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OFFICIAL GAZETTE UNITED STATES PATENT OFFICE

VOL. 133

MARCH - APRIL

1908

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OFFICIAL GAZETTE

OF THE

UNITED STATES PATENT OFFICE.

VOLUME CXXXIII.

MARCH 3 TO APRIL 28, INCLUSIVE,

1908.

WASHINGTON:
GOVERNMENT PRINTING OFFICE.
1908.

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ERRATA.

880,818, page 115, in heading, assignment, name of assignee, for "Edward Thomas" read *Eduard Thomas*.

881,259, page 289, in heading, residence of patentee, for "Winona, S. D.," read *Winona, N. D.*

884,636, page 1535, in heading, assignment, name of assignee, for "Robert B. McCouney" read *Robert B. McConney*.

884,711, page 1561, second claim, line 3, after the word "surface" insert the word *material*, and fourth claim, line 1, for the word "flat" read *flattened*.

885,261, page 1772, third claim, line 4, for the word "adjusting" read *adjustable*.

885,475, page 1841, second claim, line 10, after the word "to" insert the word *fit*.

886,063, page 2061, fourth claim, line 14, after the word "underframe" insert the word *intermediate*.

886,088, page 2068, fifth claim, line 1, for the compound word "T-shaped" read *U-shaped*.

67,976, (Trade-Mark,) page 223, residence of registrant, for "Cassel, Germany," read *Aschaffenburg, Germany*.

68,328, (Trade-Mark,) page 1183, after residence of registrant insert *assignor to George Baker and Sons, Incorporated, Brooklyn, N. Y., a Corporation*.

68,488, (Trade-Mark,) page 1673, strike out all after number and insert WITHDRAWN.

14,130, (Label,) page 1432, strike out all after number and insert WITHDRAWN.

Commissioner's Decisions, page 232, names of counsel, for "Mr. F. A. Spencer for the appellee" read *Mr. Wallace Greene for the appellee*.

Commissioner's Decisions, page 1434, names of counsel, for "Mr. William K. Jenner for plaintiff. Mr. Antonio Knauth for defendant" read *Mr. William K. Jenner for plaintiff in error. Mr. Antonio Knauth for defendant in error*.

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OFFICIAL GAZETTE

OF THE

UNITED STATES PATENT OFFICE.

MARCH—APRIL, 1908.

Patents Nos. 880,491 to 881,102.

THE OFFICIAL GAZETTE

OF THE

United States Patent Office.

[BY AUTHORITY OF CONGRESS.]

VOL. 133—No. 1. TUESDAY, MARCH 3, 1908. PRICE—$5 per year.

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Alabama	5	1	New Hampshire	3	.....
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Arizona Territory	3	.....	New Mexico Ter't'y	2	.....
Arkansas	4	1	New York	78	17
California	15	2	North Carolina	3	.....
Colorado	10	1	North Dakota	3	.....
Connecticut	10	2	Ohio	40	9
Delaware	2	1	Oklahoma	3	.....
District of Columbia	5	.....	Oregon	7	1
Florida	2	.....	Panama	.....	.....
Georgia	4	.....	Pennsylvania	51	4
Hawaii Territory	1	.....	Philippine Islands	.....	.....
Idaho	1	.....	Rhode Island	3	.....
Illinois	51	6	South Carolina	1	.....
Indiana	27	3	South Dakota	1	.....
Iowa	18	2	Tennessee	.....	.....
Kansas	12	.....	Texas	11	3
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Louisiana	1	.....	Vermont	2	.....
Maine	5	3	Virginia	3	.....
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Massachusetts	41	13	West Virginia	6	4
Michigan	29	4	Wisconsin	8	5
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Belgium	2	.....	Newfoundland	.....	.....
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Canada	8	.....	Norway	.....	1
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China	.....	.....	Roumania	.....	.....
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Disclaimers.

634,423.—*Donald Cameron, Frederick J. Commin,* and *Arthur J. Martin,* Exeter, England. PROCESS OF AND APPARATUS FOR TREATING SEWAGE. Patent dated October 3, 1899. Disclaimer filed February 21, 1908, by assignee.

Enters its disclaimer—

"from claims, 5, 6, 7, 8, 11, 12, 20 and 22, and each of them, of every combination excepting such as contains a tank which is shallow in comparison with its length and in which the septic scum and deposit exist whereby the anaerobic bacteria are present to the flowing current of sewage."

675,812.—*James Campbell,* London, England. NAVIGABLE VESSEL. Patent dated June 4, 1901. Disclaimer filed February 21, 1908, by patentee.

Enters his disclaimer—

"To those parts of the specification which are in the following words, which your petitioner desires to erase from said specification: Lines 68 to 73, inclusive, on page 1 of said specification as printed by the Patent Office, being the following words, to wit:

"The vessel may have a longitudinal middle line wall or bulkhead with a trunk or trunks on opposite sides of it.

"The invention hereinbefore described is applicable to vessels—such as dumb barges, for instance—in which no engine is fitted."

Attorneys.

(ORDER No. 1,752.)

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., February 26, 1908.

Pursuant to the provisions of section 487 of the Revised Statutes and with the approval of the Secretary of the Interior Solomon S. Sugar, of New York, N. Y., registry No. 2068, is hereby disbarred from practice before the United States Patent Office for gross misconduct.

E. B. MOORE,
Commissioner.

APPLICATIONS UNDER EXAMINATION.

Condition at Close of Business February 25, 1908.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action. Amended	New.	No. of applications awaiting action.
308	XVII. Clutches; Linotyping; Matrix-Making; Nut and Bolt Locks; Printing.	Feb. 12	Jan. 27	194
244	XXXV. Buckles, Buttons, and Clasps; Card, Picture, and Sign Exhibiting; Garment-Supporters; Signals; Toilet.	Feb. 10	Dec. 3	673
378	XXXVIII. Artesian and Oil Wells; Bottles and Jars; Care of Live Stock; Educational Appliances; Fishing and Trapping; Stationery; Stone-Working.	Feb. 3	Jan. 23	269
179	XX. Artificial Limbs; Builders' Hardware; Dentistry; Locks and Latches; Safes; Undertaking.	Feb. 1	Jan. 8	217
172	XXXI. Alcohol; Ammonia, Water, and Wood Distillation; Charcoal and Coke; Gas, Heating and Illuminating; Hides, Skins, and Leather; Liquid Coating Compositions; Mineral Oils; Oils, Fats, and Glue; Water Purification.	Jan. 28	Dec. 28	244
135	VIII. Beds; Chairs; Furniture; Kitchen and Table Articles; Store Furniture.	Jan. 24	Nov. 27	342
147	XXIX. Coopering; Fire-Escapes; Ladders; Roofs; Wheelwright-Machines; Wooden Buildings; Wood-Sawing; Wood-Turning; Woodworking; Woodworking-Tools.	Jan. 22	Nov. 13	381
144	XXIV. Apparel; Apparel Apparatus; Sewing-Machines; Surgery.	Jan. 21	Jan. 15	291
304	XXXIV. Railways; Railway-Brakes; Railway Rolling-Stock.	Jan. 21	Oct. 19	359
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313	I. Fences; Harrows and Diggers; Plows; Seeders and Planters; Trees, Plants, and Flowers.	Jan. 18	Dec. 26	277
312	VII. Games and Toys; Mechanical Motors; Optics; Paper Manufactures; Velocipedes.	Jan. 17	Jan. 2	300
264	XXXVI. Curtains, Shades, and Screens; Drafting; Driers; Engraving; Measuring Instruments; Wind-Wheels.	Jan. 16	Jan. 6	510
308	XV. Bread, Pastry, and Confection Making; Coating; Fuel; Glass; Hydraulic Lime and Cement; Laminated Sheets and Fabrics; Paper-Making; Paving; Photography; Plastic Block and Earthenware Apparatus; Plastic Compositions; Plastics.	Jan. 15	Jan. 2	581
282	IV. Bridges; Conveyers; Cranes and Derricks; Excavating; Hoisting; Hydraulic Engineering; Iron Structures; Loading and Unloading; Towers.	Jan. 14	Jan. 15	271
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278	XXXII. Carbonating Beverages; Dispensing Beverages; Dispensing-Cans; Metallic Shipping and Storing Vessels; Packaging Liquids; Refrigeration.	Jan. 8	Oct. 26	496
318	VI. Bleaching and Dyeing; Chemicals; Explosives; Fertilizers; Medicines; Preserving; Sugar and Salt.	Jan. 7	Jan. 7	186
379	XXIII. Acoustics; Coin-Handling; Horology; Recorders; Registers; Time-Controlling Mechanism.	Jan. 6	Oct. 14	277
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375	XXVII. Brushing and Scrubbing; Grinding and Polishing; Laundry; Washing Apparatus.	Dec. 30	Jan. 2	378
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128	II. Bee Culture; Dairy; Label-Affixers; Paper Files and Binders; Pneumatics; Presses; Store-Service; Tobacco.	Dec. 26	Dec. 20	350
247	XXII. Air-Guns, Catapults, and Targets; Ammunition and Explosive Devices; Boats and Buoys; Firearms; Marine Propulsion; Ordnance; Railway-Rails and Joints; Railway-Ties and Fasteners; Ships.	Dec. 26	Nov. 2	574
280	XL. Baggage; Check-Controlled Apparatus; Cloth, Leather, and Rubber Receptacles; Deposit and Collection Receptacles; Fine Arts; Lighting-Fixtures; Package and Article Carriers; Paper Receptacles; Special Receptacles and Packages; Wooden Receptacles.	Dec. 18	Nov. 16	677
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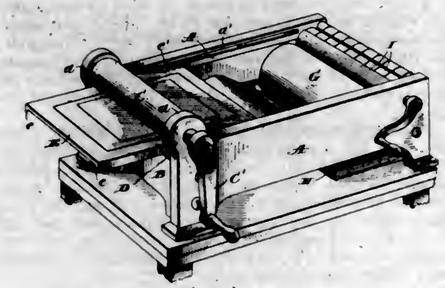
Examiners' Letters and Amendments.

Examiners are directed to recite in each letter in an application the date of the action by the applicant to which it is a reply, and applicants are requested to indicate in their actions on an application the date of the last Office letter.

PATENTS

GRANTED MARCH 3, 1908.

880,491. COPY-PRESS. CHARLES E. ADAMSON, Marion, Ind. Original application filed June 9, 1904, Serial No. 211,859. Divided and this application filed Feb. 10, 1905, Serial No. 245,119. Renewed July 26, 1907. Serial No. 385,686.



1. In a copy press, a frame, a pair of superposed rolls mounted in said frame, and a platen secured in said frame for longitudinal movement between said rolls and in frictional engagement therewith, said platen being provided at its edges with flanges adapted to overlie the ends of one of said rolls to prevent lateral movement thereof.

2. In a copy press, a frame, a pair of superposed rolls mounted in said frame, a platen secured in said frame for longitudinal movement between said rolls, said platen being provided at its edges with flanges adapted to overlie the ends of one of said rolls, and with lugs adapted to engage with a portion of the frame to limit the longitudinal movement of said platen.

3. In a copy press, a frame comprising a pair of longitudinally slotted side rails, a supporting roll secured in said frame, a platen resting upon said supporting roll and provided on opposite sides with lugs engaging the slots in the side rails, and a copying roller secured in said frame above said platen and in frictional engagement therewith.

4. In a copy press, a frame, paper feeding and dampening mechanism mounted in said frame, a platen mounted for reciprocatory movement in said frame, and a copying roller mounted in said frame and adapted to coöperate with said platen, one end of said platen being sharpened to form a cutting edge, as and for the purpose set forth.

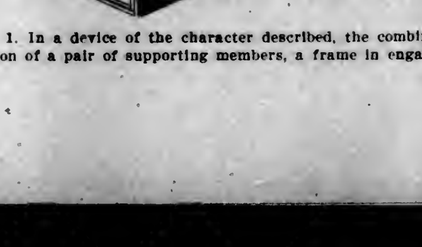
5. In a copy press, a frame, a platen mounted to reciprocate therein, a copying roll mounted in said frame and in frictional engagement with said platen to impart a longitudinal movement thereto, means for preventing lateral movement of said platen during its longitudinal movement, and means for limiting the longitudinal movement of said platen.

[Claims 6 to 10 not printed in the Gazette.]

880,492. ROTARY COPYING-PRESS. CHARLES E. ADAMSON, Muncie, Ind. Filed Nov. 29, 1905. Serial No. 289,624.

1. In a copying press, a moistening roll, an impression roll positioned thereabove and spaced therefrom, a copying roll at one side of said moistening and impression rolls and in frictional engagement therewith, and a feed roller at the opposite side of said moistening and impression rolls and in frictional engagement therewith.

2. In a copying press, a moistening roll, an impression roll positioned thereabove and spaced therefrom, a copying roll at one side of said moistening and impression rolls and in frictional engagement therewith, a feed roller at the opposite side of said moistening and impression rolls and in frictional engagement therewith, and means for adjusting said feed roll relative to said impression roll.



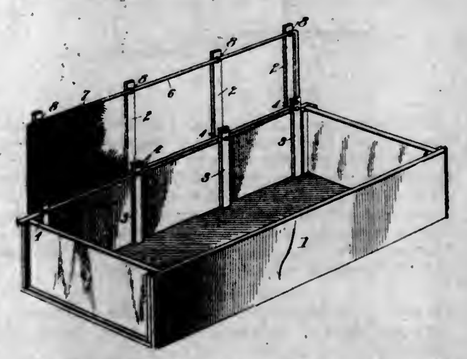
3. In a copying press, a moistening roll, an impression roll spaced therefrom, a copying roll in frictional engagement with said moistening and impression rolls, a feed roll in frictional engagement with said moistening and impression rolls, means for adjusting the moistening roll relative to the copying roll, and means for adjusting the feed roll relative to the impression roll.

4. In a copying press, a moistening roll, a copying roll, an impression roll arranged to coöperate with said copying roll, and a paper supply roll, said paper supply roll being maintained by gravity in frictional engagement with said copying roll.

5. In a copying press a frame, moistening, copying, and impression rolls mounted in said frame, inclined guideways at opposite sides of said frame, and a paper supply roll supported upon said inclined guideways and having its outer surface in frictional engagement with said copying roll.

[Claims 6 to 12 not printed in the Gazette.]

880,493. GRAIN-BOARD FOR WAGONS. EUGENE M. ANDERSON, Washington, Iowa. Filed Sept. 4, 1907. Serial No. 391,402.



1. In a device of the character described, the combination of a pair of supporting members, a frame in engage-

ment with one of said members, wire mesh carried by said frame, a detachable clamp surrounding a portion of said frame and extending through one of said supporting members, and means securing said clamp upon said supporting member.

2. In a device of the character described, the combination with a supporting member, of a throw-board in engagement with said supporting member, said throw-board comprising a frame, a wire mesh positioned upon said frame, and a clamping means extending through said supporting member and surrounding a portion of the frame of the throw-board and securing said throw-board to said supporting member.

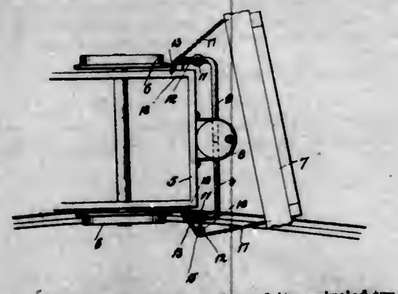
3. In a device of the character described, the combination of a pair of supporting members, a throw-board, means detachably securing the lower portion of said throw-board between said members, and clamping means detachably securing the upper portion of said throw-board to one of said supporting members.

4. In a device of the character described, the combination with a wagon body, of a pair of supporting members positioned upon the body, one of said members extending only a short distance above the upper edge of the side and the other member extending a considerable distance beyond the upper edge of the same side, a throw-board in engagement, at its upper portion, with one of said members and its lower portion positioned between said members, a substantially U-shaped clamp secured near the upper end of one of said members and only engaging a portion of the upper part of said throw-board, and means securing the lower part of said throw-board to both of the members.

5. In a device of the character described, the combination of a primary and an auxiliary supporting member, the auxiliary member of less length than the primary member, a throw-board positioned contiguous to said primary and auxiliary member, the primary member extending entirely across the throw-board, a detachable clamp extending transversely of said throw-board and primary member and securing the throw-board at its upper edge only to the primary member, and means securing the lower part of said throw-board to the primary and auxiliary members.

[Claim 6 not printed in the Gazette.]

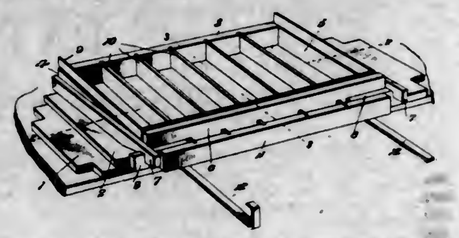
880,494. LUBRICATOR FOR RAILWAY-TRACKS. FRANK E. BAILEY, Ceres, N. Y. Filed Sept. 18, 1907. Serial No. 393,437.



The combination with a car-body and its swiveled truck, of a lubricant reservoir carried by the truck, a delivery pipe, a valve in said pipe, a handle for operating the valve, a spring connecting said handle with the truck for holding the valve normally closed, and a connection between the handle and the car-body for opening the valve by the relative movements of the car-body and its truck, and a stop carried by the handle and engageable with the pipe to limit the closing movement of the handle.

880,495. CONCRETE-BLOCK MACHINE. ALBERT T. BARNES, Neola, Iowa. Filed Apr. 1, 1907. Serial No. 365,764.

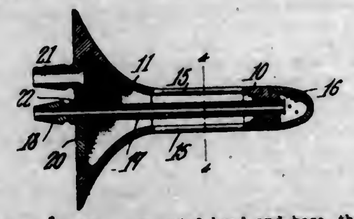
1. In a concrete block machine, in combination, a bottom wall, a back wall, and side walls; a front wall adapted to be moved into pendent relations with the bottom wall; partitions slidable through said front wall; and means for holding the partitions together with the front wall in the pendent position of the latter.



2. In a concrete block machine, in combination, a bottom wall, a back wall, and side walls; a front wall adapted to be moved into pendent relations with bottom wall; partitions slidable through said front wall; and means carried by said front wall for holding the partitions together with the front wall in the pendent position of the latter.

3. In a concrete block machine, in combination, a bottom wall and a back wall relatively fixed, movable side walls attached to said back wall, a front wall hingedly secured to said bottom wall, movable partitions operatively connected together and movable through the front wall, means for holding said partitions when the said front wall is moved, said means comprising a pair of rods rigidly connected to said front wall and having upturned ends, substantially as set forth.

880,496. SYRINGE. FRANK C. BARNES, Fremont, Ohio. Filed June 11, 1907. Serial No. 378,399.

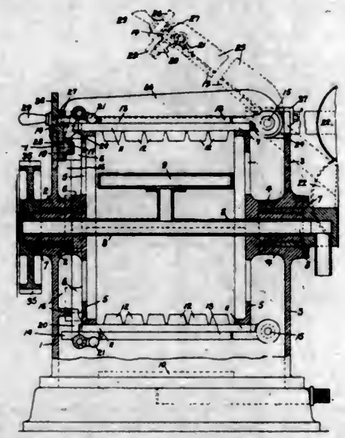


1. In a syringe, a connected head and base, the latter being hollow and provided with an enlarged face plate, said plate having an opening, a disk circumferentially adjustable within said opening and carrying a discharge nipple that communicates with the interior of the base and is adjustable with the disk, an influent tube passing through an opening in the disk and having a threaded connection with the head member, said tube having a shouldered nipple engageable against the outer face of the disk and forming a lock to hold the latter in adjusted position.

2. In a syringe of the class described, a connected head member and base, the latter having an enlarged face plate and being hollow to collect the discharge, said face plate having a circular opening, a disk circumferentially adjustable in said opening, a discharge nipple carried by the disk and adjustable therewith, an influent tube extending through a central opening in the disk and having a threaded end engaging with a threaded opening in the head member, said tube being provided with a shouldered nipple that engages against the outer face of the disk and binds the latter in adjusted position, and a detachable cap piece carried by the head member.

3. In a syringe of the class described, a head member and base connected by integral spaced bars, said head member having an internally threaded opening and the base being hollow and enlarged to close the vulva, said base having a threaded opening in its outer face, a threaded disk mounted in said opening, a discharge nipple carried by the disk and adjustable therewith, an influent tube extending through a central opening in the disk and threaded at its inner end to engage with the threaded opening of the head member, said tube being provided with a shouldered nipple arranged to bind against the outer face of the disk and hold the latter in adjusted position.

880,497. MACHINERY FOR MAKING CUP-WAFERS, SUGAR-WAFER BISCUITS, AND THE LIKE. THOMAS O. BATES, Liverpool, England. Filed Nov. 20, 1906. Serial No. 344,228.



1. In machinery for making cup wafers, sugar wafer biscuits, and the like, of the type in which a plurality of sets of cooking plates are revolved or reciprocated about an axis, and are opened and closed successively, an inner stationary plate, and an outer hinged plate having a stationary hinge connection with the inner plate, and having a detent at its outer end adapted to be operated from the front of the machine; an engager device at the front end adapted to operate in connection with the outer plate 13, and an oscillating lever carrying—at its front end—said engager and having its axis coincident with the axis of the hinge of the plates; substantially as set forth.

2. In a machine for making cup wafers, sugar wafer biscuits, and the like, in which a plurality of sets of cooking plates are revolved or reciprocated about an axis, the counterbalanced lever carrying an engager 27 having its axis separately from and coincidently with the axis of the hinge of the outer plate 13; substantially as set forth.

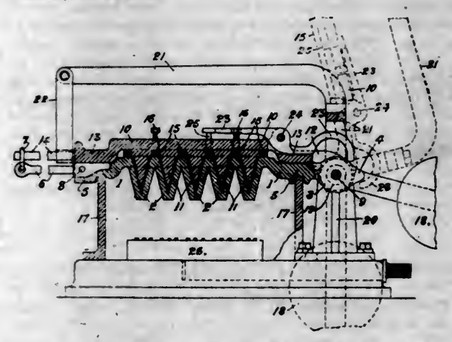
3. In machinery for making cup wafers, sugar wafer biscuits, and the like, of the type in which a plurality of sets of cooking plates are revolved or reciprocated about an axis, a catch 20 having its hinge parallel with the plates, and carried on one of the plates (13) and adapted to move up to and away from the end of said plate, and engage and disengage with same, and projections on the stationary portion of the frame of the machine for operating it, adapted to engage with the end of such catch, and move it out of engagement and into engagement, as each pair of plates comes towards and leave the position in which they are emptied and charged; substantially as described.

4. Machinery for making cup wafers, sugar wafer biscuits, and the like, of the type in which a plurality of sets of cooking plates or parts are revolved or reciprocated about an axis, an oscillating engaging part adapted to be engaged by projections 6 on the revolving frame having gaps between them; whereby when one of the plates is disengaged from the other, when at or near the top or charging and emptying position, the outer plate is held down; substantially as described.

5. Machinery for making cup wafers, sugar wafer biscuits, and the like, of the type in which a plurality of sets of cooking plates or parts are revolved or reciprocated about an axis having levers 25 hinged at the back of the machine, carrying in the front an engager 27, adapted to engage with a part of the front end of the outer plate 13, and having an inwardly projecting flange 28 adapted to come under projections 6, disposed round the axis of the machine, and with spaces between them, when each set of plates approaches the upper position; as herein set forth.

[Claim 6 not printed in the Gazette.]

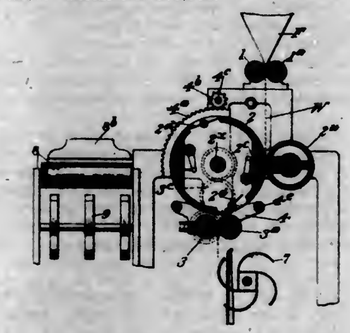
880,498. MACHINERY FOR MAKING CUP-WAFERS, SUGAR-WAFER BISCUITS, AND THE LIKE. THOMAS O. BATES, Liverpool, England. Filed Nov. 20, 1906. Serial No. 344,229.



1. In machinery for making cup wafers, sugar wafers, biscuits, and the like, two plates between which the material is cooked hinged together at one end, trunnions on which said plates revolve and a counterbalance weight lever having a hinge separate from that of the plates, but coincident with that of the said plate hinge, and connected with the upper plate of the device; substantially as described.

2. In machinery for making cup wafers, sugar wafers, biscuits, and the like, the arrangement of upper and lower plates 10 and 1, hinged together at one end; a weighted lever 21 hinged coincidently with the aforesaid hinge, and in the form of a bridge; and projecting parts, as 14 and 16, adapted to be connected together, with one of which the end of the bridge bar 21 is connected; as herein set forth.

880,499. FOLDING MECHANISM FOR WEB-PRINTING PRESSES. HENRY F. BECHMAN, Battle Creek, Mich., assignor to Duplex Printing Press Company, Battle Creek, Mich., a Corporation of Michigan. Filed May 14, 1907. Serial No. 373,664.



1. In a folding machine, the combination of a cutting cylinder, a coacting folding cylinder, a pair of folding rolls

beside said folding cylinder, and means for adjusting said rolls to different positions around the folding cylinder.

2. In a folding mechanism, the combination of a cutting cylinder, a coacting folding cylinder, a pair of folding rolls beside said folding cylinder, swinging supports for said rolls, and means for moving said supports whereby said rolls can be adjusted to different positions around the folding cylinder.

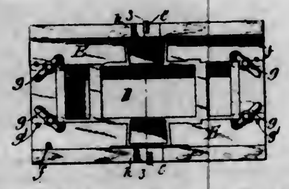
3. The combination with a pair of cutting and folding cylinders, a pair of folding rolls adjacent said folding cylinder, hangers pivoted axially to the folding cylinder, a pair of folding rolls mounted in said hangers, and means for adjusting said hangers so as to move the said rolls to position below or to one side of the folding cylinder.

4. In a folding mechanism, the combination of cutting devices, a set of folding devices located at one side of said cutting devices, a pair of second-fold rolls adapted to receive papers from the cutting devices, and means for adjusting said rolls so that they will discharge the papers to or away from the said folding devices whereby papers folded to quarter-size or to half-size may be obtained.

5. In a folding mechanism, the combination of cutting and folding cylinders, a pair of third-fold rolls located at one side of said cutting and folding cylinders, a pair of second-fold rolls adapted to receive papers from the said cylinders, and means for adjusting said second-fold rolls so that they will discharge the papers to the said third-fold rolls, or away from said rolls whereby papers folded to quarter-size or to half-size may be obtained.

[Claims 6 to 11 not printed in the Gazette.]

880,500. MOLDING APPARATUS. MICHAEL BERNHART, Lancaster, N. Y., assignor of one-half to James D. Brennan, Lancaster, N. Y. Filed May 14, 1907. Serial No. 373,700.



1. A stripping plate for a molding flask; said plate having an opening to receive a pattern; and means movable on said plate for holding said pattern in said opening while ramming said flask; substantially as set forth.

2. The combination of a drag or flask, a pattern, a stripping plate adapted to rest on the drag and having an opening which receives the pattern, and turn buttons pivoted to the stripping plate and arranged to project into the opening thereof for supporting the pattern in the ramming position of the drag, substantially as set forth.

3. A stripping plate for a molding flask having an opening adapted to receive a pattern and retractable supports arranged to project into its opening for sustaining the pattern therein, substantially as set forth.

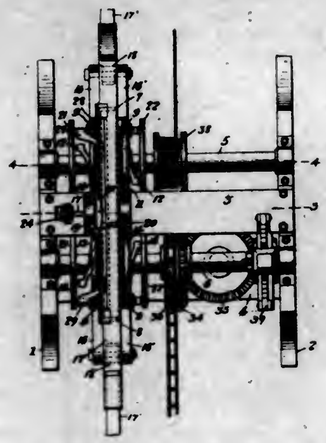
4. A stripping plate for a molding flask having an opening adapted to receive a pattern, and turn buttons pivoted to the plate adjacent to the edge of its opening and adapted to support the pattern therein, substantially as set forth.

5. The combination with a stripping plate for a molding flask; said plate having a stripping opening to pass a pattern; of means to engage said pattern and hold it in said opening; said means being removable from said engagement to permit free passage of said pattern; substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

880,501. MECHANICAL MOTOR. ROBERT H. BOWMAN, Canon City, Colo. Filed Feb. 21, 1907. Serial No. 358,541.

1. In a mechanical motor, the combination of two shafts connected for rotation in opposite directions simultaneously, oscillating members coöperating intermittently and alternately with said shafts for giving a continuous rotary movement to the shafts, similar oscillating members reversely arranged and coöperating in like manner with said shafts for giving thereto a reverse movement, and transversely shifting means so connected for operation that as one set of members is thrown into operative engagement the other set will be disengaged.



2. In a mechanical motor, the combination of two shafts connected for rotation in opposite directions simultaneously, a disk fixed to each shaft and having ratchet teeth on both of its side faces, the ratchet teeth on the face of one disk being oppositely disposed to the ratchet teeth on the corresponding faces of the other disk and the ratchet teeth on one of the faces of each disk being oppositely disposed to those on the other face of the same disk, oscillating members arranged adjacent each face of the said disks, driving pawls carried by said oscillating members for coöperation with the ratchet teeth in the disks, and means whereby the pawls on the same side of each disk may be held out of operative engagement with their ratchet teeth when the pawls on the other side are operating, whereby the shafts may be rotated in either direction as desired.

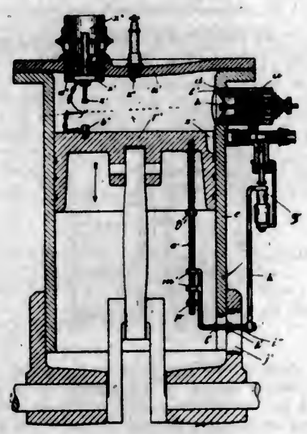
3. In a mechanical motor, the combination of two shafts connected together for rotation in opposite directions simultaneously, intermeshing gear wheels fixed to said shafts and having ratchet teeth on their side faces, the ratchet teeth on the faces of one of the gear wheels being oppositely disposed to the ratchet teeth on the corresponding faces of the other gear wheel and the ratchet teeth on one of the faces of each gear wheel being oppositely disposed to those on the other face of the same gear wheel, oscillating members arranged adjacent each face of the said gear wheels, driving pawls carried by said oscillating members for coöperation with the ratchet teeth of the gear wheels, and means whereby the pawls on the same side of each gear wheel may be held out of operative engagement with their ratchet teeth when the pawls on the other side are operating, whereby the shafts may be rotated in either direction as desired.

4. In a mechanical motor, the combination of two shafts connected for rotation in opposite directions simultaneously, oscillating members coöperating intermittently and alternately with said shafts for giving a continuous rotary movement to the shafts, similar oscillating members reversely arranged and coöperating in like manner with said shafts for giving thereto a reverse movement, a rocking lever having connection with the members for oscillating the same, transversely shifting plates mounted adjacent the members for operating the same, a member journaled in the rocking lever and having connection with said shifting plates, and hand levers connected to said member for rotating the same to its various positions of adjustment.

5. In a mechanical motor, the combination of two shafts connected for rotation in opposite directions simultaneously, a disk fixed to each shaft and having ratchet teeth therein, the ratchet teeth in each disk being oppositely disposed to those of the other, an oscillating member loosely mounted on each shaft, driving pawls carried by said oscillating member and adapted to coöperate with the ratchet teeth of the disks for giving a continuous rotary movement to both of the shafts, and a transversely shifting plate mounted adjacent the members for disengaging the pawls from the ratchet teeth.

[Claims 6 to 12 not printed in the Gazette.]

880,502. CARBURETER FOR EXPLOSIVE-ENGINES. EMANUEL J. BOYLER, Peterborough, Ontario, Canada, assignor of two-thirds to Courtland John Aggett and Angus Stalker, Peterborough, Canada. Filed June 1, 1906. Serial No. 319,758.

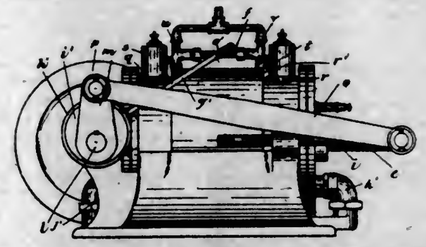


1. An explosive engine comprising a cylinder open at one end and having a cylinder head at the other end, a piston in the cylinder, a mixing chamber having air inlets and opening into the cylinder near the cylinder head and provided with a spring pressed valve to control its opening into the cylinder, a fuel chamber, a fuel inlet for the fuel chamber, a valve for the fuel inlet, an extension of the fuel chamber having a central bore communicating with the fuel chamber, a plunger reciprocally movable in the central bore of the extension, a slideway formed through the cylinder near its open end, a plunger actuating rod extending through, and slidable in, the slideway, means connected with the piston for operating the plunger actuating rod, a fuel exit for the fuel chamber connecting the latter with the mixing chamber, and a spring controlled valve for the inner end of the fuel exit.

2. An explosive engine comprising a cylinder open at one end and having a cylinder head at the other end, a piston in the cylinder, a mixing chamber having air inlets and opening into the cylinder near the cylinder head and provided with a spring pressed valve to control its opening into the cylinder, a fuel chamber, a fuel inlet for the fuel chamber, a valve for the fuel inlet, an extension of the fuel chamber having a central bore communicating with the fuel chamber, a plunger reciprocally movable in the central bore of the extension, collars on the plunger, a slideway formed through the cylinder near its open end, a plunger actuating rod consisting of a slide part extending through and slidable in, the slideway, a part extending at right angles to the slide part at the outer end of the latter connected to the plunger between the collars thereof, and a second part extending at right angles to the slide part at the inner end of the latter, means fixed to the piston actuating said last mentioned part, a fuel exit for the fuel chamber connecting the latter with the mixing chamber, and a spring controlled valve for the inner end of the fuel exit.

3. An explosive engine comprising a cylinder open at one end and having a cylinder head at the other end, a piston in the cylinder, a mixing chamber having air inlets and opening into the cylinder near the cylinder head and provided with a spring pressed valve to control its opening into the cylinder, a fuel chamber, a fuel inlet for the fuel chamber, a valve for the fuel inlet, an extension of the fuel chamber having a central bore communicating with the fuel chamber, a plunger reciprocally movable in the central bore of the extension, collars on the plunger, a slideway formed through the cylinder near its open end, a plunger actuating rod consisting of a slide part extending through and slidable in, the slideway, a part extending at right angles to the slide part at the outer end of the latter connected to the plunger between the collars thereof, and a second part, having an apertured offset, extending at right angles to the slide part at the inner end of the latter, a rod connected at one end to the piston and passing through the aperture of the offset, collars on the rod on either side of the offset, so spaced as to engage therewith and effect a movement of the slide part at each end of the piston stroke, a fuel exit for the fuel chamber connecting the latter with the mixing chamber, and a spring controlled valve for the inner end of the fuel exit.

880,503. EXPLOSIVE-ENGINE. EMANUEL J. BOYLER, Peterborough, Ontario, Canada, assignor of two-thirds to Courtland John Aggett and Angus Stalker, Peterborough, Canada. Filed June 1, 1906. Serial No. 319,759.



1. An explosive engine comprising an engine cylinder, cylinder heads at the ends thereof, a piston movable within the engine cylinder between the cylinder heads, mixing chambers fitted to the engine cylinder adjacent to the cylinder heads and on opposite sides of the piston, fuel injectors for the mixing chambers, suckers for the fuel injectors, means coupling the suckers together and means for actuating the suckers.

2. An explosive engine comprising an engine cylinder, cylinder heads at the ends thereof, a piston movable within the engine cylinder between the cylinder heads, a piston rod for the piston projecting through one of the cylinder heads, a cross head for the piston rod, an engine shaft, cranks for the engine shaft, crank rods connecting the engine shaft cranks with the cross head, mixing chambers fitted to the engine cylinder adjacent to the cylinder heads and on opposite sides of the piston, fuel injectors for the mixing chambers, suckers for the fuel injectors, means coupling the suckers together, and means for actuating the suckers.

3. An explosive engine comprising an engine cylinder, cylinder heads at the ends thereof, a piston movable within the engine cylinder between the cylinder heads, a piston rod for the piston projecting through one of the cylinder heads, a cross head for the piston rod, guide rods for the cross head, guideways for the guide rods, an engine shaft, cranks for the engine shaft, crank rods connecting the engine shaft cranks with the cross head, mixing chambers fitted to the engine cylinder adjacent to the cylinder heads and on opposite sides of the piston, fuel in-

jectors for the mixing chambers, suckers for the fuel injectors, means coupling the suckers together, and means for actuating the suckers.

4. An explosive engine comprising an engine cylinder, cylinder heads at the ends thereof, a piston movable within the engine cylinder between the cylinder heads, a piston rod for the piston projecting through one of the cylinder heads, a cross head for the piston rod, an engine shaft, cranks for the engine shaft, crank rods connecting the engine shaft cranks with the cross head, mixing chambers fitted to the engine cylinder adjacent to the cylinder heads and on opposite sides of the piston, fuel injectors for the mixing chambers, fuel chambers for the fuel injectors, pump chambers for the fuel chambers, plungers in the pump chambers, means coupling the plungers together, and means imparting a reciprocating movement to the plungers.

5. An explosive engine comprising an engine cylinder, cylinder heads at the ends thereof, a piston movable within the engine cylinder between the cylinder heads, a piston rod for the piston projecting through one of the cylinder heads, a cross head for the piston rod, an engine shaft, cranks for the engine shaft, crank rods connecting the engine shaft cranks with the cross head, two mixing chambers fitted to the engine cylinder adjacent to the cylinder heads, one on each side of the piston, fuel injectors for the mixing chambers, fuel chambers for the fuel injectors, alined pump chambers for the fuel chambers extending therefrom towards one another, plungers in said pump chambers connected at their outer ends, and means for imparting a reciprocating movement to the plungers.

880,504. WAGON-WHEEL. WILLIAM C. BRIGHAM, Danbury, Conn. Filed Sept. 26, 1906. Serial No. 336,216.
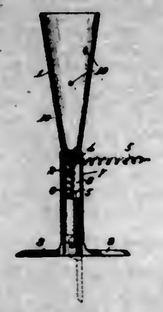


An adjustable connection for a spoke and felly comprising a spoke-tip, a foot-piece bearing on the felly, one of said parts having a threaded socket, a screw connecting said parts and having a portion entering said socket, said portion having a groove normally lying wholly within said socket, and a set screw adapted to engage said groove.

880,505. COMBINED MEDICINE-MEASURE AND CORKSCREW. JOSEPH BAYENS, Chicago, Ill. Filed Nov. 20, 1907. Serial No. 402,977.

1. A graduate having a stem and a base, in combination with a cork screw pivotally connected thereto and adapted to swing into position parallel with said stem and a member rotatably mounted on said stem for holding said cork screw in parallel position therewith, substantially as described.

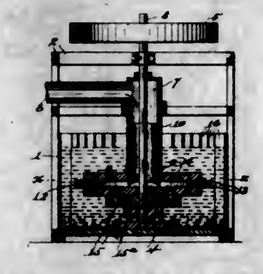
2. A graduate having a stem and a base, said stem having a longitudinal recess, a cork screw pivotally mounted in said recess and an apertured sleeve loosely mounted on said stem and adapted in one position to open said recess and in another to close the same, substantially as described.

3. A graduate having a stem and a base pivotally connected to said stem, in combination with a cork screw pivotally connected thereto, said base having a radial



recess to receive said stem when the cork screw is extended for use, substantially as described.

880,506. FUME-ARRESTER. SELDEN I. CLAWSON, Salt Lake City, Utah. Filed May 20, 1907. Serial No. 374,743.



1. In a fume-arrester, a fume-wheel having an axial fume-pipe leading into it, a ring carried by the wheel for discharging the fumes through the periphery of the wheel and forming an annular passage in the wheel from said pipe.

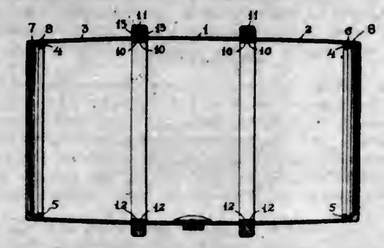
2. In a fume-arrester, the combination, with a suitable tank containing a body of water, a series of break water vanes within the tank, and the fume-pipes one within the other, of a fume-wheel revoluble in the water and having one of said pipes secured thereto for carrying the fumes from the other pipe into the wheel, and a serrated ring by which the fumes are carried out of the wheel.

3. In a fume-arrester, the combination, with a suitable tank containing a body of water, a pair of fume-pipes one revoluble within the other and both being partially within the water, and a driven shaft extending through said pipes, of a fume-wheel secured to the shaft below one of said pipes and having the other of said pipes attached and leading thereinto, and fume-passages from the revoluble pipe through the periphery of the wheel.

880,507. METAL BARREL. EDWARD G. COOK, Brooklyn, N. Y. Filed Jan. 2, 1906. Serial No. 294,318.

1. A metal barrel or similar vessel formed of annular sections having outwardly turned flanges at their edges, a hoop connecting said sections provided with a recess in each side to receive said outwardly turned flanges, interior flanges on each side of the hoop below the recess projecting inside said annular sections and bendable flanges on said hoop bearing against the outer faces of said outwardly turned flanges of the barrel sections.

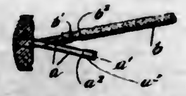
2. A metal barrel or similar vessel formed of annular sections having outwardly turned flanges at their edges and a hoop provided with a recess in each side, said recess being of a width sufficient to receive said outwardly turned flanges with the inside wall of said recess in contact with the inside of said annular section said hoop having a pair of bendable flanges bearing against the outer face of said outwardly turned flanges of the barrel sections.



3. A metal barrel or similar vessel formed of annular sections having outwardly turned flanges at their edges, a hoop provided with a recess in each side, said recess being of a width sufficient to receive said outwardly turned flanges with the inside wall of said recess in contact with the inside of said annular section, and means for holding said outwardly turned flanges in said recess.

4. A metal barrel or similar vessel formed of annular sections having outwardly turned flanges at their edges, a hoop provided with a recess in each side to receive said flanges, with the inside of said annular section in contact with one side of said recess, the periphery of said outwardly turned flange in contact with the other side of said recess and the face of said outwardly turned flange in contact with the bottom of said recess and means for holding said outwardly turned flanges in the recesses of the hoop.

880,508. TUBE-JOINT FOR METAL TRACKER-BARS AND METHOD OF FORMING THE SAME. THOMAS DANQUARD, New York, N. Y., assignor to The Autopiano Co., New York, N. Y., a Corporation of New York. Filed July 2, 1906. Serial No. 324,406.



1. The combination of a relatively hard metal tube having an expanded bell-shaped end provided with a shoulder with a relatively soft metal tube of sufficient size to pass over the bell-shaped expanded portion of the first mentioned tube, said soft metal tube being crimped onto the first mentioned tube at a point adjacent to the shoulder thereof and between said shoulder and the end of the outer tube so as to constitute a shoulder on the soft metal tube opposing the shoulder on the other tube and constituting the outside of said joint, said inner tube constituting a solid backing for the outer tube when the latter is crimped thereon.

2. The combination of a tube having an expanded bell-shaped portion near one end thereof, a second tube fitting over the expanded portion of the first tube and extending beyond the inner end of said expanded portion, a layer of adhesive material located in a space between the two tubes, the outside tube being provided with a crimped portion whereby it is forced into engagement with the outer surface of the inner tube at a point near the expanded portion thereof.

3. A method of joining a hard metal tube with a soft metal tube which consists in expanding the end of the inner hard metal tube to substantially the diameter of the inside of the soft metal tube, passing the outer tube over the expanded portion of the inner tube to project a distance beyond the same, and applying force to crimp the outer tube on the inner tube between the end of the outer tube and the expanded portion of the inner tube to form an inwardly projecting shoulder adjacent to the shoulder formed by the expanded end of the inner tube.

4. A method of uniting tubes which consists in expanding the end of the inner tube to provide a shoulder, passing the outer tube over the shoulder of the inner tube, placing an adhesive in the space between the two tubes adjacent to said shoulder, and crimping the outer tube so as to form a shoulder therein opposite the shoulder on the inner tube to provide positive means for preventing each tube from being withdrawn from the other.

880,509. CURRENT-MOTOR. ALFRED H. DAVIS, Burlington, Iowa. Filed Oct. 12, 1905. Serial No. 282,400.

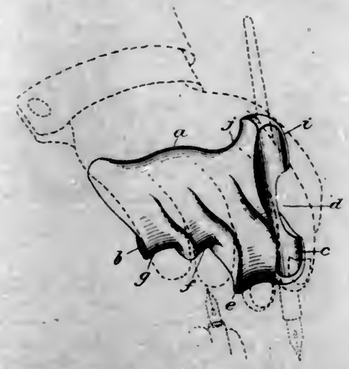


1. In an apparatus of the class described, suitable supports, shafts adjustably mounted in said supports, sprocket wheels on said shafts, endless chains arranged to travel on said wheels, paddles adjustably and pivotally mounted on said chain, braces adjustably and pivotally connected with said chain and pivotally connected with said paddles, substantially as set forth.

2. An apparatus including suitable supports, shafts adjustably mounted in said supports, sprocket wheels on the shafts, endless chains arranged to travel on said wheels, paddles adjustably and pivotally mounted on said chain, braces adjustably and pivotally connected with said chain and pivotally connected with said paddles, cushioning means for receiving the end thrust of said braces, and means for feathering said paddles substantially in the manner and for the purpose described.

3. In an apparatus of the class described, supports, shafts adjustably mounted on said supports, sprocket wheels mounted on said shafts, endless chains arranged to travel on said wheels, and chains comprising links and cross bars connecting said links, collars rotatably mounted on said cross-bars, paddles adjustably secured to the alternate collars, braces pivotally secured to the intervening collars and pivotally connected with said paddles, cushioning means arranged in said brace collars and adapted to receive the thrust of said braces, and means for feathering said paddles substantially in the manner and for the purpose described.

880,510. HAND-POSITIONING DEVICE FOR PENMEN. WILLIAM G. DELASHAW, Moulton, Ala. Filed Nov. 21, 1907. Serial No. 403,110.



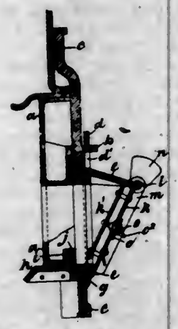
1. A hand positioning device for penmen, comprising a body portion to fit the palm of the hand, a forward extension having grooves to receive the fingers, and a lateral portion extending from the body portion having a groove to receive the thumb, the groove for the fore-finger being deepened to receive and loosely support the pen or pencil.

2. A hand positioning device for penmen, comprising a shell-like body having a superior surface to fit the palm of

the hand and fingers, a lateral surface to fit the thumb, and a groove in the portion of the superior surface underlying the fore-finger to receive and loosely support the pen or pencil.

3. A hand positioning device for penmen, comprising a body portion to fit the palm of the hand, a forward extension having grooves therein to receive the fingers, a lateral portion extending from the body portion having a groove to receive the thumb, and a boss or projection on said lateral portion to lie between the thumb and fore-finger, the groove for the fore-finger being deepened to receive and loosely support the pen or pencil.

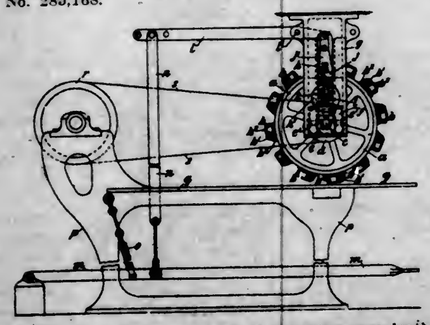
880,511. FURNACE FRONT AND DOOR. THOMAS DOWNIE, Wallasey, and DAVID BROWN, Bootle, England. Filed July 9, 1907. Serial No. 382,883.



1. In a furnace front internal protecting devices as *a*, a part thereon projecting through the front, and door frame, on the front adapted to engage with the part projecting through the front; substantially as described.

2. In a furnace front, internal protecting devices *a*, one of which has a projecting bar *b* of the form described, having a recess on each side, and the door frame *e* having an aperture at the upper part through which the said bar projects, and projecting parts thereon adapted to engage on said recesses; substantially as set forth.

880,512. MACHINERY FOR STRETCHING AND SETTING LEATHER. WILLIAM F. FINCH, Litherland, near Liverpool, England. Filed Oct. 30, 1905. Serial No. 285,168.



1. A machine for stretching and operating upon leather, comprising a rotary tool wheel *a* with a plurality of radially disposed blades *b*, set obliquely on the periphery of the wheel *a* to the axis thereof, having its axis at each end supported in a bearing, capable of rising and falling automatically at all times vertically, independently, and separately weighted to normally press the tools down onto the leather being operated upon, substantially as set forth.

2. A machine for stretching and operating upon leather, comprising a rotary tool with a plurality of blades upon its periphery, having its axis at each end supported in a bearing, capable of rising and falling automatically at all times vertically, independently, and separately weighted by a weight to normally press the tool down onto the leather being operated upon and a spring interposed between said weights and the bearings, substantially as set forth.

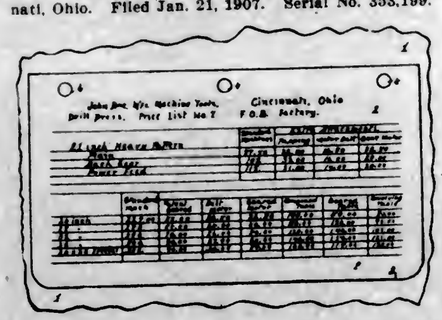
3. A leather stretching and operating machine consisting of a rotary tool wheel with blades on its periphery, set in oppositely inclined directions, having its axis supported at opposite ends in downwardly weighted independent bearings free to rise and fall independently, and such weight being adapted to constitute the sole pressure coming upon the leather through the tools, substantially as set forth.

4. A machine for stretching and setting out, and operating upon leather, comprising a tool wheel *a*, with blade tools *b* thereon, a shaft *c* carrying said wheel, bearings adapted to slide up and down carrying the ends of said shaft, vertical guides on which said bearings slide up and down, a weighted lever adapted to press the said bearings of the said shaft downwards, and a spring between the part pressed by said levers, and the bearing parts carrying the shaft; substantially as set forth.

5. In a machine for stretching and setting out, and operating upon leather, a wheel with blade tools on its periphery, a shaft supporting said wheel, bearings in which the two ends of the shaft are mounted and vertically adjustable at either end automatically, guides on which said bearings slide vertically, means for normally pressing down said bearings, and a lifting foot lever connected with the said bearings; as herein set forth.

[Claim 6 not printed in the Gazette.]

880,513. ADVERTISEMENT. CHARLES H. FOX, Cincinnati, Ohio. Filed Jan. 21, 1907. Serial No. 353,199.

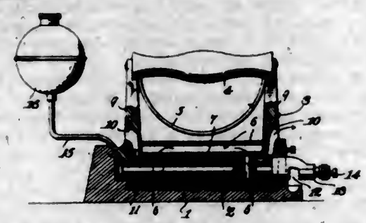


1. An advertisement comprising a portion of a sheet of paper having thereon at a distance from its edges border lines defining an area of predetermined form and size, and having within said area and adjacent to one of the lines, marks to indicate the positions of perforations for filing the advertisement in a loose leaf binder.

2. An advertisement comprising a portion of a sheet of paper having thereon at a distance from its edges border lines; and having within said lines, marks and characters to represent a loose leaf for temporary binders, part of the marks being adjacent to one of the border lines to indicate the positions of perforations for filing the advertisement.

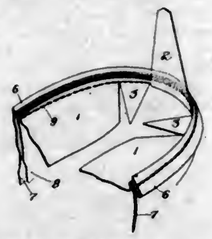
880,514. SELF-HEATING SAD-IRON. JOHN E. FAY, Gibsonburg, Ohio. Filed May 14, 1906. Serial No. 316,820.

1. As a new article of manufacture, a handle for sad irons comprising two spaced parallel plates marginally in communication with the atmosphere, handle posts integral with the plates and provided with oppositely discharging air channels that extend from the lower plate to points intermediate of the ends of the posts, and open-ended tubes carried by the lower plate and disposed at right angles thereto and communicating with the space between the plates.



2. A sad iron comprising a body having a combustion chamber, a burner therein, and a handle comprising two spaced parallel plates marginally in communication with the atmosphere, handle posts carried by the plates and provided with oppositely-discharging air channels that extend from the lower plate to points intermediate the ends of the posts, and open-ended tubes carried by the lower plate and disposed on each side of the burner.

880,515. WELT-SHOE. AVEDIS J. GABRIELIAN, Boston, Mass. Filed Aug. 7, 1907. Serial No. 387,438.



1. A shoe, containing an upper, welt and sole secured together, and having opposite flexible cover-pieces secured at their edges to the opposite sides of the shoe adjacent the inner edge of the welt, said cover-pieces being bent upwardly and back upon themselves toward each other on the inside of the shoe and connected together against lateral spreading movement.

2. A shoe, consisting of a sole, an upper and welt secured together and to said sole, a cushion for the foot to rest upon, said cushion extending in a plane above the edges of the upper and the welt, and retaining means for binding in and holding in place said cushion, consisting of opposite, thin, freely flexible, independent pieces secured respectively to the edges of the upper adjacent the welt and thence bent around the edges of the cushion to embrace the cushion and form a smooth rounded top surface and outer edge for the cushion, the free ends of said normally independent opposite pieces being connected together on top of the cushion to hold the cushion flat in place and constituting, with the cushion, a soft cushion-rest for the foot, capable of readily yielding and conforming to the bottom of the foot.

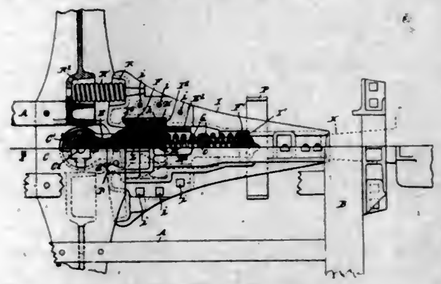
3. A shoe, consisting of an upper, welt and sole secured together, and having opposite flexible cover-pieces secured at their edges to the opposite sides of the shoe adjacent the inner edge of the welt, said pieces being bent upwardly and back upon themselves toward each other on the inside of the shoe, a layer of soft cushion material being interposed next to said pieces beneath the same and said pieces being bent over the edges of said material on top thereof and connected together at their free ends to retain said cushion material and prevent lateral spreading movement.

4. A shoe, containing an upper, welt and sole secured together, and having opposite cover-pieces secured respectively adjacent to the inner edges of the welt at the opposite sides of the shoe extending inwardly toward each other, and an inner piece extending longitudinally of the shoe and of the two side pieces respectively for holding the shoe against lateral spreading movement.

5. A shoe, containing an upper, welt and sole secured together, opposite flexible pieces fastened at their edges adjacent to the inner edges of the welt at the opposite sides of the shoe and bent over inwardly upon themselves adjacent the line of fastening and secured together above the sole, the bent-over edges of said side pieces and the inner edge of the welt containing a line of fastening means holding them down flat together.

[Claim 6 not printed in the Gazette.]

880,516. DRAFT AND BUFFING RIGGING FOR RAILWAY-CARS. RICHARD D. GALLAGHER, Jr., New York, N. Y. Filed Oct. 1, 1906. Serial No. 336,975.



1. In a draft and buffing rigging, the combination with the telescoping members movable longitudinally with relation to each other and pivotally supported for angular movement in a horizontal plane, of a friction box with which both of said members coöperate and friction members and draft and buffing springs interposed between said longitudinally movable members whereby when moved in one direction with relation to each other the box will be held by one member, and when moved in the opposite direction with relation to each other said box will be moved by the other member; substantially as described.

2. In a draft and buffing rigging, the combination with a yoke, a friction box supported by said yoke against movement in one direction and transversely movable wedge blocks and draft and buffing springs mounted in said yoke, of a follower coöperating with said wedge blocks and a housing telescoping with said yoke and having shoulders coöperating respectively with the friction box and follower, whereby upon movement of the housing in one direction the friction box is moved to operate the wedge blocks and upon movement in the opposite direction the follower is moved to operate the wedge blocks; substantially as described.

3. In a draft and buffing rigging, the combination with the yoke supported for angular movement in a horizontal plane, the front and rear followers mounted in said yoke, the friction box supported against forward movement by said yoke and the springs and wedge blocks interposed between said followers, of the housing telescoping with the yoke and having shoulders coöperating with the friction box and rear follower respectively; substantially as described.

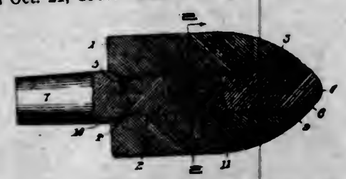
4. In a draft and buffing rigging, the combination with the yoke pivoted to move angularly in a horizontal plane, the housing telescoping with and inclosing said yoke and at its forward end adapted for connection with a coupler shank, of front and rear followers mounted in said yoke, a friction box held by said yoke against forward movement, springs and wedge blocks interposed between said followers and friction box and shoulders on the housing coöperating with both followers and the friction box; substantially as described.

5. In a draft and buffing rigging, the combination with the yoke pivotally supported at its rear end for angular movement in a horizontal plane, and the housing formed in sections and telescoping with said yoke, of the longi-

tudinally arranged draft and buffing spring mounted in the yoke, followers at opposite ends of said spring, a friction box held by the yoke against movement in one direction, friction blocks mounted between one of said followers, the friction box and one end of the spring and shoulders on the housing for coöperating with the followers and friction box; substantially as described.

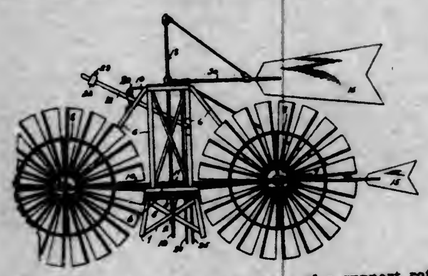
[Claims 6 to 10 not printed in the Gazette.]

880,517. PIERCING-MANDREL. ROBERT J. GARDNER, Pittsburg, Pa., assignor to The S. Jarvis Adams Company, Pittsburg, Pa., a Corporation of Pennsylvania. Filed Oct. 21, 1907. Serial No. 398,340.



In a piercing mandrel, a cast-iron body, and a steel core or center piece extending through the same and having at one end a steel piercing point and at the other end a shank.

880,518. WINDMILL. ALBERT F. GEORGE, Bisbee, Ariz., assignor of one-half to John Ryan, Kansas City, Mo. Filed July 28, 1906. Serial No. 328,234.



1. The combination with the tower, of a support rotative thereon in a horizontal plane, two pairs of vertical wind wheels rotatively mounted on said support at opposite sides of a vertical plane intersecting transversely to the support the axis of revolution of the support, the wind wheels of each pair being disposed one in front of the other and at opposite sides of a vertical plane intersecting the axis of revolution at right angles to the other intersecting plane, a pitman, and means by which rotation of said wind wheels is employed to reciprocate said pitman.

2. The combination with the tower, of a support rotative thereon in a horizontal plane, two pairs of vertical wind wheels rotatively mounted on said support at opposite sides of a vertical plane intersecting transversely to the support the axis of revolution of the support, the windwheels of each pair being disposed one in front of the other and at opposite sides of a vertical plane intersecting the axis of revolution at right angles to the other intersecting plane, a pitman, a rotary shaft having a crank pivoted to said pitman, and means by which rotation of said wind wheels rotates said shaft.

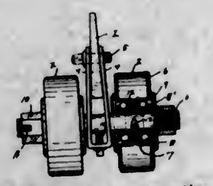
3. The combination with the tower, of a support rotative thereon in a horizontal plane, two pairs of vertical wind wheels rotatively mounted on said support at opposite sides of a vertical plane intersecting transversely to the support the axis of revolution of the support, the wind wheels of each pair being disposed one in front of the other and at opposite sides of a vertical plane intersecting at right angles to the other intersecting plane the axis of revolution, the blades of each wheel being inclined relative to the face of the wheel oppositely to the blades of the other wheel of the pair, a pitman, a rotary shaft having a crank pivoted to the pitman, and means by which the rotation of the windwheels imparts rotation in a like direction to said shaft.

4. The combination with the tower, of a support rotative thereon in a horizontal plane, a driving shaft rotatively mounted longitudinally on said support and intersecting the axis of revolution of the support and having at the axis of revolution of the support a crank, a pitman pivoted to said crank, two pairs of transverse horizontal shafts rotatively mounted on said support at right angles to the driving shaft and at opposite sides of said crank, the shafts of each pair having the same axis and disposed at opposite sides of the driving shaft, four vertical wind wheels secured respectively to said transverse shafts, and means for imparting rotation in like direction from said transverse shafts to said driving shaft.

5. The combination with the tower, of a support rotative thereon in a horizontal plane, a longitudinal driving shaft rotatively mounted on said support and intersecting the axis of revolution of the support and having at the axis of revolution a crank, a pitman pivoted to said crank, two pairs of transverse horizontal shafts rotatively mounted on the support at right angles to the driving shaft and at opposite sides of the crank, the shafts of each pair having the same axis and disposed at opposite sides of the driving shaft, means for imparting rotation in a like direction from said transverse shafts to said driving shaft, and four vertical wind wheels secured respectively to said transverse shafts, the blades of each wheel of a pair being inclined relative to the face of the wheel oppositely to the blades of the wheel having the same axis.

[Claims 6 to 17 not printed in the Gazette.]

880,519. CONVERTIBLE SKATE. FRIEDRICH GRAFFENBERGER, Milwaukee, Wis. Filed July 20, 1907. Serial No. 384,699.



1. The combination with the respective ends of an ice skate blade, of an adjustable roller supporting shaft, clamping arms adjustably connecting said shaft with the skate blade, a roller mounted on said shaft, and a clutch brake adapted, in one position of adjustment on the shaft, to resist a backward rotation of said roller.

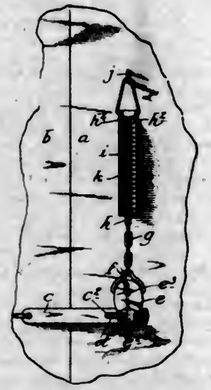
2. The combination with the respective ends of an ice-skate blade, of clamping arms connected with the skate blade, an adjustable shaft journaled in said arms and normally non-rotatable, a roller mounted on said shaft and a gravity clutch for the roller loosely connected with the shaft and adapted to move to inoperative position when the shaft is in one position of adjustment.

3. The combination of an ice skate blade perforated near its respective ends, a roller supporting clamping member at each end of the blade having a clamping bolt extending through said perforation and a roller carried by the clamping member, said clamping member being adapted to swing on the clamping bolt as a pivot to adjust the roller either above or below the skate blade when the pivotal clamping bolt is loosened.

4. The combination of an ice skate blade, a clamping yoke at each end thereof pivotally connected with the blade, a shaft adjustably mounted in said clamping yoke, a pair of rollers mounted on the shaft and a clutch member adapted to lock said rollers against rotation in one direction in one position of adjustment of said shaft.

5. The combination of an ice skate blade, a clamping yoke at each end thereof pivotally connected with the blade, an adjustable shaft mounted in said clamping yoke, a pair of rollers mounted on the shaft and means for locking said shaft against rotation, said shaft being provided with a socket and a channel of gradually decreasing depth leading therefrom, a loose ball adapted to move in said socket and channel and a ring connected with the roller and adapted to be engaged by said ball when at the shallow end of said channel whereby roller rotation toward the shallow end of the channel is prevented when the ball is in that position.

880,520. PADLOCK ATTACHMENT. SAMUEL E. GLADDING, Jersey City, N. J. Filed Dec. 24, 1907. Serial No. 407,919.

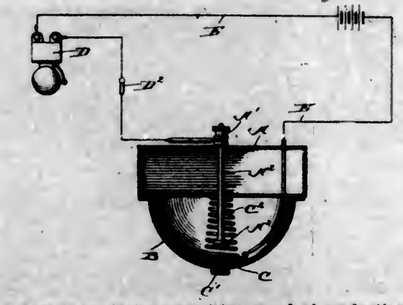


1. A padlock provided with a tensional support which holds it in an inverted position when in use.

2. A padlock, a yoke pivotally connected with the opposite sides thereof and a tensional support connected with said yoke which normally holds the padlock in an inverted position when in use.

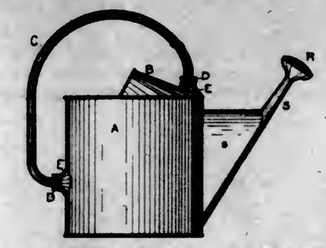
3. A padlock, a yoke pivoted to the opposite sides thereof, a flexible chain device connected with said yoke, a casing suspended over the padlock, a rod connected with said chain and passed through said casing, and a spring mounted in said casing between the lower end thereof and the upper end of said rod.

880,521. FIRE-ALARM. WILLIAM GLENCK, Newark, N. J. Filed June 14, 1907. Serial No. 378,990.



A fire alarm device comprising a rod of conducting material, a celluloid cap inclosing an end portion of said rod, a contact plate secured to the celluloid cap, a spring encircling said rod and secured at one end to the said contact plate to draw same into engagement with the rod, and an electrical circuit including said rod and said contact plate as and for the purpose set forth.

880,522. WATERING-CAN. WILLIAM GRAY, Rochester, N. Y. Filed Sept. 28, 1906. Serial No. 336,555.



1. As a means for detachably securing a handle to a can or like article; a hollow threaded member secured to the body of such can and extending outwardly therefrom; an outwardly projecting flange on and spaced from the end of such handle, the end of such handle beyond such flange adapted to engage within such hollow threaded member, and a cap adapted to screw over such threaded member and having an inwardly extending flange adapted to clamp the flange on such handle against such hollow threaded member.

2. As a means for detachably securing a handle to a can or like article; a hollow threaded member secured to the body of such can and extending outwardly therefrom; an outwardly projecting flange on and spaced from the end of such handle, the end of such handle beyond such flange adapted to engage within such hollow threaded member, and a cap adapted to screw over such threaded member and having an inwardly extending flange adapted to clamp the flange on such handle against such hollow threaded member, such hollow threaded member having an inwardly extending flange or seat adapted to engage the flange on such handle.

3. As a means for detachably securing a handle to a can or like article; an outwardly projecting flange on such handle and two coöperating threaded members, one of them secured to the can and the other revolubly supported on such handle, such threaded members adapted when screwed together to clamp the flange on such handle between them and such handle adapted to engage one or both of such threaded members at points removed from and independently of such flange to relieve the strain exerted by the handle upon such flange.

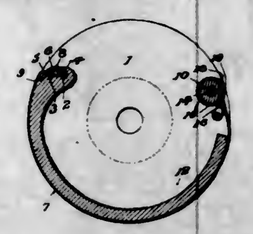
4. As a means for detachably securing a cylindrical element to any desired body; a hollow threaded member secured to such body and extending outwardly therefrom; an outwardly projecting flange on and spaced from the end of such cylindrical element, the end of such cylindrical element beyond such flange adapted to engage within such hollow threaded member and a cap adapted to screw over such threaded member and having an inwardly extending flange adapted to clamp the flange on such cylindrical element against such hollow threaded member.

5. As a means for detachably securing a cylindrical element to any desired body; a hollow threaded member secured to such body and extending outwardly therefrom; an outwardly projecting flange on and spaced from the end of such cylindrical element, the end of such cylindrical element beyond such flange adapted to engage within such hollow threaded member and a cap adapted to screw over such threaded member and having an inwardly extending flange adapted to clamp the flange on such cylindrical element against such hollow threaded member, such hollow threaded member having an inwardly extending flange or seat adapted to engage the flange on such cylindrical element.

880,523. MEANS FOR SECURING SHEETS OR BLANKETS TO PRINTING-PRESS CYLINDERS. CHARLES G. HARRIS, Niles, Ohio, assignor to The Harris Automatic Press Company, Niles, Ohio, a Corporation of Ohio. Filed Dec. 22, 1906. Serial No. 349,141.

1. In combination, a cylinder having a clamp-seat within the periphery thereof, said seat having a flat face and a

shoulder at an angle thereto, a blanket, a clamp for one end of such blanket fitted in said seat and held against said shoulder by the blanket when under tension, a tension roll to which the other end of such blanket is secured, said roll being also located within the periphery of said cylinder, and means detachably securing said roll to the cylinder, whereby the roll with the blanket may be raised from the cylinder while the clamp remains in its seat.



2. In combination, a cylinder having a clamp-seat within the periphery thereof, a blanket, a clamp for one end of such blanket fitted in said seat, a tension roll to which the other end of such blanket is secured, said roll being also located within the periphery of said cylinder, and inwardly-movable spring-pressed shafts carried by said roll and mounted in the ends of the cylinder.

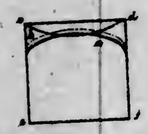
3. In combination, a cylinder having a clamp-seat extending approximately the full length thereof, said seat having a flat face and a shoulder at an angle thereto, a blanket of any desired width within the length of the cylinder, a clamp of length approximately the width of the blanket, one end of which is secured thereto, said clamp being located within said seat and held against said shoulder by the blanket when under tension, a tension roll located within the periphery of the cylinder and to which the other end of such blanket is attached, and means for detachably securing the tension roll to the cylinder.

4. The combination with a cylinder having a clamp-seat, a blanket, a clamp located in said clamp seat and to which one end of the blanket is secured, the other end of said blanket being slitted, a tension roll, a plate, and screws securing the latter to said roll, said slits being designed to coincide with said screws.

5. The combination with a cylinder having a clamp-seat, a blanket, a clamp located in said clamp-seat and to which one end of the blanket is secured, a tension roll to which the other end of such blanket is secured, and shafts for said roll mounted in said cylinder, said shafts being constructed and arranged to permit of being moved lengthwise, within the roll, to disengage the latter from the cylinder while the sheet is secured to the roll.

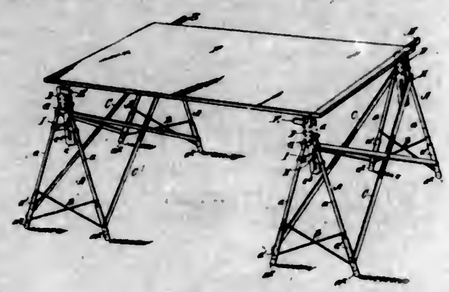
[Claims 6 to 10 not printed in the Gazette.]

880,524. WASHABLE COVERING FOR PILLOWS, FEATHER-BEDS, QUILTS, AND THE LIKE. ELISABETH HAUPHOFF, Dusseldorf, Germany. Filed Feb. 18, 1907. Serial No. 358,058.



A washable covering, the combination comprising, a slip having an arched end, a flap *b* formed at the other end of the slip, the said flap having its sides attached to the edges of the slip, the arched end of the slip being placed over the contents of the cover, and the flap being drawn over the whole, substantially as described and shown and for the purpose set forth.

880,525. TRESTLE. WILLIAM H. HAZZARD, Easton, Pa., assignor of one-half to Frank Harold Hazzard, New York, N. Y. Filed Sept. 5, 1907. Serial No. 391,463.



1. A trestle comprising two pairs of telescopic legs connected by crossed braces and which automatically lengthen and shorten as the trestle is folded or expanded, brackets to which the upper ends of the legs of each pair are pivoted and from which they diverge downwardly, and a detachable cross piece connecting the brackets.

2. A trestle comprising two pairs of telescopic legs connected by crossed braces and which automatically lengthen and shorten as the trestle is folded or expanded, brackets to which the upper ends of the legs of each pair are pivoted and from which they diverge downwardly, and a detachable notched cross piece connecting the brackets to prevent them from spreading.

3. A collapsible trestle, comprising two pairs of telescopic legs, the upper members of the legs of each pair being arranged close together and pivoted to a connecting device from which they diverge downwardly, the lower members of the legs of each pair being connected with the lower portions of the upper members of the same pair by crossed braces pivoted at their opposite ends, and the two pairs of legs being connected for conjoint movement by crossed braces pivotally connected to the lower portions of the legs of one pair and pivotally connected to the upper portion of the legs of the other pair.

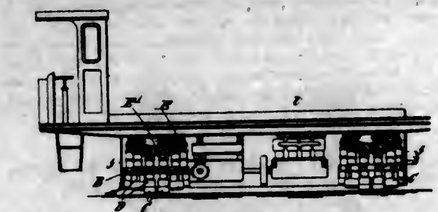
4. A trestle comprising two pairs of telescopic legs, the lower members of the legs of each pair being connected with the lower portions of the upper members of the same pair by crossed braces and the two pairs of legs being connected for conjoint movement by crossed braces connected to the lower portion of the legs of one pair and to the upper portion of the legs of the other pair, vertically adjustable brackets to which the legs of each pair are pivotally connected and from which they diverge downwardly and toggle levers connecting each bracket with a pair of divergent legs.

5. A trestle comprising folding legs connected by crossed braces and vertically adjustable brackets carried by the legs, each comprising a vertical portion slotted at its lower end and connected by toggle levers with the adjacent legs and having vertical series of perforations, a shorter member vertically perforated and connected with the longer member by a slotted bridge piece and bolts for connecting the bracket with the legs of the trestle.

880,526. VEHICLE. HENRY S. HELE-SHAW, London, England. Filed June 27, 1907. Serial No. 381,161.

1. The combination with a vehicle or transporter of a carrier rotatable in a "horizontal plane", feet supported by said carrier and movable relatively thereto, and means to successively depress said feet relatively to the carrier to engage the ground and to raise them clear of the ground.

2. The combination with a vehicle or transporter of a carrier rotatable in a "horizontal plane", feet supported by said carrier and movable relatively thereto and means to successively depress said feet relatively to the carrier to engage the ground and to raise them clear of the ground such movements resulting in or permitting a movement of the vehicle relatively to the ground.



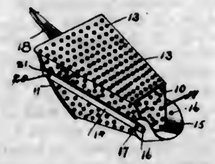
3. The combination with a vehicle or transporter of a carrier rotatable in a "horizontal plane", feet supported by said carrier and movable relatively thereto, means to successively depress said feet relatively to the carrier to engage the ground and to raise them clear of the ground and means carried by the vehicle to rotate the carrier.

4. The combination with a vehicle or transporter of a carrier rotatable in a "horizontal plane", feet supported by said carrier and movable relatively thereto, means to successively depress said feet relatively to the carrier to engage the ground and to raise them clear of the ground and means for varying the position relatively to the vehicle at which the feet engage the ground.

5. The combination with a vehicle or transporter of a carrier rotatable in a "horizontal plane", feet supported by said carrier and movable relatively thereto, means to successively depress said feet relatively to the carrier to engage the ground and to raise them clear of the ground, and means for steering the vehicle comprising mechanism for varying the position relatively to the vehicle at which the feet engage the ground.

[Claims 6 to 14 not printed in the Gazette.]

880,527. DIGGER. JACOB HEPP, Shively, Ky. Filed July 23, 1907. Serial No. 385,101.



1. A device of the character described comprising a receptacle having an open end, a cover for said receptacle, and a rear closure for said receptacle, all of said members being formed of perforated sheet metal, and a shovel attached to the open end of said receptacle.

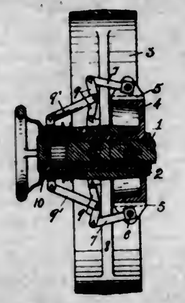
2. In a device of the character described a shovel and a receptacle, said receptacle comprising a metal plate of U formation, said metal plate being enlarged at one end, a rear closure at the enlarged end of said plate and a cover mounted across the ends of said plate all of said members being perforated.

3. In a device of the character described a perforated receptacle, a bail around said receptacle and a shovel carried at the ends of said bail.

4. In a device of the character described a receptacle a bail passing around said receptacle, a shovel mounted at ends of said bail and means for attaching a handle to said bail.

880,528. FRICTION-CLUTCH. ANTHONY L. HERKENHOFF, Minster, Ohio. Filed Oct. 14, 1907. Serial No. 397,259.

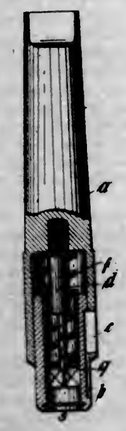
1. In combination in a friction-clutch, a pulley, a drive-member, a split brake-ring adapted when contracted to frictionally engage the periphery of the drive-member and having its sections provided with sockets, a block associated with each ring section and removably attached to a pulley spoke without the ring, a drive-pin carried by each block and projecting inwardly from the block and loosely into the socket of the associated ring-section, said blocks being positioned to permit the ring-sections, actuated by centrifugal force, to move radially out of engagement of the drive-member, and mechanism for effecting a contraction of the ring-sections upon the drive-member.



2. The combination with the drive-member, the split brake-ring coacting therewith, and the driven-member of a friction clutch mechanism, of a part carried by the driven-member in association with each ring-section and coöperating therewith to permit a limited centrifugal movement thereof when the brake-ring is released from the drive-member.

3. In combination in a friction-clutch, a pulley, a brake-wheel, a split-ring coöperating therewith and having its sections socketed, blocks removably secured to the pulley spokes and standing laterally thereof in the plane of radial movement of the ring-sections, and a drive-pin carried by each block and projecting inwardly therefrom loosely within the socket of the associated ring-section, the expanding movements of the ring-sections being guided by the drive-pins and limited by the blocks.

880,529. THOROUGHFARE TAP-HOLDER. HANS HEYNAU, Dotzheim, near Wiesbaden, Germany. Filed Apr 10, 1907. Serial No. 367,333.



A tap holder comprising a shank having a recess, a pin projecting thereinto and a spring actuated tap receiving head having a bore slidable in the recess and splined to the shank.

880,530. WINDOW-SASH FASTENER. WILLIAM J. HILLS, Waterford, Pa. Filed Nov. 13, 1907. Serial No. 401,975.

The combination in a window fastener of a vertical rod C, an inclined plate D embracing said rod, and a curved

locking-dog E embracing said rod, and having its inner end resting on said inclined plate, substantially as and for the purpose set forth.



880,531. CARPET-BEATER. THOMAS HOLT, Tarrytown, N. Y., assignor to The Holt-Lyon Company, Tarrytown, N. Y., a Corporation of New York. Filed May 3, 1904. Serial No. 206,192.



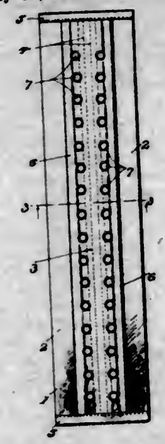
1. A carpet beater comprising a wire having a shank portion and a looped portion; said looped portion projecting to one side of the shank portion; a second wire in substantially the same form as the first mentioned wire; said wires being united together, their shank portions adjacent to each other, the looped portions extending in opposite directions crossing each other; a tie piece placed in connection with the intersecting wires of said loops, respectively, united to the shanks aforesaid by twisting; a handle secured to the ends of the shanks, substantially as described.

2. A carpet beater comprising a wire having a shank portion and a looped portion; said looped portion projecting to one side of the shank portion; a second wire formed in substantially the same form as the first mentioned wire; the looped portions crossing each other and extending in opposite directions; the shanks being united by twisting the wires slightly below the loops; a handle secured to the end of the shank.

3. In a carpet beater having a shank constructed of wire; said wires twisted near their ends and having one wire longer than the others; a handle provided with a central longitudinally extended socket from one end of the handle to nearly the opposite end thereof; said twisted wires forming the shank portion of the beater placed in said socket in said handle; the shorter ones engaging the bottom thereof; said longer wire extending through the bottom of said socket and back, parallel to itself into said handle to hold it in place, substantially as described.

4. A carpet beater comprising a wire provided with a looped portion and a shank portion; said looped portion extending to one side of the shank portion; a second wire substantially in the same form as the first mentioned wire; said wires being united together, the looped portions extending in opposite directions and crossing each other; the shank portions adjacent to each other; a tie piece placed in connection with the intersecting wires of said looped portions, respectively, and twisted around said shanks; said wires forming the shank, being twisted at their ends; a handle secured to the end of the said shank, on the twisted portion thereof, but which twisted portion extends slightly above the handle, when in position, substantially as described.

880,532. CORSET. ZACHARY T. HOSKINS, Brookhaven, Miss. Filed July 18, 1907. Serial No. 384,412.



1. As a new article of manufacture a closure for corsets or the like, comprising a base portion, an upper portion arranged in superimposed relation thereto, means securing said parts together approximately at their center, whereby the edges of said upper portion are left free, and means carried by the edges of said upper portion, whereby the closure may be secured between the adjacent edges of the garment.

2. As a new article of manufacture, a closure for corsets or the like, comprising a base portion, an upper portion of less width than the base portion arranged in superimposed relation thereto, means securing said parts together approximately at their center, whereby the edges of said upper portion are left free and eyelets adjacent to the edges of said upper portion.

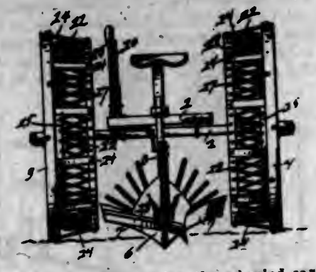
3. As a new article of manufacture, a closure for corsets or the like, comprising a base portion, an upper portion of less width than the base portion, and arranged in superimposed relation thereto, and eyelets adjacent to the edges of said upper portion, said base portion being provided with stays.

4. As a new article of manufacture, a closure for corsets or the like, comprising a base portion, an upper portion of less width than the base portion and arranged in superimposed relation thereto, eyelets adjacent to the edges of said upper portion and stays at the edges of the base portion and the upper portion.

5. The combination with a corset or the like having its adjacent edges provided with eyelets, of a closure therefor consisting of a base portion, a superimposed portion narrower than such base portion provided at its adjacent edges with stays and rows of eyelets adjacent thereto, whereby the edges of the garment will be adapted to aline against the edges of said narrow portion in the act of lacing the closure in place.

880,533. POTATO-HARVESTER. JOEL S. HOYT, Bannister, Mich. Filed Nov. 17, 1906. Serial No. 343,795.

1. In a potato digger, the wheeled carriage and double mold-board plow, the rings connected to the spokes of the wheels of the carriage, the brackets connected to the rims of the wheels and projecting inwardly, the rings connected to said brackets and the rods connecting the adjacent rings, as set forth.



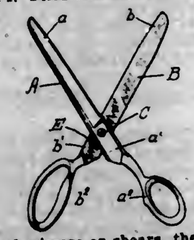
2. A potato digger comprising the wheeled carriage and double mold board plow, the rings arranged upon opposite sides of the plow, the brackets for connecting said rings to the rims of the wheels, rings of smaller diameter connected to the spokes of the wheels, and spaced bent rods connecting the said rings, for the purpose specified.

880,534. REPAIR-TIP FOR UMBRELLAS. LAUREL M. HOYT, Hillsboro, Oreg. Filed Dec. 7, 1906. Serial No. 346,802.



As an article of manufacture, a repair tip for repairing broken ends of umbrella ribs, or stretchers, said repair tip comprising a rolled or barrel portion and a flattened portion, said flattened portion having an oblique slot therein, the said rolled or barrel portion being arranged to receive the broken rib, or stretcher of an umbrella, said rolled or barrel portion being provided with two contiguous edges arranged to be pressed into the concavity of the rib or stretcher, substantially as described.

880,535. SCISSORS AND SHEARS. ERNEST HUNOLD, Providence, R. I. Filed Feb. 15, 1907. Serial No. 357,513.



1. In a pair of scissors or shears, the combination with the shear members, and their pivot, of a compressible lubricant saturated member confined wholly within one of said members only, to the rear of the pivot only, and contiguous to the adjacent faces of the two members.

2. In a pair of scissors or shears, the combination with the shear members, and their pivot, of a compressible lubricant saturated member confined wholly within one of said members only, to the rear of the pivot only, and contiguous to the adjacent faces of the two members, and means for facilitating the flow of the lubricant from said member.

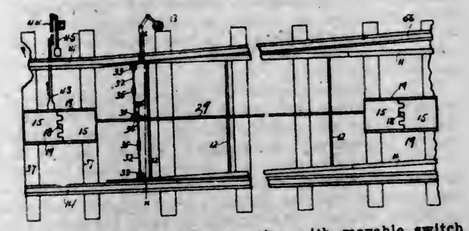
3. In a pair of scissors or shears, the combination with the shear members and their pivotal connection, of an absorbent lubricant-saturated material on one of the shear members only and disposed to the rear of the pivot only and adjacent the contacting surface of the other shear member.

4. In a pair of scissors or shears, the combination with the shear members and their pivotal connection, of a compressible fibrous absorbent lubricant-saturated material on one of the shear members only and disposed to the rear of the pivot only and adjacent the contacting surface of the other shear member.

5. In a pair of scissors or shears, the combination with the shear members and their pivotal connection, of an absorbent lubricant-saturated material on one of the shear members only and disposed to the rear of the pivot only and adjacent the contacting surface of the other shear member, the shear member in which the lubricant-saturated material is confined being provided with a contracted air passage to facilitate the discharge of the lubricant.

[Claims 6 to 8 not printed in the Gazette.]

880,536. AUTOMATIC RAILWAY-SWITCH. JOHN A. JACKSON, Ithaca, N. Y. Filed July 25, 1907. Serial No. 385,535.



1. In a switch, the combination with movable switch rails, depressible hinged plates positioned between parallel guide frames, a toothed rack hinged with said hinged plates, a pinion mounted upon a shaft and meshing with the teeth of the rack, a depressing of said hinged plates operating to depress the rack and revolve said pinion, a revoluble operating rod, meshing gears carried by said shaft and rod, a crank provided in said rod, connecting means between said crank and movable switch rails for actuating the latter.

2. In a switch, the combination with movable switch rails, depressible spring held plates positioned between parallel guide frames, a toothed rack hinged with said hinged plates, and moving therewith, a ratchet pinion mounted upon a shaft and operated by engagement with said toothed rack, to revolve said shaft upon depression of the rack, an operating rod provided with a crank and adapted to be revolved by the revolution of said shaft, connecting rods between the movable switch-rails and the wrist of said crank for actuating the switch-rails.

3. In a switch, the combination with movable switch-rails, a hand operating lever in pivotal engagement with a toothed rack engaging a ratchet pinion mounted upon a revoluble shaft, an operating rod provided with a crank adapted to revolve by the action of said shaft, connecting rods engaging the wrist of said crank and the switch rails for actuating the latter.

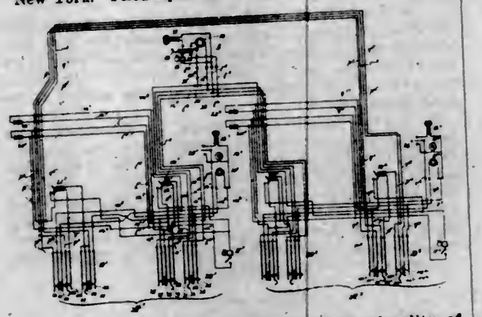
4. In a trip operating mechanism, the combination with a truck, a pivoted trip-arm provided with a roller journaled in the operating end thereof, a wedge bar adapted to engage under the other end of said arm for depressing the roller end thereof.

5. In a trip operating mechanism, the combination with

a truck, a pivoted trip-arm provided with a roller journaled in the operating end thereof, a wedge bar carried by a revoluble shaft adapted to be manually rotated by a lever to force said bar under the other end of said arm for depressing the roller end thereof.

[Claims 6 and 7 not printed in the Gazette.]

880,537. TELEPHONE DICTATING SYSTEM OR APPARATUS. JOHN W. KELLY, Jr., Camden, N. J., assignor to General Acoustic Company, a Corporation of New York. Filed Apr. 27, 1907. Serial No. 370,649.



1. In a telephone system or apparatus, a plurality of managers' stations each having a talking battery, a stenographer's station, means for establishing talking circuits between said stenographer's station and any manager's station including the battery at such manager's station, and means for establishing a talking circuit between two managers' stations, said circuit including the battery at one such station only.

2. In a telephone system or apparatus, a plurality of managers' stations each having a battery, a stenographer's station, means for establishing a pair of separate talking circuits between said stenographer's station and any desired manager's station, said circuits including the battery at such manager's station, and means for establishing a pair of separate talking circuits between any two managers' stations, said circuits including the battery at one manager's station only.

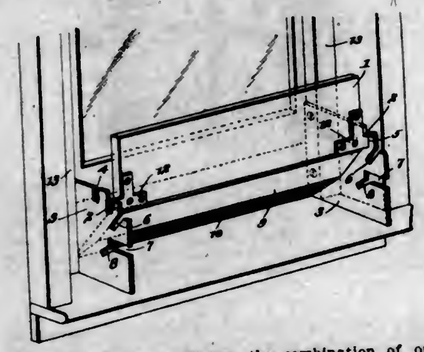
3. In a telephone system or apparatus, two managers' stations each having its own battery, the circuit connections of one manager's station being different from those of the other, and circuits for putting said managers' stations into telephonic communication, said circuits including the battery at one manager's station only.

4. In a telephone system or apparatus, a plurality of managers' stations each having a battery, a stenographer's station, keys for establishing talking circuits between said stenographer's station and any manager's station, said circuits including the battery at said manager's station, additional keys at the several managers' stations, the keys of certain managers' stations being disconnected from the battery at such station, and talking circuits completed by said keys between the managers' stations, whereby the battery at only one manager's station is included in any such talking circuit.

5. In a telephone system or apparatus, a plurality of managers' stations interconnected by separate circuits, a talking battery at each manager's station, only one terminal of said circuits having any connection with said batteries, and means for establishing telephonic communication over said circuits, whereby said telephonic communication circuits include only the battery at one manager's station in every case.

880,538. WINDOW-VENTILATOR. GEORGE W. KENNEDY, Delaware City, Del. Filed Mar. 29, 1907. Serial No. 365,350.

1. In a window ventilator, the combination of oppositely disposed side plates, an air deflecting slat adjustably supported between the side plates, a tongue and socket connection being provided between the side plates and deflecting slat and the said tongues and sockets being of angular formation and adapted to interlock with each other to hold the deflecting slat in an adjusted position, and a second air deflecting slat hinged to one of the longitudinal edges of the first mentioned air deflecting slat and designed to be folded against the same in either a vertical or horizontal position or to hang at an angle to the same.



2. In a window ventilator, the combination of oppositely disposed side plates provided with a series of corresponding sockets of angular formation, and a pair of air deflecting slats having the longitudinal edges thereof hinged, one of said slats having angular tongues projecting from the opposite ends thereof adjacent the edge to which the opposite slat is hinged, the said tongues being adapted to interlock with a selected pair of the corresponding sockets in the side plates to hold the deflecting slats in an adjusted position.

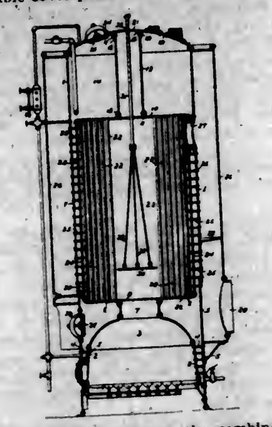
3. In a window ventilator, the combination of a pair of side plates each of which is provided in its upper edge with a pair of vertical sockets one of which is deeper than the other, and also at its rear edge with an inclined socket and a horizontal socket, an air deflecting slat provided at its extremities with angular tongues designed to interlock with a selected pair of the sockets to hold the air deflecting slat in an adjusted position, and a second air deflecting slat hinged to the first mentioned slat and designed to hang therefrom at an angle varying according to the sockets engaged by the tongues of the first mentioned slat.

4. In a window ventilator, the combination of oppositely disposed side plates, an air deflecting slat adjustably supported between the side plates, and a second air deflecting slat hinged to one of the longitudinal edges of the first mentioned slat, the second mentioned slat being provided at its free edge with a laterally extended flange for the purpose specified.

5. In a window ventilator, the combination of oppositely disposed side plates provided with a plurality of corresponding sockets of angular formation, an air deflecting slat mounted between the side plates, and retractable tongues carried by opposite ends of the deflecting slat, the said retractable tongues being of angular formation and adapted to interlock with any selected pair of the before mentioned sockets to hold the deflecting slat in an adjusted position.

880,539. STEAM-BOILER FURNACE. JAMES V. KENNY, Omaha, Nebr. Filed Mar. 6, 1907. Serial No. 360,918.

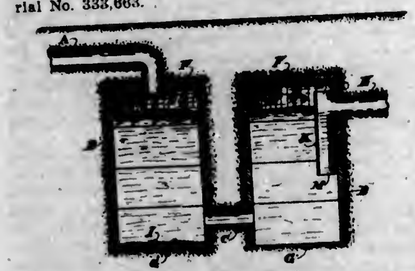
1. In a steam boiler furnace, the combination with a combustion chamber at one end, a steam dome at the other end having an exposed head provided with an opening, an annular series of water tubes disposed between the wall of the combustion chamber and the steam dome, flue plates secured to the ends of said tubes, and the wall of the furnace provided below the upper flue plate with an outlet for smoke and gases, of a pipe communication with the central flue formed by the annular series of water tubes and with the opening in the top of the steam dome, and a removable cover plate normally closing said opening.



2. In a steam boiler furnace, the combination with a combustion chamber, a steam dome having an exposed head provided with an opening and an annular series of water tubes between the wall of the combustion chamber and the steam dome, of a pipe passing through the steam dome and connecting the opening in the top of the latter with the flue formed by the annular series of flues, a cover plate normally closing the opening in the top of the steam dome, a deflector within the flue formed by the water tubes, and means whereby the removable deflector is supported by said cover plate on the steam dome.

3. In a steam boiler furnace, the combination with a combustion chamber, a steam dome having an exposed head provided with an opening, and an annular series of water tubes between the steam dome and the wall of the combustion chamber, of a pipe connecting the opening in the steam dome with the flue formed by the annular series of water tubes, a cover plate normally closing the upper end of said pipe, a deflector within the flue formed by the water tubes, a bar passing through the cover plate on the steam dome, means connecting the lower end of said bar with the deflector and means for supporting said bar and deflector at different vertical adjustments.

880,540. APPARATUS FOR SEWAGE DISPOSAL. JOHN H. KINEALY, Ferguson, Mo. Filed Sept. 7, 1906. Serial No. 333,663.



1. The combination of an apparatus for sewage disposal comprising a closed primary vessel and a closed secondary vessel, a non-siphonic passage connecting said vessels so located and arranged as to allow the flow of liquid from one to the other below where floating matter accumulates and above where non-floating matter accumulates without allowing any flow of air or gas, an inlet leading into the primary vessel, and an outlet leading from the secondary vessel, said outlet being connected to an outlet piece placed inside of the secondary vessel and having a vent at the top and arranged to take liquid from the secondary vessel at a point below where floating matter accumulates in said vessel, substantially as described.

2. The combination in an apparatus for sewage disposal comprising a closed primary vessel and a closed secondary vessel, a non-siphonic passage connecting said vessels so located and arranged as to allow the flow of liquid from one to the other below where floating matter accumulates and above where non-floating matter accumulates without allowing any flow of air or gas, an inlet leading into the primary vessel above where floating matter accumulates, and an outlet leading from the secondary vessel below the level of the inlet into the primary vessel, said outlet being connected to an outlet piece placed inside of the secondary vessel and having a vent at the top and arranged to take liquid from the secondary vessel at a point below where floating matter accumulates in said vessel, substantially as described.

3. The combination in an apparatus for sewage disposal comprising a closed primary vessel and a closed secondary vessel, an inlet leading into the primary vessel through the cap thereof, an outlet leading from the secondary vessel below the level of the inlet into the primary vessel, said outlet being connected to an outlet piece placed inside of the secondary vessel and having a vent at the top and arranged to take liquid from the secondary vessel at a point below where floating matter accumulates in said vessel, and a non-siphonic passage connecting the two vessels below the level of the outlet leading from the secondary vessel, substantially as described.

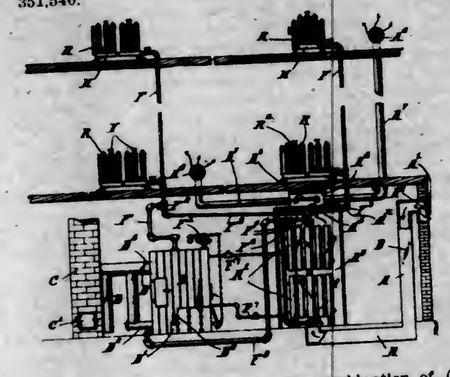
880,541. SEMICONVERTIBLE CAR. PETER M. KLING, Allegheny, Pa. Filed Oct. 2, 1905. Serial No. 280,912.



1. A semiconvertible car comprising a vertical side body, a roof, a head lining contiguous to the roof, an upper board and a post formed with a single slightly curved pocket for the upper sash section constructed with parallel sides, and extending a short distance beyond the lower edges of the roof and the head lining, and approximately tangential to said vertical side body, and with a lower pocket, a short curved sash section shiftable in said curved pocket and a lower sash, in said lower pocket, against the upper rail of which the curved sash section is forced to hold the lower sash from vibration.

2. A semiconvertible car comprising a vertical side body, a roof, a head lining contiguous to the roof, an upper board and a post formed with a single slightly curved pocket for the upper sash section constructed with parallel sides, and extending a short distance beyond the lower edges of the roof and the head lining, and approximately tangential to said vertical side body, and a short curved sash section having a flat pane set therein as a chord to the curve of the curved sash section, and shiftable in said curved pocket.

880,542. HEATING SYSTEM. JOSEPH M. W. KITCHEN, East Orange, N. J. Filed Jan. 9, 1907. Serial No. 351,540.



1. In a steam heating system, the combination of (1) a steam boiler, said boiler comprising means for absorbing large volumes of low degrees of heat into horizontal strata of water of low temperatures and for absorbing high degrees of heat into horizontal strata of water of high temperatures, (2) means comprising a plurality of radiating units for radiating said absorbed heat and for varying the amount of heat radiated in each radiating unit in consonance with wide variations in the heat radiating requirements of said system to meet atmospheric temperature variations, (3) means for cooling the water of condensation condensed in said system for feed water use in said boiler through the heating of air for respiration, (4) means for conveying steam from said boiler to said means for radiating heat and for preventing the direct return of priming moisture and the water of condensation to said boiler and for conveying said water of condensation and said priming moisture to said cooling means, (5) means for preventing the lowering of the level of the water in the top of said cooling means as the water passes through said means and for conveying said water when cooled to said boiler, and (6) means for distributing the air used in cooling the water of condensation to designated places for the purpose of respiration and adjunct heating and for controlling the amount of air thus distributed.

2. In a steam heating system, the combination of (1) a steam generator comprising means for conveying to cool feed-water high heat and those low degrees of heat in the heating gases that are of a temperature below 150° F., (2) means for radiating the heat generated in said generator, and (3) means for preventing the direct return of the water of condensation from said means for radiating the heat and for conveying said water of condensation to a means for cooling said water, and (4) said means comprising provision for cooling water with cool air and for utilizing said air after its heating by said water of condensation and for returning said water after its cooling to said generator for reheating, said combination providing a feed-water of low temperature capable of absorbing low degrees of heat from the heating gases in said generator and for economizing the heat lost in cooling said water in heating air for respiration.

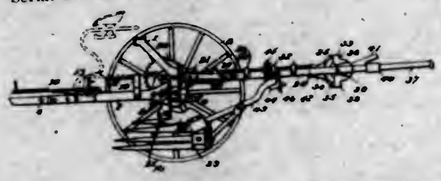
3. In a steam heating system, the combination of (1) a steam boiler, (2) steam radiators, (3) steam conduits connecting said boiler and said radiators and comprising means for preventing priming moisture and water of condensation from returning directly to said boiler and providing for the conveyance of the water of condensation to a water cooler and air heater, said water being cooled by transmission of its heat to air currents, (4) said water cooler and air heater, and (5) means for conveying said water when cooled from said water cooler and air heater into said boiler at a place where the heating gases traversing said boiler have the lowest temperature.

4. In a heating system, the combination of (1) means for heating gases, (2) means for producing steam from the heat of said gases, (3) means for producing cool feed-water from hot water of condensation, (4) means for heating said cool feed-water progressively with the heat in said gases by transferring the heat progressively from said gases to said water, said gases and said water traversing said boiler in counter currents oppositely to the opposite heating surfaces of the means for effecting the transmission of said heat to said water, (5) a radiating means, and (6) means for automatically maintaining a steam pressure in the steam conveying conduits of said system and for controlling said pressure to any desired degree.

5. In a heating system, the combination of (1) a water containing heat absorbing boiler, (2) heat conveying conduits leading from said boiler, (3) means for radiating the heat transmitted in said boiler, (4) means for intercepting and retarding the flow of water returning from said means for radiating the heat to said boiler and for reducing the temperature of said water when retarded in its return to said boiler by the convection of said heat to air, and (5) means for returning said water entirely devoid of the heat thus reduced by convection to a low level of said boiler.

[Claims 6 to 12 not printed in the Gazette.]

880,543. WHEEL-FORK. ALEXANDER KORMIL and FREDRICK RADLOFF, Goldendale, Wash. Filed Aug. 30, 1905. Serial No. 276,445.



1. In combination, a frame provided with ground supporting means and with a fork or like load carrier, a draft frame having the rear ends of its side members widened vertically and engaging vertical portions of the arched frame to obtain extended bearings upon said main frame, and loose connections between the main and draft frames to prevent turning of said parts and admit of their having a relative limited vertical movement.

2. In combination, an arch having its side members vertically arranged and provided with ground supporting means, a fork or load carrier supported by means of said arch, a draft frame having the rear ends of its side members widened vertically and engaging vertical portions of the arched frame to obtain extended bearings upon the vertical members of the aforesaid arch and having the rear edges indented, and slidable connections between the draft frame and arch and normally occupying a position in the indentations formed in the rear edges of the draft frame side bars, substantially as set forth.

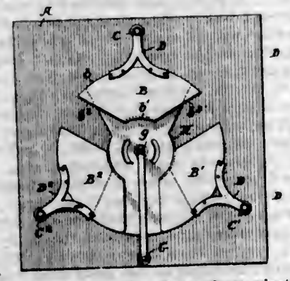
3. In combination, a main frame provided with ground supporting means and with a fork or load carrier and having an approximately horizontally arranged draft frame, a pole connected to said draft frame and having a hinged joint, and a platform and running board extending over the joint formed in the pole and connected to the latter, the platform resting upon the draft frame, substantially as and for the purpose set forth.

4. In combination, an arch, means fitted to the side members of the arch for supporting the same from the ground, a fork, connecting means between the fork and said members of the arch comprising swinging links 25 having pivotal connection at one end with the fork and rotary means 20 having the opposite end of the links 25 pivoted thereto a distance from their supporting pivots; means for securing the said rotary means in an adjusted position, and other means for securing the fork swung either forward or rearward of a given position.

5. In combination, a main frame, a fork, a pivotally mounted U-shaped support 22, means for moving and holding the U-shaped support in an adjusted position, connecting links 25 between the fork and the side members of the said U-shaped support, means for moving the fork independently of or with the said U-shaped support, and means for securing the fork in the adjusted position.

[Claims 6 to 11 not printed in the Gazette.]

880,544. GROUND-DETECTOR. JUSTUS C. LAWLER, Colorado Springs, Colo. Filed Feb. 17, 1906. Serial No. 301,647.



1. A ground detector for three-phase electric circuits, comprising three plates in a single plane, each plate adapted to be connected to a different leg of the circuit, and a single vane common to the three plates mounted in a plane parallel to the plane of the plates and free to rotate therein.

2. A ground detector for three-phase electric circuits, comprising three plates in a single plane, equi-distant from a given point and symmetrical in regard to this point and each adapted to be connected to a single leg of a three-phase circuit, and a single vane common to the three plates mounted in a plane parallel to the plates and free to rotate therein.

3. A ground detector for three-phase electric circuits, comprising three flat plates in a single plane, equi-distant from a given point, symmetrical in regard to this point, and each occupying less than 120°, and a single vane common to the three plates mounted in a plane parallel to the plane of the plates and free to rotate therein.

4. A ground detector for three-phase electric circuits, comprising three plates in a single plane and secured in a circle equi-distant from a given point and symmetrical with the point, one side of each plate being in the arc of said circle and the adjacent sides of two plates being parallel to each other, and a single vane common to the three plates mounted in a plane parallel to the plates and free to rotate therein.

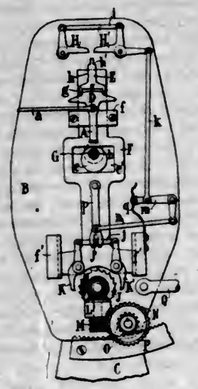
5. A ground detector for three-phase electric circuits, comprising three flat plates in a single plane, and a single flat parallel vane common to the three plates, the vane having two equal and opposite sectors and being free to rotate in its plane.

[Claims 6 to 9 not printed in the Gazette.]

880,545. CONTROLLING MECHANISM. FRANK M. LEAVITT, New York, N. Y., assignor to E. W. Bliss Company, Brooklyn, N. Y., a Corporation of West Virginia. Filed Mar. 25, 1907. Serial No. 364,522.

1. A follow-up gear comprising a movable controlling or pilot part, a movable controlled part, power-driven means for displacing the latter, and a continuously reciprocating dog governed by said pilot part and adapted to control said power-driven means, whereby a displacement of the pilot part is followed by a corresponding displacement of the controlled part.

2. A follow-up gear comprising a movable controlling or pilot part, a reciprocating dog moving toward and from it, power-driven propelling means controlled by said dog, and a controlled part or traveler adapted to be driven by said propelling means in either direction according to the position impressed by the pilot part upon said dog.



3. A follow-up gear comprising a movable controlling or pilot part, a controlled part or traveler, a reciprocating dog carried thereby, moving toward and from said pilot part, and a power-driven propelling mechanism controlled by said dog for propelling said traveler in either direction.

4. A follow-up gear comprising a movable controlling or pilot part, a reciprocating dog moving toward and from said pilot part, so as to be positioned thereby corresponding to the position of the pilot part, a tappet adapted to be encountered by said dog as the latter recedes from said pilot part, a traveler carrying said reciprocating dog and tappet, and power-driven mechanism controlled by said tappet for propelling the traveler in either direction, whereby the traveler carries the tappet and dog in the direction of displacement of the pilot part until they overtake the latter.

5. A follow-up gear comprising a movable controlling or pilot part, a controlled part or traveler, a reciprocating part carried thereby, a dog carried by said reciprocating part, a tappet carried by said traveler, and acted on by said dog, a source of power, mechanism driven thereby for propelling the traveler in either direction under control of said tappet, whereby the traveler carries the tappet and dog in the direction of displacement of the pilot part until they overtake the latter.

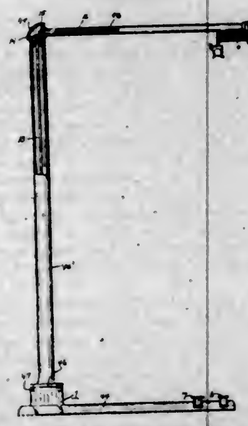
[Claims 6 to 10 not printed in the Gazette.]

880,546. SHEET-MUSIC TURNER. PINKNEY G. LEWIS, Milwaukee, Wis., assignor to Emma A. Lewis, Milwaukee, Wis. Filed Mar. 25, 1907. Serial No. 364,233.

1. In a pedal actuated leaf turning device, the combination of a plurality of leaf actuating arms, each provided with a leaf clamping device, a set of foot actuated pedals, an oscillatory laterally extending shaft for each pedal operatively connected therewith, a vertical shaft operatively connected with the leaf turning arms and ratchet feed mechanism arranged to communicate motion from the laterally extending shafts in opposite directions to the vertical shaft.

2. In a pedal actuated leaf turning device, the combination of a plurality of leaf actuating arms, leaf clamping mechanism connected with one end of each of said arms, gear segments rigidly connected with the opposite ends of said arms means for supporting said gear segments and arms one above another around a single central shaft, a plurality of annular disks rigidly connected together in a vertical series, the periphery of each disk being provided with a gear segment and an intervening blank space, said gear segments being respectively adapted to mesh with the respective gear segments of said leaf turning arms, the gear segments of the first and each succeeding disk in the series being located slightly in advance of the gear segment of the next succeeding disk, whereby as said disks are revolved together the gear segments on but one of said

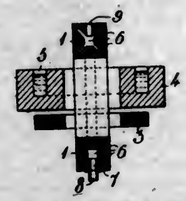
disks will act at a time upon the gear segments of said arms, two foot-actuated pedals, pedal actuated shafts one located within the other, means for connecting one of said pedals with the interior shaft, means for connecting the other pedal with the exterior shaft, a vertical shaft located near the ends of said interior and exterior shafts, a star wheel affixed to the lower end of said vertical shaft, said star wheel being provided with a plurality of radial arms, two vibratory arms, one rigidly connected with said interior shaft and one rigidly connected with said exterior shaft, means for communicating motion from one of said vibratory arms to said star wheel on one side of its supporting shaft, and means for communicating motion from the other of said vibratory arms to said star wheel on the opposite side of said supporting shaft, whereby as one of said vibratory arms is moved said star wheel and its supporting shaft will be revolved in one direction and whereby as the other of said vibratory arms is moved said star wheel and its supporting shaft will be revolved in the opposite direction, and means for communicating motion from the upper end of said vertical shaft to said series of disks and the leaf actuated arms connected therewith, substantially as set forth.



3. In a pedal actuated leaf turning device, the combination of a plurality of leaf actuating arms, leaf clamping mechanism connected with one end of each of said arms, gear segments rigidly connected with the opposite ends of said arms, means for supporting said gear segments and arms one above another around a single central shaft, a plurality of annular disks rigidly connected together in a vertical series, the periphery of each disk being provided with a gear segment and an intervening blank space, said gear segments being respectively adapted to mesh with the respective gear segments of said leaf turning arms, the gear segments of the first and each succeeding disk in the series being located slightly in advance of the gear segment of the next succeeding disk, whereby as said disks are revolved together the gear segments on but one of said disks will act at a time upon the gear segments of said arms, two foot-actuated pedals, two pedal actuated shafts one located within the other, means for connecting one of said pedals with the interior shaft, means for connecting the other pedal with the exterior shaft, a vertical shaft located near the ends of said interior and exterior shafts, a star wheel affixed to the lower end of said vertical shaft, said star wheel being provided with a plurality of radial arms, two vibratory arms, one rigidly connected with said interior shaft and one rigidly connected with said exterior shaft, a pawl pivotally connected with each of said vibratory arms, a spring rigidly connected at one end with each of said vibratory arms and adapted to bear at its opposite end against one of said pawls respectively, whereby said pawls are normally retained in position to contact with the radial arms of said star wheel and with each forward movement to revolve said wheel and vertical shaft a partial revolution, means connected with the upper end of said vertical shaft for revolving said series of disks and moving the leaf actuating arms.

4. In a pedal actuated leaf turning device, the combination of a plurality of leaf actuating arms, leaf clamping mechanism connected with one end of each of said arms, gear segments rigidly connected with the opposite ends of said arms, means for supporting said gear segments and arms one above another around a central shaft, a plurality of annular disks rigidly connected together in a vertical series, the periphery of each disk being provided with a gear segment and an intervening blank space, said gear segments being respectively adapted to mesh with the respective gear segments of said leaf turning arms, the gear segments of said disks being so located in relation to each other that but one will act at a time upon the gear segments of said arms, the respective sides of said arm supporting segments being adapted when said segments are turned to the limit of their movement in either direction to bear against the blank space of said disk, whereby they are locked in place and prevented from turning except when in mesh with the teeth of said disks, two foot-actuated pedals, two horizontal pedal actuated shafts, a vertical shaft located near the ends of said horizontal shafts, means for communicating motion from one of said horizontal shafts to said vertical shaft in one direction and means for communicating motion from the other horizontal shaft to the vertical shaft in the opposite direction, and means for communicating motion from said vertical shaft to said series of disks and from thence to said leaf actuating arms, all substantially as and for the purpose specified.

880,547. TRANSFORMER-FURNACE. AXEL R. LINDBLAD and OTTO STÅLHANE, Ludvika, Sweden. Filed Nov. 5, 1906. Serial No. 342,038.



1. In an electric transformer furnace, a transformer core formed of an endless member composed of superposed plates or laminæ so arranged that a number of said plates or laminæ will be cut by any plane laid through the axis of the core.

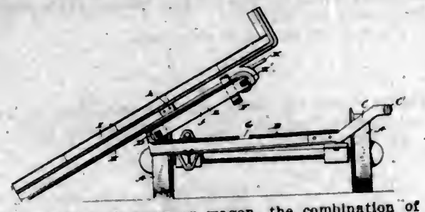
2. In a transformer furnace, a transformer core formed of an endless member, the member in cross section being constituted of sector portions meeting at the axis of the member, the sectors being formed of superposed parallel plates or laminæ that in each sector are substantially perpendicular to the radius at the middle of the sector, each sector being separated by insulating material.

3. In a transformer furnace, a transformer core in the form of a rectangular ring, each side member being formed in section of four sector portions composed of parallel sheets of magnetic material and separated by nonmagnetic material, the sheets in each sector being parallel to form a substantially square outline.

4. In an electric transformer furnace, a transformer having a core formed of an endless annular member composed of superposed plates or laminæ, the plates being arranged around the axis of the annular member to intersect all lines of force radiating from the axis of the core.

880,548. DUMPING CAR, WAGON, AND THE LIKE. BERT LLOYD, Cokedale, Colo., assignor of one-half to Frederick P. Bayles, Cokedale, Colo. Filed Sept. 10, 1907. Serial No. 392,236.

1. In a dumping car or wagon the combination of a main truck, an auxiliary truck movable thereon, and a table carried by the auxiliary truck and independently movable relative thereto, and means for attaching the auxiliary truck to the main truck during a portion of its movement relative thereto.



2. In a dumping car or wagon, the combination of a main truck, an auxiliary truck slidably mounted thereon and arranged to tilt, and a table carried by and tiltable with said auxiliary truck and having an independent slidable movement relative thereto.

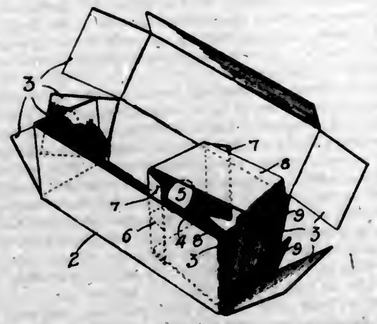
3. In a dumping car or wagon, the combination of a main truck having oppositely disposed tracks or guideways with goose-neck terminals, a table having downwardly extending goose-neck projections, a truck on which the table is slidably mounted, the truck having front and rear rollers adapted to be engaged respectively by the goose-neck projections on the table and tracks, and means for holding the truck in lowered position on said tracks during its movement along the same.

4. In a dumping car or wagon, the combination of a main truck having thereon a track or guideway with a flange at its top, an auxiliary truck slidably mounted on said track and adapted to be tilted relative thereto and means for normally holding the auxiliary truck in lowered position relative to the main truck comprising a clip engaging over said flange.

5. In a dumping car or wagon, the combination of a main truck having thereon a track or guideway with a flange at its top, an auxiliary truck slidably mounted on said track and adapted to be tilted relative thereto and means for normally holding the auxiliary truck in lowered position relative to the main truck comprising a clip engaging over said flange, and means for releasing said clip.

[Claims 6 to 18 not printed in the Gazette.]

880,549. BOX FOR TRANSPORTING POTTED PLANTS. LEWIS P. LORD, Owatonna, Minn. Filed Oct. 5, 1906. Serial No. 337,537.



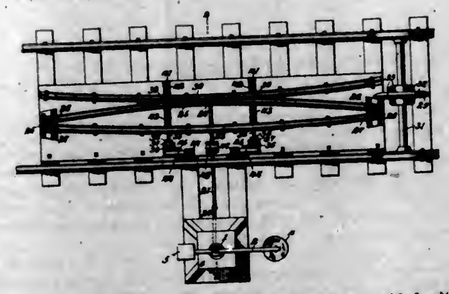
1. As a new article of manufacture, a folding box of flexible material having collapsible side and end walls arranged when folded to inclose potted plants placed lengthwise therein resting on one end of the box, and a part intermediate to said ends and detachably fitting within said box and having a hole to receive the stalk of the plant and adapted to rest upon the top of the pot and provided with flaps that extend down beside the pot and having their ends inserted between the flaps on the end of the box, for the purpose specified.

2. As a new article of manufacure, a folding box of flexible material, having collapsible side and end walls, the latter composed of flaps folded in one upon another, a flexible plate having a hole to receive the plant stalk, and adapted to rest upon the top of the pot, and provided with flaps of substantially the same length as the height of the pot, and provided with inwardly turned ends adapted to be inserted between the flaps on two of the box sides and those on the other sides and said flaps contacting with said walls and preventing lateral movement of the pot when the device is in use, substantially as described.

3. As a new article of manufacture, a packing box for plants, composed of flexible material and having side walls adapted to be folded with their edges lapping by one another to inclose the plant, and each wall having a flap at its end that is adapted to be inserted between the corresponding flaps at that end and form a support or rest for the pot, and a plate adapted to be placed intermediate to said ends and having a hole to receive the stalk of the plant and rest upon the top of the pot and provided with depending ends that extend down beside the pot and said ends terminating in inwardly turned portions that are inserted between the end flaps beneath the pot whereby the pot will be held against accidental movement and said plate being separable from said box and the said ends filling the space between the upper portion of the pot and the walls of the box when the device is in use and preventing lateral movement of the pot.

4. As a new article of manufacture, a packing box for plants, composed of flexible material and having side walls adapted to be folded with their edges lapping by one another to inclose the plant and each wall having a flap at its end that is adapted to be inserted between the corresponding flaps of the other walls at that end and forming a support or rest for the pot when placed in the box, and a plate removably fitting within said box intermediate to its ends and transversely thereof and having a hole to receive the stalk of the plant and adapted to rest upon the top of the pot, and said plate being provided with depending ends that extend down beside the pot to the bottom thereof and said ends terminating in inwardly turned portions that are inserted between the end flaps beneath the pot, and said plate also having depending ends extending down beside the pot and terminating above the lower portion thereof, substantially as described, and for the purpose specified.

880,550. MAIL-CRANE. SIMON L. LUCAS, Mulberry, Fla. Filed Oct. 30, 1907. Serial No. 399,847.



1. The combination of a rotary mail crane provided with means for holding a mail bag, a laterally shiftable member, means for communicating motion from the laterally shiftable member to the mail crane, and means carried by a train for actuating the laterally shiftable member to positively rotate the mail crane to turn the same to its operative position.

2. The combination of a rotary mail crane provided with means for holding a mail bag, a laterally shiftable member, means for communicating motion from the laterally shiftable member to the mail crane, means carried by a

train for actuating the laterally shiftable member to positively rotate the mail crane to turn the same to its operative position, and means for automatically locking the mail crane in its operative position.

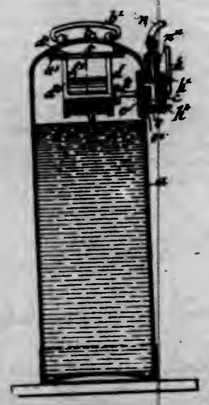
3. The combination of a rotary mail crane provided with means for holding a mail bag, a laterally shiftable member, means for communicating motion from the laterally shiftable member to the mail crane, means carried by a train for actuating the laterally shiftable member to positively rotate the mail crane to turn the same to its operative position, means for automatically locking the mail crane in its operative position, and manually operable means for releasing the mail crane.

4. The combination of a rotary mail crane provided with means for holding a mail bag, a laterally shiftable member, means for communicating motion from the laterally shiftable member to the mail crane, means carried by the train for actuating the laterally shiftable member to positively rotate the mail crane to turn the same to its operative position, means for automatically locking the mail crane in its operative position, manually operable means for releasing the mail crane, and means for automatically turning the mail crane to an inoperative position.

5. The combination of a rotary mail crane having a crank element, a laterally shiftable member, a slidable rod, means for connecting the rod with the crank element, and means carried by a train for positively actuating the laterally shiftable member.

[Claims 6 to 15 not printed in the Gazette.]

880,551. FIRE-EXTINGUISHER. WILLIAM E. LUHMAN, Port Chester, N. Y. Filed Apr. 11, 1907. Serial No. 367,490.



1. In a fire-extinguisher, the combination of a receiver, an acid-bottle mounted therein to turn on its axis and thereby discharge its contents, an outlet-valve for the receiver, means for operating said valve, and a direct positive connection between said bottle and said outlet-valve whereby they are turned simultaneously.

2. In a fire-extinguisher, the combination of a receiver, an acid-bottle rotatably supported therein, a rotary outlet-valve for the receiver, means for operating said valve, and a key connecting the valve with the acid-bottle.

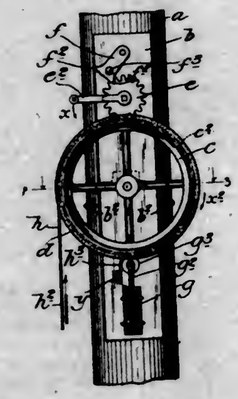
3. In a fire-extinguisher, the combination of a receiver, an acid-bottle rotatably and removably mounted therein and having a boss at one end, a rotary outlet-valve for the receiver, means for operating the same, and a key extending from the body of said valve and engaging said boss.

4. In a fire-extinguisher, the combination of a bottle-supporting frame, a shell fixed in said frame and having a split lower portion, and a bottle mounted in said shell to turn therein and having an outlet to register with said split portion.

5. The combination, with the receiver, of a frame supported therein, a shell fixed in said frame but freely removable therefrom, an acid-bottle mounted to turn in said shell, and means operable from the exterior of the receiver for turning said bottle.

[Claim 6 not printed in the Gazette.]

880,552. NET DRAWING OR LIFTING DEVICE. AXEL G. LUNDIN, New York, N. Y. Filed July 31, 1907. Serial No. 386,353.



1. A lifting or hoisting device of the class described adapted to be secured to a vertical holder and comprising a plate or support, a wheel mounted centrally thereof and provided in its perimeter with a deep annular groove, the side walls of which are provided with radial ribs or projections, and a ring or band mounted in said groove, the diameter of which is greater than the inner diameter of said groove.

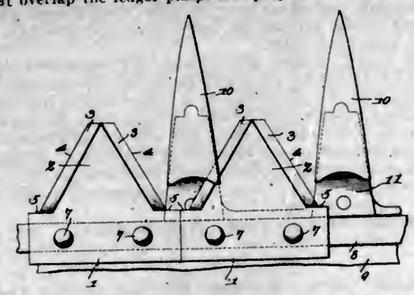
2. A lifting or hoisting device of the class described adapted to be secured to a vertical holder and comprising a plate or support, a wheel mounted centrally thereof and provided in its perimeter with a deep annular groove, the side walls of which are provided with radial ribs or projections, and a ring or band mounted in said groove, the diameter of which is greater than the inner diameter of said groove, and a vertically movable spring plunger supported beneath the said wheel and provided with a roller movable in said groove.

3. A lifting or hoisting device of the class described adapted to be secured to a vertical holder and comprising a plate or support, a wheel mounted centrally thereof and provided in its perimeter with a deep annular groove, the side walls of which are provided with radial ribs or projections, and a ring or band mounted in said groove, the diameter of which is greater than the inner diameter of said groove, and a vertically movable spring plunger supported beneath the said wheel and provided with a roller movable in said groove, said plate or support being also provided above said wheel with a small gear wheel which operates in connection with teeth on one side of the perimeter of said wheel, and a pawl mounted over said small gear wheel and adapted to operate in connection with the teeth thereof and to be turned in opposite directions.

880,553. CUTTING APPARATUS FOR HARVESTERS. JOHN LUTIN, Sterling, Colo. Filed Feb. 3, 1906. Serial No. 299,354.

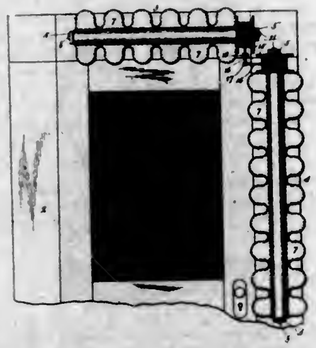
In a cutting apparatus for harvesters, a cutter bar having guard fingers provided with ledger plates, in combination with a reciprocatory sickle bar, and cutting members

mounted upon the latter and having rectangular bases that overlap the ledger plates and project beyond the cut-



ting edges of the members, whereby to provide enlarged clearances at the crotches thereof.

880,554. FLY-GUARD. WILLIAM F. MANNERS, Parker, Kans. Filed Aug. 9, 1906. Serial No. 329,807.

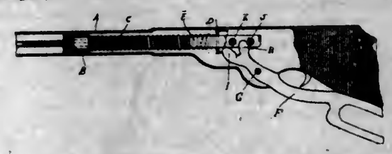


In combination with a door frame and the door thereof, a pair of fan rollers, a metal plate on each end of each roller, a shaft passing through one of the plates and into the roller, and having a collar which abuts the plate, one of said plates on each roller having an inwardly extending peripheral flange which is received in a groove provided therefor in one end of said rollers so as to lie flush with the peripheries of said rollers, a drum on said last named end of each roller which extends over and engages a portion of said plate flange, a second shaft passed through said second named plate and having a collar which abuts the outer face of said second named plate, a coil spring surrounding said second shaft and being secured at one end to the latter and at its opposite end bearing against the inner face of the second named plate, said rollers being disposed along the top and one side of the door frame and having their drums adjacent, a screw eye on the door at the upper outer corner thereof, and cords immovably affixed at one end to said eye and having their free ends connected to said drums.

880,555. GUN. WILLIAM F. MARKHAM and ERNEST S. ROE, Plymouth, Mich., assignors to Markham Air Rifle Company, Plymouth, Mich., a Corporation of Michigan. Filed Apr. 15, 1907. Serial No. 368,331.

1. In a gun, the combination with the spring, the plunger and a shank inwardly-extending therefrom, of a rockable spring compressing member, and a plurality of coöperating bearings on the front end of said rockable member and shank arranged for successive engagement.

2. In a gun, the combination with the spring, a plunger and a shank inwardly-extending therefrom, of a rockable spring compressing member, a plurality of bearings on the rear end of said shank and coöperating fingers on said rockable member extending at different angles and arranged for successive engagement with their respective bearings.



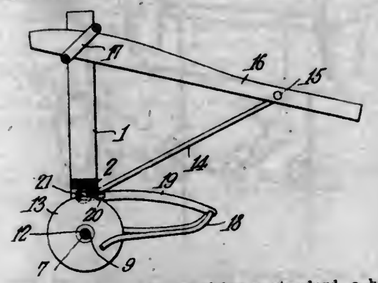
3. In a gun, a plunger, retracting mechanism comprising a pivotal lever having furcations at one end thereof, and an inwardly-extending plunger shank having a plurality of bearings at the rear end thereof for successive engagement with said furcations.

4. In a gun, the combination with a plunger, of a shank therefor formed of a pair of separated side members, a pivotal lever having furcations extending between said side members, and a plurality of pins extending between said side members arranged for successive engagement with said furcations.

5. In a gun the combination with a barrel, of a spring, a plunger, a shank formed of a pair of separated side members longitudinally operable in axial alinement with said barrel, a pivoted member having a Y-shaped member at one end thereof, and a plurality of pins extending between said side members arranged for engagement with said Y-shaped member.

[Claims 6 and 7 not printed in the Gazette.]

880,556. PLOW ATTACHMENT. RAY S. MATTINGLEY, Rockport, Ind. Filed Mar. 30, 1907. Serial No. 365,581.



1. A plow attachment comprising a standard, a hollow shaft passing through the same and having a hemispherical end provided with a transverse slot, said shaft being capable of longitudinal and axial adjustment on the standard, a spindle located at the hemispherical end of the shaft, a bolt passing longitudinally through said spindle and the slot in the shaft and a disk journaled upon the spindle.

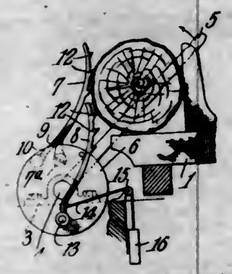
2. A plow attachment comprising a standard, a hollow shaft passing through the same and having a hemispherical end provided with a transverse slot, said shaft being capable of longitudinal and axial adjustment on the standard, a spindle located at the hemispherical end of the shaft, a cap bearing against the outer end of the spindle, a bolt passing through said cap, the spindle and the slot in the shaft, and a disk journaled for rotation upon the spindle.

880,557. LOG-TURNER. JAMES R. MEECE, Rosman, N. C. Filed June 8, 1907. Serial No. 377,967.

1. A log turner comprising a horizontal rocking shaft, a wrist plate thereon, toothed dogs pivoted to said wrist plate, a stop to limit the operative movement of each dog projecting from said wrist plate, and means for rocking said shaft.

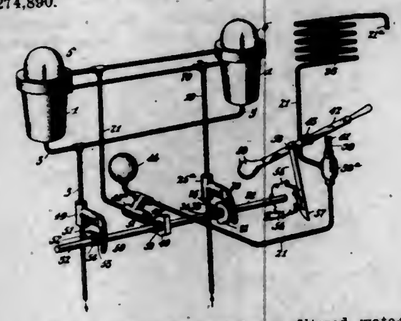
2. A log turner comprising a shaft and means for rocking the same, a wrist plate fixed to one end of said shaft, a toothed dog pivoted to said wrist plate on each face, a

pawl for limiting the operative movement of one of said dogs and the movement of the hand lever in one direction, and a stop pin for acting in like manner on the other dog and arresting the hand lever as it is moved in the opposite direction.



3. A log turner comprising a horizontal shaft, a hand lever thereon for rocking the same, a disk or wrist plate keyed to said shaft, a toothed dog pivoted on each side of said disk in a diametrical line and equally spaced from the axis of said disk, one of said dogs having a notch or tooth, a pawl pivoted on the same side of the disk to engage said notch or tooth, and a projecting pin on the opposite side of said plate for contacting with the dog pivoted thereon at the completion of its operative movement.

880,558. SELF-CLEANSING FILTER. BRYCE METCALF, New York, N. Y. Filed Aug. 19, 1905. Serial No. 274,890.



1. A self-cleansing filter having unfiltered water supplied thereto under pressure and provided with means for drawing off the filtered water, a step-by-step operated mechanism for automatically causing a back-wash of filtered water through the filter-body, such mechanism being operated after several operations of the said drawing-off means.

2. A self-cleansing filter having unfiltered water supplied thereto under pressure and provided with means for drawing off the filtered water, mechanism for automatically causing a back-wash of filtered water through the filter-body, such mechanism being operatively connected with and controlled by said drawing-off means and being actuated after several successive operations of said drawing-off means.

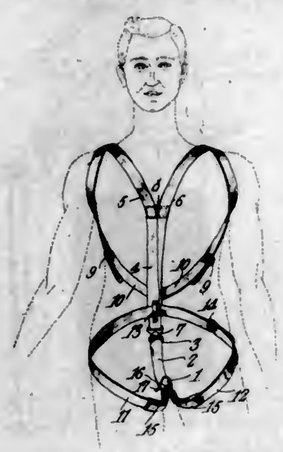
3. A self-cleansing filter having unfiltered water supplied thereto under pressure and provided with means for drawing off the filtered water, means for automatically confining air within the filter under the said pressure of the water therein, mechanism for causing a back-wash of filtered water through the filter-body under the pressure of the air thus confined in the filter to cleanse the filter, and such mechanism being operated after several operations of said drawing-off means.

4. A self-cleansing filter provided with means for drawing off the filtered water and having unfiltered water supplied thereto under pressure, means for confining air within the filter under the said pressure of the water therein, mechanism for forcing filtered water through the filter body under the pressure of such air to cleanse the filter and such mechanism being operated after several operations of said drawing off means, substantially as and for the purpose set forth.

5. A self-cleansing filter provided with means for drawing off the filtered water, and mechanism for cleansing the filter with the water therein, a step-by-step device intermediate between said drawing off means and the mechanism for cleansing the filter and said step-by-step device being actuated by each operation of said drawing off means but actuating said cleansing mechanism after several step-by-step movements of said device, substantially as and for the purpose set forth.

[Claims 6 to 8 not printed in the Gazette.]

880,559. TRUSS. MILTON W. MILLIGAN, East Las Vegas, N. Mex. Filed Apr. 9, 1907. Serial No. 367,198.



1. A truss of the character described, comprising a rectum supporter, a strap attached thereto and extending rearwardly, a back strap separably attached to the first mentioned strap and extending up the back then dividing, the two parts pass over the shoulders and under the arms to the back strap being attached thereto, and two other straps attached to the first mentioned strap under the rectum supporter passing forwardly close against the perineum between and around the thighs and connected to the back strap.

2. A truss of the character described comprising a supporter, a strap connected to said supporter and adapted to pass up the back then divide to pass over each shoulder and under the arms of the wearer and adjustably connected to side straps connected to the back strap, other straps attached to the supporter and pass forwardly around the thighs, one of said straps passing through a loop on the back strap and adjustably attached to the other.

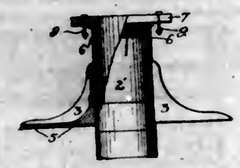
3. A truss of the character described comprising a dome shaped rectum supporter, a strap passing rearwardly therefrom up the back and dividing, the two parts pass over the shoulders and under the arms to the back, two straps reaching forward from said rectum supporter and over the thighs to the back strap, and a close fitting removable cover for the rectum supporter fastened by strings thereon tied beneath the attached straps.

4. A truss of the character described comprising a rectum supporter, a rear strap and two front straps therefor, back and shoulder straps attached to the rear strap of the supporter by a separable connection, said front straps arranged to pass between and around the thighs and connected together by a buckle on one side, one of said front straps supported in a loop on the back strap, and a removable sheath on each front strap where it passes beneath the perineum.

5. A truss of the character described comprising a dome shaped rectum supporter, a rear strap and two front straps connected thereto, said rear strap removably attached to the back strap supported by the shoulders, the front strap passing around the thighs and slidable in a loop on the back strap, a close fitting removable cover for the rectum support, and removable sheaths applied to the front straps between the thighs.

[Claim 6 not printed in the Gazette.]

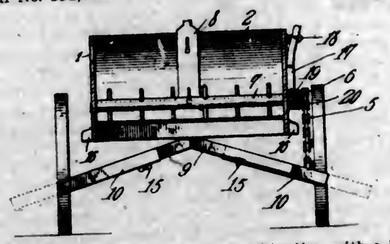
880,560. PUMP-SUPPORT. SIDNEY MILROY, Milledgeville, Ill. Filed Oct. 2, 1907. Serial No. 395,619.



1. As a new article of manufacture, a pump support comprising a cylindrical body, a flange in removable engagement therewith, and detachable anchoring means carried by the support.

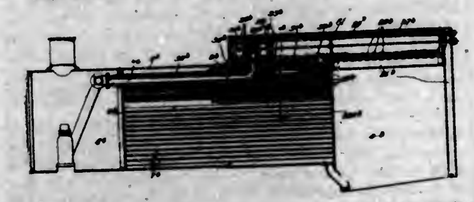
2. As a new article of manufacture, a pump support comprising a cylindrical body, a flange in removable engagement therewith, and angle strips detachably secured to the support.

880,561. FERTILIZER-DISTRIBUTER. WILLIAM A. MITCHELL, Fitzgerald, Ga. Filed Sept. 13, 1907. Serial No. 392,701.



In a fertilizer distributer, the combination with a body, of oppositely inclined bottoms secured thereto and having their lower ends spaced apart to provide an escape opening, beams secured to the body and extending along the edges of the opening, blocks secured to the outer sides of the body, and discharge chutes having flanges adapted for connection with either the beams or the blocks whereby to adapt the machine to supply fertilizer to one or to two rows.

880,562. SUPERHEATER. JAMES M. MCCLELLON, Everett, Mass. Filed Jan. 30, 1905. Serial No. 243,356.



1. In a locomotive boiler, a shell having a smoke-chamber at one end and a fire-box at the other, a superheating chamber located entirely within the shell, means to admit the steam into the superheating chamber, means to superheat the steam while in the chamber, and a pipe, a portion of which is located within the shell, to convey the superheated steam from said chamber to the engine cylinder, said pipe being separate from the means to superheat the steam and from the superheating chamber, the portion of the pipe that is located within the shell being protected from contact with the water.

2. In a locomotive boiler, a shell having a smoke-chamber at one end and a fire-box at the other, a horizontal superheating chamber within said shell above the normal water level therein, and flues extending longitudinally of the shell and all opening at one end into the fire-box and at the other end into the smoke-chamber, a portion of said flues passing through the superheating chamber.

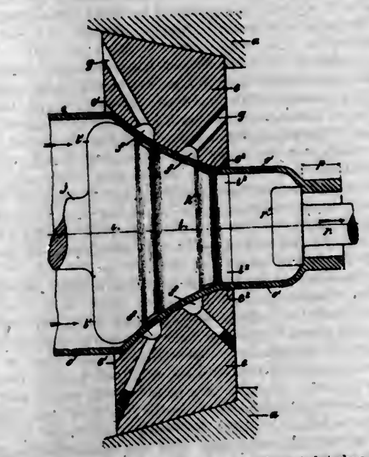
3. In a locomotive boiler, a shell having a smoke-chamber at one end and a fire-box at the other, a horizontal superheating chamber within said shell above the normal water level therein, flues extending longitudinally of the shell and all opening at one end into the fire-box and at the other end into the smoke-chamber, a portion of said flues passing through the superheating chamber, and a pipe to convey superheated steam from said superheating chamber to the engine cylinders, said pipe being protected from contact with the water in the steam and water chamber.

4. In a locomotive boiler, a shell, a smoke-chamber at one end of the shell, a fire-box at the other end thereof, a superheating chamber within the shell, a longitudinally extending drum exterior to the shell and communicating both with the steam and water spaces of the boiler and with said superheating chamber, and means within the superheating chamber to superheat steam.

5. In a locomotive boiler, a shell, a smoke-chamber at one end of the shell, a fire-box at the other end, a superheating-chamber within the shell, a drum exterior to the shell and communicating with the steam and water spaces of the boiler, said drum also communicating with the superheating chamber, and flues extending through the shell and communicating at one end with the fire-box and at the other end with the smoke chamber, a portion of said flues passing through the superheating chamber.

[Claim 6 not printed in the Gazette.]

880,563. APPARATUS FOR DRAWING HARD-METAL TUBES. BALFOUR F. MCTEAR, Rainhill, England. Filed Mar. 7, 1902. Serial No. 97,130.

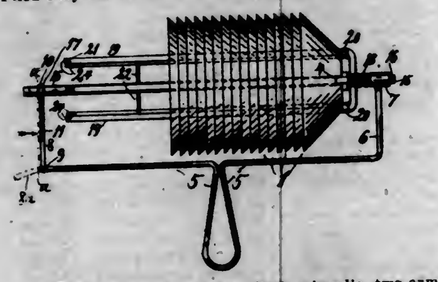


1. An apparatus for drawing hard metal tubes, comprising an external die having an aperture therein which decreases in diameter from the mouth or entrance face to the discharge face, the surface of said aperture being a convex curve, said aperture having a short cylindrical

portion at its discharge end, an internal plug *i* disposed axially within the aperture of the die, said plug having its operative surface tapering and decreasing in diameter from the entrance end towards the discharge end and said discharge end portion being cylindrical and parallel with the cylindrical portion of the die and the said tapered operative surface being substantially straight.

2. An apparatus for drawing hard metal tubes, comprising an external die *e* having an aperture therein, the operative surface of which being a convex curve and decreasing in diameter from the entrance end to the discharge end and having a short cylindrical portion at its discharge end, annular chambers *f* in said operative surface, said die having ports therein leading to said chambers, a plug *i* disposed axially within the die aperture, said plug having its operative surface tapering and decreasing in diameter from the entrance end to the discharge end and said discharge end being cylindrical and parallel with the cylindrical portion of the die, said plug having annular recesses therein corresponding to the chambers in the surface of the die.

880,564. HOLDER FOR USE IN CLEANING CREAM-SEPARATOR DISKS. OLE H. NESSETH, Badger, Minn. Filed July 15, 1907. Serial No. 383,822.



1. In a device of the kind described, a handle, two arms extending therefrom and having in their ends, one an open-sided journal with a spring catch normally closing the opening thereof, the other arm having a common journal, a shaft permanently retained with one end in the common journal and the other end detachably resting in the open-sided journal, bars fixed on the shaft and extending parallel thereto and adapted to hold and engage the inner notches in disks of cream separators, for the purpose set forth.

2. In a device of the kind described, a handle, two arms extending therefrom and having in their ends, one an open-sided journal with a spring catch normally closing the opening thereof, the other arm having a common journal, a shaft permanently retained with one end in the common journal and the other end detachably resting in the open-sided journal, bars fixed on the shaft and extending parallel thereto and adapted to hold and engage the inner notches in disks of cream separators, for the purpose set forth; said arm with the opensided journal having a joint to enable a portion of it to be swung out of the way for the disks as they enter and leave the device.

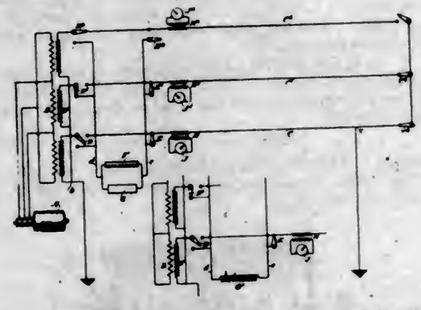
3. In a device of the kind described, a handle, two arms extending therefrom and having in their ends, one an open-sided journal with a spring catch normally closing the opening thereof, the other arm having a common journal, a shaft permanently retained with one end in the common journal and the other end detachably resting in the opensided journal, bars fixed on the shaft and extending parallel thereto and adapted to hold and engage the inner notches in disks of cream separators, for the purpose set forth; said arm with the opensided journal having a joint to enable a portion of it to be swung out of the way for the disks as they enter and leave the device, and said shaft having an annular recess for the open-sided journal to help hold it in place on the shaft.

4. In a device of the kind described, a handle, two arms extending therefrom and having in their ends journals, a shaft normally retained in the journals, bars fixed on the shaft and extending parallel thereto and adapted to hold and engage the inner notches in disks of cream separators, for the purpose set forth, said bars having their ends formed each with three fingers adapted to guide upon three sides of each bar or rib of the disk-carrying tube of the separator.

5. In a device of the kind described, a handle, two arms extending therefrom and having in their ends journals, a shaft normally retained in the journals, bars fixed on the shaft and extending parallel thereto and adapted to hold and engage the inner notches in disks of cream separators, for the purpose set forth, said bars having their ends formed each with three fingers adapted to guide upon three sides of each bar or rib of the disk-carrying tube of the separator, and radial braces between the shaft and said bars to prevent their spreading or closing beyond normal position.

[Claim 6 not printed in the Gazette.]

880,565. FAULT-LOCATING APPARATUS. LLOYD C. NICHOLSON, Buffalo, N. Y. Filed Mar. 7, 1907. Serial No. 361,011.



1. A means for locating faults comprising a source of electricity, a loop connected to one terminal thereof and containing the faulty conductor, means for applying a high voltage to said fault, means responsive to the flow of current to said fault for limiting said current while maintaining the same impedance ratio of the two branches to the fault, and means acted upon by the currents in said loop for determining the relative impedances of the branches of the loop to the fault.

2. A means for locating faults comprising a source of electricity, a loop connected to one terminal thereof and containing the faulty conductor, means for applying a high voltage to said fault, means responsive to the flow of current to said fault for limiting said current while maintaining the same impedance ratio of the two branches to the fault, and two measuring instruments so connected as to show currents determinative of the relative impedances of the branches to the fault.

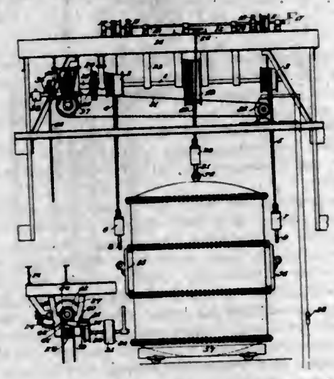
3. A means for locating faults comprising a source of electricity, a loop connected to one terminal thereof and containing the faulty conductor, means for applying a high voltage to said fault, means responsive to the flow of current to said fault for limiting said current while maintaining the same impedance ratio of the two branches to the fault, a transformer in each branch of the loop, and a measuring instrument connected to the secondary of each transformer.

4. A means for locating faults comprising a source of electricity, a loop connected to one terminal thereof and containing the faulty conductor, means for applying a high voltage to said fault, means responsive to the flow of current to said fault for limiting said current while maintaining the same impedance ratio of the two branches to the fault, a transformer in each branch of the loop and means connected to the secondaries of said transformers for determining the relative currents therein.

5. A means for locating faults comprising a source of electricity, a loop connected to one terminal thereof and containing a faulty conductor, an impedance in series with the source and the loop, a current operated circuit opener shunting said impedance, and means acted upon by the currents in said loop for determining the relative impedances of the two branches to the fault.

[Claims 6 to 13 not printed in the Gazette.]

880,566. ERECTING-HOIST. DAVID O. PAIGE, Detroit, Mich., assignor to The Pfaudler Company, Rochester, N. Y., a Corporation of New York. Filed Feb. 9, 1905. Serial No. 244,850.



1. In hoisting apparatus, the combination with a hoisting shaft, of a drum mounted thereon having a hoisting cable wound thereon in one direction, and a pair of drums mounted on the shaft one on each side of the drum first mentioned and having a hoisting cable wound thereon in a direction opposite to that of the first mentioned drum to cause the pair of drums to wind their cables while the other drum unwinds its cable during the rotation of the shaft, a separate load-attaching device for each cable, and means independent of the hoisting cables for operating said drums.

2. In hoisting apparatus, the combination with a hoisting shaft, of a drum mounted on the shaft having a hoisting cable wound thereon in a given direction, and a pair of drums of smaller diameter than the first mentioned drum and each having a hoisting cable wound thereon in a direction opposite to that of the first mentioned drum, a separately operable load-attaching device for each cable, and means independent of said cables for operating their respective drums simultaneously.

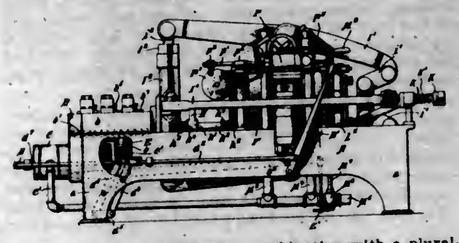
3. In hoisting apparatus, the combination with a hoisting shaft, of a pair of drums mounted on the shaft of substantially equal diameter having hoisting cables wound thereon in the same direction, and a drum of a different diameter than that of the first mentioned drums and having a cable wound thereon in a direction opposite to that of the first mentioned drums, a separately operable load-attaching device for each cable, and means independent of the cables for operating their respective drums.

4. In hoisting apparatus, the combination with a hoisting shaft, of a pair of drums of substantially equal diameters mounted on the shaft having hoisting cables wound thereon in the same direction, and a drum of larger diameter than that of the first mentioned drums mounted on the shaft intermediate of the first mentioned drums and having a hoisting cable wound thereon in a direction opposite to that of the first mentioned cables and means independent of the cables for operating said drum shaft.

5. In hoisting apparatus, the combination with a shaft and a drum on the said shaft having a hoisting cable wound in a given direction thereon, of a second drum mounted to operate with the first mentioned drum and having one end of a hoisting cable wound thereon in a direction opposite to that of the first mentioned drum, a hoisting pulley supported intermediately of the length of the cable of the second drum, and an adjusting device having the opposite end of the cable of the second drum attached thereto for varying the length of cable which is unwound from the second drum.

[Claims 6 to 13 not printed in the Gazette.]

880,567. MACHINE FOR MANUFACTURING AND SHARPENING STAR-BIT DRILLS. HARRY O. PALMER, Washington, D. C. Filed Mar. 31, 1906. Serial No. 309,137.



1. In a forging machine the combination with a plurality of laterally movable die holders, arranged to reciprocate toward and from the stock, in a plane perpendicular thereto, and a longitudinally movable dolly tool holder, arranged to reciprocate in line with the stock, of operating mechanism for producing a continuous reciprocation of said die holders, a separate operating mechanism for producing a continuous reciprocation of the dolly tool holder, connections between said operating mechanisms for causing the blows of the said die holders to alternate with those of the dolly tool holder when the said mechanisms are operated simultaneously and a controlling device for said operating mechanisms for causing them to operate separately and also simultaneously, substantially as described.

2. In a forging machine the combination with a plurality of laterally movable die holders, arranged to reciprocate toward and from the stock, in a plane perpendicular thereto, and a longitudinally movable dolly tool holder, arranged to reciprocate in line with the stock, of operating mechanism for producing a continuous reciprocation of said die holders, a separate operating mechanism for producing a continuous reciprocation of the dolly tool holder, connections between said operating mechanisms for causing the blows of the said die holders to alternate with those of the dolly tool holder when the said mechanisms are operated simultaneously and a controlling device for said operating mechanisms for causing them to operate separately and also simultaneously and independent devices for regulating the blow produced by each of said mechanisms, substantially as described.

3. In a forging machine, the combination with laterally movable die holders arranged to reciprocate toward and from the stock in a plane perpendicular thereto and a longitudinally movable dolly tool holder, arranged to reciprocate in line with the stock, and substantially perpendicularly to the plane of movement of said die holders, of a piston and cylinder for continuously reciprocating said die holders, a separate piston and cylinder for continuously reciprocating said dolly tool, connections between said cylinders for causing the blows of said dies to alternate with those of the dolly tool when the said pistons are simultaneously operated, and means for operating said pistons simultaneously and means for operating each of said pistons separately and independently, substantially as described.

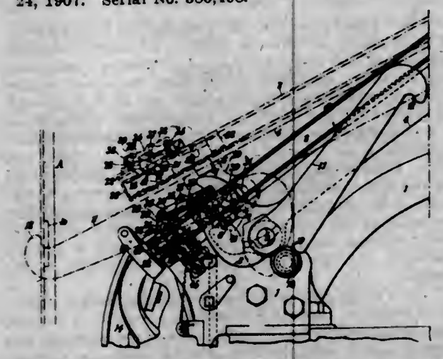
4. In a forging machine the combination with laterally movable die holders arranged to reciprocate toward and from the stock in a plane perpendicular thereto and a longitudinally movable dolly tool holder, arranged to reciprocate in line with the stock, and substantially perpendicularly to the plane of movement of said die holders, of a piston and cylinder for continuously reciprocating said die holders, a separate piston and cylinder for continuously reciprocating said dolly tool, connections be-

tween said cylinders for causing the blows of said dies to alternate with those of the dolly tool when the said pistons are simultaneously operated, means for operating said pistons simultaneously and means for operating each of said pistons separately and independently, and independent adjustable devices, connected with said cylinders for regulating the force of the blows produced thereby, substantially as described.

5. In a forging machine, the combination with a plurality of separate main cylinders, and pistons and a separate controlling valve mechanism for each cylinder, of a governing device comprising a cylinder and a piston working therein, connections between said piston and the said separate valve mechanisms, for the main cylinders, and manually operated devices for varying the control of said main cylinders and pistons by said governing device, substantially as described.

[Claims 6 to 18 not printed in the Gazette.]

880,568. MAGAZINE OF LINOTYPE-MACHINES. HERBERT PEARCE, Altrincham, England, assignor to Linotype and Machinery Limited, London, England. Filed June 24, 1907. Serial No. 380,498.



1. The combination with a matrix magazine occupying an oblique position on the machine frame and detachable from the latter, of a longitudinally slotted rock shaft positioned thereon to stop the matrices by being turned into their path, means carried by the magazine for so turning the said shaft, and means carried by the magazine for locking the said shaft in the matrix-stopping position.

2. The combination with a matrix magazine, of a longitudinally slotted rock shaft or matrix stop; slides on the magazine; and links operatively connecting the slides to the said shaft.

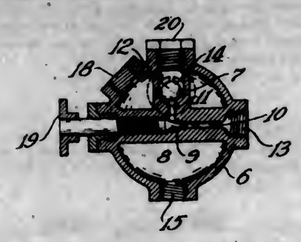
3. The combination with a matrix magazine, of a longitudinally slotted rock shaft positioned on the magazine to stop the matrices by being turned into their path; slides on the magazine; and links operatively connecting the slides to the said shaft.

4. The combination of matrix magazine; rock shaft having two faces at an angle with each other and carried by the magazine; slides on the magazine; links operatively connecting the slides to the rock shaft; a slot in the magazine through which the adjacent face on the rock shaft can be turned into the path of the matrices; a detent adapted to automatically engage with the other of the said two faces to lock the shaft with said adjacent face in the said path and means actuated by the reversal of the slides to disengage the detent.

5. The combination with a matrix magazine having a longitudinally slotted rock shaft positioned thereon to stop the matrices by being turned into their path, slides, and links operatively connecting the slides to the said shaft, of cams turnable about a relatively fixed axis to raise and lower the magazine and having a certain amount of lost motion; and means on the cams to engage and actuate the said slides during the said motion.

[Claims 6 to 8 not printed in the Gazette.]

880,569. WATER-JACKETED CONTROLLING AND CHECK VALVE. FRED PEULECKE, Chicago, Ill. Filed Mar. 14, 1907. Serial No. 362,321.



1. In apparatus of the kind described, a valve casing having a gas passage provided with inlet and outlet connections, a regulating valve controlling the flow of gas through said passage, a check valve for preventing the backward flow of gas, said casing being formed with a water space surrounding both of said valves and having inlet and outlet connections for circulating water around said valves.

2. The combination with the cylinder of an internal combustion engine, of a fluid storage chamber, a connection between said cylinder and storage chamber, a contracted passage in said connection, the length of said passage being considerably greater than its width, a casing surrounding the walls of said contracted passage, and means for circulating water through said casing for cooling said walls and thereby reducing the temperature of fluid flowing through said contracted passage, and a check valve between said contracted passage and storage receptacle.

3. The combination with the cylinder of an internal combustion engine, of a fluid storage chamber, a connection between said cylinder and storage chamber, a contracted passage in said connection, a casing surrounding the walls of said contracted passage, means for circulating water through said casing for cooling said walls and thereby reducing the temperature of fluid flowing through said contracted passage, and a check valve between said contracted passage and storage receptacle, and a regulating valve for adjusting the flow of fluid through said contracted passage.

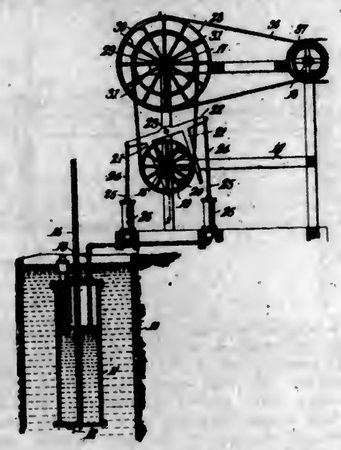
4. The combination with the cylinder of an internal combustion engine, of a fluid storage chamber, a connection between said cylinder and storage chamber, a contracted passage in said connection, the length of said passage being considerably greater than its width, a casing surrounding the walls of said contracted passage, and means for circulating water through said casing for cooling said walls and thereby reducing the temperature of fluid flowing through said contracted passage, and a check valve within said casing and located between said contracted passage and said storage chamber.

5. The combination of a casing having a gas inlet and a gas outlet, the walls of said casing being spaced away from the walls of said passage and forming a jacket surrounding the walls of said passage, a needle valve extending into said passage and adapted to control the flow of gas therethrough, and a check valve located between said needle valve and said outlet and adapted to prevent a return flow of gas through said passage, said casing having connections for circulating water around the walls of said passage.

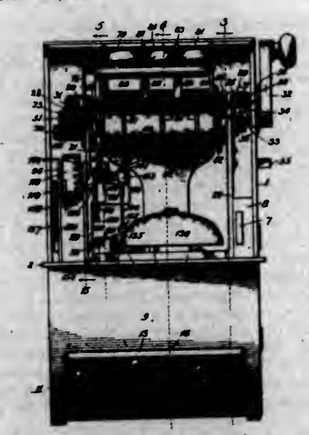
[Claims 6 and 7 not printed in the Gazette.]

880,570. COMPRESSED-AIR LIQUID-ELEVATOR. JOHN H. PHILLIPS, Pottsville, Pa. Filed July 27, 1906. Serial No. 328,115.

In apparatus of the class described, a pair of vertically disposed parallel pumping cylinders, pistons or plungers arranged therein, a continuously revoluble shaft, means for actuating the same, a walking beam pivoted above the shaft, means for connecting the opposite ends of the walking beam to the pistons or plungers of the pumps, a pair of spaced arms depending from said walking beam, said arms being arranged in parallel relation to each other and equi-distantly spaced from the fulcrum of the walking beam, and an eccentric carried by the shaft and playing between said arms to effect alternate operation of the pumps, substantially as specified.



880,571. COIN-REGISTERING MECHANISM. FRANK D. POWELL and CHARLES S. ELLIS, Chicago, Ill., assignors to American Coin Register Company, Chicago, Ill., a Corporation of Illinois. Filed June 20, 1904. Serial No. 213,326.



1. In a device of the class described, the combination of a coin-chute and coin receptacle, of interposed yielding coin feed-rollers and a coin-controlled signal for indicating the values of coins of different denominations in predetermined units of value.

2. In a device of the class described, the combination with a coin receptacle of a plurality of coin-chutes for coins of different denominations, interposed coin feed rollers for positively feeding the same to said receptacles and a coin controlled signal for indicating the value in units of the several coins fed thereto.

3. In a device of the class described, the combination with a coin receptacle of a plurality of coin-chutes for coins of different denominations, interposed yielding coin feed-rollers for positively feeding coins to said receptacle, coin-controlled means for limiting the extent of rotation of said rolls in proportion to the unit of value of the coin deposited, a coin-controlled signal for indicating by sound the value in units of the several coins fed thereto, and a coin-controlled registering mechanism for simultaneously registering said unit values.

4. In a device of the class described, the combination with a coin receptacle of a plurality of coin-chutes for coins of different denominations, interposed means for positively feeding the same to said receptacle, a coin-controlled registering mechanism for registering the unit values of the several coins deposited, and means for automatically depositing the evidence of registration made thereby in said coin receptacle.

5. In a device of the class described, the combination with a sealed or locked receptacle, of coin feed-rollers protected against unauthorized manipulation, means for actuating said rollers in unison, means for limiting the rotary movement thereof, means for preventing a backward movement thereof after the engagement thereby with, and before the discharge of a coin in their backward movement, and means for causing a backward movement to a normal position after the discharge of each coin.

[Claims 6 to 39 not printed in the Gazette.]

880,572. METAL ORNAMENTATION. GEORGE E. PRENTICE, New Britain, Conn., assignor to The Traut & Hine Manufacturing Company, a Corporation of Connecticut. Filed June 3, 1905, Serial No. 263,661. Renewed Oct. 3, 1907. Serial No. 395,759.



1. The method of ornamenting thin sheet metal which consists in so forming therein a perforation of the desired outline that the sides of the perforation are at right angles to the faces of the metal, forming a blank of greater thickness than the metal and of the same outline as the perforation, and with its edges at right angles to its faces, placing the blank within the perforation, and applying sufficient pressure to reduce the thickness of the blank and expand it into efficient holding contact with the perforation.

2. A sheet metal article having a perforation the edges of which are at right angles to the faces of the metal, and a blank of the same outline as the perforation and having its edges likewise at right angles to its faces, the said blank being held within said perforation by cohesion resulting from a thinning and widening of the blank by pressure applied while the blank is within the perforation.

3. The method of ornamenting thin sheet metal consisting in perforating the same with a punch and die of the special design; cutting out with the same or similar die from thicker metal of different color an ornamental blank; inserting the latter into the former, the edges of both being at right angles to the faces thereof, whereby a moderate compression produces perfect cohesion of the edges; and applying sufficient pressure to compress and reduce the thickness of the ornamental blank, thereby expanding it into efficient holding contact to prevent accidental displacement, and dispensing with soldering.

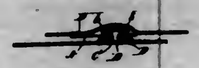
4. The method of manufacturing ornamental buckles, snap fasteners or the like, consisting in taking a flat sheet of the principal metal from which the buckle or fastener is to be made; perforating it of the ornamental design, the edges of the perforation being at right angles to the face of the metal; similarly perforating a slightly greater thickness of different metal to produce an ornamental blank; setting the blank in the perforation of the principal metal; and then stamping the latter up, out of the flat, into the shape desired for use in a buckle, fastener or the like, with a pressure sufficiently great to also reduce the thickness of the ornamental blank, thereby expanding it into intimate contact with the principal metal whereby the cohesion will be sufficient to prevent accidental displacement thereof.

5. The method of manufacturing ornamental buckles,

snap fasteners or the like, consisting in taking a flat sheet of the principal metal from which the buckle or fastener is to be made; perforating it of the ornamental design, the edges of the perforation being at right angles to the face of the metal; similarly perforating sheet metal of different kind to produce an ornamental blank; setting said blank in said perforation and then afterward by machine pressure reducing the blank in thickness thereby expanding it into intimate contact with the principal metal whereby the resulting cohesion will be sufficient to prevent accidental displacement thereof, and shaping the principal metal up out of the flat into the shape desired for use in a buckle fastener or the like.

[Claim 6 not printed in the Gazette.]

880,573. SNAP-FASTENER. WILLIAM S. RICHARDSON, Canton, Mass., assignor to United States Fastener Company, Boston, Mass., a Corporation of Maine. Filed June 30, 1906. Serial No. 324,169.

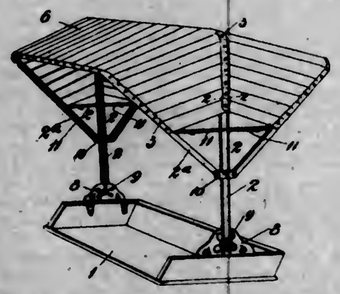


1. In a garment fastener a stud member combined with a socket member the latter consisting of a containing plate having an opening longer than its width and smaller at one end than at the other; and a resilient stud catch engaged in said opening by reason of its enlarged portions above and below the containing plate, the stud catch capable of passing from the larger to the smaller end of said opening substantially as and for the purposes described.

2. A garment fastener socket member comprising a containing plate having an opening longer than its width the said opening formed with a binding end and a free end; and a resilient stud catch held by its enlargements within said opening and adapted when the fastener is under strain to pass into the binding end of said opening whereby a positive locking thereof is obtained.

3. A snap fastener stud member comprising a plate provided with an elongated aperture narrower near one end than near the other and a stud catch slidably mounted in said aperture and adapted to engage a stud.

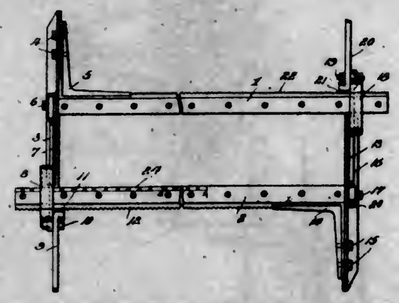
880,574. VEHICLE-TOP. JAMES ROGERS, Chicago, Ill. Filed Oct. 7, 1907. Serial No. 396,256.



A vehicle top having bows formed of channel metal with the flanges presented inwardly, a cover over the bows, and fasteners extending through the cover and the bows and clenched on the inside of the bows between the said flanges.

880,575. MOLDING-MACHINE. WILLIAM W. ROWLEY, Jackson, Mich., assignor to William F. Cowham, Jackson, Mich. Filed Jan. 30, 1907. Serial No. 354,880.

1. A molding machine for concrete blocks comprising side members, each carrying an end member, said side members each provided with notches upon one of their edges, a cam lever pivoted to each end member, said levers each having a notched face to engage the notches in the side members, and independent means comprising angular brackets and bolts for adjusting the side and end members to the size of block desired, substantially as described.



2. In a molding machine, side members, end members adjustably connected one to each side member by means of angular brackets, one of said side members having gage marks thereon, and said side members provided with notched edges, bolts passing through slots in said end members and through said angular brackets for adjusting said members to the size of the block required, and cam levers for securing said end members in adjusted position upon said side members, substantially as described.

880,576. BUCKLE. MAX RUBIN, New York, N. Y. Filed July 1, 1907. Serial No. 381,807.



1. A buckle comprising a back having upward and forward extensions; and a front having a finger piece, means near the top of the finger piece for hinging the front to the extensions on the back, and a roll on the top part of the front adapted to substantially fill the space between the front and back when the buckle is closed and reversely curved to extend below the top edge of the back whereby the top edge of the back rests in the reversed curve.

2. A buckle comprising a back having upward and forward extensions; and a front having a finger piece; means near the top edge of the finger piece engaging the extensions on the back; a roll along the top part of the front adapted to substantially fill the space between the front and the back when the buckle is closed and reversely curved to extend below the top edge of the back, said front having a clamping edge below said top part.

3. A buckle comprising a back having upward and forward extensions; and a front provided with a roll along the top part adapted to clamp a web against the back; means near its upper edge for engaging the extensions on the back and a series of teeth on the front below the top adapted to press the web between them and the inside of the back.

4. A buckle comprising a back having upward and forward apertured extensions; and a front having a finger piece and pins near its upper edge engaging the apertures in the extensions; a clamping part on the front adapted to coact with the back to clamp a web, the front being raised adjacent to the pins whereby a surface flush with the extensions is obtained.

880,577. SCREEN-HANGER. EMORY G. RUST, Dallas, Tex. Filed Apr. 9, 1907. Serial No. 367,270.

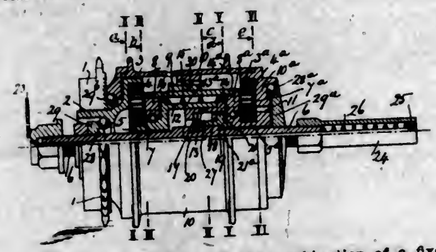
1. A reversible hanger consisting of a flat piece of metal having a shallow hook at one end for full length screens and a deep hook at the other for half screens and a body portion between said hooks to receive attaching devices.

2. A hanger for screens having a shallow hook in one edge thereof at one end for a full screen and a deep hook



in the other edge at the other end for a half screen, the ends of said hanger being interchangeable.

880,578. VARIABLE-SPEED GEARING. MONTAGU SAUNDERS, London, England. Filed Apr. 6, 1906. Serial No. 310,271.



1. In a variable speed gear the combination of a fixed axle and a hub shell rotating thereon, with a sprocket wheel, a first epicyclic train whereof one member rotates with said sprocket wheel, a second epicyclic train one member whereof rotates with the driven hub, an intermediate carrier carrying one member of each train, and means capable of being so operated as either to prevent relative movement of the members of both trains on the forward drive or to lock either sun-wheel to the fixed axle on the forward drive and simultaneously cause the train of which such locked sun-wheel forms part to become operative, while the parts of the other train remains locked against relative movement.

2. In a variable speed gear the combination of a fixed axle and a hub shell rotating thereon, with a sprocket wheel, a first epicyclic train whereof the outermost member is driven by said sprocket wheel, a second epicyclic train whereof the outer member is rigidly attached to the driven hub, a pinion carrier between the two trains, studs on either side thereof carrying the planet pinions of said trains, and means capable of being so operated as either to prevent relative movement of the parts of both trains on the forward drive or to lock either sun-wheel to the fixed axle on said forward drive and simultaneously cause the train of which said locked sun-wheel forms part to become operative, while the parts of the other train remains locked against relative movement.

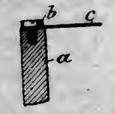
3. A variable speed gear consisting of a non-rotating spindle, a hub shell mounted thereon, an internally toothed wheel driven by the driving element and a driven internally toothed wheel attached to the hub-shell, sunwheels, an intermediate carrier, planet pinions mounted thereon and gearing with said internally-toothed wheels and sunwheels, a one way clutch between one sun-wheel and said carrier, a one-way clutch between the other sun-wheel and the driven member, and a stop capable of locking either sun-wheel to the spindle, the whole so arranged that the pinions are incapable of being disengaged from the internally-toothed wheels and sun-wheels.

4. A variable speed gear consisting of a non-rotating spindle, a hub shell mounted thereon, an internally-toothed wheel driven by the driving element, and a driven-internally toothed wheel attached to the hub shell, sun wheels, an intermediate carrier, planet pinions mounted thereon and gearing with said internally-toothed wheels and sunwheels, a sliding one way clutch between one sun-wheel and said carrier, a one way clutch between the other sun-wheel and the driven member, and a sliding stop capable of locking either sun-wheel to the spindle, the whole so arranged that the pinions are incapable of being disengaged from the internally-toothed wheels and sun-wheels.

5. A variable speed gear consisting of a non-rotating spindle, a hub shell mounted thereon, an internally-toothed wheel driven by the driving element, and a driven internally toothed wheel attached to the hub shell, sun wheels, an intermediate carrier, planet pinions mounted thereon and gearing with said internally-toothed wheels and sunwheels, a sliding spring controlled one way clutch between one sun-wheel and said carrier, a one way clutch between the other sun-wheel and the driven member, and a controlled stop capable of locking either sun-wheel to the spindle, the whole so arranged that the pinions are incapable of being disengaged from the internally-toothed wheels and sun-wheels.

[Claims 6 to 9 not printed in the Gazette.]

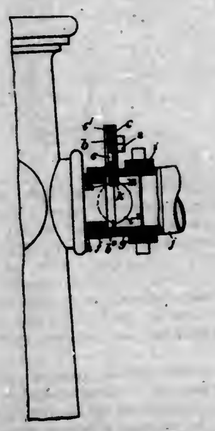
880,579. CARBON ELECTRODE FOR ELECTRICAL BLEACHING APPARATUS. PAUL SCHOOP, Nuremberg, Germany. Filed Nov. 26, 1906. Serial No. 345,219.



In a contact for carbon electrodes of electrolytic apparatus, the combination with the electrode having a threaded hole formed therein, of a perforated precious metal lead and a hard carbon screw passed through the perforation in the lead and screwed into the electrode,

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880,580. HYDRANT CUT-OFF VALVE. FREDERIC S. SEAGRAVE, Detroit, Mich. Filed Oct. 23, 1905. Serial No. 284,024.



1. The combination with a hydrant, of a cut-off valve comprising a pair of circular members adapted to lie in close contact with each other and one rotate upon the other, means retaining such members against other displacement than rotary, the said members having eccentric ports therein, means whereby the said members are coupled to a pair of fluid conductors, and means whereby a hose key is rotatively connected to the rotatable member.

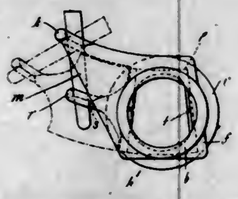
2. A hydrant cut-off valve comprising a pair of circular disks adapted to lie in close contact with each other and one rotate upon the other, one of such disks having an integral part engaging the other disk and retaining the

same against other displacement than rotary, the said disks each having an eccentric port therein, and one of the said disks having a second port therein, such second port being located a distance from the first port greater than the diameter of the port in the other disk, an internally screw-threaded coupling sleeve formed integrally with one of such disks and an internally screw threaded coupling sleeve formed integrally with the other disk, and one of the said disks having means for the connection of a hose key whereby it can be rotated.

3. A hydrant cut-off valve comprising a pair of circular disks adapted to lie in close contact with each other and one rotate upon the other, one of such disks having its periphery flanged and engaging the other disk and retaining the same against other displacement than rotary, the said disks each having an eccentric port therein, and one of the said disks having a second port therein, such second port being located a distance from the first port greater than the diameter of the port in the other disk, an internally screw-threaded coupling sleeve formed integrally with one of such disks and an externally screw threaded coupling sleeve formed integrally with the other disk, and one of the said disks having means for the connection of a hose key whereby it can be rotated.

4. A hydrant cut-off valve adapted to be coupled to a hydrant and have a hose coupled thereto, such cut-off valve comprising a pair of members one movable relatively to the other in three degrees of movement, one position of the members relatively to one another, effecting a communication between the hydrant and hose, a second position closing the outlet from both hydrant and hose through the valve, and a third position closing the outlet of the hydrant and effecting an outlet from the hose, substantially as described and for the purpose set forth.

880,581. HYDRANT AND HOSE CUT-OFF VALVE. FREDERIC S. SEAGRAVE, Detroit, Mich. Filed Nov. 22, 1905. Serial No. 288,612.



1. The combination with a hydrant, of a cut-off valve comprising a valve chamber means for securing such chamber to a hydrant, a valvular member located slidably in such chamber and movable at right angles to the port controlled thereby, a bearing device upon the valvular member and a fulcrum upon the coupling members, such bearing device and fulcrum being adapted to coact with and have a portion of a separate tool inserted therein for moving the said valvular member from and to closing position.

2. The combination with a hydrant, of a cut-off valve consisting of a pair of coupling members rigidly secured together with a guideway or valve chamber between them, one of such coupling members being adapted to be connected to a hydrant, a valvular member located slidably in such guideway and movable in a flat plane at right angles to the port controlled thereby, a bearing device upon the valvular member and a fulcrum upon the coupling members, such bearing device and fulcrum being adapted to coact with and have a portion of a separate tool inserted therein for moving the said valvular member from and to closing position.

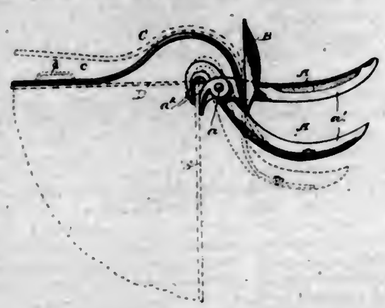
3. A cut-off of the type specified consisting of a pair of coupling members rigidly secured together with a guideway or valve chamber between them such guideway or valve chamber being quadrantal and flat in the direction of its curvature, a valvular member conforming to and located slidably in such guideway, a fulcrum device upon the valve casing and a bearing device upon the valvular member such devices being adapted to coact with a separate tool for moving the said valvular member from and to closing position.

4. A cut-off of the type specified consisting of a pair of coupling members rigidly secured together with a guideway or valve chamber between them a valvular member located slidably in such guideway, a fulcrum ring upon the valve casing and a bearing ring upon the valvular member such rings being adapted to coact with a separate tool for moving the said valvular member from and to closing position.

5. A cut-off of the type specified consisting of a pair of coupling members rigidly secured together with a guideway or valve chamber between them, a valvular member located slidably in such guideway, a fulcrum ring upon the valve casing and a bearing ring upon the valvular member such rings being formed with the interior edges thereof of inwardly tapered cross-section and adapted to coact with a separate tool for moving the said valvular member from and to closing position.

[Claims 6 to 9 not printed in the Gazette.]

880,582. POT-LIFTER. HARRY O. SECREST, Cleveland, Ohio. Filed Feb. 2, 1907. Serial No. 355,359.



1. In a device of the character described, the combination with pincers comprising a pair of pivotally connected handles adapted to grip the edge of a pot or the like, of a member borne by one of said handles and adapted upon actuation of the latter to retain the cover of such pot in place.

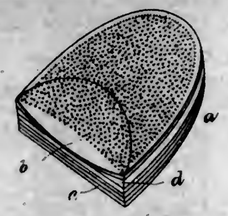
2. In a device of the character described, the combination with pincers comprising a pair of pivotally connected handles adapted to grip the edge of a pot or the like, of a cover-retaining member mounted upon the lower of said handles and adapted to be depressed upon actuation of the latter.

3. In a device of the character described, the combination with pincers comprising a pair of pivotally connected handles having down-turned jaws adapted to grip the edge of a pot or the like, of a spring member borne by one of said handles and adapted upon actuation of the latter to retain the cover of such pot in place.

4. In a device of the character described, the combination with pincers comprising a pair of pivotally connected handles having down-turned jaws adapted to grip the edge of a pot or the like, of a spring member attached at one end to the lower of said handles and having its outer end recurved, said member being adapted upon actuation of said handles to grip the pot to retain the cover of such pot in place.

5. In a device of the character described, the combination with pincers comprising a pair of pivotally connected handles having down-turned jaws adapted to grip the edge of a pot or the like, a spring member attached to the lower of said handles and adapted upon actuation of the latter to retain the cover of such pot in place, and a hand-guard borne by one of said handles.

880,583. HEEL. LINUS H. SHAW, Brockton, Mass., assignor, by mesne assignments, to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed May 29, 1905. Serial No. 262,751.



1. A heel having upon its inner surface independent penetrating projections formed and arranged to indent the heel seat of a shoe.

2. A heel comprising lifts, said heel having an inner lift situated with the grain side outward and provided with independent penetrating projections formed and arranged to indent the heel seat of a shoe.

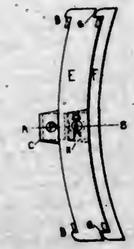
3. A heel having upon its inner surface penetrating projections formed and arranged to indent the heel seat of a shoe.

4. A heel, comprising lifts, said heel having an inner lift with the grain side outward and provided with penetrating projections formed and arranged to indent the heel seat of a shoe.

5. A compressed heel having its heel seat face molded to provide a bevel at the breast and to form penetrating projections constructed to indent the heel seat of a shoe.

[Claims 6 to 10 not printed in the Gazette.]

880,584. BRAKE-SHOE. JAMES S. SHEAFE, Chicago, Ill. Filed Nov. 2, 1907. Serial No. 400,358.



1. A brake shoe having a lug centrally and integrally located on the back of said shoe, the lug having a longitudinal opening thereto and a horizontal perforation therein, said perforation located upon a middle transverse line for the reception of a bolt, a keeper securing said bolt, the bolt being projected through the perforation in said lug; in combination with end lugs fitting into corresponding recesses in the face of the shoe, thus preventing the displacement of the shoe either in a vertical or lateral direction.

2. A brake shoe of the character described, having a lug formed centrally and integrally on the back of the shoe, and having a perforation therein for the reception of a bolt, a keeper securing said bolt, the bolt being projected horizontally through the perforation in said lug, end lugs fitting in corresponding recesses in the face of the shoe; in combination with reinforcing plates located in each shoe, thus strengthening the same and providing a suitable foundation for the bolt, thereby preventing the lug from giving way and tearing out.

3. A brake shoe composed of a back and face portion, having counter sunk cored holes therein and lugs on said shoe, recesses formed in the shoe to receive the lugs; in combination with the substantially elliptical strengthening rod.

880,585. PEDAL ATTACHMENT. JULIUS SIMMONDS, Utica, N. Y. Filed Aug. 16, 1907. Serial No. 388,807.



1. In a piano, a casing, pedals and pedal openings, a guard for closing the opening beneath the pedal, the same consisting of a spring attached at one end to the upper side of the bottom of the case of the instrument and extending outward and upward into contact with the under side of the pedal, the other end extending downward and covering the said opening, substantially as described.

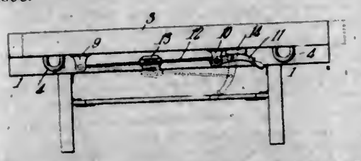
2. In a piano, a casing provided with openings for pedals, and pedals, means for closing the opening below the pedal consisting of a flat spring having one end bent downwardly below the pedal and having one or more apertures in the other end, said end having a prong for holding the spring to the piano bottom, substantially as described.

3. In a piano, the combination with a case and pedals projecting from the case through openings therein, of means for closing the opening beneath the pedals consisting of a spring bent at one end upward to engage the under side of the pedal and then downward to close the said opening, the other end being secured to the inner side of the piano case, substantially as described.

4. A guard for closing the pedal-opening in a piano consisting of a spring fastened to the inside of the piano case by prong means bedded in the piano bottom and securing means through the guard near its inner end and at its outer end bearing on the under side of the pedal, the said spring comprising a portion for covering said hole at said outer end of the guard, substantially as described.

5. In a piano having pedals projecting from the case thereof, a member adapted to close the openings in the case when the pedals are elevated, the same consisting of a spring mounted within the piano and extending in a bent extremity into contact with the pedal and thence downwardly in front of and adapted to cover the pedal opening, substantially as described.

880,586. BOARD-CLAMP FOR BENCHES. IRA W. SIPES, Zion City, Ill. Filed June 18, 1907. Serial No. 379,598.



1. A bench clamp comprising a fixed jaw, a movable jaw, connecting links between said jaws, a lever pivoted at one end to the movable jaw and adapted to swing longitudinally thereof, a rod pivoted to said lever and to a fixed part of the clamp, and means connected with said rod whereby its length may be changed to permit said lever to carry said rod across its axis of rotation for locking said jaws in clamped position.

2. A bench clamp comprising a fixed jaw, a parallel movable jaw, connecting links between said jaws, a hand lever pivoted at one end to the movable jaw and adapted to swing longitudinally thereof, a rod pivoted to said lever and to the movable jaw and a turn buckle on said rod for changing its length to permit said lever carrying said rod across its axis of rotation to lock the jaws against separation when clamping an object.

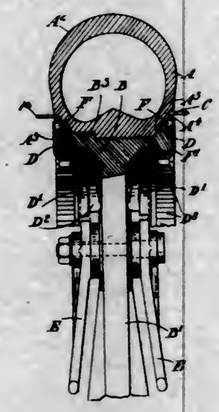
3. A bench clamp comprising a fixed jaw adapted to be secured to the side of a bench, a movable jaw supported therefrom, a plurality of yoke shaped links each having a leg threaded into the fixed jaw and a leg similarly threaded into the movable jaw thereby forming the sup-

port for the movable jaw, and means for operating the movable jaw.

4. A bench clamp comprising a fixed jaw, a movable jaw and a plurality of yoke-shaped links pivoted to said jaws, bushings having threaded sockets fitted in vertical openings in said jaws, said sockets adapted to receive the threaded legs of said yokes, and means for preventing the rotation of said bushings.

5. A bench clamp comprising a fixed jaw, a movable jaw, a plurality of yoke shaped links between said jaws the legs of said links and nicks in the ends of said bush-through holes in said jaws having threaded sockets for the legs of said links and nicks in the ends of said bushings for turning them, and removable fastening means extending through said bushings for preventing them from turning.

880,587. APPARATUS FOR MANUFACTURING PNEUMATIC TIRES. THOMAS SLOPER, Devizes, England. Filed June 27, 1907. Serial No. 381,164.



1. In a "former" employed in building up a tire fabric, means for holding a plurality of anchoring devices for the fabric, in such a manner that they may be released from the "former" without disturbing their relation to the fabric, substantially as set forth.

2. In a "former" employed in building up a tire fabric and having an annular working face for the tire-fabric, means for securing to the "former" a plurality of anchoring devices for the fabric situated in proximity to the edges of the working face, in such a manner that they may be released from the "former" without disturbing their relation to the fabric, substantially as set forth.

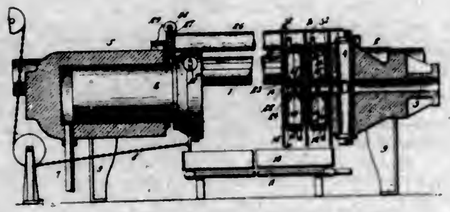
3. In a "former" employed in building up a tire fabric the combination of, a member providing an annular working face for the tire fabric, a side-ring for such member carrying a plurality of anchoring devices for the fabric, and means for detachably securing the side ring to the member aforesaid, substantially as set forth.

4. In a "former" employed in building up a tire fabric the combination of, a member providing an annular working face for the tire fabric, a side-ring for such member, means for detachably securing the side-ring to the member, and means for securing a plurality of anchoring devices for the fabric to the side-ring, in such a manner that they may be released from the side-ring without disturbing their relation to the fabric, substantially as set forth.

5. In a "former" employed in building up a tire fabric the combination of, a member providing an annular working face for the tire fabric, a side-ring for such member, means for securing the side-ring to the member, means for moving the side-ring laterally or in axial direction relatively to the working-face of the member, and means for securing a plurality of anchoring devices for the fabric to such side-ring, in such a manner that they may be released from the side-ring without disturbing their relation to the fabric, substantially as set forth.

[Claims 6 to 19 not printed in the Gazette.]

880,588. COMBINED FILTER AND HYDRAULIC PRESS. MYRON A. SMITH, New York, N. Y. Filed Aug. 10, 1903, Serial No. 168,881. Renewed June 22, 1907. Serial No. 380,243.



1. In a combined filter and hydraulic press, the combination with filtering receptacles and a plunger, of movable separating pieces.

2. A combined filter and hydraulic press in which is comprised a supporting frame; a series of pairs of rings mounted therein each pair of rings carrying filter cloths; heads between each pair of pairs of rings; movable separating pieces between each pair of pairs of rings; a conduit for material to be treated leading to the spaces between the filter cloths, and a hydraulic plunger, the whole combined and arranged to operate substantially as shown and described.

3. In a device of the character herein specified, the combination with a filter cloth having a perforation through its center encircled by a ring, of a perforated movable head, having a finger projecting from the side of said perforation adapted and arranged to engage the filter-cloth ring, substantially as shown and described.

4. In a device of the character herein specified, the combination with a movable head having a central perforation, a packing gasket fitting around said perforation, and a central filter-cloth support, of a filter-cloth resting against said head, substantially as shown and described.

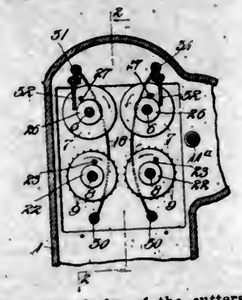
5. In a device of the character herein specified, the combination with the rings carrying filter cloths of heads or plungers, arranged to enter said rings, and movable separating pieces for interposing between each pair of pairs of rings.

[Claims 6 to 11 not printed in the Gazette.]

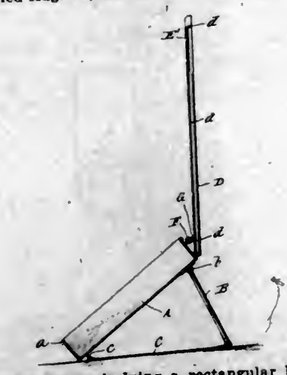
880,589. MEAT-TENDERER. JESSE E. SNELLING, Newark, Ohio. Filed Sept. 26, 1907. Serial No. 394,737.

1. A meat-tendering machine comprising two gangs of circular cutters arranged to cut partway through the meat but not to sever it into strips, two cylindrical gangs of longitudinal blades having transverse slots and arranged below the circular cutters and also arranged to cut partway through the meat without severing it into strips, gearing for driving the circular blades and the longitudinal blades toward the center of the machine to feed the meat inwardly and downwardly between them and vertically arranged rods or wires extending through the slots of the longitudinal blades and between the disk cutters for guiding the meat and clearing the blades and cutters, substantially as set forth.

2. A meat-tendering machine comprising two gangs of circular cutters arranged to cut partway through the meat but not to sever it into strips, two cylindrical gangs of longitudinal blades having transverse slots arranged below the circular cutters and also arranged to cut partway through the meat without severing it into strips, gearing for driving the circular blades and longitudinal blades toward the center of the machine to feed the meat inwardly and downwardly between them, mechanism for driving the cutters and blades in the proper direction, adjustable plates at opposite ends of the machine carrying bearings for the shafts of the cutters and two sets of vertically arranged wires on opposite sides of the machine extending through the slots of the longitudinal blades and between the cutting disks, the upper ends of said wires being arranged further apart than their middle portions to form a hopper to receive the meat.



880,590. DISPLAY-BOX. ADOLPH SOMMER, Cambridge, Mass. Filed Aug. 17, 1907. Serial No. 388,986.

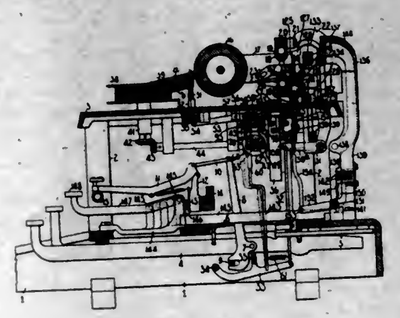


1. A display box embodying a rectangular box body, a support hinged to the bottom of the box body for supporting the same in an inclined position; and a display frame hinged to the upper side of the box body on an axis removed from the edge of the frame, whereby said edge forms a stop to support the frame in an inclined position, said frame having edge channels for the reception of a removable display card or sheet; substantially as described.

2. A display box embodying a rectangular box body, a support hinged to the bottom of the box body for supporting the same in an inclined position, and an open display frame hinged to the upper side of the box and adapted to occupy an inclined display position above the box, said frame having U-shaped edge channels at the sides and bottom for the reception of a display card and a flat field at the top with permanent advertising matter within it, the edge of said flat portion being flanged to stiffen the frame.

880,591. TYPE-WRITING MACHINE. HERBERT H. STEELE, Marcellus, N. Y., assignor to The Monarch Typewriter Company, Syracuse, N. Y., a Corporation of New York. Filed Dec. 16, 1907. Serial No. 406,683.

1. In a typewriting machine, the combination of a carriage, printing instrumentalities, ribbon fields of different characteristics normally removed from the printing point, devices for moving said ribbon fields to and from the printing point at printing operation, and means operative at a predetermined point in the carriage travel to alter the normal relation between certain of said devices.



2. In a typewriting machine, the combination of a carriage, printing instrumentalities, ribbon fields of different characteristics, a ribbon vibrator normally maintaining said ribbon fields away from the printing point, devices operative to move said vibrator to and from the printing point, and means operative at a predetermined point in the travel of the carriage to alter the normal relation between certain of said devices.

3. In a typewriting machine, the combination of a ribbon vibrator, devices operative to move said vibrator to and from the printing point, a member adjustable to vary the normal relation between certain of said devices, and means operating automatically to re-adjust said member at a predetermined point in the travel of the carriage.

4. In a typewriting machine, the combination of a ribbon vibrator, devices operative to move said vibrator to and from the printing point, a member adjustable to vary the normal relation between certain of said devices, a spring normally controlling the position of said member, and means automatically acting to overcome the force of said spring and re-adjust said member to change again the normal relation between certain of said devices.

5. In a typewriting machine, the combination of a carriage, printing instrumentalities, ribbon fields of different characteristics normally removed from the printing point, actuating devices for said ribbon fields including a link and a lever, and means operative at a predetermined point in the travel of the carriage to vary the normal relation between said link and said lever.

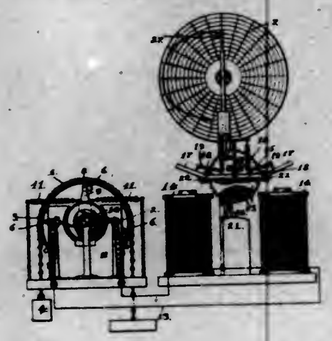
[Claims 6 to 34 not printed in the Gazette.]

880,592. LONG-DISTANCE RECORDING-INDICATOR FOR RECIPROCATING DEVICES. RICHARD H. STEELING, Watsonville, Cal. Filed Sept. 29, 1905. Serial No. 280,590.

1. In an apparatus of the character described, the combination of a reciprocating device, an electric circuit, means operated by the reciprocation of said device for generating an electric impulse in said circuit, positive or negative dependently upon the direction of movement of said device, means for continuously advancing a recording sheet, an instrument for marking said sheet, and means for moving said instrument actuated by the passage of said current, the direction of movement of said instrument depending upon the direction of the current, substantially as described.

2. In an apparatus of the character described, the combination of a reciprocating device, an electric circuit, means for generating a current in said circuit, a pair of springs for rotating said generating means, means for energising said springs selectively operated by the movement of said reciprocating means in either direction, means for releasing said energising means after the

reciprocating means has moved through a predetermined distance, and recording means correspondingly actuated in either direction by the current so generated, substantially as described.



3. In an apparatus of the character described, the combination of a reciprocating device, an electric circuit, a dynamo for generating an electrical impulse in said circuit, means operated by the movement of said reciprocating device for imparting a rotary movement to the dynamo shaft comprising a disk having pins thereon, and an arm on the dynamo shaft, said arm having a part adapted to engage said pins in succession, said shaft and disk being so arranged that said part when in its normal position is engaged by one of the pins on the disk when the latter commences to rotate, but is automatically removed therefrom after a predetermined extent of rotation of the disk, a spring for returning the arm to its normal position, a recording device, and means operated by the electrical impulse so produced for actuating said recording device, substantially as described.

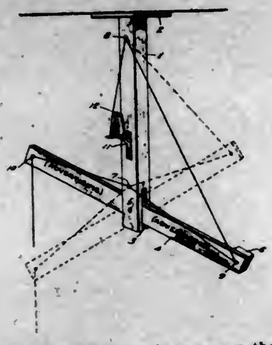
4. In an apparatus of the character described, the combination of a reciprocating device, an electric circuit, a dynamo for generating an electrical impulse in said circuit, a shaft rotated by the reciprocation of said device, a disk on said shaft, pins on said disk, the shaft of the dynamo being out of alinement with the shaft rotated by said reciprocating device, a crank arm on said dynamo shaft, a part carried by said crank arm and engaged by said pins in succession, springs connected to opposite sides of said crank arm to restore it to its normal position, a recording device, and means actuated by the electrical impulse generated for actuating said recording device, substantially as described.

5. In an apparatus of the character described, the combination of, clock work mechanism for advancing said sheet, a marker for a recording sheet, means for moving said marker transversely to the direction of movement of the recording sheet, comprising a polarized armature operatively connected with said marker, whereby the movement of the armature in either direction correspondingly moves the marker, a permanent magnet over said armature, electro-magnets opposed to said permanent magnets, and a transmitter at a distant point for energizing said electro-magnets, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

880,593. TWINE-HOLDER. GEORGE C. STEVENS, Chicago, Ill. Filed Feb. 26, 1907. Serial No. 359,346.

The herein described twine holder comprising a post, said post having a notch formed at the lower end thereof, a flat elongated arm pivoted in said notch and having a weighted end, a twine supporting bracket upon the post, and a guide member such as a screw eye secured directly above the twine holder and near the upper end of the post, a ball of twine supported upon said bracket, and the twine being led through said guide member and through a guide eye on the weighted end of the arm, and led thence through an eye on the post above the pivot of said arm, the twine



continuing thence to and through an eye on the end of the arm opposite the weight.

880,594. CLOSET-FLUSHING APPARATUS. ROBERT STICKDORN, Dusseldorf, Germany. Filed Dec. 5, 1906. Serial No. 346,379.

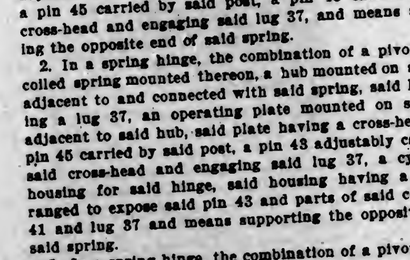


In a flushing apparatus, a water tank, combined with a first cylinder communicating therewith, a second cylinder, a differential piston engaging both cylinders, a flush pipe, a valve on the piston controlling communication between the tank and the flush pipe, a water inlet pipe communicating with the first cylinder above the piston, a passage connecting said inlet pipe with the second cylinder below the piston, a valve operable by the tank-pressure and controlling communication between said passage and the water inlet pipe and also between said passage and the flush pipe, substantially as specified.

880,595. PNEUMATIC-DESPATCH-TUBE APPARATUS. CHARLES F. STODDARD, Boston, Mass., assignor to American Pneumatic Service Company, Dover, Del., a Corporation of Delaware. Filed July 28, 1906. Serial No. 328,197.

1. In a pneumatic despatch tube apparatus, a series of pneumatic despatch tube lines, a series of blowers for said tube lines, an atmospheric connection to the blower of the first pneumatic tube line, and a connection between said first pneumatic tube line and the blower of the second pneumatic tube line for supplying air current to said pneumatic tube line and closed to the atmosphere.

2. In a pneumatic despatch tube apparatus, a series of pneumatic despatch tube lines, a series of blowers for said tube lines, an atmospheric connection to the blower of the first pneumatic tube line, means for drying the air in said first line, and a connection between said first pneumatic tube line and the blower of the second pneumatic tube line for supplying air current to said pneumatic tube line and closed to the atmosphere.



3. In a pneumatic despatch tube apparatus, a series of pneumatic despatch tube lines, a blower open on one side to the outside atmosphere and communicating at the other side with the transmitting terminal of the first tube line, a tank interposed in the communication between the blower and the first tube line, a pipe connecting the receiving terminal of the first tube line with the open side of the blower, a second blower communicating at one side with the transmitting terminal of the second tube line, and a closed communication leading to the other side of said second blower from the pipe connecting the receiving terminal of the first tube line with the first blower and said closed communication also leading from the receiving terminal of the second tube line.

880,596. SPRING-HINGE. ABRAHAM L. STUMP and FRANCIS BAUCKER, Shelby, Ohio, assignors to Shelby Spring Hinge Company, Shelby, Ohio, a Corporation of Ohio. Filed Jan. 26, 1903. Serial No. 140,556.

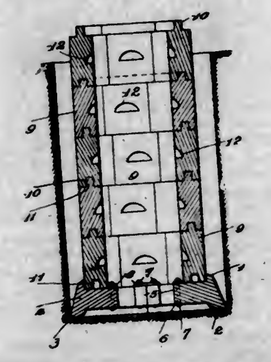
1. In a spring hinge, the combination of a pivot-post, a coiled spring mounted thereon, a hub mounted on said post adjacent to and connected to said spring, said hub having a lug 37, an operating plate mounted on said post adjacent to said hub, said plate having a cross-head 41, a pin 45 carried by said post, a pin 43 carried by said cross-head and engaging said lug 37, and means supporting the opposite end of said spring.

2. In a spring hinge, the combination of a pivot-post, a coiled spring mounted thereon, a hub mounted on said post adjacent to and connected with said spring, said hub having a lug 37, an operating plate mounted on said post adjacent to said hub, said plate having a cross-head 41, a pin 45 carried by said post, a pin 43 adjustably carried by said cross-head and engaging said lug 37, a cylindrical housing for said hinge, said housing having a slot arranged to expose said pin 43 and parts of said cross-head 41 and lug 37 and means supporting the opposite end of said spring.

3. In a spring hinge, the combination of a pivot-post, an operating plate mounted upon said post near the lower end thereof and adapted to non-rotatably and removably engage the door, a hub mounted on said post adjacent to said plate, interlocking devices carried by said hub and plate, whereby when said plate rotates in one direction only it will cause said hub to rotate in the same direction, a spring mounted on said post and connected with said hub, and means supporting the opposite end of said spring.

4. In a spring hinge, the combination of a pivot-post, an operating plate mounted upon said post near the lower end thereof and adapted to non-rotatably and removably engage the door, a hub mounted on said post adjacent to said plate, interlocking devices carried by said hub and plate whereby when said plate rotates in one direction only it will cause said hub to rotate in the same direction, a spring mounted on said post and connected with said hub, means supporting the opposite end of said spring, a hub mounted on said post above said spring and connected therewith, an operating plate mounted on said post adjacent to said upper hub, and interlocking devices carried by said upper hub and operating plate, said upper operating plate being adapted to removably and non-rotatably engage the door, said upper and lower operating plates being actuated respectively by the swinging of the door in opposite directions.

880,597. WELL-CURB. JAMES F. SYZE, Yorktown Heights, N. Y. Filed Aug. 30, 1907. Serial No. 390,843.



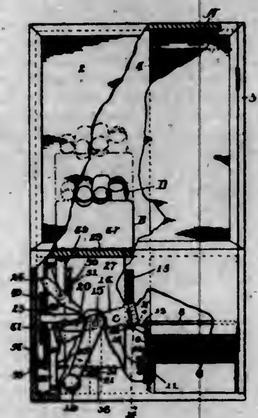
1. The means for use in connection with the sinking of a well shaft or the like, comprising the combination of the curb and the supporting base therefor, said base being of sectional formation and having upper and lower rims at its outer edge, the end portions of the sections being widened and apertured, and clips overlapping the joints from between the sections and fastenings connecting the clips to the sections.

2. The means for use in connection with the sinking of a well or shaft or the like, comprising the combination of a curb and a supporting base therefor, the latter having its outer edge downwardly flared and terminating in a cutting edge and having a vertical rim embracing the lower end of the curb said base being formed of sections whose end portions are widened and vertically apertured clips overlapping the joints between sections and having their outer edges adapted to touch the inner side of the lower end of the curb and fastenings connecting said clips to the sections.

3. The herein described means for use in connection with the sinking of a well, shaft, or the like the same consisting of a curb comprising courses each course consisting of sections, the sections of one course arranged to break joint with the sections of the adjacent portions, the several curb sections being of like formation and having a tongue at one edge and a matching groove at the opposite edge and a base, the latter having a vertical rim to embrace the lower end of the curb and composed of like sections whose end portions are widened and apertured, the outer edge portion of the base being downwardly flared and terminating in a cutting edge, clips overlapping the joints from between the sections of the base and having the space between their outer edges and the inner

edge of the vertical rim of a size to receive the lower edge of the curb, and fastenings connecting the clips with the sections of the base.

880,598. CARD-EXHIBITING MACHINE. HUGH G. TAYLOR, St. Paul, Minn. Filed Feb. 4, 1905. Serial No. 244,087.



1. A machine of the class set forth, comprising, in combination, a suitable cabinet, a pack of cards arranged vertically therein, a selector, and means provided with an operating handle adapted to move said selector to exhibit one of said cards by lifting a plurality of said cards belonging to said pack.

2. A machine of the class set forth, comprising, in combination, a suitable cabinet, a pack of cards therein, a selector adapted to raise a plurality of cards belonging to said pack to exhibit one of said cards, a drive shaft for raising said selector, an operating handle attached to said shaft to turn it, and means for returning said handle to normal position after said selector has been raised.

3. A device of the class set forth, comprising, in combination, a suitable cabinet, a pack of cards arranged vertically therein, a selector for raising a plurality of cards belonging to said pack to exhibit one of said cards, a shaft journaled in said cabinet, an arm carried by said shaft to operate said selector, and spring actuated means for returning said arm to normal position.

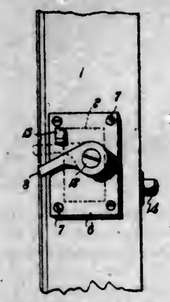
4. A machine of the class set forth, comprising, in combination, a suitable cabinet, a pack of cards arranged vertically therein, means for selecting and sliding said cards vertically to exhibit one of them, means for holding said selecting and sliding means in superior position, a shaft journaled in said cabinet, means for engaging said selecting and sliding means as said shaft is revolved, a spring for reversing said shaft, means for releasing said selecting and sliding means to cause it to return to normal position, and an operating handle attached to said shaft.

5. A machine of the class set forth, comprising, in combination, a suitable cabinet, a shaft therein, a holder for a pack of cards arranged vertically in said cabinet, an operating handle attached to said shaft, means for selecting and exhibiting one of said cards by raising a number of cards belonging to said pack in superior position, and means for returning said selecting and exhibiting means to normal position.

880,599. PROCESS FOR ELECTROLYTICALLY PRODUCING PERSULFATES. GUSTAV TRICHNER and PAUL ASKENASY, Nuremberg, Germany. Filed Feb. 12, 1906. Serial No. 300,652.

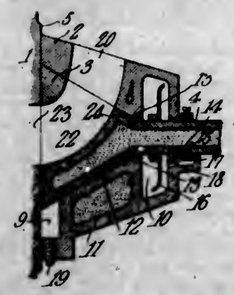
A process for producing persulfates, which consists in subjecting the solutions of the corresponding sulfates to electrolytic action and periodically adding thereto, during the electrolysis reducing agents adapted to reduce the Caro-acid as it is formed.

880,600. COMBINED SASH FASTENER AND LIFT. BENJAMIN F. THOMPSON, Malone, N. Y. Filed Jan. 31, 1907. Serial No. 355,106.



In combination, a window sash having a recess opening at its inner face and provided with an opening extending from one wall of the recess to the edge of the sash, a locking bolt slidably mounted in the opening and having its inner end projected into said recess, a spring tending to project the outer end of the bolt beyond the edge of the sash, a detachable plate secured to the inner face of the sash and forming the sole support of the bolt actuating means, said plate forming a covering for the recess and being provided with an approximately central opening, an elbow lever having one arm pivotally mounted in the opening of the plate and extending through beyond the outer face of the plate, its outer end having a rectangular portion, the other arm of said lever being arranged to engage the inner end of the bolt, an operating crank having a socket to receive the projecting rectangular portion of the elbow lever, and a lug projecting from the outer face of the plate and forming a stop with which the operating crank engages after the bolt has been retracted, said lug serving as a means for transmitting lifting movement to the sash from said operating crank.

880,601. GAS-ENGINE VALVE. JAMES I. THOMPSON, Centerville, Iowa. Filed Mar. 30, 1907. Serial No. 365,573.



1. A valve for explosion engines comprising a valve casing having a frusto-conical valve seat therein and a bearing surface at the frustum end of said valve seat inclined at an angle different from that of the seat, and a rotary frusto-conical valve fitted to said seat and having a shoulder at the same angle as, and abutting against said bearing surface to take the thrust of the valve.

2. A valve for explosion engines comprising a valve casing having an open frusto-conical valve seat in one end the frustum end of said seat being innermost and terminating in a bearing surface inclined at a different angle from that of said valve seat, an inlet port and an exhaust port extending through the casing from the valve seat, and a rotary frusto-conical valve fitted to said valve seat having a curved port extending from its base through the side of the valve in position to register with said inlet and outlet ports, and a tapered shoulder at the smaller end of the valve inclined at the same angle as, and abutting against, said inclined bearing surface to take the thrust of the valve.

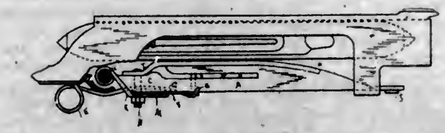
3. A valve for explosion engines comprising a separable casing having a flat bearing face onto which opens a frusto-conical valve seat and an oil receptacle below said seat and communicating therewith, an inlet port and an outlet port passing at an angle to each other through the side of said casing into the valve seat, and a rotary frusto-conical valve fitted in said valve seat with its base towards the explosion chamber and extending into said oil receptacle and having a curved port therethrough, one end of said port opening through the base of the valve at its axial center and the other end through the side of said valve in position to register with the inlet and exhaust ports when the valve rotates.

4. A valve for explosion engines comprising a valve casing having a closed oil chamber formed therein at one end and a frusto-conical valve seat open at its other end, the smaller inner end of said valve seat next the oil chamber terminating in a tapered bearing surface, an inlet port and an exhaust port leading through the wall of said casing from the valve seat, a rotary frusto-conical valve fitted to said valve seat provided with an axial stem projecting from its smaller end through said closed oil chamber, a tapered shoulder to bear against said tapered bearing surface, and a curved port continuously open at the base of said valve to the explosion chamber and at its opposite end in position to register as the valve rotates with the inlet and exhaust ports, and an adjustable bearing ring adapted to be seated in a conical bearing on the outside of said casing.

5. A valve for explosion engines comprising a valve seat having a closed oil chamber formed therein at one end, an open frusto-conical valve seat in its other end, and an open oil receptacle in the same end below said valve seat, an inlet port and an exhaust port extending from the valve seat through the wall of the casing, a rotary frusto-conical valve fitted in said valve seat and having an axial stem extending through the closed oil chamber, an adjustable coned bearing ring on said valve stem adapted to seat in a bearing on the outside of said casing, means on said valve stem within said oil chamber for distributing oil to the bearings and to the valve, and a pocket at the outer end of the casing for collecting excess oil from the outer bearing.

[Claim 6 not printed in the Gazette.]

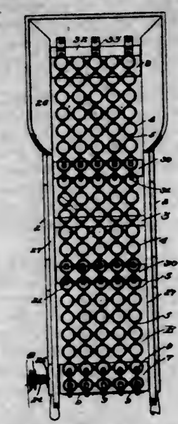
880,602. SHUTTLE-BINDER. AUGUST TILCH, Lewiston, Me. Filed Mar. 14, 1907. Serial No. 362,272.



A shuttle binder comprising a body part and a yielding projection spaced apart therefrom a portion of its length, a post adapted to support the free end of the projection and to register through the body part and a spring mounted independently of the binder and adapted to yieldingly support said post.

880,603. SEPARATING-MACHINE. WILLIS A. TRESCOTT, Fairport, N. Y. Filed Apr. 20, 1907. Serial No. 369,249.

1. In a separating machine, a separating element comprising a plurality of rings, and means spacing said rings at such a distance that the spaces formed by every four rings will have a width approximately equal to the diameter of the space inclosed by each ring.



2. In a separating machine, a separating element comprising a plurality of rings each having a plurality of eyes, arranged about the same, and links, each secured in the eyes of two rings and holding said rings in spaced relation.

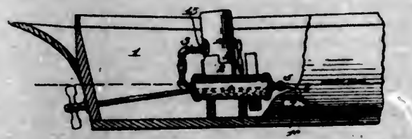
3. In a separating machine, a frame having a hopper and a discharge end, and a separating element extending from the hopper to the discharge and comprising a plurality of rings and means spacing said rings at such a distance that the spaces formed by every four rings will have a width approximately equal to the space inclosed by each ring.

4. In a separating machine, an endless belt comprising a plurality of rings and links holding the rings in spaced relation, means for moving the belt and a chute arranged beneath a portion of the belt to receive material separated by the belt and discharge said material to one side of the belt.

5. In a separating machine, a separating element comprising an endless belt formed of a plurality of rings, and means spacing said rings at such a distance that the spaces formed between every four rings will have a width approximately equal to the diameter of the space inclosed by each ring, and means for moving said belt.

[Claims 6 to 12 not printed in the Gazette.]

880,604. EXHAUST MECHANISM FOR EXPLOSIVE-ENGINES. JAMES M. TRUSCOTT and EDWARD E. TRUSCOTT, St. Joseph, Mich., assignors to Truscott Boat Manufacturing Company, St. Joseph, Mich., a Corporation of Michigan. Filed Mar. 15, 1906. Serial No. 306,145.



1. In combination with a boat having an explosive motor thereon, under water exhaust mechanism for the motor consisting of a nozzle comprising a hollow casing having a wall secured to the hull of a boat and an imperforate wall spaced therefrom and joining said first wall at three sides only to provide a chamber whose only outlet is directed toward the stern of the boat, and an expansion chamber having communication with the motor exhaust and with the said nozzle.

2. In combination with a boat having an explosive motor thereon, under water exhaust mechanism for the motor consisting of a nozzle comprising a hollow casing having a substantially flat wall attached to the hull of

the boat below the water line and an imperforate wall arched over said flat wall, said imperforate wall being removed from the flat wall to provide an opening at one end only of the casing and joined thereto at its opposite end, and a pipe leading from the space between the said walls and communicating with the exhaust pipe of the motor.

3. In combination with a boat having an explosive motor mounted thereon, exhaust mechanism for the motor, comprising an expansion tank having communication with the exhaust pipe of the motor, a part of said tank being located below the water line, and an outlet pipe leading from the tank and extending through the bottom of the boat below the water line thereof, the discharge end of said outlet pipe being free and unobstructed and directed toward the stern of the boat.

4. In combination with a boat having an explosive motor mounted thereon, exhaust mechanism for the motor, comprising an expansion tank having open communication at one end with the exhaust pipe of the motor, a part of said tank being located below the water line, and an outlet pipe leading from the opposite end of the tank and discharging outside of the boat below the water line thereof, the free end of said outlet pipe being directed toward the stern of the boat.

5. In combination with a boat having an explosive motor mounted thereon, exhaust mechanism for the motor, comprising an expansion chamber having communication with the motor exhaust, and an aspirating nozzle consisting of a hollow casing provided with means whereby it may be secured to the bottom of the boat below the water line and having a single outlet opening directed rearwardly, the outer wall of the nozzle being imperforate, and a pipe connection between the nozzle and the expansion chamber.

[Claims 6 to 11 not printed in the Gazette.]

880,605. VEHICLE-HUB. DAVID L. TSCHANTZ, Canton, Ohio. Filed Sept. 24, 1907. Serial No. 394,320.



1. In a vehicle hub, the combination of a hub body, metal bands located upon the hub body and connected together, one of said bands and the hub body provided with mortises, spokes connected to the body and one of the bands, a ring provided with integral tangs and the tangs embedded in the bodies of the spokes and located against the inner periphery of the band provided with the spoke-mortises, substantially as and for the purpose specified.

2. In a vehicle hub, the combination of a hub body, bands located upon the hub body, spokes connected to one of the bands and hub body, a ring provided with spaced tangs, and one of the bands seated upon the ring and the tangs, located against the spokes concentrically beyond the hub body, substantially as and for the purpose specified.

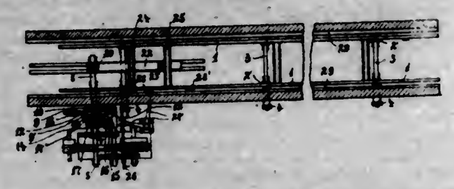
3. In a vehicle hub, the combination of a hub body, bands located upon the hub body, spokes connected to one of the bands and hub body, a ring provided with spaced tangs, and one of the bands seated upon the rings and the tangs located against the spokes concentrically beyond the hub body, and the tangs seated in the spoke bodies, substantially as and for the purpose specified.

4. In a vehicle hub the combination of a hub body, bands located upon the hub body and connected together, spokes connected to one of the bands and hub body, spaced tangs pointed at their spaced ends, said tangs located around the hub body and between the bodies of the spokes and said tangs abutting against the inner periphery of the band provided with the spoke mortises, substantially as and for the purpose specified.

5. In a vehicle hub, the combination of a hub body, bands connected together and located upon the hub body, a ring provided with tangs, spokes connected to one of the bands and to the hub body and the tangs located concentrically with one of the rings and between the spokes, said tangs embedded in the body of the spokes, substantially as and for the purpose specified.

[Claims 6 and 7 not printed in the Gazette.]

880,606. CONVEYER FOR DRYING APPARATUS. EMIL UPENAST, Zurich, Switzerland. Filed July 30, 1906. Serial No. 328,395.



1. In conveyer apparatus for a drying plant an iron frame consisting of two parallel longitudinal carriers, rollers supporting the carriers, single armed levers, on the free ends of which the rollers are fitted, shafts carrying the levers and wall supports over and under which the frame is moved by the levers for the purpose described.

2. In conveyer apparatus for a drying plant an iron frame, consisting of two parallel longitudinal carriers, rollers supporting the frame, single armed levers on the free ends of which the rollers are fitted, shafts carrying the levers, wall supports over or under which the frame is moved by the shafts and levers, operating levers and adjustable connections from the said operating levers to the shafts enabling them to be turned simultaneously.

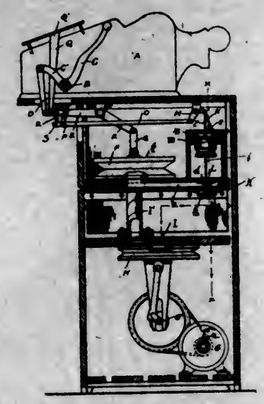
3. In conveyer apparatus for a drying plant, an iron carrier frame, rollers supporting the frame, single armed levers carrying the rollers, shafts on which the levers are mounted, operating levers connected together, winding mechanism connected to one of the levers, coupling mechanism for the winding drum adapted to be engaged by hand, and means for automatically uncoupling.

4. In conveyer apparatus for a drying plant, an iron carrier frame, supporting rollers for the frame, single armed levers carrying the rollers, shafts on which the levers are mounted, mutually connected shaft operating levers, winding mechanism actuating the said levers, a hand applied coupling for the winding mechanism, means for automatically disengaging the coupling, a toothed wheel on the shaft of the winding mechanism, and a rack engaged by the wheel and arranged to move the carrier frame intermittently.

5. In conveyer apparatus for a drying plant, an iron carrier frame, rollers supporting the frame, single armed levers carrying the rollers, shafts on which the levers are mounted, interconnected operating levers for the shafts, winding mechanism connected to one of the said levers, means for engaging the winding mechanism by hand and for disengaging it automatically, a toothed wheel on the shaft of the winding mechanism, a rack engaged by the toothed wheel and adapted to move the carrier frame intermittently and a lever operated by the moving frame effecting the automatic disengagement of the driving mechanism.

880,607. PNEUMATIC MOTOR FOR ADDING-MACHINES. CHARLES WALSH, Detroit, Mich., assignor to Adder Machine Company, Detroit, Mich., a Corporation of New Jersey. Filed Aug. 28, 1905. Serial No. 276,117.

1. The combination with the actuating shaft of an adding machine, of a reciprocating pneumatic motor for rocking said shaft, valve-controlled inlet and exhaust ports for said motor, a tripper for opening the inlet port, and automatic means for holding said port open a sufficient time for completing the actuating movement of said shaft, and then to close it and open the exhaust port.



2. The combination with the actuating shaft of an adding machine, of a reciprocating pneumatic motor for rocking said shaft, valve-controlled inlet and exhaust ports for said motor, a tripper for starting the motor, and automatic means for controlling the inlet and exhaust ports of the motor to cause it to rock the shaft forward and back, and to stop, after each tripping operation.

3. The combination with the actuating shaft of an adding machine, of a reciprocating pneumatic motor for rocking said shaft, a valve for controlling the inlet and exhaust to said motor, a tripper for opening the inlet and closing the exhaust, means controlled by the movement of the rock shaft for holding the valve in this position during the actuating movement of the shaft, and for releasing and shifting the valve at the end of such movement.

4. The combination with the actuating shaft of an adding machine, of means for rocking said shaft comprising a bellows connected to rock said shaft by its inflation and deflation, a valve controlling the air to and from said bellows, and a tripper for operating said valve.

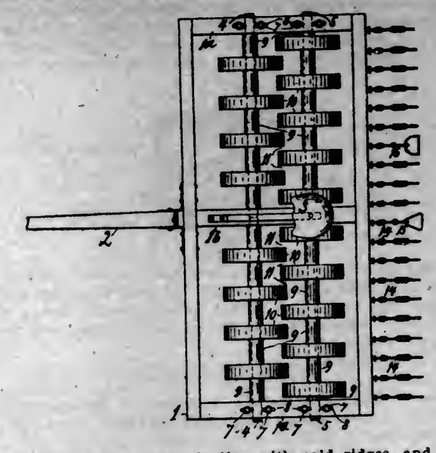
5. The combination with the actuating shaft of an adding machine, of means for locking said shaft comprising a bellows connected to rock said shaft by its inflation and deflation, a valve for controlling the passage of air to and from said bellows, a tripper for opening said valve, and means after the valve is opened for holding it open until the shaft has completed its actuating movement, and then closing it.

[Claims 6 to 9 not printed in the Gazette.]

880,608. LAND-ROLLER. SWAN P. WALGREN, Worthington, Minn. Filed Apr. 13, 1907. Serial No. 368,870.

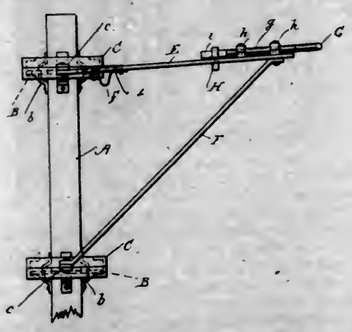
1. In a machine of the class described, the combination with a frame and means for drawing the same, of two parallel shafts extending from side to side of the frame one rearward of the other, a series of roller wheels on each shaft with intervening spaces between the wheels, the spaces between the wheels on one shaft being wider than the faces of the wheels of the other shaft so as to leave unrolled ridges on the ground, and chains dragged by the rear end of the frame in line with said ridges.

2. In a machine of the class described, the combination with a frame and means for drawing the same, of two parallel shafts extending from side to side of the frame one rearward of the other, a series of roller wheels on each shaft with intervening spaces between the wheels, the spaces between the wheels on one shaft being wider than the faces of the wheels of the other shaft, so as to leave unrolled ridges on the ground, and chains dragged by the



rear end of the frame in line with said ridges, and enlarged members at the lower ends of the chains.

880,609. MAIL-CRANE. WILLIAM WATTS, Spring Grove, Ill. Filed Sept. 19, 1907. Serial No. 393,670.



1. In a mail-crane, the combination, with a supporting post, of a crane jib journaled to revolve freely in each direction on the said post, a reversible hook for the mail-bag journaled at the end of the said jib, and a slidable locking device for holding the said hook in position.

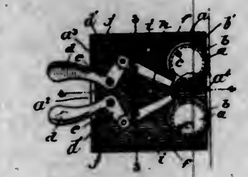
2. In a mail-crane, the combination, with a supporting post, of two bearing rings secured one above the other to the said post, two bearings each formed of two parts secured together and forming an annular channel, antifriction devices arranged in the said channel and running on the said bearing rings, arms arranged in pairs and secured together at their outer ends and secured to the said bearings at their inner ends, and a hook for the mail-bag carrid by the outer end portions of the said arms.

3. In a mail-crane, the combination, with a supporting post, of a crane jib journaled to whirl continuously around the said post, and an automatically disengageable catch which normally checks the free movement of the said jib when the jib is in a position to receive a mail-bag.

880,610. SAFETY WINDOW-CATCH. LE ROY D. WAY, Rugby, N. D. Filed May 6, 1907. Serial No. 372,278.

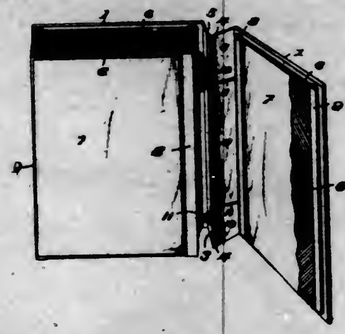
A safety window catch, consisting of a bottom plate a^1, provided with a flange a^2, having a slot a^3, a central threaded elevation h, and screw holes i; eccentric wheels a, having their periphery grooved, pivoted to the face of

said plate near its front end; rubber bands *b*, covering the peripheries of said wheels; elbow levers *d*, pivoted to said plate near its rear end; short arms a^4, extending from said wheels *a*; links *f*, their front ends pivoted to the free ends of said short arms, their rear ends to the extreme forward ends of the fore-arms of said elbow levers; a coiled



spring secured to said links near their rear ends, in position to hold said wheels against the window casing, and a top plate a^5, secured to said bottom plate by means of a screw *f*, substantially as shown and described and for the purposes set forth.

880,611. DISPLAY-BOOK. ANTHONY W. WERMERSKIRCHEN, Chicago, Ill. Filed July 5, 1907. Serial No. 382,296.

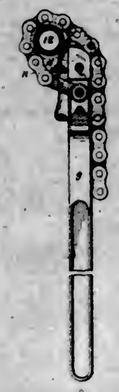


1. The herein described display book, consisting of covers having seats in one edge thereof, angle plates having one of their sections in said seats and hinge joints on the edges of the opposite sections, a rod extending through said joints, whereby the covers will be hinged together, a plurality of binding clamps between said covers and arranged in pairs, display sections secured in said binding clamps, arms secured to one of each pair of clamps and eyes at the free ends of said arms adapted to receive the hinge rod, whereby the clamping members and display sections carried thereby will be hingedly mounted between the covers.

2. The herein described display book, comprising a pair of covers having seats in one edge thereof, angle plates having one of their sections secured in said seats, hinge joints formed at the edges of the opposite sections of said angle plates, a rod extending through said joints to hingedly secure the covers together, a plurality of clamping members arranged in pairs between said covers, a plurality of display sections interposed between and carried by the clamping members, arms fixed to the clamping members, adjacent the angle plates, eyes at the free ends of said arms adapted to receive said rod and hingedly mount the clamping members and display sections carried thereby between the covers and a protecting leaf carried by one of said clamping members.

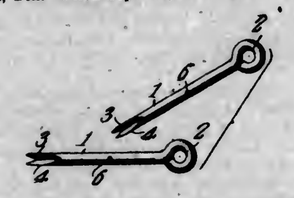
880,612. PIPE-WRENCH. BENJAMIN WHITTAKER, New York, N. Y. Filed Jan. 19, 1907, Serial No. 358,052. Renewed Jan. 17, 1908. Serial No. 411,326.

1. A wrench comprising in combination, an operating handle, a bifurcated holding head having serrated jaws, a connected clamping chain coöperating with said head to grip a pipe or other article, and a separable gripping block interposed between the jaws adapted to engage with a beaded or projecting portion of the pipe or pipe fittings, or other article.



2. A wrench comprising in combination, an operating handle, a bifurcated holding head having serrated jaws, a connected clamping chain coöperating with said head to grip a pipe or other article, a gripping block interposed between the jaws adapted to engage with a beaded or projecting portion of the pipe or pipe fittings, or other article, and means for adjusting said block relatively with the gripping surface of the holding head.

880,613. WIRE-STRETCHER. JOHN H. WILLIAMS, Milano, Tex., assignor of one-half to Joseph M. Smith, Cameron, Tex. Filed Sept. 14, 1907. Serial No. 392,833.

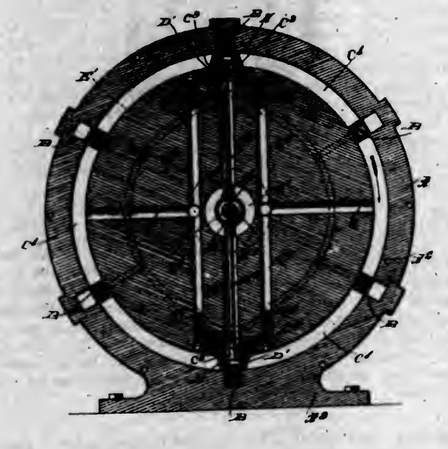


1. A wire stretcher consisting of a round bar having at one end an eye, the internal diameter of which is substantially the same as the diameter of the bar the opposite end of the bar being pointed, said bar being provided at an intermediate point with a perforation.

2. A wire stretcher consisting of a round bar, said bar having an eye formed at one end, the internal diameter of which is substantially the same as the diameter of the bar, said bar having at its opposite end pointed binate claws and being provided at an intermediate point with a perforation.

880,614. ROTARY ENGINE. ROBERT H. WRIGHT and MIDDLETON S. GILL, Mexico, Mo. Filed Apr. 23, 1907. Serial No. 369,782.

1. A rotary engine comprising a casing having the opposite side sections provided with the inner and outer flanges projecting toward each other, the inner flanges being shorter than the outer flanges, forming between their adjacent edges an annular space for the body of the piston, and the inner faces of the outer flanges being recessed at intervals for the reception of the abutments, the abutments operating in said recesses, a hollow shaft, a piston having a body secured to said shaft, and provided with piston blades and with steam channels leading thereto and communicating at their inner ends with the hollow shaft, and having at their outer ends ports for the passage of steam to the steam space of the engine, valves movable longitudinally and rotarily in the piston and having ports controlling the passage of steam to the steam space and also having stems extending inwardly toward the center of the piston and provided with beveled pinions, an adjusting shaft having a beveled gear meshing with the pinions of the valve stems, and turning normally with the hollow shaft, means for turning the said adjusting shaft relatively to the hollow shaft, whereby to rotate the valves, a controlling rod, operating longitudinally within the adjusting shaft, and intermediate devices between such controlling rod and the valve stems, whereby the said rod may be operated to effect a longitudinal movement of the valve, all substantially as and for the purposes set forth.



2. A rotary engine comprising a casing, having the opposite side sections provided with inner and outer flanges, projecting toward each other, and forming a steam space, a piston having a body portion operating between the adjacent edges of the inner flanges, and laterally extending blades operating in the steam space of the engine the body portion of the piston being also provided with feed channels for the passage of steam to the steam space, and means for controlling the passage of steam to the steam space, substantially as set forth.

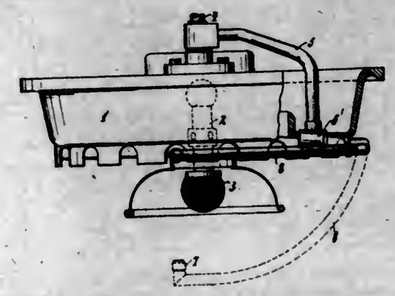
3. In a rotary engine, the combination of a piston having a body portion and blades at the outer edge thereof and extending laterally to opposite sides of the piston body, and a casing having a steam space receiving said laterally projecting blades, the body portion of the piston being also provided with feed channels for the passage of steam to the steam space.

4. The combination of a piston having a body portion provided with feed channels for the passage of steam, valves controlling such passage of steam, and laterally projecting blades at the outer edge of the piston body, cam plates revolving with the piston, a casing having a steam space for the operation of the piston blades and provided with radially movable abutments, and intermediate connections between said abutments and the cam plates whereby the latter may operate the abutment relatively to the piston blades.

5. A rotary engine, having a piston comprising a body portion, having feed channels, blades at the outer edge of the body portion, and having valve chambers communicating with the feed channels, and ports leading from said valve chambers, valves movable longitudinally and rotarily in the said valve chambers, means for moving the valves longitudinally, and means for moving the valves rotarily, substantially as and for the purposes set forth.

[Claims 6 to 23 not printed in the Gazette.]

880,615. INVERTED INCANDESCENT LAMP WITH EMERGENCY-BURNER. ARTHUR WÜRKER, Karlshorst, near Berlin, Germany, assignor to The Firm of Julius Pintsch, Berlin, Germany. Filed Apr. 17, 1905. Serial No. 256,065.



1. In a lamp having a crown plate and an inverted incandescent burner, the combination of an emergency burner and an arm to carry the same hinged to the said crown plate and bent to conform to the outline of the said crown plate so as to fold up against the same when out of use.

2. In a lamp having a crown plate and an inverted incandescent burner, the combination of an emergency burner, an arm to carry the same curved substantially to the outline of the crown plate and means for supplying gas to the same, said arm being hinged to the crown plate and adapted to be turned up and lie against the same.

3. In a lamp having a crown plate and an inverted incandescent burner and means for supplying gas to the same, the combination of an emergency burner, an arm to carry the same, said arm being curved substantially to the outline of the said crown plate and hinged thereto, so as to be turned up and lie against the same, means for supplying gas to the same and means for cutting off the gas supply to the incandescent burner when the said arm is turned down for use substantially as described.

4. In a lamp having a crown plate and an inverted incandescent burner, the combination of an emergency burner an arm to carry the same, said arm being curved to conform substantially to the outline of the crown plate and hinged to the latter, so as to lie around the outer edge of the same when turned up, means for supplying gas to the incandescent and to the emergency burners and means to cut off the gas supply to the incandescent burner and open the supply to the emergency burner when the latter is turned down for use substantially as described.

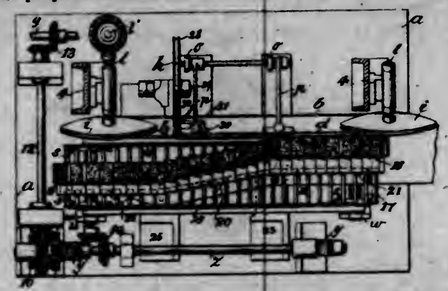
5. In a lamp having a crown plate and an inverted incandescent burner, the combination of an emergency burner, an arm to carry the same, said arm being curved to conform substantially to the outline of the crown plate and hinged to the same so as to lie up against it when out of use, means for supplying gas to both burners and means for cutting off the gas supply to one burner when the other is in its operative position.

880,616. TOBACCO-STEMMING MACHINE. CHARLES H. ANDREW and HERBERT E. B. ANDREW, Stockport, England. Filed Oct. 25, 1907. Serial No. 399,173.

1. In a tobacco leaf stemming machine, a pair of traveling endless bands located one above the other a suitable distance apart from each other adapted to grip the lamina of and carry the leaf forward and means adjacent to the said bands for spreading out the leaf and drawing the lamina side of the stem against the edges of the said bands adjacent to the stem, all combined substantially as and for the purpose set forth.

2. In a tobacco leaf stemming machine, a pair of traveling endless stem guide and lamina gripping bands located one above the other a suitable distance apart from each other, grooved guides located where the said bands meet to hold them laterally and vertically in position, the lower

of the said band guides being stationary and the upper one fulcrumed and means for vertically adjusting the said upper band guide, all combined substantially as and for the purpose set forth.



3. In a tobacco leaf stemming machine, a pair of traveling endless stem guide and lamina gripping bands located one above the other a suitable distance apart from each other, grooved guides located where the said bands meet to hold them laterally and vertically in position, the lower of the said band guides being stationary and the upper one fulcrumed, a set screw carried by the latter, resting upon a stationary part and a spring tying the said upper guide to the latter, all combined substantially as and for the purpose set forth.

4. In a tobacco leaf stemming machine, a pair of traveling endless stem guide and lamina gripping bands located one above the other a suitable distance apart from each other, a pair of endless traveling brushes one above the other adjacent to and in the same plane in which the said bands meet to bear against the lamina of the tobacco leaf and having a movement in the same direction as and at a right angle to the said bands, all combined substantially as and for the purpose set forth.

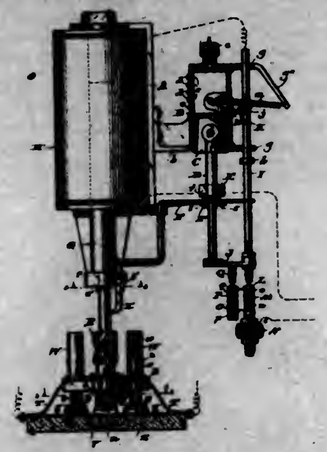
5. In a tobacco leaf stemming machine, a pair of traveling endless stem guide and lamina gripping bands located one above the other, a suitable distance apart from each other, a pair of endless traveling brushes one above the other adjacent to and in the same plane in which the said bands meet, to bear against the lamina of the tobacco leaf and having a movement in the same direction and at a right angle to the said bands, a machine base, bearings secured to the latter in which the lower one of the said brushes is mounted, arms suitably fulcrumed and bearing thereon in which the upper one of the said brushes is mounted and means for vertical adjustment for the said arms, all combined substantially as and for the purpose set forth.

[Claims 6 and 7 not printed in the Gazette.]

880,617. ELECTRIC-CIRCUIT CONTROLLER. CHRISTOPHER BACH, Jr., Milwaukee, Wis. Filed Dec. 13, 1906. Serial No. 347,604.

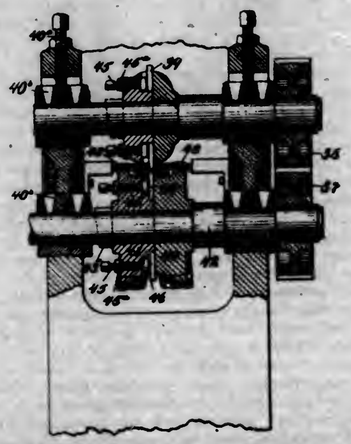
1. The combination of a vertically disposed solenoid, a vertically movable contact-rod by which the solenoid-circuit is made and broken, guides for the rod, means for holding said rod temporarily at extreme throw in opposite directions, a vertical cylinder open at the bottom, a piston having independent retarded gravity descent in the cylinder and provided with a depending stem, a tappet extending from the aforesaid rod in the descending path of the piston-stem, a core movable in the solenoid, and a stem-and-rod lifting arm in connection with the core to have reciprocation therewith, the lift of the rod being concurrent with the completion of an upstroke of the piston.

2. The combination of a vertically disposed solenoid, a vertically movable contact-rod by which the solenoid circuit is made and broken, guides for the rod, means for holding said rod temporarily at extreme throw in opposite directions, a vertical cylinder open at the bottom, a piston having temporarily retarded gravity descent but thereafter free to suddenly complete its downstroke, a stem depending from the piston, a tappet extending from the aforesaid rod in the descending path of the piston-stem, a core movable in the solenoid, and a stem-and-rod lifting arm in connection with the core to have reciprocation therewith, the lift of the rod being concurrent with the completion of an upstroke of the piston.



3. The combination in an automatic electric-circuit controller of a vertical cylinder open at the bottom and provided with a series of upper apertures at suitable intervals apart in a vertical direction, removable stoppers closing all but a predetermined one of said apertures, a piston having retarded descent in the cylinder until such time as it uncovers the open aperture of same, and circuit make-and-break mechanism controlled by the movement of the piston.

880,618. MACHINE FOR MAKING COAL-BITS. HERMAN BACHARACH, Pittsburg, Pa. Filed Mar. 12, 1906. Serial No. 305,494.



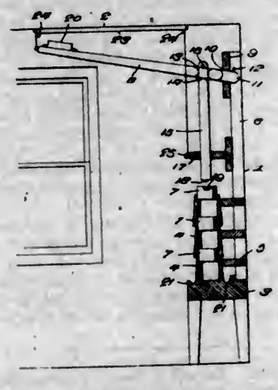
1. In combination, a pair of rotary opposing members each provided at its periphery with a plurality of spaced beveled dies having curved forging faces of a width increasing from the front to the rear, a laterally movable forging ring mounted on the periphery of one of the rotary members on either side of the plurality of dies and having inclined radial grooves in their faces adjacent the forging dies to receive the dies, and camming means adjacent the point of travel of the rotary members at which the dies meet, whereby the rings may be operated.

2. A rotary forging member comprising in combination a rotary member having a plain lateral face, a second rotary member provided with a lateral face adapted to bear against the lateral face of the other member and having a radial groove therein, a forging die adapted to fit the groove, means for holding the rotary members together and clamping means for the die in the second rotary member.

3. A forging member comprising in combination a member having a clamping surface, a second member provided with a lateral face adapted to bear against the clamping surface of the other member and having a radial groove therein, and a recess adjacent the radial groove, a forging die adapted to fit the groove and bearing against the clamping surface, a threaded bolt extending freely through the second member, and a holding nut on the inner end of the bolt and fitting the said recess.

4. A forging member comprising in combination a member having a clamping surface, a second member provided with a lateral face adapted to bear against the clamping surface of the other member and having a radial groove therein, and a recess adjacent the radial groove, a forging die adapted to fit the groove and bearing against the clamping surface, a threaded bolt extending freely through the second rotary member and holding nuts for the bolt on both sides of the second member, the inner one lying in the said recess.

880,619. PRESS. JOHN BEEMSTER, De Pere, Wis. Filed Sept. 18, 1907. Serial No. 392,715.

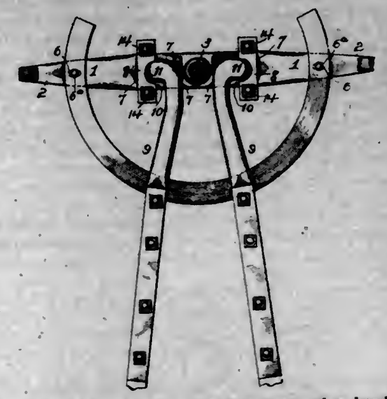


1. A cheese press comprising a bench and series of sections of annular outline, one resting upon the other, and a series of blocks of cylindrical outline inserted within said sections, said blocks extending above the upper ends of lower sections and into the lower ends of the upper sections, said blocks thus breaking joints with said sections, and means for delivering pressure to the topmost one of said blocks.

2. A press as described comprising a bench and series of superposed sections of annular outline and a series of blocks of cylindrical outlines inserted within said sections and breaking joints with said sections, a plunger arranged above said sections and blocks adapted to engage the topmost one of said blocks, and a lever fulcrumed laterally of said plunger and adapted to actuate the same.

3. A cheese press consisting of a bench and series of annular sections superposed with relation to each other and a series of cylindrical blocks arranged within said sections, said blocks extending above the upper ends of the lower sections and projecting into the lower end of the relatively upper sections, a plunger adapted to engage the topmost section, a lever fulcrumed laterally of said plunger adapted to actuate the latter and a line or cable connected to a fixture at one end and passed over a series of pulleys and having its opposite end connected to said lever.

880,620. VEHICLE-GEAR. STEPHEN N. BIRDSALL, Dayton, Ohio, assignor to Isaac Cornwell, Northumberland, Pa. Filed Oct. 9, 1907. Serial No. 396,621.

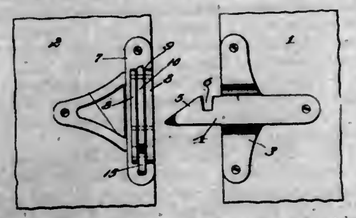


1. The combination in a vehicle gear, of a head block plate having a king bolt opening and provided on its lower face with transverse shoulders located on opposite sides of the king bolt opening, lugs depending from said plate and spaced from said shoulders and said king bolt opening, and reach irons bent outwardly approximately at right angles at their front ends and terminating in end sections which project in front and rear of the head block plate, the said end sections having holes for the securing clips, said end sections being confined between said shoulders and lugs and the outwardly bent portions of the reach irons disposed in front of said lugs.

2. The combination with a head block plate having a king bolt opening, and provided on its lower face on opposite sides of the king bolt opening with transverse shoulders and with lugs spaced from said shoulders and the king bolt opening, of reach irons bent approximately at right angles at their front ends and bearing against said lugs, said bent portions of the reach irons terminating in end sections adapted to span the head block plate, the said end sections resting between the shoulders and lugs, with the right angle bends in the reach irons in front of the lugs, and clips securing the reach iron to the head block.

3. The combination with a head block plate having a king bolt opening, and provided on its lower face, on opposite sides of the king bolt opening with transverse shoulders, and with lugs spaced from the shoulders and king bolt opening, of reach irons bent approximately at right angles at their front ends and terminating in end sections recessed on their upper faces to receive the head block plate, the said end sections resting between the shoulders and the lugs on the plate, with the right angle bends in the reach irons in front of the lugs, and clips securing the parts together.

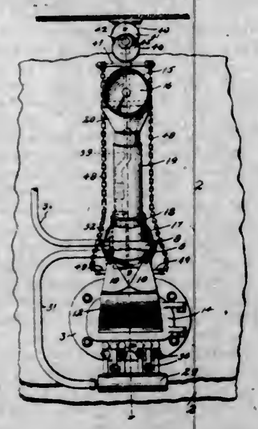
880,621. CAR-DOOR FASTENING. BOSE B. BOWERS, Macon, Ga. Filed June 4, 1906. Serial No. 320,186.



In a sliding-door latch, the combination of a base-plate having a pair of spaced outstanding flanges disposed to form a vertical guide-way, said flanges being provided with

opposed transverse perforations together forming a keeper-opening intersecting said guide-way, a gravity-actuated keeper-bolt slidably secured in the guide-way and formed to provide between its ends an engaging shoulder normally traversing the keeper-opening, and a companion base-plate having a rigid latch-bolt provided with a pointed substantially spear-shaped head terminating at its rear in an engaging shoulder, said head being designed to pass through the keeper-opening and having an inclined edge disposed to ride beneath the shoulder of and automatically lift the keeper-bolt, and the latter being adapted after passage of the head to descend automatically by gravity for effecting interlocking of said engaging shoulders.

880,622. AUTOMATIC STOKER. MORRIS B. BREWSTER, Columbus, Ohio. Filed Jan. 25, 1907. Serial No. 353,938.



1. In an automatic stoker, the combination with a combustion chamber, of means for feeding fuel to the combustion chamber comprising a hopper, a fixed conveying member arranged above the hopper, a movable part having connection with said conveying member, and a receiving part having movable connection with the movable part.

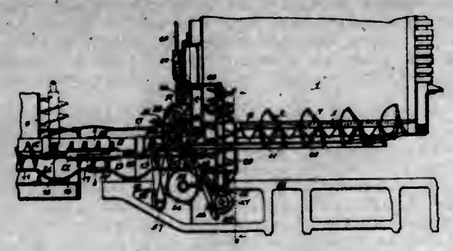
2. In an automatic stoker, the combination with a combustion chamber, of a hopper for feeding fuel to the chamber, a fixed fuel conveying member arranged above the hopper, means for controlling the passage of the fuel through the fixed member, means for conducting fuel to said member having movable connection therewith, and means for conveying fuel to said conducting means.

3. In an automatic stoker, the combination with a combustion chamber, of a regulated fuel introducing means therefor comprising a fixed fuel receiver carried by said combustion chamber, an intermittently operated valve arranged therein, a conveyer, and a two part extensible section arranged between said conveyer and said fixed receiver, one of said parts having a universally movable connection with said receiver, substantially as described.

4. In an automatic stoker, the combination with a combustion chamber of a regulating fuel introducing means therefor comprising a fixed fuel receiver carried by said combustion chamber having a regulating valve therein, a conveyer, and a two part telescopingly extensible section arranged between said conveyer and said fuel receiver, having movable connection with said conveyer and said receiver, substantially as described.

5. In an automatic stoker, the combination with a combustion chamber, means for feeding fuel to said chamber comprising a stationary receiver and a fixed conveying member above said receiver having a regulating valve therein, and means for conveying fuel to said feeding means having universal connection therewith, substantially as described.

880,623. AUTOMATIC STOKER. MORRIS B. BREWSTER, Columbus, Ohio. Filed June 12, 1907. Serial No. 378,592.



1. The combination with a locomotive and its tender having a fuel conveyer provided with a removable section universally jointed therein between the cars, of a fire box having movable grates, means for distributing the fuel from said conveyer to said grates, and mechanism for simultaneously operating said conveyer and grates, substantially as described.

2. The combination with a locomotive and its tender having an extensible removable section universally jointed therein between the cars, of a fire box having movable grates, means for distributing the fuel from said conveyer to said grates, and mechanism for simultaneously operating said conveyer and grates, substantially as described.

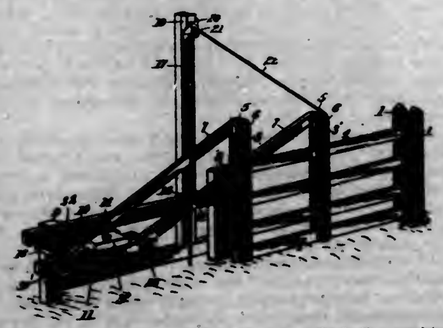
3. The combination with a locomotive and its tender having a separable fuel conveyer provided with a removable section universally jointed therein between the cars, of a fire box having movable grates, means for distributing the fuel from said conveyer to said grates, and mechanism for operating said conveyer, said distributing means, and said grates, substantially as described.

4. The combination with a locomotive and its tender having a separable fuel conveyer provided with an extensible removable section universally jointed therein between the cars, of a fire box having movable grates, means for distributing the fuel from said conveyer to said grates, and mechanism for simultaneously operating said conveyer, said distributing means, and said grates, substantially as described.

5. The combination in a device of the character described, of a locomotive and its tender and a conveyer for delivering fuel from said tender to said locomotive, and having a removable section, universally jointed therein between the cars, substantially as described.

[Claims 6 to 10 not printed in the Gazette.]

880,624. GATE. OLIVER E. BROWN, Andalusia, Ill. Filed Nov. 25, 1907. Serial No. 403,714.



1. In a mechanism of the class described, the combination with a support, of levers pivoted intermediate their ends upon said support, a gate pivotally connected to the levers near their upper ends, a foot-device pivotally connected to the lower ends of said levers, said foot device provided with a weight and a guide member, the guide member being capable of limiting pivotal movement of said levers and gate.

2. In a mechanism of the class described, the combination with a support, of a pair of levers pivoted intermediate their ends upon said support, a gate pivotally supported upon said levers, a foot-device comprising a horizontal piece or block provided with a bifurcated portion upon one end and provided with a foot-engaging extension upon the other end, and one of the levers pivotally mounted in the bifurcated portion, the other lever pivotally secured to the foot-engaging extension.

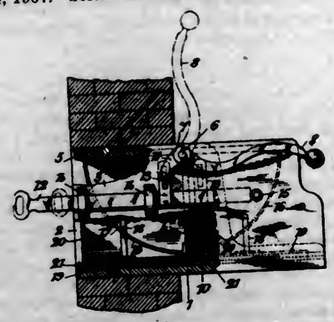
3. In a mechanism of the class described, the combination with a support, of levers pivotally mounted upon said support and having their lower ends positioned above the ground, a gate connected to said levers near their upper ends, a foot-device comprising a horizontal member provided with a bifurcated portion at one end and with a rearwardly-extending extension at its opposite end, one of the levers pivotally mounted in the bifurcated portion and the other lever pivotally secured to the extension, and said gate adapted to be swung upon the levers when downward pressure is exerted upon the foot-device.

4. In a mechanism of the class described, the combination with a plurality of posts and a horizontal supporting member carried by said post, of levers connected intermediate their ends to said supporting member, the lower ends of said levers supported above the ground, a foot-device provided with a bifurcated portion and with a rearward extension, one of said levers pivotally mounted in the bifurcated portion and the other lever pivotally secured to the extension intermediate its ends, said foot-device provided with a guide, and the guide adapted to retain the levers away from the post and adapted to limit the pivotal movement of said levers and guides.

5. In a mechanism of the class described, the combination with a support provided with a post, of levers pivotally connected to said support, a gate secured to said levers, a foot-device pivotally secured to the lower ends of said levers, said foot-device provided with a bifurcated portion formed upon one end and with a rearwardly-extending foot-engaging portion at its opposite end, said foot-device provided with a rectangular guide secured to the rear face and adapted to engage the post, and said device provided with a detachable weight.

[Claims 6 to 8 not printed in the Gazette.]

880,625. DUMB-WAITER FOR BOOTS AND THE LIKE. HEINRICH A. BRUGGER, Radolfzell, Germany. Filed Mar. 4, 1907. Serial No. 360,410.



1. A dumb-waiter, comprising in combination an open ended box adapted to be fixed in an opening in a partition, a tray slidable in the box, a pair of flaps making an angle with one another and mounted to revolve about the apex of the angle, means to revolve the flaps, and mechanism to simultaneously move the tray when the flaps are revolved.

2. A dumb-waiter, comprising in combination an open ended box adapted to be fixed in an opening in a partition, a tray slidable in the box, a pair of flaps in angular relation and mounted on an axis in the box, means on each side of the box to actuate the flaps to close the opening, and a slidable connection between the tray and flaps whereby said tray will be caused to slide in the box between the flaps during the positioning of the latter to close the opening.

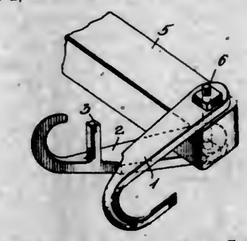
3. A dumb-waiter, comprising in combination, an open-ended casing adapted to be fixed in a perforated partition; a waiter sliding therein; two closing devices, each closing the aperture in one end-position of the waiter and at right angles to each other and means at each side of the partition for revolving the said closing devices, said two actuating-means being coupled, whereby as one device exposes the aperture the other device closes the latter; substantially as described.

4. A dumb-waiter, comprising in combination, an open-ended casing adapted to be fixed in a perforated partition; a transverse rocking shaft mounted in the casing; a waiter sliding in the latter below the shaft; waiter reciprocating means actuated by the shaft; two devices each closing the aperture in one end-position of the waiter; and means at each side of the aperture for actuating the said closing-devices, said two actuating-means being coupled, whereby as one device exposes the aperture the other device closes the latter; substantially as described.

5. A dumb-waiter, comprising in combination, an open-ended casing adapted to be fixed in a perforated partition; a transverse rocking shaft mounted in the casing; a waiter sliding in the latter; waiter reciprocating means actuated by the shaft; two wings secured at right angles to each other on the shaft, each closing the aperture in one end-position of the waiter; and means at each side of the aperture for actuating the shaft; substantially as described.

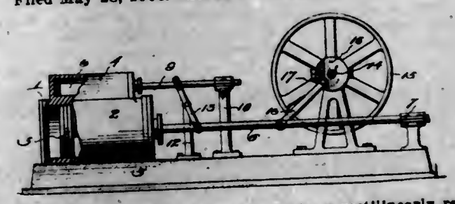
[Claims 6 to 8 not printed in the Gazette.]

880,626. CLEVIS. HENRY S. BURNETT, Lisbon, Ohio. Filed Aug. 1, 1907. Serial No. 386,631.



A clevis composed of two hook or J-shaped members overlapping at their curved ends, one of said members having a stop extending laterally from its inner face with its free end spaced from the free end of the curved hook portion thereof, and the curved end of the other member being longer than that of the stop carrying member and overlapping and extending beyond the base of said stop at its connection with the hook member.

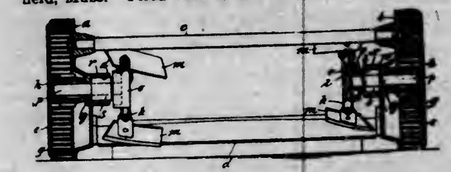
880,627. DRIVE-GEAR FOR ENGINES. MATTHEW O. CARTER and WILLIAM T. DAVIS, Travellers Rest, S. C. Filed May 28, 1906. Serial No. 319,200.



In a drive gear for engines, supports, a rectilinearly reciprocatory rod mounted therein, a shaft, one end of which is adjacent to said rod and provided with a wrist pin, a link

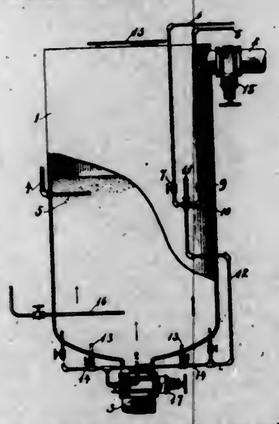
pivotally secured at one end to said pin and at the other to said rod intermediate its ends, the length of the link and the connection thereof with the rod and the pin being such that at each complete reciprocation of the rod the shaft will be given two revolutions, and means for reciprocating the rod.

880,628. LAWN-MOWER. ADELBERT B. CASE, Springfield, Mass. Filed Dec. 6, 1907. Serial No. 405,298.



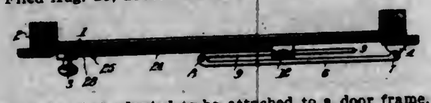
In a lawn mower, a suitable frame having oppositely placed rigid side plates, each plate supporting in a recess in same a non-rotary cone with the beveled portion thereof extending inwardly from each side plate; a revolving cutter between said side plates having spiral blades, a cutter-head with hub, at each end thereof, each hub being provided with a bearing in its outer end adapted to engage with the beveled portion of the non-rotary cone in each of said side plates, a cutter-shaft extending axially of each of said cutter-heads to, and freely through the non-rotary cone and supporting recess in each of said side plates; and means to maintain said non-rotary cone in yielding contact axially with the bearing in each of said cutter hubs.

880,629. METHOD OF CRYSTALLIZING SUGAR. HARRY C. CHRISTIANSON, Fanwood, N. J. Filed June 14, 1907. Serial No. 379,008.



The method of crystallising sugar from molasses, which comprises admitting air into the lower portion of the molasses at substantially the same temperature but slightly higher pressure than the molasses at said place of admission, and reducing the temperature of the air, before its admission, to the diminishing temperature of the molasses, as the crystallization progresses.

880,630. DOOR-HOLDER. ROBERT CLARK, Charlie, Tex. Filed Aug. 29, 1907. Serial No. 390,653.



1. A bracket adapted to be attached to a door frame, a casing adapted to be attached to a door, the casing having two communicating passage ways therein, a bar pivoted at one end to said bracket, a bar pivoted to the first mentioned bar and having slidable movement in one of the passage ways of said casing, the second mentioned bar having notches throughout its length, a spring actuated spindle mounted in the other of said passage ways of said casing, a spring actuated dog mounted in the casing and working through the communication between the passage ways into and out of the notches of said second mentioned bar by the reciprocation of said spindle, and a bar having connection with said spindle and with the knob for reciprocation upon turning of the knob to actuate said spindle.

2. A bar adapted to be swingingly attached at one end to a door frame, a bar pivotally connected at one end to the free end of said swinging bar, a supporting element adapted to be attached to a door a catch device operating in said supporting element and adapted to be yieldably connected at spaced intervals to said pivoted bar, and means adapted to be actuated by a knob spindle whereby said catch device is operated.

3. In a device of the class described, a casing having means for attachment to a door and provided with longitudinal passage ways, a spindle spring supported and movable through one of said passage ways, a bar movable through the other of said passage ways and provided with spaced notches, a dog spring supported within said casing and adapted to yieldably engage the notches in said bar and through which said spindle is operatively engaged, a bar swinging at one end from the free end of said notched bar and with means at its other end for being swingingly connected to a door frame, and means connecting said spindle with the knob spindle of the door, whereby the rotation of the knob spindle will operate the spindle of said casing to cause it to operate said dog.

4. In a device of the class described, a bar adapted to be swingingly attached to a door frame, a bar pivotally connected to the free end of said swinging bar and provided with spaced notches, a supporting element adapted to be connected to a door, a catch device comprising a dog, spring controlled, and carried by said supporting element and yieldably engaging said notches, and connecting means between said dog and a knob spindle, whereby the oscillation of said knob spindle will release said dog.

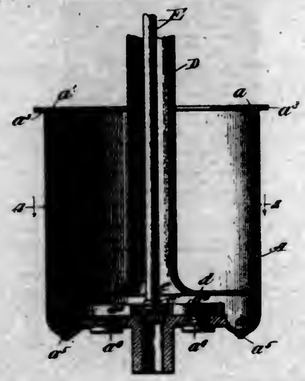
5. In a device of the class described, a bar adapted to be swingingly attached to a door frame, a bar pivotally connected to the free end of said swinging bar and provided with a plurality of spaced notches, a casing adapted to be attached to a door and through which said pivoted bar slidably extends, a catch device within said casing and detachably engaging the notches of said pivoted bar, and means whereby the oscillation of a knob spindle will actuate said catch device and release said pivoted bar.

[Claim 6 not printed in the Gazette.]

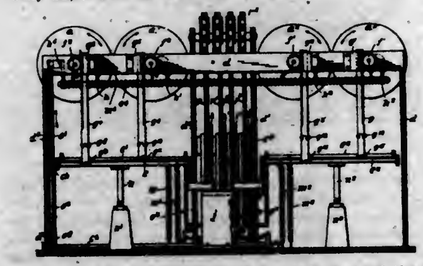
880,631. GOLD-CONCENTRATING APPARATUS. EDMOND R. COOK, Portland, Oreg., assignor of one-half to Frank Anthony, Portland, Oreg. Filed June 6, 1907. Serial No. 377,502.

1. In an apparatus for collecting precious metals, a receptacle, means beneath the receptacle for revoluibly supporting it, a plurality of horisontal radiating vanes projecting above the bottom of the receptacle and extending from points near the axis thereof to points near the side walls of the receptacle, a tube extending axially into the receptacle and having a wide laterally extending flange at its lower end arranged in close proximity to the vanes, and a water pipe smaller in diameter than the tube extending through said tube into the bottom of said receptacle, said pipe having a head arranged in the space between the inner ends of the vanes, and there being perforations in the sides of the head to permit the water to be discharged into the space between the vanes in the form of jets.

2. In an apparatus for collecting precious metals, a receptacle, means beneath the receptacle for revolubly supporting it, a plurality of horizontal radiating vanes projecting above the bottom of the receptacle and extending from points near the axis thereof, to points near the side walls of the receptacle, a tube extending axially into the receptacle and having a wide laterally extending flange at its lower end arranged in close proximity to the vanes, and a water pipe smaller in diameter than the tube extending through said tube into the bottom of said receptacle, said pipe having a head arranged in the space between the inner ends of the vanes, and there being perforations in the sides of the head to permit the water to be discharged into the space between the vanes in the form of jets, said receptacle having a groove for containing mercury surrounding the outer ends of said vanes.



880,632. CASH-REGISTER REVOLVING INDICATING-TARGET. ALVAH L. CREELMAN, Chicago, Ill. Filed July 11, 1906. Serial No. 325,743.



1. In a registering machine the combination of the machine frame, a main shaft supported upon the machine frame, a rectangular rocker frame, comprising two longitudinal bars, journaled upon the shaft, and located upon the opposite sides thereof, value keys journaled upon the shaft extending across and above the longitudinal rocker frame bar at the front of the machine and having tappets to press downwardly upon said outer longitudinal bar, a gear wheel supported upon the axis of the main shaft, a registering mechanism supported upon the frame and connected with the gear wheel, a rocker arm rigidly attached to the rear end of the rocker frame and a pawl arm operated upon by the rocker arm and supported to oscillate around said gear wheel and engage therewith substantially as described.

2. In a registering machine the combination of the machine frame, a rectangular rocker frame journaled within the main frame, a second rocker frame journaled within the first named rocker frame, value keys having tappets journaled upon the machine frame and arranged in groups, one group to press downwardly upon the front longitudinal bar of the outer rocker frame and the other group to press downwardly upon the front longitudinal bar of the inner rocker frame, indicating and registering mechanisms supported upon the machine frame and arms connected to the rear sides of the rocker frames to operate said mechanism, substantially as described.

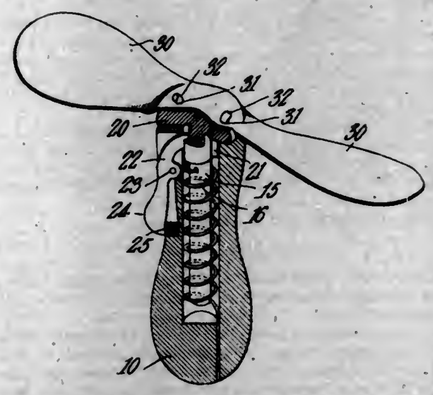
3. In a registering machine the combination of the machine frame, a rectangular rocker frame journaled within the main frame, a second rocker frame journaled within the first named rocker frame, value keys having tappets journaled upon the machine frame and arranged in groups, one group to press downwardly upon the front longitudinal bar of the outer rocker frame and the other group to press downwardly upon the front longitudinal bar of the inner rocker frame, and an outer casing having two sets of graduating openings cut therein through which the keys pass downwardly from top to bottom to admit of the unequal depression of said keys substantially as shown and described.

4. In a registering machine the combination of the machine frame, a rectangular rocker frame journaled within the main frame, a second rocker frame journaled within the first named rocker frame, value keys having tappets journaled upon the machine frame and arranged in groups, one group to press downwardly upon the front longitudinal bar of the outer rocker frame and the other group to press downwardly upon the front longitudinal bar of the inner rocker frame, a shaft carrying a rotary target and a gear pinion each rigidly affixed to said target shaft adapted to be connected with each of said rocker frames, rack bars supported in guides to reciprocate vertically upon said frames and engage with the gear pinions and links connecting said rack bars and said rocker frames and adapted to make a whole revolution of said targets substantially as described.

5. In a registering machine the combination with the main frame, of a rocker frame pivoted thereon a shaft supported upon the frame and value keys journaled thereon, and adapted to press upon said rocker frame, a shaft carrying a disk target, a ratchet wheel and a gear pinion on the target shaft, a rack bar connecting the rocker frame and gear pinion, a retracting spring connecting the main frame and rocker frame, a pawl pivoted to the main frame to engage the ratchet wheel of the target shaft, a pawl shaft and coiled spring thereon to connect with the pawl, a change key and a rod and lever connecting said pawl shaft with the change key for releasing the target shaft, substantially as described.

[Claims 6 to 17 not printed in the Gazette.]

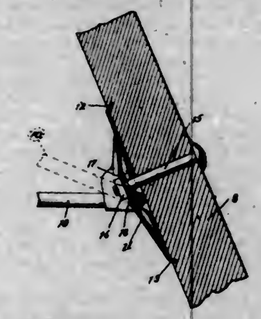
880,633. TOY. JESSE T. CURTIS, Bement, Ill. Filed Apr. 23, 1907. Serial No. 369,813.



In combination, a hollow handle, a revoluble spindle loosely hung therein and having an enlarged head by which the spindle is suspended within the handle, the head being free to rotate with the spindle, a helical spring wound around the lower portion of the spindle and connected at one end to the spindle, and at the opposite end to the handle, said spring serving as a spindle rotating means, and, also, acting to form a connection between the spindle and the handle, the upper portion of the periphery of the spindle being shaped to form a ratchet wheel, the teeth of such ratchet wheel being protected or housed by

the upper portion of the handle, a pivotally mounted trigger arranged in a slot in the handle and having one end engaging the ratchet wheel, a spring engaging the opposite end of the trigger and tending to hold the latter in operative position, a pair of pins carried by the head and inclined in a direction opposite that in which the head is to rotate, and a fan having a pair of openings for the reception of said pins.

880,634. RAKER-BAR. JOSEPH DAIN, Ottumwa, Iowa. Filed Mar. 24, 1905. Serial No. 251,714.



1. A clip for raker-bar teeth, comprising an elastic sheet metal plate bulged intermediately so as to lie away from the adjacent surface of the raker-bar and having a transverse channel adapted to form a bearing for the rake tooth.

2. A clip for raker-bar teeth, comprising an elastic sheet metal plate bulged intermediately so as to lie away from the adjacent surface of the raker-bar and having a transverse channel adapted to form a bearing for the rake tooth, and having means formed integral therewith for limiting the movement of the rake tooth.

3. A clip for raker-bar teeth, comprising an elastic sheet metal plate bulged intermediately so as to lie away from the adjacent surface of the raker-bar and having a transverse channel having pockets formed integral therewith near the ends of said channel for receiving the projecting portions of the rake tooth.

4. A clip for raker-bars, comprising an elastic sheet metal plate polygonal in form and having one of its corners deflected to engage the raker-bar, said plate being bulged intermediately so as to lie away from the adjacent surface of the raker-bar, and having a channel to receive the rake tooth.

5. The combination of a raker-bar, a clip having a bulged portion opposite the adjacent surface of the raker-bar, a bolt extending through said raker-bar and the bulged portion of the clip, and a nut on said bolt and bearing against the bulged portion of the clip.

[Claim 6 not printed in the Gazette.]

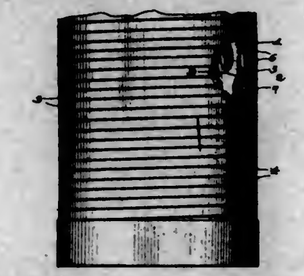
880,635. OIL AND WATER WELL STRAINER. HARRY R. DECKER, Houston, Tex. Filed Nov. 17, 1905. Serial No. 287,885.

1. In a strainer, a perforated pipe, wire wrapped thereon, and means integral with said wire to space it from the pipe and form a chamber between the wire and pipe, substantially as shown and described.

2. In a strainer, a pipe having holes therein, and wire wrapped thereon having legs to space the wire from the pipe and form a chamber between the wire and pipe, substantially as shown and described.

3. In a strainer, a pipe having holes therein, and wire wrapped thereon having projections extending from one of its sides, said projections being extended beyond the inner edge of the wire to form legs to space the wire from said pipe, substantially as shown and described.

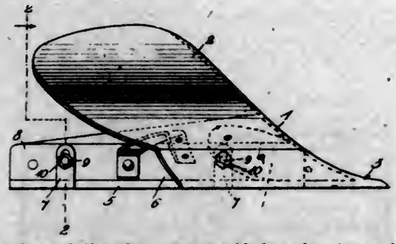
4. In a strainer, a pipe having holes therein, and wire wrapped thereon having projections extending below its base, one of the edges of said projections being triangular in shape and extending beyond the plane of the corresponding edge of the wire, substantially as shown and described.



5. In a strainer, a pipe having holes therein, and wire wrapped thereon having projections extending below its base, one of the edges of said projections being triangular in shape and extending beyond the plane of the corresponding edge of the wire, the apex of the triangular projection being below the surface of the wire, substantially as shown and described.

[Claims 6 to 9 not printed in the Gazette.]

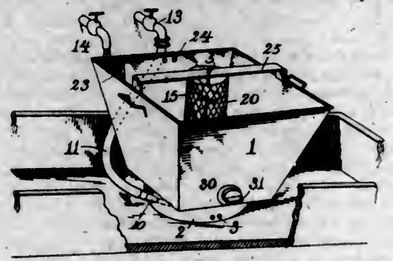
880,636. ADJUSTABLE SOLE-PLATE FOR PLOWS. PATRICK DEEVY, Melrose, Iowa. Filed Oct. 14, 1907. Serial No. 397,402.



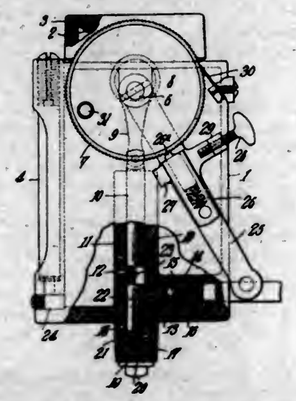
A plow of the character specified, embracing a longitudinally disposed supporting plate arranged on the inner face of the landside, said plate being formed at its forward end with an obliquely disposed rearwardly extending enlarged portion, designed to fit under the meeting edges of the mold board and plow share, said enlarged portion providing a support and joint for such meeting edges and part of the fastening means for the supporting plate, a sole plate arranged under the landside, means for connecting the sole plate with the supporting plate, said means comprising longitudinally spaced threaded members extending laterally from the inner face of the supporting plate, longitudinally slotted extensions formed on the inner side edge of the sole plate to receive said threaded members, and nuts adapted for screwed engagement with the threaded members.

880,637. AUTOMATIC DISH-WASHER. JOHN A. DE VITO, Boston, Mass. Filed May 6, 1907. Serial No. 372,154.

A dish washer comprising a dish receiving compartment, a horizontal water wheel located beneath said compartment, a vertical shaft rising from said wheel into said compartment, agitator blades fixed to said shaft within said compartment, a nozzle for directing a stream against said wheel, a base surrounding said wheel and supporting said compartment and having outlet openings through the lower part thereof, and a flexible tube joined to said nozzle and adapted to be connected with a source of water under pressure; said water wheel being supported at a substantial distance above the bottom of said base; whereby the washer being stood on any suitable drained surface, as a sink, and said tube connected to the cold water faucet of such sink, said agitator blades will be continually operated and the waste water from said wheel not interfere with the latter's action.



880,638. LUBRICATOR FOR STEAM-ENGINES. JOHNATHAN A. DICKEY, Columbus, Ind., assignor of one-fourth to William W. Denison and one-forth to Wallace B. Denison, Columbus, Ind. Filed June 27, 1907. Serial No. 381,131.



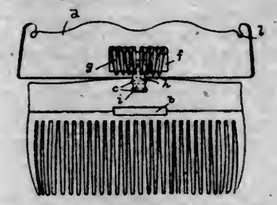
1. The combination with a receptacle and means for successively trapping a lubricant and forcing it from the receptacle; of mechanism for actuating said means and including an oscillatory arm, a pivot device upon the arm, a ratchet engaging member movably mounted upon said device, and adjustable means on the arm for limiting the movement of said device in relation to the arm.

2. The combination with a lubricant receptacle, and a casing projecting thereinto having an inlet communicating with said receptacle, and a valved outlet; of a cushioned plunger within said casing and normally closing the outlet, a plunger mounted to reciprocate within the casing and to successively open and close the inlet, a ratchet wheel, means operated thereby for reciprocating the plunger, an oscillatory arm, a pawl carried thereby and engaging the ratchet wheel, and adjustable detachable means for limiting the movement of the pawl.

3. The combination with a receptacle, and means for successively trapping a lubricant and forcing it from the receptacle; of mechanism for actuating said means, said mechanism including the ratchet, an oscillatory arm, a casing pivotally mounted upon the arm, a spring pressed pawl within the casing and engaging the ratchet, and adjustable means upon the arm for limiting the movement of the casing in relation to the arm.

880,639. COMB. GIUSEPPE A. D'ISEPO, Passaic, N. J. Filed July 5, 1906. Serial No. 324,735.

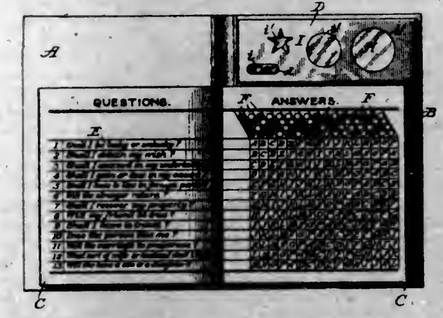
1. In a comb, the combination of the comb proper, and a toothed device attached thereto, said toothed device normally standing with its teeth projecting substantially reversely to the teeth of the comb proper and being movable in the comb proper to withdraw its teeth, and said comb proper and the teeth of the toothed device being engageable with each other during the withdrawal of the latter, whereby to afford resistance to such withdrawal, substantially as described.



2. In a comb, the combination of the comb proper having a substantially horizontal slot, and a toothed device pivotally attached to the comb proper and having its axis of movement parallel with said slot, said toothed device having its teeth normally projecting through said slot substantially reversely to the teeth of the comb proper and being retractive from said slot, and said comb proper and the teeth of the toothed device being engageable with each other during the withdrawal of the latter, whereby to afford resistance to such withdrawal, substantially as described.

3. In a comb, the combination of the comb proper, and a toothed device, the one lying substantially squarely against one face of the other and having notches one in each side edge receiving the side edges of the other, substantially as described.

880,640. QUESTION-ANSWERING DEVICE. CHARLES H. EMERSON, Whitehall, N. Y. Filed June 27, 1907. Serial No. 381,122.



1. A question answering device comprising a book containing a series of questions and a series of answers for each question, the answers in each series of answers having a distinctive designating mark, and a chance-controlled device mounted between the covers of the book and constructed to indicate by chance a particular answer in each series of answers.

2. A question answering device comprising a book containing a series of questions and a series of answers for each question, said book having side covers extending beyond the leaves to afford space for a chance-controlled device, and a chance-controlled device mounted between said side covers, said chance-controlled device being constructed to select by chance one of the answers in each series of answers.

3. A question answering device comprising a series of questions, each question having a series of reference characters associated therewith, each referring to a series of answers, a series of answers for each question, the answers in each series having a different designating mark, and a chance-controlled device constructed to indi-

cate by chance a particular answer in each series of answers.

4. A question answering device comprising a book containing a series of questions and a series of answers for each question, the answers in each series of answers having a different designating mark, said book having side covers extending above the book leaves to afford space between the covers for a chance-controlled device, and a chance controlled device mounted on one of said side covers consisting of a receptacle provided with a ball mixing chamber and a ball pocket communicating therewith in which balls from the mixing chamber may be received in a file or row, said receptacle containing a series of balls, some of which are distinguishable from others, and which are adapted by chance arrangement in said ball pocket to indicate a particular answer in each of said series of answers.

880,641. PROCESS OF MANUFACTURE OF ARTIFICIAL AROMATIC BALSAMS. FERDINAND EVERS, Dusseldorf, Germany, assignor to Chemische Fabrik Reisholz Gesellschaft M. B. H., Reisholz, near Dusseldorf, Germany. Filed May 25, 1907. Serial No. 375,617.

The process of making an artificial aromatic balsam which consists in heating a mixture of tolu-balsam and storax in a closed vessel to a temperature above 200° C., but below the temperature at which empyreumatic products are formed, condensing the products volatilized by said heating and mixing them with the unvolatilized residues, and finally adding cinnamene to the product thus formed, substantially as specified.

880,642. ENGINE REVERSING-VALVE. JAMES G. FAIRBANKS, Marion, Ohio. Filed Aug. 12, 1907. Serial No. 388,246.



1. In combination, a cylinder, a steam chest, a pair of transversely alined steam ports leading from the valve seat of the chest to the cylinder, an exhaust port in the valve seat, the exhaust port being in alinement with one of the steam ports, and a slide valve having a pair of ports arranged to alternately open communication between the exhaust port of the valve seat and arranged to alternately communicate with said steam ports.

2. In an engine, a cylinder, a steam chest having a valve seat, a pair of cylinder ports opening in the valve seat in transverse alinement with each other, an exhaust port also formed in the valve seat, and a slide valve having an exhaust port in constant communication with the valve seat exhaust port and movable to alternately communicate with the cylinder ports, said valve being further provided with independent steam ports arranged to alternately communicate with their respective cylinder ports.

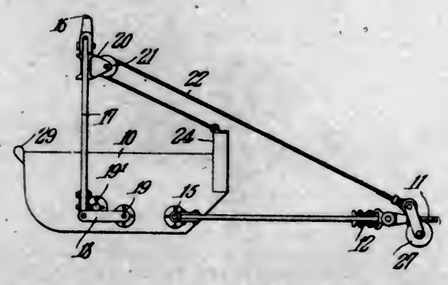
3. In a steam engine, a cylinder, a steam chest having a valve seat, cylinder ports opening into the valve seat in transverse alinement with each other, an exhaust port also formed in the valve seat in alinement with one of the cylinder ports in a direction lengthwise of the cylinder, a slide valve mounted on the seat, said valve being approximately rectangular in form and having integral partitions dividing the same into an exhaust port and a pair of steam ports, the exhaust port being in constant communication with the exhaust port of the valve seat and arranged to alternately communicate with the cylinder ports, and the steam ports being arranged to alternately communicate with their respective cylinder ports.

4. In a steam engine, a cylinder, a steam chest having a valve seat, cylinder ports leading from the valve seat in transversely alinement to each other, said valve having also an exhaust port in longitudinal alinement with one of the cylinder ports, a rectangular slide valve mounted on the valve seat, partitions arranged within the valve and dividing the same into two steam inlet ports and one exhaust port, said exhaust port being in constant communication with the exhaust port of the valve seat and arranged to alternately communicate with the cylinder ports, one of said steam ports opening at the end of the valve for communication with the steam chest, and the front of said ports opening at the top of the valve for communication with the steam chest.

5. In a steam engine, a cylinder, a steam chest, a controlling valve therein, a reversing valve chamber arranged between the steam chest and the cylinder, a pair of ports leading from the valve seat to the reversing valve chamber, ports leading from each end of the cylinder to the reversing valve chamber and divided at the latter point into double ports, and a reversing valve arranged within the chamber and provided with ports spaced to correspond to the port openings in the chamber, said valve being circumferentially adjustable to reverse the direction of the flow of the steam to and from the cylinder.

[Claim 6 not printed in the Gazette.]

880,643. EXCAVATING-SCRAPER. JAMES G. FAIRBANKS, Marion, Ohio. Filed Sept. 20, 1907. Serial No. 393,833.



1. The combination in a drag line excavator, of a scraper, a hauling member connected to the lower front portion of the same, and a support pivoted to the scraper at a point below and in the vertical plane of the center of gravity thereof, whereby the scraper is free to swing from a filling position to full inverted position for dumping.

2. The combination in a drag line excavator, of a scraper, a scraper support pivoted thereto at a point below the center of gravity of the scraper, and approximately in the vertical plane of such center of gravity, and a hauling member connected to said scraper.

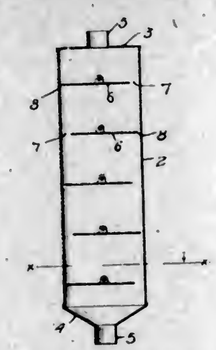
3. In combination, a scraper, and a scraper carrier on which the scraper is free to turn to full inverted dumping position, a hauling member and means associated therewith for restoring the scraper to loading or excavating position.

4. In combination, a scraper, a scraper carrier pivoted thereto at a point below the center of gravity of the scraper, and means on the scraper for engaging the support and imposing the load on the carrier at a point to the rear of the vertical plane of the center of gravity, during the loading or excavating operation.

5. In combination, a scraper, a carrier pivotally connected thereto, the carrier being formed of pivotally connected sections, and the point of connection between the carrier and the scraper being below the center of gravity of the latter, and projections extending from the scraper and engaging portions of the carrier to thereby impose the load on the carrier at a point to the rear of the vertical plane of the center of gravity of the scraper during the loading and excavating operation.

[Claims 6 to 12 not printed in the Gazette.]

880,644. HEATING-DRUM. ISAAC FAWCETT, Minneapolis, Minn. Filed Apr. 8, 1907. Serial No. 366,886.



A heating drum comprising a casing 2, a series of deflector plates 6 arranged transversely therein at intervals, each plate being provided with semi-circular recesses 7 and 8 in their opposite edges, the recesses 7 being of greater depth than the recesses 8, whereby wider spaces will be formed between the edges of the plates having such recesses and the wall of said casing than between the edges of the plates having recesses 8 and the wall of the casing, and said recesses 7 and 8 alternating with one another from end to end of said casing, whereby a tortuous path will be formed therethrough and the greater portion of the products of combustion rising through the space formed by a recess 7 and striking the edge of the plate above having the shallower recess 8, will be deflected to the opposite side and against the walls of the casing, substantially as described.

880,645. PROCESS OF EXTRACTING URANIUM AND VANADIUM FROM ORES. HERMAN FLECK and WILLIAM G. HALDANE, Golden, and EDWIN L. WHITE, Denver, Colo. Filed June 18, 1907. Serial No. 379,658.

1. The method of treating ores containing uranium or vanadium which consists in subjecting the ore to sulfuric acid to produce an acid solution, neutralizing said acid solution by contact with fresh ore, and recovering values from said solution.

2. The method of treating ores containing uranium or vanadium which consists in subjecting the ore to sulfuric acid to produce an acid solution, bringing said acid solution into contact with fresh ore, thereby neutralizing the solution and enriching the ore, and recovering values from said solution.

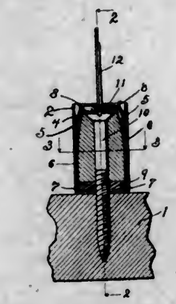
3. The method of treating ores containing uranium or vanadium which consists in subjecting the ore to sulfuric acid to produce an acid solution, bringing said acid solution into contact with fresh ore, thereby neutralizing the solution and enriching the ore, subjecting the enriched ore to an acid solvent, and recovering values from the solution.

4. The method of treating ores containing uranium or vanadium which consists in subjecting the ore to sulfuric acid to produce an acid solution, neutralizing said acid solution by contact with fresh ore, reducing metallic compounds in said solution and producing sulfuric acid therein by treating the solution with sulfurous acid, and recovering values from said solution.

5. The method of treating ores containing uranium or vanadium which consists in subjecting the ore to sulfuric acid to produce an acid solution, neutralizing said solution by contact with fresh ore, reducing metallic compounds in said solution and producing sulfuric acid therein by treating the same with sulfurous acid, again neutralizing the solution by contact with ore, and recovering values from said solution.

[Claims 6 to 10 not printed in the Gazette.]

880,646. BUTTON-HOLDER. LEO J. FLECKENSTIEN, Kalamazoo, Mich., assignor of three-fourths to John Fleckenstien, James J. O'Meara, and Samuel P. Fitzgerald, Kalamazoo, Mich. Filed June 28, 1907. Serial No. 381,296.



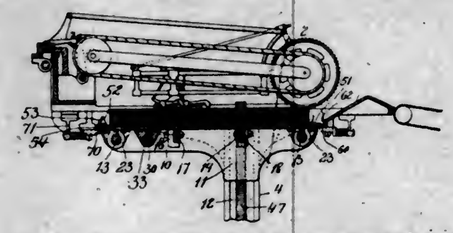
1. A button-holder, comprising a support; a cup-like metal shell; a block arranged in said shell, said block having a socket in its outer end adapted to receive a button; a cushion disk arranged at the inner end of said block; button engaging springs having inturned portions at their inner ends arranged in said shell so that the said inturned portions thereof project under said cushion disk, said block being cut away on its sides to receive said springs and permit the upper ends thereof to swing; and a screw arranged through said block and the inner end of said shell to engage said support, whereby the parts are secured together, for the purpose specified.

2. A button-holder, comprising a support; a cup-like metal shell; a block arranged in said shell, said block having a socket in its outer end adapted to receive a button; a cushion disk arranged at the inner end of said block; button engaging springs having inturned portions at their inner ends arranged in said shell so that the said inturned portions thereof project under said cushion disk; and a screw arranged through said block and the inner end of said shell to engage said support, whereby the parts are secured together, for the purpose specified.

3. A button holder, comprising a support; a cup-like shell; a pair of button engaging springs arranged in said shell, said springs having inturned inner ends; a block fitted in said shell, said block having a socket in its outer end adapted to receive a button, and being cut away on its sides to receive said springs and permit the upper ends thereof to swing, the lower portion of said springs being clamped between the walls of the shell and the said block; and a screw arranged longitudinally through said block and through the inner end of said shell to engage said support, whereby said block is clamped upon the inturned end of said springs for securing them in position in said shell, and whereby the parts are secured together, for the purpose specified.

4. A button holder comprising a support; a cup-like shell; a pair of button-engaging springs arranged in said shell, said springs having inturned inner ends; a block fitted into said shell to clamp the lower portion of said springs between it and the walls of the shell, said block having a socket in its outer end adapted to receive a button; and a screw arranged longitudinally through said block and through the inner end of said shell to engage said support whereby said block is clamped upon the inturned ends of said springs and said springs secured in position thereby, the parts all being secured together by said screw.

880,647. PAPER-FEEDER ELEVATOR. KIMBALL B. FLETCHER, Lancaster, N. H., assignor to United Printing Machinery Company, Boston, Mass., a Corporation of Maine. Filed Aug. 4, 1905. Serial No. 272,774.



1. In a machine for feeding independent sheets of paper, an elevator platform, a grid comprising a series of connected slats, yielding latches arranged to retain the grid stationary in its elevated position after the removal of the elevator platform.

2. In a machine of the character specified, an elevator platform and means for operating the latter, a removable grid the slats of which are adapted to lie in complemental recesses in said platform, two opposed latches located near the upper end of the travel of the platform, and between which the grid is arranged to be carried, and complemental members on the grid and framework to prevent displacement of the grid due to the action of the latches.

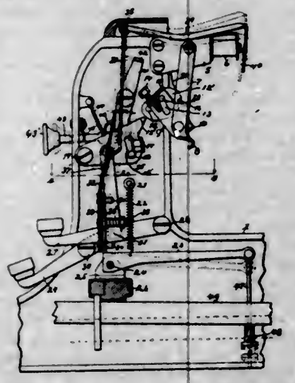
3. In a machine of the character specified, an elevator platform formed with grooves, a removable grid adapted to have its slats arranged in said grooves, a pair of opposed latches, each arranged below a shoulder, a shoulder upon one end of said grid whereby as said grid is forced between said latches the latter are constrained to snap under the grid and the latter is held against displacement due to the action of the latches.

4. A grid comprising a series of slats, a head to which one end of each slat is secured, said head being formed with a vertical and a superimposed surface or part.

5. In a machine of the character specified, an elevator mechanism, an elevator platform, a grid adapted to be carried thereby, latches for holding said grid independent of the platform and provisions on the grid and framework to prevent movement of the grid when engaged by said latches.

[Claims 6 to 8 not printed in the Gazette.]

880,648. RIBBON MECHANISM FOR FRONT-STRIKE TYPE-WRITING MACHINES. WILLIAM R. FOX, Grand Rapids, Mich. Filed Mar. 16, 1907. Serial No. 362,733.



1. In a ribbon mechanism for typewriters, the combination of the frame; a ribbon spool upon a suitable shaft; a face cam 4 on the face of the ribbon spool and rotatable therewith; a ribbon oscillator or vibrator consisting of arms 39 and downwardly bent portion 40 supported on a suitable rock shaft 38; arranged in the upper front part of the machine; a downwardly-extending lever-arm 37 with its lower portion 37′ offset from the main lever-arm to secure variation in movement, in conjunction with adjustable stop means; a swinging arm 7 pivoted in the upper part of the machine and terminating in a suitable shoe 8 at its lower end to rest against the face cam; a horizontal link 9 carrying an adjustable stop 14 at its forward end, supported on a suitable flange 11, a slot 13 being formed in said link 9; a rock shaft 12 with a knurled button 53 at its outer end for actuating the same; arms 12′ on the said rock-shaft 12 with a pin 13′ engaging the slot 13 in the link 9, whereby on rotating the shaft 12, the shoe 8 will be thrown into or out of contact with the cam 4, the stop 14 being arranged to limit the motion of the lever-arm 37 in varying degree, owing to its actuation by the cam 4, thereby securing oscillation of the ribbon vibrator guide; a spring catch 51 for supporting the arm 12′; a swinging plate 15; a link 20 connected thereto; a pair of levers 27—29 connected to the lower end of said link, the lever being fulcrumed back of the link and the lever 29 in front of the link, whereby the depressing of the said levers will raise or lower the said link; a spring 46 connected to the stop pin 18 operating in a suitable slot to limit the motion of the said plate 15 and lock it either side of the center automatically; a stop 17 carried by the said adjustable plate 15 for contacting with the main part of the lever-arm 37, or the offset portion 37′ therein, to permit the utilization of a party-colored ribbon; a stop 15′ formed on the plate 15 for controlling the arm 12′; a stop formed on the arm 12′ to control the plate 15 whereby it is impossible to swing the one into position without first swinging the other out of position; a lever 41 with an offset portion 42 for contacting with the said lever-arm 37; a plunger 43 with suitable notches on its upper side and having an actuating button 43′ for controlling the said lever 41 for throwing the lever-arm 37 forward and depressing the ribbon guide out of the printing position; a spring 44 for throwing the said plunger 43 upwards to engage the catch 45; a rock shaft 24 in the lower front part of the machine, with a vertical plate 33 secured thereto; actuating levers 23 on the said rock shaft 24 extending toward the rear of the machine; an actuating arm 32 slotted to engage the lever-arm 37; a pair of pins 34—34 extending through the said plate 33; a central pin 35 secured to the arm 32 and extending through the plate 33; a coiled spring 36 on the pin 35 to hold the same yieldingly in position; a common bar beneath the key levers; and connections 47 from said common bar 48 to said levers 23, all coacting substantially as described and for the purpose specified.

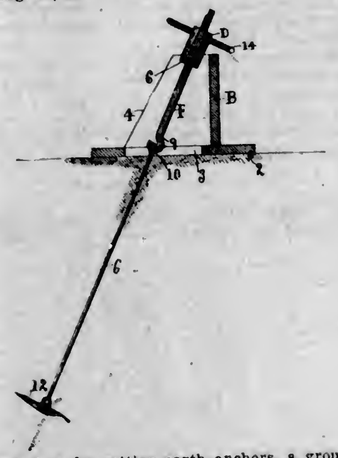
2. In a ribbon mechanism for typewriters, the combination of the frame; a ribbon spool upon a suitable shaft; a face cam 4 on the face of the ribbon spool and rotatable therewith; a ribbon oscillator or vibrator consisting of arms 39 and the downwardly bent portion 40 supported on a suitable rock shaft 38; arranged in the upper front part of the machine; a downwardly-extending lever-arm 37 with its lower portion 37′ offset from the main lever-arm to secure variation in movement, in conjunction with adjustable stop means; a swinging arm 7 pivoted in the upper part of the machine and terminating in a suitable shoe 8 at its lower end to rest against the face cam; a horizontal link 9 carrying an adjustable stop 14 at its forward end, supported on a suitable flange 11, a slot 13 being formed in said link 9; a rock shaft 12 with a knurled button 53 at its outer end for actuating the same; an arm 12′ on the said rock shaft 12 with a pin 13′ engaging the slot 13 in the link 9, whereby on rotating the shaft 12, the shoe will be thrown out of or into contact with the cam 4, the stop 14 being arranged to limit the motion of the lever-arm 37 in varying degree, owing to its actuation by cam 4, thereby securing oscillation of the ribbon vibrator guide; a spring catch 51 for supporting arm 12′; adjustable stop means for the lever-arm 37 with its offset portion; connections to the key levers at the front of the machine for varying the stop to utilize party-colored ribbons; an adjustable stop with a lever connected to act upon the lever arm 37 and depress the ribbon guide below the printing point; a rock shaft 24 in the lower front part of the machine, with a vertical plate 33 secured thereto; actuating levers 23 for said rock shaft 24 extending towards the rear of the machine; an actuating arm 32 slotted to engage the lever-arm 37; a pair of pins 34—34 extending through the said plate 33; a central pin 35 secured to the arm 32 and extending through the plate 33; a coiled spring 36 on the pin 35 to hold the same yieldingly in position; a common bar 48 beneath the key levers; and connections 47 from said common bar 48 to said levers 23, all coacting substantially as described and for the purpose specified.

3. In a ribbon mechanism for typewriters, the combination of the frame; a ribbon spool upon a suitable shaft; a face cam 4 on the face of the ribbon spool and rotatable therewith; a ribbon oscillator or vibrator consisting of arms 39 and the downwardly bent portion 40 supported on a suitable rock shaft 38; arranged in the upper front part of the machine; a downwardly-extending lever-arm 37 with its lower portion 37′ offset from the main lever-arm to secure variation in movement, in conjunction with adjustable stop means; a swinging arm 7 pivoted in the upper part of the machine and terminating in a suitable shoe 8 at its lower end to rest against the face cam; a horizontal link 9 carrying an adjustable stop 14 at its forward end, supported on a suitable flange 11, a slot 13 being formed in said link 9; a rock shaft 12 with a knurled button 53 at its outer end for actuating the same; an arm 12′ on the said rock shaft 12 with a pin 13′ engaging the slot 13 in the link 9, whereby on rotating the shaft 12, the shoe 8 will be thrown out of or into contact with the cam 4, the stop 14 being arranged to limit the motion of the lever-arm 37 in varying degree, owing to its actuation by cam 4, thereby securing oscillation of the ribbon vibrator guide; a spring catch 51 for supporting arm 12′; adjustable stop means for the lever-arm 37 with its offset portion; connections to the key levers at the front of the machine for varying the stop to utilize party-colored ribbons; a rock shaft 24 in the lower front part of the machine, with a vertical plate 33 secured thereto; actuating levers 23 on said rock shaft extending towards the rear of the machine; an actuating arm 32 slotted to engage the lever-arm 37; a pair of pins 34—34 extending through the said plate 33; a central pin 35 secured to the arm 32 and extending through the plate 33; a coiled spring 36 on the pin 35 to hold the same yieldingly in position; a common bar 48 beneath the key levers; and connections 47 from said common bar 48 to said levers 23, all coacting substantially as described and for the purpose specified.

4. In a ribbon mechanism for typewriters, the combination of the frame; a ribbon spool upon a suitable shaft; a face cam on the face of the ribbon spool and rotatable therewith; a ribbon oscillator or vibrator consisting of arms 39 and the downwardly bent portion 40 supported on a suitable rock shaft 38; arranged in the upper front part of the machine; a downwardly-extending lever-arm 37 with its lower portion 37′ offset from the main lever-arm to secure variation in movement, in conjunction with adjustable stop means; a swinging arm 7 pivoted in the upper part of the machine and terminating in a suitable shoe 8 at its lower end to rest against the face cam; a horizontal link 9 carrying an adjustable stop 14 at its forward end, supported on a suitable flange 11, a slot 13 being formed in said link 9; a rock shaft 12 with a knurled button 53 at its outer end for actuating the same; an arm 12′ on the rock shaft 12 with a pin 13′ engaging the slot 13 in the link 9, whereby on rotating the shaft 12, the shoe 8 will be thrown out of or into contact with the cam 4, the stop 14 being arranged to limit the motion of the lever-arm 37 in varying degree, owing to its actuation by cam 4, thereby securing oscillation of the ribbon vibrator guide; a spring catch 51 for supporting arm 12′; adjustable stop means for the lever-arm 37 with its offset portion; an adjustable stop with a lever connected to act upon the lever-arm 37 and depress the ribbon guide below the printing point; a rock shaft 24 in the lower front part of the machine, with a vertical plate 33 secured thereto; actuating levers 23 on said rock shaft 24 extending towards the rear of the machine; an actuating arm 32 slotted to engage the lever-arm 37; a pair of pins 34—34 extending through the said plate 33; a central pin 35 secured to the arm 32 and extending through the plate 33; a coiled spring 36 on the pin 35 to hold the same yieldingly in position; a common bar 48 beneath the key levers; and connections 47 from said common bar 48 to said lever 23, all coacting substantially as described and for the purpose specified.

[Claims 6 to 39 not printed in the Gazette.]

880,649. DEVICE FOR SETTING EARTH-ANCHORS. CLINTON E. FROST, Cleveland, Ohio, assignor to The Atlas Anchor Company, Cleveland, Ohio, a Corporation. Filed Aug. 22, 1907. Serial No. 389,627.



1. In devices for setting earth anchors, a ground support having a flat bottom having a slot through its middle front to rear and upright supports at the sides of said slot provided with circular bearings in their top and a cross wall at the rear of said slot connecting said side supports.

2. In devices for setting earth anchors, a ground sup-

port having a flat bottom with a slot in its center and upright portions at the sides of said slot having circular bearings at their top and front inclined edges.

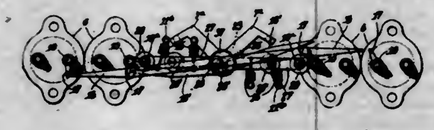
3. In devices for setting earth anchors, a support having a flat bottom with a slot through the same front to rear and walls at the sides of said slot having rounded bearings at their top, in combination with a rod threaded at its upper end and adapted at its lower end to connect with an anchor rod through said slot, a block having trunnions seated on said bearings and engaged centrally by said threaded rod, and a threaded head engaged on said rod and adapted to be rotated on said block, whereby the said rod is tightened or loosened in respect to the anchor rod.

4. In devices for setting earth anchors, a base member having a slotted bottom and upright supports thereon provided with open bearings, in combination with a screw support rotatably and removably mounted within said open bearings, and a tightening screw member adapted to be detachably engaged with the anchor connections and having a threaded head rotatably mounted on said screw support.

5. An anchor setting device comprising a base member adapted to rest upon the ground and a tightening member rotatably and removably mounted on said base member, in combination with an earth anchor having an anchor rod adapted to be detachably engaged with said tightening member.

[Claims 6 to 8 not printed in the Gazette.]

880,650. SPARKING IGNITER. PAUL GARTH, Cleveland, Ohio. Filed Apr. 9, 1907. Serial No. 367,179.



1. The combination with quadruple sparkers arranged in a row and having movable electrodes, of an operating shaft at the middle of the row having a pair of cranks set at a quarter to each other, and a pair of oppositely extending push rods connected to each crank and extending toward the sparkers and arranged to operate said electrodes, one pair being long to operate the sparkers at opposite ends of the row and the other being short to operate the intermediate sparkers.

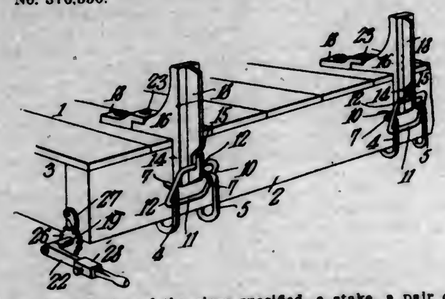
2. The combination with a plurality of sparkers having rocking electrodes, of a shaft having a crank, and push rods connected to the crank and extending at various angles toward the sparkers and arranged to operate said electrodes, guide rollers over which the push rods work, and means to hold the rods thereto.

880,651. FEED-BAG. ANDREW GAUL, Jr., Ridgefield, N. J. Filed Oct. 19, 1905. Serial No. 283,395.



A feed bag having sides and a bottom, and a strip of material secured within the bag at its rear portion to form a pocket having an open top and an open bottom, and means for tightly securing the top of the strip to the rear portion of the sides of the bag for closing the top of said pocket.

880,652. STAKE FOR LOGGING-CARS. SAMUEL P. GEORGE, Puyallup, Wash. Filed May 31, 1907. Serial No. 376,550.



1. In a device of the class specified, a stake, a pair of vertically disposed guides arranged on the side of the car adjacent the stake, and a link connecting the guides and stake.

2. The combination with a car, and a pair of guides secured to one of the side sills thereof each having a vertically extending portion, of a stake having a supporting arm arranged to coöperate with the floor of the car, and a link pivotally attached to the lower end of the stake and slidable vertically on the said guides.

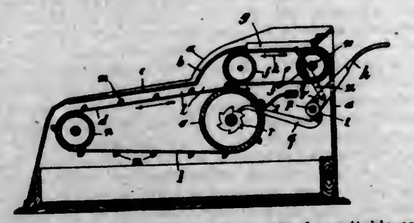
3. The combination with a car, and a pair of guides each embodying a vertically extending intermediate portion, an inwardly extending attaching arm secured to the side sill, the lower end of each guide extending below the sill and having an attaching portion secured to the under side thereof, of a stake arranged at the side of the car having a laterally extending supporting arm arranged to coöperate with the floor of the car, a link pivotally connected to the lower end of the stake and slidable vertically on said guides, and a locking device coöperating with the supporting arm of the stake for retaining the latter in operative position.

4. The combination with a car or other support, of a stake mounted to swing in a vertical plane relatively thereto and having an apertured arm supported on the car floor, a locking bar coöperating with the said arm of the stake to retain the latter in operative position, and an actuating shaft having a cam coöperating with the locking bar to move the latter into locked and unlocked positions.

5. The combination with a car or other support, of a series of stakes mounted in pivotal relation thereto and having apertured supporting arms extending laterally thereof, of a series of locking bolts arranged to coöperate with the apertured supporting arms of the respective stakes to retain them in operative position, and an actuating shaft having a series of cams therein operatively connected to the respective locking bolts for moving the latter into locked and unlocked position.

[Claims 6 to 9 not printed in the Gazette.]

880,653. CASH-REGISTER. ARMAND GODEFROID, Berlin, Germany. Filed Dec. 8, 1906. Serial No. 346,970.

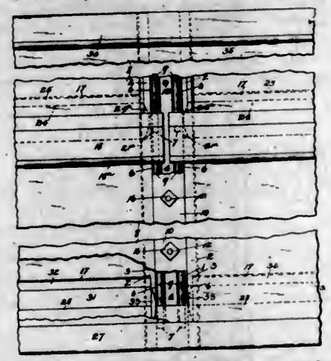


1. In a cash register, the combination of a suitable casing having an opening and a till, a receiving carrier situated at said opening and adapted to carry the coins away from said opening, a second carrier adapted to receive the coins from said first carrier and deposit them in the till, an operating lever and connections between said lever and both of said carriers for actuating the same.

2. In a cash register, the combination of a suitable casing having an opening, a receiving carrier situated at said opening and adapted to receive the coins and carry them away from said opening, an operating lever, a rack connected thereto and a pinion in engagement with said rack, said pinion being adapted to impart movement to the said carrier.

3. In a cash register, the combination of a suitable casing having an opening, coin receiving means situated at said opening and adapted to carry the coins away from said opening, a controlling band for receiving the coins from said receiving means, and means for simultaneously actuating said receiving means and controlling band comprising a lever *h* pivoted at one end, a rack *u* connected to said lever, a crank arm *t* also connected to said lever, and a pawl *q* connected to said crank arm.

880,654. SKYLIGHT. JOSEPH N. GRENIER, Boston, Mass. Filed May 27, 1907. Serial No. 375,973.



1. In a skylight, the supporting beams formed with longitudinal grooves, cushions resting in said grooves formed of tubes of soft metal, and the glass plates resting on said cushions, substantially as shown and described.

2. In a skylight, the supporting beams having portions cut out on three sides and turned up at intervals to form abutments, and plates of glass resting on said beams and against said abutments, substantially as shown and described.

3. In a skylight, the supporting beams of the inverted channel beam type having the upper surface cut out on three sides at intervals and turned up to form abutments, and plates of glass resting on said beams and against said abutments, substantially as shown and described.

4. In a skylight, the supporting beams formed of metal and having a central longitudinal drain, the parts of the beam at each side of said central drain cut out at intervals and turned up to form abutments, and plates of glass resting on said beams and against said abutments, substantially as shown and described.

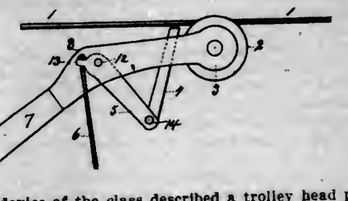
5. In a skylight, the supporting beams of the inverted channel beam type having a central longitudinal drain in its upper surface the parts of the beam on each side of said central drain cut out at intervals and turned up to form abutments, and plates of glass resting on said beams and against said abutments, substantially as shown and described.

[Claims 6 to 14 not printed in the Gazette.]

880,655. TROLLEY-WIRE FINDER. FERDINAND GUNDORPH, Portland, Oreg. Filed May 29, 1907. Serial No. 376,444.

1. A device of the class described comprising a recessed trolley head having a guiding slot therein, an actuating lever pivotally mounted therein, and a finder arm pivoted to said lever and extending upward through said slot.

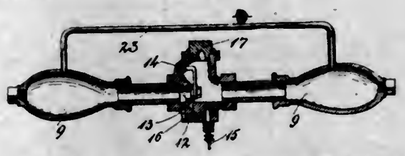
2. In a device of the class described, a trolley head provided with a wheel at its free end, a lever pivotally mounted in said head, a finder arm pivoted to said lever and projected above the head intermediate of the opposite sides of said wheel to guide the center thereof into contact with a wire, and operating means for said lever extending from said head.



3. In a device of the class described a trolley head provided with an operating lever pivoted therein having a short operating arm and a long depending arm, a finder arm extending through said head and pivoted to said depending arm, and an operating connection extending from the short arm of said lever.

4. In a device of the class described, a trolley head comprising a casing having a recess in its under face and an aperture through the upper face thereof, a wheel pivoted at one end of said recess, an operating lever pivoted at the opposite end thereof, and a finder arm pivoted to said lever and disposed adjacent to said aperture.

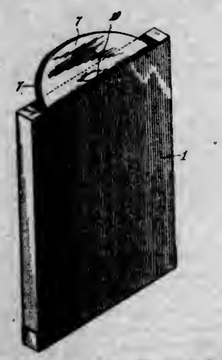
880,656. FURNACE ATTACHMENT. GUSTAF A. GUSTAFSON, Chicago, Ill. Filed Sept. 7, 1907. Serial No. 391,794.



1. The combination of a rocking holder having a passage from one end to the other, a check valve in said passage, and a by-pass in the casing of the holder, around said check valve.

2. The combination of a rocking holder having a passage from one end to the other, a valve casing at the middle of said passage, having a check valve therein, and also having a by-pass in the floor thereof, around said valve, and a set screw controlling the size of said by-pass.

880,657. FILM-PACK. LEO G. HAASE, Pasadena, Cal. Filed July 30, 1907. Serial No. 386,311.



1. A plurality of photographic films, each having a separate tab connected thereto, a casing inclosing said films, and means for detachably fastening the tabs together.

2. A plurality of photographic films, each having a separate tab connected thereto, a casing for said films, and means for detachably fastening the tabs together and to the casing.

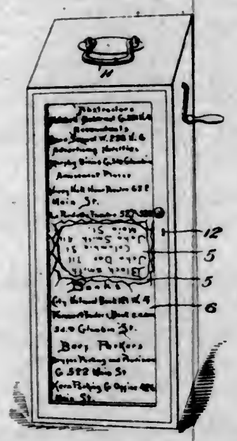
3. A plurality of photographic films, a casing inclosing said films each film having a separate tab connected thereto, and a thread passing through the tabs and case.

4. A casing, a plurality of photographic films therein, and means positively fastening all of the films to the casing.

5. A film package comprising a casing having connected chambers for exposed and unexposed films, a plurality of films in the casing, each film having a flexible manipulating portion, and means detachably securing the flexible manipulating portions to the casing.

[Claims 6 and 7 not printed in the Gazette.]

880,658. ADVERTISING APPLIANCE. SAMUEL F. HALL, La Fayette, Ind. Filed July 19, 1907. Serial No. 384,557.

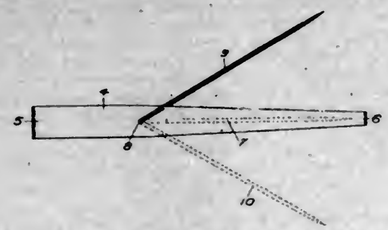


1. In an advertising appliance of the class described, the combination with a casing having a plurality of rollers, arranged in series at the upper and lower ends of said casing, said rollers having enlarged portions at each end thereof and one of said rollers being adjustable; of a bifurcated yoke member adapted to engage said adjustable roller and fit between the enlarged ends, an anchoring stem extending from said yoke to the bottom of the casing, said stem being formed in two sections, the meeting ends of which are threaded and a thimble having right and left threads therein adapted to engage the threaded ends of the stem and adjust the same longitudinally.

2. In an advertising appliance of the class described, the combination with a casing; of a plurality of rollers at the upper and lower ends of said casing, one of said rollers being adjustable, enlarged portions on said rollers, a belt adapted to travel on said rollers, said belt having characters on the faces thereof, a bifurcated yoke having cavities to receive the smaller portion of the adjustable roller, said yoke snugly fitting between the enlarged portions of the roller, a stem formed in sections and extending from the yoke to the floor of the casing and means between said sections to increase or decrease the length of the stem.

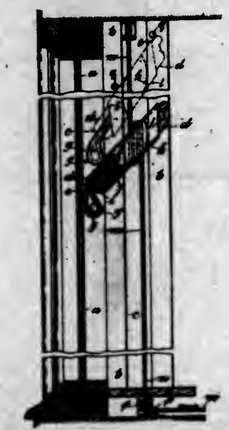
880,659. COMBINED NEEDLE AND TWEEZERS. NELS O. HAMMERGREN, Portland, Oreg. Filed June 10, 1907. Serial No. 378,319.

A tweezer, comprising two arms fixedly secured at one end and having means to outwardly retain their free ends which are provided with gripping jaws, one of said arms being formed with a groove longitudinally on the inner surface thereof, and a needle of suitable form and size pivotally mounted in the arm of the tweezer having the groove, and so arranged in its mounting that it can be swung laterally to the tweezers and also placed within



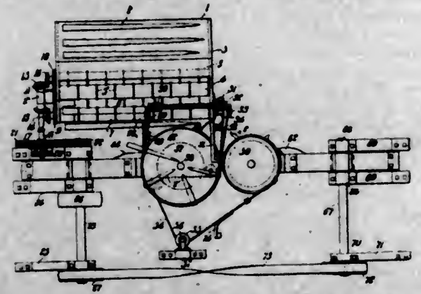
said groove and retained in such position, substantially as described.

880,660. APPARATUS FOR CLEANING LARGE PANES OF GLASS. FRANCIS E. L. HARRIS, Alderley Edge, England. Filed Nov. 12, 1906. Serial No. 343,121.



An apparatus for cleaning large panes of glass comprising a lath, a pad arranged at the forward edge of the lath, brackets in each end of the lath provided with reduced extensions, each extension being provided with three transversely alining openings, guides arranged at each end of the lath said guides having grooves to receive the reduced extensions of the brackets, and operating cords for the lath, a cord passing continuously through the alining openings of each bracket.

880,661. MACHINE FOR DISINTEGRATING FIBROUS PLANTS. EMIL HARTMAN, Houston, Tex., assignor of eighty-five one-hundredths to Lon C. Hill, Brownsville, Tex. Filed Feb. 2, 1907. Serial No. 355,505.



1. In a machine for cleaning the fibers of leaves from pulp, a leaf carrier consisting of a drum mounted on a vertical shaft, endless bands or ropes engaging grooves in the periphery of the drum, a deflector plate covering a portion of the periphery of the drum and shaped to guide a portion of each leaf on to the top surface of the drum, and a guide bar above said drum and encircling a portion of the circumference thereof.

2. In a machine for cleaning the pulp from the fibers of leaves, feeding rollers for breaking the leaves, a horizontal drum adjacent to the feeding rollers, a plate between the feeding rollers and drum and shaped to guide a portion of the leaves to the top of the drum, endless bands or ropes extending over the feeding rollers to and around the drum and serving to clamp the leaves to the drum, a pulp-removing mechanism in the path of the ends of the leaves remote from those on top of the drum, another drum adjacent to the first drum and receiving the endless bands passing around said first drum and arranged to engage the pulp-free ends of the leaves, and another pulp-removing mechanism in the path of the ends of the leaves unacted upon by the first mechanism.

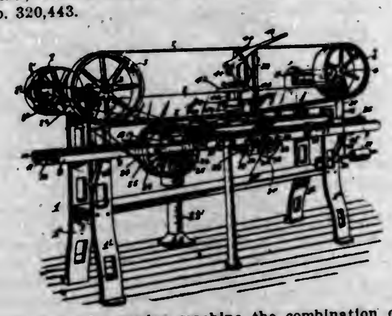
3. In a machine for cleaning the pulp from the fibers of leaves, feed rollers for breaking the leaves, a horizontal drum or carrier adjacent thereto, endless bands extending from the feed rollers to and around the periphery of the drum, a plate extending from the feeding rollers to the drums and shaped to direct one end of the leaves up on to the top of the drum, a guide bar above the top of the drum adjacent to the periphery thereof, and pulp-removing mechanism in the path of the leaves.

880,662. AUTOMATIC ELECTRIC FIRE-ALARM SIGNAL. EDWARD E. HAYDEN, Washington, D. C. Filed May 11, 1906, Serial No. 316,363. Renewed July 2, 1907. Serial No. 381,925.



In an automatic electric fire alarm signal, the combination of a backing having a central hollowed out portion, a casing carrying a push button and adapted to be secured upon said backing, a contact member consisting of strips of brass and steel fastened together curved into the form of a spiral and normally contained in said hollowed out portion, and a resilient contact member adapted to be pushed in by said push button, or to be struck by said first named contact member as it expands under the influence of heat, substantially as described.

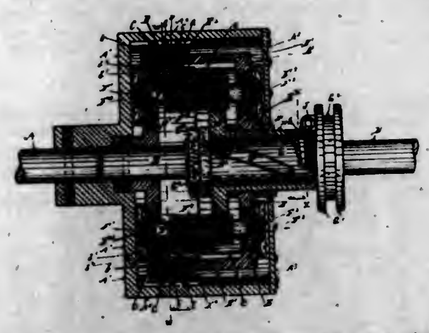
880,663. SANDPAPERING-MACHINE. GUSTAV HERRMANN, Fort Smith, Ark. Filed June 6, 1906. Serial No. 320,443.



1. In a sand papering machine the combination of an upright frame 1, having uprights 1^1, and a top 2; a carriage 3^1, mounted on said top on one end thereof; axle 4, journaled in bearings of said carriage; pulley 6, rigidly secured on the forward end of said axle; axle 3, journaled in bearings on the other end of said frame; pulley 5, rigidly secured on the forward end of said axle; said paper belt 7, running over said pulleys; longitudinal supporting guide 9, having longitudinal recesses 10, and a vertical recess 11, secured to the front side of said frame, immediately below said pulleys; automatic traveling table 12, comprising transverse plates 13, upper transverse plates 15, terminating at their front ends in bearings 16, and a top 17, slidably mounted on said guide; a longitudinal rack bar 18, secured to the under face of said table 12; a shaft 20, journaled transversely below said guide; a pinion 22, secured on said shaft immediately below said rack bar 18; longitudinal rod 26^1, journaled in said bearings 16; downwardly extending fingers 27, adjustably secured to said rod; horizontal support 29, secured to the front side of said guide; shifting block 30, having a slotted neck 31, and inwardly extending fingers 32, pivoted on said support below said rod 26^1; belt shifter 33, located immediately over said block 30, and adapted to work laterally through the side pieces of said guide and to shift bands 8^3 and 8^4; power wheel 8 and drum 8^2, rigidly secured on said shaft 3, said bands 8^3 and 8^4, working around said drum, and loose pulleys 24, and rigidly secured pulley 25, on shaft 23, with means for rotating said power wheel 8, means for pressing the sand paper belt down on the material to be sand papered, and means for drawing said carriage 3^1, back to its normal position when the pressure is removed, substantially as shown and described and for the purposes set forth.

2. In combination with the frame of a sand papering machine, substantially as shown and described, a frame guideway 39, secured vertically to the outer face of the front board of the top 2; a slide 40, adapted to work up and down in said guideway; a shelf 43, rigidly secured to the lower end of said slide; a form holder 45, adjustably and removably secured to said shelf; form 47, removably secured to said form holder; a lever 42, pivoted at one end to one side of said frame and pivoted near its center to said slide, said device adapted to press down the sand paper belt on the material to be sand papered.

880,664. FRICTION-CLUTCH. WILLIAM J. HILLIARD, Elmira, N. Y. Filed Jan. 15, 1907. Serial No. 352,418.



1. The combination in a friction clutch, of a clutch member, a friction surface thereon, a second clutch member, a friction surface thereon, a longitudinally movable section on said second clutch member, a friction surface thereon, screw mechanism for moving said sections of the second member toward and away from the friction surface on the first named clutch member, and a sleeve rotatable with the shaft and non-rotatable with relation to the screw mechanism for operating said screw mechanism, substantially as set forth.

2. The combination in a friction clutch, of a clutch member fixed to one shaft section, a second clutch member fixed to another shaft section, a portion of which second clutch member is longitudinally movable, friction surfaces on said clutch members, screw mechanism in said

second clutch member to bring the friction surfaces of the clutch members into and out of contact, a sleeve rotatable with the shaft and also to a limited degree rotatable thereon and non-rotatable with relation to the screw mechanism, and means for moving said sleeve longitudinally on the shaft and simultaneously rotating it to a limited degree thereon, substantially as set forth.

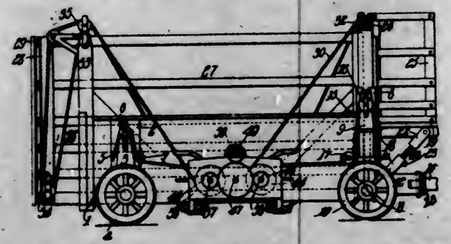
3. The combination in a friction clutch, of a clutch member fixed to one shaft section, a second clutch member fixed to another shaft section, a section of which second clutch member is longitudinally movable, friction surfaces carried by both of said clutch members, means for adjusting said friction surfaces with relation to each other, screw mechanism in said second clutch member to move the friction surfaces on said second clutch member into and out of contact with the friction surfaces on the first named clutch member, and means for operating said screw mechanism, substantially as set forth.

4. The combination in a friction clutch of two clutch members, one of which is secured to a shaft section, an annular rim or shell on one side of said clutch member, a friction surface on said clutch member, a second clutch member mounted on another shaft-section, a movable section on said second clutch member, friction surfaces on the parts of said second clutch member, screw mechanism connecting the first and second sections of the second clutch member to bring the friction surfaces thereon into and out of contact with the friction surface on the first named clutch member, and means for operating said screw mechanism, substantially as set forth.

5. The combination in a friction clutch of two clutch members, one of which is secured to a shaft section, an annular rim or shell on one side of said clutch member, a friction surface on said clutch member, a second clutch member mounted on another shaft section, a movable section on said second clutch member, friction surfaces on said second clutch member adapted to contact with the friction surface on the first named clutch member, means connecting the fixed and movable parts of the second clutch member so they will rotate in unison, screw mechanism connecting the fixed and movable parts of the second clutch member to move the friction surfaces thereon into and out of contact with the friction surface of the first named clutch member, a sliding sleeve having a diagonal slot therein on the second shaft section, a stud on said shaft-section engaging said slot, means for connecting said sleeve with the movable parts of said second clutch member, and means for sliding said sleeve longitudinally on the shaft, substantially as set forth.

[Claims 6 and 7 not printed in the Gazette.]

880,665. PORTABLE STOCK-CHUTE. AMOS HOPPER, Orion, Ill. Filed July 31, 1907. Serial No. 386,444.



1. A stock chute comprising a body, means for raising or lowering the same, a cradle located in the body, and means for raising or lowering the same with relation to the body.

2. A stock chute comprising a body, separate means for raising or lowering either end of the same, a cradle located in the body and means for raising or lowering the cradle with relation to the body.

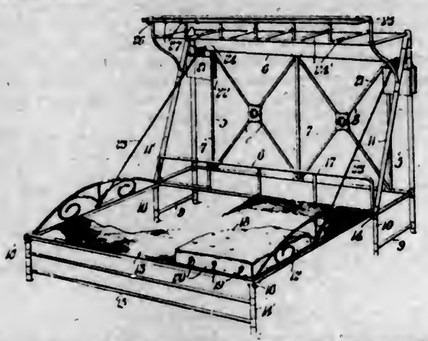
3. A stock chute comprising a body, means for raising or lowering the same, a cradle located in the body and separate means for raising or lowering either end of the cradle with relation to the body.

4. A stock chute comprising a wheel-mounted body and separate means for raising and lowering either end of the same.

5. A stock chute comprising a body supports for the same and a hoisting means located upon the body and being connected with the supports for raising or lowering the body.

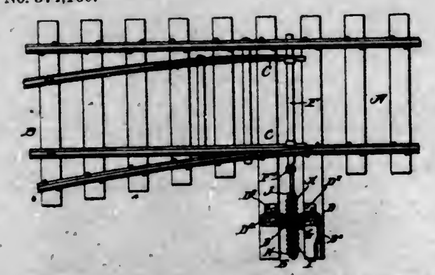
[Claims 6 to 11 not printed in the Gazette.]

880,666. FOLDING BED. ROBERT B. JAGGERS, Hot Springs, Ark., assignor of one-half to Henry G. Fleming, Memphis, Tenn. Filed June 15, 1907. Serial No. 379,253.



A folding bed including a supporting frame consisting of spaced front and rear posts of different lengths and connected by diagonal rods, guide rods spaced from and disposed parallel with the long posts, a bed bottom pivotally connected with the short posts and provided with a vertical guard rail disposed in spaced relation to one of the side rails of the bed bottom and adapted to form a support for a mattress, the opposite side rail of the bed being arranged flush with the bed bottom, said bed bottom being movable sidewise between the diagonal rods of the frame and provided with rigid head and foot sections, counterweights slidably mounted between the long corner posts and the adjacent guide rods, and cords connecting the counter weights and bed bottom, respectively.

880,667. SWITCH-OPERATING ROD. WILTON W. JOHNSTON, Hammond, Ind. Filed May 17, 1907. Serial No. 374,160.



1. A switch operating rod comprising a bifurcated rod having a duplicate pair of spring actuated plates slidably mounted on said rod.

2. A switch operating rod comprising a rod having a bifurcated end, the forked arms of which are reduced and threaded, a duplicate pair of plates slidably mounted on said arms, a cross bar secured to said bar adjacent the end of the bifurcation, a plate mounted on the ends of said bars, nuts working on the threaded ends of said arms, and springs arranged on said arms between the duplicate pairs of plates and the cross bar and plate.

3. A switch rod comprising a flat rod provided with a bifurcated end forming forked arms having threaded ends,

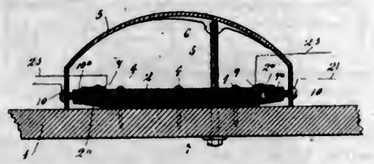
a plate slidably mounted on said arms nuts mounted on the ends of said arms, a cross-bar secured on said bar adjacent the ends of the bifurcation, a duplicate pair of plates provided with semi-circular openings arranged on each end of said arms connected together by bolts and coiled springs arranged on said arms between said duplicate plates and cross-bar and plates.

4. The combination with pivoted switch points, of a switch-stand provided with a crank, of an operating rod connected to said points carrying a spring actuated box mounted on said crank, for the purpose set forth.

5. The combination with a pair of switch points connected together by a bar, of a switch stand provided with a double crank, a rod carried by the bar connecting the points provided with a bifurcated end extending over said crank, a sectional box mounted on said bar arranged over said crank, and springs arranged over said bar to each side of said box.

[Claim 6 not printed in the Gazette.]

880,668. BURGLAR-ALARM. WILLIAM E. JONES, Minneapolis, Minn., assignor to Electric Protection Company, Minneapolis, Minn., a Corporation of Minnesota. Filed June 8, 1907. Serial No. 377,920.



1. In a burglar alarm system, the combination with an electrically actuated bell located outside of the protected apartment, of a sectional housing inclosing said bell, and circuit connections to said bell including a source of electrical energy and normally separated circuit closing contacts, which contacts are subject to movement by the sections of said housing and have parts that lie in the path of movement, each with the other, in every direction, whereby the circuit will be closed when either section of said housing is moved in any direction with respect to the other, substantially as described.

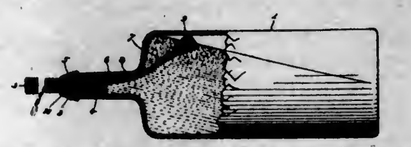
2. In a burglar alarm system, the combination with an electrically actuated bell located outside of the protected apartment, of a sectional housing inclosing said bell, and circuit connections to said bell including a source of electrical energy, and a pair of normally separated controlling contacts, one of which contacts is perforated and applied to one section of said housing and the other of which contacts is applied to the other section of said housing and projects with clearness through the perforation of the said perforated contact, substantially as described.

3. In a burglar alarm system, the combination with a bell located outside of the protected apartment, of a sectional housing inclosing said bell, and circuit connections to said bell including a source of electrical energy, and a pair of coöperating circuit controlling contacts, one of which contacts is in the form of a perforated metal member secured to one of the sections of said housing, and the other of which contacts is in the form of a screw applied to the other sections of said housing and having a reduced intermediate portion that normally projects through the perforations of said first noted contact with clearance, substantially as described.

880,669. BOTTLE-STOPPER. ROBERT KELLER, Detroit, Mich. Filed May 4, 1907. Serial No. 371,789.

1. A bottle stopper comprising an inelastic core, having a discharge duct and a vent extending longitudinally therethrough a ring of elastic material surrounding the lower portion of the core adapted to frictionally engage and seal the mouth of a bottle, a piece of flexible tubing leading from the inner end of the vent, a piece of inflexible tubing secured in the free end of the flexible tubing and a bulbous float secured on the free end of the outer tube.

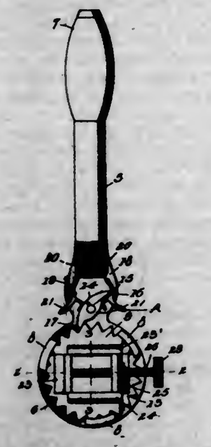
2. A bottle stopper having a discharge passage, and an inwardly projecting apertured nipple, in which the air passage terminates, a flexible tube connected to the nipple, a straight piece of inflexible tubing connected to the free end of the flexible tube a float on the free end of the tubing, and an imperforate metal cap having screw-threaded engagement with the outer end of the stopper body.



3. A bottle stopper comprising an inelastic core provided with a discharge duct and an air passage extending longitudinally therethrough having an exteriorly screw-threaded outer end and a shoulder adapted to seat itself on the rim of a bottle mouth a bushing of elastic material surrounding the reduced portion of the core adapted to frictionally engage the mouth of a bottle, an apertured nipple on the core in which the air passage terminates projecting beyond the body of the stopper, an air tube connected at its inner end by a short piece of flexible tubing to the nipple, an axially apertured float secured on the outer end of the air tube, and an imperforate cup closing over the outer end of the core having a screw-threaded flange engaging said outer end.

4. The combination with an ink bottle, of a stopper therefor consisting of an inelastic core provided with a longitudinal discharge duct and an air passage having an enlarged outer end provided with an annular shoulder adapted to seat itself on the rim of the bottle mouth, a bushing of elastic material secured concentrically on the reduced portion of the core adapted to frictionally engage the mouth of the bottle, an apertured nipple in which the air passage terminates, a piece of flexible tubing connected to the nipple, a bulbous float centrally apertured to receive and be secured on the free end of the tubing, and an imperforate cap having screw-threaded engagement with the outer end of the core.

880,670. RATCHET-WRENCH. THOMAS G. KINDER, Mount Olive, Ind. Filed July 6, 1907. Serial No. 382,486.



In a ratchet wrench, the combination with a stock, of a head carried by one end of the stock, a ratchet wheel pivotally mounted upon the head, adjustable jaws mounted upon the ratchet wheel, a pawl pivoted between its ends upon the head between the stock and ratchet wheel, said pawl being of crescent shape to provide oppositely disposed terminal ratchet engaging teeth, said pawl having on its

concave side a centrally located convexity, and separate springs secured to the end of the stock adjacent to the head, said springs being arranged for interchangeable engagement with the concave side of the pawl at the end of the centrally located convexity, to hold the pawl with its opposite ends yieldably in engagement with the ratchet teeth.

880,671. BOTTLE-CAPPING MACHINE. GEORG KIRKEGAARD, New York, N. Y. Filed June 13, 1906. Serial No. 321,431.



1. In a bottle capping machine, the combination of a shaft, a forming ring surrounding the lower end of the shaft, cam surfaces upon the forming ring arranged to directly engage with a portion of a bottle cap, said forming ring being split so that it may yield when subjected to undue pressure, and means for moving said shaft and ring together until the movement of the shaft is arrested and for imparting a further movement in the same direction to the forming ring.

2. In a bottle capping machine, the combination of a shaft, a forming ring surrounding the lower end of the shaft, cam surfaces upon the forming ring arranged to directly engage with a portion of a bottle cap, said forming ring being split so that it may yield when subjected to undue pressure, a resilient connection between said shaft and forming ring, a lever arranged to move said shaft and ring together through the resilient connection until the movement of the shaft is arrested, and to positively impart a further movement in the same direction to the forming ring.

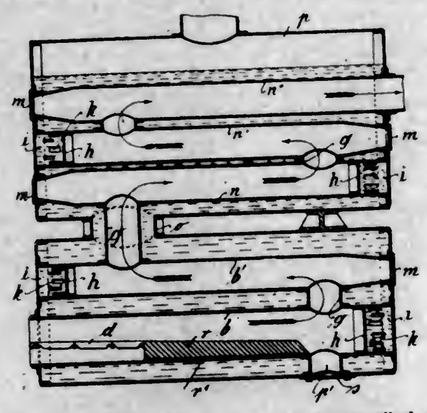
3. In a bottle capping machine, the combination of a magnetized shaft arranged to support a cap of magnetic material, a split forming-ring arranged to directly engage with a bottle cap, said forming-ring being about the lower end of the shaft, a compression spring connecting the shaft and the forming-ring, a lever arranged to move said shaft and ring together through the spring until the movement of the shaft is arrested, and to positively impart a further movement in the same direction to the forming-ring.

4. In a bottle capping machine, the combination of a shaft, a plunger-head slidably mounted upon said shaft, a forming-ring loosely mounted on said plunger-head, a resilient connection between the shaft and the plunger-head, a lever arranged to move said shaft and plunger-head together through the resilient connection until the movement of the shaft is arrested, and to positively impart a further movement in the same direction to the plunger-head.

5. In a bottle capping machine, the combination of a magnetized shaft, a plunger-head slidably mounted upon said shaft, a split forming-ring loosely mounted on said plunger-head, a resilient connection between the shaft and plunger-head, a spring connecting the shaft and the plunger-head, a lever arranged to move said shaft and plunger-head together through the resilient connection until the movement of the shaft is arrested, and to positively impart a further movement in the same direction to the plunger-head.

[Claims 6 to 11 not printed in the Gazette.]

880,672. FIRE-TUBE BOILER. GEORG KOCH, Lausigk, Germany. Filed May 6, 1907. Serial No. 372,146.

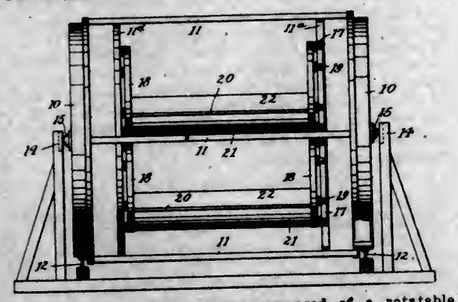


1. In a fire tube boiler of the nature described the combination with the fire tubes and connecting tubes of diaphragms in said fire tubes placed respectively beyond the connection of each fire tube with the connecting tube leading therefrom and water chambers behind said diaphragms.

2. In a fire tube boiler of the nature described the combination with the fire tubes and connecting tubes of diaphragms in said fire tubes placed respectively beyond the connection of each fire tube with the connecting tube leading therefrom and water chambers behind said diaphragms formed by perforated continuations of the fire tubes.

3. In a fire tube boiler of the nature described the combination of fire tubes and connecting tubes diaphragms in the fire tubes placed respectively beyond the connection of each fire tube with the connecting tube leading therefrom, the opposite ends of said fire tubes being tapered and extending to the boiler wall, and doors to said tapered ends.

880,673. AMUSEMENT APPARATUS. GASTON LACOMME, New York, N. Y., assignor of one-half to Edward C. Eustace, New York, N. Y. Filed Dec. 30, 1907. Serial No. 408,461.



1. An amusement apparatus composed of a rotatable open-work barrel, a pair of longitudinally alined eccentric tracks within the same, and a frame having rollers at each end for engaging the tracks, substantially as specified.

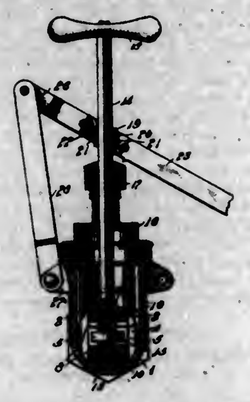
2. An amusement apparatus composed of a rotatable open-work barrel, eccentric circular tracks within the same, rings having rollers engaging the tracks, and platforms connecting the rings, substantially as specified.

3. An amusement apparatus composed of a rotatable open-work barrel, eccentric circular tracks within the same, rings having rollers engaging the tracks, platforms connecting the rings, seats mounted on the platforms, and weights below the platforms, substantially as specified.

4. An amusement apparatus composed of a pair of flanged end rings, a track engaged thereby, longitudinal rods connecting the rings, eccentric circular tracks connected to the rods, and frames movable upon the circular tracks, substantially as specified.

5. An amusement apparatus composed of a rotatable open-work barrel, eccentric circular tracks within the same, frames movable upon said tracks, guards flanking the barrel, and buffers on the barrel that engage said guards, substantially as specified.

880,674. GATE-VALVE. JOHN P. LADD, Detroit, Mich. Filed Apr. 2, 1906. Serial No. 309,399.

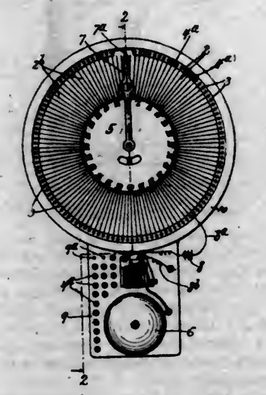


A gate valve comprising a casing having oppositely disposed seats, gates slidably mounted within the casing and spaced apart, the adjoining faces of said gates being oppositely beveled, a stem revolubly mounted within the casing and projecting between the gates, said stem having an integral collar upon that portion thereof between the gates, said collar extending loosely within recesses in the gates and disposed to hold the gates and stem against independent longitudinal movement said stem being provided with oppositely pitched threads adjacent opposite faces of the collar, and tapered spreading devices engaged by said threads and interposed between the beveled faces of the gates, said stem being disposed to be rotated to move the spreading devices toward or from each other to permit outward or inward movement of the gates without necessitating longitudinal movement of the stem and gates.

880,675. PROCESS ALARM-CLOCK. WILLIAM J. LATCHFORD, Chicago, Ill. Filed Mar. 11, 1907. Serial No. 361,793.

1. A process alarm clock comprising an electric circuit and an alarm device therein; a fixed dial also in the circuit having its subdivisions each provided with means for receiving a contact pin; a dial concentric with the fixed dial mounted for rotation with the clock train; a contact finger carried by the rotating dial, said rotating dial being graduated commencing at the location of the finger to correspond with the subdivisions of the fixed dial, and distinguishably marked contact pins adapted to be applied at will to any subdivision of the fixed dial.

2. A process alarm clock comprising an electric circuit and an alarm device therein; a fixed dial also in the circuit having its subdivisions each provided with means for receiving a contact pin, and radial direction lines extending to the locations provided for the pins respectively; a dial concentric with the fixed dial, insulated therefrom but in the electric circuit and rotated by the clock train; a contact finger carried by the rotating dial for making contact with the contact pins as the dial rotates, said rotating dial being graduated at its periphery commencing at the location of the finger to correspond with the subdivisions and radial lines of the fixed dial, and distinguishably marked contact pins adapted to be at will applied to any subdivision of the fixed dial.



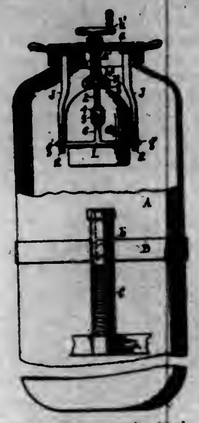
3. A process alarm clock comprising an electric circuit and an alarm device therein; a disk contained in the circuit rotated by the clock train marginally graduated for time subdivisions; a contact finger carried by the rotating dial mounted at the zero point of said dial and projecting off therefrom; a fixed dial also in the circuit concentric with the rotating dial, but insulated therefrom marginally graduated for time subdivisions and having at each subdivision point means for receiving a contact pin, and distinguishably marked contact pins adapted to be applied at will to any subdivision of the fixed dial, and when so applied to be within the path of the contact finger for closing the circuit when reached by said finger.

4. A process alarm clock comprising an electric circuit and an alarm device therein; a disk or dial carried by the clock train and marginally graduated in selected time unit subdivisions; a contact finger contained in the electric circuit carried rigidly by said disk or dial mounted thereon at the zero point of its graduation and projecting therefrom; a fixed dial contained in the electric circuit and concentric with the rotating dial marginally subdivided to correspond to the graduations of the rotating dial and having at each subdivision means for receiving a contact pin in the path of rotation of the contact finger, said contact finger having a yielding terminal to permit it to pass by the contact pin while making contact therewith.

5. A process alarm clock comprising an electric circuit and an alarm device therein; an exposed dial carried by the clock train marginally subdivided for any selected time unit, and graduated from any selected zero point; a contact finger contained in the electric circuit carried by said dial mounted thereon at the zero point; a fixed dial concentric with the rotating dial contained in the electric circuit marginally subdivided to correspond with the subdivisions of the rotating dial, and at each subdivision provided with means for receiving a contact pin in position to be encountered by the contact finger as the rotating dial rotates; distinguishably marked contact pins adapted to be at will applied to any subdivision of the fixed dial, and a pin plate having pin lodgments marked to correspond with the contact pins respectively.

[Claims 6 to 9 not printed in the Gazette.]

880,676. CHEMICAL FIRE-ENGINE. THEODORE LEECH and HAROLD S. CLARK, Cleveland, Ohio. Filed Apr. 14, 1906. Serial No. 311,690.



1. In a chemical engine, a main tank and a support on which the tank is adapted to be tilted, a removable cover for said tank and hangers on the inside thereof, in combination with a bottle supported on said hangers in a tilting position, and means to tilt said bottle comprising a screw engaged through said cover, a stopper for the bottle on said screw and an arm connected with said screw at one end and adapted to engage a stem on the bottle support at its other end.

2. The main tank and the cover therefor and rigid hangers from said cover having hooks at their lower ends bent inward over the engaging portion thereof, in combination with a bottle and a support therefor having legs engaged in said hooks, an upright stem on said support, an arm engaging said stem and a screw through said cover on which said arm is supported, whereby when the said screw is run up the said arm is raised and the bottle is tilted.

3. The main tank and the removable cover thereon, and a pair of hangers removably engaged in said cover, in combination with a bottle supported about its lower portion upon said hangers in a tilting position, a device adapted to close the mouth of said bottle, a screw to raise said device and open the bottle and means connected with said device and bottle adapted to cause the said bottle to tilt, said means comprising a slotted arm and a post from the bottle support engaged therein.

880,677. DEVICE FOR THREADING CONDUITS AND FOR ANALOGOUS PURPOSES. EDWARD M. MARS, Chicago, Ill., assignor of one-half to Thomas H. Mars, Chicago, Ill. Filed Jan. 16, 1904. Serial No. 189,845.



1. A device for threading conduits comprising a head member, a follower, a frame connected with the head member and extending rearwardly, guides upon the follower engaging said frame and whereby the follower is caused to travel on the frame, a pair of gripper arms pivotally mounted in the head member, a wedge movably mounted in the head member in advance of and adapted to act between the gripper arms, a pair of gripper arms mounted in the follower head, a wedge member movably mounted in the follower member in advance of and adapted to act between the gripper arms thereof, springs tending to normally withdraw said wedges from between the gripper arms of the respective members, an operating cable connected with the rear portion of said frame, extended thence forwardly around a guide upon the wedge of the follower member and thence rearwardly, and a second operating cable connected with the follower member extended thence forwardly around the guide upon the wedge of the head member and thence returned rearwardly.

2. A conduit threading device comprising a two-part substantially closed head member provided with lateral openings and a shoe-shaped bottom, a pair of gripper arms having their rear ends pivotally mounted within said head member and extending thence forwardly and obliquely outward and carrying at their outer ends gripper rolls adapted to be projected through said lateral openings, a spring retracted wedge mounted in front of said gripper arms and adapted to move rearwardly between the latter, a guide frame connected with said head member and extending rearwardly therefrom, a follower member mounted to slide on said guide frame, a pair of gripper arms having their inner ends pivotally mounted in said follower member and extending thence forwardly and obliquely outwardly, gripper rolls carried by the outer ends of said gripper arms, a spring retracted wedge mounted in said follower member in advance of the gripper rolls thereof and adapted to be moved rearwardly between the latter, an operating cable connected with the rear end of said guide frame extended thence forwardly around an operating guide upon the wedge member of the follower member and thence returned rearwardly, a second operating cable connected with the forward end of the follower member extended thence forwardly around an operating guide upon the wedge of the head member and thence returned rearwardly whereby the follower member and head members may be alternately advanced by alternate operation of said cables, each wedge member operating to cause grippers engaged thereby to grip the interior of the conduit with a force proportionate to the resistance to advance encountered by the moving member of the device.

880,678. HEMMER. AUGUST MARTIN, Rock Elm, Wis. Filed Mar. 31, 1905. Serial No. 253,497.



A hemming attachment comprising top and bottom walls, a flat intermediate wall, and a tongue 5 extending upwardly and forwardly from the outer edge of said intermediate wall, the tongue being bent outwardly toward its upper edge and being separated from the adjacent edge of the top wall to form an intermediate slot, said attachment being formed at the inner end of the tongue with an enlarged opening 8 constituting the rear end of said slot, for the purpose set forth.

880,679. CLOSURE FOR MUCILAGE AND OTHER RECEPTACLES. RICHARD MASON, Gladstone, Mich. Filed Jan. 21, 1907. Serial No. 353,350.

1. The combination with a receptacle, of a fixed top having an opening, an upwardly projecting ridge extending along one edge of said opening, and a cover rotatably mounted on said top and having a smooth surface adapted to slide over and rest upon said ridge, and provided with a notch to receive the handle of a brush or the like.

2. The combination with a receptacle, of a fixed top having an opening, an upwardly projecting ridge extending along one edge of said opening, and a cover rotatably mounted on said top and bearing along the length of said ridge when closed, said cover being provided with an opening complemental with that in the top, and both openings comprising notches which coöperate to form an opening for the handle of a brush or the like when the receptacle is closed.



3. The combination with a receptacle, of a fixed top having an opening, in one side of which is a notch, and a cover rotatably mounted on said top concentric with said notch, and also having a corresponding notch in one side.

4. The combination with a receptacle, of a fixed top having an opening, one side of which is a diameter of said top and is provided at the center of said top with a notch, and a superposed cover having a complementary opening and notch, said cover being rotatable concentric with said notches.

5. The combination with a receptacle, of a fixed top having an opening, in one side of which is a notch, and a cover rotatably mounted on said top concentric with said notch, and having an opening comprising a notch registering with the notch in said top.

[Claim 6 not printed in the Gazette.]

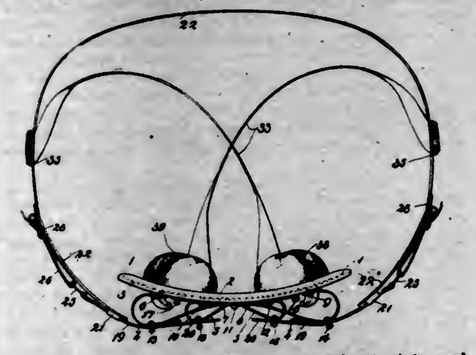
880,680. LUBRICATOR. CHRISTOPHER J. MATTHEWS, Grand Rapids, Mich. Filed June 15, 1907. Serial No. 379,245.



1. A lubricator for distributing grease on piston or valve rods, comprising a removable annular structure surrounding the rod exterior to the packing gland for said rod, said structure being provided with an annular seat for a swab or wiper, an annular duct for receiving grease, and an annular series of free radial passages from said duct to points adjacent to the rod.

2. A lubricator for distributing grease on piston or valve rods, comprising a removable annular structure surrounding the rod exterior to the packing gland for said rod, said structure being provided with an annular seat for a swab or wiper, an annular duct for receiving grease, and an annular series of free radial passages from said duct to points adjacent to the rod, the cross sectional area of the duct being greater than that of the passages leading therefrom.

880,681. HERNIAL TRUSS. FRIEDRICH MEINE, La Grange, Ill. Filed Sept. 10, 1907. Serial No. 392,171.

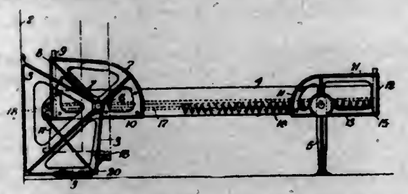


1. In a truss, the combination of a front plate and pads, a waist belt to support the same, a pubic strap attached at its opposite ends to the plate and suspended across under the same, and projections on the plate engaging the strap on opposite sides, below the points of attachment, to hold the same in position.

2. In a truss, the combination of a front plate and pads, spring strips attached at the middle to the front of said plate and extending across the same and curved and attached at the ends to the plate to form bows at opposite ends and a belt connected at its opposite ends to said bows respectively.

3. In a truss, the combination of a front plate with pads on the back or inside thereof, upper and lower springs on the front of the plate at each side thereof, and a belt having upper and lower straps at each end connected to said springs.

880,682. TILTABLE BED. NATHAN C. MERRILL, Vancouver, British Columbia, Canada. Filed Apr. 27, 1907. Serial No. 370,706.



1. In a tiltable bed, a wall or panel, brackets projecting therefrom, a bed frame pivotally mounted on said brackets, means for counter-balancing said bed frame, said means comprising springs secured to the bed frame, flexible connections from the springs through the head of the bed, and secured to the supporting bracket whereby when the bed is in an up-ended position tension on the flexible connections will tend to move the bed toward its horizontal position, substantially as shown and described.

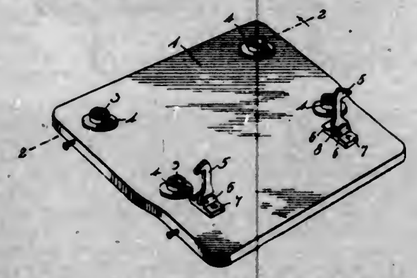
2. In a tiltable bed, the combination with a bed frame, brackets secured to a wall or panel in which the bed frame is pivotally mounted, springs secured in the bed frame, a pair of adjacent anti-friction rollers caried in the head of the frame, flexible connections from the springs through the head of the bed between the anti-friction rollers and secured to the brackets at their lower part, at a point nearer the wall than the anti-friction rollers when the bed is in an up-ended position, substantially as shown and for the purposes described.

3. In a tiltable bed, brackets projecting from a wall or panel, said bed including a bed frame pivotally mounted in said brackets, means for counter-balancing said bed, said means, comprising springs extending lengthwise within the bed frame and secured to the end of the bed frame further from the pivotal support, a flexible connection from the free end of the spring through the head of the bed and secured to the bracket adjacent to the position of the head of the bed frame when the same is in an up-ended position against the wall, but at a distance from the wall less than the distance from the wall to the pivotal axis of the bed, and means at the head of the bed for coöperating with said flexible connections to engage the same at a point further from the wall than the point at which the flexible connection is secured to the bracket substantially as shown and for the purposes described.

4. In a tiltable bed, brackets projecting from a wall or panel, said bed including a bed frame pivotally mounted in said brackets, means for counter-balancing said bed, said means comprising springs extending lengthwise within the bed frame and secured to the end of the bed frame further from the pivotal support, a flexible connection from the free end of the spring through the head of the bed and secured to the bracket adjacent to the position of the head of the bed frame when the same is in an up-ended position against the wall, but at a distance from the wall less than the distance from the wall to the pivotal axis of the bed, means at the head of the bed for coöperating with said flexible connections to engage the same at a point farther from the wall than the point at which the flexible connection is secured to the bracket, a plate secured to each side member of the bed frame toward the end opposite its pivotal support, said plates having brackets to support the under-side of the side frames, and a foot member and legs pivotally mounted on the side plates, substantially as shown and described.

5. In a tiltable bed, a bed frame, brackets on which said bed frame is pivotally mounted, said brackets being adapted to be secured to a wall or panel, means for counter-balancing said bed, said means comprising springs secured to the bed frame, and flexible connections from the springs through the head end of the bed and fastened to the supporting bracket, at a point that is passed by the point where the connection passes through the head of the bed frame whereby an initial tendency is given the upper end of the bed from the panel or wall to facilitate the lowering and conversely to oppose a check at the upper limit of the bed's position, substantially as shown and for the purposes described.

880,683. SCREWLESS TYPE-WRITER BASE-BOARD. FREDERICK S. MERROW, Portland, Me. Filed Aug. 5, 1907. Serial No. 387,135.



1. A typewriter base-board having formed therein recesses to receive the feet of a typewriting machine, cushions arranged in said recesses, and spring projected clamping hooks adapted to automatically engage with the frame of the machine and secure the same in place on the board, substantially as described.

2. A typewriter base-board having formed in its upper side a series of recesses to receive the feet of a typewriter, cushions arranged in said recesses, tubular cylindrical sockets secured to the board around each of the cushioned recesses therein, and spring projected fastening devices adapted to automatically engage the frame of the machine to secure the same on a board, substantially as described.

3. A typewriter base-board having formed in its upper side a series of recesses to receive the feet of a typewriter, tubular cylindrical sockets secured to the board around said recesses, cushions adapted to be inserted in the latter, and spring projected clamping hooks adapted to automatically engage the side bars of the typewriter frame when the latter is placed on the board, substantially as described.

880,684. ROLLER-SKATE. JOHN MINER, Detroit, Mich. Filed Apr. 15, 1907. Serial No. 368,202.



1. In a skate, the combination with the foot plate, of the forward movable clamping arms slidable upon the under face of said plate and crossing from side to side, jaw members upon the outer ends of said arms, a yoke having forwardly extending diverging end portions which are pivotally connected to the inner ends of said arms respectively, said yoke being pivotally mounted at the juncture of said diverging end portions and slidable longitudinally of the foot plate, and means for actuating said yoke.

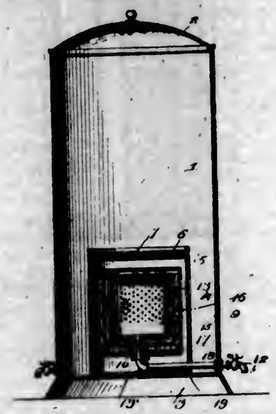
2. In a skate the combination with the foot plate, of the forward truck plate secured to the under face thereof, and clamping arms slidable between the foot plate and said truck plate transversely of the foot plate and crossing each other to the opposite sides of said plate, a rear truck plate, a single clamping bar slidable longitudinally of the foot plate between the rear truck plate and said foot plate, said clamping bar having jaw members at its rear end, a yoke slidable upon the foot plate having forwardly extending diverging end portions which are pivoted to the inner ends of the forward clamping arms respectively, said yoke being pivotally mounted at the juncture of said diverging end portions, means for adjustably connecting said yoke with the forward end of the rear clamping bar, and a lever pivotally connected to said bar and to said connecting means for actuating said parts.

3. In a skate, the combination of the foot plate, the forward clamping arms slidably mounted upon the under face of said plate, said arms having jaw members at their outer ends and crossing said plate transversely, a yoke movable longitudinally of the foot plate having diverging forwardly extending end portions which are pivoted to the inner ends of said clamping arms respectively, said yoke being pivoted to swing transversely of the foot plate to allow of a transverse movement of said arms in the same direction, and a pivoted lever for sliding said yoke.

4. In a skate, the combination of the foot plate, the forward clamping arms slidably mounted on the under face of said plate and crossing said plate transversely, a slidable yoke having forwardly extending diverging arms which are pivoted to the inner ends of said clamping arms respectively, said yoke being pivotally mounted to permit its diverging arms to swing transversely of the foot plate, a rear clamping bar mounted to slide upon the under face of the foot plate and having a jaw member at its rear end, a lever pivoted to the forward end of said rear clamping bar, a stud pivoted to said lever, a stud pivoted to said yoke, and a screw threaded in one of said studs and swiveled in the other.

880,685. FILTER. STANLEY S. MONTANYE, Canton, Pa. Filed Apr. 22, 1907. Serial No. 369,539.

1. A filter comprising a casing or receptacle for unfiltered water, an inner filtered water receptacle having a perforated upper portion, a discharge pipe connected with said inner receptacle, a faucet removably connected to the outer end of said pipe, a series of filtering screens arranged over said inner filtered water receptacles, layers of filtering material arranged between said screens, and a copper sterilizing cylinder arranged around said filtering mechanism, substantially as described.



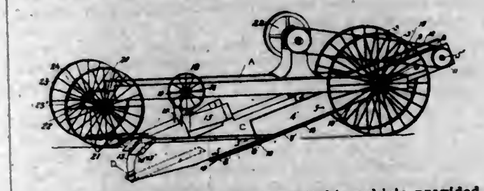
2. A filter comprising a casing or receptacle for unfiltered water, an inner filtered water receptacle having a perforated upper portion, a discharge pipe connected with said inner receptacle, a faucet removably connected to the outer end of said pipe, a series of filtering screens arranged over said inner filtered water receptacle, layers of filtering material arranged between said screens, a copper sterilizing cylinder arranged around said filtering mechanism, said cylinder having polished inner and outer walls, and a perforated top removably supported in the upper end of said cylinder, substantially as described.

3. A water filter comprising an outer casing or receptacle for unfiltered water, a draw-off faucet arranged near the lower end of said casing, a filtering mechanism arranged in said casing, a draw-off pipe connected to said filtering mechanism, and a sterilizing cylinder arranged around said filtering mechanism, substantially as described.

4. A water filter comprising an outer casing or receptacle for unfiltered water, an inner filtered water receptacle having a perforated upper portion, a draw-off pipe connected to said inner receptacle and adapted to form a support for the same, a brass cloth screen arranged around said inner water receptacle, a layer of mineral charcoal filtering material arranged over said brass cloth screen, a bag-like asbestos screen arranged over said filtering material and secured at its lower end to the discharge pipe beneath said filtered water receptacle, a layer of bone black filtering material arranged over said asbestos screen, a galvanized supporting disk arranged on said discharge pipe to support the filtering material, an outer bag-like asbestos screen arranged over said outer layer of filtering material and secured at its lower open end to said discharge pipe below said galvanized plate, a polished copper sterilizing cylinder arranged around said filtering mechanism, a perforated top removably arranged in the upper end of said cylinder, and a supporting disk secured to said discharge pipe to support said filtering mechanism, substantially as described.

880,686. CLAM-DIGGER. WILLIAM J. MUMFORD, South Bend, Wash. Filed May 10, 1907. Serial No. 373,011.

1. In a clam-digger, the combination with a suitable vehicle carrying thereon a power source and provided with rear wheels having a transverse wheel shaft, of clam trapping or digging mechanism upon said vehicle, and comprising a conveyer C, of suitable form and dimensions, pivotally mounted near its rear end longitudinally of the vehicle upon its rear wheel shaft, and having sides 4—4', an endless rotating screen E, of suitable mesh, provided with sprocket and link chain mechanism, and means to receive and transmit motive power to the conveyer, a digger D, of suitable form and dimensions, fixedly secured to the free end of the conveyer C and having a surface plow 15 at a convenient height thereon, also side furrow blades 14—14', and means whereby the digger may be raised and lowered, substantially as described.

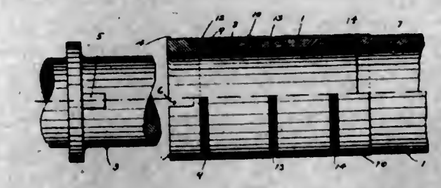


2. A clam-digger, comprising a suitable vehicle provided with rear wheels having a transverse wheel shaft, and clam trapping or digging mechanism upon said vehicle and consisting of a conveyer C, of suitable form and dimensions, pivotally mounted near its rear end longitudinally of the vehicle upon its rear wheel shaft, and having sides 4—4', an endless rotating screen E, of suitable mesh, provided with sprocket and link chain mechanism, and means to receive and transmit motive power to the conveyer, a digger D, of suitable form and dimensions, fixedly secured to the free end of the conveyer C and having a surface plow 15 at a convenient height thereon, also side furrow blades 14—14', and means whereby the digger may be raised and lowered, substantially as described.

3. A clam-digger, comprising a suitable vehicle provided with rear wheels having a transverse wheel shaft, and clam trapping or digging mechanism upon said vehicle, consisting of a conveyer C, of suitable form and dimensions, pivotally mounted near its rear end longitudinally of the vehicle upon its rear wheel shaft, and having sides 4—4', and endless rotating screen E, of suitable mesh, provided with sprocket and link chain mechanism, and means to receive and transmit motive power to the conveyer, a digger D, of suitable form and dimensions, fixedly secured to the free end of the conveyer C, and means whereby the digger may be raised and lowered, substantially as described.

4. In a clam-digger, the combination with a suitable power source placed upon a suitable vehicle provided with rear wheels having a transverse wheel shaft, of clam trapping or digging mechanism upon said vehicle and consisting of a conveyer C, of suitable form and dimensions, pivotally mounted near its rear end longitudinally of the vehicle upon its rear wheel shaft, and having sides 4—4', an endless rotating screen E, of suitable mesh, provided with sprocket and link chain mechanism, and means to receive and transmit motive power to the conveyer, a digger D, of suitable form and dimensions, fixedly secured to the free end of the conveyer C, substantially as described.

880,687. SPINDLING PLUG FOR PAPER CORES. WILLIAM H. MUNROE, Maplewood, Mass. Filed June 3, 1907. Serial No. 377,110.



1. In combination with a tubular winding core, a spindling plug engaging with the interior of the end of said core, and a jacket, mechanically separate from said plug,

surrounding said core end and longitudinally fixed with reference to plug and to core end.

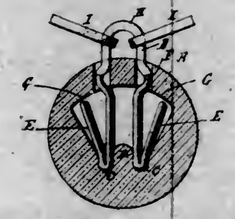
2. In combination with a tubular winding core, a spindling plug adapted to engage with the interior of the end of the said core, and a jacket surrounding the said core end and plug lying therein, said jacket being in engagement with the said plug and having superficial indentations whereby it is longitudinally fixed with relation to the said core end.

3. In combination with a tubular winding core, a spindling plug provided with a retaining groove, and adapted to engage within the interior of the end of said core, and a jacket surrounding said core end and the plug lying therein, said jacket being in engagement with said plug, and having circumferential grooves whereby the said jacket engages the core end.

4. In combination with a non-metallic tubular winding core, a spindling plug having a portion of its length exteriorly threaded, and adapted to screw into the interior of the end of said core, said plug also having a retaining groove formed in its unthreaded portion, and an outside jacket surrounding the said core end and the threaded portion of the plug lying therein, said jacket being in engagement with the retaining groove of the plug, and also embodying means engaging the exterior of the said core end.

5. In combination with a tubular winding core, a spindling plug having a threaded engagement with the interior of said core end, and a jacket, mechanically separate from plug, surrounding said core end and longitudinally fixed with relation both to said plug and said core end.

880,688. FASTENING-WIRE FOR SEALS, &c. THOMAS E. MURRAY, New York, N. Y. Filed Nov. 11, 1907. Serial No. 401,682.



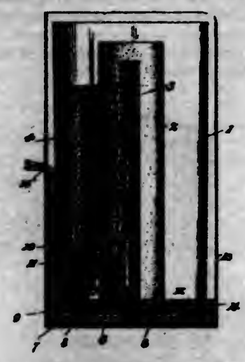
1. In combination with eyes or loops, a wire for connecting the same and means for securing the ends of the wire: the said wire being partly coated with fictile material.

2. In combination with eyes or loops, a wire for connecting the same and means for securing the ends of the wire: the said wire being partly coated with vitreous enamel.

3. In combination with eyes or loops, a wire for connecting the same and a seal device for permanently securing the ends of said wire: the portion of the said wire external to said seal being covered with fictile material.

880,689. PRIMARY BATTERY. WILLIAM M. MCDOUGALL, East Orange, N. J., and STANLEY R. V. ROBINSON, New York, N. Y. Filed Mar. 9, 1907. Serial No. 361,577.

A battery having a jar or vessel having a central perforation at its lower face, a carbon rod extending through said perforation and projecting upward into the cell, a metallic support larger at its upper surface than at its base and also projecting through the bottom of said jar and extending upward for substantially one-fifth of the normal fluid level therein corresponding to the abnormally strong portion of the electrolyte which is found around the crystals at the bottom of the cell, a porous tube interposed between said support and said carbon rod, a layer of cement completely surrounding said support, said tube and said rod and overlying the bottom of the jar, and a zinc element resting on said support, said zinc element being of less height than the central rod and porous tube, whereby the zinc element is maintained at the central portion of the electrolyte without being exposed to the especially corrosive action thereof at its surface and at its bottom layers.



880,690. GAS-BURNER. JOHN E. NADASDY, Chicago, Ill. Filed Nov. 1, 1907. Serial No. 400,272.



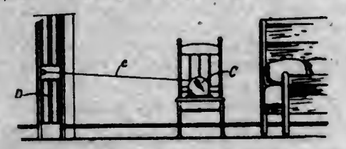
1. In a gas burner, in combination, a diaphragm-closed expansion chamber, a gas pipe entering the chamber, a burner tip carried by the diaphragm and communicating with the gas pipe, and a valve interposed between the tip and the pipe and controlled by the diaphragm.

2. In a gas burner, in combination, a diaphragm-closed expansion chamber, a tube entering the chamber, a tube leading from the chamber, one of such tubes carrying a valve for closing the other tube and one of such tubes being supported by the diaphragm.

3. In a gas burner, in combination, a cup, a tubular stem entering the cup, its inner end being a valve, a diaphragm covering the mouth of the cup, a burner carried by the diaphragm, a tube extending into the cup from the burner and inclosing the stem and forming a seat for the valve.

4. In a gas burner, in combination, a cup, a tubular stem entering the cup, its inner end being a valve, a diaphragm covering the mouth of the cup, a burner carried by the diaphragm, a tube extending into the cup from the burner and inclosing the stem and forming a seat for the valve, and a liquid seal for the inner end of the tube.

880,691. ELECTRIC ALARM. THEODOR NORPOTH, St. Louis, Mo. Filed Apr. 10, 1907. Serial No. 367,410.



1. In an electric alarm, a normally open electric circuit, an annunciator or bell in the path of the circuit, a rotatable disk, an oscillating bar having one end in frictional engagement with the disk, and actuated by said disk, and intermediate circuit-closing devices interposed between the bar and circuit for closing the latter upon rotation of the disk, substantially as set forth.

2. In an electric alarm, an electric circuit having its terminals or electrodes spaced a suitable distance apart, an annunciator or bell in the path of the circuit, a spring-controlled disk adapted to be connected to any object upon the disturbance of which rotation will be imparted to the disk, an oscillating member having one end frictionally engaging the disk and actuated by the disk, and intermediate circuit-closing devices interposed between said member and the separated electrodes for forcing the electrodes together and thereby closing the circuit, upon rotation of the disk in either direction, substantially as set forth.

3. In an electric alarm, an electric circuit having normally separated electrodes, an annunciator in the path of the circuit, a rotatable member, an oscillating bar pivoted between its ends, one arm of said bar being resilient or springy and adapted to normally bear against the rotatable member, a rock-shaft disposed transversely to the axis of rotation of the rotatable member, a yoke having converging sides formed on the shaft, the base of the yoke being removed to one side of the axis of the rock-shaft, said yoke serving to force the spring-arm out of engagement with the rotatable member with the rocking of the rock-shaft in one direction, a pair of pivoted circuit-closing levers adapted to be actuated by the oscillating bar upon deflection thereof with any rotation of the rotatable member, the circuit-closing levers being provided with formations adapted upon deflection of the oscillating bar to be forced against one of the electrodes of the circuit and force the latter into contact with its opposite electrode, and thus close the circuit, substantially as set forth.

4. In an electric alarm, an electric circuit having normally separated electrodes, an annunciator in the path of the circuit, a rotatable spring-controlled disk having a peripheral groove for a winding cord, an oscillating bar pivoted between its ends, one arm thereof being resilient and provided with a terminal tooth normally engaging the periphery of the disk, a transverse rock-shaft disposed beneath the spring arm of the oscillating bar, and having a saddle formed thereon with converging sides engaging the spring arm, the base of the saddle being disposed to one side of the axis of rotation of the rock-shaft whereby upon rocking the shaft in one direction the saddle will force the spring-arm away from the rotatable disk, a pair of circuit-closing levers pivoted about a common center and provided at one end with pins for engaging the adjacent end of the oscillating-bar, and having wedge-shaped heads at the opposite ends for engaging the adjacent electrodes of the open circuit, a reciprocating brake-bar terminating in a transversely disposed curved brake-arm adapted to engage the pins on the circuit-closing levers for a movement of the brake-bar in one direction, and intermediate formations between the brake-bar and rock-shaft for shifting the former to releasing position for the set or engaged position of the spring arm and rotatable disk, and for shifting the brake-arm to engaging position for a released position of the spring-arm, whereby the circuit-closing levers are swung out of contact with the electrodes by the movement of the curved brake-arm against the pins carried by said levers, and whereby under the action of the converging sides of the saddle, the oscillating bar is caused to assume a central position or in line with the axis of rotation of the disk, the parts operating substantially as, and for the purpose set forth.

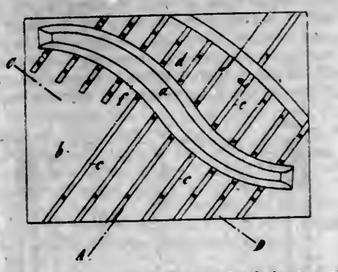
5. In an electric alarm, a normally open electric circuit, an annunciator in the path thereof, a rotatable member, an oscillating bar pivoted intermediate its ends and having one arm engaging said member and adapted to be deflected by the latter upon rotation of the member in either direction, and circuit-closing devices actuated by the deflection of the bar, substantially as set forth.

[Claims 6 and 7 not printed in the Gazette.]

880,692. SOUNDBOARD FOR STRINGED MUSICAL INSTRUMENTS. ROBERT OPPITZ, Koblenz, Germany. Filed Feb. 16, 1907. Serial No. 357,662.

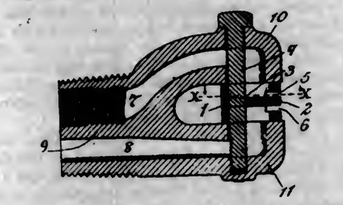
1. A soundboard for stringed musical instruments provided with a counter-bridge which diminishes in width towards the ends, and with ribs abutting against the sides of the bridge, substantially as specified.

2. A soundboard for stringed musical instruments provided with a counter-bridge which diminishes in width towards the ends, and with ribs abutting against the sides



of the bridge, the thickness of the bridge being equal to the thickness of the abutting ribs, substantially as specified.

880,693. OIL-BURNER FOR FURNACES. ERNEST H. PEABODY, New York, N. Y. Filed Mar. 19, 1906. Serial No. 306,924.



1. An oil burner for furnaces comprising separate oil and steam conduits having mutually opposed openings, a tip having separate outlets for oil and steam located between said openings and means for pressing the ends of said conduits together upon said tip, substantially as described.

2. An oil burner for furnaces comprising separate oil and steam conduits having mutually opposed openings, a tip having a cross partition and slotted on each side thereof, said tip being located between said conduit openings, and means for pressing the conduit ends together upon said tip, substantially as described.

3. An oil burner for furnaces comprising separate oil and steam conduits having mutually opposed openings, a cylindrical tip located between said conduit ends and a bolt passing through said conduit ends and said tip to draw said ends together, substantially as described.

4. An oil burner for furnaces comprising separate oil and steam conduits having mutually opposed openings, a cylindrical tip having a cross partition and located between said openings, a bolt passing eccentrically through said conduit ends and tip and means for preventing rotation of said tip around said bolt, substantially as described.

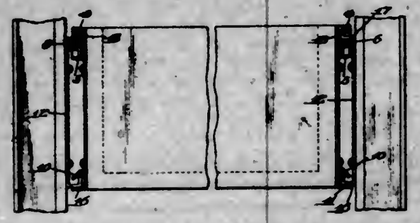
5. An oil burner for furnaces comprising a main conduit with two passages dividing into two branch conduits having mutually opposed openings, a tip located between said openings and means for pressing said branch conduits together on said tip, substantially as described.

[Claim 6 not printed in the Gazette.]

880,694. WINDOW-BOX SUPPORT. LEONARD G. QUACKENBOSS, Chicago, Ill. Filed May 10, 1905. Serial No. 259,850.

1. In a support for window boxes or the like, the combination with upper double and lower single tracks mounted upon the sides of the box, of brackets secured to the window frame having portions adapted to fit within said lower track and one of said upper tracks when the box is moved in one direction and brackets having portions adapted to fit within said lower track and the other of said upper tracks when the box is moved in the opposite direction.

2. In a support for window boxes or the like, the combination with upper double and lower single tracks adapted to be secured to the sides of the box, of brackets having portions adapted to fit within said lower track and one of said upper tracks when the box is moved in one direction, and brackets having portions adapted to fit within said lower track and the other of said upper tracks when the box is moved in the opposite direction, and means to prevent said brackets from becoming disengaged from said tracks when the box is moved to its extreme limits.



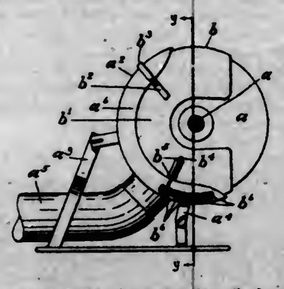
3. In a support for window boxes or the like, the combination with double and single tracks secured to opposite sides of the box, of brackets having portions adapted when the box is moved in one direction to fit within said single track and one of said double tracks, and brackets having portions adapted when the box is moved in the opposite direction to fit within said single track and the other of said double tracks, said tracks having portions fitting over the portions formed on the brackets, whereby lateral displacement of the same will be prevented.

4. In a support for window boxes or the like, the combination with tracks adapted to be secured to the sides of the box and comprising an upper double track and a lower track, of a front and a rear bracket mounted on each side of the window frame having lower projections adapted to fit in the lower track and the front bracket having a projection adapted to fit in one portion of the double upper track, the rear bracket having a portion adapted to fit in the other portion of the double track.

5. In a support for window boxes or the like, the combination with a set of tracks mounted upon each side of the box, each set of tracks comprising an upper double track and a lower track, of a front and rear bracket mounted upon each side of the window frame and having portions adapted to fit within the lower track, the front bracket having a portion adapted to fit in one portion of the double track and the rear bracket having a portion adapted to fit in the other portion of the double track, a stop at the forward end of one of said upper track portions, and a second stop at the rear end of the other track portion.

[Claims 6 to 11 not printed in the Gazette.]

880,695. HOOD FOR EMERY, POLISHING, OR BUFFING WHEELS. GEORGE V. SCHNELL, Troy, Ohio. Filed Nov. 23, 1907. Serial No. 403,443.



1. In a device of the character described, a stationary frame or casing having a suction-pipe attached thereto, a movable hood located therein, and a slotted opening in said hood, substantially as and for the purpose specified.

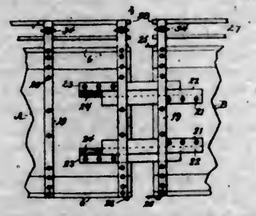
2. In a device of the character described, a stationary frame or casing having a suction-pipe attached thereto, a movable hood located therein, having a slotted opening to permit communication to said suction-pipe in certain positions of adjustment of said hood, and to completely close said suction-pipe in another position of adjustment, substantially as and for the purpose specified.

3. In a device of the character described, a stationary frame part having a suction-pipe secured thereto, a hood located thereon, having a slotted opening, and means for removably securing said hood to said frame, substantially as and for the purpose specified.

4. In a device of the character described, a stationary frame or casing having a suction-pipe attached thereto, an adjustable hood located therein having a slotted opening, and arms located on said movable hood adapted to embrace said stationary frame part but adapted to clear said frame part when said hood is turned to a certain position to permit the easy removal of the same, substantially as and for the purpose specified.

5. In a device of the character described, a wheel, a casing partially inclosing the same, a suction pipe leading therefrom, and a movable hood located in said casing between the same and said wheel having a slotted opening, substantially as and for the purpose specified.

880,696. PARLOR BOWLING-ALLEY. AUGUST F. SCHUPINSKY, Jr., Milwaukee, Wis. Filed Nov. 6, 1905. Serial No. 286,014.



1. In a parlor bowling alley, a detachable transverse section of such alley, comprising a longitudinal bed centrally, adjacent longitudinal side floors whose surfaces are below the plane of the bed, longitudinal guard rails along and projecting above the outer edges of the side floors, a longitudinal rail ball-runway a little distance at one side from and parallel with the adjacent one of said guard rails, and cross ties on which the bed and floors and guard rails and the runway all in the same plane are severally supported and secured.

2. In a parlor bowling alley, a plurality of detachable sections, each section including a central longitudinal bed, adjacent longitudinal side floors whose surfaces are lower than the top surface of the bed, longitudinal bordering upwardly projecting guard rails, a longitudinal rail ball-runway a little distance at one side from and parallel with the guard rail but generally in the same horizontal plane with the bed and the side floors, and a detachable rear end box and pit section including a high rear end wall, a low front wall, a bottom, and side walls projecting forwardly above and in front of the front pit wall to over the adjacent bed section above and in alinement with the guard rails of that adjacent bed section.

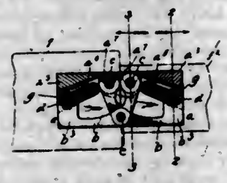
3. In a parlor bowling alley, the combination with a plurality of detachable sections forming a central longitudinal bed, and parallel adjacent lower side floors having outer raised guards, of a detachable box and pit section having a bottom, a high rear end wall and high side walls, a partial box top projecting forward from the rear wall above the pit, and a swinging baffle depending from the partial top at a distance rearwardly from its front edge and adapted to impinge in inclined position rearwardly against the rear box end.

4. In a parlor bowling alley, a plurality of detachable bed sections abutting transversely in a right line, longitudinally extending cleats in complementary pairs secured on the under side alternately to abutting alley bed sections and projecting endwise therefrom, the cleats being longitudinally shouldered or rabbeted whereby they interlock when the sections are brought together endwise and prevent both lateral and vertical displacement of the abutting sections, and means for connecting together the sections detachably preventing separation in endwise direction when so connected together.

5. In a parlor bowling alley, detachable alley bed sections, a plurality of cross ties secured on the under side to and projecting laterally from each section, a pair of ball runway rails adjacent to and parallel with the beds of the bed sections and supported on the projecting ends of said cross ties substantially in the horizontal plane of the bed sections and means for securing the rails to the ties detachably.

[Claims 6 to 8 not printed in the Gazette.]

880,697. HINGE. JOSEPH SOSS, New York, N. Y. Filed Apr. 8, 1907. Serial No. 367,073.

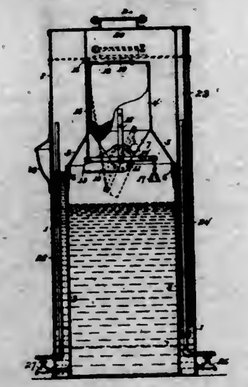


1. A hinge composed of two similar main parts or holders, each of which comprises a back plate and integral parallel end members at right angles thereto, the end members being provided in their adjacent faces with slots or grooves which range approximately in the same direction as the front faces of the back plates in transverse section and in which are mounted sliding rods which are movable in said grooves, said main parts or holders being also provided with stationary rods which are passed through the end members adjacent to the corresponding edges of the back plates when the separate parts of the hinge are closed together, and separate sets of swinging arms or members pivoted to the last named rods of each main part or holder and extended into the other main part or holder and connected with the rod mounted in the slots or grooves in the end plates thereof, said separate sets of arms or members being crossed and pivotally connected where crossed by a rod passed therethrough, the end portions of the arms of each set between the last named rod and the sliding rods being longer than the end portions connected with the stationary rods.

2. A hinge composed of two similar main parts or holders, each of which comprises a back plate and integral parallel end members at right angles thereto, the end members being provided in their adjacent faces with slots or grooves which range approximately in the same direction as the front faces of the back plates in transverse section and in which are mounted sliding rods which are movable in said grooves, said main parts or holders being also provided with stationary rods which are passed through the end members adjacent to the corresponding edges of the back plates when the separate parts of the hinge are closed together, and separate sets of swinging arms or members pivoted to the last named rods of each main part or holder and extended into the other main part or holder and connected with the rod mounted in the slots or grooves in the end plates thereof, said separate sets of arms or members being crossed and pivotally connected where crossed by a rod passed therethrough, the end portions of the arms of each set between the last named rod and the sliding rods being longer than the end portions connected with the stationary rods, the back plates being also provided on their corresponding edges when the separate parts of the hinge are closed together with forwardly directed lugs through which the second named rods are passed.

3. A hinge composed of two similar main parts or holders each of which is provided with parallel end members having slots or grooves formed in the adjacent faces thereof and in which are mounted sliding rods movable in said grooves, said main parts or holders being also provided with stationary rods which are passed through the end members adjacent to the corresponding edges when the separate parts of the hinge are closed together, and separate sets of swinging arms or members pivoted to the last named rods of each main part or holder and extended into the other main part or holder and connected with the rod mounted in the slots or grooves in the end plates thereof, said separate sets of arms or members being crossed and pivotally connected where crossed by a rod passed therethrough, the end portions of the arms of each set between the last named rod and the sliding rods being longer than the end portions thereof connected with the stationary rods.

880,698. ACETYLENE-GAS GENERATOR. HARVEY S. STONER and BURTON STONER, Massillon, Ohio. Filed June 7, 1907. Serial No. 377,715.



1. The combination with a gasometer, of a generator and a carbid-holder both mounted within said gasometer, a feed-device carried by said carbid-holder, said device comprising a rotatable feeder in open communication with the discharge-end of said holder, a shaft rotatable with said feeder, a lever fixed to said shaft, and an upright vertically movable rod connected to said lever and adapted to be controlled in its movements by fluctuations in the volume of gas contained in said gasometer.

2. The combination with a gasometer, of a generator and a carbid-holder both mounted within said gasometer, a feed-device carried by said carbid-holder, said device comprising a rotatable feeder in open communication with the discharge-end of said holder and rotatable about said discharge-end, said feeder being of tapered horn-like formation and normally standing in a non-discharging position, a lever in fixed relation to said feeder, a vertically movable rod connected with said lever and adapted to be depressed by the movable member of said gasometer as it descends for actuating said lever to rotate said feeder to discharging position, and means for returning the moved parts to their normal positions with the ascent of said movable member.

3. The combination with a gasometer, of a generator tank mounted within said gasometer, a carbid-holder mounted over said generator tank, said holder having a laterally-directed discharge-end, a carbid-feeder of horn-like formation in open communication with and rotatable about said discharge-end, a shaft fixed to one side of said feeder, a lever fixed intermediate its ends on said shaft, means connected to one end of said lever whereby the downward movement of the movable bell of said gasometer between predetermined points is communicated to said lever whereby the partial rotation of said feeder is effected,

and means for returning said lever to its normal position with the upward movement of said bell.

4. The combination with a gasometer, of a generator tank located within said gasometer, a carbid-holder mounted over said generator tank, said holder having a laterally-directed discharge-end, a carbid-feeder rotatable about and in open communication with said discharge end, a support depending from said carbid-holder, a shaft fixed to said feeder and journaled in said support, a lever mounted upon the end of said shaft, a rod attached to said lever and adapted to be contacted by the movable member of said gasometer at a predetermined point in the downward movement of the latter and to be forced downward thereby to effect the operation of said lever and the resultant tipping of said feeder, and means for effecting the return of the downwardly-moved parts with the upward movement of said member.

880,699. WALL-PLUG. MARTIN SWINTEK, Des Moines, Iowa. Filed Apr. 19, 1907. Serial No. 369,694.



1. A wall plug having a body portion bent intermediate of its ends and wings on opposite sides of one end portion of said wall plug, each wing bent annular in cross-section to form a seat, each seat tapering from end to end, the inner end portions of the seats directed toward each other, and a pin transversely of the bend of the body portion.

2. A wall plug having a body portion adapted to be bent intermediate of its ends and formed with wings on opposite sides of one end portion, each wing bent laterally upon itself to form a bore or seat annular in cross section, each wing so shaped that the bore or seat therein tapers from end to end and the inner end portions of adjacent seats directed toward each other.

3. A wall plug having a body portion adapted to be bent intermediate of its ends and formed with wings on opposite sides of one end portion, each wing bent transversely upon itself to form a bore annular in cross-section, each bore tapering from end to end and having sinuous longitudinal trend, each wing shaped to form a flaring mouth to the bore therein, the inner end portions adjacent the bores directed toward each other.

880,700. SANITARY FLOOR FOR ANIMAL-STALLS. ALBERT TURNEY, Kansas City, Mo. Filed Mar. 30, 1906. Serial No. 308,867.



1. A stall floor having a recess, means to discharge jets of water toward the sides of the recess, a platform fitting in and spaced above the bottom of the recess, having its upper surface sloping downward and inward, means to discharge water from the sides toward the center of the recess and against the bottom of the platform, and a drain pipe for the recess.

2. A stall floor having a recess with its bottom sloping downward and inward, longitudinal pipes arranged within the recess near its center and sides and adapted to discharge water transversely, the center pipe discharging toward the sides, and the side pipes toward the center of the recess, a platform fitting in and spaced above the bottom of the recess and sloping downwardly and inwardly from the sides toward the center of the same, and means to drain the water from the recess.

3. A stall floor having a paneled recess with the bottoms of the panels sloping and a passage connecting the panels, a drain pipe for the recess at the lowest points thereof, a longitudinal pipe embedded in the floor centrally of the recess and bridging said passage and closed at one end and provided at opposite sides of said passage with transverse nozzles communicating with said panels, a pair of longitudinally extending pipes embedded in the floor at the outer sides of the panels and closed at one end and provided with transverse nozzles communicating with the panels, pipes embedded in the floor and coupled to said side pipes, a valve-controlled water-supply pipe coupled to said first-named longitudinal pipe and the pipes coupled to the side pipes, and a removable platform fitting in said recess and bridging said panels and the passage connecting the same.

4. A stall floor provided with a recess having its bottom sloping downwardly and inwardly and provided with substantially horizontal side and end shoulders below the plane of the floor and in the horizontal plane of the outer and end edges of said bottom, a removable platform supported on said shoulders and sloping downward and inward from its outer sides and provided with a drain slot at its lowest point, a drain pipe communicating with the lowest point of the recess, pipes embedded in said shoulders of the recess and provided with nozzles for discharging jets of water into the latter in a substantially horizontal plane and below said platform, and means to control the supply of water to said pipes.

5. A stall floor having a recess deepened to provide a pair of longitudinally extending parallel panels and a passage connecting the same and having their bottoms sloping downward toward said passage, a drain pipe communicating with said passage, communicating pipes embedded in the floor and provided with transverse nozzles to discharge water in opposite directions into said panels, a supply pipe embedded in the floor, a substantially Z-shaped pipe connecting the supply pipe with the first-named pipes, a valve in said connecting pipe, and a tube surrounding said valve and opening at its upper end through the floor.

[Claim 6 not printed in the Gazette.]

880,701. FIREPROOF BLIND. HERMAN E. VANCE, Columbus, Ohio. Filed July 10, 1903. Serial No. 164,986.



1. A slat for rolling fire proof blinds and the like comprising two strips or plies of metal and an intermediate ply of asbestos or other heat obstructing material all rolled and bent together longitudinally to form the slat body and engaging hooks, the intermediate ply extending into the hook forming portion.

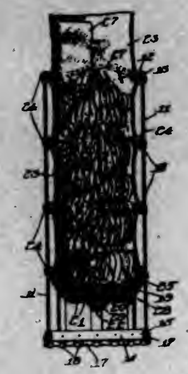
2. A slat for use in the construction of fire proof blinds and the like, having a body portion and hooks at its edges and comprising two strips or plies of metal bent substantially identically in cross section, and an intermediate strip of asbestos or other heat-obstructing material between said strips and extending into said hooks.

3. A slat for rolling fire proof blinds comprising two strips or plies of metal and an intermediate ply of asbestos or other heat obstructing material all correspondingly rolled and bent together to form the body of the slat and engaging hooks at the edges thereof, the intermediate ply extending into the part forming the engaging hook.

880,702. BANANA-SHIPPING CASE. CHARLES A. WELLMAN, Ottumwa, Iowa. Filed June 11, 1906. Serial No. 321,255.

1. In a banana shipping case, the combination of a crate, means within said crate near its lower end adapted to support in any of a plurality of positions the end of the stem of a bunch of bananas, and a bag distended and secured within said crate above said supporting means.

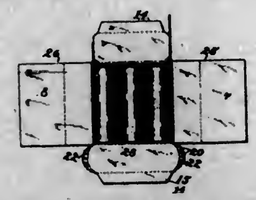
2. In a banana shipping case, the combination of a crate, a rigid support secured within said crate near its lower end, said support having a plurality of depressions each adapted to receive and hold in place the end of the stem of a bunch of bananas, and a bag distended and secured within said crate.



3. In a banana shipping case, the combination of a crate, a rigid support secured within said crate near its lower end, said support having a central conical depression and an outer concentric depression, and a bag distended and secured within said crate above said support.

4. In a banana shipping case, the combination of a crate, a wire-netting support secured within said crate near its lower end, said support being shaped to have a conical depression and an outer concentric depression, and a bag distended and secured within said crate.

880,703. BATTERY. GEORGE M. WHEELER and HENRY WILHELM, Brooklyn, N. Y. Filed July 11, 1907. Serial No. 383,185.



1. A pocket battery comprising a plurality of cells, and a readily removable wrapper of flexible material comprising a central portion having a pair of side extensions folded around said cells to inclose them and also having a top and bottom extension folded over the ends of said cells.

2. A pocket battery comprising a plurality of cells, and a readily removable wrapper of flexible material comprising a central portion having a pair of side extensions folded around said cells to inclose them and also having a top and bottom extension folded over the ends of said cells, each of said top and bottom extensions having a tab or portion projecting within said side extensions.

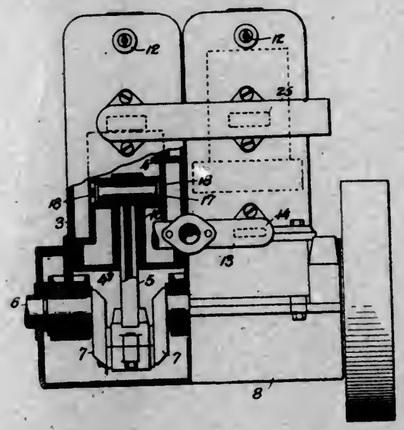
3. A pocket battery comprising a plurality of cells having metallic contacts connected thereto, and a readily removable wrapper of flexible material comprising a central portion having a pair of side extensions folded around said cells to inclose them and also having a top and bottom extension folded over the ends of said cells, said top extension having cut-away portions for the passage of said metallic contacts.

4. A pocket battery comprising a plurality of cells, and a readily removable wrapper of flexible material comprising a central portion having a pair of side extensions folded around said cells to inclose them and also having a top and bottom extension folded over the ends of said cells, said bottom extension having a tab or portion projecting within said side extensions and also having a pair of upwardly turned crimped or tongued ends projecting within said side extensions.

5. A pocket battery comprising a plurality of cells having metallic contacts, and a readily removable wrapper of flexible material comprising a central portion having a pair of side extensions each of substantially the same area as said central portion and folded around said cells to inclose them, one side extension overlapping the other, said central portion also having a top and a bottom extension folded over the ends of said cells and each provided with an inwardly projecting tab or portion extending within said side extensions, said top extension having cut-away portions for the passage of said metallic contacts and said bottom extension having a pair of upwardly turned crimped or tongued ends also projecting within said side extensions.

[Claims 6 to 9 not printed in the Gazette.]

880,704. GAS-ENGINE. MARSHALL L. WOOD, Montpelier, Vt. Filed Feb. 5, 1907. Serial No. 355,782.



1. In an internal combustion or explosive engine, the combination of a plurality of cylinders, and a piston in each cylinder which supplies the fuel-charge to another of said cylinders, said piston having a hollow interior in which the fuel-charge is received and compressed.

2. In an internal combustion or explosive engine, the combination of a plurality of cylinders, means for supplying the fuel-charge to each cylinder, and a piston in each cylinder which forces such charge from such cylinder into the adjacent cylinder, said piston having a hollow interior in which the fuel-charge is received and compressed.

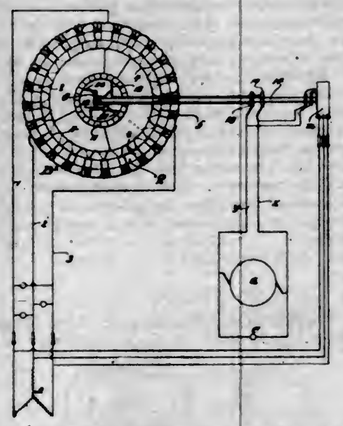
3. In an internal combustion or explosive engine, the combination of a plurality of cylinders, and a piston in each cylinder which supplies the fuel-cnarge to another cylinder, said piston comprising a working-section and a pump-section, and having a hollow interior in which the fuel-charge is received and compressed.

4. In an internal combustion or explosive engine, the combination, a plurality of cylinders each comprising a pump-section and a combustion-section, means for supplying the fuel-charge to each pump-section, and a piston in each cylinder which transfers such charge from the pump-section of such cylinder into the combustion-section of another, said piston having a hollow interior in which the fuel-charge is received and compressed.

5. In an internal combustion or explosive engine, in combination, a plurality of cylinders, and a hollow piston in each cylinder, which piston receives and compresses therein the fuel-charge and transfers the same to the adjacent cylinder.

[Claims 6 to 25 not printed in the Gazette.]

880,705. SYSTEM OF ELECTRICAL DISTRIBUTION. JOSEPH L. WOODBRIDGE, Philadelphia, Pa. Filed Aug. 30, 1905. Serial No. 276,351.



1. In combination a magnetic circuit of which all parts are relatively fixed, a winding in inductive relation thereto, a commutator connected to said winding, one set of brushes for said commutator adapted for connection to a direct current circuit, another set of brushes electrically interconnected and adapted to produce a displaced magnetic field in said magnetic circuit, and means for producing relative rotation of brushes and commutator.

2. In combination a magnetic circuit of which all parts are relatively fixed, a winding in inductive relation thereto, a commutator connected to said winding, brushes for said commutator adapted for connection to a direct current circuit and direct current means for producing a rotating magnetic field in said magnetic circuit, displaced with respect to the point of contact of said brushes.

3. In combination a magnetic circuit all parts of which are relatively fixed, a winding in inductive relation thereto, alternating current connections for said winding, and direct current means for producing in said magnetic circuit a rotating magnetic field, said means including a commutator and brushes of which some are adapted for connection to a source of direct current electro-motive-force, while others are displaced with respect to the first and short circuited.

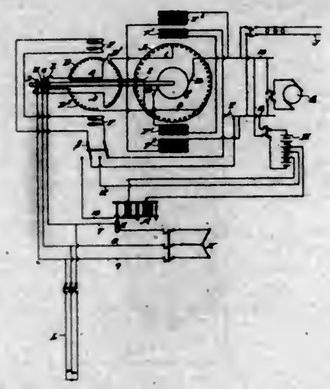
4. In combination a magnetic circuit of which all parts are relatively fixed, a winding in inductive relation thereto, a commutator connected to said winding, brushes for said commutator adapted for connection to a source of direct current electro-motive-force, and direct current means for producing in the winding an electro-motive-force counter to that of the source.

5. In combination a magnetic circuit, of which all parts are relatively fixed, a winding in inductive relation thereto, a commutator connected to said winding, and commutator brushes whereof some are short circuited and others are adapted for connection to direct current lines.

[Claims 6 to 12 not printed in the Gazette.]

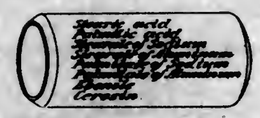
880,706. ELECTRICAL DISTRIBUTION. JOSEPH L. WOODBRIDGE, Philadelphia, Pa. Filed Jan. 12, 1906. Serial No. 295,682.

1. A system of electrical distribution comprising the combination of a source of alternating current and its circuit, a source of direct current and its circuit, transforming apparatus operatively connected between the two sources, and means responsive to fluctuations on the alternating current circuit for compelling the transfer of energy in either direction between the direct current source and the alternating current circuit, said means including an armature connected in series between the alternating current terminals of the transforming apparatus and the alternating current circuit, substantially as described.



2. A system of electrical distribution comprising the combination of a source of alternating current and its circuit, a storage battery and its direct current circuit, transforming apparatus operatively connected between the two circuits, and means responsive to fluctuations on the alternating current circuit, for compelling the transfer of energy in either direction between the storage battery and the alternating current circuit, said means including an armature connected in series between the alternating current terminals of the transforming apparatus and the alternating current circuit, substantially as described.

880,707. COMPOSITION FOR MAKING DUPLICATE PHONOGRAPH-RECORDS. JONAS W. AILSWORTH, East Orange, N. J., assignor to New Jersey Patent Company, West Orange, N. J., a Corporation of New Jersey. Filed Feb. 5, 1906. Serial No. 299,630.



1. A composition suitable for the manufacture of phonograph records which contains a wax-like substance extracted from bituminous coal and harder than paraffin, substantially as set forth.

2. A composition suitable for the manufacture of phonograph records which contains the wax-like substance known as ebonite, substantially as set forth.

3. A composition suitable for the manufacture of phonograph records which contains the wax-like substance known as montan wax, substantially as set forth.

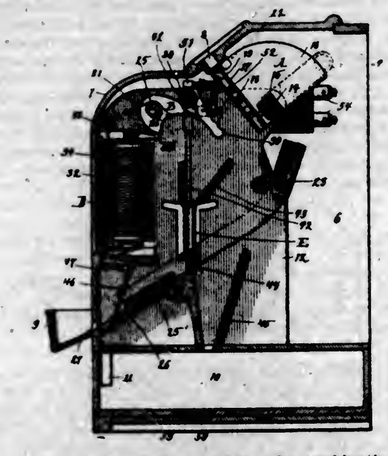
4. A composition suitable for the manufacture of phonograph records which contains a metallic soap and a wax-like substance extracted from bituminous coal and harder than paraffin, substantially as set forth.

5. A composition suitable for the manufacture of phonograph records, which contains a metallic soap and the wax-like substance known as ebonite, substantially as set forth.

[Claims 6 to 11 not printed in the Gazette.]

880,708. TELEPHONE TOLL APPARATUS. EDWARD P. BAIRD, Evanston, Ill., assignor to Baird Manufacturing Company, Chicago, Ill., a Corporation. Filed Mar. 25, 1901. Serial No. 52,678.

1. In a telephone toll apparatus, the combination with means for disposing of a coin in a plurality of directions, means for directing said coin in one of said directions by the insertion of another coin, and means operated from the exchange for disposing of said coin in another of said directions.



2. In a telephone toll apparatus, the combination with means for disposing of a coin in a plurality of directions, of means operable by the depositor for directing said coin in one of said directions upon the insertion of another coin, and means operated from the exchange for disposing of said first coin in another of said directions.

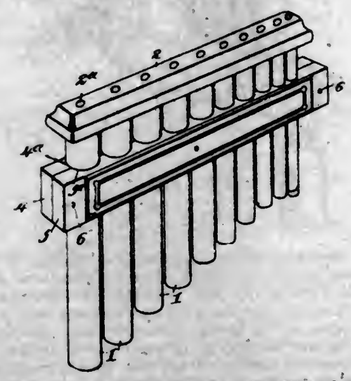
3. In a telephone toll apparatus, the combination with means for disposing of a coin in a plurality of directions, means operable by another inserted coin for displacing said first coin in one of said directions, and means for shifting said second coin to operate said displacing means.

4. In a telephone toll apparatus, the combination of means for refunding a coin operable by the exchange operator, means for retaining a previously deposited coin when another coin is deposited, and means for shifting the deposited coin to operate the retaining means.

5. In telephone-toll apparatus, the combination of coin-distributing-means for causing a coin to be refunded or retained, means for causing a deposited coin to be refunded and operable by the exchange operator, and means for operating the distributing-means to retain a previously deposited coin when another coin is deposited.

[Claims 6 to 58 not printed in the Gazette.]

880,709. MOUTH-ORGAN. SAMUEL S. BARLOW, Chicago, Ill. Filed Mar. 23, 1907. Serial No. 364,027.



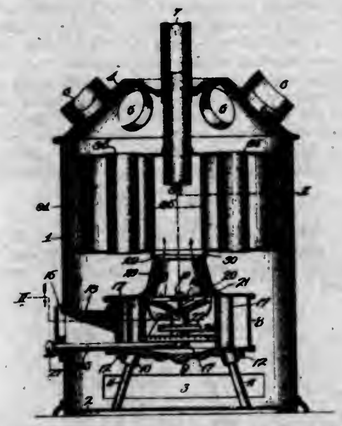
1. A mouth-organ comprising a plurality of pipes located side by side and having one set of ends in substantial alinement and open at the opposite ends, an apertured mouth-piece attached to the adjacent alined ends of said pipes, means for securely holding said pipes side by side in operative position, and reeds within said pipes.

2. A mouth-organ comprising a plurality of pipes, having one set of ends in substantial alinement, an apertured mouth-piece attached to the adjacent alined ends of said pipes, means for securely holding said pipes in operative position, reeds within said pipes, and means for supporting said reeds in said pipes adjustably in the longitudinal direction of said pipes.

3. A mouth-organ comprising a plurality of pipes, having one set of ends in substantial alinement, an apertured mouth-piece attached to the adjacent alined ends of said pipes, plugs within said pipes having bores communicating by a passage, said bores being respectively open at their outer ends and closed at their inner ends, a slotted plate within one bore, and a reed attached to said plate and alined with its slot, the end of said plug adjacent said mouth-piece, being inclined downwardly toward the bore that opens toward the mouth-piece opening.

4. A mouth-organ comprising a plurality of pipes located side by side, clamp pieces securing said pipes firmly together, an apertured mouth piece having recesses on one side receiving the adjacent ends of said pipes, and means for producing musical notes by the flow of air through said pipes.

880,710. FURNACE. JAMES H. BENNETT, Kansas City, Mo. Filed May 28, 1907. Serial No. 376,153.



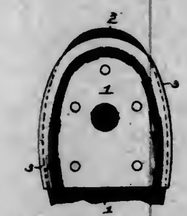
1. A furnace comprising a casing or shell provided with an air inlet opening at its lower end and an exit opening at its upper end and with a door-controlled opening, a cylinder within the casing or shell and provided with a central exit opening in its top, and with a tube connecting it with said door-controlled opening, air-pipes extending through the cylinder and communicating at their upper and lower ends with the interior of the casing or shell, a burner in the cylinder, a valve-controlled supply pipe connected with the burner and extending through said tube and shell or casing and adapted to direct the flame upon said air tubes, a drum within the casing or shell and above the cylinder and provided with a central opening in its lower end in communication with the exit opening of the cylinder, an escape pipe depending into the drum to convey the products of combustion therefrom, and a series of air pipes extending up through said drum and communicating at their opposite ends with the interior of the casing or shell.

2. A furnace, comprising a casing or shell provided with an air-inlet opening at its lower end and an exit opening at its upper end and with a door-controlled opening, a cylinder within the casing or shell and provided with a central exit opening in its top and with a tube connecting it with said door-controlled-opening air-pipes extending through the cylinder and communicating at their upper and lower ends with the interior of the cas-

ing or shell, a burner in the cylinder, a valve controlled supply pipe connecting with the burner and extending through said tube and shell or casing and adapted to direct the flame upon said air-tubes, a tube secured to the top of the casing or shell around said exit opening, and provided at its upper end with an inwardly projecting annular flange, a cross bar bridging the exit opening of the cylinder, a bolt depending centrally from said cross bar, an inverted conical deflector mounted upon said bolt and disposed in the upper part of the cylinder, a drum in the casing or shell and provided with a depending tube communicating with it and secured upon the flange of the tube surrounding the exit opening of the cylinder, an escape pipe depending into the drum to convey the products of combustion therefrom, and a series of air-pipes extending up through said drum and communicating at their opposite ends with the interior of the casing or shell.

3. A furnace, comprising a casing or shell having an air-inlet opening at its lower end and air-exit openings at its upper end and provided with a door-controlled opening, and an escape pipe, a cylinder within the drum and provided with a central exit opening in its top and with depending legs resting upon the bottom of the casing or shell, a tube connecting the cylinder with the door-controlled opening, an inverted conical deflector suspended in the upper part of the cylinder centrally of its exit opening, a pair of burners in the lower central part of the cylinder, valve-controlled fuel-supply pipes connected to said burners and extending out through the shell, air tubes extending vertically through the cylinder around the burners and deflector and communicating at their opposite ends with the interior of the casing or shell, a tube surrounding the exit opening of and rising upward from the cylinder, a drum supported upon said tube and communicating at its lower end therewith, air-pipes extending vertically through the drum and communicating at their opposite ends with the interior of the casing or shell, and a pipe fitting at its upper end in said escape pipe and depending into the drum to convey the products of combustion therefrom.

880,711. SHOE-LAST. FRANCIS E. BENTON, Stoughton, Mass., assignor of one-half to Woodward and Wright, Campello, Mass. Filed Aug. 21, 1907. Serial No. 389,568.

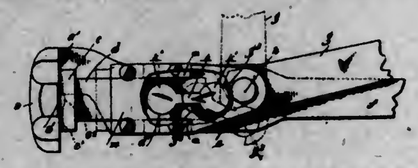


1. The method herein described, consisting in forming a flange or lip at the side edges of a heel plate, securing said heel plate to a last, and trimming off the flanges inwardly of edges of the heel portion of the last.

2. The method herein described, consisting in forming a flange at the side edges of a heel plate, securing said heel plate to a last, trimming off the greater portion of said flanges and then hammering the edge of the plate against the bottom of the heel portion of the last.

880,712. IMPLEMENT FOR APPLYING CLAMPS TO WIRE FENCES. JOSEPH G. BERTHIAUME and ARTHUR E. BARLOW, Worcester, Mass., assignors of one-half to Wright Wire Company, Worcester, Mass., a Corporation of Massachusetts. Filed Apr. 18, 1906. Serial No. 312,397.

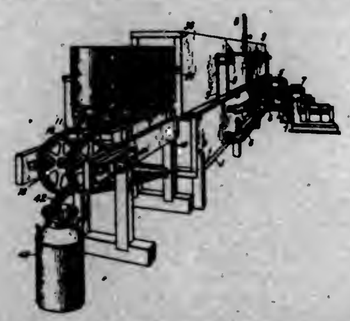
1. In an implement for applying clamps to wire fences and the like, the combination of a body having an arm, a handle on said arm, a jaw located on the body opposite the arm, a second jaw adapted to move toward and from the first-named jaw, a slide on which the second jaw is mounted, said body having ways along which the slide is adapted to move, said slide having a socket, a lever pivotally mounted with respect to the body and having a handle adapted to move towards and from the first-named handle, said lever having its socket located on the side of its pivot opposite to that on which its handle is located, and a link having means located in said sockets by which said link is pivotally connected with the lever and with the second jaw, the points at which the link is pivoted to the lever and to the jaw and at which the lever is pivoted to the body being substantially in alinement when the jaw is at the end of its stroke.



2. An implement for applying clamps to wire fences and the like, comprising a body having a stationary arm, a handle on said arm, a stationary jaw located on said body opposite said arm, a movable jaw on the body, a lever pivoted to the body, a link pivotally connected with the lever and with the movable jaw, and a handle on said lever adapted to move toward and from the first named handle, the points at which the link is pivoted to the jaw and to the lever and at which the lever is pivoted to the body being nearly in alinement when the jaw is at the end of its stroke, the lever and arm being nearest together at the same time.

3. In an implement of the character described, the combination of a body having a stationary arm provided with a handle and a stationary jaw, a second jaw adapted to move toward and from the stationary jaw, a slide on which the second jaw is mounted, said body having ways along which the slide is adapted to move, said slide having a socket, a lever pivotally mounted on the body and having a handle adapted to move toward and from the first-named handle, said lever having a projection provided with a socket located on the side of its pivot opposite to that on which its handle is located, and a link having two cylindrical heads, one located in each of said sockets.

880,713. CAN-WASHING MACHINE. JAMES R. BLAIR, Boston, Mass. Filed Dec. 21, 1906. Serial No. 348,892.



1. A receptacle washing apparatus comprising a vat, a circulating system connected thereto and having a substantially horizontally and longitudinally disposed pipe having upwardly directed discharge openings and opposed upright pipes having facing lateral discharge openings, an endless carrier having a substantially horizontal run thereof disposed above said vat over said first mentioned pipe and between said upright pipes and adapted to receive thereon receptacles to be cleansed, and an adjustable lateral guide for receptacles so positioned upon said carrier.

2. A receptacle washing apparatus comprising a vat, an endless carrier having an operative run supported above the same and adapted to receive receptacles supported month downward thereon, cleansing medium pipes within said vat and directed toward the interior of said receptacles, and means located anterior to said cleansing pipes to receive material discharged from said receptacles, said material being received by said means uncontaminated by said cleansing medium.

3. A receptacle washing apparatus comprising a vat, an endless carrier having an operative run supported above the same and adapted to receive receptacles supported mouth downward thereon, cleansing medium pipes within said vat and directed toward the interior and the exterior of said receptacles, and means located anterior to said cleansing pipes to receive material discharged from said receptacles, said material being received by said means uncontaminated by said cleansing medium.

4. A receptacle washing apparatus comprising a vat having compartments therein, a cleansing fluid circulating system connected to each compartment and terminating in discharge pipes upwardly directed, an endless carrier comprising laterally spaced portions whereon receptacles may be positioned mouth downward and spanning the same, and a trough beneath the upper run of said endless carrier anterior to said discharge pipes to receive material draining from said receptacles.

5. A receptacle washing apparatus comprising a vat having a plurality of compartments, means permitting the heating of one or more of said compartments, a circulating system connected to each compartment, each system terminating in discharge pipes arranged longitudinally of said compartments and having upwardly directed openings to discharge a cleansing medium into the mouth of the receptacles, and one or more of said systems having upright pipes provided with lateral openings to discharge a cleansing medium against the sides of the receptacles and an endless carrier having an operative run positioned above said discharge pipes and adapted to receive receptacles positioned thereon mouth downward.

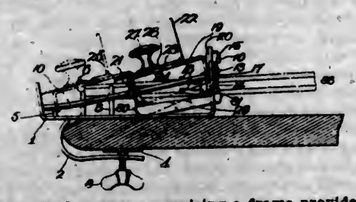
[Claims 6 to 13 not printed in the Gazette.]

880,714. LAUNDRY-EDGER. RALPH L. BRAY, Long Branch, N. J. Filed Nov. 5, 1906. Serial No. 342,103.



As a new article of manufacture, the herein described hand operated laundry edger comprising an elongated cylindrical stock 1 having a plurality of annular edging grooves 3 formed therein toward one end, the opposite end serving as a handle for rotating the tool and applying it to the edge of a laundered article.

880,715. PENCIL-SHARPENER. MYRTLE A. CAMERON, Kansas City, Kans., and WILLIAM H. COWLES, Rockford, Ill. Filed May 14, 1907. Serial No. 373,609.



1. A pencil sharpener comprising a frame provided with longitudinally alined standards having recesses in their upper ends to receive and support a pencil, downwardly and forwardly inclined guide rods on the frame, a reciprocatory carrier mounted on said guide rods and extending over the standards, and a knife secured to said carrier.

2. A pencil sharpener, comprising a substantially U-shaped frame provided with a pair of longitudinally alined standards having recesses of different sizes in their upper ends, guide rods extending downwardly and forwardly from the rear to the front arms of the frame, a rotatable pencil support journaled in the rear arm of the frame and provided with a passage through which a pencil is adapted to extend, springs extending through said passage to squeese the pencil yieldingly between them, a reciprocatory carrier mounted on said rods and adapted to operate in a plane above the standards, a knife secured to said carrier, and means actuated by the rearward movement of the carrier to turn said support and incidentally the pencil.

3. A pencil sharpener, comprising a substantially U-shaped frame equipped with means for securing it to a desk or equivalent support, and provided with a pair of longitudinally alined standards having recesses of different size in their upper ends, the recess of the forward standard being smaller and the recess of the other standard larger in diameter than the lead pencil, guide rods extending downwardly and forwardly from the front to the rear arm of said frame and curved slightly upward near their front ends, an inverted U-shaped carrier mounted on the rods and having its body portion in a plane above said standards, a knife secured to the carrier and projecting forwardly beyond the same, a handle for the carrier, a rotatable pencil support mounted on the rear arm of the frame and provided with a passage in alinement with the recesses of said standards, springs secured to and rotatable with said support to hold a pencil firmly therein, and means actuated by the rearward movement of the carrier to impart rotatable movement to the pencil support.

880,716. ELECTROTHERMAL GARMENT. BURTON R. CHARLES, Portland, Oreg. Filed Oct. 15, 1907. Serial No. 397,582.



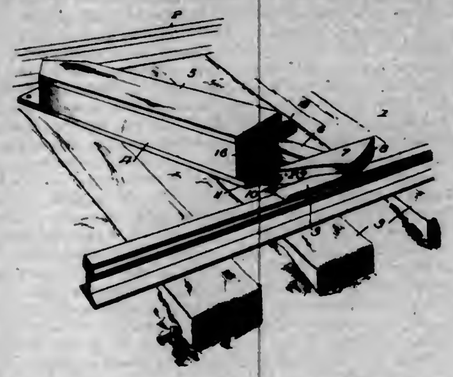
1. A thermal garment provided with a pocket, wires in the garment, the wires passing through the garment into the pocket, a plug on the terminals of the wires to form electric connection, said plug and the wires connecting the same with the garment adapted to be carried in the pocket and concealed.

2. A thermal garment comprising a body portion having a pocket, wires in the body portion, said wires extending outside the body and fastened thereto inside the pocket, a contact plug on the terminals of the wires, said plug and the wires connecting the same with the garment adapted to be concealed in the pocket when the garment is used as an ordinary robe.

3. A thermal garment comprising a body portion having pockets, wires in the body portion, said wires extending outside the body and fastened thereto inside the pockets, a contact plug on the terminals of the wires in one pocket, and a switch on the terminals of the wires in the other pocket, the plug and switch and the wires connecting the same with the garment adapted to be concealed in the pockets when the garment is used for an ordinary house robe.

4. A thermal garment consisting of a body portion having pockets, wires in the garment, the terminals of the wires extending through the body of the garment at a point inside the pocket, said wires being coiled on and secured to the garment at a point where the wires pass from said garment, and a plug on the ends of the terminals, said plug adapted to be concealed in the pocket.

880,717. DERAILING DEVICE. CHARLES W. CLARKE, Swiss, W. Va. Filed July 5, 1907. Serial No. 382,318.



1. A derailer of the class described comprising a housing, an arm longitudinally movable in said housing and extending beyond one end thereof, a derailing head secured to said arm, means at the inner end of said arm to direct said head over the rail, a latch secured to said arm, a finger pivotally mounted in said housing and in the path of said latch, a ledge, and means to dispose said latch out of engagement with said ledge whereby the derailing head will be disposed over the rail.

2. A derailing device of the class described comprising an arm, a head secured to one end of said arm, said head having one of its ends curved, a derailing member secured to the opposite end of said head and forming a notch between said member and the extended end of said head, and means to dispose said head over a rail, and additional means to hold said head from off the rail.

3. A derailing device of the class described comprising an arm, a head secured to one end of said arm, a housing for said arm, shoulders on said arm, a latch carried by said arm, a ledge adapted to be engaged by said latch, a member having a finger adapted to disengage said latch from said ledge when desired, and a controlling spring at the inner end of said arm adapted to direct the head over the rail when the arm is released.

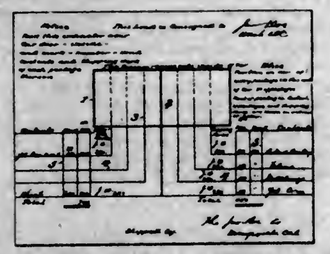
880,718. BANDAGE. MATTIE S. CLENDENIN, Mexico, Mo. Filed June 1, 1907. Serial No. 376,800.



1. A bandage of the character described comprising a body of elastic material formed with a longitudinal slot to receive the point of the chin and to provide upper and lower supporting straps, the upper strap being adapted to engage the front portion of the chin beneath the lower lip and being formed in its lower edge with a centrally disposed and substantially V-shape notch, the lower strap being adapted to engage the bottom and side portions of the chin and jaw and being formed at its front edge with a centrally disposed and substantially V-shaped projection, and attaching ribbons connected to the ends of said body, substantially as and for the purpose set forth.

2. A bandage of the character described comprising a body of elastic material formed with a longitudinal slot to receive the point of the chin and to provide upper and lower supporting straps, the upper strap being adapted to engage the front portion of the chin beneath the lower lip and being formed in its lower edge with a centrally disposed and substantially V-shape notch, the lower strap being adapted to engage the bottom and side portions of the chin and jaw and being formed at its front edge with a centrally disposed and substantially V-shaped projection, the ends of the body being formed with centrally arranged V-shaped notches adapted to receive the lower ends of the ears and to provide projecting arms, and attaching ribbons secured to said arms for holding the bandage in position, substantially as and for the purpose set forth.

880,719. LOAD-INDICATOR FOR RAILWAY-CARS. MACK C. COATS, Marysville, Cal. Filed Mar. 7, 1907. Serial No. 361,167.



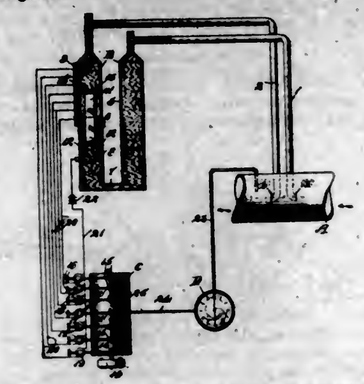
As a new article of manufacture, the herein described load indicating card provided with a diagram of the shape and proportion of the parts of the interior of a space where goods are located, a set of leader lines terminating at one end at different points within said diagram and extending outwardly therefrom, a series of horizontal lines outside of said diagram, said horizontal lines extending parallel to each other and connected at one end with the outer ends of the respective leader lines, and a series of vertical lines intersecting the said horizontal lines and forming therewith tabulating columns, as and for the purpose set forth.

880,720. RECORDING DEVICE. EDWARD S. COLE, Upper Montclair, N. J. Filed Feb. 17, 1904. Serial No. 193,937.

1. The combination with a main or conduit for the flowing stream, of tubes 1 and 2 connected therewith, a U-tube B containing a heavy liquid, a float in one of the legs of said U-tube, electrical contacts along the side of said leg, conductors extending from said contacts, magnets to which said conductors are connected, pencils carried by the armatures of said magnets, a rotary drum associated with said pencils, and means for rotating said drum, substantially as described.

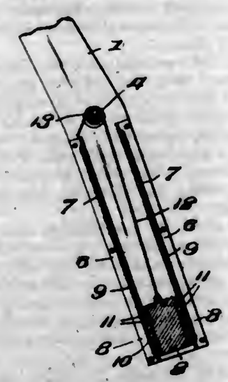
2. In a device of the class specified, the combination of a series of recording devices separated from one another by varying distances which are computed to indicate desired units of velocity, and means controlled by a flowing stream for actuating said devices, substantially as described.

3. In a device of the class specified, a rotary drum, a series of pencils arranged lengthwise of the axle of said drum and separated from one another by increasing distances which are computed to indicate like units of velocity, a series of electromagnets for operating said pencils, and means controlled by a flowing stream for energising said magnets.



4. An apparatus of the class specified, comprising a conduit for the flowing stream, tubes 1 and 2 connected therewith, a U-tube containing a float, a series of electromagnetic devices provided with connections by which they are operated by said float, a series of pencils operated by said electromagnetic devices, a rotary drum associated with said pencils, and a pressure gage connected with the tube 2 and having an arm 24 provided with a pencil 25 adapted for use in connection with the rotary drum, substantially as described.

880,721. AUTOMATIC GATE FOR RAILWAY-CROSSINGS. HARRY W. CONDE, Ottawa, Ill. Filed Feb. 13, 1907. Serial No. 357,204.



1. In a device of the class described, the combination with railway track-rails having vertical slots therethrough; of gates in juxtaposition to said track-rails, drums at a distance from said gates, heads on said drums, said heads extending through said slots and normally above the track-rails, and means interposed between the drums and gates and partially around said drums whereby, when said drums are rotated, the gates will be closed.

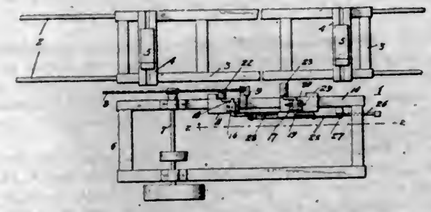
2. In a device of the class described, the combination with track rails; of gates pivotally mounted adjacent said track rails, weights carried by the lower ends of said gates, guides extending longitudinally on the gates, from their lower ends to their pivotal points, in which said weights are adapted to travel, cables secured to said weights, rotating means adapted to engage said cables and raise said weights automatically, whereby the gates will descend, and additional means to hold said gates in their lowered position.

3. In a device of the class described, the combination with track-rails; of gates pivotally mounted adjacent said rails, weights movably mounted on the lower ends of said gates, drums at each side of said gates and below the track-rails, housings for said drums, a head on each of said drums, said heads extending through slots in said rails and above said rails, means connecting said drums to said weights whereby, when the drums are rotated in one direction, the weights will be elevated, means to engage said heads and prevent rotation thereof, and additional means to release said heads when desired.

4. In a device of the class described, the combination with tilting gates and weights slidably mounted on the lower ends of said gates; of drums, heads on the upper periphery of said drums, means to normally hold said heads in a horizontal position, and cables extending from said drums to the weights whereby, when said drums are rotated in a given direction, the weights will be elevated and the gates caused to descend.

5. In a device of the class described, the combination with a plurality of tilting gates and weights slidably mounted at the lower ends of said gates adapted to normally hold said gates in their elevated position; of means to elevate the weights simultaneously whereby said gates may descend, comprising rotatably mounted drums, heads on said drums, means to normally hold said heads above the drum, cables extending from said drums to the weights whereby, when said drums are rotated in one direction, the weights will be elevated, latches adapted to engage said heads and hold the drums in their depressed position, and means to disengage said latches from the heads whereby the drums will return to their normal position and the weights descend to elevate the gates.

880,722. SAWMILL ATTACHMENT. JAMES H. COY, Milford, Mo. Filed Mar. 18, 1907. Serial No. 362,994.



1. In a saw mill, means for supporting the work as it passes the saw, said means comprising two rollers to engage the bottom of the work and support the same, one of said rollers being arranged in front of and transversely with respect to the edge of the saw and the other being arranged to one side of the saw and in rear of its cutting edge, and means for projecting and retracting said rollers.

2. In a saw mill, means for supporting the work as it passes the saw, said means comprising two rollers to engage the bottom of the work and support the same, one of said rollers being arranged in front of and transversely with respect to the edge of the saw and the other being arranged to one side of the saw and in rear of its cutting edge, crank shafts for carrying said rollers, a lever for operating said crank shafts to project said rollers to an operative position and a spring for retracting said rollers.

3. In a saw mill, means for supporting the work as it passes the saw, said means comprising two rollers to engage the bottom of the work and support the same, one of said rollers being arranged in front of and transversely with respect to the edge of the saw and the other being arranged to one side of the saw and in rear of its cutting edge, a support, bearings thereon, crank shafts carrying said rollers and journaled in said bearings, a link connecting said crank shafts, and a lever connected to said link.

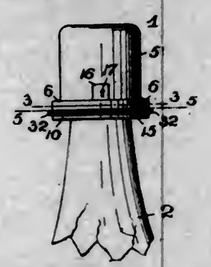
4. In a saw mill, means for supporting the work as it passes the saw, said means comprising two rollers to engage the bottom of the work and support the same, one of said rollers being arranged in front of and transversely with respect to the edge of the saw and the other being ar-

ranged to one side of the saw and in rear of its cutting edge, a support, bearings upon the latter, one of said bearings being adjustable toward and from the other, crank shafts carrying said rollers and journaled in said bearings, a link adjustably connecting said crank shafts, a lever attached to said link for operating said crank shafts to project said rollers and a spring for retracting said rollers, substantially as set forth.

5. A work supporting device for saw-mills or the like, comprising a support, a pair of crank shafts thereon, work engaging rollers upon said crank shafts, a rod connecting said crank shafts for simultaneous operation, a lever for operating said rod to swing said crank shafts in one direction, a spring for actuating said crank shafts in the opposite direction and means for adjusting one of said crank shafts upon said support and upon said connecting rod to enable the rollers to be positioned with respect to the saw, substantially as and for the purpose specified.

[Claim 6 not printed in the Gazette.]

880,723. BOTTLE-CLOSURE. JAMES M. CUMMING, Newark, N. J. Filed Mar. 21, 1907. Serial No. 363,567.



1. A bottle-closure for the necks of bottles, comprising a closing-gap adapted to be arranged over the mouth and down the outer sides of the neck of a bottle, a series of retaining pawls, and means for forcing the said retaining pawls into holding engagement with portions of the outer surfaces of the neck of the bottle.

2. A bottle-closure for the necks of bottles, comprising a closing-cap adapted to be arranged over the mouth and down the outer side of the neck of a bottle, combined with retaining devices adapted to be brought in engagement with the neck of the bottle, and a key-released mechanism with which said retaining devices are connected for forcing the said retaining devices in holding engagement with portions of the outer surfaces of the neck of the bottle, substantially as and for the purposes set forth.

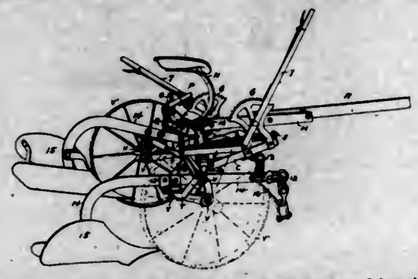
3. A bottle-closure for the necks of bottles, comprising a closing-cap adapted to be arranged over the mouth and down the outer sides of the neck of a bottle, an actuating ring movably connected with said cap, and retaining devices connected with said ring, adapted to be brought into holding engagement with portions of the outer surfaces of the neck of the bottle when said ring is moved in one direction.

4. A bottle-closure for the necks of bottles, comprising a closing-cap adapted to be arranged over the mouth and down the outer sides of the neck of a bottle, an actuating ring movably connected with said cap, and retaining devices connected with said ring adapted to be brought into holding engagement with portions of the outer surfaces of the neck of the bottle when said ring is moved in one direction, and means for locking said ring against movement, substantially as and for the purposes set forth.

5. A bottle-closure for the necks of bottles, comprising a closing-gap adapted to be arranged over the mouth and down the outer sides of the neck of a bottle, an actuating ring movably connected with said cap, and retaining devices connected with said ring adapted to be brought into holding engagement with portions of the outer surfaces of the neck of the bottle when said ring is moved in one direction, and means for locking said ring against movement, consisting, of a series of teeth on said ring, a lock-casing on said cap, and a key-actuated bolt in said lock having its end-portion in holding engagement with said teeth, substantially as and for the purposes set forth.

[Claims 6 to 20 not printed in the Gazette.]

880,724. SULKY-PLOW. CALVIN R. DAVIS, South Bend, Ind., assignor to Oliver Chilled Plow Works, South Bend, Ind. Filed Sept. 24, 1906. Serial No. 335,998.



1. In a plow, the combination with an arch and bearing devices at the ends and also intermediate the ends of said arch, of bails pivotally supported at its respective ends in an end and an intermediate bearing device, a bracket secured between its ends to each bail, carrying wheels, axle stubs for said wheels carried by said brackets, operating levers connected with said brackets, and a plow beam mounted on each bail.

2. In a plow, the combination with a frame, and a bail having the free ends of its arms pivotally supported by said frame, of a bracket secured between its ends to one arm of said bail, a stub axle for a carrying wheel projecting from the lower arm of said bracket, a lever mounted on the frame, a connection between said lever and the upper arm of said bracket and a plow beam mounted on the horizontal member of the bail.

3. In a plow, the combination with a frame and bails pivotally suspended therefrom, of stub axles for carrying wheels connected with said bails, bars connecting said stub axles with the upper portions of the bails, and provided with arms projecting upwardly from their connection with the bails, springs connecting said arms with the forward portion of the frame, plow beams mounted on the bails, and means for raising and lowering each bail independently of the other.

4. In a sulky plow, the combination with a frame, of two swinging or pivoted bails, a plow connected with each bail, wheels, axle stubs in said wheels, brackets secured to the bails and to the stubs, arms on said brackets, and lifting levers connected with said arms to swing the bails and raise or lower the plows independently of each other.

5. In a sulky plow, the combination with a frame, of two swinging bails supported at their ends in the frame, plows connected with the bails, axle stubs, wheels supporting the stubs, brackets secured to the stubs and to the bails, arm on the brackets, lifting levers, and links connecting the lifting levers with their respective bracket arms.

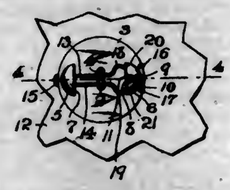
[Claims 6 to 9 not printed in the Gazette.]

880,725. BUTTON. ALEXANDER EFFENBERGER, Orange, N. J. Filed May 27, 1907. Serial No. 375,878.

1. A button and button-fastener comprising, in combination with a button-head and its loop, a perforated plate into and through which said loop is inserted, and a retaining or holding pin movably but inseparably connected with said plate, said pin consisting of a pair of spring-arms adapted to be brought in holding engagement with said loop, substantially as and for the purposes set forth.

2. A button and button-fastener comprising, in combination with a button-head and its loop, a perforated plate into and through which said loop is inserted, a retaining

lug or tongue on said plate, and a retaining or holding pin slidably connected with said plate, said pin consisting of a pair of spring-arms adapted to be brought in holding engagement with said loop, and a connecting element between said spring-arms adapted to be brought in engagement with said retaining lug or tongue, so as to be inseparable from said plate, substantially as and for the purposes set forth.



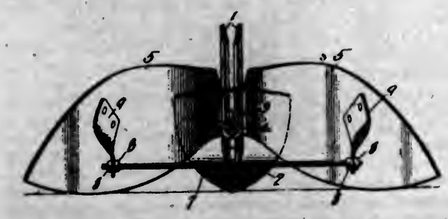
3. A button and button-fastener comprising, in combination with a button-head and its loop, a perforated plate into and through which said loop is inserted, said plate having a pair of outwardly extending members forming pin-receiving portions, and a retaining or holding pin, said pin consisting of a pair of spring-arms movably arranged in said receiving portions adapted to be brought in holding engagement with said members and the loop of the button-head, and said pin being inseparably connected with one of said outwardly extending members, substantially as and for the purposes set forth.

4. A button and button-fastener comprising, in combination with a button-head and its loop, a perforated plate into and through which said loop is inserted, said plate being provided with a pair of outwardly extending members forming pin-receiving portions, a retaining lug or tongue projecting from one of said outwardly extending members into the receiving portion therebeneath, and a retaining or holding pin movably arranged in said receiving portions, said pin being inseparably connected with said retaining lug or tongue, substantially as and for the purposes set forth.

5. A button and button-fastener comprising, in combination with a button-head and its loop, a perforated plate into and through which said loop is inserted, said plate being provided with a pair of outwardly extending members forming pin-receiving portions, a retaining lug or tongue projecting from one of said outwardly extending members into the receiving portion therebeneath, and a retaining or holding pin, said pin consisting of a pair of spring-arms movably arranged in said receiving portions adapted to be brought in holding engagement with said outwardly extending members and the loop of the button head, and a connecting element between said spring-arms adapted to be brought in engagement with said retaining lug or tongue, so as to be inseparable from said plate, substantially as and for the purposes set forth.

[Claims 6 and 7 not printed in the Gazette.]

880,726. LISTER FOR PLOWS. LORANZA D. FLANARY, Long, Okla. Filed Oct. 31, 1907. Serial No. 399,977.



1. The combination with a plow embodying a foot or standard and a shovel mounted thereon, of a lister comprising oppositely extending wings carried by the foot, spring plates attached to the wings, and an adjusting rod adjustably connected at its opposite ends with the spring plates of the wings.

2. The combination with a plow embodying a standard consisting of a U-shaped bar, of a lister comprising oppositely extending wings mounted upon the standard, each wing being formed with spaced hooks projecting downwardly from its inner portion and engaging over a side of the U-shaped standard, a shovel arranged upon the standard so as to extend over the inner portions of the wings aforesaid, and a fastening member passing through the shovel and the space between the sides of the standard securing the shovel and wings thereto, said fastening member being located intermediate of the hooks of the wings as described.

3. The combination with a plow embodying a standard consisting of a U-shaped bar, of a lister comprising oppositely extending wings mounted upon the standard, each wing being formed with spaced hooks projecting downwardly from its inner portion and engaging over the side of the U-shaped standard, the shovel arranged upon the standard so as to extend over the inner portions of the wings aforesaid, a fastening member passing through the shovel and the space between the sides of the standard securing the shovel and wings thereto, said fastening member being located intermediate of the hooks of the wings as described, plates permanently secured at the upper ends thereof to the rear sides of the wings and have the lower portion thereof extending rearwardly and spaced from the wings, an adjusting rod disposed transversely of and in the rear of the wings, and adjusting nuts applied to the opposite ends of the adjusting rod and securing the plates together.

880,727. TRAP FOR CRUSTACEA. ROBERT M. FRANKLIN, Galveston, Tex. Filed Mar. 15, 1907. Serial No. 362,515.



1. A device of the character described, comprising a collapsible frame, means for securing the same together in an assembled condition, doors secured to said frame, and elastic means secured to said doors for holding the doors normally closed.

2. A device of the character described, comprising a housing, a plurality of doors removably secured to said housing, and guiding plates for limiting the movement of said doors.

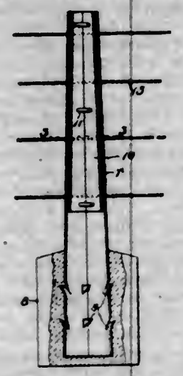
3. A device of the character described, comprising a housing, a plurality of doors pivotally mounted therein, guiding plates for limiting the movement of said doors and means for normally holding said doors in a closed position.

4. A device of the character described, comprising a trap body formed with an opening, an inlet frame secured in said opening, a plurality of doors oppositely mounted on said frame and capable of adjustment to swing inwardly into the body of the trap, elastic means connecting said doors and normally holding them in a closed position, guard plates to close the openings at either side of the swinging doors, and stops to limit the movement of said doors.

5. A trap, comprising a pyramidal-shaped housing, doors pivotally mounted to the top of said housing, means for normally holding said doors in a closed position, and a guiding plate for regulating the movement of said doors and for filling openings left by said doors.

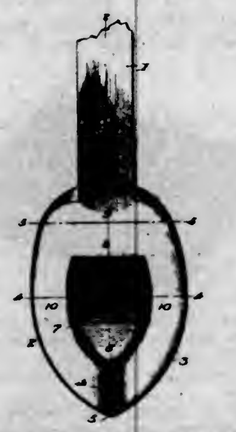
[Claims 6 to 10 not printed in the Gazette.]

880,728. POST. CHARLES A. FULLER, Manzanola, Colo. Filed July 15, 1907. Serial No. 383,714.



A post comprising a V-shaped bar, a V-shaped reinforcement bar fitting in the angle of the first mentioned bar, eye-bolts passing through the bars for clamping them together, and nuts screwed on said bolts and engaging the apex of the first mentioned bar, the eye portion of the bolts fitting in the angle of the reinforcement bar.

880,729. SUBSOIL-PLOW. THOMAS J. GREEN, Andalusia, Ala. Filed July 15, 1907. Serial No. 383,942.

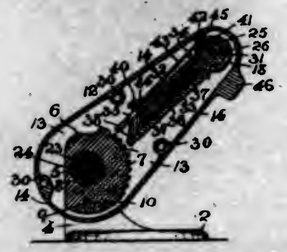


A sub-soil plow having on its front face a ridge extending inwardly from its point or tip and flanked by transversely inclined slopes leading backward toward the rear of the plow-point and a flat surface located back of the ridge and also flanked by the rearward parts or branches of said slopes.

880,730. FOOT REST OR GUARD FOR VEHICLES. LEWIS W. GAOUT, Springfield, Mass., assignor of one-half to William Nicoll, Newark, N. J. Filed May 23, 1907. Serial No. 375,250.

1. A combined foot-rest and brace for vehicles comprising, a pedestal, a casing pivotally connected with said pedestal, and means connected with said casing for connecting the end-portion of a foot-rail to said casing, and means within said casing for rigidly securing said foot-rail in any one of its adjusted positions, consisting of a fixed toothed or serrated disk, a bolt slidably arranged in said casing, said bolt being normally in holding engagement with said toothed or serrated disk, and means for withdrawing said bolt from its holding engagement with said disk, substantially as and for the purposes set forth.

2. A combined foot-rest and brace for vehicles comprising a pair of pedestals, a casing pivotally connected with each pedestal, a foot-rail connected at each end-portion with a casing, and means upon said foot-rail for producing an oscillatory motion of said casings, and means within each casing for rigidly securing said foot-rail in any one of its adjusted positions, consisting of a fixed toothed or serrated disk, a bolt slidably arranged in said casing, said bolt being normally in holding engagement with said toothed or serrated disk, and means for withdrawing said bolt from its holding engagement with said disk, substantially as and for the purposes set forth.



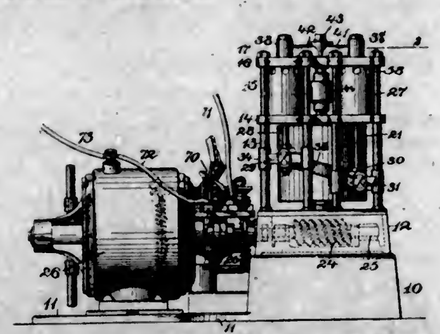
3. A combined foot-rest and brace for vehicles comprising a pair of pedestals, a casing pivotally connected with each pedestal, a tubular hub upon each casing, and a foot-rail rotatively mounted in the hubs of said casings, substantially as and for the purposes set forth.

4. A combined foot rest and brace for vehicles comprising a pair of pedestals, a casing pivotally connected with each pedestal, a tubular hub upon each casing, and a foot-rail rotatively mounted in the hubs of said casings, and means for producing such rotative movement of the foot-rail, consisting of a shank extending from the foot-rail, and a lift connected with said shank, substantially as and for the purposes set forth.

5. A combined foot-rest and brace for vehicles comprising a pair of pedestals, a casing pivotally connected with each pedestal, a tubular hub upon each casing, and a foot-rail rotatively mounted in the hubs of said casings, and means within each casing for rigidly securing the foot-rail in any one of its adjusted positions, substantially as and for the purposes set forth.

[Claims 6 to 11 not printed in the Gazette.]

880,731. AIR-COMPRESSOR. GEORGE F. HALL, Jersey City, and BENJAMIN ALBERTSON, Mantoloking, N. J.; said Hall assignor, by mesne assignments, to said Albertson. Filed Apr. 12, 1907. Serial No. 367,768.



1. An air-compressor comprising a base portion, a drum having a cam groove and rotatably arranged on the base portion, bars surrounding the drum, cylinders supported on the bars, pistons and their rods in the cylinders, cross-heads on the piston rods, a roller on each cross-head to enter the cam groove, and sleeves on the cross-heads to embrace the bars and slide thereon.

2. An air-compressor comprising a base portion, a drum rotatably mounted thereon, a series of bars around the drum, cylinders supported on the bars, pistons and their rods in the cylinders, means for operating the piston from the drum, cross-heads on the piston rods, and sleeves on the cross-heads to embrace the bars and slide thereon.

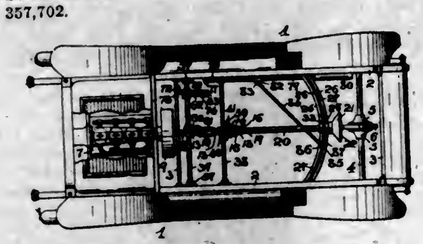
3. An air-compressor comprising a base portion, a drum rotatably mounted thereon, and having a central hollow portion and a peripheral cam groove, supporting bars around the drum, cylinders on the supporting bars, pistons and their rods in the cylinders, a cross-head on each piston rod, a roller on each cross-head to enter the cam groove, and a tubular sleeve on each end of the cross-head to embrace a supporting bar and slide thereon.

4. An air-compressor comprising a base portion, bars projecting therefrom, a horizontal plate, a top plate, cylinders between the plates, means within the bars to operate the cylinders, a chamber on the top plate, the top plate having passages from the cylinders to the chamber, and a check valve for each cylinder for controlling the flow of air through its passage.

5. An air-compressor comprising a base portion, bars projecting therefrom, a horizontal plate, a top plate, cylinders between the plates, means within the bars to operate the cylinders, a chamber on the top plate, the top plate having passages from the cylinders to the chamber, a check valve at the top of each cylinder leading into its passage, a pipe leading from the chamber, and a check valve in the pipe.

[Claims 6 to 12 not printed in the Gazette.]

880,732. DRIVING MECHANISM. EDMUND R. HALSEY, South Orange, N. J. Filed Feb. 16, 1907. Serial No. 357,702.



1. In a friction-drive, the combination, with an axle which is to be driven, of a friction device connected with said axle, a driving-shaft, a transmission shaft operated from said driving-shaft, a friction-disk at the opposite end of the transmission shaft, and means for producing a longitudinal reciprocatory movement of the transmission shaft to bring the friction disk of said shaft in engagement with the friction device of the axle, and mechanism for producing a lateral reciprocatory movement of the transmission shaft, comprising a channeled truss or guide bar, a slide upon said bar, a bearing on said slide in which said transmission shaft is revolubly arranged, and means for moving said slide back and forth upon said guide-bar, substantially as and for the purposes set forth.

2. In a friction-drive, the combination, with an axle which is to be driven, of a friction device connected with said axle, a driving-shaft, a transmission shaft operated from said driving-shaft, a friction-disk at the opposite end of the transmission shaft, and means for producing a longitudinal reciprocatory movement of the transmission shaft to bring the friction disk of said shaft in engagement with the friction device of the axle, and mechanism for producing a lateral reciprocatory movement of the transmission shaft, comprising a channeled truss or guide-bar, a slide upon said bar, a bearing on said slide in which said transmission shaft is revolubly arranged, and means for moving said slide back and forth upon said guide-bar, consisting of a pivoted operating lever, a longitudinally movable rod or bar connected with said lever, and an annularly arranged link between said rod or bar and said slide, substantially as and for the purposes set forth.

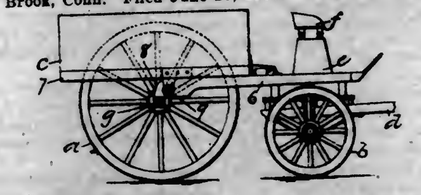
3. In a friction-drive, the combination, with an axle which is to be driven, of a friction-device connected with said axle, a driving shaft, a transmission shaft operated from said driving shaft, a friction-disk at the opposite end of the transmission shaft, and means for producing a longitudinal reciprocatory movement of the transmission shaft to bring the friction disk of said shaft in engagement with the friction device of the axle, consisting of a sleevelike member provided with a ball-bearing, a pivoted lever provided with a yoke which is operatively connected with said sleeve-like member, a crank-arm, a link between said crank-arm and said lever, a foot-lever connected with said crank-arm, and a foot-piece on said foot-lever, substantially as and for the purposes set forth.

4. In a friction-drive, the combination, with an axle which is to be driven, of a friction-device connected with said axle, a driving shaft, a transmission shaft operated from said driving shaft, a friction-disk at the opposite end of the transmission shaft, and means for producing a longitudinal reciprocatory movement of the transmission shaft to bring the friction disk of said shaft in engagement with the friction device of the axle, consisting of a sleeve-like member provided with a ball-bearing, a pivoted lever provided with a yoke which is operatively connected with said sleeve-like member, a crank-arm, a link between said crank-arm and said lever, a foot-lever connected with said crank-arm, and a foot-piece on said foot-lever, and mechanism for producing a lateral reciprocatory movement of the transmission shaft, comprising a channeled truss or guide-bar, a slide upon said bar, a bearing on said slide in which said transmission shaft is revolubly arranged, and means for moving said slide back and forth upon said guide-bar, substantially as and for the purposes set forth.

5. In a friction-drive, the combination, with an axle which is to be driven, of a friction-device connected with said axle, a driving shaft, a transmission shaft operated from said driving shaft, a friction-disk at the opposite end of the transmission shaft, and means for producing a longitudinal reciprocatory movement of the transmission shaft to bring the friction disk of said shaft in engagement with the friction device of the axle, consisting of a sleeve-like member provided with a ball-bearing, a pivoted lever provided with a yoke which is operatively connected with said sleeve-like member, a crank-arm, a link between said crank-arm and said lever, a foot-lever connected with said crank-arm, and a foot-piece on said foot-lever, and mechanism for producing a lateral reciprocatory movement of the transmission shaft, comprising a channeled truss or guide-bar, a slide upon said bar, a bearing on said slide in which said transmission shaft is revolubly arranged, and means for moving said slide back and forth upon said guide-bar, consisting of a pivoted operating lever, a longitudinally movable rod or bar connected with said lever, a link between said rod or bar and said slide, substantially as and for the purposes set forth.

[Claims 6 to 33 not printed in the Gazette.]

880,733. DUMP-WAGON. JOSEPH F. HAYES, Broad Brook, Conn. Filed June 17, 1907. Serial No. 379,381.



1. In combination with an axle and its supports, a frame including side parts secured to the axle, a wagon body including sills overlying the side parts, a support extending between the side parts and firmly secured to

each to prevent lateral movement thereof, and brackets secured to the sills.

2. In combination with an axle and its supports, a frame including side parts secured to the axle, a wagon body including sills overlying the side parts, a support having a shoulder engaging each of said side parts and secured at the outer surface thereof, and brackets secured to the sills and pivotally engaged with said support.

3. In combination with an axle and its supports, a frame including side parts secured thereto, a wagon body including sills overlying the side parts, a support extending between the side parts and secured at the outer surface of each, a bracket secured to each sill and pivotally engaging said support, and a spacer located between said brackets.

4. In combination with an axle and its supports, a frame including side parts secured to the axle, a wagon body including sills overlying the side parts, a support extending between the side parts and firmly secured to each to prevent lateral movement thereof, brackets secured to each sill and each having an opening forming a chamber, anti-friction bearings located in said chambers between the brackets and the supports, a plate on the support closing each of said openings, and a spacer extending between said plates.

5. In combination with an axle and its supports, a frame including side parts secured to the axle, a wagon body including sills overlying the side parts, a plate secured to the inner face of each side part, a support having a shoulder engaging each of said plates and projecting through each side part and secured at the outer surface thereof, a bracket secured to each sill and having an opening for the reception of said support, anti-friction bearings located in said opening, between the support and brackets, a plate closing said opening, and a spacer located on the support and between said plates.

[Claim 6 not printed in the Gazette.]

880,734. HOOK FOR SWINGLETREES OR NECK-YOKES. JOSEPH L. HECHT, Davenport, Iowa, assignor to Davenport Wagon Company, a Corporation of Iowa. Filed Feb. 18, 1907. Serial No. 357,987.



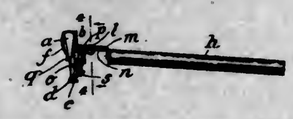
1. In a draft coupling of the type described, a sleeve or ferrule provided with a pair of offset lips presenting underlying sockets, and a detachable confining eye having engaging portions formed to enter said sockets for interlocking engagement with the lips.

2. In a draft coupling of the type described, a sleeve or ferrule having a pair of outstruck engaging lips, and a confining eye comprising a spring metal open-loop provided with terminal fingers designed to seat and engage beneath said lips.

3. In a draft coupling of the type described, a sleeve or ferrule having a pair of outwardly offset lips opening toward each other, and a confining eye comprising a spring metal open-loop provided with outturned terminal fingers to seat and engage beneath said lips.

4. In a draft coupling of the type described, a sleeve or ferrule provided with a pair of keepers, a confining eye having portions for engagement with said keepers, and a draft hook confined in said eye and adapted to bear between said portions for maintaining them in engagement with the keepers.

880,735. SAFETY-RAZOR. JOHN HEISSENBERGER, New York, N. Y., assignor to Automatic Utilities Company, New York, N. Y., a Corporation of New York. Filed Sept. 18, 1907. Serial No. 392,606.



1. The combination in a safety razor of a blade, a base plate for the blade having a portion thereof cut away and bent backwardly substantially normal to the plane of the base plate, a handle having a projecting portion, means to pivot the backwardly extending portion upon the base plate to the projecting portion upon the handle, and a spring to hold the said two portions in frictional engagement.

2. The combination in a safety razor, of a blade, a base plate for the blade, a handle, a projecting portion upon the base plate extending backwardly substantially centrally therefrom, a spring, and a rivet extending through the two projecting portions and the spring whereby the projecting portions are pivotally secured to each other and are held in frictional engagement.

3. The combination in a safety razor of a blade, a base plate for the blade, a handle, the base plate and handle each having a projecting portion, means to pivot the projecting portions together, a spring to hold the projecting portions in frictional engagement, and a pivot extending in a direction transverse of the handle to pivot one of the projecting portions to the handle.

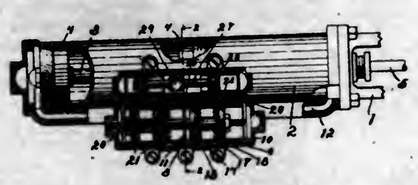
880,736. CORSET-CLOSURE. ZACHARY T. HOSKINS, Brookhaven, Miss. Filed Aug. 26, 1905, Serial No. 275,968. Renewed Jan. 31, 1908. Serial No. 413,613.



A back closure for corsets, corset waists and the like, comprising flies integral with the corset members at the waist line thereof, lacing for said flies, an inelastic back piece or strip of textile fabric extending between the edges of said members, elastic lacing connecting the strip and members above and below said flies, and stiffening devices in said strip at the sides of the strip center.

880,737. WATER-MOTOR. FREDERICK J. HUMPHREY, Kalamazoo, Mich. Filed July 17, 1907. Serial No. 384,272.

1. In a water motor, the combination with a motor cylinder of a double-headed piston therefor; a main valve cylinder; a centrally-located inlet passage for said main valve cylinder; connecting passages for said main valve cylinder and said motor cylinder, opening into said main valve cylinder at each side of the said inlet passage and into the said motor cylinder at points outside of the stroke of the piston heads thereof; a main exhaust passage; a pair of exhaust connecting passages for said main valve cylinder and said main exhaust passage, opening into said main valve cylinder at each side of the said motor and main valve cylinder connecting passages; a main valve having four heads adapted to alternately connect said connecting passages for said motor and main valve cylinders to the said inlet and exhaust passages of said main valve cylinder; a trip valve cylinder; connecting passages for said trip valve cylinder to said inlet passage; connecting passages for said trip valve cylinder to said main valve cylinder, opening into the same at points beyond the stroke of the said valve thereof; a double-headed trip valve arranged in said trip valve chamber, adapted to alternately connect and disconnect the said connecting passages for said trip valve cylinder to said main valve cylinder to the said connecting passages for said trip valve cylinder to the said inlet passages; a tappet on the said trip valve projecting into the said motor cylinder to be engaged by the said piston heads for shifting the trip valve; and a passage connecting said motor cylinder to said exhaust passage opening into said motor cylinder at a point within the stroke of the said piston heads, for the purpose specified.



2. In a water motor, the combination with a motor cylinder, of a double-headed piston therefor; a main valve cylinder; a centrally located inlet passage for said main valve cylinder; connecting passages for said main valve cylinder and said motor cylinder, opening into said main valve cylinder at each side of the said inlet passage and into said motor cylinder at points outside the stroke of the piston heads thereof; a pair of exhaust passages for said main valve cylinder, opening into said main valve cylinder at each side of the said motor and main valve cylinder connecting passages; a main valve having four heads adapted to alternately connect said connecting passages for said motor and main valve cylinders to the said inlet and exhaust passages of said main valve cylinder; a trip valve cylinder; connecting passages for said trip valve cylinder to said inlet passage; connecting passages for said trip valve cylinder to said main valve cylinder, opening into the same at points beyond the stroke of the said valve thereof; a double-headed trip valve arranged in said trip valve chamber, adapted to alternately connect and disconnect the said connecting passages for said trip valve cylinder to said main valve cylinder to the said connecting passages for said trip valve cylinder to said inlet passages, and a tappet on said trip valve projecting into the said motor cylinder to be engaged by the said piston heads for shifting the trip valve, for the purpose specified.

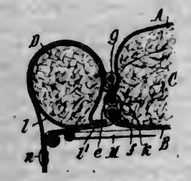
3. In a water motor, the combination with a motor cylinder of a double-headed piston therefor; a main valve cylinder; a centrally-located inlet passage for said main valve cylinder; connecting passages for said main valve cylinder and said motor cylinder, opening into said main valve cylinder at each side of the said inlet passage and into said motor cylinder at points outside of the stroke of the piston heads thereof; a main exhaust passage; a pair of exhaust connecting passages for said main valve cylinder and said main exhaust passage, opening into said main valve cylinder at each side of the said motor and main valve cylinder connecting passages; a main valve having four heads adapted to alternately connect said connecting passages for said motor and main valve cylinders to the said inlet and exhaust passages of said main valve cylinder; a trip valve cylinder; connecting passages for said trip valve cylinder to said inlet passage; connecting passages for said trip valve cylinder to said main valve cylinder, opening into the same at points beyond the stroke of the said valve thereof; a double-headed trip valve actuated by said piston, adapted to alternately connect and disconnect the said connecting passages for said trip valve cylinder to said main valve cylinder to the said connecting passages for said trip valve cylinder to the said inlet passages; and a passage connecting said motor cylinder to said exhaust passage opening into said motor cylinder at a point within the stroke of the said piston heads, for the purpose specified.

4. In a water motor, the combination with a motor cylinder, of a double-headed piston therefor; a main valve cylinder; a centrally-located inlet passage for said main valve cylinder; connecting passages for said main valve cylinder and said motor cylinder, opening into said main valve cylinder at each side of the said inlet passage and into said motor cylinder at points outside of the stroke of the piston heads thereof; a pair of exhaust passages for said main valve cylinder opening into said main valve cylinder at each side of the said motor and main valve cylinder connecting passages; a main valve having four heads adapted to alternately connect said connecting passages for said motor and main valve cylinders to the said inlet and exhaust passages of said main valve cylinder; a trip valve cylinder; connecting passages for said trip valve cylinder to said inlet passage; connecting passages for said trip valve cylinder to said main valve cylinder, opening into the same at points beyond the stroke of the said piston heads for shifting the trip valve; and a double-headed trip valve actuated by said piston, adapted to alternately connect and disconnect the said connecting passages for said trip valve cylinder to the said main valve cylinder to the said inlet passages, for the purpose specified.

5. In a water motor, the combination with a motor cylinder of a piston therefor; a main valve cylinder; a centrally located inlet passage for said main valve cylinder; connecting passages for said main valve cylinder and said motor cylinder, opening into said main valve cylinder at each side of the said inlet passage and into said motor cylinder at points outside of the stroke of the piston thereof; a main exhaust passage; a pair of exhaust connecting passages for said main valve cylinder and said main exhaust passage, opening into said main valve cylinder at each side of the said motor and main valve cylinder connecting passages; a main valve adapted to alternately connect said connecting passages for said motor and main valve cylinders to the said inlet and exhaust passages of said main valve cylinder; a trip valve cylinder; connecting passages for said trip valve cylinder to said inlet passage; connecting passages for said trip valve cylinder to said main valve cylinder, opening into the same at points beyond the stroke of the valve thereof; a trip valve arranged in said trip valve chamber, adapted to alternately connect and disconnect the said connecting passages for said trip valve cylinder to said main valve cylinder to the connecting passages for said trip valve cylinder to the said inlet passages; a tappet on said trip valve projecting into the said motor cylinder to be engaged by the said piston for shifting the trip valve; and a passage connecting said motor cylinder to said exhaust passage, for the purpose specified.

[Claims 6 to 12 not printed in the Gazette.]

880,738. UPHOLSTERED FURNITURE. HENRY J. JACOBS, Buffalo, N. Y., assignor to Buffalo Lounge Company, Buffalo, N. Y. Filed Nov. 5, 1907. Serial No. 400,854.



1. A top or pad for upholstered furniture comprising filling material, and top and bottom coverings therefor

each provided on its inner face with a stiff welt substantially parallel with one edge of the covering, said welts being secured together between portions of the pad filling, and the edges of said coverings adjacent to said welts being secured, whereby a roll-edge is formed on the pad, substantially as set forth.

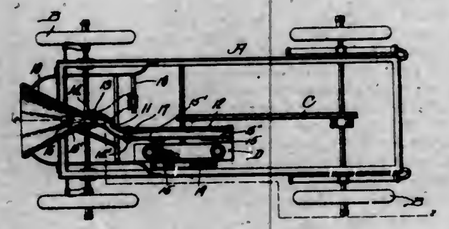
2. A top or pad for upholstered furniture comprising filling material, top and bottom coverings therefor each provided on its inner face with a stiff welt substantially parallel with one edge of the covering, said welts being secured together at one edge of the filling, and an incased filling roll arranged between the edge portions of said coverings, said edge portions of said coverings being secured around said filling roll, substantially as set forth.

3. A top or pad for upholstered furniture comprising filling material, and top and bottom coverings therefor each provided on its inner face with a stiff welt substantially parallel with one edge of the covering, said welts being secured together between portions of the pad filling, the edges of said coverings adjacent to said welts being secured, whereby a roll edge is formed on the pad, and said top covering having also a finishing welt on its outer face adjacent to its stiff welt, substantially as set forth.

4. A top or pad for upholstered furniture comprising filling material, and top and bottom coverings therefor, said top covering consisting of separate pieces sewed together, one of said pieces having a wire welt on the inner face of the covering and the other piece a finishing welt on the outer face of the covering adjacent to the seam joining said pieces, and said bottom covering having a wire welt on its inner face, said wire welts of the top and bottom coverings being sewed together, and the edges of said coverings adjacent to said welts being secured to confine the edge portion of the filling material, substantially as set forth.

5. The combination of a pad comprising filling material, top and bottom coverings therefor, each provided on its inner face near opposite edges thereof with wire welts, the two welts at each side of the coverings being secured together, a spring bottom on which said pad rests and to which the opposite edges of said coverings are secured, and incased filling rolls inclosed between the edge portions of said coverings, substantially as set forth.

880,739. AUTOMOBILE. MANANDER M. JOHNSON, Clay Center, Nebr. Filed Nov. 30, 1907. Serial No. 404,603.



1. In automobile construction, the combination of running gear, an air receiver supported thereon and having an open end arranged toward the front end of the machine, a motor, means for conveying air from the air receiver to different parts of the motor, and means for variably controlling the relative quantities of air passing to said parts.

2. In automobile construction, the combination of running gear, an air receiver supported thereon and having an open end arranged toward the front end of the machine, a motor, a valved casing, connecting means between the air receiver and casing, the latter being arranged to distribute air to different parts of the motor, and means for adjusting said connecting means so that air may be directed against mechanism separate from the motor.

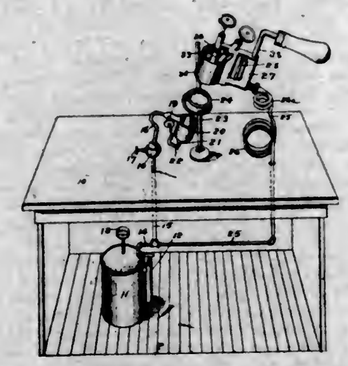
3. In automobile construction, the combination of running gear, an air receiver supported thereon and having an open end arranged toward the front end of the machine, a motor, a cooling jacket for the motor, a distributing casing having a plurality of passages communicating with the cooling jacket, valves controlling said passages, means for operating said valves, and a tube connecting the distributing casing with the air receiver.

4. In an automobile construction, the combination of running gear, an air receiver supported thereon and having an open end arranged toward the front end of the machine, a motor, a cooling jacket for the motor, a distributing casing having a plurality of passages communicating with the cooling jacket, valves controlling said passages, means for operating said valves, a tube connecting the distributing casing with the air receiver, and means for holding the tube in adjusted positions, either in connection with the distributing casing, or disconnected from the casing to supply air to other parts of the operating mechanism.

5. In automobile construction, the combination of running gear, an air receiver comprising a funnel arranged at the front end of the machine, means connecting the smaller end of the funnel with the operating mechanism of the automobile to supply air to the latter, the inner sides of the funnel being provided with a reflecting surface, and a light arranged within the body of the funnel as specified.

[Claims 6 to 8 not printed in the Gazette.]

880,740. DENTAL SOLDERING DEVICE. ARTHUR H. JOY, Newton, Iowa. Filed Jan. 29, 1906. Serial No. 298,333.

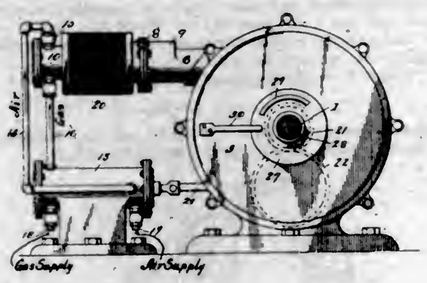


1. In a dental soldering device, the combination of a platform, a hydro-carbon tank below the platform, an air pipe communicating with the tank, a pipe leading from the tank, a branch projecting upwardly through the platform a hydro-carbon burner on said branch, a universal joint provided in said branch above the platform, means for securing the joint in different positions, the second branch communicating with said pipe and projecting through the platform, and having coils therein arranged at different angles, said coils being above the platform, and a burner communicating with the latter branch pipe above the coils.

2. The combination of a burner and a flexible non-elastic pipe for supporting the burner formed with two coils arranged in different planes.

3. In a dental soldering device, a platform, a hydro-carbon tank below the platform, a pipe communicating with the tank and projecting through the platform, a series of vertically arranged coils in said pipe above the platform, a series of coils in said pipe above the first series and arranged on a different plane and a burner supported upon the upper end of said pipe and communicating with it.

880,741. GAS OR OTHER EXPLOSIVE ENGINE. JOHN W. KALBS, Franklinville, N. Y. Filed Feb. 13, 1906. Serial No. 300,849.



1. In an engine the combination, of an explosion chamber, a hinged valve located between said chamber and the engine piston, a coil surrounding the walls of said chamber and said walls forming the core of a magnet, and electrical connections to said coil whereby the valve is held in closed position.

2. In an engine the combination with an explosion chamber, of a valve located between said chamber and the engine piston, a coil surrounding the walls of the explosion chamber and said walls forming the core of a magnet whereby when the magnet is energized the valve is held closed; a stationary contact point, and a moving contact point on the engine, in electrical circuit, for releasing said valve.

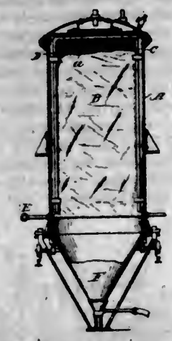
3. The combination with an explosion chamber having a shoulder formed at its end, of a swinging valve adapted to bear against said shoulder and close the chamber, and an electro-magnetic coil surrounding the walls of said chamber adapted when energized to hold the valve closed, and said walls forming the core of a magnet; and means for deënergizing the magnet to permit the valve to be opened at the time of explosion.

4. The combination in an explosive engine, of an expansion chamber and an explosion chamber and a hinged valve located therebetween, a coil surrounding the walls of the explosion chamber and said walls forming the core of a magnet, and electrical connections for energizing the magnet to hold the valve closed and deënergizing the magnet to permit the valve to open.

5. In an engine the combination of an explosion chamber and an expansion chamber and a valve hinged therebetween, a valve seat formed at one end of the explosion chamber, a coil surrounding the walls of the explosion chamber and adapted when energized to hold the valve against its seat, the walls of the explosion chamber forming the core of a magnet, and an electrical circuit including said coil having means therein for intermittently magnetizing and demagnetizing the valve to close and open the same.

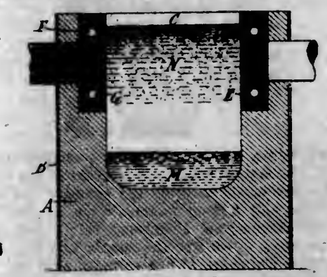
880,742. METHOD OF REMOVING CAKED MATERIAL FROM PRESSURE-FILTERS. DAVID J. KELLY, Salt Lake City, Utah, assignor to The Kelly Filter Press Co., Salt Lake City, Utah, a Corporation of Utah. Filed Jan. 5, 1907. Serial No. 350,972.

The process herein described of removing solid material adhering to the outer porous sides of a hollow filter, which process consists in admitting a volume of steam to the interior of the filter between said sides so that it will expand therein and outwardly penetrate the pores of the filter and form a film of moisture on the inner surface of the solid



material, and thereby allow said solid material to detach itself, in compact form, from the filter sides.

880,743. ELECTRIC-FURNACE PROCESS. FRANZ VON KÜGELGEN and GEORGE O. SEWARD, Holcombs, Rock, Va. assignors to Virginia Laboratory Company, New York, N. Y., a Corporation of New York. Filed Apr. 10, 1905. Serial No. 254,677.



1. The method which consists in treating in an electric furnace a pyro-conductive charge by passing through it from a carbon electrode in contact with it a current sufficient to maintain the charge molten, and cooling said electrode sufficiently to protect it from attack by the portion of the charge in contact with it.

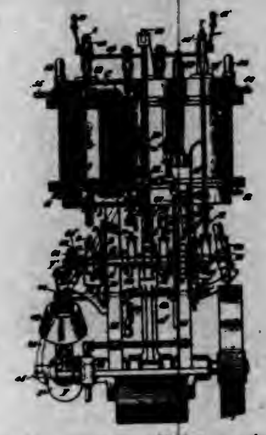
2. The method which consists in treating in an electric furnace a pyroconductive charge by passing through it from a carbon electrode in contact with it a current sufficient to maintain the charge molten, and cooling said electrode sufficiently to cause a portion of the charge to be chilled in a protective but conducting coating thereon, whereby such chilled portion forms in effect a new working electrode.

880,744. HEAT-ENGINE. SIMON LAKE, Berlin, Germany. Filed Feb. 10, 1906. Serial No. 300,520.

1. A heat engine, having a cylinder, a reciprocating piston therein, combustion chambers adjacent to the cylinder, upper and lower heads covering the cylinder and combustion chambers and having passage-ways connecting the cylinder and combustion chambers, valves arranged in said passage-ways to control the supply of pressure from the combustion chambers to the cylinder and the expulsion of air from the cylinder to the combustion chambers on opposite sides of the piston, respectively, means to positively actuate said valves, an exhaust port and valve therefor arranged on the pressure side of the piston, and means to positively open said exhaust valve on each up-stroke of the piston when the pressure inlet valves are closed.

2. A heat engine, having a cylinder, a reciprocating

piston therein, combustion chambers adjacent to the cylinder, upper and lower heads covering the cylinder and combustion chambers and having passage-ways conecting the cylinder and combustion chambers, valves arranged in said passage-ways to control the supply of pressure from the combustion chambers to the cylinder and the expulsion of air from the cylinder to the combustion chambers on opposite sides of the piston, respectively, means to positively actuate said valves, an exhaust port and valve therfor arranged on the pressure side of the piston, and means to positively open said exhaust valve on each up-stroke of the piston when the pressure inlet valves are closed, combined with fuel reservoirs and valved connections between said reservoirs and said combustion chambers.



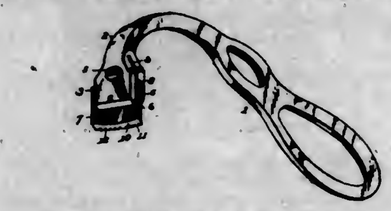
3. A heat engine, having a cylinder, a reciprocating piston therein, combustion chambers adjacent to the cylinder, upper and lower heads covering the cylinder and combustion chambers and having passage-ways connecting the cylinder and combustion chambers, valves arranged in said passage-ways to control the supply of pressure from the combustion chambers to the cylinder and the expulsion of air from the cylinder to the combustion chambers on opposite sides of the piston, respectively, means to positively actuate said valves, an exhaust port and valve therefor arranged on the pressure side of the piston, and means to positively open said exhaust valve on each up-stroke of the piston when the pressure inlet valves are closed, combined with fuel reservoirs, and connections between the reservoirs and combustion chambers, whereby the contents of the reservoirs are admitted into the combustion chambers at each alternate stroke of the piston.

4. A heat engine, having a cylinder, a reciprocating piston therein, combustion chambers adjacent to the cylinder, upper and lower heads covering the cylinder and combustion chambers and having passage-ways connecting the cylinder and combustion chambers, valves arranged in said passage-ways to control the supply of pressure from the combustion chambers to the cylinder upon one side of the piston and the expulsion of air from the cylinder upon the opposite side of the piston to the combustion chambers, means to positively actuate said valves, an exhaust port and valve therefor arranged in said cylinder on the pressure side of the piston, means to positively open said exhaust valve on each up-stroke of the piston when the pressure inlet valves are closed, and fuel inlets for said combustion chambers, combined with fuel reservoirs, valved connections between said reservoirs and the combustion chambers, and means for injecting the fuel from said reservoirs into said combustion chambers under pressure.

5. A heat engine, having a cylinder, a reciprocating piston therein, combustion chambers adjacent to the cylinder, heads covering the ends of the cylinder and combustion chambers and having passage-ways connecting the cylinder and combustion chambers, valves arranged in said passage-ways to control the supply of pressure from the combustion chambers to the cylinder upon one side of the piston and the expulsion of air from the cylinder upon the opposite side of the piston to the combustion chambers, means to positively actuate said valves, an exhaust port and valve therefor arranged on the pressure side of the piston, means to positively open said exhaust valve on each up-stroke of the piston when the pressure inlet valves are closed, independent liquid fuel, steam and air inlets for said combustion chambers, and means for injecting the liquid fuel, steam and air into said combustion chambers under pressure to thoroughly mix the same therein before ignition.

[Claims 6 to 11 not printed in the Gazette.]

880,745. BOX-SCRAPER. JOHN LOBMILLER, Wellsburg, W. Va. Filed July 23, 1906. Serial No. 327,270.



1. The combination with a stock having its front end downwardly and rearwardly curved, of a head having two transverse intercommunicating alined slots therein, the lower of said slots having a greater receiving capacity than the upper slot, a bearing shoulder at the upper extremity of the lower slot, a removable blade having its opposite edges beveled, said blade being mounted in said lower slot with the face of the bevel of the upper edge in bearing engagement with said shoulder, and the extreme edge, or cutting edge, lying in the upper slot, and means for clamping said blade in place.

2. The combination with a blade-holding handle, of a scraping-blade mounted in said handle in a forwardly-inclined position, said blade having its lower edge beveled on one side only, and having a series of longitudinal grooves in its opposite face merging with said bevel whereby alternate teeth and V-shaped notches are formed in the cutting edge of the blade, the grooves being so spaced as to leave a substantial front edge on the teeth in the line of the edge of the blade, and the teeth having their lateral edges sharpened to the apices of the notches.

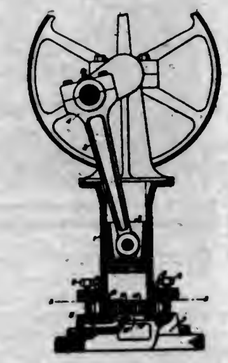
3. A scraping-blade having a beveled cutting edge, the bevel of which is on one side only of said edge, said blade having on the side opposite the bevel a plurality of spaced parallel grooves or channels which merge slightly above the cutting edge with said bevel, said grooves being so spaced as to form alternate teeth and V-shaped serrations in said edge, each tooth having a substantial front edge in the line of the edge of the blade, and having sharpened lateral edges extending to the apices of the serrations, said cutting edge of the blade being adapted for successive grindings or sharpenings on the beveled side without lessening the depth of said serrations.

4. A scraping-blade having a plain unbeveled face in which is provided a plurality of longitudinal grooves extending to the lower edge of the blade, the sides of said grooves being disposed in corresponding relation to the surface of the blade, a cutting edge formed by a bevel on the face of the blade opposite the grooves, said grooves being so spaced as to leave teeth, each having a substantial front edge in the line of the edge of the blade, and said grooves forming V-shaped notches which adapt said edge for taking into a wooden surface.

5. A scraping-blade having a plain unbeveled side in which is provided a plurality of longitudinal grooves or channels which extend to the lower edge of the blade and the sides of which stand in corresponding relation to the surface of the blade, said blade having a bevel on the face thereof opposite to said grooved side, which bevel constitutes a cutting edge of said lower edge of the blade and V-shaped notches in said edge at the points where said grooves merge therewith, said grooves being so spaced as to leave teeth, each of which has a substantial front edge in the line of the edge of the blade.

[Claim 6 not printed in the Gazette.]

880,746. AIR-PUMP. JOSEPH B. MERIAM, Cleveland, Ohio. Filed Feb. 16, 1907. Serial No. 357,653.



1. In an air or gas pump, a frame made in different sections, means connecting said sections, whereby they are adjustable relatively to each other, a valve block that is adapted to be inserted between two of said sections when the latter are in one of their adjusted positions, means for clamping said two sections against the valve block for holding the latter in position and a valve in said valve block.

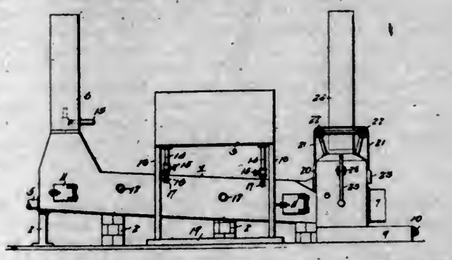
2. In an air or gas pump, a frame in a plurality of sections, a valve block that is adapted to be inserted between two of said sections, bolts for clamping said two sections together against the valve block for holding the same in position, and adjusting bolts threaded through one of said sections and resting against the other section whereby, by screwing upon said adjusting bolts, the said sections of the frame may be separated and the valve block removed from the frame and replaced therein without disturbing the other parts of the pump.

3. In an air or gas pump, a frame made in a plurality of sections, a valve block that is adapted to be inserted between two of said sections, said block being flat and substantially rectangular in form, bolts passing through one of the sections of the frame and screwing into the other section for clamping the valve block between said sections, and adjusting bolts threaded through one of said sections and resting against the other section whereby, by screwing upon said adjusting bolts, the said sections may be separated so as to permit the ready removal of the valve block.

4. In an air or gas pump, a frame comprising a base section and a cylinder section, a piston operating vertically in the cylinder section, a valve block between said sections, valves in said block below the said piston, intake and outlet ports in the base section controlled by said valves, bolts passing through the cylinder section and screwing into the base section for clamping the valve block between said sections, adjusting bolts threaded through the cylinder section and resting against the base section whereby, by screwing upon said adjusting bolts, the said sections may be separated, and means on said valve block whereby the latter may be withdrawn from between said sections when the latter are thus separated.

5. In an air or gas pump, a frame comprising a base section and a cylindrical section, a piston operating in the cylindrical section, a valve block between said sections, valves in said block opposite the said piston, intake and outlet ports in the base section controlled by said valves, bolts passing through one of said sections and screwing into the other section for clamping the valve block between said sections, adjusting bolts threaded through one of said sections and resting against the other section whereby, by screwing upon said adjusting bolts, the said sections may be separated for removing and replacing the valve block, and means on said valve block whereby the latter may be withdrawn from between said sections when the latter are thus separated.

880,747. SMOKE-PURIFIER. GEORGE MORBY, Robinson, Utah. Filed Mar. 29, 1907. Serial No. 365,326.



1. In an apparatus for treating products of combustion from furnaces, a receiver into which said flue empties, a stack extending from said receiver, a second flue also extending from said receiver, and a second stack connected with said last-named flue.

2. In an apparatus for treating products of combustion from furnaces, an inclined flue, means for admitting a liquid in the form of spray at a plurality of points in said flue, and means for admitting air also at a plurality of points.

3. In an apparatus for treating products of combustion from furnaces, an inclined flue, means for supplying said products of combustion to the lower end thereof, a stack communicating with the upper end thereof, a plurality of air blasts extending through the side of said flue and directed toward said stack, and means for supplying water to the interior of said flue.

4. In an apparatus for treating products of combustion from furnaces, a flue through which said products pass, said flue being substantially straight and of a rectangular cross section, and doors arranged in the side of said flue whereby ready access may be had to all parts of the interior of said flue.

5. In an apparatus for treating the products of combustion from furnaces, an inclined flue, a stack at the upper end thereof, means for supplying a constant stream of water to the upper end of said flue, and additional means for supplying a transverse spray of suitable liquid at a plurality of points in said flue.

[Claims 6 and 7 not printed in the Gazette.]

880,748. CLOTHES-LINE PROP. DAVID MCDOUGALL, Fall River, Mass. Filed Mar. 4, 1907, Serial No. 360,420. Renewed Jan. 9, 1908. Serial No. 410,011.

1. A clothes line prop including pivotally united sections foldable one upon the other and movable laterally to extended position, a locking member slidably mounted on each section and adapted to engage the end of the adjacent section, and means carried by each section and forming a guide for the adjacent locking member for holding said members in operative and inoperative position.

2. A clothes line prop including mating sections having their lower ends over-lapped and pivotally united, said sections being folded one upon the other and movable laterally to extended position, keepers secured to one longitudinal edge of each section, and locking collars slidably mounted in the keepers and adapted to engage the end of the adjacent section for locking said sections in extended position.

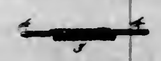
3. A clothes line prop including pivotally united sec-

tions foldable one upon the other and movable laterally to extended position, straps secured to one longitudinal edge of each section and provided with a central depression defining spaced slots, and a locking member slidably mounted in said slots and adapted to engage the end of the adjacent section for locking said sections in extended position.



4. A clothes line prop including pivotally united sections foldable one upon the other and movable laterally to extended position, straps secured to one longitudinal edge of each section and having an intermediate portion thereof bent downwardly to form a spring pressed projection, and collars slidably mounted on the sections at said straps and movable into engagement with the end of the adjacent section for locking said sections in extended position, said collars being held in operative position by engagement with the spring pressed projections.

880,749. PIPE-CLEANER. WILLIAM O'SULLIVAN, New York, N. Y., assignor to Manhattan Briar Pipe Company, New York, N. Y., a Corporation of New York. Filed May 21, 1906. Serial No. 317,920.



1. An extensible pipe cleaner having a non-contractile sinuous core, the undulations of which are normally compacted and capable of being drawn out and maintained in a straight or substantially straight condition.

2. An extensible pipe cleaner consisting of a non-contractile core having cleansing material associated therewith, said core having a normally compacted sinuous form whereby it may be extended and maintained in its extended condition by reason of the inherent non-contractile property thereof.

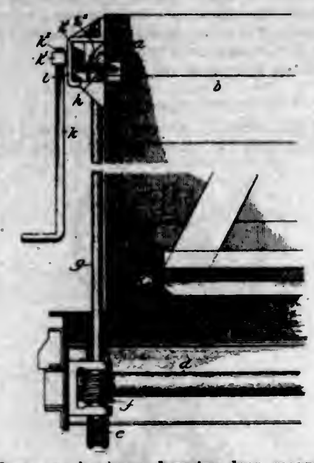
3. An extensible pipe cleaner consisting of a non-contractile core having a cleaning surface, said core being normally sinuous in form and capable of being extended and maintained in an extended condition by reason of the inherent non-contractile property thereof.

4. An extensible pipe cleaner consisting of a non-contractile core having a cleaning surface, said core being normally sinuous in form and capable of being extended and maintaining an extended sinuous form.

5. An extensible pipe cleaner having a non-contractile core sinuous in form throughout substantially its entire length, the sinuous portion of the core being normally compacted and capable of being drawn out and maintaining a straight or substantially straight condition.

[Claims 6 to 16 not printed in the Gazette.]

880,750. DUMP-CAR. SPENCER OTIS, Chicago, Ill. Filed Apr. 20, 1906. Serial No. 312,816.



1. A dump car having a dumping door, means for operating the dumping door, a collar forming a part of the operating means, and a longitudinally adjustable crank freely slidable in the collar.

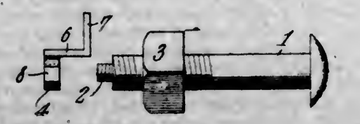
2. A dump car having a dumping door, means for operating the door, comprising a rotatable shaft, a collar secured to the end of the shaft, a crank held in the collar and freely movable longitudinally therein, and means for preventing the withdrawal of the crank from the collar.

3. A dump car having a longitudinal operating shaft below the floor thereof, a worm wheel on the end of said shaft, a vertical shaft at the end of the car with a worm on its lower end engaging the said worm wheel, a short horizontal shaft near the upper end of said vertical shaft, bevel gears connecting the vertical shaft and the short horizontal shaft, a transverse sleeve on the short horizontal shaft, a crank adapted to slide through said sleeve, and means to prevent the said crank from leaving the sleeve while permitting it to slide freely therein.

4. A dump car having operating mechanism below the floor thereof, connecting mechanism extending thence to the outside end wall of the car, a short horizontal shaft adapted to actuate said connecting mechanism, a transverse sleeve on the said shaft, a crank adapted to slide through the said sleeve, and means to prevent the said crank from leaving the sleeve while permitting it to slide freely therein.

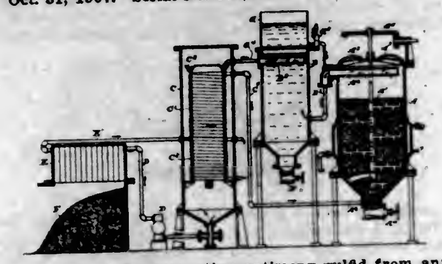
5. A dump car having door operating mechanism, a shaft adapted to actuate said door operating mechanism, a transverse sleeve on said shaft, a crank extending loosely through said sleeve, a handle on one end of said crank, and means at the opposite end thereof to prevent the crank from sliding out of the sleeve.

880,751. NUT-LOCK. BENJAMIN F. PARKER, Cowiche, Wash. Filed Aug. 19, 1907. Serial No. 389,268.



A nut lock comprising a bolt, a nut thereon, a stud projecting axially from the bolt and threaded in opposition to the bolt, and a lock consisting of a threaded ring engaging the stud, an arm projecting from one side of the ring and parallel with the bolt, and an outturned finger upon the arm and disposed to be turned down on the nut.

880,752. PROCESS OF TREATING ORES. JOHN PATTEN and CHARLES R. BARNETT, Baltimore, Md. Filed Oct. 31, 1907. Serial No. 400,135.



1. A process for separating antimony sulfid from antimonial ores, consisting in circulating a solution of sodium sulfid through hot ores, then cooling the solution, causing a portion of the dissolved antimonial sulfid to precipitate, then separating the precipitated antimonial sulfid from the solution, then heating the solution again running it through the hot ore again, substantially as described.

2. A process for separating the sulfid of antimony from the antimonial ores with a solvent sulfid solution consisting in alternately heating the solution, bringing the hot solution in contact with the crushed ore, cooling the saturated solution to precipitate a part of the dissolved antimony, separating the precipitant, heating the clarified solution again and using it over again.

3. A process for separating the sulfid of antimony from the antimonial ores with a solvent sulfid solution consisting in alternately heating the solution, bringing the hot solution in contact with the crushed ore adding lime during the process for uniting the dissolved silica, arsenic and other compounds forming the insoluble compounds to eliminate them from the solution, cooling the saturated solution to precipitate a part of the dissolved antimony, separating the precipitant, and heating the clarified solution again and using it over again.

4. A process for separating antimony sulfid from antimonial ores, which consists in treating the ore with a solvent sulfid solution in the presence of heat, subsequently cooling the resulting solution to precipitate antimonial sulfid, then filtering to recover the antimonial sulfid, and then subjecting ore to the resultant solution in the presence of heat.

5. A process for separating antimonial sulfid from antimonial ores, consisting in passing a solvent sulfid solution through said ores in the presence of heat, subjecting the resultant solution to a cooling medium consisting of a previously cooled portion of solution from which the antimonial sulfid has been removed.

[Claims 6 to 12 not printed in the Gazette.]

880,753. IMITATION MARBLE AND GRANITE. GEORGE PAYNE, London, England, and WILLIAM J. H. PAYNE, San Francisco, Cal. Filed Nov. 1, 1907. Serial No. 400,310.



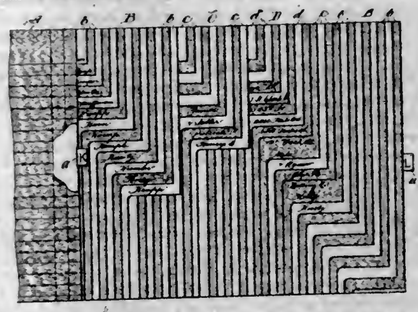
1. The process of producing artificial marble and the like, which consists in, (1), spreading a layer of magnesite cement on a sheet of smooth glass, (2), placing coloring matter on the magnesite cement, and (3), pressing backing sheets of suitable material onto the coloring matter.

2. The process of producing artificial marble and the like, which consists in, (1), spreading a layer of magnesite cement on a sheet of smooth glass, (2), placing coloring matter on the magnesite cement, and (3), pressing backing sheets of suitable material onto the coloring matter, (4), spreading a layer of cement on the back of the backing sheets, (5), pressing a second set of backing sheets of suitable material onto the last mentioned layer of cement and allowing same to set, (6), spreading another layer of magnesite cement onto glass, (7), placing coloring matter onto same, and (8), pressing the block made by steps 1 to 5 of this process onto the last mentioned coloring matter.

3. In an imitation block of marble, the combination of a layer of magnesite cement, a layer of coloring matter, a layer of backing sheets of suitable material, a second layer of cement, a second layer of backing sheets of suitable material, a second layer of coloring matter, and another layer of magnesite cement, all adhering together in the order named.

4. In an imitation block of marble, the combination of a layer of magnesite cement, a layer of coloring matter, a layer of backing sheets of suitable material, a second layer of cement, a second layer of backing sheets of suitable material, a second layer of coloring matter, another layer of magnesite cement, all adhering together in the order named, a layer of coloring material around the edges of the beforementioned layers, and an outer layer of magnesite cement around the last mentioned layer of coloring matter.

880,754. SELF-INDEXING LEDGER. JOHN B. PERRINE, Valparaiso, Ind., assignor to James E. Plew, Chicago, Ill. Filed Oct. 21, 1907. Serial No. 398,377.

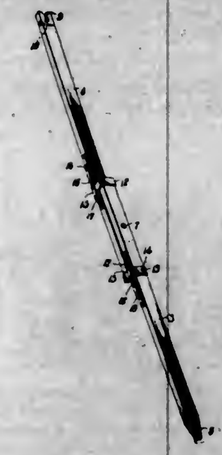


1. In a self-indexing ledger, a set of leaves which have progressively-increasing sections removed from corresponding edges so as to expose a portion of each leaf at one edge of the set, and a second set of leaves interposed between two of the leaves of the first set, the leaves of the second set also having progressively-increasing sections removed from corresponding edges so that a portion of each leaf of the second set is exposed at the edge at which the sheets of the first set are exposed, the shortest section which is removed from the leaves of the second set being longer than the shorter of the two sections removed from the two adjacent leaves of the first set and the sections which are cut away from the remaining leaves of the second set being longer than the longer of the two sections removed from the two adjacent leaves of the first set.

2. In a self-indexing ledger, a set of leaves which have progressively-increasing sections removed from corresponding edges so as to expose a portion of each leaf at one edge of the set, and a second set of leaves interposed between two of the leaves of the first set, the leaves of the second set also having progressively-increasing sections removed from corresponding edges so that a portion of each leaf of the second set is exposed at the edge at which the sheets of the first set are exposed, the shortest section which is removed from the leaves of the second set being longer than the shorter and at least as long as the longer of the sections removed from the two adjacent leaves of the first set.

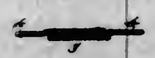
3. In a self-indexing ledger, a set of leaves which have progressively-increasing sections removed from corresponding edges so as to expose a portion of each leaf at one edge of the set, and a second set of leaves interposed between two of the leaves of the first set, the leaves of the second set also having progressively-increasing sections

tions foldable one upon the other and movable laterally to extended position, straps secured to one longitudinal edge of each section and provided with a central depression defining spaced slots, and a locking member slidably mounted in said slots and adapted to engage the end of the adjacent section for locking said sections in extended position.



4. A clothes line prop including pivotally united sections foldable one upon the other and movable laterally to extended position, straps secured to one longitudinal edge of each section and having an intermediate portion thereof bent downwardly to form a spring pressed projection, and collars slidably mounted on the sections at said straps and movable into engagement with the end of the adjacent section for locking said sections in extended position, said collars being held in operative position by engagement with the spring pressed projections.

880,749. PIPE-CLEANER. WILLIAM O'SULLIVAN, New York, N. Y., assignor to Manhattan Briar Pipe Company, New York, N. Y., a Corporation of New York. Filed May 21, 1906. Serial No. 317,920.



1. An extensible pipe cleaner having a non-contractile sinuous core, the undulations of which are normally compacted and capable of being drawn out and maintained in a straight or substantially straight condition.

2. An extensible pipe cleaner consisting of a non-contractile core having cleansing material associated therewith, said core having a normally compacted sinuous form whereby it may be extended and maintained in its extended condition by reason of the inherent non-contractile property thereof.

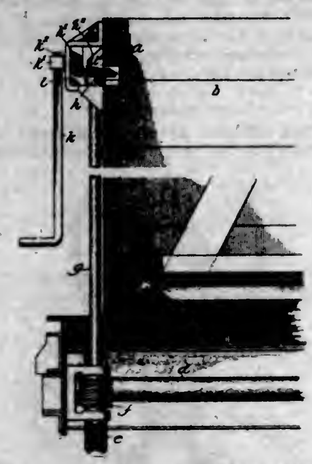
3. An extensible pipe cleaner consisting of a non-contractile core having a cleaning surface, said core being normally sinuous in form and capable of being extended and maintained in an extended condition by reason of the inherent non-contractile property thereof.

4. An extensible pipe cleaner consisting of a non-contractile core having a cleaning surface, said core being normally sinuous in form and capable of being extended and maintaining an extended sinuous form.

5. An extensible pipe cleaner having a non-contractile core sinuous in form throughout substantially its entire length, the sinuous portion of the core being normally compacted and capable of being drawn out and maintaining a straight or substantially straight condition.

[Claims 6 to 16 not printed in the Gazette.]

880,750. DUMP-CAR. SPENCER OTIS, Chicago, Ill. Filed Apr. 20, 1906. Serial No. 312,816.



1. A dump car having a dumping door, means for operating the dumping door, a collar forming a part of the operating means, and a longitudinally adjustable crank freely slidable in the collar.

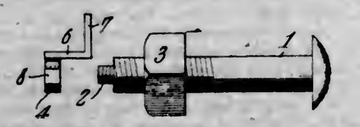
2. A dump car having a dumping door, means for operating the door, comprising a rotatable shaft, a collar secured to the end of the shaft, a crank held in the collar and freely movable longitudinally therein, and means for preventing the withdrawal of the crank from the collar.

3. A dump car having a longitudinal operating shaft below the floor thereof, a worm wheel on the end of said shaft, a vertical shaft at the end of the car with a worm on its lower end engaging the said worm wheel, a short horizontal shaft near the upper end of said vertical shaft, bevel gears connecting the vertical shaft and the short horizontal shaft, a transverse sleeve on the short horizontal shaft, a crank adapted to slide through said sleeve, and means to prevent the said crank from leaving the sleeve while permitting it to slide freely therein.

4. A dump car having operating mechanism below the floor thereof, connecting mechanism extending thence to the outside end wall of the car, a short horizontal shaft adapted to actuate said connecting mechanism, a transverse sleeve on the said shaft, a crank adapted to slide through the said sleeve, and means to prevent the said crank from leaving the sleeve while permitting it to slide freely therein.

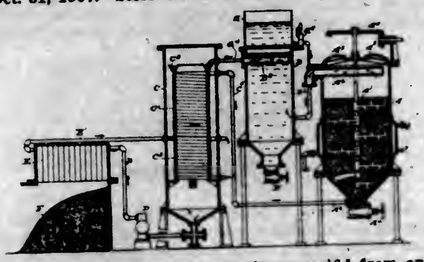
5. A dump car having door operating mechanism, a shaft adapted to actuate said door operating mechanism, a transverse sleeve on said shaft, a crank extending loosely through said sleeve, a handle on one end of said crank, and means at the opposite end thereof to prevent the crank from sliding out of the sleeve.

880,751. NUT-LOCK. BENJAMIN F. PARKER, Cowiche, Wash. Filed Aug. 19, 1907. Serial No. 389,268.



A nut lock comprising a bolt, a nut thereon, a stud projecting axially from the bolt and threaded in opposition to the bolt, and a lock consisting of a threaded ring engaging the stud, an arm projecting from one side of the ring and parallel with the bolt, and an outturned finger upon the arm and disposed to be turned down on the nut.

880,752. PROCESS OF TREATING ORES. JOHN PATTEN and CHARLES R. BARNETT, Baltimore, Md. Filed Oct. 31, 1907. Serial No. 400,185.



1. A process for separating antimony sulfid from antimonial ores, consisting in circulating a solution of sodium sulfid through hot ores, then cooling the solution, causing a portion of the dissolved antimonial sulfid to precipitate, then separating the precipitated antimonial sulfid from the solution, then heating the solution again running it through the hot ore again, substantially as described.

2. A process for separating the sulfid of antimony from the antimonial ores with a solvent sulfid solution consisting in alternately heating the solution, bringing the hot solution in contact with the crushed ore, cooling the saturated solution to precipitate a part of the dissolved antimony, separating the precipitant, heating the clarified solution again and using it over again.

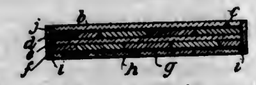
3. A process for separating the sulfid of antimony from the antimonial ores with a solvent sulfid solution consisting in alternately heating the solution, bringing the hot solution in contact with the crushed ore adding lime during the process for uniting the dissolved silica, arsenic and other compounds forming the insoluble compounds to eliminate them from the solution, cooling the saturated solution to precipitate a part of the dissolved antimony, separating the precipitant, and heating the clarified solution again and using it over again.

4. A process for separating antimony sulfid from antimonial ores, which consists in treating the ore with a solvent sulfid solution in the presence of heat, subsequently cooling the resulting solution to precipitate antimonial sulfid, then filtering to recover the antimonial sulfid, and then subjecting ore to the resultant solution in the presence of heat.

5. A process for separating antimonial sulfid from antimonial ores, consisting in passing a solvent sulfid solution through said ores in the presence of heat, subjecting the resultant solution to a cooling medium consisting of a previously cooled portion of solution from which the antimonial sulfid has been removed.

[Claims 6 to 12 not printed in the Gazette.]

880,753. IMITATION MARBLE AND GRANITE. GEORGE PAYNE, London, England, and WILLIAM J. H. PAYNE, San Francisco, Cal. Filed Nov. 1, 1907. Serial No. 400,310.



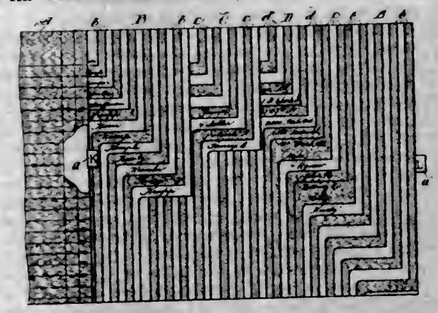
1. The process of producing artificial marble and the like, which consists in, (1), spreading a layer of magnesite cement on a sheet of smooth glass, (2), placing coloring matter on the magnesite cement, and (3), pressing backing sheets of suitable material onto the coloring matter.

2. The process of producing artificial marble and the like, which consists in, (1), spreading a layer of magnesite cement on a sheet of smooth glass, (2), placing coloring matter on the magnesite cement, and (3), pressing backing sheets of suitable material onto the coloring matter, (4), spreading a layer of cement on the back of the backing sheets, (5), pressing a second set of backing sheets of suitable material onto the last mentioned layer of cement and allowing same to set, (6), spreading another layer of magnesite cement onto glass, (7), placing coloring matter onto same, and (8), pressing the block made by steps 1 to 5 of this process onto the last mentioned coloring matter.

3. In an imitation block of marble, the combination of a layer of magnesite cement, a layer of coloring matter, a layer of backing sheets of suitable material, a second layer of cement, a second layer of backing sheets of suitable material, a second layer of coloring matter, and another layer of magnesite cement, all adhering together in the order named.

4. In an imitation block of marble, the combination of a layer of magnesite cement, a layer of coloring matter, a layer of backing sheets of suitable material, a second layer of cement, a second layer of backing sheets of suitable material, a second layer of coloring matter, another layer of magnesite cement, all adhering together in the order named, a layer of coloring material around the edges of the beforementioned layers, and an outer layer of magnesite cement around the last mentioned layer of coloring matter.

880,754. SELF-INDEXING LEDGER. JOHN B. PERRINE, Valparaiso, Ind., assignor to James E. Plew, Chicago, Ill. Filed Oct. 21, 1907. Serial No. 398,377.



1. In a self-indexing ledger, a set of leaves which have progressively-increasing sections removed from corresponding edges so as to expose a portion of each leaf at one edge of the set, and a second set of leaves interposed between two of the leaves of the first set, the leaves of the second set also having progressively-increasing sections removed from corresponding edges so that a portion of each leaf of the second set is exposed at the edge at which the sheets of the first set are exposed, the shortest section which is removed from the leaves of the second set being longer than the shorter of the two sections removed from the two adjacent leaves of the first set and the sections which are cut away from the remaining leaves of the second set being longer than the longer of the two sections removed from the two adjacent leaves of the first set.

2. In a self-indexing ledger, a set of leaves which have progressively-increasing sections removed from corresponding edges so as to expose a portion of each leaf at one edge of the set, and a second set of leaves interposed between two of the leaves of the first set, the leaves of the second set also having progressively-increasing sections removed from corresponding edges so that a portion of each leaf of the second set is exposed at the edge at which the sheets of the first set are exposed, the shortest section which is removed from the leaves of the second set being longer than the shorter and at least as long as the longer of the sections removed from the two adjacent leaves of the first set.

3. In a self-indexing ledger, a set of leaves which have progressively-increasing sections removed from corresponding edges so as to expose a portion of each leaf at one edge of the set, and a second set of leaves interposed between two of the leaves of the first set, the leaves of the second set also having progressively-increasing sections

removed from corresponding edges so that a portion of each leaf of the second set is exposed at the edge at which the sheets of the first set are exposed, the shortest section which is removed from the leaves of the second set being longer than either of the sections removed from the two adjacent leaves of the first set.

4. In a self-indexing ledger, a set of leaves which have progressively-increasing sections removed from corresponding edges so as to expose a portion of each leaf at one edge of the set, a second set of leaves interposed between two of the leaves of the first set, the leaves of the second set also having progressively-increasing sections removed from corresponding edges so that a portion of each leaf of the second set is exposed at the edge at which the sheets of the first set are exposed, the shortest section which is removed from the leaves of the second set being longer than the shorter of the two sections removed from the two adjacent leaves of the first set, and a third set of leaves interposed between two leaves of the second set, the leaves of the third set also having progressively-increasing sections removed from corresponding edges so that a portion of each leaf of the third set is exposed at the same edge as the leaves of the other sets, the shortest section which is removed from the leaves of the third set being longer than the shorter of the sections removed from the two adjacent leaves of the second set.

5. In a self-indexing ledger, a set of leaves which have progressively-increasing sections removed from corresponding edges so as to expose a portion of each leaf at one edge of the set, a second set of leaves interposed between two of the leaves of the first set, the leaves of the second set also having progressively-increasing sections removed from corresponding edges so that a portion of each leaf of the second set is exposed at the edge at which the sheets of the first set are exposed, the shortest section which is removed from the leaves of the second set being longer than the shorter and at least as long as the longer of the sections removed from the two adjacent leaves of the first set, and a third set of leaves interposed between two leaves of the second set, the leaves of the third set also having progressively-increasing sections removed from corresponding edges so that a portion of each leaf of the third set is exposed at the same edge as the leaves of the other sets, the shortest section which is removed from the leaves of the third set being longer than the shorter of the sections removed from the two adjacent leaves of the second set.

[Claims 6 to 16 not printed in the Gazette.]

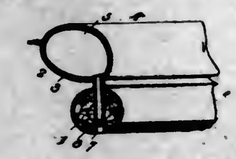
880,755. METHOD OF TESTING TUBULAR BODIES. EDWARD L. PERAY, Paterson, N. J. Filed Apr. 1, 1907. Serial No. 365,892.



The method of testing tubular bodies of rigid non-yielding material which comprises applying a plurality of tapered headed elastic testing plugs from the interior of said body, and forcing the same outward with the same degree of force to close the openings fluid-tight by said solid plugs solely by the pressure of the testing fluid within the tubular body.

880,756. PNEUMATIC HORSE-COLLAR. HENRY R. RASMUSSEN, Aztec, N. Mex. Filed Oct. 29, 1906. Serial No. 341,106.

In a horse collar, the combination of a wale 1 comprising a cover and filling material inclosed within the same, a body portion 2 consisting of a covering 3 and an oppositely disposed lining 4, the outer edges of the covering and lining being stitched together, and the edge of the cover projecting beyond the lining for the purpose specified, while the inner edges of the covering and lining are received between the edges of the wale covering, a single line of stitching being employed for fastening the four thicknesses together, a tube 7 extending through the wale,



a pneumatic sack 5 fitted within the space between the covering 3 and lining 4, and designed to distend the same when inflated, and a valve 6 for the pneumatic sack, said valve being received within the tube 7.

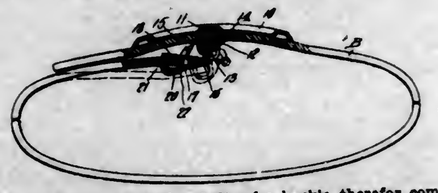
880,757. HINGE. DE LEONARD RUGG, Catskill, N. Y. Filed Oct. 29, 1906. Serial No. 341,012.



1. A pinless hinge comprising two separate members having respectively a pintle-roll and a knuckle to engage therewith, said roll and knuckle having beads thereon to strengthen the same and to form a guide and stop for the knuckle, substantially as and for the purpose described.

2. A pinless hinge comprising separate members of angular shape, the apex of the angle forming the fastening spur, said members having a pintle-roll and a knuckle respectively to engage with each other and having beads to form a stop for the knuckle to prevent lateral movement thereof, substantially as and for the purpose specified.

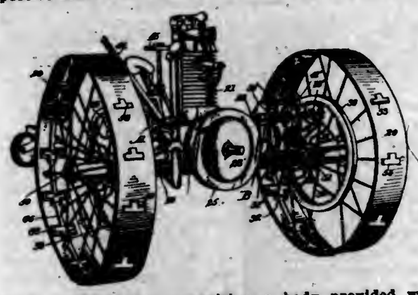
880,758. BELT-BUCKLE. OTIS R. RUST, Springfield, Ohio. Filed Oct. 24, 1807. Serial No. 398,950.



The combination with a belt, of a buckle therefor comprising a body having an abutment, a pivoted clamping member having spaced plane faced gripping jaws to cooperate with the said abutment to clamp the belt, a curved stirrup rigidly secured to the pivoted clamping member and extending outwardly therefrom and thence in a direction substantially parallel to the plane of the gripping faces of said jaws, and means connected to the opposite end of the belt and permanently secured to the said stirrup whereby the clamp may be set or released by a slight bodily movement of the said connected end of the belt.

880,759. MOTOR-VEHICLE. GEORGE G. SCHROEDER, Washington, D. C., assignor to Farm Motor Company, a Corporation of South Dakota. Filed June 20, 1906. Serial No. 322,563.

1. A motor vehicle comprising a body provided with traction wheels, an independent drive shaft for each wheel, gearing for imparting forward and reverse rotations to each drive shaft, and a pinion slidably mounted on each drive shaft and each adapted to independently connect its respective shaft with either of its respective gearings.



2. A motor vehicle comprising a body provided with traction wheels, a counter shaft carried by said body, an independent drive shaft for each wheel arranged adjacent the opposite ends of said counter shaft, gearing for imparting forward and reverse rotations to each drive shaft, and a pinion slidably mounted on each drive shaft and adapted to independently connect the latter with either of its respective gearings.

3. A motor vehicle comprising a body provided with traction wheels, an independent drive shaft for each wheel, gearing for imparting forward and reverse rotations to each drive shaft, a pinion slidably mounted on each drive shaft and adapted to independently connect the latter with either of its respective gearings, and means for independently shifting each pinion to engage the forward and reverse gearings respectively.

4. A motor vehicle comprising a body provided with traction wheels, an independent drive shaft for each wheel, gearing for imparting forward and reverse rotations to each drive shaft and arranged on a plane below the latter, and a pinion slidably mounted on each drive shaft and adapted to independently connect the latter with either of its respective gearings.

5. A motor vehicle comprising a body provided with traction wheels, toothed rings on said wheels, an independent drive shaft for each wheel having a pinion meshing with the adjacent ring, gearing for imparting forward and reverse rotations to each drive shaft, a pinion slidably mounted on each drive shaft, and means for shifting each pinion upon its shaft to independently engage with its respective forward and reverse gearings.

[Claims 6 to 16 not printed in the Gazette.]

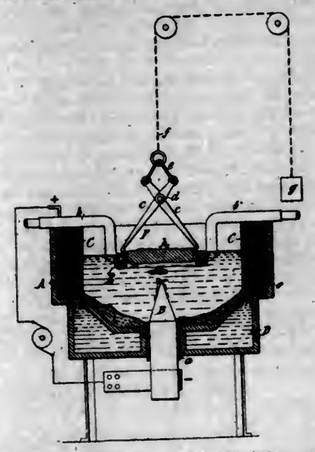
880,760. PRODUCING METALS BY ELECTROLYSIS. GEORGE O. SEWARD and FRANZ VON KÜGELGEN, Holcombs Rock, Va., assignors to Virginia Laboratory Company, New York, N. Y., a Corporation of New York. Filed Apr. 24, 1906. Serial No. 313,387.

1. In the electrolysis of fused electrolytes, causing the metal to separate in a molten state at a submerged cathode, rise through the electrolyte, and collect and solidify under a movable protective cover in contact with the electrolyte.

2. In the electrolysis of fused electrolytes, causing the metal to separate in a molten state at a submerged cathode, rise through the electrolyte, and accumulate within a collecting ring and adhere to and solidify under a protective cover in contact with the electrolyte.

3. In the electrolysis of fused electrolytes, causing the metal to separate in a molten state at a submerged cathode, rise through the electrolyte, and accumulate, cohere and solidify at the top to form a protective cover, the upper surface of which is chilled by cooling, while the under surface remains sufficiently soft for the rising globules of metal to cohere therewith.

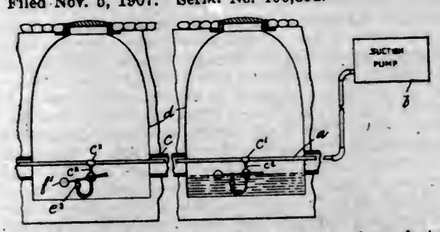
4. In the electrolysis of fused electrolytes causing the metal to separate in a molten state at a submerged cathode, rise through the electrolyte, and accumulate and solidify at the top within a collecting ring to form a protective cover, the upper surface of which is chilled by cooling, while the lower surface remains sufficiently soft for the rising globules of metal to cohere therewith.



5. In the electrolysis of fused electrolytes, causing the metal to separate in a molten state at a submerged cathode, rise through the electrolyte, and accumulate and solidify under a protective mass of the same metal, chilling the upper portion of the mass and withdrawing the same gradually from the electrolyte so as to form rods or blocks of the desired metal.

[Claims 6 and 7 not printed in the Gazette.]

880,761. MEANS FOR DRAINING MANHOLES OF ELECTRIC CONDUIT SYSTEMS. ANGUS J. SMITH, Boston, and DANIEL LIVINGSTON, Cambridge, Mass. Filed Nov. 5, 1907. Serial No. 400,892.



1. In a system of draining the manholes of an electric conduit system, the combination of a main suction pipe connected with a suction pump and extending throughout the conduit system, crossing the manholes, branch pipes depending therefrom, in the manholes, which extend to the bottoms thereof, and which have open ends provided with valve-seats, valves movable toward and from said seats, automatic means, operated by the rise and fall of water in the manholes, for opening and closing said valves and supports for said means in the manholes arranged on one of the pipes therein substantially as described.

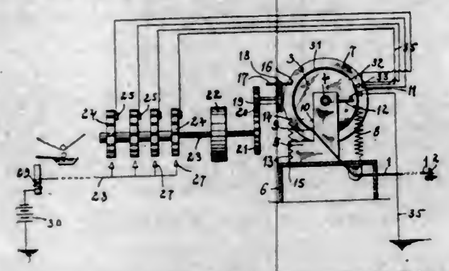
2. In a system of draining the manholes of an electric conduit system, the combination of a main suction pipe connected with a suction pump and extending throughout the conduit system, crossing the manholes, branches depending therefrom in the manholes which extend to the bottoms thereof, valves controlling the inlets to said branches, supports secured to said branches, float-bearing arms pivotally connected with said supports which are connected with said valves, and floats borne by said arms, substantially as described.

3. In a system of draining the manholes of an electric conduit system, the combination of a main suction pipe connected with a suction pump and extending throughout

the conduit system, crossing the manholes, branches depending therefrom in the manholes which extend to the bottoms thereof, valves controlling the inlets to said branches, base-plates secured to said branches, supporting-plates pivoted to said base-plates, float-bearing arms secured to said supporting-plates which are connected with said valves and floats borne by said arms, substantially as described.

4. In a system of draining the manholes of an electric conduit system, the combination of a main suction pipe connected with a suction pump and extending throughout the conduit system, crossing the manholes, branches depending therefrom in the manholes which extend to the bottoms thereof, valves controlling the inlets to said branches, base-plates secured to said branches, supporting-plates pivoted to said base-plates, float-bearing arms secured to said supporting-plates which are connected with the valves, movable counterbalancing means for said arms and floats borne by said arms, substantially as described.

880,762. SIGNALING SYSTEM. BERNARD STAUB, New York, N. Y. Filed Nov. 5, 1906. Serial No. 342,053.



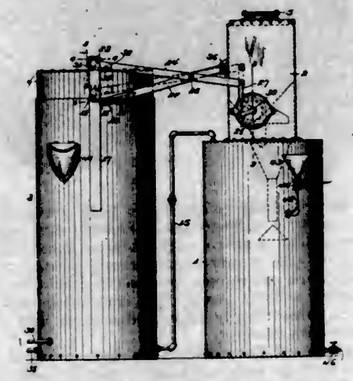
1. The combination with a series of rotatable disks at a sending station and adapted to be operated from distant points, of a corresponding number of make-and-break wheels, an electric circuit containing a recorder or receiver at a receiving station and any of said make-and-break wheels at said sending station, and a contact device on each of said disks to close said electric circuit through one of said make-and-break wheels and said receiver.

2. The combination with a sending station and a receiving station, of a series of threads or cords leading from distant points to said sending station, a series of rotatable disks adapted to be operated by said threads, a corresponding number of make-and-break wheels, an electric circuit leading to said receiving station and containing any of said make-and-break wheels at said sending station and a recorder or receiver at said receiving station, and a contact device on each of said disks in said sending station adapted to close said electric circuit through one of said make-and-break wheels and said receiver.

3. The combination with a sending station and a receiving station, of a series of rotatable disks at the sending station, a stop device common to all the disks and capable of being operated by the same, a clock-work controlled by said stop device, a series of make-and-break wheels capable of being operated by said clock-work, an electric circuit containing a recorder or receiver at said receiving station and any of said make-and-break wheels at said sending station, and a contact device on each of said disks to close said electric circuit through one of said make-and-break wheels and said receiver.

4. The combination with a sending station and a receiving station, of a series of threads or cords leading from distant points to said sending station, a series of rotatable disks at said sending station and adapted to be operated by said threads, a stop device common to all the disks and capable of being operated by the same, a clock-work controlled by said stop device, a series of make-and-break wheels capable of being operated by said clock-work, an electric circuit containing a recorder or receiver at said receiving station and any of said make-and-break wheels at said sending station, and a contact device on each of said disks to close said electric circuit through one of said make-and-break wheels and said receiver.

880,763. ACETYLENE-GAS GENERATOR. HARVEY S. STONER and BURTON STONER, Massillon, Ohio. Filed June 7, 1907. Serial No. 377,714.



1. In an acetylene generator, the combination of a carbid-holder, a generator and a gasometer, a feed device located within said carbid-holder, said device comprising a hopper, a rotatable feeder in open communication with the discharge-end of said hopper and rotatable about said discharge-end, said feeder being of a tapered horn-like formation and normally standing in a non-discharging position, and means intermediate the movable member of said gasometer and said feeder whereby the partial rotation of the latter is effected, said means comprising a guide arm carried by said movable member, an adjustable guide for said arm, a stationary bar having one end mounted upon the carbid-holder and the other to a fixed part of the gasometer, a lever pivotally mounted upon said bar, one end of said lever carrying a pivoted clip and having connection with the movable member of the gasometer, and means intermediate the opposite end of said lever and the feeder whereby motion is communicated to the latter.

2. In an acetylene generator, the combination with a feeder and the movable bell of a gasometer, of a guide-arm carried by said bell, said arm being bent to form a loop at its upper end, a pivoted lever having one end loosely held within said loop, a pin projected across said loop for engaging and carrying said lever upward with the upward movement of said bell, said pin being positioned to disengage itself from said lever at a predetermined point in the upward movement, a clip carried by said lever, said clip being pivoted for admitting of the unobstructed descent thereby of said pin, and means intermediate said lever and said feeder whereby the movement of the latter to and from charge-discharging position is controlled by the movements of the former.

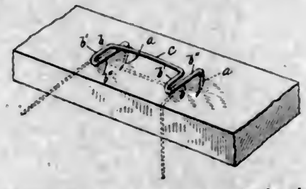
3. In a device of the character described, the combination with a feeder and a gasometer, of intervening mechanism whereby fluctuations in the volume of gas contained in said gasometer between predetermined points propels said feeder to and from charge-discharging position, said mechanism including a pivoted lever, a guide-arm carried by the movable member of said gasometer, a loop formed at the top of said guide-arm, a pin projected across said loop, said lever being normally held between said pin and the top of said loop and said pin being positioned to pass from under said lever at a predetermined point in the ascent of said movable member, and means whereby the passage of said pin by the end of said lever with the descent of said member is admitted.

4. In a device of the character described, the combination with a feeder and a gasometer, of intervening mechanism whereby fluctuations in the volume of gas contained

in said gasometer between predetermined points propels said feeder to and from discharging position, said mechanism including a pivoted lever, a guide-arm carried by the movable member of said gasometer, a loop formed at the top of said guide-arm, a pin projected across said loop, said lever being normally held between said pin and the top of said loop, and said pin being positioned to pass from under said lever at a predetermined point in the ascent of said movable member, and a pivoted clip carried by the end of said lever whereby the downward passage of said pin by the end of said lever is admitted.

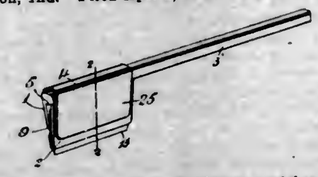
5. In a device of the character described, the combination with a feeder and a gasometer, of intervening mechanism whereby fluctuations in the volume of gas contained in the gasometer between predetermined points propels said feeder to and from charge-discharging position, said mechanism including a pivoted lever, a guide-arm carried by the movable member of said gasometer, a loop formed at the top of said guide-arm, a pin projected across said loop, said lever being normally held between said pin and the top of said loop, and said pin being positioned to pass from under said lever at a predetermined point in the ascent of said movable member, a pivoted clip carried by the end of said lever whereby the downward passage of said pin by the end of said lever is admitted, and an adjustable guide for said guide-arm.

880,764. LEATHER-STRETCHING-STRING CLAMP. ALFRED J. THOMSON, Canton, Mass. Filed June 24, 1907. Serial No. 380,565.



A string-holding cleat formed of a single piece of wire bent into shape and comprising a pair of separated clamps each consisting of a pair of members one arranged directly above the other and the upper one being resilient, each of these pairs of members being directly connected at their inner ends and separated at their outer ends to form outwardly opening clamping jaws, a pointed entering member carried at the outer end of each of the lower members, and a cross-bar directly connecting the outer ends of the upper members, substantially as set forth.

880,765. RAZOR-BLADE HOLDER. CLIFFORD UTTER, Lebanon, Ind. Filed Apr. 1, 1907. Serial No. 365,765.



1. A razor blade auxiliary holder comprising coöperating clamping plates, the proximate surfaces of the plates being relatively divergent for a portion of their widths, the remaining portions of said surfaces being projected in parallel planes to provide clamping faces.

2. A razor blade auxiliary holder comprising a handle member, a fixed clamping plate carried thereby, a movable clamping plate arranged to coöperate with the fixed clamping plate, the proximate surfaces of the plates being relatively divergent for a portion of their widths the remaining portions of said surfaces being projected in parallel planes to provide clamping surfaces, and means engaging both plates to secure them in clamping position.

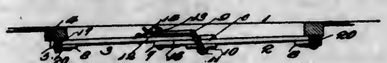
3. A razor blade auxiliary holder comprising a handle, member, a fixed clamping plate carried thereby, a movable clamping plate arranged to coöperate with the fixed clamping plate the proximate surfaces of the plates being relatively divergent for a portion of their widths, the remaining portions of said surfaces being projected in parallel planes to provide clamping surfaces, means for retaining the razor blade in proper position between the clamping plates, and means for engaging both the clamping plates to secure them in clamping position.

4. A razor blade auxiliary holder comprising a handle member, a fixed clamping plate carried thereby, a movable clamping plate arranged to coöperate with the fixed clamping plate, the proximate surfaces of the plates being relatively divergent for a portion of their widths, the remaining portions of said surfaces being projected in parallel planes to provide clamping surfaces, a binding clip embracing the handle member and engaging both the plates.

5. A razor blade auxiliary holder, comprising a handle member, a fixed handle plate carried thereby, a movable clamping plate arranged to coöperate with the fixed clamping plate, the proximate surfaces of the plates being relatively divergent for a portion of their widths, the remaining portions of said surfaces being projected in parallel planes to form clamping surfaces, means for retaining said clamping plates in their relative positions, and a binding clip embracing the handle member and engaging both plates.

[Claims 6 to 10 not printed in the Gazette.]

880,766. CAR-DOOR. CHARLES L. VANDERVORT, Enderlin, N. D. Filed Apr. 30, 1907. Serial No. 371,089.



1. A car door comprising sections having end portions overlapped, cleats secured to the respective sections a short distance from the extremities of the overlapped end portions, and lock means confining the overlapped portions of the sections to prevent outward displacement thereof, the same comprising parts embracing the edges of the overlapped portions of the said sections when closed.

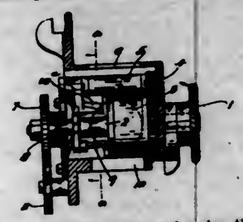
2. A car door composed of sections adapted to have end portions overlapped, a rod having end portions bent to extend over opposite edges of one section, and having the terminal portions of the bent ends rebent to provide journals which are mounted in bearings applied to the other section, said rod adapted to be swung to engage with and confine the overlapped ends of the sections, an arm projected from the side rod, and means for securing said arm when turned upon one of the sections.

3. A car door comprising sections having end portions overlapped, cleats secured to the end portions of the sections a short distance from their extremities to form abutments for the ends of the sections to engage with, a strip attached to one of the cleats and adapted to overlap the end portion of the opposite section, a rod having its end portions bent to extend over the overlapped edges of the sections and rebent to provide journals, bearings applied to the inner section to receive said journals, an arm projected from the rod to form operating means therefor and having an opening at or near its outer end, an apertured fastening applied to the outer section of the door to pass through the opening of the aforesaid arm, and fastening means for securing the arm when turned upon the section.

880,767. PREPAYMENT GAS-METER. BENJAMIN G. WAGGONER, Philadelphia, Pa. Filed Apr. 27, 1907. Serial No. 370,555.

In a prepayment gas meter the combination of a manually operated carrier adapted to carry a coin with a portion thereof exposed, a gear wheel which is provided with means that are engaged by the coin and by which advancing motion is imparted to the wheel, a ratchet wheel provided with a pair of diametrically arranged teeth and

connected with said gear wheel, and a pawl tending to engage said teeth and prevent advancing motion of said gear wheel and provided with a projection operatively



arranged in respect to the coin, whereby the latter when the knob is turned lifts the pawl and permits of advancing motion of the gear wheel, substantially as described.

880,768. ROLLER FOR HAT-SIZING MACHINES. JOHN F. WILLIAMS, West Orange, N. J. Filed Apr. 7, 1903. Serial No. 151,436.



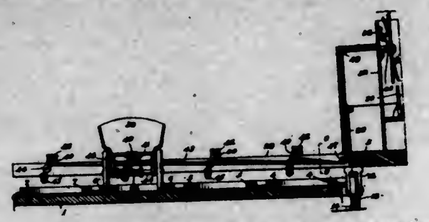
1. In a hat-sizing roller, the combination with a body porion comprising a single piece of pottery, and having sockets at its ends with longitudinal grooves in their walls, of bushings inserted in said sockets and having radial lugs to enter said grooves, and a shaft in each of said bushings.

2. In a hat-sizing roller, the combination with a body portion formed of a single piece of pottery and having sockets in its ends with longitudinal grooves in their walls, of bushings adapted to enter said sockets and having exterior lugs adapted to lie in the said grooves, said lugs being shorter than said grooves and providing space for cement, and a shaft in each of said bushings.

3. The improved hat sizing machine roller, comprising the roller body and ribs arranged longitudinally and in series, the alternate series of ribs projecting farther from the axis of the roll and forming annular recesses, and the end ribs being inclined to the axis of the roll and giving a concaved general outline to the periphery of the roll, the said body and ribs being in one integral piece of pottery ware.

880,769. AMUSEMENT DEVICE. FRANCIS K. WILSON, Coatesville, Pa., assignor of one-half to Henry K. Fort, West Haddonfield, N. J. Filed Mar. 26, 1907. Serial No. 364,568.

1. In a device of the character described the combination of a stationary platform, vehicles, arms adapted to propel said vehicles over said platform, wheels on said vehicles, axles carrying said wheels, one of said axles mounted in a fixed bearing at one end and in an adjustable bearing at its other end, a screw-threaded rod in said adjustable bearing, a bearing engaging said rod and nuts to adjust said rod in said latter bearing to vary the angle of said axles.



2. In a device of the character described the combination of a platform, a vehicle upon said platform, a radial arm extending over said platform, means for revolving said arm, a rod carried by said arm, said rod extending under said vehicle, a bearing on said vehicle to engage said rod, and means for advancing said vehicle along said rod.

3. In a device of the character described the combination of a platform, a vehicle upon said platform, a radial arm extending over said platform, means for revolving said arm, said arm having a rod extending under said vehicle, a rope carried by the outer end of said rod, said rope adapted to engage said vehicle and advance the latter along said rod.

4. In a device of the character described the combination of a platform, a vehicle, an arm adapted to be rotated over said platform a rod extending from said arm, a rope secured to the end of said rod, said rope adapted to engage said vehicle and advance it along said rod and means for releasing said rope to disengage said vehicle.

5. In a device of the character described the combination of a platform, a vehicle, an arm adapted to be rotated over said platform a rod extending from said arm, a rope secured to the end of said rod, said rope being coiled around the axle of said vehicle and means for tightening said rope to cause it to bind upon said axle.

[Claims 6 to 19 not printed in the Gazette.]

880,770. SIGNALING-CIRCUIT FOR RAILWAYS. JOSEPH A. WILSON, Westfield, N. J., assignor to Hall Signal Company, New York, N. Y., a Corporation of Maine. Filed Feb. 10, 1902. Serial No. 93,367.



1. In a railway signaling system the combination of a magnetic core, two separate coils wound on said core, a pivoted armature therefor, a local or signal operating circuit, a circuit closing point on said armature in said local circuit, a series of successive, insulated track sections; a series of circuits substantially coextensive with said track sections, respectively, a series of automatic signals, one for each section; connections between one of said coils and one of said circuits, connections between the second of said coils and a separate circuit, means for varying the current in one circuit without reversing it and means for reversing the current in the other circuit.

2. In a railway signaling system the combination of a magnetic core, two separate coils wound on said core, a pivoted armature therefor, a local or signal operating circuit; a circuit closing point on said armature in said local circuit, a series of successive, insulated track sections, a series of circuits substantially coextensive with said track sections, respectively, a series of automatic signals, one for each section; connections between one of said coils and one of said circuits, connections between the second of said coils and a separate circuit, means for reversing the current in the track circuit, and means for breaking the current in the separate circuit.

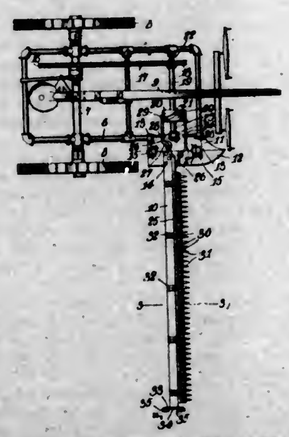
3. In a railway signaling system the combination of a magnetic core, two separate coils wound on said core, a pivoted armature therefor, a local or signal operating circuit, a circuit closing point on said armature in said local circuit, a series of successive, insulated track sections, a series of circuits substantially coextensive with said track sections, respectively; a series of automatic signals, two for each section, connections between one of said coils and one of the track circuits, connections between the second of said coils and a signal operating local circuit, means for reversing the current in the track circuit and means for breaking the current in the signal operating circuit.

4. In a signaling system the combination of two signals, a neutral relay, a circuit controller operated thereby for controlling one signal, a circuit therefor, a second relay for controlling the second signal provided with two coils, a circuit adapted, when closed, to send a current through one of the said coils always in the same direction, a circuit connected with the other of said coils and connected in shunt with said neutral relay, a pole-changer therein, means for shifting it so as to send the current through the said circuit when it is closed either in one direction or the other, and a circuit controller for the second signal controlled by said last mentioned relay adapted to be moved in one direction to operate the signal one way when the current is passing through both of said coils of the relay in the same direction and to be moved the other way to operate the signal in the reverse direction.

5. In a signaling system the combination of two signals, a neutral relay, two circuit controllers operated thereby, one for controlling one signal, and the other for controlling the second signal, a circuit for said neutral relay, a second relay for controlling the second signal provided with two coils, a circuit adapted, when closed, to send a current through one of the said coils always in the same direction, a circuit connected with the other coil and in shunt with the neutral relay, a pole changer therein, means for shifting it so as to send the current through the said circuit when it is closed either in one direction or the other, and a circuit controller for the second signal controlled by the last mentioned relay adapted to be moved in one direction to operate the signal one way when the current is passing through both coils of the relay in the same direction and to be moved the other way to operate the signal in the reverse direction, whereby the first signal will be controlled only by the neutral relay and the second signal will be controlled by both relays.

[Claims 6 to 12 not printed in the Gazette.]

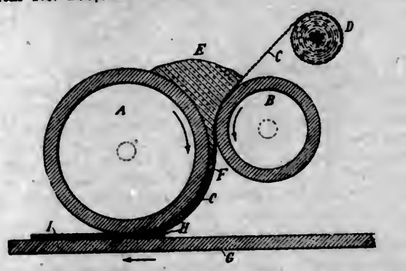
880,771. MOWING-MACHINE. GEORGE W. BACON, Grand Junction, Colo. Filed June 5, 1907. Serial No. 377,445.



1. The combination of a frame and a finger bar, a shoe section fixed to the frame and to which the finger bar is hinged, guides on the shoe, a pair of reciprocating cutter bars, a shaft having bearings on the frame and on the shoe, and a pair of pitmen having operative connection to the shaft and slidable in the guides and hinged to the cutter bars.

2. The combination of a frame and a finger bar, a shoe fixed to the frame at one side thereof, a reciprocating cutter bar on the finger bar, a shaft extending transversely across the frame and having bearings on the shoe and on the side of the frame opposite to the shoe, and a pitman having operative connections to the shaft and to the cutter bar.

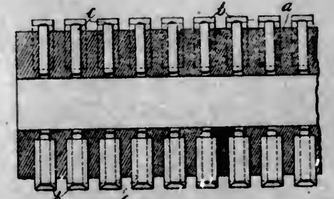
880,772. METHOD OF MAKING WIRE-GLASS. ARTHUR J. BALDWIN, East Orange, N. J. Filed July 21, 1905. Serial No. 270,602.



1. The method of making wire glass, which consists in forming a sheet of glass with a wire fabric on one surface thereof, progressively subjecting all portions of the sheet equally to pressure, to force a portion of the glass through the meshes of the fabric, and simultaneously forming said portion of glass into a smooth uniform layer on the fabric, as set forth.

2. The method of making wire glass, which consists in forming upon a roller a sheet of glass with a wire fabric on the outer surface thereof, and progressively passing the said sheet between the said roller and another rolling surface to force a portion of the glass through the meshes of the fabric and simultaneously form the said portion into a uniform smooth layer on the fabric, as set forth.

880,773. MILLING-CUTTER. ROBERT BANNISTER, Birmingham, England. Filed Dec. 29, 1906. Serial No. 349,998.

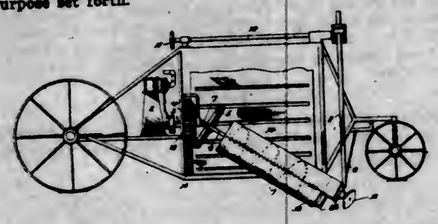


In milling cutters, the combination consisting of a holder, cylindrical tool apertures around the said holder, cylindrical cotter apertures formed exactly parallel with and intersecting the said tool apertures, cylindrical tools fitted within the tool apertures and each provided with a flat surface inclined to the axis of the tool, and cylindrical cotters fitted into the cotter apertures and each formed with a flat surface oppositely inclined to those on the tools, substantially as set forth.

880,774. ROAD-GRADER. LORENZO D. BATY, Knoxville, Iowa. Filed June 13, 1907. Serial No. 378,736.

1. A machine of the character described, comprising a traveling supporting framework, a motor or engine mounted thereon, an auger carried by the framework and pro-

vided with means whereby it may be adjusted to different elevations, the said auger projecting forwardly and laterally from the framework, an operative connection between the auger and the engine, and a disk carried in front of the cutting blade of the auger, as and for the purpose set forth.



2. A road grading machine comprising a traveling framework, an engine mounted thereon, an auger shaft carried by the framework and having universal movement, an operative or driving connection between the engine shaft and the auger shaft, an auger, a cutting blade therefor mounted on said auger shaft, a swinging support for the front end of said shaft, means for raising and lowering the auger shaft, and a disk carried at the front end of the auger.

3. A road grading machine comprising a traveling supporting framework, an engine mounted thereon, an auger provided with a shaft having universal movement in the framework and having a driving connection with the drive shaft of the engine, means for adjusting said auger to different inclinations, a laterally traveling elevator mounted in the framework, and a driving connection between said elevator and the engine shaft.

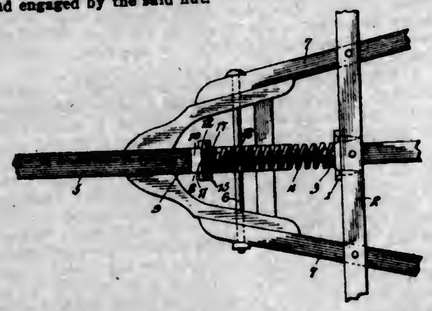
880,775. TREATMENT OF COMPLEX SULFID ORES. GUY DE BECHI, London, England, assignor of one-half to Reginald Wynn Rucker, London, England. Filed Apr. 9, 1907. Serial No. 367,271.

1. A cyclical process for treating complex sulfid ores containing lead and zinc consisting in grinding or pulverizing the ore to the condition of an impalpable powder, treating the same with a solution of ferric sulfate, filtering the solution of ferrous sulfate and zinc sulfate so formed from the insoluble lead residue, converting the ferrous sulfate to ferric sulfate by oxidation and subjecting them to acid fumes evolved from the calcination of the zinc sulfate obtained from a previous operation, crystallizing out the zinc sulfate and separating the same from the ferric sulfate solution, calcining the zinc sulfate, subjecting the zinc and lead compounds separately to the usual metallurgical treatment and using the regenerated ferric solution for the treatment of a further quantity of ore.

2. A cyclical process for treating complex sulfid ores containing lead and zinc consisting in grinding or pulverizing the ore to the condition of impalpable powder, treating the same with a solution of ferric sulfate, filtering the solution of ferrous sulfate and zinc sulfate so formed from the insoluble lead residue, converting the ferrous sulfate to ferric sulfate by oxidation aided by sulfuric acid, crystallizing out the zinc sulfate and separating the same from the ferric sulfate solution, calcincing the zinc sulfate, subjecting the zinc and lead compounds separately to the usual metallurgical treatment, and using the regenerated ferric solution for the treatment of a further quantity of ore, and also utilizing the acid fumes, evolved from the aforesaid calcining of the zinc sulfate in the conversion by oxidation of the subsequently formed ferrous sulfate to ferric sulfate.

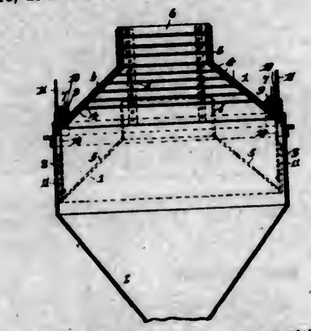
880,776. VEHICLE-TONGUE SUPPORT. GEORGE F. BELL, Sistersville, W. Va. Filed Aug. 5, 1907. Serial No. 387,095.

1. A vehicle tongue support comprising a rear support designed to be mounted on a running gear in rear of the tongue and provided with a forwardly projecting stud, a front support having means for securing it to the tongue and depending therefrom and provided with a rearwardly projecting threaded stem, a nut adjustable along the stem, and a coiled spring having its rear end fitted on the said stud and receiving the threaded stem within its front end and engaged by the said nut.



2. A tongue support comprising a rear support having a projecting stud, a coiled spring having its rear end fitted on the stud, a front support consisting of a top plate, a depending arm, and a threaded stem extending rearwardly from the arm and into the front portion of the coiled spring, means engaging the top plate of the front support for securing the same to a vehicle tongue, and a nut mounted on the threaded stem and having a reduced portion receiving the front end of the spring.

880,777. LORRY. BENTON BOYD, Uniontown, Pa. Filed Aug. 16, 1907. Serial No. 388,910.



1. A lorry open at the top and provided with an adjustable cap extending over the top of the body of the lorry and having an opening, and adjustable means connected to the cap and mounted on the body of the lorry for raising and lowering the cap to vary the capacity of the lorry.

2. A lorry open at the top and provided with an adjustable cap mounted on and forming a closure for the open top of the lorry and adapted to vary the capacity of the same, and means for raising and lowering the cap including chains connected to the cap at the outer sides thereof for suspending the cap within the body of the lorry.

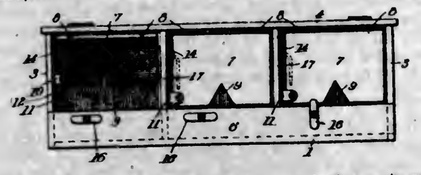
3. A lorry open at the top and provided with an adjustable cap mounted on and forming a closure for the open top of the lorry and adapted to vary the capacity of the same, said cap being composed of bars spaced apart to expose the contents to view.

4. A lorry open at the top and provided with an adjustable cap mounted over the top of the body of the lorry and adapted to vary the capacity of the same, means for raising and lowering the cap including chains connected to the cap, and guide bars for guiding the cap in its vertical movement.

5. The combination with a lorry, of a measuring device consisting of a cap having an opening for the passage of the material, windlass shafts mounted on the lorry, and flexible connections extending from the windlass shafts to the measuring device and adapted to be wound around and unwound from the former for raising and lowering the latter.

[Claims 6 to 8 not printed in the Gazette.]

880,778. POULTRY TRAP-NEST. FRANK F. B. CHAPMAN, Winchester, Mass. Filed Dec. 1, 1905. Serial No. 289,904.



1. A poultry trap nest, having a swinging entrance door, a pivoted hook for supporting the door partially open inwardly and adapted to be disengaged from the door upon further inward movement of the door, and an independent automatically operating door-locking mechanism for locking the door in closed position against inward movement only, after the hen enters the nest and releases the door from its supporting hook by further inward movement of the door, said locking mechanism serving the double purpose of preventing the entrance of another hen into the same nest and the entrance of any hen into the nest after an occupant has left the nest.

2. A poultry trap nest, having an inwardly and outwardly swinging entrance door, a pivoted hook for supporting the door partially open inwardly and adapted to be disengaged from the door by further inward movement of the door, and an independent locking mechanism for automatically locking the door in closed position against inward movement only, after the hen enters the nest and releases the door from its supporting hook by further inward movement of the door, said locking mechanism serving the purpose of preventing the entrance of another hen into the same nest and the entrance of any hen into the nest after an occupant has left the nest, the door being capable of being opened from the inside by an outcoming hen.

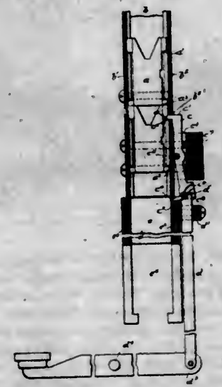
3. A poultry trap nest, having an inwardly and outwardly swinging entrance door, a pivoted hook for supporting the door partially open inwardly and adapted to be disengaged from the door by further inward movement of the door, and an independent spring dogging device and a stop therefor for automatically locking the door in closed position against inward movement only, after the hen enters the nest and releases the door from its supporting hook by further inward movement of the door, said dogging device and stop serving the double purpose of preventing the entrance of another hen into the same nest and permitting the egress of an imprisoned hen.

4. A poultry trap nest, composed of several cells, each cell having an inwardly and outwardly swinging door, a pivoted hook in each cell for supporting the door partially open inwardly for the entrance of a hen, said door being capable of being released from its supporting hook by further inward movement of the door upon the entrance of the hen to permit the door to close, and an automatic locking mechanism for locking the thus released door in closed position against inward movement, and at the same time allowing the door to swing outward to permit the exit of the imprisoned hen.

5. A poultry trap nest, composed of several cells, each cell having an inwardly and outwardly swinging door, a pivoted hook in each cell for setting the door partially open inwardly for the entrance of a hen, said door being capable of being wholly disengaged from said hook by the ingoing hen pushing the door inwardly to permit the door to close, and a dogging mechanism for each door independent of the setting mechanism for locking the door in closed position against inward movement and permitting outward movement of the door for the free exit of the imprisoned hen.

[Claims 6 and 7 not printed in the Gazette.]

880,779. LINOTYPE-MACHINE. FRANCIS B. CONVERSE, Jr., New Haven, Conn., assignor to Mergenthaler Linotype Company, a Corporation of New York. Filed May 16, 1907. Serial No. 373,919.



1. The combination of matrices having beveled surfaces and a centrally pivoted escapement having beveled surfaces to coöperate therewith, substantially as described and shown; whereby the passing matrices are caused to urge the escapement to and fro.

2. The combination of a channeled magazine, matrices guided thereby, a centrally pivoted escapement, having beveled surfaces at opposite ends to coöperate with the passing matrices, and means for controlling the vibration of the escapement; whereby the matrices are caused to urge the escapements to and fro, and the escapements controlled to prevent the improper release of the matrices.

3. In combination with means for guiding the same, gravitating matrices having beveled surfaces, and a centrally pivoted escapement having its ends arranged to contact with said surfaces; whereby the matrices are caused to urge the escapement to and fro.

4. In combination with a centrally pivoted escapement and finger-key connections for operating the same, matrices having beveled surfaces to act upon and assist in moving the escapement; whereby the passing matrices are caused to assist in moving the escapement, thereby reducing the labor required to actuate the key.

5. In combination with a centrally pivoted escapement having beveled surfaces at its ends, an actuating device adapted to lock the escapement in its normal position; whereby it is prevented from moving accidentally under the weight of the matrices.

[Claims 6 to 9 not printed in the Gazette.]

880,780. MEANS FOR ELECTRICALLY OPERATING FIRE-ENGINES. GUSTAVE A. DRAKE, Denver, Colo. Filed June 17, 1907. Serial No. 379,515.

1. The means for operating fire engines comprising a pump including discharge and suction nozzles, an electric motor operatively associated therewith and means adapted to simultaneously connect the motor with the terminals of the conductors in a broken electric circuit and the said suction nozzle with a water conduit.

2. The means to operate fire engines comprising a pump including discharge and suction nozzles, an electric motor operatively connected therewith, and a flexible conduit adapted to connect the suction nozzle with a water supply and to simultaneously connect the motor with the terminals of the conductors in a broken electric circuit.

3. The means for operating fire engines including a water supply conduit, a discharge nozzle communicating therewith a broken electric circuit terminating on the said nozzle at two insulated points, an electrically driven pump, a flexible conduit connected with its suction opening and having at its free end means adapted to operatively connect with the said nozzle and provided with insulated contacts electrically connected with the motor employed to drive the pump, and arranged to engage the insulated points on the nozzle, when the said connection between the latter and the conduit is being made.

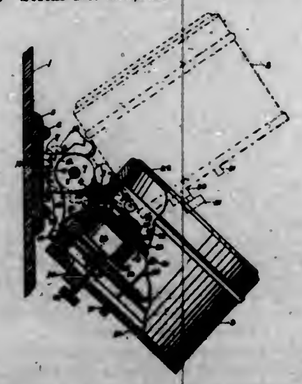


4. The means for operating fire engines including a water supply conduit, a discharge nozzle associated therewith, a broken electric circuit terminating in the said nozzle and in a contact insulated therefrom, an electrically driven pump, a flexible conduit connected with its suction opening and having at its free end means adapted to operatively connect with the said nozzle and having an insulated contact arranged to engage the contact on the nozzle when the connection with the flexible conduit is being made, the said means of connection and its insulated contact being electrically connected with the motor employed to drive the pump.

5. The means for operating fire engines including a water supply conduit, a discharge nozzle connected therewith, a broken electric circuit terminating on the said nozzle at two insulated points, an electrically driven pump including a suction nozzle having two insulated contacts electrically connected with the motor employed to drive the pump, and a detachable conduit adapted to connect the said nozzles and to electrically connect the insulated contacts on the one with the insulated points on the other.

[Claims 6 to 9 not printed in the Gazette.]

880,781. ODOMETER. WILLIAM W. DUDLEY, Lancaster, Pa., and LOUIS A. GREENLEAF and WALLACE R. DUDLEY, Trenton, N. J., assignors to Star Speedometer Company, a Corporation of Pennsylvania. Filed June 5, 1906. Serial No. 320,333.



1. In a registering device, the combination of the driving disk 42 having a stepped edge providing two circumferential surfaces of different diameters in different planes, radially projecting pins one on each of said circumferential surfaces and at an angular distance apart, means for driving said disk 42, continuous record mechanism having an actuating wheel 56 peripherally notched to receive one of said pins on the driving disk 42 and having between said notches concavities adapted to fit against the circumferential surface from which said pin projects and lock the said actuating wheel, trip recording mechanism having an actuating wheel 44 peripherally notched to receive the other pin on the driving disk 42 and being so located with reference to the said continuous record mechanism actuating wheel 56 as that both said actuating wheels are engaged by their pins simultaneously, said trip counter mechanism actuating wheel 44 being free to turn independent of the driving disk when not engaged by the said pin thereof, a reversing gear 52 on the shaft of said trip record actuating wheel 44, and a sliding gear 53 adapted to engage said reversing gear 52 to turn the trip record mechanism back to starting point.

2. In a registering device, the combination of the driving disk 42 having a stepped edge providing two circumferential surfaces of different diameter in different planes and an intermediate annular surface in the plane of the disk, radially projecting pins one on each of said circumferential surfaces at an angular distance apart, means for driving said disk, and a plurality of counter mechanisms having actuating wheels one in the same plane with each of the said portions of the driving disk and tangent thereto engaging the edge of the driving disk, said actuating wheels each having peripheral notches adapted to receive the said projecting pins on the disk portion with which it is in the same plane and said pins being so disposed as to engage their respective actuating wheel simultaneously.

3. The combination of the cylindrical casing 2 having its walls interiorly and annularly recessed from one of its ends inward to form a radially enlarged end portion and an annular shoulder at the end of said enlargement, a plate 32 seated on said shoulder, a second plate 19 arranged flat against said plate 32 in the small end part of the cylinder, screws extending through said first-mentioned plate into the second, screws extending through the wall of the cylindrical casing into the edge of said second-named plate, odometer mechanism mounted upon said plate 32 and removable therewith, time-keeping mechanism mounted on the other or second plate 19 and removable from the casing therewith, and screw caps one on each end of said casing, whereby either mechanism is accessible independent of the other and either can be removed on its plate without disturbing the other on its plate.

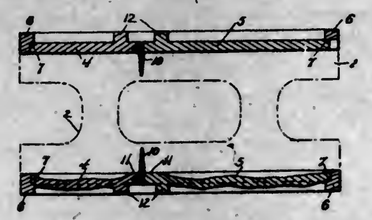
4. In a combined odometer and clock device, the combination of a cylindrical casing, interior transverse partitions arranged flatwise together intermediate of the ends of said casing, screws passing through the wall of said casing into the edge of one of said partitions, other screws passing through one of said partitions into the other one, odometer mechanism mounted upon one of said partition plates and removable from the casing thereupon, time-keeping mechanism mounted on the other partition and removable from the casing therewith, and movable closure caps one on each end of said casing, whereby either mechanism is accessible independent of the other and either can be removed on its plate without disturbing the adjustment of the other on its plate.

5. The combination with an odometer casing having a stem, of an attaching plate having a tongue, a pivotal pin passed through said stem and tongue, a fixed stop, on the said attaching plate, and a locking lever pivoted on the odometer casing and notched to engage said stops and hold the casing in desired position.

[Claims 6 to 11 not printed in the Gazette.]

880,782. FACE-PLATE FOR CEMENT-BLOCK MOLDS. GEORGE W. DUNLAP, Vancouver, British Columbia, Canada. Filed Dec. 28, 1906. Serial No. 349,868.

1. In a face plate for cement block molds, an open rectangular frame having a recessed seat, a supplementary mold plate fitting in said recessed seat, means for securing the supplementary mold plate in the seat, and parting blades removably secured to the edge of said mold plate, substantially as shown and described.

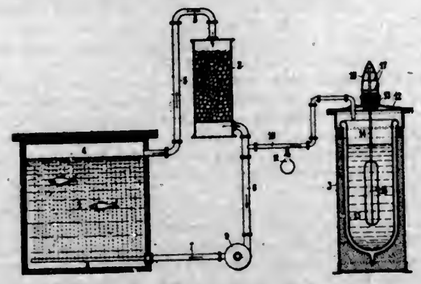


2. In a face plate for cement block molds, an open rectangular frame having a recessed seat, supplementary mold plates removably fitted within said recessed seat, means for securing said supplementary mold plates in the seat, and parting blades removably secured to the edge of the mold plates and held between the abutting edges of adjacent mold plates and projecting at right angles to the forming faces of the mold plates, substantially as shown and described.

3. In a face plate for cement block molds, an open recessed seat toward the lower part of the blade having dovetailed portions projecting toward one side of the plate, supplementary mold plates having portions for fitting in said seat and the dove-tailed portions thereof, means for holding the supplementary mold plates of the seat, and a parting blade secured to the edge of one of the supplementary plates and projected from the face of the plate at right angles thereto, substantially as shown and described.

4. In a face plate for cement block molds, a recessed seat, mold plates removably held in said recessed seat with their edges abutting, means for securing said mold plates in the seat, and parting blades removably secured to the edge of one of the mold plates and held between the abutting edges of adjacent mold plates, substantially as shown and described.

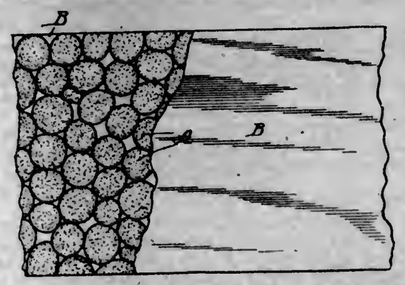
880,783. PROCESS OF REGENERATING WATER IN RESERVOIRS CONTAINING AQUATIC ANIMALS. GEORG ERLWEIN, Charlottenburg, and ERNST MARQUARDT, Carow, near Berlin, Germany. Filed Oct. 11, 1907. Serial No. 396,908.



1. A process for regenerating water in reservoirs, containing aquatic animals, consisting in driving out the air breathed out by the animals from the water, then eliminating the carbon dioxid from and adding oxygen to this air and finally leading back the air thus regenerated into the water.

2. A process for regenerating water in reservoirs, containing aquatic animals, consisting in driving out the air breathed out by the animals from the water, then eliminating the carbon dioxid by conducting the air through a material absorbing carbon dioxid and finally leading back the air thus regenerated into the water.

880,784. BOARD. JEFFERY T. FERRIS, Anderson, Ind., assignor to J. W. Sefton Manufacturing Company, Anderson, Ind., a Corporation of Indiana. Filed Jan. 15, 1907. Serial No. 352,410.



1. As a new article of manufacture, a board composed of a series of cross sections of vegetable stems assembled together with their ends in the same parallel planes, and paper arranged at their opposite ends; substantially as described.

2. As a new article of manufacture, a board composed of a series of cross sections of vegetable stems assembled together with their ends in the same parallel planes, and sheets of paper secured to the opposite ends of such sections; substantially as described.

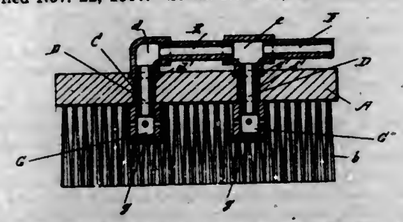
3. As a new article of manufacture, a board composed of a series of cross sections of vegetable stems assembled together with their ends in the same parallel planes, said sections being circular and arranged with their peripheries in contact, and sheets of paper secured to the opposite ends of such sections; substantially as described.

4. As a new article of manufacture, a board composed of a series of cross sections of vegetable stems assembled together with their ends in the same parallel planes, and a sheet of suitable material secured to one end of said sections to hold them in said assembled condition; substantially as described.

5. As a new article of manufacture, a board composed of a series of cross sections of corn stalks, said sections being of the same height and assembled together with their ends in the same parallel planes, and sheets of paper arranged at their opposite ends to hold such sections in said assembled condition; substantially as described.

[Claim 6 not printed in the Gazette.]

880,785. BRUSH. ROBERT E. FIELDS, Gordon, Nebr. Filed Nov. 22, 1907. Serial No. 403,356.

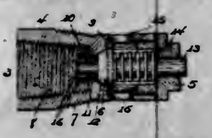


1 The combination, with a brush provided with a hole in its back having a countersunk recess, of a removable pipe inserted loosely in the said hole, a junction-piece secured to one end portion of the said pipe and engaging with the said recess, and a removable fastening cap provided with small perforations in its sides and end and screwed on the other end portion of the said pipe between the bristles of the brush.

2. The combination, with a brush provided with holes in its back having countersunk recesses, of removable pipes inserted loosely in the said holes, junction-pieces secured to the said pipes at one end and engaging with the said recesses, supply pipes connected to the said

junction-pieces, and removable fastening caps provided with small perforations in their sides and ends and screwed on the other end portions of the said removable pipes between the bristles of the brush.

880,786. GAGE-COCK. JAMES J. FINNEGAN and CHARLES E. WEBSTER, Benwood, W. Va. Filed Oct. 10, 1907. Serial No. 396,724.



1. In a device of the character described, the combination with a gage-cock, of a valve device threaded upon the tapered end of said gage-cock, said valve device consisting of a tapered exteriorly-threaded casing, having in its outer end a threaded socket in which the gage-cock is seated, and having a valve chamber in its opposite end, a closure for the end of said second socket, a centrally-apertured wall between said sockets, a spring-controlled valve in said chamber for closing the aperture in said wall, prongs carried by the face of said valve and projected through said aperture against the end of the gage-cock, which latter normally holds said valve unseated against the tension of the valve-controlling spring, and inlet-ports in said casing for admitting steam to said chamber.

2. In a device of the character described, the combination with a gage-cock, of a valve device threaded upon the tapered end of said gage-cock, said valve device consisting of a tapered exteriorly-threaded casing having in its outer end a threaded socket in which the gage-cock is seated, and having a valve chamber in its opposite end, steam inlet-ports in the walls of said chamber, a valve seat between said chamber and said socket, a spring-controlled valve in said chamber, and an element carried by said valve projected through into bearing engagement with said gage-cock.

3. In a device of the character described, a valve device comprising a casing adapted for mounting in the gage-cock opening of a boiler and having a threaded socket in its outer end for the reception of a gage-cock, a socket in the inner end of said casing, a closure for the last-mentioned socket, a valve seat intermediate said sockets, a spring-controlled valve in said last-mentioned socket, prongs carried by said valve and projected into the first-mentioned socket, said prongs being adapted to be engaged by the end of the gage-cock for normally holding said valve unseated, and ports for admitting of a passage of steam into said last-mentioned socket.

880,787. NON-REFILLABLE BOTTLE. ELIZABETH GIBSON, Dallas, Tex. Filed June 15, 1907. Serial No. 379,264.

1. A bottle of the character described comprising a neck portion, a valve movably seated therein, and a series of hooks on said movable valve engaging within the bottle, substantially as specified.

2. A bottle comprising a neck portion having an enlargement thereon, a movable valve in the neck portion and extending into the enlargement, and a series of hooks extending from said valve into the body of the bottle.

3. A bottle comprising a neck portion tapering at its inner end and provided with an enlargement above said tapering portion, a movable valve seated in said tapering portion and in said enlargement, and a series of hooks on said valve engaged inside the bottle, substantially as specified.

4. A bottle comprising a neck having a tapering portion at its lower end and a semi-globular enlargement above said tapering portion, in combination with a valve body located in the tapering portion of the neck, an enlarged portion on said valve body within the semi-globular enlargement in the neck, and a series of hooks on said valve body extending into the body of the bottle to prevent extraction of the valve, substantially as specified.



5. A bottle comprising a body having an internal annular groove at its upper end, a neck portion extending above said groove, a valve movably located in said neck portion, and a series of hooks on said valve engaging in the said annular groove, as and for the purpose specified.

[Claim 6 not printed in the Gazette.]

880,788. MEANS OF FORMING ELECTRICALLY-BONDED RAIL-JOINTS. HORATIO G. GILLMOR, Bath, Me. Filed Mar. 27, 1906. Serial No. 308,289.



1. An electrically bonded rail joint, including, in combination with the rails, a chair having upwardly extending arms, a bonding plate over-lapping the ends of the rails, and a wedge whereby pressure is exerted upon parts of the joint, substantially as described.

2. The combination of rails and an electrically bonded joint for the adjacent ends thereof, including a chair having inwardly extending arms, a sheet of conducting material over-lapping the ends of said rails, and wedges whereby pressure is exerted upon the parts of the joint, substantially as described.

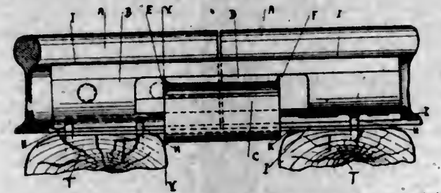
3. The combination of rails and an electrically bonded joint for the adjacent ends thereof, including a chair having upwardly extending arms, a conducting plate over-lapping the ends of said rails, and wedges constructed with double wedging surfaces whereby an inward and upper pressure is exerted upon parts of the joint, substantially as described.

4. A combination of rails and an electrically bonded joint for the adjacent ends thereof, including a sheet of conducting material over-lapping the ends of said rails, a chair having upwardly extending arms; fish bars adapted to engage under surfaces of the heads of the rails and upper surfaces of the bases of the rails, and wedges driven in between the arms of said chair and said fish bars, substantially as described.

5. A combination of rails and an electrically bonded joint for the adjacent ends thereof, including a plate of bonding material over-lapping the ends of said rails, a chair having upwardly extending arms; fish bars adapted to engage under surfaces of the heads of the rails and upper surfaces of the bases of the rails; wedges between said arms and bars, and fastening means for holding the joints in place, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

880,789. MEANS OF FORMING JOINTS IN ELECTRICAL CONDUCTORS. HORATIO G. GILLMOR, Bath, Me. Filed Feb. 4, 1907. Serial No. 355,598.



1. The combination of electrical conductors and a joint for the adjacent ends thereof, including, a chair having upwardly extending arms, and a wedge constructed with two wedging surfaces whereby pressure is exerted both transversely and vertically upon the parts of the joint, substantially as described.

2. The combination of electrical conductors and a joint for the adjacent ends thereof, including, a part composed partly of rust-proof material over-lapping the meeting ends of the conductors, a chair having upwardly extending arms and a wedge constructed with double wedging surfaces whereby pressure is exerted in two directions approximately at right angles upon the parts of the joint, substantially as described.

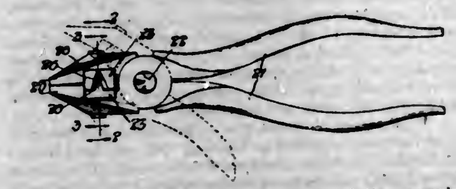
3. The combination of electrical conductors and a joint for the adjacent ends thereof, including, a part composed partly of corrosion-proof material over-lapping the meeting ends of the conductors, a chair having upwardly extending arms, a wedge constructed with two wedging surfaces whereby pressure is exerted upwardly and inwardly upon the parts of the joint, and fastening means whereby the joint is secured against movement with respect to one of the said conductors, substantially as described.

4. The combination of electrical conductors and a joint for the adjacent ends thereof, including a chair having upwardly-extending arms, a bar between said chair and said conductors, and a wedge having two wedging surfaces, whereby an inward and upward pressure is exerted upon the parts of the joint, substantially as described.

5. The combination of electrical conductors and a joint for the adjacent ends thereof, including a chair having upwardly extending arms, a bar composed in part of rust-proof material between said chair and said conductors, and a wedge having two wedging surfaces, whereby an inward and upward pressure is exerted upon the parts of the joint, substantially as described.

[Claims 6 to 17 not printed in the Gazette.]

880,790. IMPLEMENT FOR REMOVING INSULATING-COVERING FROM ELECTRIC-CIRCUIT WIRES. JOHN H. GOEHST, Chicago, Ill. Filed Feb. 25, 1907. Serial No. 359,296.



1. An implement for removing the insulating covering from electric circuit wires comprising, in combination with swinging jaws, coacting blades at the side of said jaws, one carried by each jaw, for transversely cutting the covering, and a blade between the jaws for longitudinally splitting the covering and arranged and designed to split the said covering past the center of the wire.

2. An implement for removing the insulating covering from electric circuit wires comprising, in combination with swinging jaws, co-acting blades at the side of the jaws for transversely cutting the covering, one carried by each jaw, said blades being provided with opposing notches, and at the side of said notches with inclined cutting edges, and a blade disposed transversely between the jaws for longitudinally splitting the covering, the splitting blade extending with its cutting edge past the bottom of said notches.

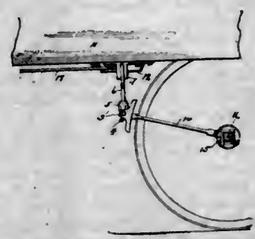
3. An implement for removing the insulating covering from electric circuit wires comprising, in combination with swinging jaws, co-acting blades at the side of the jaws for transversely cutting the covering, one carried by each jaw, said blades being provided with opposing notches, and at the side of said notches with inclined cutting edges, and a blade disposed transversely between the jaws, at one side of the center of said notches, for longitudinally splitting the covering.

4. An implement for removing the insulating covering from electric circuit wires comprising, in combination with hinged jaws, co-acting blades at the side of the jaws, for transversely cutting the covering, one carried by each jaw, and co-acting blades between the jaws, one carried by each jaw, and located at one side of the centers of said transversely cutting blades, for longitudinally splitting the covering.

5. An implement for removing the insulating covering from electric circuit wires comprising, in combination with swinging jaws, two pairs of co-acting blades, one pair at each side of the jaws for transversely cutting the covering, one of the blades of each pair being carried by one jaw and the other by the other jaw, and a blade extending transversely between the side blades at one side of the centers of the transverse cutting blades for longitudinally splitting the covering.

[Claims 6 to 12 not printed in the Gazette.]

880,791. VEHICLE OR WAGON BRAKE. FRANCES A. GRACE, Sharon, Pa. Filed Apr. 12, 1907. Serial No. 367,825.

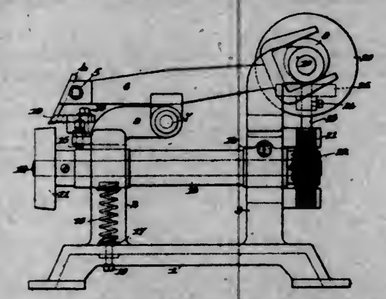


1. In combination with a wagon body and its supporting wheels, swinging stirrups depending from the wagon body, guides within the stirrups for holding the stirrups against lateral movement, oppositely extending levers carried by the stirrups, rods pivotally connected at one end with the axle of the supporting wheel and at the opposite end to the stirrup, brake shoes carried by certain of the oppositely extending levers, and a brake rod in operative connection with the remaining levers.

2. In combination with a wagon body and its supporting wheels, swinging stirrups depending from the wagon body, guides within the stirrups for holding the stirrups against lateral movement, oppositely extending levers carried by the stirrups, rods pivotally connected at one end with the axle of the supporting wheel and at the opposite end to the stirrup, brake shoes carried by certain of the oppositely extending levers, a brake rod in operative connection with the remaining levers, and guide straps for the levers with which the brake rod connects.

3. In combination with a wagon body and its supporting wheels swinging stirrups depending from the wagon body, spaced guides within the stirrups for holding the stirrups against lateral movement, oppositely extending levers carried by the stirrups, rods pivotally connected at one end with the axle of the supporting wheels and at the opposite end to the stirrups, brake shoes carried by certain of the oppositely extending levers and a brake rod in operative connection with the remaining levers.

880,792. STITCH-SEPARATING MACHINE. JOHN B. HADAWAY, Brockton, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Nov. 22, 1900. Serial No. 37,237.



1. A stitch separating machine, having, in combination, a stitch separating tool movable towards and from the work to indent the stitch intervals successively, automatic mechanism for actuating the tool and continuously acting feeding mechanism acting to feed the work approximately the length of a stitch between successive actuations of the tool and arranged to allow the work to be stopped by the tool and to slip on the work while the work is held by the tool, substantially as described.

2. A stitch separating machine, having, in combination, a stitch separating tool movable towards and from the work to indent the stitch intervals successively, automatic mechanism for actuating the tool, a continuously rotating feed roll acting on the bottom of the sole to feed the sole approximately the length of a stitch between successive actuations of the tool and arranged to allow the sole to be stopped by the engagement of the tool therewith and to slip on the sole while the sole is held by the tool, substantially as described.

3. A stitch separating machine, having, in combination, a stitch separating tool movable towards and from the work to indent the stitch intervals successively and automatic mechanism for actuating the tool and for continuously feeding the work while the tool is out of engagement therewith, constructed and arranged to allow the work to be positioned and stopped by the tool as the tool engages each stitch interval, substantially as described.

4. A stitch separating machine, having, in combination, a stitch separating tool movable towards and from the work to indent the stitch intervals successively, automatic mechanism for actuating the tool, and feeding mechanism acting continuously on the work and arranged to allow the work to be stopped and positioned by the tool as the tool engages each stitch interval and to feed the work when released by the tool, and means for adjusting the feeding mechanism to cause the work to be moved approximately the length of a stitch between successive actuations of the tool, substantially as described.

890,793. TOY. JOHN W. HASLETT, Washington, D. C. Filed July 23, 1907. Serial No. 385,167.

1. A toy comprising a wheel, an inclined track over which the wheel travels, a crank attached to the wheel and rotated thereby, a device supported on the crank to move therewith and disposed above the wheel, and means suspended from the wheel to hold the latter in upright position.

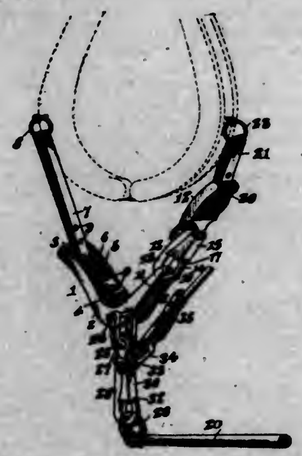
2. A toy comprising a wheel, a track over which the wheel travels, links supported on the wheel, a weight mounted on the links, cranks on the wheel, and a device mounted on both cranks and movable therewith and extending beyond the wheel.

3. A toy comprising a trolley, a cord over which the trolley travels, a crank shaft on the trolley, links carried by the trolley and depending therefrom, a shaft rotatably mounted on the links, cranks on the last mentioned shaft, connecting rods between said cranks and crank shaft for rotating the second shaft by the first and a device on the second shaft to rotate therewith.



4. A toy comprising a trolley, a cord over which the trolley travels, a crank shaft on the trolley, links carried by the trolley and depending therefrom, a shaft rotatably mounted on the links, a crank on the last mentioned shaft, a connecting rod between the crank shaft and crank for rotating the second shaft by the first, an object on and rotated by the second shaft and serving to hold the toy upright, and a device attached to and movable with the connecting rod and extending above the trolley.

880,794. BREAST-STRAP CONNECTION. HENRY R. HENRICHS, Woodward, Okla. Filed Feb. 9, 1907. Serial No. 356,588.



1. A breast strap connection comprising a connecting frame having upwardly extending arms, one of the arms being provided at an intermediate point with a pivoted tongue and forming a buckle adapted to receive one breast strap, a buckle loosely connected with the other arm of the frame to receive the other breast strap, and means for connecting the frame to a neck yoke.

2. A breast strap connection comprising a substantially V-shaped frame provided at one arm with a pivoted tongue and forming a buckle to receive one of the breast straps, a buckle loosely connected with the other arm for receiving the other breast strap, and means for connecting the apex of the frame with a neck yoke.

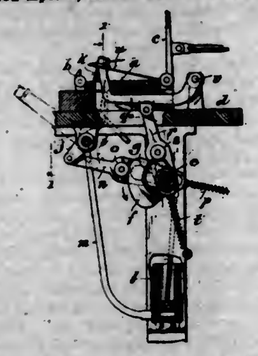
3. A breast strap connection comprising a frame having upwardly diverging arms and consisting of two sides and connecting transverse portions arranged at intervals, a tongue pivotally mounted between the sides on one of the transverse portions of one of the arms to form a buckle for engaging one of the breast straps, a buckle loosely connected with one of the transverse portions of the other arm to receive the other breast strap, and means for connecting the frame with a neck yoke.

4. A breast strap connection comprising a frame having upwardly extending arms provided with two sides, one of the arms being also provided with spaced transverse bars and having a pivot at an intermediate point, a tongue mounted on the pivot and coöperating with one of the end bars to form a buckle, a buckle connected with the other arm of the frame, and means for connecting the frame with the neck yoke.

5. A breast strap connection comprising a frame having upwardly extending arms provided with spaced sides, one of the said arms having a buckle, and the other arm being provided with spaced connecting portions forming an end loop, a buckle having means for engaging the end loop, and means for connecting the frame to a neck yoke.

[Claims 6 and 7 not printed in the Gazette.]

880,795. DELIVERY MECHANISM FOR ENVELOP AND SIMILAR MACHINES. CHARLES H. HEYWOOD and DENISON E. TRAVIS, Waukegan, Ill., assignors to United States Envelope Co., Springfield, Mass., a Corporation of Maine. Filed Apr. 2, 1906. Serial No. 309,289.



1. In combination with the folding bed of an envelop or similar machine, a suction picker movable to and fro over the folding bed, means for producing a vacuum in said picker while it is over and moves away from said bed, and a lifter adapted to raise an envelop or the like upwardly from the bed against the picker, substantially as described.

2. In an envelop or similar machine, the combination with the folding mechanism comprising a bed and front folder, of a suction picker movable to and fro over said bed, means for exhausting air from the picker while it is over and moves away from the bed, and a vertically movable lifter adapted to raise an envelop or the like from the bed into position to be caught by the picker and to be carried thereby over the front folder, substantially as described.

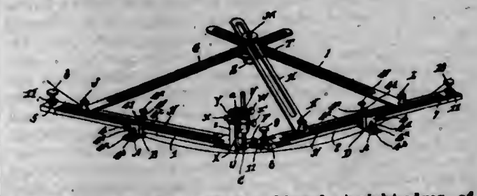
3. In an envelop or similar machine the combination with the folding bed, of a suction picker consisting of a tubular rocker shaft provided with tubular arms having mouths at their free ends which are bent to pass over said bed, means for exhausting air from said picker, and a lifter consisting of arms movable vertically through openings in the bed and adapted to raise an envelop or the like therefrom towards the opposing mouths of the picker, substantially as described.

4. In an envelop or similar machine the combination with folding mechanism comprising a bed and folder, of a suction picket comprising a tubular rocker shaft provided with inwardly bent tubular arms terminating in mouths opening towards said shaft and a suction pump connected with said shaft; a lifter comprising pivoted arms movable at their free ends upwardly through openings in said bed, and means for actuating the picker, pump and lifter, substantially as described.

5. In an envelop or similar machine, the combination with a folding bed, of a withdrawing mechanism for removing a folded envelop or the like from the folding bed and comprising a pair of suction pickers, means for swinging said pickers in planes at the opposite ends of said folding bed, said pickers being bent at their ends to extend over said folding bed, and means for lifting an envelop or the like from said bed into contact with said pickers, substantially as described.

[Claim 6 not printed in the Gazette.]

880,796. DRAFTING INSTRUMENT. WALTER E. HORROCKS, Cleveland, Ohio. Filed June 13, 1907. Serial No. 378,785.



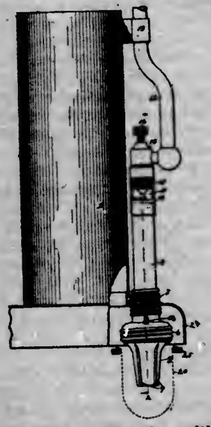
1. The combination with two hinged straight-edges, of point-holders each of which comprises a block across which the straight-edges are slidable, said block having a depending point and also having a clamp adapted to fasten the same to the straight-edge.

2. The combination with hinged straight-edges and a marking device carried thereby, of rollers upon which said parts are mounted, the rollers being adjustable to raise or lower said parts.

3. The combination with hinged straight-edges and a marker carried thereby, of point holders each of which comprises a block having a depending point, the face of the block being in line with the point, and also having an opening in the back of the block, through which the point may be seen.

4. The combination with hinged straight-edges and a marker carried thereby, of point-blocks across which the straight edges are slidable, and brackets pivotally connected to said blocks.

880,797. GAS-LAMP. ALFRED H. HUMPHREY, New York, N. Y. Filed Mar. 16, 1907. Serial No. 362,696.



1. In a gas lamp, the combination with a gas delivery pipe, of a chimney connected thereto, said chimney having an outwardly-projecting flange at its lower end; a nipple on said gas delivery pipe; a downwardly-directed delivery nozzle threaded upon the lower end of said nipple; a valve for controlling said delivery nozzle; a sleeve adjustably-arranged on said nipple having openings in the sides thereof for the admission of air and for the manipulation of said nozzle, said openings being of sufficient size to admit of the insertion or removal of said nozzle therethrough; an inverted burner tube having a flange-like enlargement at its lower end, threaded through said

chimney flange, arranged with its upper end projecting into said sleeve; an inverted burner tip having a threaded enlargement at its upper end corresponding in diameter to the lower end of the said burner tube; a coupling sleeve arranged on the enlarged lower end of said burner tube, into which said burner tip is threaded; and lugs on said burner tube adapted to engage said coupling whereby its rotation on said burner tube is prevented.

2. In a gas lamp, the combination with a gas delivery pipe, of a chimney connected thereto, said chimney having an outwardly-projecting flange at its lower end; a downwardly-directed delivery nozzle; a valve for controlling said delivery nozzle; a sleeve having openings in the sides thereof for the admission of air, arranged about said nozzle; an inverted burner tube having a flange-like enlargement at its lower end, threaded through said chimney flange, arranged with its upper end projecting into said sleeve; an inverted burner tip having a threaded enlargement at its upper end corresponding in diameter to the lower end of the said burner tube; a coupling sleeve arranged on the enlarged lower end of said burner tube, into which said burner tip is threaded; and lugs on said burner tube adapted to engage said coupling whereby its rotation on said burner tube is prevented.

3. In a gas lamp, the combination with a gas delivery pipe, of a chimney connected thereto, said chimney having an outwardly-projecting flange at its lower end; a nipple on said gas delivery pipe; a downwardly-directed delivery nozzle threaded upon the lower end of said nipple; a valve for controlling said delivery nozzle; a sleeve adjustably-arranged on said nipple having openings in the sides thereof for the admission of air and for the manipulation of said nozzle, said openings being of sufficient size to admit of the insertion or removal of said nozzle therethrough; an inverted burner tube having a flange-like enlargement at its lower end, threaded through said chimney flange, arranged with its upper end projecting into said sleeve; an inverted burner tip having a threaded enlargement at its upper end corresponding in diameter to the lower end of the said burner tube; and a coupling sleeve arranged on the enlarged lower end of said burner tube into which said burner tip is threaded.

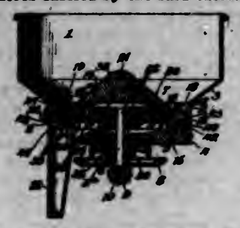
4. In a gas lamp, the combination with a gas delivery pipe, of a chimney connected thereto, said chimney having an outwardly-projecting flange at its lower end; a downwardly-directed delivery nozzle; a valve for controlling said delivery nozzle; a sleeve having openings in the sides thereof for the admission of air arranged about said nozzle; an inverted burner tube having a flange-like enlargement at its lower end, threaded through said chimney flange, arranged with its upper end projecting into said sleeve; an inverted burner tip having a threaded enlargement at its upper end corresponding in diameter to the lower end of the said burner tube; and a coupling sleeve arranged on the enlarged lower end of said burner tube, into which said burner tip is threaded.

5. In a gas lamp, the combination with a gas delivery pipe, of a chimney connected thereto, said chimney having an outwardly-projecting flange at its lower end; a downwardly-directed delivery nozzle; a valve for controlling said delivery nozzle; an inverted burner tube having a flange-like enlargement at its lower end, threaded through said chimney flange, arranged with its upper end arranged below said delivery nozzle; an inverted burner tip having a threaded enlargement at its upper end corresponding in diameter to the lower end of the said burner tube; a coupling sleeve arranged on the enlarged lower end of said burner tube into which said burner tip is threaded; and lugs on said burner tube adapted to engage said coupling whereby its rotation on said burner tube is prevented.

[Claims 6 to 25 not printed in the Gazette.]

880,798. POTATO CUTTER AND FEEDER FOR PLANTERS. CHARLES JENKINS, Delevan, N. Y. Filed Oct. 26, 1907. Serial No. 399,239.

1. In a device of the class described, the combination of a hopper having a discharge opening, a rotary potato carrier operating within the hopper and provided with spaced members forming seed cups, and a knife arranged at the space between the said members in position to divide the potatoes carried by the said carrier.



2. In a device of the class described, the combination of a hopper having a cylindrical portion, a potato carrier operating in the hopper and consisting of a circular support and arranged in spaced relation with the cylindrical portion of the hopper, and projecting arms extending from the support and operating in the space between the same and the hopper, and a central conical member mounted on the carrier for directing the potatoes into the said space.

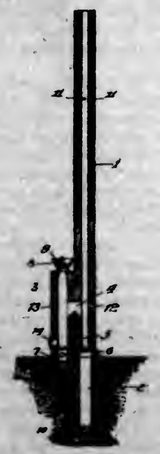
3. In a device of the class described, the combination of a hopper, a rotary potato carrier provided with radially arranged upper and lower arms spaced apart and forming seed cups, and a knife arranged in the space between the upper and lower arms and adapted to divide the potatoes carried by the seed cups.

4. In a device of the class described, the combination of a hopper having a discharge opening, a rotary carrier provided with upper and lower projecting arms forming seed cups, the lower arms being movably mounted, and means for causing the movement of the arms at the discharge opening of the hopper to drop the potatoes.

5. In a device of the class described, the combination of a hopper, a carrier provided with upper and lower arms spaced apart to form seed cups, the lower arms being movable, a knife arranged in the space between the upper and lower arms in position for dividing the potatoes carried by the seed cups, and means arranged in the path of the potatoes and the lower arms for moving the same downward to discharge the potatoes.

[Claims 6 to 24 not printed in the Gazette.]

880,799. METHOD OF REDUCING ORES. JOHN T. JONES, Iron Mountain, Mich., assignor of one-half to George A. St. Clair, Duluth, Minn. Filed May 22, 1907. Serial No. 374,980.



1. The method of reducing ore to recover the metal therefrom, which consists in mixing with the ore in finely divided condition coke, or the like, in lump form, thereby forming a column of the ore mixed throughout with such coke, or the like, to render the column interstitial, and passing through said column the hot products of combustion from carbonaceous fuel, to the exclusion of air and without smelting the ore, thereby reducing the metallic constituent of the ore to a metal state therein.

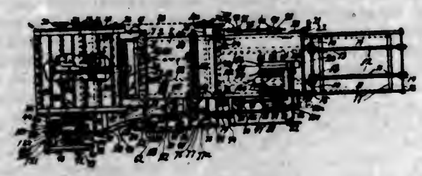
2. The method of reducing ore to recover the metal therefrom, which consists in mixing with the ore in finely divided condition coke, or the like, in lump form, passing through a column of the mixture the hot products of combustion from carbonaceous fuel, to the exclusion of air and without smelting the ore, and mixing air with the products of combustion in the upper part of said column, for the purpose set forth.

3. The method of reducing ore to recover the metal therefrom, which consists in mixing with the ore in finely divided condition coke, or the like, in lump form, and passing through a column of the mixture the hot products of combustion from carbonaceous fuel together with hydrocarbons distilled from said fuel, to the exclusion of air and without smelting the ore, thereby reducing the metallic constituent of the ore to a metal state therein.

4. The method of reducing ore to recover the metal therefrom, which consists in mixing with the ore in finely divided condition coke, or the like, in lump form thereby forming a column of the ore mixed throughout with such coke, or the like, to render the column interstitial, passing through said column the hot products of combustion from carbonaceous fuel, to the exclusion of air and without smelting the ore, and cooling the ore thus treated preparatory to separating from the gangue the metal products of reduction.

5. The method of reducing ore to recover the metal therefrom, which consists in mixing with the ore in finely divided condition coke, or the like, in lump form, passing through a column of the mixture the hot products of combustion from carbonaceous fuel together with hydrocarbons distilled from said fuel, to the exclusion of air and without smelting the ore, cooling the ore thus treated and separating from the gangue the metal product of reduction.

880,800. BALING-PRESS. ALDEN J. LAIDLAW, Red Wing, Minn. Filed Mar. 14, 1907. Serial No. 362,307.



1. In a baling-press, the combination with a baling chamber and an automatic binding device, of a pair of downwardly foldable normally level shelves arranged for the bale to slide upon as it is pushed out from the baling chamber, a trigger or trip in the path of the bale and adapted to be operated by the bale when it is fully on to the shelves, and means whereby the trigger trips the shelves and drops the bale, means for restoring the shelves to normal position automatically, and an automatic conveyer below the shelves for removing the bales.

2. A baling-press having a horisontally disposed baling chamber, a hopper above the same, an endless conveyer apron arranged to feed the hopper, a plunger reciprocated below the hopper and the conveyer, a crank shaft below the conveyer, a pitman operated thereby and driving the plunger, and means for turning the crank shaft by power, a packer vibrating vertically in the hopper and having a supporting arm extended forwardly between the conveyer and the said crank shaft and being pivoted to the frame work, and formed with a slot, a smaller crank shaft journaled to the frame work, and having its crank inserted in said slot so as to vibrate the packer.

3. A baling-press having a baling chamber and a plunger working therein, a packer feeding materials down into the chamber and having a slotted supporting arm pivoted to the frame work, and a crank engaging in the slot to operate the packer, one of the bars forming the slot having a yielding spring connection with the arm for the purpose set forth.

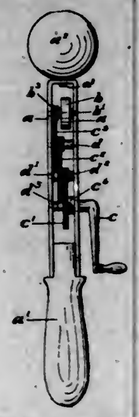
4. In a baling-press, the combination of a baling chamber, a power-operated shaft, a pinion slidingly keyed thereon, a main crank-shaft with a pitman and plunger operated thereby in the baling chamber, a gear fixed on the main shaft and driven periodically by the pinion, a packer and packer crank-shaft operatively connected with the main crank shaft, a secondary shaft, 70, having a fixed gear permanently meshing with the sliding pinion, a bale-binding device arranged to bind each bale while it is in the chamber, operative connection between the secondary shaft and the binder, a clutch inserted in said operative connection, a trigger in the path of the bale pushed by the bale about to be bound, and means whereby said trigger causes the clutch to start the binder, a cam on the binder-shaft, a spring-held lever pivoted to the frame-work and operated by the cam against the action of the spring, means for dropping the bale that acted on the trigger, means whereby said lever restores the trigger to normal position after the bale is dropped, and also throws the clutch out of action as soon as the binder has bound the bale in the chamber, said lever operating the sliding pinion, thereby stopping the main crank shaft, the plunger and the packer while the binding device is at work, all operated automatically from the one drive shaft.

5. In a baling press, the combination of a baling chamber, a power-operated shaft, a pinion slidingly keyed thereon, a main crank-shaft with a pitman and plunger operated thereby in the baling chamber, a gear fixed on the main shaft and driven periodically by the pinion, a packer and packer crank-shaft operatively connected with the main crank shaft a secondary shaft, 70, having fixed gear permanently meshing with the sliding pinion, a bale-binding device arranged to bind each bale while it is in the chamber, operative connection between the secondary shaft and the binder, a clutch inserted in said operative connection, a trigger in the path of the bale pushed by the bale about to be bound, and means whereby said trigger causes the clutch to start the binder, a cam on the binder-shaft, a spring-held lever pivoted to the frame work and operated by the cam against the action of the spring, means for dropping the bale that acted on the trigger, means whereby said lever restores the trigger to normal position after the bale is dropped, and also throws the clutch out of action as soon as the binder has bound the bale in the chamber, said lever operating the sliding pinion, thereby stopping the main crank-shaft, the plunger and the packer while the binding device is at work, all operated automatically from the one drive shaft, and automatic means for preventing the plunger from getting in the way for the binding mechanism when the latter is in operation.

880,801. VIBRATOR. HAROLD LARSEN, Springfield, Ohio. Filed Apr. 4, 1907. Serial No. 366,427.

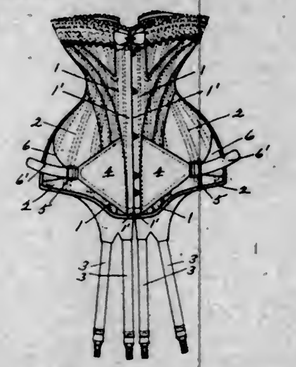
In a vibrating device, a handle member, a U-shaped frame secured at one end to said handle member and in longitudinal alinement therewith, a spherical solid contacting device, means connecting said spherical solid contacting device in direct contact with the U-shaped frame at the end opposite the handle member, said connecting means lying in the longitudinal axis of the device as a whole, a vibrator fixedly mounted upon its shaft within said frame, a manually operated drive shaft also in said frame, and a train of intermeshing gearing fixedly mounted on their respective shafts and connecting the drive shaft with the vibrator, whereby when the drive shaft is turned in either direction the vibrator is operated, the

plane of rotation of said vibrator being parallel with the longitudinal axis of the device as a whole, said gearing



rotating in parallel planes with said vibrator, substantially as shown and described.

880,802. CORSET. AUGUSTE J. LECOUTRE, Worcester, Mass., assignor to Royal Worcester Corset Company, a Corporation of Massachusetts. Filed Oct. 1, 1906. Serial No. 336,824.



1. The combination with a corset, of two pairs of adjusting bands or straps at the lower front part of the corset, and extending over the front and side sections, the front strap or band of each pair being of substantially triangular shape with its wide front end secured to a busk section, and the rear strap or band of each pair being also of substantially triangular shape with its wide rear end secured to the middle part of a hip section, and a strap and buckle connection for adjustably attaching the two parts of each pair of adjusting straps or bands together, and each pair of straps or bands being so located on the corset that the draft or strain on the same, in adjusting the corset, is in a substantially horizontal plane, and in a plane substantially parallel to the lower edge of the corset.

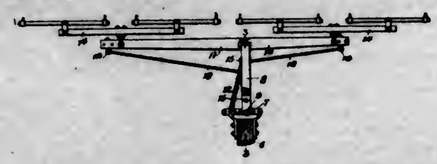
2. The combination with a corset, of two pairs of adjusting bands or straps at the lower front portion of the corset, the front strap or band of each pair being of substantially triangular shape and having its wide front portion attached to a busk section and provided with a loop or buckle, and the rear strap or band of each pair being also of substantially triangular shape with its wide rear end attached to a hip section and having a reduced end to pass through said loop or buckle, and each pair of straps or bands being so located on the corset that the draft or strain on the same, in adjusting the corset, will be in a substantially horizontal plane, and in a plane substantially parallel to the lower edge of the corset.

880,803. BRIDLE-BIT. STEPHEN A. M. LINVILLE and LINEY HICKS, Concordia, Kans. Filed Aug. 2, 1907. Serial No. 386,853.



A bit comprising a bar, separate cheek pieces journaled for independent rotation around the longitudinal axis of the bar, arms carried by the cheek pieces, and separate jaw pallets carried by the arms.

880,804. DRAFT-EQUALIZER. CHARLES M. LOFLIN, Ellis, Kans. Filed June 27, 1907. Serial No. 381,104.



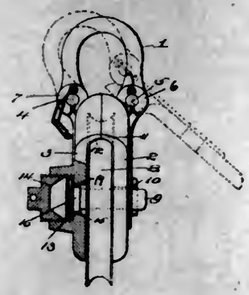
1. In a draft equalizer, the combination with a draft member, of a lever fulcrumed at one end thereon, an evener beam comprising sections pivoted at their inner ends to the draft member, whiffletrees connected to the beam sections at different distances from the draft member, and links of different lengths connected at their outer ends respectively to the beam sections at different distances from the draft member and on the same side of the pivot as the whiffletrees, said links being connected at their inner ends directly to the lever at different distances from and on the same side of the fulcrum of said lever.

2. In a draft equalizer, the combination with a draft member having means at its rear end for attachment to a clevis and comprising spaced bars, of a lever located between the bars longitudinally thereof and fulcrumed at its rear end to the same in advance of said attaching means, an evener beam comprising sections, the inner ends of which are located between the front ends of the bars in advance of the lever, a pivot connecting the sections and bars, whiffletrees connected to the outer ends of the beam sections, links connected to the outer portions of the beam sections at different distances from the pivot and having their inner and rear ends connected to the lever on the same side of and at different distances from the fulcrum thereof, and a flexible device connected to the draft member and having means for attachment to the clevis, said device permitting the swinging movement of the draft member in one direction and limiting it in an opposite direction.

880,805. LOGGING-BLOCK. JAMES MATTSON, Redmond, Wash. Filed June 1, 1907. Serial No. 376,821.

1. A device of the class described, comprising a pulley, a journal therefor, guards for supporting said journal and for preventing a cable from being accidentally removed from said pulley cable retaining portions formed on the upper part of the sides of the guards, said retaining portions extending laterally and being provided with crescent shaped recesses fitting a segment of the pulley and draft means secured to said guards.

2. A device of the class described, comprising a pulley, guards therefor, a clevis pivotally secured to each of said guards, cable retaining portions formed on the upper part of the sides of the guards said retaining portions extending laterally and being provided with crescent shaped recesses fitting a segment of the pulley, means for holding said guards in position, and means for permitting one of said guards to be removed from said pulley.

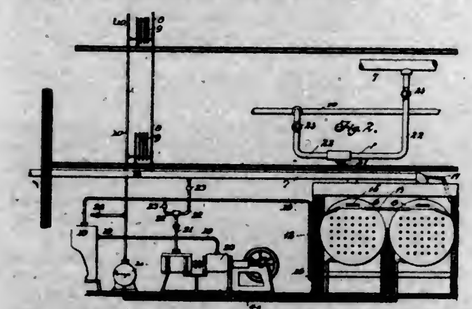


3. A device of the class described, comprising a pulley, draft means pivotally secured to said guards, a journal for said pulley supported by said guards, a lubricating receptacle, and means for closing the receptacle and holding the journal in position, thereby preventing its accidental displacement when one of the guards is opened.

4. A device of the class described, comprising a pulley, draft means, pivotally mounted guards secured thereto, means for permitting one of said guards to be removed for permitting the removal of the cable supported by said pulley, a journal for said pulley mounted in said guards, one of said guards being formed with a cut-away portion for accommodating the end of said journal and for forming ways for permitting lubricant to be forced into the bearings of said pulley, and means for closing the receptacle and holding the journal in position, thereby preventing its accidental displacement when one of the guards is opened.

5. A device of the class described, comprising a pulley, guards for supporting said pulley, said guards partially surrounding said pulley, cable retaining portions formed on the upper parts of the guards, extending laterally, and being provided with crescent shaped recesses fitting a segment of the pulley and means for permitting one of said guards to be moved from said pulley for permitting the removal of a cable designed to be passed thereover.

880,806. HEATING SYSTEM. FRANK J. MELTON, Chicago, Ill. Filed Apr. 6, 1907. Serial No. 366,793.



1. In a combined steam and air heating system, the combination with a boiler, and a main steam pipe leading therefrom, of an air compressor having a pipe connection extending through the boiler and to the said steam pipe, a pipe for motive power, connected to the compressor and having branches connected to said air and steam pipes, and check valves which open toward each other in said branches.

2. In a combined steam and air heating system, the combination with a boiler and its furnace, and a supply pipe leading from the boiler, of an air pump, an air pipe leading therefrom to the said supply pipe and exposed intermediately to the heat of the furnace, a branch pipe from the said supply pipe to the pump, to supply pressure to operate the latter, and a branch pipe connecting said last mentioned pipe and the air pipe, each of the branch pipes having a check valve therein which opens toward the other, to stop the pump when the air pressure equals the steam pressure.

880,807. PICKLE-FORK. EDWARD F. MENKIN, Chicago, Ill., assignor, by mesne assignments, to Enterprise Specialty Company, a Corporation of Illinois. Filed Sept. 9, 1907. Serial No. 391,937.



1. A pickle fork, consisting of a stem, formed by twisting together two strips or strands of metal, and an acting end having a spear point at the terminal end of one strip or strand and an outwardly curved hook grab at the terminal end of the other strip or strand, for the acting end to enter and grasp the body of the pickle, substantially as described.

2. A pickle fork made from a single piece of wire turned on itself to furnish two strands and having the two strands twisted together to form a stem and having the free end of one strand shaped to form a spear point and having the free end of the other strand shaped to form an outwardly curved hook grab, the spear point and hook grab constituting an acting end for entering and grasping the body of the pickle, substantially as described.

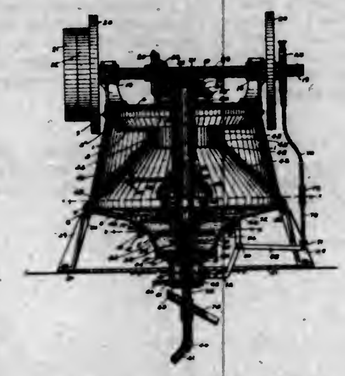
3. A pickle fork made from a single piece of wire turned on itself to furnish two strands and having the two strands twisted together to form a stem and having the free end of one strand shaped to form a spear point and having the free end of the other strand shaped to form an outwardly and spirally curve hook grab, the spear point and the hook grab constituting an acting end for entering and grasping the body of a pickle, substantially as described.

4. A pickle fork, consisting of a stem and an acting end, the acting end having a spear point and an outwardly and spirally curved hook grab for entering and grasping the body of the pickle, substantially as described.

880,808. MINERAL-CONCENTRATOR. CHARLES O. MICHAELSEN, Omaha, Nebr. Filed Jan. 30, 1907. Serial No. 354,905.

1. In a machine of the class described, the combination with the casing having a centrally inclined bottom plate, the removable central bowl, and the means forming

a central discharge passage, of the two sets of agitating blades working adjacent the inclined bottom plate and within the bowl and moving at different speeds, and an automatically actuated discharge valve intermittently openable and adapted to impart a pulsatory motion to the fluid contents of the bowl and casing.



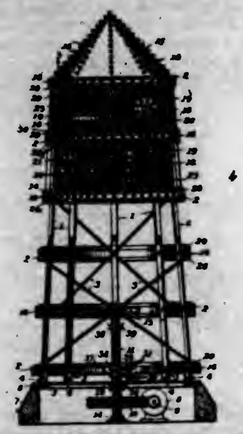
2. In a machine of the class described, the combination with the casing, the removable concave bowl and pan, and the means forming a central tubular discharge passage having ports opening thereinto above the level of the bowl, of the agitating blades working within the bowl, there being water inlets to the bowl and pan, a shell forming a chamber arranged below the pan to receive materials therefrom, and an automatically operated valve for intermittently discharging the contents of said chamber, said valve being adapted to impart a pulsatory motion to the fluid contents of the casing.

3. In a machine of the class described, the combination with the casing having a centrally inclined bottom plate, the bowl removably secured thereto, the rotary distributer, the curved blades working adjacent to the inclined bottom plate and rotating at the same speed as the distributer, and the means forming a central tubular discharge passage, of agitating blades working within the bowl, means carrying said agitating blades and rotating at a speed slower than that of the distributer, there being a screened water inlet to said bowl, means arranged below the bowl to receive materials therefrom, and an intermittently actuated valve controlling the final discharge of such materials.

4. In a machine of the class described, the combination with a casing having a centrally depressed bowl-shaped bottom, a conical rotary distributer working within said casing, agitating blades moving adjacent the bottom of the casing, and means forming a central tubular discharge passage having ports opening thereinto above the level of the outer portion of the bottom, of a shell forming a chamber arranged below the lowest part of the bowl-shaped bottom and communicating therewith, means for supplying a stream of water to said chamber, and reciprocating means working within said chamber and adapted to impart a pulsatory motion to the fluid contents of the chamber and casing.

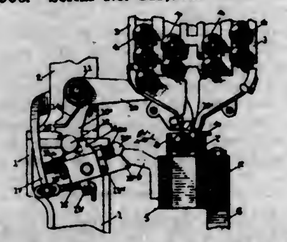
5. In a machine of the class described, the combination with a circular casing, a feed chute leading thereinto, a rotary distributer arranged to distribute materials received from the feed chute around the outer edge of the casing bottom, said bottom having a central bowl-like depression, and means forming an overflow or discharge passage opening into the casing above the level of the outer edge of the bottom, of a cylindrical shell arranged below the bowl-like central depression of the bottom and communicating therewith, there being in said shell an internal annular recess, a piston-like valve working within said shell adjacent said annular recess, driving mechanism for actuating said valve, and means for adjusting said driving mechanism to vary the opening of the valve.

880,809. ADVERTISING DEVICE. JOSEPH T. MONCRIEF, Montgomery, Ala. Filed Sept. 30, 1907. Serial No. 395,081.



In an advertising device, an advertising unit comprising a plurality of electric lamps arranged to form letters, supporting means in which said lamps are mounted, wire netting, means to removably secure the supporting means in which said lamps are mounted to said wire netting, a frame surrounding and supporting said netting, in combination with a supporting structure comprising a tower frame divided into sections adapted each to receive one or more of said units.

880,810. WEFT-REPLENISHING LOOM. ALFRED MORELL, Worcester, Mass., assignor to Crompton & Knowles Loom Works, a Corporation of Massachusetts. Filed Dec. 1, 1906. Serial No. 345,863.



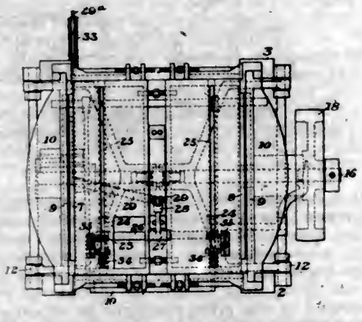
1. In a transferrer mechanism of a weft replenishing loom, the combination with a bunter on the lay and the transferrer arm, of a trip or dagger connected with the transferrer arm and having a yielding or give-way part to be engaged and moved by said bunter, on the forward movement of the lay, in case of obstruction to the movement of the transferrer arm.

2. In a transferrer mechanism of a weft replenishing loom, the combination with a bunter on the lay, and the transferrer arm, of a trip or dagger connected with the transferrer arm and having a yielding or give-way part to be engaged and moved by said bunter on the forward movement of the lay, in case of obstruction to the movement of the transferrer arm.

3. In a transferrer mechanism of a weft replenishing loom, the combination with a bunter on the lay, and the transferrer arm, of a trip or dagger connected with the transferrer arm and having a yielding or give-way part, said yielding part consisting of a spring actuated longitudinally moving pin, having a beveled end to be engaged by the bunter and moved outwardly.

4. In a transferrer mechanism of a weft replenishing loom, the combination with a bunter on the lay, and the transferrer arm, of a trip or dagger connected with the transferrer arm and having a yielding or give-way part, said yielding part consisting of a spring actuated longitudinally moving pin, having a beveled end to be engaged by the bunter and moved outwardly, said pin having a support adapted to be adjusted on the dagger, to vary the position of the engaging end of the pin relatively to the engaging end of the dagger.

880,811. DISCHARGE MECHANISM FOR SHEARS. ARTHUR R. MCARTHUR, Elwood, Ind., assignor to American Sheet & Tin Plate Company, Pittsburg, Pa., a Corporation of New Jersey. Filed July 16, 1907. Serial No. 384,060.



1. A double resquaring shear having a throw-out device arranged to engage one edge of the sheet while in shearing position, and connections arranged to operate said throw-out to move the sheet from its shearing position; substantially as described.

2. A double resquaring shear having a movable throw-out device provided with projections extending above the top of the table and arranged to engage an edge of the sheet other than the edges being squared up, and connections arranged to give a quick motion thereto to remove the sheet from its shearing position; substantially as described.

3. A double resquaring shear having a table provided with slots, throw-out projections extending up through the slots and movable along them, said projections being arranged to engage the sheet while in shearing position, and connections between the throw-out mechanism and the moving parts of the machine, arranged to give it a quick back and forth movement after the shearing operation; substantially as described.

4. A double resquaring shear having side shearing apparatus, a longitudinally moving slide with a projection arranged to engage another edge of the sheet than those being sheared while in shearing position, and connections arranged to give the slide a quick movement after the shearing operation on the other edges; substantially as described.

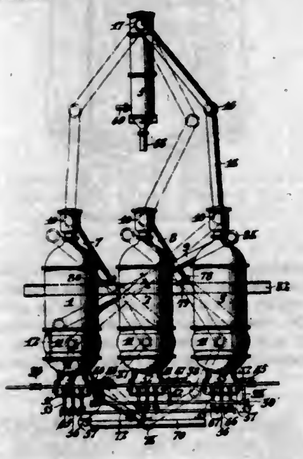
5. A double resquaring shear having side shearing apparatus, a longitudinally moving slide with a projection arranged to engage another edge of the sheet than those being sheared while in shearing position, connections arranged to give the slide a quick movement after the shearing operation on the other edges, and a spring connection arranged to return the throw-out; substantially as described.

[Claim 6 not printed in the Gazette.]

880,812. EVAPORATING APPARATUS. GEORGE P. MCARTHUR, Rockledge, Pa. Filed Sept. 17, 1906. Serial No. 334,935.

1. An evaporating apparatus, comprising a plurality of pans arranged to contain a liquid, and provided with means arranged to vaporize said liquid; and means comprising movable rigid pipe sections adapted to direct the vapor from one pan to another in different order, in accordance with the variable connection of said pipe with said pans, substantially as set forth.

2. An evaporating apparatus comprising a plurality of pans arranged to contain a liquid, and provided with means arranged to vaporize said liquid; and means comprising movable rigid pipe sections having a detachable connecting device, adapted to direct the vapor from one pan to another in different order, in accordance with the variable connection of said pipe with said pans, substantially as set forth.



3. An evaporating apparatus, comprising a plurality of pans arranged to contain a liquid, and provided with means arranged to vaporize said liquid; and means comprising a pivoted pipe adapted to direct the vapor from one pan to another in different order, in accordance with the variable connection of said pipe with said pans, substantially as set forth.

4. An evaporating apparatus, comprising a plurality of pans arranged to contain a liquid, and provided with means arranged to vaporize said liquid; and means comprising a movable pipe, having a pivoted joint intermediate of its ends, and adapted to direct the vapor from one pan to another in different order, in accordance with the variable connection of said pipe with said pans, substantially as set forth.

5. An evaporating apparatus, comprising a plurality of pans arranged to contain a liquid, and provided with means arranged to vaporize said liquid; a steam supply pipe; a condenser; and detachable movable rigid pipe sections, arranged to connect said steam supply pipe and said condenser respectively with any selected pans in series, in accordance with the adjusted position of said movable pipes, substantially as set forth.

[Claims 6 to 8 not printed in the Gazette.]

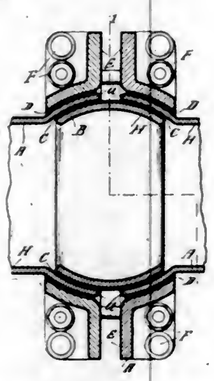
880,813. COUPLING FOR ENAMELED PIPES. RAYMOND F. NAILLER, Cleveland, Ohio. Filed July 10, 1907. Serial No. 382,992.

1. A coupling for enameled pipes, comprising a plurality of parts connecting the pipe ends, each of said parts being coated with enamel and of uniform thickness throughout.

2. The combination with pipes, of a detachable coupling comprising separable parts around the ends of the pipes, each of said pipes and parts being coated with enamel and of uniform thickness throughout.

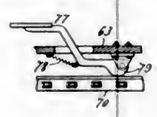
3. In a pipe coupling, the combination of pipes having expanded ends, a connecting ring fitting within said ends, and clamping rings fitting upon said ends and connected together, said rings being formed in sections joined to-

gether each of the pipes, ends and connecting ring being coated inside and out with enamel and of uniform thickness throughout.



4. A coupling for enameled pipes, comprising enameled pipe sections having expanded ends, an enameled connecting ring within and between said ends, a packing sleeve between the ring and said ends, enameled clamping rings upon said ends and connected together, and soft metal plates between said clamping rings and the pipes.

880,814. DIGGING AND LOADING MACHINE. NELS H. NELSON, Willmar, Minn. Filed Apr. 25, 1907. Serial No. 370,175.



1. In a machine of the class described, the combination with a wheel-supported main frame, of an upwardly extending frame work fixed thereon, a notched segment on the frame work, a mast pivotally secured to one end of the main frame and adapted to stand plumb up and also to be folded upon the main frame, a metal frame fixed on the mast, a clamping bolt carried thereby and adapted to engage in the notches of the segment and hold the mast adjusted in vertical position.

2. In a machine of the class described, the combination with a wheel-supported horizontally-disposed frame, of a mast pivotally secured to one end of the frame, and a crutch upon the other end of the frame for the mast to rest on when folded.

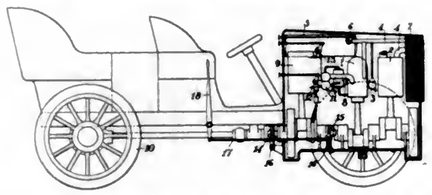
3. In a machine of the class described, the combination with a wheel-supported main frame and a mast pivoted to one end thereof, of the brace 28 extending from the upper part of the mast to the other end of the main frame, and the side braces 27, 27^a, extending from the mast to the ground and having pivotally secured shoes 35 bearing on the ground, and the links 34 connecting them with the main frame.

4. In a machine of the class described, the combination with a wheel-supported main frame and a mast pivoted to one end thereof, of the brace 28 extending from the upper part of the mast to the other end of the main frame, and the side braces 27, 27^a, extending from the mast to the ground and having pivotally secured shoes 35 bearing on the ground, and the link 34 connecting them with the main frame, and means for adjusting the length of said braces.

5. In a machine of the class described, the combination with a wheeled frame and a mast pivoted to one end of the frame, of a derrick beam swinging from one side of the mast, the mast having upon said side the supporting block or shoe 36 pivoted to its lower end, and the slanting brace 39 extending from the shoe to the mast, and the clevis 38 and adjustment screw 37, for the purpose set forth.

[Claims 6 to 18 not printed in the Gazette.]

880,815. STORED-PRESSURE MOTOR-STARTING DEVICE. EDWARD P. NOYES, Winchester, Mass., assignor to Charles F. Brown, trustee, Reading, Mass. Filed Dec. 28, 1906. Serial No. 349,822.



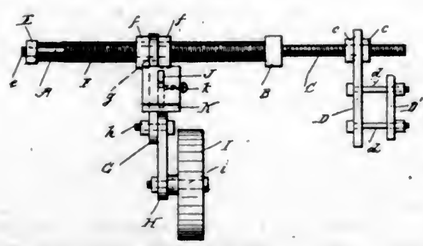
1. In a compound motor system, the combination of a high-pressure internal-combustion prime-motor adapted to drive the external load indirectly through the medium of exhaust pressure-fluid, an independently-running low-pressure engine operated by the pressure of the exhaust from said prime motor, means for storing the pressure fluid supplied by said prime motor and for admitting it to the low-pressure engine, and means for temporarily connecting the low-pressure engine to drive the prime motor.

2. The combination of an internal-combustion motor, an independently-running receiving-engine operated by pressure-fluid supplied by said motor, means to store the fluid under pressure to furnish a reserve for starting said receiving-engine, means to couple and uncouple said engine with its external load, and means to couple and uncouple said engine with the internal-combustion motor.

3. A motor system comprising an internal-combustion motor and connected charging air-compressor therefor together constituting a prime mover, a receiving-engine supplied by pressure-fluid from said prime-mover for driving the external load, means for storing the pressure-fluid to start the receiving-engine, a separable coupling between the receiving-engine and the prime-mover for driving the latter by means of the former, and a separable coupling for connecting the receiving-engine with its external load and disconnecting it therefrom.

4. The combination of an internal-combustion motor, an independently-running receiving-engine driven by pressure-fluid supplied by said motor, and reciprocally-acting clutches for connecting said receiving-engine alternatively with said internal-combustion motor and with the external load.

880,816. BELT-TIGHTENER. JESSE NULL, Evanston, Ill. Filed Dec. 12, 1907. Serial No. 406,151.



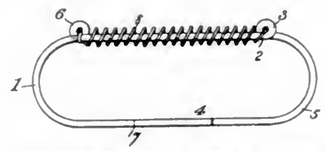
1. In a belt-tightener, the combination, with a supporting-spindle and means for securing it in position, of a pivot-sleeve journaled on the said spindle, an arm adjustable longitudinally on the said sleeve, a tightener-sheave supported by the said arm, and operating mechanism for moving the said arm and sheave pivotally.

2. In a belt tightener, the combination, with a supporting-spindle and means for securing it in position, of a pivot-sleeve journaled on the said spindle, a jointed arm, means for securing its members together at different angles, means for securing one of the said members to the said sleeve at any desired point longitudinally, a tightener-sheave supported by the other member, and operating machanism for moving the jointed arm and sheave pivotally.

3. In a belt-tightener, the combination, with a supporting-spindle, of a clamp adjustable longitudinally and circumferentially upon one end portion of the said spindle, a pivot-sleeve journaled on the other end portion of the said spindle, an arm adjustable longitudinally on the said sleeve, a tightener-sheave supported by the said arm, and operating mechanism for moving the said arm and sheave pivotally.

4. In a belt-tightener, the combination, with a supporting-spindle and means for securing it in position, of a pivot-sleeve journaled on the said spindle, a jointed arm, means for securing its members together at different angles, one of the said members having a plurality of holes for engaging with the said sleeve, means for securing the said member to the said sleeve at any desired point longitudinally, a tightener-sheave supported by the other member of the said jointed arm, and operating mechanism for moving the said jointed arm and sheave pivotally.

880,817. DRAFT AND LAP RING. SAMUEL L. NUNNELY, Winthrop, Ark. Filed May 7, 1907. Serial No. 372,377.

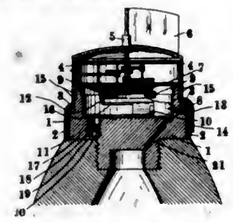


1. A combination draft or lap-ring, consisting of two rods bent substantially U shaped, the end 2, of one of the rods 1, terminating in a ring 3, the other end 4, of said rod, terminating to the right of the center of the lap-ring, the long end of the other part 5, terminating in a ring, its lap end terminating to the left of the center of the lap-ring, the two lap ends 4 and 7, being provided with corresponding recesses 9 and 10, respectively, and a spring wire, having one end secured in the ring 3, then coiled around the two long ends, binding them together, its other end secured in the ring 6, said coil spring having such tension as to hold the lap ends of said ring together, and coiled so openly as to allow longitudinal play to the two parts of the ring, substantially as shown and described, and for the purposes set forth.

2. A combination draft and lap-ring, consisting of two rods bent substantially U shaped, the end 2, of one of the rods 1, terminating in a ring 3, the other end 4, of said rod terminating to the right of the center of the lap-ring, the long end of the other part 5, terminating in a ring, its lap end terminating to the left of the center of the lap-ring, and a spring wire 8, having one end secured in the ring 3, then coiled around the two long ends, binding them together, its other end secured in the ring 6, said coil spring having such tension as to hold the lap ends of said ring together, and coiled so openly as to allow longitudinal play to the two parts of the ring, substantially as shown and described, and for the purposes set forth.

880,818. MECHANICAL TIME-FUSE. JOSEF PANGHER, Vienna, Austria-Hungary, assignor to Edward Thomas, Vienna, Austria-Hungary. Filed Aug. 23, 1906. Serial No. 331,749.

1. In a mechanical time-fuse, the combination of a suitable supporting means for the component parts, a movable striker, a firing device coöperative therewith, a rotary part having a helical contact-way adapted to be engaged by the striker and hold the same from engagement with the firing device, and means for rotating said rotary part and thus causing its contact-way to move out of engagement with the striker, whereby to release the striker, substantially as described.

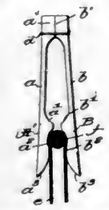


2. In a mechanical time-fuse, the combination of a suitable supporting means for the component parts, a movable striker, a firing device coöperative therewith, a rotary part having a helical contact-way adapted to be engaged by the striker and hold the same from engagement with the firing device, means for rotating said rotary part and thus causing its contact-way to move out of engagement with the striker, whereby to release the striker, and means for setting the striker and said movable part relatively to each other, substantially as described.

3. In a mechanical time-fuse, the combination of a suitable supporting means for the component parts, a movable striker, a firing device coöperative therewith, a rotary part having a limited contact-way adapted to be engaged by the striker and hold the same from engagement with the firing device, an actuating device for said rotary part, disconnective connecting means between the actuating device and said rotary part, and a setting means operatively connected with said rotary part, substantially as described.

4. In a mechanical time-fuse, the combination of a suitable supporting means for the component parts, a movable striker, a firing device coöperative therewith, a rotary part having a limited contact way adapted to be engaged by the striker and hold the same from engagement with the firing device, an actuating device, gearing connecting said actuating device and the rotary part, means for disconnecting a portion of said gearing, and a setting mechanism operatively connected with said rotary part, substantially as described.

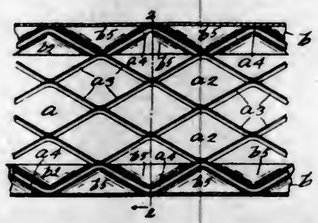
880,819. CLOTHES-PIN. FREDERICK H. PERRY, Beverly, Mass. Filed Feb. 19, 1906. Serial No. 301,759.



A clothes-pin comprising two pieces of wood presenting abutting faces, a binder surrounding said pieces and clamping the abutting faces firmly together, each piece presenting a stop a', b' respectively, and part of a line space adjacent thereto, each piece being reduced in thickness at its inner side between the abutting faces and said stop to impart of the requisite spring, and having its free end interiorly shaped to form a continuous reverse curve, the convex portions of the curves forming an open mouth leading into the line space, such convex portions merging into the concave portions which constitute the line space and presenting a smooth and unbroken entrance to and exit from said line space from one to the other side of the pin, the thickness of each of the pieces being greater at the

portion forming the stop than at any portion of the free end forming the mouth, whereby said free ends are always separated.

880,820. REINFORCING AND TENSION DEVICE FOR CONCRETE STRUCTURES. ARTHUR S. PIERSON, Morristown, N. J. Filed Dec. 8, 1905. Serial No. 290,930.

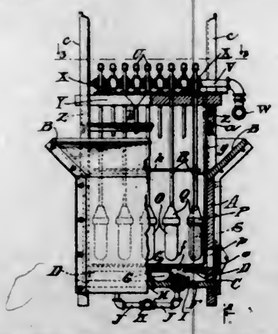


1. A reinforcing device for use in concrete structures, comprising a strip or sheet of expanded open work metal having loops or projections at its opposite sides and parallel side bars of sheet metal firmly clasped upon the looped sides of said strip or sheet, portions of said side bars passing partially around or partially embracing the material of said loops and holding the said loops and the said sheet rigidly in their expanded condition, substantially as described.

2. A reinforcing device for concrete structures, comprising a strip or sheet of expanded open work metal having loops or projections at its opposite sides, and parallel side bars U-shaped in cross section, said side bars being firmly clasped to said strip or sheet, by having the metal of said side bars compressed upon and about said loops or projections, substantially as described.

3. A reinforcing device for use in concrete structures, comprising a strip or sheet of expanded open work metal having loops or projections at its opposite side edges, and parallel side bars U-shaped in cross section, the said loops or projections extending between the sides of the said side bars and having the said sides compressed firmly together within and against the said loops, substantially as described.

880,821. PROCESS OF EXTRACTION. JAMES E. PORTER, Syracuse, and ARTHUR L. CLARK, New York, N. Y., assignors to The Just Mining and Extraction Company, a Corporation of New York. Filed Feb. 27, 1907. Serial No. 359,659.



1. The process of extracting precious metals from their ores by cyaniding which consists in heating a mass of such ore in the presence of cyanid solution while at the same time forcing air through porous-walled bodies to form very minute bubbles in contact with the lower portion of said mass, thereby aerating and agitating the mass, and then discontinuing the heating and applying suction to a porous-walled body to filter off the cyanid solution.

2. The process of extracting precious metals from their ores by cyaniding which consists in heating a mass of such ore in the presence of cyanid solution while at the same time forcing air through a plurality of porous-walled bodies to form very minute bubbles in contact with the lower portion of said mass at different levels, thereby aerating and agitating the mass and then discontinuing heating and applying suction to a higher-lying porous walled body to filter off the cyanid solution while at the same time continuing to force air through a lower-lying porous-walled body.
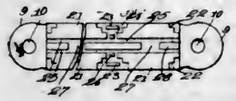
3. The process of extracting precious metals from their ores by cyaniding which consists in heating a mass of such ore in the presence of cyanid solution while at the same time forcing air through a porous-walled body to form very minute bubbles in contact with the lower portion of said mass, continuing the introduction of air and maintaining the temperature of the mass at about 190 degrees Fahrenheit until the extraction of precious metals is finished, and then discontinuing the heating and applying suction to the porous-walled body to filter off the cyanid solution.

4. The process of extracting precious metals from their ores by cyaniding which consists in heating a mass of such ore in the presence of cyanid solution while at the same time forcing air through a plurality of porous-walled bodies to form very minute bubbles in contact with the lower portion of said mass at different levels, thereby agitating and aerating the mass, continuing the introduction of air and maintaining the temperature of the mass at about 190 degrees Fahrenheit until the extraction of the precious metals is finished, and then discontinuing heating and applying suction to a higher-lying porous-walled body to filter off the cyanid solution while at the same time continuing to force air through a lower-lying porous-walled body.

5. In the extraction of precious metals from their ores by cyaniding, the process which consists in suspending such ore in a cyanid solution and distributing minute air bubbles substantially uniformly throughout the mass of ore and liquid.

[Claims 6 to 17 not printed in the Gazette.]

880,822. MARBLE AND STONE SAW. ISIDORE RAMBOUX, Erquelinnes, Belgium. Filed Oct. 10, 1906. Serial No. 338,298.



1. A saw blade for sawing stone consisting of a bar of metal provided on one side with a continuously smooth surface and having a plurality of projections or teeth extending from the opposite side, said projections or teeth being spaced apart from each other and disposed in staggered relation in a manner to bring the intervening spaces between said teeth out of register with each other.

2. A saw blade for sawing stone, consisting of a bar of metal provided on one side with a continuously smooth surface and having a plurality of projections or teeth extending from the opposite side, said teeth being spaced apart from each other and arranged in parallel rows and in a manner to bring spaces intervening the teeth of one row out of register with the spaces intervening the teeth of adjacent rows.

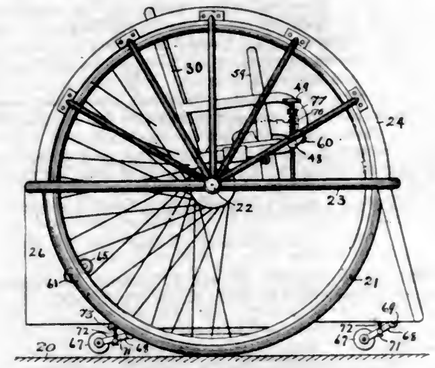
3. A saw blade for sawing stone comprising a bar of metal provided on one side with a continuously smooth surface and having on its other side superposed cutting means retarding the progress of sand or like cutting material and effecting distribution thereof about said means.

4. A saw blade for sawing stone consisting of a bar of metal provided on one side with a smooth surface and having a plurality of projections or teeth extending from another side, certain of said teeth having stepped end portions.

5. A saw blade for sawing stone consisting of a bar of metal provided on one side with a smooth surface and having a plurality of projections or teeth extending from another side, said projections or teeth being spaced apart from each other and out of alinement with each other to bring intervening spaces out of register, and the outermost teeth having stepped end portions.

[Claims 6 to 10 not printed in the Gazette.]

880,823. MOTOR-VEHICLE. CASPER L. REDFIELD, Chicago, Ill. Filed Apr. 17, 1900, Serial No. 13,200. Renewed Nov. 14, 1904. Serial No. 232,620.



1. The combination with a driving member furnishing a constant power at a constant speed, and a driven member subjected to variable resistances, of a variable speed mechanism connecting the two, and automatically operating means for adjusting said variable speed mechanism so that the driven member will absorb a constant power under all changes of resistance.

2. A driving disk, a roller in contact with the face of said disk and subjected to varying resistances to being driven, and automatically operating means for controlling the position of said roller so that its distance from the center of said disk and its resistance to being driven will equal a constant torque on said driving disk.

3. A driving disk and a driven disk, a roller between the two and in contact with the faces of both so as to serve as a means of conveying power from the driving member to the driven member, a constant force applied to the driving disk and a variable resistance applied to the driven disk, and automatic means for shifting said roller on the faces of said disks.

4. In combination with a motor furnishing a constant power at a constant speed, an automatic device for transforming the output of said motor into a constant power at a variable speed.

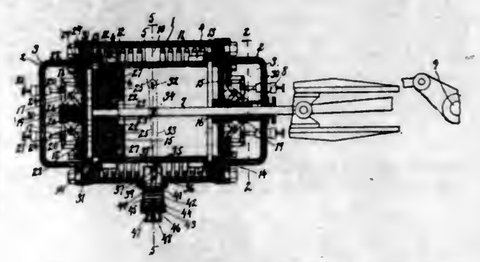
5. A driving roller and a driven disk in contact with each other, a movable support for said roller so arranged that the roller may be inclined with respect to said disk, a weighing device for measuring the force of transmission between said roller and said disk, and means by which said weighing device will operate said support so as to shift the position of said roller on said disk.

[Claims 6 to 48 not printed in the Gazette.]

880,824. VALVE MECHANISM FOR ENGINES AND COMPRESSORS. SIDNEY A. REEVE, Worcester, Mass., assignor to Charles F. Brown, trustee, Reading, Mass. Filed Sept. 20, 1901. Serial No. 75,819.

1. The combination of a reciprocating fluid-controlling valve, and linkage swung back and forth by the valve into positions of greatest and least mechanical advantage over the valve coinciding with different positions of said valve.

2. The combination of a reciprocating fluid-controlling valve, and linkage swung back and forth by the valve and arranged to assume a position of maximum mechanical advantage over the valve occurring at one extreme of the valve's movement.



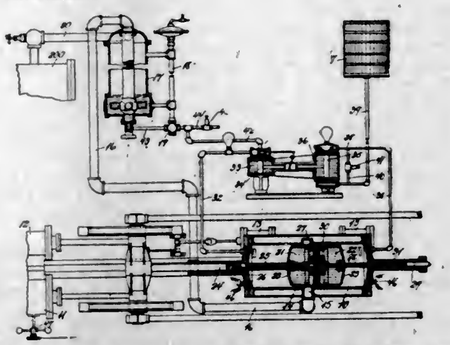
3. The combination of a reciprocating fluid-controlling valve, and linkage swung back and forth by the valve and capable of assuming a position of substantially infinite mechanical advantage thereover at one extreme of the valve's movement.

4. A valve in combination with means for intermittently actuating the same by a moving force of indeterminate time effect, and a valve-arresting lever device acting with increasing mechanical advantage over the valve as the valve approaches an extreme of its movement.

5. The combination with a relatively-reciprocating piston and cylinder, of a reciprocating valve controlling an opening of said cylinder and reaching its extreme positions independently of the dead-points of the piston, and linkage actuated by the valve and adapted to arrest the same with positive retardation.

[Claims 6 to 26 not printed in the Gazette.]

880,825. VARIABLE-CLEARANCE ENGINE. SIDNEY A. REEVE, Worcester, Mass., assignor to Charles F. Brown, trustee, Reading, Mass. Filed Oct. 11, 1905. Serial No. 282,251.



1. A pressure-engine formed with a plurality of variable cylinder-clearance chambers one of which is expansible by the fluid-pressure in said cylinder, and means actuated by the expansion of the last-said clearance chamber for varying the capacity of another of said clearance chambers.

2. An explosion-engine formed with a plurality of variable cylinder-clearance-chambers one of which is expansible by the explosion pressure in said cylinder, means for intermittently exploding combustible charges in said cylinder, and means actuated by the expansion of the last-said chamber for varying the capacity of another of said clearance-chambers.

3. A pressure-engine comprising a double-acting working-cylinder structure, a solid-piston structure working therein and axially expansible and collapsible at both ends, and means for varying the volume of one piston-end by the fluid-pressures active on the other piston-end.

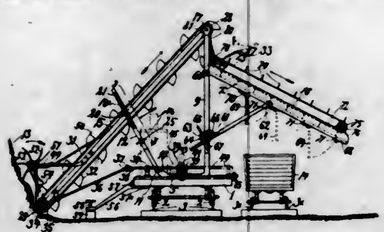
4. A pressure-engine comprising a working cylinder, a hollow working piston therein having an axially movable wall with a liquid-chamber behind it for varying the pis-

ton-volume, and means for introducing liquid to said chamber from outside of the cylinder.

5. A pressure-engine comprising a working cylinder, a hollow axially expansible and collapsible working piston therein, a piston-rod connected with said piston and having a duct for conducting liquid between the exterior of the cylinder and the interior of the piston, and an external liquid pump connected with said duct.

[Claims 6 to 19 not printed in the Gazette.]

880,826. EXCAVATING-MACHINE. TORGELS REISTAD, St. Paul, Minn. Filed Apr. 29, 1907. Serial No. 370,811.



1. An excavating machine comprising in combination, a body or platform having wheels adapted to stand and move on rails, a turn-table mounted thereon, and means for securing it in different positions, a frame guided to slide horizontally on the turn-table and having uprights, an endless inclined elevator supported by said uprights and having buckets adapted to dig and convey earth up the incline, a conveyer or chute receiving the earth from the elevator and delivering it into cars at the opposite side of the machine, an engine carried by the machine, and means operated by the engine for driving said elevator and conveyer and for feeding the sliding frame back and forth.

2. An excavating machine comprising in combination, a body or platform having wheels adapted to stand and move on rails, a turn-table mounted thereon, and means for securing it in different positions, a frame guided to slide horizontally on the turn-table and having uprights, an endless inclined elevator supported by said uprights and having buckets adapted to dig and convey earth up the incline, a conveyer or chute receiving the earth from the elevator and delivering it into cars at the opposite side of the machine, an engine carried by the machine, and means operated by the engine for driving said elevator and conveyer and for feeding the sliding frame back and forth, said conveyer comprising a chute with several shutters in the bottom, for the purpose set forth.

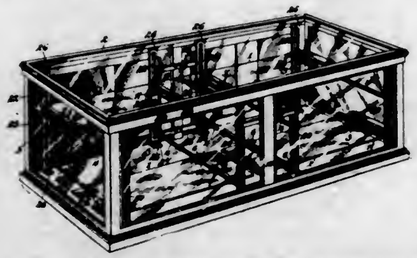
3. An excavating machine comprising in combination, a body or platform having wheels adapted to stand and move on rails, a turn-table mounted thereon, and means for securing it in different positions, a frame guided to slide horizontally on the turn-table and having uprights, an endless inclined elevator supported by said uprights and having buckets adapted to dig and convey earth up the incline, a conveyer or chute receiving the earth from the elevator and delivering it into cars at the opposite side of the machine, an engine carried by the machine, and means operated by the engine for driving said elevator and conveyer and for feeding the sliding frame back and forth, said conveyer comprising a chute with several shutters in the bottom, and an endless guided conveyer belt or belts with blades adapted to move the earth along in the chute to the end of it, or to such shutter as may be open.

4. An excavating machine comprising in combination, a body or platform having wheels adapted to stand and move on rails, a turn-table mounted thereon, and means for securing it in different positions, a frame guided to slide horizontally on the turn-table and having uprights, an endless inclined elevator supported by said uprights and having buckets adapted to dig and convey earth up the incline, a conveyer or chute receiving the earth from the elevator and delivering it into cars at the opposite side of the machine, an engine carried by the machine, and means operated by the engine for driving said elevator and conveyer and for feeding the sliding frame back and forth, and means carried by the sliding frame for changing the incline of the elevator and of the chute.

5. An excavating machine comprising in combination, a body or platform having wheels adapted to stand and move on rails, a turn-table mounted thereon, and means for securing it in different positions, a frame guided to slide horizontally on the turn-table and having uprights, an endless inclined elevator supported by said uprights and having buckets adapted to dig and convey earth up the incline, a conveyer or chute receiving the earth from the elevator and delivering it into cars at the opposite side of the machine, an engine carried by the machine, and means operated by the engine for driving said elevator and conveyer and for feeding the sliding frame back and forth, journal bearings on the turn-table, a shaft sliding therein and having a universal joint whereby a portion of it may be inclined, gear-wheels connecting said inclined portion with one of the shafts of the endless elevator, a pulley slidingly keyed on the shaft, and a belt thereon receiving motion from the engine, and means for retaining the pulley in line with the belt when the shaft slides.

[Claim 6 not printed in the Gazette.]

880,827. SHOW-CASE. ALBERT D. RESLER, Montesano, Wash. Filed May 14, 1907. Serial No. 373,697.



1. The combination with a show case, of front and rear posts arranged within the same, horizontally disposed rails, means for adjustably connecting the terminals of the rails with the front and rear posts for raising and lowering the rails, and shelves having wheels arranged to run on the rails.

2. The combination of a show case, front and rear posts mounted therein, tubular rails extending from the front to the rear post and engaging the same, clamping rods passing through the tubular rails and provided with terminal means coöperating with the adjustable tubular rails for clamping the said posts, whereby the rails are secured in their adjustment, and shelves supported by the rails.

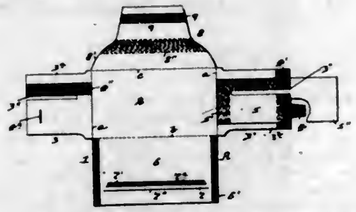
3. The combination with front and rear posts, the front post being provided with vertical ways, tubular rails extending from the front to the rear posts, clamping rods passing through the tubular rails and having terminal portions slidable in the ways of the front posts, adjustable means for securing the rear ends of the rods to the rear posts and for causing the rods and rails to clamp the front posts, and shelves slidable on the rails.

4. The combination of front and rear posts, the rear post being provided with slots, adjustable tubular rails, clamping rods passing through the rails and through the slots of the rear posts and provided with means for engaging the front posts, means carried by the clamping rods and coöperating with the rails to secure the latter in their adjustment, and shelves supported by the rails.

5. The combination of front posts having inwardly extending flanges spaced apart and forming ways, rear posts, tubular rails, clamping rods passing through the tubular rails and having heads arranged within the front posts and engaging the flanges thereof, said rods being provided at their rear ends with screw threads and passing through the rear posts, and nuts arranged on the threaded ends of the rods and engaging the rear posts, said nuts being also adapted to cause the rails and the heads of the rods to clamp the front posts.

[Claims 6 to 10 not printed in the Gazette.]

880,828. ENVELOP. PAOLO RUSSO, Pittsburg, Pa. Filed Nov. 15, 1905. Serial No. 287,458.



1. An envelop comprising a front or address side, end flaps secured together and having a slit or opening therein, an inner flap secured to the inner side of one of said end flaps, a rear sealing flap having a slit therein, and a main sealing flap for fitting in the slit in the rear flap.

2. An envelop comprising a front or address side, end flaps, an inner flap secured along the inner portion of one of said end flaps, each of said end flaps having a slit therein dividing each flap into two portions, the upper portions being sealed to each other and also sealed to said inner flap, and the lower portions sealed to each other but not to the inner flap, forming a pocket between said lower portions and said inner flap, and a main sealing flap extending through said slit in the rear flap into said pocket and adapted to be sealed therein.

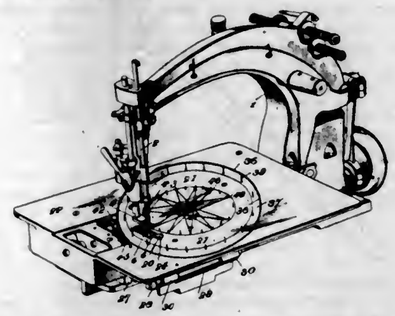
3. An envelop comprising a front, end flaps secured together and having a slit or opening formed therein, an inner sealing flap secured to the inside of one of said end flaps, a rear sealing flap having slits therein to form two strips on said rear flap, and a main sealing flap for fitting under one of said strips, over the other one of the same and through the said opening to be sealed or secured to said inner flap and to one of said strips.

4. An envelop comprising a front, end flaps secured together having a slit or opening formed therein, a tongue on one of said end flaps adapted to be inserted through a slit in the opposite end flap and be sealed or secured to the same, an inner sealing flap secured to the inside of one of said end flaps beyond the opening therein, a rear sealing flap having slits therein to form two strips on said rear flap, and a main sealing flap for fitting under one of said strips, over the other one of the same and through the said opening between the lower portions of said end flaps and said inner flap to be sealed or secured to said inner flap and to one of said strips.

880,829. TRIMMING MECHANISM FOR SEWING-MACHINES. GEORGE SCOTT, Amsterdam, N. Y., assignor to Union Special Machine Company, Chicago, Ill., a Corporation of Illinois. Filed May 31, 1902. Serial No. 109,756. Renewed June 1, 1906. Serial No. 319,769.

1. In a sewing machine including mechanism for simultaneously stitching and covering a cut edge, means for feeding a plurality of layers of fabric, a cutting mechanism including a device for separating the layers of fabric, whereby only certain of said layers are severed, and means for deflecting one of said severed edges away from the stitching and covering mechanism, leaving the other severed edge to be sewed to the uncut layer of fabric by the stitching and covering mechanism, said cutting mechanism being in advance of the stitching mechanism; substantially as described.

2. In a sewing machine and in combination, over-stitching mechanism, means for feeding a plurality of layers of fabric to the stitching mechanism, a cutting mechanism in advance of the stitching mechanism and in line of feed, said cutting mechanism including a device for separating the layers of fabric, whereby only certain of said layers are severed, and means for deflecting one of said severed edges away from the stitching mechanism, leaving the other severed edge to be covered and sewed to the uncut layer of fabric by the stitching mechanism; substantially as described.



3. In a sewing machine, the combination of over-stitching mechanism, cutting mechanism in advance of the stitching mechanism, and comprising two knives co-operating to cut one of a plurality of thicknesses of material, means for feeding said material, one of said knives passing between and separating the thicknesses of material, and one of said knives spreading the cut edges of the fabric and guiding and deflecting one edge away from the stitching mechanism, whereby one of the cut edges is sewed to the uncut material by covering the cut edge; substantially as described.

4. In a sewing machine, the combination of over-stitching mechanism, means for feeding a plurality of thicknesses of material, cutting mechanism in advance of the over-stitching mechanism, comprising a device for separating the thicknesses as the cutting is performed, whereby only one of said thicknesses is cut, the said stitching mechanism being located behind the cutting mechanism and arranged to sew one of the cut edges to the uncut fabric by covering the cut edge, and a rotary guide arranged to guide the fabric as it is being cut and stitched and means for deflecting one of the severed edges away from the stitching mechanism; substantially as described.

5. In a sewing machine, the combination of over-stitching mechanism, means for feeding a plurality of thicknesses of material, cutting mechanism in advance of the over-stitching mechanism, comprising a device for separating the thicknesses as the cutting is performed, whereby only one of said thicknesses is cut, the said stitching mechanism being located behind the cutting mechanism and arranged to sew one of the cut edges to the uncut fabric by covering the cut edge, and a rotary guide arranged to guide the fabric as it is being cut and stitched, and operable in unison with said feeding means and means for deflecting one of the severed edges away from the stitching mechanism; substantially as described.

[Claims 6 to 23 not printed in the Gazette.]

880,830. WIRE-STRETCHING TOOL. THOMAS A. SCOTT and HENRY E. CRAWFORD, Bentonville, Ind. Filed Mar. 12, 1906. Serial No. 305,476.

A wire stretching tool, comprising a supporting plate having one edge adapted to lie against the face of a post, an active clamping member and an opposed passive clamping member encircling said supporting plate normal to said edge, each of said members consisting of a flat plate apertured to receive said supporting plate and having both of its apertured faces formed to constitute clamping faces, said passive clamping member projecting perpendicularly beyond the post-engaging edge of the supporting plate and having means for securing it to said plate, and said active clamping member being slidable on the sup-

porting plate, an operating lever having cams coöperating with the outer face of the active clamping member, and an axially-removable pivot pin connecting said lever with the inner end portion of the supporting plate, said supporting

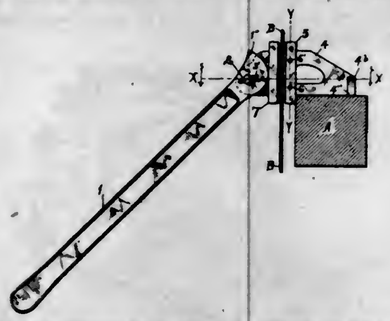


plate being constructed to permit the removal of the clamping members over such end portion when the operating lever is removed.

880,831. CLAMPING-RING FOR PIPE-COUPLINGS. FRANK N. SMITH, Bradford, Pa., assignor to S. R. Dresser Manufacturing Company, Bradford, Pa. Filed Dec. 10, 1906. Serial No. 347,167.



1. A clamping ring for pipe couplings having an annular main body, provided with bolt holes and having at its inner edge a packing engaging flange extending on one side of said main body, said main body being inclined to the axis of the clamping ring from the inner edge of said annular main body in a direction away from said flange, and having a certain amount of elasticity, whereby the yielding of said main body under pressure of the bolts will tend to draw it into a position perpendicular to the axis of said main body, substantially as described.

2. A wrought metal clamping ring for pipe couplings comprising an annular main body provided with bolt holes and having at its inner edge, an annular packing engaging flange extending on one side of said main body, said main body having a certain amount of elasticity and being capable of yielding under the strain of the bolts, substantially as described.

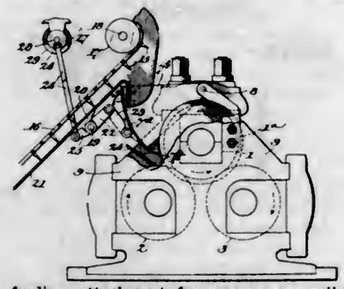
3. A wrought metal clamping ring for pipe couplings comprising an annular main body disposed at an angle to the axis of the ring, and provided with bolt holes, and having at its inner edge an annular packing engaging flange, said main body having a certain amount of elasticity, the said flange being thickened at its outer edge to provide a packing engaging face of greater width than the normal thickness of said flange and main body, substantially as described.

4. A wrought metal clamping ring for pipe couplings comprising an annular main body disposed at an angle to the axis of the ring, and provided with bolt holes, and having at its inner edge an annular packing engaging flange, said main body having a certain amount of elasticity the said flange being upset adjacent to its outer edge, to provide a packing engaging face of greater width than the normal thickness of said flange and main body, substantially as described.

5. A wrought metal clamping ring for pipe couplings comprising an annular main body having a certain amount of elasticity and disposed at an angle to the axis of the ring, and provided with bolt holes, and having at its inner edge an annular packing engaging flange, the said flange being upset adjacent to its outer edge to provide a packing engaging face of greater width than the normal thickness of said flange and main body, said additional thickness extending on one side of said flange, substantially as described.

[Claim 6 not printed in the Gazette.]

880,832. FEEDER FOR SUGAR-CANE MILLS. JAMES M. STEEL, Waialua, Hawaii. Filed Nov. 13, 1906. Serial No. 343,241.



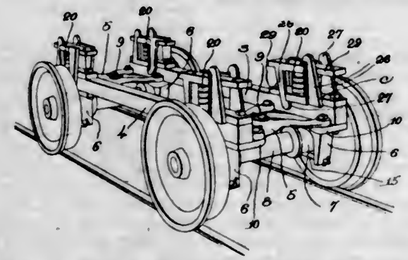
1. A feeding attachment for sugar cane roller mills, comprising means for feeding the material to the rolls of said mill, and a plate pivoted to swing approximately tangential to the rolls and adapted to force the material between said rolls.

2. A feeding attachment for sugar cane roller mills, comprising a vibrating hopper for receiving the material and feeding the same to the rolls of said mill, the lower edge of the hopper serving to force the material between the rolls.

3. A feeding attachment for sugar cane roller mills, comprising a vibrating hopper for receiving the material and feeding the same to the rolls of said mill, and a plate carried by said hopper and adapted to force the material between the rolls as said hopper is vibrated.

4. A feeding attachment for sugar cane roller mills, comprising a vibrating hopper for receiving the material and feeding the same to the rolls of said mill, a plate carried by said hopper and adapted to force the material between the rolls as said hopper is vibrated, and a guard mounted adjacent said rolls and serving to prevent the escape of the material from the receiving gap between the rolls.

880,833. CAR-TRUCK. FRANK C. STEVENS, North Andover, Mass., assignor to Davis & Furber Machine Company, North Andover, Mass., a Corporation of Massachusetts. Filed Nov. 21, 1907. Serial No. 403,107.



1. In a car truck, the combination with an axle extending from one side to the other of the truck, of a truck frame having a bearing member for each end of the axle, each bearing member having a bearing surface formed on a curve of greater radius than that of the axle.

2. In a car truck, the combination with an axle extending from one side to the other of the truck and having a cylindrical bearing portion adjacent each end, of a truck frame having a bearing member adapted to engage each bearing portion of the axle, each bearing member having a bearing surface formed on a curve of greater radius than that of the bearing portion of the axle.

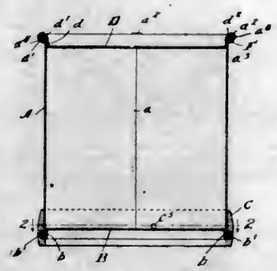
3. In a car truck, the combination with an axle having at each end a cylindrical bearing portion, of a truck frame having a bearing member adapted to rest on and engage each bearing portion of the axle, each bearing member having a conical bearing surface to engage the cylindrical portion of the axle.

4. In a car truck, the combination with a truck frame, of an axle centrally pivoted thereto and having a cylindrical bearing portion adjacent each end, said truck frame having a bearing member for each bearing portion of the axle, each bearing member having a bearing surface of conical shape formed on a curve of much greater radius than that of the bearing portion of the axle.

5. In a car truck, the combination with an axle, of cylindrical sleeves loosely mounted on each end thereof, a truck frame having a yoke-shaped bearing member for engagement with each sleeve, each bearing member having a concavely curved bearing surface for the sleeve, which bearing surface is of greater radius than that of the sleeve.

[Claims 6 to 9 not printed in the Gazette.]

880,834. SHEET-METAL KEG FOR WHITE LEAD AND OTHER HEAVY ARTICLES. CHARLES STOLLBERG, Toledo, Ohio, assignor to American Can Company, New York, N. Y., a Corporation of New Jersey. Filed Jan. 6, 1906. Serial No. 294,815.



1. The sheet steel keg for white lead or other heavy material herein shown and described, and comprising in one unitary structure the parts of which mutually connect, brace, strengthen and stiffen each other, a body A having a folded or locked side seam a, and provided at its upper end or mouth with an integral annular roll a^1 furnished with integral cover locking lip a^2, a bottom or lower head B having an annular countersink wall or flange b fitting within and bracing the lower end of said body, and an external double or folded seam b^1 uniting said bottom or head B with the body, a chime ring or band C having on its inner side a channel or groove C^1 to receive said external seam b^1, the portion of said chime ring or band below said groove or channel being inwardly offset in respect to the portion thereof above said groove or channel, a wire F embraced by said roll at the upper end of the body, and a deep countersunk cover D having a countersink wall d fitting within the upper end or mouth of the body, and an annular curved rim fitting and snugly engaging the upper portion of said roll on the body, said integral cover locking lips a^2 on the body roll being bent over and engaging the rim of the cover to securely lock and hold the cover in place, substantially as specified.

2. In a sheet steel or metal keg or vessel, the combination with a body, of a countersunk bottom or lower head having its countersink wall fitting within the lower end of the body, an external folded seam uniting said bottom or lower head with the body, and a chime ring or band embracing the body both above and below said bottom head and having a groove or channel on its inner face in which said external seam fits, the portion of said chime ring or band below said groove or channel being inwardly offset in respect to the portion thereof above said groove or channel, substantially as specified.

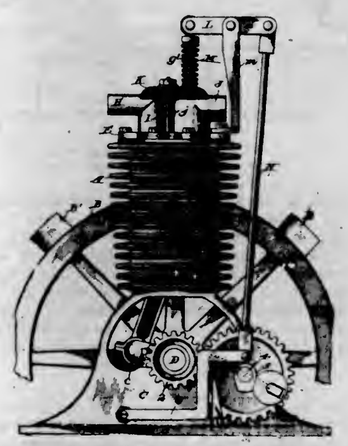
3. In a sheet steel or metal keg or vessel, the combination with a body having an integral external annular roll at its upper end or mouth, of a strengthening wire embraced thereby, and a cover having a countersink wall fitting within and bracing the upper end or mouth of said body and provided with an external annular curved rim fitting upon and snugly embracing the upper portion of said roll on the body, said roll on the body being provided with integral cover locking lips projecting at their base from the upper outer portion of said roll, and bent over the rim of the cover to lock and hold the cover in place and in coöperative bracing and stiffening relation with the roll on the body, substantially as specified.

4. In a sheet metal keg or vessel, the combination with a body having an integral annular external roll at its upper end or month, and provided with integral cover locking lips projecting from the upper outer portion of said roll, of a cover having a countersink wall or flange fitting within the upper end or mouth of the body and having an external annular rim fitting on said roll, said cover being locked and held in place by said integral lips on the body roll, substantially as specified.

5. In a sheet metal keg or vessel, the combination with a body having an integral annular external roll at its upper end or mouth, and provided with integral cover locking lips projecting from the upper outer portion of said roll, of a cover having a countersink wall or flange fitting within the upper end or mouth of the body and having an external annular rim fitting on said roll, said cover being locked and held in place by said integral lips on the body roll, the rim of the cover being curved in cross section to fit and embrace the upper portion of said roll on the body, substantially as specified.

[Claims 6 and 7 not printed in the Gazette.]

880,835. VALVE MECHANISM FOR GAS-ENGINES. HENRY STOLTENBERG, Davenport, Iowa, assignor to White Lily Washer Company, Davenport, Iowa, a Corporation of Iowa. Filed June 12, 1905. Serial No. 264,866.



1. A gas-engine comprising a cylinder having a closed end provided with an inlet port and an outlet port therein, valves therefor, an independent tubular housing for each port that is removably placed over the same and out of communication with each other, and common means which alone secures said housings in place and in which the spindle of one of said valves is journaled.

2. A gas-engine comprising a cylinder having a closed end provided with an inlet port and an outlet port therein, valves therefor, an independent housing for each port

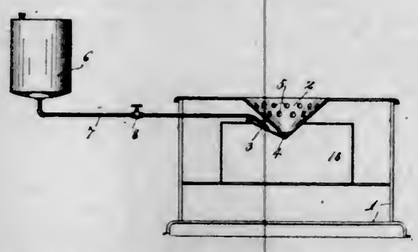
that is removably placed over the same and out of communication with each other, and a bridge-plate engaging the upper portion of said housings which alone secures the same in place and in which the spindle of one of said valves is journaled.

3. A gas-engine comprising a cylinder having a closed end provided with an inlet port and an outlet port therein, valves therefor, an independent elbow for each port that is removably placed over the same and out of communication with each other, and a bridge-plate engaging the upper portion of said elbows which alone secures the same in place and in which the spindle of one of said valves is journaled.

4. A gas engine comprising a cylinder having a closed end provided with an inlet and an outlet port therein, valves therefor, an independent tubular elbow placed over each of said ports and out of communication with each other, the horizontal portions of said elbows leading in substantially opposite directions, a bridge connecting and spanning the space between said elbows which alone secures said elbows in place, and in which the spindle of one of said valves is journaled, and a bolt for connecting said bridge to the closed end of said cylinder.

5. A gas engine comprising a cylinder having a closed end with an inlet and an exhaust port therein, normally closed mushroom valves therefor the spindles of which extend upwards through said closed end, an elbow placed over the exhaust port and out of communication with said inlet elbow and having an opening in its top up through which the spindle of the exhaust valve extends, means for actuating said exhaust valve, and a bridge-plate engaging the upper portion of said elbows which alone secures said elbows in place, and in which said spindle is journaled.

880,836. ALCOHOL-STOVE. ARTHUR W. SWANBERG, Minneapolis, Minn., assignor of one-third to Charles A. Bohlin and one-third to Hans C. Peterson, Minneapolis, Minn. Filed Oct. 8, 1906. Serial No. 337,923.

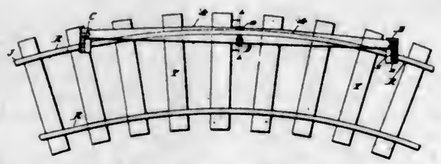


In a stove of the kind described, a conical combustion chamber 2 having the outset segmental pocket 3 partly surrounding said chamber 2, and communicating therewith at its bottom through a feed opening in the apex of said conical combustion chamber, said chamber 2 having a multiplicity of air passages 5 located above its bottom and running completely around said chamber, a tank for containing the liquid fluid, and a valved pipe leading from said tank to the said outlet segmental pocket of said combustion chamber, substantially as described.

880,837. RAILROAD CURVE TESTER AND GAGE. JOHN T. TAYLOR, South Boston, Va., assignor of one-third to John C. Harris and one-third to Fowler T. Hunt, South Boston, Va. Filed May 29, 1907. Serial No. 376,258.

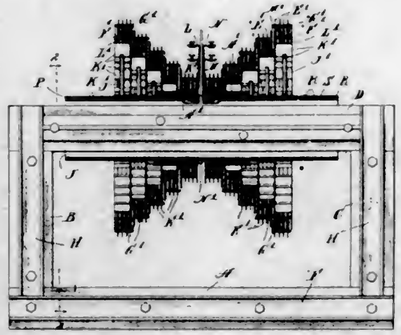
1. A railroad curve tester and gage, comprising a long straight bar having at each end a laterally projecting plate marked with similar graduations and numbers, and projecting on the same side of the bar at right angles to its longitudinal axis, means for fixing the relation of one plate to the rail, and means for clamping the middle of the bar to the rail.

2. A railroad curve tester and gage, comprising a long straight bar having at each end a laterally projecting plate marked with similar graduations and numbers and projecting on the same side of the bar at right angles to its longitudinal axis, one of said plates having holes through it opposite each graduation, and detachable pins fitting said holes, and means for securing the middle of the bar to the rail.



3. A railroad curve tester and gage, comprising a long straight bar with a stop at its middle and an adjustable set screw connected to the bar in transverse position opposite the stop, and two laterally projecting and similarly graduated and numbered plates secured to the opposite ends of the bar and projecting on the same side of the same, at right angles to its longitudinal axis, and adjustable means for connecting one of these plates to the rail.

880,838. HIGH-POTENTIAL TRANSFORMER. CHESTER H. THORDARSON, Chicago, Ill. Filed Apr. 17, 1905. Serial No. 255,892.



1. In a high potential transformer, a frame comprising a laminated base, laminated end pieces resting thereon and a core resting upon said end pieces, and transformer coils carried by said core.

2. In a high potential transformer, a frame comprising a magnetic base, and magnetic end pieces resting endwise thereon, and a magnetic core supported by said end pieces, in combination with transformer coils supported upon said core.

3. A high potential transformer comprising a rectangular frame, one of the side pieces thereof forming a core and the other forming a base, the end parts resting freely endwise upon the base part and freely supporting the core part, and transformer coils encircling the core part.

4. In a high potential transformer, a magnetic frame including a core, transformer coils encircling said core, said coils being respectively equally distant from the end and base portions of the frame.

5. In a high potential transformer, a frame comprising a laminated core, a laminated base and laminated end pieces, said end pieces resting upon said base and said core resting upon said end pieces, and transformer coils encircling said core, said transformer coils being respectively equally distant from the base and adjacent end portions.

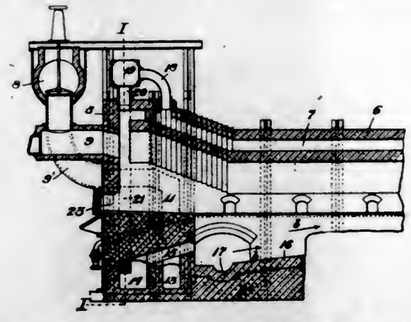
[Claims 6 to 31 not printed in the Gazette.]

880,839. COLLAR SUPPORT AND CLOSER. ALBERT TOOTH, Glenside, Pa. Filed Aug. 7, 1907. Serial No. 387,413.



A collar support and closer formed of a single piece of wire bent to have an upright body having its top formed with a loop and its central portion twisted, the ends of the twisted portions of said body being bent downwardly and outwardly to form a pair of divergent prongs, the end of each prong being bent to form a spring coil so as to provide two spring jaws which engage on opposite sides of the collar button shank and which engage the rear of the head of said button, said upright body being adapted to lie against the overlapping button flaps of the collar, each of said spring coils being extended to form long arms having hooks formed on their ends.

880,840. FURNACE. JOHN A. WALDBURGER, McKeesport, Pa., assignor to Forter Miller Engineering Company, Pittsburg, Pa., a Corporation of Pennsylvania. Filed Feb. 19, 1907. Serial No. 358,184.



1. A heating furnace provided with longitudinally arranged supporting benches having vertically arranged side walls and intervening spaces, downwardly sloping floors, and transverse air and gas ports each communicating with ports opening into said spaces below the top of said benches at the lower end of said sloping floors, substantially as set forth.

2. A heating furnace provided with longitudinally arranged supporting benches having vertically arranged side walls and intervening spaces, downwardly sloping floors, a transverse gutter arranged to receive the slag from said floors and carry it off to the outside of the furnace, and transverse air and gas ports each communicating with ports opening into said spaces below the top of said benches at the lower end of said sloping floors, substantially as set forth.

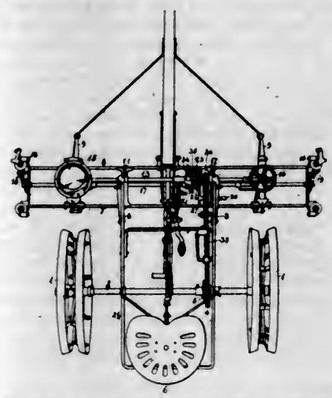
3. A heating furnace provided with supporting benches and intervening spaces, and transverse air and gas ports each communicating with ports opening into said spaces below the supporting level of said benches, substantially as set forth.

4. A heating furnace provided with supporting benches and intervening spaces, and transverse air and gas ports each communicating with ports opening into said spaces below the supporting level of said benches, with additional means for supplying fuel in combustion above the supporting surface of said benches, substantially as set forth.

5. A heating furnace provided with supporting benches and intervening spaces, and a transverse fuel supply port communicating through the wall of the furnace with a fuel supply conduit and opening into the lower front portion of said intervening spaces below the supporting level of said benches, substantially as set forth.

[Claims 6 to 11 not printed in the Gazette.]

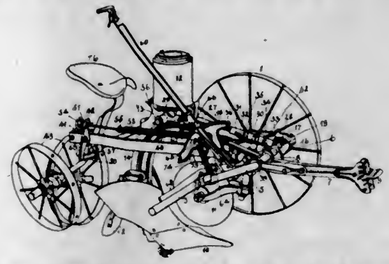
880,841. CORN-PLANTER. LEWIS E. WATERMAN, Rockford, Ill., assignor to Emerson Manufacturing Company, Rockford, Ill., a Corporation of Illinois. Filed Oct. 22, 1906. Serial No. 339,976.



1. In a corn planter, seed dropping mechanism, a revolving shaft for imparting movement to the seed dropping mechanism, a clutch face loosely mounted on the shaft and having driving connection with the supporting wheels, a dog movable with the shaft, a stationary cam, and means operated by the tappet lever for carrying the dog against the cam and into engagement with the clutch face, and means for restoring the carrying means to its starting position.

2. In a corn planter, seed dropping mechanism, a revolving shaft for imparting movement to the seed dropping mechanism, a clutch face loosely mounted on the shaft and having a driving connection with the supporting wheels, a dog movable with the shaft, a stationary cam, and means operated by the tappet wire for carrying the dog against the cam and into engagement with the clutch face, means for restoring the carrying means to its starting position, the starting means receiving the dog after the completion of the movement of the seed dropping mechanism.

880,842. AGRICULTURAL IMPLEMENT. LEWIS E. WATERMAN, Rockford, Ill., assignor to Emerson Manufacturing Company, Rockford, Ill., a Corporation of Illinois. Filed Oct. 22, 1906. Serial No. 339,977.



1. The combination of a cranked axle, wheels supporting the axle, a plow beam having a pivotal connection with the crank portion of the axle, a caster wheel, a link pivotally connecting the caster wheel and plow beam, and a bar pivotally connecting the caster wheel and crank portion of the axle.

2. The combination of a cranked axle, wheels supporting the axle, a plow beam having a pivotal connection with the crank portion of the axle, a caster wheel, a link pivotally connecting the caster wheel and plow beam, a stop carried by the plow beam and extending over the link and with which the link engages, and a bar pivotally connecting the caster wheel and crank portion of the axle.

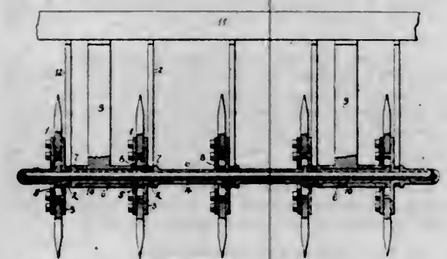
3. The combination of a cranked axle, wheels supporting the axle, a plow beam having a pivotal connection with the crank portion of the axle, a caster wheel, a bracket pivotally supported by the caster wheel, a link pivotally connecting the bracket and plow beam, and a bar pivotally connecting the bracket and crank portion of the axle.

4. The combination of a cranked axle, wheels supporting the axle, a plow beam having a pivotal connection with the crank portion of the axle, a caster wheel, a bracket pivotally supported by the caster wheel, a link having its ends turned in the same direction and at right angles to the link, a pivotal connection between one of the ends of the link and bracket and a pivotal connection between the other end of the link and the plow beam, and a bar pivotally connecting the bracket and crank portion of the axle.

5. The combination of a cranked axle, wheels supporting the axle, a plow beam having a pivotal connection with the crank portion of the axle, a bracket pivotally supported by the caster wheel, a link pivotally connecting the bracket and plow beam, and a bar having one end fixedly connected with the bracket and its other end pivotally connected with the crank portion of the axle.

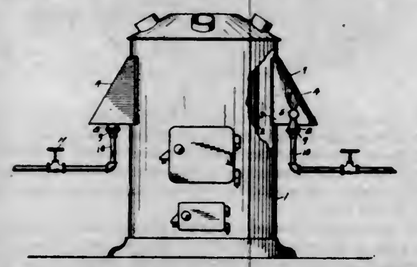
[Claims 6 to 17 not printed in the Gazette.]

880,843. DISK HARROW. LEWIS E. WATERMAN, Rockford, Ill., assignor to Emerson Manufacturing Company, Rockford, Ill., a Corporation of Illinois. Original application filed Feb. 19, 1907, Serial No. 358,211. Divided and this application filed Nov. 7, 1907. Serial No. 401,087.



A harrow section comprising a main frame, a rod, brackets connected to the frame and to the rod, a series of disks having the rod located in their axial center and having a hub extending therefrom, a series of spools, one located between two disks one end of a spool resting in contact with the hub of a disk, and a scraper for each disk having one end encircling the hub of a disk and held against displacement by the end of the spool.

880,844. GAS HEATING APPARATUS. THOMAS P. WATTS, Kansas City, Mo. Filed Jan. 28, 1907. Serial No. 354,407.



1. The combination with a furnace having a jacket provided with a cut out portion, of a hood projecting from said jacket and covering said cut out portion, and a burner located in said hood.

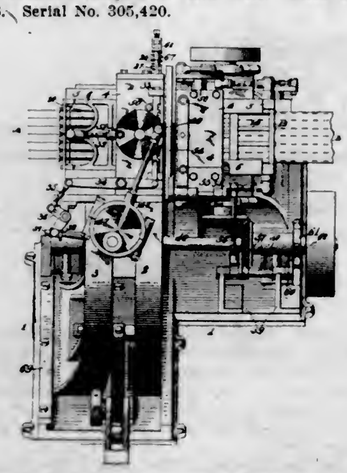
2. The combination with a furnace having a jacket provided with a cut out portion, of a hood having close contact with said jacket at the top and sides of said cut out portion, but open at the bottom, and a burner located in said hood, for the purpose set forth.

3. The combination with a furnace having a jacket provided with a cut out portion, of a hood having close contact with said jacket at the top and sides of said cut out portion, but open at the bottom, a burner located in said hood near the bottom, and a mixing chamber and feed pipe projecting into said open bottom and supporting said burner.

4. The combination with a furnace having a jacket provided with a cut out portion, of a wedge shaped hood having a close contact with said jacket at the top and sides of said cut out portion and extending outwardly toward the bottom, and a burner located in said hood near the bottom, for the purpose set forth.

5. The combination with a furnace having a jacket provided with a cut out portion, of a hood carried by said jacket in communication with said cut out portion, an asbestos lining in said hood, and a burner located in said hood, for the purpose set forth.

880,845. CELL-CASE MACHINE. ALWIN W. D. WEIS, Waterloo, and JOSEPH STARMAN, Cedar Rapids, Iowa; said Starman assignor to said Weis. Filed Mar. 10, 1906. Serial No. 305,420.



1. In a cell-case machine provided with suitable actuating mechanism, and having sheet grouping frames separated a short distance from each other, and inclined substantially at right angles to each other, the combination of sheet-holding fingers, feed-dogs to engage perforations previously made in the sheets, shears to sever the strips when intermatched, and mechanism adapted to move said fingers forward and back between the shear-blades to guide the sheets in matching, substantially as set forth.

2. In a cell-case machine having sheet-grouping, guiding and feeding mechanisms in a separated pair and at substantially right angles to each other, fingers to hold and guide the matching edges of the sheets, a positive feed mechanism to engage the previously punched sheet, a suitable cut-off to sever the sheets after matching between the two parts of the machine. and mechanism adapted to actuate the feed, to carry the fingers and the sheet held by them to matching position between the shears.

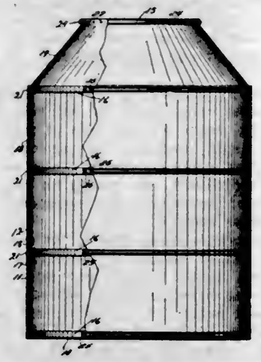
3. In a cell-case machine arranged to deliver notched sheets in a pair of groups substantially at right angles to each other, the combination of fingers to hold and guide the sheets, feed-dogs to positively feed the sheets forward, means for moving the fingers and dogs simultaneously a greater distance than the limited movement of the sheet, a backstop for the sheet, and a shunt for the feed through a part of its course.

4. In a cell-case machine, the combination of a matcher or assembler comprising a pair of mechanisms arranged to deliver into an open space between them, and at substantially right angles to each other, groups of notched sheets to form a complete cell-case, means for feeding the sheets to intermatching position, means for severing them when so matched, an ejector to discharge them from the open intermatching space.

5. In a cell-case machine arranged to match at substantially right angles the slotted but unsevered sheet ends to form a complete cell-case, the combination of guiding fingers to hold the sheets in proper position, coöperating feed-dogs, means for simultaneously moving the fingers and dogs through a greater space than the required feed, and auxiliary stationary fingers adapted to shunt the dogs during a part of their course.

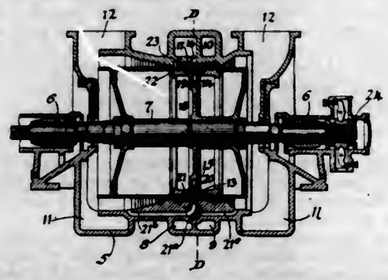
[Claims 6 to 16 not printed in the Gazette.]

880,846. TANK. FRANK B. WENTWORTH, Independence, Kans. Filed Apr. 19, 1906. Serial No. 312,694.



In a tank having sectional walls of sheet metal in combination, a circumferential hoop of channel section having its flanges directed outwardly, contiguous edges of adjacent wall sections of the tank being flanged inwardly and laid in the groove of the channel, a band surrounding the tank and bearing upon the edges of the wall sections within the groove, and a calking of solder for the joint thus formed, the solder being applied over the band.

880,847. ELASTIC-FLUID TURBINE. GEORGE WESTINGHOUSE, Pittsburg, Pa., assignor to The Westinghouse Machine Company, a Corporation of Pennsylvania. Filed Aug. 23, 1904, Serial No. 221,861. Renewed Sept. 18, 1907. Serial No. 393,461.



1. In an elastic fluid turbine, an ahead portion, an astern portion, a seal between said portions and means whereby the fluid escaping from either of said portions through said seal is conducted to an operative point of the ahead portion.

2. In an elastic fluid turbine, an ahead portion, an astern portion, two interleaving seals between said portions, a fluid chamber common to said seals, and means whereby the fluid entering said chamber is conducted to the ahead portion.

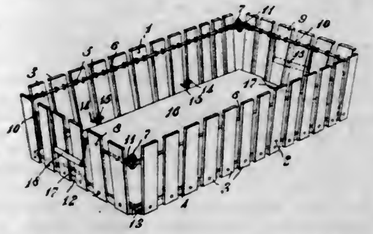
3. In a reversing turbine, an ahead portion, an astern portion, two interleaving seals between said portions, a fluid chamber on the turbine rotor common to said seals and means whereby the fluid entering said chamber is conducted to the ahead portion.

4. In a reversing turbine, an ahead portion, an astern portion, two interleaving seals between said portions, a fluid chamber on the turbine rotor common to said seals and a fluid conduit in the turbine casing communicating with said chamber whereby the fluid entering said chamber is conducted to an operative point of the ahead portion.

5. In an elastic fluid turbine, primary nozzles, buckets coöperating therewith to produce rotation in one direction, secondary nozzles, buckets coöperating with said secondary nozzles to produce opposite rotation, a rotor carrying said buckets, a fluid chamber in said rotor, seals located between said rotor and the portion carrying said nozzles, and means whereby the fluid entering said chamber is conducted to an effective portion of the turbine.

[Claims 6 to 15 not printed in the Gazette.]

880,848. COLLAPSIBLE BASKET. HUGO WIENER, Henderson, Ky. Filed Feb. 27, 1906. Serial No. 303,247.

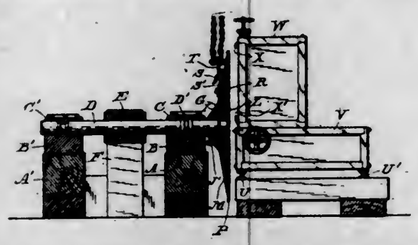


1. A collapsible receptacle comprising side and end panels each panel consisting of a base strip, slats secured at one end thereto and a connecting wire secured to the other end of the slats and parallel with the base strip, hinges connecting the base strips of the side and end panels, loops integral with the ends of the connecting wires of the side panels and extending substantially at right angles to said wires, the wires of the end panels having coils at their ends loosely and non-detachably engaging the loops of each side panel, a bottom hingedly connected to one of the side panels and foldable thereon, the loops of the side panels being of sufficient length to overlap the ends of the bottom when the basket is folded, and a bail pivotally mounted on the wires of opposite panels.

2. A collapsible receptacle having side and end panels each consisting of slats and a connecting wire secured to the slats, the wires of the side panels terminating in loops extending inwardly from the ends of, and at right angles to, the panels, and the connecting wires of the end panels terminating in coils loosely and non-detachably engaging the adjoining loops of the side panels, said loops and coils being so disposed as to permit each end panel to fold flat on to one of the adjoining side panels.

3. A collapsible receptacle having side and end panels, each panel consisting of slats, a continuous connecting wire secured upon one face of the slats, the wires of the side panels terminating in loops extending inwardly from the ends of, and at right angles to, the panels, and the connecting wires of the end panels terminating in coils loosely and non-detachably engaging the adjoining loops of the side panels, said loops and coils being disposed to permit each end panel to fold flat on to one of the adjoining side panels, base strips connected to the side and end panels and hingedly connected, and a bottom hingedly connected to one of the panels and disposed to be supported upon the base strip and to fold upon one of the side panels, said bottom having recessed ends disposed to receive the loops when the receptacle is folded.

880,849. VENEER-MACHINE. HARRY T. WILLIAMS, Indianapolis, Ind. Filed Feb. 14, 1907. Serial No. 357,271.



1. A veneer machine including a saw spindle, a saw-flange securely mounted removably on the spindle, saw blades secured to the flange, a collar secured to the spindle, and screws threaded into the rear of the collar and projectable against the flange to force the same from the spindle.

2. A veneer machine including a saw spindle, a collar secured to the spindle, a plurality of threaded studs secured permanently to the collar and projecting beyond a face thereof, a saw flange mounted removably on the spindle and having holes receiving the studs, and nuts on the studs in engagement with the flange.

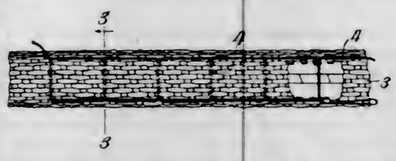
3. A veneer machine including a saw spindle with a tapering end portion, a collar secured permanently to the spindle with the straight front face thereof at the larger part of the end portion, the opposite or rear face of the collar being beveled, a plurality of threaded studs secured permanently to the collar and projecting beyond the straight face thereof, a saw flange mounted on the end portion of the spindle and against the front face of the flange removably and having holes receiving the studs, the side of the flange that is against the collar being beveled from the collar outwardly and the other or front side being straight, said flange being recessed in the straight face thereof about the holes, and nuts on the studs seated in the recesses against the flange.

4. A veneer machine including a rotative spindle having a collar secured thereto, the spindle extending beyond the collar and having a tapering extremity, a saw flange mounted removably on the tapering extremity of the spindle and provided with a detachable carrying device, a plurality of screws securing the flange to the collar detachably, a pair of screws mounted in the collar to be projected against the flange, and saw blades secured to the flange.

5. A veneer machine including a saw spindle having a collar thereon, a saw flange joined detachably to the spindle and the collar and having a hole therein to receive a carrying device, a plurality of screws securing the flange to the collar and the spindle, and saw blades secured to the flange, said hole being between the saw blades and the middle portion of the flange.

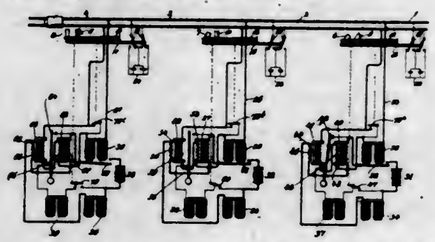
[Claims 6 and 7 not printed in the Gazette.]

880,850. FLEXIBLE CONDUIT. JAMES S. WILSON, Chelsea, Mass. Filed May 20, 1907. Serial No. 374,604.



A flexible conduit comprising an inner wall composed of successive turns of a strip of material, forming a tube, a body of any suitable material, applied to and surrounding said tube, and a fastening member or members securing said tube at different points to said body.

880,851. RAILWAY SIGNALING SYSTEM. JOSEPH A. WILSON, Westfield, N. J., assignor to The Hall Signal Company, New York, N. Y., a Corporation of Maine. Filed Aug. 10, 1906. Serial No. 329,973.



1. In a railway signaling system the combination of two magnetically separate electro-magnets each having two coil windings; a circuit controller operated by said magnets conjointly, a circuit containing one coil of each magnet, a second circuit containing the second coil of each magnet and means for varying the current to vary the field of one magnet and oppositely vary the field of the other magnet.

2. In a railway signaling system the combination of a circuit controller, a plurality of separate, independent, electro-magnets, means whereby one of said electro-magnets actuates said controller in one direction, means whereby another electro-magnet actuates said controller in the reverse direction, and means for neutralizing the magnetic field of one magnet and increasing the magnetic field of the other magnet.

3. In a railway signaling system, the combination of a circuit controller, a plurality of separate, independent, electro-magnets, means whereby one magnet moves said controller in one direction, means whereby another magnet moves said controller in the reverse direction and means for increasing the magnetic field of one magnet and simultaneously decreasing the magnetic field of the other magnet.

4. In a railway signaling system, the combination of a signal, a circuit including a battery, translating device and circuit controller for controlling the operation of said signal, means for actuating said circuit controller comprising a plurality of electromagnets, a plurality of coils for each of said magnets, means for energizing said coils, and means for reversing the flow of current through one coil of each magnet while the other coils of said magnets are energized.

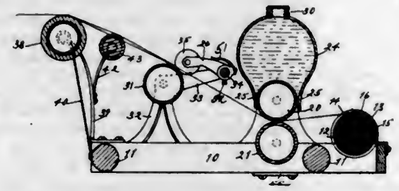
5. In a railway signaling system, the combination of a signal, a circuit including a battery, circuit controller and translating device for controlling the operation of said signal, a plurality of electromagnets arranged to move said circuit controller in opposite directions, a plurality of coils for each of said magnets, means for passing a current in a constant direction through a coil of each magnet, means for passing a current through another coil of each magnet, and means for reversing the direction of the current through said last named coils while the other current is passing through the other coils of said magnets.

[Claims 6 to 18 not printed in the Gazette.]

880,852. PAPER-HANGING DEVICE. ROLANDO WISSLER, Indianapolis, Ind., assignor of one-half to Charles A. Stonebreaker, Urbana, Ill. Filed July 12, 1907. Serial No. 383,533.

1. A paper-hanging device consisting of an open rectangular frame, means for supporting a roll of paper at one end of said frame, a handle extending transversely of said frame and adjacent said paper roll-supporting means, a second handle extending transversely of the frame at its other end, paste-applying means, a paper-trimming means mounted on said frame intermediate said handles, and means for applying paper to the surface to be covered comprising a pressure roll mounted in spring arms secured to the end of said frame over said second handle.

2. A paper-hanging device including means for applying paste to the paper as it passes through the device, means for applying the paper to a wall, and an intermediate



roller that bears against the paper and tapers in diameter from the middle to the ends thereof, whereby the wrinkles will be straightened out of the paper.

880,853. STOP-MOTION AND REGULATOR FOR WINDING-MACHINES. THOMAS WRIGHT, Reading, Pa. Filed Aug. 2, 1906. Serial No. 328,851.



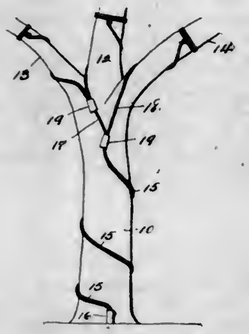
1. In a stop motion and regulator for winding machines the combination of a spool on which thread is wound, a spindle upon which the spool is mounted, a friction wheel carried by the spindle for turning the spool, a friction pulley upon which the friction wheel is adapted to bear, a pair of pivoted arms having vertical adjustment and independent longitudinal adjustment and an eccentric roll pivoted between said arms and so located relative to the spool that when the latter is full its surface will come in contact with the short diameter of said roll causing it to revolve whereby its long diameter will be turned upward and disengage the friction wheel and roller, substantially as described.

2. In a stop motion and regulator for winding machines the combination of a spool on which thread is wound, a spindle upon which the spool is mounted, a friction wheel carried by the spindle for turning the spool, a friction pulley upon which the friction wheel is adapted to bear, a pair of pivoted arms having vertical adjustment and independent longitudinal adjustment and an eccentric roll pivoted between said arms and so located relative to the spool that when the latter is full its surface will come in contact with the short diameter of said roll causing it to revolve whereby its long diameter will be turned upward and disengage the friction wheel and roller, a pin projecting from the eccentric roll to stop the latter when its long diameter is at the top, substantially as described.

880,854. LIGHTNING-PROTECTOR ATTACHMENT FOR TREES. JOHN P. A. ANDERSON, Madrid, Iowa. Filed Feb. 23, 1907. Serial No. 359,495.

1. A tree protector, consisting of a main metallic conductor embracing the trunk of the tree and in electrical connection with the ground and coacting metallic conductors clamped to said main conductor and embracing the branches of the tree.

2. The herein described tree protector comprising a spiral main conductor encircling the trunk of the tree and in electrical connection with the earth and spiral branch



conductors clamped thereto and encircling the branches of the tree.

880,855. FLUE-CLEANER. HENRY O. BARRELL, Reading, Pa. Filed Oct. 6, 1906. Serial No. 337,723.



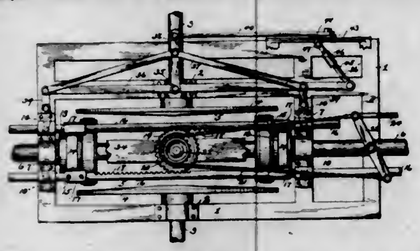
A flue cleaner comprising a straight rod having formed on its upper end horizontal branches having their ends bent to provide upwardly extending vertical arms, the terminals of which are bent inwardly to form hooks, a brush back having a continuous surrounding central groove therein, and bristles on opposite sides faces of the back, said grooves being provided with oppositely disposed openings therein arranged near the upper end of the back, and said hooks serving to be sprung into said openings to permit of the branches and the vertical arms being inclosed and secured within said groove, substantially as specified.

880,856. REVERSIBLE AND VARIABLE-SPEED POWER-TRANSMITTING DEVICE. JOSEPH BARTOSIK and PETER KRUMMEL, Pittsburg, Pa. Filed May 17, 1906. Serial No. 317,283.

1. In combination alining shafts, disks on the adjacent ends of the shafts, the opposed faces of the disks being conical, a drive shaft passing between the disks friction rolls on the drive shaft movable on the shaft, a frame movable on each of the rolls, a bar secured to each frame and slidable through the remaining frame, and means engaging the bars to impart movement thereto.

2. In combination, alining shafts, disks on the adjacent ends of the shafts, the opposed faces of the disks being conical, a drive shaft passing between the disks, friction rolls on the drive shaft movable on the shaft, a frame movable on each of the rolls, a bar secured to each frame and slidable through the remaining frame, and means en-

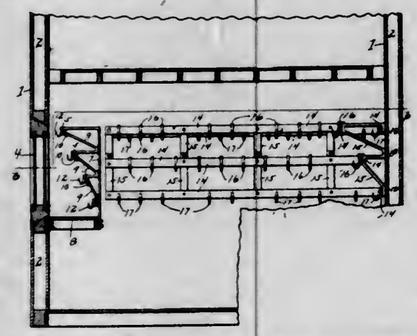
gaging the bars to impart movement thereto simultaneously.



3. In combination, alining shafts, disks on the adjacent ends of the shafts, the opposed faces of the disks being conical, a drive shaft passing between the disks, friction rolls on the drive shaft movable on the shaft, a frame movable on each of the rolls, a bar secured to each frame and slidable through the remaining frame, and means engaging the bars to impart movement therein in opposite directions.

2. A series of meat racks, one of said racks consisting ends of the shafts, the opposed faces of the disks being conical, a drive shaft passing between the disks, friction rolls on the drive shaft movable on the shaft, a frame movable on each of the rolls, a bar secured to each frame and slidable through the remaining frame, means engaging the bars to impart movement thereto, teeth on the bars, a toothed wheel engaging the teeth of the bar, and means for rotating the toothed wheel.

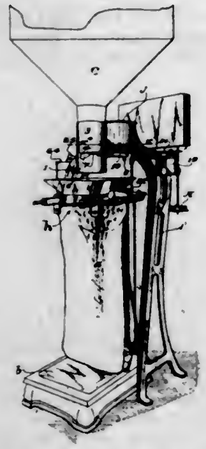
880,857. MEAT-RACK. HENRY J. BOECKMAN, Dayton, Ohio. Filed May 20, 1907. Serial No. 374,599.



1. A series of meat racks adapted to support smaller cuts of meat and consisting of a series of horizontal bars supported out of vertical alinement one with the other and in end pockets, a series of integrally-joined brackets supporting said bars at intermediate points in pockets provided in the outer ends of said brackets, a series of racks adapted to support the larger cuts of meat, each of said racks consisting of a plurality of horizontal bars, a series of graduated brackets integrally joined and graduated to support the lower bars out of vertical alinement with the upper bars, the two upper bars being supported in the same horizontal plane with one in the rear of the other, a series of rigid hooks supported upon the upper rearward bar and the lower bar, and two series of movable hooks supported upon the two outwardly-lying bars, substantially as specified.

2. A series of meat racks, one of said racks consisting of a series of horizontal bars mounted at their ends in pockets and out of vertical alinement one with the other, a series of integrally-joined graduated brackets supporting said bars at intermediate points, the said brackets terminating in a vertical portion by which they are attached to a supporting member, a second series of racks consisting of four horizontal bars, the upper two of which are mounted in the same horizontal plane one in the rear of the other, and the two lower bars are mounted out of vertical alinement with the upper forward bar, a plurality of graduated supporting brackets for said bars each consisting of a series of integrally-joined brackets secured to the adjacent wall of the housing at their bases, the upper rearward bar being attached to the upper portion of the brackets adjacent to the supporting wall, the upper outward bar being attached to the upper front angles of the brackets, the next adjacent lower bar being attached to the brackets in a plane between the two upper bars, and the lower bar being attached to the lower inner angle of the brackets in a vertical plane with the upper rearward bar, the two front bars being provided with a series of movable meat hooks, and the two rearwardly-lying bars being provided with a series of fixed meat hooks, as herein shown and described.

880,858. ELECTRO-AUTOMATIC WEIGHING APPARATUS. CHARLES L. BOND, Los Angeles, Cal. Filed Jan. 28, 1907. Serial No. 354,579.



1. In an apparatus for weighing bulk material, etc., the combination of a scale, a conveyer-chute for conveying a stream of material to the scale, a gate operable in said conveyer-chute for reducing the size of the stream, said gate being provided with an orifice, a cut-off operable in said chute and beneath the orifice of said gate, and means for operating said gate and cut-off at different periods.

2. The combination, with a conveyer-chute for conducting material to a weighing scale, of a gate in said conveyer-chute having an orifice, means for holding said gate open, electro-magnetic means for releasing said gate, means for controlling the speed of movement of said gate when released, a cut-off operable beneath the orifice of said gate, and means for controlling said cut-off.

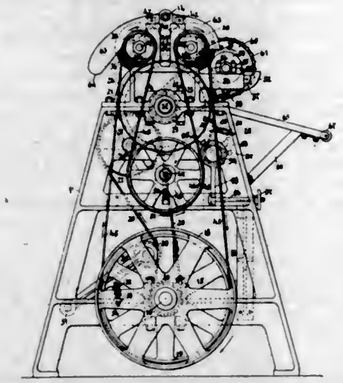
3. The combination with a conduit for conducting material to a weighing scale, of a gate operable in said conduit and provided with an orifice, a cut-off also operable in said conduit arranged to move beneath the orifice of said gate, means for holding said gate and cut-off open, means for causing said gate and cut-off to travel at different speeds, and means for releasing the gate and cut-off, said means being controllable by the movement of the scale-beam.

4. The combination with a conduit for conducting material to a weighing scale, said conduit being provided with transverse slots, of a gate having an orifice and operable in one of said slots, a cut-off operable in the other of said slots and directly beneath the orifice of said gate, means for releasing said gate and cut-off at different periods, means for regulating the speed of said gate, means for controlling said means, means for normally holding said cut-off open, both means for controlling the release of the gate and cut-off being regulable by the movement of the scale-beam.

5. The combination with a weighing scale, of a conduit having a tapering delivery chute and a plurality of transverse slots arranged on different planes, a gate extending in line with one of said slots having an orifice, a cut-off operable in said other slot and arranged to close the orifice in said gate, mechanism for holding said gate and cut-off open, electrical means for releasing said gate and cut-off, and means for causing said gate to travel at a slower speed than said cut-off.

[Claims 6 to 49 not printed in the Gazette.]

880,859. LEATHER BLACKENING AND SEASONING MACHINE. CHARLES P. BOSSERT, Milwaukee, Wis., assignor to Pfister & Vogel Leather Company. Filed Apr. 11, 1907. Serial No. 367,501.



1. The combination of a rotating carrying-drum, means for distributing a fluid composition upon the surface thereof or of a sheet of material carried thereby, a shaft parallel and adjacent to said drum, a wiper rotatably mounted on said shaft, an abutment fixed on said shaft, and a spring compressed between said abutment and said wiper and pressing the latter resiliently against said drum.

2. The combination of a rotating carrying-drum, means for distributing a fluid composition upon the surface of said drum or of a sheet of material carried thereby, a shaft parallel and adjacent to said drum, a wiper pivotally mounted on said shaft, an abutment rotatable upon said shaft, means for clamping said abutment in any position on said shaft, and a compression spring between said abutment and said wiper whereby the latter is pressed against said drum.

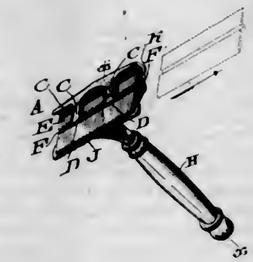
3. The combination of a rotating carrying-drum, means for distributing a fluid composition upon the surface of said drum or of the sheet of material carried thereby, a shaft parallel and adjacent to said drum, a wiper pivotally mounted on said shaft, an abutment rotatable upon said shaft, means for clamping said abutment in any position on said shaft, a compressed spring between said abutment and said wiper whereby the latter is pressed against said drum, and means for separably adjusting the compressive force of said spring.

4. The combination of a rotating carrying-drum, means for distributing a fluid composition upon the surface of said drum or of a sheet of material carried thereby, a shaft parallel and adjacent to said drum, a wiper pivotally mounted on said shaft, an abutment rotatable upon said shaft, means for clamping said abutment in any position on said shaft, a compressed spring between said abutment and said wiper whereby the latter is pressed against said drum, a screw-pin threaded into one of said members between which the spring acts and having an abutment for one end of said spring, and means for rotating said pin whereby the force of said spring is varied.

5. In combination with a rotary drum, means for removing a coating of liquid or composition from the surface thereof comprising a curved member pressing against the surface of said drum, the curvature of said member being such as to present a concave collecting surface to the advancing part of the surface of said drum.

[Claims 6 to 22 not printed in the Gazette.]

880,860. SAFETY-RAZOR. JAMES H. BOWEN, Philadelphia, Pa. Filed Mar. 29, 1907. Serial No. 365,234.



1. In a safety razor, in combination, a blade-holding device comprising a rigid head or backing plate having a groove or depressed part providing at each side thereof bearing surfaces constituting a blade-seat, a flexible blade supported on said blade-seat near its longitudinal edges, a guard on one side of the backing plate and a rigid extension from its other side over-hanging the blade-seat and projecting slightly below the plane thereof, whereby the blade is slightly flexed and securely held by friction.

2. A razor of the character stated, composed of a blade having a longitudinal deflection, and a blade-holder comprising a head hollowed out near its center and an arm thereon set out therefrom to slidingly receive said blade between them, means on said arm to engage said deflection opposite the hollowed out portion and lock the blade on the head, and a projection on the face of the head between the free end of said arm and the edge of the blade beneath said arm to receive said edge of the blade and keep it from contact with the face of the head.

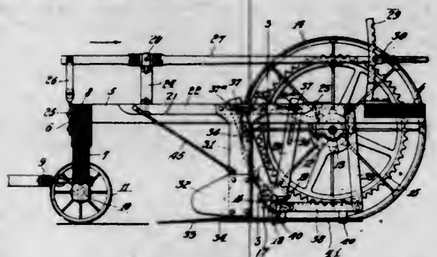
3. A razor of the character stated, composed of a blade having a turned-out wall on the face thereon, and a blade-holder composed of a head and an arm thereon set out therefrom so as to slidably receive said blade between them, means on said arm adapted to engage said wall and lock the blade on the head, and a projection on the face of said head adjacent to the inner place of connection of said arm with said head, on which projection the adjacent portion of the blade is seated and by which the relative cutting edge is removed from said face.

4. In a razor of the character stated, a blade-holder comprising a plate hollowed out near its center, an arm extending from an end of said plate and adapted to overhang the face of the same opposite the hollowed out portion, and a projection on said face adjacent to the inner place of connection of said arm with said plate at a distance from the free end of said overhanging arm, said projection being adapted to hold the relative cutting edge of the blade removed from the face.

5. A razor of the character stated comprising a head hollowed out near its center, an arm extending from an end of said head and adapted to overhang the face thereof, and a projection on said face at a distance from the free end of said overhanging arm, said projection being adapted to have the adjacent portion of the blade of the razor seated thereon and hold the relative cutting edge from contact with said face the free end of said arm being disposed opposite said hollowed out portion.

[Claim 6 not printed in the Gazette.]

880,861. POTATO-DIGGER. JOSEPH N. CHAMPAGNE, Ste. Clothilde, Quebec, Canada, assignor of one-third to Adelard Gagner, Manchester, N. H., and one-third to Origene Charland, Ste. Philomene, Canada. Filed Mar. 15, 1906. Serial No. 306,167.

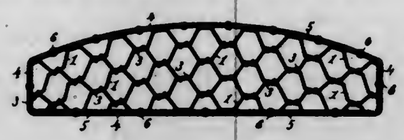


1. In an implement of the character described, the combination comprising a wheeled supporting frame, a digging member carried by the frame, a separating member comprising a plurality of fingers, and a bowed cranked axle adapted to reciprocate said fingers.

2. In an implement of the character described, the combination comprising a wheeled supporting frame, a digging member carried by the frame, shaft hangers carried by said frame, a separating member comprising a plurality of fingers, a bowed crank shaft journaled in said hangers, connections between said crank shaft and said separating member, whereby said separating member is actuated by said shaft, means for driving said shaft and means for simultaneously raising said shaft and separator and disengaging the driving means from said shaft.

3. In an implement of the character described, the combination comprising a wheeled supporting frame, a digging member on the frame, a shaft supporting hanger carried by the frame, a bowed crank shaft carried by the hangers, a separating member having its front end connected with the bowed portion of the crank shaft, and its rear end mounted on fixed pivots, means for rotating said crank shaft, and means for moving the aforesaid hangers and crank shaft mounted thereon into operative position relatively to the aforesaid crank shaft rotating means.

880,862. TREAD-SURFACE. RODNEY G. CHASE, Medford, Mass. Filed June 2, 1906. Serial No. 319,831.



1. A tread surface of the class described, consisting of a series of crimped thin metal strips arranged edgewise to the surface and leaving interstices between the strips when assembled, locking means to hold the strips assembled with portions of the surface of each strip contacting with portions of the surface of the next strip of the series, and perforations through the contacting portions of the strips, receiving the locking means and allowing of longitudinal movement of one strip relative to the adjacent strip.

2. A tread surface of the class described, consisting of a series of crimped thin metal strips arranged edgewise to the surface and leaving interstices between the strips when assembled, perforations and projections which interlock each other arranged at portions of the surface of the strip which contact with portions of the surface of the next adjacent strip of the series, the projections fitting the perforations vertically and preventing movement of the strips in that direction relative to each other and the perforations of sufficient length longitudinally to allow of a longitudinal movement of each strip relative to the next strip, whereby the general direction of the strips may be changed from a straight line, and means to hold the series of the strips assembled.

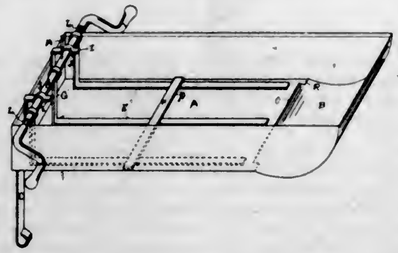
3. A tread surface of the class described consisting of a series of crimped thin metal strips arranged edgewise to the surface with portions of the surface of each strip contacting with portions of the surface of the next adjacent strip of the series, leaving interstices between the strips when assembled, perforations and projections on the contacting portions of the strips, which perforations and projections interlock each other and prevent vertical displacement of the strips when assembled.

4. A tread surface of the class described, consisting of a series of crimped thin metal strips arranged edgewise to the surface with portions of the surface of each strip contacting with portions of the surface of the next adjacent strip of the series, leaving interstices between the strips when assembled, perforations and projections on the contacting portions of the strips, which perforations and projections interlock each other and prevent vertical displacement of the strips when assembled and the projections extending through the perforations with their ends turned against the opposite surface of the strip to fasten the series of strips in proper assembled positions.

5. A tread surface of the class described, consisting of a series of crimped thin metal strips arranged edgewise to the surface leaving interstices between the strips when assembled, perforations and projections on the strips which interlock and prevent vertical displacement of the strips, combined with a metal binding to which the strips are locked.

[Claims 6 and 7 not printed in the Gazette.]

880,863. DEVELOPING-TRAY. ROBERT A. CROSBY, Portland, Me., assignor of one-half to Elgin C. Verrill, Cape Elizabeth, Me. Filed May 29, 1905. Serial No. 262,767.



1. A developing tray having a film-containing portion and a depressed developer-containing portion spaced apart from the end thereof and means for holding the film on the film containing portion.

2. A developing tray having a film-containing portion, a depressed developer-containing portion adjacent thereto and means for supporting the film-containing portion of the tray in a raised position.

3. A developing tray having a film-containing portion, a depressed developer-containing portion adjacent thereto and standards removably secured to the film-containing portion of the tray adapted to support the tray in an inclined position.

4. A developing tray having a film-containing portion, a depressed developer-containing portion adjacent thereto and a raised lip positioned between the film-containing and developer-containing portions of the tray.

5. A developing tray having a film-containing portion, a depressed developer-containing portion and a raised lip positioned between the film-containing and developer-containing portion extending transversely of the tray and terminating a short distance inside the walls of the tray.

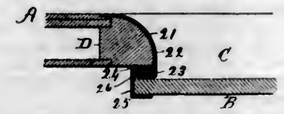
[Claims 6 to 9 not printed in the Gazette.]

880,864. CURTAIN-FIXTURE. MARTHA CURRAN, Baltimore, Md. Filed Aug. 1, 1907. Serial No. 386,508.



A curtain fixture comprising the end-supporting plates having a plurality of horizontal loop bars and said loop bars of each plate being in different planes both horizontally and vertically, posts of unequal length sustained by and projecting outwardly from the horizontal loop bars of each plate, elbows telescopically connected to each of said posts, rods sustained by and connecting the elbows on the shorter posts and telescoping rods sustained by and connecting the elbows on the longer posts.

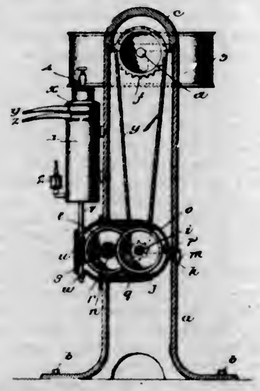
880,865. SLIDING DOOR. NEWTON A. DAVIS, Chicago, Ill. Filed June 22, 1906. Serial No. 322,914.



1. In a sliding door structure, the combination with the door and door casing spaced laterally from each other, and a trolley rail secured to the latter and trolley wheels to the former, of a plate extending substantially the width of the casing and having a horizontal portion underlying the under side of the upper part thereof and an upturned flange occupying the space between door and casing, and a plate extending substantially the width of the door and having a horizontal portion overlying the top of the door and a depending flange overlapping the other flange and interposed between the latter and the door-casing.

2. In a sliding door structure, the combination with the door and door casing spaced laterally from each other, of a channel iron having one flange secured to the inner face of the rear side-post of the door-casing and the other flange received freely in the space left between door and casing, and a channel iron embracing the rear vertical edge of the door with one flange spaced from the face of the door so as to be received between such free flange and the casing, when the door is closed.

880,866. CREAM-SEPARATOR. MORTON DECKER, Chicago, Ill., and MARVIN H. MATTY, Clayton, N. Y. Filed June 28, 1906. Serial No. 323,849.

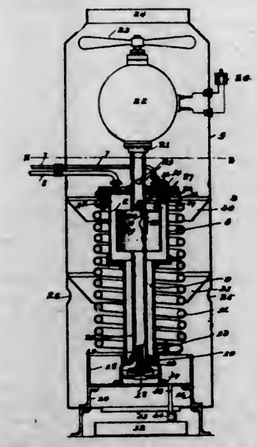


1. The combination of a hollow metal casting provided with oppositely placed openings of different sizes, a separator supported by said casting, a removable gear casing containing the driving gear for said separator, said gear casing being provided with a projection for engaging the smaller opening in said casting and with a shoulder adapted to fit against said casting, said gear casing being adapted to be slipped into the larger opening in said casting, means for securing said gear casing in said casting, and means for operating the gearing in said casing, substantially as described.

2. The combination of a hollow metal casting provided with two openings of different sizes placed opposite to each other, a removable casing carrying the driving gear and provided with a shoulder and a projection, means for fastening said gear casing in said casting, a separator supported on said casting and provided with a spindle removably connected thereto and carried by said gear casing, a milk can supported by said casting at a higher level than said separator, and means for operating the gear in said removable gear casing, subatantially as described.

3. The combination of a supporting frame consisting of a hollow metal frame, provided with a large opening and a small opening placed opposite each other, a removable cover for said casting, a separator supported by said frame, a removable casing containing the driving gear for said separator, said casing being provided with a projection adapted to fit into the smaller opening in the supporting frame, and said casing being also adapted to be slipped into the larger opening in said frame and having a shoulder adapted to fit against said frame, a headed screw adapted to fit into the projection on said gear casing and with the aid of said shoulder to hold said casing rigidly in position in relation to said frame, a sprocket wheel on the outside of said gear casing, an operating crank, a sprocket wheel operated by said crank, a sprocket chain connecting said sprocket wheels, and a milk can supported by said frame at a higher level than said separator, said separator being provided with a detachable spindle, which spindle is carried by said gear casing, substantially as described.

880,867. REFRIGERATOR. CHARLES E. EDGAR, Parsons, Kans., assignor to The Edgar Manufacturing Company, Kansas City, Mo., a Corporation of Missouri. Filed June 25, 1906. Serial No. 323,285.



1. In a refrigerator, the combination of a casing provided with ports for the intake and exit of air, a refrigerant tank and a brine tank within the casing, a shaft, a tube inclosing the shaft and communicating with the brine tank, a fan at one end of the shaft and a centrifugal pump at its other end, ports in said tube, and means for rotating said shaft, substantially as described.

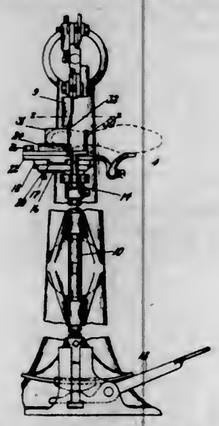
2. In a refrigerator, the combination of a casing provided with an aperture at its top and a series of ports near its bottom, a refrigerant tank within said casing,

valve controlled means for admitting the refrigerant within the tank, a coil of pipe encircling said tank and cooperating therewith at both ends, a brine tank below said coil of pipe, a vertically disposed discharge pipe communicating with said brine tank and provided with apertures positioned above said coil of pipe, a shaft within said discharge pipe, a centrifugal pump at the lower end of said shaft and within said brine tank, a fan at the other end of said shaft, and means for turning said shaft, substantially as described.

3. In a refrigerator, the combination of a casing, a reservoir within said casing, valve-controlled means for supplying said reservoir with a refrigerant, a coil of pipes surrounding and communicating with said reservoir, a motor within said casing, a shaft for said motor, an air-fan and a centrifugal pump on said shaft, a brine reservoir, said pump being in communication with said brine reservoir whereby when said shaft is rotated by said motor said liquid is discharged about said reservoir and coil of pipe and the atmosphere within said casing is circulated downward for the purpose described.

4. In a refrigerator, the combination of a casing, a reservoir and a motor within said casing, a valve-controlled means for supplying said reservoir with a refrigerant liquid, a pipe communicating with said reservoir and adapted to carry away the gases therefrom, a shaft for said motor, an air fan and a centrifugal pump on said shaft arranged above and below said motor, respectively, apertures in said casing for the intake and exit of air, a series of baffle plates arranged between said apertures, means for supplying brine to said centrifugal pump, whereby when said shaft is rotated brine is discharged upon said reservoir for the purpose of preventing frost from accumulating thereon and air is circulated within said casing, substantially as and for the purposes described.

880,868. HEEL-BREASTING MACHINE. MARY E. ELLIOTT, Lawrence, Mass., executrix of Alvin D. Elliott, deceased, assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Mar. 24, 1905. Serial No. 251,799.



1. In a heel-breasting machine, the combination with a knife curved in transverse section, and means for carrying said knife, of a work support constructed and arranged to support a heel of a boot or shoe on its side against the cut of the knife, means for moving relatively said knife and work support, and a rest positioned to bear on the shank part of the boot or shoe.

2. In a heel-breasting machine, the combination with a knife, of a work support constructed and arranged to support a heel of a boot or shoe on its side against the cut of the knife, means for moving the work support and knife relatively in a path substantially parallel with the tread face of the heel, and means permitting relative movement of the knife and work support in a direction transverse to said path.

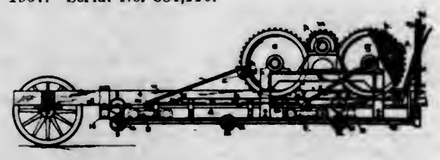
3. In a heel-breasting machine, the combination with a knife, of a work support constructed and arranged to support a heel of a boot or shoe on its side against the cut of the knife, means for moving relatively the knife and work support in a path substantially parallel with the tread face of the heel, means permitting relative movement of the knife and work support in a direction transverse to said path, and a rest positioned to bear on the shank part of the boot or shoe.

4. In a heel-breasting machine, the combination with a knife, of a work support movable relatively to the knife, comprising a tread rest having an acting face substantially parallel with the path of the knife, a gage for positioning the breast edge of the top lift of a heel, and a rest for supporting the heel against the cut of the knife, and means for moving relatively said knife and work support.

5. In a heel-breasting machine, the combination with a work support comprising means for sustaining a heel of a boot or shoe on its side against the cut of a knife and a rest arranged to bear on the tread face of the heel, of means for positioning the shank part of the boot or shoe, and means for sustaining said work support movably with relation to the shank positioning means to permit heels differing in height to be placed in operative position upon said support.

[Claims 6 to 10 not printed in the Gazette.]

880,869. TRACTION APPARATUS FOR STATIONARY CABLES. OSCAR A. ELLIS, San Francisco, Cal. Filed Aug. 2, 1906, Serial No. 328,954. Renewed July 16, 1907. Serial No. 384,110.



1. In a traction apparatus for a cable, the combination of stationary guides, a plurality of reciprocating carriages, cable gripping-devices on each carriage, means for reciprocating the carriages in the guides in opposite directions, and means operating in the reciprocating movements of each carriage to throw on the gripping-devices of each carriage at the beginning of its travel in one direction and to throw off the same at the end of such travel and hold them out of action during the return travel of the carriage.

2. In a traction apparatus for a cable, the combination of stationary guides, a plurality of reciprocating gripper-carriages each provided with cable-gripping devices, means for reciprocating the said carriages in opposite directions, means actuated through the movements of each carriage for throwing on its gripping-devices at the beginning of the travel of the carriage in one direction and for throwing off the gripping-devices at the end of said travel and for holding the same out of action during the return travel of the carriage, and means for reversing the action of the said actuating means, whereby the gripping-devices may be caused to take hold and release the cable in either direction of the travel in the guides.

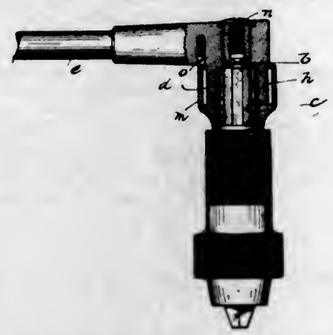
3. In a traction apparatus for a cable, a plurality of carriages having cable-gripping devices, and means for imparting reciprocating movement to the carriage in opposite directions towards and from a common starting-point, in combination with means for alternately throwing on the gripping-devices of each carriage in one direction of its travel and throwing off the gripping-devices at the end of said travel and holding the same out of action, said means being actuated through the reciprocating movement of the carriage, and means for throwing said gripper-actuating means into and out of operation at will.

4. In a traction apparatus of the character described, the combination of stationary guides, a reciprocating carriage thereon, gripping devices in said carriage arranged on opposite sides of a channel in the bottom of the carriage adapted to set over and take the cable from above, means alternately throwing in and throwing off said gripping devices in the reciprocations of the cable, and a stationary cable-supporting bar removably supported under the cable for retaining the same in place in the gripping-devices in the intervals when the gripping-devices are out of operation.

5. In a traction apparatus of the character described, a reciprocating gripper-carriage, stationary guides therefor, gripping devices pivotally mounted in said carriage in sets on opposite sides of a cable channel in the carriage, and means for throwing the gripping devices alternately into and out of action composing a stationary switch-rail, hinged switch-points on said rail, a rock-shaft to each set of gripping devices adapted to actuate the same by its movement, an arm on the rock-shaft arranged to travel upon or beneath the switch-rail according to the position of the switch-points, means for controlling the switch-points, and a spring on the rock-shaft operating in opposition to the said arm.

[Claims 6 to 8 not printed in the Gazette.]

880,870. RATCHET MECHANISM. ROBERT C. ELLRICH, Southington, Conn., assignor to Peck, Stow & Wilcox Company, Southington, Conn., a Corporation of Connecticut. Filed Mar. 9, 1906. Serial No. 305,174.



1. A ratchet mechanism including a driving and a driven member, one of said members having ratchet teeth extending lengthwise thereof, pawls carried by the other member, said pawls movable toward and away from said ratchet in radial planes, and a pivotally mounted lever in operative engagement with each pawl, and means for operating said lever.

2. A ratchet mechanism including a driven member having ratchet teeth extending lengthwise thereof and a driving member, pawls carried by the driving member and adapted to slide radially toward and from said ratchet, levers pivotally mounted upon the driving member and operatively engaging said pawls, and a sleeve surrounding said parts and having a cam to operate said levers.

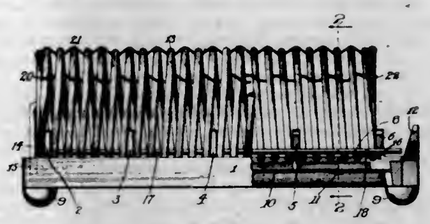
3. In a ratchet mechanism for screw-drivers, bit-braces, and similar tools, comprising the driving and driven member, a ratchet on the driven member, a hub on the driving member chambered to fit about said ratchet and having opposite radial slots, pawls located in said slots and adapted to slide towards and away from said ratchet, levers pivoted in said hub with one end in engagement with said pawls and the opposite end projecting beyond the periphery of said hub, springs normally holding said pawls in engagement with the ratchet, and a sleeve surounding said hub and rotatable with respect thereto, and cams on the interior of said sleeve adapted to coöperate with the projecting ends of said levers to slide said pawls to disengage them one at a time from said ratchet.

4. In a ratchet mechanism for screw-drivers, bit-braces, and similar tools, comprising the driving and driven members, a ratchet on the driven member, a chambered hub on the driving member fitting about said ratchet and having opposite radial slots, pawls mounted in said slots free to slide radially towards and away from said ratchet, a spring engaging said pawls midway between their ends and normally holding them in engagement with the ratchet, a pair of levers for each pawl pivoted in said hub, with one end in engagement with said pawl, said levers being located at equal distances on either side of said spring with their free ends projecting beyond the periphery of the hub, and means for engaging the projecting ends of said levers to slide the pawls one at a time out of engagement with said ratchet.

5. A driving member and a driven member, one having ratchet teeth extending lengthwise thereof and the other carrying pawls, the pawls adapted to slide radially toward and from said ratchet, pivotally mounted levers engaging each end of their respective pawls, and means to simultaneously actuate said levers to operate said pawls.

[Claims 6 and 7 not printed in the Gazette.]

880,871. HOLDER FOR SOLDERING-IRONS. JOHN M. FELL, Roslindale, Mass., assignor to Western Electric Company, Chicago, Ill., a Corporation of Illinois. Filed May 27, 1907. Serial No. 375,944.



1. The cylindrical receptacle consisting of the helically wound wire mounted upon a base and clamped thereto and adapted to receive a soldering iron, and supports for the soldering iron erected upon the base and extending between convolutions of the coil.

2. The casting provided with transverse arches and with longitudinal bars, in combination with the cylindrical receptacle formed of wire, the convolutions of said wire resting upon said bars, and a key adapted to be thrust under the arches and along the wires of the said cylindrical receptacle to clamp the same in position, substantially as described.

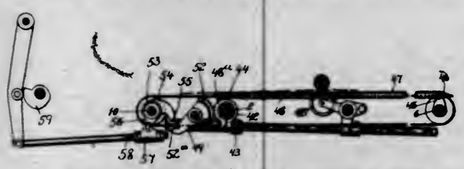
3. In a holder for a heated soldering iron, the combination with a casting forming the frame of the base, longitudinal supports thereon, a cylindrical holder or guard resting on said supports, the ends of the wire forming said guard being secured, and the convolutions thereof braced, wires threaded therethrough to insure rigidity, transverse holding members erected on said base and cast integral therewith, said holding members extending upwardly through the convolutions of said guard and adapted to support the soldering iron centrally thereon, said base immediately under said guard being open to permit of the ready removal of any solder that may drop from the iron, and a key passing under said holding members and inside the coil, to clamp the same in position, substantially as described.

4. A holder for a heated soldering iron consisting of a base, ribs extending upwardly from said base and adapted to serve as supports for the iron, in combination with a coiled inclosure mounted on said base and securely clamped thereto, the base immediately under the inclosure being open to permit of the ready removal of any solder that may drop from the iron.

5. The holder for a soldering iron consisting in the combination with the base, of a wire coil clamped thereto, said coil being braced by one or more wires threaded therethrough, substantially as described.

[Claims 6 to 10 not printed in the Gazette.]

880,872. PAPER-FEEDING MACHINE. KIMBALL B. FLETCHER, Lancaster, N. H., assignor to United Printing Machinery Company, Boston, Mass., a Corporation of Maine. Filed Aug. 4, 1905. Serial No. 272,773.



1. A paper sheet feeding machine comprising means for feeding individual sheets of paper, vertically and forwardly movable slats, and one or more upwardly movable rolls arranged below said means, a cylinder arranged above said means, and mechanism for operating the slats and rolls to lift a sheet from said means against said cylinder and position it at a predetermined point.

2. A paper sheet feeding machine comprising means for feeding individual sheets of paper, a series of upwardly and forwardly movable slats and one or more upwardly movable rolls arranged below said means, a cylinder arranged above said means, and mechanism for moving said slats and rolls to lift a sheet from said means and hold it against said cylinder, having provisions whereby said slats impart a feeding or positioning movement to said sheet after it leaves the control of said cylinder and rolls.

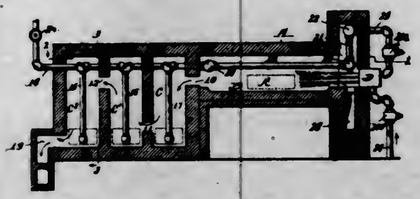
3. A paper sheet feeding machine comprising means for feeding individual sheets of paper, a series of slats and one or more rolls arranged below said means, a cylinder arranged above said means and mechanism for periodically operating said slats and rolls arranged to lift a sheet from said means against said cylinder and thereafter impart to said sheet a feeding or positioning movement.

4. A paper sheet feeding machine comprising means for feeding individual sheets of paper, a series of upwardly and forwardly movable slats and one or more upwardly movable rolls arranged below said means, a cylinder arranged above said means and mechanism for periodically operating said rolls and slats arranged to permit the feeding action of said slats independent of said rolls.

5. A paper sheet feeding machine comprising means for feeding individual sheets of paper a cylinder arranged above the normal plane of the paper, a series of upwardly and forwardly movable slats and one or more upwardly movable rolls arranged below said means and mechanism for periodically operating said slats and rolls to lift a sheet from said means, maintain it against said cylinder and thereafter impart to it an independent feeding or positioning movement.

[Claims 6 to 14 not printed in the Gazette.]

880,873. APPARATUS FOR MAKING STANNIC OXID. HANS FOERSTERLING, Perth Amboy, N. J., assignor to The Roessler & Hasslacher Chemical Co., New York, N. Y., a Corporation of New York. Filed Feb. 23, 1905. Serial No. 246,894.



1. A furnace for making stannic oxid comprising a melting pan, means for directing flames into said melting pan whereby tin may be melted therein, and means for heating air and leading the same directly up into the flames from below at substantially right angles to the direction of the flames previous to their contact with the tin.

2. A furnace for making stannic oxid comprising a melting pan, means for directing flames into said pan whereby tin may be melted therein, and means for heating air above the temperature at which the lower dark colored oxid is formed and leading the same directly up into the flames from below previous to their contact with the tin.

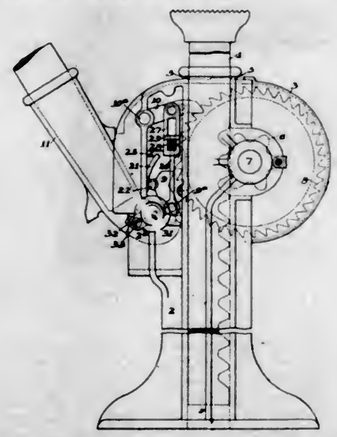
3. A furnace for making stannic oxid comprising a melting pan, means for directing flames horisontally over the pan, and means for introducing air directly upward into the flame before it contacts with the tin.

4. A furnace comprising a melting pan, means for directing a wide horisontal flame of burning gas over the melting pan, means for initially heating air, and means for introducing the heated air directly upward into the flame from below entirely across said flame before the flame enters said pan.

5. A furnace for making stannic oxid, comprising a melting pan, means for directing burning gas over the melting pan, means for heating air, means for mixing part of said heated air with the gas for the purpose of combustion, and means for introducing the rest of said air directly under and into the flame.

[Claims 6 to 17 not printed in the Gazette.]

880,874. LIFTING JACK. GEORGE F. FREED, Allegheny, Pa., assignor to The Duff Manufacturing Company, Pittsburg, Pa., a Corporation of Pennsylvania. Filed Mar. 29, 1906. Serial No. 308,680.



1. In a lifting jack, an operating lever, a lifting pawl actuated thereby, a holding pawl and a member connecting said lever and the holding pawl for forcing the pawl into working position when the jack is operated to lower the load; the connecting member for the holding pawl being independent of the means which force the lifting pawl into its engaging position substantially as described.

2. In a lifting jack, an actuating lever, a lifting pawl, a holding pawl, a spring connected to said holding pawl, means for putting said spring under either compression or tension, and a connection between said holding pawl and the lever; substantially as described.
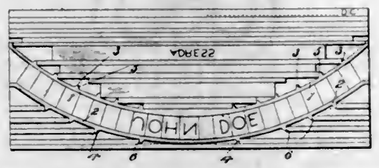
3. In a lifting jack, a lifting pawl, a holding pawl, a separate spring for each of said pawls, and means for putting said springs under either compression or tension; substantially as described.

4. In a lifting jack, a lifting pawl, a holding pawl, separate springs for said pawls, and a movable device for putting the said springs under either compression or tension; substantially as described.

5. In a lifting jack, an actuating lever, a holding pawl pivoted to the frame of the jack, a spring arranged to force said pawl out of operative position when the load is being lowered, and a connection between the lever and the pawl arranged to force said pawl into operative position at predetermined times; substantially as described.

[Claims 6 to 10 not printed in the Gazette.]

880,875. MEANS FOR SETTING TYPE COMPOSITIONS ON CURVED LINES. HARRY M. FRYSINGER and WILLIAM W. BARRETT, Wilmington, Del. Filed June 19, 1907. Serial No. 379,816.

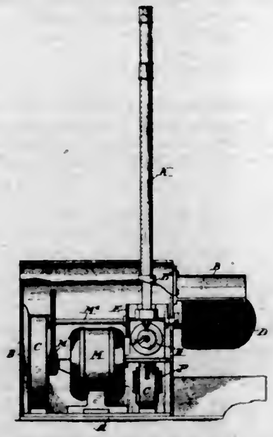


1. Means for curving type-compositions consisting of two corresponding parallel curved plates having opposite smooth surfaces between which the type composition is designed to be located, said plates on the outer surfaces at points intermediate their ends having teeth with which type on straight lines or slugs or leads are designed to engage.

2. Means for curving type-compositions consisting of two corresponding parallel curved plates having opposite smooth surfaces between which the type composition is designed to be located, said plates on the outer surfaces having teeth with which type on straight lines or slugs or leads are designed to engage, the teeth of the inner plate having their opposed faces on planes parallel to each other, and the teeth on the outer plate having their outer faces on planes parallel to each other.

3. Means for forming type-compositions on curved lines, composed of two plates of practically inflexible material formed on curved lines, the outer faces of said plates at points intermediate their ends having stops arranged at fixed distances to be engaged by type, slugs or leads set on straight lines.

880,876. COIN-CONTROLLED BRUSHING-MACHINE. EVERETT GOLDTHWAIT, Elkhart, Ind. Filed Jan. 15, 1906. Serial No. 296,022.



1. In a brushing machine, the combination with a motor, of a coin chute, a disk at the inner end of the coin chute and provided with a notch for receiving a coin placed within said chute, an electrical connection closed by a coin when within said notch, means by which the closing of said electrical connection will cause the motor to start into operation, and connections from the motor to the disk for causing the rotation of the latter to remove the coin from its position for making said electrical connection, said disk and said electrical connection being so arranged that the disk will hold the electrical connection closed after the coin is removed but will permit the breaking of said connection upon a predetermined movement of said motor.

2. In a brushing machine, the combination with a motor, of a casing containing the motor, a standard consisting of a pipe extending upward from the top of the casing and having a coin slot at its upper end, a coin chute within said pipe and extending to the interior of the casing, a notched disk within the casing and arranged to receive and support a coin passing through said chute, contact springs placed in electrical connection with each other by a coin so supported, means by which the electrical connection so closed will cause the motor to be started into operation, and connections from the motor to the disk for causing a movement of the latter to remove the coin from its contact closing position.

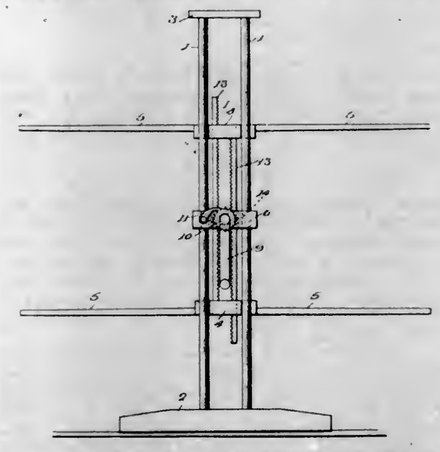
3. In a brushing machine, the combination with a motor, coin operated devices, and an inclosing case, of a standard formed of pipes and rising from the upper part of said case, and a coin chute extending through one of said pipes to the coin operated devices in the interior of said case.

4. In a brushing machine, the combination with a motor, of a chute through which a coin may be deposited within the machine, a disk provided with a notch adapted to receive a coin so deposited, contact springs on each side of said notch and arranged to be electrically connected to each other through a coin resting in said notch, means by which the closing of such electrical connection will set the motor into operation, and connections from the motor to the disk for rotating the latter so as to remove the coin from between said springs.

5. In a brushing machine, the combination with a motor and an inclosing case, of a coin chute extending to the interior of the case, a notched disk within the case and arranged to receive and support a coin passing through said chute, contact springs placed in electrical connection with each other by a coin so supported, means by which the electrical connection so closed will cause the motor to be started into operation, and connections from the motor to the disk for causing a movement of the latter to remove the coin from its contact closing position.

[Claims 6 to 11 not printed in the Gazette.]

880,877. PRESS. JOHN GOODFELLOW, Vienna Cross Roads, Ohio. Filed May 27, 1907. Serial No. 375,874.



1. A press of the character described comprising a main frame, a pair of guide plates mounted within said main

frame, means for moving said guide plates in opposite directions, and members carried by each of said guide plates extending outwardly from said main frame and adapted to receive the material to be compressed between them.

2. A press of the character described, comprising a main frame, a pair of guide plates mounted within said main frame, means for moving said guide plates in opposite directions, and a plurality of fingers carried by each of said guide plates extending outwardly beyond said main frame and adapted to receive the material between the fingers of the respective plates.

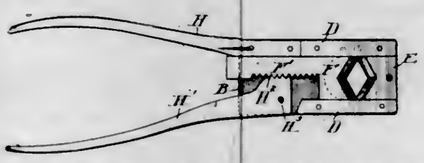
3. A press of the character described comprising a main frame, bearings supported on said main frame, a shaft journaled in said bearings, means for rotating said shaft, a pinion secured to said shaft, guide plates mounted in said main frame, members carried by said guide plates and extending outwardly beyond said main frame, and rack bars connected to said guide plates and meshing with said pinion.

4. A press of the character described comprising a main frame, an auxiliary frame, a shaft journaled in said auxiliary frame, means for rotating said shaft, a pinion secured to said shaft, guide plates mounted in said main frame, members carried by said guide plates and extending beyond said main frame, and rack bars connected to said guide plates and meshing with said pinion.

5. A press of the character described comprising a main frame, an auxiliary frame supported on said main frame, a shaft journaled in said auxiliary frame, means for rotating said shaft, pinions secured on said shaft near the opposite ends thereof, guide plates mounted in said main frame on opposite sides of said auxiliary frame, a plurality of rack bars secured to each of said guide plates and extending through said auxiliary frame and meshing with said pinions, and outwardly extending members carried by said guide plates.

[Claims 6 and 7 not printed in the Gazette.]

880,878. IMPLEMENT FOR SEVERING BRITTLE SUBSTANCES. EMANUEL HAGSTROM and GUSTAF HAGSTROM, Lindsborg, Kans., assignors to Hagstrom Brothers Manufacturing Company, Lindsborg, Kans., a Corporation of Kansas. Filed Apr. 11, 1906. Serial No. 311,063.



In a tool of the character described, a cutting blade having a beveled V-shaped cutting edge, and a second opposed cutting blade movable to and from the first, having a like cutting edge arranged in the same plane therewith.

880,879. GRAMOPHONE OR OTHER SOUND REPRODUCING OR RECORDING MACHINE. LUTHER T. HAILE, Philadelphia, Pa., assignor, by direct and mesne assignments, of one-fifth to Maurice N. Weyl and William A. Mackie, one-fifth to Joseph W. Shannon, one-twentieth to Frederick J. Geiger, and one-twentieth to Logan W. Mulford, Philadelphia, Pa. Filed July 6, 1906. Serial No. 324,978.

1. In apparatus of the class recited for recording or reproducing sound-waves, the combination with a sound-box containing a diaphragm, a needle-arm adapted to carry a record needle and having means to guide a vibrating flexible cord leading therefrom to the diaphragm, a perforated guide-plate supporting said elements in operative relation to each other and adapted to traverse the record tablet radially, and a flexible cord-like connection between the needle-arm and the diaphragm operating to transmit the vibrations of the needle directly to the diaphragm, with means carried by said guide-plate operating to increase or decrease the tension in said flexible connection.



2. In apparatus of the class recited, the combination with a diaphragm and means to operatively support the same, of a hollow needle arm, the wall of which is perforated near its base, and a flexible cord passing through the interior of the needle arm and connecting it with the diaphragm.

3. In apparatus of the class recited, the combination with a diaphragm, a stylus or record needle, and means to support each of the same independently but in operative relation, of a hollow needle arm mounted to respond to the vibratory movements of the needle, and means adapted and operating to transmit the lateral vibratory movements only of the needle to the diaphragm, said means consisting substantially of a flexible cord-like connection secured at one end to the basal portion of the needle arm and passing freely through the hollow interior thereof to the diaphragm to which its opposite end is attached.

4. In apparatus of the class recited, the combination with a diaphragm and means to operatively support the same, of a hollow needle arm, a bushing of anti-friction material within the same, and a flexible cord passing through the interior of the needle arm and connecting it with the diaphragm.

5. In apparatus of the class recited, the combination with a diaphragm and means to operatively support the same, a hollow needle arm perforated near its base, a flexible cord passing through the interior of said needle arm and connecting it with the diaphragm, and means to adjust the tension on said flexible connection.

[Claims 6 to 9 not printed in the Gazette.]

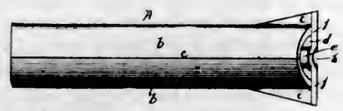
880,880. PNEUMATIC AND OTHER DRILL. MARTIN HARDSOCG, Ottumwa, Iowa. Original application filed Feb. 20, 1906. Serial No. 302,049. Divided and this application filed Feb. 25, 1907. Serial No. 359,092.



1. A shank for a pneumatic tool having a body of D shape in cross section with its exterior consisting of a curved face, an opposite flat face, and two flat faces connecting the curve face and the flat face, the body furnishing an end face to produce two bits or blades parallel with the plane of the body opposite the curved face thereof, each with a cutting edge, the body having two longitudinal passages one passage for admitting a cooling medium to the acting end of the tool and the other passage for withdrawing dust and fine particles from around the acting end of the tool, substantially as described.

2. A shank for a pneumatic tool having a body of D shape in cross section with its exterior consisting of a curved face, an opposite flat face, and two flat faces connecting the curved face and the flat face, the body furnishing an end face to produce two bits or blades parallel with the plane of the body opposite the curved face thereof, each with a cutting edge, the body having two longitudinal passages one passage for admitting a cooling medium to the acting end of the tool and opening centrally between the two cutters and the other passage for withdrawing dust and fine particles from around the acting end of the tool, substantially as described.

880,881. PNEUMATIC AND OTHER DRILL. MARTIN HARDSOCG, Ottumwa, Iowa. Filed Apr. 15, 1907. Serial No. 368,381.



1. A shank for a pneumatic tool, formed of a base, a curved wing extending from each side edge of the base on one face thereof, with the abutting ends of the curved wings in contact and forming, with the base, a passage longitudinally of the shank, a central rib on the base, and a curved wing on each side of the center of the base, with the abutting edges of the wings in contact and forming, with the base, a passage, each passage extending longitudinally of the shank and one passage furnishing a means for admitting a cooling medium to the cutting end of the tool, and the other passage furnishing a means for withdrawing dust and fine particles from around the cutting end of the tool, substantially as described.

2. A shank for a pneumatic tool, formed of a base, a curved wing extending from each side edge of the base on one face thereof, with the abutting edges of the curved wings in contact and forming, with the base, a passage extending longitudinally of the shank, a central rib on the base, and a curved wing on each side of the center of the base and opposite the central rib, with the abutting edges of the wings in contact and forming, with the base, a passage, each passage extending longitudinally of the shank and one passage furnishing a means for admitting a cooling medium to the cutting end of the tool and the other passage furnishing a means for withdrawing dust and fine particles from around the cutting end of the tool, and the base furnishing an end face to produce two bits or cutters, substantially as described.

3. A shank for a pneumatic tool, formed of a base, a curved wing extending from each side edge of the base and on one side thereof, with the abutting edges of the curved wings in contact and forming, with the base, a passage extending longitudinally of the shank, a central rib on the base having a curved exterior face and a curved interior face, a curved wing on each side of the center of the base and opposite the central rib, with the abutting edges of the wings in contact and forming, with the base, a passage, each passage extending longitudinally of the shank and one passage furnishing a means for admitting a cooling medium to the cutting end of the tool, and the other passage furnishing a means for withdrawing dust and fine particles from around the cutting end of the tool, and the base furnishing an end face to produce two bits or blades, substantially as described.

880,882. FLEXIBLE TUBE. WINFRED W. HARRIS, Winthrop, Mass., assignor to James S. Wilson, Chelsea, Mass. Filed June 7, 1905. Serial No. 264,117.

A conduit comprising a suitable covering, a lining arranged therein composed of a strip of material arranged in a spiral form, said lining being formed with a weakened portion arranged at an angle to the spiral path formed by the edges of the strip, whereby the path of one intersects the path of the other at predetermined points.



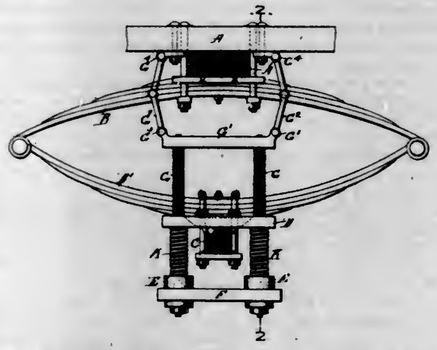
880,883. GUIDE-PLATE FOR CORRECTION-TYPE. JEFFERSON A. G. HARTON, New York, N. Y. Filed May 7, 1907. Serial No. 372,450.



1. The combination, with a guide-frame having a longitudinal slot with grooved edges, of a guide-plate having its edges movable in the grooves of said slot said guide-plate being provided with a longitudinal slot, and a type-guiding opening cut in said slot intermediately of the length of the latter.

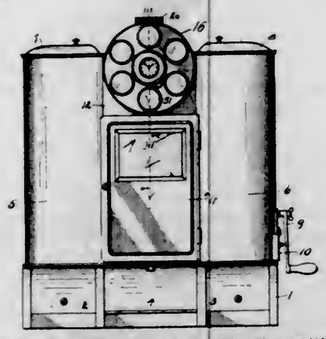
2. The combination, with a guide-frame having a longitudinal slot with grooved edges, of a guide-plate having its edges movable in the grooves of said slot, said guide-plate being provided with a longitudinal slot and a type-guiding opening intermediately of the length of said last-named slot, and a handle for the guide-plate by which it is shifted in the guide-frame.

880,884. SPRING FOR VEHICLES. LEVERETT C. HAYNES, Boston, Mass. Filed Oct. 3, 1906. Serial No. 337,308.


A
C
C'
C²
C³
C⁴
G
G'
G'
G'

said stop-bar; toggles constructed to connect said stop-bar to the body of the vehicle; closed springs attached to the said stop bar and extending downward through the said axle bar and the said extension springs and rigidly attached to the lower ends of the said rods and said extension springs substantially as and for the purpose set forth.

880,885. KITCHEN-CABINET. WILLIAM M. HENSON, Kansas City, Mo. Filed Aug. 16, 1907. Serial No. 388,762.



1. In a kitchen cabinet, the combination with a base portion, of bins mounted thereon and separated to form an intermediate chamber, plates extending between said bins and inclosing said chamber at the front and back, a drum removably mounted on said plates and normally covering said chamber, and a shelf in said chamber, upon which said drum may be supported when nested therein as set forth.

2. In a kitchen cabinet, the combination with a base and body portion, of a drum and a cylinder mounted in said drum, having a portion of its lower side cut away and one end opening through the drum end, substantially as set forth.

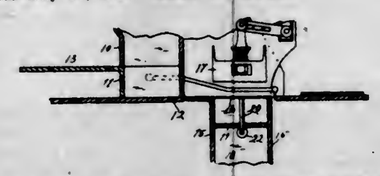
3. In a kitchen cabinet, a body portion having a central chamber, brackets on said body portion projecting into said chamber, a shelf mounted on said brackets, and a drum removably mounted on said body portion over said chamber, said shelf being adapted for removal from its brackets, and said drum being adapted for removal from its seat, and for nesting wholly within said chamber, substantially as set forth.

4. In a kitchen cabinet, the combination of a base and bins mounted thereon, in a manner to form a chamber therebetween, plates inclosing said chamber at the front and back arcuatile straps on the top of the front and back plates, a drum seated on said straps, and latch members on said drum and on one of said plates.

5. In a kitchen cabinet a drum, and a cylinder mounted in said drum near the bottom, and having its lower side cut away for a portion of its extent, for the purpose set forth.

[Claims 6 and 7 not printed in the Gazette.]

880,886. MACHINE FOR MAKING CEMENT BRICK AND THE LIKE. FRED C. HOHN, Greencastle, Ind. Filed May 31, 1907. Serial No. 376,526.



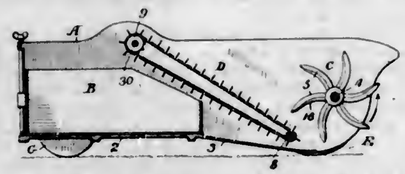
1. In a machine for making cement brick and the like, the combination with a mold, a sliding hopper movable over the mold for charging the same with cement or the like, and a tamper operable through said sliding mold to force the cement into the mold and tamp the same, of a false bottom, a rod extending centrally therefrom through the bottom of the mold, and yielding means connected with said rod beyond the bottom of the mold for holding the false bottom flush with the top of the mold.

2. In a machine for making cement brick and the like, the combination with a mold, a sliding hopper movable over the mold for charging the same with cement or the like, and a tamper operable through said sliding mold to force the cement into the mold and tamp the same, of a false bottom, a rod extending centrally therefrom through the bottom of the mold, a transverse bar connected with said rod beyond the bottom of the mold, and a yielding friction disk extending from each end thereof in engagement with the sides of the mold.

3. In a machine for making cement brick and the like, the combination with a mold, a sliding hopper movable over the mold for charging the same with cement or the like, and a tamper operable through said sliding mold to force the cement into the mold and tamp the same, of a false bottom, a rod extending centrally therefrom through the bottom of the mold, a transverse bar connected with said rod beyond the bottom of the mold, said bar having a hole in each end thereof, a pin mounted loosely in each of said holes and extending beyond the end of said bar, a friction disk carried on the outer end of each of said pins, a spring coiled about said pin between said disk and bar, and means for limiting the outward movement of said pins, substantially as set forth.

4. In a machine for making cement brick and the like, a revoluble mold with the sides thereof laterally movable somewhat for the discharge of a brick when the mold is inverted, a sliding hopper movable over said mold when in its upper position for charging the same with cement, a tamper operable through said sliding hopper for forcing the cement into the mold and tamping the same, a false bottom in said mold with a rod extending centrally therefrom through the bottom of the mold, a laterally extending bar on the end of said rod beyond the bottom of the mold, yielding means mounted on the ends of said bar for frictionally engaging the sides of the mold, and means for limiting the outward movement of said yielding means so that when the mold is inverted said frictional means will be disengaged from the side of the mold and enable the false bottom to drop down by gravity to the position where it will be engaged by the top of the mold when in its upper position.

880,887. BERRY-PICKER. JOHN W. HOLMAN, West Creek, N. J. Filed Nov. 14, 1907. Serial No. 402,221.



1. The combination in a cranberry picker, of a frame, a picker consisting of a shaft carried by the frame and radial arms, a receptacle supported at the rear of the frame, an endless carrier supported at the front at a point below the picker and at the rear at a point above the receptacle, and a drive wheel and means for rotating the shaft and driving belt therefrom.

2. The combination in a cranberry picker, of a frame, a picker consisting of a shaft carried by the frame and radial arms, a receptacle supported at the rear of the frame, an endless carrier supported at the front at a point below the picker and at the rear at a point above the receptacle, drive wheels and means for supporting the shaft and driving the belt therefrom, and a guard plate below the carrier.

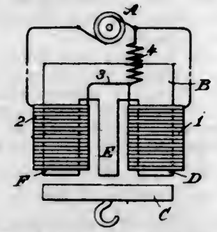
3. The combination with the frame, receptacle, and picker of a berry picker, of a drive wheel, and an endless carrier, rollers supporting the carrier at the front below the picker and at the rear above the receptacle, and means for driving the rear roller and the picker constructed to impart an upward movement to the picker arms at the front of the machine for the purpose set forth.

4. The combination in a berry picker of a frame, a guard plate supported at the bottom of the frame, supports for a detachable receptacle above the rear of the guard plate, a picker forward and above the front edge of the guard plate, an endless carrier extending from a point between the picker and guard plate to a point above the receptacle, a drive wheel and means for driving the picker and carrier from the drive wheel.

5. The combination with the frame of a berry picker, of a picker consisting of a shaft, and a series of curved arms radiating from said shaft, each with a longitudinal socket and a blade fitted detachably to said socket.

[Claims 6 and 7 not printed in the Gazette.]

880,888. ELECTROMAGNET. WINTHROP K. HOWE, Buffalo, N. Y., assignor to General Railway Signal Company, a Corporation of New York. Filed Apr. 26, 1906. Serial No. 313,769.



1. A traction magnet, comprising a magnetic core having a plurality of poles and provided with a number of magnetizing coils, and means whereby currents may flow in a local path or shunt-circuit through one of said coils.

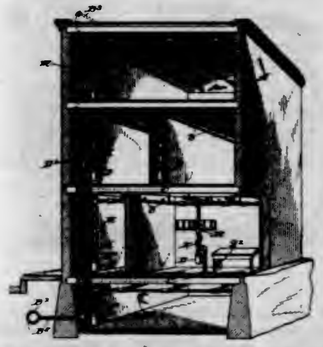
2. A traction magnet, comprising a magnetic core having a plurality of legs wound with magnetizing coils and an auxiliary unwound leg, an armature coöperating with said magnetic core, and means for displacing the phase of the currents in said coils and providing a shunt-circuit for one of the coils.

3. A traction magnet, comprising a magnetic core having a plurality of poles, coils thereon adapted to be connected to a source of alternating currents, and means for causing currents to flow in local circuits about the magnet core, whereby the magnetism in part of the core is retarded to cause a continuous attraction of the armature.

880,889. AUTOMATIC SPRINKLING AND FIRE-ALARM SYSTEM. CHARLES A. JACOBY, Chicago, Ill., assignor of one-third to Michael Farrell and one-third to John L. Fruin, New York, N. Y. Filed Mar. 11, 1907. Serial No. 361,706.

1. The automatic sprinkler and fire alarm system and apparatus for buildings, comprising in combination, a system of water supply pipes furnished with sprinkler nozzles, a series of electro magnetic valves for controlling the supply of water of the nozzles, a series of solenoids for automatically opening said valves, a series of valve circuits in which said solenoids are included, a series of thermostats and thermostat circuits furnished with relays or magnets for automatically closing the valve circuits, a series of fire alarm circuits closed by the magnets in the thermostat circuits and furnished with fire alarm devices, a test or indicator circuit and stop valves having small test openings in their shells and switches operated by the turning of said valves substantially as specified.

2. An automatic sprinkler and fire alarm system and apparatus, comprising in combination, a system of water supply pipes, having a series of sprinkler nozzles, a series of electro magnet operated valves, a series of solenoids for operating said valves, a series of valve circuits including therein said solenoids, a series of thermostats and thermostat circuits having relays therein for closing said valve circuits, and a series of fire alarm circuits closed by the relays in the thermostat circuit, and having fire alarm devices therein, said water supply pipe being furnished with hand operated valves shutting off the water from the sprinkler nozzles to test the operation of the electro-magnet valves and a test or indicator electric circuit having an electric indicator device therein, said test or indicator circuit having a switch closed by the closing of said hand operated valve to prevent the hand operated valves being accidentally left closed, substantially as specified.



3. In an automatic sprinkling system, the combination with a system of water supply pipes of sprinkling nozzles located in said water supply pipes, valves located in said water supply pipes, the stems of said valves being electrically actuated, a manually operable member adapted to actuate said valves independently of the electrical means for actuating said valves, stop valves located in the pipes between the electrically operated valves and the sprinkler nozzles, there being a small outlet port which establishes communication between the interior of the supply pipe and the exterior of the stop valve casings when said stop valves are turned to cut off communication between the electrically operated valves and the sprinkler nozzles, electrical valve circuits in which the electrically operated valves are located, and means for opening and closing said circuits, said means being controlled by variations in temperature.

4. In an automatic sprinkling system, the combination with a plurality of water supply pipes of sprinkler heads carried by said water supply pipes, electrically operated valves adapted to control the flow of water through said water supply pipes, a plurality of independent valve circuits in which said valves are located, a plurality of thermostats and thermostat circuits having relays therein for closing said valve circuits, an independent test circuit for each of the valve circuits, and an indicating device in said test circuit.

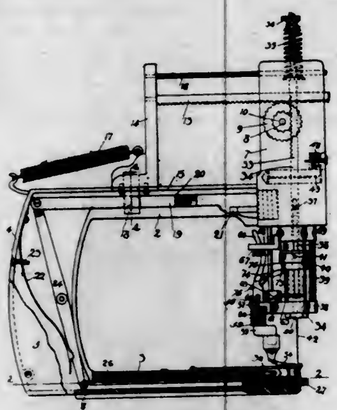
5. In an automatic sprinkling system, the combination with a plurality of water supply pipes of sprinkler heads carried by said water supply pipes, electrically operated valves adapted to control the flow of water through said water supply pipes, a plurality of independent valve circuits in which said valves are located, a plurality of thermostats and thermostat circuits having relays therein for closing said valve circuits, an independent test circuit for each of the valve circuits, an indicating device in said test circuit, stop valves located between the electrically operated valves and the sprinkler heads and means for closing the test circuit when said stop valves are closed.

[Claims 6 and 7 not printed in the Gazette.]

880,890. SEWING-MACHINE. HARRY E. LA PLANT, Kennett, Cal. Filed Dec. 15, 1906. Serial No. 348,038.

1. In a sewing machine, the combination of a head, a needle carrier reciprocating vertically therein, a shaft, a gear wheel carried thereon, a pinion loose on the shaft, a

pawl on the gear wheel, and a ratchet on the pinion and engaged by said pawl, a horizontal rack engaging said gear wheel a hand piece attached to said rack, and a spring for returning the needle carrier substantially as described.



2. In a sewing machine, the combination of a hand reciprocating device, spring plates depending therefrom, a link and a guide therefor, said link passing between said spring plates, said link having at its forward end a shoulder adapted to be engaged by one of said plates to move said link forward with the hand piece, a wedge arranged to spread the lower ends of the spring plates and thereby release the link when it has arrived at a predetermined position, a spring for retracting said link, a shuttle, and means actuated by the movement of the link for moving said shuttle, substantially as described.

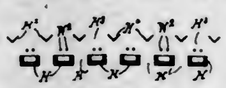
3. In a sewing machine, the combination of a hand reciprocating device, spring plates depending therefrom, a link and a guide therefor, said link passing between said spring plates, said link having at its forward end a shoulder adapted to be engaged by one of said plates to move said link forward with the hand piece, a wedge arranged to spread the lower ends of the spring plates and thereby release the link when it has arrived at a predetermined position, a spring for retracting said link, a shuttle, and means actuated by the movement of the link for moving said shuttle, said means comprising a lower link and a guide therefor, an operative connection between said lower link and the shuttle, a lever attached at its ends to said links, a spring acting upon said lever, and a screw screwed through said spring for adjusting the same, substantially as described.

4. In a sewing machine, the combination of a head having a downward slotted extension, a needle carrier reciprocating vertically in said extension, a sleeve around said extension and attached to said needle carrier, a plate rotatably carried upon the lower end of said extension, a presser carried by said plate, the upper end of the presser being formed into a tongue, and an apertured collar surrounding said extension and through which said tongue passes, substantially as described.

5. In a sewing machine the combination of a head having a downward slotted extension, a needle carrier reciprocating vertically in said extension, a sleeve around said extension and attached to said needle carrier, a plate rotatably carried upon the lower end of said extension, a presser carried by said plate, the upper end of the presser being formed into a tongue. an apertured collar surrounding said extension and through which said tongue passes, a pin carried by the needle carrier and adapted to engage said collar to move it therewith, the tongue being so formed that the reciprocating movement of the collar produces a vibratory movement of the presser, substantially as described.

[Claim 6 not printed in the Gazette.]

880,891. ELECTRICAL PURIFICATION OF FLOUR, GRAIN, &c. JOHN L. LAWSON, Leith, Edinburgh, Scotland. Filed June 22, 1906. Serial No. 322,881.

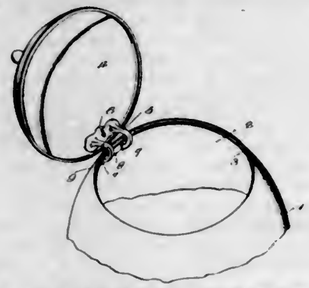


1. The method of purifying flour, grain, rice and like cereals, consisting in feeding the same in comminuted condition in a series of shallow streams slightly separated from one another, below a superposed conductor charged with high tension electricity whereby the impurities in said cereals are lifted from said streams, brought into contact with said conductor and repelled so as to fall between the streams, substantially as described.

2. The method of purifying flour, grain, rice and like cereals, consisting in feeding the same in comminuted condition in a series of shallow streams slightly separated from one another below superposed conductors charged with high tension electricity and producing a reciprocatory movement between said conductors and streams of cereal with relation to each other, whereby the impurities in said cereals are attracted out of said streams, brought into contact with said conductors and repelled between the streams, substantially as described.

3. The method of purifying flour, grain, rice and like cereals, consisting in feeding the same in comminuted condition in a series of shallow streams slightly separated from one another, below a superposed conductor charged with high tension electricity whereby the impurities in said cereals are lifted from said streams and repelled so as to fall between the streams, substantially as described.

880,892. HINGE. FRANK A. LEBKUECHER, Newark, N. J. Filed May 23, 1907. Serial No. 375,327.

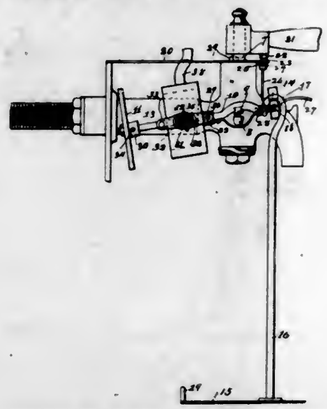


1. A domestic vessel at its top contracting upwardly to a top opening and formed with an annular seat in its edge around said opening, a vertically swinging lid adapted to fit down into said opening onto said seat, an approximately J-shaped arm at the upper end of its elongated portion rigidly fixed to the under side of said lid within the edge boundary thereof and depending from said lid through said opening, and means pivotally joining the end of the short curved inner portion of said arm to the under surface of the vessel top to swing on a transverse axis at one side of said opening and below the horizontal plane thereof, said arm constructed, arranged and pivoted to engage at its curved inner portion within said opening, the edge of the wall surrounding said opening when the lid is in completely opened position and thereby bodily uphold and support said lid laterally beyond said opening and spaced from the vessel top, substantially as described.

2. A vessel having a top opening, a vertically and laterally swingable lid to close said opening, a plate 6, rigidly fixed to the under surface of said lid adjacent the edge thereof and formed with a pair of spaced, parallel similar approximately J-shaped arms 5, depending therefrom and rigid therewith, a post 8, rigidly fixed to the under surface of the vessel top adjacent said opening, and a transverse axis by which the inner ends of said arms are pivotally

joined to said post, said arms being constructed and arranged to engage at their intermediate portions and at spaced points along the vessel top edge within said opening when the cover is completely opened to hold said cover bodily to one side of and beyond said opening and spaced from the top of the vessel, substantially as described.

880,893. WEIGHING-FAUCET. CARL LEWIN, Cleveland, Ohio. Filed July 29, 1907. Serial No. 386,037.



1. In combination in a faucet, a tapered valve therein, provided with an opening adapted to register with the faucet opening, and valve stem, a platform mounted upon the faucet through which said valve stem passes, a hollow barrel for the faucet and coiled spring therein adapted to engage said valve stem and close said valve, knife edges extending laterally from said faucet, balancing arms, mounted upon said knife edges, one on each side of said faucet, a weight slidably mounted upon said arms, said weight provided with an opening through which said faucet extends, a yoke connecting the outer extremities of said arms, which project beyond the fulcrum points thereof, a weighing platform, knife edges upon the yoke, and rods having eyes resting upon said knife edges and connected at their lower ends with said platform, a lug upon said valve stem, a retaining device for said lug upon said platform and an actuating spring therefor, and mechanism for releasing said lug to close said valve, said mechanism operatively connected with one of said balancing arms and said yoke, an arm on said valve stem, and a stop on said plate for said arm on said valve stem.

2. In combination with a faucet, and tapered valve therefor, a valve stem for the valve, said valve and faucet having registering openings, a hollow barrel in said faucet, through which said valve stem projects, a closing spring for said valve, located in said barrel, knife edges extending laterally from said faucet one on each side thereof, balancing arms mounted on said knife edges on the faucet, a yoke connecting the outer ends of said balancing arms, a vertical plate connecting the inner ends of said balancing arms, said plate encircling said faucet, a movable weight on said arms, knife edges upon said yoke, a weighing platform depending from said knife edges on said yoke, a horizontal plate mounted upon said faucet, through which said valve stem projects, a lug upon said valve stem, a spring actuated arm pivoted to said platform adapted to engage said lug upon said valve stem and retain said valve in its open position, a rock arm pivoted upon one of said balancing arms, one end of which said yoke is adapted to engage as it descends, a link connecting said rock arm and said arm pivoted on said horizontal plate.

3. The combination with a faucet and rotatable valve and stem therefor, of a pair of knife edges upon the faucet at its sides, a pair of balancing arms upon the knife, a movable weight upon said arms, a yoke connecting their front extremities, a weighing platform suspended from said yoke, a lug on said valve stem, a fixed support on said faucet, a spring actuated arm on said support, adapted to engage said arm and hold said valve in the open position, and a link and rock arm device operatively connecting said spring actuating arm with one of said balancing arms, whereby when said arm falls, said spring actuated arm is withdrawn from contact with said lug on said valve stem.

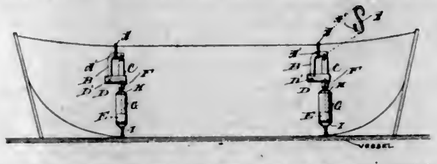
4. In a weighing device for a faucet, the combination with the balancing arm and a knife edge upon the faucet, of a movable weight upon said arm, a movable sleeve in said arm in advance of said weight, and a similar sleeve in the rear of said weight, means for moving said weight to the required position, means for securing said sleeves upon said arm, and means for detachably securing said weight alternately to said sleeves, substantially as described.

880,894. HOSE-SUPPORTER. MARY T. LEWIS, near Marseilles, Ill. Filed June 5, 1907. Serial No. 377,338.



The combination with the hose, of a supporter therefor, comprising a non-elastic strap provided at its lower end with a loop for engagement by the foot of the wearer, and having its upper end terminating in branches, said strap adapted to be worn beneath the hose, fastening means for securing the hose to the branches, a band for encircling the waist of the wearer, and provided at its front with a shield, and elastic bands depending from the shield and provided with buckles for engagement by the ends of the branches, said bands being entirely above the hose, whereby the expansion and contraction of the same will not disarrange the hose.

880,895. BOAT-DETACHER. ERIK H. LINDMAN, San Pedro, Cal. Filed July 10, 1907. Serial No. 383,028.



1. A boat securing and releasing apparatus, comprising a frame, a bolt jointed thereto at one end and free at its other end, a latch pivoted to the frame and engaging at one end with the bolt, a buoyant weight connected with the other end of the latch, a casing for said weight, and means connecting the casing with the frame, substantially as set forth.

2. The combination of a vessel, a boat thereon, a casing connected at one end with the vessel, a frame connected with the other end of the casing and having a bolt, and a

latch for securing the same, and a buoyant weight in the casing and connected with the latch, substantially as set forth.

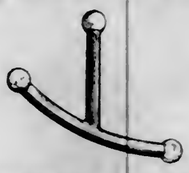
3. The combination with a boat of means for securing the same, and having releasing devices, a casing outside of the boat and suspended from said securing means and a float in the casing and connected with the releasing devices for operating the same.

4. A boat securing and releasing apparatus comprising a frame, a casing suspended from the frame, a bolt and latch carried by the frame, and a float in the casing and connected with the latch, substantially as set forth.

5. The combination of a vessel, a boat thereon, a frame, a bolt and latch carried by the frame, and a float below the latch and suspended therefrom, substantially as set forth.

[Claim 6 not printed in the Gazette.]

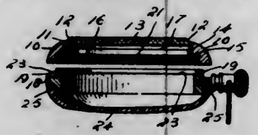
880,896. ANCHOR FOR CONTOUR AMALGAM FILLING. FRANK W. LINNERT, Warrenton, Mo. Filed Nov. 29, 1907. Serial No. 404,416.



1. An anchor for amalgam fillings, comprising a shank, a head integral with one end thereof, and an arm rigidly fixed at its center to the opposite end of the shank.

2. An anchor for amalgam fillings, comprising a shank, a head integral with one end thereof, an arm rigidly fixed at its center to the opposite end of the shank, and heads formed on the ends of said arm.

880,897. WATCH-BEZEL. GOY G. LLOYD, Donaldson, Minn. Filed Mar. 13, 1907. Serial No. 362,122.



A watch case and bezel comprising the outer rim and main part of the bezel, having a larger and a smaller screw-threaded offset and provided with a beveled seat for the glass, the glass resting at its margin on said beveled seat, a follower outwardly beveled at its outer margin, screwed into said smaller offset and bearing at its outer edge on the extreme margin of the glass, the ring or case-center provided with an external screw-threaded offset to adapt it to be turned into the larger offset of the outer rim, and having an internal offset 23, combined with the casing for the watch-works provided with a rim resting on the said offset 23 and bearing against the inner side of the follower.

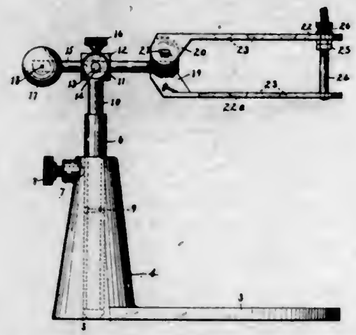
880,898. HEEL. THOMAS LUND, Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Dec. 22, 1905. Serial No. 292,933.



1. A heel having upon its inner surface penetrating projections formed and arranged to indent the heel seat of a shoe and comprising parallel ridges extending from side to side of the heel.

2. A heel, having upon its inner surface penetrating projections formed and arranged to indent the heel seat of a shoe and comprising a plurality of sets of parallel ridges, the ridges of one set being arranged at an angle to, and intersecting the ridges of another set.

880,899. DENTAL ARTICULATOR. WILLIAM LUXMORE, Chicago, Ill. Filed Dec. 19, 1906. Serial No. 348,638.



1. In a device of the character stated, a supporting stand comprising a pedestal and a base, a tube vertically adjustable in said pedestal, a vertical rod rotatably mounted in said tube, a horizontal rod adjustably mounted in said vertical rod, and articulating jaws secured to said horizontal rod.

2. In a device of the character stated, a supporting stand comprising a pedestal and a base, a tube vertically adjustable in said pedestal, a vertical rod rotatably mounted in said tube, a horizontal rod pivotally and slidably mounted on said vertical rod, an articulating jaw fixed on said horizontal rod and a second jaw hingedly arranged relative to said fixed jaw.

3. In a device of the character stated, a supporting stand, articulating members comprising a fixed jaw, and a jaw pivotally mounted on the fixed jaw, means for locking said jaws in a predetermined relation, and means adjustably connecting said articulating members with said stand.

4. In a device of the character stated, a supporting stand, articulating members comprising a fixed jaw, and a jaw hingedly connected with the fixed jaw, means for adjusting said hinged jaw, and for locking it in its adjusted positions, a rod supporting said jaws and provided with a suitable grasping portion, means for adjustably connecting said rod with said stand.

5. In a dental articulator, an upper and a lower jaw adapted respectively to support the upper and lower jaws of a "case," the upper jaw hingedly connected with the lower jaw, means for adjusting said hinged jaw and for locking it in its adjusted position, and means supporting said jaws whereby they will be simultaneously adjusted.

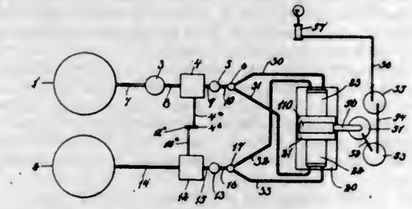
[Claims 6 and 7 not printed in the Gazette.]

880,900. PROCESS FOR PRODUCING CHLORIDS OF CARBON. JAMES MACKAYE, Cambridge, Mass., assignor to Stone & Webster, Boston, Mass. Filed Apr. 13, 1905. Serial No. 255,462.

1. The process of producing chlorids of carbon which consists in mixing gas and chlorin in the presence of a porous media, subjecting said mixture to a reacting temperature, maintaining the mixing zone separate from the reacting zone, and separating the products of reaction.

2. The process of producing chlorids of carbon which consists in mixing gas and chlorin in the presence of a porous media, preventing reaction in the mixing zone, subjecting said mixture to a reacting temperature, and separating the products of reaction.

3. The process of producing chlorids of carbon which consists in mixing gas and chlorin in the presence of a porous media, subjecting said mixture to a predetermined temperature by electrical means, maintaining the mixing zone separate from the reacting zone and separating the products of reaction.

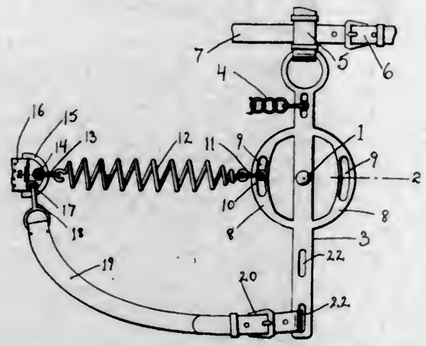


4. The process of producing chlorids of carbon which consists in mixing gas and chlorin in the presence of granulated coke, subjecting said mixture to a reacting temperature, maintaining the mixing zone separate from the reacting zone, controlling the temperatures of both zones, and exhausting at the delivery end of said reacting zone to maintain a uniform action and separating the products of reaction.

5. The process of producing chlorids of carbon which consists in mixing gas and chlorin in the presence of a porous media, subjecting said mixture to a reacting temperature, controlling the temperatures of the mixing and the reacting zones, maintaining the reacting and mixing zones separate, and separating the products of reaction.

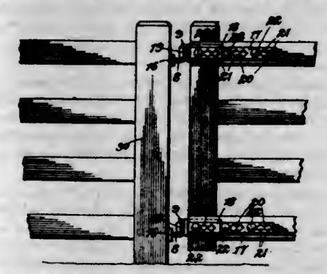
[Claims 6 to 8 not printed in the Gazette.]

880,901. BRIDLE-BIT. JOHN A. MILLARD, New York, N. Y. Filed Apr. 12, 1906. Serial No. 311,297.



A bit having a curved portion, a side bar fixed on the end of the bit and having a transverse extension provided with a vertically disposed arcuate slot arranged concentric with the bit, a rein carrying a terminal loop having a substantially semi-circular curved portion, connecting members movably engaged respectively with the slot and the curved portion of the loop, an extensible spring terminally engaged with said connecting members, said side bar having its lower portion, beneath the plane of the bit, provided with a plurality of vertically spaced openings, and a normally slack curb-operating strap having its forward end detachably engaged with one of said openings and its rear end movably connected with said loop, said curb strap being adjustable in length and adapted for engagement with different ones of the openings in the side bar for varying the curbing action of the bit and having its forward end secured against accidental movement longitudinally of the side bar.

880,902. GATE-HINGE. THOMAS MONSON, Cynthiana, Ky. Filed Nov. 27, 1906. Serial No. 345,288.

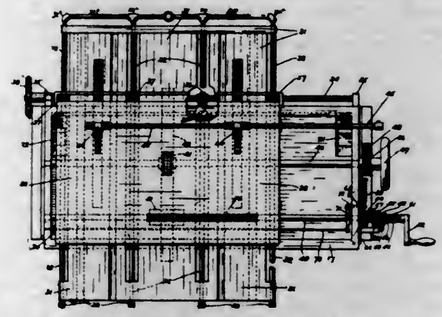


1. A gate hinge comprising pivotally connected members, one of said members being composed of a threaded shank, and a plug adjustably screwed upon the shank, said plug being exteriorly threaded to screw into a post or support and having means at its outer end for engagement with an operating tool.

2. A gate hinge comprising a strap member having an eye, and a pintle member having a pintle that engages in the eye, said pintle member including an anchor element composed of separable sections having a threaded bore, a plug having an angular head at its outer end, said plug having a threaded bore and a tapered threaded exterior, and a shank carrying said pintle and threaded through the bore of the plug, said shank having a tapered inner end that is threaded into the bore of the anchor element.

3. A gate hinge comprising pivotally associated members, one of said members being composed of a strap having a doubled end forming an eye in which the other member is engaged, said strap and doubled end having a plurality of longitudinal slots provided with angular openings, and bolts passing through the slots and having heads located against the outer face of the strap, said bolts having shanks passing through the slots and of small enough diameter to move longitudinally in said slots from socket to socket, the bolts furthermore having angular enlargements disposed between the shanks and heads and fitting snugly in the sockets, being of too great size to pass longitudinally in the slots from socket to socket.

880,903. ROCK-CHANNELING MACHINE. THOMAS D. MOWLDS, Bala, Pa. Filed May 23, 1907. Serial No. 375,248.



1. A rock channeling machine having in combination therewith, a vertically movable frame, a laterally movable frame mounted therein, and vertically adjustable rotary cutters carried by said laterally movable frame.

2. A channeling machine having in combination therewith a vertically and laterally movable cutter carrying frame, rotary cutters carried by said frame and having an adjustable vertical movement independent thereof, means for adjusting said cutters vertically, and rotary means for moving said frame laterally.

3. A channeling machine having in combination there-

with a vertically movable frame, a laterally movable frame mounted therein and carried thereby, a set or gang of rotary cutters mounted in said laterally movable frame, mechanism for automatically depressing said vertically movable frame, and mechanism for returning the same to normal position.

4. A channeling machine having in combination therewith a laterally movable drill carrying frame, a drill shaft holder mounted therein and capable of vertical movement, means for moving said drill shaft holder vertically, and independent means for holding said drill shaft holder in depressed position.

5. A channeling machine having in combination therewith a vertically movable frame a laterally movable drill shaft carrying frame carried thereby, means for moving said frame laterally and means connected therewith for automatically causing a step by step movement of said laterally movable frame at proper intervals.

[Claims 6 to 36 not printed in the Gazette.]

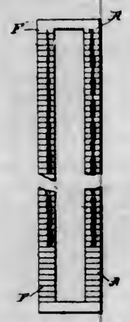
880,904. BACK-SUPPORTER. JOHN H. MUELLER, Oakley, Ill. Filed Sept. 19, 1907. Serial No. 393,746.



1. A back supporter comprising inelastic leg bands which are padded throughout a portion of their extent, elastic sections connected to the leg bands adjacent the padded portions, inelastic padded shoulder sections connected to the other ends of the said elastic sections, and an elastic section connecting the other ends of the shoulder sections.

2. A supporter of the class described comprising leg bands, loops attached to the leg bands, elastic sections passed through the loops, inelastic padded shoulder sections to which the ends of the elastic sections are stitched, and an elastic section connecting the two inelastic shoulder sections, substantially as described.

880,905. TABULATED GAGE FOR TELEGRAPHIC OR SECRET CODES. BEDFORD MCNEILL, London, England. Filed Aug. 3, 1907. Serial No. 386,895.



1. A tabulated gage for telegraphic or secret codes having upon one side figures to correspond with the code words in the order in which they appear and having upon the other side arbitrarily selected numbers of the code words intended to be meant thereby.

2. A tabulated gage for telegraphic or secret codes consisting of a plate having an opening therein corresponding to the column of words of the code and having upon one side of the opening numbers corresponding to said words arranged in numerical order, and on the other side of the opening having arbitrarily selected numbers of the code words intended to be meant thereby.

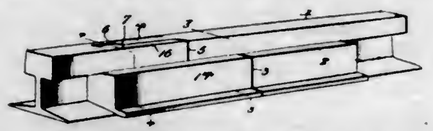
3. A tabulated gage for telegraphic or secret codes consisting of a plate having an opening therein corresponding to the code words in the order in which they appear, and having upon one side of the opening numbers corresponding to said code words, and having on the other side columns of arbitrarily selected numbers of the code words intended to be meant thereby.

4. A tabulated gage for telegraphic or secret codes consisting of a plate having an opening therein corresponding to the code words in the order in which they appear, and having upon one side of the opening numbers corresponding to said code words, and upon the other side movable blocks carrying arbitrarily selected numbers of the code words intended to be meant thereby.

5. A tabulated gage for telegraphic or secret codes consisting of a plate having an opening therein corresponding to the code words in the order in which they appear, and having upon one side of the opening movable blocks carrying numbers corresponding to said code words, and upon the other side movable blocks carrying arbitrarily selected numbers of the code words intended to be meant thereby.

[Claim 6 not printed in the Gazette.]

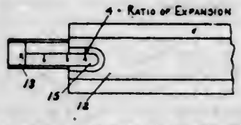
880,906. RAIL-JOINT. WILLIAM NEWGENT, West Baden, Ind. Filed June 28, 1907. Serial No. 381,262.



1. A rail joint comprising a rail having at one end a male member consisting of an integral chair, a reduced portion, a neck and a dove-tailed tenon, slotted lugs extending downwardly from said male member, and a female member conforming to said male member and provided with openings therein for the slotted lugs, and keys driven through the slots in said lugs transversely of the rails.

2. In a rail joint, a male member comprising an integral chair, a reduced portion, shoulders at opposite sides of said reduced portion, a neck, shoulders at opposite sides of said neck, a dove-tailed projection, slotted lugs extending downwardly from said member, a female member comprising an integral chair, oppositely disposed parallel members, a recess and a dove-tailed mortise, said chair having apertures in the bottom thereof through which the slotted lugs are extended, and wedge shaped keys driven transversely through the slots for locking the two members together.

880,907. SLIDE-RULE. FRANZ F. NICKEL, East Orange, N. J. Filed Dec. 28, 1906. Serial No. 349,861.



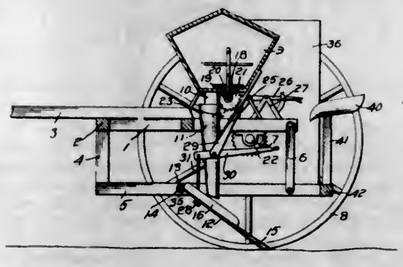
1. In a slide rule, consisting of a main piece having an upper and a lower fixed bar and a movable slide between said bars: two logarithmic scales upon the upper bar, the one progressing from the left hand end to the median point of the graduated length of the rule and the other from said median point to the right hand end; a single logarithmic scale upon the lower bar, progressing from the left hand end to the right hand end; two logarithmic scales upon the slide at its upper edge, the one progressing from the left hand end to the median point and the other from said median point to the right hand end; two logarithmic scales upon the slide at its lower edge, the one progressing from the left hand end to the median point and the other from said median point to the right hand end; a logarithmic scale upon the reverse side of the slide at its upper edge, progressing from the left hand end to the right hand end; a logarithmic scale upon the reverse side of the slide at its lower edge, progressing from the right hand end to the left hand end; a scale upon the reverse side of the slide between said scales on the reverse side, progressing from right to left; and one or more additional logarithmic scales each occupying not more than one-half of the graduated length of the rule.

2. In a slide rule, consisting of a main piece having an upper and a lower fixed bar and a movable slide between said bars: two logarithmic scales upon the upper bar, the one progressing from the left hand end to the median point of the graduated length of the rule and the other from said median point to the right hand end; a single logarithmic scale upon the lower bar, progressing from the left hand end to the right hand end; two logarithmic scales upon the slide at its upper edge, the one progressing from the left hand end to the median point and the other from said median point to the right hand end; two logarithmic scales upon the slide at its lower edge, the one progressing from the left hand end to the median point and the other from said median point to the right hand end; a logarithmic scale upon the reverse side of the slide at its upper edge, progressing from the left hand end to the right hand end, a logarithmic scale upon the reverse side of the slide at its lower edge, progressing from the right hand end to the left hand end; a scale upon the reverse side of the slide between said scales on the reverse side, progressing from right to left; and an additional logarithmic scale on the reverse side of the slide of said rule progressing from the left hand end of said slide to the median point of the graduated length of said rule.

3. In a slide rule, consisting of a main piece having an upper and a lower fixed bar and a movable slide between said bars: two logarithmic scales upon the upper bar, the one progressing from the left hand end to the median point of the graduated length of the rule and the other from said median point to the right hand end; a single logarithmic scale upon the lower bar, progressing from the left hand end to the right hand end; two logarithmic scales upon the slide at its upper edge, the one progressing from the left hand end to the median point and the other from said median point to the right hand end; two logarithmic scales upon the slide at its lower edge, the one progressing from the left hand end to the median point and the other from said median point to the right hand end; a logarithmic scale upon the reverse side of the slide at its upper edge, progressing from the left hand end to the right hand end; a logarithmic scale upon the reverse side of the slide at its lower edge, progressing from the right hand end to the left hand end; a scale upon the reverse side of the slide between said scales on the reverse side, progressing from right to left; an additional logarithmic scale on the reverse side of the slide of said rule progressing from the left hand end of said slide to the median point of the graduated length of said rule; and a second additional logarithmic scale likewise on the reverse side of said slide but progressing from the right hand end of said slide to the said median point.

4. In a slide rule, consisting of a main piece having an upper and a lower fixed bar and a movable slide between said bars: two logarithmic scales upon the upper bar, the one progressing from the left hand end to the median point of the graduated length of the rule and the other from said median point to the right hand end; a single logarithmic scale upon the lower bar, progressing from the left hand end to the right hand end; two logarithmic scales upon the slide at its upper edge, the one progressing from the left hand end to the median point and the other from said median point to the right hand end; two logarithmic scales upon the slide at its lower edge, the one progressing from the left hand end to the median point and the other from said median point to the right hand end; a logarithmic scale upon the reverse side of the slide at its upper edge, progressing from the left hand end to the right hand end; a logarithmic scale upon the reverse side of the slide at its lower edge, progressing from the right hand end to the left hand end; a scale upon the reverse side of the slide between said scales on the reverse side, progressing from right to left; an additional logarithmic scale on the reverse side of the slide of said rule progressing from the left hand end of said slide to the median point of the graduated length of said rule; and a second additional logarithmic scale likewise on the reverse side of said slide but progressing from the right hand end of said slide to the said median point.

880,908. FERTILIZER-DISTRIBUTER. GEORGE NIEBEL, Dunkirk, N. Y. Filed May 28, 1907. Serial No. 376,139.



1. A machine of the type set forth comprising in combination with a feed hopper and distributing tubes depending therefrom, a transverse bar, distributing plates arranged for pivotal and sliding movement on said bar beneath said distributing tubes, lever operated means for raising and lowering said plates on their pivots, and lever operated means for moving said plates laterally in either direction.

2. A machine of the type set forth, comprising in combination with a feed hopper and distributing tubes depending therefrom, of distributing plates arranged for pivotal and sliding movement beneath said tubes, means for moving said plates on their pivots and means for moving said plates laterally in either direction.

3. A machine of the type set forth, comprising in combination with a feed hopper and distributing tubes depending therefrom, distributing plates arranged beneath said tubes for pivotal movement and means for moving said plates on their pivots.

4. A machine of the type set forth, comprising in combination with a feed hopper and distributing tubes depending therefrom, distributing plates arranged beneath said tubes for pivotal movement and means for moving said plates simultaneously on their pivots.

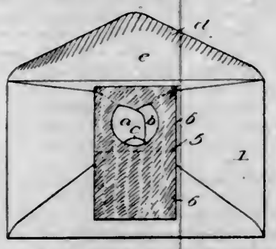
5. A machine of the type set forth, comprising in combination with a feed hopper and distributing tubes depending therefrom, distributing plates arranged beneath said tubes for lateral movement with relation thereto and means for moving said plates laterally in either direction.

[Claim 6 not printed in the Gazette.]

880,909. ENVELOP-SEAL. WILLIAM R. O'NEAL, Maryville, Mo. Filed Feb. 14, 1907. Serial No. 357,312.

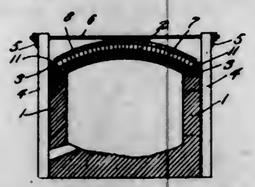
The herein described envelop seal comprising a piece of flexible material having a tongue of approximately circular form cut therefrom near one end thereof, and a line of fold indicated centrally thereof, in combination with

an envelop of ordinary construction, said tongue being inserted within the envelop and gummed inside to the flaps



thereof, said seal being folded on the central line and secured to the outside of the sealing flap of said envelop.

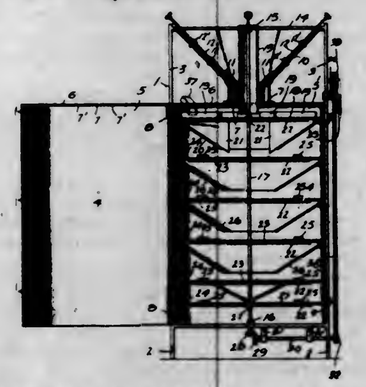
880,910. ARCH CONSTRUCTION FOR FURNACES. FRANK OETH, Indiana Harbor, Ind. Filed May 6, 1907. Serial No. 371,983.



1. A furnace comprising side walls, angle iron braces at the tops of said walls, angle iron buck stays connected by cross rod braces, and an arch comprising transverse sections of bricks, and intermediate arched ribs, said ribs extending beyond the outer face of the bricks.

2. An arch construction for furnaces comprising transverse brick sections and intermediate arched ribs formed of blocks of refractory material, the inner surfaces of the rib blocks lying flush with the bricks and the outer surfaces of the rib blocks extending beyond the outer surface of the bricks.

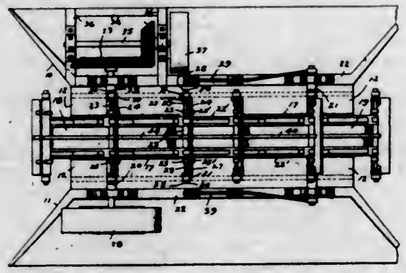
880,911. MACHINE FOR GRADING AND SEPARATING GRAIN. WILLIAM W. PATTERSON, Fairview, Okla. Filed May 22, 1907. Serial No. 375,139.



1. A machine of the type set forth comprising a casing, a hopper communicating therewith, a draft tube leading thereinto, a vertical shaft extending through said casing, means for rotating said shaft, spaced superposed screening plates carried upon said shaft, deflectors of inverted cone shape carried by said casing beneath said screening plates, spouts leading from said casing above each of said screening plates, a distributing plate carried by said shaft above the uppermost of said screens, a blower arranged in said casing below said distributing plate and communicating with said draft tube, said fan including a stationary casing and rotatable vanes, said hopper communicating with said fan casing and with the uppermost of said screens, a rotatable distributing plate carried by said shaft below the lowermost of said screens, and spouts in said casing arranged above said distributing plates.

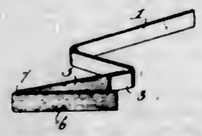
2. A machine of the type set forth comprising a casing, a hopper communicating therewith, a draft tube leading centrally thereinto, a vertical shaft extending into said casing, means for rotating said shaft, spaced superposed screening plates carried upon said shaft, a distributing plate carried by said shaft above the uppermost of said screening plates, deflectors of inverted cone shape arranged below said distributing plate and each of said screening plates and surrounding said shaft in spaced relation, and vanes carried by and depending from said distributing plate and working in the space between said distributing plate and said deflector, said distributing plate being of less diameter than said casing.

880,912. CURRENT-MOTOR. FRANCIS J. PAYNE, Portland, Oreg. Filed Feb. 11, 1907. Serial No. 356,828.



The combination, in a current motor, of a closed sluice way; a pair of wheels disposed at opposite ends thereof; endless chains adapted to travel over said wheels and through the sluice way; transversely-disposed shafts connecting said chains; L-shaped plates secured to the opposite end of each shaft, each of said plates having an outwardly-projecting sleeve formed upon its forward arm through which the corresponding shaft end extends; a wheel loosely mounted upon the sleeve of each plate; and tracks disposed within the sluice way, said wheels being adapted to travel upon the tracks to support the paddles during their passage through the sluice way.

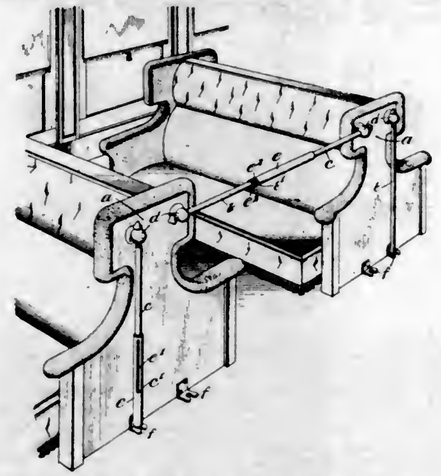
880,913. THREADER AND PROTECTOR FOR INKED RIBBONS. GLADSTONE PERRY, Listowel, Ontario, Canada. Filed Oct. 24, 1907. Serial No. 398,991.



1. The combination with an inked ribbon, of a combined threader and protector attached to and projecting beyond the end of the ribbon and embodying a folding portion adapted to be folded between the remainder of the protector and the body of the ribbon, substantially as described.

2. The combination with an inked ribbon, of a combined threader and protector therefor consisting of a strip of relatively stiff material attached to and projecting beyond the extremity of the ribbon, said strip being provided with oppositely arranged notches and a fold line extending across the strip adjacent to said notches.

880,914. GUARD-RAIL FOR PASSENGER-CARS. JOHN J. PETERSON, Chicago, Ill. Filed Aug. 19, 1907. Serial No. 389,216.



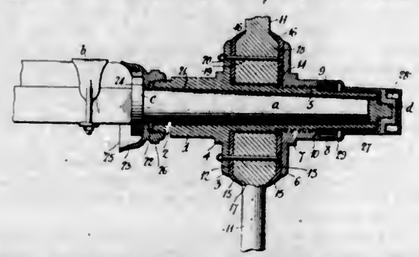
1. A guard rail for passenger cars consisting of two rod sections articulately connected to the different seat ends, and means for holding said sections in alinement.

2. A guard rail for passenger cars consisting of rod sections secured to the different seat ends, and a sleeve for holding said sections in alinement.

3. A two-part guard rail for passenger cars, each part of the rail being adapted to be secured to a seat end, and adapted to swing to a horizontal position when in use and to a substantially vertical position when not in use, and a sleeve mounted upon one of said rail parts and adapted to disengagingly engage the other rail part for holding the same in alinement with each other.

4. In combination with the body of a passenger car, a seat end rigidly secured to said car body, rods articulately connected to the seat ends, and means for temporarily coupling two rods on different seat ends together, to thereby hold said rods in alinement in a direction parallel to the length of the car body.

880,915. VEHICLE-WHEEL. MARTIN L. PORTER, Redding, Cal. Filed Apr. 22, 1907. Serial No. 369,666.

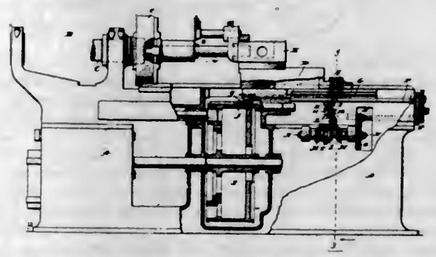


1. A wheel hub having a sleeve, a box therein to bear on the axle spindle and provided with an annular, outwardly extending flange, and a box retainer, detachably secured to the inner end of the hub sleeve and having an inwardly extending annular flange to bear between the inner end of the box and the collar of the axle spindle.

2. A wheel hub having a sleeve, a box therein to bear on the axle spindle and provided at its inner end with an annular outwardly extending flange, and a box retainer screwed to the inner end of the hub sleeve and having an inwardly extending annular flange to bear between the inner end of the box and the collar of the axle spindle.

3. In a vehicle wheel, a hub having a perforated fixed collar and a screw threaded portion adjacent thereto, an imperforate collar on said screw threaded portion, two clamping plates between said collars, perforated to register with the perforations in the fixed collar and the perforations in one plate being counter-sunk, spokes between said plates, and bolts through said spokes, plates and the stationary collar with their heads in said counter-sunk perforations, and the nuts on said bolts engaging with the stationary collar.

880,916. CARRIAGE-FEEDING MECHANISM FOR LATHES, &c. JAMES C. POTTER, Pawtucket, R. I., assignor to Potter & Johnston Machine Co., Pawtucket, R. I., a Corporation of Rhode Island. Filed Nov. 16, 1906. Serial No. 343,751.



1. In a feed mechanism for feeding a tool, the combination of a traversable tool holder, a drum having cams arranged to act in succession to move the tool holder during one part of its traverse for the performance of work by the tool, and separate means arranged to be effective upon said tool holder to move it during another part of its traverse.

2. In a feed mechanism for feeding a tool, the combination of a traversable tool holder, means arranged to be effective upon said holder to move it back and forth during one part of its traverse, and separate means arranged to be effective upon said tool holder to move it back and forth during another part of its traverse.

3. In a feed mechanism for feeding a tool relative to its work, the combination of a traversable tool holder, a series of separate and oppositely acting cams to move said tool holder during that part of its traverse back and forth over the work, and separate tool holder moving means arranged to be effective during another part of its traverse.

4. In a feed mechanism for feeding a tool relative to its work, the combination of a traversable tool holder, a cam drum for moving the same during that part of its traverse to and fro over the work, and separate tool holder moving means arranged to be effective during another part of its traverse.

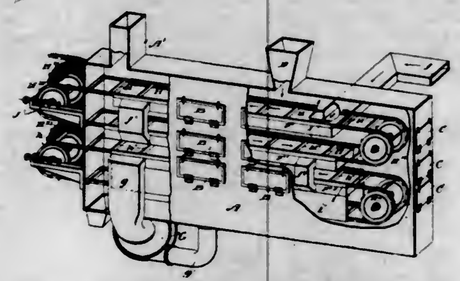
5. In a feed mechanism, the combination of a traversable carriage, means for moving the same during one part of its traverse, comprising a series of successively acting cams, a shaft geared to the carriage, gearing connecting the shaft to a source of power, a clutch for controlling the connection of said shaft with its source of power, and a connection between said first-mentioned carriage moving means and clutch, to operate the latter.

[Claims 6 to 11 not printed in the Gazette.]

880,917. DRIER. HENRY W. RAYNER, Eagle Lake, Tex. Filed May 29, 1907. Serial No. 376,247.

1. A drier substantially as herein described, comprising a casing, a series of heating boxes arranged therein one above the other, with the delivery end of each box terminating short of the receiving end of the next lower box, connecting flues between the delivery ends of each box and the receiving ends of the next lower box, a supply flue leading to the upper box, an outlet flue leading from the lower box, a suction fan connecting with said outlet flue

and having a discharge flue leading to the casing, a suction fan connected with the offtake of the casing, chain carriers movable over their respective heating boxes, and angle iron tracks for the chains of the said carriers, substantially as set forth.



2. In a drier substantially as described, the combination of a casing, a series of drying boxes therein and arranged one above the other, with the delivery end of each box discharging to the receiving end of the next lower box, flues connecting the said boxes, a supply flue leading to the upper box, a discharge flue leading from the lower box, a fan in connection with said discharge flue, and a return flue from said fan to the casing, whereby heat may be circulated through the boxes and may thence be withdrawn and circulated through the casing surrounding the boxes, substantially as set forth.

3. The combination with a casing, and heating boxes therein, forming bases over which the material to be dried may be passed, means for supplying a heating medium to the heating boxes, and means for withdrawing the said medium from the boxes and circulating it through the case surrounding the boxes, substantially as set forth.

880,918. RAILWAY-TIE ORGANIZATION. CALVIN M. REED, Sumneytown, Pa. Filed Sept. 18, 1906. Serial No. 335,088.



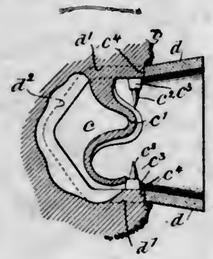
1. A metallic railway tie having a flat top provided with a plurality of closely arranged bolt openings, a wear plate disposed on the tie and adjustable to any position with respect to the flat top, and a rail secured on the said plate and connected with the latter to the tie.

2. A metallic railway tie having a flat top provided with a plurality of bolt openings, a wear plate disposed on the top and adjustable to any position with respect to said top, a rail bearing on the plate, and clench bolts inserted through the plate and tie, said clench bolts being self-clenching beneath the top of the tie.

3. A metal railway tie having its bearing face perforated with a plurality of bolt openings, a wear plate disposed on the bearing face and adapted to receive a rail, and a clench bolt inserted through the wear plate and bearing face and having a key driven downwardly therethrough and clenching the lower extremity thereof beneath the top of the tie to immovably wedge the bolt in secured position.

4. A metal railway tie having its bearing face perforated with a plurality of bolt openings, a wear plate disposed on the bearing face and adapted to receive a rail, and a clench bolt inserted through the wear plate and bearing face and having a key driven downwardly therethrough and clenching the lower extremity thereof to immovably wedge the bolt in secured position, the upper end of the key being secured by swaging a portion of the bolt head thereover.

880,919. METHOD OF FINISHING THE MOUTHS OF THE ANIMAL-HEADS OF SKIN RUGS. HAROLD A. REICH, New York, N. Y., assignor to R. Reich & Son, New York, N. Y., a Copartnership. Filed Aug. 31, 1907. Serial No. 390,986.



1. The method herein specified of finishing the mouths of animal heads of skin rugs, the same consisting in applying a suitable sleeve or mask around the open contour of the mouth, holding the head and sleeve in an upright position, filling the same with wax in a melted condition, holding the same therein momentarily and then turning over the head and sleeve and pouring out all of the hot wax that does not adhere as a lining.

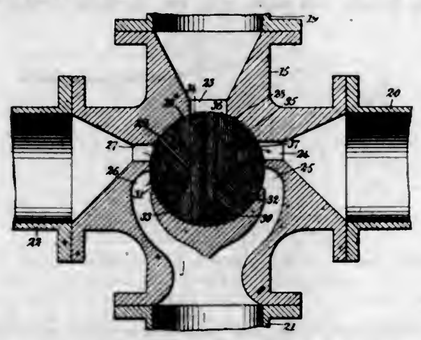
2. The method herein specified of finishing the mouths of animal heads of skin rugs, the same consisting in applying a suitable sleeve or mask around the open contour of the mouth, holding the head and sleeve in an upright position, filling the same with wax in a melted condition, holding the same therein momentarily and then turning over the head and sleeve and pouring out all of the wax that does not adhere as a lining, and repeating the operation so performed until the layers of wax deposited within the mouth are of the desired thickness.

3. The method herein specified of finishing the mouths of animal heads of skin rugs, the same consisting in taking a sleeve or mask of plastic material and fitting the same around the mouth within the hair line of the skin rug, fastening the same in position, holding the head and sleeve in a substantially upright position and pouring into the sleeve and mouth wax in a melted condition, holding the same momentarily to permit a layer to chill against and deposit upon the surface of the mouth, tongue, teeth and gums, then turning over the head and pouring out all of the hot wax that does not adhere as a lining within the mouth.

4. The method herein specified of finishing the mouths of animal heads of skin rugs, the same consisting in taking a sleeve or mask of plastic material and fitting the same around the mouth within the hair line of the skin rug, fastening the same in position, holding the head and sleeve in a substantially upright position and pouring into the sleeve and mouth wax in a melted condition, holding the same therein momentarily to permit a layer to chill against and deposit upon the surface of the mouth, tongue, teeth and gums then turning over the head and pouring out all of the hot wax that does not adhere as a lining within the mouth, and repeating the operation so performed until the layers of wax deposited within the mouth are of the desired thickness.

5. The method herein specified of finishing the mouths of animal heads of skin rugs, the same consisting in taking a sleeve or mask of plastic material and fitting the same around the mouth within the hair line of the skin rug, fastening the same in position, holding the head and sleeve in a substantially upright position and pouring into the sleeve and mouth, wax in a melted condition, holding the same therein momentarily to permit a layer to chill against and deposit upon the surface of the mouth, tongue, teeth and gums, then turning over the head and pouring out all of the hot wax that does not adhere as a lining within the mouth and removing the sleeve or mask and finishing the surface of the foundation previously occupied by the edges of the mask.

880,920. BALANCED VALVE. LEWIS J. RIGSBY, Manning, Tex. Filed June 15, 1907. Serial No. 379,168.

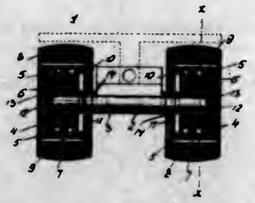


1. In a balanced valve, the combination of a casing provided with a central space and with ports merging into said central space, and a valve plug provided with a pair of webs having two ends thereof bent outwardly and spaced far apart, said plug being further provided with a pair of ribs disposed intermediate said last-mentioned ends, so as to form a plurality of ports disposed between said ends, said webs at their ends opposite said last-mentioned ports being separated so as to form a single port.

2. In a balanced valve, the combination of a casing provided with a central space of substantially cylindrical form and with a large inlet port merging into said space, said casing being further provided with a pair of exhaust ports disposed widely apart and connected together and merging into said central space, said casing being also provided with a pair of ports to be connected with opposite ends of a shot gun, said last-mentioned ports each being located intermediate one of said exhaust ports and said inlet port, and a revoluble plug mounted within said central space, said plug being provided with a pair of webs of arcuate form, said webs being spaced widely apart at one end thereof and close together at the opposite ends thereof so as to form a port between the ends last-mentioned, said plug being further provided with a pair of ribs disposed intermediate said webs and spaced therefrom to form ports, said ribs being spaced from each other so as to form a port of substantially the same area as said port intermediate the opposite ends of said webs.

3. As an article of manufacture, a valve plug provided with a pair of webs of arcuate form disposed with their convex surfaces facing each other, said webs being provided with ends disposed far apart, said plug being further provided with ribs disposed intermediate said last-mentioned ends and spaced therefrom so as to form ports and being spaced apart so as to leave a large port therebetween, the opposite ends of said webs being spaced apart far enough to leave a port of proper size to balance said large port.

880,921. ROLLER-SKATE. CARL ROSENBERG, East Pittsburg, Pa. Filed Sept. 27, 1907. Serial No. 394,822.

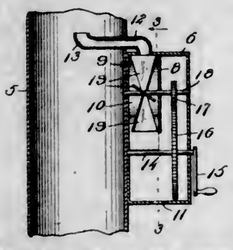


1. In a roller skate the combination with a shouldered axle, of a roller fixedly mounted thereon near each end and formed with peripheral grooves, a cup-shaped casing mounted against each of the shoulders of the shaft and inclosing said rollers, said casings provided with interiorly arranged grooves opposing the grooves of the rollers, bearing balls interposed between the casings and rollers and mounted in said grooves, a resilient covering for said casings, means to prevent the longitudinal movement of rollers with respect to the axle, and means for securing said resilient coverings to the casings.

2. In a roller skate the combination with a shouldered axle, of a roller fixedly mounted thereon near each end and formed with peripheral grooves, a cup-shaped casing mounted against each of the shoulders of the shaft and inclosing said rollers, said casings provided with interiorly arranged grooves opposing the grooves of the rollers and mounted in said grooves, disks mounted upon the axles and abutting against the inner sides of the casings, means to prevent said rollers from shifting longitudinally upon the axle, resilient coverings for the casings and peripheries of the disks, and means for securing the coverings to the casings and disks.

3. In a roller skate the combination with an axle, of rollers fixedly mounted thereon and provided with peripheral grooves, a casing inclosing each of said rollers and provided with interiorly arranged grooves, bearing balls interposed between the rollers and casings and seated in the grooves, a resilient covering inclosing each of said casings, a disk mounted in each of the coverings and upon the axle, means for securing the disk to the casing, a flexible gasket interposed between the disks and casing and means for securing the cover to the casing and disk.

880,922. FORCED-DRAFT APPLIANCE. CLARENCE RUSK, Bucklin, Kans. Filed July 11, 1907. Serial No. 383,204.



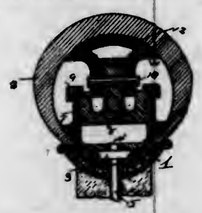
A rectangular casing having an intake opening and being adapted to be secured to a stove pipe and provided with supporting lugs and a concaved rear wall to insure close engagement with an attached stove pipe, of a depending partition within the upper end of said casing, of a curved wall between said rear wall and depending partition to form a fan housing entirely open below, a laterally projecting discharge pipe extending from the upper portion of said fan housing, a crank provided shaft within the lower portion of said casing, a gear on said shaft, a shaft extending through bearings within said partition, rear wall, and the front wall of said casing and being centrally positioned within said fan housing, a fan on said last mentioned shaft, and a pinion on said last mentioned shaft meshing with said gear.

880,923. NON-PUNCTURABLE INNER TIRE. BALDWIN F. SCHRAMER, Indianapolis, Ind. Filed Nov. 6, 1905. Serial No. 286,025.

1. The combination with the rim and tubular tire, of an annular chamber adjacent to the rim, a series of cylinders housed within the tubular tire and communicating with said chamber, a piston in each chamber, and a shoe pivoted upon each piston and adapted to engage the inner surface of the tubular tire, substantially as described.

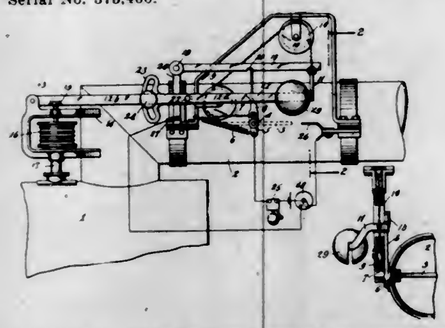
2. The combination with a rim, and a tubular resilient tire thereon, of an annular chamber in the rim, a series of cylinders housed within the resilient tire and radially secured therein and severally communicating with said

chamber pistons in said cylinders, and a shoe for each piston, each shoe having an extended base and pivotally connected with its piston, substantially as described.



3. The combination with a rim, and a tubular resilient tire thereon, of an annular chamber in the rim, a series of cylinders secured radially in the outer wall of said chamber, and communicating with said opening, the said cylinders being housed within the said tubular tire; a pivoted outer portion for each piston and a foot therefor curved laterally on its outer edge to engage the inner surface of the tire, and an admission tube for air leading to said chamber and check valve therefor, substantially as described.

880,924. AUTOMATIC DRAFT-CONTROLLER. GEORGE E. SCHUETZ, West Hoboken, N. J. Filed May 24, 1907. Serial No. 375,400.



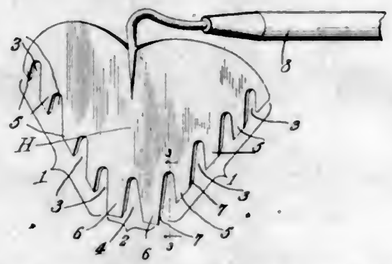
1. Automatic draft-controlling mechanism comprising, in combination with a boiler, a draft-controlling device, means tending to move the draft-controlling device to more or less operative position in proportion to the pressure in the boiler, and a detent to prevent such movement, said means operating, upon the attainment of a predetermined pressure in the boiler, to disengage the detent and release the draft-controlling device.

2. Automatic draft-controlling mechanism comprising, in combination with a boiler, a draft-controlling device, and means controlled by the pressure in the boiler and constructed and operating, upon the attainment of a predetermined pressure in the boiler, to move the draft-controlling device quickly to a position to effect a substantial reduction in the draft, and upon further rise of pressure in the boiler, to move the draft-controlling device gradually to further reduce the draft in proportion to such rise.

3. Automatic draft-controlling mechanism comprising, in combination with a boiler, a draft controlling device, a pressure chamber, and connection between the pressure chamber and the draft-controlling device comprising a lever actuated by the pressure chamber and provided with an adjustable joint to adjust the connection between the pressure chamber and the draft-controlling device.

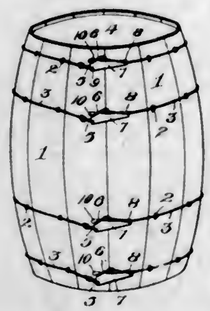
880,925. HOE. SIMON W. SHANKS, Benton Harbor, Mich. Filed Oct. 15, 1907. Serial No. 397,557.

A substantially triangular hoe having a broad point at its apex and downwardly converging inclined side edges, said point being vertically notched to provide teeth presenting relatively broad, straight, chisel-like edges, and said inclined side edges being also vertically notched to



provide teeth having relatively broad, alined, chisel-like edges.

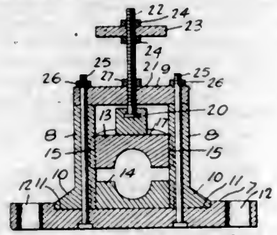
880,926. KNOCKDOWN BARREL. CLINTON S. SHUGART, Fairmount, Ind. Filed Mar. 29, 1907. Serial No. 365,378.



1. A knockdown receptacle comprising a plurality of parts, a flexible member permanently attached to the parts for connecting the latter together, loops formed at the ends of the member, and a locking device consisting of a metal piece disposed flatwise with respect to the outer surface of the receptacle and having an opening at one end for receiving one of the loops for permanent connection therewith, a hook at the same end extending longitudinally for detachably receiving the hook at the free end of the member, and a laterally extending hook adjacent the opposite end of the piece and bent over from one of the long edges of the latter for engaging over the member at a point inwardly from the detachable loop, the free end of the member extending the full length of the device and the detachable loop being shorter than the device to permit the inner end of the loop to directly engage and press on the device to urge the latter in a direction to assist in maintaining the second hook in engagement with the member.

2. A knockdown receptacle comprising a plurality of parts, a fastener consisting of a wire to which the parts are attached, a locking device comprising a member to which one end of the wire is hingedly connected, a hook at one corner of the member, a loop on the other end of the wire shorter than the length of the member and adapted to be placed over the corner for engagement with the hook, a laterally extending hook on the member under which the wire is engaged when the member is in locking position, the outer end of the loop engaging the first hook and the inner end of the loop being disposed between both hooks and bearing directly on the member at a point intermediate the ends thereof to exert a pressure on the latter in a direction to maintain the second hook in engagement with the wire.

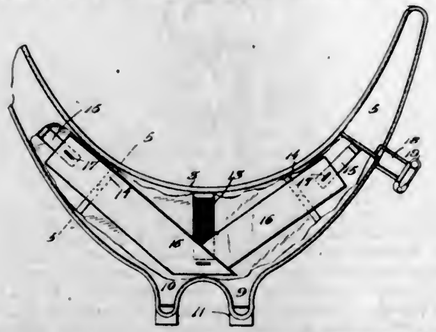
880,927. JOURNAL-BOX. JOSEPH W. SMITH and STERLING A. CULBRETH, Gordon, Ala. Filed June 26, 1907. Serial No. 380,911.



1. In a journal box, the combination, with a supporting frame, of an upper and a lower bearing movable therein, said upper bearing having a longitudinal rib formed on its outer face provided intermediate its ends with a seat having oppositely-under-cut walls, a tapered block fitted in said seat, and a vertically-movable adjusting screw carried by said supporting frame, said screw having its lower end swiveled in said block and provided at its upper end with means for effecting its rotation in one direction or the other, to move the upper bearing towards or from the lower bearing.

2. In a journal box, the combination of a base provided upon its upper face with a pair of spaced seats; a pair of standards mounted upon said base and provided with feet fitting in said seats; a cross-piece connecting the upper ends of said standards, said cross-piece having a threaded opening formed vertically therethrough intermediate its ends; an upper bearing and a lower bearing movable between said standards and provided with oppositely-disposed alining recesses formed in their side faces into which the standards extend, the upper bearing having a bowed longitudinal rib and a transverse seat formed on its outer face, said seat having its walls oppositely undercut; a block disposed within said last-mentioned seat and provided with oppositely beveled flanges formed on its front and rear faces and extending beneath the undercut walls of said seat; and an adjusting screw movable vertically through the threaded opening in said cross-piece, said screw having its lower end swiveled in said block and provided at its upper end with means for effecting its rotation in one direction or other, to move the upper bearing towards or from the lower bearing.

880,928. CATAMENIAL BANDAGE. ARTHUR R. SLATER, Fruitvale, Cal. Filed July 11, 1906. Serial No. 235,620.



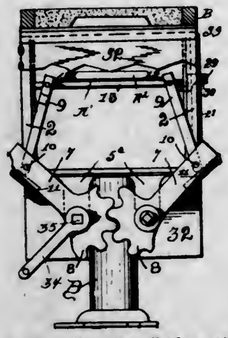
1. An abdominal bandage comprising two members secured together, in combination with a catamenial pad secured centrally between the members with said ends projected in opposite directions and terminally secured to one of said members beyond the center.

2. An abdominal bandage comprising two members, a central tab secured between the members, and end tabs secured in opposite directions beyond the central tab, in combination with a catamenial pad to be centrally secured to the central tab with its ends secured respectively to the end tabs, said pad being concealed between the members.

3. An abdominal bandage comprising two members secured together at their upper edges to provide a belt-like structure, a tab secured centrally to one of the members and concealed between said members, end tabs secured to one of the members in opposite directions beyond the central tab, in combination with a catamenial pad secured centrally to the central tab and having its ends secured to the end tabs, said pad being concealed between the members.

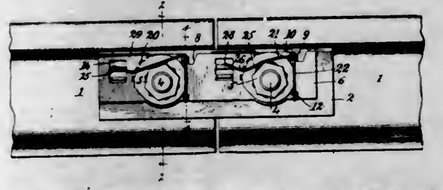
4. An abdominal bandage comprising two members secured together at their upper edges to provide a belt-like structure, a tab secured centrally to one of the members and concealed between said members, end tabs secured to one of the members in opposite directions beyond the central tab, in combination with a catamenial pad secured centrally to the central tab and having its ends secured to the end tabs, said pad being concealed between the members, the lower edges of the members being free of connection to permit convenient access to the pad.

880,929. MOLD-STRIPPING MACHINE. EDMUND P. SLENTZ, Oak, Pa. Filed Aug. 31, 1905. Serial No. 276,590.



In a device of the class described, a standard having a rectangular upper portion and spaced transverse bearings, an open rectangular frame having spaced vertical sides constituting guide members engaging the rectangular upper portion of said standard, a stripping frame mounted upon said rectangular frame, a pattern supporting plate associated with said stripping frame, shafts mounted for oscillation in the bearings of said standard, gear segments carried by said shafts and having radially-extending arms, and links between said arms and said pattern supporting plate.

880,930. NUT-LOCK. CLAUDE B. STILLWELL, Jacksonville, Fla. Filed Nov. 27, 1907. Serial No. 404,014.



1. In a nut lock, in combination, a bolt, a nut mounted thereupon, a main plate upon which said nut seats and having an opening receiving said bolt, a locking ring engaging said nut and adapted to prevent the rotation thereof, said locking ring having an outwardly projecting finger formed thereupon, and a locking bar adapted to be attached to said main plate after the said nut is seated, and having an extension engaging said main plate at two

points, said extension engaging said finger at a point between said first points, and affording means for locking said ring against rotation.

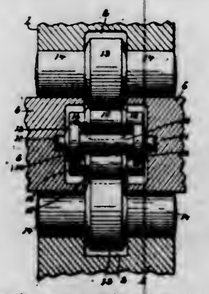
2. In a nut lock, in combination, a bolt, a nut mounted thereupon, a main plate having an opening through which said bolt passes and upon which said nut seats, a locking ring having an opening with a plurality of notches therein adapted to engage said nut in a plurality of positions, a locking ring having a plurality of fingers projecting outwardly on the edge thereof, a locking bar adapted to be applied after the nut is seated, means for mounting the same upon said plate, said main plate further having engaging means adapted to receive said locking bar to hold the same in place, said locking bar having an extension passing across the face of said locking ring and engaging said fingers and said engaging means.

3. In a nut lock, in combination, a bolt, a nut mounted thereupon, a main plate having an opening receiving said bolt upon which said nut seats, a locking ring adapted to engage said nut in a plurality of positions, a locking bar having hooks engaging the opposite edges of said plate and removably secured thereto, said locking bar having an extension engaging said locking ring to prevent the rotation thereof, and means formed on said plate for engaging said extension.

4. In a nut lock, in combination, a bolt, a nut mounted thereupon, a main plate under said nut, said main plate being offset outwardly so as to form pockets at opposite edges thereof, one of said edges having a notch adjacent to said pocket, a locking bar having an extension with hooks formed at the ends thereof adapted to be received in said pockets, said notch affording means for receiving one of said hooks and attaching said locking bar, said locking bar further having a second extension, and a locking ring adapted to engage said nut to prevent the rotation thereof, and having means for engaging said second extension.

5. In a nut lock, in combination, a bolt, a nut mounted thereupon, a main plate upon which said nut seats, said main plate having outwardly offset tongues forming pockets, and having a notch adjacent to one of said pockets, and a locking bar having an extension extending transversely of said main plate and having hooks adapted to be received in said pockets to hold said locking bar in position, said locking bar having a second extension or locking ring adapted to engage said nut in a plurality of positions, and having fingers adapted to engage said second extension, said main plate having an offset bar adapted to engage the end of said second extension to hold the same in position.

880,931. ROLLER-BEARING. FRANCIS G. SUSEMIHL, Detroit, Mich., assignor of one-fourth to Frank L. Susemihl, Chicago, Ill. Filed Oct. 26, 1907. Serial No. 399,246.



1. A roller bearing comprising a main axle consisting of a pair of axially alined fixed stub shafts having cylindrically recessed and separated adjacent ends, a spindle journaled between the shafts in axial alinement therewith, a set of spacing rolls revoluble around the spindle within the shafts, a set of bearing rollers revoluble around the shafts maintained in separated parallel relation by the spacing rolls, and a hub rotatable on the bearing rollers.

2. A roller bearing comprising a main axle consisting of a pair of axially alined fixed stub shafts having cylindrically recessed and separated adjacent ends, a spindle journaled in axial sockets in the shafts having a flange near each end within the recess of the adjacent shaft, a set of spacing rolls whose end journals are interposed between the spindle flanges and encircling shafts in simultaneous contact therewith, a set of bearing rollers whose bodies revolve in spaced relation on the spacing rolls and whose end journals travel on the peripheries of the shafts, and a hub riding on the journals of the bearing rollers and clearing the bodies thereof.

3. A roller bearing comprising a main axle consisting of a pair of axially alined fixed stub shafts having cylindrically recessed and separated adjacent ends, a spindle journaled in axial sockets in the shaft ends and provided with flanges lying inside the shaft recesses, a set of spacing rolls revoluble around the spindle within the shafts in simultaneous contact with the spindle flange peripheries and the inner surfaces of the shaft recesses, a set of bearing rollers revoluble around the shafts maintained in separated parallel relation by the spacing rolls, and a hub rotatable on the bearing rollers.

4. A roller bearing comprising a main axle consisting of a pair of axially alined fixed stub shafts having counterbored and separated adjacent ends, a spindle journaled between the shafts in axial alinement therewith, a set of spacing rollers interposed between the spindle and the encircling shaft ends in simultaneous contact therewith, a set of bearing rollers whose bodies are adapted to revolve in spaced relation on the spacing rolls and whose end journals are adapted to travel on the peripheries of the shafts and a hub which rotates on the journals of the bearing rollers and clears the bodies thereof.

5. A roller bearing comprising a main axle consisting of a pair of axially alined fixed stub shafts having counterbored separated adjacent ends, a spindle journaled in axial sockets in the said shaft ends, spacing rolls revolving on the spindle whose end journals are in simultaneous contact with the spindle and the inner surfaces of the counterbores in the shaft, a hub having an inner channel, and bearing rollers whose bodies are held in spaced relation by the spacing rolls and maintained in proper longitudinal relation by the hub channel and whose end journals are interposed between the hub and the shafts in simultaneous rolling contact therewith.

[Claims 6 to 9 not printed in the Gazette.]

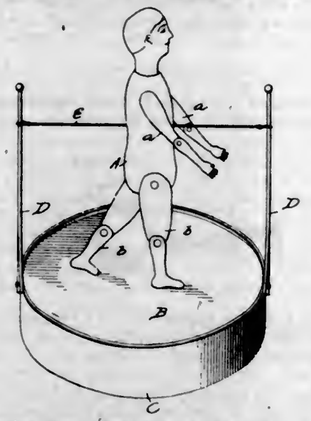
880,932. PADLOCK. HERBERT SWOGGERS, New Galilee, Pa. Filed Mar. 4, 1907. Serial No. 360,436.



1. A lock of the character described consisting of a body having a recess formed therein, a locking hasp carried by said body, a spring-held locking bolt slidably mounted in said body and adapted to engage in said hasp, a tooth carried by said bolt, a lever pivotally mounted in the recess of said lock body and having lugs adapted to be engaged by the tooth of said bolt, spring-held tumblers mounted within the recess of said lock body and adapted to engage said lever and hold the same in engagement with said bolt, a side plate mounted upon said lock body and having a block extending into a recess in said lock body, said enlargement having a key-hole formed therein to permit entry of a key for engagement with said tumblers.

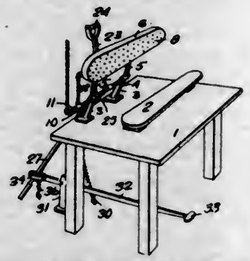
2. A lock consisting of a body portion having a recess formed therein, a lock hasp carried by said body, a spring-held bolt mounted within said body and adapted to engage said hasp, a tooth carried by said bolt, a lever pivotally mounted in the recess of said lock body and adapted to engage said bolt, spring-held tumblers pivotally mounted in said lock body and engaging said lever, means carried by said lever to hold said tumblers in an elevated position for releasing said bolt, and means carried by said lever and engaging said bolt for holding said bolt in locked position, the said body portion having a keyhole to permit entry of a key for engagement with said tumblers.

880,933. DANCING TOY. RICHARD J. TANNER, Lincoln, Nebr. Filed Apr. 5, 1907. Serial No. 366,536.



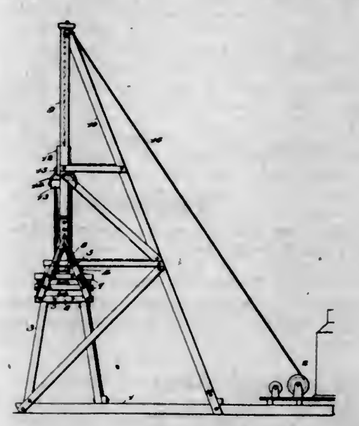
A dancing toy consisting of a base comprising a resonant rim having a head composed of a sheet of elastic material stretched within the same, a dancing figure, resonant standards connected with opposite sides of the rim, and a catgut stretched between the upper portions of the standards and passing through the body of the figure to support the same with the feet thereof barely touching the same.

880,934. CLOTHES STEAMING AND PRESSING MACHINE. GONZELO E. TARBOX, Spokane, Wash. Filed Nov. 28, 1905. Serial No. 289,489.



In a machine of the type set forth, the combination with a press board, and a sponging board mounted for rocking movement towards and away from said press board, of a lever carried by said sponging board and having a rearward extension, a floor bracket, a foot lever pivoted adjacent its rear end to said floor bracket, and provided rearwardly of its pivot with a longitudinal slot having a stepped wall, a retractile coil spring engaged with the rear end of said lever, and with the floor, a rod pivotally depending from said extension and projected through said slot, the end of said rod being formed for engagement with said stepped wall and a retractile coil spring having one end engaged with said rod, and its other end engaged with the floor.

880,935. TIE-CUTTING MACHINE. CHARLES C. TATE, Bogalusa, La. Filed Aug. 28, 1907. Serial No. 390,548.



1. A tie-cutting machine comprising two sets of horizontally disposed knives located at right angles to each other, a casing in which said knives are removably located, a support for said casing, guides located above said knives, and a hammer movable in said guides and designed to force timbers through the space formed between the knives of the two sets thereof.

2. A tie-cutting machine comprising two sets of horizontally disposed knives located at right angles to each other, a casing in which said knives are removably located, a support for said casing, guides located above said knives, a hammer movable in said guides and designed to force timbers through the space formed between the knives of the two sets thereof, a cap also movable in said guides and designed to rest on the end of a timber, and means detachably connecting said cap to said hammer.

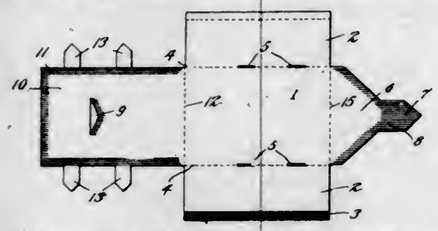
3. In a tie-forming machine, a rectangular casing, two sets of knives arranged at right angles to each other, each set of knives being composed of a plurality of pairs of knives located different distances apart, said knives being extended through the walls of said casing, a frame supporting said casing, rests for said knives at the outside of said casing, and means for forcing a timber through the space between the sets of knives.

4. A portable tie cutting machine comprising a base, a motor thereon, a frame mounted on said base, guides above said frame, a casing supported by said frame, two sets of knives arranged at right angles to each other, each set of knives being composed of a plurality of pairs of knives located at different distances apart, fillers supported by said frame and resting upon each other, said fillers forming bearings for the ends of the knives, a hammer movable in said guides and designed to be operated by said motor, and a cap also movable in said guides for resting on the timbers which are forced by said hammer through the space between said knives, and means detachably connecting said cap to said hammer.

880,936. SAFETY-ENVELOP. MARETON N. THOMPSON, Enterprise, Ala. Filed Jan. 26, 1907. Serial No. 354,326.

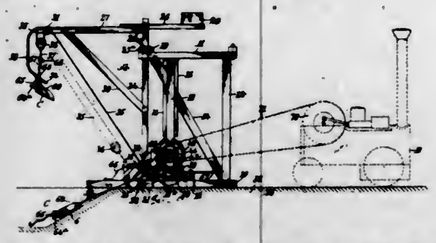
The herein described safety envelop comprising a body portion having overlapping side flaps one at each side thereof, the overlapping portion of one of said flaps being secured to the other, said side flaps and body portion having slots formed therein at two points longitudinally in the edges thereof on the line of fold of said side flaps, a back portion provided with laterally extending tabs and a central aperture, said back portion being secured to the side flaps and said tabs being gummed and inserted in the

slots and secured to the body portion of the envelop, and a sealing flap gummed upon both of its sides and pro-



vided with a tab to be passed through the aperture in the back portion of the envelop.

880,937. DITCHING-MACHINE. LEVI THORTVEDT, Glyndon, Minn. Filed June 20, 1907. Serial No. 379,906.



1. In a ditching machine, a drive shaft, a series of independent capstans mounted to rotate and slide thereon, and independent means for locking or unlocking the capstans relatively to the shaft, and a crane adjustable opposite any one of the capstans.

2. In a ditching machine, a drive shaft, a hoisting capstan and a drag capstan mounted to slide and turn upon the drive shaft, independent clutch connections between the shaft and the capstans, an independent shifting device for each capstan and a laterally adjustable crane.

3. In a ditching machine, the combination with a drive shaft, of a hoisting capstan, and a drag capstan mounted to turn and slide upon the shaft, an independent coupling connection between each capstan and the drive shaft, shifting devices for the capstans, a crane provided with trip arms a hoisting cable carried by the crane, and connected with the hoisting capstan, and a drag cable connected to the drag capstan.

4. In combination, a drive shaft, independent capstans mounted for rotary and sliding movement upon the said shaft, an independent coupling between each capstan and the shaft, shifting devicea for the capstans, and a crane mounted for adjustment to and from any of the capstans.

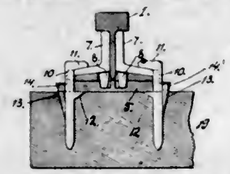
5. In combination, a drive shaft, independent capstans mounted for rotary and sliding movement upon the said shaft, an independent coupling for each capstan with the drive shaft, shifting devices for each capstan, a crane mounted for sliding movement to or from any of the capstans in a line parallel therewith, a hoisting rope carried by the crane and attached to one of the capstans and drag ropes connected with the other capstans.

[Claims 6 to 12 not printed in the Gazette.]

880,938. RAIL-JOINT. STEFAN VLAJNIC, McKeesport, Pa. Filed Aug. 15, 1907. Serial No. 388,606.

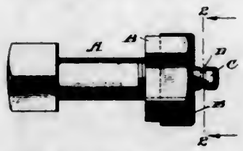
1. The combination with the meeting ends of railway rails, having openings formed in their base portions, of base-plates below said rails formed with recesses registering with said openings, fish-plates having integral depending tongues fitting said openings and recesses, and spikes for securing said fish-plates in position.

2. The combination with the meeting ends of railway rails, having openings in their base portions, of base-plates below said rails formed with recesses registering with said openings, fish-plates having integral depending tongues fitting said openings and recesses, spikes for securing said



fish-plates in place, said spikes having heads overlapping the bases of the rails, and prongs extending below the base-plates, and means for clamping said spikes.

880,939. NUT-LOCK. JAMES E. VIRGO, Bridgeport, Conn. Filed June 24, 1907. Serial No. 380,575.



1. In a nut lock the combination of a bolt provided with a lug rigid therewith and extending from the end thereof in prolongation of the body of the bolt, a nut fitting the said bolt, and a sheet metal cap fitting said nut and provided with a cup fitting said lug, and interlocking means integral with said cup and engaging said lug, whereby the cap securely locks the nut on the bolt but is adapted to be readily removed and replaced, substantially as described.

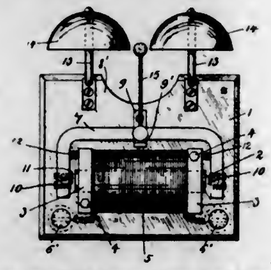
2. In a nut lock, the combination of a bolt having a lug provided with a recess, integral therewith and extending from the end thereof, in prolongation of the body of the bolt, a nut on said bolt, and a sheet metal cap provided with angular flanges snugly fitting said nut, and also provided with a cup, or recess, snugly fitting said lug, and said cup provided with an integral spring-like projection fitting the recess in the lug, whereby the cap securely locks the nut on the bolt, but is adapted to be readily removed and replaced, substantially as described.

3. In a nut lock the combination of a bolt having a lug provided with a recess, integral therewith and extending from the end thereof, in prolongation of the body of the bolt, a nut on said bolt, and a sheet metal cap provided with angular flanges snugly fitting said nut, and also provided with a cup, or recess, snugly fitting said lug, and said cup provided with two spring-like depressions forming integral projections and fitting the recess in the lug, whereby the cap securely locks the nut on the bolt, but is adapted to be readily removed and replaced, substantially as described.

4. In a nut lock, the combination of a bolt provided with a lug rigid therewith and extending in prolongation of the body thereof, a nut provided with a plurality of angular surfaces fitting said bolt and a sheet metal cap provided with angular flanges fitting said surfaces and having a cup shaped depression in its bottom provided with integral spring means, and fitting said lug, whereby the cap may be readily removed, the nut adjusted, and the cap replaced in locking position, substantially as described.

5. In a nut lock, the combination of a bolt provided with a lug smaller in cross section than said bolt, rigid therewith and extending in prolongation of the body thereof, an angular nut fitting the said bolt, and a sheet metal cap provided with integral angular flanges fitting over the said nut and lug, and having integral spring locking means for engaging said lug, whereby the cap securely locks the nut on the bolt but is adapted to be readily removed and replaced, substantially as described.

880,940. ELECTRIC BELL. CHARLES J. WAGNER, Chicago, Ill. Filed Aug. 15, 1907. Serial No. 388,581.



1. In a device of the class described the combination with an electro-magnet, of a U shaped permanent magnet pivoted adjacent thereto, springs between the arms of the permanent magnet and the electro-magnet, a centrally disposed hammer on said permanent magnet and bells adapted to be engaged by said hammer.

2. In a device of the class described the combination with an electro-magnet of a U shaped permanent magnet having its poles projecting into close proximity to the poles of the electro-magnet, adjustable contact pieces on the poles of the permanent magnet, a spring between each pole of the permanent magnet and the electro-magnet, an adjustable pivot for said permanent magnet and a pair of bells adjacent said hammer.

3. In a device of the class described the combination with a base plate of a bracket thereon, oppositely directed trunnions on said plate, a U shaped permanent magnet pivoted at its center on said trunnions, an electro-magnet rigidly engaged on the plate between the poles of said permanent magnet, springs normally holding the poles of said magnets out of contact, a hammer on said permanent magnet and bells adjacent thereto adapted to be struck by said hammer.

4. In a device of the class described the combination with a base plate of a pair of oppositely directed trunnions thereon, one of which is adjustable with respect to the other, a U shaped permanent magnet pivoted at its center on said trunnions, an electro-magnet rigidly engaged on said plate intermediate the poles of the permanent magnet, means acting normally to hold the poles of the permanent magnet out of contact with the core of the electro-magnet, adjustable contacts on the poles of the permanent magnet, a hammer engaged on said permanent magnet at its pivoted point and extending outwardly therefrom and a pair of bells on said plate adapted to be engaged by the hammer.

5. In a device of the class described the combination with a base plate of a bracket thereon, a pair of trunnions on said bracket, one of which is adjustable with respect to the other, a U shaped permanent magnet pivoted on said trunnions, an electro-magnet rigidly engaged on said plate, a spring between each end thereof and the permanent magnet, a pair of stems on said plate, a bell on each stem and a hammer on said permanent magnet projecting between said bells.

880,941. SHADE-BRACKET. CHARLES E. WALDORF, Bridgeport, Conn. Filed Aug. 22, 1906. Serial No. 331,629.



1. The combination with a bar, of a bracket provided with flanges adapted to embrace the upper and lower edges of the bar to adjustably secure the bracket thereon, one of the flanges of the bracket being provided with recesses, and a spring dog mounted upon the bracket between the recessed flange and one edge of the bar, said spring dog being transversely depressed at points adjacent its ends to provide stops adapted to fit in the recesses to fixidly secure the spring dog on the bracket, the free ends of the spring dog being adapted to engage the edge of the bar to secure the bracket in its adjusted position thereon.

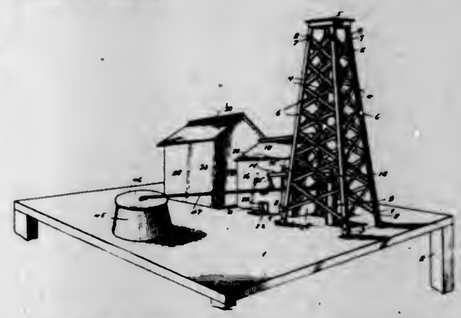
2. The combination with a bar provided with a corrugated edge, of a bracket provided with flanges adapted to embrace the upper and lower edges of the bar to adjustably secure the bracket thereon, one of the flanges of the bracket being provided with recesses, and a spring dog mounted upon the bracket between the said recessed flange and the corrugated edge of the bar, said spring dog being transversely depressed at points adjacent its ends to provide stops adapted to fit in the recesses to fixedly secure the spring dog upon the bracket, the free ends of the spring dog being adapted to engage the corrugated edge of the bar to secure the bracket in its adjusted position thereon.

880,942. HEAT-RETAINING COVER FOR FLAT-IRONS. FRANCES M. B. WATKINS, Lapeer, Mich. Filed Jan. 29, 1907. Serial No. 354,671.



A portable heat-retaining cover adapted to be placed over a flat-iron and comprising an open-ended frusto-conical member formed of compressed heat-insulating material and having its upper and lower edges provided with metallic re-inforcing strips extending completely therearound, a swinging bail attached to the upper re-inforcing strip, and a hand-piece carried by the bail, whereby the cover may be moved from one point to another.

880,943. TOY OIL-WELL. CHRISTIAN WEISENBACH and JACOB WEISENBACH, Pittsburg, Pa. Filed Aug. 23, 1907. Serial No. 389,869.



1. In a toy, a supporting platform, a knock-down well-derrick mounted thereon and comprising anchors secured to the platform, uprights or corner posts of angle form received at their lower ends in said anchors and provided adjacent their lower and upper ends with slots, brace-bars between the uprights, said brace-bars being in the form of lazy-tongs, and buttons carried by the free ends of the end bars of each set of brace-bars, said buttons engaging

in the slots of said uprights and securing the brace-bars in position.

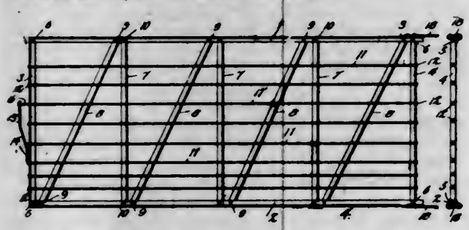
2. In a toy, a supporting platform, a knock-down well-derrick mounted thereon, a pump arranged in the platform centrally of the derrick and extending above and below the platform, a tank mounted on the platform, a pipe connecting said pump with said tank, an auxiliary reservoir connected to the lower end of the pump, a pipe extending through the platform and communicating with the auxiliary reservoir and the tank, a walking beam pivotally mounted in the well derrick and connected at one end to the piston rod of said pump, a drive shaft mounted on the platform and having a crank arm on one end to which the other end of said walking beam is connected, and a motor mounted on the platform and connected to said drive shaft for actuating the latter and operating the pump.

880,944. PIN. FRANK B. WHEELER, St. Louis, Mo. Filed Mar. 12, 1907. Serial No. 362,044.



A pin comprising a single piece of wire having an elongated body, said body being reduced at one end to form a point, the opposite end of said body being provided with a laterally extending arm, said arm being provided with a depending portion, the latter being spaced from the body and disposed parallel therewith by means of said arm, a terminal arm formed integral with the depending portion and at right angles thereto, the terminal arm being presented to and spaced apart from the laterally extending arm and resiliently engaging the body for locking the said pin in the apparel, the end of the said terminal arm extending over and beyond the body portion, said end being blunt for allowing the pin to be adjusted to any height without having to first manipulate the terminal arm.

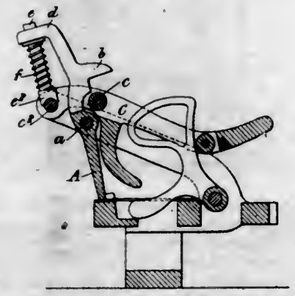
880,945. GATE. JOHN K. WHEELER, Cerro Gordo, Ill. Filed Feb. 19, 1907. Serial No. 358,225.



The herein described gate comprising top and bottom rails made of oppositely disposed angle iron bars, angle iron uprights, end bars, diagonal braces secured to the top and bottom rails, stretcher rods extending through the flanges of the uprights, diagonal braces and end bars, adjustable hinges for said gate, each comprising a plate having a pintle hole therein and provided with slots through which the attaching rivets extend to secure the hinge members to the angle iron rails at the top and bottom of the gate, a rod extending through the flanges of the uprights, diagonal bars and end bars, said rod extending beyond one of the end bars of the gate, and a spring latch secured to said end bar and provided with a slot at its upper end to engage the extended end of said rod, substantially as described.

880,946. CLIP FOR STENTERING-MACHINES. ALFRED A. WHITLEY, Whitefield, Bury, England. Filed Aug. 19, 1907. Serial No. 389,130.

1. A stentering machine clip having an upper jaw centered to the clip arms and provided with a lifting piece above the center on which the upper jaw turns and with a bent-over head piece embracing a rod with a foot-piece resting on the hinge pin of the opening lever and a spring encircling the said rod and bearing at one end on the bent-over head piece of the upper jaw and at the other end on the said foot piece, as described.



2. A stentering machine clip having an upper jaw centered to the clip arms and provided with a lifting piece above the center on which the upper jaw turns, and a spring connected at one end directly to the said upper jaw, below the center on which it turns, and at the other end to the pin on which the opening lever turns, as described.

880,947. MEANS FOR MOLDING HOLLOW ARTICLES WITH BULGED OR SWELLED WALLS. LUDOVIC A. WILCZEK, Paris, France. Filed July 17, 1905. Serial No. 270,021.



In means for molding hollow articles with bulged or swelled walls the combination with a mold having cavities arranged in pairs with their axes in alinement and having a cylindrical recess intermediate of each pair of cavities of larger diameter than the orifices of the cavities, with cores connected in pairs and a center piece integral with each pair of cores, and adapted to support same in the mold, said center-piece being of larger diameter than the apertures of the articles to be molded, and of the same diameter and breadth as the cylindrical recess in the mold to fit accurately therein substantially as described.

880,948. TOOL-POST. HENRY P. WILHELM and EDWARD VERO, Millvale, Pa. Filed Jan. 21, 1907. Serial No. 353,361.



In a tool post, a screw having a rounded lower end, a gripping block having a semispherical socket to receive the rounded end of the screw, the opposing surfaces of the socket and screw-end being formed to provide an extended contact in the direction of thrust of the screw, an annular groove formed on the screw above its rounded end, and yieldably retaining fingers carried by the block, said fingers having portions extending into said groove, said fingers and groove removably holding the block in position on the screw-end in a manner to permit relative movement, whereby the inclination of the gripping face of the block may be varied within normal limits, said fingers being yieldable to retain the extended contact of the opposing faces of the screw-end and socket when the variation is increased.

880,949. SIGNAL-BLADE CLASP. HIRAM C. WILLIAMS, Utica, N. Y., assignor to The W. F. Bossert Manufacturing Company, Utica, N. Y. Filed Sept. 17, 1907. Serial No. 393,421.



1. A signal blade clasp comprising, in combination with a pivotal weighted member, a blade having apertures registering with apertures in said member, a plate having integral tangs adapted to pass through registering apertures in said blade and member, and means for holding said tangs in the apertures, as set forth.

2. A signal blade clasp comprising, in combination with a pivotal weighted member, a blade having apertures registering with apertures in said member, a plate having integral tangs adapted to pass through registering apertures in said blade and member, a bolt carried by the plate and extending through the blade and member, and a nut upon said bolt, as set forth.

3. A singal blade clasp comprising, in combination with a pivotal weighted member, said member having a recess in one face thereof at one side of its pivot with apertures in the wall thereof, a blade adapted to seat in said recess and provided with an aperture in registration with the apertures in said member, a plate having integral tangs engaging said registering apertures, and means for fastening the plate to said blade and member, as set forth.

4. A signal blade clasp comprising, in combination with a pivotal weighted member, said member having a recess in one face thereof at one side of its pivot with apertures in the wall thereof, a blade adapted to seat in said recess and provided with an aperture in registration with the apertures in said member, a plate having integral tangs engaging said registering apertures, a bolt carried by the plate and extending through said blade and member, and a nut mounted upon said bolt, as set forth.

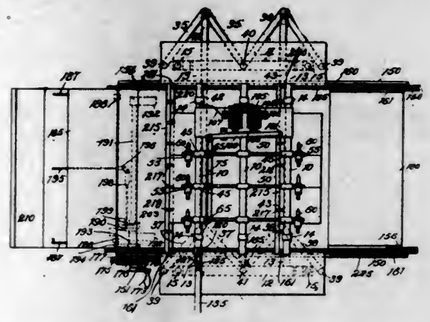
5. A signal blade clasp comprising, in combination with a pivotal weighted member, said member having a recess in one face thereof at one side of its pivot with apertures in the wall thereof, a blade adapted to seat in said recess and provided with an aperture in registration with the apertures in said member, a plate having radial arms, a tang projecting from each arm and adapted to pass through registering apertures in the blade and member, a bolt passing through a central aperture in said plate and also through registering apertures in the blade and member, and a nut mounted upon said bolt, as set forth.

880,950. MEANS FOR WRITING A PLURALITY OF SIGNATURES OR INSCRIPTIONS. WILLIAM R. WOODWARD, New York, N. Y. Filed June 15, 1907. Serial No. 379,222.

1. The combination of a plurality of writing members, and a monitor controlling device, with means for successively moving groups or series of documents into writing position.

2. The combination of a plurality of simultaneously operating writing members, with means for successively moving groups or series of documents into and out of writing position.

3. The combination in a writing machine of a table and a plurality of simultaneously operating writing members, with means for successively moving groups or series of documents into and out of writing position upon said table.

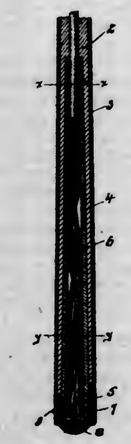


4. The combination of a table, a plurality of simultaneously operating writing members, with a conveyer adapted to convey groups of documents into and out of writing position upon said table.

5. The combination of a plurality of writing members, and a document supporting table or platform, with means for temporarily binding documents into groups or series, and a conveyer adapted to engage said binding means and convey the groups or series of documents over the table or platform.

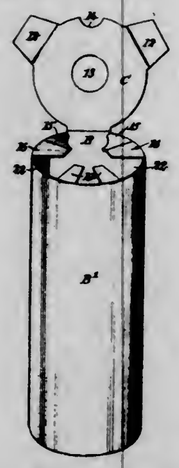
[Claims 6 to 27 not printed in the Gazette.]

880,951. WHIP. WALTER E. WRIGHT, Saltsburg, Pa. Filed Aug. 8, 1906. Serial No. 329,753.



As a new article of manufacture, a whip comprising a tapering sleeve having the lower end thereof formed with exterior threads, a whip member extending in the upper end of and projecting partly through said sleeve, said sleeve constituting an anchor for the whip member and that portion of the interior of the sleeve below the inner end of the whip member forming a chamber for the reception of whip crackers, means for inclosing a portion of the whip member above the upper end of the sleeve, and furthermore inclosing a portion of the sleeve, said means terminating in proximity to the screw-threaded end of the sleeve, a cap mounted upon the lower end of the sleeve and engaging with said threads, said cap having a depending resilient extension, and a covering inclosing said cap and said means.

880,952. FOLDING PAPER BOX. JAMES M. YARNALL, New York, N. Y. Filed Aug. 31, 1907. Serial No. 390,938.



1. In folding paper boxes for cylindrical objects, a blank consisting of a body divided by score lines into two main panels of equal size and a glue flap, a circular cover member and a circular bottom member extending respectively from the top and the bottom edges of the outermost main panel, the cover member being provided with opposing tuck ends and the bottom member with opposing slots, flaps at the top and the bottom edges of the outermost main panel, centrally located flaps at the upper and the lower edges of the other main panel, and tuck ends at each side of the flaps at the lower edge of the latter mentioned panel.

2. In folding paper boxes for cylindrical objects, a blank consisting of a body divided by score lines into two main panels of equal size and a glue flap, a circular cover member and a circular bottom member extending respectively from the top and the bottom edges of the outermost main panel, the cover member being provided with opposing tuck ends and the bottom member with opposing slots, flaps at the top and the bottom edges of the outermost main panel, centrally located flaps at the upper and the lower edges of the other main panel, and tuck ends at each side of the flaps at the lower edge of the latter mentioned panel, the diameter of the cover and bottom members corresponding to that of the body formed by the union of the two main panels when said body is bent to the cylindrical shape.

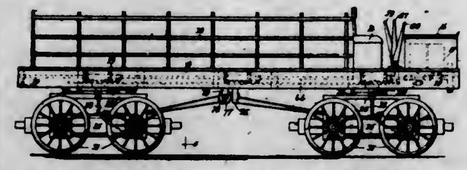
3. In folding paper boxes for cylindrical objects, a blank comprising a body divided by score lines into two main panels of equal width and a glue flap, one of said main panels having a slotted circular bottom member at its lower edge and flaps at each side of the said member, the other main panel having at its bottom edge tuck ends and flaps intervening the tuck ends, the said main panels being of greater width than the diameter of said bottom member.

4. As an improved article of manufacture, a box which consists of two main body panels separated by score lines and adapted to fold flat or assume a cylindrical shape, a hinged cylindrical cover, and a hinged cylindrical bottom for the body panel, means for locking the bottom to the body panels, and tuck ends carried by the cover adapted when the cover is closed to engage with the inner faces of the body panels, the body panels being of greater width than the diameter of the cover and the diameter of the bottom, the relatively cross sectional measurements of said cover, bottom, and body being such that when the body is given a cylindrical form, the cover and the bottom portions of the body panels are of substantially the same diameter as that of the body panels.

5. As an improved article of manufacture, a box the body of which consists of two main panels separated by score lines and adapted to fold flat or assume a cylindrical shape, a hinged cylindrical cover and a hinged cylindrical bottom for the body, tuck ends carried by the cover adapted when the cover is closed to engage with the inner face of the body, the body panels being of greater width than the diameter of the cover and the diameter of the bottom, the relatively cross sectional measurements of said cover and bottom being such that when the body is given a cylindrical form the cover and bottom portions of the body are of substantially the same diameter as that of the body, and inwardly directed sustaining flaps at the top and bottom of the body in engagement relatively with the inner faces of the cover and the bottom.

[Claim 6 not printed in the Gazette.]

880,953. TRACTION-VEHICLE. ROBERT E. ZAGER, Branscombe, Cal. Filed May 10, 1907. Serial No. 372,894.



1. In a traction vehicle, a main frame, a king pin revolubly connected thereto, a truck frame swiveled on said king pin and supporting said main frame, traction wheels journaled to said truck frame and having swiveled connection therewith, means for swiveling said wheels with respect to said truck frame, a prime mover on said main frame, a power shaft journaled in said main frame and adapted to be driven by said prime mover, transmission mechanism connected with said power shaft for driving said king pin, means for starting, stopping and reversing the rotation of said king pin, and driving mechanism for transmitting the motion of said king pin to said traction wheels.

2. In a traction vehicle, a main frame, a king pin comprising two members connected together by a universal joint, one of said members being journaled in said main frame, a truck frame swiveled on the other of said members and supporting said main frame, traction wheels journaled to said truck frame and having swiveled connection therewith, means for swiveling said wheels with respect to said truck frame, a prime mover carried on said main frame, transmission mechanism connecting said prime mover with said king pin, and transmission mechanism connecting said king pin with said wheels.

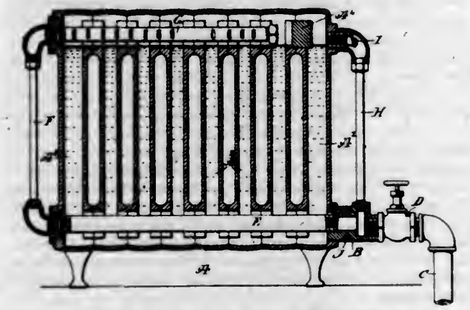
3. In a traction vehicle, a main frame, a king pin revolubly connected therewith, a truck frame swiveled on said king pin and supporting said main frame, traction wheels journaled to said truck frame and having swiveled connection therewith, a prime mover on said main frame, a power shaft journaled in said main frame, transmission mechanism connected with said power shaft for driving said king pin, means for starting, stopping, and reversing the rotation of said king pin, driving mechanism for transmitting the motion of said king pin to said wheels, steering mechanism actuated by said power shaft and adapted initially to swivel said wheels with respect to said truck frame and thereafter to swivel said truck frame with respect to said main frame, and means for starting, stopping, and reversing said steering mechanism.

4. In a traction vehicle, a truck frame, journal sleeves swiveled therein, axles journaled in these sleeves, traction wheels secured on said axles, collars secured on said axes to hold the latter in said journals, a steering frame mounted to swivel in said truck frame, drive-shafts journaled in said steering frame, coupling sleeves coupled by universal joints with the ends of said drive-shafts, said coupling sleeves being formed with angular bores, said axles being formed with angular shanks adapted to slide in said bores and engage said coupling sleeves, and means for swiveling said steering frame so as to turn said wheels at angles with said truck frame.

5. In a traction vehicle, a truck frame, formed with openings at opposite sides thereof, a fixed pin in each opening, an adjustable pin in each opening in opposed relation to said fixed pin, means for locking said adjustable pins at any desired adjustment, a sleeve in each opening, swiveled between the fixed pin and the adjustable pin therein, an axle journaled in each sleeve, a traction wheel secured on the outer end of each axle, a collar secured on each axle, said collars bearing respectively against the inner faces of said sleeves, each axle being formed with an inwardly-extending angular shank, a steering frame, a shaft mounted in said steering frame between each pair of opposed axles, a coupling sleeve on each end of each shaft and connected thereto by a universal joint, each coupling sleeve being formed with an angular bore adapted to receive in sliding engagement said angular shank of an adjacent axle, means for driving said shafts, and means for swiveling said steering frame.

[Claims 6 and 7 not printed in the Gazette.]

880,954. HEATING APPARATUS. ALEXANDER ZECK and FREDERICK VAN ZECK, Grafton, W. Va. Filed July 17, 1907. Serial No. 384,174.



1. A heating apparatus, comprising a hot water radiator, a steam pipe extending horizontally in the lower part of the radiator, a perforated distributing pipe extending horizontally in the upper part of the radiator, and a vertical pipe outside of the radiator and connecting the said pipes.

2. A heating apparatus, comprising a hot water radiator, a steam supply connected with the radiator, a horizontal steam pipe in the lower part of the radiator, a horizontal perforated distributing pipe in the upper part of the radiator, a vertical pipe outside of the radiator and connecting the said pipes, and a valved overflow leading from the upper end of the radiator to the steam supply.

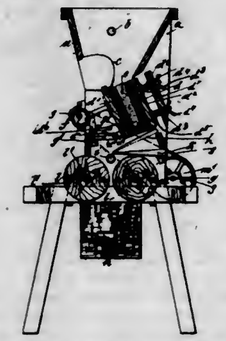
3. A heating apparatus comprising a hot water radiator, a steam pipe extending horizontally through the water in the lower part of the radiator for heating the same, the said steam pipe discharging into the upper portion of the radiator to supply the latter with water, and an overflow for carrying off the surplus water and maintaining the level of the water in the radiator at a uniform height.

4. A heating apparatus comprising a steam supply pipe, a radiator connected with the said supply pipe and filled with water to within a short distance from the top, a steam pipe connected with the said steam supply pipe and extending horizontally through the lower portion of the said radiator, and a steam distributing pipe connected with the first named steam pipe and arranged horizontally in the upper portion of the radiator above the level of the water therein.

5. A heating apparatus comprising a steam supply pipe, a radiator connected with the said supply pipe and filled with water to within a short distance from the top, a steam pipe connected with the said steam supply pipe and extending through the lower portion of the said radiator, a steam distributing pipe connected with the first named steam pipe and arranged in the upper portion of the radiator above the level of the water therein, and an overflow pipe for the water in the radiator.

[Claims 6 to 8 not printed in the Gazette.]

880,955. APPARATUS FOR CLEANSING CORKS. MAX ACH, Egg, Vorarlberg, Austria-Hungary. Filed Jan. 21, 1907. Serial No. 353,316.



1. A cork cleansing machine comprising in combination a frame, a feed hopper, stationary and movable coacting brushes in communication with said hopper between which the corks are caused to pass, squeezing rollers adapted to act on the corks after treatment by the brushes, and means intermediate the brushes and squeezing rollers for treating the corks with liquid.

2. A cork cleansing machine comprising in combination a frame, a feed hopper means for feeding liquid thereto, an adjustable stationary brush and a co-acting reciprocating brush below said hopper between which the corks are caused to pass, squeezing rollers adapted to act on the corks after treatment by the brushes, and means intermediate the brushes and squeezing rollers for further treating the corks with liquid.

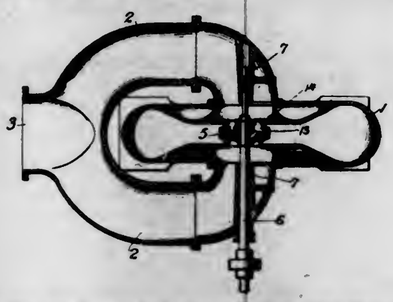
3. A cork cleansing machine comprising in combination a frame, a feed hopper, vibratory means for agitating the contents thereof means for feeding liquid to said hopper, an adjustable stationary brush and a coacting reciprocating brush below said hopper between which the corks are caused to pass, squeezing rollers adapted to act on the corks after treatment by the brushes, and means intermediate the brushes and squeezing rollers for further treating the corks with liquid.

4. A cork cleansing machine comprising in combination a frame, a feed hopper vibratory means for agitating the contents thereof means for feeding liquid to said hopper, an adjustable stationary brush and a co-acting reciprocating brush below said hopper between which the corks are caused to pass an inclined sieve below the brushes, squeezing rollers adapted to act on the corks after treatment by the brushes, means intermediate the brushes and squeezing rollers for further treating the corks with liquid and an inclined sieve below said squeezing rollers.

880,956. CENTRIFUGAL PUMP. LOUIS R. ALBERGER, Greenwich, Conn., assignor, by mesne assignments, to Alberger Pump Company, New York, N. Y., a Corporation of New York. Filed May 1, 1905. Serial No. 258,354.

1. The herein described method of operating centrifugal and like pumps, consisting in moving one portion of the fluid or liquid by direct action, and another portion by inductive action, the entire operation taking place within a single inclosure through which all the water passes and before any of the water leaves it.

2. The herein described method of operating centrifugal and like pumps, consisting in moving one portion of the fluid or liquid by direct action, and another portion both by direct action and also by the inductive action of the first portion, the entire operation taking place within a single inclosure through which all the water passes and before any of the water leaves it.



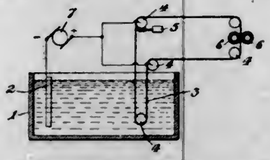
3. The herein described method of operating centrifugal and like pumps, consisting in lifting a portion of the water or other liquid to be pumped by exerting a direct action thereon, and lifting the remainder both by direct action and also by the inductive action of the first portion thereon, the entire operation taking place within a single inclosure through which all the water passes and before any of the water leaves it.

4. The herein described method of operating centrifugal and like pumps, which consists in moving a body of liquid by centrifugal force and moving another body of liquid by the motion of the former, the entire operation taking place within the pump through which all the water passes and before any of the water leaves it.

5. The herein described method of operating centrifugal and like pumps, which consists in imparting power to a body of liquid by the action of centrifugal force, and then imparting a portion of the power to another body of liquid, so as to obtain a flow of both liquids, the entire operation taking place within the pump through which all the water passes and before any of the water leaves it.

[Claims 6 to 25 not printed in the Gazette.]

880,957. STORAGE-BATTERY ELECTRODE. JONAS W. AYLSWORTH, East Orange, N. J., assignor to Edison Storage Battery Company, West Orange, N. J., a Corporation of New Jersey. Filed Apr. 28, 1905. Serial No. 257,875.



1. A storage battery electrode, comprising a conducting support and electrolytically deposited hydrated peroxid of nickel applied to the same, substantially as set forth.

2. A storage battery electrode, comprising a conducting support and hydrated peroxid of nickel electrolytically deposited thereon, substantially as set forth.

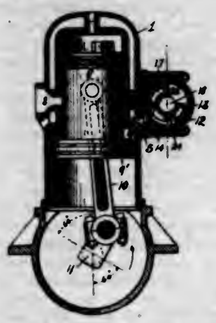
3. A storage battery electrode, comprising a perforated plate and electrolytically deposited hydrated peroxid of nickel applied thereto, substantially as set forth.

4. A storage battery electrode, comprising a perforated plate and hydrated peroxid of nickel electrolytically deposited thereon, substantially as set forth.

5. A storage battery electrode comprising two opposed perforated plates and electrolytically deposited hydrated peroxid of nickel between the said plates, substantially as set forth.

[Claims 6 to 10 not printed in the Gazette.]

880,958. MULTIPLE-CYLINDER ENGINE. FRANK X. BACHLE and JOHN C. L. KREBS, Clyde, Ohio. Filed June 13, 1907. Serial No. 378,691.



1. A multiple cylinder engine having its cylinders provided with pumping and combustion-chambers, said chambers each having a port communicating therewith, a crank-shaft and a rotary valve geared to revolve with the engine crank-shaft and having a gas supply-chamber and a gas distributing-chamber, said supply-chamber having ports arranged to register at different points in a rotation of the valve with the ports leading to the pumping-chambers of the cylinders, and said distributing-chamber having two series of ports, one series of which registers with the pumping-chamber ports at different points in a rotation of the valve while the other series registers with the combustion-chamber ports at different points in a rotation of the valve.

2. A multiple cylinder engine having its cylinders each provided with pumping and combustion-chambers which have ports communicating therewith, a rotary valve having a supply-chamber provided with ports arranged to register at different times with the pumping-chamber ports when the valve is rotated and having a distributing-chamber provided with a series of receiving and a series of discharging ports, the former of which ports register at different points with the pumping-chamber ports and the latter with the combustion-chamber ports when the valve is rotated, and means for rotating the valve at a predetermined speed.

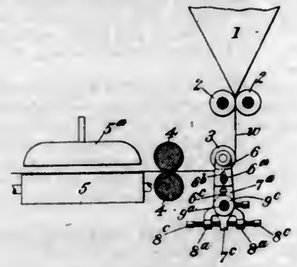
3. A multiple cylinder engine having its cylinders provided with pumping and combustion-chambers having ports communicating therewith, a rotary valve having a supply-chamber and a distributing-chamber, the former of which is provided with a series of staggered ports for communicating with the pumping-chamber ports when the valve is rotated and the latter being provided with a series of staggered ports for communicating with the pumping-chamber ports and a series of staggered ports for communicating with the combustion-chamber ports when the valve is rotated, and means for rotating the valve at a predetermined speed.

4. A multiple cylinder engine having its cylinders provided with pumping and combustion-chambers, said chambers each having a port communicating therewith, a rotary valve forming a distributing-chamber and having a series of ports communicating with a source of gas supply and intended to register with the pumping-chamber ports as the valve rotates and a double series of ports communicating with the distributing-chamber, one series of which registers with the pumping-chamber ports and the other with the combustion-chamber ports when the valve is rotated, a source of gas supply, and means for rotating the valve.

5. A multiple cylinder engine having its cylinders provided with pumping and combustion-chambers each having a port communicating therewith, a rotary valve having a chamber in communication with a source of gas supply and provided with ports which register with the ports of the pumping-chambers of the cylinders at predetermined points in a revolution of the valve, and a distributing-chamber provided with ports which register with the ports of the combustion-chambers at predetermined points in a revolution of the valve, a source of gas supply, and means for rotating the valve.

[Claims 6 to 11 not printed in the Gazette.]

880,959. ADJUSTABLE WEB-GUIDE. HENRY F. BECHMAN, Battle Creek, Mich., assignor to Duplex Printing Press Company, Battle Creek, Mich., a Corporation of Michigan. Filed Apr. 29, 1907. Serial No. 370,865.



1. In combination with folding mechanism, a web guiding roller interposed between the first-fold rolls and second-fold rolls, and means for adjusting either end of said roller independently of the other end both horizontally and vertically in different degrees.

2. In a folding mechanism, the combination of the first-fold rolls, cutting cylinders, and a web guide roller interposed between the rolls and cylinders; with means for vertically and horizontally adjusting either end of said web guide roller in different degrees independently of its other end.

3. In combination a web guide roller, vertically adjustable castings supporting said roller, horizontally adjustable pivoted castings, supporting the first castings; means for adjusting the first castings upon the second, and means for adjusting the second castings on their pivots.

4. The combination of a support, castings pivotally mounted thereon, castings fixed beside the first castings, bolts tapped through the latter castings and engaging the first castings to regulate the position of the latter, bearings mounted on the first castings, and a guide roller journaled in said bearings.

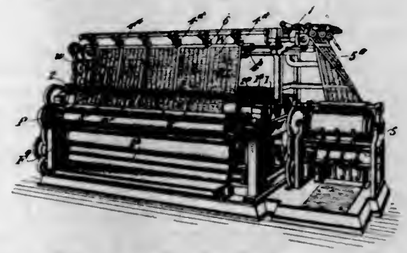
5. The combination of a shaft, castings rotatably mounted thereon, bifurcated castings fixed on said shaft beside the first castings, bolts tapped through the bifurcations of the latter castings and engaging the first castings to regulate the position of the latter; vertically adjustable castings mounted on the first castings, and a guide roller journaled in the vertically adjustable castings.

[Claims 6 and 7 not printed in the Gazette.]

880,960. ROTARY-CYLINDER WEB-PERFECTING PRINTING-PRESS. HENRY F. BECHMAN, Battle Creek, Mich., assignor to Duplex Printing Press Company, Battle Creek, Mich., a Corporation of Michigan. Filed June 1, 1907. Serial No. 376,835.

1. In a rotary printing press the combination of two plate cylinders and two co-acting impression cylinders all extending longitudinally of the press and arranged close together with the plate cylinders outermost, each plate cylinder adapted to carry rows of five newspaper-page forms arranged in two groups, two forms in one group and three in the other; a folder adjacent one end of said cylinder, guides for directing a wide and a narrow web between the cylinders to be perfected thereby, a slitter for the wider web and angle bars and guides for deflecting the narrow web and the two parts of the wide web and directing same to the folder.

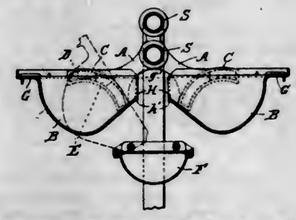
2. In a rotary printing press the combination of two plate cylinders and two co-acting impression cylinders all extending longitudinally of the press and close together and arranged in substantially the same plane with the plate cylinders outermost, each plate cylinder adapted to carry rows of five newspaper-page forms arranged in two groups, two forms in one group and three in the other; a folder adjacent said cylinders, guides for directing two webs of paper of different width side by side between the cylinders to be perfected by the respective groups of forms thereon, a slitter for the wide web adapted to sever one page width therefrom and angle bars and guides for deflecting the narrow web and the two parts of the wide web and directing them to the folder.



3. In a rotary printing press the combination of two plate cylinders and two impression cylinders arranged side by side in substantially the same plane and extending longitudinally of the press each plate cylinder adapted to carry ten newspaper-page forms arranged in two rows, five page-forms in each row arranged in groups of two and three forms; with a folder having its cylinders in axial parallelism with the plate and impression cylinders, guides for directing a wide and a narrow web of paper between the plate and impression cylinders to be perfected, means for slitting the wide printed web, three angle bars above the cylinders for assembling the narrow and slit webs, and guides for directing the assembled webs to the folder.

4. In a rotary newspaper printing press the combination of two plate and two impression cylinders arranged closely adjacent and extending longitudinally of the press in substantially the same plane with the plate cylinders outermost, each plate cylinder adapted to carry two rows of forms, five newspaper-page forms in each row, said forms being arranged in two groups of three forms and two forms respectively; a folder at one end of the press, means for directing a wide and a narrow web of paper side by side between the plate and impression cylinders to be perfected by the groups of forms thereon, means for slitting the wide printed web longitudinally to separate a one page width of web therefrom, three parallel angle bars above the cylinders over which the narrow and the two parts of the slitted webs are given a quarter turn and assembled, and guides for directing the assembled webs to the folder.

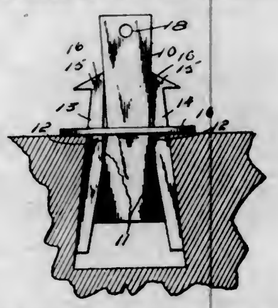
880,961. LAVATORY-BASIN. FREDERICK C. BLANCHARD, Bridgeport, Conn., assignor to The Ashcroft Manufacturing Company, Bridgeport, Conn., a Corporation of Connecticut. Filed Apr. 12, 1907. Serial No. 367,761.



1. The combination of standards, a bowl supported thereon, one of the two said members provided with curved segment guides the other with two-point bearings coacting with the segment guides.

2. The combination of standards, a bowl supported thereon, circular arc guides on the standard, and circular arc lugs on the bowl coacting with the guides and having a two-point bearing therein.

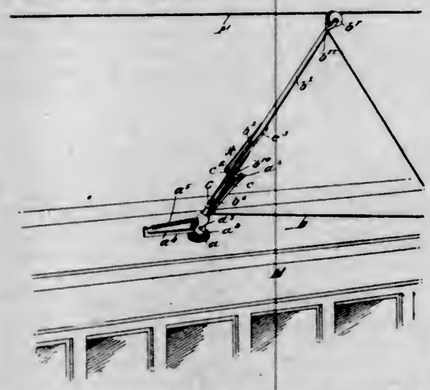
880,962. LEWIS. JOHN W. BLANCHARD and ARTHUR E. COVELL, Montpelier, Vt. Filed Nov. 16, 1906, Serial No. 343,737. Renewed Jan. 15, 1908. Serial No. 410,997.



1. A lewis comprising a lifter consisting of a flat plate of metal having divergent edges at its lower portion forming a dovetail, the edges of the lifter above the dovetail being inclined outwardly, and feathers on opposite sides of the lifter having edges of a form to conform to the outer edges of the lifter, the outer edges of the feathers being substantially parallel when in normal position, a yoke for connecting the parts at their upper portions, and an eye in the lifter formed by making a hole therethrough from side to side.

2. A lewis compesed of a lifter consisting of a plate of metal having a lower portion of dovetail form, feathers at the sides of the lifter, the inner edges of which conform to the outer edges of the lifter, the upper parts of the feathers being constructed with lateral offsets forming hooks having outwardly inclined heads, combined with a yoke-plate provided with a slot through which the upper portions of the parts extend, the offsets resting on the plate beyond the ends of the slot.

880,963. TROLLEY-POLE. HENRY BOUCHARD, Austin, Tex. Filed Apr. 16, 1907. Serial No. 368,513.



1. The combination with the supporting bracket, of a trolley pole comprising a plurality of telescoping sections, the innermost section being provided with trunnions, near one end thereof for engaging the bracket, said bracket being recessed for receiving the end of the section, a sleeve slidable on the bracket, levers pivoted on the trunnions, a connection between one end of each of the levers and the sleeve, a connection between the other end of each of the levers and the outermost section of said pole, and a spring interposed between the sections for normally retaining them in extended position, whereby to move the sleeve from over the end of the section to release it from the recess.

2. The combination with the supporting bracket, of a trolley pole comprising a plurality of telescoping sections, the innermost section being provided with trunnions, near one end thereof for engaging the bracket, said bracket being recessed for receiving the end of the section, a sleeve slidable on the bracket, a connection between the sleeve and its outermost section, whereby to move said sleeve from over the end of the section when the sections are moved apart, and a spring normally acting to move the sections apart.

3. The combination with the bracket, of a trolley pole comprising a plurality of telescoping sections, one of said sections being hinged to the bracket, means for retaining the pole in alinement with the bracket, a connection between the other section and the retaining means, whereby to release said retaining means when the sections are extended, and a spring acting normally to extend the sections.

4. The combination with the bracket, of a trolley pole pivoted to the bracket, said pole comprising a plurality of telescoping sections, means for retaining the pole in alinement with the bracket, means whereby the extending of the sections will release the retaining means, a spring acting normally to extend the sections, and a cable having its ends connected with the ends of the pole whereby to manipulate the same.

5. The combination with the bracket, of a trolley pole pivoted to the bracket, said pole comprising a plurality of telescoping sections, means for retaining the pole in alinement with the bracket, means whereby the extending of the sections will release the retaining means, a spring acting normally to extend the sections, and a rest on the bracket for supporting the pole when out of alinement with the bracket.

[Claims 6 to 9 not printed in the Gazette.]

880,964. PORTABLE COASTING DEVICE. JAMES C. BOYLE, Calgary, Alberta, Canada. Filed July 25, 1907. Serial No. 385,463.

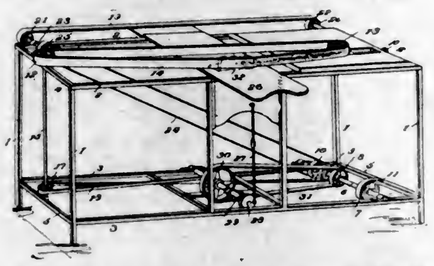


1. A coasting device, comprising a plurality of sections, each section embodying an oblong frame having spaced parallel side bars, a flat surfaced chute board fixed between the frame side bars, transverse rollers journaled at their ends in the side bars near ends of the chute board, an endless apron mounted upon the rollers on each section and having its upper run in sliding contact with the top surface of the chute board, dowel pins and sockets in adjacent ends of the frame side bars for sections disposed in sequence which serve to maintain said sections alined, means for detachably securing the ends of sections together, and means supporting the sections inclined at one end of the coasting device.

2. A coasting device, comprising a plurality of similar sections, each one embodying a frame having spaced side bars, a flat surfaced chute board fixed between the side bars, rollers journaled in said side bars at ends of the chute board, an endless apron carried by said rollers, dowel pins and sockets in ends of the side bars adapted for engagement and retaining adjacent sections in sequence, hooks and eyes on side bars at their ends, that by engagement hold adjacent sections detachably connected, and means for holding two sections at one end of the device elevated and inclined.

3. A coasting device, comprising a series of sections detachably connected at their ends, a ladder having transverse steps and arranged at one end of the series for supporting it inclined, a lower frame for supporting an adjacent section inclined, and a horizontally disposed keeper bar having a plurality of notches in one edge thereof that have engagement with transverse members of the ladder and of the frame, and adapted for spacing apart the ladder and frame adjustably, so as to give the engaged sections of the coasting device a suitable inclination.

880,965. SANDPAPER-MACHINE. JOHN T. BRANTLEY, Salisbury, N. C. Filed Dec. 6, 1906. Serial No. 346,659.

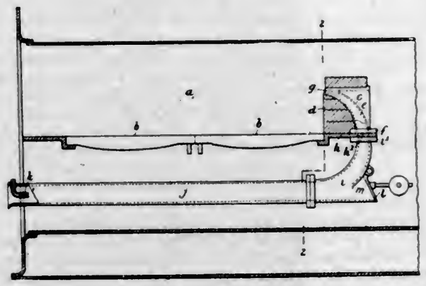


1. In a sand paper machine of the character specified, the combination of a horizontally arranged endless belt for finishing the work, a work support, and means for imparting a vertical reciprocating movement to the work support.

2. In a machine of the character specified, the combination of a flexible sand papering strip, spaced supports therefor, a work holder arranged beneath the supports of the sand papering strip, means for imparting a reciprocating movement to the work holder at about a right angle to the sand papering strip, and means for varying the amplitude of movement of the said work holder.

3. In a machine of the character specified, the combination of a sand papering belt, a work support, means for imparting a reciprocating movement to the work support at about a right angle to the said sand papering belt, and a former for shaping the belt to the work and attached to the said work support.

880,966. CONSUMING SMOKE IN BOILER-FURNACES AND THE LIKE. HENRY BROAD, London, England, assignor to Herbert Bennett, London, England. Filed Nov. 9, 1906. Serial No. 342,676.

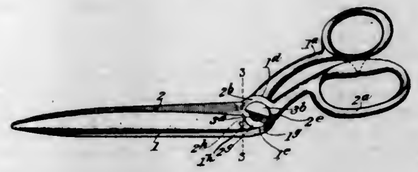


1. The combination with a furnace having the bridge wall thereof provided with an air discharge passage curving upwardly and forwardly, said passage increasing in width and decreasing in its vertical diameter toward the top and front of the bridge wall, and terminating in a horizontally disposed discharge slit, adapted to deliver a wide sheet of air forwardly and upwardly, an air pipe extending from the front of the furnace, rearwardly beneath the grate and having at its rear end an upwardly curved portion communicating with and forming a continuation of the air passage in said box, and means for causing a current of air to pass through said pipe from the front of the furnace to said discharge passage in said box, substantially as described.

2. The combination with a furnace, of a steam and air passage extending from the front to the rear of the furnace beneath the grate, thence upward in a curving direction, through the fire bridge and discharging into the furnace, said passage being provided at its lower rear portion with an offset and a door for closing the same, for collecting and removing dust and like matter, substantially as described.

3. The combination with a furnace, of a steam and air passage extending from the front to the rear of the furnace beneath the grate, thence upward in a curving direction, through the fire bridge and discharging into the furnace, said passage being provided at its lower rear portion with an offset and a door for giving access thereto, said offset and door forming a substantially triangular chamber, the opening to said steam and air passage being near the bottom at one side thereof, whereby dust and like matter collected in said triangular chamber is prevented from escaping therefrom, substantially as described.

880,967. SHEARS. PETER BROADBOOKS, Batavia, N. Y. Filed June 8, 1907. Serial No. 377,880.



1. Shears comprising a pair of pivotally connected complemental members each of which is formed with a blade and handle, the blade of one of the complemental members being offset from its handle and the blade of the opposite complemental member being pivoted between the blade and handle of the first member and provided with a notch designed to receive the forward edge of said offset.

2. Shears comprising a pair of pivotally connected complemental members each of which is formed with a blade and handle, the blade of one of the complemental members being connected to its respective handle by an offset while the blade of the opposite complemental member is provided with a notch designed to engage one end of said offset, the handle of the second mentioned complemental member being formed with a shoulder coöperating with the other end of the offset to limit the pivotal movement of the blades.

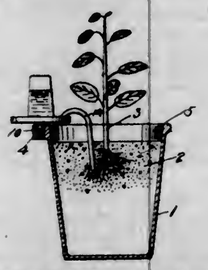
3. In a pair of shears, the combination of a pair of complemental members each comprising a blade, and a pin pivotally connecting the complemental members, said pin being formed with a projection for guiding the material being operated upon.

4. In a pair of shears, the combination of a pair of complemental members each comprising a blade and a handle, said handles being extended laterally from the blades, and a pin pivotally connecting the complemental members, said pin being formed with a projection for guiding the severed portion of the material being operated upon away from the handles.

5. A shears comprising a pair of pivotally connected complemental members, one member having its blade offset from its handle, and the other member having a notch near its pivot adapted to receive the forward edge of the offset of the other member, thereby enabling the blades to close to a greater extent and prevent their lateral separation.

[Claim 6 not printed in the Gazette.]

880,968. IRRIGATING DEVICE. JOHN W. BUNKER, Providence, R. I., assignor to Providence Plant Irrigator Company, a Corporation of Maine. Filed July 10, 1907. Serial No. 383,127.



1. In an irrigating device, a shallow pan or vessel, an open mouthed jar adapted to be filled with water and inverted in said pan, means for providing a space between the lower edge of the jar and the bottom of the pan whereby the contents may flow from said jar to the pan as fast as drawn from the latter, and means for feeding the water from said pan to a plant in predetermined quantities.

2. In an irrigating device, a shallow pan or vessel, an open mouthed jar adapted to be filled with water and inverted in said pan, means for providing a space between the lower edge of the jar and the bottom of the pan whereby the contents may flow from the jar to the pan as fast as drawn from the latter, and a wick for feeding the water from said pan to a plant.

3. In an irrigating device, a shallow pan or vessel, an open mouthed jar adapted to be filled with water and inverted in said pan, ribs on said pan on which the jar sits for providing a space between the lower edge of the jar and the bottom of the pan whereby the contents may flow from the jar to the pan as fast as drawn from the latter, and a wick for feeding the water from said pan to a plant.

4. In an irrigating device, a vessel, a reservoir communicating with said vessel, a pot or receptacle in which a plant is set, means for supporting said vessel on said pot, the upper end of said reservoir being hermetically sealed whereby the pressure of air prevents the water from being drawn from the reservoir only as fast as the same is drawn from the vessel, and a wick for feeding the water from said vessel to the plant.

5. In an irrigating device, a vessel, a reservoir, means whereby the water will automatically flow from said reservoir to maintain a constant level in said vessel, a pot or receptacle in which the plant is set, means for supporting said vessel on said pot, and a wick contained within a rubber tube for feeding the water from said vessel to the plant by capillary attraction, substantially as described.

[Claims 6 to 11 not printed in the Gazette.]

880,969. DEVICE FOR SEALING FRUIT-CANS AND OTHER RECEPTACLES. ALICE M. BUTLER, Cleveland, Ohio. Filed May 6, 1907. Serial No. 372,131.

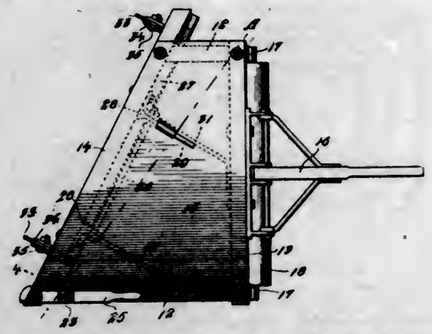


1. The combination with a jar and cap, of a sealing device for the upper edge of the jar, said sealing device comprising a disk inclosed between said cap and the upper edge of the jar and a coating thereon of nonfibrous material adapted to melt when the contents of the jar are heated and to cover the surface thereof and protect the same, from the air, substantially as described.

2. A sealing device for the purpose described, comprising a rigid disk of porous material and an enveloping coating of nonfibrous material thereon adapted to be melted by the heated contents of the jar and to cover said contents.

3. The combination, with a jar and a cap therefor, of a rigid disk, the edges of which are adapted to be inclosed between the said cap and the edges of the mouth of the jar, and to rest upon said jar mouth and a coating upon said disk of paraffin, adapted to melt and seal the jar to the cover and to cover the surface of the contents thereof, when said contents are heated.

880,970. ROAD-DRAG. CARL J. CARLSON, Wahoo, Nebr. Filed Dec. 11, 1907. Serial No. 406,025.



1. In a device of the character described, the combination with a scraper blade and means for supporting the same, of means for adjusting the inclination of said scraper blade, said parts being constructed and arranged to permit a further adjustment of said scraper blade independent of said adjusting means.

2. In a device of the character described, the combination with a scraper blade and means for supporting the same, of means for adjusting the inclination of said scraper blade with respect to a horizontal plane, said parts being constructed and arranged to permit a further adjustment of said scraper blade with respect to a horizontal plane independent of said adjusting means.

3. In a device of the character described, the combination with a scraper blade and means for supporting the same adapted to permit movement of said scraper blade within certain limits, of means for adjusting one of the limits of movement of said scraper blade.

4. In a device of the character described, the combination with a scraper blade and means for supporting the same adapted to permit movement of said scraper blade with respect to a horizontal plane within certain limits, of means for adjusting one of the limits of movement of said scraper blade.

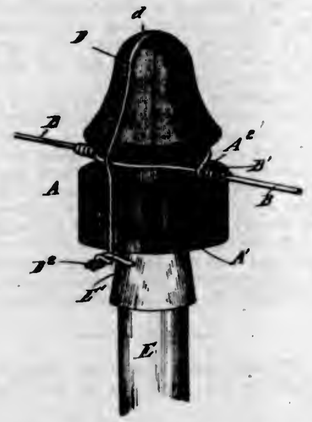
5. In a device of the character described, the combination with a frame and a scraper blade carried by said frame, of means for loosely supporting said frame at one end, and a single support for said frame at its opposite end.

[Claims 6 to 18 not printed in the Gazette.]

880,971. INSULATOR. GEORGE W. CARTER, Canyonville, Oreg. Filed May 8, 1907. Serial No. 372,469.

1. The combination of an insulator body having between its ends a seat for a line wire and provided at its upper end with a seat for a tie wire, a peg fitting at its upper end in the insulator body and provided below the insulator body with a seat for the tie wire, and a tie wire passing around the insulator body and over the line wire and held above and below the line wire in the seats of the insulator body and of the peg, substantially as set forth.

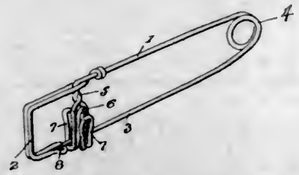
2. An insulator body having an annular groove for a line wire and its fastening and provided above the said groove with a seat for a tie wire, and a peg receiving the insulator body at its upper end and provided below said body with a transverse opening, and a tie wire passed through said transverse opening and around the insulator body and engaged with the upper seat thereof and having its ends united whereby to retain the insulator body in connection with the peg and the line wire in connection with the insulator body, substantially as set forth.



3. An insulator body, a peg receiving the same, a line wire in connection with the insulator body, and a tie wire passed around the insulator body and the line wire and connected with the peg, substantially as set forth.

4. An insulator body grooved in its upper end to form a seat for a tie wire, a peg receiving said body and having below the same a transverse opening for the tie wire and a tie wire engaged with the groove in the upper end of the insulator body and passed through the opening in the peg, substantially as set forth.

880,972. SAFETY-PIN. LEOPOLD J. CASTIAU, Strathcona, Alberta, Canada. Filed May 3, 1907. Serial No. 371,648.

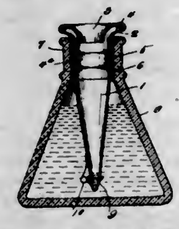


1. A safety pin comprising a back having an intermediate portion thereof crimped, a sheath carried by one end of the back, and a pin connected to the opposite end of the back and designed to engage the sheath, the before mentioned crimped portion of the back being returned upon itself to form a hook acting independently of the sheath to retain the pin in engagement therewith.

2. A safety pin comprising a back having an intermediate portion thereof crimped, a sheath carried by one end of the back, and a pin connected to the opposite end of the back and designed to engage the sheath, the before mentioned crimped portion of the back being bent inwardly to bifurcate the end thereof, the two members of the bifurcation being returned upon themselves to form oppositely facing hook members acting independently of the sheath to retain the pin in engagement therewith.

3. A safety pin comprising a back, a sheath at one end of the back, a pin connected to the opposite end of the back and designed to engage the sheath, an arm projecting laterally from the back at a point adjacent the sheath, and a pair of oppositely facing hook members carried by the arm, each of said hook members being adapted to have a spring engagement with the pin and to act independently of the sheath to retain the pin in engagement therewith.

880,973. ATTACHMENT FOR INK-BOTTLES AND INK-WELLS. WILLIAM L. CLARKE, Waynesburg, Pa. Filed May 6, 1907. Serial No. 371,993.

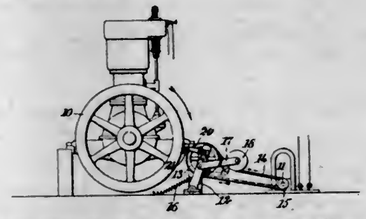


1. An attachment for ink wells and bottles comprising a funnel having an integral flared end terminating in an auxiliary funnel, the lower end of said funnel having a permanent passageway of a size sufficient to permit of the free passage therethrough of that portion of the pen point to be inked, a resilient sleeve for holding said funnel in a bottle or well, and a spring held valve-forming cap carried by and covering the lower end of said funnel.

2. The combination with an ink well or bottle, of a funnel detachably mounted therein and having an integral flared end terminating in an auxiliary funnel, the lower end of said funnel having a permanent passageway of a size sufficient to permit of the free passage therethrough of that portion of the pen point to be inked, a valve-forming cap for inclosing the lower end of said funnel and resilient means carried by said funnel and connecting with said valve or cap for holding said valve or cap in engagement with said funnel.

3. The combination with an ink well or bottle, a pen-inserting funnel therefor, and carrying a resiliently-supported inclosure for its lower end, said funnel having an annular depressed portion, of resilient means interposed between the neck of the bottle and said funnel and extending into said depressed portion for positioning the funnel within the bottle, said funnel being substantially free from contact with the neck of the bottle throughout its length.

880,974. OPERATING MECHANISM FOR MAGNETOS. ALBERT N. CLASSON, Rutland township, Lasalle county, Ill. Original application filed Apr. 20, 1906, Serial No. 312,800. Divided and this application filed Oct. 7, 1907. Serial No. 396,220.



1. The combination of an internal combustion engine, an ignition system therefor including a magneto, gearing for driving said magneto, and an intermediate gear member capable of being set in action as a part of said gearing to continue the normal operation of the magneto upon the reversal of the engine.

2. The combination of a rotatable member, a magneto, gearing for rotating said magneto from said member, and an intermediate gear member movable into position to form a part of said gearing and automatically movable out of operation upon a change in the direction of rotation of the member.

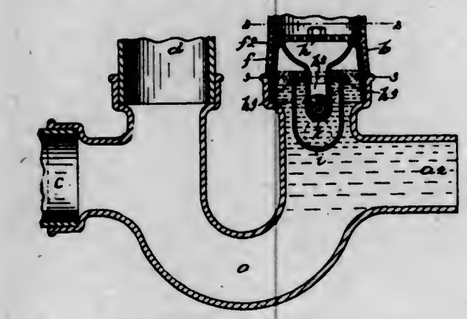
3. The combination of a rotatable member, a magneto, and means for driving the magneto from the member, said means including a friction member adapted to engage with said member for driving the magneto when the member rotates in one direction and a spacing roller adapted for insertion between said members to transmit motion when the member rotates in the opposite direction.

4. The combination of an internal combustion engine, a magneto, and means for driving the magneto from the engine, said means comprising a friction pulley normally operated by frictional engagement with a rotating part of the engine, and a spacing roller adapted for insertion between said pulley and said rotating part for transmitting motion when the engine is rotated in the opposite direction.

5. The combination of an internal combustion engine, a magneto, and means for driving the magneto from the engine, said means comprising a pivoted arm, a pulley mounted thereon, a belt frictionally engaging with a rotating part of the engine and with a rotating part of said magneto, a second arm pivoted to the first-mentioned arm, and a spacing roller carried by said last-mentioned arm and movable into a position in engagement with said belt and said rotating part of the engine.

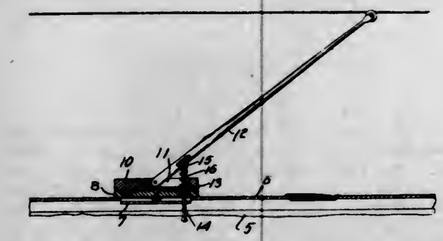
[Claim 6 not printed in the Gazette.]

880,975. WATER TRAP AND SEAL. EDWARD A. CONRAD and FRANK M. CONRAD, Elizabeth, N. J. Filed Dec. 31, 1906. Serial No. 350,297.



In a trap, a collar secured in the drain pipe flange and in said drain pipe, a passage through said collar, a cup detachably mounted upon said passage and a float in said cup, normally above the level of water in said trap and preventing communication between said trap and said drain pipe.

880,976. TROLLEY MECHANISM. WILLIAM J. CRAIG, Pine Bluff, Ark. Filed Sept. 6, 1907. Serial No. 391,688.

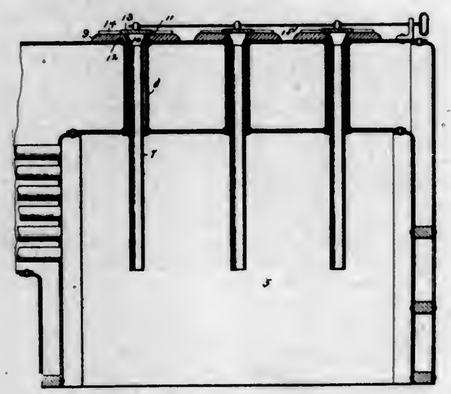


1. The combination with a car having an apertured roof, of a plate secured to the car roof directly above the aperture therein, and provided with an arcuate slot; a rotating member mounted upon said plate and provided with an opening adapted to register with said slot; a pole having its lower end attached to said rotating member; and an operating rod pivoted at its upper end to said pole and extending through said opening and slot into the interior of the car.

2. The combination, with a car having an apertured roof, of a plate secured to the car roof directly above the aperture therein, and provided with a C-shaped slot; a rotating member mounted on said plate, and provided with an opening adapted to register with said slot; a pole having its lower end attached to said rotating member; and an operating rod pivoted at its upper end to said pole and extending through the said opening and slot into the interior of the car.

3. The combination, with a car having an apertured roof, of a plate secured to the car roof directly above the aperture therein, and provided with an arcuate slot; a rotating member mounted upon said plate and provided with an opening adapted to register with said slot; a pole having its lower end pivotally secured to said rotating member; an operating rod having a bifurcated upper end pivoted directly to the pole, said rod extending through said slot and opening into the interior of the car; and a spring embracing said rod and bearing at opposite ends against the bifurcated rod end and the rotating plate, to normally maintain the pole in elevated position.

880,977. STEAM-BOILER FURNACE. WILLIAM P. DARLING, Meadville, Mo. Filed Apr. 22, 1907. Serial No. 369,534.



1. The combination with the fire-box and the crown and top sheets of a boiler, of flues mounted in the crown and top sheets, and closed at their outer ends, and air-feeding pipes entering the fire-box through said flues, and spaced from the inside thereof.

2. The combination with the fire-box and the crown and top sheets of a boiler, of flues mounted in the crown and top sheets, brackets fastened to the top sheet over the outer ends of the flues, air-feeding pipes mounted in said brackets and entering the fire-box through the flues, and means for excluding outside air from the flues.

3. The combination with the fire-box and the crown and top sheets of a boiler, of flues mounted in the crown and top sheets, recessed brackets on the top sheet over the outer ends of the flues, and air-feeding pipes having flaring ends seating in the recesses of the brackets and closing the outer ends of the flues to exclude outside air therefrom.

4. The combination with the fire-box and the crown and top sheets of a boiler, of flues mounted in the crown and top sheets, brackets fastened to the top sheet over the outer ends of the flues, air-feeding pipes mounted in said brackets and entering the fire-box through the flues, means for excluding air from the flues, and dampers for the air-pipes mounted on the brackets.

880,978. ELECTRODE ELEMENT FOR STORAGE BATTERIES. THOMAS A. EDISON, Llewellyn Park, Orange, N. J., assignor to Edison Storage Battery Company, West Orange, N. J., a Corporation of New Jersey. Filed Nov. 2, 1905. Serial No. 285,650.



1. An electrode element, comprising a perforated inclosing pocket non-deformable under normal working conditions, containing a highly compressed mass of active material and a net-work of conducting paths formed of overlapping flakes extending throughout the active mass and in contact with the pocket walls and with which the particles of active material are deformably compressed into intimate contact, substantially as set forth.

2. An electrode element, comprising a perforated inclosing pocket non-deformable under normal working conditions, containing a highly compressed mass of active material, formed with a net-work of minute circulating passages extending throughout the same and constituting a substantially predetermined porosity, and a net-work of conducting paths formed of overlapping flakes extending throughout the active mass and with which the particles are deformably compressed into intimate contact, substantially as set forth.

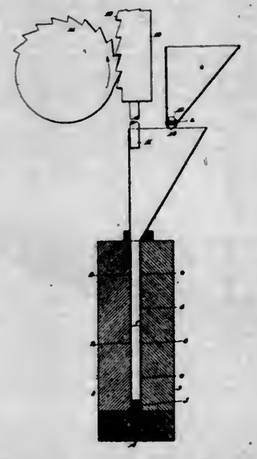
3. An electrode element, comprising a perforated inclosing pocket non-deformable under normal working conditions, containing a highly compressed mass of active material therein of such density as to prevent relative shifting of the particles under the effect of disturbing influences, and a net-work of conducting paths formed of overlapping flakes and extending throughout the mass and with which the active particles are in intimate contact, substantially as set forth.

4. An electrode element, comprising a perforated inclosing pocket non-deformable under normal working conditions, containing a highly compressed mass of nickel hydroxid, and a net-work of conducting paths formed of overlapping flakes extending throughout the active mass and in contact with the pocket walls and with which the active particles are deformably compressed in intimate contact, substantially as set forth.

5. An electrode element, comprising a perforated inclosing pocket non-deformable under normal working conditions, containing a highly compressed mass of nickel hydroxid, formed with a net-work of minute circulating passages extending throughout the same, and constituting a substantially predetermined porosity, and a net-work of conducting paths formed of overlapping flakes extending throughout the active mass and with which the particles are deformably compressed into intimate contact, substantially as and for the purposes set forth.

[Claims 6 to 9 not printed in the Gazette.]

880,979. METHOD OF MAKING STORAGE-BATTERY ELECTRODES. THOMAS A. EDISON, Llewellyn Park, Orange, N. J., assignor to Edison Storage Battery Company, West Orange, N. J., a Corporation of New Jersey. Filed Nov. 2, 1905. Serial No. 285,651.



1. The method of making electrode elements which consists in introducing a mixture of particles of active material and flake-like conducting material within non-deformable inclosing pockets, and in applying a pressure to such material sufficient to crush or deform the active particles and cause them to substantially follow the contour of the conducting flakes, as and for the purposes set forth.

2. The method of making electrode elements, which consists in introducing within a non-deformable inclosing pocket in successive small increments, a mixture of particles of active material and flake-like conducting material, and in applying to each increment after its introduction sufficient pressure to deform or crush the active particles and cause them to substantially follow the contour of the conducting flakes, as and for the purposes set forth.

3. The method of making electrode elements, which includes adding a sticky binder to the active particles, so as to substantially coat the surfaces of the latter, in then adding to the sticky mass flake-like conducting material, whereby the conducting flakes will be caused to adhere to the active particles, in introducing the mixture so obtained within non-deformable inclosing pockets, and in applying to the mixture sufficient pressure to force the active particles through the films formed by the binder, displacing the latter into the minute interstices formed within the mass and spreading the active particles with respect to and upon the surfaces presented by the conducting flakes, as and for the purposes set forth.

4. The method of making electrode elements, which includes adding a sticky binder to the active particles, so as to substantially coat the surfaces of the latter, in then adding to the sticky mass flake-like conducting material, whereby the conducting flakes will be caused to adhere to the active particles, in introducing the mixture so obtained in successive small increments within non-deformable inclosing pockets, and in applying to each increment sufficient pressure to force the active particles through the films formed by the binder, displacing the latter into the minute interstices formed within the mass and spreading the active particles with respect to and upon the surfaces by the conducting flakes, as and for the purposes set forth.

5. The method of making electrode elements, which consists in adding a sticky binder to the active particles, so as to substantially coat the surfaces of the latter, in then adding to the stick mass flake-like conducting material, whereby the conducting flakes will be caused to adhere

to the active particles, in introducing the mixture so obtained within non-deformable incloding pockets, and in applying to the mixture sufficient pressure to force the active particles through the films formed by the binder, displacing the latter into the minute interstices formed within the mass, and spreading the active particles with respect to and upon the surfaces presented by the conducting flakes, and in finally removing the binder so as to thereby result in the formation within the mass of network of circulating channels, as and for the purpose set forth.

[Claims 6 to 8 not printed in the Gazette.]

880,980. TIGHTENER. JAMES M. EVANS, Chanute, Kans. Filed Oct. 29, 1907. Serial No. 399,645.



1. In a device of the class described, in combination, clamp members adapted to hold fence wire, means for securing said clamp members together, shackles removably mounted upon said clamp members near the ends thereof, said means for securing said clamp members together serving to limit the movement of said shackles, links secured together at one end and each attached to one of said shackles, a means for exerting a pull at the adjacent ends of said links.

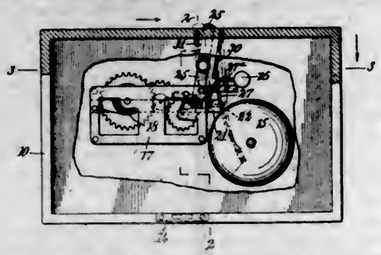
2. In a device of the class described, in combination, clamp members adapted to hold fence wire therebetween, means for securing said clamp members together, shackles loosely arranged at the ends of said clamp members and engaging said securing means, whereby said shackles are held in position upon said clamp members, links carried by said shackles, means for securing together the ends of said links remote from said shackles, and means for exerting a pull at the adjacent ends of said links.

3. In a device of the class described, in combination, elongated clamp members adapted to hold fence wire therebetween, bolts arranged transversely of said clamp members and serving to secure them together, shackles loosely mounted upon said clamp members near the ends and engaging said bolts, whereby said shackles are prevented from moving along said clamp members toward the middle thereof, links loosely secured to said shackles, a clevis connecting the ends of said links remote from the shackles, means for exerting a pull, and means for movably securing said pulling means and said clevis together.

880,981. BURGLAR-ALARM BOX. ADOLPH LO FARO, New York, N. Y. Filed June 12, 1907. Serial No. 378,490.

1. A device of the character described, a box, divided into an upper and a lower compartment, an alarm arranged in the lower compartment, means for holding the alarm in inaction, a projection, means for forcing the projection through the bottom of the box and releasing said alarm when the box is lifted, a lever for locking said projection in retracted position, whereby the alarm will not be released when the box is lifted, and means operable from the interior of the upper compartment of said box to prevent said lever from being engaged with said projection.

2. In a device of the character described, a box divided into an upper and a lower compartment, an alarm in the lower compartment, a projection, means for forcing the projection through the bottom of the box and releasing said alarm when the box is lifted, a spring arm for automatically engaging said projection and locking it against movement when the alarm is released, and means for disengaging said locking means operable from the interior of the upper compartment.

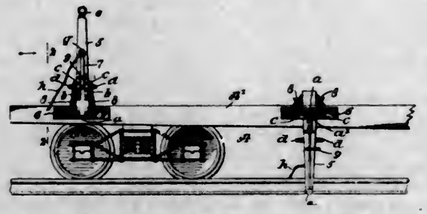


3. In a device of the character described, a box divided into an upper and a lower compartment, an alarm in the lower compartment, means for holding the alarm in inaction, a projection, means for forcing the projection through the bottom of the box and releasing said alarm when the box is lifted, a lever for engaging a notch in the projection and holding said projection within the box, whereby the alarm will not be released when the box is lifted, means for preventing the engagement of said lever with said notch operable from the interior of the upper compartment, means for automatically locking the projection against movement when the alarm is sounded, and means for disengaging said locking means operable from the interior of the upper compartment.

4. In a device of the character described, an alarm mechanism, a box in which said mechanism is located, a spring having a projection rigidly attached thereto adapted to pass through the bottom of the box, means for holding said projection within the box against the tension of the spring, and a finger carried by said spring to maintain the alarm in inaction when the projection is pressed inwardly.

5. In a device of the character described, a box, an alarm mechanism within the box, a spring having a projection rigidly attached thereto adapted to pass through an opening in the bottom of the box, means for holding said projection within the box against the tension of the spring, a finger carried by said spring for maintaining the alarm in inaction when the projection is pressed inwardly, and a spring-arm for automatically locking the projection against movement when it is forced outwardly.

880,982. CAR-STAKE. JOHN FELKEY, Bemidji, Minn. Filed Nov. 1, 1907. Serial No. 400,147.

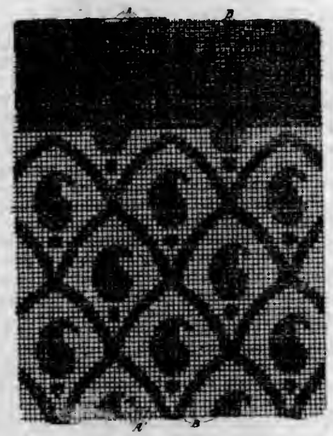


1. A car stake, comprising an elongated metal body, a bracket plate hinged upon the normally lower end of said body, chains extended from the car, and a lever pivoted on the stake and having lateral projections that receive the ends of the chains when the lever is pendent, and retain the chains engaged therewith when the lever is rocked upwardly.

2. A car stake, comprising an elongated metal body, a bracket plate hinged on the normally lower end of said body, chains extended from the car, and a lever having lateral extensions that are journaled in boxes or the like on the lever, said extensions having conical bent ends forming horns and the chains terminating in rings that will engage with the horns or may be removed therefrom when the lever is pendent, said rings being held in place on the horns when the lever is erected.

3. A car stake, comprising an elongated metal body, a bracket plate whereon the lower end of the body is hinged, chains having rings on their outer ends and extended from the car body, a lever having integral extensions that terminate in horns bent in the same direction, boxes on the stake that receives journaled portions of said extensions, the rings on the chains engaging the horns when the lever is pendent and being retained thereon when the lever is rocked upward, and a keeper arm adapted for adjustment and contact with the outer side of the lever for its retention in an upright position.

880,983. PRODUCTION OF PATTERNS, DESIGNS, OR OTHER SIMILAR MARKINGS IN FABRICS. CHARLES W. FULTON, Paisley, Scotland. Filed Aug. 7, 1905. Serial No. 273,215.



1. The process of producing patterns in previously woven textile fabric embodying fibers of different chemical characteristics which consists in chemically destroying part only of the fibers of one character constituting the fabric and only in portions of the fabric bounded by the design to be produced; substantially as described.

2. The process of producing patterns in previously woven fabric which consists in applying a chemical fiber destroying agent to portions of the fabric bounded by the design to be produced, and destroying part only of the fiber in such portions.

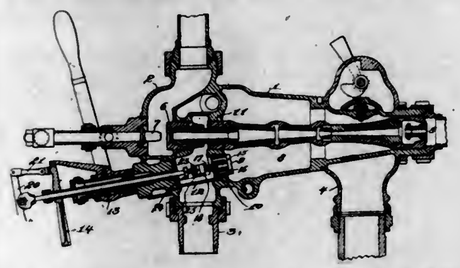
3. The process of producing patterns in previously woven fabric composed of fibers having different chemical characteristics, which consists in applying a chemical fiber destroying agent to portions of the fabric bounded by the design to be produced and destroying that part only of the fibers constituting the fabric which are of a nature to be acted on by the destroying agent.

4. The process of producing patterns of open-work or gauze-like nature in previously woven textile fabrics which consists in chemically destroying part only of the fibers constituting the fabric and only in portions of the fabric bounded by the design to be produced and simultaneously altering in color the undestroyed fibers.

5. The process of producing patterns of open-work or gauze-like nature in textile fabrics, which consists in weaving the fabric with certain fibers arranged to accord with the pattern to be produced and then chemically destroying part only of the fibers constituting the fabric and only in portions of the fabric bounded by the design to be produced.

[Claims 6 to 8 not printed in the Gazette.]

880,984. INJECTOR. JAMES M. GAILEY, McKeesport, Pa. Filed June 28, 1907. Serial No. 381,357.



1. An injector having a main or water-controlling valve provided with a tubular stem, an auxiliary valve, a rod extending through said tubular stem and turnably connected with said inlet or auxiliary valve, a hand-operable member connected with said stem for turning the same, a hand-operable member connected with said rod for moving the same in an endwise direction to cause the operation of said auxiliary or inlet valve, and linkage means jointed to the two hand-operable members for causing them to turn together.

2. In an injector, a casing provided with an internal partition separating the same into chambers, a main or water-controlling valve in one of said chambers, an auxiliary or inlet valve in the other chamber, means for positively closing said auxiliary or inlet valve toward said partition, and means for moving the valve toward and from the partition indipendently of the closing means therefor.

3. In an injector, a casing having an internal partition dividing the same into two chambers, a main or water-controlling valve in one chamber, an auxiliary or inlet valve in the other chamber, a spring acting against said auxiliary or inlet valve to close the same toward said partition, means involving a hand-operable member for operating said auxiliary or inlet valve independently of said spring, said hand-operable member being accessible exteriorly of the casing, and means for operating the main or water-controlling valve.

4. In injector having a main or water-controlling valve provided with a tubular stem, an auxiliary or inlet valve, a spring for closing said auxiliary or inlet valve, a rod extending through said stem and having a hook provided with a bifurcation, the auxiliary valve having a stem straddled by said bifurcation and also having shoulders between which the bifurcation is located, and a lever connected with said rod for moving the same in an endwise direction to cause the hook to act on one of said shoulders to open the inlet or auxiliary valve.

5. An injector having a main or water-controlling valve provided with a rotary tubular stem, an auxiliary or inlet valve, an endwise movable rod extending through said stem and connected with said auxiliary valve for operating the same, a lever connected with said rod to move the same in an endwise direction, a lever fastened to said stem for turning the same, and a link jointed to the respective levers for causing them to turn together.

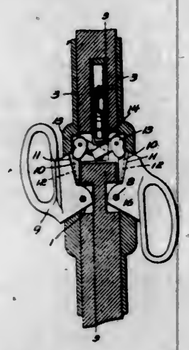
[Claims 6 and 7 not printed in the Gazette.]

880,985. DOOR-LOCK. OSCAR T. GRANN, Cadillac, Mich. Filed Apr. 3, 1907. Serial No. 366,150.

1. The combination of a door set provided with a follower for withdrawing the bolt, with a plurality of dogs arranged in coöperative relation with the follower, and handles mounted to return by gravity for separately actuating the dogs.

2. A door lock or set comprising a bolt and a follower for actuating the same, in combination with oppositely disposed pivotally mounted members arranged with portions in overlapping relation and movable into and out of engagement with the follower and returned to normal po-

sition by gravity, and hingedly mounted handles arranged to separately actuate the members and adapted to return by gravity.



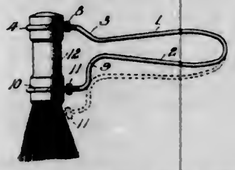
3. A door set or lock having a bolt-actuating member, in combination with a pair of pivotally mounted bell crank levers arranged with arms extending under the said member to engage the same and disposed to return by gravity to their normal positions, and hingedly mounted handles adapted to engage the other arms of the levers and disposed to return by gravity to their normal positions, one handle extending upwardly and the other downwardly from their pivots.

4. A door set or lock provided with a bolt-actuating member movable in a vertical direction, oppositely disposed bell crank levers arranged with corresponding arms to engage the member and adapted to return by gravity to their normal positions, and handles mounted to operate on the levers for throwing the latter into engagement with the member of the door set.

5. The combination of a pair of plates, hingedly mounted handles thereon arranged one to swing upwardly and the other downwardly, means for limiting the movement of the handles, members pivoted on the plate and normally held in engagement with the handles, and a device actuated by the members.

[Claim 6 not printed in the Gazette.]

880,986. BRUSH-HANDLE. JOHN H. GREENE, High Point, N. C. Filed Mar. 5, 1907. Serial No. 360,686.

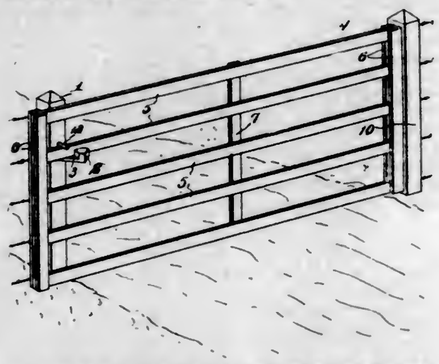


1. A brush handle comprising spaced members, a clamping ring carried by each member, and a clamping nut cooperating with each of said rings whereby they may be adjusted to engage a brush handle, said members being independently separable to permit movement of the clamping rings longitudinally of the brush.

2. A brush handle comprising spaced arms, a clamping ring carried by each of said arms, means coöperating with said rings to insure their clamping coöperation with an article, one of said arms being adapted for independent movement relative to the other to space the ring carried by said arm at varying distances with respect to the ring carried by the other arm.

3. A brush handle constructed of a single length of wire bent into loop form, the terminals of the wire being formed to provide clamping rings, the wire ends being reduced in sectional area and fitting in recesses formed in the main length of the wire, and means for securing said wire ends in said recesses.

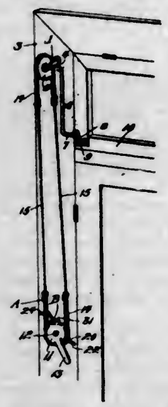
880,987. GATE. SAMUEL B. HACKETT, Ray, Ind. Filed Dec. 12, 1907. Serial No. 406,124.



1. In a gate of the character described, a gate post, a gate supporting pin secured in said post, said pin having formed therein angularly disposed intersecting guide notches, a gate having a series of longitudinally disposed parallel slats or rails, one of which is adapted to be engaged with the notches in said supporting pin whereby the gate is slidably and pivotally supported and guided on said pin, a gate retaining pin arranged in said post in position to hold the gate in the guide groove of said supporting pin when the gate is closed, but which will permit the removal of the gate from the supporting pin when in an open position, a latch post, and means to engage the free ends of the gate with said post, substantially as described.

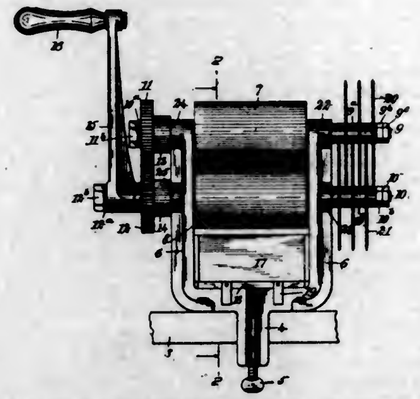
2. In a gate of the character described, a gate post, a gate supporting pin secured in said post, said pin having formed therein angularly disposed intersecting guide notches, a gate having a series of longitudinally disposed parallel slats or rails, one of which is adapted to be engaged with the notches in said supporting pin whereby the gate is slidably and pivotally supported and guided on said pin, a gate retaining pin arranged in said post in position to hold the gate in the guide groove of said supporting pin when the gate is closed, but which will permit the removal of the gate from the supporting pin when in an open position, a latch post having formed therein a series of locking recesses, and latch lugs formed by the projecting ends of the rails of the gate and adapted to engage said locking recesses when the gate is in a closed position, substantially as described.

880,988. TRANSOM-LIFTER. CLYDE C. HALL, Bellaire, Ohio. Filed May 3, 1907. Serial No. 371,600.



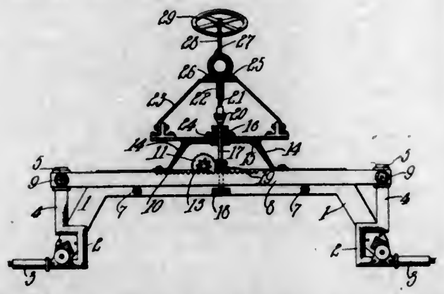
In a device of the class described, a pair of sprocket pulleys, a transom, means for connecting the latter with one of the pulleys, an endless flexible element connecting the two pulleys, a casing or housing for the pulleys and the flexible element, a spring member coiled and supported adjacent to the rear side of one of the pulleys and having arms extending therefrom, means for securing one of said arms in a fixed position, a shoe formed upon the other arm, said shoe engaging the flexible element and forcing it into engagement with the wall of the housing, and a terminal finger upon the shoe carrying arm extending through an aperture in the housing.

880,989. CANE CUTTER AND CRUSHER. CHARLES W. HARRIS, Hawkinsville, Ga. Filed Aug. 15, 1907. Serial No. 388,592.



In a device of the character described, the combination of a substantially U-shaped frame, a catch pan detachably mounted within the base of said frame, a pair of shafts extending directly through said frame and projecting a little distance beyond the same, gears mounted upon said shafts and meshing together so as to render the rotation of said shafts positive relatively to each other, rolls mounted rigidly upon the respective shafts extending practically from one side of said frame to the other, knives mounted upon portions of said shafts extending beyond said frame, said knives being staggered, and a handle connected with one of said shafts for the purpose of turning the same.

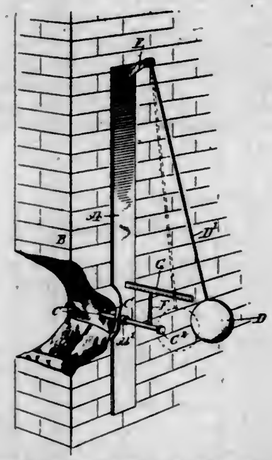
880,990. AXLE. EDDA G. HARTLE, Columbus, Ohio. Filed July 24, 1907. Serial No. 385,384.



1. An axle, spindles pivoted thereto, sleeves slidably mounted upon the spindles, binate bars receiving said sleeves between them and being pivoted thereto and means for shifting said bars.

2. An axle, spindles pivoted thereto, means for swinging the spindles simultaneously, a fifth wheel mounted upon the axle and having a central tubular bearing, a longitudinally extensible shaft journaled in said bearing and forming a portion of the spindle swinging means and a superstructure mounted upon the fifth wheel and having a bearing plate journaled upon the exterior of the tubular bearing thereof.

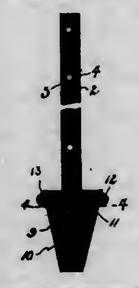
880,991. TESTING APPARATUS. JORGE M. VON HASSEL, Lima, Peru. Filed July 18, 1907. Serial No. 384,400.



1. An apparatus for testing the strength of materials, comprising a frame, a penetrating pointed tool mounted to slide on the said frame and provided with a pointer, a gage held on the frame and on which indicates the said pointer, and a driving device for imparting a sliding motion to the said pointed tool.

2. An apparatus for testing the strength of materials, comprising a frame, a penetrating pointed tool mounted to slide on the said frame and provided with a pointer, a gage held on the frame and on which indicates the said pointer, and a weight having an arm fulcrumed on the said frame, the weight being adapted to swing and strike the head of the said pointed tool.

880,992. FENCE-POST. JASPER N. HAYES, Dallas City, Pa. Filed Aug. 17, 1907. Serial No. 389,016.



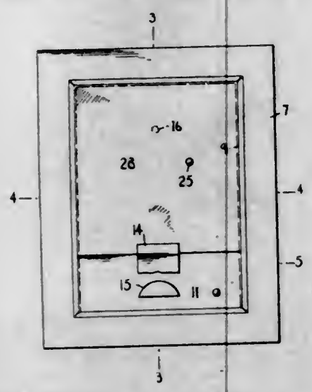
1. A fence post comprising a tubular post member having diametrically disposed apertures, a base fitted on the lower end of the post member and having diametrically disposed apertures adapted to register with those of the latter, a ring encircling the base, a rod passing through the member and base and projecting at both ends beyond the latter and having its ends bent over the ring to prevent movement of the latter, and a filling of plastic material for holding the member rigid in the base.

2. A post comprising a post member, an inverted frustoconical base into which the member extends, a filling of concrete for holding the member in the base, a ring en-

circling the base adjacent its upper end and smaller than the said upper end, and means attached to the base for preventing the ring from slipping downwardly.

3. A post comprising a post member, a frusto-conical hollow base into which the member extends, a ring of less diameter than the larger end of the base and encircling the latter, a rod passing through the base and member and having its ends bent over the ring to prevent movement of the latter toward the smaller end of the base, and a filling of concrete in the base for holding the post member in upright position.

880,993. PUZZLE. ERNEST G. HODGSON, Middletown, Conn., assignor of one-half to William Dean, Middletown, Conn. Filed Apr. 13, 1907. Serial No. 368,022.



1. A puzzle comprising, in combination, a receptacle; a partition disposed within said receptacle and bent transversely between its ends to form upper and lower horizontal floors arranged one in advance of the other and a vertical wall connecting the adjacent ends of said floors, said wall being provided with a central opening, and said upper floor having an opening formed therethrough adjacent its outer end; a transverse, depending partition secured to the under face of said upper floor; a chamber located beneath said upper floor upon one side of said partition; a runway located beneath said upper floor upon the other side of said partition and communicating at opposite ends with said openings, said runway including an extension communicating with said chamber; a plurality of spherical bodies adapted to pass through said openings and along said runway, and to be lodged in said chamber.

2. A puzzle comprising, in combination, a receptacle; a partition disposed within said receptacle and bent transversely between its ends to form upper and lower horizontal floors arranged one in advance of the other and a vertical wall connecting the adjacent ends of said floors, said wall being provided with a central opening, and said upper floor having an opening formed therethrough adjacent its outer end; a transverse, depending partition secured to the under face of said upper floor; a chamber located beneath said upper floor upon one side of said partition; a runway located beneath said upper floor upon the other side of said partition and communicating at opposite ends with said openings, said runway including an extension communicating with said chamber; a plurality of spherical bodies adapted to pass through said openings and along said runway, and to be lodged in said chamber; and a bridge connecting said floors, to permit said bodies to pass from one floor to the other.

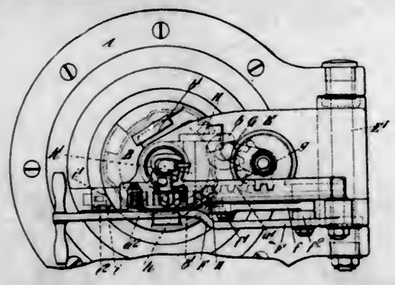
3. A puzzle comprising, in combination, a receptacle; a partition disposed within said receptacle and bent transversely between its ends to form upper and lower horizontal floors arranged one in advance of the other and a vertical wall connecting the adjacent ends of said floors, said walls being provided with a central opening, and said upper floor having an opening formed therethrough adjacent its outer end; a transverse, depending partition secured to the under face of said upper floor; a chamber located beneath said upper floor upon one side of said partition; a runway located beneath said upper floor upon the other side of said partition and communicating at opposite ends with said openings, said runway including an extension communicating with said chamber; a plurality of spherical bodies adapted to pass through said openings and along said runway, and to be lodged in said chamber; and means carried by said vertical wall and adapted to extend across the opening therein, to prevent said bodies from passing through said opening into said runway.

4. A puzzle comprising, in combination, a receptacle; a partition disposed within said receptacle and bent transversely between its ends to form upper and lower horizontal floors arranged one in advance of the other and a vertical wall connecting the adjacent ends of said floors, said wall being provided with a central opening, and said upper floor having an opening formed therethrough adjacent its outer end; a transverse, depending partition secured to the under face of said upper floor; a chamber located beneath said upper floor upon one side of said partition; a runway located beneath said upper floor upon the other side of said partition and communicating at opposite ends with said openings, said runway including an extension communicating with said chamber; a plurality of spherical bodies adapted to pass through said openings and along said runway, and to be lodged in said chamber; a bridge connecting said floors, to permit said bodies to pass from one floor to the other; and means carried by said lower floor, for preventing said bodies from becoming lodged beneath said bridge.

5. A puzzle comprising, in combination, a receptacle provided with upper and lower horizontal floors arranged one in advance of the other, said upper floor having an inlet opening formed therethrough adjacent its outer edge; a transversely extending vertical wall connecting the adjacent edges of said floors, said wall being provided with an outlet opening; a runway located beneath said upper floor and communicating with said openings; a plurality of spherical bodies adapted to travel through said openings and runway; and a bridge connecting said floors, to permit said bodies to travel from one floor to the other.

[Claim 6 not printed in the Gazette.]

880,994. BREECH MECHANISM OF ORDNANCE. CARL HOLMSTROM, London, England, assignor of one-half to Elias Middleton, Sheffield, England. Filed July 23, 1906. Serial No. 327,430.



1. In gun breech mechanism of the De Bange obturator type, the combination with the swinging carrier and the breech block movably mounted thereon, of means for imparting angular motion to said block, lever mechanism turning about a fulcrum situated immediately behind the face of the breech block for rectilinearly moving the said block in the carrier, means for swinging the carrier about its pivot, and means whereby these various movements take place in proper sequence by the continued movement of the member by which the force for working the mechanism is applied thereto.

2. In gun breech mechanism of the De Bange obturator type, the combination with the swinging carrier and the breech block movably mounted thereon, of means for imparting angular motion to said block, an arm or crank mounted on the carrier to move about a fulcrum situated immediately behind the face of the breech block in a plane transverse with respect to the rear face of the said block, a flange on said block with which the arm or crank engages to move the block in a rectilinear path, means for operating said arm or crank, means for swinging the carrier about its pivot, and means whereby these various movements take place in proper sequence by the continued movement of the member by which the force for working the mechanism is applied thereto.

3. In gun breech mechanism of the De Bange obturator type, the combination with the swinging carrier and the breech block movably mounted thereon, of means for imparting angular motion to said block, an arm or crank mounted on the carrier to move in a plane transverse with respect to the rear face of the block, a flange on said block with which the arm or crank engages to move the block in a rectilinear path, toothed gearing for actuating said arm or crank, means for swinging the carrier about its pivot, and means whereby these various movements take place in proper sequence by the continued movement of the member by which the force for working the mechanism is applied thereto.

4. In gun breech mechanism of the De Bange obturator type, the combination with the swinging carrier and the breech block movably mounted thereon, of a crank mounted on the carrier to move in a plane parallel with the rear face of the block and engaging with a radial slot of the latter to angularly displace the same, a pair of arms or cranks mounted on the carrier to move in a plane transverse with respect to the face of the block, flanges on the block with which the pair of arms or cranks engage to shift the block rectilinearly, means for actuating the aforesaid cranks, means for swinging the carrier about its pivot, and means whereby these various movements take place in proper sequence by the continued movement of the member by which the force for working the mechanism is applied thereto.

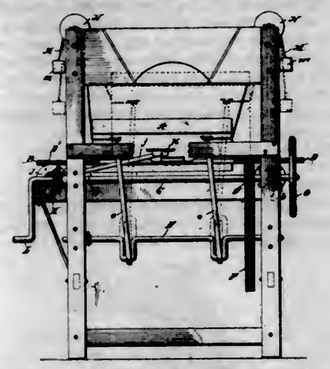
5. In gun breech mechanism of the De Bange obturator type, the combination with the swinging carrier and the breech block movably mounted thereon, of a crank mounted on the carrier to move in a plane parallel with the rear face of the block and engaging with a radial slot of the latter to angularly displace the same, a pair of arms or cranks mounted on the carrier to move in a plane transverse with respect to the face of the block, flanges on the block with which the pair of arms engage to shift the block rectilinearly, a sliding rack bar on the carrier for actuating the crank that engages with the radial slot on the block and the cranks or arms that engage with the flanges on the block, means for actuating said rack bar, and means whereby these various movements take place in proper sequence by the continued movement of the member by which the force for working the mechanism is applied thereto.

[Claim 6 not printed in the Gazette.]

880,995. DRY ORE-CONCENTRATOR. JOSEPH HUBERT, Reno, Nev. Filed Mar. 4, 1907. Serial No. 360,508.

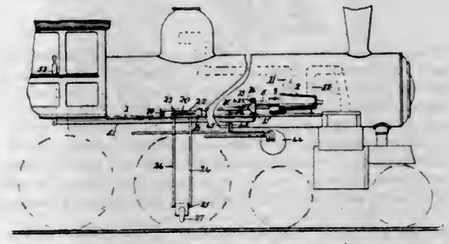
1. The combination with a concentrating table, of means to impart vertical and lateral motion thereto, comprising a drive-shaft having a pinion and a bevel gear thereon, a crank shaft having a gear meshing with the pinion and having pitmen working vertically and connected between the table and the cranks, a side shaft having a bevel gear meshing with said bevel gear, and a crank disk thereon, and a pitman connected between said disk and the table.

2. The combination with a concentrating table, of means for imparting vertical and lateral motion thereto, comprising a drive shaft having a pinion, a crank shaft having a gear meshing with the pinion and provided with pitmen working vertically and connecting the table and the cranks, a side shaft provided with a crank disk, a pitman



connecting the crank disk and the table, and a driving connection between the side shaft and the driving shaft.

880,996. RAILWAY SAFETY APPARATUS. RALPH H. HUNT, Chelsea, N. Y. Filed July 15, 1907. Serial No. 383,776.



1. The combination with a steam valve casing provided with inlet and outlet ports, of a valve mounted in the casing, a rod secured at one end to the valve, a lever having a locking engagement with the other end of the valve rod, mechanism adapted to release said lever from engagement with the valve rod, and means for re-tracting the valve in the casing when the valve rod is released.

2. The combination with a valve casing provided with inlet and outlet ports, of a valve mounted in the casing, a rod secured at one end to said valve, a pivoted lever having a locking engagement with the other end of said rod, a spring adapted to normally hold the end of said lever in engagement with the end of the valve rod, and means for operating the end of said lever against the tension of said spring to release the lever from engagement with the valve rod.

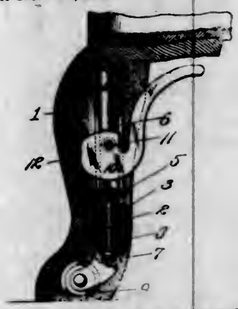
3. The combination with a valve casing provided with inlet and outlet ports, of a valve mounted in the casing, a rod secured at one end to said valve, a pivoted lever having a locking engagement with the other end of the valve rod, means for normally holding said lever in engagement with said rod, a shaft provided with rock arms adapted to engage one end of said lever, and a trip lever connected with and adapted to operate said rock arm.

4. The combination with a conical casing provided with inlet and outlet ports, of a round valve mounted in the casing and provided with a beveled edge, a rod secured at one end to said valve, a lever having a locking engagement with the other end of the said rod, a spring adapted to retract said rod within the casing, means for holding said rod in a projected position against the tension of said spring, and a trip lever and connecting mechanism adapted to release said valve rod so as to be operated by said spring.

5. The combination with a conical casing provided with inlet and outlet ports, of a round valve mounted in the casing and provided with a beveled edge, a valve rod secured at one end to said valve, a spring adapted to close said valve against the wall of the casing, mechanism for retracting the edge of said valve from the wall of the casing, means for holding the valve in its retracted position, a trip lever and mechanism connected therewith adapted to release said valve and enable it to be controlled by said spring.

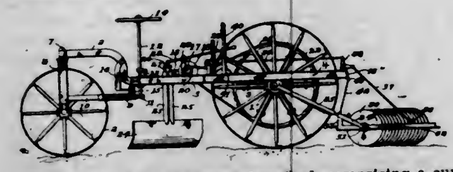
[Claims 6 to 9 not printed in the Gazette.]

880,997. COMBINED FURNITURE LEG AND CASTER. CHRISTOPHER HYMERS, St. Louis, Mo. Filed May 16, 1907. Serial No. 374,028.



The combination of a leg having a depending guide stem and a horizontally disposed bearing member formed with a vertical perforation beneath the depending guide stem, a slidable caster sleeve formed with a vertical slot and receiving the depending guide stem and extending downwardly through the vertical perforation, a pivot pin extending through the caster sleeve across the vertical slot, and a cam lever having a cam mounted on the pivot pin within the vertical slot beneath the depending guide pin.

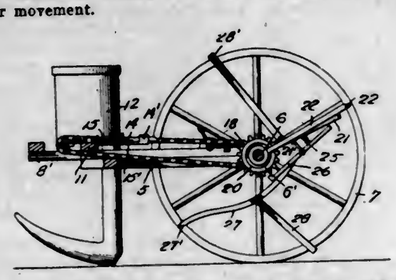
880,998. HARROW. WESLEY HYRE, Stroh, Ind. Filed Sept. 17, 1907. Serial No. 393,378.



A machine of the character described, comprising a supporting framework, traveling wheels upon which said framework is mounted, said framework embodying a rear cross bar, arms swinging on the outer ends of the axle for the rear traveling wheels and trailing behind the same, a transversely tapered harrow frame secured to the rear ends of said trailing arms, a shaft mounted in said frame, disks secured to said shaft, a bell crank fulcrumed on the rear cross bar of the main supporting framework, a hand lever having an operative connection with said bell crank and mounted on the framework, and a link connecting one arm of said lever with the harrow frame.

880,999. CORN-PLANTER. WILLIAM P. IBBITSON, Henry, S. D. Filed Oct. 25, 1906. Serial No. 340,563.

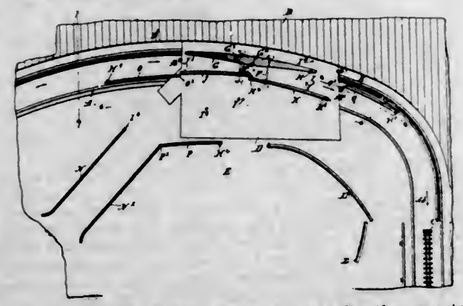
1. In a machine of the class described, the combination, with a frame and an axle revolubly mounted in the frame, of a collar revolubly mounted upon said axle; hoppers mounted in the frame; mechanism carried by the frame and connected with the hoppers for effecting a discharge therefrom; trip arms connected with the collar for rotation therewith, and arranged to successively engage the discharge mechanism to operate the latter at definite periods, said arms being shiftable with respect to the collar; and means for holding the arms at different points of their movement.



2. In a machine of the class described, the combination with a frame, of an axle revolubly mounted in the frame; means for driving the axle; hoppers mounted in the frame; mechanism carried by the frame and connected with the hoppers for effecting a discharge therefrom; a trip arm connected with the axle for rotation therewith, said trip arm being adapted to engage a portion of the discharge mechanism at definite periods to operate the latter, said arm being shiftable with respect to the axle; means for holding the arm at different points of its movement; and a marker connected with the arm and adapted for bodily rotation therewith.

3. In a machine of the class described, the combination with a frame, of an axle journaled in the frame; wheels mounted upon the axle; a rack collar rotatably mounted upon the axle and having oppositely extending flanges; an arm having a notch in which one of the flanges is engaged; an arm connected with said first-mentioned arm for movement toward and away from the latter and having a notch in which the other flange is engaged; detachable means for holding said arms against separation; a dog connected with the first mentioned arm, for movement into and out of engagement with the rack; means for holding the dog yieldably in engagement with the rack; a second arm connected with the dog and extending oppositely to the first named arm; markers carried by the arms; hoppers mounted on the frame; mechanism carried by the frame and connected with the latter for effecting a discharge therefrom; and an endwise movable member carried by the frame and operatively connected with said discharge mechanism, said member lying in the path of movement of said arms and arranged for engagement therewith at definite periods to operate said discharge mechanism.

881,000. SWITCH FOR PLEASURE-RAILWAYS. STEPHEN E. JACKMAN, New York, N. Y. Filed Oct. 3, 1907. Serial No. 395,666.



1. A pleasure railway having a track for the cars to run on, a platform between the ends of the said track for the cars to pass over from one end of the track to the other, and guiding means on the said platform for guiding the cars while traveling over the platform from one end of the track to the other end thereof, the said guiding means comprising a main guide rail pivoted on top of the platform and having its outer edge curved, the ends of said main guide rail terminating near the ends of the outer rail of the track, means for locking the main guide rail in position to guide the outer wheels of a car, auxiliary guide rails fulcrumed on the platform adjacent to the ends of the inner rail of the track, and means for locking the auxiliary guide rails in position to guide the inner wheels of a car.

2. A pleasure railway having a track for the cars to run on, a platform between the ends of the said track for the cars to pass over from one end of the track to the other and adjustable guiding means on the said platform for guiding a car while traveling over the said platform from one end of the track to the other end thereof, and for guiding a car from the terminal of the track to one side of the platform and for guiding a car from one side of the platform to the beginning end of the track.

3. A pleasure railway having a track for the cars to run on, a platform between the ends of the said track for the cars to pass over from one end of the track to the other, adjustable guiding means on the said platform for guiding a car while traveling over the said platform from one end of the track to the other end thereof, and for guiding a car from the terminal of the track to one side of the platform, and for guiding a car from one side of the platform to the beginning end of the track, and adjustable auxiliary means for assisting the said guiding means in running a car over the side of the platform.

4. A pleasure railway having a track for the cars to run on, a platform between the ends of the said track for the cars to pass over from one end of the track to the other, adjustable guiding means on the said platform for guiding the cars while traveling over the platform from one end of the track to the other end thereof, and for guiding a car from one end of the track out of the course and to one side of the platform, and auxiliary means for guiding a car on running the same on one side of the platform.

5. A pleasure railway having a track for the cars to run on, a platform between the ends of the said track for the cars to pass over from one end of the track to the other, adjustable guiding means on the said platform for guiding the cars while traveling over the platform from one end of the track to the other end thereof and for guiding the car from one side of the platform onto one end of the track, and auxiliary means for guiding a car while running the same on one side of the platform.

[Claims 6 to 9 not printed in the Gazette.]

881,001. TAMPER. HOMER B. JOHNSON, Atlanta, Ga. Filed May 17, 1907. Serial No. 374,255.



1. A tamper comprising a series of thin, parallel members spaced apart and secured together, the lower edge of each member constituting a tamping face, and means connected with said members for operating the same.

2. A tamper comprising a series of thin plates or disks spaced apart and secured together, the lower edge of each plate or disk constituting a tamping face, and means connected with the plates or disks for operating the same.

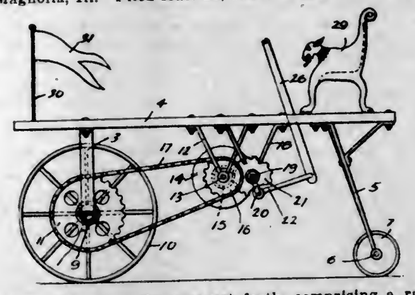
3. A tamper comprising a series of plates each of uniform thickness, rods passing therethrough, collars on the rods spacing said plates apart, and a handle connected with said rods.

4. A tamper comprising a series of plates each of uniform thickness, spacing devices between the plates, a rod passing through the plates and spacing devices, a handle, and means for connecting the handle with said rod.

5. A tamper comprising a series of plates, collars spacing the plates apart, said collars arranged in two series, a rod passing through each series of collars and the plates, a bail secured to the respective rods, and a handle secured to said bail.

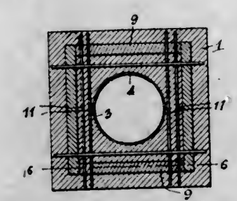
[Claim 6 not printed in the Gazette.]

881,002. AMUSEMENT DEVICE. PAUL T. JOHNSON, Magnolia, Ill. Filed Mar. 28, 1907. Serial No. 365,155.



A roundabout of the type set forth, comprising a radially extending bar pivoted at its inner end, a U-shaped frame fixed to the outer end of said bar, a platform connected with the side bars of said frame, the cross bar of said frame being detachable and constituting an axle, a main traction wheel provided on said axle, a sprocket wheel fixed to said main traction wheel, hangers depending from the rear portion of said platform, an axle mounted between said hangers, a second traction wheel carried on said last named axle, a drive shaft having a crank arm, an operating lever for rotating said drive shaft, and gearing between said drive shaft and said sprocket wheel.

881,003. ARTIFICIAL-STONE SEWER-CAP. EDWARD F. KENNELLY, Boston, Mass. Filed July 12, 1907. Serial No. 383,503.



1. As a new article of manufacture, an artificial stone sewer cap having a central opening therethrough provided with a metallic reinforcing band and adapted for the reception of a suitable cover plate and reinforcing elements embedded within the material of said cap and encircling said openings, and comprising a rectangular wooden frame, and a supplemental frame located therein and connected thereto for rigidly supporting said wooden frame, substantially as described.

2. As a new article of manufacture an artificial stone sewer cap having central reinforced openings for the reception of a suitable cover plate, having the recess formed

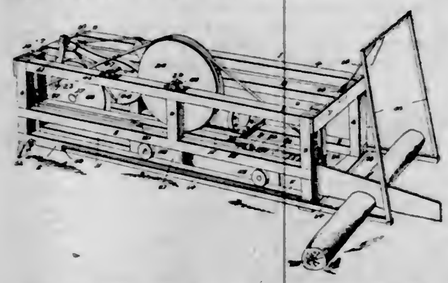
upon its under surface constituting the sewer inlet, and having reinforcing elements embedded in the material thereof about said openings and comprising a rectangular wooden frame, and a supplemental metallic rod frame associated therein and connected thereto, to rigidly support said wooden frame, substantially as described.

3. As a new article of manufacture, an artificial stone sewer cap having a central reinforced opening formed therethrough for the reception of a suitable cover plate, having a recess formed therein constituting a sewer inlet, and for reinforcing elements embedded therein about said opening comprising wooden beams having reduced interfitting ends to form a rectangular frame, and a supplemental metallic rod frame associated within and through said wooden frame to rigidly support the same in position, substantially as described.

4. As a new article of manufacture, an artificial stone sewer cap having a central reinforced opening for the reception of a suitable cover plate, having a recess formed in the under surface thereof constituting a sewer inlet, and having reinforcing elements embedded in the material thereof about said central opening comprising wooden beams having reduced interfitting ends to form a rectangular frame, said beams having transverse openings therethrough adjacent their reduced ends, and a plurality of metallic rods adapted to be associated through said openings to form, within said wooden frame, a supplemental metallic frame for rigidly supporting the same, substantially as described.

5. As a new article of manufacture an artificial stone sewer cap having a central reinforced opening formed therethrough for the reception of a suitable cover plate, having a recess formed in the under surface thereof constituting a sewer inlet, having a metallic strip arranged upon its forward edge above said recess, and extending partially upon the side edges thereof to externally reinforce the same, and reinforcing elements embedded within the material of said cap about the central opening thereof and comprising a rectangular wooden frame having a metallic rod frame associated within and through said wooden frame to rigidly support the same, substantially as described.

881,004. SAWMILL. DANIEL I. KEOUGH, Lewis Run, Pa. Filed Mar. 6, 1907. Serial No. 360,861.



1. A saw mill comprising a frame, a reciprocating saw engine and connection parts, carried by the frame, feet carried by the end of the frame opposite to that of the saw, bars pivotally connected to the lower end of the frame adjacent the feet and extending parallel with the frame and beyond the end carrying the saw, a frame carried by the ends of said beam, a pulley carried by the upper end of said frame, and a cable secured to the saw carrying frame and passing over the pulley whereby said frame is raised and lowered.

2. A saw mill, comprising a frame, a saw-carrying member horizontally reciprocating within the frame, a saw carried thereby, a drum mounted within said frame above the saw-carrying member, pulleys carried by the ends of the frame, a cable wound upon the drum and having its ends passing over the pulleys and secured to the saw-carrying member, means for oscillating said drum whereby the saw is reciprocated, feet carried by the opposite end of the frame from the saw, and means for rocking the said frame on the feet.

3. A saw mill, comprising a frame, a saw-carrying member horizontally reciprocating in the frame, a saw carried by said members, a drum mounted within said frame, pulleys carried by the ends of the frame, a cable wound upon the drum and having its ends passing over the pulleys and secured to the ends of the saw-carrying member, a smaller drum mounted upon the same shaft as the before mentioned drum, an arm intermediately pivotally mounted upon the shaft adjacent the drums, a segmental member carried by the end of said arm, a cable having its ends secured to the arm and passing over the segmental member and crossed and wound upon the smaller drum, an engine on said frame and means connecting the end of said arm and the engine whereby the same is oscillated, and a reciprocating movement imparted to the saw.

4. A saw mill, comprising a frame, a reciprocating saw carried by the frame, and projecting from one end of the frame, means carried by the frame for reciprocating the saw, a cable carried by the drum and having its ends passing over the pulleys and secured to the ends of the saw-carrying member, a smaller drum mounted upon the same shaft as the before mentioned drum, an arm intermediately pivoted upon the frame adjacent the drums, a segmental member carried by the end of said arm, a cable having its ends secured to the arm and passing over the segmental member and crossed and wound upon the smaller drum, a pitman connected to the outer end of said arm, a disk below said arm and having a wrist-pin connected to the pitman, a drum carried by the shaft-carrying disk, an engine carried by the frame adjacent the drum, a belt driven by the engine and passing over the drum, a gravity belt tightener at the end of the frame opposite the saw, bars pivotally connected to the lower end of the frame adjacent the feet and extending parallel with the frame, and beyond the end carrying the saw, a frame carried by the ends of said beam, a pulley carried by the upper end of said frame, and a cable secured to the saw-carrying frame and passing over the pulley whereby said frame is raised and lowered.

5. A saw mill, comprising a frame, a saw-carrying member horizontally reciprocating in the frame by means of horizontally pivoted rollers traveling in and between rails, a saw carried by the said member, a drum mounted within said frame, pulleys carried by the ends of the frame, a cable wound upon the drum and passing over the pulleys and attached to said saw frame, a belt for operating said drum, a belt tightener engaging said belt, feet carried by one end of the frame, a saw carrying frame pivotally attached to the frame adjacent the feet and extending along the sides and beyond the end of the frame carrying the saw, and means carried by the frame for raising and lowering the saw-carrying frame.

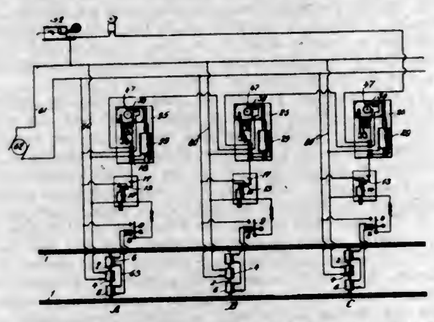
[Claims 6 to 9 not printed in the Gazette.]

881,005. SIGNALING SYSTEM. EDWARD E. KLEINSCHMIDT, New York, N. Y., assignor to George M. Seeley, New York, N. Y. Filed Dec. 29, 1905. Serial No. 293,856.

1. A signaling system comprising a plurality of signal stations, a home signal, a circuit including all of said stations and said signal, a solenoid at each signal station included in said circuit, a track instrument at each station in which an induced current is set up by the passage of a car or train over said instrument, and means controlled by the induced current to energize and deënergize a corresponding station solenoid to thereby operate the home signal.

2. In a system of the character described, a signal, a signaling station comprising a track instrument wherein an induced current is set up by the passage of a car or train over said instrument, a call box, and means controlled by the induced current from said track instrument to set in operation said call box to thereby actuate the signal.

3. In a system of the character described, a signal, a signaling station comprising a track instrument wherein an induced current is set up by the passage of a car or train over said instrument, a call box, and means controlled by the induced current from said track instrument to close the circuit through said call box to set the same in operation and to thereby operate said signal.

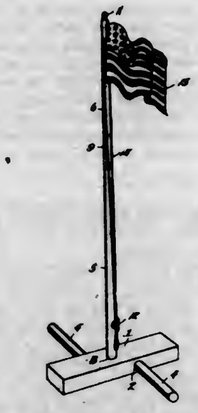


4. A signaling system comprising a plurality of signal stations, a home signal, a circuit including all of said stations and said signal, a normally deënergized solenoid at each signal station included in said circuit, a track instrument at each station in which an induced current is set up by the passage of a car or train over said instrument, means controlled by the induced current to energize a corresponding station solenoid, and mechanism connected to the core of said solenoid adapted to operate the home signal when the solenoid is energized.

5. A signaling system comprising a plurality of signal stations, a home signal, a circuit including all of said stations and said signal, a normally deënergized solenoid at each signal station included in said circuit, a track instrument at each station in which an induced current is set up by the passage of a car or train over said instrument, means controlled by the induced current to energize a corresponding station solenoid, a circuit make and break device, and mechanism controlled by said solenoid when energized to actuate said device to thereby operate the home signal.

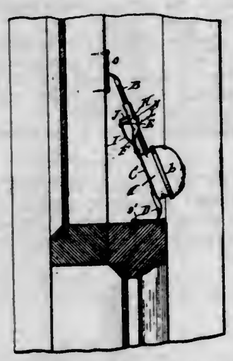
[Claims 6 to 15 not printed in the Gazette.]

881,006. TOY FLAGSTAFF. FRANK W. KLINE, North Germantown, N. Y. Filed May 9, 1907. Serial No. 372,673.



A toy flag staff comprising an oblong rectangular base block provided in its upper face with a central socket and in its sides on opposite sides of its transverse center with sockets, supporting pins having tenons to engage said sockets, the lower staff section adapted to be fitted at its lower end in the central receiving socket and provided at its upper end with a ferrule, an upper staff section provided with a reduced lower end to enter the ferrule and carrying at its upper end a guide, a cleat upon the lower section, a core extending through the guide, and a flag supported by the cord.

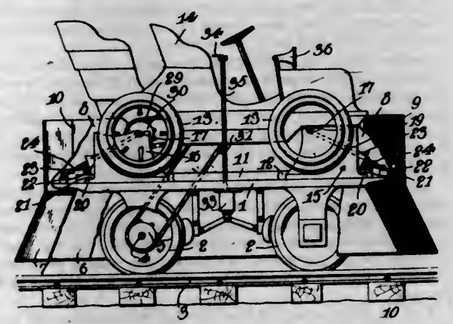
881,007. BURGLAR-ALARM. VALENTIN M. KLUGE, Syracuse, N. Y. Filed May 1, 1907. Serial No. 371,218.



1. The combination, with the bell and its casing, of the actuating plunger provided with a transverse notch, the supporting-plate formed with a sleeve embracing the plunger and provided with a transverse slot disposed at the rear of the aforesaid notch, and a spring plate attached at one end to the supporting-plate and formed at the opposite end with a tongue extending into the slot of the sleeve and embraced by the edges of said slot.

2. The combination, with the bell and its casing, of the actuating plunger provided with a transverse notch, the supporting-plate formed with a sleeve embracing the plunger and provided with a transverse slot at the rear of the aforesaid notch, a spring-plate attached at one end to the supporting-plate and formed at the opposite end with a tongue extending into the slot of the sleeve, and a handle attached to the spring-plate and provided with a head adapted to engage the sleeve and thereby limit the movement of the spring-plate as set forth.

881,008. TRUCK. SARGEANT P. KNUT, Washington, D. C. Filed Sept. 4, 1907. Serial No. 391,283.



1. The combination, with a motor car having tires, of a vehicle arranged to receive said car and provided with propelling means, and means independent of the motor car tires to gear the motor to the propelling means.

2. The combination, with a motor car, of a vehicle arranged to receive said car and provided with propelling

means, and means to gear the motor to the propelling means and to the car wheels alternatively.

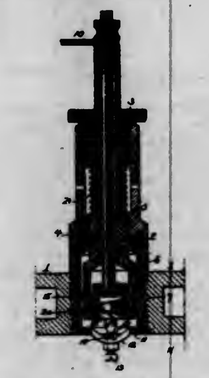
3. The combination, with a motor car, of a vehicle arranged to receive said car and provided with propelling means, means to gear the motor to the propelling means and to the car wheels alternatively, and means to prevent relative movement of the car on the vehicle.

4. The combination, with a motor car, of a vehicle arranged to receive said car and provided with propelling means, means to gear the motor to the propelling means and to the car wheels alternatively, and chains secured to the vehicle and to the car to prevent relative longitudinal movement of the same.

5. The combination, with a railway track, and a motor car having tires, of a truck arranged to receive said motor car and provided with wheels to run on said track, and means independent of the motor car tires to gear the motor to the wheels of the truck.

[Claims 6 to 34 not printed in the Gazette.]

881,009. MAKE-AND-BREAK IGNITER FOR EXPLOSIVE-ENGINES. ROBERT H. KOENIG, Camden, N. J., assignor, by direct and mesne assignments, to Nicholas A. Petry, Philadelphia, Pa. Filed Jan. 29, 1907. Serial No. 354,722.



1. The combination of the electrodes of a make-and-break igniter for explosive engines with a circuit-opener-and-closer actuated by variations of pressure in the cylinder and serving to control the circuit independently of the movement of the electrodes.

2. The combination of the electrodes of a make-and-break igniter for explosive engines operated by pressure in the cylinder to separate the electrodes and produce the spark, and a circuit-opener-and-closer likewise operated by variations of pressure in the cylinder.

3. The combination of the electrodes of a make-and-break igniter for explosive engines operated by pressure in the cylinder to separate the electrodes and produce the spark, and a circuit-opener-and-closer likewise operated by variations of pressure in the cylinder and constructed to close the circuit through the electrodes before the pressure in the cylinder acts to separate the same.

4. The combination of the cylinder of an explosive engine carrying one of the electrodes of a make-and-break igniter, a sliding plunger carrying the other electrode and acted upon in one direction by a spring and in the other direction by the pressure in the cylinder, and a pressure-actuated circuit-opener-and-closer likewise carried by said plunger.

5. The combination of the cylinder of an explosive engine carrying one of the electrodes of a make-and-break igniter, a sliding plunger carrying the other electrode, a conductor rod insulated from the plunger and a block movable in a chamber of the plunger and serving by variations of pressure upon it to make and break connection between the conductor rod and the plunger.

[Claims 6 to 8 not printed in the Gazette.]

881,010. PROCESS FOR PRODUCING ELECTRIC RESISTANCE BODIES. JOHANN KRANNICHFELDT, Cologne, Germany. Filed Nov. 1, 1907. Serial No. 400,162.

1. The described process for producing electric resistance bodies, which consists in mixing good and bad electric conductors, subjecting said mixture to an electric influence, while in a condition of mobility of particles to establish a definite position of the conducting particles, and then permanently fixing said condition, substantially as, and for the purpose, set forth.

2. The described process for producing electric resistance bodies, which consists in mixing good and bad electric conductors, subjecting said mixture to an electric influence, while in a condition of mobility of particles to establish a definite position of the conducting particles, and then causing said mixture to unite to form a single solid body, substantially as, and for the purpose, set forth.

3. The described process for producing electric resistance bodies, which consists in mixing good and bad electric conductors, subjecting said mixture to an electric influence, while in a condition of mobility of particles to establish a definite position of the conducting particles, and then causing said mixture to solidify, substantially as, and for the purpose, set forth.

881,011. WRAPPING-SHEET. JORDAN W. LAMBERT, St. Louis, Mo. Filed Aug. 26, 1905. Serial No. 275,872.



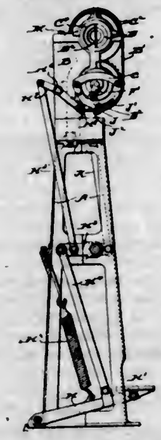
1. A wrapping sheet formed integral with an inner main section, an intermediate supplemental section and an outer sealing section, two rows of perforations extending transversely of the wrapping sheet and marking off separating lines between the inner main section and the intermediate supplemental section, and two rows of perforations extending transversely of the wrapping sheet between the intermediate supplemental section and the outer sealing section and adapted to register with the first named rows.

2. A wrapping sheet formed integral with an inner main section, an intermediate supplemental section and an outer sealing section, two rows of perforations extending transversely of the wrapping sheet and marking off separating lines between the inner main section and the intermediate supplemental section, and two rows of perforations extending transversely of the wrapping sheet between the intermediate supplemental section and the outer sealing section and adapted to register with the first named rows, and a severing strip secured transversely of the wrapping sheet on the inside of the latter between the first named rows of perforations and having an end projecting beyond the edge of the wrapping sheet so as to provide a tongue.

881,012. LAUNDRY-MARKER. ELDON L. LEWIS and ALPHA P. JAMISON, La Fayette, Ind. Filed Aug. 26, 1905. Serial No. 275,963.

1. A device of the kind described comprising a hollow shaft longitudinally slotted, a plurality of disks mounted thereon, and each having a slotted inner edge, indicating characters carried by the periphery of the disks, a plunger sliding in the shaft, a finger carried by the plunger, and projecting through the slot of the shaft into the slots of the disks, said shaft being rotatable, a parallel shaft, printing disks on said shaft meshing with the index disks first mentioned, means for locking each of the printing disks separately to its shaft, means for inking the printing disk, and means for moving the article to be printed into contact with the printing disks.

2. A device of the kind described comprising a fixed shaft, a plurality of disks rotatably mounted upon said shaft, each disk having radial projections upon its periphery, said projection having a printing type formed thereon, and each disk having V-shaped notches in its inner edge, said shaft having a plurality of sockets formed therein, each socket being in alinement with one of the said disks, a spring pressed pawl in each socket adapted to engage the V-shaped notches of its alining disk, a second rotatable shaft longitudinally slotted, rotatable disks adapted to mesh with the printing disks first mentioned and having similar characters formed upon their peripheries and having slots formed on their inner edges, a plunger sliding in the said shaft, a finger carried by the plunger projecting through the slot of the shaft and into the slots in the disks adapted to rotate the shaft and one of said disks upon rotation of the plunger, the said rotation of one of the last mentioned disks unlocking and rotating the printing disk with which it intermeshes, as and for the purpose set forth.



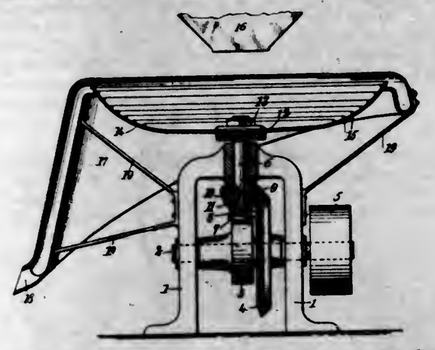
3. In a device of the kind described, printing disks, a hollow shaft having a longitudinal slot therein, indicating disks mounted on the said shaft and meshing with the printing disks, each of said disks having a plurality of slots on its inner edge, and a plunger sliding in the hollow shaft, and having a finger extending through the slot of the shaft and adapted to engage a slot of the indicating disks.

4. A device of the kind described comprising a casing having horizontal ways formed therein, a block sliding therein, parallel shafts, intermeshing indicating and printing disks carried by the shafts, respectively, the disks having projections, a tongue carried by the block adapted to fit between adjacent projections of the indicating disks, the said block having a slot, and a set screw working through said slot.

881,013. ORE-CONCENTRATOR. RAY H. MANLEY, San Francisco, Cal. Filed Apr. 26, 1907. Serial No. 370,440.

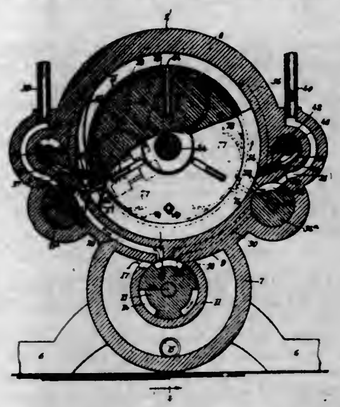
1. An ore separator, comprising standards connected together at their upper ends, a cross-shaft journaled in the standards, having a cam and a bevel wheel fixed thereto, a vertical shaft journaled in the connecting portion of said standards, having a head, a bevel wheel in engagement with the first-named wheel, slidably splined to the vertical shaft, a spring interposed between the last-named wheel and the head of the shaft, normally forcing said head in contact with said cam, a bowl fixed to the upper end of said shaft, and an apron surrounding the upper edge of said bowl and fixed to said standards.

2. An ore concentrator, comprising a vertical shaft carrying a bowl, a cross shaft having a cam on which the lower end of the vertical shaft bears, a bevel gear slidably splined to the vertical shaft near its lower end, a bevel gear fixed to said cross shaft in mesh with the first-named



bevel gear, and a spring interposed between the first-named bevel gear and the lower end of said vertical shaft.

881,014. ROTARY ENGINE. JAMES F. MASSEY, Douglas, Ariz. Filed June 25, 1907. Serial No. 380,813.



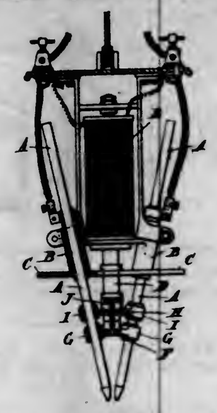
1. The combination of a casing, abutments mounted therein and movable relatively thereto, means for moving said abutments into predetermined positions and for retracting said abutments from said positions, a steam wheel provided with a channel for receiving the abutments, said steam wheel being further provided with pistons, and steam-controlled mechanism mounted within said steam wheel for actuating said pistons, said wheel being further provided with means for admitting steam into said steam-controlled mechanism.

2. In a rotary engine, the combination of a casing an abutment mounted therein, a link connected with said abutment and mounted pivotally so as to allow said abutment to move inwardly, a cam connected with said abutment, means controllable at will for actuating said cam so as to move said abutment, a steam wheel provided with a portion for engaging said abutment, a slide mounted upon said steam wheel, and means for admitting steam intermediate said abutment and said slide.

881,015. ELECTRIC-ARC LAMP. LOUIS C. H. MENSING, Rugby, England. Filed Feb. 9, 1905. Serial No. 244,943.

1. In an electric arc lamp, a pair of inclined carbon tubes, a solenoid, a bridge F carried by the core of said solenoid and having inclined sleeves normally out of axial alinement with said tubes and adapted to be brought into such alinement by the rise of the core, a bridge H movable

independently of said core and having inclined sleeves, an adjustable contact carried by said bridge H and adapted to be engaged by the bridge F in the inward movement of the core, carbon points adapted to be inserted in said carbon tubes and through the respective sleeves of said bridges in a manner to have their points come substantially in contact, the combination operating as described.



2. In an electric arc lamp a pair of inclined carbon tubes, a solenoid, a bridge carried by the core of said solenoid and having inclined sleeves normally out of axial alinement with said tubes and adapted to be brought into such alinement by the rise of the core, means independent of the core and adapted to be engaged by the bridge on the inward movement of the core, and carbon points adapted to be inserted in said carbon tubes, extend through the sleeves of the bridge and engaged by said means, said means when engaged by said bridge releasing the carbons to allow the feed thereof.

881,016. METHOD OF MANUFACTURING WHITE LEAD. WALTER MILLS, London, England. Filed Feb. 12, 1907. Serial No. 357,066.

1. A process which comprises the following steps: first, bringing lead-containing ore into contact with hydric-chlorid gas to decompose the ore and form plumbic chlorid and hydric sulfid; second, leaching out the plumbic-chlorid by a solvent; and, third, treating the plumbic-chlorid with sulfuric acid to obtain plumbic-sulfate.

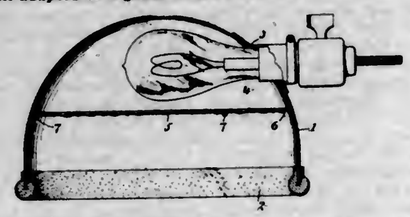
2. The method of manufacturing a hydrated basic pigment from sulfate of lead, which consists in treating the normal sulfate with aqueous ammonia containing not less than 1.75 per cent. of gas.

3. The process which comprises the following steps: first, bringing lead-containing ore into contact with hydric chlorid gas to decompose the ore and form plumbic chlorid and hydric sulfid; second, leaching out the plumbic-chlorid by a solvent; third, treating the plumbic-chlorid with sulfuric acid to obtain plumbic-sulfate; fourth, adding water to said sulfate; and, fifth, adding ammonia to the sulfate water.

4. The described method of manufacturing a hydrated basic pigment from sulfate of lead, which consists in mixing with the sulfate about its own weight of water, more or less according to the quantity of ammonia present in the aqueous solution of ammonia used, but so that not more than three times the weight of the sulfate with respect to water is employed, and then adding to the said mixture ammoniacal fluid containing gaseous ammonia.

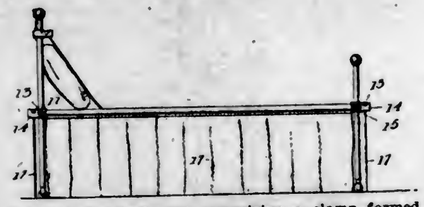
881,017. HEATING DEVICE. WILLIAM E. H. MORSE, Algona, Iowa. Filed Apr. 25, 1907. Serial No. 370,205.

A heating device comprising a hemispherical shell, an incandescent electric light attached therein and projecting therefrom to form a handle, a projecting screen mounted in said shell below said light and having notches in the edge thereof, and pins projecting in from the wall of said shell adapted to register with said notches and supporting



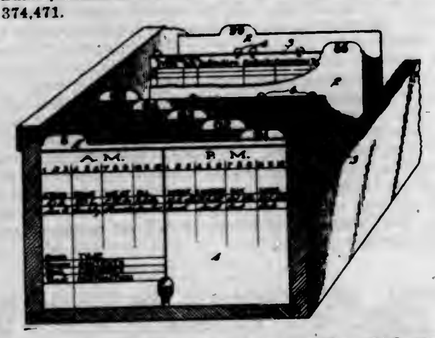
said screen, said light being disposed with the axis thereof substantially parallel with the plane of said edge.

881,018. BEDSTEAD ATTACHMENT. WALTER T. MOTT, Cleveland, Ohio. Filed May 17, 1907. Serial No. 374,236.



A bedstead attachment comprising a clamp formed of two members and adapted to embrace a bed-post, one member having a vertical flange at one end and the other member having vertical flanges at the end and the middle, the middle flange having an opening to receive the ends of a rod, and a clamping bolt connecting the end flanges of the members, said end flanges having registering notches to receive the end of a rod.

881,019. SYSTEM OF TABULATING CARS. CHARLES F. MULLER, FLORENCE M. DRISCOLL, and RICHARD J. BARRY, Oakland, Cal. Filed May 18, 1907. Serial No. 374,471.



1. A system of tabulating cars and the like, which comprehends a series of index cards numerically numbered in consecutive order corresponding with the terminal figures of the numbers of the cars to be recorded, and an initial index card having a number corresponding to the initial figure of the numbers of the cars to be recorded, record cards numbered correspondingly with the numbers of the cars to be recorded, and said record cards bearing suitable notation and being segregated correspondingly with the terminally numbered cards aforesaid.

2. A system of tabulating cars and the like, which comprehends a series of index cards numerically numbered in consecutive order corresponding with the terminal figures of the numbers of the cars to be recorded, and an initial

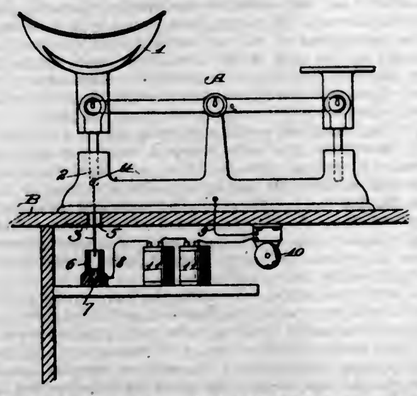
index card having a number corresponding to the initial figure of the numbers of the cars to be recorded, record cards numbered correspondingly with the numbers of the cars to be recorded, said record cards bearing suitable notation and being segregated correspondingly with the terminally numbered cards aforesaid, and a key-card bearing suitable notation corresponding with the notation on the record cards.

3. A system of tabulating cars and the like which comprehends a series of index cards numerically numbered in consecutive order corresponding with the terminal figures of the numbers of the cars to be recorded, and an initial index card having a number corresponding to the initial figure of the numbers of the cars to be recorded, record cards numbered correspondingly with the numbers of the cars to be recorded, said record cards bearing suitable notation and being segregated correspondingly with the terminally numbered cards aforesaid, a key card bearing suitable notation corresponding with the notation on the record cards, and removable visible indices carried by certain of said record cards, said indices corresponding to notation on said key card.

4. A system of tabulating cars and the like, which comprehends a series of index cards numerically numbered in consecutive order corresponding with the terminal figures of the numbers of the cars to be recorded, and an initial index card having a number corresponding to the initial figure of the number of the cars to be recorded, record cards numbered correspondingly with the numbers of the cars to be recorded, said record cards bearing suitable notation and being segregated correspondingly with the terminally numbered cards aforesaid, and removable visible indicators on certain of said indicator cards representative of certain desired data in connection with the cars.

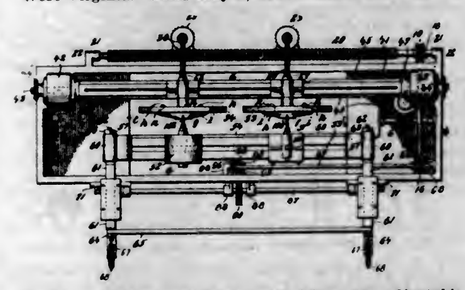
5. A system of tabulating cars and the like, which comprehends a series of index cards numerically numbered in consecutive order corresponding with the terminal figures of the numbers of the cars to be recorded, and an initial index card having a number corresponding to the initial figure of the numbers of the cars to be recorded, record cards numbered correspondingly with the numbers of the cars to be recorded, said record cards bearing suitable notation and being segregated correspondingly with the terminally numbered cards aforesaid, and a key card arranged in front of said index cards and vertically ruled into columns, which columns bear notation corresponding to the notation on said record cards, and removable indicators for the purpose described arranged in line behind said columns and carried by said record cards.

881,020. WEIGHING-SCALE. CLARENCE W. MCKEE, Phœnix, Ariz. Filed Feb. 28, 1906, Serial No. 303,521. Renewed Oct. 5, 1907. Serial No. 396,057.



In a weighing scale having a movable pan support provided with a depending extension, a plunger loosely mounted on the latter and having a contact terminal, the latter projecting below the base of the scale, a yieldable element independent of the scale and arranged within the path of the contact terminal and normally out of contact therewith and adapted to be engaged thereby for completing an electrical circuit, an electric circuit, and a signaling device arranged within the circuit said yieldable element being below the plane of the scale base.

881,021. ENGRAVING-MACHINE. JOSEPH A. MCLANE, Grafton, W. Va., assignor to Patent Holding and Manufacturing Company, Grafton, W. Va., a Corporation of West Virginia. Filed May 3, 1907. Serial No. 371,672.



1. An engraving machine comprising an adjustable chuck for the pattern, an adjustable chuck for the blank, means for rotating said chucks, a rotary drill or cutting tool, a stylus or tracer, an arm supporting said drill or cutting tool and stylus or tracer, horizontally slidable supports for said arm, and means for vertically reciprocating said supports.

2. An engraving machine comprising a rotary chuck for the pattern, a rotary chuck for the blank, an adjustable rotary drill or cutting tool, an adjustable stylus or tracer, a vertically reciprocating supporting arm for said drill or cutting tool and stylus or tracer, means for adjusting the throw or stroke of said supporting arm, and mechanism for holding the drill or cutting tool and the stylus in yielding contact with the blank and pattern respectively.

3. An engraving machine comprising a rotary chuck for the pattern, a rotary chuck for the blank, a support adapted to be adjusted to tilt said chucks to an angle from the perpendicular, a rotary drill or cutting tool, a stylus or tracer, a supporting arm for said drill or cutting tool and tracer, horizontally movable members for supporting said arm, and means for vertically reciprocating said arm.

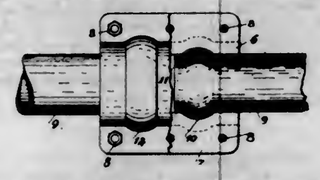
4. An engraving machine comprising a rotary chuck for the pattern, a rotary chuck for the blank, a rotary drill or cutting tool, a stylus or tracer, an arm for supporting said drill or cutting tool and stylus or tracer, horizontally slidable supports to which the ends of said arm are pivoted, means for locking one end of said arm against vertical reciprocation, and means for oscillating the arm from its other end.

5. An engraving machine, comprising rotary chucks for the pattern and the blank, a rotary drill or cutting tool and a tracer or stylus, an arm for supporting said drill or cutting tool and stylus or tracer, horizontally movable members for supporting said arm, means for vertically reciprocating said arm, and means for automatically limiting the travel and reversing the direction of movement of said arm.

881,022. PIPE-COUPLING. RAYMOND F. NAILLER, Cleveland, Ohio. Filed July 10, 1907. Serial No. 382,993.

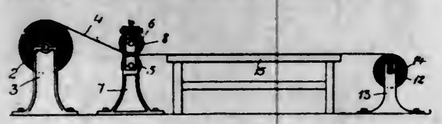
In a coupling for enameled pipes, the combination with enameled pipe sections expanded near their ends to form ribs, the walls of the pipes and ribs being of the same thickness, of clamping sections which are the same thickness throughout and covered on all sides with enamel, and having inner circumferential recesses in which the ribs

fit, and means to clamp the sections together, the ends of the pipe sections being spaced apart and the ends of the



clamping sections being clamped upon the pipe sections on both sides of the ribs, to form a rigid coupling.

881,023. APPARATUS FOR MAKING SERRATED ROOFING-STRIPS. FREDERICK C. OVERBURY, New York, N. Y., assignor to Flintkote Manufacturing Company, Rutherford, N. J., a Corporation of New Jersey. Filed Mar. 18, 1907. Serial No. 362,986.

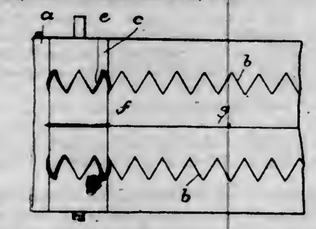


1. An apparatus of the character stated, comprising means for supporting a rolled sheet of flexible roofing material, a reel to which the said sheet is transferable by the rotation of the reel, intermediate rolls between which the sheet passes, said rolls comprising a bed roll adapted to support the sheet, and a cutter roll having a sig-zag cutter supported by the bed roll and adapted to form a longitudinal zig-zag cut in the sheet, and means for holding the projections in the same plane interlocked after they are cut.

2. An apparatus of the character stated, comprising means for supporting a rolled sheet of flexible roofing material, a reel to which the said sheet is transferable by the rotation of the reel, intermediate rolls between which the sheet passes, said rolls comprising a bed roll adapted to support the sheet, and a cutter roll having a sig-zag cutter supported by the bed roll and adapted to form a longitudinal zig-zag cut in the sheet, and a bed or table interposed between the said rolls and the reel, and adapted to support the subdivided portion of the sheet.

3. In an apparatus of the character stated, a bed roll adapted to support a strip of flexible material traveling over it, a cutter roll having a plurality of sig-zag cutters adapted to form a plurality of longitudinal zig-zag cuts in the sheet, means for forming a straight longitudinal cut between the said zig-zag cuts, a winding reel for the cut strip, and means for holding the cut edges of the sheet in the same plane as they pass from the cutters to the reel.

881,024. ROOFING-PACKAGE AND METHOD OF MAKING SAME. FREDERICK C. OVERBURY, New York, N. Y., assignor to Flintkote Manufacturing Company, Rutherford, N. J., a Corporation of New Jersey. Filed Mar. 18, 1907. Serial No. 362,988.



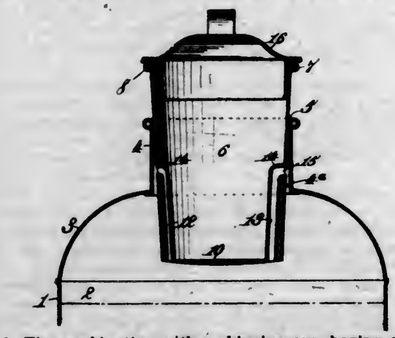
1. As an article of manufacture, a cylindrical roofing package composed of a sheet of flexible roofing material longitudinally subdivided into a plurality of roofing strips, having serrated abutting edges and wound into a roll, the projections of each strip alternating with and being protected by the projections of the abutting strip, said strips being separable when the sheet is unrolled.

2. As an article of manufacture, a cylindrical roofing package composed of a sheet of flexible roofing material, subdivided by a straight longitudinal cut, and by zig-zag longitudinal cuts between the straight cut and the margins of the sheet, the edges formed by said cuts being abutted together, and the sheet being wound into a roll to hold the said edges in contact with each other, the sheet being divisible, when unrolled, into a plurality of roofing strips each having a straight edge and a serrated edge.

3. The method hereinbefore described of making a cylindrical roofing package, which consists in longitudinally subdividing a sheet of flexible roofing along a sigzag line to form serrated edges and winding the subdivided sheet into a roll in which the serrated edges are abutted together.

4. The method hereinbefore described of making a cylindrical roofing package, which consists in longitudinally subdividing a sheet along a plurality of lines including a straight line and zig-zag lines between the straight line and the margins of the sheet, and winding the subdivided sheet into a roll in which all the edges formed by the lines of division are abutted together.

881,025. COOLING OR REFRIGERATING ATTACHMENT FOR MILK-CANS. HARRY S. PARKER, Trenton, N. J. Filed July 11, 1907. Serial No. 383,213.



1. The combination with a shipping can, having a neck of uniform diameter throughout its vertical extent, of a refrigerating attachment consisting of a body tapering towards its lower reduced extremity and removably and frictionally wedged in the said neck, a chamber being formed between the inner portion of the neck and the attachment and the latter having interiorly located pipes opening through the bottom thereof and with their upper ends terminating at a point removed from the upper extremity of the body of the attachment and opening into the said chamber, and cover means for closing the upper end of the attachment and the can neck, the pipes having communication solely with the interior of the can.

2. The combination with a shipping can, of a refrigerating attachment removably disposed in the can neck and forming a chamber with the latter, and pipes disposed at opposite points in the interior of the attachment and opening through the bottom of the body of said attachment, and also through the side portion of the body into the said chamber, one of the pipes being of greater diameter than the other and both pipes having communication solely with the interior of the can.

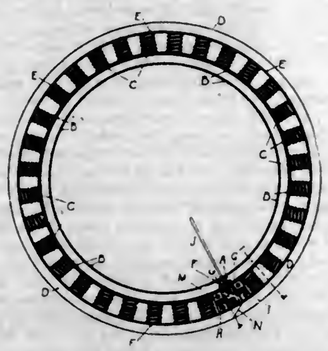
3. The combination with a shipping can, of a refrigerating attachment removably disposed in the can neck and forming a chamber with the latter, and pipes disposed at opposite points in the interior of the attachment and opening through the bottom of the body of said attachment, and also through the side portion of the body into the said chamber, both pipes having communication solely with the interior of the can.

4. The combination with a shipping can, of a refrigerating attachment comprising a tapering body closed at its bottom and having a pair of pipes arranged therein, the lower open end of the pipes communicating through the bottom with the interior of the can and at their upper extremities opening through the side portion of the body, a chamber being formed between the body of the attachment and can neck and with which the upper ends of the pipes communicate.

5. The combination with a shipping can, of a refrigerating attachment removably insertible in the can neck and having a closed bottom and an open top, pipes arranged within the body of the attachment and of less length than the length of the body, said pipes at their lower ends opening through the bottom of the body and at their upper ends opening through the side portion of said body into the neck of the can at a point below the upper extremity of said neck, and cover means for completely closing the upper open top portion of the attachment.

[Claim 6 not printed in the Gazette.]

881,026. SPRING-CUSHION FOR AUTOMOBILE-TIRES. JOHN P. PARSONS and WILLIAM FLEMING, Pittsburg, Pa. Filed July 6, 1907. Serial No. 382,518.



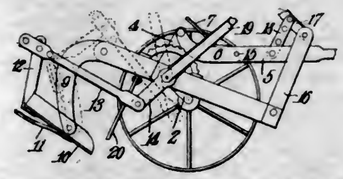
1. A cushion tire comprising an outer casing inclosing a split annular frame provided with a circumferential recess, resilient means positioned in said recess, an outer split frame supported on said resilient means, an annular cushion carried by said outer frame, and means positioned within said annular frame for expanding and contracting said tire, substantially as described.

2. A cushion tire comprising an outer casing inclosing a split annular frame provided with a circumferential recess, a plurality of springs positioned radially in said recess, an outer split frame engaging the outer ends of said springs, an annular cushion carried by said outer frame, adjustable means positioned within said tire for regulating the expansion of the latter, and means for permitting actuation of said adjustable means from the exterior of said tire, substantially as described.

3. A cushion tire comprising an outer casing inclosing a split annular frame provided with a circumferential recess, a plurality of springs supported radially in said recess, an outer split frame engaging the outer ends of said springs, an annular cushion carried by said outer frame, oppositely threaded screws engaging the ends of said split annular frame, and a wheel rigidly secured to one of said screws and splined on the other of said screws for regulating expansion of the tire, substantially as described.

4. A cushion tire comprising an outer casing inclosing a hollow annular frame of curved cross section, said frame being provided with a circumferential recess comprising a bottom wall supported by said walls dependent from the curved walls of said frame, resilient means supported on the bottom of said recess, an outer frame supported on said resilient means, and an annular cushion carried by said outer frame, substantially as described.

881,027. SCRAPER AND GRADER. OSCAR E. PENWELL, Mountain Home, Idaho. Filed Nov. 16, 1907. Serial No. 402,515.



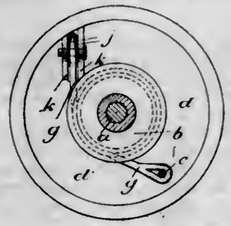
1. An implement as described comprising a wheel mounted platform, a tongue pivotally connected thereto means for swinging the platform with relation to the tongue, a scoop pivotally connected to the platform and means for swinging the scoop with relation to the platform.

2. An implement as described comprising a platform which is V-shaped in plan, wheels supporting the same, a tongue pivotally connected to the platform means for swinging the platform with relation to the tongue, a scoop pivotally connected to the platform at the ends thereof and lying behind the converging edges of the platform and means for swinging the scoop with relation to the platform.

3. An implement as described comprising a wheel mounted platform a tongue pivotally connected thereto uprights attached to the platform and crossing the tongue, a lever fulcrumed between the uprights, links pivoted to said lever and to the tongue, a scoop pivotally mounted upon the platform and means for swinging the scoop with relation to the platform.

4. An implement as described comprising a wheel mounted platform provided at its rear edge with a vertically disposed lug, a tongue having at its end portion side plates the extremities of which are upwardly curved and pivotally attached to said lug, a lever mechanism for swinging the platform with relation to the tongue, a scoop pivotally mounted upon the platform and a lever mechanism for swinging the scoop with relation to the platform.

881,028. CLUTCH. ARTHUR S. F. ROBINSON, Beccles, England. Filed Oct. 4, 1907. Serial No. 395,934.



1. In a friction clutch, a rotary driving part, a rotary driven part, a flexible rope carried by one said clutch part and comprising a coil that embraces and is adapted to grip the other said part, an actuating member mounted to rotate with said rope-carrying part, a lever to which a part of said rope is connected pivoted to said actuating member, and means for moving said actuating member relatively to the coil portion of said rope in a longitudinal direction.

2. In a friction clutch, a rotary driving part, a rotary driven part, a flexible rope carried by one said clutch part and comprising a coil that embraces and is adapted to grip the other said part, an actuating member mounted to rotate with said rope-carrying part, a lever to which a part of said rope is connected pivoted to said actuating member, a spring for moving said actuating member relatively to the coil portion of said rope, and means for moving said actuating member against the action of said spring.

3. In a friction clutch, a rotary driving part, a rotary

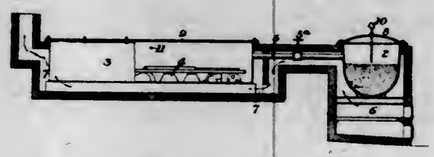
driven part, a number of flexible ropes carried by one said clutch part and each comprising two coils that embrace and are adapted to grip the other said part, means for securing the end portions of said ropes to said rope-carrying part, an actuating member, to which portions of said ropes intermediate of their coils are connected, mounted to rotate with said rope carrying part, and means for moving said actuating member relatively to the coils of said ropes.

4. In a friction clutch, a rotary driving part, a rotary driven part, a number of flexible ropes carried by one said clutch part and each comprising two coils that embrace and are adapted to grip the other said part, means for securing the end portions of said ropes to said rope carrying part, an actuating member mounted to rotate with said rope carrying part, a lever pivoted to said actuating member, parts on said lever over which pass portions of said ropes intermediate of their coils, and means for moving said actuating member relatively to the coils of said ropes.

5. In a friction clutch, a rotary driving part, a rotary driven part, a number of flexible ropes carried by one said clutch part and each comprising two coils that embrace and are adapted to grip the other said part, means for securing the end portions of said ropes to said rope carrying part, an actuating member mounted to rotate with said rope carrying part, a lever pivoted to said actuating member, pulleys on said lever over which pass portions of said ropes intermediate of their coils, and means for moving said actuating member relatively to the coils of said ropes.

[Claims 6 to 19 not printed in the Gazette.]

881,029. METHOD OF COATING METALS. ALFRED SANG, Sewickley, Pa. Filed Apr. 13, 1907. Serial No. 367,916.



1. The process of depositing coating metal upon a metallic surface, consisting in vaporizing the dust of the coating metal, and subjecting the metal surface to be coated to the action of said vapor while out of contact with the dust; substantially as described.

2. The method of coating metal surfaces, consisting in heating and vaporizing the dust of the coating metal, treating the vapor with a reducing agent, and depositing the vapor upon the surface to be coated while said surface is out of contact with the metal dust; substantially as described.

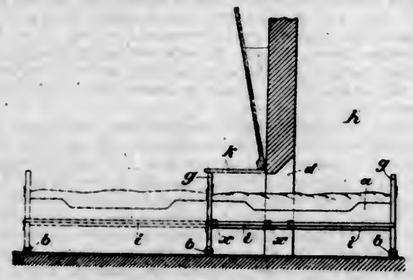
3. The method of coating metal surfaces, consisting in vaporizing the dust of the coating metal in the presence of a reducing agent, heating the surface to be coated, and subjecting it to the action of said vapor while out of contact with the dust; substantially as described.

4. The process of depositing coating metal upon a metallic surface, consisting in vaporizing the dust of the coating metal by applying heat of a temperature below the vaporizing temperature of the metal itself, and subjecting the metal surface to be coated to the action of said vapor, while out of contact with the dust; substantially as described.

5. The process of simultaneously coating a metallic surface with metallic and non-metallic layers, consisting in vaporizing the dust of the coating metal, and subjecting the metal surface to be coated to the action of said vapor in the presence of the vapor of a non-metallic material while out of contact with the dust; substantially as described.

[Claim 6 not printed in the Gazette.]

881,030. BEDSTEAD. BRUNO SCHERL, Erfurt, Germany. Filed Oct. 31, 1907. Serial No. 400,017.



1. The combination with a partition having a passage therethrough, of a bedstead guided to move longitudinally through said passage and adapted to occupy reverse position on opposite sides of the partition, the bedstead having end pieces which serve respectively to close the passage in the partition when the bedstead occupies either of said positions.

2. The combination with a partition having a transverse passage therethrough, of a bedstead guided to move longitudinally through said passage carrying a pair of vertical end pieces and provided with longitudinal guide rails, and relatively fixed guide rollers mounted on the partition and arranged to coöperate with said guide rails on the bedstead, the latter being adapted to occupy a position on either side of the partition, and the end-pieces serving respectively to close the passage in the partition while the bedstead occupies either of the said positions.

3. The combination with a partition having a transverse passage therethrough, of a bedstead provided with supporting rollers mounted on fixed horizontal axes, longitudinal guide rails fixed on opposite sides of the bedstead, a pair of vertical end pieces carried on each end of the bedstead and guide rollers mounted on fixed vertical axes on the partition and arranged to coöperate with the guide rails on the bed to insure a rectilinear movement of the latter through said passage, the end-pieces serving respectively to close the passage in the partition while the bedstead occupies a position at either side thereof.

4. The combination with a partition having a transverse passage extending therethrough, of a bedstead guided to move longitudinally through said passage and adapted to occupy a position on either side of the partition, and a cabinet projecting from one side of the partition above the passage therein, one end of the bedstead being arranged to coöperate with said cabinet to provide a front section therefor, when the bedstead occupies one position, and an opposite end serving to close the passage in the partition when the bedstead occupies a reverse position.

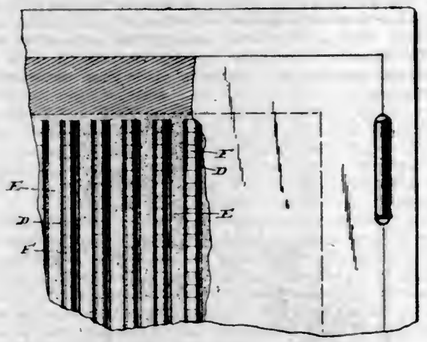
881,031. SAFE AND VAULT. WILLIAM F. SCHULTZ, Cincinnati, Ohio, assignor to Herring-Hall-Marvin Safe Company, New York, N. Y., a Corporation of New York. Filed Nov. 23, 1906. Serial No. 344,741.

1. In a structure of the class specified, the combination of a wall; a body of cement in rear thereof; a series of tubes embedded in such cement; and a series of rotatable members mounted in each of said tubes.

2. In a structure of the class specified, the combination of a wall; a body of cement in rear thereof; a series of tubes embedded in such cement said tubes being out of contact with the wall and each other; and a series of cylinders rotatably mounted in each of said tubes.

3. In a structure of the character specified, the combination of a wall; of a body of cement in rear thereof; a series of tubes embedded in said cement, the tubes being insulated from each other and from the wall; and a series of members rotatably mounted in each of said tubes.

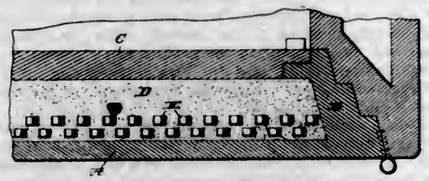
4. In a structure of the character specified, the combination of a wall; a body of cement in rear thereof; a series of tubes embedded in said cement and insulated from each other and said wall; and a series of cylinders formed of laminated metal mounted in each of said tubes.



5. In a structure of the character specified, the combination of a wall; a body of cement in rear thereof; a series of tubes embedded in such cement, said tubes being arranged in a plurality of rows, the tubes of the various rows being staggered said tubes being likewise insulated from each other and the wall; and a series of rotatable members mounted in each of said tubes.

[Claims 6 and 7 not printed in the Gazette.]

881,032. SAFE AND VAULT CONSTRUCTION. WILLIAM F. SCHULTZ, Cincinnati, Ohio, assignor to Herring-Hall-Marvin Safe Company, New York, N. Y., a Corporation of New York. Filed Nov. 23, 1906. Serial No. 344,742.



1. In a structure of the class specified, the combination of a wall; a body of insulating material in rear thereof; and a series of separated disks embedded in the insulating material, the axis of each disk standing at approximately right angles to the face of the wall.

2. In a structure of the class specified, the combination of a wall; and a series of independent, electrically insulated disks mounted in rear thereof, the axis of each disk standing at approximately right angles to the face of the wall.

3. In a structure of the class specified, the combination of a wall; a backing of insulating material; and a series of independent disks embedded in said material, the axis of each disk standing at approximately right angles to the wall.

4. In a structure of the class specified, the combination of a wall; a backing of insulating material; and two layers of disks embedded in said material, the disk being independent of each other and of the wall and having their axes at substantially right angles to the wall.

5. In a structure of the class specified, the combination of a wall; a backing of insulating material; and two layers of separated disks mounted therein, each layer of disks being composed of separated vertical columns, the columns of one layer being staggered with relation to those of the other the axes of the disks being at substantially right angles to the face of the wall.

[Claims 6 to 8 not printed in the Gazette.]

881,033. SAFETY-RAZOR. WALTER J. SMART, Brooklyn, N. Y., assignor to Mary Zinn, Martin Zinn, and Arthur S. Zinn, New York, N. Y. Filed Jan. 14, 1905. Serial No. 241,129.



1. A safety razor having a frame provided with clips adapted to engage a blade, a spring-pressed pivotal clamp removably mounted on the frame and adapted to hold the blade in position.

2. A safety razor having a frame provided with a guard, and a spring-pressed pivotal clamp removably mounted on the frame and adapted to hold the blade in position.

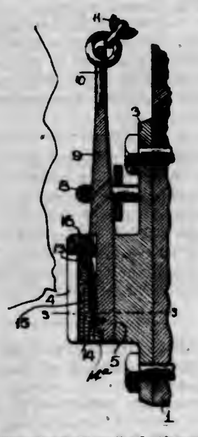
3. A safety razor having a frame provided with clips adapted to hold a blade, and a spring-pressed clamp consisting of a pair of clamping members detachably connected with said frame, and adapted to hold the blade in position.

4. A safety razor having a frame provided with a guard, a spring-pressed pivotal clamp removably mounted on the frame and adapted to hold the blade in position, and a spring piece connected with the frame and adapted to contact with the removable clamp for holding the same in position.

5. A safety razor having a frame provided with a guard, a spring-pressed pivotal clamp removably mounted on the frame, and comprising a pair of clamping members adapted to hold the blade in position, and a spring piece mounted on the frame and contacting with the removable clamp for holding the same in position.

[Claim 6 not printed in the Gazette.]

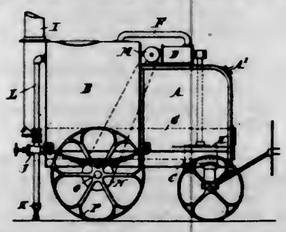
881,034. SEAL-LOCK. CHARLES S. SMITH, East St. Louis, Ill. Filed Oct. 15, 1906. Serial No. 339,114.



In a device of the class described, the combination with a plate 3, of a staple 8 integral with the upper portion of the front face of said plate; a housing 4 integral with the lower end of the plate, the front and bottom of said hous-

ing being open and there being an opening through the top of said housing, and there being an opening 5 provided with grooves 6 formed vertically through the housing, a locking bolt 9 having its lower end constructed to pass through the opening in the top of the housing and fit in the opening within said housing, ribs 12 integral with the sides of the lower end of the bolt and adapted to occupy the grooves in the housing, a leaf spring 13 detachably fixed at its lower end to the front face of the lower end of the locking bolt, there being a notch formed in the lower end of said bolt; a frangible member 14 positioned in the housing in front of the lower portion of the locking bolt, the rear face of which frangible member is provided with a recess 15 to accommodate the leaf spring, and there being an inclined shoulder 16 formed at the upper end of the recess, against which shoulder the free upper end of the spring engages when the lower end of the bolt and frangible member occupy the housing, and a lip integral with the bottom of the frangible member for engaging in the notch in the lower end of the bolt.

881,035. METHOD OF MAKING A DUSTLESS ROAD-SURFACE. BENJAMIN H. THWAITE, London, England. Filed Dec. 9, 1907. Serial No. 405,730.



1. The herein described method of making dustless road surfaces consisting in artificially heating the road surface and immediately spraying heated hydrocarbon thereon to provide a covering.

2. The herein described method of making dustless road surfaces which consists in dehydrating the road surface by the application of artificial heat directly thereto and immediately spraying the surface thus treated with a heated liquid hydrocarbon.

3. The herein described method of making dustless road surfaces which consists in passing a highly heated body over the road surface to dehydrate and heat the same, and immediately spraying heated hydrocarbon thereon before appreciable cooling of said surface.

4. The herein described method of making dustless road surfaces which consists in artificially heating the road surface to dehydrate the same and to effect a thorough binding thereof, and spraying heated hydrocarbon on the surface thus treated to provide a water-proof wearing surface.

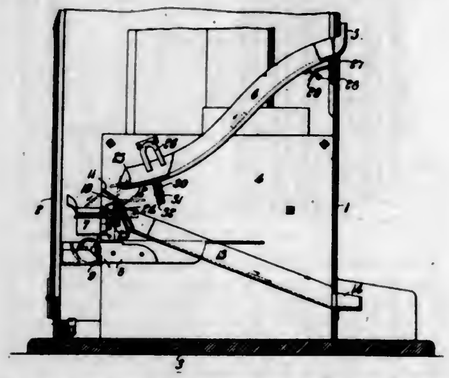
881,036. COMPOSITION OF METAL. ROBERT C. TOTTEN, Pittsburg, Pa. Filed June 8, 1907. Serial No. 377,866.

1. A new composition of chilling cast iron, consisting of coke or coal iron and carbid of silicon.

2. A new composition of chilling cast iron, consisting of coke or coal iron and carbid of silicon, containing combined iron and carbon, the composition containing at least one-fourth of one per cent. (¼ of 1%) of combined carbon.

881,037. SPURIOUS-COIN DETECTOR. LESLIE A. VANDIVER, Hannibal, Mo., assignor of one-fourth to John W. Vandiver, Hagers Grove, Mo., and one-fourth to Robert H. Visger, Chicago, Ill. Filed Feb. 21, 1907. Serial No. 358,670.

1. In a coin-controlled vending machine, means for rejecting all coins or similar articles except genuine coins of suitable weight, comprising a coin chute down which the coins pass by gravity, retarding means therein acting upon spurious coins and an overbalanced pivoted deflector in line with the lower end of the chute and having its pivotal point so related to the end of the chute that a retarded coin will strike the deflector so near its pivotal point as to be directed toward the overbalanced end of the deflector, while an unretarded genuine coin will strike the deflector at a point sufficiently remote from its pivot to pass the deflector in a direction away from its overbalanced end.



2. In a coin-controlled vending machine, a pivoted overbalanced deflector, and means for directing genuine coins to a point on the deflector sufficiently remote from its pivotal point to overcome the weighted end of the deflector and for directing spurious coins so close to the pivotal point of the deflector as to be deflected toward the overbalanced end of said deflector.

3. In a coin-controlled vending machine, a coin chute down which coins move by gravity, another chute for directing spurious coins to the exterior of the machine, and an overbalanced deflecting lever having its overbalanced end normally resting in the delivery chute for spurious coins and its other end in the path of coins coming from the initial coin chute, said deflecting lever having its pivotal point below and beyond the delivery end of the first-named chute.

4. In a coin-controlled vending machine, a coin chute having a downward inclination in the form of a compound curve terminating at the lower end in a section approaching the horizontal, retarding means coacting with the coin chute to retard the spurious or light-weight coins, another chute for directing retarded coins to the outside of the machine, and an overbalanced deflecting lever having one end normally engaging in the second named chute and its other end in the path of coins leaving the lower end of the first-named chute, the said overbalanced lever having its pivotal point so located with reference to the delivery end of the first-named chute that retarded coins will engage the lever so near its pivotal point as to be inactive thereto and be diverted thereby into the chute in which the over balanced end of the lever normally rests.

881,038. WAFFLE-IRON. WILLIAM E. WOLTMAN, Pueblo, Colo., assignor of one-half to John W. Spencer. Filed May 6, 1907. Serial No. 372,046.



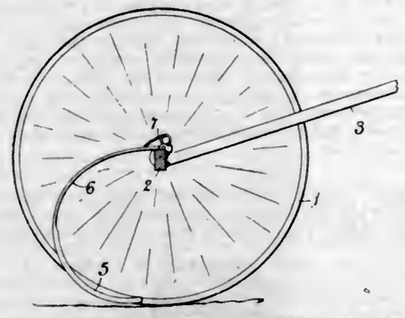
1. In a revoluble cake griddle, the combination of a stationary supporting frame, a revoluble mold carrying member revolubly mounted on said frame and having an opening and a cake mold hinged to said mold carrying member and adapted to fit in the opening therein, substantially as described.

2. In a revoluble cake griddle, the combination of a stationary frame, a revoluble mold carrying member having a circular body portion provided with two corresponding circular opposite openings and revolubly mounted on said stationary supporting frame, and molds hinged to said mold carrying member and adapted to fit in the openings therein, substantially as described.

3. In a revoluble cake griddle, the combination of a stationary supporting frame, a revoluble mold carrying member provided with a circular body portion having an annular rim near its edge and two corresponding oppositely-disposed openings, means for revolubly connecting said mold carrying member to said frame and cake molds hinged to the upper face of the body portions of said mold carrying member and adapted to fit in the openings therein.

4. In a revoluble cake griddle, a stationary supporting frame, a mold carrying member having a body portion provided with two oppositely disposed openings and revolubly mounted on said frame, and cake molds comprising each a body portion having an upwardly-extending rim and provided at its lower edge with an outwardly-extending flange, said molds being hinged to the body portion of said mold carrying member and adapted to fit in the openings therein, substantially as described.

881,039. CRANBERRY-PRUNER. FRED YOUNG, Brewster, Mass., assignor to Augustus L. Thorndike, Brewster, Mass. Filed Dec. 5, 1907. Serial No. 405,233.



1. A vine pruning machine composed of a cross-bar, means for transversely moving it at a predetermined height along the ground, and a plurality of pivoted blades depending from said cross bar and having resilient means for maintaining them in their normal positions.

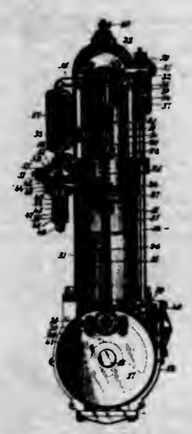
2. A vine trimming machine composed of a cross-bar, means for transversely moving it at a predetermined height above the ground, and a plurality of blades carried by said cross-bar; each blade rising rearwardly at an acute angle from its point.

3. A vine pruning machine composed of a cross-bar, means for transversely moving it along the ground, and a plurality of blades carried by said bar, each blade and its shank being curved to a substantial semi-circle.

4. A vine pruning machine composed of a cross-bar, means for transversely moving it at a predetermined height above the ground, and a plurality of blades pivotally and resiliently carried by said cross-bar; each blade and its shank being curved to present the blade at an acute angle with the ground.

881,040. COMPRESSOR FOR INTERNAL-COMBUSTION ENGINES. HARRY W. ADAMS, Fargo, N. D., assignor of one-half to Philip W. Farnham, Fargo, N. D. Filed July 11, 1905. Serial No. 269,154.

1. A compressor having an inlet valve, a conduit for the delivery of compressed fluid, an exhaust valve controlling said conduit, a coil spring for normally holding the inlet valve in its closed position, and a movable member having one surface thereof subjected to the pressure of the gas in said delivery conduit beyond said exhaust valve and for increasing the tension of the spring and increasing the resistance to the opening of the inlet valve as the pressure within said delivery conduit increases,



2. A compressor, an admission valve therefor, a cylindrical chamber, a piston within said chamber, a valve stem carried by said valve and extending through said chamber, resilient means connecting said piston and said valve stem, and means having a passage therein communicating to said chamber the pressure developed by the compressor, whereby to automatically govern the admission valve.

3. A compressor, an admission valve therefor, a cylindrical chamber, a piston within said chamber, a valve stem carried by said valve and extending through said chamber, resilient means connecting said piston and said valve stem, means having a passage therein communicating to said chamber the pressure developed by the compressor, whereby to automatically govern the admission valve, and a yieldingly seated valve normally closing said passage and opening upon the attainment of a predetermined pressure.

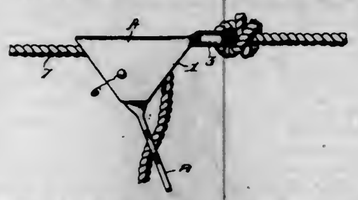
4. A compressor provided with an inlet port, a valve for controlling said port, a cylindrical chamber, a piston movably mounted therein and resiliently connected to said valve, means having a passage therein to communicate to said chamber the pressure developed by the compressor, whereby the resistance to the opening of said valve is increased upon an increase of pressure beyond a predetermined limit, and a spring-pressed valve within said passage for controlling said limit.

5. A compressor provided with a single passage communicating therewith, said passage being provided with inlet and exhaust ports, valve controlling said ports, a cylindrical chamber adjacent said inlet port, a piston within said chamber and slidably mounted upon the valve stem of the inlet valve, a coil spring surrounding said valve stem and in engagement with said piston, whereby the spring offers a resistance to the opening of said valve, means forming a passage delivering the pressure created by the compressor to said piston, whereby upon the movement of said piston the resistance to the opening of said valve is increased, and a spring-pressed valve normally closing said passage and preventing the application of pressure to said piston until a predetermined limit has been reached.

881,041. ROPE-CLAMP. FRANK ALMSTEAD, Clayville, N. Y. Filed June 29, 1907. Serial No. 381,465.

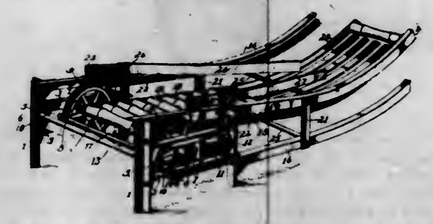
A rope clamping device comprising a body or frame having parallel ears, a cam pivoted between the ears and having a gripping face coöperating with a portion of the frame for clamping a rope or the like, teeth on the cam shaped to permit the rope to slide in one direction, a lever on the cam disposed approximately at right angles with the general length of the gripping face of the latter and

provided with an opening, means for anchoring the body to a suitable support, and a rope or the like extending



over the cam and having its free end threaded through the opening of the lever.

881,042. CONVEYER. BENJAMIN H. ALVEY, Louisville, Ky., assignor to The Alvey-Ferguson Company, Louisville, Ky., a Corporation of Kentucky. Filed Aug. 6, 1907. Serial No. 387,265.



1. In a conveyer, a package propelling means having traveling devices to engage the packages and force the same along the conveyer, and means for retarding the movement of packages which are improperly engaged by said propelling means, and to permit the movement of such packages as are properly engaged therewith.

2. In a conveyer, a package propelling means comprising endless traveling chains and devices extending transversely of the conveyer and connecting the chains with each other and adapted to engage the packages, and means for retarding the movement of packages which are improperly engaged by said devices, and to permit the movement of such packages as are properly engaged therewith.

3. In a conveyer, a package propelling means having traveling devices to force the packages along the conveyer, and yieldable arms extending toward each other into the path of the packages and adapted to prevent movement of packages which are improperly engaged by said devices and to permit movement of such packages as are properly engaged therewith.

4. In a conveyer, a frame comprising sides formed to provide guide ways, endless chains which travel in said ways, package engaging devices carried by said chains, and arms extending diagonally into the path of the packages, and adapted to prevent movement of such packages as are improperly engaged with said devices, said arms being yieldable to permit movement of packages which are properly engaged with said devices.

5. In a conveyer, a carrier way provided with spring arms, extending inwardly from the sides thereof, and means for conveying the packages along said way and between said arms.

[Claims 6 to 20 not printed in the Gazette.]

881,043. TONGUE-SWITCH. VICTOR ANGERER, Ridley Park, Pa., assignor to William Wharton, Jr., & Company, Incorporated, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Nov. 27, 1907. Serial No. 404,094.

1. The combination of a body portion of a switch structure, having a cavity, an annular bearing mounted in the cavity, set screwa for adjusting the bearing, and a switch tongue mounted in the bearing.

2. The combination in the body portion of a switch structure, having a cavity and a portion overhanging the cavity, of an annular bearing mounted in the cavity under the overhanging portion, said cavity being of such a size that the bearing can be moved from under the cavity and withdrawn when desired, means for retaining the bearing in the cavity, and a switch tongue having a pivot adapted to the bearing.

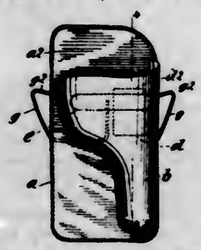


3. The combination of a body portion of a switch structure having a cavity therein open at the top and at the rear, a base plate adapted to be inserted in the cavity through the opening in the rear, an annular bearing adapted to be inserted in the cavity from the top, means for retaining the bearing in position, and a switch tongue having a pivot adapted to the bearing and resting upon the base plate.

4. The combination of a body portion of a switch structure, having a cavity therein, a base plate mounted in the bottom of the cavity, an annular bearing mounted upon the base plate also within the cavity, set screws for adjusting the annular bearing within the cavity, and soft metal filling the interstices between the bearing and the plate and the body of the switch structure, with a tongue having a pivot adapted to the bearing.

5. The combination of a body portion of a switch structure having a cavity at one end and having a portion overhanging the cavity, an annular bearing mounted in the cavity and under the overhanging portion of the body, means for adjusting the bearing in the cavity, a block inserted between the forward end of the bearing and the walls of the cavity, a base plate mounted under the bearing, and a switch tongue having a pivot mounted in the bearing.

881,044. REVOLVER-HOLSTER. FRANCIS H. AUDLEY, New York, N. Y., assignor to Katherine M. Audley, Stamford, Conn. Filed June 19, 1906. Serial No. 322,384.



1. A revolver holster having a pocket adapted to receive the barrel and cylinder of a revolver, the back portion of said pocket being provided with a transverse shoulder near the top thereof and the front portion of said pocket being provided with a spring.

2. A revolver holster having a pocket adapted to receive the barrel and cylinder of a revolver, the back portion being provided with an opening adapted to receive one side of the cylinder, and the front of the pocket being provided with a spring adapted to bear on said cylinder.

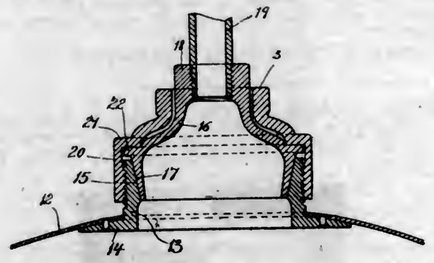
3. A revolver holster provided with a pocket adapted to receive the barrel and cylinder of a revolver, the back portion of the pocket being provided with an opening adapted to receive one side of the cylinder and the front portion thereof with a spring adapted to exert pressure on said cylinder, said holster being also provided with means for locking it in a pocket.

4. A revolver holster comprising a back portion and a front portion forming a pocket adapted to receive the barrel and cylinder of a revolver, the back portion being projected above said pocket, and said back portion being also provided below the top of the pocket with a transverse shoulder and the front portion of the pocket with a spring.

5. A revolver holster provided with a pocket adapted to receive the barrel and cylinder of a revolver, the back of said pocket and the front part thereof near the top thereof being provided with devices which operate in connection with the cylinder of the revolver for holding said revolver in said pocket.

[Claims 6 to 9 not printed in the Gazette.]

881,045. HAND-HOLE PIPE-COUPLING ATTACHMENT FOR BOILER-HEADS, &c. ARTHUR C. BADGER, Cohasset, Mass. Filed Feb. 12, 1907. Serial No. 357,105.

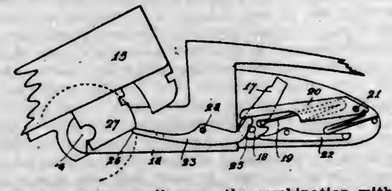


1. An appliance of the character stated, comprising a hand hole bushing having an external member adapted for attachment to a receptacle head, a conduit section having one end enlarged, the said bushing and enlarged end having reciprocal bearing faces forming a tight joint, and means for detachably securing the section to the bushing.

2. An appliance of the character stated, comprising an externally threaded hand hole bushing having an external member adapted for attachment to a receptacle head, and a conduit section enlarged at one end and having a reduced pipe-engaging socket at its opposite end, the bushing and the enlarged end of the conduit section being provided with reciprocal bearing faces adapted to maintain a tight joint, and a coupling nut adapted to engage the external thread of the bushing and having an inwardly-projecting flange to engage the enlarged portion of the conduit section.

3. An appliance of the character stated, comprising an externally threaded hand hole bushing adapted for attachment to a receptacle head, and a conduit section enlarged at one end and having a reduced pipe-engaging socket at its opposite end, the bushing and the enlarged end of the conduit section being provided with reciprocal bearing faces adapted to maintain a tight joint, and a coupling nut adapted to engage the external thread of the bushing, and having an inwardly-projecting flange to engage the enlarged portion of the conduit section, said nut having a reduced wrench-engaging end surrounding said socket.

881,046. DROP-DOWN SMALL-ARM. WILLIAM BAKER, Birmingham, England. Filed June 15, 1907. Serial No. 379,186.



1. In drop down small arms, the combination with the main spring compression lever, of a locking member movable with the barrel and having a working face arranged in such relation with respect to one end of the lever whereby upon the closing of the gun said working face after actuating the lever to compress the main spring will bear against the said end of the lever to prevent movement thereof so as to overcome any tendency towards the opening of the gun by pressure of the main spring.

2. In drop down small arms, a pivotal barrel having a downwardly extending projection, a hammer, a spring for the latter, a sear lever for normally locking the hammer against movement, a movable lever coöperative with the spring to compress the latter, and a pivotal lever having one end arranged in the path of movement of the projection so that the same will actuate said lever to cause compression of said spring and also to bear against the end of said lever to prevent movement thereof to avoid accidental opening of the small arms.

3. A fire arm of the class described, comprising a relatively pivoted stock and barrel, the latter having a depending projection thereon, a hammer and main spring for actuating it, and a spring compressing lever pivoted on the stock, one end of the lever being arranged in the path of said projection and operable by the latter to set the spring in firing condition, the said end of the lever being of a length to bear against the rear side of the said projection at a point off-set below the pivots of the barrel and lever whereby movement of the latter under action of said spring to unlock the barrel is prevented.

881,047. TESTING APPARATUS. WILLIAM I. BALLENTINE, Philadelphia, Pa. Filed Apr. 26, 1907. Serial No. 370,488.



1. The combination of a tubular guide, a plunger mounted in the guide, means for holding a test piece on the end of the plunger, and a punch held in the guide having one end projecting so as to rest upon the piece to be tested and the other end shaped to compress the test piece carried by the plunger, substantially as described.

2. The combination in an apparatus for testing the hardness and density of materials, of a punch adapted to rest on the material to be tested, a plunger mounted above the punch, and a test disk and means for retaining the test piece between the punch and plunger so that when the plunger drops the disk will be compressed, substantially as described.

3. The combination in an apparatus for testing the hardness and density of metals, of a guide, a punch, a plunger mounted in the guide above the punch, means for retaining a test piece in position between one end of the punch and the end of the plunger, the said test piece being placed to be compressed between the plunger and the punch when the plunger is allowed to drop, substantially as described.

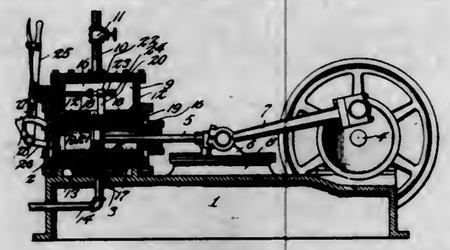
4. The combination of a tubular guide, a plunger mounted in the guide, a cap clamping the test piece to the plunger and having an opening, with a punch mounted in the guide and having a portion projecting so as to come in contact with the material to be tested, the other end

of the punch projecting so as to enter the opening in the cap to compress the test piece, substantially as described.

5. The combination in an apparatus for testing the hardness and density of metals, a guide, a plunger in the guide, means for holding a test piece on the end of the plunger, with a punch mounted in the end of the guide and having one end arranged to project beyond the end of the plunger to penetrate the material being tested, the other end being adapted to compress the test piece, and one end being of greater surface area than the other, substantially as described.

[Claims 6 to 14 not printed in the Gazette.]

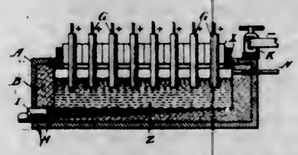
881,048. STEAM-ENGINE. WALTER H. BETTS, Admire, Kans. Filed June 4, 1907. Serial No. 377,215.



1. In an engine, the combination of a cylinder having inlet and exhaust ports, a cylinder therein having inlet and exhaust ports and movable longitudinally to alternately bring corresponding ports into register, a piston reciprocating in the inner cylinder and adapted to close the ports at the end of the strokes, means on the inner cylinder for engaging the piston to receive motion therefrom, and a manual means for adjusting the inner cylinder to reverse the engine.

2. In an engine, the combination of a stationary outer cylinder having inlet and exhaust ports, an inner cylinder mounted for reciprocation and having ports adapted to register with those of the outer cylinder, a piston reciprocating within the inner cylinder and adapted to impart motion thereto at the end of each stroke, a removable member on the inner cylinder and extending into the steam chest, an actuating rod, an adjustable lost motion connection between the member and rod and located within the chest, and a manually actuated means connected with the rod for reversing the engine.

881,049. ART OF LIBERATING ALUMINIUM AND OTHER METALS. HENRY S. BLACKMORE, Mount Vernon, N. Y. Filed Oct. 29, 1904. Serial No. 230,549.



1. The process of reducing metal which consists in exposing a substance containing a metal and oxygen, to electrolysis, while employing an electrode containing aluminium methid (Al_4C_3).

2. The process of reducing metal which consists in inducing a reaction between an aluminium methid (Al_4C_3) electrode and aluminium oxid and fluorid, by passing an electric current through the aluminium methid electrode in communication with the aluminium oxid and fluorid, whereby the metal content of the aluminium oxid and fluorid is reduced by the concurrent combination of their electro-negative constituents with the anode.

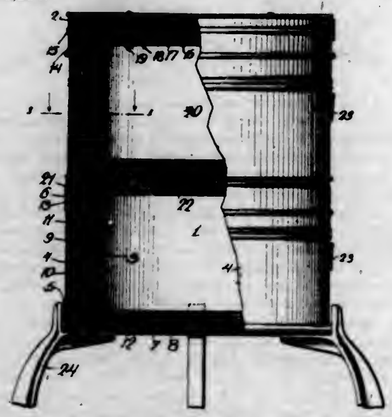
3. The process of reducing metal which consists in inducing a reaction between an aluminium methid (Al_4C_3) electrode and metal oxid and fluorid, by passing an electric current through the aluminium methid electrode in communication with the metal oxid and fluorid, whereby the metal content of the aluminium carbid and oxid is reduced by the concurrent combination of their electro-negative constituents.

4. The process of reducing metal which consists in exposing a substance containing the same to the combined action of an anode of aluminium methid (Al_4C_3) and an electric current.

5. The process of reducing metal which consists in exposing a compound containing metal and one or more electro-negative elements, to the combined action of an anode of aluminium methid (Al_4C_3) and an electric current.

[Claims 6 to 19 not printed in the Gazette.]

881,050. COOKING UTENSIL. ROBERT C. BLEAN and FREDERICK B. CANODE, Chicago, Ill.; said Blean assignor to said Canode. Filed Apr. 25, 1907. Serial No. 370,284.



1. A cooking utensil comprising a receptacle having an inner and an outer wall joined at their upper edges to provide an air-tight space between them, a layer of asbestos-board lying adjacent to each wall of the receptacle in said air-tight space and a plurality of layers of asbestos-board certain of which are corrugated filling the space between said first-named layers except for dead-air cells provided by said corrugations, and a cover adapted to fit over said receptacle having heat-insulating material secured thereto, substantially as set forth.

2. A cooking utensil comprising a receptacle having an inner and an outer wall one of which has a flange at the upper edge thereof secured to the edge of the other wall to provide an air-tight space between said walls, a layer of asbestos-board in said space adjacent to each of said walls and to said flange and a plurality of layers of asbestos-board certain of which are corrugated filling the space between said first-named layers except for dead-air cells provided by said corrugations, and a cover adapted to fit over said receptacle and having heat-insulating material secured thereto, substantially as set forth.

3. A cooking utensil comprising a receptacle having an inner and an outer wall joined at their upper edges to provide an air-tight space between them, a layer of asbestos-board lying adjacent to each wall the receptacle in said air-tight space and a plurality of layers of asbestos-board certain of which are corrugated filling the space between said first-named layers except for dead-air cells provided by said corrugations, a second receptacle similarly constructed and having a downwardly extending portion of the bottom thereof adapted to fit over the walls of the first receptacle, and a cover for said second receptacle having heat-insulating material secured thereto, substantially as set forth.

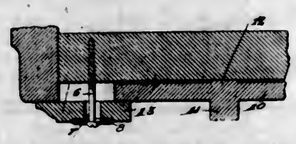
881,051. MATCH-SAFE. WALTER A. BREWSTER, Philadelphia, Pa., assignor of one-half to Harry J. Robinhold, Philadelphia, Pa. Filed Jan. 14, 1907. Serial No. 352,165.



1. A match safe comprising a supporting base composed of a single piece of metal having spaced apertured wings on opposite sides thereof bent at right angles thereto, the upper edges of said wings being downwardly inclined at the rear thereof to form slots or bearings and a pocket formed from a single piece of longitudinally curved sheet metal having the edges of its upper and lower ends bent to form bearings, a rod disposed in the bearings at the lower ends thereof and extending on opposite sides thereof to pivotally engage the apertures in said wings, and a rod disposed in the bearing in the upper end of said pocket and extended on opposite sides and bent to form finger-pieces adapted to rest in said inclined slots and supporting the pockets in upright position.

2. A match safe comprising a single piece of sheet metal having scalloped side edges bent at right angles to form pocket supports, said scallops having recesses between and above them inclined downwardly to form bearings, match-containing pockets approximately U-shaped in cross section with one leg longer than the other and having finger-pieces projecting from the opposite ends of said long leg, the short leg having trunnions extending from its opposite ends for pivotal engagement with said scallops, the finger pieces of said long leg being adapted to rest in said inclined recesses.

881,052. WEATHERPROOF WINDOW-FRAME. WILLIAM S. BRICKELL, Buffalo, N. Y. Filed June 26, 1906, Serial No. 323,498. Renewed Jan. 21, 1908. Serial No. 411,908.



1. In combination with a frame having movable sashing, a spacing lining bar located between the sashing and the frame and having a spacing rib passing between the sashing and in its reverse side a rib bearing against the frame and a means for flexibly holding the sashing in contact with said spacing rib.

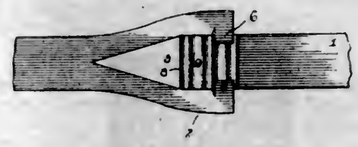
2. In combination with a frame having movable sashing, a spacing lining bar located between the sashing and the frame and having a spacing rib passing between the sashing and on its reverse side a rib bearing against the frame, said ribs being located directly opposite each other and a means for flexibly holding the sashing in contact with said spacing rib.

3. In combination with a frame having movable sashing a spacing lining bar located between the sashing and the frame and having a spacing rib passing between the sashing and on its reverse side a rib bearing against the frame, said ribs being located along the central longitudinal axis of the lining bar and a means for flexibly holding the sashing in contact with said spacing rib.

881,053. BALE-TIE. ALICE O. BRIGANCE, Navasota, Tex. Filed Aug. 2, 1907. Serial No. 386,782.

1. A bale band having an eye at one end, a bar forming the outer side of said eye, and inwardly extending lugs at the outer side of and spaced from the ends of said bar.

2. A bale band having an eye at one end, a bar forming the outer side of said eye, and inwardly extending lugs at the outer side of and spaced from the ends of said bar, the



opposite end of said band being doubled and passed around said bar and disposed under said inwardly extending lugs.

881,054. PAINT POT AND BRUSH HOLDER. THOMAS CARLE, Jr., Kingston, Pa. Filed Aug. 30, 1907. Serial No. 390,788.



1. A supporting device of the character described including a supporting hook having its shank terminating in an eye, a rock shaft supported for rotation in the eye, means carried by the rock shaft for engagement with the hook to secure the rock shaft in various positions to which it may be oscillated about its axis, and a receptacle supported upon the rock shaft.

2. A supporting device of the character described including a supporting hook provided with an eye having apertures, a rock shaft supported for rotation in the eye, a lever pivotally secured to the rock shaft for engagement in one of said apertures to secure the rock shaft in various positions to which it may be oscillated about its axis, and a receptacle supported upon the rock shaft.

3. A supporting device of the character described including a supporting hook provided with an eye having apertures, a rock shaft supported for rotation in the eye and provided with a terminal bracket, a lever pivotally mounted upon the rock shaft for engagement in one of the apertures to secure the rock shaft in various positions to which it may be oscillated about its axis, a sleeve slidably mounted upon the bracket and provided with a set screw bearing thereagainst, and a receptacle supported upon the sleeve.

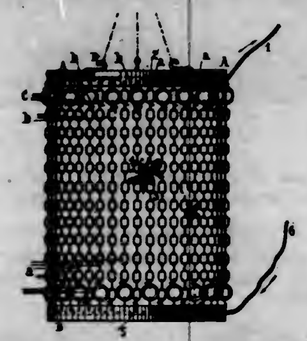
4. A supporting device of the character described including supporting hooks having their shanks terminating in eyes provided with apertures, a rock shaft provided with terminal brackets and with reinforcing collars, said reinforcing collars being adapted to be received by the eyes, levers pivotally mounted upon the rock shaft for engagement in the apertures of the eyes to secure the rock shaft in various positions to which it may be oscillated about its axis, a spring secured upon the rock shaft and adapted to bear against the levers to normally retain them in engagement with the apertures, sleeves slidably mounted upon the brackets and having set screws bearing thereagainst, and receptacles supported by the sleeves and having resilient brush holding clamps.

881,055. ELECTRICAL APPLIANCE FOR PROTECTION AGAINST INSECTS. ALPHONSE L. M. CHAULIN, Paris, France. Filed June 26, 1906. Serial No. 323,495.

1. A collapsible electrocutor for insects comprising two electrical conducting bodies, conducting chains uniting said bodies, a link of insulating material in each of said chains, in combination with means for connecting said bodies to the positive and negative poles respectively of a source of electricity.

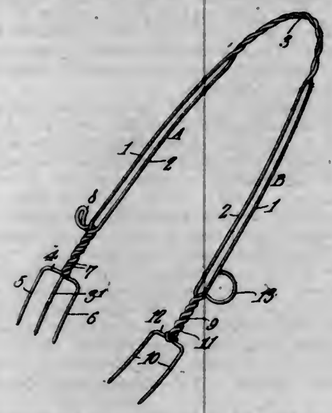
2. An electrocutor for insects comprising two electrical conducting bodies, flexible exposed conductors suspending one of said bodies from the other, and means to prevent a

completion of the circuit between said bodies through said conductors, in combination with means for connecting



said bodies to the positive and negative poles respectively of a source of electricity.

881,056. COTTON-PICKER. ROY E. CHENSMAN, La Fayette, Ind. Filed Apr. 3, 1907. Serial No. 366,179.

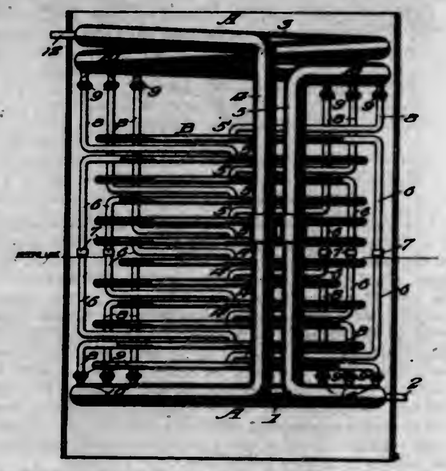


An implement for picking cotton consisting of integral oppositely disposed shanks each consisting solely of connected spring wires and movable toward or from each other, a fork at the free end of each shank, a finger guard extending laterally from one of the shanks and in the plane of movement of said shanks, and a thumb rest upon the other shank and disposed perpendicularly to the plane of movement of the shanks, said finger guard being integral with a tine of one of the forks.

881,057. STEAM-GENERATOR. JOHN M. CLARK, Whitestone, N. Y. Filed Mar. 12, 1907. Serial No. 362,025.

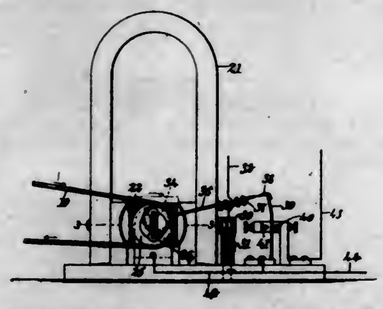
1. A boiler comprising a main generator including spaced coils arranged in circulatory communication, and an auxiliary generator including spaced coils in communication with each other and in communication with the respective coils of the main generator, the respective communication between the coils comprising pipe sections and coupling members connecting said sections, whereby the auxiliary generator may be disconnected from the main generator and the respective coils of said generator disconnected from each other.

2. A boiler comprising a main generator including a water coil and a steam coil in circulatory communication, and an auxiliary generator comprising a steam coil and a water coil in communication with each other and respectively in communication with the steam coil and water coil of the main generator, each coil of the auxiliary gen-



erator comprising a series of concentric pipe convolutions disposed in the same plane.

881,058. GAS-ENGINE IGNITER. ALBERT N. CLASSON, Rutland township, Lasalle county, Ill. Filed Apr. 20, 1906. Serial No. 312,800.



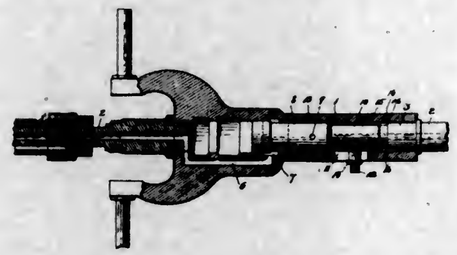
1. An ignition apparatus for internal combustion engines, comprising a magneto, an eccentric located upon the shaft of the armature thereof, a vibrator electrically connected to said magneto, binding posts oppositely disposed in the path of the vibrator, an eccentric rod connected to said eccentric and to said vibrator, and a condenser in parallel with said vibrator and binding posts, whereby the vibrator may be positively operated and an alternating current generated.

2. An electric ignition apparatus for internal combustion engines, comprising a primary circuit, including an induction coil, a magneto, means operatively connected to said magneto for interrupting the circuit, a condenser in parallel with said interrupter, and means operatively connected to the engine for interrupting the circuit, and a secondary circuit including sparking terminals within the engine and said induction coil.

3. An ignition apparatus for internal combustion engines, comprising a magneto, a vibrator electrically connected to said magneto and mechanically operated by the rotation of the armature thereof, binding posts oppositely disposed in the path of the vibrator, and a condenser in parallel with said vibrator and binding posts, whereby the vibrator may be positively operated and an alternating current generated.

4. An electric ignition apparatus for internal combustion engines, comprising a primary circuit, including an induction coil, a magneto, means operatively connected to said magneto for interrupting the circuit, said means comprising an eccentric upon the shaft of the armature of the magneto, an eccentric rod, and a vibrator in engagement with said rod and operated thereby, a condenser in parallel with said interrupter, and means operatively connected to the engine for interrupting the circuit, and a secondary circuit including the sparking terminals within the engine and said induction coil.

881,059. ROCK-DRILL. HENRY J. COOK, Ottumwa, Iowa. Filed July 2, 1907. Serial No. 381,895.



1. In a rock-drill, a casing having a tubular drill stem mounted at one end, an air-propelled hammer, a striking-head mounted between the hammer and the drill-stem having a hole therein that registers with the hole in the drill-stem, and a hose connection secured to said striking-head and communicating with the hole therein, substantially as shown and described.

2. In a compressed-air rock-drill, in combination with the casing, a tubular drill-stem mounted in the casing and having its inner end spaced apart from the inner surface of the casing to form a chamber, an air-propelled hammer in the casing, a striking-head in the casing between the drill-stem and the hammer having a longitudinal hole therethrough that registers with the hole in the drill-stem, a hose connection secured to said striking-head and communicating with the longitudinal hole therein to convey a flushing element thereto, and means to convey a part of the exhaust air from the hammer past the striking-head to the chamber around the drill-stem, substantially as shown and described.

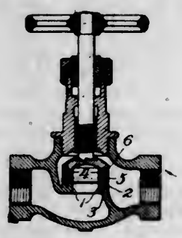
3. In a compressed-air rock-drill, in combination with the casing, a tubular drill-stem mounted in the casing and having its inner end spaced apart from the inner surface of the casing to form a chamber, an air-propelled hammer in the casing, a striking-head in the casing between the drill-stem and the hammer having a central opening therethrough that registers with the hole in the drill-stem, and means to convey the exhaust air from the hammer to the chamber around the drill-stem to form a seal for the connection between the striking-head and the drill-stem, substantially as shown and described.

4. In a compressed-air rock-drill, in combination with the casing, a tubular drill-stem mounted in the casing and having its inner end spaced apart from the inner surface of the casing to form a chamber, an air-propelled hammer in the casing, a striking-head in the casing between the drill-stem and the hammer having a central opening therethrough that registers with the hole in the drill-stem, and air-ducts formed in the striking-head for the passage of the air exhausted from the hammer to the chamber around the drill-stem, substantially as shown and described.

5. In a compressed-air rock-drill, in combination with the casing, a tubular drill-stem mounted in the casing and having its inner end spaced apart from the inner surface of the casing to form a chamber, an air-propelled hammer in the casing, a striking-head in the casing between the drill-stem and the hammer having a central opening therethrough that registers with the hole in the drill-stem, and grooves in the surface of the striking-head forming ducts for the passage of air exhausted from the hammer to the chamber around the drill-stem, substantially as shown and described.

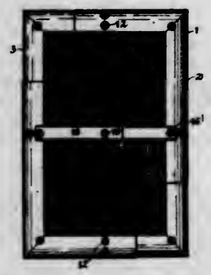
[Claims 6 to 8 not printed in the Gazette.]

881,060. VALVE. JOHN J. COOK, Medford, Mass., assignor to Crosby Steam Gage and Valve Company, Boston, Mass., a Corporation of Massachusetts. Filed June 10, 1907. Serial No. 378,167.



In a valve the combination, with an annular seat having an exteriorly conical upper part provided with an interior, vertical, annular groove, of a co-acting disk having a corresponding annular, interiorly conical lower part leading into an interior, vertical, annular groove, the groove of the disk being of greater width than the groove of the seat, and the conical walls of the disk inclosing a greater angle than the conical walls of the seat; substantially as described.

881,061. ADJUSTABLE METALLIC SCREEN-FASTENER. LAWRENCE K. DEVLIN, Havre, Mont. Filed Apr. 22, 1907. Serial No. 369,664.



1. A screen frame consisting of right-angularly formed corner sections, means whereby the opposite ends of said corner sections are adjustably connected with each other, fastening bolts arranged through the engaging ends of said sections to secure the same in their adjusted positions, screen retaining spurs formed on said sections to engage and hold the screen, screen fastening strips arranged on the sides of said frame sections, telescoping brace bars arranged across the screen and connected at their ends to the sections of the screen frame, and means to detachably secure said strips in place to fasten the edges of the screen, substantially as described.

2. A screen frame consisting of right-angularly formed, adjustably connected corner pieces, said pieces comprising an ornamental face plate and right-angularly bent side plates which form the edges of the frame, inwardly bent retaining flanges formed on the inner edges of said side plates, and right-angularly formed screen fastening strips adapted to be engaged with said retaining flanges to fasten the edges of the screen to the sections of the frame, substantially as described.

3. A screen frame consisting of right-angularly formed adjustably connected pairs of corner sections, one pair of said sections having formed in their opposite ends elongated slots, fastening bolts adapted to be engaged with said slots and with bolt holes formed in the ends of the

opposite pair of corner sections whereby said sections are secured in their adjusted positions, screen engaging spurs formed on said sections, and a series of adjustable screen fastening strips adapted to be secured to the sections of the frame, substantially as described.

4. A screen frame consisting of pairs of adjustably connected telescoping corner sections, means to secure the engaging ends of said sections in their adjusted positions, inwardly turned retaining flanges formed on the inner edges of said corner sections, a series of adjustable screen fastening strips secured to said sections, right angularly turned retaining flanges formed on one edge of said fastening strips and adapted to be engaged with the retaining flanges of said sections on the frame, adjustable brace bars arranged on each side of the frame and secured at their opposite ends to the engaging ends of the sides of the frame and means to secure the sections of the adjustable brace bars in their adjusted positions, substantially as described.

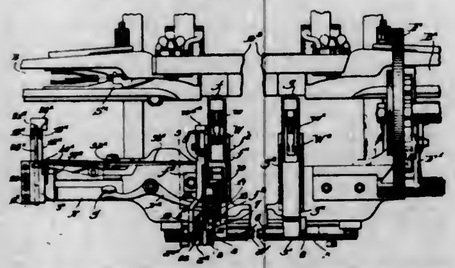
881,062. INSTRUMENT FOR INSERTING TAGS BENEATH THE SKIN OF ANIMALS. PORTER K. DOBYNS, Franklin, Ind. Filed Mar. 9, 1907. Serial No. 361,625.



1. An instrument for inserting tags beneath the skin of animals including one member with a flat V-shaped sharp point on the wide portion of which the tag may be placed, and another member mounted slidably thereon for pushing the tag off of said point after it has been inserted through the hide of the animal, the end of said slidable member being undercut to furnish a seat for the tag.

2. An instrument for inserting tags beneath the skin of animals including one member with a flat V-shaped sharp point on the wide portion of which the tag may be placed, another member mounted slidably thereon for pushing the tag off said point after it has been inserted through the hide of the animal, finger pieces on the side of said first mentioned member, and a thumb piece on said slidable member, whereby they may be held and operated.

881,063. FILLING-REPLENISHING LOOM. CLARE H. DRAPER, Hopedale, Mass., assignor to Draper Company, Hopedale, Mass., a Corporation of Maine. Filed Apr. 29, 1907. Serial No. 370,747.



1. In a loom provided with filling-replenishing mechanism, and with means to cause the operation thereof prior to complete exhaustion of the running filling, in combination, two detectors to detect filling absence on alternate picks, a stopping instrumentality for the loom, and governing means, including a member manually changeable as to its position, to operatively connect the stopping instrumentality with both detectors, or to operatively connect the replenishing mechanism at will with one only of detectors, according to the position of said member.

2. In a loom provided with filling-replenishing mechanism, and with means to cause the operation thereof prior to complete exhaustion of the running filling, in combination, two detectors to detect filling absence on alternate picks, and adapted to arrest the operation of a take-up instrumentality upon detection of filling absence by either detector, and governing means, including a member manually changeable as to its position, to operatively connect the replenishing mechanism at will with one only of the detectors, according to the position of said member.

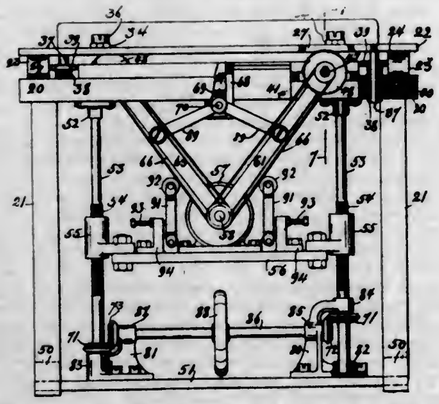
3. In a loom provided with filling-replenishing mechanism, and a stopping instrumentality, in combination, two detectors to detect filling absence on alternate picks and adapted to arrest the operation of a take-up instrumentality upon detection of filling absence by either detector, and governing means, including a member manually changeable as to its position, to operatively connect the stopping instrumentality with both detectors, or to operatively connect the replenishing mechanism with one only of the detectors, according to the position of said member.

4. In a loom provided with filling-replenishing mechanism, and a rock-shaft to control the time of its operation, in combination, two instrumentalities to detect filling absence on alternate picks, a take-up arresting member operatively connected with both instrumentalities, whereby filling absence detected by either will arrest take-up, and manually controlled means to at will operatively connect one only of said detecting instrumentalities with the rock-shaft, to effect filling replenishment by or through detection of filling absence by the operatively connected instrumentality.

5. The combination, in a loom provided with filling replenishing mechanism, of two filling-detecting instrumentalities located at opposite sides of the loom, a take-up arresting member permanently and operatively connected with both instrumentalities, to effect arrest of take-up upon detection of filling absence by either instrumentality, and manually changeable means whereby one only of said instrumentalities may be operatively connected with or disconnected from the filling replenishing mechanism.

[Claims 6 to 22 not printed in the Gazette.]

881,064. SLOTTING-MACHINE. WALTER FAVREAU, New York, N. Y. Filed Dec. 27, 1906. Serial No. 349,643.



1. In a slotting machine the combination of a table, a platform over the table, flexible connections between the table and the platform, threaded shafts under the table, a support carried on the threads of each of said threaded shafts, a second platform connecting the supports, means to turn the shafts in unison and thereby move the second platform to different levels, a motor on the second platform, saws slidably journaled on the table, means to maintain the arbors of the saws and the armature shaft of the motor at constant distances apart, means between the armature shaft and the saws to rotate the latter.

2. In a slotting machine the combination of a table, a platform above the table springs extending from the platform and bearing on the table, adjustable guides between the platform and the table, guides on the table cross-heads slidably supported on the guides, arbors journaled on the cross-heads, a circular saw supported on each of said arbors, a pulley on each arbor, an adjustable platform under the table, a motor on the latter platform, linked connections between the shaft of the motor and the arbors of the saws so that the arbors of the saws will move in horizontal lines, when the armature shaft of the motor is moved in a vertical line.

3. In a slotting machine the combination of a table, a platform having an opening thereon flexibly supported over the table, guide pins extending from the platform, guide sleeves engaging with said pins and adjustably supported in the table, vertical shafts supported under the table, threaded portions on the vertical shafts, supports carried on the threaded portions of the vertical shafts, a platform on the said threaded supports, a motor on the latter platform with an extended shaft, guides on the table, cross-heads on said guides, arbors journaled in the cross-heads, circular saws on the arbors, links connecting the shaft of the motor with each of the arbors, a pocket on the table, a cross-head in said pocket, a pin in the latter cross-head, secondary links connecting the latter pin with the links extending from the armature shaft, a pulley on the shaft of the motor and a pulley on each of the arbors, belting connecting the pulleys on the armature shaft with the pulleys on the arbors.

4. In a slotting machine the combination of a table, a platform flexibly supported over the table, means to control the amount of deflection of the platform relatively to the table, guides on the table, cutting means slidably supported in said guides to engage an object supported on the said platform, a motor under the table, connections between the motor and the cutting means, means to move the motor in a vertical line to thereby move the cutting means in a horizontal plane.

5. In a slotting machine the combination of a table, a platform having an opening flexibly supported over the table, means to control the amount of deflection of the platform, cross-heads adjustably supported on the table, arbors journaled on the cross-heads, a circular saw supported on each arbor, vertical shafts journaled under the table, a threaded portion on each of said vertical shafts, a support on each of said threaded portions, a motor platform connecting the threaded supports, a motor on the motor platform, an armature shaft for the motor means between the motor and the saws to actuate the latter, a link extending from each arbor to the said armature shaft a bevel gear on each of the vertical shafts, a horizontal shaft journaled below the motor platform, a bevel gear fastened on each end of said horizontal shaft, the bevel gears on the latter shaft meshing with the bevel gears on the vertical shafts, and a hand wheel on the said horizontal shaft.

[Claim 6 not printed in the Gazette.]

881,065. JEWEL-BAR. HENRY W. FISHEL, New York, N. Y., assignor to himself and Theodore H. Fishel, Copartners trading as Fishel, Nessler & Company, New York, N. Y. Filed Mar. 16, 1907. Serial No. 362,660.



1. An integral jewel bar recessed to form a plurality of closely adjacent jewel-receiving sockets, walls surrounding the sockets and terminating in thin extremities continuous with the lateral surfaces of the bar, and jewels located in and closely fitting the sockets, the thin extremities of the walls being forced inward over the jewels and securing the jewels in place.

2. An integral jewel bar provided with a plurality of adjacent jewel-receiving sockets, jewels in the sockets in substantially-contiguous position, and walls surrounding the jewels except at their substantially-contiguous portions and forced inward over the jewels to hold them in place.

3. A jewel bar provided with a plurality of jewel-receiving sockets and with a thin wall extending along the sides of the sockets, the wall being curved inwardly about the side of each socket so as to embrace substantially one-half of the jewel mounted therein.

4. A jewel bar comprising an integral body recessed to form a plurality of closely adjacent jewel-receiving sockets terminating in thin walls continuous with the lateral surfaces of the bar and substantially surrounding the sockets, and jewels located in and closely fitting the sockets, the thin walls being burnished inward over the jewels so as to form burnished rims substantially surrounding the jewels and extending to the sides of the bar.

881,066. JEWEL-BAR. HENRY W. FISHEL, New York, N. Y., assignor to himself and Theodore H. Fishel, Copartners trading as Fishel, Nessler & Company, New York, N. Y. Filed May 13, 1907. Serial No. 373,447.

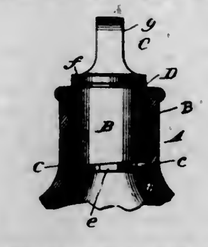


1. A jewel bar comprising a body provided with jewel-receiving sockets, a thin wall at one side of each socket, and beading at the other side of each socket and jewels secured in the sockets, the thin wall being burnished down on the jewels.

2. A jewel bar comprising a body provided with jewel-receiving sockets, a thin wall curved around one side of each socket, a solid margin on the other side of the sockets affording material for beading, and beading formed in such margin and jewels secured in the sockets, the thin wall being burnished down on the jewels.

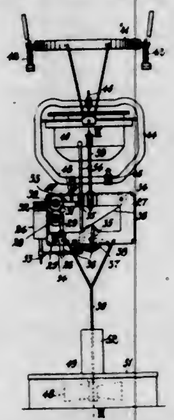
3. A jewel bar comprising a curved body provided with jewel-receiving sockets, a thin outer wall curved around the outer sides of the sockets, a smooth inner wall provided with beading, and jewels secured in the sockets, the thin outer wall being burnished down on the jewels.

881,067. CLOSURE. WILLIAM P. FLEMING, Port Huron, Mich. Filed Oct. 23, 1907. Serial No. 398,767.



The herein described closure consisting essentially of a portion to receive a plug, the said plug, and a gasket; the said portion having a vertical-central bore and diametrically opposite vertical grooves communicating with the bore and extending laterally therefrom and also having oppositely disposed cams on its lower end extending in opposite directions from the lower ends of said grooves, and an interior bevel *d* at its upper end, and the plug being of a diameter to snugly occupy said portion and having diametrically-opposite, radial lugs at its lower end and a shoulder at its upper end and also having a finger-piece above the shoulder, and the gasket being arranged on the plug below the shoulder thereof and also arranged on downward movement of the plug in said portion to be crowded in the upper beveled end of the portion.

881,068. DISTANCE AND COURSE RECORDER FOR SHIPS. WILLIAM C. FORBES, Melbourne, Victoria, Australia. Filed Feb. 20, 1905. Serial No. 246,611.



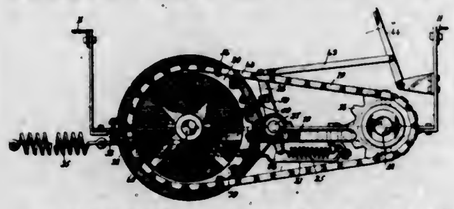
1. In a distance and course recorder or indicator for ships, the combination of an inverted U-shaped pipe having one branch forming an inlet tube and the opposite branch an outlet, a tube slidably mounted in the said inlet branch and having the end thereof which is projectable below the ship's bottom provided with an opening to the said outlet branch and also with the inlet opening presented in the direction of the ship's progress and with a scoop-shaped back, valves in the inlet and outlet branches, means for lowering and raising the tube in the inlet branch, the said tube being movable above the valve in the inlet branch, recording mechanism, and a rotating operating device for the recording mechanism, the rotating operating device being disposed in the said tube above the valve in the inlet branch.

2. In a distance and course recorder or indicator for ships, the combination of an inverted U-shaped pipe having one branch forming an inlet tube and the opposite branch an outlet, a tube slidably mounted in the inlet branch and having the end thereof which is projectable below the ship's bottom provided with an opening to the said outlet branch and with an inlet opening presented in the direction of the ship's progress and with a scoop-shaped back, valves in the said inlet and outlet branches, means for lowering and raising the tube in the inlet branch, the tube being movable above the valve in the inlet branch, recording mechanism, a rotating operating device also located in the tube above the valve and actuating the recording mechanism, and means for independently operating the valves in the inlet and outlet branches.

3. In a recording or indicating mechanism for ships, means for delineating the course of the ship, comprising a chart ribbon, a roller upon which the said ribbon is wound, a tensioning device for the said roller, and frictional rollers between which the chart has movement, in combination with a compass, a frame adjustable on the compass and carrying a meter and means for imparting motion to the chart ribbon, and a light frame passing vertically around the compass and supported upon the latter, the said frame which passes vertically around the compass carrying a marking instrument consisting of a receptacle for marking fluid and a thread, the end of the thread protruding from the receptacle and adapted to trail upon the chart ribbon.

4. In a recording or indicating mechanism for ships, means for delineating the course of the ship, comprising a chart ribbon, a roller upon which the said ribbon is wound, a tensioning device for the roller, and frictional rollers between which the chart has movement, in combination with a compass, having a pin, a frame adjustable on the compass and carrying a meter and means for imparting motion to the chart ribbon, the said frame being provided with a lever which is pivoted thereto and has its upper end in operative relation to the compass to tap the latter and keep it alive, and a light frame passing vertically around the compass and supported by the pin of said compass and carrying a marking instrument consisting of a receptacle containing a marking fluid and a thread, the end of the thread protruding from the receptacle and adapted to trail upon the chart ribbon, the meter being provided with a lateral arm which engages the lever.

881,069. ENGINE-STARTER. HERBERT P. FRANCIS, Oroville, Cal. Filed Apr. 20, 1906. Serial No. 312,806.



1. In an engine starter, the combination of a means for storing energy, a rotary shaft, means connecting it to the engine, a gear in connection with said means for storing energy, a gear in connection with the shaft, an independently rotatable member, a gear carried thereby, and means for arresting the movement of said independently rotatable member at will, said means being automatically controlled by the means for storing energy.

2. In an engine starter, the combination of a means for storing energy, a rotary shaft, means connecting it to the engine, a gear in connection with said means for storing energy, a gear in connection with the shaft, an independently rotatable member, a gear carried thereby, means for arresting the movement of said independently rotatable member at will, said means being automatically controlled by the means for storing energy, and a manually operative device also in connection with the means for arresting the movement of the independently rotatable member.

3. In an engine starter, the combination of a means for storing energy, a rotary shaft, means including a clutch for connecting the shaft to the engine, a gear connected to the shaft, a gear connected to the means for storing energy, an independently rotatable member, a brake therefor, a gear mounted on said independently rotative member and meshed with the first named gears, and devices for actuating the clutch and brake.

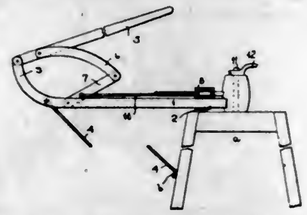
4. In an engine starter, the combination of a means for storing energy, a rotary shaft, means including a clutch for connecting the shaft to the engine, a gear connected to the shaft, a gear connected to the means for storing energy, an independently rotatable member, a brake therefor, a gear mounted on said independently rotative member and meshed with the first named gears, and devices for actuating the clutch and brake, said devices being actuated from said means for storing energy.

5. In an engine starter, the combination of a means for storing energy, a rotary shaft, means including a clutch for connecting the shaft to the engine, a gear connected to the shaft, a gear connected to the means for storing energy, an independently rotatable member, a brake therefor, a gear mounted on said independently rotative member and meshed with the first named gears, devices for actuating the clutch and brake, said devices being actuated from said means for storing energy, and a manually operative means also for actuating the clutch and brake.

[Claims 6 to 13 not printed in the Gazette.]

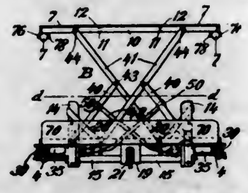
881,070. SPOKE-EXTRACTOR. JOSEPH W. GAY, Solomon Rapids, Kans., assignor of one-half to George W. Morehead, Beloit, Kans. Filed Oct. 4, 1906. Serial No. 337,467.

In a spoke extractor, a support provided with a vertically arranged clamping device for engaging with the hub of a wheel, a bar pivotally secured to the top of the support at one side of the clamping device, a brace from the support to the bar, a hand lever and a link lever pivotally secured to the outer portion of the bar, a link connected at its ends to said levers, a rod pivotally connected at one end with each of said link levers, and two open, substantially rectangular link-shaped jaws connected



to said rods, the sides of the jaws crossing each other, above and below the spoke, respectively, and the end of each link opposite the connection of the link with its rod being inclined so that the gripping edges of the two links will oppose each other and extend slightly toward the outer end of the spoke when the device is being operated.

881,071. BED. EDWARD S. HALL, Water Witch, N. J. Filed Nov. 10, 1906. Serial No. 342,800.



1. In a device of the kind described, having a lower main bed-frame adapted to support a mattress and an upper frame overlying the same, head and foot mechanisms comprising each a base adapted to be secured to said lower frame in the space between the mattress thereon and the adjacent head or foot section thereof, and provided with folding posts adapted to fold inwardly and when folded to occupy the afore-mentioned space, said posts being connected with said upper frame to support the same above the lower frame a sufficient distance to permit occupancy of the latter, in combination with means for simultaneously operating both said head and foot mechanisms.

2. An expansible bed comprising two vertically superposed beds of which, when collapsed, the upper bed is unobstructed for access and use, in combination with elevating mechanism mounted on the lower bed for raising said upper bed a sufficient distance to expose and permit occupancy also of the lower bed, said elevating means constituting the supporting means of said upper bed when elevated and adapted to collapse below the level of the upper surface of said upper bed when the latter is depressed, and means for operating said mechanism to raise and lower said upper bed.

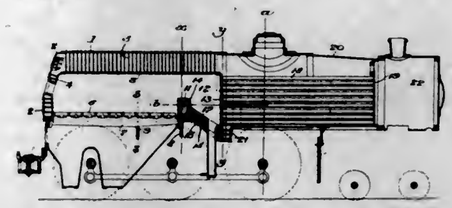
3. Supports for vertically adjustable beds, comprising two correlated pairs of posts, each post having one or more pivoted folding and collapsing parts, and all the posts coacting when erected to sustain the raised bed independently of extraneous supports, means operating the pivoted parts of either pair of posts independently of the operation of the pivoted parts of the other pair of posts, and devices coupling the operating means of both pairs of posts and simultaneously folding the pivoted parts of all four posts for raising and sustaining the bed.

4. Supports for vertically adjustable beds, comprising two correlated pairs of posts, each post having one or more pivoted folding and collapsing parts, and all the posts coacting when erected to sustain the raised bed independently of extraneous supports, means operating the pivoted parts of either pair of posts independently of the operation of the pivoted parts of the other pair of posts, and devices coupling and uncoupling said operating means of both pairs of posts and adapted when coupled to simultaneously fold the pivoted parts of all four posts for raising and sustaining the level bed, and adapted when uncoupled to assure operation of but one pair of posts for adjusting one end of the bed higher than its other end.

5. Supports for vertically adjustable beds, comprising two correlated pairs of posts, each post having one or more pivoted folding and collapsing parts, and all the posts coacting when erected to sustain the raised bed independently of extraneous supports, means positively folding and collapsing the pivoted parts of each pair of posts and disposed below said pivoted post parts and in the general plane of their folding and collapse, and devices coupling the pivoted post part operating means of both pairs of posts and simultaneously folding or collapsing the pivoted parts of all four posts for raising or lowering the bed.

[Claims 6 to 47 not printed in the Gazette.]

881,072. LOCOMOTIVE-BOILER. ALBERT F. HELBLING, Philadelphia, Pa. Filed Oct. 15, 1907. Serial No. 397,480.



1. In a locomotive, a fire box situated over the rear driving wheels and extending laterally beyond the same on each side, a barrel having fire tubes suitably supported therein, a fire brick lined combustion chamber between said grate bars and the fire tube sheet, the lower wall of said combustion chamber being inclined between the intermediate and front sets of driving wheels.

2. In a locomotive, a fire box, grate bars therein, said fire box and grate bars placed over the rear sets of driving wheels and extending on each side beyond said wheels, a barrel containing fire tubes, the ring of which barrel extends between and below the top or apex of the forward sets of driving wheels and a fire brick lined inclined combustion chamber between the fire grate and the tube sheet of the barrel.

3. In a locomotive, a fire box placed over the rear sets of driving wheels and extending on each side beyond said wheels, grate bars therein, a saddle bar extending laterally of said grate bars and suitably supported, a fire brick carried by said saddle bar and serving as the end wall for the fuel, a tube sheet suitably supported and a fire brick lined incolsing sheet situated at an incline and forming the lower wall of the combustion chamber.

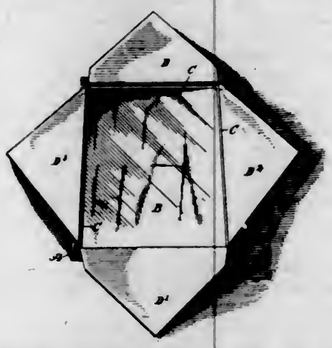
4. In a locomotive, a fire box, placed over the rear sets of driving wheels and extending on each side beyond said wheels, grate bars therein, a saddle bar extending laterally with respect to said grate bars, fire brick carried by said saddle bar and forming the end wall for the fuel, a tube sheet extending below the plane of the grate bars, an inclosing sheet situated at an incline, non-heat absorbent material carried by said inclosing sheet and fire brick thereon, the upper face of which is at an incline.

5. In a locomotive, a fire box, placed over the rear sets of driving wheels and extending laterally on each side beyond said wheels, grate bars therein, a saddle bar extending laterally of said grate bars, fire brick carried by said saddle bar, an inclined fire brick lined combustion chamber, a tube sheet suitably supported and extending below the plane of the grate bars, a throat sheet forming

with said tube sheet a mud drain, said mud drain protected from the action of the fire by the lining of the combustion chamber.

[Claims 6 to 15 not printed in the Gazette.]

881,073. PICTURE-FRAME. ELEANOR G. HEWITT, Ringwood Manor, Pompton township, Passaic county, N. J. Filed Apr. 6, 1907. Serial No. 366,659.



1. A picture frame comprising a frame, a pane of transparent material held in the opening of the frame, flaps attached to the sides and upper and lower ends of the frame and capable of being folded into the frame opening, and a back of a stiff material fitting into the frame opening and covering the said flaps, the back being removably secured in place in the frame.

2. A picture frame comprising a frame, provided on its back with a rabbet, a pane of transparent material fitting in the said rabbet, flaps attached to the rear of the sides and the upper and lower ends of the said frame, the flaps being adapted to fold into the frame opening, the flaps when closed overlapping one the other, and a back of stiff material fitting into the frame opening and removably secured to the said frame, the back covering the said overlapping flaps.

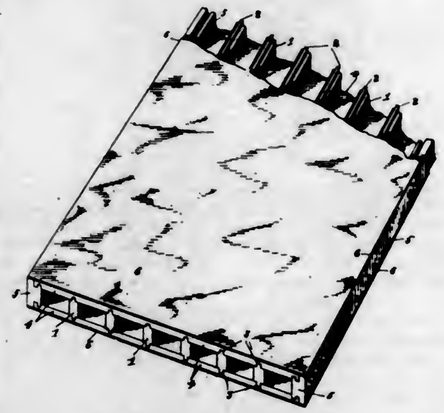
3. A picture frame comprising a frame provided in its back with a rabbet, a pane of a transparent material fitting into the said rabbet and secured in place on the frame, flaps of flexible material and of an approximately triangular shape and having their bases attached to the rear of the sides and the upper and lower ends of the said frame, the flaps when closed overlapping one the other, a back fitting into the said rabbet and covering the said overlapping flaps, and locking means locking the said back in the rabbet of the frame.

881,074. HOLLOW BUILT-UP MATERIAL FOR WOODEN STRUCTURES. JOSEPH HOELLIG and MILNER LIDSTER, Los Angeles, Cal. Filed Sept. 6, 1907. Serial No. 391,679.

1. Built up material for use in wooden structures comprising strengthening strips spaced apart and provided with central longitudinal tongues; and outside grooved cover-boards secured upon said strengthening strips, the grain of the strengthening strips running longitudinally the body, and the grain of the coverboard running at right angles to that of the strengthening strips.

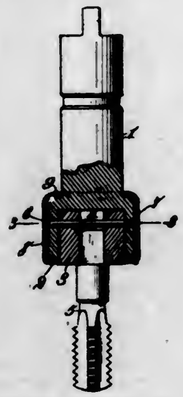
2. Built up material for wooden structures comprising spaced apart strengthening strips provided with central, longitudinal tongues on the side thereof, the grain of said strips running longitudinally the body thereof; coverboards having the grain thereof running at right angles to the grain of the strengthening strips and having spaced apart grooves therein for the reception of the tongues of the strengthening stripe; and outside veneer for said coverboards having the grain running at right angles to the grain of the cover board.

3. A built up door composed of strengthening strips provided with longitudinal central tongues, said strips being spaced apart; cover-boards having channels therein for the reception of the tongues of the strengthening strips; and veneer secured upon said cover-boards, the grain of the strengthening strips running longitudinally the body, and the grain of the coverboard running at right angles to that of the strengthening strips.



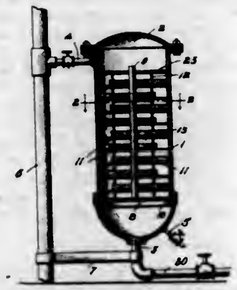
4. A built up door composed of strengthening strips provided with longitudinal central tongues, said strips being spaced apart; tongued and grooved bands; cover-boards having channels therein for the reception of the tongues of the strengthening strip and outside bands; and veneer secured upon said cover-boards and bands, the grain of the strengthening strips running longitudinally the body, and the grain of the coverboard running at right angles to that of the strengthening strips.

881,075. SAFETY CONNECTION FOR TAPS AND CHUCKS. JOHN HOSKING, Claremont, N. H., assignor of one-half to Jere C. Dufresne, Claremont, N. H. Filed Mar. 18, 1907. Serial No. 362,958.



A tap chuck having a socket, a bushing mounted in the socket, the bushing and socket having diametric openings therethrough, a tap fitted in the bushing, a breakable safety pin inserted in the openings of the bushing and socket, and means movable over the socket for exposing the said openings and also for preventing separation of the pin from the socket and bushing.

881,076. FIRE-EXTINGUISHING APPARATUS. CHARLES HOWARD, Brooklyn, N. Y. Filed Apr. 10, 1905, Serial No. 254,809. Renewed Aug. 14, 1907. Serial No. 388,552.



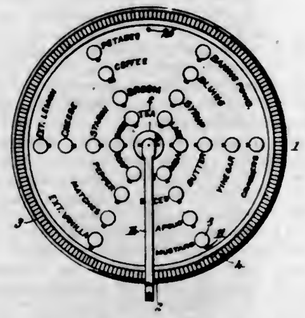
1. In a fire extinguishing apparatus, the combination of a receptacle, a base plate therein, a guide mounted on the base plate, and a series of supporting plates loosely mounted upon said guide and tablets of soluble fire-extinguishing material carried by the supporting plates, substantially as described.

2. In a fire extinguishing apparatus, the combination of a receptacle, a base plate therein, and a series of supporting plates each having depending legs loosely mounted in said receptacle above the base plate tablets of soluble fire-extinguishing material carried by the supporting plates, the legs of the adjacent plates resting upon the tablet next below, substantially as described.

3. In a fire extinguishing apparatus, the combination of a receptacle, a base plate therein, a series of supporting plates each having depending legs loosely mounted in said receptacle one above the other, and tablets of fire extinguishing material arranged in staggered series on said supporting plates said tablets contacting with the legs of the plate next above, substantially as described.

4. In a fire extinguishing apparatus, the combination of a receptacle, a series of horizontal reticulated plates loosely mounted therein one above the other tablets of soluble fire-extinguishing material on the plates, each plate being provided with depending legs and resting upon the adjacent tablets, substantially as described.

881,077. KITCHEN DEVICE. EDWARD A. HUDSON, Oquawka, Ill. Filed Mar. 28, 1906. Serial No. 308,466.



1. In a kitchen device, the combination of a disk having a raised center and a raised periphery, a corrugated depression extending around the periphery, a series of conical protuberances on the under face of the disk, said conical protuberances being arranged in diametrical rows dividing the disk into an equal number of parts, and a cutter-arm pivoted to the center of the disk and having a cutter-blade at its outer extremity.

2. The combination of a disk, a plurality of rows of protuberances equally spaced apart, extending from the bottom of the disk, said disk having a corrugated periphery, and a cutter-blade pivoted to the center of the disk.

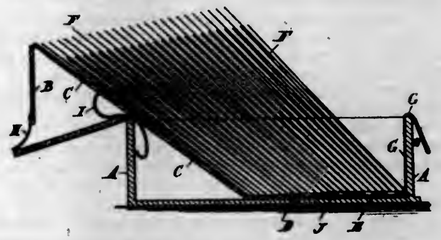
3. The combination of a sheet metal disk having a corrugated periphery, and a trimming blade pivoted to the center of the disk and adapted to swing about the corrugated periphery, for the purpose described.

4. The combination of a disk, a plurality of rows of protuberances equally spaced apart and extending from one side of the disk, and means for covering said protuberances, said means having indicators for the purpose described.

5. The combination of a disk, a plurality of rows of protuberances equally spaced apart and extending from one side of the disk, caps for covering the protuberances, and indicators carried by the caps, for the purpose described.

[Claims 6 to 8 not printed in the Gazette.]

881,078. LETTER-FILE AND THE LIKE. WILLIAM A. JOHNSON, London, England. Filed Aug. 2, 1907. Serial No. 386,774.

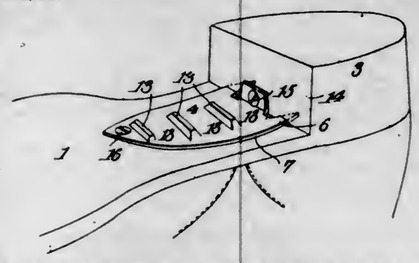


1. The combination with a receptacle, of a filing device comprising a plurality of rigid flaps flexibly connected together and normally forming an envelop for the contents of the box and adapted when manipulated to bring said contents to a position for access, one of said flaps adapted to rest in an inclined position upon one edge of the receptacle and constitute a support for the contents of the box and certain of the remaining flaps forming a base for the contents when the latter are supported at an inclination and the remaining flap being free of the contents when the latter is supported at an inclination, and means for flexibly connecting the file to the interior of the receptacle.

2. A letter file or the like, consisting of a box, drawer, or the like, a folding flap contained within said box, drawer or the like, and having four folding members, two to engage walls of the box or drawer, one the bottom and one to fold over on to the top of folders, envelops, covers, cards or the like adapted to be positioned within the folding flap when in a closed state, the flap being movable within said box, drawer or the like, so that when in an opened state, the flap is angled with two of its members lying at the bottom of the box, and the folders, envelops, covers, cards or the like spaced or fanned out; substantially as set forth for the purpose described.

3. A letter file or the like, consisting of a box, drawer, or the like, a folding flap contained within said box, drawer or the like, and having four folding members, two to engage walls of the box or drawer, one the bottom and one to fold over on to the top of folders, envelops, covers, cards or the like adapted to be positioned within the folding flap, when in a closed state, the flap being movable within said box, drawer or the like, so that when in an opened state, the flap is angled with two of its members lying at the bottom of the box, and the folders, envelops, covers, cards or the like spaced or fanned out, ribbons, cords, tags, or the like attached to the two outside members of the flap, and by which the flap can be actuated in combination with tapes, ribbons, cords or the like connecting the two inner members of the flap with the box or casing, and so limit the movement of the flap, substantially as set forth.

881,079. INSTEP-PROTECTOR. FRIEDRICH W. JOLITZ, West Duluth, Minn. Filed Nov. 1, 1906. Serial No. 341,618.



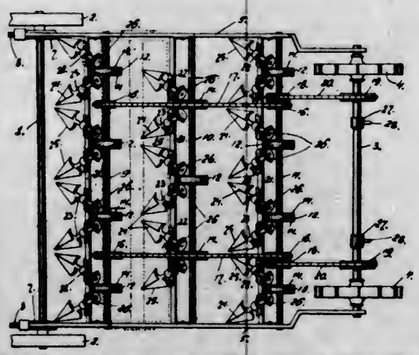
1. An instep protector comprising a plate having at one end on outturned apertured lug and a plurality of outstanding transversely-extending ribs spaced on the plate and from the lug, the portions of the plate between the adjacent ribs and between the lug and rib adjacent thereto being comparatively flat.

2. An instep protector comprising a plate apertured at one end, a pair of spurs at the other end of the plate, an apertured lug on the plate adjacent to and between the spurs and extending at right angles to the plate, and a plurality of spaced transversely extending ribs projecting from the plate.

3. An instep protector comprising a plate of sheet metal wider at its rear than at its front end and provided at the rear end with a central outturned flange and a rearwardly-projecting stud on each side of the flange in the plane of the plate, a perforation being provided in the flange and plate for securing the protector to the heel and sole of the shoe, and a plurality of parallel ribs on the plate between its front end and the flange.

4. As an article of manufacture, an instep protector consisting of a plate of sheet metal provided near each end with an orifice and on one face with a plurality of spaced transverse ribs and having its rear end broader than its front end, the rear end being formed with a broad, short central lug disposed transversely at right angles to the ribbed face of the plate and with a sharp spur on each side of the lug.

881,080. AGRICULTURAL IMPLEMENT. FRANK KLOUSNITZER, Herman, Pa. Filed June 7, 1907. Serial No. 377,676.



1. A harrow consisting of side frames, a rear axle adjustably mounted in said frames, a forward axle journaled in said frames, wheels supporting said axles, a plurality of shafts journaled in said frames, double beveled gear wheels mounted upon said shafts, sprocket wheels mounted upon said forward axle, sprocket chains passing over said sprocket wheels, bars arranged between said frames, angularly disposed blades journaled upon said bars, beveled gear wheels carried by said blades and meshing with said double beveled gear wheels, the blades of said bars being staggeredly arranged.

2. An implement of the type described consisting of movable side frames, shafts journaled in said frames, sprocket wheels mounted upon said shafts, sprocket chains passing over said wheels, bars arranged between said frames, sets of blades disposed at an angle upon said bars, means actuated by the movement of said frames for rotating said shafts, and means carried by said shafts for imparting a rotary movement to said blades.

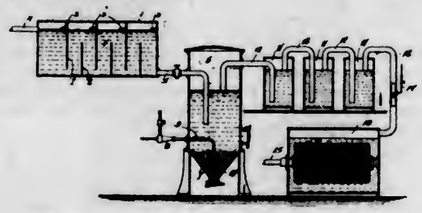
3. A harrow embodying movable frames, bars arranged between said frames, a plurality of blades disposed at an angle upon said frames, means carried by said frames and actuated by the movement of said harrow for imparting a rotary movement to said blades, said means including beveled gear wheels, sprocket wheels and chains.

881,081. FLUX AND PROCESS OF MAKING THE SAME. FRANCIS J. KOVACH, Cambridge, Mass., assignor to Josiah Colby Bassett, Cambridge, Mass., Theodore Edison Parker, New Bedford, Mass., and Henry Francis Strout, Mount Vernon, N. Y., trustees. Filed Apr. 3, 1907. Serial No. 366,120.

1. A pulverulent non-intumescing flux, consisting of a mixture of boracic acid and borax from which all water has been removed.

2. The herein described process of producing a non-intumescing flux which consists in subjecting borax and boracic acid to a high heat, until ebullition ceases, permitting the mass to cool and then reducing it to small particles.

881,082. APPARATUS FOR PURIFYING WATER AND STEAM AND FOR EXTRACTING OIL AND GREASE. ARTHUR E. KRAUSE, Jersey City, N. J. Filed Nov. 23, 1905. Serial No. 288,722.



1. In a water purifying apparatus, the combination of a chamber provided with means for abrading and disintegrating an insoluble mineral purifier, in the presence of water, and means for elutriating the disintegrates with said water, a second chamber adapted to receive and thoroughly admix the elutriates and water and to perfect elutriation and a filter receiving and filtering the elutriates from said second chamber.

2. In water purifying apparatus, the combination of a chamber containing an insoluble mineral purifier, means in said chamber for abrading and elutriating said purifier in the presence of water, a second chamber adapted to receive the elutriates and water and thoroughly admix the same and to perfect elutriation and a filter receiving and filtering the elutriates from the second chamber.

3. In water purifying apparatus, the combination of a chamber containing an insoluble mineral purifier, means in said chamber for grinding said purifier in the presence of the water to be purified, means for transporting water and elutriates into a second chamber, thoroughly admixing the same therein and perfecting elutriation and a filter receiving and filtering the elutriates from the second chamber.

4. In water purifying apparatus, the combination in a single structure of a chamber adapted to receive and contain a body of an insoluble mineral purifier, means therein for abrading and elutriating portions of the same in the presence of water and a chamber adapted to receive and filter the elutriates.

5. In water purifying apparatus, the combination in a single structure of a chamber adapted to receive and contain body of insoluble mineral purifier, means for grinding the same in the presence of water, means for admixing and elutriating the disintegrates and water, and a chamber receiving the mixture and provided with filtering means.

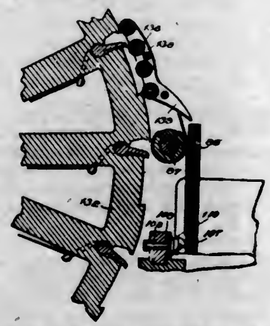
[Claims 6 to 16 not printed in the Gazette.]

881,083. WRENCH. COURTLAND MANNING, Brackenridge, Pa., assignor of one-third to Matti Lehikoinen, Brackenridge, Pa. Filed June 15, 1907. Serial No. 379,173.



A wrench comprising a toothed shank having a fixed jaw, the jaw slidably mounted upon said shank, the upper portion of said slotted jaw provided with an opening having the inner end thereof contracted, the side walls of said opening formed with grooves to constitute guide ways, a locking member arranged in said opening and provided with longitudinally extending ribs seated in said guide ways, said member having its forward end formed with a tooth adapted to extend through the contracted end of the opening and engage with the teeth of the shank and said locking member having its other end bifurcated and carrying a pin approximately centrally of the opening formed by the bifurcation, a plate secured to the slidable jaw for closing the openings formed therein, a spring surrounding said pin and bearing against said locking member of the plate, said means having one end connected with the shifting locking member and its other end projecting from the jaw.

881,084. FEEDING MECHANISM FOR WRAPPING-MACHINES. ALBERT M. PRICE, Elgin, Ill., assignor, by mesne assignments, to Adolph E. Brion, New York, N. Y. Original application filed Sept. 13, 1905, Serial No. 278,338. Divided and this application filed Feb. 11, 1907. Serial No. 356,807.



1. In a paper feed, the combination with frictional means for removing the first of a plurality of sheets of paper, of an intermittently operated mechanism for pressing said sheets against said frictional means, means connected with said frictional means for stopping the mechanism when the pressure of the paper against said frictional means exceeds a predetermined pressure and for starting the mechanism when the pressure falls below a predetermined pressure, and a rotating needle adapted to penetrate the first two or more of the sheets near the edge thereof to prevent the removal of more than one sheet at a time.

2. In a paper feed, the combination with means for removing the first of a plurality of sheets of paper, of a rotating needle adapted to penetrate the first two or more sheets at a point near their edge to prevent the removal of more than one sheet at a time.
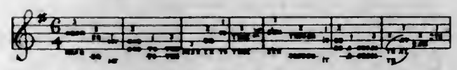
3. In a paper feed, the combination with means for removing the first of a plurality of sheets of paper, of a rotating boring needle adapted to penetrate the first two or more sheets near their edge to prevent the removal of more than one sheet at a time.

4. In a paper feed, the combination with means for removing the first of a plurality of sheets of paper, of a rotating needle having the point thereof screw threaded, adapted to penetrate the first two or more sheets near the edge thereof to prevent the removal of more than one sheet at a time.

5. In a paper feed, the combination with frictional means for removing the first of a plurality of sheets of paper, of a rotating needle adapted to penetrate two or more of said sheets near their edge to prevent the removal of more than one sheet at a time.

[Claims 6 to 24 not printed in the Gazette.]

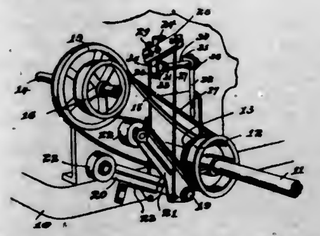
881,085. MUSIC-NOTATION. JOSEPH A. SHIRES, Denver, Colo. Filed Apr. 22, 1907. Serial No. 369,703.



1. In a system of music notation, a staff, words positioned on said staff, and numerals positioned on said staff above the words for the purpose set forth.

2. In a system of music notation, a staff, words positioned on the staff to indicate the tones, and numerals also positioned on said staff designating the length of tone, the various music parts being written in different shades for the purpose set forth.

881,086. VARIABLE-SPEED MECHANISM. BURT D. STEVENS, Beloit, Wis., assignor to The Berlin Machine Works, Beloit, Wis., a Corporation of Wisconsin. Original application filed Sept. 24, 1906, Serial No. 335,906. Divided and this application filed Mar. 16, 1907. Serial No. 362,676.



1. A variable speed mechanism comprising a belt tightener for controlling a plurality of belts, comprising an arm for each belt, a pivoted walking beam or evener, loose connections between said walking beam or evener and said arms, and a lever for controlling said evener whereby both of the tighteners may be thrown out of action or either of them brought into action by the movement of the lever, substantially as described.

2. A variable speed mechanism comprising a belt tight-

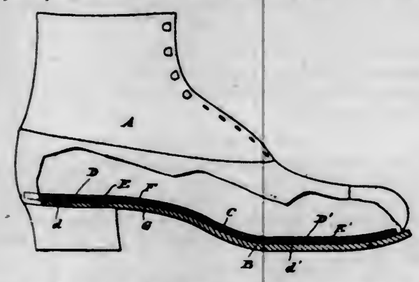
ener for controlling a plurality of belts, comprising an arm for each belt, a pivoted walking beam or evener, rods connecting said walking beam or evener with said arms, and a lever for controlling said evener whereby both of the tighteners may be thrown out of action or either of them brought into action by the movement of the lever, substantially as described.

3. A variable speed mechanism comprising a belt tightener for controlling a plurality of belts, comprising a pivoted arm for each belt, a pivoted walking beam or evener, sliding rods connecting said walking beam or evener with said arms, and a single lever for controlling said evener whereby both of the tighteners may be thrown out of action or either of them brought into action by the movement of the lever, substantially as described.

4. A variable speed mechanism comprising a belt tightener for controlling a plurality of belts, comprising a pivoted arm for each belt adapted to control its tension or tightness, a pivoted walking beam or evener having a sliding connection with each of said arms, a shaft, a single handle to turn said shaft, a crank-arm on said shaft, and a link connecting said crank-arm and walking beam or evener, whereby either of said arms may be brought into action or both of said arms thrown out of action, substantially as described.

5. A variable speed mechanism comprising a belt tightener for controlling a plurality of belts, comprising a pivoted arm for each belt adapted to control its tension or tightness, a pivoted walking beam or evener, rods having a sliding engagement with said walking beam or evener connecting said arms to said walking beam or evener, a shaft, a single handle to turn said shaft, a crank-arm on said shaft, and a link connecting said crank-arm and walking beam or evener, whereby either of said arms may be brought into action or both of said arms thrown out of action, substantially as described.

881,087. ELECTRIC INSOLE. ROBERT A. STEVENSON and JOHN T. STORY, New York, N. Y., assignors of one-half to John T. Story & Co., New York, N. Y., a Firm. Filed Dec. 14, 1905. Serial No. 291,732.



1. An article of the class described, comprising an insole carrying two galvanic piles, one of said piles having a terminal of one polarity adapted to contact with a foot of the wearer and the other pile having a terminal of opposite polarity adapted to contact with the foot, and means for electrically connecting the terminals of said piles.

2. An article of the class described, comprising an insole carrying two galvanic piles, each of which is composed of a plurality of positive and negative elements, and means connecting said piles in circuit one with the other.

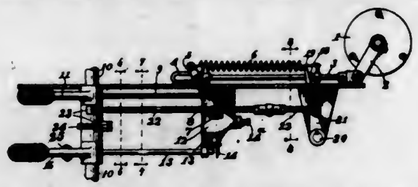
3. An article of the class described, an insole cored in the heel and sole thereof, a galvanic pile located in each of said cored portions each pile having its elements contained within a cup shaped terminal and a conducting strip secured to the sole and adapted to hold said piles in proper positions.

4. An article of the class described, an insole provided with a plurality of galvanic cells or piles, each pile being contained within a cup shaped terminal, and an electric conductor secured to said insole and serving to electrically connect said piles or cells through the cup shaped terminals thereof.

5. An article of the class described, an insole supporting or carrying a flanged cup which serves as the outer member of a galvanic pile.

[Claims 6 to 16 not printed in the Gazette.]

881,088. THROTTLE-CONTROLLER. OTTO THUM, Grand Rapids, Mich. Original application filed May 14, 1906, Serial No. 316,700. Divided and this application filed June 21, 1907. Serial No. 380,162.



1. In an automobile, the combination of a steering wheel, a lever below the steering wheel and near the same, a pawl and ratchet to hold the lever, and a second lever to release the pawl and also located near the steering wheel, whereby the levers and steering wheel may all be controlled by one hand of the operator.

2. In an automobile, a steering post, a steering wheel on the post, a lever pivoted to a bracket attached to the post, a segment on the lever and concentric with the wheel, a ratchet on the bracket, a pawl on the levers and engaging the ratchet, a second lever to release the pawl and a second segment on said releasing lever and arranged near the first named segment.

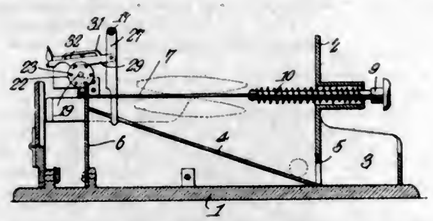
3. In an automobile, a steering wheel, a lever below the steering wheel, a segment on the lever and near the rim of the wheel, a pawl and ratchet to hold the lever, a second lever to release the pawl, a second segment on said lever and arranged parallel with and near to the first named segment, one of said segments being concave and the other being convex, whereby the segments are distinguished.

4. In an automobile, a steering post, a steering wheel on the post, a bracket on the post, a ratchet on the bracket, levers pivoted to the bracket, a pawl on one of said levers and engaging the ratchet, a segment on the movable end of the levers and near the rim of the wheel, a lever pivoted to the said first named levers and having an arm to engage and release the pawl, and a segment on said lever and arranged near the first named segment and parallel therewith.

5. In an automobile, a steering wheel, a longitudinally movable rod, a pedal operated lever slidably connected to said rod and rigidly engaging the rod to move the same, a pawl and ratchet to hold said lever, a brake pedal, means for releasing said pawl when the brake pedal is operated, a manually operated lever near the steering wheel, a pawl and ratchet to hold said lever, a lever slidably connected with the rod and engaging a stop on the rod to move the rod, and a second manually operated lever near the steering wheel to release the last named pawl.

881,089. COIN-OPERATED MECHANISM FOR VENDING-MACHINES. LESLIE A. VANDIVER, Hannibal, Mo., assignor of one-fourth to John W. Vandiver, Hagers Grove, Mo., and one-fourth to Robert H. Visger, Chicago, Ill. Original application filed Aug. 4, 1905, Serial No. 272,736. Divided and this application filed Mar. 1, 1907. Serial No. 360,020.

1. In a coin-operated vending machine, a rotatable plate having spaced peripheral notches or teeth, one of which is deeper than the others, and a lever having one end located in the path of a coin and at the other end provided with a dog arranged to engage in the deep notch on the plate and to be engaged by the peripheral teeth thereon, the construction being such that a suitable coin engaging the lever will move the dog out of the notch and the succeeding peripheral tooth will move the lever away from and release the coin.



2. In a coin-operated vending machine, a rotatable plate having spaced peripheral notches or teeth, one of which is deeper than the others, pins projecting from one face of the plate, a longitudinally movable pawl having a tooth constructed to engage the pins, means for delivering the articles, controlled by said pawl, and a lever having one end located in the path of a coin and at the other end provided with a dog arranged to engage in the deep notch on the plate and to be engaged by the peripheral teeth thereon, the construction being such that a suitable coin engaging the lever will move the dog out of the notch and the succeeding peripheral tooth will move the lever away from and release the coin.

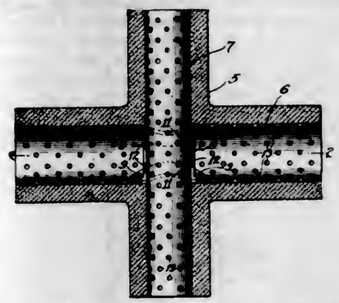
3. In a coin-operated vending machine, a rotatable member provided with peripheral teeth and a radial notch coincident with one of the teeth, projecting pins on said rotatable member, a sliding pawl provided with a tooth in operative relation to the pins and connected to the article-delivery mechanism, a link-and-lever system under the control of an inserted coin engaging said pawl for lifting the same out of the path of the pins on the insertion of a coin of suitable size, and a lever having one end located in the path of a coin and at the other end provided with a dog arranged to engage in the deep notch on the rotatable member and to be engaged by the peripheral teeth thereon, the construction being such that a suitable coin engaging the lever will move the dog out of the notch and the succeeding peripheral tooth will move the lever away from and release the coin.

4. In a coin-operated vending machine, a rotatable member provided with peripheral teeth and a radial notch coincident with one of the teeth, projecting pins on said rotatable member, a sliding pawl provided with a tooth in operative relation to the pins and connected to the article-delivery mechanism, a link-and-lever system under the control of an inserted coin engaging said pawl for lifting the same out of the path of the pins on the insertion of a coin of suitable size, a lever having one end located in the path of a coin and at the other end provided with a dog arranged to engage in the notch on the rotatable member and to be engaged by the peripheral teeth thereon, the construction being such that a suitable coin engaging the lever will move the dog out of the notch and the succeeding peripheral tooth will move the lever away from and release the coin, and a spring connecting the lever system controlled by one coin with the lever controlled by the other coin for normally maintaining both coin-operated mechanisms in the locked or inactive position.

5. In a coin-operated vending machine, a coin-controlled mechanism comprising a locking lever engaging the article-delivery mechanism, a pawl carried by said lever and movable longitudinally with the locking lever, a rotatable member engaged by and holding said pawl, and a lever system under the control of an inserted coin for lifting said pawl out of engagement with the rotatable member.

881,090. CORE-ARBOR. MATHIAS J. WEBER and HERMEN J. WEBER, Chicago, Ill., Filed Sept. 23, 1907. Serial No. 394,192.

1. A device of the class described, comprising a hollow core arbor, a second hollow arbor of larger diameter than the first and having therein a transverse socket adapted to receive said first arbor, and means for detachably locking said first arbor within said socket.



2. A device of the class described, comprising a hollow core arbor, a second hollow arbor of larger diameter than the first and having therein a transverse socket adapted to receive said first arbor, said arbors having pin and bayonet-slot interlocking engagement with each other.

3. A device of the class described, comprising a substantially cylindrical core arbor, a second substantially cylindrical arbor having a passage extending transversely therethrough and fitting the first arbor, a hollow locking member secured within said second arbor, said first arbor and member having detachable interlocking pin and slot connection with each other for rigidly connecting said arbors.

4. A device of the class described, comprising a substantially cylindrical core arbor, a second substantially cylindrical arbor of larger diameter than the first, said second arbor having a passage extending transversely therethrough to receive said first arbor, and a member secured within said second arbor and having therein a passage registering with the passage in said second arbor, said member having therein a bayonet-slot opening through one side of said second arbor, and said first arbor having thereon a projecting pin adapted to enter said bayonet-slot for securing said arbors in detachable interlocking engagement with each other.

5. A device of the class described, comprising a substantially cylindrical core arbor, a second substantially cylindrical arbor of larger diameter than the first, said second arbor having a passage extending transversely therethrough to receive said first arbor, and a member secured within said second arbor and having therein a passage registering with the passage in said second arbor, said member having therein a plurality of bayonet-slots open toward one side of said second arbor, and said first arbor having thereon a plurality of projecting studs located to correspond with the slots in said member and adapted to enter said bayonet-slots for securing said arbors in interlocking engagement with each other.

[Claim 6 not printed in the Gazette.]

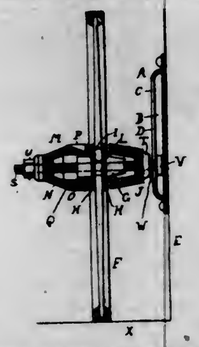
881,091. APPLIANCE FOR COMPRESSING SARVEN-WHEEL HUBS, &c. HENRY E. WITHERED, Le Roy, Kans. Filed Feb. 11, 1907. Serial No. 356,921.

1. In a device of the kind described, the combination of a draw-bolt and a pair of oppositely disposed clamping members to engage the respective hub flanges, one of said members adapted to engage the rivet heads and the other having openings to give access to the rivet ends.

2. In a device of the kind described, the combination of a draw-bolt adapted to pass through the opening through a hub and a pair of oppositely disposed thimble-like clamping members, one of said members being adapted to engage one hub flange and the rivet heads and having recesses with inclined bottoms to correspond to the rivets and to be adjustable to various thicknesses of rivet heads, and the other member being adapted to engage the other hub flange and having openings corresponding to the rivets to give access to the rivet ends.

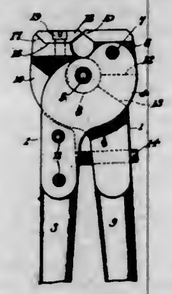
3. A device of the kind described comprising the com-

bination of a suitable support, a channeled plate mounted thereon with a slotted opening, a draw-bolt having a knob fitting non-rotatably in said channel through said slotted opening, a thimble-like clamping member removably secured to one end of the draw-bolt and adapted to embrace the hub flange and the rivet heads and having recesses with inclined bottoms corresponding to the rivets and ad-



justable to various thicknesses of rivet heads, another and oppositely disposed thimble-like clamping member removably secured to the other end of the draw-bolt and adapted to embrace the other hub flange and having openings corresponding to, and to give access to, the rivet ends, said second-mentioned clamping member consisting of a main portion and a separable die.

881,092. PLIERS. PETER BROADBOOKS, Batavia, N. Y. Filed June 17, 1907. Serial No. 379,390.



1. The herein described pliers comprising a bifurcated member, and an opposed member having an integral jaw entered between the bifurcation of the first member, a pivot bolt transfixing said jaw and bifurcation, an opposed separately formed jaw fastened to and between the ends of said bifurcation and pivoted on said bolt, said separate jaw and the handle of the solid jaw having opposed radial surfaces adapted to limit the opening movement of the jaw, substantially as described.

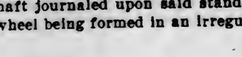
2. The herein described pliers composed of a handle having an integrally formed jaw, and also having an inclined shoulder adjacent the pivot point of the jaw; an opposed member comprising a handle having a bifurcation on its upper end, said bifurcation embracing the said jaw and projecting beyond the pivot point; a bolt transfixing the said jaw and bifurcation, a separately formed jaw fastened to and between the ends of the bifurcation and having a shank pivoted on said bolt between the arms of the bifurcation and also having a shoulder adapted to engage the shoulder on the other handle to limit the opening movement of the jaws, substantially as described.

3. The herein described pliers composed of a handle having an integrally formed jaw provided with a recess at its upper end, and a removable reversible blade detachably secured in the said recess; an opposed member comprising a handle having a bifurcation on its upper end, said bifurcation embracing the aforesaid jaw and projecting beyond the pivot point; a bolt transfixing the bifurcation and said jaw; and a separately formed jaw fastened to and between the ends of the bifurcation and having a shank pivoted on said bolt between the arms of the bifurcation.

4. The herein described pliers composed of a handle having an integrally formed jaw provided with a recess at its upper end, and said handle having an inclined shoulder adjacent the pivot point of the jaw, a removable reversible blade detachably secured in said recess; an opposed member comprising a handle having a bifurcation on its upper end, said bifurcation embracing the aforesaid jaw and projecting beyond the pivot point; a bolt transfixing the bifurcation on the jaw, and a separately formed jaw fastened to and between the ends of the bifurcation and having a shank pivoted on said bolt and also having a shoulder adapted to engage the shoulder on the opposed handle to limit the opening movement of the jaws.

881,093. SPEAKING-TUBE. FRANK M. CHANDLER, Buffalo, N. Y. Filed June 20, 1907. Serial No. 379,939.

1. A speaking-tube consisting of a length of tube, one end of said tube being mitered for placing against the ear of the user, substantially as described.



2. A speaking-tube consisting, in combination, two tubes of unequal diameter, the tube of lesser diameter adapted to slide telescopically within the larger tube, and one end of the smaller tube being mitered for placing against the ear of the user, substantially as described.

3. A speaking-tube consisting of a length of tube of which one end is mitered, said mitered part of the tube being provided with a transverse partition by which the aperture at the said mitered end is contracted in its proportions.

4. A speaking-tube consisting of a length of tube, one end of said tube being mitered, said mitered part being provided with a transverse partition consisting of a block set in the said mitered part of said tube, the outer end of said block filling the outer end of said miter, the inner end of said block being tapered to a thin edge, substantially as described.

5. A speaking-tube consisting of a length of tube, one end of said tube being mitered, said mitered part being provided with a transverse partition consisting of a block set in the said mitered part of said tube, the outer end of said block filling the outer end of said miter, the inner end of said block being tapered to a thin edge and provided with a transversely concave face, substantially as described.

[Claim 6 not printed in the Gazette.]

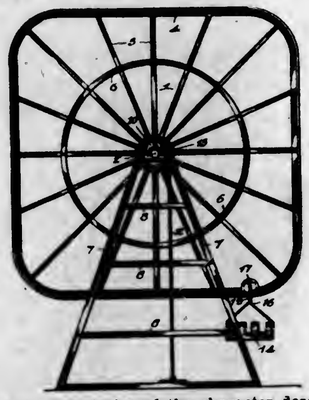
881,094. PROCESS FOR UTILIZING SAPPED TANNING LIQUORS. GEORGE W. CHILDS, New York, N. Y. Original application filed May 16, 1906, Serial No. 317,141. Divided and this application filed July 20, 1906. Serial No. 327,029.

1. The process which consists in impregnating leather with concentrated waste tanning liquor.

2. The process which consists in impregnating leather with concentrated waste tanning liquor heated above atmospheric temperature, and when the leather is still moist from the tanning process.

881,095. PLEASURE-WHEEL. ELTON F. CHUBBUCK, Hornell, N. Y. Filed Oct. 15, 1907. Serial No. 397,584.

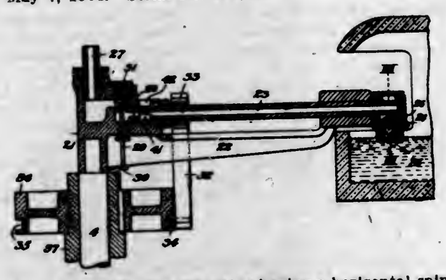
1. In a pleasure device of the character described, the combination of a supporting stand, a freely rotating wheel having its shaft journaled upon said stand, the peripheral rim of said wheel being formed in an irregular shape about said shaft and constituting a rail, and a car adapted to be actuated upon the rotation of said wheel, having wheels rotatably journaled within a portion thereof and straddling said rim and freely rolling by gravity thereupon, substantially as described.



2. In a pleasure device of the character described, the combination of a supporting stand, a freely rotating wheel having its shaft suitably journaled upon said stand and provided with hubs mounted thereon adjacent its ends, the peripheral rim of said wheel being formed in a substantial rectangular shape about said shaft and connected thereto by radial spokes, said rim having continuous outstanding flanges, and a car having oppositely disposed rollers rotatably journaled in a portion thereof and adapted to straddle the flanges of said rim and to freely roll, by gravity thereupon, as their rail, substantially as described.

3. In a pleasure wheel of the character described, the combination of a supporting stand, a freely rotating wheel having its shaft journaled upon said stand, the peripheral rim of said wheel being formed in an irregular shape about said shaft and constituting a rail, and a hanging car adapted to be actuated upon the rotation of said wheel, having wheels to rotate freely upon said rail, substantially as described.

881,096. GLASS-GATHERING APPARATUS. JOHN H. CROSKEY, Pittsburg, Pa., assignor to Duquesne Glass Co., Pittsburg, Pa., a Corporation of Pennsylvania. Filed May 7, 1906. Serial No. 315,468.



1. A glass gathering apparatus having a horizontal spindle provided with a rotatable measuring cup, and means for vertically raising and lowering the cup into and out of the glass.

2. A glass gathering apparatus provided with a hollow spindle having a measuring cup, means for vertically raising and lowering the cup into and out of the glass, and means for rotating the cup around the longitudinal center of the spindle.

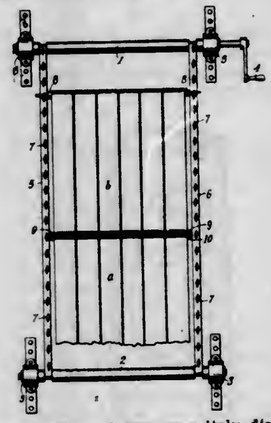
3. A glass gathering apparatus having a horizontal spindle provided with a rotatable measuring cup, means for vertically raising and lowering the cup into and out of the glass, and means for exhausting air from the interior of the cup to create retaining suction therein.

4. A glass gathering apparatus provided with a hollow spindle having a measuring cup, means for vertically raising and lowering the cup into and out of the glass, means for rotating the cup around the longitudinal center of the spindle, and means for exhausting the air from the interior of the cup to create retaining suction therein.

5. A glass gathering apparatus provided with a horizontal swinging arm having a rotatable cup, and means for vertically raising and lowering the arm and cup from and towards the top surface of the glass.

[Claims 6 to 20 not printed in the Gazette.]

881,097. DYEING APPARATUS. LOUIS DESTREE, Haren, Belgium. Original application filed Aug. 27, 1904, Serial No. 222,398. Divided and this application filed Aug. 11, 1906. Serial No. 330,220.



1. The combination of two oppositely disposed lateral supports, a channeled skein-stick secured therebetween, and a skein-clip within said channel, the channel being of sufficient capacity to permit the skein-clip to lie therein without any portion thereof projecting beyond the peripheral line of said skein-stick, whereby the passage of the skein-stick and clip therein, through folds of fibrous materials is entirely unimpeded, substantially as described.

2. The combination of two oppositely disposed endless belts, rotatable supports therefor, a skein-stick detachably secured to said belts, a skein-clip, and a channel in said skein-stick of sufficient capacity to completely envelop said skein-clip without any portion thereof projecting beyond the peripheral line of the skein-stick, whereby the passage of the skein-stick and clip therein, through folds of fibrous materials is entirely unimpeded, substantially as described.

3. A skein-stick provided with a longitudinally extending channel of substantially uniform cross-section and of sufficient depth to intersect the axial line of said skein-stick, said channel extending throughout the greater portion of the length thereof, and said skein-stick having ends of reduced cross-section extending axially beyond the outermost limits of said channel and capable of engaging opposing lateral supports spaced a greater distance apart than the length of said channel, whereby the channeled portion of said skein-stick can be freely suspended intermediate said supports, substantially as described.

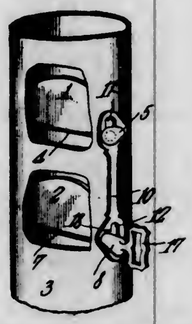
4. A skein-stick provided with a longitudinal channel of substantially uniform and U-shaped cross-section, extending throughout the greater portion of its length, and the ends of said skein-stick being of reduced cross-section and extending beyond the outermost limits of said channel and capable of engaging opposing lateral supports spaced a greater distance apart than the length of said channel, whereby the channeled portion of said skein-stick can be freely suspended intermediate said supports, substantially as described.

881,098. PAPER-BOARD. MOSES B. DISKIN, New York, N. Y. Filed Sept. 27, 1907. Serial No. 394,934.

1. The herein described process of making paper and paper board from manure, comprising the preliminary washing of the raw material with the addition of carbolic acid to destroy the odor and then subject the washed residuum with live steam under heavy pressure and a treatment of the product with camphor and a suitable insecticide during the process of pulping the same and finally pressing the pulp into boards of any desired thickness.

2. The herein described process of making paper and paper board from manure comprising the preliminary washing of the raw material with the addition of a suitable deodorant and then subjecting the washed residuum with live steam, and a treatment of the product with camphor and a suitable insecticide during the process of pulping the same and finally pressing the pulp into desired shape.

881,099. DAMPER-OPERATING MECHANISM. NORMAN P. FRASER, Carsonville, Mich., assignor of one-half to George C. Fraser, Carsonville, Mich. Filed May 15, 1907. Serial No. 373,790.



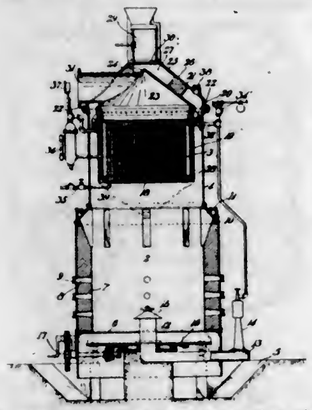
1. In a damper mechanism of the character described, the combination with a set of dampers having operating cranks provided with pins, of a vertically movable connecting member having horizontally extending slots to receive the pins on the respective cranks, the upper wall of one of the horizontal slots being recessed to provide a locking engagement between the connecting member and the respective crank pin, the weight of the connecting member serving to retain it in locked position.

2. In a damper mechanism of the character described, the combination with a set of dampers having operating cranks provided with pins, the cranks having journals adjacent thereto, of a vertically movable connecting member having vertically extending slots to receive the journals of the respective cranks and having horizontal slots to receive the crank pins thereof, the upper wall of one of the horizontal slots being provided with a locking recess to coöperate with one of the crank pins and the weight of the connecting member serving to retain it in locked position.

3. In mechanism of the class described, a set of dampers or valves, carrying pins therefor, cranks rigidly secured to said pins and each provided with a crank pin, a connecting member having longitudinally extending slots coöperating with the carrying pins to guide said member, said member being provided with transversely extending passages for the reception of the crank pins.

4. In an operating mechanism of the character described, the combination with dampers having cranks provided with crank pins, of a connecting member mounted to reciprocate longitudinally between the cranks and having transversely extending slots in which the crank pins operate, the upper wall of one of the transverse slots being cut away to form a locking recess to receive the crank pin on one of the cranks, and a handle for turning the crank pin coöperating with the locking recess.

881,100. GAS-PRODUCER. HENRY I. LEA, Pittsburg, Pa., assignor to The Westinghouse Machine Company, a Corporation of Pennsylvania. Filed July 27, 1905. Serial No. 271,413.

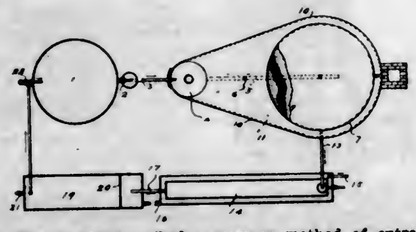


1. In a gas producer, a gas generating chamber, a superimposed steam generator, gas passages extending therethrough, a hood provided with a gas offtake inclosing the ends of said gas passages and a fuel charging passage inclosing said hood and encircling said steam generator, adapted to introduce fuel adjacent to the walls of said generating chamber.

2. In a gas producer, a gas generating chamber, a superimposed steam generator, gas passages extending through said generator, means provided with a gas offtake port inclosing the ends of said passages for collecting the gas delivered therefrom, a fuel charging device and a passage surrounding said means and said generator for delivering fuel from said device to said gas generating chamber.

3. In a gas producer, a gas generating chamber, a superimposed boiler, gas passages extending therethrough and communicating with said chamber, a collecting chamber communicating with the upper ends of said gas passages and provided with a gas delivery port, a fuel feeding device located above said collecting chamber and a passage around said chamber and said steam generator for delivering fuel from said device to said gas generating chamber.

881,101. PROCESS OF TREATING ORES. STANLEY C. C. CUARIE, Los Angeles, Cal. Filed May 16, 1904, Serial No. 208,192. Renewed June 28, 1907. Serial No. 381,354.

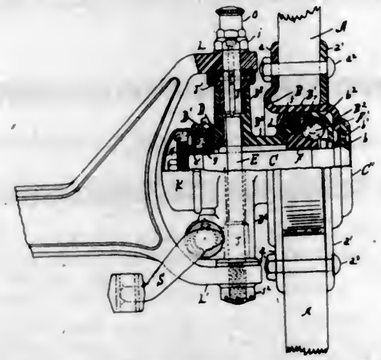


1. The herein described process or method of extracting bismuth from ores which consists in passing a hot caustic alkali solution through the ore containing bismuth and maintaining the heat of the ore in the solution during such passage and finally withdrawing the solution.

2. The herein described process of extracting bismuth which consists in passing a hot caustic alkali solution through the ore containing the bismuth, then maintaining the heat of the ore in the solution, then withdrawing and cooling the solution, then extracting the bismuth from the solution.

3. The herein described process or method of extracting bismuth which consists in first passing a hot caustic alkali solution through the ore, then cooling and precipitating metals and metallic salts therefrom, then reheating the solution and repassing the solution through the ore.

881,102. ANTIFRICTION-BEARING. WALTER C. BAKER, Cleveland, Ohio, assignor to The American Ball-Bearing Company, Cleveland, Ohio, a Corporation of Ohio. Filed Apr. 2, 1906. Serial No. 309,387.



1. A wheel bearing and steering mechanism comprising balls rollers, or other anti-friction devices, one of said anti-friction devices being located within the wheel hub, and within the line of the tread thereof, the other of said anti-friction devices being located inwardly from said wheel, said anti-friction devices being of different sizes, and the larger of said anti-friction devices being located in a line with the traction and tread of the wheel, and a steering knuckle located between the two bearings.

2. An anti-friction bearing and steering mechanism for wheels comprising ball, roller, or analogous devices, located one within the line of the traction or tread of the wheel, and the other located inwardly from said wheel, and a steering knuckle which supports the ball, roller or analogous bearings located and operating within the wheel hub, said steering knuckle being provided on its inner end with ball, roller or other anti-friction bearings operating in connection with the spindle in turn connected to the wheel hub in combination with the wheel and its hub.

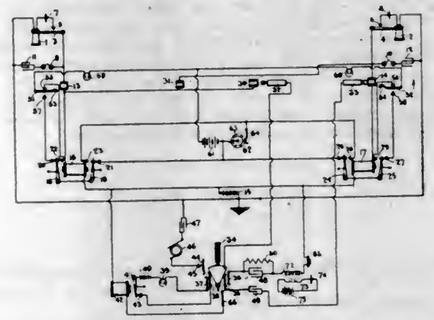
3. In a combined steering knuckle and wheel journal, a horizontally rotating steering knuckle provided with bearings interposed between the steering knuckle and the races upon which said bearings travel, one of said bearings being larger than the other and located in line with the tread of the wheel, one of said bearings being located so as to project inwardly from the wheel, the mounting upon which said knuckle rotates being located intermediate between the two bearings, as and for the purpose set forth.

4. A steering knuckle for motor vehicles comprising bearings, located interior of the hub of the wheel, and in line with the tread of the wheel, also bearings located exterior of the hub of the wheel, and projecting inwardly therefrom, both of said bearings co-acting with the steering mechanism, with the steering mechanism forming the main support for the wheel, substantially as set forth.

REISSUES.

12,756. TELEPHONE SYSTEM. EDWARD J. BURKE, Brooklyn, N. Y. Filed Oct. 25, 1907. Serial No. 399,233. Original No. 853,002, dated May 7, 1907, Serial No. 282,731.

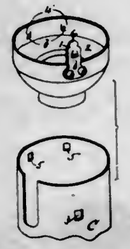
1. In a multiple board central system the combination of a plurality of subscribers' stations, a plurality of jacks connected together and to each of the said subscribers' stations by a single line, a pair of plugs connected together by a single strand, a lamp associated with each of the said sets of jacks and means for causing the said lamps to produce lights of different characters to indicate when a connection is desired and when the conversation is completed.



2. In a multiple board central system the combination of a plurality of subscribers' stations, a plurality of jacks connected with each subscriber's station, a lamp at all times controlled by the subscribers' instruments and associated with each set of the said jacks, a pair of plugs for connecting the said jacks together, means for causing the said lamps to produce lights of a different character to indicate when a connection is desired and when the conversation is completed, a switch connected to the said plugs, a second lamp controlled by the said switch.

3. In a multiple board central system the combination of a plurality of subscribers' stations, a plurality of jacks connected together and to each station by a single line, a plurality of pairs of plugs for connecting the said stations together, each pair being connected together by a single strand, a lamp associated with each set of jacks, means for causing the said lamp to give lights of different characters to indicate when a connection is desired and when the conversation is completed, a switch connected to the said strand, a second lamp controlled by the said switch.

12,757. INCANDESCENT-LAMP SOCKET. FRANK E. SEELEY, Bridgeport, Conn., assignor to The Bryant Electric Company, Bridgeport, Conn., a Corporation of Connecticut. Filed Jan. 22, 1908. Serial No. 412,222. Original No. 839,655, dated Dec. 25, 1906, Serial No. 324,919.



1. An incandescent lamp socket, having a flanged cap and a shell, adapted to fit within the flange of the cap, and means for attaching the shell and cap together, said means including two oppositely faced angled projections formed directly on one part while the other part has holes to receive the said projections.

2. An incandescent lamp socket, having a flanged cap and a shell, adapted to fit within the flange of the cap, and means for attaching the shell and cap together, said means including two oppositely faced angled projections

formed directly on one part, while the other part has holes to receive said projections in combination with an additional latching means preventing endwise motion of the shell in the cap.

3. In incandescent lamp sockets, the combination of a shell with the cap, and means for attaching the shell and cap together, consisting of a spring tongue carrying the beveled catch borne by one part and faced angled projections borne by one part, the other part having holes to receive the angled projections and the beveled catch.

4. An incandescent lamp socket, having a cap provided with oppositely faced angled projections on the inner face of the rim, a tongue provided on its inner face with a beveled catch, and a shell provided with holes suitably placed to receive the angled projections and the beveled catch when the cap and shell are fitted together.

DESIGNS.

39,164. PIN OR BUTTON HEAD. DAVID P. BARRY, New York, N. Y. Filed Jan. 4, 1908. Serial No. 409,362. Term of patent 7 years.



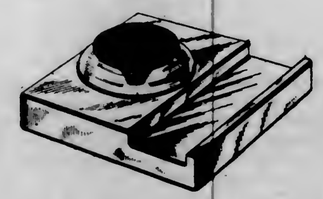
The ornamental design for a pin or button head, as shown.

39,165. CAMPAIGN-BUTTON. CHRISTOPHER F. PEARSON, Portland, Oreg. Filed Dec. 26, 1907. Serial No. 408,198. Term of patent 3½ years.



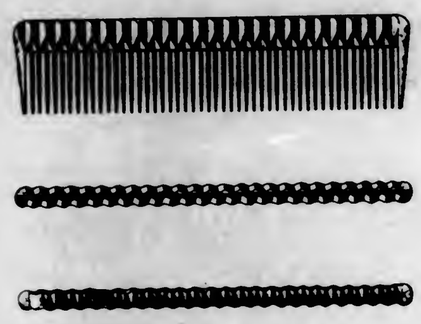
The ornamental design for a campaign button, as shown.

39,166. INKSTAND. FRANK M. ASHLEY, New York, N. Y. Filed Nov. 30, 1906. Serial No. 345,846. Term of patent 14 years.



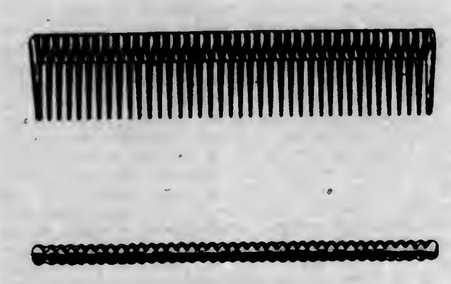
The ornamental design for an inkstand, as shown.

39,167. COMB. FREDERICK W. GRELL, New York, N. Y., assignor to American Hard Rubber Company, a Corporation of New York. Filed Dec. 20, 1907. Serial No. 407,431. Term of patent 14 years.



The ornamental design for a comb, as shown.

39,168. COMB. FREDERICK W. GRELL, New York, N. Y., assignor to American Hard Rubber Company, a Corporation of New York. Filed Dec. 20, 1907. Serial No. 407,432. Term of patent 14 years.



The ornamental design for a comb, as shown.

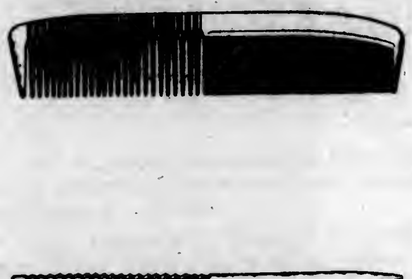
39,169. COMB. FREDERICK W. GRELL, New York, N. Y. assignor to American Hard Rubber Company, a Corporation of New York. Filed Dec. 20, 1907. Serial No. 407,433. Term of patent 14 years.



Fig 2.

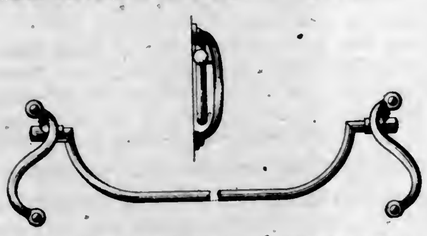
The ornamental design for a comb, as shown.

39,170. COMB. FREDERICK W. GRELL, New York, N. Y., assignor to American Hard Rubber Company, a Corporation of New York. Filed Dec. 20, 1907. Serial No. 407,434. Term of patent 14 years.



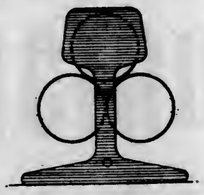
The ornamental design for a comb, as shown.

39,171. COMBINED HANDLE AND ROBE-HOLDER FOR VEHICLES. HARRY THOMASMA and ADDISON H. BLANCHARD, Grand Rapids, Mich. Filed Mar. 28, 1907. Serial No. 365,207. Term of patent 14 years.



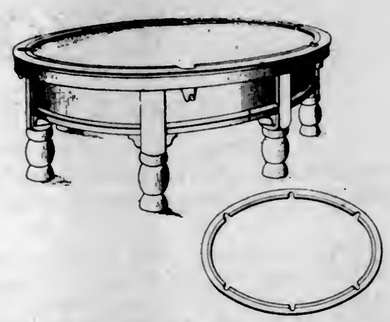
The ornamental design for a combined handle and robe holder for vehicles, as shown.

39,172. DISPLAY-STAND AND HANGER. HAROLD A. RICHARDSON, Steelton, Pa. Filed Dec. 19, 1907. Serial No. 407,266. Term of patent 14 years.



The ornamental design for a display stand and hanger, as shown.

39,173. BILLIARD-TABLE. JOHN JEFFREY PEARSON, London, England. Filed Nov. 13, 1907. Serial No. 402,041. Term of patent 14 years.



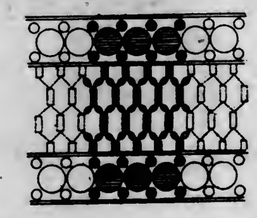
The ornamental design for a billiard table as shown.

39,174. BRAID AND BRAID-NECKWEAR. AUGUST HUGO GROSSENBACH, Jersey City, N. J. Filed Jan. 8, 1908. Serial No. 409,892. Term of patent 3½ years.



The ornamental design for braid and braid neckwear, as shown.

39,175. TRIMMING. WALTHER HELBIG, Jersey City, N. J., assignor to The Kuraheedt Manufacturing Company, New York, N. Y., a Corporation of New York. Filed Jan. 2, 1908. Serial No. 409,057. Term of patent 3½ years.



The ornamental design for a trimming substantially as herein shown.

TRADE-MARKS

PUBLISHED MARCH 3, 1908.

The following trade-marks have been adjudged entitled to registration under the act of February 20, 1905, and are published in compliance with section 6 of said act. Said section provides:

"Any person who believes he would be damaged by the registration of a mark may oppose the same by filing notice of opposition, stating the grounds therefor, in the Patent Office within thirty days after the publication of the mark sought to be registered, which said notice of opposition shall be verified by the person filing the same before one of the officers mentioned in section two of this act. If no notice of opposition is filed within said time the Commissioner shall issue a certificate of registration therefor, as hereinafter provided for."

Marks which are stated to have been "Used ten years" are registrable under the last proviso of section 5 of said act, which is as follows:

"And provided further, That nothing herein shall prevent the registration of any mark used by the applicant or his predecessors, or by those from whom title to the mark is derived, in commerce with foreign nations or among the several States, or with Indian tribes, which was in actual and exclusive use as a trade-mark of the applicant or his predecessors from whom he derived title for ten years next preceding the passage of this act."

Section 14 of said act provides for the following fee:

"On filing notice of opposition to the registration of a trade-mark, ten dollars."

Ser. No. 8,344. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) Voigt & Co., Chattanooga, Tenn. Filed June 16, 1905. Used ten years.

Ricinol.

Particular description of goods.—Tasteless Castor-Oil.

Ser. No. 10,915. (CLASS 22. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) Mergenthaler Linotype Company, New York, N. Y. Filed July 27, 1905. Used ten years.

LINOTYPE.

Particular description of goods.—Machines for Producing Type-bars.

Ser. No. 11,764. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) The Franco-American Chemical Co., Montreal, Quebec, Canada. Filed Aug. 18, 1905.



Particular description of goods.—A Remedy for Female Complaints.

Ser. No. 15,068. (CLASS 39. CLOTHING.) Beals & Torrey Shoe Co., Milwaukee, Wis. Filed Nov. 29, 1905. Used ten years.



The annular band being red and the crown partly red.

Particular description of goods.—Leather, Rubber, and Canvas Boots and Shoes.

Ser. No. 15,399. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) JOSEPH PERCY REMINGTON, Jr., Philadelphia, Pa. Filed Dec. 14, 1905.



Particular description of goods.—Supports for Chemical Utensils, Laboratory Emulsifiers, Laboratory Stills, Retorts, and Condensers, Laboratory Grinding Apparatus, Laboratory Powder Sifters and Mixers, Laboratory Measuring and Molding Apparatus, Laboratory Filtering and Percolating Apparatus, Laboratory Burners and Furnaces, Laboratory Water and Drying Baths, Laboratory Presses, Laboratory Evaporating-Dishes, Laboratory Mortars and Pestles.

Ser. No. 18,565. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) EDDY PALMER, New York, N. Y., assignor to Solon Palmer, a Corporation of New York. Filed Apr. 6, 1906.

VIOLET GIRL

Particular description of goods.—Perfumes and Perfumed Toilet Powders.

Ser. No. 18,566. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) EDDY PALMER, New York, N. Y., assignor to Solon Palmer, a Corporation of New York. Filed Apr. 6, 1906.

ROSE GIRL

Particular description of goods.—Perfumes and Perfumed Toilet Powders.

Ser. No. 21,406. (CLASS 9. EXPLOSIVES, FIREARMS, EQUIPMENTS, AND PROJECTILES.) LAFLIN & RAND POWDER COMPANY, New York, N. Y. Filed Aug. 9, 1906.



Particular description of goods.—Fuses and Blasting-Caps.

Ser. No. 21,492. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) NEW YORK QUININE & CHEMICAL WORKS LIMITED, New York, N. Y. Filed Aug. 11, 1906.



Particular description of goods.—Acetanilid, Aloins, Ammonia, Bismuth, Caffeine, Calomel, Chinodin, Chloroform, Cinchonidin, Cinchonin, Cocaine, Codeine, Corrosive Sublimate, Digtalin, Ergotin, Euonymin, Iodin, Iodoform, Mercury Iodid, Potassium, Quinidin, Red Precipitate, Santonin, Sodium Bromid, Strychnin, Quinin, and Morphine, Blue-Mass, Citrine Ointment, Mercurial Ointment, Dover's Powders, and Opium.

Ser. No. 21,908. (CLASS 38. PUBLICATIONS.) SAMUEL J. HOPPER, Dallas, Tex. Filed Sept. 4, 1906. Used ten years.

SOUTHERN POULTRY JOURNAL

Particular description of goods.—A magazine or Periodical.

Ser. No. 22,011. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE TANGE LASHLEY CO., Cleveland, Ohio. Filed Sept. 10, 1906.

WEDDING-BELLS

Particular description of goods.—Tea.

Ser. No. 24,223. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) DULUTH-SUPERIOR MILLING CO., Duluth, Minn. Filed Dec. 22, 1906.



Particular description of goods.—Wheat-Flour.

Ser. No. 24,405. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) SUCHARD SOCIÉTÉ ANONYME, Neufchatel, Switzerland. Filed Jan. 3, 1907.



CHOCOLAT
AU
NOISETTES
SUCHARD

Particular description of goods.—Chocolate.

Ser. No. 24,406. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) SUCHARD SOCIÉTÉ ANONYME, Neufchatel, Switzerland. Filed Jan. 3, 1907.

NOISETTINES

Particular description of goods.—Chocolate.

Ser. No. 24,407. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) SUCHARD SOCIÉTÉ ANONYME, Neufchatel, Switzerland. Filed Jan. 3, 1907.

DUJA

Particular description of goods.—Chocolate.

Ser. No. 26,264. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) PRICE & LUCAS CIDER & VINEGAR CO., Louisville, Ky. Filed Mar. 26, 1907. Used ten years.



Particular description of goods.—Vinegar, Mustard, and Pepper-Sauces.

Ser. No. 26,782. (CLASS 39. CLOTHING.) YOUNKER BROS. INC., Des Moines, Iowa. Filed Apr. 18, 1907.

GREEK MAID

Particular description of goods.—Muslin Underwear and Corsets.

Ser. No. 26,795. (CLASS 37. PAPER AND STATIONERY.) L & C HARDTMUTH, Budweis, Austria, and Paris, France. Filed Apr. 19, 1907.

FERESILVER

Particular description of goods.—Crayon-Holders, Penholders, Pencil-Holders, and Fountain-Pens Made of an Extra White Metal.

Ser. No. 27,259. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) A. & R. LOGGIE, Loggieville, New Brunswick, Canada; Island Pond, Vt., and Columbia Falls and Vanceboro, Me. Filed May 9, 1907.

EAGLE BRAND



Particular description of goods.—Canned Lobsters, Clams, and Fish, Except Salmon.

Ser. No. 28,570. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) FRED E. MCCOY, Denver, Colo. Filed July 2, 1907.

R-U-HUNGREE?

Particular description of goods.—Ice-Cream Cones and Popcorn.

Ser. No. 28,758. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) MAX HEIM, Berlin, Germany. Filed July 12, 1907.

Antinausin

Particular description of goods.—Remedies for Seasickness.

Ser. No. 29,485. (CLASS 43. THREAD AND YARN.) THE AMERICAN THREAD COMPANY, Jersey City, N. J. Filed Aug. 20, 1907.

UNCLE SAM

Particular description of goods.—Spool-Cotton, Sewing-Cotton, and Thread.

Ser. No. 29,869. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) THOS. HARPER & SONS, LTD., Redditch and London, England. Filed Sept. 11, 1907.



Particular description of goods.—Hand-Sewing Needles.

Ser. No. 29,898. (CLASS 39. CLOTHING.) THE WASHINGTON WOOLEN MILLS, Fredericksburg, Va. Filed Sept. 12, 1907.



Particular description of goods.—Trousers.

Ser. No. 29,954. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) RAINBOW DYE CO., New York, N. Y. Filed Sept. 13, 1907. Rainbow being shown in colors.



Particular description of goods.—Dyes.

Ser. No. 30,220. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) EUGENE L. WALDO, New Rochelle, N. Y. Filed Sept. 26, 1907.

"Hai"

Particular description of goods.—Bareges.

Ser. No. 30,307. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) EDWARD BAUM, Baltimore, Md. Filed Sept. 30, 1907.

NASALOIDS

Particular description of goods.—Suppositories for the Nasal Passages.

Ser. No. 30,652. (CLASS 18. AGRICULTURAL AND DAIRY MACHINERY AND PARTS THEREOF.) POTATO IMPLEMENT CO., Traverse City, Mich. Filed Oct. 18, 1907.

ACME

Particular description of goods.—Potato-Planters, Attachments Therefor, and Corn-Planters.

Ser. No. 30,661. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) HOLBROOKS LIMITED, Birmingham, England. Filed Oct. 18, 1907.



Particular description of goods.—Sauces, Pickles, Vinegar, Curries, Curry-Powders, Curry-Paste, Custard-Powders, Egg-Powders, Soups, Soup-Powders, Soup-Tablets, Salad-Oils, and Fruit Essences.

Ser. No. 31,031. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) JOHS. CONRADSEN A/S, Stavanger, Norway. Filed Nov. 6, 1907.



Particular description of goods.—Canned Fish, Smoked Fish, Pickled and Preserved Fish.

Ser. No. 31,311. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) WILLIAM H. GALE, Hamburg, N. Y. Filed Nov. 22, 1907.



Particular description of goods.—A Chilblain and Foot Remedy, Chilblain-Ointment, Corn Remedy, and Foot-Powder.

Ser. No. 31,363. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) GEO. L. MARION MFG. CO., New York, N. Y. Filed Nov. 25, 1907.

"Aurora"

Particular description of goods.—Denatured Alcohol.

Ser. No. 31,367. (CLASS 17. TOBACCO PRODUCTS.) RODRIGUEZ Y HNO, Habana, Cuba. Filed Nov. 26, 1907.



Particular description of goods.—Cigars.

Ser. No. 31,384. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS, NOT INCLUDING ELECTRICAL APPARATUS.) THE UNION STOVE WORKS, New York, N. Y. Filed Nov. 26, 1907.

INVADER

Particular description of goods.—Stoves for Heating and Cooking, Ranges, Furnaces, and Radiators.

Ser. No. 31,508. (CLASS 29. BROOMS, BRUSHES, AND DUSTERS.) C. W. SNOW & COMPANY, Syracuse, N. Y. Filed Dec. 2, 1907.

STELLA

Particular description of goods—Paint-Brushes.

Ser. No. 31,539. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) J. KRIDEL, SONS & CO., New York, N. Y. Filed Dec. 4, 1907

"Zoe-Der-Ark"

Particular description of goods.—Silk Piece Goods.

Ser. No. 31,553. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) W. H. STOKES MILLING CO., Watertown, S. D. Filed Dec. 4, 1907.

WANETA

Particular description of goods.—Wheat-Flour.

Ser. No. 31,590. (CLASS 39. CLOTHING.) STRAWBRIDGE & CLOTHIER, Philadelphia, Pa. Filed Dec. 5, 1907.

DAUBREY

Particular description of goods.—Leather Gloves.

Ser. No. 31,600. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE HIGGINSVILLE MILLING CO., Higginsville, Mo. Filed Dec. 6, 1907.



BULL DOG

Particular description of goods.—Wheat-Flour.

Ser. No. 31,650. (CLASS 25. LOCKS AND SAFES.) JOHN B. POORE, Scranton, Pa. Filed Dec. 10, 1907.

WATCH BANK

Particular description of goods.—Portable Money-Banks.

Ser. No. 31,667. (CLASS 37. PAPER AND STATIONERY.) DENNISON MANUFACTURING COMPANY, Boston, Mass. Filed Dec. 11, 1907.

IMPERIAL

Particular description of goods.—Crape-Paper.

Ser. No. 31,678. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) J. L. HOPKINS & COMPANY, New York, N. Y. Filed Dec. 12, 1907.



Particular description of goods.—Roots, Barks, Herbs, Gums, Leaves, and Seeds Used for Medicinal Purposes.

Ser. No. 31,696. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) WHITON HARDWARE CO., Seattle, Wash. Filed Dec. 13, 1907.

OLYMPIC

Particular description of goods.—Shovels, Spades, Scoops, Axes, Hammers, Hatchets, Files, Handsaws, Crosscut-Saws, Cutlery Not of Precious-Metal Ware, Chisels, Screw-Drivers, Auger-Bits, and Drawing-Knives.

Ser. No. 31,736. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) THE I. E. PALMER CO., Middletown, Conn. Filed Dec. 16, 1907.

Cherub

Particular description of goods.—Hammocks.

Ser. No. 31,767. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) AUGUSTA BREWING CO., Augusta, Ga. Filed Dec. 17, 1907.

PROHI

Particular description of goods.—A Non-Intoxicating Carbonated Beverage.

Ser. No. 31,771. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) J. OPPENHEIMER & CO., San Antonio, Tex. Filed Dec. 17, 1907.

BLUE JAY



Particular description of goods.—Canned Fruits and Vegetables.

Ser. No. 31,772. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) J. OPPENHEIMER & CO., San Antonio, Tex. Filed Dec. 17, 1907.

BLUE JAY



Particular description of goods.—Canned Fish and Oysters.

Ser. No. 31,792. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) GRIFFITH-DURNEY COMPANY, San Francisco, Cal. Filed Dec. 17, 1907.

Regina

Particular description of goods.—Canned Salmon.

Ser. No. 31,794. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) GRIFFITH-DURNEY COMPANY, San Francisco, Cal. Filed Dec. 17, 1907.

Mistletoe



Particular description of goods.—Canned Salmon.

Ser. No. 31,805. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) RIDENOUR-BAKER GROCERY CO., Kansas City, Mo. Filed Dec. 18, 1907.



Particular description of goods.—Coffee and Tea.

Ser. No. 31,806. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) RIDENOUR-BAKER GROCERY CO., Kansas City, Mo. Filed Dec. 18, 1907.



Particular description of goods.—Buckwheat-Flour, Pancake-Flour, White Oats, Tapioca, Sage, Sago, Rice, Barley, Farina, and Spaghetti.

Ser. No. 31,825. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) MILTON BRADLEY CO., Springfield, Mass. Filed Dec. 18, 1907.

TOPSY-TWIRL

Particular description of goods.—Tops.

Ser. No. 31,833. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) JOSEPH BIECHELE, Canton, Ohio. Filed Dec. 18, 1907.

BANNER

Particular description of goods.—Soap.

Ser. No. 31,834. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) JOSEPH BIECHELE, Canton, Ohio. Filed Dec. 18, 1907.

DISINFECTINE

Particular description of goods.—Medicated Soap.

Ser. No. 31,845. (CLASS 27. HOROLOGICAL INSTRUMENTS.) SETH THOMAS CLOCK COMPANY, New York, N. Y. Filed Dec. 19, 1907.



Particular description of goods.—Clocks.

Ser. No. 31,869. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) THE HOLBROOK GROCERY CO., Keene, Woodsville, and Nashua, N. H. Filed Dec. 21, 1907.

MOUNTAIN

Particular description of goods.—Grass-Seed.

Ser. No. 31,870. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JOHN P. HOLLIWAY, St. Joseph, Mo. Filed Dec. 21, 1907.



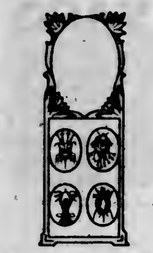
Particular description of goods.—Medicines for Piles.

Ser. No. 31,877. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) STANDARD FURNITURE COMPANY, Seattle, Wash. Filed Dec. 21, 1907.



Particular description of goods.—Furniture-Polish.

Ser. No. 31,906. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JAMES W. BLACK, Clinton, Iowa. Filed Dec. 24, 1907.



Particular description of goods.—Remedy for Diseases of the Scalp.

Ser. No. 31,908. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) STANDARD MILK FLOUR CO., New York, N. Y. Filed Dec. 24, 1907.



Particular description of goods.—Milk-Flour and Desiccated Milk.

Ser. No. 31,913. (CLASS 17. TOBACCO PRODUCTS.) J. W. ROBERTS & SON, Tampa, Fla. Filed Dec. 26, 1907.



Particular description of goods.—Cigars.

Ser. No. 31,914. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) GENERAL ELECTRIC COMPANY, Schenectady, N. Y. Filed Dec. 26, 1907.

H

Particular description of goods.—Alternating-Current Transformers.

Ser. No. 31,915. (CLASS 2. RECEPTACLES.) JOHN G. LYMAN, White Plains, N. Y. Filed Dec. 26, 1907.

CALORIS

Particular description of goods.—Heat and Cold Insulated Bottles.

Ser. No. 31,916. (CLASS 2. RECEPTACLES.) JOHN G. LYMAN, White Plains, N. Y. Filed Dec. 26, 1907.

VACO

Particular description of goods.—Heat and Cold Insulated Bottles.

Ser. No. 31,924. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ALBERT H. LANDSBERGER, San Francisco, Cal. Filed Dec. 26, 1907.



Particular description of goods.—An Extract of Tomatoes and Beef.

Ser. No. 31,943. (CLASS 48. MALT EXTRACTS AND LIQUORS.) THE WEST END BREWING CO., Utica, N. Y. Filed Dec. 27, 1907.



Particular description of goods.—Ale, Beer, Half-and-Half, Porter, Malt Extract, and Brown Stout.

Ser. No. 31,959. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) THE I. E. PALMER CO., Middletown, Conn. Filed Dec. 28, 1907.



Particular description of goods.—Open-Mesh Fabric for Protection Against Insects.

Ser. No. 31,960. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) SPRAGUE ELECTRIC COMPANY, New York, N. Y. Filed Dec. 28, 1907.

BX

Particular description of goods.—Armored Conductors.

Ser. No. 31,989. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) GEO. V. FRYE, Lexington, Ohio. Filed Dec. 31, 1907.



Particular description of goods.—Composition for Insulating Material.

Ser. No. 31,999. (CLASS 3. BAGGAGE, HORSE EQUIPMENTS, PORTFOLIOS, AND POCKET-BOOKS.) THE HARRIS SADDLERY COMPANY, Cairo, Ill. Filed Jan. 2, 1908.



Particular description of goods.—Harness, Saddles, Horse-Collars, Whips, and Lap-Robes.

Ser. No. 32,019. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) THE NATIONAL-ACME MFG. CO., Cleveland, Ohio. Filed Jan. 2, 1908.



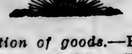
Particular description of goods.—Screw-Machines and Slotting-Machines.

Ser. No. 32,025. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) AITKEN, SON & CO., New York, N. Y. Filed Jan. 2, 1908.



Particular description of goods.—Artificial Flowers, Artificial Wings, Birds, and Feathers, Hat-Pins, and Imitation Buckles for Use as Hat-Trimmings.

Ser. No. 32,026. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) E. C. DE WITT & COMPANY, Chicago, Ill. Filed Jan. 2, 1908. The sun-rays being printed in gold bronze.



Particular description of goods.—Remedies for the Relief of Kidney, Bladder, and Liver Troubles.

Ser. No. 32,074. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE STERN & SAALBERG CO., New York, N. Y. Filed Jan. 4, 1908.



The annular band is red.

Particular description of goods.—Candies.

Ser. No. 32,075. (CLASS 18. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) COVERT MANUFACTURING COMPANY, Watervliet, N. Y. Filed Jan. 6, 1908.

SQUARE

BRAND

Particular description of goods.—Hooks, Attaching-Rings, Clevises, Chains, Eyes, Combined Buckles and Snaps, Metallic Bull-Leads and Trimmings Therefor, Metallic Trimmings for Breast-Straps, Metallic Trimmings for Leads, Metallic Hitching-Pins and Hitching-Posts and Trimmings Therefor, Hammock-Trimmings, Metallic Hitching Devices, Breech-Irons, Combination Lariat, Tether, and Picket Pin Formed of Metal, Breast-Strap Protectors, Combination Snaps and Thimbles, Metallic Trimmings for Trace-Carriers, Metallic Tie-Trimmings, Buckles, Animal-Weights, and Thimbles.

Ser. No. 32,076. (CLASS 3. BAGGAGE, HORSE EQUIPMENTS, PORTFOLIOS, AND POCKET-BOOKS.) COVERT MANUFACTURING COMPANY, Watervliet, N. Y. Filed Jan. 6, 1908.

SQUARE

BRAND

Particular description of goods.—Harness Formed of Web, Rope, and Leather and Combinations of the Same, Comprising Hitching Devices, Leads, Ties, Lariats, Breeching-Straps, Weight-Cords, Breast-Straps, Bridles, Checkreins, Girths, Halters, Trace and Trace-Carriers, and Reins.

Ser. No. 32,078. (CLASS 3. BAGGAGE, HORSE EQUIPMENTS, PORTFOLIOS, AND POCKET-BOOKS.) COVERT MANUFACTURING COMPANY, Watervliet, N. Y. Filed Jan. 6, 1908.



Particular description of goods.—Harness Formed of Web, Rope, and Leather and Combinations of the Same, Comprising Hitching Devices, Leads, Ties, Lariats, Breeching-Straps, Weight-Cords, Breast-Straps, Bridles, Checkreins, Girths, Halters, Trace and Trace-Carriers, and Reins.

Ser. No. 32,079. (CLASS 18. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) COVERT MANUFACTURING COMPANY, Watervliet, N. Y. Filed Jan. 6, 1908.



Particular description of goods.—Hooks, Attaching-Rings, Clevises, Chains, Eyes, Combined Buckles and Snaps, Metallic Bull-Leads and Trimmings Therefor, Metallic Trimmings for Breast-Straps, Metallic Trimmings for Leads, Metallic Hitching-Pins and Hitching-Posts and Trimmings Therefor, Hammock-Trimmings, Metallic Hitching Devices, Breech-Irons, Combination Lariat, Tether, and Picket Pin Formed of Metal, Breast-Strap Protectors, Combination Snaps and Thimbles, Metallic Trimmings for Trace-Carriers, Metallic Tie-Trimmings, Buckles, Animal-Weights, and Thimbles.

Ser. No. 32,080. (CLASS 3. BAGGAGE, HORSE EQUIPMENTS, PORTFOLIOS, AND POCKET-BOOKS.) COVERT MANUFACTURING COMPANY, Watervliet, N. Y. Filed Jan. 6, 1908.



Particular description of goods.—Harness Formed of Web, Rope, and Leather and Combinations of the Same, Comprising Hitching Devices, Leads, Ties, Lariats, Breeching-Straps, Weight-Cords, Breast-Straps, Bridles, Checkreins, Girths, Halters, Trace and Trace-Carriers, and Reins.

Ser. No. 32,125. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) CLARK, COGGIN & JOHNSON CO., Boston, Mass. Filed Jan. 8, 1908.

PURI-TAN-ATED

Particular description of goods.—Coffee.

Ser. No. 32,130. (CLASS 12. MASONRY MATERIALS.) BUCK ROOFING COMPANY, St. Louis, Mo. Filed Jan. 8, 1908.

OLD BUCK



Particular description of goods.—Felt Roofing.

Ser. No. 32,160. (CLASS 28, JEWELRY AND PRECIOUS-METAL WARE.) ARTHUR L. BAILHACHE, Racine, Wis. Filed Jan. 10, 1908.

BABYHOOD

Particular description of goods.—Jewelry for Personal Wear, Bowls, Spoons, and Cups of Precious-Metal Ware.

Ser. No. 32,179. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) THE STANLEY RULE & LEVEL COMPANY, New Britain, Conn. Filed Jan. 11, 1908. Used ten years.

BAILEY

Particular description of goods.—Planes, Spoke-Shaves, and Scrapers, Provided with Cutting Edges.

Ser. No. 32,194. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) MAURICE J. BEBB, Xenia, Ohio. Filed Jan. 13, 1908.



Particular description of goods.—A Chemical Compound in Tablet, Liquid, and Powdered Form for Cleansing Straw.

Ser. No. 32,221. (CLASS 48. MALT EXTRACTS AND LIQUORS. BIENVILLE BREWERY, Mobile, Ala. Filed Jan. 14, 1908.



The upper portion of the shield being blue and the letters thereon red.

Particular description of goods.—Beer.

Ser. No. 32,222. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) THE I. E. PALMER CO., Middletown, Conn. Filed Jan. 14, 1908.

Reliance

Particular description of goods.—Hammocks.

Ser. No. 32,227. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) HENRY M. O'NEIL, New York, N. Y. Filed Jan. 15, 1908.

SHORT STOP

Particular description of goods.—Remedies for Coughs, Colds, Hoarseness, Bronchitis, Pneumonia, and other Diseases of the Throat and Lungs, Remedies for Cholera, Diarrhea, Dysentery, Colic, Cramps, Cholera Morbus, and other Diseases of the Stomach and Bowels, Remedies for Rheumatism, Gout, Sciatica, Lumbago, and other Diseases of an Inflammatory Character, Remedies for Asthma, Remedies for Corns, Remedies for Grip, Malaria, and Chills, Remedies for Headache, Neuralgia, and other Diseases of the Nervous System, and Plasters for External Application to the Human Body to Relieve Pain.

Ser. No. 32,228. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) LEWIS S. SORBER, Philadelphia, Pa. Filed Jan. 15, 1908.

RAL-U-G

Particular description of goods.—A Remedy for Backache, Neuralgia, Rheumatism, Sprains, Toothache, Lumbago, Sciatica, Pleurisy, Sore Throat, and Analogous Diseases.

Ser. No. 32,235. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) J. C. GRANT CHEMICAL COMPANY, East St. Louis, Ill. Filed Jan. 15, 1908.



Particular description of goods.—Baking-Powder.

Ser. No. 32,236. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) J. C. GRANT CHEMICAL COMPANY, East St. Louis, Ill. Filed Jan. 15, 1908.



Particular description of goods.—A Bicarbonate of Soda, Otherwise Known as Baking-Soda or Saleratus.

Ser. No. 32,247. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) CALUMET MANUFACTURING CO., New York, N. Y. Filed Jan. 16, 1908.

"POINTRITE"

Particular description of goods.—Toilet-Pins.

Ser. No. 32,250. (CLASS 3. BAGGAGE, HORSE EQUIPMENTS, PORTFOLIOS, AND POCKETBOOKS.) THREEFOOT BROS. & CO., Meridian, Miss. Filed Jan. 16, 1908.



Particular description of goods.—Riding-Saddles and Harness.

Ser. No. 32,297. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) MARSHALL MILK CONDENSING COMPANY, Marshall, Ill. Filed Jan. 18, 1908.

BOSS BRAND

Particular description of goods.—Milk.

Ser. No. 32,325. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS, NOT INCLUDING ELECTRICAL APPARATUS.) THOS W. HOUCHIN CO., New York, N. Y. Filed Jan. 20, 1908.

SUNBURST

Particular description of goods.—Alcohol-Burners.

Ser. No. 32,326. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) GILSON MANUFACTURING CO., Port Washington, Wis. Filed Jan. 20, 1908.

Goes Like Sixty.

Particular description of goods.—Explosive-Engines.

Ser. No. 32,360. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) J. OLNEY NORRIS, Baltimore, Md. Filed Jan. 22, 1908.

SILVER SPRING

Particular description of goods.—Wheat-Flour.

Ser. No. 32,369. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS, NOT INCLUDING ELECTRICAL APPARATUS.) RELIANCE HEATER & SUPPLY COMPANY, Pittsburg, Pa. Filed Jan. 22, 1908.

RELIANCE

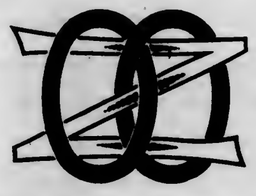
Particular description of goods.—Heating-Boilers, Hot-Water Heaters, Steam-Heaters, Radiators, and Parts Thereof.

Ser. No. 32,429. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) CERTAIN CURE COMPANY, Evansville, Ind. Filed Jan. 25, 1908.



Particular description of goods.—Chill Compound, Cough Compound, and Corn Compound.

Ser. No. 32,430. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE OZO COMPANY, Tiffin, Ohio. Filed Jan. 25, 1908.



Particular description of goods.—Hair-Tonic, Toilet Water, and Toilet Cream.

Ser. No. 32,433. (CLASS 17. TOBACCO PRODUCTS.) S. S. PIERCE CO., Boston, Mass. Filed Jan. 25, 1908.



Particular description of goods.—Cigars.

TRADE-MARKS

REGISTERED MARCH 3, 1908.

67,962. SKIN CREAM, COLD CREAM, AND HAIR LOTIONS. S. ARMITAGE, London, England.
Filed October 5, 1907. Serial No. 30,435. PUBLISHED DECEMBER 31, 1907.

67,963. INTERNAL REMEDY FOR URINARY DISEASES. ACTIEN-GESELLSCHAFT FÜR ANILIN-FABRIKATION, Berlin, Germany.
Filed July 30, 1907. Serial No. 29,116. PUBLISHED DECEMBER 31, 1907.

67,964. CERTAIN CHEMICALS. BADISCHE ANILIN & SODA FABRIK, Ludwigshafen-on-the-Rhine, Germany.
Filed July 27, 1907. Serial No. 29,058. PUBLISHED DECEMBER 31, 1907.

67,965. DYESTUFFS, INCLUDING INDIGO AND INDIGO PREPARATIONS, COAL-TAR DYES. BADISCHE ANILIN & SODA FABRIK, Ludwigshafen-on-the-Rhine, Germany.
Filed October 26, 1907. Serial No. 30,801. PUBLISHED DECEMBER 31, 1907.

67,966. DRESSING FOR MANGE IN CATTLE, HORSES, AND DOGS. WILLIAM COOPER & NEPHEWS, Berkhamsted, England.
Filed August 26, 1907. Serial No. 29,604. PUBLISHED DECEMBER 31, 1907.

67,967. STOMACH TONICS OR BITTERS. PIETRO DE VECCHI, Milan, Italy.
Filed June 14, 1906. Serial No. 20,268. PUBLISHED DECEMBER 31, 1907.

67,968. LIQUID HAIR-TONIC. THE J. EY COMPANY, San Jose, Cal.
Filed September 13, 1907. Serial No. 29,935. PUBLISHED DECEMBER 31, 1907.

67,969. PERFUMES. FOOTE AND JENKS, Jackson, Mich.
Filed November 6, 1907. Serial No. 31,034. PUBLISHED DECEMBER 31, 1907.

67,970. REMEDIES FOR INDIGESTION AND DYSPEPSIA. FREDERICK STEARNS & Co., Detroit, Mich.
Filed October 21, 1907. Serial No. 30,714. PUBLISHED DECEMBER 31, 1907.

67,971. TONIC LAXATIVES. FREDERICK HAMILTON GREEN, Muscatine, Iowa.
Filed November 11, 1907. Serial No. 31,113. PUBLISHED DECEMBER 31, 1907.

67,972. REMEDIES FOR CONSTIPATION. JULIUS GRÜNTHAL, Berlin, Germany.
Filed October 23, 1907. Serial No. 30,736. PUBLISHED DECEMBER 31, 1907.

67,973. CERTAIN COSMETIC PREPARATIONS. ABRAHAM MISLIG, New York, N. Y.
Filed November 1, 1907. Serial No. 30,909. PUBLISHED DECEMBER 31, 1907.

67,974. FEVER AND HEADACHE POWDERS, BITTERS, LINIMENT, AND LIVER-REGULATOR. J. H. SNYDER MED. Co., Jonesboro, Ark.
Filed October 29, 1907. Serial No. 30,848. PUBLISHED DECEMBER 31, 1907.

67,975. MASSAGE AND FACE CREAM. WHEELER MANUFACTURING Co., Dallas, Tex.
Filed August 26, 1907. Serial No. 29,570. PUBLISHED DECEMBER 31, 1907.

67,976. CRAMP REMEDY FOR PIGS. THEODOR ENGELHARD, Cassel, Germany.
Filed December 10, 1906. Serial No. 23,914. PUBLISHED DECEMBER 31, 1907.

67,977. CERTAIN MEDICINES. FLOURNOY AND JOHNSON, Odessa, Mo.
Filed July 23, 1907. Serial No. 29,000. PUBLISHED DECEMBER 31, 1907.

67,978. MEDICAL COMPOUNDS CONTAINING IRON. MARTIN GERING, Gering, Nebr.
Filed November 7, 1907. Serial No. 31,057. PUBLISHED DECEMBER 31, 1907.

67,979. HAIR-RESTORATIVE. GEORGE GREAMBA, Denver, Colo.
Filed November 13, 1907. Serial No. 31,147. PUBLISHED DECEMBER 31, 1907.

67,980. HAIR-TONIC. HARRY LAY, Kansas City, Mo.
Filed April 20, 1905. Serial No. 3,023. PUBLISHED DECEMBER 31, 1907.

67,981. CHEMICAL WASHING-POWDER FOR LAUNDRY PURPOSES. LUIN F. MANGIS, Portland, Oreg.
Filed September 5, 1907. Serial No. 29,768. PUBLISHED DECEMBER 31, 1907.

67,982. NAIL-POLISHING PASTE. MILLER BROTHERS, New York, N. Y.
Filed November 5, 1907. Serial No. 31,022. PUBLISHED DECEMBER 31, 1907.

67,983. CERTAIN MEDICINES. THE NORWICH PHARMACAL COMPANY, Norwich and New York, N. Y.
Filed May 25, 1906. Serial No. 19,859. PUBLISHED DECEMBER 31, 1907.

67,984. WHISKY. JOHN QUACK and GERHARD H. SANDHEGER, Cincinnati, Ohio, executors of C. Sandheger, deceased.
Filed September 25, 1907. Serial No. 30,196. PUBLISHED DECEMBER 24, 1907.

67,985. MEDICINAL AND TOILET COLOGNE. ROBINSON BROS. & COMPANY, INCORPORATED, Portland, Me., and Malden, Mass.
Filed November 15, 1907. Serial No. 31,193. PUBLISHED DECEMBER 31, 1907.

67,986. CHEMICAL NICKEL SALT. WALDBERG & Co., G. M. B. H., Berlin, Germany.
Filed December 10, 1906. Serial No. 23,919. PUBLISHED DECEMBER 31, 1907.

67,987. FACE-LOTIONS POSSESSING ANTISEPTIC AND GERM-DESTROYING QUALITIES. WATERBURY CHEMICAL COMPANY, Des Moines, Iowa.
Filed April 17, 1905. Serial No. 2,072. PUBLISHED DECEMBER 31, 1907.

67,988. CHEMICAL SWEEPING COMPOUND. CONRAD D. WITTE, Cincinnati, Ohio.
Filed August 14, 1907. Serial No. 29,394. PUBLISHED DECEMBER 31, 1907.

67,989. ICE-CREAM, ICES, SHERBETS, AND FROZEN CUSTARDS. ALTA VISTA CREAMERY COMPANY, Fort Worth, Tex.
Filed September 28, 1907. Serial No. 30,272. PUBLISHED DECEMBER 31, 1907.

67,990. DEHYDRATED VEGETABLES AND FRUIT. AMERICAN DEHYDRATING COMPANY, Waukesha, Wis.
Filed October 28, 1907. Serial No. 30,818. PUBLISHED DECEMBER 31, 1907.

67,991. PREPARATIONS FOR IMPROVING AND FLUFFING THE HAIR. A. B. BELLMAN & Co., Chicago, Ill.
Filed October 2, 1907. Serial No. 30,362. PUBLISHED DECEMBER 31, 1907

67,992. ROOFING-PAPER. F. W. BIRD & SON, East Walpole, Mass.
Filed November 25, 1907. Serial No. 31,345. PUBLISHED DECEMBER 31, 1907.

67,993. MACARONI AND VERMICELLI. EMILIA BISI, Carnegie, Pa., executrix of Ernesto Bisi, deceased.
Filed November 22, 1907. Serial No. 31,308. PUBLISHED DECEMBER 31, 1907.

67,994. CHEWING-GUM. COMMON SENSE GUM CO., Boston, Mass.
Filed October 5, 1907. Serial No. 30,443. PUBLISHED DECEMBER 31, 1907.

67,995. SHEET METAL. FRANK A. HOWELL, New York, N. Y.
Filed April 26, 1907. Serial No. 26,947. PUBLISHED DECEMBER 31, 1907.

67,996. SORGHUM AND SYRUP. HULMAN & CO., Terre Haute, Ind.
Filed November 11, 1907. Serial No. 31,112. PUBLISHED DECEMBER 31, 1907.

67,997. WHEAT-FLOUR. THE HUNTER BROTHERS MILLING COMPANY, St. Louis, Mo., and Edwardsville, Ill.
Filed November 21, 1907. Serial No. 31,278. PUBLISHED DECEMBER 31, 1907.

67,998. WIRE FENCE. JANESVILLE BARB WIRE COMPANY, Janesville, Wis.
Filed November 18, 1907. Serial No. 31,229. PUBLISHED DECEMBER 31, 1907.

67,999. COFFEE. W. A. JENKINSON & CO., Jacksonville, Ill.
Filed November 18, 1907. Serial No. 31,235. PUBLISHED DECEMBER 31, 1907.

68,000. MATCHES. NITEDALS TÆNDSTIKFABRIK, Östre Aker, near Christiania, Norway.
Filed December 21, 1906. Serial No. 24,181. PUBLISHED DECEMBER 31, 1907.

68,001. LAWN-MOWERS. NORVELL-SHAPLEIGH HARDWARE COMPANY, St. Louis, Mo.
Filed November 14, 1905. Serial No. 14,618. PUBLISHED DECEMBER 31, 1907.

68,002. CERTAIN OILS. STROHMEYER & ARPE COMPANY, New York, N. Y.
Filed October 2, 1907. Serial No. 30,331. PUBLISHED DECEMBER 31, 1907.

68,003. CHEMICAL ENGINES, CHEMICAL FIRE-EXTINGUISHING APPARATUS, AND HAND-GRENADES. AMERICAN-LA FRANCE FIRE ENGINE CO., Elmira, N. Y.
Filed November 15, 1907. Serial No. 31,179. PUBLISHED DECEMBER 31, 1907.

68,004. CHEMICAL FIRE-EXTINGUISHING APPARATUS. AMERICAN-LA FRANCE FIRE ENGINE CO., Elmira, N. Y.
Filed November 25, 1907. Serial No. 31,355. PUBLISHED DECEMBER 31, 1907.

68,005. THREADING AND CUTTING-OFF MACHINES. THE ARMSTRONG MFG. CO., Bridgeport, Conn.
Filed November 19, 1907. Serial No. 31,255. PUBLISHED DECEMBER 31, 1907.

68,006. CERTAIN HAND-TOOLS. THE CHILLINGTON TOOL CO. LD., Wolverhampton, England.
Filed December 4, 1906. Serial No. 23,753. PUBLISHED DECEMBER 31, 1907.

68,007. ABRASIVE SCOURING-SOAP. THE CUDAHY PACKING CO., Chicago, Ill., and South Omaha, Nebr.
Filed November 21, 1907. Serial No. 31,291. PUBLISHED DECEMBER 31, 1907.

68,008. CLOTHES-WASHING MACHINES. THE EAGLE TOOL CO., Cincinnati, Ohio.
Filed November 6, 1907. Serial No. 31,035. PUBLISHED DECEMBER 31, 1907.

68,009. HAND-RATCHETS FOR OPERATING DRILLS, TAPS, AND WRENCHES. THE KEYSTONE MFG. CO., Buffalo, N. Y.
Filed November 23, 1907. Serial No. 31,322. PUBLISHED DECEMBER 31, 1907.

68,010. CERTAIN CUTLERY AND EDGE TOOLS. NORVELL-SHAPLEIGH HARDWARE COMPANY, St. Louis, Mo.
Filed November 14, 1905. Serial No. 14,612. PUBLISHED DECEMBER 31, 1907.

68,011. HAMMERS. NORVELL-SHAPLEIGH HARDWARE COMPANY, St. Louis, Mo.
Filed November 14, 1905. Serial No. 14,614. PUBLISHED DECEMBER 31, 1907.

68,012. NON-CUTTING PLIERS, NON-CUTTING PINCERS, WRENCHES, AND PUTTY-KNIVES. NORVELL-SHAPLEIGH HARDWARE COMPANY, St. Louis, Mo.
Filed November 14, 1905. Serial No. 14,615. PUBLISHED DECEMBER 31, 1907.

68,013. PICKS, GRUB-HOES, TROWELS, SHOVELS, AND SPADES. NORVELL-SHAPLEIGH HARDWARE COMPANY, St. Louis, Mo.
Filed November 14, 1905. Serial No. 14,617. PUBLISHED DECEMBER 31, 1907.

68,014. CERTAIN TOOLS. NORVELL-SHAPLEIGH HARDWARE COMPANY, St. Louis, Mo.
Filed November 14, 1905. Serial No. 14,628. PUBLISHED DECEMBER 31, 1907.

68,015. COFFEE AND TEA. SHAPLEIGH COFFEE COMPANY, Boston, Mass.
Filed November 25, 1907. Serial No. 31,337. PUBLISHED DECEMBER 31, 1907.

68,016. DISPENSING APPARATUS FOR LIQUIDS. JAMES BOWERS, Newark, N. J.
Filed October 17, 1907. Serial No. 30,638. PUBLISHED DECEMBER 31, 1907.

68,017. GLASS TILES. MONARCH TILE CO., Weston, W. Va.
Filed September 21, 1907. Serial No. 30,130. PUBLISHED DECEMBER 31, 1907.

68,018. GLASS TILES. MONARCH TILE CO., Weston, W. Va.
Filed September 21, 1907. Serial No. 30,131. PUBLISHED DECEMBER 31, 1907.

68,019. BLACK LEAD, PLUMBAGO, GRAPHITE, AND FOUNDRY-FACINGS. FELICIA V. MORSE, Canton, Mass.
Filed September 24, 1906. Serial No. 22,277. PUBLISHED DECEMBER 31, 1907.

68,020. COAL. PEABODY COAL COMPANY, Chicago, Ill.
Filed September 13, 1907. Serial No. 29,961. PUBLISHED DECEMBER 31, 1907.

68,021. CERTAIN MACHINE-TOOLS. NORMAN K. PEACE, Sheffield, England.
Filed May 9, 1906. Serial No. 19,380. PUBLISHED DECEMBER 31, 1907.

68,022. PORTLAND CEMENT. PENN-ALLEN PORTLAND CEMENT CO., Allentown, Pa.
Filed October 26, 1907. Serial No. 30,810. PUBLISHED DECEMBER 31, 1907.

68,023. COFFEE AND TEA. SHAPLEIGH COFFEE COMPANY, Boston, Mass.
Filed November 25, 1907. Serial No. 31,335. PUBLISHED DECEMBER 31, 1907.

68,024. COFFEE AND TEA. SHAPLEIGH COFFEE COMPANY, Boston, Mass.
Filed November 25, 1907. Serial No. 31,336. PUBLISHED DECEMBER 31, 1907.

68,025. SHOVELS, SPADES, SCOOPS, AND HAMMERS. SUPPLEE HARDWARE COMPANY, Philadelphia, Pa.
Filed February 16, 1907. Serial No. 25,335. PUBLISHED DECEMBER 31, 1907.

68,026. HATCHETS AND AXES. SUPPLEE HARDWARE COMPANY, Philadelphia, Pa.
Filed February 16, 1907. Serial No. 25,336. PUBLISHED DECEMBER 31, 1907.

68,027. WITHDRAWN.

68,028. STOVE-POLISH. HENRY C. BOMHARD, Milwaukee, Wis.
Filed February 16, 1907. Serial No. 25,339. PUBLISHED MARCH 19, 1907.

68,029. CHAINS FOR PERSONAL ADORNMENT. THE D. F. BRIGGS CO., Attleboro, Mass.
Filed November 18, 1907. Serial No. 31,230. PUBLISHED DECEMBER 31, 1907.

68,030. CHAMPAGNE-WINE. CHANDON ET CO., Epernay, France.
Filed June 10, 1905. Serial No. 7,811. PUBLISHED DECEMBER 31, 1907.

68,031. CHAMPAGNE-WINE. CHANDON ET CO., Epernay, France.
Filed January 14, 1907. Serial No. 24,607. PUBLISHED DECEMBER 31, 1907.

68,032. CHAMPAGNE-WINE. CHANDON ET CO., Epernay, France.
Filed January 14, 1907. Serial No. 24,608. PUBLISHED DECEMBER 31, 1907.

68,033. CHAMPAGNE-WINE. CHANDON ET CO., Epernay, France.
Filed January 14, 1907. Serial No. 24,610. PUBLISHED DECEMBER 31, 1907.

68,034. SHAVING AND OTHER TOILET SOAPS. THE J. B. WILLIAMS COMPANY, Glastonbury, Conn.
Filed October 24, 1907. Serial No. 30,757. PUBLISHED DECEMBER 31, 1907.

68,035. MEDICINAL AND TOILET SOAP. ROBINSON BROS. & COMPANY, INCORPORATED, Portland, Me., and Malden, Mass.
Filed November 15, 1907. Serial No. 31,196. PUBLISHED DECEMBER 31, 1907.

68,036. SOAPS. ROYAL SOLVENT CO., New York, N. Y.
Filed November 15, 1907. Serial No. 31,197. PUBLISHED DECEMBER 31, 1907.

68,037. COFFEE AND TEA. SHAPLEIGH COFFEE COMPANY, Boston, Mass.
Filed November 27, 1907. Serial No. 31,390. PUBLISHED DECEMBER 31, 1907.

68,038. ARTIFICIAL FUEL IN THE FORM OF BRIQUETS. STANDARD FUEL COMPANY, Birmingham, Ala.
Filed November 16, 1907. Serial No. 31,209. PUBLISHED DECEMBER 31, 1907.

68,039. RECORDING AND REPRODUCING SOUND-BOXES FOR TALKING-MACHINES. VICTOR TALKING MACHINE COMPANY, Camden, N. J.
Filed March 2, 1907. Serial No. 25,713. PUBLISHED DECEMBER 31, 1907.

68,040. WHEAT-FLOUR. AMERICAN HOMINY COMPANY, Indianapolis, Ind.
Filed October 29, 1906. Serial No. 22,976. PUBLISHED AUGUST 6, 1907.

68,041. MANDOLINS, GUITARS, BANJOS, AND PARTS THEREOF. BUEGELEISEN & JACOBSON, New York, N. Y.
Filed November 20, 1907. Serial No. 31,263. PUBLISHED DECEMBER 31, 1907.

68,042. CHAMPAGNE-WINE. CHANDON ET CO., Epernay, France.
Filed January 14, 1907. Serial No. 24,609. PUBLISHED DECEMBER 31, 1907.

68,043. SOAP. CHEMISCHE WERKE HANSA GESELLSCHAFT MIT BESCHRÄNKTER HAFTUNG, Hemelingen, Germany.
Filed August 17, 1907. Serial No. 29,434. PUBLISHED DECEMBER 31, 1907.

68,044. WINES. CARL DRESEL, Sonoma, Cal.
Filed June 24, 1905. Serial No. 8,991. PUBLISHED NOVEMBER 5, 1907.

68,045. SHIRT AND DRESS WAISTS. FRANKENTHAL BROTHERS COMPANY, New York, N. Y.
Filed November 6, 1907. Serial No. 31,033. PUBLISHED DECEMBER 31, 1907.

68,046. HEAT OR TEMPERATURE REGULATORS. THE FULTON COMPANY, Knoxville, Tenn.
Filed October 14, 1907. Serial No. 30,602. PUBLISHED DECEMBER 31, 1907.

68,047. TALKING-MACHINES AND CERTAIN PARTS THEREOF. GENERAL PHONOGRAPH SUPPLY CO., New York, N. Y.
Filed November 4, 1907. Serial No. 30,975. PUBLISHED DECEMBER 31, 1907.

68,048. KID GLOVES. GREENHUT & COMPANY, New York, N. Y.
Filed November 8, 1907. Serial No. 31,094. PUBLISHED DECEMBER 31, 1907.

68,049. WOOD RULES. JOSEPH F. MCCOY CO., New York, N. Y.
Filed August 16, 1907. Serial No. 29,417. PUBLISHED DECEMBER 31, 1907.

68,050. STRINGS FOR MUSICAL INSTRUMENTS. THE KAY GRAHAM CO., Portsmouth, Ohio.
Filed September 23, 1907. Serial No. 30,158. PUBLISHED DECEMBER 31, 1907.

68,051. COATS, PANTS, VESTS, AND OVERCOATS. H. M. LINDENTHAL AND SONS, Chicago, Ill.
Filed October 24, 1907. Serial No. 30,770. PUBLISHED DECEMBER 31, 1907.

68,052. ICE-SKATES. NORVELL-SHAPLEIGH HARDWARE COMPANY, St. Louis, Mo.
Filed November 14, 1905. Serial No. 14,616. PUBLISHED DECEMBER 31, 1907.

68,053. KID GLOVES AND LADIES' AND GIRLS' CLOAKS. PERLMUTTERS, Jersey City, N. J.
Filed September 17, 1907. Serial No. 30,030. PUBLISHED DECEMBER 31, 1907.

68,054. BEER. AMERICAN BREWING CO., Indianapolis, Ind.
Filed November 1, 1907. Serial No. 30,948. PUBLISHED DECEMBER 31, 1907.

68,055. MIXED PAINTS. THE ATLANTIC PAINT COMPANY, New York, N. Y.
Filed October 12, 1907. Serial No. 30,554. PUBLISHED DECEMBER 31, 1907.

68,056. PRINTING-INK. THE AULT & WIBORG CO., Cincinnati, Ohio.
Filed October 7, 1907. Serial No. 30,466. PUBLISHED DECEMBER 31, 1907.

68,057. STOVES AND RANGES. BRIDGE & BEACH MANUFACTURING COMPANY, St. Louis, Mo.
Filed November 11, 1907. Serial No. 31,124. PUBLISHED DECEMBER 31, 1907.

68,058. PORTER. C. KERN BREWING CO., Port Huron, Mich.
Filed December 11, 1906. Serial No. 23,946. PUBLISHED DECEMBER 31, 1907.

68,059. LUBRICATING-OILS AND LUBRICANTS. CHEMISCHE WERKE HANSA GESELLSCHAFT MIT BESCHRÄNKTER HAFTUNG, Hemelingen, Germany.
Filed August 17, 1907. Serial No. 29,435. PUBLISHED DECEMBER 31, 1907.

68,060. LEATHER AND CANVAS BOOTS AND SHOES. DOROTHY DODD SHOE CO., Boston, Mass.
Filed June 24, 1907. Serial No. 28,349. PUBLISHED JULY 30, 1907.

68,061. LEAD-PENCILS AND COLORED PENCILS. A. W. FABER, Stein, near Nürnberg, and Berlin, Germany.
Filed June 22, 1906. Serial No. 20,480. PUBLISHED DECEMBER 31, 1907.

68,062. WHISKY. GEO. W. TORREY COMPANY, Boston, Mass.
Filed May 22, 1907. Serial No. 27,573. PUBLISHED DECEMBER 31, 1907.

68,063. COLLARS AND CUFFS, MADE FROM CELLULOID AND OTHER SIMILAR COMPOSITIONS. WILLIAM HEYMANN, New York, N. Y.
Filed November 6, 1907. Serial No. 31,038. PUBLISHED DECEMBER 31, 1907.

68,064. LEATHER BOOTS AND SHOES. HEYWOOD BOOT & SHOE COMPANY, Worcester, Mass.
Filed November 18, 1907. Serial No. 31,234. PUBLISHED DECEMBER 31, 1907.

68,065. RADIATORS. HOLLAND RADIATOR COMPANY Bremen, Ind., and Chicago, Ill.
Filed May 2, 1907. Serial No. 27,067. PUBLISHED JULY 16, 1907.

68,066. HOSIERY. J. L. BRANDEIS AND SONS, Omaha, Nebr.
Filed November 16, 1907. Serial No. 31,210. PUBLISHED DECEMBER 31, 1907.

68,067. LEAD-PENCILS AND OIL-CHALK CRAYONS. JOHANN FROESCHEIS LYRA-BLEISTIFTFABRIK, Nuremberg, Germany.
Filed November 14, 1905. Serial No. 14,601. PUBLISHED DECEMBER 31, 1907.

68,068. CERTAIN LEATHER MANUFACTURES. L. FRANK SADDLERY CO., San Antonio, Tex.
Filed August 23, 1907. Serial No. 29,546. PUBLISHED DECEMBER 31, 1907.

68,069. LUBRICATING-OILS AND LUBRICATING-GREASES AND LUBRICATING-PASTES. L. SONNEBORN SONS, INC., New York, N. Y.
Filed November 1, 1907. Serial No. 30,913. PUBLISHED DECEMBER 31, 1907.

68,070. WHISKY. ISAAC L. LIPSCHUTZ, Philadelphia, Pa.
Filed August 19, 1907. Serial No. 29,455. PUBLISHED NOVEMBER 5, 1907.

68,071. KNITTED UNDERWEAR. LORD & TAYLOR, New York, N. Y.
Filed September 30, 1907. Serial No. 30,313. PUBLISHED DECEMBER 31, 1907.

68,072. KNIT HOSIERY AND UNDERWEAR. M. & C. MAYER, New York, N. Y.
Filed October 9, 1907. Serial No. 30,501. PUBLISHED DECEMBER 31, 1907.

68,073. SUSPENDERS. THE OHIO SUSPENDER COMPANY, Mansfield, Ohio.
Filed November 4, 1907. Serial No. 30,998. PUBLISHED DECEMBER 31, 1907.

68,074. SUBSTITUTE FOR TURPENTINE. PATTON PAINT COMPANY, Milwaukee, Wis.
Filed October 15, 1907. Serial No. 30,618. PUBLISHED DECEMBER 31, 1907.

68,075. HARNESS, HORSE-COLLARS, AND SADDLES. PIERSON & HOUGH CO., Detroit, Mich.
Filed June 17, 1907. Serial No. 28,213. PUBLISHED DECEMBER 31, 1907.

68,076. TEXTILE WORSTEDS. PRUDENTIAL WORSTED COMPANY, Philadelphia, Pa.
Filed October 30, 1907. Serial No. 30,882. PUBLISHED DECEMBER 31, 1907.

68,077. LEATHER BOOTS AND SHOES. H. E. SMITH & SON, Worcester, Mass.
Filed November 23, 1907. Serial No. 31,326. PUBLISHED DECEMBER 31, 1907.

68,078. BEER. THE STARK-TUSCARAWAS BREWERIES CO., Canton, Ohio.
Filed November 5, 1907. Serial No. 31,020. PUBLISHED DECEMBER 31, 1907.

68,079. PAPER BAGS. THE UNION BAG & PAPER COMPANY, New York, N. Y.
Filed August 15, 1907. Serial No. 29,411. PUBLISHED DECEMBER 31, 1907.

68,080. ULTRAMARINE BLUE. VEREINIGTE ULTRAMARINFABRIKEN AKTIEN-GESELLSCHAFT VORMALS LEVERKUS, ZELTNER & CONSORTEN, IN KÖLN AM RHEIN, Cologne, Germany.
Filed September 7, 1907. Serial No. 29,797. PUBLISHED DECEMBER 31, 1907.

LABELS

REGISTERED MARCH 3, 1908.

14,070.—*Title:* "SHINGLE WEAVER CIGAR I. S. W. U. OF A." (For Cigars.) LA FRAY & DE LIERE, Bellingham, Wash. Filed December 23, 1907.

14,071.—*Title:* "HERCULES BREAD." (For Bread.) VIRGINIA M. NEWTON, Montclair, N. J. Filed January 8, 1908.

14,072.—*Title:* "STORK." (For Macaroni.) MINNEAPOLIS MACARONI COMPANY, Minneapolis, Minn. Filed January 20, 1908.

14,073.—*Title:* "ARTGUM, THE DRY CLEANER AND MASSAGER." (For a Cleaning Composition.) ADOLPH SOMMER, Cambridge, Mass. Filed February 4, 1908.

14,074.—*Title:* "ARTGUM, THE DRY CLEANER AND MASSAGER." (For a Cleaning Composition.) ADOLPH SOMMER, Cambridge, Mass. Filed February 4, 1908.

PRINTS

REGISTERED MARCH 3, 1908.

2,231.—*Title:* "BUT THE GROCER HAS MORE—THANK GOODNESS." (For Flour.) WASHBURN-CROSBY COMPANY, Minneapolis, Minn. Filed February 3, 1908.

2,232.—*Title:* "STAR SANITARY DAIRY PAIL." (For Sanitary Dairy-Pails.) STAR MILK COOLER CO., Haddonfield, N. J. Filed January 28, 1908.

2,233.—*Title:* "MENS APPAREL." (For Men's Apparel.) W. C. BOTH, Chicago, Ill. Filed February 1, 1908.

2,234.—*Title:* "ADLER'S SPRING FASHIONS FOR 1908." (For Men's Spring and Summer Apparel.) DAVID ADLER & SONS CLOTHING CO., Milwaukee, Wis. Filed February 3, 1908.

DECISIONS

OF THE

COMMISSIONER OF PATENTS

AND OF

UNITED STATES COURTS IN PATENT CASES.

COMMISSIONER'S DECISIONS.

EX PARTE KRUSE.

APPLICATION FOR PATENT.

Decided February 7, 1908.

AMENDMENT TO APPLICATION—RIGHT TO WITHDRAW.

Where an applicant filed an amendment directing the cancelation of the finally-rejected claims of his application and requesting that the case be passed to issue, but on the same day filed an appeal from the Examiner's final rejection, in which appeal papers he asked that the amendment be withdrawn, although the request for the withdrawal of the amendment was informal, in that it was embodied in the appeal papers instead of in a separate paper, the Examiner should not have entered the amendment and passed the case to issue without giving the applicant an opportunity to elect the course he desired to pursue.

ON PETITION.

METALLIC BARREL.

Mr. Obed C. Billman for the applicant.

MOORE, *Commissioner:*

This is a petition that this case be withdrawn from issue and that the claims canceled by the amendment of January 8, 1908, be reinserted and that the appeal filed January 8, 1908, be forwarded.

On January 9, 1907, claims 1 to 9 were finally rejected. On January 8, 1908, applicant filed an amendment, dated January 6, 1908, directing that these claims be canceled and requesting that the case be passed to issue at an early date. On the same day there was filed an appeal to the Examiners-in-Chief as to these claims, also dated January 6, 1908, and in this appeal paper the following statement was made: "The amendment this day mailed is hereby withdrawn."

The appeal and the amendment reached the examining division on January 10, 1908; but when the Examiner took the case up for action on January 16, 1908, the amendment had been entered, and he refused to forward the appeal on the ground that the rejected claims had been canceled and that if the statement above quoted from the appeal was intended as a direction to reinsert the claims canceled by the amendment of January 8, 1908, it was too indefinite to warrant the reinsertion of the rejected claims. He thereupon passed the case to issue.

The error in this action arose from overlooking the fact that the amendment directing the cancelation of the claims should not have been entered, having been withdrawn by the appeal paper. Undoubtedly if the withdrawal of the amendment had been embodied in a paper separate from the appeal paper and had reached the examining division on the same day as the amendment the Examiner would not have entered the latter.

Although the withdrawal was in the appeal paper, the Examiner should not have passed the case to issue without first notifying the applicant of the informality and giving him an opportunity to elect the course he desired to pursue. It is not the policy of the Office to take advantage of technical points of procedure to the detriment of applicants who are prosecuting their cases in good faith. If applicant will file an amendment reinserting the claims the cancelation of which was directed by the amendment of January 8, 1908, the appeal will be forwarded.

The petition is granted to the extent indicated.

ANDERSON *v.* PECK.

PATENT INTERFERENCE.

Decided February 20, 1908.

INTERFERENCE—PRELIMINARY STATEMENT—DELAY IN FILING—EXCUSE INSUFFICIENT.

Permission to file a preliminary statement will not be granted when filed nearly four months after the expiration of the period allowed for such action and after the granting of two extensions of time for the taking of testimony where it appears that applicant's counsel notified the assignee of an undivided half interest of the interference and asked him to secure from the applicant the information necessary to make a preliminary statement and that said counsel addressed a letter to applicant advising him about the preliminary statement, which presumably was delivered, as it was not returned. Whether applicant had

actual notice or not, the failure to obtain the necessary data by counsel or by the assignee was negligence with which applicant is chargeable.

APPEAL on motion.

CARRIER.

Mr. Charles S. Cairns and *Messrs. Mason, Fenwick & Lawrence* for Anderson.

Messrs. Paul & Paul for Peck.

BILLINGS, *Assistant Commissioner:*

This is an appeal from the decision of the Examiner of Interferences denying a motion by Peck for leave to file a preliminary statement.

The record shows that the time to file preliminary statements was originally set to expire August 26, 1907. Within that time a statement was filed by Anderson, but no statement was filed by Peck. Times for the taking of testimony were set on August 30, 1907, and two extensions of time have since been granted by the Examiner of Interferences. On December 24, 1907, Peck filed his motion for leave to file a preliminary statement in the case.

The showing in support of this motion consists in the affidavits of Peck, his assignee, Hewson, and his counsel, Richard Paul. It appears from these affidavits that Paul notified Hewson of the pendency of the interference and requested him to obtain certain information from Peck which could be used in the preparation of a preliminary statement; that Hewson spoke to Peck concerning the same, but while talking with him was interrupted by a telephone message and failed thereafter to call Peck's attention to this matter again. Peck states in his affidavit that until he was notified by Paul that notice had been given for the taking of testimony by Anderson he had no knowledge that the interference was pending and that when notified of that proceeding he at once signified his desire to actively contest the same.

It appears from the affidavit of Cairns, counsel for Anderson, that in November, 1907, he communicated with Paul relative to this interference and that Paul stated that he had written to Peck about the preliminary statement, but that he had received no response from Peck. Peck avers that he never received a letter from Paul; but the fact is not denied that Paul addressed a letter to him regarding this matter, and it is not shown that this letter miscarried, and, as stated by the Examiner of Interferences, the record shows that Peck was well known in the place to which the letter was addressed, and it seems likely that he either should have received the letter or that the same would have been returned to the attorneys before this time.

The record shows that on May 23, 1907, the Examiner suggested to Peck a claim taken from Anderson's application, which claim was made by amendment on May 29, 1907. It was incumbent upon counsel for Peck to have notified his principal of this suggested claim in order that he might be advised whether Peck asserted his right to the invention stated therein. Such action is now required by Rule 96, which provides that when claims are suggested a copy of the same shall be sent to the applicant as well as to the attorney of record.

After the declaration of the interference, as appears from the affidavits above referred to, Hewson, the assignee of one-half interest, was notified of the pendency of the interference and was advised by his counsel that certain data was needed for the preparation of a preliminary statement. The failure to obtain this data on the part of counsel or of the interested party, Hewson, and of Peck to furnish the data is not excused by the averments of their affidavits. No motion was made for additional time within which to file a preliminary statement. More than three months elapsed after the date for which time was set for taking testimony before the proposed preliminary statement was filed, and during this time the statement of Anderson was open to inspection of the other party, although both counsel and the applicant averred that they have not had access to the statement. During this time stipulations entered into between counsel for the respective parties for extending time for taking testimony and the fact that the interference was to be contested by Anderson was thus brought to the attention of Peck's counsel; but there is no indication that Peck or his counsel intended to contest the interference at that time.

It is well settled that the applicant is chargeable with such acts of negligence on the part of counsel. (*Jones* v. *Lynn*, 110 O. G., 1431; *Heintish and Moriarty* v. *Congdon* v. *Kelsea*, 106 O. G., 542.) Furthermore, in the present case the assignee of a half interest was notified of the pendency of the interference and advised that a statement of the inventor should be secured. The failure of Hewson, the assignee, to communicate this information to Peck or to obtain data for the statement for counsel clearly shows such negligence on the part of the parties interested as should preclude the granting of their request for relief. (*Fowler* v. *Boyce et al.*, 107 O. G., 543; *White* v. *Hewitt and Nolan*, 115 O. G., 1846; *Dutcher* v. *Matthews et al.*, 118 O. G., 2438.)

In view of the circumstances above stated it must be held that the excuse for the delay in filing a preliminary statement is insufficient and that the decision of the Examiner of Interferences refusing to accept the preliminary statement at this time was right. It is accordingly affirmed.

WHEELER *v.* PALMROS.

PATENT INTERFERENCE.

Decided February 21, 1908.

1. INTERFERENCE—MOTION TO AMEND SPECIFICATION—TRANSMISSION.

A motion to amend the specification of an application involved in an interference for the purpose of curing an alleged error therein should not be transmitted.

2. SAME—MOTION TO AMEND ISSUE UNDER RULE 109—TRANSMISSION.

A motion to amend the issue of an interference under Rule 109 was properly refused transmission where it contained a proviso that the claims shall be added "without prejudice to the right to contest such claims under the provisions of Rule 122."

APPEAL on motion.

PNEUMATIC TOOL.

Mr. Joseph M. Nesbit and *Mr. Hubert E. Peck* for Wheeler.

Messrs. Knight Brothers for Palmros.

BILLINGS, *Assistant Commissioner:*

This case is before me on an appeal by Wheeler from the decision of the Examiner of Interferences refusing to transmit a proposed amendment curing an alleged error in Wheeler's specification and refusing also to transmit a motion to add certain claims to the issue under Rule 109.

The record shows that on December 11, 1907, Wheeler filed the above-mentioned motion to amend and also a motion to dissolve upon the ground, among others, that there was such informality in the declaration of interference as would preclude the proper determination of the question of priority of invention. It appears from the brief that the question raised by this ground of the motion relates to the same matter as that which is proposed to be cured by the amendment submitted.

It is contended that if this amendment is transmitted the matter can be considered *in toto inter partes* in connection with the motion for dissolution which has been transmitted. This contention is not well founded. If there has been such irregularity in the declaration as would preclude the proper determination of the question of priority, the interference should be dissolved. The question whether the applicant will be permitted to amend his specification after such dissolution to incorporate the matter submitted or any other amendment is an *ex parte* question, which must be determined independently of any interference proceeding. The right of appeal from an adverse decision upon such amendment is likewise *ex parte* in its nature, and it is necessary that the question as to the patentability of claims based upon the specification, whether original or amended, be finally determined before the case is placed in interference. The decision of the Examiner of Interferences refusing to transmit this amendment is right.

The motion to amend under Rule 109 contains a proviso that such claims shall be added—

without prejudice to Wheeler's right to contest such claims under the provisions of Rule 123 (122).

This condition, as stated by the Examiner of Interferences, is in contravention of Rule 109, which provides that motions for dissolution will not be transmitted in regard to claims presented under this rule where the questions could have been disposed of in connection with the admission of the claims. Under the provisions of this rule it is contemplated that the question of each party's right to make the claims should be determined in connection with the motion to add such claims.

The decision of the Examiner of Interferences is affirmed.

DECISIONS OF THE U. S. COURTS.

Court of Appeals of the District of Columbia.

IN RE CRESCENT TYPEWRITER SUPPLY CO.

Decided February 4, 1908.

1. TRADE-MARKS—REGISTRATION OF GEOGRAPHICAL MARKS PROHIBITED.

Section 5 of the Trade-Mark Act of 1905 is broad enough to prohibit the registration of any word that has an exclusive geographical significance or that would suggest any particular geographical location.

2. SAME—"ORIENT"—GEOGRAPHICAL.

The word "Orient" is generally understood to refer to certain Eastern countries, and, as applied to ink-ribbons and carbon-paper, *Held* to be geographical and not registrable.

3. SAME—THE WORD "ORIENT" INCLOSED IN WREATH—GEOGRAPHICAL.

A mark for ink-ribbons and carbon-paper consisting of the word "Orient" inclosed in a wreath, the letters E and I of the word being printed as a monogram, *Held* not registrable under section 5 of the Trade-Mark Act of 1905, as the word "Orient" is geographical.

Mr. H. A. Dodge for the appellant.

Mr. F. A. Tennant for the Commissioner.

VAN ORSDEL, *J.:*

This is an appeal from the decision of the Commissioner of Patents refusing to register, as a trade-mark for ink-ribbons and carbon-paper, a device consisting of a wreath, inclosing the following combination of letters:—"ORIENT." Underneath said combination, and within the wreath, is printed the word "Brand." The application was refused by the Commissioner for the reason that the word attempted to be used in the design is the word "Orient," a geographical name, and that it is the predominating feature of the proposed trade-mark. It is contended by appellant that the mark is a device consisting of a wreath and letters arranged therein in an arbitrary manner, in other words, that it takes the whole design, wreath and letters, to compose the proposed trade-mark. It is also denied "that the word 'Orient,' as applied to typewriter ribbons, is geographical."

It appears from the record that the appellant, in his original application for the registration of the proposed trade-mark, inserted the following specification:—

The trade-mark consists of the word "Orient," inclosed in a wreath, the letters E and I of the word "Orient" being printed as a monogram.

Subsequently, when it was suggested in the Patent Office that the word "Orient" was a geographical term and under the statute precluded from use for the purpose of registration, appellant withdrew the above specification, and now contends that the word used in the design is not the word "Orient," but a mere arbitrary combination of letters. The fact that the appellant, in his original application, interpreted the word used in his proposed trade-mark as the word "Orient" presents such a presumption of his intention as cannot well be removed by a mere withdrawal of that particular specification. Especially is this true where the design is left unchanged and remains the same after the withdrawal, or amendenmt of the specification, as before. We are of the opinion that the only reasonable interpretation of the combination of letters used is that they spell the word "Orient" and at once convey the use of that word to the mind.

The Commissioner refused to register the appellant's mark "for the reason that the word 'Orient,' the distinguishing feature of applicant's mark, is geographical." Section 5, of the Trade-Mark Act of 1905, provides in part that—

no mark, which consists merely in the name of an individual, firm, corporation or association, not written, printed, impressed, or woven in some particular or distinctive manner or in association with the portrait of the individual, or merely in words or devices which are descriptive of the goods with which thsy are used, or of the character or quality of such goods, or merely a geographical name or term, shall be registered under the terms of this act.

It will be noted that this section of the Trade-Mark Act

does not permit the use of "a geographical name or term." We think this provision of the statute is broad enough to prohibit the use of any word that has an exclusive geographical significance, or that would suggest any particular geographical location. Certainly, the use of a name indicating a particular place is prohibited, such as the name of a city, or country, or subdivision of a country. With equal certainty do we think that it prohibits the use of a name that applies to a particular section of the globe, as, in this instance, to a section composed of a number of countries. The word "Orient" is generally understood to refer to certain Eastern countries, specifically the region east and southeast of the leading States of Europe, including, among others, Turkey, Persia, Egypt and India. The word has a fixed and definite use in our vocabulary.

A type-writer ribbon depends for its value largely upon the quality of the ink or dyes used for the purpose of impression or printing. It is well known that most valuable inks and dyes are produced and imported from some of those Oriental countries. Even though the applicant might have no intention of using any such articles in producing its ribbon, still it might reap a great advantage by having a name protected in its trade-mark that would suggest to the public such a use. The purpose of the statute is to prevent a manufacturer or dealer from gaining such an advantage, either directly or by subterfuge.

The question before us was conclusively disposed of by this court in the case of *in re Hopkins*, (29 App. D. C., 118,) where the Commissioner had refused to register a trade-mark described by the words "Oriental Cream," and associated with an eagle holding a scroll in its beak. Chief Justice Shepard, stating the opinion of the court, affirmed the refusal of the Commissioner to register the trade-mark—

on the ground that the term "Oriental" is a geographical term, and therefore prohibited from registration by section 5 of the Trade-Mark Act of February 20, 1905.

In that case, the Commissioner said:—

The word "Orient" is a term used to indicate the East, Easter countries, and specifically the regions to the east and southeast of the leading States of Europe. *Century Dictionary*. The term "Oriental" is in general use in commerce to indicate goods that are manufactured in this region, as, for example, Oriental rugs. As applied to a cream, it would indicate that the cream came from the Orient.

On the face of the proposed trade-mark, the brand of the ribbon and paper is designated as "Orient Brand," which would convey to the public mind but one meaning, namely, that the goods manufactured by the appellant company, possessed qualities or elements that distinctively belong to the Oriental countries. The word "Orient," we think, is such a geographical term as comes clearly within the prohibition of the statute.

The decision of the Commissioner of Patents is affirmed, and the proceedings in this court will be certified to him by the clerk, as required by law. Affirmed.

Court of Appeals of the District of Columbia.

THE NATURAL FOOD COMPANY *v.* WILLIAMS.

Decided February 4, 1908.

1. TRADE-MARKS—"SHREDDED WHOLE WHEAT"—DESCRIPTIVE.
The words "Shredded Whole Wheat" as applied to certain food preparations *Held* to be descriptive, and therefore incapable of appropriation as a trade-mark.

2. SAME—OPPOSITION—EXCLUSIVE USE—CHARACTER OF USE BY OPPOSER.
In determining if applicant's use of a mark has been "exclusive" within the meaning of section 5 of the Trade-Mark Act it is immaterial whether the opposer used the mark as a trade-mark or merely in a descriptive sense.

3. SAME—SAME—TESTIMONY.
The fact that the opposer built machines to produce shredded whole wheat and actually produced and sold such an article is sufficient corroboration of his testimony that the boxes in which the product was packed were marked "Shredded Whole Wheat."

Mr. H. A. Seymour for the appellant.

Mr. F. A. Spencer for the appellee.

ROBB, *J.*:

This is an appeal from a decision of the Commissioner of Patents sustaining the opposition to the registration of the words "Shredded Whole Wheat" as a trade-mark for biscuits or crackers.

Appellant in June, 1905, filed an application for the registration of these words under the so-called "ten-years clause" found in the act of February 20, 1905. (33 St. at L., pt. 1, 724.) Subsequently William E. Williams, the appellee here, filed a notice of opposition, in which he averred—

that the applicant, the Natural Food Company has not in fact used the words constituting the alleged trade-mark, as a supposed trade-mark, for ten years; that the said applicant has not been the exclusive user of the words constituting the alleged trade-mark, upon the specified goods, for the time of the alleged use by said company.

He also averred that he made a machine for producing shredded whole wheat as early as the early part of 1894; and that he had produced and sold the product of that and other improved machines, which he subsequently constructed, as shredded whole wheat.

We have carefully examined the record in this case and unhesitatingly sustain the view entertained by the tribunals of the Patent Office. It appears that the appellee Williams, who as a boy learned the miller's trade in a flour-mill and who later became a civil engineer, early in 1894 built a machine "the function of which was to convert the whole grains of wheat into shreds." That he constructed and operated this machine at that time is established beyond question since he is corroborated by two disinterested and intelligent witnesses. Williams endeavored to interest capital in his invention and succeeded to some extent. At all events, in 1902 he was enabled to build an improved machine and has since constructed others. The capacity of the 1902 machine was much greater than that of the earlier machine, and from that time Williams has continued without interruption to manufacture and sell shredded whole wheat. He is corroborated by the machinist who worked on the 1902 machine, and who testified in detail as to its capacity and to the extent to which it was operated after its completion. The proprietor of a large restaurant in Chicago testified to having purchased regularly shredded whole wheat from Williams since as early as 1903. Williams himself testified that the words shredded whole wheat accurately and properly describe the product of his machine; and that he had always marked the boxes containing such food product as shredded whole wheat. He said:

In my opinion should anybody get a monopoly of the words "shredded whole wheat" it would be impossible to mark the shreds made of whole wheat or describe them in an intelligent way without being considered by the owner of such a trade-mark as the words "shredded whole wheat" considering that his rights were being infringed and thereby he might worry and annoy an innocent manufacturer in the proper description of his goods.

He also offered in evidence several patents, some of which were granted in 1894, which disclose machines for converting cereals including whole wheat into shreds.

Since these words accurately and aptly describe an article of food, which according to the testimony has been produced by Williams and others for more than ten years, it follows that they are descriptive within the meaning of the statute, and that they cannot be appropriated as a trade-mark by appellant unless it has been the exclusive user of the words during the ten-years period. The evidence above briefly reviewed, we think, clearly establishes the fact that appellant was not the exclusive user of these words during the ten-years period. No claim is made of any attempt on the part of Williams to deceive the public, or that the product of his machines is not in fact as much entitled to be called shredded whole wheat as is the product of appellant's machines. That he did not use the words as a trade-mark, but merely in a descriptive sense is of no moment. He in common with all other manufacturers of shredded whole wheat had the same right to properly designate their product as did The Natural Food Company. The fact that the Patent Office for more than ten years has been granting patents for machines for converting cereals into shreds adds cogency to the contention that the words "shredded whole wheat" properly describe the product of Williams's machines.

It is urged that the Patent Office erred in ruling that Williams used the words "shredded whole wheat" in marking his goods, because his testimony was not corroborated. As above stated, it clearly appears that Williams constructed a machine in 1894 for the manufacture of this product, and that he did in fact produce shredded whole wheat at that time, and that he has continued to do so since that time. It is clearly established by the testimony of several witnesses that he referred to the product of his machines as shredded whole wheat; that he sold it as such, and that it was known as such. It is true that Williams is the only witness who testified that the boxes in which it was packed were marked "shredded whole wheat," but we think the circumstances so strongly corroborate his testimony that further corroboration is unnecessary. It being established that he was the inventor and builder of machines to produce shredded whole wheat, and that he actually produced and sold it, it necessarily follows that he would be likely to designate the product of his machine by its proper name.

The appellant for ten years prior to 1905 had not exclusively used the words which it sought to have registered, and its application, therefore, was properly denied.

Moreover, it is open to question whether appellant in fact used these words as a trade-mark until after the enactment of the "ten-years clause" in 1905. The carton used by appellant prior to 1905 contains the figure of a woman holding a torch and a sheaf of wheat. The word "trade-mark" appears immediately under this figure, indicating quite clearly that The Natural Food Company claimed the figure as its trade-mark and not the words "shredded whole wheat" which were apparently then used to merely describe the contents of the package.

The decision of the Commissioner of Patents was right, and is, therefore, affirmed. The clerk of the court will certify this opinion and the proceedings in this court to the Commissioner of Patents in accordance with law. Affirmed.

Interference Notices.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., February 24, 1908.

A. E. Jeaneret, his assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of The Matchless Metal Polish Company, of 65-69 Frankfort street, New York, N. Y., and 88 South Market street, Chicago, Ill., for registration of a trade-mark, a trade-mark registered to this company, and a trade-mark registered to A. E. Jeaneret, of Boston, Mass., and the notice of said declaration sent by the Patent Office by registered mail to the said A. E. Jeaneret having been returned undelivered, notice is hereby given to the said A. E. Jeaneret, his assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents in order that the notice of declaration heretofore sent by and returned to the Office may be forwarded to them.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will be proceeded with as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., February 17, 1908.

Jacob Balz, his assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of The German-American Coffee Company, of 406 Greenwich street, New York, N. Y., for registration of a trade-mark and a trade-mark registered to Jacob Balz, of 102 Front street, New York, N. Y., and the notice of said declaration sent by registered mail to the said Jacob Balz having been returned undelivered, notice is hereby given to the said Jacob Balz, his assigns or legal representatives, that if he or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents in order that the notices of declaration heretofore sent by and returned to the Office may be forwarded to them.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will be proceeded with as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., February 13, 1908.

Thomas W. Farnsworth, his assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of the Kahn Mfg. Company, of No. 416 Dauphin street, Mobile, Ala., for registration of a trade-mark and a trade-mark registered to Thomas W. Farnsworth, of 81 Summer street, Boston, Mass., and the notice of said declaration sent by registered mail to the said Thomas W. Farnsworth having been returned undelivered, notice is hereby given to the said Thomas W. Farnsworth, his assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents in order that the notices of declaration heretofore sent by and returned to the Office may be forwarded to them.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will be proceeded with as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., February 13, 1908.

George Riggs, his assigns or legal representatives, take notice:

An interference has been declared by this Office between an application of The Old Bleach Linen Company, Limited, of Randalstown, Ireland, for registration of a trade-mark and a trade-mark registered to George Riggs, of Newark, N. J., and the notice of said declaration sent by registered mail to the said George Riggs has been returned by the Post-Office Department undelivered.

Notice is therefore hereby given to George Riggs, his assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., February 8, 1908.

Robert G. McCorkle & Company, their assigns or legal representatives, take notice:

An interference has been declared by this Office between an application of Charles Shaffner & Company, of Chicago, Ill., for registration of a trade-mark and a trade-mark registered to Robert G. McCorkle & Company, of Louisville, Ky., and it appears from the record of the case that the registrant, Robert G. McCorkle & Company, cannot be located.

Notice is therefore hereby given to said Robert G. McCorkle & Company, their assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., February 8, 1908.

Mariano Sanz, his assigns or legal representatives, take notice:

An interference having been declared by this Office between the applications of Bennett, Sloan & Company, National Grocer Company, and Mariano Sanz for registration of a trade-mark, a letter having been received from the attorney of record for said Mariano Sanz stating that he is informed and believes that Sanz is dead and that he cannot say whether or not there is a successor to the business, and the Office having been unable to obtain any communication from said Mariano Sanz, notice is hereby given to the said Mariano Sanz, his assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication the interference will be proceeded with as in case of default.

EDWARD B. MOORE. *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., February 8, 1908.

Thomas N. Dwyer, his assigns or legal representatives, take notice:

An interference has been declared by this Office between an application of James E. Moroney, of Philadelphia, Pa., for registration of a trade-mark and a trade-mark registered to Thomas N. Dwyer, whose known address is 36 South William street, New York, N. Y., and it appears from the record of the case that the registrant, Thomas N. Dwyer, cannot be located.

Notice is therefore hereby given to said Thomas N. Dwyer, his assigns or legal representatives, that if they or any of them desire to contest said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., January 29, 1908.

Weber & Schillinger, their assigns or legal representatives, take notice:

An interference has been declared by this Office between an application of The George Wiedemann Brewing Company, of Newport, Ky., for registration of a trade-mark and a trade-mark registered to Weber & Schillinger, of Louisville, Ky., and it appears from the record of the case that the registrant, Weber & Schillinger, cannot be located.

Notice is therefore hereby given to said Weber & Schillinger, their assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., January 29, 1908.

Helen Ryan & Company, their assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of The A. Spiegel Company, of Milwaukee, Wis., for registration of a trade-mark and a trade-mark registered to Helen Ryan & Company, of 12 South Elliott place, borough of Brooklyn, New York, N. Y., and the notice of said declaration mailed by the Patent Office in the usual manner to the said Helen Ryan & Company having been returned undelivered, notice is hereby given to the said Helen Ryan & Company, their assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents in order that the notices of declaration heretofore sent by and returned to the Office may be forwarded to them.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will be proceeded with as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., January 23, 1908.

D. L. Wing & Company, their assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of J. F. Meyer & Sons' Milling Company, of 172-174 Laclede Bldg., St. Louis, Mo., for registration of a trade-mark and a trade-mark registered March 14, 1882, to D. L. Wing & Company, of St. Louis, Mo., and the notice of said declaration mailed by the Patent Office in the usual manner to the said D. L. Wing & Company having been returned undelivered, notice is hereby given to the said D. L. Wing & Company, their assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents in order that the notice of declaration heretofore sent by and returned to the Office may be forwarded to them.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will be proceeded with as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., January 22, 1908.

Joseph H. Brown, his assigns or legal representatives, take notice:

An interference has been declared by this Office between an application of Kingan & Company, Limited, of Indianapolis, Ind., or registration of a trade-mark and a trade-mark registered to Joseph H. Brown, of Fort Worth, Tex., and a letter has been filed in the case by the attorney of record for said Brown stating that he is unable to locate his client.

Notice is therefore hereby given to said Joseph H. Brown, his assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., January 18, 1908

The heirs, executor, or administrator of Siman Miyata, take notice:

An interference has been declared by this Office between an application of the Standard Import Company, Limited, of New Orleans, La., and an application of Siman Miyata, of West Orange, N. J., both for registration of a trade-mark, and a letter has been filed in the case from the attorney of record for said Miyata stating that Miyata has died.

Notice is therefore hereby given to the heirs, executor, or administrator of the said Siman Miyata that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

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[BY AUTHORITY OF CONGRESS.]

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TO CITIZENS OF THE UNITED STATES.

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Alabama	6	.....	New Hampshire	4	.....
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Arkansas	1	.....	New York	124	29
California	30	3	North Carolina	4	1
Colorado	10	.....	North Dakota	3	.....
Connecticut	19	2	Ohio	60	5
District of Columbia	5	2	Oklahoma	6	1
Florida	1	.....	Oregon	12	.....
Georgia	5	1	Pennsylvania	64	9
Hawaii Territory	.....	.....	Philippine Islands	.....	.....
Idaho	2	.....	Rhode Island	6	.....
Illinois	63	8	South Carolina	.....	.....
Indiana	15	1	South Dakota	5	.....
Iowa	19	1	Tennessee	7	.....
Kansas	16	2	Texas	18	5
Kentucky	2	.....	Utah	2	.....
Louisiana	5	.....	Vermont	.....	1
Maine	4	.....	Virginia	5	2
Maryland	4	3	Washington	4	11
Massachusetts	39	8	West Virginia	7	1
Michigan	22	5	Wisconsin	12	1
Minnesota	14	1	Wyoming	.....	.....
Mississippi	2	.....	U. S. Army	.....	.....
Missouri	15	6	U. S. Navy	1	.....
Montana	2	.....			
Nebraska	13	3	Total to citizens of the United States	705	121
Nevada	.....	.....			

TO CITIZENS OF FOREIGN COUNTRIES.

Countries.	Patents and Designs.	Trade-Marks and Prints.	Countries.	Patents and Designs.	Trade-Marks and Prints.
Argentina	.....	.....	Natal	.....	.....
Austria-Hungary	2	1	Netherlands	1	.....
Belgium	1	2	Newfoundland	.....	.....
Brazil	.....	.....	New South Wales	1	.....
British West Indies	.....	.....	New Zealand	1	.....
Canada	12	1	Norway	.....	.....
Cape Colony	.....	.....	Persia	.....	.....
Chile	.....	.....	Queensland	1	.....
China	.....	.....	Roumania	1	.....
Costa Rica	.....	.....	Russia	2	.....
Cuba	1	.....	Scotland	2	.....
Denmark	2	.....	South Australia	.....	.....
Ecuador	.....	.....	Spain	.....	.....
England	21	5	Sweden	1	2
France	6	1	Switzerland	1	.....
Germany	38	4	Transvaal, South Africa	2	.....
Haiti	.....	.....	Venezuela	.....	1
Ireland	.....	.....	Western Australia	.....	.....
Italy	1	.....			
Japan	.....	.....			
Java	.....	.....	Total to citizens of foreign countries	97	17
Mexico	.....	.....			

Interference Notices.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., February 17, 1908.

Jacob Baiz, his assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of The German-American Coffee Company, of 406 Greenwich street, New York, N. Y., for registration of a trade-mark and a trade-mark registered to Jacob Baiz, of 102 Front street, New York, N. Y., and the notice of said declaration sent by registered mail to the said Jacob Baiz having been returned undelivered, notice is hereby given to the said Jacob Baiz, his assigns or legal representatives, that if he or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents in order that the notices of declaration heretofore sent by and returned to the Office may be forwarded to them.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will be proceeded with as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., February 13, 1908.

George Riggs, his assigns or legal representatives, take notice:

An interference has been declared by this Office between an application of The Old Bleach Linen Company, Limited, of Randalstown, Ireland, for registration of a trade-mark and a trade-mark registered to George Riggs, of Newark, N. J., and the notice of said declaration sent by registered mail to the said George Riggs has been returned by the Post-Office Department undelivered.

Notice is therefore hereby given to George Riggs, his assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE *Commissioner.*

APPLICATIONS UNDER EXAMINATION.

Condition at Close of Business March 8, 1908.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action. Amended	New.	No. of applications awaiting action.
308	XVII. Clutches; Linotyping; Matrix-Making; Nut and Bolt Locks; Printing.	Feb. 18	Feb. 4	182
244	XXXV. Buckles, Buttons, and Clasps; Card, Picture, and Sign Exhibiting; Garment-Supporters; Signals; Toilet.	Feb. 30	Dec. 15	706
312	VII. Games and Toys; Mechanical Motors; Optics; Paper Manufactures; Velocipedes.	Feb. 5	Jan. 3	299
378	XXXVIII. Artesian and Oil Wells; Bottles and Jars; Care of Live Stock; Educational Appliances; Fishing and Trapping; Stationery; Stone-Working.	Feb. 4	Jan. 27	304
179	XX. Artificial Limbs; Builders' Hardware; Dentistry; Locks and Latches; Safes; Undertaking.	Feb. 3	Jan. 16	209
172	XXXI. Alcohol; Ammonia, Water, and Wood Distillation; Charcoal and Coke; Gas, Heating and Illuminating; Hides, Skins, and Leather; Liquid Coating Compositions; Mineral Oils; Oils, Fats, and Glue; Water Purification.	Jan. 29	Dec. 28	250
135	VIII. Beds; Chairs; Furniture; Kitchen and Table Articles; Store Furniture.	Jan. 28	Dec. 5	380
313	I. Fences; Harrows and Diggers; Plows; Seeders and Planters; Trees, Plants, and Flowers.	Jan. 27	Jan. 6	298
147	XXIX. Coopering; Fire-Escapes; Ladders; Roofs; Wheelwright-Machines; Wooden Buildings; Wood-Sawing; Wood-Turning; Woodworking; Woodworking-Tools.	Jan. 27	Nov. 14	396
167	V. Bookbinding; Harvesters; Jewelry; Music.	Jan. 25	Jan. 8	307
318	VI. Bleaching and Dyeing; Chemicals; Explosives; Fertilizers; Medicines; Preserving; Sugar and Salt.	Jan. 24	Jan. 15	197
144	XXIV. Apparel; Apparel Apparatus; Sewing-Machines; Surgery.	Jan. 22	Jan. 29	305
308	XV. Bread, Pastry, and Confection Making; Coating; Fuel; Glass; Hydraulic Lime and Cement; Laminated Sheets and Fabrics; Paper-Making; Paving; Photography; Plastic Block and Earthenware Apparatus; Plastic Compositions; Plastics.	Jan. 22	Jan. 8	600
304	XXXIV. Railways; Railway-Brakes; Railway Rolling-Stock.	Jan. 22	Oct. 19	365
164	XXXIII. Cutlery; Domestic Cooking Vessels; Electric Signaling; Electricity, Medical and Surgical; Fireproof Buildings; Masonry; Tents, Canopies, Umbrellas, and Canes.	Jan. 20	Jan. 18	293
154	XI. Boot and Shoe Making; Boots, Shoes, and Leggings; Button, Eyelet, and Rivet Setting; Harness; Leather Manufactures; Nailing and Stapling; Whips and Whip Apparatus.	Jan. 20	Dec. 30	335
232	IV. Bridges; Conveyers; Cranes and Derricks; Excavating; Hoisting; Hydraulic Engineering; Iron Structures; Loading and Unloading; Towers.	Jan. 18	Jan. 20	284
264	XXXVI. Curtains, Shades, and Screens; Drafting; Driers; Engraving; Measuring Instruments; Wind-Wheels.	Jan. 16	Jan. 9	525
278	XXXII. Carbonating Beverages; Dispensing Beverages; Dispensing-Cans; Metallic Shipping and Storing Vessels; Packaging Liquids; Refrigeration.	Jan. 9	Nov. 5	502
322	XII. Elevators; Journal-Boxes; Lubrication; Machine Elements; Pulleys and Shafting.	Jan. 8	Jan. 3	506
327	XVIII. Injectors and Ejectors; Steam and Vacuum Pumps; Steam-Boilers; Steam-Engines; Steam-Engine Valves.	Jan. 8	Jan. 3	280

Applications Under Examination—Continued.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action. Amended	New.	No. of applications awaiting action.
332	X. Carriages and Wagons.....	Jan. 8	Nov. 18	490
379	XXIII. Acoustics; Coin-Handling; Horology; Recorders; Registers; Time-Controlling Mechanism	Jan. 6	Oct. 28	280
375	XXVII. Brushing and Scrubbing; Grinding and Polishing; Laundry; Washing Apparatus.	Jan. 4	Jan. 3	430
382	XXVIII. Internal-Combustion Engines; Miscellaneous Heating Plants.	Jan. 4	Dec. 13	503
280	XL. Baggage; Check Controlled Apparatus; Cloth, Leather, and Rubber Receptacles; Deposit and Collection Receptacles; Fine Arts; Lighting-Fixtures; Package and Article Carriers; Paper Receptacles; Special Receptacles and Packages; Wooden Receptacles.	Jan. 4	Dec. 2	668
105	XXVI. Electric Heating and Rheostats; Electric Railways; Electricity, Generation; Motive Power.	Jan. 4	Oct. 18	349
152	XXX. Fluid-Pressure Regulators; Lamps and Gas-Fittings; Liquid and Gaseous Fuel Burners; Type-Writing Machines.	Jan. 2	Dec. 30	283
238	XIX. Furnaces; Heating and Cooking Stoves, Liquid and Gaseous Fuel; Stoves and Furnaces.	Jan. 2	Nov. 16	506
247	XXII. Air-Guns, Catapults, and Targets; Ammunition and Explosive Devices; Boats and Buoys; Firearms; Marine Propulsion; Ordnance; Railway-Rails and Joints; Railway-Ties and Fasteners; Ships.	Jan. 2	Nov. 15	565
128	II. Bee Culture; Dairy; Label-Affixers; Paper Files and Binders; Pneumatics; Presses; Store-Service; Tobacco.	Dec. 26	Dec. 21	388
329	XIII. Arms, Projectiles, and Explosive Charges, Making; Metal-Working, etc.	Dec. 18	Dec. 9	591
307	XIV. Compound Tools; Cutting and Punching Sheets and Bars; Farriery; Metal-Bending; Metal-Ornamenting; Sheet-Metal Ware, Making; Tools; Wire-Working.	Dec. 16	Oct. 9	337
112	XXI. Brakes and Gins; Carding; Cloth-Finishing; Cordage; Felt and Fur; Knitting and Netting; Silk; Spinning; Weaving.	Dec. 12	Oct. 5	556
142	IX. Air and Gas Pumps; Fire-Extinguishers; Hydraulic Motors; Pumps; Sewerage.	Dec. 11	Jan. 20	221
315	XXV. Butchering; Mills; Threshing; Vegetable Cutters and Crushers.	Dec. 7	Dec. 4	442
107	XXXVII. Electric Lighting; Electricity, Conductors; Electricity, General Applications.	Dec. 6	Oct. 1	643
109	XVI. Telegraphy; Telephony	Nov. 22	Aug 19	618
175	III. Annealing and Tempering; Coating with Metal; Electrochemistry; Metal-Founding; Metallurgy; Shaping Fluid Metal.	Nov. 19	Nov. 9	545
321	XXXIX. Baths and Closets; Water Distribution.	Nov. 8	Sept. 24	916
352	XLI. Railway Draft Appliances; Resilient Tires and Wheels.	Oct. 18	Sept. 9	865

Total number of applications awaiting action 17,800

Room No.		Oldest new application and oldest action by applicant awaiting office action. Amended	New.	No. of applications awaiting action.
161	TRADE-MARKS, DESIGNS, LABELS, AND PRINTS.			
	Trade-Marks.....	Feb. 27	Feb. 3	354
	Designs.....	Feb. 18	Feb. 6	61
	Labels and Prints.....	.....	.....	....

Notice.

Coupons unless properly filled out will not be accepted in payment for copies of publications.

PATENTS

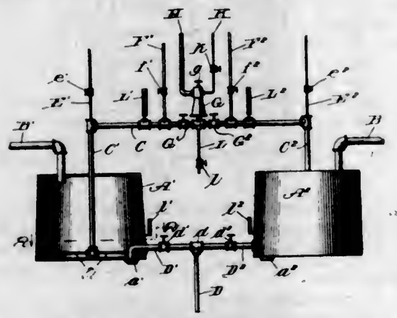
GRANTED MARCH 10, 1908.

881,103. LAMP-BURNER. JOHN M. BEADLES, Denver, Colo. Filed June 17, 1907. Serial No. 379,503.



In a lamp burner a wick tube having in one of its sides a recess, the lower surface of which is inclined, and a cylindrical weight upon the latter, adapted to pass into the tube when the wick is lowered beneath the recess, the diameter of the said weight exceeding the distance between the sides of the tube.

881,104. PROCESS OF MAKING THIN BOILING STARCH. THEODOR E. BREYER, Waukegan, Ill. Filed Apr. 19, 1905. Serial No. 256,391.

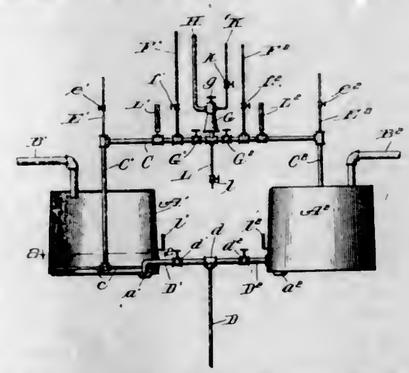


The process of manufacturing thin boiling starch which consists in first discharging into acidulated starch milk a mixture of steam and air thereby imparting the requisite heat to the starch milk to promote the conversion thereof into thin boiling starch and coincidently keeping the starch in suspension, and subsequently after the desired temperature has been acquired discontinuing the discharge of the mixed air and steam and discharging compressed air into the starch milk to prevent the starch from settling.

881,105. APPARATUS FOR MAKING THIN BOILING STARCH. THEODOR E. BREYER, Waukegan, Ill. Filed Apr. 19, 1905. Serial No. 256,392.

1. In an apparatus for manufacturing thin boiling starch, the combination with a tank, of a conduit extending into and having a perforated portion adjacent the bottom of said tank, means for delivering mixed air and steam through said conduit to the interior of said tank, and means for delivering compressed air to said conduit.

2. In an apparatus for manufacturing thin boiling starch, the combination with a tank, of a conduit extending into and having a perforated portion adjacent the bottom of said tank, means for delivering mixed air and steam through said conduit to the interior of said tank, a pipe for conveying compressed air communicating with said conduit, and means for cutting off the delivery of mixed air and steam to said tank.



3. In an apparatus for manufacturing thin boiling starch, the combination with a tank, of a conduit extending into and having a perforated portion adjacent the bottom of said tank, a steam jet device communicating with said conduit for delivering a mixture of steam and air thereto, a pipe for conveying compressed air to said conduit, and a valve in said conduit intermediate of said steam jet device and said pipe.

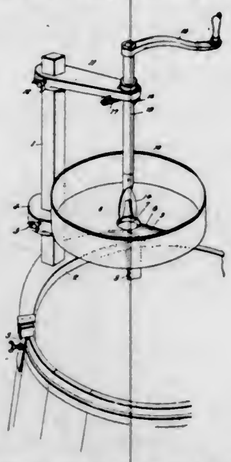
4. In an apparatus for manufacturing thin boiling starch, the combination with a tank, of a conduit extending into and having a perforated portion adjacent the bottom of said tank, means for delivering mixed air and steam through said conduit to the interior of said tank, a vent pipe leading from said conduit, and a valve controlling the escape of the mixed air and steam from said pipe.

881,106. VEGETABLE-CUTTER. ARTHUR BRONSON, Simpson, Kans. Filed Aug. 6, 1907. Serial No. 387,357.

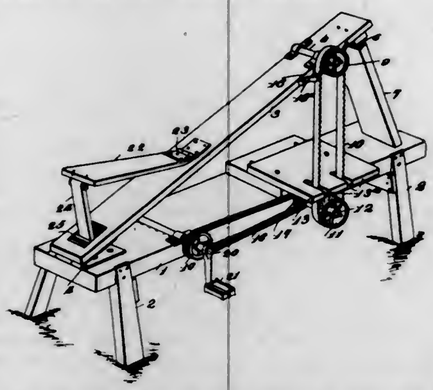
1. In a device of the character described, the combination of a standard, a knife carrying plate supported by the standard, a knife blade mounted upon the knife carrying plate, a bracket supported by the standard, a shaft journaled upon the bracket in coöperative relation to the knife carrying plate, the said shaft being slidable longitudinally within its bearings and being provided with means for engaging and rotating the material to be sliced upon the knife carrying plate, and a friction shoe mounted upon the bracket and engaging the shaft to hold the same against longitudinal movement.

2. In a device of the character described, the combination of a standard, a bracket supported by the standard, a shaft journaled upon the bracket and movable longitudinally within its bearings, a friction shoe mounted upon the bracket and engaging the shaft to hold the same against longitudinal displacement, a knife carrying plate supported by the standard in coöperative relation to the shaft and provided with a central opening to accommodate the said shaft, the plate being also formed with a radial

slot, and a knife blade mounted within the radial slot, the before mentioned shaft being provided with means for engaging and rotating the material to be sliced upon the knife carrying plate.



881,107. BAND-SAW. WALTER CAREY, Lexington, Miss. Filed July 22, 1907. Serial No. 384,925.



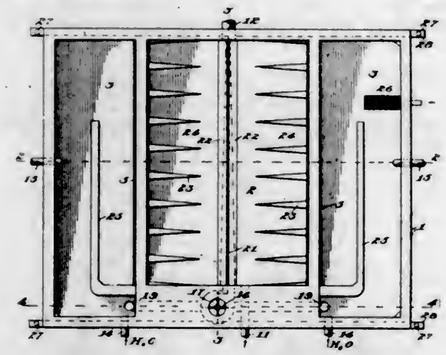
1. A machine of the character described, comprising a bench, a beam hinged at one end to said bench, an upright supported on the bench and on which the other end of said beam rests, means for raising and lowering the beam, a band saw supported by the beam and by the bench, whereby the vertical adjustment of the beam may effect the tightening of the saw, a drive shaft journaled in the bench, a driving connection between the said shaft and the saw, and means for turning said shaft.

2. A machine of the character described, comprising a bench provided at one end with an upright, a beam hinged at one end to the bench, adjustable bolts working in the upper end of said upright and on which the other end of said beam rests, the beam being held in an inclined position, a shaft journaled on the beam, a wheel carried by said shaft, a shaft journaled underneath the first named shaft, a wheel carried by said last named shaft, a band saw extending around said wheels, a crank shaft journaled in the bench and having a driving connection with the saw, said crank shaft being provided with pedals, and a seat mounted on the beam.

3. A machine of the character described, comprising a bench provided at one end with a post, adjusting bolts mounted in the upper end of said post, a beam hinged at one end to the bench with its other end resting on said post, a band saw carried by the bench and the beam with its stretches extending vertically, a work table mounted on the bench and provided with slots through which the stretches pass, a guide plate secured to the side of the beam and also provided with grooves for the passage of the saw, and means for driving the saw.

4. A machine of the character described, comprising a bench provided at one end with an upright, a beam hinged at one end to the bench and supported at its other end on the upright, means for raising the last named end of the beam, a band saw carried by the beam and bench, whereby the raising of the beam will effect the tightening of the saw, a driving shaft journaled in the bench and having a driving connection with the saw, said shaft being provided with foot pedals, and a seat hinged at one end to the beam and provided at its other end with a depending strut, the beam being provided with notches to receive the lower end of the strut, whereby to vertically adjust the seat on the beam.

881,108. APPARATUS FOR ELECTROLYSIS OF BRINE. COURTLAND F. CARRIER, Jr., Elmira, N. Y., assignor to Elmira Electrochemical Company, Elmira, N. Y., a Corporation of New York. Filed Apr. 25, 1907. Serial No. 370,280.



1. An electrolytic cell having decomposing and oxidizing compartments, and means for circulating mercury therethrough, the passage for mercury through the decomposing compartment diminishing in superficial area in the direction of flow.

2. An electrolytic cell having decomposing and oxidizing compartments, and means for circulating mercury therethrough, the passage for mercury through the decomposing compartment diminishing in cross sectional and superficial area in the direction of flow.

3. An electrolytic cell having decomposing and oxidizing compartments, means for circulating mercury therethrough, and a distributing slot for mercury substantially centrally disposed in the decomposing compartment.

4. An electrolytic cell having decomposing and oxidizing compartments, means for circulating mercury therethrough, a distributing slot for mercury substantially centrally disposed in the decomposing compartment, and means in said compartment for preventing retardation of the flow of the amalgam therein.

5. An electrolytic cell having decomposing and oxidizing compartments, means for circulating mercury therethrough, a distributing slot for mercury substantially centrally disposed in the decomposing compartment, and means in said compartment for preventing retardation of the amalgam therein, said means comprising triangular strips or blocks extending above the surface of the mercury and providing intermediate channels diminishing in cross sectional area in the direction of flow of the amalgam.

[Claims 6 and 7 not printed in the Gazette.]

881,109. DRUM. FLOREN CIPAR, Chicago, Ill. Filed May 15, 1907. Serial No. 373,765.



1. In a musical instrument, the combination of a pair of drum-heads, and a collapsible body of flexible material therebetween.

2. In a musical instrument, the combination of a pair of drum-heads, and a collapsible body of flexible material therebetween and having air openings therein.

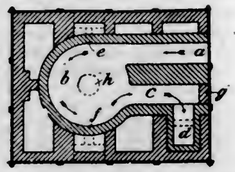
3. In a musical instrument, the combination of a pair of drum-heads, a body-band for each of said heads, and a body of flexible material connecting said bands.

4. In a musical instrument, the combination of a body of flexible material, drum-heads respectively connected to said body, and means for securing said bands so the flexible body will be held taut.

5. In a musical instrument, the combination of a pair of body-bands, a body of flexible material between said bands, drum-heads respectively connected to said bands, and means for securing said bands so the flexible body will be held taut.

[Claims 6 to 12 not printed in the Gazette.]

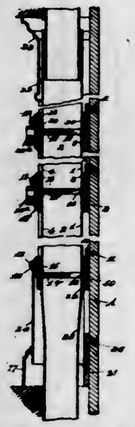
881,110. REVERBERATORY FURNACE. FRANK COTTON, Hornsby, New South Wales, Australia. Filed Feb. 3, 1906. Serial No. 299,252.



1. A reverberatory furnace comprising inner and outer walls separated by a filling of sand, a circular furnace chamber having a concaved floor and domed roof, an intake conduit arranged tangentially to the circumference of said chamber, the length of said intake conduit being approximately equal to the diameter of the furnace and an outlet conduit parallel to and in the same horizontal plane as said intake conduit but located non-tangentially with respect to the circumference of the furnace chamber.

2. A reverberatory furnace comprising inner and outer walls separated by a suitable filling of sand, a circular furnace chamber having a concaved floor and domed roof, said roof being provided with a central feed aperture for the material to be treated, a fuel intake conduit for said chamber located tangentially to its circumference, the length of said conduit being equal to the diameter of the furnace and an outlet conduit parallel to and in the same horizontal plane as said intake conduit but out of tangential line with respect to the circumference of said chamber.

881,111. MAIL-CHUTE. JOSEPH W. CUTLER, Rochester, N. Y., assignor to Cutler Manufacturing Company, Rochester, N. Y., a Corporation of New York. Filed Oct. 1, 1906. Serial No. 336,880.



1. A mail chute having an opening therein, and a vertically opening socket located at one end of said opening, in combination with a removable panel for covering said opening having one end adapted to enter said socket and a locking device for securing the opposite end.

2. A mail chute having an opening therein, a vertically opening socket located at one end of said opening and an opposing stop at the opposite end of said opening, in combination with a removable panel for covering said opening having one end arranged to coöperate with the socket and the other to coöperate with the stop and a locking device for holding said panel in position over the opening.

3. A mail chute having an opening therein, in combination with a removable panel for covering said opening, cooperating projections and recesses between the panel and a relatively stationary portion at the ends of the panel adapted to be engaged and disengaged by a vertical tilting and longitudinal movement of the panel, and a locking device for preventing the tilting movement of the panel thereby securing said panel in position over the opening.

4. A mail chute having the open front and ledges at opposite ends thereof, in combination with a removable panel for closing said opening and extending behind and cooperating with a ledge at one end and having its rear face located in rear of the ledge at the other end when in position and locking devices for securing the last mentioned end in position.

5. In a mail chute, the combination with a support, a bracket therein, having a recess, of a chute section open at the front and supported in said bracket, and a removable panel for closing said opening having at one end a portion adapted to enter the recess in the bracket and a locking device for securing the other end of said panel in position.

[Claims 6 to 15 not printed in the Gazette.]

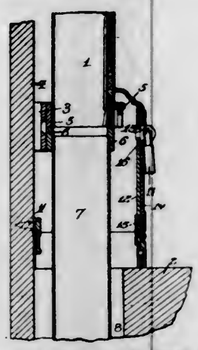
881,112. LOCKING DEVICE FOR MAIL-CHUTES. JOSEPH W. CUTLER, Rochester, N. Y., assignor to Cutler Manufacturing Company, Rochester, N. Y., a Corporation of New York. Filed Jan. 6, 1906. Serial No. 294,824. Renewed Nov. 4, 1907. Serial No. 400,549.

1. The combination with a mail chute, of a base section therefor embodying a removable member, and a locking device for the said member.

2. The combination with a mail chute, of a base section for protecting a portion of the chute, embodying a relatively fixed member, a movable member, and a locking device for controlling relative movement of the movable and fixed members.

3. The combination with a mail chute adapted to extend through the floors of a building, of a base section for

protecting the chute adjacent to the floor embodying a relatively fixed member, a relatively movable member adapted to coöperate with the fixed member and a lock for preventing unauthorized movement of the movable member.

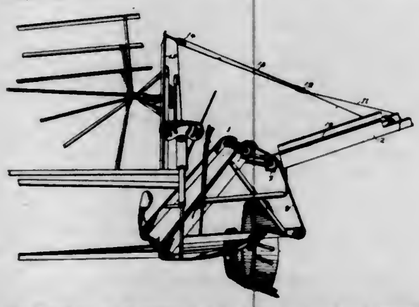


4. The combination with a mail chute embodying one or more sections, and securing means therefor, of a base section adapted to conceal the chute-securing means, and a lock for preventing unauthorized movement or removal of the base section.

5. The combination with a mail chute embodying a floor section, and securing means for said section, of a base section adapted to conceal said securing means, and a lock for preventing unauthorized removal of the base section.

[Claims 6 to 20 not printed in the Gazette.]

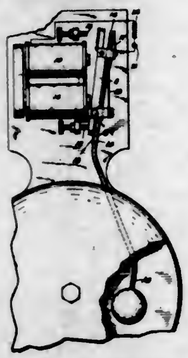
881,113. ATTACHMENT FOR BINDERS. JAY M. DARROW, Asherville, Kans. Filed Sept. 9, 1907. Serial No. 392,027.



An elevator attachment for binders comprising brackets detachably applied to the frame of the binder, side pieces having their inner ends received between the brackets, braces connecting the side pieces, a roller journaled between the inner ends of the side pieces, the journals at the opposite extremities of the roller extending through the side pieces and being received within suitable bearings in the before mentioned brackets and one of the journals projecting beyond the bracket, a wheel applied to the said journal, means for transmitting motion from the binder mechanism to the wheel, a second roller journaled between the outer ends of the side pieces, an endless belt passing around the rollers and designed to receive the grain discharged from the binder and elevate the same so as to drop it into a vehicle, and means for adjusting the inclination of the side pieces.

881,114. ELECTRIC VIBRATOR. JOHN M. DINKINS, Indianapolis, Ind., assignor to The Hercules Electric & Mfg. Co., Indianapolis, Ind., a Corporation of Indiana. Filed July 21, 1906. Serial No. 327,225.

1. In an electro magnetic vibrator, the combination, with an electro magnet, of a movable armature arranged in the field of said magnet, a hammer arm mounted upon said armature and movable relative thereto, and an energizing circuit for said magnet comprising a pair of separable members controlled by the movement of the hammer arm relative to the armature.



2. In an electro-magnetic vibrator, the combination, with an electro magnet, of a pivotally supported armature arranged in the field of said magnet, a hammer arm pivotally mounted on said armature and movable relative thereto, and an energizing circuit for the electro magnet comprising a pair of separable terminals controlled by the relative movement of the hammer arm on the armature.

3. In an electro magnetic vibrator, the combination, with an electro magnet, of a pivotally supported armature arranged in the field of said magnet, means for limiting the swing of said armature in both directions, a hammer arm pivotally mounted on said armature and movable relative thereto, and an energizing circuit for the electro magnet comprising a pair of separable terminals controlled by the relative movement of the hammer arm on the armature.

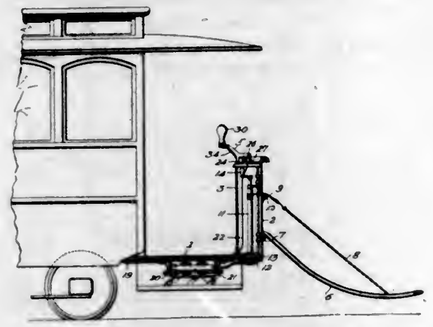
4. In an electro magnetic vibrator, the combination, with an electro magnet, of a pivoted armature arranged in the field of said magnet, a hammer arm pivotally associated with the armature and movable relative thereto, spring fingers forming a connection between the armature and hammer arm permitting relative movement between the hammer arm and armature, and an energizing circuit for said electro magnet controlled by the relative movement of the hammer arm and armature.

5. In an electro magnetic vibrator, the combination, with an electro magnet, of a pivoted armature arranged in the field of said magnet, a hammer arm pivotally associated with the armature and movable relative thereto, spring fingers forming a connection between the armature and hammer arm permitting relative movement between the hammer arm and armature, an energizing circuit for said electro magnet controlled by the relative movement of the hammer arm and armature, and means for limiting the swing of the armature in both directions.

881,115. ELECTRICALLY-OPERATED FENDER FOR STREET-RAILWAY CARS. NATHAN FALLEK, Denver, Colo. Filed June 17, 1907. Serial No. 379,471.

1. In a device of the character described, the combination with a car platform having a dash board, of a fender hinged thereto, a revoluble shaft on said platform, a flexible connection secured to said shaft and said fender, and means for turning said shaft to lift the fender, a dog on the end of said shaft, and an electrically operated latch for normally engaging said dog, and for releasing it to drop the fender.

2. In a device of the character described, the combination with a car platform having a dash board, of a fender hinged thereto, a crank operated shaft on said platform, a flexible connection uniting said shaft and fender, whereby to raise said fender when the shaft is turned, a dog on the end of the shaft, a magnet in circuit with a source of power, an armature in operative relation to said magnet, one end of which normally engages said dog, and means for closing the circuit, whereby the magnet is energized and the dog released.



3. In a device of the character described, the combination with a car platform having a dash board, of a fender hinged thereto, a revoluble shaft on the platform, a flexible connection uniting the shaft and fender, a roller for supporting the said flexible connection, and a crank for turning the shaft to lift the fender, a dog on the end of said shaft, a magnet in circuit with a source of electric power, an armature in operative relation to said magnet, one end of which projects into the path of said dog, and normally holds it against rotation in one direction, and a push button for closing said circuit.

4. In a device of the character described, the combination with a car, a controller and a controller crank, of a fender hinged to said car, a manually operated shaft on said car, and a flexible connection uniting said shaft and fender, whereby the fender is raised when the shaft is turned, a dog on the end of the shaft, a magnet in circuit with a source of power, an armature in operative relation to the magnet, one end of which engages said dog, and a circuit closer in said controller crank connected with said magnet.

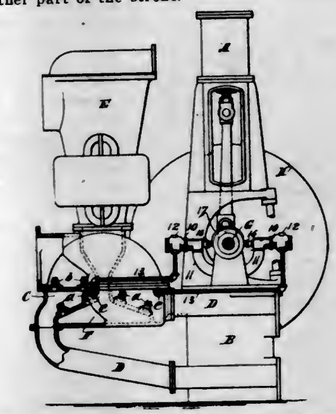
5. In a device of the character specified, the combination with a car having a controller and a controller crank, of a fender hinged to said car, a revoluble shaft on said car, a flexible member attached to said shaft and fender, and means for turning the shaft to lift the fender, a dog on the lower end of the shaft, a magnet, one pole of which is connected with a source of power, a circuit closer in the handle of the controller crank, wires connecting said circuit closer with the other pole of the battery and with the crank and an armature in operative relation to the magnet, one end of which engages said dog.

[Claims 6 to 9 not printed in the Gazette.]

881,116. AIR OR VACUUM PUMP. WILLS M. FLEMING, Holyoke, Mass., assignor to International Steam Pump Company, New York, N. Y., a Corporation of New Jersey. Filed June 19, 1906. Serial No. 322,432.

1. The combination with an air or vacuum pump cylinder and its admission and discharge valve mechanism, said cylinder having a port for the admission of cushioning air independently of the admission and discharge valves, of an air snifting valve controlling said port, and operating devices including a cam engaging the snifting valve stem for operating the valve to admit air in front of the pump plunger during one part of each stroke and to prevent admission of air during another part of the stroke.

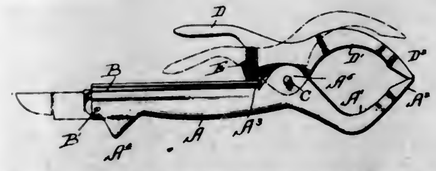
2. The combination with a double acting air pump and its pulsation chambers, of connections between the pulsation chambers and the atmosphere, check valves controlling said connections and opening toward the cylinder, and mechanically actuated valve devices outside the check valves controlling said connections and actuated to open said connections to the atmosphere during one part of the stroke and close said connections to the atmosphere during another part of the stroke.



3. The combination with a double acting air pump and its pulsation chambers, of pipes connecting the pulsation chambers for opposite ends of the pump with the atmosphere, valves controlling connection between the atmosphere and pipes, and mechanical connections between said valves and a moving part of the pump for operating said valves to open the pipes to the atmosphere during one part of the stroke and to close the pipes during another part of the stroke.

4. The combination with a double acting air pump and its pulsation chambers, of pipes 13 counecting the pulsation chambers for opposite ends of the pump with the atmosphere, check valves *c* in said pipes opening toward the pulsation chambers, valves *c* outside said check valves *c* and controlling connection between the atmosphere and pipes 13, and mechanical connections between said valves *c* and a moving part of the pump for operating said valves *c* to open pipes 13 to the atmosphere at the beginning of the discharge stroke in the chambers with which they respectively connect and to close the pipes during the suction strokes in said chambers.

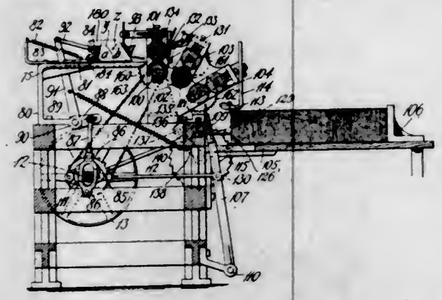
881,117. CASTRATING-TOOL. JOHN N. GASSETT, Laurin, Mont. Filed Feb. 11, 1907. Serial No. 356,864.



1. A tool of the kind described comprising a handle having a slot formed in one end and a jaw formed on the other end, a knife blade pivotally mounted in said slot, a short handle mounted on said handle provided with a jaw at one end, and a spring arranged between said handle for holding said jaws together.

2. A tool of the kind described comprising a handle having a curved jaw at one end provided with an enlarged serrated gripping portion, said handle having an oblique slot formed therein in respect to the jaw, a stop formed on the handle adjacent its end, a knife blade pivotally mounted in said slot, an enlarged bifurcated portion formed on said blade, a short handle provided with an enlarged reduced portion pivotally mounted in said bifurcated portion, a jaw formed on said handle provided with an enlarged serrated gripping portion, and a coil spring arranged between said handles for holding the serrated enlarged gripping portion together.

881,118. PAPER-BOX MACHINE. CHAUNCEY W. GAY, West Springfield, Mass. Filed Sept. 14, 1904. Serial No. 224,441.



1. In a paper box machine, the combination, with mechanism for feeding successive blanks, and a gumming device for depositing a supply of gum on one of the blank flaps, of means for angularly bending a side portion of each blank, of a folding mechanism comprising a table, onto which the angularly bent blanks are fed by the feeding means, a slide horizontally movable on said table transversely of the line of feed of the blanks thereto, a folding blade pivoted to the edge of the slide, bodily movable in unison with the slide and also having a swinging movement relatively thereto, and a means operative both to swing said blade relatively to the slide, and to subsequently move said slide and the blade together.

2. In a paper box machine, the combination, with mechanism for feeding successive blanks, and a gumming device for depositing a supply of gum on one of the blank flaps of means for angularly bending a side portion of each blank, of a folding mechanism comprising a table, onto which the angularly bent blanks are fed by the feeding means, a slide horizontally movable on said table transversely of the line of feed of the blanks thereto, a folding blade pivoted to the edge of the slide, bodily movable in unison with the slide and also having a swinging movement relatively thereto, and a cam-operated swinging lever linked to the folding blade, and operative to swing the blade relatively to the slide and to also move the swung blade and slide together horizontally on the table.

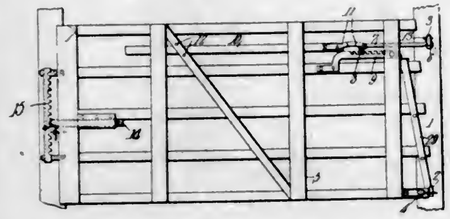
3. In a paper box machine, the combination, with mechanism for feeding successive blanks, and a gumming device for depositing a supply of gum on one of the blank flaps; of a folding mechanism comprising a swinging flap folder for folding the gummed flap, and means for operating said swinging flap folder, a stationary blade for folding the second flap over the gummed flap, and means for moving the partially folded blank relatively to the stationary blade, whereby such blade causes the second flap to be folded onto the gummed flap.

4. In a paper box machine, the combination, with mechanism for feeding successive blanks, and a gumming device for depositing a supply of gum on one of the blank flaps: of a folding mechanism located to one side of the line of feed of the blanks comprising a slide movable transversely of the line of feed of the blank to the folding mechanism, a folding blade pivoted thereon, and means for actuating said blade and subsequently moving said slide and the blade together, and a stationary blade opposite the pivoted folding blade and to the other side of the line of blank feed, for folding the second flap over onto the gummed flap during the movement of said slide and in relation to which the partially folded blank is transversely moved by said slide.

5. In a paper box machine, the combination, with mechanism for feeding successive blanks, a gumming device for depositing a supply of gum on one of the blank flaps, and means for bending the flaps of the blank to form an angle with the body portion of the blank; of devices for overturning the flaps onto the body of the blank, a carton-receiving table, and a plurality of pairs of successively-operative feeding and flattening rollers, having quadrantal arrangements, for diverting the horizontal longitudinal path of the blank into a vertical one, and for depositing the folded blank upon the receiving table.

[Claims 6 to 8 not printed in the Gazette.]

881,119. GATE. GEORGE W. GOSS and CHARLES E. GOSS, Baltimore, Ohio. Filed Apr. 30, 1907. Serial No. 371,099

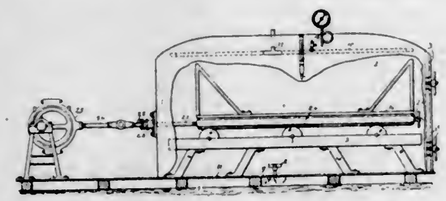


1. The combination with a post and a tiltable gate hingedly connected thereto adjacent the bottom of the gate; of a hooked member pivotally connected to the post, a rack bar fixedly connected to the gate and normally engaged by said hooked member, and a lifting device mounted upon the gate and connected to said member.

2. The combination with a post and a tiltable gate hingedly connected, adjacent its bottom to the post; of a hooked member pivotally connected to the post, a rack bar fixedly connected to the gate, said member being normally seated by gravity in engagement with the rack bar, a latch carried by the gate, and a keeper disposed to be engaged by the latch when said gate is in any position to which it may be tilted.

3. The combination with a post and a tiltable gate hingedly connected adjacent its bottom to the post; of a rack bar fixedly connected to the gate, a hooked member pivotally conected to the post, and a lifting bar fulcrumed upon the gate and pivotally engaging the hooked member, said member being normally held by gravity in engagement with the rack bar.

881,120. COMBINED RETORT AND SHAKER. JOSEPH S. GUIBBINI, Benicia, Cal. Filed June 24, 1907. Serial No. 380,606.

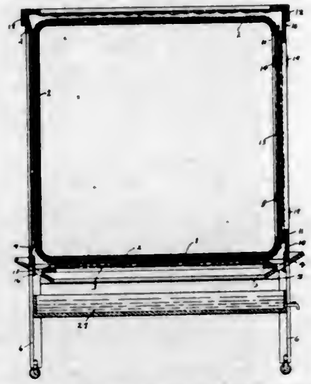


1. In combination, a retort, a truck therein, a prong approximately U-shape engaging the truck, a closing member engaging the free ends of the prong to hold the prong to the truck, and means for engaging the prong to reciprocate the truck.

2. In combination, a retort having means for admitting heating agents, a frame within the retort, rollers on the frame, a prong, a truck in the prong, said truck resting on the rollers, a member secured to the prongs back of the truck and bearing thereagainst, and means for reciprocating the prong.

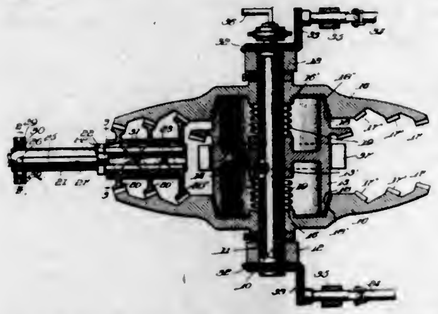
3. In combination, a retort, a truck therein, a prong approximately U-shaped engaging the track and extending to the exterior of the retort, a closing member engaging the free ends of the prong to hold the prong to the truck and means for engaging the exterior portion of the prong to reciprocate the truck.

881,121. EVAPORATOR-COOLER. BEATRICE M. HODGINS, Colorado Springs, Colo. Filed Dec. 18, 1906. Serial No. 348,486.



In combination, a base, supporting means for the base, an inclined strip carried by the base, said strip being provided with openings, a receptacle having reticulated faces resting on the strip, means carried by the receptacle passing through the openings of the strip to hold the receptacle removably to the strip, an inner receptacle, a fabric covering for the inner receptacle, and means for feeding a liquid to the fabric covering.

881,122. SPEED MECHANISM. FREDERICK H. HODGKINS, Chicago, Ill. Filed Aug. 25, 1905. Serial No. 275,035.



1. In a speed mechanism, the combination of a hollow shaft, a slidable shaft in said hollow shaft, a friction member mounted on the hollow shaft and locked to the slidable shaft, driving members mounted on the hollow shaft at the ends of the friction member, each of the driving members having a seat and the ends of the friction member being shaped to engage the seats on the driving members, means for actuating said driving members, means for adjusting said slidable shaft to shift the friction member into operative engagement with one or the other of said driving members, and yielding means to move the friction member out of operative engagement with the driving members.

2. In a speed mechanism, the combination of a hollow shaft provided with a slot, a slidable shaft in said hollow shaft, a friction member mounted on the hollow shaft, a key locking the friction member to the slidable shaft and located in the slot of the hollow shaft, driving members mounted on the hollow shaft at the ends of the friction member, means for actuating said driving members, means for adjusting said slidable shaft to shift the friction member into operative engagement with one or the other of said driving members, a brake device to operate on said friction member, and yielding means to move the friction member out of operative engagement with the driving members.

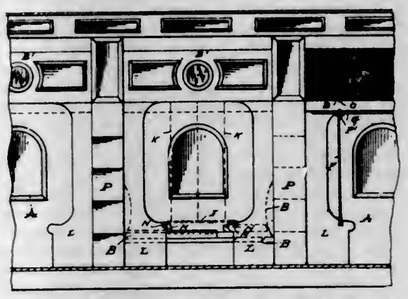
3. In a speed mechanism, the combination of a hollow shaft, a slidable shaft in said hollow shaft, a friction member mounted on the hollow shaft and locked to the slidable shaft, driving members mounted on the hollow shaft at the ends of the friction member, said driving members being provided with oppositely disposed gears, a driving pinion meshing with said gears, means for adjusting said slidable shaft to shift the friction member into operative engagement with one or the other of said driving members, and yielding means to move the friction member out of operative engagement with the driving members.

4. In a speed mechanism, the combination of a hollow shaft, a slidable shaft in said hollow shaft, a friction member mounted on the hollow shaft and locked to the slidable shaft, driving members mounted on the hollow shaft at the ends of the friction member, said driving members being provided with a plurality of oppositely disposed and concentric gears, a plurality of driving pinions located between the driving members each of said pinions meshing with a gear on each driving member, a driving shaft, means for locking said driving shaft to any one of said pinions, means for adjusting said slidable shaft to shift the friction member into operative engagement with one or the other of said driving members.

5. In a speed mechanism, the combination of a hollow shaft, a slidable shaft on said hollow shaft, a friction member mounted on the hollow shaft and locked to the slidable shaft, drivng members mounted on the hollow shaft at the ends of the friction member, said driving members being provided with a plurality of oppositely disposed and concentric gears, a hollow and slotted shaft located between said driving members, a plurality of driving pinions mounted on said hollow shaft each of said pinions meshing with a gear on each of said members, a driving shaft in said hollow shaft, a key carried by said driving shaft and adapted to be locked to any one of said pinions, means for adjusting the slidable shaft to shift the friction member into operative engagement with one or the other of said driving members, and yielding means to move the friction member out of operative engagement with the driving members.

[Claims 6 to 10 not printed in the Gazette.]

881,123. SLEEPING-CAR. LEOPOLD HOFSCHNEIDER, Hoboken, N. J. Filed June 1, 1907. Serial No. 376,782.



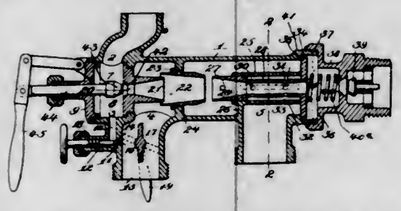
1. The combination in a sleeping car body of seats convertible into berths extending crosswise over the floor, said seats bearing ends and center divisions, their extending armrests having openings, with a rod or bar its ends terminating in hook shaped extensions fitted to the openings in said armrests, the former adapted to support partition boards separating the seats when two facing each other are united to a sleeping berth, substantially as described.

2. In a sleeping car body the combination of seats convertible into berths extending crosswise over the floor, the seats having ends and center divisions and perforated arm-

reats forming receptacles for hook-shaped ends of a bar or rod adapted to support partition boards to separate the seats when two facing each other are united to a sleeping berth, with stationary steps between the backs of each section of two seats to facilitate reaching or leaving an upper berth substantially as set forth.

3. The combination in a sleeping car body of seats convertible into berths extending crosswise over the floor and having center divisions their armrests perforated to receive hook shaped ends of a rod or bar designed to support partition boards separating the seats when two facing each other are united to a sleeping berth, said partition boards, stationary steps secured between the backs of each section of two seats. to facilitate reaching or leaving the upper berth and a supporting frame to which said berths are hinged and they are folded, when not in use, substantially as described.

881,124. INJECTOR. LOVREN E. HOGUE, Greenville, Pa. Filed Dec. 11, 1906. Serial No. 347,345.



1. An injector embodying a plurality of overflow spaces, and a combined forcing and nozzle element carrying a valve for automatically closing said spaces by pressure thereby preventing an overflow during the operation of the injector.

2. An injector communicating with a water and steam supply, means for regulating the water supply, and means for supplying steam to maintain the water above the freezing temperature, said regulating means preventing such supply of steam from entering the body portion of the injector.

3. An injector embodying a lifting tube, a forcing tube carrying a valve and spaced from said lifting tube, and means for automatically increasing the space between the lifting tube and the forcing tube when the injector is in inoperative position to form a large passage to facilitate the operation of the valve carried by the forcing tube when initially supplying pressure to operate the injector.

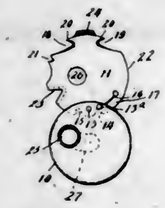
4. An injector comprising a plurality of overflow spaces adapted to communicate with the atmosphere when the injector is not lifting, and means operated by pressure for automatically closing said spaces when communication is established between the injector and boiler thereby preventing any overflow from the injector during the lifting action of the injector.

5. An injector comprising a plurality of overflow spaces adapted to communicate with the atmosphere when the injector is not lifting, means operated by pressure for automatically closing said spaces when communication is established between the injector during the lifting action of the injector and boiler thereby preventing any overflow from the injector, and an overflow chamber communicating with the atmosphere and with said overflow spaces, said means when the injector is closed to the boiler adapted to automatically establish communication between the said spaces and said chamber.

[Claims 6 to 8 not printed in the Gazette.]

881,125. POCKET MANICURING-TOOL. AUGUST HOLMQUIST, Hoopeston, Ill. Filed July 24, 1907. Serial No. 385,284.

1. The pocket manicure implement embodying companion disks pivoted together, one of said disks having a series of manicuring devices formed upon its edge, and the others acting as covering or protecting plates to the manicuring disk.



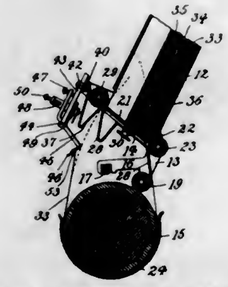
2. The pocket manicure implement consisting of three circular disks of flat metal arranged side by side and united by a pivot, the central one of said disks being provided on its edge with a plurality of tools for manicuring.

3. The pocket manicure implement consisting of three circular disks of flat metal arranged side by side and united by a pivot, the central one of said disks being provided on its edge with undercut sharpened shoulders suitable for manicuring.

4. The pocket manicure implement consisting of three circular disks of flat metal arranged side by side and united by a pivot, the central one of said disks being provided on its edge with undercut sharpened shoulders and a file suitable for manicuring.

5. The pocket implement herein described consisting of three circular flangeless disks of flat metal arranged as set forth and united by a pivot, the central disk being provided with a series of tools upon its edge and with notches at each side of the pivot engaging a stop and limiting its pivotal movements.

881,126. PAPER-FEED ATTACHMENT FOR TYPE-WRITERS. BENJAMIN F. HUTCHES, Jr., Ridgewood, N. J., assignor to The Automultigraph Co., New York, N. Y., a Corporation of New York. Filed May 8. 1907. Serial No. 372,610.



1. A device of the character described, comprising a magazine having an egress opening and an ingress opening, means for withdrawing blank sheets from the magazine through the egress opening, and means for simultaneously returning written sheets thereto through the ingress opening, substantially as specified.

2. A device of the character described, comprising a magazine having a paper support, an egress opening below said support, an ingress opening above said support, means for withdrawing blank sheets from the magazine through the egress opening, and means for simultaneously returning written sheets to said magazine through the ingress opening, substantially as specified.

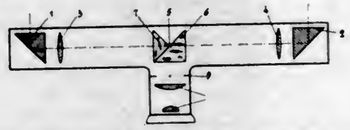
3. A device of the character described, comprising a magazine, a friction roller journaled thereto and adapted to contact with the type-writer platen, and means controlled by said roller for feeding sheets to the platen and for withdrawing sheets therefrom, substantially as specified.

4. A device of the character described, comprising a magazine, a feed roller, a return roller, a friction roller adapted to contact with a type-writer platen, and means for operatively connecting the friction roller to the feed roller and to the return roller, substantially as specified.

5. A device of the character described, comprising a magazine, means for coupling said magazine to a type-writer carriage, a friction roller adapted to engage the type-writer platen, and means actuated by said roller for feeding blank sheets to said platen and withdrawing written sheets from said platen, substantially as specified.

[Claims 6 to 13 not printed in the Gazette.]

881,127. INSTRUMENT FOR OPTICALLY MEASURING DISTANCES. HEINRICH JACOB, Steglitz, near Berlin, Germany, assignor to The Firm of Optische Anstalt C. P. Goerz Aktiengesellschaft, Friedenau, near Berlin, Germany. Filed July 16, 1907. Serial No. 383,960.



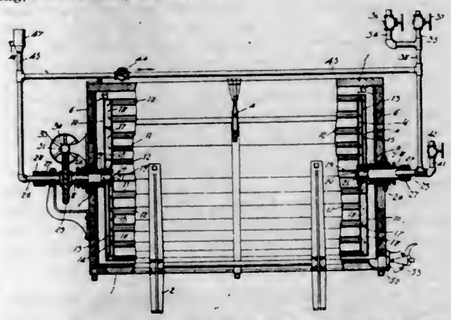
1. In an optical distance measuring instrument comprising two objectives arranged at a distance from each other, each coöperating with a prism, said prisms arranged likewise at a distance from each other, an image-uniting body between said two objectives and coöperating prisms and an ocular in front of said image-uniting body adapted to receive the rays coming from said image-uniting body and having an image-plane coinciding with the image-plane of the said two objectives, the image-uniting body being situated at such a distance from the common image-plane of the objectives and ocular that between two separated half pictures there is produced a central zone with double images, which latter coincide on adjustment of the instrument for a given object and form with the half or part images a single full image of the object for which the adjustment is msde.

2. In an optical distance measuring instrument comprising two objectives arranged at a distance from each other, each coöperating with a prism, said prisms arranged likewise at a distance from each other, an image-uniting body provided with two reflecting surfaces forming an angle with each other, and being adjustable with relation to each other, said image-uniting body being situated between said two objectives and coöperating prisms and an ocular in front of said image-uniting body adapted to receive the rays coming from said image-uniting body and having an image-plane coinciding with the image-plane of the said two objectives, the image-uniting body being situated at such a distance from the common image-plane of the objectives and ocular that between two separated half pictures there is produced a central zone with double images which latter coincide on adjustment of the instrument for a given object and form with the half or part images a single full image of the object for which the adjustment is made.

881,128. LIQUID-RIPENER. AAGE JENSEN, Eureka, Cal. Filed Sept. 16, 1907. Serial No. 393,044.

1. In an apparatus of the character described, the combination of a suitable receptacle for containing the liquid to be treated, said receptacle having apertured heads, an agitator having horizontal shafts passing through said apertures, bearings for said shafts, the agitator having hubs with which said bearings contact, and means for adjusting said bearings to maintain them in close contact with said hubs, substantially as described.

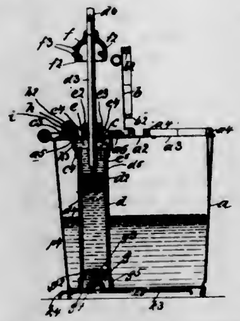
2. In an apparatus of the character described, the combination of a suitable receptacle for containing the liquid to be treated, said receptacle having apertured heads, an agitator having horizontal shafts passing through said apertures, bearings for said shafts, the agitator having hubs with which said bearings contact, and means for adjusting said bearings to maintain them in close contact with said hubs, comprising plates secured upon said heads and screws through said plates abutting against said bearing, substantially as described.



3. In an apparatus of the character described, the combination of a receptacle adapted to contain the liquid to be treated, an agitator revoluble therein, means for rotating said agitator, a shaft for said agitator extending through the wall of the casing, a metallic lining for said casing, and a bearing for said shaft secured to said lining to prevent the passage of fluid therebetween, substantially as described.

4. In an apparatus of the character described, the combination of a receptacle adapted to contain the liquid to be treated, an agitator revoluble therein, means for rotating said agitator, a shaft for said agitator extending through the wall of the casing, a metallic lining for said casing, a bearing for said shaft secured to said lining to prevent the passage of fluid, therebetween, said agitator having a hub, against which said bearing can abut, and means for adjusting said bearing to make a tight joint between the abutting surfaces of said bearing and hub, substantially as described.

881,129. FIRE-EXTINGUISHING ENGINE. WALTER R. JOHNSTON, New York, N. Y., assignor to The Walter R. Johnston Manufacturing Company, New York, N. Y., a Corporation of New York. Filed July 3, 1906. Serial No. 324,557.



1. In a fire extinguishing engine of the class described, a receiver provided with a cover, said cover being provided with an opening closed by a cap beneath which is the cylinder of the pump which passes downwardly into said receiver, said cylinder being provided with a valved piston having a rod which passes outwardly through a stuffing box connected with said cap and is provided at its end with a handle, said rod and said stuffing box being provided with means whereby the turning of said rod by means of the handle thereof will lock the piston in its innermost position and the rod to said cap, and said cap being provided with a valved coupling in connection with said cylinder, and means for connecting a flexible tube

therewith, and the cover of the receiver being also provided at one side with an opening and a sealing cap for said opening.

2. In a fire extinguishing engine of the class described, a receiver provided with a cover, said cover being provided with an opening closed by a cap beneath which is the cylinder of the pump which passes downwardly into said receiver, said cylinder being provided with a valved piston having a rod which passes outwardly through a stuffing box connected with said cap and is provided at its end with a handle, said rod and said stuffing box being provided with means whereby the turning of said rod by means of the handle thereof will lock the piston in its innermost position and the rod to said cap, and said cap being provided with a valved coupling in connection with said cylinder, and means for connecting a flexible tube therewith, and the cover of the receiver being also provided at one side with an opening and a sealing cap for said opening, said sealing cap being hinged between the opening and the pump cylinder.

3. In a fire extinguishing engine of the class described, a receiver provided with a permanent cover, said cover being provided with an opening closed by a cap beneath which is a pump cylinder which extends downwardly into said receiver, said cylinder being provided with a valved piston having a rod which passes outwardly through a stuffing box connected with said cap and is provided at its end with a handle, said rod and said stuffing box being provided with means whereby the turning of said rod by means of the handle thereof will lock the piston in its innermost position and the rod to said cap, and said cap being provided with a valved coupling in connection with said cylinder, and means for connecting a flexible tube therewith, the cover of the receiver being also provided at one side with an opening and a sealing cap therefor, and said receiver being also provided with supplemental fire extinguishing devices which are placed therein and removed therefrom through said opening.

4. In a fire extinguishing engine of the class described, a bucket or receiver provided with a permanent cover having at one side edge an opening closed by a movable sealing cap, said cover being also provided with another opening closed by a detachable sealing cap beneath which is a pump cylinder which extends downwardly into said bucket or receiver, and a piston mounted in said cylinder and provided with a rod which passes outwardly through the detachable sealing cap, said detachable sealing cap being also provided with a valved coupling in communication with said cylinder, and means for connecting a flexible tube with said valved coupling.

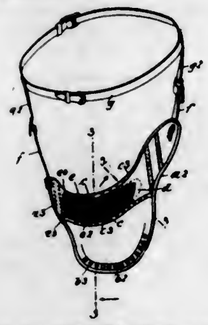
5. In a fire extinguishing engine of the class described, a bucket or receiver provided with a permanent cover having at one side edge an opening closed by a movable sealing cap, said cover being also provided with another opening closed by a detachable sealing cap beneath which is a pump cylinder which extends downwardly into said bucket or receiver, and a piston mounted in said cylinder and provided with a rod which passes outwardly through the detachable sealing cap, said detachable sealing cap being also provided with a valved coupling in communication with said cylinder, and means for connecting a flexible tube with said valved coupling, said bucket or receiver being also provided with supplemental fire extinguishing devices which are placed therein and removed therefrom through the first named opening in the cover.

[Claims 6 to 9 not printed in the Gazette.]

881,130. CATAMENIAL DEVICE. ABRAHAM I. JORDAN, New York, N. Y. Filed Jan. 16, 1906. Serial No. 296,252.

1. A device of the class described, comprising an oblong bag member open at the top and provided with end and side flaps, said bag member being filled with absorbent material, the bag member being also provided at the sides thereof with perforated rolls or receptacles filled with absorbent material, substantially as shown and described.

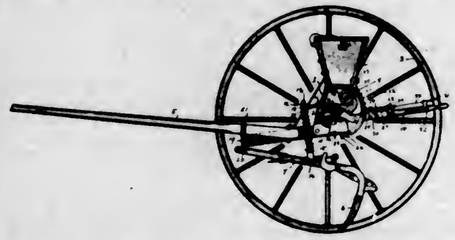
2. A device of the class described, comprising an oblong bag member open at the top and provided with end and side flaps said bag member being filled with absorbent material, the bag member being also provided at the sides thereof with perforated rolls or receptacles filled with absorbent material, and the side flaps being also provided with transverse rolls or receptacles filled with absorbent material and perforated on their outer sides, substantially as shown and described.



3. A device of the class described, comprising an oblong bag member open at the top and provided with rear and front end flaps and with a rear end pocket, and an absorbent pad adapted to be placed in said bag member and pocket, the sides of the bag member being also provided with perforated rolls or receptacles filled with absorbent material, substantially as shown and described.

4. A device of the class described, comprising an oblong bag member open at the top and provided with rear and front end flaps and with a rear end pocket, and an absorbent pad adapted to be placed in said bag member and pocket, the sides of the bag member being also provided with perforated rolls or receptacles filled with absorbent material, and the sides of said bag member being also provided with depending flaps having transversely arranged rolls or receptacles perforated on their outer sides and filled with absorbent material, substantially as shown and described.

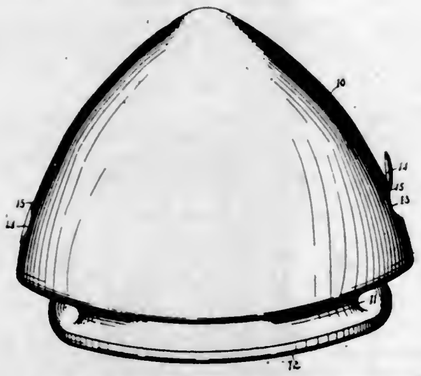
881,131. SEEDER. CHARLES J. KALKHURST, Beaver Dam, Wis. Filed Apr. 24, 1907. Serial No. 369,968.



1. In a device of the described class the combination with the wheel supported frame of a wheel axle revolubly supported at its respective ends in the ends of said frame, a tooth supporting shaft located on a higher plane slightly in rear of said wheel axle, a rearwardly extending operating lever rigidly fixed at its front end to said shaft, a plurality of forwardly extending levers rigidly affixed at their rear end to said shaft, means for pivotally connecting the front ends of said levers with the draw bars of the cultivator teeth and means for locking the operating lever at any desired point of adjustment relatively to the shaft and axle supporting frame, the relative position of said tooth supporting shaft to said wheel axle being such that the center of gravity of the teeth and draw bars connected therewith when raised will be brought in rear of the wheel axle.

2. In a device of the described class the combination with the wheel supported frame, of a wheel axle revolubly supported at its respective ends in the ends of said frame, a tooth supporting shaft located on a higher plane slightly in rear of said wheel axle, a feed shaft located on a higher plane, and slightly in rear of said tooth supporting shaft, said shafts and wheel axle being substantially in line with each other, whereby the driving chain of the feed shaft is free to pass from the pulley of the wheel axle to the pulley of the wheel shaft around and free from contact with the tooth supporting shaft, a rearwardly extending operating lever rigidly affixed at its front end to said tooth supporting shaft, a plurality of forwardly extending levers rigidly affixed at their rear ends to the opposite side of said tooth supporting shaft, means for pivotally connecting the front ends of all of said forwardly extending levers with the draw bars of the cultivator teeth, means for locking the operating lever at any desired point of adjustment, whereby said cultivator teeth may be either supported free from contact with the ground or may be forced yieldingly against the same, the relative position of said tooth supporting shaft to the wheel axle being such that the gravity of the teeth and draw bars when elevated will be brought to bear in rear of said wheel axle, while the resistance of the teeth when forced into the ground will bear upwardly upon the tooth supporting shaft and have a tendency to balance the machine upon the wheel axle, all substantially as and for the purpose specified.

881,132. HAT-PROTECTOR. ALBERT G. KINER, Chicago, Ill. Filed July 12, 1907. Serial No. 383,387.



1. A hat protector composed of a flexible fabric, including a body portion, a contracted neck having a marginal flange, an aperture in said body portion and a closure for said aperture.

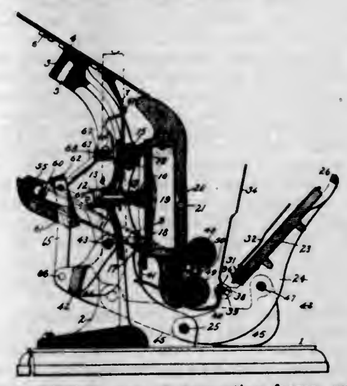
2. A hat protector composed of a flexible fabric, provided with a plurality of apertures and closures for said apertures.

3. A hat protector composed of an elastic fabric, including a body portion provided with a plurality of apertures, and coverings for said apertures adapted to automatically close said apertures.

881,133. PRINTING-PRESS. HARRY T. KINGSBURY, Keene, N. H. Filed Mar. 25, 1907. Serial No. 364,370.

1. A printing press comprising a supporting frame, a bed carried thereby, a rocking platen pivoted to said supporting frame and means for rocking said platen including a rocking lever pivoted to the frame and having a downwardly projecting arm, a link pivoted to said arm and having an upwardly turned end pivoted to said platen; substantially as described.

2. A printing press comprising a supporting frame, a bed carried by said supporting frame, a platen pivoted to said supporting frame and means for operating said platen including a rock shaft pivoted to said supporting frame and having a downwardly projecting arm, a link pivoted to said arm and extending underneath said platen, said link having an upwardly extending arm pivotally connected to said platen; substantially as described.



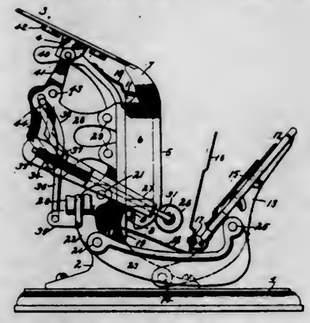
3. In a printing press, a supporting frame, an inking roller, swinging arms supporting the roller, a pair of yokes forming a toggle joint connection between the arms and the frame, a main operating lever, and means for operatively connecting the same to said toggle joint.

4. In a printing press, a supporting frame, a rocking platen, an operating lever, links connecting the lever to the platen, an inking roller, swinging arms carrying the roller, a pair of pivotally connected yokes, one connected to the arms and the other to the frame, a rocker arm carried by the operating lever, and a link extending from the rocker arm to the connecting pivot of the yokes.

5. A printing press comprising a supporting framework, a bed carried thereby, a rocking platen, inking rollers, swinging arms for carrying said inking rollers and means for operating said inking rollers and platen including rocker arms, links for connecting said rocker arms to said platen, a swinging yoke connected to the inking roller supporting arms, a link connecting said swinging yoke to said rocker arms and a second swinging yoke connected to said link and to the supporting frame; substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

881,134. PRINTING-PRESS. HARRY T. KINGSBURY, Keene, N. H. Filed Mar. 25, 1907. Serial No. 364,371.



1. A printing press, comprising a supporting frame, a platen pivotally supported upon said frame, a bed carried by said frame, an inking roller, a swinging arm for carrying said inking roller, a rocker arm pivoted upon said supporting frame, a link for connecting said rocker arm to said platen, a yoke connecting said rocker arm to said swinging arm, and a bracket having a guiding slot for said yoke; substantially as described.

2. A printing press, comprising a supporting frame, a bed carried thereby, an inking roller, a swinging arm car-

rying said inking roller, a bracket to which said swinging arm is pivoted, a rocker arm pivoted to said supporting frame, a yoke pivoted to said rocker arm and connected to said swinging arm, said bracket having a slot for said yoke arranged eccentric to the pivot of the swinging arm; substantially as described.

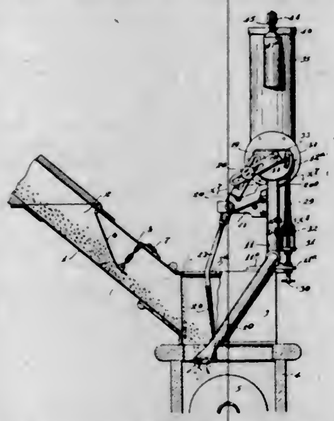
3. A printing press, comprising a supporting frame, a bed carried thereby, an inking roller, a swinging arm having a radial slot, a bracket to which said swinging arm is pivoted, a rocker arm, a yoke pivoted to said rocker arm and having a connection with the slot in said swinging arm, said bracket having a slot cooperating with said yoke and arranged eccentric to the pivot of said arm.

4. A printing press comprising a supporting frame, a bed carried thereby, an inking roller, swinging arms carrying said inking roller, rods carried by said swinging arms and having the ends thereof bent at right angles to the body of the rod, said ink roller having recessed bearings to receive the ends of said rods; substantially as described.

5. In a printing press, a frame, a bed carried thereby, a chase supported on the bed, said chase having upper and lower horizontal walls, a bifurcated lug depending from the lower wall, a stud projecting from the bed and engaged by said lug, a lug projecting from the upper wall of the chase, and a spring retainer carried by the frame and provided with an opening for the reception of said upper lug.

[Claim 6 not printed in the Gazette.]

881,135. GRAIN-DAMPENER. ALVA H. KIRK, Minneapolis, Minn. Filed Sept. 27, 1907. Serial No. 394,830.



1. In an apparatus of the kind described, the combination with an inclined frictional runway for the material to be dampened, of a water conduit for supplying water to such material, a valve in said conduit, and a valve controller comprising a movably mounted impact plate directly subject to the force of the momentum of the material which has passed downward over said inclined frictional runway, substantially as described.

2. In an apparatus of the kind described, the combination with an inclined frictional runway for the material to be dampened, of a water conduit for supplying water to such material, a valve in said conduit, and a valve controller comprising a movably mounted impact plate directly subject to the force of the momentum of the material which has passed downward over said inclined frictional runway, and a yielding element tending to force said impact plate against the force of the momentum of said material, substantially as described.

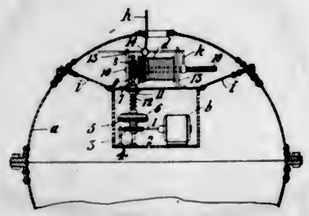
3. In an apparatus of the kind described, the combination with an inclined frictional runway for the material to be dampened, of a water conduit for supplying water to such material, a valve in said conduit, and a valve controller comprising a pivotally mounted impact plate directly subject to the force of the momentum of the material which has passed downward over said inclined frictional runway, and a spring exerting a force on said impact plate tending to move the same against the force of the momentum of said material, substantially as described.

4. In an apparatus of the kind described, the combination with an inclined frictional runway for the material to be dampened, of a water conduit for supplying water to such material, a valve in said conduit, and a valve controller comprising a movably mounted impact plate directly subject to the force of the momentum of the material which has passed downward over said inclined frictional runway, and an adjustable spring exerting a force tending to move said impact plate against the force of the momentum of said material, substantially as described.

5. In an apparatus of the kind described, the combination with an inclined frictional runway for the material to be dampened, of a water conduit for supplying water to such material, a valve in said conduit, and a valve controller comprising an impact plate directly subject to the force of the momentum of the material which has passed downward over said inclined frictional runway, a yielding resistance device tending to move said impact plate against the force of the momentum of said material, and an adjustable connection between said impact plate and said valve for varying the amount of movement given to said valve under predetermined movement of said impact plate, substantially as described.

[Claims 6 to 12 not printed in the Gazette.]

881,136. APPARATUS FOR REGULATING THE DEPTH OF MOORED FLOATING BODIES. KARL O. LEON, Stockholm, Sweden. Filed Nov. 16, 1906. Serial No. 343,685.



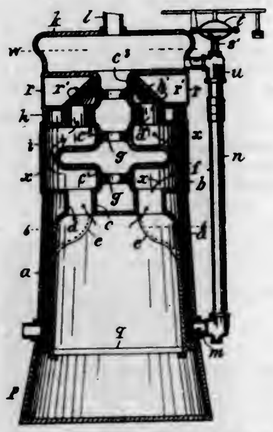
1. The combination of a substantially stationary body, a floating body, a flexible connection between the two bodies, an electric motor placed in one of the said bodies, a source of electricity for supplying current to the said electric motor, electric connections between the source of electricity and the motor, a switch arranged in such a manner as to cause the motor to run in one or the other direction, according as the switch is thrown into one or the other of its working positions, a pressure-operated device carried by the floating body and connected with the switch in such a manner as to cause the latter to move toward the one or the other of its working positions, according as the water pressure increases or decreases, and means, driven by the motor, for winding up or unwinding the flexible connection between the stationary body and the floating body, according as the motor rotates in one or the other direction, substantially as and for the purpose set forth.

2. In a submarine mine, the combination of a moored floating body inclosing the detonator, a floating contact buoy, a flexible connection between the two floating bodies, an electric motor placed in one of the said floating bodies, a source of electricity for supplying current to the said electric motor, electric connections between the source of electricity and the motor, a switch connected in circuit with the motor in such a manner as to cause the motor to run in one or the other direction, according as the switch is thrown into one or the other of its working positions, a pressure-operated device carried by the contact buoy and connected with the switch

in such a manner as to cause the latter to move toward the one or the other of its working positions, according as the water pressure increases or decreases, and a windlass driven by the motor for winding up or unwinding the flexible connection between the moored body and the contact buoy, according as the motor rotates in one or the other direction, substantially as and for the purpose set forth.

3. In a submarine mine, the combination of a moored floating body inclosing the detonator, a floating contact buoy, a flexible connection between the two floating bodies, an electric motor placed in one of the said floating bodies, a source of electricity for supplying current to the said electric motor, electric connections between the source of electricity and the motor, a switch arranged in such a manner as to cause the motor to run in one or the other direction, according as the movable part of the switch is thrown into one or the other of its working positions, a pressure-gage carried by the contact buoy and connected with the switch in such a manner as to cause the movable part thereof to move toward the one or the other of its working positions, according as the water presure upon the pressure-gage increases or decreases, means driven by the motor for winding up or unwinding the flexible connection between the moored body and the contact buoy, according as the motor rotates in one or the other direction, an electro-magnet acting, when supplied with current, upon the movable part of the switch in such a manner as to throw the said movable part into that working position in which the motor causes the contact buoy to descend, and a switch for closing the circuit of the said electro-magnet, when the contact buoy is to be lowered, substantially as and for the purpose set forth.

881,137. STEAM AND HOT-WATER BOILER FORMED OF CIRCULAR SECTIONS. WILLIAM M. MACKAY, Newark, N. J. Filed Apr. 12, 1907. Serial No. 367,841.



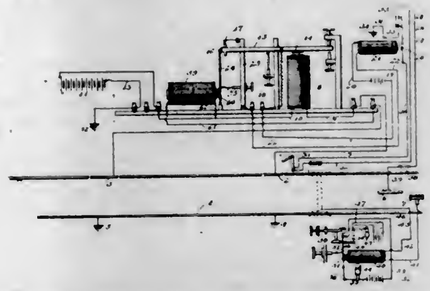
1. In a boiler having horizontal sections with central hub for water connection, the combination, with a flat disk-section having casing extended around the same and provided with cleaning-out door, of a firebox section fitted to such casing below the same with a series of flues around the central hub discharging the gases beneath such disk-section, a superposed flat section with a series of flues around the central hub, a dome-section having a bottom water connection with the superposed flat section, the two sections being separated by space for the lateral passage of the smoke, a casing surrounding the margin of such smoke-space with smoke-box having pipe-collar thereon, and a deflector inclosing the flues through the superposed section upon the side next to such smoke-box.

2. In a steam heating boiler having horizontal sections, the combination, with a fire-box section having an annular water-leg, a steam-dome section, and intermediate sections all joined by central water connections, the dome-section having an outlet and the bottom of the water-leg having an inlet, with a circulating pipe connecting the same, and a diaphragm damper-regulator having its pressure pipe extended into the top of the said circulating pipe several inches below the water level of the boiler, whereby the water pressure is transmitted to the diaphragm without access of steam, and the breaking of the diaphragm discharges only a few inches of water from the boiler.

3. In a boiler having horizontal sections with central hub for water connection, the combination, with a flat disk-section having casing extended around the same and provided with cleaning-out door, of a firebox section fitted to such casing below the same with a series of flues around the central hub discharging the gases beneath such disk-section, a superposed flat section with a series of flues around the central hub, a dome-section having a bottom water connection therewith, the two sections being separated by space for the lateral passage of the smoke, a casing surrounding the margin of such smoke-space with smoke-box upon one side having pipe-collar thereon, a deflector between such outlet-box and the nearest smoke-flues in the flat section, and a cleaning-out door upon the said casing opposite to the smoke-box, the whole arranged and operated substantially as set forth.

4. In a boiler having horizontal sections with central hub for water connection, the combination, with a fire-box section having an annular water-leg with hollow crown-plate having smoke passages around the central hub, a superposed flat section having similar flues around its central hub, and a disk-section intermediate to said sections with smoke space between the disk and the flues above and below the same, and around the margin of the disk for the passage of the smoke, and dome-sections fitted interchangeably to the hub upon the top of the flat superposed section.

881,138. ELECTRIC BLOCK-SIGNAL. EDWARD P. MATTER, Alexandria, Va. Filed May 13, 1907. Serial No. 373,477.



1. In a railway signal, the combination of a track circuit including a short length of rail forming a part of the main track and electrically insulated, an electro-magnet included in said track circuit, an operating circuit adapted to be closed by the electro-magnet of the track circuit when energized, said operating circuit including an electro-magnet, and a train and signal circuits adapted to be closed or brought into working condition when the operating circuit is closed, whereby a track signal may indicate danger and the train circuit adapted to bring into operation the signal mechanism upon a train.

2. In railway signal appliances, the combination of a primary circuit including an electro-magnet, a short length of rail in the main track insulated therefrom and included in said primary circuit, the latter adapted to be closed by means of a train passing over the said short length of rail, an operating circuit including an electro-

magnet and adapted to be closed by the primary circuit when established, a train circuit, and a signal circuit both adapted to be brought into working position upon energizing the electro-magnet of the operating circuit, a short length of rail forming a terminal of the train circuit, and a brush or shoe carried by the train and forming a coöperating terminal of said train circuit, an electro-magnet arranged in the train circuit, and an electrically operated signal mounted upon the train and adapted to be actuated upon closing of the train circuit when the block immediately preceding is occupied.

3. In railway signal appliances, the combination of a primary, an operating, a train and a resetting circuit, each of the several circuits including an electro-magnet and circuit closing contacts, the primary and resetting circuits being grounded through a rail of the track and each including a short section of rail forming a part of the main track and electrically insulated therefrom, the primary circuit when closed serving to close the operating circuit, lock means for holding said operating circuit in closed position, a short length of rail independent of the main track and included in the train circuit, and a brush or shoe coöperating therewith and mounted upon the train to close the train circuit when the operating circuit is closed, and an electrically operated signal mounted upon the train and brought into operation when the train circuit is closed, the lock means for holding the operating circuit closed adapted to be moved upon closing of the resetting circuit as the train leaves the block, thereby permitting the operating circuit to become broken and interrupt the signal and train circuits.

4. In railway signal apparatus, the combination of short sections of the main rail electrically insulated, primary and resetting circuits including the respective insulated rail sections, electro-magnets in both of said circuits, an operating circuit adapted to be closed upon the establishment of the primary circuit, and lock means for holding the operating circuit closed and adapted to be released to permit automatic breaking of said operating circuit when the resetting circuit is closed as the train leaves the block or passes over the short section of insulated rail included in the resetting circuit.

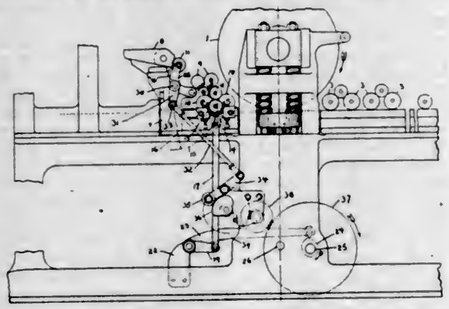
5. In railway signal apparatus, the combination of an electrically operated signal mounted upon the train, a train circuit including an electro-magnet arranged to close the circuit of the said electrically operated signal, a brush or shoe mounted upon the train and forming a terminal of the train circuit, a short section of rail applied to the track and forming a coöperating terminal of said train circuit, an operating circuit including an electro-magnet for bringing the train circuit into operative position, a track circuit including an electro-magnet arranged to close the operating circuit, lock means for holding the operating circuit closed, and a resetting circuit including an electro-magnet for effecting the release of said locking means, both the track and resetting circuits including a short section of main rail electrically insulated from the track..

881,139. PRINTING-PRESS. ROBERT MIEHLE, Chicago, Ill. Filed June 13, 1904. Serial No. 212,326.

1. In a printing press of the character described, the combination with the cylinder, the reciprocating bed and two inking apparatuses located one at each side of the cylinder and each comprising a form roller, of means for passing the form completely past one of said rollers and only partially past the other, and means for elevating the form roller of one of said inking apparatuses while the form is still in contact therewith.

2. In a printing press of the character described, the combination with the impression cylinder, the form bed movable forward and back with respect to the cylinder, an inking apparatus comprising a form roller and means whereby the roller is rotated, of means for elevating said form roller clear of the form after the bed has made a portion of its stroke, and means for compensating in the speed of rotation of the roller, the variation in the differing effect of the bed due to the elevation of the roller.

3. In a printing press of the character described, the combination with the cylinder, the reciprocating bed for carrying the form, an inking apparatus comprising a form roller, an ink fountain and a ductor roller movable towards the fountain, of means for moving said form roller and fountain bodily away from the bed and means for maintaining the ductor roller in operative relation to the fountain in the different positions of the fountain.

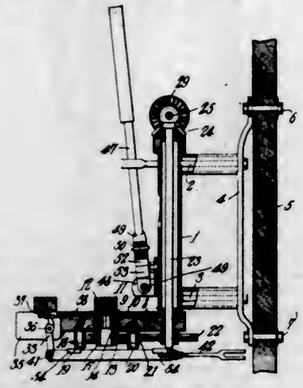


4. In a printing press of the character described, the combination with the reciprocating bed for carrying the form, the cylinder and an inking apparatus comprising a form roller, ink fountain and a ductor roller, of means for moving the form roller and fountain bodily away from the bed on the arc of a circle and means operatively connecting the ductor roller with the operating mechanism of the press for oscillating it towards and from the fountain, comprising a pivoted connection having its center concentric with the bodily oscillation of said form roller.

5. In a printing press of the character described, the combination with the reciprocating bed for carrying the form, and the cylinder, of an inking apparatus comprising a form roller, a fountain and a ductor roller all movable as a whole on the arc of a circle, a lever for oscillating said ductor roller movable bodily therewith and a pivoted connection for oscillating said lever from the operating mechanism of the press, having its center concentric with the center of oscillation of said inking apparatus.

[Claims 6 to 13 not printed in the Gazette.]

881,140. BOLT TIGHTENER AND CUTTER FOR WHEELS. BRINTON M. NATION, Bloomfield, Ind. Filed May 10, 1907. Serial No. 372,896.



1. In a machine of the character described, the combination with a suitable bed adapted to support a wheel rim, of a wrench journaled therein having a socket at its upper end adapted to coöperate with the nut, and having a clutch face on its lower end, an actuating gear journaled in the bed in alinement with the wrench and having a clutch face on its upper end, and a part removably secured to the under side of the bed for retaining the clutch faces of the wrench and actuating gear in coöperative relation.

2. In a machine of the character described, the combination with a bed adapted to support a wheel rim, of a wrench journaled in the bed, an actuating gear arranged in axial alinement with the wrench having an upper journal portion, the latter and the lower end of the wrench being provided with coöperating segmental projections and correspondingly shaped recesses forming a driving connection between these parts, and a supporting plate removably secured to the underside of the bed and coöperating with the actuating gear to maintain the driving connection between the latter and the wrench.

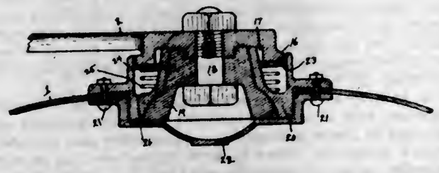
3. In a machine of the character described, the combination with a bed having an aperture extending therethrough and forming a bearing, of a wrench having a journal portion engaging in the said bearing and extending partially through the bed, the lower end of the wrench being provided with segmental recesses, a driving gear having an upper journal portion extending into the said bearing on the under side of the bed, the upper edge of the upper journal portion being provided with a segmental projection coöperating with the correspondingly shaped recess in the wrench, a journal portion formed on the gear below the journal portion first mentioned, and a supporting plate detachably mounted on the under side of the bed and having a bearing coöperating with the journal portion at the lower end of the said gear for retaining the latter in coöperative relation with the wrench.

4. In a machine of the character described, the combination with a suitable bed, and a wrench journaled therein, a driving mechanism for the wrench including a driving shaft, a bevel gear mounted thereon, a pair of oppositely arranged bevel gears arranged to coöperate alternately with the bevel gear on the driving shaft, an operating shaft supporting said pairs of gears, bearings arranged at the outer sides of the gears last mentioned and supporting the shaft, and a device adapted to removably fit over the operating shaft between one of the gears and its corresponding bearing to retain the said gear in coöperative relation with the gear on the driving shaft.

5. In a machine of the class described, the combination with a bed, of a wrench journaled therein, and gearing for revolving the wrench, of a standard, a driving shaft mounted axially thereon and having a gear at its lower end coöperating with the gearing on the bed and having a bevel gear at its upper end, a yoke on the upper end of the standard provided with a pair of bearing arms, an operating shaft journaled therein and capable of axial movement, a pair of reversely arranged bevel gears mounted in fixed relation on the shaft and movable into and out of coöperative relation with the bevel gear on the driving shaft, and a yoke-shaped member adapted to fit between one of the gears and its respective bearing arm to prevent axial movement of the operating shaft.

[Claim 6 not printed in the Gazette.]

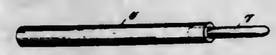
881,141. DUST-PROOF DISK BEARING AND ATTACHMENT. NICHOLAS R. NELSON, Beaver Dam, Wis. Filed Sept. 4, 1906. Serial No. 333,048.



1. In a dust excluding mechanism of the class described the combination of a hub supporting bracket, an annular flange and a central projection formed integrally with said bracket, an annular groove located between the periphery of said flange and the projection, an outwardly diverging stationary collar rigidly secured at one end to said bracket within said groove, a collar retaining bolt located in and adapted to secure said collar and flange together, a revoluble collor supported upon said stationary collar, a disk blade rigidly fixed to the periphery of said revoluble collar, a dust cap rigidly secured to said revoluble collar, a washer carried by said revoluble collar, and means for retaining said washer against the vertical face of said stationary flange.

2. In a dust excluding mechanism of the class described, the combination of a hub supporting bracket, an annular flange a central projection formed integrally with said bracket, an annular groove located between the periphery of said flange and the projection, an outwardly diverging stationary collar rigidly secured at one end to said bracket within said groove, a collar retaining bolt located in and adapted to secure said collar and flange together, a revoluble collar supported upon said stationary collar, a disk blade rigidly fixed to the periphery of said revoluble collar, a dust cap rigidly secured to said revoluble collar, a a washer carried by said revoluble collar, a spiral spring interposed between the revoluble collar and said washer and adapted by its recoil to retain said washer against the vertical face of said stationary flange, substantially as set forth.

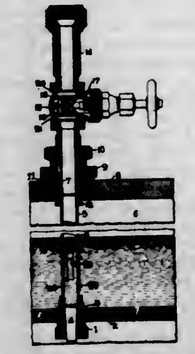
881,142. LUNAR-CAUSTIC HOLDER. JOHN P. O'CONNOR, Chicago, Ill. Filed Aug. 16, 1907. Serial No. 388,770.



1. A pencil of caustic or similar corrosive substance provided with a handle of plastic material proof against the action of said substance, applied thereto in soft condition and allowed to harden thereon.

2. A caustic pencil provided with a handle of sealing wax stuck thereto.

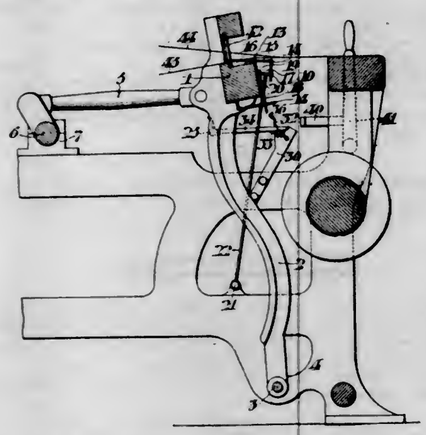
881,143. DEVICE FOR REPLACING FUSIBLE PLUGS. EDWARD OLDMAN, Buffalo, N. Y. Filed May 16, 1907. Serial No. 374,017.



1. The combination with a boiler and its crown sheet, of a bushing fitted in an opening in the crown sheet and a slotted lower tube having its lower end screwed into the bushing and extending through the steam and water space of the boiler, an intermediate tube screwed to the lower tube and extending through a stuffing box in the boiler shell, an upper tube arranged vertically above the intermediate tube, a valve located between the intermediate tube and the upper tube for closing communication between them, and means for preventing the passage of the intermediate tube through the boiler shell in one direction, substantially as described.

2. The combination with a boiler and its crown sheet, of a bushing fitted in an opening in the crown sheet and constituting a plug seat, a slotted lower tube having its lower end screwed into the bushing and extending through the steam and water space of the boiler, an intermediate tube screwed to the lower tube and extending through a stuffing box in the boiler shell, an upper tube arranged vertically above the intermediate tube, a valve located between the intermediate tube and the upper tube for closing communication between them, and a flange on the intermediate tube for preventing its passage through the stuffing box in an outward direction, substantially as described.

881,144. STOP-MOTION. FREDERICK OTT, South Bethlehem, Pa. Filed Apr. 10, 1907. Serial No. 367,390.



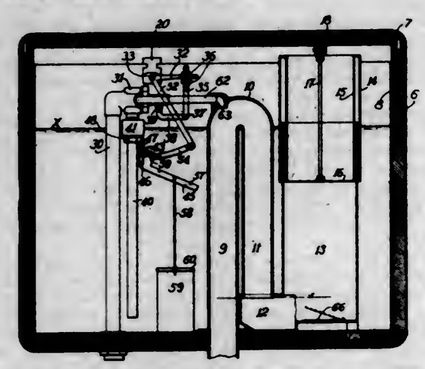
1. In a loom, the combination of a lay; a rod rotatably mounted on said lay; a filling detector mounted upon said rod; means for rotating said rod to tilt said detector above the raceway of said lay; a finger mounted upon said rod; a lever operatively related to said finger; and a dagger having one end supported by said lever.

2. In a loom, the combination of a lay; a rod rotatably mounted on said lay; a filling detector mounted upon said rod; means for rotating said rod to tilt said detector above the raceway of said lay, said means being located at one side of the loom; a finger mounted upon said rod; a two-armed lever operatively related to said finger; a dagger having one end supported by one arm of said lever, the other arm of said lever being arranged to be engaged by said finger upon breakage or failure of the filling.

3. In a loom, the combination of a lay; a rod rotatably mounted on said lay; a filling detector mounted upon said rod; a rod pivotally mounted below said lay and operatively related to said filling detector to tilt the latter above the raceway of said lay; a slidably mounted finger carried by said lay; a lever operatively related to said finger; a dagger having one end supported by said lever; and means for sliding said finger to clear said lever when the lay is moving backward, said lever being arranged to be engaged by said finger to raise said dagger upon breakage or failure of the filling.

4. In a loom, the combination of a lay; a filling detector pivotally mounted on said lay; a slidably mounted finger operatively related to said detector; means for tilting said detector to enable the shuttle to traverse its raceway; a lever operatively related to said finger; a dagger having one end supported by said lever; means for sliding said finger to clear said lever when the lay is moving backward, said lever being arranged to be engaged by said finger to raise said dagger upon breakage or failure of the filling.

881,145. FLUSHING-TANK. GEORGE W. PALMER and FREDERICK E. PIERCE, Lancaster, Mass. Filed Aug. 21, 1906. Serial No. 331,457.



1. In a flushing apparatus, a tank connected to supply and discharge pipes for the water current and inclosing the operative mechanism including a permanent siphon, in combination with inclosed siphon priming means comprising a tubular base self-filled at the bottom and connected with the leg of the siphon, a telescoping plunger with vertical stem and two vibrating levers and a connecting rod for actuating said plunger, and means whereby said plunger controls in its movement, the supply pipe.

2. In a flushing apparatus, a tank connected to supply the discharge pipes for the water current and inclosing the operating mechanism including a permanent siphon in combination with inclosed siphon priming means comprising a fixed tubular base self-filling at the bottom and connected with the short leg of the siphon, a telescoping plunger with a vertical stem and two vibrating levers, means for operating the plunger, a connection between the siphon and the supply pipe, and means whereby said plunger controls in its movement the connection between the supply pipe and the siphon.

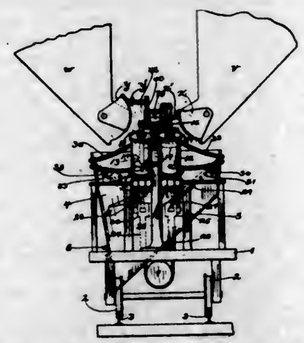
3. In a flushing apparatus, a tank connected to supply and discharge pipes for the water current and inclosing the operating mechanism including a permanent siphon in combination with inclosed siphon priming means comprising a fixed tubular base self-filling at the bottom and connected with the short leg of the siphon, a telescoping plunger with a vertical stem and two vibrating levers, means for operating the plunger, a connection between the siphon and the supply pipe, and means whereby said plunger controls in its movement the connection between the supply pipe and the siphon, and the supply pipe.

881,146. ORE-CAR. CHARLES L. PENNELL, Canal Dover, Ohio, assignor of one-half to Charles Wagner, Canal Dover, Ohio. Filed Dec. 7, 1907. Serial No. 405,605.

1. In a device for operating doors of hoppers, the combination with a car of a cylinder mounted on said car, a piston arranged in said cylinder and provided with a piston rod which extends through one end of said cylinder, means for actuating said piston in said cylinder and means for forming an operative connection between said piston rod and the door of a hopper when the car is beneath the hopper so that the movement of said piston rod will open the door of said hopper.

2. In a device for operating doors of hoppers, the combination with a car of a cylinder pivotally mounted on said car, a piston arranged in said cylinder and provided with a piston rod which projects beyond one end of said cylinder, means for actuating said piston in said cylinder and means for forming an operative connection between said piston rod and the door of a hopper when the car is under said hopper so that the movement of said piston rod will open the door thereof.

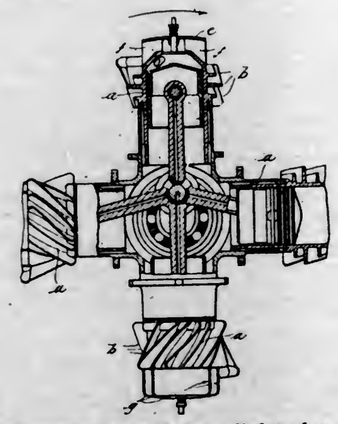
3. In a device for operating the doors of hoppers, the combination with a car of a tank for holding a fluid under pressure mounted on said car, a cylinder pivotally mounted on said car, a piston arranged in said cylinder and provided with a piston rod, pipes connecting the upper and lower ends of said cylinder with said tank and a valve controlling the passage of the fluid from the tank to said cylinder.



4. In a device for operating the doors of hoppers, the combination with a car of a tank for holding fluid under pressure arranged on said car, a pair of cylinders mounted on said car, pistons arranged in said cylinders and provided with piston rods, pipes connecting the upper and lower ends of said cylinders with said tank, valves for controlling the passage of said fluid through said pipes, a pair of levers fulcrumed on said car and operatively connected with said piston rods and means for causing said levers to engage with the doors of the hoppers when the car is under the hoppers.

5. In a device for operating the doors of hoppers, the combination with a car of a tank for holding fluid under pressure arranged on said car, a pair of cylinders pivotally mounted on said car, pistons arranged in said cylinders and provided with piston rods, pipes connecting the upper and lower ends of said cylinders with said tank, valves for controlling the passage of fluid through said pipes, a pair of levers fulcrumed on said car and operatively connected with said piston rods and rollers arranged on the free ends of said levers, substantially as described and for the purpose set forth.

881,147. HEAT-RADIATING DEVICE. JULIAN L. PERKINS, Springfield, Mass. Filed June 5, 1907. Serial No. 377,351.



1. The combination with the cylinder of a revolving engine, of heat-radiating ribs spirally disposed around the cylinder whereby air is directed around the latter to the rear side thereof, when the engine is running.

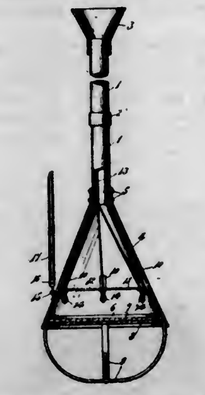
2. The combination with the cylinder of a revolving engine, of heat-radiating ribs spirally disposed around the outer end of the cylinder, whereby air is directed around the latter to the rear side thereof when the engine is running, together with a deflecting plate surrounding the rear side of the cylinder, and having forwardly facing wings extending beyond the edges of the ribs, at the sides of the cylinder.

3. A cylinder of a revolving engine provided with an exhaust valve in the outer end thereof, heat-radiating devices spirally disposed therearound whereby air is directed around the cylinder to the rear side thereof when the engine is running, and heat-radiating devices on the outer end of the cylinder to direct air over the exhaust valve.

4. A cylinder of a revolving engine provided with an exhaust valve in the outer end thereof, heat-radiating devices spirally disposed therearound whereby air is directed around the cylinder to the rear side thereof when the engine is running, a casing over the exhaust valve having an opening therein facing in the plane of rotation of the cylinder, and heat-radiating devices to direct air against the sides of said casing.

5. A cylinder of a revolving engine provided with an exhaust valve in the outer end thereof, heat radiating devices spirally disposed therearound whereby air is directed around the cylinder to the rear side thereof when the engine is running, a casing over the exhaust-valve having openings at either end thereof facing in the plane of rotation of the cylinder, whereby when the engine is running air will pass through said casing and across the exhaust valve.

881,148. APPARATUS FOR EXAMINING SUBMERGED BODIES. DÉSIRÉ PÉPIN, Sr., Montreal, Quebec, Canada. Filed May 24, 1907. Serial No. 375,456.



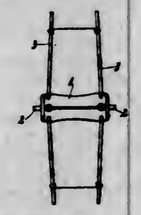
1. In a device of the character described, the combination comprising tube sections, a sleeve adapted to telescopically receive said sections, a frusto-conical drum rigidly secured to one of said tube sections and an eyepiece removably carried by the other of said tube sections, brackets attached to the inner face of said frusto-conical section, a horizontally mounted mirror carried by said brackets and adapted to reflect light downwardly, electric lights carried by said brackets and mounted directly beneath said mirror and a transparent closure for the lower end of the drum.

2. In a device of the character described, the combination comprising, tube sections, a sleeve adapted to telescopically receive said sections, a frusto-conical drum rigidly secured to one of said tube sections and an eyepiece removably carried by the other of said tube sections, brackets attached to the inner face of said frusto-conical section, a horizontally mounted mirror carried by said brackets and adapted to reflect light downwardly, elec-

tric lights carried by said brackets and mounted directly beneath said mirror, a transparent closure for the lower end of the drum, and a guard for said closure.

3. In a device of the character described, the combination comprising, tube sections, a sleeve adapted to telescopically receive said sections, a frusto-conical drum rigidly secured to one of said tube sections and an eyepiece removably carried by the other of said tube sections, brackets attached to the inner face of said frusto-conical section, a horizontally mounted mirror carried by said brackets and adapted to reflect light downwardly, electric lights carried by said brackets and mounted directly beneath said mirror, a transparent closure for the lower end of the drum and a guard for said closure, said guard comprising bowed bands secured at their opposite ends to the drum.

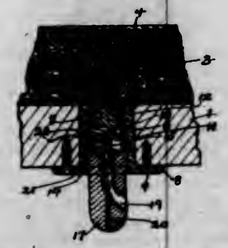
881,149. REEL FOR WINDING-MACHINES. CARL W. PILSCHEUR, Barmen, Germany. Filed Aug. 3, 1907. Serial No. 386,993.



1. Reel for winding-machines comprising in combination a revoluble nave, a plurality of radial spokes arranged at opposite ends of the nave the spokes at one end being opposite those at the other end, a rubber ring on each spoke near its outer end, and a bridge interconnecting the rubber rings on each pair of spokes situated opposite one another.

2. Reel for winding-machines comprising in combination a revoluble nave, a plurality of radial spokes arranged at opposite ends of the nave the spokes at one end being opposite those at the other end, a rubber ring on each spoke near its outer end, and an elastic bridge interconnecting the rubber rings on each pair of spokes situated opposite one another.

881,150. AMUSEMENT DEVICE. CHARLES B. POST, New London, Ohio, assignor to The Ward-Stilson Company, New London, Ohio. Filed Oct. 21, 1907. Serial No. 398,437.



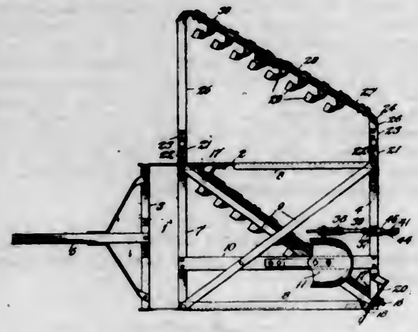
1. The combination of a paddle having cushioning means arranged on one face thereof, a casing set into the opposite face, an anvil arranged in the bottom of said casing, a cartridge-carrying block arranged to slide in said casing and come in contact with said anvil and means for removably securing said block in said casing.

2. The combination of a paddle having an upholstered face, a casing set into the opposite face of said paddle and provided with communicating grooves, one of which is closed at its outer end, a cartridge-carrying block arranged to slide in said casing and provided with a lug arranged to travel in said grooves, an anvil arranged in the bottom of said casing, a firing pin mounted on said anvil so as to come in contact with the cartridge carried by said block, and a spring arranged between the block and the bottom of said casing so as to normally hold the block above said anvil.

3. The combination of a paddle having cushioning means arranged on one face thereof, a casing set into the opposite face of said paddle and provided with an annular flange arranged to abut against the surface thereof, said casing having on its inner surface a straight groove which is closed at its outer end and an inclined groove which is open at its outer end and communicates with said straight groove, means for securing said flange to said paddle, a cartridge-carrying block provided with a lug arranged to travel in said grooves, an anvil arranged in the bottom of said casing, a firing pin formed on said anvil and means for resiliently holding said block out of contact with said anvil.

4. The combination of a paddle having an upholstered face, a casing set into the opposite face of said paddle and provided with communicating grooves, one of which is closed at its outer end, a cartridge carrying block arranged to slide in said casing and provided with a lug arranged to travel in said grooves and provided with a cartridge receiving opening at its lower end and a passage-way which extends through said block and communicates with the cartridge receiving opening, an anvil arranged in the bottom of said casing, a firing pin mounted on said anvil so as to come in contact with the cartridge carried by said block and a spring arranged between said block and the bottom of said casing, substantially as described and for the purpose set forth.

881,151. CULTIVATOR. VICTOR M. POWERS and CHARLES P. POWERS, Sattley, Cal. Filed Nov. 17, 1906. Serial No. 343,866.



1. A cultivator comprising a main frame including runners, a bracket projecting from the forward end of one runner, a second bracket projecting from the rear end of the opposite runner, a frame pivotally mounted in the brackets, means for rotating the frame, and a series of cultivating teeth depending from the pivoted frame.

2. A cultivator comprising a main frame including runners, a bracket projecting from the forward end of one runner, a second bracket projecting from the rear end of the opposite runner, a frame pivotally mounted in the brackets, means for rotating the frame, and a series of cultivating teeth depending from the pivoted frame, each of said teeth comprising a length of material twisted intermediate its ends to dispose the lower or cutting edge at approximate right angles to the plane of movement of the teeth.

3. A cultivator comprising a main frame including runners, a bracket projecting from the forward end of one runner, a second bracket projecting from the rear end of the opposite runner, a frame pivotally mounted in the brackets, means for rotating the frame, a series of cultivating teeth depending from the pivoted frame, cross bars uniting the runners and projected beyond the same, and an auxiliary frame hinged to the projecting ends of the cross bars.

4. A cultivator comprising a main frame including runners, a bracket projecting from the forward end of one runner, a second bracket projecting from the rear end of the opposite runner, a frame pivotally mounted in the brackets, means for rotating the frame, a series of cultivating teeth depending from the pivoted frame, cross bars uniting the runners and projected beyond the same, an auxiliary frame hinged to the projecting ends of the cross bars, the outer or free edge of said auxiliary frame being inclined with respect to both runners of the main frame, and a series of teeth depending from said inclined edge.

5. A cultivator comprising a main frame including runners, a bracket projecting from the forward end of one runner, a second bracket projecting from the rear end of the opposite runner, a frame pivotally mounted in the brackets, means for rotating the frame, a series of cultivating teeth depending from the pivoted frame, cross bars uniting the runners and projected beyond the same, an auxiliary frame hinged to the projecting ends of the cross bars, the outer or free edge of said auxiliary frame being inclined with respect to both runners of the main frame, and a series of teeth depending from said inclined edge, the pivoted frame within the main frame being inclined in parallel relation to the inclined edge of the auxiliary frame.

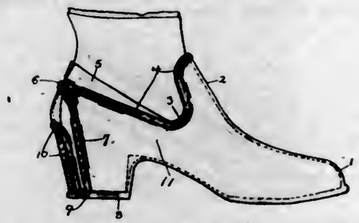
[Claims 6 and 7 not printed in the Gazette.]

881,152. POULTRY INDICATOR AND MARKER. CHARLES M. RENSHAW, Lake Andes, S. D. Filed Jan. 31, 1907. Serial No. 355,039.



In a poultry market, the combination of a loop formed of a single length of wire and designed to be applied to the first joint of the wing of a fowl, the extremities of the wire terminating in hooks bent laterally in opposite directions, each hook being designed to engage an opposite end portion of the wire, a clip formed of a piece of sheet material doubled upon itself and receiving one side of the wire loop, and a slip engaged by the before mentioned clip.

881,153. OVERSHOE. EDWARD P. RICKERT, Cleveland, Ohio. Filed Mar. 4, 1907. Serial No. 360,491.



1. As a new article of manufacture, a rubber overshoe having embedded in the rear portion of the heel thereof a loop of nonelastic material, said loop extending into and being embedded in the sole of the heel portion of the overshoe and projecting thence upwardly along the rear portion of the heel of the overshoe and above the sole and on opposite sides of the central portion of said heel, substantially as specified.

2. As a new article of manufacture, a rubber overshoe having a high heel, said heel having embedded in the rear face or portion thereof a non-elastic cord, said cord being formed into the shape of two inverted U's, one within the other, and having their lower ends connected, the connecting portions being embedded in the sole of the shoe.

3. As a new article of manufacture, a rubber overshoe having the heel or rear portion thereof provided with one or more vertically extending non-elastic cord-sections embedded therein, substantially as specified.

4. As a new article of manufacture, a rubber overshoe having a continuous non-elastic reinforcing cord embedded therein, said cord extending around the upper, the cord sections crossing each other at the rear central portion of the heel and extending downwardly on opposite sides of the central portion of the heel as far as and into the sole thereof, thence upwardly within the loop formed by the two downwardly extending sections and having their ends united, substantially as specified.

5. As a new article of manufacture, a rubber overshoe, having its heel portion provided with one or more sections or branches of non-elastic cord extending in a generally vertical direction from the sole and being embedded in said heel and sole, substantially as specified.

881,154. WELL-PACKER. LAWRENCE E. ROBINSON, Butler, Pa. Mlled Mar. 7, 1907. Serial No. 361,105.



1. The combination with a wall packer, of ratchet mechanism for holding the packer compressed.

2. The combination with a well packer, of ratchet mechanism embodied in the packer structure for holding the packer compressed.

3. A packer consisting of inner and outer telescoping parts, dogs on one of the parts, and holding points on the part adapted to be engaged by the dogs for holding the inner part against withdrawal as it passes into the outer part.

4. A packer consisting of inner and outer telescoping parts, ratchet-teeth on the inner part, and spring pressed dogs seated in the outer part which the ratchet teeth freely pass when moving inward, but which so engage the teeth as to prevent outward movement of the inner part.

5. A packer consisting of inner and outer telescoping parts with the inner part turnable in the outer part, vertical series of teeth on one of the parts interrupted by untoothed surfaces, and spring-pressed dogs on the other part adapted to engage either the untoothed or the toothed surfaces according as the inner part is turned, and when in engagement with the teeth adapted to prevent withdrawal of the inner part.

[Claims 6 to 18 not printed in the Gazette.]

881,155. GLOVE-TURNER. SARAH A. ROBINSON, Northville, N. Y. Filed Sept. 6, 1907. Serial No. 391,570.

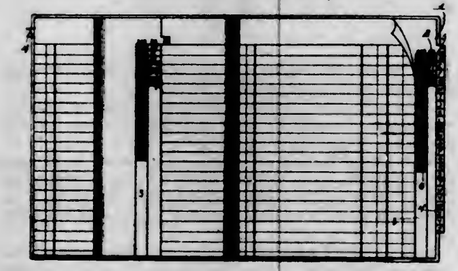


1. In a glove turner, the combination of a flat horizontal base, an upright having a foot at right angles to its body secured to the base near one end thereof, a series of hollow glove finger holders removably carried by said upright and projecting toward the other end of and parallel with the base, a pair of guides secured to the other end of the base and providing a space therebetween above the base, a block slidably mounted between said guides, means for manually sliding said block, and a series of plungers corresponding in number and in alinement with said holders carried by one end of the block, for the purpose set forth.

2. In a glove turner, the combination of a flat horizontal base, a socketed support carried at one end of the base, a series of tapered projections removably mounted in said socketed support, a glove finger receiving tube carried by each projection and projecting toward the other end of and parallel with the base, a pair of guides mounted at the other end of the base, a block slidably mounted between said guides, means for moving the block to and from the tubes, and a series of plungers corresponding in number and in alinement with said tubes carried by one end of said block, for the purpose set forth.

3. In a glove turner, the combination of a flat horizontal base, guides at one end, a block slidably mounted in said guides, a series of plungers carried by said block and projecting toward the other end of the base, a socketed support mounted upon the other end of the base, a series of tapered projections removably mounted in said socketed support, and a glove finger receiving tube carried by each projection and projecting toward and in alinement with its respective plunger of the series, said tubes being adapted to receive the glove's fingers exteriorly and have the plungers force the said fingers within the tubes turning the fingers simultaneously.

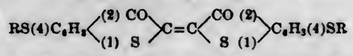
881,156. INDEX. WILLIS J. ROUSSEL, New Orleans, La. Filed Mar. 27, 1906. Serial No. 308,369.



An indexed book, comprising an index embodying a series of main index cards, bearing in alinement properly spaced, an initial letter, the combination of the initial letter and a second letter, and the combination of the initial letter, a second letter and a third letter, a series of sub-index cards bearing in alinement properly spaced the combination of an initial letter and a second letter, and the combination of an initial letter, a second letter and a third letter, and a series of auxiliary, sub-index cards bearing a combination of the initial letter and a second and third letter, and record leaves interposed between the index cards, said leaves varying in width.

881,157. DARK-GREEN-BLACK DYE. KARL SCHIRMACHER and RICHARD LEOPOLD, Höchst-on-the-Main, Germany, assignors to Farbwerke vorm. Meister Lucius & Brüning, Höchst-on-the-Main, Germany, a Corporation of Germany. Filed Feb. 20, 1907. Serial No. 358,419.

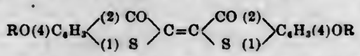
As products the vat dyestuffs of the constitution of which corresponds to the formula:



wherein "R" means ethyl and methyl, being dark green black powders, insoluble in water and soluble in alcohol, glacial acetic acid, benzene and chloroform with a violet color, in concentrated sulfuric acid with a blue green color; with alkaline hydrosulfite they yield yellow colored vats dyeing wool and cotton black-green shades.

881,158. DARK-BLUE-VIOLET DYE. KARL SCHIRMACHER and BERNARD DEICKE, Höchst-on-the-Main, Germany, assignors to Farbwerke vorm. Meister Lucius & Brüning, Höchst-on-theMain, Germany, a Corporation of Germany. Filed Feb. 20, 1907. Serial No. 358,420.

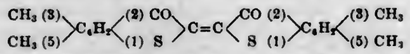
As products the vat dyestuffs having the formula:



wherein "R" means ethyl and methyl, being black violet powders, insoluble in water, soluble in hot alcohol, glacial acetic acid, benzene and chloroform with a violet color, in concentrated sulfuric acid with a green color; with alkaline hydrosulfite they yield yellow colored vats dyeing wool and cotton dark blue-violet shades.

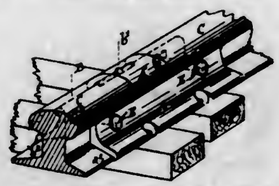
881,159. RED VAT-DYE. KARL SCHIRMACHER and ARNOLD BRUNNER, Höchst-on-the-Main, Germany, assignors to Farbwerke vorm. Meister Lucius & Brüning, Höchst-on-the-Main, Germany, a Corporation of Germany. Filed Feb. 20, 1907. Serial No. 358,421.

As product the red vat dyestuff which corresponds to the constitutional formula



being a red powder insoluble in water, very difficultly soluble in hot alcohol, more easily soluble in hot benzene, glacial acetic acid and chloroform with a red color; soluble in concentrated sulfuric acid with a green color, forming with alkaline hydrosulfite a yellow vat from which wool and cotton are dyed fast tints to alizarin-pink.

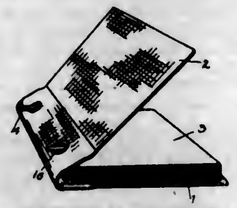
881,160. RAIL-JOINT. JOHN G. SMITH, Pawnee, Ill. Filed July 18, 1907. Serial No. 384,468.



1. A rail-joint comprising a member having an integral central block provided with a longitudinal channel and a central notch; and a complemental member having a longitudinal rib fitting in the longitudinal channel of the block of said first named member, and a central lug fitting in the central notch on the under side of the central block of said first named member.

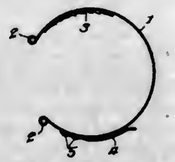
2. A rail-joint comprising a member having an integral central block conforming to the head of a rail and provided with a longitudinal channel and a central notch on the under side of said block and also having a longitudinal lip adapted to fit along the edge of the base of a rail; and a complemental rail-joint member having a longitudinal rib, adapted to fit in the channel on the under side of the block of the first named member, a lug adapted to fit in the central notch on the under side of said block, and a lip adapted to lie along the edge of the base of a rail.

881,161. LOOSE-LEAF BINDER. FREDERICK H. SMITH, Alameda, Cal., assignor of one-half to John L. Tisdale, Alameda, Cal. Filed Aug. 29, 1906. Serial No. 332,502.



A loose leaf binder comprising two covers, one of which has an eyelet secured therein and the other has a fixed tubular socket and a fixed screw within said socket, eccentric thereto, and spaced therefrom, and an internally threaded sleeve screwed upon the fixed screw and within the socket, said socket being of sufficient thickness compared with the shortest distance between the screw and the socket to fit snugly therebetween and press said screw towards the center of the socket, said internally threaded sleeve having a finger extending at right angles from its top and adapted to enter the eyelet in the other cover, substantially as described.

881,162. HOLDING DEVICE. EPHRAIM S. SMITH, Jr., Orange, Mass. Filed Nov. 30, 1907. Serial No. 404,506.



1. A switch-holding device of the class described, comprising a metallic spring-actuated body, means on the inner face of the body to anchor said body against rotation and a spring-actuated clamp secured to one face of said body adapted to receive and hold the switch of the animal.

2. A switch-holding device of the class described, comprising a spring-actuated body, projections on the inner face of said body, adapted to hold said body against rotation, a spring-actuated clamp on one face of said body, adapted to receive and hold the switch of an animal and means to secure one end of the clamp to the body.

3. A securing device of the class described, comprising a substantially circular spring-actuated body having terminals, projections on the inner face of said body, adapted to hold the body against rotation, a spring-actuated clamp on the outer face of the body and means to secure one end of the clamp to the body.

881,163. DEVICE FOR PUTTING ON AND TAKING OFF HOSE. GUSTAV SPIESS, Berlin, Germany. Filed Mar. 22, 1907. Serial No. 363,972.

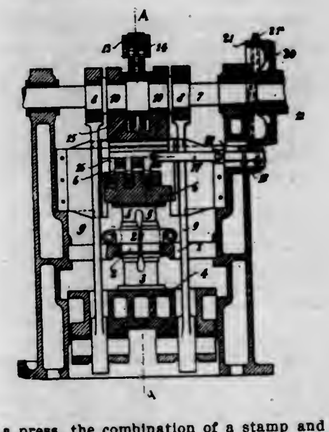
1. A device for putting on and taking off hose comprising in combination a bow, a plurality of horns fixed to said bow, and a handle attached to one of said horns, substantially as set forth.

2. A device for putting on and taking off hose comprising in combination a semi-elliptical bow, two downwardly and outwardly directed horns fixed to it, and a



handle attached at its lower end to one of said horns, substantially as set forth.

881,164. PRESS FOR MANUFACTURING BRIQUETS, BLOCKS, ARTIFICIAL STONE, AND THE LIKE. WILHELM SURMANN, Cologne, Germany. Filed Apr. 28, 1906. Serial No. 314,290.



1. In a press, the combination of a stamp and a stamp carrier with a driving shaft, a pushing head driven thereby and a laterally movable intermediate part, through which the said shaft and pushing head operate the said stamp, and means for laterally shifting the said part, the proximate faces of said stamp and intermediate part being provided with alternating recessed portions and projecting portions, the projecting portions of these two faces being in contact during the pressure, but the projections being opposite the recesses, to permit the independent rising and falling of said stamp, when a sudden stroke of said stamp is desired.

2. In a press, the combination of a stamp and a stamp carrier with a driving shaft and pushing head, an intermediate part through which the said head pushes said stamp; means for moving said intermediate part laterally, and means for causing the independent movement of said stamp for a sudden blow, the opposed faces of said stamp carrier and intermediate part being such that this independent movement is permitted when the said intermediate part is in one laterel position, but not permitted when it is in another lateral position substantially as set forth.

3. In a press, the combination of a stamp with means for pressing the same, an intermediate laterally movable part for transmitting such pressure, means for laterally moving said part, and means for temporarily lifting and then releasing the said stamp, in order that it may fall and give a sudden stroke, the said intermediate part being shaped to permit in one of its lateral positions this independent action of the stamp.

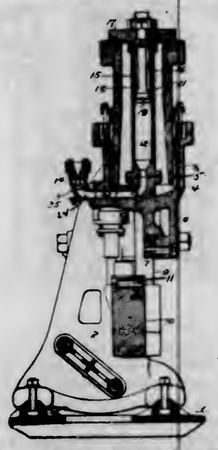
4. In a press, the combination of a stamp with a driving shaft and means whereby said shaft in its rotations

presses down said stamp, said means including a shifting element which in one position allows the independent movement of said stamp, a tappet carried by said shaft, and intermediate means acted on by said tappet to lift said stamp, the said means being released by the continued turning of said shaft and tappet and then permitting said stamp to fall with a sudden blow.

5. A pair of stamps acting on material between them, in combination with means for applying pressure to the lower part of said stamps, a carrier for the upper stamp provided with a comblike upper face, a part above said carrier having a corresponding comb-like lower face, means for shifting laterally said part to bring the projections of said faces opposite the recesses above or below them and thereby permit independent vertical play of said upper stamp, a driving shaft provided with a pressure head for pressing said upper stamp and with a tappet for lifting the said upper stamp and means engaging said stamp and temporarily engaged by said tappet, but adapted and arranged to slip from said tappet at a certain point of its rotation, thus permitting the stamp to fall by gravity with a sudden blow.

[Claim 6 not printed in the Gazette.]

881,165. THROTTLING DEVICE FOR HYDRAULIC MACHINERY. CLARENCE L. TAYLOR, Alliance, Ohio, assignor to The Morgan Engineering Company, Alliance, Ohio. Filed June 15, 1905. Serial No. 265,351.



1. The combination with a fixed main cylinder, a smaller cylinder secured to the closed end of the fixed main cylinder and a liquid supply for the main cylinder leading to the smaller cylinder, of a hollow piston for the main cylinder, and a plunger carried by said piston and moving within the smaller cylinder, the said plunger and cylinder being shaped to permit the liquid to freely pass, and enter the main fixed cylinder except when the piston has approximately reached the ends of its stroke.

2. The combination with a main fixed cylinder, a smaller cylinder secured to the closed end of the fixed main cylinder, and provided with an annular peripheral shoulder or seat, and a liquid supply for the main cylinder leading to the smaller cylinder, of a hollow piston for the main cylinder, and a plunger carried by said piston and provided with a head of less diameter than the smaller cylinder, the said head adapted to coöperate with the shoulder or seat in the smaller cylinder for shutting off the supply of fluid to the larger cylinder.

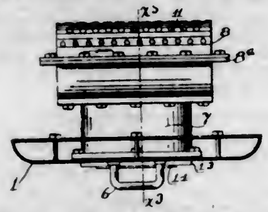
3. The combination with a main fixed cylinder, a smaller cylinder secured to the closed end of the fixed main cylinder and provided with an annular peripheral shoulder or seat, and a supply port for the main fixed cylinder discharging into the inner cylinder, of a hollow piston for the main cylinder, and a plunger carried by the piston and provided with an enlarged end or head adapted to coöperate with the shoulder or seat within the smaller cylinder for cutting off the supply of fluid to the main cylinder.

4. The combination with a fixed main cylinder, a smaller cylinder within the main cylinder and provided with an internal peripheral shoulder or seat, and an inlet port for the main cylinder discharging into the inner cylinder, of a hollow piston for the main cylinder, and a plunger fixed to said piston and moving within the smaller cylinder, the said plunger having enlarged heads at its ends, one head adapted to normally close the free end of the smaller cylinder, and the other head adapted to coöperate with the peripheral seat or shoulder in the smaller cylinder for cutting off the supply of fluid to the main fixed cylinder as the piston nears the end of its up stroke.

5. The combination with a fixed main cylinder, a smaller cylinder secured to the closed end of the main cylinder and in open communication at its end with the latter, a fluid supply port discharging into said smaller cylinder, an exhaust port, a port connecting the supply and exhaust ports and a valve in the exhaust port, of a hollow piston for the main cylinder, and a plunger carried by said piston and moving within the smaller cylinder.

[Claims 6 to 8 not printed in the Gazette.]

881,166. SUPPLEMENTAL DRAFT DEVICE FOR FURNACES. JOHN C. TELLER, Minneapolis, Minn., assignor of forty-nine one-hundredths to Zarah C. Colborn, Minneapolis, Minn., and William T. Colborn, Kansas City, Mo. Filed May 11, 1907. Serial No. 373,066.



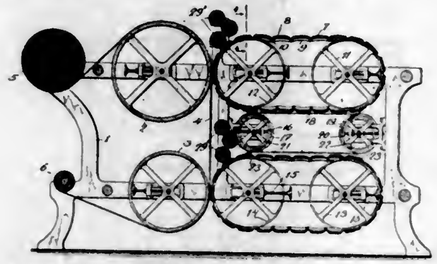
1. The combination with a furnace door, of a transversely elongated neck portion secured to said door and receiving air from the exterior thereof, a cylindrical head applied to the inner end of said neck and receiving air therefrom, said head having perforations in its most inwardly projecting portion, and an approximately semi-cylindrical deflector located within said head and extending from end to end thereof, with its convex portion alined with said neck and with its concave surface facing the perforations of said head, substantially as described.

2. The combination with a furnace door having a port, of a neck portion secured to said door and connected to said port, a cylindrical twyer head applied to the inner end of said neck and provided with perforations for the injection of air into the furnace, and an approximately semi-cylindrical deflecting plate concentrically applied within said twyer head and positioned with its convex surface turned toward and alined with said neck portion, substantially as described.

3. The combination with a furnace door having a port 9, of a neck portion 7 secured to said door and connected to said port, a twyer head 8 secured to the inner end of said neck portion 7 and made up of two approximately semi-cylindrical sections, the inner of which sections is provided with perforations 11 for the injection of air into the furnace, and a semi-cylindrical deflecting plate 12 secured within said twyer head concentric to and coextensive with the outer section of said twyer head, substantially as described.

881,167. PRINTING-MACHINE. WILLIAM H. THOMAS, New York, N. Y. Filed Mar. 11, 1907. Serial No. 361,708.

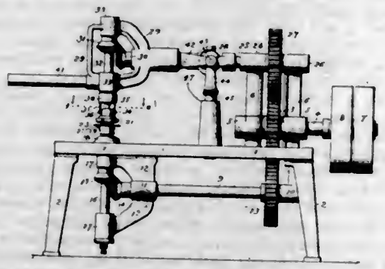
1. In a printing machine, an impression cylinder, an endless chain consisting of a plurality of form plates connected together by links, means for bringing said plates successively into working relation with the impression cylinder, and means for moving adjacent plates into abutting relation when in printing position to present an unbroken cylindrical surface.



2. In a printing machine, impression cylinders, an endless chain adapted to coöperate with each of said cylinders, each of said chains consisting of a plurality of connected form plates, and means for moving said chains so as to bring the plates thereof into working relation with a corresponding impression cylinder, the plates of one chain being disposed relatively to those of the other that the impressions from one series of plates are complemental to those of the other.

3. In a printing machine, an impression cylinder, an endless chain consisting of a plurality of form plates connected together by a couple consisting of a substantially T-shaped link and a short link, said links being pivotally connected together, and means for rocking the T-link to cause contiguous plates to abut.

881,168. MACHINE FOR GRINDING TORIC LENSES. CHARLES F. WALL and CHARLES SAILE, Philadelphia, Pa.; said Saile assignor to said Wall. Filed Mar. 1, 1906, Serial No. 303,723. Renewed June 19, 1907. Serial No. 379,796.



1. In a machine for grinding lenses, a grinding tool, a lens carrier, the axis of rotation of one of said elements being fixed, and the axis of the other movable in relation thereto to permit one of said elements moving across the face of the other, and means for operating the grinding tool and the lens carrier without disturbing the parallel relation of corresponding diametrical axes of the tool and carrier.

2. In a machine for grinding lenses, a grinding tool having a fixed axis of rotation, a lens carrier the axis of rotation of which is movable relatively to the axis of rotation of the grinding tool, means for operating the grinding tool and the lens carrier without disturbing the parallel relation of corresponding diametrical axes of the tool and carrier, and means for shifting the position of the lens carrier upon the grinding tool.

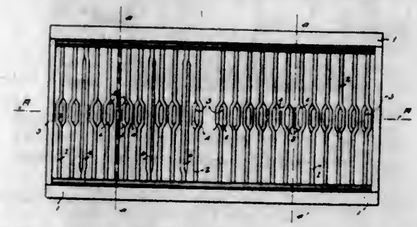
3. In a machine for grinding lenses, a grinding tool having a fixed axis of rotation, a lens carrier the axis of rotation of which is movable relatively to the axis of rotation of the grinding tool, and means for rotating the grinding tool and the lens carrier without disturbing the parallel relation of corresponding diametrical axes of the tool and carrier.

4. In a machine for grinding lenses, a grinding tool having a fixed axis of rotation, a lens carrier the axis of rotation of which is movable relatively to the axis of rotation of the grinding tool, means for rotating the grinding tool and the lens carrier without disturbing the parallel relation of corresponding diametrical axes of the tool and carrier, and means for shifting the position of the lens carrier upon the grinding tool.

5. In a machine for grinding lenses, a grinding tool, a lens carrier, means for rotating the grinding tool and the lens carrier, without disturbing the parallel relation of corresponding diametrical axes of the tool and carrier and means for varying the position of the lens carrier relative to the grinding tool for changing the relative positions of the axes of rotation of the carrier and tool.

[Claims 6 to 20 not printed in the Gazette.]

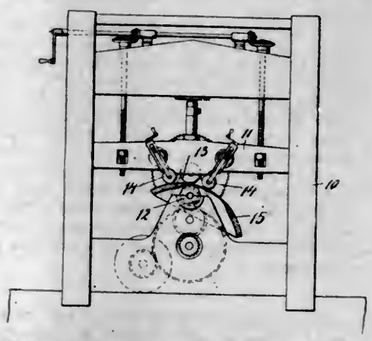
881,169. LEASE-REED. MATHIAS WALTER, Paterson, N. J. Filed Mar. 10, 1906. Serial No. 305,291.



1. In a lease-reed, the combination with dents, some having openings there-through passing obliquely to the right, and some having openings passing there-through obliquely to the left, of eyeless dents, some arranged obliquely, slanting to the right, and some arranged obliquely, slanting to the left, and a frame in which said dents are secured, substantially as set forth.

2. In a lease reed, the combination with the frame, of dents therein provided with obliquely facing openings, the dents on one side of said frame being reversely mounted with respect to those on the other side of said frame, in such a way that said oblique openings shall face toward the center of said reed.

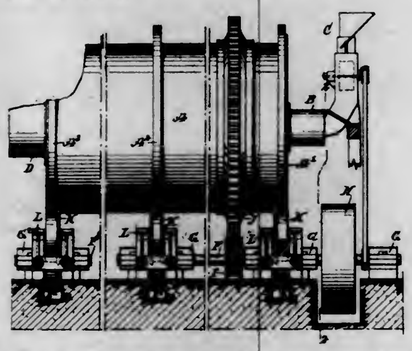
881,170. PROCESS FOR WORKING METALS. STANISLAS ZIETARSKI, Newark, N. J. Filed Feb. 26, 1906. Serial No. 302,955



1. The herein described method of working metals which consists in reducing the thickness of and shaping a metal blank by rolling pressure applied first to the portion which is within the periphery, reducing the thickness of said inner portion and thereby enlarging its area more rapidly than the portions toward the periphery, at the same time permitting the blank to dish or buckle.

2. The herein described method of working metals which consists in reducing the thickness of a metal blank by submitting it to pressure between two horizontally mounted rolls, said pressure being first applied to a portion of the blank which is within its periphery reducing the thickness of said inner portion and thereby enlarging its area more rapidly than the portions toward the periphery permitting the blank to dish or buckle, and at the same time guiding the dished blank vertically into the required form.

881,171. ROTATING DRUM. RICHARD F. ABBÉ, Hoboken, N. J., assignor to J. R. Alsing Engineering Co., New York, N. Y., a Corporation. Filed July 17, 1906. Serial No. 326,604.

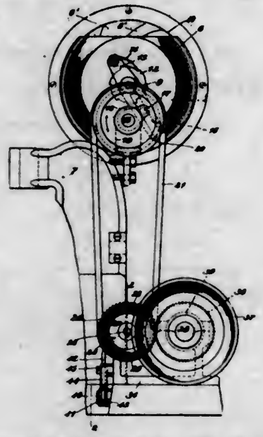


1. A device of the character described comprising a drum having external annular bearings, one located approximately at the middle of the drum and the others located at or near the ends of the drum, a gear wheel fixed on the said drum, adjacent to one of the end bearings, a driven shaft extending beneath one end of the drum and located in a vertical plane passing through the axis of the drum, supporting wheels mounted on said shaft and in frictional engagement respectively with the annular bearing at one end of the drum and the middle bearing, a pinion secured to said shaft between the said supporting wheels and in mesh with the gear wheel on the drum, a second shaft extending beneath the other end of said drum and in axial alinement with the said driven shaft, a supporting wheel loosely mounted on said second shaft and in engagement with the bearing at said end of the drum, guide rollers peripherally engaging the said bearings of the drum and located on opposite sides of the said supporting wheels.

2. The combination with a drum having a central inlet at one end and a central outlet at the other end, a feeding device leading to said inlet, supporting wheels engaging the drum peripherally at the bottom of the drum, a driven shaft extending beneath one end of the drum and on which sundry of said supporting wheels are mounted, a driving pulley secured on said shaft, a second shaft extending beneath the other end of said drum and in axial alinement with the said driven shaft, a supporting wheel for the drum loosely mounted on said second shaft, guide rollers engaging the drum on opposite sides of the said supporting wheels, and in transverse alinement therewith, and transversely adjustable bearings in which said guide rollers are mounted.

881,172. HOOK-SEPARATING MECHANISM. WILLIAM P. BARTEL, Waltham, and SYDNEY E. TAFT, South Framingham, Mass, assignors to American Lacing Hook Co., a Corporation of New Jersey. Filed Dec. 18, 1905. Serial No. 292,274.

1. In a device of the character described, a hopper, a picker plate journaled to rotate within said hopper, mechanism adapted to impart an intermittent rotary motion to said picker plate, said mechanism adapted to impart a slow forward motion to said picker plate and to return preparatory to imparting another forward movement to said picker plate at a relatively rapid rate of speed, while said picker plate is stationary.



2. In a device of the character described, a hopper, a picker plate journaled to rotate within said hopper, a ratchet fast to said picker plate, a lever provided with a slot extending longitudinally thereof, a crank pin fast to said crank and projecting into said slot, and a pawl pivoted to said lever and engaging said ratchet, whereby a slow forward movement is imparted to said picker plate and a relatively rapid return movement is imparted to said pawl while said picker plate is stationary.

3. In a device of the character described, a hopper, a shaft journaled therein, a picker plate fast to said shaft within said hopper, a ratchet fast to said shaft, a lever journaled on said shaft and provided with a slot extending longitudinally thereof, a crank, a crank pin fast to said crank and projecting into said slot, and a pawl pivoted to said lever and engaging said ratchet, whereby a slow forward movement is imparted to said picker plate and a relatively rapid return movement is imparted to said pawl while said picker plate is stationary.

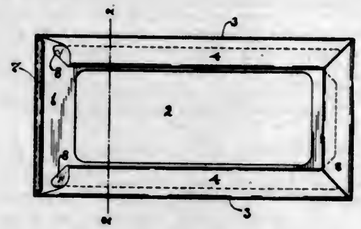
4. In a device of the character described, a hopper, a shaft journaled therein, a picker plate fast to said shaft within said hopper, a ratchet fast to said shaft, a lever journaled on said shaft and provided with a slot extending longitudinally thereof, a crank, a crank pin fast to said crank and projecting into said slot, and a pawl pivoted to said lever and engaging said ratchet, whereby a slow forward movement is imparted to said picker plate and a relatively rapid return movement is imparted to said pawl while said picker plate is stationary, and frictional means for imparting a rotary motion to said crank.

881,173. STENCIL AND FRAME ROBERT S. BOLGER, New York, N. Y., assignor, by mesne assignments, to Velox Manufacturing Company, a Corporation of New York. Filed Nov. 23, 1906. Serial No. 344,683.

1. A stencil card frame, a removable flexible stencil card therefor and means for holding said card taut in said frame, said means being adapted to resist pull at right angles to the edge of the card which is held and non-resisting against longitudinal pull, said means comprising a fold in the card and means adapted to prevent the unfolding of the card by pull at right angles.

2. The combination of a stencil card frame having a fold in its edge, a lengthwise removable flexible stencil sheet having a folded edge, the fold of the sheet embracing said edge in the frame when the sheet is in position.

3. A stencil card frame, a removable flexible stencil sheet therefor and means for holding said sheet taut in said frame, said frame having an inturned edge forming a bight, a fold of the sheet embracing said edge when the sheet is in position, said inturned edge being folded upon itself so that it extends into a bight of the frame, and said sheet in embracing said edge passing into the bight and around the edge.

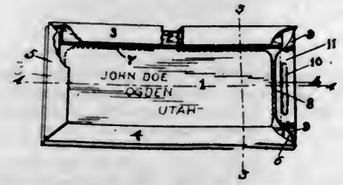


4. A stencil card frame having an inturned edge, in combination with a removable stencil sheet of flexible material also having an inturned edge, said edges of frame and sheet being hooked upon each other whereby the sheet will be held taut.

5. A stencil card frame having an inturned edge, in combination with a removable stencil sheet of flexible material also having an inturned edge, said edges of frame and sheet being hooked upon each other whereby the sheet will be held taut, an abutment at the end of the frame to receive one end of the sheet as it is slid into place.

[Claims 6 to 10 not printed in the Gazette.]

881,174. STENCIL AND FRAME. ROBERT S. BOLGER, Richmond Hill, N. Y., assignor, by mesne assignments, to Velox Manufacturing Company, a Corporation of New York. Filed May 17, 1907. Serial No. 374,112.



1. A stencil frame having side grooves or channels for the cards, an inlet flange having a lip at the center of the forward edge and depressed at the ends adjacent to the side channels, whereby a card may be passed over the end flange while being inserted into the side channels.

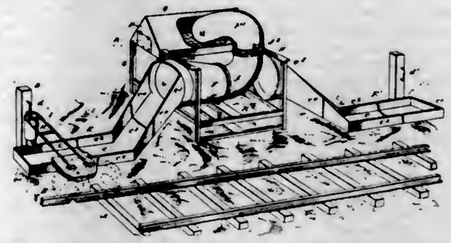
2. A stencil frame having side grooves or channels for the cards, an inlet flange having a lip at the center of the forward edge and depressed at the ends adjacent to the side channels, whereby a card may be passed over the end flange while being inserted into the side channels, a frame portion beneath said flange of the same width as said flange.

881,175. MAIL-BAG CATCHER. OSCAR C. BRETT, Humboldt, Kans. Filed Jan. 15, 1908. Serial No. 410,916.

1. A mail bag deliverer and catcher comprising a holder for the bag projecting from a car, a catch on the holder, means for operating the catch to release the bag, a trough into which the bag drops and a pivoted chute registering with the delivery end of the trough and having a discharge member adjustable about a vertical axis through which the bag is delivered.

2. The combination with a holder for suspending a mail bag from a railway car, of a wind shield carried thereby, a catch for suspending the bag from the holder within the shield, and an arm projecting from the catch for operating it to drop the bag.

3. The combination with a holder for suspending a mail bag from a car, of a wind shield carried by the holder, a catch for detachably suspending the bag within the shield, and means engaging the catch for releasing the bag.

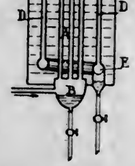


4. The combination with a holder for suspending a mail bag from a car, of a wind shield carried by the holder within which the bag is suspended, a catch bar pivoted to the upper end of the holder, and a hanger connected with the bag and detachably connected with the catch bar.

5. A holder for suspending a mail bag from a car comprising parallel arms having bent inner ends, a cross bar or handle connecting the arms, a ring connected with the outer ends of the arms, a cylindrical wind shield depending from the ring and a catch bar pivotally connected with the ring.

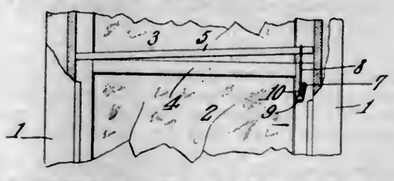
[Claims 6 to 9 not printed in the Gazette.]

881,176. APPARATUS FOR THE LIQUEFACTION OF AIR. GEORGES CLAUDE, Paris, France. Filed Feb. 23, 1906. Serial No. 303,129.



An apparatus for liquefying air, comprising a series of upright tubes, a chamber at the upper end of said tubes and in communication therewith, a reservoir for collecting air liquefied in said tubes, means to admit air under pressure to said tubes, a second series of upright tubes in communication with the said upper chamber, a reservoir adapted to collect air liquefied in said second series of tubes and means surrounding said tubes adapted to maintain a refrigerating agent in contact therewith, substantially as described.

881,177. SASH-LOCK. WILLIS H. CULP, King, Tex. Filed Oct. 12, 1907. Serial No. 397,153.



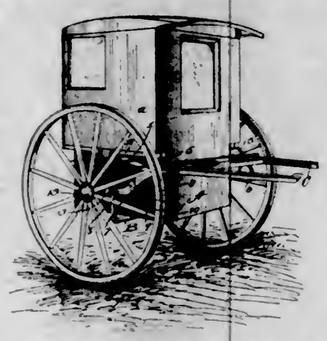
1. A sash lock comprising a bar slightly longer than the width of the window sash to which it is applied, one end of said bar being higher than the other, a spring catch attached to said sash and extending upwardly over

said higher end of the bar, a projecting pin on the outer side of the bar adapted to be supported by the upper end of said spring latch.

2. A sash lock comprising a lock bar one end of which rests on the top of the lower sash and the other end extending slightly above the same, a spring latch secured to the lower sash and having a hook on its upper end engaging over the higher end of said bar, the end of said hook having a lateral projection, and a pin projecting outwardly from said bar adapted to be supported by the projection on said hook and hold said higher end of the bar away from the window frame.

3. A sash lock comprising a lock bar resting on the top of the lower sash at one end and elevated slightly above it at the opposite end, a spring latch having a hook at its upper end provided with a lateral extension, a plurality of coils at its lower end, and an angularly disposed loop having a projection, means for fastening the loop to the sash, and a pin extending rearwardly from said bar and adapted to hold said bar in unlocked position when supported by the projection of said hook.

881,178. MAIL-CART. FRANK H. CUNNINGHAM, South Omaha, Nebr. Filed Feb. 21, 1907. Serial No. 359,038.
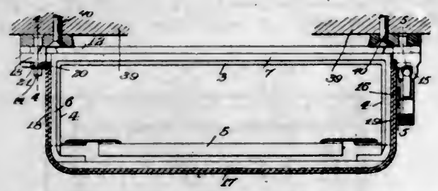


1. In a two-wheeled vehicle for delivering mail, consisting of a covered body, elliptic springs secured to the axle upon each side of the body and under the outwardly extending sides thereof for supporting said body, clips secured to said axle adjacent the lower side of said springs, thills having pivotal connection with said clips, looped springs secured to each of the thills at a point near the axle and at their opposite ends to the forward ends of the spring-bars which are secured to the underside of the outwardly extending sides of the covered-body and means secured to the thills for supporting the aforesaid looped springs.

2. In a two-wheeled vehicle, the combination of the body having the outwardly extending sides and spring-bars secured to the underside thereof, the elliptic springs upon which said body is mounted, the lower sides of which are secured to the axle, the looped springs having rigid connection at their long ends to the thills and at their opposite ends to the forward ends of the spring-bars, the pivotal connection between the thills and axle, and the means for supporting the long ends of the aforesaid looped springs.

881,179. LOCKING DEVICE FOR MAIL-CHUTES. JOSEPH W. CUTLER, Rochester, N. Y., assignor to Cutler Manufacturing Company, Rochester, N. Y., a Corporation of New York. Filed Jan. 9, 1906. Serial No. 295,212.

1. The combination with a mail chute, of a support having a staple at one side of the chute, a member adapted to secure a part of the chute having detachable connections with the support at the side opposite the staple and adapted to accommodate the staple, and a lock coöperating with the staple for preventing unauthorized removal of said member.



2. The combination with a mail chute, of a channeled support, a part on the chute adapted to coöperate with the channel of the support, a member adapted to coöperate with the said part on the chute to retain it in position, and a lock for securing the said member from unauthorized removal.

3. The combination with a mail chute, of a channeled support, a flange on a part of the chute adapted to coöperate with the said support, a member adapted to coöperate with said flange to secure a part of the chute in position, and a lock for preventing unauthorized removal of said member.

4. The combination with a mail chute, of a support having a staple thereon, a member detachably secured at one end to said support at the side of the chute and formed to accommodate said staple, said member being adapted to retain a part of the chute in position, and a lock coöperating with said staple for preventing unauthorized removal of said member.

5. The combination with a mail chute, of a support having an enlargement or overhanging portion, and a staple thereon, a member adapted to secure a part of the chute in position, having a portion for detachably engaging the enlargement, and also formed to accommodate the staple, and a lock to coöperate with said staple to prevent unauthorized removal of said member.

[Claims 6 to 16 not printed in the Gazette.]

881,180. MAIL-CHUTE. JOSEPH W. CUTLER, Rochester, N. Y., assignor to Cutler Manufacturing Company, Rochester, N. Y., a Corporation of New York. Filed Feb. 23, 1907. Serial No. 358,796.



1. In a mail chute, the combination with the open channel having the projections at their inner sides in rear of their outer edges, of a laterally movable panel arranged between said outer edges and engaging said projection.

2. In a mail chute, the combination with the channel having the forwardly-projecting sides and the inwardly-extending ribs thereon located in rear of the outer edges, of the laterally movable panel arranged between the outer edges of the channel sides and engaging the outer faces of the ribs.

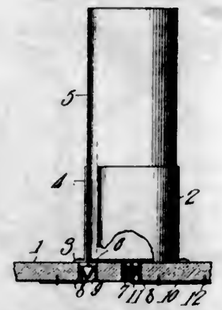
3. In a mail chute, the combination with the channel composed of sheet material and having the sides doubled to form longitudinal ribs in rear of the outer edges, of a laterally movable panel arranged between the outer edges of the sides and engaging the said ribs.

4. In a mail chute, the combination with the channel having the projections on the inner sides in rear of their outer edges, of a laterally movable panel located between the outer edges of the sides and engaging the projections and means for fastening the panel at its ends.

5. In a mail chute, the combination with the channel composed of sheet material having the longitudinal ribs formed in the sides and in rear of the outer edges of the latter, of a laterally movable panel arranged between said outer edges and engaging the ribs and fastening devices for securing the ends of said panel in position.

[Claims 6 to 35 not printed in the Gazette.]

881,181. BATTERY-HOLDER. EMORY S. EGGE, Montgomery, Ala. Filed Aug. 14, 1907. Serial No. 388,535.



1. In a battery box or holder, the combination of a suitable base, elastic receptacles for the battery cells secured to said base, conical terminals for the battery cells, and connectors fast on the base and each terminating in elastic conducting spirals shaped to receive the conical terminals when the latter are attached to the battery cells.

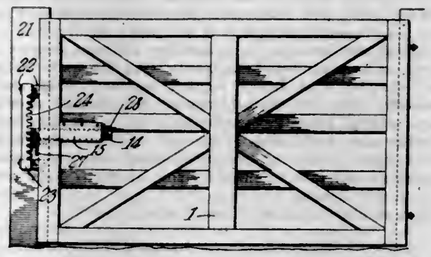
2. A means for coupling electric battery cells comprising battery terminal plugs of conical shape adapted to be secured to the terminals of battery cells, and a coupling conductor having its ends formed into conical spirals to receive the conical battery plugs.

3. An electric sparking unit comprising a suitable base or support, split elastic cylindrical holders secured thereon, coupling connectors extending from the center of one cylinder to a point adjacent the split or divided portion of another cylinder and each connector having its ends formed into conical spirals, conical plugs adapted to be attached to the battery terminals and insertible into the spiral terminals of the connectors, and another cylinder arranged to receive a spark coil and provided within the area covered thereby with spiral connector terminals.

881,182. LATCH. GEORGE W. GOSS and CHARLES E. GOSS, Baltimore, Ohio. Original application filed Apr. 30, 1907, Serial No. 371,099. Divided and this application filed Sept. 23, 1907. Serial No. 394,167.

1. The combination with a post and a gate hingedly connected to the post; of a latch carried by the gate, and a keeper having a plurality of superposed latch receiving notches, one of which is disposed to be engaged by the latch when the gate is in any position to which it may be tilted.

2. The combination with a post and a gate hingedly connected thereto; of a second post, a keeper connected thereto and having a plurality of notches in one edge thereof, a spring actuated latch carried by the gate, a locking pin movable therewith, a trigger carried by the gate and disposed to engage the latch and hold it in retracted position, said trigger being movable against the post to release the latch.



3. The combination with a post, and a gate movably connected thereto; of a second post, a keeper connected thereto and having a plurality of notches in one edge thereof, a spring actuated latch carried by the gate, means movable therewith for engaging any one of the notches in the keeper, and means upon the gate for holding the latch retracted, said means being disposed to contact with said second post when the gate is closed to release the latch.

881,183. CEMENT COLUMN. RICHARD H. GUYER, La Fayette, Ind. Filed Mar. 18, 1907. Serial No. 362,978.



1. The combination, in a mold for artificial stone columns, of a base, an end piece carried by said base forming a head to the mold-chamber when the mold is in condition for use, an outer mold structure composed of sections hinged together, a tubular core having angular projections with a wire wound around said core and resting on said projections but standing free from the body of the core, a pin at each end of the core for holding the same centrally within the mold, one of said pins engaging with said end piece and the other pin engaging with a cross bar at the opposite end of the mold, and said cross bar.

2. The combination, in a mold for artificial stone columns, of a suitable surrounding structure forming the walls of the mold-chamber, and a core extending longitudinally through said chamber and secured centrally within said structure, said core having longitudinally arranged projecting ribs thereon and a wire wound around said core and bearing upon such ribs, but held thereby away from the adjacent portions of the core surfaces.

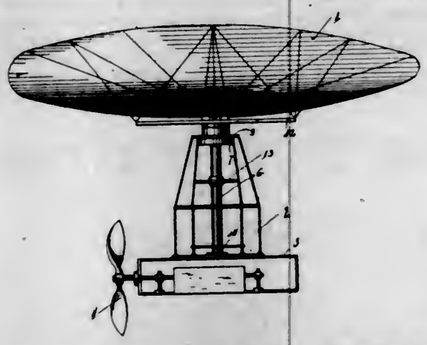
3. The combination, in a mold for artificial stone columns, of a surrounding structure forming the outer walls of the mold-chamber, and a core extending longitudinally through said chamber, said core being tubular in form and provided with longitudinally arranged projecting ribs upon its outer surface, and a wire wound around said core in contact with said ribs.

4. The combination, in a mold for artificial stone columns, of an outer structure constituting the walls of the mold-chamber, and a core secured centrally within said chamber, said core being composed of a central wooden piece, a sheet metal tube surrounding and secured to said wooden piece, and projections in the form of Z-bars secured to the external surface of said sheet metal tube.

5. The combination, in a mold for artificial stone columns, of an outer structure constituting the walls of the mold-chamber, and a core secured centrally within said chamber, said core being composed of a central wooden piece, a sheet metal tube surrounding and secured to said wooden piece, projections in the form of Z-bars secured to the external surface of said sheet metal tube, and a wire wound around said core and bearing upon the outer surface of said Z-bars.

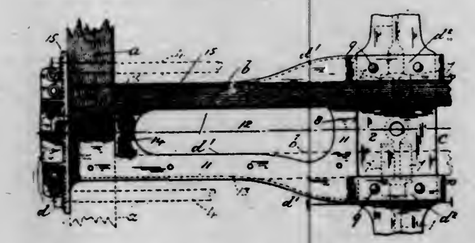
[Claim 6 not printed in the Gazette.]

881,184. FLYING-MACHINE. WILLIAM HALLE, Union, N. J. Filed Nov. 4, 1907. Serial No. 400,536.



In a flying machine, a car, a balloon, a vertical shaft rotatively arranged in and projecting outward of the car and carrying the balloon, a hand wheel rigidly mounted on said shaft and allowing the steering of the balloon from within the car directly and independently of the latter, and a platform secured on said shaft inside the car.

881,185. CAR-UNDERFRAME. CLARENCE H. HOWARD, St. Louis, Mo. Filed Nov. 25, 1907. Serial No. 403,782.



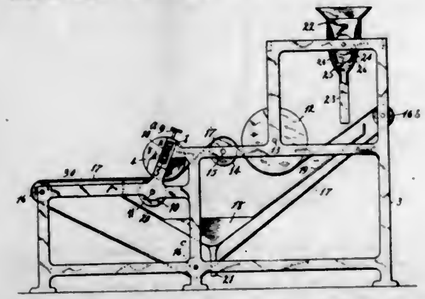
1. In a car underframe, the combination with the end sill and abutting portions of the longitudinal sills, of a body-bolster fixed to the longitudinal sills adjacent to the end sill, a dead-block projecting from the end sill, an arm projecting from the dead-block and adapted to interlock with the body-bolster, and means for fixing the arm to the said bolster, substantially as described.

2. In a car underframe, the combination with the end sill and abutting portions of the longitudinal sills, of a body-bolster fixed to the longitudinal sills adjacent to the end sill, a dead-block projecting from the end sill, an arm projecting from the dead-block, the said arm being adapted to interlock with the body-bolster and to bear against the end, and middle, longitudinal sills, and means for fixing the arm to the said end and middle sills, substantially as described.

3. In a car underframe, the combination with the end sill and abutting portions of the longitudinal sills, of a body-bolster fixed to the longitudinal sills adjacent to the end sill, a dead-block projecting from the end sill, an arm projecting from the dead-block and integral therewith, the said arm being adapted to interlock with the body-bolster and to bear against the end, and middle, longitudinal sills, and means for fixing the arm to the said middle sills, substantially as described.

4. In a car underframe, the combination with the end sill and abutting portions of the longitudinal sills, of a body-bolster fixed to the longitudinal sills adjacent to the end sill, a dead-block projecting from the end sill, an arm projecting from the dead-block, the said arm being adapted to interlock with the body-bolster and to bear against the end, and middle, longitudinal sills, and means for fixing the arm to the said end sill, middle sills, and body-bolster, substantially as described.

881,186. FRUIT-PULPING APPARATUS. JOHN HULINGS and SAMUEL B. CRAIG, Hastings, Mich. Filed Apr. 9, 1906. Serial No. 310,699.



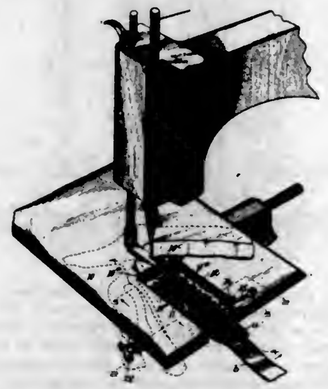
An apparatus for the purpose specified, including a frame, a juice expressing mechanism mounted on said frame and comprising an endless apron, a series of pressure members mounted above and below said apron and in engagement therewith and consisting of a drum 12, a roller 14, and adjustably mounted roller 4, and a drip pan 18, arranged below the upper course of said apron, and having projections extending below and beyond said rollers and having vertical upturned margins, said pan also having a discharge spout, substantially as described.

881,187. SEWING-MACHINE ATTACHMENT. FRANK J. KAUFMAN, Fultonville, N. Y., assignor, by mesne assignments, to The Singer Manufacturing Company, a Corporation of New Jersey. Filed Feb. 4, 1905, Serial No. 244,164. Renewed Jan. 11, 1907. Serial No. 351,903.

1. A sewing machine having an opening in the work plate adjacent to the stitch forming devices, and means located under the work plate adjacent to the opening and providing gage shoulders or surfaces between which a section of material is guided in its movement through said opening, one of said shoulders or surfaces being adjustable toward or from the other for the purpose specified.

2. A sewing machine having an opening in the work plate adjacent to the stitch forming devices, a member forming a guide below the upper surface of the work-plate adjacent to said opening, and a slide also arranged below the upper face of the work-plate and having a gage shoulder opposite the guide and adjustable toward and from the same.

3. A sewing machine having an opening in the work plate adjacent to the stitch forming devices, a part located below the upper face of the work plate adjacent to said opening to form a gage surface for one edge of a section of material passed up through said opening in the work-plate, and a slide located below the upper face of the work-plate and having a reduced extension engaging the under side of the said part, and also having a gage shoulder lying opposite the said part and movable with the slide toward and from the said part, for the purpose specified.

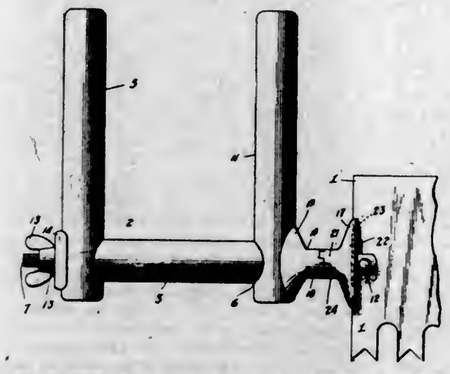


4. A sewing machine having an opening in the work plate adjacent to the stitch forming devices, a gage member movably situated in said opening and terminating short of the inner extremity thereof, and a part having a gage surface adjustably mounted under the work plate adjacent to said opening, and spaced from the gage member to form a passage between the gage member and the said part.

4. A sewing machine having an opening in the work vided with an opening therein leading to the stitch forming devices, a gage member placed in said opening and terminating short of the inner extremity thereof, a slide mounted under the work plate and extending across the opening, said slide having a gage shoulder at one side of the opening.

[Claims 6 to 14 not printed in the Gazette.]

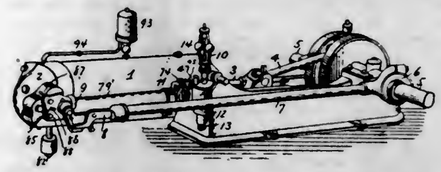
881,188. SAW-HANDLE. CHARLES M. LARKIN, Baker City, Oreg. Filed Aug. 23, 1907. Serial No. 389,898.



1. A saw handle of substantially U-form comprising a longitudinal hand grip, two transverse hand grips, one being arranged at each end of the longitudinal grip and projecting at right angles therefrom, said longitudinal grip being formed with a longitudinal opening or bore and the two transverse or end grips being formed with transverse openings to aline with the one in the longitudinal grip, a clamping bolt extending through the alined openings in said grips whereby the latter are rotatably mounted upon the bolt, and a coupling device arranged upon the bolt and consisting of two separable, non-rotatably engaged members, one being adapted to receive the saw and the other to receive the handle, substantially as and for the purpose set forth.

2. A saw handle comprising a handgrip portion formed with an opening, a screw bolt arranged in the opening in the hand grip portion whereby the latter may turn upon the bolt, one end of the bolt being formed with a head for the attachment of the saw and its other end with a threaded portion, a coupling device arranged upon the bolt and consisting of two separable non-rotatably engaged members, one being formed with a groove or notch to receive the saw and the other being shaped to engage said hand grip portion, and a clamping nut arranged upon the threaded outer end of the bolt and adapted to clamp the parts together and against the saw, substantially as and for the purpose set forth.

881,189. EXPLOSIVE-ENGINE. JOHN S. LOSCH and GEORGE H. GERBER, Reading, Pa. Filed May 16, 1907. Serial No. 373,907.



1. An explosive gas engine, provided with means for supplying air under pressure, and means for supplying liquid fuel, a mixing chamber for the air and the liquid fuel, means for accelerating the velocity and increasing the temperature of the air in transit to said mixing chamber, a liquid fuel supply discharge exposed to the current of air, and means for controlling the supply of the oil and the air.

2. In an explosive gas engine provided with means for supplying air under pressure, and means for supplying oil, a mixing chamber for the air and the oil provided with means for accelerating the velocity and increasing the temperature of the air in transit, an oil supply discharge operated upon by the current of air, and means for controlling the supply of the air and the oil.

3. An explosive gas engine provided with means for supplying air under pressure, a mixing chamber, means for forming a contracted passage for the air, an oil and air distributer adjacent to said passage and operated upon by the current of air, and means for controlling the supply of the air and the oil.

4. An explosive gas engine provided with means for supplying air under pressure, a mixing chamber, an obstruction concentrically arranged to form an annular passage for the air, a distributer adjacent to said passage and provided with oil and air passages, and means for controlling the supply of the air and the oil.

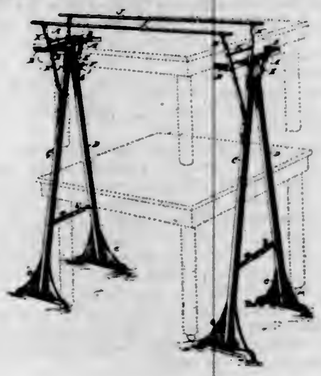
5. An explosive gas engine provided with means for supplying air under pressure, a mixing chamber, a distributer concentrically arranged in said chamber and provided with liquid fuel and air ducts or passages in parallel planes.

[Claims 6 and 7 not printed in the Gazette.]

881,190. TABLE-SUPPORT. VALENTINE C. LUPPERT, South Williamsport, Pa. Filed July 24, 1907. Serial No. 385,246.

A table support comprising two standards, supporting brackets pivoted thereto, and supporting props connected

to the standards and projecting above the same, substantially as and for the purpose set forth.



881,191. VALVE. JOHN D. MACLACHLAN, Detroit, Mich., assignor to Detroit Steam Engine Company, Detroit, Mich., a Corporation of Michigan. Filed Apr. 23, 1906. Serial No. 313,283.



1. A valve comprising an integrated cast metal head and wrought metal stem.

2. A valve comprising a cast metal head on which the valve face is formed, and wrought metal stem, said head being cast upon said stem and integrated therewith, and being in an unchilled condition.

3. A valve comprising a stem of wrought metal, a head cast thereabout and integral therewith the end of said stem, projecting through said head, and being fashioned for the engagement of a tool therewith, for rotating the valve.

4. A valve comprising a stem of wrought metal, having a pair of separated grooves cut therein, and a cast metal head surrounding said stem, so as to fill said grooves, and surrounding the intermediate portion of the larger diameter, said head being integral with said stem.

5. A valve comprising a stem of wrought metal, and a head cast thereabout and "burned" thereupon substantially as and for the purpose described.

[Claim 6 not printed in the Gazette.]

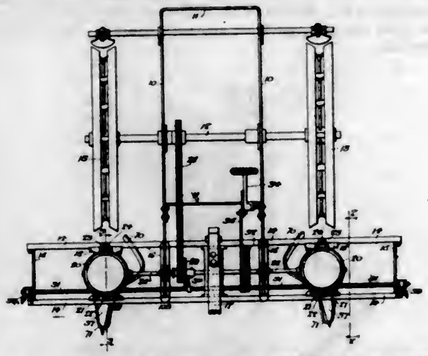
881,192. FUEL-BRIQUET. AUGUST M. MANNEWITZ, Dallas, Tex. Filed June 5, 1907. Serial No. 377,438.

A briquet composed of the following ingredients in the proportions specified by measure; finely ground coal waste, ninety parts; cotton seed meal, five parts; cattle dung, one part; finely ground flint rock, three parts; and coal oil residuum or asphaltum, one part.

881,193. PLANTER. CLEMENT W. MICHAEL, Racine, Wis., assignor to J. I. Case Plow Works, Racine, Wis., a Corporation. Filed July 11, 1906. Serial No. 325,571.

1. The combination with the frame having a seed delivery conduit, of a revoluble furrow opening disk, a shield held against the side of said disk, and a valve device operating between said shield and disk, said shield and valve device being mounted to move at right-angles to the disk and free to follow any lateral variation of the disk as the latter revolves, substantially as described.

2. The combination with the frame having a seed delivery conduit, of a revoluble, concavo-convex furrow opening disk journaled at an angle on said frame, a shield on the convex side of said disk having its forward edge shaped to conform thereto, said shield being movably mounted and free to follow any lateral variation of the disk as the latter revolves, and a seed chute between said shield and disk and connected to said shield to move laterally therewith, substantially as described.



3. In a planter, the combination with the frame having a seed delivery conduit, of a furrow opening disk journaled at an angle on said frame, a coöperating shield, said shield being pivotally mounted on said frame to swing at right angles to said disk, a spring for yieldingly holding said shield into engagement with the convex side of said disk, and a seed chute between said shield and disk and mounted on said shield, substantially as described.

4. In planters, the combination with the inclined furrow opening disk, of a shield mounted on the convex side of said disk and coöperating therewith, a seed chute between said shield and disk, said shield and chute being mounted to move laterally at right angles to the disk and free to follow any variation of said disk as the latter revolves, substantially as described.

5. In planters, the combination with a frame having a seed delivery conduit, of a furrow opening disk journaled on said frame, a shield on the convex side of said disk, a valve device connected to said shield, said shield being pivoted on said frame and arranged to move together with said valve device to follow any variation of the side of said disk as the latter revolves, substantially as described.

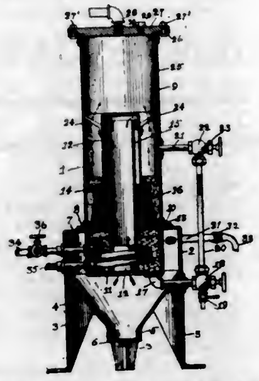
[Claims 6 to 13 not printed in the Gazette.]

881,194. DUST SEPARATOR AND COLLECTOR. WILLIAM F. MOUGHLER, Toledo, Ohio, assignor to The Vacuum and Compressor Company, of Wauseon, Ohio, Incorporated. Filed Mar. 2, 1907. Serial No. 360,241.

1. In a dust separator and collector, the combination of an exhaust chamber having an outlet adapted to be connected to a vacuum pump, a receiving chamber having an air inlet, an air passage connecting the chambers, a liquid seal normally closing the air passage, means to heat the liquid forming the seal, and a suction pipe connected to the air inlet of the receiving chamber, substantially as and for the purpose set forth.

2. In a dust separator and collector, the combination of an exhaust chamber having an outlet adapted to be connected to a vacuum pump, a receiving chamber having an air inlet, an air passage connecting the chambers, a liquid seal normally closing the air passage, means to heat the liquid forming the seal, a screen interposed in the path of exit of the air drawn through the seal, and a suction pipe connected to the air inlet of the receiving chamber, substantially as and for the purpose set forth.

3. In combination in a dust separator and collector, a receiving cylinder, an exhaust cylinder mounted on and partially in the receiving cylinder, and having an open pipe axial thereto forming an air passage from the receiving into the exhaust cylinder, a screen surrounding the pipe within the exhaust cylinder, having a surmounting cap concentrically inclosing the upper portion of the pipe, and forming an air passage, downward and around the pipe, liquid in the exhaust cylinder submerging the screen, and forming a seal for the air passage between the cap and the pipe, a pipe adapted to connect the air space of the exhaust cylinder with an air exhaust pump, and thereby draw air from the receiving chamber through the liquid sealed passage, and a suction pipe connected to the receiving cylinder, substantially as and for the purpose set forth.

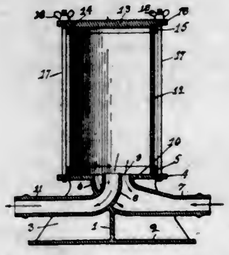


4. In combination in a dust separator and collector, a receiving cylinder, an exhaust cylinder mounted on and partially in the receiving cylinder, and having an open pipe axial thereto forming an air passage from the receiving into the exhaust cylinder, a screen surrounding the pipe within the exhaust cylinder having a surmounting cap concentrically inclosing the upper portion of the pipe, and forming an air passage, downward and around the pipe, liquid in the exhaust chamber submerging the screen, and forming a seal for the air passage between the cap and the pipe, means to heat the liquid in the exhaust cylinder, a pipe adapted to connect the air space of the exhaust cylinder with an air exhaust pump, and thereby draw air from the receiving chamber through the liquid sealed passage, and a suction pipe connected to the receiving cylinder, substantially as and for the purpose set forth.

5. In combination in a dust separator and collector, a receiving cylinder, an exhaust cylinder mounted on and partially in the receiving cylinder, and having an open pipe axial thereto formnig an air passage from the receiving into the exhaust cylinder, a screen surrounding the pipe within the exhaust cylinder, having a cap concentrically inclosing the upper portion of the pipe, and forming an air passage, downward and around the pipe, liquid in the exhaust chamber submerging the screen, and forming a seal for the air passage between the cap and the pipe, a heating pipe in the lower portion of the exhaust chamber having one end portion extending to and adapted to be connected to the exhaust of an engine, and the opposite end open to the atmosphere without the cylinder, a pipe adapted to connect the air space of the exhaust cylinder with an air exhaust pump, and thereby draw air from the receiving chamber through the liquid sealed passage, and means to supply air to the receiving cylinder, substantially as and for the purpose set forth.

881,195. SIGHT-GLASS AND SEPARATOR FOR PNEUMATIC RENOVATORS. WILLIAM F. MOUGHLER, Toledo, Ohio, assignor to The Vacuum and Compressor Company, of Wauseon, Ohio, Incorporated. Original application filed Jan. 11,1906, Serial No. 295.547. Divided and this application filed Mar. 2, 1907. Serial No. 360,243.

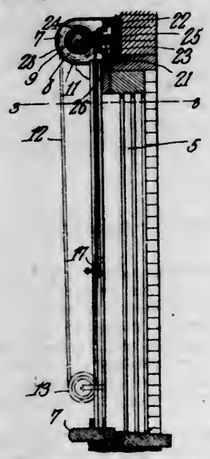
1. In a sight glass for pneumatic renovators, a transparent cylinder having closed ends, a tube extending centrally into one end of the cylinder, and forming an inlet for the cylinder, a tube extending from the same end of the cylinder, and forming an outlet for the cylinder, the outlet tube having its inner end portion concentric to the inner end portion of the inlet tube, the outer end portions of the inlet and outlet tubes being adapted to be connected into and as parts of the passage for the transmission of air currents induced by a vacuum.



2. In a sight glass and separator for pneumatic renovators, the combination of a glass cylinder, a support for the cylinder adapted to inclose the lower end of the cylinder, a closure for the top end of the cylinder, a tubular inlet for the cylinder extending upward through the support axially into the lower end of the cylinder, and a tubular outlet for the cylinder extending downward through the support from the lower end of the cylinder, and having an open inner end concentric to the open inner end of the tubular inlet, the outer end portions of the tubular inlet and outlet being adapted for the connection of the inlet and outlet into and as a part of a pipe line used for transmission of dust laden air currents induced by a vacuum, substantially as set forth.

3. In a sight glass for pneumatic renovators, the combination with a stand top, of a glass cylinder mounted endwise on the stand top, a closure for the top end of the cylinder, a tubular inlet to the cylinder extending through the stand top axial to the cylinder, and a tubular outlet from the cylinder having its inner end concentric to the open inner end of the tubular inlet, the outer ends of the tubular inlet and outlet being adapted for the connection of the inlet and outlet into and as a part of a pipe line used for the transmission of dust laden air currents induced by a vacuum.

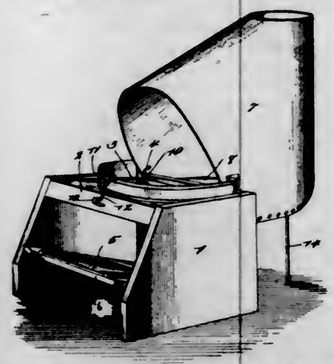
881,196. ROLLING SCREEN. JAMES L. MCCALL, Mobile, Ala. Filed Mar. 1, 1907. Serial No. 359,988.



The combination with a window frame, of a bar extending transversely across the top of said frame and

provided with a recess defining spaced longitudinal guide flanges, brackets secured to the window frame and forming closures for the opposite ends of the recess, a roller journaled in said brackets, a screen secured to the roller and forming a closure for the window, a longitudinal strip slidably mounted for horizontal movement between the flanges of the longitudinal bar and provided with an intermediate seating groove communicating with the recess in said bar, coiled springs seated in said groove and recess and bearing against the bar and strip, respectively, for yieldably supporting the latter in engagement with the screen at said roller, a casing secured to the brackets and top of the longitudinal bar, respectively, and forming a housing for the roller, and means for operating the roller thereby to move the same to operative and inoperative position.

881,197. EGG-TESTER. CHARLES F. O'DELL and KATHERINE HAYNES, Ceylon, Minn. Filed Sept. 25, 1907. Serial No. 394,475.



An egg tester, comprising a casing having an opening in its top-portion and an upwardly and an outwardly inclined support in its lower portion, a reflector arranged upon said support at an angle to said top-portion and its opening, and a light reflecting hood having its bottom member opposed to the rear wall of said casing and otherwise supported in position in connection with said casing, said light-reflecting hood having extending forwardly from its lower portion, a band-like member resting upon and secured to the top of said casing, and a pliable egg support secured to the upper surface of said casing top, over the opening therein, and itself provided with a plurality of egg-engaging openings to allow of the reflection of the contents of the eggs placed in said latter openings, in said mirror below.

881,198. RAIL-BRACE. JOHN OLDENDORF, Elizabeth, N. J. Filed May 10, 1907. Serial No. 372,949.

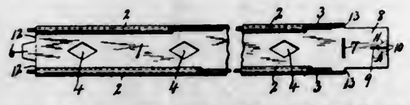


1. A rail brace composed of a continuous bar of metal, normally attached to the inside of one rail, near the top thereof, extending thence, at an acute angle with the vertical plane of the rail, downward to the sleeper and extending along a portion of the center thereof, and affixed thereto, and again ascending from said sleeper to and engaging the opposite rail at a point near its top, all substantially as set forth and for the purpose hereinbefore described.

2. A rail brace consisting of a continuous bar of metal bent in three planes, each at an obtuse angle with the other, its center reach engaging and fastened to the sleeper and its extremities fastened to the rails at or near the tops thereof, all substantially as set forth and for the purposes hereinbefore described.

3. In a rail brace, the combination with the rail and sleeper, of a bar of metal engaging and fastened to the surface of the sleeper between the rails and extending along the said sleeper to a point near the rail and being there bent in an obtuse angle upwardly, extending to or through the vertical wall of the rail at a point near its top and fastened thereto, all substantially as set forth and for the uses and purposes hereinbefore set forth.

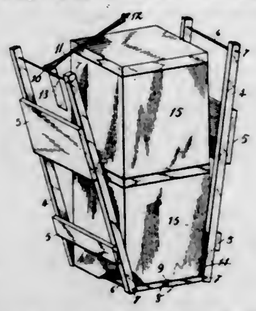
881,199. STOVE-RING. GEORGE E. PALMER, Elmira, N. Y. Filed July 18, 1907. Serial No. 384,312.



1. A stove ring comprising a sheet metal strip having its opposite longitudinal edges over turned toward each other and inclosing lengthwise reinforcing wires, the intermediate portion of the strip being formed with vent openings, one end of said strip being reduced in width and provided with a central lengthwise slit opening from its extremity and provided with opposed bendable locking members adapted to enter one of the vent openings in the opposite end of the strip and to be clenched upon the sides of said opening.

2. A stove ring comprising a sheet metal strip bent into circular form and having its opposite longitudinal edges over turned toward each other forming lengthwise reinforcing flanges, the main body being formed with vent openings, reinforcing rods embraced within said flanges, one end of the strip being provided with a tongue and the opposite end being formed with a groove, the tongue being inserted through the groove and clenched upon the adjacent portions of the strip, the end of the strip offset to that which is provided with a tongue having a reduced extension formed with a lengthwise slit opening from its extremity forming opposed bendable locking members adapted to be inserted through and clenched upon the sides of one of the vent openings.

881,200. SHIPPING-CRATE. EVAN L. REED, Oregon, Ill. Filed July 13, 1906. Serial No. 326,043.



1. A shipping crate consisting of a pair of frames each frame formed of two corner posts, slats secured to said posts, and cross wires connecting together the upper and lower ends of the posts of each pair, straps each consisting of two members hingedly connected together midway said posts and pivotally mounted on the lower cross-wires, and means for detachably connecting together the upper cross-wires, said means adapted to serve as a handle for the crate when in operative position, and to removably retain a shipping tag.

2. A shipping crate consisting of a pair of frames, each frame formed of two corner posts having longitudinal grooves formed therein, slats secured to said posts and cross-wires connecting together the ends of the posts of each pair, foldable straps mounted on the lower cross wires and adapted when unfolded to embrace the sides of the can, and to fit when folded in the said grooves in the posts, and means for detachably connecting together the upper cross-wires said means adapted to receive and hold against accidental displacement, a shipping tag.

3. In a shipping crate consisting of two frames hingedly and foldably connected together at their lower ends, each of said frames having a flexible cross-rod at its upper and lower ends, means for connecting together the upper cross-rods of the frames, said means consisting of a wire permanently connected with one of said rods midway its ends, and detachably connected with the other rod, said wire bent upon itself so that its two portions cross each other, and having its free ends adapted to be interlocked with the other rod.

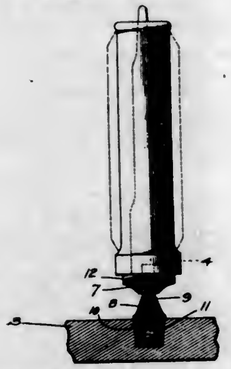
4. In a shipping crate consisting of two frames hingedly and foldably connected at their lower ends and having cross wires at their upper ends, the upper cross-wire of one frame being bent to form an eye, means for detachably connecting the upper ends of said frame, said means consisting of a wire, engaging said eye, bent upon itself and bent at one end to form a hook and having its other end straight and extending beyond said hook.

881,201. REIN-PROTECTOR. LEONARD G. SCHLENK, Rockford, Ill. Filed Sept. 9, 1907. Serial No. 392,025.



The combination of a rein protector, a spring connected to each of the four corners of the protector, a fastening device connected to the free end of each spring, and a fastening device connected to the protector between two of the springs.

881,202. SKEWER AND BEARING THEREFOR. ROBERT SCHOFIELD, New Bedford, Mass. Filed June 24, 1907. Serial No. 380,476.



1. The combination with a skewer having a recess in its lower end provided with a bearing surface, of a main bearing for engaging said bearing surface, and a yieldingly-mounted auxiliary bearing also adapted to engage said bearing surface.

2. The combination with a skewer having a bearing surface at one end, of a bearing separate from the skewer and on which it rests, said bearing having two separate bearing surfaces of different coefficients of friction, and means governed by the weight on the skewer to determine which bearing shall be operative.

3. The combination with a skewer formed at one end with a bearing surface, of a main and an auxiliary bearing for the skewer, and means to bring the auxiliary bearing into operative position for supporting the skewer as the load on the skewer decreases.

4. The combination with a skewer having a recess in one end provided with a bearing surface, of a main and an auxiliary bearing for the skewer, each adapted to engage the bearing surface thereof, and means to bring the auxiliary bearing into operative position as the load on the skewer decreases.

5. The combination with a skewer having a bearing surface at one end, of a main bearing for engaging said bearing surface, and a yieldingly-mounted auxiliary bearing also adapted to engage said bearing surface on the skewer.

[Claims 6 and 7 not printed in the Gazette.]

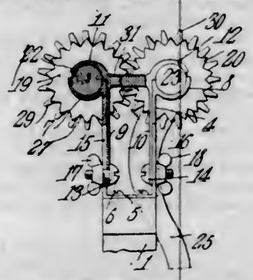
881,203. WHIP-SOCKET. LESLIE SETZER, Gentryville, Mo., assignor to Harrison W. Kerfoot, Gentryville, Mo. Filed June 12, 1906. Serial No. 321,363.



1. A whip socket having a reduced upper or neck portion, a catch pivotally pendent in the socket and provided with a substantially horizontal toe portion and a heel portion depending from the toe portion, a spring secured to the wall of the socket and pressing the catch toward the vertical plane of the reduced portion of the socket, a substantially horizontal lever catch pivoted to and externally of the bottom of the socket, and provided at one end with a beveled tooth 19, a spring engaging said lever catch and holding the same with its tooth yieldingly in the path of the heel portion of the depending catch so that said portion shall prevent accidental movement of the depending catch in one direction and yield to its movement in the opposite direction.

2. The combination with a whip socket provided with a reduced upper portion or neck, a catch 9 pivoted in the socket and provided at its lower end with a toe portion 10 and a depending heel portion 11, a spring pressing the lower end of said catch toward the vertical plane of the reduced upper portion of the socket, a whip extending through the neck portion and into the lower portion of the socket and provided with a reduced neck portion adapted to be engaged by the toe portion of the catch, a key to be fitted in the socket and turned to engage and force the catch from engagement with the whip, and a spring actuated catch lever to yield to said key-actuated movement of the first-named catch and then engage the heel portion of the latter and lock it in its reversed position.

881,204. MEAT-TENDERER. GEORGE E. SMITH, Winnfield, La. Filed May 24, 1907. Serial No. 375,514.



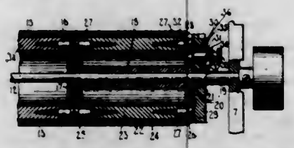
1. In a device of the character described, the combination with a frame, and bearing standards mounted thereon and provided with pairs of bearing sections, of a pair of coöperatively arranged rolls journaled in the bearing sections of the said standards, slides adjustable relatively to the standards and provided with bearing sections arranged to coöperate with those on the respective standards, and devices for retaining the slides in fixed relation to the standards.

2. In a device of the character described, the combination with a frame, and a pair of standards mounted thereon each standard embodying a pair of relatively adjustable arms and each arm having a bearing section thereon, of a pair of coöperatively arranged rolls having their ends journaled in the bearing sections on the arms of the standards, and coiled springs connecting the arms of the standards for yieldingly proximating the rolls.

3. In a device of the character described, the combination with a frame, and a pair of bearing standards mounted thereon each composed of a strip of resilient material having its intermediate portion fixed to the frame and having its ends extending upwardly therefrom in parallelism to form a pair of relatively movable bearing arms, and bearings mounted upon the free ends of the said arms, of a pair of coöperatively arranged rollers journaled in the said bearings, and springs interposed between the arms of each standard and normally acting to proximate the rolls.

4. In a device of the character described, the combination with a frame, and a pair of bearing standards mounted thereon each embodying a pair of substantially parallel bearing arms provided with bearing sections on their free ends, of a pair of coöperatively arranged rolls having their ends journaled in the bearing sections on the said arms, a pair of slides arranged to coöperate with the inner sides of the arm of each standard and having bearing sections arranged to coöperate with those on the standards, and devices coöperating with the said slides and the respective arms of the standard for retaining them in fixed relation.

881,205. TYPE-WRITING MACHINE. ALFRED F. SMITH, Pittsburg, Pa., assignor to Wyckoff, Seamans & Benedict, Ilion, N. Y., a Corporation of New York. Filed Dec. 24, 1904. Serial No. 238,212.



1. In a typewriter machine, the combination of a platen carrier; a platen axle having bearings in said platen carrier; a platen fixedly connected with said platen axle and carrying a ratchet wheel; a second platen rotatably mounted on said platen axle; and also carrying a ratchet wheel, said two ratchet wheels always being maintained at a fixed distance from each other; line-spacing devices coöperating with the first named platen; separate line spacing devices coöperating with the second named platen; and a spring lock for connecting the two platens so that both may be simultaneously actuated by either of said line-spacing devices.

2. In a typewriting machine, the combination of a platen carrier; a platen axle having bearings in said platen carrier; a platen having a fixed relation with said platen axle; a ratchet wheel having a fixed relation with said platen axle; a second platen loosely mounted on said platen axle between said platen and said ratchet wheel; a second-ratchet wheel having a fixed relation with said second platen; line-spacing devices coöperating with the first named ratchet wheel; line-spacing devices independently coöperating with said second ratchet wheel; a rotatable locking pin mounted on the first named ratchet wheel; and means whereby when said locking pin is suitably rotated in its bearing on said first named ratchet wheel it is caused to enter a hole in said second ratchet wheel, thereby connecting the two ratchet wheels so that their respective platens are caused to rotate simultaneously under the actuation of either of said line-spacing devices.

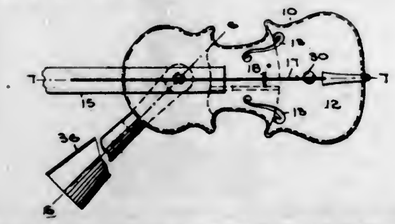
3. In a typewriting machine, the combination of a platen carrier; a platen axle having bearings in said platen carrier; a platen having a fixed relation with said platen axle; a ratchet wheel having a fixed relation with said platen axle; a second platen loosely mounted on said platen axle between said platen and said ratchet wheel; a second ratchet wheel having a fixed relation with said second platen; line-spacing devices coöperating with the first named ratchet wheel; line-spacing devices independently coöperating with said second ratchet wheel; a rotatable locking pin carried in a perforation in the first named ratchet wheel; a spring constantly pressing said locking pin towards said second named ratchet wheel; and means for controlling the longitudinal movement of said locking pin so as to cause it either to be held disengaged from said second ratchet wheel or to cause it to engage with said ratchet wheel under the impulse of said spring.

4. In a typewriting machine, the combination of a platen frame, and a divided or sectional platen mounted thereon, said platen comprising a plurality of sections, each section comprising an interior core, a head and an exterior covering or sheath, the sheath of one platen section overlapping the head of an adjacent platen section.

5. In a typewriting machine, the combination of a platen frame, a pair of platen sections mounted end to end and having the same axis of rotation, ratchet wheels, one operatively connected with each of said platen sections, and line spacing devices coöperative with said ratchet wheels, each of said line spacing devices comprising a hand operated lever, said levers being operative in opposite directions.

[Claim 6 not printed in the Gazette.]

881,206. RESONANT BOX OF STRING INSTRUMENTS. GEORGE SOMERVILLE, Denver, Colo. Filed June 29, 1907. Serial No. 381,466.



1. In an instrument of the class named the combination with its resonant box, of a partition arranged therein, unconnected with its back, coöperatively connected with its belly at a point remote from its edges and in substantially parallel relation thereto.

2. In an instrument of the class named, the combination with its resonant box, of a partition arranged therein, unconnected with its back, and a slender member connecting the said partition with the belly of the said box.

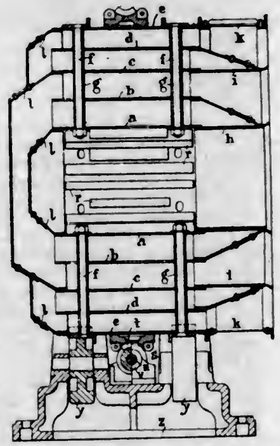
3. In an instrument of the class named, the combination with the resonant box of two partitions extending oppositely from its ends in spaced relation to each other, the said partitions being unconnected with the back of the said box and coöperatively and independently connected with its belly.

4. In an instrument of the class named, the combination with the resonant box, of two partitions extending oppositely from its ends in spaced relation to each other and unconnected with its back and a slender connection between each of the said partitions and the belly of the said box.

5. In a musical instrument of the class named, the combination with the resonant box, of a partition arranged therein, a bass bar having separated points of contact with the under surface of the belly of the box, and means to coöperatively connect the said partition, bar and belly.

[Claims 6 to 8 not printed in the Gazette.]

881,207. DISINTEGRATING, WASHING, AND SCREENING MACHINE. CHARLES B. C. STOREY, Lancaster, England. Filed July 2, 1906. Serial No. 324,464.

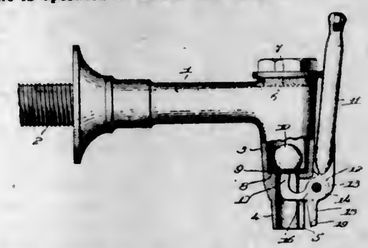


Apparatus for treating ores or the like comprising a series of nested cylinders, conical ends on the alternate cylinders, screens at the opposite ends of said cylinders, conical ends on the other cylinders immediately below said screens, baffles in all the cylinders, radial bolts and distance sleeves for rigidly connecting all the cylinders, means for supporting the outermost cylinder and means for rotating the same.

881,208. FLUID-DRAWER. THEODORE G. STRATER, Boston, Mass. Filed May 2, 1907. Serial No. 371,376.

1. The combination, in a fluid-drawer, of a slotted discharge nozzle having an annular valve-seat therein, a spherical valve to seat thereupon, an operating handle fulcrumed on the nozzle, an upturned finger rigidly connected with the handle and extended through the slot into the nozzle below the valve, to lift the latter from its seat by movement of the handle, and a combined stop and slot-closer on the handle, to limit opening movement thereof and simultaneously close the slot in the nozzle.

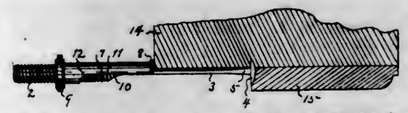
2. The combination, in a fluid-drawer, of a downturned discharge nozzle having an annular valve-seat therein, and slotted below the valve-seat, a gravity valve to coöperate with the latter, ears on the exterior of the nozzle at opposite sides of the slot, a fulcrum-pin mounted in the ears, an operating handle flattened to pass between the ears and fulcrumed on the pin, an upturned finger extended through the slot in the nozzle from the base of the handle, the tip of the finger being adapted to engage and unseat the valve when the handle is swung outward, and a depending extension on the handle below the fulcrum, to abut against the nozzle and close the slot when the handle is operated to unseat the valve.



3. The combination, in a fluid drawer, of a downturned discharge nozzle having an annular valve-seat therein, and slotted longitudinally below the valve seat, a gravity valve to coöperate with the latter, a handle fulcrumed externally on the nozzle, an upturned finger integral with the handle and extended through the slot in the nozzle, the tip of the finger engaging the valve, to lift the same from its seat when the handle is swung outward, the valve being of sufficient weight to act upon the finger and swing the handle upward automatically to normal or inoperative position when released, the valve at such time seating upon the valve-seat, and a device on the handle to close the slot when the handle is operated to unseat the valve.

4. The combination, in a fluid-drawer, of a downturned discharge nozzle having an annular valve-seat therein and longitudinally slotted below the seat, a gravity valve to coöperate with the latter, an operating handle externally fulcrumed on the nozzle, adjacent the slot, a valve-operating finger fixedly connected with the handle and extending through the slot into the nozzle, and a device on the handle to close the slot and limit operative movement of the handle when the latter is moved to unseat the valve.

881,209. DOOR-LOCKING DEVICE. GEORGE B. TAYLER, Germantown, Nebr. Filed Apr. 9, 1906. Serial No. 310,590.

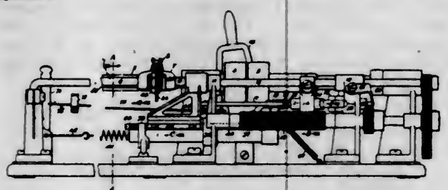


A door-locking device, comprising a shaft having a threaded end portion with oppositely-disposed concaved surfaces thereon, the opposite end of said shaft being contracted to form a lengthwise-extending blade with a terminal formed outwardly-flaring to form a supporting-base with a disk secured transversely thereon; a curved hood having one of its ends upset to form engaging-arms, its opposite end being formed as a sleeve, said curved hood seated longitudinally upon and adapted to overhang said oppositely-disposed concaved surfaces of said shaft, said sleeve inclosing a part of the threaded end-portion thereof; and a follower disposed outwardly of the sleeve upon the threaded end-portion of said shaft.

881,210. WINDING-MACHINE. SIMON W. WARDWELL, Providence, R. I. Filed July 11, 1906. Serial No. 325,676.

1. The combination in a winding machine, with a rotating spindle, a reciprocating guide adapted to lay the yarn in openly coiled helices, and means to adjust the number of spindle rotations per reciprocation of the guide to control the lay of the yarn, of means to continuously

change the position relation of spindle and guide so that the guide winds in a constantly new position on the spindle.



2. The combination in a winding machine, with a rotating spindle, a reciprocating guide adapted to lay the yarn in openly coiled helices, and means to adjust the number of spindle rotations per reciprocation of the guide to control the lay of the yarn, of means to increase the extent of traverse of the guide in one direction.

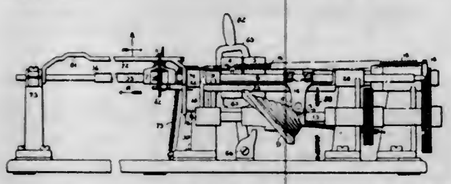
3. The combination in a winding machine, with a rotating spindle, a reciprocating guide and means to adjust the number of spindle rotations per reciprocation of the guide to control the lay of the yarn, of means to reciprocate the guide with increasing length of traverse until the full traverse is attained and then continue the traverse of uniform extent and means to advance the traverse after it has attained the full extent, to constantly new positions on the spindle.

4. The combination in a winding machine, with a winding spindle, a reciprocating guide and means to adjust the number of spindle rotations per reciprocation of the guide to control the lay of the yarn, of means to change the extent of traverse of the guide in one direction until the full extent of traverse is attained and then continue that attained extent of traverse until the completion of the winding.

5. The combination in a winding machine, with a winding spindle and a reciprocating guide, of means to adjust the number of spindle rotations per reciprocation of the guide, means to change the extent of traverse of the guide until an ultimate extent is attained, and then continue that extent to the completion of the winding, and means engaged intermittently by the cop to shift the reciprocating guide along the spindle to wind in a constantly new position.

[Claims 6 to 25 not printed in the Gazette.]

881,211. WINDING-MACHINE. SIMON W. WARDWELL, Providence, R. I. Filed July 19, 1906. Serial No. 326,889.



1. The combination in a winding machine with a winding spindle and a reciprocating guide, of a cam to reciprocate the guide, said cam having a plurality of helical cam faces of different lengths of throw.

2. The combination in a winding machine with a winding spindle and a reciprocating thread guide, of means to reciprocate the thread guide, including a cam having a plurality of helical cam faces of different lengths of throw arranged concentric with the axis of the cam.

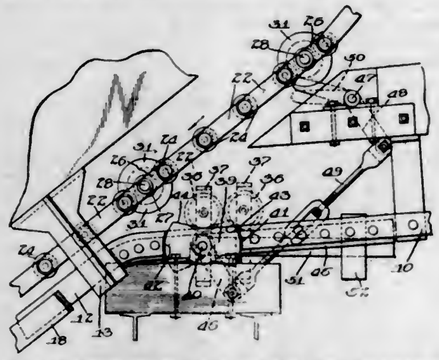
3. The combination in a winding machine with a winding spindle, thread guide and reciprocating rod to traverse the guide, of a cam formed with a plurality of concentric cam faces of different diameters and different lengths of throw, and a member connected to the rod and adapted to engage the cam faces.

4. The combination in a winding machine with a winding spindle and thread guide, of a cam having helical cam faces with varying extents of throw and means to reciprocate the guide successively from the different cam faces.

5. The combination in winding machine with a winding spindle and thread guide, of a stepped cam formed with a plurality of helical cam faces, means connecting the guide with the cam, and devices for automatically shifting said means successively from one cam face to another.

[Claims 6 to 29 not printed in the Gazette.]

881,212. CONVEYER. DIXON E. WASHINGTON, Chicago, Ill., assignor of one-half to Charles W. Patton, Chicago, Ill. Filed July 17, 1907. Serial No. 384,155.



1. In a device of the class described, the combination of a track, a hanger supported by the track, means for preventing axial movement of the hanger upon the track, and means adjacent the track adapted to be engaged by the hanger for controlling the movement of the hanger.

2. In a device of the class described, the combination of a track, a guide adjacent to and parallel with the track, a hanger supported by the track, a portion of the hanger extending between the track and guide, the guide being located in close proximity to the track to prevent axial movement of the hanger, and means adjacent the track adapted to be engaged by the hanger for controlling the movement of the hanger upon the track.

3. In a device of the class described, the combination of an inclined track, a hanger supported by and movable on the track, means for preventing displacement of the hanger, an endless conveyer supported adjacent the track, means for operating the conveyer, and means operatively related to the conveyer and coöperating with the hanger for controlling the movement of the hanger upon the track.

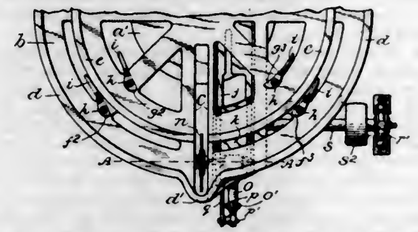
4. In a device of the class described, the combination of a track, a hanger supported by and movable on the track an endless conveyer adjacent the track, means for operating the conveyer, and means projecting from the conveyer and arranged within the path of movement of the hanger for retarding the movement of the hanger.

5. In a device of the class described, the combination of an inclined track, an endless conveyer supported adjacent the track, a hanger supported by and movable on the track, and means projecting from the conveyer, extending across and out of engagement with the track and adapted to be engaged by the hanger whereby the movement of the hanger upon the track will be retarded.

[Claims 6 to 20 not printed in the Gazette.]

881,213. TRIMMING-MACHINE. JOHN R. WELCH, Alexandria, Ind., assignor to Keefer-Heart Iron and Steel Company, Alexandria, Ind., a Corporation of Indiana. Filed Mar. 27, 1907. Serial No. 364,904.

1. A trimming machine including a table having a slot therein extending radially with respect to the middle portion of the table, an upright non-continuous gage mounted on the table and curved concentrically to the middle portion of the table, clamps mounted on the table to coöperate with the gage, a guide supported by the table, a carriage mounted on the guide, and a saw mounted on the carriage and extending through the slot of the table.



2. A trimming machine including a table having a slot therein and provided on the top thereof with a circular gage having a gap therein at the slot, clamps mounted on the table to coöperate with the gage, a guide bar supported by the table, a saw carriage movably supported by the guide bar, a rotative saw spindle mounted in the carriage and having a saw secured thereto that extends into the slot to be moved therein through the gap in the gage, and means for moving the carriage.

3. A trimming machine including a stand having an arm mounted thereon, a table secured on the stand and having a slot therein, a circular gage mounted on the table and having a gap therein at the slot, clamps mounted on the table opposite to the gage, a guide bar supported by the table at the under side thereof, a saw carriage movably supported by the guide-bar and having a saw spindle mounted rotatively therein, a saw secured to the spindle to be carried thereby in the slot of the table through the gap in the gage, a pulley secured to the spindle, a drive belt connected with the pulley, an idler pulley mounted adjustably on the arm opposite to the belt, and means for moving the saw carriage.

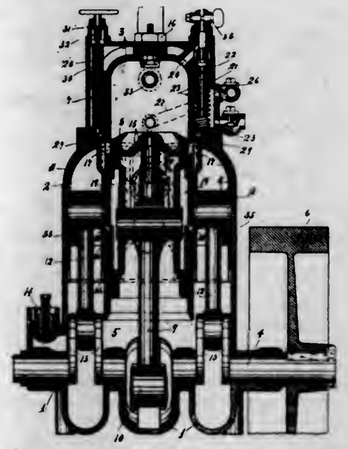
4. A trimming machine including a table having a slot therein and provided on the top thereof with a plurality of circular gages arranged concentrically and having each a gap therein at the slot on the table, clamps mounted on the table opposite to the gages to coöperate therewith, a guide bar supported by the table, a saw carriage movably supported by the guide bar, a rotative saw spindle mounted on the carriage, a saw secured to the spindle to be carried thereby in the slot and through the gaps in the gages, a drive pulley secured to the spindle, a lever pivoted to the table, and a reach rod pivoted to the lever and also to the carriage.

881,214. EXPLOSIVE COMPOUND ENGINE. ELLIS J. WOOLF, Minneapolis, Minn., assignor to The Woolf Valve Gear Company, Minneapolis, Minn., a Corporation of Minnesota. Filed Mar. 2, 1907. Serial No. 360,148.

1. A compound explosive engine having its high pressure piston connected to travel in advance of the coöperating low pressure piston, and a charging chamber subject to compressing action of both of said pistons for forcing a charge into the explosion cylinder, substantially as described.

2. A compound explosive engine having its high pressure piston connected to travel in advance of the coöperating low pressure piston, a connecting port controlled by the high pressure piston to admit the gas from the high to the low pressure cylinder and to effect the final exhaust from the latter, a port controlled by the low pressure piston to effect a preliminary exhaust from the high pressure cylinder, and a charging chamber subject to the direct action of said low pressure piston for forcing a charge into said high pressure cylinder coincident with the preliminary exhaust therefrom.

3. A compound explosive engine having its pistons connected to a common crank shaft in a common charging chamber, with its high pressure piston connected to travel in advance of the coöperating low pressure piston, and means for admitting the charge from said charging chamber to the high pressure or explosion cylinder under the compressing action thereon of both of said pistons, substantially as described.

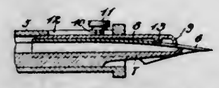


4. A compound explosive engine having its pistons connected to a common crank shaft in a common charging chamber, with its high pressure piston connected to travel in advance of the coöperating low pressure piston, means affording a preliminary exhaust from the high pressure explosion cylinder, and means for admitting the charge from the charging chamber to the explosion cylinder under the compressing action thereon of the low pressure piston coincident with said preliminary exhaust, substantially as described.

5. A compound explosive engine having its high pressure piston connected to travel in advance of the coöperating low pressure piston, a low pressure admission port controlled by the high pressure piston, a preliminary exhaust port controlled by the low pressure piston, and an exhaust port in the high pressure piston, which, under the movement of said piston, coöperates alternately with said preliminary exhaust port and with said low pressure admission port to effect a preliminary and a final exhaust, substantially as described.

[Claim 6 not printed in the Gazette.]

881,215. FOUNTAIN-PEN. FERDINAND H. WURDEMANN, National Military Home, Tenn. Filed Nov. 19, 1907. Serial No. 402,857.



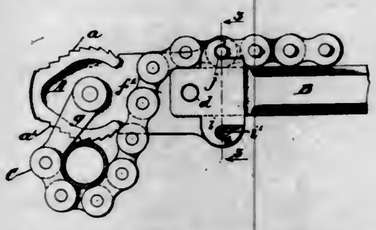
1. In a fountain pen having a feed device on one side of the pen-nib, a stop to limit the movement of the nib away from the feed device, and a protuberance on the stop engageable with the back of the nib.

2. In a fountain pen having a slotted barrel and a feed device on one side of the pen-nib, a tongue slidably mounted in the barrel and having a projecting pin working in the slot of the barrel, said strip projecting from the barrel and engaging the other side of the nib.

881,216. CHAIN PIPE-WRENCH. GEORGE AMBORN, New York, N. Y., assignor to J. H. Williams & Co., Brooklyn, N. Y., a Corporation of New York. Filed May 6, 1907. Serial No. 372,039.

1. A chain pipe wrench having a handle, a head, a connecting portion between such parts, said parts being

constructed to form a chain-receiving recess on each side of such portion, said recesses opening toward the sides of the wrench, a chain adapted to be passed laterally into either of such recesses, and means for locking such chain.



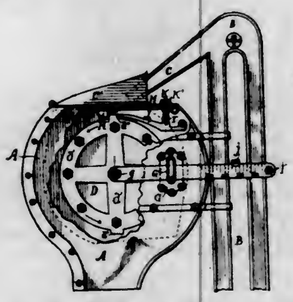
2. A chain pipe wrench having a handle, a head, a connecting portion between such parts, said parts being constructed to form a chain-receiving recess on each side of such portion, said recesses opening toward the sides of the wrench, a chain adapted to be passed laterally into either of such recesses, and locking means at the rear of said recesses adapted to lock the chain in either of its positions.

3. A chain pipe wrench having a handle, a head, a connecting portion between such parts, said parts being constructed to form a chain-receiving recess on each side of such portion, said recesses opening toward the sides of the wrench, a chain adapted to be passed laterally into either of such recesses, and two locks, each of which is adapted to lock said chain in one of its positions.

4. A chain pipe wrench having a handle, a head, a connecting portion between such parts, said portion being of reduced thickness so as to leave a chain-receiving recess between such handle and head on each side of such portion, said recesses opening toward the sides of the wrench, a chain pivoted to said head and adapted to be passed laterally into either of said recesses, and means for locking such chain at the rear of said recesses.

5. A chain pipe wrench having a handle, a head having working faces on opposite sides, a connecting portion between such parts, said portion being of reduced thickness so as to leave an open-sided chain-receiving recess on each side thereof, a chain pivoted to said head and adapted to be used in connection with either of said working faces, and being adapted in each such use to be passed into either of said recesses, and locking means on the upper and lower sides of the wrench for engaging said chain.

881,217. AUTOMATIC GRAIN-WEIGHER. GEORGE M. BAIRD, Oklahoma, Okla. Filed Feb. 28, 1907. Serial No. 359,896.



1. In an automatic grain weigher having a housing-casement attached to an elevator or a grain discharge; a momentum and gravity actuated rotatable grain receptacle mounted within said casement and having circular-like ends and two like and oppositely located peripheral casing sections secured thereto and having two like sections of partition having their external edges secured to the advance edges of said casing sections and their interior portions overlapping and having semi-circular offsets to form an axle-tube when the said sections of partition are secured together to form two like oppositely located and approximately V-shaped compartments void of projections for the lodgment of discharging grain, as described.

2. In an automatic grain weigher having a housing-casement attached to a grain elevator or discharge; a double compartment gravity and momentum actuated grain receptacle; reinforcing plates secured to the outer surface of the ends of said receptacle and having upon their peripheries oppositely located stop-lugs to check and stop the rotation of said receptacle, said reinforcing plates having hubs extending in one direction and forming hollow axles; a non-rotatable shaft supporting said receptacle and having each of its ends extending outwardly beyond the sides of said housing-casement and having fitted thereon jam-nuts and tightening nuts to secure said shaft in position and prevent it from rotating, as set forth.

3. In an automatic grain weigher having a housing-casement attached to a grain elevator or discharge; a double compartment, gravity and momentum actuated grain receptacle mounted within said housing-casement; reinforcing plates secured to the outer surface of each end of said grain receptacle and having two oppositely located peripheral stop-lugs and converging hollow-shaft axles; a non-rotating shaft extending through said housing-casement with said grain receptacle mounted thereon and having its projecting ends provided with threaded nuts and jam-nuts to secure said shaft in position; non-rotating bearing collars secured upon said shaft by said jam-nuts to receive the turning friction of the said receptacle; a pair of duplicate, scaled lever-bars with their sides vertical and edges normally horizontal, by means of stay-rods secured in a parallel position adapted to maintain unity of action of said lever-bars positioned on each side of the housing-casement and having firmly secured in their front ends the non-rotating receptacle supporting shaft, and having in the lower edge of each a fulcrum kerf to prevent longitudinal movement of said lever-bars; weighing weights adjustably secured to the scaled portion of the said lever-bars to balance the weight of the said receptacle and grain therein; the duplicate pivot-plates G being firmly secured to the said housing-casement and having inverted V-shaped fulcrum pivots adapted to said kerfs in said lever-bars, and having vertical guards G' to prevent lateral movement of the said lever-bars adapted to vibrate upon said pivots, substantially as described.

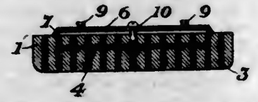
4. In an automatic grain weigher having a housing-casement consisting of a cylindrical body and vertical end walls and being attached to a grain elevator or grain discharge; a double compartment rotatable grain receptacle mounted therein; reinforcing plates a' secured to the ends of said receptacle and each having a hollow axle and two oppositely located peripheral stop-lugs a'' to prevent said receptacle from continuous rotation; the right and left casement stops or bumpers H each having a longitudinal body horizontally secured to the inner surface of the end walls of said casement, and having a flange portion extending away from said wall and having an enlargement to receive the concussion of the said peripheral stop-lugs, the rearward portion of said flanges having vertical perforations therein; the right and left receptacle-locking latches J the rear end of their body portions being pivotally secured to the inner surface of the end walls of the said housing-casement in position for the end of the forwardly projecting neck portion of the said latches to be contacted and lifted by the said peripheral stop-lugs at each semi-revolution of the said grain receptacle, each of said latches being provided with a tension spring, a tension bolt with a thumb-nut to regulate the pressure upon the said stop-lugs to check the rotation of the said receptacle and prevent its back-action, its release being gravity actuated, substantially as described and for the purposes set forth.

881,218. TRUSS-PAD. ELLSWORTH R. BATHRICK, Akron, Ohio. Filed Feb. 5, 1907. Serial No. 355,930.



A truss pad comprising a body portion formed of an integral body of cellular sponge rubber and having embedded therein at a point between its center and its inner face a longitudinally disposed stiffening plate provided with an enlarged central portion and a series of openings, one of which has its wall threaded and arranged in the enlarged central portion of the plate, said stiffening plate having an inclined marginal portion, the inclination of said marginal portion being towards the front face of said body portion, a back plate mounted directly against the inner face of the body portion and provided with a centrally disposed opening and further having a pair of studs projecting rearwardly whereby said pad can be connected to a suspension element, said studs being arranged in longitudinal alinement with respect to the opening in the back plate, and a screw-threaded headed pin extending through the central opening in the back plate and engaging in the central opening of the stiffening plate for adjustably connecting the stiffening plate to the back plate, that portion of the rear face of the stiffening plate other than the bent marginal portion extending in the same plane throughout.

881,219. TRUSS-PAD. ELLSWORTH R. BATHRICK, Akron, Ohio. Filed Apr. 9, 1907. Serial No. 367,264.



1. A truss pad comprising a resilient body portion provided with an interiorly-arranged pocket and further provided with a slit communicating with said pocket and a plurality of transversely-extending openings, a skeleton frame positioned in said pocket and provided with a centrally-disposed screw-threaded opening, a backing provided with an inclined marginal portion engaging the rear face of the body portion, said backing having a centrally-disposed opening, and a headed screw-threaded element extending through said backing and engaging said frame for adjustably connecting the latter to the former.

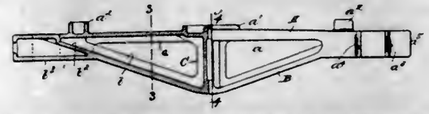
2. A truss pad comprising a resilient body portion provided with an interiorly-arranged pocket and further provided with a slit communicating with said pocket and a plurality of transversely-extending openings, a skeleton frame positioned in said pocket provided with a centrally-disposed screw-threaded opening, a backing provided with an inclined marginal portion engaging the rear face of the body portion, said backing having a centrally-disposed opening, a headed screw-threaded element extending through said backing and engaging said frame for adjustably connecting the latter to the former, and a plurality of studs secured to the backing and constituting means for connecting the pad to a sustaining element.

3. A truss pad comprising a resilient body portion provided with a plurality of transversely-extending openings, a frame enveloped by said body portion, a backing having an inclined marginal portion engaging the rear face of said body portion, means extending through the backing and engaging the frame for adjustably connecting the latter to the former, and means carried by the backing for connecting the pad to a sustaining element.

4. A truss pad comprising a resilient body portion provided with a plurality of ventilating openings, a skeleton plate having an inclined marginal portion adapted to engage the rear face of the body portion, a frame enveloped in said body portion and having a centrally-arranged screw-threaded opening, a screw-threaded element extending through the plate and engaging in the screw-threaded opening of the frame for adjustably connecting the frame to the plate, and means carried by the plate for connecting the pad to the sustaining element.

5. A truss pad comprising a resilient body portion provided with a plurality of ventilating openings, a skeleton plate having an inclined marginal portion adapted to engage the rear face of the body portion, a frame enveloped in said body portion and provided with ventilating openings.

881,220. TRUCK-BOLSTER. ARTHUR S. BLANCHARD and HARRY M. FOOTE, Cleveland, Ohio. Filed Nov. 28, 1906. Serial No. 345,434.



1. A cast metallic bolster comprising a top member and a bottom member separated at their middle points and prolonged so as to unite directly at their ends, and a post interposed between said members at such middle points, whereby a truss structure is formed.

2. A cast metallic bolster comprising a top plate and a bottom plate separated at their middle points and prolonged so as to unite directly near the ends of the bolster, and a hollow post interposed between said plates at such middle points and serving as a strut, whereby a truss structure is formed.

3. A cast metallic bolster comprising a top plate and a bottom plate separated at their middle points and prolonged so as to unite directly near the ends of the bolster and substantially at the points of support of the latter, and a hollow post interposed between said plates at such middle points and serving as a strut, whereby a truss structure is formed.

4. A cast metallic bolster comprising a top member of substantially channel cross-section throughout its length and a bottom member of substantially inverted T cross-section throughout its length, said members being separated at their middle points and prolonged so as to unite directly at their ends, and a post interposed between said members at such middle points and serving as a strut, whereby a truss structure is formed.

5. A cast metallic bolster comprising a top plate of substantially channel cross-section throughout its length, and a bottom plate of substantially inverted T cross-section throughout its length, said plates being separated at their middle points and prolonged so as to unite directly near the ends of the bolster, and a hollow post interposed between said plates at such middle points and serving as a strut, whereby a truss structure is formed.

[Claims 6 to 18 not printed in the Gazette.]

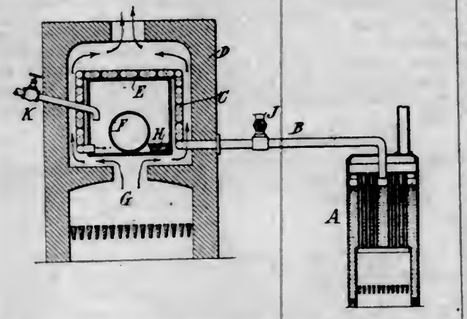
881,221. RUST-PROOFING IRON, STEEL, &c. AUGUSTO BONTEMPI, New York, N. Y. Filed Jan. 29, 1907, Serial No. 354,672. Renewed Jan. 28, 1908. Serial No. 412,991.

1. The method of protecting iron or steel which consists in subjecting it to the Bower-Barff treatment and subsequently subjecting it to the vapor or gas of a non-corrodible metal substance while heating it to a high temperature in a closed chamber.

2. The method of protecting iron or steel which consists in subjecting it to the Bower-Barff treatment, and then subjecting it to the vapor or gas of a non-corrodible metal substance while heated in a closed chamber, and finally subjecting it to the vapor or gas of a hydrocarbon while heated in a closed chamber, the temperatures in such closed chambers being in each case sufficiently high to form the vapor or gas referred to.

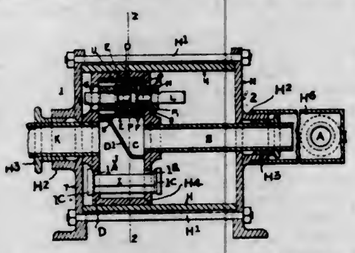
3. The method of protecting iron or steel which consists in subjecting it in a closed chamber at a temperature sufficient to form such a vapor or gas, to the vapor or gas

of a composition including tannic acid, an oleaginous material, and an oxid of a non-corrodible metal.



4. The method of protecting iron or steel which consists in subjecting it in a closed chamber at a temperature sufficient to form such a vapor or gas, to the vapor or gas of a composition including tannic acid, an oleaginous material, and an oxid of a non-corrodible metal, and following this by similar treatment with a solid hydrocarbon.

881,222. WATER-MOTOR. FRANK BREITENSTEIN, Denver, Colo. Filed June 7, 1907. Serial No. 377,777.



1. In a water motor, the combination with the cylinder and the piston provided with independent fluid inlets and exhaust chambers and oppositely extending piston rods, of the fluid outlet ports in the opposite sides of said piston's fluid chamber, the fixed bushing in alinement with said ports and provided with inlet ports, and the differential movement valve arranged in said bushing and ports and comprising the main and auxiliary valves, said auxiliary valve being arranged to contact with the opposite ends of said cylinder at the opposite strokes of said piston.

2. In a water motor, the combination with the cylinder and the hollow piston provided with oppositely extending hollow fluid inlet and exhaust piston rods, and containing independent fluid inlet and exhaust chambers of the outlet ports in the sides of said fluid inlet chamber, the fixed bushing valve seat in said chamber, the main valve in said bushing, the auxiliary valve in said main valve, and cooperatively arranged with said main valve to admit motive fluid to the opposite sides of said piston, and the exhaust valve and its ports in said piston's exhaust chamber.

3. In a water motor, the combination with the cylinder, of a hollow piston provided with a fluid inlet chamber and an independent fluid exhaust chamber, and provided with a hollow fluid inlet piston rod at one end, connected to said piston's fluid inlet chamber, and a hollow fluid exhaust piston rod at the opposite end of said piston connected to said piston's fluid exhaust chamber, ports through the opposite sides of the exhaust chamber of said piston, a valve stem extending through said piston and beyond it at each end far enough to engage the opposite ends of said cylinder, and provided with a valve at its opposite ends adapted to control the oppositely arranged ports of said piston's fluid exhaust chamber, of ports through the opposite sides of the said piston's fluid inlet chamber, a fixed bushing valve seat in said chamber registering with said ports, a main valve seated in said bushing valve seat and said inlet chamber ports, an axial port in said main valve, an auxiliary valve in said axial port of said main valve adapted to engage the opposite ends of said cylinder at the opposite strokes of said piston, and a series of ports in said bushing valve seat and said main and auxiliary valves coöperatively arranged to admit a suitable motive fluid to the opposite ends of said cylinder in alternate order.

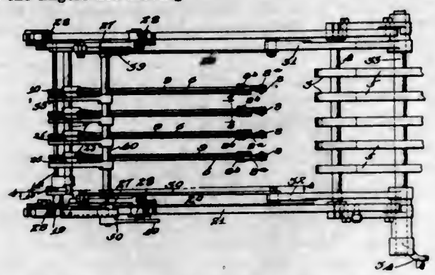
4. In a water motor, the combination of the cylinder, the hollow piston reciprocally mounted on said cylinder and provided with an independent fluid inlet and an exhaust chamber, a fluid inlet piston-rod connected to said piston's fluid inlet chamber and extending through said cylinder from one side of said piston, and a hollow piston rod connected to said exhaust chamber and extending through said cylinder from the opposite side of said piston, a port through the opposite sides of said piston in said exhaust chamber, and a slide valve arranged to control said ports, and to admit the exhaust fluid from opposite sides of said piston in alternate order to said exhaust chamber, with a pair of ports positioned in the opposite sides of said piston in its fluid inlet chamber, a fixed bushing valve seat positioned in said chamber in alinement with said ports and of larger diameter than said ports, a main valve comprising a central body portion fitting slidably said bushing valve seat, and having opposite end portions fitting slidably in said ports, an axial port through said main valve, an auxiliary valve slidably mounted in said port and extending beyond said valve and said piston on opposite sides of it far enough to engage the opposite ends of said cylinder on the alternate strokes of said piston, and adapted to be moved by said engagement with said cylinder a predetermined distance, fluid inlet ports through the central portion of said bushing valve seat to said main valve and to said fluid inlet chamber, inlet ports in the opposite sides of said piston, circumferential ports in said auxiliary valve at each side of its central portion, and extension ports extending from said circumferential ports along the length of the opposite end portions of said valve, a predetermined distance, sufficient to register beyond the sides of said piston in the opposite end strokes of said auxiliary valve, a plurality of radial ports in the center of the body portion of said main valve arranged to register with the circumferential ports of said auxiliary valve, and two groups of radial ports through the end portions of said main valve on opposite sides of said main valve's central radial ports, arranged to register in alternate order with said auxiliary valve's ports and opening into said bushing valve seat and a stop pin in said main valve extending into one of said auxiliary valve's ports and adapted to permit the reciprocal movements of said auxiliary valve to coöperatively operate and move said main valve to alternately admit fluid pressure to opposite ends of said piston and cylinder in alternate order.

5. In a water motor, the combination with the cylinder and the piston provided with a water inlet piston rod and chamber and an independent water exhaust chamber and piston rod, with the fixed sleeve in said inlet chamber, provided with inlet ports, the ports in the opposite sides of said chamber in alinement with said sleeve, the main valve slidably mounted in said sleeve, the auxiliary valve reciprocally mounted in said main valve and arranged to strike the ends of said cylinder at the opposite ends of said piston's reciprocal strokes, and the operative ports in said main and auxiliary valves.

[Claims 6 to 10 not printed in the Gazette.]

881,223. SHEET-DELIVERY MECHANISM FOR PRINTING-PRESSES. HORACE P. BROWN and CLARENCE L. JOHNSTON, San Francisco, Cal., assignors to Frank Brown Redington, Chicago, Ill. Filed Dec. 9, 1905. Serial No. 291,165.

1. In a sheet delivery mechanism, a plurality of sheet supporting fingers independent of each other at their ends, and each comprising means for propelling the sheet relatively to itself, in combination with means for reciprocating said fingers said sheet propelling means operating as the fingers are moving.



2. In a sheet delivery mechanism, a plurality of sheet supporting fingers independent of each other at their ends, and each comprising means for propelling the sheet relatively to itself, in combination with a plurality of sheet supporting devices alternating in arrangement with said fingers, and means for reciprocating said fingers with relation to said devices said sheet propelling means operating as the fingers are moving.

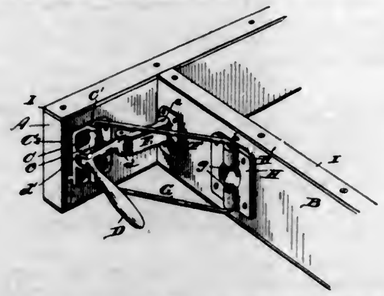
3. In a sheet delivery mechanism, a plurality of sheet supporting fingers independent of each other at their ends, and each comprising means for propelling the sheet relatively to itself, in combination with a plurality of tapes alternating in arrangement with said fingers for supporting the sheet preparatory to its deposit upon said fingers, and means for reciprocating said fingers with relation to said tapes.

4. In a sheet delivery mechanism, a plurality of sheet supporting fingers independent of each other at their ends, and each comprising means for propelling the sheet relatively to itself, in combination with a tape roller shaft, a plurality of tape rollers thereon with spaces between them, tapes passing around said rollers, and means for reciprocating said fingers between said rollers.

5. In a sheet delivery mechanism, a plurality of sheet supporting fingers independent from each other at their ends and each comprising sheet propelling tapes and tape operating means, in combination with means for reciprocating said fingers bodily, and means for depositing the sheet upon said fingers.

[Claims 6 to 13 not printed in the Gazette.]

881,224. CORNER-LOCK FOR CEMENT-MOLDS. HUGH A. CARMICHAEL, West Lorne, Ontario, Canada. Filed July 29, 1907. Serial No. 385,950.

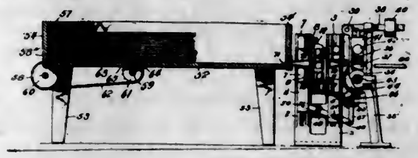


1. In a locking device for cement molds, a bell-crank lever pivoted to one of the walls of the mold, a link connecting one arm of said lever with the wall located at right angles to the first named wall, and a separate link connection between said walls.

2. In a locking device for cement molds, a plate secured to one of the walls of said mold having bearings to support a bell-crank lever, a bell-crank lever supported in said bearings, a plate secured to the wall located at right angles to the first mentioned wall, a link connection between said last named plate and with one arm of the bell-crank lever, and a separate link connection between said walls.

3. In a locking device for cement molds, a plate secured to one of its walls having bearings for a bell-crank lever, said plate also adapted to support a link connecting it with the wall of the mold at right angles to that first mentioned, a bell-crank lever pivoted in the plate and having a linked connection with the last named wall of the mold, a plate secured to said last named wall adapted to be engaged by a separate link also engaging the first named plate, and the said link, substantially as described.

881,225. SLAT-WEAVING MACHINE. HENRY W. CARPENTER, Washington, D. C., assignor to American Woven Lath Company, Washington, D. C., a Corporation of West Virginia. Filed May 10, 1906. Serial No. 316,217.



1. A slat-weaving machine embodying two sets of shed-formers, each set comprising opposing relatively stationary shed-formers, and said sets being simultaneously reciprocable in right lines in opposite directions.

2. A slat-weaving machine embodying two sets of shed-formers transversely recessed for the passage of the weft-slats, each set comprising relatively stationary shed-formers, and said sets being simultaneously reciprocable in right lines in opposite directions.

3. A slat-weaving machine embodying two sets of shed-formers transversely recessed for the passage of the weft-slats, each set comprising opposing relatively stationary shed-formers, and said sets being simultaneously reciprocable in right lines in opposite directions.

4. A slat-weaving machine embodying two sets of shed-formers transversely recessed for the passage of the weft-slats, each set comprising opposing, vertically-disposed and relatively stationary shed-formers, and said sets being simultaneously reciprocable in opposite directions.

5. A slat-weaving machine embodying two sets of shed-formers, each set comprising opposing, relatively stationary shed-formers, and said sets being simultaneously reciprocable in right lines in opposite directions and in the same vertical plane, the shed-formers of one set alternating in position with those of the other.

[Claims 6 to 26 not printed in the Gazette.]

881,226. RAILWAY-SIGNAL CHECK. CLARENCE W. COLEMAN, Westfield, N. J., assignor to The Hall Signal Company, a Corporation of Maine. Filed July 18, 1907. Serial No. 384,336.

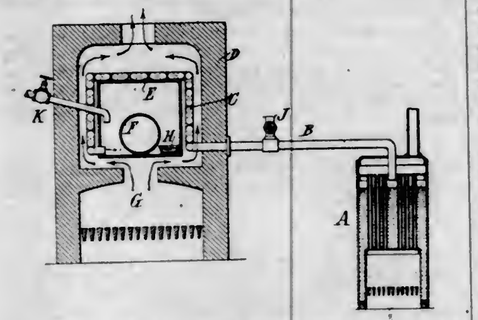
1. The combination with a signal, of means controlled by the inertia of such means for opposing the momentum of the signal and compelling it to come to rest under diminished momentum.

2. The combination with a signal having a normal bias to danger, of a device controlled by its inertia for opposing the momentum of the signal and compelling it to assume its danger position under diminished momentum.

3. The combination with a rectilinearly movable signal actuating part, of a rotary device adapted to act by its inertia to oppose the momentum of the signal and compel it to come to rest under diminished momentum, such rotary inertia device being actuated by the rectilinearly movable signal actuating part.

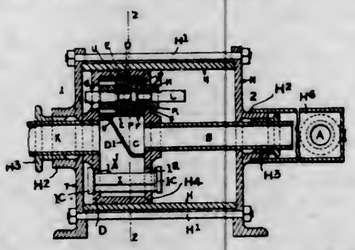
4. In a signal check, the combination with a signal, of a rotary part arranged to be rotated by the signal and adapted to act by inertia of such part to oppose the momentum of the signal and compel it to come to rest under diminished momentum.

of a composition including tannic acid, an oleaginous material, and an oxid of a non-corrodible metal.



4. The method of protecting iron or steel which consists in subjecting it in a closed chamber at a temperature sufficient to form such a vapor or gas, to the vapor or gas of a composition including tannic acid, an oleaginous material, and an oxid of a non-corrodible metal, and following this by similar treatment with a solid hydrocarbon.

881,222. WATER-MOTOR. FRANK BREITENSTEIN, Denver, Colo. Filed June 7, 1907. Serial No. 377,777.



1. In a water motor, the combination with the cylinder and the piston provided with independent fluid inlets and exhaust chambers and oppositely extending piston rods, of the fluid outlet ports in the opposite sides of said piston's fluid chamber, the fixed bushing in alinement with said ports and provided with inlet ports, and the differential movement valve arranged in said bushing and ports and comprising the main and auxiliary valves, said auxiliary valve being arranged to contact with the opposite ends of said cylinder at the opposite strokes of said piston.

2. In a water motor, the combination with the cylinder and the hollow piston provided with oppositely extending hollow fluid inlet and exhaust piston rods, and containing independent fluid inlet and exhaust chambers of the outlet ports in the sides of said fluid inlet chamber, the fixed bushing valve seat in said chamber, the main valve in said bushing, the auxiliary valve in said main valve, and cooperatively arranged with said main valve to admit motive fluid to the opposite sides of said piston, and the exhaust valve and its ports in said piston's exhaust chamber.

3. In a water motor, the combination with the cylinder, of a hollow piston provided with a fluid inlet chamber and an independent fluid exhaust chamber, and provided with a hollow fluid inlet piston rod at one end, connected to said piston's fluid inlet chamber, and a hollow fluid exhaust piston rod at the opposite end of said piston connected to said piston's fluid exhaust chamber, ports through the opposite sides of the exhaust chamber of said piston, a valve stem extending through said piston and beyond it at each end far enough to engage the opposite ends of said cylinder, and provided with a valve at its opposite ends adapted to control the oppositely arranged ports of said piston's fluid exhaust chamber, of ports through the opposite sides of the said piston's fluid inlet chamber, a fixed bushing valve seat in said chamber registering with said ports, a main valve seated in said bushing valve seat and said inlet chamber ports, an axial port in said main valve, an auxiliary valve in said axial port of said main valve adapted to engage the opposite ends of said cylinder at the opposite strokes of said piston, and a series of ports in said bushing valve seat and said main and auxiliary valves coöperatively arranged to admit a suitable motive fluid to the opposite ends of said cylinder in alternate order.

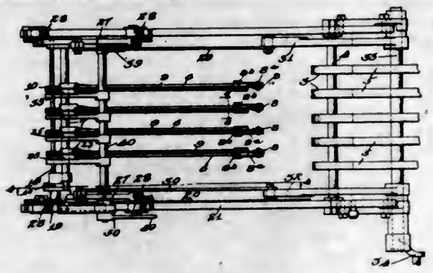
4. In a water motor, the combination of the cylinder, the hollow piston reciprocally mounted on said cylinder and provided with an independent fluid inlet and an exhaust chamber, a fluid inlet piston-rod connected to said piston's fluid inlet chamber and extending through said cylinder from one side of said piston, and a hollow piston rod connected to said exhaust chamber and extending through said cylinder from the opposite side of said piston, a port through the opposite sides of said piston in said exhaust chamber, and a slide valve arranged to control said ports, and to admit the exhaust fluid from opposite sides of said piston in alternate order to said exhaust chamber, with a pair of ports positioned in the opposite sides of said piston in its fluid inlet chamber, a fixed bushing valve seat positioned in said chamber in alinement with said ports and of larger diameter than said ports, a main valve comprising a central body portion fitting slidably said bushing valve seat, and having opposite end portions fitting slidably in said ports, an axial port through said main valve, an auxiliary valve slidably mounted in said port and extending beyond said valve and said piston on opposite sides of it far enough to engage the opposite ends of said cylinder on the alternate strokes of said piston, and adapted to be moved by said engagement with said cylinder a predetermined distance, fluid inlet ports through the central portion of said bushing valve seat to said main valve and to said fluid inlet chamber, inlet ports in the opposite sides of said piston, circumferential ports in said auxiliary valve at each side of its central portion, and extension ports extending from said circumferential ports along the length of the opposite end portions of said valve, a predetermined distance, sufficient to register beyond the sides of said piston in the opposite end strokes of said auxiliary valve, a plurality of radial ports in the center of the body portion of said main valve arranged to register with the circumferential ports of said auxiliary valve, and two groups of radial ports through the end portions of said main valve on opposite sides of said main valve's central radial ports, arranged to register in alternate order with said auxiliary valve's ports and opening into said bushing valve seat and a stop pin in said main valve extending into one of said auxiliary valve's ports and adapted to permit the reciprocal movements of said auxiliary valve to coöperatively operate and move said main valve to alternately admit fluid pressure to opposite ends of said piston and cylinder in alternate order.

5. In a water motor, the combination with the cylinder and the piston provided with a water inlet piston rod and chamber and an independent water exhaust chamber and piston rod, with the fixed sleeve in said inlet chamber, provided with inlet ports, the ports in the opposite sides of said chamber in alinement with said sleeve, the main valve slidably mounted in said sleeve, the auxiliary valve reciprocally mounted in said main valve and arranged to strike the ends of said cylinder at the opposite ends of said piston's reciprocal strokes, and the operative ports in said main and auxiliary valves.

[Claims 6 to 10 not printed in the Gazette.]

881,223. SHEET-DELIVERY MECHANISM FOR PRINTING-PRESSES. HORACE P. BROWN and CLARENCE L. JOHNSTON, San Francisco, Cal., assignors to Frank Brown Redington, Chicago, Ill. Filed Dec. 9, 1905. Serial No. 291,165.

1. In a sheet delivery mechanism, a plurality of sheet supporting fingers independent of each other at their ends, and each comprising means for propelling the sheet relatively to itself, in combination with means for reciprocating said fingers said sheet propelling means operating as the fingers are moving.



2. In a sheet delivery mechanism, a plurality of sheet supporting fingers independent of each other at their ends, and each comprising means for propelling the sheet relatively to itself, in combination with a plurality of sheet supporting devices alternating in arrangement with said fingers, and means for reciprocating said fingers with relation to said devices said sheet propelling means operating as the fingers are moving.

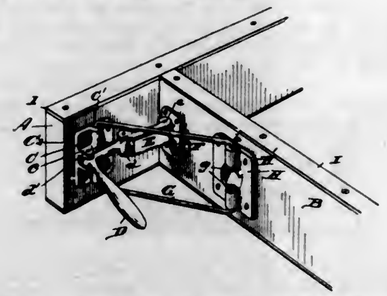
3. In a sheet delivery mechanism, a plurality of sheet supporting fingers independent of each other at their ends, and each comprising means for propelling the sheet relatively to itself, in combination with a plurality of tapes alternating in arrangement with said fingers for supporting the sheet preparatory to its deposit upon said fingers, and means for reciprocating said fingers with relation to said tapes.

4. In a sheet delivery mechanism, a plurality of sheet supporting fingers independent of each other at their ends, and each comprising means for propelling the sheet relatively to itself, in combination with a tape roller shaft, a plurality of tape rollers thereon with spaces between them, tapes passing around said rollers, and means for reciprocating said fingers between said rollers.

5. In a sheet delivery mechanism, a plurality of sheet supporting fingers independent from each other at their ends and each comprising sheet propelling tapes and tape operating means, in combination with means for reciprocating said fingers bodily, and means for depositing the sheet upon said fingers.

[Claims 6 to 13 not printed in the Gazette.]

881,224. CORNER-LOCK FOR CEMENT-MOLDS. HUGH A. CARMICHAEL, West Lorne, Ontario, Canada. Filed July 29, 1907. Serial No. 385,950.

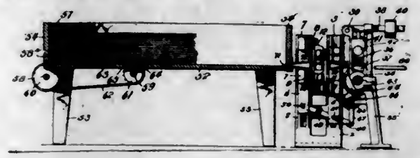


1. In a locking device for cement molds, a bell-crank lever pivoted to one of the walls of the mold, a link connecting one arm of said lever with the wall located at right angles to the first named wall, and a separate link connection between said walls.

2. In a locking device for cement molds, a plate secured to one of the walls of said mold having bearings to support a bell-crank lever, a bell-crank lever supported in said bearings, a plate secured to the wall located at right angles to the first mentioned wall, a link connection between said last named plate and with one arm of the bell-crank lever, and a separate link connection between said walls.

3. In a locking device for cement molds, a plate secured to one of its walls having bearings for a bell-crank lever, said plate also adapted to support a link connecting it with the wall of the mold at right angles to that first mentioned, a bell-crank lever pivoted in the plate and having a linked connection with the last named wall of the mold, a plate secured to said last named wall adapted to be engaged by a separate link also engaging the first named plate, and the said link, substantially as described.

881,225. SLAT-WEAVING MACHINE. HENRY W. CARPENTER, Washington, D. C., assignor to American Woven Lath Company, Washington, D. C., a Corporation of West Virginia. Filed May 10, 1906. Serial No. 316,217.



1. A slat-weaving machine embodying two sets of shed-formers, each set comprising opposing relatively stationary shed-formers, and said sets being simultaneously reciprocable in right lines in opposite directions.

2. A slat-weaving machine embodying two sets of shed-formers transversely recessed for the passage of the weft-slats, each set comprising relatively stationary shed-formers, and said sets being simultaneously reciprocable in right lines in opposite directions.

3. A slat-weaving machine embodying two sets of shed-formers transversely recessed for the passage of the weft-slats, each set comprising opposing relatively stationary shed-formers, and said sets being simultaneously reciprocable in right lines in opposite directions.

4. A slat-weaving machine embodying two sets of shed-formers transversely recessed for the passage of the weft-slats, each set comprising opposing, vertically-disposed and relatively stationary shed-formers, and said sets being simultaneously reciprocable in opposite directions.

5. A slat-weaving machine embodying two sets of shed-formers, each set comprising opposing, relatively stationary shed-formers, and said sets being simultaneously reciprocable in right lines in opposite directions and in the same vertical plane, the shed-formers of one set alternating in position with those of the other.

[Claims 6 to 26 not printed in the Gazette.]

881,226. RAILWAY-SIGNAL CHECK. CLARENCE W. COLEMAN, Westfield, N. J., assignor to The Hall Signal Company, a Corporation of Maine. Filed July 18, 1907. Serial No. 384,336.

1. The combination with a signal, of means controlled by the inertia of such means for opposing the momentum of the signal and compelling it to come to rest under diminished momentum.

2. The combination with a signal having a normal bias to danger, of a device controlled by its inertia for opposing the momentum of the signal and compelling it to assume its danger position under diminished momentum.

3. The combination with a rectilinearly movable signal actuating part, of a rotary device adapted to act by its inertia to oppose the momentum of the signal and compel it to come to rest under diminished momentum, such rotary inertia device being actuated by the rectilinearly movable signal actuating part.

4. In a signal check, the combination with a signal, of a rotary part arranged to be rotated by the signal and adapted to act by inertia of such part to oppose the momentum of the signal and compel it to come to rest under diminished momentum.

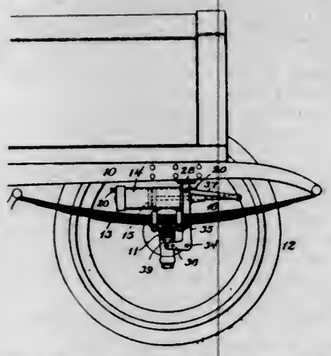
5. In a signal check, the combination with a signal, of an oscillatable part arranged to be oscillated by the signal and adapted to act by inertia to oppose the momentum of



the signal and compel it to come to rest under diminished momentum.

[Claims 6 to 22 not printed in the Gazette.]

881,227. ANTIVIBRATION DEVICE FOR AUTOMOBILES. CHARLES C. DODGE, Newark, N. J., assignor to The Dodge Lubricator Company, Boston, Mass., a Corporation of Massachusetts. Filed Sept. 1, 1905. Serial No. 276,671.

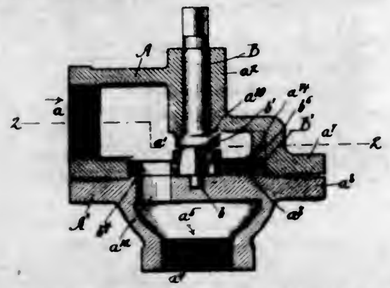


1. An appartus of the character referred to, comprising a cylinder, a support connected to the cylinder, means by which said support may be adjusted, a piston in the cylinder, bell-crank levers fulcrumed on said support and having relatively long and short arms, a piston rod, connections between said long arms and the piston rod, and means by which the cylinder and the short arms of the bell-cranks may be attached to two relatively movable parts of a vehicle.

2. An apparatus of the character described, comprising clips adapted to be attached to two relatively movable parts of a vehicle, a cylinder pivoted to one of said clips, a two-armed lever fulcrumed on the cylinder and having one arm pivoted to the other of said clips, a piston in said cylinder, and a connection between the other arm of said lever and said piston.

3. An apparatus of the character described, comprising a cylinder having escape ports, and inlet valves at its ends, a piston in said cylinder, a piston rod, an elbow lever having arms of unequal length the longer arm being operatively connected with the piston rod, and means for connecting the cylinder and the shorter arm of the lever to two relatively movable parts of a vehicle.

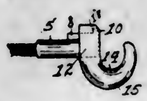
881,228. COCK FOR CONTROLLING FLUID UNDER PRESSURE. JULIUS A. DYBLIE, Joliet, Ill., assignor of one-half to Hollis R. McCullough, Chicago, Ill. Filed May 27, 1903. Serial No. 158,906.



1. A cock for controlling the flow of fluid under pressure, comprising a casing consisting of two chambered sections bolted together, one of said sections being supplied with an admission port and a valve stem opening having a seat at its inner end and the other of said sections being provided with a discharge port and with a raised valve seat extending within the first mentioned section, a rotary disk valve mounted upon the pressure side of said valve seat and having a central polygonal opening and a valve stem having a corresponding polygonal lower portion setting loosely within the central opening of said valve and interlocking therewith to effect its rotary movement, said stem being free to move at right angles to the plane of the valve and having a collar adapted to bear against the seat at the inner end of the stem opening, the lower end of said valve stem being provided with a reduced portion journaled within a suitable socket in said valve seat, substantially as described.

2. A cock for controlling the flow of liquid under pressure comprising a casing formed of two chambered sections having integral flanges bolted together, one of said sections having an outlet and an integral valve seat thereon raised above the meeting line of said sections and extending within the chamber of the other of said sections, a rotary disk valve on the pressure side of said valve seat having a central polygonal opening, said second casing section having an inlet port and an integral sleeve bored to form a stem opening and provided with a raised seat at its inner end, and a valve stem extending through said sleeve and having an integral collar engaging the seat at the inner end thereof and a polygonal lower portion set loosely within the central opening of said valve, said valve and stem being freely removable one from the other and held in opposite directions to the respective seats solely by the pressure within the valve casing, substantially as described.

881,229. LOCKING-HOOK. BENJAMIN F. EMERY, Thayer, Iowa. Filed Apr. 29, 1907. Serial No. 370,820.



1. In a device of the character described, a stem, a shoulder on the stem, a hook provided with a recess and adapted to slide on the stem with the stem in the recess, and a lug connected with the shoulder on the stem for limiting the outward movement of the hook.

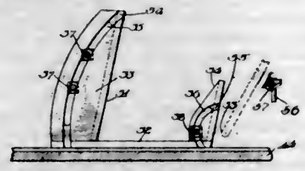
2. In a device of the character described, a hook provided with a recess through the shank, a stem provided with a shoulder, said stem adapted to engage in the recess in the hook and permit the hook to slide thereon, and a lug on the outer end of the shoulder on the stem engaging the hook for limiting the movement of the hook upon the stem.

3. In a device of the character described, a hook provided with a recess therethrough and a shoulder in one end of the recess, a stem provided with a shoulder adapted to engage the recess in the hook and permit the hook to slide thereon, and a lug on the stem adapted to engage the shoulder in the recess in the hook and limit the outward movement of the hook.

4. In a device of the character described, a stem adapted to be inserted in the article to which it is applied, a shoulder on the outer end of the stem, a lug on the outer end of the shoulder on the stem, and a hook provided with a recess of unequal dimensions and adapted to be engaged by the stem and rotate therein and slide on the shoulder and be limited in its sliding movement by the lug on the stem.

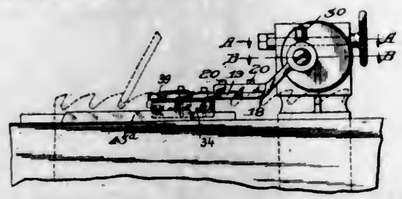
5. In a device of the character described, a stem provided with a shoulder on its outer end and a lug on the outer part of the shoulder, and a hook provided with a recess therethrough and a shoulder, in said recess, said hook adapted to rotate on the stem and its rotation limited by the engagement of the hook with the lug on the shoulder and also adapted to slide on the stem and the sliding movement limited by the engagement of the lug on the stem with the shoulder in the recess in the hook.

881,230. SAW-SHARPENING MACHINE. EDDIE C. FILSTRUP, Chicago, Ill., assignor to Covel Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed Jan. 10, 1907. Serial No. 351,594.



In a saw sharpening machine, a frame, a back frame support provided with a series of concentric slots and a series of grooves of a like curvature extending from the ends of said slots, a grinding wheel, supporting means for said grinding wheel, clamping bolts carried by said supporting means and extending through and working in said slots, and a series of guides secured to said supporting means and adapted to travel in said slots and grooves, said grooves and slots and guides being so positioned that the angular position of the grinding wheel may be shifted without changing its point of contact with the saw tooth being operated upon.

881,231. SAW-SHARPENING MACHINE. LARS L. FILSTRUP, Chicago, Ill., assignor to Covel Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed Feb. 8, 1906. Serial No. 300,080.

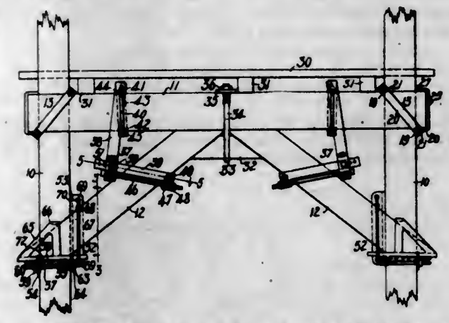


1. In a saw sharpening machine, a guide mounted on the frame of the machine, a reciprocable feed finger, an adjustable and removable feed pin seated in said feed finger, a spring clamping plate for said feed pin mounted on the upper side of said feed finger, a guide block, and screws for adjustably clamping said guide block to the under side of the feed finger, one of the said screws passing through the clamp spring and serving to removably hold the same in place, and a lateral guide pin carried by the guide block at a point below the feed pin, for the purpose set forth.

2. In a saw-sharpening machine, a feed-finger and means for reciprocating it, said feed-finger having a transverse angular seat in its upper side, a feed-pin shaped in cross-section to fit down into said seat, a spring-clamp-plate and means for clamping it down on the face of said feed-finger, the outer edge of said plate having a broad resilient bearing upon the upper face of the feed-pin and its inner edge being provided with a downwardly-turned flange bearing upon the face of the feed-finger.

3. In a saw-sharpening machine, a suitable guide on the machine frame, a reciprocable feed-finger carrying a laterally extending feed-pin, a guide block, clamp screws securing this guide block adjustably to the under side of said feed-finger, said guide block being vertically split at its forward end and having a transverse hole extending through said split portions, a bearing or supporting pin 43 extending through said hole and adapted to rest on the aforesaid guide on the machine frame, and a clamp screw connecting the two members formed by the split, substantially as set forth.

881,232. SCAFFOLD. DOMINICK FLATLEY, Manchester, Mass. Filed July 24, 1907. Serial No. 385,304.



1. In a scaffold, an upright, a horizontal member extending across one face thereof, a plate located on the opposite face of said upright, said plate provided with two lugs, a second horizontal member extending across a third face of said upright at right angles to said first member, a U-shaped bolt having two legs which extend through said lugs, respectively, two nuts having screw-threaded engagement with said legs, respectively, a second U-shaped bolt consisting of a cross piece and two legs, said cross piece extending across said piece between said lugs, a second plate through which said second-named legs project, said second plate arranged in contact with and extending diagonally across said first member, and two nuts having screw-threaded engagement with said second-named legs, respectively.

2. In a scaffold, an upright, two plates located on opposite sides, respectively, of said upright, a third plate located on a third side of said upright and supported by said first two plates, a diagonal brace extending upwardly at an angle to said upright and supported on said third plate, a U-shaped bolt provided with two legs extending through one of the said first two plates, the other of said first two plates being supported by said U-shaped bolt, and two nuts having screw-threaded engagement with said legs, respectively.

3. In a scaffold, an upright, two plates located on opposite sides, respectively, of said upright, a third plate located on the third side of said upright and provided with a flange resting on said first two plates, a diagonal brace extending upwardly at an angle to said upright and resting on said flange, a U-shaped bolt provided with two legs extending through one of said first two plates, one of said legs extending through the other of said first two plates, the other of said two legs extending beneath said

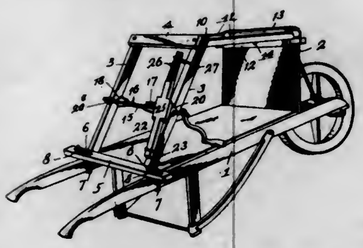
other plate, and two nuts having screw-threaded engagement with said legs, respectively.

4. In a scaffold, an upright, two plates located on opposite sides, respectively, of said upright, a third plate located on a third side of said upright, and provided with a flange resting on said first two plates, said third plate also provided with a lug located above said flange, a diagonal brace extending upwardly at an angle to said upright and resting on said flange, the upper edge of said brace bearing against said lug, a U-shaped bolt provided with two legs extending through one of said first two plates, one of said legs extending through the other of said first two plates, the other of said legs extending beneath said plate, two nuts having screw-threaded engagement with said lugs, respectively, said other plate being provided with a projecting flange, a second U-shaped bolt having two legs extending through said flange, and two nuts having screw-threaded engagement with said legs, whereby said brace is clamped to said upright.

5. In a scaffold, an upright, a horizontal ledgerboard fast to said upright, a diagonal brace fast at its lower end to said upright and arranged with its upper end resting against the underside of said ledger board, a member extending transversely of said brace, a second member extending transversely of said ledger board and arranged to move longitudinally of said first member, means to secure said second member to said ledger board, means on said first member to engage the lower edge of said brace, and means to move said second member longitudinally of said first member toward said second means.

[Claims 6 to 9 not printed in the Gazette.]

881,233. DEVICE FOR DISTRIBUTING OR TAKING UP BARB-WIRE. CHARLES FOX, Leavenworth, Kans. Filed Oct. 11, 1907. Serial No. 396,882.



1. In a device of the character described, a folding frame adapted to be extended or contracted to fit vehicles of different lengths, and means journaled on said frame for carrying a spool.

2. In a device of the character described, a frame adapted to be extended or contracted to fit vehicles of different lengths, adjustable fastening devices carried by the frame for securing it to vehicles of different widths, and means journaled on said frame for carrying a spool.

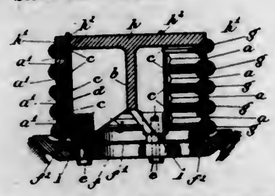
3. In a device of the character described, the combination with a vehicle, of a folding frame removably mounted thereon, a shaft removably journaled on said frame and adapted to carry a spool, and means for retarding the rotation of said shaft.

4. In a device of the character described, the combination with a vehicle, of a folding frame removably mounted thereon, a shaft removably journaled on said frame and adapted to carry a spool, and tapered bearings mounted upon the shaft, one of said bearings being adjustably and removably mounted upon the shaft.

5. In a device of the character described, the combination with a vehicle, of a folding frame removably mounted thereon, a shaft removably journaled on said frame and adapted to carry a spool, and a crank on the shaft whereby the same may be rotated.

[Claims 6 to 9 not printed in the Gazette.]

881,234. VALVE. GUSTAV FUSCH, Hanover, Germany, assignor to Schutte and Koerting Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Dec. 16, 1907. Serial No. 406,628.

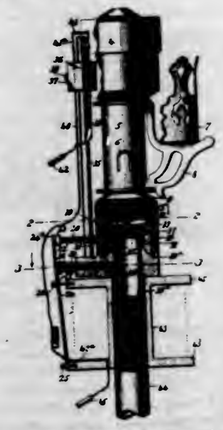


1. A valve structure comprising a set of rings assembled end to end to form a cylindrical body and adapted to be held at varying distances apart whereby circumferentially extending ports are formed in the cylindrical body between the rings, said rings being shaped to form a trough shaped valve seat at the outer edge of each port and a set of elastic ring valves, one for each of said ports, surrounding said cylindrical body and each tending to close the corresponding port.

2. A valve structure, comprising a set of rings assembled end to end to form a cylindrical body, removable spacers inserted between the ends of adjacent rings to space them apart and thereby form circumferentially extending ports in said cylindrical body, each ring having reversely inclined surfaces a', and a set of rubber ring valves surrounding said cylindrical body and arranged one between the adjacent surfaces a' of each adjacent pair of rings and tending to close the corresponding port.

3. A valve structure comprising a spider formed of an end member h having axially extending ribs b, an end member f having an axially extending port f' formed through it, removable spacers i between the end members h and f, means for securing the end members together with the spacers i in place, a set of rings a mounted end to end on, and surrounding the axial ribs b, removable spacers c located between the adjacent ends of adjacent rings and spacing the rings apart to form a circumferentially extending port between each adjacent pair of rings, each ring having outer reversely inclined surfaces a', and a set of rubber ring valves surrounding said ribs and arranged one between the adjacent surfaces a' of each adjacent pair of rings a, and tending to close the port between said adjacent rings.

881,235. GAS-IGNITER. CARLO T. GIORGI, Florence, Italy. Filed Oct. 5, 1904, Serial No. 227,326. Renewed Feb. 1, 1908. Serial No. 413,842.



1. In a gas igniter, the combination of a burner, a valve seat provided with openings for admitting gas thereinto, a valve having the form of a star wheel revolubly mounted upon said valve seat and provided with openings adapted to register with those of said seat, a yoke slidably mounted and encircling said valve seat, pins mounted upon said yoke and adapted to engage said star wheel, and electrically operated mechanism connected with said yoke for actuating the same so as to bring the openings of said valve into and out of registry with the openings of said valve seat.

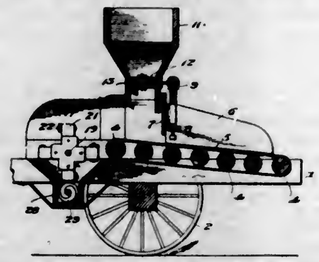
2. In a gas igniter, the combination of a burner provided with a main valve and with a side passage, a plug valve mounted within said side passage and provided with a constriction and with openings adjacent to said constriction, a by-pass adapted to communicate with said side passage and controllable by said plug valve, magnetic mechanism for pressing said plug valve in one dircetion, a spring for retracting said plug valve, means for operating said main valve, so as to turn the flow of gas on and off said burner, and means for igniting small quantities of gas passing through said by-pass toward said burner.

3. In a gas igniter, the combination of a burner provided with a main valve seat, said main valve seat having openings therethrough, a main valve revolubly mounted upon said seat and having the form of a star wheel, said main valve being provided with openings adapted to register with those of said seat, a yoke provided with pins for engaging said star wheel, means for actuating said yoke so as to turn said star wheel step by step, magnetic mechanism controllable by an electric current for actuating said yoke, and means for igniting the gas of said burner when said openings of said valve are in registry with the openings of said seat.

4. In a gas igniter, the combination of a burner, a valve seat provided with openings for admitting gas thereinto, a side passage, mechanism connected therewith and provided with a constriction and with openings disposed adjacent to said constriction, a by-pass adapted to communicate with said side passage and controllable by said mechanism having said constriction, and means controllable electrically from a distance for actuating said mechanism so as to open and close said openings adjacent to said constriction.

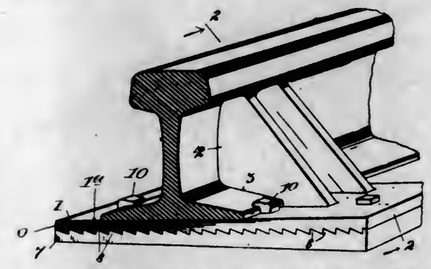
5. In a gas igniter, the combination of a burner provided with a main valve and with a side passage, a by-pass communicating with said side passage, a hollow member slidably mounted within said side passage and provided with a constriction and with an opening adjacent to said constriction, and magnetic mechanism controllable from a distance for controlling said member for actuating said main valve.

881,236. CONCRETE-MIXER. FREDERICK B. GULZOW, Flandreau, S. D. Filed Oct. 15, 1906. Serial No. 339,140.



In a concrete mixer, the combination with a mixing chamber, of a rotary mixer therein provided with cross blades or paddles extending longitudinally of the rotary mixer, a belt or apron conveyer running substantially at right angles to the length of the mixer and adapted to deliver the material to the side of the mixer whereby the material is forcibly dashed by said blades against the walls of the mixing chamber, a trough located under the mixing chamber lengthwise thereof and in communication therewith by an opening extending lengthwise thereof, and a conveyer in said trough for discharging the material lengthwise of said trough.

881,237. RAIL-BRACE. GEORGE L. HALL, New York, N. Y., assignor to The National Railway Materials Company, New York, N. Y. Filed Feb. 27, 1907. Serial No. 359,584.



1. A rail brace comprising a base adapted to support the rail and provided with an upwardly and inwardly extending brace arm adapted to engage the rail, said base being formed of two parts, and means whereby said two parts of the base may be adjusted on each other to vary the height of the upper surface of the base.

2. A rail support comprising a base plate formed of an upper member and a lower member, and means whereby the members may be adjusted on each other to vary the height of the upper surface of the upper member.

3. A rail brace comprising a base adapted to support the rail and provided with an upwardly and inwardly extending brace arm adapted to engage the rail, said base being formed of two parts which are adapted to fit together on a substantially diagonal line, whereby said parts may be adjusted on each other to vary the height of the upper surface of the base.

4. A rail brace comprising a base adapted to support the rail and provided with an upwardly and inwardly extending brace arm adapted to engage the rail, said base being formed of two parts which are adjustable on each other to vary the height of the upper surface of the base, said upper surface inclining upwardly toward the brace arm, whereby the rail will be supported in a transversely inclined position.

5. A rail brace comprising a base plate adapted to support the rail and provided with an upwardly and inwardly extending brace arm adapted to fit under the head of the rail and to engage the web thereof, the lower edge of said brace arm being cut out to adapt it to fit over the upper surface of the base of the rail, a rail clip connected to the base plate and adapted to fit the rail base on the opposite side thereof from the brace arm and diagonally across the base plate from said arm, and a stop lug adapted to engage the rail on the same side thereof as the brace arm and at a point transversely opposite the clip.

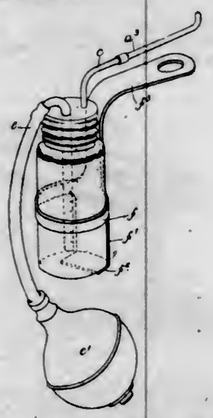
[Claims 6 to 9 not printed in the Gazette.]

881,238. INSUFFLATOR. SAYER HASBROUCK, Providence, R. I. Filed Dec. 8, 1902. Serial No. 134,293.

1. An apparatus of the character specified, comprising a closed receptacle, a delivery tube leading therefrom, an air tube extending downwardly into said receptacle from its top and having an open end relatively near the bottom of said receptacle, said air tube being provided with a continuous series of lateral ports, extending along its length, whereby the powder is raised by the air issuing from the ports just below the level of the powder and is broken into fine particles and forced out by the air issuing from the ports above said level, substantially as described.

2. An insufflator comprising a closed receptacle, a delivery tube leading from the top thereof, an air tube extending into said receptacle from the top towards the

bottom thereof, said air tube having an open end and having a continuous series of lateral ports for delivering streams of air into the powder in the insufflator, and also above the level of the powder.

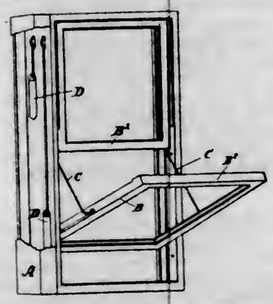


3. An insufflator comprising a receptacle adapted for the reception of a mass of powder, a cap for closing the same, a delivery tube extending through said cap and having its mouth located above the level of the powder, an air tube extending through said cap to a point relatively near the bottom of the receptacle, said air tube having a continuous series of lateral ports which are successively uncovered as the powder is gradually discharged from the receptacle.

4. The combination with a spraying device comprising a receptacle, a delivery tube, and an air tube, of a holder for receiving said receptacle and adapted to be grasped in the hand, said holder being provided with a portion constituting a tongue depressor.

5. A combined bottle-holder and tongue-depressor, the same comprising a portion adapted to receive, inclose and support a bottle and having a laterally extending strip to constitute the tongue depressor, substantially as described.

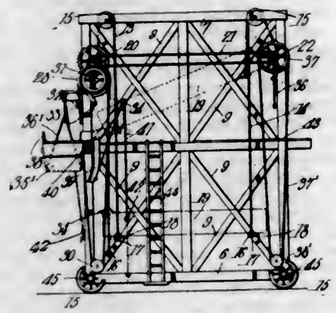
881,239. WINDOW FRAME AND SASH. THOMAS A. HODGSON, Ottawa, Ontario, Canada, assignor to Esther Hodgson, Ottawa, Canada. Filed July 6, 1906. Serial No. 325,191.



1. In a window, an upper sash of less width than the lower sash, a guideway in the frame for said upper sash, a parting stop of the length of the upper sash less the width of the lower bar of said upper sash, and a cord recess in said sash extending to the inner edge of its stile.

2. In a window, an upper sash of less width than the lower sash, a guideway in the frame for said upper sash, a parting stop of the length of the upper sash less the width of the lower bar of said upper sash, and a cord recess in said sash extending to the inner edge of its stile; a lower sash of greater width than the upper sash, a guideway in the frame for said lower sash, an outside stop for said guideway consisting partly of the edge of the outer guideway and partly of the parting stop, a cord recess in said sash extending to the inner edge of its stile and sectional inner stops for said sash.

881,240. WAGON-RAISER. ARNO C. HOUSINGER, Sylvia, Kans. Filed June 1, 1907. Serial No. 376,777.



1. A hoisting device including a supporting frame, spaced rollers extending transversely across the frame and mounted for rotation thereon, suspension devices secured to the rollers and adapted to support a wagon body, means for imparting movement from one roller to the other, a chute, and means for disconnecting said rollers thereby to permit one end of the wagon body to be tilted in engagement with the chute.

2. A hoisting device including a supporting frame, spaced rollers extending transversely across the frame and mounted for rotation thereon, said rollers being provided with horizontally disposed sprocket wheels, a sprocket chain connecting said wheels, cables secured to the rollers and adapted to support a wagon body, means for actuating the rollers thereby to raise and lower the wagon body, a clutch carried by one of the rollers for moving the adjacent sprocket wheel to inoperative position, and independent means for elevating one end of the wagon body.

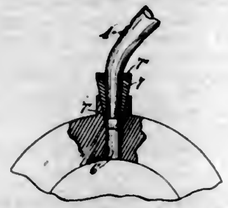
3. A hoisting device including a supporting frame provided with an intermediate marginal platform extending longitudinally of the frame, a chute secured to the frame at one end of said platform, rollers extending transversely across the frame and mounted for rotation thereon, suspension devices secured to the rollers and adapted to support a wagon body, and means for actuating the rollers thereby to raise and lower the wagon body.

4. A hoisting device including a portable supporting frame having an intermediate platform, a chute secured to the supporting frame at said platform and provided with a pivoted section movable vertically to operative position, spaced rollers journaled in the frame, cables secured to the rollers and provided with means for engagement with a wagon body, means for rotating the rollers to elevate the wagon body above the platform, and means for tilting one end of the wagon body thereby to dump the contents of the latter into the chute.

5. A hoisting device including a supporting frame having an intermediate platform, a chute secured to the frame at said platform and provided with a pivoted section, suspension devices adapted to support a wagon body, means for operating the suspension devices thereby to elevate the wagon body above the platform, means for tilting one end of the wagon body to permit the discharge of the contents of the latter into the chute, and means for moving the pivoted section of said chute in engagement with the wagon body.

[Claims 6 to 8 not printed in the Gazette.]

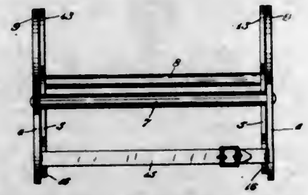
881,241. OIL-CAN. HENDLEY W. HUBBARD, Middletown, Conn. Filed Apr. 3, 1906. Serial No. 309,588.



In an oil can, in combination, a barrel having a delivery-spout in direct communication therewith, a piston operating in said barrel, a tapered, somewhat compressible sleeve telescopically adjusted to said spout at its free end, and adapted to exert a holding grasp within and at the entrance of an oil-way, and annular stops of rigid material adjusted along and fixed to said delivery-spout, one at each end of said sleeve, and whereby displacement of the latter in either direction along said delivery-spout, is prevented, substantially as herein specified

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881,242. BRIDLE-BIT. CHARLES B. JOHNSON, Columbus, Ohio. Filed June 8, 1907. Serial No. 377,892.



1. A horse bit having side-bars each composed of a part 4 for attachment of the head-stall and rein and a part 5 for attachment of the over-check, the parts 5 each having rigidly attached thereto a loop for the curb-strap, said parts being hinged together at their lower ends, and mouth-rods between the parts 4 and 5 respectively.

2. A horse bit having side-bars each composed of two parts 4 and 5 hinged together at their lower ends, a mouth rod connecting the parts 4 and a mouth-rod connecting the parts 5, the said mouth-rods, when the bit is closed, having their axes lying in a substantially straight line with the axis of the hinges of the side-bars, and loops for a curb-strap rigid with the parts 5.

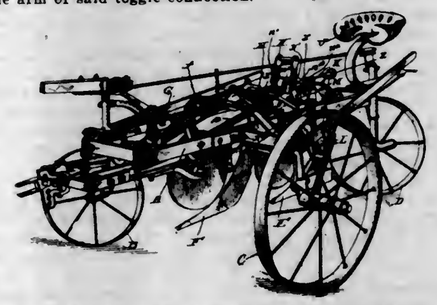
3. In a horse bit, side-bars each composed of two parts hinged together at their lower ends and mouth-rods between corresponding parts of said side-bars located, when the bars are closed, one above the other and having their axes lying substantially in a straight line with the hinges of the side-bars.

881,243. WHEEL-PLOW. WILLIAM E. JOHNSON, Rock Island, Ill., assignor to Rock Island Plow Company, Rock Island, Ill., a Corporation of Illinois. Filed Aug. 26, 1904. Serial No. 222,335.

1. A wheeled plow comprising a plow and beam, a body frame mounted on wheels, bails connecting the body frame with the plow-beam, a toggle connection between the body frame and the plow-beam, a lifting foot-lever applied directly to the joint or articulation of said toggle connection, and a depressing foot lever applied directly to the point of pivotal connection between the plow-beam and one arm of said toggle connection.

2. A wheeled plow comprising a plow and beam, a body frame mounted on wheels, bails connecting the body frame with the plow beam, a toggle connection between the body frame and plow beam, and a lifting foot lever applied directly to the toggle joint or intermediate point of articulation of said toggle connection, and rigid with one arm thereof.

3. A wheeled plow comprising a plow and beam, a body frame mounted on wheels, a toggle connection between the body frame and plow beams, and a depressing foot lever mounted on the plow beam and applied directly to the point of pivotal connection between the plow beam and one arm of said toggle connection.

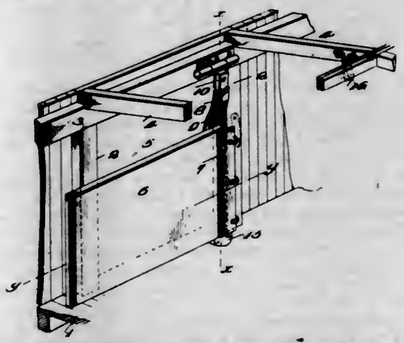


4. In a wheeled plow, a toggle connection for effecting the lifting and lowering of the plow, and a lifting lever for manipulating said toggle connection, said lever being supported by and applied directly to the toggle joint or intermediate point of articulation of said toggle connection and rigid with one arm thereof.

5. In a wheeled plow, a plow and beam, a toggle connection for effecting the lifting and lowering of the plow, and a depressing lever for manipulating said toggle connection, said lever being supported by the plow beam and applied directly to the point of pivotal connection between the plow beam and one arm of the said toggle connection.

[Claims 6 to 10 not printed in the Gazette.]

881,244. GRAIN-CAR DOOR. JAMES H. JONES and PETER LYNCH, Atlantic, Iowa. Filed Apr. 15, 1907. Serial No. 368,016.



1. In a freight car having an opening in its side, the combination of a door for closing said opening, one end of the door abutting against a side of the door jamb facing the door opening, and the opposite end portion of the door resting against the side of the other door jamb facing the inner side of the car, a bar hinged to the inner side of the car above the door opening to swing both inward and outward and having an off-set near its upper end to throw the lower portion of the bar in such relative position as to extend along the outer side of the door, and means for securing the lower end of the bar to the car below the door opening.

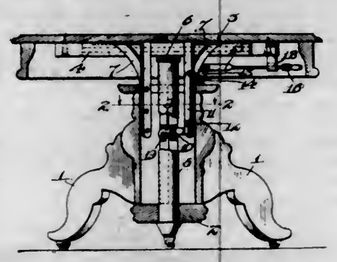
2. In a freight car having an opening in its side, the combination of a door for closing said opening, one end of the door abutting against the side of the door jamb facing the door opening, and the opposite end portion of the door resting against the side of the other door jamb facing the inner side of the car, a member hinged to the inner side of the car above the door opening and adapted to swing

inward only, a bar pivoted to the lower portion of said member to swing outward only with reference thereto and to swing inward therewith, said bar adapted to extend along the outer side of the door, and means for securing the lower end of said bar to the car below the door opening.

3. In a freight car having an opening in its side, the combination of a door for closing said opening, a member hinged at one end to the inner side of the car above the door opening and adapted to swing inward only, a bar having an off-set near its upper end and pivoted to the lower end of the said hinged member to swing outward only with reference thereto and to swing inward therewith, said bar extending along the outer side of the door, and means for securing the lower end of the bar to the car at a point below the door opening.

4. In a freight car having an opening, the combination of a door for closing said opening, a bar for securing the door and channeled in its outer side, hinged and securing member for said bar arranged in the channel or hollow side of the bar to be housed and protected thereby, and screws also arranged in the hollow side of the bar to be protected thereby and having their projecting ends pointed to form spurs to make positive engagement with the door and prevent possible slipping thereof.

881,245. LOCKING DEVICE FOR EXTENSION-TABLES. WILLIAM M. JOST, Chicago, Ill. Filed Sept. 23, 1905. Serial No. 279,846.



In a table of the class described, the combination with the separable portions of the supporting column, of a locking device comprising a curved member pivotally connected with one part of said column and having its ends provided with hooks or catches, said curved member being also provided intermediate its ends with upwardly projecting ears, a rod pivotally connected with the locking member between the ears thereof, a bell crank pivotally connected with said rod, and pivoted at the top of said column to rock in a vertical plane, said rod being straight for the greater portion of its length but curved at its upper end for connection with the bell crank, a bracket secured to the table top, a lever pivotally supported by the bracket in a horizontal position, a link pivotally connected with the bell crank and having its outer portion bent to lie in the same horizontal plane as the lever, said link being curved at its outer end toward the pivot of the lever and pivotally connected to said lever.

881,246. ART OF CONVERTING HIDES OR SKINS INTO LEATHER. ARTHUR E. KELK, Louisville, Ky. Filed Oct. 23, 1905. Serial No. 284,079.

1. In a process of converting hides or skins into leather, the step of nicotinizing the hide or skin prior to the completion of the tanning operation for the purpose specified.

2. In the manufacture of leather, the process which consists in treating a hide or skin to the action of a bath containing nicotin prior to the completion of the tanning operation.

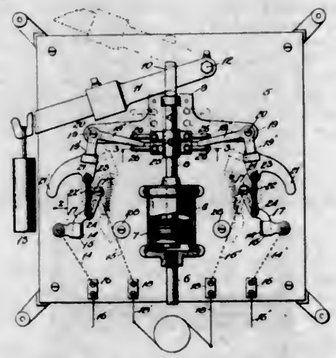
3. In the manufacture of leather, the process which consists in treating a hide or skin to the action of a bath containing nicotin and prolonging the contact of hide and solution until the hair of the hide loosens.

4. In the manufacture of leather, the process which consists in subjecting the same to a solution containing nicotin, prior to the actual tanning operation.

5. In the manufacture of leather, the process which consists in subjecting the same to a solution containing nicotin, prior to the actual tanning operation and prolonging the contact of hide and solution until the hair of the hide loosens.

[Claims 6 to 11 not printed in the Gazette.]

881,247. ELECTRIC PUMP-REGULATOR. ANDREW KOSSCHE, Chicago, Ill. Filed Sept. 13, 1907. Serial No. 392,621.



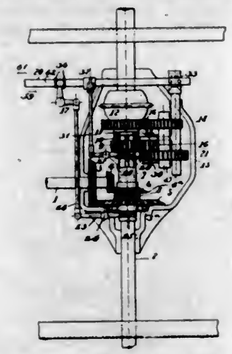
1. The combination of a movable tripper, an electric switch comprising a stationary contact and a movable contact, a two arm angle lever having one arm engaged with the tripper, a lever pivoted independently of said angle lever and carrying said movable contact and extending in the same general direction from its pivot as the other arm of said angle lever and in the several positions thereof, the fulcrum center of said angle lever being located out of line with the fulcrum center of the contact lever and the stationary contact, and a spring connected to said other arm of the angle lever and to said contact lever.

2. The combination of a movable tripper, an electric switch comprising a stationary contact and a movable contact, a lever carrying said movable contact, a two arm angle lever having one arm engaged with the tripper, a spring connected to the other arm of the angle lever and to the movable contact lever, a lug on said movable contact lever, and a projection on the angle lever to engage said lug.

3. The combination of an electric switch comprising a stationary contact and a movable contact, a lever carrying said movable contact, a two arm angle lever pivotally mounted independent of said contact lever, the fulcrum center of said angle lever being out of line with the fulcrum center of the contact lever and the stationary contact, a spring connected to said contact lever and to one arm of said angle lever, and a movable tripper for operating said angle lever and comprising a pair of fingers between which the other arm of the angle lever projects, said fingers being independently adjustable longitudinally to regulate the movement of said angle lever.

4. The combination of a pressure cylinder, a piston in said cylinder, a stem carrying said piston, a weighted lever engaged with the stem, a tripper comprising a bracket on the stem, a pair of arms spaced apart and projecting from the bracket on each side thereof, a pair of electric switches each comprising a stationary contact and a movable contact, a lever carrying the movable contact, a pair of two arm angle levers each having one arm projecting into the space between a pair of fingers, and springs connected to the movable contact levers and to the other arms of the angle levers.

881,248. CHANGE-SPEED GEARING. HUBERT LE BLON, Paris, France. Filed Jan. 31, 1907. Serial No. 355,044.



1. In combination, a driving member, high and low speed gears therefor, a driven member, a sleeve therefor loosely mounted high and low speed gears for said sleeve meshing with said first mentioned gears and provided with adjacent coupling members, an intermediate coupling member mounted on said sleeve, and means for shifting said sleeve to throw said intermediate coupling member into engagement with either of said loosely mounted gears.

2. In combination, a driving member, high and low speed gears for said member, a driven member, a sleeve for said driven member, high and low speed gears for said sleeve meshing with said first mentioned gears, means for throwing the sleeve gears into engagement with said sleeve, a load gear for said driven member, a shiftable clutch, and means engaging said clutch to operatively connect said sleeve and load gear.

3. In combination, a driving member, a driven member, an intermediate member, a primary change speed device for said driving and intermediate members, a secondary change speed device for said intermediate and driven members, means whereby direct connection may be effected between said intermediate and driven members, and a single controlling device whereby said primary and scondary change speed devices and said means may be independently adjusted.

4. In combination, a driving member, high and low speed elements therefor, an intermediate member, high and low speed elements therefore coöperating with said first mentioned elements, a clutch for throwing selected elements into engagement with said intermediate member, a driven member, a clutch for effecting direct connection between said intermediate and driven members, and a change speed device for said intermediate and driven members.

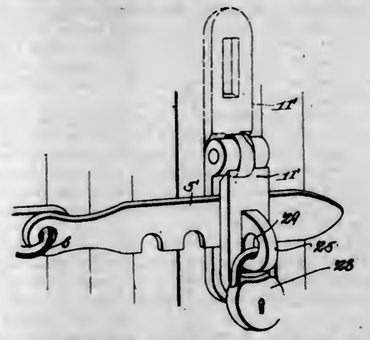
5. In combination, a driving member, a driven member, and intermediate member, a change speed device for said driving and intermediate members, and a change speed device for said intermediate and driven members, said last named change speed device being adapted to effect direct connection between said intermediate and driven members.

[Claims 6 to 23 not printed in the Gazette.]

881,249. CAR-DOOR FASTENER. GEORGE LIGHTHISER, Toledo, Ohio. Filed Feb. 23, 1907. Serial No. 358,892.

1. In a device of the class described a plate provided with a lateral projection constituting a keeper, a hasp movable into engagement with the keeper, spaced lugs carried by the plate, a latch pivotally mounted between the lugs and provided with an inclined slot for the reception of the pivot pin, and means co-acting with the exterior walls of the slot for supporting the latch in elevated position.

2. In a device of the class described a plate provided with a lateral projection constituting a keeper, a hasp adapted to engage the keeper, spaced lugs carried by the plate, a latch having a reduced extension provided with an inclined slot, a pin seated in said slot and engaging the lugs, and means co-acting with the exterior walls of the extension for supporting the latch in elevated position.

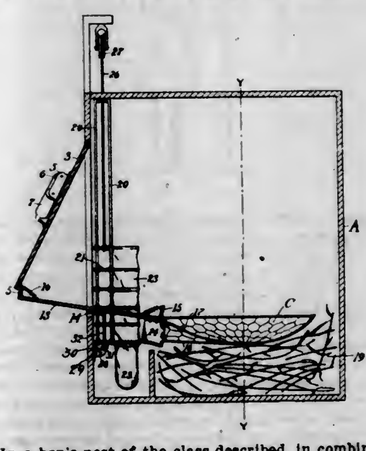


3. In a device of the class described a plate provided with a lateral projection constituting a keeper, a hasp adapted to engage the keeper, spaced lugs carried by the plate, a latch provided with an angularly disposed extension having a cam face coöperating with the exterior walls of the plate for supporting the latch in elevated position, there being an inclined slot formed in the angular extension, and a pin piercing the lugs and engaging the slot.

4. In a device of the class described a keeper provided with spaced lugs and having that portion thereof between the lugs inclined or beveled, a hasp adapted to engage the keeper, a latch provided with a reduced extension having a cam face for engagement with the inclined face of the keeper, there being an inclined slot formed in the reduced extension of the latch, and a pin carried by the lugs and engaging the walls of the slot.

5. In a device of the class described, a keeper, a hasp adapted to engage the keeper, a latch pivotally mounted on the keeper and adapted to engage the hasp, said latch being provided with an inclined slot for the reception of the pivot pin, and means co-acting with the exterior walls of the slot for holding the latch in elevated position.

881,250. HEN'S NEST. LEOPOLD S. LINDER, Mankato, Minn. Filed Oct. 12, 1906. Serial No. 338,558.



1. In a hen's nest of the class described, in combination, a tilting board, a nest frame secured to one end of the board and having a discharge runway for eggs, a plurality of sacks arranged to be carried past the discharge end of the runway, a chute bridging the space between the dis-

charge end of the runway and the sacks, and means controlled by the tilting board for bringing the sacks successively into alinement with the runway.

2. In a hen's nest of the class described, the combination, with a nest-box having an opening, of an apertured door hung from the top of the opening so as to swing in or out, and a tilting board having central pivotal support at the bottom of the opening, the door being of sufficient length to engage, and be intercepted by, the uplifted end of the tilting board.

3. In a hen's nest of the class described, the combination, with a nest frame having a laterally extending runway for eggs, of a plurality of sacks arranged to be carried past the outer end of the runway in position to receive an egg therefrom, and means controlled by the travel of a hen to and from the nest frame for imparting to the sacks a step by step movement.

4. In a hen's nest of the class described, the combination, with a tilting nest-frame having a discharge runway for eggs, of a plurality of sacks arranged to be carried past the discharge end of the runway, means actuated by a departing hen for tilting the nest-frame and means controlled by the travel of the hen for imparting to the sacks a step by step motion.

5. In a hen's nest of the class described, in combination, a tilting board, a nest frame secured to one end of the board and formed with a runway for eggs, a plurality of spaced sacks runningly supported in a vertical plane about the end of the runway, and means controlled by the tilting board for bringing the sacks in succession into registration with the runway.

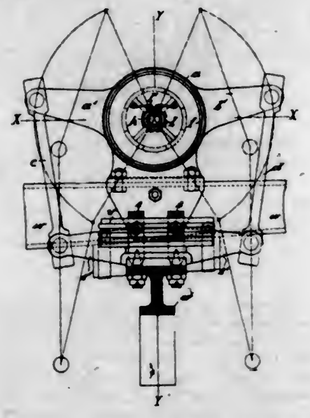
[Claims 6 to 8 not printed in the Gazette.]

881,251. CHURN. HENRY W. MABRY, Dundee, Tex. Filed Oct. 31, 1907. Serial No. 400,062.



A churn of the character specified embracing upright frame members; a horizontal drive axle, arranged at the upper ends of said frame members, the outer end of the former extending through and projecting beyond one of the latter, a drive pinion fixed to the outer end of the drive axle; a drive wheel at one end of said axle; a vertically disposed pitman connected with the drive wheel and arranged between the frame members; a dasher rod carrying a dasher; a vertically disposed connecting member pivotally connected at opposite ends between the pitman and dasher rod, and permitting lateral movement of the dasher; cross members formed with guide-opening to receive the connecting member arranged between the frame members, said cross members constituting guide means for the connecting member and connecting means for the frame members; and a vertical series of gears, rotatably sustained by one of the frame members for imparting movement to the drive pinion.

881,252. DEVICE FOR THE RELIEF OF WAGON-SPRINGS. WILHELM MAYBACH, Cannstatt, Germany, assignor to Daimler Motorengesellschaft, Untertürkheim-Stuttgart, Germany. Filed Mar. 15, 1907. Serial No. 362,481.

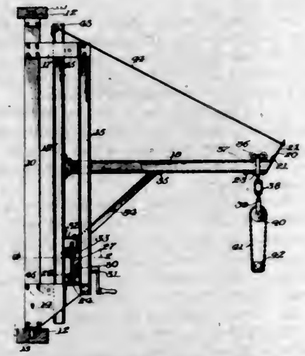


1. In a device for the relief of wagon-springs the combination of several disks placed side by side and revolving around an axis firmly attached to the carriage frame, the friction surfaces of which disks have a wave-like form and are pressed against one another by an adjacent spring coil, each disk being attached by suitable projecting arms and connection rods to the spring holder of the main wagon spring on the axial frame, so that each friction disk is shifted under increased spring pressure and thereby enlarged frictional resistance of the friction surface at a ratio of but a slight increase at the start and during the first part of the disks movement, but with a considerable increase towards the end position of the whole disk travel.

2. A device for the relief of wagon springs consisting of two disks *a* and *b*, arranged side by side and pressed against each other by means of a spring coil *k*, said disks revolving concentrically around one shaft or axis *h*, firmly attached to the carriage frame *w*, said disks being provided with friction surfaces bearing upon one another in a wave-like form, the auxiliary washers *f* and *g* placed on each side of disks *a* and *b*, each disk *a* and *b* being attached to the spring holder *e* of the main wagon spring *v* on the axle frame *w'* by means of side arms *a' b'* and connection rods *c*, *d* and projecting holder-arms *e'*, so that each friction disk is shifted under increased spring pressure and thereby enlarged frictional resistance of the friction surfaces at a ratio of but a slight increase at the start and during the first part of the disks movements but with a considerable increase towards the end-position of the whole disk travel.

3. A device for the relief of wagon-springs consisting of two disks *a* and *b* placed side by side and pressed against each other by means of a spring coil *k*, said disks revolving concentrically around one shaft or axis *h*, firmly attached to the carriage frame *w*, said disks being provided with peculiar shaped friction surfaces, of which the surface b^2 of the disk *b* is curved in form of waves, whereas the surface of disk *a* next to the one of disk *b* is even but provided with elevated portions a^2, said elevations being under normal conditions situated opposite the deep or dented parts of the surface b^2 of disk *b*, each disk *a* and *b* being attached to the spring holder *e* of the main wagon spring *v* on the axle frame *w'* by means of side arms *a' b'* and connection rods *c*, *d* and projecting holder arms *e'*, so that each friction disk is shifted under increased spring pressure and thereby enlarged frictional resistance of the friction surfaces at a ratio of but a slight increase at the start and during the first part of the disks movements, but with a considerable increase towards the end-position of the whole disk travel.

881,253. FORGING-CRANE. CHARLES J. MILLER, Chicago, Ill. Filed Nov. 21, 1907. Serial No. 403,182.



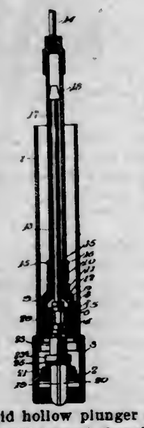
1. The combination with a pivotally mounted vertical post, of laterally extending arms or projections secured thereto near its upper and lower ends, an upright comprising two spaced-apart pieces secured to the outer ends of said projections, a vertically movable upright extended between the projections at the upper and lower ends of the post and located between the post and the upright at the outer ends of said projections, a load-supporting-arm secured at one of its ends to about the middle of the movable upright and having its other end connected to the upper portion of said upright, a box-like bracket secured to the movable upright below the supporting-arm and having on its lower portion a screw-threaded nut fixed thereto, a screw vertically mounted on the lower projections of the post and extended through said nut and into the bracket, a beveled gear on the lower portion of the screw, a crank-shaft journaled near the screw, and a beveled gear on the crank-shaft to engage the gear on the screw.

2. The combination with a pivotally mounted vertical post, of a pair of laterally extending arms or projections secured thereto near its upper and lower ends and spaced apart, an upright comprising two spaced-apart pieces secured to the outer ends of said projections, a vertically movable upright extended between the projections at the upper and lower ends of the post and located between the post and the upright at the outer ends of said projections, a roller journaled on the upper projections in front of the movable upright, a roller journaled on the lower projections at the rear of the movable upright, a load-supporting-arm secured at one of its ends to about the middle of the movable upright and having its other end connected to the upper portion of said upright, a bracket secured to the movable upright below the supporting-arm and having on its lower portion a screw-threaded nut fixed thereto, a block mounted on the upper portion of the lower projections and having on its upper surface a race, anti-friction balls located in said race, a screw provided with a base to rest on the said balls and extended upwardly through the nut on the bracket, a beveled gear on the lower portion of the screw, a crank-shaft journaled near the screw, and a beveled gear on the crank-shaft to engage the gear on the screw.

881,254. PUMP. PHILIP A. MYERS, Ashland, Ohio, assignor to F. E. Myers and Brother, Ashland, Ohio, a Copartnership. Filed Mar. 19, 1907. Serial No. 363,276.

1. In a device of the character described, the combination, with a cylinder provided with a valve seat, and a valve adapted to engage said seat and having a hollow upper portion provided with an inwardly extending shoulder, of a plunger adapted to reciprocate in said cylinder, a rod slidably connected at one end to said plunger and having its other end extending into the hollow portion of said valve and provided with a stop adapted to engage said shoulder.

2. In a device of the character described, the combination, with a cylinder provided with a valve seat, and a valve adapted to engage said seat and comprising a solid lower portion, a hollow upper portion detachably connected to said lower portion and having an aperture through the upper wall thereof, of a hollow plunger adapted to reciprocate in said cylinder, a two part rod having one part



extending through said hollow plunger and provided with means to prevent its withdrawal therefrom, and its other part extending into the hollow upper portion of said valve and provided with means to prevent its withdrawal therefrom, and means for connecting the adjacent ends of the two parts of said rod.

881,255. COMBINED PATTERN-POUCH AND SALES-CHECK. THERON MCCAMPBELL, New York, N. Y. Filed Aug. 18, 1905. Serial No. 274,783.



1. A combined pattern pouch and sales check comprising a thin flexible paper bag having a closing flap on one side of its mouth and bearing identifying printed matter on its body, a second reinforcing flap on the opposite side of said mouth, said second flap bearing printing substantially identical with that on the body of the bag, being limited by a tearing line near the mouth of the bag and being creased and turned into the bag, substantially as described.

2. A combined pattern pouch and sales check, comprising a thin flexible paper bag gummed down one side edge and having a closing flap on one side of its mouth, and a second reinforcing flap on the opposite side of said mouth, said second flap being limited by a tearing line and being so narrow as not to overlap the inner edge of the gummed area, so that said reinforcing flap may be turned inward before the bag is gummed together without danger of gumming it, substantially as described.

881,256. AUTOMATIC FIRE-SHUTTER. EDWARD H. MCCLOUD, Columbus, Ohio. Filed Feb. 25, 1907. Serial No. 359,196.



1. In combination with a fire shutter, a shutter-carrying barrel, supports therefor, a counterbalance for said shutter, means automatically acting on a dangerous rise in temperature of successively rendering the counterbalance inoperative, and re-rendering a part of said counterbalance operative.

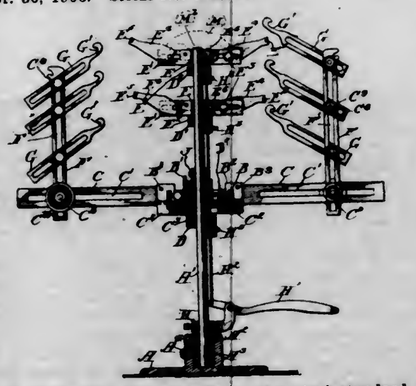
2. In combination with a fire shutter, a shutter-carrying barrel, supports therefor, a counterbalance therefor, means actuated by a rise in temperature of rendering said counterbalance inoperative, and means of subsequently rendering a portion of said counterbalance operative, and means whereby that portion of said counterbalance subsequently rendered operative, can be adjusted.

3. In connection with a fire shutter, brackets supporting a rotatable barrel, a spring counterbalance, therein, a shaft rotatable in one of said brackets, a rotatable shaft temporarily held in other said bracket; means for liberating upon a dangerous rise in temperature; the rotatable shaft temporarily held, and means of subsequently arresting the rotation of said shaft.

4. In a rolling fire shutter, a barrel for carrying said shutter, supporting brackets therefor, a rotatable shaft supported by one of said brackets, a rotatable shaft temporarily held, supported by other said bracket, a spring connecting the rotatable shaft temporarily held, and the rotatable barrel; means for automatically, upon a dangerous rise in temperature, liberating the rotatable shaft temporarily held and means adjustable for subsequently arresting the rotation of said shaft.

5. In connection with a fire shutter, a rotatable barrel with shafts projecting from the ends thereof, journaled in supporting brackets, said barrel containing a spring or springs therein, and connected thereby to one of said shafts, having fixed thereon a gear with a projecting arm; said gear engaging a gear with projecting arm, mounted on one of said brackets, and held stationary by levers, and an element fusible on a dangerous rise in temperature.

881,257. HAT-FRAME-FORMING DEVICE. JULIUS NATTENHEIMER, Chicago, Ill., assignor of one-half to E. Eiger & Bros., Chicago, Ill., a Copartnership. Filed Apr. 30, 1906. Serial No. 314,366.



1. In a hat-frame forming device, a central standard, a plurality of collars secured at different elevations on said standard, a series of independently movable arms pivoted to each collar, and a separate locking device for the arms of each collar.

2. In a hat-frame forming device, a central standard, a plurality of independently adjustable arm-holding devices secured at different elevations on said standard, a series of arms pivoted to each such holding device, and a separate locking device for each series of arms.

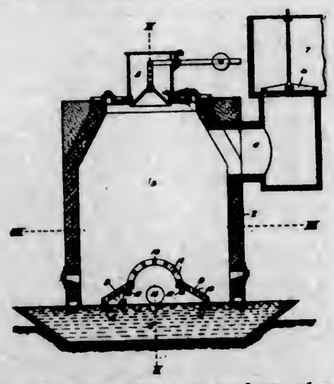
3. In a hat-frame machine, a central standard, a plurality of series of pivoted arms carried by said standard, a separate locking device for each series of arms, and connections between said locking devices whereby they may be simultaneously operated.

4. In a hat-frame machine, a central standard, a plurality of series of pivoted arms carried by said standard, means whereby said series of arms may be independently adjusted, a locking device for each series also independently adjustable, and connections by which said locking devices may be simultaneously operated.

5. In a hat-frame machine, a central standard, a plurality of sets of pivoted arms supported at different elevations on said standard, means by which the support for each set is independently adjustable on said standard, a separate locking device for each set of arms, a pivoted lever, and a rod extending from said lever to said locking devices whereby said locking devices may be simultaneously operated.

[Claims 6 to 12 not printed in the Gazette.]

881,258. GAS-PRODUCER. HUGH T. NEWELL, Wilkinsburg, Pa., assignor to Newell Engineering Company, Pittsburg, Pa., a Corporation of Pennsylvania. Filed Apr. 3, 1907. Serial No. 366,229.



1. The combination with a gas producer, of a fuel supporting grate comprising a middle rounded semi-cylindrical arch and lower sloping grates at each side thereof, substantially as set forth.

2. The combination with a gas producer, of a fuel supporting grate comprising a middle rounded arch, and lower sloping grates at each side thereof, with a clearance space between said grates and the producer wall, substantially as set forth.

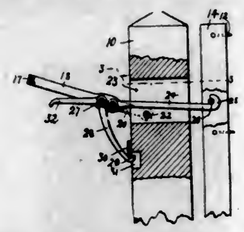
3. The combination with a gas producer, of a fuel supporting grate comprising a middle rounded semi-cylindrical arch and lower sloping grates at each side thereof, and means for introducing air and steam beneath said arch and grates, substantially as set forth.

4. A producer grate consisting of an upwardly bowed rounded arch portion, and grates sloping downwardly and outwardly at an angle from the base of said arched portion at each side.

5. A producer grate consisting of an upwardly bowed rounded arch portion, and grates sloping downwardly and outwardly at an angle from the base of said arched portion at each side, said arched portion and grates having perforating openings therein for the purpose described.

[Claims 6 and 7 not printed in the Gazette.]

881,259. GATE-FASTENER. PETER O. PETERSON, Winona, S. D. Filed Dec. 5, 1907. Serial No. 405,242.

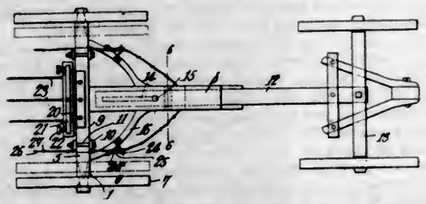


1. The combination with a gate structure and a gate post, of a lever swinging from the post, an arm swinging from the lever and with a hook at its free end adapted to detachably engage the gate, and a pawl swinging from said lever and adapted to be connected at its free end to the post and hold the lever in locked position.

2. In a device of the class described, two posts spaced apart, one of said posts having a transverse aperture, a socket connected to said apertured post, a gate comprising a plurality of spaced wires connected to the other of said posts and with the free ends coupled to a supporting structure, said supporting structure adapted to be stepped at one end in said socket, a fastening device comprising a lever formed with spaced sides and bearing upon opposite sides of said apertured post and pivoted thereto and with an arm pivoted between the sides of said lever and extending through the post aperture and adapted to detachably engage said supporting structure, and with locking means between the lever and adjacent post.

3. The combination with a gate and a gate post having a transverse aperture, a lever formed with spaced sides and bearing upon opposite sides of said apertured post and pivoted thereto and with an arm pivoted between the sides of said lever and extending through the post aperture and adapted to detachably engage said gate, and locking means between the lever and post.

881,260. SHOCK-HANDLER. GEORGE F. PETTIT, Springfield, Ill. Filed Mar. 29, 1907. Serial No. 365,428.



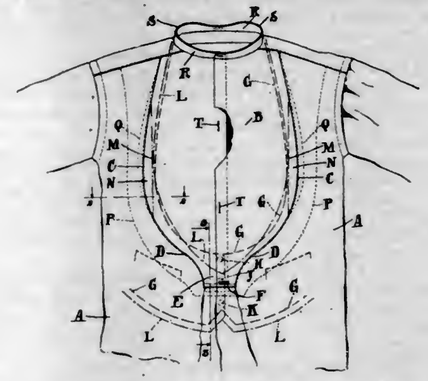
1. A shock handler comprising a wheel mounted axle, a cuff supported thereby and adapted to swing, an adjustable sill carried by the cuff, said cuff having means for engaging the shock and means for swinging the sill and cuff.

2. A shock handler comprising a wheel mounted axle, a cuff mounted thereon and adapted to swing, a cable coöperating with the cuff in retaining a shock, means for drawing said cable, clamping devices for holding said cable taut about the shock and means for swinging said cuff.

881,261. SHIRT. EDWARD J. QUIGLEY, Newark, N. J. Filed Sept. 24, 1907. Serial No. 394,276.

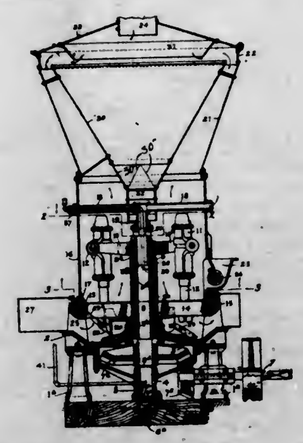
1. A shirt comprising a body portion, a shirt bosom secured to said body portion, said body portion being cut on a greater curve than the curve of the side of the shirt bosom, so that when the sides of the shirt bosom are secured to the greater curved edge of the body portion the bosom of the shirt will remain firmly in position.

2. A shirt comprising an open shirt bosom consisting of an upper and lower plait, said plaits being provided with button holes which are placed nearer the edge of the upper plait than the edge of the lower plait, an extended portion at the lower end of said shirt bosom, a plurality of plies of linen in said shirt bosom some of which extend to the full width of the bosom only at the top and bottom, the



central portions of which are less than the full width or the full length of the shirt bosom, the sides of said shirt bosom and said extended portion being cut inward and downward in an ogee curve, all of said features enabling said shirt bosom to remain in position when in use.

881,262. CENTRIFUGAL ROLLER-MILL. ALBERT RAYMOND, Chicago, Ill.; Mary M. Bartelme administratrix of said Albert Raymond, deceased. Filed Sept. 26, 1901. Serial No. 76,643.



1. In a crushing machine the combination with a main shaft, of a base plate, a bearing sleeve carried by said base plate, a bearing fitted within said sleeve, means for leading oil to said bearing, a hopper extending over said sleeve, and an overflow passage leading from said bearing to an opening through said base plate, substantially as described.

2. In a machine of the class described, the combination with the main shaft, of a base plate, a bearing-sleeve carried thereby, a bearing for the main shaft fitted with said sleeve, a hopper extending over said sleeve to said base-plate, a flange on said hub extending over said base plate, an annular groove within said base-plate, a complementary shoulder on said hub, an escape opening through the bottom of said groove, and an oil overflow passage leading

from said bearing to said escape opening, substantially as described.

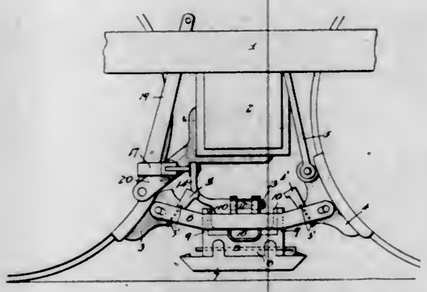
3. In a machine of the class described, the combination with the main shaft, of a spider, a journal box pivotally suspended from said spider, journal and thrust bearings mounted within said journal box, a bearing-sleeve arranged to rotate within said journal-bearing and upon said thrust bearing, a roll-shaft carried by said bearing-sleeve, a dam arranged within said sleeve and a crushing-roll mounted upon said shaft, substantially as described.

4. In a machine of the class described, the combination with the main shaft, of a spider rigidly secured thereto, a closed journal box pivotally suspended from said spider, a roll-shaft suspended within said journal-box and arranged to rotate therein, annular oil-chambers within said journal-box and surrounding said roll-shaft, bearings for said roll-shaft arranged within said oil-chambers, an overflow from one of said oil-chambers to the other, means for supplying oil to said oil-chambers, and a crushing-roll rigidly secured to the lower end of said roll-shaft, substantially as described.

5. In a crushing machine the combination with the main shaft of an air inlet conduit, a disk at the lower end of said air inlet conduit, within which is loosely fitted said main shaft and an oil supply pipe leading through said air inlet conduit, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

881,263. CAR-BRAKE. CHARLES V. ROTE and PARKE E. SHEE, Lancaster, Pa., assignors of one-third to Frederick Shoff, Lancaster, Pa. Filed June 3, 1907. Serial No. 377,099.



1. A car brake embodying a pair of wheel brake shoes, a yoke bar rigidly connecting said shoes, a rail brake shoe, and an operating device interposed between the yoke bar and rail shoe and acting simultaneously on both of said members.

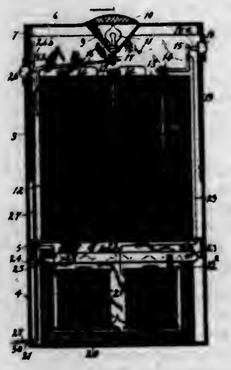
2. A car brake embodying wheel brake shoes and rail brake shoes, yoke bars connecting the wheel brake shoes in pairs, a rail shoe brake beam extending at right angles to said yoke bars, and a lever operating between the wheel brake shoes and the rail brake shoes for simultaneously throwing both sets of shoes into action.

3. A car brake embodying wheel brake shoes, a rigid yoke connecting said shoes to hold them against the wheels, rail brake shoes, a beam connecting the last named shoes, a fulcrum bar mounted on said beam and coöperating with said yoke, and means for operating said fulcrum bar.

4. A car brake embodying wheel brake shoes, yokes connecting said shoes, rail brake shoes, parallel bars connecting the last named shoes, a presser foot mounted on said bars and operating against the yokes, and means for actuating said presser foot.

5. A car brake embodying wheel brake shoes, yokes connecting said shoes, rail brake shoes, a beam connecting the last named shoes, a rock shaft journaled on said beam, a presser foot mounted fast on said shaft, a crank arm on said shaft, and operating means connected with said arm.

881,264. ELECTRIC SIGNAL DEVICE. ELIAS SCHERMERHORN, Amsterdam, N. Y., assignor of one-half to William P. McKeough, Amsterdam, N. Y. Filed Sept. 1, 1906. Serial No. 332,894.



1. A device for the purpose specified, comprising a casing open at opposite ends, closures for said open ends, a lamp mounted in one of said closures, an electro-magnet mounted in the other closure, a partition dividing the interior of the casing into two compartments, a battery arranged in one of said compartments, a plurality of circuit closers attached to the casing and adapted to make immediate contact with the opposite pole pieces of the battery, circuit wires connecting one circuit closer with said magnet, and the other circuit closer with the said lamp, and connections between the battery and the lamp and magnet.

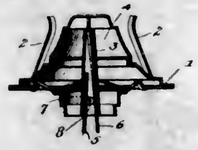
2. A device for the purpose specified, comprising a casing open at opposite ends, closures for said ends, said closures consisting of a cap for one end having a lamp mounted therein, and a cup engaging the other end, and containing an electro-magnet, a partition dividing the interior of the casing into two compartments, a battery arranged in one of said compartments, a plurality of circuit closers adapted to make immediate contact with opposite poles of said battery, connection between one circuit closer and the said lamp, circuit wires connecting the other circuit closers with the magnet, and electrical conductors connecting said battery with the lamp and the electro-magnet.

3. A device for the purpose specified comprising a casing open at opposite ends, removable closures for the ends, said closures consisting of a cap for one end and a cup engaging the other end, a lamp mounted in said cap, an electro-magnet mounted upon a frame arranged in said cup, a spring-held armature pivoted to the frame at one end and engaging an aperture in said frame by its free end, a partition dividing the interior of the casing into two compartments, a battery arranged in one of said compartments, a plurality of circuit closers adapted to complete connections with opposite poles of said battery, connection between one circuit closer and the said lamp, wires connecting the remaining circuit closers with the said magnet, and electrical conductors connecting said battery with the lamp and the electro-magnet.

881,265. LAMP-BURNER. HENRY L. SWAZEY and MEADER B. PINKHAM, Lincoln, Me. Filed May 18, 1907. Serial No. 374,400.

1. In a lamp burner, the combination of a wick tube formed with a single mouth, a plurality of wick members mounted within the tube, and means for moving the wick members alternately into the mouth of the tube, each of the wick members being of a size to completely fill said mouth.

2. In a lamp burner, the combination of a wick tube having a tapered formation and terminating at its upper end in a single mouth, a plurality of wick members mounted within the enlarged base of the tube, the said wick members being each of a size to completely fill the mouth of the tube, and means for moving the wick members alternately into the said mouth.



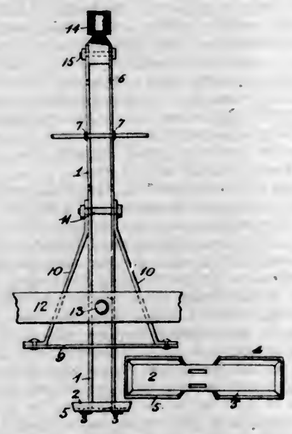
3. In a lamp burner, the combination of a wick tube having a tapered formation and terminating at its upper end in a single mouth, a shaft extending across the lower portion of the wick tube and provided with wick engaging means, and a wick member arranged within the tube upon each side of the shaft, the said wick members being designed to be alternately moved into the mouth of the wick tube and being each of such size as to completely fill the said mouth.

881,266. TENNIS-RACKET. CHARLES T. THOMPSON, Philadelphia, Pa., and FRANK P. MITCHELL, Laurel Springs, N. J. Filed July 8, 1907. Serial No. 382,586.



A tennis racket having a striking face, a solid handle, and a stem intermediate said handle and said striking face, said stem being apertured substantially throughout its length in the plane of the striking face, whereby its resiliency is increased without unduly decreasing its strength or its resistance to torsional strain.

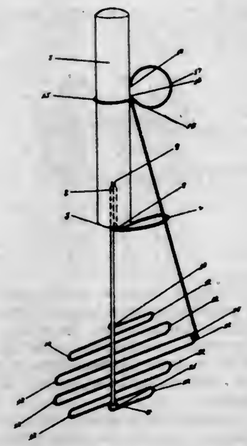
881,267. FENCE-POST. RICHARD TITSWORTH, Fort Bliss, El Paso, Tex. Filed June 14, 1906. Serial No. 321,682.



1. A fence post having longitudinally spaced apertures extending transversely therethrough and having a stationary anchor, another anchor extending laterally at right angles to and adjustable relatively to said stationary anchor and operable in conjunction therewith to clamp said post in position, brace arms extending from said adjustable anchor, and bolts adapted to pass through said arms and through one of said apertures to hold the adjustable anchor in clamped relation relatively to the stationary anchor, whereby slipping of said adjustable anchor is prevented.

2. A fence post provided with a stationary anchor having an upturned flange extending therearound, said flange being cut out at diametrically opposite points, another anchor adjustable relatively to said stationary anchor and adapted to fit in the cut-out portion of said flanges at right angles to said stationary anchor, and said adjustable anchor having braces provided with means for adjustably connecting them to the post.

881,268. COMBINATION KITCHEN UTENSIL. CHARLES R. TUSON, Windsor, Ontario, Canada. Filed Sept. 27, 1907. Serial No. 394,890.



The combination of a handle, 1, with three wires, one of such wires having one of its extremities inserted in the handle, as indicated at 2, bent and extending from the handle, at 3, continuing, to form a wire frame in the form of an isosceles triangle 3, 4, 5, 6, bent at right angles at 6, and looped to form the guide loop, 6, 7, 8, again bent at right angles at 8, to enter the handle, 1, to its extremity, 9; the second wire, formed into a coil, on an even plane, placed beneath and joined to the base, 4, 5, of the isosceles triangle of the frame, by being looped around the base, 4, 5, at its extremities, as indicated at 10 and 11; the third wire extending from, looped around and engaging with the second wire, as indicated at 13, passing through the guide loop, 6, 7, 8, of the first wire, bent at right angles at the point 14, then looped to encircle the handle, as indicated at 14, 15, 16, then finally bent circular to form the loop, as indicated at 16, 17, 18, at right angles to the plane of the loop, 14, 15, 16; the second and third wires being adjustable, by moving the encircling loop, 14, 15, 16, up or down the handle, 1, to change the relation of the plane of the coil of the second wire, as required, substantially as described, and for the purposes specified.

881,269. DEVICE FOR STRETCHING THE STRINGS OF MUSICAL INSTRUMENTS. JOHANNES W. VAN HOUTEN, Amsterdam, Netherlands. Filed Feb. 4, 1907. Serial No. 355,656.

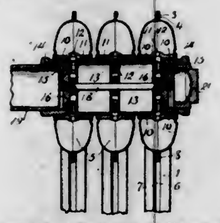
In a device for stretching the strings of musical instruments, in combination, a small handle of suitable form, a pin fixed with one end on said handle, a small roller journaled on the said pin, and a groove of semi-circular cross-

section on the periphery of the said roller, said grooved roller being adapted to be inserted under the strings of a



musical instrument, substantially as shown and for the purpose set forth.

881,270. SHEET-METAL-RADIATOR MANUFACTURE. THOMAS H. WALKER, Kansas City, Mo. Filed Feb. 8, 1907. Serial No. 356,447.



1. In a sheet metal radiator, a radiator section comprising two sheets of metal having bosses formed therein respectively, one bosa fitting within the other, a depression in one sheet forming a flue space encircling the boss in said sheet, the outer edges of the sheets being locked together, and the bosses being upset so that they interlock at their peripheries.

2. A radiator section, comprising two sheets of metal having bosses formed therein, one boss fitting within the boss of the opposite sheet, each sheet having therein a depression encircling the boss in said sheet, said depressions forming a flue space, the outer edges of the sheets being locked together, and the bosses being upset so that they interlock at their peripheries.

3. A sheet metal radiator section comprising two sheet metal parts having respectively two bosses fitted one within the other, both bosses being closed and interlocked with each other, one part having a depression encircling the boss, the other part covering said depression, and the outer edges of the parts being tightly joined to each other.

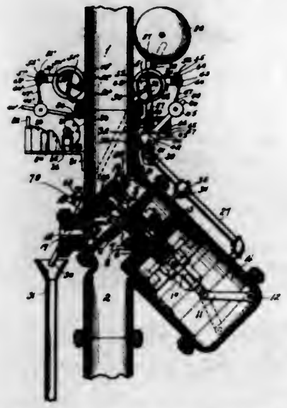
4. A sheet metal radiator section comprising two sheets of metal having respectively two bosses fitted one in the other, both bosses being closed and interlocked with each other, each sheet having a depression encircling the boss, the depressions forming a fine space, and the outer edges of the sheets being joined tightly with each other.

5. A sheet metal radiator section comprising two metal sheets having respectively two bosses fitted one in the other, both bosses having closed ends and interlocked at their peripheries, each sheet having a depression encircling the boss, the depressions of the sheets forming a flue space, and the outer edge of one sheet overlapping the outer edge of the other sheet.

[Claims 6 to 20 not printed in the Gazette.]

881,271. FIRE-PROTECTIVE SYSTEM. THOMAS H. WALKER, Kansas City, Mo. Filed July 8, 1907. Serial No. 382,731.

1. In a fire protective system, the combination with a water main having two chambers and a passage connecting said chambers, one chamber having a cylinder closed at one end and communicating at the other end with said chamber, of a valve normally disconnecting said passage from one of said chambers, a piston movable lengthwise in said cylinder, means connected with the piston for actuating said valve, a by pass connected with said passage and with the cylinder chamber at opposite ends of said piston, and means actuated by variation of pressure in the other chamber for controlling the flow of water through said by pass.



2. In a fire protective system, the combination with a water main having two chambers and a passage connecting said chambers, one chamber containing a partial vacuum, the other chamber having a cylindrical portion closed at one end and communicating at the other end with the said chamber, of a valve for disconnecting said passage from one of said chambers, a piston mounted in said cylindrical portion, means connected with the piston for actuating said valve, a by pass connected with said passage and with said cylindrical portion at opposite ends of said piston, and means actuated by increase of pressure in the partial vacuum chamber for controlling the flow of water through said by pass.

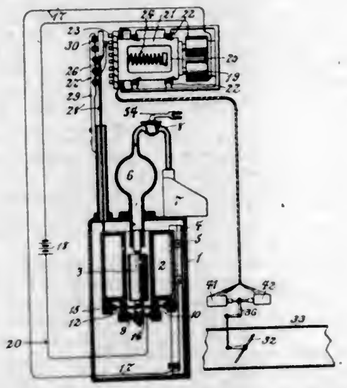
3. In a fire protective system, the combination with a water main having two chambers and a passage connecting said chambers, one chamber normally containing a partial vacuum and the other chamber having normally water therein under pressure, of a valve disconnecting said passage from one of said chambers, a piston mounted in said water containing chamber, means connected with the piston for actuating said valve, a by pass connected with said passage and to the water containing chamber at opposite ends of said piston, and means regulatable to operate at different pressures and actuated by increase of pressure in the partial vacuum chamber for controlling the flow of water through said by pass.

4. In a fire protective system, the combination with s water main, having two chambers and a passage connecting them, one chamber normally containing air, the other chamber normally containing water under pressure, of a piston mounted in the latter chamber said chamber being closed at one end of the piston, a by pass connecting with said passage and with the water chamber at opposite ends of said piston, a valve controlling the flow of water through the by pass to said passage, means actuated by variation of pressure in the air chamber for controlling the opening of said valve, two valves respectively controlling communication between said two chambers and said passage, one of said two valves being actuated by said piston, said passage having an outlet, and a valve controlling said outlet and movable to the open position by one of said two valves.

5. In a fire protective system, the combination with a water main having a chamber normally containing water under pressure and provided with a pocket, an air containing chamber and a passage connecting said two chambers, said passage having an outlet intermediate its ends, of a valve for closing said outlet, two valves for respectively closing the ends of said passage, a piston reciprocative in said pocket and controlling the movement of one of said two valves, a by pass connected with said passage and with said pocket at opposite ends of said piston, a valve in said by pass for controlling the flow of water therethrough into said passage, and means actuated by a variation in pressure in the air containing chamber for controlling the opening of said by pass valve.

[Claims 6 to 14 not printed in the Gazette.]

881,272. AUTOMATIC DRAFT-REGULATOR. HENRY J. WESTOVER, New York, N. Y. Filed Jan. 8, 1907 Serial No. 351,318.



1. A draft regulator, a plurality of independent prime movers for operating the same, a source of stored up energy, means for storing furnace gas and absorbing CO_2 therefrom and a device controlled by the residual gas for placing said source of energy in communication with one or another of said prime movers, substantially as described.

2. A boiler, a furnace and a draft regulator; in combination with two motive mechanisms for said regulator, means controlled as to operation by variations in steam pressure for controlling one of said motive mechanisms and means operated by variations in percentage of CO_2 in the furnace gases for controlling the second motive mechanism, substantially as described.

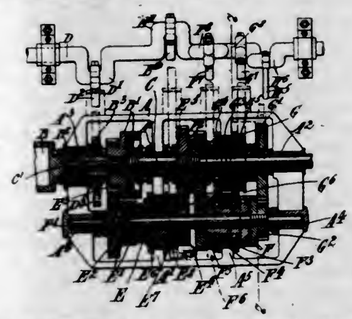
3. A draft regulator, a number of separately operative electro-magnetic prime movers therefor, and normally stationary mechanical means for transmitting motion from said prime movers to said shaft regulator; in combination with separate circuit closing elements connected respectively to said separately operative prime movers, means for storing furnace gas and absorbing CO_2 therefrom and means controlled by the residual gas after absorption for selecting and closing circuit through one or another of said circuit closers for setting in operation one or another of said prime movers, substantially as described.

4. A furnace, a draft regulator therefor, a solenoid core operatively connected to said regulator, a number of solenoid coils for said core, a multiple switch for said coils, a gas-analyzing apparatus adapted to receive gas from the furnace, and a connection between said analyzing apparatus and said switch for selectively operating the latter by the movement of the former, substantially as described.

5. A boiler, a furnace and a draft regulator, in combination with two sets of solenoid coils, a magnetic core controllable thereby and operatively connected to said draft regulator, means operated by variations in steam pressure for closing circuit through one of said sets of solenoid coils and means controlled as to operation by variations in percentage of CO_2 in the furnace gases for closing circuit through the second set of solenoid coils, substantially as described.

[Claims 6 to 27 not printed in the Gazette.]

881,273. GEARING. CHARLES WICKSTEED, Kettering, England. Filed Aug. 9, 1906. Serial No. 329,937.



1. In speed gearing the combination of, two clutches each having a part movable axially into and out of engagement with its coöperating part, a rotatable operating shaft (D) having two eccentric bodies thereon, means for operatively connecting one eccentric body with the axially movable part of one clutch in such manner that rotary movement of the shaft imparts axial movement to the clutch part, means for operatively connecting the second eccentric body with the axially movable part of the second clutch in such manner that rotary movement of the shaft produces axial movement of this second clutch part, substantially as set forth.

2. In speed gearing the combination of, two clutches each having a part movable axially into and out of engagement with its coöperating part, a rotatable operating shaft (D) having two eccentric bodies thereon, means for operatively connecting one eccentric body with the axially movable part of one clutch in such manner that rotary movement of the shaft imparts axial movement to the clutch part, means for operatively connecting the second eccentric body with the axially movable part of the second clutch in such manner that rotary movement of the shaft produces axial movement of this second clutch part, the angular position of one of the eccentric bodies on the shaft relatively to the other being such that when the shaft is turned to cause one body to throw its connected clutch part into engagement the other is moved to bring its connected part out of engagement, substantially as set forth.

3. In speed gearing the combination of, two clutches each having a part movable axially into and out of engagement with its coöperating part, a screw-threaded sleeve carried on one of the axially movable clutch parts, means for holding the sleeve against endwise movement on the clutch part but permitting it to rotate freely thereon, a stationary screw-threaded part engaging the thread on the sleeve, a pinion carried by the sleeve, a rack engaging the pinion, a screw-threaded sleeve on the second axially movable clutch part, means for holding this sleeve against endwise movement on the clutch part but permitting it to rotate freely thereon, a stationary screw-threaded part engaging the thread on this sleeve, a pinion carried by this sleeve, a rack engaging the pinion, a rotatable operating shaft (D) having two eccentric bodies thereon, means for operatively connecting one of the eccentric bodies to the first of the aforesaid racks, and means for operatively connecting the second eccentric body to the second of the aforesaid racks, substantially as set forth.

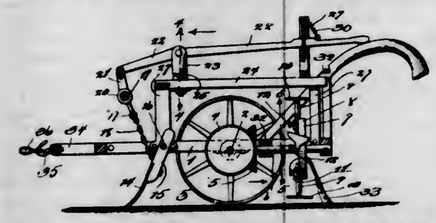
4. In speed gearing the combination of, a driving shaft, a driven shaft, a clutch part carried fast on one of these shafts, a corresponding clutch part carried by the other shaft and movable axially into engagement with the first part, gearing intermediate the driving and driven shafts, including a clutch having a member movable axially to operatively connect the driving and driven shafts through said intermediate gearing or disconnect the same, a rotatable operating shaft (D) having two eccentric bodies thereon, means for operatively connecting one eccentric body with the axially movable part of the first of the aforesaid clutches in such manner that rotary movement

of the shaft imparts axial movement to the clutch part, means for operatively connecting the second eccentric body with the axially movable part of the second of the aforesaid clutches in such manner that rotary movement of the shaft produces axial movement of this second clutch part, the angular position of one of the eccentric bodies on the shaft relatively to the other being such that when the shaft is turned to cause one body to throw its connected clutch part into engagement the other is moved to bring its connected clutch part out of engagement, substantially as set forth.

5. In speed gearing the combination of, a main driving shaft, a main driven shaft axially alined therewith, a clutch part carried fast on one of these shafts, a corresponding clutch part in operative engagement with the other shaft and movable axially into engagement with the first part, a counter-shaft parallel to the driving and driven shafts, a toothed wheel fast on the driving shaft, a toothed wheel fast on the driven shaft, a toothed wheel fast on the counter-shaft and meshing with one of the previously mentioned wheels of the main shafts, a second toothed wheel free on the counter-shaft and meshing with that wheel of the main shafts not engaged by the first-mentioned wheel on the counter shaft, a clutch part fast on this wheel, a corresponding clutch part carried by the counter-shaft and operatively engaged therewith, one of these clutch parts being movable axially, a rotatable operating shaft (D) having two eccentric bodies thereon, means for operatively connecting one eccentric body with the axially movable part of one of the aforesaid clutches in such manner that rotary movement of the shaft imparts axial movement to the clutch part, means for operatively connecting the second eccentric body with the axially movable part of the second clutch in such manner that rotary movement of the shaft produces axial movement of this second clutch part, the angular position of one of the eccentric bodies on the shaft relatively to the other being such that when the shaft is turned to cause one body to throw its connected clutch part into action the other is moved to bring its connected clutch part out of action, substantially as set forth.

[Claims 6 to 11 not printed in the Gazette.]

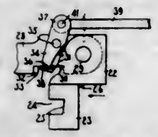
881,274. COTTON-CHOPPER. JOHN S. WILLIAMS, Commerce, Tex. Filed July 17, 1906. Serial No. 326,632.



1. In a cotton cultivator, the combination of a frame; a drive shaft journaled therein; driving wheels therefor; a plurality of cultivator blades pivoted to the frame; a lever pivoted and swiveled to the frame and provided with a link at one end, having a sleeve; a flexible frame, a portion of which being slidable in said sleeve and provided with chain connections with the cultivator blades; a plurality of racks for holding said lever in adjusted position as and for the purpose specifically set forth.

2. In a cotton cultivator, the combination of a frame; a drive shaft journaled therein; driving wheels therefor; a plurality of cultivator blades pivoted to the frame; a lever pivoted and swiveled to the frame, and provided with a link at one end, having a sleeve; a flexible frame, a portion of which, being slidable in said sleeve and provided with chain connections with the cultivator blades; a plurality of racks for holding said lever in adjusted position for the purpose specifically set forth, and a revolving cutter having gear connections with the said drive shaft as and for the purpose specifically set forth.

881,275. TYPE-WRITING MACHINE. FRANK A. YOUNG, Syracuse, N. Y., assignor to The Monarch Typewriter Company, Syracuse, N. Y., a Corporation of New York. Filed Jan. 26, 1904. Serial No. 190,668.



1. In a typewriting machine, the combination of a type bar, a key actuated sub-lever, a locking lever connected with the sub-lever and operative to swing the type bar to its printing position; and a fixed catch with which the locking lever engages, said catch being on a part of the machine which is immovable by the action of said locking lever on the type bar, and said locking lever being movable from the catch before said lever acts to impart motion to the type bar.

2. In a typewriting machine, the combination with a type bar, of a latch operative to engage a fixed catch, and key actuated mechanism pivotally secured to said latch.

3. In a typewriting machine, the combination with a type bar, of a type bar locking and actuating latch operative to engage a fixed catch, and key actuated mechanism pivotally secured to said latch.

4. In a typewriting machine, the combination with a type bar, of a latch operative to engage a fixed catch, and a key-actuated link pivotally secured to said latch.

5. In a typewriting machine, the combination with a type bar, a type bar locking and actuating lever operative to swing the type bar from its normal position to its printing position with one end of the lever in contact with the type bar a fixed catch with which the locking lever engages, a sub-lever pivotally connected to the other end of said first mentioned lever, and means including a key for actuating said sub-lever.

[Claims 6 to 43 not printed in the Gazette.]

881,276. ADJUSTABLE DRAWING-BOARD. WILHELM ZÖRNSCH, Cologne, Germany. Filed July 31, 1906. Serial No. 328,558.



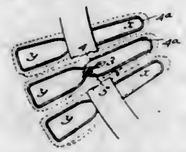
1. The combination with a drawing board, of a support hinged at one end to the back of the board, a longitudinally adjustable flexible connection between the free end of the support and the board, and braces of different length adapted to secure the board and the support in the different angular positions determined by the length of the flexible connection.

2. The combination with a drawing board, of a support hinged at one end to the back of the board, a band of adjustable length connecting the free end of the support and the board, and a plurality of flaps of different length hinged at one end to the support and having their other ends adapted to rest against the back of the board to secure the support and the board in the different angular positions determined by the length of the band.

881,277. GARMENT-HANGER. JAMES M. ACHESON, Portland, Oreg. Filed Mar. 27, 1907. Serial No. 364,926.

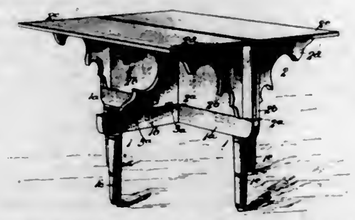
1. A garment hanger comprising a hanger body having an increasing width from one end to the other and a suspension member for said body.

2. A garment hanger formed of a wire bent to form a hanger body of gradually increasing width from one end to the other, having a portion extended centrally from the body and bent to form a suspension shank and hook.



3. As a new article, a garment hanger consisting of a wire strand looped upon itself, twisted and bent into a shank and hook portion, the free ends of the wire being extended in opposite directions from the shank and bent into hanger arms, said arms being in alinement and of gradually increasing width, beginning from the outer end of one arm and ending at the outer end of the other arm, for the purpose specified.

881,278. COMBINATION TABLE AND FITTING-STAND. JAMES M. ACHESON, Portland, Oreg. Filed Mar. 28, 1907. Serial No. 365,098.



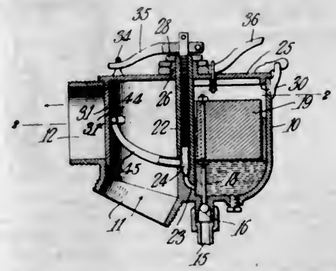
1. In an apparatus of the class described, a support, combined with a pair of sections hingedly secured thereto, said sections each comprising a pair of boards secured at right angles to one another, one of said boards of each section being hinged to said support longitudinally, means for bracing said sections, means for securing said sections in one position with their hinged boards abutting one another, said sections being arranged to be independently moved on their hinges whereby one section may be swung down while the other section remains in its table forming position, to form a fitting stand, substantially as shown and described.

2. An apparatus of the class described, comprising a pair of cross beams, legs for supporting said cross beams, a pair of sections each consisting of boards secured substantially at right angles to one another by means of angle braces, one of said boards for each section being pivotally secured to one of the cross beams, and folding braces each hinged to the other cross beam and adapted when raised to support one of said sections in an upright position.

3. An apparatus of the class described, comprising a support consisting of a pair of cross beams held at substantially right angles to one another, legs upon which said cross beams are mounted, a pair of sections each consisting of a pair of boards secured at right angles to one another, means for hingedly securing one of the boards of each section to one of the cross beams along their longitudinal edges, and means whereby the sections may be held in raised position with the faces of their said hinged boards in contact, the remaining boards of the sections lying in the same plane to form a table, the said other cross beam being in position to support either section when in lowered position, substantially as shown and described.

4. An apparatus of the class described, comprising a support consisting of a pair of cross beams held at substantially right angles to one another, legs upon which said cross beams are mounted, a pair of sections each consisting of a pair of boards secured at right angles to one another, means for hingedly securing one of the boards of each section to one of the cross beams along their longitudinal edges, means whereby the sections may be held in raised position with the faces of their hinged boards in contact, the remaining boards of the sections lying in the same plane to form a table, and means whereby said holding means may be disengaged from either section to permit said section being swung on its pivot into another position with its respective boards held in planes at right angles to the planes containing such boards when in their table forming position, and thereby form a fitting stand, substantially as shown and described.

881,279. CARBURETER FOR INTERNAL-COMBUSTION ENGINES. PERRY ALLEN, Flint, Mich. Filed May 31, 1907. Serial No. 376,533.



1. In a carbureter, a casing having an air passage provided with ports in both ends, a gate valve controlling the discharge port, a fuel supply pipe having a plurality of discharge ports facing the gate valve and under the control of said gate valve, a second valve controlling the quantity of fuel passing into the supply pipe, and means for connecting the two valves for mutual movement.

2. A carbureter having an air port, a gasolene pipe having a plurality of discharge ports, a valve controlling all of said ports, a second valve controlling the quantity of gasolene passing to the gasolene pipe, and means for connecting the two valves for mutual movement.

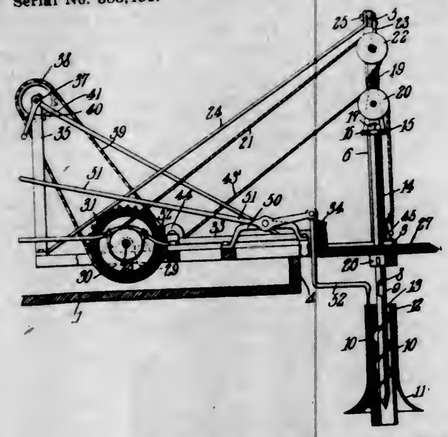
3. In a carbureter, a casing, a partition dividing the casing into a gasolene compartment, and an air passage, there being ports at both ends of said passage, a valve controlling the flow of air through the passage, said valve being held from full closing movement, a gasolene supply pipe having a plurality of feed openings also under the control of the valve, one of said openings being constantly uncovered to permit the formation of a starting charge, a second valve for controlling the quantity of gasolene passing into the supply pipe, and means for connecting said valves for mutual movement.

4. In a carbureter, a casing, a partition arranged in the casing and dividing the same into a gasolene compartment and an air passage, there being ports at both ends of the passage, a feed pipe in communication with the gasolene compartment, a float valve controlling the liquid level in the compartment, a gate valve controlling the quantity of air passing through the carbureter, a gasolene supply pipe leading from the compartment and provided with a plurality of discharging perforations adjacent to and controlled by said gate valve, a second valve for controlling the quantity of gasolene passing into the supply pipe, and means for connecting said valves for mutual movement.

5. In a carbureter, a casing, a partition dividing the casing into a gasolene compartment, and an air passage, there being ports at both ends of the passage, a float valve for regulating the liquid level in the compartment, a gate valve controlling the outlet port of the passage, a revoluble cap forming the top of the carbureter and carrying the valve, a gasolene feed pipe leading from the compartment and provided with a number of discharging perforations under the control of the gate valve, a needle valve controlling the quantity of gasolene passing through said pipe, and means for connecting the two valves for mutual movement.

[Claim 6 not printed in the Gazette.]

881,280. POST-HOLE DIGGER. JOHN P. ANDERSEN and EDWARD G. DEAN, Naper, Nebr. Filed July 12, 1907. Serial No. 383,491.



1. In a post-hole digger, a suitable supporting frame, hollow uprights at one end thereof, an auger, an auger guide below the uprights, rods fast to the auger guide and entering the hollow uprights, and means for moving said guide in a vertical plane.

2. In a post-hole digger, an earth-auger, a guide through which the auger is movable, and an earth-deflector exterior to the guide, said deflector being spaced at its lower end from said guide to receive the earth elevated by the auger and to divert it from the bore produced by said auger.

3. In a post-hole digger, an earth-auger, a guide therefor, a deflector exterior to the guide and flaring at its lower end for receiving the dirt elevated by the auger and for diverting the same away from the post-hole, and means for elevating and depressing said guide and deflector.

4. In a post-hole digger, an earth auger, means for rotating the same comprising a gear train receiving power at one end and engaging the auger at the other end, a rope or cable having a connection at one end to a fixed portion of the machine, a pulley acting on the auger and over which the rope or cable passes, a drum receiving the other end of said rope or cable, and means for moving the drum into frictional engagement with the driving gear for bringing pressure to bear upon the auger to drive it into the earth.

5. In a post-hole digger, an earth-auger, means for rotating the same comprising a gear train receiving power at one end and engaging the auger at the other end, a rope or cable having a connection at one end to a fixed portion of the machine, a pulley acting on the auger and over which the rope or cable passes, a drum receiving the other end of said rope or cable, means for moving the drum into frictional engagement with the driving gear for bringing pressure to bear upon the auger to drive it into the earth, another rope or cable connected to the auger, another drum receiving said second rope or cable, and means for moving the second drum into frictional engagement with the driving means for lifting the auger out of the ground.

[Claim 6 not printed in the Gazette.]

881,281. UNDERFRAME FOR CARS. JAMES S. ANDREWS, New York, N. Y. Filed Sept. 27, 1907. Serial No. 394,790.

1. In a sectional underframe for cars, the combination of two sections arranged end to end and provided with a side channel at their abutting ends larger at one end than at the other, and a tie plate larger at one end than at the other secured in said channel and overlapping said ends.

2. In a sectional underframe for cars, the combination of two sections arranged end to end and provided with a side channel at their abutting ends, said channel being formed by top and bottom flanges on the sections and being wedge shaped longitudinally, and a wedge plate secured in said channel and overlapping said ends.



3. In a sectional underframe for cars, the combination of two sections arranged end to end and provided with a side channel at their abutting ends, said channel being formed by top and bottom flanges on the sections and being wedge shaped longitudinally, and a wedge shaped channel plate secured in said channel and overlapping said ends.

4. In a sectional underframe for cars, the combination of two sections arranged end to end and provided with a side channel at their abutting ends, said channel being wedge shaped longitudinally, a wedge plate secured in said channel and overlapping said ends, a flat face plate overlapping said ends on the outer side thereof, and fastening devices passing through said plates and sections to secure all the parts together.

5. In a sectional underframe for cars, the combination of two sections arranged end to end and provided with a wedge shaped channel on one side thereof at their ends, a wedge plate secured in said channel, a flange on the outer side of said sections, said flange being cut away at the joint, and a face plate secured to the sections over the joint and in the cut-away part of the flange.

[Claims 6 and 7 not printed in the Gazette.]

881,282. WINDOW OR LIKE SCREEN. CHARLES C. ARMSTRONG, Marysville, Ohio. Filed Oct. 6, 1906. Serial No. 337,805.



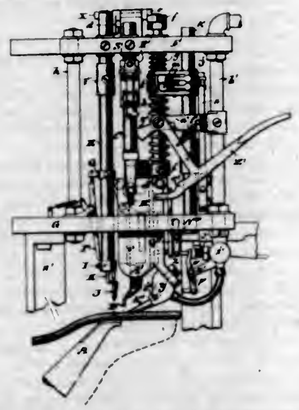
1. In combination, a screen composed of the main frame members, movable clamping members having mitered ends cut-away, and a filling piece arranged in the space left by the cut-away portions of the movable clamping members, substantially as described.

2. In combination in a screen, the main frame composed of members having a channel with an overhanging portion, the movable clamping members having pivotal movement in relation to the said main frame members and having mitered ends cut-away, and a filling piece in the space left by these cut-away portions, substantially as described.

3. In combination with the main frame members the clamping members mitered at the corners and cut off and fitting within a portion of the main frame members, and a filling piece abutting against the ends of the clamping members and having a face portion forming a continuation of faces of the clamping members, substantially as described.

881,283. SEWING-MACHINE. WILLIAM F. AANDT and HENRY M. HAMILTON, Watertown, Wis. Filed Feb. 11, 1907. Serial No. 356,677.

1. In a sewing-machine having a reciprocative needle and work-supporting horn, the combination of a spring-controlled water-feed presser-foot, automatic means for lifting the presser-foot at timed intervals, wings extending from the presser-foot bar, a slotted awl-bar fitted between the wings, a horizontally reciprocative block in connection with the awl-bar, and a vertically reciprocative plunger in engagement with the awl-bar slot.



2. In a sewing-machine having a reciprocative needle and work-supporting horn, the combination of a spring-controlled water-feed presser-foot, automatic means for lifting the presser-foot at timed intervals, wings extending from the presser-foot bar, a slotted awl-bar fitted between the wings, a horizontally reciprocative block in connection with the awl-bar, and a vertically reciprocative plunger in engagement with the awl-bar slot.

3. In a sewing-machine, a reciprocative needle, a reciprocative work feeding mechanism, and a rotative work supporting horn; the combination of a cam rotative with the horn, and mechanism connecting the cam and reciprocative work feeding mechanism, whereby the stroke of said feed-mechanism is regulated relative to the position of the horn.

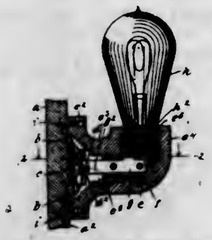
4. In a sewing-machine, having a reciprocative needle and work-supporting rotative horn, the combination of a spring-controlled water-feed presser-foot, automatic means for lifting the presser-foot at timed intervals, wings extending from the presser-foot bar, an awl-bar fitted between the wings, a horizontally reciprocative block in connection with the awl-bar, a horizontal slot in said awl-bar, a vertically reciprocative plunger in engagement with the slot, a movable plate interposed between said wings in the path of travel of the awl-bar, a cam mounted on the work-supporting horn, and means in connection with the cam and plate whereby the position of the latter is changed when the horn is moved to a predetermined point.

5. In a shoe-sewing machine, upper and lower bed-plates, a spring-pressed presser-foot bar guided in the upper bed-plates, means for regulating the spring-pressure of the presser-foot, means for lifting said presser-foot at timed intervals, wings provided with vertically disposed slots extending from the presser-foot bar, a guide for the wings in the lower bed-plate, an awl-head provided with a horizontally disposed slot fitted between the wings, a pin in engagement with the awl-head and wing-slots, a plunger secured to the pin exterior of the wings, an opening in one of the wings, a rib extending from said awl-head through the opening in the wing, a reciprocative block guide in the lower bed-plate, and a vertically disposed groove in the block into which the rib of the aforesaid awl-head is fitted.

[Claims 6 to 11 not printed in the Gazette.]

881,284. WALL-BRACKET FOR ELECTRIC LIGHTS. WILLIAM R. ATKINSON, New York, N. Y. Filed Apr. 23, 1907. Serial No. 369,805.

1. A bracket attachment for electric lights adapted to be used in connection with a molding having grooves for electric cables, comprising an insulating block secured between said grooves and provided with side plates having outwardly directed spring arms and with which the wires in said cables are connected, and a bracket or socket member adapted to be secured to said molding and to inclose said block and provided with a head having a socket to receive the neck of an incandescing electric light bulb, said bracket member being also provided with an insulating block having side plates provided with spring arms adapted to engage the first named spring arms and provided with contact devices which range transversely of the bottom of said socket.



2. A bracket attachment for electric lights adapted to be used in connection with a carrier having grooves for electric cables, comprising an insulating block secured between said grooves and provided with side plates to which the wires in the cables are attached, said side plates being provided with outwardly directed spring arms, and a bracket member comprising a base member adapted to be secured to said carrier and provided with a head having a socket adapted to receive the neck of an electric light bulb, said bracket member being provided with a chamber adapted to receive said insulating block and in which is secured another insulating block provided with side plates having spring arms adapted to engage the spring arms of the insulating block secured to the carrier, and said plates being provided with contact devices which overlap the surface of the last named insulating block in the bottom of said socket.

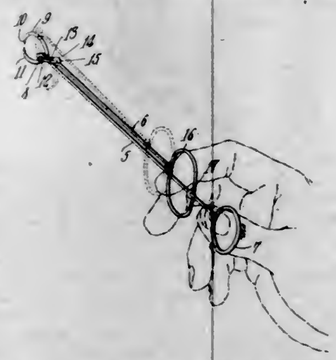
3. A bracket attachment for electric lights adapted to be used in connection with a carrier provided with grooves through which electric cables are passed, said carrier being provided with an insulating block which is secured between said grooves and provided at its opposite sides with plates with which the wires in said cables are connected, said plates being provided with outwardly directed spring arms, and a bracket member adapted to be secured to said carrier and provided with a head having a socket adapted to receive the neck of an incandescing electric light bulb, said bracket being also provided with an insulating block having side plates provided with spring arms adapted to engage the spring arms of the plates secured to the first named insulating block, and said last named plates being also provided with contact devices which extend inwardly across the bottom of the socket.

4. A bracket attachment for electric lights adapted to be used in connection with a carrier provided with grooves for electric cables, comprising an insulating block secured between said grooves and provided with side plates to which the wires in the cables are secured, said side plates being provided with outwardly directed spring arms, and a bracket member adapted to be secured to said carrier and provided with a plurality of sockets adapted to receive the necks of incandescing electric light bulbs, said bracket being also provided with an insulating block to the opposite sides of which are secured metal plates having spring arms adapted to engage the arms of the plates secured to the first named insulating block and provided with contact devices which range transversely of the inner end of said sockets.

5. An attachment for electric lights adapted to be connected with the molding strip having grooves for electric cables, said attachment comprising an insulating block adapted to be secured between said grooves and provided

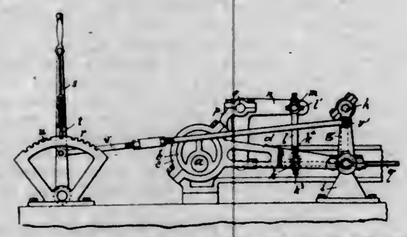
with side plates having outwardly directed spring arms and with which the wires in said cables are connected, and a bracket member having a base portion adapted to be secured to said molding strip and to inclose said insulating block and provided with a head having a socket adapted to receive the neck of an incandescing electric light bulb, said electric light member being also provided with an insulating block having side plates provided with spring arms adapted to engage the first named spring arms and provided with contact devices which range transversely of the bottom of said socket.

881,285. PICKLE-FORK. HENRY BABIN, Lafourche Crossing, La., assignor of one-third to Arthur J. Richard and one-third to Albert Bergeron, Lafourche Crossing, La. Filed June 20, 1907. Serial No. 379,983.



A pickle fork including a relatively stationary member comprising a rod one end of which is bent to form a terminal finger loop and its opposite end twisted to form an inwardly extending coil terminating in a stationary segmental jaw having a piercing point, a relatively movable member comprising a rod having one end thereof formed with a terminal eye and its opposite end bent laterally to provide an elongated loop, that wall of the elongated loop adjacent the finger loop being provided with a centrally disposed eye for the reception of the rod of the stationary member, a movable segmental jaw pivotally connected with the jaw of the stationary member and having one end thereof provided with a piercing point and an intermediate portion offset and extended through the coil to form the pivotal axis of said jaws and thence extended longitudinally to form an arm having a terminal eye disposed in alinement with the coils for pivotal connection with the rod of the movable member, that portion of the movable jaw on opposite sides of the offset thereof being disposed in contact with the coil of said stationary member.

881,286. VALVE-GEAR FOR STEAM-ENGINES. ABNER D. BAKER, Swanton, Ohio. Filed Sept. 7, 1905. Serial No. 277,307.



1. In a valve-gear for controlling the admission and exhaust valve of a steam engine, an eccentric and eccentric-rod, a valve-rod, connections intermediate the eccentric-rod and the valve-rod, a rock-arm, a link or hanger pivotally connected with the rock-arm, pivotal connections between the link and the eccentric-rod, means in said pivotal connections consisting of an eccentric for the adjustment of the link with the eccentric rod, and means for controlling the position of the rock arm.

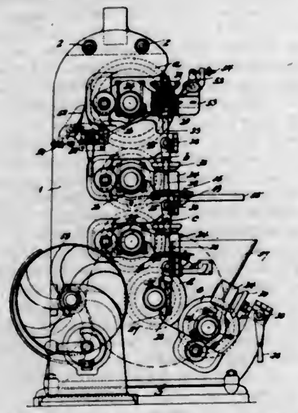
2. In a valve-gear for steam engines, an eccentric and eccentric-rod, a valve-rod for connection with the valve, a bell-crank connected with the valve-rod, a link pivotally connected at one end with the bell-crank, a pivotal connection between the other end of the link and the eccentric-rod, and means consisting of an eccentric for the adjustment of said latter pivotal connection.

3. In a valve-gear for steam engines, an eccentric and eccentric-rod, a valve-rod for connection with the valve, a bell-crank one end of which is connected with the valve-rod, a link pivotally connected at one end, with the other arm of the bell-crank and pivotally connected, at its other end, with the eccentric-rod, means for the adjustment of said two pivotal connections of said link, a rock-arm, a link pivoted to the rock-arm and to the eccentric-rod, an eccentric for adjusting the said latter pivot, and means for controlling the position of the rock-arm.

4. In a valve-gear for steam engines, an eccentric and eccentric-rod, a valve-rod for connection with the valve, devices for controlling the valve-rod independently of the motion of the engine, pivotal connections in said devices and means for adjusting one or more of said pivotal connections eccentrically, said means of adjustment comprising a shaft adapted for manual rotation and which engages the overlapping ends of two members, an eccentric on said shaft and in engagement with one of such members, and means for securing the shaft against axial movement.

5. In a valve-gear for steam engines, an eccentric and eccentric-rod, a valve-rod for connection with the valve, a bell-crank connected with the valve-rod having its two arms relatively disposed at an angle greater than a right angle, a link pivotally connected at one end with the bell-crank, and pivotal connection between the other end of the link and the eccentric-rod, and means consisting of an eccentric for the adjustment of said latter pivotal connection.

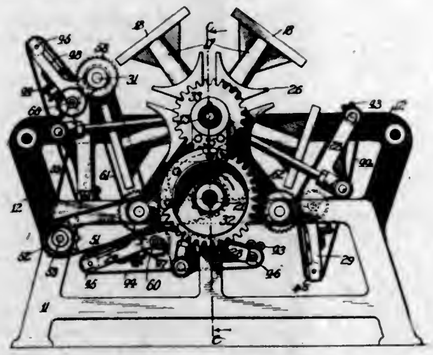
881,287. MACHINE FOR GRINDING PLASTIC SUBSTANCES, SUCH AS CHOCOLATE AND THE LIKE. GEORGE S. BAKER, London, England. Filed Aug. 30, 1906. Serial No. 332,666.



1. In a machine for grinding plastic substances the combination with a frame, pivoted bearing arms mounted in said frame and each provided with a pocket and grinding rolls carried by said arms, of adjustable springs located in said pockets, screw threaded spindles in connection with said springs, eccentrics mounted in the frame, and adapted to act on said spindles, levers for operating said eccentrics and auxiliary adjusting means comprising slidable wedges adapted to act on said bearing arms, screw spindles connected to said wedges and nuts mounted in the machine frame for operating said screw spindles substantially as described for the purposes set forth.

2. In a machine for grinding plastic substances the combination with a frame, pivoted bearing arms mounted in said frame and each provided with a pocket and grinding rolls carried by said arms, of adjustable springs located in said pockets, screw threaded spindles in connection with said springs, eccentrics mounted in the frame and adapted to act on said spindles, levers for operating said eccentrics and auxiliary adjusting means comprising slidable wedges adapted to act on said bearing arms, screw spindles connected to said wedges, and nuts mounted in the machine frame for operating said screw spindles and means for adjusting the pivots of the bearing arms in the frame aforesaid substantially as described.

881,288. PRINTING-PRESS. HAROLD G. BARRETT, Chicago, Ill., assignor, by mesne assignments, to William H. Cowles, Spokane, Wash. Filed Sept. 24, 1903. Serial No. 174,529.



1. In a device of the class described, the combination with a plurality of type beds and platens adapted to cooperate therewith grouped about a common center, of means for moving said platens intermittently to bring them into register with the different type beds in succession and for moving the type beds toward the platens to contact therewith between the movements of the latter.

2. In a device of the class described, the combination with the framework, of the rotating support for the platens, the plurality of platens therein, the plurality of type beds grouped about the center of said support and movable in the frame towards said center, means for advancing the platen support intermittently to bring the platens into register with the different type beds in succession and for moving the type beds toward the platens to contact therewith between the movements of the support.

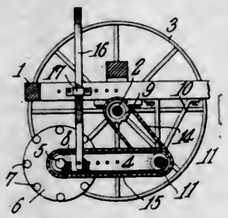
3. In a device of the class described, the combination with the plurality of type beds and platens adapted to cooperate therewith grouped about a common center, of means for moving said platens intermittently to bring them into register with the different type beds in succession and for moving the type beds towards the platens to contact therewith between the movements of the latter, and means for inking the type beds between their contacts with the platens.

4. In a device of the class described, the combination with the framework, of the rotating support for the platens journaled therein, the platens carried by said support, the plurality of type beds grouped about the common center, means for advancing said support intermittently to bring the platens into register with the different type beds in succession, means for moving the type beds toward the platens to contact therewith between the movements of the support, and means for inking the type beds between their contacts with the platens.

5. In a device of the class described, the combination with the framework, of the rotating platen-support journaled therein, the plurality of platens carried by said support, the plurality of type beds mounted to swing in said frame and grouped about the platen support, means for moving the platen support intermittently to bring the platens into register with the different type beds in succession, and means for swinging the type beds towards the platens to contact therewith between the movements of the latter.

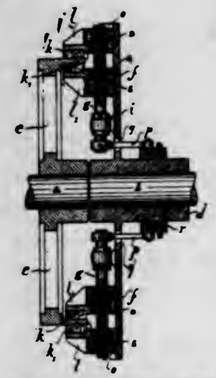
[Claims 6 to 20 not printed in the Gazette.]

881,289. ROTARY SOIL-DRAG. CHARLIE W. BABZEE, The Dalles, Oreg. Filed May 7, 1907. Serial No. 372,312.



An implement as described comprising a wheel mounted frame having depending brackets, arms pivotally connected with said brackets, a drum journaled for rotation between the free ends of said arms, means for transmitting rotary movement from the supporting wheel to said drum, a bail adjustably attached to the arms and guides adjustably attached to the frame and receiving the side portions of said bail.

881,290. FRICTION-COUPLING. WILHELM BEILKE, Charlottenburg, Germany. Filed Feb. 5, 1907. Serial No. 355,792.

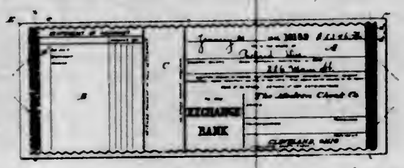


In a friction-coupling, comprising right and left handed screw-spindles turnably journaled in a coupling cross and radially arranged to the shafts to be coupled a journaling box, independently adjustable, on each of the two thread-parts of each spindle, clamping pieces with jaws facing each other to the inside on each of the said boxes, a coupling-ring between the said jaws, means for rotating the screw-spindles all together, substantially as and for the purpose described.

881,291. COMMERCIAL PAPER. JOHN C. BELL, Cleveland, Ohio. Filed Apr. 19, 1906. Serial No. 312,521.

1. A check, or similar commercial paper, provided with a protective device consisting of two alined columns each made up of the digits naught to nine symmetrically disposed with respect to a central point; and designations

of two orders of values disposed adjacent to said two alined columns respectively.



2. A check, or similar commercial paper, provided with a protective device consisting of two alined columns each made up of the digits naught to nine, the naughts being placed at the center and the nines at the respective ends of the combined column; and designations of two successive orders of values disposed adjacent to said two alined columns, respectively.

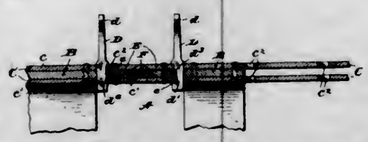
3. A check, or similar commercial paper, provided with a protective device consisting of two alined columns each made up of the digits naught to nine, the naughts being placed at the center and the nines at the respective ends of the combined column, the individual figures of the respective columns being inclined so as to distinguish one column from the other; and designations of two successive orders of values disposed adjacent to said two alined columns respectively.

4. A check, or similar commercial paper, provided with a protective device consisting of two vertically disposed alined columns of digits naught to nine at one end of the check, the naughts being placed at the center and the nines at the respective ends of the combined column, the individual figures of the upper column inclining upwardly and inwardly, and of the lower column, upwardly and outwardly, with respect to the end of the check; and designations of two successive orders of values disposed adjacent to the inner sides of said two alined columns, respectively, substantially as described.

5. A check, or similar commercial paper, provided with a protective device consisting of two vertically disposed alined columns of the digits naught to nine at each end of the check, the naughts being placed at the center and the nines at the respective ends of the two combined columns thus formed, the individual figures of the upper of each pair of alined columns inclining upwardly and inwardly, and of the lower, upwardly and outwardly, with respect to the corresponding end of the check; and designations of units and tens, hundreds and thousands, disposed in pairs as indicated adjacent to the inner sides of the pair of alined columns at each end of the check, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

881,292. THRESHING-MACHINE CYLINDER. ARNE H. BERG, Clarkfield, Minn. Filed July 27, 1906. Serial No. 328,133.



1. In a threshing machine cylinder, a tooth bar having an aperture therein, a tooth provided with a shank engaging said aperture, and a pivoted individual tooth locking member carried by said tooth bar and adapted to engage said tooth.

2. In a threshing machine cylinder, a tooth bar having an aperture therein, a tooth provided with a shank tapering throughout its entire length and engaging said aperture, and a laterally movable clamping member pivoted to the tooth bar and adapted to engage the tooth and draw the tapered shank thereof downwardly in said aperture.

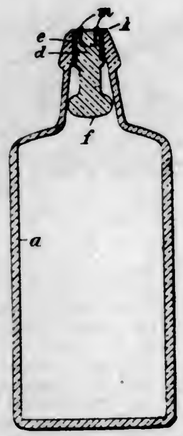
3. In a threshing machine cylinder, a tooth bar having a polygonal shaped aperture therein, a tooth provided with polygonal shaped shank tapering throughout its entire length, and a laterally movable clamping member carried by the tooth bar and adapted to engage the tooth and to simultaneously draw the tapered portion thereof downwardly in said aperture.

4. In a threshing machine cylinder, a tooth bar having an aperture therein, a tooth provided with a shank engaging said aperture and with an inwardly extending recess in one side thereof, an individual tooth clamping member pivotally secured to the tooth bar, and means for causing the clamping member to engage the inwardly extending recess in the tooth.

5. In a threshing machine cylinder, a tooth bar having an irregular shaped aperture therein, a tooth provided with a shank tapering throughout its entire length irregular in cross section engaging said aperture, said tooth having an inwardly extending recess in one side thereof having its lower wall beveled, and a laterally movable clamping member carried by the tooth bar and adapted to engage the recess in the tooth and contact with the beveled lower wall thereof.

[Claims 6 to 14 not printed in the Gazette.]

881,293. BOTTLE FOR CASE GOODS. CHARLES M. BEARY, New York, N. Y., assignor of one-half to Hugh Gray, New York, N. Y. Filed Sept. 16, 1907. Serial No. 393,123.



1. The combination, with a bottle having a neck contracted toward the top, of a loose stopper within the bottle having a point *d* fitted with a cork-collar *e* to close the bottle-neck and having a shoulder to sustain the cork-collar when pressing it into the bottle-neck, and the stopper having a head to prevent its withdrawal through the bottle-neck, and means whereby the stopper may be lifted into engagement with the bottle-neck.

2. The combination, with a bottle having a neck contracted toward the top, of a loose stopper within the bottle having a point fitted with a cork-collar to close the bottle-neck and having an enlarged head to prevent the withdrawal of the stopper through the bottle-neck, and a metallic projection upon the top of the stopper adapted for use in lifting the stopper into the bottle-neck.

3. The combination, with a bottle having a neck contracted toward the top, of a loose stopper within the bottle having a point fitted with a cork-collar to close the bottle-neck and having an enlarged head to prevent the withdrawal of the stopper through the bottle-neck, a metallic projection upon the top of the stopper, a washer fitted upon the top of the bottle-neck with an aperture to receive the metallic projection, and the metal of such projection bent over the top of the washer to hold the washer and stopper mutually in place.

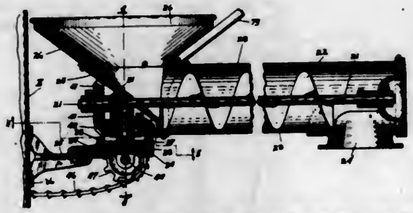
4. The combination, with a bottle having a neck contracted toward the top, of a loose stopper within the bottle having a point fitted with a cork-collar to close the bottle-neck and having an enlarged head to prevent the withdrawal of the stopper through the bottle-neck, and a wire staple having its legs secured in the substance of the stopper and its exterior loop formed with a central projection or apex *k'*, to center the loop upon a hook when lifting the stopper.

881,294. KNIFE. CHARLES E. BILLINGS, Hartford, Conn. Filed Nov. 11, 1907. Serial No. 401,569.



A knife having a handle formed of two circular tubes, each tube having mortised ends and a slot along a portion of one side, a blade with its tang pivotally fastened in the mortise at one end of each tube, a catch block hinged in the mortise at the other end of one tube and a spring catch carried by the block and adapted to enter the mortise in the adjacent end of the other tube and engage the walls thereof for holding the ends of the tubes together, substantially as specified.

881,295. SWINGING CONVEYER. CHESTER BRADFORD, Indianapolis, Ind. Filed Apr. 2, 1906. Serial No. 309,345.



1. The combination, with a swinging conveyer composed of a tube having bearings at opposite ends and an auger in said tube the shaft whereof rests in said bearings, of a driving mechanism therefor composed of a bevel gear mounted on the said auger shaft, a double gear loosely mounted on a pivot shaft at right angles with the auger shaft, a driving shaft positioned below said pivot shaft, and a gear mounted on said driving shaft and also engaging with the double gear on the pivot shaft.

2. The combination, in a swinging conveyer, of a conveyer structure having an inclined receiving end through which the auger shaft extends to the outside, and a power transmitting device arranged below said inclined end whereby power is transmitted from the driving shaft to the auger shaft.

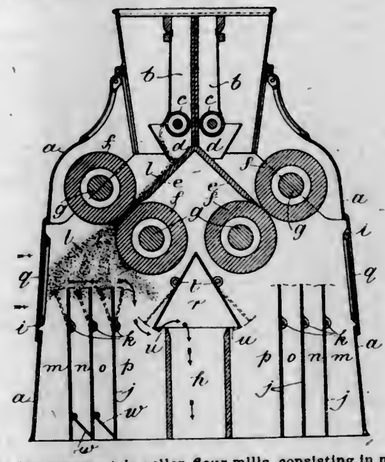
3. The combination, in a swinging conveyer, of the conveyer structure having an inclined end through which the auger shaft extends to the outside, a pivot shaft arranged perpendicularly below the center of said inclined end, a driving shaft arranged below said pivot shaft, and gears mounted on said shafts and below said inclined end whereby said auger shaft is driven through said gears from said driving shaft.

4. The combination, in a swinging conveyer, of the conveyer structure, a driving mechanism including a pivot shaft, a head on the lower end of said pivot shaft, and a bracket upon which said head rests, the contacting surface of said head being substantially of the form of a zone of a globe.

5. The combination, in a swinging conveyer, of the conveyer structure, a driving mechanism for the auger of said conveyer, a bracket supporting said driving mechanism, a bearing therein for the pivot-shaft head, and a keeper whereby said pivot-shaft head is held from escaping from said bearing.

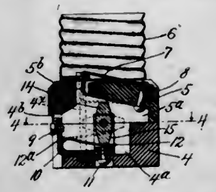
[Claims 6 to 10 not printed in the Gazette.]

881,296. ROLLER-MILL. GEORGE BAIDDON and ROBERT J. FOWLER, Manchester, England. Filed Jan. 10, 1907. Serial No. 351,714.



An improvement in roller flour mills, consisting in means for effecting and retaining the separation of the broken products after leaving the break rollers comprising in combination with a casing, an air conduit arranged vertically of the casing, a plurality of partitions for dividing the separated products positioned on opposite sides of the conduit, each of said partitions having a section pivoted to the upper edge thereof movable to either side, valves located between the partitions, a cover positioned above the air conduit, and sections pivotally secured to the cover adjustable with relation to the air conduit, said casing having openings adjacent the upper edges of the partitions.

881,297. SOCKET FOR ELECTRIC LAMPS. CHARLES G. BURTON, Peru, Ind. Filed Mar. 14, 1907. Serial No. 362,269.



1. In an electric lamp socket, in combination with an insulating base, electric circuit connections mounted thereon

for connecting the two carbon filament terminals of the lamp, said circuit connections having a gap and a switch device in such gap, the switch device being adapted to only partly close the gap by rotation from "off" to "on" position, one of the elements of said connections being movable to complete the closing of the gap and being mounted for such movement by the insertion of the lamp.

2. In an electric lamp socket, in combination with an insulating base, electric circuit connections mounted on such base comprising a switch device and a key for rotating it, said connections having a gap which is only partly closed by the switch device, one element in said connections being a piece which yieldingly opposes the insertion of the lamp and which is moved by such insertion for completing the closing of the gap.

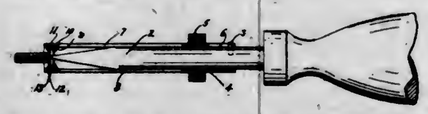
3. In an electric lamp socket, in combination with an insulating base, means for connecting the lamp therewith; electric circuit connections mounted on the insulating base for connecting the two terminals of the lamp filament, said circuit being formed with a gap, and a switch device in such gap, the connection at one side of said gap being normally out of position for connecting with the switch device and being exposed in the path of insertion of the lamp for movement thereby into position for contact with the switch device.

4. In an electric lamp socket, in combination with an insulating base and means for mounting the lamp thereon; electric circuit connections mounted on the insulating base for connecting the two terminals of the lamp filament, and said circuit connections having two parts which are movable to complete the circuit, one of said parts being a switch device provided with a key for rotating it, the other of said parts being exposed in the path of insertion of the lamp for movement by such insertion in direction for completing the circuit.

5. In an electric lamp socket in combination with an insulating base, means for securing the lamp thereto; electric circuit connections mounted on the base for connecting the two terminals of the lamp filament, said circuit connections comprising two parts which are movable for completing the circuit, one of said parts being a switch device having a key for operating it, the other of said parts being a resilient contact piece for making one of the lamp contacts and being mounted so as to be normally out of circuit-completing positions at all positions of the switch device and being exposed in the path of insertion of the lamp and yieldingly resisting such insertion and adapted to be moved thereby into circuit-closing position.

[Claims 6 to 11 not printed in the Gazette.]

881,298. SCREW-DRIVER AND ATTACHMENT THEREFOR. JAMES M. CHAPPEL, Dallas, Tex. Filed Apr. 16, 1906. Serial No. 311,983.

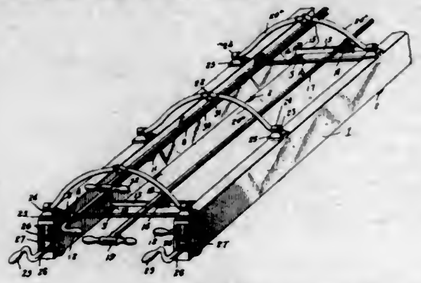


1. An attachment for a screw driver comprising a sleeve having a pair of clamping jaws provided on the interior with oppositely disposed flanges each having inclined or beveled inner and outer faces, and flanges adjacent said first named flanges, and adapted to form a stop for the heads of screws.

2. An attachment for a screw driver comprising a sleeve having a pair of spring clamping members provided on the interior with two pairs of oppositely disposed flanges forming a recess for the head of a screw, the outer flanges of said members having inclined or beveled faces for facilitating the entrance or withdrawal of the head of the screw and the inner flanges having flat faces forming a stop therefor.

3. In combination a screw driver, a sleeve slidably mounted thereon said sleeve having a pair of clamping members, each of said clamping members having a stop flange and a retaining flange for holding the head of the screw against said stop flange, said retaining flanges having inclined faces for facilitating the entrance and release of the head of the screw.

881,299. MOLD. SAMUEL S. CHEZEM, Terre Haute, Ind. Filed July 27, 1907. Serial No. 385,820.



1. A device of the character described comprising side members, means for moving them toward and from each other, and collapsible supporting arches pivoted to the side members to swing downwardly.

2. A device of the character described comprising side members, means for moving them toward and from each other, collapsible arches having their ends pivoted to the side members to swing downwardly and means for swinging said arches simultaneously.

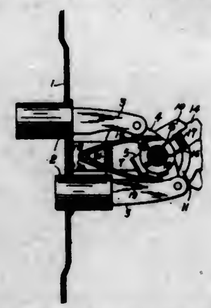
3. A device of the character described comprising side members, pairs of toggle levers having their inner ends hingedly connected and their outer ends pivoted to said side members at opposite points, an operating rod connecting the inner end of the toggle levers for simultaneous operation and collapsible supporting arches pivoted to the side members to swing downwardly.

4. A device of the character described comprising side members, pairs of toggle levers having their inner ends hingedly connected and their outer ends pivoted to said members at opposite points, an operating rod connecting the inner ends of the toggle levers for simultaneous operation, collapsible supporting arches having their ends pivoted to the side members to swing downwardly and means for simultaneously swinging said arches.

5. A device of the character described comprising side members movable toward and from each other, collapsible supporting arches having their ends pivoted upon said members to swing downwardly and means upon said members for raising and lowering the pivots of said arches.

[Claims 6 to 16 not printed in the Gazette.]

881,300. ELECTRIC SWITCH. EVERETT M. COFFIN, Oakland, Cal. Filed Mar. 7, 1906. Serial No. 304,652.



1. In a device of the character described, the combination of a contact, a shaft upon which said contact rocks, a shifter also rocking on said shaft and operatively connected with said contact, a coiled spring around the shaft for energizing said shifter, and a controller having side members and a bridge connecting them, said opposite side members being pivoted on said shaft on opposite sides of the coiled spring, substantially as described.

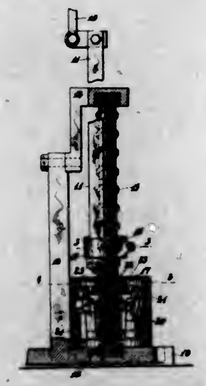
2. In a device of the character described, the combination of a shaft, a contact rocking thereon, a shifter operatively connected with said contact to impart motion thereto, a coiled spring around the shaft, and a controller for energizing said coiled spring, the shifter having side members and a bridge connecting them and having its opposite members and a bridge connecting them, said opposite side coiled spring to provide a long bearing for said shifter, substantially as described.

3. In a device of the character described, the combination of a contact, a shaft upon which said contact rocks, a shifter also rocking on said shaft and operatively connected with said contact, a coiled spring around the shaft for energizing said shifter, and a controller also rocking on said shaft for energizing said coiled spring, said shifter and controller each having side members and a bridge connecting them, the coiled spring lying within the side members of the shifter, and the latter lying within the side members of the controller, substantially as described.

4. In a device of the character described, the combination of a contact, a shaft upon which said contact rocks, a shifter also rocking on said shaft and operatively connected with said contact, a coiled spring around the shaft for energizing said shifter, a pair of hooks alternately engaging the shifter to prevent movement of the same, and a controller energizing said spring and in its continued movement disengaging the engaging hook from the shifter, substantially as described.

5. In a device of the character described, the combination of a contact, a shaft upon which said contact is supported, a shifter rocking on said shaft and operatively connected with said contact, a coiled spring around the shaft for energizing said shifter, a controller also rocking on said shaft for energizing said spring, said shifter and controller each having side members and a bridge connecting them and the said shifter and controller each having its side members pivoted upon the shaft on the opposite sides of the coiled spring.

881,301. RAILWAY SIGNAL-CHECK. CLARENCE W. COLEMAN, Westfield, N. J., assignor to The Hall Signal Company, a Corporation of Maine. Filed July 18, 1907. Serial No. 384,337.



1. The combination of a signal, a signal actuating part, and a centrifugal friction clutch to check the movement of the signal.

2. The combination of a signal, a signal actuating part, and a centrifugal friction clutch connected to the signal actuating part.

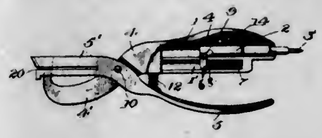
3. The combination of a signal having a normal bias to danger, a signal actuating part for moving the signal to safety, and a centrifugal friction clutch to check the movement of the signal to danger.

4. The combination of a signal having a normal bias to danger, a signal actuating part for moving the signal to safety, and a centrifugal friction clutch to check the movement of the signal to danger, such clutch being connected to the signal actuating part.

5. The combination of a signal having a normal bias to danger, a signal actuating part for moving the signal to safety, a centrifugal friction clutch to check the movement of the signal to danger, and automatic means for rendering such clutch non-operative as the signal moves to safety.

[Claims 6 to 12 not printed in the Gazette.]

881,302. RECORDING-TOOL. PETER P. COLER, Chicago, Ill. Filed Oct. 26, 1905. Serial No. 284,435.



1. In a device of the kind described, a pencil case provided with a longitudinally movable carrying member and a pencil, said carrying member adjustably positioned within said case, said case having a chamber arranged adjacent thereto, in combination with resilient means arranged in said chamber and tending to normally hold the pencil within said case, and a latch pivotally secured to said movable carrying member adapted to operate the same and hold it in operative position.

2. In a device of the kind described, a pencil case provided with a longitudinally movable pencil adjustably positioned therein, in combination with resilient means tending to normally hold the pencil within said case, and a pivoted latch and sliding rod adapted to move the pencil and keep it in operative position.

3. In a device of the kind described, a pencil case provided with a longitudinally movable carrying member 2 and pencil, said carrying member being adjustably positioned within said case, said case having a chamber in proximity thereto, in combination with resilient means arranged in said chamber and adapted to normally hold the pencil within the case, a pivoted lever 17 adapted to engage said carrying member, and a member 18 adapted to operate the lever 17 and carrying member 2.

4. A pencil case provided with a longitudinally movable pencil, said pencil being adjustably positioned within said pencil case, a chamber arranged adjacent to the case, in combination with resilient means tending to normally hold the pencil within the case and means arranged in said chamber for controlling the movements of the pencil.

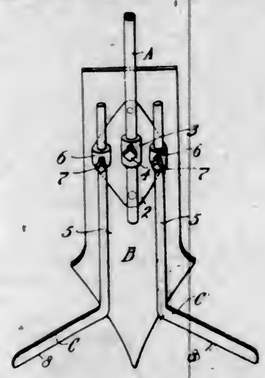
5. In a device of the kind described, a pencil case provided with a longitudinally movable carrying member and pencil, said carrying member being adjustably positioned within said case, said pencil provided with a chamber arranged adjacent thereto, in combination with resilient means arranged within said chamber adapted to engage the movable carrying member and normally retain the pencil within said case, means for operating said movable carrying member a latch pivotally secured within said case and a sliding coöperating bar therefor, said sliding bar adapted to retain the carrying member in operative position as desired.

881,303. CORN-PLOW SHOVEL. JACOB J. CONRAD, Luverne, Minn. Filed Aug. 29, 1907. Serial No. 390,623.

1. The combination with a plow shovel, of a pair of knives adjustably supported upon the rear of said shovel, and provided with outwardly and rearwardly slanting cutting ends, for the purpose set forth.

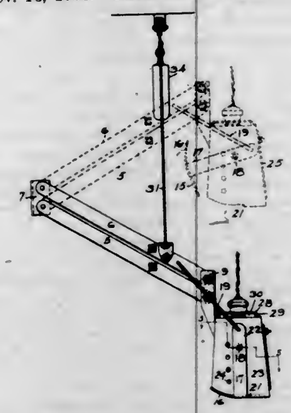
2. The combination with a plow shovel, of a pair of

knives, each of said knives consisting of a shank having adjustable support upon the rear of the shovel, and each



knife having a rearwardly and downwardly extending lower cutting end.

881,304. EGG-TESTER. EUGENE CULVER, Pittsburg, Pa. Filed Nov. 16, 1906. Serial No. 343,736.



1. An egg tester comprising a lamp and a shade having a testing port and a bottom shutter, said tester being adapted to be raised and lowered, and means for automatically opening and closing the shutter by the raising and lowering of the tester.

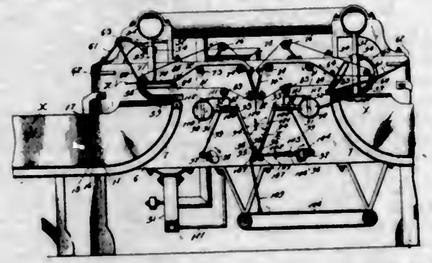
2. An egg tester comprising a lamp and shade having a testing port, a hinged arm supporting the tester, means for closing and opening the shade, and connections between the bracket and shade for closing and opening the shade as it is lowered and raised.

3. An egg tester comprising a lamp and a shade having a testing port, a hinged arm supporting the lamp and shade, a bottom shutter, and connections between the hinged arm and shutter for opening and closing the same as the tester is lowered and raised.

4. An egg tester comprising a lamp and shade having a testing port, two parallel hinged arms supporting the tester in vertical position, a bottom shutter pivoted to the shade, and a link connecting the shutter and one of the bracket arms.

5. An egg tester having a lamp and a shade having a testing port, a bracket formed of two hinged arms, the shade of the tester being supported in vertical position thereby, a bottom shutter having one or more arms pivoted on the shade, and a link connected to said shutter arm and to one of the bracket arms.

881,305. MACHINE FOR ASSEMBLING NEWSPAPER PARTS. CLAUD D. CURRY and ALBERT W. LINN, Memphis, Tenn. Filed July 30, 1906. Serial No. 328,379.



1. In a machine of the kind stated, the combination with an opener having opposite frames which swing to and from each other, to open the fold of a paper, of means to alternately deliver outer and inner folded paper sections to the opener, and means to actuate the opener to open the outer section when it is delivered thereto, to allow the inner section to be inserted within the same.

2. In a machine of the kind stated, the combination with an opener and means to operate the same to open a folded paper, of a V-shaped guide leading to the opener, and opposite feed mechanisms leading to opposite sides of the guide, and means to actuate the same to alternately feed outer and inner paper sections from the respective mechanisms to the guide.

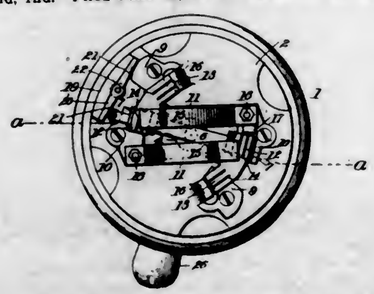
3. In a machine of the kind stated, an opener comprising opposite frames pivoted at their lower edges and arranged to swing toward and from each other, and suction tubes connected to each frame at the upper edge thereof and movable therewith toward and from each other.

4. An opener comprising opposite frames pivoted near together at their lower edges and arranged to swing toward and from each other, opposite suction tubes connected to each frame and movable therewith, and means to cut off the suction after each opening movement.

5. In combination, a V shaped opener the sides of which are spaced apart, and pivoted at their lower edges to swing toward and from each other, suction tubes carried by the opposite sides and having means to govern the suction therethrough, means to supply successively outer and inner paper sections downwardly into the opener, the sides being actuated to swing open after the outer section is supplied, to allow the inner section to be inserted within the same, a movable support under the space at the bottom of the opener, and means to withdraw intermittently the support, to allow the associated sections to discharge from the opener.

[Claims 6 and 7 not printed in the Gazette.]

881,306. ELECTRIC SWITCH. GEORGE CUTTER, South Bend, Ind. Filed June 13, 1906. Serial No. 321,549.



1. The combination with the line wire contacts and the lamp contacts, of a portion extending from each line wire contact over the other line wire contact and one of the lamp contacts, a switch blade movable to connect the line wire contacts or to connect each line wire contact with a lamp contact and means for supporting said elements.

2. The combination with the line wire contacts and the lamp contacts, of a portion extending from each line wire contact over the other line wire contact and one of the lamp contacts, a switch blade having a pair of contacts insulated from each other and movable to connect the line wire contacts or to connect each line wire contact with a lamp contact and means for supporting said elements.

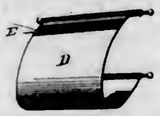
3. The combination with the line wire contacts and the lamp contacts, of a portion extending from each line wire contact over the other line wire contact and one of the lamp contacts, a switch blade operable about the axis intermediate its ends, and having a pair of contacts, one at each end, insulated from each other and each movable between the overhanging portion of one line wire contact and the other line wire contact, or between the overhanging portion and one of the lamp contacts and means for supporting said elements.

4. The combination with the line wire contacts and the lamp contacts, of a curved portion extending from each line wire contact over the other line wire contact and one of the lamp contacts, a switch blade having a pair of contacts, one at each end, insulated from each other and each movable between the overhanging portion of one line wire contact and the other line wire contact, or between the overhanging portion and one of the lamp contacts, means preventing the maintaining of the switch blade in an intermediate position and means for supporting said elements.

5. The combination with the line wire contacts and the lamp contacts, of an upwardly curved portion extending from each line wire contact over the other line wire contact and one of the lamp contacts, a switch blade movable to connect the line wire contacts or to connect each line wire contact with a lamp contact, the curved portion having a slitted part and means for supporting said elements.

[Claims 6 to 8 not printed in the Gazette.]

881,307. STENCIL-DUPLICATING APPARATUS. ALBERT B. DICK, Lake Forest, Ill., assignor to A. B. Dick Company, Chicago, Ill., a Corporation of Illinois. Filed Nov. 25, 1904. Serial No. 234,294.



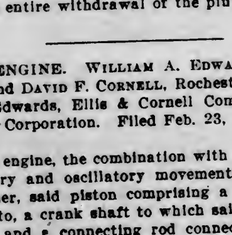
1. In duplicating apparatus, the combination with a drum, of a stencil-carrier thereon, a pad of textile material secured to the drum over said stencil-carrier and extending about a substantial portion of the drum, an adhesive material on said pad, and a stencil-sheet coacting with said material, substantially as set forth.

2. In duplicating apparatus, the combination with a drum, of a foraminated stencil-carrier thereon, a part detachably secured to the drum and overlying said stencil-carrier, said part being provided with an adhesive material, and a stencil-sheet coacting with said material, substantially as described.

3. In duplicating apparatus, the combination with a drum, of a foraminated stencil-carrier thereon, a pad detachably secured to the drum and overlying said stencil-carrier, a strip secured on said pad and provided with an adhesive material, and a stencil-sheet coacting with said material, substantially as described.

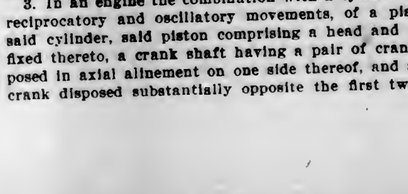
881,308. HINGE. JAMES W. DONALDSON, Houston, Tex. Filed July 9, 1907. Serial No. 382,903.

A hinge made up of a leaf having apertured bosses upon one of its edges and spaced apart, the inner face of each boss being cam-outlined, portions of the inner end of each boss being in parallel planes and forming the inner walls of a recess between the bosses, a second leaf having an apertured boss with its opposite ends having parallel and cam surfaces



upon the bosses of the other leaf, as shown and for the purpose set forth.

881,309. ANTIRATTLER FOR VEHICLE SHAFTS AND TONGUES. SAMUEL M. DORRIS, Broken Bow, Nebr., assignor of one-half to Willis E. Talbot, Broken Bow, Nebr. Filed July 18, 1907. Serial No. 384,418.



1. The combination with an axle clip, of a rotatable endwise movable pin or bolt adapted to enter the eye of a shaft or tongue and holes in the clip, said pin or bolt having a cam lever thereon by means of which it is turned and locked, means for preventing endwise movement of the pin or bolt when rotated to one of its positions, and a spring bearing against the eye and the cam lever.

2. The combination with two axle clips located adjacent to each other, one of which has two jaws and the other a single jaw and a lug, said jaws having holes in alinement with one another, the clip having two jaws being adapted to receive the eye of shaft or pole, a bolt having rotatable sliding connection in the holes in the three jaws, a cam lever on the pin or bolt, springs bearing against the cam lever and the eye, the lug retaining the pin or bolt against endwise movement when in one of its rotary positions, and means on the pin or bolt between the clips for preventing the entire withdrawal of the pin or bolt from the jaws.

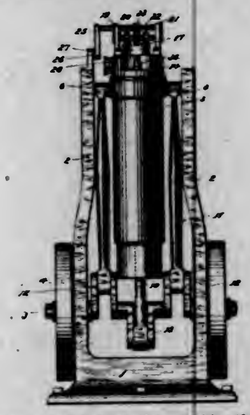
881,310. ENGINE. WILLIAM A. EDWARDS, CHARLES E. ELLIS, and DAVID F. CORNELL, Rochester, Minn., assignors to Edwards, Ellis & Cornell Company, Rochester, Minn., a Corporation. Filed Feb. 23, 1907. Serial No. 358,962.

1. In an engine, the combination with a cylinder having reciprocatory and oscillatory movements, of a piston in said cylinder, said piston comprising a head and a stem fixed thereto, a crank shaft to which said stem is directly connected, and a connecting rod connecting the cylinder to the crank shaft.

2. In an engine, the combination with a cylinder having reciprocatory and oscillatory movements, of a piston in said cylinder, said piston comprising a head and a stem fixed thereto, a crank shaft having cranks disposed substantially opposite each other, said stem being directly connected to one of said cranks, and a connecting rod connecting the cylinder to the other crank.

3. In an engine the combination with a cylinder having reciprocatory and oscillatory movements, of a piston in said cylinder, said piston comprising a head and a stem fixed thereto, a crank shaft having a pair of cranks disposed in axial alinement on one side thereof, and a third crank disposed substantially opposite the first two men-

tioned cranks, said stem being directly connected to said third crank, and connecting rods connecting the cylinder with said pair of cranks.

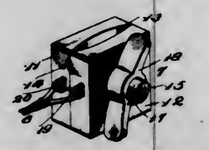


4. In an explosive engine the combination with a cylinder having a reciprocatory movement, of a piston in said cylinder, a crank shaft to which said piston and cylinder are both connected, a stationary carbureter, a pipe and connections between the pipe and the carbureter and the pipe and the cylinder whereby the cylinder may move in relation to the carbureter, without breaking said connections.

5. In an engine the combination with a frame, of a cylinder pivotally and slidably mounted in said frame, a piston in said cylinder, said piston comprising a head and a stem fixed thereto, a crank shaft journaled in the frame to which said stem is directly connected, and a connecting rod connecting the cylinder and the crank shaft.

[Claim 6 not printed in the Gazette.]

881,311. WIRE CLAMP OR GRIP. JOSEPHUS H. EUBANK, Ysleta, Tex., assignor of one-half to W. B. Merchant, El Paso, Tex. Filed May 11, 1907. Serial No. 373,109.



A wire clamp comprising a pair of blocks having their opposing faces recessed to provide at their opposite edges opposing jaws, one of said blocks being apertured, a screw stud projecting from the other of said blocks and through said aperture, said stud being centrally disposed in said block and having at its inner end a transverse recess, a clamping nut upon the outer end of said stud, centrally arranged eyes upon the adjacent ends of said blocks, a flexible element and links upon said element and engaged with the eyes upon said blocks, substantially as and for the purpose specified.

881,312. ADJUSTABLE DESK. JOHN F. FIELD, Ionia, Mich., assignor to E. H. Stafford Manufacturing Company, Ionia, Mich., a Corporation of Illinois. Filed Mar. 11, 1907. Serial No. 361,752.

1. The combination of opposed members, a rack on one member, a pinion connected with the other member and engaging said rack, an internal annular gear connected with said pinion, a shaft extending axially through said pinion and gear, an annular gear eccentrically mounted within the internal gear, and means for operating said annular gear.

2. The combination of a movable member, a rack on said member, a pinion engaging said rack, an internal annular gear connected with said pinion, a shaft extending axially through said pinion and gear, an annular gear within the internal gear, an eccentric on the shaft supporting said annular gear, and means for preventing rotation of said annular gear.



3. In an adjusting device, the combination of a movable member, a rack thereon, an internal gear having a pinion adapted to engage the rack, a rotatable eccentric within the internal gear, an annular gear mounted on said eccentric and engaging the internal gear, and means for preventing rotation of said annular gear.

4. In an adjusting device, the combination of opposite members, a rack on one member, a pinion rotatably connected with the other member and engaging said rack, an internal gear connected with said pinion, a rotatable eccentric within the toothed portion of such internal gear, an annular gear mounted on said eccentric and engaging the internal gear, and a pin and slot for preventing rotation of said annular gear.

5. The combination of opposed members, one of said members having a rack on its inner face and the other of said members having an annular recess, an internal gear in said recess, a pinion connected with said gear engaging said rack, a shaft extending through said pinion, an annular gear mounted on an eccentric on said shaft and meshing with the internal gear, and means for preventing rotation of the annular gear.

[Claims 6 to 8 not printed in the Gazette.]

881,313. COMPOUND RAILWAY-RAIL. ALFRED P. FINLEY, Sherman, Tex. Filed Aug. 20, 1907. Serial No. 389,333.

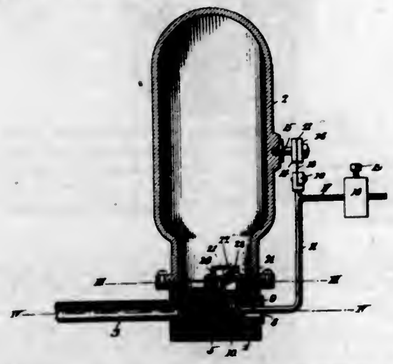


1. A compound railway-rail comprising a base and web portion, the web extending centrally from the base portion upwardly, terminating with laterally projecting ribs, one of which is flanged upwardly and perforated; a pair of tread portions, one being grooved to receive the flange portion of the web, the other channeled to receive the T web portion, and connecting devices for the flange and treads extending therethrough, substantially as and for the purpose described.

2. A compound railway-rail including a pair of tread portions perforated laterally at regular intervals and having inner opposing faces, one of the portions being grooved throughout its length, a base with a central web portion extending upwardly, terminating with laterally projecting ribs, one of which is flanged upwardly and the flange perforated at intervals, the groove in the tread portions adapted to receive and engage the flanged terminus and connecting devices extending through the treads and flange in a plane above the base, substantially as and for the purpose set forth.

3. In a railway-rail, the combination of a pair of tread portions one grooved throughout its length, the other channeled, the base portion having a central web portion that terminates in laterally projecting ribs, one being provided with an upwardly projecting flange and the other recessed, the treads resting upon the top of the ribbed web portion, and retaining pins extending through said treads and flange, substantially as and for the purposes shown and described.

881,314. HYDRAULIC RAM. ALFRED H. FRANCFORT, Jersey City, N. J., assignor to Niagara Hydraulic Engine Company, a Corporation of Pennsylvania. Filed Feb. 26, 1907. Serial No. 359,421.



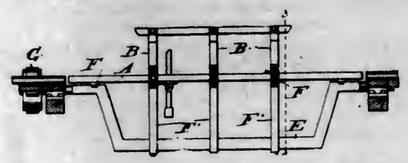
A hydraulic ram having a base with an interior chamber having a valve opening and a flat inside upper face, a valve member within the chamber and comprising a disk coöperating with said opening and disposed in a substantially vertical plane perpendicular to said flat face, said chamber having a pocket or cavity 24 in said flat upper face directly above the valve member and into which said valve member projects slightly, said cavity or pocket having a larger diameter at its interior than at its point of communication with said chamber, and a pressure chamber communicating with said cavity or pocket at the upper side thereof, said communication being the only one provided between said chambers.

881,315. BASE-BALL GLOVE. JOHN GAMBLE, Philadelphia, Pa., assignor to George A. Reach, Philadelphia, Pa. Filed Nov. 22, 1907. Serial No. 403,253.



In a base ball glove, the combination with a front piece comprising a palm portion and finger portions, of a sectional back piece forming the back and side portions of the body portion and fingers, said sectional back piece being provided with extension flaps on the adjacent sides of the fingers spanning the crotch between the fingers, and being united to the next adjacent fingers by substantially longitudinal seams, whereby transverse seams of stitching between the fingers are obviated, substantially as shown and described.

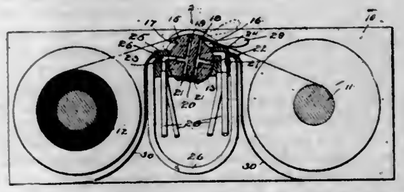
881,316. DROP-AXLE FOR TILTING PLATFORMS. WILLIAM L. HANSEN and ALFRED HAYES, Coalville, Utah. Filed Mar. 23, 1907. Serial No. 364,119.



1. A pivoted axle having a drop portion and a track section supported by said axle and in a horizontal plane above the pivotal point of the axle.

2. In a device of the kind described a track section an axle journaled at each end and supporting said track section, the axle being arranged upon one side of the longitudinal center of the track, and having intermediate its ends and beneath the track section a drop portion, said drop portion being spaced from the track forming a counter-balance weight as and for the purpose set forth.

881,317. TRACKER-BAR. JUSTUS HATTEMER and ARTHUR KUHLE, West New York, N. J., assignors to Hardman, Peck & Co., a Corporation of New York. Filed Sept. 13, 1907. Serial No. 392,711.



1. In a device of the class described, a rotatable tracker bar, openings formed in the said bar, closure members disposed upon opposite sides of the bar and provided with ports adapted to register at times with the openings of the tracker bar, and means facilitating the movement of the tracker bar.

2. In a device of the class described, a tracker bar, provided with a plurality of series of openings adapted to register with openings of a music sheet, a similar number of openings formed through the opposite sides of the tracker bar and in communication with the first mentioned openings, closure members disposed upon opposite sides of and in engagement with the tracker bar and each having openings formed therein positioned to register with one of the sets of openings.

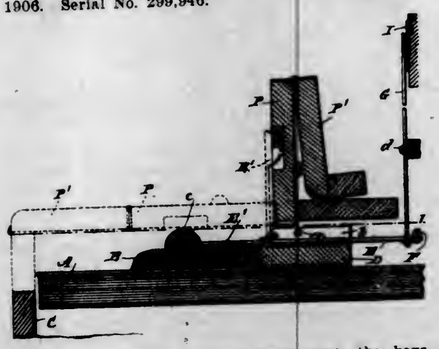
3. In a device of the class described, a tracker bar provided with a plurality of series of openings at its forward side, a like number of openings formed upon opposite sides of the tracker bar and communicating with the first-mentioned openings, closure members in engagement with the opposite sides of the tracker bar and provided with openings and so positioned that the openings of one closure member register with the openings at one side of the tracker bar while the openings of the opposite closure are out of register.

4. In a device of the class described, a tracker bar presenting segmental surfaces upon opposite sides and having openings from said opposite sides to the front of the bar, closure members disposed upon opposite sides in engagement with the segmental surfaces and provided with openings, and means for facilitating the movement of the tracker bar to bring the openings of either side into register with the openings in the closure member upon that side.

5. In a device of the class described, a tracker bar presenting convex opposite surfaces, openings formed in the convex surfaces and communicating with openings in the front of the bar, closures having concave faces in engage-

ment with the convex surfaces and having openings positioned to register at times when the openings in the convex surfaces, and means facilitating the rotary movement of the bar.

881,318. AUTOMATIC MUSICAL INSTRUMENT. BERNDT A. HOGLUND, New York, N. Y. Filed Feb. 7, 1906. Serial No. 299,946.



1. In an automatic musical instrument, the keys, a cross rail having an open recess in its top above the keys, and a horizontally movable lever for varying or regulating the playing, said lever being pivoted in the recess in the cross rail and movable horizontally above the keys, the parts being combined and arranged substantially as and for the purposes set forth.

2. In an automatic musical instrument, the combination with a regulating lever, of a fixed scale, a pointer connected with the lever and movable with relation to the fixed scale, and the cross rail having an open recess in its top, said lever being mounted and horizontally movable in the open recess in the top of the cross rail and over the keys, substantially as and for the purposes set forth.

3. In combination with the key board of a musical instrument and a cross rail above the keys, said cross rail having an open recess in its top, a time lever and a separate expression lever, the time lever being horizontally movable in the recess in the top of the rail and the expression lever being vertically movable upon the top of the cross rail above the keys, all arranged to operate substantially in the manner and for the purposes set forth.

4. In combination with the key board and cross rail of an automatic musical instrument, said cross rail having recesses in its top, two time levers and two expression levers, the time levers being each horizontally movable in the recesses in the top of the rail and the expression levers being mounted and vertically movable upon the top of the rail, all arranged substantially in the manner and for the purposes set forth.

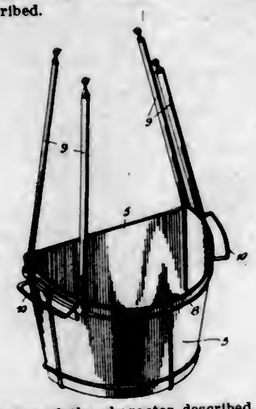
5. The combination with the key board and the cross rail above the same, said cross rail having an open recess in its top, of a lever pivoted in the open recess in the top of the rail and being horizontally movable therein, said lever being provided with a hinged projecting part arranged to be turned up and out of the way of the keys, substantially as and for the purposes set forth.

881,319. HORSE SANITARY PAN. ANTON HOLPUCH, Chicago, Ill. Filed Oct. 11, 1907. Serial No. 397,034.

1. A manure pouch comprising a wire-basket adapted to be detachably secured to a harness upon an animal and a removable receptacle adapted to fit within said wire-basket, substantially as described.

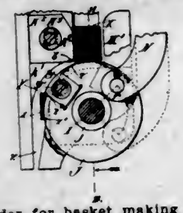
2. A manure pouch comprising a wire-basket adapted to be detachably secured by supporting straps to a harness upon an animal, and a semicylindrical receptacle adapted to fit within said wire basket, substantially as described.

3. A manure pouch comprising a wire-basket adapted to be detachably secured to a harness upon an animal and a semicylindrical receptacle having a perforated bottom adapted to fit loosely within said wire-basket, substantially as described.



4. In a device of the character described, the combination of a wire-basket, a plurality of supporting-straps for attaching said basket to a harness upon an animal, and a semicylindrical receptacle having a perforated bottom adapted to fit within said wire-basket, substantially as described.

881,320. BASKET-MAKING MACHINE. EMMET HORTON, Elmira, N. Y. Filed Jan. 14, 1907. Serial No. 352,180.



1. A blank feeder for basket making machines having a curved surface on which the blanks normally rest, a shoulder and a needle projecting from the shoulder adapted to engage the under side of the lowermost blank in the pile, means for actuating the blank feeder and a guide for turning the blank while it is being fed to cause it to assume a position with one of its longitudinal edges beneath blank plungers, and blank plungers adapted to further move the blank.

2. A blank feeder having a curved surface on which the blanks normally rest, a shoulder, a needle projecting from said shoulder and pointing in the general direction of movement of the blank feeder and which is adapted to engage the under side of the lowermost blank in the pile between its longitudinal edges and guides for directing the blank while being moved by the feeder.

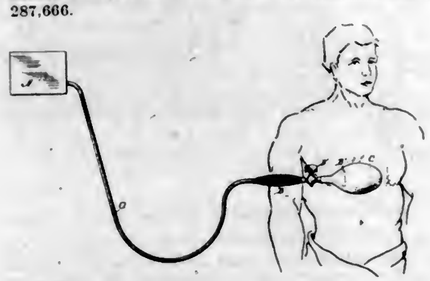
3. The combination of means for holding a pile of bands, an oscillating feeder below the pile having a curved surface on which the bands rest, and a needle projecting from the surface and pointing in the general direction of the movement of the feeder and adapted to engage the lowermost band in the pile between its longitudinal edges, means for oscillating the band feeder, and means for guiding the bands while being fed.

4. A blank feeder having an outer peripheral surface on which the blanks normally rest, a peripheral inner surface of less radius on which the blanks are carried while being fed, and a shoulder between said surfaces, a needle projecting from the shoulder for engaging the blanks between their longitudinal edges, means for oscillating the blank feeder and a guide for directing the bands while being fed.

5. The combination of means for supporting a vertical pile of bands, a band feeder having a curved surface on which the bands rest, a needle projecting from the surface of the feeder and adapted to engage the lowermost band in the pile between its longitudinal edges, a guide for directing the bands while being fed, and an adjustable plate above the feeder at one side of the bands, one corner of the lower portion of which is adapted to engage the lowermost band and direct it while being moved by the feeder and one vertical edge of which serves to hold the remaining bands in place.

[Claims 6 to 11 not printed in the Gazette.]

881,321. MASSAGE APPARATUS. JOHN H. KELLOGG, Battle Creek, Mich. Filed Nov. 16, 1905. Serial No. 287,666.



1. In a massage apparatus, the combination with means for supplying air under pressure; a flaring air delivery nozzle having a slit-like delivery opening; a stop cock for said nozzle carried thereby; a handle for said nozzle; and a forwardly projecting concaved vibrator member carried by said nozzle and coacting therewith, for the purpose specified.

2. In a massage apparatus, the combination with means for supplying air under pressure; an air delivery nozzle; a stop cock for said nozzle carried thereby; a handle for said nozzle; and a forwardly projecting vibrator member carried by said nozzle and coacting therewith, for the purpose specified.

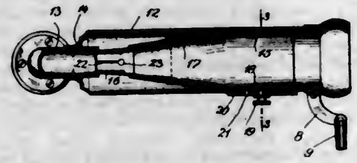
3. In a massage apparatus, the combination with means for supplying air under pressure; a flaring air delivery nozzle having a slit-like delivery opening; and a forwardly projecting concaved vibrator member carried by said nozzle and coacting therewith, for the purpose specified.

4. In a massage apparatus, the combination with means for supplying air under pressure; an air-delivery nozzle; and a forwardly projecting vibrator member carried by said nozzle and coacting therewith, for the purpose specified.

5. In a massage apparatus, the combination with means for supplying air under pressure; an air delivery nozzle; and a member arranged over said nozzle to coact therewith, for the purpose specified.

[Claim 6 not printed in the Gazette.]

881,322. TALKING-MACHINE. THOMAS KRAEMER, Philadelphia, Pa., assignor to Hawthorne & Sheble Manufacturing Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Dec. 14, 1907. Serial No. 406,451.



1. In a talking machine, a sound-conveying tube comprising two sections secured together one of which is of greater internal cross-sectional area than the other, a sound modifier lying within said larger section and having one end movable within said smaller section, and means connected to said modifier and extending through the wall of the tube for moving the modifier axially of the tube from outside the same, substantially as described.

2. In a talking machine, a sound-conveying tube comprising two sections secured together one of which is of greater internal cross-sectional area than the other, a sound modifier lying within said larger section and having an elastic end portion which is movable within said smaller section, and means for moving said modifier axially of the tube from outside the same, substantially as described.

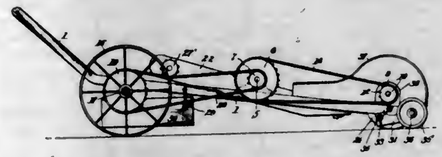
3. In a talking machine, a sound-conveying tube comprising two sections secured together one of which is of greater internal cross-sectional area than the other, a tubular, sheet-metal sound-modifier lying within said larger section and having one end entering said smaller section and provided with a plurality of lengthwise cuts to make it elastic, and means for moving said modifier axially of the tube from outside the same, substantially as described.

4. In a talking machine, a sound-conveying tube comprising two sections secured together one of which is of greater internal cross-sectional area than the other, a tubular modifier within said tube having a portion fitting within said larger section, a portion adapted to move within the end of said smaller section and a portion of conical shape connecting said portions, and means for moving said modifier axially of the tube from outside the same, substantially as described.

5. In a talking machine, a sound-conveying tube comprising two sections secured together one of which is of greater internal cross-sectional area than the other, a tubular modifier within said tube having a portion fitting within said larger section, an elastic portion adapted to move and to fit tightly within the end of said smaller section and a portion of conical shape connecting said portions, and means for moving said modifier axially of the tube, substantially as described.

[Claim 6 not printed in the Gazette.]

881,323. STREET-SWEEPER. JOHN H. LONG, New Philadelphia, Ohio. Filed May 15, 1907. Serial No. 373,804.



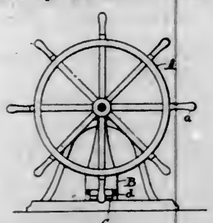
1. A street sweeper comprising a frame, a brush head carried by the frame, a driving shaft, a counter shaft, chain and sprocket connections between the drive shaft, the counter shaft and the brush head, a dirt collecting receptacle carried by the frame for coöperation with said conveyer, a plate pivotally secured upon each side of the frame at the forward end of the latter, each of said plates having a slot, means connected with the frame and working in the slot of each plate to adjust the latter, a stub shaft carried by each plate, and a wheel carried by each stub shaft.

2. A street sweeper comprising a frame, a brush head carried by the frame, a driving shaft, a counter shaft, chain and sprocket connections between the drive shaft, the counter shaft and the brush head, a dirt collecting receptacle carried by the frame for coöperation with said conveyer, a plate pivotally secured to each side of the frame at the forward end of the latter, a stub shaft carried by each plate, a wheel carried by each stub shaft, and means whereby each plate and the corresponding wheel may be shifted to adjust the frame toward and away from the ground.

3. A street sweeper comprising a wheeled frame, a brush head carried by the frame, a conveyer mounted in the frame, a collecting receptacle connected with the frame for coöperation with the conveyer, means for driv-

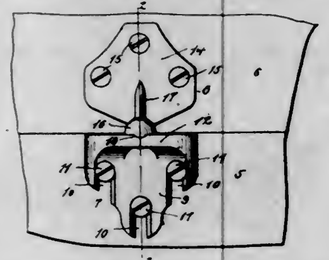
ing the conveyer, and a combined supporting and adjusting device for each of the front wheels of the machine, each of said devices including a pivoted member having a slot at one end, and means engaging the frame and working in each slot of each member, whereby the front wheels may be adjusted toward and away from the ground.

881,324. STEERING-WHEEL. READ W. LOWELL, Searsport, Me. Filed Apr. 24, 1907. Serial No. 369,900.



A lock for steering-wheels, comprising a plate adapted to be removably attached to a steering-post and carrying on one face thereof ears and a leaf-spring, and a locking-member borne against by said spring and having a base of relatively greater thickness secured by a pivot-pin to said ears, and having locking-fingers extending from said base and positioned to leave a space between the same and the plate when the locking-plate is out of operative locking-position, whereby the foot of the steersman may be inserted in said space to press the locking-member down into locking position, without releasing his hand from the wheel.

881,325. FLASK-HINGE. HARRY F. MANIFOLD, Avondale, Ala. Filed Aug. 23, 1906. Serial No. 331,744.



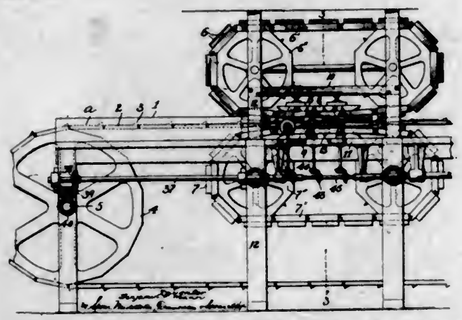
A flask-hinge comprising a plate secured to the cope, and having a ball at its lower edge, the back of said plate extending tangentially from the ball, and a socket member secured to the drag, and adapted to receive the ball.

881,326. CAN-MAKING MACHINE. BENJAMIN F. MANN, Baltimore, Md. Filed Sept. 24, 1906. Serial No. 335,905.

1. In combination in a can making apparatus, means for feeding the can blanks, means for clamping the said blanks, leaving their edges projecting, carrier means for the clamping means, and means for bending the projecting edges, said clamping means moving to keep pace with the onward movement of the blank and the bending means performing its function while the blank is in motion, substantially as described.

2. In combination in can making machinery, a horn, means for feeding the can blanks along said horn comprising the endless chain and means independent of said chain for folding the can blanks and forming the seam as the said blanks are moving along the horn, said means comprising the endless chain of folding wings and the relatively fixed cam means for closing said wings, substantially as described.

3. In combination in can making machinery, a series of upper and lower clamps, independent carrier means for each of said series whereby said upper and lower clamps are caused to approach each other to clamp the blanks between them and then move in unison with the blanks so clamped, and means for bending the edges of the blanks projecting from the said clamps, said independent carrier means then causing the separating movement of the clamps to release the bent blanks, substantially as described.

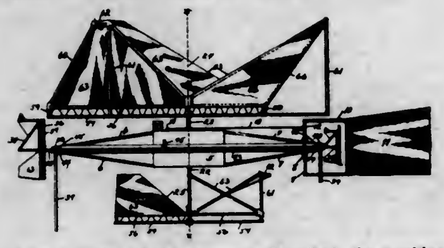


4. In combination, the upper and lower series of clamps, the endless carrier for the upper clamps, the endless carrier for the lower clamps, and means for bending the projecting edges of the blanks as they are carried along past the bending means by the endless carriers, and while gripped by the said clamps, substantially as described.

5. In combination, the upper and lower clamps, endless carriers therefor, an endless carrier for the blanks, said carriers all moving in unison, and means for bending the edges of the blanks as they are carried along by the carriers, substantially as described.

[Claims 6 to 15 not printed in the Gazette.]

881,327. AIR-SHIP. JOHN W. MONTGOMERY, Columbus, Ohio, assignor to Sarah J. Montgomery, Columbus, Ohio. Filed Oct. 9, 1907. Serial No. 396,540.



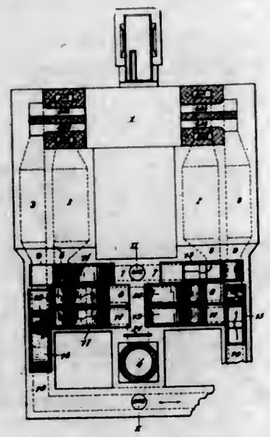
1. In a device of the character described, the combination with a supporting framework, of a motor carried by said framework, horizontally disposed lifting wheels driven by said motor, and wings adapted to be moved outwardly beneath one of said lifting wheels for the purpose set forth, said wings at all times lying in the downwardly moving current of air from the lifting wheel.

2. In a device of the character described, the combination with a supporting framework, of a motor carried by said framework, an upwardly extending shaft driven by said motor, a lifting wheel carried by said upwardly extending shaft, a downwardly extending shaft driven by said motor, a lifting wheel carried by said downwardly extending shaft, a forwardly extending shaft driven by said motor, a propelling wheel carried by said forwardly extending shaft, a rearwardly extending rudder, means for actuating said rudder from the supporting framework, and outwardly movable horizontally disposed wings adapted to be moved outwardly beneath the uppermost lifting wheel, said wings at all times lying in the downwardly moving current of air from the lifting wheel.

3. A wheel of the character described comprising a rim, a hub, and a plurality of radial spokes connected to said hub, of a plurality of radial spokes disposed in advance of each of the first named radial spokes, vertically disposed members extending upwardly from the juncture of the rim and each of the first named radial spokes that lies in advance of the last named radial spokes, inclined members connecting the upper ends of said upwardly extending members with the last named radial spokes, inclined members connecting said upwardly extending members with the outer ends of the last named spokes, and coverings carried by said members, substantially as shown and described.

4. A wheel of the character set forth, comprising a rim, a plurality of radial spokes 54 connected to said rim, and a hub to which said spokes are connected, a plurality of supplemental radial spokes 56 disposed over every other radial spoke 54, a plurality of vertically disposed members 61 extending upwardly from the juncture of every other spoke 54 with the rim, a centrally disposed supplemental hub 58, inclined members 63 connecting the vertically disposed members 61 and hub 58, inclined members 60 connecting the vertically disposed members 61 and the spokes 56, and canvas coverings 68 secured to the members 60, 63 and 54.

881,328. FLUE AND VALVE SYSTEM FOR FURNACES. JACOB B. MCKENNAN, Pueblo, Colo. Filed May 14, 1906. Serial No. 316,773.



1. In a circulating system for furnaces, in combination, conduits comprising a flue having a plurality of branches, and a plurality of reciprocating valves constructed and arranged to permit the connection of any two of said conduits; substantially as described.

2. In a circulating system for furnaces, in combination, a regenerator, conduits, each comprising a flue having a plurality of branches, with vertical sections, and reciprocating valves controlling said vertical sections and adapted to permit the connection of any two of said conduits; substantially as described.

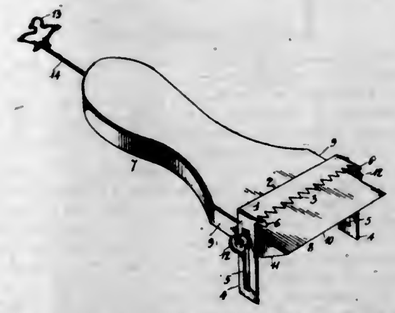
3. In a circulating system for furnaces, in combination, a regenerator flue having a plurality of branches, and a reciprocating valve for controlling each branch, said valves being adapted to connect their respective branches to supply and stack connections or to coöperate to directly connect the supply with the stack connection; substantially as described.

4. In a circulating system for furnaces, in combination, a regenerator-flue having supply and stack branches, and independent valves for each of said branches; said valves being adapted to coöperate to connect the supply branch directly to the stack branch; substantially as described.

5. In a circulating system for furnaces, in combination, a regenerator, a flue therefor, said flue having two branches, a supply main, a stack and independent reciprocating valve adapted to connect the supply main to one flue-branch and the other flue-branch to stack, respectively; said valves being adapted to coöperate to connect the supply main to the stack flue through the regenerator-flue branches, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

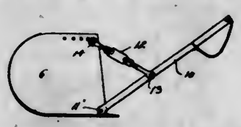
881,329. FRUIT AND VEGETABLE PARER AND SLICER. SOSAKU NAGASSE, Los Angeles, Cal. Filed Feb. 28, 1907. Serial No. 359,929.



1. An implement of the class described comprising a handle beveled at one end and having a longitudinal side at an angle to said beveled end, in combination with a blade spaced from and extending across said beveled end and having a slotted arm connected by a set screw to said longitudinal side of the handle for longitudinal and pivotal movement with respect thereto to enable said blade to be adjusted toward and from said beveled end of the handle and to be also disposed at an angle with respect to the handle, substantially as described.

2. The herein-described fruit and vegetable peeler, scraper and slicer comprising the blade having the sharpened edge at one side, a serrated scraping edge at its opposite side, eye-cutting points at its ends, parallel slotted arms extending from its ends, in combination with a handle beveled at one end having parallel sides for engagement by the arms of the blade, and set-screws adjustably securing said blade to the handle and operating in said slotted arms of said blade, substantially as set forth.

881,330. DIGGING-SHOVEL. WILLIAM J. NEWMAN, Chicago, Ill. Filed Jan. 25, 1907. Serial No. 354,084.



1. The combination with a digging shovel, of suitable arms, a guide-shoe extending across the outer ends of said arms, and turn-buckles connecting between said arms and said shovel for adjusting the position of said arms.

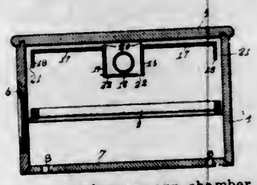
2. The combination with a shovel, of arms pivoted adjacent to the digging edge thereof, a guide-shoe at the outer ends of said arms, and means for adjusting the position of said arms relative to said shovel and holding them rigidly in such position.

3. The combination with a shovel, of bars or the like secured to said shovel for drawing the same, a plate connecting between said bars to form a suitable guide-shoe, and means for adjusting the position of said arms with respect to the shovel.

4. The combination with a shovel, of arms pivotally secured to the sides of said shovel, and adjustable means

connecting between said arms and the sides of said shovel for adjusting the position of said arms and for holding said arms rigidly in such adjusted position with respect to the shovel.

881,331. INCUBATOR. JAMES L. NIX, Homer City, Pa. Filed July 24, 1906. Serial No. 327,586.

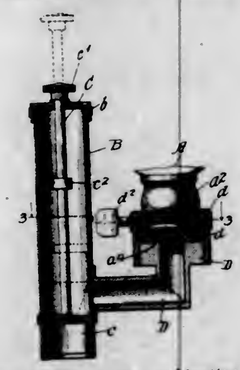


1. An incubator having an egg chamber, an egg tray mounted in the egg chamber, a suitable source of heat supply, a horizontal air-distributing pipe mounted within the egg chamber, a horizontal deflector mounted beneath said pipe, and vertical deflectors mounted at the sides of said pipe, substantially as described.

2. In a device of the class described a combination of an incubator having an egg chamber, a heating drum, a pipe connecting the heating drum to the end of the egg chamber, a horizontal deflector mounted beneath said pipe deflectors mounted in the upper portion of the egg chamber and vertical deflectors mounted at each side of the first named deflector, substantially as described.

3. An incubator, having an egg chamber, an egg tray mounted in the egg chamber, deflectors mounted in the upper portion of the egg chamber forming a passage between the same and the top of the incubator, a pair of depending walls projecting downwardly and located centrally in the egg chamber, a distributing pipe located in the egg chamber between the centrally depending walls, a horizontal deflecting strip located beneath the distributing pipe and extending throughout the length of the egg chamber, downwardly projecting deflecting walls 18 formed on the ends of the horizontal deflectors forming passages at the sides of the egg chamber between the same and the vertical walls of the incubator, substantially as specified.

881,332. BATH-SPRAY. IRA J. OWEN, Oak Park, and ROBERT A. BROOKS, Chicago, Ill., assignors to John G. Hodgson, Sr., and William A. Christiansen, Chicago, Ill. Filed Sept. 14, 1906. Serial No. 334,683.



1. In a spraying device the combination with a cock, a cylinder communicating therewith having slots in one side thereof adapted to deliver fan shaped sprays and an open lower end and a valve in the cylinder adapted to direct the flow from the cocks to the spray and to the open end of the cylinder.

2. In a device of the class described the combination with a hot and cold water cock of a mixing chamber, a pipe rigidly engaged to the mixing chamber, an open ended cylinder having an aperture in its side affording communication with the pipe and having a plurality of spray apertures in its side above and opposite said aperture, a plug valve in the cylinder, and a stem rigidly engaged to the same for manual actuation adapted to move said valve to direct the flow from the cock to the open end of the cylinder and to direct the flow to the spray end of the cylinder.

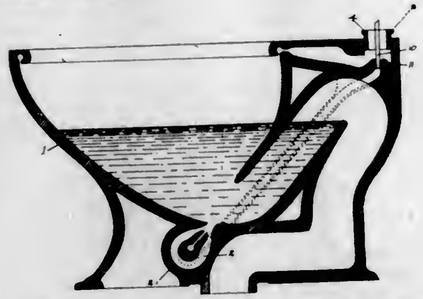
3. In a device of the class described the combination with a cock, a cylinder communicating therewith, having spraying slots in its side, a valve in the cylinder adapted to direct the fluid into the spray end or out of the lower end of the cylinder, a stem engaged to the valve and a removable top on the cylinder.

4. The combination with a source of water supply of a metallic tubular cylinder connected therewith, said cylinder having spraying apertures in one side above the point of connection and an open lower end, and a valve in the cylinder adapted to be elevated above the connection to direct the flow to the lower end of the cylinder, to be depressed to direct the flow to the spray end of the cylinder or to shut off the flow entirely.

5. The combination with a double bath cock of a mixing and spraying cylinder connected to receive the flow therefrom and comprising an upper apertured pressure chamber and a lower open discharge orifice, a valve interposed to direct the flow from the cock into either and a removable cover to admit of charging said pressure chamber with material to impregnate the water.

[Claims 6 to 17 not printed in the Gazette.]

881,333. CLOSET-BOWL. GEORGE W. PALMER and FREDERICK E. PIERCE, Lancaster, Mass. Filed Apr. 5, 1907. Serial No. 366,583.



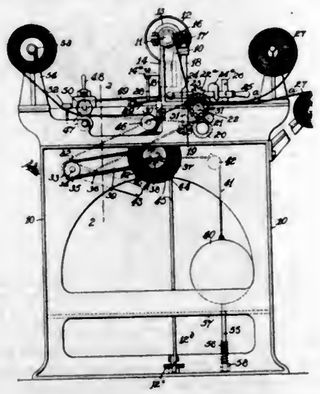
1. In combination with a bowl having a siphon trap, means for discharging water in said trap at the base of the uptake from a plurality of independent sources, one of said sources being under main pressure.

2. In combination with a bowl having a siphon trap, means for discharging water in said trap at the base of the uptake from a plurality of independent sources.

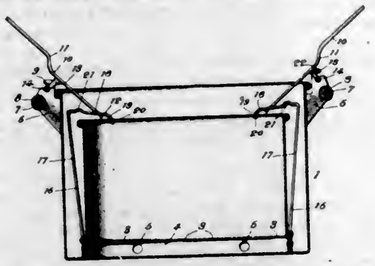
3. As a new article of manufacture, a bowl having a siphon trap, said bowl being provided with a chamber discharging within the up-take of the siphon at the base thereof, a passageway positioned on one side of the up-take of the siphon communicating with the bowl, a nipple within the chamber discharging through the opening of the chamber, said bowl having a passageway on the opposite side of the up-take communicating with the nipple.

881,334. MATCH-MACHINE. WILLIAM H. PARKER, Passaic, N. J., assignor to Dixie Match Company, a Corporation of New Jersey. Filed Feb. 27, 1905. Serial No. 247,429.

In a match machine, the combination with the coiling means, of a counter weight to balance the coil, and a tension spring thrown into action by the movement of the counter weight, and adapted to augment the action of the weight.



881,335. WASHBOILER. ISAAC B. PARSONS, Bathgate, N. D. Filed June 28, 1907. Serial No. 381,236.



1. In a device of the character described, the combination of an outer shell, a handle applied to the outer shell and formed with a bearing, an inner shell received loosely within the outer shell, and a lever fulcrumed upon the bearing of the handle and serving to manipulate the inner shell.

2. In a device of the character described, the combination of an outer shell, a handle applied to the outer shell, an inner shell fitting removably within the outer shell, a bail attached to the inner shell, and an operating lever fulcrumed upon the handle and detachably engaging the said bail.

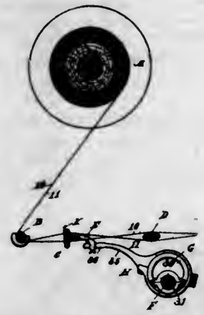
3. In a device of the character described, the combination of an outer shell, an inner shell received loosely within the outer shell, a bail loosely connected to the inner shell and provided with lateral arms, and an operating lever carried by the outer shell and provided with extensions loosely engaging the said lateral arms of the bail.

4. In a device of the character described, the combination of an outer shell, an inner shell received loosely within the outer shell, a bail carried by the inner shell and provided with lateral arms formed with depressions in their lower faces, and an operating lever carried by the outer shell and formed with extensions slidably engaging the said lateral arms and designed to be received within the depressions to hold the inner shell in an elevated position.

5. In a device of the character described, the combination of an outer shell, an inner shell fitting removably within the outer shell, a bail carried by the inner shell and comprising downwardly diverging upright members, and an operating lever mounted upon the outer shell and provided with lateral extensions having an interlocking connection with the upper portion of the before mentioned bail and designed to pass freely through the diverged ends of the upright members when the inner shell is lifted from the outer shell.

[Claims 6 to 10 not printed in the Gazette.]

881,336. OSCILLATING LEASE-ROD. NAPOLEON PAQUETTE and DONA PAQUETTE, Lowell, Mass. Filed May 22, 1907. Serial No. 375,048.



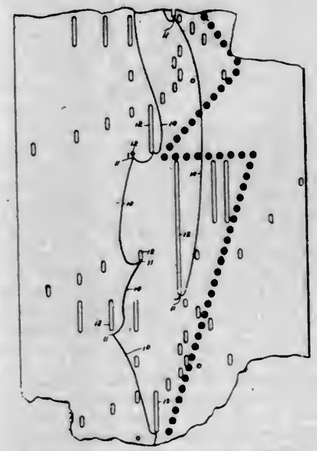
1. In a loom, a crank shaft, an eccentric carried thereby, a collar which incloses the eccentric and is extended to form a tongue, two arms carried by the tongue, and a lease rod carried by the two arms.

2. In a loom, a crank shaft, an eccentric carried thereby, a collar which incloses the eccentric and is extended to form a tongue, two arms adjustably carried by the tongue, and a lease rod carried by the two arms.

3. In a loom, a crank shaft, an eccentric carried thereby, a collar which incloses the eccentric and is extended to form a tongue, two arms carried by the tongue, a lease rod carried by the two arms, and a detachable wire guard at each end of the lease rod.

4. In a loom, a crank shaft, a split eccentric carried thereby, a split collar which incloses the eccentric and is extended to form a tongue, two arms adjustably carried by the tongue each of which terminates in a V shaped slot, a lease rod, and two screws countersunk in and passed through the lease rod each into one of the V shaped slots of the arms as described.

881,337. MUSIC-SHEET. CARL E. PECK, New York, N. Y. Filed July 13, 1907. Serial No. 383,676.



1. A traveling music sheet provided with melody openings, and a mark preceding each of the melody openings.

2. A traveling music sheet having melody openings, and marks produced upon the surface of the sheet and preceding each of the melody openings.

3. A traveling music sheet provided with melody openings, a mark preceding each of the melody openings, and lines joining the several marks.

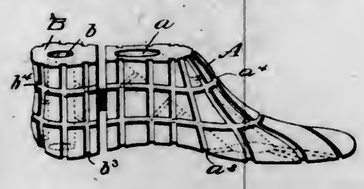
4. A traveling music sheet provided with melody open-

ings, a mark formed upon the surface of the sheet and preceding each of the melody openings, and lines formed upon the music sheet and joining the several marks.

5. A traveling music sheet provided with melody openings, a mark preceding each of the melody openings, and curved lines joining the several marks.

[Claims 6 and 7 not printed in the Gazette.]

881,338. SHOE TREE OR LAST. TRUMAN W. POST, Battle Creek, Mich., assignor to Ventilating Shoe Tree Co., New York, N. Y. Filed July 30, 1904, Serial No. 218,893. Renewed July 29, 1907. Serial No. 386,000.



1. A form or tree for drying boots and shoes provided with a series of intersecting air-channels on its outer surface, and a central air-duct communicating with the said air-channels, substantially as described.

2. A two part drying form for boots and shoes having an adjusting connection between said parts, and provided with a series of intersecting air channels on the outer surface thereof, and a series of internal air-passages radiating from one or more central air-ducts, and communicating with the air-channels, substantially as shown and described.

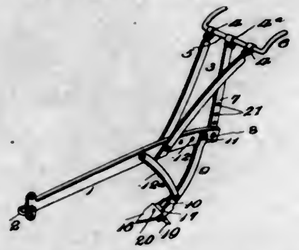
881,339. BRACKET. ISAAC POVALL, Des Moines, Iowa. Filed May 14, 1906. Serial No. 316,875.



1. A bracket, comprising a socket member, marginal flanges on said socket member and having their inner faces formed in converging planes, lugs on said flanges and spaced apart from the socket member, the inner faces of said lugs being parallel with the opposite face of the socket members and a key member having ribs on its side margins, said ribs adapted to enter freely between the lugs and socket member and the body of the key member extending outward beyond the outer faces of the lugs, the converging margins of the ribs adapted to engage the converging inner faces of the flanges on the socket member, and the lugs adapted to engage the key member.

2. A bracket, comprising a socket-member formed with converging grooves opposite each other, said grooves square in cross-section, said socket-member also formed with screw holes, and a key-member formed with converging marginal flanges, said flanges also square in cross-section and adapted for longitudinal seating in said grooves, the outer face of the key-member being outside the plane of the outer face of the socket-member, the side margins of said key-member being in converging planes and adapted to enter between and engage the opposite sides of the socket-member outside the converging grooves, said key-member also formed with a central bolt hole having a counter-sink 23 angular in cross-section at its inner end and adapted to receive a square-headed bolt whereby the key-member may be attached to an object.

881,340. PLOW-STOCK. JAMES A. RAIFORD, Columbus, Ga. Filed May 7, 1907. Serial No. 372,361.



1. In a plow, the combination of a stock having an opening formed therein, a plate positioned within the opening, a plow point mounted upon one side of the stock, and a laterally disposed scraper mounted upon the opposite side of the stock, the before mentioned plate being provided at one end with a shoulder engaging the plow point and at the opposite end with a lateral extension fitting against the scraper and engaging an edge of the same.

2. In a plow, the combination of a stock having an opening formed therein, a plate positioned within the opening, a plow point mounted upon one side of the stock, and a laterally disposed scraper mounted upon the opposite side of the stock, the before mentioned plate being provided at one end with a shoulder designed to engage the plow point while the opposite end is extended downwardly and is designed to fit against the scraper, the said downwardly extending portion of the plate being provided with lateral flanges carrying projections engaging an edge of the scraper.

3. In a plow, the combination of a stock having an opening formed therein, a plate positioned within the opening, a plow point mounted upon one side of the stock, and a laterally disposed scraper mounted upon the opposite side of the stock, the before mentioned plate being provided at one end with a shoulder designed to engage the plow point while the opposite end is extended downwardly to fit against the scraper, the downwardly extending portion of the plate carrying rearwardly extending flanges embracing the stock and also being provided with laterally extending flanges formed with projections designed to engage an edge of the scraper.

4. In a plow, the combination of a stock having an opening formed therein, a plate positioned within the opening and having a shoulder at one end thereof and projections at the opposite end, a plow point mounted upon the stock and engaging the shoulder, and a scraper mounted upon the stock and engaging the projections.

5. In a plow, the combination of a stock having an opening formed therein, a plate positioned within the opening, and having one end thereof extended upwardly to form a shoulder while the opposite end is extended downwardly, and provided with projections, a plow point mounted upon the stock and engaging the shoulder, and a scraper mounted upon the stock and engaging the projections.

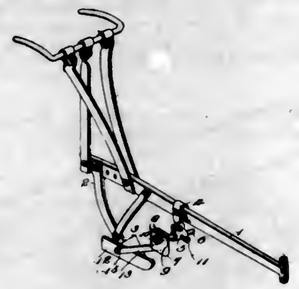
881,341. PLOW-FENDER. JAMES A. RAIFORD, Columbus, Ga. Filed May 18, 1907. Serial No. 374,402.

1. The combination of a cultivator, a clip, means for securing the clip to the cultivator beam, an arm having a hooked connection with the clip, and a fender carried by the arm.

2. The combination of a cultivator, a clip, means for securing the clip to the beam, means for adjusting the clip, an arm having a hooked connection with the clip, and a fender carried by the arm.

3. The combination of a cultivator, a clip comprising spaced sides connected along one of their edges and also connected by a pin, means for securing the clip to the cultivator beam, an arm having a hooked connection with the pin and normally held in engagement therewith by the

member connecting the sides of the clip, and a fender carried by the arm.

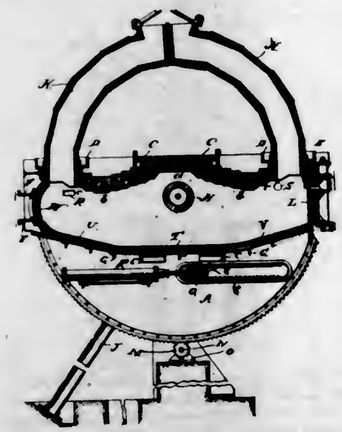


4. The combination of a cultivator, a bracket mounted upon the cultivator beam, a clip, means for adjustably connecting the clip to the bracket, an arm having a detachable and interlocking connection with the clip, and a fender carried by the arm.

5. The combination of a cultivator, a bracket mounted upon the cultivator beam, and provided with a bearing, a shaft received by the bearing, a clip carried by the shaft, an arm loosely connected to the clip, and a fender carried by the arm.

[Claim 6 not printed in the Gazette.]

881,342. OSCILLATING PUDDLING-FURNACE. JAMES P. ROE, Pottstown, Pa. Filed Mar. 24, 1905. Serial No. 251,783.



1. In an oscillating puddling furnace having a transverse axis of oscillation a hearth having its bottom inclining downwardly from each end to a central or middle part on an obtuse angle to said ends.

2. In an oscillating puddling furnace having a transverse axis of oscillation a hearth having a bottom formed with its central part on a lower plane than its ends.

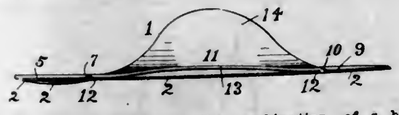
3. In an oscillating puddling furnace having a transverse axis of oscillation, a hearth having a bottom and side walls extending from end to end, one end wall curved upwardly and inwardly, and another end wall provided with means for permitting removal of the charge.

4. In an oscillating puddling furnace having a transverse axis of oscillation a hearth having its bottom formed with a central horizontal part, and its end parts inclining thereto, and a curved end.

5. In an oscillating puddling furnace a hearth having a bottom formed of a central horizontal part and two inclined parts, and an arched bow-shaped roof.

[Claims 6 to 8 not printed in the Gazette.]

881,343. ARCH-SUPPORTER FOR FLAT FEET. BENJAMIN RUHMANN, Jersey City, N. J. Filed Apr. 10, 1907. Serial No. 367,307.



1. In an arch-supporter, the combination, of a base-plate, a concave heel-plate connected therewith, a chamfered portion upon the inner edge of said heel-plate adapted to form in connection with the base-plate a groove, a ball-plate connected with the forward part of said base-plate, a chamfered portion upon the inner edge of said ball-plate adapted to form in connection with the base-plate a groove, and an arch-supporting member adapted to be slidably and removably arranged in the said grooves formed in the base plate, substantially as and for the purposes set forth.

2. In an arch-supporter, the combination, of a base-plate, a concave heel-plate connected therewith, a chamfered portion upon the inner edge of said heel-plate adapted to form in connection with the base-plate a groove, a ball-plate connected with the forward part of said base-plate, a chamfered portion upon the inner edge of said ball-plate adapted to form in connection with the base-plate a groove, and an arch-supporting member adapted to be slidably and removably arranged in the said grooves formed in the base-plate, said arch-supporting member comprising an upwardly bowed portion, chamfered portions on each of the end edges of the said upwardly bowed portion, adapted to coincide with the chamfered portions of the said heel-plate and the said ball-plate, and an upwardly extending side-supporting plate adapted to conform generally to the shape of a foot and embrace a part of the side of a foot, substantially as and for the purposes set forth.

3. In an arch-supporter the combination, of a base-plate provided with a heel-plate and a ball-plate, said heel-plate and said ball-plate being provided with chamfered inner edges adapted to form in connection with said base-plate a pair of oppositely situated grooves, and an arch-supporting member slidably and removably arranged in said grooves, substantially as and for the purposes set forth.

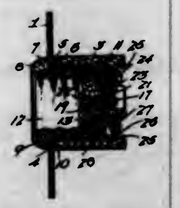
4. In an arch-supporter the combination, of a base-plate provided with a heel-plate and a ball-plate, said heel-plate and said ball-plate being provided with chamfered inner edges adapted to form in connection with said base-plate a pair of oppositely situated grooves, and an arch-supporting member slidably and removably arranged in said grooves, said arch supporting member comprising an upwardly bowed portion, and an upwardly extending side-supporting plate adapted to conform generally to the shape of a foot and embrace a part of the side of said foot, substantially as and for the purposes set forth.

881,344. ELECTRICAL SIGN-RECEPTACLE. FRANK J. RUSSELL, New York, N. Y. Filed Apr. 5, 1907. Serial No. 366,555.

1. In combination with a supporting element having a receptacle receiving hole and a retaining projection, an electrical receptacle having adjustably connected cup members clamped respectively upon opposite sides of the supporting element, said members having respectively a co-operating notch and lug engaging with said retaining projection of the supporting element.

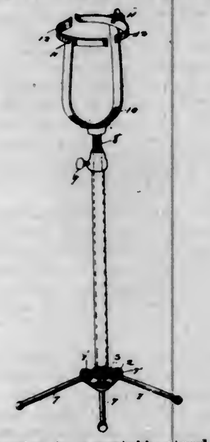
2. An electrical receptacle comprising a pair of telescoping cup members provided with closed insulating bottoms, and one of said members being further provided with

line wire passages, a wire terminal plate secured to the bottom piece of the outer cup member and having a binding screw exposed to one of the line wire passages, a side plug contact arranged within the inner cup member and carrying a binding post projecting through the bottoms of both cup members and exposed to the other line wire passage, and a combined contact and assembling screw arranged to hold said side plug contact in position and adjustably engaging the wire terminal plate on the bottom piece of the outer cup member.



3. The combination with a supporting element, of an electrical receptacle comprising a pair of cup members nested one within the other and clamped respectively upon opposite sides of the supporting element, one of said cup members carrying both plug contacts and one of said wire connections, means whereby one contact serves to secure the other plug contact in position, and the other cup member carrying the other wire terminal connection.

881,345. DISPLAY-STAND. HERBERT B. SABIN, Cleveland, Ohio. Filed Mar. 26, 1906. Serial No. 308,004.



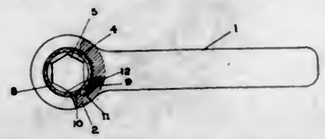
1. The combination in a portable stand of a stem portion formed of tubular metal and screw threaded at the lower end, a base plate having a central screw threaded opening into which said stem is inserted, and provided also with radial openings connecting with the central opening and having countersunk depressions in their outer extremities, legs comprising rods having enlarged ends inserted in the slots, and a rod adjustably inserted in said stem, and provided with a supporting device at its upper end, substantially as described.

2. A base for a stand comprising a centrally perforated and screw threaded plate, and with radial slots communicating with said central opening and having countersunk openings at their outer ends, legs comprising metal rods, inserted in said slots, and having heads at both ends, the heads at the inner ends thereof resting within said countersunk openings, and means for closing the central opening to retain the legs in the slot, substantially as described.

3. In a portable stand, a tubular stem, and an adjustable support mounted therein, said support comprising a rod, a fork thereon having spring sides, and semi-circular clamps, pivoted upon said sides, substantially as described.

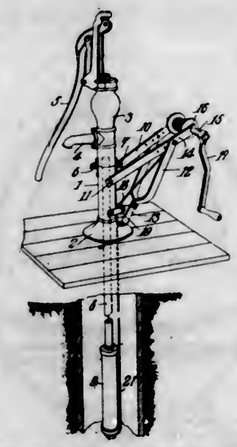
4. In a portable support for flower pots or similar devices, an adjustable stem, an object clamping and supporting device thereon consisting of a fork having spring sides and semi-circular clamps pivotally attached to said fork sides, substantially as described.

881,346. WRENCH. HENRY D. SARGENT, Worcester, Mass. Filed May 25, 1907. Serial No. 375,755.



In combination, a handle having an opening and a tangential recess in the wall of said opening, a shoulder formed at the junction of the recess and opening, a detent on the shoulder, a spring in the recess back of the detent, a nut-engaging member having transversely disposed recesses forming seats and shoulders for the detent, the said detent engaging the shoulder of the handle and the nut-engaging member to hold the nut-engaging member against movement in one direction independently of the handle.

881,347. ATTACHMENT FOR PUMPS. PETER SCHLAGECK, Angelus, Kans. Filed Jan. 3, 1908. Serial No. 409,129.



1. In a pump the combination with a standard, a head detachably mounted thereon, and a pipe detachably connected to and depending from the head; of hoisting means carried by the standard and connected to the pipe.

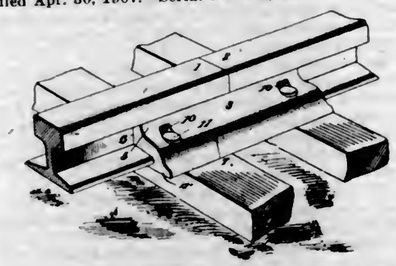
2. In a pump the combination with a standard, a head detachably connected thereto, and a pipe detachably secured to and depending from the head; of winding means, a support therefor secured to the standard, and a connection between said winding means and the pipe.

3. In a pump the combination with a standard, a head detachably secured thereon, and a pipe detachably secured to and depending from the head; of supporting strips secured to and extending beyond the standard, a brace therefor, a winding device carried by the strips, and a flexible connection between said device and the pipe.

4. The combination with a standard, a pump head detachably mounted thereon, and a pipe detachably secured to and depending from the head; of supporting strips extending from the standard, a brace adjustably connected thereto, a guide sheave carried by the standard, winding

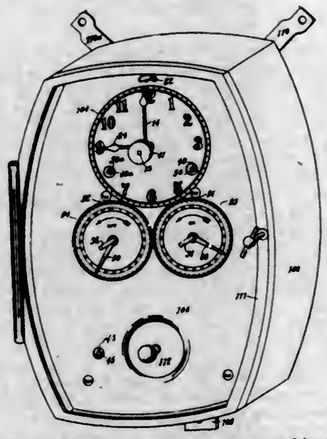
means supported by the strips, and a flexible connection between said means and the pipe, said connection extending over the guide sheave downward below the standard.

881,348. RAIL-JOINT. MEAD E. SEMPLE, Sharon, Pa. Filed Apr. 30, 1907. Serial No. 371,092.



In a rail joint, the combination of a chair comprising a base and a pair of oppositely disposed wings, each wing being formed with a vertical portion and an inclined portion and spike receiving openings being provided in opposite sides of the chair, the said spike receiving openings communicating with the rail receiving space within the chair and passing through the inclined portions of the wings, the vertical portions thereof being provided with cut away portions located adjacent the spike receiving openings and terminating in shoulders serving to engage the spike heads which face inwardly and are partly housed within the cut away portions, the upper edges of the vertical portion of the wings being curved outwardly, and abutting rail ends received within the chair and having the bases thereof formed with notches designed to register with the spike receiving openings in the chair, the lower portion of the head of the rails being curved to correspond to the outwardly curved upper edges of the wings of the chair, substantially as described.

881,349. AUTOMATIC TIME-VALVE. ARCH A. SHINGLETON, Cincinnati, Ohio. Filed Feb. 19, 1906. Serial No. 301,893.



1. In an automatic time valve, the combination of a clock mechanism, a frame in which said clock mechanism is mounted, a crank shaft journaled in said frame, a valve adjacent to said frame, a crank on said crank shaft, operative connection between said valve and said crank, a face plate on said crank shaft, a projection on said face plate, a brake support pivoted adjacent to said face plate having a recess therein adapted to receive said projection on said face plate, a brake mounted upon said brake support, a sheave in operative connection with said crank shaft adapted to be engaged by said brake, and means whereby said brake is engaged with and disengaged from said sheave.

2. In an automatic time valve, the combination of a clock mechanism, a frame in which said clock mechanism is mounted, a crank shaft journaled in said frame, a valve adjacent to said frame, a crank on said crank shaft, operative connection between said valve and said crank shaft, a face plate on said crank shaft, a projection on said face plate, a brake support pivoted adjacent to said face plate having a recess therein adapted to receive said projection on said face plate, a brake mounted upon said brake support, a sheave in operative connection with said crank shaft adapted to be engaged by said brake, a cam shaft in operative connection with said clock mechanism, cams on said cam shaft, and cam levers engaging said cams and adapted to engage with and disengage from said brake whereby said brake is engaged with and disengaged from said sheave.

3. In an automatic time valve, the combination of a clock mechanism, a frame in which said clock mechanism is mounted, a crank shaft journaled in said frame, a valve adjacent to said frame, a crank on said crank shaft, operative connection between said valve and said crank shaft, a face plate on said crank shaft, a projection on said face plate, a brake support pivoted adjacent to said face plate having a recess therein adapted to receive said projection on said face plate, a brake mounted upon said brake support, a sheave in operative connection with said crank shaft adapted to be engaged by said brake, a cam shaft journaled in said frame, a cam on said cam shaft, a cam gear mounted on said cam shaft adapted to be rotated by said clock mechanism and to rotate said cam shaft, a cam lever in engagement with said cam and adapted to engage with and to disengage from said brake whereby said brake is engaged with and disengaged from said sheave.

4. In an automatic time valve, the combination of a clock mechanism, a frame in which said clock mechanism is mounted, a valve adjacent to said frame, a crank shaft journaled in said frame, a ratchet rigidly mounted on said crank shaft, a crank loosely mounted on said crank shaft adjacent said ratchet, a pawl on said crank in engagement with said ratchet, operative connection between said crank and said valve, a motor adapted to turn said crank shaft and a braking mechanism in connection with said motor controlled by said clock mechanism.

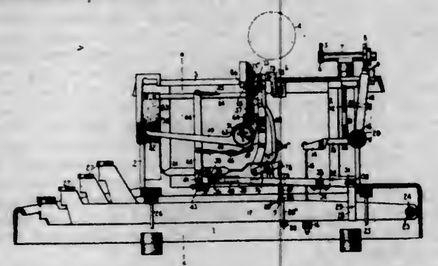
5. In an automatic time valve, the combination of a clock mechanism, a frame in which said clock mechanism is mounted, a valve adjacent to said frame, a crank shaft journaled in said frame, a ratchet rigidly mounted on said crank shaft, a crank loosely mounted on said crank shaft adjacent to said ratchet, a pawl on said crank in engagement with said ratchet, operative connection between said crank and said valve, a face plate on said crank shaft, a projection on said face plate, a brake support pivotally mounted adjacent said face plate and having a recess therein adapted to receive said projection whereby it is reciprocated by said face plate, a brake mounted on said brake support, a sheave rotatively mounted in said frame adjacent said brake and means whereby said brake is engaged with an disengaged from said sheave by said clock mechanism.

881,350. TYPE-WRITING MACHINE. ZALMON G. SHOLES, Evanston, Ill., assignor to Union Typewriter Company, Jersey City, N. J., a Corporation of New Jersey. Filed Mar. 16, 1903. Serial No. 148,050.

1. In a front-strike typewriting machine, the combination of a system of parallel key-levers, a system of segmentally arranged upwardly and rearwardly striking type bars, a system of parallel sub-levers pivoted on fixed pivots and arranged in a single substantially horizontal plane, and a second system of sub-levers interposed between the type bars and said first mentioned sub-levers and co-acting directly with said first mentioned sub-levers.

2. In a front-strike typewriting machine, the combina-

tion of parallel key-levers, a series of upwardly and rearwardly striking type-bars, a series of sub-levers arranged above the key levers pivoted intermediate of their ends on fixed pivots and operatively connected to the key-levers, and a series of angle levers operatively connected to the type-bar and controlled by the sub-levers.



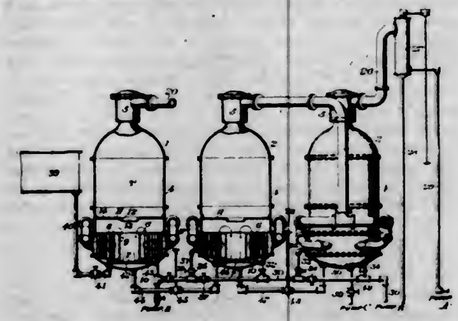
3. In a front-strike typewriting machine, the combination of a series of parallel key-levers, a series of parallel and substantially horizontal sub-levers of the first order extending fore and aft of the machine substantially parallel with said key levers and connected at their rear ends to said key-levers, a series of upwardly and rearwardly striking type bars, and operative connections between the sub-levers and type-bars and connected to the sub-levers at the forward ends thereof.

4. In a front-strike typewriting machine, the combination of a series of parallel key-levers, substantially straight parallel sub-levers of the first order, pivoted to a fixed portion of the machine and operatively connected to the key-levers, and substantially parallel therewith, and bell-cranks between the sub-levers and type-bars.

5. In a front-strike typewriting machine, the combination of a series of upwardly and rearwardly swinging type bars, a series of key-levers, a series of substantially horizontal sub-levers operatively connected to the key levers, a series of vertical sub-levers pivoted to a fixed portion of the machine lower than the type bars and operatively connected to the horizontal sub-levers to be vibrated fore and aft of the machine, and operating links connecting the vertical sub-levers to the type bars.

[Claims 6 to 123 not printed in the Gazette.]

881,351. VACUUM-PAN. ALONZO P. SMITH, Philadelphia, Pa. Filed June 2, 1904. Serial No. 210,824.



1. An evaporator having a steam space, means for admitting a heating agent at quadrantal points from the periphery toward the center of said steam space for uniformly distributing the heating agent within said steam space, vertical tubes in said steam space, and a perforated ring beneath said tubes.

2. An evaporator, a pipe connected with said evaporator for supplying a heating agent thereto, a plurality of branches from said pipe, a plurality of branches connecting each of said first-named branches directly with the steam space of the evaporator, tubes in said steam space, and a perforated ring beneath said tubes.

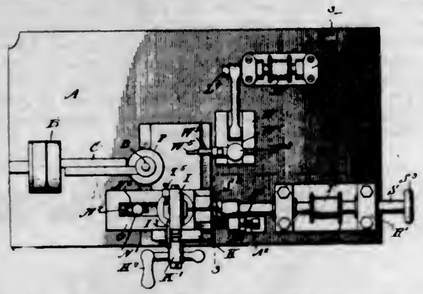
3. An evaporator, a pipe connected therewith for supplying a heating agent thereto, a plurality of branches from said pipe, a plurality of branches connecting each of the first-named branches with the steam space of the evaporator, tubes in said steam space, a perforated ring beneath said tubes, and a pipe leading from the space below said tubes for connection with the perforated ring of an adjacent evaporator.

4. An evaporator, means in the lower portion thereof for heating and circulating a liquid, embodying vertical tubes in the lower portion of said evaporator with a relatively large central passage therethrough, a perforated ring near the bottom of the evaporator beneath the inlets for the heating agent, and a perforated baffle plate above and in proximity to the heating means.

5. An evaporator having in its lower portion means for heating and circulating a liquid, embodying vertical tubes in the lower portion of the evaporator with a relatively large central passage therethrough in combination with a substantially annular perforated ring below the same, means for supplying liquid to said ring, and a perforated baffle plate above and in proximity to the heating means.

[Claim 6 not printed in the Gazette.]

881,352. MACHINE FOR MAKING ACETYLENE-GAS TIPS. CLARENCE S. STEWARD and WILLIAM T. LOWRY, Chattanooga, Tenn., assignors to The D. M. Steward Manufacturing Company, Chattanooga, Tenn. Filed Apr. 18, 1907. Serial No. 368,946.



1. A mechanism for making acetylene gas burner tips, comprising a tip holder adapted to have an angular movement, a movable carriage upon which said holder is mounted, a movable rasping member mounted at right angles to the line of travel of said carriage and against which member a tip, engaged by said holder, is designed to be moved whereby an elongated chamber may be formed within the tip, and means positioned in the path of the tip for cutting a slot in the end and intersecting at right angles the chamber within the latter, as set forth.

2. A mechanism for making acetylene gas burner tips, comprising a tip holder adapted to have an angular movement, a movable carriage upon which said holder is mounted, a reciprocating rasping member mounted at right angles to the line of travel of said carriage and against which member a tip fixed to said holder is designed to be moved whereby an elongated chamber may be formed within the tip, and means positioned in the path of the tip for cutting a slot in the end intersecting at right angles the chamber within the latter, as set forth.

3. A mechanism for making acetylene gas burner tips, comprising a tip holder adapted to have an angular movement, a movable carriage upon which said holder is mounted, a reciprocating rasping member mounted at right angles to the line of travel of said carriage and against which member a tip adjustably held by said holder is adapted to be moved, whereby an elongated chamber may be formed within the tip, and means positioned in the path of the tip for cutting a slot in the end intersecting at right angles the chamber within the latter, as set forth.

4. A mechanism for making acetylene gas burner tips, comprising a tip holder adapted to have an angular movement, a movable carriage upon which said holder is mounted, a rotatable drill, means for causing the latter to be actuated at right angles to the movement of said carriage and in the path of the tip, a movable rasping member mounted at right angles to the line of travel of said carriage and against which the tip is adapted to contact as said member is reciprocated, whereby an elongated member may be formed within the tip and intermediate the holes formed therein by said drill, and means positioned in the path of the tip for cutting a slot in the end intersecting at right angles the chamber within the tip, as set forth.

5. A mechanism for making acetylene gas burner tips, comprising a tip holder adapted to have an angular movement, a movable carriage upon which said holder is mounted, a rotatable drill movable in a plane at right angles to the movement of said carriage, a movable rasping member mounted at right angles to the line of travel of said carriage and against which the tip is adapted to contact as said member is reciprocated, whereby an elongaated member may be formed within the tip and intermediate the holes formed therein by said drill, a rotatable saw mounted in the path of the end of the tip engaged by said holder and designed to cut a slot in the end of the tip intermediate the spreading chamber therein, as set forth.

[Claims 6 to 8 not printed in the Gazette.]

881,353. BOILER-TUBE CLEANER. ANDREW T. STEWART, Washington, D. C. Filed Jan. 31, 1906. Serial No. 298,884.

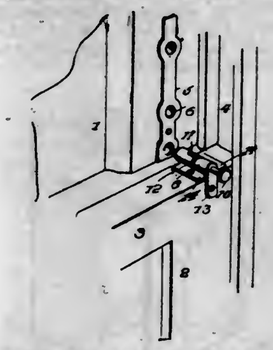


1. A tube cleaner comprising a rod, a head arranged on the rod and having a circumferential, rearwardly and outwardly disposed groove, a tubular end part mounted on the rod and having circumferential forwardly and outwardly disposed grooves, bow springs extending between the head and tubular part and having their forward ends disposed in the groove of the head and their rear ends disposed in the rear groove of the tubular end part, stiffening strips connected at their forward ends to the bow springs and having their rear ends disposed in the forward groove of the tubular end part, blades arranged diagonally and each connected at its rear end to one bow spring and at its forward end to an adjoining bow spring, and means for adjusting the rod through the tubular end part.

2. A tube cleaner comprising a rod, a head arranged on the rod and having a circumferential rearwardly and outwardly disposed groove and also having an exterior thread, an interiorly threaded brush arranged on and engaging the thread of said head, a tubular end part mounted on the rod and having a circumferential, forwardly and outwardly disposed groove and also having an exterior thread, an interiorly threaded brush arranged on and engaging the thread of the tubular part, bow springs extending between the head and tubular part and having their ends disposed in the grooves thereof, blades arranged diagonally and each connected at its rear end to one bow spring and at its forward end to an adjoining bow spring and means for adjusting the rod through the tubular part.

881,354. SASH-LOCK. GEORGE W. STEWART, Fort Wayne, Ind. Filed Sept. 5, 1907. Serial No. 391,480.

In a locking device of the character specified the same comprising a casing formed of a sheet metal blank having a T-slot ears at opposite sides and a wing at one end, said blank being rolled upon itself and having its ears outwardly bent and the said wing bent at a right angle to the length of the casing to close the outer end thereof and in conjunction with the aforesaid ears to form attaching means for the device, and a spring actuated lock bolt slidably mounted in said casing and having an end



portion passed through an opening formed in the closed end thereof and provided with a pin arranged to operate in the said T slot.

881,355. PROCESS OF TREATING ZINC-RETORT RESIDUES. GUSTAV STOLZENWALD, Valea Calugareasca, Roumania. Filed Sept. 22, 1906. Serial No. 335,826.

A process of utilizing the waste products of zinc works consisting in mixing material containing zinc with the residue from zinc distillation works and heating said mixture in a continuous acting furnace whereby the use of coal and coke is rendered unnecessary.

881,356. HORSE-COLLAR PAD. JOHN H. TAYLOR, Waterloo, Nebr. Filed July 12, 1907. Serial No. 383,489.



1. An attachment of the class described, comprising a pad, a race secured thereto, ball bearings arranged in the race, a pad bridge carrying a hemispherical boss engaging the bearings, and a socket engaging the race and secured to the pad bridge.

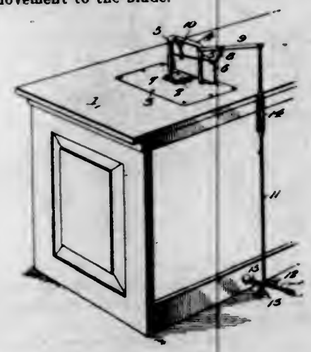
2. An attachment of the class described, comprising a pad, a race rigidly secured thereto, ball bearings carried by the race, a pad bridge having a hemispherical boss engaging the bearings, a socket assembled with the race and secured to the pad bridge, and means carried by the bridge to secure the attachment to a collar.

3. An attachment of the class described, comprising a pad, a race rigidly secured thereto, ball bearings within the race, a pad bridge having a hemispherical boss to engage the bearings, a socket encircling the race and secured to the pad bridge, and inwardly-projecting cleats carried by the bridge to secure the attachment to a collar.

881,357. TOBACCO-CUTTER. ARTHUR W. TEASLEY and MILLARD VAN, Ozone, Tenn. Filed Mar. 12, 1907. Serial No. 362,067.

1. A tobacco cutter comprising a base plate, an inverted U-shaped frame thereon, a blade guided on the vertical portions of the frame, a link hingedly connected at one end to the blade at a point intermediate its ends and at the opposite end to the frame adjacent one corner thereof, a lever fulcrumed at one end on the frame at the other

corner thereof and extending outwardly from the frame, and an inclined link connected at one end with the lever at a point intermediate the ends of the lever, and at the opposite end with the extremity of the blade and the lever acting directly through the second link for depressing and raising the blade and the first link serving to impart a drawing movement to the blade.



2. In a device of the class described, the combination of a plate, an inverted U-shaped frame rigid thereon, a blade guided on the frame, an inclined link pivoted on the frame and connected with the blade to suspend the latter, a lever fulcrumed at one end on the frame, a link inclined toward the other and connected at one end of the blade and with the lever at a point intermediate its ends, a treadle, means for supporting the same, and a pitman between the treadle and outer end of the lever, said pitman including adjustable sections for lengthening or shortening the same.

881,358. TUBE-CUTTER. OMER THOMAS and GRANT BLACKWELL, Bedford, Ind. Filed Aug. 9, 1907. Serial No. 387,917.



1. In a tube cutter, a relatively fixed supporting member, a member rotatably mounted in said supporting member, a radially movable cutter carried by said rotatable member, an actuating shaft mounted in said supporting member, said actuating shaft being provided with a threaded portion and with a portion which is longitudinally movable in said rotatable member and rotatable therewith, means for forcing said cutter outwardly when said shaft is moved longitudinally of said rotatable member, a sectional nut carried by said supporting member and adapted to engage the threaded portion of said actuating shaft, and means for positively effecting a rapid adjustment of the sections of the nut back and forth.

2. In a tube cutter, a relatively fixed supporting member, a member rotatably mounted in said supporting member, a radially movable cutter carried by said rotatable member, an actuating shaft mounted in said supporting member, said actuating shaft being provided with a threaded portion and with a portion which is longitudinally movable in said rotatable member and rotatable therewith, means for forcing said cutter outwardly when said shaft is moved longitudinally of said rotatable member, and a nut carried by said supporting member comprising sections pivotally connected thereto and provided with complementary threaded portions adapted to engage opposite sides of the threaded portions of said actuating shaft, and means for positively adjusting said sections back and forth.

3. In a tube cutter, a supporting member, a member rotatably mounted in said supporting member, a radially movable cutter carried by said rotatable member, an actuating shaft mounted in said supporting member, said actuating shaft being provided with a threaded portion and with a portion longitudinally movable in said rotatable member and rotatable therewith, means for forcing said cutter outwardly when said actuating shaft is moved longitudinally of said rotatable member, and a nut carried by said supporting member comprising sections pivotally connected thereto and provided with complementary threaded portions adapted to engage opposite sides of the threaded portions of said actuating shaft, said sections being provided with oppositely threaded alined apertures, and a bolt provided with oppositely threaded portions engaging said apertures.

4. In a tube cutter, a supporting member, a plate carried thereby and provided with a sleeve projecting therefrom, a collar adjustably mounted on said sleeve, a tool carrying member journaled in said sleeve and of less diameter than said sleeve, a sleeve loosely mounted on the end of said tool-carrying member of substantially the same diameter as the first mentioned sleeve, a cutter movably secured to said tool carrying member and normally positioned below the peripheries of said sleeves means for forcing said cutter outwardly, and means for rotating said tool carrying member.

5. In a tube cutter, a supporting member provided with a fixed tube supporting sleeve, a tool carrying member rotatably mounted in said sleeve, a cutter carried by said member, and a collar adjustably secured on said sleeve.

[Claim 6 not printed in the Gazette.]

881,359. TROLLEY-POLE CONTROLLER. CISCO R. TRAXLER and EDWARD E. LINEBACK, Winston Salem, N. C. Filed Apr. 16, 1907. Serial No. 368,512.



1. A trolley pole controller, comprising a weight for attachment to a trolley pole cord, and a guide for the weight in its vertical movements, said guide being formed with a laterally disposed seat for sustaining the weight until the weight is moved from its seat by tension on the trolley pole cord, substantially as described.

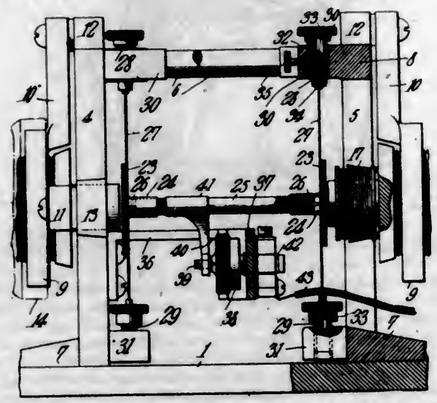
2. A trolley pole controller, comprising a weight for attachment to a trolley pole cord, a guide for the weight in its vertical movements, a laterally disposed seat on the guide for the weight, and a lateral projection on the weight to engage said seat, substantially as described.

3. A trolley pole controller, comprising a weight for attachment to a trolley pole cord, a tube constituting a guide for the weight, said tube being formed with a longitudinally extending slot in its wall and a laterally disposed slot in communication therewith, and a laterally extending part on the weight working in said longitudinally extending slot and adapted to be seated in the laterally disposed slot, substantially as described.

4. A trolley pole controller, comprising a weight for attachment to a trolley pole cord, a tube constituting a guide for the weight and formed with a longitudinally extending slot in its wall and a laterally disposed slot in communication therewith, said lateral slot extending obliquely to the longitudinal slot, and a laterally extending part on the weight working in said longitudinal slot and adapted to be seated in the laterally disposed slot, substantially as described.

5. A trolley pole controller, comprising a weight for attachment to a trolley pole cord, a guide for the weight in its vertical movements, a laterally disposed seat on the guide for the weight, a lateral projection on the weight to engage said seat, and a guard for the trolley pole cord to engage to aid in unseating the weight, substantially as described.

881,360. TELEPHONE-RELAY. CHARLES W. UNDERWOOD, Crowley, La. Filed July 6, 1907. Serial No. 382,475.



1. In a telephone relay, a telephone receiver magnet and coils, a telephonic transmitter, an armature in operative relation to the telephone receiver magnet and mechanically connected to the transmitter element, and a wire support for the armature having a localized central connection thereto, said wire being under longitudinal strain or stress.

2. In a telephone relay, a telephone receiver magnet and coils, another permanent magnet having its polar extremities facing but spaced from the polar extremities of the telephone receiver magnet, connected armatures in operative relation to the polar ends of the opposed magnets, and wire supports for the armatures having a localized central connection thereto and said wire being under initial longitudinal strain or stress.

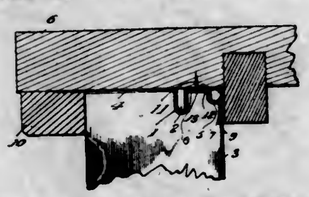
3. In a telephone relay, a telephone receiver magnet and coils, a telephonic transmitter, an armature in operative relation to the telephone receiver magnet, and mechanically connected to the transmitter element, a wire support for the armature having a localized central connection thereto, and means for putting said wire under longitudinal strain or stress, and for centering the armature to the polar extremities of the receiver magnet.

4. In a telephone relay, a telephone receiver magnet and coils, a support therefor in which the receiver magnet is adjustable longitudinally, an armature in operative relation to the telephone receiver magnet, a wire support for the armature having a localized central connection thereto, means for adjusting the armature in a direction at right angles to the direction of adjustment of the receiver magnet and for putting the wire under initial longitudinal strain or stress, and a telephonic transmitter mechanically connected to the armature.

5. In a telephone relay, a telephone receiver magnet and coils, an armature in operative relation to the receiver magnet, a wire support for the armature having a localized central connection thereto and under initial longitudinal strain or stress, a telephonic transmitter, and connections between the armature and transmitter so arranged that the transmitter parts are moved in the direction of compression when the receiver magnet is strengthened by the passage of a current impulse.

[Claims 6 to 10 not printed in the Gazette.]

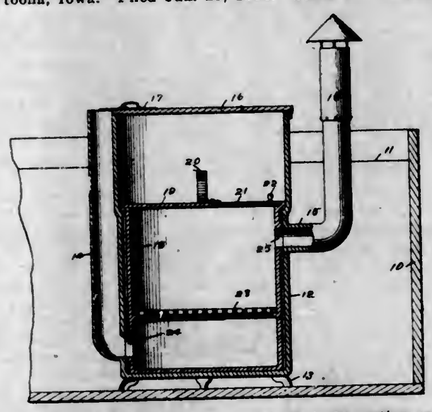
881,361. WEATHER-STRIP. WILLIAM VAN HORN, Piqua, Ohio. Filed May 10, 1907. Serial No. 373,004.



1. A weather strip having a portion between its longitudinal edges doubled or folded to provide a rib and having an edge portion bent to provide a spring bead and a spring leaf, the latter adapted to occupy the space between the spring bead and the said rib.

2. In a window frame and sash, the combination of the sash or like part having a groove and a rabbet, a weather strip formed of sheet metal having a portion between its edges doubled or folded to provide a rib to enter the groove in the edge of the sash and having an edge portion bent to provide a spring bead to enter the rabbet in the edge of the sash, and having a spring leaf projected from the free edge of the bead and normally standing away from the base portion of the strip, the spring leaf and the opposite base portion of the strip having corresponding openings to receive fastenings, the openings in the spring leaf being larger than the openings in the base portions to permit the heads of the fastenings to pass freely therethrough, the opposite edge portion of the strip being confined by a window stop.

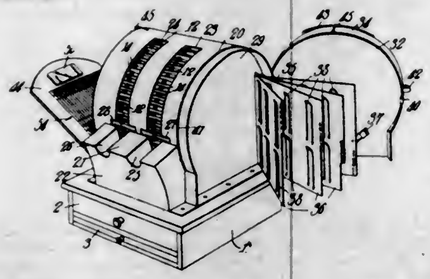
881,362. TANK-HEATER. ALBERT W. VAN RINSUM, Altoona, Iowa. Filed Jan. 29, 1906. Serial No. 298,331.



An improved tank heater comprising a body portion open at its top, and provided at one end with a draft passage-way extended from the top to a point near the bottom, and communicating with the interior of the body portion at the bottom, a flue communicating with the opposite side of the body portion at a point midway between its upper and lower ends, and extended upwardly to a point above the body portion, and a detachable combustion chamber comprising sides, top and bottom, designed to fit into the said body portion, and provided with a grate, and with draft passage-ways to register with the draft passage

way and flue of the body portion, a handle secured to the top of said combustion chamber, a hinged section in said top of the combustion chamber, and a cover for the top of the body portion, provided with an adjustable slide to extend over the said draft passage way.

881,363. ACCOUNT-FILE. EDWIN J. VICKERS, New Philadelphia, Ohio. Filed June 5, 1907. Serial No. 377,427.



1. An account file comprising a rotatable cylinder, a plurality of fixed arms projecting radially from its periphery, and a file tray slidably mounted on each of said arms.

2. An account file comprising a rotatable cylinder, a plurality of fixed arms projecting radially from its periphery in two series, and a file tray slidably mounted on each of said arms.

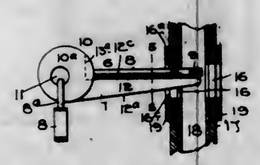
3. An account file comprising a rotatable cylinder, a plurality of fixed arms projecting radially therefrom in two series parallel to each other and in planes perpendicular to the axis of the cylinder, a file tray slidably mounted on each of said arms, and means for locking each of said trays to its respective arm.

4. An account file comprising a rotatable cylinder, a plurality of fixed arms projecting radially therefrom, in two parallel series, a file tray slidably mounted on each arm, and a casing for said file trays having a slotted opening in its front opposite each series of file trays but of less width than said trays except at one point where it expands to the width of said trays.

5. An account file comprising a revoluble file holder having a plurality of slidable file trays, a casing for said file holder having a curved front with a vertical slot in the curved front of said casing opposite to but narrower than said file trays, and a shelf projecting from said casing front below a lateral extension of said slot, said extended opening being of sufficient size to permit one of said file trays to pass through.

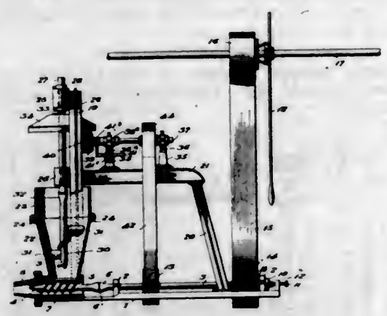
[Claims 6 to 9 not printed in the Gazette.]

881,364. LOCK-GUARD. DANIEL Y. WHEELER, Denver, Colo. Filed Oct. 27, 1906. Serial No. 340,929.



A guard for preventing the insertion of keys in key holes, comprising a pair of independent normally disconnected members, one adapted to the ordinary key hole as shown, and having a cylindrical shank with a divided head composed of two flat plates with a space between, and having at the opposite end a bit lying in a plane at an angle to the plane of that of the head of the shank, and the other member having a flat laterally extended head adapted to be inserted in the space between the parallel head portions of the first member and having a shank adapted to extend along the shank of the first member in a plane at right angles to the plane of the bit and into the keyhole, said head portions having alining openings for the insertion of a locking member to prevent their disengagement, substantially as described.

881,365. MACHINE FOR FORMING A CARTRIDGE-ROPE FROM EXPLOSIVE GELATIN. HENRY AUCHU, Emporium, Pa. Filed May 23, 1907. Serial No. 375,296.



1. In a machine for forming a cartridge rope from explosive gelatin, the combination with a shell or case having a delivery mouth from which the gelatin is adapted to issue, of means for forcing the gelatin through said mouth, continuously operating driving means, and driven means for said gelatin forcing means which is automatically thrown out of action by the reactionary pressure of the gelatin when said pressure becomes too great.

2. In a machine for forming a cartridge rope from explosive gelatin, the combination with a shell or case having a delivery mouth from which the gelatin is adapted to issue, of means for forcing the gelatin through said mouth, and mechanical driving means comprising driving and driven elements, the latter adapted for operation of the gelatin forcing means and arranged to become inactive when the pressure on the gelatin becomes too great.

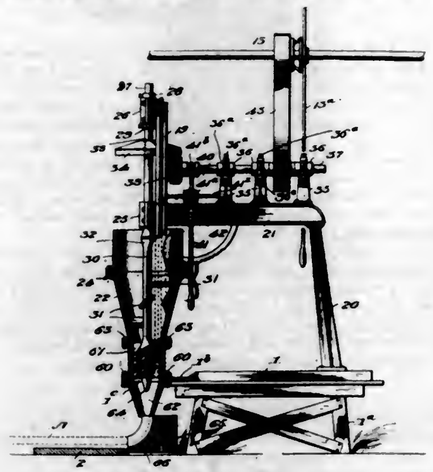
3. In a machine for forming a cartridge rope from explosive gelatin, the combination with a shell or case having a delivery mouth from which the gelatin is adapted to issue, of means for forcing the gelatin through said mouth, and operating means for said gelatin forcing means comprising a driving member and a driven member, the latter being adapted for operating the said forcing means, said driving and driven members being adapted for disengagement to stop the operation of the forcing means when the reactionary pressure of the gelatin becomes too great.

4. In a machine for forming a cartridge rope from explosive gelatin, the combination with a shell or case having a delivery mouth from which the gelatin is adapted to issue, of a rotary device for forcing the gelatin through said delivery mouth, a wheel rotating with said forcing device, said forcing device and wheel being adapted for shifting, and a driving wheel normally engaged with the first-named wheel, whereby when the pressure of the forcing device on the gelatin becomes too great the reactionary pressure will shift the forcing device and its wheel and throw the said wheels out of operative engagement.

5. In a machine for forming a cartridge rope from explosive gelatin, the combination with a shell or case having a delivery mouth from which the gelatin is adapted to issue, of a rotary device for forcing the gelatin through said delivery mouth, a friction wheel rotating with said forcing device, said forcing device and friction wheel being adapted for shifting, and a driving friction wheel normally engaged with the first-named wheel, whereby when the pressure of the forcing device on the gelatin becomes too great, the reactionary pressure will shift the forcing device and its friction wheel out of operative engagement.

[Claims 6 to 22 not printed in the Gazette.]

881,366. MACHINE FOR FORMING A CARTRIDGE-ROPE FROM EXPLOSIVE GELATIN. HENRY AUCHU, Emporium, Pa. Filed May 23, 1907. Serial No. 375,298.



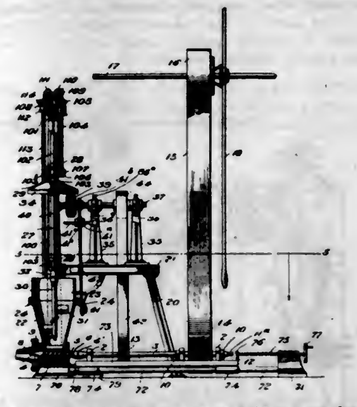
1. In a machine for forming a cartridge rope from explosive gelatin, the combination with a shell or case having a delivery mouth from which the gelatin is adapted to issue, of a packing screw and a feeder connected together and adapted to force the gelatin through said mouth, and means automatically actuated by the reactionary pressure of the gelatin adapted to stop the operation of the feeder and screw when the pressure becomes too great.

2. In a machine for forming a cartridge rope from explosive gelatin, the combination with a shell or case having a delivery mouth from which the gelatin is adapted to issue, of a packing screw and a feeder connected together and adapted to force the gelatin through said mouth, and means automatically actuated by the reactionary pressure of the gelatin on the feeder and screw, adapted to stop the operation of said feeder and screw when the pressure becomes too great.

3. In a machine for forming a cartridge rope from explosive gelatin, the combination with a shell or case having a delivery mouth from which the gelatin is adapted to issue, of a packing screw and a feeder connected together and adapted to force the gelatin through said mouth, and operating means for said feeder and screw comprising a driving member and a driven member, the latter being adapted for actuating the feeder and screw, said driving and driven members being adapted for disengagement to stop the operation of the screw and feeder when the reactionary pressure of the gelatin becomes too great.

4. In a machine for forming a cartridge rope from explosive gelatin, the combination with a tapered hopper having a delivery mouth, of a packing screw case in communication with said delivery mouth and having an extrusion opening, a feeder in the hopper having blades or paddles with inclined faces, a packing screw in the case and connected to and rotatable with the feeder, a wheel rotating with said feeder and screw, and a driving wheel normally engaged with the first-named wheel but disengageable therefrom, said screw and feeder and driven wheel being adapted for shifting, whereby when the reactionary pressure of the gelatin on the screw and feeder becomes too great, the wheels will be thrown out of operative engagement.

881,367. MACHINE FOR FORMING A CARTRIDGE-ROPE FROM EXPLOSIVE GELATIN. HENRY AUCHU, Emporium, Pa. Filed May 23, 1907. Serial No. 375,299.



1. In a machine for forming a cartridge rope from explosive gelatin, the combination with a shell or case having a delivery mouth from which the gelatin is adapted to issue, of a rotary device within said shell or case for forcing the gelatin through said mouth, means for bodily removing said rotary gelatin forcing device from the shell or case or for inserting it therein, and operating means for said rotary gelatin forcing device comprising disengageable elements one of which is carried by the rotary gelatin forcing device and is thrown out of action when said gelatin forcing device is shifted from its usual position.

2. In a machine for forming a cartridge rope from explosive gelatin, the combination with a shell or case having a delivery mouth from which the gelatin is adapted to issue, of a slidable carriage, and means carried and supported solely by the carriage adapted for forcing the gelatin through said mouth, said carriage affording means for bodily withdrawing the gelatin forcing device aforesaid from the shell or case.

3. In a machine for forming a cartridge rope from explosive gelatin, the combination with a shell or case having a delivery mouth from which the gelatin is adapted to issue, of a slidable carriage, means carried and supported solely by the carriage adapted for forcing the gelatin through said mouth, and means for shifting the carriage to thereby bodily shift the gelatin forcing device into or out of the shell or case aforesaid.

4. In a machine for forming a cartridge rope from explosive gelatin, the combination with an upright shell or case having a delivery mouth from which the gelatin is adapted to issue, of a carriage slidable in a general up and down direction, and means carried and supported solely by the carriage for forcing the gelatin through said mouth, said carriage affording means for bodily withdrawing the gelatin forcing device from the shell or case or for positioning it within the shell or case.

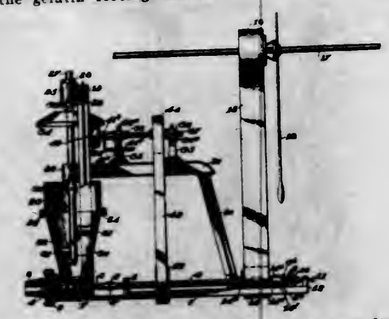
5. In a machine for forming a cartridge rope from explosive gelatin, the combination with a shell or case having a delivery mouth from which the gelatin is adapted to issue, of a carriage slidable in a general up and down direction, means carried and supported solely by the carriage for forcing the gelatin through said mouth, and means for raising and lowering the carriage to thereby bodily raise the gelatin forcing device from the shell or case or to lower it into the shell or case.

[Claims 6 to 15 not printed in the Gazette.]

881,368. MACHINE FOR FORMING A CARTRIDGE-ROPE FROM EXPLOSIVE GELATIN. HENRY AUCHU, Emporium, Pa. Filed Nov. 14, 1907. Serial No. 402,114.

1. In a machine for forming a cartridge rope from explosive gelatin, the combination with a shell or case hav-

ing a delivery mouth through which the gelatin is adapted to pass, of means for forcing the gelatin through said mouth, and operating means for said gelatin forcing means comprising a driving member and a driven member which are adapted for relative slipping without disengagement to thereby automatically control the operation of the gelatin forcing means.



2. In a machine for forming a cartridge rope from explosive gelatin, the combination with a shell or case having a delivery mouth through which the gelatin is adapted to pass, of rotary means for forcing the gelatin through said mouth, and operating means for said rotary gelatin forcing means comprising a rotary driven member for rotating the rotary gelatin forcing means and a driving member engaged therewith, said driving and driven members being adapted for relative slipping without disengagement to thereby automatically control the operation of the rotary gelatin forcing means.

3. In a machine for forming a cartridge rope from explosive gelatin, the combination with a shell or case having a delivery mouth through which the gelatin is adapted to pass, of means for forcing the gelatin through said mouth, operating means for said gelatin forcing means comprising a driving member and a driven member which are adapted for relative slipping without disengagement to thereby automatically control the operation of the gelatin forcing means, and means for holding the driving and driven members together with any desired pressure, whereby their automatic action may be regulated.

4. In a machine for forming a cartridge rope from explosive gelatin, the combination with a shell or case having a delivery mouth through which the gelatin is adapted to pass, of means for forcing the gelatin through said mouth, and operating means for said gelatin forcing means comprising driving and driven friction wheels engaged with each other which are adapted for relative slipping without disengagement to thereby automatically control the operation of the gelatin forcing means.

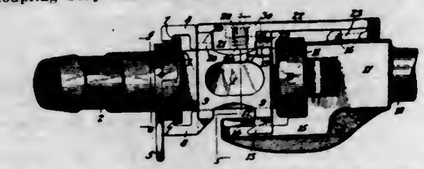
5. In a machine for forming a cartridge rope from explosive gelatin, the combination with a shell or case having a delivery mouth through which the gelatin is adapted to pass, of rotary means for forcing the gelatin through said mouth, and operating means for said gelatin forcing means comprising driving and driven friction wheels engaged with each other which are adapted for relative slipping without disengagement to thereby control the operation of the gelatin forcing means.

[Claims 6 to 14 not printed in the Gazette.]

881,369. HOSE OR PIPE COUPLING. STEPHEN D. BARNETT, Newark, N. J. Filed Jan. 18, 1906. Serial No. 296,637.

1. A hose or pipe coupling having a frame movable transversely and longitudinally on the coupling body and carrying means for coupling engagement with an opposed coupling member, and means for holding said frame in adjusted position on the coupling body.

2. A hose or pipe coupling having a frame movable transversely and longitudinally on the coupling body and carrying means for coupling engagement with an opposed coupling member, and means for moving said frame on the coupling body and holding it in adjusted position.



3. A hose or pipe coupling having a frame movable transversely and longitudinally on the coupling body and carrying means including a series of non-alined lugs or shoulders for coupling engagement with an opposed member, and means for holding said frame in adjusted position.

4. A hose or pipe coupling having a frame movable transversely and longitudinally on the coupling body and carrying means including a series of vertically and transversely non-alined lugs or shoulders for coupling engagement with an opposed coupling member, and means for holding said frame in adjusted position.

5. A hose or pipe coupling having a frame movable transversely and longitudinally on the coupling body and having means including an arm movable longitudinally by and with the frame for coupling engagement with an opposed coupling member, and means for moving said frame on the coupling body and holding it in adjusted position.

[Claims 6 to 21 not printed in the Gazette.]

881,370. INSECT-EXTERMINATOR. WILLIAM L. BOYD, Lincoln, Nebr. Filed July 8, 1907. Serial No. 382,763.

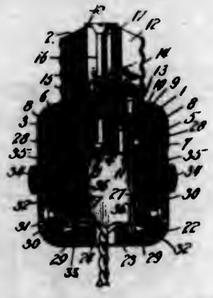


1. In an insect exterminator, a frame comprising front and rear boards, rolls journaled in said front and rear boards, plates connecting said front and rear boards having their upper portions extending over the tops of the rolls and their lower portions extending to the lower edges of said boards forming an inclosure for the rolls, blades journaled in said front and rear boards, arms extending rearwardly from the rear board, a drive shaft journaled in said arms, the traction wheels secured to said shaft, and gearing connecting said drive shaft and rolls and blades, substantially as shown and described.

2. An insect exterminator comprising a frame consisting of two boards, plates connecting said boards having their upper edges curved towards each other, pans pivotally secured to said curved portions of the plates and having their edges curled, shafts journaled in said boards beneath the curved portions of said plates, rolls mounted on said shafts, meshing pinions keyed to said shafts, a sprocket wheel keyed to each shaft, a beveled gear wheel secured to the end of one of said shafts, shafts journaled in the upper portion of said boards, blades secured to last mentioned shafts, a sprocket wheel keyed to each shaft, chains connecting the sprocket wheel on one of the first named shafts with the sprocket wheel on one of the last named shafts, arms secured to one of the boards, a drive shaft journaled in said arms, a beveled gear wheel secured to the drive shaft and meshing with the aforementioned beveled gear wheel, and traction wheels secured to said drive shaft, substantially as shown and described.

881,371. ELECTRICAL PLUG AND RECEPTACLE. PENNELL C. BROWN, Boston, Mass., assignor of one-half to Frank J. Russell, New York, N. Y. Filed Oct. 20, 1906. Serial No. 339,826.

1. In an electrical connection, a base member carrying external plug contacts and internal receptacle contacts operatively connected, a connection piece having interior conducting elements having a snapping engagement with said receptacle contacts, and separate release buttons supported by the connection piece and movable against said conducting elements.



2. In an electrical connection, a base member having external plug contacts and internal receptacle contacts, a connection piece having internal conducting elements interlocking with said receptacle contacts, and releasing elements loosely mounted at the sides of the connection piece and movable inwardly against said conducting elements.

3. In an electrical connection, a base member having external plug contacts and also provided with a receptacle element having therein a transverse insulating bridge, receptacle contacts arranged upon opposite sides of said bridge, a connection piece having conducting elements interlocking with said receptacle contacts, and release buttons loosely mounted in the sides of the connection piece.

4. In an electrical connection, a base member having a plug element and a receptacle element the latter provided therein with a transverse insulating bridge, receptacle contact elements arranged upon opposite sides of said bridge and provided with spring catch arms, a plug contact shell having a fastening and conducting connection with one of the receptacle contact elements, a central plug contact screw having a fastening and conducting connection with the other receptacle contact element, and a detachable connection-piece carrying spring locking blades engaging said spring catch arms, and slidably supported release buttons operating against the locking blades.

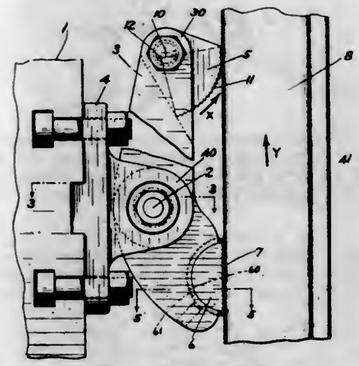
5. In an electrical connection, a base member having contact elements provided with catch arms, a detachable connection-piece, a pair of spring locking blades arranged within the connection-piece and provided at one end with fastening heads engaging said catch arms, the opposite ends of said blades being formed with supporting arms resting against the body of the connection-piece, wire terminal plates arranged within the connection-piece and having connecting straps fitting against said supporting arms, securing screws holding said straps and arms together, and oppositely arranged release buttons slidably mounted in the wall of the connection-piece and operating against said blades.

881,372. GARMENT-SUPPORTER CLASP. JOHN J. BUCHANAN, Waterbury, Conn., assignor to Waterbury Buckle Co., Waterbury, Conn., a Corporation. Filed Oct. 14, 1907. Serial No. 397,367.



In a garment-supporter clasp, the combination with a front and a rear jaw, the two jaws being pivoted together, of a locking-lever pivotally connected with the rear jaw at a point above the pivot connecting the two jaws and bent to form a cam and a strut, the former acting upon the upper end of the front jaw and the latter being engaged with the front face of the said lever.

881,373. LATHE-DRIVER. JOHN BURT, Narberth, Pa., assignor to William Sellers & Company, Incorporated, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Apr. 4, 1907. Serial No. 366,361.



1. A driver for work centered between the centers of a lathe and adapted for application to one face only of the work, comprising two parts adapted to engage the same face of the work, one part being movable in a direction substantially parallel to the axis of the lathe and the other part being relatively movable in substantially the direction of rotation of the lathe, and connections between the parts adapted, by the stated action of the second part, to be actuated to produce the stated movement of the first part, thereby increasing the gripping force applied to the work proportionately to its resistance to rotation.

2. A driver for work centered between the centers of a lathe, comprising a support adapted to be attached to the face plate of the lathe, a part having a gripping face arranged to abut against one face of the work, a clamping part adapted to engage the same face of the work and partake of its movement, a lever carrying the gripping part and pivotally connected to the support and to the clamping part and adapted, by the action of the clamping part, to be swung on its pivot to embed the gripping face into the work.

3. A driver for work centered between the centers of a lathe, comprising a support adapted for attachment to the face plate of a lathe, a lever pivoted thereto on an axis substantially perpendicular to the axis of rotation, a gripping part on said lever adapted to engage the face of the work, and a clamping part, adapted to engage the face of the work, pivoted to the lever on an axis substantially parallel to the axis on which the lever is pivoted.

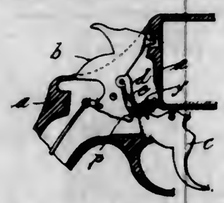
4. A driver for work centered between the centers of a lathe, comprising a support adapted for attachment to the face plate of a lathe, a lever pivoted thereto on an axis substantially perpendicular to the axis of rotation, a gripping part at one end thereof adapted to engage the face of the work, and a clamping part, adapted to engage the face of the work, pivoted at the other end of the lever on an axis substantially parallel to the axis on which the lever is pivoted.

5. A driver for work centered between the centers of a lathe, comprising a support adapted for attachment to the face plate of a lathe, a gripping part, a lever carrying the gripping part and pivoted on the support and adapted, while turning on its pivot, to move the gripping part in a direction substantially parallel to the axis of the lathe, and an eccentric, having a toothed face, attached to the lever and adapted, in its actuation by the work in the

latter's resistance to rotation, to operate the lever and cause its gripping part to embed itself in the work.
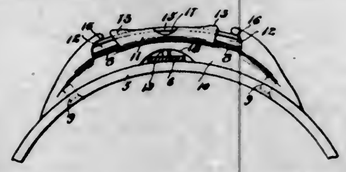
[Claims 6 to 11 not printed in the Gazette.]

881,374. REVOLVER. CHARLES C. CALL, Springfield, Mass., assignor to Joseph H. Wesson, Springfield, Mass. Filed May 8, 1907. Serial No. 372,605.



In a firearm, a hammer, a trigger, and a member loosely mounted on the trigger in position to engage the hammer to cock the same, and means to slide said member towards the hammer by the movement of the trigger to cock the hammer.

881,375. CROWN-LOOP FOR HARNESS-BRIDLES. JOHN B. CALVERT, Guthrie, Okla. Filed Sept. 11, 1907. Serial No. 392,394.



1. A crown-loop for harness-bridles comprising a plate having openings to receive a checkrein, loops adjacent the openings, and a keeper passing through said loops and across the entrance to the aforesaid openings, above the checkrein.

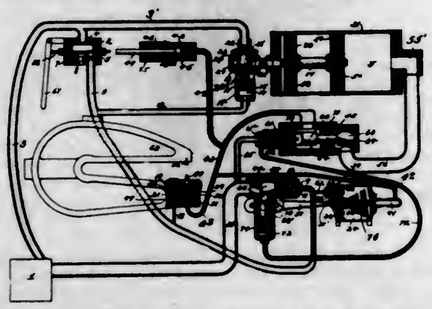
2. A crown-loop for harness bridles comprising a plate having openings to receive a checkrein, and an opening to receive a billet, a pin projecting from the plate into the latter opening, loops adjacent the first mentioned openings, and a keeper passing through said loops and across the entrance to the first mentioned openings, above the checkrein.

3. A crown-loop for harness-bridles comprising a plate grooved on top and having openings to receive a checkrein, loops between the openings and the ends of the groove, and a strap in the groove passing through the loops and across the entrance to the openings, above the checkrein.

881,376. MECHANISM FOR CONTROLLING FLUID-PRESSURE. HENRY A. CARPENTER, Sewickley, Pa., assignor to Riter-Conley Manufacturing Company, Jersey City, N. J., a Corporation of New Jersey. Filed Dec. 30, 1901. Serial No. 87,698.

1. In a mechanism for controlling fluid pressure, the combination with a source of pressure, of a valve controlling the pressure supply, a fluid pressure operated device for the performance of work, a low pressure mechanism for supplying the fluid pressure operated device with fluid pressure, a high pressure mechanism for augmenting the fluid pressure supply at a predetermined time, automatic valves controlling the operation of the low and high pressure mechanisms, and means for automatically restoring the low and high pressure mechanisms to normal position after the work has been done.

2. In a mechanism for controlling pressure, the combination with a source of pressure, of a hand-operated valve controlling the pressure supply, a pressure operated device the supply and release of pressure to which is controlled by the valve, normally inactive means adapted to automatically operate the valve to release the pressure at a predetermined degree comprising a piston having a stem adapted to engage the valve, a spring for retracting the piston, and means for placing the spring under any desired tension, and pressure supplying connections to said piston, whereby said piston is actuated automatically when the pressure reaches a predetermined degree.



3. In a mechanism for controlling fluid pressure, the combination with a source of pressure, of a valve controlling the pressure supply, a fluid pressure operated device for the performance of work, a low pressure mechanism for supplying the fluid pressure operated device with fluid pressure, a high pressure mechanism for augmenting the fluid pressure supply at a predetermined time, and means for automatically restoring the low and high pressure mechanism to normal position after the work has been done.
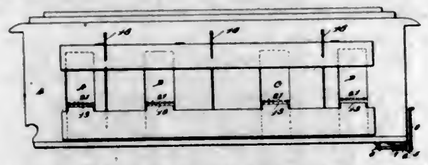
4. In a mechanism for controlling fluid pressure, the combination with a source of pressure, of a valve controlling the pressure supply, a fluid pressure operated device for the performance of work, a low pressure mechanism for supplying the fluid pressure operated device with fluid pressure, a high pressure mechanism for augmenting the fluid pressure supply at a predetermined time, an automatically acting pressure operated device controlling the application of the fluid from the low and high pressure mechanisms to the fluid pressure operated work device, and means for automatically restoring the low and high pressure mechanisms to normal position after the work has been done.

5. In a mechanism for controlling fluid pressure, the combination with a source of pressure, of a valve controlling the pressure supply, a fluid pressure operated device for the performance of work, a low pressure mechanism for supplying the fluid pressure operated device with fluid pressure, a high pressure mechanism for augmenting the fluid pressure supply at a predetermined time, an automatically acting pressure operated piston valve having opposite faces of different areas and controlling the application of the fluid from the low and high pressure mechanism to the fluid pressure operated work device, said automatic piston valve being operated by the fluid pressure upon one face thereof overbalancing the constant pressure on the opposite face of said piston, means for supplying said constant pressure, and automatic valves controlling the operation of the low and high pressure mechanisms.

[Claims 6 to 8 not printed in the Gazette.]

881,377. MEANS FOR TRANSFERRING PASSENGERS AND THE LIKE TO AND FROM MOVING TRAINS. FRANCIS H. COOK, Buckeye, Wash. Filed July 26, 1907. Serial No. 385,739.

1. The herein-described means for transferring passengers and the like from and to a rapidly moving train, comprising a main line transfer car in the train, a station transfer car adapted to parallel the main line transfer car, means for connecting said two transfer cars together, and a transfer vestibule between said two cars, the said cars being provided with side doors communicating with said vestibule.



2. The herein-described means for transferring passengers and the like to and from a rapidly moving train, consisting of a transfer car in the train, a station transfer car adapted to be run out to meet the train, means for directly connecting together the main line transfer car and the station transfer car, the said cars being provided with four registering side doorways, gang ways adapted to extend from one doorway to the doorway opposite, and means for moving the said gang ways into and out of operative position.

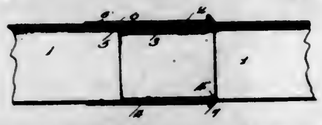
3. The herein-described means for transferring passengers and the like to and from rapidly moving trains, comprising two transfer cars, one in the train and the other adapted to parallel the one in the train, the said two cars being provided with registering side doorways, and a platform hinged to the side of one of the said cars and extending continuously from doorway to doorway, said platform being provided with gang ways adapted to extend into the opposite doorways, and means for swinging said platform.

4. The herein-described means for transferring passengers and the like to and from rapidly moving trains, comprising two transfer cars, one in the train and the other adapted to parallel the one in the train, the said two cars being provided with registering side doorways, and a platform hinged to the side of one of the said cars and extending continuously from doorway to doorway, said platform being provided with gangways adapted to extend into the opposite doorways, means for swinging said platform, and a hinged cover extending alongside of one of said cars and adapted to form a roof for said platform.

5. The herein-described means for transferring passengers and the like to and from rapidly moving trains, comprising two transfer cars, one in the train and the other adapted to parallel the one in the train, the said two cars being provided with registering side doorways, and a platform hinged to the side of one of the said cars and extending continuously from doorway to doorway, said platform being provided with gangways adapted to extend into the opposite doorways, means for swinging said platform, a hinged cover extending alongside of one of said cars and adapted to form a roof for said platform, and a connection between said platform and cover designed to effect the simultaneously swinging of said platform and cover to either operative or inoperative position.

[Claims 6 to 11 not printed in the Gazette.]

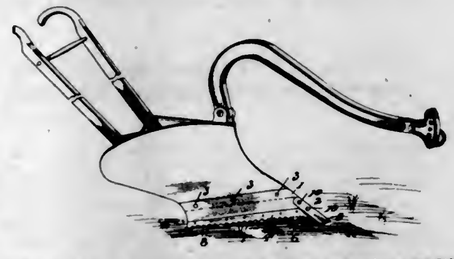
881,378. STOVEPIPE-JOINT. ORRIN M. COWLES, Devils Lake, N. D. Filed July 16, 1907. Serial No. 383,999.



1. In a pipe joint, the combination of two pipe sections, the end of one of the sections being reduced and the outer end of the reduced portion being contracted while the inner end of the said reduced portion terminates in an annular shoulder, and a sleeve applied to the pipe section formed with the reduced end and coöperating with the latter to form an annular socket designed to receive an end of the opposite pipe section.

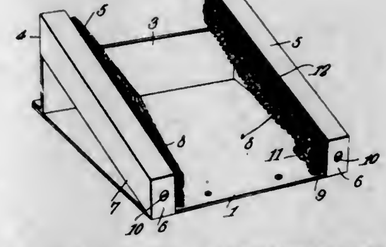
2. A pipe section provided with an annular shoulder adjacent one extremity thereof while the opposite end of the pipe section is reduced, the said reduced portion terminating in an annular shoulder, and a sleeve being applied to the end of the pipe section provided with the reduced portion and coöperating with the said reduced portion to form an annular socket for the purpose specified.

881,379. PLOWSHARE. JOHN B. CRAPO, Parker, Idaho. Filed July 16, 1907. Serial No. 384,000.



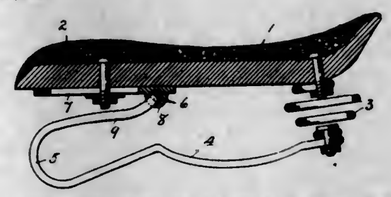
In a plow, the combination of a share of uniform width and having a pendent vertical landside wing at its inner end, a toothed blade fitted to the lower edge of the share, a moldboard attached to the upper edge of said share, and a forked point embracing the inner ends of the share, toothed blade and the pendent wing of said share and secured thereto.

881,380. SHOE-CLEANER. OPHAS T. CRITES and HARRY T. SMOOT, Parkersburg, W. Va. Filed Dec. 1, 1906. Serial No. 345,960.



A shoe cleaner comprising a base having at one end a shoe scraper, a pair of brush holders supported at one end of the base and at the other end upon the scraper, whereby to maintain them in an inclined position, the brushes secured in the holders, the opposed faces of the brush backs being oppositely beveled whereby to cause portions of the brushes to lie close to the base.

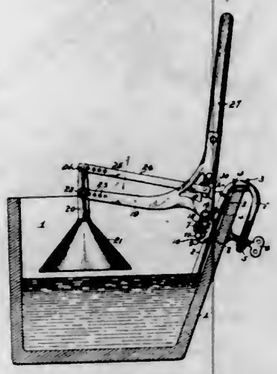
881,381. BICYCLE-SADDLE SPRING. MILLER M. DEEM, Reading, Pa., assignor of one-half to The Reading Saddle & Manufacturing Company, Reading, Pa., a Corporation of Pennsylvania. Filed Nov. 1, 1907. Serial No. 400,275.



In a bicycle saddle spring, a truss spring formed with a central tongue at the forward end, said tongue being bent

back on the body to form two loops 5, which loops extend to a point substantially in line with the forward end of the seat in combination with a plate secured to the seat by the pommel bolt and extending to a point near the center of the saddle and having an eye formed at its rear end in which the end of said tongue is pivotally secured.

881,382. WASHING-MACHINE. CYRUS A. DODGE, Syracuse, N. Y. Filed Jan. 5, 1907. Serial No. 350,995.



1. In a washing machine, the combination with a support, of a sliding carriage on the support, a tubular post on the sliding carriage, a sleeve on the post, a bell-crank lever fulcrumed on the sleeve, a pounder, a stem thereon connected between its ends to the lever, links connecting the upper ends of the stem and sleeve, and a buckle on the links compelling them to hold themselves in engagement with the stem and sleeve by their own spring tension.

2. The combination with a trackway having a series of notches or openings, of a sliding carriage, a tubular post thereon registering with the notches or openings, a sleeve on the post, a bell-crank-lever fulcrumed on the sleeve, a pounder, a stem on the pounder connected between its ends to the lever, links connecting the upper ends of the stem and sleeve and located on opposite sides thereof, a locking pin in the post to project into the notches or openings in the trackway and lock the carriage against sliding movement on the trackway, and an enlarged head on the pin riding on the links and elevated by the latter when the lever is drawn back, to release the pin from locked engagement with the trackway.

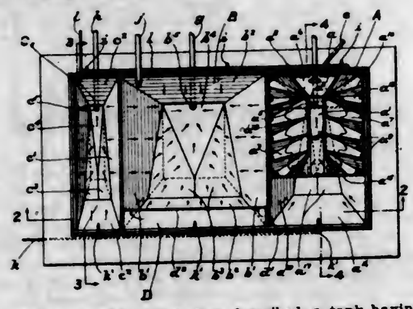
3. The combination with a rod frame to engage over the wall of a tub, of eye bolts on the inner rods, flat bars on the eye bolts against the inner faces of the tub, thumb screws on the frame to bear against the outside of the tub wall, brackets on the rods having openings to receive the eye bolts, a trackway against the brackets, and nuts on the eyebolts securing the trackway to the brackets and the latter to the rod frame.

4. The combination with a rod frame, of eye bolts mounted on the rod frame, brackets bearing against the rods of the rod frame and having openings through which the eye bolts pass said brackets having general concave curvature from end to end, parallel rods forming a trackway located against the brackets and nuts on the eye bolts having spherical faces engaging the trackway rods and operating to clamp the latter at various angles to the brackets and the brackets to the rod frame.

5. The combination with a rod frame, of track supporting brackets thereon, a trackway, and means for simultaneously adjusting the brackets vertically on the rod frame and the trackway angularly on the brackets.

[Claim 6 not printed in the Gazette.]

881,383. APPARATUS FOR RECLAIMING MATTER DISCHARGED IN THE MANUFACTURE OF PULP AND PAPER. JOSEPH M. DOHAN, Darlington, Pa. Filed Aug. 15, 1907. Serial No. 388,582.



1. In apparatus of the class described, a tank having a channel containing riffle boards, a compartment or compartments into which said channel discharges, means for drawing precipitated matter from the bottom of said compartment or compartments, and means for draining off the clarified liquid in said compartment or compartments from the upper strata thereof.

2. In apparatus of the class described, a series of communicating compartments separated by riffle boards forming a baffled channel, a plurality of communicating compartments separated by one or more partitions forming a baffled chamber, said compartments last named being beneath and receiving the discharge from said first compartments, means for drawing off precipitated matter from the lower strata of said chamber and means for drawing off liquid from the upper strata of said chamber.

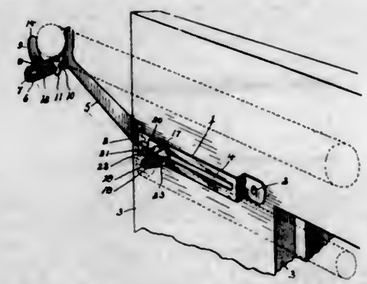
3. In apparatus of the class described, a series of compartments having inclined bottoms with holes therein and inclined partitions, in combination with a settling chamber beneath said compartments.

4. In apparatus of the class described, a channel having an inclined bottom with holes therein, inclined riffle boards forming compartments in said channel, an open channel into which said channel first named discharges, and a settling chamber into which said channel last named discharges.

5. In apparatus of the class described, a channel containing riffle boards, a settling chamber beneath and to which said channel discharges, said chamber having a bottom with inclined walls, and means for discharging said chamber through said bottom.

[Claims 6 to 8 not printed in the Gazette.]

881,384. ADJUSTABLE WINDOW-SHADE AND CURTAIN-POLE HOLDER. CHARLES W. DRAPER, Jr., and GEORGE H. DRAPER, Detroit, Mich. Filed June 1, 1907. Serial No. 376,763.



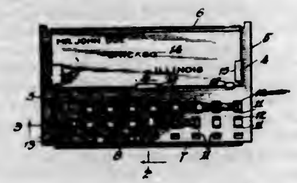
1. A combined curtain pole and shade roller fixture comprising a horizontally disposed base, longitudinally slotted for the major portion of its length, a bracket arm extending obliquely up and out from the base in a plane vertical to the plane of the base, having an outward longitudinally slotted, lateral extension near its upper end, and an arm adjustably secured in the slot, forming a pole seat with the upright portion of the arm above the extension, and a shade roller bracket adjustably secured in the slotted base provided with a shade roller bearing.

2. A combined curtain pole and shade roller fixture comprising a single piece sheet metal body having a narrow horizontally disposed base offset for the major portion of its length and longitudinally slotted throughout its offset portion, and a bracket arm bent at right angles to the base, extending obliquely up and out therefrom, carrying a pole seat adjustable for poles of different diameters, and a roller bearing bracket consisting of a sheet-metal plate bent at right angles between its ends, one of whose arms is provided with lugs struck out therefrom, engaging the slot of the base, against which it is clamped by a bolt and nut, and the other arm having a shade roller bearing.

3. A combined curtain pole and shade roller fixture comprising a single piece sheet metal body having a narrow horizontally disposed base offset for the major portion of its length and longitudinally slotted throughout its offset portion, and a bracket arm bent at right angles to the base, extending obliquely up and out therefrom, having an outward, longitudinally slotted extension near its upper end, and an L-shaped member whose horizontal arm has sliding engagement with said slotted extension and whose upright arm forms with the upper part of the bracket an adjustable pole seat, and a roller bearing bracket consisting of a sheet metal plate bent at right angles between its ends, one of the arms adjustably engaging the slotted base, and the other arm carrying a shade roller bearing.

4. A combined curtain pole and shade roller fixture comprising a single piece sheet metal body having a narrow horizontally disposed base offset for the major portion of its length and longitudinally slotted throughout its offset portion, and a bracket arm bent at right angles to the base, extending obliquely and out therefrom, having an outward longitudinally slotted extension near its upper end, and an L-shaped member whose horizontal arm has sliding engagement with said slotted extension and whose upright arm forms with the upper part of the bracket an adjustable pole seat, and a roller bearing bracket consisting of a piece of sheet-metal bent at right angles between its ends, one of whose arms is provided with lugs struck out therefrom, engaging the slot of the base, against which it is clamped by a bolt and nut, and the other arm having a shade roller bearing.

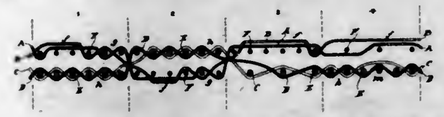
881,385. PRINTING DEVICE. JOSEPH S. DUNCAN, Chicago, Ill., assignor to Addressograph Company, Chicago, Ill., a Corporation of Illinois. Filed Aug. 9, 1907. Serial No. 387,798.



1. A printing device comprising a type bar holder consisting of a frame having lips thereon, said lips being stamped and pressed up from the frame in parallel lines to form a groove between the lines to receive a type bar, there being a plurality of said lips spaced apart in each line and the lips in each line being inclined inwardly to frictionally engage and hold the type bar.

2. The combination of a type bar having a longitudinal recess throughout its length and in one side thereof, a holder comprising a frame having lips stamped and pressed up from the frame in parallel lines to form a groove between the lines to receive a type bar, there being a plurality of said lips spaced apart in each line, one line of said lips being inclined to engage the recess in the type bar and the other line of said lips being inclined to engage the opposite side of said type bar.

881,386. DOUBLE-FACED WOVEN FABRIC. JOSEPH C. EARNSHAW, Philadelphia, Pa., assignor to Solomon Selig, Morris A. Kauffman, and Joseph Elias, Philadelphia, Pa., trading as Moss Rose Manufacturing Company. Filed June 14, 1907. Serial No. 378,942.



A double ply drapery fabric formed by the combination of two cloths independent of each other in their construction and reversible in their relative positions and joined only by their intersections and whereof one is a weft predominating cloth and whereof the other is a warp predominating cloth in which the figure is raised by bringing the entire warp to the face and permitting the weft to float between the two cloths and in which the ground is formed by interweaving alternate warp threads with weft threads, substantially as described.

881,387. SYSTEM OF CONTROL FOR ELECTRIC MOTORS. ARTHUR C. EASTWOOD, Cleveland, Ohio. Filed Mar. 6, 1907. Serial No. 360,925.



1. In an electric railway system, the combination of a train of cars, an electric generator, means for driving the same on said train, electric driving motors on certain of the cars of said train said train having a motorless car or cars between consecutive motor cars, and means for controlling the voltage delivered by said generator to said driving motors and for controlling the direction of rotation of said motors from a given point on said train, said means being independent of the cars on said train not equipped with electric driving motors.

2. In an electric railway system, the combination of a train of cars, an electric generator, means for driving the same on said train, electric driving motors on certain of the cars of said train, a stationary power-conductor along said railway through which and the rails of said railway said generator may deliver a variable voltage to said driving motors, and means on the train for varying the voltage delivered by said generator.

3. In an electric railway system, the combination of a train of cars, an electric generator, means for driving the same on said train, electric driving motors on certain of the cars of said train, a stationary power conductor along said railway through which and the rails of said railway said generator may deliver a variable voltage to said driving motors, means on the train for varying the voltage delivered by said generator, a stationary control-conductor along said railway, electrically operated reversing mechanism on the cars of said train equipped with driving motors, and means including an electric circuit through said stationary control-conductor and the rails of said railway for operating all of said reversing mechanism from a single point on said train.

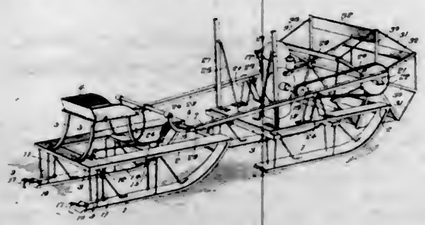
4. In a distributing system for electric motors, the combination of a unipolar generator having a plurality of inductors, power actuated switches for altering the grouping of said inductors, and a controller for governing the action of said power actuated switches, the arrangement being such that each change in the grouping of said inductors is accomplished in a period of time independent of the speed at which said controller is operated.

5. In a distributing system for electric motors, a unipo-

lar generator having a plurality of inductors, power actuated switches for altering the grouping of said inductors, means for energizing the closing mechanism of one of said switches prior to deënergizing the closing mechanism of another said switches, and means for preventing the closure of said first switch while said second switch is closed.

[Claims 6 to 11 not printed in the Gazette.]

881,388. MOTOR-SLED. WILLIAM P. EASTWOOD, Hailey, Idaho. Filed May 27, 1907. Serial No. 375,996.

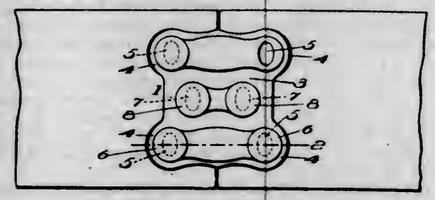


1. A conveyance embodying front and rear sleds or trucks having a tandem arrangement and coupled to admit of relative independent movement, a propeller mounted upon the front sled or truck, handle bars having the propeller mounted thereon and extended within convenient reach of the operator mounted upon the rear truck and adapted to be manipulated for starting the conveyance and to admit of throwing the propeller into and out of action.

2. In combination, sleds or trucks having a tandem arrangement and coupled to admit of relative independent movement, a propeller, handle bars pivotally mounted intermediate of their ends upon the front sled or truck and extended within convenient reach of the operator upon the rear truck and having said propeller carried thereby at their front ends, and standards projected upward from the front truck and adapted to engage with the handle bars to brace the same laterally against horizontal stress when exerted to steer the conveyance.

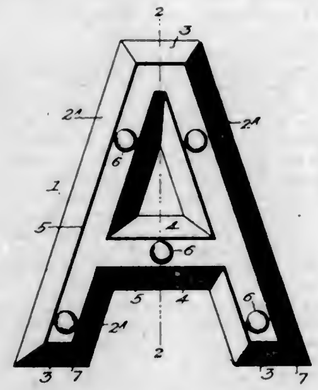
3. In combination, two sleds or trucks having a tandem arrangement and coupled to have limited independent movement, the rear sled or truck adapted to carry the operator, an engine and propeller mounted upon the front truck, connecting means between the propeller and engine, pivoted handle bars carrying the propeller and extended within convenient reach of the operator upon the rear sled, and standards projected upward from the rear portion of the front truck and adapted to engage with the handle bars to sustain lateral stress and admit of proper steering of the conveyance.

881,389. BELT-FASTENER. ANDREW L. EATON, New York, N. Y. Filed Jan. 14, 1905. Serial No. 241,032.



In combination, a belt having two meeting ends, a plate with openings therein elongated transversely of the belt, and a rivet arranged in each opening and having a pair of legs, the diameter of the rivet measured across the space between said legs being equal to the minor axis of the opening in said plate and the diameter of the rivet measured parallel to said space being equal to the major axis of said opening.

881,390. ILLUMINATED SIGN. JAMES W. ELLIS, Denver, Colo., assignor of one-half to Andrew P. Thompson, Denver, Colo. Filed Oct. 2, 1907. Serial No. 395,580.



1. An illuminated electric light sign letter, comprising a flat back portion, provided with inwardly converging side and end portions projecting from said back and converged towards each other to form a dove-tailed recess between them, their free ends being spaced at a sufficient distance apart to form a recess between them of the outline of the letter desired, and narrower than the width of the back of the different portions of the letter, and an electric incandescent light secured to said back portion at the central and end portions of each limb and arm portions of said letter.

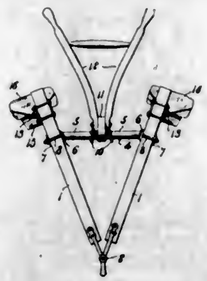
2. An illuminated sign letter, comprising a supporting back portion, sides, and end portions projecting forward from said back portion and converging towards each other to form a dove-tailed shaped recess portion, having a flat back or wall portion and converging side wall and end wall portions, provided with a light reflecting surface, and incandescent electric lights secured to the back wall within said dove-tailed recess and operatively connected to a source of electric current supply to illuminate said dove-tailed shaped recess.

3. In an illuminated sign letter, the combination of a letter supporting sign or back board adapted to permit a letter to be formed in it, with a letter, comprising a dove-tailed shaped recess of the form of the true outlines of the letters of the alphabet desired, said recess having its narrowest slot entrance portion at the front or face of the supporting back in which it is formed, and its widest portion at the bottom of said recess in said supporting back, and having the sides of said dove-tailed recess convergingly inclined towards each other from the bottom of said recess to its entrance slot portion and having the inside walls of this dove-tailed shaped recess provided with a light reflecting surface, electric lights secured at predetermined distances apart into the rear wall of said dove-tailed recess and arranged to illuminate the rear and side walls of said dove-tailed recess, and circuit wires operatively connected to said electric lights and to a supply of electric current.

4. A letter for an illuminated sign, comprising a back, having the outline of the desired letter, and a projecting rim conforming to the outline of the letter, which forms with the back, a channel or chamber open on its front, the sides of which converge from the back, and incandescent lamps secured to said back within said chamber.

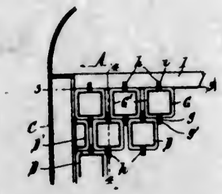
5. A letter for an illuminated sign, comprising a back having the outline of the desired letter, and a projecting rim conforming to the outline of the letter, which forms, with the back, a channel or chamber open on its front, the sides of which converge from the back, said chamber being provided with drain openings, and incandescent lamps secured to the back, within said chamber.

881,391. PLOW. JOHNATHAN W. FARRINGTON, Alba, Tex. Filed Feb. 1, 1907. Serial No. 355,300.



A plow comprising beams pivoted together at their forward ends, a cross member connecting the rear portions of the beams together, said member consisting of binate sleeves each having a clamping means which surrounds a beam and is adapted to be adjusted longitudinally thereof, a rod fitting in said sleeves and terminating short of the clamping means and adapted to turn therein, handles fixed to the rod and means carried by the sleeves for fixing the rod with relation thereto.

881,392. RADIATOR FOR COOLING LIQUIDS. THEODOR C. FEDDERS, Buffalo, N. Y. Filed June 3, 1905. Serial No. 263,564.



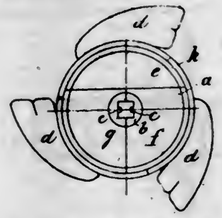
1. A radiator comprising open-ended prismatic tubes having plain end portions by which the tubes rest against each other and having between said end portions alternating channels and ridges which are arranged crosswise with reference to the longitudinal dimension of the tubes, substantially as set forth.

2. A radiator tube composed of two channel-shaped parts having their longitudinal flanges seamed together and having between said flanges alternating channels and ridges which are arranged crosswise with reference to the longitudinal dimension of the tube, substantially as set forth.

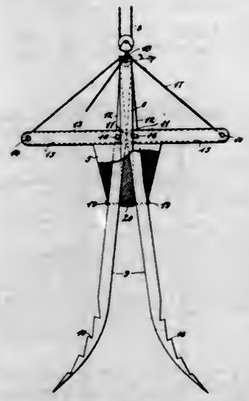
3. A radiator comprising a frame having upper and lower water chambers and horizontal tubes arranged in said frame, said tubes having plain end portions by which the tubes rest against each other and longitudinal flanges and having between said end portions alternating channels and ridges which are arranged crosswise with reference to the longitudinal dimension of the tubes, and slotted filling strips arranged between the tubes and the frame, substantially as set forth.

881,393. SHIP-PROPELLER. CARL J. H. FLINDT, Copenhagen, Denmark. Filed July 25, 1906. Serial No. 327,613.

A propeller, comprising a shaft, a hub thereon, and wing-shaped propeller blades, each provided with an arc shaped flange portion attached to the hub, with which flange portion the blade is in contact throughout approximately the entire length of its inner edge, the broad ends of the blades being split in the direction of their movement, and the portion between the split and the hub having an angle to the axis of the shaft comparatively smaller than the angle of the outer portion.



881,394. HAY-FORK. CHARLES FOSS, Brighton, Iowa. Filed Dec. 10, 1907. Serial No. 405,883.



1. A hay-fork comprising a supporting-frame, links pivoted thereto, tines mounted in the frame and connected at their inner ends to the links, thrust-links connected to the aforesaid links and tines, and means for operating the thrust-links.

2. A hay-fork comprising a supporting-frame, links pivoted thereto, tines mounted in the frame and connected at their inner ends to the links, a slide-bar mounted on the frame, thrust links connected to the slide-bar and the inner ends of the tines, respectively, and a trip rope connection to the slide-bar.

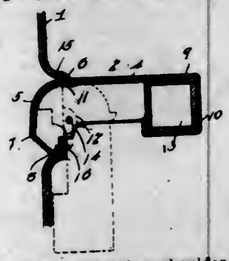
3. A hay-fork comprising a supporting-frame, links pivoted thereto, tines mounted in the frame and connected at their inner ends to the links, a block in the frame between the inner ends of the tines, cross-bars in the frame extending outside the tines, a slide-bar mounted in the frame, links connecting said bar and the inner ends of the tines, and a trip rope connected to the bar.

881,395. CASKET-HANDLE. AUSTIN P. GILLEN, Youngstown, Ohio. Filed May 15, 1907. Serial No. 373,763.

1. In a handle fixture, the combination with a handle proper, of the escutcheon having a keeper opening, of a swinging hanger arm struck out from a single blank of sheet metal and shaped to provide a semi-tubular shank portion formed at its inner end with an angularly disposed pivot head having a top bearing shoulder and a downwardly projecting shouldered holding hook.

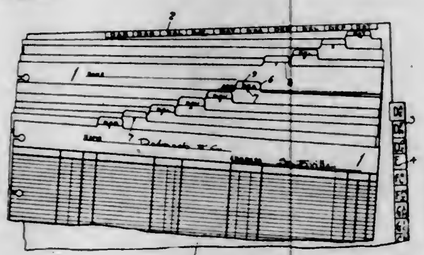
2. In a handle fixture, the handle proper, an escutcheon having a keeper opening and provided with an outer abutment and an inner supporting face respectively at the upper and lower edges of said opening, and a hollow

sheet metal hanger arm struck up from a blank sheet metal and provided at its inner end with a pivot head and at its outer end with a strap piece looped to close in a handle receiving clip, said pivot head being provided at its



upper side with a top bearing shoulder engaging said abutment, and at the inner side of the escutcheon provided with shouldered hook members engaging said supporting face.

881,396. LOOSE-LEAF LEDGER. GEORGE F. GILLETT, San Francisco, Cal. Filed Feb. 20, 1907. Serial No. 358,453.



A record book comprising sheets, interposed division leaves separating said sheets into main groups or sections, each leaf having on a marginal space a lineal series of initial letter groups, and each of the sheets of the main group or section corresponding to said division leaf having a blank tag extending from an edge thereof, said tags forming a lineal series when the sheets are in their superposed position, the tags of any series respectively registering with and lying adjacent to the initial letter groups of the corresponding division leaf, substantially as described.

881,397. HAY-LOADER. CLARK GRAVES, Sandwich, Ill. Filed Apr. 2, 1906. Serial No. 309,433.

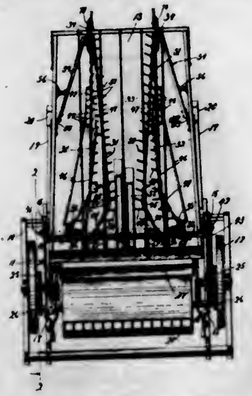
1. In a hay loader, in combination, an inclined deck, a reciprocatory elevating rake-bar located above the deck and mounted to oscillate in a plane parallel therewith.

2. In a hay loader, in combination, an inclined deck, a reciprocatory elevating rake-bar located above the deck and mounted to oscillate in a plane parallel therewith, and an abutment opposed to the rake-bar.

3. In a hay loader, in combination, an inclined deck, reciprocatory rake-bars located above the deck and mounted to oscillate in a plane parallel therewith and wind slats above the rake-bars for holding material in engagement therewith.

4. In a hay loader, in combination, an inclined deck, a reciprocatory rake-bar oscillatable in a plane parallel with the deck, and a movable abutment opposed to the rake-bar and coöperating therewith to advance material upwardly over the deck and wind slats above the rake-bars for holding material in engagement therewith.

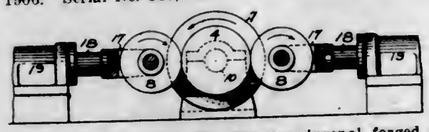
5. In a hay holder, in combination, an inclined deck, a pair of reciprocatory rake-bars mounted in opposition above the deck, and means for oscillating the rake-bars in a plane parallel with the deck, the oscillatory movement of the rake-bars being timed to cause them to simultaneously approach and recede and wind slats above the



rake-bars for holding material in engagement therewith.

[Claims 6 to 18 not printed in the Gazette.]

881,398. METHOD OF MAKING CIRCULAR WROUGHT-METAL BLANKS. JOHN M. HANSEN, Pittsburg, Pa., assignor to Forged Steel Wheel Company, Pittsburg, Pa., a Corporation of Pennsylvania. Filed May 19, 1906. Serial No. 317,740.



1. The method of transforming a polygonal forged or rolled metal slab or blank into one of circular or curved outline consisting in heating the metal blank and while confining the sides of the blank so as to prevent thickening thereof subjecting the projecting portions of the edge thereof to pressure and thereby causing the metal of the projecting portions to fill up the low portions and produce a circular blank.

2. The method of reducing polygonal or irregularly shaped metal blanks to circular or curved form, consisting in confining the metal at the edge of the blank against side flow, and while so confining the same subjecting the projecting portions of said edge to pressure to cause the metal to flow peripherally and produce the circular blank.

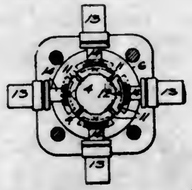
3. The method of transforming a polygonal forged or rolled metal slab or blank into one of circular or curved outline, consisting in heating the blank, confining the metal at the edge of such blank against side flow, and while so confining the same subjecting said edge to rolling pressure, thereby causing the metal in the projecting portions to flow peripherally and producing the circular blank.

4. The method of transforming a polygonal forged or rolled metal slab or blank into one of circular or curved outline, consisting in heating such blank, rotating the same while confining the metal of the edges against side flow, and subjecting the edge thereof to rolling pressure, thereby causing the metal in the projecting portions to flow peripherally and produce the circular blank.

5. The method of transforming a polygonal forged or rolled metal slab or blank into one of circular or curved outline, consisting in heating such blank, then subjecting the edge thereof to a rolling action while confining the metal at the edges against side flow, and gradually extending said rolling action toward the center of the blank, thereby causing the metal in the angles to flow peripherally and producing the circular blank.

[Claims 6 and 7 not printed in the Gazette.]

881,399. METHOD OF MAKING CIRCULAR WROUGHT-METAL BLANKS. JOHN M. HANSEN, Pittsburg, Pa., assignor to Forged Steel Wheel Company, Pittsburg, Pa., a Corporation of Pennsylvania. Filed May 19, 1906. Serial No. 317,742.



1. The method of reducing polygonal or irregularly shaped metal blanks to circular or curved form, consisting in confining the metal at the edges against side flow, and while so confining the same subjecting the angles thereof when heated to a radial pressure to cause a peripheral flow of the metal to produce the circular blank.

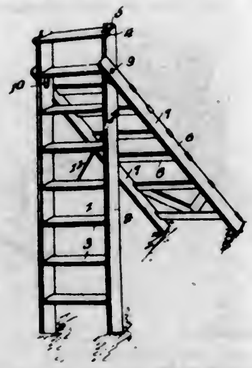
2. The method of reducing square or irregularly shaped metal blanks to circular or curved form, consisting in heating the blank, clamping the side faces thereof and then subjecting the projecting portions thereof to radial pressure, thereby causing peripheral flow of the metal to produce the circular blank.

3. The method of transforming a polygonal forged or rolled metal slab or bloom into one of circular or curved outline, consisting in heating said blank, clamping the same between plates extending beyond the edges thereof, and then subjecting the angles of said blank to radially acting pressure, and thereby causing peripheral flow of the metal and producing the circular blank.

4. The method of transforming a polygonal forged or rolled metal slab or blank into one of circular or curved outline, consisting in heating the blank, then subjecting the angles thereof to radially acting pressure, and simultaneously therewith subjecting the sides of the blank to successive pressures to flatten out the metal at the edges.

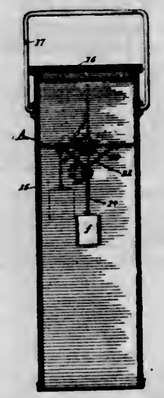
5. The method of forming circular wrought metal blanks, consisting in cutting a square blank from a rolled metal slab, heating the same, and then subjecting the angles thereof to radially acting pressure while confining the metal at the edges against side flow.

881,400. COMBINED STEP AND EXTENSION LADDER. ISAAC M. HARPSTER, Ironwood, Mich. Filed May 12, 1906. Serial No. 316,586.



In a ladder, the combination of a pair of loosely connected sections, one of the sections comprising spaced side pieces connected by steps, longitudinal slots being formed in the said side pieces and the uppermost step projecting beyond the forward edge of the side pieces and the forwardly projecting portion thereof carrying lateral extensions, the side pieces extending upwardly above the uppermost step, L shape reinforcing strips applied to the sides of the said section and engaging the lateral extensions of the uppermost step, the second section comprising side pieces designed to receive the side pieces of the first mentioned section and having their rear edges connected by slats, a rod connecting the side pieces of the second section and extending through the slots in the side pieces of the first mentioned section, the lateral extensions of the uppermost step of the first section serving to engage the side pieces of the second section when the latter is swung into alinement with the former, the movement of the rod within the slots then permitting the second mentioned section to be moved longitudinally to throw one of the slats against the projecting portion of the uppermost step of the first mentioned section whereupon the slat engages the extremity of the side pieces projecting beyond the uppermost step and the two sections are locked rigidly together.

881,401. COMBINATION RAT-TRAP AND BUCKET. CALAWAY HERNDON, Wagoner, Okla. Filed June 14, 1907. Serial No. 379,070.



1. An animal trap comprising a receptacle such as a bucket having bearings disposed interiorly upon the sidewalls thereof, in combination with a trap-door having a cross-bar with projecting ends forming trunnions, and a weight-supporting bail pivotally connected with the trap-door and moving in a plane perpendicular to the axis of rotation of the trap-door.

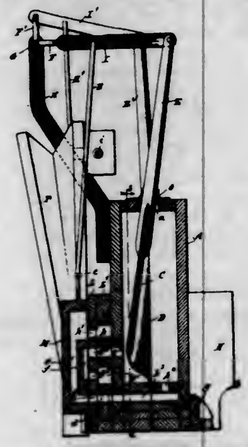
2. In an animal trap, the combination with a vessel constituting a receptacle, of a trap door pivotally supported in said receptacle, a bail pivoted upon the under side of the trap-door transversely to the axis of rotation of said door, and a pendulum-weight having a suspending rod connected with the bail.

881,402. MOTOR FOR MUSIC-ROLLS OF PNEUMATIC MUSICAL INSTRUMENTS. BERNDT A. HOGLUND, New York, N. Y. Filed Feb. 7, 1906. Serial No. 299,945.

1. In a motor for music rolls of musical instruments, the combination of the two piston chambers, hinged pistons movable therein, diaphragms connected with the pistons and surrounding the same, projecting piston rods, connecting rods, crank shaft, valves, valve seats, trunk or reservoir, and a governor bellows, all constructed and arranged for operation substantially as and for the purposes set forth.

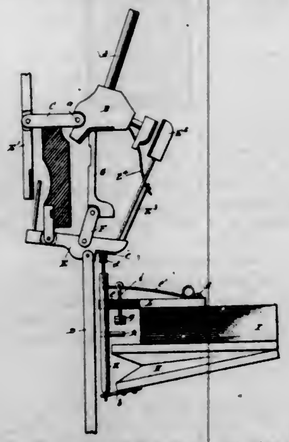
2. The herein described motor for music rolls of musical instruments, comprising the two piston chambers, hinged pistons movable therein, diaphragms connected with the pistons and surrounding the same, projecting piston rods, connecting rods, crank shaft, valves, valve seats, trunk or reservoir, governor bellows, drive wheel applied on the

crank shaft, and means for connecting said drive wheel with the object to be driven, all constructed, arranged and combined substantially as shown and described.



3. In a motor for music rolls of musical instruments, the combination of the piston chambers having inlets and outlets for air thereto and therefrom, of hinged pistons movable in said chambers, regulator valves and a perforated block intermediate of said valves and the wall of the piston chambers, substantially as shown and described.

881,403. PNEUMATIC ACTION FOR MECHANICAL MUSICAL INSTRUMENTS. BERNDT A. HOGLUND, New York, N. Y. Filed Feb. 7, 1906. Serial No. 299,947.

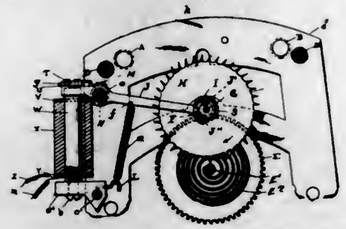


1. In a mechanical musical instrument, the combination with the pneumatic, of a step piece applied on the bottom of the pneumatic, a removable push rod, a guide for said push rod having a recess open at one side, and a spring detachably connected with the push rod, substantially as and for the purposes set forth.

2. In a pneumatic action for mechanical musical instruments, the combination of a removably stepped push rod operated by one of the pneumatics, an adjustable head for said push rod, a guiding plate having a recess open at one side, and a detachable spring, the parts being constructed and arranged substantially as shown.

3. The combination with a pneumatic, of a push rod operated thereby, an adjustable head for said push rod, a guiding plate having a recess open at the rear side for accommodating the push rod, a detachable spring connected with the push rod, an adjustable stop, and an arm on the push rod for striking against said stop, substantially as and for the purposes set forth.

881,404. ELECTRIC ESCAPEMENT FOR TIME-MOVEMENTS. CHARLES F. HOLLISTER, Waterbury, Conn. Filed Mar. 25, 1907. Serial No. 364,288.

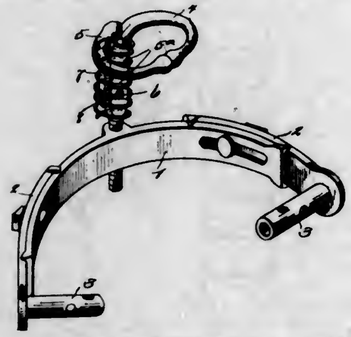


1. An electrically operated escapement for clock movements, comprising a shaft and means for operating the same, a hub mounted upon the shaft and bearing a pin disposed parallel with said shaft, a magnet, an armature operated by the magnet and bearing an arm having a pair of fingers disposed parallel with and upon two sides of the shaft, and a spring connected to the arm to retract the same when released by the magnet.

2. An electrically operated escapement for clock movements, comprising a shaft having means for operating the same, a wheel carried on the shaft bearing a pin upon one side disposed parallel with the shaft, a pivoted arm having branches to straddle the shaft and a finger upon each arm disposed parallel with the shaft, a magnet and spring for operating the arm to alternately throw the fingers of the arm in line with the movement of the pin in the wheel to check and release its escapement.

3. An electrically operated escapement for clock movements, comprising a shaft with means for operating the same, a hub attached thereto having a pin disposed parallel with the shaft, a divided arm pivoted to the movement and having one branch disposed upon one side of the shaft and the other upon the opposite side, and a finger projected from each of such branches and parallel with the shaft, a magnet to retract the arm and spring to operate the arm when released by the magnet.

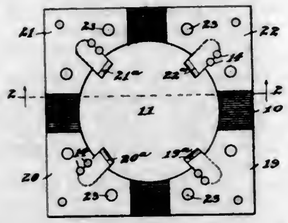
881,405. CALF-WEANER. CHARLES E. HOPPENRATH, Elwood, Ind. Filed Aug. 29, 1907. Serial No. 390,654.



1. A device of the class described, comprising a frame having adjustable portions, hollow stub-bits mounted on said portions and means coöperating with said bits for holding said device in engagement with the head of the calf.

2. A calf weaner, comprising a frame, and having bits adapted to be inserted in the mouth of a calf, a segmental ring adapted to engage the nose of said calf, said ring having a downwardly extending stem connected with said frame, said stem being provided with a coiled spring for holding said segments together, substantially as described.

881,406. THREADING-TOOL. HENRY JANSEN, Chicago, Ill. Filed May 20, 1907. Serial No. 374,619.



1. A threading tool consisting of a tooth-holder having radial slots formed therein, and a series of detachable individual threading teeth seated and rigidly secured in each of said slots, substantially as described.

2. A threading tool consisting of a tooth-holder having radial slots formed therein, a series of detachable individual threading teeth seated and rigidly seured in each of said slots, and clamp plates on one or both sides of said tooth-holder having integral teeth located in alinement with the individual threading teeth of each series, substantially as described.

3. A threading die consisting of a die-block or frame having parallel flat sides and a central opening formed therethrough and further provided with a plurality of radially directed slots at their inner ends communicating with said opening, a group of individual threading teeth seated and detachably secured in each of said slots, and clamp-plates applied to the opposite sides of the die-block and overlying said slots whereby to confine said teeth against lateral displacement, the clamp plates on one or both sides of said die-block having integral teeth located in alinement with the individual threading teeth of each group substantially as described.

881,407. SEALING DEVICE FOR MONEY-BAGS. MILFORD E. JEWETT, Keokuk, Iowa. Filed Mar. 21, 1907. Serial No. 363,748.

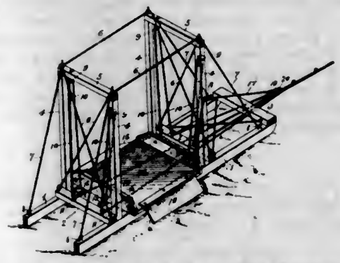


1. A bag seal comprising a tie and a channeled block having a plurality of projections located interiorly thereof and inclined toward one end of the block in order that the tie may be inserted through the block toward the end of the block to which the projections point and from the opposite end.

2. A bag seal comprising a channeled block having barbs located interiorly thereof, and integral with the block; said barbs being inclined relative to the wall of the block and extending longitudinally of the channel in said block.

3. In a bag sealing device, the combination of a tie, and a seal for application to said tie provided with a plurality of channels and having inclined barbs located in said channels, substantially as set forth.

881,408. LOADING APPARATUS. NELS JORGENSEN, Craig, Nebr. Filed July 1, 1907. Serial No. 381,697.



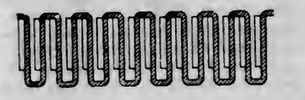
1. In a loading apparatus, a suitable frame-work including corner posts and means for sustaining said corner posts in an upright position, a vertically movable platform guided between said posts, a lifting bar secured upon the underside of said platform and having projecting ends forming trunnions upon which said platform may be tilted, an auxiliary supporting bar extending beneath the platform the latter resting loosely thereon, and suitably guided flexible hoisting elements connected with the lifting bar and the supporting bar.

2. In a loading apparatus, a frame including corner posts, a pair of parallel bars guided for vertical movement between said posts, suitably guided flexible hoisting elements connected with said bars, a tiltable platform secured upon one of said bars and resting loosely upon the other bar, and a trip rope connected with said tiltable platform.

3. In a loading apparatus, a frame including corner posts, a vertically-movable tiltable platform guided between said posts, a bar extending beneath the platform and having projecting ends forming trunnions, suitably guided flexible hoisting elements connected with said trunnions, and a suitably guided trip rope connected at one end with the tiltable platform and having its other end adjustably connected with one of the flexible hoisting elements.

4. In a loading apparatus, a pair of sills, cross bars connecting said sills, corner posts rising from the sills adjacent to the cross bars, caps connecting said corner posts in pairs, brace and guy members sustaining said posts, a pair of bars disposed intermediate the posts in parallel relation to the sills, a tiltable platform secured upon one of said bars and resting loosely upon the other bar, suitably guided flexible hoisting elements connected with the platform supporting bars, and a trip rope connected with the platform.

881,409. GUIDE BLADE AND VANE FOR TURBINES. ALEXANDER JUDE, Birmingham, England, assignor to Belliss & Morcom Limited, Birmingham, England. Filed Aug. 28, 1906. Serial No. 332,351.



1. For turbine motors, guide-blades of which a plurality are formed integrally in one piece from a strip and have a narrow connecting portion which extends tangentially relatively to the stator.

2. For turbine motors, vanes of which a plurality are formed integrally in one piece from a strip and have a narrow connecting portion which extends tangentially to the rotor.

3. For turbine motors, guide-blades of which a plurality are formed integrally in one piece from a strip and have a shank portion which extends tangentially relatively to the stator.

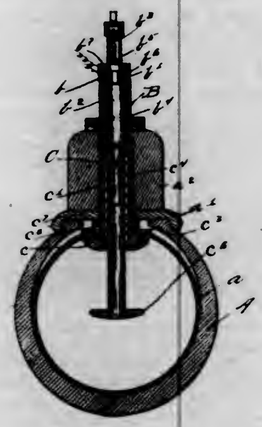
4. For turbine motors, vanes of which a plurality are formed integrally in one piece from a strip and having a

shank portion which extends tangentially relatively to the rotor.

5. For turbine motors, guide-blades of which a plurality are formed integrally in one piece from a strip and have a shank portion which extends tangentially relatively to the stator, and retaining blocks adapted to fit between consecutive guide-blades and vanes, and be fastened to the stator and rotor respectively and inclose the said tangentially extending portion of the shank.

[Claims 6 to 8 not printed in the Gazette.]

881,410. VALVE-STEM AND TIRE-DEFLATION ALARM. ABBOTT E. KAY, Chicago, Ill. Filed Aug. 3, 1906. Serial No. 329,271.



1. In a device of the class described the combination with an inner tube of a stem rigidly engaged thereto and having its inner end approximately flush with the tube, telescoping tubes, one rigidly engaged in the stem and insulated therefrom, the other slidable therein, spring contacts carried by the movable tube adapted to bear against the rigid tube to close a circuit.

2. In a device of the class described the combination with a pneumatic tire of a valve stem removably engaged thereto, telescoping tubes in said stem adapted to be actuated by the deflation of the tire, contacts movable with one of said tubes to contact the other tube, said stem being approximately flush with the inside of the tire and a rounded nut secured on the end of said stem.

3. The combination with a pneumatic tire of a valve stem engaged thereto, an insulated tube in said stem, a tube in said stem projecting into the tire and adapted to telescope said insulated tube, spring contacts carried by the movable tube to close a circuit, said stem and telescoping tube adapted to assume a position approximately flush with the tire when said tire is entirely deflated.

4. In a device of the class described the combination with a stem of a tube in the upper end thereof and insulated therefrom, an integral extension on said tube provided with a valve therein, a spring contact normally out of engagement with said tube adapted when forced into contact therewith to complete the circuit and means normally holding the spring contact at its lower limit of movement.

5. An automatical signaling device comprising in combination with a tire a stem, a tube insulated therefrom and engaged in the upper end thereof, a tube in the lower end of said stem and normally extending into the tire and adapted when actuated to telescope in the first mentioned tube, contacts carried by said lower tube, a flange on said lower tube and a spring bearing against the same normally holding the contacts out of engagement.

[Claims 6 to 12 not printed in the Gazette.]

881,411. TIRE-CASE. ARTHUR H. KINDER, Boston, Mass., assignor to Frank B. Hopewell, Newton, Mass. Filed July 9, 1907. Serial No. 382,949.



1. A tire case composed of material having at each edge a longitudinal pocket, a longitudinally elastic cord in each pocket by means of which when the case is in position on the tire the edges of the case are contracted into and retained in a circle smaller than the circle defining the circumference of the tire.

2. An annular tire case composed of material having at each edge a longitudinal pocket, a longitudinally elastic cord in each pocket to retain the pocketed edge of the case in a circle smaller than the circle defining the circumference of the tire.

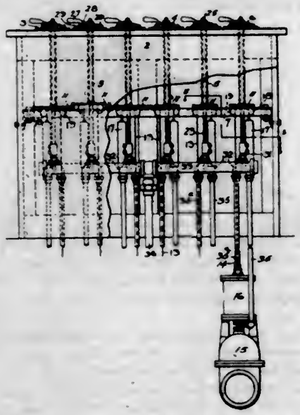
3. An annular tire case composed of material having at each edge a longitudinal pocket, a longitudinally elastic metallic cord in each pocket to retain the pocketed edge of the case in a circle smaller than the circle defining the circumference of the tire.

4. An annular tire case composed of material having at each edge a longitudinal pocket, a coiled metallic spring constituting a longitudinally elastic cord in each pocket to retain the pocketed edge of the case in a circle smaller than the circle defining the circumference of the tire.

5. An annular tire case composed of material having at each edge a longitudinal pocket, a cord in each pocket to retain the pocketed edges of the case in a circle smaller than the circle defining the circumference of the tire, one of said cords being longitudinally elastic, whereby the annular pocketed edge containing the said cord may be expanded to position the same upon the tire, and when contracted will hold the said edge in position on the tire.

[Claims 6 to 8 not printed in the Gazette.]

881,412. MECHANISM FOR OPERATING INDICATORS FOR HYDRAULIC VALVES. GERALD W. KNIGHT, Pittsburg, Pa., assignor to Pittsburgh Filter Manufacturing Co., Pittsburg, Pa. Filed Mar. 14, 1907. Serial No. 362,332.



1. In mechanism for operating hydraulic valves, the combination with a suitable frame or table, of a hydraulic valve, a registering device, connections between said valve and said registering device, and means for controlling the supply of fluid to said valve to operate the plunger of same.

2. In mechanism for operating hydraulic valves, the combination with a suitable frame or table, of a hydraulic valve, a registering device, connections between said valve and said registering device, a controller-arm, a fluid supply valve, and connections between said controller-arm and said fluid supply valve for admitting fluid to operate the plunger of said hydraulic valve.

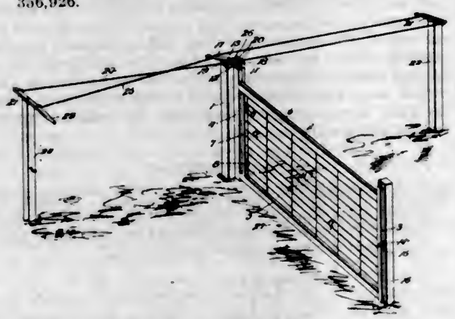
3. In mechanism for operating hydraulic valves, the combination with a suitable frame or table, of a hydraulic valve, a dial, an indicator hand, connections between said indicator hand and the plunger of said valve, a controller-arm, a fluid supply valve, and connections between said arm and said fluid supply valve for admitting fluid to operate the plunger of said hydraulic valve.

4. In mechanism for operating hydraulic valves, the combination with a suitable frame or table, of a hydraulic valve, a dial, an indicator hand, a sheave connected to said indicator hand, a cord passing around said sheave secured at one end to the plunger of said hydraulic valve, means for holding said cord taut as said plunger ascends, and means for controlling the supply of fluid to said hydraulic valve to operate said plunger.

5. In mechanism for operating hydraulic valves, the combination with a suitable frame or table, of a hydraulic valve, a dial, an indicator hand, a sheave connected to said indicator hand, a belt or cord engaging said sheave and connected at one end to the plunger of said hydraulic valve, a weight attached to the other end of said cord, and means for controlling the supply of fluid to said valve to operate the said plunger.

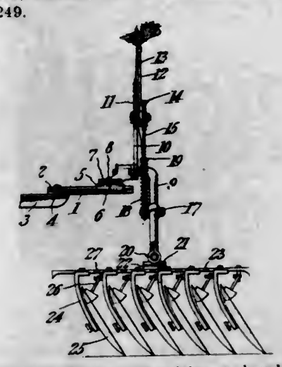
[Claims 6 to 11 not printed in the Gazette.]

881,413. SWINGING GATE. WILLIE J. KNUTZEN, Burlington, Wash. Filed Feb. 11, 1907. Serial No. 356,926.



In a swinging gate, the combination of a gate post, a bearing plate secured to the upper end of the gate post and having a plurality of openings formed therein, a latch post, a catch mounted upon the latch post, a gate comprising a pair of upright members, a hinged connection between the lower portion of one of the upright members and the gate post, said upright member extending upwardly flush with the top of the gate post, a pin projecting from the extremity of the said upright member, an operating lever comprising a pair of arms disposed at an obtuse angle to each other, one of the said arms engaging the before mentioned pin projecting from the upright member of the gate, a pivot pin passing through the operating lever at the junction of the two arms thereof and engaging a selected one of the before mentioned openings in the bearing plate at the upper end of the gate post, a standard located upon each side of the gate post, a hand lever pivoted between its ends upon each of the standards, a cable connecting the inner end of one hand lever to the upper end of the opposite hand lever, and a second cable connecting the outer end of the first mentioned hand lever to the inner end of the second mentioned hand lever, and also engaging the outer arm of the operating lever.

881,414. HARROW ATTACHMENT FOR PLOWS. EMIL M. KRAMER, Paxton, Ill. Filed June 15, 1907. Serial No. 379,249.



1. A plow attachment comprising a bracket, a block slidably located on the bracket, a part adjustable on said block and having a bearing, an arm journaled in said bearing, a bar carried by said arm, earth engaging elements carried by said bar, a standard attached to the said part, a lever fulcrumed on the standard, a gear wheel attached to the lever, a gear rod meshing with said gear wheel and slidably connecting with the arm and a coil spring interposed between the gear rod and the arm.

2. A plow attachment comprising a standard, a swinging arm, a lever fulcrumed to the standard, a gear wheel attached to said lever, a gear bar meshing with said gear wheel and slidably engaging said arm, a spring interposed between the arm and the gear bar, a zigzag bar attached to said arm, and ground engaging elements carried by the last said bar.

3. A plow attachment comprising a standard, a swinging arm, a lever fulcrumed to the standard, a gear wheel attached to said lever, a gear bar meshing with said gear wheel and slidably engaging said arm, a spring interposed between said gear bar and said arm, a collar adjustably carried by said arm, a bar adjustably attached to said collar, and earth engaging elements carried by said bar.

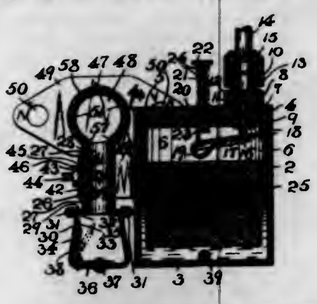
881,415. POCKET ATTACHMENT FOR WATCHES. FRANZ KRAWCZYK, Lodz, Russia. Filed Oct. 11, 1906. Serial No. 338,344.



1. A pocket attachment for holding a watch by the tension exerted by the wearer upon a garment, and comprising a cup-like body having an upper overhanging edge and a frontal side provided with an opening which permits the introduction of a watch, and secured within a garment pocket, said body having a slot in the upper overhanging edge thereof for the reception of a stem of a watch.

2. A pocket attachment for holding a watch within a garment pocket, by the tension exerted by a wearer upon the garment, and comprising a cup-like body having an overhanging edge and a frontal side provided with an opening which permits the introduction of a watch, and having openings in its bottom for attaching said body as desired, and the aforesaid edge of the body provided with a slot for the reception of the stem of the watch.

881,416. CARBURETER. CHARLES KAEBS, Newark, N. J. Filed Apr. 12, 1907. Serial No. 367,820.



1. In a carbureter for gas-engines, the combination with a gasolene-holder, of a series of mixing tubes, each tube forming a mixing chamber, a feed-tube connected with said gasolene-holder, said tube extending into and diametrically across each mixing tube, said tube being provided with a series of outlets, each outlet establishing a communication with each mixing chamber of the respective mixing tubes, and means connected with each mixing tube having a portion in engagement with the outlets in said feeding tube for regulating the spraying of the gasolene from said outlets, substantially as and for the purposes set forth.

2. In a carbureter for gas-engines, the combination with a gasolene-holder, of a series of mixing tubes, each tube forming a mixing chamber, a feed-tube connected with said gasolene-holder, said tube extending into and diametrically across each mixing tube, said tube being provided with a series of outlets, each outlet establishing a communication with each mixing chamber of the respective mixing tubes, and means connected with each mixing tube having a portion in engagement with the outlets in said feeding tube for regulating the spraying of the gasolene from said outlets, a regulating chamber in communication with all of said mixing tubes, and means in said regulating chamber for establishing communication with one or more or all of said mixing tubes, substantially as and for the purpose set forth.

3. In a carbureter for gas-engines, the combination with a gasolene-holder, of a series of mixing tubes, each tube forming a mixing chamber, a feed-tube connected with said gasolene-holder, said tube extending into and diametrically across each mixing tube, said tube being provided with a series of outlets, each outlet establishing a communication with each mixing chamber of the respective mixing tubes, and means connected with each mixing tube having a portion in engagement with the outlets in said feeding tube for regulating the spraying of the gasolene from said outlets, a regulating chamber in communication with all of said mixing tubes, and means in said regulating chamber for establishing communication with one or more or all of said mixing tubes, comprising a tubular regulator arranged in said regulating chamber, said regulator having an oscillatory motion, said regulator being provided with variously disposed openings of different conformations, all arranged for establishing communication with one or more or all of said mixing tubes, and an actuating lever connected with one end of said regulator, substantially as and for the purposes set forth.

4. In a carbureter for gas-engines, the combination with a gasolene-holder, of a series of mixing tubes, each tube forming a mixing chamber, a feed-tube connected with said gasolene-holder, said tube extending into and diametrically across each mixing tube, said tube being provided with a series of outlets, each outlet establishing a communication with each mixing chamber of the respective mixing tubes, and means connected with each mixing tube having a portion in engagement with the outlets in said feeding tube for regulating the spraying of the gasolene from said outlets, a regulating chamber in communication with all of said mixing tubes, and means in said regulating chamber for establishing communication with one or more or all of said mixing tubes, comprising a tubular regulator arranged in said regulating chamber, said regulator having an oscillatory motion, said regulator being provided with variously disposed openings of different conformations, all arranged for establishing communication with one or more or all of said mixing tubes, and means for actuating said regulator, substantially as and for the purposes set forth.

5. In a carbureter for gas-engines, the combination with a gasolene holder, of a series of mixing tubes, each tube forming a mixing chamber, a regulating chamber in communication with all of said mixing tubes, and means in said regulating chamber for establishing communication with one or more or all of said mixing tubes, all combined with an air-receiving shell forming an air-intake, said shell being in communication with said mixing tubes and being provided in one of its sides with air-receiving holes, and a spring-controlled gate movably arranged over said holes, substantially as and for the purposes set forth.

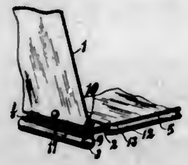
[Claims 6 and 7 not printed in the Gazette.]

881,417. LIFE-SAVING APPLIANCE. CHARLES H. KRÜGER, Bradford, England. Filed June 15, 1907. Serial No. 379,234.



A life saving apparatus comprising a kite, an equilibrium distributing device comprising a cable holding means and a trigger for releasing said means, a cable secured to one end of the device and to one end of the kite a main cable secured to the other end of the kite and to the cable holding means, to the other end of the device and to the ship, a block and means operated by the wind for causing the block to travel up the main cable to contact with the trigger and release the same.

881,418. SHEET-METAL PACKING-CASE. ALFRED T. KRUSE, Defiance, Ohio, assignor to The American Steel Package Company, Defiance, Ohio, a Corporation of Ohio. Filed Sept. 5, 1906. Serial No. 333,285.



1. In a packing-case, a wall provided with a lateral flange near its lower edge, a bottom having a peripheral flange resting on said lateral flange and a depending portion below said peripheral flange, the depending portion of the bottom and the part of the wall below the lateral flange being rolled into a double walled beading.

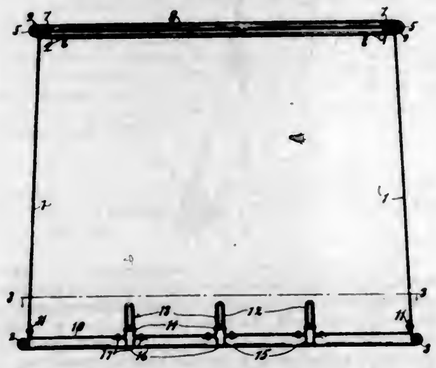
2. In a packing-case, a wall provided with a bottom-supporting-flange a rib abutting against said flange and a friction-bearing beading, and a bottom provided with a marginal flange mounted on and registering with said bottom-supporting-flange.

3. In a packing-case, a wall provided with a bottom-supporting-flange and a friction-bearing beading, and a bottom provided with a companion supporting-flange in registering engagement with the other and a depending-rib having its ends abutting against said last mentioned flange.

4. In a packing-case, a wall and bottom having their marginal edges bent over and about each other forming a double-walled horizontally-extending bottom-supporting-flange and terminating in a double-walled friction-bearing-beading.

5. In a packing-case, a wall and bottom having their marginal edges interfolded so as to form a double-walled horizontally-extending bottom-supporting-flange said marginal edges terminating in a depending double-walled friction-bearing-beading, and said wall having a vertical rib abutting against said bottom-supporting-flange.

881,419. SHEET-METAL PACKING-CASE. ALFRED T. KRUSE, Defiance, Ohio, assignor to The American Steel Package Company, Defiance, Ohio, a Corporation of Ohio. Filed Sept. 5, 1906. Serial No. 333,287.



1. In a packing-case, the combination with the walls thereof provided with an upper beading, and a lid-supporting-flange formed by the upper marginal edges thereof and extending inwardly from said beading; of a lid or cover provided with a companion supporting and cushioning-flange and beading adapted to rest on and within said first mentioned flange and beading, respectively.

2. A lid or cover for packing-cases, consisting of a single blank of sheet metal bent over and about forming a marginal strengthening-beading and having its marginal edges bent thereunder and inwardly from said beading forming a lid-supporting-cushioning-flange.

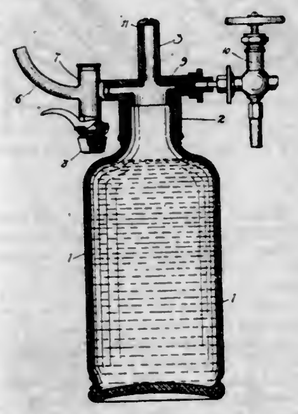
3. In a packing-case, the combination with the walls thereof having their lower edges provided with a friction-bearing strengthening-beading, and a plurality of bottle-partitions carried by and interposed between said walls; of a plurality of supporting-straps secured to said walls near said strengthening-beading and provided with a plurality of upwardly-extending hanger-straps taking over said bottle-partitions and oppositely-disposed friction-bearing portions flush with said strengthening-beading.

4. In a packing-case, the combination with the walls thereof having their lower edges provided with a strengthening-beading and a plurality of bottle-bars or partitions secured to said walls near said strengthening-beading; of an open bottom comprising a plurality of supporting-straps extending at right angles to said bottle-bars and provided with a plurality of inverted U-shaped hanger straps taking over said bottle-bars and depending friction-bearing portions flush with said strengthening-beading.

5. A packing-case, comprising walls provided with a friction-bearing strengthening-beading and carrying a plurality of bottle-partitions near said strengthening-beading, a plurality of supporting-straps secured to said walls in close proximity to said strengthening-beading and provided with upwardly-extending hanger-straps secured to said bottle-partitions and friction-bearing portions flush with said strengthening-beading.

[Claims 6 and 7 not printed in the Gazette.]

881,420. SIPHON-BOTTLE. DEWIS LANDAU, San Francisco, Cal., assignor to Landau Economic Syphon Company, San Francisco, Cal., a Corporation of California. Filed May 23, 1907. Serial No. 375,323.



A bottle having a body and a head, said head having a spout with an upwardly directed outlet and a valve controlling said spout, and having an upward tubular extension adapted, when the bottle is inverted, to fit in a socket in a stand, and a cap removably closing said extension, substantially as described.

881,421. HOOK FOR LACINGS. JULIUS C. LEHMANN, New York, N. Y., assignor of one-fifth to H. W. Aylward, one-fifth to J. J. Aylward, and one-fifth to J. Schlagel, New York, N. Y. Filed May 4, 1906. Serial No. 315,123.



1. As a new article of manufacture, a lacing hook having a ball of elastic material within the body thereof against which the lacing engages while under tension.

2. As a new article of manufacture, a lacing hook having a body and rotary elastic means within the body, the said means being free to rotate within the body by engagement with the lacing while under tension.

3. As a new article of manufacture, a lacing hook having elastic means within the body thereof against which the lacing engages while under tension.

4. As a new article of manufacture, a lacing hook having a hollow hook-like body and an elastic ball imprisoned therein, the said ball being adapted to be engaged and compressed by the lacing while the latter is under tension.

5. As a new article of manufacture, a lacing hook having a hollow hook-like body and an elastic ball imprisoned therein and free to turn in all directions, the said ball being adapted to be engaged by the lacing and distorted by the pressure on the latter while under tension.

[Claims 6 and 7 not printed in the Gazette.]

881,422. GRAIN-SEPARATOR. MARCUS LEONARD, Salina, Kans. Filed Dec. 15, 1906. Serial No. 348,043.

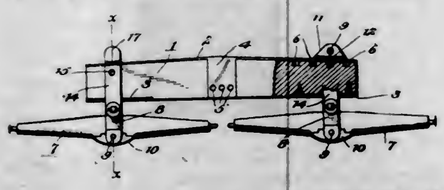
A grain separator comprising a combined grain threshing and grain and air propelling fan, separating raddles

lying in different planes and located opposite the fan, a deflector located in the angle between the raddles and



spaced slats moving orbitally around the raddles and deflector.

881,423. MEANS FOR ATTACHING SWINGLETREES TO DOUBLETREES. JULIUS LORENZ, Matteawan, N. Y., assignor of one-half to J. H. Robinson, Matteawan, N. Y. Filed Apr. 11, 1907. Serial No. 367,718.



1. In combination a double-tree, a swingle-tree, a shackle connection between the swingle and double-trees, a slide having pivotal connection with the shackle connection interlocking means between the shackle connection and one edge of the double-tree, and means applied to said shackle connection to engage with the opposite edge of the double-tree to prevent casual separation of the aforesaid interlocking means, whereby the swingle-tree with reference to the double-tree remains fixed.

2. In combination a double-tree, a swingle-tree, a shackle connection between the swingle and double-trees, an interlocking projection between the shackle connection and an edge portion of the double-tree, a cam fitted to said shackle connection and adapted to engage with the opposite edge of the double-tree to prevent separation of the aforesaid interlocking means between the shackle and double-tree, and means for securing the cam when moved into operative position with reference to the double-tree.

3. In combination a double-tree, a swingle-tree, a shackle connection between the swingle and double-trees, an interlocking projection between the shackle connection and an edge portion of the double-tree, a cam fitted to said shackle connection and adapted to engage with the opposite edge of the double-tree to prevent separation of the aforesaid interlocking means between the shackle and double-tree, a lever having connection with said cam and serving as operating means therefor, and interlocking means between said lever and the shackle connection to hold the lever and cam in operative position.

4. In combination a double-tree, a swingle-tree, a shackle connection between the swingle and double-trees, an interlocking projection between the shackle connection and an edge portion of the double-tree, a cam fitted to said shackle connection and adapted to engage with the opposite edge of the double-tree to prevent separation of the aforesaid interlocking means between the shackle and double-tree, a spring lever having connection with said cam and having a finger-piece and a projection carried by said spring lever to engage with the shackle connection and hold the lever and cam in operative position.

5. In combination swingle and double-trees, upper and lower shackle bars having pivotal connection at one end with the swingle-tree, a slide pivotally connected to the opposite ends of the shackle bars and adapted to engage with the rear edge of the double-tree, interlocking means between said slide and double-tree to fix the position of the swingle-tree, and means supported by the shackle bars and arranged to engage with the front edge of the double-tree to prevent casual disengagement to the aforesaid slide from the double-tree after the parts have been properly engaged.

[Claim 6 not printed in the Gazette.]

881,424. GARMENT-SUPPORT. ERNEST H. LUEBBERS, Jr., New York, N. Y. Filed Apr. 15, 1907. Serial No. 368,428.



1. In a hose supporter, the combination of a yoke, a button base plate, a button shank connected thereto, a head carried by the shank, the shank having substantially transverse ribs, and the yoke being adapted to embrace the shank, and bear in between two adjacent ribs for the purpose specified, and a means flexibly connecting the yoke and button base plate to each other, whereby to admit engagement and disengagement of the yoke and button shank.

2. In a hose supporter, the combination of a yoke, a button base plate, a button shank connected thereto, a head carried by the shank, the shank having substantially transverse ribs, and the yoke being adapted to embrace the shank, and bear in between two adjacent ribs for the purpose specified, and a means flexibly connecting the yoke and button base plate to each other, whereby to admit engagement and disengagement of the yoke and button shank, the said ribs on the shank being formed by a wire coiled around the same.

881,425. BUILDING-BLOCK. OLOF P. LUNDELL, Sioux Falls, S. D. Filed Apr. 26, 1906. Serial No. 313,821.

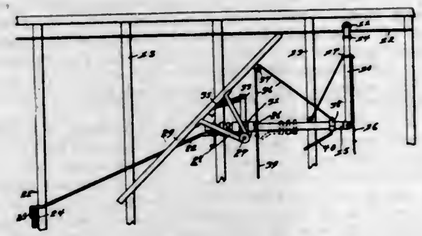


1. A building block for hollow tiled walls, comprising a central portion of constricted facial dimensions and inner and outer portions of greater facial dimensions projecting beyond said central portion on all sides thereof, and of substantially the same width therewith, said block being formed with straight inclined surfaces extending between said inner and outer portions and said central portion, said central portion being formed with a longitudinal channel therethrough, and said block being further formed solid with the exception of said channel, substantially as described.

2. A building block for hollow tiled walls comprising a central portion of constricted facial dimensions, and inner and outer portions of greater facial dimensions projecting beyond said central portion on all sides thereof and of substantially the same width therewith, said block formed with straight inclined surfaces extending between said inner and outer portions and said central portion, said central portion having a longitudinal channel extending partially between said inclined surfaces with its direction of greatest width lying between said inner and outer portions, and said block being further formed solid with the exception of said channel, substantially as described.

3. A building block for hollow tiled walls comprising a central portion of constricted facial dimensions and inner and outer portions of greater facial dimensions projecting beyond said central portion on all sides thereof, and of substantially the same width therewith, said block being formed with straight inclined surfaces extending between said inner and outer portions and said central portion, said central portion being formed with a longitudinal channel therethrough, and partially between said inclined surfaces with its direction of greatest width lying between said inner and outer portions and at right angles thereto, said inner and outer portions being formed on each surface of their sides of greatest length with parallel grooves designed to register with corresponding grooves of the adjacent blocks, and said block being further formed solid with the exception of said channel and said grooves, substantially as described.

881,426. HAY-HANDLING MECHANISM. MADS H. MADSEN, Kimballton, Iowa. Filed Apr. 18, 1907. Serial No. 369,380.



1. A hay-handling mechanism, comprising a supporting bar, means for suspending said bar from and for travel relative to a track, arms supporting said bar independent of the track, and a frame mounted for oscillation on said supporting bar.

2. In a hay-handling mechanism, a hanger adapted for travel on a track, a supporting bar pivoted to said hanger, arms on said supporting bar and adapted for engagement with supporting means independent of the track, and a frame mounted for oscillation longitudinally and transversely on said supporting bar.

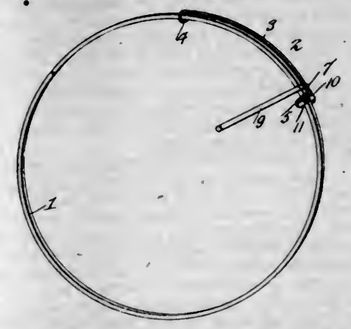
3. In a hay-handling mechanism, a hanger adapted for travel on a track, a supporting bar pivotally connected to said hanger, a cable connected to said bar and rove through said hanger, arms adjustably connected to said supporting bar and adapted for engagement with supporting means independent of the track, and a frame mounted for oscillation on said supporting bar.

4. In a hay-handling mechanism, a hanger adapted for travel on a track, a supporting bar pivotally connected to said hanger, means for oscillating said bar relative to said hanger, arms adjustably connected to said supporting bar and adapted for engagement with a cross-tie or collar-beam, hooks on said arms, and a frame mounted for oscillation on said supporting bar.

5. In a hay handling mechanism, a hanger adapted for travel on a track, a supporting bar carried by said hanger, a stem rigidly mounted on said bar, a frame mounted for lateral oscillation on said bar, and springs connecting the sides of said frame to the extremity of said stem.

[Claims 6 and 7 not printed in the Gazette.]

881,427. PLAYING-HOOP. JOSEPH G. MARSH, Manchester, N. H. Filed Apr. 3, 1907. Serial No. 366,185.



1. A device of the class described comprising a suitably shaped body, a ring at one end loosely engaging around the hoop, hoop engaging means at the opposite end, and a handle adjacent the said means for engaging and disengaging the latter, said means consisting of right angularly disposed rollers.

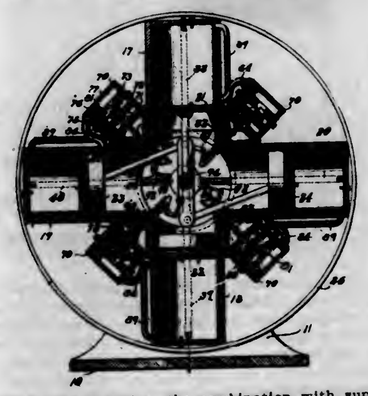
2. A device of the class described comprising a suitably shaped body, a loop at one end thereof loosely engaging the hoop and serving to permanently connect the body to the hoop, a plurality of rotatable members arranged on said body to engage the periphery and edges of the hoop, and a handle attached to the body.

3. A device of the class described comprising an arcuate structure having a ring at one end loosely engaging the hoop, and having a pair of parallel rollers at the opposite end for engaging the edges of the hoop, a third roller at said opposite end for engaging the periphery of the hoop, and a handle attached to the structure.

4. A device of the class described comprising a single piece wire structure having one end bent into a ring and the opposite end forked and terminating in a shank, a handle on the shank, and a plurality of rollers mounted on the forked portion.

5. A device of the class described comprising a wire bent into connected and U-shaped bifurcations, a handle secured to the wire, parallel rollers on the U-shaped bifurcations and a third roller arranged on the connecting portion between the bifurcations and disposed at right angles to the said pair of rollers.

881,428. ENGINE. CHARLES V. MARTIN, Charleston, W. Va. Filed Feb. 26, 1906. Serial No. 303,036.

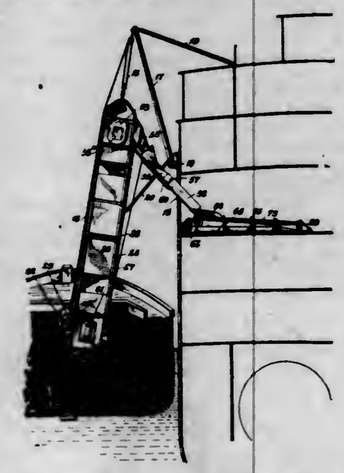


1. In a rotary engine, the combination with supports, of a fixed crank shaft carried thereby, a casing having ported inlet and exhaust hubs revolubly mounted on the

shaft, an annular partition dividing the interior of the casing into a central crank chamber, and an annular compartment, cylinders supported by the casing and having their inner ends opening into the crank chamber, exhaust valve mechanism arranged in the annular compartment between the cylinders, there being ports or passages through which communication is established between the cylinders and the inlet hub and exhaust valve mechanism, respectively, exhaust valve stems extending into the crank chamber, and means arranged within such crank chamber for engaging and actuating said stems.

2. In an internal combustion engine, a support, a stationary crank shaft carried thereby a revoluble casing mounted on the crank shaft and having ported inlet and exhaust hubs, a stationary inlet chamber surrounding the inlet hub, a governor controlled valve at the entrance port of the inlet chamber, independent suction inlet valves controlling the passage of the explosive charges from the inlet chamber to the ports of the inlet hub, a plurality of cylinders carried by the casing, pistons arranged in the cylinders and connected to the crank shaft, there being ports or passages leading from the inlet hub to the outer ends of said cylinders, exhaust valves arranged in the casing at points between the cylinders, exhaust valve stems extending radially from the valves toward the crank shaft, and means on the crank shaft controlling the operation of said exhaust valves.

881,429. APPARATUS FOR COALING VESSELS. LOUIS A. DE MAYO, New York, N. Y., assignor to De Mayo Coaling Company, New York, N. Y., a Corporation of New Jersey. Filed Jan. 7, 1907. Serial No. 351,109.



1. In an apparatus for coaling vessels, the combination of an elevator, a boom adapted to be secured to a vessel a tackle adapted to be secured to the boom and to the top of the elevator, and a winding mechanism mounted on the elevator and connected with the fall of the tackle.

2. In an apparatus for coaling vessels, the combination of an elevator, means secured to the top thereof for adjustably sustaining the same, and an operating device mounted on the elevator and connected with said means for adjustably sustaining it.

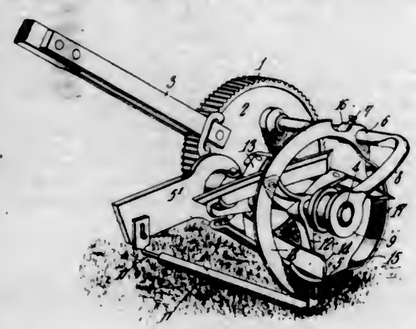
3. In an apparatus for coaling vessels, the combination of an elevator, a tackle by which said elevator is suspended, a winding drum mounted on the elevator and engaging the fall of the tackle, a motor also mounted on the elevator and gearing for driving the drum from the motor at will.

4. In an apparatus for coaling vessels, the combination of a boom stepped on the hull, a tackle connected to the free end of the boom to hold it in position, an elevator, a tackle sustaining the elevator from the boom and means on the elevator for operating the tackle.

5. In an apparatus for coaling vessels, the combination of a boom stepped on the hull, a tackle connected to the free end of the boom to hold it in position, an elevator, a tackle sustaining the elevator from the boom and a winding mechanism mounted on the elevator and engaging the fall of the tackle.

[Claims 6 to 19 not printed in the Gazette.]

881,430. LAWN-MOWER. WILLIAM N. MERRITT, Nocona, Tex. Filed Apr. 30, 1907. Serial No. 371,068.



1. A single-wheel lawn mower, means for propelling the same, blades journaled for rotation thereon, a fixed blade carried thereby, an arm located in advance of the rotating blades and having a branch provided with a journal-bearing which receives the shaft of the rotating blades and a brace carried by said arm and surrounding the rotating blades.

2. A single-wheel lawn mower comprising a ground wheel, means for propelling the same, rotating blades carried by the same, a fixed blade carried by the same, an arm located in advance of the rotating blades and having a branch provided with a journal bearing which receives the shaft of the rotating blades, a brace adjustably mounted upon said arm and surrounding the rotating blades.

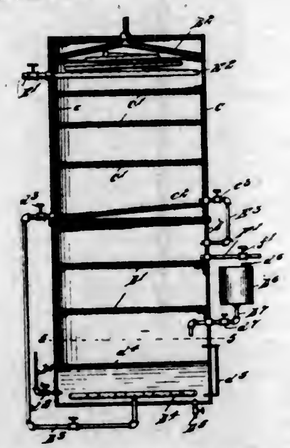
3. A single-wheel lawn mower comprising a ground wheel, blades journaled for rotation thereon, a fixed blade carried thereby, an arm located in advance of the rotating blades and having a branch provided with a journal bearing which receives the shaft of the rotating blades, a circular runner mounted upon the arm and being twisted so that its opposite sides lie in different planes.

881,431. APPARATUS FOR CARBURETING AIR. CHARLES L. MEYER and NICHOLAS P. HICKEY, Detroit, Mich., assignors to The Commercial Gas Company, Limited, Windsor, Canada, a Corporation of Canada. Filed Aug. 13, 1906. Serial No. 330,306.

1. In an apparatus of the kind described, a carbureter casing, an inlet for air provided with a broad rose at its end, a pipe for the induction of liquid fuel, said pipe being shaped into spirals within said casing, the spirals being formed into surfaces parallel with the foraminous surface of the rose and adjacent thereto, and provided with apertures opening toward said rose.

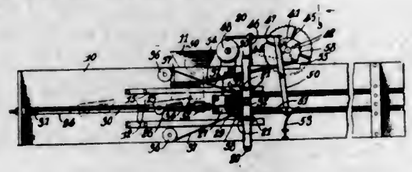
2. In an apparatus of the kind described, a carbureter casing, an induction pipe for air having a rose at its end having its foraminous surface in the shape of a cone, an induction pipe for liquid fuel formed into spirals within the casing, said spirals being arranged adjacent to the foraminous surface of the rose and arranged in a surface parallel to such surface, for the purpose described.

3. In a carbureter, the combination of means for delivering air in one direction in small streams extending over a considerable area, and an apparatus for delivering carbureting fluid in the opposite direction to and against the incoming air in a finely divided condition and over an approximately equal area to that over which the incoming air is distributed, said areas being located adjacent, and opposite, to each other.



4. In a carbureter, the combination of a delivery passage for air, a rose at the end of said delivery passage, and means adapted to deliver carbureting fluid in a divided condition in the opposite direction to that of the air flowing from said rose and over an area approximately equal to that of said rose, said rose and means for delivering the fluid being located adjacent, and opposite, to each other.

881,432. BINDING ATTACHMENT FOR BALING-PRESSES. GEORGE A. MILLER, Tamaroa, Ill. Filed May 4, 1907. Serial No. 371,863.



1. The combination in a baling-press, of a plunger, a wire carrier working transversely through the compression-chamber behind the charge, means operated by the plunger to actuate the carrier, and a timing-mechanism for said means operated initially by the bale and finally by the plunger.

2. The combination in a baling-press, of a plunger, a wire carrier working transversely through the compression-chamber, a cable connected to the carrier, a catch carried by the plunger and engageable with the cable to actuate the wire carrier, and a timing-mechanism for said catch operated by the bale and the plunger.

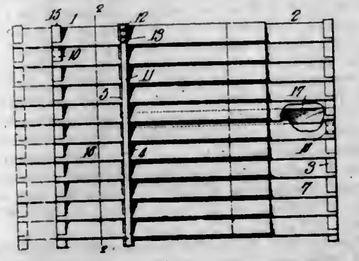
3. The combination in a baling-press, of a plunger, a wire carrier working transversely through the compression-chamber behind the charge, a cable connected to the wire carrier, a button on the cable, a catch carried by the plunger and engageable over the button, a block normally in contact with the button to prevent engagement of the catch, and timed means for withdrawing the block from the button.

4. The combination in a baling-press, of a plunger, a wire carrier working transversely through the compression-chamber behind the charge, a cable connected to the wire carrier, a button on the cable, a catch carried by the plunger and engageable over the button, a block normally in contact with the button to prevent engagement of the catch, a timing-wheel actuated by the bale and plunger, and a connection between said wheel and the block for withdrawing the same from the button.

5. The combination in a baling-press, of a plunger, a wire carrier working transversely through the compression-chamber behind the charge, a cable connected to the wire carrier, a button on the cable, a catch carried by the plunger and engageable over the button, a block normally in contact with the button to prevent engagement of the catch, a timing-wheel actuated by the bale and plunger, a projecting-pin carried by said wheel, and a lever connected at one end to the block and arranged at the other end in the path of the aforesaid pin.

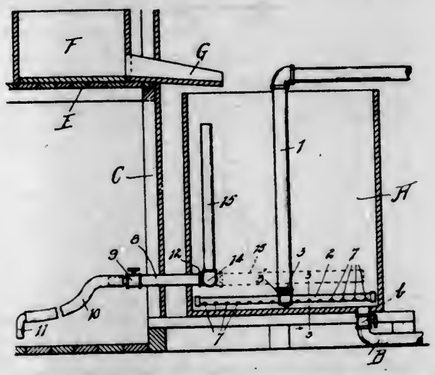
[Claims 6 to 8 not printed in the Gazette.]

881,433. WINDOW-BLIND. GEORGE P. MITCHELL, Galva, Ill. Filed Sept. 11, 1907. Serial No. 392,349.



A blind comprising two sections adapted for sliding movements relatively to each other, each section comprising an end stile having obliquely disposed seats open at one end and one of the sections having a guide provided with obliquely disposed similarly constructed seats, slats secured in the seats of the stiles and overlapping and projecting through the seats of the guide, means for holding the slats in the latter seats, and a brace connecting one of the stiles and the guide.

881,434. APPARATUS FOR BOILING LIME AND SULFUR. FRANK O. MOBURG, Omaha, Nebr. Filed July 29, 1907. Serial No. 386,106.



1. An apparatus of the type set forth, comprising a vat, a steam supply pipe, a transverse feed pipe connected to the lower end of said supply pipe, said feed pipe decreasing in diameter towards its ends, being of greatest diameter at its point of connection with the supply pipe and of least diameter at its ends, and a series of cross pipes perforated on their under sides and having their ends terminating at points adjacent the inner circumference of the vat.

2. In an apparatus of the type set forth, a vat, a steam supply pipe leading into said vat, a transverse feed pipe decreasing in diameter as its ends are approached, secured to the said supply pipe at a point adjacent the bottom of the vat, and a multiplicity of cross pipes having closed ends and perforations on their under sides secured to said feed pipe on opposite sides thereof, and at regular intervals throughout the length of the feed pipe.

3. An apparatus of the type set forth, comprising a vat, a steam supply pipe leading thereinto, a transverse feed pipe connected to the steam pipe and composed of a series of sections which decrease in diameter towards the ends of the said feed pipe, couplings for connecting said sections, a multiplicity of cross pipes arranged on opposite sides of the feed pipe throughout the length of the feed pipe connected to said couplings and each formed with pairs of apertures throughout their length, the apertures of each pair being disposed so as to discharge the steam therefrom in paths at right angles to one another, a horizontal pipe leading into the vat adjacent its bottom, and a pipe connected to the inner end of said horizontal pipe and having movement in a vertical rotary plane.

4. An apparatus of the type set forth, comprising a vat, a mixing tank located at a point above said vat and having a discharge spout which extends over said tank and discharges thereinto, means for feeding steam against the bottom of the tank at spaced points throughout the area thereof, and means to enable the vat contents to be removed by taking the same from the level thereof, said last named means being movable to enable the same to continually be lowered as the level of the vat contents are lowered.

5. An apparatus for boiling lime and sulfur composed of a vat, a main steam supply pipe for said vat, a series of perforated pipes extending throughout the area, of the bottom of the vat, and a pipe having tapering portions connecting said series of pipes with said main steam supply pipe whereby the steam egressing from said perforated pipes will be discharged at the same pressure throughout the length of each.

[Claims 6 and 7 not printed in the Gazette.]

881,435. GARMENT-FASTENER. FARKAS MOSKOVITS, BÉLA BERKOVITS, and JENÖ GÜNSBERGER, Nagyvárad, Austria-Hungary. Filed Mar. 27, 1907. Serial No. 364,890.



1. A safety chain for securing wearing apparel comprising a chain having two branches at one end, a lock on one of said branches and a pin on the other adapted to enter said lock and fastening means at the other end of said chain.

2. A safety chain having locking means at one end and means for securing it to a coat at the other end, said securing means comprising a plate, rivets for securing the plate to the coat and a chain secured to the rivets and connected to the main chain.

881,436. ANIMAL-POKE. CHARLES H. MCCRACKEN, Perry, Okla. Filed Oct. 4, 1907. Serial No. 395,896.



1. An animal poke, comprising a chain having links formed from pieces of wire bent at their centers to form eyes and arms, said arms being bent intermediate their ends to provide eyes and upwardly and outwardly projecting fingers and connections between the eyes of the links, substantially as set forth.

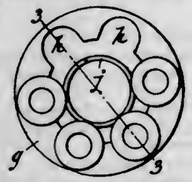
2. An animal poke, comprising a chain having links formed from pieces of wire bent at their centers to form eyes and arms, said arms being intermediate their ends to provide eyes and upwardly and outwardly projecting fingers and connecting links each engaged with the eye at one end of the first mentioned links, said connecting links having arms provided with eyes to engage the eyes at the ends of the arms of the first mentioned links, substantially as described.

3. An animal poke, comprising a chain having links each provided with diverging arms having an eye at its united upper end and eyes at its diverging lower ends, the arms of said links being also provided with outwardly and upwardly projecting fingers, and connecting links of substantially U-form, each of the latter being engaged with the eye at the upper end of the first mentioned links and having eyes at the ends of its branches engaged with the eyes at the lower end of one of the first mentioned links.

4. An animal poke comprising a chain composed of links having fingers, other links uniting the first mentioned ones and means for attaching the chain to the head or neca of an animal.

5. An animal poke comprising a chain having links provided with diverging arms having an eye at their united upper ends and eyes at their diverging lower ends, the arms of said links being also provided with outwardly and upwardly inclined fingers, connecting links of U-form, each of the latter being engaged with the eye at the upper end of one of the first-mentioned links and having eyes at the ends of its branches engaged with the eyes at the lower ends of one of the first mentioned links, and means for attaching the chain to the head or neck of an animal.

881,437. LOADING-PACK. ELMER E. NEAL, Springfield, Mass., assignor of one-half to Joseph H. Wesson, Springfield, Mass. Filed June 3, 1907. Serial No. 376,968.



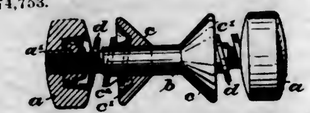
1. A loading pack for revolving firearms comprising an annular plate having recesses in the inner border thereof to receive grooved cartridge shells, and a ring sprung into the grooves in the shells to hold the latter in loose interlocking engagement with said plate and ring.

2. A loading-pack for revolving firearms consisting of an annular plate having recesses in the inner border thereof, and an expansible element located in the plane of said plate, the cartridges having an annular groove near the heads thereof to engage both the said plate and the said expansible element whereby the cartridges are maintained loosely in pack form in said plate.

3. A loading pack for revolving firearms consisting of a perforated plate provided with a series of recesses in the inner border of the perforation to receive a circumferential groove formed on the cartridges, an expansible element engaging the grooves in the cartridges and located in the plane of the plate, the grooves being substantially rectangular in cross-section, whereby the cartridges are prevented from longitudinal displacement.

4. A loading pack for revolving firearms consisting of a perforated plate provided with a series of recesses in the inner border of the perforation to receive a circumferential groove formed on the cartridges, an expansible element engaging the groove in the cartridges and located in the plane of the plate, the grooves being substantially rectangular in cross-section, and in width less than the thickness of the plate and expansible element, whereby the cartridges are permitted to assume various inclined positions and are also prevented from longitudinal displacement from the plate, as described.

881,438. DUMB-BELL FOR PHYSICAL EXERCISES. GEORG NOHL, Manchester, England, assignor to Hugo Schultz, Plauen, Germany. Filed May 20, 1907. Serial No. 374,753.



1. In a dumb-bell for physical culture exercises, the combination of two converging truncated cones slidably mounted upon the handle, and resilient means mounted thereon for resisting their outward displacement and for normally maintaining them near the middle thereof, substantially as described.

2. In a dumb-bell for physical culture exercices the combination of two converging truncated cones slidably mounted upon the handle, with means for limiting the inward movement of the cones, and resilient means mounted on the handle for resisting their outward displacement, and for normally maintaining them near the middle thereof.

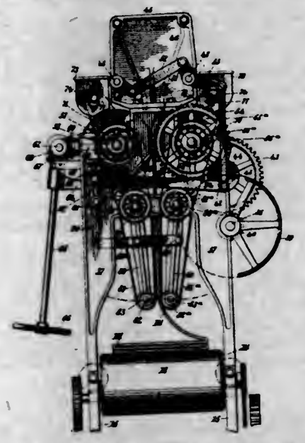
3. In a dumb-bell for physical culture exercises the combination of two converging truncated cones slidably mounted upon the handle, with means for limiting their inward movement, resilient means mounted on the handle for resisting their outward movement and for normally maintaining them near the middle thereof, and means for regulating the resistance.

4. A dumb-bell for physical culture exercises, having the weights adapted to slide on the handle, the said weights being provided with conical faces at their inner ends, means for limiting the inward movement of the weights, resilient means for resisting their outward displacement and for normally maintaining them near the middle of the handle and means for regulating the resistance, substantially as described.

881,439. DOUGH-SHEETING MACHINE. FRANK M. PETERS, Chicago, Ill. Filed Oct. 8, 1906. Serial No. 337,968.

1. In a machine of the character described the combination with a source of dough supply, means for working said dough into a continuous sheet, and additional means adapted to act upon said continuous dough sheet transversely of its length, substantially as specified.

2. In a machine of the character described, the combination with a source of dough supply, sheeting means for working said dough into a continuous sheet, and sheeting means adapted to act upon said continuous sheet transversely to the direction of the grain imparted thereto by said first named sheeting means, substantially as specified.



3. In a machine of the character described, the combination with means for working the dough into a continuous elongated mass, of sheeting means for working said elongated mass into a continuous sheet, and sheeting means adapted to act upon said continuous dough sheet transversely thereof, substantially as specified.

4. In a machine of the character described, the combination with a source of dough supply, of two sets of sheeting means adapted to work said dough into a continuous dough sheet, and means for lapping said dough sheet transversely of its length intermediate said two sets of sheeting means, substantially as specified.

5. In a machine of the character described, the combination with a source of dough supply, of two sets of sheeting means adapted to act successively upon said dough to work the same into a continuous dough sheet, and means for lapping said dough sheet transversely of its length intermediate said first and second sheeting means, substantially as specified.

[Claims 6 to 20 not printed in the Gazette.]

881,440. WATCH. WILSON E. PORTER, New Haven, Conn., assignor to New Haven Clock Co., New Haven, Conn., a Corporation. Filed June 17, 1907. Serial No. 379,340.



1. In a watch, the combination with a center pinion having a longitudinal passage or bore throughout its length and having its rear end split for the production of spring fingers; of a removable center-shaft adapted to be inserted into one end of said pinion the spring fingers of which grip the rear end of the said shaft and thus frictionally couple the said shaft and pinion; and a flat sheet-metal cannon pinion driven upon the projecting forward end of the said shaft.

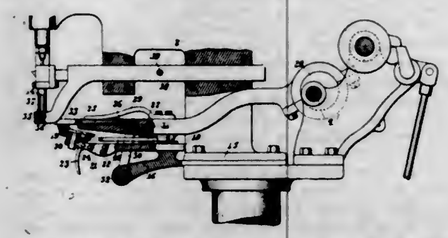
2. In a watch, the combination with a center pinion having a longitudinal passage or bore extending throughout its length, and formed at its rear end with integral spring fingers constituting the rear terminal of the said passage; of a removable center-shaft adapted to be inserted into one end of the said pinion the spring fingers of

which grip the rear end of the said shaft when the same is in its home position and thus frictionally couple the shaft and pinion; and a flat sheet-metal cannon pinion driven upon the projecting forward end of the said shaft which is held against longitudinal movement by the spring fingers of the pinion.

3. In a watch, the combination with a center pinion having a longitudinal passage or bore extending throughout its length, and formed at its rear end with integral spring fingers constituting the rear terminal of the said passage; of a removable center shaft adapted to be inserted into one end of the said pinion and formed at its rear end with a taper for engagement by the said spring fingers whereby the shaft and pinion are frictionally coupled together; and a flat sheet-metal cannon pinion driven upon the forward end of the said shaft.

4. In a watch, the combination with a center pinion traversed throughout its length by a longitudinal passage and formed at its rear end with integral spring fingers constituting the rear terminal of the said passage; of a removable center-shaft adapted to be inserted into the rear end of the said pinion and formed at its rear end with a head and with a taper for co-action with the said spring fingers which couple the said shaft and pinion; and flat sheet-metal cannon pinion driven upon the projecting forward end of the said shaft.

881,441. HEEL-SEAT LASTER. CHARLES F. PYM, Essex, Ontario, Canada, assignor of one-half to Krentler Brothers Company, Detroit, Mich., a Corporation of Michigan. Filed Aug. 1, 1906. Serial No. 328,689.



1. A machine of the kind described, comprising a tack driver and leather crimping and wiping mechanism and operating mechanisms constructed and arranged to rapidly reciprocate the crimping and wiping mechanism a plurality of times to one tack driving movement, combined with means located at the lower end of the tack driver adjacent said crimping mechanism for spanning the gap between the two and preventing the leather from being pinched against the tack driver and for facilitating the smooth movement of the work.

2. A machine of the kind described, comprising tack-driving mechanism including a nozzle, a work rest to engage the veritical side of the shoe and limit the inward movement of the shoe toward the machine, a vertically unyielding wiper immediately and always beneath said nozzle and in position to engage the bottom of the shoe continuously as long as the shoe is in operative position against said work rest, and means to move said wiper in sliding wiping engagement over the surface of the shoe-upper when so held, said wiper having a race-way arranged to aline with the race-way of the nozzle when moved into tack-driving position, and being movable out of alinement with said race-way at other times.

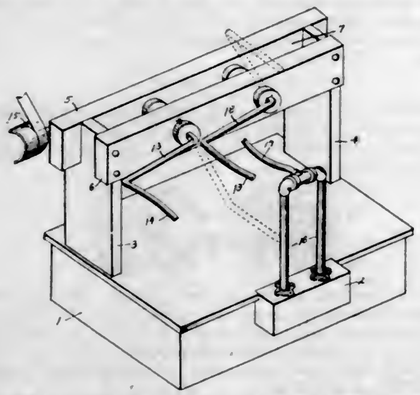
3. A machine of the kind described, comprising tack driving mechanism including a nozzle, a workrest to position the shoe, a wiper immediately beneath said nozzle and means to move said wiper in sliding engagement with the shoe-upper when the latter is held against said work-rest, said wiper having a race-way arranged to aline with the race-way of the nozzle when moved into tack driving position, and being movable out of alinement with said race-way at other times, and means operating on the leather separately from said wiper a plurality of times to one movement of the wiper to position the leather for being tacked.

4. A machine of the kind described, comprising a main wiper, means for rapidly reciprocating the same, a tack driver, means for intermittingly operating said tack driver, a combined auxiliary nozzle and supplemental wiper, and means for intermittingly operating the latter in unison with said tack driver.

5. A machine of the kind described, comprising an intermittingly operated tack driver containing a nozzle, a horizontally extending, movable supporting member beneath the lower end of the nozzle of said tack driver for holding the crimped leather in position for tacking, and a rapidly moving wiper operating substantially in the same plane as said supporting member for rapidly pushing forward and crimping the leather to be held by said supporting member.

[Claims 6 to 13 not printed in the Gazette.]

881,442. CANDY-PULLING MACHINE. EDWARD M. ROBINSON and JACOB H. DEITER, Lancaster, Pa., assignors, by mesne assignments, to Herbert L. Hildreth, Boston, Mass. Filed July 12, 1902. Serial No. 115,252.



1. The combination, in a device of the character described, of a plurality of revoluble arms, one of said arms revolving in one direction and another of said arms revolving in another direction, and stationary means for creating tension in matter carried by said arms.

2. The combination in a device of the character described, of an arm revoluble in one direction, an arm revoluble in another direction, and located between said arms means for creating tension in matter carried thereby.

3. The combination, in a device of the character described, of an arm revoluble in one directfon, an arm revoluble in another direction, and located midway between said arms means for creating tension in matter carried therefy.

4. The combinatiou, in a device of the character described, of an arm revoluble in one direction, an arm revoluble in another direction, and located midway between said arms stationary means for creating tension in matter carried thereby.

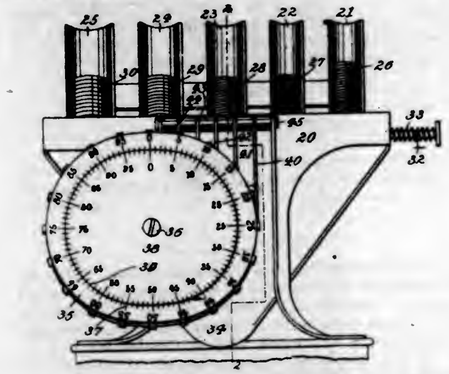
5. The combination, in a device of the character described, of an arm revoluble in one direction, an arm revoluble in another direction, and located opposite and between said arms means for creating tension in matter carried thereby.

[Claims 6 and 7 not printed in the Gazette.]

881,443. CHANGE-MAKING MACHINE. IRVIN ROSENFELD, New York, N. Y. Filed Oct. 31, 1907. Serial No. 400,053.

1. In a device of the character described, a rotatable disk, a series of coin-levers adapted to operatively engage

the same, first coin supporting means connected to the levers, and a slide provided with second coin supporting means, substantially as specified.



2. In a device of the character described, a rotatable disk having a series of concentrically arranged recesses, a series of coin levers having stepped feet adapted to engage said recesses, and coin-controlled means for tilting said levers, substantially as specified.

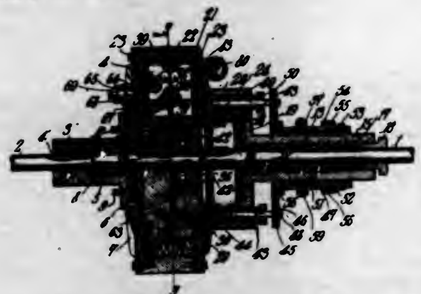
3. In a device of the character described, a series of coin magazines, levers having first coin supporting means below said magazines, a disk having a series of recesses adapted to be engaged by said levers, and a slide having second coin supporting means, substantially as specified.

4. In a device of the character described, a series of coin magazines, levers having first coin supporting means below said magazines, stepped feet on the levers, a disk having a series of recesses adapted to be engaged by said feet, and a slide having second coin supporting means, substantially as specified.

5. In a device of the character described, a series of coin magazines, levers having slotted plates beneath said magazines, means for locking and unlocking said levers, and a slide having projections that engage the slotted plates, substantially as specified.

[Claims 6 to 8 not printed in the Gazette.]

881,444. POWER-TRANSMISSION DEVICE. CARL A. SCHLACHTER, Rockwell City, Iowa. Filed June 24, 1907. Serial No. 380,550.



1. A power transmission device comprising a drive member, a vane drum fast thereon, radial seats formed in the drum, vanes in said seats, springs housed in said seats and tending to force the vanes outwardly, and connections between the vanes, and a common actuating member for said connections.

2. A power transmission device comprising a drive member, a vane drum fast thereon, radial seats formed in said drum, vanes in said seats, springs housed in said seats and acting on the vanes to drive them outwardly, and flexible connections fast to the vanes and passing through the seats, and an actuating member for the flexible connections common to all of them.

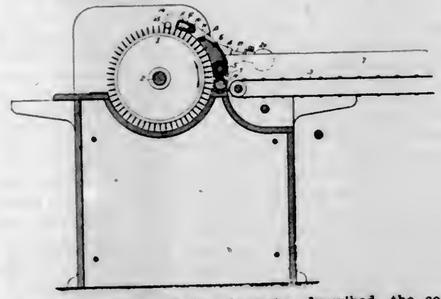
3. A power transmission device comprising a drive shaft, a driven shaft, a fluid-container on the driven shaft, a vane carrier on the drive shaft, radially-movable vanes on said carrier, springs tending to force the vanes radially outward, flexible connections engaging said vanes to move them radially inward, means for diverting the course of the flexible connections to a direction parallel to the drive shaft, and a common actuating means for all the flexible connections movable in the direction of the length of the drive shaft.

4. A power transmission device comprising a drive shaft, a driven shaft, a fluid-container carried by said driven shaft, radially-movable vanes carried upon the drive shaft, and adjusting means movable laterally into engagement with the sides of the vanes for taking up side wear of said vanes.

5. A power transmission device comprising a drive shaft, a driven shaft, a fluid-container carried by said driven shaft, radially-movable vanes carried upon the drive shaft, and adjusting means for taking up side wear of the vanes, comprising an annulus provided with exterior screw-threads engaging other screw-threads on the fluid-container and provided with gear teeth on its inner periphery, a pinion, and means for operating the same, said pinion engaging the gear teeth on the annulus for turning it to move against the corresponding edges of the vanes.

[Claims 6 to 8 not printed in the Gazette.]

881,445. FIBER-CLEANING MACHINE. CHARLES SCHOFIELD, Philadelphia, Pa. Filed Sept. 3, 1907. Serial No. 391,143.



1. In a machine of the character described, the combination of a toothed rotating drum, feed rolls, and a retainer which is adjacent to the points of the drum teeth, partakes of the rising and falling movements of the upper feed roll and is combined with means for maintaining it in proper relation to the teeth of the drum during such movements.

2. In a machine of the character described, the combination of a toothed rotating drum, feed rolls, a retainer which is adjacent to the points of the drum teeth and partakes of the rising and falling movements of the upper feed roll, and a slot-and-pin guide for maintaining said retainer in proper relation to the teeth of the drum during such movements.

3. In a machine of the character described, the combination of a toothed rotating drum, feed rolls, a retainer which is adjacent to the points of the drum teeth and partakes of the rising and falling movements of the upper feed roll, and means adjustable from and towards the teeth of the drum, for maintaining the retainer in proper relation to said teeth during its rising and falling movements.

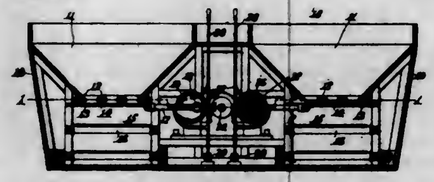
4. In a machine of the character described, the combination of a toothed rotating drum, feed rolls, a retainer which is adjacent to the points of the drum teeth and partakes of the rising and falling movements of the upper feed roll, a slot-and-pin guide for maintaining said re-

tainer in proper relation to the teeth of the drum during such movements and means for adjusting said guide from and towards the points of the teeth.

5. In a machine of the character described, the combination of a toothed rotating drum, feed rolls, a retainer which is adjacent to the points of the drum teeth and partakes of the rising and falling movements of the upper feed roll, a projection on said retainer, and a pivoted and adjustable arm having a slot for the reception of said projection.

[Claims 6 and 7 not printed in the Gazette.]

881,446. APPARATUS FOR UNLOADING VESSELS. AARON SCHWARTZ, Boston, Mass., assignor to Automatic Rapid Unloading Company, Boston, Mass., a Corporation of Massachusetts. Filed July 27, 1907. Serial No. 385,786.



1. In a movable carrier for sand, coal, and similar material, the combination with a belt conveyer; of a hopper located with its discharge outlet above said conveyer; a slide adapted to open and close said outlet and provided with openings therein having inclined walls; and means for reciprocating said slide.

2. In a movable carrier for sand, coal, and similar material, the combination with a belt conveyer; of a hopper located with its discharge outlet above said conveyer; a slide provided with openings therein of greater width at the bottom than the top and adapted to open and close said outlet; and means for reciprocating said slide.

3. In a movable carrier for sand, coal, and similar material, the combination with a belt conveyer; of a hopper located with its discharge outlet above said conveyer; two slotted plates at said discharge outlet one fixed and the other slidable, the walls of the slots therein being so inclined that the material will be cut through by the reciprocation of said slidable plate to effect a delivery; and means for reciprocating said slide.

4. In a movable carrier for sand, coal, and similar material, the combination with a belt conveyer; of a hopper located with its discharge outlet above said conveyer; a slide provided with openings therein adapted to open and close said outlet; means for reciprocating said slide; and means for effecting a closing of said discharge outlet upon the stopping of said reciprocating slide.

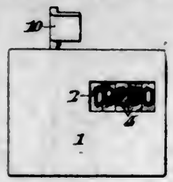
5. In a movable carrier for sand, coal, and similar material, the combination with a belt conveyer; of a hopper located with its discharge outlet above said conveyer; a reciprocating device for opening and closing said outlet; means for causing the reciprocation of said device; and mechanism for insuring the stoppage of said reciprocating device in closed position.

[Claims 6 to 10 not printed in the Gazette.]

881,447. APPARATUS FOR REGISTERING TELEPHONIC CALLS. CARL W. SHARER, Philadelphia, Pa., assignor to Keystone Telephone Company, Philadelphia, Pa., a Corporation of New Jersey. Filed Apr. 26, 1907. Serial No. 370,354.

1. In apparatus for registering telephonic calls, the combination with a numerical registering device; of a handle for operating said device arranged to move in two directions; a lost-motion connection between said handle and said device; and means for producing a signal to indicate the operation of said device at each movement of said handle in either direction.

2. In apparatus for registering telephonic calls, the combination with a numerical registering device; of a handle for operating said device arranged to move in two directions; a lost-motion connection between said handle and said device; means for producing an audible signal by the operation of said handle in either direction; and means for transmitting said signal to the operator to indicate that said handle has been operated.



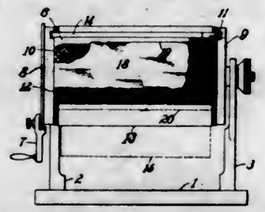
3. In apparatus for registering telephonic calls, the combination with a numerical registering device at the subscriber's station; of a handle for operating said device arranged to move in two directions; means whereby the subscriber's instrument may be shunted upon operation of said handle in either direction, to indicate that said handle has been operated.

4. In apparatus for registering telephonic calls, the combination with a numerical registering device at the subscriber's station; of means for operating said device and producing a pair of signals, one electrical and one mechanical, to indicate that said means has been operated.

5. In apparatus for registering telephonic calls the combination with a numerical registering device at the subscriber's station; of means for operating said device; a branch circuit; a spring in the branch circuit; and means adapted to come in contact with said spring and snap past the end thereof, thereby producing an electrical and a mechanical signal which is transmitted to the operator.

[Claims 6 and 7 not printed in the Gazette.]

881,448. STENCILING-MACHINE. STEPHEN T. SMITH, Jr., Stamford, Conn., assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of New Jersey. Filed Dec. 13, 1907. Serial No. 406,255.



1. In a stenciling machine provided with a perforated drum, the combination with an ink-pad and a stencil sheet wrapped around said drum, of a sheet of impermeable material interposed between the drum and ink-pad to cover such perforations in the drum as are out of use.

2. In a stenciling machine provided with a perforated drum, the combination with an ink-pad and a stencil sheet wrapped around said drum, of a flexible sheet of celluloid wrapped around the drum within the ink-pad, and overlapping the lower end of the stencil sheet and covering the remaining perforations in the drum.

3. In a stenciling machine, the combination with a perforated drum, of an ink-pad wrapped around said drum, a stencil sheet wrapped around the ink-pad, but only partly encircling the drum, and a sheet of impermeable material interposed between the drum and ink-pad to cover the perforated portion of the drum not inclosed by the stencil sheet.

4. In a stenciling machine provided with a perforated drum and a pressure-roller, the combination with an ink-pad wrapped around said drum, and a stencil sheet also wrapped around said drum over the ink-pad but not entirely covering the same, of an impermeable sheet interposed between the drum and such portion of the ink-pad not covered by the stencil sheet to prevent access of ink to the pressure roller.

5. In a stenciling machine provided with a perforated drum having a channel running the length thereof, the combination with an ink-pad wrapped around said drum, the ends of the pad secured in said channel below the printing surface of the drum, of a stencil sheet also wrapped around the drum over the ink-pad but only partly encircling the drum, said stencil sheet secured at one end in the channel by a clamping bar, and a sheet of impermeable material interposed between the drum and the ink-pad and extending from the channel to a point where it is overlapped by the lower end of the stencil sheet.

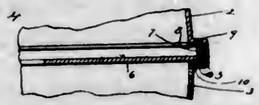
881,449. THREAD-CUTTING DEVICE. GUSTAVUS A. SMITH, Marshalltown, Iowa. Filed Jan. 25, 1907. Serial No. 354,060.



1. A thread cutting device comprising a body member having a die-recess in its inner edge and also having a cylindrical recess in said edge, a second body member hinged to the first mentioned member and having a die-recess in its inner edge and also having a cylindrical recess in said edge, a screw fixed to the first mentioned body member and extending through the cylindrical recesses and loosely through an opening in the second mentioned member and having a head at its outer end, a nut mounted on the screw, at the inner side of the head thereof, and having a recess receiving the head of the screw, and a coiled spring arranged in the cylindrical recesses of the members and surrounding the screw and serving to hold the bottom of the recess in the nut against the head of the screw.

2. A thread cutting device comprising body members pivotally connected together and having a thread-cutting die formed in their adjacent edges, a screw fixedly connected to one body member and extending loosely through the other body member and having a head at its outer end, and a nut mounted on the screw, at the inner side of the head thereof, and having a recess receiving the head of the screw; the screw, the nut and the body member adjacent to the nut being so relatively arranged that the head of the screw is contained at all times in the recess of its nut.

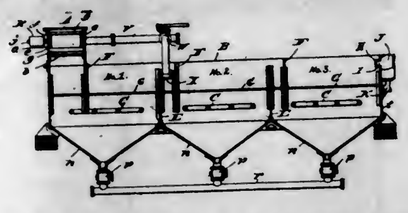
881,450. FLOAT. FREDERICK M. STEVENS, Waterbury, Conn., assignor to Scovill Manufacturing Co., Waterbury, Conn., a Corporation. Filed Aug. 23, 1907. Serial No. 389,839.



1. A float comprising two members the edge of one member having an offset seat, a ring located on said seat and formed with an annular flange, the edge of said member turned inward over said flange the edge of the other member offset to receive the edge of the first member and adapted to be turned under the seat of the said first member, substantially as described.

2. A float comprising two members the edge of one member having an offset seat, a ring located on said seat, the edge of said member turned inward over said ring, the edge of the other member offset to receive the edge of the first member and adapted to be turned under the seat of the said first member, substantially as described.

881,451. APPARATUS FOR REMOVING FOREIGN SUBSTANCES FROM LIQUIDS. MARTIN ALTOLAGUIRRE and JOAQUIN ZUBILLAGA, Vedado, Cuba. Filed Sept. 30, 1907. Serial No. 395,154.



1. In an apparatus for the purpose described, a tank comprising compartments separated by partitions that terminate in a plane below the top of the tank, walls extending from the top of the tank down in the compartments thereof and arranged in combination with walls of the compartments to form vertical spaces in communication at their lower ends with the interiors of the compartments; the outer end wall of one end compartment terminating in a plane below the top of the tank, a wall H arranged in said end compartment a slight distance from the said end wall and extending downward to a plane below the upper edge thereof, and a receptacle arranged to receive from the opening between the said walls and having a discharge pipe.

2. In an apparatus for the purpose described, a tank comprising compartments separated by partitions that terminate in a plane below the top of the tank, walls extending from the top of the tank down in the compartments thereof and arranged in combination with walls of the compartments to form vertical spaces in communication at their lower ends with the interiors of the compartments; the outer end wall of one end compartment terminating in a plane below the top of the tank, a wall H arranged in said end compartment a slight distance from the said end wall and extending downward to a plane below the upper edge thereof, a receptacle arranged to receive from the opening between the said walls and having a discharge pipe, a lower longitudinally disposed pipe arranged outside the tank and connected through valved pipes with the compartments, an upper longitudinally disposed pipe arranged outside of the tank and connected through valved pipes with the compartments, through a valved pipe with the vertical passage of the said end compartment and through a valved pipe with the receptacle which receives from said end compartment and also connected at one end through a leg with the lower longitudinal pipe, and heating worms connected together and arranged in the compartments.

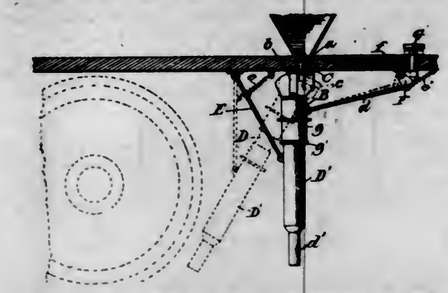
881,452. TRACK-SANDING DEVICE. EDGAR J. ANDERSON, Davenport, Iowa. Filed Aug. 14, 1907. Serial No. 388,532.

1. In a track sanding device the combination with a suitable hopper having a discharge opening therein, of a tubular extensible conveyer comprising a pivotally suspended head adapted to close the mouth of said opening when in its normal position and open the mouth thereof when moved out of its normal position.

2. In a track sanding device the combination with a suitable hopper having a discharge opening therein, of a tubular extensible conveyer comprising a pivotally suspended head having a flared mouth, adapted to close the mouth of said opening when in its normal position and open the mouth thereof when moved out of its normal position.

3. In a track sanding device the combination with a

suitable hopper having a discharge opening therein, of a tubular extensible conveyer comprising a pivotally suspended head having a valve-chamber consisting of a transverse bar, adapted to close the mouth of said opening when in its normal position and open the mouth thereof when said head is moved out of its normal position.



4. In a track sanding device the combination with a suitable hopper having a discharge pipe therein, of a tubular conveyer comprising a pivotally suspended head having a telescopic extension, said head adapted to close the mouth of said pipe when in its normal position and open the mouth of said pipe when moved out of its normal position.

5. In a track-sanding device the combination with a suitable hopper having a discharge pipe therein, of a tubular conveyer comprising a pivotally suspended head adapted to close the mouth of said pipe when in its normal position and open the mouth of said pipe when moved out of its normal position, and a tubular extension the outer telescopic portion of which is suspended at a point nearer the wheel than said head.

[Claims 6 to 15 not printed in the Gazette.]

881,453. APPARATUS FOR PROTECTING GRAIN-STACKS. JOHN P. A. ANDERSON, Madrid, Iowa. Filed Feb. 25, 1907. Serial No. 359,908.



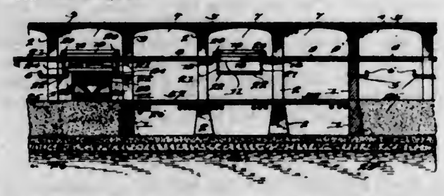
1. In an apparatus for protecting grain stacks, a flexible waterproof cover, a metal disk on the top and center of the cover, a metal point on top of the center of the disk, metal rods connected with the point and extended to the corners of the flexible cover, for the purposes stated.

2. In an apparatus for protecting grain stacks, a flexible waterproof cover, water proof strips on top of the cover, a metal disk, a metal point, metal rods connected with the metal disk, and means for detachably fastening the rods to the waterproof strips and the corners of the cover.

3. In an apparatus for protecting grain stacks, a flexible waterproof cover, water proof strips on top of the cover, a metal disk, a staple-shaped metal point on top of the center of the disk and the insulator and cover metal rods connected with the disk and point and the corners of the flexible cover and the water proof strips on top of the cover and means for detachably connecting extensions with said metal rods on top of the cover and water proof strips, for the purposes stated.

4. An apparatus for protecting grain stacks from lightning and rains, comprising a flexible waterproof cover, an insulator on top of the cover, a metal disk, a lightning rod point on the top and center of the disk, insulator and cover, lightning rods connected with said point and extended over the insulator, and means for electrically connecting the ends of the rods with the ground, to operate in the manner set forth.

881,454. TRANSFER-TRACK SYSTEM. GEORGE P. BALDWIN, Los Angeles, Cal. Filed July 16, 1907. Serial No. 384,066.



1. A transfer track system for covered filters comprising a series of parallel tracks supported beneath the cover, a transfer track running at an angle to and on a plane parallel to but above said parallel tracks, a transfer table in the path of said transfer track and an auxiliary track, said transfer table being adapted to register in turn with said transfer and auxiliary tracks.

2. A transfer track system for covered filters comprising a series of parallel incomplete tracks supported beneath the cover, a transfer track running at an angle to and on a plane parallel to but above said parallel tracks, a transfer truck adapted to run on said transfer track, rail sections carried by said transfer truck to complete said incomplete parallel tracks, a transfer table in the path of said transfer track and an auxiliary track, said transfer table being adapted to register in turn with said transfer and auxiliary tracks.

3. A transfer track system for covered filters comprising a series of parallel tracks supported beneath the cover, a transfer track running at an angle to and on a plane parallel to but above said parallel tracks, a cut-away transfer table in the path of said transfer track and an auxiliary track, the cut-away portion of said transfer table being adapted to register in turn with said transfer and said auxiliary tracks.

4. A transfer track system for covered filters comprising a series of parallel tracks supported beneath the cover, a transfer track running at right angles to and on a plane parallel to but above said parallel tracks, a transfer table in the path of said transfer track, an auxiliary track running at right angles to said transfer track and a track section on said transfer table adapted to register in turn with said transfer and auxiliary tracks.

5. A transfer track system for covered filters comprising a series of parallel incomplete tracks supported beneath the cover, a transfer track running at right angles to and on a plane parallel to but above said parallel tracks, a transfer truck adapted to run on said transfer track, rail sections carried by said transfer truck to complete said incomplete parallel tracks, a transfer table in the path of said transfer tracks, an auxiliary track at right angles to said transfer track and track sections on said transfer table adapted to register in turn with said transfer and auxiliary tracks.

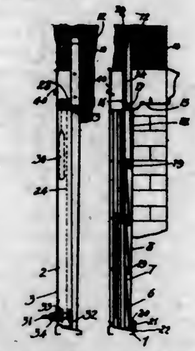
[Claims 6 to 9 not printed in the Gazette.]

881,455. PROTECTIVE SHIELD FOR WINDOWS. AUGUST BENNERSCHEIDT, San Francisco, Cal. Filed Mar. 28, 1907. Serial No. 365,191.

1. In a protective shield for windows, the combination, with shield sections, slidable one past the other, of guide ways for said sections, tapering downward from front to rear and also laterally or parallel with the window, substantially as described.

2. In a protective shield for windows, the combination of a series of shield sections, a chain for raising and lowering said sections, and a piece of fusible metal on the lowermost section to which the end of said chain is attached, substantially as described.

3. In a protective shield for windows, the combination of a series of shield sections, a hook carried at the lower edge of the lowermost section, an upper section having a part near the lower edge thereof adapted to be engaged by said hook to hold said sections in a partly collapsed position, substantially as described.

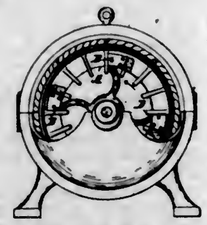


4. In a protective shield for windows, the combination of a series of shield sections, each having its upper and lower edges bent in opposite directions, away from the main body of the sections, to form a lip and groove, and lip being of an ogee form and extending inwardly and towards the shield section and then outwardly from said section to its outer edge, substantially as described.

5. In a protective shield for windows, the combination of a series of shield sections, each having its upper and lower edges bent in opposite directions, away from the main body of the sections, to form a lip and groove, and guide-ways in which the vertical edges of said sections move, said guideways tapering downward from front to rear to cause the lips and grooves of the different sections to engage each other, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

881,456. DYNAMO-ELECTRIC MACHINE. HENRY BEAU, Orange, N. J. Filed Aug. 8, 1905. Serial No. 273,249.



1. In a dynamo electric machine, the combination of a solid ring armature with a series of fans or wings attached to each end of said armature adjacent to its periphery, said fans or wings being inclined away from the direction of rotation of said armature.

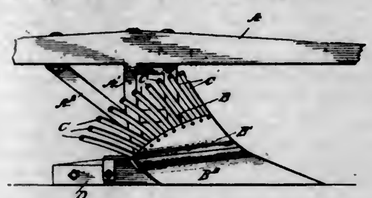
2. In a dynamo electric machine, the combination with field magnets and a solid ring armature, of fans or wings upon each end of said armature adjacent to its periphery adapted to create a current of air away from each end of said armature during the rotation thereof.

3. In a dynamo electric machine, the combination with the field magnets and a solid ring armature, of fans or wings upon each end of said armature adjacent to its periphery, said fans or wings being inclined away from the direction of rotation of said armature, whereby upon the rotation of the same a current of air is created in a direction parallel with the axis of and away from each end of said armature.

4. A clearing and cooling device for dynamo electric machines having a solid ring armature comprising a series of inclined fans or wings secured to each end of said armature adjacent to its periphery, said fans or wings designed to create a current of air away from each end of the armature.

5. A clearing and cooling device for dynamo electric machines having a solid ring armature comprising fans or wings secured to each end of said armature adjacent to its periphery, said fans or wings consisting of flat metallic plates bent at an angle away from the direction of motion of said armature.

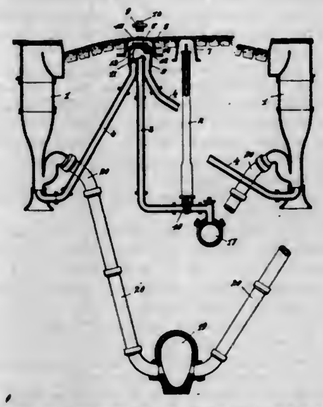
881,457. PLOW. MAGNUS O. BERGSTROM, Canton, S. D. Filed Aug. 15, 1907. Serial No. 388,646.



1. In a plow, a moldboard comprising a share, a wedge-shaped plate thereabove and secured thereto, spaced rods secured to the upper edge of said plate, said rods extending upwardly, rearwardly and curving outwardly, substantially as described.

2. In a plow, the combination with a beam, standard and landside of a moldboard, comprising a share, a plate thereabove and secured thereto, rods secured to the upper edge of the plate, said rods extending upwardly, rearwardly and curving outwardly, a frog secured to the moldboard and the landside and a cross-arm secured to the frog and landside, substantially as described.

881,458. FLUSHING DEVICE. EUGEN BINDEWALD, Kaiserslautern, Germany. Filed Dec. 31, 1907. Serial No. 408,858.



1. In flushing devices for catch basins, sewers and the like, the combination with the hydrant stand pipe, of flushing pipes open at the upper end, the pipes being in connection with the catch basins, a casing in which the open upper ends of the stand pipe and the flushing pipes are contained, and means for connecting the pipes at will with the stand pipe of the hydrant substantially as described.

2. In flushing devices for catch basins, sewers and the like, the combination with the hydrant stand pipe of pipes open at the upper end, the pipes being in connection with the sinks, while their open ends are disposed within a

casing in which the open upper ends of the stand pipe is contained, said casing having an opening therein and a stopper or cap for said opening substantially as described.

3. In flushing devices for catch basins, sewers and the like, the combination with the hydrant stand pipe of pipes open at the upper end, the pipes being in connection with the sinks, while their open ends are disposed within a casing in which the open upper ends of the stand pipe is contained, said casing having an opening at the top thereof, a stopper or cap for said opening, and means by which one or more of the pipes within the casing may be closed at their open ends; substantially as described.

4. In flushing devices for catch basins, sewers and the like, the combination with the hydrant stand pipe of pipes open at the upper end, the pipes being in connection with the sinks, while their open ends are disposed within a casing in which the open upper ends of the stand pipe is contained, said casing having an opening at the top thereof, a stopper or cap for said opening, and means by which for closing the ends of the pipes within the casing at will; substantially as described.

881,459. TYPE-WRITER. CLEMENT BOOTH, Ilion, N. Y. Filed Aug. 12, 1907. Serial No. 388,079.



1. In a typewriter in combination, a hanger, a type bar having at one end a fork pivoted to said hanger, and means carried by said type bar acting lengthwise thereof for adjusting the legs of said fork to adjust the play of said pivot.

2. In a typewriter in combination, a hanger provided with a fixed pivot-bar, a type bar having at one end a fork straddling and pivoted to said pivot-bar, and means carried by said type bar and acting lengthwise thereof for adjusting the legs of said fork to adjust the play of said pivot.

3. In a typewriter in combination, a hanger, a type bar having at one end a fork pivoted to said hanger, and means carried by said type bar for adjusting the legs of said fork to adjust the play of said pivot, said means comprising a movable cam adapted to contact with the legs of said fork to vary the distance between the same and an adjustable threaded device to move said cam at will.

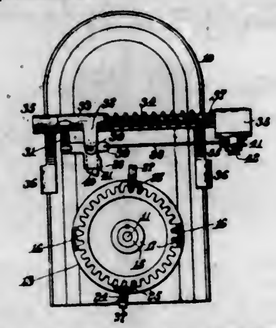
4. In a typewriter in combination, (a hanger provided with means for slightly adjusting the position of the same) and carrying a pivot-bar, a type bar formed at one end into a spring fork straddling and pivoted on said pivot-bar, a cam portion carried by and movable longitudinally of said type bar and acting against the legs of said fork to draw them together, and a threaded device also carried by said type bar to move said cam portion to vary the play of said pivot.

5. In a typewriter in combination, a hanger (provided with means for slightly adjusting the position of the same) and type bar, one of said parts having a spring fork the legs of which are pivoted to said other part, said fork being provided with a cam portion adapted to move longitudinally of said fork and contact with the legs of the same to vary the distance between said legs to adjust the play of said pivot connection, and threaded means adapted to move said cam portion at will.

[Claims 6 and 7 not printed in the Gazette.]

881,460. MAGNETO FOR SPARKING MECHANISMS. HAROLD H. BROWN, Boston, Mass. Filed Feb. 14, 1907. Serial No. 357,380.

1. An actuator for magnetos comprising a revoluble armature shaft provided with a radial arm; a member rotatably mounted on said shaft provided with stops coacting with said arm to limit the movement of said shaft and member relative to each other; a spring interposed between said arm and said member; a device for temporarily obstructing the movement of said arm on said shaft and again releasing it; and means movable in the plane of the axis of said shaft for automatically effecting the cessation of such obstructing action when said shaft has reached a predetermined speed.



2. An actuator for magnetos comprising a revoluble armature shaft provided with a radial arm; a member rotatably mounted on said shaft provided with stops coacting with said arm to limit the movement of said shaft and member relative to each other; a spring interposed between said arm and said member; a yielding device for temporarily obstructing the movement of said arm on said shaft and again releasing it; and means movable in the plane of the axis of said shaft for automatically effecting the cessation of such obstructing action when said shaft has reached a predetermined speed.

3. An actuator for magnetos comprising a revoluble armature shaft provided with a radial arm; a member rotatably mounted on said shaft provided with stops coacting with said arm to limit the movement of said shaft and member relative to each other; a spring interposed between said arm and said member; a yielding device for temporarily obstructing the movement of said arm on said shaft and again releasing it; and centrifugal mechanism revoluble with said shaft and movable in the plane of the axis of said shaft for effecting the cessation of such obstructing action when said shaft has reached a predetermined speed.

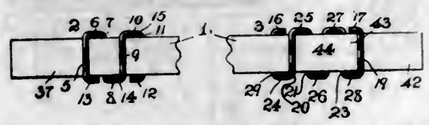
4. An actuator for magnetos comprising a revoluble armature shaft provided with a radial arm; a member rotatably mounted on said shaft provided with stops coacting with said arm to limit the movement of said shaft and member relative to each other; a spring interposed between said arm and said member; a yielding device for temporarily obstructing the movement of said arm on said shaft and again releasing it; and a weighted pivoted member revoluble with said shaft normally in the path of said obstructing device and adapted under increased speed to move in the plane of the axis of said shaft out of the path of said obstructing device.

5. An actuator for magnetos comprising a revoluble armature shaft provided with a radial arm; a member rotatably mounted on said shaft provided with stops coacting with said arm to limit the movement of said shaft and member relative to each other; a spring interposed between said arm and said member; a yielding device for temporarily obstructing the movement of said arm and again releasing it; a weighted pivoted member revoluble with said shaft normally in the path of said obstructing device and adapted under increased speed to move from said path in the plane of the axis of said shaft; and a spring to retain said weighted member in its normal position.

[Claims 6 to 13 not printed in the Gazette.]

881,461. HOLDING OR RETAINING DEVICE. BEATRICE D. CRAIG, Brooklyn, N. Y., administratrix of Serin Potter Craig, deceased. Filed Mar. 29, 1907. Serial No. 365,431.

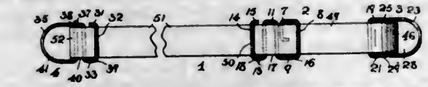
1. A fastening or retaining device for straps and the like, consisting of a frame-like structure comprised of laterally extending members, alternately connected with longitudinally extending side-members, all arranged to provide a series of loop-shaped receiving portions in which parts of a strap are adapted to be inserted and arranged in frictional engagement with the laterally extending members, and a longitudinally extending shank at one end of said frame-like structure for the insertion in an opening formed in the end-portion of the strap, whereby said end-portion of the strap may be slid upon one of said laterally extending members, substantially as and for the purposes set forth.



2. A fastening or retaining device for straps and the like, consisting of a frame-like structure comprised of laterally extending members, alternately connected with longitudinally extending side-members, all arranged to provide a series of loop-shaped receiving portions in which parts of a strap are adapted to be inserted and arranged in frictional engagement with the laterally extending members, and a longitudinally extending shank at each end of said frame-like structure for the insertion of one of said shanks in an opening formed in the end-portion of the strap, whereby said end-portion of the strap may be slid upon one of said laterally extending members, substantially as and for the purposes set forth.

3. A fastening or retaining device for straps and the like, consisting of a frame-like structure made of wire, said structure comprising a pair of end-members, a series of intermediately arranged and laterally extending members, a series of longitudinally extending side-members, and an inwardly extending shank at the free end of each side-member, substantially as and for the purposes set forth.

881,462. HOLDING OR RETAINING DEVICE. BEATRICE D. CRAIG, Brooklyn, N. Y., administratrix of Serin Potter Craig, deceased. Filed Mar. 29, 1907. Serial No. 365,432.



1. A fastening or retaining device for straps and the like, consisting of a frame-like body made of wire, said body comprising a pair of end-members, and a pair of center-members, and side pieces connecting said center-members with the respective end-members, and one of said side-members being formed with a laterally extending member provided with a longitudinally extending shank over which the perforated end-portion of the strap is to be arranged, substantially as and for the purposes set forth.

2. A fastening or retaining device for straps and the like, consisting of a frame-like body made of wire, said body comprising a pair of end-members, and a pair of center-members, a connecting side-member between said center-members, and a connecting side-member between each center-member and each end member, all arranged to provide a series of loop-shaped receiving portions in which parts of a strap are adapted to be inserted and arranged in frictional engagement with said center-members and the end-members, substantially as and for the purposes set forth.

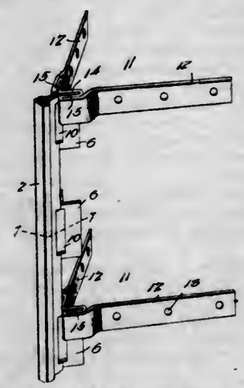
3. A fastening or retaining device for straps and the like, consisting of a frame-like body made of wire, said body comprising a pair of end-members, and a pair of center-members, a connecting side-member between said center-members, and a connecting side-member between each center-member and each end-member, all arranged to provide a series of loop-shaped receiving portions in which parts of a strap are adapted to be inserted and arranged in frictional engagement with said center-members and the end-members, and one of said side-members being formed with a laterally extending member provided with a longitudinally extending shank over which the perforated end portion of the strap is to be arranged, substantially as and for the purposes set forth.

4. A fastening or retaining device for straps and the like, consisting of a frame-like body made of wire, said body comprising a pair of end-members, and a pair of center-members, and a connecting side-member between each center-member and each end-member, a longitudinal and inwardly extending side-member connected with one of said end-members, and a laterally extending member extending from said last-mentioned side-member, all arranged to provide a series of loop-shaped receiving portions in which parts of a strap are adapted to be inserted and arranged in frictional engagement with said center-members and the side-members, substantially as and for the purposes set forth.

5. A fastening or retaining device for straps and the like, consisting of a frame-like body made of wire, said body comprising a pair of end-members, and a pair of center-members, a connecting side-member between said center-members, and a connecting side-member between each center-member and each end-member, a longitudinal and inwardly extending side-member connected with one of said end-members, and a laterally extending member extending from said last-mentioned side-member, all arranged to provide a series of loop-shaped receiving portions in which parts of a strap are adapted to be inserted and arranged in frictional engagement with said center-members and the side-members, combined with means on said last-mentioned laterally extending member for attachment of the end-portion of the strap thereto, substantially as and for the purposes set forth.

[Claim 6 not printed in the Gazette.]

881,463. CORNER-BAR. CHARLES B. CUSHWA, Youngstown, Ohio. Filed Apr. 10, 1907. Serial No. 367,872.



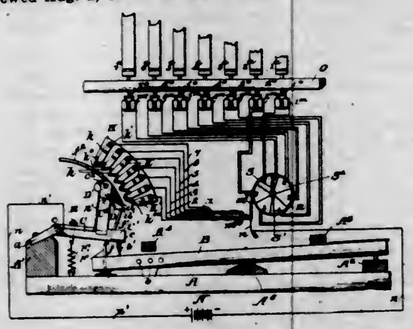
1. A corner bar for walls, comprising a metallic body strip stamped from a single blank of sheet metal and doubled or folded along the longitudinal center line thereof to provide a longitudinal edge bead, said strip being further provided with a plurality of integral spaced arms projecting from one side of the bead and flatly abutting to produce double thickness straight portions, said arms being provided beyond said straight portions with divergent wings.

2. A corner bar for walls, comprising a body strip having an edge bead and divergent wings at one side of the bead, and a supplemental holder bracket having a member detachably engaging between and about said wings.

3. A corner bar for walls comprising a body strip having an edge bead and divergent attaching wings at one side of the bead, and a supplemental holder bracket having a V-shaped clip detachably engaging between and about said wings.

4. A corner bar for walls comprising a body strip having an edge bead and a plurality of pairs of divergent attaching wings at one side of the bead, and a plurality of suppiemental angular holder brackets, each bracket consisting of a single metallic strip bent to form a pair of divergent supporting straps, and at the angle of the bracket being bent and doubled to provide an integral V-shaped engaging clip having a V-shaped pocket receiving a pair of said attaching wings.

881,464. EXPRESSION DEVICE FOR KEYBOARD MUSICAL INSTRUMENTS. JOHN W. DARLEY, Jr., Baltimore, Md. Filed Dec. 13, 1905, Serial No. 291,621. Renewed Aug. 2, 1907. Serial No. 386,763.



1. In a device for producing vibrations, a plurality of vibration-producers, controlling means therefor, and means for operating a greater or less number of said vibration-producers, depending only on the speed of the controlling means.

2. A musical instrument, comprising operating mechanism, sound-producing means, and means for varying the quality of the tone in a predetermined order with the speed of the operating mechanism, without changing the pitch.

3. A musical instrument, comprising operating mechanism, sound-producing means, and means for causing the loudness of the sound produced to vary by predetermined gradations with the speed of the operating mechanism, without changing its pitch.

4. A musical instrument, comprising operating mechanism, a plurality of sound producing means, and means for causing the loudness of the sound produced to vary by predetermined gradations with the speed impressed upon the operating mechanism, without changing the pitch.

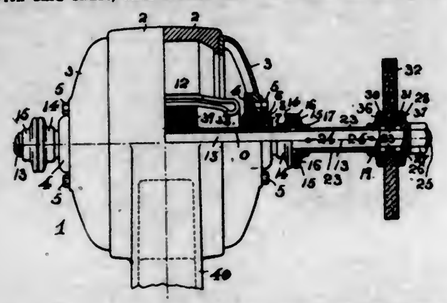
5. A wind musical instrument, comprising operating mechanism, sound producing means, and means for causing the loudness of the sound produced to vary from a predetermined degree with the speed of the operating mechanism, without changing the pitch.

[Claims 6 to 67 not printed in the Gazette.]

881,465. GRINDING-MACHINE. MALCOLM DICKERSON, Newark, N. J., assignor of one-half to Frederick L. Luz, Newark, N. J. Filed Oct. 4, 1905. Serial No. 281,225.

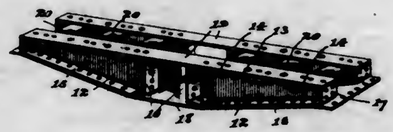
1. In a grinding machine, the combination, with a sleeve running in bearings with fixed centers, a shaft running through said sleeve, and normally concentric therewith, means for imparting motion to said sleeve, a flexible coupling on said sleeve to impart motion to said shaft, a grinding wheel, and a cushion-mounting for mounting said wheel on said shaft, substantially as and for the purposes set forth.

2. In a grinding machine, the combination, with a sleeve running in bearings with fixed centers, a shaft running through said sleeve, and normally concentric therewith, said sleeve being provided with a clearance space between the same and said shaft to allow of a lateral motion of the shaft relative to said sleeve, means for imparting rotary motion to the sleeve, a flexible coupling at the end of said sleeve to impart motion to the shaft, a second flexible coupling on said shaft, a second sleeve concentric with said shaft, said second sleeve being connected at its



ends with said flexible couplings, and a grinding wheel mounted in said second flexible coupling, substantially as and for the purposes set forth.

881,466. RAILWAY-CAR. ETHAN I. DODDS, Chicago, Ill., assignor to The Pullman Company, Chicago, Ill., a Corporation of Illinois. Filed Apr. 29, 1907. Serial No. 370,833.



1. In a railway car, the combination of center sills, and a body-bolster comprising a pair of beams or diaphragms on each side of said center sills, a bottom compression member fastened to the under sides of said beams or diaphragms, a pair of tension bars each fastened to the tops of two of said beams or diaphragms on opposite sides of said center sills, and means to tie said beams or diaphragms together transversely, substantially as described.

2. In a railway car, the combination of center sills, a body-bolster comprising a pair of beams or diaphragms on each side of said center sills, a bottom compression member fastened to the under sides of said beams or diaphragms, a pair of tension bars located in the planes of said beams or diaphragms and each fastened to the tops of two of them on opposite sides of said center sills, and means to tie said beams or diaphragms together transversely, substantially as described.

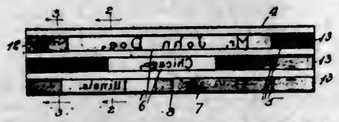
3. In a railway car, the combination of center sills, and a body-bolster comprising a pair of beams or diaphragms on each side of said center sills, each of said beams or diaphragms having a top and bottom marginal flange, a compression member fastened to the bottom flanges of said beams or diaphragms, a pair of tension bars located in the planes of said beams or diaphragms and each fastened to the top flanges of two of them on opposite sides of said center sills, and means to tie said beams or diaphragms together transversely, substantially as described.

4. In a railway car, the combination of center sills, side sills, and a body-bolster comprising a pair of beams or diaphragms on each side of said center sills, each of said beams or diaphragms having a top and bottom marginal flange and inner and outer end flanges fastened respectively to one of the center sills and one of the side sills, a compression member fastened to the bottom flanges of said beams or diaphragms, a pair of tension bars located in the planes of said beams or diaphragms and each fastened to the top flanges of two of them on opposite sides of said center sills, and means to tie said beams or diaphragms together transversely, substantially as described.

5. In a railway car, the combination of apertured center sills, and a body-bolster comprising a pair of beams or diaphragms on each side of said center sills, each of said beams or diaphragms having a top and bottom marginal flange, a compression member fastened to the bottom flanges of said beams or diaphragms, a pair of tension bars each fastened to the top flanges of two of said beams or diaphragms on opposite sides of said center sills, and means to tie said beams or diaphragms together transversely, substantially as described.

[Claims 6 to 11 not printed in the Gazette.]

881,467. HOLDER FOR METAL TYPE-BARS. JOSEPH S. DUNCAN, Chicago, Ill., assignor to Addressograph Company, Chicago, Ill., a Corporation of Illinois. Filed July 3, 1907. Serial No. 381,980.



The combination of metal type bars each having a longitudinal groove in one side thereof near its face, a holder provided with a plurality of type grooves to receive said type bars and stamped from a single sheet of metal, each of said type grooves having one wall sprung inwardly to bear against one side of the type bar, and a projection on the upper end of the inwardly sprung wall of the adjacent type groove to fit in the grooves in the bar, the width of the type groove between the upper edge of said inwardly sprung wall and said projection for the greater portion of the length of the type groove being slightly less than the thickness of the type bar on a line through the recess therein so that said inwardly sprung wall will press the type bar tightly against said projection and hold the type bar in the type groove, and the walls of said type groove at the entrance end thereof being slightly flared to facilitate the insertion of the type bar.

881,468. CAR. OGDEN E. EDWARDS, Jr., New York, N. Y., assignor to The J. G. Brill Company, Philadelphia, Pa. Filed Nov. 30, 1906. Serial No. 345,638.



1. In a car construction an upper sash and a lower sash movably connected by guide ways carried by a sash extending above and below the meeting rails of the sash and stanchions between which said sashes and guide ways are movably supported.

2. In a car construction an upper sliding sash and a lower sliding sash of greater height than the upper sash, guide ways for the lower sash mounted on and carried by the upper sash and extending downwardly beyond the meeting rail, for maintaining the parallelism of the sashes and stanchions between which said sashes and guide ways are movably supported.

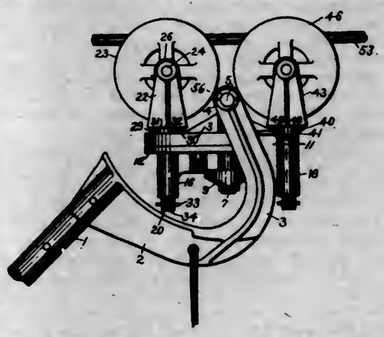
3. In a car construction an upper sliding sash and a lower sliding sash of greater height than the upper sash, guide ways for the lower sash mounted on the upper sash and extending downwardly beyond the meeting rail to maintain them in parallelism and a stop at the top of the upper sash against which the lower sash abuts to raise the upper sash and stanchions between which said sashes and guide ways are movably mounted.

881,469. ATTACHMENT FOR DENTAL SYRINGES. CHARLES W. HALE, Springfield, Mass. Filed June 21, 1906. Serial No. 322,792.



In combination with a nozzle end portion of a syringe having a hypodermic needle forwardly projecting therebeyond, an adapter comprising a cylindrical body having a conical socket flaring towards one end of said body, to conformably receive the said nozzle end portion, said body also having a reduced opening extending to the other end thereof axially from said socket, said opening surrounding said needle, said body being frictionally and detachably engaged with the said nozzle end portion and having its face to which said reduced opening extends adapted to rest upon a cushioning mat surrounding said needle.

881,470. TROLLEY. CHARLES HABKNESS, Providence, R. I., assignor, by mesne assignments, to The United Traction Improvement Company, a Corporation of Rhode Island. Filed Nov. 28, 1906. Serial No. 345,469.



1. The combination with a trolley pole, of a plurality of independent vertical stems and a plurality of independent gravitating trolley wheels supported on said stems and mounted for vertical movement under torsional strain tending to preserve the wheels in alinement.

2. The combination with a trolley pole and a fork, of a suspended spindle disposed in the fork thereof, a suspension frame carried by said spindle, a plurality of independent vertical stems and a plurality of independent trolley wheels on said vertical stems in said frame as mounted to rise under torsional strain and to fall to their normal positions by gravity.

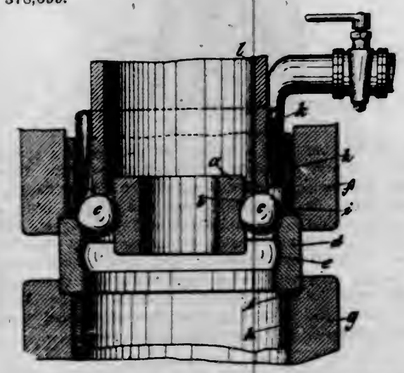
3. The combination with a trolley pole and a fork, of a suspension frame suspended from the fork thereof, a depending spindle supporting said frame and a plurality of independent trolley wheels mounted upon vertical supports in said frame.

4. The combination with a trolley pole and a fork, of a suspension frame suspended from the fork thereof, a depending spindle, vertical supports in said frame and a plurality of independent trolley wheels mounted upon said vertical supports, said frame being mounted for movement to take the position of a conductor while the pole takes the position of a car while passing a curve.

5. The combination with a trolley pole, of a pintle, a depending spindle pivotally supported thereby, a frame carried by the spindle, and a plurality of trolley wheels mounted on vertical axes in said frame for vertical movement.

[Claims 6 to 24 not printed in the Gazette.]

881,471. METHOD OF MANUFACTURING AND ASSEMBLING BALL-BEARINGS. ERNST G. HOFFMANN, New Rochelle, N. Y. Filed June 13, 1907. Serial No. 378,699.

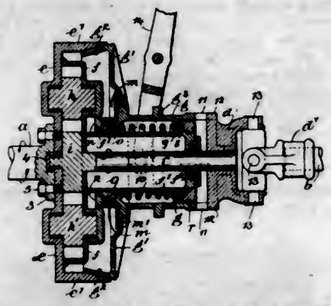


1. The method of manufacturing a ball bearing which consists in forming uninterrupted, integral inner and outer rings or race ways grooved respectively on the outer and inner circumferential faces to embrace the balls and prevent lateral displacement thereof when assembled, subjecting the body of the outer ring to an electric heating current while the working face thereof and the inner ring and the balls are maintained at a low temperature, moving the ring and balls relatively in the desired direction at the instant of maximum expansion to embrace or release the balls, and immediately cooling the outer ring to prevent the heating of its working face.

2. The method of manufacturing and assembling a ball bearing which consists in forming uninterrupted, integral inner and outer rings or race ways grooved respectively on the outer and inner circumferential faces to embrace the balls and prevent lateral displacement thereof when assembled, subjecting the body of the outer ring to an electric heating current while the working face thereof and the inner ring and balls are maintained at a low temperature, moving the rings and balls into the same plane at the instant of maximum expansion, and immediately cooling the outer ring to prevent the heating of its working face and to permit it to contract and cause the balls to be embraced in the grooves of the two rings.

881,472. POWER-TRANSMISSION DEVICE. CLARENCE P. HOLLISTER, Pittsfield, Mass., assignor of one-half to himself and one-half to Herbert M. Stilson, Pittsfield, Mass. Filed Oct. 4, 1907. Serial No. 395,843.

1. In a power transmission device and in combination, a case fluid-filled and tight, a set of gears located in said case and connected respectively to the engine for power and to the running gear of the car or vehicle for transmission, means providing for and for regulating and controlling the movement of the fluid through the case or impounding the same, and so controlling the power delivered by the engine to and also the speed of the driven member, and parts providing for a frictional engagement or grip.



2. In a power transmission device and in combination, a case fluid-filled and tight, a set of gears located in said case and connected respectively to the engine for power and to the running gear of the car or vehicle for transmission, pipes connecting the respective opposite portions of said case and providing for the circulation of the fluid through the case, valves in said pipes for regulating and controlling the movement of the fluid and impounding the same and so controlling the power delivered from the engine to and also the speed of the driven member, and parts providing for a frictional engagement or grip.

3. In a power transmission device and in combination, a case fluid-filled and tight, a set of gears located in said case and connected respectively to the engine for power and to the running gear of the car or vehicle for transmission, pipes connecting the respective opposite portions of said case and providing for the circulation of the fluid through the case, valves in said pipes for regulating and controlling the movement of the fluid and impounding the same and so controlling the power delivered from the engine to and also the speed of the driven member, a manually actuated lever, a slidable member, connections therefrom to said valves for their operation, and parts providing for a frictional engagement or grip.

4. In a power transmission device, the combination with a set of three gears in line, of the case members *e f*, fluid-filled and tight, pipes *k k*¹ connecting parts of the case at opposite sides, valves intermediately placed in said pipes and provided with apertures which in area agree with the area of said pipes for the free passage of the fluid when the valves are open, a tubular member *f*¹ formed with the case member *f*, a tubular case *g* slidable thereon manually actuated and normally spring returned, a ring member *n* connected with the slidable case *g*, arms formed on said ring member and crank-arms formed with said valves and rods extending between said arms and said crank-arms for opening and closing said valves with and by the longitudinal movement of the case *g* as manually operated.

5. In a power transmission device, the combination with a set of three gears in line, of the case members *e f*, fluid-filled and tight, pipes *k k*¹ connecting parts of the case at opposite sides, valves intermediately placed in said pipes and provided with apertures which in area agree with the area of said pipes for the free passage of the fluid when the valves are open, a manually actuated slidable case and friction grip device, a ring member movable therewith, crank arms connected to the valves, arms upon said ring member and adjustable rods extending between and respectively connected to the said crank arms and arms of the ring.

[Claim 6 not printed in the Gazette.]

881,473. DETACHABLE BUTTON. NETTIE ILLOWAY, New York, N. Y. Filed Apr. 4, 1907. Serial No. 366,263.

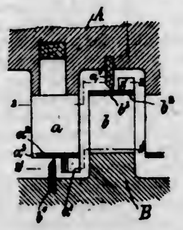
1. A detachable button, consisting of a head, a shank carried thereby having an enlarged portion provided with an opening, a movable tongue comprising a plurality of resilient members, one of said members being provided with a recess in the inner side adapted to engage said shank at the bottom of the opening therein, the other of said members being adapted to contact the under side of said shank and hold said recessed member in position.



2. A detachable button, consisting of a head, a shank carried thereby having an enlarged portion provided with an opening, a movable tongue comprising a plurality of resilient members, one of said members having a recess in the inner side adapted to engage said shank at the bottom of the opening therein, the other of said members being adapted to contact the under side of said shank and hold said recessed member in position, one of said members being provided with an extension adapted to maintain said tongue in extended position.

3. A detachable button, consisting of a head, a shank carried thereby provided with an opening, said opening being so formed as to leave a substantially square bar at the bottom thereof, a movable tongue comprising a plurality of resilient members, one of said members being provided with a recess adapted to engage said bar when said bar is in a horizontal or extended position, said recessed member being held in position by the resiliency of the other of said members.

881,474. TURBINE-MOTOR. ALEXANDER JUDE, Birmingham, England, assignor to Belliss & Morcom Limited, Birmingham, England. Filed Aug. 14, 1906. Serial No. 330,585.



1. Means for utilizing the energy of fluid which tends to leak between the rotor and stator of a turbine, consisting of secondary guide blades which are interposed in the clearance spaces between the operative surfaces of the rotor and stator, to operate on the escaping fluid.

2. Means for utilizing the energy of fluid which tends to leak between the rotor and stator of a turbine, consisting of secondary vanes which are interposed in the clearance spaces between the operative surfaces of the rotor and stator, to be operated on by the escaping fluid.

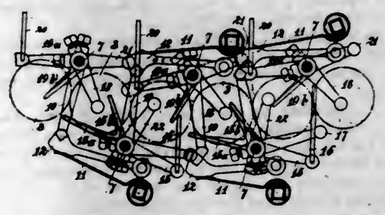
3. Means for utilizing the energy of a fluid which tends to leak between the rotor and stator of a turbine, consisting of secondary guide blades and vanes which are interposed in the clearance spaces between the operative surfaces of the rotor and stator, to operate on and be operated on respectively by the escaping fluid.

4. In a turbine comprising a rotor and a stator, secondary guide blades interposed in the clearance spaces between the operative surfaces of the rotor and stator, and means for directing escaping fluid on to such secondary guide blades.

5. In a turbine comprising a rotor and a stator, secondary vanes interposed in the clearance spaces between the operative surfaces of the rotor and stator, and means for directing escaping fluid on to such secondary vanes.

[Claim 6 not printed in the Gazette.]

881,475. BRAIDING-MACHINE. WILHELM KÖRTING, Barmen, Germany. Filed Aug. 9, 1905. Serial No. 273,450.



1. In a braiding machine the combination of a serpentine race way with drivers (2) toothed gear (3) forming part thereof and governing forks said forks having symmetrically shanks crossing the junction of two adjacent race circles and having protuberances 14 and posts 13 as described and for the purpose set forth.

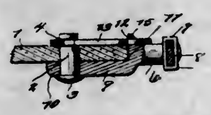
2. In a braiding machine the combination of a serpentine race way having recesses, with drivers (2) toothed gear (3) forming part thereof and governing forks, levers (10) having a wedge shaped head and levers (12) engaging said head and springs actuating said levers (12) as described and for the purpose set forth.

3. In a braiding machine the combination of a serpentine race way having recesses at the intersections of the circles thereof, drivers, toothed gears for rotating said drivers, bobbin carrier governing forks mounted on pillars, operating arms therefor, levers having wedge and notched shaped heads respectively, coöperating to return the said forks to predetermined positions, levers having three arms, two of which coöperate with the operating arms of said forks, and drawing rods connected to the third arms of said last named levers, substantially as described and for the purpose set forth.

4. In a braiding machine the combination of a serpentine race way having recesses, with drivers (2) toothed gear (3) forming part thereof and governing forks, said forks being situated horizontally at the intersections of the circles of the race way alternately from the inner and outer side of the machine metal springs 23 fixed to the forks as described and for the purpose set forth.

5. In a braiding machine the combination of a serpentine race way having recesses, with drivers (2) toothed gear (3) forming part thereof and governing forks, said forks being situated horizontally at the intersections of the circles of the race way alternately from the inner and outer side of the machine projections 25 forming part of the forks and projections 24 fixed to the gear wheels as described and for the purpose set forth.

881,476. MOUNTING FOR EYEGLASSES. LELAND T. LOUDON, Williamson, N. Y., assignor of one-third to Thomas West and one-third to Charles I. De Lutter, Williamson, N. Y. Filed Sept. 20, 1907. Serial No. 393,809.



1. In eyeglasses, a fastening comprising a body portion, a member to engage the edge of the lens, and a friction holding device having a resilient portion passed through said member and engaging the same and means carried by the lens holding said device against endwise movement and to secure the body portion and lens together.

2. In eyeglasses, a fastening comprising a body portion with an arm and a member to engage the edge of the lens and provided with a slot, a holding stud carried by the lens and a forked member adapted to coöperate with said slot and with said stud carried by the lens to hold the body portion and lens together.

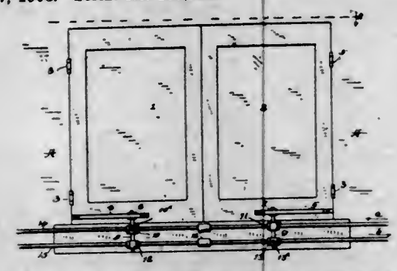
3. In eyeglasses, a fastening comprising a body portion with a curved portion to engage the edge of the lens and provided with a slot, a headed stud to engage an opening in the lens, and a forked member to engage said stud and slot to hold the parts together.

4. In eyeglasses, a body portion having an arm with an opening, a curved portion with flange with slot, a headed stud, and a forked member with spring arms to engage said slot.

5. In eyeglasses, a body portion with arm with opening, and a curved portion with flange provided with an opening, a headed stud to engage the opening in the arm, and a forked member having spring arms with notches to pass through the slot and engage the walls thereof.

[Claims 6 and 7 not printed in the Gazette.]

881,477. WINDOW OR SHUTTER OPERATING DEVICE. ALBERT K. LOVELL, New York, N. Y. Filed Dec. 17, 1903. Serial No. 185,554.



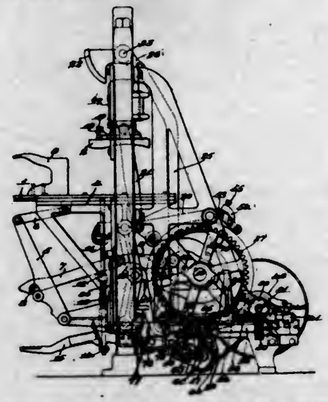
1. A window operating device adapted to operate a plurality of windows in opposite directions, comprising a bracket secured to each window, operating-rods parallel with each other and located adjacent to the windows and adapted to move in opposite directions, said brackets having slots angularly inclined with respect to said rods and windows and oppositely inclined with respect to each other, supports for said rods, a collar on each of said rods in front of each window, said collars being in vertical alinement with each other, a drive-pin carried by each pair of collars and projecting within said slots, for the purpose set forth.

2. A window operating device adapted to operate a plurality of windows in opposite directions, comprising a bracket secured to each window, operating-rods parallel with each other and located adjacent to the windows and adapted to move in opposite directions, said brackets having slots angularly inclined with respect to said rods and oppositely inclined with respect to each other, collars on each of said rods arranged in pairs and in vertical alinement with each other, a drive-pin carried by each pair of collars and projecting within the bracket-slots, the outer end of the bracket-slots in each alternate window being provided with a straight portion substantially parallel with the operating-rods so as to cause the windows thus equipped to stand still while the windows having bracket-slots without said straight portions will start to open first, for the purpose set forth.

3. A window operating device adapted to operate a plurality of windows, comprising a bracket secured to each window, operating-rods parallel with each other and located adjacent to the windows, a support for said rods, said brackets having slots angularly inclined with respect to said rods, collars on said rods arranged in pairs and in vertical alinement with each other, a drive-pin carried by each pair of collars and projecting within the bracket slots, for the purpose set forth.

881,478. SOLE-PRESSING MACHINE. BENJAMIN F. MAYO, Salem, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Mar. 10, 1906. Serial No. 305,230.

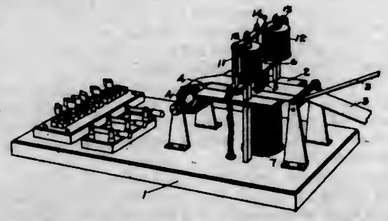
1. A sole pressing machine, having, in combination, a shoe supporting jack, a sole pressing form, a cam shaft and suitable connections for relatively actuating the jack and form to press the sole of a shoe supported upon the jack, a driving shaft and suitable connections for actuating the cam shaft, a constantly running pulley on the driving shaft, a friction clutch for connecting the pulley and driving shaft, mechanism for actuating the clutch to disconnect the driving shaft and pulley when the jack and form are in a position of pressure, and a timing mechanism driven from the pulley and acting on the clutch actuating mechanism to cause said mechanism to connect the driving shaft and pulley.



2. A sole pressing machine, having, in combination, a shoe supporting jack, a sole pressing form, a cam shaft and suitable connections for relatively actuating the jack and form to press the sole of a shoe supported upon the jack, a driving shaft and suitable connections for actuating the cam shaft, a constantly running pulley on the driving shaft, a friction clutch for connecting the pulley and driving shaft, a brake for stopping the rotation of the driving shaft, mechanism for actuating the clutch to disconnect the driving shaft and pulley and for applying the brake when the jack and form are in a position of pressure, and a timing mechanism driven from the pulley and acting on the clutch and brake actuating mechanism to cause said mechanism to connect the driving shaft and pulley and to release the brake.

3. A sole pressing machine, having, in combination, a shoe supporting jack, a sole pressing form, a cam shaft and suitable connections for relatively actuating the jack and form to press the sole of a shoe supported upon the jack, means for actuating the cam shaft, a brake arranged to engage a disk on the cam shaft, means for disconnecting the cam shaft from its actuating means when the jack and form are in a position of pressure, and means for applying the brake to stop the rotation of the cam shaft with the jack and form in a position of pressure.

881,479. CHRONOGRAPH. EZRA B. MERRIAM, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed July 22, 1904. Serial No. 217,639.

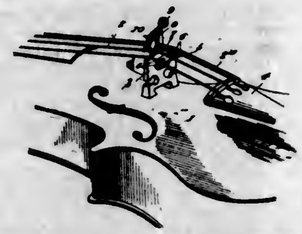


1. Means for recording the frequency of an alternating current, comprising an electromagnet connected to be energized by said current, a table above the same, a bridge over said table, a guide depending from said bridge in line with said electromagnet, and a loose weight in said guide carrying a marking point.

2. Means for making records, comprising a traveling record carrier, a main recording device coöperating therewith, a time recording device having a movable part, a source of alternating current of known frequency, and means for actuating said movable part in unison with the alternations of said current.

3. Means for making records, comprising a traveling record carrier, adjacent recording devices coöperating therewith, a source of alternating current of known frequency and a marking device connected to be actuated by said current for producing alternating light and heavy marks corresponding with the cycles of said alternating current of known frequency.

881,480. VIOLIN-MUTE. JOHN MITCHELL, Auckland, New Zealand. Filed June 3, 1907. Serial No. 376,993.



1. In combination, a stringed instrument embodying a bridge, and a mute therefor comprising a modulating member movable into and out of engagement with the bridge by bow-wise movement of the hand.

2. In combination, a stringed instrument embodying a bridge, a mute therefor comprising a modulating member movable into engagement with the bridge by bow-wise movement, and frictional means for holding the modulating member in an adjusted position.

3. In combination, a stringed instrument embodying a bridge, and a mute therefor comprising a support located at one side of the bridge, a standard projecting from said support, a modulating member consisting of an arm pivoted to the standard for engagement with the bridge, and means connecting the arm with the standard and permitting of bow-wise movement thereof as set forth.

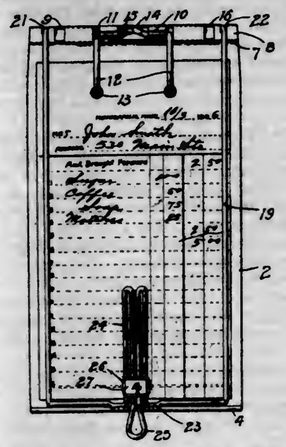
4. A mute for stringed instruments consisting of a supporting plate, a standard extending laterally from said plate, means for securing the plate to an instrument, a modulating member pivoted to the outer end of the standard, and friction means coöperating to hold the modulating member in an adjusted position.

5. A mute for stringed instruments comprising a support including a pivot member substantially parallel with the strings, a modulating member mounted on said pivot, and a finger-piece for said member arranged transversely with respect to the plane in which the modulating member is adapted to move.

881,481. DUPLICATE-SALE-SLIP FILE. HORACE MCCORMICK and MELVILLE A. LUMBARD, Des Moines, Iowa. Filed Oct. 27, 1906. Serial No. 340,893.

1. The combination, with a duplicate sale slip file, of a bail mounted thereon at one end and extending thereover, said file having an upwardly turned part at one end, and said bail resting on said part and having a finger piece projecting beyond the same for convenience in withdrawing the file from its pocket.

2. The combination, with a duplicate sale slip file comprising a plate having upwardly turned flanges at its ends and a bail having bearings in one of said flanges and adapted to bear at its opposite end on the other flange, and said file having posts between which and said bail the sales slips are held, the sides of said bail extending over and near the longitudinal edges of the slips when the device is in use.



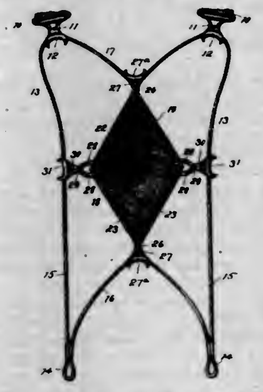
3. A duplicate sale slip file having an upwardly turned flange at one end and a bail hinged at the opposite end of said file and adapted to overhang the duplicate sale slips and hold them in place on the file, said bail having projections arranged to engage and snap by the upper edge of said flange, thereby locking said bail in place.

4. The combination, with a duplicate sale slip file, of a bail hinged thereon at one end and extending thereover and adapted to hold the sale slips in place in the file, said file having a raised portion at one end and said bail having a loop formed therein and adapted to overhang said raised portion, for the purpose specified.

5. The combination, with a duplicate sale slip file, of a bail mounted thereon near one end and extending thereover to the opposite end and adapted to overhang the loose ends of the sale slips and said bail having inwardly projecting loops for the purpose specified.

[Claims 6 and 7 not printed in the Gazette.]

881,482. SUSPENDERS. MOSES NEIMA, Amherst, Nova Scotia, Canada. Filed Mar. 21, 1907. Serial No. 363,705.



1. In a pair of suspenders, the combination with shoulder straps and means for attaching the same to the rear of the trousers, of a metallic skeleton frame comprising four members arranged in pairs so as to be substantially diamond-shaped, means for attaching the frame to the shoulder straps, and elastic means connecting the mem-

bers of the frame so that they will move either vertically or laterally when in use.

2. In a pair of suspenders, the combination with shoulder straps and means for attaching the same to the rear of the trousers, of a metallic skeleton frame comprising four members pivotally held in pairs so as to be substantially diamond-shaped, means for attaching the frame to the shoulder straps, and a single elastic web connecting the members of the frame together so that they may move either vertically or laterally when in use.

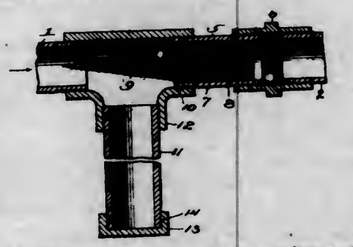
3. A pair of suspenders having means for attachment to the rear of the trousers, and a connecting or take-up device comprising a metallic frame, and a single inner elastic web secured to the frame and arranged to permit movement of the parts of the frame either vertically or laterally when in use.

4. A pair of suspenders comprising shoulder straps, means for attaching said straps to the rear of the trousers, a device or take-up having a metallic frame, and an inner yielding part to permit the frame parts to move either vertically or laterally, and links projecting outward from the frame and connecting the device to the attaching means.

5. In suspenders, a metallic frame comprising four members connected together in pairs, and an elastic web rigidly held within and to the frame.

[Claims 6 to 19 not printed in the Gazette.]

881,483. GAS-FILTER. CHRISTIAN N. OLSEN and AXEL P. PETERSEN, Jersey City, N. J. Filed Dec. 9, 1907. Serial No. 405,781.



1. A strainer for gas comprising a casing a netting wound into a plurality of convolutions, means for holding the same in position and a receptacle for receiving extraneous matter therefrom.

2. A strainer comprising a holder, a conical-shaped strainer formed from a plurality of conical-shaped sieves telescoped into each other and in contact their entire length, and means for receiving dirt from said conical-shaped strainer.

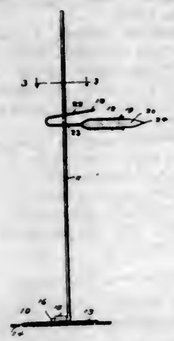
3. A strainer, comprising a holder, a dirt receptacle and a strip of netting wound into a conical-shaped strainer having a plurality of layers, said strainer being in position above said receptacle for receiving dirt and depositing the same in said receptacle.

4. A gas strainer comprising a holder, a dirt receptacle, a conical-shaped strainer in position above said receptacle and constructed of a plurality of conical shaped strainers formed of netting and positioned in contact with each other through their entire length and in the same general cross-sectional plane, and means for holding said conical shaped strainer in position.

5. A gas filter comprising a holder, a conical-shaped filtering medium formed of wire netting wound into a plurality of conical-shaped cones, and means for holding said conical-shaped windings in position for compelling the gas to pass through said windings.

881,484. SKIRT-MARKER. IRVING H. PECK, Derby, Conn., assignor of one-half to Franklin S. Slauter, Derby, Conn. Filed Oct. 22, 1907. Serial No. 398,601.

1. A skirt marker comprising a plate of sheet metal having lugs struck up therefrom, a standard having its lower end bent to form a foot which detachably engages the lugs and a chalk holder adjustable on the standard.



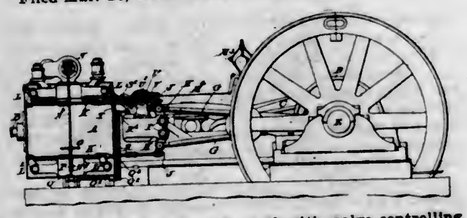
2. A skirt marker comprising a base, a standard detachably secured thereto and a chalk holder comprising two spring arms lying at an acute angle to each other and having slots through which the standard passes, one of said arms having chalk-grasping fingers substantially at a right angle to the standard, said chalk holder being movable on the standard when the arms are pressed toward each other and being self-locking on the standard when the arms are released.

3. A skirt marker comprising a base, a standard secured thereto, and a chalk holder comprising spring arms lying at an acute angle to each other, one of said arms forming a thumb piece and the other arm extending substantially at a right angle to the standard and provided with oppositely offset spring arms to hold a piece of chalk and both of said arms having slots through which the standard passes, the spring of the arms making the chalk holder self-locking on the standard wherever placed.

4. A skirt marker comprising a base having struck up lugs, a standard having a foot to engage said lugs and a scale, and a chalk-holder comprising spring arms engaging the standard the chalk-carrying arm being substantially at a right angle to the standard and having spring fingers to retain a piece of chalk in alinement with the lower arm, so that the chalk holder may be set by the gage to mark a skirt at any required height from the floor.

5. A skirt marker comprising a base, a standard detachably secured thereto and having a scale at its mid-width and a chalk holder comprising spring arms lying at an acute angle to each other and having slots to receive the standard and recesses on opposite sides of the slots at their mid-length, so that the standard will be engaged by the walls of the slots in the arms near the edges only and the portion of the standard bearing numerals will not be marred by movement thereover of the chalk holder.

881,485. THROTTLE-VALVE MECHANISM FOR STEAM-ENGINES. GUSTAV B. PETSCHE, Philadelphia, Pa., assignor to Southwark Foundry and Machine Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Mar. 26, 1906. Serial No. 308,001.



1. In a steam engine having a throttle valve controlling the admission of steam to the valve chest, the combination with said valves of constantly acting means tending to close it, a catch acting when engaged to hold the valve open, an emergency governor arranged to act as a catch releasing device and means directly and positively connecting said governor with a reciprocating element of the actuating mechanism for the engine valves.

2. In a steam engine having engine valves and a throttle valve controlling the admission of steam to the valve chest, the combination with said throttle valve of constantly acting means tending to close it, a catch acting when engaged to hold the valve open, an emergency governor arranged to act as a catch releasing device, an eccentric and connecting mechanism whereby said eccentric actuates an engine valve, and an actuating connection from the eccentric to the emergency governor.

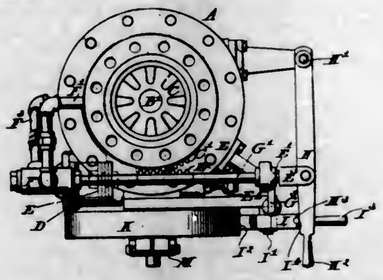
3. In a steam engine having a throttle valve controlling the admission of steam to the valve chest, the combination with said valve of constantly acting means tending to close it, a catch acting when engaged to hold the valve open, an oscillating emergency governor having a projectable catch releasing device arranged to come into operation when the speed of the governor exceeds a determined limit, and means for positively and directly connecting and actuating said governor to and by a moving part of the engine,

4. In a steam engine having a throttle valve controlling the admission of steam to the valve chest, the combination of said valve with constantly acting means tending to close it, a catch acting when engaged to hold the valve open, an oscillating emergency governor having a projectable catch releasing device arranged to come into operation when the speed of the governor exceeds a determined limit, means for actuating an engine valve or valves including an oscillating lever J, and a positive actuating connection from said lever to the emergency governor.

5. In a steam engine, a throttle valve in combination with a latch device comprising the bell crank lever R', R², the catch lever S, S', a tie connecting the lever arms R' and S' and a spring acting to force said lever arms apart, a system of links and levers connecting the throttle valve and latch device and an emergency governor adapted to serve as a catch releasing device and means for actuating said governor connected to a moving part of the engine.

[Claim 6 not printed in the Gazette.]

881,486. THROTTLE-VALVE MECHANISM FOR STEAM-ENGINES. GUSTAV B. PETSCHE, Philadelphia, Pa., assignor to Southwark Foundry and Machine Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Mar. 26, 1906. Serial No. 308,002.



1. A throttle valve for steam engines, comprising a valve casing, a valve for opening and closing the steam passage in the same, a steam cylinder open at one end to the live steam space, a steam pipe leading from the live steam space to the other end of the cylinder, a valve for opening and closing said pipe, a piston working in said cylinder and connected to actuate the valve, catch mechanism whereby the piston is normally held in position to hold the throttle valve open, and an emergency governor adapted to act as a releasing device for said catch mechanism.

2. A throttle valve for steam engines comprising a valve casing, a valve for opening and closing the steam passage in the same, a steam cylinder open at one end to the live steam space, a steam pipe leading from the live steam space to the other end of the cylinder, said pipe having a branch leading to the casing below the valve seat, a valve for opening and closing said pipe, a piston working in said cylinder and connected to actuate the valve, catch mechanism whereby the piston is normally held in position to hold the throttle valve open, and an emergency governor adapted to act as a releasing device for said catch mechanism.

3. A throttle valve for steam engines having in combination a valve casing with a seat for a slide valve, a slide valve working on said seat, a cylinder having one end in free connection with the live steam space, a piston working in said cylinder and connected to actuate the valve, a piston rod, catch mechanism acting to engage the piston rod and through it hold the valve open and an emergency governor arranged to act as a catch releasing device.

4. A throttle valve for steam engines having in combination a valve casing with a seat for a slide valve, a slide valve working on said seat, a cylinder having one end in free connection with the live steam space, a steam pipe connecting the other end of the cylinder also with the live steam space, a valve for opening and closing said conduit, a piston working in said cylinder and connected to actuate the valve, a piston rod catch mechanism acting to engage the piston rod and through it hold the valve open and an emergency governor arranged to act as a catch releasing device.

5. A throttle valve for steam engines having in combination a valve casing with a seat for a slide valve, a slide valve working on said seat, a cylinder having one end in free connection with the live steam space, a steam pipe connecting the other end of the cylinder also with the live steam space, said pipe having a branch extending into the casing below the slide valve, a valve for opening and closing said conduit, a piston working in said cylinder and connected to actuate the valve, a piston rod catch mechanism acting to engage the piston rod and through it hold the valve open and an emergency governor arranged to act as a catch releasing device.

881,487. DOOR-LOCK. FRANK P. PFLEGHAR, Jr., New Haven, Conn., assignor to F. P. Pfleghar & Son, New Haven, Conn., a Firm. Filed June 1, 1906. Serial No. 319,683.



1. In a door lock, a swinging locking bolt, means for extending and withdrawing it and a slide arranged to be brought into and out of direct engagement with the bolt for locking it in its withdrawn position when the door is opened and releasing it when the door is closed.

2. In a door lock, a rotary swinging locking bolt having a shoulder thereon, means for extending and withdrawing the bolt and a slide having a lug arranged to be automatically brought into and out of engagement with the said shoulder for locking the bolt in its withdrawn position when the door is opened and releasing it when the door is closed.

3. In a door lock, a latch bolt, a latch bolt handle, its shank, a locking bolt fixed thereto and arranged to engage the latch bolt and a slide arranged to be brought into and out of engagement with the bolt, said slide serving to automatically lock said bolt in its withdrawn position when the door is opened and release it when the door is closed, and the said slide being operated by the outward and inward swinging movement of the door.

4. In a door lock, a latch bolt, a latch bolt handle, its shank, a rotary swinging locking bolt fixed thereto and arranged to engage the latch bolt and a slide arranged to be brought into and out of engagement with the bolt, said slide serving to automatically lock said bolt in its withdrawn position when the door is opened and release it when the door is closed, and the said slide being operated by the outward and inward swinging movement of the door.

5. In a door lock, a latch bolt, a latch bolt handle, its shank, a locking bolt fixed thereto and arranged to engage the latch bolt, said locking bolt having a shoulder thereon and a slide having a lug arranged to be brought into and out of engagement with the said shoulder, said lug serving to automatically lock the locking bolt in its withdrawn position when the door is opened and releasing it when the door is closed, and said lug being operated by the outward and inward swinging movement of the door.

[Claim 6 not printed in the Gazette.]

881,488. VEHICLE FOR TRANSPORTING LIVE FISH. FERDINAND J. ROCHOW, New York, N. Y., assignor to Central Fish Company, a Corporation of New York. Filed Nov. 17, 1906. Serial No. 343,819.



1. In a vehicle for conveying live fish, the combination in a circulating system of a tank, means for pumping water out of the tank and for forcing it back into the tank, and means for forcing air into the water on its entrance into the tank, substantially as described.

2. In a vehicle for conveying live fish, the combination in a circulating system of a tank, means for withdrawing water from and returning it to the tank, a filtering chamber through which the water is passed, means for refrigerating the water, and means for injecting air into the water on its entrance into the tank, substantially as described.

3. In a vehicle for conveying live fish, the combination of a tank, means for circulating water whereby it is withdrawn from and returned to the tank near the bottom thereof, and means for injecting air into the water on its entrance into the tank near the bottom thereof, substantially as described.

4. In a vehicle for conveying live fish, the combination in a circulating system of a fish compartment, means for pumping water and means for pumping air into the fish compartment, and water inlets and air inlets distributed over the bottom of the fish compartment, substantially as described.

5. The combination in a tank, of a perforated partition plate located near the bottom and forming in the tank above the plate a compartment for live fish, inlets for water located in the chamber formed below the plate, and an outlet for water below the plate, substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

881,489. PROCESS FOR PRODUCING FIBERS FROM RHEA-PLANTS. GUSTAV H. ROEDER, Philadelphia, Pa.; Christiana K. Roeder, administratrix of said Gustav H. Roeder, deceased, assignor to Ernest F. Greeff and Albert Tilt, New York, N. Y., and Charles C. Rossire, Yonkers, N. Y. Filed Mar. 3, 1903, Serial No. 145,998. Renewed July 20, 1907. Serial No. 384,763.

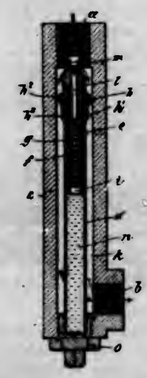
The process herein described of producing fibers from the rhea plant, which consists in, first, decorticating the stalks while still in a fresh or green condition for removing the bark and woody parts; second, slowly squeezing the decorticated fibers for expressing the thin sap or juice from the same; third, subjecting the decorticated and squeezed fibers to a grinding action for separating the fibers from each other and for removing the remaining woody parts; fourth, removing the gummy substances still contained in the fibers by subjecting the same to the action of a mixture of alkali lye and a suitable hydrocarbon solvent; fifth, removing the fibers from said solvent; and, lastly, washing and drying the same.

881,490. PROTECTING MEANS FOR THE ENDS OF ROLLS OF MERCHANDISE. WILLIAM E. ROTHERMEL, Chicago, Ill. Filed Mar. 2, 1907. Serial No. 360,294.



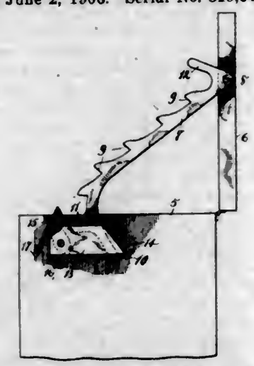
Means for protecting the ends of rolls of roofing or other paper, comprising flaps secured to the edges of the free-end portions of the material constituting the roll and forming flanges extending beyond the roll-ends, and cup-shaped heads seated on the ends of the rolls and having their upwardly extending encircling rims secured to the flange-portions of said flaps, as set forth.

881,491. REGULATOR FOR LIQUIDS, &c. HERMANN SANDVOSS, Neuss, Germany. Filed July 13, 1906. Serial No. 325,999.



A device of the character described, comprising a casing having an inlet and outlet, an inclosed mercury tube, an annular threaded cap fitted thereon, a perforated screw plug engaging said cap, an inlet valve having a spring-influenced stem that passes through the perforated screw plug into the mercury tube, a head at the bottom of the stem, and a flexible casing secured to said head and to the screw plug, substantially as specified.

881,492. LID-SUPPORT. WILLIAM A. SCHILLER, Chicago, Ill. Filed June 2, 1906. Serial No. 319,942.



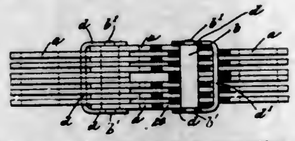
1. A supporting device consisting of a pivoted brace having downwardly extending projections at its upper end and near its lower end and with teeth intermediate said projections, and a pivoted gravity operating latch adapted to engage said teeth to hold the brace in its adjusted positions and to be engaged by said downwardly extending projections to be thrown into operative and inoperative positions.

2. A supporting device consisting of a pivoted brace having downwardly extending projections at its upper end and near its lower end, a lateral projection at its lower end, and teeth intermediate said downwardly extending projections, a pivoted latch member adapted to engage said teeth to hold the brace in its adjusted positions and to be engaged by said downwardly extending projections to be thrown into operative and inoperative positions, and means engaging said lateral projection to limit the movement of said brace in one direction.

3. A support for a hinged device, consisting of an adjustable brace pivotally connected with said device and having teeth along one edge and a lateral projection at its lower end, and formed with extensions, a pivoted latch adapted to engage said brace and hold it in its adjusted positions, and to be engaged by said extensions, and a housing for said latch, said housing forming a stop for said latch and a slideway for said brace, substantially as shown.

881,493. DRIVE-CHAIN. CARL G. A. SCHMIDT, Jr., New York, N. Y. Filed June 27, 1907. Serial No. 381,042.

1. A chain comprising links, link-connecting pivot pins, and pin-retaining spanners engaged with the end portions of the pins.



2. A chain comprising links, link-connecting pivot pins, and detachable pin-retaining spanners, each composed of a pair of ears adapted to engage the end portions of a pin, and a cross bar connecting said ears.

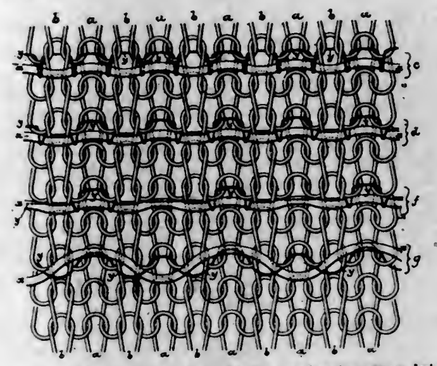
3. A drive chain comprising toothed links, link-connecting pivot pins having reduced end portions, and pin-retaining spanners having ears engaged with the end portions of the pins.

4. A drive chain comprising toothed links, removable link-connecting pivot pins having reduced end portions, and pin-retaining spanners, each composed of a pair of ears adapted to engage the reduced portions of a pin, and an ear-connecting cross bar extending through orifices in the links across the chain.

5. A drive chain comprising toothed links, each having elongated pin-receiving orifices in its end portions, pivot pins removably inserted in said orifices, and provided with reduced end portions forming shoulders on the pins, and pin-retaining spanners composed of ears engaging the reduced portions of the pins, and bearing against said shoulders, and ear-connecting cross bars passing through the said elongated orifices.

[Claims 6 to 11 not printed in the Gazette.]

881,494. FLEECED RIBBED WEB. ROBERT W. SCOTT, Leeds Point, N. J., assignor of one-half to Louis N. D. Williams, Ogontz, Pa. Filed July 12, 1906. Serial No. 325,838.



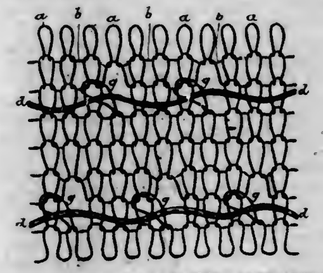
1. A ribbed knitted fabric having a fleecing yarn lying on one face of the same and secured to the ribbed web by means of a tying yarn engaging said fleecing yarn and also engaging wales of the ribbed web.

2. A ribbed knitted fabric having a fleecing yarn lying on one face of the same and secured to the ribbed web by means of a tying yarn engaging said fleecing yarn and also engaging wales of both faces of the ribbed web.

3. A ribbed knitted fabric having a fleecing yarn lying on one face of the same and secured to the ribbed web by means of a tying yarn engaging said fleecing yarn and also engaging each wale of one face of the ribbed web.

4. A ribbed knitted fabric having a fleecing yarn lying on one face of the same and secured to the ribbed web by means of a tying yarn engaging said fleecing yarn and also engaging each wale of each face of the ribbed web.

881,495. KNITTED WEB. ROBERT W. SCOTT, Leeds Point, N. J., assignor of one-half to Louis N. D. Williams, Ogontz, Pa. Filed Apr. 5, 1907. Serial No. 366,589.



1. A knitted web having a backing yarn exposed across one or more needle wales on one face of the web, and secured to said web by loops transferred from one wale to another.

2. A knitted web having a backing yarn exposed in the form of loops on one face of the same, and secured to said web by loops transferred from one wale to another.

3. A knitted web having eyelet holes therein and a backing yarn exposed on the back of the web, and crossing said eyelet holes, whereby, at such eyelet holes it is also exposed on the other face of the web.

4. A knitted web having a backing yarn exposed across one or more needle wales on one face of the web, and secured to said web by loops transferred from one wale to another and forming eyelet holes in said web.

5. A knitted web having a backing yarn secured thereto by engagement with sinker wale loops transferred to an adjoining needle wale or wales, said backing yarn being exposed on the back of the web.

[Claims 6 to 11 not printed in the Gazette.]

881,496. PIPE-GRAB. WALTER S. SEAMAN, Beaver, N. D. Filed Sept. 11, 1907. Serial No. 392,311.



1. A pipe grab embodying a casing, jaw members carried by said casing and projecting beyond the sides thereof, and an adjustable abutment in said casing bearing against said jaw members.

2. A pipe grab embodying a casing, a plate stationary therein and having a threaded opening, jaw members supported at their lower ends from said plate and having their upper ends serrated and projecting beyond the casing sides, an operating rod having a threaded part engaging said threaded opening of the plate, and an abutment loosely mounted on said rod means to cause said abutment to partake of the longitudinal movement of said rod, said abutment having cam faces which bear against said jaw members and force the same beyond said casing sides.

3. A pipe grab embodying a casing, a flexible washer on the bottom end of the casing projecting beyond the casing sides, means to clamp said washer to said casing end, and means at the opposite end of the casing to engage the pipe.

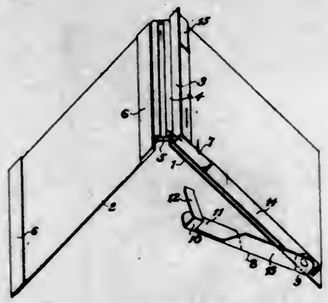
4. A pipe grab embodying a casing, an expansible washer secured to the exterior of the bottom of said casing, jaw members secured at their lower ends on the casing interior and at their upper ends projecting beyond the exterior of the casing, and means for impelling said upper ends of the jaw members outwardly.

5. A pipe grab embodying a casing, an expansible washer secured to the lower end of the casing and projecting beyond the sides thereof, jaw members carried by said casing and having gripping faces which project beyond the casing sides at the upper portion of the casing, and means to move said gripping faces outwardly beyond the casing sides.

[Claims 6 to 9 not printed in the Gazette.]

881,497. MANIFOLDING-PAD HOLDER. ALBERT F. STAPLES, Alliance, Ohio. Filed Oct. 28, 1907. Serial No. 399,435.

1. A holder for manifolding pads comprising a back, a clip comprising a U-shaped piece of spring metal and adapted to embrace the back and a pad thereon at one margin thereof to hold the pad in place, and connections between the back and the clip to permit the clip to be moved laterally into or out of engagement with the pad and the back.

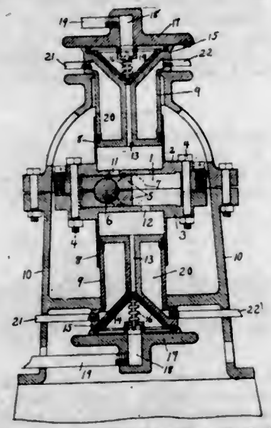


2. A holder for manifolding pads comprising a back and an arm pivoted at one end to a lateral margin of the back and provided at the other end with a clip to engage and hold the upper margin of a pad, a portion of the arm between the clip and the pivoted end being formed as an up-standing flange covering the edge of the pad.

3. A holder for manifolding pads comprising a back, and a clip-member comprising an arm pivoted to the back near one lateral edge, a portion engaging the lower surface of the back near its upper end, and a resilient pad-engaging member extending over the upper end of the back, the clip being disengaged by swinging it laterally out of contact with the pad and the back.

4. A holder for manifolding pads comprising a back, a resilient clip movably connected with the back and formed to embrace the back and a lateral margin of a pad thereon, and a clip fixed to the back and arranged to engage the opposite margin of the pad.

881,498. AIR-COMPRESSOR. JOHN STURGESS, Troy, N. Y. Filed July 11, 1907. Serial No. 383,220.



1. In an apparatus of the class described, the combination with a yoke having a slideway provided with an opening therethrough; a crank and crank-pin; and a bearing-block for the crank-pin fitting and movable along said slideway and adapted to open and close said opening; of a piston and cylinder, one mounted upon a fixed support and the other upon said yoke with the space inclosed by said piston and cylinder communicating with said opening; and a check-valve controlling an outlet from said inclosed space.

2. In an apparatus of the class described, the combination with a yoke having a slideway provided with a pair

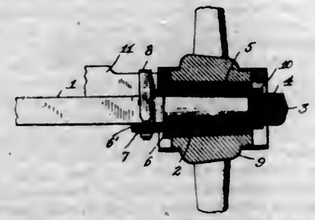
of openings therethrough; a crank and crank-pin; and a bearing-block for the crank-pin fitting and movable along said slideway and adapted to alternately open and close the respective openings; of a piston and cylinder, one mounted upon a fixed support and the other upon one side of said yoke with the space inclosed by said piston and cylinder communicating with one of said openings; a piston and cylinder, one mounted upon a fixed support and the other upon the opposite side of said yoke with the space inclosed between said last mentioned piston and cylinder communicating with the other of said openings; and a check-valve controlling an outlet from each of said inclosed spaces.

3. In an apparatus of the class described, and in combination, a pair of members comprising a cylinder, and a piston fitting therewithin, said cylinder being provided with an inlet-opening to the space inclosed by said piston and cylinder, and the piston being provided with an outlet-opening leading from said inclosed space and being provided in its outer end with an enlarged chamber communicating with said outlet-opening; an automatically closing check-valve adapted when closed to substantially fill said chamber and to close an outlet therefrom of substantially the diameter of said cylinder; means for moving one of said members toward and from the other; and means for opening and closing the inlet-opening to the cylinder.

4. In an apparatus of the class described, and in combination, a pair of members comprising a cylinder, and a piston fitting therewithin, said cylinder being provided with an inlet-opening to the space inclosed by said piston and cylinder, and the piston being provided with an axial passageway communicating with said space and with a conical chamber communicating at its apex with said passageway and having at the larger end of said chamber a valve-seat surrounding an outlet-opening of approximately the diameter of the cylinder; an automatically closing conical check-valve adapted when closed to engage said seat and substantially fill said chamber; means for moving one of said members toward and from the other; and means for opening and closing the inlet-opening to the cylinder.

5. In an apparatus of the class described, and in combination, a pair of yoke members secured together with a slideway therebetween, and each having on its outer side a hollow cylinder and provided with an aperture leading from said slideway within said cylinder; a crank and crank-pin; a bearing-block for the crank-pin fitting and movable along said slideway and adapted to alternately open and close said inlet-openings; a pair of pistons fixedly mounted within the open ends of said respective cylinders; and a check-valve controlling an outlet from the space inclosed by each piston and its cylinder.

881,499. AXLE-SKEIN. JULIUS TANCK and JOHN C. JOHNSON, Kenosha, Wis. Filed Apr. 1, 1907. Serial No. 365,743.



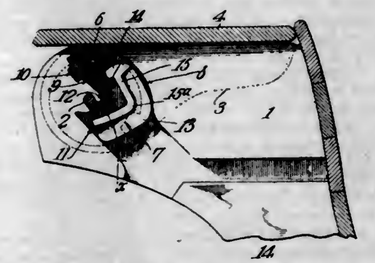
The combination with an axle formed into an angular body portion, a rounded hub receiving portion, and a reduced screw-threaded projection, of a removable sleeve or skein having a collar at one end and mounted on said hub receiving end, and projecting over said reduced threaded portion, thus forming an annular recess at the end of the hub receiving end, means for retaining said sleeve in position comprising a lip extending from said collar and formed integral therewith and having a recess adapted to receive a clip, and a nut mounted on the reduced threaded portion of said axle and adapted to force said sleeve in position and to retain said hub.

881,500. BASKET. WILLIAM J. THOMAS, Grand Rapids, Mich., assignor of one-half to Annie S. Thomas, Buffalo, N. Y. Filed July 1, 1905, Serial No. 267,975. Renewed Jan. 15, 1908. Serial No. 411,027.



In basket construction, an integral blank cut to form the bottom, the sides, the ends, and reinforcing sides integral with the ends, the meeting ends of the reinforcing sides extending by each other in alternate projections to form interlocking joints, a handle formed and placed so that its ends will cover the interlocking joints at each side of the basket, means for securing the ends of the handles to the sides of the basket, and a metallic plate cut and formed to cover each end of the handle and provided with lugs to pass through the sides of the basket and bend closely against the inner surfaces thereof in position to clamp the ends of the handle closely thereto, substantially as and for the purpose set forth.

881,501. DESK. THOMAS H. THOMPSON, Winfield, Tex. Filed Oct. 8, 1907. Serial No. 396,482.

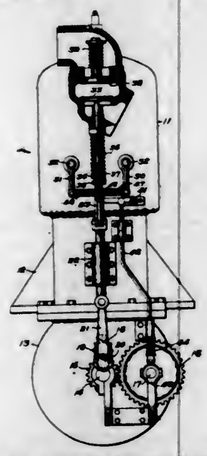


1. The combination with a desk standard having a socket, one wall of the socket being notched; of a lid arm pivotally connected to the standard, an L-shaped bolt loosely mounted within the socket and having a shoulder, a notch engaging portion for the bolt, and means upon the lid arm for successively engaging the angle portion and shoulder of the bolt to shift the bolt out of the path of said means and to seat the notch engaging portion of the bolt within the notch respectively, said bolt being movable by gravity against one wall of the standard socket and below and into the path of said means immediately subsequent to the first or shifting operation.

2. The combination with a desk standard having a socket, a pivot device extending through the standard, said socket being curved partly around and over the pivot device and having a substantially straight inclined wall provided with an angular notch, the lower wall of the socket being also preferably straight and inclined from a point close to the pivot device, said walls forming a rounded nose therebetween; of a lid arm mounted upon the pivot device; an L-shaped bolt loosely mounted within the socket and having a shoulder, a notch engaging portion upon the bolt, and means upon the lid arm for successively engaging the angle portion and the shoulder of the bolt to shift said bolt out of the path of said means to seat the notch-engaging portion of the bolt within the notch respectively, said bolt being movable by gravity against the upper and lower inclined walls of the standard socket and below and into the path of said means

upon the lid arm subsequent to the first or shifting operation.

881,502. MECHANICAL MOVEMENT. ELIHU THOMSON, Swampscott, Mass., assignor to General Electric Company, a Corporation of New York. Filed Apr. 26, 1906. Serial No. 313,734.



1. A driving and a driven element, in combination with a flexible member having different axes and arranged to transmit motion between said elements, and a means for determining which axis will be active and the direction of flexure of the said member.

2. A driving and a driven element, in combination with a flexible member connected to the driving element and acting on the driven element, the axes of the connections occupying a common plane and crossing each other, the said parts being so arranged that when one axis is active motion is imparted directly from the driving to the driven element and when the other axis is active the driving element is free to move without moving the driven element, and a means determining which axis shall be active.

3. A driving and a driven element, in combination with a flexible member connected to the driving element and acting on the driven element for imparting motion from one to the other, and comprising hinged plates, the axes of the hinges extending across each other, and a means for bending the plates at one hinge or the other depending on whether or not motion is to be transmitted from one element to the other.

4. A driving and a driven element, in combination with a flexible member comprising a plate divided into parts and hinged together, the axes of the hinges crossing each other, a means for connecting the member with said elements, a means acting on one side of the flexible member for causing it to bend on one of its axes and transmit motion from one element to the other, and a second means acting on the other side of the member for causing it to bend on the other axis and prevent the transmission of motion between the elements.

5. A driving and a driven element, a flexible member for transmitting motion from one to the other, a hinged support attached to one element and connected to the member at two points, a second hinged support attached to the member at two points and angularly displaced from the first, and a means arranged in opposition to the driven element for deflecting the member along one axis.

[Claims 6 to 10 not printed in the Gazette.]

881,503. AUTOMATIC STREET-INDICATOR. THOMAS TIGHE and CHARLES S. CROSS, New York, N. Y. Filed May 31, 1906. Serial No. 319,488.

1. In a station indicator, the combination of an indicating device arranged to be shifted to bring characters thereon sucessively to view, an electric motor, a clutch member driven from said motor, a coöperating clutch member having means for actuating the indicator device when said members are caused to engage, and a controlling means including a web and means operated thereby and actuated from the said motor to intermittently cause engagement of the clutch members to actuate the indicator a sufficient distance to bring the next consecutive character to view.



2. In an indicating device for electric cars, the combination with the car motor and the leads connecting the controller with the motor, an indicating device arranged to be shifted to bring characters thereon successively to view, an electric motor in electrical connection with the car motor, a clutch member driven from said electric motor, a coöperating clutch member having means for actuating the indicator device when said members are caused to engage, and controlling means including a web and means operated thereby and actuated from the said electric motor to intermittently cause engagement of the clutch members to actuate the indicator a sufficient distance to bring the next consecutive character to view.

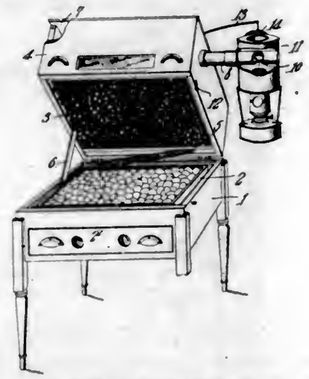
3. In an indicator for electric cars, the combination of an indicating device arranged to be operated to bring the successive characters thereon to a view point, a clutch member connected with the indicator for operating it, an electric motor, a coöperating clutch member driven from the motor, a web device driven from said motor and provided with openings therein that are spaced apart distances corresponding to the actual distances apart of the successive stations on the indicator, and mechanism arranged to be engaged successively by the openings in the web to temporarily cause engagement of the clutch members and actuate the indicator to bring the next indication to the view point.

4. In an indicating device for electric cars, the combination with the car motor and the leads connecting the controller with the motor, an electric motor in electrical connection with the car motor, a clutch member driven from said electric motor, a coöperating clutch member having means for actuating the indicator device when said members are caused to engage, controlling means including a web and means operated thereby and actuated from the said electric motor and arranged to intermittently cause engagement of the clutch members and actuate the indicator a sufficient distance to bring the next consecutive character to view, and means for reversing the direction of movement of the indicator and controlling mechanism.

5. In an indicator for electric cars, the combination of an indicating device arranged to be operated to bring the successive characters thereon to a view point, a clutch member connected with the indicator for operating it, an electric motor, a coöperating clutch member driven from the motor, a web device driven from said motor and provided with openings therein that are spaced apart distances corresponding to the actual distances apart of the successive stations on the indicator, mechanism arranged to be engaged successively by the openings in the web to cause temporarily engagement of the clutch members and actuate the indicator to bring the next indication to the view point, and means for reversing the direction of movement of the indicator and also of the web device from the motor.

[Claims 6 to 10 not printed in the Gazette.]

881,504. INCUBATOR. WILLIAM E. TREDWAY, Nardin, Okla. Filed Aug. 8, 1907. Serial No. 387,715.



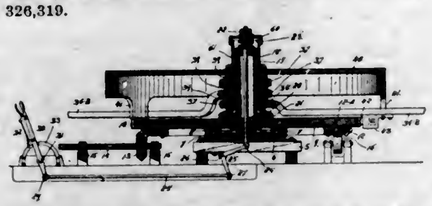
1. In an incubator the combination with an egg holding body; of a lid movably connected to the body; feathers massed within the lid and disposed to contact with eggs in the body, and a heater pivotally connected to and suspended from the lid.

2. In an incubator the combination with an egg holding body; of a spring actuated lid hingedly connected to the body, feathers massed within the lid and disposed to contact with the eggs within the body, a heater, and a swiveled tubular connection between the heater and lid.

3. In an incubator the combination with a body for holding eggs; of a spring pressed lid hinged upon the body, means for securing the lid upon the body and against the tension of the spring, a soft material massed within the lid and disposed when the lid is closed to contact with eggs within the body, and a heater pivotally connected to and movable with the head.

4. In an incubator the combination with a body for holding eggs; of a lid hingedly connected to the body, feathers massed within the lid, a water container within the lid, a heat conducting tube extending through the container and lid, a heater pivotally mounted upon and supported by the heat conducting tube, said tube being disposed to receive heated air from the heater.

881,505. AMUSEMENT APPARATUS. WILLIAM H. VANCE, Denver, Colo. Filed July 16, 1906. Serial No. 326,319.



1. In amusement apparatus, the combination of an operating wheel provided with ratchet teeth, a central shaft, vehicle sweeps connected with the central shaft independently of each other, each sweep having a ratchet and pawl connection with said wheel whereby the sweeps are propelled by the rotation of the wheel, all of the sweeps being connected with the wheel and free to travel faster than the wheel and independently of each other or at varying speeds.

2. In amusement apparatus, the combination of a centrally located operating wheel provided with ratchet teeth, a central shaft around which the wheel rotates, vehicle sweeps connected in operative relation with the central shaft and mounted to swing independently of each other, a pawl and ratchet connection between the sweeps and the operating wheel whereby the rotation of the wheel actuates the sweeps but the latter are free to move faster than the wheel as described.

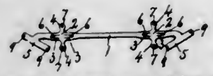
3. In amusement apparatus, the combination of an operating wheel, vehicle sweeps mounted to swing independently of the wheel and independently of each other, a pawl and ratchet connection between the sweeps and the wheel, means for operating the wheel, and a platform mounted above the wheel and provided with depending projections located in the path of the sweeps for the purpose set forth.

4. In amusement apparatus, the combination of an operating wheel, an undulatory track surrounding the wheel, vehicles mounted to travel on said track, sweeps connected with the vehicles at one extremity, the said sweeps being mounted to swing from the axis of the wheel as a center, and an operative connection between the sweeps and the wheel whereby the rotation of the wheel actuates the sweeps, the latter, however being free to move independently of each other and independently of the wheel to permit a speed of travel faster than the travel of the wheel.

5. In amusement apparatus, the combination with an operating wheel, an undulatory track surrounding the wheel, vehicles mounted on the track, sweeps mounted to swing from the axis of the wheel as a center, their outer extremities being connected with the respective vehicles, each sweep being composed of two jointed members, and an operative connection between the sweep and the wheel, the sweeps being mounted to travel independently of each other, and suitable connections between the sweeps and the wheel whereby the latter actuates the sweeps while the latter are free to travel independently of the wheel in the direction of the wheel's travel, to permit the sweeps to travel at a greater speed than that of the wheel.

[Claims 6 to 12 not printed in the Gazette.]

881,506. MOUNTING FOR EYEGLASSES. JOHN R. VAN TASSEL, Geneva, N. Y. Filed Sept. 29, 1904. Serial No. 226,501.



A mounting for eye glasses comprising a bar having laterally extending ends inclined to the longitudinal plane of the bar to form supports for the nose pieces, said bar having oppositely extending perforated lugs spaced apart and forming lens engaging ears and with oppositely extending clefts within the bar between the lugs and forming tongues adapted to bear against the edges of the lenses between said ears.

881,507. ROLLER WINDOW-SCREEN. CARL J. WALLEN, Jamestown, N. Y., assignor to Charles Lindbeck and Charles Swanson, Jamestown, N. Y. Filed Feb. 6, 1907. Serial No. 356,013.

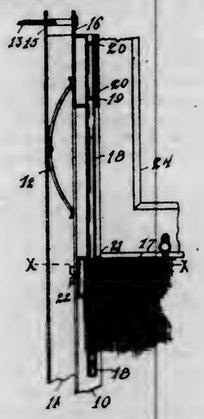
1. In combination with a roller screen having a looped edge, a guide rod working in said loop, a channel guide strip, a double clip to hold said guide rod in the upper end of said channel guide strip, said channel guide strip having a slot and a clip on said screen slidably interlocking in said slot.

2. In combination with a roller screen having a looped edge, a channel guide strip, a guide rod in said channel strip working in said loop, a second channel strip over said channel guide strip, and means for adjusting said guide strips as to one another.

3. In combination with a roller screen, two channel guide strips for the edge of the screen, a spring between said guide strips, and screws to adjust said guide strips as to one another.

4. In combination with a roller screen, a guide rod for

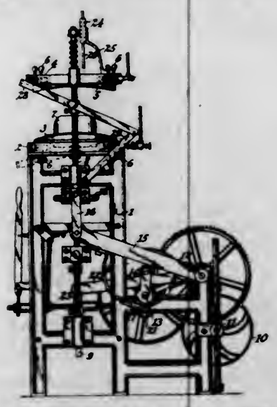
the edge of said screen, a channel guide strip for said guide rod, a clip attached to said screen and slidably interlocked with said channel guide strip, a second channel strip over said channel guide strip, and adjusting means for said channel strips as to one another, substantially as and for the purpose specified.



5. In screen construction, a roller screen 17 having a looped edge, a guide rod 18 working in said loop, a channel guide strip 10, a double holding clip 19 and rivets 20 for said guide rod in said channel strip, said channel strip having a slot 23, and a clip 21 attached to said screen and slidably engaging in said slot, substantially as and for the purpose specified.

[Claim 6 not printed in the Gazette.]

881,508. HAT-BLOCKING MACHINE. ARTHUR B. WARING, Yonkers, N. Y. Filed Sept. 24, 1904. Serial No. 225,768.

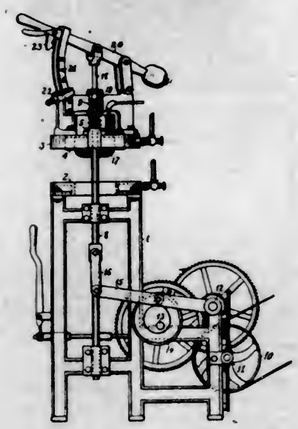


1. In a hat-blocking machine, the combination of two brim-clamps with curved surfaces one of which is convex and the other concave, means for closing the same, a hat-block, means on which the hat-block is adjustably supported for moving the hat-block through the brim-clamps, and a gage comprising a slide supported by one of the brim-clamps and a slidable member supported by the slide in the path of the hat-block, substantially as described.

2. In a hat-blocking machine, the combination of brim-clamps, means for closing the same, a hat-block, means on which the hat-block is adjustably supported for moving the hat-block through the brim clamps, and a gage comprising a slide supported by one of the brim-clamps and a slidable member supported by the slide in the path of the hat-block, one of the members of the gage being provided with a scale and the other member with a marker for the scale, substantially as described.

3. In a hat-blocking machine, the combination of brim-clamps, one movable toward the other, a guard, and means for automatically moving the movable brim-clamp away from and returning it to the other brim-clamp and passing the guard in front of the space between the brim-clamps in advance of the closure of the brim-clamps, substantially as described.

881,509. HAT-BLOCKING MACHINE. ARTHUR B. WARING, Yonkers, N. Y. Filed Apr. 20, 1905. Serial No. 256,520.



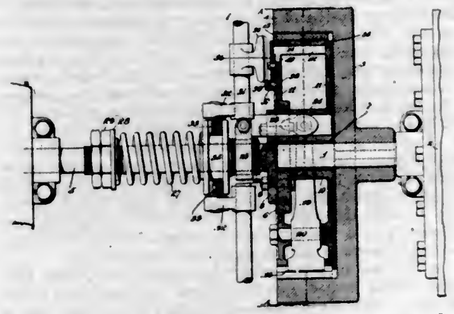
1. In a hat blocking machine, the combination of separate clamping means for the inner and outer edges of a hat-brim, a reciprocating member, connections between both clamping means and the reciprocating member whereby both clamping means are concurrently operated and the clamping means for the inner edge of the hat-brim is less positively clamped than the clamping means for the outer edge of the hat-brim, a hat-block, and means for moving the hat-block through the brim-clamps, substantially as described.

2. In a hat blocking machine, the combination of separate clamping means for the inner and outer edges of a hat-brim, a reciprocating member, connections between the outer clamping means and the reciprocating member, elastic connections between the inner clamping means and the outer clamping means whereby the clamping means for the inner edge of the hat-brim is less positively clamped than the outer edge of the hat-brim, a hat-block, and means for moving the hat-block through the brim-clamps, substantially as described.

3. In a hat blocking machine, the combination of separate clamping means for the inner and outer edges of a hat-brim, means for heating the clamping means, a reciprocating member, connections between both clamping means and the reciprocating member whereby both clamping means are concurrently operated and the clamping means for the inner edge of the hat-brim is less positively clamped than the clamping means for the outer edge of the hat-brim, a hat-block, and means for moving the hat-block through the brim-clamps, substantially as described.

4. In a hat blocking machine, the combination of separate clamping means for the inner and outer edges of a hat-brim, a reciprocating member, connections between both clamping means and the reciprocating member whereby both clamping means are concurrently operated and the clamping means for the inner edge of the hat-brim is less positively clamped than the clamping means for the outer edge of the hat-brim, a hat-block and a hand lever for moving the hat-block through the brim-clamps, substantially as described.

881,510. FRICTION-CLUTCH. LYMAN E. WARREN and AUGUSTUS ANDERSON, New York, N. Y. Filed Mar. 12, 1907. Serial No. 361,909.



1. A clutch having a member with a friction surface, and a separate drum and an expanding band, the said drum carrying a permanent flange and an adjustable flange.

2. A clutch having a member with a friction surface, and a separate drum and an expanding band, the said drum carrying a fixed flange and a button, which constitutes a means for assisting the fixed flange in holding the band in place.

3. A clutch having a member with a friction surface, and a separate drum and an expanding band, the said drum carrying a fixed flange on one side and a pivoted button on the other, the said button having a latch for securing it in position.

4. A clutch which comprises a driving member, having an internal bearing surface, a driven member having an expanding band, a fixed and an adjustable flange on the driven member for confining the band, means for expanding the band against the bearing surface, the said means comprising a fixed abutment and a moving abutment; the fixed abutment being located beyond the moving abutment in relation to the direction of the rotation of the parts, whereby the clutch will drive against the moving abutment.

5. A clutch which has an interrupted expanding band, and a drum with abutments, and an adjustable and a permanent flange confining the band, the abutments and ends of the band being inclined, so that the working stress will force the band toward the permanent flange, and hold it in place.

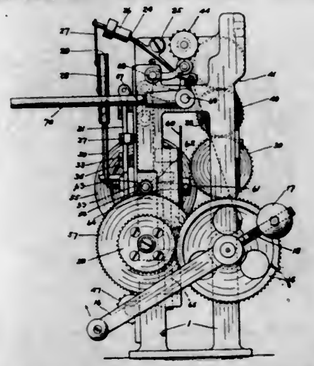
[Claims 6 to 11 not printed in the Gazette.]

881,511. BENCH-DRAWER. BEVERLY L. WATERS, Aurora, Ill. Filed Feb. 2, 1907. Serial No. 355,508.



In combination, a sheet metal drawer plate having two parallel edges bent downwardly and inwardly and a drawer adapted to be supported thereby, said drawer consisting of sheet metal and having lateral slides of double thickness formed integral with said drawer, said drawer having also a portion 6^c integral with and depending from said slide and lying adjacent to the drawer sides for stiffening the same, substantially as described.

881,512. MOVING-PICTURE-PROJECTING MACHINE. OAVILLE T. WEISER, Philadelphia, Pa., assignor to Siegmund Lubin, Philadelphia, Pa. Filed Mar. 21, 1907. Serial No. 363,552.



1. In apparatus of the class described, mechanism for moving a film, a device having an aperture through which light is projected against said film, a screen having guides permitting its movement into positions for covering and uncovering said aperture, a handle which operates the mechanism for moving the film, and mechanism comprising a clutch whereby said screen is withdrawn from said aperture on turning said handle and is automatically returned on releasing said handle.

2. In apparatus of the class described, a screen, having one or more guides upon which it reciprocates a lever connected with said screen, a revoluble shaft, a wheel normally loose on said shaft, means for connecting said wheel and lever, a handle, mechanism comprising a clutch operated by said handle for engaging said wheel, and means whereby said clutch is automatically released on releasing said handle.

3. In apparatus of the class described, a movable screen, a revoluble shaft, mechanism whereby said screen is connected with said shaft, devices whereby said mechanism is clutched and unclutched in relation to said shaft, a handle, mechanism through which said handle operates said devices, film feeding mechanism, and gearing operated by said handle for operating said feeding mechanism.

4. In apparatus of the class described, a movable screen, a revoluble shaft, mechanism whereby said screen is connected with said shaft, clutching devices by which said mechanism is fixed and unfixed in relation to said shaft, a sleeve movable longitudinally in relation to said shaft to engage and disengage said clutching devices, a handle, and means whereby said handle revolves said shaft and moves said sleeve longitudinally.

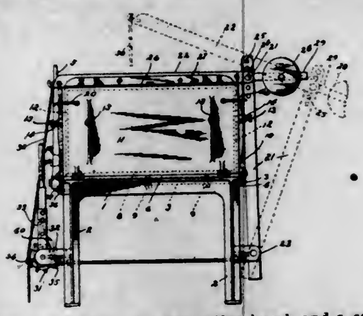
5. In apparatus of the class described, a revoluble hollow shaft, a shaft movable longitudinally in said hollow shaft and fixed so as to revolve therewith, a handle having a limited motion of revolution with relation to said shafts, means whereby said handle moves one of said shafts longitudinally with relation to the other, a movable screen, and means connected with said shafts whereby said screen is operated.

[Claims 6 to 9 not printed in the Gazette.]

881,513. CEMENT-BLOCK MACHINE. JOHN WENGS, Monroe, Mich. Filed Sept. 23, 1907. Serial No. 394,101.

1. The combination of a supporting bench and a cement block mold hinged to the bench having adjustably secured end, side and bottom walls, with means for forcing a cover into the mold to a predetermined distance above the bottom board consisting of an upright link pivoted to one end of the bench, a presser bar adjustably pivoted at one end to the upper part of the link to swing in a vertical plane above the mold when the latter is upright, a cover on the bar, a sprocket wheel journaled on the bench in the plane

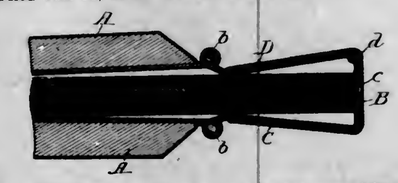
of oscillation of the lever, a sprocket chain on the bar adapted to drop over and engage the sprocket wheel when the bar is turned down over the mold, and a ratchet lever for operating the sprocket wheel.



2. The combination of a supporting bench and a cement block mold hinged to the bench having adjustably secured end, side and bottom walls, with means for forcing a cover into the mold to a predetermined distance above the bottom board consisting of an upright link pivoted to one end of the bench, a presser bar adjustably pivoted at one end to the upper part of the link to swing in a vertical plane above the mold when the latter is upright, a cover on the bar, a sprocket wheel journaled on the bench opposite the link in the plane of oscillation of the lever, a sprocket chain on the bar, adapted to drop over and engage the sprocket wheel when the bar is turned down over the mold, a counterbalance weight secured on an extension of the bar beyond the link adapted to swing the lever clear of the mold when the chain is disengaged from the sprocket and a ratchet lever for operating the sprocket wheel.

3. The combination of a supporting bench and a cement block mold hinged to the bench having adjustably secured end, side and bottom walls, with means for forcing a cover into the mold to a predetermined distance above the bottom consisting of an upright link pivoted to one end of the bench, a presser bar adjustably pivoted at one end to the upper part of the link to swing in a vertical plane above the mold when the latter is upright, a cover on the bar, a sprocket wheel journaled on the bench opposite the link in the plane of oscillation of the lever, a sprocket chain on the bar adapted to drop over and engage the sprocket wheel when the bar is turned down over the mold, an alarm signal on the bench adapted to be sounded by the bar when the latter has reached a predetermined position, and a ratchet lever for operating the sprocket wheel.

881,514. TEMPORARY BINDER FOR LOOSE LEAVES. HERMAN WIEDMAN, Chicago, Ill., assignor to J. S. McDonald Company, Chicago, Ill., a Corporation of Illinois. Filed Feb. 18, 1907. Serial No. 357,946.



1. A temporary binder for loose leaves comprising suitable covers, and a flexible jointed back consisting of an upper and a lower plate each hinged respectively to said covers the rear longitudinal portion of one of said plates being bent at an angle to itself and hinged to the rear longitudinal portion of the opposite plate by a hinge the knuckles of which do not separate said plates, and a sheet metal spring-clamp between which the rear portions of said plates are held and normally pressed toward each other.

2. A temporary binder for loose-leaves comprising suitable covers, and a flexible jointed back consisting of upper and lower plates hinged respectively to said covers, the rear longitudinal portion of said lower plate being bent at an angle to itself and having the rear longitudinal portion of the upper plate hinged to the free edge thereof the diameter of the knuckles of said hinge being less than the space between said plates and a sheet metal spring-clamp substantially triangular-shape in cross-section between the divided longitudinal edges of which said plates are held and kept normally pressing toward each other.

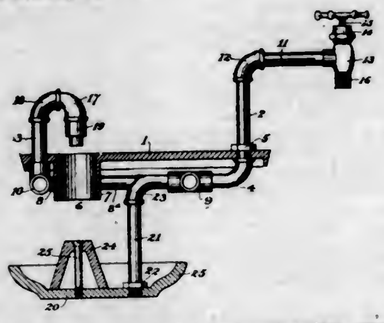
3. A temporary binder for loose-leaves comprising suitable covers, an upper and a lower hinged binding plate one of which has its outer longitudinal edge bent at an angle to itself and has the opposite plate hinged thereto by a hinge the knuckles of which do not separate said plates, and a metallic spring-clamp between which the outer members of said binding-plates are clamped.

4. A temporary binder for loose-leaves comprising suitable covers, hinged upper and lower binding-plates to the forward members of which said covers are secured, one of said plates having its free longitudinal portion bent at an angle to itself and the opposite plate hinged to the edge thereof by a hinge the knuckles of which do not separate said plates, and a sheet metal spring-clamp substantially triangular-shaped in cross-section between which the outer members of said binding-plates are clamped.

5. A temporary binder for loose-leaves comprising suitable covers, an upper and a lower binding-plate having their inner members hinged to said covers, the inner longitudinal portion of said lower plate being bent at an angle to said plate and hinged to the inner edge of said upper plate by a hinge the knuckles of which do not separate said plates, and a sheet metal spring-clamp between the abutting free edges of which the attached members of said plates are clamped.

[Claim 6 not printed in the Gazette.]

881,515. HYDROCARBON-BURNER. WILHELM H. WILHELMY, Nebraska City, Nebr. Filed Sept. 24, 1907. Serial No. 394,270.

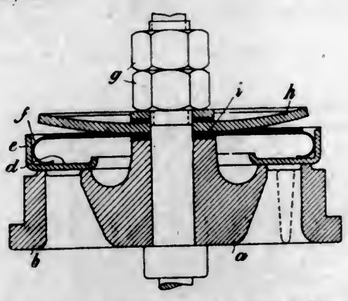


1. A burner, comprising a supporting-plate provided with a downwardly-extending flanged mixer-opening, an inlet-pipe and an outlet-pipe intersecting said supporting-plate said outlet-pipe terminating in a depending burner-tip immediately above said mixer-opening, a horizontally-arranged elliptical vaporizing yoke-pipe mounted immediately beneath said supporting-plate and intersected and carried by said inlet and outlet-pipes by means of cross and T-pipe fittings, respectively, and a flanged base-pan carried beneath said mixer-opening by means of a vertical stem secured to said cross-pipe fitting.

2. In a burner, an elliptical vaporizing yoke-pipe comprising two U-shaped branches having their ends threaded and taking into cross and T-pipe fittings, oil inlet and vapor outlet pipes communicating with said yoke-pipe through said cross and T-pipe fittings, respectively, and a peripherally-flanged base-pan suspended beneath said yoke-pipe by means of a vertical stem secured to said cross-pipe fitting.

3. In a burner, the combination with a supporting-plate carrying a vaporising yoke-pipe made up of two branches and a mixer-opening provided with a depending flange, a cross and T-pipe fitting uniting said two branches of the yoke-pipe, and an oil inlet and vapor outlet pipe secured to said cross and T-pipe fittings, respectively; of a peripherally-flanged base-pan suspended beneath said supporting-plate and yoke-pipe by means of a vertical stem secured to said cross-pipe fitting, and a flame-spreader-head carried by said base-pan and mounted directly beneath said mixer-opening.

881,516. ANNULAR VALVE FOR COMPRESSORS, BLOWING-ENGINES, AND THE LIKE. JEAN A. WILLAREDT, Brussels, Belgium. Filed Oct. 12, 1907. Serial No. 397,145.



1. In a valve, the combination of a central stem or rod, an annular seat thereon, an annular plate on said seat having at its outer annular edge inwardly and upwardly facing parts, a series of radial springs fastened to the stem and having their outer ends shaped to fit against said inwardly and upwardly facing parts of the valve plate, to center the plate and also to normally hold it against its seat.

2. In a valve, the combination of a central stem or rod, an annular seat thereon, an annular plate on said seat having at its outer annular edge inwardly and upwardly facing parts, a series of radial springs fastened to the stem and having their outer ends shaped to fit against said inwardly and upwardly facing parts of the valve plate, to center the plate and also to normally hold it against its seat, a circular stop on the stem to limit the upward movement of the springs and the plate, and means for removably clamping the stop and the springs in place on the stem.

881,517. ELECTRIC FURNACE. CHARLES E. WILSON, Ferris, W. Va. Filed Sept. 15, 1906. Serial No. 334,749.

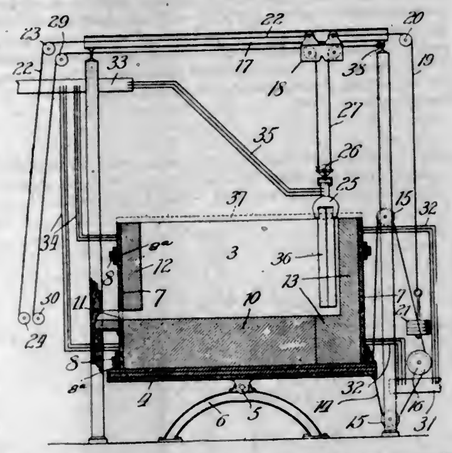
1. In an electric furnace, the combination of a melting-receptacle provided with main electrodes, and an exciting electrode movable between the main electrodes, toward one and away from the other, for the purpose set forth.

2. In an electric furnace, the combination of a melting-receptacle provided with main electrodes, and an insertible and withdrawable exciting electrode with means for moving it between the main electrodes, toward one and away from the other, for the purpose set forth.

3. In an electric furnace, the combination of a melting-receptacle provided with main electrodes, an insertible and withdrawable exciting electrode and an electric controller device operatively connected with the exciting electrode for moving the same between the main electrodes, toward one and away from the other, for the purpose set forth.

4. In an ore-smelting electric furnace, the combination of a tiltable melting-receptacle provided with electrodes toward opposite sides, and means for tilting the receptacle to prevent accumulating molten metal from contacting with one electrode and to maintain the desired resistance through the heat-generating material overlying the metal.

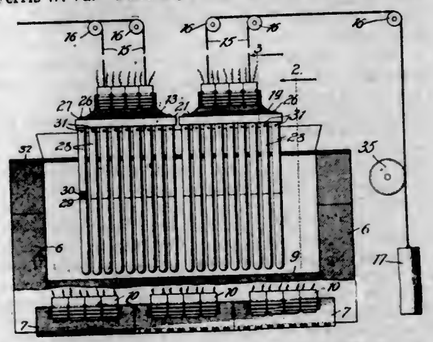
5. In an ore-smelting electric furnace, the combination of a tiltable melting-receptacle provided with electrodes toward opposite sides, and an electrically actuated controller device operatively connected with the receptacle for tilting the same, to prevent accumulating molten



metal from contacting with one electrode and to maintain the desired resistance through the heat-generating material overlying the metal.

[Claims 6 to 8 not printed in the Gazette.]

881,518. ELECTRIC FURNACE. CHARLES E. WILSON, Ferris W. Va. Filed Sept. 15, 1906. Serial No. 334,750.

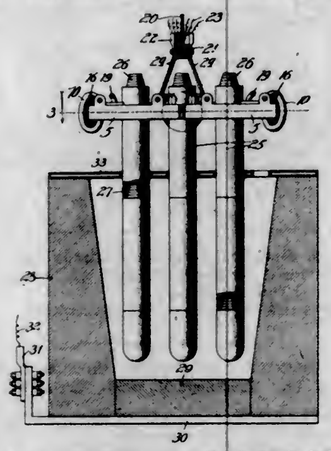


1. In an electric furnace, the combination of a melting chamber, an electrode in the base of the chamber forming a lower terminal of the electric-current supply, a plurality of suspended and independently-adjustable heads above the said chamber independently connected with said supply, and a suspended electrode removably mounted in each of the said heads, the suspended electrodes forming together an upper terminal, in the chamber, of the electric-current supply, whereby the electrode at one head may be renewed while the current passes through the other suspended electrode, for the purpose set forth.

2. In an electric furnace, the combination of a melting chamber, an electrode in the base of the chamber forming a lower terminal of the electric-current supply, a plurality of suspended and independently-adjustable heads, above the said chamber, independently connected with said supply, and a battery of pencils removably mounted in each of the said heads and forming together an upper terminal, in the chamber, of the electric-current supply, whereby pencil renewals may be made at one suspended electrode while the current passes through the other suspended electrode, for the purpose set forth.

3. In an electric furnace, the combination of a melting-chamber, a lower electrode in the chamber, a pencil holding head independently connected with the source of current-supply, a plurality of pencils for said head independently mounted therein at their upper ends and forming an upper electrode, and a cover for the melting-chamber having openings through it for the passage of the pencils, each pencil comprising a plurality of readily applied sections joined together at their ends and provided, near their upper ends, with perforations to receive sustaining pins, for the purpose set forth.

881,519. ELECTRODE-HOLDER FOR ELECTRIC SMELTING-FURNACES. CHARLES E. WILSON, Ferris, W. Va. Filed Sept. 15, 1906. Serial No. 334,751.



1. In an electric-furnace pencil-electrode holder, the combination of clamping means for releasably engaging a pencil and provided with an opening therefor, and a pencil formed of longitudinal sections joined together with the upper section provided with a joint-member and releasably held by said clamping means in said opening to adapt it for coupling to said joint-member another section equipped with a joint-member to engage therewith, for the purpose set forth.

2. An electric-furnace current-distributing holder for a plurality of pencil electrodes, comprising, in combination, a head having pencil receiving openings through it, electric current conducting means connected with the head, and a pencil-support comprising current-conducting pencil engaging and releasing clamping means on the head at each of said openings.

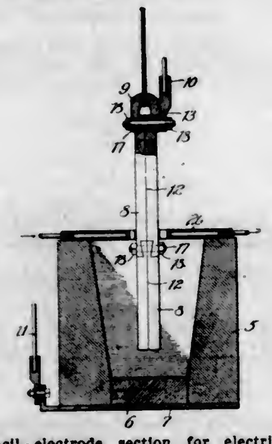
3. An electric-furnace current-distributing holder for a plurality of pencil electrodes, comprising, in combination, a water jacketed head having pencil receiving openings through it, electric current conducting means connected with the head, and a pencil-support, comprising water-jacketed pencil engaging and releasing clamping means on the head at each of said openings.

4. In an electric furnace, the combination of a current distributing holder for a plurality of pencil electrodes, comprising, a head having pencil receiving openings throught it, electric-current conducting means connected with the head, and pencil engaging and releasing clamping means on the head at said openings, and pencils formed of longitudinal sections fastened together at their ends passing through said openings and adjustably fastened therein by said clamping means.

5. An electric furnace current-distributing holder for a plurality of pencil electrodes, comprising, in combination, a pencil-supporting head connected with the electric-current supply and having an opening through it for each pencil, each opening being formed with a segmental wall against which the pencil fits at one side, an adjustable clamping block in each opening against which the pencil fits at the opposite side, and set-screws in the sides of the head engaging said blocks, whereby each pencil may be positioned independently of the others.

[Claim 6 not printed in the Gazette.]

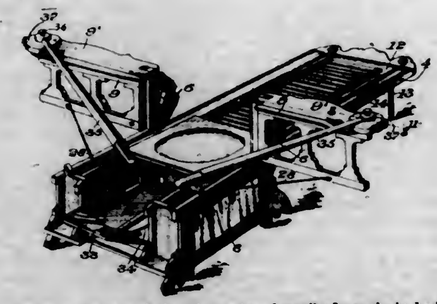
881,520. SECTIONAL ELECTRODE FOR ELECTRIC FURNACES. CHARLES E. WILSON, Ferris, W. Va. Filed Sept. 15, 1906. Serial No. 334,752.



1. A pencil-electrode section for electric furnaces, formed of separate longitudinally extending members, fitting closely together at adjacent sides and provided at opposite ends with means for clamping the members together, and for securing the sections endwise to other sections.

2. A pencil electrode for electric furnaces, formed of a plurality of end-wise engaging sections, each comprising a block of carbonaceous material formed of a plurality of separate longitudinal members fitting closely together, each block being provided in one end with a dove-tail groove and a perforation and at its opposite end with a dove-tail tongue and a perforation, the tongue on one section fitting the groove of the adjacent section in a manner to cause the perforations in their adjacent ends to register with each other, and a graphite bolt passing through the said registering perforations.

881,521. MECHANICAL CHAIR. STEPHEN G. WILSON, Philadelphia, Pa. Filed Dec. 24, 1906. Serial No. 349,346.



1. In a device of the character described, a chair body, a chair back, a side member, side arm members pivoted at different points and capable of extending from the side of the chair, a pin connecting the side arm members and securing them in extended position, and an exercising device coöperating with the side arm members.

2. In a device of the character described, a movable chair back, a body, coöperating guides upon the back and body and a movable seat moving upon said guides.

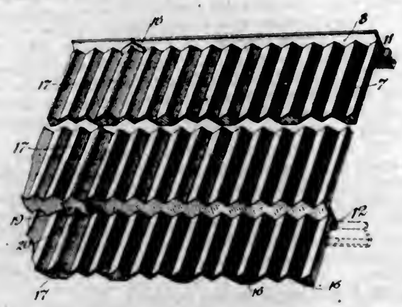
3. In a device of the character described, a movable chair back and body, a seat movable thereon, side and arm members extendable to form oar supports, oars fitting therein and means for retarding the stroke of said oars.

4. In a device of the character described, an oar, two supports therefor, ratchet members upon said supports bearing right and left relation, a ratchet member upon the oar, and means for giving frictional retardation to the movement of the oar when mounted upon either of said supports.

5. In a device of the character described, an exercising chair, an arm joined at one end thereto, means for supporting the arm in outstanding position, an oar, a ratchet connected to said oar, means upon the support for engaging said ratchet and frictional retarding means interposed between the ratchet and the arm.

[Claims 6 to 13 not printed in the Gazette.]

881,522. FIREPROOF ROOFING-TILE. EDWARD J. WINSLOW, Chicago, Ill. Filed July 14, 1906. Serial No. 326,269.



1. A roofing tile formed from plastic material, having a main body member relatively thin and longitudinally corrugated as to both its upper and lower sides, an upstanding flange extending across its upper margin, a downturned flange extending across its upper end margin, a downturned flange extending across its lower end margin, and a plurality of reinforcing ribs extending across the main body at the lower side thereof one or more of which extends across the central part of the tile.

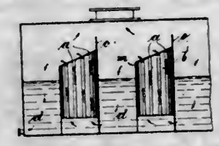
2. A roofing tile formed from plastic material, having a main body of generally rectangular form and longitudinally corrugated both as to its upper and lower sides, marginal strengthening ribs extending along each of the four sides of the tile, longitudinal ribs extending the length of the tile between the lateral margins thereof, upstanding and downturned flanges extending across its upper margin, a downturned flange extending across its lower end margin, and reinforcing wires extending through the body of the tile.

3. A roofing tile formed from plastic material, having a main body of generally rectangular form and longitudinally corrugated both as to its upper and lower sides, integral marginal strengthening ribs extending along each of the four sides of the tile, intermediate longitudinally extending strengthening ribs, intermediate transverse ribs, upstanding and downturned flanges extending along the upper margins of the tile, a downturned flange extending across its lower end margin, and reinforcing wires extending longitudinally through said intermediate longitudinal and transverse ribs, said reinforcing wires being located below near the lower surfaces of the respective ribs within which they are embedded.

4. In combination with a pair of roofing tiles arranged edge to edge, the upper surfaces of the meeting edges of which are inclined upwardly and towards each other, a cap member having its under side recessed and constructed to fit upon and overlap the meeting edges of said tiles, said cap member being provided with an upstanding flange across its upper end and a downturned flange across its lower end, and being of a length slightly in excess of the length of the tiles, substantially as described.

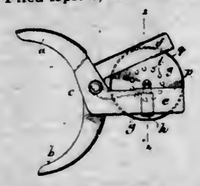
5. In combination two tiers of roofing tiles, each tier comprising corrugated tile members arranged edge to edge, the lateral edges of said tiles meeting in a line extending coincident with the apex of a corrugation, and cap members arranged to overlie the meeting edges of the laterally contiguous tiles, each cap member being longitudinally grooved or recessed in its under side to fit upon the meeting edges of the tiles, and provided at its upper end with an upstanding flange and at its lower end with a downturned flange, the cap member of one tier of tiles being of a length to extend slightly below the lower edges of the tiles it overlies and the upper flange of the next lower cap member being hooked beneath and interengaged with the depending flange of the upper cap member, substantially as described.

881,523. APPARATUS FOR CONTINUOUS EVAPORATION. HEINRICH WINTER, Charlottenburg, Germany. Filed Oct. 31, 1904. Serial No. 230,846.



In an apparatus for continuous evaporation, the combination of a casing and pairs of chambers within said casing spaced from the top thereof, each pair comprising a heating-chamber and a collecting- or return-chamber, the heating-chamber being provided with heating-tubes and an upper heating-plate obliquely situated, the collecting-chamber communicating at its lower portion with the adjacent heating-chamber of the next pair of chambers.

881,524. PAPER-PUNCH. SIGMUND WOLLHEIM, Milwaukee, Wis. Filed Apr. 4, 1904. Serial No. 201,480.



1. In a paper punch the combination of two connected and opposing jaws movable towards and from each other, a combination die stationarily mounted on one of said jaws, and a punch plate pivotally connected with the other jaw independently of the die jaw and provided with fixed teeth or projections arranged on one of its flat faces in a circular series of groups, each of which represents a character and is adapted to be turned into position to register with said die and then to be moved with the jaw to which said plate is pivoted towards the other jaw into engagement with the die, substantially as described.

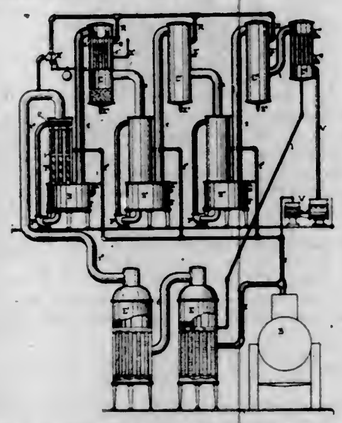
2. In a paper punch the combination of two connected and opposing jaws movable towards and from each other, a die fixed on one of said jaws, a punch plate pivotally and yieldingly connected with the other jaw and provided with fixed teeth or projections arranged on one of its flat faces in a circular series of groups each of which represents a character and is adapted to be turned into register with said die, said punch plate and the associated jaw having interengaging parts on their adjoining faces arranged to hold any desired character on the punch plate in its proper working relation to said die, substantially as described.

3. In a paper punch the combination of pivotally connected levers having opposing jaws a punch plate provided with a jointed stem which is adapted to turn and move endwise in one of the jaws, substantially as described.

4. A paper punch comprising pivotally connected levers, a punch plate adjustably connected with one lever and provided with teeth or projections grouped to form a series of characters, a perforated combination die plate on the other lever, an inking pad and a spring yieldingly pressing said pad against the back of the die plate, substantially as described.

5. In a paper punch the combination of a pair of pivotally connected levers having opposing jaws, a folding punch plate pivotally connected with one of said jaws by a jointed stem and provided with teeth or projections grouped to form a circular series of characters, a part on the opposing jaw against which the paper to be punched is held, and means for holding said punch plate with any desired character in working position opposite said part, substantially as described.

881,525. PROCESS OF DISTILLING GLYCERIN. FRANK J. WOOD, New York, N. Y., assignor to Marx and Rawolle, New York, N. Y., a Corporation of New York. Filed Mar. 22, 1905. Serial No. 251,520.



1. The process of effecting a series of glycerin distillations, consisting of successively combining a plurality of bodies of glycerin with a single jet of steam flowing through all of the stills in which the bodies of glycerin are contained, and condensing the glycerin vapors obtained from each body of glycerin.

2. In the process of distilling glycerin, successively combining a single column of steam with a plurality of bodies of glycerin, and condensing the vaporized glycerin of each combination while maintaining the steam, the latter combining with a succeeding body of glycerin.

3. The process of distilling glycerin consisting of utilizing a single jet of steam for a series of successive distillations, combining with the steam jet in each distillation a flowng column of glycerin, and condensing the glycerin vapors of each distillation while maintaining the steam, the latter combining with a succeeding column of glycerin.

4. The process of distilling glycerin consisting of heating columns of glycerin in series, successively combining with the columns of glycerin a single jet of steam, and condensing the vaporized glycerin of each column while maintaining the steam, the latter combining with a succeeding column of heated glycerin.

5. The process of effecting a series of glycerin distillations consisting of successively combining flowing columns of glycerin with a single jet of steam, superheating the combined vapors at each distillation, and condensing the glycerin vapors obtained from each column of glycerin.

[Claims 6 to 15 not printed in the Gazette.]

881,526. ORE-SEPARATOR. JAMES R. YOUNT, Nyssa, Oreg. Filed June 24, 1907. Serial No. 380,536.



1. The combination with a sluice; of a plurality of riffles suspended therein, each riffle comprising a deflecting member and a pocket member, the deflecting member of each riffle being disposed below the pocket member of the adjoining riffle.

2. The combination with a sluice; of a plurality of riffles suspended therein, each riffle comprising a cross bar and depending oppositely curved members integral therewith, one of said members constituting a deflector and the other member constituting a gold retaining pocket.

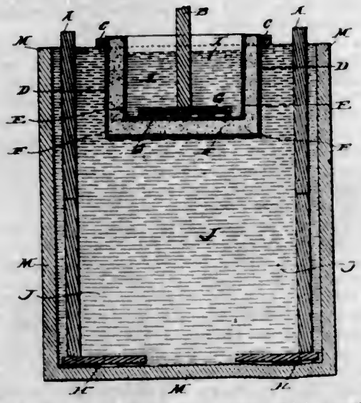
3. The combination with a sluice; of a plurality of riffles suspended therein and forming a water passage thereunder, each riffle comprising a deflecting member curved toward the sluice inlet, and an oppositely extending member constituting a gold retaining pocket, each pocket being disposed above the deflecting member of the adjoining riffle.

4. The combination with a sluice having a fabric covering on the bottom thereof; of a plurality of riffles suspended within the sluice and forming a water passage thereunder gradually diminishing in size toward one end of the sluice, each riffle comprising a deflecting member curved toward the sluice inlet, and a shorter oppositely extending member constituting a pocket.

5. The combination with a sluice having a waved bottom and a fabric covering thereon; of a plurality of riffles suspended within the sluice and forming a water passage thereunder gradually diminishing in size toward one end of the sluice, each riffle comprising a deflecting member curved toward the sluice inlet, and a shorter oppositely extending member constituting a pocket, and a cover upon the riffles.

[Claim 6 not printed in the Gazette.]

881,527. PROCESS FOR TREATING COMPLEX COBALT ORES AND FOR REFINING COBALT FROM NICKEL, ARSENICAL, AND SILVER-BEARING ORES. ERNEST E. ARMSTRONG, Niagara Falls, N. Y. Filed May 1, 1906. Serial No. 314,624.



1. The process of separating cobalt which consists in electro chemically precipitating the cobalt as oxid by treating a solution of the same to electrolysis in the presence of a halogen salt of a metal.

2. The process of separating cobalt which consists in electro chemically precipitating the cobalt as oxid by treating a solution of the same to electrolysis in the presence of a chlorid.

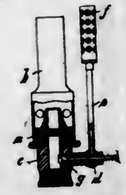
3. The process of separating cobalt which consists in electro chemically precipitating the cobalt as oxid by treating a solution of the same to electrolysis by an electrode which is not soluble in the electrolyte in the presence of a halogen salt of a metal.

4. In the process of refining cobalt solution containing iron, the steps which consist in treating a solution of the same to electrolysis in the presence of a halogen salt of a metal until the iron is converted into the ferric state and precipitating the iron compound.

5. The process of separating cobalt which consists in electro chemically precipitating the cobalt as oxid by treating the same to electrolysis in the presence of a halogen salt of a metal until the iron is converted into the ferric state, interrupting the electrolysis, precipitating the iron compound, and then continuing the electrolysis until the cobalt is electro chemically precipitated as oxid.

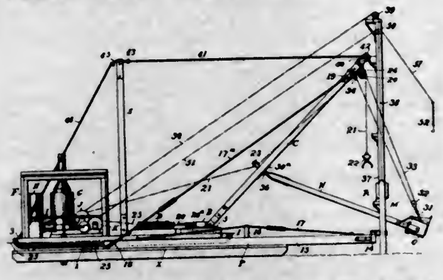
[Claims 6 to 8 not printed in the Gazette.]

881,528. IGNITION DEVICE FOR GAS-BURNERS. MAX BAER and PAUL FLACHSHAAR, Berlin, Germany. Filed Sept. 20, 1905. Serial No. 279,254.



The combination, with a gas-burner having a main gas-passage in the body thereof, of a side-tube extending laterally from said body and having a gas-passage leading laterally from said main gas-passage, an ignition-tube mounted on said side-tube and a valve to control said lateral gas-passage movable at right angles to the main gas-passage and into the same when said valve is opened, whereby the flow of gas through said main-gas passage is reduced.

881,529. COMBINED LOADER, EXCAVATOR, AND PILE-DRIVER. CLAUDE L. BAKER, Sr., Chatawa, Miss., assignor of one-half to Edgar Goodwill, Chatawa, Miss. Filed Mar. 4, 1907. Serial No. 360,506.

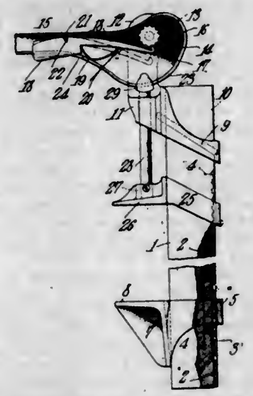


1. The herein described logging apparatus, having a base A, cross beam B pivoted thereto, shears C pivoted to the cross beam, and an engine D operably connected with the cross beam to swing the latter about its pivot, for the purpose described.

2. The combination of a base frame A provided with runners 1, 1, cross beam B pivoted thereto, and shears pivoted to the cross beam, and an engine operably connected with the said cross beam.

3. The combination of a base frame A provided with runners, 1, 1, cross beam B pivoted thereto, and shears pivoted to the cross beam, and an engine having a piston terminating in separated jaws, and a link having a ball and socket connection with the cross beam extending between the said jaws, and connected thereto by a removable pin.

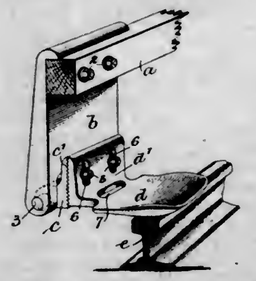
881,530. GLUING-CLAMP. EUGENE BARKER, Batavia, N. Y. Filed Apr. 5, 1907. Serial No. 366,600.



1. The combination with a bar having a jaw slidably mounted thereon; of a collar upon the bar, a guide extension integral therewith, an arm extending from said extension, a stud fixedly mounted upon the arm, a ratchet rigid with the stud, a cam revolubly mounted upon the stud and between the arm and ratchet, said ratchet being disposed entirely within the edges of the cam, a push bar mounted within the guide extension and connected to the jaw, said bar being movably engaged by the cam, and means carried by the cam for engaging the ratchet to lock the cam against movement in one direction.

2. The combination with a bar, a jaw thereon, and a second jaw slidably mounted upon the bar; of a cam pivotally connected to the bar, an actuating lever extending therefrom, a continuous flange extending laterally from the edges of the cam and lever, means engaging said flange for transmitting motion from the cam to the movable jaw, a ratchet wheel fixedly disposed upon the pivot of the cam and surrounded by the flange, a projection upon the actuating lever, a locking lever interposed between the flanges and upon the actuating lever, said locking lever having a recess disposed to receive the projection, means integral with the locking lever for engaging the ratchet to hold the cam against movement in one direction, and yieldable means for holding the locking lever normally in engagement with the ratchet, one end of the locking lever projecting through the flange of the lever and constituting a grip.

881,531. CURRENT-COLLECTOR FOR THE THIRD RAIL OF ELECTRIC RAILWAYS. JOHN G. BAUKAT, White Plains, N. Y. Filed Aug. 24, 1907. Serial No. 389,946.



1. In a current collector for the third rail of electric railways, a bracket, a part for attachment to the bracket and an integral part at right angles thereto for contact with the third rail, the portion at the intersection of said parts being apertured to leave connecting webs which are

breakable when the shoe comes in accidental contact with an unyielding obstruction.

2. In a current collector for the third rail of electric railways, a bracket, a part for adjustable attachment to the bracket and an integral part at right angles thereto for contact with the third rail, the portion at the intersection of said parts being apertured to leave connecting webs which are breakable when the shoe comes in accidental contact with an unyielding obstruction.

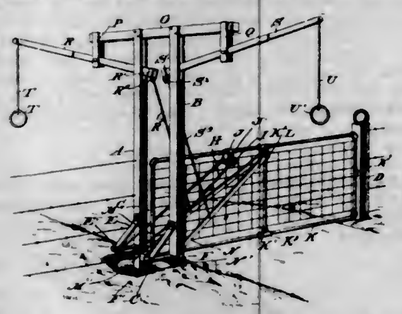
3. The combination with the shoe beam of a truck and a shoe hanger connected thereto, of a shoe bracket pivotally connected at the lower end of the shoe hanger and having a substantially vertical serrated outer face and an integral shoe and shoe-arm, the shoe arm having a serrated face to coutact with the serrated face of the shoe bracket and means for connecting the shoe and its arm in an adjustable relation with the bracket.

4. The combination with the shoe beam of a truck and a shoe hanger connected thereto, of a shoe bracket pivotally connected at the lower end of the shoe hanger and having a substantially vertical serrated outer face and an integral shoe and shoe-arm, the shoe arm having a serrated face to contact with the serrated face of the shoe bracket, means for connecting the shoe and its arm in an adjustable relation with the bracket, and a spring device for moving the shoe towards the third rail so as to maintain contact between the parts.

5. The combination with the shoe beam of the truck of an electric car, of a shoe hanger and means for connecting the same together, said shoe hanger being cut away at its lower edge so as to produce side lugs, a pin passing through said lugs, a shoe bracket fitting between the lugs and apertured for said pivot pin, said shoe bracket having a rising portion and a substantially vertical serrated face, a shoe and integral shoe arm of cast metal, having slots, a serrated face to the shoe arm having an adjustable relation with the serrated face of the shoe bracket, and bolts passing through the vertical portion of the shoe bracket and through said slots in the shoe arm for connecting the parts together.

[Claim 6 not printed in the Gazette.]

881,532. GATE. JOHN H. BAUER and JOHN J. DILLON, Stanberry, Mo. Filed May 8, 1907. Serial No. 372,507.



1. In a gate, the combination with a pair of spaced posts connected together at their lower ends by a bar, and provided with slotted upper ends, of brackets secured to the rear of said posts adjacent the ground provided with bearing sleeves, rods provided with angled lower ends mounted in said bearing sleeves and provided with eyes at their upper ends, a pair of flat bars pivotally mounted on the inside face of said posts carrying a gate at the upper ends, a U-shaped clip secured on the top bar of said gate provided with outwardly extending bolts, the eyes of said rod being mounted on said bolts, a cross beam secured in the upper ends of said posts and carried by said cross-beam provided with links pivotally connected to the pair of flat bars.

2. In a gate, the combination with a pair of posts, provided with slotted upper ends, of a beam secured in said posts carrying brackets at its ends, levers mounted in said brackets carrying cables at their free ends, sleeves secured on the other end of said levers provided with eyes, brackets provided with bearing sleeves secured to the rear of the said posts, rods mounted in said sleeves connected to a U-shaped clip secured over the top bar of a gate, flat bars pivotally mounted on bolts secured to said post having their ends pivotally mounted on a bolt secured in the central bar of the gate, and links carried by the eyes of the sleeves secured on the levers connected to said bars, for the purpose described.

881,533. STERILIZING. EDWARD P. BECKWITH, Canenovia, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Nov. 9, 1905. Serial No. 286,499.



1. In a sterilizing apparatus, a fluid supply, an ozone generating chamber, and means for utilizing the flow of fluid in said apparatus to cool said ozone generating chamber and to produce a circulation of air therein.

2. In a sterilizing apparatus, a plurality of conducting surfaces separated by dielectric material, means for establishing an electric stress between said surfaces, means for cooling one of said surfaces with a flowing liquid, and means for utilizing said flowing liquid to circulate a gaseous cooling medium in proximity to another of said surfaces.

3. In a sterilizing apparatus, a plurality of concentric cylindrical conductors, means for establishing an electric stress between said conductors to produce ozone, means for supplying a liquid to the innermost of said conductors and means for permitting said ozone to contact with said liquid.

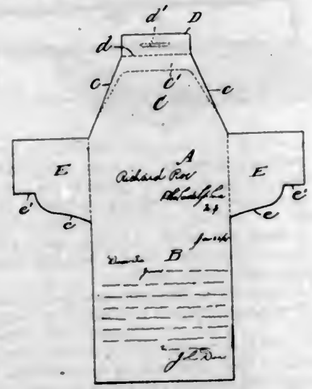
4. The combination of a plurality of concentric insulating tubes, a conductive coating for each of said tubes, means for establishing an electric stress between said coatings to produce ozone, and means for supplying a cooling liquid to the innermost tube, said tube having openings through which said ozone is entrained to purify said liquid.

5. In a fluid purifying apparatus, a mixing chamber, means for supplying fluid thereto to be purified, an ozone generating chamber surrounding said mixing chamber and communicating therewith, the walls of said mixing chamber forming a constriction in the path of said water to effect a circulation of air through said ozone chamber.

[Claims 6 and 7 not printed in the Gazette.]

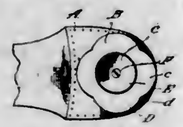
881,534. COMBINED LETTER-SHEET AND ENVELOP. CHARLES L. BENEDICT, Toronto, Ontario, Canada. Filed Feb. 7, 1907. Serial No. 356,283.

1. A combined letter sheet and envelop comprising a blank having an address receiving portion, for receiving the mailing address which is at the same time the address of the letter receiving portion, a letter receiving portion extending from one edge thereof and adapted to be folded onto the same, side flaps extending laterally from said address receiving portion and adapted to be folded onto said letter receiving portion when the same is folded onto said address receiving portion and to substantially cover said letter receiving portion, said side flaps having their outer corners on their edges adjacent to said letter portion, cut away to expose a small part of said letter receiving portion when folded onto the same and a sealing flap extending from the edge of said address portion opposite to the letter portion, said sealing flap being adapted to be folded onto said flaps and sealed thereto along its edges and also sealed to said small exposed part of said letter portion, substantially as described.



2. A combined letter sheet and envelop comprising a blank having an address receiving portion for receiving the mailing address which at the same time forms the address of the letter receiving portion, a letter receiving portion extending from one edge thereof and adapted to be folded onto the same, side flaps extending laterally from said address receiving portion and adapted to be folded onto said letter receiving portion when the same is folded onto said address receiving portion and to substantially cover said letter receiving portion, said side flaps having their outer corners on their edges adjacent to said letter portion, cut away to expose a small part of said letter receiving portion when folded onto the same and a sealing flap extending from the edge of said address portion opposite to the letter portion, said sealing flap being adapted to be folded onto said side flaps and provided with a gummed portion on the side opposite the writing receiving portion, for sealing the same to said side flaps and to the said small exposed part of the letter receiving portion, whereby the letter receiving portion when folded and any inclosure are substantially covered and protected by the side flaps, substantially as described.

881,535. HEEL. RICHARD H. BENNETT, Amsterdam, N. Y., assignor of one-third to David W. Davies and one-third to Samuel Winterbottom, Amsterdam, N. Y. Filed Nov. 11, 1907. Serial No. 401,564.



1. A heel formed of resilient material formed with a symmetrically scalloped periphery and having a central recess in the bottom thereof and a flat stiff plate in the bottom of said recess and of equal surface thereof, the heel and the plate being centrally bored and means therewith to attach the heel to the shoe, substantially as shown and described.

2. A heel formed with symmetrical indentations in the periphery thereof and with a central recess in the bottom of a diameter approximately one-half that of the heel, a stiff plate at the bottom of said recess and means passing through the plate and the heel at the center of each whereby to secure them in place, substantially as shown and described.

3. A heel formed with the outermost points of its periphery at an equal distance from the center and indented on its edge between such points, the central part of the bottom of the heel having a recess of substantial diameter and means therein for securing the heel to the shoe, whereby it may be turned to present different faces, of like appearance, to the rear, substantially as shown and described.

881,536. METHOD OF MANUFACTURING ARTIFICIAL CAOUTCHOUC. PETER BEREZIN, St. Petersburg, Russia. Filed Jan. 29, 1907. Serial No. 354,781.

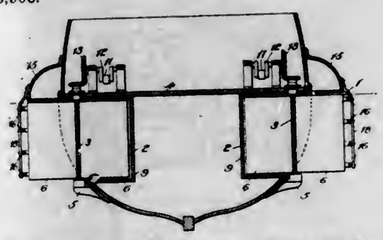
1. The method of producing artificial caoutchouc, consisting in treating an oil, as described, with sulfurous chlorid, dissolving the thus obtained mass in benzin, mixing this solution with a solution of matesite and of isoprene in benzin, and removing the benzin from the resulting product, substantially as set forth.

2. The method of producing artificial caoutchouc consisting in treating a vegetable oil, with sulfurous chlorid, dissolving the thus obtained mass in benzin, mixing this solution with a solution of matesite and of isoprene in benzin, and removing the benzin from the resulting product, with the aid of heat, substantially as set forth.

3. The method of producing artificial caoutchouc, consisting in treating sun-flower-oil with sulfurous chlorid, dissolving the thus obtained mass in benzin, mixing this solution with a solution of matesite and of isoprene in benzin, and removing the benzin from the resulting product, with the aid of heat and under a vacuum, substantially as set forth.

4. The method of producing artificial caoutchouc consisting in treating an oil, as described, with sulfurous chlorid, dissolving the thus obtained mass in benzin, mixing this solution, with a solution of matesite and of isoprene in benzin, and removing the benzin from the resulting product, under vacuum and with the aid of very slight heat, substantially and for the purpose as described.

881,537. MEANS FOR PROPELLING SHIPS. WILLIAM BETHANY, Mars, Ark. Filed Oct. 4, 1907. Serial No. 395,906.

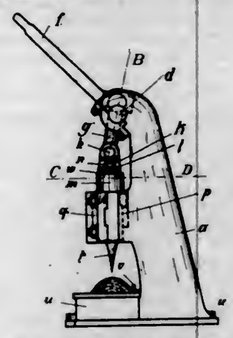


1. In propelling means for a ship, a casing of semi circular form within each side of the ship forming a chamber having an extended top about at the water line, and its open side in the plane of the outer wall, the flooring of the vessel and the top of the casing forming a double wall, a chambered hood secured to the ship's side and connected to the outer edge of the extended top of said casing and forming a water tight chamber overhanging the open side of the casing, and a propeller suspended by the flooring and supported in a bearing at the outer wall of the ship, and means for rotating said propeller.

2. In a ship, a casing of semi circular form within each side, the top of the casing secured to the ship's floor above

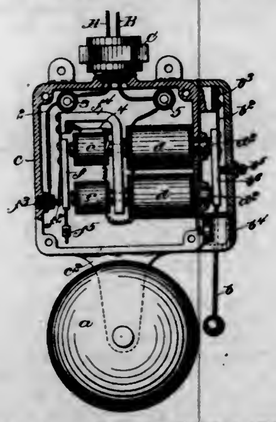
the water line, and forming a chamber, the top of the casing being extended and overhangs the top of said chamber the open side of which is in the plane of the outer wall, a propeller mounted in said casing and having its shaft suspended from the floor and stepped in a bearing, and a metallic hood secured to the ship's side and to the outer edge of the top case extension and forming a closed chamber overhanging the open side of the casing.

881,538. WOOD-CLEAVER. ADOLPH BIENK, Königsberg, Germany. Filed July 25, 1906. Serial No. 327,784.



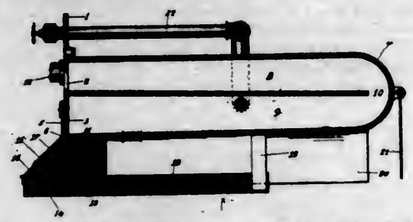
A wood cleaver comprising the combination of a block-frame, a crank-shaft on top supported therein, a connecting rod secured in the said crank-shaft, a foot rotarily attached to the bottom-end of the said rod, a vertical guide-block secured in the said frame-block a punch guided in the said guide block and vertically and axially movable therein, radial trunnions on the said punch, the said guide block having grooves receiving the said trunnions and being vertical and straight for the greater portion of their lengths and then turning into peripheral curves, a hatchet in the bottom-end of the said punch and a support adapted to receive and hold a log of wood at the foot of the machine and within reach of the said hatchet, substantially as described.

881,539. ELECTRIC BELL. DONALD M. BLISS, New York, N. Y. Filed Mar. 1, 1906. Serial No. 303,620.



An electric vibrator bell comprising a gong; a striker therefor; an armature connected with said striker; an electro-magnet to coöperate with said armature; a water-tight inclosing case for the windings of said electro-magnet, the polar extremities of said electro-magnet projecting through the wall of said case; a circuit interrupter contained in said case and consisting of an electro-magnet and a circuit-controlling armature; leading-in wires to supply the circuit through the electro-magnets inside the case; and a stuffing box for said leading-in wires to render the case completely water-tight.

881,540. OIL-BURNER. OSCAR E. BROWN and AUGUSTUS M. FIELD, Tulare, Cal.; said Brown assignor to said Field. Filed May 1, 1907. Serial No. 371,351.



1. In a device of the character described a box divided into two chambers connected at their inner ends, means for conveying oil to the upper chamber, an opening into the front of the lower chamber, a door swung in front of said opening and engaging with the bottom of said lower chamber to form an outlet, a burner pan, and means leading from the connection of said door and said bottom to said burner pan, as set forth.

2. In a device of the character described a box divided into two chambers connected at their inner ends, means for conveying oil to the upper chamber, an opening into the front of said lower chamber, the bottom of said lower chamber being beveled outwardly at such opening, a swinging door over said opening having a beveled lower end co-acting with said first named beveled end, a mixing box extending outward from said bevels, and a burner pan extending backward from said mixing box, as set forth.

3. In a device of the character described a box divided into two chambers connected at their inner ends, means for conveying oil into the upper chamber, an opening into the front end of said lower chamber, a swinging door covering said opening, the bottom thereof co-acting with the bottom of said lower chamber to form an outlet, a mixing box secured to said first named box beneath and extending outward from the said opening, said box being beveled from said opening outward, a door partly covering said beveled portion, a finger piece upward from said last named door and bearing against said first named door, and a burner pan extending backward from said mixing box beneath said first named box, as set forth.

4. In a device of the character described a front plate, a gas generating box bolted thereto, said box being divided into two chambers connected at their rear ends, an opening in said front plate into the lower one of said chambers, a door swung on said plate over said opening and engaging the bottom of said box, a burner pan disposed under said box, and means whereby the gas from said box will pass through said opening and into said pan, as set forth.

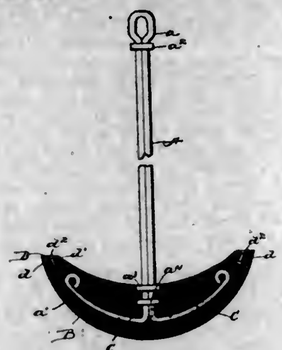
5. In a device of the character described a gas generating box, means conveying oil thereto, a mixing chamber secured thereto and extending outward from the front thereof, means admitting air therein, a burner pan extension from such chamber underneath said box, there being spaces intermediate the bottom of said box and the upper edges of the sides of said pan, and means conveying gas from such box to said mixing chamber.

[Claim 6 not printed in the Gazette.]

881,541. ANCHOR. RICHARD W. BUCKLEY, Jr., New York, N. Y. Filed July 18, 1907. Serial No. 384,443.

1. An anchor having a holding member of reinforced concrete provided with a concave upper surface and means for reinforcing the margin of said concrete.

2. In a land anchor, the combination, with a metallic shank, arms connected to said shank, and bars arranged transversely to said arms, of a mass of concrete inclosing said arms and bars.

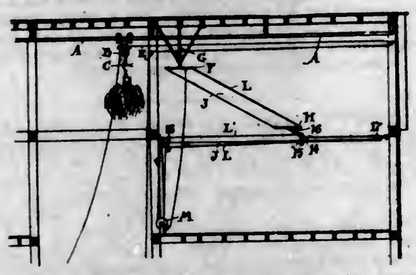


3. In a land anchor, the combination, with a metallic shank, arms extending radially from said shank, and bars bearing against said arms, of a mass of concrete inclosing said arms and bars.

4. In a land anchor, the combination, with a metallic shank, arms extending radially from and formed integral with said shank, and bars arranged transversely to said arms and decreasing in length from the shank toward the outer ends of the arms, of a circular mass of concrete inclosing said arms and bars.

5. In a land anchor, the combination, with a metallic shank, of a holding member formed of reinforced concrete connected to said shank, and means independent of the reinforcing means and arranged to support the outer margin of the concrete.

881,542. APPARATUS FOR UNLOADING HAY IN BARNS. CLARENCE L. BURGNER, Clinton, Ohio. Filed Apr. 20, 1907. Serial No. 369,371.



1. In a hay unloading apparatus, a main carrier and an auxiliary carrier for distributing the hay in the mow and a device connecting said parts adapted to open and release the auxiliary distributing carrier.

2. In a hay unloading apparatus, a main carrier for lifting the hay into the mow and a distributing carrier beneath the same, a downwardly opening hook connecting said carriers, and tracks for said distributing carrier adapted to convey the hay transversely over the mow.

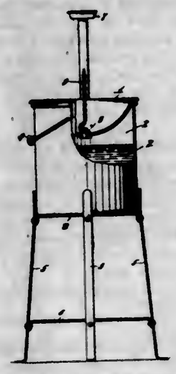
3. The main carrier and the distributing carrier separably connected therewith, one of said parts having a hook adapted to be swung open to effect such separation of said parts, and means to receive the distributing carrier when release occurs.

4. The main carrier having a downwardly opening hook and a distributing carrier engaged by said hook, a track adapted to receive said distributing carrier and means to open said hook automatically when said track is occupied by said distributing carrier.

5. In a hay unloading apparatus, a main carrier and a fixed track therefor, in combination with a distributing carrier, means separably uniting said parts and a separate track for said distributing carrier adapted to be variously disposed in respect to the main carrier track.

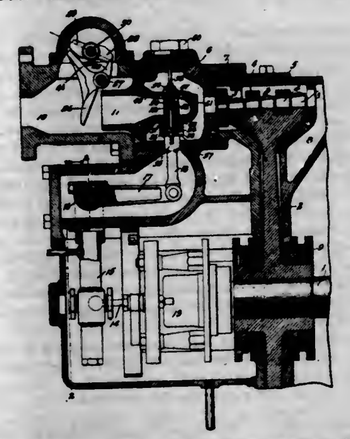
[Claims 6 to 20 not printed in the Gazette.]

881,543. PORTABLE LAVATORY. ARTHUR W. CALE, Alberta, Minn. Filed Dec. 26, 1905. Serial No. 293,203.



The combination with a stand having legs 5 and transversely crossed lower and upper tie bars 6 and 8 rigidly connecting said legs, said bars 8 being located below the upper ends of said legs, of a pail arranged to rest upon the upper bars 8 and to be detachably held in position by the upwardly projecting ends of said legs, a basin fitting the top of said pail and provided with a drain passage in its bottom, a stopper detachably fitting said drain passage, a flexible connection attached to said stopper, one of the said legs 5 being extended above the said pail and basin, and the said flexible connection being attached thereto, substantially as described.

881,544. GOVERNING MECHANISM FOR TURBINES. JOHN G. CALLAN, Lynn, Mass., assignor to General Electric Company, a Corporation of New York. Filed June 28, 1906. Serial No. 323,836.



1. In a governing mechanism, the combination of a valve that has a tendency at all times to close, a catch which normally prevents the valve from closing, and a means for rotating the catch after it has released the valve to reset it.

2. In a governing mechanism, an emergency valve, a

catch which may engage the valve to hold it open, means for rotating the catch to engage it with the valve, and means rendered operative by an increase of speed above a prescribed limit which releases the valve from the catch.

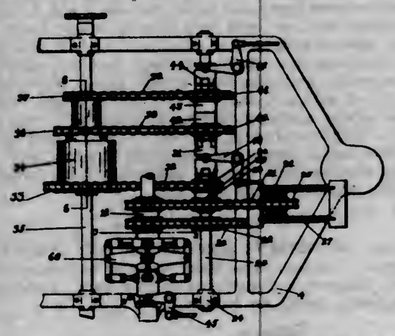
3. In a governing mechanism, an emergency valve, a catch which may engage the valve to hold it open, means rendered operative by an increase of speed above a prescribed limit to release the valve, and means for rotating the catch to open and reset the valve.

4. In a governing mechanism, an emergency valve, a catch having a plurality of members one of which engages a portion of the valve to hold it open while another is located adjacent another portion of the valve, means rendered operative by an increase of speed above a prescribed limit which actuates the catch to release the valve and to impart a blow to the second portion of the valve, and means for rotating the catch to reset the valve in open position.

5. In a governing mechanism, an emergency valve having a plurality of projections, a catch having oppositely disposed members one of which engages one of the projections while a second member is adjacent another projection, and means rendered operative by an increase of speed above a prescribed limit which actuates the catch to release the first projection and to impart a blow to the other projection to close the valve.

[Claims 6 to 12 not printed in the Gazette.]

881,545. POWER-TRANSMISSION MEANS. JOHN E. CAPS and ARTHUR W. CAPS, Kansas City, Mo. Filed Jan. 25, 1907. Serial No. 353,983.



1. In an automobile, a drive gear comprising a frame a drive shaft a sleeve loosely mounted thereon, a clutch adapted to hold said shaft and sleeve against relative rotation, a pair of sprockets rigidly mounted on said sleeve, a countershaft, a sprocket rigid therewith and geared to one of said sprockets on said sleeve, a sleeve loosely mounted on said countershaft, a plurality of sprockets carried thereby, a jack-shaft, a sprocket carried thereby to which one of said sprockets on said sleeve is adapted to be geared, an idler disposed in bearings movable on the frame a sprocket-chain trained over said idler and over one of said sprockets of said first-named sleeve, one of said sprockets of said last-named sleeve being disposed in the path of and adapted to be engaged by said chain when said idler is moved in one direction and a clutch disposed on said countershaft and adapted to engage said sleeve thereon to hold same against rotation relatively to said shaft.

2. Reversing gear for automobiles, comprising a drive-shaft, a driven shaft and an intermediate countershaft, a sleeve loosely mounted on said drive-shaft, clutching means disposed in operative relation to said drive-shaft and said sleeve and adapted to hold the same against relative rotation, a plurality of sprockets rigidly disposed on said sleeve, an idler disposed in bearings movable in guides eccentric to said drive shaft, a sprocket chain geared over said idler and one of the said sprockets on said sleeve, a sprocket rigid with said countershaft and geared to one of said sprockets on said sleeve, a sleeve loosely mounted on said countershaft and geared to said driven shaft, a sprocket disposed on said last named sleeve in the path of said idler chain and adapted when said idler is moved in one direction to be engaged by said chain and clutching means disposed in operative relation to the gearing between said countershaft and said driven shaft to throw the latter out of relative gear and enable said driven shaft to be reversed without reversing said countershaft.

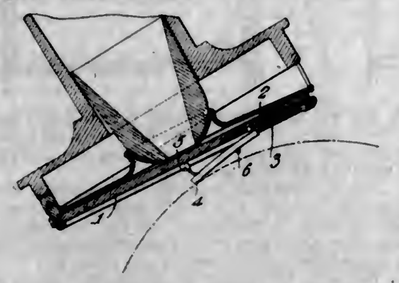
3. Power transmission means comprising in combination, a drive-shaft, a driven shaft, an intermediate countershaft, a pair of sprockets on said drive shaft, a sprocket on said countershaft geared to one of said sprockets on said drive-shaft, an idler geared to said other sprocket on said drive-shaft, a sprocket on said countershaft adapted to be interposed in said gearing between said idler and said drive-shaft, variable speed gearing between said countershaft and said driven shaft and clutches disposed in operative relation to said countershaft and gear members carried thereby.

4. Power transmission means comprising a drive-shaft revoluble on one direction, a countershaft, a pair of sprockets disposed on said drive-shaft, a pair of sprockets disposed on said countershaft, one of the latter being normally loose thereon, a sprocket chain trained over one of said sprockets of each of said shafts, an idler disposed in movable bearings, a sprocket chain trained over said idler and said other sprocket on said drive shaft, said last-named sprocket chain being adapted to be thrown into engagement with said other sprocket on said countershaft, a clutch disposed in operative relation to said countershaft and said loose-sprocket thereon to hold the same against relative rotation, a sleeve on said countershaft a part to be driven and gearing between the same and said sleeve, said clutch and said idler chain determining the direction of rotation of said sleeve.

5. Power transmission means comprising a frame a drive-shaft revoluble in one direction, a pair of sprockets adapted to rotate therewith, a countershaft, a sprocket rotatably rigid therewith, a sprocket loosely mounted thereon, an idler disposed on the frame, sprocket chains trained over one of said sprockets on said drive-shaft and said countershaft, a sprocket-chain trained over said idler and over said other sprocket on said drive-shaft, means for imparting relative movement to said last-named chain and said other sprocket on said countershaft to throw the same into engagement with each other, and a clutch disposed in operative relation to said countershaft and said loose sprocket thereon to hold the same against relative rotation.

[Claims 6 to 11 not printed in the Gazette.]

881,546. SPEAKING-MACHINE. CHARLES L. CHISHOLM, Marysville, New Brunswick, Canada. Filed Jan. 5, 1907. Serial No. 350,979.



1. In a device of the class described; a rigid, peripherally supported and otherwise superficially unobstructed diaphragm, and a stylus having a bearing upon the center of the diaphragm circumscribed in area to substantially that of a geometric point, said diaphragm being of such thickness as to be undeflected to any appreciable extent from its normal diametric plane by the pressure necessary to maintain the bearing point of the stylus in constant contact with the diaphragm.

2. In a device of the class described; a rigid, peripherally supported and otherwise superficially unobstructed diaphragm, and a stylus in yielding contact but unattached to the center of the diaphragm, with the bearing circumscribed in area to that of a geometric point, the said diaphragm being of a thickness to resist deflection by the pressure necessary to maintain the stylus in unbroken contact with the diaphragm.

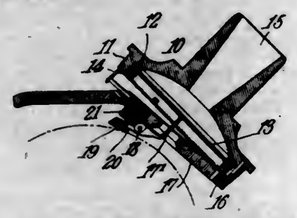
3. In a device of the class described; a rigid, peripherally supported and otherwise superficially unobstructed diaphragm; a stylus bearing upon the center of the diaphragm with the area of contact circumscribed to substantially that of a geometric point, the said diaphragm being of a thickness to resist deflection by the pressure necessary to maintain the stylus in unbroken contact with the diaphragm, and a spring arm coöperating with the stylus to establish a yielding contact between the stylus bearing point and the diaphragm.

4. In a device of the class described; a peripherally supported and otherwise superficially unobstructed diaphragm, and a stylus in constant contact with but unattached to the diaphragm at its center, with the area of contact circumscribed to substantially that of a geometric point.

5. In a device of the class described; a peripherally supported and otherwise superficially unobstructed diaphragm; a stylus, and a bearing for the latter in constant contact with but unattached to the diaphragm at its center, said bearing being attached to the stylus back of the stylus point and having its point of contact with the diaphragm in a plane cutting the center of the latter and the graving point of the stylus, and the area of contact between the bearing point and the diaphragm closely approaching a geometric point.

[Claim 6 not printed in the Gazette.]

881,547. REPRODUCER. CHARLES L. CHISOLM, Marysville, New Brunswick, Canada. Filed Apr. 22, 1907. Serial No. 369,007.



1. A reproducer having a peripherally supported but otherwise superficially unobstructed diaphragm, and a stylus carrier unconnected with the diaphragm but having a contact point provided with a film-like cushion in contact but not connected with the surface of the diaphragm at the center.

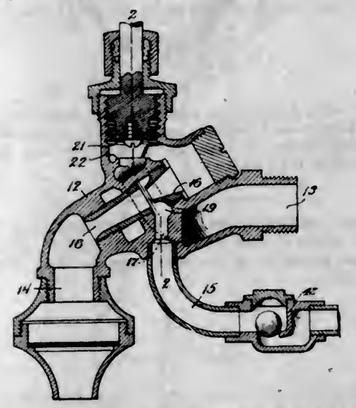
2. A reproducer having a peripherally supported but otherwise superficially unobstructed diaphragm, and a yieldingly-supported stylus carrier provided with a contact point provided with a film-like cushion which is in contact but not connected with the surface of the diaphragm at its center.

3. A reproducer having a peripherally supported but otherwise superficially unobstructed diaphragm, and a stylus carrier mounted for pivotal movement and having its extremity opposite to the stylus point constructed to form a contact point for contact with the surface of the diaphragm at its center, and cushioning means under that portion of the stylus carrier which is adjacent to the stylus point.

4. A reproducer having a peripherally supported but otherwise superficially unobstructed diaphragm, and a pivotal stylus carrier having a substantially non-damping, cushioned contact point for contact with the diaphragm at its center.

5. A reproducer having a peripherally supported but otherwise superficially unobstructed diaphragm, and a pivotally mounted stylus carrier terminating at one end in a stylus point and at the other end in a contact point, a cushion of film-like thinness on the contact point of the stylus carrier, and a cushioning device arranged in operative relation with the stylus end of the stylus carrier to yieldingly impel the same toward the record.

881,548. AIR-EXHAUSTING LIQUID-SUPPLY APPARATUS. CHARLES A. CLAFLIN, Medford, Mass. Filed Oct. 9, 1907. Serial No. 396,555.



1. An air-exhausting apparatus, comprising a faucet or cock casing having a liquid inlet, an outlet, an intermediate air inlet, means for causing the flow of liquid through said casing to induce an inflow of air through the air inlet, and a liquid-controlling valve adapted to shut off the liquid between the liquid inlet and the air inlet, the said air inlet forming a part of an air conduit adapted for connection with a vacuum chamber, and means for closing said conduit to prevent a back flow of air therethrough.

2. An air-exhausting apparatus, comprising a faucet or cock casing having a liquid inlet, an outlet, an intermediate air inlet, means for causing the flow of liquid through said casing to induce an inflow of air through the air inlet, and a liquid-controlling valve adapted to shut off the liquid between the liquid inlet and the air inlet, the said air inlet forming a part of an air conduit adapted for connection with a vacuum chamber, and a vacuum-maintaining check valve controlling the air in said conduit.

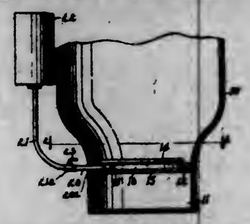
3. An air-exhausting faucet, or cock, comprising a casing having a liquid inlet, an outlet, a jet-forming nozzle communicating with the liquid inlet, a combining nozzle between the outlet and the jet-forming nozzle, and separated from the latter by an air space, an air inlet communicating with said air space, and a liquid-controlling valve between the jet-forming nozzle and the liquid inlet, the relative arrangement of said nozzles and air space being such that a jet of liquid is projected across the air space into the combining nozzle, and induces an inflow of air through the air inlet.

4. An air-exhausting liquid-supply apparatus, comprising a plurality of faucets, each having a liquid inlet, an outlet, an intermediate air inlet, means for causing the flow of liquid through the casing to induce an inflow of air through the air inlet, and means for shutting off the liquid between the liquid and air inlets, a vacuum tank, pipe connections between said tank and the several faucets, and vacuum-maintaining check valves controlling said air inlets.

881,549. SPRAYER ATTACHMENT FOR FURNACES. GEORGE H. CLEMENTS, Chicago, Ill. Filed May 25, 1907. Serial No. 375,642.

In combination with a furnace ash-box having an inwardly projecting ledge below the grate, a sprinkling device consisting of a perforated bent pipe extending part

way around said ash box and supported on said ledge, a perforated straight pipe connecting the ends of the bent pipe, a water supply pipe connected with said bent pipe and extending externally of said ash-box, a manually op-



erable valve arranged in said pipe, and means for supplying water to said supply pipe, said means consisting of a reservoir connected with the supply pipe and arranged adjacent to the furnace.

881,550. DETACHABLE AND REVERSIBLE SPOUT OR NOZZLE FOR DISPENSING CANS. GEORGE W. COLE, Brooklyn, N. Y. Filed May 4, 1907. Serial No. 371,877.



1. A spout or nozzle comprising a tubular portion, a pair of disks wedged on said tubular portion, and a washer located between said disks.

2. A spout or nozzle comprising a tapered tubular portion, a pair of disks mounted on said tubular portion, the opening in one disk being smaller than the opening in the other, and a washer located between said disks.

3. A spout or nozzle comprising a tubular portion, a pair of disks mounted on said tubular portion, and a washer located between said disks, said washer being of greater diameter than said disks and having the portion outside of the disks extending substantially parallel therewith.

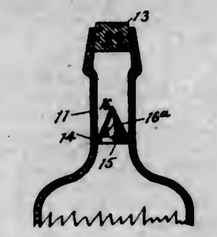
4. A spout or nozzle comprising a tapered tubular portion having a disk mounted thereon, and a washer of greater diameter than said disk also mounted on said tubular portion adjacent said disk, the portion of the washer outside of the disk extending substantially parallel therewith.

5. In a device of the character described, the combination with a can provided with an opening and a seat surrounding said opening, of a spout or nozzle provided with a disk of less diameter than said opening and with a washer adapted to coöperate with said seat.

[Claims 6 and 7 not printed in the Gazette.]

881,551. NON-REFILLABLE BOTTLE. CLIFFORD D. COLLISON, Montclair, N. J. Filed May 6, 1907. Serial No. 372,088.

1. In a bottle of the character described, the combination with a bottle neck having a groove therein, of a device having a flange or base fitting the groove, and a resilient body portion provided with overlapping folds which are adapted to spread and open the end thereof when the contents of the bottle is being poured and to automatically return to a closed position when relieved from pressure within.



2. In a bottle of the character described, the combination with a bottle neck having a groove therein, of a device having a flange or base fitting the groove, a resilient body portion adapted to spread and open the end thereof when the contents of the bottle is being poured and to automatically return to a closed position when relieved from pressure within, and a conical retainer within said device.

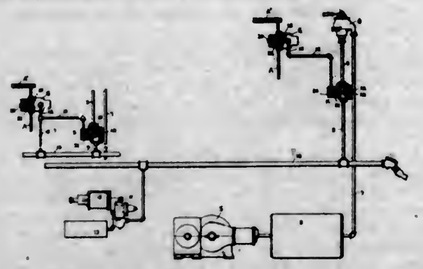
3. In a non-refillable bottle, the combination with a bottle neck having a groove therein, of a device having a collapsible resilient open-ended body portion provided with overlapping folds which are adapted to spread by pressure from within to open one end thereof and to automatically close said open end when relieved of such pressure, and a former or retaining means arranged within the body portion of the device.

4. In a non-refillable bottle, the combination with a bottle neck having a groove therein, of a device having a collapsible resilient open-ended body portion provided with folds which are adapted to spread by pressure from within to open one end thereof and to automatically close said open end when relieved of such pressure, and a former or retaining means comprising a plurality of wires or rods arranged within the body portion of the device.

5. In a non-refillable bottle, the combination with a bottle neck having a groove therein, of a device having a base fitting said groove and a resilient open-ended portion provided with folds and adapted to spread by pressure from within to open one end thereof and to automatically close said open end when relieved of such pressure.

[Claims 6 to 8 not printed in the Gazette.]

881,552. EMERGENCY-BRAKE. FRED B. COREY, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Mar. 21, 1903. Serial No. 148,902.



1. In combination, a controller having a revoluble shaft, a power-actuated brake, a brake controlling device, a member loosely mounted on said shaft and arranged to coöperate with said brake controlling device to cause the brakes to be applied in the normal position of the said member and to release the brakes and maintain them released in the running positions of the controller when the said member is locked to the controller shaft for rotation therewith, means for locking said member to said shaft, said means being arranged to unlock the said member from the shaft upon release of the controller handle, and means for returning said member to the normal position.

2. In combination, a controller having a revoluble shaft, a power-actuated brake, a brake controlling device, a member loosely mounted on said shaft and arranged to coöperate with said brake controlling device to cause the brakes to be applied in the normal position of the said member and to release the brakes and maintain them released in the running positions of the controller when the said member is locked to the controller shaft for rotation therewith, means for locking said member to said shaft, said means being arranged to unlock the said member from the shaft upon release of the controller handle, means for returning said member to the normal position, and a projection on said shaft arranged to coöperate with said brake controlling device to release the brakes in the "off" position of the controller.

3. In combination, a controller having a revoluble shaft, a power-actuated brake, a brake controlling device tending normally to apply the brakes, a cam loosely mounted on said shaft, said cam being normally out of engagement with said brake controlling device and arranged to engage with said brake controlling device in the running positions of the controller when locked to the controller shaft, means for locking said cam to said shaft, said means being arranged to unlock said cam from the shaft upon release of the controller handle, and a spring for returning the cam to its normal position.

4. In combination, a controller having a revoluble shaft, a power-actuated brake, a brake controlling device tending normally to apply the brakes, a cam loosely mounted on said shaft, said cam being normally out of engagement with said brake controlling device and arranged to engage with said brake controlling device in the running positions of the controller when locked to the controller shaft, means for locking said cam to said shaft, said means being arranged to unlock said cam from the shaft upon release of the controller handle, a spring for returning the cam to its normal position, and a projection on the controller shaft arranged to engage the brake controlling device when the controller is in its "off" position.

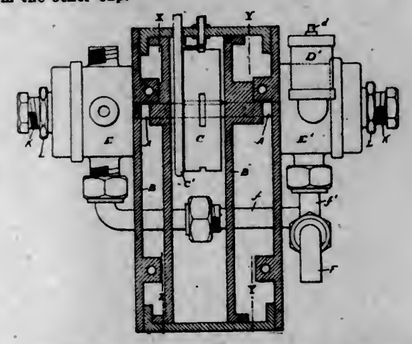
5. In combination, a controller having a revoluble shaft, a power-actuated brake, a brake valve tending to apply the brakes, a sleeve loose on said shaft and having a cam arranged to engage said valve to release the brakes and maintain them released in the running positions of the controller when the sleeve is locked to the controller shaft and to release the valve in the normal position of the sleeve, means for locking said sleeve to said shaft, said means being arranged to unlock the sleeve from the shaft upon release of the controller handle, and a spring tending to maintain said sleeve in its normal position.

[Claims 6 to 21 not printed in the Gazette.]

881,553. MEANS FOR MEASURING AND MIXING LIQUIDS. HARRY S. CORNISH, New York, N. Y., assignor to New York Liquid Dispensing Machine Company, a Corporation of New York. Filed Nov. 1, 1905. Serial No. 285,393.

1. In an apparatus for measuring, mixing and delivering mixed drinks, the combination of a piston-measuring cylinder for the carbonated liquid, a valve shaft, a valve operated thereby and adapted to connect the opposite ends of the piston-measuring cylinder in alternation with the supply source of carbonated liquid and with the discharge pipe, a pair of measuring cups and a second valve operated by said shaft and adapted to connect said cups in alternation to a source of supply of flavoring syrup and to the discharge pipe simultaneously with the alternate operations of the first named valve, as and for the purpose described.

2. In an apparatus for measuring, mixing and delivering a carbonating liquid and a flavoring syrup, the combination of a shaft, two four-way valves mounted thereon, a piston measuring cylinder, a discharge pipe, valve ports and connections for connecting the opposite ends of said cylinder alternately with an inlet pipe leading from the source of supply and with the discharge pipe, a pair of measuring cups for measuring the syrup, and ports and connections of the second valve adapted to connect said measuring cups alternately with the inlet supply pipe and with the discharge pipe simultaneously with the connections established for the measuring cylinder, all as described so that a fixed quantity of carbonated liquid will be measured and one of the measuring cups will be permitted to fill simultaneously with the forcing out from the measuring cylinder of the previously measured contents thereof, together with the syrup simultaneously discharged from the other cup.



3. In an apparatus for dispensing mixed drinks, the combination of two valves, a common shaft for the same, a measuring device for one of said valves consisting of a cylinder and piston, a pair of measuring cups for the other valve, a common discharge pipe into which the contents of the cylinder are delivered by the action of the appropriate valve, and an ejector nozzle opening into said discharge pipe and leading from the outlet of the measuring cups, as and for the purpose described.

4. In an apparatus for dispensing a mixed drink, the combination of two or more sources of liquid supply, a source of liquid supply under pressure, a common discharge pipe, an ejector nozzle connected with the source of liquid supply under pressure aand arranged in the discharge pipe to draw all the liquid from the other source and at the same time mix the two liquids together in said discharge pipe, and means for admitting liquid from said liquid supply under pressure to the pipe leading to said nozzle during the flow of the liquid from the other source.

5. In an apparatus for measuring, mixing and delivering mixed drinks, the combination of two sets of measuring devices for the two liquids respectively, one consisting of a piston measuring cylinder and the other of a pair of measuring cups and a pair of valves having ports and connections adapted, as described, one to connect the opposite ends of said cylinder alternately with an inlet pipe leading from the source of supply and with a discharge pipe and the other adapted to connect said measuring cups alternately with their source of supply and with the discharge pipe simultaneously with the connections established for the measuring cylinder all as described so that a fixed quantity of one liquid will be measured in the cylinder and one of the measuring cups will be permitted to fill with the other liquid simultaneously with the forcing out from the measuring cup of the previously measured contents thereof and the simultaneous discharge of the liquid from the other cup.

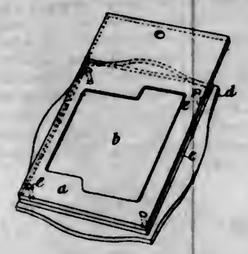
[Claim 6 not printed in the Gazette.]

881,554. PRODUCTION OF ELECTROTYPES. SHERARD O. COWPER-COLES, London, England. Filed Feb. 25, 1907. Serial No. 359,298.

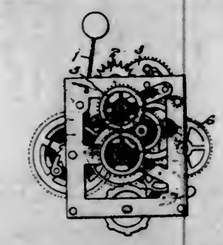
1. A matrix comprising a lead sheet, an intermediate layer of elastic material and a backing of soft material, substantially as described.

2. A matrix comprising a sheet of lead provided with a

backing of elastic material, and a second sheet of lead placed on the elastic backing, substantially as described.



881,555. REPEATING ALARM-CLOCK. WALTER D. DAVIES, New York, N. Y., assignor to The Ansonia Clock Company, Ansonia, Conn., a Corporation of Connecticut. Filed Oct. 30, 1907. Serial No. 399,894.



1. In a clock movement provided with an alarm mechanism, the combination with the ordinary alarm trip spring, of an alarm repeating mechanism arranged to be thrown out of engagement with the time mechanism when the said trip spring is in position to arrest the alarm the said alarm repeating mechanism including a rocking lever provided with an inclined laterally directed bearing in position to be engaged by the alarm trip spring.

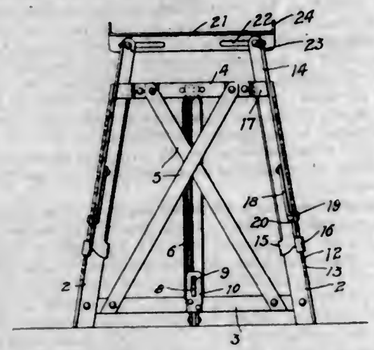
2. In a clock movement provided with an alarm mechanism, the combination with the trip spring, of a rocking lever in position to engage the time mechanism to repeat the alarm, the said lever being provided with a curved bearing in position to engage the said trip spring and rock the lever out of engagement with the time mechanism when the trip spring moves into position to arrest the alarm.

3. In a clock movement provided with an alarm mechanism, the combination with a pinion on the second time wheel and the alarm trip spring, of an alarm repeating lever fulcrumed intermediate of the said pinion and the stem of the alarm hammer and provided with a curved bearing in position to be engaged by the alarm trip spring when the latter is moved in position to arrest the alarm.

4. In a clock movement provided with an alarm mechanism, the combination with the alarm trip spring and a pinion on the second time wheel spindle, of an alarm repeating lever fulcrumed intermediate of the said pinion and the stem of the alarm hammer and provided with a toe in position to engage the pinion and with a projection in position to engage the stem, the said lever being further provided with a curved bearing extending laterally therefrom for engaging the trip spring as the latter is moved laterally to arrest the alarm for lifting the toe of said lever out of engagement with the pinion when the alarm is not in operation.

5. In a time movement provided with an alarm mechanism, the combination with the trip spring and a pinion on the spindle of the second time wheel, of an alarm repeating lever interposed between the said pinion and the stem of the alarm hammer, the said lever being provided with a toe at one end for engaging the pinion and with a projection at the opposite end for engaging the stem of the alarm hammer, and a spring for holding the toe end of the lever depressed, the said lever being provided with a bearing for placing the said repeating lever under the control of the trip spring.

881,556. JACK. ALBERT S. DEHLER, Minneapolis, Minn. Filed Oct. 17, 1906. Serial No. 339,370.



1. A jack comprising a frame, legs mounted thereon and converging from the bottom towards the top and vertically adjustable, and a bar carried by said legs and having a sliding pivotal connection therewith, whereby the adjustment of either end of said bar independently of the other end is permitted.

2. A jack comprising a frame having angle bar side rails converging from the bottom toward the top, of extension angle bars slidably mounted on said rails and a cross bar connecting the upper ends of said extension bars and said connection permitting the vertical adjustment of either one of said extension bars and the corresponding elevation of either end of said cross bar independently of the other extension bar and the other end of said cross bar.

3. The combination, with a frame, of a plate forming a rest for the rails of a carrier or staging, legs having a sliding, pivotal connection with said plate and an independent vertical movement on said frame, substantially as described.

4. The combination, with a frame, having upper and lower cross bars of a leg pivotally connected at one end to said upper cross bar, a bar pivotally attached to said leg and having a series of notches in its edge adapted to receive said lower cross bar and adjustably connecting the lower end of said leg with said frame, and whereby said frame may be tilted to vary its inclination with respect to the ground, and a plate supported on said frame and adjustable vertically thereon, substantially as described.

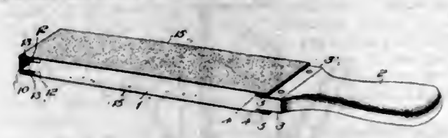
5. The combination, with a frame having legs provided with a series of vertically arranged ratchet teeth, of bars vertically slidable on said frame and having slots contiguous to said ratchet teeth and adapted to move past the same when said bars are raised or lowered, latches pivoted on said bars and having ends turned at an angle to their main portions and passing through said slots and adapted to enter the spaces between said ratchet teeth and engage said teeth and lock said bars at different elevations on said frame, and a cross plate connecting the upper ends of said bars, for the purpose specified.

[Claims 6 to 10 not printed in the Gazette.]

881,557. HAND-BUFFER. FRANK B. DEMING, Warren, Ohio. Filed Oct. 31, 1907. Serial No. 400,082.

1. In a hand buffer the combination with a body portion, of an adjustable end-clamp formed of sheet metal folded upon itself to produce an open ended pocket, an adjusting screw interposed between said body portion and end-clamp, and a strip of abrading material secured at one end in said pocket and at its opposite end to the body portion aforesaid, substantially as described.

2. In a hand buffer the combination with a body portion, of an adjustable outer end-clamp formed of sheet metal folded upon itself to produce open ended pockets on both sides of said body portion, projecting clutch-points on the edges of said folded clamp member, and a strip of abrading material extending from each of said pockets over said clutch-points and secured at the opposite end to the body portion aforesaid, substantially as described.

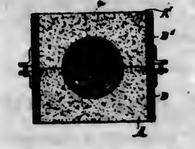


3. In a hand buffer the combination with a body portion, of an adjustable outer end-clamp embracing said body portion formed of sheet metal folded upon itself to produce open ended pockets, an adjusting screw shouldered upon and projecting through said clamp, and strips of abrading material each secured at one end in the aforesaid pockets and at the opposite end in similar pockets fixed with relation to the body portion aforesaid, substantially as described.

4. In a hand buffer the combination with a body portion, of relatively fixed and adjustable clamps formed of sheet metal folded upon itself to produce open ended pockets, and a strip of abrading material secured at opposite ends in the pockets aforesaid, substantially as described.

5. In a hand buffer, the combination with a body portion having upon each side of its longitudinal center relatively fixed and adjustable clamps formed of sheet metal folded upon itself to produce oppositely disposed open ended pockets, projecting clutch-points on the edges of said clamps, and a strip of abrading material secured at opposite ends in each set of said pockets, substantially as described.

881,558. MOLD AND PROCESS OF MAKING THE SAME. WILLIAM P. DUN LANY, Cleveland, Ohio, assignor to John A. Lannert, Cleveland, Ohio. Filed June 8, 1906. Serial No. 320,754.



1. The process of making molds which consist of mixing the mold material with woody matter in small particles, and subsequently heating the mold to a high temperature to burn out the wood to vent the mold prior to the casting of metal therein.

2. The process of making molds consisting of making the mold with powdered combustible matter interspersed in it, giving the mold a preliminary baking in its flask, removing it from the flask, and giving it a subsequent baking at a high temperature to burn out the combustible matter.

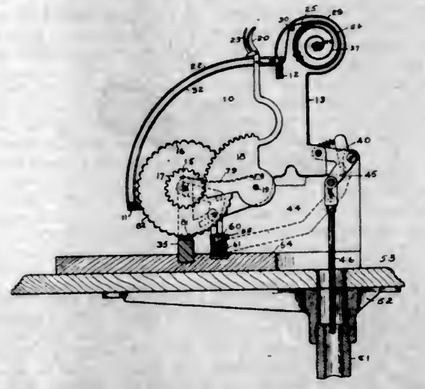
3. The process of making molds consisting of mixing carbon, woody matter, and a plastic binder, preliminarily baking the mold to drive off the moisture and make it hold together, and giving the mold a subsequent heating at a high temperature for a suitable length of time to burn out the woody matter.

4. The process of making molds consisting of mixing graphite, comminuted vegetable matter, and pitch, preliminarily baking the mold to drive off the moisture and make it hold together, and giving the mold a subsequent heating at a high temperature for a suitable length of time to burn out said vegetable matter.

5. The process of making molds consisting of mixing approximately 80 per cent. graphite, 10 per cent. pulverized woody material, 10 per cent. refractory filler, and enough pitch to bind the composition together, preliminarily baking the mold to drive off the moisture and make it hold together, and giving the mold a subsequent heating at a high temperature for a suitable length of time to burn out the woody matter.

[Claims 6 to 9 not printed in the Gazette.]

881,559. MARKING-MACHINE. WILLIAM P. DUN LANY, Cleveland, Ohio, assignor to The Continental Manufacturing Company, Cleveland, Ohio, a Corporation of Ohio. Filed Dec. 1, 1906. Serial No. 345,925.



1. In a printing machine, the combination of a floating frame carrying a series of wheels having on their periphery printing characters, means carried by said frame for setting said wheels as desired, means for moving the floating frame bodily to cause the wheels to come into cooperation with a stationary platen, an inking device adapted to stand in the path of movement of said wheels toward the platen and means for automatically moving said inking device to idle position.

2. In a marking machine, the combination of a series of printing wheels, individual levers for setting said wheels, indicators for said levers adapted to assist in positioning them, and another indicator comprising tapes visible through stationary sight openings, said tapes being connected at their forward ends to the levers, and spring barrels connected with the rear ends of the tapes, whereby an indication in a definite row is provided irrespective of the position of levers.

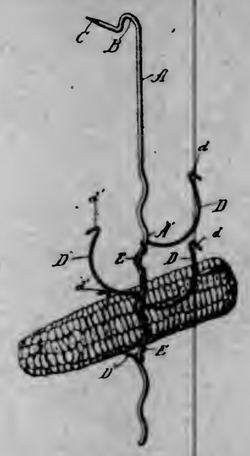
3. In a marking machine, the combination of printing wheels journaled side by side and bodily movable, an impression platen, a guard adapted to prevent soiling the material being printed; said guard being journaled substantially coincident with the axis of rotation of said wheels, and means for swinging said guard into and out of position.

4. The combination of printing wheels journaled side by side and bodily movable, means for inking said wheels, a guard journaled substantially coincident with the axis of rotation of said wheels, means for swinging said guard into position after the wheels are inked, and means for causing the wheels to print.

5. The combination of a frame carried on pivoted members and adapted to move forward and downward, a series of wheels journaled in said frame and having printing characters on their periphery, a guard mounted in the frame and extending across such wheels and having an opening through which the printing is accomplished, an inking pad, means for causing the same to bear against the wheels, means for moving the guard out of position before the wheels engage the inking pad, means for thereafter moving the wheels into position to print, and means for automatically moving the guard into position preceding the printing.

[Claims 6 to 12 not printed in the Gazette.]

881,560. CORN-RACK. FRED D. DUTTON, Mount Pleasant, Iowa. Filed May 13, 1907. Serial No. 373,304.

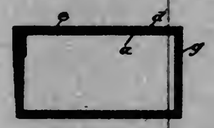


1. A corn-rack comprising a main upright stem-member and a plurality of pairs of curved elastic arms extending laterally from said stem-member and adapted to embrace ears of corn, the arms of each pair extending on opposite sides of said stem-member and formed from a single length of wire having its intermediate portion twisted around said stem-member, substantially as described.

2. A corn rack, comprising a crimped stem-wire and a plurality of curved elastic branch wires adapted to embrace ears of corn, said branch wires being secured to said stem-wire by being wound around the latter, substantially as described.

3. A corn hanger, comprising a depending crimped stem-wire having means for suspending the same at its upper end, and a plurality of curved elastic branch wires extending alternately from opposite sides thereof and adapted to embrace ears of corn, said branch wires being secured to said stem-wire by being wound around the latter, substantially as described.

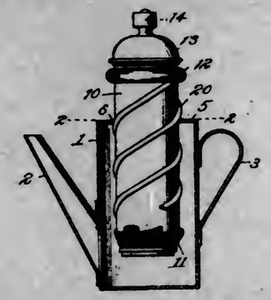
881,561. MOISTURE-PROOF PACKAGE. HENRY C. ECKSTEIN, Chicago, Ill., assignor to Roeckheim Bros. & Eckstein, Chicago, Ill., a Corporation of West Virginia. Filed Dec. 6, 1904. Serial No. 235,706.



1. A moisture-tight package for candies and like merchandise, comprising an inner wrapper or carton of stiff paper board and of regular form having foldable flap portions, which may be opened to receive the charge and folded to completely inclose the same, and an outer wrapper of flexible paper supersaturated with wax and sealed at its overlapping folded portions through aid of the contained wax, substantially as described.

2. A moisture-tight package for candies and like merchandise comprising an inner box of regular form and of stiff, rigid material, having means which may be opened to receive the charge and closed to completely surround the same, and an outer wrapper of flexible, heavily waxed paper, folded about the inner box and sealed around its overlapped portions through aid of the contained wax, substantially as described.

881,562. COOKING OR CULINARY UTENSIL. LEROY J. ELLIS, Plainfield, N. J. Filed May 29, 1907. Serial No. 376,370.



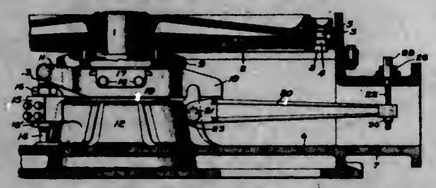
1. In a cooking or culinary utensil the combination of a containing vessel provided on its outside with oblique or spirally arranged shoulders, and an annular supporting plate having a recessed inner margin coöperating with the shoulders on the containing vessel to effect the raising or lowering of said vessel by rotary motion imparted thereto and sustain it at any height to which it may be adjusted.

2. In a cooking or culinary utensil, the combination of an outer receptacle formed with a notched or recessed mouth or opening and an inner vessel provided on its outside with spirally arranged shoulders coöperating with the notches or recesses in the mouth of the outer receptacle so as to guide the inner vessel in its vertical movement and support it in any position in which it may be set.

3. In a cooking or culinary utensil the combination of an outer receptacle formed with a recessed annular top and an inner vessel adjustably supported in said recessed annular top by means of upwardly extended and obliquely arranged shoulders on the exterior of the inner vessel.

4. In a cooking or culinary utensil the combination of an outer receptacle formed with a recessed annular top and an inner vessel provided on its outer surface with spiral or oblique shoulders coöperating with the recessed annular top of the outer receptacle, to effect the vertical movement of the inner vessel by rotary movement imparted to the latter, and to sustain it at any height to which it may be set.

881,563. BRAKE FOR ELASTIC-FLUID TURBINES. WILLIAM L. R. EMMET, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed July 9, 1904. Serial No. 215,868.



1. In an elastic fluid turbine, the combination with the casing, of a shaft entering the same, a bearing for the shaft, an element rotating with the shaft and affording a brake surface inside said casing, a frame surrounding said shaft and hinged at one side thereof and provided with a brake surface coöperating with that on the shaft, and means acting on the side of the frame opposite the hinge for moving said frame from outside said casing and causing it to brake the element and at the same time relieve the pressure on the bearing.

2. In an elastic fluid turbine, the combination with the casing, of a shaft entering the same, a bearing for the shaft, a brake element rotating with said shaft, a brake element rotating with said shaft inside said casing, a frame surrounding said shaft and hinged at one side, brake shoes on said frame to act on the rotating element, a lever separate from and engaging the frame on one side for raising it in a manner to cause the shoes to engage and relieve the pressure on the bearing, and means for actuating said lever from outside the casing.

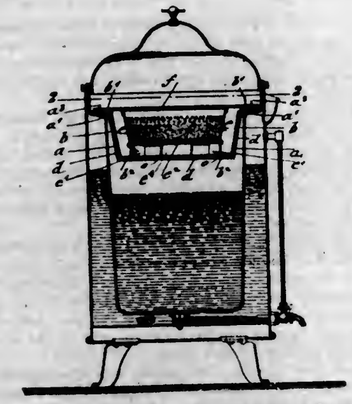
3. In an elastic fluid turbine, the combination with the casing, of a shaft entering the same, a bearing for the shaft, a brake element secured to said shaft inside said casing, a frame surrounding the shaft and hinged at one side thereof, brake shoes carried by the frame and acting on said brake element, a lever independent of the frame and the shoes for moving them, a pivot for the lever, and a screw for actuating said lever, said screw passing through the casing.

4. In an elastic-fluid turbine, the combination with a shaft, of an element rotating therewith, a casing for the element, a frame surrounding said shaft and hinged at one side, brake-shoes on said frame to act on the rotating element, a lever for moving the frame, a screw for actuating said lever, and means for operating said screw from a point outside the casing of the turbine.

5. In an elastic-fluid turbine, the combination with a shaft, of an element rotating therewith and having a brake-surface in a plane of revolution, a frame carrying brake-shoes to coöperate therewith, hinges supporting said frame, and means for adjusting each hinge separately.

[Claims 6 and 7 not printed in the Gazette.]

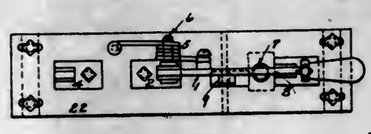
881,564. STRAINER FOR COFFEE-URNS. GUSTAV EPSTEIN, New York, N. Y. Filed June 25, 1907. Serial No. 380,743.



1. A strainer for coffee-urns consisting of an exterior main-body provided with a circumferential flange and bottom-openings, and interior cup fitting into the main-body also provided with an outwardly bent circumferential flange and an inwardly-bent bottom-flange, a straining-cloth interposed between the outer body and interior cup, a perforated strainer-cup for the ground coffee provided with supporting legs and bottom-screen, and means for holding the strainer-cup, interior cup and straining-cloth in position in the exterior main-body.

2. A strainer for coffee-urns consisting of an exterior body provided with openings in its bottom and an outwardly-bent flange at its upper edge provided with bent-up perforated lugs at diametrically-opposite points, an interior cup also provided with an open bottom and an outwardly-bent flange at the upper end, said cup fitting in the outer body, a straining-cloth interposed between the exterior body and the interior cup, a perforated strainer-cup for the ground coffee provided with a screen-bottom and placed inside of the interior cup, and a transverse rod passed through the perforated ears of the exterior body and across the strainer-cup for holding the parts in position in the exterior body.

881,565. SAFETY-LIMIT SWITCH. HENRY A. EVERETT, Barrington, N. J., and ARTHUR PARKER, Philadelphia, Pa. Filed July 23, 1907. Serial No. 385,105.



1. In a limit switch of the character described the combination of an insulated pinion and a screw keyed to same and bearings for said screw and a carrier threaded and adapted to traverse the said screw and to engage with a hereinafter mentioned dog or finger, and a guide for the said carrier, a switching mechanism mounted on a base over the said screw, a finger or dog passing through and pivoted on said base and adapted to hold said switching mechanism in normal position, and a spring provided to actuate said switching mechanism upon the disengagement of said dog or finger with said switching mechanism, all substantially as and for the purpose shown and described.

2. In a limit switch of the character described the combination of an insulated pinion and a screw keyed to same, and bearings for said screw and a carrier threaded and adapted to traverse the said screw and also to engage with a hereinafter mentioned finger or dog upon a predetermined movement of said dog or finger, and a guide for said screw and passing through said carrier, a single pole double throw switch mounted on a base over the said screw and carrier, a finger extending through and pivoted on said base, a pin on the blade of said switch and adapted to engage with said finger or dog in the normal position of said switch, and a spring opposing the engagement of the switch blade with the normal switch clip, and actuating the said switch upon the disengagement of the said finger or dog with said pin, all substantially as and for the purpose shown and described.

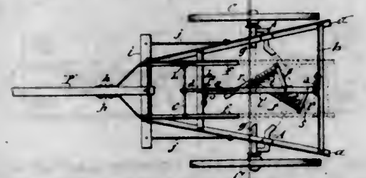
3. In a limit switch of the character described, an insulated pinion actuated by a gear in a train of gears, a screw secured to said pinion, bearings provided for said screw, a carrier actuated by said screw, a guide for said carrier and passing through same, a switching mechanism mounted on a base over said screw, and a finger or dog holding said switching mechanism in normal position and adapted to engage with the said carrier upon a predetermined movement of said carrier, all substantially as and for the purpose shown and described.

4. In a limit switch of the character described, an insulated pinion, said pinion meshing with a train of gears of a hoisting motion, a screw provided with bearings, said screw keyed to said insulated pinion, a carrier, said carrier threaded and adapted to traverse said screw, a guide for said carrier, a switching mechanism mounted on a base over the said carrier, a finger or dog extending through and pivoted on said base and adapted to engage with said switching mechanism in its normal position and also with said carrier upon a predetermined movement of same, and a spring opposing the engagement of said switching mechanism in its normal position, and actuating the switching mechanism upon the disengagement of said finger with said switching mechanism, all substantially as and for the purpose shown and described.

5. In a limit switch of the character described, an insulated pinion actuated by a gear in a train of hoisting gears, a screw secured to said pinion, bearings provided for said screw, a carrier threaded and adapted to traverse the said screw, a guide for said carrier and passing through same, a switching mechanism mounted on a base over said screw, and a finger or dog pivoted at said base and holding said switching mechanism in normal position, said finger or dog adapted to engage with said carrier upon a predetermined movement of said carrier, all substantially as and for the purpose shown and described.

[Claims 6 to 8 not printed in the Gazette.]

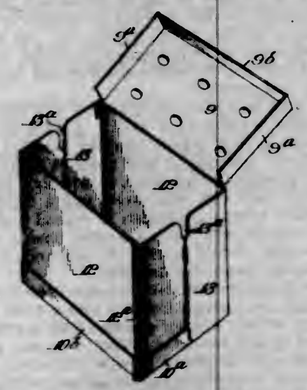
881,566. WEEDER ATTACHMENT TO CULTIVATORS. MARIETTE EVERINGHAM, East Onondaga, N. Y., executrix of Francis M. Everingham, deceased. Filed Aug. 23, 1907. Serial No. 389,758.



1. The combination, with the cultivator-frame, of a longitudinal bar terminating in hangers connected to the cultivator-frame adjustably lengthwise of the hangers, arms extending from opposite sides of said longitudinal bar, and flexible tines depending from said arms and disposed in rearwardly divergent rows as set forth.

2. The combination with the cultivator-frame formed with side-rails carrying the cultivator teeth, and transverse rails tying the side-rails to each other, of a central longitudinal bar supported at each end on the transverse rails, separate arms extending from opposite sides of the central bar and equipped with weeder-teeth, and braces connecting the free ends of said arms separate and independently of each other to the aforesaid central bar.

881,567. PACKING OR SHIPPING BOX. JEFFERY T. FERENS, Anderson, Ind., assignor to J. W. Sefton Manufacturing Company, Anderson, Ind., a Corporation of Indiana. Filed Feb. 27, 1906. Serial No. 247,586.



1. A packing box or receptacle comprising side and end walls, two opposite walls being provided with opposite vertical slots entering from their top and bottom edges and scores connecting said slots running across such walls to enable them to be collapsed for shipping, and a closure provided with extensions on two opposite sides adapted to be received in and interlock with said slots; substantially as described.

2. A packing box or receptacle comprising a body portion consisting of sides hinged to each other, and closures therefor provided with side extensions, two of the opposite sides having slots entering from their top and bottom edges, said slots being connected by scores and arranged to receive the extensions of the closures; substantially as described.

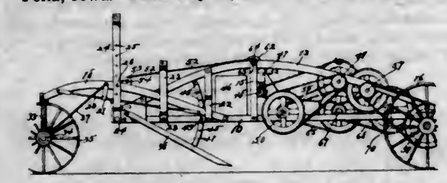
3. A packing box or receptacle comprising a body portion consisting of sides hinged to each other, and closures therefor provided with side extensions, and hinged to the top and bottom of such body portion of the box, two of the opposite sides of said body portion having slots connected by scores and arranged to receive and interlock with the extensions of the closures; substantially as described.

4. A packing box or receptacle comprising a body portion consisting of side and end walls hinged to each other, the end walls having slots connected by scores extending inwardly from their opposite edges, and top and bottom closures hinged to one of the side walls and having extensions or flaps entering the slots when the box is assembled; substantially as described.

5. A packing box or receptacle comprising a body portion consisting of side and end walls hinged to each other, and top and bottom closures hinged to one of the side walls and having extensions on two of its opposite edges corresponding with the ends of the box, the end walls of the box having at their middle line slots connected by scores, said slots entering from opposite edges and substantially equaling in length the width of said extensions, and receiving the extensions; substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

881,568. TRAVELING CAPSTAN. HENRY M. FISK, Pella, Iowa. Filed May 23, 1907. Serial No. 375,369.



1. A traveling capstan, comprising a frame, wheels supporting one end of said frame, hounds pivotally connected to said frame, locking connections between said frame and hounds, wheels supporting the forward ends of the hounds, and anchors carried by said frame.

2. A traveling capstan, comprising a frame, wheels supporting one end of said frame, hounds pivoted at their rear ends intermediate of the ends of the frame, adjustable connections between said frame and hounds intermediate of the ends of the hounds, a bolster carrying the forward ends of the hounds, wheels carrying said bolster, and anchors carried by the frame.

3. A traveling capstan, comprising a frame, guides on one end thereof, hounds extending through said guides and pivoted at the rear thereof to said frame, pins removably and replaceably connecting said hounds and frame auxiliary to the pivots, wheels supporting the rear end of the frame, wheels supporting the forward ends of the hounds, and anchors carried by said frame.

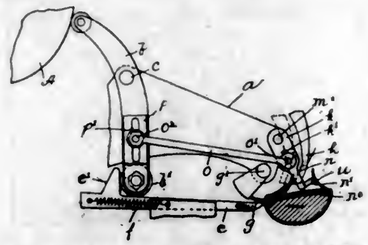
4. A traveling capstan, comprising a jointed frame constructed to flex intermediate of its ends, wheels supporting end portions of said frame, a motor on the frame, cable and windlass mechanism between said motor and frame for governing the flexing of the frame, and anchors carried by said frame.

5. In a traveling capstan, a trussed frame, a motor and gearing thereon, traction wheels supporting the rear end of said frame, said traction wheels geared to said motor, trussed hounds pivoted at their rear ends to the frame at the rear of the front end of said frame, a sheave on said hounds, a cable attached to the front end of the frame and carried by said sheave, a drum in the gearing to which the opposite end of said cable is attached, steering wheels supporting the forward ends of the hounds, and anchors carried by said frame.

[Claim 6 not printed in the Gazette.]

881,569. UPPER-DEFLECTOR FOR SHOE-SEWING MACHINES. CHARLES A. GILBERT, Haverhill, Mass. Filed Nov. 18, 1907. Serial No. 402,586.

1. The combination in a shoe sewing machine, of the stitch forming mechanism and means for feeding the shoe, a finger, and means for moving the same transversely of the feed to move the opposite edge portion of the upper away from the stitch forming mechanism, substantially as described.



2. In combination with a shoe-sewing machine having feeding mechanism, a looper and a hooked needle movable to and from the looper, an upper deflecting device located adjacent the end of the looper and means for moving said device transversely of the feed towards and from the looper at the opposite side thereof from the needle, as and for the purpose specified.

3. In combination with a shoe-sewing machine having a looper, a hooked needle movable to and from the looper, a feed-awl, a back-gage, and means for normally holding the same in engagement with the work, and for moving the same out of engagement therewith in time with the feeding of the shoe, an upper deflecting finger movable transversely of the feed towards and from the looper at the opposite side thereof from the needle, said finger being timed to move towards the looper as the back gage is withdrawn from the work and away therefrom as the back gage is advanced, substantially as described.

4. In combination with a shoe-sewing machine having feeding means, a looper and a hooked needle movable to and from the looper, an upper deflecting finger disposed adjacent the end of the looper and means for moving said finger transversely of the feed obliquely upward away from the looper and the needle, substantially as described.

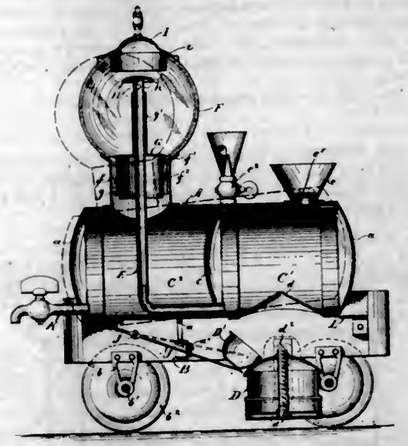
5. In combination with a shoe-sewing machine having intermittently operating feeding means a looper and a hooked needle movable to and from the looper, an upper deflecting finger disposed adjacent the end of the looper, and means for moving said finger transversely of the feed away from the needle and looper between each feeding operation, substantially as described.

[Claim 6 not printed in the Gazette.]

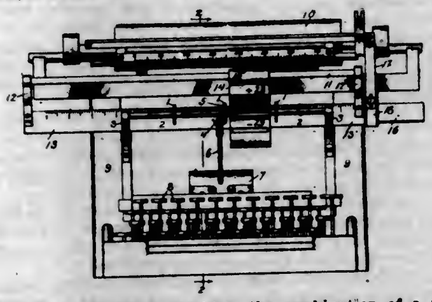
881,570. APPARATUS FOR PREPARING EXTRACTS. GEORGE GIOVANNA, New York, N. Y. Filed Jan. 24, 1905. Serial No. 242,527.

1. In a domestic coffee urn, a hot-water receptacle, means for heating said receptacle, a percolating chamber, having an open bottom and a depending tubular flanged outlet, a pipe communicating with said receptacle and said percolating chamber for delivering hot water to the latter chamber, a removable distributer mounted on the upper end of said pipe, a tube within said percolating chamber and surrounding that portion of the water pipe located in said percolating chamber, a perforated member secured to the lower end of said tube and adapted to form a support for the coffee, said tube and the perforated member being separate from the percolating chamber and adapted to be removed therefrom without disturbing the percolating chamber, and a coffee extract chamber communicating with said percolating chamber, whereby the coffee extract may pass from the percolating chamber to said extract chamber.

2. In a domestic coffee urn, a hot-water receptacle, means for heating said receptacle, a percolating chamber, having an open bottom and a depending tubular flanged outlet, a pipe communicating with said receptacle and said percolating chamber for delivering hot water to the latter chamber, a tube within said percolating chamber and surrounding that portion of the water pipe located in said percolating chamber, a perforated member secured to the lower end of said tube and adapted to form a support for the coffee, said tube and the perforated member being separate from the percolating chamber and adapted to be removed therefrom without disturbing the percolating chamber, a tubular flange depending from said perforated member and extending within the aforesaid tubular flanged outlet, and a coffee extract chamber communicating with said percolating chamber, said extract chamber having a constricted inlet, in the form of an upwardly extending tube flanged at its upper end and forming a seat for the percolating chamber.



881,571. CALCULATING-MACHINE. HYMAN E. GOLDBERG, Chicago, Ill., assignor to Goldberg Calculating Machine Company, a Corporation of Illinois. Filed Mar. 26, 1906. Serial No. 308,049.



1. In a calculating machine, the combination of a reversible totalizer having movable parts including numeral bearing members, actuating means therefor, and means operated by one of the movable parts of said totalizer for hiding the figures of the numeral bearing members at the reading line when the totalizer has been reversely operated beyond zero.

2. In a calculating machine the combination of a reversible totalizer embodying numeral bearing members; means for actuating said totalizer, and means operated by the numeral bearing member occupying the highest ordinal place thereof for hiding the numerals at the reading line when the totalizer has been reversely operated beyond zero.

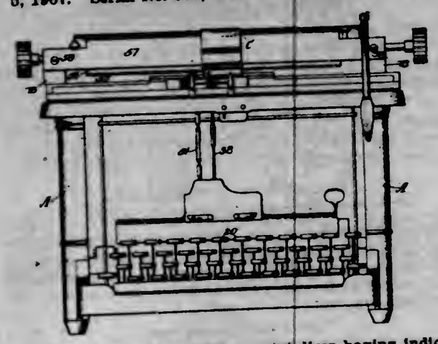
3. In a calculating machine the combination of a reversible totalizer embodying totalizing wheels provided with figures; means for actuating said totalizing wheels, and a shutter operated by one of said totalizing wheels for covering the figures at the reading line when the wheel having the highest ordinal place value is rotated reversely beyond zero.

4. In combination, two totalisers, and a single differential mechanism adapted to operate both of them simultaneously and oppositely so that the amount added on one will be simultaneously subtracted on the other, and means operated by a part of one of the totalisers for indicating from which one of them the total should be read.

5. In combination, totalizing mechanism having a double set of totalizing wheels, means for operating both sets simultaneously in opposite directions one for addition and the other for subtraction; and means operated by one of said totalizing wheels for indicating where the total is to be read.

[Claims 6 to 26 not printed in the Gazette.]

881,572. CALCULATING-MACHINE. HYMAN B. GOLDBERG, Chicago, Ill., assignor to Goldberg Calculating Machine Company, a Corporation of Illinois. Filed June 5, 1907. Serial No. 377,379.



1. In a calculating machine, a totaliser having indicating members for indicating the various decimal denominations, operating mechanism for operating said indicating members one at a time, a carriage for determining the denominational place of operation of the operating mechanism upon the indicating members and means for preventing two successive operations upon the same indicating member without intervening motion of said carriage, said preventing means being restorable to permissive condition by the motion of the carriage.

2. In combination, a calculating machine having keys and a traveling denomination carriage, and means for preventing two successive calculations in the same denominational column, said preventing means being restorable to permissive conditions by the motion of the carriage.

3. In combination with a calculating machine having keys and a traveling carriage, a stop adapted to prevent depression of a key, and means operated by the carriage for throwing said stop to non active position.

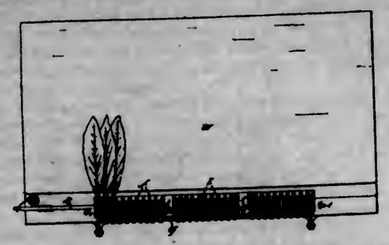
4. In combination with a calculating machine having keys and a traveling carriage, a stop adapted to prevent depression of a key, and a cam device operated by said carriage during its traveling movement for throwing said stop to non active position.

5. In combination with a calculating machine having keys and a traveling carriage, means for preventing two successive movements of a key without an intervening movement of the carriage, said preventing means being capable of being put into active and non active position, said preventing means being put into active position by the keys and into non active position by the travel of the carriage.

[Claims 6 to 20 not printed in the Gazette.]

881,573. MACHINE FOR STRINGING UP TOBACCO-LEAVES. OTTO GRAF and ALFRED GRAF, Boehringen, near Radolfzell, Germany. Filed Aug. 16, 1906. Serial No. 330,915.

1. The combination, of a plurality of leaf holders arranged in series, a needle arranged to traverse the holders in line with the leaves and having its side formed as a rack, and a drive pinion, meshing with the rack to propel the needle through the holders.



2. The combination, of a plurality of leaf holders arranged in series, a comparatively short needle arranged to traverse the holders in line with the leaves, and having its side formed as a rack, and a plurality of spaced drive pinions arranged to successively mesh with the rack to progressively propel the needle through the holders.

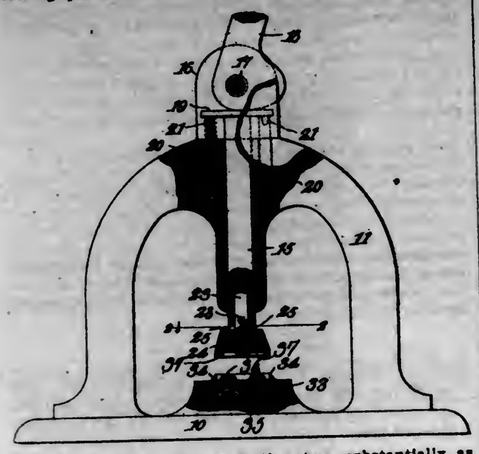
3. The combination, of a frame divided into a series of cells, a plurality of leaf holders one in each cell and comprising an underlying spring-pressed block and an overlying plate, a needle arranged to traverse the holders between the blocks and plates and transfix the leaves, said needle having its side formed as a rack, and a plurality of spaced drive pinions arranged to successively mesh with the rack of the advancing needle to progressively propel the needle through the holders.

4. The combination, of a frame divided into a series of cells, a plurality of leaf holders one in each cell and comprising an underlying spring-pressed block and an overlying plate, the blocks and plates provided in their opposing faces with transverse grooves to receive the leaf stems and with longitudinal grooves to form a needle passage, a needle arranged to traverse the said passage and transfix the stems, said needle having its side formed as a rack, and a plurality of drive pinions arranged at intervals to successively mesh with the rack of the advancing needle to propel the needle progressively forward.

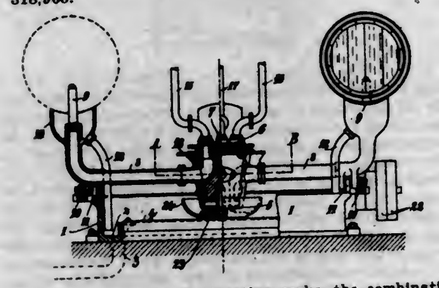
5. The combination, of a frame divided into a series of cells, a plurality of leaf holders one in each cell, and comprising an underlying spring-pressed block and an overlying plate, the blocks and plates provided in their opposing faces with transverse grooves to receive the leaf stems and with longitudinal grooves to form a needle passage, a needle arranged to traverse the said passage and transfix the stems, said needle having its side formed as a rack, a plurality of drive pinions arranged at intervals to successively mesh with the rack of the advancing needle to propel the needle progressively forward, a foot treadle, a drive shaft actuated thereby, and bevel gears connecting the drive shaft with the drive pinions to effect simultaneous movement thereof.

881,574. DENTAL-CROWN-SWAGING MACHINE. LAURENCE C. GRAHAM, Wigham, Ga. Filed Nov. 6, 1906. Serial No. 342,280.

A manually operable crown swaging device comprising a base plate having a dovetailed groove, a combined cutting and swaging die disposed therein, a frame carried by the base and provided with a vertical guiding opening in alinement with said die, a pair of pivot ears extending upward from the frame and provided with parallel inner walls, a plunger rod extending through the guiding opening, a plate secured to the top of the plunger rod, the opposite sides of said plate engaging the side walls of the pivot ears to prevent turning of the plunger, a cam lever arranged to operate on said plate, springs for elevating the plate and rod, the lower end of said rod having a central opening, and being provided with a diametrically extending recess, a movable cutting and swaging die having an integral stem arranged to fit within the opening of the plunger and provided with a pair of ribs arranged to fit within said diametrically extending recess, and a spring actuated locking pin carried by the plunger and arranged to fit within an opening formed in the stem, substantially as specified.



881,575. APPARATUS FOR RINSING AND AIRING CASKS. CARL GÜLKE, Chemnitz, Germany, assignor to Maschinenfabrik Germania vorm. J. S. Schwalbe & Sohn, Chemnitz, Germany. Filed May 26, 1906. Serial No. 318,965.



1. In an apparatus for treating casks, the combination with a stationary multi-chambered valve plug, of a rotary valve casing provided with ports corresponding in number to the plug chambers, distributing pipes connected with the ports, bearing cups arranged on the outer pipe ends to support the casks, drain pipes leading from the bearing cups, and means to rotate the valve casing.

2. In an apparatus for treating casks, the combination, with a stationary multi-chambered valve plug, and feeding pipes leading to certain of the plug chambers and a drain pipe leading from certain of the plug chambers, of a rotary valve casing provided with ports corresponding in number to the plug chambers, distributing pipes connected with the ports, bearing cups arranged on the outer pipe ends to support the casks, drain pipes leading from the bearing cups, and means to rotate the valve casing.

3. In an apparatus for treating casks, the combination, with a circular guide rail, a girder bridging the space inclosed by the guide rail, a drain cup formed on the girder centrally of said space, a stationary multi-chambered valve plug mounted centrally of the cup upon the girder, feeding pipes leading to certain of the plug chambers and a drain pipe leading from certain of the plug chambers to the drain cup, of a rotary valve casing mounted around the valve plug and centrally of the drain cup, said valve casing provided with ports, distributing pipes connected with the ports and revolving with the valve casing, bearing cups arranged on the outer pipe ends to support casks, drain pipes leading from the bearing cups, a circular rack connecting the distributing pipes, and means to drive the rack and wheels carrying the rack and traveling on the guide rail.

4. In an apparatus for treating casks, the combination, with a circular guide rail, a water channel bounded thereby, a girder bridging the space inclosed by the guide rail, a drain cup formed on the girder centrally of the said space, said cup having a central elevated portion, a stationary multi-chambered valve plug mounted centrally of the cup, feeding pipes leading to certain of the plug chambers and a drain pipe leading from certain of the plug chambers to the drain cup, of a rotary valve casing mounted around the valve plug upon the elevated drain cup portion as a foot step bearing and provided with ports, distributing pipes connected with the ports and revolving with the valve casing, bearing cups arranged on the outer pipe ends to support the casks, drain pipes leading from the bearing cups to points above the water channel, a circular rack connecting the distributing pipes, a worm to drive the rack, and wheels carrying the rack and traveling on the guide rail.

5. In an apparatus for treating casks, the combination, with a circular guide rail, a water channel bounded thereby, a girder bridging the space inclosed by the guide rail, a drain cup formed on the girder centrally of the said space, said cup having a central elevated portion, a stationary multi-chambered valve plug mounted centrally of the cup, feeding pipes respectively for warm and cold water and air leading to three of the plug chambers and a drain pipe leading from another of the plug chambers to the drain cup, of a rotary valve casing mounted around the valve plug upon the elevated drain cup portion as a foot step bearing and provided with ports corresponding in number to the plug chambers, distributing pipes connected with the ports and revolving with the valve casing, said distributing pipes terminating in nozzles, bearing cups arranged about the outer pipe ends to support casks with the nozzles therein, drain pipes leading from the bearing cups to points above the water channel, a circular rack connecting the distributing pipes to drive the rack, and wheels carrying the rack and traveling on the guide rail.

881,576. DOOR-OPERATING MECHANISM. CLEMENT G. HARRINGTON, Maplewood, Mo., assignor to American Car & Foundry Company, St. Louis, Mo., a Corporation of New Jersey. Filed Oct. 15, 1907. Serial No. 397,532.



1. A car provided with a door, a winding shaft arranged beyond the edge of the door and mounted so that it can rotate but not move or shift bodily relatively to the door, a flexible connection between said shaft and door, a projection on the door immovably connected thereto, and a device connected to the winding shaft for engaging said projection to hold the door closed; substantially as described.

2. A car provided with a hinged door, a rotatable winding shaft arranged beyond the edge of the door and stationarily mounted relatively thereto, a connection between said shaft and door, a projection on the door rigidly connected thereto, and a device connected to said shaft for engaging said projection to hold the door closed; substantially as described.

3. A car provided with a hinged door, a winding shaft connected to the door by a flexible member and stationarily mounted with relation to said door, a projection on said door which extends underneath the winding shaft when the door is closed, and a device connected to the winding shaft and adapted to pass under said projection to hold the door closed; substantially as described.

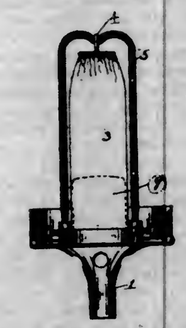
4. A car provided with a hinged door, a winding shaft connected to the door by a flexible member, a member se-

cured to the door and projecting beyond the front edge thereof, and a device connected to the winding shaft and provided with a roller which passes under said member to hold the door in its closed position; substantially as described.

5. A car provided with a door, a winding shaft connected to the door by a flexible member, a device connected to the underneath side of the door and having a portion that projects beyond the front edge of the door, and a yoke-shaped member secured to the winding shaft and having a roller on which the projecting portion of the device on the door rests when the door is closed; substantially as described.

[Claims 6 to 12 not printed in the Gazette.]

881,577. MANTLE-SUPPORT AND PROCESS FOR PROTECTING SAME. JOHN P. HARRIS, Cleveland, Ohio. Filed Aug. 25, 1905. Serial No. 275,772.



1. The process of protecting mantle supports which consists in coating the same with a cement containing refractory material and then applying to the support thus coated a coating of refractory material, substantially as specified.

2. The process of protecting mantle supports which consists in coating the same with a cement containing refractory material and then applying to the support thus coated a coating of refractory material applied in a powdered condition, substantially as specified.

3. The process of protecting mantle supporting wires which consists in roughening or serrating the wire, applying to the same a cement containing refractory material, and then applying to the wire thus coated a coating of refractory material in powdered condition, substantially as specified.

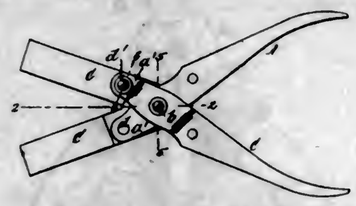
4. A mantle support having thereon an inner coating of cement containing refractory material and an outer coating of powdered refractory material, substantially as specified.

5. A mantle support comprising a wire having the surface thereof, which is adjacent to the mantle, roughened or serrated and having applied thereto a coating of cement containing refractory material and a further coating of refractory material applied in powdered condition, substantially as specified.

[Claim 6 not printed in the Gazette.]

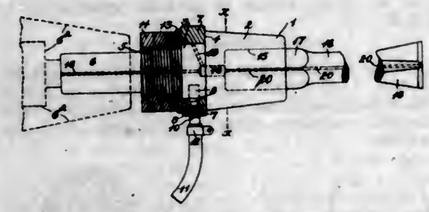
881,578. CUTTING IMPLEMENT. GEORGE W. HASKINS, New York, N. Y., assignor to Abbot Augustus Low, Horseshoe, N. Y. Filed Oct. 26, 1907. Serial No. 399,375.

In an implement of the character designated, the combination of the hollow handles, cutter blades attached thereto and formed with annular grooves in their opposed surface concentric to the pivot upon which the cutters are fulcrumed, with tangential grooves extending from said annular grooves, said fulcrum pivot, a spring having a convolution resting in the annular recess formed by and between said grooves and extending through the tangential grooves and projecting into the hollow handles, said cutting blades and bifurcated handles being also formed with coinciding perforations, male and female screws extending through said coinciding perforations and



engaging with each other, and coiled springs around said screws and interposed between the inner sides of the cutting blades and the opposed surfaces of the bifurcated handles, for the purpose described.

881,579. WATER-SUPPLYING ATTACHMENT FOR ROCK-DRILLS. HENRY HELLMAN and LEWIS C. BAYLES, Johannesburg, Transvaal. Filed Dec. 18, 1906. Serial No. 348,394.



1. In a rock-drilling machine, the combination, with a drill, of a detachable make-up piece positioned at the front end of the drill and supported and rotated thereby and constructed at the forward end with a hole of non-circular transverse section, a bit constructed with a portion of corresponding non-circular transverse section loosely positioned in the hole in the make-up piece and supported and rotated thereby and constructed with a longitudinal hole communicating with the hole in the make-up piece and leading to the cutting end, a swivel mounted on the make-up piece and means for conducting water to the swivel, the make-up piece being constructed with passages for conveying water from the swivel and actuating fluid from the drill to the longitudinal hole in the bit.

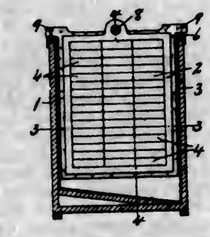
2. In a rock-drilling machine, in combination, a drill, a detachable make-up piece loosely positioned at the front end thereof and supported and rotated thereby, a bit carried at the front of the make-up piece and having a longitudinal hole therein, a swivel mounted on and closely surrounding the make-up piece and having a water-conducting opening periodically placed in communication with the longitudinal hole in the bit upon rotation of the latter, for alternately supplying water to the bit aforesaid and for cutting off said supply.

3. In a rock-drilling machine, a drill a detachable make-up piece loosely positioned at the front end thereof and supported and rotated thereby, a bit carried at the front end of the make-up piece, said bit having a longitudinal passage and the make-up piece having a port or passage in communication therewith, a swivel mounted on and closely surrounding the make-up piece and having a short recess for periodically communicating with the port or passage in the make-up piece as the bit is rotated, to alternately supply water to the port or passage of the make-up piece and to cut off said supply, and means for conducting water to the swivel.

4. In a rock-drilling machine, in combination, a drill, a detachable make-up piece loosely positioned at the front end thereof and supported and rotated thereby, a bit carried at the front end of the make-up piece, said bit having a longitudinal passage and the make-up piece, having two ports or passages, one extending from the end of this make-up piece and communicating with the longitudinal passage of the bit and the other port or passage communicating with the drill cylinder, a swivel mounted round the make-up piece and having a recess adapted to communicate with the first-named port or passage in the make-up piece as the bit is rotated, to permit an intermittent supply of water to pass to the bit, and means for conducting water to the swivel.

5. In combination, a bit having a passage disposed longitudinally therein a detachable make-up piece secured to the aforesaid bit for rotating the latter, said make-up piece having a port in communication with the passage of said bit, and a swivel mounted on and closely surrounding the make-up piece and having a short recess wherewith the port of the make-up piece is intermittently brought into and out of register as the bit is rotated, and means for supplying water to the opening in the swivel.

881,580. METHOD OF RECOVERING COPPER FROM ORE OR MATTE BY ELECTROLYSIS. HENRY K. FOSS, Philadelphia, Pa. Filed Jan. 31, 1907. Serial No. 355,145.



1. The herein described process of recovering copper from natural ore or matte consisting in immersing porous briquets containing particles of comminuted ore in an electrolyte together with a lead electrode in permanent contact with the briquets and subjecting the same to the action of an electric current for the liberation of the copper.

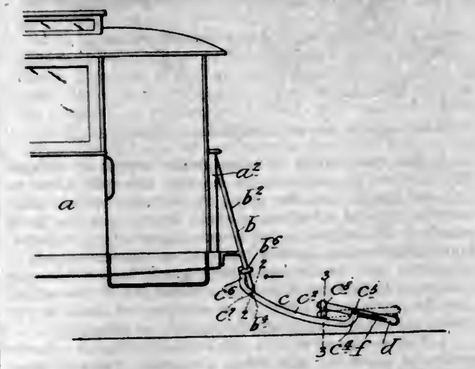
2. The herein described process of recovering copper from natural ore consisting in mixing a quantity of comminuted copper ore together with a body of clay, subsequently vitrifying the clay to bind the ore particles together and immersing the whole in a suitable electrolyte in the presence of suitable electrodes, one of which is in permanent contact with the body of ore and clay for liberating the copper therefrom.

3. The herein described process of recovering copper from ores consisting in forming a briquet of comminuted ore, clay and vegetable fiber, then heating the briquet thus formed sufficiently to destroy the fiber and to vitrify the clay, thus rendering the briquet porous, and immersing the briquet in a suitable electrolyte in the presence of suitable electrodes, one of which is in permanent contact with the briquet for liberating the copper therefrom.

4. The herein described method of recovering copper from its ores by electrolysis consisting in immersing into a suitable electrolyte a self-sustaining electrode of comminuted copper ore held together by a bond of vitrified clay and supporting a lead conductor, and then subjecting the electrode and electrolyte to the action of an electric current in the presence of a second electrode for the deposition of the copper.

5. The herein described method of recovering copper from its ores consisting in confining comminuted copper containing ore by means of an earthy bond burned to hardness to increase its porosity and to render the body of comminuted ore self-sustaining and affixing a lead conductor to the porous body to form an electrode, immersing the electrode together with a second electrode for receiving the copper deposit into a suitable electrolyte and subjecting said electrodes to the action of an electrical current, whereby the copper is expelled from the porous body without disintegrating the latter.

881,581. CAR-FENDER. ADAM HESSEMER, Brooklyn, N. Y. Filed Dec. 5, 1907. Serial No. 405,169.



1. A fender or guard for cars, comprising a stationary frame member secured to the end body portion of the car and ranging downwardly and outwardly therefrom and below the bottom thereof, a movable fender or guard frame detachably pivoted at the lower end of the stationary frame member and normally ranging forwardly and downwardly therefrom, means for holding said fender or guard frame in a predetermined position, and a supplemental fender or guard frame pivotally and slidably mounted on the front end of the main movable fender or guard frame and extending forwardly thereof and backwardly of its pivotal support and normally held in a downwardly and forwardly directed position, and adapted to be moved backwardly and tilted into a backwardly and downwardly directed position, substantially as shown and described.

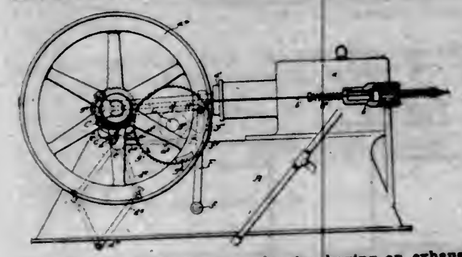
2. A fender or guard for cars, comprising a stationary frame member secured to the end body portion of the car and ranging downwardly and outwardly therefrom and below the bottom thereof, a movable fender or guard frame detachably pivoted at the lower end of the stationary frame member and normally ranging forwardly and downwardly therefrom, means for holding said fender or guard frame in a predetermined position, and a supplemental fender or guard frame pivotally and slidably mounted on the front end of the main movable fender or guard frame and extending forwardly thereof and backwardly of its pivotal support and normally held in a downwardly and forwardly directed position, and adapted to be moved backwardly and tilted into a backwardly and downwardly directed position, all of said frame members being provided with open-work body portions, substantially as shown and described.

881,582. GAS-ENGINE. HENRY A. HETTINGER, Bridgeton, N. J. Filed May 13, 1907. Serial No. 373,362.

1. The combination in a gas engine having an exhaust valve, of a cam operated from the main shaft, a structure actuated by said cam, to periodically open the exhaust valve, centrifugal governor mechanism including a lever movable into a position to engage the cam actuated structure so as to hold the exhaust valve open independently of the cam, and means independent of the governor mechanism including a hand operated eccentric for moving said lever at will into said position.

2. The combination in a gas engine having an exhaust valve, of means including a cam actuated from the main shaft of the engine for periodically opening the valve, centrifugal governor mechanism including a structure mounted upon an eccentric for connecting the governor and the valve, with means for moving said eccentric independently

of the governor and the cam, to maintain the exhaust valve in its open position, substantially as described.



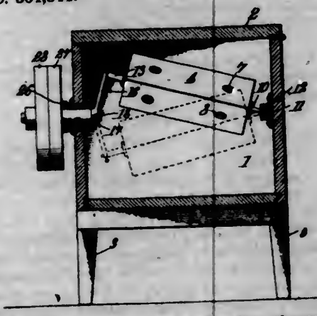
3. The combination of a gas engine having an exhaust valve, a rod for said valve, a movable structure operative on said rod to open the valve, an electrical contact piece carried by said structure, a shaft driven from the main shaft of the engine, having a cam operative on the structure and carrying an electrical contact member capable of engaging said contact piece, with means for holding said structure in position to prevent engagement of the contact member with the contact piece and also to maintain the valve in its open position, substantially as described.

4. The combination in a gas engine having an exhaust valve of a rod for said valve, a movable structure operative on said rod to open the valve, an electrical contact piece carried by said structure, a member driven from the main shaft of the engine, having a cam operative to cause movement of the structure and carrying an electrical contact member capable of engaging said contact piece, with a centrifugal governor capable of holding said structure in position to prevent engagement of the contact member with the contact piece and also of holding the valve in its open position, substantially as described.

5. The combination in a gas engine having an exhaust valve, of a rod for said valve, a movable structure operative on said rod to open the valve, an electrical contact piece carried by said structure, a member driven from the shaft of the engine having a cam operative on the structure and carrying an electrical contact member capable of engaging said contact piece, with a centrifugal governor capable of holding said structure in position to prevent engagement of the contact member with the contact piece and of holding the valve in its open position, substantially as described.

[Claims 6 to 10 not printed in the Gazette.]

881,583. JEWELRY-POLISHING DEVICE. CURTIS H. HODGKINS, Attleboro, Mass. Filed Mar. 25, 1907. Serial No. 364,344.



1. In a machine for polishing jewelry, the combination with a tank adapted to contain a suitable cleansing solution, of a receptacle revolubly mounted in the tank having a plurality of peripheral sides, and a series of inwardly projecting ribs secured to each peripheral side of the receptacle, the ribs on some of the sides having a pitch toward one end of the receptacle and those on the other sides having a pitch toward the other end of the receptacle, the ends of the ribs of the several sides abutting to form continuous zig-zag channels extending circumferentially around the inside of the receptacle, screened openings being formed in the walls of the receptacle and communicating with the said channels and means for oscillating the latter about a longitudinal and a transverse axis.

2. In a machine of the character described, the combination with a suitable tank, of a receptacle revolubly mounted therein having a plurality of sides having screened openings therein, one of the sides being movable to permit access to the interior of the receptacle, and a series of inwardly projecting ribs extending circumferentially about the inside of the receptacle.

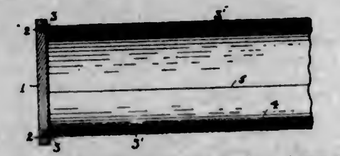
3. In a polishing or burnishing machine, the combination with a tank adapted to contain a suitable cleansing solution, of a receptacle having axially extending trunnions at opposite ends, an operating shaft journaled in the tank having a crank arm provided with an eccentrically arranged angular socket coöperating with a corresponding annular end on one of the trunnions, and a bearing on the tank arranged in alinement with the said shaft and coöperating with the other trunnion of the receptacle, and a latch for locking the said crank arm and its coöperating trunnion.

4. In a polishing machine of the character described, the combination with a tank adapted to contain a suitable cleansing solution, of a receptacle adapted to receive the articles to be polished having axially extending trunnions at the opposite ends thereof, devices arranged within the tank and detachably coöperating with the trunnions of the receptacle for revolubly supporting the latter within the tank, and a spring actuated latch carried by one of the said supporting devices and coöperating with its respective trunnion for locking the receptacle in operative position within the tank when the receptacle is introduced therein.

5. In a polishing or burnishing machine, the combination with a tank adapted to contain a suitable cleansing solution, of a receptacle having axially extending trunnions at opposite ends, an operating shaft journaled in the tank having a crank arm, a latch on the latter for detachably locking one of the trunnions thereto, and a suitable bearing for the other trunnion.

[Claims 6 to 8 not printed in the Gazette.]

881,584. CYLINDER OR TUBE. ROSS J. HOFFMAN, Bradford, Pa. Filed May 10, 1907. Serial No. 372,928.

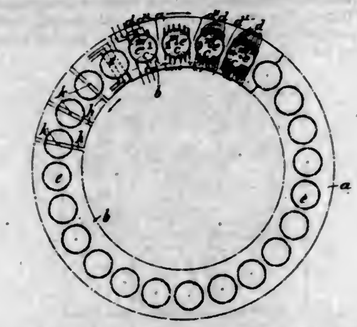


1. A cylinder or tubing composed of an inner shell of sheet metal rolled into cylindrical form with its edges abutting, an outer winding of wire and solder filling the interstices between the windings of the wire and between said wire and the sheet metal, said solder uniting the abutting edges of the sheet metal together, substantially as described.

2. In combination, a cylinder composed of an inner lining of sheet metal rolled into cylindrical form with its edges abutting, an outer winding of wire soldered thereto and the heads having grooves to receive the ends of the sheet metal cylinder and the wire winding, substantially as described.

881,585. ELECTRIC MOTOR. EDWARD HOPKINSON and JULIUS FRITH, Manchester, England, assignors to Mather & Platt Limited, Manchester, England. Filed Dec. 29, 1905. Serial No. 293,751.

1. An electric motor of the induction type having a plurality of rotors mounted to revolve about separate axes, and a magnetic system common to and arranged to extend symmetrically around said rotors in a direction transverse to their axes and to act equally and simultaneously upon diametrically opposite parts of each rotor.



2. An electric motor of the induction type comprising a plurality of independent rotors mounted to revolve about separate axes displaced laterally of one another, and a stationary electro-magnetic system common to and arranged to extend symmetrically around said rotors in a direction transverse to their axes and to act inductively and equally upon diametrically opposite parts of each rotor and to simultaneously rotate all the rotors.

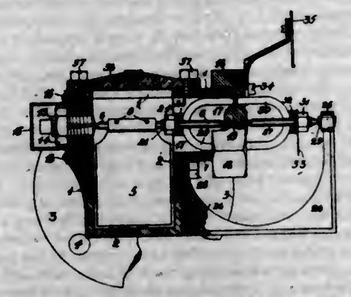
3. An electric motor of the induction type comprising a plurality of independent rotors mounted to rotate about separate axes, and a stationary electro-magnetic system common to said rotors and having polyphase windings arranged to produce magnetic fields that travel in reverse directions in opposite parts of said electro-magnetic system and to act inductively upon and simultaneously rotate said rotors.

4. An electric motor of the induction type comprising a plurality of rotors revoluble independently about separate axes, and a stator comprising oppositely arranged parts common to all the rotors, the rotors being arranged between the parts of the stator and the stator being provided with polyphase windings arranged so that a moving magnetic field set up in one part of the stator will be caused to progress in the reverse direction to that set up in the opposite part of the stator.

5. An electric motor of the induction type comprising a stator having two oppositely disposed parts provided with polyphase windings producing oppositely moving magnetic fields therein, and a plurality of independent rotors, revoluble about separate axes and arranged between the parts of said stator.

[Claims 6 to 16 not printed in the Gazette.]

881,586. FLUID-METER. ROBERT HOWE-GOULD, Springs, Transvaal. Filed Aug. 7, 1906. Serial No. 329,550.

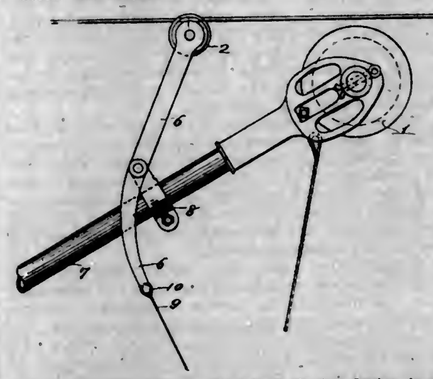


1. In a fluid-velocity meter, a casing having a passage therethrough and a lateral chamber opening through said passage, a freely movable spindle crosswise of the passage, a part directly acted upon by the fluid and engaging the spindle and a magnet located within the lateral chamber and adjustably connected with said spindle, in combination with indicator means located externally of the casing and comprising a spindle alined with that first mentioned and a piece of magnetic material influenced by the aforesaid magnet and adjustably connected with the second-mentioned spindle, and an indicator dial adjustably connected with said casing and constituting part of the indicator means.

2. In a fluid velocity meter, in combination, a casing forming a conduit for the fluid and constructed to form a lateral chamber, a vane in said casing with its plane at right angles to the direction of flow of the fluid through the conduit, a spindle supporting the vane and fixed thereto the spindle projecting into the lateral chamber, adjustable bearings for said spindle, a magnet fixed to the spindle inside the lateral chamber, a cover for said lateral chamber forming a drone wall, an external spindle, adjustable bearings therefor, an external magnet fixed to said external spindle the poles of the magnets being oppositely disposed, and an index finger or pointer carried by the external spindle to which the movements of the vane are transmitted through the magnets.

3. In a fluid velocity meter, in combination, a casing forming a conduit for the fluid and constructed to form a lateral chamber, a vane in said casing with its plane at right angles to the direction of flow of the fluid through the conduit, a spindle supporting the vane and fixed thereto said spindle projecting into the lateral chamber, adjustable bearings for said spindle, a magnet fixed to the spindle inside the lateral chamber, a cover for said lateral chamber forming a non-magnetic wall, adjustable bearings for said external spindle, an external magnet fixed to said external spindle, the poles of the magnets being oppositely disposed, an index finger or pointer carried by the external spindle to which the movements of the vane are transmitted through the magnets, and a graduated dial for indicating the volume or quantity of fluid flowing through the conduit.

881,587. TROLLEY-WHEEL-PLACING DEVICE. HUBERT G. HUSTED, Oberlin, Ohio. Filed July 29, 1907. Serial No. 385,993.



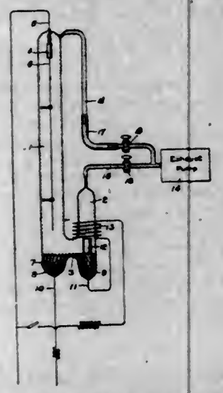
1. In an automatic trolley wheel placing device, in combination with the trolley wheel and the pole therefor, a swinging arm pivoted upon the pole below the wheel, and adapted to normally fold thereon, an idler pivoted in said arm and provided with a central annular groove, and reversely spiral grooves at each end communicating with said central groove and with an annular flange at each extremity, said idler adapted to be raised to a greater elevation than said wheel when the pole is inclined, and means for raising said arm and idler from the folded position, and for releasing the same.

2. In an automatic trolley wheel placing device secured to the pole the combination with the pole and wheel of an idler provided with reversely arranged spiral grooves

extending from each end towards the center a central annular groove in the idler with which said spiral grooves communicate, an arm pivotally secured upon the pole upon which arm the said idler is pivotally mounted, said arm having an extension projecting below said pole, and a manipulating cord attached to the lower extremity of said arm.

3. In combination with a trolley pole and wheel adapted to run upon a trolley wire, an auxiliary device for placing the trolley wheel, and for drawing it into alinement with the wire, and comprising a pivoted idler, said idler provided with a central annular groove, auxiliary reverse spiral grooves on each side thereof and terminal flanges and a pivoted support for said idler upon said pole.

881,588. METHOD OF EXHAUSTING VAPOR CONDUCTORS. ALEXANDER M. JACKSON, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Aug. 4, 1903. Serial No. 168,158.



1. The method of exhausting a vapor electric apparatus having an envelop or receptacle provided with a condensing chamber and with a main operating chamber traversed by the arc stream, which consists in conducting the exhaustion both from the condensing chamber and from the main operating chamber or portion traversed by the arc stream, and maintaining the arc or normal discharge during the operation of exhaustion.

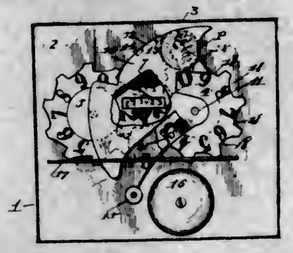
2. The method of exhausting a vapor electric apparatus having an envelop or receptacle provided with communicating chambers each containing an electrode, which consists in conducting the exhaustion simultaneously from points communicating with the envelop or receptacle in the one case near one electrode and in the other case near another electrode, and maintaining an arc in the envelop while the exhaustion is proceeding.

3. The method of exhausting a vapor electric apparatus having a receptacle or container consisting of a main body portion and a coöperating portion serving as a condensing chamber and communicating with the main body portion, which consists in conducting the exhaustion both from the condensing chamber and from the main body of the receptacle, and at the same time maintaining an arc or discharge in the apparatus.

4. The method of exhausting a vapor electric apparatus consisting of a receptacle or container provided with communicating chambers, which consists in conducting the exhaustion from said chambers simultaneously and, while the exhaustion is proceeding, maintaining an arc in said receptacle.

881,589. TOY BANK. ARTHUR E. JACOBS, Cleveland, Ohio. Filed Feb. 28, 1906. Serial No. 303,335.

1. The combination with a case having a coin entrance slot, of two wheels pivoted in the case, one wheel having a multiple number of teeth and the other one adapted to engage therewith once in one revolution thereof, the said wheels having each a portion of a slot in its periphery, and the said case having a coin exit slot, the portional slots in said wheels combining to form a complete coin exit slot registering with the said coin exit slot in the case, once in a complete revolution of the wheel having a multiple number of teeth.



2. The combination with a case having a coin entrance slot, of two wheels pivoted in the case, one wheel having an elongated tooth, and the other wheel having a multiple number of teeth with which said tooth engages once in one revolution thereof, a series of coin receiving recesses in the edge of the wheel having one tooth, and means for forcing the coins one at a time into engagement with one of the recesses in the recessed wheel and thereby rotating the same, consisting of, a feed plate pivoted on the axis of the recessed wheel, said feed plate having coin engaging lugs, the wall of said case having a coin outlet opening and the edge of each wheel provided with a partial opening, a complete outlet opening being formed only when the partial openings in the wheels register with each other and with the opening in the wall.

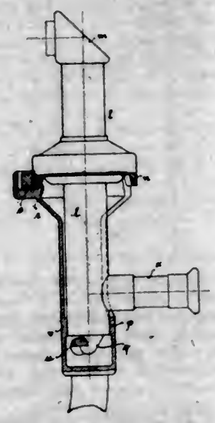
3. The combination with a case having a coin inlet opening and observation openings, of two wheels pivoted in the case and having an equal multiple number of numerals in the wheels visible in turn in said observation openings, a series of recesses in one wheel adapted to receive one at a time coins falling into said coin inlet opening, said recesses equaling in number said numerals on said wheel, a long tooth on the recessed wheel, and a multiple number of teeth on the other wheel equaling in number the number of said recesses, and engaged by said long tooth one at a time, and a combined flash and feed plate pivoted upon the axis of the recessed wheel, and provided with lugs adapted and arranged to engage the coin and force it against the recessed edge of the recessed wheel.

881,590. MOUNTING OF SIGHTING-TELESCOPES. HEINRICH JACOB, Friedenau, near Berlin, Germany, assignor to The Firm of Optische Anstalt C. P. Goers Aktiengesellschaft, Friedenau, near Berlin, Germany. Filed July 24, 1906. Serial No. 327,475.

1. In a device for mounting sighting-telescopes a support provided with a circular bearing surface to receive a corresponding bearing surface in a member rigidly fixed to the telescope, and stop-members one adapted to interlock said support and said telescope so as to prevent rotation of the telescope on the circular bearing surface of the support and the other to interlock the telescope and the support so as to prevent removal of the telescope from the support, at least one of said support-members being adapted to be brought out of locking position, thereby freeing the telescope for removal from the support.

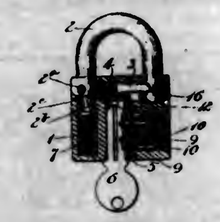
2. In a telescope a body member, an objective reflector rotatably mounted thereon, an ocular tube arranged at an angle to the axis of rotation of said objective reflector, the telescope body being provided with a circular bearing surface, the axis of said bearing surface being coincident with the axis of rotation of the objective reflector of the instrument.

3. In a telescope a body member, an objective reflector rotatably mounted thereon, an ocular tube arranged at an angle to the axis of rotation of said objective reflector, the telescope body being provided with a circular bearing surface, the axis of said bearing surface being coincident with the axis of rotation of the objective reflector of the instrument and a stop member extending radially from the body of the instrument.



4. A support for a panorama telescope provided with at least two concentric circular bearing surfaces one of which is interrupted by a gap for the passage of the ocular tube during the mounting of the telescope.

881,591. PADLOCK. CHARLES E. JOHNSON, New Britain, Conn., assignor to Corbin Cabinet Lock Company, New Britain, Conn., a Corporation of Connecticut. Filed Aug. 23, 1907. Serial No. 389,805.



1. In a pad-lock, a one piece body or case, two recesses in the top of the same, a third recess entering the case from the bottom and between the first two, two or more bores extending into the side edge of the case and including a relatively large bore and a relatively small bore, the former intersecting the recess entering the case from the lower end, a shackle hinged in one of the upper recesses, a bolt in the aforesaid relatively large bore for engaging the free end of the shackle, and a bolt-operating device in the recess in the lower end of the case.

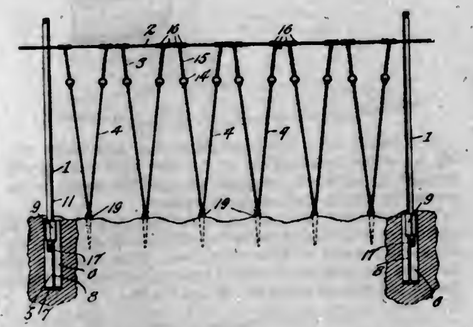
2. In a pad-lock, a solid body or case, two recesses in the top of the same, a third recess entering the case from the bottom and between the first two, two or more bores extending into the side edge of the case and including a relatively large bore and a relatively small bore, the former intersecting the recess entering the case from the lower end, a shackle hinged in one of the upper recesses, a bolt in the aforesaid relatively large bore for engaging free end of the shackle, and a bolt-operating device in the recess in the lower end of the case, and a shackle opening device including a spring arranged under the hinged end thereof.

3. In a pad-lock, a solid body or case, two recesses in the top of the same, a third recess entering the case from the bottom and between the first two, two or more bores extending into the side edge of the case and including a relatively large bore and a relatively small bore, the former intersecting the recess entering the case from the lower end, a shackle hinged in one of the upper recesses, a bolt in the aforesaid relatively large bore for engaging the free end of the shackle, and a bolt-operating device in the recess in the lower end of the case, a shackle opening device including a spring arranged under the hinged end thereof, and a plunger between said spring and shackle.

4. In a pad-lock, a solid body or case, two recesses in the top of the same, a third recess entering the case from the bottom and between the first two, two or more bores extending into the side edge of the case and including a relatively large bore and a relatively small bore, the former intersecting the recess entering the case from the lower end, a shackle hinged in one of the upper recesses, a bolt in the aforesaid relatively large bore for engaging the free end of the shackle, a bolt-operating device in the recess in the lower end of the case, a shackle opening device including a spring arranged under the hinged end thereof, a plunger between said spring and shackle, and a shoulder on said shackle arranged to engage the end of the plunger when the shackle is open.

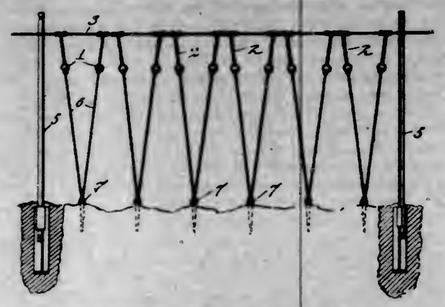
5. In a pad-lock, a solid body or case, two recesses in the top of the same, a third recess entering the case from the bottom and between the first two, two or more bores extending into the side edge of the case and including a relatively large bore and a relatively small bore, the former intersecting the recess entering the case from the lower end, a shackle hinged in one of the upper recesses, a bolt in the aforesaid relatively large bore for engaging the free end of the shackle, and a bolt-operating device in the recess in the lower end of the case, a shackle opening device including a spring arranged under the hinged end thereof, and a plunger between said spring and shackle, one side of the plunger being cut away or recessed to provide clearance for the hinged portion of the shackle when the latter is open.

881,592. HOP-POLE. ORVILLE M. KNOX, Oneida, N. Y. Filed Mar. 27, 1907. Serial No. 364,860.



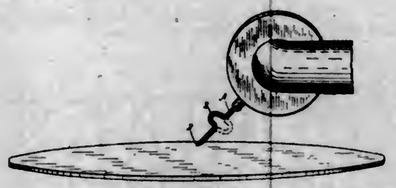
An all-metal hop pole comprising a vertical base plate provided at its lower end with a laterally-projected foot, an angular socket member arranged at the upper end of the plate upon one of the side faces thereof, above the foot, said socket member forming with the plate an L-shaped opening whose portions extend respectively parallel with the plate and at right angles thereto, a bracing web upon the plate extending upward from the foot in alinement with the latter-named portion of the socket opening and terminating below the socket member, an L-shaped-pole proper fitted at its lower end in the socket opening and extending below the same, one web of said pole bearing against the side of the plate and the other resting loosely upon the upper end of the bracing web, and a fastening connecting the plate and the bearing web of the pole below and at one side of said socket member, substantially as described.

881,593. TRAINING-STRING CONNECTOR. ORVILLE M. KNOX, Oneida, N. Y. Filed Mar. 27, 1907, Serial No. 364,861. Renewed Jan. 9, 1908. Serial No. 410,013.



In a training-string connector for hop-trellises, the combination, with an overhead supporting wire, of a flexible training-string leading from the hop-hill, and a connector coupling said string to the wire, and about which the vine is adapted to twine to relieve the string of a portion of the weight thereof, said connector comprising a member formed of a single length of wire bent to form a ring or eye to which the string is attached, intertwisted above the eye to form a single stem, and projected beyond the stem in opposite directions and coiled to provide attaching members engaging the wire, the eye being arranged to lie vertically in the plane of the stem to transmit the strain of the weight of the vine on a direct line to and through the stem to the wire, substantially as described.

881,594. TALKING-MACHINE NEEDLE. GÁBOR KÖNIGSTEIN, San Francisco, Cal. Filed Sept. 20, 1907. Serial No. 393,851.



1. A needle for a disk talking machine, said needle having a portion intermediate of its ends bent transversely beyond the plane of the outer sides of the needle to increase the length and elasticity thereof.

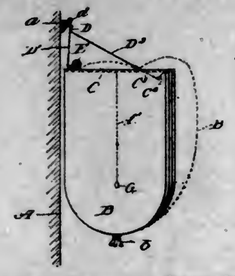
2. A needle for disk talking machines, having one end adapted to be fixed and connected with the transmitter, the other end pointed to follow the lines of the disk, and an intermediate bend which curves outwardly from the direct line of the first two portions of the needle.

881,595. APPARATUS FOR FLASH-LIGHT PHOTOGRAPHY. GEORGE R. LAWRENCE, Chicago, Ill. Filed Apr. 30, 1906. Serial No. 314,406.

1. In a flash light apparatus, the combination with a translucent collapsible closure, of means for creating light within said closure, and means for automatically effecting the collapse of said closure upon the creation of the light therein.

2. In a flash light apparatus, the combination with a collapsible translucent closure, of means for creating light within said closure, means for automatically effecting the collapse of said closure upon the creation of the light therein, and a cover for automatically screening said closure upon its collapse.

3. In a flash light apparatus, the combination with a translucent bag, of a frame within said bag for supporting the same, means for supporting said frame in position to distend said bag, a support for powder depending from said frame within said bag, means for igniting the powder, and means for automatically permitting said frame to swing into position to collapse said bag upon the ignition of the powder.

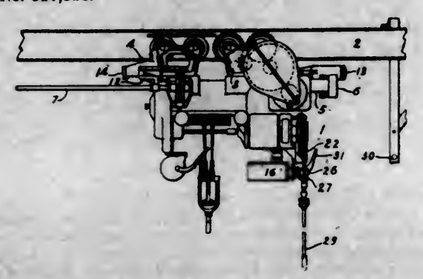


4. In a flash light apparatus, the combination with a translucent normally closed bag, of a frame within said bag for supporting the same distended, hangers for supporting said frame in position to distend said bag, a support for powder within said bag, means for igniting the powder while surrounded by said bag, means for automatically disconnecting one of said hangers from said frame upon the ignition of the powder.

5. In a flash light apparatus, the combination with a translucent normally closed bag, of a frame within said bag for supporting the same, hangers for supporting said frame in position to distend the bag, a support for powder within said bag, means for igniting the powder while surrounded by said bag, and a fusible connection between one of said hangers and said frame.

[Claims 6 to 14 not printed in the Gazette.]

881,596. ELECTRIC CARRIER. SAM H. LIBBY, East Orange, N. J., assignor to Sprague Electric Company, a Corporation of New Jersey. Filed May 18, 1906. Serial No. 317,526.



1. In an automatic carrier system, an electrically-operated carrier, a switch for controlling the circuit of the carrier motor, a switch-operating arm projecting laterally from said carrier, and a member mounted on the carrier in the plane of said arm and projecting beyond the end of the carrier for engagement with the switch-operating arm of a following carrier.

2. In an automatic carrier system, an electrically-operated carrier, a switch for controlling the circuit of the carrier motor, a switch-operating arm projecting laterally from said carrier, a member mounted on the carrier in the plane of said arm and projecting beyond the end of the carrier for engagement with the switch-operating arm of a following carrier, and means for automatically adjusting the position of said member relative to the carrier when the carrier is on a curve in order to maintain the outer end of said member at approximately the same distance from the track.

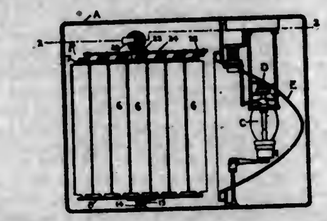
3. In a carrier, a motor, a motor-controlling device, an operating arm for said device projecting laterally from the carrier at one end thereof, and a rod or staff mounted upon the carrier in the plane of said arm and projecting beyond the end of the carrier opposite to that at which the motor controlling device is situated.

4. In a carrier, a motor, a motor-controlling device, an operating arm for said device projecting laterally from the carrier at one end thereof, a member mounted upon the carrier in the plane of said arm and projecting beyond the end of the carrier opposite to that at which the motor controlling device is situated, and means for automatically changing the angular relation of said member relative to the carrier when movement of the carrier deviates from a straight line.

5. In a carrier, a motor, a motor-controlling device, an operating vane for said device arranged at one end of the carrier and projecting at an angle thereto, and a rod or staff mounted on the carrier in a plane passing through said vane, said rod or staff projecting beyond the end of the carrier opposite to that at which the said vane is situated.

[Claims 6 to 10 not printed in the Gazette.]

881,597. PROJECTOR. CHARLES E. LORD, Cincinnati, Ohio, assignor to General Electric Company, a Corporation of New York. Filed Oct. 19, 1904. Serial No. 229,108.



1. In a projector, a source of illumination, a surface of high reflecting quality, a surface of low reflecting quality, and means for changing the position of said reflecting surfaces so as to project a beam of light of high or low intensity in the direction desired.

2. In a projector, a source of illumination, a surface of high reflecting quality, a surface of low reflecting quality, and means for changing the relative position of the reflecting surfaces and said source of illumination so as to project a beam of light of high or low intensity in the direction desired.

3. In a projector, a source of illumination, a reflector adapted to receive the beam of light from said source and project it in the desired direction, said reflector being provided with surfaces of high reflecting and low reflecting qualities, and means for changing the position of said reflector so as to bring one or the other of said reflecting surfaces into play when a beam of high or low intensity is desired.

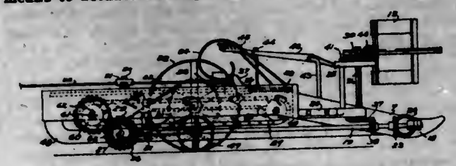
4. In a projector, a source of illumination, a reflector built up of a plurality of rotatably-mounted slats each having a surface of high reflecting quality and a surface of low reflecting quality, and means for rotating said slats.

5. In a head-lamp, a source of illumination, a reflector comprising a plurality of movable slats having surfaces of different reflective qualities constructed and arranged to receive a beam of light from said source and project it in the desired direction, means for adjusting said reflector to change the direction of the beams of light, and means for adjusting the position of said slats to vary the intensity of said beam.

[Claims 6 to 14 not printed in the Gazette.]

881,598. TOBACCO-HARVESTER. SAMUEL E. LOXLEY, Dayton, Ohio. Filed July 26, 1906. Serial No. 327,819.

1. A tobacco harvester comprising a frame, a series of impaling needles movably supported on said frame and adapted to be successively loaded and removed, an impaler for impaling the plants on each successive needle, and means to actuate the impaler.



2. A tobacco harvester comprising a frame, a guide for the plants, a series of removable impaling needles adapted to be moved successively into alinement with said guide, an impaler to engage the plants and force them onto the needles, and means to actuate the impaler.

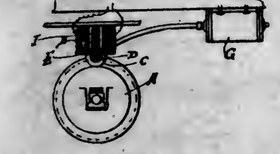
3. A tobacco harvester comprising a frame, impaling needles rotatively mounted and adapted to be successively loaded and removed by the operator, devices to guide the plants to the needles, an impaler to force the plants on the needles, the impaler being under the control of the operator, and devices to actuate the impaler.

4. A tobacco harvester comprising a frame, removable impaling needles under the control of the operator, one needle being removable while another is being loaded, devices to guide the plants to the needle to be loaded, a reciprocating impaler also under the control of the operator, and means to actuate the impaler.

5. A tobacco harvester comprising a frame, a series of rotatable removable needles under the control of the operator, devices to guide the plants to the needle to be loaded, an impaler to force the plants on such needle, a traveling chain having detents, treadle devices to throw the detents into position to engage the impaler, and means to actuate said chain.

[Claims 6 to 13 not printed in the Gazette.]

881,599. MEANS FOR TRANSMITTING POWER FROM THE AXLES OF RAILWAY-CARS. LAWRENCE C. MAHER, Philadelphia, Pa. Filed June 29, 1907. Serial No. 381,476.



In combination with a generator carried by the body of a car, a wheel, a flexible shaft connecting said generator and wheel, a driving wheel secured upon the axle of the car, a spring for forcing the driven wheel in contact with the driving wheel, an armature upon which the driven wheel is journaled and an electro-magnet so arranged as to draw the armature upward and thereby lift the driven wheel out of contact with the driving wheel when said magnet is vitalized, as specified.

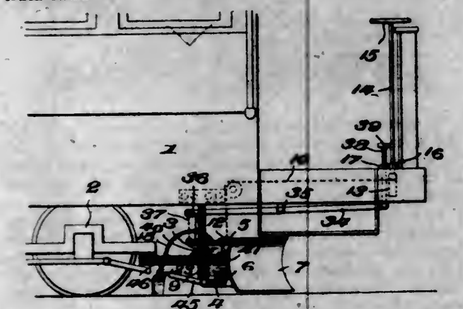
881,600. COMBINED FENDER AND TRACK-CLEANER. JOSEPH P. MANSON, Hartland, Me. Filed Sept. 19, 1907. Serial No. 393,716.

1. The combination of a car body having depending standards thereon; of beams, sockets on said beams adapted to receive said standards, a mold board carried by said beams and means to raise and lower said beams and mold board.

2. The combination with a car body; of beams below said car body, a mold board carried by said beams, means to slidably secure said beams to the car body, supporting cables for said beams, means to operate said cables, whereby the beams will be raised or lowered, and additional means to limit the downward movement of said beams.

3. The combination with a pair of beams, a mold board

carried by said beams and means to secure said beams to a car body; of spring arms, heads for said arms, means to rotatably mount said heads between said beams and means at the free end of said spring arms to engage and clean track rails.



4. The herein described track cleaner, comprising the combination with a pair of beams and means to mount the same upon a car body; of a spring arm at each end of said beam, a head rotatably mounted between said beams to which one end of said arms are fixed, a shovel yieldingly secured to the opposite ends of said spring arms, a finger on said shovel and means to normally hold said heads against rotation.

5. The herein described track cleaner, comprising the combination with a pair of beams, and means to secure said beams to a car body; of a head at each end of said beams, means to pivotally mount said heads between said beams, spring arms having one of their ends fixed to said heads, a shovel at the opposite end of said spring arms, a finger on said shovel and at one edge thereof, a rod adapted to normally hold said heads against rotation and means to normally return said heads to their initial position.

[Claim 6 not printed in the Gazette.]

881,601. ASH-SIFTER. ADELE MANZO, Paterson, N. J. Filed Oct. 31, 1907. Serial No. 400,067.



In an ash sifter, the combination of a casing open at top and bottom and comprising side walls, a hopper arranged in said casing and comprising walls inclining inwardly from the side walls of the casing and occupying the lower portion of the casing, a sifter proper having a handle on one side thereof below the centrally horizontal plane of the sifter and a pivotal support on the opposite side thereof and above said plane, one side wall of the casing having a sifter-admission opening and comprising a hinged door for said opening formed at its lower edge with a slot for the handle, and hinged covers or leaves adapted to close the casing at the top thereof, substantially as described.

881,602. MACHINE FOR DRYING YARN AND TEXTILE GOODS. ARTHUR N. MARR, Thorner, near Leeds, England. Filed July 20, 1906. Serial No. 327,040.

1. In a drying machine, a drying chamber, a plurality of parallel raceways arranged therein and disposed in different planes, each of said raceways comprising fixed guide rails, a series of supports for carrying the material to be dried, traveling chains provided with projections for engaging said supports and causing them to traverse said raceways, and lifting chains for transferring said supports from one raceway to the next, said lifting chains being driven at such speed that they effect the transfer of a support in the time required by the traveling chains to move a distance equal to the space between two adjacent projections.



2. In a drying machine, the combination of a drying chamber open at one end and closed at the other, and provided with a perforated floor and ceiling, with fan chambers arranged on each side of the drying chamber and communicating therewith by ports arranged respectively above and below the perforated ceiling and floor, said fan chambers having fans and heating radiators arranged therein, substantially as described.

3. In a drying machine, the combination of a drying chamber open at one end and closed at the other end, and provided with a perforated ceiling and floor, fan chambers arranged on each side of the drying chamber, ports arranged in the partitions of the drying chamber respectively above and below the perforated ceiling and floor for forming a communication between the said chambers, air circulating fans and heating radiators arranged in each fan chamber, with longitudinal races of angle iron fixed to each side of the drying chamber, each race being arranged in a tier, a pair of sprocket wheels mounted upon a shaft at each end of a tier of races, an endless chain provided with projections and mounted upon the said sprocket wheels at each side of the drying chamber, and poles sliding upon said races, as set forth.

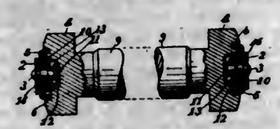
4. In a drying machine, the combination of a drying chamber having a fan chamber on each side thereof and in communication therewith, air circulating fans mounted upon a shaft arranged in each fan chamber at a distance from each end, openings closed by sliding doors in each fan chamber, an exhaust fan mounted in the end of one of the fan chambers, a number of races fixed longitudinally to the sides of the drying chamber, each race being formed of two angle irons arranged in tiers, poles sliding upon said races, a shaft at the end of each race having a pair of sprocket wheels mounted upon it, an endless chain arranged to work over each pair of sprocket wheels to the longitudinal partitions of the drying chamber, projections on the endless chains for traversing the poles along said races, means for actuating said endless chains, and for separately actuating the air circulating and exhaust fans, as set forth.

5. In a drying machine, the combination of a framework open at one end and closed at the other end, divided into three compartments to form a drying chamber with a fan chamber on each side thereof, a perforated ceiling and floor to the drying chamber with a space respectively above the said ceiling and below the said floor, ports in the longitudinal partitions of the drying chamber for forming a communication between the said spaces and the fan chambers, openings in the outer sides of each fan chamber closed by sliding doors, an opening in the closed end of the fan chamber for exhaust purposes, and a conditioning chamber arranged at and projecting from the open end of the machine and provided with an air duct, as set forth.

[Claims 6 to 9 not printed in the Gazette.]

881,603. BALL-BEARING FOR CARPET-SWEEPERS. FRANCIS C. MASON, Grand Rapids, Mich., assignor to Bissell Carpet Sweeper Company, Grand Rapids, Mich., a Corporation of Michigan. Filed Feb. 19, 1907. Serial No. 358,314.

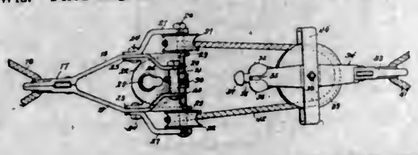
1. An improved ball bearing for the brush shaft of a carpet sweeper, comprising a cup, a circular series of balls in the cup, a retaining cap having a flange engaging the periphery of the cup and attached thereto and a central opening for the pin, a cone loose in the cup and retained therein by the cap a pin extending through the opening in the cap and engaging the cone, and means for supporting the pin.



2. A ball bearing for the brush shaft of a carpet sweeper, comprising a cup, a circular series of balls in the cup, a cone loose in the cup and engaging the balls and also having an axial opening, a retaining cap having a flange engaging the rim of the cup and attached thereto, and also having a central opening to receive the pin, and a pin extending through said opening and engaging the cone.

3. An improved ball bearing for the brush shaft of a carpet sweeper, comprising a shaft, cups inserted in the respective ends of the shaft, a circular series of balls in each cup, a cone loose in each cup and engaging the balls and also having an axial opening, a cap on each cup and having a flange engaging the rim of the cup and attached thereto and also having a central opening in line with the opening of the cone, opposing flexible supporting bars, and pins supported by the bars and inserted in the openings of the caps and cones, and also having shoulders engaging the outer surfaces of the cones.

881,604. HAY-CARRIER. RICHARD MILLER, Appleton, Wis. Filed Aug. 16, 1905. Serial No. 274,374.



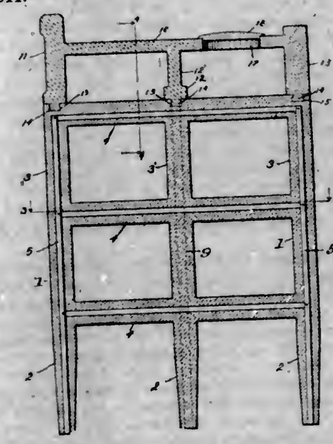
1. In lifting mechanism for hay carriers, the combination of lifting devices having means at their outer ends for engaging the load, and one of said lifting devices provided at its inner end with a cup-shaped socket having an opening in the top thereof, with a narrow slot extending from the opening, and the other lifting device provided at its inner end with a projecting stud having a headed extremity, and a hoisting rope engaging the lifting devices and adapted, when draft is applied thereto, to pull the lifting devices toward each other and thereby cause the headed stud of one of said lifting devices to enter the cup-shaped socket of the other lifting device and pass through the opening of said socket, and finally seat itself in the narrow slot extending from said opening, whereby the two lifting devices are automatically releasably locked together.

2. In lifting mechanism for hay carriers, the combination of lifting devices having means at their outer ends for engaging the load, and one of said lifting devices provided at its inner end with a cup-shaped socket, having an opening in the top thereof with a narrow slot extending from the opening, and the other lifting device provided at its inner end with a projecting stud having a convex headed extremity, and a hoisting rope engaging the lifting devices and adapted, when draft is applied thereto, to pull the lifting devices toward each other and thereby cause the convex headed extremity of one of said lifting devices to enter the cup-shaped socket of the other lifting device and pass through the opening of said cup-shaped socket, and finally seat itself in the narrow slot extending from said opening, whereby the two lifting devices are automatically releasably locked together.

3. In lifting mechanism for hay carriers, the combination of lifting devices having means at their upper ends for engaging the load, and one of said lifting devices provided at its inner end with a cup-shaped socket having an opening in the top thereof, and the other lifting device provided at its inner end with a series of convex ridges, and with a headed stud projecting from the ridged portion, and a hoisting rope engaging the lifting devices, and adapted, when draft is applied thereto, to pull the lifting devices toward each other and thereby cause the headed stud of one of said lifting devices to enter the cup-shaped socket of the other lifting device and pass through the opening of said cup-shaped socket, whereby the two lifting devices are automatically releasably locked together.

4. In lifting mechanism for hay carriers, the combination of lifting devices having means at their outer ends for engaging the load, and one of said lifting devices diverged inwardly into two members, and the other lifting device provided at its inner end with a projecting headed stud, a cup-shaped socket carried between the diverging arms of one of the lifting devices and provided with an opening having a narrow slot extending therefrom, outstanding brackets secured to the outer sides of the diverging members of said last mentioned lifting device, a shaft having its ends removably mounted in the brackets, pulleys mounted on the shaft in the spaces between the brackets and the outer sides of the diverging arms, a horizontally mounted pulley carried by the other lifting device, and a hoisting rope extended beneath one of the pair of pulleys of one of said lifting devices, thence to and around the horizontally mounted pulley of the other lifting device, thence to and around the other pulley of the pair of pulleys, and thence upwardly, said hoisting rope adapted, when draft is applied thereto, to pull the lifting devices toward each other and thereby cause the headed stud of one of said lifting devices to enter the cup-shaped socket of the other lifting device and pass through the opening of said cup-shaped socket and finally seat itself in the narrow slot extending from said opening, whereby the two lifting devices are automatically releasably locked together.

881,605. PIER OR BREAKWATER. JOHN A. MITCHELL, Ludington, Mich. Filed Apr. 18, 1907. Serial No. 369,011.



1. In a structure of the class described, the combination of a plurality of integral foundation and substructure units or sections formed of concrete, each unit comprising side wall sections and a post connected by cross beams, said side wall sections and post being extended into foundation piles the lower ends of which are inclined downwardly and rearwardly, said wall sections being A-shaped on one edge and V-shaped on the other, the edges of said wall sections also having longitudinal channels extending from the top to the bottom thereof, said channels being adapted to register when the units are in position, said

units also having horizontal channels in their upper ends; a concrete filling for said channels in the edges of said wall sections forming a bond for said units; pipes embedded in said posts of said units and extending from the tops to the bottoms thereof; and a superstructure comprising a deck having manholes therethrough, front and rear walls, and central posts formed integral of concrete and molded upon said substructure, said front and rear walls and central posts of said superstructure having tongue projections molded into the said channels in the upper ends of said units, whereby the units are further united and said superstructure secured in position thereon, for the purpose specified.

2. In a structure of the class described, the combination of a plurality of integral foundation and substructure units or sections formed of concrete, each unit comprising side wall sections and a post connected by cross beams, said side wall sections and post being extended into foundation piles the lower ends of which are inclined downwardly and rearwardly, said wall sections being A-shaped on one edge and V-shaped on the other, the edges of said wall sections also having longitudinal channels extending from the top to the bottom thereof, said channels being adapted to register when the units are in position, said units also having horizontal channels in their upper ends; a concrete filling for said channels in the edges of said wall sections forming a bond for said units; and a superstructure comprising a deck having manholes therethrough, front and rear walls, and central posts formed integral of concrete and molded upon said substructure, said front and rear walls and central posts of said superstructure having tongue projections molded into the said channels in the upper ends of said units, whereby the units are further united and said superstructure secured in position thereon, for the purpose specified.

3. In a structure of the class described, the combination of a plurality of integral foundation and substructure units or sections and a post connected by cross beams, said side wall sections and post being extended into foundation piles, said wall sections being A-shaped on one edge and V-shaped on the other, the edges of said wall sections also having longitudinal channels extending from the top to the bottom thereof, said channels being adapted to register when the units are in position, said units also having horizontal channels in their upper ends; a concrete filling for said channels in the edges of said wall sections forming a bond for said units; and a superstructure comprising a deck having manholes therethrough, front and rear walls, and central posts formed integral of concrete and molded upon said substructure, said front and rear walls and central posts of said superstructure having tongue projections molded into the said channels in the upper ends of said units whereby the units are further united and said superstructure secured in position thereon, for the purpose specified.

4. In a structure of the class described, the combination of a plurality of integral foundation and substructure units or sections formed of concrete, each unit comprising side wall sections and a post connected by cross beams, said side wall sections and post being extended into foundation piles, said wall sections being A-shaped on one edge and V-shaped on the other, the edges of said wall sections also having longitudinal channels extending from the top to the bottom thereof, said channels being adapted to register when the units are in position, said units also having horizontal channels in their upper ends; a concrete filling for said channels in the edges of said wall sections forming a bond for the units; and a superstructure comprising a deck having manholes therethrough, front and rear walls, and central posts formed integral of concrete and molded upon said substructure, said front and rear walls and central posts of said superstructure having tongue projections molded into the said channels in the upper ends of said units, whereby the units are further united and said superstructure secured in position thereon, for the purpose specified.

5. In a structure of the class described, the combination of a plurality of integral foundation and substructure units or sections formed of concrete, each unit comprising side wall sections and a post connected by cross beams, said side wall sections and post being extended into foundation piles the lower ends of which are inclined downwardly and rearwardly, said wall sections being A-shaped on one edge and V-shaped on the other, the edges of said wall sections also having longitudinal channels extending from the top to the bottom thereof, said channels being adapted to register when the units are in position; a concrete filling for said channels in the edges of said wall sections forming a bond for said units; and pipes embedded in said posts of said units and extending from the tops to the bottoms thereof, for the purpose specified.

[Claims 6 to 45 not printed in the Gazette.]

881,606. TEMPORARY BINDER. LUCENA M. MORDEN, Waterbury, Conn. Filed June 1, 1906. Serial No. 319,678.



1. A temporary binder comprising a loose leaf book with covers connected by a flexible back, metallic plates hinged together and attached to the covers and offset adjacent to the hinges to form an interspace for perforated sheets, the opposed faces of the metallic plates having respectively the projecting studs *f* tapered toward the point and provided with recess *f'* at the base, and with projecting sockets adapted to fit the perforations of the sheets and having each a lip adapted to engage the recess in the stud.

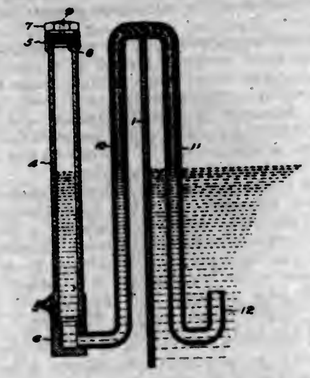
2. A temporary binder comprising a loose leaf book with covers connected by a flexible back and having a loose flap within the back, metallic plates hinged together and attached to the loose flap with interspace for perforated sheets, and the opposed faces of the metallic plates provided with projecting studs and sockets adapted to fit the perforations of the sheets and to engage one another for holding the sheets in the binder.

881,607. GAGE FOR TANKS. GEORGE E. MUSGROVE, Wilkinsburg, Pa., assignor to General Electric Company, a Corporation of New York. Filed Sept. 17, 1906. Serial No. 334,895.

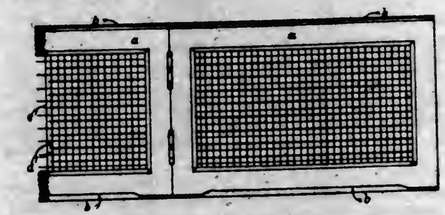
1. The combination with a tank, of an inverted U-shaped tube having one leg inside of said tank and the other leg outside, and a gage-tube communicating with said outside leg said inverted U-shaped tube being filled with liquid.

2. The combination with a tank, of an inverted U-shaped tube having one leg inside of said tank and the other leg outside, a gage-tube communicating with said outside leg, and an upturned loop at the end of the inside leg.

3. The combination with a tank for liquid, of a gage-tube outside the tank, and a tube communicating with the gage-tube at one end and depending into said liquid at the other, the intermediate portion thereof rising higher than the level of said liquid and being itself filled with liquid.



881,608. RAILWAY-CAR TRANSOM AND OTHER WINDOW SCREEN. CLARENCE J. MCNITT, Salt Lake City, Utah. Filed Nov. 12, 1906. Serial No. 342,957.



1. In means of the class described, the combination of a frame, inner and outer screens applied thereto in spaced relation, the outer portion of the frame being cut away at its lower edge to form a passage transversely of the frame, said passage communicating with a second passage leading downwardly from the space between the inner and outer screens.

2. In means of the class described, the combination of a frame, inner and outer screens applied thereto in spaced relation, there being provided a passage extending downwardly through the lower end of the frame coincident with the space between the screens, and thence extending outwardly through said lower end to the outer side of the frame.

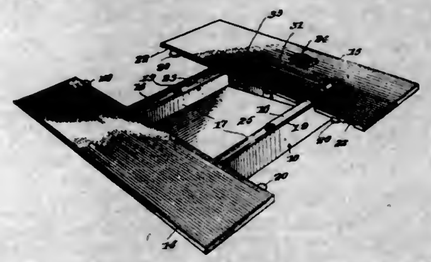
3. In means of the class described, a frame composed of inner and outer sections secured together, screens applied to the frame in spaced relation to one another, the lower end of the outer section of the frame being formed with a downwardly extending passage or opening coincident with the space between the screens, and having its lower edge cut away to provide a continuation of said passage to the outer side of the device, whereby foreign substances passing to the space between the screens may have lateral exit at the lower end of the frame.

881,609. PROP FOR MINES. FRIEDRICH NELLEN and ALBERT VOIGT, Essen, Germany. Filed Nov. 6, 1907. Serial No. 400,973.

An improved prop for mines comprising in combination a hollow cylinder closed at the bottom and made from pressed waste stone, a cover for said cylinder made from impregnated shaving, a piston in said cylinder made from pressed waste stone and provided with a cover made from shavings, and a suitable filling of the cylinder adapted to be compressed by the pressure exerted upon the piston by the hanging-wall of the lode, substantially as described and shown and for the purpose set forth.



881,610. EXTENSION-TABLE. SAMUEL A. NICHOLS, Los Angeles, Cal. Filed July 23, 1906. Serial No. 327,451.



1. A device of the class described, comprising a frame having end leaves movably attached thereto; a centrally disposed foldable side leaf pivotally attached to one of the side rails of said frame; and a centrally disposed foldable leaf comprising two sections hinged together, pivotally attached to the end rails of said frame, said foldable leaves adapted to fill the opening created by the movement of the end leaves.

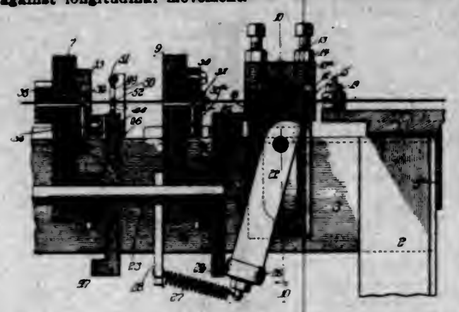
2. A device of the class described, comprising a frame having end leaves movably attached thereto; a centrally disposed foldable side leaf slidingly pivoted to one of the side rails of said frame; and a centrally disposed foldable leaf comprising two sections hinged together, pivotally attached to the end rails of said frame, said foldable leaves adapted to fill the opening created by the movement of the end leaves.

881,611. MACHINE FOR MAKING TWISTED-WIRE BOX-STRAPPING. RALPH H. NORTON, Chicago, Ill., assignor to Acme Flexible Clasp Company, Chicago, Ill., a Corporation of Illinois. Filed Oct. 9, 1906. Serial No. 338,149.

1. In a machine of the character described, means for fixedly holding two strands of wire apart at two points and against longitudinal movement, and intermediate means for twisting the strands one upon the other forming an eye with reverse twists on opposite sides of the same while the wire is held against longitudinal movement.

2. In a machine of the character described, means for fixedly holding two strands of wire apart at two points and against longitudinal movement, and a revolving twister entering between the wires at an intermediate

point and operating to form an eye while the wire is held against longitudinal movement.



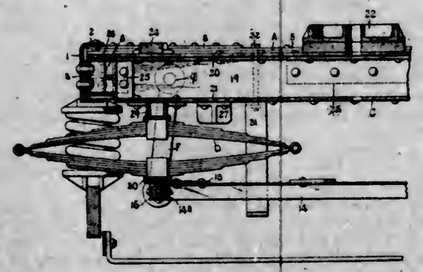
3. In a machine of the character described, the combination of non-revoluble stakes entering between the wires at two points and a revoluble blade entering between the wires at an intermediate point and operating to impart a reverse twist thereto.

4. In a machine of the character described, the combination of non-revoluble stakes entering between the wires at two points, a revoluble blade entering between the wires at an intermediate point and operating to impart a reverse twist thereto, means for engaging the wires with and disengaging them from the stakes and blade, and means for feeding the wire.

5. In a machine of the character described, the combination of non-revoluble stakes entering between the wires at two points, a revoluble blade entering between the wires at an intermediate point and operating to impart a reverse twist thereto, means for intermittently revolving the twisting blade, and means for engaging the wires with and disengaging them from the latter and the non-revoluble stakes.

[Claims 6 to 43 not printed in the Gazette.]

881,612. CAR-TRUCK. ALLEN E. OSTRANDER, Paterson, N. J., assignor to American Car and Foundry Company, St. Louis, Mo., a Corporation of New Jersey. Filed Oct. 12, 1907. Serial No. 397,115.



1. A car truck provided with a side frame which consists of a pressed metal plate provided at its ends and one edge with a continuous integral flange, and a commercially rolled member secured to the other longitudinal edge portion of said plate and having a horizontal leg projecting in the same direction as said integral flange on said plate; substantially as described.

2. A car truck provided with a side frame which consists of a pressed metal plate provided with an integral inwardly projecting flange at its ends and upper edge, and an angle secured to the lower edge portion of said plate and arranged with its horizontal leg projecting inwardly; substantially as described.

3. A car truck comprising approximately channel-shaped side frames arranged with their flanges projecting inwardly, a pair of transversely extending transoms secured to said side frames and having their ends arranged between the inwardly projecting flanges of said frames, a bolster located between said transoms, and auxiliary transoms extending parallel to the transoms first referred to and connected to said side frames; substantially as described.

4. A car truck comprising approximately channel-shaped side frames which consist of pressed metal pieces provided with one integral flange, and a parallel flange formed by a commercially rolled member, transversely extending transoms connected to said side frames, and auxiliary transoms extending parallel to the transoms first referred to and also being connected to the side frames; substantially as described.

5. A car truck comprising approximately channel-shaped side frames arranged with their flanges projecting inwardly, transversely extending transoms, a bolster arranged between said transoms, auxiliary transoms extending parallel to the transoms first referred to, and gusset plates secured to the upper flanges of the side frames and having the main transoms and the auxiliary transoms connected thereto; substantially as described.

[Claims 6 to 19 not printed in the Gazette.]

881,613. BOLT. FRANK P. PFLEGHAR, New Haven, Conn., assignor to F. P. Pfleghar & Son, New Haven, Conn., a Firm. Filed Sept. 28, 1905. Serial No. 280,434.



1. The combination with a longitudinally sliding bolt and a handle provided with a projection eccentrically located thereon for operating the bolt, of a second handle oppositely disposed with respect to the first named handle and connected with the first named handle for operating the said handle and hence the bolt.

2. The combination with a longitudinally sliding bolt and a handle provided with a projection eccentrically located thereon for operating the bolt, of an oppositely disposed handle and an intermediate spindle connecting the shanks of the two handles to cause them to operate in unison.

3. The combination with a longitudinally reciprocating bolt and a handle having a projection eccentrically located thereon for operating the bolt, of an intermediate spindle having a connection with the shank of said handle at a distance from its axis and a second handle having its shank connected with the spindle at a distance from its axis to rotate the spindle and hence the first named handle and bolt.

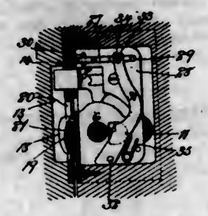
4. The combination with a reciprocating bolt and a handle provided with a projection eccentrically located thereon for operating the bolt, of a spindle provided with a pin projecting from its face in axial alinement with the first named handle and with a second pin projecting from its face at a distance from the axis thereof and a second handle provided with a shank adapted to receive said spindle and means for locking said shank to the spindle.

5. The combination with a reciprocating bolt, and a handle provided with a projection eccentrically located thereon for operating the bolt, of a spring housed between the shank of the handle and the bolt support, the said spring and the handle being provided the one with projections and the other with recesses for frictionally holding the bolt in either its advanced or withdrawn position.

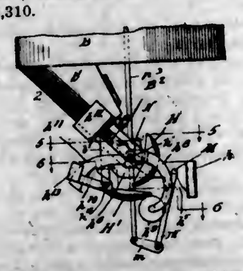
881,614. DOOR-LOCK. FRANK P. PFLEGHAR, Jr., New Haven, Conn., assignor to F. P. Pfleghar & Son, New Haven, Conn., a Firm. Filed May 22, 1906. Serial No. 318,119.

1. In a door lock, a latch bolt, a latch bolt handle, its shank, a locking bolt directly fixed thereto and arranged to directly engage the latch bolt, a shoulder on the locking bolt and a rocking arm having a lug arranged to be brought into and out of engagement with said shoulder on the locking bolt whereby the bolt is locked in its withdrawn position by the outward swinging movement of the door and released by the inward swinging movement of the door, and a slide engaging the arm for controlling its movements.

2. In a door lock, a latch bolt, a latch bolt handle, its shank, a locking bolt directly fixed thereto and arranged to directly engage the latch bolt, a shoulder on the locking bolt and a rocking arm having a lug arranged to be brought into and out of engagement with said shoulder on the locking bolt whereby the bolt is locked in its withdrawn position by the outward swinging movement of the door and released by the inward swinging movement of the door, and a slide engaging the arm for controlling its movements and a lug on the door jamb arranged to control the movements of the slide.



881,615. ACETYLENE-GAS GENERATOR. ALGERNON S. PHELPS, Jr., Chicago, Ill. Filed July 16, 1906. Serial No. 326,310.



1. In an acetylene generator, the combination of a generator tank having a generating chamber at its lower portion and an annular gasometer chamber at its upper part, and a central tube to receive a carbid holder or magazine, of an annular gasometer bell having a cylindrical outer wall and a cylindrical inner wall eccentric to said outer wall, a carbid holder or magazine fitting in said central tube, a rocking feed shoe swinging beneath the discharge mouth of said magazine, a tilting dump pan mounted beneath said shoe, an arm on said shoe engaging the dump pan to close the same as the shoe swings open, a latch for holding the dump pan closed, an arm on the shoe operating to trip the dump pan latch as the shoe swings into its closed position beneath the discharge mouth of the magazine, a bail or crank for operating the shoe, an operating lever connected with the gasometer, and provided with a cam, and a connecting lever having a roller engaging the cam, and a link connecting said last mentioned lever with said feed operating bail or crank, substantially as specified.

2. In an acetylene generator, the combination with a tank having a generator chamber at its lower portion, and an upper annular gasometer chamber, and a central tube to receive the carbid magazine, of an annular gasometer bell, a carbid magazine in said central tube provided with an incline and with a reversely inclined feed chute at its lower portion, a closed hood covering and surrounding said central tube, a rocking feed shoe swinging beneath the discharge mouth of said feed chute, a tilting dumping pan mounted beneath said shoe, means for closing the dump pan as the feed shoe begins to open, means for locking or holding the dump pan in its closed position, means for tripping or releasing the dump pan when the shoe is closed, and means for operating said shoe automatically from the gasometer bell, substantially as specified.

3. In an acetylene gas generator, the combination of a tank having a generating chamber, of a carbid magazine, a rocking feed shoe swinging beneath the discharge mouth of said magazine, a tilting dumping pan mounted beneath said shoe, a latch for holding the dump pan closed, the shoe being provided with means for releasing or tripping said latch as the shoe closes, substantially as specified.

4. In an acetylene gas generator, the combination with a generator tank having a generating chamber, and an annular gasometer chamber, and a central tube to receive the carbid magazine, of an annular gasometer bell fitting in the annular chamber of the tank, a carbid magazine fitting in said central tube, a rocking feed shoe swinging under the discharge mouth of said magazine, a tilting dump pan mounted beneath said feed shoe, said feed shoe being provided with means for automatically operating the dump pan, and connecting means for operating said feed shoe from and by the gasometer bell, substantially as specified.

5. In an acetylene gas generator, the combination with a generator tank having a generating chamber, and an annular gasometer chamber, and a central tube to receive a carbid magazine, of an annular gasometer bell fitting in the annular chamber of the tank, a carbid magazine fitting in said central tube, a rocking feed shoe swinging under the discharge mouth of said magazine, a tilting dump pan mounted beneath said feed shoe, said feed shoe being provided with means for automatically operating the dump pan, and connecting means for operating said feed shoe from and by the gasometer bell, said tilting dump pan being curved and said rocking feed shoe being also curved and swinging concentrically to the dump pan, substantially as specified.

[Claims 6 to 52 not printed in the Gazette.]

881,616. ADVERTISING-MACHINE. ELSWORTH PICKEL, Portland, Oreg. Filed Nov. 8, 1906. Serial No. 342,511.

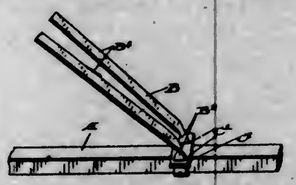


1. In a machine of the class described, the combination of a motor, a shift extending laterally from the motor and operably connected therewith, a fan mounted on said shaft, an electro-magnet adjacent to the fan, means for intermittently energizing said magnet, a bell-crank lever having an arm extending toward the electro-magnet and operable thereby, the other arm of the lever being provided with a hook, a strip operable by the motor and

adapted to interlock with the hook of the lever, a lateral extension projecting from the hook arm of the lever, a rod loosely connected at one end with the extension and movable at its other end into and out of engagement with the fan, and a guide bracket provided with an opening through which the rod aforesaid slides in proper relation to the fan.

2. In apparatus of the type described, the combination of a movable advertising strip, having a plurality of openings in its length, a roller over which said strip is adapted to pass and having an annular groove in its periphery coincident with the openings in the strip, an intermittently operable member arranged to enter any opening in the strip and engage the bottom of the groove of the said roller to stop the strip in its movement, and means for actuating the strip.

881,617. METALLIC REINFORCEMENT FOR CONCRETE STRUCTURES. ETHELBERT D. PITT, Niagara Falls, Ontario, Canada, and LAFORREST G. ROBINSON, Plattsburg, N. Y. Filed Dec. 10, 1906, Serial No. 347,227. Renewed Jan. 31, 1908. Serial No. 413,615.



In metallic reinforcement for concrete structures the combination with the main member, of a flat shear member doubled around said main member and extending at right angles thereto, a cross bar lying on the main member and having two slots through which the two ends of the shear member extend, said shear member being twisted and inclined at the points where it emerges from the slots of the cross bar.

881,618. CONCRETE-REINFORCING BAR. WILLIAM W. RAMSEY, Chicago, Ill. Filed Sept. 4, 1907. Serial No. 391,378.



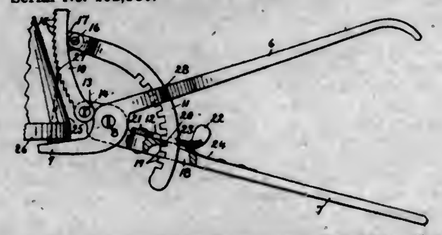
1. The concrete reinforcing bar consisting of an angular bar of metal and having two of its opposite sides furnished with deep central grooves forming each two longitudinal ridges or wings 8 at each side of the grooves, the other two sides of the bar being substantially flat, and the bar having a solid central portion of substantially cross-sectional area between the bottoms of said grooves, substantially as specified.

2. The concrete reinforcing bar consisting of an angular bar of metal and having two of its opposite sides furnished with deep central grooves forming each two longitudinal ridges or wings 8 at each side of the grooves, the other two sides of the bar being substantially flat, and the bar having a solid central portion of substantially cross-sectional area between the bottoms of said grooves, the tops of said ridges or wings being irregular or wavy, substantially as specified.

3. The concrete reinforcing bar consisting of an angular bar of metal and having two of its opposite sides furnished with deep central grooves forming each two longitudinal ridges or wings 8 at each side of the grooves, the other two sides of the bar being substantially flat, and the bar having a solid central portion of substantially cross-sectional area between the bottoms of said grooves, the tops of said ridges or wings being irregular or wavy and the bar being twisted rendering the said ridges or wings spiral, substantially as specified.

4. The concrete reinforcing bar consisting of an angular bar of metal and having two of its opposite sides furnished with deep central grooves forming each two longitudinal ridges or wings 8 at each side of the grooves, the other two sides of the bar being substantially flat, and the bar having a solid central portion of substantially cross-sectional area between the bottoms of said grooves, and said bar being twisted so as to render the said ridges or wings spiral, substantially as specified.

881,619. HORSESHOER'S CLENCHING-PLIERS. ELI ROBIDOUX, Ludlow, Mass., assignor of one-half to John B. Bouchard, Chicopee Falls, Mass. Filed Nov. 18, 1907. Serial No. 402,580.



1. The combination, in horseshoers' clenching pliers, with a handle having a fixed jaw, of a second handle pivoted to the first and provided with a pivotally connected jaw adapted to engage the point of a nail, an arm attached to said point-engaging jaw, and means to lock said arm to the same handle to which the point-engaging jaw is pivoted and to release it therefrom.

2. The combination, in horseshoers' clenching pliers, with a handle having a fixed jaw, of a second handle provided with a pivotally connected jaw adapted to engage the point of a nail, said handles being pivoted together, an arm having one end pivotally connected with said point-engaging jaw, engaging means between said second handle and the terminal of said arm which is opposite the pivoted end of the same, and means to lock and release such engaging means.

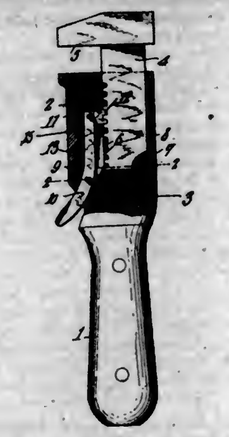
3. The combination, in horseshoers' clenching pliers, with a handle having a fixed jaw, of a second handle slotted and provided with a pivotally connected jaw adapted to engage the point of a nail, said handles being pivoted together, a segmental arm having one end pivotally connected with said point-engaging jaw and the other terminal inserted in the slot in said second handle, and means to lock and release that part of said arm which is in said slot.

4. The combination, in horseshoers' clenching pliers, of two pivotally connected handles one of which is provided with a fixed jaw and the other with a locking lug or tooth and has a slot therethrough, a serrated jaw pivoted to the tooth-provided and slotted handle, a segmental serrated arm pivoted at one end to the movable jaw and having its free terminal extended through said slot, the arm serrations being adapted to engage said locking lug or tooth to hold said movable jaw in position, and means to retain the interlocking toothed parts in engagement and to permit them to be released.

5. The combination, in horseshoers' clenching pliers, of two pivotally connected handles one of which is provided with a fixed jaw and the other with a locking lug or tooth and has a slot therethrough, a serrated jaw pivoted to the tooth-provided and slotted handle, a segmental serrated arm pivoted at one end to the movable jaw and having its free terminal extended through said slot, the arm serrations being adapted to engage said locking lug or tooth to hold said movable jaw in position, and a latch pivoted to the slotted handle and arranged to retain said arm in locking engagement with the aforesaid lug or tooth and to permit the same to be released from such engagement.

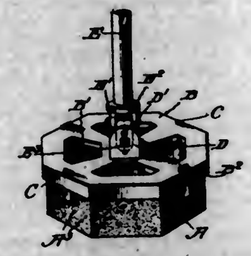
[Claim 6 not printed in the Gazette.]

881,620. WRENCH. FRANK E. ROSEKELLY, Huron, Ohio. Filed Apr. 4, 1907. Serial No. 366,879.



A wrench comprising a handle having a fixed jaw attached thereto, said jaw having a channel and an adjacent cavity provided at the upper end of its sides with opposite recesses, a stock entering said channel, a jaw carried by the stock, said stock having at one edge teeth, a spring actuated lever fulcrumed in the cavity, a head pivoted at a point intermediate of its ends to the lever and being provided with teeth for engagement with the teeth of the stock and having its ends lying in said recesses, one end of said lever projecting beyond the side of the wrench.

881,621. ABRASIVE TOOL AND MOUNTING. ROBERT A. ROWLAND and WILLIAM J. MAHNKE, Cleveland, Ohio. Filed Feb. 25, 1907. Serial No. 359,087.
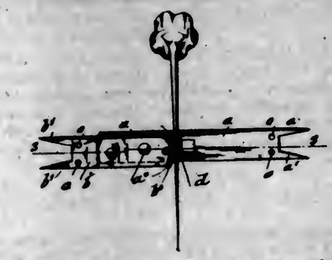


1. A grinding tool consisting of a rectangular hollow block of molded abrasive material a central core therein, and radial arms connecting the central core and the sides of the block, said arms forming partitions dividing the interior of the block into compartments, said partitions and core beng transversely perforated.

2. A grinding tool of the kind described consisting of a block of abrasive material octagonal in form and hollow, a web formed upon the interior of the block and comprising a core and radial arms, said core and arms being transversely perforated, the sides of the block being of greater thickness than the walls of the core and the radial arms decreasing in thickness as they approach the core.

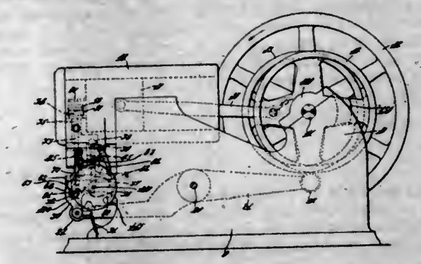
881,622. CLUTCH FOR SCARF-PINS. ALBERT ROSENBAUM, New York, N. Y. Filed July 25, 1907. Serial No. 385,428.

1. A clutch for scarf-pins consisting of a main-piece and a clamping piece pivoted thereto, the main piece being provided with a socket open at the side for receiving the shank of the scarf-pin and the clamping piece with an eccentric cam for tightly holding the shank in the socket, both main-piece and clamping-piece being provided with means for attaching said pieces to the scarf.



2. A clutch for scarf-pins consisting of a main-piece and a clamping-piece pivoted thereto, the main-piece being provided with a socket open at the side for receiving the shank of the scarf-pin and the clamping-piece with a cam for tightly holding the shank in the socket, both the main and clamping pieces having pointed prongs at the ends.

881,623. GAS-ENGINE. THOMAS A. SAMMONS, Dayton, Ohio. Filed Oct. 9, 1905. Serial No. 282,009.



1. In a gas engine, the combination with a cylinder, intake and exhaust valves, ignition means, and devices for producing a four-cycle movement of the engine, of means for automatically changing to an alternate intake and exhaust valve movement alone without compression or ignition.

2. In a gas engine, the combination with a cylinder, intake and exhaust valves, ignition means, and devices for producing a four-cycle movement of the engine, of means controlled by the speed of the engine for automatically changing to an alternate intake and exhaust valve movement alone without compression or ignition.

3. In a gas engine, the combination with a cylinder, intake and exhaust valves, ignition means, and devices for producing a four-cycle movement of the engine, of a governor connected to the engine; and means connected with said governor for automatically changing to an alternate intake and exhaust valve movement alone without compression or ignition when the speed is above a certain normal.

4. In a gas engine, the combination with a cylinder, of an intake valve; an ignition device; an exhaust device; means for operating the above devices to produce a proper sequence of in-take, compression, ignition, and exhaust; and means for automatically cutting out of operation the ignition device and causing alternate operation of the intake and the exhaust valves with alternate reciprocations of the cylinder piston when the speed is above normal.

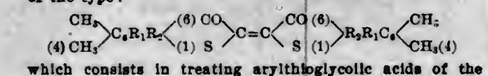
5. In a gas engine, the combination with a cylinder, of an intake valve; an ignition device; an exhaust device; means for operating the above devices to produce a proper sequence of in-take, compression, ignition, and exhaust; a governor connected with the engine; and means connected with said governor for automatically cutting out

of operation the ignition device and causing alternate operations of the intake and the exhaust valves with alternate reciprocations of the cylinder piston.

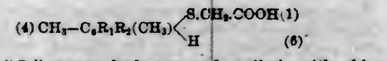
[Claims 6 to 27 not printed in the Gazette.]

881,624. MAKING VAT-DYESTUFFS. ALBRECHT SCHMIDT and ERNST BAYK, Höchst-on-the-Main, Germany, assignors to Farbwerke vorm. Meister Lucius & Brüning, Höchst-on-the-Main, Germany, a Corporation of Germany. Filed May 22, 1907. Serial No. 375,126.

1. The process herein described of making vat dyestuffs of the type:

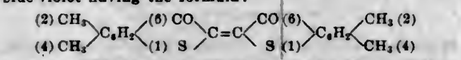


which consists in treating arylthioglycolic acids of the type:



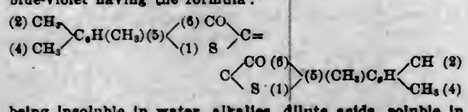
wherein "R" means hydrogen and methyl, with chlorsulfonic acid.

2. As a new product, the vat dyestuff dyeing cotton blue-violet having the formula:



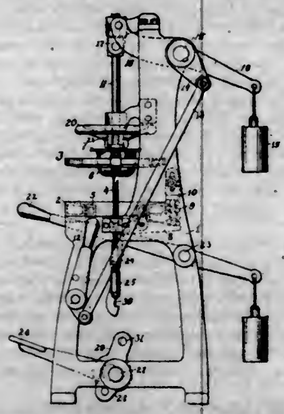
being insoluble in water, alkalies, dilute acids, soluble in hot nitrobenzene with red-violet color, in concentrated sulfuric acid with a green color, forming a vat with alkali hydrates from which cotton is dyed in blue-violet tints.

3. As a new product, the vat dyestuff dyeing cotton blue-violet having the formula:



being insoluble in water, alkalies, dilute acids, soluble in hot nitrobenzene with red-violet color, in concentrated sulfuric acid with a green color, forming a vat with alkali hydrates from which cotton is dyed in blue-violet tints.

881,625. BRIM-STRETCHING AND HAT-BLOCKING MACHINE. GUSTAV SEGSCHNEIDER, Yonkers, N. Y., assignor to Waring Hat M'f'g Co., Yonkers, N. Y., a Corporation of New York. Filed Jan. 3, 1906, Serial No. 239,312. Renewed Oct. 2, 1907. Serial No. 395,523.



1. In a hat-blocking machine, the combination of concentric pairs of brim-clamps, means for operating each pair of clamps, and means for moving one pair of clamps from the plane of the other pair of clamps while clamping, substantially as described.

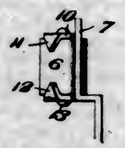
2. In a hat-blocking machine, the combination of concentric pairs of brim-clamps, means for operating each pair of clamps, and means for moving the inner pair of clamps from the plane of the other pair of clamps while clamping, substantially as described.

3. In a hat-blocking machine, the combination of concentric pairs of brim-clamps, means for operating each pair of clamps, a hat-block, and means for moving the hat-block through the brim-clamps and for moving one pair of clamps from the plane of the other pair of clamps while clamping, substantially as described.

4. In a hat-blocking machine, the combination of concentric pairs of brim-clamps, means for operating each pair of clamps, a hat-block, and means for moving the hat-block through the brim-clamps and for moving the inner pair of clamps from the plane of the other pair of clamps while clamping, substantially as described.

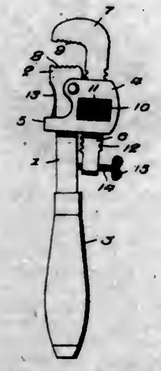
5. In a hat-blocking machine, the combination with a clamping device, of a hand-lever for the rapid opening and closing of the movable part of the clamping device, a treadle, a power device operated by the treadle, and means for coupling the power device to the movable part of the clamping device when the clamping device has been closed by the hand lever, substantially as described.

881,626. STAY-ROLLER. FRANK SHIMERDA, Swanton, Nebr. Filed Nov. 18, 1907. Serial No. 402,686.



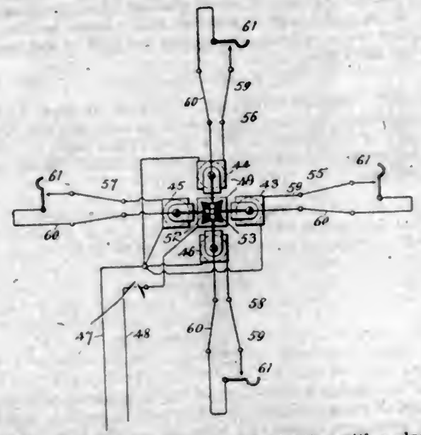
A device of the class described comprising a bracket formed of a single section of material and having an offset portion, ears formed by striking up portions of said bracket, stays at the corners of said ears, a roller between said ears and a pivot pin for said roller.

881,627. WRENCH. ALFRED C. SMITH, Dobbs Ferry, N. Y. Filed Oct. 14, 1907. Serial No. 397,396.



A wrench of the character described, comprising a handled jaw-equipped member, a rocking yoke-member pivoted to said handled jaw-equipped member and formed with a loop-extension or formation having said handled member passing therethrough, a resilient member delivering its pressure or stress upon said yoke-member and applied to said handled jaw-equipped member, a movable jaw-equipped member having a screw-threaded shank-portion extending through said yoke-member, a nut arranged in an opening in said yoke-member and adapted to project laterally beyond the latter and to engage the screw-threaded shank-portion of said movable jaw-member, and a manually actuated retaining member for said movable jaw-equipped member, adapted to engage said handled jaw-equipped member and to cause the engaging face of said movable jaw-equipped member to effectively grip the engaging object.

881,628. TELEPHONE CUT-OUT. EDWIN W. SMITH, New York, N. Y. Filed July 12, 1907. Serial No. 383,464.



1. In a telephone system, the combination with a plurality of lines and a main line, of a plurality of magnets one for each party line connected with the main line, an armature normally in circuit with the main line and the party lines, and means whereby the armature may be made to break the circuit with any of the party lines.

2. In a telephone system, the combination with a plurality of party lines and a main line, an armature normally in circuit with the main line and the party lines, and a plurality of magnets one for each party line connected to the main line and adapted to move the armature to cut out the party line not in use.

3. In a telephone system, the combination with a base, of four magnets supported on the base, a party line connected with each magnet, a main line connected to the magnets, an armature interposed between the magnets and included in the main line circuit and adapted to be drawn toward either one of the magnets, and yielding contacts one for each magnet normally engaging and in circuit with the armature and included in the party line circuit.

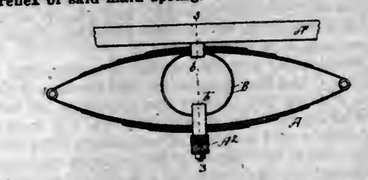
4. In a telephone system, the combination with four magnets, of a party line connected with each magnet, a main line connected to the magnets, an armature interposed between the magnets and included in the main line circuit and adapted to be drawn toward either one of the magnets, and yielding contacts one for each party line normally engaging and in circuit with the armature and included in the party line circuit.

5. In a telephone system, the combination with a base, of a plurality of magnets supported on the base, a party line connected with each magnet, a main line connected to the magnets, an armature interposed between the magnets and included in the main line circuit and adapted to be drawn toward either one of the magnets, and a spring forming a contact for each party line normally engaging and in circuit with the armature and included in the party line circuit.

[Claims 6 to 11 not printed in the Gazette.]

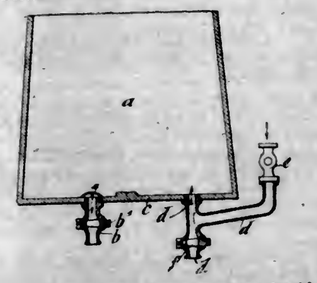
881,629. SHOCK-ABSORBING DEVICE. GEORGE R. SMITH, Dover, N. H. Filed June 3, 1907. Serial No. 377,080.

1. The combination with a main compressible arched spring of an auxiliary spring with a loop which auxiliary spring is contained within the arch of said main spring, a stop passing through the loop of said auxiliary spring whereby upon the reflex of said main spring after compression thereof said auxiliary spring will engage said stop and become drawn out thereby yieldingly stopping the reflex of said main spring.



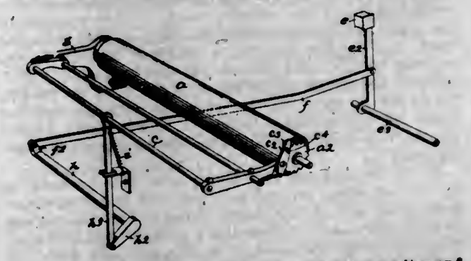
2. The combination with a main compressible arched spring of an auxiliary spring with a loop which auxiliary spring is contained within the arch of said main spring, said auxiliary spring being mounted to occupy a position whereby it may reinforce said main spring only after compression, thereof, a stop passing through the loop of said auxiliary spring whereby upon the reflex of said main spring after compression thereof said auxiliary spring will engage said stop and become drawn out thereby stopping the reflex of said main spring.

881,630. PROCESS OF WASHING BUTTER. VALDEMAR G. SMITH, Copenhagen, Denmark. Filed Sept. 5, 1907. Serial No. 391,473.



The process herein described of washing freshly-churned butter, which consists in drawing off the buttermilk from the butter-mass, and then introducing cleansing water into the mass from below in such a matter that the butter-globules or granules are lifted and distributed evenly in the cleansing water without being subjected to injurious pressure, whereby the free individual globules or granules are subjected to a thorough washing action which takes place without affecting their granular state.

881,631. TYPE-WRITER LINER. CHARLES M. SORENSEN, Brooklyn, N. Y., assignor to Vidal Typewriter Company, New York, N. Y., a Corporation of Cuba. Filed Oct. 22, 1907. Serial No. 398,581.



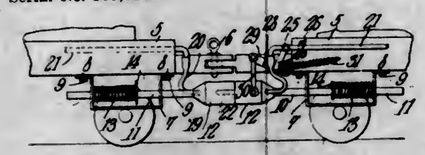
1. In combination with the carriage of a typewriter and supports thereof, the platen with a ratchet wheel secured

to the platen, a pivoted frame, a spring held pivoted arm carried by said frame and disposed between said ratchet wheel and one of said supports, means on one side of said arm to engage said ratchet wheel to rotate the platen, means on the opposite side of said arm to engage said support and thereby limit the extent of movement of the arm, and means movably carried by said support so as to be movable into and out of the path of travel of said second named means on said arm.

2. In combination with the carriage of a typewriter, the platen thereof, and the supports for said carriage, a pivoted frame, a spring held pivoted arm carried by the frame, a pivoted element on one of said supports, and means on opposite sides of said arm, one of said means being for rotating the platen and the other means being for engagement with said pivoted element or the support to which it is attached.

3. In combination with the carriage of a typewriter, the supports thereof, the platen and a ratchet wheel secured to the platen, a pivoted frame composed of a longitudinal member and end members the latter pivoted to said supports, one of said end members being extended and carrying means to operate said ratchet wheel, a vertical spring held link movably connected at its top to said longitudinal member, a shaft having two crank arms one of which is connected to said link, a second oscillatory shaft at the keyboard, a vertical arm having an arc-like movement connected to said second shaft to oscillate the same, and a horizontal bar connected to said second crank of the first named shaft and to an intermediate point along the length of said vertical arm.

881,632. AUTOMATIC TRAIN-PIPE COUPLING. CHARLES H. STAMM, Kokomo, Ind. Filed Apr. 20, 1907. Serial No. 369,310.



1. The combination with a coupling head having a socket formed therein and provided with a tubular extension adapted to engage the socket of a mating head when two of said couplings are united, a fluid conducting pipe operatively connected with the coupling head, a valve for controlling the flow of fluid from the pipe to the coupling head and provided with a laterally extending arm, a standard secured to the coupling head, and a link having one end thereof pivotally connected with the standard and its opposite end formed with an elongated slot for the reception of the free end of the valve arm.

2. The combination with a coupling head having a concave face and provided with an interior chamber, there being a socket formed in the coupling head and communicating with the chamber, a tubular extension secured to one side of the coupling head and adapted to engage the socket of an adjacent coupling when two of said coupling heads are united, a train pipe operatively connected with the chamber and the coupling head, a valve mounted in the train pipe for controlling the flow of fluid from the train pipe to the chamber, a standard secured to the coupling head, a link pivoted to the upper end of the standard and operatively connected with the valve for moving the latter to open position when the adjacent coupling heads are united, and a spring for automatically moving the valve to closed position when the coupling heads are detached.

3. The combination with a car, of a bracket secured to the bottom of the car and provided with alined openings, a draw bar mounted for lateral movement in the openings of the bracket and provided with a terminal coupling head, a spring interposed between the bracket and draw bar for yieldably supporting the coupling head in extended position, a fluid conducting pipe operatively connected with the coupling head, a main valve for controlling the flow of fluid from the conducting pipe to the coupling head and provided with a laterally extending arm, a standard secured to the coupling head, a link pivotally connected with the upper end of the standard and having an elongated slot formed therein for the reception of the free end of the valve arm for moving the valve to open position when a longitudinal pressure is exerted on the coupling head, a spring having one end thereof secured to the arm and its opposite end fastened to the car for automatically moving the valve to closed position when the pressure on the coupling head is removed, and a buffer secured to the end of the car and arranged in the path of movement of the valve arm.

881,633. STEAM-TURBINE. JOHANN STUMPF, Charlottenburg, Germany, assignor to General Electric Company, a Corporation of New York. Filed Sept. 8, 1903, Serial No. 172,242. Renewed Oct. 4, 1905. Serial No. 281,244.



1. In a steam or gas turbine, the combination of a plurality of turbine wheels provided with buckets or vanes, and adjustable means for covering one of said turbine wheels.

2. In a steam or gas turbine, the combination of a plurality of turbine wheels provided with buckets or vanes, and an annular slide adapted to cover one of said turbine wheels.

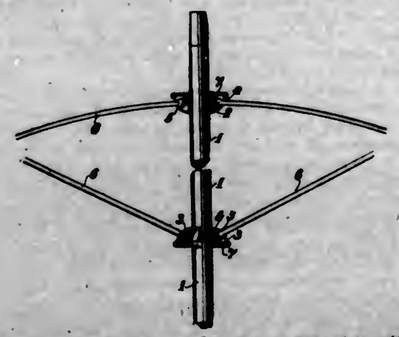
3. In a steam or gas turbine, the combination of two turbine wheels provided with buckets or vanes, an annular slide adapted to cover one or more of said turbine wheels, and means on said slide adapted to cover one or more sides of said buckets or vanes.

4. In a steam or gas turbine, the combination of two turbine wheels provided with buckets or vanes and an annular slide having a flange adapted to cover the sides of said buckets or vanes.

5. In an elastic-fluid turbine, the combination of a wheel having active and idle buckets with an adjustable covering for the idle buckets.

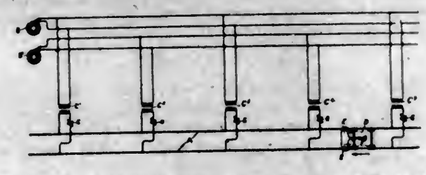
[Claims 6 to 10 not printed in the Gazette.]

881,634. UMBRELLA-RUNNER. RUDOLF SUTER, Kölliken, Switzerland. Filed May 31, 1907. Serial No. 376,709.



In an umbrella, or parasol, the combination with a stick, provided with a thimble, having screw threads on one end and a curved slotted flange at the other, adapted to receive the ball end of ribs, a nut with an inwardly rounded projecting edge to bear against the ball ends of the ribs, said nut having a broadened flange, at the outer edge of which is a depending portion adapted to secure the slotted ends of the thimble.

881,635. CAB SIGNAL SYSTEM. DAVID P. THOMSON, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Aug. 2, 1907. Serial No. 386,749.



1. In a cab signal system, in combination with a railway having both rails conductively continuous and having sources of alternating-current connected at intervals across the rails, a coil carried by a vehicle in front of the front wheels and in inductive relation to the alternating-current in the rails, and electro-responsive means on the vehicle connected to said coil.

2. In a cab signal system, in combination with a railway having both rails conductively continuous and having sources of alternating-current connected at intervals across the rails, a coil carried by a vehicle in front of the front wheels and in inductive relation to the alternating-current in the rails, and electro-responsive means on the vehicle energized by the current induced in said coil and adapted to produce a signal indication.

3. In a cab signal system, in combination with a railway having both rails conductively continuous and having sources of alternating-current connected at intervals across the rails, a coil carried by a vehicle in front of the front wheels and in inductive relation to the alternating-current in the rails, and electro-responsive means on the vehicle connected to the coil and adapted to indicate the inductive action on said coil of current from a plurality of said sources ahead of the vehicle.

4. In a cab signal system, in combination with a railway having both rails conductively continuous and having sources of alternating-current connected at intervals across the rails, adjacent sources being of different character, a coil carried by a vehicle in front of the front wheels and in inductive relation to the current in the rails, and electro-responsive means connected to said coil and adapted to indicate the presence in said coil of a plurality of currents of different character.

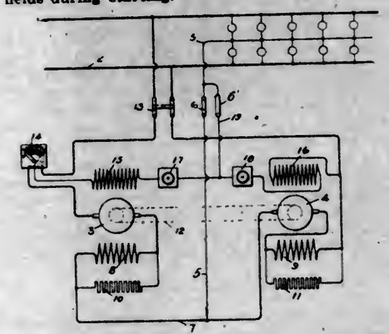
5. In a cab signal system, in combination with a railway having both rails conductively continuous and having sources of alternating-current connected at intervals across the rails, adjacent sources being of different frequency, a coil carried by a vehicle in front of the front wheels and in inductive relation to the current in the rails, and electro-responsive means connected to the coil and adapted to give different indications for the presence in said coil of two frequencies simultaneously and of one frequency only.

[Claims 6 to 10 not printed in the Gazette.]

881,636. BALANCER SET. LOUIS E. UNDERWOOD and RICHARD W. DOUGLASS, Lynn, Mass., assignors to General Electric Company, a Corporation of New York. Filed Oct. 1, 1904. Serial No. 226,750.

1. In an electrical system, the combination of distributing mains, compensating machines joined by a conductor and connected across said mains, a mechanical connection between said machines, a shunt field for each machine, and means for connecting said shunt fields to said conductor joining said machines or for disconnecting said fields therefrom.

2. In an electrical system, the combination of distributing mains, compensating machines connected across said mains to a neutral conductor and driven by energy received from said mains, a mechanical connection between said machines, shunt fields for said machines normally connected between said distributing mains and said neutral conductor, regulating means in circuit with said shunt fields, and means for preventing abnormal potential across said fields during starting.



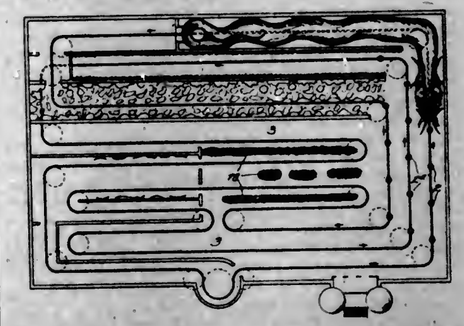
3. In an electrical system, the combination of distributing mains, compensating machines joined by a conductor and connected across said mains, a mechanical connection between said machines, shunt fields for said machines, regulating means in each shunt field, and means for connecting said fields to the conductor joining said machines and for disconnecting said fields therefrom.

4. In an electrical system, the combination of distributing mains, compensating machines connected across said mains and to a neutral conductor, shunt fields connected between said distributing mains and said neutral conductor, and a switch in said neutral conductor between said machines and said shunt field connection.

5. In an electrical system, the combination of distributing mains of a three-wire circuit connected to a source of supply, compensating machines driven by energy derived from said mains and normally connected across said mains to the neutral conductor of said three-wire circuit, a shunt field for each machine, regulating means in each shunt field, means for connecting said shunt fields to said neutral conductor, and means for opening a connection between said fields and said armatures during the interval of starting.

[Claims 6 to 8 not printed in the Gazette.]

881,637. AMUSEMENT DEVICE. WILLIAM S. VAN SANT, Oakland, Cal. Filed Sept. 16, 1907. Serial No. 393,065.



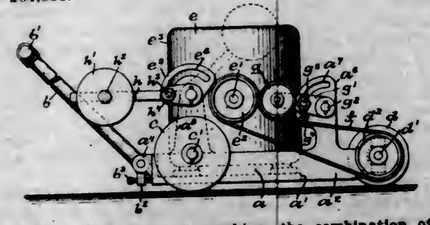
1. An amusement device comprising independently traveling carriages and direction means by which the carriages are first started in pairs, and afterwards separated and moved in opposite directions.

2. In an amusement apparatus, a plurality of seats, mechanism by which said seats are caused to travel, direction means by which said seats may be separated, brought together, or caused to travel in opposite directions, means by which the seats may be raised and depressed either rapidly or gradually, means by which the seats may be partially turned to face toward or away from each other, and means by which the seats may be tilted and the occupants caused to bow toward each other.

3. In an amusement apparatus, a plurality of endless traveling cables, direction means by which the seats are first started in pairs, and afterwards separated, means by which they are concealed from each other, means by which one of the seats may be caused to travel upon a downward incline, and the other upwardly, and an irregular surface over which a seat-carrier is caused to pass.

4. In an amusement apparatus, endless traveling cables, seats connected therewith to start in pairs, means by which said seats may be partially turned to face to or from each other, means by which the seats are tilted about a horizontal axis to produce a bowing movement, and means by which the seats are returned to their normal position.

881,638. FLOOR-DRESSING MACHINE. CYRA B. WATTLES, Providence, R. I., assignor, by mesne assignments, to Electric Floor Surfacer Company, Gardiner, Me., a Corporation of Maine. Filed June 12, 1905. Serial No. 264,851.

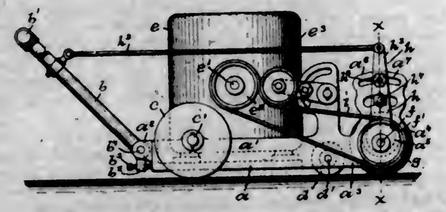


1. In a floor dressing machine, the combination of a frame, wheels rotatably secured to the frame, a dressing roll rotatably secured in bearings to the frame, a motor secured to the frame, and means for operatively connecting the motor to the dressing roll to revolve the roll, of a segmental member, a lever adjustably secured to the segmental member and a weight adjustably secured to the lever, as and for the purpose set forth.

2. In a floor dressing machine, a dressing roll d, a boss c^4, a segmental member c^5 having the semi-circular slot c^6 secured to the boss c^4, a lever h pivotally secured to the boss c^4, a weight h' adjustably secured to the lever h by a set bolt h^2, and a bolt h^3 adapted to extend through the circular slot c^6 in the member c^5 and through a hole in the lever h where it is secured by a nut h^4, whereby the lever h is adjusted to bring the weight h' away from or over the dressing roller d to decrease or increase the weight on the dressing roll, thereby decreasing or increasing the pressure of the dressing roll on a floor, means for securing the boss c^4 to the machine, and means for revolving the dressing roll d, as described.

3. In a floor dressing machine, the combination of a frame a having the body portion a', the forwardly-extending arms a^2 a^2 supporting the bearings a^3 a^3, the two rearwardly-extending lugs a^4 a^4, the bosses a^5 a^5 on the side of the body a', and the upwardly-extending bracket a^6 having the semi-circular slot a^7, a handle b having the T-shaped upper end b', the downwardly-extending lug b^2 in which is the adjusting bolt b^3, the wheels c c rotatably secured to the axles c' c' which are secured to the bosses a^5 a^5 on the frame a, a dressing roll d secured to a shaft d' which is supported in the bearings a^3 a^3, a pulley d^2 secured to the end of the shaft d', a motor e rigidly secured to the frame a and having the driving shaft e', the pulley e^2, the casing e^3 having the bosses e^4 e^4, the segmental member e^5 e^5 having the semi-circular slots e^6 e^6 secured to the bosses e^4 e^4, a belt f connecting the pulley e^2 with the pulley c^2, an idler pulley g rotatably secured to the free end of an arm g' which is pivotally secured to the bracket a^4, a bolt g^2 adapted to extend through the semi-circular slot a^7 in the bracket a^6 and through a hole in the arm g' where it is secured by the nut g^3, a lever h pivotally secured to the boss e^4, a weight h' adjustably secured to the lever h, and a bolt h^3 adapted to extend through the semi-circular slot e^6 in the segmental member e^5 and through a hole in the lever h where it is secured by a nut h^4, whereby the handle b is adjusted and the weighted lever h is adjusted to bring more or less weight on the dressing roll d to vary the pressure of the dressing roll on a floor, as described.

881,639. FLOOR-DRESSING MACHINE. CYRA B. WATTLES, Providence, R. I., assignor, by mesne assignments, to Electric Floor Surfacer Company, Gardiner, Me., a Corporation of Maine. Filed June 12, 1905. Serial No. 264,853.



1. A floor dressing machine comprising a frame, wheels rotatably secured to the frame, a motor secured to the frame, a dressing roll shaft, a dressing roll secured to the shaft, eccentric bearings supporting the dressing roll shaft and rotatably held in the frame, means for adjusting the eccentric bearings to raise or lower the dressing roll, and means for operatively connecting the motor with the dressing roll shaft.

2. A floor dressing machine comprising a frame, a handle pivotally secured to the frame, wheels rotatably secured to the frame, a motor secured to the frame, a dressing roll shaft, a dressing roll secured to the shaft, eccentric bearings supporting the dressing roll shaft and rotatably held in the frame, means for rigidly connecting the eccentric bearings together, means for adjustably securing the eccentric bearings to the frame, whereby the dressing roll is adjustable vertically in the frame, and means for operatively connecting the motor with the dressing roll shaft.

3. In a floor dressing machine, the combination of a frame a having the forwardly-extending arms a^2 a^2 on the ends of each of which is formed the hub a^4 having the circular opening a^5 and the upwardly-extending bracket a^6 in which is the semi-circular slot a^7, a motor e secured to the frame, a dressing roll shaft f, a dressing roll g secured to the shaft f, a dressing roll adjusting mechanism h consisting of the eccentric bearings h' h' each eccentric bearing being rotatably supported in a hub a^4 on the forwardly extending arms a^2 a^2 of the frame and having the off-center hole h^2 for the dressing roll shaft f and the vertical arm h^3, a roll h^4 rigidly secured to the arms h^3 h^3 by the nuts h^5 h^5, a bolt h^6 extending through each semi-circular slot a^7 in the brackets a^6 a^6 and through a hole in the arms h^3 h^3 where it is secured by the nut h^7, whereby the dressing roll g is adjustable vertically and secured in the adjusted position, and means for operatively connecting the motor e with the dressing roll shaft f, as described.

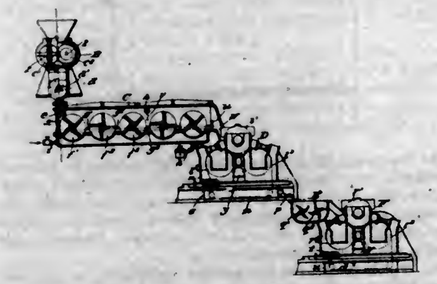
881,640. DIAPER-COVER. HEINRICH WIMMEL, Frankfort-on-the-Main, Germany. Filed Oct. 15, 1907. Serial No. 397,504.

A diaper-cover comprising an upper or shirt-portion having armholes, tapering body-portions extending from the shirt-portion and having straps or belts at their ends, the belt of the underlapping body-portion passing through a slit in one side of the shirt-portion, means for connecting the straps or belts of the body-portions at the rear of the shirt-portion, buttons at the lower front-edges of the over



and underlapping body-portions, and an abdominal portion at the lower part of the shirt-portion, provided with buttonholes for attaching the latter to the buttons on the lower edges of the body-portions.

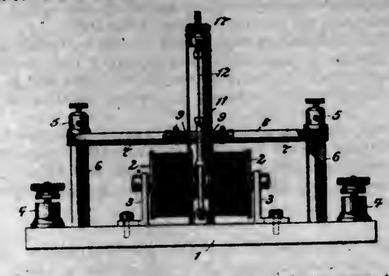
881,641. PROCESS OF TREATING SUGAR-BEETS. MORIZ WEINRICH, Yonkers, N. Y., assignor of one-third to Carl Portius, Halle-on-the-Saale, Germany. Filed May 14, 1907. Serial No. 373,554.



1. The process herein described for complete defecation, neutralization and purification of juice in sugar beets before said juice is extracted, in one continuous operation and under elimination of carbonation and filter-press work, said process consisting in re-conducting to limed beet mush and mixing therewith continuously for thinning purposes, some of the defecated and neutralised juice, heating the mixture to 60–65° C., then neutralising the excess of lime by means of phosphoric acid, heating further to 70–75° C., and finally extracting by pressing the thus defecated, neutralised and purified juice.

2. The process herein described for complete defecation, neutralization and purification of juice in sugar beets before such juice is extracted, in one continuous operation and under elimination of carbonation and filter press work, said process consisting in re-conducting to limed beet mush and mixing therewith continuously for thinning purposes, some of the defecated and neutralised juice, heating the mixture to 60–65° C., then neutralising the excess of lime by means of phosphoric acid, heating further to 70–75° C., extracting by pressing the thus defecated, neutralised and purified juice, then treating the extracted juice by adding a small amount of lime thereto, then heating the juice to the boiling point, and finally neutralising and filtering said juice.

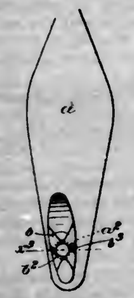
881,642. ELECTRIC RELAY. EDWARD WESTON, Newark, N. J. Filed June 21, 1904. Serial No. 213,500.



1. A relay provided with a pair of electromagnets; an armature lever pivotally supported at one end between the poles of said magnets; a retractile spring secured to the free end of said lever and to a stationary support located in alinement with the axis thereof; in combination with movable and stationary contacts located intermediate the pivoted end of the armature lever and the stationary support for the retractile means, said retractile means being provided with adjusting means for placing it under tension, the arrangement being such that normally the armature lever and its retractile means are located in the same plane and the stationary contacts at equal distances on opposite sides from the movable contacts, substantially as described.

2. A relay provided with a pair of electromagnets and an armature lever pivotally supported at one end between the poles thereof; a pair of stationary contacts located on opposite sides of the armature lever and intermediate the ends thereof, said contacts being electrically connected to and supported by a conducting bar secured to the base of the instruments by standards located on opposite sides of the electromagnets; in combination with yielding retractile means secured to the free end of the armature lever and to a standard supported also by the base; together with movable contacts carried by the armature lever, the lever, the retractile means and the supporting end of the standard being normally in alinement and the arrangement such that the forces opposing the action of the magnets is always equal, substantially as described.

881,643. LAST. WILLIAM WIGGINS, Brockton, Mass. Filed Jan. 31, 1907. Serial No. 354,975.



1. A last having a reinforcing plate for the last socket adapted to be set into the surface of the wooden body of the last around said socket and provided with longitudinally projecting bifurcated wings.

2. A last having a bushing for the last socket and a reinforcing plate set into the surface of the last around said socket and provided with bifurcated wings projecting forward and back to afford an external, lateral support for the material forming the body of the last.

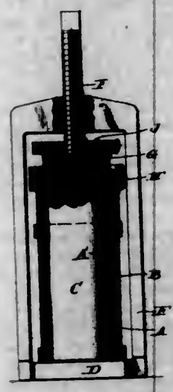
3. A last having a combined reinforcing plate and thimble for the last socket formed in a single piece, a portion of which is bent around to form a tubular thimble the

meeting edges of which are at one side, the remainder being bent at an angle to the tubular bushing, and bifurcated and extended forward and backward of the socket and adapted to be set into the surface of the last.

4. The combination with a last, having a thimble hole, of a thimble in said hole provided with a pair of longitudinally extended, diverging projections embedded in the last, said projections adapted to prevent splitting of the last.

5. The combination with a last, having a thimble hole, of a thimble therein provided with oppositely projecting, longitudinally directed, bifurcated wings, said wings being embedded in the last and adapted to prevent splitting thereof.

881,644. PROCESS OF MAKING PHONOGRAMS. RITTER P. WINNE, Brooklyn, N. Y. Filed Dec. 4, 1906. Serial No. 346,299.



1. The process of forming phonograms, which consists in placing a cylinder of celluloid in a matrix; arranging a backing of softened pasteboard within the celluloid cylinder; softening the celluloid by the application of heat; and finally expanding the same together with the pasteboard backing to force the celluloid into intimate contact with the matrix.

2. The process of forming phonograms, which consists in placing a cylinder of celluloid within a matrix; backing said celluloid with a tube of softened pasteboard; applying heat to the celluloid to soften the same; and finally applying pressure throughout the entire inner surface of the paste-board tube whereby it will be expanded laterally and thereby force the plastic celluloid into intimate contact with the matrix.

3. The process of forming phonograms, which consists in placing a hollow cylinder of celluloid in a matrix; placing a cylindrical member of rubber within the celluloid member; heating the matrix and celluloid to a degree sufficient to soften the celluloid; and finally applying pressure to one end of the cylindrical member, the other member being held against a fixed abutment, whereby the cylindrical member will be spread or extended evenly throughout and the celluloid will be forced outwardly into intimate contact with the matrix.

4. The process of forming phonograms, which consists in placing a cylinder of celluloid in a matrix; arranging a backing of normally-unyielding material within said cylinder; softening the backing and the celluloid; and finally expanding the backing and the celluloid to force the latter into intimate contact with the matrix and the backing into a fixed relation with the celluloid.

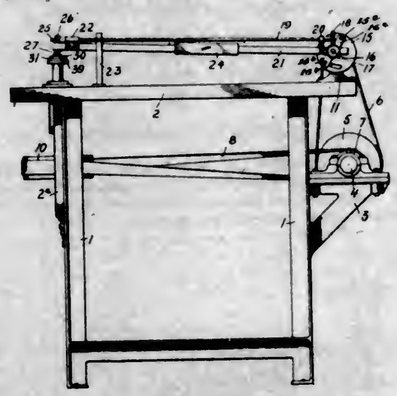
881,645. MOLD AND MOLD-LINING. EDWARD G. ACHESON, Stamford township, Welland county, Ontario, Canada. Filed Dec. 13, 1904. Serial No. 236,672.

1. The herein described mold comprising a porous body composed of crushed siloxicon, the particles of which are rigidly cemented together and from which the moisture has been eliminated.



2. The herein described mold comprising a porous body composed of crushed siloxicon, the particles of which are rigidly cemented together and from which the moisture has been eliminated, the said body having low heat conductivity and a low coefficient of expansion.

881,646. MACHINE FOR GRINDING LENSES. CLILE C. ALLEN, Chicago, Ill., assignor to F. A. Hardy & Company, Chicago, Ill., a Corporation of Illinois. Filed May 16, 1906. Serial No. 317,052.



1. In a machine for the purpose indicated, two opposed elements, one for carrying the lens and the other carrying an annular lap and an auxiliary lap located within the opening thereof and annularly spaced therefrom; means for oscillating one of said two opposed elements and means for rotating one of them.

2. In a machine for the purpose indicated, two opposed elements, one for carrying the lens and the other carrying an annular lap and an auxiliary lap located within the opening thereof, and annularly spaced therefrom; means for oscillating one of said two opposed elements and means for rotating the lens carrier.

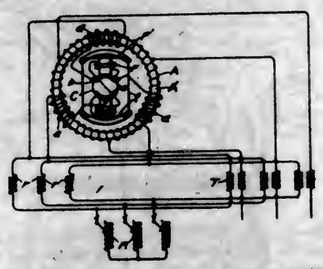
3. In a machine for the purpose indicated, two opposed elements, one for carrying the lens to be dressed and the other carrying an annular lap and an auxiliary lap located within the opening thereof; means for rotating one of said elements; means common to the two laps for yieldingly pressing them both against the lens; means for distributing such pressure in predetermined ratio to the lenses, and means adjustable at will for varying such ratio.

4. In a machine for the purpose indicated, two opposed elements, one for carrying the lens to be dressed; an annular lap and an auxiliary lap located within the opening thereof carried by the other element; means for rotating one of said elements; means for yieldingly pressing the lens carrier toward the laps, and independent means for yieldingly pressing the auxiliary lap toward the lens.

5. In a machine for the purpose indicated, two opposed elements, one for carrying the lens to be dressed; an annular lap and an auxiliary lap located within the opening thereof carried by the other element; means for rotating one of said elements; means for yieldingly pressing the lens-carrier toward the laps; independent means for yieldingly pressing the auxiliary laps toward the lens, and means for varying at will the pressure of said auxiliary element toward the lens.

[Claims 6 to 16 not printed in the Gazette.]

881,647. SELF-EXCITED ALTERNATOR. ERNST F. W. ALEXANDERSON, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Feb. 19, 1906. Serial No. 301,727.



1. In a self-exciting alternator, a main armature winding, an auxiliary winding, a field winding provided with a rectifying commutator, brushes bearing on said commutator and connected to said auxiliary winding, and a short-circuited winding carried by the field magnet in inductive relation to said auxiliary winding.

2. In a self-exciting alternator, a slotted armature core, a main armature winding in said slots, an auxiliary winding in the top of said slots above the armature winding, a field magnet, a field winding carried thereby provided with a rectifying commutator, brushes bearing on said commutator and connected to said auxiliary winding, and a short-circuited winding carried by the field magnet in inductive relation to said auxiliary winding.

3. In a self-exciting alternator, a main armature winding, an auxiliary winding, a field magnet, a field winding carried thereby provided with a rectifying commutator, and brushes bearing on said commutator and connected to said auxiliary winding, said field winding having a few turns short-circuited on themselves.

4. In a self-exciting alternator, a main armature winding, an auxiliary winding, a field magnet, a field winding carried thereby provided with a rectifying commutator, brushes bearng on said commutator and connected to said auxiliary winding, and short-circuited conductors surrounding each pole and the spaces between poles.

5. In a self-exciting alternator, a main armature winding, an auxiliary winding, a cylindrical field magnet, a field winding carried in slots therein and provided with a rectifying commutator, brushes bearing on said commutator and connected to said auxiliary winding, and short-circuited conductors surrounding each field pole and the spaces between poles.

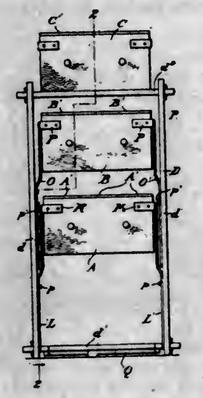
[Claims 6 and 7 not printed in the Gazette.]

881,648. COOKING AND HEAT-RETAINING APPARATUS. MARCUS O. ANTHONY, New York, N. Y. Filed Sept. 22, 1906. Serial No. 335,741.

1. In a device of the class described, a frame, a cooking and heat-retaining receptacle provided with a cover, and arms connected to the frame and to said receptacle for supporting the latter within said frame, said arms and the receptacle being capable of swinging outwardly from the frame, whereby the receptacle is supported beyond the frame and in a position to open its cover.

2. In a device of the class described, a frame, a cooking and heat-retaining receptacle, arms pivoted to the frame and to said receptacle, said arms and the receptacle being movable inwardly and outwardly of the frame, and means for limiting the outward swinging movement of the arms when in a position inclined upwardly and outwardly from the frame.

3. In a device of the class described, a frame, a cooking and heat-retaining receptacle and two pairs of arms, each arm being pivoted to the frame and connected pivotally and detachably to the receptacle, said arms and the receptacle being movable inwardly and outwardly relative to the frame, and said receptacle being removable from said arms.

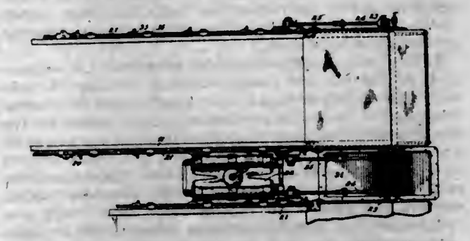


4. In a device of the class described, a frame, a plurality of cooking and heat-retaining receptacles, and a plurality of devices for supporting the receptacles individually on the frame, each receptacle and its supporting devices being movable relative to the frame independently of the other receptacles and the respective supporting devices therefor.

5. In a device of the class described, a frame, a plurality of cooking and heat-retaining receptacles, and a plurality of arms for supporting the receptacles individually on the frame, each receptacle and its arms being movable relative to the frame independently of the other receptacles.

[Claims 6 to 10 not printed in the Gazette.]

881,649. MECHANISM FOR MOVING HATCH-COVERS. TULLEY B. ARMSTRONG, Lakewood, Ohio. Filed Mar. 11, 1907. Serial No. 361,671.



1. In a mechanism of the character described, the combination with hatch covers, of reciprocating mechanism extending athwartship and adapted to periodically engage and release the covers and thereby move them in one direction or the other, as desired.

2. The combination with the hatch coaming, of mechanism carried thereby and adapted to reciprocate alongside of the hatch coaming, hatch covers, and means carried by said mechanism for periodically engaging and releasing and thereby moving the covers.

3. The combination with the hatch coaming, of a shaft guided to reciprocate alongside of the hatch coaming, hatch covers, and mechanism carried by the shaft for periodically engaging and releasing and thereby moving the covers.

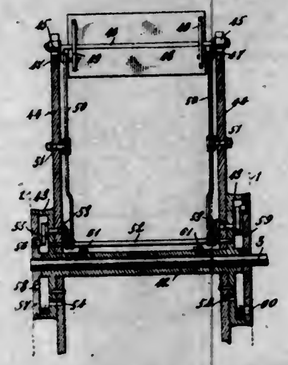
4. The combination with hatch covers, of reciprocating mechanism having a ratchet connection with the covers whereby the covers are moved step by step.

5. The combination with a hatch coaming and hatch

covers, with mechanism carried by the coaming for moving the hatch covers, said mechanism having a ratchet connection with one of the covers.

[Claims 6 to 35 not printed in the Gazette.]

881,650. BOAT. FORTUNAT AUDET, St. Jean Des Chaillons, Quebec, Canada. Filed May 10, 1906. Serial No. 316,063.



1. In a boat, paddle wheels for propelling the same, a shaft for driving said paddle wheels, a plurality of rocking paddles attached to said wheels and means for rocking said paddles, said means comprising stationary plates with cam grooves therein, crank shafts journaled in the paddle wheels and having crank arms traveling in the aforesaid cam grooves whereby said shafts are rocked by the rotation of the paddle wheels, and links connecting said shafts and the aforesaid blades.

2. In a boat, paddle wheels for propelling the same, a shaft for driving said paddle wheels, a plurality of rocking paddles attached to said wheels and means for rocking said paddles said means comprising fixed plates having cam grooves therein, crank shafts journaled in said paddle wheels and having cranks traversing said cam grooves whereby said shafts are rocked, and lever links connecting the paddles and said rock shafts said links being pivoted intermediate their lengths whereby the rotary motion of the shafts is positively translated into reciprocating motion of the lever links.

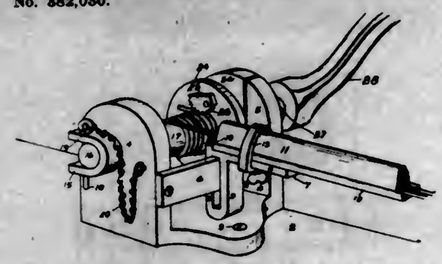
3. In a boat, paddle wheels for propelling the same, a shaft for driving said paddle wheels, a plurality of rocking paddles attached to said wheels and means for rocking said paddles, said means comprising fixed plates having cam grooves therein, crank shafts journaled in the paddle wheels and having cranks traversing said cam grooves whereby said shafts are rocked, parallel links connecting said shafts and the opposite ends of the aforesaid paddles whereby said paddles are rocked, and a loose sliding pivotal support for each of said links intermediate its ends.

4. In combination with the hull of a boat, a main shaft provided with crank portions, paddle wheels secured to the outer end of the main shaft, links secured to the crank portions of the main shaft and provided with collars, levers disposed through the collars, hooked plates secured to one end of the levers, foot plates secured to the opposite ends of the lever, seats secured to the hull adjacent the ends of the levers, and a balance wheel disposed centrally of the hull and connected with the main crank shaft.

5. In combination with the hull of a boat, a main shaft, paddle wheels secured to the ends of the shaft, means for driving the shaft, seats adjacent the driving means, a framework disposed centrally of the driving means and provided with a steadying handle adjacent one side, a steering rod carried by the opposite side of the framework and provided with a hand-wheel, a beveled pinion on the end of the steering rod, a framework supported adjacent the lower end of the steering rod, a shaft carried by the framework, a beveled gear in mesh with the beveled pinion on said shaft, a winding drum on the shaft, and a balance wheel connected with the main shaft and disposed centrally of the hull.

[Claims 6 and 7 not printed in the Gazette.]

881,651. TIRE-WIRE-PULLING MACHINE. JOHN A. BARBRAKE, Canton, Ohio. Filed July 3, 1907. Serial No. 382,080.



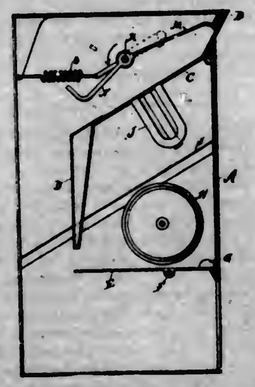
1. A tire-wire pulling machine comprising a frame with two standards thereon, an open bearing in one standard and a pivoted bearing in the other standard, a tapered spindle in the bearings adapted to be swung with the pivoted bearing to swing its free end out of the open bearing, an adjacent tire-supporting bracket, and means for connecting the tire-wire with the spindle.

2. A tire-wire pulling machine comprising a frame with two standards thereon, an open bearing in one standard and a pivoted bearing in the other standard, a spindle in the bearings adapted to be swung with the pivoted bearing to swing its free end out of the open bearing, an adjacent tire-supporting bracket, and means for connecting the tire-wire with the spindle.

3. A tire-wire pulling machine comprising a frame with two standards thereon, an open bearing in one standard and a pivoted bearing in the other standard, and a tapered spindle in the bearings adapted to be swung with the pivoted bearing to swing its free end out of the open bearing.

4. A tire-wire pulling machine comprising a frame with two standards thereon, an open bearing in one standard and a pivoted bearing in the other standard, and a spindle in the bearings adapted to be swung with the pivoted bearing to swing its free end out of the open bearing.

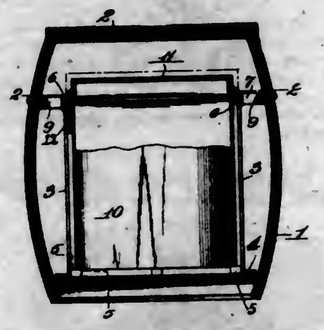
881,652. COIN-CONTROLLED MECHANISM FOR TELEPHONE-BOXES AND THE LIKE. FRANCIS X. BEE, Philadelphia, Pa. Filed Sept. 12, 1906. Serial No. 334,214.



1. In an apparatus of the character described, a casing having a slot therein for the passage of a coin, a chute leading from the slot, a permanent magnet located beneath the chute, an operating shaft, a spring for holding said shaft in its normal position, a crank handle for oscillating the shaft, a series of kick-off fingers secured to said shaft and adapted to swing between the two side bars of the chute and a retaining bar loose upon said shaft, said bar being adapted to hold the coin in the slot until the kick-off fingers have been brought into operative position.

2. In an apparatus of the character described, a casing having a slot therein for the passage of coin, a chute leading from the slot, a permanent magnet located beneath the chute, an operating shaft, a series of kick-off fingers carried by said shaft and a retaining bar for holding the coin in the slot until the kick-off fingers have been brought into operative position.

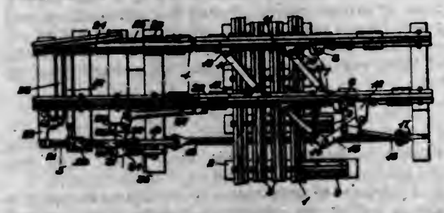
881,653. OYSTER-CARRIER. ROBERT C. BENDER, St. Louis, Mo. Filed May 10, 1907. Serial No. 372,964.



1. An oyster carrier, comprising a receptacle, a lid normally closing the upper end thereof, a perforated wall concentrically arranged within the receptacle, lugs integral with the upper end of the perforated wall, ears integral with the lugs, which ears engage against and are fixed to the wall of the receptacle, a flange integral with and projecting outwardly from the lower end of the perforated wall, lugs integral with and projecting inwardly from the lower end of the perforated wall, and an oyster receptacle removably positioned within the perforated wall.

2. The combination with a receptacle, of a perforated wall concentrically arranged within the receptacle, a ring integral with the upper end of the perforated wall, lugs integral with said ring, the outer ends of which lugs are fixed to the wall of the receptacle, a horizontally disposed flange integral with and projecting outward from the lower end of the perforated wall, lugs integral with and projecting inward from the lower end of the perforated wall, and a receptacle removably positioned within the perforated wall and with its lower end resting on the lugs.

881,654. RAILWAY-CROSSING. ARTHUR BERTRAND, Kankakee, Ill., assignor to Joseph E. Bowman, Evansville, Ind. Filed Aug. 2, 1907. Serial No. 390,233.

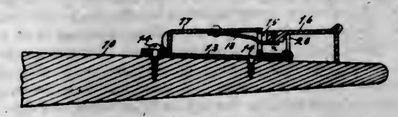


1. A railway crossing, comprising main track rails, crossing track rails arranged in a plane above the main track rails, a pair of rail sections of the crossing track rails immediately above the main track rails hinged at one end so as to swing horizontally relatively to said crossing track rails, and which crossing rail sections are of such length as to extend continuously across both the main track rails, means whereby said hinged rail sections are shifted from one position to another, and means whereby the hinged rails and shifting means are locked in both open and closed positions.

2. A railway crossing, comprising main track rails, crossing track rails arranged in a plane above the main track rails, a pair of rail sections of the crossing track rails immediately above the main track rails hinged at one end so as to swing horizontally relatively to said crossing track rails, and which crossing rail sections are of such length as to extend continuously across both the main track rails and auxiliary rails arranged between and adjacent the main track rails for supporting the hinged rail sections in both open and closed positions.

3. The combination with the rails of a main track, of crossing rails arranged in a plane above the main track rails, there being movable sections of the crossing track rails arranged to swing away from their normal positions above the main track rails, and which movable sections of the crossing track rails are of such length as to extend continuously across both the main track rails, a derailing rail forming a part of one of the crossing rails and arranged adjacent the main track rails, means whereby the movable crossing rail sections and the derailing rail are simultaneously shifted, and means whereby the movable rail sections and the derailing rail are locked after being shifted from one position to another.

881,655. TRACE-HOLDER. HENRY A. BIEBLEY, Portsmouth, Ohio. Filed July 25, 1907. Serial No. 385,438.



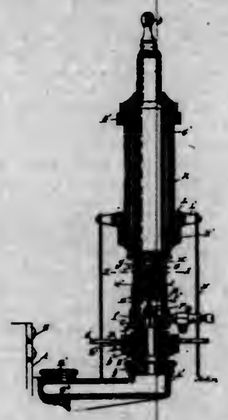
1. A trace holder for swingle-trees consisting of a plate secured to the swingle-tree with a pair of upwardly extending ears, a catch pivoted between said ears and adapted to engage the trace and prevent its escape from the end of the swingle-tree, and a second plate adapted to be secured to said first-mentioned plate for forming the stationary part of the trace holder with one end thereof fitting between said ears, and a spring projecting from said stationary portion of the trace-holder to a point between said ears and under and engaging with the pivoted end of said catch so as to hold the latter in its open and closed positions.

2. A trace-holder for swingle-trees consisting of a plate secured to the swingle-tree with a pair of upwardly extending ears, a catch pivoted between said ears and adapted to engage the trace and prevent its escape from the end of the swingle-tree, a second plate adapted to be secured to said first mentioned plate for forming the stationary part of the trace holder with one end thereof fitting between said ears, and a flat spring secured under and to said last mentioned plate and projecting through the opening therein to a point between said ears and into engagement with the pivoted end of said catch so as to hold said catch in its open and closed positions.

3. A trace holder for swingle-trees consisting of a plate secured to the swingle-tree with a pair of upwardly extending ears, a catch pivoted between said ears and adapted to engage the trace and prevent its escape off of the end of the swingle-tree, a second plate adapted to be secured to said first mentioned plate for forming the stationary part of the trace holder with one end thereof fitting between said ears, and a spring projecting from said stationary portion of the trace holder to a point be-

tween said ears and under and engaging with the pivoted end of said catch so as to hold the latter in its open and closed positions, the edges of said ears being turned inward under said catch to afford stops to limit the closing movement of said catch.

881,656. DAMPER AND PRESSURE REGULATOR. JOHN B. BISCHOFF, Mount Clemens, Mich. Filed Apr. 23, 1906. Serial No. 313,242.



1. In a damper regulator, the combination with a stationary tubular piston, of a cylinder therefor, a weight, flexible connections between said weight and the lower end of the cylinder, steam connections leading into the lower end of said piston, a valve in said connections, and means permitting the opening of said valve by a predetermined pressure for permitting said pressure to raise said cylinder and weight, for the purpose described.

2. In a damper regulator, the combination with a stationary tubular piston, of a cylinder therefor, supporting means for said piston, steam connections leading into said piston, a valve in said connections, means for permitting the opening of said valve by a predetermined steam pressure to raise said cylinder, a flange on the lower end of said cylinder, and a weighted collar supported on said flange and slidable on said cylinder, for the purpose described.

3. In a damper regulator, the combination with a stationary tubular piston, having in its lower end a transverse slot and a communicating longitudinal aperture, of a movable cylinder therefor, having a flange on its lower end, a collar sleeved on said cylinder and normally resting on said flange, a weight, flexible connections between said weight and collar, supporting means for said piston, steam connections leading into said piston, and cylinder, a valve in said steam connections, a stem resting on said valve and passing through said longitudinal aperture, a pivoted lever passing through said transverse slot and resting on said stem, and a weight on said lever to hold said valve on its seat, for the purpose described.

881,657. STUMP AND ROOT PULLER. CHARLES BITTNER, New York, N. Y. Filed Apr. 20, 1907. Serial No. 369,281.

In a stump and root puller, the combination with a lever having spaced apertures at one end, of a forked hook having a bifurcated end and apertures in the bifurcations thereof, a bolt adapted to be inserted in any of the apertures of the bifurcations and lever for varying the effective length of the hook and the position of the fulcrum point on the lever, and a rocker on the lower end of the lever, said rocker consisting of a metal strip curved into an approximately semi-circular portion and a straight



portion forming a brace for the free extremity of the semi-circular portion.

881,658. SASH-LOCK. JOHN W. BOWMAN, Chicago, Ill. Filed Sept. 1, 1906. Serial No. 332,909.

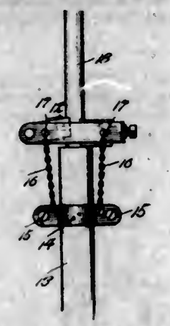


1. In a sash lock, the combination of a face plate, a lever pivoted to said plate having a rearwardly-extending part and a nose piece downwardly extending therefrom, near the top thereof, a spring-pressed swinging-latch pivoted through said plate adapted and arranged to snap behind the nose when the lever is moved forward, to prevent the lever from being returned to normally closed position, and a lever on the front of the plate for swinging the latch out of the path of said nose piece.

2. In a sash lock, the combination of a face plate 8, a lever 13 pivoted thereto, having the rearwardly extending part 16' and the nose 16, a spring pressed latch 17 pivoted to said plate and a counter-sunk lever 19 for moving said latch and a latch guard 22ª for strengthening the latch.

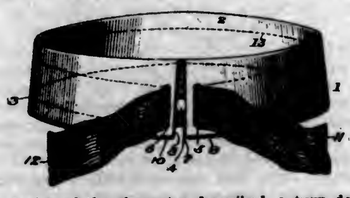
881,659. HOLDER FOR DRILL-RODS AND PIPES. SAMUEL L. BRANNAN, Garden City, Kans. Filed Dec. 20, 1907. Serial No. 407,349.

1. A holder for drill rods and the like comprising a frame, a sliding jaw adjustable therein, a pivoted jaw carried by said frame, means for limiting the movement of the pivoted jaw relatively to the supporting frame, and means for anchoring said holder relatively to the well tube or pipe, substantially as described.



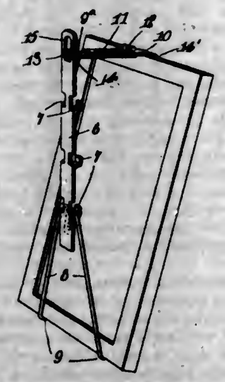
2. A holder for drill rods, pipes and the like embodying a holder frame, a pivoted and swinging jaw mounted therein, a sliding jaw adjustable toward and away from the working face of the pivoted jaw, a clamp, and one or more flexible connections between the clamp and said holder, substantially as described.

881,660. COLLAR. WALTER J. BRUEHL, Philadelphia, Pa. Filed Sept. 10, 1907. Serial No. 392,246.



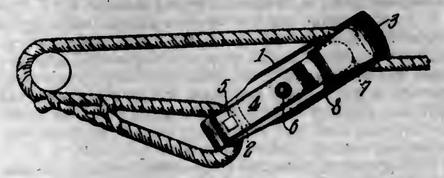
In a device of the character described, a turn down collar, consisting of an inner and an outer fold, said outer fold being provided near its juxtaposed edges with substantially vertical slits extending through the main body of the fold and through which the ends of a necktie are adapted to be inserted.

881,661. PICTURE-HANGER. HARRY C. BURNARD, Tower, Mich. Filed May 24, 1907. Serial No. 375,542.



A picture hanger comprising a vertical strip having a series of tongues projecting therefrom at different heights, a wire engaging over said tongues and having depending arms with hooks at the lower end, and an extensible hooked arm projecting outwardly from the upper end of the strip.

881,662. ROPE-CLAMP. ELWOOD CAREY, Myrtle Point, Oreg. Filed Aug. 31, 1907. Serial No. 390,973.



A clamp comprising a supporting member having a hooked portion, a member pivotally mounted upon the supporting member and having a notched end adapted to lie within the hooked portion of the supporting member and being provided with a notch for the reception of the extremity of the hooked portion.

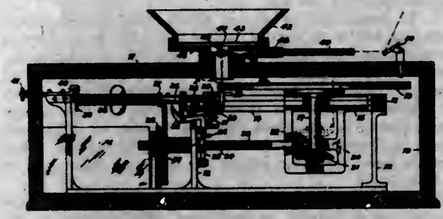
881,663. FIRE-ALARM. GEORGE H. CARROLL, Vacaville, Cal. Filed Nov. 9, 1907. Serial No. 401,499.



1. A fire alarm embodying a circuit closer, a tension device, and a fusible cord connecting the tension device and circuit closer, the circuit closer embodying a spring-actuated slide, means for adjusting the tension of said slide, a collar for limiting the movement of the slide in one direction, and a contact piece located in the path of the slide, the slide and contact piece being included in an alarm circuit, substantially as described.

2. Fire alarm apparatus embodying a circuit closer, a tension device, and a fusible cord connecting the two, the circuit closer comprising a slide and a contact piece in the path thereof, the said slide and contact piece forming portions of an alarm circuit, and the tension device embodying a spring-wound drum to which one end of the fusible cord is connected and upon which it is wound, substantially as described.

881,664. SOUND-RECORDING APPARATUS. FRANCIS W. H. CLAY, Pittsburg, Pa. Filed May 22, 1903. Serial No. 158,311.



1. Apparatus for photographically recording sound comprising a reflector mounted to vibrate angularly on a diaphragm, means for directing a converging beam of light thereon, a sensitive film and means for moving it spirally under the focus point of the beam, substantially as described.

2. The combination with means for angularly vibrating a converging beam of light in consonance with the motions of a sound-actuated body, of a plate carrying a sensitized film thereon and means for moving the film in a general spiral path under the point of focus of the beam and recording the said trace of light thereon.

3. A sound recording camera comprising a dark box, a supporting table therein, means for directing a converging beam of light on the table, and means for revolving the

table and simultaneously shifting it laterally, and means for vibrating the position of the beam of light in exact accordance with the movements of sound waves.

4. In a recording machine the combination with a photographic film and means to vibrate a beam of light in consonance with sound waves of a table supporting said film under the beam of light, mounted to revolve in a sliding carriage, a screw shaft and gears for both revolving the table and laterally shifting it, a friction wheel driven by the revolving table and a regulator controlling the revolution of the shaft of the friction wheel.

5. In a recording machine the combination with a means for vibrating a beam of light in consonance with sound waves, of a sensitive film and a table supporting the film and means for revolving and laterally shifting it, and a regulator actuated by a friction wheel revolved by contact with the table whereby the movable point of contact of the table on the friction wheel travels at a regular speed.

[Claims 6 to 15 not printed in the Gazette.]

881,665. JOINT-WIPING APPARATUS. RICHARD M. CORCORAN, Cleveland, Ohio. Filed June 19, 1907. Serial No. 379,711.



1. An apparatus for wiping joints comprising a hollow body adapted by its rotation or oscillation to work the joint-wiping metal introduced thereinto, said body being provided with a trough or receptacle for supplying molten metal to the interior thereof, said trough or receptacle being provided with a pair of ports, said ports being arranged adjacent to opposite portions of the hollow body, substantially as specified.

2. An apparatus for wiping joints comprising a hollow body adapted to be applied to the joints and to be rotated or oscillated with respect thereto, said body having an internal chamber provided with means for engaging and working the metal introduced thereinto and having a pair of separated ports for the introduction of the molten metal thereinto, the ports being so located as to prevent direct impingement of the molten metal introduced therethrough upon the joint within the chamber, substantially as specified.

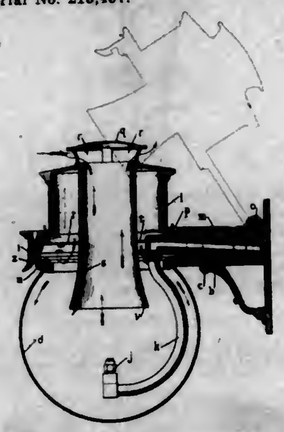
3. A joint-wiping apparatus comprising a hollow body adapted to be rotated or oscillated with respect to the sections to be united, said body being provided on its exterior with a trough, said trough having at opposite ends thereof ports communicating with the interior of the body, and means for mounting the body rotatably in relation to the sections to be united, substantially as specified.

4. In an apparatus for wiping joints, the combination of a pair of clamping members, one of said members comprising pivotally connected sections having a plurality of apertures therethrough, and a chambered body adapted to be applied to said members and to be rotated or oscillated with respect thereto, substantially as specified.

5. In an apparatus for wiping joints, the combination of a pair of clamping members, one of said members comprising a plurality of sections each having a fractional aperture therein and adapted, when united, to form one or more complete apertures, and a chambered body adapted to be applied to said members and to be rotated or oscillated with respect thereto, substantially as specified.

[Claims 6 and 7 not printed in the Gazette.]

881,666. GAS-LAMP. ROBERT M. DIXON, East Orange, N. J., assignor to The Safety Car Heating & Lighting Company, a Corporation of New Jersey. Filed Aug. 4, 1904. Serial No. 219,497.



1. In apparatus of the class described, in combination, a globe, means upon which said globe is supported, a burner within said globe, means mounted adjacent said supporting means and adapted to swing with reference thereto, and a draft tube adapted normally to project within said globe and in operative relation to said burner and mounted upon said last-mentioned means whereby said tube may be swung away from said burner.

2. In apparatus of the class described, in combination, a globe, supporting means having said globe mounted thereon, a burner within said globe, supporting means mounted above said globe and adapted to swing with relation thereto, a casing upon said last-mentioned means, and a draft tube mounted within said casing and adapted normally to project within said globe and in operative relation to said burner.

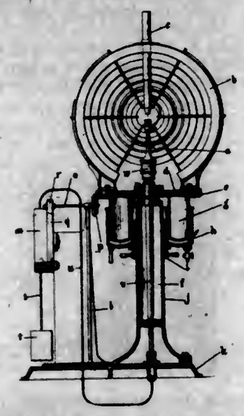
3. In a gas lamp, the combination of a depending globe, an unobstructed draft tube provided with a lower end terminating within said globe and at a distance from the walls thereof whereby a clear passageway for the incoming air is provided, a burner within said globe and positioned symmetrically with respect to said tube whereby the products of combustion will be deflected by the lower walls of said tube and caused to pass therethrough, a gas conduit leading exteriorly of said tube to said burner means for supporting said globe, and means for supporting said tube.

4. In a gas lamp, the combination of a burner, a bracket maintaining said burner against displacement, an unobstructed draft tube, and an arm normally holding the lower end of said tube within said globe and above said burner and adapted to be independently actuated whereby said tube may be temporarily displaced from the aforesaid normal position.

5. In a gas lamp, the combination of a vertical clear draft tube having an outlet at its upper end and provided with a funnel-shaped lower end which incrementally flares downwardly and outwardly from the normal bore of said tube to the lower edge thereof, a hinged bracket carrying said tube, a burner substantially coinciding with the central axis of said tube whereby the products of combustion therefrom will be deflected by said flaring end and pass through said tube, a stationary support carrying said burner, and a conduit leading exteriorly of said tube to said burner.

[Claims 6 and 7 not printed in the Gazette.]

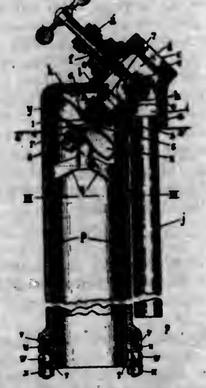
881,667. BEACON, LIGHT-BUOY, &c. ROBERT M. DIXON, East Orange, N. J., assignor to The Safety Car Heating & Lighting Company, a Corporation of New Jersey. Filed Nov. 9, 1904. Serial No. 231,994.



1. A lamp, a lens, a float therefor, a tank, a mercury bath therein, means for adjustably elevating said tank, and a rotator for said float.

2. A float, a lamp and a lens carried thereby, a tank adapted to contain a mercury bath, a cock for draining portions of mercury from said tank, an adjustable elevator for said tank, and an automatic rotator for said float.

881,668. EXPANSION-TRAP. ROBERT M. DIXON, East Orange, N. J., assignor to The Safety Car Heating & Lighting Company, a Corporation of New Jersey. Filed May 10, 1904, Serial No. 207,269. Renewed July 12, 1907. Serial No. 383,515.



1. In a trap, the combination of a valve chamber, an automatically operating valve located therein, expansion means for operating said automatically operating valve, the operating face of the said automatically operating valve receiving direct steam pressure and being angularly disposed with respect to the vertical line of the trap, whereby the water condensation may be effectively delivered from the face of the valve.

2. In a trap, the combination of a valve seat inclined with respect to the vertical line of the trap, an automatic valve adapted to said seat and having its face inclined with respect to the vertical line of the trap and automatic means acting in a line inclined with respect to the vertical line of the trap and operating to actuate the valve.

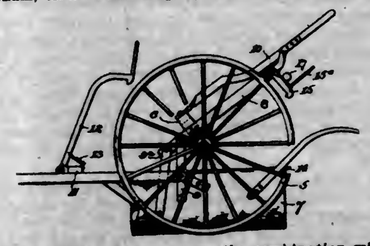
3. In a trap, the combination of a hand operated valve and an automatically operated valve with means for automatically operating the said last named valve, the said valves being set angularly with respect to each other and inclined with respect to the vertical line of the trap.

4. In an expansion trap, the combination of a plurality of valves with mechanical means for operating one valve, automatic means for operating the other valve, one of the said valves having its operating face receiving steam pressure and placed angularly with respect to the vertical line of the trap.

5. In a trap, the combination of a valve, expansion means for automatically operating said valve, an elongated valve chamber enveloping the said valve and its automatically operating means, the said automatically operating means and valve being located at or near one end of the said elongated chamber, the said elongated chamber being open to the atmosphere at the other end.

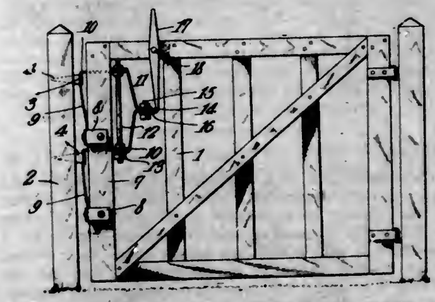
[Claims 6 to 12 not printed in the Gazette.]

881,669. WHEELED SCRAPER. NORMAN S. DUNAWAY, Pelham, Ala. Filed Aug. 6, 1907. Serial No. 387,373.



In a wheeled scraper or scoop, the combination with the arched axle, handle-bars and scoop supported by the latter, of a latch-bar pivoted to the handle-bars and having a rearwardly projecting rod, a spring having an end member with an eye which engages the rod and an end member with a loop portion engaging the pivot-bolt of the latch-bar and a bent end engaging the lower edge of the handle-bar, substantially as herein shown and described.

881,670. LATCH. PETER DUNFORD, Summit, Ga. Filed Dec. 11, 1907. Serial No. 406,062.



1. The combination with a post and superposed keepers connected thereto; of a gate and a latch connected to the gate and comprising superposed resilient catches, a frame connected to and supported by the catches, and means upon the gate for actuating the frame.

2. The combination with a post and keepers connected thereto; of a gate, and a latch upon the gate comprising superposed spring catches disposed to engage the respective keepers, arms extending from the catches, connecting means movably connected to the arms, and actuating means upon the gate and connected to the frame for actuating said connecting means to simultaneously withdraw the catches from the keepers, said catches being capable of independent movement from their keepers.

3. A latch comprising similar superposed spring catches having integral arms, a resilient frame, an adjustable connection between the frame and arms, and means for actuating the frame to simultaneously move the catches in one direction.

4. The combination with superposed simultaneously actuated catches; of a keeper for each catch and comprising a staple-like member disposed to be driven into a support, said member having a recessed crown for the reception of a catch.

881,671. BOTTLE-CAP. ORLANDO DUCKER, Washington, D. C. Filed Jan. 14, 1907. Serial No. 352,188.

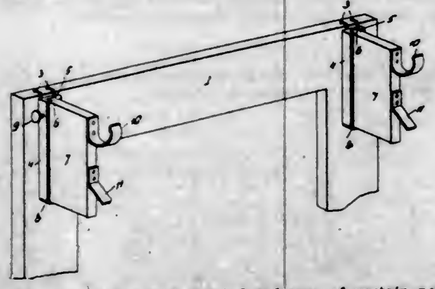


1. A bottle cap having a divided side flange, and a locking flange projecting upwardly and inwardly from the lower edge of each division of the side flange, each division of the side flange being formed with an opening in transverse alinement with the upper edge of the locking flange.

2. A bottle cap having a divided side flange, locking flanges projecting from each division of the side flange, ears disposed between the divisions of the side flange, and auxiliary locking means passed above the cap and through the ears.

3. A bottle cap having a divided side flange, locking flanges projecting from each division of the side flange, ears disposed between the divisions of the side flange, and a plurality of locking wires passed over the cap with their ends projecting through the respective ears.

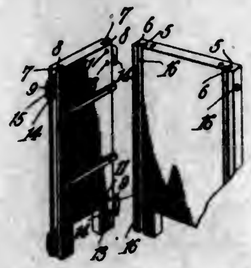
881,672. CURTAIN-FIXTURE. GERHARD EBENHOCH, Belle Vernon, Pa. Filed Sept. 11, 1907. Serial No. 392,291.



The combination with a window-frame, of curtain pole supports, each comprising a cleat formed with a vertical dove-tail groove, hooks secured to the cleat and engaging the frame for suspending said cleat from said frame, a block formed with a dove-tail tongue fitting said vertical groove, a plate secured to the lower end of the cleat and forming a stop and rest for said block, two pole supporting brackets secured to the front edge of said block, said brackets having the supporting faces thereof disposed in opposite directions and shaped to receive poles of different cross sectional contours, and a set screw for securing said block at different adjustments, said block being reversible to bring either of said brackets into position to support a pole.

881,673. WARDROBE OR SAFE. ARTHUR L. ELLISON, High Point, N. C. Filed Mar. 11, 1907. Serial No. 361,743.

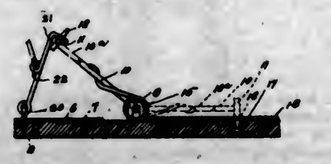
1. In an article of the character described, the combination with a pair of coöperating sections, one of the latter having a longitudinal groove, and the other section having a tongue to coöperate with the said groove, of interlocking devices for detachably connecting the sections embodying pins extending transversely of the said groove on one of the sections, and hooks carried by the other section and projecting beyond the tongue to coöperate with the respective pins, the latter and the hooks being engaged and disengaged by a relative longitudinal movement of the sections guided by the tongue and groove, and the sections being detachable by a relative lateral movement thereof.



2. In an article of the character described, the combination with a pair of sections, one of the latter having a longitudinally extending tongue, and the other section being provided with a groove to receive the tongue and a second groove narrower and deeper than the groove first mentioned, the sections being detachable by a relative lateral movement thereof, of interlocking devices for detachably securing the sections in coöperative relation embodying pins extending transversely of the narrower groove, and hooks having portions guided in the said narrower groove and projecting beyond the tongue to engage and disengage the said pins by a relative longitudinal movement of the sections.

3. In an article of the character described, the combination with a pair of coöperating sections, one of the latter having a longitudinally extending tongue, and the other section having a groove to fit the tongue and coöperate therewith to guide the sections when moved longitudinally and to prevent relative lateral movement thereof, and also having a narrower groove extending deeper than the tongue receiving groove, of interlocking devices for securing the sections in coöperative relation embodying a pin extending transversely of the said narrower groove in one of the members, and a hook rigidly attached to the coöperating member and projecting beyond the tongue thereon to enter the narrower groove and having an inclined slot adapted to engage the pin therein and produce a locking action between the tongue on one section and the coöperating groove on the other section.

881,674. BURGLAR-ALARM. ADAM FAUST, Pittsburg, Pa. Filed July 15, 1907. Serial No. 383,815.



1. In a burglar alarm, the combination with a movable-member, and a hook carried thereby, of a stationary support provided in its upper face with a cap-receiving socket, staples carried by said support, a frame comprising side arms and a cross-head, the cross-head carrying a firing pin to engage a cap placed in said socket, one of the side arms of said frame pivotally engaged with one of said staples and the other of said side arms extended through both staples, a spring arranged thereon having one end engaged with one of said side arms and the other end thereof engaging the support, and a hook member pivoted to the support to engage the cross-head of said frame and normally hold the latter elevated, the said hook-member having an eye to receive the hook carried by said movable-member.

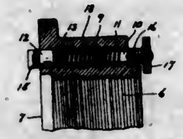
2. In a burglar alarm, the combination with a movable-member and a hook carried thereby, of a stationary support provided with a cap receiving socket, a hammer-frame pivotally-mounted on the support and provided with a firing pin to engage a cap placed in said socket, a spring engaging the hammer frame for operating the same, and a hook-member pivotally mounted on the support to engage the hammer frame and hold the latter normally in an elevated position, the said hook-member provided with an eye to receive said hook carried by the movable member whereby when the movable member is actuated the hook-member is withdrawn from engagement with the hammer frame and the spring is free to force the latter against the support.

881,675. ENVELOP. CHARLES J. FISHER, Oakmont, Pa. Filed Oct. 8, 1907. Serial No. 396,419.



The combination with an envelop having a sealing flap provided with a tongue adapted to extend inwardly of the rear flap of the envelop, of a fastening device for the sealing flap, said device comprising a single strip of material having its upper end bent to constitute a hook adapted to engage over the edge of the end flaps of the envelop, said strip further bent intermediate of its ends to constitute a socket and further having its other end bent to constitute a safety pin adapted to penetrate the tongue and engage in the socket thereby fastening the flaps of the envelop together.

881,676. LOCK-NUT FOR AXLES. RICHARD T. FITZPATRICK, St. Louis, Mo., assignor of one-half to John H. Mills, St. Louis, Mo. Filed Oct. 26, 1907. Serial No. 399,242.

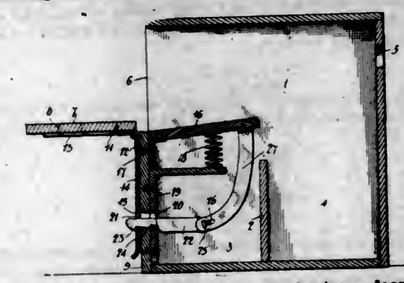


1. In combination with an axle having a screw-threaded end and an annular shoulder adjacent thereto and provided on its face with a number of stops, a nut for said axle having a spring controlled locking bolt mounted therein for engagement with said stops, said nut having a portion of its body cut away to form a shoulder, a nut mounted on said bolt and having a flat side bearing against said shoulder and a thumb nut also mounted on said bolt and adapted to be screwed into engagement with said first-named nut.

2. In combination with an axle having a screw-threaded end and an annular shoulder adjacent thereto provided with stops, a nut for said axle having a spring controlled locking-bolt retractably mounted therein for engagement with said stops, said nut having a portion of its body cut away to provide a shoulder, a nut screwed on said bolt and having a flat side adapted to engage said shoulder, a thumb nut screwed onto said bolt and into engagement with said first-named nut, said bolt upon being retracted being adapted to be turned and have its nut engage the outer face of the axle nut, whereby to hold the bolt in a retracted position.

881,677. TRAP-NEST. CHARLES E. GOODENOUGH, Pierrepont Manor, N. Y. Filed Aug. 2, 1907. Serial No. 386,778.

1. A trap nest comprising a casing having a doorway, a pivoted automatically closing door adapted to close the doorway and to swing outwardly to a horizontal position to form a platform, a yieldingly supported platform extending inwardly from the doorway, a locking member on the door projecting downwardly when the door is in open position, a coacting catch upon the box projecting through the front thereof to engage said locking member, and a connection between the platform and catch for retracting the latter when the platform is depressed.



2. A trap nest comprising a casing having a doorway, a spring closed door for closing said doorway, said door being adapted to swing outward to a horizontal position to form a platform and having a locking member thereon adapted when the door is open to extend downwardly, a hooked latch pivotally mounted upon the casing and projecting through the front thereof to engage said locking member, a yieldingly supported platform extending inwardly from the doorway, and a connection between said platform and the latch whereby the latter is adapted to be retracted when said platform is depressed.

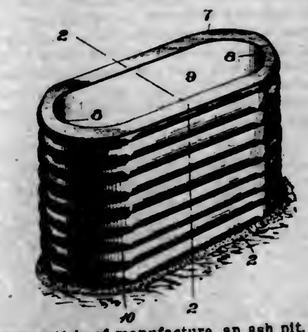
3. A trap nest comprising a casing having a doorway in the upper front portion thereof, an automatically closing door adapted to swing outward to a horizontal position, a locking member upon the door, a pivoted latch upon the casing adapted to engage said locking member, a yieldingly supported platform extending inwardly from the doorway, and a connection between said platform and the latch for retracting the latter when said platform is depressed.

4. A trap nest comprising a casing having a doorway, a door for closing the doorway, a movable platform upon the interior of the casing, latch mechanism for holding the door open, means operated by the platform for releasing said latch mechanism, and means for rendering the latch mechanism inoperative.

5. A trap nest comprising a casing having a doorway, a pivoted door for closing the doorway, a pivoted spring supported platform within the casing, a latch member mounted tiltingly upon the casing, a hasp upon the door adapted to interlock with said latch member, and means operated by the platform for tilting said latch member.

[Claims 6 and 7 not printed in the Gazette.]

881,678. CONCRETE ASH-PIT. JAMES W. GRAHAM, St. Louis, and CHARLES A. JONES, Midland, Mo. Filed June 3, 1907. Serial No. 376,896.



As a new article of manufacture, an ash pit, constructed in a single integral piece and formed of hardened plastic

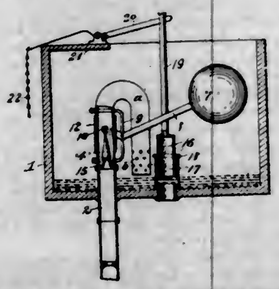
material and comprising a pair of vertically disposed parallel side walls 7, the semi-circular end walls 8 connecting the ends of the side walls, the inner surfaces of which side and end walls are smooth and the exterior surfaces of said walls being provided with the horizontally disposed paralleled corrugations 10, a base 2 of plastic material embedded in the ground, the top of which base is of greater width than is the thickness of the wall of the ash pit, and the ash pit being bonded to the base at the time of its formation, and a sub-base 1 granular material supporting the base.

881,679. FASTENING DEVICE. HERMANN C. GROS, Leipsig-Leutzsch, Germany. Filed Feb. 5, 1906. Serial No. 299,647.



A fastening device comprising a female member and a male member, the female member comprising an upper and a lower prong, the upper prong being resilient and of less length than the lower prong, locking means pivoted to the free end of the upper prong and a male member adapted to be engaged by said pivoted locking means for connecting the two members together.

881,680. CISTERN FOR WATER-CLOSETS. JOHN R. HALL, Forest Grove, Oreg., assignor of one-half to Robert J. Ginn, Longbeach, Cal. Filed Sept. 24, 1906. Serial No. 335,970.

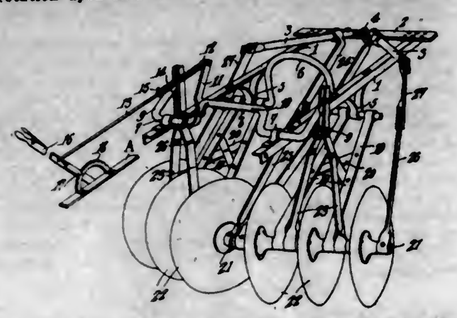


1. A device of the character described, employing a supply pipe, a float-valve lever fulcrumed from said pipe, a sleeve slidingly arranged upon said pipe, a yoke or member arranged to slide with said sleeve and controlled by said float-valve lever, and a supply valve for controlling the inlet of the water to said pipe and itself controlled by said float-valve lever said supply-valve being connected by said yoke to said sleeve.

2. A device of the character described, employing a supply pipe equipped with a ported seat within, a downward flared valve engaging said seat, a sliding sleeve arranged upon said pipe, a yoke or cross-bar connected to said sleeve and passing through opposite vertical slots in said pipe and through said sleeve, said valve being connected to said yoke, a bracket secured to said pipe, a float-valve lever having its arm connected to said yoke and fulcrumed upon said bracket.

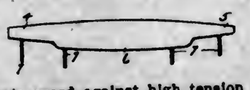
881,681. SOIL-PULVERIZER. SAMUEL J. HARDIN and BERTIS F. NORCROSS, Beatrice, Nebr. Filed July 31, 1907. Serial No. 386,406.

A pulverising attachment for agricultural implements comprising a frame, an arched bar attached to the frame, a shaft journaled to the frame and having crank extremities with an arched intermediate portion, a lever mechanism for turning said shaft, a V-shaped bar mounted upon the frame, arms depending from said V-shaped bar, arms pivotally connected to said depending arms, arms journaled upon the end portions of the arch bar, shafts attached to the lower ends of the last said arms, disks journaled for rotation upon said shafts, and links pivotally connecting



the crank ends of the first said shaft with the disk bearing shafts.

881,682. SHIELD FOR THE USE OF LINEMEN. GEORGE E. HARRISON and GEORGE BURNS, Detroit, Mich. Filed Aug. 1, 1907. Serial No. 386,575.



1. A lineman's guard against high tension electric currents, comprising a shield of non-conducting flexible material adapted to be rolled into tubular terminals of small diameter at the ends and to form a housing of larger diameter at the central part, substantially as described.

2. A lineman's guard, comprising a shield of flexible material having end parts adapted to be rolled into tubes of small diameter, and a central part, and means for securing the shield in position on the wire, substantially as described.

881,683. ELECTRICAL SOCKET-SEAL. LLEWELLYN T. HATFIELD, Sacramento, Cal. Filed Aug. 3, 1906. Serial No. 329,120.



1. The combination with an electrical socket, of a sealing device arranged in said socket, permitting the insertion of a current consuming plug and preventing electrical connection with the socket contacts.

2. The combination with an electrical socket, of a sealing device held in said socket to prevent access to the socket contact and provided with slits preventing the removal of the device except upon destroying the device.

3. The combination with an electrical socket, of a sealing device held in the socket to prevent access to the socket contacts and provided with means preventing the removal of the device except upon destroying the device.

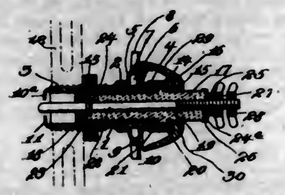
4. The combination with an electrical socket, of a sealing disk arranged in said socket to prevent access to the socket contacts and provided with radial slits.

5. The combination with an electrical socket, of a non-conducting disk held against one of the contacts of the socket between the contact and the mouth of the socket.

[Claims 6 to 9 not printed in the Gazette.]

881,684. SPARK-PLUG. WILLIAM B. HAYDEN, New York, N. Y. Filed June 7, 1907. Serial No. 377,795.

1. A spark plug comprising an inner and an outer section, said inner section terminating at its inner end in a pair of fixed electrodes, a body of insulating material secured within said sections by the outer of said sections, an electrode rod extending through said body and provided with an integral offset abutting against the body, said rod having its inner end extending between the fixed electrodes, a plurality of nuts carried by the outer end of said rod for fixing it in position and for connecting a circuit wire therewith, a compression nut mounted upon the said inner section, and a water jacket formed integral with said inner section and independent of the water jacket of the cylinder of the engine.

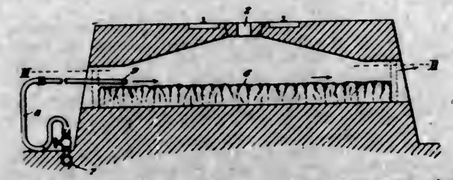


2. A spark plug comprising an inner and an outer section, said inner section terminating at its inner end in a pair of fixed electrodes, a body of insulating material secured within said sections by the outer of said sections, an electrode rod extending through said body and provided with an integral offset abutting against the body, said rod having its inner end extending between the fixed electrodes, a plurality of nuts carried by the outer end of said rod for fixing it in position and for connecting a circuit wire therewith, a compression nut mounted upon the said inner section, a water jacket formed integral with said inner section and independent of the water jacket of the cylinder of the engine, and a dome-shaped shield snugly engaging said body, arranged in close proximity to said outer section and extending towards said inner section.

3. A spark plug embodying a pair of terminals insulated from each other, a water jacket, and an elastic shield surrounding the insulation between the terminals, said shield extending in close proximity to the water jacket.

4. A spark plug embodying a pair of terminals, an insulating medium between the terminals, and a shield having an elastic portion contacting with the insulation, said elastic contacting portion adjusting itself to different diameters of insulators and water-tight.

881,685. MANUFACTURE OF COKE. JOHN H. HILLMAN, Pittsburg, Pa. Filed Nov. 30, 1907. Serial No. 404,609.

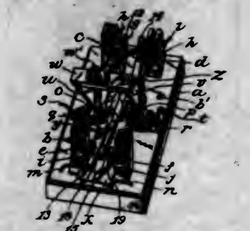


1. In the manufacture of coke, the process of removing the ashes, etc., from the top surface of the coke by introducing a blast of air at one portion of the charge, and directing it across the surface and towards an outlet opening remote from the point of introduction and leading to the atmosphere, prior to quenching the charge in the oven, substantially as set forth.

2. In the manufacture of coke, the process of burning the charge in a Belgian oven, opening the ends thereof after the coking operation, and introducing a blast of air at one end, whereby the loose impurities are removed from the charge and carried through the oven and outwardly through its other end, substantially as set forth.

3. In the manufacture of coke, the process of burning the charge in a longitudinal oven having a closed opening at each end, opening the end thereof after the coking operation, and introducing a blast of air from one end over the surfaces of the charge while it is highly heated and before quenching, whereby the expanding blast and radiated heat remove and carry the loose impurities from the coke through the oven and outwardly through the other end, substantially as set forth.

881,686. ELECTRIC SWITCH. SILVESTER HOADLEY, Gosport, Ind. Filed Aug. 12, 1907. Serial No. 388,092.



1. An electrical switch including an insulating base member, two contact devices mounted on the base member and provided each with a supplemental contact element, an electrical connector provided with a binding screw and mounted on the base member and having two elastic fingers, each finger normally in contact with its respective contact element, a switch bar mounted on the base member and movable into connection with either contact device, and a non-conducting element attached to the switch bar to press either one of the fingers away from the contact element.

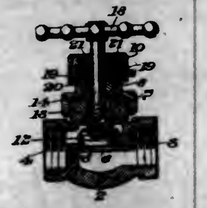
2. An electrical switch including an insulating base member, two pairs of contact devices mounted on the base member and each contact device provided with a supplemental contact element, a pair of electrical connectors provided each with a binding screw and mounted on the base member and each having two elastic fingers, each finger of each connector normally in contact with its respective contact element of a contact device of either pair thereof, a pair of switch bars mounted on the base member to engage either pair of contact devices, and an operating bar attached to the switch bars to engage a finger of each connector.

3. In an electrical switch, the combination of a base member, two pairs of electrical contact devices mounted on the base member and having each a supplemental contact element electrically connected therewith that extends opposite to the base member, each contact device being provided with a binding post and insulated one from another, a pair of conducting supports mounted on the base member and provided each with a binding post, the supports being insulated one from the other, a pair of switch bars pivoted to the supports to engage either pair of contact devices, an operating bar attached to the pair of switch bars, and a pair of electrical connectors provided each with a binding screw and mounted on the base member between the supports and electrically insulated from the supports and the contact devices, each connector having two elastic fingers normally in contact with two of the supplemental contact elements to be disconnected therefrom by the operating bar.

881,687. VALVE. LOUIS B. HOFFNER, Philadelphia, Pa., assignor of one-half to Robert D. Work, Philadelphia, Pa. Filed May 7, 1906. Serial No. 315,502.

1. In a valve, a body, a boss thereon having an opening communicating with the discharge opening of the valve, a valve controlling the port in said body and having a portion thereof filling said opening, and a portion forming a ground joint with the lower wall of said boss, a stem in suitable engagement with the said valve and adapted to raise and lower the same, a bonnet connected with said boss having a depressed seat in its upper wall, a cap adapted to be secured to said bonnet and having a seat reversely situated with respect to the seat in said

bonnet, and a ground washer connected with said stem, and rotatable therewith whereby no vertical movement of the stem is permitted and leakage is prevented.



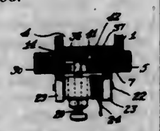
2. In a device of the character described, a body, a boss thereon having an opening communicating with the discharge end of the body, a valve controlling a port in said body, and forming a ground joint with the lower wall of said boss when raised, a stem in suitable engagement with said valve for raising and lowering the same, a bonnet connected with said body and having double inclined walls in its upper face, a cap adapted to be secured to said bonnet and having double inclined walls in its lower face, and a washer having reversely inclined faces adapted to be seated against the inclined walls of said bonnet and cap, and forming at all times therewith, a double ground joint.

3. In a device of the character described, a body, a boss thereon, having an opening therethrough, a valve for controlling the port in said body, a stem having the threaded end engaging with said valve whereby the rotation of said stem raises and lowers said valve, a bonnet in suitable engagement with said boss, inclined walls in the upper portion of said bonnet, a cap adapted to be suitably connected with said bonnet and having walls inclined reversely from that in the upper portion on said bonnet, a threaded portion on said stem and a washer engaging with said threaded portion and adapted to completely fill the space formed by said inclined wall.

4. In a device of the character described, a body, a boss thereon having an opening communicating with the discharge end of the body, a valve controlling the port in said body and forming a ground joint with the lower wall of said boss, when raised, a stem in suitable engagement with said valve for raising and lowering the same, a bonnet connected with said body and having a depressed seat in its upper wall, a ground washer connected with said stem and seated in said depressed seat and a cap adapted to be secured to said bonnet and adapted hold said ground washer in position whereby no vertical movement of the stem is permitted and leakage is prevented.

5. In a device of the character described, a boss having an opening communicating with the discharge end thereof, a valve controlling the port in said body, a stem in suitable engagement with said valve for raising and lowering the same, a bonnet connected with said body and having double inclined walls in its upper face, a cap adapted to be secured to said bonnet and having double inclined walls in its lower face, and a washer having reversely inclined faces adapted to be seated against the inclined walls of said bonnet and cap and forming at all times therewith a double ground joint.

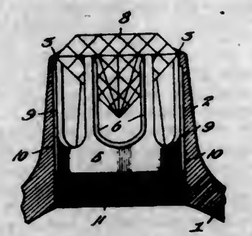
881,688. COIN-CONTROLLED MACHINE. MAURICE HOFHEIMER, New York, N. Y. Filed Nov. 19, 1904. Serial No. 233,453.



1. The combination with the coin-conveying slide having a coin-opening, and a guideway for said slide, of a spring-pressed member designed to project into said opening to one side of the center thereof, and a plate against which said slide is fitted having in its underside a beveled groove of less width than said opening, the deeper end of such groove being nearer the line of movement of said spring-pressed member than is the other end thereof, so that a coin or disk of insufficient diameter engaged by said member will be forced out of said opening into said groove.

2. The combination with the coin-conveying slide having an opening, a guideway therefor, and a plate against which said slide travels, said plate having in its underside a beveled groove of less width than said opening, of a spring-pressed lever for arresting said slide, and a screw mounted in said lever for entering said opening to one side of the center thereof and forcing coins or slugs of insufficient diameter into said groove, said screw being out of line with the center of travel of a coin or slug carried by the slide and nearer the deeper end of said groove than it is to the other end thereof.

881,689. GEM-SETTING. RICHARD K. HOHMANN, San Diego, Cal. Filed Apr. 20, 1907. Serial No. 369,366.



1. A setting for jewelry comprising a plurality of claws of fixed shape, a removable member having arms arranged to register with the claws and adapted to cooperate with the latter to hold a stone or gem, and means for preventing longitudinal and rotary movement of the member.

2. A stone setting comprising claws of fixed shape, a member having arms coinciding with the claws and cooperating with the latter to removably hold the stone in position, and retaining means for the said member.

3. A stone setting comprising a body having an opening, means on the body adapted to engage one side of the stone, a removable member in the opening engaging the opposite side of the stone, and means for preventing the member from turning, and a retainer for the member attached to the body.

4. A stone setting comprising a body having an opening, claws extending outwardly from the opening for receiving a stone, a sleeve fitted in the opening and having arms coöperating with the claws to removably hold the stone in position, means for preventing the sleeve from turning, and a retainer removably holding the sleeve in position.

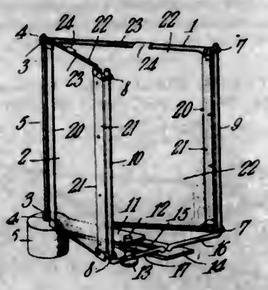
5. A stone setting comprising a body, an opening, stone-engaging claws extending outwardly from the opening, a member fitted in the opening and having arms coinciding with the claws and engaging at their extremities the stone, and means for holding the arms and claws in alinement.

[Claim 6 not printed in the Gazette.]

881,690. SIGNAL-FLAG FOR RAILROAD-TRAINS. MARTIN J. HORAN, Hughesville, Mo. Filed May 13, 1907. Serial No. 373,420.

1. A signal flag comprising two rigid plates hinged together at one of their vertical edges and provided with adjusting means below said plates for holding them in angularly open position or in parallel closed position.

2. A signal flag comprising two rigid plates or leaves hinged together at a vertical edge of each to a stem, a staff socket supporting said stem, a horizontal arm projecting from said socket, and adjusting mechanism for said leaves connected to said arm.

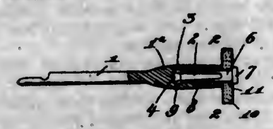


3. A signal flag comprising a pair of rigid plates or leaves, hinge members on each plate or leaf mounted on a stem, a staff socket supporting said stem, a horizontal arm projecting from said staff socket, a rod pivoted to the front of each leaf, and flexible adjusting connections between said rods and the horizontal arm.

4. A signal flag comprising a pair of plates or leaves hinged together on a stem, a staff socket carrying said stem, a pivoted rod on the free edge of each leaf and adjusting means below said leaves for holding said leaves separated a limited distance.

5. A signal flag comprising a pair of plates or leaves hinged together on a stem, a staff socket supporting said stem, means for adjusting to a limited extent the hinged movement of said leaves or plates, and independent target plates adapted to slide in grooves formed on each side of said leaves.

881,691. MANDREL FOR DENTAL ENGINES. HERBERT S. HUGHES, Union City, Tenn. Filed May 23, 1907. Serial No. 375,313.



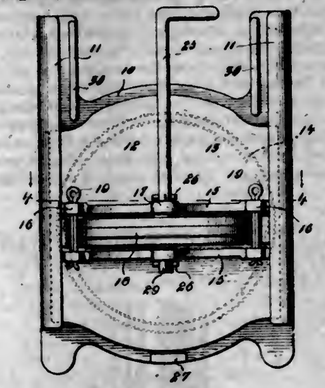
1. The combination with a mandrel having a socket at one end, the wall of the socket at its inner end formed with an annular shoulder, of a disk having an attaching means extending through said opening, each of said arms provided with spring arms having an off-set adapted to engage said shoulder thereby connecting the disk to the mandrel head.

2. The combination with a mandrel having the head thereof formed with a socket slightly tapering from its outer to its inner end and square in cross section, of a disk, and an attaching member square in cross section extending through said disk and provided with a pair of spring arms adapted to engage the wall of the socket for fixedly securing the disk to the mandrel head, said member further provided with a head adapted to abut against the disk for clamping the disk against the head of the mandrel.

3. The combination with a mandrel having its head formed with a recess substantially square in cross section, of a disk, and an expansible and contractible attaching member substantially square in cross section adapted to extend through and abut against said disk and engage in the mandrel head thereby securing the disk to the mandrel.

4. The combination with a mandrel having its head formed with a recess with the wall thereof enlarged to form a shoulder, of a disk, and a headed attaching member substantially square in cross section adapted to extend through and abut against said disk, said member comprising a plurality of arms adapted to project in said socket and engage said shoulder thereby fixedly securing the disk to the mandrel.

881,692. WATER-GATE. ELMER E. IZER, Pomona, Cal. Filed Aug. 28, 1907. Serial No. 390,521.



1. A water gate comprising a frame having guideways at its opposite sides, a cover mounted to slide in said ways, a brace extending between the guideways and across the cover; separable members interposed between said cover and said brace, and means for forcing said members apart.

2. A water gate comprising a frame having guideways at its opposite sides, a cover slidably mounted in said ways, an operating handle mounted upon the cover, an operating device carried by said handle, a brace disposed between said guideways, and separable members disposed between said brace and cover to receive said device for forcing the members apart.

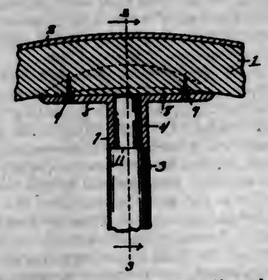
3. A water gate comprising a frame having guideways at its opposite sides, a cover slidably mounted in said ways, a brace extended between said ways and across the cover, separable members interposed between said brace and cover to force the same apart, and a handle having an operating device disposed between said means and mounted to travel longitudinally upon the handle.

4. A water gate comprising a frame having guideways at its opposite sides, a cover slidably mounted in said ways, parallel lugs at opposite sides of the cover, a brace disposed between said lugs and having its opposite ends in said ways, retaining means extending between the lugs at one side of said brace, and means interposed between said brace and cover to separate the same.

5. A water gate comprising a frame having ways at opposite sides thereof, a cover to slide in said ways, a brace extending across the face of said cover with its opposite ends disposed in said ways, means carried by the cover to retain said brace in position, nut members interposed between said brace and cover, and means for separating said nut members.

[Claims 6 to 10 not printed in the Gazette.]

881,693. VEHICLE-WHEEL. GILBERT JONES, Marion, Mich. Filed Aug. 16, 1906. Serial No. 330,788.

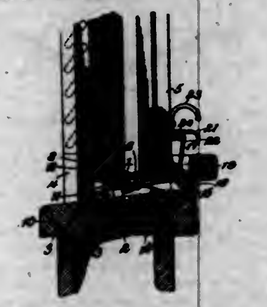


1. In a wheel structure, the combination of a felly whose inner rim has a straight reinforced portion tapered on op-

posite sides, a plate seated upon said straight reinforced portion having beveled sides flanges which embrace the opposite tapered sides of the felly, and having a socket member projecting therefrom, and a spoke having a tenon which enters the socket of said member.

2. In a wheel structure, the combination of a felly reinforced in the direction of its diameter, a plate seated over said reinforced portion having flanges which embrace the opposite sides of the felly, and having a socket member projecting therefrom, a spoke having a tenon which enters the socket in said member, said spoke also having a shoulder thereon against which the end of the socket member abuts.

881,694. COMBINED SASH AND BLIND LOCK. CHARLES N. KALSTROM, Manson, N. C. Filed July 16, 1907. Serial No. 384,030.



1. In a device of the class described, the combination with a pair of shutters provided with catches, and a sash, of a pivotally mounted lever extending beneath the sash and provided at its outer end with means for engaging the shutter catches, said lever being arranged to swing on its pivot to engage and release the said catches, and a movable catch connected with the inner end of the lever and arranged to move toward and from the sash and provided with means for engaging the latter to lock the same and for holding the lever in engagement with the shutter catches.

2. In a device of the class described, the combination with a pair of shutters provided with a rigid shutter catch, and a sash, of a locking lever extending beneath the sash and provided at its outer end with means for engaging the shutter catch, said lever being arranged to swing on its pivot to engage and release the said catch, and a catch pivotally connected with the inner end of the locking lever and arranged to swing on its pivot toward and from the sash and provided with means for engaging the latter to lock the same and to hold the lever in engagement with the rigid shutter catch.

3. In a device of the class described, the combination with a shutter, and a sash, of a catch mounted on the shutter, a lift secured to the sash and provided with a projecting lip or flange forming a rigid catch, a locking lever extending beneath the sash and provided with means for engaging the shutter catch, and a movable catch connected with the inner end of the lever and arranged to engage the lip or flange of the said lift.

4. In a device of the class described, the combination with a shutter, and a sash, of a catch mounted on the shutter, a projecting lip or flange projecting from the sash and forming a rigid catch, a locking lever extending beneath the sash and provided with means for engaging the shutter catch, and a movable catch connected with the inner end of the lever and provided with a head projecting inwardly towards the sash for engaging the lip or flange of the lift and having a finger piece extending outwardly in the opposite direction from the head.

5. A device of the class described comprising a plate, a locking lever pivotally connected at an intermediate point with the plate and arranged beneath the same and provided at its outer end with a head, a rigid shutter catch for interlocking with the outer end of the lever, a spring for holding the lever in engagement with the said catch, a movable catch connected with the inner end of the lever, and means carried by the sash for engagement with the movable catch.

881,695. POWER-EXCAVATOR. FRANCIS E. KIRBY, Cincinnati, Ohio. Filed Sept. 25, 1907. Serial No. 394,445.



1. In an excavator, the combination with a supporting member, of a dipper arm carried thereby and longitudinally movable with relation thereto, lifting mechanism for the outer end of the dipper arm, and a crowding means acting on the upper end of the dipper arm to project said dipper arm both longitudinally and angularly, the angular movement being in the direction to move upwardly the dipper end of the arm, said crowding means comprising a sliding pivotal connection with the dipper arm and a cable running therefrom over suitable sheaves to a winding drum.

2. In an excavator, the combination, with a supporting member, of a dipper arm mounted thereon, means for lifting the dipper end of said arm, a sliding pivotal support for said dipper arm, and a cable engaging the opposite end of the dipper arm beyond the pivot in a direction tending to project the dipper arm longitudinally and to swing the dipper end of the arm upward.

3. In an excavator, the combination, with a suitable support, of a dipper arm mounted thereon by a sliding pivotal connection, and a pulling cable engaging the inner end of the dipper arm and passing thence over a guide below the dipper arm and forward of the inner end thereof.

4. In an excavator, the combination, with a supporting member, of a dipper arm carried thereby and longitudinally movable with relation thereto, lifting mechanism for the outer end of the dipper arm, and a crowding means acting on the upper end of the dipper arm to project said dipper arm longitudinally and angularly, the angular movement being in the direction of the lifting of the dipper end of the arm, and means for holding the dipper arm against longitudinal movement.

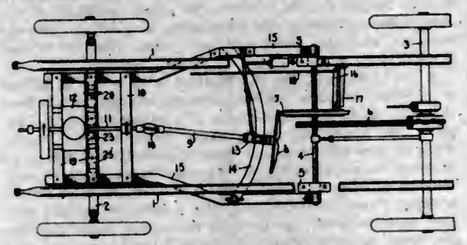
5. In an excavator, the combination, with a supporting member, of a dipper arm mounted thereon, means for lifting the dipper end of said arm, a sliding pivotal support for said dipper arm, a cable engaging the opposite end of the dipper arm beyond the pivot in a direction tending to project the dipper arm longitudinally and to swing the dipper end of the arm upward, and means for holding the dipper arm against longitudinal movement.

[Claims 6 to 9 not printed in the Gazette.]

881,696. AUTOMOBILE RUNNING-GEAR. CHARLES C. KEYSER, Washington, D. C. Filed Dec. 13, 1907. Serial No. 406,306.

1. The combination, with the side-bars and front and rear axles of a motor car, of a counter-shaft journaled in the side-bars; a frame pivoted at one end to the counter-shaft; a spring interposed between the free end of the frame and the adjacent axle; and an engine mounted upon the free end of the frame.

2. The combination, with the side-bars and front and rear axles of a motor car, of a counter-shaft journaled in the side-bars; a frame pivoted at one end to the counter shaft; a spring interposed between the free end of the frame and the adjacent axle and pivoted to the latter and to the frame; and an engine mounted upon the free end of the frame.



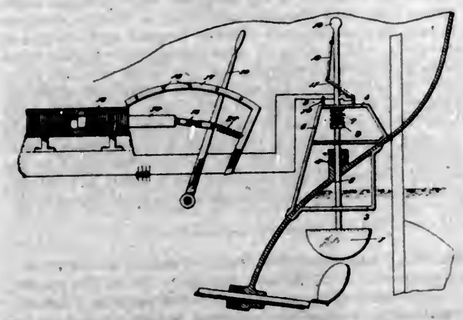
3. The combination, with the side-bars and front and rear axles of a motor car, of a counter shaft journaled in the side-bars; a frame pivoted at one end to the counter-shaft; an elliptic spring interposed between the free end of the frame and the adjacent axle, one member of the spring being pivotally connected with said axle and the other member with said frame; and an engine mounted upon the free end of the frame.

4. The combination, with the side-bars and front and rear axles of a motor car, of a counter-shaft journaled in the side-bars; a frame comprising a pair of spaced bars pivoted at one end to the counter-shaft, and a series of spaced cross-pieces connecting the free ends of said bars; a spring interposed between said cross-pieces and the adjacent axle and pivotally connected with the cross-pieces and with said axle; and an engine mounted upon said cross-pieces.

5. The combination, with the side-bars and front and rear axles of a motor car, of a counter-shaft journaled in the side-bars; a frame comprising a pair of spaced bars pivoted at one end to the counter-shaft, and a series of spaced cross-pieces connecting the free ends of said bars; an elliptic spring interposed between said cross-pieces and the adjacent axle; a sleeve secured to said axle; a bracket secured to each member of the spring intermediate the ends thereof, one bracket being pivoted to said sleeve and the other bracket to the adjacent cross-piece; and an engine mounted upon said cross-pieces.

[Claim 6 not printed in the Gazette.]

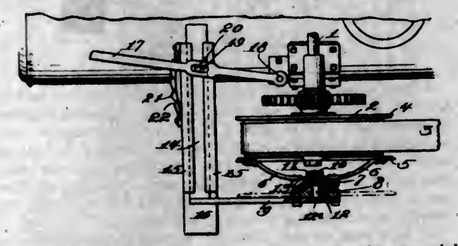
881,697. MARINE GOVERNOR. LEWIN D. KISSACK, Cloverdale, Cal. Filed May 10, 1907. Serial No. 372,998.



1. The combination with a marine vessel, its propeller shaft and engine throttle lever, of a buoyant drum adapted to be submerged in juxtaposition to the propeller shaft, a shaft connected to said drum and extending upwardly through the hull of the vessel, a stand through which said shaft extends, said stand being provided with a cross bar, a spring encircling said shaft and bearing at its upper end against the cross bar, a collar secured on said shaft and against which the other end of said spring bears, the said collar abutting against the stand and limiting the downward movement of the shaft through the stand, and connecting means between said shaft on the inner side of the hull and said throttle lever, said connecting means being arranged to move the throttle lever towards the closed position when the drum lowers and to the opposite position when the drum rises.

2. The combination with a marine vessel, its propeller shaft, and engine throttle, of a buoyant drum adapted to be submerged in juxtaposition to the propeller shaft, a shaft connected to the drum and extending upwardly through the hull of the vessel, a stand through which said shaft extends, a spring encircling said shaft and tending to move the shaft downwardly, an electric switch mounted upon said stand, a link connecting the circuit opening and closing device of said switch with the shaft, an electric circuit in which said switch is included, a solenoid also included in said circuit, and provided with a core or plunger, a link connecting said plunger with the engine throttle, whereby when the circuit is closed the core will move the throttle in one direction, and a spring tending to move the throttle in the opposite direction.

881,698. BELT-GUIDE. HERMAN R. KUEFFER, Wellmanville, Kans. Filed Oct. 5, 1907. Serial No. 396,046.



1. A belt guide comprising an annular member co-axial with a belt wheel and movable to and from operative position relatively to the belt wheel in a direction axially of the latter and means for causing the axial movements of the guide.

2. A guide for belt wheels, comprising a flange member co-axial with and adapted to coöperate with one edge of a belt wheel, and means for guiding the said member in a direction axially of the belt wheel.

3. A guide for belt wheels comprising an annular member journaled co-axially of the wheel and movable into and out of coöperative relation with one of its edges by a relative movement axially of the wheel.

4. A device of the class described, embodying a belt wheel having a relatively fixed flange on one of its edges, and an adjustable member adapted to coöperate with the opposite edge of the wheel as a flange and movable in a direction axially of the wheel.

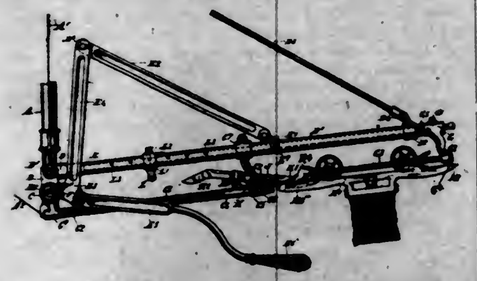
5. A device of the character described, embodying a belt wheel, a member adapted to coöperate with one of its edges as a belt flange, and a carrier for supporting the annular member and moving it into and out of coöperative relation with the belt wheel by a movement axially of the latter.

[Claims 6 to 12 not printed in the Gazette.]

881,699. STORE-SERVICE APPARATUS. ISAAC W. LITCHFIELD, Boston, Mass., assignor to Lamson Consolidated Store Service Company, Newark, N. J., a Corporation of New Jersey. Filed Sept. 1, 1905. Serial No. 276,679.

1. In a cash or parcel carrier, a track or way, a carrier adapted to travel on said track or way, a spring adapted to propel said carrier along said track or way, sliding means for applying tension to said spring, and a toggle joint for equalizing the power to be applied to said sliding means to produce any degree of tension in said spring.

2. In a cash or parcel carrier, a main support, a track or way fixed to said support, a carrier adapted to travel on said track or way, a hollow bar pivoted to said support and adapted to be adjusted in parallelism with said track or way, a sliding rod adapted to fit in said hollow bar and move longitudinally therein, a spring attached to the outer end of said rod and adapted to propel said carrier, a bell-crank lever pivoted to said main support, a connecting rod pivoted to and connecting said bell crank lever and said rod, said bell-crank lever adapted to apply tension to said spring, a pivoted catch adapted to hold said carrier while tension is being applied to said spring, and adjustable means on said sliding rod for engaging said pivoted catch and releasing said carrier at any desired tension of said spring.



3. In a cash or parcel carrier, a track or way, a carrier adapted to travel on said track or way, a spring adapted to propel said carrier on said track or way, a bracket supporting said spring, a sliding arm to which said bracket is secured, propelling means for moving the said arm along said track or way, and connections between said propelling means and said arm for operating said arm for applying tension to said spring to propel the carrier.

4. In a cash or parcel carrier, a track or way, a carrier adapted to travel on said track or way, a spring adapted to propel said carrier on said track or way, a bracket supporting said spring, a sliding arm to which said bracket is secured, propelling means for moving the said arm along said track or way, connections between said propelling means and said arm for operating said arm for applying tension to said spring to propel the carrier, a catch adapted to hold said carrier while said spring is under tension, and a trip for engaging said catch to release said carrier.

5. In a cash or parcel carrier, a track or way, a carrier adapted to travel on said track or way, a spring adapted to propel said carrier on said track or way, a bracket supporting said spring, a sliding arm to which said bracket is secured, propelling means for moving the said arm along said track or way, connections between said propelling means and said arm for operating said arm for applying tension to said spring to propel the carrier, a catch adapted to hold said carrier while said spring is under tension, and an adjustable trip for engaging said catch to release said carrier.

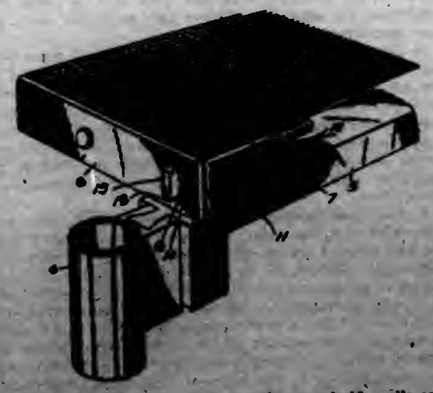
881,700. REINFORCED CONCRETE SIDEWALK. FRANCIS J. MILLER, Detroit, Mich. Filed Nov. 16, 1907. Serial No. 402,434.



1. A sidewalk comprising a bed of ballast and a series of slabs thereon each consisting of a single rectangular sheet of the full width of the walk, with depending marginal flanges connected at their centers by a pair of intersecting cross-ribs, all molded integrally of cementitious material, a one piece rectangular metal frame embedded in the flanges and cross-rods embedded in the ribs connected at their intersection with each other and at their extremities with the frame, and a square mesh network of wire embedded in the body of the slab above the plane of the frame with the end portions of the wires extending down in the flanges to the frames, the upper portions of the contiguous margins of the slabs being tongued and grooved together and the lower portions being slightly beveled inwardly.

2. In a sidewalk, the combination with a bed of ballast of a series of slabs resting thereon interlocked at their margins, each slab comprising a rectangular metal one piece rim connected by a square mesh inverted basket work of wire and by a pair of intersecting cross wires, all inclosed in an embedment of cementitious material presenting a smooth upper face and a recessed underside adapted to retain the ballast, the transverse mating margins being tongued and grooved near their upper portions and being slightly beveled inwardly below the interlocking portions.

881,701. MATTRESS-FRAME. RICHARD W. MILLER, Perry, Iowa. Filed Oct. 8, 1907. Serial No. 396,491.



The combination, in a mattress frame, of side rails each provided at opposite ends with upstanding shoulders, each shoulder having a threaded opening formed therethrough; angle end rails connecting said side rails and fitting over the top and end faces of said shoulders; a cleat disposed against the side face of each end rail, said cleats and end rails being provided at opposite ends with openings registering with said shoulder openings; a flexible mattress having its opposite ends clamped between said cleats and end rails; and a series of bolts having their shanks fitted in said shoulder openings, each bolt being provided adjacent its outer end with an integral collar and heads arranged in spaced relation to each other, the heads of the bolts being adapted to be passed through the openings in the end rails and cleats, to dispose the same between said heads and collars, whereby the endwise movement of the bolts will move the end rails and cleats bodily as entireties away from the adjacent shoulders, to stretch the mattress.

881,702. DETONATING TOY. THOMAS E. MITCHELL, Americus, Ga. Filed Aug. 15, 1907. Serial No. 388,652.

1. A device of the class described comprising a cylinder constituting an explosion chamber having a groove in its inner wall and a pair of outlets, one arranged above the other, said groove terminating in one of said outlets, a guide sleeve projecting from the cylinder and a reciprocatory ram arranged within the sleeve and adapted to operate in the explosion chamber.

2. A device of the class described comprising a cylinder constituting an explosion chamber having a groove in its inner wall and a pair of outlets, one arranged above the other, said groove terminating in one of said outlets, a guide sleeve projecting from the cylinder, a reciprocatory ram arranged within the sleeve and adapted to operate in the explosion chamber, and means for limiting the movement of said ram in one direction to prevent the withdrawal of the ram from the sleeve.



3. A device of the class described comprising an explosion chamber having a groove in its inner wall and a pair of outlets and said groove terminating in one of said outlets, and a reciprocatory ram operating in said chamber.

881,703. LOCK FOR SWITCH-LEVERS. FRIEND W. MOORE, Pittsburg, Pa. Filed Dec. 17, 1906, Serial No. 348,357. Renewed Aug. 22, 1907. Serial No. 389,724.



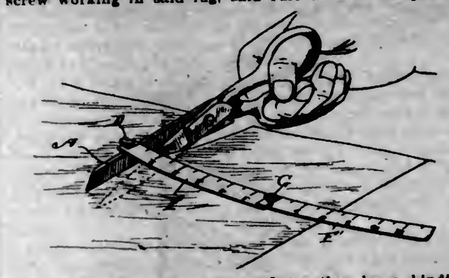
1. In combination with a switch lever and a reciprocating bar or latch, said lever and bar having key openings formed therein, a key adapted to fit in said openings, an annular flange carried by said key, and a tassel carried by said key, substantially as described.

2. The combination with a switch lever, a bar for holding the same in a fixed position, and means for moving said bar, of a key adapted to extend through said lever and said bar, a warning signal carried by said key, and means to limit the movement of said key, and said bar and lever.

3. The combination with a switch lever, and a movable bar for holding the same in a fixed position, of means for preventing the movement of said bar, said means consisting of a key adapted to extend through said lever and said bar.

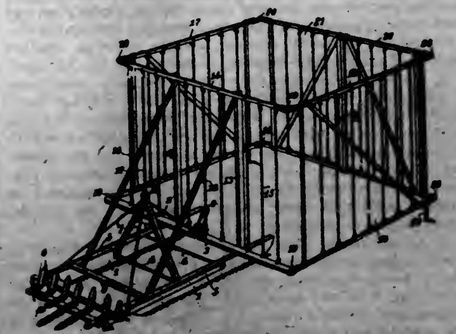
881,704. SCISSORS. ALICE L. MOSBY, San Diego, Cal. Filed Apr. 6, 1906. Serial No. 310,330.

As a new article of manufacture, a pair of scissors having a laterally projecting threaded apertured lug formed on the upper edge of the upper blade adjacent its point, a rule or scale secured to said blade by a binding screw working in said lug, said rule or scale comprising



two sections pivotally connected together by a binding screw at their overlapping ends.

881,705. HAY PITCHING AND STACKING APPARATUS. EDWARD MURRAY, Mullen, Nebr. Filed Dec. 19, 1907. Serial No. 407,205.

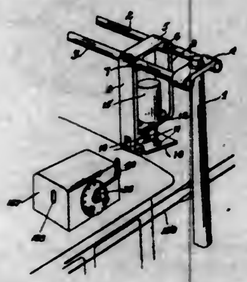


1. A hay pitching and stacking apparatus comprising a carrier frame, a vertically swinging fork carried by said frame, a wall-mounted transversely upon the rear end of the frame, side walls hinged at one end to said wall, gates hinged to the opposite ends of the side walls, said gates being provided with means for connecting them, whereby a folding stack frame or inclosure of rectangular form is provided, and folding legs carried by the side walls to support the outer ends thereof when arranged in frame-forming position.

2. A hay pitching and stacking apparatus comprising a carrier frame, a vertically swinging fork mounted thereon, and a stack frame comprising a vertical rear wall transversely disposed at the rear of the carrier frame, side walls hinged thereto to swing in either direction, gate sections hinged to the side walls to provide a connecting means, said walls and gates being adapted to be disposed to form a rectangular frame beyond the rear of the carrier frame, the gates being adapted to be folded against the side walls and the latter swung forwardly to rest upon the forward portion of the carrier frame.

3. A hay pitching and stacking apparatus comprising a raising frame, a vertically swinging fork mounted upon said frame, a vertical wall supported transversely upon the rear end of the runner frame adapted to form the front wall of a stack frame, side walls hinged to said front wall to swing forwardly or rearwardly, gate sections hinged at the opposite ends of the side wall to swing to a position parallel with said walls or parallel with the front wall to conjunctively form the rear wall of the complete rectangular stack frame, means for connecting the gate sections, and folding supporting legs upon the outer ends of the side walls, the construction being such that the gates and the side walls may be folded and swung forwardly to rest upon the sills of the runner frame, substantially as described.

881,706. AUTOMATIC STOP FOR RAILWAY-VEHICLES. JAMES H. K. MCCOLLUM, Toronto, Ontario, Canada. Filed Mar. 30, 1907. Serial No. 365,544.



1. An automatic stop for railway vehicles, comprising, an obstructing member suitably supported in proximity to a line of railway, a moving member projecting from said vehicle and adapted to contact with said obstructing member, and a controlling device operated by said moving member and holding the arresting mechanism and said moving member in their stop position during the disarrangement of said moving member through contact with said obstructing member, substantially as described.

2. An automatic stop for railway vehicles, comprising a controlling device connected with the arresting mechanism, a lever connected with said controlling device and projecting above said locomotive and adapted to remain in its disarranged position during the period of the arresting of the vehicle, and a striker member suitably supported in proximity to the line of railway adapted to contact with said lever on the passage of the vehicle, substantially as described.

3. An automatic stop for railway vehicles, comprising a controlling device connected with the arresting mechanism, a lever connected with said controlling device and projecting from the vehicle and adapted to remain in its disarranged position during the period of the arresting of the vehicle, and a hinged striker plate supported in proximity to the line of railway and adapted in its lower position to operate said lever in the passage of the vehicle, substantially as described.

4. An automatic stop for railway vehicles, comprising a controlling device connected with the arresting mechanism, a lever connected with said controlling device and projecting from the vehicle and adapted to remain in its disarranged position during the period of the arresting of the vehicle, a striker plate hinged to a suitable support in proximity to the line of railway, and means for lifting said striker plate out of the line of contact of said lever on the passage of the vehicle, substantially as described.

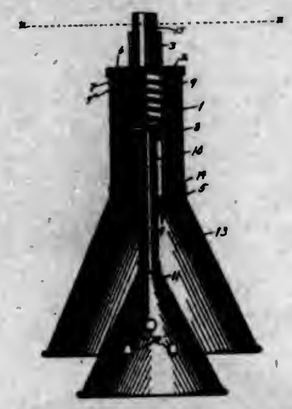
5. An automatic stop for railway vehicles, comprising a controlling device connected to the arresting mechanism, a lever projecting upwardly from said vehicle and connected with said arresting mechanism, a striker plate hinged to a suitable support along the side and over the line of railway and normally resting in an inclined position, and means for lifting said striker plate out of the line of contact with said lever, substantially as described.

[Claims 6 to 91 not printed in the Gazette.]

881,707. CLOTHES-POUNDER. GEORGE E. NORRIS, Columbus, Ohio. Filed Nov. 29, 1907. Serial No. 404,370.

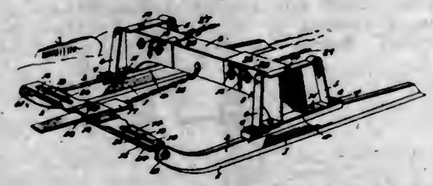
1. In a clothes pounder, the combination with a cylinder, a handle connected therewith, said cylinder having an air port and a valve adapted to normally close said air port, of a piston contained in the cylinder, a tube 10 leading through said piston and through the lower end of the cylinder, a conical body on the lower end of said tube, and a second and larger conical body depending from said cylinder.

2. In a clothes pounder, the combination with a cylinder, a handle connected therewith, said cylinder having a port in its upper portion, of a piston within said cylinder, a spring extending upwardly from said piston, a tube passing through the piston and through the lower end of the cylinder, a conical body on the lower end of said tube and communicating therewith, an external conical body of



larger diameter than said first mentioned body having its upper portion connected with said cylinder, a spring in the lower portion of the cylinder, and a valve in the upper portion of the cylinder adapted to normally close said air port and to open on the downward movement of the piston.

881,708. LOGGING-SLED. ROSCOE G. NOYES, Patten, Me. Filed June 8, 1907. Serial No. 377,997.



1. In a sled, the combination of a pair of runners, socket members carried by the runners, a cross bar having the ends thereof adjustably received by the socket members, and a longitudinally adjustable draft member connecting the runners.

2. In a sled, the combination of a pair of runners, a bracket carried by each of the runners, a socket member also carried by each of the runners and reinforced by the before mentioned bracket, a cross bar having the ends thereof adjustably connected to the socket members, and a longitudinally adjustable draft member connecting the runners.

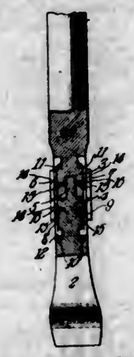
3. In a sled, the combination of a pair of runners, a block mounted upon each runner, a bracket secured to each block, a socket member mounted upon each block and reinforced by the bracket, a cross bar having the ends thereof adjustably connected to the socket members, and a longitudinally adjustable draft member connecting the runners.

4. In a sled, the combination of a pair of runners, means adjustably connecting the runners, a draft bar, plates slidably connected to the end portions of the draft bar and loosely connected to the runners, and draft means applied to the draft bar.

5. In a sled, the combination of a pair of runners, means adjustably connecting the runners, a draft bar, plates applied to the end portions of the draft bar and provided with flanges embracing the same, the said plates being loosely connected to the sled runners, and a pin and slot connection between the plates and the draft bar.

[Claims 6 and 7 not printed in the Gazette.]

881,709. DRILL-CHUCK. DANIEL J. O'LEARY, Green Bay, Wis. Filed Nov. 11, 1907. Serial No. 401,695.



1. A drill point connection for deep well drills comprising a drill rod having at its end an axial screw socket and diametrically opposed longitudinal grooves on each side thereof terminating in end recesses entering the body of the drill rod, a drill point having a screw stem adapted to the screw socket and the drill rod, and also having diametrically opposed longitudinal grooves terminating at one end in recesses, the grooves in the drill rod and drill point being located to match when the drill point is screwed into the drill rod, links having heads at each end projecting at right angles to the length of the links, and adapted to be seated in the grooves and recesses on opposite sides of the joint between the drill rod and point, and means for holding the links in their seats.

2. A drill point connection for deep well drills comprising a drill rod having at its end an axial screw socket and diametrically opposed longitudinal grooves on each side thereof terminating in end recesses entering the body of the drill rod, a drill point having a screw stem adapted to the screw socket and the drill rod, and also having diametrically opposed longitudinal grooves terminating at one end in recesses, the grooves in the drill rod and drill point being located to match when the drill point is screwed into the drill rod, links having heads at each end and adapted to be seated in the grooves and recesses on opposite sides of the joint between the drill rod and point, and screws having their heads countersunk in the links and entering both the drill rod and drill head.

3. A drill point connection for deep well drills comprising a drill rod and drill point having matching grooves each terminating at the end remote from the meeting ends of the rod and point in a laterally inwardly extending recess, and a link adapted to be seated in such groove, said link having at each end a head extending at right angles to the length of the link, said links being adapted to the lateral recesses at the ends of the matched grooves.

881,710. GARMENT-SUPPORTER. BENJAMIN F. OREWILER, Chicago, Ill. Filed Jan. 4, 1906. Serial No. 294,561.



1. In a garment supporter, a loop member having side arms with eyes extending inwardly toward each other, and a cushion into the opposite ends of which said eyes project.

2. In a garment supporter, a loop member formed of wire and having convergent side arms provided with inwardly extending eyes, and a tubular cushion located between the arms and having its ends surrounding the inwardly extending portions of the eyes and covering the upper and lower portions thereof.

3. In a garment supporter, a loop member having laterally movable side arms provided with terminal eyes that are disposed in the same plane with the arms, and a substantially rigid metallic and continuous keeper loop extending transversely of the arms, and through the eyes thereof, said loop permitting the lateral movement of the side arms, and said eyes having a sliding movement towards and from each other in and longitudinally of the loop.

4. In a garment supporter, a loop member formed of wire and having converging side arms provided with inwardly extending eyes, and a substantially rigid metallic keeper link extending through the eyes and having its ends abutted, said eyes being slidable in the link towards and from each other.

5. In a garment supporter, a loop member having side arms provided with eyes, a cushion portion that surrounds upper and lower portions of the eyes and forms an abutment for a stud placed between the arms, and a keeper element connecting the eyes.

[Claims 6 to 14 not printed in the Gazette.]

881,711. COMBINED PLUG AND STOP-COCK. BENJAMIN F. PALMER, Jacksonburg, W. Va. Filed May 6, 1907. Serial No. 371,981.



A valved plug for oil well casing comprising a housing formed with a tapering seat extending transversely therethrough and angularly disposed with respect to the well casing, said housing further provided with a vertically extending and a horizontally extending bore, each of said bores formed of a pair of branches, said seat communicating with said bores, said vertical bore constituting a passage for a drill supporting cable which extends through the housing, a plug mounted against said seat and provided with a passage for establishing communication between the upper and lower branches of the vertical bore, said plug further having its periphery cut away for establishing communication between one of the branches of the horizontally extending bore and the lower branch of the vertical bore when said plug is in its normal position, said plug further adapted when shifted from normal position to have said cut away portion establish communication between the other branch of the horizontally extending bore and the lower branch of the vertically extending bore and when so shifted cutting off communication between the two branches of the vertical bore, said plug projecting at both ends from said housing, means secured to one end of the plug for retaining it within the housing, and a lever secured to the other end of the plug for shifting it, a recessed offset provided upon the top of said housing, a vertically extending guide sleeve mounted in said recess, and means extending through the wall of the recess for securing said guide sleeve in position, said guide sleeve forming a continuation of the vertical bore of the housing.

881,712. TELEPHONE-RECEIVER. HERMANN G. PAPE, New York, N. Y. Filed June 16, 1904, Serial No. 212,820. Renewed Jan. 25, 1908. Serial No. 412,633.



1. In a receiver, the combination with a casing having front and rear caps, an armature, a diaphragm and a magnet housed within the casing, an armature spring supporting the armature and having a plurality of ends retained by the rear cap of the casing, said armature having connection with the diaphragm, and said armature spring being adjustable by the rear cap.

2. In a receiver, the combination with a casing divided to form front and rear compartments, of an armature in one compartment, a diaphragm in the other compartment, a magnet having an inclosing shell screwed into the dividing wall of the casing, and a connection passed through the magnet between the armature and the diaphragm.

3. In a receiver, the combination with a casing divided to form front and rear compartments closed by detachable front and rear caps, of a diaphragm and an armature located in the respective compartments and retained in place by the caps, an intermediate magnet mounted in the dividing wall of the casing, and a connection between the armature and the diaphragm, said connection serving as a means for regulating and adjusting the tension of the diaphragm and armature spring.

4. In a receiver, the combination with a casing, of a diaphragm, an armature, an intermediate magnet, a connection between the armature and the diaphragm, an armature spring, and detachable caps for the casing, one of said caps serving as retaining means for the diaphragm, and the other cap serving to retain the armature spring and also as a means for regulating the distance between the armature and the pole pieces of the magnet.

5. In a receiver, the combination with a casing, of a magnet therein, a diaphragm, a pair of rubber gaskets between which the periphery of the diaphragm is interposed, a detachable front cap retaining the gaskets in place, an armature opposed to one end of the magnet and connected with the diaphragm, an armature spring for urging the armature in one direction, a pair of rubber gaskets between which the ends of the armature spring are interposed, and a rear cap retaining the last named gaskets in place.

[Claims 6 to 18 not printed in the Gazette.]

881,713. COMBINATION TOOL-WRENCH. ALBERT PARTIN, Cooke, Mont. Filed May 11, 1907. Serial No. 373,083.

1. In a tool, the combination of a tubular shank, a rod-like shank, relatively movable jaws on the shanks, a plate having an opening for receiving the rod-like shank, means on the plate engaging the rod-like shank for preventing relative turning of the shanks, a longitudinally extending dove-tail on the bottom side of the said plate serving to strengthen the latter and engaging in a correspondingly shaped groove of the movable jaw, and means for holding the shanks in adjusted position and for preventing the shanks from pulling apart longitudinally.

2. In a tool, the combination of a hollow body, a fixed jaw thereon, a longitudinally movable member in the said body, a jaw on the member, a removable plate forming the gripping face of the fixed jaw and arranged for preventing the said member from turning, and serrations on the said plate and movable jaws.

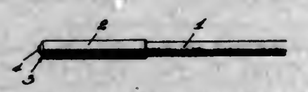


3. In a tool, the combination of a fixed jaw, a movable jaw, a hollow shank connected with the movable jaw, a shank on the fixed jaw movable in the hollow shank and provided with a longitudinal groove, a plate secured to the movable jaw and having a central opening for receiving the shank of the fixed jaw, a projection on the plate engaging in the said groove for preventing turning of the shanks and permitting the shanks to be disconnected by a relative longitudinal movement, and means for adjustably connecting the shanks for holding the jaws at different adjustments and for preventing the shanks from being disconnected.

4. In a tool, the combination of a jaw, a plate thereon having an opening, means for slidably mounting the plate on the jaw, a second jaw, a shank for the second jaw passing through the opening for retaining the plate in position, and means between the plate and shank for preventing the latter from turning.

5. In a tool, the combination of a double ended jaw, a plate covering the same having an opening, means for slidably mounting the plate on the jaw, a second jaw, serrations thereon, serrations on the plate, a shank for the second jaw for movably relating the jaws and passing through the opening of the plate, and means between the plate and shank for preventing the latter from turning.

881,714. BLASTING-FUSE IGNITER. BENJAMIN F. PEARSON, Canyonville, Oreg. Filed Oct. 21, 1907. Serial No. 398,475.



1. A fuse protector and igniter comprising a metal cap having a reduced or contracted outer end and adapted to be applied to the outer end of the fuse and means in the outer end of said cap whereby the fuse may be quickly ignited, substantially as described.

2. A fuse igniting device comprising a cap or ferrule having a reduced or contracted open outer end and a wad of highly inflammable material packed in said outer end, substantially as described.

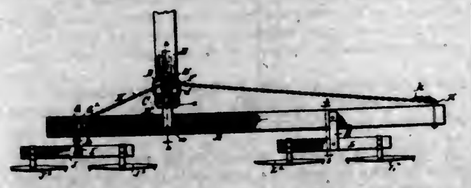
3. An igniting and protecting device for blasting fuses, comprising a ferrule or cap adapted to be applied to the outer end of a fuse, said cap or ferrule having a contracted or inwardly turned open outer end, an igniting wad arranged in said outer end of the ferrule, said wad consisting of a composition of raw cotton and powder adapted to be packed or rammed into the outer end of the cap, substantially as described.

4. An igniting material for fuses consisting of a composition of raw cotton, gun powder and giant powder constructed in the form of wads, and means to hold said wads in engagement with the end of the fuse, substantially as described.

5. A fuse igniter consisting of raw cotton mixed with gun powder having combined therewith a small percentage of giant powder, such gun powder and giant powder being mixed with water to form a pasty solution which is thoroughly mixed with the cotton and formed into small rolls and dried, after which said rolls are cut into lengths or pieces to form igniting wads, and means whereby said wads are held in engagement with the end of the fuse, substantially as described.

[Claim 6 not printed in the Gazette.]

881,715. DRAFT-EQUALIZER. CHARLES PERES, Lebo, Kans. Filed Sept. 9, 1907. Serial No. 391,944.

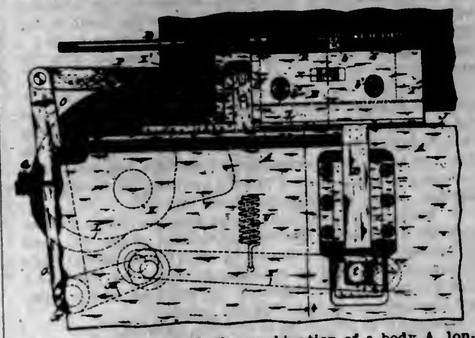


1. The combination with a beam or tongue, a clevis projecting from the front end thereof, an evener bar in advance of said tongue and clevis, a strap plate connecting said tongue and evener bar, a clevis pin passing through said strap plate, whereby said strap plate may be adjusted with respect to the plow beam or tongue, a pulley mounted at the rear end of said strap on the beam, a pulley mounted on the evener bar near one end, a chain secured to a double tree and passing over said pulley and over the pulley on the beam or tongue, an eye at the opposite end of the evener bar, said chain passing through said eye, a grab hook at the end of the chain whereby the length of same may be adjusted, and another double tree secured to the evener bar between its points of connection with the beam and the point of connection of the chain to the evener bar.

2. The combination with a beam or tongue, a clevis projecting from the front end thereof and standing away from the same, an evener bar in advance of said tongue and clevis, a strap plate secured at its front end to the upper face of said evener bar, and at its rear end upon the forward end of the beam or tongue, a lower strap plate secured at its forward end to the under face of the evener bar, said lower strap plate then extending rearwardly and bent upwardly between the end of the beam and the clevis and then bent to extend rearwardly on the beam, beneath the upper strap plate, a clevis pin passing through the upper and lower strap plates, whereby they may be adjusted laterally with respect to the beam or tongue, a pulley mounted at the front end of the beam upon said strap plates, a pulley mounted on the evener bar near one end, a chain secured at one end to a doubletree and passing over said pulley and over the pulley on the beam or tongue, an eye mounted at the opposite end of the evener bar, said chain passing through said eye, a grab hook at the free end of said chain whereby the length of same may be adjusted, and another doubletree secured in advance of the evener bar between its point of connection with the beam or tongue and the point of connection of the chain to the evener bar.

881,716. MOLD FOR LINOTYPE-MACHINES. DAVID PETRI-PALMEDO, Hoboken, N. J., assignor to Mergenthaler Linotype Company, a Corporation of New York. Filed July 27, 1906. Serial No. 328,129.

1. In a linotype mold, the combination of a body portion A, an overlying cap B mounted to slide longitudinally, a plate or shoulder C carried by the cap and bearing on the body, and a sliding block D seated in the body and retractable beyond the mold slot to permit the passage of the slugs thereover.



2. In a linotype mold, the combination of a body A, longitudinally guided cap B overlying the same, a plate or shoulder C carried by the cap and bearing on the body, a slide D and mechanism for reciprocating the cap and the slide.

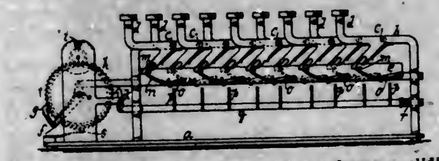
3. In a linotype mold, the combination of a body, a cap having a shoulder to form one end of the mold slot, the slide to form the opposite end of the slot, means for reciprocating the cap to deliver the slug past the slide D, and adjustable means for arresting its movement at predetermined points; whereby the length of the slot may be varied at will.

4. In a linotype mold, the combination of a body, a longitudinally reciprocating cap carrying a shoulder to form one end of the mold slot, a slide to form the opposite end of the slot, mechanism for reciprocating the slide to carry its shouldered end over said slide, and mechanism for actuating said slide.

5. In a linotype mold, the combination of a body portion, a cap, mechanism for longitudinally and automatically reciprocating the cap, a spring-actuated plate carried by the cap to close one end of the mold and deliver the slug, a slide to form the opposite end of the slot, means for changing the distance between the cap and body at will, and a yielding mechanism for actuating the slide D; whereby it is adapted to adjust itself to the varying position of the cap.

[Claims 6 to 9 not printed in the Gazette.]

881,717. CALCULATING OR ADDING MACHINE. WILLIAM P. QUENTELL, New York, N. Y., assignor to Agnes R. Quentell, Stamford, Conn. Filed Nov. 27, 1906. Serial No. 345,307.



1. A calculating machine comprising a frame, a sliding bar mounted in the frame, a series of pivots fixed to the frame at different points in proximity to the sliding bar, key levers fulcrumed on the pivots and directly contacting at one end with the bar to slide the latter in direction of swing of the lever, an actuator composed of a ratchet and pawl driven by the sliding bar, tumblers on the sliding bar and actuated by the keys, and a lock for the actuator actuated by the tumblers.

2. A calculating machine comprising a ratchet, key levers, a movable bar actuated by the levers, stopping means on the bar for arresting such bar and engaged by the key levers, and an actuator for the ratchet and lock for the ratchet actuated by the movable bar.

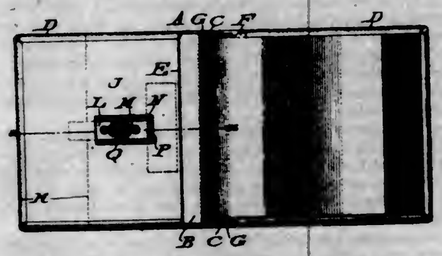
3. A calculating machine comprising key levers, a movable bar engaged by the key levers, a tumbler, a stop, an actuator composed of a ratchet and pawl and moved by the bar, a computing mechanism driven by the actuator, and a lock for the actuator actuated by the movable bar through the tumbler and stop, said key levers having a part made to bring the tumbler to engagement with the stop.

4. A calculating machine comprising key levers, a movable bar engaged by the levers, tumblers on the bar, stops for arresting the bar, means for bringing the tumblers to stop engaging position in advance of the movement of the bar, and an actuator driven by the movable bar, and a lock for the actuator actuated by said movable bar through the medium of the tumblers and stops.

5. A calculating machine comprising key levers, a movable bar actuated by the levers, tumblers on the bar, stops for arresting the bar, means for positioning the tumblers to engage the stops, an actuator driven by the bar, and a lock for the actuator actuated by the stops as the latter are engaged and actuated by the tumblers.

[Claims 6 to 25 not printed in the Gazette.]

881,718. BOOK-COVER. JACOB L. READ, Philadelphia, Pa. Filed Aug. 29, 1907. Serial No. 390,608.



1. A book cover having a pocket adapted to receive a back of a book, the same being composed of exterior and interior members and a flap which is continuous with one of said members, said flap being constructed to be adjusted relatively to different thicknesses of a book, and means for positively holding the same in such adjusted position.

2. A book cover having a pocket adapted to receive a back of a book, the same being composed of exterior and interior members, a flap continuous with one of said members, and a strap connected with said flap and one of said members, said strap being adjustable in length for adjusting said flap relatively to the thickness of a book.

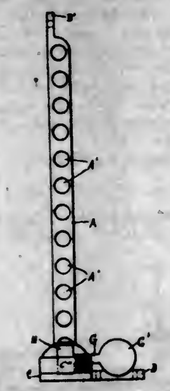
3. A book cover having a pocket adapted to receive the back of a book, the same being composed of longitudinally extensible exterior and interior members, a flap continuous with the exterior member adapted to enter the interior member, and means for connecting said flap with said interior member.

4. A book cover adapted to receive the back of a book consisting of a pocket, and means for adjusting and positively holding said pocket relatively to the thickness of a book.

5. In a book cover, a pocket adapted to receive the back of a book, the same comprising a flap continuous with the pocket and a strap connected with said flap and a fixed part, said strap being adjustable in length.

881,719. SASH LOCK AND ADJUSTER. THEODORE RICHARDS, Philadelphia, Pa. Filed Mar. 12, 1907. Serial No. 361,982.

1. A window fastener comprising an apertured locking bar, a housing formed of a flat plate having a vertical apertured part at its front and a depressed seat at its rear, said plate having two spaced slots formed therein, one slot having its outer side adjacent said vertical part and the other slot having its outer side adjacent the said seat, a bolt passed through said aperture of the front portion, a T-shaped head integral with one end of said bolt, an arm extending outwardly from one side of said head, a weight on the end of the arm, and an abutment in said seat for engagement with said T-head to limit the outward movement thereof.



2. A window fastener comprising an apertured locking bar, a housing formed of a horizontal plate having a vertical apertured front, a bolt passed through said aperture, a T-shaped head integral with one end of said bolt, an arm extending outwardly from one side of said head and having a weight on its outer end which extends beyond the housing, said plate having a pair of spaced slots formed therein, said T-head being movable to have either of its ends engage in either of said slots.

881,720. SUNSHADE. WILLIAM L. RIDOUT, Luling, Tex. Filed Nov. 27, 1907. Serial No. 404,090.



A device of the character described comprising a cover, a stem connected thereto, and a body engaging device comprising hangers having hooked terminals constituting shoulder engaging portions, a yoke-like connection between the hangers and disposed at an angle to the plane occupied by the hangers, means for detachably securing the stem to the middle portion of said connection, said connection being disposed to support the stem at an angle to the hangers, hooks formed by the lower ends of the hangers, and a belt engaging said hooks and disposed to extend under the arm pits of the user.

881,721. TRUCK-FRAME. JOHN M. ROHLFING, St. Louis, Mo. Filed Nov. 20, 1907. Serial No. 402,956.



1. In a car truck side frame, two column guides each having a flat guide face extending part of its height, the remainder of each column guide having an L-section, the said L sections of the two column guides being reversely positioned.

2. In a car truck, a side frame having a bolster opening therein a transverse Z-tie-bar having its web adjacent the bottom of the bolster opening one flange adjacent the side thereof and the other being notched, the portions on each side of the notch extending on either side of the bottom of the bolster opening.

3. In a car truck side frame, two column guides each having a flat guide face at its upper part and an L-section at its lower part the two L-sections being reversely positioned with a flange of each directed toward the bolster opening.

4. In combination a bolster, and a car truck side frame having an opening of uniform width adapted to receive the end of the bolster, the walls of the bolster opening being so shaped over part of their height as to prevent rotation of the side frame relatively to the bolster, and the said walls being so shaped over another part of their height as to permit such rotation.

5. In combination, a bolster and a car truck side frame having an opening adapted at all heights thereof to prevent lateral displacement of the frame relatively to the bolster and to permit relative rotation on a vertical axis.

[Claims 6 and 7 not printed in the Gazette.]

881,722. DENTAL TOOL. EMERSON R. SAUSSER, Philadelphia, Pa., assignor to James W. Ivory, Philadelphia, Pa. Filed Aug. 5, 1907. Serial No. 387,036.



1. A dental tool for the purpose described, composed of a handled blade, the working face of which is concave and provided with serrations, the concavity of said face extending in the direction of the longitudinal axis of the tool and said serrations extending at a right angle to said axis.

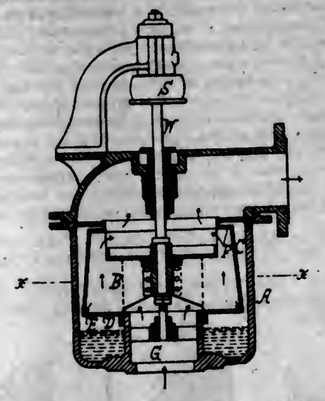
2. A dental tool for the purpose described, consisting of a blade, the working face of which is concave, a cutting edge on the forward end of said blade, and serrations on said working face, the concavity of said face extending in the direction of the longitudinal axis of the tool.

3. A dental tool for the purpose described, consisting of a blade having a concave face, and serrations on said face, the shoulders of said serrations being directed forwardly.

4. In a dental tool, a resilient concave blade having the forward end converging to a sharp edge and provided with serrations contiguous thereto, the shoulders of which are directed forwardly.

881,723. SEPARATOR. ROBERT SCHEIBE, Leipsig, Germany. Filed May 29, 1906. Serial No. 319,365.

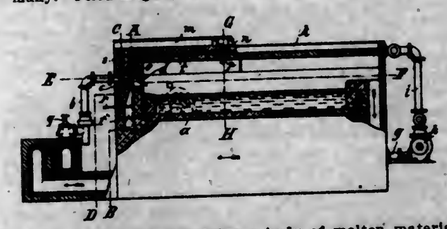
1. A separator for removing foreign elements from gaseous bodies, comprising a blade ventilator and a mantle having a common axis of rotation said mantle being centrally open at its top and bottom and suitably open or perforated at its circumference or front, and an exteriorly closed chamber with conduit into which said circumferential perforations are made to lead.



2. A separator for removing foreign elements from a current of gaseous bodies, comprising a blade ventilator and a flaring mantle rotated about a common axis by said current, said mantle being centrally open at its top and bottom and open at its circumference and an exteriorly closed chamber communicating with said circumferential mantle opening.

3. A separator for removing foreign elements from a current of gaseous bodies, comprising a blade ventilator and a flaring mantle rotated about a common axis by said current, said mantle being centrally open at its top and bottom and open at its circumference at the points furthest from the axis of rotation and an exteriorly closed chamber communicating with said circumferential mantle opening.

881,724. METHOD OF WORKING GAS-FURNACES. PAUL SCHMIDT and ADOLPHE DESGRAZ, Hanover, Germany. Filed Aug. 3, 1905. Serial No. 272,549.



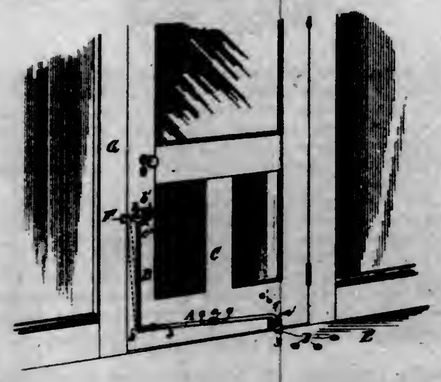
1. A method of maintaining a body of molten material within a furnace at a uniform temperature throughout which consists in subjecting the material to the action of a heating flame which spreads in an even manner entirely over the material by introducing into the furnace a mixture of combustible gas and air, the latter being in excess of the former, and further introducing into the furnace a mixture of combustible gas and air, the former being in excess of the latter, said excess of air of the first mixture causing the excess of gas of the second mixture to be burned in the form of a long flame which evenly spreads entirely over the material.

2. A method of maintaining a body of molten material within a furnace at a uniform temperature throughout which consists in subjecting the material to the action of a heating flame which spreads in an even manner entirely over the material by introducing into the furnace a mixture of combustible gas and air, the latter being in excess of the former, and further introducing into the furnace below the point of introduction of the first mixture another mixture of combustible gas and air, the former being in excess of the latter, said excess of air of the first mixture causing the excess of gas of the second mixture to be

burned in the form of a long flame evenly spreading entirely over the material.

3. A method of maintaining a body of molten material within a furnace at a uniform temperature throughout which consists of subjecting the material to the action of a heating flame, which evenly spreads entirely over the material by introducing into the furnace through one end thereof a mixture of combustible gas and air, the latter being in excess of the former, and further introducing into the furnace through the same end thereof a mixture of combustible gas and air, the former being in excess of the latter, said excess of air of the first mixture causing the excess of gas of the second mixture to be burned in the form of a long flame evenly spread entirely over the material.

881,725. DOOR STOP AND FASTENING. WILLIAM SCOTT, Fredericksburg, Va. Filed July 12, 1907. Serial No. 383,459.



1. The combination with a swinging door, of a pivoted lever having its free end bent downward to engage a floor socket and a bar pivoted to the other end of said lever and having its free end provided with a lateral projection adapted to enter a socket or keeper on the door jamb, substantially as described.

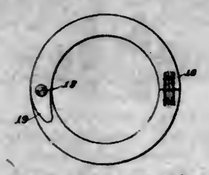
2. The combination with a swinging door, of an attachment comprising a lever pivoted to said door and having its free end turned downward to serve as a door stop or fastening and a bar pivoted to said lever whereby it is adapted for use in manipulating the latter and to be folded when not required for use, substantially as described.

3. The combination with a swinging door and devices secured to the floor and door jamb and adapted to serve as sockets, of an attachment adapted for the functions specified, the same comprising a lever pivoted to the door and having its free end turned downward, a keeper for said end of the lever, and a bar pivoted to the other end of the lever and having a lateral projection at its upper end, substantially as described.

4. The improved door attachment, comprising a lever, a bar pivoted to one end of the lever, the other end of the lever and the upper end of the bar being constructed for engagement with the floor and door frame respectively, as shown and described.

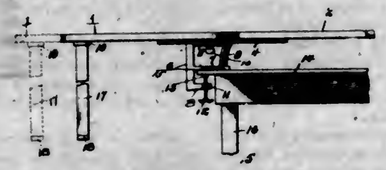
881,726. MANUFACTURE OF BULL-RINGS. CHARLES P. SHOWELL, Stirchley, England. Filed Apr. 17, 1906. Serial No. 312,257.

A ring of the class described consisting of two duplicate segments the inner ends of which are provided with screw-threaded sockets, a screw of uniform diameter throughout its length fitted in the two sockets for pivotally and removably connecting said segments together, each segment being provided with an acute beveled end, the flat faces of the beveled ends being adapted to abut and being provided with threaded perforations, and a screw fitted into said



perforations, the head of the screw being countersunk into one of said segments.

881,727. IRONING-BOARD. SAMUEL E. SHURTZ, Pittsburg, Pa. Filed Nov. 24, 1906. Serial No. 344,845.

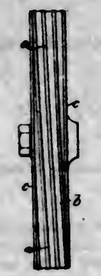


1. In an ironing board, a supporting member having a top plate and an arm extending parallel thereto and adapted to rest on a table or other support, said arm and plate being rigidly connected at spaced points to provide an extended top plate supported at its ends and to prevent relative movement of the arm and top plate, said top-plate, in cross-section, being of greater width than the width of the connections between it and said arm, means for clamping said arm to the member support, and an ironing board having an extended flanged plate secured to its under surface, said plate and the top plate of the supporting member being complementally-formed to permit a relative longitudinal movement of the board and supporting member, the complemental forms of said plates preventing a disengagement of the board and member otherwise than by a longitudinal movement, and a set screw extending through the top plate of the supporting member, said set screw being adapted to contact with the inner face of the board-plate to provide a relative movement of the top-plate and board-plate to frictionally engage said plates, the engagement being throughout the length of the top-plate, whereby the board will be positively held against longitudinal movement, and whereby the relative width of the top-plate and the connections between it and the supporting arm are such as to provide a space on opposite sides of said connections below the plane of the top-plate.

2. In an ironing board, a supporting member having a top plate substantially T-shaped in cross-section, and also having a long and a short arm spaced from each other and from said top plate, said arms and top plate extending in parallel planes, said top plate and the adjacent arm being rigidly connected at their ends by relatively narrow connections, a clamping screw carried by one of said arms and adapted to clamp the other arm on the opposing face of a table or other support, an ironing board having an extended flanged plate secured to its under surface, said plate having a form in cross-section, to receive the top plate of the supporting member in a manner to permit relative longitudinal movement of the board and supporting member and prevent a disengagement thereof otherwise than by such longitudinal movement, and a set screw extending through the top-plate of the supporting member and into contact with the inner face of the plate of the board, to retain the board against longitudinal movement, the engagement of the flanged plate and the top-plate being contiguous throughout the length of the top plate.

881,728. TIRE FOR VEHICLE-WHEELS. THOMAS A. SILVERWOOD, London, England. Filed Apr. 22, 1907. Serial No. 369,648.

1. A tire for vehicle wheels composed of material in the form of a helix of ribbon material set on edge and a filling material between the layers of ribbon material, substantially as and for the purposes set forth.



2. A tire for vehicle wheels provided with a helix of ribbon steel set on edge, in combination with a fibrous material separating the coils of said helix, substantially as and for the purposes set forth.

3. In vehicle wheels the combination of the rim provided with plates forming a box, a material in the form of a helix of ribbon material set on edge, fixed in said box, and a fibrous material also having a ribbon form set on edge in said box between contiguous portions of the said ribbon material, substantially as described.

4. In a vehicle wheel, the combination of a box on the rim thereof, a spiral ribbon set on edge in said box, a fibrous material between the convolutions of the spiral and a bolt passing through the box and ribbon, substantially as described.

881,729. GEARING MECHANISM FOR BICYCLES, &c. WILLIAM B. SMITH, Grand Ledge, Mich. Filed July 19, 1907. Serial No. 384,605.

1. In a transmission gear for the purposes set forth, the combination with a driven-shaft, of segmental gearwheels fixed thereto, an auxiliary shaft, gearwheels loosely mounted on the latter and adapted to be engaged by the segmental gearwheels, and springs connecting the loosely mounted gearwheels yieldingly to the shaft, substantially as shown and described.

2. In a transmission gear for the purposes set forth, the combination with a driven-shaft, of segmental gearwheels connected to turn therewith, an auxiliary shaft, gearwheels loosely mounted on the latter and adapted to be engaged by the segmental gearwheels, springs connecting the loosely mounted gearwheels yieldingly to the shaft, and spring pawls engaging the last mentioned gearwheels, substantially as shown and described.

3. In a transmission gear for the purposes set forth, the combination with a shaft, of gearwheels loosely mounted thereon, springs connecting the shaft yieldingly to the gearwheels, and segmental gearwheels connected to each other and arranged to successively engage the aforesaid gearwheels, substantially as set forth.

4. In a transmission gear for the purposes set forth, the combination with a shaft, of gearwheels loosely mounted thereon, flat spring bars fixed to and projecting from the shaft, lugs on the gearwheels adapted to engage the outer or free ends of the flat spring bars, and segmental gearwheels connected together and arranged to mesh successively with the aforesaid gearwheels, substantially as shown and described.

5. In a transmission gear for the purposes set forth, the combination with a shaft, of gearwheels loosely mounted thereon, flat spring bars fixed to and projecting from the shaft, a lug and adjoining stop-pin on each gearwheel between which the free end of the companion spring-bar is confined, pawls engaging said gearwheels, and segmental gearwheels fixed to a driving-shaft and adapted to mesh successively with the aforesaid gearwheels, substantially as shown and described.

[Claims 6 to 9 not printed in the Gazette.]

881,730. SAFETY-RAZOR. LEVI T. SNOW, New Haven, Conn. Filed Sept. 11, 1905. Serial No. 277,881.



1. In a safety razor, the combination with a handle, of an alined backing-plate rigid therewith, an operating-plate registered with the backing-plate and connected at its outer end with the outer end thereof, the two plates being adapted to have a double-edged razor blade introduced between them, and means connected with the said operating-plate for moving the same laterally with respect to the backing-plate.

2. In a safety razor, the combination with a tubular handle, of an alined backing-plate rigid therewith, an operating-plate registered with the backing-plate, the two plates being adapted to have a double edged razor blade introduced between them, means for moving the operating-plate laterally with respect to the backing-plate, and means located within the tubular handle for moving the operating-plate longitudinally.

3. In a safety razor, the combination with a handle, of an alined backing-plate rigid therewith, of an operating-plate registered with the said backing-plate and formed upon its edges with guard-teeth, the two plates being adapted to have a double edged razor blade introduced between them, and means combined with the said handle and coacting with the operating-plate for operating the latter.

4. In a safety razor, the combination with a handle, of an alined backing-plate rigid therewith, an operating-plate registered with the said backing-plate, the two plates being adapted to have a double edged razor-blade introduced between them, a stem located in the said handle and pivotally connected with the operating-plate, means mounted in the handle and connected with the stem for operating the operating-plate, and means for coupling the ends of the two plates, whereby the operating-plate is laterally moved with respect to the backing-plate when the operating-plate is longitudinally moved

5. In a safety razor, the combination with the handle thereof, of a backing-plate rigid therewith and in line therewith, a stem located in the said handle, an operating-plate pivoted to the said stem, means for confining a razor blade between the said backing and operating plates, means for coupling the two plates together, and a finger-piece combined with the handle and connected with the said stem for adjusting the operating-plate longitudinally.

[Claims 6 and 7 not printed in the Gazette.]

881,731. SAFETY-RAZOR. LEVI T. SNOW, New Haven, Conn. Filed Sept. 15, 1905. Serial No. 278,673.



1. In a safety razor, the combination with a handle, of an alined backing-piece rigid therewith, a flexible double-edged comb applied to the back of the backing-piece and projecting beyond the edges thereof, means for holding a double-edged razor blade against the back of the comb, and means placed over the front of the comb for engaging with the edges thereof for deflecting the said edges with respect to the edges of the blade.

2. In a safety razor, the combination with a handle, of an alined backing-piece rigid therewith, a flexible double-edged comb applied to the back of the backing-piece and projecting beyond the edges thereof, a locking-lever pivoted at one end for holding a double-edged razor blade against one face of the comb with which it is alined when it is in its closed position, and means applied to the opposite face of the comb for engaging with the edges thereof for deflecting the said edges with respect to the edges of the blade.

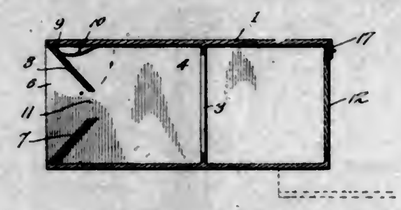
3. In a safety razor, the combination with a handle, of an alined backing-piece rigid therewith, a flexible double-edged comb applied to the back of the backing-piece and projecting beyond the edges thereof, means for holding a double-edged razor blade against the back of the comb, an operating-plate placed over the front of the comb and engaging with the edges thereof for flexing the same with respect to the edges of the blade, and means for connecting said plate with the backing-piece for moving it laterally with respect thereto and for connecting it with the handle for its longitudinal movement.

4. In a safety razor, the combination with a handle, of an alined backing-piece rigid therewith, a longitudinally flexible double-edged comb applied to the back of the backing-piece and projecting beyond the edges thereof, a locking-lever pivoted at its inner end to the inner end of the backing-piece and adapted to hold a double-edged razor blade against the back of the backing-piece with the outer end of which its outer end is coupled when it is alined with the comb, and means coupled with the backing-piece and with the handle for engagement with the front of the comb for flexing the same with respect to the edges of the blade.

5. In a safety razor, the combination with a tubular handle, of an alined backing-piece rigid therewith, a longitudinally flexible double-edged comb applied to the back of the backing-piece and projecting beyond the edges thereof, means connected at its ends with the backing-piece for holding a double-edged razor blade against the back of the comb, a laterally and longitudinally movable operating-plate engaging with the front of the comb for flexing the same with respect to the edges of the blade, and means for coupling the said plate with the backing-piece for its lateral movement with respect thereto and for coupling it with the handle for its longitudinal movement.

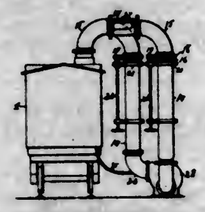
[Claims 6 to 9 not printed in the Gazette.]

881,732. TRAP-NEST. GEORGE W. SPENCE, Tully, N. Y. Filed Mar. 21, 1907. Serial No. 363,695.



A trap nest for poultry comprising a box provided with a door comprising a rigid member and a spring-actuated member movable inward in the box, said members converging and spaced apart, a partition in the box having an opening therein, said partition dividing the box into two compartments, and a hinged door, said door being hinged at its upper side to drop by gravity and close the opening, said door having a recess at its lower end, substantially as described.

881,733. APPARATUS FOR REFRIGERATION. ALMERIN R. SPRAGUE, Sacramento, Cal., assignor, by mesne assignments, to L. A. Roy, Chicago, Ill. Filed Sept. 27, 1905. Serial No. 280,354.



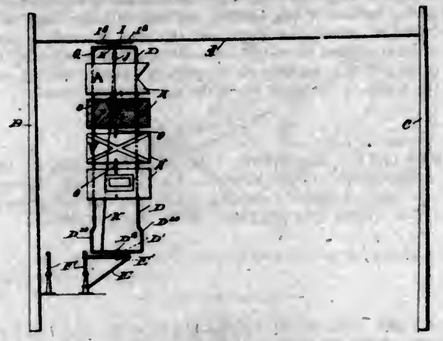
1. In a refrigerating apparatus, a chamber, a conduit connected therewith provided with an opening to the atmosphere, a blower and valve, said valve being between the blower and the chamber, and being adapted to control the passage through the conduit, a second valve adapted to control the opening to the atmosphere, and a coil in the conduit.

2. In a temperature changing apparatus, a chamber adapted to contain a temperature changing medium, a conduit connected therewith at both ends and provided with an opening to the atmosphere, a blower and two valves, said opening being between the blower in the conduit and the chamber and one of the valves being adapted to control said opening and the other valve being adapted to control the passage through the conduit.

3. In a refrigerating apparatus, a chamber adapted to contain a cooling medium, a conduit connected therewith, a coil in the conduit adapted to be connected with said chamber and said cooling medium passed through it, and means for intermittently passing a current of air through the conduit and chamber in such volume as to appreciably vary the density of the air within the chamber and its contents, whereby said contents are quickly cooled.

881,734. SIGNALING APPARATUS. WALTER T. STANWORTH, Norfolk, Va. Filed Aug. 3, 1907. Serial No. 386,994.

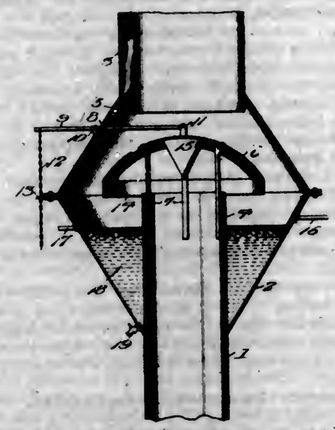
1. A signaling apparatus substantially as herein described, comprising an overhead support, a bearing rod secured thereto and provided with a bearing opening, an upright frame having its upper cross-bar provided with an opening registering with that in the bearing rod, an eye bolt passed upwardly through said openings and forming a pivot for the upper end of the upright frame, a pulley block suspended from said eye bolt and forming a guide for a halyard, a base for the upright frame, pivot devices between the base and the upright frame, and signal devices slidable along the side bars of the upright frame, all substantially as and for the purpose set forth.



2. The combination of an upper bearing rod having a central depressed portion, an upright frame, a bolt pivoting the upper end of the upright frame to the depressed portion of the bearing rod, a base underlying the lower end of the upright frame, a pivotal connection between the base and the upright frame, a detent for securing the upright frame to the base in any suitable adjustment, and signaling devices carried by the upright frame, substantially as set forth.

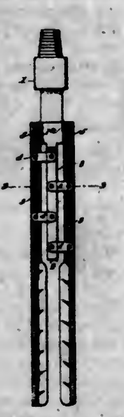
3. The combination in a signal apparatus, of an overhead support, a bearing rod secured at its ends to said support and provided between its ends with a depressed portion having a bearing opening, a frame having its upper cross-bar provided with an opening registering with that in the bearing rod, an eye-bolt passed through said openings and forming a pivot for the upper end of the upright frame and having below the cross-bar of the said frame an eye, a pulley block suspended from said eye, and signal devices guided by the upright frame and adapted to be lifted by the halyard guided by the said pulley block, all substantially as set forth.

881,735. SPARK-ARRESTER. LEWIS H. STARRETT, Portland, Oreg., assignor of one-half to Daniel Starrett, Portland, Oreg. Filed May 23, 1906. Serial No. 318,378.



In a spark arrester, the combination of a smoke duct, an inverted truncated cone secured around the upper portion of the duct to constitute with the latter a water containing receptacle, a truncated cone resting on and secured to the upper end of the first cone and provided with an opening in its wall, a duct arranged in axial alinement with and of greater diameter than the smoke duct and extending at its lower end a suitable distance into the upper cone, a hood disposed in the upper cone and provided with a depending cylindrical rim, flexible vertical members secured at their upper ends to the under side of the hood and slidably engaging the internal surface of the lower duct, a lever extending into the upper cone through the opening thereof and hingedly connected with the top of the hood, a fulcrum for the lever located outside the upper cone and arranged to permit the lever to strike the lower end of the upper duct for limiting the upward movement of the hood, and means connecting with the lever for actuating the same.

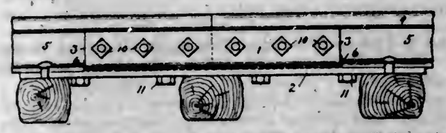
881,736. ROPE-GRAB. LAWRENCE STEPHENS and EARL L. STEPHENS, Macksburg, Ohio. Filed Dec. 9, 1907. Serial No. 405,796.



1. The improved rope-grab, comprising a head, an alined stem dependent therefrom, two toothed jaws arranged on opposite sides of the same, and links which pivotally connect the jaws with the stem whereby the jaws are adapted for vertical movement as required for engagement with, and disengagement from, the rope, as shown and described.

2. The improved rope-grab, comprising a head having an alined central stem which is dependent therefrom and provided with slots, toothed jaws arranged on opposite sides of said stem and also provided with slots, and links pivoted at their ends in the respective slots of the stem and jaws, in the manner shown and described.

881,737. RAILWAY-CHAIR. FREDERICK J. STERNER, Baltimore, Md. Filed June 10, 1907. Serial No. 378,070.



1. The combination with the rails having their outer lower flanges cut away at the ends of a rail chair comprising a base upon which the rails rest and a vertical projection adapted to fit into the cut out portion of the rails.

2. The combination with the rails having their outer lower flanges cut away at the ends of a rail chair comprising a vertical projection adapted to fit into the cut out portion of the rails and a base upon which the rails rest and having its ends projecting beyond the said vertical projection.

3. The combination with the rails having their outer lower flanges cut away at the ends, of a rail chair comprising a base of sufficient length to rest upon at least three of the cross-ties and upon which the rails rest and a vertical projection adapted to fit into the cut out portion of the rails and having its upper edge impinging against the lower surface of the head of the rail and provided with a plurality of apertures.

4. The combination with the rails having their outer lower flanges cut away at the ends and provided with apertures above said cut away portion, of a rail chair having a base upon which the rails rest and projecting beyond the cut-away portion and a vertical projection adapted to fit into the cut out ends of the rails, having its upper edge impinging against the lower surface of the head of the rails and provided with a number of apertures, and bolts passing through the said vertical projection and rails.

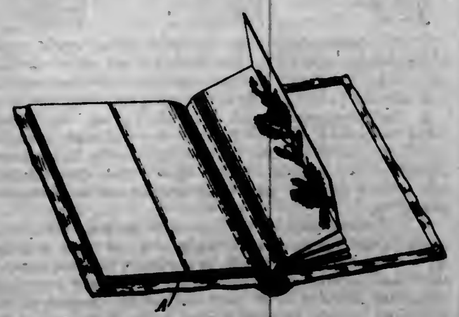
5. The combination with the rails having their outer lower flanges cut away at the ends and provided with apertures above said cut away portion and a number of apertures in their lower inner flanges, of a rail chair having a base upon which the rails rest and projecting beyond the cut away portion of the rails and having a number of apertures to register with the apertures in the lower inner flanges of the rails and a vertical projection adapted to fit into the cut out portion of the rails and having a number of apertures therein, bolts passing through the lower rail flanges and the base, and bolts passing through the vertical projection and rails.

881,738. PIE CUTTER AND CRIMPER. ALEXANDER H. STILLWAGEN, Pittsburg, Pa. Filed May 17, 1907. Serial No. 374,125.



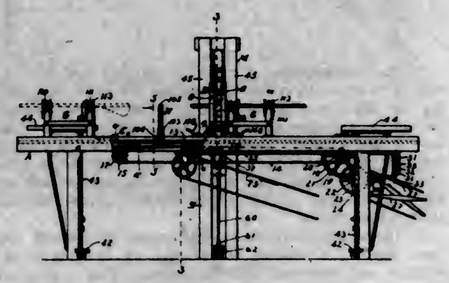
In a crimping and cutting device, the combination of a rotatable corrugated roller having a circular cutting disk at one end, an end plate at the other end, a holding frame having embracing sides and inwardly turned terminals inserted centrally into the disk and end plate, and a flat cutting blade secured to one of the sides of the frame and extending laterally therefrom on a plane with the center of the roller, substantially as set forth.

881,739. AUTOGRAPH-ALBUM. HENRY A. STILES, Philadelphia, Pa. Filed Feb. 28, 1907. Serial No. 359,815.



An autograph album including a plurality of sheets of paper, each of the sheets being provided with a pronounced crease extending lengthwise of and parallel with the side edges of the sheet and located nearer the outer edge than the inner edge thereon, the inner edges being bound together in book form, leaving the unbent edges free to be folded or unfolded, and a cover, the area of which is equal at least to that of one of the unfolded sheets, whereby the cover forms a backing or support to permit writing over the whole of the sheet when the latter is unfolded.

881,740. MACHINE FOR MAKING MOPS AND BRUSHES. LOUIS STOCKER, Knoxville, Tenn., assignor to Myer Bridges Company, Louisville, Ky., a Corporation. Filed July 30, 1906. Serial No. 328,431.



1. In a machine for making mops and brushes, the combination of a frame, a handle-supporting mechanism, and a cord guide, reversible power mechanism for relatively reciprocating said handle-supporting mechanism and said cord guide, mechanism for disengaging said power mechanism, and mechanism for engaging said power mechanism, substantially as described.

2. In a machine for making mops and brushes, the combination of a frame, a reciprocatory carriage, handle-supporting mechanism upon said carriage, reversible power mechanism for driving said carriage, mechanism for disengaging said power mechanism when the carriage reaches each limit of travel, and mechanism for engaging said power mechanism, substantially as described.

3. In a machine for making mops and brushes, the combination of a frame, a reciprocatory carriage, handle-supporting mechanism upon said carriage, a fixed pulley and loose pulleys, oppositely moving belts, automatic mechanism for shifting said belts to the loose pulleys when said carriage reaches either limit of travel, and mechanism for shifting either of said belts to the fixed pulley, substantially as described.

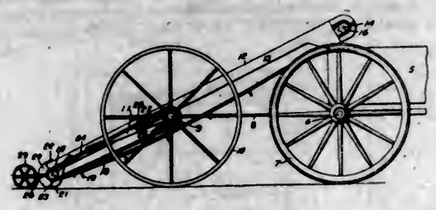
4. In a machine for making mops and brushes, mechanism for holding cords of indefinite length at or near the ends which are adjacent the machine, and means for drawing limited lengths of said cords toward the machine while they are held by said holding mechanism, substantially as described.

5. In a machine for making mops and brushes, mechanism for holding cords of indefinite length at or near the ends which are adjacent the machine, mechanism for drawing limited lengths of said cords toward the machine and keeping said cords under tension, substantially as described.

[Claims 6 to 17 not printed in the Gazette.]

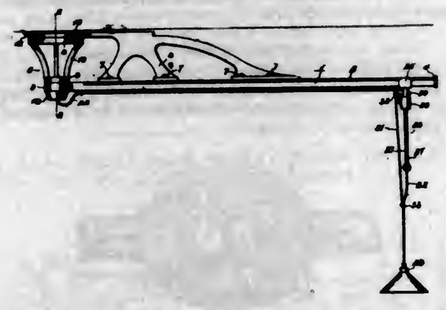
881,741. GRAVEL-LOADER. EDWARD A. STROSCHEIN, Cottonwood, Minn. Filed Mar. 25, 1907. Serial No. 364,275.

A loading attachment for wagons and the like consisting of a supplemental truck; means for coupling said truck with a wagon; an inclined conveyer mounted on the truck, to discharge into the wagon-box; a scoop located at the lower end of the conveyer frame; and a roller located in



the rear of the scoop, for supporting the same and the rear end of the conveyer.

881,742. ELECTRIC-LIGHT SUPPORT. PHILIP N. THEVENET, Dallas, Tex. Filed Feb. 26, 1907. Serial No. 359,403.



1. In a device of the class described, the combination of a horizontal supporting member, a vertically disposed holder movably mounted at its upper end on the said member, a lamp cord carried by the holder, a counterbalance weight permanently attached to the holder and having a limited movement thereon, a flexible element for connecting the weight to the lamp cord for counterbalancing the lamp on the latter, and a device on the upper end of the holder and movable therewith for operatively supporting the flexible element on the holder.

2. In a device of the class described, the combination of a horizontally extending member mounted for the swinging movement, a holder movable longitudinally of the member, a holder and counterbalance weight movable vertically on the holder and permanently attached thereto, a lamp cord supported by the holder, and a flexible element attached to one end of the cord and at the other end to the weight and arranged to permit the latter to counterbalance the lamp attached to the cord.

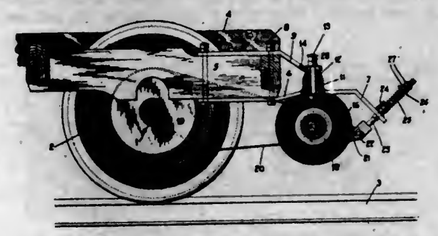
3. In a device of the class described, the combination of a horizontal rail having longitudinal recesses forming guideways, stops at the ends of the guideways, a vertically extending member, a U-shaped yoke rigidly mounted on the upper end of said member and arranged to embrace the rail from below, rollers on the yoke which engage in the guideways, and a lamp suspended by the said member, and a weight movable on and longitudinally of the member and arranged to counterbalance the weight of the lamp.

4. In a device of the class described, the combination of a rail having an eye at one end, a bracing member secured thereto and provided with a ring arranged in axial alinement with the eye, and a mounting secured to the ring of the member and eye of the rail for pivotally supporting the latter.

5. A device of the class described, the combination of a supporting structure comprising a rail having an eye and a member having a ring spaced above the eye, with a pivotal mounting for the structure between the eye and ring, said structure comprising a top plate having an annular recess for receiving the ring, a bottom plate, a pivot secured to the bottom plate which extends through the eye of the rail, and means secured to the top plate for holding the ring thereon and for securing the mounting to a suitable support.

[Claims 6 and 7 not printed in the Gazette.]

881,743. DYNAMO SUSPENSION. WILLIAM I. THOMSON, Newark, N. J., assignor to The Safety Car Heating & Lighting Company, a Corporation of New Jersey. Filed Nov. 6, 1905. Serial No. 285,980.



1. In apparatus of the class described, in combination, an axle, a truck mounted upon said axle, a pair of members mounted respectively upon the upper and lower sides of said truck at each side thereof and projecting beyond the same, said members being provided with substantially opposite longitudinally-extending slots, a cross member interposed between said slotted portions of said first-mentioned members, bolts passing through said slots and the ends of said cross member, a dynamo mounted upon said cross member, and power-transmitting means connecting said dynamo and said axle.

2. In apparatus of the class described, in combination, an axle, a truck mounted upon said axle, a pair of members secured to said truck at each side thereof, each of said members being slotted in a longitudinal direction, a cross member having its ends positioned between said members at each side of said truck and having in each end a slot extending in a direction transverse of said truck, bolts passing through said slots in said cross member and said first-mentioned members, a dynamo mounted upon said cross member, and power-transmitting means connecting said dynamo and said axle.

3. In apparatus of the class described, in combination, an axle, a truck, a member secured upon said truck at each side thereof, a cross-bar stretched between said members, said members being provided with slots and the ends of said cross-bar being provided with slots transversely disposed with reference to said first slots, a dynamo mounted upon said cross-bar, a pulley upon said axle, a pulley upon said dynamo, a belt connecting said pulleys, and resilient adjustable means adapted to tend to swing said dynamo away from said axle.

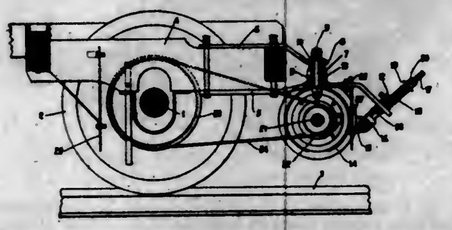
4. In apparatus of the class described, in combination, an axle, a truck, a member secured upon said truck at each side thereof, a cross-bar stretched between said members, said members being provided with slots and the ends of said cross-bar being provided with slots transversely disposed with reference to said first slots, a dynamo mounted upon said cross-bar, a pulley upon said dynamo, a pulley upon said axle, a belt connecting said pulleys, a member upon said truck projecting beyond said dynamo, and resilient adjustable means connecting the projecting end of said member with said dynamo adapted to tend to draw said dynamo away from said axle.

5. In apparatus of the class described, in combination, an axle, a truck mounted upon said axle, a pair of members secured upon each side of said truck, said members being slotted in a direction longitudinal of the truck, a cross member having its ends between said pairs of members and having each end slotted in a transverse direction, a bolt passing through the slots on each side of said truck, a dynamo suspended from said cross member, a pulley upon said dynamo, a pulley upon said axle, a belt connecting said pulleys, one of the members of each of said pairs

of members projecting beyond said dynamo, a cross member connecting the free ends of said projecting members, and resilient adjustable means connecting said dynamo with said second cross member and adapted to tend to swing the same away from said axle.

[Claims 6 to 9 not printed in the Gazette.]

881,744. CAR-AXLE DRIVING-GEAR FOR DYNAMOS. WILLIAM I. THOMSON, Newark, N. J., assignor to The Safety Car Heating & Lighting Company, a Corporation of New Jersey. Filed Nov. 6, 1905. Serial No. 285,981.



1. In apparatus of the class described, in combination, a car axle, a dynamo mounted adjacent said car axle, and a belt comprising a plurality of independently operative sections each of which is adapted to transmit power from said car axle to the shaft of said dynamo.

2. In apparatus of the class described, in combination, a car axle, a dynamo mounted adjacent said axle, a belt comprising a plurality of parallel independently operative sections adapted to transmit power between said car axle and the shaft of said dynamo, and resilient means tending to move said dynamo away from said axle.

3. In apparatus of the class described, in combination, a car axle, a dynamo mounted adjacent said axle, a pair of pulleys upon said axle, a pulley upon each end of the shaft of said dynamo, a belt comprising a plurality of parallel sections respectively connecting said pulleys in pairs, and resilient means connected with said dynamo between the pulleys mounted upon the shaft thereof adapted to tend to move said dynamo away from said axle.

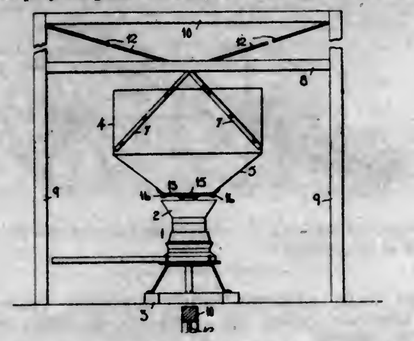
4. In apparatus of the class described, in combination, a car axle, a truck mounted upon said axle, a dynamo mounted upon said truck and adapted to swing with reference to said axle, a belt comprising a plurality of independently operative parallel sections each of which is adapted to transmit power from said axle to the shaft of said dynamo, and means connected with said dynamo upon the side thereof remote from said axle adapted to tend to swing said dynamo away from said axle.

5. In apparatus of the class described, in combination, a car axle, a dynamo mounted adjacent said axle, a pair of pulleys upon said axle, a pulley upon each end of the shaft of said dynamo, a belt comprising a plurality of independent sections respectively connecting the said pulleys in pairs, and independent means adapted to adjust the distance between each of said pulleys upon said dynamo and the corresponding pulley upon said axle.

[Claims 6 to 12 not printed in the Gazette.]

881,745. SUPPLEMENTAL HOPPER FOR GRINDING-MILLS. FRANK B. TICE, Polo, Ill. Filed May 23, 1907. Serial No. 375,338.

In a sweep mill the combination of a feed hopper supporting structure comprising oppositely disposed uprights spaced from the respective sides of said mill a sufficient distance to provide for the operating team to pass between said mill and said uprights, vertically spaced cross bars connecting said uprights above said mill, truss brace rods connected at one end to the upper ends of said uprights and at their opposite ends to the lower cross bar, a feed hopper, a pair of bars secured on opposite sides of said hopper and arranged in inverted V-shape with the apices thereof projecting above the top of said hopper and secured



to the lower cross bar at the point where said bar is engaged by said brace rods.

881,746. HOSE-COUPLING. JOSEPH M. TOWNE, East Orange, N. J., assignor to Safety Car Heating & Lighting Company, a Corporation of New Jersey. Filed Sept. 22, 1902. Serial No. 124,415.



1. In a hose coupling of the class described, the combination with the two parts of the coupler each of which has a locking arm on one side and a locking projection upon the opposite side and adapted to couple by a downward swinging movement, of a boss upon each part, and hooks carried by the respective bosses, the hook on each boss being adapted to engage the other boss.

2. The combination with the two parts of a hose coupling of the class described, each of which has a locking arm on one side and a locking projection upon the opposite side, said parts being adapted to mutually engage with a downward swinging movement, of a boss upon each part and oppositely disposed U-shaped lugs upon the respective bosses, the hook on each boss being adapted to engage the other boss.

3. The combination with the two parts of a hose coupler of the class described, each of which has a locking arm on one side and a locking projection upon the opposite side, said parts being adapted to mutually engage through relative rocking movements thereof, of a locking device located above the steam joint between the parts, comprising a boss on each part and hooks upon the respective bosses, the hook on each boss being adapted to engage the other boss.

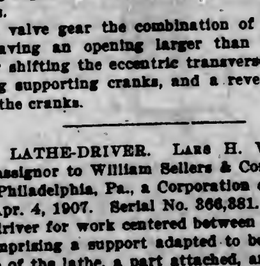
881,747. ARTIFICIAL-STONE FENCE. LOUIS TOWNSEND, Evansville, Ind. Filed Oct. 12, 1907. Serial No. 397,113.

1. A fence comprising hollow blocks, each block extending to the height of the fence, and means inserted in said blocks for holding them in position.

2. A fence comprising hollow blocks having grooves formed in the edges thereof, and an adhesive substance inserted in the grooves for connecting the blocks together.

3. An artificial stone fence, comprising a base, hollow blocks mounted on the base, means on the base inserted in the blocks, and means inserted in the blocks for adhering the base and block together.

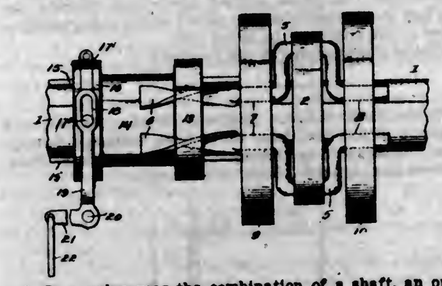
4. An artificial stone fence, comprising a base, anchor irons embedded in the base, hollow blocks mounted on the base and over the anchor irons, said blocks having grooves in their edges, and means inserted in the block whereby the block is secured to the base and anchor irons, and said means inserted in the grooves for connecting the blocks together.



5. An artificial fence, comprising a base, anchor irons in the base, hollow blocks mounted on the base and over the anchor irons, said blocks tapering upwardly from the base toward the top and grooves formed in the edges of said block, and means inserted between the grooves for securing the blocks and inserted in the blocks for connecting the blocks to the base and anchor iron.

[Claims 6 and 7 not printed in the Gazette.]

881,748. VALVE-GEAR. CLYDE C. VINSON, Wichita, Kans. Filed Nov. 14, 1907. Serial No. 402,118.



1. In a valve gear the combination of a shaft, an open center eccentric encircling the shaft, and means for shifting the eccentric transversely of the shaft embodying a pair of swinging eccentric supporting elements.

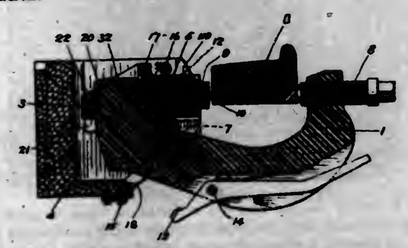
2. In a valve gear the combination of a shaft, an eccentric having an opening larger than the shaft, and means for shifting the eccentric transversely of the shaft comprising suporting cranks, and an element for swinging the cranks.

3. In a valve gear the combination of a shaft, an eccentric having an opening larger than the shaft, and means for shifting the eccentric transversely of the shaft comprising supporting cranks, and a reversing sleeve for swinging the cranks.

881,749. LATHE-DRIVER. LARS H. VOLD, Westville, N. J., assignor to William Sellers & Company, Incorporated, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Apr. 4, 1907. Serial No. 366,881.

1. A driver for work centered between the centers of a lathe, comprising a support adapted to be secured to the face-plate of the lathe, a part attached, and movable with relation to said support, and having a gripping face arranged to abut against the work; and a clamping face pivotally mounted upon the gripping part and adapted to engage the work and partake of its movement and thereby actuate the gripping part to embed its gripping face into the work.

2. A driver for work centered between the centers of a lathe comprising a stationary support adapted to be secured to the face-plate of the lathe, a part attached to said support adapted to contact with the face of the work and movable, to increase its grip on the work, in a direction substantially parallel to the axis of the lathe, and a second part, adapted to contact with the face of the work and movable in relation to said support, in a direction substantially oposite to the direction of rotation of said support, and connections between the parts, adapted to be actuated by the work in its resistance to rotation by which the said movement of the second part produces the said movement of the first part, and thereby causing the first part to embed its gripping face into the work until the gripping effect is sufficient to overcome the resistance to rotation.



8. A driver for work centered between the centers of a lathe, comprising two parts adapted to engage the face of the work, one part having a gripping face and movable, relatively to the work, in a direction substantially parallel to the axis of the lathe, and the other part being movable, with respect to the first part, in a substantially circumferential direction in relation to the axis of rotation of the lathe, and connections between the parts actuated by the second part and adapted, during the rotation of the lathe, when the second part is moved relatively to the first part by partaking of the relative movement of the work in the latter's resistance to rotation, to so actuate the first part, thereby embedding the gripping face of the first part into the face of the work.

4. A driver for wheels mounted on an axle centered between the centers of a wheel lathe, comprising two parts adapted to engage opposite faces of a wheel rim, one part having a gripping face and movable, relatively to the wheel, in a direction substantially parallel to the axis of the lathe, and the other part having a clamping face and movable, with respect to the first part, in a substantially circumferential direction about the axis of the lathe, and a connection between the parts adapted to extend within the rim and between the spokes of the wheel and adapted, during the rotation of the lathe, to be actuated by the second part and move the first part as described, thereby embedding the gripping face of the first part into the wheel face.

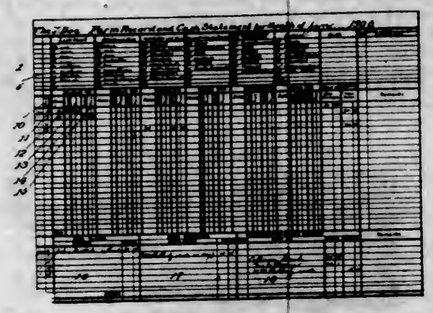
5. A driver for wheels mounted on an axle between the centers of a wheel lathe, comprising a support adapted to be attached to the face plate of the lathe, a part having a gripping face and pivoted to said support, a clamping part adapted to engage the wheel face and partake of its movement, an arm carrying the clamping part and pivoted to the first part and adpated, when the clamping part is actuated by the wheel in the latter's resistance to rotation, to move the first part toward the wheel and embed its gripping face into the wheel face.

[Claims 6 to 13 not printed in the Gazette.]

881,750. BOOKKEEPING SYSTEM AND LEAF FORMING PART OF THE SAME. GEORGE H. VROOM, Columbus, Ohio. Filed Mar. 8, 1906. Serial No. 304,862.

1. A ledger sheet having thereon a series of lines to provide major columns, each of said columns being subdivided by lines to provide a series of minor columns which terminate short of one end of the major columns to provide a schedule space, a series of lines running transverse of the major and minor columns to provide account spaces, a schedule of articles or material formed in each schedule
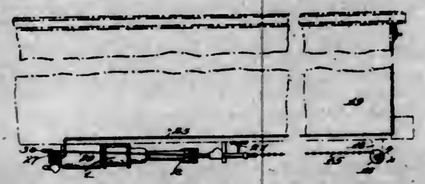
space in the major column, the minor columns having printed therein designations as follows—"Kind" "Quality", and "Price", to indicate the data in connection with a transaction and two columns formed by ruled lines opposite the minor columns, and one of said columns having printed therein "Total purchases", and the other of said columns having printed therein the words "Total sales".



2. A ledger having thereon a series of lines to provide major columns, each of said columns being subdivided by lines to provide a series of minor columns which terminate short of one end of the major columns to provide a schedule space, a series of lines running transverse of the major and minor columns to provide account spaces, a schedule of articles or material formed in each schedule space in the major columns, a character opposite each scheduled article, the minor columns having printed designations therein as follows—"Kind", "Quality", and "Price", to indicate data in connection with a transaction in one of which is printed "Total purchases" and in the other is printed "Total sales."

3. A ledger sheet having printed thereon a series of lines to form major columns, a series of shorter lines within the major columns to form columns which stop short of one end of the major columns to provide a space, a schedule of articles printed in said space of each major column, the minor column having printed therein "Kind"; another of said columns having printed therein "Sold"; another of said columns having printed therein "Purchased", and other printed matter in said minor columns as follows—"Quality" and "Price", the printed matter serving as a guide to record a transaction, two columns formed by lines parallel with the minor columns having printed therein "Total sales" and "Total purchases", a series of lines to form spaces on the sheet and in certain of which spaces is printed "Bills receivable", "Bills payable", "Other cash receipts" and other "Cash payments".

881,751. FLUID-PRESSURE RAILWAY-BRAKE. WILLIAM A. WEANT, Mocksville, N. C. Filed Sept. 30, 1907. Serial No. 396,185.



1. A fluid pressure railway brake provided with means operated by the piston rod of the brake cylinder for actuating a pressure retaining valve when the brakes are applied and released.

2. A fluid pressure railway brake comprising the combination with a triple valve mechanism and its exhaust, of a brake cylinder having a piston rod projecting therefrom, a pressure retaining valve interposed in the exhaust of the triple valve mechanism, an arm connected to the stem of said retaining valve, and connections between said arm and said rod for actuating said arm to shift the valve during the application and release of the brakes.

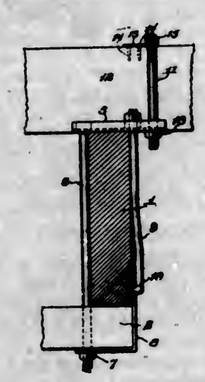
3. A fluid pressure railway brake comprising a pressure retaining valve, an arm connected to the stem of said valve, a brake cylinder embodying a piston and piston rod, a link connected with the piston rod and shifted during the application and release of the brakes, and a pin and slot connection between said arm and said link, said link causing the actuation of said arm and shifting of said pressure retaining valve when actuated by the piston rod.

4. A fluid pressure railway brake comprising a brake cylinder embodying a piston and an elongated piston rod, a sleeve mounted upon said piston rod, a brake beam pivotally connected to said sleeve, a collar mounted upon the rod, a coil spring arranged within said sleeve, having one end abutting against the sleeve and its other end affixed to said collar, a dog suspended from the bottom of the car, and a shouldered collar carried by the rod and adapted to be engaged by the dog when the piston rod is moved outwardly, thereby arresting the inward movement of the rod and maintaining the brakes applied.

5. A fluid pressure railway brake comprising a brake cylinder embodying a piston and an elongated piston rod, a sleeve mounted upon said piston rod, a brake beam pivotally connected to said sleeve, a collar mounted upon the rod, a coil spring arranged within said sleeve, having one end abutting against the sleeve and its other end affixed to said collar, a dog suspended from the bottom of the car, a shouldered collar carried by the rod and adapted to be engaged by the dog when the piston rod is moved outwardly, thereby arresting the inward movement of the rod and maintaining the brakes applied, and means whereby the dog and shouldered collar are moved out of engagement to allow of the return of the piston rod.

[Claim 6 not printed in the Gazette.]

881,752. HAY-RACK. ELMER J. WELLS, Nashua, and JAMES M. FULLER, Cedar Falls, Iowa, assignors to Wagner Manufacturing Company, Blackhawk county, Iowa. Filed Mar. 7, 1907. Serial No. 361,117.



1. In a hay rack, the combination with a bed, an attaching plate secured to said bed, a rub plate secured to said bed, the attaching plate being secured to said bed by means of a bolt passing through said plate and through said bed, and a bolt passing through said attaching plate and engaging said rub plate, and a hook bolt pivoted to the rack, and adapted to be swung into a slot in said attaching plate, substantially as described.

2. In a hay rack, the combination of an attaching plate secured to the top of the sill of a bed and provided with a slot in one end thereof, and a hook bolt pivoted to the top of the cross bar of a rack and adapted to be swung into said slot, and a nut upon said bolt for engaging the attaching plate, substantially as described.

881,753. EXCREMENT-SACK FOR DOMESTIC ANIMALS. EDWARD A. WHITEHOUSE, Newark, N. J. Filed Dec. 2, 1907. Serial No. 404,715.



1. In a device of the character specified, the combination with a supporting loop designed to encircle the anus of an animal and supporting means for the loop, of a flexible tubing, incasing the loop, and an excrement collecting receptacle suspended beneath and from the loop.

2. In a device of the character specified, the combination with a crupper and supporting means therefor, of an inwardly inclined downwardly extending supporting loop attached to the body of the crupper in position to encircle the anus of an animal, a flexible tubing incasing the loop and an excrement collecting receptacle, suspended beneath and from the supporting loop.

3. In a device of the character specified, the combination with a supporting loop designed to encircle the anus of an animal, and supporting means for the loop of an excrement collecting receptacle formed with an inlet opening to correspond with the outline of the loop, suspended beneath the same and a retaining flap arranged at the edge of the inlet opening of the receptacle and foldable over the supporting loop.

4. In a device of the character specified, the combination with a crupper and supporting means therefor, of a supporting loop attached to the body of the crupper in position to encircle the anus of an animal, an excrement collecting receptacle formed with an inlet opening to correspond with the outline of the loop, suspended beneath the same and a retaining flap arranged at the edge of the inlet opening of the receptacle and foldable over the supporting loop.

5. In a device of the character specified, the combination with a crupper and supporting means therefor, of an inwardly inclined downwardly extending supporting loop attached to the body of the crupper in position to encircle the anus of an animal, an outwardly inclined downwardly extending supporting loop attached to the body of the crupper at a point opposite the inwardly inclined supporting loop, an excrement collecting receptacle formed with an inlet opening to correspond with the first mentioned loop, a retaining flap, arranged at the edge of said inlet opening and foldable over the first mentioned loop and a retaining strap attached to the inlet end of the receptacle and insertible through the second mentioned loop.

[Claim 6 not printed in the Gazette.]

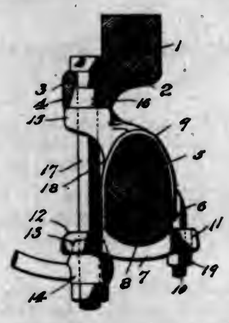
881,754. VEHICLE-CLIP. FRANK E. WILCOX, Mechanicsburg, Pa. Filed Sept. 16, 1907. Serial No. 393,169.

1. A vehicle clip made in one piece having a yoke perforated at its free end, and a body portion of a U shape; the free end of the body portion being provided with a threaded prong.

2. A vehicle clip made in one piece having a yoke with an elongated slot at its free end, and a body portion of a U shape; the free end of the body portion being provided with a threaded prong.

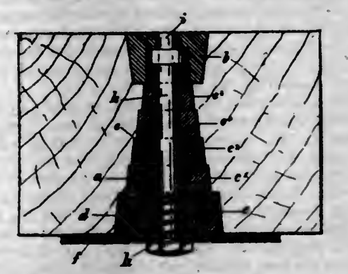
3. An integral vehicle clip having a yoke with a plurality of perforations at its free end, and a body portion of a U shape provided with a plurality of threaded prongs at its free end.

4. A vehicle clip made in one piece having a yoke perforated at its free end, a body portion of a U shape provided with a threaded prong, and a perforated king bolt lug.



5. A vehicle clip made in one piece having a yoke perforated at its free end, a body portion of a U shape provided with a threaded prong, and top and bottom perforated king bolt lugs.

881,755. DOWEL FOR FASTENING WOOD-SCREWS IN RAIL CROSS-TIES. CARL WILKE, Brunswick, Germany. Filed May 25, 1907. Serial No. 375,733.



1. A dowel of the class described comprising a body formed of sections of successively reduced diameters providing shoulders between successive sections, said body having a central bore extending longitudinally throughout the extent of the same, and an annular cap mounted upon the reduced end of the body.

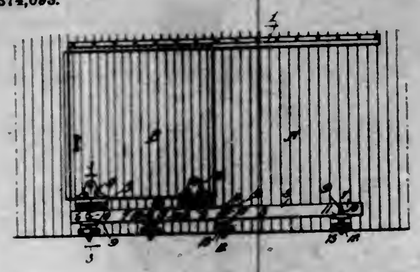
2. A dowel of the class described comprising a body formed of sections of successively reduced diameters providing shoulders between successive sections, said body having a central bore extending longitudinally throughout the extent of the same, an annular cap mounted upon the reduced end of the body, and means at the opposite enlarged end of the said body to protect the same from dampness.

3. The combination of a dowel comprising sections of successively reduced diameters providing shoulders between the successive sections, and a tie having a hole corresponding to the shape of the dowel for receiving the same.

4. The combination of a dowel comprising sections of successively reduced diameters providing shoulders between the successive sections, a portion of each section being formed into an obtuse cone, and a cross tie having a hole corresponding to the shape of the said dowel for receiving the latter.

5. The combination of a dowel comprising sections of successively reduced diameters providing shoulders between the successive sections, a portion of each section being formed into an obtuse cone, a cross tie having a hole corresponding to the shape of the said dowel for receiving the latter, a cap mounted on the reduced end of the dowel, and means at the opposite end of the dowel for protecting the same from dampness.

881,756. COMBINED TRACK AND ROLLER SUPPORT FOR FREIGHT-CAR DOORS. JAMES P. WILLIAMS, New Orleans, La. Filed May 16, 1907. Serial No. 374,093.



1. The combination of a car body having an opening, a door-supporting track mounted on the car below the opening and having independently adjustable sections arranged end to end, one of the sections being shorter than the width of the opening and normally disposed under the same, and door-guiding means on the car above the opening, with a door supported on and movable over the track and having its top engaged by the said guiding means.

2. The combination of a car body, a rail composed of independently adjustable sections and having vertical slots, fastenings passing through the slots and secured to the car body, bearings on the car body disposed under the track, vertically-extending screws in the bearings, devices on which the sections of the track rest, and swiveled joints between the devices and screws, with a car door, and devices attached to the car door and engaging the track for movably supporting the door on the latter.

3. The combination of a car body, an edgewise movable door, anti-friction elements mounted on said door, a fixed guideway for the top edge of the door, a track under the door composed of adjustable and connected sections and on which the elements bear, bearings on the side of the car at a point below the sections, screws engaging in the bearings, members on the screws for receiving the rail sections, and swivel joints between the screws and members.

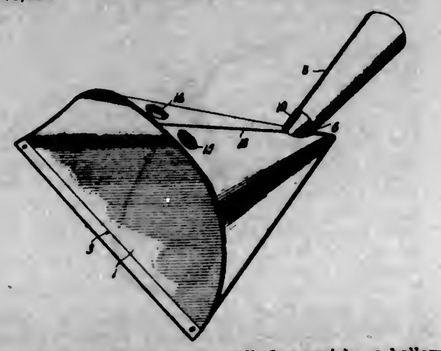
4. The combination with a car body, an edgewise movable door thereon, a track rail composed of hingedly connected sections, spaced rollers on the door and movable on the sections, and means for independently tilting both of the sections.

881,757. RULE-HOLDER. BERT V. WINSOR, Davenport, Iowa, assignor of one-half to Henry H. Vogt, Davenport, Iowa. Filed Apr. 29, 1907. Serial No. 370,938.



A rule holder formed from a strip of spring metal curved or bent upon itself to form two clamping walls and having a retaining wall, the curved portion between the clamping walls being cut away to form two connectors at the edges of the holders with an opening therebetween, the front wall of the clamp being curved outwardly at its lower end and bent inwardly and having its upper end flared outwardly and the other wall of the clamp having a forwardly extending triangular flange upon each edge, the point or upper end of each flange being adjacent to the point of greatest inward curvature of the front wall, and the bottom of the flange being between the rear clamping wall and the greatest outward curvature of the front wall, and the retaining wall being adapted to hold the clamp in position.

881,758. HOUSEHOLD ARTICLE. JEREMIAH F. WYNKOOP, Minneapolis, Minn. Filed Apr. 24, 1907. Serial No. 370,054.



1. An article of the class described comprising a hollow substantially conical body portion having a mouth or opening, an inclined sleeve extending through the top of the body portion at the apex thereof and having its lower end rigidly secured to the bottom of the latter, said sleeve being provided with a locking groove extending inwardly from the open end of the sleeve in a direction longitudinally thereof, and thence extended diagonally of the sleeve, a corresponding handle adapted to detachably engage the interior walls of said sleeve and having a projection thereon adapted to enter the longitudinal portion of said groove and to coöperate with the diagonal portion thereof to tighten the handle when turned relatively in one direction and to loosen it when turned relatively in the opposite direction, and a projection depending from the bottom of the body portion between the apex thereof and the fixed lower end of the sleeve.

2. An article of the class described comprising a substantially conical body portion having one side flattened and provided with a sweeping edge arranged at the open end thereof, an inclined sleeve extended through the top of the body portion at the apex thereof and having its lower end rigidly secured to the bottom of the latter, said sleeve having its walls pressed outwardly to form a bayonet groove, a handle having a lug adapted to engage the bayonet groove of the sleeve, and a projection depending from the bottom of the body portion between the apex thereof and the fixed lower end of the sleeve.

881,759. PROCESS FOR COATING THE SURFACES OF VESSELS. WILHELM ACKERMANN, Wilmersdorf, near Berlin, Germany. Filed June 10, 1907. Serial No. 378,301.

The herein described process for coating wooden fermenting vats for brewing, consisting in coating the surface to be protected with a suitable adhesive, then applying a porous lining to the same, then impregnating this lining with a material melting at a low temperature like paraffin, ozocerite, ceresin, wax, resin, pitch, stearic acid, oil varnish, caoutchouc and the like, and capable of resisting the effects of fermenting beer wort, and other liquids containing acids, said material being applied to the lining in a heated molten condition.

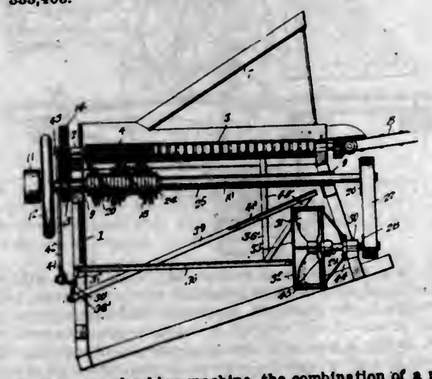
881,760. ROPE-CLAMP. ALBERT L. ADAMS, Cedar Rapids, Iowa. Filed May 9, 1907. Serial No. 372,798.

In a device of the class described, two ropes arranged side by side, and a clamp thereon formed from a single piece of wire doubled upon itself substantially midway of its length to form two legs, each leg being bent adjacent to said bend so as to engage with one of the ropes, and also bent intermediate its length so as to engage with and be bent around the other rope, the free end of each leg being extended beyond and outside of the second mentioned bend and formed into a substantial hook which is bent down upon the first mentioned rope on the side opposite the first mentioned bend of the clamp, whereby four bends



of the clamp engage with one of the ropes and two bends engage with the other rope.

881,761. CORN-HUSKING MACHINE. EDWIN G. ADAMS, near Plain City, Ohio. Filed Sept. 5, 1906. Serial No. 333,403.

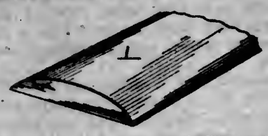


1. In a corn husking machine, the combination of a pair of inclined combined snapping and husking rollers arranged with their snapping portions at the highest point, means for driving the rollers simultaneously, a shaft disposed parallel with and below the rollers and provided with decorticating knives arranged below the snapping portions of the latter, a gearing between the shaft and one of the rollers, means for driving the shaft, a fan, a shaft therefor disposed parallel with the first-mentioned shaft, a belt and pulley mechanism between the shafts, an inclined vibrating table arranged directly above the fan, a screen disposed parallel with and below the knife carrying shaft and in line with the fan, means for flexibly supporting the end of the screen adjacent the fan, means for flexibly supporting the table on the screen, and a mechanism for simultaneously vibrating the screen and table.

2. In a corn husking machine, the combination of a pair of combined snapping and husking rollers, a shaft disposed below the same and having decorticating knives under the snapping portions of the rollers, means for driving the shaft, a pinion on the shaft, a gear wheel on one of the rollers meshing with the pinion, means for driving one roller by the other, a screen disposed below the shaft, an inclined table between the screen and husking portions of the rollers, links for suspending the inner end of the screen, links for supporting the inner end of the table directly on the screen, an oscillating lever on which the outer end of the screen is hinged, means for connecting the table with the lever, a crank and pitman connection between the lever and gear wheel, the said lever being arranged to vibrate the table and screen simultaneously in opposite directions, a fan arranged in coöperative relation with the screen, and a driving mechanism between the shaft and fan.

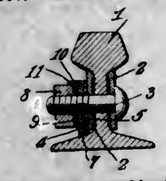
881,762. REINFORCING-BAR. EDWARD L. ADERSON, Jr., St. Louis, Mo. Filed Jan. 15, 1907. Serial No. 352,425.

As a new article of manufacture, a reinforcing member for concrete and metal construction, comprising a bar which gradually decreases in thickness from its longitudinal center to its side edges, said side edges being bent inward and upward at intervals so as to bring the edges of the bent portions into the horizontal plane occupied by the



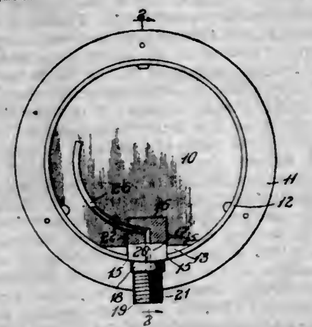
center of the bar, and there being shallow concave pockets formed on the top of the bar between the bent portion of the side edges and the center of said bar.

881,763. NUT-LOCK. ASHER A. ALLEN, Glouster, Ohio. Filed Oct. 24, 1907. Serial No. 398,989.



A nut lock comprising, in combination with a bolt, a washer fitted upon the bolt, a second washer fitted upon the bolt, a nut mounted upon the threaded portion of the bolt, the adjacent faces of the nut and washer being provided with radial grooves and a key adapted to be inserted within said grooves, and a portion of the first named washer adapted to be bent over the grooves.

881,764. PRESSURE-GAGE. OTTO ARNOLD, Jr., Magdeburg, Buckau, Germany. Filed Mar. 25, 1907. Serial No. 364,230.



1. In a pressure gage, the combination with a casing providing a base, and a peripheral wall having a thickened portion wherein is provided an opening extending from the edge of the wall toward the base, of a socket member providing a head of squared stock having side surfaces arranged to interfit intimately with the confronting surfaces of said opening in the wall, and means for securing the socket in such position.

2. The combination in a pressure gage, of a casing having a base and a peripheral wall having an opening therein from its edge toward the base, the edges of said opening constituting parallel planes, a square-headed socket member fitting snugly in said opening, and provided with a central bore and a transverse slot intersecting said bore and extending clear across the head, and a gage tube seated in said slot and closing the same on all sides of the duct aperture.

3. A socket member for gage tubes, comprising a head of squared stock and a reduced, screw threaded stem integral therewith, said stem being provided with an axial

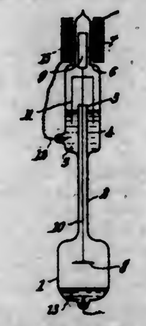
duct, and said head being provided with a slot extending from side to side thereof and intersecting said duct.

4. A socket member for gage tubes, comprising a head of squared stock and a reduced, screw threaded stem integral therewith, said stem being provided with an axial duct, and said head being provided with a slot extending from side to side thereof and intersecting said duct at an oblique angle.

5. In a pressure gage, a socket provided with a duct extending therein in one direction, and a transverse slot extending clear across the socket and intersecting said duct, combined with a gage tube seated in said slot, and closing the same on all sides of said intersection with the duct.

[Claims 6 to 9 not printed in the Gazette.]

881,765. STARTING DEVICE FOR MERCURY-VAPOR ELECTRIC LAMPS. LOUIS A. AUDIBERT, Lodève, France. Filed Sept. 14, 1906. Serial No. 334,647.



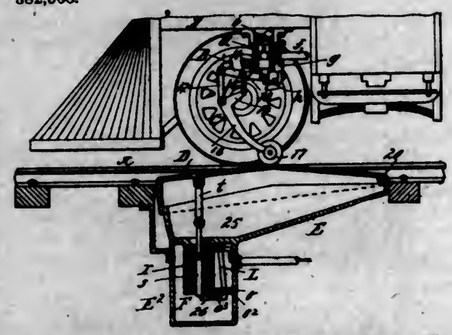
1. In a mercury vapor electric lamp having an anode and a mercury cathode, and in which the lighting is effected by a preliminary contact between the anode and the cathode, an annular chamber above the cathode formed by two concentric tubes and containing a quantity of mercury independent of the electrodes of the lamp and which is permanently connected to one of the lamp terminals, and a contact member connected to the anode and movable therewith and extending permanently into the quantity of mercury in said annular chamber so that the latter forms a liquid-conducting slide maintaining a perfect and permanent contact of the anode with its lamp terminal.

2. In a mercury vapor electric lamp having an anode and a mercury cathode and in which the lighting is effected by a preliminary contact between the anode and the cathode, a chamber above the cathode and containing a quantity of mercury independent of the electrodes of the lamp and which is permanently connected to one of the lamp terminals, and a contact member connected to the anode and movable therewith and extending permanently into the quantity of mercury in said chamber so that the latter forms a liquid-conducting slide maintaining a perfect and permanent contact of the anode with its lamp terminal, the anode being solid, and its connection with said contact member being of sufficient conductivity to insure that the arc shall be between the solid anode and the mercury cathode.

3. In a mercury vapor electric lamp which is lighted by a preliminary contact of anode and cathode, a condensing chamber carrying a supply of mercury forming the cathode, and an annular chamber above the condensing chamber formed by two concentric tubes and containing a supply of mercury independent of the electrodes of the lamp, a movable contact member connected with the anode and extending into the mercury in said annular chamber so as to form a liquid-conducting slide which maintains a perfect and permanent contact of the anode with the mercury in said annular chamber, the mercury in said annular chamber being connected to one of the terminals of the lamp.

4. In a mercury vapor electric lamp, a movable contact member having an arm, a chamber containing a supply of mercury connected to one of the terminals of the lamp and into which said contact member permanently extends so as to form a sliding liquid contact with said terminal, an anode connected with said arm at one side, a solenoid having a core connected with said arm at the other side, said chamber being provided with upper and lower shoulders forming abutments for said arm against which it strikes in its upward and downward movement and by which its movement is limited to maintain it permanently in contact with the mercury.

881,766. RAILWAY BLOCK SYSTEM. OLIVER BARNISH, Springfield, Mass., assignor of one-half to John M. Newell, Springfield, Mass. Filed July 8, 1907. Serial No. 382,568.



1. In a railway block system, the combination with a plurality of track sections insulated one from another, and a vehicle to run thereover, a movable abutment adjacent a track of one of said sections, a normally open electric circuit, having a generator connected therein, comprising the tracks of a given section, and also having connected therein a solenoid, said circuit being adapted to be closed by the presence, on the track section to which it pertains, of opposite connected wheels of the vehicle, means for engaging and locking the shifted core of the solenoid, and a brake operating device on the vehicle adapted to be actuated by said abutment.

2. In a railway block system, the combination with a plurality of track sections insulated one from another, and a vehicle to run thereover, a movable abutment adjacent a track of one of said sections, a normally open electric circuit, having a generator connected therein, comprising the tracks of a given section, and also having connected therein a solenoid the core of which is operative to shift said movable abutment, said circuit being adapted to be closed by the presence, on the track section to which it pertains, of opposite connected wheels of the vehicle, an armature adapted to be magnetically attracted by the energized solenoid and to engage, and lock, the shifted core of the latter, and a brake operating device on the vehicle adapted to be actuated by said abutment.

3. In a railway block system, the combination with a plurality of track sections insulated one from another, and a vehicle to run thereover, a movable abutment adjacent a track of one of said sections, a normally open electric circuit, having a generator connected therein, comprising the tracks of a given section, and also having connected therein a solenoid the core of which is operative on said movable abutment, said circuit being adapted to be closed by the presence, on the track section to which it pertains, of opposite connected wheels of the vehicle, an L-shaped armature pivotally mounted at the side of the solenoid, adapted to have a member thereof magnetically attracted by the latter when energized, and by a member thereof to engage and lock in shifted position the solenoid coil, and a spring for retiring the armature from engagement with the solenoid coil, and a brake operating device on the vehicle adapted to be actuated by said abutment.

4. The combination with a solenoid and circuit conductors in which it is connected, of an armature pivotally mounted alongside the solenoid and adapted to be magnetically attracted to assume a position across the axis of the solenoid and to engage the shifted core of the latter, and means for retiring said armature from its core engaging position.

5. The combination with a solenoid and circuit conductors in which the solenoid is connected, of an L-shaped armature pivotally mounted at the side of the solenoid and adapted on the energising of the latter to have an angular member thereof magnetically attracted to locking engagement with the shifted solenoid core, a rod relatively to which the L-shaped armature swings and a spiral spring encircling the rod and reacting against said armature.

[Claim 6 not printed in the Gazette.]

881,767. COVER FOR MILK-PAILS. JOHN R. BOSTWICK, Clifton Springs, N. Y., assignor of one-half to Henry J. Bostwick, Clifton Springs, N. Y. Filed Oct. 9, 1907. Serial No. 396,616.



1. A pail cover having a disk, and a funnel obliquely piercing the disk with its small end beneath, a perforated closure for said small end, and a chamber outside of the closure disposed obliquely to said disk.

2. A pail cover having a circular disk, and a funnel piercing the disk with small end beneath, a perforated closure for the funnel, and a chamber without the closure, having an opening above the lower edge, and a sheet of gauze covering said opening.

3. A cover for a pail, having a disk and a funnel piercing the disk eccentrically and in an inclined direction with its small end beneath the disk, a perforated closure for the small end of the disk, and a perforated removable cup joined to the closure.

4. A cover for a pail, having a disk and a tapered funnel piercing the disk obliquely with its large end open and above the disk and its small end below the disk and closed by a flanged plate with an opening therein, and a cup joined to the flange of the plate by a threaded connection, the cup having an opening at the bottom covered with gauze.

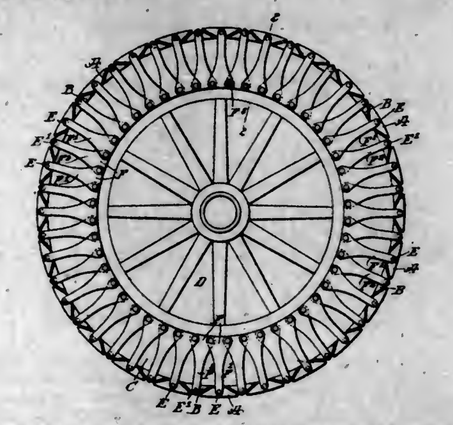
5. A cover for a pail, having a disk and a tapered funnel piercing the disk obliquely with its large end open and above the disk and its small end below the disk and closed by a flanged plate with an opening therein, and a cup joined to the flange of the plate by a threaded connection, the cup having an opening through the bottom covered with gauze, the centers of the openings in the plate and the cup being in a vertical plane and one higher than the other.

[Claims 6 to 9 not printed in the Gazette.]

881,768. TIRE-PROTECTOR. HERBERT M. BRADLEY, Fort Worth, Tex. Filed Feb. 20, 1907. Serial No. 358,365.

1. A tire protector comprising a sectional tread covering the outer face of the tire, the tread being formed of tread sections having their forward and rear ends beveled outwardly, and alternating sections having their corresponding ends beveled inwardly and facing the beveled ends of the first mentioned tread sections, and means for supporting the said treads in position on the tire.

2. A tire protector comprising a sectional tread around the tire and consisting of tread sections extending across the peripheral face of the tire and each having its front and rear ends beveled outwardly, and tread sections alternating with the first mentioned sections and having their corresponding ends beveled inwardly and facing the beveled ends of said first mentioned sections, the adjacent beveled ends of the treads being normally slightly spaced apart, and link chains on opposite sides of the tire and having outwardly extending arms in which the tread sections are pivoted.



3. A tire protector comprising a sectional tread around the tire and formed of tread sections having their outer faces curved and having their ends beveled outwardly, the said sections being spaced apart, and tread sections alternating with the first sections and having their ends beveled inwardly from the center of the outer face, the angles formed at the junction of the beveled surfaces of said sections being at the spaces between the first mentioned sections, and link chains on opposite sides of the tire, and having outwardly extending arms supporting the said tread sections.

881,769. ATTACHMENT FOR BOW INSTRUMENTS. JOHN Y. BROWN, Providence, Ky. Filed Sept. 26, 1906. Serial No. 336,313.



1. The combination with a bow instrument, of a sympathetic vibratory device comprising supporting means, and a plurality of vibratory members arranged in parallelism with the major axis of the body of the instrument and extended in advance and in rear of the supporting means and tuned to give an octave.

2. The combination with a bow instrument, of a sympathetic vibratory device arranged within the instrument and comprising a plurality of rods supported intermediate of their ends and forming vibratory members, said members being tuned to give an octave.

3. The combination with a bow instrument, of a sympathetic vibratory device comprising a plurality of rods supported intermediate of their ends and varying in length and tuned to give an octave.

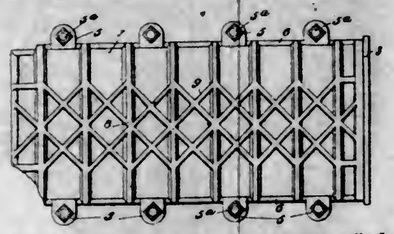
4. The combination with a bow instrument, of a sympathetic vibratory device comprising a pedestal, a support extending laterally from the pedestal, and vibratory means extending in opposite directions from the support and tuned to give an octave.

5. The combination with a bow instrument, of a sympathetic vibratory device comprising a pedestal, a sup-

port mounted on the pedestal and extending from opposite sides thereof, and a plurality of rods mounted between their ends on the support and forming opposite vibratory members, said members being tuned to give an octave.

[Claims 6 to 9 not printed in the Gazette.]

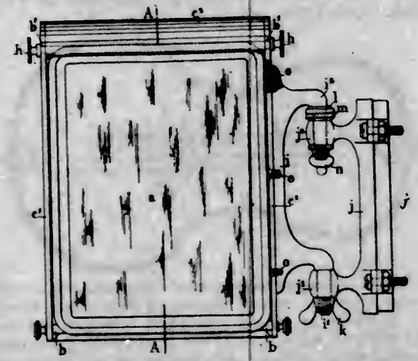
881,770. CULVERT. DAVID C. BOYD, Galion, Ohio. Filed July 8, 1907. Serial No. 382,758.



1. A culvert section of the character described, provided with a series of obliquely disposed ribs, the series extending longitudinally on the exterior of the culvert section and along its uppermost portion and also provided with a series of transverse ribs which intersect the oblique ribs and extend beyond the same to the side edges of the section.

2. A culvert section of the character described arched in cross section and provided on its exterior along both sides of a longitudinal line extending through its uppermost portion with a ridged surface embodying intersecting oblique and transverse ribs, said ridged surface terminating on both sides short of the side edges of the section and lying entirely above the main exterior surface of the section.

881,771. MIRROR FOR MOTOR-VEHICLES. HENRI CAIN, Paris, France. Filed Feb. 21, 1907. Serial No. 358,557.

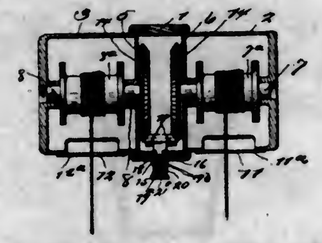


1. A device for use in connection with motor vehicles, comprising a mirror having a frame surrounding the same, a bracket having a curved slot therein, a member carried by said mirror and extending through said slot, means for pivotally supporting the opposite end of the mirror, and means carried by said bracket for securing the same to a portion of the vehicle.

2. A device for use in connection with vehicles, comprising clamping members, sockets carried by one of said members, a mirror, a supporting frame, means for pivotally supporting one end of said mirror within said frame, means for adjustably mounting the opposite end of said mirror within said frame, and means carried by said frame and fitting within sockets for adjusting the position of the mirror and frame.

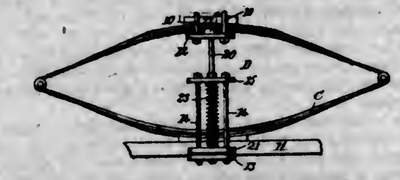
3. A device for use in connection with vehicles, comprising a supporting frame, brackets carried thereby having curved slots therein, a mirror, means for pivotally securing said mirror within said frame, means carried by said mirror and in engagement with said slots for adjusting the inclination of the mirror, clamping members adapted to be secured to a portion of the vehicle, sockets carried by one of said members, means carried by said supporting frame and in engagement with said sockets whereby the position of the frame and mirror may be adjusted, and means adapted to prevent accidental displacement of the frame with respect to the clamping members.

881,772. REEL FOR CLOTHES-LINES. HARRIET CANNEY, Colusa, Cal. Filed Apr. 26, 1907. Serial No. 370,392.



A device of the class described, having a casing, shafts journaled therein, a crank shaft intergeared with the aforesaid shafts, the first-named shafts being equipped with drums, around which a cable is wound, said casing having a recess provided with a reduced extension, a spring-actuated T-shaped locking pin, having a plurality of opposite shoulders and a reduced portion, the reduced extension 17 of the recess being adapted to receive the reduced or narrowest portion of said locking pin, substantially as shown and described.

881,773. VEHICLE-SPRING. JOHN S. CLARK, Island City, Oreg. Filed Aug. 8, 1906. Serial No. 329,683.



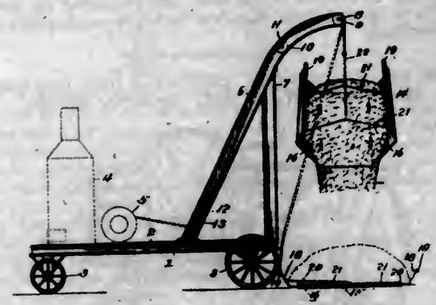
1. The combination with a vehicle spring and its lower support, of brackets extending one from the top of the spring and the other from the said lower support therefor, the brackets located at the central portion of the spring, a frame having a sliding connection with both brackets, and a spring carried by said frame, which spring is placed under compression as the main spring is unduly compressed or expanded.

2. The combination with an elliptical vehicle spring and an upper and a lower bracket extending out from the central portions of the said elliptical spring, of a frame consisting of a lower plate located above the lower bracket, an upper plate located between the two brackets, guide bars secured to the upper plate and loosely passed through the lower plate and bracket, a connecting rod loosely passed through the upper bracket and through the upper and lower plates of said frame, being secured to the lower plate of the frame, and a spring coiled around the connecting rod between the two plates of the frame.

3. The combination with an elliptical vehicle spring, and an upper and a lower bracket extending out horizontally from the central portions of the elliptical spring, of a plate located between the two brackets adjacent to the upper one, a lower plate which lies normally in engagement with the upper face of the lower bracket, guide rods secured to said upper plate, being passed loosely through the lower plate, terminating in heads at their lower ends, a connecting rod having a head at its upper end, which connecting rod is passed loosely through the upper bracket and loosely through the said upper plate and is secured to the lower plate, and a spring coiled around said connecting rod and having bearing against both of said upper and lower plates.

4. The combination with a vehicle spring, of a frame having sliding connection with the spring at its top, being otherwise independent thereof, and an independent spring carried by the said frame, which latter spring is placed under compression whenever the main spring is unduly compressed or expanded.

881,774. LOADING APPARATUS. JOSIAH C. COBB, Washington, D. C. Filed June 10, 1907. Serial No. 378,261.



1. A hoisting platform, comprising a solid central section open at each end, side sections connected thereto, and means for raising the platform bodily and then tilting said platform longitudinally, whereby the contents thereof is discharged through one of said open ends.

2. A loading apparatus, comprising a platform, composed of a material-containing portion open at each end, side sections for retaining the material on the platform movable with respect to the material-containing portion, and means for hoisting said platform, including connections to said sections for first moving the same with respect to the material-containing portion and subsequently raising the platform bodily and then tilting said platform longitudinally, whereby the contents thereof is discharged through one of said open ends.

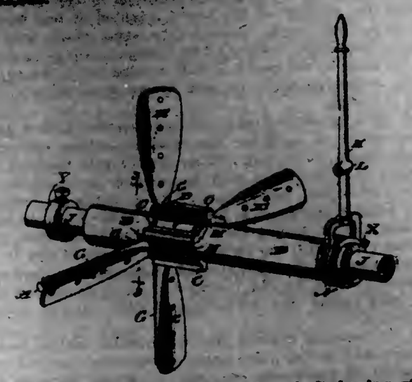
3. A loading apparatus, comprising a platform, composed of a material-containing portion open at each end, side sections for retaining the material on the platform movable with respect to the material-containing portion, means for hoisting said platform, including connections to said sections for first moving the same with respect to the material-containing portion and subsequently raising the platform bodily, and then tilting said platform longitudinally, whereby the contents thereof is discharged through one of said open ends and means for limiting the movement of said section.

4. A chute for loading apparatus, comprising a central flat portion, side sections relatively movable with respect thereto, and hoisting devices connected to the side sections and central portion for first moving the side sections radially with repsect to the central portion and then bodily raising the chute and then tilting said platform longitudinally, whereby the contents thereof is discharged through one of said open ends.

5. A collapsible hoisting platform comprising a plurality of sections hinged together, the sections at opposite sides of said platform having upturned portions.

[Claims 6 to 12 not printed in the Gazette.]

881,775. SCREW-PROPELLER. ROSCOE B. COON, Portland, Oreg. Filed July 2, 1907. Serial No. 382,848.

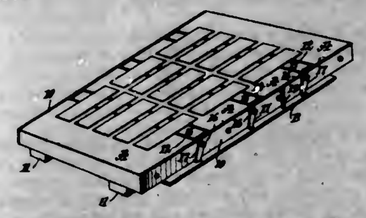


1. The combination of a propeller shaft having rigid right angular arms, propeller blades with sockets and gear wheels on the inner ends of the same mounted to turn on said arms, an outer sleeve inclosing the propeller shaft and having longitudinal slots to give passage to the said arms and rack bars arranged beside the slots and fixed to said sleeve, and means for sliding said sleeve longitudinally over the propeller shaft to adjust or reverse the pitch of the propeller blades.

2. The combination of a propeller shaft having rigid right angular arms, propeller blades with sockets and gear wheels on the inner ends of the same mounted to turn on said arms, an outer sleeve inclosing the propeller shaft and having longitudinal slots to give passage to the said arms, rack bars arranged beside the slots and fixed to said sleeve, means for sliding said sleeve longitudinally over the propeller shaft to adjust or reverse the pitch of the propeller blades, and stops for limiting the throw of the blades.

3. The combination of a propeller shaft having rigid right angular arms, propeller blades with sockets and gear wheels on the inner ends of the same mounted to turn on said arms, an outer sleeve inclosing the propeller shaft and having longitudinal slots to give passage to the said arms, rack bars arranged beside the slots and fixed to said sleeve, means for sliding said sleeve longitudinally over the propeller shaft to adjust or reverse the pitch of the propeller blades, and adjustable stop collars fixed to the shaft and arranged to limit the throw of the sleeve.

881,776. LABEL-PASTING BOARD. LEONHARD DAUM, New York, N. Y. Filed Nov. 18, 1907. Serial No. 401,965.



1. In labeling devices, the combination with a board having a series of openings therein, of lifting members pivoted at said openings to lie in one position in the same plane with the upper face of the board and in another position to extend upward at an angle to the board, the said members being shaped to correspond with the said openings and practically closing the same when in the first mentioned position, and means for simultaneously operating all of said lifting members.

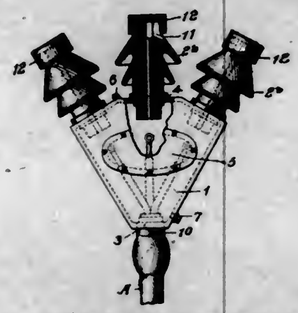
2. In a labeling device, the combination with a board constructed in sections, spaces intervening said sections, of lifting members pivotally mounted in the spaces between the sections of the board, adapted in one position to have their upper faces in the same plane with the upper face of the board and in another position to extend at an angle to the board, a slide carried by the board, and arms connected with the said lifting members and with the said slide.

3. In a labeling device, the combination with a board constructed in sections, the sections having spaces between them, connecting devices for the said sections, and pintles located at the said spaces and journaled in the said connecting members, of lifting members eccentrically secured to the said pintles, the said lifting members in one position having their upper faces in the same horizontal plane with the upper face of the board and in another position extending upward at an angle to the board, a slide carried by the board, and arms connected with the said pintles and with the said slide, for the purpose described.

4. In labeling devices, the combination with a rectangular board having a flat upper surface and provided with a series of transverse openings, of lifting members pivoted at said openings and each extending from one end of an opening to the other end, the said members being adapted when in one position to practically close the openings and when in another position to extend upward at an angle to the board, the said members having flat faces which, when the members are in the first mentioned position, lie in the same horizontal plane with the upper face of the board, and means for simultaneously operating all of the said lifting members.

5. In a labeling device, the combination with a board having openings therein, of lifting members pivotally mounted in the openings and adapted in one position to have their upper faces in the same plane with the upper face of the board, and in another position to extend upward at an angle to the upper face of the board, a slide carried by the board, and means for operating the lifting members from the slide.

881,777. TERMINAL FOR ELECTRIC CABLES. CHARLES W. DAVIS, Edgeworth, Pa., assignor to Standard Underground Cable Company, Pittsburg, Pa., a Corporation of Pennsylvania. Filed Mar. 31, 1906. Serial No. 309,197.



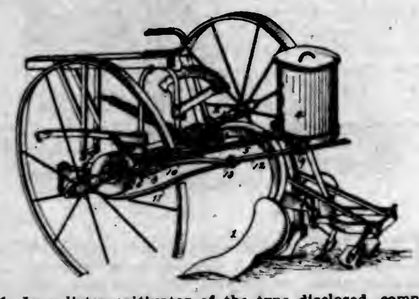
1. In a terminal for an electric cable the combination with a case or shell, of a plug for an outward leading wire, said plug being formed of insulating material molded on said wire and provided with an outwardly and downwardly flaring petticoat and provided with a groove for the reception of a line wire arranged adjacent to one end and above the plane of the said petticoat, and having at its opposite end means for attachment to a support, substantially as described.

2. The combination of a central conducting core and a plug of insulating material formed thereon, such plug being provided with an outwardly and downwardly flaring petticoat and with a groove for the reception of a line wire arranged above the plane of such petticoat, and such plug being inserted in an orifice in a case or shell and forming part of a terminal for an electric cable, substantially as described.

3. A terminal for an electric cable provided with a plug for an outward-leading wire, said plug being formed of insulating material and provided with an opening extending through it in a substantially vertical direction for the reception of a conductor and with a notch at the upper end of said opening into which such conductor may be bent, and a cap fitting over the upper end of said opening in the plug, and when seated forming together with the outer surface of the plug a groove wherein a line wire may be turned, substantially as described.

4. A terminal for an electric cable provided with a plug for an outward-leading wire, said plug being formed of insulating material, and provided with an opening extending through it in a substantially vertical direction for the reception of a conductor and with a lateral notch at the upper end of said opening into which the conductor may be bent, and a cap fitting over the upper end of said opening in the plug, and when seated holding the conductor in position in the notch and protecting the opening in the plug from ingress of moisture, substantially as described.

881,778. CULTIVATOR. CLARENCE R. DEAN, Glen Elder, Kans. Filed Nov. 14, 1907. Serial No. 402,214.



1. In a lister cultivator of the type disclosed, comprising a bracket supporting a hopper, a gear case mounted upon the axle, a tumbling-rod transmitting motion from the ground wheel to the seed dropping mechanism of the hopper, an eye at one side of the aforesaid bracket, and a brace having its rear portion fitted in said eye and having its front portion forked and connected to the said gear case at opposite points.

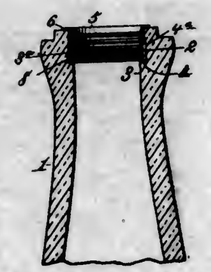
2. In a lister cultivator, comprising a plow, a bracket projected upward from the plow beam and supporting a hopper, a tumbling-rod for transmitting motion from a ground wheel to the seed dropping mechanism coöperating with said hopper, and a sectional gear case housing the gearing connecting the tumbling-rod with the rotatable part connected with the ground wheel, an eye at one side of the aforementioned bracket, a brace having its rear portion loosely fitted in said eye and having its front portion forked, and fastenings securing the sections of the gear case and the front ends of the respective fork members of said brace.

881,779. BOTTLE-CLOSURE. JOHN DICKENS, Passaic, N. J., assignor to The Standard Sheet Metal Company, Passaic, N. J., a Corporation of New Jersey. Filed Sept. 28, 1906, Serial No. 336,622. Renewed Aug. 19, 1907. Serial No. 389,251.

1. A bottle closure having an expansible cup-shaped body portion provided with circumferentially-extending ribs separated by circumferentially-extending grooves, the bottom of said body portion adapted to be seated within the neck of a bottle and constituting a closure therefor.

2. A bottle closure having an expansible body portion provided with circumferentially-extending ribs separated by circumferentially-extending grooves, said body portion terminating at its top in a laterally-extending flange.

3. A metallic bottle closure comprising an expansible cup-shaped body portion open at its top and having the side thereof provided with ribs to form surplus metal so that when the body portion is expanded in the throat of the bottle the metal will readily adjust itself to any irregularities or unevenness in the wall of the throat of the bottle the bottom of said body portion adapted to be mounted in the throat of the bottle and form a closure therefor.



4. A metallic bottle closure having an expansible body portion provided with ribs to form surplus metal so that when the body portion is expanded in the throat of the bottle the metal will readily adjust itself to any irregularities or unevenness in the wall of the throat of the bottle, said body portion terminating at its upper end in a laterally-extending flange.

5. The combination with a bottle having the wall of the throat thereof formed with an annular shoulder, of a metallic closure therefor consisting of a substantially cup-shaped member having the bottom thereof seated upon said shoulder and comprising an expansible body portion having endless ribs separated from each other to provide surplus metal when expanding the body portion so that said body portion will readily adjust itself to any irregularities or unevenness in the wall of the throat of the bottle above the shoulder.

[Claims 6 and 7 not printed in the Gazette.]

881,780. BOTTLE-SEAL. WILLIAM S. DORMAN, Brooklyn, N. Y., assignor to Spring Seal Company, New York, N. Y., a Corporation of Maine. Filed Nov. 12, 1906. Serial No. 343,065.



1. An internal sealing plug provided with and carrying a resilient retainer ring angular in cross section and arranged on and projecting upwardly from the top face of the plug and at its upper edge formed with an out turned locking flange, substantially as described.

2. A bottle seal comprising a sealing plug provided with a retaining ring resting thereon and extending upwardly therefrom and at its lower edge formed with an inturned flange and at its upper edge having an out turned locking flange.

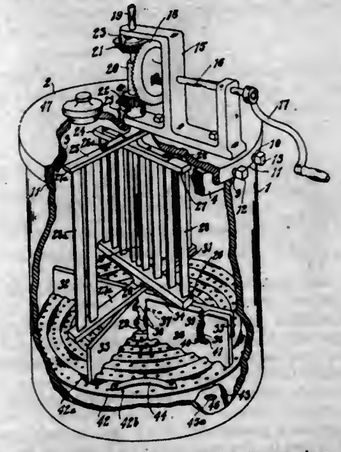
3. A bottle seal comprising a metal cap, a sealing medium disk secured thereto and depending therefrom, and a resilient upwardly projecting retaining ring secured to and arranged on the cap and formed with an inturned bottom flange resting on the cap and with an upper outturned horizontal locking flange normally projecting outwardly beyond the cap.

4. A bottle seal comprising a sheet metal cap, a sealing medium disk secured thereto and depending therefrom, and an upwardly projecting resilient split retaining ring resting on the top face of the cap and at one end secured thereto, said ring having an upper projecting locking flange, and at its free end an inwardly projecting pull piece having a raised inner edge and a dished portion forming a finger hold.

5. A receptacle closure comprising a sealing plug having a sealing medium and a metal top, a split retainer ring resting on and rising from said metal top, and an upwardly extending ligament connecting said ring to said top, the upper locking edge of said retainer ring extending outwardly beyond the junction between said ring and said ligament, substantially as described.

[Claims 6 to 11 not printed in the Gazette.]

881,781. COMBINATION CHURN AND BUTTER-WORKER. ARTHUR S. EASTMAN, Morrow, Ohio, assignor of one-half to George W. Hengst, Norwood, Ohio. Filed July 22, 1907. Serial No. 384,911.



1. In a combination churn and butter worker, a vessel, a rotatable dasher mounted therein, and a series of butter working paddles adapted to rotate simultaneously with said dasher, substantially as and for the purposes herein specified.

2. In a combination churn and butter worker, a vessel, a shaft journaled vertically therein, a dasher mounted on said shaft, a diaphragm below said dasher adapted to receive the butter formed by the operation of said dasher, and a series of butter working paddles adjacent to said diaphragm and adapted to rotate simultaneously with said dasher and said shaft, substantially as and for the purposes herein specified.

3. In a combination churn and butter worker, a vessel, a shaft journaled vertically therein, a dasher mounted upon said shaft, a diaphragm mounted in said vessel and spaced apart from the bottom of said vessel, and a series of butter working paddles adjacent to said diaphragm and adapted to rotate simultaneously with said dasher, substantially as and for the purposes herein specified.

4. In a combination churn and butter worker, a vessel, a dasher rotatably mounted therein, a series of butter working paddles mounted therein below said dasher, and adapted to rotate simultaneously therewith, a diaphragm mounted in said vessel below said butter working paddles, a trip mounted on said diaphragm adapted to be engaged by one of said paddles, the other paddles of said series being variously spaced from said diaphragm and a yieldable mounting for the paddle by which said trip is adapted to be engaged, substantially as and for the purposes herein specified.

5. In a combination churn and butter worker, a vessel, a dasher rotatably mounted therein, butter working paddles rotatably mounted therein, a lid, operating mechanism for said dasher and said paddles mounted upon said

lid, and adjustable lugs on said lid adapted to engage with the concave surface of said vessel to fix the position of said dasher and paddles and the operating mechanism therefor, substantially as and for the purposes herein specified.

[Claims 6 to 16 not printed in the Gazette.]

881,782. INTRENCHING-TOOL. GEORGE F. ELLIOTT, U. S. Marine Corps. Filed Apr. 24, 1907. Serial No. 370,072.



1. The combination with a handle provided with an annularly inclosed recess, of a blade carrying a rotatably mounted member contained within said recess and completely encircled by the peripheral wall thereof, and means for locking said member in any one of several adjusted positions, substantially as described.

2. The combination with a handle provided with an annularly inclosed recess, of a blade carrying a rotatably mounted member contained within said recess and completely encircled by the peripheral wall thereof, and means for locking said member in any one of several adjusted positions, comprising a locking tooth carried by said handle and coöperating with notches formed on said rotatably mounted member, substantially as described.

3. The combination with a handle provided with an annularly inclosed recess, of a blade carrying a rotatably mounted member contained within said recess and completely encircled by the peripheral wall thereof, and means for locking said member in any one of several adjusted positions, comprising a locking tooth carried by said handle and coöperating with notches formed on the periphery of said rotatably mounted member, substantially as described.

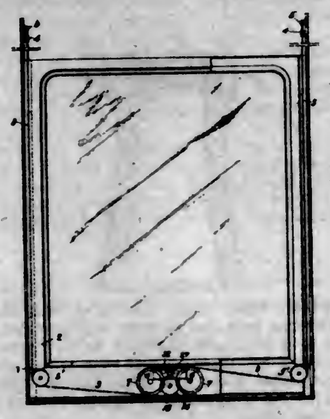
4. The combination with a handle provided with an annularly-inclosed recess at its lower end, of a plate carrying a rotatably-mounted member contained within said recess and completely encircled by the wall thereof, and means for locking said member in any one of several adjusted positions, comprising a longitudinally sliding locking tooth mounted on said handle and coöperating with notches formed on the periphery of said rotatably-mounted member, substantially as described.

5. The combination with a handle, of a socket member therefor terminating in an annular strap, a blade carrying an annular rotatably mounted member inclosed within and snugly bearing against said strap and completely encircled by the peripheral wall thereof, and means for locking said member in any one of several adjusted positions, substantially as described.

[Claims 6 to 14 not printed in the Gazette.]

881,783. SASH-BALANCE. EDMUND M. EBB, Jersey City, N. J., assignor to Robert M. Dixon, East Orange, N. J. Filed Aug. 20, 1906. Serial No. 331,233.

1. In window construction, in combination, a sliding sash, suspending means therefor, a plurality of drums about which are wound said suspending means, arbors for rotatively supporting said drums, a member engaging each of said drums to hold the same against movement, and means for withdrawing said members from engagement with said drums whereby they are free to move to carry the sash in an upward direction.



2. In window construction, in combination, a sliding sash, suspending means therefor, a plurality of drums about which are wound said suspending means, arbors for rotatively supporting said drums, a member engaging each of said drums to hold the same against movement, a spring for maintaining said members in engagement with said drums, and common means for withdrawing said members from engagement therewith whereby said drums are free to rotate under the influence of their springs to carry the sash in an upward direction.

3. In window construction, in combination, a sliding sash, suspending means therefor, a plurality of drums about which are wound said suspending means, a plurality of members journaled upon arbors supported in said sash, each of which supports one of said drums, a spring connecting each of said members with the drum mounted thereon, a common means for rotating said members to adjust the tension of said springs, a plurality of spring-pressed members each of which engages one of said drums and holds the same against movement, and a finger lever common to both of said spring-pressed members adapted to retract the same and permit said drums to rotate under the influence of their springs.

4. In window construction, in combination, a sliding sash, suspending means therefor, a plurality of drums about which are wound said suspending means, a plurality of gear wheels journaled upon arbors supported in said sash, each of which rotatively supports one of said drums, a spring connecting each gear wheel with its drum, a pinion meshing with each of said gear wheels, and worm mechanism for rotating said pinion whereby said springs, through said gear wheels, may be given any desired degree of tension.

5. In window construction, in combination, a sliding sash, suspending means therefor, a plurality of drums carried by said sash about which are wound said suspending means, a plurality of arbors each of which carries rotatively one of said drums, a gear wheel journaled upon each of said arbors, a spring connecting each gear wheel with one of said drums, a pinion journaled upon said sash and meshing with each of said gear wheels, worm mechanism adapted to rotate said pinion whereby said gear wheels are rotated and the springs connected therewith given any desired degree of tension, a plurality of members each of which engages teeth provided upon one of said drums and holds said drums against movement, a spring common to both of said members for holding the same in engagement with said drums, and a finger lever for retracting said spring-pressed members whereby they are disengaged from said drums and said drums are permitted to rotate freely under the influence of the springs connected therewith.

881,784. CLOTHES-DRIER. MORTON B. FITTS, Minneapolis, Kans. Filed June 19, 1907. Serial No. 379,746.

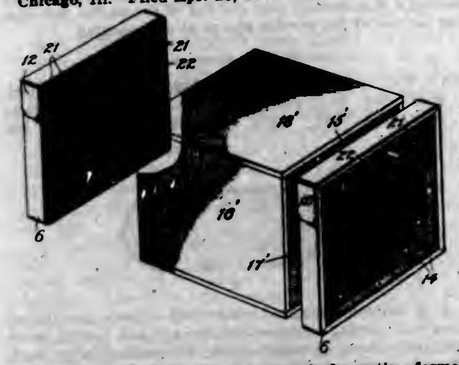


1. The combination with bars 7 and a fixed object to which they are secured, said bars being arranged vertically and having an outwardly bent portion 7^a at the top, a transverse bar 4 which is slidably connected with the bars 7, and a clothes-supporting line connected with said bar 4, substantially as described.

2. The combination, with suspending ropes, of a clothes-hanger proper comprising a wire body having parallel side portions and end loops that lie above the plane of the body, and hooks attached to and extending laterally from said loops and adapted for engagement with the loops of the adjacent hanger, substantially as described.

3. The combination, with parallel suspending ropes of a hanger proper formed of wire having parallel side strands 8, and end portions projecting upward and inward and provided with loops for attaching them to the hangers and suspending them from the said ropes, and pendent hooks 10^a connecting such loops with the body strands or loops, and supporting the latter substantially as described.

881,785. METAL-BOUND BOX. ELLSWORTH E. FLORA, Chicago, Ill., assignor of one-half to W. E. Rothermel, Chicago, Ill. Filed Apr. 26, 1907. Serial No. 370,484.



1. A metal-bound box comprising a body-portion formed of sheet-material, sheet-metal binding-strips formed with single trough-shaped sections, in which the edge-portions of the sheet-material are contained and secured, each said section being divided transversely at intervals along the inner side of the trough at points of bending it to conform to said body-portion, and the divisions of the trough-sections having flanges projecting at right-angles thereto immediately from their edges to form box-end abutments, and box-ends abutting against and secured to said flanges.

2. A metal-bound box comprising a body-portion having its sides, bottom and lid formed of separate sections of sheet-material, binding-strips composed of sheet-metal bent into single trough-shaped sections, in which the edge-portions of the sheets are contained and secured, as by eyelets, each trough-section being divided transversely at intervals along its inner side at points of bending it to conform to said body-portion, and the divisions of the trough-sections having flanges projecting at right-angles thereto immediately from their edges, and box-ends abutting against and secured to said flanges.

3. A metal-bound box comprising a body-portion formed of sheet-material, sheet-metal binding-strips formed with single trough-shaped sections having end-lips, in which sections the edge-portions of the sheet-material are contained and secured, each said section being divided transversely at intervals along the inner side of the trough at points of bending it to conform to said body-portion, and the divisions of the trough-sections having flanges projecting at right-angles thereto immediately from their edges to form box-end abutments, and box-ends abutting against and secured to said flanges.

881,786. COPY-HOLDER. JAMES A. GARDENHIRE, Nashville, Tenn., assignor of one-half to George F. Carter, Nashville, Tenn. Filed Oct. 13, 1906. Serial No. 338,792.



1. In a copy holder, the combination with a supporting frame, of a roller journaled thereon, a swinging carrier frame pivoted to the supporting frame, another roller coacting with the first-mentioned roller, and bearing elements for the second roller pivotally mounted on the carrier frame.

2. In a copy holder, the combination with a supporting frame, of a roller journaled thereon, a swinging carrier frame pivoted to the supporting frame, a spring connecting the frames for urging the latter toward the former, another roller coacting with the first-mentioned roller, and bearing elements for the second roller pivotally mounted on the carrier frame.

3. In a copy holder, the combination with a support, of a roller journaled thereon, spaced rollers coacting with the first mentioned roller, a common bearing element for the spaced rollers, and a swinging connection between the element and the support that permits the relative movement of said spaced rollers with respect to the first mentioned roller.

4. In a copy holder, the combination with a support, of a roller journaled thereon, spaced rollers coacting with the first mentioned roller, a common bearing element for the spaced rollers, a swinging carrier connection between the element and the support that permits the relative movement of said spaced rollers with respect to the first mentioned roller, and a spring for urging the carrier toward the support.

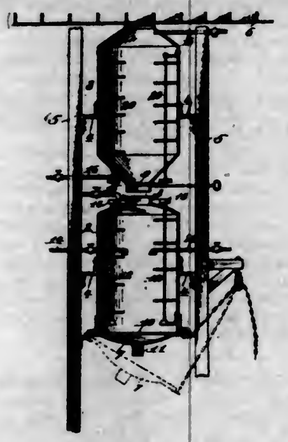
5. In a copy holder, the combination with a support, of a roller journaled thereon, a carrier movably mounted on the support, a bearing element movably mounted on the carrier, and a plurality of rollers journaled on the bearing element and coacting with the first-mentioned roller.

[Claims 6 to 14 not printed in the Gazette.]

881,787. METHOD OF EXTRACTING TURPENTINE FROM WOOD. JOSHUA G. GARDNER, Jacksonville, Fla., assignor to Pure White Turpentine Company, Jacksonville, Fla., a Corporation of Florida. Filed Mar. 11, 1905. Serial No. 249,646.

1. A method which consists in forming a mass of sawdust or ground up wood in a dense body and confining the

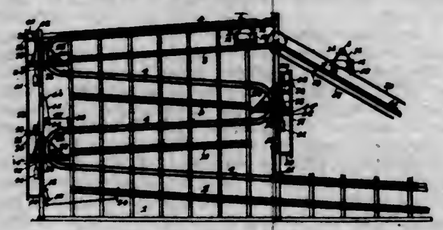
same vertically and then during such confinement forcing steam downwardly entirely through the mass.



2. A method which consists of forming a mass of sawdust or ground up wood into a dense body, confining the mass in a vertical direction, forcing steam downwardly entirely through the mass and opening up paths in the mass for the passage of steam therethrough.

3. A method which consists in forming a mass of sawdust or ground-up wood into a vertically confined body and then forcing steam through the mass solely in a downward direction.

881,788. PLEASURE-RAILWAY. EDWARD F. GARDNER and AUGUST J. SCHMIDT, Scranton, Pa. Filed May 31, 1907. Serial No. 376,587.



1. In a railway of the class described, the combination of a plurality of spaced oppositely inclined track sections located at different elevations and arranged in substantially the same vertical plane, and an elevator movable vertically back and forth between the sections for transferring a car from an upper section of the track to a lower section thereof to cause the car to make a continuous passage from the top to the bottom of the railway.

2. In a pleasure railway, the combination of a plurality of spaced inclined track sections arranged at different elevations, an elevator movable vertically back and forth between the sections of the track to transfer a car from an upper section of the track to a lower section thereof to cause the car to make a continuous trip from the top to the bottom of the railway, and automatically operated means for returning the elevator from the lower section of the track to the upper section thereof.

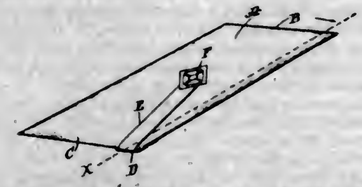
3. In a railway of the class described, the combination of a plurality of spaced inclined track sections arranged at different elevations, an automatically operable elevator movable back and forth between the track sections for transferring a car from an upper section of the track to a lower section thereof to cause the car to make a continuous trip from the top to the bottom of the railway, locking mechanism for holding the elevator at the lower section of the track, and means operable by the car for tripping the locking mechanism to release the elevator.

4. In a railway of the class described, the combination of a plurality of spaced inclined track sections arranged at different elevations, an automatically operable elevator movable back and forth between the track sections for transferring a car from an upper section of the track to a lower section thereof to cause the car to make a continuous trip from the top to the bottom of the railway, a catch arranged to automatically engage the elevator for holding the same at the lower section of the track, and a trip lever arranged in the path of the car and connected with the catch for releasing the elevator.

5. In a railway of the class described, the combination of a continuous hanger track provided with a plurality of portions arranged at different elevations and having connecting curves or bends extending downwardly from the upper portions of the track to the lower portions thereof, a car provided with a hanger to run on the said track, and yieldable means located at the curved portions or bends of the track and arranged to receive the car for lowering the same from an upper portion of the track to a lower portion thereof.

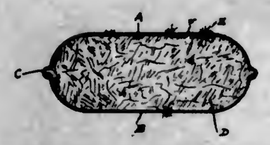
[Claims 6 to 22 not printed in the Gazette.]

881,789. PACKET FOR BRAIDS, LACES, AND OTHER NARROW FABRICS. PERCY GARDNER, New York, N. Y., assignor to Gardner & Highet Company, New York, N. Y., a Corporation of New York. Filed Mar. 1, 1906. Serial No. 303,666.



As an improved article of commerce, a braid packet, consisting of an envelop permanently closed at one end, and a package of braid confined within said envelop with one end passed through an opening in the opposite end of said envelop and extended outside the latter, and means securing said end to the outer face of the envelop, the end of the envelop through which said end of the braid passes having a flap closable over the end of the packet and closing the end of the envelop except at said opening.

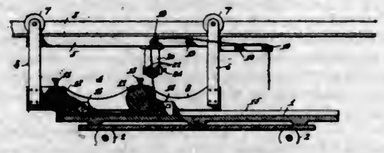
881,790. TOBACCO-MOISTENER. JAMES P. GATES, Milwaukee, Wis., assignor of one-half to John Glisch, Milwaukee, Wis. Filed June 20, 1907. Serial No. 379,833.



1. A tobacco moistener comprising a loose unattached receptacle having substantially flat top and bottom walls and imperforate rounded sides interlocking with each other to form a permanently closed receptacle, said top and bottom walls being perforated and said receptacle containing a body of absorbent material not subject to decay, such as asbestos or mineral wool.

2. A tobacco moistener comprising a loose unconnected receptacle having substantially flat top and bottom walls and with a smooth surface and without corners or projections rounded sides interlocking with each other to form a permanently closed receptacle, said top and bottom walls being perforated and said receptacle containing a body of absorbent material not subject to decay, such as asbestos or mineral wool, the absorbent material being permitted to extend in light feathery strings through some of the openings, whereby the moisture carried by said material is distributed both by evaporation through the perforations and by capillary attraction and by evaporation from the outwardly projecting portions.

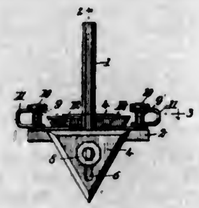
881,791. APPARATUS FOR MANUFACTURING WIRE-GLASS. ALBAN GESSNER, Sergeant, Pa. Filed Jan. 22, 1907. Serial No. 353,478.



1. The combination of a table, track rails above the table, a carriage mounted to travel on the track rails, pressing rolls in the lower portion of the carriage arranged to travel over the table, and a series of rollers in the upper portion of the carriage constituting a movable surface trellis-sheet support.

2. The combination of a table, side rails thereon, a carriage mounted to travel over the table, pressing rolls in said carriage arranged to engage said side rails, and plows secured to the sides of the carriage in advance of the pressing rolls and shaped to engage and be guided by the side rails.

881,792. STYLUS FOR TALKING-MACHINES. SAMUEL GOLDFADEN, New York, N. Y. Filed Dec. 9, 1907. Serial No. 405,794.



1. A stylus for talking machines, having a plurality of points adapted to trace the record, means to adjust the stylus so that one point is substituted for another, and means which bears on the periphery of the stylus and thereby holds rigid the point which is in operative position.

2. A stylus for talking machines, having a plurality of points, a body having a shank adapted to be connected to the diaphragm of the talking machine, the stylus being pivoted to the said body, and means which bears on the periphery of the stylus to secure it in a predetermined position.

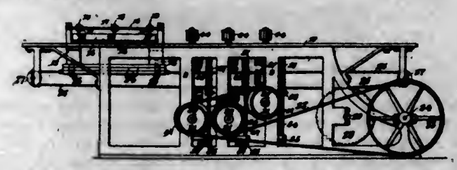
3. A stylus for talking machines, having a plurality of points spaced apart on its periphery, a body having a shank adapted to be connected to the diaphragm of the talking machine, the stylus being pivoted to the said body, and means which bears on the periphery of the stylus to secure it in a predetermined position.

4. A stylus for talking machines, having a plurality of points spaced apart on its periphery, a body having a shank adapted to be connected to the diaphragm of the talking machine, the stylus being pivoted to the said body, means to secure the stylus against the said body, and means which bears on the periphery of the stylus and holds it rigid.

5. A stylus for talking machines, having a plurality of points, a body having a shank adapted to be connected to the diaphragm of the talking machine, a slot in the stylus means to pivot the stylus to the said body in a plurality of positions along the said slot, and means to secure the stylus rigidly to the said body.

[Claims 6 to 17 not printed in the Gazette.]

881,793. WOOD-MOLDING MACHINE. FREDERICK D. GREEN, Florence, Ala., assignor of one-half to William T. Adams, Corinth, Miss. Filed Aug. 3, 1906. Serial No. 329,065.



1. In a machine of the character described, the combination with a support, of work holding means movably mounted thereon, a carriage movable transversely of the path of movement of the work holding means, upper and lower guides for the carriage, a driving shaft located between and longitudinally of the guides, a countershaft journaled on the carriage and having a cutter, and friction gears connecting the shafts, one of the gears being slidably mounted on the driving shaft and movable with the carriage.

2. In a machine of the character described, the combination with a movable work-carrier, of a driving shaft disposed transversely of its path of movement, a carriage movable longitudinally of the shaft, a countershaft on the carriage, friction gears connecting the driving and countershafts, one of said gears being movable on the driving shaft, yielding tension means associated with the gears for maintaining them in frictional engagement, and a cutter mounted on the countershaft.

3. In a machine of the character described, the combination with a movable work-carrier, of a carriage movable transversely of its path of movement, a shaft journaled on the carriage, and having a cutter, a friction gear carried by the shaft, a driving friction gear associated with the first mentioned friction gear, and movable with the carriage, said latter gear being also capable of a limited movement with respect to said carriage, and yielding means for effecting such limited movement and insuring a proper frictional engagement between the gears.

4. In a machine of the character described, the combination with a table, of a work and a pattern-carrier mounted thereon, upper and lower guides located beneath the table transversely of the carriers, a driving shaft located longitudinally of and between the guides, a carriage slidably mounted on the guides and driving shaft, a countershaft journaled on the carriage and projecting above the table, cutters mounted on the upper end of the shaft, and gearing connecting the shafts, one of the gears being movable with and journaled on the carriage between the guides, said gear being slidable on the driving shaft but held against rotation thereon.

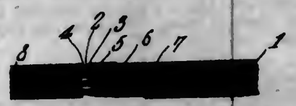
5. In a machine of the character described, the combination with a movable work-carrier, of a driving shaft disposed transversely of its path of movement, a carriage movable longitudinally of the shaft, a countershaft on the carriage, friction gears connecting the driving and countershafts, one of said gears being movable on the driving shaft, a tension device yieldingly mounted on the carriage and associated with the gears for maintaining the same in frictional engagement, and a cutter mounted on the countershaft.

[Claims 6 to 8 not printed in the Gazette.]

881,794. BOOK. JOHN GRIESINGER, Los Angeles, Cal., assignor of one-half to William F. Wismar, Los Angeles, Cal. Filed Apr. 4, 1907. Serial No. 366,357.

1. A book having its leaves provided with binding hinges, each of a stronger material than that of the body

of the leaf and overlapping the rear edge of the leaf and having the overlapping portion of each leaf at a different distance from the rear edge of the book than that of the next adjoining leaf on either side, and filling strips of a width less than the distance from the rear edge of the leaves having the shortest hinges to the rear edge of said hinges.



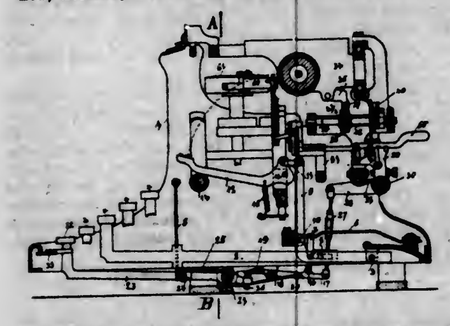
2. A book comprising a number of groups of leaves, each group being made up of a number of suitable leaves, flexible hinges therefor of other material than that of the leaves and united thereto by overlapping the rear edges of the leaves, with the overlapping portions of each leaf and its hinge at a different distance from the rear edge of the book than that of the overlapping portion of the next adjacent leaf and its hinge, all the hinges of a group being brought together back of the rearmost edge of the longest leaf of the group, and filling strips between the assembled groups of hinges beyond the rear edges of the leaves.

3. A book comprising paper leaves, cloth hinges therefor, each of different width than that of the next adjacent hinge and united to the rear edge of the leaf, and filling strips between the rear ends of the cloth hinges beyond the rear edges of all the leaves, the said filling strips being all of the same width but of less width than the free portions of the shortest hinges.

4. A book comprising a number of groups of leaves with each group made up of leaves and flexible hinges therefor united by overlapping the rear edges of the leaves, with the rear edges of the several leaves of a group at progressively greater distances from the rear edge of the book, the groups of leaves being assembled into the form of a book with the shortest hinge of one group next adjacent to the longest hinge of the next group.

5. A book comprising a number of groups of leaves with each group made up of leaves and flexible hinges therefor united by overlapping the rear edges of the leaves, with the rear edges of the several leaves of a group at progressively greater distances from the rear edge of the book, the groups of leaves being assembled into the form of a book with the shortest hinge of one group next adjacent to the longest hinge of the next group, and filling strips all of the same width but of less width than the shortest hinge.

881,795. TYPE-WRITER. PAUL GRÜTZMANN, Stettin, Germany, assignor to Nähmaschinen-und Fahrräder-Fabrik Bernhard Stoewer Actien-Gesellschaft, Stettin-Grünhoff, Germany. Filed Aug. 9, 1907. Serial 387,794.



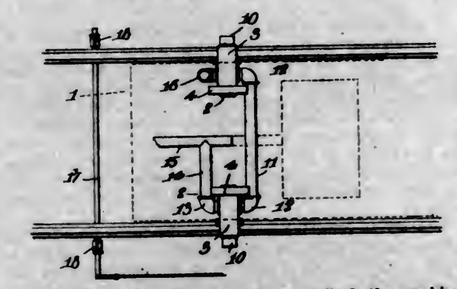
1. In a type-writer, the combination with means for shifting the ribbon to cover the printing place during the print of a type, of a rod longitudinally movable in the machine frame and adapted to actuate said means, a carriage feeding device, a lever mounted to rock in the machine frame and connected with the key-controlled mechanism and adapted to operate said carriage feeding device, and a part on said lever and adapted to be placed at will in either of two positions relatively thereto for transmitting in the one position the motion from said lever to said rod and for remaining in the other position out of contact with same.

2. In a type-writer, the combination with means for raising the ribbon to cover the printing place during the print of a type, of a rod longitudinally movable in the machine frame and adapted to actuate said means, a carriage feeding device, a lever mounted to rock in the machine frame and connected with the key-controlled mechanism and adapted to operate said carriage feeding device, and a part on said lever and adapted to be placed at will in either of two positions relatively thereto for transmitting in the one position the motion from said lever to said rod and for remaining in the other position out of contact with same.

3. In a type-writer, the combination with means for shifting the ribbon to cover the printing place during the print of a type, of a horizontal rod longitudinally movable in the machine frame and adapted to actuate said means, a carriage feeding device, a lever mounted to rock in the machine frame and connected with the key-controlled mechanism and adapted to operate said carriage feeding device, a plate hinged at one end to said lever, a projection on said lever, and a spring-pressed handle hinged to the other end of said plate and provided with two notches into either of which said projection can engage, so that said plate in its one position can actuate said horizontal rod and in its other position can not.

4. In a type-writer, the combination with means for raising the ribbon to cover the printing place during the print of a type, of a horizontal rod longitudinally movable in the machine frame and adapted to actuate said means, a carriage feeding device, a lever mounted to rock in the machine frame and connected with the key-controlled mechanism and adapted to operate said carriage feeding device, a plate hinged at one end to said lever, a projection on said lever, and a spring-pressed handle hinged to the other end of said plate and provided with two notches into either of which said projection can engage, so that said plate in its one position can actuate said horizontal rod and in its other position can not.

881,796. AIR-BRAKE ATTACHMENT AND TRIPPING MECHANISM THEREFOR. GEORGE P. HANKS, Wilkes-Barre, Pa. Filed Sept. 12, 1907. Serial No. 392,543.



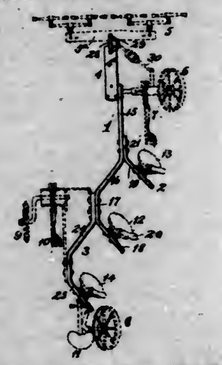
1. In a device of the character described, the combination of two upright supporting frames adapted to be applied under a locomotive, horizontally disposed stop-cocks arranged in said frames, said cocks having laterally projecting journals, gear wheels fixed to the outer ends of the journals, means for establishing communication between said cocks, gears journaled in the supporting frames to intermesh with said first mentioned gears, operating levers connected with said last mentioned gears, means for connecting one of the stop-cocks with the brake pipe of the locomotive, and tripping mechanism adapted to be arranged on the track for engaging the free ends of the operating levers.

2. In combination with a locomotive, vertically disposed supporting frames arranged under the locomotive, horizontally disposed stop-cocks arranged in the frames, operating levers pivotally sustained by the frames, the lower ends of the levers projecting below the same, means for establishing communication between the stop cocks, means for connecting one of the cocks with the train pipe of the locomotive, and tripping mechanism adapted to be arranged along the track and set by the danger signal for engaging the free ends of the operating levers, with means for opening the stop cocks when the operating levers are engaged by the tripping mechanism.

3. In combination with a locomotive, two vertically disposed supporting frames sustained under the same, horizontally disposed stop-cocks arranged in the frames, said cocks having laterally projecting journals adapted to be received by the frame, a gear wheel fixed to one of the journals of each of the stop cocks, tripping mechanism adapted to be set by the danger signal arranged along the track, and means sustained or carried by the frames and coacting with said gears for opening the stop-cocks, said means being operated by the tripping mechanism, with means for connecting one of the stop-cocks with the train pipe of the locomotive.

4. In combination with a locomotive, supporting frames sustained under the same, horizontally disposed stop-cocks sustained by the frames, said cocks having journals at their ends, a gear fixed to one of the journals of each of the stop-cocks, means for establishing communication between the stop-cocks, axles journaled in the frames under the stop-cocks, gears fixed to said axles in position to intermesh with said first-mentioned gears, operating levers fixed to the outer ends of the axle, the free ends of said levers projecting below the supporting frames, means for connecting one of the stop-cocks with the brake pipe of the locomotive, and tripping mechanism arranged along the track and adapted to be set by the danger signal for engaging the free ends of the operating levers.

881,797. DISK PLOW. CLEMENT A. HARDY, Chicago, Ill. Filed Apr. 10, 1905. Serial No. 254,691.



1. In a disk plow, having a front furrow wheel, a rear furrow wheel and a land wheel, a framework comprising a draft bar or frame and a rearwardly extending disk-supporting bar or frame rigidly secured to and adjustable longitudinally of the draft bar or frame, in combination with a plow disk situated substantially in the central vertical longitudinal plane of travel of the machine, said rearward extending disk-supporting bar or frame being adapted to have a supplemental plow disk connected thereto in front of the aforesaid plow disk, and adapted to have a second supplemental plow disk secured thereto in rear of the latter, substantially as set forth.

2. In a disk plow, the combination of the draft frame or bar 4, the disk frame bar 1 adapted to be secured to the draft bar 4 in either of several positions longitudinal of the said draft bar and having the rear incline part 18 adapted to support a plow disk and the oppositely inclined part 16 in front of the plow disk, means connected to the frame bar 1 adapted to carry a plow disk in front of the part 18, means connected to the part 18 adapted to carry a plow disk, and a suitable land wheel and furrow wheel for supporting the said parts, substantially as set forth.

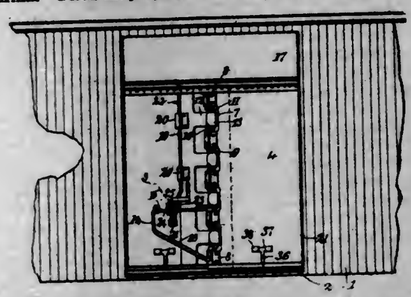
3. In a disk plow, the combination of the draft bar or frame 4, the furrow wheel connected thereto, the disk supporting frame beam 1 rigidly secured to the bar or frame 4 and having the inclined part 18 at the rear and the oppositely inclined part 16 between the rear and front ends, the disk supporting frame bar 2 detachably secured to the forward part of the bar 1 and having the inclined part 19 approximately parallel to the inclined part 18, a furrow wheel behind the frame bar 1, and the land wheel, substantially as set forth.

4. In a disk plow, the combination of the draft bar or frame, a front furrow wheel supported on said draft bar or frame, a forward plow disk, a frame bar for said disk, a second rear plow disk, a frame bar for the rear disk extending continuously therefrom forward to the draft bar or frame and rigidly secured thereto independently of the front furrow wheel and longitudinally adjustable thereon and adapted to have the frame bar of the forward disk detachably connected to it rigidly, a rear furrow wheel detachably connected to the second aforesaid frame bar, and a suitable land wheel, substantially as set forth.

5. In a disk plow, the combination of the draft bar or frame adapted to have the draft animals connected thereto, a front furrow wheel supported on said draft bar or frame, a forward plow disk, a frame bar for said disk, a second rear plow disk, a frame bar for the rear disk extending continuously therefrom forward to the draft bar or frame and rigidly secured thereto and longitudinally adjustable thereon and adapted to have the frame bar of the forward disk detachably connected to it rigidly, substantially as set forth.

[Claims 6 to 16 not printed in the Gazette.]

881,798. CAR-DOOR. GILBERT O. HELVIG, Dawson, Minn. Filed May 9, 1907. Serial No. 372,655.



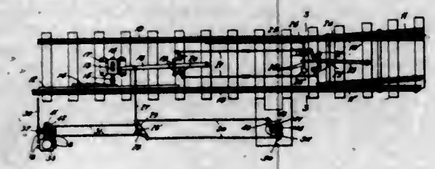
1. In combination, a pair of swinging doors overlapping at their free edges when closed, a rotatable locking bar attached to one of said doors and affording means for latching said doors together, a third door coöperating with said first doors to close the opening of the doorway, a locking bolt for latching said third door, and a member for locking both said locking bar and locking bolt against movement.

2. In combination, a swinging door having a hook plate near the free edge thereof, a second swinging door overlapping the first, a rotatable locking bar attached to said second door and having cranks adapted to engage said hook plate, a third door overlapping the upper edges of said first doors, a sliding and rotatable bolt mounted on one of said first doors and engaging said third door to lock the same, said locking bolt having a lateral finger, a lever carried by said locking-bar, and means moving over said finger and said lever and locking the same against movement.

3. In combination, a swinging door having a hook plate near the free edge thereof, a second swinging door meet-

ing the first, a rotatable locking bar attached to said second door and having cranks adapted to engage said hook plate, a third door attached to the upper edge of the doorway and meeting the upper edge of said first door, a sliding and rotatable bolt mounted on said first door and engaging said third door to lock the same, said bolt having a handle adapted to lie against the face of said first door, a lever carried by said locking bar and adapted to lie against the face of said first door adjacent to said handle, and a sliding member attached to said first door and affording means for holding said handle and said lever against the face thereof.

881,799. RAILWAY-SWITCH. PHILIP D. HIBNER, Seattle, Wash. Filed May 31, 1907. Serial No. 376,580.



1. The combination with a railway-track provided with switch-points, mechanism connected with said points and including a pin which is normally in inoperative position, a car, means actuated by a wheel of the car for disposing the pin in operative position, a bar swinging upon the car, means for alternately actuating said bar for effecting the alternate movement of the switch points, and means for locking said bar in either of its adjusted positions.

2. The combination with a railway-track provided with switch-points, mechanism connected with said points and including a pin which is maintained normally in inoperative position, a car, means actuated by the wheel of the car for disposing the pin in operative condition, means for locking the switch-points in set positions, a bar swinging upon the car whereby the pin is alternately engaged for effecting the alternate movements of said switch-points, and means for locking said bar in either of its adjusted positions.

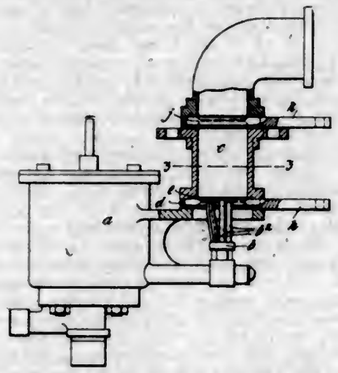
3. The combination with a railway-track provided with switch-points, mechanism connected with said points and including a pin which is normally in inoperative position, a car, and means actuated by a wheel of the car for elevating the pin into operative condition, of mechanism upon the car whereby the pin is engaged for effecting the movements of said switch-points, such mechanism comprising a vertical spindle provided with a horizontal bar at its lower end and arranged for rotation, a blade secured to one end of said bar, a spring serving to retain the spindle in its uppermost position, means for depressing the spindle, and means for effecting the rotation of the spindle.

4. The combination with a railway-track provided with switch-points, mechanism connected with said points and including a pin which is normally in inoperative position, a car, means actuated by a wheel of the car for elevating the pin into operative condition, and means for locking the switch-point in set positions, of mechanism upon the car whereby the pin is engaged for effecting the movements of said switch-points, such mechanism comprising a vertical spindle provided with a horizontal bar at its lower end and arranged for rotation, a blade secured to one end of said bar, a spring serving to retain the spindle in its uppermost position, means for depressing the spindle, and means for effecting the rotation of the spindle.

5. The combination with a railway-track provided with switch-points, mechanism connected with said points and including a pin which is normally in inoperative position, a car, means actuated by a wheel of the car for elevating the pin into operative condition, and means for locking the switch-point in set positions, of mechanism upon the car whereby the pin is engaged for effecting the movements of said switch-points, such mechanism comprising a vertical spindle provided with a horizontal bar at its lower end and arranged for rotation, a blade secured to one end of said bar, a spring serving to retain the spindle in its uppermost position, means including a lever for depressing the spindle, means for effecting the rotation of the spindle, and a rack provided with notches arranged to secure the spindle in various rotary positions.

[Claims 6 to 14 not printed in the Gazette.]

881,800. CARBURETER FOR INTERNAL-COMBUSTION ENGINES. SIDNEY A. HORSTMANN, Bath, England, assignor of one-sixth to Albert Horstmann, one-sixth to Gustav Otto Henry Horstmann, one-sixth to Ernst Hermann Horstmann, one-sixth to William Thomson Edgar, Bath, England, and one-sixth to R. A. Lister & Company, Limited, Dursley, England. Filed Dec. 3, 1906. Serial No. 346,140.



1. In a carbureter for internal combustion engines, the combination with a mixing chamber, of an iris diaphragm arranged in the lower part of said mixing chamber and having the inner edges of its leaves thinned so that the vibrations of the same caused by the passage of air atomizes the fuel.

2. In a carbureter for internal combustion engines, the combination with a mixing chamber, of an iris diaphragm and an operating lever arranged at the lower end of said mixing chamber, and a compound nozzle formed of a series of small nozzles so disposed that the said small nozzles may be successively brought into action or put out of action by operating said iris diaphragm.

3. In a carbureter for internal combustion engines, the combination with a compound nozzle formed of a series of small nozzles, of an iris diaphragm provided with leaves thinned at their inner edges and arranged to vibrate under the passage of the air.

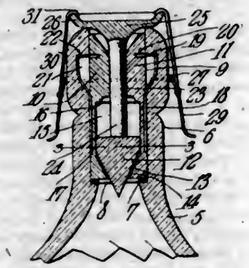
4. In a carbureter for internal combustion engines, the combination with a mixing chamber, an iris diaphragm arranged in said mixing chamber and provided with leaves the inner edges of which are thinned, and a nozzle; of an additional throttle arranged in the mixing chamber above the said iris diaphragm, and means for operating said diaphragm and throttle.

881,801. NON-REFILLABLE BOTTLE. ADOLPH HUBER, Mannheim, Germany, assignor to James Schneiderwind, Omaha, Nebr. Filed July 30, 1907. Serial No. 386,237.

1. A containing vessel having a neck, a casing seated in the neck and provided with a valve seat, a valve engaging the seat, a solid stem bearing against the valve and provided with a terminal head constituting a stopper, and means for locking the stem in engagement with the valve.

2. A containing vessel having a neck, a casing seated in the neck and provided with a conical shaped valve seat, a triangular shaped valve having its reduced end curved to conform to the shape of the valve seat and adapted to engage the same, a stopper having a solid shank the free end of which bears against the valve, and means engaging the stopper for locking the latter in contact with the valve.

3. A containing vessel having a neck, a casing engaging the walls of the neck and provided with a conical shaped valve seat, a substantially triangular valve having its reduced end curved to conform to the shape of the valve seat and adapted to engage the same, a stopper having a solid shank for engagement with the valve and provided with an integral head adapted to bear against the vessel at the neck thereof, and locking levers pivotally mounted on the exterior walls of the neck and adapted to engage the head of the stopper for locking the shank in engagement with the valve.



4. A containing vessel having a neck, a casing disposed within the neck and having one end thereof provided with a longitudinal bore and its opposite end formed with a conical shaped seat, a substantially triangular valve and having its reduced end curved to conform to the valve seat and adapted to engage the same, a stopper having an enlarged head forming a closure for the neck and provided with a solid integral shank bearing against the valve, and means pivotally mounted on the exterior walls of the neck and engaging the head of the stopper for locking the latter in engagement with the valve.

5. A containing vessel having a neck provided with an interior shoulder, a casing bearing against said shoulder and having one end thereof formed with a longitudinal bore and its opposite end provided with a conical shaped seat, a substantially triangular shaped valve having its reduced end curved to conform to the curvature of the valve seat and adapted to engage the latter, a stopper having a shank passing through the bore and bearing against the valve, and locking levers pivotally mounted on the exterior walls of the neck for locking the stopper in engagement with the valve.

[Claims 6 to 8 not printed in the Gazette.]

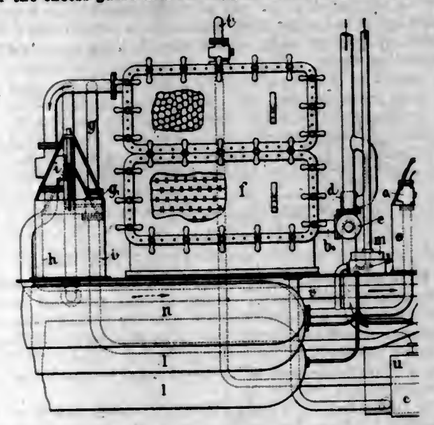
881,802. JEWEL-HOLDER. ALFRED T. HUNT, New York, N. Y. Filed Jan. 24, 1906. Serial No. 297,593.



A device of the character described, comprising a single integral piece of spring metal bent around so that its ends are comparatively close together, and provided internally with a surface for engaging the finger, said ends being provided with gripping jaws provided with prolongations extending toward each other at their tips and having surfaces for engaging oppositely-disposed portions of a jewel.

881,803. PROPULSION OF SUBMARINE BOATS. GEORGE F. JAUBERT, Paris, France. Filed Nov. 27, 1905. Serial No. 289,369.

1. In an apparatus for the purpose set forth, the combination of an explosion gas engine, a gas pipe, a silencer placed thereon, an exhaust valve, a purifier, a three-way cock permitting either of exhausting outside the vessel or into the purifier, a pipe leading from the purifier for supplying the purified exhaust gases to the engine, a pump for the excess gases and an oxygen supply to the engine.



2. In an apparatus for the purpose set forth, the combination of an explosion gas engine exhausting into a purifier, an excess gas outlet with a cock controlled by means of a bell regulator, a gas pump for forcing the excess gas into the sea, a pipe leading from the purifier for supplying the purified exhaust gases to the engine, and an oxygen supply to the engine.

3. In an apparatus for the purpose set forth, the combination of an explosion gas engine exhausting into a purifier, an excess gas pump, a bell regulator for the aspiration of the gases and a pipe for supplying the exhaust gases, three-way cocks arranged on said pipe for supplying either atmospheric air or exhaust gases to the motor, oxygen storage tubes connected with a reducing valve and with a reservoir tube, a pipe for supplying oxygen to the motor and an oxygen distributing valve with regulating cocks.

4. In an apparatus for the purpose set forth, the combination of an explosion gas engine exhausting into a purifier, a sea-water supply to said purifier, a discharge tank connected with the purifier, a pump for causing the water to circulate through the purifier and for expelling the washing water into the sea, an excess gas pump, a bell regulator for the aspiration of the gases and a pipe leading to the motor, three-way cocks arranged on said pipe for supplying either atmospheric air or exhaust gases to the motor, oxygen storage tubes connected with a reducing valve and with a reservoir tube, a pipe for supplying oxygen to the motor and an oxygen distributing valve with regulating cocks.

5. In an apparatus for the purpose set forth, the combination of an explosion gas engine, an exhaust valve connected with a purifier or washer, a plate type washer having a small liquid surface, a sea-water supply to the washer, a discharge tank connected with said washer, a pump for causing the water to circulate through the purifier and for expelling the washing water into the sea, an outlet and an inlet for the circulating cooling water of the motor, an excess gas pump, a bell regulator for the aspiration of the gases and a pipe for the supply of exhaust gases, three-way cocks arranged on said pipe for supplying either atmospheric air or exhaust gases to the motor, oxygen storage tubes connected with a reducing valve and with a reservoir tube, a pipe for supplying oxygen to the motor, an oxygen distributing valve with regulating cocks and fuel pumps for supplying the motor.

881,804. DEVICE FOR CONTROLLING A SUPPLY OF WATER FOR IRRIGATING AND OTHER PURPOSES. ROBERT G. KENNEDY, Edinburgh, Scotland. Filed Nov. 8, 1907. Serial No. 401,331.

1. In devices for controlling water supply and in combination, a flume having contracted and expanded parts

connecting a supply channel with an outfall channel, whereby an artificially increased head of water is obtained, means for insuring that the discharge passing out is independent of the outfall level, and means for utilizing the artificial head of water to indicate the discharge passing at any moment.



2. In devices for controlling water supply and in combination, a flume having contracted and expanded parts for connecting a supply channel with an outfall channel, whereby an artificially increased head of water is obtained, a stand pipe opening into said flume, and means for utilizing the artificial head of water to indicate the discharge passing at any moment.

3. In devices for controlling water supply and in combination, a flume having contracted and expanded parts for connecting a supply channel with an outfall channel, whereby an artificially increased head of water is obtained, a stand pipe opening into said flume and open to the air, and a scale for indicating the discharge passing to the outfall at any moment.

4. In devices for controlling water supply and in combination, a flume of varying diameter for connecting a supply channel with an outfall channel to obtain an artificially increased head of water, a stand pipe opening into said flume, and a gage for indicating the discharge passing at any moment.

5. In devices for controlling water supply and in combination, a flume of varying diameter having a bell mouthed opening for connecting a supply channel with an outfall channel to obtain an artificially increased head of water, means for insuring that the discharge passing is independent of the outfall level and means for utilizing the artificial head of water to indicate the discharge passing at any moment.

[Claims 6 to 9 not printed in the Gazette.]

881,805. FISH-BAIT. HENRY D. KLEIN, Butternut, Wis. Filed May 17, 1907. Serial No. 374,287.



1. In a device of the class described, a body having means for securing a live bait upon said body, and a catch carried by said body and adapted removably to engage the live bait and to hold the same in position, said body being adapted to support a removable artificial bait formed to be mounted upon said body.

2. In a device of the class described, a body having a fish hook, said fish hook being adapted to attach a live bait upon said body, and a catch carried by said body and adapted removably to engage the live bait thereby to hold the same in position, said body being adapted to support a removable artificial bait formed to be mounted upon said body.

3. In a device of the class described, in combination, a body having a fish-hook near one end thereof, said fish-hook being adapted to attach a live bait at the head thereof upon said body, a catch carried by said body and adapted removably to engage the live bait and to hold the same in position, said catch having spring arms presenting laterally disposed extremities.

4. In a device of the class described, in combination, a body having a fish-hook near one end thereof, said fish-hook being adapted to attach a live bait at the head thereof upon said body, a catch serving to attach a live bait upon said body, said body having an offset loop near the center, and a removable hook adapted to be supported by said offset loop.

5. In a device of the class described, in combination, a body having a fish-hook near one end thereof, and a removable artificial bait supported by said body, said artificial bait having a groove on the under side thereof, said body engaging said groove and supporting said artificial bait, said fish hook engaging said bait at the head thereof.

[Claims 6 to 10 not printed in the Gazette.]

881,806. PROCESS OF REMOVING CHLORIN FROM RAW BROMIN. KONRAD KUBIERSCHKY, Brunswick, Germany. Filed June 23, 1906. Serial No. 323,179.

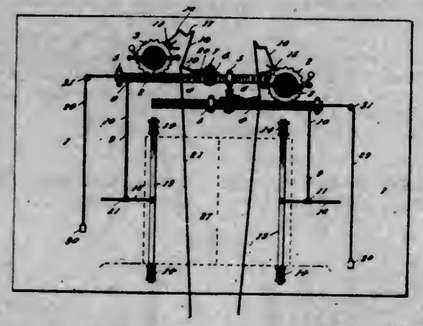
1. The herein described process of purifying raw bromin, which consists in dripping liquid raw bromin through ascending bromin vapor whereby the chlorin of the raw bromin is vaporized and the bromin vapor condensed.

2. The herein described process of purifying raw bromin, which consists in dripping liquid raw bromin and allowing same to be received in the boiler, whereby the same is vaporized and leading the ascending vapors upwardly through the dripping raw bromin whereby the chlorin of the raw bromin is vaporized and the bromin of the vapor condensed.

3. The herein described process of purifying raw bromin, which consists in dripping liquid raw bromin through an ascending bromin vapor whereby the chlorin of the liquid raw bromin is vaporized and the bromin of the vapor condensed, and passing the escaped vaporized chlorin through the condenser whereby condensation of the bromin contained in the escaped chlorin vapor takes place.

4. The herein described process of purifying raw bromin, which consists in fractionally distilling raw bromin and dripping cold raw bromin through the rising vapors therefrom.

881,807. MUSIC-LEAF TURNER. ROBERT LANGSTAFF, Donora, Pa. Filed Aug. 16, 1907. Serial No. 388,869.



1. In a music leaf turner the combination of a support, an arm mounted on said support and adapted to swing from side to side thereof, means for swinging said arm, an electro-magnet carried by said arm, means for energizing said magnet, in connection with a button designed to be secured to a leaf and adapted to be attracted to said magnet and carried by the latter in its traverse.

2. In a music leaf turner, the combination of an oscillating arm adapted to swing from side to side, actuating means for said arm, means for holding said actuating means inoperative, a clutch mechanism adapted to operatively connect and disconnect the actuating means with and from said arm, means for simultaneously throwing the clutch in and moving the holding means to the release position, a magnet carried by said arm, and an element adapted to be secured to a leaf and designed to be attracted to said magnet.

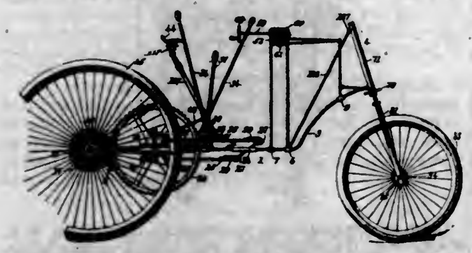
3. In a music leaf turner, the combination of an oscillating arm adapted to swing from side to side, actuating means for said arm, means for holding said actuating means inoperative, a clutch mechanism adapted to operatively connect and disconnect the actuating means with and from said arm, means for simultaneously throwing the clutch in and moving the holding means to the release position, and means carried by the arm, in connection with a device secured to a leaf for moving the leaf as the arm is moved.

4. In a music leaf turner, the combination of an oscillating arm adapted to swing from side to side, actuating means for said arm, means for holding said actuating means inoperative, a clutch mechanism adapted to operatively connect and disconnect the actuating means with and from said arm, means for simultaneously throwing the clutch in and moving the holding means to the release position, means carried by the arm in connection with a device secured to a leaf for moving the leaf as the arm is moved, and means for automatically returning the said means carried by the arm to initial position.

5. In an apparatus of the character described, the combination of a support, an arm mounted to oscillate on said support, means for actuating said arm, a clutch for connecting said arm with its actuating means, means for holding the actuating means inoperative, an electro-magnet carried by said arm, an electric circuit in which said magnet is included and a source of supply therefor, and means for simultaneously closing said circuit, releasing the holding means for the actuating means and throwing the clutch in a direction to operatively connect the arm with its actuating means.

[Claim 6 not printed in the Gazette.]

881,808. TRICYCLE. NICHOLAS LARSON, Agra, Kans. Filed Sept. 1, 1906. Serial No. 332,913.



1. A device of the class described, comprising a frame having an axle mounted thereon, wheels on said axle, a crank shaft having pairs of cranks and means for driving said axle, hand levers adapted to rotate a pair of said cranks, a second crank shaft adapted to be rotated by the foot of the operator, and a link connecting a crank of said second shaft with a crank of said first shaft.

2. A device of the class described, comprising a frame having an axle mounted thereon, wheels and pinions on said axle, a crank shaft having pairs of cranks and gear wheels adapted to engage with said pinions, hand levers adapted to engage with said pinions, a second crank shaft adapted to be rotated by the foot of the operator, and a link connecting a crank of said second shaft with a crank of said first shaft.

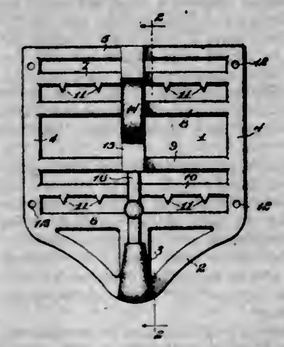
3. A device of the class described, comprising a frame, an axle having pinions and adjustable wheels thereon, a crank shaft having pairs of cranks and gear wheels adapted to engage with said pinions, a second crank shaft having cranks, links connecting said crank shafts and having foot rests thereon constituting pedals, hand levers having links adapted to rotate a pair of said cranks on said first shaft, and means for steering the device.

4. A device of the class described, comprising a frame, an axle having pinions and adjustable wheels thereon, a crank shaft having pairs of cranks, the cranks of each pair being arranged substantially 180° apart, a second crank shaft having a pair of cranks arranged substantially 180° apart, links connecting said cranks of said second crank shaft with a pair of said cranks respectively of said first crank shaft and having foot-rests thereon constituting pedals, hand levers having links adapted to rotate a pair of said cranks on said first crank shaft, and means for steering the device.

5. A device of the class described, comprising a frame having an axle mounted thereon and a transverse member, wheels and pinions on said axle, a crank shaft having pairs of cranks, and gear wheels adapted to engage with said pinions, hand levers pivotally mounted upon said transverse members, links operatively connecting said hand levers and a pair of said cranks, a second crank shaft adapted to be rotated by the foot of the operator, and a link connecting a crank of said second shaft with a crank of said first shaft.

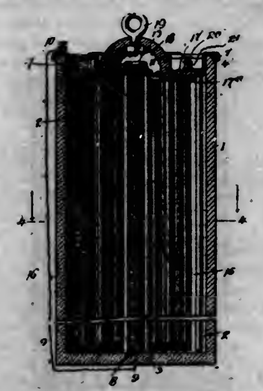
[Claim 6 not printed in the Gazette.]

881,809. BACK-BAND HOOK. HIRAM P. LITTLE, Forest Home, Ala. Filed Nov. 20, 1907. Serial No. 403,098.



The herein described back band hook comprising a frame having a plurality of spaced cross bars, a bill at the lower end of said frame, a bar or web at the upper portion of such frame connecting certain of such cross bars, disposed in line with such bill and having an outwardly extending projection provided with an eye for the reception of a rein or line, certain of such cross bars having downwardly extending pointed studs to engage a back band passed through the spaces between the cross bars, and a bolt mounted in the said web or bar and coacting with the bill to detachably secure a trace.

881,810. ELECTROPLATING APPARATUS. GEORGE A. LUTZ, New York, N. Y., assignor to American Circular Loom Company, Portland, Me., a Corporation of Maine. Filed Apr. 8, 1907. Serial No. 366,903.



1. An electro plating apparatus comprising a tank for an electrolyte, a series of anodes suspended within said tank, a post within said tank located within said series of

anodes, anodes suspended from said post, means for connecting all of said anodes in a circuit, and a cathode plate provided with means to support articles to be plated and arranged to suspend said articles in the space between said series of anodes.

2. An electro plating apparatus comprising a tank for an electrolyte, means to suspend anodes within said tank, a post within said tank and within the space bounded by said anodes, said post having a metal contact near its upper part, anodes suspended from said metal contact, a conductor connecting said contact with the first named anodes, and a cathode plate provided with means for suspending articles to be plated in the space between the first named and the second named anodes.

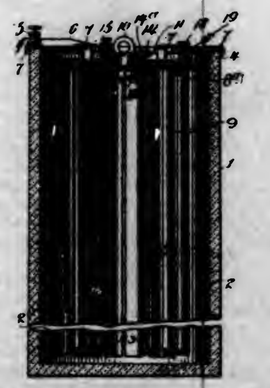
3. An electro plating apparatus comprising a tank for an electrolyte, means to suspend anodes within said tank, a post within said tank and within the space bounded by said anodes, said post having a metal contact near its upper part, anodes suspended from said metal contact, a conductor conecting said contact with the first named anodes, and a cathode plate provided with means for suspending articles to be plated in the space between the first named and the second named anodes, said cathode plate being provided with an opening or space to receive the upper end of said post, whereby its suspended articles may hang below the upper ends of the anodes connected with said post.

4. An electro plating apparatus comprising a tank provided with a metal rim, hooks on said rim depending into the tank, anodes suspended within the tank on said hooks, a post within the tank, anodes suspended from said post, a conductor connecting said anodes with said rim, and a cathode plate provided with means to suspend articles to be plated within the space bounded by the first named anodes and within the space surrounding the second named anodes.

5. An electro plating apparatus comprising a tank provided with a metal rim upon its edge, hooks carried by said rim and depending into the tank, anodes carried by said hooks, a post within the tank and provided with a contact near its upper end, a conductor connecting said contact with said rim, hooks carried by said contact, anodes suspended around said post by said hooks, and a cathode plate provided with means to suspend the articles to be plated in the space between the first named and the second named anodes.

[Claims 6 and 7 not printed in the Gazette.]

881,811. ELECTROPLATING APPARATUS. GEORGE A. LUTZ, New York, N. Y., assignor to American Circular Loom Company, Portland, Me., a Corporation of Maine. Original application filed Apr. 8, 1907, Serial No. 366,903. Divided and this application filed Aug. 8, 1907. Serial No. 387,669.



1. The combination of a tank for an electrolyte, means for suspending an anode therein, a cathode, means for suspending an article to be plated therefrom, means for suspending an anode from said cathode, and means for insulating the anode from said cathode.

2. The combination of a tank for an electrolyte, means for suspending an anode therein, a cathode, means for suspending an article to be plated therefrom, and an anode suspending device carried by and insulated from said cathode.

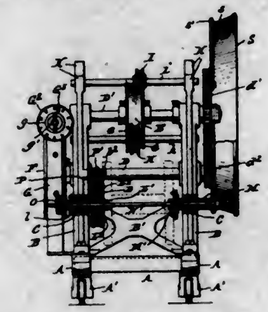
3. The combination of a tank for an electrolyte, means for suspending an anode therein, a cathode, means for suspending an article to be plated therefrom, and a hook carried by and insulated from said cathode.

4. The combination of a tank for an electrolyte, means for suspending an anode therein, a cathode, means for suspending an article to be plated therefrom, an insulating block carried by said cathode, and a hook supported by said block to sustain an anode.

5. The combination of a tank for an electrolyte, means for suspending an anode therein, a cathode, means for suspending an article to be plated therefrom, a hook carried by and insulated from said cathode, and a contact connected with said hook.

[Claims 6 to 12 not printed in the Gazette.]

881,812. APPARATUS FOR MAINTAINING THE TENSION OF A MOVING WIRE. ROBERT E. MANLEY, Hanover, Pa. Filed June 22, 1907. Serial No. 380,353.



1. In an apparatus for maintaining the tension of a moving wire, the combination with a drum around which an intermediate portion of the wire is wound, of a brake drum, reducing gearing intermediate said drums, and an adjustable brake shoe coöperating with the brake drum.

2. In an apparatus for maintaining the tension of a moving wire, the combination with a drum around which an intermediate portion of the wire is wound and a relatively large gear wheel connected therewith, of a brake drum, an adjustable brake shoe coöperating with the brake drum, and a relatively small gear wheel connected with the brake drum and meshing with the relatively large gear wheel.

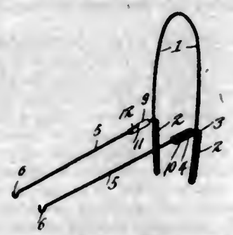
3. In an apparatus for maintaining the tension of a moving wire, the combination with the drum about which an intermediate portion of the wire is wound, and a friction brake for resisting the rotation of said drum, of a holder for the wire spool from which the wire passes to the drum, and a friction brake for the wire spool holder; substantially as described.

4. In an apparatus for maintaining the tension of a moving wire, the combination with the wire drum around which an intermediate portion of the wire is wound, an adjustable friction brake and gearing intermediate said brake and drum, of a holder for the wire spool from which the wire passes to the drum, and an adjustable friction brake for the wire spool holder; substantially as described.

5. In an apparatus for maintaining the tension of a moving wire, the combination with the drum around which an intermediate portion of the wire is wound, grooved sheaves over which the wire renders to and from the drum and an adjustable friction brake connected with said drum through reducing gearing, of a holder for the wire spool from which the wire passes to the drum and an adjustable friction brake for the wire spool holder; substantially as described.

[Claims 6 to 11 not printed in the Gazette.]

881,813. FEED-BAG HOLDER. ELIZABETH H. MARSHALL, Markham, Va. Filed May 29, 1907. Serial No. 376,292.



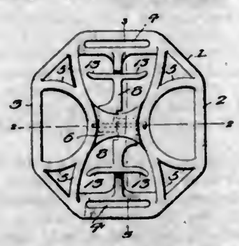
1. A device of the character described comprising a yoke, bag supporting arms pivotally connected with the yoke, and slotted coupling sleeves carried by the yoke and adapted to support said arms when in operative position.

2. A device of the character described comprising a yoke having upturned standards at its lower end provided with forward extensions, arms pivoted to said extensions, and a supporting connection between the arms and extensions adapted to permit the arms to fold in the direction of the yoke.

3. A device of the character described comprising a yoke having forward extensions, supporting arms, sleeves engaging the extensions and arms, fastening devices connecting the sleeves with the aforesaid parts and pivoting the arms for vertical movement toward and from the yoke, said sleeves being provided with slots for the movement of the arms.

4. A device of the character described comprising a yoke bent at its lower end to provide upwardly extending standards having forward projections, coupling sleeves engaging said projections and having their upper front portions slotted, and arms pivoted within said sleeves and movable through said slotted portions.

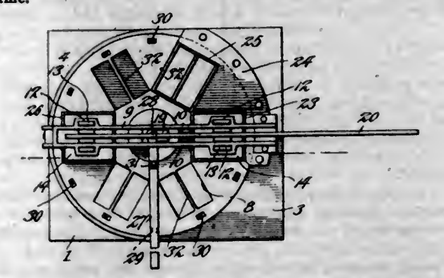
881,814. TRACE-CARRIER. ADAM B. MEINHARDT, Paxico, Kans. Filed Apr. 6, 1907. Serial No. 366,845.



A trace carrier comprising a base frame, upwardly curved integral bars connected by a crown at the top, said crown being recessed, oppositely disposed members having recessed inner ends, and flanges on each side of said recesses, a pintle passing through the crown portion, through the flanges and inclosing springs, curved arms at the outer ends of said members, and stationary members formed integral with the frame, said stationary members having curved outer edges, and vertical inner holding edges, substantially as described.

881,815. CEMENT-BRICK MACHINE. DANIEL H. MERRITT, Lincoln, Nebr. Filed Mar. 21, 1907. Serial No. 363,630.

1. The combination of a supporting structure, a bed thereon, a pivot on the bed, a mold disk bearing on the bed and revoluble on the pivot, pressing and discharging plungers, guides for the plungers disposed over the disk, means for supporting the guides on the structure, a mechanism for simultaneously actuating the plungers, lever mounted on the pivot and extending radially over the disk, and means on the lever for engaging the disk to turn the same.



2. In a machine of the class described, the combination of a bed, a pivot rising therefrom, a mold disk mounted to turn on the pivot and rest on the bed, a frame supported on the pivot, plungers guided on the frame, levers mounted on the frame for simultaneously actuating the plungers, a member mounted on the pivot for oscillatory movement and arranged to have a ratchet engagement with the disk.

3. In a machine of the class described, the combination of supporting structure, a bed thereon, a pivot on the bed, a mold disk turning on the pivot and bearing on the bed, a frame supported on the said structure at a point above the disk, pressing and discharging plungers, plunger guides overhanging the disks and rigid on the structure, means on the frame engaging the members for guiding the plungers, a lever connected with one of the plungers and fulcrumed on the frame, an operating lever connected with the other plunger, and a link connecting the levers.

4. In a machine of the class described, the combination of a supporting structure, a bed thereon, a pivot on the bed, a mold disk mounted to turn on the pivot, pressing and discharging plungers, a ratchet lever mounted on the pivot and extending over the top of the disks for engaging to the latter, said lever being composed of flexibly connected parts.

5. In a machine of the class described, the combination of a stationary support, a rotatable member mounted thereon provided with a plurality of mold chambers, an operating lever extending over the rotatable member from the center thereof to a point beyond the periphery and adapted to turn the member, said lever being composed of flexibly connected sections, a stationary plunger guide, a stationary hopper, a supporting plate for the guide and hopper, a second plunger guide mounted on the said stationary support diametrically opposite from the first guide, simultaneously actuated plungers, and means arranged adjacent the second guide for receiving the bricks discharged from the mold chambers.

881,816. PRESSER-FOOT FOR SEWING-MACHINES. JOSEPH M. MERROW, Hartford, Conn., assignor to The Merrow Machine Company, Hartford, Conn., a Corporation of Connecticut. Filed Jan. 30, 1906. Serial No. 298,656.

1. A sewing machine presser foot embodying a shank member and a foot member pivotally connected and having registering apertures, a pivotal connecting pin for the shank and foot members and a lock for insertion in the apertures to rigidly connect the said shank and foot members, substantially as described.

2. A sewing machine presser foot embodying a shank member and a foot member pivotally connected and having registering apertures one or more of which are screw threaded, a pivotal connecting pin for the shank and foot members and a screw threaded lock for insertion in the apertures to rigidly connect the said shank and foot mem-

bers the said lock having threaded connection with one or more of the said apertures, substantially as described.



3. In a sewing machine presser foot, the combination of a shank portion, a foot portion, ears on the latter between which the shank portion is received, a hinge pin engaging the ears and the shank to pivotally secure the same together, a screw also engaging the said ears and shank and having threaded connection with one of said parts to lock the shank and foot portions rigidly together; substantially as described.

4. In a sewing machine presser foot the combination of a shank member and a foot member pivotally connected and having registering apertures, a hinge pin connecting the shank and foot members, a stop on the shank for limiting the rocking of the foot in one direction, a spring intermediate the shank and the foot acting normally to hold the foot in engagement with the stop and a lock for insertion in the apertures to rigidly retain the shank and foot members in the relative positions in which they are normally held by the spring, substantially as described.

5. In a sewing machine presser foot the combination of a shank member and a foot member pivotally connected and having registering apertures one or more of which are screw threaded, a hinge pin connecting the shank and foot members, a stop on the shank for limiting the rocking of the foot in one direction, a spring intermediate the shank and the foot members acting normally to hold the foot in engagement with the stop and a screw threaded lock for insertion in the apertures and having threaded connection with one or more of the same to rigidly retain the shank and foot members in the relative positions in which they are normally held by the spring, substantially as described.

881,817. NON-REFILLABLE BOTTLE. JAKOB MEYER, Muttershols, near Schlettstadt, Germany. Filed Mar. 8, 1907. Serial No. 361,418.



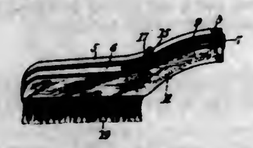
1. A non-refillable bottle comprising the combination with the bottle neck having an exteriorly arranged laterally extending flange intermediate the ends thereof and further having the top edge constituting a valve seat, of a cap having a centrally disposed uninterrupted discharge passage, said cap surrounding that portion of the bottle neck above said flange having a solid portion constituting a valve stop, means engaging in the neck and the cap at a point above said flange for securing the latter to the former, and a flap valve arranged within the cap and adapted to engage said seat for closing the latter.

2. In a non-refillable bottle, the combination with the neck thereof provided with an exteriorly arranged laterally extending flange intermediate the ends thereof and further having a pair of recesses above said flange, the top edge of said neck constituting a valve seat, of a flap valve hinged to the upper edge of the neck and adapted to engage said seat, a cap surrounding said neck projecting above the same and provided with openings adapted to register with said recesses, said cap further having a closable discharge passage, and pins extending through the openings in the cap and engaging in the recesses of the neck for securing the former to the latter, said cap having means for limiting the movement in one direction of the flap valve.

3. In a non-refillable bottle, the combination with the neck thereof provided with an exteriorly arranged laterally extending annular flange intermediate the ends thereof and further having a pair of recesses above the flange, the top edge of said neck constituting a valve seat, of a flap valve hinged to the upper edge of the neck, a cap surrounding said neck adapted to engage said seat projecting above the same and provided with openings adapted to register with said recesses, said cap further having a closable discharge passage, pins extending through the openings in the cap and engaging in the recesses of the neck for securing the former to the latter, said cap having means for limiting the movement in one direction of the flap valve, and a resilient packing interposed between said cap and said flange.

4. In a non-refillable bottle, the combination with a bottle neck provided with a pair of recesses and a flange below said recesses, of a cap having a hollow cylindrical lower portion surrounding and projecting above the bottle neck, said cylindrical portion having a pair of openings, said cap further provided with a tapering upper portion having a closable discharge passage of the same diameter throughout, a flap valve hinged to the upper edge of the neck, and of a diameter as to close the mouth of the neck and adhesive coated pins extending through the openings in the cap and engaging in the recesses of the neck for securing the cap to the neck.

881,818. COMBINED WARDROBE APPLIANCE. JOHN MORRISON, Jr., and MATTHEW P. BENSON, Upper Troy, N. Y. Filed Feb. 11, 1907. Serial No. 356,772.



1. In a garment hanger, the combination of a pair of brushes connected together and each provided with a slot, and a metallic member pivotally mounted within one of said slots and adapted to enter the other for the purpose of holding said members rigidly in alinement with each other.

2. The combination of a pair of mating brush members hinged together and adapted to be folded and unfolded, and a metallic fastening member connected with one of said brush members and provided with a portion for engaging the other brush member, said metallic fastening member extending in a lateral direction from said brush members, for the purpose of spacing the brush members from a wall.

3. In a garment hanger, the combination of a plurality of separate brush members hinged together end to end and adapted to fold side by side, and a fastening member pivotally mounted upon one of said brush members and provided with a portion for engaging the other brush member so as to lock said brush members together end to end, said fastening member being further provided with means for locking said brush members together side by side.

4. In a garment hanger, the combination of a pair of brush members connected together and movable in relation to each other, each of said members being provided with a slot, said slots being so positioned as to register with each other when said brush members are disposed end to end, a fastening member mounted within the slot of one of said brush members and provided with a portion for projecting into the slot of the other brush member when said slots are in registry with each other, said fastening member being provided with a distinct portion adapted to reach from one of said slots to the other for the purpose of holding said brush members together when folded side by side.

881,819. KEY-BOLT AND AUTOMATIC LOCK THEREFOR. WILLIAM M. MCINTOSH, Denver, Colo., assignor of one-fourth to Harry B. Seaton and one-fourth to Frank Macke, Denver, Colo. Filed Jan. 7, 1907. Serial No. 351,060.



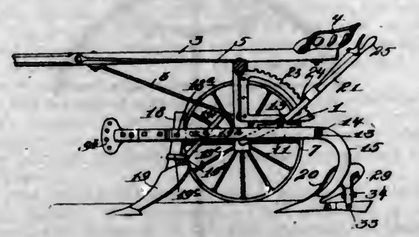
1. The combination with a bolt having a web at one end, formed by a transverse groove in the end of the bolt and a transverse opening near the end thereof, of a loosely mounted spring ring applied to the bolt end and surrounding the web, substantially as described.

2. The combination with a bolt having an opening near one extremity, and a transverse groove in the extremity thereof, of a loosely mounted wedge-shaped spring ring applied to the bolt end and surrounding a web formed by the transverse opening and groove.

3. The combination with a bolt provided with a transverse opening at one end and grooved longitudinally on opposite sides between the spring and the end, thus forming a web, a loosely mounted spring ring surrounding the web and adapted to enter the side grooves during the insertion or removal of the bolt, substantially as described.

4. The combination of a bolt provided with an opening at one end and grooved on opposite sides forming a web, a wedge or heart-shaped spring ring applied to the bolt end and surrounding the web, the said ring being free to move in the bolt end whereby its small extremity may be turned in either direction for purposes of insertion and removal, substantially as described.

881,820. WHEEL-PLOW. JASPER MCMULLAN, Milford, Tex. Filed Aug. 12, 1907. Serial No. 388,182.

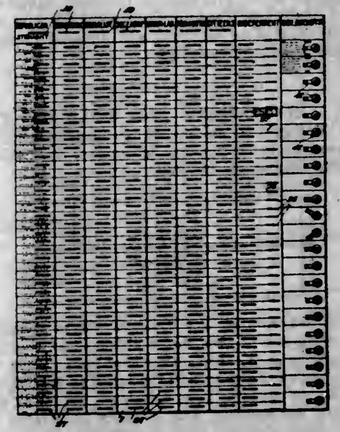


1. A wheel plow comprising a plow beam frame, a furrow opener carried thereby forwardly thereof, covering plows attached to the rear of said frame, a plow standard adjustably connected to said frame forwardly thereof, an adjustable brace connected at its lower end to the standard for maintaining the latter in its adjusted position, said brace extending through said frame, means for connecting the upper portion of the brace to the frame, and an adjustable abutment mounted in the frame and adapted to engage the brace for maintaining it in its adjusted position.

2. A wheel plow comprising a plow beam frame, a furrow opener carried thereby forwardly thereof, covering plows attached to the rear of said frame, a plow standard adjustably connected to said frame forwardly thereof, an adjustable brace connected at its lower end to the standard for maintaining the latter in its adjusted position, said brace extending through said frame, means for connecting the upper portion of the brace to the frame, an adjustable abutment mounted in the frame and adapted to engage the brace for maintaining it in its adjusted position, and adjustable means connected to the covering plows to prevent sidewise slipping thereof.

3. An agricultural implement comprising a vertically adjustable plow beam frame embodying a longitudinally extending sectional member and a pair of diverging members connected at their forward ends to the sectional member, an adjustable standard extending between and connected to the sections of said longitudinally-extending member and carrying a furrow opener, a covering plow attached to each of said diverging members, an adjustable brace member connected at one end to the standard and having its other end extending between the sections of the longitudinally-extending member, means for adjustably connecting the brace member to the longitudinally-extending member, and an adjustable means mounted between the sections of said longitudinally-extending member for fixing the brace member in its adjusted position.

881,821. MECHANICAL BALLOT. DAVID L. NEWCOMB, San Diego, Cal. Filed May 23, 1904. Serial No. 209,231.



1. A top plate, a plurality of tappets adapted to be raised perpendicular thereto, an erector tappet, and means operated by the erector tappet for raising the tappets.

2. A top plate, a plurality of tappets adapted to be raised perpendicular thereto, an erector tappet, and means operated by the erector tappet for raising several tappets simultaneously.

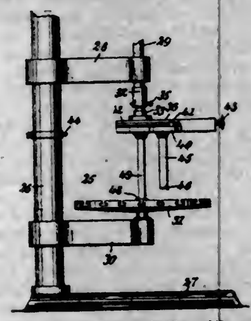
3. A top plate, a plurality of movable members adapted to be raised perpendicular thereto, a special movable member, and means operated by the special member for changing the relative positions of several of the movable members.

4. A top plate, a plurality of tappets adapted to be raised perpendicular thereto arranged in party columns, erector tappets for the columns and means operated by an erector tappet for raising the tappets in its respective column.

5. A top plate, a plurality of tappets adapted to be raised perpendicular thereto arranged in columns, erector tappets for the columns, means operated by an erector tappet for raising the tappets in its respective column and locking tappets outside that column.

[Claims 6 to 51 not printed in the Gazette.]

881,822. BORING ATTACHMENT FOR DRILLS. OTTO OSBORNE, Zanesville, Ohio, assignor of one-half to Lance B. Slocomb, Zanesville, Ohio. Filed June 27, 1907. Serial No. 381,030.



1. A drill press having a spindle with a socket in the lower end thereof and a table with an opening in alinement with said spindle, in combination with an arm having a hub secured in said socket, a tool guided in said arm, an arbor rigid with said arm and rotating in said opening, and means for automatically feeding said tool outwardly in said arm.

2. A boring attachment for a drill press, comprising an arm adapted to be attached to the drill spindle, a tool carried by said arm, feeding mechanism for said tool, and an arbor attached to said arm and adapted to center the same upon a support therebelow.

881,823. ATTACHMENT FOR MOLDERS' FLASKS. JOHN N. PERKINS, Richmond, Va., assignor of one-half to Lawrence B. Grasberger, Richmond, Va. Filed Sept. 4, 1907. Serial No. 391,353.



1. A socket member for molders' flasks comprising a bracket composed of two plates arranged at substantially right angles to each other, one of said plates being adapted to be secured to the mold and the other of said plates having ribs at its opposite sides forming a guideway and provided with an opening, and a plate adjustable in said guideway having rollers arranged about said opening.

2. A socket member for molders' flasks comprising a bracket having an opening, and a roller bearing carried by said bracket arranged about said opening.

3. A socket member for molders' flasks comprising a bracket having an opening, a plate adjustable on the bracket, and rollers carried by the plate arranged about said opening.

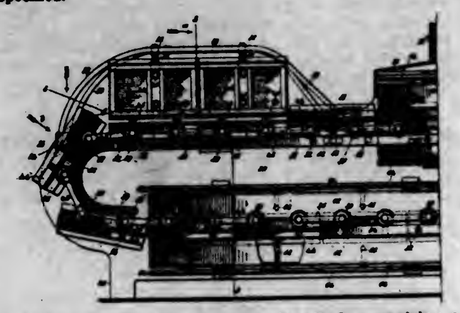
4. A socket member for molders' flasks comprising a bracket having an opening, and two rollers arranged at an angle to each other about said opening and carried by the bracket.

5. In a molder's flask, mold sections, a flask-pin carried by one of said sections, and a socket member fixed to the other mold section having roller elements for receiving and forming a bearing for the pin.

[Claims 6 and 7 not printed in the Gazette.]

881,824. MACHINE FOR BAKING SUGAR-WAFERS. FRANK M. PETTAS, Chicago, Ill. Filed May 22, 1906. Serial No. 318,116.

1. A machine of the character described comprising a continuous series of traveling tongs or plates forming a continuous, uninterrupted trough-shaped batter support, and means for supplying batter thereto, substantially as specified.



2. A machine of the character described, comprising a continuous series of traveling tongs or plates having their ends substantially in contact and forming a continuous, uninterrupted trough-shaped batter support, and means for supplying batter thereto, substantially as specified.

3. A machine of the character described, comprising a continuous series of traveling tongs or plates having their transverse edges substantially in contact, and forming a continuous, uninterrupted trough-shaped batter support, and means for supplying batter thereto, substantially as specified.

4. A machine of the character described, comprising a series of connected traveling tongs or plates having their transverse abutting edges substantially in contact and forming a continuous, uninterrupted trough-shaped batter support, and means for uninterruptedly supplying batter to said support, substantially as specified.

5. A machine of the character described comprising a series of connected, traveling tongs or plates having rims along their opposite longitudinal edges and their opposing transverse edges substantially in contact and forming a continuous, uninterrupted trough-shaped batter support, and means for uninterruptedly supplying batter to said support, substantially as specified.

[Claims 6 to 27 not printed in the Gazette.]

881,825. FOLDING UMBRELLA. HANS P. PETERSEN, Waupaca, Wis. Filed June 8, 1907. Serial No. 377,996.



1. In a folding umbrella, comprising ribs formed of sliding sections, interlocking means for securing said sections when extended, the same consisting of a sleeve upon one section having intercommunicating slots, one of the slots opening through an extremity of the sleeve and the other slot being closed, and the other section having a lug, and slidable in said sleeve, and having said lug movable in the said slot, the lower section having both longitudinal and rotary movement.

2. A folding umbrella comprising ribs formed of sliding sections, a sleeve carried by one of said sections and having a longitudinal slot opening through an end and an approximately L slot in communication with said longitudinal slot, and the other section having both a sliding and a rotary movement in said sleeve and provided with a lug which is adapted to travel in said longitudinal and L slots.

3. In a folding umbrella, the combination of a handle, a notch secured to the handle, a runner mounted upon the handle, ribs composed of upper and lower sections which are relatively slidable, the upper sections being pivoted to the notch, sleeves at the lower ends of said upper sections, and provided with longitudinal and L slots, in communication, the lower section being mounted in said sleeves to receive both longitudinal and rotary movement and having lugs to move through said longitudinal and L slots, and braces connecting said sleeves with the runner.

881,826. FLEXIBLE STEEL OR METAL MEASURING-TAPE. HARRY J. RABONE, Birmingham, England. Filed July 2, 1907. Serial No. 381,890.



1. A flexible steel measuring tape having in the main a dead surface and the lines or division marks and figures of the subdivisions in relief, bright tablets being arranged at intervals throughout the length and formed as a part of the tape and provided with lines or division marks and figures or letters indicating the main divisions to distinguish the said main divisions from the marks, figures, and lines of the subdivisions, the tablets being of such thickness as to permit the tape to be regularly coiled.

2. A flexible steel measuring tape having in the main a dead surface and lines or division marks and figures of the subdivisions in relief, and raised tablets disposed at intervals throughout the length and formed as a part of the tape structure and having bright surfaces and provided with lines or division marks and figures or letters of the main divisions to distinguish the said main divisions from the lines or division marks and figures of the subdivisions, the tablets being of such thickness as to permit the regular coiling of the tape.

881,827. CELLULOID SUBSTITUTE AND PROCESS OF MAKING THE SAME. EMILE A. L. ROUXEVILLE, Paris, France. Filed June 3, 1907. Serial No. 376,972.

1. The process of making a celluloid substitute, which consists of polymerising oil of turpentine or its equivalent and mixing the product with nitro cellulose dissolved in acetone, substantially as described.

2. The process of manufacturing a celluloid substitute, which consists in polymerising oil of turpentine or its equivalent with sulfuric acid, mixing the product with nitro cellulose dissolved in acetone, and evaporating off the acetone.

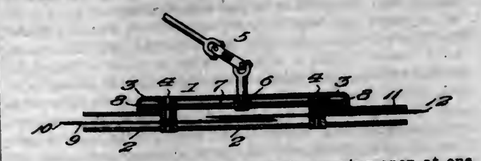
3. The process of manufacturing a celluloid substitute, which consists in polymerising oil of turpentine or its equivalent by means of sulfuric acid, removing the excess of acid, treating the product with nitric acid, removing the excess of said nitric acid, mixing the product with nitro cellulose dissolved in acetone, and evaporating off the acetone, substantially as described.

4. The process of manufacturing a celluloid substitute, which consists in dissolving celluloid, or its equivalents, in acetone or its equivalents, and mixing with said acetone solution a complex product obtained by polymerising oil of turpentine or its equivalents, substantially as described.

5. A celluloid substitute composed of a solution of nitro cellulose mixed with a polymerized product of the oil of turpentine or its equivalents, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

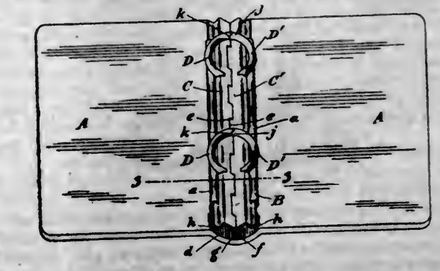
881,828. BUTCHERING-TOOL. FRANK SCHMIT, Douglas, Ariz., assignor of one-half to Edward A. Tovrea, Bisbee, Ariz. Filed May 26, 1906. Serial No. 318,963.



1. In a tool of the type described, a casing open at one edge and having its upper portion formed to serve as a grip, a flexible power shaft extended into the casing, a gear fixed on said shaft and located within the casing, a pair of driven shafts journaled in the casing, pinions within the casing and fixed on said shafts and in mesh with the gear, and a pair of cutting blades fixed respectively on and for rotation with the driven shafts, said cutting blades being projected beyond the open end of the casing and the latter being wholly closed except at the point of projection of the blades.

2. In a tool of the class described, the combination of a rotary knife, a rotary saw arranged in close proximity to the knife and overlapping the same, a gearing for simultaneously rotating the saw and knife, and a casing covering the gearing and saw and knife, said casing serving as a grip for working the tool.

881,829. LOOSE-LEAF BOOK. WILLIAM J. SCHULTZ and HERBERT GERDINO, Cincinnati, Ohio, assignors, by mesne assignments, to Henry Bentley, trustee, Cincinnati, Ohio. Filed Sept. 11, 1905. Serial No. 278,058.



1. A loose leaf book comprising a cover, a spring-plate adapted to be secured to said cover, the side edges of said plate curled upward or bent toward itself, a pair of plates hinged together, said plates each provided with an angular shoulder adapted to take against the curled or bent edge of the spring-plate, ring-segments secured to each of said hinged plates, and adapted to engage the curled edges of the spring-plate, and thereby limit the action of said plate on the hinged plates when the ring-segments are separated.

2. A loose leaf book comprising a cover, a spring-plate secured to said cover, and having its edges curled or bent toward itself, a pair of plates hinged together at their one edge, the other edge of said plates being bent downward and outward to form shoulders, said shoulders taking against the curled edges of the spring-plate, each of said hinged plates being provided with segments of a ring, the segments on the one adapted to register with the segments on the other and form rings, said segments adapted to butt against the curled edges of the spring-plate when they are opened outwardly.

3. A loose leaf book comprising a cover, a spring-plate secured to said cover, said spring-plate having its sides bent or curled toward itself, and its ends extending beyond the bent or curled portion thereof, a pair of hinged plates provided with shoulders against which the curled or bent up sides of the spring-plate are adapted to press, said hinged plates being provided with segments of rings,

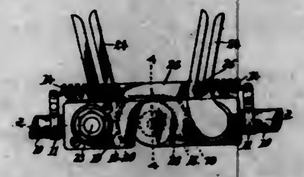
the segments on the one plate registering with the segments on the other, and so secured on the hinged plates as to take against the curled edges of the spring-plate, and limit thereby the motion of the hinged plates.

4. A loose leaf book comprising a cover, a spring-plate secured on said cover, said plate having its side edges curled toward itself, a pair of plates provided with angular shoulders against which the curled edges of the spring-plate take, the adjacent edges of said plates being curled upon themselves and cut away in places to receive portions of each other, a pin taking through the curled portions of said plates and forming a hinge, segments of rings secured to each of said hinged plates and registering with each other, and so secured as to take against the curled edges of the spring-plate when the segments are separated to limit the action of the hinged plates.

5. A loose leaf book comprising a cover, a spring-plate secured on said cover and having its sides curled upward and toward itself, the ends of said plate extending beyond the curled sides thereof, a pair of plates whose adjacent edges have cut away portions to permit them to interlock, the outward sides of said plates being bent downward and outward to form shoulders which are adapted to take against the curled up edges of the spring-plate and be held under tension, segments of rings adapted to register with each other secured on the interlocked plates so as to take against the curled edges of the spring plate and limit its action on the interlocked plates.

[Claims 6 to 10 not printed in the Gazette.]

881,830. HOSE-COUPLING. WILLIAM SKERMAN, Brisbane, Queensland, Australia, assignor to Thomas Chirgwin Ladner and Nicolaus Joseph Kessels, Brisbane, Australia. Filed May 19, 1904, Serial No. 208,708. Renewed May 6, 1907. Serial No. 372,031.



1. The combination of two coupling sections, hose sections respectively connected therewith, clips for joining the hose sections to the coupling sections, and springs connected to the clips and to the coupling sections.

2. The combination of two coupling sections, hose sections, means for connecting the hose sections to the coupling sections, and springs connected to said connecting means and to the coupling sections.

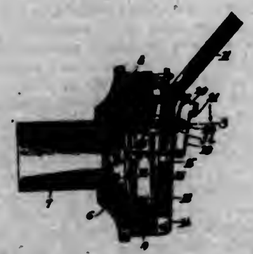
3. In a hose coupling, the combination of two coupling sections each having a passage therein, the said passages registering with each other when the sections are engaged, each coupling section having a hook member adapted to enter a cavity in the other section, the bills of the hooks engaging studs formed at the lower portions of said cavities to removably hold the sections together, each coupling section also having a longitudinally projecting arm extending beyond the hook member and adapted to overlap the other section, a valve mounted in each section and commanding the passage thereof, and an arm connected to each valve, the last named arm of one coupling section being adapted to engage a part of the first named arm of the other section, whereby automatically to operate the valve, and springs supported at one end and connected at the other end with the said longitudinally projected arms.

4. In a hose coupling, the combination of two coupling sections each having a passage therein, and the passages registering with each other when the sections are engaged, each coupling section having a hook member adapted to enter a cavity in the other section, the bills of the hooks engaging studs in said cavity to removably hold the sections together, each coupling section also having a longitudinally projected arm extending beyond the said hook member and adapted to overhang the other section, a valve mounted in each section and commanding the passage thereof, and an arm connected to each valve, the last named arm of one coupling section being adapted to engage a part of the first named arm of the other section whereby automatically to operate the valve, the second named arms being longitudinally slotted and the first named arms having laterally disposed pins at their ends received in the slots.

5. In a hose coupling, the combination of two coupling sections each having a passage therein, and the passages registering with each other when the sections are engaged for the purpose specified, and each coupling section also having a longitudinally projected arm adapted to overhang the other section, a valve mounted in each section and commanding the passage thereof, an arm connected to each valve, the last named arms of one coupling section being adapted to engage a part of the first named arm of the other section whereby automatically to operate the valve, clips adapted to connect the hose sections with the coupling sections, and springs connected to the clips and to the first named arms of the opposite coupling sections respectively.

[Claim 6 not printed in the Gazette.]

881,831. SOUND-REPRODUCER. RICHARD B. SMITH, New York, N. Y. Filed Sept. 17, 1907. Serial No. 393,309.



1. The combination of a member mounted free to rock upon an axis, a stylus lever supported upon said member and free to rock upon an axis intersected by a prolongation of the axis of said member, and a diaphragm in operative relation to said stylus lever.

2. The combination of a member mounted free to rock upon an axis, and a longitudinal stylus lever pivoted upon said member and free to rock, said lever extending diametrically across the axis of said member, and a diaphragm in operative relation to said stylus lever.

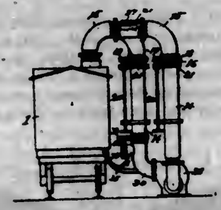
3. The combination of a casing, a vibratory diaphragm mounted therein, a weight disposed adjacent to said casing and movable relatively thereto, a rocking member mounted upon said weight and free to turn relatively to the same in a plane nearly parallel with the plane of said diaphragm, and a stylus lever free to rock in a general direction crossing the plane of said diaphragm, the axis of said stylus lever being intersected by a prolongation of the axis of said rocking member.

4. The combination of a vibratory diaphragm, means for supporting the same, a weight disposed adjacent to said diaphragm and free to move independently thereof, a disk mounted upon said weight and free to turn relatively thereto in a plane nearly parallel with the plane of said diaphragm, and a stylus lever journaled upon said disk and free to rock in a general direction crossing the plane of said diaphragm, the axis of said stylus lever being intersected by a prolongation of the axis of said disk.

5. The combination of a supporting member mounted to rock upon an axis, a stylus lever mounted upon said supporting member and free to rock upon an axis, said lever being so positioned that the axis is intersected by a prolongation of the axis of said supporting member, a vibratory diaphragm, and a connection from said vibratory diaphragm to said stylus lever.

[Claim 6 not printed in the Gazette.]

881,832. APPARATUS FOR REFRIGERATION. ALMERIN R. SPRAGUE, Sacramento, Cal., assignor, by mesne assignments, to L. A. Roy, Chicago, Ill. Filed Aug. 12, 1905. Serial No. 273,931.



1. In a means for refrigerating cars, a horizontal tube, two pipes rising therefrom, curved extensions of said pipes rotatable horizontally upon them and adapted to be connected to a car at both ends and a fan or blower for causing an air current to pass through said conduit.

2. In a means for refrigerating cars, a conduit which is provided with two stand-pipes, the upper end of each pipe being provided with a rotatably mounted extension, one end of said extension fitting within the stand-pipe and provided with a packing to form an air tight joint and the other end being movable to a position over the car and away again and adapted to be detachably connected therewith, and means for causing a current of air to pass through said conduit.

3. In a means for refrigerating cars, a conduit which is provided with two stand-pipes, the upper end of each pipe being provided with a rotatably mounted curved portion, a band and two lateral projections on the main portion of each pipe, a crank shaft journaled vertically in said projections and provided at its upper end with a pinion, a gear wheel on the pivotal end of each of said curved portions and in engagement with said pinion, means at the free end of said curved portions adapted for being connected with the car, and means for passing a current of air through said conduit.

4. In a means for refrigerating cars, a conduit which is provided with two stand-pipes, the upper end of each pipe being provided with a rotatably mounted upwardly curved portion, an annular gear wheel on the pivoted end of each of said portions, a brace extending diagonally upward from the top of one of said wheels and engaging with the portion at that end near its free end, a crank shaft journaled vertically at the side of each stand-pipe and having a pinion at its upper end for engaging with the gear wheel on that pipe, means adapted for detachably connecting the free end of each curved portion with the top of the car, and means for passing a current of air through said conduit.

5. In a means for refrigerating cars, a conduit which is provided with two stand-pipes, the upper end of each pipe being provided with a curved portion rotatably mounted thereon, one of said portions being provided with rotatable telescopic joint, means for rotating said portions, means for detachably connecting the free ends of the portions with the top of the car, and means for passing a current of air through said conduit.

[Claims 6 to 13 not printed in the Gazette.]

881,833. EYEGLASSES. FRED M. VANCE, Geneva, N. Y. Filed Feb. 5, 1907. Serial No. 355,854.



1. A noseguard for eyeglasses comprising a guard arm to be secured to the eyeglass structure, the terminal of the arm being cut away on its upper edge to form a head of less vertical dimensions than the arm terminal and to provide a projection from the upper edge of said terminal in rear of the head, and a guard plate to engage the arm, said plate being formed with a socket by offsetting the material of the plate, the socket being of greater dimensions than the similar dimensions of the head, the projection serving to prevent movement of the upper portion of the guard plate toward the adjacent lens beyond the vertical.

2. A nose guard for eyeglasses comprising a guard arm to be secured to the eyeglass structure, the terminal of the arm being cut away on its upper edge to form a head of less vertical dimensions than the terminal and to provide a projection from the upper edge of said terminal in rear of the head, and a guard plate to engage the arm, said plate being formed with a socket by offsetting the material of the plate, the upper portion of the socket being adapted to bear against the projection of the head to limit movement of the plate in that direction, the lower portion of the socket being arranged for uninterrupted movement of the head, whereby the guard plate is prevented from tilting in one direction beyond the vertical, while free to tilt in the opposite direction.

881,834. REINFORCED BAR FOR CONCRETE. CHARLES F. VARNEY, New York, N. Y. Filed July 26, 1907. Serial No. 385,600.



1. A metallic reinforcement for concrete structures, composed solely of a plurality of strands twisted together for a distance intermediate their ends to form a main lower tension bar, said strands having portions bent laterally to form a plurality of substantially parallel inclined shear members spaced apart adjacent each end of said main tension bar, and the terminal portions of said strands being reunited and twisted together to form two upper tension bars substantially parallel to said lower tension bar adjacent each end thereof, and integral with and in the same vertical plane as said shear members and said lower tension bar.

2. A metallic reinforcement for concrete structures, including two substantially parallel tension bars lying in the same vertical plane and each formed of a plurality of strands twisted together, the strands of each bar increasing in number along the length thereof in opposite directions, and the strands of one bar being integral with the strands of the other bar and connecting the two together at a plurality of points to form diagonal shear members, all lying in the vertical plane of said bars.

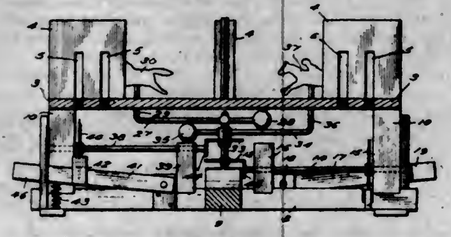
3. A metallic reinforcement for concrete beams, girders and the like, comprising a tension bar formed of a plurality of strands twisted together and of decreasing number from the central portion thereof toward the ends, said bar adapted to extend over a supporting point, adjacent the upper surface of the concrete, and two tension bars below the ends of the said first-mentioned bar and in the same vertical plane therewith, each of said last-mentioned bars being formed of a plurality of strands twisted together, the strands of the first-mentioned bar being integral with the strands of each of the other bars and having diagonally-disposed connecting portions spaced apart to form shear members in said vertical plane and at opposite sides of said supporting point.

4. A metallic reinforcement for concrete structures, comprising two substantially parallel tension bars lying in the same vertical plane, each bar being formed of a plurality of strands twisted together and the number of strands of each bar varying along the length thereof, the strands of one bar being integral with the strands of the other bar and constituting the sole connecting means between the two and forming a plurality of inclined shear members in the same vertical plane with said bars, the number of strands cut by a vertical plane through said metallic reinforcement being uniform throughout the length thereof.

5. A metallic reinforcement for concrete beams, girders and the like, comprising two substantially parallel tension bars lying in the same vertical plane, each bar being formed of a plurality of strands twisted together and the number of strands of each bar varying along the length thereof, the strands of each bar being integral with the strands of the other bar and constituting the sole connecting means between the two and forming a plurality of inclined shear members in the same vertical plane with said bars, certain of said adjacent strands lying at divergent angles to brace one bar rigid with the other.

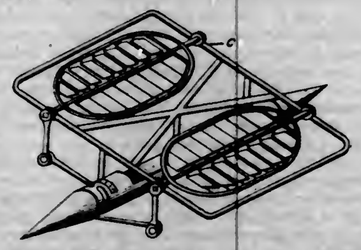
[Claims 6 to 9 not printed in the Gazette.]

881,835. GAME APPARATUS. ANTON A. WALRATH, Fort Plain, N. Y. Filed Mar. 12, 1907. Serial No. 362,020.



A game board comprising a circular platform, concentric rings encircling said platform and spaced therefrom by arches provided with guideways, the spaces forming raceways or tracks, a frame upon which the outer ring is supported, a central vertically disposed standard mounted to rotate in the frame, a counter-balanced arm rigidly connected to said standard and having an upwardly extending arm which passes through one of the spaces or tracks, a sleeve loosely mounted upon said standard, a counter-balanced arm rigidly connected to said sleeve and provided with an upwardly extending arm carrying a racing element, a gear wheel rigidly connected to said sleeve, a shaft mounted in the frame and provided with a pinion to engage said gear wheel, a ratchet wheel secured to said shaft, a gear wheel rigidly mounted on said standard, a shaft provided with a pinion to engage said gear wheel, a ratchet wheel on said shaft, pivoted levers each having a finger key at its outer end, a downwardly inclined pawl secured to each lever, said pawl engaging said ratchet wheel, a spring connected to each lever and supported upon the frame for returning said lever to its uppermost position, and detents for preventing retrograde movement of said ratchet wheels.

881,836. WING FOR FLYING-MACHINES. EVERETT E. WARNER, Hartford, Conn. Filed June 22, 1907. Serial No. 380,269.



1. In a flying-machine, a wing adapted to oscillate on an axis longitudinal with the machine, transverse wires secured to said axis, and flaps secured at their front ends to said transverse wires in separate series on each side of said axis.

2. In a flying-machine, a wing adapted to oscillate on an axis longitudinal with the machine, pairs of transverse wires secured to said axis, and flaps secured at their front ends to each pair of said wires.

881,837. AEROPLANE. GUSTAVE WHITEHEAD, Bridgeport, Conn., assignor of one-half to Stanley Yale Beach, Stratford, Conn. Filed Dec. 20, 1905. Serial No. 292,614.

1. An aeroplane provided with a trough-like body terminating in a head and having the rear portions of its sides extended upwardly and outwardly, to form a tail.



2. An aeroplane provided with a body approximately V-shaped in cross section and terminating at its front end in a head, the bottom of which is inclined upwardly and forwardly, and the sides of the head forming extensions of the sides of the body.

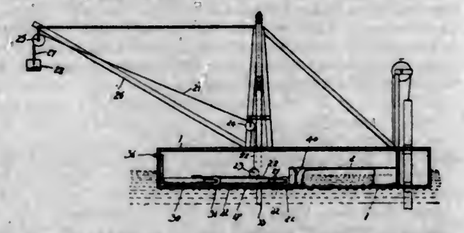
3. An aeroplane provided with a body approximately V-shaped in cross section and terminating at its front end in a head, the bottom of which is inclined upwardly and forwardly, and the sides of the head forming extensions of the sides of the body, the head sides and the head bottom terminating at a point lying in a horisontal plane containing the top of the said body.

4. An aeroplane provided with a body approximately V-shaped in cross section and terminating at its front end in a head, the bottom of which is inclined upwardly and forwardly, and the sides of the head forming extensions of the sides of the body, the head sides and head bottom terminating at a point intersected by a horisontal plane and a vertical plane, of which the latter passes longitudinally through the bottom of the said body, and the horizontal plane extends through the top of the body.

5. An aeroplane provided with a body approximately V-shaped in cross section and terminating at its front end in a head, the bottom of which is inclined upwardly and forwardly, and the sides of the head forming extensions of the sides of the body, the sides of the head being inclined toward each other and terminating in a point coinciding with the forward end of the bottom of the head.

[Claims 6 to 23 not printed in the Gazette.]

881,838. HOISTING APPARATUS FOR DREDGERS AND THE LIKE. ROBERT M. WILSON, San Francisco, Cal. Filed May 21, 1907. Serial No. 374,956.



1. In an apparatus of the character described, the combination with mechanism for applying power, of a cylinder, a plunger therein, an operative connection therefrom to said mechanism, a receiver for pressure fluid, a connection therefrom to said cylinder, and means for forcing compressed air and a liquid into said receiver, substantially as described.

2. In an apparatus of the character described, the combination, with mechanism for applying power of a cylinder, a plunger therein, an operative connection therefrom to said mechanism, a receiver for pressure fluid, a connection therefrom to said cylinder, and means for forcing compressed air and a liquid into said receiver, said means comprising a liquid pump and an air pump, means for operating said pumps in unison, and a connection from said pumps to said receiver, substantially as described.

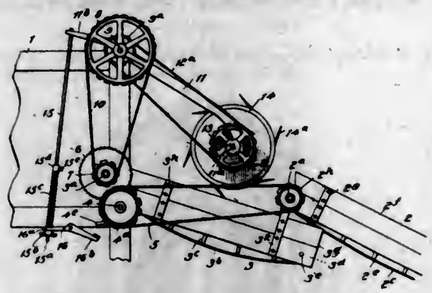
3. In an apparatus of the character described, the combination with the hull of a dredger, of a boom swinging on said hull, cylinders carried by said hull, plungers in said cylinders, cables operatively connected with said plungers and leading to the boom on opposite sides thereof, high and low pressure receivers connected with the respective cylinders, and means for supplying high and low pressure fluids to the respective receivers, substantially as described.

4. In an apparatus of the character described, the combination with the hull of a dredger, of a boom swinging on said hull, cylinders carried by said hull, plungers in said cylinders, cables operatively connected with said plungers and leading to the boom on opposite sides thereof, high and low pressure receivers connected with the respective cylinders, and means for interchangeably supplying high and low pressure fluids to the receivers, substantially as described.

5. In an apparatus of the character described, the combination with the hull of the dredger, and a swinging boom, of a cylinder carried by said hull, a plunger in said cylinder, a cable operatively connected with said plunger and with the boom, a receiver for pressure fluid, means for forcing air and a liquid under pressure to said receiver, and a conduit from said receiver to said cylinder, substantially as described.

[Claims 6 to 10 not printed in the Gazette.]

881,839. AUTOMATIC FEEDING MECHANISM FOR THRESHING-MACHINES. GEORGE O. APPEL, Bushton, Kans. Filed June 14, 1907. Serial No. 379,053.



1. In a machine of the class described, the combination with a self-feeder for threshing machines, including a first and second elevating conveyer, a main drive shaft for said second conveyer, a conveyer drive shaft for said first conveyer, a supplemental shaft sprocket and chain connections between said supplemental shaft and said first conveyer drive shaft, gear connections between the main drive shaft and said supplemental shaft, a clutch mechanism cooperating with said gear connections, a rotatable straw governing drum coöperatively connected with said main drive shaft, and means controlled by the movement of said drum for throwing said clutch mechanism out of operative connection at times, substantially as shown and described.

2. In a machine of the class described, the combination with a self-feeder for threshing machines, including a first and second elevating conveyer, a main drive shaft for said second conveyer, a conveyer drive shaft for said first conveyer, a supplemental shaft, sprocket and chain connections between said supplemental shaft and said first conveyer drive shaft, gear connections between the main drive shaft and said supplemental shaft, a clutch mechanism cooperating with said gear connections, a rotatable straw governing drum coöperatively connected with said main drive shaft to rotate at a speed less than that of the second elevating conveyer, means controlled by the movement of said drum for throwing said clutch mechanism out of operative connection at times, and means for normally holding said clutch mechanism in operative connection substantially as shown and described.

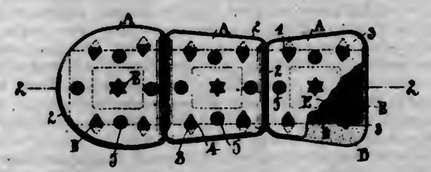
3. A device of the class described, comprising in combination with a self-feeder for threshing machines, including a first and second conveyer, a main drive shaft, means for driving said second conveyer from said main drive shaft, a supplemental shaft, means for driving said first conveyer from said supplemental shaft, gear connections between said main drive shaft and said supplemental shaft, said gear connections including a loose pinion on the supplemental drive shaft and a rotatable fixed pinion on the main drive shaft for meshing with the loose pinion, a clutch on the supplemental drive shaft for holding the loose pinion relatively fixed, means for normally holding said clutch in engagement with the loose pinion, and means for automatically throwing said clutch out of engagement with the loose pinion at times.

4. A device of the class described, comprising in combination with a first and second conveyer, a main drive shaft, means for driving said second conveyer from said main drive shaft, a supplemental shaft, means for driving said first conveyer from said supplemental shaft, gear connections between said main drive shaft and said supplemental shaft, said gear connections including a loose pinion on the supplemental drive shaft and a rotatable fixed pinion on the main drive shaft for meshing with the loose pinion, a clutch on the supplemental drive shaft for holding the loose pinion relatively fixed, means for normally holding said clutch in engagement with the loose pinion, means for automatically throwing said clutch out of engagement with the loose pinion at times, said last named means comprising a clutch lever, a bell crank lever coöperating therewith, and means for automatically rocking the said bell crank lever to engage said clutch lever to throw the clutch substantially as shown and described.

5. A device of the class described, comprising in combination with a first and second conveyer, a main drive shaft, means for driving said second conveyer from said main drive shaft, a supplemental shaft, means for driving said first conveyer from said supplemental shaft, gear connections between said main drive shaft and said supplemental shaft, said gear connections including a loose pinion on the supplemental drive shaft and a rotatable fixed pinion on the main drive shaft for meshing with the loose pinion, a clutch on the supplemental drive shaft for holding the loose pinion relatively fixed, means for normally holding said clutch in engagement with the loose pinion, means for automatically throwing said clutch out of engagement with the loose pinion at times, said last named means comprising a clutch lever, a bell crank lever coöperating therewith, means for automatically rocking the said bell crank lever to engage said clutch lever to throw the clutch, said rocking means comprising a pivoted arm, a rod connecting said pivoted arm with said bell crank lever, a rotatable conveying drum carried by said pivoted arm, means for rotating said conveying drum from the main drive shaft.

[Claim 6 not printed in the Gazette.]

881,840. INSOLE FOR BOOTS AND SHOES. JOSEPH ASKINS, Lima, Ohio. Filed Sept. 23, 1907. Serial No. 394,054.



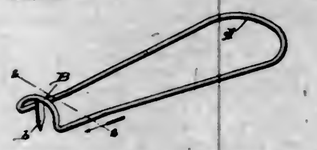
1. An insole for shoes having a flexible bottom, an absorbent padding over said bottom and a plurality of sepa-

rate surface plates affixed to said bottom having their edges bent downward all around the same and the opposed edges in contact.

2. An insole for shoes having a plurality of perforated metal plates at its top arranged edge to edge and the meeting edges thereof bent downward, a piece of electrical conducting metal next beneath each of said plates, a flexible support for said plates at the bottom of the insole and an absorbent cushioning pad between said electrical conducting metal pieces and said flexible bottom support.

3. An insole for shoes having a rubber treated fabric bottom, a series of separate surface plates over said bottom and affixed thereto and having transverse edges bearing one against the other and the edges of said plates bent downward all around, absorbent material between said plates and fabric bottom and a layer of conducting metal at the bottom of each of said surface plates over said absorbent material.

881,841. DEVICE FOR SLITTING SWEET CORN. GUSTAVUS A. BAHN, Austin, Tex. Filed July 17, 1907. Serial No. 384,142.

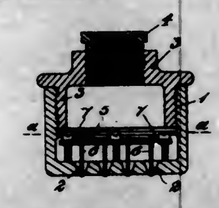


1. The improved corn-slitting device comprising a handle and a head attached thereto and having a transverse arch or curve and a cutter attached to and projecting inward from said curve, substantially as shown and described.

2. The improved corn slitting device consisting of a handle and a head connected therewith and having side portions adapted to bear upon rows of kernels, and a cutter secured to the head interiorly and arranged between the side-bearing portions, substantially as shown and described.

3. The improved corn-slitting device composed of a handle and a head formed of a metal strip, the head consisting of a transverse curve that joins the side ends of the handle and having a cutter projecting inward from the curved portion, as shown and described.

881,842. NOZZLE FOR THE SUPPLY OF LIQUID OR GASEOUS FUEL TO FURNACES. OSCAR BENDER, Neu-Babelsberg, near Berlin, Germany. Filed Feb. 28, 1907. Serial No. 359,944.



1. In a nozzle for the supply of liquids or gases to furnaces, a nozzle cap provided with holes in its nozzle-face, a liquid or gas inlet arranged opposite to said nozzle-face, a bridge within said cap between said nozzle face and said inlet, pins attached to said bridge, said pins projecting into said holes, said bridge and pins having free play within said cap to all sides thereof, set screws adjustably arranged in said bridge, said screws projecting against the inner nozzle face and limiting the minimum distance between said bridge and said nozzle face.

2. A nozzle for the supply of liquids or gases to furnaces having a liquid or gas inlet, a nozzle cap provided with holes in the nozzle-face, a plate within said cap arranged between said face and said inlet, pins attached to said plate and projecting into said holes, said plate together with said pins having free play within said cap to all sides, a lid adjustably screwed into the nozzle cap, and an inwardly projecting rim on said lid for limiting the backward movement of said plate.

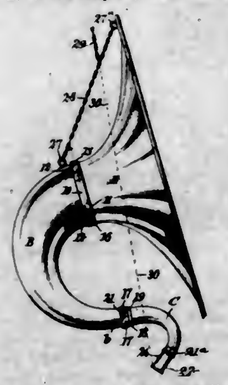
3. A nozzle for the supply of liquids or gases to furnaces having a liquid or gas inlet, a nozzle cap provided with holes in the nozzle-face, a plate within said cap arranged between said face and said inlet, pins attached to said plate and projecting into said holes, said plate together with said pins having free play within said cap to all sides, and set screws adjustably arranged in said plate and projecting against the inner nozzle-face.

4. A nozzle for the supply of liquid or gaseous fuel to furnaces, a nozzle cap provided with holes in the nozzle-face, a liquid or gas inlet opposite to said nozzle-face, a loose plate within said cap arranged between said fuel inlet and said nozzle-face, pins attached to said plate and projecting into said holes, said plate having free play within said cap to permit of its being hurled by the force of the current of fuel, set screws in said plate projecting against the inner nozzle-face, and an adjustable stop within said cap adapted to limit and regulate the backward movement of said plate.

5. A nozzle for the supply of liquid or gaseous fuel to furnaces, a nozzle cap provided with holes in the nozzle-face, a liquid or gas inlet opposite to said nozzle face, a bridge within said cap between said nozzle face and said inlet, pins attached to said bridge and projecting into said holes, said bridge being perfectly loose within said cap, set screws adjustably arranged in said bridge, said screws projecting against the inner nozzle face, and an adjustable stop within said cap adapted to limit and regulate backward movement of said bridge.

[Claims 6 and 7 not printed in the Gazette.]

881,843. PHONOGRAPH-HORN. CHARLES A. BEPPLER, New York, N. Y. Filed May 13, 1907. Serial No. 373,311.



1. A phonograph horn comprising a bell section, a body section removably connected at one end with the rear end portion of the bell section, means for locking the said sections together, a tip section having both removable and adjustable connection with the other end of the body section, and a sliding ferrule mounted upon the end portion of the tip section.

2. A phonograph horn formed on the line of a compound curve and comprising a bell section, a downwardly and forwardly curved body section, a tip section curved reversely to the curvature of the body section, the same being in direction of the rear of the horn, and means for removably connecting the body section to the bell section and for removably and adjustably connecting the tip section with the body section.

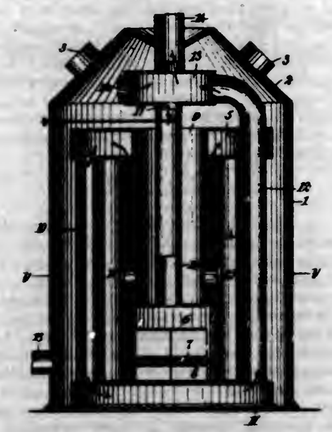
3. A phonograph horn comprising a bell section having its outer face at the peripheral portion of its flaring section flattened, a body section removably connected with the rear end portion of the bell section, the body section being downwardly and forwardly curved terminating at its lower end at a point beneath yet within the horizontal plane of the lower edge of the flaring portion of the bell section, a tip section for the body section curved reversely to the curvature of the body section, and means for adjustably and removably connecting the tip section to the body section.

4. A phonograph horn comprising a bell section having its outer face at the peripheral portion of its flaring section flattened, a body section removably connected with the rear end portion of the bell section, the body section being downwardly and forwardly curved, terminating at its lower end at a point beneath yet within the horizontal plane of the lower edge of the flaring portion of the bell section, a tip section for the body section, curved reversely to the curvature of the body section, means for adjustably and removably connecting the tip section to the body section, and a sliding ferrule mounted upon the lower end portion of the tip section.

5. In a phonograph horn, the combination with a bell section having a series of L-shaped slots at its rear or contracted end, a body section having pins at its upper or enlarged ends adapted to enter the slots in the bell section, arched bridge members located at the mouth portions of the said grooves, and a latch for one of the said pins, carried by the body section and having a head extending down into one of the said grooves, the body section being downwardly and forwardly curved, and also being of a longitudinally tapering shape in a downward direction, a tip section curved reversely to the curvature of the body section, opposing pins exteriorly located at the lower end of the body section, a hub formed at the upper or inner end of the tip section, the said hub being provided with opposing slots of equal length and mouth portions at the central portions of the said slots, the slots being adapted to receive the said pins, a bridge crossing the mouth portions of the slots of the tip member, and an adjustable ferrule at the lower end of said tip member.

[Claims 6 and 7 not printed in the Gazette.]

881,844. HEATER. HERBERT BEVAN, Burlington, N. J. Filed Apr. 29, 1907. Serial No. 370,867.

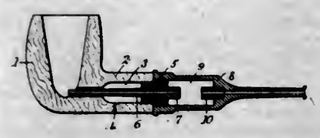


1. An air heating furnace, comprising an outer shell, a cylinder arranged therein the lower portion of which forms a fire chamber, a casing with which the upper end of the cylinder communicates, a casing in the lower portion of the furnace, tube connections between the upper and lower casings, a cylinder arranged within the first-named cylinder and passing through the upper casing, said cylinder communicating with the outer shell, a drum above the upper end of said inner cylinder, and pipe connections between said drum and said lower casing.

2. A furnace for heating air, comprising an outer shell, a cylinder arranged therein, a grate in the lower portion of said cylinder, a casing with which the upper end of said cylinder communicates, a cylinder arranged within the first-named cylinder and passing through said casing, the said inner cylinder being open at the top, tubes leading from the lower portion of the inner cylinder through the wall of the first-named cylinder, a casing in the lower portion of the furnace, tube connections between the upper and lower casings, a drum arranged above said inner cylinder and having an outlet for smoke and the like, and pipe connections between said drum and said lower casing.

3. A hot air furnace, comprising an outer shell having a dome top, flues leading from said dome top, a cylinder arranged within the casing the lower portion of which forms a fire chamber, a casing with which the upper portion of said cylinder communicates, a cylinder within the first-named cylinder and having an exterior diameter smaller than the interior diameter of the first-named cylinder, the said inner cylinder being open at the top, a lower casing, a plurality of tubes providing communication between the upper and lower casings, a drum arranged in the upper portion of the furnace and having an outlet for smoke and the like, and pipe connections between said drum and said lower chamber.

881,845. PIPE. ALLAN K. BOWMAN, Pittsburg, Pa. Filed May 27, 1907. Serial No. 375,899.



1. A pipe having a chamber formed in the stem thereof provided with an air intake opening, and a tube passing through said chamber to the bowl of the pipe, said chamber communicating with the bowl of the pipe around said tube.

2. A pipe having a chamber formed in the stem thereof communicating with the bowl of the pipe and provided with an air intake opening, and a tube passing through said chamber to the bowl of the pipe substantially at the bottom center thereof.

3. A pipe having a chamber formed in the stem provided with an air intake opening, a plug carried by the stem, and a tube passing through the plug and chamber to the bowl of the pipe.

4. A pipe having a chamber formed in the integral stem portion thereof communicating with the bowl and provided with an air intake opening, a displacable stem connected to said integral stem portion having a reservior, and a tube passing from said reservoir through said chamber to the bowl of the pipe.

5. A pipe having a reservoir formed in the stem thereof, and a removable tube providing communication between said reservoir and the bowl of the pipe.

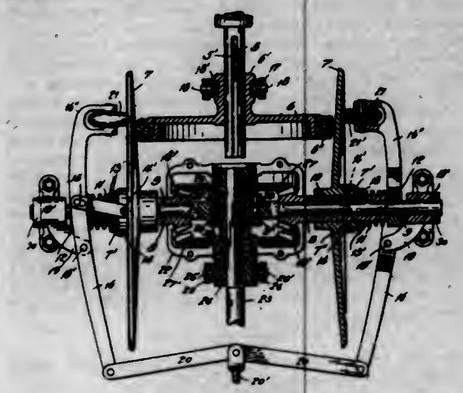
[Claim 6 not printed in the Gazette.]

881,846. POWER-TRANSMITTING MECHANISM. FREDERICK R. BURCH and CHARLES E. S. BURCH, Seattle, Wash. Filed June 11, 1907. Serial No. 378,351.

1. In combination with the power shaft, a driving wheel on said shaft, two disks adapted to be frictionally driven by said wheel, a pair of toothed pinions rotated by the respective disks, an axle carrying said disks and pinions and furnishing a support for a driven shaft, a pair of toothed gears carried by the driven shaft and arranged to be severally engaged with both the said pinions, and means for effecting such engagement.

2. In combination with the power shaft, a driving wheel mounted upon said shaft so as to be movable longitudinally thereof, means for effecting such adjustment, a pair of disks arranged to be frictionally driven by the wheel and normally in engagement therewith, means for simultaneously disengaging the disks from the wheel, a driven shaft, mechanical driving connections between said disks

and the driven shaft, such connections being adapted to transmit the non-reversible rotary motions of the disks into two reversible rotary motions to the driven shaft, and means for effecting such reversal of motions of the driven shaft.



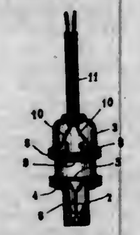
3. In apparatus of the class described, the combination with a pair of disks intended for rotation in opposite direction, a driving wheel for accomplishing such rotations through frictional contact with the respective disks, an axle arranged transversely of the axis of said driving wheel and axially of the disks, toothed pinions mounted upon the axle and rotated in opposite directions and coincidently with the respective disks, a driven shaft extending through said axle, two toothed gear wheels upon the driven shaft and respectively positioned upon opposite sides of the axle, and means whereby either of said gear wheels may be simultaneously meshed with both of said pinions or disengaged therefrom.

4. In apparatus of the class described, the combination with a wheel, and a pair of disks adapted to be frictionally driven thereby, rollers acting against said disks, levers carrying the rollers, link connections between the disks and the respective levers, and means for controlling the action of said levers whereby said rollers are engaged with or disengaged from the disks and the latter coincidently moved toward or from said wheel.

5. In apparatus of the class described, the combination with a wheel, and a pair of disks adapted to be frictionally driven thereby, of springs for yieldingly retaining the disks in engagement with the wheel, levers, link connections between the disks and the respective levers, and means for controlling the action of said levers whereby the disks are moved toward or from said wheel.

[Claims 6 to 11 not printed in the Gazette.]

881,847. THERMOSTAT. FRED P. BUTMAN, Holbrook, Mass. Filed Mar. 27, 1903. Serial No. 149,904.



1. In a thermostat for journal bearings, the combination of a cup 2 having a closed bottom forming a solder-retaining receptacle and provided above the same with a ledge 4, a disk 5 having a pin 6 normally secured in the bottom of said cup by fusible solder, a tapering spiral spring having its base resting upon said ledge and its smaller end bearing against said disk, the coils of said spring being normally nested one within another, and means for completing an electric circuit through said disk upon the melting of the fusible solder.

2. In a thermostat for journal bearings, the combination of a cup having a closed bottom forming a solder-retaining receptacle and also having an open top adapted to permit the resetting of the device, an insulating disk 9 detachably screwed into the open top of said cup; contact terminals passing through said disk and serving as a means for turning the same, a disk 5 located beneath said insulating disk and having a downwardly-extending pin normally secured to the bottom of the cup by fusible solder, and a spring tending to force said disk 5 upward.

3. In a thermostat for journal bearings, the combination of a cup 2 having a closed bottom of restricted diameter as compared with the upper portion of the cup and forming a solder-retaining receptacle, an insulating disk 9 detachably secured in the open top of the cup and provided with contact terminals passing through the same and adapted to be included in an alarm circuit, a disk 5 contained in said cup beneath the disk 9 and provided with a downwardly-extending pin having its lower end normally secured within the restricted bottom of the cup by means of fusible solder contained therein, and a spring tending to force said disk 5 upward, the sides of the cup above its restricted bottom being tapered to act as guiding surfaces for said pin in resetting the device.

4. In a thermostat for journal bearings, the combination of an externally screw-threaded cup 2 having a ledge 4 and closed at its top by a detachable insulating disk 9, a disk 5 movable in said cup above the ledge 4 and provided with a pin normally secured to the bottom of the cup by fusible solder, a tapering spiral spring between said ledge and movable disk, insulated conducting pins 8 passing through the disk 9, wires leading from said pins respectively, and a cap 3 detachably secured to the cup 2, substantially as described.

5. In a thermostat for journal bearings, the combination of a cup 2, an insulating disk 9 detachably secured to the top of said cup and forming a tight cover for the same, a cap 3 detachably secured to the cup 2 and provided with a central perforation, the interior of said cap forming an inclosed chamber, contact terminals passing through the disk 9 and extending upward therefrom into the interior of said cap, circuit wires connected to said contact terminals respectively within said cap and passing loosely through the perforation therein, and means contained within the cup 2 for establishing a circuit through the contact terminals at a predetermined temperature.

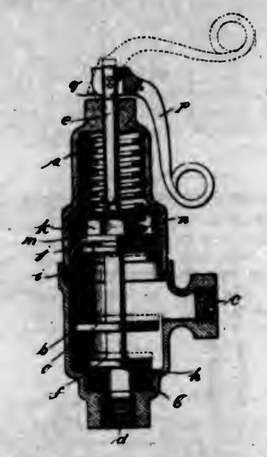
[Claim 6 not printed in the Gazette.]

881,848. WATER-RELIEF VALVE. GEORGE W. DAY, Gasport, N. Y. Filed Apr. 8, 1907. Serial No. 366,975.

1. A water-relief valve consisting of a casing; a valve-stem mounted therein; a valve upon said valve-stem; a spring controlling said valve-stem; means actuated by the pressure of the water for opening said valve; and means upon said valve-stem and actuated by the water for closing the valve; the last named means being separate from said valve and on the side thereof opposite from the opening controlled thereby.

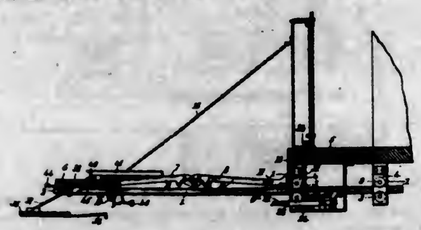
2. A water-relief valve consisting of a valve casing; a valve-stem mounted therein; a valve upon said valve-stem; means for holding said valve closed against the pressure of the water; means actuated by the pressure of the water for opening said valve; and means for closing the valve after it has been opened by the pressure of the water; said last named means being separate from the first named means and from said valve and on the side thereof opposite from the opening controlled thereby.

3. The combination in a water-relief valve of a valve casing provided with a valve-seat; a valve-stem mounted in said casing; a valve upon said valve-stem; means for holding said valve upon said valve-seat; means actuated by the pressure of the water for raising said valve from said valve-seat against the action of the first-named means; and a flange upon said valve-stem between said valve and the inlet to said casing; said flange being separated from



the inner wall of said casing by a narrow interval and serving to seat the valve after it has been opened by an excess of pressure.

881,849. FENDER. RAFFAELA D'ORONZIO, New York, N. Y. Filed Mar. 12, 1907. Serial No. 361,911.



1. In combination with a car, an extensible fender comprising a frame carrying a bed composed of a plurality of sections pivotally connected together, a locking mechanism located under the platform of the car for holding the fender in contracted position, and depressible means operable from said platform to operate said mechanism for releasing the fender.

2. In combination with a car having roller bearings located thereunder, an extensible fender comprising a frame movably mounted in said bearings having a bed composed of a plurality of sections pivotally connected together, and means for locking said fender in contracted position.

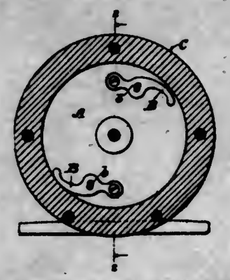
3. The combination with a fender, of a portion movably mounted thereon below the fender, buffers adapted to lie flat upon the fender when said portion is depressed, and means carried by said portion automatically operating to turn the buffers into alinement therewith when said portion is elevated.

4. An extensible fender having a portion movably mounted with respect thereto at the front end thereof, a locking mechanism, and means carried by said portion for engaging with said locking mechanism to lock the fender in contracted position.

5. An extensible fender having a portion movably mounted with respect thereto at the front end thereof, a locking mechanism, means carried by said portion for engaging with said locking mechanism to lock the fender in contracted position, and means located at the front end of the fender above said movable portion operable to release the fender.

[Claims 6 to 9 not printed in the Gazette.]

881,850. FISHING-TACKLE. BENJAMIN F. FLEGEL, Racine, Wis. Filed Apr. 11, 1907. Serial No. 367,472.

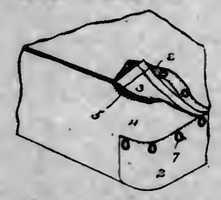


1. A fishing-reel spool having a head thereof provided with a pivotal brake-shoe concentrically slotted, a guide-pin on said spool-head engaging the brake-shoe slot, and a spool-cage having annularly recessed heads engaged by the spool-heads, the brake-shoe aforesaid in connection with one of said spool-heads being operated by centrifugal force in the recess of the adjacent cage-head to automatically govern speed of the spool as a whole when a line wound thereon is running out.

2. A fishing-reel spool having a head thereof provided with diametrically opposite pivotal brake-shoes each concentrically slotted, guide-pins on said spool-head each engaging a brake-shoe slot, and a spool-cage having annularly recessed heads engaging by the spool-heads, the brake-shoes aforesaid in connection with one of said spool-heads being operated by centrifugal force in the recess of the adjacent cage-head to automatically govern speed of the spool as a whole when a line wound thereon is running out.

3. A fishing-reel comprising a spool, a cage therefor having one of its heads formed with a recess to accommodate a head of said spool, a brake-shoe consisting of a single independent element pivotally mounted at one end on the spool-head and designed to freely swing outwardly to engage the wall of said recess, and means for limiting the inward movement of the brake-shoe element.

881,851. COVER. DAVID F. FORWOOD, Taylor, Tex. Filed July 2, 1907. Serial No. 381,883.

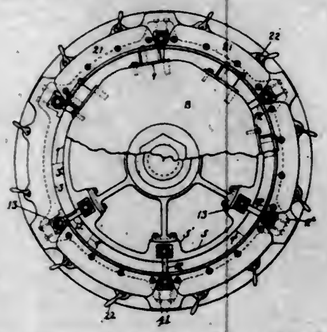


A closure for a mattress comprising a cover consisting of walls completely covering the ends and all sides, an opening in the form of a slit along the edge of the joining of the top of said cover with one end, said opening extending around the joining edges for a short distance, a flap secured to said joining edge of said cover and extending downwardly over said opening said flap extending to the lower edge of the end of the mattress and entirely covering said end, and two half length flaps covering said flap and said end and the adjoining portions of the sides, said half length flaps being secured at their edges which edges meet along a line midway between the slit and the free end of the flap directly covering said slit.

881,852. APPARATUS FOR MANUFACTURING STEEL OR OTHER METAL WOOL. HARRY C. GAMAGE, Lynn, Mass., assignor, by mesne assignments, to The Gamo Company, Jersey City, N. J., a Corporation of New Jersey. Filed Mar. 20, 1903. Serial No. 148,683.

1. In an apparatus for paring the edges of bundled sheets of metal, the combination of a curved holder, adapt-

ed to retain the sheets on edge, a central rotatable shaft, a knife mounted on the shaft so as to move in a path concentric with the opening in the holder, and means for feeding the curved sheets edgewise from the holder into the path of the knife for the purpose specified.



2. The combination substantially as described of a curved holder open at one end and adapted to sustain a laminated bundle of sheets of metal on edge and to prevent the bundle from buckling sidewise, clamping plates movable inwardly on the outer wall near the open end of the holder for clamping the outer edge of the bundle, means for feeding said bundle edgewise out of the open end of said holder, and one or more cutters mounted to revolve over said opening in a circular path, the axis of the cutters being substantially coincident with the axis of the curved holder, substantially as specified.

3. The combination substantially as described of a curved receptacle or holder adapted to sustain a bundle or pile of metal or other sheets on edge, a series of carriages or supports on which the bundle or pile may rest, a tool-carrying shaft carrying one or more cutters adapted to take a cut from the edge of the sustained plates or sheets on the circumference of a circle whose plane is transverse to the laminations, and means for actuating said supports to feed the bundle edgewise during rotation of the cutter or cutters.

4. The combination substantially as described of two concentric frames or shells having an annular or curved space between them adapted to receive a bundle or pile of laminated material, a series of supports upon which said bundle rests, guides for said supports in said frames or shells at opposite sides of the curved space or receptacle, and feed-screws for operating said supports and projecting the laminated bundle edgewise from the space between said frames or shells.

5. In an apparatus for reducing the edge of a pile or bundle of laminated material, the combination of concentric shells or frames adapted to provide a lateral support for the pile sustained on edge between them, a series of rests or carriages 12 extended across the space between said frames and provided with heads working in suitable guides and operating screw-shafts passing through said heads.

[Claims 6 to 12 not printed in the Gazette.]

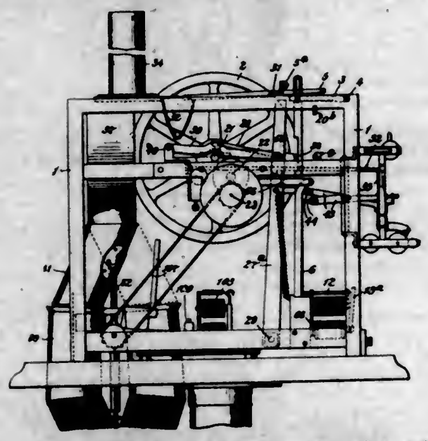
881,853. WIRE-GRIP. JOHN T. GARDNER, Buffalo, Mo., assignor to Levi Engle, Buffalo, Mo. Filed Sept. 17, 1907. Serial No. 393,349.



1. A grip comprising a pair of pivotally connected members having gripping surfaces, a guide secured to one of the members and slidably engaging the other member and a guard arranged opposite to said guide and movable into and out of coöperative relation with the gripping members.

2. A grip comprising a pair of pivotally connected members having gripping surfaces, a guide fixed to one of the members and coöperating with the other member to prevent disarrangement of the article gripped with relation to the members and a guard fitting on the opposite side of one of the gripping members and having a portion adapted to overlap the gripping surfaces of the members and provided with an undercut shoulder adapted to coöperate with the other member.

881,854. CHANGE-MAKER. EDWIN R. GILL, Yonkers, N. Y., assignor to Electric Cash Carrier and Change Maker Company, a Corporation of Missouri. Original application filed July 26, 1895. Serial No. 557,182. Patented Apr. 26, 1904, No. 758,060. Divided and this application filed Aug. 14, 1903, Serial No. 169,481. Renewed July 2, 1907. Serial No. 381,926.



1. The combination of a change maker and a motor mechanism therefor, with a change recorder and order setting device.

2. In a change maker, a change deliverer, motor mechanism therefor, and a change selector movable independently of said motor mechanism and adapted to establish various connections between said change deliverer and motor mechanism.

3. In a change maker, a change deliverer, motor mechanism therefor, a recorder adapted to be variously connected for operation with said motor mechanism and a change selector adapted to establish various connections between said motor mechanism and said deliverer and recorder.

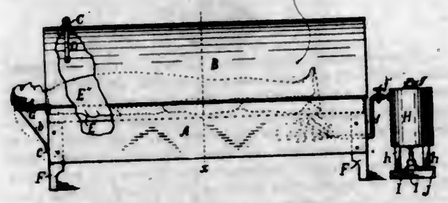
4. In a change maker, a change deliverer and motor mechanism therefor; said mechanism being adapted to make a number of strokes in each operation of the machine; in combination with a change selector adapted to control the change deliverer with relation to the number of strokes of said motor mechanism which may act upon said deliverer in one operation of the machine.

5. In a change maker, a change selector, a type selector, and means whereby the change selector operates the type selector.

[Claims 6 to 25 not printed in the Gazette.]

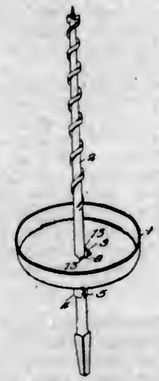
881,855. COMBINATION STEAM AND WATER BATH CABINET. JOSEPH F. GRUBBS, Oklahoma, Okla. Filed May 6, 1907. Serial No. 371,977.

1. In the combination of a steam and water bath-cabinet, a longitudinally rectangular body portion A having a floor and vertical side and end walls mounted upon four legs secured to the inner surface of said walls and having their upper ends bent to form right-angled flanges, a body-rest supported by said flanges, a longitudinally rectangular cover B being transversely circular or oval and pivotally secured to the outer marginal surface of one of the side walls of the cabinet-body in a manner to be turned down and constitute a water-bath tub, having a plugable waste-water orifice in its concave bottom to drain off the refuse water, a thermometer inserting and steam-emitting stub pipe C secured to the outer upper surface and near the head end of the said cover, means for generating and conducting steam into the body portion of the said cabinet, substantially as described.



2. In a bath cabinet of the class described having a body portion and a corresponding cover or top portion with a steam emitting and thermometer inserting stub pipe in its top portion externally secured thereto, a ball-head thermometer D extending interiorly through the orifice of said pipe to indicate the temperature within the cabinet the thermometer-head serving to suspend the stem portion and as a steam check or valve during service, as set forth and described.

881,856. CUP ATTACHMENT FOR AUGERS. WILLIAM HAGSTROM, GUSTAF HAGSTROM, and EMANUEL HAGSTROM, Lindsborg, Kans., assignors to Hagstrom Bros. Manufacturing Co., Lindsborg, Kans. Filed June 28, 1907. Serial No. 381,381.

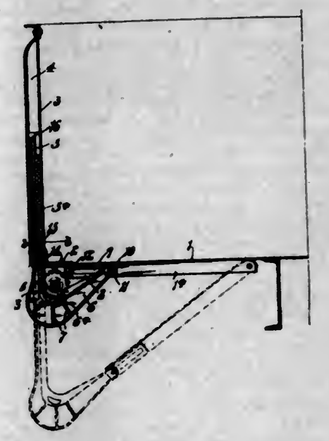


1. In combination with a cup for use in connection with a boring tool for catching cuttings and which cup has an opening for the reception of the boring tool, a fixed jaw secured to the cup upon one side of the opening, a movable jaw arranged upon the opposite side of said opening, and a cam lever coöperating with the movable jaw to advance the same towards the fixed jaw.

2. In combination with a cup for use in connection with a boring tool for catching cuttings and which cup has an opening for the reception of the boring tool, a fixed jaw secured to the cup upon one side of the opening, a movable jaw arranged upon the opposite side of said opening, said movable jaw having a base in which is formed a slot, a cam lever overlapping said base to confine the same between it and the cup, and a fastening connecting the cam lever to the cup and passed through said slot in the base of the movable jaw.

3. In combination with a cup for use in connection with a boring tool for catching cuttings and which cup has an opening for the reception of the boring tool, a fixed jaw secured to the cup upon one side of the opening, a movable jaw arranged upon the opposite side of said opening, said movable jaw having a base formed with an open slot at one end to embrace the fixed jaw and having a narrow slot in its opposite end portion, a cam lever overlapping said base to confine the same between it and the cup, and a fastening connecting the cam lever and the cup and passed through said slot in the base of the movable jaw.

881,857. DOOR-OPERATING MECHANISM FOR CARS. CLEMENT G. HARRINGTON, Maplewood, Mo., assignor to American Car & Foundry Company, St. Louis, Mo., a Corporation of New Jersey. Filed Nov. 11, 1907. Serial No. 401,653.



1. A car provided with a door, a vertically disposed actuating bar, an arm rigidly connected to said bar and projecting underneath the door when it is closed so as to support same, and means for reciprocating said actuating bar; substantially as described.

2. A car provided with a hinged door, a vertically disposed actuating bar, a rigid arm on said bar having a sliding connection with said door and projecting underneath same when in its closed position, and means for moving said bar; substantially as described.

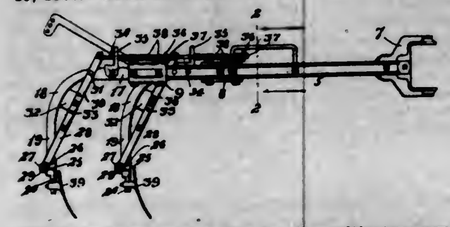
3. A car provided with a hinged door closing an opening in the bottom of the car and having its front edge arranged parallel to the side wall of the car, a vertically disposed actuating bar provided with a rigid arm that is connected to the door adjacent the front edge thereof, and means for reciprocating said bar to open and close the door; substantially as described.

4. A car provided with a hinged door that closes an opening in the bottom of the car, an actuating bar arranged on one of the vertical walls of the car and provided with rack teeth and a rigid arm that projects underneath the bottom of the car and is connected to said door, and an operating shaft provided with a pinion that meshes with the rack teeth on said bar; substantially as described.

5. A car provided with a drop door that closes an opening in the bottom of the car, a vertically disposed actuating bar provided with a rigid arm that projects underneath the outer edge of the door, and means for operating said bar; substantially as described.

[Claims 6 to 23 not printed in the Gazette.]

881,858. DRAG-BAR FOR CULTIVATORS. RALPH W. E. HAYES, Galva, Ill., assignor of one-half to Hayes Pump & Planter Company, Galva, Ill., a Corporation of Illinois. Original application filed Feb. 13, 1906, Serial No. 300,846. Divided and this application filed Mar. 19, 1907. Serial No. 363,210.



1. The combination of a drag bar for cultivators comprising two beam sections having a space between them, a stirrup-shaped support having top, bottom and end walls, clamping bolts passing through the top and bottom walls and between the beam sections for rigidly clamping the sections together and permitting adjustment, and a shovel standard attached to the stirrup-shaped support, substantially as described.

2. The combination of a drag bar for cultivators comprising two beam sections having a space between them, a stirrup-shaped support having top, bottom and end walls, clamping bolts passing through the top and bottom walls and between the beam sections for rigidly clamping the sections together and permitting adjustment, and a shovel standard having its end entered between the top and bottom walls of the stirrup and rigidly secured to the end wall thereof, substantially as described.

3. The combination of a drag bar comprising two beam sections having a space between them, a stirrup-shaped support having top, bottom and end walls, clamping bolts passing through the space between the two beam sections for rigidly securing the sections together and permitting adjustment, a shovel standard having its end entered within the stirrup and secured to the end wall thereof, a stem for a shovel, and a yieldable connection between the stem and the shovel standard, substantially as described.

4. The combination of a drag bar comprising two beam sections having a space between them, a stirrup-shaped support having top, bottom and end walls, a clamping bolt secured to the top and bottom walls and passing through the space between the beam sections, a transverse bolt for clamping the sections together, and a shovel standard attached to the stirrup-shaped support, substantially as described.

5. The combination of a drag bar comprising two beam sections having a space between them, a stirrup-shaped support having top, bottom and end walls and provided with a transversely extending row of adjusting holes in the top and bottom walls, a clamping bolt entered through companion holes in the top and bottom and through the space between the beam sections for permitting fore and aft and lateral adjustment of the stirrup support, and for clamping the parts in adjusted position, and a shovel standard attached to the stirrup-shaped support, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

881,859. CLEANING COMPOUND. GABOR HEGYI, Los Angeles, Cal. Filed July 8, 1907. Serial No. 382,775.

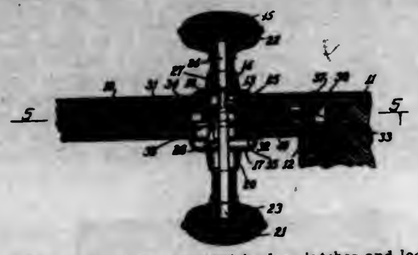
1. A composition for cleaning purposes, comprising black asphaltum base oil, liquid asphaltum, neutral oil, carbolic acid, glycerin, oil of mirbane, sawdust and sand.

2. A compound for cleaning purposes comprising a heavy oil having an asphaltum base, neutral oil, disinfecting liquid, glycerin, oil of mirbane, sawdust and sand.

3. A cleaning compound comprising an oil of heavy gravity, asphaltum, neutral oil, carbolic acid, glycerin, oil of mirbane, sawdust and sand.

4. A cleaning compound consisting of neutral oil having asphaltum dissolved therein, carbolic acid, glycerin, oil of mirbane, sawdust and sand.

881,860. DOOR LATCH AND LOCK. FRANK HESBECK, Orange, Mass. Filed Nov. 9, 1905. Serial No. 286,526.



1. The described improvement in door latches and locks, consisting in the spring-pressed latch-bolt, the rectangular, reciprocating knob-spindles passing through said bolt and divided longitudinally into relatively adjustable half-sections suitably secured for joint use, such sections having half-round intermediate portions and one section being formed with a rigid, wedge-like projection for retracting said bolt, in combination with an oscillatory locking piece surrounding the composite spindle at its rounded portion and adapted to engage the angular shoulders at the ends thereof when desired, substantially as set forth.

2. The described two part composite knob-spindle adapted for slight longitudinal adjustment, formed with adjacent half-round portions of different lengths, one member of such spindle having a short lengthwise slot and the other provided with a stud entering the same, in combination with the oscillatory locking piece surrounding the composite spindle and adapted to turn on its rounded portion when the door is closed and lock the door by engaging the terminal shoulders of said portion, substantially as set forth.

3. The improvement in door-latch mechanism, comprising the prolonged spring-pressed latch bolt, movable in a socket in the door and having at its inner end a bearing for the spindle cam, the reciprocating knob-spindle passing through such bolt transversely and formed with an integral cam-like projection engaging said bearing to retract the latch bolt, in combination with the inside plate and outside shell having hollow hubs for reciprocation of the spindle, said shell inclosing the key-lock mechanism, substantially as set forth.

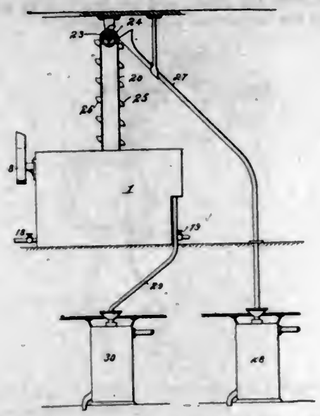
4. The improvement in door latches and locks comprising the reciprocating knob-spindle formed with a lateral wedge-like cam, the latch bolt slotted for passage of the spindle, and having a bearing for said cam to act on, and adjacent recesses, in combination with key lock mechanism including a slotted tumbler actuated by the key, pivoted levers linked near their upper ends, one of them having a stud at foot engaging the tumbler slots and the other having alternate fulcrums and formed at its free end with an offset arm or tang entering a recess in the latch bolt, substantially as set forth.

881,861. PROCESS FOR SORTING COCOA-BEANS. JAMES M. HERRON, East Orange, N. J., assignor, by mesne assignments, to Ceylon Cocoa & Coffee Company, a Corporation of New York. Filed June 13, 1905. Serial No. 265,089.

1. The process of separating ripe from unripe cocoa beans, which consists in submerging the mass containing ripe and unripe beans in tepid water and separately gathering the beans which float at or near the surface of the water and those which sink.

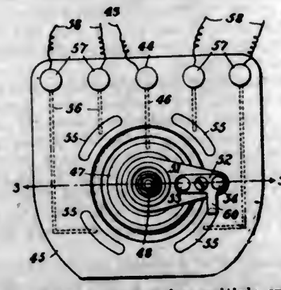
2. The process of separating ripe from unripe cocoa beans, which consists in submerging a mass containing both ripe and unripe beans in water at a temperature of about 85° to 90° F. and separately gathering the beans which float at or near the surface of the water and those which sink.

3. The process of treating a mass which contains both ripe and unripe cocoa beans, which consists in carrying said mass into and through a body of tepid water, separately collecting and drying those beans which float at or near the surface of the water, and separately gathering those beans which remain upon the carrier, removing the



water adhering thereto, and subjecting said beans to a ripening process, substantially as described.

881,862. ELECTRIC IGNITION APPARATUS. RUSSELL HUFF, Detroit, Mich., assignor to Packard Motor Car Company, Detroit, Mich., a Corporation of West Virginia. Original application filed Dec. 22, 1906, Serial No. 349,190. Divided and this application filed May 31, 1907. Serial No. 376,547.



1. In an ignition apparatus for multiple cylinder hydrocarbon engines, a distributer comprising a traveling brush and a series of separated contacts over which the brush travels in succession, said brush being provided with means for transmitting current through each contact in turn while the forward part of the brush is traveling over a portion of the succeeding interval between contacts, for the purpose set forth.

2. In an ignition apparatus for multiple cylinder hydrocarbon engines, a distributer comprising a traveling brush and a series of separated contacts over which the brush travels in succession, said brush having a trailing extension through which current may pass to each contact in turn while the forward part of the brush is traveling over a portion of the succeeding interval between contacts, for the purpose set forth.

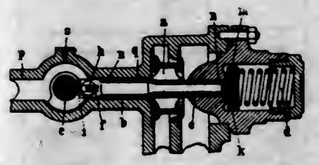
3. In an ignition apparatus for hydrocarbon engines, the combination with a distributer having a series of contacts and a brush adapted to engage said contacts successively, of a conductor in communication with the brush and adapted to follow said brush over the contacts, said conductor being separated from the contacts by an air gap, whereby preignition of the explosive charges in the cylinders is prevented.

4. In an ignition apparatus for hydrocarbon engines, the combination with a distributer having a series of segmental contacts and a brush adapted to move over said contacts successively, of a finger extending rearwardly from the brush and having its free end separated from the contact by an air gap, said finger being in electrical communication with the brush, whereby preignition of the explosive charges in the cylinder is prevented.

5. In an ignition apparatus for hydrocarbon engines, the combination with a distributer having a series of segmental contact pieces mounted thereon, said contact pieces being respectively in circuit with the spark plugs of the engines, and with a brush adapted to travel over and in engagement with said contact pieces successively, of means for producing a high tension current through said brush and contact pieces, and a conducting finger extending rearwardly from the brush and having its free end separated from the contact pieces by an air gap, for the purpose set forth.

[Claim 6 not printed in the Gazette.]

881,863. DISTRIBUTING-VALVE. HUGO LENTZ, Halensee, near Berlin, and WILHELM VOIT, Berlin-Steglitz, Germany. Filed Dec. 19, 1906. Serial No. 348,521.



1. The combination with a distributing chest and a multiple seat tubular valve, of a hollow rod integral with the valve and having a fork-shaped end, said rod being guided by the distributing chest of the valve, a roller lodged in the fork-shaped extremity of the rod, and a journal for said roller having extensions entering grooves formed in the guide member of the rod.

2. The combination with a multiple seat tubular valve, of a hollow rod integral with the valve, one of the extremities of said rod being fork-shaped and receiving a roller, a distributing cam engaging the roller, a plate at the other extremity of the rod, and a spring engaging the plate.

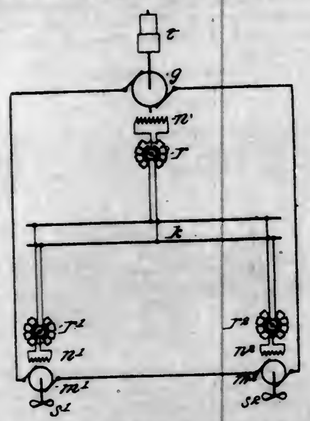
3. The combination with a multiple seat tubular valve, of a hollow rod, one of the extremities of said rod being fork-shaped and receiving a roller, a distributing cam engaging the roller, a plate at the other extremity of the rod, and a spring engaging the plate, the plate having a passage for establishing communication between the chamber of the spring and the interior of the hollow rod, and the hollow rod apertured for the passage of lubricating materials.

4. The combination with a multiple seat tubular valve, of a hollow rod, one of the extremities of said rod being fork-shaped and receiving a roller, a distributing cam engaging the roller, a plate at the other extremity of the rod, and a spring engaging the plate, the plate having a passage for establishing communication between the chamber of the spring and the interior of the hollow rod, and the hollow rod apertured for the passage of lubricating materials, and grooves providing for lubrication and the formation of a good joint.

881,864. MEANS FOR TRANSMITTING POWER ELECTRICALLY. GREGOR LEWIN, Schöneberg, near Berlin, Germany, assignor to Siemens-Schuckert-Werke, G. M. B. H., Berlin, Germany, a Corporation of Germany. Filed July 2, 1907. Serial No. 381,906.

1. In means for transmitting power electrically, the combination with a separately excited controlling generator and means for varying the field excitation of the same; of a plurality of motors, an armature circuit in which the armature of said motors are connected in series with each other and with the armature of said controlling generator, means for exciting the fields of said motors independently of the tension in said armature circuit and reversible means for varying the field excitation of each of said motors independently of the other.

2. In means for transmitting power electrically, the combination with a separately excited controlling generator and means for varying the field excitation of the same; of a plurality of motors, a plurality of propellers operatively connected with and adapted to be driven by said motors, an armature circuit in which the armatures of said motors are connected in series with the armature of said controlling generator, means for exciting the fields of said motors independently of the tension in said armature circuit and means for varying the field excitation of each of said motors independently of the other.



3. In means for transmitting power electrically, the combination with a separately excited controlling generator and means for varying the field excitation of the same; of a plurality of motors, a plurality of propellers operatively connected with and adapted to be driven by said motors, an armature circuit in which the armatures of said motors are connected in series with each other and with the armature of said controlling generator, means for exciting the fields of said motors independently of the tension in said armature circuit and means for varying the field excitation of each of said motors independently of the other.

4. In means for transmitting power electrically, the combination with a separately excited controlling generator and means for varying the field excitation of the same, of a plurality of motors, a plurality of propellers operatively connected with and adapted to be driven by said motors, an armature circuit in which the armatures of said motors are connected in series with the armature of said controlling generator, means for exciting the fields of said motors independently of the tension in said armature circuit and reversible means for varying the field excitation of each of said motors independently of the other.

5. In means for transmitting power electrically, the combination with a separately excited controlling generator and means for varying the field excitation of the same, of a plurality of motors, a plurality of propellers operatively connected with and adapted to be driven by said motors, an armature circuit in which the armatures of said motors are connected in series with each other and with the armature of said controlling generator, means for exciting the fields of said motors independently of the tension in said armature circuit and reversible means for varying the field excitation of each of said motors independently of the other.

[Claims 6 to 8 not printed in the Gazette.]

881,865. FLEXIBLY-SUPPORTED TOOL. THOMAS NICHOLS, Templeton, Mass., assignor of one-half to Elliott J. McKnight, Gardner, Mass. Filed Oct. 12, 1906. Serial No. 338,600.

1. In a flexibly supported tool, the combination of a flexible shaft, a hollow flexible support containing the shaft, a tool-holder, an adjustable screw for engaging the tool-holder and positively holding the tool-holder in engagement with the shaft, and yielding means tending to disconnect the tool-holder from the shafts.



2. The combination with a shaft, of a tool-holder having a pair of grooves, one deeper than the other, the deeper groove being located at a greater distance from the shaft than the other groove, and means adapted to enter either of said grooves to fix the location of the tool-holder with respect to the shaft.

3. The combination of a shaft having a clutch section on the end thereof, a tool holder having a complementary clutch section, a spring between the shaft and tool holder for forcing the clutch sections apart, and means for positively holding the clutch sections together, said means comprising a groove on the tool holder and an adjustable member adapted to enter said groove when the clutch sections are in engagement and to prevent the clutch section from becoming disengaged.

4. The combination of a flexible shaft having an eccentric socket in its end, and a second socket, a tool holder having a pin adapted to engage said eccentric socket and having a socket registering with said second socket, a spring mounted in the registering sockets in the shaft and tool holder and operating to force the shaft and tool holder apart, said tool holder having a pair of grooves, one deeper than the other, the deeper groove being located at a greater distance from the flexible shaft, and a screw adapted to enter said grooves.

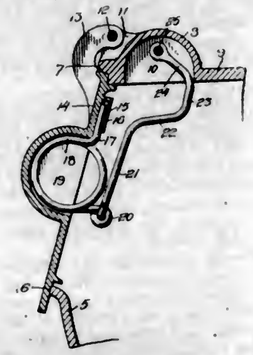
5. The combination of a flexible shaft, a hollow flexible support containing the shaft, a tool holder mounted in said support, a clutch for connecting said tool holder and shaft, resilient means for disconnecting the sections of said clutch, said support comprising telescoping tubes, and a clutch mounted on said tubes for preventing the rotation of one independently of the other.

[Claims 6 and 7 not printed in the Gazette.]

881,866. JOURNAL-BOX. JAMES S. PATTEN, Baltimore, Md. Filed Dec. 7, 1906. Serial No. 346,806.

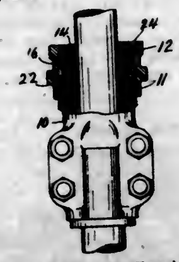
A journal box comprising a hollow body portion having an opening therein, there being an enlargement formed upon the body portion and having a chamber therewithin communicating with the interior of the body portion, said enlargement being located above the opening, and wings carried by the body portion above the opening, a lid for the opening, there being fingers carried by the lid and pivotally connected with the wings, said lid having a forwardly extending hollow enlargement opening through the inner face of the lid, and a projection located upon the inner surface of the lid above the enlargement, said projection having a passage therewithin, a helical spring having an end engaged in said passage, said spring extending into the enlargement of the lid, and a rod pivoted to the other end of the spring at its lower end, and having its upper end pivoted within the chamber of the first named

enlargement, said rod having a rearwardly offset portion adjacent to its upper end, arranged to receive the forward



portion of the top of the box therewithin when the lid is moved into open position.

881,867. STUFFING-BOX WITH REVERSIBLE GLAND. GEORGE S. POWER, Passaic, N. J. Filed Nov. 5, 1906. Serial No. 342,010.



1. The combination with a stuffing box of a neck, a cap in engagement with the upper end of the neck, a gland having a groove therein located in the cap axially in line with the neck, and a flanged packing ring extending from the groove of the gland.

2. The combination with a stuffing box of a neck therefor, a cap in engagement with the upper end of the neck, a split gland having a groove thereon located axially in line with the neck and bearing upon the upper edge thereof, a piston rod passing through the stuffing box, a flanged packing ring extending from the groove and bearing on the piston rod.

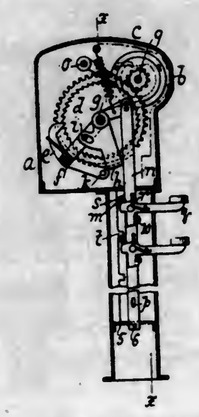
3. The combination with a stuffing box of a neck therefor, a cap in engagement with the upper end of the neck, a split reversible gland located axially in line with the neck and bearing upon the upper edge thereof, a piston rod passing through the stuffing box, and packing material inserted between the lower edge of the gland and the upper edge of the neck of the stuffing box.

4. The combination with a stuffing box of a neck therefor, a cap having a beveled opening in engagement with the upper end of the neck, a split reversible gland located axially in line with the neck and bearing thereon and having a beveled surface in engagement with the beveled opening in the cap, a piston rod passing through the gland and stuffing box, and a flanged packing ring extending from the gland bearing on the said rod.

5. The combination with the neck of a stuffing box, of a reversible gland axially in line with the neck and bearing on the upper edge thereof, a piston rod passing through the stuffing box, a packing ring extending from the gland, a collar on the gland, and a cap engaging with the neck and inclosing the gland and collar.

[Claim 6 not printed in the Gazette.]

881,868. CALCULATING-MACHINE. WILLIAM P. QUENTELL, Stamford, Conn., assignor to Agnes R. Quentell, Stamford, Conn. Filed May 18, 1907. Serial No. 374,482.



1. In a calculating machine, a pawl, a carrier therefor, a pawl lock, a bar connected to the lock, and a bar connected to the carrier, said bars being connected so that movement from one bar will be communicated to the other.

2. In a calculating machine, a pawl, a carrier therefor, a pawl lock, a bar connected to the lock, and a bar connected to the carrier, said bars being connected so that movement from one bar will be communicated to the other, and tumblers pivoted to one of the bars.

3. In a calculating machine, a pawl, a carrier therefor, a pawl lock, a bar connected to the lock, and a bar connected to the carrier, said bars being connected so that movement from one bar will be communicated to the other, tumblers pivoted to one of the bars, and keys for actuating the tumblers.

4. In a calculating machine, a pawl, a carrier therefor, a pawl lock, a bar connected to the lock, and a bar connected to the carrier, said bars being connected so that movement from one bar will be communicated to the other, tumblers pivoted to one of the bars, and a detent for arresting the tumblers when moving a bar.

5. In a calculating machine, a pawl, a carrier therefor, a pawl lock, a bar connected to the lock, and a bar connected to the carrier, said bars being connected so that movement from one bar will be communicated to the other, tumblers pivoted to one of the bars, and a detent for arresting the tumblers when moving a bar, one of said bars having means for limiting the movement of the tumblers on their pivots.

[Claims 6 to 12 not printed in the Gazette.]

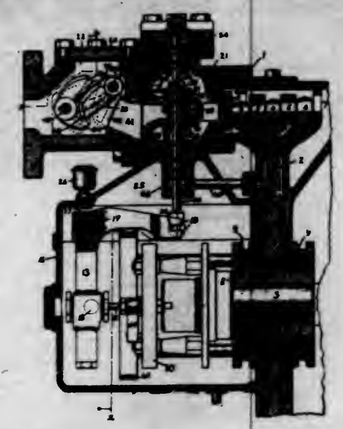
881,869. GOVERNING MECHANISM FOR TURBINES. RICHARD H. RICE, Lynn, Mass., assignor to General Electric Company, a Corporation of New York. Filed June 7, 1905. Serial No. 264,059.

1. In a governing mechanism, the combination of a quick closing emergency valve pivoted to have a swinging movement, means for releasing the same from its set position which includes a weighted member, a trigger arranged to interlock with the said member when the valve is set, and a speed-responsive device arranged and adapted to strike and release the trigger to permit the member to act.

2. In a governing mechanism, the combination of a valve, a single member arranged to hold the valve in one position under normal conditions and to impart a hammer blow thereto to actuate it under abnormal conditions, and a device for imparting a hammer blow to the said member and through it to the valve.

3. In a governing mechanism, the combination of an emergency valve mounted to have a tendency at all times to close, a lock or latch arranged to engage the valve

and hold it open, and means for releasing the latch and actuating it to impart a hammer blow directly to the valve.

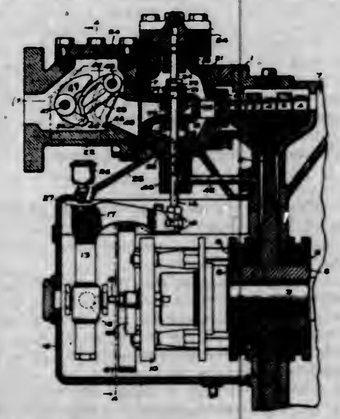


4. In a governing mechanism, the combination of an emergency valve, a lock which engages the valve to hold it open, a projection on the lock which is normally separated from the valve by a clearance sufficient to permit the lock to be disengaged and impart a hammer blow thereto substantially simultaneously with the release of the lock, and a speed-responsive device for actuating the lock.

5. In a governing mechanism, the combination of a valve chest, an emergency valve therein, a lock within the chest which engages the valve to hold it open, an arm exterior to the chest for disengaging the lock from the valve to permit the latter to close, and a means for imparting a hammer blow to said arm.

[Claims 6 to 20 not printed in the Gazette.]

881,870. ELASTIC-FLUID TURBINE. RICHARD H. RICE, Swampscott, Mass., assignor to General Electric Company, a Corporation of New York. Original application filed June 7, 1905, Serial No. 264,059. Divided and this application filed Dec. 24, 1906. Serial No. 349,243.



1. An elastic fluid motor comprising a movable element, a casing therefor, a device for discharging motive fluid against the movable element, in combination with a valve chest supported on the casing which delivers motive fluid to the discharging device, a regulating valve therein, a second valve chest supported by the first and in alinement therewith and with the discharging device, and an emergency valve in the second valve chest.

2. An elastic fluid motor comprising a rotatable element and a casing therefor, in combination with a speed-responsive device arranged exterior to the casing and in alinement with the axis of rotation, a casing for said device, a valve chest supported on the turbine casing, a regulating valve therein, a second valve chest which is carried by and is arranged in line with the first, and an emergency valve therein.

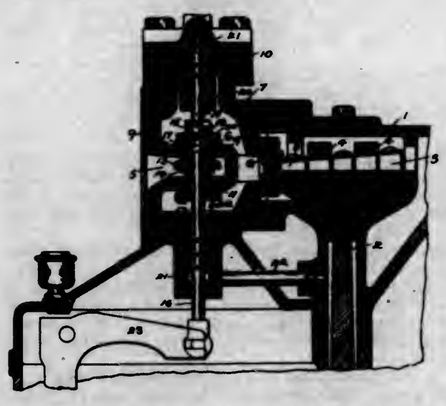
3. An elastic fluid motor comprising a rotatable element and a casing therefor, in combination with a speed-responsive device arranged exterior to the casing and in alinement with the axis of rotation, a casing for said device, a valve chest supported on the motor casing at a point situated at one side of the axis of rotation, a regulating valve therein, a second valve chest which is arranged in line with the first and overhangs the speed-responsive device, and an emergency valve therein.

4. In a governing mechanism, the combination of separate regulating and emergency valves, chests for the valves which communicate, and a member secured between the chests which contains seats for one of the valves.

5. In a governing mechanism, the combination of a balanced regulating valve, an emergency valve, communicating chests for the valves removably connected together, a recess between adjacent surfaces of the valve chests, and a removable member supported in the recess which contains seats for the regulating valve.

[Claims 6 and 7 not printed in the Gazette.]

881,871. REGULATING-VALVE FOR TURBINES. RICHARD H. RICE, Lynn, Mass., assignor to General Electric Company, a Corporation of New York. Original application filed June 7, 1905, Serial No. 264,059. Divided and this application filed June 4, 1907. Serial No. 377,137.



1. The combination of a stem, a balanced valve mounted on the stem, seats for the valve, and a flange on the valve against which the stem impinges when the valve is opened to keep it balanced under the action of the flowing steam upon it.

2. The combination of a valve having two disks, seats engaged by the disks and having a chamber between them which receives the steam and from which it flows outward in opposite directions over said seats when the valve is open, and a flange on the valve beyond one of the seats on which the flowing steam impinges and balances the impinging action of the steam upon the valve disk which is adjacent the other seat.

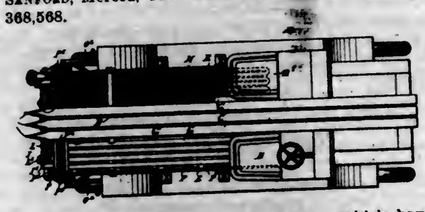
3. The combination of a valve comprising a sleeve having an annular flange which forms a valve disk, a valve seat above the disk, a collar mounted on the sleeve which forms a second valve disk, a valve seat above the second disk, a chamber between the valve seats from which the steam flows outward in opposite directions over them, a cap which secures the collar in place, and a flange on the cap above the last named seat against which the steam impinges as it flows outward over it.

4. A balanced valve comprising a sleeve having an annular flange which forms a valve disk, a collar mounted on the sleeve which forms a second valve disk, and a cap which secures the collar in place.

5. The combination of a valve stem, a sleeve on the stem having a valve disk at one end, a shoulder on the sleeve, a collar engaging the shoulder, a valve disk on the collar, a cap screw-threaded to the end of the sleeve beyond the collar which secures the sleeve to the stem and holds the collar against the shoulder, jaws upon the cap, and a guide stem with which the jaws engage.

[Claims 6 and 7 not printed in the Gazette.]

881,872. FIRE-FIGHTING APPARATUS. EDGAR F. SANFORD, Merced, Cal. Filed Apr. 16, 1907. Serial No. 368,568.



1. A fire fighting apparatus comprising a vehicle having seats spaced apart in a transverse direction, and ladder supports arranged in longitudinal alinement with the space between the said seats, to allow of supporting ladders the entire length of the vehicle without obstructing the said seats.

2. A fire fighting apparatus comprising a vehicle, hose shelves arranged on the vehicle one above the other and on which the hose is coiled with the convolutions located side by side, and means in connection with the shelves and the vehicle for permitting the said shelves to be placed at different heights in the vehicle without removal therefrom, said means being operated by the longitudinal shifting of the shelves.

3. A fire fighting apparatus comprising a vehicle, and a plurality of horisontally arranged parallel hose shelves in connection with the vehicle and on which the hose is coiled, and means in connection with the vehicle and the shelves for permitting the said shelves to be moved vertically without removal from the vehicle, said means being operated by the longitudinal shifting of the shelves.

4. A fire fighting apparatus provided with a hose rack comprising longitudinally extending guideways arranged one above the other, and shelves slidably held on the said guideways and adapted to support sections of hose, the said guideways having means to allow dropping of a shelf from one guideway to the next lower one.

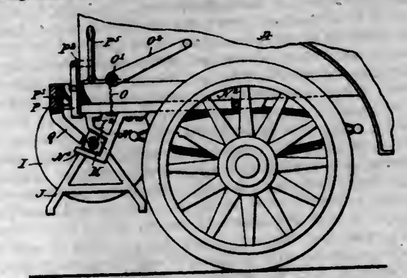
5. A fire fighting apparatus provided with a hose rack comprising longitudinally extending guideways having spaced vertical slots, and shelves for supporting the hose and having cross bars adapted to rest on the said guideways and adapted to register with the said slots, to allow of dropping a shelf from one guideway to the next lower one.

[Claim 6 not printed in the Gazette.]

881,873. FIRE-FIGHTING APPARATUS. EDGAR F. SANFORD, Merced, Cal. Original application filed Apr. 16, 1907, Serial No. 368,568. Divided and this application filed Sept. 24, 1907. Serial No. 394,309.

1. In a fire-fighting apparatus, the combination with a wheeled vehicle, of a chemical tank, and a support for the same comprising arms mounted to swing on the vehicle and arranged to normally hold the said tank above the ground, the said swing arms being capable of releasing the said tank and delivering it to the ground.

2. A fire-fighting apparatus comprising a vehicle, a chemical tank, a support for the same, the said support having swing arms for supporting the chemical tank and fulcrumed on the said vehicle, and a locking device for locking the said swing arms normally in a raised position.



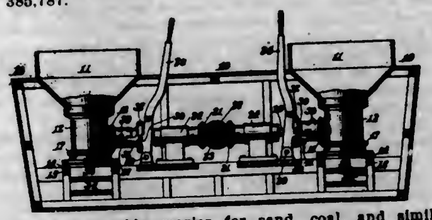
3. A fire-fighting apparatus comprising a vehicle, a chemical tank, a support for the same, the said support having swing arms for supporting the chemical tank and fulcrumed on the said vehicle, a locking device for locking the said swing arms normally in a raised position, and manually controlled means arranged on the vehicle and connected with the said swing arms, to swing the latter down or up.

4. A fire-fighting apparatus comprising a vehicle, a chemical tank, a support for the same, the said support having swing arms for supporting the chemical tank and fulcrumed on the said vehicle, and a stop on the vehicle for holding the chemical tank against accidental displacement on the said swing arms.

5. A fire-fighting apparatus comprising a vehicle, a chemical tank, a support for the same, the said support having swing arms for supporting the chemical tank and fulcrumed on the said vehicle, a manually controlled drum mounted on the vehicle, and cables winding on the said drum and connected with the said swing arms.

[Claims 6 to 10 not printed in the Gazette.]

881,874. APPARATUS FOR UNLOADING VESSELS. AARON SCHWARTZ, Boston, Mass., assignor to Automatic Rapid Unloading Company, Boston, Mass., a Corporation of Massachusetts. Filed July 27, 1907. Serial No. 385,787.



1. In a movable carrier for sand, coal, and similar material, the combination with a belt conveyer; of a fixed hopper located at its discharge outlet above said conveyer; a vertical tubular member interposed between said belt conveyer and the bottom of said discharge outlet provided with inwardly extending flanges extending to the axis of said tubular member; and means for revolving said tubular member to effect a delivery.

2. In a movable carrier for sand, coal, and similar material, the combination with a belt conveyer; of a fixed hopper located with its discharge outlet above said conveyer; a vertical tubular member interposed between said belt conveyer and the bottom of said discharge outlet; a screw conveyer within and forming a part of said tubular member the inner edge of which is at the axis of said tubular member and means for revolving said tubular member to effect a delivery.

3. In a movable carrier for sand, coal, and similar material, the combination with a belt conveyer; of a fixed hopper located with its discharge outlet above said con-

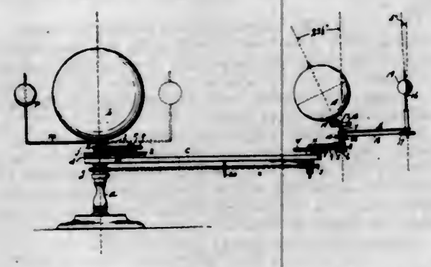
veyer; a tubular member forming an extension to said discharge outlet and provided with inwardly extending flanges; a gear on said tubular member; and a driving gear to revolve said tubular member.

4. In a movable carrier for sand, coal, and similar material, the combination with a belt conveyer; of a hopper located with its discharge outlet above said conveyer; a tubular member forming an extension to said discharge outlet; a fixed plate extending partly across said discharge outlet; and a co-acting plate movable with said tubular member adapted to close the discharge outlet when at rest.

5. In a movable carrier for sand, coal, and similar material, the combination with a belt conveyer; of a hopper located with its discharge outlet above said conveyer; a screw revoluble about a vertical axis in said outlet and adapted to open and close said outlet; means for revolving said screw; and means for effecting a closing of said discharge outlet upon the stopping of said revoluble screw.

[Claims 6 to 12 not printed in the Gazette.]

881,875. PLANETARIUM. FRANK J. TRIPPENSEE, Detroit, Mich., assignor to The Trippensee Manufacturing Company, Detroit, Mich., a Corporation of Michigan. Filed Feb. 16, 1907. Serial No. 357,717.



1. In a planetarium the combination of a supporting standard, a sun globe carried thereupon, a swinging arm mounted upon said support and movable thereabout, a swinging angle arm upon the outer end of the swinging arm, an axis or spindle carried by the angle arm, sprocket mechanism to actuate said angle arm when the swinging arm is moved, mechanism actuated by the angle arm to actuate said axis, an earth globe carried upon said axis, a moon supporting arm rotatable with said axis, a moon globe carried upon the moon supporting arm, and means actuated by the rotation of said axis to rotate the moon supporting axis and to cause the moon globe to travel about the earth globe, substantially as described.

2. In a planetarium the combination of a supporting standard, a sun globe carried thereupon, a Venus globe carried upon the standard rotatable about the sun globe, a swinging arm mounted upon said standard, sprocket mechanism to rotate the Venus globe about the sun simultaneously with the movement of said swinging arm, an earth supporting axis carried at the outer extremity of the swinging arm, an earth globe upon the axis, sprocket mechanism to drive said axis, friction mechanism to rotate the earth upon said axis, a moon supporting axis movable simultaneously with the earth supporting axis, a moon globe upon the moon supporting axis, and mechanism to rotate the moon upon its axis.

3. In a planetarium the combination of a supporting standard, a sun globe carried thereupon, a swinging arm sleeved upon the standard, a sprocket wheel carried upon the standard, an angle arm carried upon the outer extremity of the swinging arm, a sprocket wheel in engagement with the sprocket wheel upon the standard to actuate the angle arm, an earth axis carried upon the angle arm, the sprocket mechanism upon the said axis, an earth globe upon said axis, friction mechanism to rotate the earth globe upon its axis, a moon supporting arm upon said axis and rotatable therewith to carry the moon about the earth, and means to rotate the moon upon its axis.

4. In a planetarium the combination of a supporting standard, a collar upon the standard, a swinging arm upon said collar, a threaded spindle engaged with said collar, a gear upon said spindle, a sleeve upon said spindle, a sprocket gear upon said sleeve, a swinging arm carried by said sleeve, a Venus globe carried by the last named arm, a sun globe carried upon said spindle, an arbor upon the first named arm, a gear upon said arbor in mesh with the first named gear, and a sprocket gear upon said arbor connected with the first named sprocket gear.

5. In a planetarium a supporting standard, a sun globe carried thereby, a swinging arm carried by the standard and movable thereabout, an earth globe carried by said swinging arm, a moon globe carried upon the swinging arm rotatable upon its axis and about the earth, and friction mechanism to rotate the earth globe upon its axis.

[Claims 6 and 7 not printed in the Gazette.]

881,876. ANTIFRICTION THRUST-BEARING. PETER VÖLKER, Cologne, Germany, assignor to Peter Heyarts, Cologne, Germany. Filed May 23, 1906. Serial No. 318,380.



1. In combination, a body, guide members rigidly secured to said body and provided with outwardly disposed inwardly inclined engaging faces, a shaft having portions movably fitting said guide members, thrust blocks non-rotatively and slidably mounted on said shaft and provided with inclined faces adapted to be engaged by the inclined faces of said guide members, inner thrust disks operatively supported by said blocks out of engagement with said shaft, outer thrust disks non-rotatively and slidably mounted on said shaft, means for adjusting and retaining said outer disks in position, a hub member interposed between said thrust disks, and radially disposed rollers interposed between said disks and said hub member.

2. In combination, a body, bifurcated guide members rigidly secured to said body and provided with outwardly disposed inwardly and downwardly inclined operating surfaces, a shaft having polygonal portions slidably and non-rotatively positioned in said bifurcated guides, thrust blocks non-rotatively and slidably mounted on said shaft and provided with inclined operating faces adapted to be engaged by the inclined guide faces and having conical engaging portions, outer thrust disks non-rotatively and slidably mounted on said shaft, means for adjusting and retaining said outer disks in position, inner thrust disks having conical engaging surfaces adapted to be supported by said thrust blocks out of engagement with the shaft, a hub member interposed between said thrust disks and adapted to be retained out of engagement with the shaft, said thrust disks and hub members having annular flanges, and radially disposed rollers having annular recesses adapted to be engaged by said flanges, said rollers being interposed between said thrust disks and hub members.

3. In combination, a body, bifurcated guide members rigidly secured to said body and provided with outwardly disposed inwardly and downwardly inclined operating surfaces, a shaft having polygonal portions slidably and non-rotatively positioned in said bifurcated guides, thrust blocks non-rotatively and slidably mounted on said shaft and provided with inclined operating faces adapted to be engaged by the inclined guide faces and having conical engaging portions, outer thrust disks mounted on said shaft, inner thrust disks having conical engaging surfaces adapted to be supported by said thrust blocks out of engagement with the shaft, a hub member interposed between said thrust disks and adapted to be retained out of engagement with the shaft, said thrust disks and hub members having annular flanges, and radially disposed rollers having annular recesses adapted to be engaged by said flanges, said rollers being interposed between said thrust disks and hub members.

4. In combination, a body, bifurcated guide members rigidly secured to said body and provided with outwardly disposed inwardly and downwardly inclined operating surfaces, a shaft having polygonal portions slidably and non-rotatively positioned in said bifurcated guides, thrust blocks non-rotatively and slidably mounted on said shaft and provided with inclined faces of conical engaging portions, outer thrust disks mounted on said shaft, inner thrust disks having conical engaging surfaces adapted to be supported by said thrust blocks out of engagement with the shaft, a hub member interposed between said thrust disks and adapted to be retained out of engagement with the shaft, and radially disposed rollers having annular flanges, and radially disposed rollers having annular recesses adapted to be engaged by said flanges, said rollers being interposed between said thrust disks and hub members.

5. In combination, a body, bifurcated guide members rigidly secured to said body and provided with operating surfaces, a shaft slidably and non-rotatively mounted in said guide members, thrust blocks non-rotatively and slidably mounted on said shaft and provided with guide operating surfaces adapted for engagement with said guides and also provided with disk operating surfaces, outer thrust disks mounted on said shaft, inner thrust disks provided with operating surfaces adapted to engage the disk operating surfaces of said blocks, hub members interposed between said disks, and radially disposed rollers interposed between said disks and hub members.

[Claims 6 and 7 not printed in the Gazette.]

881,877. BUNSEN BURNER. PHILIPP VON WOUWERMENS, Vienna, Austria-Hungary, assignor to Ludwig Loewenstein, Vienna, Austria-Hungary. Filed May 10, 1906. Serial No. 316,221.

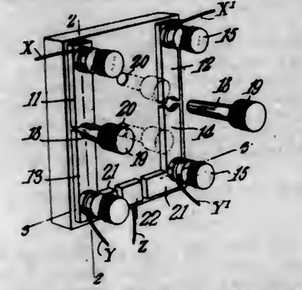


1. In a Bunsen burner the combination with the gas-nozzle and the mixing tube provided with air inlets of an enlarged burner head containing a distributer subdivided into small vertical passages the width of which increases from the center outwards, and a perforated cap on the burner head the perforations in which cap are of increasing width from the center outward, substantially as and for the purposes specified.

2. In a Bunsen burner, the combination with the gas-nozzle and the mixing tube provided with air inlets, of an enlarged burner head containing a distributing diaphragm arranged at some distance above the mouth of the mixing tube and formed with small vertical passages near the center surrounded toward the outside with vertical passages of larger area, and a cap having perforations of larger area near the outside and smaller area near the center, covering the burner head at a distance above said distributer so as to provide an intervening mixing chamber, substantially as described.

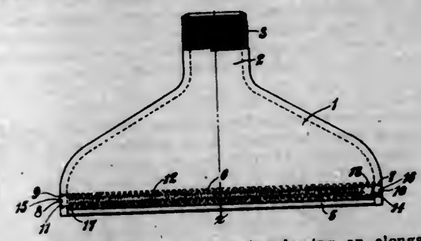
3. In a Bunsen burner the combination with the usual gas-nozzle and a mixing tube provided with air inlets, of an enlarged burner head, a plurality of distributers spaced apart within the same, each formed with concentric rows of vertical passages, the perforations of the outer circle being of larger area than those of the inner, and a perforated cap covering the top of the burner head some distance above the upper distributer, the perforations near the periphery of said cap being of larger area than those near the center, substantially as described.

881,878. TELEPHONE-SWITCH. ANDY N. WRIGHT, Jackson Center, Ohio, assignor of one-third to Harney L. Hill, Jackson Center, Ohio. Filed July 8, 1907. Serial No. 382,684.



A telephone cut out, comprising a base plate of non-conducting material, two pairs of spaced metallic strips secured thereto, the upper and lower members of each pair having semi-circular recesses at their adjacent edges forming plug sockets, binding posts carried by the upper members for attachment to the local wires of the telephone, binding posts connected to the lower members for attachment to the leading in wires, the binding posts serving to confine the strips to the base, the lower ends of the lower strips having inwardly extending spaced arms, a grounded plate secured between and slightly spaced from such arms, means for securing said plate to the base, and circuit closing plugs arranged to be placed in the sockets to complete the circuit, the base plate being provided with openings for the reception of said plugs when the telephone is cut out.

881,879. SUCTION-NOZZLE. CARL W. E. BOEGEL, Lima, Ohio. Filed Oct. 28, 1907. Serial No. 399,419.



1. In a suction nozzle, a casing having an elongated opening therein, a slotted tube extending longitudinally of said elongated opening, and a valve in said slotted tube adapted to be automatically opened by the pressure of the atmosphere, substantially as and for the purposes specified.

2. In a suction nozzle, a casing of elongated lower formation and of tapering upper formation, adapted to communicate with a suction or vacuum producing apparatus, an opening extending longitudinally of the lower part of said casing, a tube extending longitudinally thereof, coincident with said opening, a valve seat near the end of said tube, and a spring controlled gate adapted to engage with said valve seat or be disengaged therefrom by the pressure

of the atmosphere, substantially as and for the purposes specified.

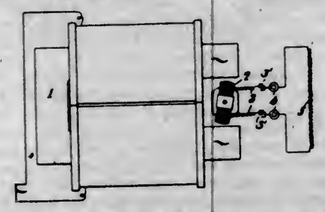
3. In a suction nozzle, a casing, an opening in said casing, a tube in said casing adapted to form communication between the interior of said casing and the atmosphere, independently of said opening, and an automatic relief valve in said tube, said opening being relatively long and narrow and said tube extending longitudinally of said opening, substantially as and for the purposes specified.

4. In a suction nozzle, a casing having an elongated lower part and a tapering upper part, the general directions of said upper and lower parts being inclined to each other, and said elongated lower part being provided with an opening extending longitudinally thereof, a slotted tube extending longitudinally of said opening, and an automatic relief valve in said tube, substantially as and for the purposes specified.

5. In a suction nozzle, a casing having an elongated lower part and a tapering upper part, means for communication between said casing and a suction or vacuum producing apparatus, an opening extending longitudinally of the elongated lower part, a slotted tube extending longitudinally of said opening, an automatic relief valve in said tube, the tube being at some distance above the plane of said opening, substantially as and for the purposes specified.

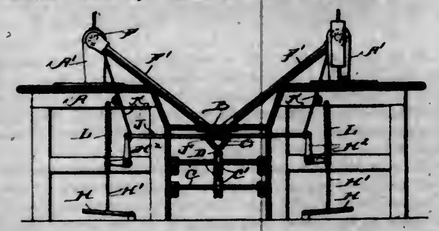
[Claims 6 to 8 not printed in the Gazette.]

881,880. GALVANOMETER. SIDNEY G. BROWN, London, England. Original application filed June 16, 1902, Serial No. 111,964. Divided and this application filed Apr. 7, 1903. Serial No. 151,491.



A reaction galvanometer comprising an alternating or fluctuating current-exciting electro-magnet, a coil delicately suspended between the poles of said electro-magnet whereby voltage is induced in the coil and the lines of force cut the wire coil, a cable or artificial line, wires connecting the cable or artificial line, binding screws for securing the said connecting wires, leading-in wires connecting said binding screws with said delicately suspended coil, said coil being mounted to move rotatively in a horizontal plane, a reflecting mirror mounted on said delicately suspended coil, and capacity in said leading-in wires.

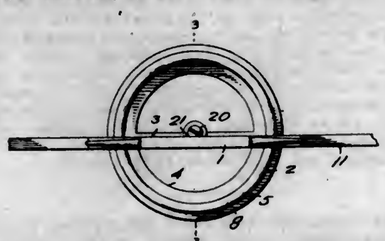
881,881. POWER-TRANSMITTING DEVICE. ALEXANDER B. COHN, New York, N. Y., assignor to A. B. C. Machine Company, Philadelphia, Pa., a Corporation of Delaware. Filed Apr. 11, 1906. Serial No. 311,115.



1. In a power transmitting device, a plurality of shafts, arranged at an angle to each other, intermeshing gears carried by said shafts, one of said shafts having a free end portion and being movable, a friction pulley carried by the free end of the shaft, an endless traveling belt, a pivoted bell crank, a rod pivoted to one member of the bell crank, a collar mounted upon the movable shaft adjacent the friction pulley, one end of the said rod being pivotally connected to said collar, means for moving the bell crank to throw the friction pulley into engagement with the belt, and means for returning the bell crank to its normal position.

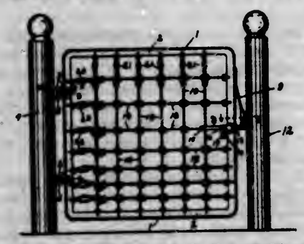
2. A power transmitting device comprising an endless belt, a shaft, a gear wheel thereon, a rotatable swinging shaft, a beveled gear carried by said shaft and meshing with the gear of the first mentioned shaft, a friction pulley fixed to the said swinging shaft, means for throwing said pulley into and out of engagement with the belt, and a brake bar carried by said means and adapted to be thrown into contact with the first mentioned shaft when the friction pulley is thrown out of engagement with the belt.

881,882. FIFTH-WHEEL. JAMES W. COTTON, Newton, Iowa, assignor of one-half to William Korsmeier, Laurel, Iowa. Filed May 6, 1907. Serial No. 372,189.



In a fifth wheel of the type described, an annulus 2 having an inner flat portion 4, an annular corrugation stamped thereinto concentric to said flat portion, the corrugation affording an annular groove 5 in the underface of said annulus, said corrugation having an outer depending wall portion affording an annular shoulder 6, a flat annular portion 8 projecting outwardly from said shoulder and a portion 9 depending from said portion 8 and affording a second annular shoulder, a second annulus 10 formed with an inner annular raised portion 12 and having an outer annular runway portion 13 of less depth than the portion 12, the portion 13 being disposed within the confines of the shoulder 9, and ball bearings disposed partially in the groove 5 and resting on the runway portion 13, said ball bearings being confined between the shoulder 6 and the raised portion 12.

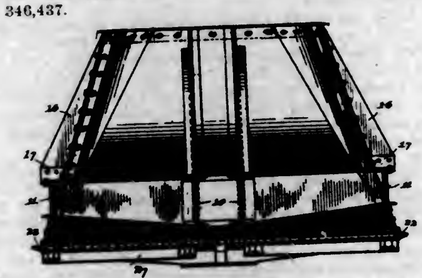
881,883. GATE. WASHINGTON M. DILLON, Sterling, Ill., assignor to Northwestern Barb Wire Company, Sterling, Ill. Filed Mar. 22, 1907. Serial No. 363,892.



In a device of the class named, the combination of the frame 1, having the inwardly projecting flange 2, and adapted to be hingeably supported at one of its edges; the wires 18, secured at their ends to the flange 2, and provided with loops 20; a series of wires 19, secured to the flange 2, and provided with loops 21, the wires 19 being attached to the wires 18 at the points of intersection; a spring latch 9, secured to that edge of the gate opposite

to the hinged edge thereof; a bar 13, pivotally attached to the lower end of the latch 9, and provided with the handle 15, and means for locking the bar 13 from longitudinal movement when the gate is closed, substantially as and for the purpose named.

881,884. RAILWAY DUMPING-CAR. ETHAN I. DODDS, Pullman, Ill., assignor to The Pullman Company, Chicago, Ill., a Corporation of Illinois. Original application filed July 6, 1904. Serial No. 215,492. Divided and this application filed Dec. 5, 1906. Serial No. 346,437.



1. A railway car-body having side and end walls, the latter being upwardly divergent, and corner walls connecting said side and end walls, substantially as described.

2. A railway car-body having side and end walls, the latter being upwardly divergent, and inclined corner walls connecting said side and end walls, substantially as described.

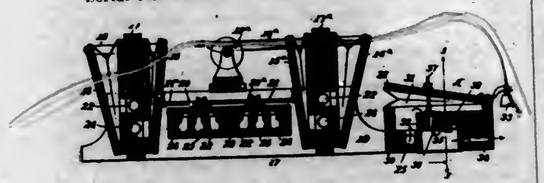
3. A railway car-body having rectangular side walls and end walls, the latter being upwardly divergent and having their side edges upwardly convergent, and triangular corner walls or plates connecting the adjacent edges of said side and end walls, substantially as described.

4. A railway car-body having downwardly divergent side walls, upwardly divergent end walls, and corner walls connecting said side and end walls, substantially as described.

5. A railway car-body having downwardly divergent side walls, upwardly divergent end walls, and inclined corner walls connecting said side and end walls, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

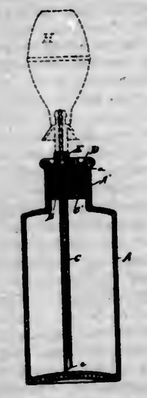
881,885. AIR-MOTOR. LEWIS B. DOMAN, Elbridge, N. Y., assignor to Amphion Piano-Player Company, Elbridge, N. Y., a Corporation of New York. Filed May 19, 1904. Serial No. 208,703.



1. In an air motor, the combination of a crank shaft, pneumatics on opposite sides of said crank shaft, pitmen connecting the pneumatics with the crank shaft, valves controlling the passage of air to and from the pneumatics, each valve being connected directly to a part of the movable board of one of the pneumatics having a movement substantially equal to the throw of the valve, whereby direct connections between the pneumatics and the valves are permitted.

2. In an air motor, the combination with the crank shaft, of a plurality of pairs of pneumatics arranged on opposite sides of said shaft, connections between said pneumatics and the shaft for driving the latter, and slide valves controlling the passage of air to and from the pneumatics, said slide valves being connected directly to the movable boards of the pneumatics and arranged between parts of said movable boards having a movement substantially equal to the throw of the valves, whereby direct connections between the pneumatics and the valves are permitted.

881,886. BOTTLE. ARTHUR J. FARMER, Detroit, Mich. Original application filed June 17, 1907, Serial No. 372,321. Divided and this application filed Nov. 7, 1907. Serial No. 401,134.



1. In a bottle, a tube extending the length of the bottle, a cork for supporting said tube, said cork provided with an air vent, and means for connecting said tube with a suction device, substantially as described.

2. In a bottle, a tube extending the length of the bottle, a cork lodged in the neck of the bottle and adapted to engage the end of the tube, the neck of the bottle formed with a depression or groove on its inner wall above the cork to receive the extending edge of a suitable seal, and the seal, substantially as described.

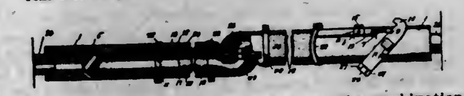
3. In a bottle, a tube extending the length of the bottle, a cork lodged in the neck of the bottle to support the tube and close the aperture surrounding the tube between it and the neck of the bottle, and a rubber nipple mounted on the end of the tube adapted to receive the end of a suction nozzle.

4. In a bottle, a tube extending the length of the bottle, a cork lodged in the neck of the bottle in which the tube is supported, a seal above the cork, an air vent tube extending through the cork and seal, and suitable stoppers to close the ends of both tubes.

5. In a bottle, an open tube extending the length of the bottle, a cork lodged in the neck of the bottle in which the tube is supported, a seal above the cork, and a projecting rubber nipple mounted above the seal, and on the end of the tube, substantially as and for the purpose described.

REISSUES.

12,758. SAFETY-VALVE FOR AIR-BRAKES. THOMAS BEHAN, Aliquippa, Pa. Filed Nov. 26, 1907. Serial No. 403,992. Original No. 867,234, dated Oct. 1, 1907. Serial No. 383,432.



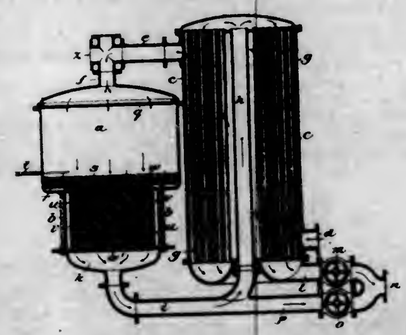
1. In a coupling for air brake systems, the combination with two train pipe sections, of angle pipe sections con-

nected to the adjacent ends of the train pipe sections, a valve in the passage-way of each angle pipe section, a longitudinal auxiliary passage-way in each angle pipe section, a projection from each angle pipe formed with an air passage, communicating with said auxiliary passage-way, and a valve seat, a valve or vent within said seat having a transverse bore, pistons in said auxiliary passage-ways having their rods extending outside of the angle pipe sections, and provided with heads, levers carried by said valves, and engaged by the heads on said piston rods, sections of hose arranged one within the other, connecting said coupling members with the angle pipe sections, the space between said hose sections communicating with the auxiliary passage-way in the angle pipes, and an arm 29 depending from each of said levers.

2. In a coupling for air brake systems, the combination with two train pipe sections, of angle pipe sections connected to the adjacent ends of the train pipe sections, a valve in each angle pipe section, an auxiliary passage-way in each angle pipe section, a projection from each angle pipe formed with an air passage communicating with said auxiliary passage-way, and a valve seat, a valve or vent within said seat having a transverse bore, a piston in each of said auxiliary passage-ways having one end extending outside the passage-way, and provided with a head or lever on the valve engaged by said head, an arm pivotally secured to said lever and serving to limit its movement, coupling members, coupling pipes connecting said coupling members with the angle pipe sections, and air-tight pipes surrounding the coupling pipes.

3. A train pipe safety device, comprising an angle pipe section, a plug valve therein, an auxiliary passage-way in the pipe section, a projection from each angle pipe formed with an air passage communicating with said auxiliary passage-way, and a valve seat, a valve or vent within said seat having a transverse bore, a piston in said auxiliary passage-way, having one end extending outside of the passage-way, a U-shaped head on said end, a lever on said valve, engaged by said head, a stop carried by the angle pipe section engaging in a groove in the piston and limiting the travel of said piston, an arm pivotally secured to said lever, and a split washer on the pivotal support of said arm.

12,759. CATALYTIC APPARATUS FOR MAKING SULFURIC ANHYDRID. GEORG ESCHELLMANN and ALBERT HARMUTH, St. Petersburg, Russia, assignors to Tov. Tentelevskago Ximichesk-Zavoda, St. Petersburg, Russia. Filed Oct. 22, 1906. Serial No. 340,099. Original No. 792,205, dated June 13, 1905, Serial No. 244,349.



1. An apparatus for the production of sulfuric anhydrid, comprising connected chambers, the first chamber being relatively wide and having a gas inlet, a transverse layer of a catalytic agent, and a gas space between said inlet and layer, the second chamber being relatively narrow and heat-insulated and containing a catalytic agent.

2. An apparatus for the production of sulfuric anhydrid, comprising connected chambers, the first chamber being relatively wide and having a gas inlet, a transverse layer of a catalytic agent, and a gas space between said inlet and layer, the second chamber being relatively narrow and containing a catalytic agent arranged longitudinally in the path of the gases.

3. An apparatus for the production of sulfuric anhydrid, comprising superposed connected chambers, the first chamber being relatively wide and having a gas inlet, a broad horizontal layer of a catalytic agent, and a gas space between said inlet and agent, the second chamber being relatively narrow and heat-insulated and containing a catalytic agent.

4. An apparatus for the production of sulfuric anhydrid, comprising superposed connected chambers, the upper chamber being relatively wide and having a gas inlet at its top, a gas distributer below said inlet, a large gas space, and a horizontal layer of a catalytic agent below and presenting a wide radiating surface to said space, the second chamber being relatively narrow, heat-insulated and containing a catalytic agent.

5. An apparatus for the production of sulfuric anhydrid, comprising superposed connected chambers, the upper chamber being relatively wide and having a gas inlet at its top, a gas distributer below said inlet, a large gas space, a horizontal layer of a catalytic agent below and presenting a wide radiating surface to said space, and a temperature-indicator adjacent to said layer, the second chamber being relatively narrow, heat-insulated and containing a catalytic agent.

[Claims 6 and 7 not printed in the Gazette.]

12,760. APPARATUS FOR USE IN MANUFACTURING SMALL METALLIC PATTERN-PLATES. PHILIBERT BONVILLAIN, Paris, France, assignor, by mesne assignments, to E. H. Mumford Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Jan. 4, 1908. Serial No. 409,368. Original application filed July 29, 1904, Serial No. 218,626. Divided and this application filed Mar. 14, 1905, Serial No. 250,067. Original No. 814,638, dated Mar. 6, 1906.

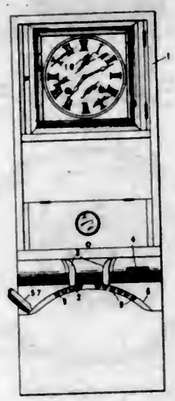


1. The complete apparatus for manufacturing pattern-plates used in foundries consisting of in combination, two similar frames having two faces and their edges machined, a frame adapted to cover the above mentioned frames and to fit on their edges and provided in the center with a rib at the bottom so as to come into position above the juxtaposed sides of the two other frames, a frame with lateral grooves adapted to be placed between the juxtaposed frames and the superposed frame and a rule or bar adjusted in the grooves of the said frame with lateral grooves, substantially as hereinbefore described and for the purpose specified.

2. Apparatus for manufacturing pattern-plates used in foundries, comprising a pair of similar frames having their edges and two side faces constructed for accurate fitting, a frame adapted to cover the said pair of frames when they are placed side by side, and means whereby the said frame may be supported with its edges spaced away from the opposing edges of the pair of frames.

3. Apparatus for manufacturing pattern-plates used in foundries, comprising a pair of similar frames having their edges and two side faces constructed for accurate fitting, a frame adapted to cover the said pair of frames when they are placed side by side, and provided in the center with a rib arranged to come opposite the juxtaposed sides of the pair of frames, and means whereby the said frame may be supported with its edges spaced away from the opposing edges of the pair of frames.

12,761. WORKMAN'S TIME-RECORDER. CHARLES T. HAWLEY, Gardner, Mass., assignor to Simplex Time Recorder Company, Gardner, Mass., a Corporation of Massachusetts. Filed Dec 16, 1907. Serial No. 406,824. Original No. 853,878, dated May 14, 1907, Serial No. 322,662.



1. In a time recorder, the combination with a time stamp, of a fixed card receiver or guide, an actuating device for causing the stamp to mark a card in the receiver, a movable stop to coöperate with and vary the position of a card in the receiver to thereby vary the position of the card relatively to the stamp, said stop being positioned by operation of the actuating device, and periodically changing means to govern the relative position of the stamp and card receiver.

2. In a time recorder, the combination with a time stamp, of a card receiver or guide, a movable stop to cooperate with a card inserted therein and position such card relatively to the time stamp, a manually operated actuator to move the stop at will to any desired operating position and also to cause the stamp to mark a card in the receiver, and periodically changing means to govern the relative position of the stamp and card receiver.

3. In a time recorder, the combination with a time stamp, of a fixed card receiver or guide, a movable stop to coöperate with and position a card, inserted in said receiver, relatively to the time stamp, and an actuator having a selective movement to determine the position of the stop and having another movement to cause the stamp to mark a card in the receiver.

4. In a time recorder, the combination with a time stamp, of a fixed card receiver or guide, a movable stop to coöperate with and position a card, inserted in said receiver, relatively to the time stamp, and a manually operated actuator having a selective movement in one path to determine the position of the stop and having another movement at different points in such path to cause the stamp to mark a card in the receiver.

5. In a time recorder, the combination with a time stamp, of a fixed card receiver or guide, a movable stop to coöperate with and position a card, inserted in said receiver, relatively to the time stamp, an actuator having a selective movement in an angular path to determine the position of the stop and having a movement at right angles to such angular path at predetermined points thereon to cause the stamp to mark a card in the receiver, and periodically changing means to govern the relative position of the stamp and card receiver.

[Claims 6 to 66 not printed in the Gazette.]

12,762. PROCESS OF MAKING NITROGEN COMPOUNDS. ADOLPH FRANK, Charlottenburg, and NIKODEM CARO, Berlin, Germany, assignors, by mesne assignments, to American Cyanamid Company, Portland, Me., a Corporation. Filed June 25, 1907. Serial No. 330,989. Original No. 785,161, dated Mar. 21, 1905, Serial No. 699,847.

1. The process of producing cyanid from carbids, which consists in heating from a dark-red to a bright-yellow heat, a carbid that will not melt at these temperatures, reacting upon the heated carbid with nitrogen, then melting the product of the reaction and extracting the cyanid in the usual manner, substantially as set forth.

2. The process, which consists in heating to from a dark-red to a bright-yellow heat a carbid that will not melt at these temperatures, reacting upon the heated carbid with nitrogen, then melting the reaction product in the presence of carbon and extracting the cyanid in the usual manner, substantially as set forth.

3. The process, which consists in heating to from a dark-red to a bright-yellow heat a carbid that will not melt at these temperatures, reacting upon the heated carbid with nitrogen, melting the reaction product in the presence of an oxygen compound of an alkali metal and extracting the cyanid in the usual manner, substantially as set forth.

4. The process, which consists in heating to from a dark-red to a bright-yellow heat a carbid that will not melt at these temperatures, reacting upon the heated carbid with nitrogen, and leaching the cyanamid out of the reaction product.

5. The process of producing calcium cyanamid which consists in reacting with nitrogen upon calcium carbid at a temperature sufficient to produce calcium cyanamid but below that required for converting calcium cyanamid into calcium cyanid.

[Claim 6 not printed in the Gazette.]

DESIGNS.

39,176. PLATE OR SIMILAR ARTICLE. CHARLES J. AHRENFELDT, New York, N. Y. Filed Jan. 30, 1908. Serial No. 413,477. Term of patent 7 years.



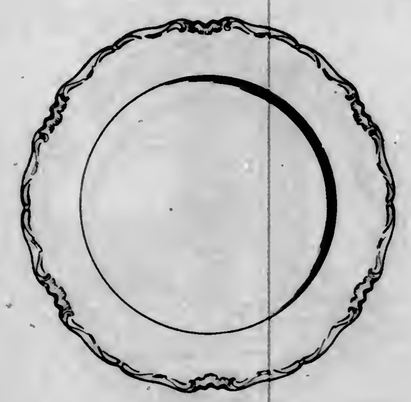
The ornamental design for a plate or similar article, as shown.

39,177. PLATE OR SIMILAR ARTICLE. CHARLES J. AHRENFELDT, New York, N. Y. Filed Jan. 30, 1908. Serial No. 413,478. Term of patent 7 years.



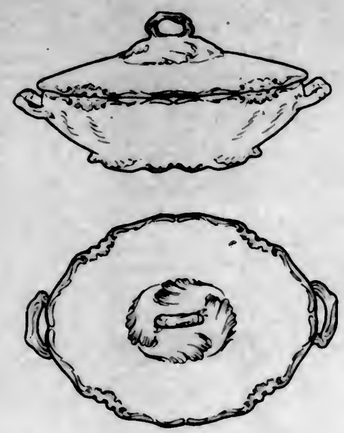
The ornamental design for a plate or similar article, as shown.

39,178. PLATE OR SIMILAR ARTICLE. CHARLES J. AHRENFELDT, New York, N. Y. Filed Jan. 30, 1908. Serial No. 413,479. Term of patent 7 years.



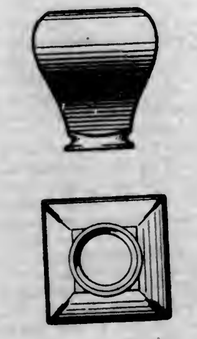
The ornamental design for a plate or similar article, as shown.

39,179. COVERED DISH OR SIMILAR ARTICLE. CHARLES J. AHRENFELDT, New York, N. Y. Filed Jan. 30, 1908. Serial No. 413,480. Term of patent 7 years.



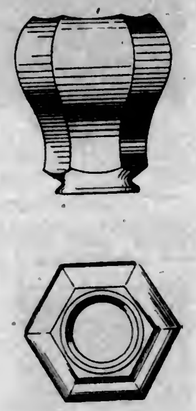
The ornamental design for a covered dish or similar article as shown.

39,180. GLASS SHADE OR GLOBE. MARSHALL W. GLEASON, New York, N. Y., assignor to Gleason-Tiebout Glass Company, Brooklyn, N. Y., a Corporation of New York. Filed Jan. 21, 1908. Serial No. 412,017. Term of patent 7 years.



The ornamental design for a glass shade or globe, as shown.

39,181. GLASS SHADE OR GLOBE. PAUL SCHILLING, New York, N. Y., assignor to Gleason-Tiebout Glass Company, Brooklyn, N. Y., a Corporation of New York. Filed Jan. 21, 1908. Serial No. 412,018. Term of patent 7 years.



The ornamental design for a glass shade or globe, as shown.

39,182. GLASS SHADE OR BALL. RALPH TH. CORDEAU, New York, N. Y., assignor to Gleason-Tiebout Glass Company, Brooklyn, N. Y., a Corporation of New York. Filed Jan. 21, 1908. Serial No. 412,019. Term of patent 7 years.



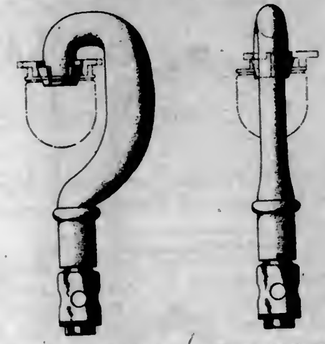
The ornamental design for a glass shade or ball, as shown.

39,183. GLASS SHADE OR BALL. RALPH TH. CORDEAU, New York, N. Y., assignor to Gleason-Tiebout Glass Company, Brooklyn, N. Y., a Corporation of New York. Filed Jan. 21, 1908. Serial No. 412,020. Term of patent 7 years.



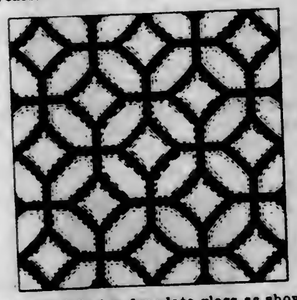
The ornamental design for a glass shade or ball, as shown.

39,184. GAS-LAMP. ALCORN RECTOR, New York, N. Y., assignor to Rector Gas Lamp Company, New York, N. Y., a Corporation of New York. Filed Jan. 22, 1908. Serial No. 412,219. Term of patent 14 years.



The ornamental design for a gas lamp as shown.

39,185. PLATE-GLASS. ANTHONY DIXON BROGAN and ANDREW MURRAY MALLOCH, Firhill, Glasgow, Scotland, Filed Dec. 31, 1907. Serial No. 408,844. Term of patent 14 years.



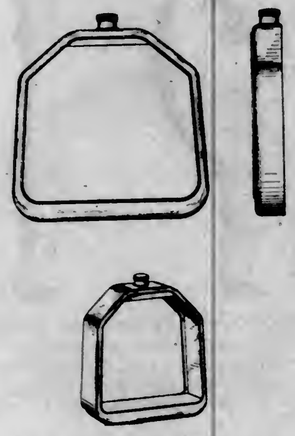
The ornamental design for plate glass as shown.

39,186. ELECTRICALLY-ILLUMINATED SIGN. FREDERIC W. LORD, New York, N. Y. Filed Oct. 22, 1907. Serial No. 398,660. Term of patent 7 years.



The ornamental design for an electrically illuminated sign, as shown.

39,187. AUTOMOBILE-RADIATOR. CHARLES SCHMIDT, Cleveland, Ohio, assignor to The Peerless Motor Car Company, Cleveland, Ohio, a Corporation of West Virginia. Filed Feb. 7, 1907. Serial No. 356,269. Term of patent 14 years.



The ornamental design for an automobile radiator, substantially as shown.

39,188. LEVERS LACE. CHARLES WILFRED BIRKIN, Nottingham, England. Filed Jan. 27, 1908. Serial No. 412,937. Term of patent 3½ years.



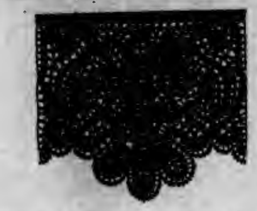
The ornamental design for Levers lace as shown.

39,189. LEVERS LACE. CHARLES WILFRED BIRKIN, Nottingham, England. Filed Jan. 27, 1908. Serial No. 412,938. Term of patent 3½ years.



The ornamental design for Levers lace as shown.

39,190. LEVERS LACE. CHARLES WILFRED BIRKIN, Nottingham, England. Filed Jan. 27, 1908. Serial No. 412,939. Term of patent 3½ years.



The ornamental design for Levers lace as shown.

39,191. LEVERS LACE. CHARLES WILFRED BIRKIN, Nottingham, England. Filed Jan. 27, 1908. Serial No. 412,940. Term of patent 3½ years.



The ornamental design for Levers lace as shown.

39,192. LEVERS LACE. CHARLES WILFRED BIRKIN, Nottingham, England. Filed Jan. 27, 1908. Serial No. 412,941. Term of patent 3½ years.



The ornamental design for Levers lace as shown.

39,193. PILE FABRIC. FREDERIC E. KIP, Montclair, N. J. Filed Jan. 28, 1908. Serial No. 413,099. Term of patent 7 years.



The ornamental design for a pile fabric, as shown.

TRADE-MARKS

PUBLISHED MARCH 10, 1908.

The following trade-marks have been adjudged entitled to registration under the act of February 20, 1905, and are published in compliance with section 6 of said act. Said section provides:

"Any person who believes he would be damaged by the registration of a mark may oppose the same by filing notice of opposition, stating the grounds therefor, in the Patent Office within thirty days after the publication of the mark sought to be registered, which said notice of opposition shall be verified by the person filing the same before one of the officers mentioned in section two of this act. If no notice of opposition is filed within said time the Commissioner shall issue a certificate of registration therefor, as hereinafter provided for."

Marks which are stated to have been "Used ten years" are registrable under the last proviso of section 5 of said act, which is as follows:

"And provided further, That nothing herein shall prevent the registration of any mark used by the applicant or his predecessors, or by those from whom title to the mark is derived, in commerce with foreign nations or among the several States, or with Indian tribes, which was in actual and exclusive use as a trade-mark of the applicant or his predecessors from whom he derived title for ten years next preceding the passage of this act."

Section 14 of said act provides for the following fee:

"On filing notice of opposition to the registration of a trade-mark, ten dollars."

Ser. No. 4,274. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) BAY STATE BELTING CO., Boston, Mass. Filed May 4, 1905. Used ten years.



Particular description of goods.—Leather Belting and Lacing for Belting.

Ser. No. 5,410. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) SIEGEL COOPER & Co., Chicago, Ill. Filed May 13, 1905.



Particular description of goods.—A Prepared Dessert Food.

Ser. No. 6,452. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) SUNSET DISTILLING CO., Chicago, Ill. Filed May 24, 1905.

BELLE OF VERNON

Particular description of goods.—Whiskies.

Ser. No. 9,144. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) EDDY PALMER, New York, N. Y., assignor to Solon Palmer, a Corporation of New York. Filed June 27, 1905. Used ten years.

LILAC SWEETS

Particular description of goods.—Perfumes and Perfumed Toilet Powders.

Ser. No. 9,145. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) EDDY PALMER, New York, N. Y., assignor to Solon Palmer, a Corporation of New York. Filed June 27, 1905.

GARLAND OF VIOLETS

Particular description of goods.—Perfumes, Perfumed Toilet Powders, and Perfumed Smelling Salts.

Ser. No. 9,146. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) EDDY PALMER, New York, N. Y., assignor to Solon Palmer, a Corporation of New York. Filed June 27, 1905.

CURIO

Particular description of goods.—Perfumes and Perfumed Toilet Powders.

Ser. No. 9,147. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) EDDY PALMER, New York, N. Y., assignor to Solon Palmer, a Corporation of New York. Filed June 27, 1905. Used ten years.

MAY BLOOM

Particular description of goods.—Perfumes and Perfumed Toilet Powders.

Ser. No. 9,148. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) EDDY PALMER, New York, N. Y., assignor to Solon Palmer, a Corporation of New York. Filed June 27, 1905. Used ten years.

INDIA BOUQUET

Particular description of goods.—Perfumed Toilet Soap.

Ser. No. 9,938. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) EDDY PALMER, New York, N. Y., assignor to Solon Palmer, a Corporation of New York. Filed July 8, 1905.

GARLAND OF ROSES

Particular description of goods.—Perfumes and Perfumed Toilet Powders.

Ser. No. 14,775. (CLASS 36. MUSICAL INSTRUMENTS AND SUPPLIES.) THE AEOLIAN COMPANY, New York, N. Y. Filed Nov. 17, 1905.

ARPA GRANDE

Particular description of goods.—Pipe-Organs and Registers of Pipes for Pipe-Organs.

Ser. No. 19,865. (CLASS 50. MERCHANDISE NOT OTHERWISE CLASSIFIED.) ONEIDA COMMUNITY LTD., Oneida and Niagara Falls, N. Y. Filed May 25, 1906. Used ten years.

NEWHOUSE

Particular description of goods.—Animal-Traps.

Ser. No. 24,174. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) MARIANA E. SKINNER, Clayton, N. Y., sole executrix of the estate of G. M. Skinner, deceased. Filed Dec. 20, 1906.

Particular description of goods.—Fluted-Spoon Baits.

Ser. No. 25,730. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) ACTIEN-GESELLSCHAFT ADOLPH H. NEUFELDT METALLWAREN-FABRIK UND EMAILLIRWERK, Elbing, Germany. Filed Mar. 4, 1907.

Particular description of goods.—Kitchen and Household Utensils made of Enameled-Metal Ware.

Ser. No. 26,440. (CLASS 16. PAINTS AND PAINTERS' MATERIALS, NOT INCLUDING OILS AND POLISHES.) B. LEE ANDERSON, Washington, D. C. Filed Apr. 3, 1907.

FIXIT.

Particular description of goods.—Varnishes and Stains for Pianos and Fine Furniture and Sets of the Same.

Ser. No. 27,867. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) GAAR, SCOTT & Co., Richmond, Ind. Filed June 4, 1907.



Particular description of goods.—Sawmills.

Ser. No. 28,352. (CLASS 37. PAPER AND STATIONERY.) EBERHARD FABER, New York, N. Y. Filed June 24, 1907. Used ten years.

EBERHARD FABER

Particular description of goods.—Lead and Colored Pencils, Penholders, Rulers, Rubber Bands, and Rubber Erasers.

Ser. No. 28,449. (CLASS 37. PAPER AND STATIONERY.) EBERHARD FABER, New York, N. Y. Filed June 28, 1907. Used ten years.

E. FABER.

Particular description of goods.—Lead and Colored Pencils, Penholders, Rulers, Rubber Bands, and Rubber Erasers.

Ser. No. 28,645. (CLASS 37. PAPER AND STATIONERY.) J. W. BUTLER PAPER CO., Chicago, Ill. Filed July 8, 1907. Used ten years.

GENERAL LEDGER

Particular description of goods.—Writing-Paper.

Ser. No. 28,646. (CLASS 37. PAPER AND STATIONERY.) J. W. BUTLER PAPER CO., Chicago, Ill. Filed July 8, 1907. Used ten years.

Ledger Mills

Particular description of goods.—Writing-Paper.

Ser. No. 28,687. (CLASS 48. MALT EXTRACTS AND LIQUORS.) FREIHERRLICH VON TUCHER'SCHE BRAUEREI AKTIENGESELLSCHAFT, Nuremberg, Germany. Filed July 9, 1907.



Particular description of goods.—Beer.

Ser. No. 28,750. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.). MACONOCHIE BROS. LTD., London, England. Filed July 12, 1907.

PANYAN

Particular description of goods.—Pickles.

Ser. No. 29,071. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) WRIGHT'S INDIAN VEGETABLE PILL COMPANY, New York, N. Y. Filed Sept. 14, 1907. Used ten years.



Particular description of goods.—A Remedy for Indigestion.

Ser. No. 30,020. (CLASS 39. CLOTHING.) NATIONAL INDIA RUBBER CO., Bristol, R. I. Filed Sept. 16, 1907. Used ten years.

NATIONAL INDIA RUBBER COMPANY

Particular description of goods.—Rubber Boots and Shoes and Rubber Soles.

Ser. No. 30,149. (CLASS 39. CLOTHING.) PHOENIX KNITTING WORKS, Milwaukee, Wis. Filed Sept. 23, 1907.

PHOENIX

Particular description of goods.—Knitted Mufflers.

Ser. No. 30,569. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) CHARLES ALFRED JAMES, Stamford-Hill, London, England. Filed Oct. 12, 1907.

AJAX

Particular description of goods.—Washbasins, Bath-Tubs, Needle-Baths, Shower-Baths, Sinks, Water-Closet Pans, Urinals, and the Parts of Said Goods.

Ser. No. 30,688. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) FAYETTEVILLE MILL CO., Fayetteville, Tenn. Filed Oct. 21, 1907.



Particular description of goods.—Wheat Products—viz., Flour, Bran, Cracked Wheat, and Wheat Hearts—and Corn Products—viz., Meal, Corn-Chops, Corn-Bran, and Stock Food Composed of One-third Corncob, One-Third Corn, and One-Third Wheat-Bran.

Ser. No. 30,745. (CLASS 14. METALS AND METAL CASTINGS AND FORGINGS.) PATTERSON, GOTTFRIED & HUNTER LTD., New York N. Y. Filed Oct. 23, 1907.



The triangle being in red.

Particular description of goods.—Antifriction Metal, Babbitt Metal, Bronze, Brass, Brass Sheets, Brass Rods, Brass Bars, Brass Tubing, Brass Wire, Copper Wire, Brass and Bronze Castings and Forgings, Brass and Bronze Metal for Bearings, Phosphor-Bronze, Zinc, Lead, Tin, Solder, Copper, Alloys, and Antimony.

Ser. No. 30,746. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) PATTERSON, GOTTFRIED & HUNTER LTD., New York, N. Y. Filed Oct. 23, 1907.



The triangle being in red.

Particular description of goods.—Injectors, Ejectors, Fixed and Portable Lubricating Devices, Journals and Journal-Boxes, Gears, Shafts, Shaft-Couplings, Pulleys, Pulley-Couplings, Planing-Machines, Drilling-Machines, Boring-Machines, Sawing-Machines, Grinding-Machines, Polishing-Machines.

Ser. No. 30,796. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) THE ASHCROFT MANUFACTURING COMPANY, Bridgeport, Conn. Filed Oct. 26, 1907.



Particular description of goods.—Pipe-Tongs, Ratchets, Ratchet-Drills, and Hand-Pullers.

Ser. No. 31,366. (CLASS 17. TOBACCO PRODUCTS.) RODRIGUEZ Y HNO., Habana, Cuba. Filed Nov. 26, 1907.



Particular description of goods.—Cigars.

Ser. No. 31,531. (CLASS 39. CLOTHING.) A. A. CUTTER COMPANY, Eau Claire, Wis. Filed Dec. 3, 1907.



Particular description of goods.—Boots and Shoes of Leather, Boots and Shoes of Rubber, Boots and Shoes of Canvas, Boots and Shoes Partly of Leather and Partly of Rubber, Boots and Shoes Partly of Leather and Partly of Canvas, Boots and Shoes Partly of Rubber and Partly of Canvas, Boots and Shoes Partly of Leather and Partly of Rubber and Partly of Canvas, Tops for Rubbers, and Sandal Mittens.

Ser. No. 31,607. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JOHN EDWIN GARRATT, New York, N. Y. Filed Dec. 7, 1907.

VETSKIN

Particular description of goods.—A Medicinal Plaster and a Medicinal Paint.

Ser. No. 31,611. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) SEVEN DAY COFFEE COMPANY, New York, N. Y. Filed Dec. 7, 1907.



Particular description of goods.—Coffee.

Ser. No. 31,613. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) SAMSTAG & HILDER BROTHERS, New York, N. Y. Filed Dec. 7, 1907.



Particular description of goods.—Dolls.

Ser. No. 31,630. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) THE CASSADY-FAIRBANK MANUFACTURING COMPANY. Chicago, Ill. Filed Dec. 9, 1907.



Particular description of goods.—Curling-Irons.

Ser. No. 31,671. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS, NOT INCLUDING ELECTRICAL APPARATUS.) O. K. STOVE & RANGE CO., Louisville, Ky. Filed Dec. 11, 1907.

OK

Particular description of goods.—Heating and Cooking Stoves and Ranges.

Ser. No. 31,735. (CLASS 38.) PUBLICATIONS.) THEODORE C. WOOD & CO., Chicago, Ill. Filed Dec. 16, 1907.



Particular description of goods.—A Weekly Periodical.

Ser. No. 31,766. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) AUGUSTA BREWING CO., Augusta, Ga. Filed Dec. 17, 1907.

ABC

Particular description of goods.—Birch-Beer, a Non-Alcoholic Beverage.

Ser. No. 31,835. (CLASS 39. CLOTHING.) ENDICOTT JOHNSON COMPANY, Endicott, N. Y. Filed Dec. 19, 1907.

KROMELK

Particular description of goods.—Boots and Shoes of Leather.

Ser. No. 31,841. CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) GLOBE FIRE APPARATUS COMPANY, Jersey City, N. J. Filed Dec. 19, 1907.

GLOBE

Particular description of goods.—Hand Fire-Extinguishers, Chemical Fire-Extinguishing Machines, Fire-Engines, Hose-Wagons, Hook-and-Ladder Trucks, and Hose-Reels.

Ser. No. 31,891. (CLASS 50. MERCHANDISE NOT OTHERWISE CLASSIFIED.) PRESTON BELVIN, Richmond, Va. Filed Dec. 23, 1907.

VIRGOPLATE

Particular description of goods.—Blackboards.

Ser. No. 31,910. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) WELLS FLOUR MILLING COMPANY, Wells, Minn. Filed Dec. 24, 1907.

CREAM OF WELLS

Particular description of goods.—Wheat-Flour.

Ser. No. 31,917. (CLASS 39. CLOTHING.) SHAW STOCKING COMPANY, Lowell, Mass. Filed Dec. 26, 1907. Used ten years.

Shawknit

Particular description of goods.—Hosiery.

Ser. No. 31,918. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JEFFREYS MANUFACTURING COMPANY, Cheswick, Pa. Filed Dec. 26, 1907.

ROYAL

Particular description of goods.—Shampoo-Cream, Massage-Cream, Cream Lotion, and Cold-Cream.

Ser. No. 31,931. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) RATHENOWER OPTISCHE INDUSTRIE ANSTALT VORMALS EMIL BUSCH, A. G., Rathenow, Germany. Filed Dec. 26, 1907.

„Terlux"

Particular description of goods.—Prismatic Telescopes.

Ser. No. 31,940. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS, NOT INCLUDING ELECTRICAL APPARATUS.) PORTLAND STOVE FOUNDRY COMPANY, Portland, Me. Filed Dec. 27, 1907. Used ten years.

ATLANTIC

Particular description of goods.—Stoves, Ranges, Heaters, and Furnaces.

Ser. No. 32,003. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ANGUS WATSON & CO., Newcastle-on-Tyne, England. Filed Jan. 2, 1908.

HERRINGLETS

Particular description of goods.—Preserved or Canned Herrings.

Ser. No. 32,012. (CLASS 37. PAPER AND STATIONERY.) A. KIMBALL CO., New York, N. Y. Filed Jan. 2, 1908. Used ten years.

KIMBALL

Particular description of goods.—Pin-Tickets.

Ser. No. 32,017. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS, NOT INCLUDING ELECTRICAL APPARATUS.) C. T. HAM MANUFACTURING COMPANY, Rochester, N. Y. Filed Jan. 2, 1908. Used ten years.

HAM

Particular description of goods.—Oil-Burning Lamps, Lanterns, and Burners Therefor.

Ser. No. 32,030. (CLASS 14. METALS AND METAL CASTINGS AND FORGINGS.) ABENDROTH BROTHERS, Port Chester and New York, N. Y. Filed Jan. 2, 1908. Used ten years.

A
NY

Particular description of goods.—Cast-Metal Soil-Pipes and Fittings for the Same, Consisting of Branches, T's, Y's, Offsets, and Bends.

Ser. No. 32,031. (CLASS 14. METALS AND METAL CASTINGS AND FORGINGS.) ABENDROTH BROTHERS, Port Chester and New York, N. Y. Filed Jan. 2, 1908. Used ten years.

ABENDROTH

Particular description of goods.—Cast-Metal Soil-Pipes and Fittings for the Same, Consisting of Branches, T's, Y's, Offsets, and Bends.

Ser. No. 32,032. (CLASS 14. METALS AND METAL CASTINGS AND FORGINGS.) ABENDROTH BROTHERS, Port Chester and New York, N. Y. Filed Jan. 2, 1908. Used ten years.

ABENDROTH BRO'S

Particular description of goods.—Cast-Metal Soil-Pipes and Fittings for the Same, Consisting of Branches, T's, Y's, Offsets, and Bends.

Ser. No. 32,073. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE STERN & SAALBERG CO., New York, N. Y. Filed Jan. 4, 1908.

FLUFFY MINTS

Particular description of goods.—Candy.

Ser. No. 32,102. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) JOHN JAQUES & SON LIMITED, London, England. Filed Jan. 6, 1908.

SPELKA

Particular description of goods.—Card Games.

Ser. No. 32,105. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE PEA RIDGE CANTALOUPE & TRUCK GROWERS ASSOCIATION, Fayetteville, Tenn. Filed Jan. 6, 1908.

Pride of Pea Ridge

Particular description of goods.—Cantaloups.

Ser. No. 32,107. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) J. FAESSLER MANUFACTURING CO., Moberly, Mo. Filed Jan. 7, 1908.



Particular description of goods.—Tools Used in Expanding and Cutting Boiler Tubes and Flues.

Ser. No. 32, 117. (CLASS 47. WINES, EXCEPT MEDICATED.) DURLACHER BROS., Hamburg, Germany. Filed Jan. 7, 1908.



Particular description of goods.—Still Wine, Sparkling Wine, and Fruit Wine.

Ser. No. 32,122. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) KEVORK M. BOYAJIAN, Chicago, Ill. Filed Jan. 7, 1908.



The seal being in gold.

Particular description of goods.—Nuts and Nut-Meats.

Ser. No. 32,124. (CLASS 19. VEHICLES, NOT INCLUDING ENGINES.) SPRING PERCH COMPANY, Bridgeport, Conn. Filed Jan. 7, 1908.



Particular description of goods.—Springs for Automobiles.

Ser. No. 32,138. (CLASS 19. VEHICLES, NOT INCLUDING ENGINES.) EDWIN HENDRY BENNERS, New York, N. Y. Filed Jan. 8, 1908.

CROWN

Particular description of goods.—Car-Trucks, Side Frames for Such Trucks, and Parts of the Truck.

Ser. No. 32,180. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) THE TUNGSTEN ELECTRIC LAMP COMPANY, Cleveland, Ohio. Filed Jan. 11, 1908.

Helle

Particular description of goods.—Incandescent Electric Lamps.

Ser. No. 32,181. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THOMAS J. MYER & CO., Baltimore, Md. Filed Jan. 11, 1908.



Particular description of goods.—Canned Fruits, Vegetables, and Oysters.

Ser. No. 32,226. (CLASS 14. METALS AND METAL CASTINGS AND FORGINGS.) COLONIAL STEEL CO., Pittsburg, Pa. Filed Jan. 15, 1908.



Particular description of goods.—Steel Bars, Sheets, and Plates.

Ser. No. 32,234. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) WALSTINE Q. BOWMAN, Hubbard City, Tex. Filed Jan. 15, 1908. Used ten years.

BOWMAN'S
PIUTE XVI
REMEDY.

Particular description of goods.—A Remedy for Rheumatism, Neuralgia, Sore Throat, Burns, Spider and Snake Bites, Colic, Cramps, Indigestion, Nervous Headache, and Croup.

Ser. No. 32,241. (CLASS 48. MALT EXTRACTS AND LIQUORS.) H KOEHLER & CO., New York, N. Y. Filed Jan. 16, 1908.



Particular description of goods.—Beer.

Ser. No. 32,253. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) CHENEY BROTHERS, South Manchester, Conn. Filed Jan. 16, 1908.



Particular description of goods.—Silk Piece Goods.

Ser. No. 32,294. (CLASS 47. WINES, EXCEPT MEDICATED.) CALIFORNIA WINE ASSOCIATION, San Francisco, Cal. Filed Jan. 18, 1908.

CAL-FALERNO

Particular description of goods.—Wine.

Ser. No. 32,304. (CLASS 10. FERTILIZERS.) UNION GUANO COMPANY, Winston Salem, N. C. Filed Jan. 18, 1908.

VICTORIA

Particular description of goods.—Fertilizers.

Ser. No. 32,318. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) M. M. JOHANNSEN CANDY COMPANY, Dubuque, Iowa. Filed Jan. 20, 1908.



ELK SWEETS

Particular description of goods.—Candy.

Ser. No. 32,319. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) H. W. CAMPBELL COMPANY, Chicago, Ill. Filed Jan. 20, 1908.

NATURE'S
CREATION

Particular description of goods.—A Blood-Purifier.

Ser. No. 32,329. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) W. & B. CHEMICAL COMPANY, Omaha, Nebr. Filed Jan. 20, 1908.

LEUKOS

Particular description of goods.—A Medicine for Leucorrhea.

Ser. No. 32,332. (CLASS 17. TOBACCO PRODUCTS.) LOUIS REES, Chicago, Ill. Filed Jan. 20, 1908.



Particular description of goods.—Smoking-Tobacco.

Ser. No. 32,340. (CLASS 17. TOBACCO PRODUCTS.) RODRIGUEZ Y HERMANO, Habana, Cuba. Filed Jan. 21, 1908.



Particular description of goods.—Cigars.

Ser. No. 32,349. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ANNA CLYDE AYDELOTT, McKenzie, Tenn. Filed Jan. 21, 1908.

O. T. T.

Particular description of goods.—Toilet Cream, Pastil Rouge, Skin Food, Toilet Water, a Hair-Curling Preparation, and Perfume.

Ser. No. 32,385. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) PENNSYLVANIA CHOCOLATE COMPANY, Pittsburg, Pa. Filed Jan. 23, 1908.

BILLETS

Particular description of goods.—Chocolate and Candy.

Ser. No. 32,389. (CLASS 39. CLOTHING.) E. J. WILE & Co., New York, N. Y. Filed Jan. 23, 1908.

THE "LITTLE MAJOR" MADE BY E. J. WILE & CO NEW YORK

Particular description of goods.—Misses' and Children's Cloaks and Suits.

Ser. No. 32,405. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) SODELTZER CO., St. Louis, Mo. Filed Jan. 24, 1908.

Sodeltzer

Particular description of goods.—A Remedy for Stomach Disorders, Nervous Headache, Brain Fatigue, and Sleeplessness.

Ser. No. 32,419. (CLASS 17. TOBACCO PRODUCTS.) EAGLE TOBACCO CO., Quincy, Ill. Filed Jan. 24, 1908.

GOLDEN RULE

Particular description of goods.—Plug-Tobacco.

Ser. No. 32,424. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) LANGE BROS., New York, N. Y. Filed Jan. 25, 1908.

GORA

Particular description of goods.—Granular Effervescent Salts.

Ser. No. 32,426. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) MONARCH DRUG COMPANY, Chicago, Ill. Filed Jan. 25, 1908.

MONARCH TRADE HAIRITONE MARK

Particular description of goods.—Pharmaceutical Preparations for Use Upon and Treatment of the Hair and as a Hair-Tonic and Dandruff-Remover.

Ser. No. 32,432. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) RIO CHEMICAL CO., New York, N. Y. Filed Jan. 25, 1908.

COLAZAN

Particular description of goods.—A Nerve Tonic and Stimulant.

Ser. No. 32,445. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) GERHARD BOERNER, Buffalo, N. Y. Filed Jan. 27, 1908.



Particular description of goods.—Almond Rings.

Ser. No. 32,450. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) SAMUEL KAPNEK, Philadelphia, Pa. Filed Jan. 27, 1908.

CITY HALL

Particular description of goods.—Whisky.

Ser. No. 32,452. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) HAAS, BARUCH & Co., Los Angeles, Cal. Filed Jan. 27, 1908.



Particular description of goods.—Tea and Coffee.

Ser. No. 32,457. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) GRIFFITH-DURNEY COMPANY, San Francisco, Cal. Filed Jan. 27, 1908.

M·M·M

Particular description of goods.—Canned Salmon.

Ser. No. 32,458. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) GRIFFITH-DURNEY COMPANY, San Francisco, Cal. Filed Jan. 27, 1908.



Particular description of goods.—Canned Salmon.

Ser. No. 32,460. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) GRIFFITH-DURNEY COMPANY, San Francisco, Cal. Filed Jan. 27, 1908.



Particular description of goods.—Canned Salmon.

Ser. No. 32,461. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) GRIFFITH-DURNEY COMPANY, San Francisco, Cal. Filed Jan. 27, 1908.



Particular description of goods.—Canned Fruits and Vegetables.

Ser. No. 32,497. (CLASS 36. MUSICAL INSTRUMENTS AND SUPPLIES.) THE PALMER PIANO COMPANY, White Plains and New York, N. Y. Filed Jan. 30, 1908.



Particular description of goods.—Pianos.

Ser. No. 32,500. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ONEIDA COUNTY CANNING CO., LIMITED, Verona, N. Y. Filed Jan. 30, 1908.

SPRING BROOK

Particular description of goods.—Canned Fruits and Canned Vegetables.

Ser. No. 32,501. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ONEIDA COUNTY CANNING CO., LIMITED, Verona, N. Y. Filed Jan. 30, 1908.

MAZEPPA



Particular description of goods.—Canned Fruits and Canned Vegetables.

Ser. No. 32,623. (CLASS 10. FERTILIZERS.) VIRGINIA-CAROLINA CHEMICAL COMPANY, Jersey City, N. J.; Richmond and Norfolk, Va.; Charleston, S. C.; Savannah and Atlanta, Ga.; Montgomery, Ala.; Durham, N. C., and Memphis, Tenn. Filed Feb. 7, 1908. Used ten years.

BALDWIN FERTILIZER CO'S AMMONIATED DISSOLVED BONE

Particular description of goods.—Fertilizers.

Ser. No. 32,624. (CLASS 10. FERTILIZERS.) VIRGINIA-CAROLINA CHEMICAL COMPANY, Jersey City, N. J.; Richmond and Norfolk, Va.; Charleston, S. C.; Savannah and Atlanta, Ga.; Montgomery, Ala.; Durham, N. C., and Memphis, Tenn. Filed Feb. 7, 1908. Used ten years.

MOBILE PHOSPHATE CO.

Particular description of goods.—Fertilizers.

Ser. No. 32,628. (CLASS 10. FERTILIZERS.) VIRGINIA-CAROLINA CHEMICAL COMPANY, Jersey City, N. J.; Richmond and Norfolk, Va.; Charleston, S. C.; Savannah and Atlanta, Ga.; Montgomery, Ala.; Durham, N. C., and Memphis, Tenn. Filed Feb. 7, 1908. Used ten years.

GEORGIA FARMERS STANDARD

Particular description of goods.—Fertilizers.

Ser. No. 32,629. (CLASS 10. FERTILIZERS.) VIRGINIA-CAROLINA CHEMICAL COMPANY, Jersey City, N. J.; Richmond and Norfolk, Va.; Charleston, S. C.; Savannah and Atlanta, Ga.; Montgomery, Ala.; Durham, N. C., and Memphis, Tenn. Filed Feb. 7, 1908. Used ten years.

PROGRESSIVE FARMER

Particular description of goods.—Fertilizers.

Ser. No. 32,637. (CLASS 10. FERTILIZERS.) GEORGIA CHEMICAL WORKS, Augusta, Ga. Filed Feb. 7, 1908. Used ten years.

GEORGIA FORMULA

Particular description of goods.—Fertilizers.

Ser. No. 32,638. (CLASS 10. FERTILIZERS.) GEORGIA CHEMICAL WORKS, Augusta, Ga. Filed Feb. 7, 1908. Used ten years.

GEM COTTON GROWER

Particular description of goods.—Fertilizers.

Ser. No. 32,640. (CLASS 10. FERTILIZERS.) COWETA FERTILIZER COMPANY, Newnan, Ga. Filed Feb. 7, 1908. Used ten years.

COWETA FERTILIZER CO

Particular description of goods.—Fertilizers.

Ser. No. 32,643. (CLASS 10. FERTILIZERS.) AMERICAN FERTILIZING COMPANY, Norfolk, Va. Filed Feb. 7, 1908. Used ten years.

AMERICAN FERTILIZING CO.

Particular description of goods.—Fertilizers.

Ser. No. 32,662. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ARBUCKLE BROTHERS, New York, N. Y.; Pittsburg, Pa., and Chicago, Ill. Filed Feb. 8, 1908.

PAULISTA

Particular description of goods.—Coffee.

TRADE-MARKS

REGISTERED MARCH 10, 1908.

68,081. POTATO-DIGGERS. A. B. FARQUHAR COMPANY, LIMITED, York, Pa.
Filed November 16, 1907. Serial No. 31,204. PUBLISHED DECEMBER 24, 1907.

68,082. STARCH FOR LAUNDRY PURPOSES AND BLUE FOR LAUNDRY PURPOSES. HUGO BECKER, London, England.
Filed September 7, 1907. Serial No. 29,795. PUBLISHED JANUARY 7, 1908.

68,083. DISINFECTANTS. ERNST ERBIC, New York, N. Y.
Filed September 28, 1907. Serial No. 30,224. PUBLISHED JANUARY 7, 1908.

68,084. BREWERS' WET AND DRIED GRAINS. FARMERS FEED COMPANY, New York, N. Y.
Filed November 16, 1907. Serial No. 31,231. PUBLISHED DECEMBER 31, 1907.

68,085. CERTAIN CHEMICAL. H. A. METZ & Co., New York, N. Y.
Filed May 14, 1907. Serial No. 27,356. PUBLISHED JANUARY 7, 1908.

68,086. BAKING-POWDER. INDEPENDENT BAKING POWDER Co., Jersey City, N. J.
Filed November 4, 1907. Serial No. 31,093. PUBLISHED JANUARY 7, 1908.

68,087. PREPARATIONS OF AMMONIA FOR USE AS A DETERGENT. G. F. SUTTON SONS & Co., London, England.
Filed November 26, 1907. Serial No. 31,293. PUBLISHED JANUARY 7, 1908.

68,088. INSECTICIDES AND DISINFECTANTS. UNITED INCUBATOR AND POULTRY SUPPLY MANUFACTURING COMPANY, New York, N. Y., and Boundbrook, N. J.
Filed November 25, 1907. Serial No. 31,233. PUBLISHED JANUARY 7, 1908.

68,089. INSECTICIDES AND DISINFECTANTS. UNITED INCUBATOR AND POULTRY SUPPLY MANUFACTURING COMPANY, New York, N. Y., and Boundbrook, N. J.
Filed November 25, 1907. Serial No. 31,234. PUBLISHED JANUARY 7, 1908.

68,090. OINTMENTS FOR PROTECTION AGAINST INSECTS. JOHN CHARLES FREMONT WOODWORTH, Silverbell, Ariz. Ter.
Filed October 3, 1906. Serial No. 22,407. PUBLISHED JANUARY 7, 1908.

68,091. WOODEN GAGE BOARDS AND FRAMES. THE ASHCROFT MANUFACTURING COMPANY, Bridgeport, Conn.
Filed October 26, 1907. Serial No. 30,727. PUBLISHED JANUARY 7, 1908.

68,092. CERTAIN STEEL. CAMMELL LAIRD & Co. LIMITED, Sheffield, England.
Filed May 25, 1907. Serial No. 27,629. PUBLISHED JANUARY 7, 1908.

68,093. SOLDERING METAL. HIRAM L. CONDÉ, Oswego, N. Y.
Filed November 16, 1907. Serial No. 31,211. PUBLISHED JANUARY 7, 1908.

68,094. WOODEN WATER-CLOSET SEATS AND TANKS. WILLIAM HEAP & SONS, Grand Haven, Mich.
Filed November 25, 1907. Serial No. 31,242. PUBLISHED JANUARY 7, 1908.

68,095. WOODEN WATER-CLOSET SEATS AND TANKS. WILLIAM HEAP & SONS, Grand Haven, Mich.
Filed November 25, 1907. Serial No. 31,243. PUBLISHED JANUARY 7, 1908.

68,096. COCKS, VALVES, FAUCETS, AND STRAINERS. HOMER BRASS WORKS INCORPORATED, Philadelphia, Pa.
Filed November 7, 1907. Serial No. 31,022. PUBLISHED JANUARY 7 1908.

68,097. CERTAIN METALS. HOMER BRASS WORKS INCORPORATED, Philadelphia, Pa.
Filed December 2, 1907. Serial No. 31,502. PUBLISHED JANUARY 7, 1908.

68,098. ENAMELED CAST AND SHEET STEEL HOLLOW WARE. THE JACOB J. VOLLRATH MFG. CO., Sheboygan, Wis.
Filed September 23, 1907. Serial No. 30,163. PUBLISHED JANUARY 7, 1908.

68,099. METAL ROASTERS. THE REPUBLIC METALWARE CO., Buffalo, N. Y.
Filed October 16, 1907. Serial No. 30,659. PUBLISHED JANUARY 7, 1908.

68,100. FERTILIZERS. VIRGINIA-CAROLINA CHEMICAL COMPANY, Jersey City, N. J.; Richmond and Norfolk, Va.; Charleston, S. C.; Savannah and Atlanta, Ga.; Montgomery, Ala.; Durham, N. C., and Memphis, Tenn.
Filed November 30, 1907. Serial No. 31,468. PUBLISHED JANUARY 7, 1908.

68,101. FERTILIZERS. VIRGINIA-CAROLINA CHEMICAL COMPANY, Jersey City, N. J.; Richmond and Norfolk, Va.; Charleston, S. C.; Savannah and Atlanta, Ga.; Montgomery, Ala.; Durham, N. C., and Memphis, Tenn.
Filed November 30, 1907. Serial No. 31,469. PUBLISHED JANUARY 7, 1908.

68,102. FERTILIZERS. VIRGINIA-CAROLINA CHEMICAL COMPANY, Jersey City, N. J.; Richmond and Norfolk, Va.; Charleston, S. C.; Savannah and Atlanta, Ga.; Montgomery, Ala.; Durham, N. C., and Memphis, Tenn.
Filed November 30, 1907. Serial No. 31,470. PUBLISHED JANUARY 7, 1908.

68,103. FERTILIZERS. VIRGINIA-CAROLINA CHEMICAL COMPANY, Jersey City, N. J.; Richmond and Norfolk, Va.; Charleston, S. C.; Savannah and Atlanta, Ga.; Montgomery, Ala.; Durham, N. C., and Memphis, Tenn.
Filed November 30, 1907. Serial No. 31,471. PUBLISHED JANUARY 7, 1908.

68,104. FERTILIZERS. VIRGINIA-CAROLINA CHEMICAL COMPANY, Jersey City, N. J.; Richmond and Norfolk, Va.; Charleston, S. C.; Savannah and Atlanta, Ga.; Montgomery, Ala.; Durham, N. C., and Memphis, Tenn.
Filed November 30, 1907. Serial No. 31,472. PUBLISHED JANUARY 7, 1908.

68,105. FERTILIZERS. VIRGINIA-CAROLINA CHEMICAL COMPANY, Jersey City, N. J.; Richmond and Norfolk, Va.; Charleston, S. C.; Savannah and Atlanta, Ga.; Montgomery, Ala.; Durham, N. C., and Memphis, Tenn.
Filed November 30, 1907. Serial No. 31,473. PUBLISHED JANUARY 7, 1908.

68,106. MEDICINE FOR THE KIDNEYS AND URINARY ORGANS. THE CLAFLIN CHEMICAL CO. Limited, Windsor, Ontario, Canada.
Filed October 15, 1907. Serial No. 30,613. PUBLISHED JANUARY 7, 1908.

68,107. CORN AND BUNION REMEDY. LOU S. COUPLIN, Guthrie, Okla.
Filed November 4, 1907. Serial No. 30,988. PUBLISHED JANUARY 7, 1908.

68,108. CERTAIN MATTRESSES, PILLOWS, LOUNGES, AND DAVENPORTS. THE J. C. HIRSCHMAN COMPANY, Indianapolis, Ind.
Filed August 26, 1907. Serial No. 20,595. PUBLISHED JANUARY 7, 1908.

68,109. CERTAIN MEDICINAL PREPARATIONS. JOHN WYETH AND BROTHER, INCORPORATED, Philadelphia, Pa.
Filed August 15, 1906. Serial No. 21,548. PUBLISHED JANUARY 7, 1908.

68,110. CERTAIN MEDICINAL PREPARATIONS. JOHN WYETH AND BROTHER, INCORPORATED, Philadelphia, Pa.
Filed August 15, 1906. Serial No. 21,553. PUBLISHED JANUARY 7, 1908.

68,111. DERIVATIVE OR SUBSTITUTE FOR ERGOT. E. MERCK, Darmstadt, Germany.
Filed August 6, 1906. Serial No. 21,357. PUBLISHED JANUARY 7, 1908.

68,112. LIQUID MEDICINAL PREPARATION. THE MORRIS PHARMACAL COMPANY OF NEW YORK, New York, N. Y.
Filed November 16, 1907. Serial No. 31,214. PUBLISHED JANUARY 7, 1908.

68,113. NITRO-OXIDIZING AGENT. NITROX CHEMICAL COMPANY, St. Louis, Mo.
Filed October 28, 1907. Serial No. 30,842. PUBLISHED JANUARY 7, 1908.

68,114. SKIN-TONICS. BERNHARD ROCHOW, New York, N. Y.
Filed November 27, 1907. Serial No. 31,400. PUBLISHED JANUARY 7, 1908.

68,115. FOOT SALVES, OINTMENTS, AND POWDERS. JULIA A. SAVAGE, Cambridge, Mass.
Filed September 4, 1906. Serial No. 21,907. PUBLISHED JANUARY 7, 1908.

68,116. SALVE. GEORGE F. SMITH, Woodsboro, Md.
Filed December 2, 1907. Serial No. 31,496. PUBLISHED JANUARY 7, 1908.

68,117. CERTAIN TOILET PREPARATIONS. UNITED DRUG COMPANY, Boston, Mass.
Filed October 24, 1907. Serial No. 30,771. PUBLISHED JANUARY 7, 1908.

68,118. TEETHING-POWDERS. MARY GARDNER, St. Louis, Mo., executrix of Charles J. Moffett, deceased.
Filed November 18, 1907. Serial No. 31,242. PUBLISHED JANUARY 7, 1908.

68,119. CERTAIN TOILET PREPARATIONS. GEORGE A. SCHMIDT COMPANY, Chicago, Ill.
Filed September 3, 1907. Serial No. 20,728. PUBLISHED JANUARY 7, 1908.

68,120. CERTAIN MEDICINAL PREPARATIONS. HOME REMEDY COMPANY, Fredonia, N. Y.
Filed November 26, 1907. Serial No. 31,376. PUBLISHED JANUARY 7, 1908.

68,121. MATCHES. JÖNKÖPINGS OCH VULCANS TÄNDSTICKSFABRIKSAKTIEBOLAG, Jönköping, Sweden.
Filed January 12, 1907. Serial No. 24,503. PUBLISHED JULY 30, 1907.

68,122. CERTAIN REMEDY. LUCIAN LLOYD, East Lynn, W. Va.
Filed September 6, 1907. Serial No. 20,784. PUBLISHED JANUARY 7, 1908.

68,123. SHOTGUNS. NORVELL-SHAPLEIGH HARDWARE COMPANY, St. Louis, Mo.
Filed November 14, 1905. Serial No. 14,662. PUBLISHED JANUARY 7, 1908.

68,124. WITHDRAWN.

68,125. LIQUID TONIC FOR THE BLOOD. WILLIAM SOUTHWORTH, Paris, France.
Filed August 6, 1907. Serial No. 20,290. PUBLISHED JANUARY 7, 1908.

68,126. TOILET CREAM. JOHN MARTIN TOBIN, New York N. Y.
Filed November 6, 1907. Serial No. 31,028. PUBLISHED JANUARY 7, 1908.

68,127. HAIR-REMOVER. SHERMAN M. TURRILL, Cincinnati, Ohio.
Filed November 18, 1907. Serial No. 31,268. PUBLISHED JANUARY 7, 1908.

68,128. CERTAIN MEDICINES FOR BIRDS AND FOWLS. UNITED INCUBATOR AND POULTRY SUPPLY MANUFACTURING COMPANY, New York, N. Y., and Boundbrook, N. J.
Filed November 25, 1907. Serial No. 31,331. PUBLISHED JANUARY 7, 1908.

68,129. RAILWAY SIGNAL AND SWITCH APPARATUS. W. R. STEES INTERLOCKING SIGNAL COMPANY, LIMITED, London, England.
Filed October 30, 1907. Serial No. 30,880. PUBLISHED JANUARY 7, 1908.

68,130. ANCHOVIES. AKTIEBOLAGET SVERIGES FÖRENADE KONSERVFABRIKER, Gottenborg, Sweden.
Filed November 12, 1907. Serial No. 31,137. PUBLISHED JANUARY 7, 1908.

68,131. BREAD, CRACKERS, AND CAKE. AUSTIN BISCUIT COMPANY, Chelsea, Mass.
Filed July 24, 1907. Serial No. 29,012. PUBLISHED JANUARY 7, 1908.

68,132. BUTTER. HERBERT HENRY BROWN, Philadelphia, Pa.
Filed October 30, 1907. Serial No. 30,873. PUBLISHED JANUARY 7, 1908.

68,133. CANNED SALMON. COLUMBIA CANNING COMPANY, Seattle, Wash.
Filed November 29, 1907. Serial No. 31,450. PUBLISHED JANUARY 7, 1908.

68,134. MINCE-MEAT, CANNED FRUITS, AND CANNED VEGETABLES. DE WITT GROCERY CO., Brattleboro, Vt.
Filed October 30, 1907. Serial No. 30,878. PUBLISHED JANUARY 7, 1908.

68,135. SMOKED SARDINES PACKED IN OIL. DODGE & STARKEL, Chicago, Ill.
Filed November 4, 1907. Serial No. 30,993. PUBLISHED JANUARY 7, 1908.

68,136. WHEAT-FLOURS. GLOBE MILLING CO., Lockport, N. Y.
Filed July 1, 1907. Serial No. 28,531. PUBLISHED OCTOBER 15, 1907.

68,137. FELT, PAPER, AND ASBESTOS ROOFINGS AND PIPE-COVERING. H. W. JOHNS-MANVILLE CO., New York, N. Y.
Filed October 23, 1907. Serial No. 30,749. PUBLISHED JANUARY 7, 1908.

68,138. COFFEE. J. A. FOLGER & COMPANY, San Francisco, Cal.
Filed October 2, 1907. Serial No. 30,357. PUBLISHED JANUARY 7, 1908.

68,139. WHEAT-FLOUR. J. F. JOHNSON MILLING CO., Bridgeton, N. J.
Filed September 30, 1905. Serial No. 13,156. PUBLISHED JANUARY 7, 1908.

68,140. CANNED SALMON. KELLEY-CLARKE CO., Seattle, Wash.
Filed November 29, 1907. Serial No. 31,422. PUBLISHED JANUARY 7, 1908.

68,141. CANNED SALMON. KELLEY-CLARKE CO., Seattle, Wash.
Filed November 29, 1907. Serial No. 31,423. PUBLISHED JANUARY 7, 1908.

68,142. CANNED SALMON. KELLEY-CLARKE CO., Seattle, Wash.
Filed November 29, 1907. Serial No. 31,424. PUBLISHED JANUARY 7, 1908.

68,143. CANNED SALMON. KELLEY-CLARKE CO., Seattle, Wash.
Filed November 29, 1907. Serial No. 31,425. PUBLISHED JANUARY 7, 1908.

68,144. CANNED SALMON. KELLEY-CLARKE CO., Seattle, Wash.
Filed November 29, 1907. Serial No. 31,426. PUBLISHED JANUARY 7, 1908.

68,145. CANNED SALMON. KELLEY-CLARKE CO., Seattle, Wash.
Filed November 29, 1907. Serial No. 31,427. PUBLISHED JANUARY 7, 1908.

68,146. CANNED SALMON. KELLEY-CLARKE CO., Seattle, Wash.
Filed November 29, 1907. Serial No. 31,434. PUBLISHED JANUARY 7, 1908.

68,147. CANNED SALMON. KELLEY-CLARKE CO., Seattle, Wash.
Filed November 29, 1907. Serial No. 31,435. PUBLISHED JANUARY 7, 1908.

68,148. CANNED SALMON. KELLEY-CLARKE CO., Seattle, Wash.
Filed November 29, 1907. Serial No. 31,436. PUBLISHED JANUARY 7, 1908.

68,149. CANNED SALMON. KELLEY-CLARKE CO., Seattle, Wash.
Filed November 29, 1907. Serial No. 31,437. PUBLISHED JANUARY 7, 1908.

68,150. SAUCE. LEA & PERRINS, Worcester, England.
Filed November 4, 1907. Serial No. 31,000. PUBLISHED JANUARY 7, 1908.

68,151. COFFEE AND TEA. MCCORD BRADY CO., Omaha, Nebr.
Filed May 1, 1906. Serial No. 19,215. PUBLISHED JANUARY 7, 1908.

68,152. ANIMAL OIL USED IN FOODS. NEW YORK BUTCHERS DRESSED MEAT COMPANY, New York, N. Y.
Filed June 21, 1906. Serial No. 20,474. PUBLISHED JANUARY 7, 1908.

68,153. SAUCES. SEARS AND DICKERSON, Washington, D. C.
Filed February 19, 1907. Serial No. 25,430. PUBLISHED JANUARY 7, 1908.

68,154. LARD-SUBSTITUTES. SHERMAN COTTON OIL PROVISION CO., Sherman, Tex.
Filed October 29, 1907. Serial No. 30,852. PUBLISHED JANUARY 7, 1908.

68,155. LARD SUBSTITUTES. SHERMAN COTTON OIL PROVISION CO., Sherman, Tex.
Filed October 29, 1907. Serial No. 30,853. PUBLISHED JANUARY 7, 1908.

68,156. LARD SUBSTITUTES. SHERMAN COTTON OIL PROVISION CO., Sherman, Tex.
Filed October 29, 1907. Serial No. 30,854. PUBLISHED JANUARY 7, 1908.

68,157. AGRICULTURAL AND SIMILAR FORKS AND HOES. WITHINGTON & COOLEY MANUFACTURING COMPANY, Jackson, Mich.
Filed November 14, 1907. Serial No. 31,163. PUBLISHED JANUARY 7, 1908.

68,158. RYE BREAD. CHARLES J. BIEHLE, St. Louis, Mo.
Filed November 21, 1907. Serial No. 31,273. PUBLISHED JANUARY 7, 1908.

68,159. COCKTAILS. THE COOK & BERNHEIMER CO., New York, N. Y.
Filed June 27, 1905. Serial No. 9,268. PUBLISHED JANUARY 7, 1908.

68,160. ALCOHOLIC BEVERAGE CONTAINING MILK, EGGS, BRANDY, AND SUGAR. ELIODORO GONZÁLEZ P., Caracas, Venezuela.
Filed March 25, 1907. Serial No. 26,196. PUBLISHED JANUARY 7, 1908.

68,161. RYE AND MALT WHISKY. THE GOTTSCHALK COMPANY OF BALTIMORE CITY, Baltimore, Md.
Filed August 12, 1905. Serial No. 11,610. PUBLISHED JANUARY 7, 1908.

68,162. RYE AND MALT WHISKY. THE GOTTSCHALK COMPANY OF BALTIMORE CITY, Baltimore, Md.
Filed June 29, 1906. Serial No. 20,651. PUBLISHED JANUARY 7, 1908.

68,163. BEER. THE MATHIE BREWING COMPANY, Los Angeles, Cal.
Filed July 17, 1907. Serial No. 28 838. PUBLISHED JANUARY 7, 1908.

68,164. WHISKY. C. PERSON'S SONS, Buffalo, N. Y.
Filed May 6, 1905. Serial No. 4,549. PUBLISHED APRIL 17, 1906.

68,165. PURE RYE WHISKY. SUNNY SIDE DISTILLING CO., Cincinnati, Ohio.
Filed April 21, 1905. Serial No. 2,595. PUBLISHED MAY 15, 1906.

68,166. WHISKY. NICHOLAS GLEN WILLIAMS, Williams, N. C.
Filed June 7, 1907. Serial No. 27,966. PUBLISHED JANUARY 7, 1908.

68,167. LEATHER BOOTS AND SHOES. BROCKTON CO-OPERATIVE BOOT & SHOE CO., Brockton, Mass.
Filed November 22, 1907. Serial No. 31,306. PUBLISHED JANUARY 7, 1908.

68,168. CERTAIN RUBBER GOODS. HOOD RUBBER CO., Boston, Mass.
Filed November 21, 1907. Serial No. 31,274. PUBLISHED JANUARY 7, 1908.

68,169. SYRINGES AND SURGICAL IRRIGATORS. HEINRICH A. KAYSAN, Cassel, Germany.
Filed August 28, 1907. Serial No. 29,639. PUBLISHED JANUARY 7, 1908.

68,170. ANKLE-BRACING SKATE ATTACHMENTS. F. D. KEES MFG. CO., Beatrice, Nebr.
Filed November 7, 1907. Serial No. 31,058. PUBLISHED JANUARY 7, 1908.

68,171. CORSETS. MANUFACTURES ROYALES DE CORSETS P. D. (SOCIÉTÉ ANONYME), Brussels, Belgium.
Filed May 29, 1905. Serial No. 7,052. PUBLISHED JANUARY 7, 1908.

68,172. CORSETS. MANUFACTURES ROYALES DE CORSETS P. D. SOCIÉTÉ ANONYME, Brussels, Belgium.
Filed September 18, 1905. Serial No. 12,764. PUBLISHED JANUARY 7, 1908.

68,173. CERTAIN PAINTERS' MATERIALS. METROPOLITAN PAINT & VARNISH CO., Philadelphia, Pa.
Filed November 23, 1907. Serial No. 31,328. PUBLISHED JANUARY 7, 1908.

68,174. STOVES AND STOVE PARTS. THE READING STOVE WORKS, ORR PAINTER & CO., Reading, Pa.
Filed September 19, 1907. Serial No. 30,081. PUBLISHED JANUARY 7, 1908.

68,175. LEATHER BOOTS, SHOES, AND SLIPPERS. HERBERT H. ROOSA, Lincoln, Nebr.
Filed October 30, 1907. Serial No. 30,879. PUBLISHED JANUARY 7, 1908.

68,176. GOODS MADE FROM HUMAN HAIR AND SUBSTITUTES THEREFOR. ALBERT SIMONSON, New York, N. Y.
Filed October 14, 1907. Serial No. 30,598. PUBLISHED JANUARY 7, 1908.

68,177. SEAT-PADS DESIGNED TO PROTECT THE BODY AND LIMBS FROM COLD. JOHN A. THROCKMORTON, Sidney, Ohio.
Filed November 14, 1907. Serial No. 31,166. PUBLISHED JANUARY 7, 1908.

68,178. OVERALLS, JUMPERS, TROUSERS, AND DRESS-SHIRTS. AMERICAN MANUFACTURING COMPANY, Fort Worth, Tex.
Filed September 13, 1907. Serial No. 29,956. PUBLISHED JANUARY 7, 1908.

68,179. CERTAIN LAMPS AND STOVES. ANTON MEENEN, SPEZIALHAUS FÜR SPIRITUSBELEUCHTUNG, Berlin, Germany.
Filed May 15, 1907. Serial No. 27,383. PUBLISHED JANUARY 7, 1908.

68,180. CLOCKS. THE ASHCROFT MANUFACTURING COMPANY, Brigdeport, Conn.
Filed October 26, 1907. Serial No. 30,795. PUBLISHED JANUARY 7, 1908.

68,181. LEATHER BOOTS AND SHOES. BEASLEY HARWOOD SHOE CO. INC., Lynchburg, Va.
Filed November 25, 1907. Serial No. 31,340. PUBLISHED JANUARY 7, 1908.

68,182. LEATHER BOOTS AND SHOES. BEASLEY HARWOOD SHOE CO. INC., Lynchburg, Va.
Filed November 25, 1907. Serial No. 31,241. PUBLISHED JANUARY 7, 1908.

68,183. STOVES AND RANGES. BRIDGE & BEACH MANUFACTURING COMPANY, St. Louis, Mo.
Filed November 11, 1907. Serial No. 31,128. PUBLISHED JANUARY 7, 1908.

68,184. JEWELRY AND CERTAIN PRECIOUS-METAL WARE. CLARENCE LINZ COMPANY, Dallas, Tex.
Filed October 10, 1907. Serial No. 30,539. PUBLISHED JANUARY 7, 1908.

68,185. CERTAIN PAINTERS' MATERIALS. THE CLEVELAND VARNISH COMPANY, Cleveland, Ohio.
Filed October 14, 1907. Serial No. 30,588. PUBLISHED JANUARY 7, 1908.

68,186. NECKTIES. H. C. COHN & Co., Rochester, N. Y.
Filed October 26, 1907. Serial No. 30,806. PUBLISHED JANUARY 7, 1908.

68,187. DENTAL RUBBER. MARY J. DOHERTY, New York, N. Y., executrix of Eugene Doherty, deceased.
Filed October 25, 1907. Serial No. 30,783. PUBLISHED JANUARY 7, 1908.

68,188. CERTAIN CHEMICALS. FARBENFABRIKEN OF ELBERFELD CO., New York, N. Y.
Filed August 30, 1907. Serial No. 29,678. PUBLISHED OCTOBER 29, 1907.

68,189. SOAPS. MAX FEIGL, Prague, Austria-Hungary.
Filed November 25, 1907. Serial No. 31,348. PUBLISHED JANUARY 7, 1908.

68,190. CERTAIN PAPER-MAKERS' SUPPLIES. M. GOTTESMAN & SON, New York, N. Y.
Filed August 8, 1907. Serial No. 29,309. PUBLISHED JANUARY 7, 1908.

68,191. STRAW FIBER OR CELLULOSE EXTRACTED FROM STRAW. THE NATIONAL STRAW PULP CO., New York, N. Y.
Filed September 22, 1906. Serial No. 22,251. PUBLISHED JANUARY 7, 1908.

68,192. CERTAIN ELECTRICAL SUPPLIES. THE OHIO BRASS COMPANY, Mansfield, Ohio.
Filed April 12, 1907. Serial No. 26,672. PUBLISHED JULY 23, 1907.

68,193. CORSETS. R & G CORSET COMPANY, New York, N. Y.
Filed November 6, 1907. Serial No. 31,030. PUBLISHED JANUARY 7, 1908.

68,194. MEDICINAL AND TOILET SOAP. ROBINSON BROS. & COMPANY INCORPORATED, Malden, Mass.
Filed December 5, 1907. Serial No. 31,591. PUBLISHED JANUARY 7, 1908.

68,195. MEN'S KNITTED UNDERWEAR. ROXFORD KNITTING COMPANY, Philadelphia, Pa.
Filed November 9, 1907. Serial No. 31,104. PUBLISHED JANUARY 7, 1908.

68,196. CIGARS. MATHEW STANICEK, Chicago, Ill.
Filed December 4, 1907. Serial No. 31,568. PUBLISHED JANUARY 7, 1908.

68,197. GARMENT-SUPPORTERS. VENUS MANUFACTURING CO., New York, N. Y.
Filed August 1, 1907. Serial No. 29,155. PUBLISHED JANUARY 7, 1908.

68,198. WHIP STOCKS OR MATERIALS, WHIPS, AND WHIP-LASHES. THE WARREN FEATHERBONE CO., Three Oaks, Mich.
Filed April 20, 1906. Serial No. 18,938. PUBLISHED JANUARY 7, 1908.

68,199. VELVETEENS. MECHANISCHE WEBEREI ZU LINDEN, Hanover-Linden, Germany.
Filed July 6, 1905. Serial No. 9,811. PUBLISHED JANUARY 7, 1908.

68,200. TELEPHONIC APPLIANCES, APPARATUS, AND PARTS THEREOF. THE NATIONAL ENGINEERING CORPORATION, Washington, D. C., Baltimore, Md., and Cleveland, Ohio.
Filed December 14, 1906. Serial No. 24,025. PUBLISHED FEBRUARY 19, 1907.

LABELS

REGISTERED MARCH 10, 1908.

14,075.—*Title:* "C. GRANDE'S LA PRIMA VERA." (For Cigars.) CARLOS GRANDE, Sacramento, Cal. Filed January 25, 1908.

14,076.—*Title:* "STAG BOTTLED BEER." (For Beer.) WESTERN BREWERY COMPANY, Belleville, Ill. Filed February 10, 1908.

14,077.—*Title:* "SCHOONER BREW." (For a Non-Alcoholic Beverage.) ALBERT DAVID LEWIS, Atlanta, Ga. Filed February 7, 1908.

14,078.—*Title:* "LEWIS' TEA." (For Tea.) GEORGE LEWIS & Co. INCORPORATED, Chicago, Ill. Filed February 8, 1908.

14,079.—*Title:* "TOWLE'S CIRCUS BRAND." (For Syrup.) THE TOWLE MAPLE SYRUP COMPANY, St. Paul, Minn. Filed January 27, 1908.

14,080.—*Title:* "TULIP EVAPORATED MILK." (For Milk Which Has Been Condensed by Evaporation.) ELGIN MILK & CREAM COMPANY, Elgin, Ill. Filed February 8, 1908.

14,081.—*Title:* "SUNFLOWER." (For Creamery-Butter.) A. S. KININMONTH & Co., Winfield, Kans. Filed January 30, 1908.

14,082.—*Title:* "ARAGUM PASTE." (For a Paste for Confectioners and Bakers.) A. S. BURGESS, New York, N. Y. Filed February 10, 1908.

14,083.—*Title:* "COLGATE'S DENTAL CREAM." (For Dental Cream.) COLGATE & Co., New York, N. Y. Filed February 6, 1908.

14,084.—*Title:* "COLGATE & CO'S ANTISEPTIC DENTAL CREAM." (For Antiseptic Dental Cream.) COLGATE & Co., New York, N. Y. Filed February 6, 1908.

14,085.—*Title:* "LÉHEALOL SOAP." (For Soap.) THE LÉHEALOL COMPANY, Melrose, Mass. Filed February 1, 1908.

14,086.—*Title:* "MURRAY'S DIAMOND CLEANSER THE HOUSEKEEPER'S FRIEND." (For Cleansing Compounds.) MURRAY MNFG. Co., Detroit, Mich. Filed January 30, 1908.

14,087.—*Title:* "CABLE PIANO POLISH." (For Furniture-Polish.) DR. JOHN W. CHILES & Co., Chicago, Ill. Filed October 31, 1907.

14,088.—*Title:* "AFFINITY PUZZLE." (For Puzzles.) THE HULSIZER COMPANY, Des Moines, Iowa. Filed February 6, 1908.

PRINTS

REGISTERED MARCH 10, 1908.

2,235.—*Title:* "COX'S GELATINE." (For Gelatin.) WARD & Gow, New York, N. Y. Filed August 24, 1905.

2,236.—*Title:* "FASHION SHEET FOR 1908." (For Wash Fabrics.) AMERICAN PRINTING COMPANY, Fall River, Mass. Filed Janary 13, 1908.

2,237.—*Title:* "MEN'S AND BOYS' APPAREL." (For Men's and Boys' Apparel.) H. C. LYTTON, Chicago, Ill. Filed February 7, 1908.

2,238.—*Title:* "THE ATCHISON AU TRA KAR." (For a Self-Propelling Car Adapted for Use in Working Upon Tracks of Railroads.) HENRY W. JACOBS, Topeka, Kans. Filed February 8, 1908.

DECISIONS

OF THE

COMMISSIONER OF PATENTS

AND OF

UNITED STATES COURTS IN PATENT CASES.

COMMISSIONER'S DECISIONS.

THE ANDREW JERGENS CO. *v.* WOODBURY.

OPPOSITION.

Decided January 29, 1906.

TRADE-MARKS—OPPOSITION—NAME OF APPLICANT.

The applicant, Woodbury, having given opposer the exclusive right to use certain trade-names and a trade-mark which had been associated for many years with applicant's name, *Held* that he is not entitled to register a mark of which the name "Woodbury" constitutes a prominent feature for goods of the same descriptive properties.

APPEAL from the Examiner of Interferences.

TRADE-MARKS FOR DETERGENTS, (TOILET SOAP.)

Mr. Roswell S. Nichols and *Messrs. Knight Bros.* for The Andrew Jergens Co.

Mr. C. T. Bell for Woodbury.

MOORE, *Commissioner:*

This is an appeal by John H. Woodbury from a decision of the Examiner of Interferences sustaining the opposition and adjudging that John H. Woodbury is not entitled to register the mark for which he has made application.

It appears that Woodbury made application for the registration of a trade-mark for toilet soap, which consists of the name "Woodbury" arranged in a circular shape between two concentric circles, which inclose the representation of a serpent and arrows.

The opposition is based on the ground that by virtue of certain contracts between the parties to these proceedings John H. Woodbury had given to the opposer the right to use the name "Woodbury" on certain toilet soap; that therefore John H. Woodbury had no right to use this name in connection with toilet soap, and that the opposer would be injured by the registration by Woodbury of a mark for toilet soap of which the name constituted a part.

The record shows that on June 7, 1897, Andrew Jergens & Co., the predecessors in business of the opposer, entered into a contract with the applicant, who had for many years been engaged in selling a toilet soap known as "Woodbury's Facial Soap," whereby Andrew Jergens & Co. was to manufacture this soap for the applicant. On June 29, 1900, another contract was entered into between the same parties with reference to this soap, and on June 13, 1901, Andrew Jergens & Co. purchased from the applicant and those associated in business with him the business of manufacturing certain named commodities, of which "Facial Soap" was one.

The contract of June 29, 1900, contains the following statement:

Whereas John H. Woodbury is the owner of the proprietary toilet articles known as Woodbury's Facial Soap, Woodbury's Facial Cream, Woodbury's Dental Cream, Woodbury's Tooth Powder and Woodbury's Odorine Powder, and as sole and exclusive owner of the aforesaid articles having made them valuable by long advertising thereby acquiring a considerable patronage and demand for the same and an identification of the same in the minds and eyes of the public.

When the contract of June 13, 1901, was entered into, the applicant sold to Andrew Jergens & Co. and its assigns—

all right, title and interest in and to the commodities known as Facial Soap, Facial Cream, Dental Cream, Tooth Powder, Shaving Sticks and Shaving Soap and all trade-marks, copyrights and privileges of every name and nature whatsoever appurtenant to the ownership thereof.

The statment quoted above from the former contract shows that the applicant considered that these goods were known as "Woodbury's goods," and the testimony shows that they are so considered by the public and that the "Facial Soap" was often ordered from the opposer and its predecessor as "Woodbury's Soap." Furthermore, it is clearly shown by the testimony that in advertising this soap the name "Woodbury" was made a prominent feature of the advertising, and that this was done with John H. Woodbury's knowledge and consent.

In view of these facts it must be held that when Andrew Jergens & Co. acquired from John H. Woodbury all right, title, and interest in the commodity known as "Facial Soap" and all privileges of any name and nature whatsoever appurtenant thereto it acquired the right to use the name "Woodbury" therewith. The contract of June 13, 1901, also gave Andrew Jergens & Co. the right to use the "neckless-head" trade-mark on "Facial Soap." This trade-mark was the head of John H. Woodbury and was so known and recognized.

The mark which applicant seeks to register includes as a prominent feature thereof the word "Woodbury," and the merchandise in connection with which the mark is used—viz., toilet soap—is merchandise of the same descriptive properties as the "Facial Soap" of the opposer.

The mark which applicant seeks to register, therefore, so nearly resembles a "known trade-mark owned and in use by another and appropriated to merchandise of the same descriptive properties" that its registration is prohibited by section 5 of the act of February 20, 1905.

The name "Woodbury" is the name of the applicant,

and, generally speaking, a man has the right to use his own name in all legitimate ways; but, as pointed out by Mr. Chief Justice Fuller in *Howe Scales Co.* v. *Wyckoff, Seamans & Benedict*. (198 U. S., 118,) he has this right only "in the absence of contract, fraud, or estoppel." The facts above stated bring this case clearly within that limitation.

The decision of the Examiner of Interferences is affirmed.

PRICE v. BLACKMORE.

PATENT INTERFERENCE.

Decided March 4, 1908.

INTERFERENCE—MOTION TO DISSOLVE—DELAY IN BRINGING.

The pendency of a motion to shift the burden of proof is no excuse for the delay in bringing a motion to dissolve.

APPEAL on motion.

ELECTRODE.

Messrs. Byrnes & Townsend for Price.

Mr. J. R. Nottingham for Blackmore.

MOORE, *Commissioner:*

This is an appeal by Blackmore from the decision of the Examiner of Interferences refusing to transmit to the Primary Examiner a motion to dissolve the above-entitled interference.

The reason for the appeal is stated to be—

that the Examiner of Interferences erred in holding that the showing made for the delay in bringing a motion within the time prescribed by the rule was not satisfactory.

The record shows that the time for filing a preliminary statement expired on November 4, 1907. On October 24, 1907, Blackmore filed a motion to shift the burden of proof, which motion was granted by the Examiner of Interferences on November 27, 1907. On December 26, 1907, Blackmore filed a motion to dissolve, which was denied transmission on the ground that it was brought late and that no showing in excuse for the delay accompanied the motion. On January 17, 1908, Blackmore filed a second motion to dissolve, accompanied by the affidavits of himself and his attorney, setting forth certain reasons in excuse for the delay.

The reasons stated briefly, are that the attorney for certain reasons thought it proper that the motion to shift the burden of proof should be decided before the motion to dissolve was brought, that he thought he had thirty days from the date of the decision on the motion to shift the burden of proof within which to bring the motion to dissolve, and that owing to the fact that the applicant was away from his place of business the attorney was unable to communicate with him until within a few days of the bringing of the motion.

These reasons are clearly insufficient to excuse the delay. In the first place, the pendency of one motion is no excuse for the delay in bringing another, as was stated in *McArthur* v. *Gilbert*, (111 O. G., 1624,) where the motions were the same as in the present case—namely, a motion to shift the burden of proof and a motion to dissolve. Furthermore, it does not appear why it was necessary to have a conference between the applicant and the attorney prior to filing the motion. In both the affidavits it is stated that as soon as access to Price's file was had the attorney was instructed to bring both motions, but that he postponed bringing the motion to dissolve for the reason above stated.

The decision of the Examiner of Interferences is affirmed.

DEGEN v. PFADT.

PATENT INTERFERENCE.

Decided February 11, 1908.

INTERFERENCE—MOTION TO DISSOLVE—RES ADJUDICATA.

A decision refusing to dissolve an interference on the ground of *res adjudicata* is a favorable decision on the merits and will not be reviewed on appeal. (Rule 124.)

APPEAL on motion.

CENTRIFUGAL PUMP.

Messrs. Prindle & Williamson for Degen.

Messrs. J. C. & H. M. Sturgeon for Pfadt.

BILLINGS, *Assistant Commissioner:*

This is an appeal by Pfadt from a decision of the Primary Examiner denying his motion to dissolve the above-entitled interference.

The ground of the motion is that the question of priority is *res adjudicata*.

The motion relates to Degen's right to make the claims constituting the issue. If the motion were sustained upon that ground, it would be necessary to reject Degen's claims, and therefore it is clear that the ground involves the merits. The Examiner's decision being in favor of Degen's right to make the claims, there is no appeal permitted by the rule. (Rule 124.) A limit of appeal should not have been set from the Examiner's decision.

In the case of *Blackford* v. *Wilder* a similar motion was made, and an appeal from the decision of the Examiner denying the motion was dismissed. (See *Blackford* v. *Wilder*, 124 O. G., 889.)

The question can, however, be raised under the provisions of Rule 130 at final hearing before the Examiner of Interferences and on appeals from his decision.

The appeal is dismissed.

O'BRIEN v. GALE v. ZIMMER v. CALDERWOOD.

PATENT INTERFERENCE.

Decided February 11, 1908.

1. INTERFERENCE—SETTING ASIDE RECORD JUDGMENT—APPEAL.

No appeal will be entertained from a decision of the Examiner of Interferences setting aside a record judgment and fixing a time for final hearing.

2. SAME—RULE 130.

The fact that on appeal from a decision on a motion to dissolve the Examiners-in-Chief have held that a party has a right to make the claims does not prevent the question being raised before the Examiner of Interferences at final hearing under Rule 130.

APPEAL on motion.

CURRENT-CONTROLLING APPARATUS.

Mr. Robert Watson for O'Brien.

Messrs. Brown & Darby and *Mr. C. M. Nissen* for Gale.

Mr. Albert G. Davis for Zimmer. (*Mr. Frank J. Seabolt* of counsel.)

Mr. Charles E. Lord for Calderwood.

BILLINGS, *Assistant Commissioner:*

This is an appeal by Gale from the decision of the Examiner of Interferences rendered January 7, 1908,

setting aside a judgment rendered against O'Brien on the record on December 16, 1907, and setting the case down for final hearing upon the right of the parties senior to O'Brien to make the claims.

In the case of *Lemp* v. *Randall and Bates* v. *Thomson* (120 O. G., 905) it was held that no appeal would lie from a decision of the Examiner of Interferences denying a motion for judgment on the record, as such decision is not a final determination that judgment will not be rendered in favor of the moving party. For a similar reason it is thought that where the Examiner of Interferences sets aside a record judgment and fixes a time for final hearing no appeal should be allowed from such action.

No reason is seen why the action of the Examiner of Interferences should be reviewed in the exercise of the supervisory authority of the Commissioner, especially as Zimmer and Calderwood, the parties alleged by O'Brien not to be entitled to make the claims, make no objection thereto.

It may be stated here that the purpose of Rule 130 is to allow a party whose motion that his opponents have no right to make the claims has been denied to urge the question before the Examiner of Interferences and on appeals from his decision. This purpose would be defeated if it were held that because the Examiners-in-Chief had held on appeal from a decision of the Primary Examiner on a motion to dissolve that a party had a right to make the claims the question could not be raised before the Examiner of Interferences at final hearing.

The appeal is dismissed.

ROWE v. BRINKMANN.

PATENT INTERFERENCE.

Decided February 26, 1908.

1. INTERFERENCE—MOTION TO DISSOLVE—TRANSMISSION.

A motion to dissolve based on the defectiveness of the oath filed by the opposing party should not be transmitted, as it is well settled that the matter of a proper oath is an *ex parte* one and furnishes no ground for dissolution.

2. SAME—SAME—SAME.

A motion alleging that the opposing party has no right to make the claims on account of informality of his specification is too indefinite to be transmitted.

APPEAL on motion.

ELECTROMECHANICAL DEVICE.

Messrs. Raymond & Barnett for Rowe.

Mr. Claud N. Bennett and *Messrs. Wilkinson, Fisher & Witherspoon* for Brinkmann.

BILLINGS, *Assistant Commissioner:*

This is an appeal by Rowe from a decision of the Examiner of Interferences refusing to transmit a motion to dissolve.

The motion was based on two grounds—first, that there was such informality in declaring the interference as would preclude a proper determination of the question of priority of invention; second, that Brinkmann had no right to make the claim.

The reasons alleged in support of the first ground are that the oath filed by Brinkmann is defective and that his original specification is informal. The informality of the specification is also alleged in support of the second ground.

Transmission was denied on the ground that the matter of a proper oath to an application is an *ex parte* one, which cannot be considered on a motion to dissolve, and on the further ground that the alleged lack of right of Brinkmann to make the claim was not supported by the specific facts upon which the contention is based, and that the motion was therefore informal.

The Examiner of Interferences was clearly right in refusing to transmit the motion so far as it related to the oath. It is well settled that the matter of a proper oath is an *ex parte* one and offers no ground for dissolution, and this for the reason that should the interference be dissolved on such a ground the applicant could file a new oath and the interference would have to be redeclared.

As to Brinkmann's original specification, while the Examiner held that it was informal he made no objection that it was not a proper basis for the substitute specification which was filed later. If by alleging that Brinkmann had no right to make the claim on account of the informality of the original specification Rowe meant to allege that the substitute specification contained new matter and the claims could not be based on the original disclosure, he should have so framed his motion. In its present form the motion is too indefinite to be transmitted.

While, as pointed out above, the motion to dissolve cannot be transmitted, it is thought that as Brinkmann has filed no preliminary statement he should file a proper oath as a condition precedent to the continuation of the interference. The Examiner of Interferences will therefore suspend the interference for a period of thirty days, and if within that time Brinkmann does not file such an oath the interference will be dissolved.

The decision of the Examiner of Interferences is affirmed.

DECISIONS OF THE U. S. COURTS.

Supreme Court of the United States.

UNITED DICTIONARY COMPANY v. G. & C. MERRIAM COMPANY.

Decided February 3, 1908.

COPYRIGHT—PUBLICATION ABROAD WITHOUT NOTICE OF COPYRIGHT—EFFECT ON RIGHTS IN THIS COUNTRY.

The requirement of the act of June 18, 1874, chapter 301, section 1, 18 Stat., 78, (Rev. Stat., sec. 4962,) that "no person shall maintain an action for the infringement of his copyright" unless the required notice shall be inserted "in the several copies of every edition published" does not extend to publications abroad, and the owner of a work copyrighted in this country may restrain the publication thereof by another who has imported for purposes of reproduction copies published by such owner abroad without such notice.

Mr. James H. Peirce, Mr. Geo. P. Fisher, Jr., and *Mr. Wm. Henry Dennis* for the appellant.

Mr. Wm. B. Hale, Mr. Chas. N. Judson, and *Mr. Frank F. Reed* for the appellee.

Mr. Justice HOLMES delivered the opinion of the Court.

This is a suit brought by the appellee to restrain the infringement of copyright in a book entitled "*Webster's High School Dictionary.*" The appellee, a Massachusetts corporation, took out copyrights at the same time in England and here. It published and sold the book in this country with the statutory notice of copyright, and made a contract with English publishers, under which it furnished them with electrotype plates of the work, and they published it in England, omitting notice of the American copyright. The English work has a different title, "*Webster's Brief International Dictionary*," and has some other differences on the first three and last thirty-four pages, but otherwise is the same. The appellant, an Illinois corporation, sent for the English book with intent to reprint it, and was about to publish it when restrained. The English publishers agreed not to import any copies of their work into this country, and also to use all reasonable means to prevent an importation by others, so that the appellee cannot be said to have assented to the appellant's act. So far as appears, the only copies that have been brought over are the one above mentioned and another, purchased for use but not for sale, by the president and manager of the appellant. The question is whether the omission of notice of the American copyright from the English publication, with the assent of the appellee, destroyed its rights, or, in other words, whether the requirement of the act of June 18, 1874, chapter 301, section 1, 18 Stat., 78, (Rev. Stat., sec. 4962,) that notice shall be inserted "in the several copies of every edition published" extends to publications abroad. The circuit court sustained the defendant's contention and dismissed the bill. (140 Fed. Rep., 768.) The circuit court of appeals reversed this decision, (146 Fed. Rep., 354; 76 C. C. A., 470,) and the case is brought to this Court by appeal.

Notwithstanding the elaborateness of the arguments addressed to us and the difference of opinion in the courts below, there is not a great deal to be said, and the answer seems to us plain. Of course, Congress could attach what conditions it saw fit to its grant, but it is unlikely that it would make requirements of personal action beyond the sphere of its control. Especially is it unlikely that it would require a warning to the public against the infraction of a law beyond the jurisdiction where that law was in force. The reasons for doing so have not grown less, yet in the late statute giving copyright for foreign publications the notice is necessary only in "all copies of such books sold or distributed in the United States." (Act of March 3, 1905, c. 1432, 33 Stat., 1000, amending Rev. Stat., sec. 4952.) So it is decided that the section punishing a false notice, which naturally would be coextensive with the requirement of notice, did not extend to false statements affixed abroad. (*McLoughlin* v. *Raphael Tuck Co.*, 191 U. S., 267.) The same conclusion would follow from the form prescribed for the notice, which would be inapt in foreign lands.

It is said that the act of 1905 cannot affect the construction of the law under which the parties' rights were fixed, and it cannot, beyond illustrating a policy that has not changed. But the age of the condition affords another reason for confining it as the later condition is confined. When it first was attached, in 1802, there was little ground to anticipate the publication of American works abroad. As late as 1820 Sydney Smith, in the *Edinburgh Review*, made his famous exclamation, "In the four quarters of the globe, who reads an American book?" If, however, there was a publication abroad, importation without the consent of the owner was forbidden in general terms, a fact giving another reason for the narrower construction of section 4962. If that was the true construction once, it is the construction still. Again, when the present act was passed, there was no foreign copyright for an American author, and Congress knew and he knew, as he knows now, if he contents himself with home protection, that his work might be reprinted without notice of any sort. Such reprints rather inconsistently are called piracies in argument. But whatever the moral aspects may be, the piracy is a legal right, and as such its exercise must be contemplated by the author. It does not matter whether he does so with regret at the loss of money or with joy at the prospect of fame, and it is difficult to see any greater difference between giving consent to the foreign publication and intentionally creating the opportunity, the inducement and the right. But it hardly would be argued that because no copyright had been taken out in England and therefore the reprint there was lawful, an American copyright could be defeated by importing the English book and reprinting from that. (*Thompson* v. *Hubbard*, 131 U. S., 123, 150.) It would be even bolder to say that the American author stood worse if in the days before he could get a copyright in England he had made an arrangement with English publishers to secure some payment from them. Yet that is the logic of the appellant's case.

If a publication without notice of an American copyright did not affect the copyright before the days when it was possible to get an English copyright also, it is not to be supposed that Congress, by arranging with England for that possibility, gave a new meaning to the old section 4962, increasing the burden of American authors, and attempted to intrude its requirements into any notice that might be provided by the English law. The words of the section remained unchanged, notwithstanding the grant of a limited liberty of importation, while other sections were amended where there was reason for a change.

It may be that in most cases the importation of a pirated English copy of an American book would be unlawful, whereas it is argued that the importation was lawful in the case at bar. The appellee makes a strong argument that the appellant's importation was wrong. But it is hard to see how the right to copy a book, whether lawfully or unlawfully imported, can be affected by the mode in which it got here. The analogies of the law are the other way. A person is subject to the jurisdiction, even if he was brought there by wrong. (*Pettibone* v. *Nichols*, 203 U. S., 192.) A document is admissible in evidence, although it was improperly obtained. (*Commonwealth* v. *Tucker*, 189 Mass., 457, 470; 3 Wigmore, Evidence, sec. 2183.) The argument for the appellant dwells somewhat fancifully on the possibilities of innocence being led astray. All those possibilities might exist if a pirated volume should be smuggled into the United States. Moreover the appellant argues, with the support of the opinion of an Attorney General and a Solicitor General, that under section 4956 and its amendments two copies of an unauthorized edition lawfully might be imported for use. (21 Op. Att. Gen., 159, 162.) The statutes cannot be expected to do more than to secure the author and the public so far as is reasonably practicable. The obvious plan is not to be distorted by the chance that ingenuity may find some way to slip through the law uncaught.

As we are satisfied that the statute does not require notice of the American copyright on books published abroad and sold only for use there, we agree with the parties that it is unnecessary to discuss nice questions as to when a foreign reprint may or may not be imported into the United States under the present provisions of our law. Decree affirmed.

Court of Appeals of the District of Columbia.

IN RE DROOP.

Decided February 4, 1908.

PATENTABILITY—NOVELTY—ANTICIPATION.

Held that a method of covering playing-balls consisting of knitting separately a wrapper leaving a slit therein, inserting a deflated rubber ball through said slit, closing the slit by meshes of the same material as that forming the cover, and finally inflating the ball is anticipated by certain patents showing the idea of covering inflated rubber balls with a crocheted or knitted cover and another patent which contains the idea of inserting a deflated ball in a cover, inflating the ball, and then closing the aperture.

Mr. J. L. Norris for the appellant.

Mr. Frederick A. Tennant for the Commissioner of Patents.

ROBB, *J.:*

This is an appeal from the refusal of the Commissioner of Patents to issue Letters Patent to Paul Emil Droop upon a method of covering and inflating playing-balls for tennis and other games, as described in the following counts:

1. The herein-described method of covering playing-balls for tennis and other games, consisting in knitting separately a spherical wrapper and leaving a slit therein, inserting the elastic shell of the ball through said slit and then uniting the edges of the slit.

2. The herein-described method of covering playing-balls for tennis and other games, consisting in knitting separately a spherical wrapper having juxtapposed edges, placing the elastic ball within the wrapper, and then drawing together the edges of the wrapper by making new meshes of the same material as the wrapper and so inclosing the elastic ball.

3. The herein-described method of covering and inflating playing-balls for tennis and other games, consisting in knitting separately a spherical wrapper and leaving a slit therein, inserting the elastic shell of the ball through said slit and then closing the said slit by making new meshes between the edges thereof, and thereafter inflating the inner elastic ball.

These claims were severally rejected because of the following references: Ailerton, July 14, 1868, No. 79,933; Esty, July 22, 1884, No. 302,388; Waddington, Feb. 26, 1889, No. 398,558; Bissell, Oct. 30, 1900, No. 660,787; British patent to Lord, May 11, 1898, No. 10,796.

In the British patent to Lord is found the idea of covering an inflated rubber ball with crocheted or knitted material, and thereby dispensing with the necessity of using cement or other adhesive. The Lord application contains the following:

I am aware that india-rubber balls have previously been covered with a case of material, the latter being usually attached to the ball by means of a cement or other adhesive. My invention, however, differs essentially from this, in that I use no adhesive, and also in the fact that I do not use a material, but crochet or otherwise knit a strip of tape or other like substance on to the ball.

The American patent to Bissell discloses:

a tether-ball comprising a resilient ball, a cover of fibrous material inclosing the same, and a ring or loop attached to said cover and having a surface composed of a continuation of the threads of the cover.

There is nothing new, therefore, in the idea of a knitted cover, nor is there anything new in the idea of inserting a deflated ball in the cover and then fully inflating it, as that idea is disclosed in the Allerton patent. Allerton in his application says:

The nature of my said invention consists in an india-rubber bag, or other article to be inflated or distended, in combination with a separate covering of cloth, felt, or similar material, that supports the rubber fabric, and prevents injury to the same by the pressure or by wear, and such covering, not having been exposed to heat, retains its original strength and color, and the rubber being separate, can be cured by heat in the most perfect manner.

The tribunals of the Patent Office found nothing new in the idea of closing the slit in the cover, through which the deflated ball has been passed, "by making new meshes between the edges thereof." The Commissioner said:

It is wall known that fabrics may be knitted to any desired form and their free edges secured together by knitted stitches.

We concur in this view.

No claim is made that it was necessary to design new machinery to complete the cover after the inflation of the ball. The prior art suggested the idea of knitting together the edges of the slit, and that idea was adopted.

Any one skilled in the art, and who desired to produce a cloth or knitted cover for tennis-balls, would have had no difficulty in producing the result found in the rejected claims, had he consulted the references. Two of these references contain the idea of covering inflated rubber balls with a crocheted or knitted cover. Another contains the idea of inserting a deflated rubber ball in a cover, inflating the ball, and then closing the aperture.

The decision of the Commissioner was right, and is, therefore, affirmed. The clerk of the court will certify this opinion and the proceedings in this court to the Commissioner of Patents according to law. Affirmed.

Interference Notices.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., March 5, 1908.

William E. Woodyear, his assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of The Northwestern Elevator & Mill Company, of Mount Vernon, Ohio, for registration of a trade-mark and a trade-mark registered to William E. Woodyear, of 304 Spears Wharf, Baltimore, Md., and the notice of said declaration sent by the Patent Office by registered mail to the said William E. Woodyear and also the notice sent to his attorney of record in the usual manner having been returned undelivered, notice is hereby given to the said William E. Woodyear, his assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents in order that the notices of declaration heretofore sent by and returned to the Office may be forwarded to them.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will be proceeded with as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., March 4, 1908.

Frank Mellersh, his assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of William O. Frailey, of East King and Shippen

streets, Lancaster, Pa., for registration of a trade-mark and a trade-mark registered to Frank Mallerah, of 130 West Thirty-fourth street, New York, N. Y., and the notice of said declaration sent by the Patent Office by registered mail to the said Frank Mallerah, as well as the copy mailed in the usual way to his attorney of record, having been returned undelivered, notice is hereby given to the said Frank Mallerah, his assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents in order that the notices of declaration heretofore sent by and returned to the Office may be forwarded to them.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will be proceeded with as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., February 24, 1908.

A. E. Jeaneret, his assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of The Matchless Metal Polish Company, of 65-69 Frankfort street, New York, N. Y., and 26 South Market street, Chicago, Ill., for registration of a trade-mark, a trade-mark registered to this company, and a trade-mark registered to A. E. Jeaneret, of Boston, Mass., and the notice of said declaration sent by the Patent Office by registered mail to the said A. E. Jeaneret having been returned undelivered, notice is hereby given to the said A. E. Jeaneret, his assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents in order that the notice of declaration heretofore sent by and returned to the Office may be forwarded to them.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will be proceeded with as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., February 19, 1908.

Thomas W. Farnsworth, his assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of the Kahn Mfg. Company, of No. 416 Dauphin street, Mobile, Ala., for registration of a trade-mark and a trade-mark registered to Thomas W. Farnsworth, of 31 Summer street, Boston, Mass., and the notice of said declaration sent by registered mail to the said Thomas W. Farnsworth having been returned undelivered, notice is hereby given to the said Thomas W. Farnsworth, his assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents in order that the notices of declaration heretofore sent by and returned to the Office may be forwarded to them.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will be proceeded with as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., February 8, 1908.

Robert G. McCorkle & Company, their assigns or legal representatives, take notice.

An interference has been declared by this Office between an application of Charles Shaffner & Company, of Chicago, Ill., for registration of a trade-mark and a trade-mark registered to Robert G. McCorkle & Company, of Louisville Ky., and it appears from the record of the case that the registrant, Robert G. McCorkle & Company, cannot be located.

Notice is therefore hereby given to said Robert G. McCorkle & Company, their assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., February 8, 1908.

Mariano Sanz, his assigns or legal representatives, take notice:

An interference having been declared by this Office between the applications of Bennett, Sloan & Company, National Grocer Company, and Mariano Sanz for registration of a trade-mark, a letter having been received from the attorney of record for said Mariano Sanz stating that he is informed and believes that Sanz is dead and that he cannot say whether or not there is a successor to the business, and the Office having been unable to obtain any communication from said Mariano Sanz, notice is hereby given to the said Mariano Sanz, his assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication the interference will be proceeded with as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., February 8, 1908.

Thomas N. Dwyer, his assigns or legal representatives, take notice:

An interference has been declared by this Office between an application of James R. Moroney, of Philadelphia, Pa., for registration of a trade-mark and a trade-mark registered to Thomas N. Dwyer, whose known address is 26 South William street, New York, N. Y., and it appears from the record of the case that the registrant, Thomas N. Dwyer, cannot be located.

Notice is therefore hereby given to said Thomas N. Dwyer, his assigns or legal representatives, that if they or any of them desire to contest said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., January 29, 1908.

Weber & Schillinger, their assigns or legal representatives, take notice:

An interference has been declared by this Office between an application of The George Wiedemann Brewing Company, of Newport, Ky., for registration of a trade-mark and a trade-mark registered to Weber & Schillinger, of Louisville, Ky., and it appears from the record of the case that the registrant, Weber & Schillinger, cannot be located.

Notice is therefore hereby given to said Weber & Schillinger, their assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., Jan. 29, 1908.

Helen Ryan & Company, their assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of The A. Spiegel Company, of Milwaukee, Wis., for registration of a trade-mark and a trade-mark registered to Helen Ryan & Company, of 12 South Elliott place, borough of Brooklyn, New York, N. Y., and the notice of said declaration mailed by the Patent Office in the usual manner to the said Helen Ryan & Company having been returned undelivered, notice is hereby given to the said Helen Ryan & Company, their assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents in order that the notices of declaration heretofore sent by and returned to the Office may be forwarded to them.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will be proceeded with as in case of default.

EDWARD B. MOORE, *Commissioner.*

THE
OFFICIAL GAZETTE
OF THE
United States Patent Office.

[BY AUTHORITY OF CONGRESS.]

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Labels	11	No. 14,089 to No. 14,099, inclusive.
Prints	7	No. 2,239 to No. 2,245, inclusive.
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Total	786	

TO CITIZENS OF THE UNITED STATES.

States.	Patents and Designs.	Trade-Marks, Labels, and Prints.	States.	Patents and Designs.	Trade-Marks, Labels, and Prints.
Alabama	....	1	New Hampshire	2	....
Alaska, District of	....	....	New Jersey	25	5
Arizona Territory	....	....	New Mexico Ter't'y	1	....
Arkansas	....	....	New York	104	21
California	3	4	North Carolina	5	....
Colorado	8	1	North Dakota	....	....
Connecticut	22	2	Ohio	41	13
Delaware	1	....	Oklahoma	7	....
District of Columbia	5	1	Oregon	7	....
Florida	4	....	Panama	....	....
Georgia	6	2	Pennsylvania	61	6
Hawaii Territory	....	....	Philippine Islands	....	....
Idaho	2	....	Rhode Island	1	....
Illinois	61	14	South Carolina	2	....
Indiana	16	....	South Dakota	5	....
Iowa	16	2	Tennessee	4	1
Kansas	9	....	Texas	12	....
Kentucky	8	....	Utah	2	....
Louisiana	4	1	Vermont	3	....
Maine	7	1	Virginia	6	1
Maryland	4	2	Washington	4	1
Massachusetts	37	6	West Virginia	5	1
Michigan	21	2	Wisconsin	13	1
Minnesota	16	4	Wyoming	1	....
Mississippi	3	....	U. S. Army	....	....
Missouri	19	4	U. S. Navy	....	....
Montana	1	....	Total to citizens of the United States	612	98
Nebraska	8	1			
Nevada	....	....			

TO CITIZENS OF FOREIGN COUNTRIES.

Countries.	Patents and Designs.	Trade-Marks and Prints.	Countries.	Patents and Designs.	Trade-Marks and Prints.
Argentina	....	....	Natal	....	....
Austria-Hungary	4	....	Netherlands	....	1
Belgium	....	....	Newfoundland	....	....
Brazil	....	....	New South Wales	1	....
Bermuda	1	....	New Zealand	1	....
Canada	9	....	Norway	....	....
Cape Colony	1	....	Persia	....	....
Chile	....	....	Queensland	....	....
China	....	....	Roumania	....	....
Costa Rica	....	....	Russia	1	....
Cuba	....	....	Scotland	2	....
Denmark	1	....	South Australia	....	....
Ecuador	....	....	Spain	....	....
England	9	1	Sweden	2	....
France	6	1	Switzerland	1	....
Germany	21	....	Transvaal, South Africa	1	....
Haiti	....	....	Victoria	4	....
Ireland	....	....	Western Australia	1	....
Italy	2	....	Total to citizens of foreign countries	71	3
Japan	....	....			
Java	....	....			
Mexico	3	....			

Change in Price of Copies of Patents—Amendment to Rule 203.

(ORDER No. 1,756.)

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., March 13, 1908.

Acting with the approval of the Secretary of the Interior, Rule 203 of the Rules of Practice of this Office is amended by canceling lines 3 and 4 of page 60, (edition of Rules of Practice dated July 17, 1907,) relating to class and subclass orders for copies of patents. The price of uncertified copies of specifications and drawings of patents, if in print, will be five cents each on and after April 1, 1908.

EDWARD B. MOORE,
Commissioner.

Attorneys.

This Office has been advised by the Secretary of the Interior of the disbarment of the following attorneys from practice before the Department or any Bureau thereof: George Burks, Danville and Harrodsburg, Ky., February 25, 1908; J. Frank Trimble, Sayre, Okla., February 29, 1908; John Q. A. Kimmel, Murphysboro, Ill., March 10, 1908.

W. F. WOOLARD,
Chief Clerk.

Notice.

The OFFICIAL GAZETTE of the United States Patent Office is now being mailed by the Superintendent of Documents from the Government Printing Office, the place of its production. All communications respecting the GAZETTE and all subscriptions should be addressed to the Superintendent of Documents.

EDWARD B. MOORE,
Commissioner.

APPLICATIONS UNDER EXAMINATION.

Condition at Close of Business March 10, 1908.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action. Amended	New.	No. of applications awaiting action.
244	XXXV. Buckles, Buttons, and Clasps; Card, Picture, and Sign Exhibiting; Garment-Supporters; Signals; Toilet.	Feb. 24	Dec. 17	670
303	XVII. Clutches; Linotyping; Matrix-Making; Nut and Bolt Locks; Printing.	Feb. 13	Feb. 11	186
179	XX. Artificial Limbs; Builders' Hardware; Dentistry; Locks and Latches; Safes; Undertaking.	Feb. 12	Jan. 23	224
147	XXIX. Coopering; Fire-Escapes; Ladders; Roofs; Wheelwright-Machines; Wooden Buildings; Wood-Sawing; Wood-Turning; Woodworking; Woodworking-Tools.	Feb. 10	Nov. 18	382
312	VII. Games and Toys; Mechanical Motors; Optics; Paper Manufactures; Velocipedes.	Feb. 9	Jan. 3	292
167	V. Bookbinding; Harvesters; Jewelry; Music.	Feb. 8	Jan. 13	315
172	XXXI. Alcohol; Ammonia, Water, and Wood Distillation; Charcoal and Coke; Gas, Heating and Illuminating; Hides, Skins, and Leather; Liquid Coating Compositions; Mineral Oils; Oils, Fats, and Glue; Water Purification.	Feb. 7	Dec. 28	251
304	XXXIV. Railways; Railway-Brakes; Railway Rolling-Stock.	Feb. 6	Dec. 30	375
378	XXXVIII. Artesian and Oil Wells; Bottles and Jars; Care of Live Stock; Educational Appliances; Fishing and Trapping; Stationery; Stone-Working.	Feb. 5	Feb. 7	297
144	XXIV. Apparel; Apparel Apparatus; Sewing-Machines; Surgery.	Feb. 3	Jan. 30	209
284	XXXVI. Curtains, Shades, and Screens; Drafting; Driers; Engraving; Measuring Instruments; Wind-Wheels.	Feb. 3	Jan. 23	518
313	I. Fences; Harrows and Diggers; Plows; Seeders and Planters; Trees, Plants, and Flowers.	Feb. 3	Jan. 6	297
135	VIII. Beds; Chairs; Furniture; Kitchen and Table Articles; Store Furniture.	Feb. 1	Dec. 9	379
232	IV. Bridges; Conveyers; Cranes and Derricks; Excavating; Hoisting; Hydraulic Engineering; Iron Structures; Loading and Unloading; Towers.	Jan. 27	Jan. 31	319
164	XXXIII. Cutlery; Domestic Cooking Vessels; Electric Signaling; Electricity, Medical and Surgical; Fireproof Buildings; Masonry; Tents, Canopies, Umbrellas, and Canes.	Jan. 27	Jan. 22	287
154	XI. Boot and Shoe Making; Boots, Shoes, and Leggings; Button, Eyelet, and Rivet Setting; Harness; Leather Manufactures; Nailing and Stapling; Whips and Whip Apparatus.	Jan. 27	Jan. 4	340
308	XV. Bread, Pastry, and Confection Making; Coating; Fuel; Glass; Hydraulic Lime and Cement; Laminated Sheets and Fabrics; Paper-Making; Paving; Photography; Plastic Block and Earthenware Apparatus; Plastic Compositions; Plastics.	Jan. 25	Jan. 4	647
318	VI. Bleaching and Dyeing; Chemicals; Explosives; Fertilisers; Medicines; Preserving: Sugar and Salt.	Jan. 24	Jan. 15	253
327	XVIII. Injectors and Ejectors; Steam and Vacuum Pumps; Steam-Boilers; Steam-Engines; Steam-Engine Valves.	Jan. 23	Jan. 6	247
329	XII. Elevators; Journal-Boxes; Lubrication; Machine Elements; Pulleys and Shafting.	Jan. 22	Jan. 6	555
105	XXVI. Electric Heating and Rheostats; Electric Railways; Electricity, Generation; Motive Power.	Jan. 21	Oct. 13	331

Applications Under Examination—Continued.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action. Amended	New.	No. of applications awaiting action.
247	XXII. Air-Guns, Catapults, and Targets; Ammunition and Explosive Devices; Boats and Buoys; Firearms; Marine Propulsion; Ordnance; Railway-Rails and Joints; Railway-Ties and Fasteners; Ships.	Jan. 20	Nov. 27	582
278	XXXII. Carbonating Beverages; Dispensing Beverages; Dispensing-Cans; Metallic Shipping and Storing Vessels; Packaging Liquids; Refrigeration.	Jan. 17	Nov. 11	491
332	X. Carriages and Wagons	Jan. 13	Dec. 6	491
375	XXVII. Brushing and Scrubbing; Grinding and Polishing; Laundry; Washing Apparatus.	Jan. 11	Jan. 3	426
379	XXIII. Acoustics; Coin-Handling; Horology; Recorders; Registers; Time-Controlling Mechanism.	Jan. 10	Nov. 16	254
142	IX. Air and Gas Pumps; Fire-Extinguishers; Hydraulic Motors; Pumps; Sewerage.	Jan. 9	Jan. 22	214
238	XIX. Furnaces; Heating and Cooking Stoves, Liquid and Gaseous Fuel; Stoves and Furnaces.	Jan. 9	Nov. 16	515
152	XXX. Fluid-Pressure Regulators; Lamps and Gas-Fittings; Liquid and Gaseous Fuel Burners; Type-Writing Machines.	Jan. 7	Jan. 2	307
280	XL. Baggage; Check-Controlled Apparatus; Cloth, Leather, and Rubber Receptacles; Deposit and Collection Receptacles; Fine Arts; Lighting-Fixtures; Package and Article Carriers; Paper Receptacles; Special Receptacles and Packages; Wooden Receptacles.	Jan. 7	Dec. 23	605
329	XIII. Arms, Projectiles, and Explosive Charges, Making; Metal-Working, etc.	Jan. 6	Dec. 16	594
307	XIV. Compound Tools; Cutting and Punching Sheets and Bars; Farriery; Metal-Bending; Metal-Ornamenting; Sheet-Metal Ware, Making; Tools; Wire-Working.	Jan. 2	Oct. 14	350
128	II. Bee Culture; Dairy; Label-Affixers; Paper Files and Binders; Pneumatics; Presses; Store-Service; Tobacco.	Dec. 26	Dec. 21	400
333	XXVIII. Internal-Combustion Engines; Miscellaneous Heating Plants.	Dec. 26	Dec. 19	512
315	XXV. Butchering; Mills; Threshing; Vegetable Cutters and Crushers.	Dec. 26	Dec. 17	444
112	XXI. Brakes and Gins; Carding; Cloth-Finishing; Cordage; Felt and Fur; Knitting and Netting; Silk; Spinning; Weaving.	Dec. 17	Oct. 22	554
107	XXXVII. Electric Lighting; Electricity, Conductors; Electricity, General Applications.	Dec. 9	Oct. 1	645
109	XVI. Telegraphy; Telephony	Nov. 22	Aug. 23	611
175	III. Annealing and Tempering; Coating with Metal; Electrochemistry; Metal-Founding; Metallurgy; Shaping Fluid Metal.	Nov. 19	Nov. 9	541
321	XXXIX. Baths and Closets; Water Distribution.	Nov. 14	Sept. 30	906
352	XLI. Railway Draft Appliances; Resilient Tires and Wheels.	Nov. 1	Sept. 7	858

Total number of applications awaiting action 17,264

161	TRADE-MARKS, DESIGNS, LABELS, AND PRINTS.			
	Trade-Marks	Mar. 4	Feb. 8	267
	Designs	Mar. 6	Feb. 6	64
	Labels and Prints			

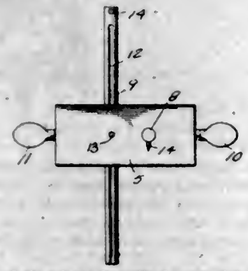
Notice.

Coupons unless properly filled out will not be accepted in payment for copies of publications.

PATENTS

GRANTED MARCH 17, 1908.

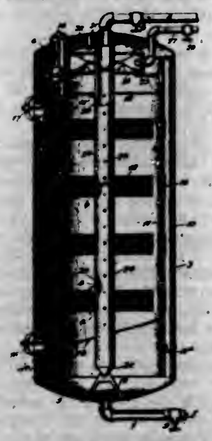
881,887. MARKING-GAGE. OSCAR T. ANDERSON and FRANK A. JOHNSON, Chicago, Ill. Filed Jan. 29, 1907. Serial No. 354,647.



1. A gage of the class described comprising a block having bores formed therein said bores being extended at right angles to each other, stems engaged in the bores, set screws for holding the stems at various adjustments, said stems being grooved longitudinally, pins carried by the block and projecting into the bores and into the grooves, and scribers carried by the stems.

2. A gage of the class described comprising a block having bores formed therein said bores being extended at right angles to each other, stems engaged in the bores, said stems being grooved longitudinally, said grooves opening through one end of each stem and being terminated short of the other end of the stem, pins carried by the block and projecting into the bores and into the grooves, set screws for holding the stems at various adjustments in the bores, and scriber points carried by the stems beyond the closed end of the grooves.

881,888. DIGESTER. WILLIAM H. ATWOOD, Lincoln, Nebr. Filed Feb. 4, 1907. Serial No. 355,619.



1. A digester receptacle, in combination with a revolving perforated supply member wholly confined within the receptacle, substantially as described.

2. A digester receptacle, in combination with a supply member and provided with discharging perforations, and wholly confined within the receptacle and means in the receptacle revolving said member, substantially as described.

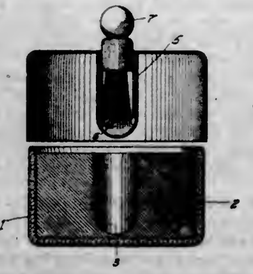
3. A digester receptacle, in combination with a supply member provided with discharging perforations in spiral arrangement, and wholly confined within the receptacle and means and wholly located in the receptacle for revolving said member, substantially as described.

4. A digester receptacle, in combination with a supply member projected therein and provided with inclined discharging perforations, and means for revolving said member, substantially as described.

5. A digester receptacle, in combination with a supply member, projected therein and provided with upwardly inclined discharging perforations, and means for revolving said member, substantially as described.

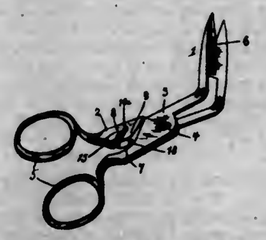
[Claims 6 to 11 not printed in the Gazette.]

881,889. PASTE-BOTTLE. ALFRED G. BAKER, Stockton, Cal. Filed Aug. 12, 1907. Serial No. 388,088.



A paste bottle comprising a bottle proper, a cover for said bottle completely telescoping the same, a depending well formed as a component part of said cover and being of a lesser depth than said cover, as set forth.

881,890. BUTTONHOLE CUTTER OR SHEARS. GEORGE T. DARE, Waco, Tex. Filed Oct. 16, 1907. Serial No. 397,710.



In a device of the character described, the combination of a pair of pivotally connected arms or members, one being formed in its inner edge with a slot and with an intersecting opening, the latter having a screw threaded

portion, a stop screw arranged in said opening and engaged with the threaded portion of the same and formed with longitudinally extending flattened portions or faces, a wheel arranged in said slot and having an aperture to slidably receive the screw, said aperture having flat portions to engage the flat faces of the screw whereby the screw will be caused to turn with the wheel and permitted to slide longitudinally therethrough, and stop heads formed at the ends of the screw by upsetting the same and adapted to prevent the removal of the screw from the arm or member, substantially as and for the purpose specified.

881,891. FUNNEL. BENJAMIN F. BEE, Harwich, Mass. Filed May 12, 1906. Serial No. 316,549.



1. A funnel having a spout provided with a yieldable clamping member fixed at its lower end to the spout and extending upwardly therefrom at an inclination and provided with a series of seats at different distances from the spout to fit orifices of different sizes.

2. A funnel having a spout provided with a yieldable clamping member fixed at its lower end to the spout and coöperating with the same to form a downwardly tapering wedge, said member being provided with a series of seats at different distances from the spout to fit orifices of different sizes, and means for guiding the clamping member.

3. A funnel having a spout, an inclined clamping device secured at its lower end to the spout and arranged at an angle to the same, a substantially U-shaped guide mounted on the funnel and receiving the upper free portion of the clamping device, said device being provided with a series of seats located at different distances from the spout to fit orifices of different sizes.

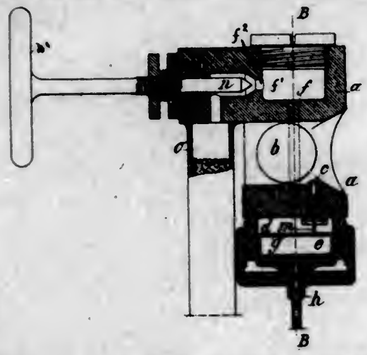
4. A funnel provided with an inclined clamping device located at and secured to the spout and provided along its length with crimps or bends forming upper and lower shoulders to engage above or below the edge of a font or reservoir.

5. A funnel comprising a bowl, a depending flat spout, a short substantially semi-cylindrical extension depending from the bowl to the upper end of the spout and connecting said parts and presenting an exteriorly arranged rounded or convex face to fit within and steady the funnel at one side of the orifice of a lamp, and a vertically disposed yielding clamping device mounted on the funnel and arranged to engage the opposite side of the said orifice.

[Claims 6 to 8 not printed in the Gazette.]

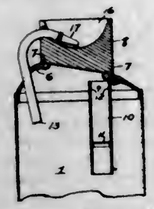
881,892. AUTOMOBILE-LAMP. LOUIS BLÉRIOT, Paris, France. Filed May 12, 1905. Serial No. 260,139.

An apparatus for the lighting of automobiles and other appliances, comprising a holder, a burner thereon, said holder acting as a support for a tablet of oxid of rare earth and acting as a heater by recuperating the heat given off by the flame of the burner, said burner comprising two separate chambers placed one above the other, pipes for introducing respectively oxygen or compressed air and the vapors of a combustible liquid into said chambers, the pipe from the liquid passing through the holder so that said liquid is volatilized by the heat of the holder; a passage leading from the chamber for the combustible



vapors directly to the burner, and a pipe leading out from the oxygen or air chamber through the chamber for the combustible vapors and into said passage so that the current of oxygen or air exhausts the vapors in the first named chamber and mixes with same in the burner.

881,893. FIRE-EXTINGUISHER. WILLIS A. BRADSHAW, Charlotte, N. C., assignor of one-half to Mortimer A. Bland, Charlotte, N. C. Filed Nov. 5, 1907. Serial No. 400,842.



1. In a fire extinguisher, the combination with a tank having a concavity in one end, of a pipe having a nozzle the latter discharging against the curved wall of the concavity at the end of the tank in a direction at an angle to the longitudinal axis of the tank.

2. In a fire extinguisher the combination with a tank and a cap closing one end thereof the said cap having a concavity in its outer face, of a tube for discharging the solution against the curved face of the concavity in the outer face of the cap.

3. In a fire extinguisher, the combination with a tank having an open end the latter beirg beveled, of a cap pivoted to the tank and correspondingly beveled, whereby a turning movement of the cap in one direction carries its beveled surface away from the seat on the tank, and a movement in the opposite direction carries its beveled face into contact with the beveled seat on the tank.

4. In a fire extinguisher the combination with a tank having a beveled seat the latter having a ground face, of a cap pivoted to the tank and having a beveled and ground face, and means for locking the cap against turning movement.

5. In a fire extinguisher the combination with a pivoted tank having a concavity in its upper end and fusible means for holding the tank in its upright position, of a discharge tube the nozzle of which projects the solution against the wall of said concavity in the upper end of the tank when the latter is inverted and in a direction at an angle to the longitudinal axis of the tank.

[Claims 6 and 7 not printed in the Gazette.]

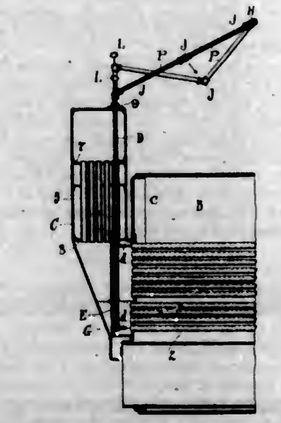
881,894. HINGE-BORER FOR EMBROIDERY-MACHINES. AUGUST BRAUN, West Hoboken, N. J., assignor of one-half to Gustav E. Steinhauser, Union Hill, N. J. Filed July 17, 1907. Serial No. 384,141.



1. In a hinge borer for embroidery machines, a borer, a member carrying the borer, a frame having resilient flaps or ears laterally embracing said member and being pivotally connected therewith, a prismatically shaped nose projecting laterally from one of said members towards the other, and correspondingly shaped notches in the said other member to engage the said nose and to lock the borer in vertical and raised positions.

2. In a hinge borer for embroidery machines, a borer, a member carrying the borer, a frame having resilient flaps or ears laterally embracing said member and pivotally connected therewith, a spring holding the two members in tight contact with one another, a prismatically shaped nose projecting laterally from one of said members towards the other, and correspondingly shaped notches in the said other member to engage said catch or nose and to lock the borer in vertical and raised positions.

881,895. BLOW-OUT DEVICE FOR STEAM-BOILERS. DOUGLAS BREWS, Cleveland, Ohio. Filed Nov. 11, 1907. Serial No. 401,576.

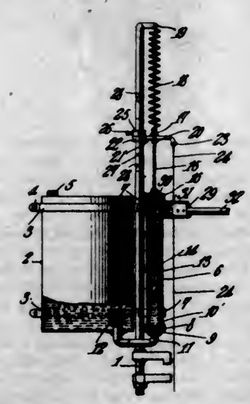


1. A boiler having a series of flues arranged in parallel rows vertically and horisontally, a steam supply pipe and a cross-head fixed to said pipe at its middle and provided with a series of jets at the front of said flues respectively and fixed upright supports behind the ends of said cross-head adapted to back the same against-back pressure by the discharging steam.

2. A tubular boiler, a steam supply pipe having a steam delivering cross-head adapted to be raised and lowered opposite the front of the tubes of the boiler to different horisontal planes, in combination with fixed vertical braces at the ends of said cross-head in respect to which said head is slidable up and down to different elevations, and the said braces extending the full depth of the space over which said cross-head is movable.

3. A steam blow-out device for boiler tubes comprising a vertical and centrally disposed steam supply pipe and a cross-head fixed at its middle on the lower end of said pipe and provided with a series of steam discharge nipples between its ends, in combination with fixed vertically disposed braces immediately behind the ends of said cross-head extending the full depth of said boiler tubes, whereby said cross-head is backed alike at all elevations and held in definite working relations to the flues of the boiler.

881,896. WINDMILL-OILER. HERBERT E. BROWN, Goldthwaite, Tex. Filed July 9, 1907. Serial No. 382,852.



1. A windmill lubricator comprising a suitable reservoir, a pump, means for actuating the pump, a valved chamber into which the pump delivers, and pipes leading from said chamber to the parts to be lubricated, the pipes and valve communicating with the chamber near its lower end.

2. A windmill oiler comprising a suitable reservoir, a force pump connected to the lower end of the reservoir and extending upward alongside of the same, a chamber at the upper end of the pump into which the oil is delivered by the pump, a valve between said chamber and the pump, and conduits leading from the chamber to the parts to be lubricated, the valve and conduits opening into the lower end of said chamber.

3. A windmill lubricator comprising a suitable reservoir, a pump, and connections for delivering oil from the reservoir to the parts to be lubricated, a spring for moving the pump piston on its power stroke, a fixed guide adjacent to the pump rod carrying one end of the spring, a sliding connection between the guide and pump rod, and an adjustable stop on the guide in the path of the slide fast on the pump rod.

4. A windmill oiler comprising a suitable reservoir, a force pump connected therewith, a valved chamber connected with the delivery end of the force pump, conduits of different capacities leading from the valved chamber to the parts to be lubricated, a supporting stem for the reservoir and pump, a spring carried by the stem and connected to the piston-rod and tending to move the pump piston in the delivery direction, a bracket fast on the piston-rod and sliding on said stem, a connection from said bracket to a distant point of manipulation, and an adjustable stop carried by said stem in the path of the bracket traveling thereon.

881,897. STORE-FRONT CONSTRUCTION. JOHN J. BURKE, Pittsburg, Pa. Filed Jan. 15, 1907. Serial No. 352,462.

1. In a structure of the class described and in combination, a post having a longitudinal groove therein; glass-securing means therefor; an outer trim having integral

inwardly-projecting fastening members fitting within and approximately midway through openings in the post; a curved reinforce within the longitudinal groove and adapted to provide a concave channel; complementary fastening members passing through said reinforce and flush therewith and engaging said integral fastening members and adapted to bind the aforesaid parts together; an inner trim adapted to close against the inner sides of the glass and with the reinforce and form with said reinforce a closed and unobstructed conduit; and securing means on said reinforce provided with a wire-receiving passage to admit wires to said conduit.



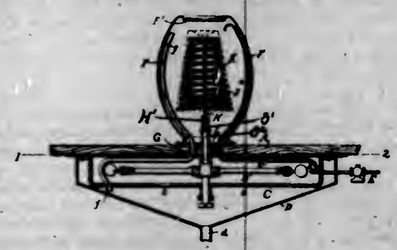
2. In a structure of the class described and in combination, a post; a reinforce thereon; a trim over said reinforce to form therewith a conduit; and an angularly disposed securing plate on said reinforce having an opening therethrough to admit wires to said conduit.

3. In a structure of the class described and in combination, a post having a longitudinal recess; a reinforce seated therein; a trim over said reinforce to form therewith a conduit; and an angularly-disposed securing plate at the end of the reinforce having a wire-receiving opening to admit wires to the conduit.

4. In a structure of the class described and in combination, a post having a longitudinally-disposed curved recess; a curved reinforce seated in said recess; an oppositely curved trim over said recess and forming therewith a conduit; and a securing plate at the end of said reinforce having a wire-receiving opening to admit wires to the conduit.

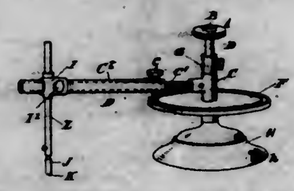
5. In a structure of the class described and in combination, a post having a longitudinally-disposed curved recess; a curved reinforce seated in said recess; an oppositely curved trim over said recess and forming with said reinforce a conduit; and an angularly-disposed plate at the end of said reinforce closing the end of the conduit; said plate having an opening therethrough to admit wires to the said conduit.

881,898. MACHINE FOR WASHING DRINKING-GLASSES. WILLIAM A. H. CAMERON and JAMES W. MARSHALL, Wellington, New South Wales, Australia. Filed Nov. 21, 1905. Serial No. 288,459.



In a machine for washing glasses, a table, a sink secured to the underside thereof, a casing in said sink, a motor wheel in said casing, a spindle on said wheel projecting above the table, a removable brush spindle adapted to be carried thereby, a bowl secured to the table and surrounding the brush spindle, a water supply pipe extending into the casing in the sink for delivering water to the wheel to rotate the same, a branch pipe connected to said water pipe and passing through the table and into the bowl to a point above the brush spindle, an overflow pipe leading from the top of the bowl through the table and casing to the sink, said casing having outlet openings to the sink, and a passage leading to the bowl and means for closing said passage.

881,899. IMPLEMENT FOR CUTTING SHAPED SECTIONS FROM GLASS SHEETS. CHARLES F. CHAPMAN, Philadelphia, Pa., assignor to Hotaling Manufacturing Company, Philadelphia, Pa., a Corporation of Delaware. Filed June 24, 1907. Serial No. 380,603.



1. An implement for cutting shaped sections from glass sheets, comprising an arched base, a substantially flat diaphragm therein, an arm mounted to move about the base as a center and adapted to carry a diamond, a rod rising from the center of the diaphragm through the base, and means to cause regulated upward movement of the rod.

2. An implement for cutting shaped sections from glass sheets comprising an arched base, a hollow standard rising therefrom, an arm secured to move about the standard as a center and carrying a diamond, a flat diaphragm within the base having an outwardly facing channel concentric with the periphery thereof, a rod rising from the center of the base through the standard, and means to cause regulated upward movement of the rod.

3. An implement for cutting shaped sections from glass sheets comprising an arched base, a hollow standard rising therefrom, an arm swiveled upon the standard and supporting a sliding sleeve carrying a tool support and tool, a grooved templet secured beneath the arm, a stud carried by the sliding sleeve engaging said groove, a flat diaphragm within the base, a rod secured centrally thereto and rising through the standard, and means to draw the rod upward to flex the diaphragm.

4. An implement for cutting shaped sections from glass sheets, comprising an arched base, a substantially flat diaphragm therein, an arm mounted to move about the base as a center and carrying a tool-shank, a rod rising from the center of the diaphragm through the base, and means to cause regulated upward movement of the rod, in combination with a tool-stock having limited swiveling movement in the shank and fitted with a diamond having a triangular face, the longer cutting edge of which is normally maintained facing the standard.

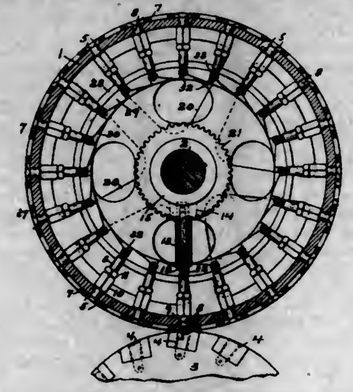
881,900. STAPLING MECHANISM. GEORGE W. CHURCH, Stamford, Conn., assignor to Robert Hoe, New York, N. Y. Filed Apr. 3, 1906. Serial No. 309,577.

1. In a stapling mechanism, the combination with a pair of constantly running carriers moving at the speed of the product to be stapled, of staple driving mechanism mounted on one of the carriers, a clencher mounted on the other carrier, a spring operated actuator for the clencher, and means for placing the spring under operating tension.

2. In a stapling mechanism, the combination with a pair of constantly running carriers moving at the speed of the product to be stapled, of staple driving mechanism mounted on one of the carriers, a clencher mounted on the other carrier, means including a spring driven plunger for actuating the clencher, and means for retracting the plunger against the stress of the spring.

3. In a stapling mechanism, the combination with a pair of constantly running carriers moving at the speed of the product to be stapled, of staple driving mechanism mounted on one of the carriers, a pair of clenching members mounted on the other carrier, means including a spring driven plunger for operating the members, and means for retracting the plunger against the stress of the spring.

4. In a stapling mechanism, the combination with a pair of constantly running carriers moving at the speed of the product to be stapled, of staple driving mechanism mounted on one of the carriers, a pair of pivoted clenching members mounted on the other carrier, means including a spring driven plunger for operating the members, and means for retracting the plunger against the stress of the spring.



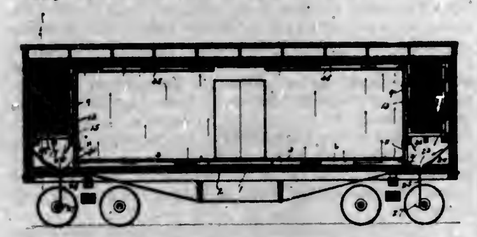
5. In a stapling mechanism, the combination with a pair of constantly running carriers moving at the speed of the product to be stapled, of staple driving mechanism mounted on one of the carriers, a pair of clenching members mounted on the other carrier, means including a spring driven plunger for operating the members, and means including a cam for retracting the plunger against the stress of the spring.

[Claims 6 to 13 not printed in the Gazette.]

881,901. WATERPROOF DRESSING FOR BOOTS AND SHOES. EVA R. COBURN, Bluffton, Ohio. Filed Mar. 15, 1906. Serial No. 306,270.

The herein described water proof dressing for boots and shoes the same consisting of beeswax one-half pound, white paraffin one-half pound, and pure red gas engine oil one quart, the same being combined with two fluid drams of oil of bergamot, substantially in the manner and the proportions stated.

881,902. REFRIGERATOR-CAR. MADISON COOPER, Minneapolis, Minn. Filed May 2, 1903. Serial No. 155,290.



1. The combination, in a refrigerator car, with an air cooling room at each end, of a main floor inclined in opposite directions from the center, a perforated false floor arranged above said main floor, suitable gutters at the ends of the main floor, a main ceiling inclined in opposite directions from the center towards the ends of the car, and a perforated false ceiling arranged below said main ceiling, substantially as described.

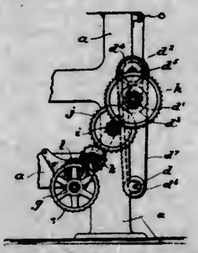
2. The combination, in a refrigerator car provided with an air cooling room at each end, of a main floor, a perforated false floor arranged above said main floor, a main ceiling inclined in opposite directions from the center to the ends of the car, and a perforated false ceiling arranged below said main ceiling, substantially as described.

881,903. ORNAMENTAL SEAM. ROBERT CORNELY, Paris, France. Filed May 11, 1906. Serial No. 316,402.



An ornamental seam composed of parallel rows of stitches arranged some distance apart and having their loops *a* disposed on one face of the fabric, crossing portions *b* joining said stitches and disposed on the other face of the fabric, said stitches and crossing portions being formed of one single continuous thread, another thread or threads *c* wound around the parallel rows of loops *a* and at the same time around a stuffing medium *d*, which stuffing medium *d* is thus confined by thread or threads *c* which are wound around the loops *a*, said stuffing medium *d* filling up the seam and concealing said parallel rows of stitches.

881,904. TAKE-UP MECHANISM FOR LOOMS. GEORGE S. COX, Fitzwatertown, Pa., assignor to himself, and Walter S. Cox, Philadelphia, Pa., trading as George S. Cox and Brother. Original application filed June 13, 1905, Serial No. 264,992. Divided and this application filed Dec. 27, 1905. Serial No. 293,444.



1. In a take-up mechanism for looms, in combination, a cloth roller, take-up rollers, having a roughened surface, to and about which the cloth is adapted to pass on its way to the cloth roller, said take-up rollers being spaced apart a distance sufficient to permit a given length of cloth on its way from one take-up roller to the other to be out of contact with either roller, and means positively actuating the take up rollers.

2. In a take-up mechanism for looms, in combination, a cloth roller, take-up rollers, having a roughened surface, to and about which the cloth is adapted to pass on its way to the cloth roller, each roller being spaced from the next roller of the series a distance sufficient to permit a given length of cloth between such rollers to be out of contact with either roller, means positively actuating the take-up rollers, and driving connections from the take-up rollers to the cloth roller.

3. In a take-up mechanism for looms, in combination, a take-up roller down to and under which the cloth is initially fed, a second take-up roller above the first take-up roller up to and over which the cloth is fed from the first take-up roller, said take-up rollers being spaced apart a distance sufficient to permit a given length of cloth on its way from one roller to the other to be out of contact with either roller, a cloth-roller beneath the first take-up roller down to which the goods are fed from the second take up roller, and means to positively drive all the rollers.

4. In a take-up mechanism for looms, in combination, the cloth-roller, a plurality of take-up rollers, one, nearer the cloth-roller, to which the cloth is fed from the guide-roller, and one, nearer the guide-roller, from which the cloth is fed to the cloth roller, and means to positively drive the take-up rollers, each roller being spaced apart from the next roller of the series a distance sufficient to permit a length of cloth at any given time feeding between them to be out of contact with either roller.

881,905. ARMOR FOR PNEUMATIC TIRES. FREDERICK Q. CREIGER, Chicago, Ill., assignor of one-half to Charles H. Edgcomb, Chicago, Ill. Filed Nov. 30, 1906. Serial No. 345,704.



1. The combination with a pneumatic tire of an armor comprising a series of sections of bent wood conforming to the curvature of the tread of the tire and extending to a point inwardly beyond the greater diameter of the tire and clamping the tire in such a manner as to maintain them in their operative position thereon, substantially as described.

2. The combination of a tire of an armor comprising a series of bent wood sections curved to conform to the tread of the tire, the grain of which sections extends lengthwise thereof and flexible means connecting said sections and maintaining the armor against accidental displacement from the tire, substantially as described.

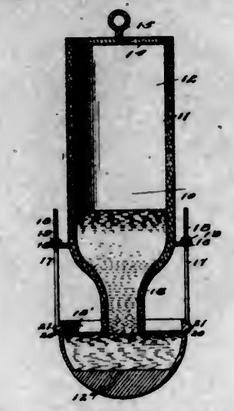
3. The combination with a pneumatic tire of an armor comprising a series of permanently bent wood sections, the inner faces of which conform to the curvature of the tread of the tire and a cable connecting said sections and adapted to maintain the armor against accidental detachment from the tire, substantially as described.

4. The combination with a pneumatic tire of an armor comprising a series of wood sections arranged thereon, and having uninterrupted sides adjacent each other formed on lines radial to the axis of the tire and provided with perforations or eyes, and a flexible cable passing through said eyes and thereby connecting said sections, said cable being adapted to maintain the armor against accidental detachment from the tire, substantially as described.

881,906. POULTRY-FOUNTAIN. JOHN CULLEN, McGirk, Mo. Filed Dec. 5, 1907. Serial No. 405,212.

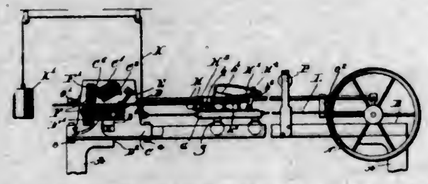
1. A poultry fountain comprising a reservoir, the reservior having an elongated cylindrical portion and a contracted neck, guides carried by the reservoir, rods slidably engaged in the guides, a trough carried by the rods, and means carried by said rods for holding the trough with its bottom spaced from the neck.

2. A drinking fountain comprising a reservior, the reservoir having guides formed integral therewith, threaded rods slidably arranged in the guides, clamping nuts carried by the rods and arranged for engagement with the



guides, and a trough carried by the rods and arranged in communication with the reservoir.

881,907. HOOP-SHAVING MACHINE. ADELBERT A. DAILEY, Vinal Haven, Me. Filed June 24, 1907. Serial No. 380,417.



1. In a shaving machine, a supporting frame comprising a trackway, a cutter frame located at one end of said trackway on said frame, a rotary cutter mounted in said cutter frame, a carriage mounted to run on said trackway and provided with a gripping device, means for drawing the carriage away from the cutter frame to draw the work therethrough, means for automatically releasing the work from the gripping device allowing it to fall through the trackway, and means for automatically returning the carriage to the cutter frame after the release of the work and means operated by the work to permit the jaws to grip the work.

2. In a shaving machine, a supporting frame comprising a trackway, a cutter frame located at one end of said trackway on said frame, a rotary cutter and opposing yieldingly mounted bed rolls mounted in said cutter frame, a carriage mounted to run on said trackway and provided with a gripping device, means for drawing the carriage away from the cutter frame to draw the work therethrough, means for automatically releasing the work from the gripping device allowing it to fall through the trackway, and means for automatically returning the carriage to the cutter frame after the release of the work and means operated by the work to permit the jaws to grip the work.

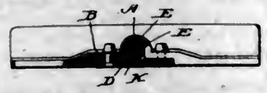
3. In a shaving machine, a supporting frame comprising a trackway, a cutter-frame located at one end of said trackway on said frame, a rotary cutter, a transverse guide bar, opposite opposing yieldingly-mounted bed rolls, and a pair of yielding guide rolls all mounted on said cutter frame, a carriage mounted to run on said trackway and provided with a gripping device, means for drawing said carriage away from the cutter frame to draw the work therethrough, means for automatically releasing the work from the gripping device allowing it to fall through the trackway, and means for automatically returning the carriage to the cutter frame after the release of the work and means operated by the work to permit the jaws to grip the work.

4. In a shaving machine, a supporting frame, comprising a trackway, a cutter frame provided with a cutting mechanism at the forward end of said trackway, a carriage mounted to run on said truckway, a pair of gripping jaws mounted on said carriage and pivoted with respect to each other, a spring normally acting to close said jaws, a latch for holding said jaws in open position, a plunger extending between said jaws and engaging said latch whereby when the plunger is retracted the jaws will be closed by the closing of the spring.

5. In a shaving machine, a supporting frame comprising a trackway, a cutter frame provided with a cutting mechanism at the forward end of said trackway, a carriage mounted to run on said trackway, a pair of gripping jaws mounted on said carriage and pivoted with respect to each other, a spring normally acting to close said jaws, a latch for holding the jaws in open position, a plunger extending between said jaws and engaging said latch whereby when the plunger is retracted the jaws will be closed by the closing of the spring, means for yieldingly-pressing said plunger and latch into position for holding the jaws open.

[Claims 6 to 9 not printed in the Gazette.]

881,908. CLEAT FOR CABLE-CHAIN CONVEYERS. ERNEST DEMAREST, Patterson, La. Filed Dec. 16, 1907. Serial No. 406,763.



1. A cleat for cable chain conveyers comprising, in combination with the links of a chain, a cleat having a groove formed transversely to the cleat in one face thereof for the reception of a link of the conveyer chain, the under face of the cleat being recessed, a plate seated in said recess and adapted to retain the link in place in said groove, as set forth.

2. A cleat for cable chain conveyers comprising a piece of material which is right angled in cross section, one of the faces of the cleat having a transverse groove formed therein for the reception of a link of the conveyer chain and recessed, a plate seated in said recess and flush with the face of the cleat, and means for holding said plate in place, as set forth.

3. In combination with a cable chain conveyer, a cleat right angled in cross section, said cleat having a reinforced portion which is recessed upon one face thereof, said recess opening into a groove which extends through the right angled face of the cleat, a link mounted in said groove, a plate seated in said recess, and means for holding the plate to said cleat to retain the link of the chain in said groove, as set forth.

881,909. WHEEL. MARSHALL D. DRAKE, Beard, Ky. Filed May 18, 1907. Serial No. 374,568.



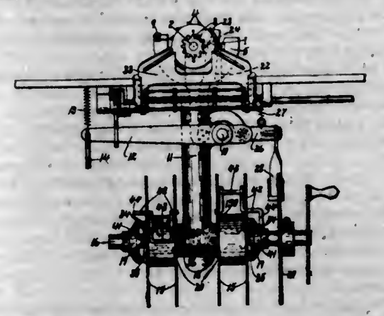
1. The combination in a wheel, of a rim, a tire comprising a continuous cover held by the rim and resilient, inflated compartments arranged in the continuous cover; some of said compartments having sockets in their inner portions the inner ends of which sockets are closed whereby the same are isolated from the interiors of their respective compartments, and spokes extending through and bearing against the inner side of the rim and also extending radially outward beyond the rim and arranged in the said sockets of the inflated compartments and bearing against the end walls of the sockets.

2. The combination in a wheel, of a rim, a tire comprising a cover held by the rim and resilient air-filled compartments contained in the cover and having sockets in their portions adjacent to the rim, and also having metallic cups in said sockets, and devices fixed to and projecting radially from the rim and disposed in the said sockets of the air-filled compartments.

3. The combination in a wheel, of a rim having a detachable portion or section at one side, spokes extending through and outward beyond the body or major portion of the rim, and a tire comprising a cover having separable base portions held by the rim and also having grooves in the opposed faces of said base portions snugly receiving the extended portions of the spokes, and resilient air-filled compartments removably arranged in the cover and having sockets receiving the outwardly extended portions of the spokes.

4. The combination in a wheel, of a rim having detachable segmental clencher sections at one side and also having fixed flange portions intermediate the said detachable sections and means connecting the said detachable sections with its body or major portion, a tire comprising a cover having separable base portions held by the rim and resilient air-filled compartments removably arranged in the cover and having sockets in their portions adjacent to the rim, and devices projecting radially from the rim and disposed in the said sockets of the air-filled compartments.

881,910. TYPE-WRITING MACHINE. FRANK J. DYETT, Ilion, N. Y. Filed Apr. 21, 1904. Serial No. 204,166.



1. In a type-writing machine, the combination with escapement-mechanism for the carriage including a shaft carrying a pinion for engaging the carriage; of ribbon-spools, and driving mechanism therefor, interposed between the same and said escapement-mechanism, comprising a ratchet-wheel movable with said shaft, a pawl coacting therewith, and mechanism actuated by the movement of said pawl, substantially as and for the purpose set forth.

2. In a type-writing machine, the combination with escapement-mechanism for the carriage including a shaft carrying a pinion for engaging the carriage; of ribbon-spools, and driving mechanism therefor, interposed between the same and said escapement-mechanism, comprising a ratchet-wheel movable with said shaft, a reciprocating pawl movable as one body coacting therewith, and mechanism actuated by the movement of said pawl, substantially as and for the purpose described.

3. In a type-writing machine, the combination with escapement-mechanism for the carriage including a shaft carrying a pinion for engaging the carriage; of ribbon-spools, and driving mechanism therefor, interposed between the same and said escapement-mechanism, com-

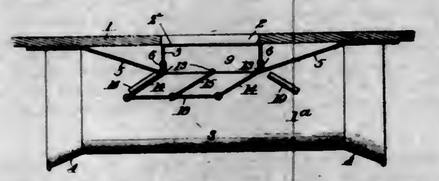
prising a ratchet-wheel, a pawl coacting therewith, a lever carrying said pawl, and mechanism actuated from said lever, substantially as and for the purpose specified.

4. In a type-writing machine, the combination with escapement-mechanism for the carriage including a shaft carrying a pinion for engaging the carriage; of ribbon-spools, and driving mechanism therefor, interposed between the same and said escapement-mechanism, comprising a ratchet-wheel, a pawl coacting therewith, a lever carrying the same, a second pawl carried by said lever, and mechanism actuated thereby, substantially as and for the purpose set forth.

5. In a type-writing machine, the combination with escapement-mechanism for the carriage including a shaft carrying a pinion for engaging the carriage; of ribbon-spools, and driving mechanism therefor, interposed between the same and said escapement-mechanism, comprising a ratchet-wheel, a pawl coacting therewith, a lever carrying the pawl at one end, a second pawl carried by the opposite end of the lever, and mechanism actuated by the second pawl, substantially as and for the purpose described.

[Claims 6 to 23 not printed in the Gazette.]

881,911. VENTILATOR. PATRICK M. EGAN, Council Bluffs, Iowa. Filed Nov. 1, 1906. Serial No. 341,593.



1. In a ventilator, a car having an opening therein, a frame surrounding the opening, and a casing secured to said frame, the back of the casing intermediate its ends diverging from the car.

2. In a ventilator, a car having an opening therein, a frame surrounding the opening, a casing secured to the frame and communicating with said opening, the back wall of the casing intermediate its ends diverging from the car toward the outer edge of said frame, slats in the frame, deflector blades mounted upon said frame to swing automatically, and stops to limit the movement of the blades.

3. In a ventilator, a car having an opening therein, a frame surrounding the opening, slats arranged within the frame, each slat having its edges turning in opposite directions, deflectors mounted to swing adjacent the frame and coöperate with said slats, and a casing secured to the frame.

4. In a ventilator, a car having an opening therein, a screen over the opening, a frame surrounding the opening, slats arranged within the frame, each slat having its edges turned in opposite directions, deflectors mounted to swing adjacent the frame and coöperate with said slats, and a casing secured to the frame.

5. In a ventilator, a car having an opening therein, and a casing fitted over the opening and communicating with the car by way of said opening, the back wall of the casing diverging from the car, and the bottom wall of the casing being inclined intermediate its ends to coöperate with the diverging portions of the back wall of the casing.

[Claims 6 to 17 not printed in the Gazette.]

881,912. DIE AND METHOD OF MAKING SAME. FRANK C. EMRICK, St. Louis, Mo. Filed Apr. 15, 1907. Serial No. 368,398.

1. A die for forming articles out of liquid pulp fiber, comprising a plurality of rods arranged parallel to each other and being of such shape in cross section that openings are formed between them to provide passage-ways for the liquid that is forced out of the pulp fiber, independently movable clamping bars surrounding said rods for binding them together, one end of each of said bars butting against the inner face of an adjacent bar, a closed rigid frame surrounding said bars, and adjustable means arranged between said frame and the clamping bars for forcing said bars toward each other to cause them to clamp said rods; substantially as described.



2. A die for the purpose described, comprising a frame, a plurality of pins or rods clamped together and arranged inside of said frame, and an auxiliary supporting member extending across said frame and engaging the ends of some of said pins; substantially as described.

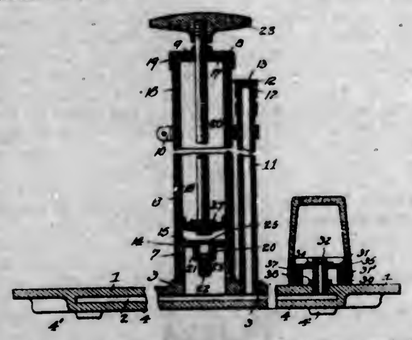
3. A die for the purpose described, comprising a frame, a plurality of pins or rods clamped together and arranged inside of said frame, and an auxiliary supporting member extending across said frame and comprising a bundle of rods clamped together and engaging the lower ends of the pins which are arranged inside of said frame; substantially as described.

4. A die for the purpose described, comprising a frame, a plurality of pins or rods clamped together and arranged inside of said frame, and an auxiliary supporting member consisting of a bar which extends across said frame and is secured thereto, and adjustable devices carried by said bar for engaging the lower ends of said pins; substantially as described.

5. A die for the purpose described, comprising a frame, a plurality of pins or rods clamped together and arranged inside of said frame, an auxiliary supporting member consisting of a bar which extends across said frame and is secured thereto, and bundles of adjustable rods clamped to said bar and engaging the lower ends of the pins arranged in said frame; substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

881,913. DEVICE FOR MANIPULATING GLASS ARTICLES. FRANK G. FARNHAM, Honesdale, Pa. Filed Feb. 3, 1905, Serial No. 244,047. Renewed July 20, 1907. Serial No. 384,760.



1. A portable device for manipulating glass and like articles having open mouths comprising a support or carrier adapted to receive the said article in an inverted position, means on said carrier to extend within the mouth of the article to effect a tight joint, and means for exhausting the air from between said article and carrier whereby they are firmly held together, substantially as described.

2. A portable device for manipulating glass articles having open mouths comprising a support or carrier, a changeable seat carried by said support and having an exterior wall whereby it is adapted to fit the said mouth, and means for causing said article to be held with its mouth pressed against the seat, substantially as described.

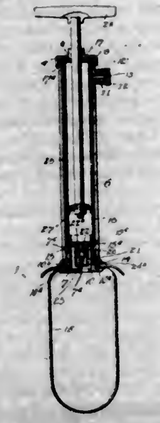
3. A portable device for manipulating glass articles having open mouths comprising a support or carrier, a rubber ring having an exterior wall, means for detachably holding said ring to said carrier, and means for causing a glass article to be held with its mouth pressed against said wall of the ring, substantially as described.

4. In combination, a bed plate having an air passage and a plurality of openings leading to said passage, a plurality of rubber devices for fitting the mouths of glass articles, means for removably holding said devices to the bed plate in proximity to the said openings, and means for exhausting the air through the air passage from said articles, substantially as described.

5. In combination, a hollow base plate having a plurality of openings in its upper side, removable hollow plugs seated in said openings, rubber rings encircling said plugs, and a vacuum-producing device connected to said hollow base plate, substantially as described.

[Claims 6 to 13 not printed in the Gazette.]

881,914. DEVICE FOR MANIPULATING GLASS ARTICLES. FRANK G. FARNHAM, Honesdale, Pa. Filed Feb. 25, 1905, Serial No. 247,362. Renewed June 29, 1907. Serial No. 381,547.



1. A portable device for dipping glass articles, comprising a manipulating member including an air-forcing device, and an inflatable member connected to said manipulating member and adapted to be inflated by the air-forcing device, substantially as described.

2. A portable device for dipping cut glass articles and the like, comprising a manipulating member including an air forcing device, and an elastic inflatable body having a detachable connection with said manipulating member, substantially as described.

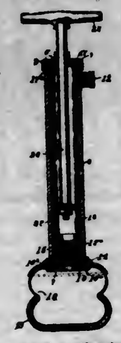
3. A device for dipping cut glass articles and the like, comprising a cylinder of acid resisting material, an air forcing device located within said cylinder, an inflatable rubber bag of acid resisting material having a detachable connection with said cylinder and means independent of the air forcing device for permitting the escape of air from said inflatable bag, substantially as described.

4. In a device for dipping glass articles, a manipulating member including an air forcing device, clamping means at the end of said member and an inflatable member held by said clamping means and adapted to be inflated by the air forcing device, substantially as described.

5. A device for dipping cut glass articles and the like, comprising an elongated member including an air forcing device, clamping rings or flanges having opposing grooves and carried by said member, and an elastic inflatable body having a bead held in said opposing grooves, substantially as described.

[Claims 6 to 10 not printed in the Gazette.]

881,915. METHOD OF PROTECTING THE INSIDE OF VESSELS DURING ORNAMENTATION. FRANK G. FARNHAM, Honesdale, Pa. Filed Jan. 16, 1907. Serial No. 352,660.



1. The method of protecting the inside of vessels during the process of ornamentation which consists in placing a collapsible bag within a vessel and then inflating the bag until the bag is forced into tight contact with the vessel within its mouth and the union between the vessel and bag at the mouth of the vessel is hermetically closed, and retaining the pressure within the bag during the process of ornamentation, substantially as described.

2. The method for protecting the inside of vessels during the process of ornamentation which consists in placing a collapsible bag within a vessel and then inflating the bag until the bag becomes tense and completely closes the vessel and extends over and covers the upper edge of the vessel, and the union between the bag and the vessel becomes air-tight so that the bag is held to the inside wall and the upper edge of the vessel by atmospheric pressure, and retaining the pressure within the bag during the process of ornamentation.

3. The method for protecting the inside of vessels during the process of ornamentation which consists in placing a collapsible bag having an inflating tube and valve within a vessel and then inflating the bag until the bag becomes tense and completely closes the vessel and extends over and covers the upper edge of the vessel, and the union between the bag and the vessel becomes air-tight so that the bag is held to the inside wall and the upper edge of the vessel by atmospheric pressure and retaining the pressure within the bag during the process of ornamentation by closing the valve and suspending the vessel by the neck of the inflating tube.

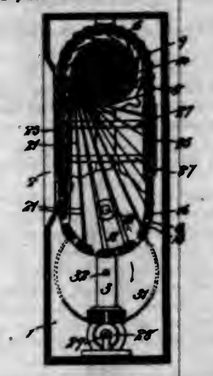
881,916. PICTURE-DISPLAY MACHINE. HIRAM A. FARRAND, New York, N. Y., assignor to The Kinetoplane Display Company, New York, N. Y., a Corporation of New York. Filed Mar. 8, 1906. Serial No. 304,844.

1. In a picture display machine, a plurality of reels, arranged to travel in a common path, picture display aprons wound thereon and means for moving the reels along said path for displaying different portions of several aprons in the picture plane at the same time.

2. In a picture display machine, a plurality of reels arranged to travel in an endless path, picture display aprons wound thereon and means for moving the reels along said path for displaying different portions of the several aprons in the picture plane at the same time.

3. In a picture display machine, a plurality of reels, picture display aprons wound thereon, means for the attachment of the aprons separate from the reels and means for moving the reels in a common path whereby different sur-

faces on the aprons are presented during the movement of the reels in said path.

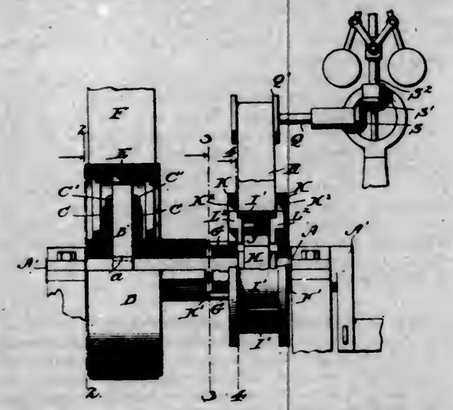


4. In a picture display machine, a plurality of spring actuated reels, picture display aprons wound thereon, means for the attachment of the aprons separate from the reels and means for moving the reels in a common path whereby different surfaces on the aprons are presented during the movement of the reels in said path.

5. In a picture display machine, a plurality of reels arranged to travel in an endless path, picture display aprons wound thereon, means for moving the reels successively into and out of the picture plane and means for the attachment of the aprons eccentric to the path of the reels whereby different surfaces on the aprons are presented during the passage of the reels through the picture plane.

[Claims 6 to 17 not printed in the Gazette.]

881,917. GOVERNOR MECHANISM FOR ENGINES. WILLIAM E. GANNON, McDavid, Fla., assignor of one-third to Benjamin F. Jernigan, Pollard, Ala., and one-third to Joseph Bonifay, McDavid, Fla. Filed Nov. 18, 1907. Serial No. 402,711.



1. An apparatus for regulating the feeding of steam to an engine when under load without slowing the latter, comprising an engine shaft and governor mechanism, a pulley loosely mounted upon said shaft, a bar fixed to said shaft and having yielding connections with said pulley, an expansible pulley connected upon said shaft, connections between said expansible pulley and governor mechanism, and means for expanding the pulley, as set forth.

2. An apparatus for regulating the feeding of steam to an engine when under load without slowing the latter, comprising an engine shaft and governor mechanism, a pulley loosely mounted upon said shaft, a bar fixed to said shaft and having yielding connections with said pulley, an expansible pulley made up of movable segments, means fixed to said loosely mounted pulley for expanding and contracting said segments, belted connections between the expansible pulley and governor mechanism, as set forth.

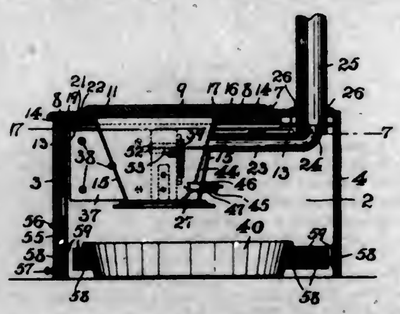
3. An apparatus for regulating the feeding of steam to an engine when under load without slowing the latter, comprising an engine shaft and governor mechanism, a pulley loosely mounted upon said shaft, a bar fixed to said shaft and having yielding connections with said pulley, an expansible pulley made up of movable segments, a cam member upon the shaft, and connections between said member and said loosely mounted pulley, said member adapted to expand and contract said segments, and connections between the expansible pulley and governing mechanism, as set forth.

4. An apparatus for regulating the feeding of steam to an engine when under load without slowing the latter, comprising an engine shaft and governor mechanism, a pulley loosely mounted upon said shaft, a bar fixed to said shaft and having yielding connections with said pulley, an expansible pulley made up of movable segments, a cam member upon the shaft and connections between said member and said loosely mounted pulley, curved arms upon said cam member adapted to actuate said segment members whereby the diameter of the expansible pulley may increase or diminish, and belted connections between said expansible pulley and governor mechanism, as set forth.

5. An apparatus for regulating the feeding of steam to an engine when under load without slowing the latter, comprising an engine shaft and governor mechanism, a pulley loosely mounted upon said shaft, a bar fixed to said shaft and having yielding connections with said pulley, an expansible pulley made up of movable segments, a cam member upon the shaft and connections between said member and said loosely mounted pulley, curved arms upon said cam member, rollers upon said segments adapted to be actuated by the arms of the cam member whereby the diameter of the expansible pulley may be increased or diminished, and connections between the expansible pulley and governor, as set forth.

[Claims 6 to 9 not printed in the Gazette.]

881,918. DRY CLOSET. EMIL L. GEISEL, Morganville, N. J. Filed Oct. 10, 1907. Serial No. 396,755.



1. In a waterless-privy, the combination, with a casing, of a seat-member pivotally secured thereto, an air-tight cover-member for said seat-member, a removable receiving-funnel holder means connected with said casing for supporting said removable receiving-funnel holder, a removable receiving funnel supported by said receiving-funnel holder, a pipe connected with said casing for carrying away the gases or odors collecting therein, a pipe connecting said receiving-funnel with the pipe in said casing, a receptacle in the bottom of said casing, beneath said receiving-funnel, a movable means for opening and closing the bottom of said receiving-funnel, and means for normally and automatically maintaining the closed relation of said receiving funnel, substantially as and for the purposes set forth.

2. In a waterless-privy, the combination, with a casing, of a seat-member pivotally secured thereto, an airtight cover-member for said seat-member, pivotally connected thereto, a removable receiving-funnel holder means connected with said casing for supporting said removable receiving-funnel holder, a receiving-funnel detachably secured to said receiving-funnel holder, a pipe connected with the said casing for carrying away the gases or odors collecting therein, a pipe connecting said receiving-funnel with the pipe in said casing, a receptacle in the bottom of said casing beneath said receiving-funnel, a movable disk adapted to normally close the bottom of said receiving-funnel, means for supporting said disk, and means for moving said disk to open and close the bottom of the said receiving funnel, substantially as and for the purposes set forth.

3. In a waterless-privy, the construction with side-walls, front and back walls, and, a top-member and side-ledges all forming a casing, of a seat-member pivotally secured to said top-member, a closure therefor pivotally connected with said seat-member, and means for causing an air-tight connection between said seat-member and said closure, strips secured beneath the edges of said side-ledges, adapted to form longitudinal flanges projecting from said side-ledges, a receiving-funnel holder removably supported upon said flanges, a receiving-funnel removably secured to said receiving-funnel holder, a disk normally closing the bottom of said receiving-funnel, means for removing said disk from said closed position and automatically returning the same to said normal closing position, and means for ventilating said receiving-funnel and said casing, substantially as and for the purposes set forth.

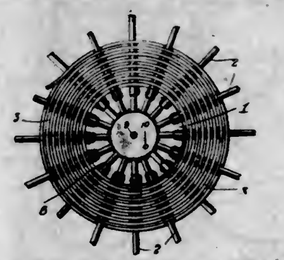
4. In a waterless-privy, the combination, with side-walls, front and back walls, and, a top-member and side-ledges all forming a casing, of a seat-member pivotally an air-tight connection between said seat-member and said closure, strips secured beneath the edges of said side-walls, front and back walls, a top-member and side-ledges and, all forming a casing, of a seat-member pivotally secured to said top-member, a closure therefor, pivotally connected with said seat-member, and means for causing an air-tight connection between said seat-member and said closure, strips secured beneath the edges of said side-ledges adapted to form longitudinal flanges projecting from said side-ledges, a receiving-funnel holder removably supported upon said flanges, a receiving-funnel removably secured to said receiving-funnel holder, a disk normally closing the bottom of said receiving-funnel, means for removing said disk from said closed position and automatically returning the same to said normal closing position, and means for ventilating said receiving-funnel and said casing, and a pan or receptacle in the bottom of said casing, beneath the said receiving-funnel, substantially as and for the purposes set forth.

5. In a waterless-privy, the combination, with side-walls, front and back-walls, and, a top-member and side-ledges all forming a casing, of a seat-member pivotally secured to said top-member, a closure therefor pivotally connected with said seat-member, and means for causing an air-tight connection between said seat-member and said closure therefor, strips secured beneath the edges of said side-ledges adapted to form longitudinal flanges projecting from said side-ledges, a receiving-funnel holder removably supported upon said flanges, a receiving funnel removably secured to said receiving-funnel holder, a disk normally closing the bottom of said receiving-funnel, means for removing said disk from said closed position and automatically returning the same to said normal closing position, and means for ventilating said receiving-funnel and said casing, a receptacle in the bottom of said casing, beneath the said receiving-funnel, and a door in said casing through which said receptacle may be removed from said casing.

[Claims 6 to 12 not printed in the Gazette.]

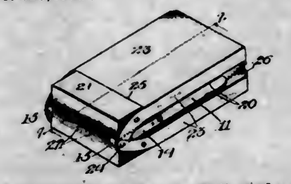
881,919. BOTTOM FOR BASKETS OR DEMIJOHNS, &c. JAMES A. GRIFFIN, Olean, N. Y. Filed Aug. 30, 1907. Serial No. 390,788.

The bottom for a wicker basket or the like, comprising a flat sheet metal centerpiece having inner and outer annular series of apertures, the apertures of the two series being arranged in radial alinement, said centerpiece also having reversely disposed radially alined seats or channels arranged in inner and outer series, the seats or channels of the two series being stamped in opposite faces of the



plate, splints radiating from said centerpiece and having their inner ends engaged with said seats and extending through said apertures, and a woven portion arranged upon the splints around the centerpiece, substantially as set forth.

881,920. POCKET TOBACCO CASE AND CUTTER. ANDREW B. HADEAN, Chicago, Ill. Filed Nov. 23, 1907. Serial No. 403,492.



1. A tobacco case and cutter consisting of a holder having one of its ends open, a pair of blade-carrying-members pivotally secured to the holder, a blade on the front portion of each of said members, a pair of levers pivotally connected at their front ends and each fulcrumed on one of the blade-carrying-members, and a spring-actuated plunger located in the holder.

2. A tobacco case and cutter consisting of a holder having one of its ends open, a pair of blade-carrying-members pivotally secured at their rear portions to the rear part of the holder, a blade on the front portion of each of said members adapted to extend across and in front of the holder, a pair of levers pivotally connected at their front ends and each fulcrumed on the front portion of one of the blade-carrying-members, and a spring-actuated plunger located in the holder.

3. A tobacco case and cutter consisting of a holder having one of its ends open, a spring on the open or front part of the holder provided with an inwardly extended projection, a pair of blade-carrying-members pivotally secured to the holder, a blade on the front portion of each of said members, a pair of levers pivotally connected at their front ends and each fulcrumed on one of the blade-carrying-members, and a spring-actuated plunger located in the holder.

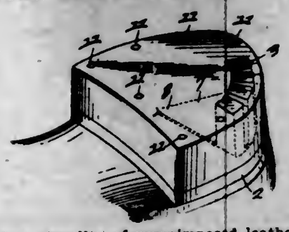
4. A tobacco case and cutter consisting of a holder having one of its ends open, a pair of springs located on the holder at its open end and opposite each other, each of said springs having an inwardly extended projection at its outer end, a pair of blade-carrying-members pivotally secured to the holder, a blade on the front portion of each of said members and adapted to extend across and in front of the open end of the holder, a pair of levers pivotally connected at their front ends and each fulcrumed on one of the blade-carrying-members, and a spring-actuated plunger located in the holder.

5. A tobacco case and cutter consisting of a holder having one of its ends open, a pair of blade-carrying-members each comprising a transverse portion having rearwardly extending and parallel prongs pivotally secured at their

rear portions to the sides of the holder near its rear end, a blade on the front portion of each of said members, a pair of levers pivotally connected at their front ends and each fulcrumed on one of the blade-carrying-members, and a spring-actuated plunger located in the holder.

[Claim 6 not printed in the Gazette.]

881,921. HEEL FOR BOOTS OR SHOES. CHARLES F. HAMEL and WILLIAM G. VOLLMAYER, Toledo, Ohio. Filed Aug. 24, 1907. Serial No. 389,949.



In a heel, a plurality of superimposed leather lifts and an upper elastic lift thereon, a metal member having a striking portion disposed in a vertical direction through the leather lifts adjacent to their rear margins, and a flat, expanded, integral portion constituting a head for the striking portion, the head extending inwardly from the striking portion and taking a position between the upper leather lift and the elastic lift with its inner extremity approximately at the center of the heel, and oppositely deflected points at the inner extremity of the head adapted to enter and engage the lifts in contact with the head, substantially as described.

881,922. MILKING APPARATUS. AUGUSTUS W. HARDY, May, Tex. Filed Nov. 30, 1907. Serial No. 404,608.



1. A milking device comprising a pair of arms, the inner walls of which are channeled to form a milk passage, and rollers arranged at the upper ends of said arms for engagement with the teat.

2. A milking device comprising a pair of arms, the inner walls of which are channeled to form a milk passage, overlapping wings at the outer edges of the arms, and rollers journaled at the upper ends of said arms for engagement with the teat.

3. A milking device comprising a pair of arms hinged at their lower ends, and the inner walls of which are channeled to form a milk passage, wings arranged at the outer edges of said arms and overlapping to close the passage, springs tending to maintain the arms in open position, and a pair of rollers journaled at the upper ends of the arms for engagement with the teat.

4. A milking device comprising a pair of channeled arms, pivoted together, and the edges of which overlap to form a continuous closed channel from top to bottom of said arms, and teat engaging devices at the upper ends of said arms.

881,923. JAR FOR DRILLING WELLS. CHARLES M. HEETER, Butler, Pa. Filed Mar. 17, 1905. Serial No. 250,537.



1. A jar for drilling tools, comprising reins having edge-abutting end portions of substantially full thickness, and the abutted portions beveled to an edge, and a head or pin of softer metal having a forked portion fitted over and separately welded to the beveled faces of the edge-abutted portions; substantially as described.

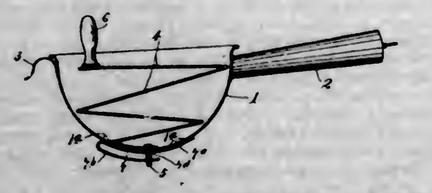
2. A jar for drilling tools, comprising reins connected at their ends, the middle portion being liquid-hardened, and the lateral portions of the reins being left unhardened; substantially as described.

3. A jar for drilling tools, comprising reins united at their ends and having grooves, the metal at the bottom of the middle portion of the grooves being softer than that at the lateral portions thereof; substantially as described.

4. A jar for drilling tools, comprising reins having edge-abutted end portions of substantially the full thickness of the reins, and a forked head of softer metal fitted over and welded to said abutted end portions; substantially as described.

5. A jar for drilling tools, comprising reins having end portions of substantially full thickness welded together, and a head or pin of softer metal having a forked portion fitted over and welded to the welded end portions of the reins; substantially as described.

881,924. COLANDER. ELMER E. HIGGINS, St. Paul, and HARRY L. MCCOY, Minneapolis, Minn. Filed Mar. 13, 1907. Serial No. 362,202.



1. In a colander, the combination with a bowl having a perforated bottom, of a tapered spiral feed blade, the lower portion of which closely fits and is arranged to scrape over the perforated bottom of said bowl, and the upper portion of which is left with an axial opening for the free feed of material into the bowl and is provided with means for rotating said feed blade within said bowl, substantially as described.

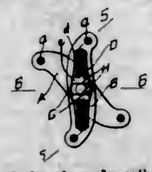
2. In a colander, the combination with a bowl having a perforated bottom, of a spiral feed blade rotatively mounted in said bowl and pivotally connected at its lower end to the bottom thereof, and a scraper mounted to rotate with said feed blade and to press against the lower surface of the perforated bottom of the bowl, substantially as described.

3. In a colander, the combination with a bowl having a perforated bottom, of a spiral feed blade rotatively mounted therein and pivotally connected at its lower end to the bottom thereof, and a combined spring and scraper arranged to rotate with said feed blade, to pass over the under surface of the perforated bottom of the bowl, and to yieldingly draw the lower end portion of said feed blade against the upper surface of the perforated bottom of the bowl, substantially as described.

4. In a colander, the combination with a bowl having a perforated bottom, and a handle, of a spiral feed blade rotatively mounted in said bowl, pivotally connected at its lower end to the perforated bottom thereof in line with the common axis of said bowl and spiral feed blade, said spiral feed blade having a finger piece at its upper end located eccentric to the axis of said feed blade and bowl, and a spring pressed scraper mounted to rotate with said feed blade and to pass over the under surface of the perforated bottom of the bowl, substantially as described.

5. In a colander, the combination with a bowl having a perforated bottom, of a spiral feed blade rotatively mounted in said bowl and provided at its upper end with a finger piece located eccentric to the common axis of the bowl and feed blade, a pin or stud 5 secured to the lower end of said feed blade and depending through the perforated bottom of the bowl, and a combined scraper lock and spring device constructed from a piece of spring wire bent upon itself to form the bowed scraper portion 7^a, spring finger 7^b and crotch 7^c with bulged portion 7^d, the said finger portion 7^b being insertible through a perforation in the depending end of said pin 5, the bulged crotch portion 7^d being engageable with the body of said pin, and the said scraper portion 7^a being engageable with the under surface of the perforated bottom of the bowl, substantially as described.

881,925. BRACELET. HARRY R. HOLBROOK, Attleboro, Mass. Filed Feb. 12, 1907. Serial No. 356,958.

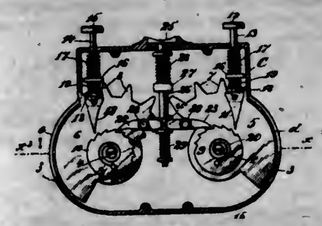


1. In an article of the class described, a pair of crossed members, one of said members being pivoted on the other of said members by a stud fixed thereon, a head on said stud having a plurality of diameters and a spring actuated part mounted on the other member co-acting with said head.

2. An article of the class described comprising a series of links composed of crossed members pivotally joined together at their ends and having a pivoted joint between the crossed members of each link at the point of crossing, a cam surface at the pivoted joint between the crossed members and attached to one thereof and a spring pressed plunger on the other member and adapted to contact with said cam surface.

3. An article of the class described comprising a series of links of crossed members pivotally joined together at their ends and having a pivoted joint between the crossed members of each link at the point of crossing, a head having oppositely disposed cam surfaces at the pivoted joint between the crossed members and attached to one thereof and a pair of oppositely disposed spring pressed plungers on the other member and adapted to contact with said cam surfaces.

881,926. GAME-COUNTER AND THE LIKE. HENRY G. HOSE, New York, N. Y. Filed Feb. 11, 1907. Serial No. 356,844.



1. In a device of the character described, the combination with a casing provided with openings, of a revoluble wheel or disk within said casing; means for imparting a step-by-step motion to said wheel or disk; means for moving said wheel or disk back to its initial position; means for holding said wheel or disk against such backward rotation, and means for disengaging said last mentioned holding means; said wheel or disk having thereon devices adapted to indicate to the sight and also to the touch the number of steps which said wheel or disk has been moved.

2. An instrument for purposes such as those specified, having a casing provided with a sight-aperture and a slot, a disk rotatively mounted in said casing, said disk having on it numerals adapted to appear successively at said sight-aperture and an equal number of teeth which are adapted to protude successively at said slot, when the disk is rotated, a pawl and ratchet mechanism for advancing said disk step by step, a spring for rotating said disk back to zero, a stop-pawl for holding the disk against back rotation, and means for disengaging said stop-pawl.

3. In a device of the character described, the combination with a casing provided with openings, of a plurality of revoluble wheels or disks within said casing; means for imparting a step-by-step motion to each of said wheels or disks separately; means for moving said wheels or disks back to their initial positions; means for holding said wheels or disks against such backward rotation; and means for disengaging said last mentioned holding means; each of said wheels or disks having thereon devices adapted to indicate to the sight and also to the touch the number of steps which said wheel or disk has been moved.

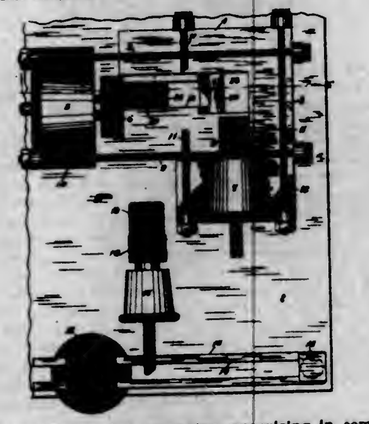
4. An instrument for the purpose specified, having an inclosing casing a plurality of disks rotatively mounted therein and provided with means for indicating the extent of their step by step rotation, said means consisting of numerals adapted to appear successively at said sight aperture and an equal number of teeth which are adapted to protrude successively at said slot, when the disks are rotated, pawl and ratchet mechanism for imparting to each disk, independently of the other, a forward step by step rotation, springs for rotating the respective disks back to zero, spring stop-pawls which hold the respective disks against back rotation, a slidable stem which projects out of the casing and which is operatively connected with both of said stop-pawls for disengaging them simultaneously when said stem is pushed in, and a spring which retracts said stem when pressure is removed therefrom.

5. An instrument for the purpose specified, having a casing provided with sight-apertures *a* and *b*, and slots *d* and *e*, indicator disks 5 and 6 rotatively mounted in the casing, said disks being provided on their faces with indicating numerals adapted to be brought opposite to the respective sight-apertures successively by intermittent forward rotation of said disks, and provided on their respective edges with indicator teeth adapted to be protruded successively at the respective slots in the casing by intermittent forward rotation of the disks, volute springs which tend to rotate the respective disks backward, pawl and ratchet mechanisms for imparting to the respective disks a step by step forward rotation, each of said mechanisms comprising a slidable stem which projects out of the casing, a retracting spring, for said stem, a spring pawl pivotally attached to the inner end of the stem, and a ratchet-

wheel fixed to the indicator disk, the teeth of which are in position to be engaged by said pawl when said stem is pushed in, stop-pawls to prevent back rotation of the respective ratchet wheels, and means, operatable from outside of the casing for releasing both of said stop-pawls simultaneously.

[Claims 6 to 8 not printed in the Gazette.]

881,927. INGOT-COMPRESSING APPARATUS. JOHN ILLINGWORTH, Newark, N. J. Filed June 28, 1906. Serial No. 323,822.



1. Ingot-compressing apparatus comprising in combination ingot supporting and holding means forming a backing for one end and certain of the sides of an ingot, and pressure-exerting means adapted to act on the remaining side portions of an ingot so held.

2. Ingot-compressing apparatus comprising in combination ingot supporting and holding means forming a backing for certain of the sides of an ingot, and pressure-exerting means adapted to act on the remaining side portions of an ingot so held and comprising a seat on which an ingot held between said backing and pressure-exerting means will rest.

3. In an ingot compressing apparatus, the combination of fixed plates adapted to engage a portion of the sides of an ingot, a ram adapted to engage another portion of the sides of the ingot, and having a seat for the bottom end of the ingot, and a second ram adapted to engage the remaining portions of the sides of the ingot.

4. In an ingot compressing apparatus, the combination of means forming a backing for certain of the sides of an ingot, pressure exerting means adapted to act on the remaining side portions of the ingot, and a movable support for one end of the ingot adapted to be operated by said pressure exerting means.

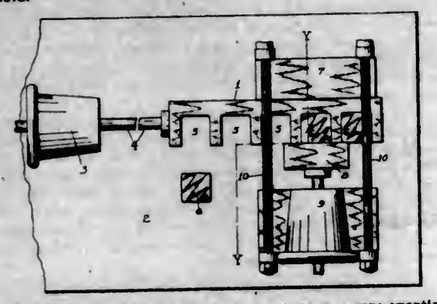
5. In an ingot compressing apparatus, the combination of compression plates forming a backing for certain of the side of an ingot, and two independently operated pressure exerting means, one of them having a seat for the end of the ingot.

[Claims 6 to 16 not printed in the Gazette.]

881,928. INGOT-COMPRESSING APPARATUS. JOHN ILLINGWORTH, Newark, N. J. Original application filed June 28, 1906, Serial No. 323,822. Divided and this application filed July 12, 1907. Serial No. 383,460.

1. The combination with reciprocating pressure exerting means, of a sliding false mold adapted to reciprocate across the path of said pressure exerting means and having at its face next said pressure-exerting means a seat for an ingot, and means for supporting said false mold against the strain of said pressure-exerting means.

2. The combination with a reciprocatory ram, of a sliding false mold adapted to reciprocate across the path of said ram, said false mold having at its face next the ram a seat for an ingot, and a rigid back-plate for said false mold.



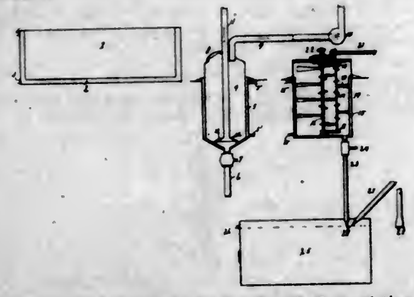
3. The combination with reciprocatory pressure-exerting means, of a sliding false mold having in its lateral face a vertical ingot recess, and means for sliding said mold to bring an ingot in the recess thereof into the path of said pressure-exerting means.

4. The combination with pressure-exerting means, of a false mold having in its face an ingot seat, one of said parts being movable with respect to the other, and means for bringing the said ingot seat into the path of said pressure-exerting means.

5. The combination with a reciprocatory ram, of a sliding false mold adapted to the reciprocated across the path of the ram and having at its face adjacent thereto a plurality of ingot seats or pockets, and a back-plate for said false mold.

[Claims 6 to 10 not printed in the Gazette.]

881,929. RENOVATING BUTTER, OILS, &c. WIGGO F. JENSEN, Lincoln, Nebr. Filed July 31, 1905. Serial No. 271,912.



1. An improvement in the art described consisting of first melting the butter and removing impurities by skimming and precipitation, then washing same with warm water without chemicals or salt, then drawing off the water, then aerating the melted butter in the absence of chemicals or salt and without the addition of skim milk, buttermilk, whey, or their equivalents, then adding ripened skim milk during mild agitation but without aeration, and then crystallizing, ripening, and churning the product.

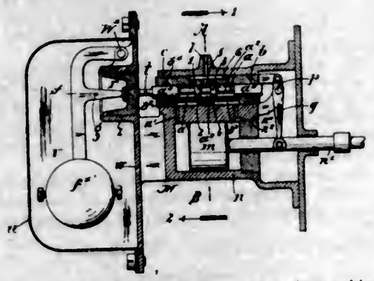
2. An improvement in the art described consisting of first melting the butter and removing impurities by skimming and precipitation, then washing same with pure water, then drawing off the water, then aerating the melted butter in the absence of chemicals or salt and without forming an emulsion, then adding ripened skim milk or its equivalent during mild agitation but without aeration, and then crystallizing, ripening, and churning the product.

3. An improvement in the art described consisting of first melting the butter and removing impurities by skimming and precipitation, then washing same with pure water without salt, then drawing off the water, then aerating the melted butter without forming an emulsion, then adding ripened skim milk during mild agitation but without aeration to form an emulsion, and then crystallizing, ripening, and churning the product.

4. An improvement in the art described consisting of first melting the butter and removing impurities by skimming and precipitation, then washing same with pure water, then aerating the melted butter without forming an emulsion and without the presence or addition of any chemical or salt or skim milk or their equivalents during aeration, then adding ripened skim milk or its equivalent during mild agitation but without aeration to form an emulsion, and then crystallizing, ripening, and churning the product.

5. An improvement in the art described consisting of first melting the butter and removing impurities by skimming and precipitation, then washing same with pure water, then aerating the melted butter without forming an emulsion and without the presence or addition of any chemical or salt or skim milk or their equivalent during aeration, then adding ripened skim milk during mild agitation to mix same but without aeration to form an emulsion, and then crystallizing, ripening and churning the product.

881,930. IMMERSION-REGULATOR. ALBERT E. JONES, Fiume, Austria-Hungary. Filed Aug. 6, 1906. Serial No. 329,403.

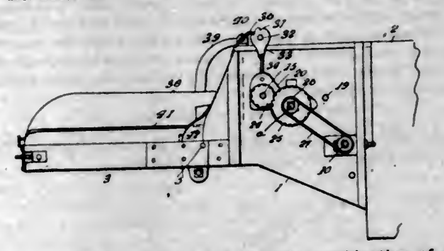


1. A submersion controller comprising in combination, a stationary cylinder provided with inlet and exhaust ports for the pressure fluid, a piston for said cylinder adapted to operate a submersion rudder, coöperating hydrostatic and engine valves for controlling admission of and exhaust of pressure fluid to and from said cylinder, said hydrostatic valve having a relatively restricted stroke with respect to the stroke of said piston, means for operatively connecting said engine valve with said piston whereby the stroke of said engine valve is made equal to that of the hydrostatic valve, a hydrostatic chamber, a pendulum therein, and a hydrostatic piston rigidly connected with said hydrostatic valve and exposed to the action of the surrounding water and operated by the oppositely directed forces of the hydrostatic pressure and said pendulum.

2. A submersion controller comprising in combination, a stationary cylinder provided with inlet and exhaust ports for the pressure fluid, a piston for said cylinder adapted to operate a submersion rudder, coöperating hydrostatic and engine valves for controlling admission of and exhaust of pressure fluid to and from said cylinder, said hydrostatic valve having a relatively restricted stroke with respect to the stroke of said piston, means for operatively connecting said engine valve with said piston whereby the stroke of said engine valve is made equal to that of the hydrostatic valve, a hydrostatic chamber, a pendulum therein, and a hydrostatic piston for said chamber operatively connected with said hydrostatic valve and exposed to the action of the surrounding water and operated by the oppositely directed forces of the hydrostatic pressure and said pendulum.

3. A submersion controller comprising in combination, an auxiliary engine provided with a piston adapted to operate a submersion rudder, coöperating hydrostatic and engine valves for controlling the admission of pressure fluid to said engine, said hydrostatic valve having a relatively restricted stroke with respect to the stroke of said piston, hydrostatic mechanism directly connected with said hydrostatic valve, and means operatively connecting said engine valve with said piston whereby the stroke of said engine valve is made equal to the stroke of said hydrostatic valve.

881,931. BAND-CUTTER AND FEEDER. JEROME H. KAUFFMAN, Hope, Kans. Filed Apr. 21, 1906. Serial No. 313,075.

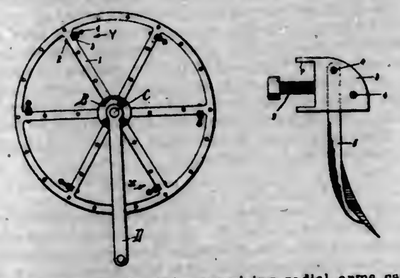


1. In a band cutter and feeder, the combination of a frame-work, a bundle carrier, swinging plates mounted upon opposite sides of the frame-work, a shaft journaled between the swinging plates, band cutters connected with the shaft, a stub shaft carried by one of the swinging plates, an idler mounted upon the stub shaft, means for transmitting motion from the idler to the shaft, means for transmitting motion from the idler to the bundle carrier, and means for adjusting the swinging plates to properly position the cutting mechanism.

2. In a band cutter and feeder, the combination of a frame work, a bundle carrier, swinging plates mounted upon opposite sides of the frame-work, a shaft journaled between the swinging plates, a stub shaft carried by one of the plates, a shaft journaled between the swinging plates, band cutters connected with the shaft, a gear wheel rigid with the shaft, a second gear wheel loosely mounted upon the stub shaft and meshing with the before mentioned gear wheel, and means for transmitting motion from the second mentioned gear wheel to the bundle carrier.

3. In a band cutter and feeder, the combination of a frame-work, a bundle carrier mounted upon the frame-work, swinging plates applied to opposite sides of the frame-work, a stub shaft carried by one of the swinging plates, a shaft journaled between the swinging plates, band cutters connected with the shaft, a gear wheel rigid with the shaft, a second gear wheel loosely mounted upon the stub shaft and meshing with the first mentioned gear wheel, a spur gear rigid with the second mentioned gear wheel, and means for transmitting motion from the spur wheel to the bundle carrier.

881,932. ROTARY IMPLEMENT. CAMDEN W. KEEN, Lodi, Cal. Filed Nov. 10, 1906. Serial No. 342,831.



1. A rotary implement, comprising radial arms carried by a hub and provided with traction means, quadrant-shaped journal boxes having parallel flanges and bolted to corresponding sides of said arms and at points inter-

mediate their ends, transverse journal pins carried by the parallel sides of said boxes and at a point near the top thereof, pivotal depending teeth journaled on said pins, pins carried by said boxes parallel to said journal pins and adapted to limit the upward movement of said teeth during one half of a revolution of said implement.

2. An implement comprising a journal box with one open and one closed side, two parallel segment shaped sides, projecting parallel flanges and an intermediate bolt carried on the exterior of said closed side, transverse journal pins carried by said parallel sides at a point near the top thereof, pivotal depending teeth journaled on said pins, pins carried by said parallel sides and parallel to said journal pins and adapted to engage said teeth during pivotal movement of the latter.

881,933. VEHICLE. CHARLES H. KRAMER, Pittsburg, Pa. Filed Dec. 3, 1906. Serial No. 345,987.



1. In a device of the character described; an adjustable shoe member secured to the axle; a slot formed in said shoe member; a fixed contacting member secured to the under side of the spring bearing block; limiting means, formed on said fixed member, adapted to enter and operate in the slot formed in said shoe member; and locking means, passing through the shoe and engaging the limiting means.

2. In a device of the character described; an adjustable shoe member secured to the axle; a slot formed in said shoe member; a fixed member secured to the under side of the spring bearing block; a lug formed on said fixed member adapted to enter and operate in the slot formed in said shoe member; and locking means, passing through the shoe member, adapted to engage the lug portion formed on said fixed member.

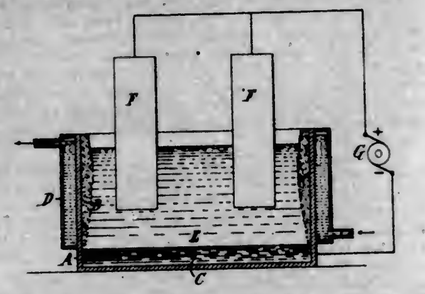
3. In a device of the character described; an adjustable shoe member seated over and secured to the axle; a slot formed in said shoe member; a fixed member secured to the under side of the spring bearing block adapted to engage the adjustable shoe member; a lug formed on said fixed member adapted to enter and operate in the slot formed in said shoe member; set screws entering said slot, their inner ends adapted to engage the lug formed on the fixed member; as, and for, the purpose set forth.

4. In a device of the character described the combination with the springs and axles of a vehicle, of a fixed member secured to the under side of the spring bearing block; a lug portion on said fixed member; an adjustable shoe member seated over and secured to the axle; a slot formed in said latter member adapted to receive the lug on said fixed member; and the set screws entering said slot through the shoe member their inner ends adapted to engage against said lug; as, and for, the purpose set forth.

5. In combination with an axle and a spring bearing block, a block carried by the axle, a member having lugs engaging the spring bearing block, and means for effecting the adjustment of the member and the block of the axle, one with relation to the other.

881,934. PROCESS OF PRODUCING ALUMINUM-MAGNESIUM ALLOYS. FRANZ VON KÜGELGEN and GEORGE O. SEWARD, Holcombe Rock, Va., assignors to Virginia Laboratory Company, New York, N. Y., a Corporation of New York. Filed Apr. 27, 1905. Serial No. 257,618.

1. The process of producing aluminum-magnesium alloys, which consists in electrolysing magnesium oxid dissolved in a fused salt of low specific gravity in the presence of a cathode of molten aluminum-magnesium alloy with which the separated magnesium alloys.



2. The process of producing aluminum-magnesium alloys, which consists in electrolysing magnesium oxid dissolved in a fused salt in presence of a cathode of molten aluminum-magnesium alloy with which the separated magnesium alloys.

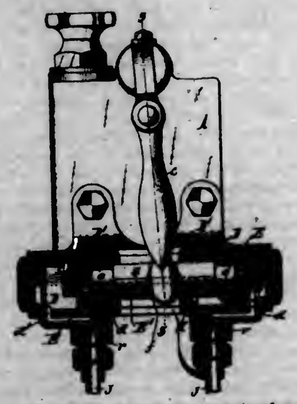
3. The process of producing aluminum-magnesium alloys, which consists in electrolysing magnesium oxid dissolved in a fused fluorid in the presence of a cathode of molten aluminum-magnesium alloy with which the separated magnesium alloys.

4. The process of producing aluminum-magnesium alloys, which consists in electrolysing magnesium oxid dissolved in fused magnesium fluorid and a fluorid of a more electro-positive metal in the presence of a cathode of molten aluminum-magnesium alloy with which the separated magnesium alloys.

5. The process of producing aluminum-magnesium alloys, which consists in electrolysing a combined fused bath of a magnesium compound and an aluminum compound.

[Claims 6 to 8 not printed in the Gazette.]

881,935. MOTOR. CHARLES W. MANSEL, Buffalo, N. Y., assignor to Standard Automatic Lubricator Co., Buffalo, N. Y., a Corporation of New York. Filed Aug. 28, 1905. Serial No. 276,035.



1. In a motor, the combination of a pair of opposing cylinders each having an inlet port and an exhaust port, connected pistons arranged in the cylinders, means independent of the inlet ports for permitting the pressure fluid to escape from the rear to the front side of each piston on its return stroke, and means arranged in said inlet ports for checking the return of the pressure fluid through the same, whereby the advancing piston is cushioned at the end of its stroke by the compression of the fluid behind the retreating piston, substantially as set forth.

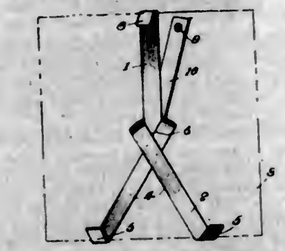
2. In a motor, the combination of a pair of opposing cylinders each having an inlet port leading to its rear end and an exhaust port at its opposite end, a pair of connected pistons arranged in the cylinders, means independent of the inlet ports for permitting the pressure fluid to escape from the rear to the front side of each piston on its return stroke, check valves in said inlet ports arranged to prevent the return of the pressure fluid through the same, and means for alternately admitting the pressure fluid to the inlet ports of the two cylinders, substantially as set forth.

3. In a motor, the combination of a pair of opposing cylinders each having an inlet port leading to the rear end thereof, pistons arranged in the cylinders, means for permitting the fluid to escape from the rear to the front side of each piston on its return stroke, a rod conecting the pistons and provided with a longitudinal exhaust port or channel which connects the front ends of the cylinders with the atmosphere, and check valves in said inlet ports arranged to prevent the return of the pressure fluid through the same, substantially as set forth.

4. In a motor, the combination of a cylinder having an inlet port and provided in its front end with an exhaust opening having a tapering seat, a piston arranged in the cylinder and having a tapering front end adapted to bear against said seat for tightly closing said opening, and means for actuating the piston, substantially as set forth.

5. In a motor, the combination of a pair of opposing cylinders each having an inlet port and provided in its front end with an exhaust opening having a tapering seat, connected pistons arranged in the cylinders and provided with tapering front ends adapted to bear against said seats for tightly closing said openings, means for permitting the fluid to escape from the rear to the front side of each piston on its return stroke and means in said inlet ports arranged to prevent the return of the pressure fluid through the same, substantially as set forth.

881,936. PICTURE-HOLDER. GROVER N. MARVIN, Oberlin, Kans. Filed Mar. 29, 1907. Serial No. 365,335.

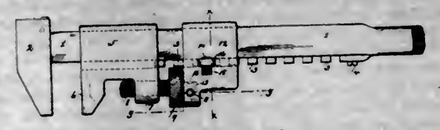


1. A support for pictures and the like comprising a pair of complemental sections, one of said sections being formed with an eye and comprising a pair of arms designed to engage an edge portion of the picture, while the opposite complemental section is formed of a flexible strip adapted to pass through the said eye of the first mentioned section, the flexible strip being designed to be either returned and suspended from the wall, or deflected outwardly to form a prop for the picture.

2. A support for pictures and the like comprising a cross bar having laterally disposed arms projecting therefrom, the said arms crossing each other to form a loop, and a flexible strip passing through the said eye and designed to be bent around the before mentioned cross bar, said strip being provided with means for engaging an edge of the picture.

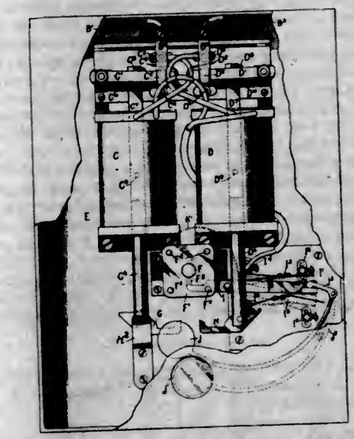
3. A support for pictures and the like comprising a cross bar the end portions of which are bent laterally and angularly to form diverging arms which cross each other and are provided at their extremities with means for engaging an edge of the picture, and a flexible strip adapted to be bent around the before mentioned cross bar and constituting a support for the picture, one end of the flexible strip being provided with means for engaging an edge of the picture.

881,937. WRENCH. GEORGE W. MASON, Sharon, Pa. Filed July 25, 1906. Serial No. 327,639.



In combination, a bar having a stationary jaw, teeth formed on said bar, a head movable on the bar, a supplemental head movable on the bar, means for moving the first named head independently of the supplemental head, said supplemental head having a transverse opening, a bar extending through the transverse opening adapted to extend between the teeth of the bar, said second named bar having a cross head on one end, a screw head removably engaging the opposite end, a lug on the bar intermediate its ends, said supplemental head having an opening communicating with the transverse opening, said second opening being positioned above the lug of the bar when the bar is in applied position, a spiral spring engaging the lug of the bar, and a closure for the second opening, said spiral spring contacting with said closure.

881,938. BLOCK-SIGNAL. DON D. MILES, Jr., Aurora, Ill. Filed Nov. 10, 1906. Serial No. 342,773.



1. A block system comprising a display signal, a controlling device therefor, comprising an electro-magnetic device actuated by the car, a controlling part for the display signal, actuated by the said electro-magnetic device and having both rotary and longitudinal movement.

2. A block system comprising two sets of apparatus located at different points, two sets of lights associated with each apparatus, a single line or conductor between the two sets of lights, and with which said lights are connected, a controlling switch associated with each set of lights, and circuit connections arranged so that either set of lights of each apparatus can be connected with said line.

3. A block system comprising two sets of apparatus located at different points, two sets of lights associated with each apparatus, a single line or conductor between the two sets of apparatus, and with which said lights are connected, a controlling switch associated with each set of apparatus, circuit connections arranged so that either set of lights of each apparatus can be connected with said line, an auxiliary switch adapted to be connected with said line, and to be actuated when a car leaves the block so as to momentarily extinguish the lights.

4. A block system comprising a display signal, a switch controlling the same, a controlling part for the switch comprising two screw threaded parts, one engaging the

other, and means for rotating one with relation to the other when a car enters or leaves the block.

5. A block system comprising a display signal, a controlling device therefor, two electro-magnetic actuating devices for said controlling part and adapted to move it in opposite directions, two contact devices at each end of the block adapted to be successively connected in circuit by a part on the car, and a selecting device for selecting which electro-magnetic device will be energized, and arranged so that only one is energized during the passage of the car.

[Claims 6 to 15 not printed in the Gazette.]
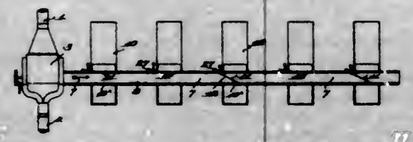
881,939. FASTENING DEVICE FOR MEN'S GARTERS. ROSWELL A. MOORE, Jr., Berlin, Conn., assignor to Waterbury Buckle Co., Waterbury, Conn., a Corporation. Filed July 12, 1907. Serial No. 383,416.



1. In a fastening device for men's garters, the combination with a hook-member formed with a hook the beak of which is turned inwardly, of a corner-plate formed with an integral guard-plate set inward in a plane parallel with it and separated from it by a segmental opening which is adapted to receive the beak of the hook, the said corner-plate being also formed with an inwardly turned flange concentric with the said opening and standing adjacent to the edge of the beak of the hook.

2. In a fastening device for men's garters, the combination with a hook-member formed with a hook the beak of which is turned inwardly, of a corner-plate having a centrally arranged circular boss and a substantially circular guard-plate located below the said boss in a plane parallel with the plane of the body of the corner-plate and separated from the said boss by a substantially circular opening which is adapted to receive the inwardly turned beak of the said hook which engages with the said guard-plate.

881,940. COTTON-DISTRIBUTING APPARATUS. ALBERT H. MORTON, Lowell, Mass. Filed Nov. 9, 1904. Serial No. 232,041.



1. An apparatus for conveying and distributing cotton to a plurality of receptacles arranged in a row, consisting of an endless belt constantly running in the same direction over the several receptacles, adapted to receive cotton at one end and to carry it over the receptacles, combined with means at each receptacle automatically controlled by the quantity of cotton therein for diverting the cotton directly from the belt into such receptacles, substantially as described.

2. Cotton distributing apparatus for cotton mills, having, in combination, a plurality of receptacles, a pneumatic conveyer, a condenser connected with said conveyer, a mechanical conveyer constructed and arranged to receive cotton from the condenser and to convey it to the receptacles and means for removing the cotton from the mechanical conveyer and diverting it into each receptacle substantially as described.

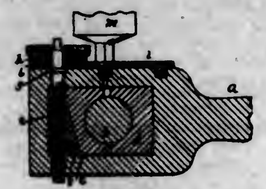
3. Cotton distributing apparatus for cotton mills, having, in combination, a plurality of receptacles for cotton, a pneumatic conveyer, a condenser connected with said conveyer, an endless belt conveyer for transferring the cotton from the condenser to the receptacles, and a movable gate at each receptacle for diverting the cotton from the belt into the receptacle, substantially as described.

4. An apparatus for conveying and distributing cotton to a plurality of receptacles arranged in a row, consisting of an endless belt constantly running in the same direction over the several receptacles, adapted to receive cotton at one end and to carry it over the receptacles, combined with a gate at each receptacle for diverting the cotton directly from the belt into such receptacle and automatic means at each receptacle for controlling the operation of the gate according to the amount of cotton in the receptacle substantially as described.

5. Cotton distributing apparatus for cotton mills, having, in combination, a receptacle for cotton, a conveyer for supplying cotton thereto, a gate for controlling the delivery of cotton from the conveyer into the receptacle, a feeler for detecting the amount of cotton in the receptacle, and mechanism controlled by the feeler for operating the gate, substantially as described.

[Claims 6 to 40 not printed in the Gazette.]

881,941. AUTOMATIC BOX-ADJUSTING MECHANISM. EDWARD MCKAY and BERT C. LAYTON, Addison township, Oakland county, Mich. Filed Oct. 1, 1906. Serial No. 336,843.



1. The combination with an adjustable bearing of a wedge engaged with one face of the bearing, a bolt having a threaded engagement with the wedge to move the wedge relative to the bearing, and a spring about one end of the bolt to exert its tension upon the bolt.

2. The combination with an adjustable bearing of a wedge adjacent to one face of the bearing, a bolt having a threaded engagement with the wedge to move the wedge relative to the bearing, a spring to exert its tension upon the threaded bolt, and a case for the spring, said spring having one extremity engaged with the bolt and the other extremity with the case.

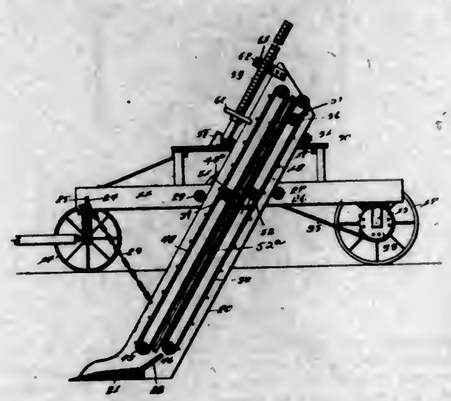
3. The combination with an adjustable bearing having a continuous wedge shaped face on one side thereof, of a wedge having a continuous wedge shaped face on one side thereof earing against the wedge shaped face of the bearing, a bolt having a threaded engagement with the wedge to move the wedge relative to the bearing, and a spring about one end of the bolt to exert an automatic tension upon the bolt.

4. The combination with a strap of a journal therewithin, a divided bearing about the journal within the strap, a wedge located between the inner face of the strap and the adjacent face of the divided bearing, a bolt having a threaded engagement with the wedge, and a spring to exert its tension upon the bolt to automatically move the wedge relative to the adjacent bearing to force the bearing upon the journal, the wedge and the adjacent face of the bearing having continuous wedge shaped surfaces.

5. The combination with a strap of a journal therewithin, a divided bearing within the strap about the journal, one portion of said bearing being adjustable and having a continuous wedge shaped surface, a wedge having a continuous wedge shaped surface located between the wedge shaped surface of the adjustable bearing and the adjacent face of the strap, a bolt having a threaded engagement with the wedge, and a spring about one end of the bolt to exert an automatic tension upon the bolt to move the wedge relative to the bearing to force the adjustable bearing upon the journal.

[Claim 6 not printed in the Gazette.]

881,942. DITCHING-MACHINE. THOMAS E. NICHOLSON, Washington, Iowa. Filed Feb. 19, 1907. Serial No. 358,997.



1. A ditching machine, comprising a wheeled truck, a plow depending from said truck, parallel elevators depending from said truck and spaced apart to receive cut earth between them, and driving connections between traction wheels of said truck and said elevators.

2. A ditching machine, comprising a truck, an elevator frame mounted in said truck in an inclined plane and movable longitudinally through said truck, a plow mounted on the lower end of said frame, elevators mounted in said frame, driving connections between traction wheels of the truck and said elevators, and a stay chain fixed to the lower end of said frame and adjustably attached to said truck.

3. In a ditching machine, parallel elevators spaced apart and adapted to receive earth between them, and means for driving said elevators in opposite directions.

4. In a ditching machine, a frame, side-bars mounted in inclined positions in said frame, said side bars formed with longitudinal slots, roller bearings on said frame supporting said side-bars, shafts on said frame extending through said slots, elevators mounted in parallel relations between said side-bars and driven in opposite directions by said shafts, driving connections between said shafts and traction wheels, a plow on said side-bars, and screw devices for moving said side-bars longitudinally through said frame.

5. A ditching machine, comprising a traction truck, side-bars mounted therein in inclined positions and formed with longitudinal slots, shafts mounted on said truck and extending through said slots, driving connections between the traction wheels of the truck and said shafts, elevators mounted parallel with each other in said frame and spaced apart to receive cut earth between them, a plow between the lower end portions of said side-bars adjacent the lower ends of said elevators, connections between said shafts and the elevators, a side-delivery carrier mounted on the upper ends of said side-bars and geared to one of said elevators, screw mechanism mounted on said truck and engaging said side-bars whereby the elevators and plow may be raised and lowered by manual actuation, roller-bearings on said truck at the front and rear of the side-bars and engaging therewith, and a stay-chain fixed to said side-bars and adapted to be detachably connected to the forward end portion of said truck.

881,943. ELECTRIC-LIGHT SIGN. MORTIMER NORDEN, New York, N. Y., assignor to The Electric Carriage Call Company, New York, N. Y., a Corporation of New York. Filed Aug. 21, 1906. Serial No. 331,445.

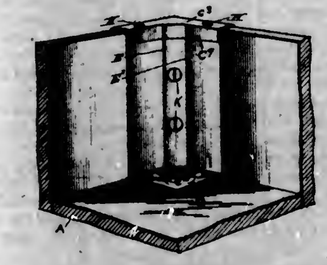


1. In an electric sign, the combination of a plurality of interchangeable plates, each having openings in the form of a letter, numeral or character, and projecting walls around said openings forming the outline of the letter, numeral or character, substantially as set forth.

2. In an electric sign having socket terminals, the combination of interchangeable plates having openings in the form of a letter of the alphabet and a wall surrounding said openings and forming the contour of the letter, attached to and projecting forward from the plate, and lamps attachable to said socket terminals through the openings in said plate.

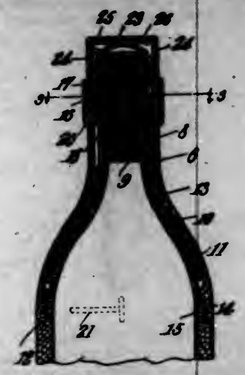
3. In an electric sign, the combination of lamp sockets adapted to be arranged to form a letter, numeral or other character, a plurality of substitutable plates locatable before said lamp sockets and each having openings in the form of a letter, numeral or character, and projecting walls around said openings forming the contour of the letter, the openings in said plates being in registry with the lamp sockets arranged to form a certain letter, numeral or character, and lamps attachable to said sockets through said openings in the plate.

881,944. DEVICE FOR REINFORCING BUGGY-BOXES. WILLIAM D. OTIS, Trenton, Nebr. Filed Sept. 18, 1907. Serial No. 393,554.



A reinforcing means for buggy boxes comprising, in combination with the box, an inside plate having two wings which are at right angles to each other with an intermediate portion which is apertured, the bottom of said plate being at right angles to the sides thereof, the upper end of the plate being flush with the upper edge of the box, an outside angular plate having a flange at its upper end extending over the upper edge of the box and top of the inner plate and having a downwardly bent portion conforming to said right angled portions of the inner plate and intervening portion, a right angled flange at the lower end of said outside angular plate and screws passed through the flat portion of the inside plate intermediate the two side wings thereof, as shown and described.

881,945. BOTTLE-SEAL. MIGUEL PEREZ, Chicago, Ill. Filed Nov. 2, 1907. Serial No. 400,393.



1. A receptacle having a neck, a tubular member surrounding the neck and terminating short of the free end of the latter, a label mutilating member interposed between the neck and tubular member, and a cap bearing against the adjacent end of the tubular member and forming a closure for the neck.

2. A receptacle having a neck the exterior walls of which are threaded, a tubular member engaging the threads on the neck and terminating short of the free end of the latter, a stopper, a label mutilating member extending transversely across the stopper and interposed between the neck and tubular member, and a cap bearing against the adjacent end of the tubular member and forming a housing for the stopper.

3. A receptacle having a neck the exterior walls of which are threaded, a tubular member engaging the threads on the neck and terminating short of the free end of the latter, a mutilating member interposed between the tubular member and neck of the bottle, and a cap engaging the threads on the neck and bearing against the adjacent end of the tubular member, said cap forming a closure for the neck of the bottle.

4. A receptacle having a neck the exterior walls of which are threaded, a tubular member engaging the threads on the neck and terminating short of the latter, a stopper seated in the neck, a mutilating member extending transversely across the stopper and having its opposite ends interposed between the tubular member and neck, and a cap engaging the threads on the neck and bearing against the tubular member, said cap being spaced from the mutilating member to form an intermediate chamber.

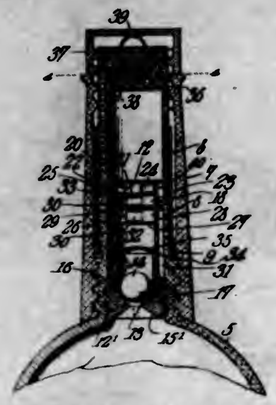
5. A receptacle having a neck the exterior walls of which are threaded, a tubular member engaging the threads on the neck and terminating short of the free end of the latter, a stopper seated in the neck, a mutilating member having its intermediate portion bent to form a finger-loop disposed at said neck and its opposite ends provided with depending canceling fingers interposed between the tubular member and neck, and a cap threaded on the neck of the bottle and bearing against the adjacent end of the tubular member, said cap being spaced from the stopper by contact with the finger loop.

[Claim 6 not printed in the Gazette.]

881,946. NON-REFILLABLE BOTTLE. MIGUEL PEREZ, Chicago, Ill. Filed Nov. 29, 1907. Serial No. 404,409.

1. A receptacle having a neck, a valve casing disposed within the neck and formed of terminal and intermediate sections, one of the terminal sections being provided with a valve seat and the other with a perforated top, a valve engaging the seat, a cap slidably mounted in the intermediate casing section and forming a housing for the valve, and a movable guard disk carried by one of said sections.

2. A receptacle having a neck, a valve casing disposed within the neck and formed of terminal and intermediate sections detachably secured together, the lower section being provided with a valve seat and the upper section with a perforated top, a valve engaging said seat, a cap slidably mounted in the intermediate section and forming a housing for the valve, a perforated diaphragm carried by the upper section and spaced from the perforated top thereof to form superposed chambers, a movable guard disk disposed within one of said compartments, there being openings formed in the walls of the valve casing and communicating with said compartments.



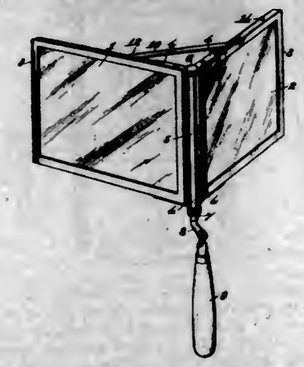
3. A receptacle having a neck, a valve casing disposed within the neck and formed of terminal and intermediate sections detachably united, the lower section being provided with a valve seat and the upper section with a perforated top, the walls of which are extended laterally to produce a peripheral flange adapted to bear against the interior walls of the neck, a perforated partition extending transversely across the upper section and defining superposed compartments, there being openings formed in the walls of said section and communicating with said compartments, an imperforate diaphragm disposed within the intermediate casing section, a perforated diaphragm spaced from the imperforate diaphragm to form a liquid receiving chamber, a guard disk arranged within one of the superposed compartments and normally covering the perforations in the adjacent transverse partition, and a cap slidably mounted in the intermediate casing section and forming a housing for the valve.

4. A receptacle having a neck, a valve casing disposed within the neck and comprising terminal and intermediate sections one of the terminal sections being provided with a valve seat and the opposite terminal section formed with a perforated top, the peripheral edge of which is extended laterally to form a flange adapted to engage the interior walls of the neck, the intermediate section of the casing being perforated and having its upper end off set and threaded interiorly for engagement with the end of the adjacent terminal section, a flange bearing against the off set portion of the intermediate section, a gasket supported by the flange and bearing against the interior walls of the neck of the bottle, a perforated partition disposed within one of the terminal casing sections and defining superposed compartments, there being recesses formed in the walls of the upper casing section and communicating with said compartments, a valve engaging the seat, and a movable guard disk disposed within one of the superposed compartments.

5. A receptacle having a neck, a valve casing disposed within the neck and having one end thereof provided with a valve seat and its opposite end provided with a top, a valve engaging said seat, spaced partitions extending transversely across the casing and defining a plurality of superposed liquid receiving compartments, there being recesses formed in the walls of the casing and communicating with said compartments, a gravity actuated guard disk disposed within one of said compartments, and a cap slidably mounted within the casing and forming a housing for the valve.

[Claims 6 and 7 not printed in the Gazette.]

881,947. FOLDING HAND-MIRROR. PETER C. PETERSEN, Chicago, Ill., assignor of two-fifths to Hector Kelly, Chicago, Ill. Filed July 22, 1907. Serial No. 385,036.

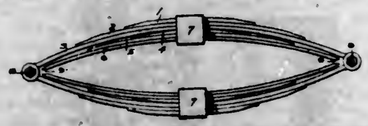


1. In a device of the class described, a pair of mirrors hingedly connected and adapted to swing to open and folded positions, a rod forming a hinge pin for said mirrors, and having an extension formed at right angles to the hinge pin portion and a handle pivotally connected thereto, substantially as described.

2. In a device of the class described, a pair of mirrors hingedly connected and adapted to swing to open and folded positions, a rod forming a hinge pin for said mirrors and having an extension formed at right angles to the hinge pin portion, a handle pivotally connected thereto, means for holding said mirrors in fixed relation to each other when in open position, and means on said rod for holding said mirrors in fixed relation to said handle, substantially as described.

3. In a device of the class described, a pair of mirrors hingedly connected and adapted to swing to open and folded positions, a rod forming a hinge pin for said mirrors a handle pivotally connected thereto, means for holding said mirrors in fixed relation to each other when in open position, and means on said rod for holding said mirrors in fixed relation to said handle, substantially as described.

881,948. ELLIPTIC SPRING. WILLIAM G. PRICE, New Castle, Pa. Filed Aug. 18, 1906. Serial No. 331,141.

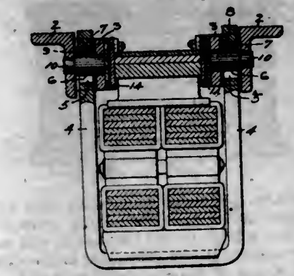


An elliptic spring comprising a plurality of complete springs each composed of a plurality of leaves, said springs being placed one within the other and being in contact only at their middles, the leaves of the inner spring or springs being thinner than those of the outer spring.

881,949. TRUCK-BOLSTER HANGER. WILLIAM G. PRICE, New Castle, Pa. Filed Aug. 20, 1906. Serial No. 331,349.

1. In a truck, the combination of a frame, and bolster hangers pivotally suspended from the frame, the pivotal joints comprising pins and eyes constructed to contact on a line only and the eyes being wider than the pins, thereby producing a rocking movement one on the other.

2. In a truck, the combination of a frame, and a bolster hanger pivotally suspended from the frame, the pivotal joints comprising pins supported by the frame and having rounded upper faces and eyes wider than the pins and having substantially flat seats bearing on the rounded faces of said pins.



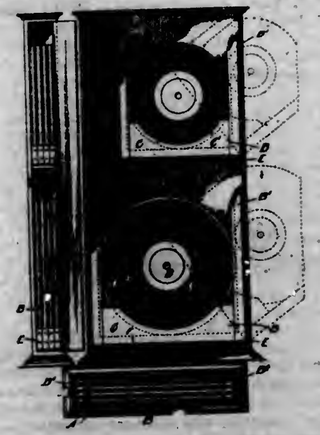
3. In a truck, the combination of transoms, hanger brackets secured thereto, bolster hangers provided with eyes, pins passing through openings in the hanger brackets and the eyes of the hangers and having reduced ends projecting into the transoms, and wear plates secured to the brackets and covering the ends of the pins.

4. In a truck, the combination of a frame, and a bolster hanger pivotally suspended from the frame, the pivotal joints of the hanger comprising eyes provided with hardened saddle pieces and hardened pins.

5. In a truck, the combination of the frame, bolster hangers pivotally suspended from the frame, the pivotal joints of the hanger comprising eyes and pins, said eyes being much larger than the pins, and hardened saddle pieces in the eyes and resting on the pins.

[Claims 6 and 7 not printed in the Gazette.]

881,950. CABINET FOR HOLDING DISK RECORDS. CHARLES H. PROGLER, Ripley, W. Va. Filed Jan. 23, 1908. Serial No. 412,352.



A cabinet for holding disk records, a pivot pin mounted in the walls of the cabinet, a rack having its opposite edges made up of a plurality of resilient strips spaced apart, a cross piece connecting the strips forming the opposite edges of the rack, said cross piece having its edge concaved and said concaved edge having a correspondingly concaved recess for the reception of a record designed to be frictionally engaged and held therein by the inner edges of said resilient strips, a hinge mounted upon said pin and secured to said rack, as set forth.

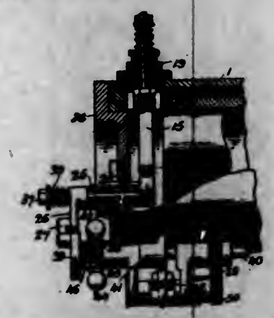
881,951. BARREL OR RECEPTACLE. HENRY S. REYNOLDS, Brooklyn, N. Y., assignor to Elizabeth C. Seaman and E. R. Gilman, Brooklyn, N. Y. Filed Mar. 13, 1906. Serial No. 305,768.



1. A receptacle comprising a clamping ring having an annular shoulder and a bendable locking portion, a cylindrical body, and a head therein, said body and head having their free edges bent at right angles to the side of said body to form a pair of flatwise engaging annular flanges, and said ring having its locking portion also bent at right angles to the side of said body but in a direction opposite to that of the body and head flanges and also inwardly therefrom to clamp said body and head flanges flatwise thereof between said annular shoulder and the crosswise-extending wall of the locking portion of said clamping ring.

2. A receptacle comprising a clamping ring having an interiorly located annular shoulder and a relatively long bendable locking portion, a cylindrical body, and a head therein, said body and head having their free edges bent outwardly at right angles to the side of said body to form a pair of flatwise engaging flanges, and said ring having its locking portion also bent inwardly at right angles to the side of said body and therefore in a direction opposite to that of the body and head flanges and also inwardly therefrom to clamp said body and head flanges flatwise thereof between said annular shoulder and the crosswise-extending wall of the locking portion of the clamping ring.

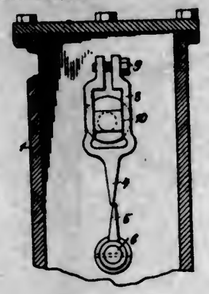
881,952. IGNITING DEVICE FOR GAS-ENGINES. JOHN V. RICE, Jr., Bordentown, N. J. Filed June 1, 1906. Serial No. 319,694.



1. In an igniting device for gas engines, the combination with a sparker, of mechanism for moving one of the electrodes of said sparker, and a governor for controlling the time of sparking, said governor consisting essentially of a rotatably-shiftable disk having a slotted sleeve, weighted levers engaging slots in the shaft that carries the disk, and connections between the disk and the movable electrode, substantially as described.

2. In an igniting device for gas engines, the combination with a sparking mechanism, of a governor for controlling the time of sparking, said governor consisting essentially of a rotatably-shiftable disk having a slotted sleeve, a shaft over which said sleeve fits, said shaft having inclined slots therein, and the ball levers pivoted in the sleeve and having their inner ends engaging the said inclined slots, together with connections between the disk and one of the electrodes of the sparking mechanism, substantially as described.

881,953. IGNITING DEVICE FOR GAS-ENGINES. JOHN V. RICE, Jr., Bordentown, N. J. Filed June 5, 1906. Serial No. 320,230.

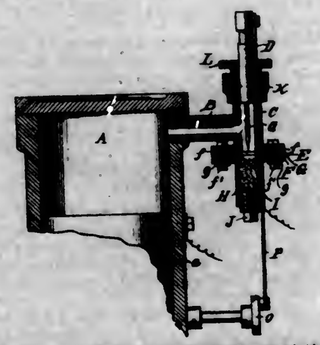


1. In an igniting device for gas engines, the combination with the positively rocking electrode, of a yielding electrode, a frame with which it is formed integrally, said frame having elastic sides serrated on their inner opposing edges and provided with a clamping device for securing them together, and a support that is engaged by the serrated sides, substantially as described.

2. In an igniting device for gas engines, the combination with the rocking electrode, of a yielding electrode having an integral rectangular frame, said frame having elastic sides serrated on their edges, a supporting pin on which said frame is clamped, said pin being provided with an external arm, and spring devices attached to the opposite sides of said arms substantially as described.

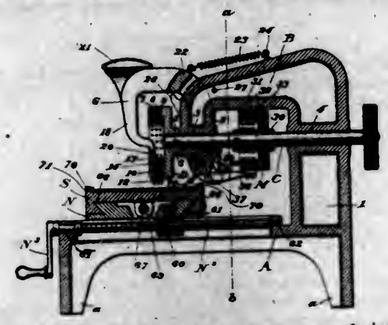
3. In an igniting device for gas engines, the combination of rocking electrode, a yielding electrode having an integral rectangular frame, said frame having elastic sides serrated on their inner opposing edges, a supporting pin to which said frame is clamped; said pin having an external arm, a flat spring bearing against said arm, spiral springs attached to the upper end of said arm, and means for adjusting the tension of said spiral spring.

881,954. IGNITING DEVICE FOR GAS-ENGINES. JOHN V. RICE, Jr., Bordentown, N. J. Filed June 22, 1906. Serial No. 322,814.



In a sparker, a fluid metal electrode consisting of mercury or quicksilver, a receptacle therefor, said receptacle having an adjustable bottom, in combination with a movable electrode, a main shaft, a crank disk thereon, and a rod connecting said crank disk with the movable electrode, all arranged so that the reciprocation of said movable electrode may be accomplished by the connections between it and the main shaft.

881,955. TYPOGRAPHIC MACHINE. FRANCIS H. RICHARDS, Hartford, Conn., assignor, by mesne assignments, to American Typographic Corporation, a Corporation of New Jersey. Filed Mar. 28, 1902. Serial No. 100,418.



1. A machine for impressing characters or designs on suitable materials, comprising a rotatable shiftable carrier provided with movable dies, means for bringing a selected die to working position, a carrier-locking member movable in unison with the carrier, a universal coöperative locking-member for locking the carrier at the selected position, and a rocking frame for operating said dies.

2. A machine for impressing characters or designs on suitable materials, comprising a rotatable shiftable carrier provided with movable dies, means for bringing a selected die to working position, a carrier-locking member movable in unison with the carrier, a universal coöperative locking-member for locking the carrier at the selected position, and a rocker for operating said dies and common to all of them.

3. A machine for impressing characters or designs on suitable materials, comprising a rotatable shiftable carrier provided with a plurality of series of movable dies, means for bringing a selected die to working position, a carrier-locking member movable in unison with the carrier, a universal coöperative locking-member for locking the carrier at the selected position, and a rocker for operating said dies and said coöperative locking member.

4. A machine for impressing characters or designs on suitable materials, comprising a rotatable shiftable carrier provided with a plurality of series of movable dies, means for bringing a selected die to working position, a carrier-locking member movable in unison with the carrier, a universal coöperative locking-member for locking the carrier at the selected position, and means for operating said dies common to all of them and for controlling said coöperative locking member.

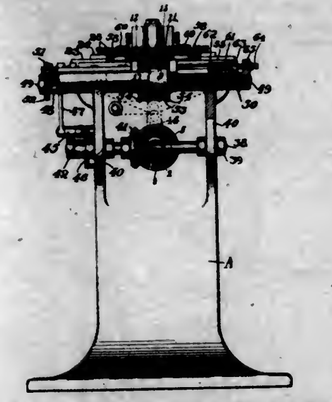
5. A machine for impressing characters or designs on suitable materials, comprising a rotatable shiftable carrier provided with movable dies, means for bringing a selected die to working position, a carrier-locking member movable in unison with the carrier, a universal coöperative locking-member for locking the carrier at the selected position, and a striker or presser device for operating said dies by movement in one direction and for unlocking said coöperative locking member on its return.

[Claims 6 to 47 not printed in the Gazette.]

881,956. CARVING-MACHINE. FRANCIS H. RICHARDS, Hartford, Conn. Filed Apr. 19, 1902. Serial No. 103,705.

1. In a carving machine, a tool-carriage consisting of parallel rods, a cross-head connecting the lower ends of said rods, a second cross-head connecting the upper ends of said rods, guides for said rods between said cross-heads, and parallel tool-beds on opposite sides of said second cross-head.

2. In a carving machine, the combination of a table provided with parallel guide-bores therethrough, a tool-carriage mounted in said guide-bores and consisting of rods passing through said bores, a cross-head connecting the ends of said rods below said table, and a second cross-head connecting the ends of said rods above said table, and tool-beds upon opposite sides of said second cross-head parallel with the said guide-bores.



3. In a carving machine, the combination of a table provided with a plurality of parallel guide-bores therethrough, a plurality of parallel stock-guides upon opposite sides of said bores, a tool-carriage mounted in said guide bores and consisting of rods passing through said bores, a cross-head connecting the ends of said rods below said table, and a second cross-head connecting the ends of said rods above said table, and tool-beds upon opposite sides of said second cross-head parallel with said guide-bores and said stock-guides.

4. In a carving machine, the combination of a box-like frame, the top of said frame being provided with a plurality of parallel stock-guides and with parallel guide-bores through said top between said stock-guides, a tool-carriage mounted in said guide bores and consisting of rods slidably mounted in said guide bores, a cross-head connecting the ends of said rods below said top, a second cross-head connecting the ends of said rods above said top, tool-beds upon opposite sides of said second cross-head parallel with said guide-bores and stock-guides, a shaft mounted in said frame perpendicular of and in the same plane with said cross-heads, a crank on said shaft lying entirely within and inclosed by said frame, and a rod connecting said crank with the first-mentioned cross-head.

5. In a carving machine, the combination of a box-like frame, the top of said frame being provided with a plurality of parallel stock-guides arranged back-to-back, and with parallel guide bores through said top between said stock-guides, a tool-carriage mounted in said guide-bores and consisting of a plurality of rods slidably mounted in said guide bores, a cross head connecting the ends of said rods below said top, a cross-head connecting the ends of said rods above said top, said second cross-head projecting transversely of and over said stock-guides, a plurality of tools carried by the projecting portions of said second cross-head and directed toward said stock-guides and parallelly of said guide-bores, a shaft mounted in said frame, a crank on said shaft within and entirely inclosed by said frame, said crank directly in alinement with the line of motion of said carriage, and a rod connecting said crank and the first mentioned cross-head.

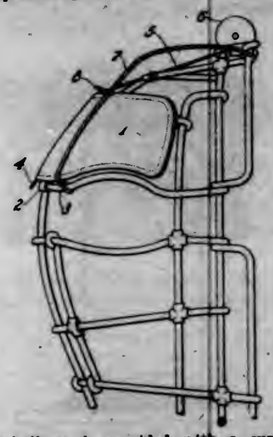
[Claims 6 to 16 not printed in the Gazette.]

881,957. BASE-BALL MASK. GEORGE H. RIDLON, Revere, Mass., assignor to William Read & Sons, Boston, Mass., a Firm. Filed Oct. 26, 1907. Serial No. 399,347.

1. A base-ball mask provided with a sun-shade, and means for securing the sun-shade in operative and inoperative position.

2. A base-ball mask provided with a sun-shade, means for holding the sun-shade in operative position, and a

spring contrivance normally tending to move the sun-shade to inoperative position.



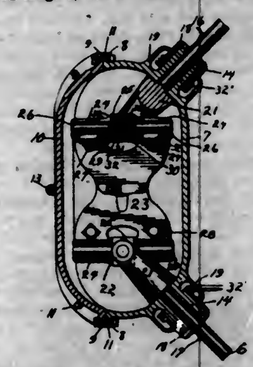
3. A base-ball mask provided with a sun-shade, and means for movably supporting the sun-shade so that it may be held in operative or inoperative position.

4. A base-ball mask provided with a sun-shade, guard wires secured to the mask outside of the frame for supporting the sun-shade.

5. A base-ball mask provided with a sun-shade movable from operative to inoperative position, and a spring device connected with the sun-shade to hold it in one position.

[Claim 6 not printed in the Gazette.]

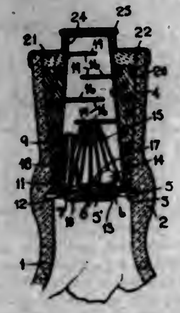
881,958. ANGLE-COUPLING. STILLMAN W. ROBINSON, Columbus, Ohio, assignor to The Robinson-Tilton Machinery Company, Columbus, Ohio, a Corporation of Ohio. Filed Aug. 3, 1907. Serial No. 386,919.



1. In a device of the character described the combination with a block of a plurality of bearing members carried by said block, said block having oil pockets formed therein, the walls of said pockets being under-cut to more readily retain the oil and oil ducts leading from said oil pockets to the bearing members.

2. In a device of the character described the combination with a forked driving member, of a forked driven member, a connecting member, forked at each end, a block adapted to enter between the forked portions of the driven member and the forked portions of the connecting member at one end of said connecting member, bearing members carried by said block and adapted to engage the forked portions of the driving member and the forked portions of the connecting member, a second block adapted to enter between the forked portions of the driven member and the forked portions of the connecting member at the opposite end of the connecting member, bearing members carried by said block and adapted to engage said driven member and said connecting member, there being oil pockets having under-cut walls formed in the faces of said blocks and ducts leading from said oil pockets to said bearing members.

881,959. NON-REFILLABLE BOTTLE. LARS RÖD, Montreal, Quebec, Canada. Filed Mar. 14, 1907. Serial No. 362,434.



1. In a non-refillable bottle, a bottle provided with an annular recessed neck, a frusto-conical body within the neck provided with a tortuous passage and having its lower end perforated, means for closing said perforations, and springs for entering said recesses and preventing the removal of the body.

2. In a non-refillable bottle, a frusto-conical hollow body having a perforated plate at one end and a plurality of oppositely extending substantially half moon shaped partitions toward the other end, pivotally mounted stoppers for said perforations, and a weight for closing the same.

3. In a non-refillable bottle, a substantially frusto-conical hollow body provided with a perforated plate at one end, and having oppositely extending alternately arranged half moon projections in the remaining portion, a lever passed through said plate and pivotally mounted therein, the ends of said lever being provided with means for closing said perforations, and a ball for engaging with one of said means.

4. In a non-refillable bottle, a substantially frusto-conical hollow body provided with a perforated plate a bent lever passed through said plate and pivotally mounted therein, the ends of said lever being provided with means for closing said openings, a pipe connecting with one of said openings, a spring connected with said lever at its pivot point in position for engaging the said pipe, a ball in said body for engaging with one of said closing means, and oppositely extending alternately arranged projections in the upper portion of said body.

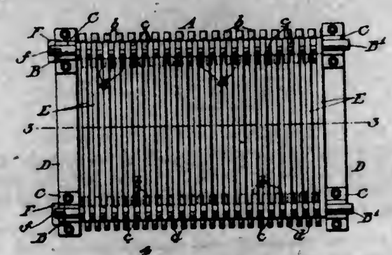
5. In a non-refillable bottle, a substantially frusto-conical hollow body provided with a perforated bottom, a pipe communicating with one of said openings, a lever pivotally mounted in said bottom, one end of which is provided with a cork for closing the pipe, and the other is provided with a winged valve for closing the other opening, a spring connected with the lever at its pivot point in position for engaging with said pipe, a cage upon said bottom, a ball in the cage adapted to rest upon said valve or either of the wings, and oppositely extending alternately arranged half moon projections in the remaining portion of said body.

[Claim 6 not printed in the Gazette.]

881,960. GRATE-BAR. CHARLES W. ROLIN, Philadelphia, Pa., assignor to himself and Horace E. Frick, Philadelphia, Pa. Filed Oct. 4, 1907. Serial No. 395,831.

1. A support for grate bars having a plurality of grate bar seats arranged in two or more interchangeably used groups, the seats in different groups being spaced differently.

2. A rotatable support for grate bars having two or more groups of grate bar seats, each group of seats being at a different side of the support from any other groups and the seats in the different groups being spaced differently.

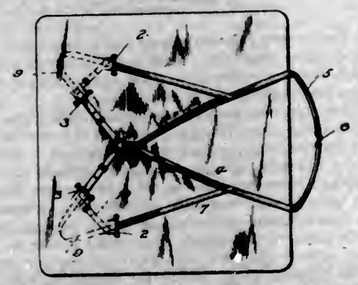


3. A rotatable support for grate bars having two or more groups of grate bar seats, each group of seats being at a different side of the support from any other groups and the seats in different groups being spaced differently, and means for locking said support in different operative positions.

4. A rotatable support for grate bars having two or more groups of grate bar seats, each group of seats being at a different side of the support from any other groups, the seats in different groups being spaced differently, the said support having slots in one end thereof, a slotted seat for the said end of said support and a key adapted to fit in the slotted seat and one of the slots in the support for locking the latter in operative position.

5. In a fire grate construction, the combination with a plurality of grate bars supporting means having grate bars bearing seats arranged in two or more interchangeably used groups, each group being adapted to support said bars at determined distances apart, different from the distances between the bars when supported by any other group of seats.

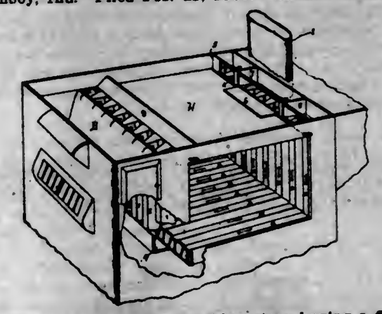
881,961. BLANKET-FASTENING FOR ANIMALS. SCOTT H. ROBABECK, Eaton Rapids, Mich. Filed June 10, 1907. Serial No. 378,257.



1. In combination with a blanket, converging straps arranged approximately centrally of the blanket, the separated ends of the straps projecting beyond an end of the blanket, means for securing the separted ends of the straps together, said blanket having perforations to either side of the converged portion of the straps, straps secured to the converged portion of the first named straps passing through the perforations of the blanket and being secured to the blanket on the same face as the first named straps, said second named straps forming loops on the face of the blanket opposite to the face to which the straps are secured.

2. In combination with a blanket, converging straps arranged approximately centrally of the blanket, the separated ends of the straps projecting beyond an end of the blanket, means for securing the separated ends of the straps together, said blanket having perforations to either side of the converged portion of the straps, straps secured to the converged portion of the first named straps passing through the perforations of the blanket and being secured to the blanket on the same face at the first named straps, said second named straps forming loops on the face of the blanket opposite to the face to which the straps are secured, and a reinforcing strap for each of the loops, said reinforcing strap being secured to its strap adjacent the perforations of the blanket.

881,962. COOKING STOVE OR RANGE. ELWOOD SCOTT, Marion, Ind., assignor of one-half to Robert Ridgway, Amboy, Ind. Filed Feb. 25, 1907. Serial No. 359,133.



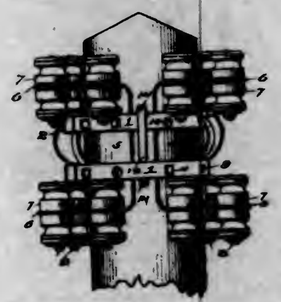
1. The combination in a cooking stove having a firebox, an outlet for products of combustion, and an oven spaced below the top of the stove, of a downtake for products of combustion leading from the firebox down one side of the oven, intercommunicating horizontal flues underlying the oven and having communication at one end with said downtake, uptake flues leading from the other ends of said horizontal flues along the opposite side of the oven and spaced at their upper open ends below the stove top, and two sets of dampers below the stove top, one set being adapted when closed to cut off partially communication between the space between the oven and stove top on the one hand and the outlet and the tops of said uptake flues on the other hand, and the other set being pivoted on vertical axes to swing laterally, being adapted in one position to coöperate with the first set to cut off such communication completely and in another position to coöperate therewith to cut off communication between said space on the one hand and the outlet and a portion of the uptake flues on the other hand and to place said space in communication with the tops of the remainder of the uptake flues.

2. The combination in a cooking stove having a firebox, an outlet for products of combustion, and an oven between the firebox and outlet and spaced below the top of the stove, of a downtake leading from the firebox along the front of the oven, intercommunicating horizontal flues leading from the bottom of said downtake beneath the oven, uptake flues leading from the rear ends of said horizontal flues along the rear of the oven and spaced at their open upper ends below the stove top, a damper adapted when closed to cut off all passage of products of combustion from the firebox rearward through the space above the oven, and two other sets of dampers below the stove top and in rear of the other damper, one set being adapted when closed to cut off partially communication between said space on the one hand and the outlet and the tops of said uptake flues on the other hand, and the other set being pivoted on vertical axes to swing laterally, being adapted in one position to coöperate with the first set to cut off such communication completely and in another position to coöperate therewith to cut off communication between said space on the one hand and a portion of the uptake flues on the other hand, said portion being in communication with the outlet, and to place said space in communication with the tops of the remained of the uptake flues.

3. The combination in a cooking stove having a firebox, an outlet for products of combustion, and an oven between

the firebox and outlet and spaced below the top of the stove, of a downtake leading from the firebox along the front of the oven, intercommunicating horizontal flues leading from the bottom of the downtake beneath the oven, uptake flues leading from the rear ends of said horizontal flues along the rear of the oven and spaced at their upper open ends below the stove top, said ends being in communication with the outlet, an upright plate extending across the space between the oven and stove top in advance of the tops of said uptake flues and having a central and two lateral damper openings, a damper controlling the central opening, and two other dampers pivoted at their inner ends on vertical axes and adapted in one position to close said lateral openings and when swung rearward to inclose with said other damper and the frame of the stove a chamber communicating only with the outlet and the tops of the central uptake flues, the tops of the lateral uptake flues being then in communication with the space between the oven and stove top.

881,963. DISTRIBUTION-FIXTURE. WILLIAM D. SCOTT, Buffalo, N. Y. Filed May 11, 1906. Serial No. 316,332. Renewed Oct. 7, 1907. Serial No. 396,325.



1. In a distributing fixture, the combination with a plurality of adjustable collars, of supporting strips carried by the said collars, and projecting above and below the same, and insulators carried by the projecting parts of said strips, substantially as described.

2. In a distributing fixture, the combination with a supporting collar, of supporting strips attached thereto, insulators carried by the supporting strips and fastenings extending through the supporting collar and strips adapted to secure the fixture in place, substantially as described.

3. In a distributing fixture, the combination of a plurality of supporting collars, supporting strips, means for fastening the collars and strips together, fastenings extending through the collars, and strips adapted to secure the fixture in place, and insulators carried by the supporting strips, substantially as described.

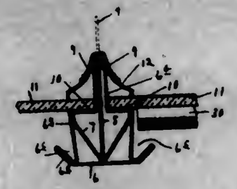
4. In a distributing fixture, the combination with a circular series of insulators and a series of supports forming a circular conduit adjacent to such insulators, substantially as described.

5. In a distributing fixture, the combination of two series of insulators each arranged radially around a center and in different vertical planes, and a circular conduit arranged around the same center but in a plane intermediate of the two series of insulators, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

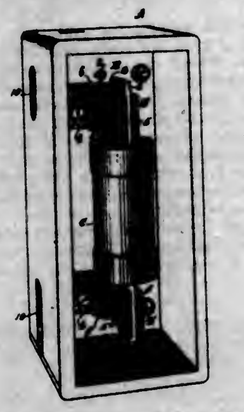
881,964. SKYLIGHT FRAME-BAR AND FRAME CONSTRUCTION. CHARLES M. SERVATIUS, Utica, N. Y., assignor of one-half to George M. Ball, Utica, N. Y. Filed Oct. 7, 1907. Serial No. 396,188.

1. A skylight frame bar having the rectangular body, the upright hollow fin and gutters formed from folded sheet metal and having the V-shaped stay strip in the body and the middle stay strip in the body and fin, substantially as set forth.



2. A skylight frame bar having the rectangular body, the upright hollow fin and gutters formed from folded sheet metal and having the V-shaped stay strip in the body portion, substantially as set forth.

881,965. FUSE AND FUSE-BOX. FRANK L. SESSIONS, Columbus, Ohio, assignor, by mesne assignments, to The Jeffrey Manufacturing Company, a Corporation of Ohio. Filed Oct. 20, 1905. Serial No. 283,661.



1. A fuse-carrying device comprising a base plate, a pair of fuse-carrying elements, and means for securing each of said fuse-carrying elements to said base plate in various positions longitudinal of the plate.

2. A fuse-carrying device comprising a base plate, a pair of fuse-carrying contacts each consisting of a pair of plates adapted to yieldingly engage one terminal of a fuse, and means for adjusting the fuse-engaging surfaces of each of said contacts toward and away from each other to accommodate fuses having terminals of different thickness.

3. A fuse-carrying device comprising a pair of fuse-carrying elements, each element comprising a pair of plates arranged side by side and adapted to receive one terminal of a fuse between them, means for adjusting said plates toward and away from each other, and means for adjusting said contact elements toward and away from each other.

4. A fuse-carrying device comprising a pair of fuse-carrying elements, each element consisting of a pair of flat plates arranged parallel to each other and adapted to receive between them one terminal of a fuse, means for adjusting the plates of each carrying element relatively to each other, and means for adjusting the pairs of plates relatively to each other.

5. A fuse-carrying device comprising a base plate, a pair of forked fuse-carrying elements adapted to be adjusted longitudinally of said base plate and to be secured thereto in their various positions of adjustment, and means for adjusting the fork arms of each contact-carrying element relatively to each other to adapt the said element for carrying fuse terminals of different thickness.

[Claims 6 to 15 not printed in the Gazette.]

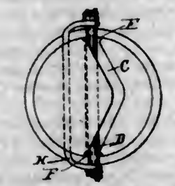
881,966. COMBINATION BLOTTER, PEN-WIPER OR PEN-CLEANER, AND PEN-RACK. MOSES H. SHAPIRO, Hoboken, N. J. Filed June 27, 1907. Serial No. 381,000.



1. A combination blotter, pen cleaner and pen rack composed of a bottom sheet or sheets of blotting material, a plurality of sheets of fabric placed thereover and forming in connection therewith a pad, a pen rack composed of sheet metal and provided with prongs passed downwardly through said pad and secured beneath the same.

2. A combination blotter, pen cleaner and pen rack composed of a bottom sheet or sheets of blotting material, a plurality of sheets of fabric placed thereover and forming in connection therewith a pad, a pen rack composed of sheet metal and provided with prongs passed downwardly through said pad and secured beneath the same, said pad being also provided centrally with a reinforcing or stiffening sheet.

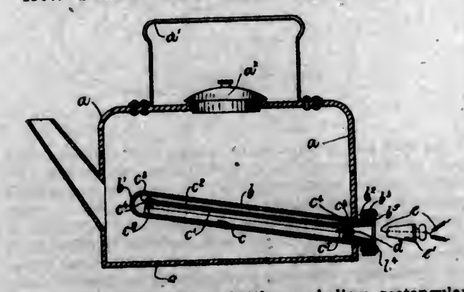
881,967. ELECTRIC INSULATOR. CHARLES R. SLUSSER, Montpelier, Idaho. Filed Jan. 30, 1907. Serial No. 354,920.



1. An insulator consisting of a body of insulating material provided with a straight, approximately diametrical perforation of approximately the size of the wire to be carried, and with an upwardly extending bent or distorted slot communicating with the entire length of said perforation and extending to the outer surface of said body; whereby the wire when in place lies free in the middle of the body but can be inserted or removed only when bent.

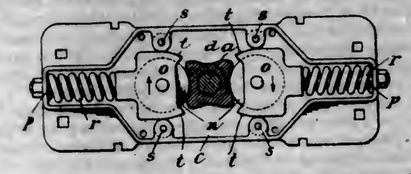
2. An insulator, the combination with a body of insulating material provided with an approximately diametrical straight perforation of approximately the size of the wire to be carried and with an outwardly open slot coinciding with said perforation throughout the entire length of the latter and having its middle outer portion deflected from the plane of the perforation, and detachable devices for connecting said body with the line wire carried thereby and adapted to resist slipping of said wire.

881,968. ELECTRIC KETTLE. DAVID C. SMITH, Kalgoorlie, Western Australia, Australia. Filed July 8, 1907. Serial No. 382,716.



In combination with a kettle, a shallow rectangular chamber therein having one end open and extending outside the kettle, said chamber being inclined in relation to the kettle, a frame removably held in said chamber and electric heating coils on said frame.

881,969. SWITCH-STAND. FRED W. SNOW, Hillburn, and WILLIAM C. KIDD, Suffern, N. Y., assignors to Standard Equipment Company, Mahwah, N. J., a Corporation of New Jersey. Filed Dec. 31, 1907. Serial No. 408,835.



1. In a switch stand, the combination of means to resist the movement of a switch, said means being capable of being deflected while in an intermediate position to prevent the switch from being left open but to be firmly held from deflection while in a limiting position to maintain the switch in its proper position.

2. In a switch stand, the combination of a rotatable block, reciprocating means to resist the rotation of the block, means to permit the reciprocating means to be deflected when the block is in an intermediate position in order to prevent the block from remaining in an intermediate position and to hold the reciprocating means firmly from deflection when the block is in a limiting position.

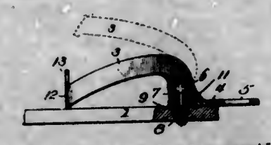
3. In a switch stand, the combination of a rotatable block, a spring actuated roller to resist the rotation of the block, a beveled housing for the roller, and guides for the housing for the purpose specified.

4. In a switch stand, the combination of a rotatable block, rollers upon opposite sides of the block, said block having recesses in which the rollers engage, springs to press the rollers against the block, beveled housings for each of the rollers, and guides coöperating with the housings for the purpose specified.

5. In a switch stand, the combination of means to connect the stand to a switch, a rotatable member connected to said means, a block on said member, means to fasten the block to and unfasten the block from said member, means to resist the rotation of the block, and guides for the resisting means, said guides and resisting means cooperating to hold the block in its turned position but permitting the resisting means to be deflected when the block is partly turned in order to prevent the block from remaining partly turned and the switch from being left in an open position.

[Claims 6 to 9 not printed in the Gazette.]

881,970. CLIP-FILE. CHARLES SPIRO, New York, N. Y. Filed Sept. 17, 1907. Serial No. 393,405.



1. In a clip file, a base board, a bar provided with guiding means and yieldingly mounted upon said board for movement toward and from the same, and a frame comprising a vertically disposed U-shaped plate having its ends pivoted upon said bar and provided with a rearward extension of less length than said guiding means and constructed to travel upon the base in the movement of said frame.

2. In a clip file, a base board, pivots provided with guiding means and yieldingly mounted thereon, and a clip plate pivotally mounted at its opposite ends upon said pivots and provided with a fulcrum extension at its rear of less

length than said guiding means whereby said extension travels toward said bar in the upward movement of said plate.

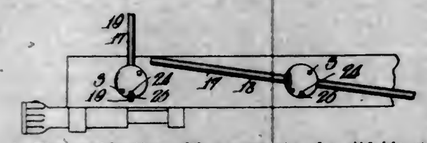
3. In a clip file, a base board, a pivot provided with guiding means and yieldingly mounted upon said board, a clip frame mounted upon said pivot, and an extension at the rear of said pivot of less length than said guiding means constructed to travel upon the base toward and from said pivot.

4. In a clip file, a base board, a bar provided at its opposite ends with depending rods, tension springs coöperating with said rods, and a clip frame pivoted at its ends in said bar and provided with a fulcrum at one side of less length than said rods and constructed to travel toward the bar in the upward movement of said frame.

5. In a clip file, a plate, a cross bar mounted above the same and provided with depending rods extending through the plate, heads at the free ends of said rods, tension springs extending between said heads and the bottom of said plate, and a clip frame pivoted upon said bar and having a fulcrum extension at the rear thereof of less length than said rods and constructed to travel upon said plate.

[Claim 6 not printed in the Gazette.]

881,971. CAR-STAKE. JOHN W. STOKOE, Jeanerette, La. Filed Oct. 21, 1907. Serial No. 398,485.

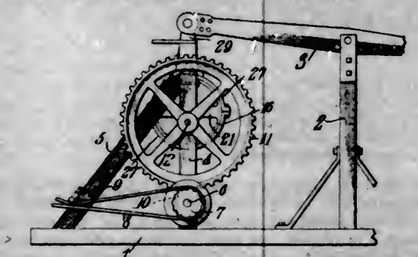


1. The combination with a support; of a slidable stake mounted to swing thereon to assume either a vertical or a non-vertical position, said support being disposed to engage one end portion of the stake to hold the same in an upright position, and means movable with the stake and about the support for closing the interior of the support.

2. The combination with a support having peripheral openings; of a slidable stake mounted to swing within the support to assume either an upright or a non-upright position, a closure ring surrounding the support and movable with the stake, and means upon the support for preventing lateral displacement of the ring.

3. The combination with a car platform; of a support fixedly connected to one side thereof, a slidable stake mounted to swing within the support to assume either an upwardly extending or a lowered position, said support being disposed to engage one end portion of the stake to hold the same tilted over the platform when in upwardly extending position, and means movable with the stake and about the support for closing the interior of the support.

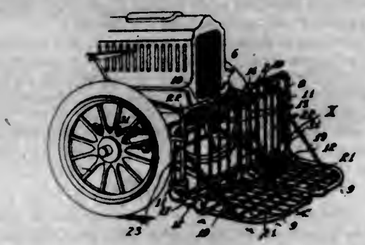
881,972. PUMPING-JACK. LUTHER R. STONE, Munden, Kans. Filed June 6, 1907. Serial No. 377,616.



1. A pumping jack comprising an eccentric embodying an annulus, cross arms connected with the inner walls thereof, one of which has its four faces longitudinally slotted to provide a diametric guideway, a block mounted in the guideway, means for holding the block in fixed adjustment in the guideway, a driven shaft upon which the block is fixed, a walking beam, and a strap including a link for connecting the eccentric with the walking beam.

2. A pumping jack comprising an eccentric embodying an annulus, cross arms connected with the inner walls thereof, one of which has its four faces longitudinally slotted to provide a diametric guide-way and oppositely alined bolt-seats, a block mounted in the guide-way, bolts passing through the block and the seats and operating to hold the former in fixed adjustment in the guide-way, a driven shaft upon which the block is fixed, a walking beam, and a strap including a link for connecting the eccentric with the walking beam.

881,973. VEHICLE-FENDER. HERBERT A. SUTTLE, Chicago, Ill. Filed June 27, 1907. Serial No. 381,023.



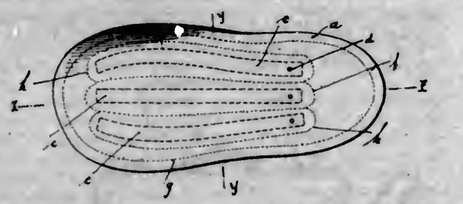
1. In a vehicle fender, the combination of a vehicle having a supporting frame attached thereto, an upright member normally substantially vertically disposed and forming the back of the fender proper and hinged at its outer end to the supporting frame for outward movement of the upright member, and a horizontal member carried by the upright member.

2. In a vehicle fender, the combination of a vehicle having a supporting frame attached thereto, an upright member normally substantially vertically disposed and forming the back of the fender proper and hinged at its outer end to the supporting frame for outward movement of the upright member, and a horizontal member hinged to the upright member.

3. In a vehicle fender, the combination of a supporting frame, an upright member hinged to the frame for outward movement, a horizontal member, and means for tilting the frame.

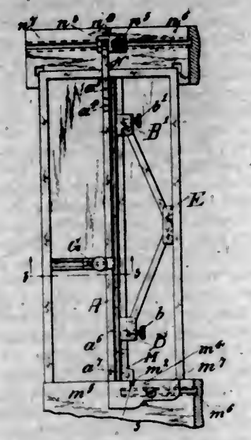
4. In a vehicle fender, the combination of a vehicle having a supporting frame hinged thereto, an upright member hinged to the frame for outward movement, a horizontal member hinged to the upright member, and means for tilting the supporting frame.

881,974. INSTEP-SUPPORTER. ANDREAS TOPORCER, New York, N. Y., assignor of one-half to Egidius Van der Hayden, New York, N. Y. Filed Sept. 29, 1906. Serial No. 336,703.



An arch and instep support, adapted to be inserted in a boot or shoe, comprising an arched body portion and a reinforce portion conforming to and coextensive therewith, a plurality of independent arch retaining elements interposed between said portions in substantially parallel relation and lengthwise thereof, said portions terminating in front and immediately adjacent the instep portion, whereby said instep portion may have lateral freedom of movement and conform to uneven treading of the foot.

881,975. CLAMPING AND LOCKING DEVICE. WILLIAM M. VAN CISE, Summit, N. J., and JONATHAN F. CHAMBERS, Washington, D. C. Filed May 8, 1906. Serial No. 315,746.



1. A clamping and locking device, comprising a main-bar, auxiliary bars having one of each of their ends connected, and runners adjustably movable along the main-bar, pivotally connected with the free ends of the auxiliary bars, substantially as described.

2. A clamping and locking device comprising a main bar, auxiliary bars loosely interconnected at one end, runners attached to the free ends of said auxiliary bars and independently movable along said main bar, and a screw to hold each runner in position.

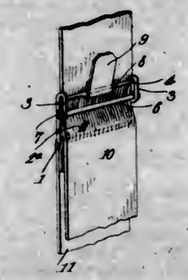
3. A clamping and locking device, comprising a main-bar, runners adjustably movable along the main-bar, auxiliary bars each having one of their ends pivotally connected with the runners, and a common runner having the free ends of the auxiliary bars pivotally connected thereto, substantially as described.

4. A clamping and locking device, comprising a main-bar having grooves, runners engaging said grooves, means for securing the runners in position, a common runner, and auxiliary bars each having one of their ends pivotally connected with the common runner, and the other ends pivotally connected with the runners movable along the bar.

5. The combination of a main-bar, and a supporting piece, said supporting piece consisting of plates, a movable extension piece between the plates, and means for simultaneously securing the movable extension piece between the plates and the supporting piece in position on the main-bar.

[Claims 6 to 11 not printed in the Gazette.]

881,976. BUCKLE. ALBERT VAN DUZER, Eureka, Cal. Filed Jan. 2, 1907. Serial No. 350,370.

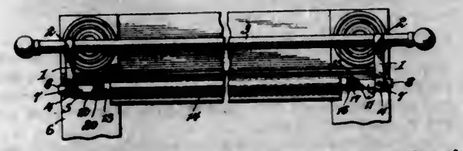


1. A buckle comprising a yoke, a rigid connection between the sides thereof and having two faces at an angle to each other, and a roller, said sides constituting bearings for the roller, said bearings being disposed in the plane of one of the faces of said connection, said connection being disposed to produce a partial wrap of a strap about the roller.

2. A buckle comprising a yoke having slots in the side portions thereof, a cross strip connecting the slotted portions of the yoke and having an inclined bearing surface, and a roller mounted to travel within the slots and movable in a plane extending longitudinally of the buckle and at an acute angle to the bearing surface to clamp a strap upon said surface and produce a partial wrap of the strap about the roller, said slots extending beyond the edges of the inclined bearing surface and said yoke being disposed to hold a strap at all times in contact with the roller.

3. A buckle comprising a yoke having slots in the sides thereof and extending longitudinally of the buckle, a cross strip connecting the slotted portions of the sides and having an inclined bearing face disposed at an acute angle to the slots, one edge of said face being disposed in the plane of one edge of each of said slots, and a roller movably mounted within the slots and disposed to bind a strap upon the inclined face, said yoke being disposed to hold the strap at all times in contact with the roller irrespective of the position of the buckle.

881,977. COMBINED WINDOW-SHADE AND LACE-CURTAIN HANGER. PETER F. WAGNER, Greensburg, Ind. Filed Mar. 30, 1907. Serial No. 365,487.



1. In a device of the class described, the combination of a curtain pole bracket, a combined guide and supporting bar extending across the said bracket, a fastening device piercing the bar and the bracket for securing the same to a window frame, said bar being provided at its outer end with a rearwardly extending arm or portion arranged to engage the side edge of a window frame, whereby the bracket and the bar are prevented from turning on the said fastening device, and a window shade bracket slidable on the inner portion of the combined guide and supporting bar.

2. In a device of the class described, the combination of a curtain pole bracket provided at its lower end with a loop or bend, a combined guide and supporting bar arranged in the loop or bend of the bracket and extending inwardly and outwardly therefrom, a fastening device piercing the bar and the bracket for securing the same to a window frame, said bar being provided at its outer end with a rearwardly exending arm or portion arranged to engage the side edge of a window frame to prevent the bracket and the bar from turning on the said fastening device, and a window shade bracket slidable on the inner portion of the combined guide and supporting bar.

3. In a device of the class described, the combination with a combined guide and support, of a horizontal window shade bracket constructed of a single piece of wire bent at an intermediate point to form an outer eye and extended inwardly therefrom to provide spaced shank portions, the terminals of the wire at the inner ends of the shank portions being bent in opposite directions to form transversely alined terminal loops which extend across the space between the shank portions and receive the combined guide and supporting bar.

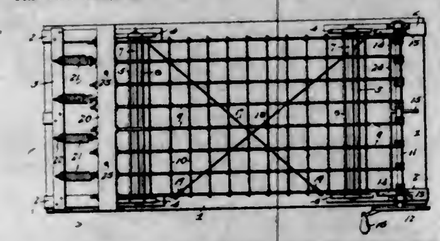
4. In a device of the class described, the combination with a combined guide and supporting bar constructed of flat metal, of an approximately horizontal window shade bracket constructed of wire and consisting of an outer eye, inwardly diverging shanks, and vertical oblong loops located at opposite sides of and extending across the space between the inner ends of the shank portions and arranged

to bind against the said bar when the outer portion of the bracket is subjected to lateral pressure.

5. In a device of the class described, the combination of a curtain pole bracket, a combined guide and supporting bar extending across the said bracket, a fastening device piercing the bar and the bracket for securing the same to a window frame, said bar being provided at one end with a rearwardly extending arm or portion to engage the side edge of the window frame and being reversible to arrange the said arm at either the inner or outer edge of the said window frame to prevent the bracket and the bar from turning on the said fastening device, and a window shade bracket slidable on the inner portion of the combined guide and supporting bar.

[Claim 6 not printed in the Gazette.]

881,978. CLOTHES-BEATING APPARATUS. FRANK WALLERSTEIN, Brooklyn, N. Y. Filed Mar. 1, 1907. Serial No. 360,046.



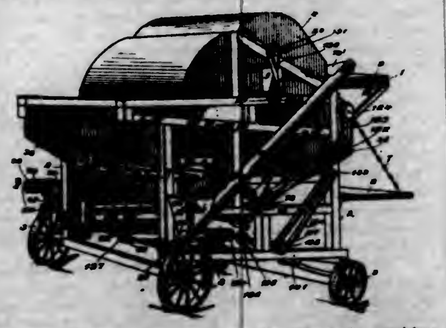
1. A clothes-beating apparatus comprising a flexible bed, means arranged at one side of and connected to said bed for placing it under tension, supporting means for the bed, and clamping means for connecting the other side of the bed to a suitable support.

2. A clothes beating apparatus comprising a flexible bed, springs connected to one end thereof and secured to a fixed support, the other end of said bed being connected to a rotatable drum whereby the said bed may be placed under tension.

3. A clothes beating apparatus comprising a flexible bed, means for supporting the same, and means for putting the bed under tension, comprising a plurality of springs and a rotatable drum, pawl and ratchet mechanism for holding the drum against rotation, and a lever for releasing said drum.

4. A clothes-beating apparatus comprising a flexible bed, springs connected to one end thereof and secured to a fixed support, the other end of the bed being connected to a tension device, and guards arranged above the bed at each terminal thereof.

881,979. PEANUT-PICKER. JAMES A. WARREN, Surry, Va. Filed Dec. 26, 1905. Serial No. 293,271.



1. In a machine of the character described, the combination of suitable mechanism for picking the peanuts from their vines, a reciprocating separator for separating the picked peanuts from their vines, an oscillating apron upon which the peanuts are delivered from the said separator, a fan or blower arranged to throw a blast of air upon the peanuts passing from said apron, suitable receptacles associated with said apron for receiving the picked peanuts passing from said apron and for receiving the peanuts with short vines attached passing from said apron, suitable mechanism for stemming the picked peanuts, a fan or blower arranged to throw a draft of air upon said peanuts after being stemmed to separate the peanuts from their stems, and means for conveying the peanuts with short vines attached passing from said apron to the said mechanism for picking the peanuts from their stems, substantially as described.

2. In a machine of the character described, the combination of suitable mechanism for picking the peanuts from their vines, a reciprocating separator for separating the picked peanuts from their vines, an oscillating apron upon which the peanuts are delivered from the said separator, a fan or blower arranged to throw a blast of air upon the peanuts passing from said apron, suitable receptacles associated with said apron for receiving the picked peanuts passing therefrom and for receiving the peanuts with short vines attached passing from said apron, suitable mechanism for stemming the picked peanuts, means for separating the peanuts from their stems after the said peanuts have been stemmed, and means for conveying the peanuts with short vines attached passing from said apron to the said mechanism for picking the peanuts from their stems, substantially as described.

3. In a machine of the character described the combination of suitable mechanism for picking the peanuts from their vines, a reciprocating separator for separating the picked peanuts from their vines, an oscillating apron upon which the peanuts are delivered from the said separator, means for separating the picked peanuts from the peanuts with short vines attached, a suitable receptacle for receiving the picked peanuts passing from the said apron, and a suitable receptacle for receiving the peanuts with short vines attached passing from said apron, means for conveying the peanuts with short vines attached to the said mechanism for picking the peanuts from their vines, means for stemming the picked peanuts and means for separating the peanuts from their stems after the peanuts have been stemmed, substantially as described.

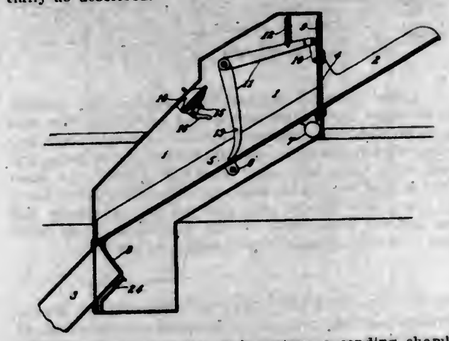
4. In a machine of the character described, the combination of suitable mechanism for picking the peanuts from their vines, a reciprocating separator for separating the picked peanuts from their vines, an apron upon which the peanuts are delivered from the said separator, means for separating the picked peanuts from the peanuts with short vines attached, means for conveying the peanuts with short vines attached to the said mechanism for picking the peanuts from their vines, means for stemming the peanuts and means for separating the peanuts from their stems after the peanuts have been stemmed, substantially as described.

5. In a machine of the character described, the combination of suitable mechanism for picking the peanuts from their vines, a separator for separating the picked peanuts from their vines, an apron upon which the peanuts are delivered from the said separator, means for separating the picked peanuts from the peanuts with short vines attached, means for conveying the peanuts with short vines attached to the said mechanism for picking the peanuts from their vines, means for stemming the peanuts and means for separating the peanuts from their stems after the peanuts have been stemmed, substantially as described.

[Claims 6 to 13 not printed in the Gazette.]

881,980. SENDING MECHANISM FOR PNEUMATIC-DESPATCH APPARATUS. HAROLD D. WATERHOUSE, Quincy, Mass., assignor to United Store Service and Tube Company, Boston, Mass., a Corporation of Maine. Filed Oct. 26, 1907. Serial No. 399,332.

1. In a pneumatic despatch system, a sending chamber through which carriers are introduced into the transmission tube, a carrier support within the chamber normally out of line with the transmission tube and brought into line therewith by the introduction of a carrier, and means closing the sending chamber during the transfer of the carrier from the support to the transmission tube, substantially as described.



2. In a pneumatic despatch system, a sending chamber through which carriers are introduced into the transmission tube, a carrier support mounted therein to move into line with the transmission tube upon the introduction of a carrier, a gate connected with the carrier support normally closing the chamber to the transmission tube, and means closing the entrance to the sending chamber during the movement of the support into line with the transmission tube, substantially as described.

3. In a pneumatic despatch system, a sending chamber through which carriers are introduced into the transmission tube, a carrier support mounted to move into line with the transmission tube upon the introduction of a carrier, a gate connected with the carrier support normally closing the chamber to the transmission tube, means closing the entrance to the chamber during the movement of the carrier support into line with the transmission tube, and a timing device for controlling the introduction of the succeeding carriers, substantially as described.

4. In a pneumatic despatch system, a sending chamber through which carriers are introduced into the transmission tube, inner and outer gates for closing the chamber, and means actuated by the introduction of a carrier to close the outer gate and thereafter to open the inner gate, substantially as described.

5. In a pneumatic despatch system, a sending chamber through which carriers are introduced into the transmission tube, a gate for closing the entrance to said chamber, means for closing said gate by the introduction of a carrier, and means actuated by the introduction of a carrier to open the chamber to the transmission tube, substantially as described.

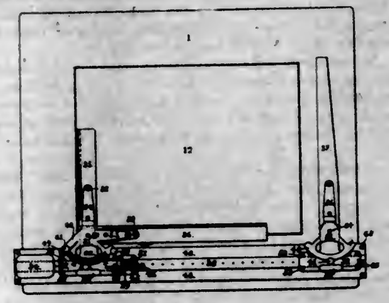
[Claims 6 to 8 not printed in the Gazette.]

881,981. DRAFTING DEVICE. RICHARD D. WATSON, Toledo, Ohio. Filed May 21, 1906. Serial No. 317,880.

1. In a drafting device, the combination of a hollow drafting board, a mitered frame loosely mounted partly within and partly projecting beyond the edges of the hollow frame, expanding springs connecting the corners of and adapted to expand the mitered frame, take-up locks secured across the joints of the mitered frame adapted to contract, lock or release the springs, and an outer frame adapted to be mounted on and around the drafting board, and to be engaged and held or disengaged by the mitered frame, substantially as set forth.

2. In a drafting device, the combination of a drafting board, comprising the board 12, the members 15, the springs 16, the take up locks 17, and the housing board 13, with an outer frame adapted to be engaged and disengaged by the drafting board, substantially as and for the purpose set forth.

3. In a drafting device, the combination of a hollow outer frame provided with slotted side edges, pulleys secured and housed within the hollow outer frame, a continuous cable mounted on the pulleys, and housed within the outer frame, said cable having side portions adapted to move in unison back and forth within the outer frame parallel with the slotted side edges, connectors fixedly and oppositely secured to the parallel side portions of the cable and projecting outward through the slotted side edges of the frame, a straight edge fixedly secured to the connectors across the outer frame at right angles to the slotted side edges, and a drafting board adapted to be mounted within and engage and hold or disengage the outer frame, substantially as set forth.



4. The combination in a drafting device of a horizontally controlled straight edge with a centrally raised part, a thin flat metal strip permanently fastened upon the raised part and projecting over the edges of the same parallel with the edges of the straight edge, a carrier movably mounted upon the metal strip with guides adjustable to wear and adapted to engage the projecting edges of the metal strip and move thereon free from contact with the straight edge with a minimum of friction without lateral play and in a straight line by the guidance of the metal strip, an extender permanently pivoted to the carrier plate, drawing rules adjustably secured to the extender and means to set and secure said rules from one to any other desired position relative to the straight edge substantially as set forth.

5. The combination in a drafting device, of a horizontally controlled straight edge with a centrally raised part, a thin flat metal strip permanently fastened upon the raised part and projecting over the edges of the same parallel with the edges of the straight edge, a carrier plate movably mounted upon the metal strip with guides adjustable to wear and adapted to engage the projecting edges of the metal strip and move thereon free from contact with the straight edge with a minimum of friction without lateral play and in a straight line by the guidance of the metal strip, an extender permanently pivoted to the carrier plate, drawing rules adjustably secured to the extender and means to set and secure said rules from one to any desired position relative to the straight edge, a stop plate having adjustable guides for wear and alinement by the projecting edges of the metal strip said guides resting on the straight edge to cause sufficient friction under downward pressure to prevent slipping when carrier plate is brought to contact with stop plate, a screw adapted to connect the carrier and stop plates and determine and regulate the distance of movement of the drawing rules substantially as and for the purpose set forth.

881,982. HEEL-BLOCK FOR RAILROAD-FROGS AND THE LIKE. BENT L. WEAVER and CHARLES W. REINOEHL, Steelton, Pa. Filed July 26, 1907. Serial No. 385,678.

1. A heel block for railroad frogs and the like, comprising an upper hard metal portion and a lower portion, said portions being detachably secured together.

2. A heel block for railroad frogs and the like, comprising an upper hard metal portion and a lower portion, said

upper portion being provided with a pad fitted to a pocket in said lower portion.
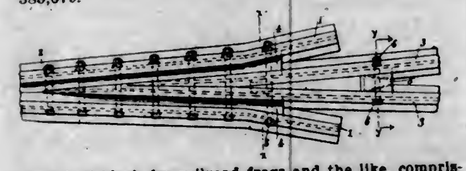


3. A heel block for railroad frogs and the like, comprising an upper hard metal portion and a lower portion, said upper portion being provided with a series of pads fitted to a series of pockets in said lower portion.

4. A heel block for railroad frogs, and the like, comprising an upper hard metal portion and a lower portion, said upper portion being of a width equal to that between the point-forming rails of the frog, and provided with outwardly extending flanges adapted to fit beneath the heads of said rails.

5. A heel block for railroad frogs and the like, comprising an upper hard metal portion and a lower portion, said upper portion being provided with a pad fitted to a pocket in said lower portion, and said upper portion being of a width equal to that between the point-forming rails of the frog, said pad being provided with outwardly extending flanges adapted to fit beneath the heads of said rails.

[Claim 6 not printed in the Gazette.]

881,983. HEEL-BLOCK FOR RAILROAD-FROGS AND THE LIKE. BENT L. WEAVER and CHARLES W. REINOEHL, Steelton, Pa. Filed July 26, 1907. Serial No. 385,679.



1. A heel block for railroad frogs and the like, comprising an upper hard metal portion and a lower portion, said upper portion being provided at its rear end with a dovetail projection and said lower portion being provided with a corresponding groove into and out of engagement with which said dovetail projection is adapted to be brought and disengaged, the forward end of said heel-block being provided with a downwardly extending pad or projection extending into and fitting a corresponding slot in said lower portion.

2. A heel block for railroad frogs and the like, comprising an upper hard metal portion and a lower portion, said upper portion being provided at its rear end with a dovetail projection and said lower portion being provided with a corresponding groove into and out of engagement with which said dovetail projection is adapted to be brought and disengaged, the forward end of said heel block being provided with a downwardly extending pad or projection extending into and fitting a corresponding slot in said lower portion, said pad being provided with lateral flanges adapted to fit beneath and be engaged by the heads of the adjacent rails.

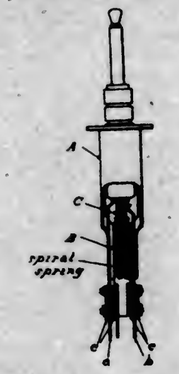
881,984. HEEL-BLOCK FOR RAILROAD-FROGS AND THE LIKE. BENT L. WEAVER and CHARLES W. REINOEHL, Steelton, Pa. Filed July 26, 1907. Serial No. 385,680.

1. A heel block for railroad frogs and the like, comprising an upper hard metal portion and a lower portion, said upper portion being provided with downwardly projecting outwardly beveled lugs, and said lower portion being provided with holes into which said lugs project, the spaces between said lugs and the inner walls of said holes respectively being filled with spelter metal, substantially as set forth.



2. A heel block for railroad frogs and the like, comprising an upper hard metal portion and a lower portion, said upper portion being provided with downwardly projecting outwardly beveled lugs, and said lower portion being provided with holes into which said lugs project, the inner walls of said holes being undercut to form shoulders above the lower ends of said lugs, and the spaces between said lugs and the inner walls of said holes respectively being filled with spelter metal, substantially as set forth.

881,985. PLUG-SEAT SWITCH. BERNARD O. WELLS, Charleston, Ill., assignor to Sterling Electric Company, La Fayette, Ind. Filed Dec. 8, 1904. Serial No. 236,075.



1. In a device of the class described, the combination with a plug seat, of an extension secured to said plug seat, a reciprocating contact device secured to said extension, means for normally holding said contact device in engagement with the plug seat, and line terminals for said contact device.

2. In a device of the class described, the combination with a plug seat and a plug adapted to work therein, of an extension on said plug seat, contact springs mounted on said extension and a plug control circuit changing device carried by said extension and operating in substantial alinement with the plug.

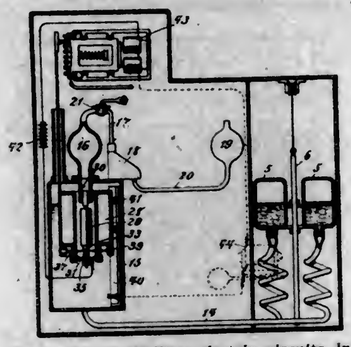
3. In a device of the class described, the combination with a plug seat, line springs connected thereto, and a self operated vertically reciprocating plunger controlled in both directions by the plug for making and breaking the circuits of the said springs.

4. In a device of the class described, the combination with a plug seat, of line springs mounted thereon, a vertically reciprocating plunger adapted to make and break the contacts and controlled in both directions by the plug, means independent of the line springs for operating said plunger and means for limiting the movement thereof.

5. In a device of the class described, the combination with a plug seat, of contact springs, a vertically reciprocating plunger having a plurality of heads insulated in different positions from the contact springs, means for normally holding one of said heads in engagement with one set of springs, and a plug controlling the action of said plunger whereby either head may be brought into engagement with the contact springs to change the circuits.

[Claim 6 not printed in the Gazette.]

881,986. AUTOMATIC GAS-ANALYZER. HENRY J. WESTOVER, New York, N. Y. Original application filed Jan. 8, 1907, Serial No. 351,318. Divided and this application filed Mar. 21, 1907. Serial No. 363,757.



1. A device for controlling electric circuits in correspondence with the proportion of a given gas in a mixture, comprising two independently movable floats electrically connected to each other, an insulated plate borne on one of said floats, a contact point upon the other float adapted to touch said plate and an electric circuit one side of which terminates in said plate and the other in said floats, substantially as described.

2. In a device for controlling electric circuits in correspondence with the proportion of a given gas in a mixture, comprising an outer float, a circuit-closing member carried thereby and insulated therefrom, an inner float, a circuit-closing member carried by the inner float and electrically connected to said outer float, and a circuit including said two circuit-closing members, substantially as described.

3. In a device of the class described, an outer float, an insulated and perforated metal plate carried thereby, an inner float, a depending stem on said inner float passing through the perforation in said plate and a circuit closing member carried by said stem and arranged to make contact with said plate, substantially as described.

4. In a gas analyzing apparatus, an outer float and an inner float, in combination with centering pins abutting at their outer ends on said outer float and converging to make contact with said inner float, substantially as described.

5. In a gas analyzing apparatus, an outer float, an inner float having a grooved stem and centering pins abutting at their outer ends on said outer float and converging to bear against said stem within said groove, substantially as described.

[Claim 6 not printed in the Gazette.]

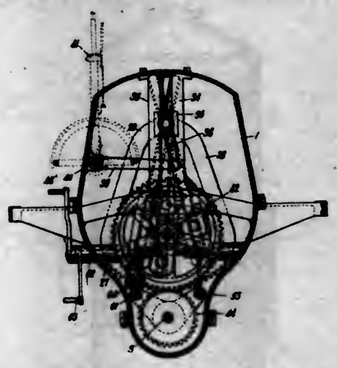
881,987. VARIABLE-SPEED MECHANISM. HERBERT I. WILBER, Dorchester, Mass. Filed Apr. 9, 1907. Serial No. 367,223.

1. A variable speed mechanism comprising a driving shaft, a driven shaft, one or more gears operatively connected to said driven shaft, a gear or gears operatively connected to said first mentioned gear or gears to drive the same, means intermediate the driving shaft and said last mentioned gears to drive the latter, and means to vary the speed of movement of said last mentioned gears without stopping the mechanism.

2. A variable speed mechanism comprising a driving shaft, a driven shaft, one or more gears operatively connected to said driven shaft, a gear or gears operatively connected to said first mentioned gear or gears to drive the same, means intermediate the driving shaft and said last mentioned gears to drive the latter, and non-clutching means to vary the speed of movement of said last mentioned gears without stopping the mechanism.

3. A variable speed mechanism comprising a driving shaft, a driven shaft, one or more gears operatively connected to the driven shaft, one or more segmental gears adapted to mesh with said first mentioned gear or gears respectively, operative driving connections between said segmental gear or gears and said driving shaft and means to vary the extent of stroke of said segmental gears.

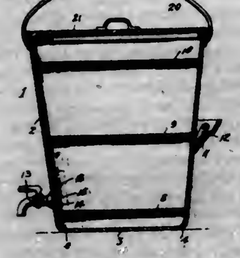
4. A variable speed mechanism comprising a driving shaft, a driven shaft, one or more gears operatively connected to the driven shaft, one or more segmental gears in mesh with said first mentioned gear or gears respectively, operative driving connections between said segmental gear or gears and said driving shaft and means to vary the speed of stroke of said segmental gear or gears.



5. A variable speed mechanism comprising a driving shaft, a driven shaft, one or more gears operatively connected to the driven shaft, one or more segmental gears in mesh with said first mentioned gear or gears respectively, operative driving connections between said segmental gear or gears and said driving shaft and means effective without stopping the operation of the mechanism to vary the speed and extent of stroke of said segmental gear or gears.

[Claims 6 to 42 not printed in the Gazette.]

881,988. CULINARY UTENSIL. PAUL WIRTHLIN, Eureka, Utah. Filed Sept. 5, 1907. Serial No. 391,482.



A culinary utensil comprising a body or pot, a drawn cock adjacent to the bottom thereof, guides upon the interior of the pot, a removable slide slidably engaged with said guides and adapted to cover the inlet to said cock, spring detents upon said guides and keeper seats or projections upon said slide to be engaged by said detents.

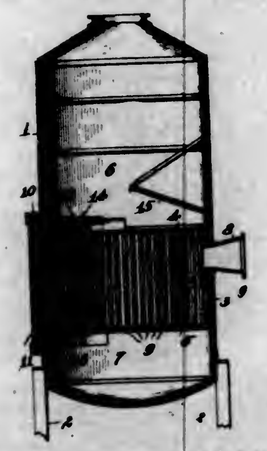
881,989. CLEANING COMPOUND. HATTIE C. WRIGHT, Shumansville, Va. Filed June 13, 1907. Serial No. 378,873.

1. A cleaning compound of the kind described consisting of a powder form of ashes, bi-carbonate of soda, tartaric acid, borax, spirits of turpentine, flour, silver bronze powder and soap.

2. A compound of the kind described consisting of a finely comminuted powder composed of the following ingredients in the proportion named, that is: two and one-

half pounds of laundry soap, one pound of bi-carbonate of soda, eight ounces of borax five ounces of tartaric acid, twenty-eight quarts of fine ashes twelve quarts of wheat flour and four ounces of bronze powder, the said powder having incorporated therein two ounces of spirits of turpentine.

881,990. EVAPORATOR. EDWARD ZAREMBA, Chicago, Ill. Filed Feb. 12, 1907. Serial No. 357,079.



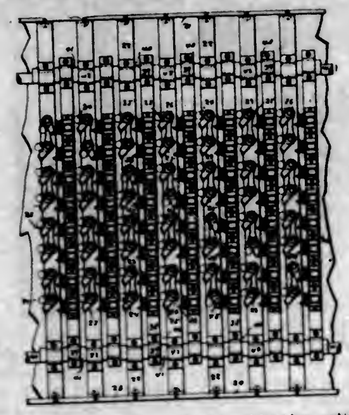
1. An evaporator comprising a casing, a steam drum therein, said evaporator being provided with a passageway which connects the interior of said casing above and below said drum, vertical circulating tubes which extend through said drum, comprising tubes the discharge ends of which are located closely adjacent to the opening to the upper end of said passageway, and a shield which extends from the upper head of said drum over a portion of said tubes located adjacent to said admission opening to the upper end of said passageway.

2. An evaporator comprising a casing, a steam drum therein, said evaporator being provided with a passageway which connects the interior of said casing above and below said drum, vertical circulating tubes which extend through said steam drum, comprising tubes the discharge ends of which are located closely adjacent to the opening to the upper end of said passageway and an upwardly inclined shield which extends from the upper head of said drum over a portion of said tubes located adjacent to said admission opening to the upper end of said passageway.

3. An evaporator comprising a casing, a steam drum therein, said evaporator being provided with a passageway which connects the interior of said casing above and below said drum, vertical circulating tubes which extend through said drum, comprising tubes the discharge ends of which are located closely adjacent to the opening to the upper end of said passageway, a shield which extends from the upper head of said drum over a portion of said tubes located adjacent to said admission opening to the upper end of said passageway, and a deflector located above said steam drum and adapted to direct the current of liquor towards the open upper end of said passageway connecting the interior of the evaporator casing above and below said steam drum.

881,991. COUNTER OPERATING AND LOCKING MECHANISM FOR VOTING-MACHINES. CHARLES C. ABBOTT, Pittsfield, Mass., assignor to Triumph Voting Machine Company, Pittsfield, Mass., a Corporation of New Jersey. Filed May 20, 1907. Serial No. 374,610.

1. In a voting machine, the combination with voting members having counter-dogs and counters having operating pins which are engaged, held and then released by the counter-dogs of actuated voting members, of counter-bars by which the counters are carried, means for imparting endwise and lateral rotary oscillation to the counter-bars to count votes and counter locking bars provided with means for engagement by the operating pins to lock the counters against unwarranted actuation.



2. In a voting machine, the combination with voting members having counter-dogs and counters having operating pins out of alinement with the counter shafts which are adapted to be engaged by the corresponding counter-dogs, of means for imparting endwise and lateral rotary oscillation to the counters and counter locking bars provided with means for engagement by the operating pins to lock the counters against unwarranted actuation.

3. In a voting machine, the combination with voting members, having counter-dogs and counters having operating pins which are adapted to be engaged by the corresponding counter-dogs, of means for imparting endwise and lateral rotary oscillation to the counters, and means for locking disengaged counters against actuation.

4. In a voting machine, the combination with voting members, having counter-dogs and counters having operating pins which are adapted to be engaged by the corresponding counter-dogs, of means for imparting endwise and lateral rotary oscillation to the counters, and counter locking bars provided with means for engagement by the operating pins to lock the counters against unwarranted actuation.

5. In a voting machine, the combination with voting members, having counter-dogs and counters having operating pins which are adapted to be engaged by the corresponding counter-dogs, of means for imparting endwise and lateral rotary oscillation to the counters, and counter locking bars provided with notches which are engaged by the operating pins to lock the counters, substantially as described, for the purpose specified.

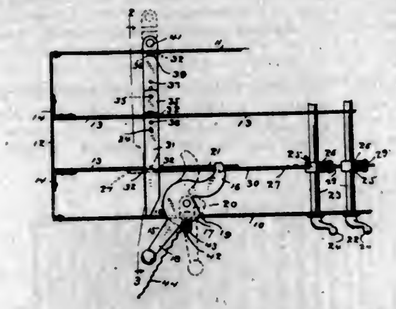
[Claims 6 to 26 not printed in the Gazette.]

881,992. PRIMARY VOTING AND VOTE-CHALLENGING MECHANISM FOR VOTING-MACHINES. CHARLES C. ABBOTT, Pittsfield, Mass., assignor to Triumph Voting Machine Company, Pittsfield, Mass., a Corporation of New Jersey. Filed June 1, 1907. Serial No. 376,753.

1. In a voting machine, the combination with a line of voting members, of means for locking said voting members in the non-voting position, a casing for said devices and means wholly within the casing for controlling said locking mechanism.

2. In a voting machine, the combination with a line of voting members, of means for locking said voting members in the non-voting position and a locking bar for locking said locking means in either the voting or non-voting position.

3. In a voting machine, the combination with voting members, a party bar engaged thereby and a party lever engaging the party bar, of means for concealing the party lever and means within the control of the custodian during an election for locking the party bar in the non-voting position.

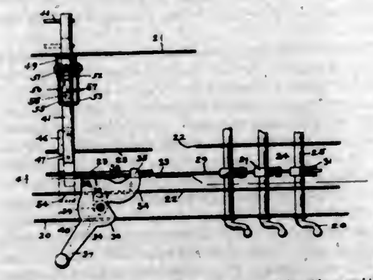


4. In a voting machine, the combination with voting members and a party bar engaged thereby, of means for locking the party bar in the non-voting position, a casing for said devices and means wholly within the casing for controlling the said locking mechanism.

5. In a voting machine, the combination with voting members and a party bar engaged thereby, of means within the control of a custodian during an election for locking the party bar in the non-voting position and for controlling the locking means.

[Claims 6 to 13 not printed in the Gazette.]

881,993. PRIMARY VOTING AND VOTE-CHALLENGING MECHANISM FOR VOTING-MACHINES. CHARLES C. ABBOTT, Pittsfield, Mass., assignor to Triumph Voting Machine Company, Pittsfield, Mass., a Corporation of New Jersey. Filed June 1, 1907. Serial No. 376,752.



1. In a voting machine, the combination with a line of voting members, a party bar engaged by said members and a party lever engaging the party bar, of means for locking the party lever leaving the party bar unlocked and permitting individual voting, and means for locking the party bar and with it the party lever to prevent voting in that line.

2. In a voting machine, the combination with voting members and a party bar engaged thereby, of means for locking the party bar in the non-voting position, a casing for said devices and means wholly within the casing for locking said locking means in either the voting or non-voting position.

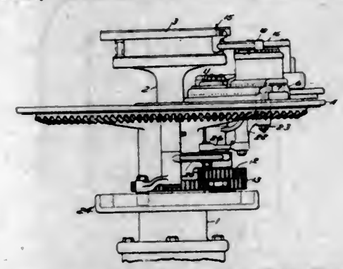
3. In a voting machine, the combination with voting members and a party bar, of a locking shaft for locking the party bar in the non-voting position and means for locking said shaft in the voting or non-voting position.

4. In a voting machine, the combination with voting members and a party bar engaged thereby, of a reciprocatory locking shaft which in the retracted position permits unrestricted movement of the party bar and when pushed inward crosses the path of the party bar and prevents forward movement thereof and means for locking said shaft in either position.

5. In a voting machine, the combination with voting members and a party bar engaged thereby, of a reciprocatory locking shaft which in the retracted position permits unrestricted movement of the party bar and when pushed inward crosses the path of the party bar and prevents forward movement thereof, a casing for said devices and means wholly within the casing for locking said shaft at either the inward or the retracted position.

[Claims 6 to 19 not printed in the Gazette.]

881,994. SOLE-ROUNDING MACHINE. CHARLES L. ALLEN, Winchester, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Nov. 28, 1902. Serial No. 133,076.



1. A rounding machine, having, in combination, a pattern, a knife carrier movable about the pattern, a knife mounted thereon, means for pressing the knife towards the pattern and means for changing the angular position of the knife carrier while the knife is traveling along the side of the pattern to vary the direction of the inward and outward movements of the knife to cause the knife to follow the angles or curves of the pattern, substantially as described.

2. A sole rounding machine, having, in combination, a pattern, a rotary support, a knife carrier pivotally mounted upon said support, and means for oscillating the carrier and for moving the pivot of the carrier during the rotation of said support, substantially as described.

3. A sole rounding machine, having, in combination, a pattern, a rotary support, a knife carrier pivotally mounted upon said support, means for oscillating the carrier during the rotation of said support, and a cam and intermediate connections for moving the pivot of the carrier, substantially as described.

4. A sole rounding machine, having, in combination, a pattern, and a knife carrier relatively movable to carry the knife around the pattern, a knife mounted thereon, means for pressing the knife towards the pattern, means for moving the knife carrier during the relative movement of the knife carrier and pattern to change the angular position of the knife carrier while the knife is passing around the ends of the pattern, and means for imparting additional movements to the knife carrier to change the angular position of the knife carrier while the knife is traveling along the side of the pattern, substantially as described.

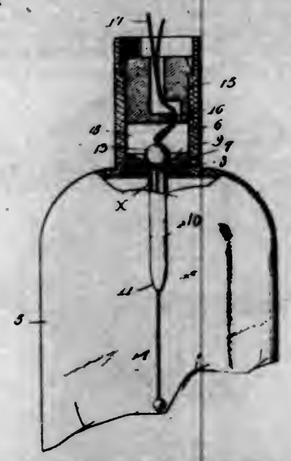
5. A sole rounding machine, having, in combination, a pattern, a knife carrier movable about the pattern, means for oscillating the knife carrier during such movement, and means for moving the pivot of the knife carrier, substantially as described.

[Claims 6 to 24 not printed in the Gazette.]

881,995. NON-REFILLABLE BOTTLE. HENRY L. BALDWIN, Watertown, N. Y. Filed Apr. 22, 1907. Serial No. 369,547.

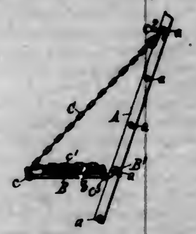
1. The combination with a bottle, of a plug engaged in the neck thereof and having a passage formed therethrough, said passage having a valve seat, a valve disposed to lie normally in the seat to close the passage, a tube connected with the plug and extending into the bottle, a cord

connected with the valve and extending through the tube and into the bottle, and a weight secured to the inner end of the cord, said cord between the inner end of the tube and weight being of less length than the distance between the said end of the tube and remaining portions of the structure, except those directly adjacent to the upper end of the tube.



2. In a non-refillable bottle, the combination with a neck and body portion, of a tube communicating with the neck, a valve arranged to cut off communication between the tube and neck, a cord connected with the valve and extending through the tube and into the body portion and a weight secured to the inner end of the cord, said cord between the inner end of the tube and the weight being of less length than the distance between the said end of the tube and the remaining portions of the structure, except those directly adjacent to the upper end of the tube.

881,996. LADDER-JACK. OSCAR C. A. BLOCK, Davenport, Iowa. Filed July 1, 1907. Serial No. 381,817.

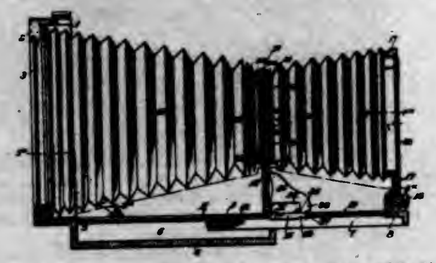


1. A ladder jack comprising a U-shaped frame having hooks and a cross brace formed with a central eye, at its ends, a chain extending lengthwise of the frame and having its ends secured to the central eye of the cross brace and to the outer end of the frame, respectively, for holding a board transversely of the frame, and a supporting chain secured to the outer end of the frame and provided with a hook at its outer end.

2. A ladder jack comprising a U-shaped frame having hooks and a cross brace, at its ends, a double eye through the lower eye of which the outer end of the frame is passed, a supporting chain secured to the upper eye of the double eye and provided with a hook at its outer end, and a chain extending lengthwise of the frame and having its ends secured to the cross brace, and to the upper eye of the double eye, respectively, for holding a board transversely of the frame.

3. A ladder jack comprising a U-shaped frame having hooks, and a cross brace formed with a central eye, at its ends, a double eye through the lower eye of which the outer end of the frame is passed, a supporting chain secured to the upper eye of the double eye and provided with a hook at its outer end, and a chain extending lengthwise of the frame and having its end secured to the central eye of the cross brace and to the upper eye of the double eye, respectively, for holding a board transversely of the frame.

881,997. PHOTOGRAPHIC ENLARGING-CAMERA. FRANK A. BROWNELL, Rochester, N. Y., assignor to Eastman Kodak Company, Rochester, N. Y., a Corporation of New York. Filed Jan. 25, 1904. Serial No. 190,529.



1. In a photographic enlarging camera the combination with a casing comprising pivotally connected front and rear sections and a bed adjustable longitudinally on the front section, of a holder for a plate or negative mounted on the onter end of the bed, a lens support also mounted on the bed and adjustable thereon between said holder and the rear section and bellows arranged between the latter and the support and holder and support.

2. The combination with hollow front and rear sections hinged together, of a holder for a plate or negative supported on the front section and adapted to be contained therein when not in use, a lens support adjustably mounted on the front section and adapted to be contained in the rear section when not in use and collapsible bellows arranged between the lens support and the rear section and the holder.

3. The combination with hinged front and rear sections, a holder for a plate or negative mounted on the front section and an adjustable carriage arranged on the latter, of a lens support pivoted to the carriage and bellows arranged between said support and the rear section and the holder.

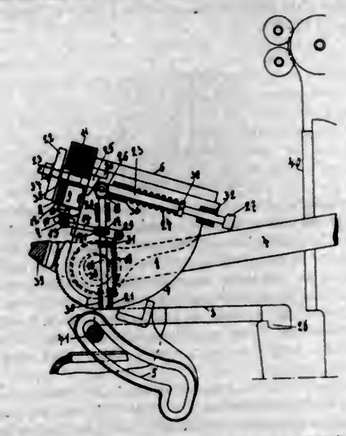
4. The combination with front and rear sections, hinges connecting them and a holder for a plate or negative mounted on one of the front sections, of a carriage, a lens support and hinges connecting the support and carriage, means for adjusting the latter to move the hinges into approximate alinement with the pivoted centers of the hinges connecting said front and rear sections and bellows connecting the lens support with the rear section and the holder.

5. The combination with front and rear sections, a lens support adapted to be contained in the rear section and a bellows connecting it therewith, of a carriage attached to the lens support and adjustably mounted on the front section, a holder for a plate or negative adapted to be contained in the front section, means for supporting it in an upright position on the latter and a bellows connecting the holder and lens support.

[Claims 6 to 32 not printed in the Gazette.]

881,998. PRINTING-PRESS, ESPECIALLY OF THE BED-AND-PLATEN TYPE. ARTHUR BURBACH, Leipsig-Schleussig, Germany, assignor to The Firm of J. G. Schelter & Giesecke, Leipsig, Germany. Filed Sept. 26, 1906. Serial No. 336,235.

1. In a press, the combination of a bed member having a printing face, and having a face extending perpendicular to the printing face, a platen member having a curved face by which the platen can roll over the said perpendicular face of the bed member, the platen member having a face extending transversely to the printing face of the bed when the platen is in the printing position, a support adjustably mounted on said transverse face of the platen to engage the side of a book or article opposite the side to be printed by the said face of the bed, means connected with said support and movable to engage the article to advance it from the support, said means having a member normally projecting beyond the curved face of the platen to engage the bed and thereby cause the support to advance the article, and means for retracting the support and said means.



2. In a press, the combination of a bed member having a printing face, and having a face extending perpendicular to the printing face, a platen member having a curved face by which the platen can roll over the said perpendicular face of the bed member, the platen member having a face extending transversely to the printing face of the bed when the platen is in the printing position, a support adjustably mounted on said transverse face of the platen to engage the side of a book or article opposite the side to be printed by the said face of the bed, means connected with said support and movable to engage the article to advance it from the support, said means having a member normally projecting beyond the curved face of the platen to engage the bed and thereby cause the support to advance the article, means for retracting the support and said means, and clamping means arranged to lock the article in its printing position.

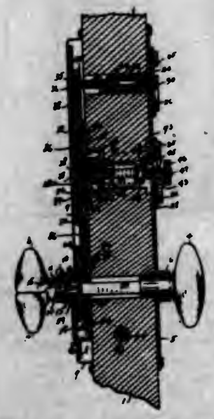
3. In a press, the combination with a bed member having a printing surface, and a platen movable toward and from said surface, of a support secured on a face of the platen extending transversely to the printing face of the bed in the printing position of the platen, whereby to engage a book or other article on its side opposite the side to be printed, means automatically operated by the platen to advance the book beyond its printing position upon the platen being retracted after the printing operation, and means for engaging the book or article on the side opposite the said transverse side of the platen, said means being automatically operated in a direction parallel with the printing surface of the bed during the movement of the platen to clamp the book when the platen is in the printing position, and to release the book when the platen is retracted from the printing position.

4. In a press, the combination with the bed member having a printing surface and a platen movable to and from the printing surface and provided with a face extending transversely to the printing surface when in the printing position, of a supporting member on said transverse face arranged to engage the side of a book or article opposite the side to be printed, and a clamping member carried by the platen and automatically operated in a direction parallel with the printing surface of the bed to engage the book or article to press it against said transverse face when the platen is in the printing position, and to release the book or article when the platen is retracted from the printing position.

5. In a press, the combination with the bed member having a printing surface and a platen movable to and from the printing surface and provided with a face extending transversely to the printing surface when in the printing position, of a supporting member on said transverse face arranged to engage the side of a book or article opposite the side to be printed, a clamping member carried by the platen and automatically operated to engage the book or article to press it against said transverse face when the platen is in the printing position, and to release the book or article when the platen is retracted from the printing position, resilient means organized to operate the clamping member toward its clamping position, and a positive locking means arranged to secure the clamp in its final clamping position.

[Claims 6 to 9 not printed in the Gazette.]

881,999. LOCK. DANIEL W. CROCKETT, Indianapolis, Ind. Filed Feb. 11, 1907. Serial No. 356,826.



1. In a lock, a knob shank fastener consisting of a two-part knob provided with a shank, the upper part of said knob pivoted to said shank, a lever fulcrumed in the knob shank, an escutcheon, and a collar secured thereto having a slot to receive one end of said lever, the other end of the lever attached to the upper and pivoted part of the knob.

2. In a lock a knob shank fastener consisting of a two-part knob provided with a shank, the upper part of said knob pivoted to said shank, a lever fulcrumed in the knob-shank, an escutcheon, a collar secured thereto having a slot to receive one end of said lever, the other end of the lever attached to the upper and pivoted part of the knob, and a spring to normally hold the lever end in said slot.

3. In a lock, a knob shank fastener, consisting of a two-part knob provided with a shank, the upper part of said knob pivoted to said shank, a lever fulcrumed in the knob shank, an escutcheon, a collar secured thereto having a slot to receive one end of said lever, the other end of the lever attached to the upper and pivoted part of the knob, a spring to normally hold the lever end in said slot, and a clip slidably mounted on said knob-shank adapted to hold said lever end out of operative position when properly adjusted.

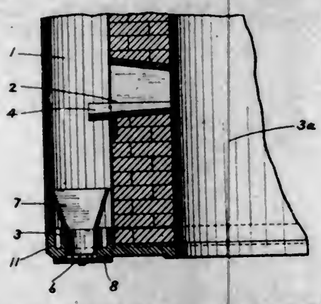
4. In a lock, a knob-shank fastener consisting of a two-part knob provided with a shank, the upper part of said knob pivoted to said shank, a lever fulcrumed in the knob-shank, an escutcheon, a collar secured thereto having a slot to receive one end of said lever, the other end of the lever attached to the upper and pivoted part of the knob, a spring to normally hold the lever end in said slot, a clip slidably mounted on said knob-shank adapted to hold said lever end out of operative position when properly adjusted, a bar slidably mounted on the inner escutcheon, and adapted to raise said lever end out of said slot, and means of operating said bar from the outside of the door.

5. In a lock, a knob-shank fastener, consisting of a two-

part knob provided with a shank, the upper part of said knob pivoted to said shank, a lever fulcrumed in the knob-shank, an escutcheon, a collar secured thereto having a slot to receive one end of said lever, the other end of the lever attached to the upper and pivoted part of the knob, a spring to normally hold the lever end in said slot, a clip slidably mounted on said knob-shank adapted to hold said lever end out of operative position when properly adjusted, a bar slidably mounted on the inner escutcheon and adapted to raise said lever end out of said slot, a plunger adapted to operate said bar from the outside of the door, and a spring to adjust and hold said plunger in its normal position.

[Claims 6 to 14 not printed in the Gazette.]

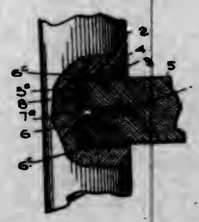
882,000. CUPOLA. NEWBOLD ETTINGS, Philadelphia, Pa. Filed Sept. 24, 1907. Serial No. 394,317.



1. A cupola wind box having a safety twyer and a safety outlet arranged through its floor and provided with a funnel like box extending above the floor of the box and having its smaller end arranged at the outlet and its larger end arranged beneath the safety twyer to catch discharge therefrom, substantially as described.

2. A cupola wind box having in its floor a safety outlet provided with a fusible or destructible closure, a detachable funnel like box projecting upward from the outlet and above the closure and floor, a swinging ring cover carrying said closure and adapted to afford access to the box, and a catch for the cover, substantially as described.

882,001. METHOD OF AND MEANS FOR MAKING MORTISE-JOINTS. JOHN L. GILMAN, Boulder, Colo., assignor of one-third to Theodore L. Strawn and Walter E. Whitacre, Boulder, Colo. Filed June 7, 1907. Serial No. 378,039.



1. The means for securing a mortise joint comprising an expansible plate and a fastening device adapted to secure the said appliance upon the end surface of an object so as to allow its dilation by forcible engagement with the opposing surface.

2. The means for securing a mortise joint comprising a concave washer and a fastening device adapted to secure the said washer upon the end of an object so as to allow its dilation by forcible engagement with an opposing abutment.

3. The means for securing a mortise joint comprising a circumferentially toothed, expansible washer and a fastening device adapted to secure the said washer upon the end of an object so as to allow its dilation by forcible engagement with an opposing abutment.

4. A mortise joint comprising a male member and an expansible plate held upon its end surface so that its perimetric parts will project beyond the edges thereof when dilated by forcible engagement with an opposing surface.

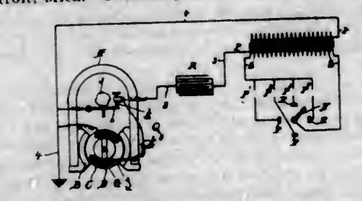
882,002. DENTAL SWAGING DEVICE. ROBERT G. HOPKINS, Des Moines, Iowa. Filed May 13, 1907. Serial No. 373,367.



1. In a device of the class described, the combination of a swaging block base formed complete of a single piece of metal, and having a recess therein, circular in horizontal section, tapered from its upper toward its lower end, and having its sides arranged on nearly straight lines near its upper end, and gradually curved inwardly to almost horizontal lines at the bottom of the recess, and a number of soft metal crown forming blocks designed to receive a tooth pattern and a crown between them, and shaped to fit into said recess.

2. In a device of the class described, the combination of a swaging block base formed complete of a single piece of metal, and having a recess therein circular in horizontal section, tapered from its upper toward its lower end, and having its sides arranged on nearly straight lines near its upper end, and gradually curved inwardly to almost horizontal lines at the bottom of the recess, and two soft metal crown forming blocks, each having its outer face shaped to fit the contour of the recess, and its inner face flat, and provided with a semi-cylindrical groove extended from its top to a point near its bottom on its flat face.

882,003. ELECTRICAL IGNITING APPARATUS. EDWARD S. HUFF, Detroit, Mich., assignor to Henry Ford, Detroit, Mich. Filed July 1, 1905. Serial No. 267,923.



1. In an electric igniting apparatus, the combination with an induction coil, of a condenser having its opposite ends connected with the opposite ends of the primary, one of said connections being formed through two branches, one of which includes a source of electricity and forms part of a charging circuit and the other of which forms part of a discharging circuit, each including the primary, and means in each of said branches adapted to periodically open and close said charging and discharging circuits, one circuit being open while the other is closed.

2. In an electric igniting apparatus, the combination with an induction coil, of a condenser having its opposite ends connected with the opposite ends of the primary, one of said connections being formed through two branches one of which includes a source of electricity and forms part of a charging circuit for the condenser and the other of which forms part of its discharging circuit, each including the primary, and means in each of said branches adapted to periodically open and close said charging and discharging circuits, the means in the discharging circuit being variable in relation to those in the charging circuit.

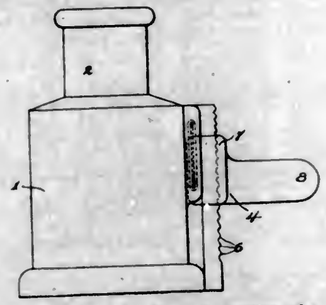
3. In an electric igniting apparatus, the combination with the primary of an induction coil, of a condenser, a source of electricity therefor adapted to charge the same, charging and discharging circuits connecting the condenser with the source and with the primary respectively, circuit controlling devices operating in unison with each other and adapted to periodically make and break said circuits at intervals apart and means for timing the making and breaking of the discharge circuit in relation to that of the charging circuit.

4. In an electric igniting apparatus, the combination with an induction coil having in its secondary circuit a plurality of electrodes forming spark gaps in different branches of the circuit, of a condenser having its opposite ends connected with the opposite ends of the primary, one of said connections being formed through two branches one of which includes a source of electricity and forms part of a charging circuit for the condenser and the other of which forms part of its discharging circuit, means in each of said branches adapted to periodically open and close said charging and discharging circuits and means in the secondary circuit to periodically open and close said circuit successively through its different branches in unison with the discharge circuit of the condenser.

5. In an electric igniting apparatus, the combination with an induction coil having a plurality of pairs of electrodes forming spark gaps included in different branches of its secondary circuit, of a condenser connected in circuit with the primary thereof, said circuit being formed with two separate branches between one end of said condenser and its connection with the primary, a source of electricity in one of said branches, a circuit controlling device in each of said branches adapted to periodically open and close the circuit through said branches, one being open while the other is closed and a switch in the secondary circuit operating in unison with the circuit controlling devices to successively close the secondary circuit through its different branches.

[Claims 6 to 10 not printed in the Gazette.]

882,004. LIFTING-JACK. MERRILL L. JENKINS, Harvey, Ill., assignor to Buda Foundry & Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed Dec. 14, 1906. Serial No. 347,753.

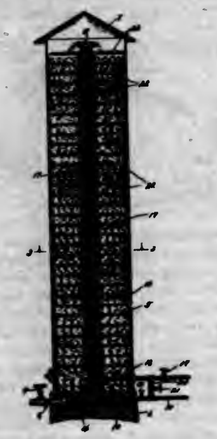


1. In combination with the body portion of a jack having a vertical engaging T rib, of a holding down member comprising a shank with opposing edges of similar contour, and a head provided with a T slot substantially at right angles to the shank for making sliding interlocking engagement with the rib and extending beyond one edge of the shank.

2. In combination with the body portion of a jack having a vertical T rib and a substantial parallel retaining rib, of a holding down member comprising a head adapted to make sliding interlocking engagement with the T rib and a shank adapted to fit the space between the T rib and the retaining rib.

3. In combination with the body portion of a jack having a vertical T rib and a substantial parallel retaining rib provided with a spring, of a holding down member comprising a head adapted to make sliding interlocking engagement with the T rib and a shank adapted to fit the space between the T rib and the spring on the retaining rib.

882,005. WATER-PURIFYING APPARATUS. WILLIAM M. JEWELL, Winnetka, and WALTER WAGNER, Berwyn, Ill., assignors of one-third to Omar H. Jewell, Chicago, Ill. Filed Nov. 15, 1902. Serial No. 131,574.



1. A subsidence apparatus, consisting of a chamber, means dividing said chamber into a plurality of zones and arranged to receive and retain sediment deposited in said zones, and means communicating with the upper portions of said zones for drawing off liquid therefrom.

2. A subsidence-apparatus, consisting of a chamber, means dividing said chamber into a plurality of zones, and arranged to receive and retain sediment deposited in said zones, means communicating with the upper portions of said zones for drawing off liquid therefrom, and means for supplying liquid simultaneously to a plurality of said zones.

3. A subsidence-apparatus, consisting of a chamber, means dividing said chamber into a plurality of zones and arranged to receive and retain sediment deposited in said zones, means communicating with the upper portions of said zones for drawing off liquid therefrom, and means for washing out the accumulated sediment from said zones, substantially as described.

4. A subsidence-apparatus, consisting of a chamber, means dividing said chamber into a plurality of zones and arranged to receive and retain sediment deposited in said zones, and means for continuously supplying liquid to said zones and means communicating with the upper portions of said zones for continuously discharging liquid from the upper portions thereof.

5. A subsidence-apparatus, consisting of a chamber, means dividing said chamber into a plurality of zones and arranged to receive and retain sediment deposited in said zones, means for supplying liquid to said chamber, and outlets communicating with the upper portions of said zones for the discharge of the liquid.

[Claims 6 to 12 not printed in the Gazette.]

882,006. PROCESS OF MAKING CRACKERS. FRANK A. JOHNSON, Salisbury, Mass., assignor to Johnson Educator Food Company, Boston, Mass., a Corporation of Massachusetts. Filed Mar. 21, 1907. Serial No. 363,533.

The process of making crackers consisting of mixing entire wheat flour and water to form a dough, stamping the cracker from the dough and sprinkling salt upon the surface of the stamped out cracker before being baked, then baking the cracker and while the freshly baked

cracker is still in its highly heated condition before being allowed to cool, applying to the surface of the cracker a pure, hot melted butter oil from which all casein, salt and water have been removed, said butter oil being applied to the surface of the cracker in such proportion as to be wholly absorbed by the cracker while still in its highly heated condition.

882,007. HORSESHOE. HERBERT P. KENNEDY, Peterboro, Ontario, Canada. Filed June 11, 1907. Serial No. 378,333.



1. The combination with a horseshoe, of a calk engaging the same, an orificed holder plate lying on the underside of the shoe and receiving the calk in the orifice of the holder plate, to hold the calk in position, and means for exerting a strain on the plate transversely of the plane in which the shoe lies, by which to draw the plate toward the underside of the shoe.

2. The combination with a horseshoe, of a reversible calk of prismatic cross sectional form, a holder plate having an orifice extending through it from side to side, the side walls of the orifice in the plate engaging opposite oblique surfaces of the calk, and means for drawing the holder plate toward the shoe, whereby the calk is pressed against the shoe and held firmly engaged in the orifice of the holder plate.

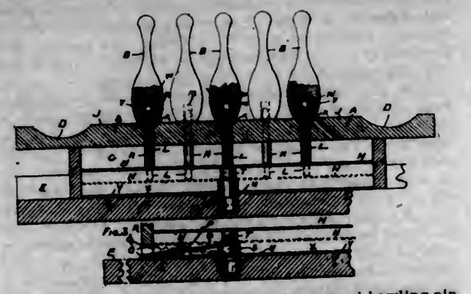
3. The combination with a horseshoe, of a reversible calk, a holder plate for securing the same in position, said holder plate having one end engaged with the shoe, and means for exerting a transverse strain on the other end of the holder plate to draw it toward the shoe.

4. The combination with a horseshoe having a recess therein, a removable calk, a holder plate adapted to retain the calk in position, the holder plate having one end engaged in the recess of the shoe, and means for exerting a transverse strain on the other end of the holder plate to draw it toward the shoe.

5. In a horseshoe, in combination, a removable calk having sloping sides and resting on said shoe, a plate having a central raised portion and an orifice through the center thereof adapted to receive said calk and having the inner walls of said raised portion conforming to the slope of the walls of said calk, said plate being held from the surface of said shoe and having projecting lips engaging the edges of said shoe, and means for adjustably securing said plate and said calk to said shoe, substantially as described.

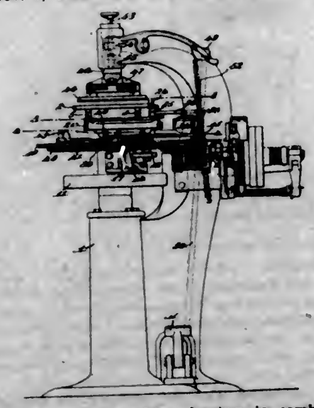
882,008. PIN-SETTING APPARATUS FOR BOWLING-ALLEYS. JOHN E. KILBURN, New Bedford, Mass. Filed Mar. 1, 1907. Serial No. 360,290.

1. A bowling-alley bed having, at its several bowling-pin spots, axial vertical openings extending downward through its thickness, fixed axial downward tubular extensions of said bed-openings, guide-pins for the setting of the bowling-pins thereon, severally located in said bed-openings and their said tubular extensions and normally at their lower ends projecting below the lower open ends of said extensions and at their upper ends within the thickness of the alley-bed, a horizontal platform which is located below the alley-bed and supports said guide-pins and is arranged for a direct up and down movement relative to the alley-bed, and means consisting of an operating-lever and of a connection thereof with said platform, which are constructed and arranged relative to said lever, said platform and said alley-bed, to raise said platform and said guide-pins standing thereon, on a forced movement of said lever in one direction, and for said operating-lever, said platform and said guide-pins to return of themselves to their respective normal positions on the releasing of said operating-lever, substantially as described, for the purposes specified.



2. A bowling-alley bed having at its several bowling-pin spots, axial vertical openings extending downward through its thickness, fixed axial downward tubular extensions of said bed-openings, guide-pins for the setting of the bowling-pins thereon, severally located in said bed-openings and their said tubular extensions and normally at their lower ends projecting below the lower open ends of said extensions and at their upper ends within the thickness of the alley-bed, a horizontal platform which is located below the alley-bed and supports said guide-pins and is arranged for a direct up and down movement relative to the alley-bed, and means consisting of an operating-lever and of a plunger and a sleeve in which said plunger moves which are relatively constructed and arranged as to each other and connected to said platform and said alley-bed to raise said platform and said guide-pins standing thereon, on a forced movement of said lever in one direction, and for said operating lever, said platform and said guide-pins to return of themselves to their respective normal positions on the releasing of said operating-lever, substantially as described, for the purposes specified.

882,009. SOLE-ROUNDING MACHINE. BENJAMIN F. MAYO, Salem, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Nov. 7, 1902. Serial No. 130,384.



1. A sole rounding machine, having, in combination, a pattern, a rotary support, a carrier mounted to move inwardly and outwardly thereon, a rounding knife mounted on the carrier, and means for actuating the carrier to maintain the direction of the inward and outward movements of the carrier substantially normal to the curves of the pattern throughout the entire rounding operation, substantially as described.

2. A sole rounding machine, having, in combination, a pattern, a rotary support, a carrier having a pivotal connection therewith located entirely outside of the pattern, a rounding knife mounted on the carrier, a cam for oscillating the carrier about said pivotal connection and connections between the cam and carrier acting to transmit substantially the entire force exerted by the cam to the carrier in a direction substantially at right angles to a line joining the point about which the carrier oscillates and the point at which the force is applied, substantially as described.

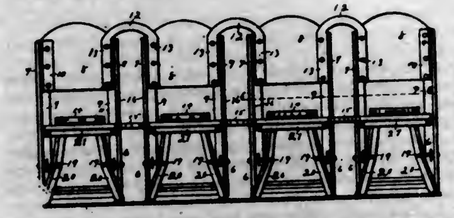
3. A sole rounding machine, having, in combination, a pattern, a rotary support, a carrier having a pivotal connection therewith located entirely outside of the pattern, a rounding knife mounted on the carrier, a cam for oscillating the carrier about said pivotal connection, a lever pivotally mounted upon the rotary support, and connections between the lever and the cam, and between the lever and the carrier, substantially as described.

4. A sole rounding machine, having, in combination, a pattern, a rotary support, a carrier having a pivotal connection therewith located entirely outside of the pattern, a rounding knife mounted on the carrier, a cam for oscillating the carrier about said pivotal connection, and mechanism intermediate the cam and carrier mounted upon the rotary support and acting to transmit substantially the entire force exerted by the cam to the carrier in a direction substantially at right angles to a line joining the point about which the carrier oscillates and the point at which the force is applied, substantially as described.

5. A sole rounding machine, having, in combination, a pattern, a rotary support, a carrier having a pivotal connection therewith located entirely outside of the pattern, a rounding knife mounted on the carrier, and means for oscillating the carrier about said pivotal connection comprising a cam and mechanism intermediate the cam and the carrier mounted on the rotary support, substantially as described.

[Claims 6 to 29 not printed in the Gazette.]

882,010. ANGLE-METAL FOLDING BENCH. WILLIAM H. MAXWELL, Kalamazoo, Mich. Filed Mar. 21, 1907. Serial No. 363,667.



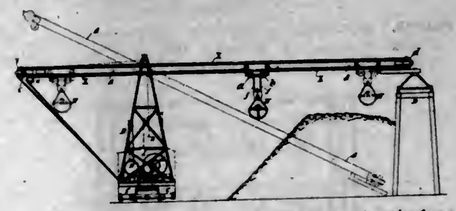
1. A folding bench comprising a series of folding chairs side by side and a little separated, loop hair pin shaped bars attached to the contiguous sides of the chair backs, substantially as set forth.

2. A folding bench comprising a series of folding chairs side by side and a little separated, loop hair pin shaped bars attached to the contiguous edges or sides of the chair backs, and a bar attached to the seat bottoms and provided with loops in position to prevent movement by endwise strain on bench, and causing the series of bottoms to act as one in the movement of folding, substantially as set forth.

3. A folding bench comprising a series of folding chairs side by side and a little separated, the side bars to the backs of said chairs being of angle metal, and loop hair pin shaped bars the parallel portions of which are attached to the sides, substantially as set forth.

4. A folding bench comprising a series of folding chairs side by side and a little separated, the side bars of the backs of said chairs being metal, loop hair pin shaped bars the parallel portions of which are attached to the sides, and a bar attached to the rear of the chair bottoms, and provided with loops surrounding the rear flanges of the angle metal bars, whereby the bottoms act as one in folding the bench, and the chairs are prevented from endwise misplacement, substantially as set forth.

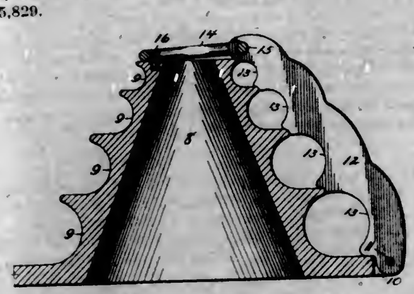
882,011. CRANE MECHANISM. HENRY W. METCALFE. Ealing, England. Filed July 8, 1907. Serial No. 382,692.



1. Crane mechanism comprising a movable platform, an upright frame pivoted thereon, a crane arm suspended at an intermediate point of its length from a pivot at the top of the frame, a carriage capable of being traversed along the arm, a two barrel winch and engine for driving it carried on the base of the frame, the barrels of the winch being capable of being driven either in opposite directions or both in the same direction, a rope led from one winch barrel around a guide pulley at the end of one arm then over a pulley on the carriage and downwards and then again upwards and over another pulley on the carriage (leaving a downwardly hanging loop on which the grab or weight to be lifted is supported) and around a guide pulley at the end of the other arm and from thence over a pulley at the end of the first arm back to the second winch barrel, substantially as described.

2. The combination of a crane arm, a carriage capable of being traversed along the arm, a rope led from a winch barrel around a guide pulley at one end of the arm, then over a pulley on the carriage and downwards and then again upwards and over another pulley on the carriage (leaving a downwardly hanging loop on which a grab is supported) and around a guide pulley at the other end of the arm and from thence over a pulley at the end of the first arm back to a second winch barrel, an endless rope rigidly attached to the carriage and passing around pulleys at the two ends of the crane arm and clamping mechanism for gripping this rope and thereby holding it fast whenever the carriage is to be restrained from moving along the arm.

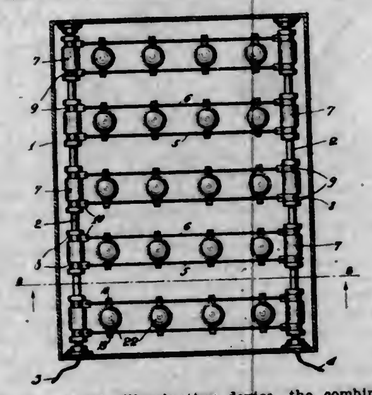
882,012. CONDUIT-BENDING DEVICE. JOHN E. MORRIS, Columbus, Ohio. Filed July 27, 1907. Serial No. 385,829.



In a device of the character described, the combination with a horizontal base having a plurality of outstanding perforated lugs carried thereby, of ears projecting from said base, an upstanding body portion having a plurality of annular grooves formed in the face thereof which extend entirely around said body portion, said grooves being of varying radii and varying diameters, a swinging member grooved to co-act with the grooves of the body portion,

said swinging member being pivoted to the base, a pin extending above the upper face of the body portion and a loop pivotally engaging the upper end of the swinging member, the free end of said loop being adapted to engage over said pin, those portions of the swinging member that actually lie in contact with the upstanding body portion slightly overlapping those portions of the body portion with which they contact.

882,013. ELECTRIC SIGN OR ILLUMINATING DEVICE. WILLIAM N. MCCOMB, New York, N. Y. Filed Oct. 5, 1904. Serial No. 227,209.



1. In an electric illuminating device, the combination with a plurality of sockets, of means for adjusting the same in groups in one direction and means for adjusting them individually in a direction at right angles to the group adjustment.

2. In an electric illuminating device, the combination with a plurality of sockets, of means for adjusting the same in groups in a vertical direction, and means for adjusting them individually in a horizontal direction.

3. In an electric illuminating device, a unit block composed of a plurality of sockets, means for adjusting the same in groups in one direction, and means for adjusting them individually in a direction at right angles to the group adjustment.

4. In an electric illuminating device, a unit block composed of a plurality of sockets, means for adjusting the same in groups in a vertical direction, and means for adjusting them individually in a horizontal direction.

5. In an electric illuminating device, the combination with two standards spaced a distance apart and connected to opposite poles of a source of supply of electricity, cross bars connecting the said standards and adjustably mounted upon the same and arranged in pairs, one cross bar of each pair being in circuit with one standard and the other cross bar being in circuit with the other standard, and one or more sockets adjustably mounted upon the cross bars having electrical connection with the same.

882,014. GRAIN-DOOR FOR CARS. CHARLES C. NEALE, Minneapolis, Minn., assignor of three-tenths to John P. Nash, three-tenths to William M. Nash, one-fifth to Helena M. Neale, and one-fifth to John H. Steele, Minneapolis, Minn. Filed Mar. 15, 1907. Serial No. 362,454.



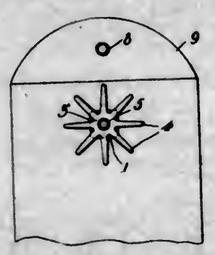
1. The combination with a car body having a door opening, of a door made up of a multiplicity of door sections and a receding lock bar, the said door sections and lock bar being so proportioned to the width of the door opening as to form an arch when the lock bar is projected, substantially as described.

2. The combination with door posts, of a door made up of a pair of door sections and a receding lock bar applied to one thereof, the said door sections and lock bar being so proportioned to the opening between said door posts as to form an arch when said lock bar is projected, and which lock bar when retracted permits the door to buckle, substantially as described.

3. The combination with a car body having a door opening, of a car door made up of a pair of door sections and a receding lock bar mounted in the inner edge of one of said door sections and detachably engageable with the inner edge of the other door section, the said door sections and lock bar being so proportioned to the width of the door opening as to form an arch when said lock bar is projected, and which lock bar when retracted permits the door to buckle, substantially as described.

4. The combination with door posts 3 having stop cleats 4, of a door made up of sections 5 and 6 and having at their inner edges reinforcing channels 7 and 8, respectively, and a receding lock blade 9 seated in said channel 8 and engageable with the groove in said channel 7, and means for holding said lock blade projected, the said door sections and lock blade being so proportioned to the width of the opening between said door posts as to form an arch when said lock blade is projected, substantially as described.

882,015. ENVELOP-FASTENER. LACY M. NORWOOD, Savannah, Ga. Filed July 29, 1907. Serial No. 386,094.



1. An envelop fastener comprising a base plate, means for securing said plate to an envelop, a plate superposed and revolubly mounted on said base plate and having a multiplicity of radially extending clamping prongs.

2. An envelop fastener comprising means for engaging an envelop, and a plate revolubly mounted thereon and provided with a plurality of radially extending bendable clamping prongs.

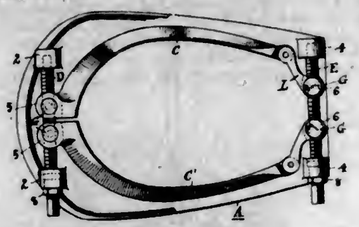
3. The combination with an envelop having a flap provided with an eyelet, of a fastener comprising a baseplate secured to said envelop, adjacent said flap, and a plate revolubly mounted on said base plate and provided with a plurality of bendable prongs for engagement with said eyelet and with the edge of said flap.

882,016. LAWN-BOOT. GEORGE W. PHILLIPS, Cleveland, Ohio, assignor to The Phillips Lawn Boot Company, Cleveland, Ohio, a Corporation. Filed Aug. 26, 1907. Serial No. 390,239.

1. A lawn pad for horses, having posts front and rear and right and left threaded screws rotatably supported in said posts, nuts engaing said right and left threads on each screw, and clamps to fasten the pad on the foot mounted on said nuts.

2. A lawn pad for horses, having posts at their ends and right and left threaded screws in said posts, a pair of cylindrically shaped nuts on each screw on said right and left threads respectively, and clamps for the foot mounted on said nuts in rotatable relation thereto, whereby adjustment can be made at either end.

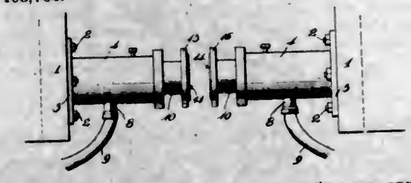
3. The pad having posts on top front and rear, right and left threaded screws rotatably mounted in said posts, a pair of oppositely threaded nuts on each screw, a pair of clamping members to secure the pad to the foot mounted at their front ends directly upon the front nuts, and links connecting the rear ends of the clamps with the rear nuts.



4. The pad having front and rear posts on top, oppositely threaded screws in said posts and clamps for the foot adjustably mounted on said screws, and lock nuts for said screws rotatably confined in both said front and rear posts respectively.

5. A lawn pad for horses having two posts at its front and two at its rear, a single screw mounted in each set of said posts having right and left threads, respectively, between said posts, and separate clamping members adapted to engage the hoof adjustable upon said threads toward and from each other.

882,017. TRAIN-PIPE COUPLING. WILLIAM Z. PULLIAM, Benton, Ill. Filed Nov. 25, 1907. Serial No. 403,764.

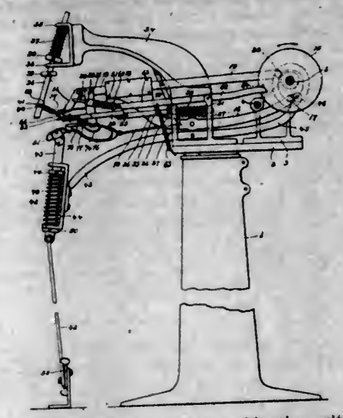


In a train pipe coupling, a valve casing, an annular supporting flange thereon, a fluid pressure supply port leading into said casing, a source of fluid pressure connected thereto, a hollow valve slidably mounted in said casing and having an opening in one end thereof only, said valve having an elongated inlet port on its side adapted to register with the supply port, and a channel-way opposite the supply port, a set screw-engaging said channel-way to guide said valve and limit its forward movement, a spring to normally keep the inlet port out of register with the supply port, and another similar valve adapted to force the registration of the inlet and supply ports of both valves so that the fluid supply of one passes through both.

882,018. LASTING-MACHINE. CHARLES F. PYM, Detroit, Mich., assignor of one-half to Krentler Brothers Company, Detroit, Mich., a Corporation of Michigan. Filed Mar. 28, 1907. Serial No. 364,960.

1. In a lasting machine, the combination with means for forming or wiping the upper of a boot or shoe in the process of lasting, and means for actuating said forming means, of a member adapted to yieldingly engage the sole of the shoe from above, a member to yieldingly support said shoe and its last from below, and means for moving one of said members toward the other to yieldingly clamp the last.

2. In a lasting machine, the combination with means for forming or wiping the upper of a boot or shoe in the process of lasting, and means for actuating said forming means, of a member adapted to yieldingly engage the shoe from above, a jack to support the shoe and its last from below and means for automatically lifting said jack in timed relation to the movement of the wiping means to clamp the last between it and said member.



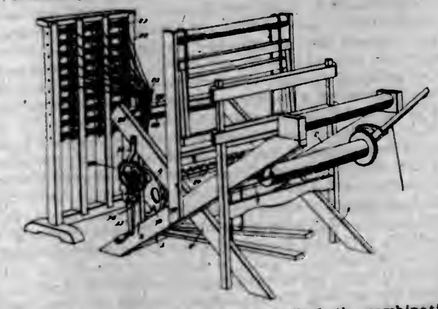
3. In a lasting machine, the combination with wipers and means for actuating the same, of a member adapted to engage the sole of the shoe secured to the last, a spring to yieldingly press said member toward the shoe sole, adjustable means for limiting the movement against the action of said spring of said member, a jack having a member to support the last and shoe, a spring to yieldingly hold said jack member and of a strength sufficient to overcome the action of the spring of the sole member and means for actuating the jack.

4. In a lasting machine, the combination with means for holding a last and shoe upper in position to be lasted and wipers having formed edges adapted to wipe forwardly the edges of the upper about the end of the last simultaneously on the opposite sides thereof with sliding wiping movement, of automatically intermittent power mechanism for automatically actuating said wipers to last the toe or heel of the shoe while the last and shoe upper are so held and stopping before the lasting is completed to enable the operator to inspect the partly lasted shoe.

5. In a lasting machine, the combination with horizontally extending wiper plates vertically pivoted together and capable of yielding in the plane of the sole, and automatic operating means therefor, of means for automatically supporting the last and shoe upper in position to be lasted.

[Claims 6 to 23 not printed in the Gazette.]

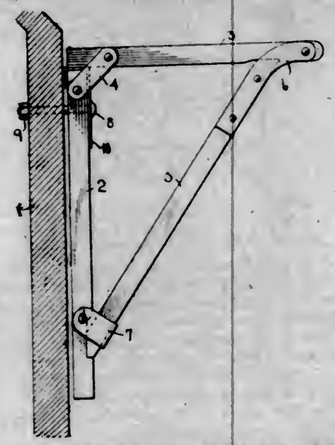
882,019. WARPING-MACHINE. GEORGE L. REED, Springfield, Ohio, assignor to The Reed Manufacturing Company, Springfield, Ohio, a Corporation of Ohio. Filed Sept. 20, 1904. Serial No. 225,268.



In a device of the character described, the combination, with the frame, of a warp beam mounted therein, a guide

plate adjustably mounted near said warp beam, and a clip or lease adapted to be interposed between said guide plate and said beam and having a slit in one end thereof adapted to receive the threads as they come from the guide plate and retain the same in their relative positions.

882,020. SCAFFOLD-BRACKET. SILAS S. RICHARDSON, Montague, Mass., assignor of one-half to Herbert G. Shaw, Montague, Mass. Filed Apr. 4, 1907. Serial No. 366,349.



A bracket embracing a stand having a mortise near its lower end, a bearer resting near one end upon the upper end of said stand, diagonal opposite link-plates arranged laterally of, and having their ends pivoted to said stand and said bearer, respectively, and an oblique brace having secured laterally thereto, at its upper end, opposed spaced apart extension-plates receiving, and having pivoted between and to them the outer end of said bearer, a stirrup pivoted to said stand and arranged to stand opposite the mortise in the latter and adapted to aid the retention of said brace in said mortise as set forth, and a mortise on the lower side of and intermediate the pivot points of said bearer, said extension plates rigidly extending outwardly at an angle from said oblique brace, whereby said extension plates will occupy a horizontal position, and the upper end of said oblique brace will be held in the mortise of said bearer when the bracket is in use and whereby said oblique brace will when it is folded be constrained to move around and over the end of said bearer and lie flush upon the upper surface thereof, whereby said stand may be folded against the lower surface of said bearer.

882,021. BOTTLE-CLEANER. JOHN SCHIGELINSKY, Cleveland, Ohio. Filed Jan. 26, 1907. Serial No. 354,330.

1. In a bottle cleaner, the combination of a shank-handle, a cleaner arm, a resilient hinge member inserted in recesses in the end of both said handle and said arm, and an extensible cord terminally secured at one end to said arm and provided with means for adjustably attaching its other end to said handle, substantially as set forth.

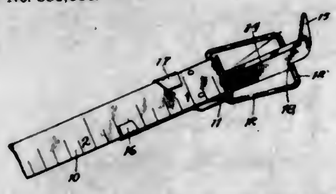
2. In a bottle cleaner, the combination of a shank-handle, a cleaner arm, a resilient hinge member inserted in the ends of both said handle and said arm, removable pins for holding said hinge member to said handle and said arm respectively, and an extensible cord terminally secured at one end to said arm and provided with means for adjustably attaching its other end to said handle, substantially as set forth.

3. In a bottle cleaner, the combination with a shank-handle having near its upper end a series of transverse apertures trending diagonally downward, of a cleaner-arm, a removable resilient hinge member between said handle and cleaner-arm, an extensible cord terminally secured at one end to the cleaner-arm, and a pin attached to the



other end of said cord adapted for insertion in the said handle apertures, substantially as set forth.

882,022. ATTACHMENT FOR TAPE-LINES. FRIEDEBERT SCHMIDT, Indianapolis, Ind. Filed July 1, 1907. Serial No. 381,636.



1. An attachment for tape lines comprising a main body having means for engaging the tape line, an arm having a projecting retaining finger, and a shoulder to engage the tape line ring.

2. An attachment for tape lines comprising a main body having means for engaging the tape line, and an arm adapted to be projected through the tape line ring, said arm having a retaining finger projected from one side thereof, and a ring retaining shoulder on the opposite side.

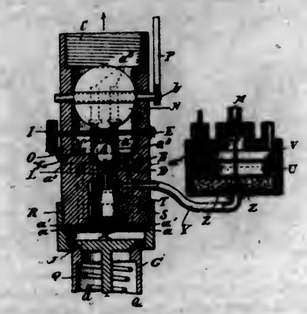
3. An attachment for tape lines comprising a main body, a pair of longitudinally-separated fingers carried by said main body and projected over the same from opposite directions, an arm having a projecting retaining finger, and a shoulder to engage the tape line ring.

4. An attachment for tape lines comprising a main body, a pair of longitudinally-separated fingers carried by said main body and projected over the same from opposite directions, an arm adapted to be projected through the tape line ring, said arm having a retaining finger projected from one side thereof, and a ring-retaining shoulder on the opposite side.

882,023. VAPORIZER OR CARBURETER FOR GAS-ENGINES. CHARLES D. SHAIN, Rockaway Park, N. Y. Filed June 22, 1907. Serial No. 380,348.

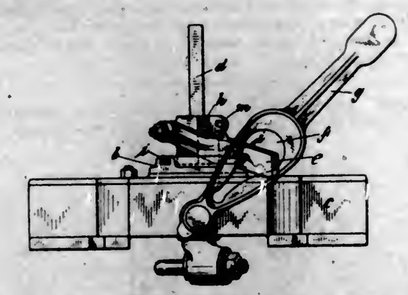
The combination in a vaporizer or carbureter of a butterfly valve, a casing forming a mixing chamber, provided with main and auxiliary air passages, extending vertically through the lower wall of the casing; additional auxiliary air passages extending horizontally from the first mentioned auxiliary air passages through the casing of the carbureter, the first mentioned auxiliary air passages directly opened partly or fully, or closed partly or fully, by the butterfly valve and arranged so their air supply from the bottom of the carbureter or vaporizer, can be cut off and these auxiliary passages supplied with air separately

if desired, by means of the air passages extending from these vertical air passages, horisontally, to the outside of the vaporizer or carbureter; with a plain union containing a suction air valve at the bottom of the vaporizer or carbureter, for supplying either heated or cold air; and a ball valve or sprayer located in the mixing chamber and seated in a support, and a passage through the support for the delivery of gasolene or liquid fuel under the ball, into the mixing chamber, the ball valve controling this delivery; an eccentric cam on a shaft, a milled nut on one end of the shaft, and a ball spring, extending from the car-



bureter casing and contacting with the milled nut, the cam and shaft being located above the ball and operated by the milled nut, which is held in any desired position by the ball spring; and a partly hollow screened plug and bushing for the passage of gasolene or liquid fuel, through the said support into the mixing chamber; the partly hollow plug having in its top a bushing with a hole through its center, the proper size for supplying the maximum flow of gasolene or liquid fuel required for any specific size of engine, all substantially as set forth.

882,024. SWITCH-STAND. FRED W. SNOW, Hillburn, and WILLIAM C. KIDD, Suffern, N. Y., assignors to Standard Equipment Company, Mahwah, N. J., a Corporation of New Jersey. Filed Dec. 20, 1907. Serial No. 407,340.



1. In a switch stand, the combination of means to control the automatic throwing of a switch, manually operated means to throw the switch normally in engagement with the automatic means, and means to disengage the manually operated means from the automatic means and throw the switch in a single operation.

2. In a switch stand, the combination of means to control the automatic throwing of a switch, manually operated means to throw the switch normally in engagement with the automatic means, and a lever adapted to move in a single plane and as it moves in said plane to disengage the manually operated means from the automatic means and throw the switch.

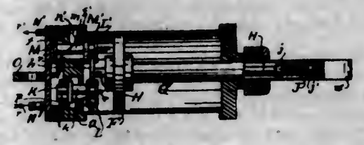
3. In a switch stand, the combination of means to control the automatic throwing of a switch, manually operated means to throw the switch normally in engagement with the automatic means, and a lever adapted to move in a vertical plane and as it moves in said plane to disengage the manually operated means from the automatic means and throw the switch.

4. In a switch stand, the combination of means to control the automatic throwing of a switch, an arm through which the switch may be manually thrown normally in engagement with the automatic means, and a lever adapted to move in a single plane and as it moves in said plane to disengage the arm from the automatic means and throw the switch.

5. In a switch stand, the combination of means to control the automatic throwing of a switch, a substantially horizontal arm through which the switch may be manually thrown normally in engagement with the automatic means, and a lever adapted to move in a vertical plane and as it moves in said plane to disengage the arm from the automatic means and throw the switch.

[Claims 6 to 11 not printed in the Gazette.]

882,025. WATER-MOTOR. GEORGE W. SPOELSTRA, Grand Rapids, Mich. Filed Dec. 26, 1906. Serial No. 349,575.

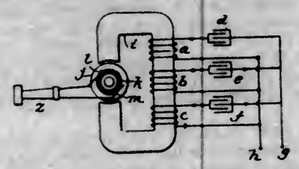


1. In a water motor, a cylinder, cylinder heads secured thereto and having intake and exhaust ports, a valve seated in the intake port constructed with a central valve plate and a web extending each way from said plate, valve seats some distance apart each side of the valve plate, an exhaust valve seated in the exhaust port, a hollow piston rod projecting out of one end of the cylinder, a piston mounted thereon within the cylinder, a removable bearing in the outer end of the rod and a shoulder in the rod some distance from the end, a hollow rod passing through the piston rod, a flange at one end thereof engaging the valves each independent of the other, a rod slidingly secured in the opposite end of the hollow rod, a permanent head and a sliding head on said rod and a spring between them, substantially as and for the purpose set forth.

2. In a water motor, a cylinder, cylinder heads secured thereto, one of said cylinder heads having an intake port with a reversible valve therein, and an exhaust port with a reversible valve therein, said valves and ports arranged to change the direction of the flow of water through the cylinder, a piston in the cylinder, a hollow rod connected therewith and projecting out through the back head of the cylinder, a removable bearing in the end and a shoulder some distance in therefrom, a hollow rod passing through the piston rod, a disk on the hollow rod engaging each valve independent of the other, a spring actuated rod arranged to engage the bearing and shoulder in the piston rod to actuate the valves, substantially as and for the purpose set forth.

3. In a water motor, a cylinder, cylinder heads on the cylinder, and a connecting pipe between said heads, a piston within the cylinder, a hollow piston rod supporting the piston, and passing out through one of the heads, said rod having a bearing at the end and a shoulder a short distance therefrom, a hollow rod within the piston rod, a short rod connected with the outer end of the hollow rod, a spring connected therewith in position to engage the bearing and the shoulder in the piston alternately, the opposite head of the cylinder having intake and exhaust ports, reciprocating valves in said head, and means for actuating said valves each independent of the other with the hollow rod that passes through the piston rod, and with the spring mounted thereon, substantially as and for the purpose set forth.

882,026. MEANS FOR TRANSMITTING ELECTRIC CURRENTS WITH INCREASED ENERGY. JULIAN A. STRATTON, Chicago, Ill. Filed July 13, 1906. Serial No. 326,135.



1. The combination with a source of current having diverse frequencies, of a plurality of inductive windings in circuit therewith; a condenser for each of said windings, each condenser and its coöperating winding being proportioned for resonance to a given frequency from said source; separate magnetic circuits each of which is linked by one of said windings and a current-reinforcing device controlled by the variable magnetic field established through said magnetic circuits.

2. The combination with a source of current having diverse frequencies, of a plurality of primary circuits connected therewith, each circuit being resonant to a given frequency from said source; a magnetic field energized by said current; and an armature which rotates in said field.

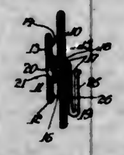
3. The combination with a source of current having diverse frequencies, of a plurality of primary circuits connected therewith, each circuit being resonant to a given frequency from said source; a plurality of separate magnetic circuits each of which is linked by one of said primary circuits; and a secondary circuit in inductive relation to said circuits.

4. The combination with a source of current having diverse frequencies, of a plurality of primary circuits connected therewith, each circuit being resonant to a given frequency from said source; and a movable secondary element in inductive relation to said primary circuits.

5. The combination with a source of current having diverse frequencies, of a plurality of primary circuits connected therewith, each circuit being resonant to a given frequency from said source; a plurality of separate magnetic circuits each of which is linked by one of said primary circuits; and a movable secondary element in inductive relation to said primary circuits.

[Claims 6 and 7 not printed in the Gazette.]

882,027. COMBINED BUTTON AND GARMENT-SUPPORTER. MAURICE M. STRAUSS, Chicago, Ill. Filed July 1, 1904. Serial No. 214,919.

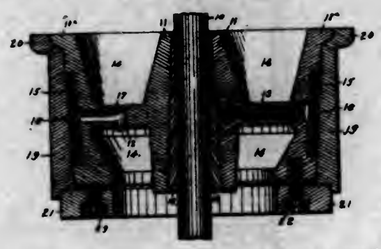


1. A garment holding device comprising a button having an integral hollow shank of metal, said shank having a shoulder for engaging one side of the cloth and bendable grip fingers on its end for engaging the other side of the cloth and a garment supporting device having a shank extending through the hollow shank of said button, substantially as described.

2. A garment holding device comprising a button formed of separate metal sections secured together, said inner section having a hollow shank provided with a shoulder for engaging one side of the cloth, a ring adapted to fit over the shank and engage the other side of the cloth, said shank having grip fingers on its end adapted to bend around said ring into engagement with the cloth and a U-shaped hook having a shank adapted to extend through the hollow shank of the button and be supported thereby, substantially as described.

3. A garment supporting device comprising a button formed of separate sheet metal sections with the edge of the outer section folded over that of the inner section, the inner section having a hollow shank provided with a shoulder for engaging one side of the cloth and with bendable grip fingers at its end for engaging the other side of the cloth and a U-shaped garment supporting hook having an integral shank on one leg thereof adapted to extend within the hollow button shank to hold the hook in place, substantially as described.

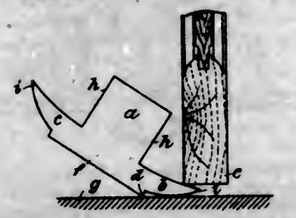
882,028. LOOSE PULLEY. CARL M. SWANSON, Des Moines, Iowa. Filed Apr. 18, 1907. Serial No. 368,823.



1. An improved loose pulley, comprising a stationary pulley body, having a tapered central opening, two tapered wedges, each semi-circular in cross section, inserted in the tapered opening, a set screw seated in the pulley body to engage one of said wedges, and a movable pulley member rotatably mounted on the stationary one.

2. In a loose pulley, the combination of a pulley body having its periphery of greater diameter at one end than the other, means for firmly connecting said pulley body with a shaft, a movable pulley member or sleeve mounted upon the pulley body and having its interior tapered to correspond with the pulley body, and an annular rim placed adjacent to the smaller end of the pulley body, said rim being of a size to engage the adjacent end of the movable pulley body, a number of set screws passed through the rim and seated in the pulley body, for adjustably holding the rim toward the pulley body for tightening the movable pulley member relative to the fixed one, and a number of set screws seated in the annular rim to engage the adjacent portion of the pulley body for normally holding the rim away from the pulley body to permit the movable pulley member to rotate freely relative to the pulley body.

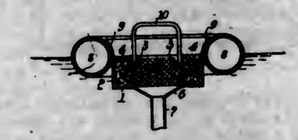
882,029. DOOR-LIFTER. REIMER THOMS, Schleswig, Germany. Filed Mar. 12, 1907. Serial No. 362,033.



1. An improved door lifter in the shape of a two-armed lever, adapted to be actuated by foot pressure and adapted to automatically hold the door raised, when the lifting movement of the door is completed, comprising a block-shaped center body *a* and a pair of horns *b*, *c* attached to, or integral with, two opposite sides of the center body *a*, substantially as set forth.

2. An improved door lifter in the shape of a two-armed lever, adapted to be actuated by foot pressure and adapted to automatically hold the door raised, when the lifting movement of the door is completed, comprising a block-shaped center body *a* and a pair of horns *b*, *c* attached to, or integral with, two opposite sides of the center body *a*, said horns extending from the side faces *h* at the lower portion thereof but a short distance above the bottom edge *d* of same, substantialy as described and for the purpose set forth.

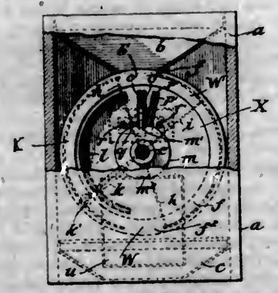
882,030. FILTER. PAUL TRAULSEN and FRIEDRICH BUNDSEEN, Bergedorf, near Hamburg, Germany. Filed Mar. 12, 1907. Serial No. 362,004.



1. An improved floating filter comprising a non-corrodible receptacle 1 provided with a perforated peripheral wall 2 and subdivided by a perforated cylindrical shell 3 into two concentric chambers 4, 5 of which the external chamber 4 serves for the reception of the filtering material; a funnel-shaped spout 6 at the open center portion of the receptacle 1 which is margined by the perforated shell 3; a tubular conduit 7 tightly connected with the aforesaid funnel-shaped spout 6 for leading off the filtered matter from the center chamber 5 of the receptale 1 to its place of destination; and a floating body 8 in the shape of a buoy filled with air under atmospheric or higher pressure or inflated with compressed gases, said floating body being detachably connected to the receptacle 1 by curving outwardly the top edge 9 of the peripheral wall 2 so as to form an abutment face for the buoy; substantially as described and shown and for the purposes set forth.

2. A floating filter of the character described, having a basket-like grating 21 for the reception and protection of the flexible conduit 7, said grating 21 coming into action when the floating filter descends by virtue of the surface of the matter to be filtered falling, substantially as described and shown and for the purpose set forth.

882,031. DELIVERY APPARATUS. GEORG UHLMANN, Dresden, Germany. Filed Aug. 13, 1906. Serial No. 330,347.

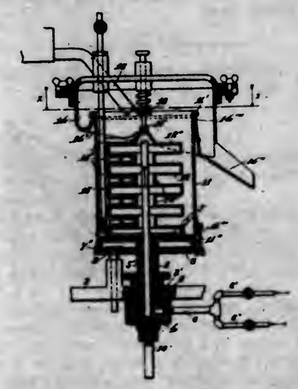


1. A delivery apparatus comprising a casing having an inlet and an outlet, a peripherally perforated rotary drum between the inlet and outlet of the casing divided into compartments by a fixed wall, a movable wall adjustable to different positions in said compartments, means for adjusting and locking said movable wall, and means for rotating and locking the drum, substantially as described.

2. A delivery apparatus comprising a casing having an inlet and an outlet, a peripherally perforated rotary drum between the inlet and outlet of the casing divided into compartments by a diametric wall, a rotary diametric wall for dividing each said compartment into two compartments, means for rotatably adjusting said rotary wall comprising a resilient hand lever, a rack coöperating with said hand lever to lock said hand lever, means for rotating the drum, and means for locking the drum against rotation, substantially as described.

3. A delivery apparatus, comprising a casing having an inlet and an outlet, a horizontal, peripherally perforated, rotary drum mounted therein between the inlet and the outlet, and divided into two compartments by a fixed wall, a shaft mounted within the drum and provided with partitions subdividing the said drum compartments, a pointer-handle at the end of said shaft, a rack on the drum head in which said handle engages, means for automatically locking the said drum against rotation, and means for releasing the locking mechanism, substantially as described.

882,032. ICE-CREAM FREEZER. THEODORE L. VALERIUS, Fort Atkinson, Wis., assignor to The Creamery Package Mfg. Company, Chicago, Ill., a Corporation of Illinois. Filed July 28, 1906. Serial No. 328,223.



1. In an ice cream freezer, an internally cooled annular and externally exposed vessel mounted for rotation upon a vertical axis and open at the top for the discharge of frozen cream therefrom, substantially as described.

2. In an ice cream freezer, an internally cooled and externally exposed annular vessel mounted for rotation upon a vertical axis and open at the top for the discharge of frozen cream therefrom, in combination with a dasher within said vessel, substantially as described.

3. In an ice cream freezer, an internally cooled and externally exposed vessel containing an annular space open at the top to receive and contain the liquid to be frozen mounted for rotation upon a vertical axis, in combination with a stationary dasher within said annular space, and means at the top of the vessel to receive frozen cream therefrom substantially as described.

4. In an ice cream freezer, an internally cooled annular or ring-like vessel mounted for rotation upon a vertical axis and open at the top for the discharge of semi-frozen liquid, in combination with means at said top for receiving and discharging the semi-frozen liquid therefrom, substantially as described.

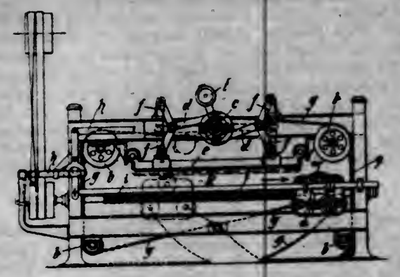
5. In an ice cream freezer, an externally exposed and internally cooled annular vessel, mounted for rotation as one part or member upon a vertical axis and open at the top for the discharge of frozen cream therefrom, substantially as described.

[Claims 6 to 21 not printed in the Gazette.]

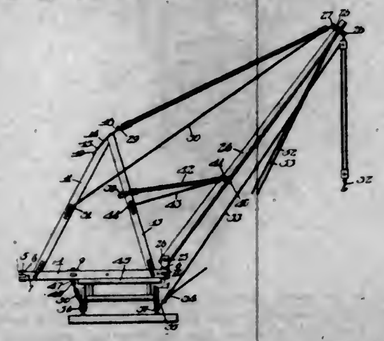
882,033. LEATHER-ROLLING PRESS. CHRISTIAN VOSS, Neumünster, Germany. Filed July 8, 1907. Serial No. 382,747.

In a leather rolling press the combination with a frame, a platen and press-box, toggle levers carrying the press-box, a reciprocating carriage, a roller thereon, a rotatable disk mounted on the frame, and two chains each having one end attached to the reciprocating carriage and the

other end attached to the circumference of the disk, the length of said chains being such that they become alternately taut when the carriage or press roller reaches the ends of the rolling path.



882,034. DERRICK. EDWARD J. WARD, Chicago, Ill. Filed Sept. 24, 1906. Serial No. 336,077.



1. The combination with a vehicle arranged to operate upon car rails of a derrick removably mounted thereon, and means for removably securing said derrick to the rails.

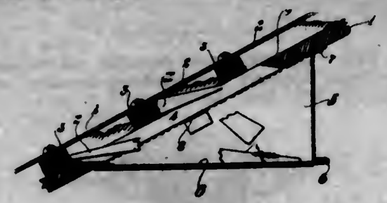
2. The combination with a vehicle, of a derrick removably mounted thereon, said derrick having a base portion extending transversely to said vehicle, and guys extending from said base portion and secured to stationary supports independent of said vehicle.

3. In a derrick, the combination with a base, of a plurality of members extending upwardly from said base and converging at their upper ends to form a quadrangular pyramidal structure, a boom pivotally mounted on the front end of said base, a fall connected to the converging ends of said members and to the upper ends of said boom for raising and lowering said boom, and a second fall connected to said boom for raising and lowering the load.

4. The combination with a base, of a plurality of members extending upwardly from said base and converging at their upper ends to form a quadrangular pyramidal structure, a boom pivotally mounted at one end of said base, a fall extending between the upper end of said boom and the converging ends of said members for raising and lowering said boom, guys extending from the upper end of said boom to a stationary support, and a second fall extending from said boom for raising and lowering the load.

5. The combination with a car arranged to operate upon tracks, of a derrick removably mounted thereon comprising a base, a plurality of members extending from said base, and converging at their upper ends, a boom pivotally mounted upon one end of said base, a fall for raising and lowering the end of said boom connected with one end thereof, and with the converging ends of said members, guys connected to the upper end of said boom and at their lower ends to the rails, and means for connecting said base to the rails.

882,035. SAFETY TOOTH-CATCHER FOR THRESHING-MACHINES. CARL G. W. WERNICKE, Minneapolis, Minn. Filed May 3, 1907. Serial No. 371,744.

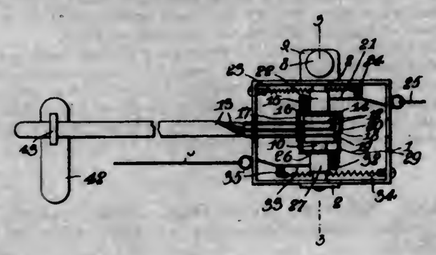


1. The combination with the tailings return mechanism of a threshing machine, of a catch box applied to the under side of a section thereof, substantially as described.

2. The combination with the leg and conveyer belt of the tailings elevator of a threshing machine, said leg having an opening in its bottom, of a catch box applied to said leg below said opening and provided with a displaceable bottom, substantially as described.

3. The combination with the leg and conveyer belt of the tailings elevator of a threshing machine, said leg having an opening in its bottom, of a catch box applied to said leg below said opening and provided with one or more transverse bridge bars in or adjacent to the bottom of said leg, substantially as described.

882,036. MUSIC-LEAF TURNER. HARRY H. WEST, Plymouth, Pa. Filed Sept. 12, 1907. Serial No. 392,544.



1. In a music leaf turner, a casing, means to adjustably connect said casing with a suitable support, a shaft arranged in said casing, leaf turning arms pivotally mounted on said shaft, arm turning devices, shoulders on said devices, and spring metal operating bars connected to said turning devices whereby the same are operated to turn on said arms and whereby the shoulders on said devices are successively engaged with said arms, substantially as described.

2. In a music leaf turner, a casing, means to adjustably connect said casing with a suitable support, a shaft arranged in said casing, leaf turning arms pivotally mounted thereon, arm turning devices, said devices comprising sleeves pivotally mounted on said shaft, radially projecting flanges on the inner ends of said sleeves, inwardly projecting operating flanges on said radial flanges, arm engaging shoulders on said operating flanges, and means whereby said arm turning devices are operated, substantially as described.

3. In a music leaf turner, a casing, means to adjustably connect said casing with a suitable support, a shaft arranged in said casing, leaf turning arms pivotally mounted thereon, arm turning devices, said devices comprising sleeves pivotally mounted on said shafts, radially projecting flanges on the inner ends of said sleeves, inwardly projecting operating flanges on said radial flanges, arm engaging shoulders on said operating flanges, and spring metal operating bars connected to said turning devices whereby the same are operated to turn said arms and whereby the shoulders on said operating flanges are successively engaged with said turning arms, substantially as described.

4. A music leaf turner comprising a casing, means to adjustably support said casing on a piano, a vertically disposed shaft arranged in said casing, a series of spacing disks rigidly secured to said shaft, a plurality of turning arms pivotally mounted on the shaft between said disks, upper and lower arm turning devices slidably mounted on said shaft, operating shoulders formed on said devices, means whereby said shoulders are successively engaged with said arms to turn the same, operating bars connected to said devices whereby the latter are caused to turn said arms, retracting springs connected to said bars whereby said operating devices are restored to their normal positions, and means connected to said operating bars whereby the same are actuated by the pedals of the piano, substantially as described.

5. A music leaf turner comprising a casing, means to adjustably support said casing on a piano, a shaft arranged in said casing, a series of spacing disks rigidly mounted on said shaft, a plurality of leaf turning arms pivotally connected to the shaft between said disks, upper and lower operating devices adapted to be successively engaged with said turning arms, to swing the same in one direction or the other, said operating devices comprising sleeves slidably mounted on said shaft, radially disposed flanges on the inner ends of said sleeves, inwardly projecting segmental flanges formed on said radially disposed flanges, arm engaging shoulders formed on said segmental flanges, eccentrically mounted studs arranged on the outer sides of the annular radial flanges of said operating devices, spring metal operating bars pivotally connected at their ends to said studs, whereby said operating devices are turned on said shaft and forced inwardly to successively engage the shoulders thereon with the turning arms, springs connected to said operating bars whereby the same are retracted to restore said operating devices to their normal positions after each operation, a series of operating rods connected to said bars, bell crank-levers connecting said bars together and to the pedal of the piano whereby the movement of said pedal is communicated to the operating device of said casing to swing said arm in one direction or the other, substantially as described.

882,037. FLY-WHEEL. SAMUEL P. WETHERILL, Jr., and JOHN P. WETHERILL, Jr., Philadelphia, Pa., assignors to Samuel Price Wetherill, Philadelphia, Pa. Filed Sept. 11, 1906. Serial No. 334,117.



1. A fly wheel, formed of a light metal alloy which is readily cast, and weighted with a heavy metal, occupying cavities in the light metal, said fly wheel having a hard metal bushing, substantially as described.

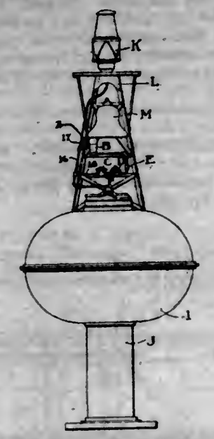
2. A fly wheel, composed of a light metal alloy which is readily cast and provided with channels on its opposite faces near its outer rim, said channels being united by transverse holes, and a metallic body occupying the said channels and transverse holes to add weight at the periphery of the wheel, substantially as described.

3. A fly wheel composed of an aluminium alloy, and provided with channels on opposite faces of its rim, said channels being connected by transverse holes, and a body of lead occupying the said channels and transverse holes to add weight at the periphery of the wheel, substantially as described.

4. A fly wheel composed of an aluminium alloy and provided with channels on its opposite faces near its outer rim, said channels being connected by transverse holes, a filling of lead occupying the said channels and holes, and a bushing of steel in the hub, substantially as described.

882,038. WITHDRAWN.

882,039. FOG SIGNALING APPARATUS. THOMAS L. WILLSON, Ottawa, Ontario, Canada. Filed June 8, 1907. Serial No. 377,960.



1. A signaling apparatus including a striker, a sounding device operated thereby and an explosion device directly operating the striker.

2. A signaling device including a vibratory sound producing means, an explosion device operating intermittently at atmospheric pressure, and means for directly applying the force of the explosions to vibrate the sound producing means.

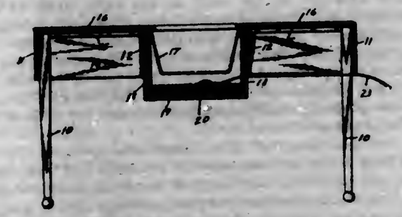
3. A signaling apparatus including a striker, a sounding device operated thereby, means for producing explosions of gas at atmospheric pressure, and means for applying the force of the explosions to operate the striker.

4. A signaling apparatus, including a bell, a projectile means for creating an explosion, means for applying the force of the explosion to direct the projectile against the bell.

5. A signaling apparatus including in combination, means for producing an explosive mixture, means for igniting said mixture at substantially atmospheric pressure to produce an explosion and signaling means operated by the explosion.

[Claims 6 to 37 not printed in the Gazette.]

882,040. CHOCOLATE-WARMING TABLE. JAMES R. WINDSOR, Des Moines, Iowa. Filed Dec. 20, 1906. Serial No. 348,775.

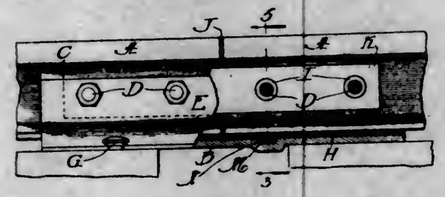


1. A chocolate warming table comprising a frame, a table top having longitudinal side pieces, a chocolate tank having flanges at its edges, two sliding table top plates between said side pieces normally projected over the adjacent flanges of the tank, a casing secured to the table top and inclosing the bottom and sides of the tank, and spaced apart therefrom, a layer of heat retaining material in said casing, and an incandescent electric light bulb in said casing.

2. A chocolate warming table, comprising a frame, a table top comprising longitudinal side pieces, a chocolate

tank having flanges at its edges, said flanges at the sides of the table resting in notches in said side pieces, two sliding table top plates between said side pieces normally projected over the end flanges of the tank, a casing permanently secured to the table top and inclosing the bottom and sides of the tank and spaced apart therefrom, a layer of heat retaining material in said casing and an incandescent electric light bulb partially embedded in said material.

882,041. INSULATING RAIL-JOINT. BENJAMIN WOLHAUPTER, New York, N. Y., assignor to The Rail Joint Company, a Corporation of New York. Filed Sept. 21, 1906. Serial No. 335,653.



1. An insulating joint comprising a base-plate, a girder-plate having interlocking connection at its lower margin with said base-plate, a joint-bar of insulating material interposed between the rails and girder-plate, a tie-bar interposed between the webs of the rails and the joint-bar and track-bolts extending through the rails, the tie-bar, joint-bar and the girder-plate.

2. An insulating joint comprising a base-plate, a girder-plate having interlocking connection at its lower margin with said base-plate, a joint-bar of insulating material interposed between the rails and girder-plate, a tie-bar interposed between the webs of the rails and the joint-bar, track bolts extending through the rails, the tie-bar, joint-bar and girder-plate, and insulating sleeves inserted through the holes in the webs of the rails and in said tie-bar and surrounding said track-bolts.

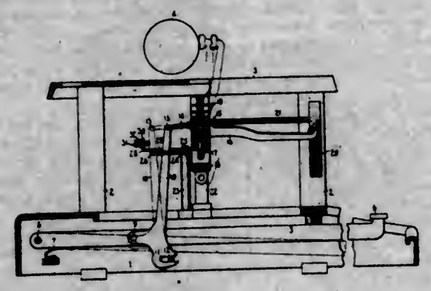
3. An insulating rail-joint comprising a base-plate, a girder-plate, a joint-bar of insulating material interposed between the rails and the girder-plate, a metal tie-bar located adjacent to the webs of the rails, the said joint-bar being provided in its inner face with a recess to receive said tie-bar, insulating sleeves interposed between said track-bolts and the webs of the rails, and an insulating layer or strip applied between the webs of the rails and the said tie-bar.

4. An insulating rail joint comprising a base-plate, two girder-plates, joint-bars of insulating material interposed between the rails and the said girder-plates, metal tie-bars located adjacent to the webs of the rails, said wooden joint-bars being provided on their inner faces with recesses to receive said tie-bars, track-bolts inserted through the rails, the tie-bars, the joint-bars and said girder-plates, insulating sleeves inserted through holes in the webs of the rails and tie-bars and surrounding the track-bolts, and insulating layers or strips applied between the webs of the rails and the said tie-bars.

5. An insulating rail joint comprising a base-plate, an insulating layer applied between the rails and said base-plate, and means for holding said insulating layer in place upon the base-plate embracing an aperture in the insulating layer, an upwardly facing closed socket in the base-plate, and a key of insulating material inserted in said aperture and socket.

882,042. TYPE-WRITING MACHINE. FRANK A. YOUNG, Syracuse, N. Y., assignor to The Monarch Typewriter Company, Syracuse, N. Y., a Corporation of New York. Filed July 22, 1904. Serial No. 217,607.

1. In a typewriting machine, the combination of a type bar support, a type bar mounted thereon, a key lever, a sub-lever movable independently of said type bar support and connected with said type bar and with said key lever, and means for limiting the throw of said sub-lever, all the recited parts of the type action being at all times positively connected together, and movement of the type bar after the sub-lever is stopped being permitted by the spring or give of the parts and the looseness in their connections.



2. In a typewriting machine, the combination of a type bar support, a type bar mounted thereon, a key lever, a sub-lever movable independently of said type bar support and connected with said type bar and with said key lever, and a stop for positively limiting the throw of said sub-lever, all the recited parts of the type action being at all times positively connected together and movement of the type bar after the sub-lever is stopped being permitted by the spring or give of the parts and the looseness in their connections.

3. In a typewriting machine, the combination of a type bar support, a type bar mounted thereon, a key lever, a sub-lever movable independently of said type bar support and connected with said type bar and with said key lever, and an adjustable stop by which the movement of travel of said sub-lever may be varied, all the recited parts of the type action being at all times positively connected together and movement of the type bar after the sub-lever is stopped being permitted by the spring or give of the parts and the looseness in their connections.

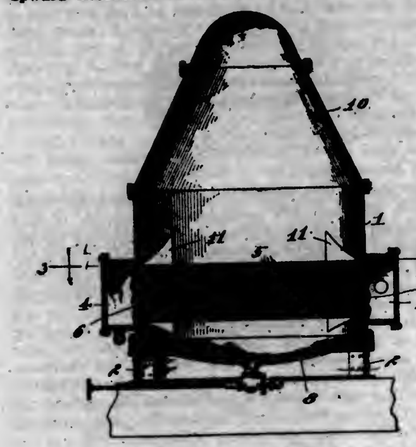
4. In a typewriting machine, the combination of a type bar, a key lever, a vertically disposed sub-lever connected with said type bar and said key lever, and a stop arranged behind said sub-lever and adapted to limit the rearward travel of said sub-lever, all the said parts of the type action being at all times positively connected together, and movement of the type bar after the sub-lever is stopped being permitted by the spring or give of the parts and the looseness in their connections.

5. In a typewriting machine, the combination of a type bar, a key lever, a vertically disposed sub-lever connected with said type bar and said key lever, and an adjustable stop arranged behind said sub-lever and adapted to vary the limit of the rearward travel of said sub-lever, all the said parts of the type action being at all times positively connected together, and movement of the type bar after the sub-lever is stopped being permitted by the spring or give of the parts and the looseness in their connections.

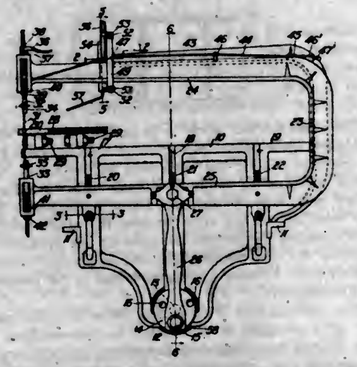
[Claims 6 to 12 not printed in the Gazette.]

882,043. EVAPORATOR. EDWARD ZAREMBA, Chicago, Ill. Filed Nov. 30, 1906. Serial No. 345,616.

An evaporator comprising a vertical cylindrical shell, two steam chests at opposite sides of the shell and exterior thereto, a transverse group of heating tubes connecting the steam chests and lying in the liquor space of the shell, said group of tubes being arranged centrally of the shell, leaving an unobstructed space above the group and a segmental unobstructed space between each side of the group and the adjacent shell wall whereby a constant upward circulation of the liquid in the center and a constant downward circulation of the liquid at each side of the group is maintained.



882,044. JIG-SAW. ALFRED ANDERSON, Somerville, Mass. Filed May 11, 1907. Serial No. 373,149.



1. In a jig saw, a stationary frame, a U-shaped frame arranged to move vertically thereon, said U-shaped frame provided with two arms, a saw connected to said arms, a guide adapted to maintain one of said arms in fixed position horisontally, and an adjustable guide adapted to move the other of said arms horizontally with relation to said first arm.

2. In a jig saw, a stationary frame, a U-shaped frame mounted to slide vertically thereon, said U-shaped frame provided with two arms, a guide in which one of said arms is arranged to slide vertically, said guide adapted to maintain said arm in fixed position horisontally, and a second guide in which the other of said arms is arranged to slide vertically, said second guide adapted to be adjusted horisontally with relation to said first-named guide.

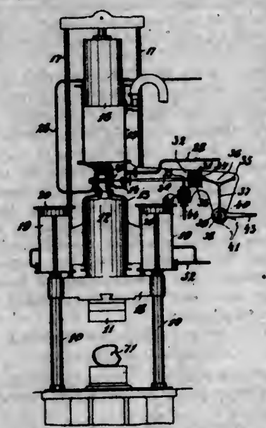
3. In a jig saw, a stationary frame, a U-shaped frame arranged to move vertically thereon, said U-shaped frame provided with two arms, a saw connected to said arms, a plurality of guides arranged at intervals along one of said arms and adapted to maintain the same in fixed position horisontally, and an adjustable guide adapted to move the other of said arms horisontally with relation to said first arm.

4. In a jig saw, a stationary frame, a U-shaped frame provided with two substantially horisontal arms, a plurality of slides fast to one of said arms at intervals, arranged to slide on said stationary frame and adapted to maintain said arm in fixed position horisontally, and an adjustable guide adapted to move the other of said arms horisontally with relation to said first arm.

5. In a jig saw, a stationary frame, a U-shaped frame arranged to move vertically thereon, said U-shaped frame provided with two arms, a saw connected to said arms, two guides between which one of said arms is arranged to slide vertically, a plurality of sleeves having screw-threaded engagement with one of said guides and bearing against the other of said guides, and a plurality of screws passing through said sleeves, respectively, and arranged to lock said sleeves against rotation.

[Claim 6 not printed in the Gazette.]

882,045. HYDRAULIC PRESS. WILAND ASTFALCK, Tegel, near Berlin, Germany. Filed Oct. 14, 1907. Serial No. 397,318.



1. In a hydraulic press the combination of a pressure cylinder, a filling cylinder, pistons in said cylinders, means of communication between said cylinders, return cylinders, pistons therein co-acting with the piston in the pressure cylinder, a valve adapted to control communication between the pressure and filling cylinders, a pressure intensifier, a pressure pump coupled thereto, means of communication between said pressure pump and the filling and pressure cylinders, a fluid controlling device, means of communication between the latter and the pressure intensifier and return cylinders respectively and means operated from the controlling device for actuating the aforesaid valve.

2. In a hydraulic press the combination of a pressure cylinder, a filling cylinder, pistons in said cylinders, means of communication between said cylinders, return cylinders, pistons therein co-acting with the piston in the pressure cylinder, a valve adapted to control communication between the pressure and filling cylinders, a pressure intensifier, a double acting pressure pump coupled thereto, means of communication between said pressure pump and the filling and pressure cylinders, a fluid controlling device, means of communication between the latter and the pressure intensifier and return cylinders, and a flexible joint and transmission mechanism interposed between the aforesaid valve and the controlling device and operated from the latter.

3. In a hydraulic press the combination of a pressure cylinder, a filling cylinder in communication therewith, pistons in said cylinders, return cylinders, pistons therein co-acting with the piston in the pressure cylinder, a spring controlled valve adapted to intercept communication between said pressure and filling cylinders, a pressure intensifier, a double acting pressure pump coupled thereto, means of communication between said pressure pump and the filling and pressure cylinders, a fluid con-

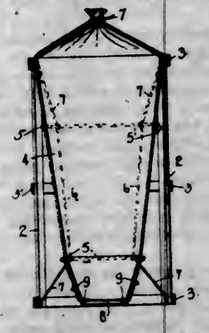
trolling device, means of communication between the latter and the pressure intensifier and return cylinders, a flexible joint and transmission mechanism interposed between the aforesaid valve and the controlling device and operated from the latter and an expansible connection between the flexible joint and said valve.

4. In a hydraulic press the combination of a pressure cylinder, a filling cylinder in communication therewith, pistons in said cylinders, return cylinders, pistons therein co-acting with the piston in the pressure cylinder, a spring controlled valve adapted to intercept communication between said pressure and filling cylinders, a pressure intensifier, a double acting pressure pump coupled thereto, means of communication between said pressure pump and the filling and pressure cylinders, a fluid controlling device, means of communication between the latter and the pressure intensifier and return cylinders, a flexible joint and transmission mechanism interposed between the aforesaid valve and the controlling device and operated from the latter and an expansible connection between the flexible joint and said valve, and means operated by the aforesaid transmission mechanism for locking said valve in its closed position.

5. In a hydraulic press the combination of a pressure cylinder, a filling cylinder, pistons in said cylinders, means of communication between said cylinders, return cylinders, pistons therein co-acting with the piston in the pressure cylinder, a twin valve acting in opposite directions to control communication between the pressure and filling cylinders, a pressure intensifier, a pressure pump coupled thereto, means of communication between said pressure pump and the filling and pressure cylinders, a fluid controlling device, means of communication between the latter and the pressure intensifier and return cylinders, respectively, and means operated from the controlling device for simultaneously actuating the valves of the twin valve aforesaid.

[Claims 6 to 8 not printed in the Gazette.]

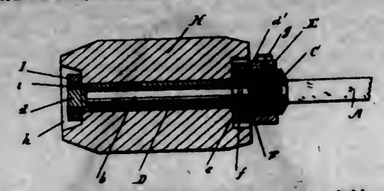
882,046. BANANA-CRATE. GUSTAV BECKER, Oklahoma, Okla. Filed Sept. 16, 1907. Serial No. 393,092.



1. A banana crate comprising an open frame, a funnel-shaped fabric tube arranged in said crate, wire rods to secure and brace said tube in place in said frame, a ventilating screen arranged in the lower end of the tube, and an integral top piece on the upper end of said tube adapted to be drawn together to form a closure for said upper end, and a tie formed by the extended upper end of one of said brace wires to fasten said closed upper end of the tube, substantially as described.

2. A banana crate comprising corner pieces, end frames adapted to connect the opposite ends of said corner pieces together, a funnel-shaped paper tube arranged in said crate and secured thereto at one end, hoops arranged around said tube, rods connecting the said hoops together, obliquely disposed fastening rods connected to said hoops and to the frame at the opposite ends of the crate, a wire screen adapted to be arranged in one end of the tube, and fastening wires to secure said screen in place, substantially as described.

882,047. AXLE-BEARING. ROBERT BLUM, Lebanon, Ill. Filed Feb. 11, 1907. Serial No. 356,875.



In an axle box, the combination, with a revoluble wheel hub, of a longitudinally adjustable bearing-tube in said hub provided with a collar at one end and having a thrust-block and an externally screwthreaded portion at its other end, an axle provided with a screwthreaded collar and having a spindle journaled in the said tube and bearing against the said thrust-block, a union-nut bearing against one end of the said hub and connecting the said collars, a packing washer of soft material arranged between the two said collars and preserved from rapid wear by the abutment of the said spindle against the said block, and an adjusting nut engaging with the said screwthreaded portion and operating to adjust the contact between the said revoluble hub and the normally stationary union-nut.

882,048. INDUCTION-COIL. MELVILLE S. BRIGHAM, Detroit, Mich., assignor of one-half to A. R. Bliss, Lowell, Mass. Filed Aug. 19, 1907. Serial No. 389,295.



1. The combination with a plurality of open magnetic circuit coils arranged in close proximity one with another, of an electric circuit for each coil including its primary winding, a plurality of independent open circuits corresponding in number to and including respectively the secondary winding of the coils, means for successively closing and opening the several circuits of the primary series, and means for preventing the induction of currents in each secondary winding by the influence of its immediately adjacent secondary.

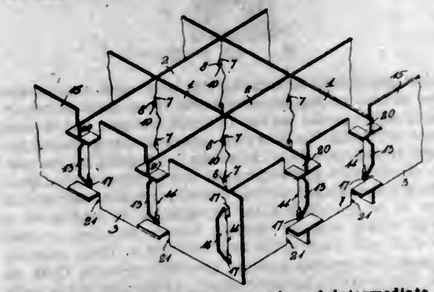
2. The combination with a plurality of open magnetic circuit coils grouped in proximity to one another, of an electric circuit for each coil including its primary winding, a plurality of independent open circuits corresponding in number to and including respectively the secondary windings of the coils, a commutator for successively closing and opening the several primary circuits, and an open magnetic circuit shield arranged intermediate each pair of adjoining coils.

882,049. FILLER FOR EGG-CRATES. JAMES H. CARTER, Chicago, Ill. Filed Oct. 14, 1907. Serial No. 397,407.

1. In an egg crate filler, a series of intermediate cell strips arranged at right-angles to each other to form egg cells, said strips having vertical rows of locking apertures arranged at intervals, a series of locking tongues arranged in line with each of said rows of apertures, said tongues being formed by zig-zag cuts extending from the inner end of each row of locking apertures to the opposite edge of the strip, locking heads formed on the ends of said intermediate cell strips, outer cell strips arranged around the edges of the filler, said strips having formed therein locking slits to receive the heads on the ends of the intermediate strips, and means on said outer cell strips to protect the locking heads on said intermediate strips, substantially as described.

2. In an egg crate filler, a series of intermediate cell strips arranged at right-angles to each other to form egg

cells, said strips having vertical rows of locking apertures arranged at intervals, a series of locking tongues arranged in line with each of said rows of apertures, said tongues being formed by zig-zag cuts extending from the inner end of each row of locking apertures to the opposite edge of the strip, locking heads formed on said intermediate cell strips, said heads having locking notches formed therein, outer cell strips arranged around the edges of the filler, said strips having a series of vertically disposed slots formed therein to receive the heads on the intermediate cell strips, locking tongues formed at the ends of said slots to engage the notches in the locking heads of said intermediate strips, locking heads formed on the opposite ends of two of said outer cell strips to engage the outer end slots of the other two outer strips, thereby forming the corner cells of the filler, and means on said outer cell strips to protect the locking heads on said intermediate cell strips, substantially as described.



3. In an egg crate filler, a series of intermediate cell strips arranged at right-angles to each other to form intermediate egg cells, said strips having vertical rows of locking apertures arranged at intervals, a series of locking tongues arranged in line with each of said rows of apertures, said tongues being formed by zig-zag cuts extending from the inner ends of each row of apertures to the opposite edge of the strip, locking heads formed on the ends of said intermediate cell strips, protecting lugs formed on the ends of said strip above and below said locking heads, outer cell strips arranged around the edges of the filler, said strips having formed therein locking slits to receive the heads on the ends of the intermediate strips, and laterally projecting pieces formed on said outer strips and held in position by said lugs to protect the locking heads on said intermediate strips, substantially as described.

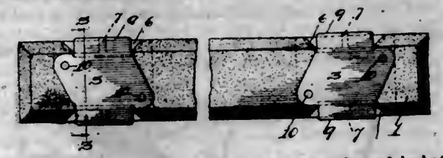
882,050. RAIL-FASTENING FOR CONCRETE RAILWAY-TIES. HENRY H. CLOUGH, Elyria, Ohio. Filed Sept. 4, 1906. Serial No. 333,211.



1. A rail fastening for ties, comprising a socketed part secured to the tie, said socket being formed with an enlarged chamber below the mouth of the socket, a clamping bolt having its head inserted through said mouth portion and turned angularly in said chamber into non-withdrawable position, and recesses in the tops of the enlarged chamber for receiving the bolt head when drawn up by its clamping nut, substantially as and for the purpose set forth.

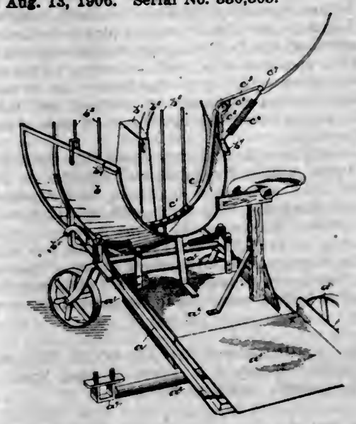
2. A rail fastening for concrete ties comprising a sleeve embedded in the concrete and formed with a socket in its upper end, the mouth of the socket being in the form of a slot with a wider chamber beneath, a clamping bolt having a T-head adapted to be inserted through said slot and turned into non-withdrawable position by the screwing of the nut on the bolt, and recesses in the top of the enlarged chamber into which the bolt head is lifted by the screwing down of its nut by which it is held against turning movement in either direction, substantially as and for the purpose set forth.

882,051. CONCRETE RAILWAY-TIE. HENRY H. CLOUGH, Elyria, Ohio. Filed Sept. 4, 1906. Serial No. 333,212.



A railroad tie comprising a concrete tie body and jackets inclosing said tie body at points beneath the track rail and provided with top plates forming seats for the rails and projecting beyond the sides of the jackets, said projecting ends being supported by ribs extending up the exterior sides of the jackets, substantially as and for the purpose set forth.

882,052. GRAIN-SHOCKER. CASSIUS M. COCHRAN, Emporia, Kans., assignor to W. S. Thomas, Springfield, Ohio. Filed Aug. 13, 1906. Serial No. 330,305.



1. In a shocker, the combination of a receptacle for a shock of bundles, capable of tilting from horizontal to vertical position, with means comprising a pivoted arm connected with said receptacle to prevent the over-turning of said bundles by said tilting movement, substantially as specified.

2. In a shocker, the combination of an open-sided receptacle for a shock of bundles capable of tilting from horizontal to vertical position, an arm normally extending across the open side of said receptacle, and means connected with said arm for causing said arm to prop the bundles during their discharging movement and as the machine moves forward.

3. In a shocker, the combination of a receptacle for a shock of bundles, and supports therefor, an oscillating compressing arm connected to the receptacle, and means connected with said arm for causing the arm to uphold the shock after same is discharged from the receptacle as the machine moves forward.

4. In a shocker, the combination of a receptacle for the shock, the rear edge of said shock being located below the front edge, said receptacle being capable of a tilting movement, with an oscillating compressing device located upon said receptacle, a non-yielding supporting band within the

receptacle located in substantial parallelism with the front edge of said receptacle and intermediate its front and rear edges, for the purpose specified.

5. In a shocker the combination of a receptacle for the shock capable of tilting from horizontal to vertical position, a movable compressor arm, means for normally holding the arm against the shock at the beginning of the tilting movement of the receptacle and for causing the arm to uphold the bundles after said shock is tilted to vertical position by said receptacle and as the machine moves forward, for the purpose specified.

[Claims 6 to 10 not printed in the Gazette.]

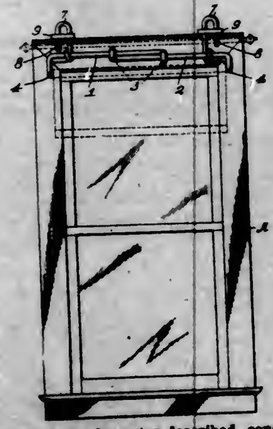
882,053. DRAG-SCRAPER. AMBROSE CONKLE, Luray, Mo. Filed Nov. 7, 1907. Serial No. 401,077.



1. A drag scraper comprising a land side member and a mold board member rigidly secured together at an angle to each other, wheels for supporting said members at or near the front and rear ends, rods extending forwardly from different points on one of the members, to the forward ends of which draft attachments are secured, and means extending across from the forward ends of each of said rods to the scraper.

2. A drag scraper comprising land side member, and a mold board member rigidly secured together at an angle to each other, wheels for supporting said members at or near the front and rear ends, rods extending forwardly from different points on one of the members, to the forward ends of which the draft attachments are secured, a rod extending from the forward end of one of the said rods to the mold board member, and a chain extending from the forward end of the other rod to the mold board member.

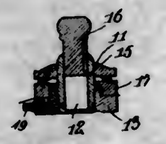
882,054. COMBINED CURTAIN-POLE AND SHADE-HOLDER. WILLIAM E. DOUD, Topeka, Kans. Filed Sept. 24, 1907. Serial No. 394,282.



1. A device of the character described, consisting of two sections adjustably engaging each other, a vertical resilient loop on each section, hooks on the loops for supporting a curtain-pole, and dogs adjustably and frictionally engaging said loops.

2. A device of the character described, consisting of two sections adjustably engaging each other, bearings at the ends of the sections for supporting a shade-roller, a vertical loop on each section adapted to engage the face of a window-casing, hooks on the loops for supporting a curtain-pole, and dogs engaging said loops.

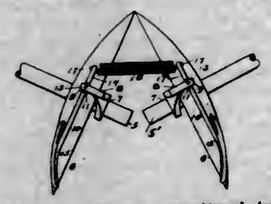
882,055. GAS-LIGHTING DEVICE. WILLIAM K. ELLIOTT, Payson, Ill. Filed Aug. 16, 1907. Serial No. 388,879.



1. A gas lighter comprising means operable from a distance to turn on the gas, an electric jump spark device arranged adjacent the burner to ignite the gas, and a push button for operating said jump spark device arranged adjacent to and encircling the means for turning on the gas.

2. A combined gas turning-on and lighting device, comprising a pump shell having means for connection with a valve to be operated, a piston operable in said shell, a double acting annular contact button arranged around said shell and composed of two members carrying coacting contacts and having springs arranged between them to hold said contacts normally apart, an electric jump-spark device arranged adjacent the burner, and wires connecting said device with said contacts.

882,056. SCRAPER. RICKLEF FOLKERTS, Lakefield, Minn. Filed Aug. 27, 1907. Serial No. 390,275.

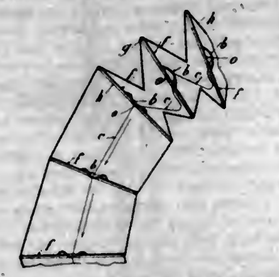


The combination with an agricultural implement including spaced disks and axles therefor, of supports carried by said axles and located between the disks, an arm pivoted to each support, said arms extending forwardly beyond the supports and extending rearwardly and downwardly over the convex faces of the disks, scraper blades carrier by the rearward ends of the arms, said scraper blades extending transversely of the disks, and a spring engaged between the forward ends of the arms and arranged to hold the arms with their transversely extending blades yieldably in engagement with the disks.

882,057. LIFE-BELT. LÉON FORTÉ, Paris, France. Filed July 16, 1907. Serial No. 384,088.

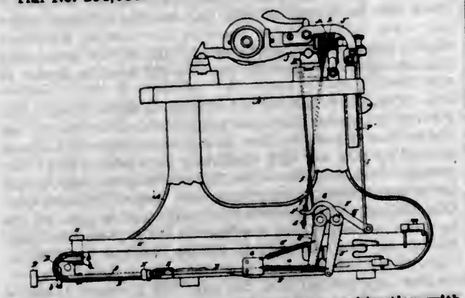
1. A life-belt comprising an annular reservoir, the walls of which are constructed of waterproof and flexible material or fabric, frames of steel wire transversely fixed at convenient distances in said annular reservoir in such a manner as to stiffen the latter when it is extended and to allow of its folding flat when it is closed, transverse partitions of waterproof material stretched on the wire frames for dividing the chamber into compartments, said partitions having valve controlled apertures therein, means for controlling the valves, and means to connect both ends of the envelop, substantially as described and for the purpose set forth.

2. A life-belt comprising an annular chamber, the walls of which are constructed of waterproof and flexible fabric or material, frames of steel wire fixed transversely at convenient distances in this annular chamber in such a manner as to stiffen it, when it is extended and to allow it to fold flat when it is closed, transversal partitions of waterproof fabric or material, stretched on the wire frames in such manner as to divide the chamber into compartments,



apertures in these partitions, valves of waterproof fabric or material arranged before these apertures, a wire connecting the valves together between them, straps and buckles embracing one of the extreme compartments and being used to adjust the belt and to stretch the wire connecting the valves, and a joint formed of three pieces being used to connect both ends of the envelop, substantially as described and for the purpose set forth.

882,058. TABULATOR FOR TYPE-WRITERS. WILLIAM R. FOX, Grand Rapids, Mich. Filed May 6, 1904. Serial No. 206,684.



1. In a tabulator for typewriters, the combination with the escapement mechanism of the typewriter of suitable adjustable stops at the rear of the carriage; a vertically movable tabulator bar with graduated notches at its upper end for engaging the stops of the said carriage; a rock shaft in the lower rear part of the machine with an arm connected to said tabulator bar; a transverse actuating bar suitably supported underneath the type key levers of the machine, with connections to downwardly depending arms on the rock shaft, a spring to throw said rock shaft arms normally toward the front of the machine; a series of horizontal tabulator keys C of graduated lengths supported in suitable transverse guide bars towards the front of the machine, with individual springs for throwing each of the same normally forward, arranged to act upon the transverse actuating bar whereby the keys will actuate the tabulator bar and elevate the same to bring the graduated notches corresponding to each of said keys into operative position; a release lever L arranged under the rack bar and adapted to act upon the same, the said lever being curved to permit the rack bar of the machine to pass freely over it; a rock shaft in the lower part of the machine with a perforated, substantially horisontal arm; a connecting rod *f* from the said lever L to the said rock shaft arm, extending through a perforation therein and provided with stops arranged to permit the free movement of the arms on the said connecting rod *f* to cause the actuation of the lever toward the end of the stroke of the arm; a transverse release bar D below and in front of the type key bank of the machine, perforated for the free passage of the horizontal tabulator key stems C; connecting rods from each end of the release bar D with downwardly depending arms on the said rock shaft of the release mechanism, all co-acting substantially as described and for the purpose specified.

2. In a tabulator for typewriters, the combination with escapement mechanism of the typewriter of a suitable stop at the rear of the carriage; a vertically movable tabulator bar with graduated notches at its upper end for engaging the stop of the said carriage; a rock shaft in the lower rear part of the machine with an arm connected to the said tabulator bar; a transverse actuating bar suitably supported underneath the type key levers of the machine, with connections to downwardly depending arms on the rock shaft; a spring to throw said rock shaft arms normally toward the front of the machine; a series of horizontal tabulator keys C of graduated lengths supported in suitable transverse guide bars towards the front of the machine, with individual springs for throwing each of the same normally forward, arranged to act upon the transverse actuating bar, whereby the keys will actuate the tabulator bar and elevate the same to bring the graduated notches corresponding to each of said keys into operative position; a release lever L arranged under the rack bar and adapted to act upon the same, the said lever being curved to permit the rack bar of the machine to pass freely over it; a rock shaft in the lower part of the machine, with a perforated substantially horisontal arm; a connecting rod *f* from the said lever L to the said rock shaft arm, extending through a perforation therein and provided with stops arranged to permit the free movement of the arms on the said connecting rod *f* to cause the actuation of the lever toward the end of the stroke of the arm; a transverse release bar D below and in front of the type key bank of the machine, perforated for the free passage of the horizontal tabulator key stems C; and connecting rods from each end of the release bar D with downwardly depending arms on the said rock shaft of the release mechanism, all co-acting substantially as described and for the purpose specified.

3. In a tabulator for typewriters, the combination with the escapement mechanism of the typewriter, of a suitable stop at the rear of the carriage; a vertically movable tabulator bar with graduated notches at its upper end for engaging the stop of the said carriage; a rock shaft in the lower rear part of the machine with an arm connected to said tabulator bar; a transverse actuating bar suitably supported underneath the type key levers of the machine, with connections to downwardly depending arms on the rock shaft; a spring to throw said rock shaft arms normally toward the front of the machine; a series of horizontal tabulator keys C of graduated lengths, supported in suitable transverse guide bars towards the front of the machine, with individual springs for throwing each of the same normally forward, arranged to act upon the transverse actuating bar, whereby the keys will actuate the tabulator bar and elevate the same to bring the graduated notches corresponding to each of said keys into operative position; a release lever L arranged under the rack bar and adapted to act upon the same, the said lever being curved to permit the rack bar of the machine to pass freely over it; a transverse release bar D below and in front of the type key bank of the machine, perforated for the free passage of the horizontal tabulator keys C; connections from the said release bar to the said release lever L, whereby, on the actuation of the tabulator keys, the release bar will also be actuated by the finger of the operator contacting therewith to release the carriage when the graduated tabulator bar is raised in position, as specified.

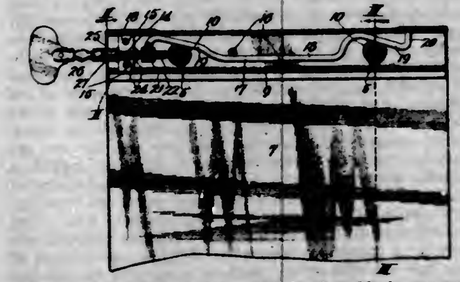
4. In a tabulator for typewriters, the combination with the escapement mechanism of the typewriter, of a suitable stop at the rear of the carriage; a vertically movable tabulator bar with graduated notches at its upper end for engaging the stop of the said carriage; a rock shaft in the lower rear part of the machine with an arm connected to said tabulator bar; a transverse actuating bar suitably sup-

ported underneath the type key levers of the machine, with connections to downwardly depending arms on the rock shaft; a spring to throw said rock shaft arms normally toward the front of the machine; a series of horizontal tabulator keys C of graduated lengths supported in suitable transverse guide bars towards the front of the machine, with individual springs for throwing each of the same normally forward, arranged to act upon the transverse actuating bar, whereby the keys will actuate the tabulator bar and elevate the same to bring the graduated notches corresponding to each of said keys into operative position; a transverse release bar perforated for the free passage of the horizontal tabulator keys; and connections from said release bar to the rack bar of the machine to raise the same and permit the carriage to move into contact with the graduated tabulator bar, as specified.

5. In a tabulator for typewriters, the combination with the escapement mechanism of the typewriter, of a suitable stop at the rear of the carriage; a tabulator bar with graduated notches for engaging said stop; a transverse actuating bar suitably supported underneath the key levers of the machine; connections therefrom to the said tabulator bar; a series of horizontal tabulator keys of graduated lengths, positioned to act upon the transverse actuating bar to operate the same and raise the tabulator bar different amounts corresponding to the lengths of the tabulator keys; a release lever L arranged under the rack bar and adapted to act upon the same, the said lever being curved to permit the rack bar of the machine to pass freely over it; a rock shaft in the lower part of the machine, with a perforated, substantially horizontal, arm; a connecting rod *f* from the said lever L to the said rock shaft arm, extending through a perforation therein and provided with stops arranged to permit the free movement of the arm on the said connecting rod *f* to cause the actuation of the lever toward the end of the stroke of the arm; a transverse release bar D below and in front of the type key bank of the machine, perforated for the free passage of the horizontal tabulator keys C; connecting rods from each end of the release bar D with downwardly depending arms on the said rock shaft of the release mechanism, all coacting substantially as described and for the purpose specified.

[Claims 6 to 19 not printed in the Gazette.]

882,059. LOOSE-LEAF POST BINDER. WILLIAM H. GARLAND, Kansas City, Mo., assignor of one-half to Raymond M. Havens, Kansas City, Mo. Filed Oct. 26, 1906. Serial No. 340,769.



1. In a loose leaf binder, a tubular bar, blocks secured in one end and provided with mating grooves, a screw journaled in said blocks and provided with collars at opposite sides of the latter, a slidable clamp comprising a pair of approximately parallel wedge arms converging with and bearing at their front ends against a wall of the tubular bar, one of the wedges having at its rear end a brace arm also bearing against said wall and the other wedge a front arm provided with a screw seat engaged by said screw.

2. In a loose leaf binder, a tubular bar, blocks secured in one end and provided with mating grooves, a screw journaled in said blocks and provided with collars at opposite sides of the latter, a slidable clamp comprising a pair of approximately parallel wedge arms converging with and bearing at their front ends against a wall of the tubular bar, one of the wedges having at its rear end a brace arm also bearing against said wall and the other a front arm provided with a screw seat engaged by said screw, and guiding means for the slidable clamp intermediate of its wedge arms.

3. In a loose leaf binder, a lower cover member provided with a plurality of upwardly projecting posts, an upper cover member provided with a tubular bar having alined openings in its upper and lower walls to slidingly engage said posts, blocks secured within and near one end of said tubular bar, a screw journaled in said blocks, means to prevent longitudinal movement of said screw when turned, and a slidable clamp extending longitudinally within the tubular bar and provided with a pair of substantially parallel wedge arms contiguous to said openings and between said posts and the rear wall of the tubular bar, and provided with a screw seat engaging said screw and adapted when the latter is turned in one direction to act as wedges between the back wall of said tubular bar and said posts and when turned in the opposite direction to withdraw from engagement with the latter.

4. In a loose leaf binder, a lower cover member provided with a plurality of upwardly projecting posts, an upper cover member provided with a tubular bar having alined openings in its upper and lower walls to slidingly engage said posts, blocks secured within and near one end of said tubular bar, a screw journaled in said blocks, means to prevent longitudinal movement of said screw when turned, a sliding clamp extending longitudinally within the tubular bar and provided with a pair of substantially parallel wedge arms contiguous to said openings and between said posts and the rear wall of the tubular bar and provided with a screw-seat engaging said screw and adapted when the latter is turned in one direction to act as wedges between the back wall of said tubular bar and said posts and when turned in the opposite direction to withdraw from engagement with the latter, and a key detachably secured upon the screw for turning the same in either of said directions.

5. In a loose leaf binder, a lower member having upwardly projecting posts, an upper member having a bar fitting on said posts to slide up and down thereon, a clamp carried by said bar and consisting of a body portion extending longitudinally of the bar and substantially parallel oblique resilient arms at opposite ends of the body portion and arranged between the posts and a part of the bar, one of said arms terminating in a brace arm also bearing against said part of the bar and the other in an oppositely projecting arm provided with a thread seat extending longitudinally of the bar, and a screw arranged longitudinally of and bearing a swivel relation to the bar and having its threaded portion engaging said thread seat.

882,060. MACHINE FOR RESHAPING BOTTLE-CAPS. GEORGE G. GLENN, Gastonia, N. C. Filed Apr. 11, 1907. Serial No. 367,579.

1. A machine for repairing sheet metal bottle caps, comprising a turn-table with die seats in its upper face and a downwardly projecting tubular bearing in the center, a bed with a downwardly projecting sleeve embracing the tubular bearing of the turn-table, a central stem arranged to reciprocate vertically in the tubular bearing of the turn-table and carrying at the top a cross head having on one end a swaging die and on the other end a plunger, and means for feeding an elastic disk between the plunger and turn-table.

2. A machine for repairing sheet metal bottle caps, comprising a turn-table with die seats, a vertically reciprocating stem bearing a cross head having on one end a swaging die and on the other end a plunger, means for feeding an elastic disk between the plunger and turn-table, a subjacent bed having a sleeve bearing for the center of the turn-table and a raised outer edge for supporting the edge of the turn-table.

3. A machine for repairing sheet metal bottle caps, comprising a turn-table with die seats, a vertically reciprocating stem bearing a cross-head having a swaging die on one end and a plunger on the other, a device for feeding an elastic disk between said plunger and turn-table, and means for maintaining said feed device stationary during the last part of the descent of the die and plunger.

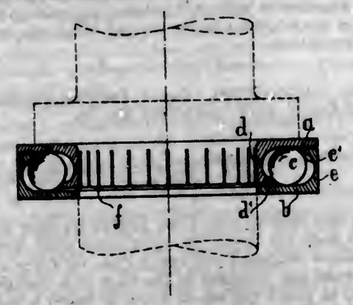


4. In a machine of the kind described, the combination of a turn-table having die seats and means for rotating it intermittently, a magazine for elastic disks, a horizontal feed bar for said disks playing under the magazine and having rack teeth along its side, a lever with segment teeth on one end engaging said rack teeth and an angular slot at the other end, a sliding carrier block with pin playing in said slot, means for reciprocating said carrier block and a vertical plunger for transferring the elastic disks to the die seats.

5. In a machine of the kind described, the combination of a turn-table having die seats and a centrally arranged ratchet wheel, a magazine for elastic disks, a horizontal feed bar for said disks playing under the magazine and having rack teeth along its side, a lever with segment teeth on one end engaging said rack, and an angular slot at the other end, a sliding carrier block with pin playing in said slot, means for reciprocating said carrier block, a spring pawl attached to said block and engaging the ratchet wheel of the turn-table, and a vertical plunger for transferring the elastic disk to the die seats.

[Claims 6 to 8 not printed in the Gazette.]

882,061. STEP-BEARING. FRIEDRICH GARBERS, Berlin, Germany, assignor to The Firm of Maschinenbau-Anstalt Altenessen A. G., Altenessen, Germany. Filed July 23, 1907. Serial No. 385,143.



1. A step-bearing comprising in combination an upper annular disk having a resilient cylindrical flange extending downwards, a lower annular disk having a resilient cylindrical flange extending upwards, said disks and flanges forming an annular chamber, and a plurality of balls in said chamber, said flanges having edges projecting into said annular chamber, the distance between said edges measured at right angles to the axis of the step-bearing being less than the diameter of said balls.

2. A step-bearing comprising in combination an upper annular disk having a resilient cylindrical flange extending downwards, a lower annular disk having a resilient cylindrical flange extending upwards, the flange of one of said disks having longitudinal incisions, said disks and flanges forming an annular chamber, and a plurality of balls in said chamber, said flanges having edges projecting into said annular chamber, the distance between said edges measured at right angles to the axis of the step-bearing being less than the diameter of said balls.

882,062. COLLAR-BUTTON. DAVID A. HART, Attleboro, Mass. Filed Sept. 19, 1906. Serial No. 335,191.



1. An article of manufacture, consisting of a collar button, having a transversely perforated back containing a recess in its front side to fit and retain the shouldered base of the post, combined with a long slender post terminating at one end in a head, and at its opposite end in a flaring shouldered base provided with a thin, flexible, integral prong extending transversely through said perforated back, bent into clamping engagement with the under side of the back and permanently secured thereto, said head, post, and back being irremovably fastened solidly together.

2. An article of manufacture, consisting of a collar button, having a post terminating at its outer end in a head and at its inner end in a shouldered base provided with prongs, a back provided with transverse holes and with an undercut recess at its rear side, said post having its shouldered base resting tightly against the front side of said back with its prongs extending through said transverse holes and bent into said recess against the rear side of the back, and a cap fitting tightly against and beneath the undercut walls of said recess, and maintaining the parts of the entire collar button at all times relatively firm and immovable.

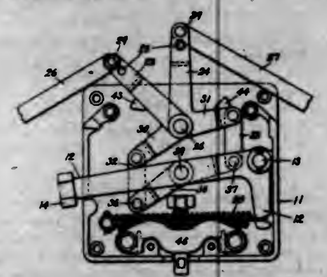
3. An article of manufacture, consisting of a collar button, having a post terminating at its inner end in a shouldered base provided with an integral securing prong, a back having undercut recesses at its opposite sides, said shouldered base fitting into the front undercut recess tightly against the undercut walls thereof, said integral prong extending through the back from one recess to the other, and a cap clamping the rear end of said prong in immovable position in said recess, said cap spanning the rear recess of said back and fitting at its edges tightly against the undercut walls thereof and maintaining the parts of the entire collar button at all times relatively firm and immovable.

4. An article of manufacture, consisting of a collar button, having a post terminating at its inner end in a shouldered base provided with an integral securing prong, a non-metallic back having undercut recesses at its opposite sides, said shouldered base fitting into the front undercut recess tightly against the undercut walls thereof, said integral prong extending through the back from one recess to the other and a cap soldered to the rear end of the prong, clamping the rear end of said prong in immovable position in said recess, said cap spanning the rear recess of said back and fitting at its edges tightly against the undercut walls thereof and maintaining the parts of the entire collar button at all times relatively firm and immovable.

5. An article of manufacture, consisting of a collar button, having a post terminating in a flared inner end provided at its periphery with a plurality of integral prongs, and a back having the central portions of its front and rear sides containing depressions extending toward each other having co-extensive areas to constitute similar-sized

shallow recesses having undercut walls, and a plurality of transverse holes through the thin portion of said back at the periphery of said recesses, said flared end of the post being seated flat against the bottom of the front recess and fitting snugly at its periphery beneath the undercut walls of said front recess, and its prongs extending through said holes and clenched in the rear recess, and a cap snugly fitted over said clenched prongs and beneath the undercut walls of the rear recess.

882,063. FARE-REGISTER-OPERATING MECHANISM. WILLIAM H. HONISS, Hartford, Conn. Filed Apr. 13, 1906. Serial No. 311,504.



1. Means for operating registering mechanism having in combination with the actuating member of the register a yoke mounted for swinging movement upon and relative to said member, and independent operating means connected with the yoke to swing it in reverse directions for imparting the actuating movement to the said member.

2. Means for operating registering mechanism, having in combination with the actuating member of the register, a yoke pivotally mounted upon the actuating member, and independent operating means connected with different portions of the yoke.

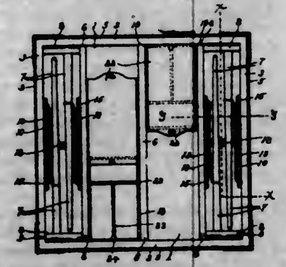
3. Means for operating registering mechanism, having in combination with the actuating member of the register a yoke pivotally mounted upon the actuating member, and having arms extending in substantially opposite directions from the pivotal connection, and independent operating means connected with the opposite arms of the yoke.

4. Means for operating registering mechanism, having in combination with the actuating member of the register, a yoke, operating levers for receiving movements from different directions, and means connecting the levers with the yoke.

5. Means for operating registering mechanism, having in combination with the actuating member of the register, a yoke pivotally mounted upon the actuating member, operating levers and connections for transmitting the operating movement from different connections, and means for connecting the levers with different portions of the yoke.

[Claims 6 to 12 not printed in the Gazette.]

882,064. FOLDING TABLE. ARTHUR E. HOWLETT, Detroit, Mich. Filed Apr. 12, 1906. Serial No. 311,232.



1. In a folding table, the combination with a top and top frame, of legs pivotally attached to the frame to fold within the same, guide-ways formed of sheet metal bent U-shape in cross-section and each secured to the vertical surface of the frame member with the open side of its channel toward said surface and each way provided with a longitudinal slot in its vertical bottom having a notch at one end extending laterally therefrom into the horisontal side of the channel, brace rods pivotally attached at one end to the legs and engaging the guide slots at their opposite ends, said rods being formed to yieldingly press toward the guide-ways to spring into engagement with said notches when the legs are fully extended.

2. In a folding table, the combination with a top frame having side and cross bars and a top secured upon said bars, of legs pivotally attached to the frame, guide-ways secured to the frame, each formed of sheet metal bent into U-shape in cross-section to form a channel and each secured to the vertical side surface of one of the bars with the open side of the channel toward said surface, by flanges forming a part of the sides of the channel, one of said flanges extending horisontally between the bar and top and the other extending vertically downward upon the surface of the bar and secured thereto, said guide ways being each formed with a longitudinal slot in the vertical bottom of the channel having a lateral notch extending into the lower side of said channel, brace rods pivotally attached at one end to the legs and provided with laterally bent ends to engage the slots, said rods being formed to yieldingly press toward the guide-ways, and heads on the laterally bent ends of said rods within the channels of the guide-ways.

3. In a folding table, the combination with a top and top frame, of legs pivotally attached to the frame, guide-ways secured to the frame, each formed of sheet metal bent into U-shape in cross-section to form a channel and provided with a longitudinal slot formed with a lateral notch extending inward in the lower side of the guide-way, brace rods pivotally attached at one end to the legs and provided at their opposite ends with laterally bent portions to engage the slots, and auxiliary strips secured within the channels opposite the notches and each having a slot extending inward from one end to receive the laterally bent portions of the rods and form bearings therefor when the rods are engaged with the notches.

4. In a folding table, the combination with a rectangular top and top-frame of legs pivotally attached to said top frame, guide-ways secured to the inner sides of the frame each formed of sheet metal bent to form a longitudinal channel and provided with a longitudinal slot and a notch extending laterally from one end of said slot, spring brace rods pivotally attached at one end to the legs and formed with laterally bent ends to project through the slots of the guide-ways, heads on the bent ends of said rods to travel in the channels of the guide-ways, auxiliary strips within the guide-ways opposite the notches and formed with slots extending inward from one end to receive the said ends of the brace rods and form bearings therefor when said rods are in engagement with said notches, and spring clips secured to the table top to receive and detachably hold the legs when folded.

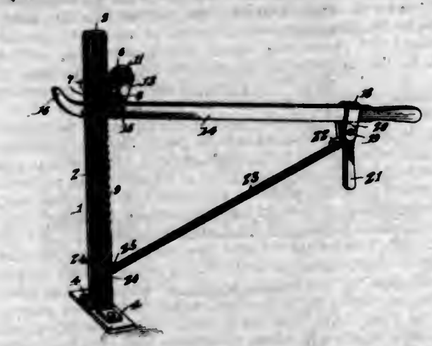
882,065. CAN-OPENER. CARL J. JOHNSON, Sunrise, Wyo. Filed Aug. 2, 1907. Serial No. 386,706.



1. In can openers, two arms pivoted together at their forward ends, the lower arm constructed with three flattened points extending downward from its lower face at the forward end, arranged in the form of a triangle, and designed to pierce the top of a can to afford a means of attaching the device to a can, and also to provide a fulcrum for the lever action of the upper arm; the second and upper arm being provided with a single point at its forward end passing through the forward part of the first mentioned arm and constituting a pivot, said arm having attached to and depending from it, by means of a clamping device fitted with a thumb-screw, a double edged cutting blade, designed to be adjustable along the said arm by means of appropriately arranged beveled edges on the said arm, substantially as described.

2. In the construction of can openers, a lower arm fitted with three depending flattened points arranged in the form of a triangle on the forward lower face of the arm; an upper arm with outer edges beveled upward along a portion of their length; a clamp attachment bearing a double edged cutting blade, and designed to be fitted and held in firm attachment to the beveled arm by means of a screw brought into firm contact with one of the beveled edges while the other beveled edge is jammed tight into the corresponding side of the clamp attachment designed to receive it; and means to pivot the two arms together at the forward end, substantially as described.

882,066. LIFTING-JACK. IRA J. KEELER, Cameron, Mo. Filed Aug. 26, 1907. Serial No. 390,185.



1. A lifting jack comprising a slotted standard, a vertically movable clutch slidable in the slot of the standard and provided with means for engaging the same, a lifting lever passing through the standard and having an engaging end, a link connecting the lever with the clutch, and means for holding the lever.

2. A lifting jack comprising a standard having spaced sides forming an opening, said standard being also provided with a ratchet, a clutch slidable in the space between the sides of the standard and provided with a tooth for engaging the said ratchet, a lever connected at an intermediate point with and carried by the clutch, and means for holding the lever.

3. A lifting jack comprising a standard having spaced sides and provided with a ratchet, a clutch operating in the space between the sides of the standard and provided with a tooth for engaging the said ratchet, said clutch being also provided with oppositely disposed lugs, a ring mounted on the clutch and spaced from the standard, which is located between the ring and the lugs, and a lifting lever carried by the clutch.

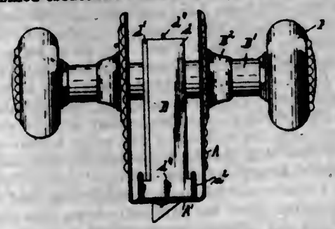
4. A lifting jack comprising a standard having a vertical opening, a clutch slidable in the opening and provided with means for engaging the standard, a lever extending through the opening of the standard, and an oscillatory link connecting the lever with the clutch.

5. A lifting jack comprising a standard, a lifting lever, means for fulcruming the lifting lever, a slide mounted on the lifting lever, a cam lever carried by the slide and arranged to engage the lifting lever, and flexible means for connecting the cam lever with the standard.

[Claims 6 and 7 not printed in the Gazette.]

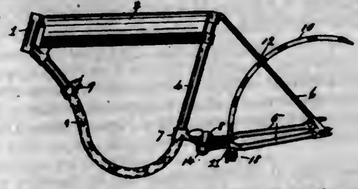
882,067. LOCK. HENRY F. KEIL, Bronxville, N. Y. Filed May 14, 1906. Serial No. 316,655.

1. A combined escutcheons and lock face constructed and arranged to be driven upon a door, to rest on the sides, and extending around the front edge of, and of greater dimensions than and overlapping a notch cut in the stile of the door, a lock case supported by the lock face and formed with retaining means to engage the notch of the door to hold the central part of the lock face rigidly in position, and means intermediate the lock casing and an escutcheon consisting of a fold free to expand, whereby when the center part of the lock face is held in the notch by the said retaining means, the lock face may be expanded in width between the lock casing and the escutcheon on the side where the fold is located, by the act of driving the combined escutcheons and lock face on a thick door.



2. A combined escutcheons and lock face constructed and arranged to be driven upon a door, to rest on the sides, and extending around the front edge of, and of greater dimensions than and overlapping a notch cut in the stile of the the door, a lock case supported by the lock face and formed with retaining means to engage the notch of the door and to hold the central part of the lock face rigidly in position, and means intermediate the lock casing and the escutcheons consisting of two folds free to expand, whereby when the center part of the lock face is held in the notch by the said retaining means, the lock face may be expanded in width equally on both sides between the lock casing the escutcheons by the act of driving the combined escutcheons and lock face upon a thick door.

882,068. APPARATUS FOR MUFFLING THE EXHAUST OF MOTOR-CYCLES. EDWIN W. KELLER, Chicago, Ill., assignor to Armac Motor Company, Chicago, Ill., a Corporation of Illinois. Filed June 13, 1906. Serial No. 321,460.



1. In a device of the character described, the combination with a motor cycle frame having a head, a top bar, seat post bar and lower bar, said seat post bar and lower bar being formed of a single continuous piece of tubing, of a lug mounted upon said lower bar, there being a passage through said lug to the interior of the said lower bar, a crank hanger located at the forward end of the rear forks, said hanger being connected to the said seat post bar by a lug having an interior passage therein communicating both with the interior of the crank hanger and the interior of the seat post bar, and a mud guard having an annular chamber formed therein mounted upon the said rear forks, there being a passage from the chamber in said mud guard to the interior of the crank hanger, for the purpose set forth substantially as described.

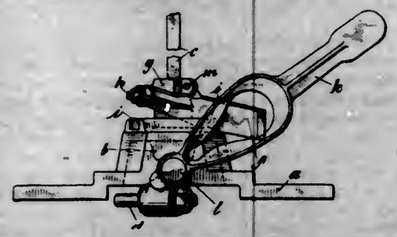
2. In a device of the character described, the combination with a motor cycle frame having a head, a top bar, seat post bar and lower bar, said seat post bar and lower bar being formed of a single continuous piece of tubing, of a lug mounted upon said lower bar, there being a passage through said lug to the interior of the said lower bar, a crank hanger located at the forward end of the rear forks, said hanger being connected to the said seat post

bar by a lug having an interior passage therein communicating both with the interior of the crank hanger and the interior of the seat post bar, a sleeve in said hanger to prevent the burned gases from coming in contact with the bearings, a mud guard having an annular chamber formed therein mounted upon the said rear forks, there being a passage from the chamber in said mud guard to the interior of the crank hanger, for the purpose set forth substantially as described.

3. In a device of the character described, the combination with a motor cycle frame having a head, a top bar, seat post bar and lower bar, said seat post bar and lower bar being formed of a single continuous piece of tubing, of a lug mounted upon said lower bar, there being a passage through said lug to the interior of the said lower bar, a crank hanger located at the forward end of the rear forks, said hanger being connected to the said seat post bar by a lug having an interior passage therein communicating both with the interior of the crank hanger and the interior of the seat post bar, a sleeve in said hanger to prevent the burned gases from coming in contact with the bearings, a mud guard having an annular chamber formed therein mounted upon the said rear forks, there being a passage from the chamber in said mud guard to the interior of the crank hanger, and means to automatically relieve the pressure when it raises above a certain point, for the purpose set forth substantially as described.

4. In a device of the character described, the combination with a motor cycle frame having a head, a top bar, seat post bar and lower bar, said seat post bar and lower bar being formed of a single continuous piece of tubing, of a lug mounted upon said lower bar, there being a passage through said lug to the interior of the said lower bar, a crank hanger located at the forward end of the rear forks, said hanger being connected to the said seat post bar by a lug having an interior passage therein communicating both with the interior of the crank hanger and the interior of the seat post bar, a sleeve in said hanger to prevent the burned gases from coming in contact with the bearings, a mud guard having an annular chamber formed therein mounted upon the said rear forks, there being a passage from the chamber in said mud guard to the interior of the crank hanger, and means to automatically relieve the pressure when it raises above a certain point, said means consisting of a spring-actuated valve at the lower end of said mud guard, for the purpose set forth substantially as described.

882,069. SWITCH-STAND. WILLIAM C. KIDD, Suffern, N. Y., assignor to Standard Equipment Company, Mahwah, N. J., a Corporation of New Jersey. Filed Dec. 20, 1907. Serial No. 407,385.



1. In a switch stand, the combination of a frame, a shaft rotatable therein, an arm projecting from the shaft and adapted to lock the shaft from turning in the frame, and means to unlock the shaft and turn it in a single operation.

2. In a switch stand, the combination of a frame, a shaft rotatable therein, an arm projecting from the shaft and adapted to lock the shaft from turning in the frame, and a lever pivoted to swing in a single plane and adapted as it is moved in said plane to unlock the shaft and turn it.

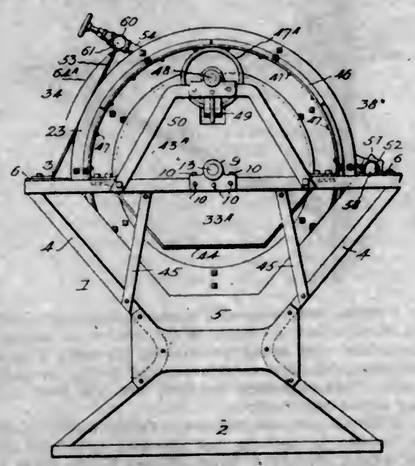
3. In a switch stand, the combination of a frame, a vertical shaft rotatable therein, an arm projecting substantially horizontally from the shaft and adapted to lock the shaft from turning in the frame, and a lever pivoted to swing in a vertical plane and adapted as it is moved in said plane to unlock the shaft and turn it.

4. In a switch stand, the combination of a frame, a shaft rotatable therein, an arm pivoted thereto and adapted to lock the shaft from turning in the frame, and a lever having a slot through which said arm extends whereby, as the lever is moved, the arm is unlocked from the frame and turns the shaft.

5. In a switch stand, the combination of a frame, a shaft rotatable therein, an arm pivoted thereto, a projection upon the arm to engage the frame, and a lever having a slot through which said arm extends whereby, as the lever is moved, the projection is disengaged from the frame and the shaft is turned.

[Claims 6 to 12 not printed in the Gazette.]

882,070. ROTARY SCREEN FOR ORE AND MATERIALS. HOWARD G. KING, Denver, Colo. Filed July 17, 1907. Serial No. 384,192.



1. In a rotary screen, the combination with a supporting frame, of a disk drum head revolubly mounted on said frame, a plurality of bolts extending from said disk head, pipes on said bolts, a ring-shaped disk drum head secured on said bolts against said pipes, a plurality of outwardly radiating concaved and semi-circular-shaped sections of screen arranged between said drum heads on said bolts, and extending around said drum in a circular row of successive concave sections, means including concaved shelves secured to said disk heads for supporting said outwardly radiating concaved screens in semi-circular shaped forms on said drum, a roller-way on the free end of said drum, and a roller supported on said frame and arranged to support the free end of said screen supporting drum.

2. In a rotating screen, the combination with a supporting lattice-work box-shaped frame, having a screenings receiving hopper secured within it, said hopper being provided with an open top and with converging sides terminating at a short distance from the bottom of said frame, the said bottom portion of said hopper being provided with a discharge aperture, a circular screen supporting drum revolubly mounted on said frame, with its lower half portion projecting into said hopper, a cylindrical screen mounted on said drum, comprising a circumferential row of concaved semi-circular-shaped segments arranged with their curved interior surfaces radiating from the axial center of said drum, means for feeding ore into and for discharging the oversize ore from the interior of said cylindrical screen and drum, means for rotating said drum and screen, and means including a roller tread-way on said drum for imparting a reciprocating oscillating vibrating shaking and bumping movement to said screen.

3. In a rotary screen, the combination with the supporting frame, having a shaft rotatably supported and journaled thereon, of a flange detachably secured to said shaft, a disk-shaped drum head secured to said flange, a plurality of bolts extending through said disk drum head, a tubular covering over each bolt, a ring-shaped disk drum head secured on the ends of said bolts against said pipes, a double cylindrical circular ring of concaved semi-circular segmental shaped shelf portions projecting a short distance from the inside faces of said drum heads, said concaved segment shelves being arranged to radiate with their curved inner faces from the axial center of said drum disks, and said projecting shelves being spaced far enough apart in parallel alinement throughout their circular form to receive the opposite side edges of screening material, said shelves being arranged between said pipe covered bolts, a screen extending around said drum between the bolts of said drum heads and extending into the space between said shelves, and adapted to be supported by said shelves, means for securing a screening material to said shelves, and bolts of said drum, and means for feeding material into and for discharging the oversize out of the interior of said screen and drum.

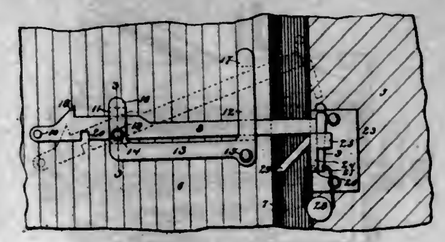
4. In a rotary screen, the combination with a suitable supporting frame, provided with a screenings hopper, of a cylindrical screen drum, having an axial support at one end and an open ring-shaped end at its opposite end, a revoluble shaft secured to the axial supporting end of said drum and revolubly journaled in said supporting frame, a roller tread-way on the free end of said drum, a supporting roller on said frame arranged in bearing contact with said drum's tread-way and adapted to support the free end of said drum, a circular row of projections on said tread-way arranged to engage said roller as said drum rotates, means for rotating said shaft and drum, a cylindrical shaped screen mounted on said drum, said screen being arranged in a continuous series of concave semi-circular segments, the inner surfaces of which radiate outward from the axial center of said drum, means including concave projecting shelves on said drums for supporting said concave sections of said cylindrical screen in their true outwardly radiating semi-circular shaped form on said drum, means for operatively feeding ore or other material to the interior of said cylindrical screen, and means for flowing water onto said screen.

5. In a rotary screen, the combination with the frame and the cylindrical screen drum, said screen drum being provided with an open end, of a hopper adapted to be inserted into the interior of said screen drum through said open end, comprising a box-shaped hopper divided longitudinally and centrally by a partition; a feeding hopper compartment on one side of said partition, a feeding in chute in the feed side of said hopper, a material distributing shelf at the end of said feed chute, a discharge aperture in the bottom of said hopper at the side of said distributing shelf, and a material catching and distributing shelf on said feed compartment of said hopper at the bottom of said discharge aperture, an oversize feeding out chute in the compartment of said hopper on the opposite side of said partition, provided with a discharge outlet at its lowest end, and a guide board partition within the interior of said cylindrical drum and screen extending from the oversize compartment of said hopper to the top portion of the interior of said screen, and adapted to guide the oversize material into the oversize discharging chute of said hopper, and means for supporting said hopper and guide board in operative positions within said screen drum.

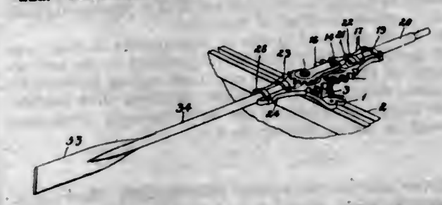
[Claims 6 to 9 not printed in the Gazette.]

882,071. CAR-DOOR FASTENER. FREDERICK LANGLEY, Rouses Point, N. Y. Filed May 4, 1907. Serial No. 371,857.

A door fastener comprising a swinging-latch pivoted to the door and having a downwardly extending hooked end with an opening therein, and a keeper comprising a base-plate secured to the car body adjacent the door, a vertical flange projecting forwardly from the base-plate and having an eye offset therefrom at the top thereof to receive the latch-hook, and an opening below the eye which registers with said opening to receive a seal, and an inclined-plate projecting from the flange in front of the jamb in the path of the latch-hook.



882,072. OAR. JOSHUA LEHMAN, Toronto, Ontario, Canada. Filed Feb. 25, 1907. Serial No. 359,179.

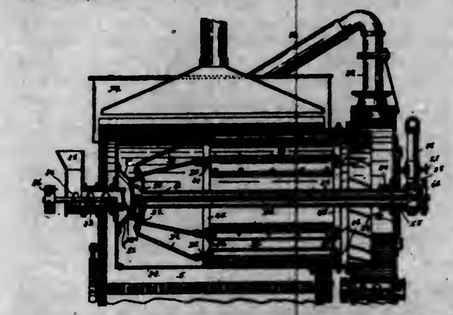


1. In an oar, in combination, a pivotal block supported from the gunwale of a boat and having pins extending upwardly from each end thereof, a pair of co-acting segmental toothed gears journaled on said pins, an oar handle rotatably supported from one of said gears, an oar stem rotatably supported from the other of said gears, a bevel pinion fixedly secured to the inner end of said oar stem and rotating therewith, and a plate having orifices therethrough through which the pins extending from the aforesaid pivotal block extend, said plate being rigidly secured to said pins above said segmental gears and having a bevel gear surface formed on its under side at one end and meshing with the bevel pinion secured to said oar stem, and adapted to rotate said pinion on the swinging of the segmental gear supporting said oar stem to feather the oar, substantially as described.

2. In a device of the class described, in combination, a base having parallel lugs extending upwardly therefrom, a block pivoted on said base, pins fixedly secured thereto at the extremities of said blocks, and projecting upwardly therefrom, gears mounted on said pins and having arms substantially parallel extending therefrom respectively, collars secured at the end of said arms, a handle secured in one of said collars, a pin journaled in the oar gear between said arms, a bevel gear fixedly mounted in the inner end of said pin inside of said oar gear, an oar blade having its stem fixedly secured to said pin between the arms, and a plate having a bevel gear face co-acting with said bevel gear and secured to the upper end of said pins from said block, substantially as described.

3. In a device of the class described, in combination, a base having a pair of parallel lugs extending upwardly therefrom, said lugs having a journal orifice in the upper end thereof, a pivot block having a journal pin adapted to rest within said orifices, a block resting within said orifice above said pin, a bell crank lever secured to said block, spring means for holding said block in position and retaining said pin in said lugs, gears mounted on said pivot block, an oar blade having the stem thereof secured to one end of said gears, and a handle extending from the other of said gears, substantially as described.

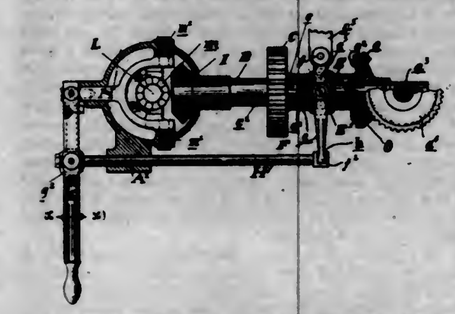
882,073. FUME-CONDENSING APPARATUS. JOHN R. MOFFITT, Denver, Colo. Filed Jan. 16, 1906. Serial No. 296,390.



1. The combination with a furnace for treating ore by subjecting the latter to the necessary heat to volatilise certain of the elements therein, of a conduit leading therefrom for the passage of the volatilised products or fumes, a hood connected with said conduit and having walls downwardly inclined from said conduit and perforated to form a rough or jagged interior surface, and a liquid-containing tank in which the hood is immersed.

2. As an improved article of manufacture, a fume conduit provided with a hood or enlargement at the exit extremity of the conduit, the said hood having downwardly inclined walls from the conduit, provided with perforations formed by punching the metal inwardly to produce a rough or jagged interior surface.

882,074. RAPID-TRAVERSE MECHANISM. EDWARD A. MULLER, Madisonville, Ohio, assignor to The King Machine Tool Company, Winston Place, Ohio, a Corporation of Ohio. Filed May 27, 1905. Serial No. 262,622.



1. The combination, with two inter-dependent shafts arranged one at right angles to the other and adapted to be geared together, said shafts being provided with clutches a plurality of gears on each shaft, and actuating yokes for the clutches, of an operating lever, a shifter rod between said lever and one of the yokes, means forming a universal connection between one end of the rod and an intermediate portion of the lever, and means forming a universal connection on the other yoke and an end of said lever, whereby said lever is capable of swinging in two planes at right-angles to each other, in one plane to operate one of the yokes and in the other to operate the other yoke.

2. The combination with two inter-dependent shafts arranged one at right-angles to the other, a plurality of gears on each of said shafts, complementary clutch-mechanism between each shaft and its gear, yokes connected to the clutches, a shifter rod connected to one of the yokes, and a single lever, said lever being formed of two parts, a universal joint between one of the parts of the lever and one of the yokes and a universal joint between the other part of said lever and the shifter rod of the other yoke, whereby said lever is permitted to swing in two planes at right angles to each other, in one plane to operate one of the yokes and in the other plane to operate the shifter rod and the other yoke.

882,075. PROCESS FOR SEPARATING THE METALS CONTAINED IN COPPER-NICKEL MATTE. JAMES M. NEIL, Toronto, Ontario, Canada, assignor to Frederic C. Norris, trustee, Detroit, Mich. Filed June 3, 1907. Serial No. 377,041.

1. In a process of reducing nickel from copper-nickel matte, the treatment of the matte with sulfuric acid to form sulfates of the metals, the electrolysis of the solution with a copper-nickel anode and copper cathode to deposit the copper in the metallic form, and the treatment of the resultant nickel sulfate solution with a solution of a chlorid of an alkaline earth resulting in the formation of a solution of nickel chlorid and a precipitate of an insoluble sulfate of the alkaline earth.

2. In a process of reducing nickel from copper-nickel matte, the treatment of the matte with sulfuric acid to form sulfates of the metals, the electrolysis of the solution with a copper-nickel anode and copper cathode to deposit the copper in the metallic form, and the treatment of the resultant nickel sulfate solution with a solution of a chlorid of an alkaline earth resulting in the formation of a solution of nickel chlorid and a precipitate of an insoluble sulfate of the alkaline earth, and the electrolysis of the nickel chlorid with an insoluble anode and nickel cathode, resulting in the deposit of the nickel on the cathode and the liberation of chlorin gas.

3. In a process of reducing nickel from copper-nickel matte, the treatment of the matte with sulfuric acid to form sulfates of the metals, the electrolysis of the solution with a copper-nickel anode and copper cathode to deposit the copper in the metallic form, the treatment of the resultant solution with a sulfurizing re-agent to precipitate any remaining copper and other metals (present as impurities) in the form of sulfids, and the treatment of the resultant nickel sulfate solution with a solution of a chlorid of an alkaline earth resulting in the formation of a solution of nickel chlorid and a precipitate of an insoluble sulfate of the alkaline earth.

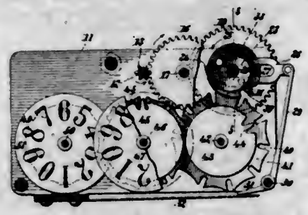
4. In a process of reducing nickel from copper-nickel matte, the treatment of the matte with sulfuric acid to form sulfates of the metal, the electrolysis of the solution with a copper-nickel anode and copper cathode to deposit the copper in the metallic form, the treatment of the resultant nickel sulfate solution with a solution of a chlorid of an alkaline earth resulting in the formation of a solution of nickel chlorid and a precipitate of an insoluble sulfate of the alkaline earth, the electrolysis of the nickel chlorid with an insoluble anode and nickel cathode, resulting in the deposit of the nickel on the cathode and the liberation of chlorin gas, the roasting of the sulfate of the alkaline earth obtained as above with carbon to convert it to a sulfid, and the treatment of the sulfid with the chlorin obtained as above to re-obtain the chlorid of the alkaline earth with the liberation of sulfur.

5. In a process of reducing nickel from copper-nickel matte, the electrolysis of a solution of copper-nickel sulfate with a copper-nickel anode and copper cathode to deposit the copper in the metallic form, and the treatment of the resultant nickel sulfate solution with a solution of a chlorid of an alkaline earth resulting in the formation of a solution of nickel chlorid and a precipitate of an insoluble sulfate of the alkaline earth.

[Claims 6 to 10 not printed in the Gazette.]

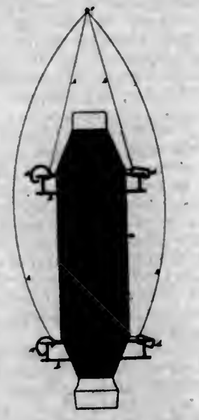
882,076. REGISTER. NILS D. NELSON, New York, N. Y. Filed Apr. 9, 1906. Serial No. 310,643.

In a measuring register, a rotary dial, a shaft carrying said dial, a Geneva gear on said shaft for imparting rotary intermittent movements to the same, and a driving mechanism therefor to be operated by the fluid measured and comprising a cam, a bar to be moved in one direction by said cam, means for quickly moving said bar in the reverse direction when it is released by said cam, and a disk having a finger to pass into engagement with said gear and a pin to be engaged by said bar after it has performed its pri-



mary movement in one direction, whereby said bar on its quick reverse movement is enabled to impart a quick movement to said disk and through it to said gear and dial; substantially as set forth.

882,077. RING-TRAVELER. ALBERTUS B. POTTER, Salmon Falls, N. H., assignor to National Ring Traveler Company, Providence, R. I., a Corporation of Rhode Island. Filed Mar. 27, 1905. Serial No. 252,285.



1. A ring traveler having a flattened top, relatively short sides and horns substantially parallel with said top, substantially as described.

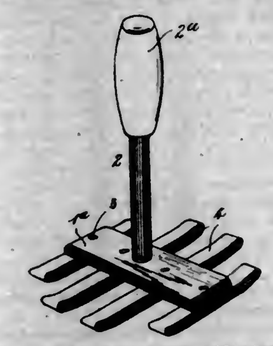
2. A ring traveler having a flattened top and straight sides, a horn substantially parallel with said top, the sides and top forming substantially right angles with each other, substantially as described.

3. The combination with a spinning ring, of a traveler having a flattened top and relatively short sides at an angle to said top whereby when the traveler tips the top of the traveler will come in contact with the upper surface of the ring, substantially as described.

4. The combination with a spinning ring, of a traveler having a flattened top, relatively short sides at an angle to said top and horns substantially parallel with said top, substantially as described.

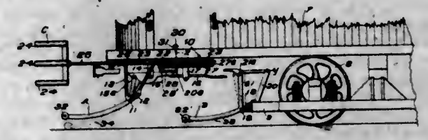
882,078. POTATO-MASHER. WILLIAM A. PRINDLE, Merrillan, Wis. Filed June 24, 1907. Serial No. 380,605.

A culinary device substantially as described, consisting of a head comprising a plate, and a plurality of spaced transverse bars or members secured to the plate at the under side thereof and curved slightly upwardly at their extremities, the said plate being provided with a centrally threaded opening, and a handle having the lower end thereof threaded so as to screw into the opening of the plate and having its upper end enlarged to form a grip substantially as described, the transverse members or bars



projecting some distance beyond the side edges of the plate to which they are attached.

882,079. CAR-FENDER. WILLIAM B. REED, Portland, Oreg. Filed Aug. 5, 1907. Serial No. 387,175.



1. In a car fender or guard, buffer fender-dropping mechanism, consisting of a buffer C, provided with buffing rails and secured to the outer ends of buffer rods 25—25', which are slidably mounted in side pipes 22—22', rigidly secured upon the lower surface of the platform near the end and longitudinally of the car and are provided with outward retaining springs, parallel rods 27—27' arranged below the buffer rods, pivotally mounted at their rear ends to the rear ends of the buffer rods, by vertical arms, transverse bell crank levers 28—28', mounted in hanging bearings below the platform, pivoted on their outer arms to the forward ends of the parallel rods and angled at their inner ends in a form to engage a dog in a lower plane, an apron-holding dog 15 pivoted in a hanger back of the center of a forward fender, and extending forward sufficiently to engage a forward apron A pivotally hung to the platform, when in suspended position, a trip lever 16 pivotally mounted in a hanger back of said dog, extending forward far enough to be engaged by the dog 15 and far enough backward to engage a dog 21, a rear apron-holding dog 21, pivoted on an upright arm 20 rigidly secured to the car truck frame, and extending forward sufficiently to be engaged by said trip lever and to engage the rear apron B, pivoted upon the truck frame, when the apron is in suspended position, substantially as described.

2. In a car fender or guard, fender-dropping mechanism, consisting of a vertical foot-pin 30, slidably mounted in an opening in the car platform, upwardly retained by a spring, and extending below the platform sufficiently to engage a dog, transverse bell crank levers 28—28', mounted in hanging bearings below the platform, and having a rigidly secured arm 30^a thereon, at a suitable angle and in position below the said pin, and inner ends angled in a form to engage a dog in a lower plane, an apron-holding dog 15 pivoted in a hanger back of the center of a forward fender, and extending forward sufficiently to engage a forward apron A pivotally hung to the platform, when in suspended position, a trip lever 16 pivotally mounted in a hanger back of said dog extending far enough backward to engage a dog 21, a rear apron holding dog 21, pivoted on an upright arm 20 rigidly secured to the car truck frame, and extending forward sufficiently to be engaged by said trip lever and to engage the rear apron B,

pivoted upon the truck frame, when the apron is in suspended position, substantially as described.

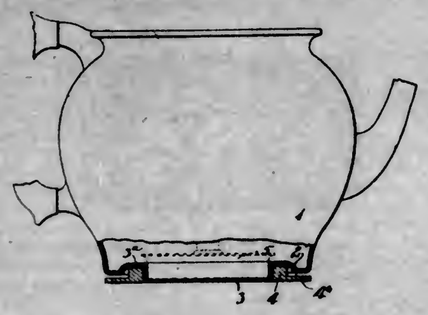
3. In a double car fender or guard, a rear fender-dropping mechanism, consisting of a forward fender A, transversely pivoted in slotted bearings of side hangers rigidly secured to the lower surface of a car platform and having a transverse upper apron rod 15^a, an apron-holding dog 15 pivoted in a hanger back of the center of said fender, suitably curved on its lower side, and extending forward sufficiently to engage said apron when in suspended position, a trip lever 16 pivotally mounted in a hanger back of said dog in a lower plane, extending sufficiently forward to be engaged by the dog 15, and sufficiently backward to engage a dog 21, a rear apron holding dog 21, pivoted on an upright arm 20, rigidly secured to the car truck frame, and extending forward sufficiently to be engaged by said trip lever and to engage the rear apron B, when said apron is in suspended position, a rear apron B, pivoted upon the truck frame below said dog, substantially as described.

4. In a car guard or fender, buffer and double fender mechanism, consisting of a forward fender A transversely pivoted in slotted bearings of side hangers rigidly secured to the lower surface of a car platform and having a transverse upper apron rod 15^a, a rear apron B pivoted upon the car truck frame, a buffer C, provided with buffing rails and secured to the outer ends of rods 25—25', buffer rods 25—25', slidably mounted in side pipes 22—22' rigidly secured upon the lower surface of the platform near the end and longitudinally of the car, the rods having outward retaining springs, parallel rods 27—27' arranged below the buffer rods, pivotally mounted at their rear ends to the rear ends of the buffer rods by vertical arms, bell crank levers 28—28' mounted in hanging bearings below the platform, pivoted on their outer arms to the forward ends of the parallel rods and angled at their inner ends in a form to engage a dog in a lower plane, an apron-holding dog 15 pivoted in a hanger back of the center of a forward fender, and extending forward sufficiently to engage the forward apron A when in suspended position, a trip lever 16 pivotally mounted in a hanger back of said dog, extending forward sufficiently to be engaged by the dog 15 and backward sufficiently to engage a dog 21, a rear apron-holding dog 21, pivoted on an upright arm 20, rigidly secured to the car truck frame, and extending forward sufficiently to be engaged by said trip lever and to engage the rear apron B when in suspended position, a rigidly secured arm 30^a on one of the bell crank levers arranged at a suitable angle and in postion below a foot pin, a vertical foot pin 30 slidably mounted in an opening in the car platform above said lever arm 30^a and upwardly retained by a spring, all substantially as described.

5. In a car fender or guard, the combination with a car, of buffer fender-dropping mechanism, consisting of a buffer C provided with buffing rails and secured to the outer ends of buffer rods 25—25', which are slidably mounted in side pipes 22—22', rigidly secured upon the lower surface of the platform near the end and longitudinally of the car and are provided with outward retaining springs, parallel rods 27—27' arranged below the buffer rods, pivotally mounted at their rear ends to the rear ends of the buffer rods, by vertical arms, transverse bell crank levers 28—28', mounted in hanging bearings below the platform, pivoted on their outer arms to the forward ends of the parallel rods and angled at their inner ends in a form to engage a dog in a lower plane, an apron-holding dog 15 pivoted in a hanger back of the center of a forward fender, and extending forward sufficiently to engage a forward apron A pivotally hung to the platform, when in suspended position, a trip lever 16 pivotally mounted in a hanger back of said dog, extending forward far enough to be engaged by the dog 15 and far enough backward to engage a dog 21, a rear apron-holding dog 21, pivoted on an upright arm 20 rigidly secured to the car truck frame, and extending forward sufficiently to be engaged by said trip lever and to engage the rear apron B, pivoted upon the truck frame, when the apron is in suspended position, substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

882,080. PERCOLATOR-POT CONSTRUCTION. GEORGE E. SAVAGE, Meriden, Conn., assignor to Manning, Bowman & Company, Meriden, Conn., a Corporation of Connecticut. Filed Feb. 19, 1907. Serial No. 358,198.



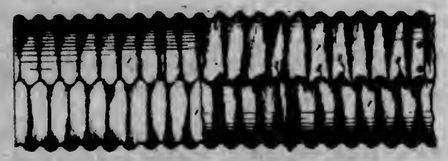
1. In a device of the character described, a pot or body portion having an opening in its bottom, a stopper therefor supported within the pot and projecting downwardly through the opening therein, the space within the walls of said stopper constituting a heating chamber, an external stopper retaining member engaging that part of the stopper projecting through said body portion.

2. In a device of the character described, a pot having a perforated bottom, a stopper therefor comprising a centrally depressed flanged member, the flange thereof being supported on the bottom of the pot around the perforation therein, the centrally depressed portion projecting through said perforation and below said bottom, a retaining member secured to the external wall of said depressed portion and clamping the edge of the pot around said opening or perforation between it and the flange on said stopper, the chamber or space within the centrally depressed portion of the stopper forming a heating chamber.

3. In a device of the character described, a pot, a centrally perforated bottom, a stopper therefor supported upon the bottom of said pot and around said opening, that part of said stopper within the area of said opening being depressed and a retaining device rigidly secured to the external wall of the centrally depressed portion of the stopper and externally of the pot.

4. In a device of the character described, a pot having a perforation in its bottom, a stopper for said perforation comprising a member having a centrally depressed portion adapted to the perforation, and a flanged portion arranged to rest upon the edge of the pot around said perforation, a stopper retainer secured to said stopper externally of the pot, and an enamel like lining for the interior of the pot, said lining extending to the edge of the stopper flange.

882,081. CORRUGATED-METAL CULVERT. JULIUS H. SCHLAFLY, Canton, Ohio. Filed Aug. 27, 1907. Serial No. 390,811.

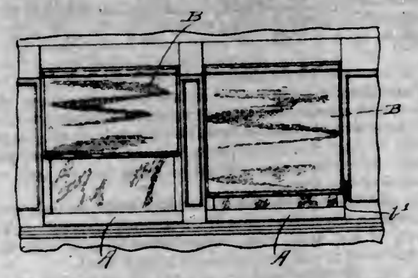


1. As an improved article of manufacture, a culvert section or member constructed of metal and provided with corrugations, flanges provided with corrugations corresponding with the corrugations of the sections or members, substantially as and for the purpose specified.

2. A culvert consisting of a series of sections, said sections or members provided with lateral flanges and the flanges adapted to be connected together and the sections provided with circumferential corrugations, substantially as and for the purpose specified.

3. A culvert consisting of sections, each section provided with lateral flanges and the flanges adapted to be connected together and the sections provided with corrugations, substantially as and for the purpose specified.

882,082. CURTAIN-FIXTURE. HARRY H. SCHROYER, Chicago, Ill. Filed Jan. 21, 1907. Serial No. 353,218.



1. The combination with a curtain roller and spring for winding the curtain thereon of a gudgeon in one end of the roller, a ratchet wheel on the gudgeon beyond the end of the roller and freely rotatable in winding the curtain, means forcing the ratchet against the outer end of the roller to frictionally engage the same and means engaging the ratchet in unwinding the curtain to prevent rotation thereof.

2. In a device of the class described the combination with a spring curtain roller of a gudgeon secured in one end thereof, a ratchet journaled on the gudgeon beyond the end of the roller, a collar secured on the gudgeon, a spring on said gudgeon having radial arms adapted to force the ratchet inwardly to frictionally engage the extremity of the roller and a pivotal pawl permitting free rotation of the ratchet in one direction and rigidly securing the same from rotation oppositely.

3. In a device of the class described the combination with a spring impelled curtain roller, a gudgeon secured in one end thereof, a bracket supporting the same, a ratchet freely rotative on the gudgeon beyond the end of the roller adapted to frictionally engage the end of the roller, tension means bearing against the outer side of the ratchet forcing the same inwardly to frictionally engage the roller and a pawl pivoted to engage the ratchet to prevent rotation thereof in unwinding the curtain.

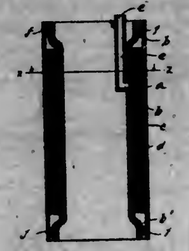
4. The combination with a spring curtain roller, of a fluted disk rigidly secured to one end thereof, a fluted ratchet wheel having the fluted portion frictionally engaging the same, means yieldingly forcing the ratchet against said disk and a pawl for engaging the teeth on the ratchet to prevent rotation thereof in one direction.

5. In a device of the class described the combination with a spring curtain roller of a curtain thereon, a gudgeon secured in the end of the roller, a ratchet thereon having a roughened side to frictionally bear against the outer end of the roller, means preventing rotation of the ratchet in unwinding the curtain, said ratchet freely rotatable with the curtain in winding, means for forcing the ratchet inwardly to frictionally engage the end of the roller and a rod secured in the lower edge of the curtain acting against the tension of the spring to prevent rolling up the curtain unless first lifted.

[Claim 6 not printed in the Gazette.]

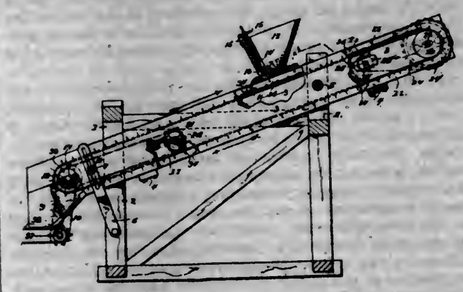
882,083. LETTER-COPYING DEVICE. ARTHUR B. VANNS, Uitenhage, Cape Colony. Filed June 4, 1907. Serial No. 377,152.

1. A copying device of the class described, comprising two tubes one of which is of less diameter than the other and adapted to be placed therein, the space between said tubes being adapted to receive a copying book, and means for applying pressure to said copy book when placed between said tubes.



2. A copying device of the class described, comprising two tubes one of which is of less diameter than the other and adapted to be placed therein, a rubber tube adapted to be placed between the first named tubes, the space between said tubes being also adapted to receive a copy book, and means for supplying pressure between the rubber tube and the other tube adjacent to which it is placed when the copy book is in position.

882,084. SEPARATOR. EDWARD J. VAUDREUIL, Two Rivers, Wis. Filed July 10, 1907. Serial No. 383,003.

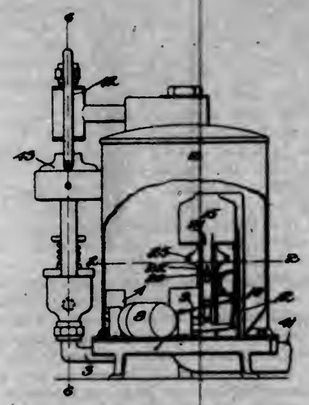


1. A separator comprising a driven inclined endless belt, having pins extending therethrough provided with burred shanks, a feed-hopper over the upper stretch of the belt intermediate of its ends, and a beater adapted to oppose the inner surface of said upper belt stretch located intermediate of the feed-hopper and the upper terminal of the belt.

2. A separator comprising a driven inclined endless belt, having pins extending therethrough provided with burred shanks, a feed-hopper over the upper stretch of the belt intermediate of its ends, the material fed being delivered by gravity over the lower terminal of said belt, means for driving the upper stretch of the belt in the opposite direction from the gravity-flow of the material, and a beater adapted to oppose the inner surface of said upper belt stretch located intermediate of the feed-hopper and the upper terminal of the belt.

3. A separator for pulse or the like comprising a frame, an inclined skeleton trough hung in the frame, means for adjusting the trough inclination in connection with the frame, a feed-hopper above the trough intermediate of its ends, rollers journaled in the trough-ends, driving-means for one of the rollers, an endless belt carried by the rollers, a series of pins projecting from the belt having burred lower shanks a revoluble beater journaled in the trough adjacent to its high end and arranged to oppose the inner surface of the upper belt stretch, driving means for the beater, a second beater journaled in said trough and arranged to oppose the inner surface of the lower belt-stretch, and means for driving the second beater.

882,085. FLUID-PRESSURE GENERATOR. MARION WARREN, Rochester, N. Y. Filed Sept. 22, 1906. Serial No. 335,680.



1. In a fluid pressure device, the combination of a cylinder 2; water inlet and outlet valves controlled by a lever; an auxiliary motor operated by water pressure and connected by a telescoping piston rod to the valve operating lever; a spring, one end of which is connected to one member of the telescoping piston rod and the other end of which is connected to the other member of the telescoping piston rod; detents to retain the valve lever in one position until a predetermined time and means to control the operation of the detents.

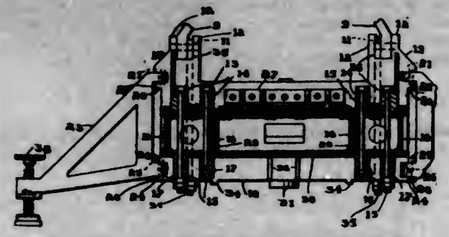
2. In a fluid pressure device, the combination of a cylinder 2; water inlet and outlet valves; an auxiliary motor; means connecting the inlet and outlet valves to actuate them in opposition; a telescoping connection between the valve connecting means and the auxiliary motor; a spring 24 interposed between the two parts 18, 19, of the telescoping connection; a detent obstructing the upward movement of the telescoping member 18 attached to the valve connecting means; all organized substantially as described, to cause the auxiliary motor to compress the spring by the upward movement of member 19, until the resistance of the detent is overcome and the valves suddenly reversed by the elevation of member 18.

3. In a fluid pressure device, the combination of a cylinder 2; water inlet and outlet valves; means connecting the inlet and outlet valves to actuate them in opposition; a telescoping connection between the valve connecting means and the auxiliary motor; a spring 24 interposed between the two parts 18, 19 of the telescoping connection; a detent preventing the downward movement of the member 18, attached to the valve connecting means; means to actuate this detent at a predetermined point, as the water escapes, all organized, substantially as described, to cause the auxiliary motor to compress the spring 24, by the downward movement of member 19 to suddenly reverse the valves through member 18 when the detent is tripped.

4. In a fluid pressure generator a float 13 suspended at the top of the dome 2, a cylinder, and a piston within that cylinder open upon one side to the atmosphere and upon the other to the water in the dome; means to give resistance to the movement of the piston; all organized to cause the closing of the air outlet by the float 13 to make effective the water main pressure upon the piston to operate the valves.

882,086. POWER-SHOVEL JACK-ARM AND MOUNTING. JOHN B. WHEELER, Jr., Toledo, Ohio, assignor to The Vulcan Iron Works Company, Toledo, Ohio, a Corporation of Ohio. Filed Oct. 24, 1907. Serial No. 398,969.

1. A triangular one-piece jackarm having a recess the axis of which extends parallel to the lateral plane of the jackarm, a vehicle body, and pivot pin means coacting with the body and the recess of the jackarm, said means so mounting the jackarm that it may swing laterally toward the body.



2. An excavator having deck and body bolsters, tie means directly holding the bolsters in position as to each other, and a swingable jack-arm connected to each bolster.

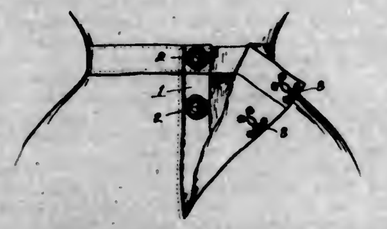
3. An A-frame and a one-piece member having a plurality of seats for the A-frame whereby the member positively fixes the frame against working out of true and against undue vibration.

4. An excavator having an A-frame with two legs, a single bolster in which each of the A-frame legs is seated, and a pair of jack-arms, there being means integral with each of the bolsters engaging each of the jack arms.

5. An excavator deck, a member on each side of the deck, and two jack-arms engaging each of the members.

[Claims 6 to 9 not printed in the Gazette.]

882,087. GARMENT-FASTENER. FRANK E. WILSON, Cleveland, Ohio. Filed Aug. 16, 1905. Serial No. 274,881.

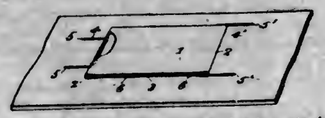


1. In a fastening device, in combination, a stud, a hook of a single thickness and consisting of a relatively long straight front end portion adapted to support the edge of the material to which the hook is attached and having openings therein whereby it may be secured to the material, the parts of said hook being substantially in the same plane, and spring clamping members extending to the rear from said straight front end portion and adapted to give laterally in the plane of the hook and provided at their extreme ends with opening whereby they may be secured to the material to which the hook is applied.

2. In a placket fastening device, in combination, a hook of a single thickness of metal, and composed of a pair of clamping portions each terminating at its end in a loop and at the front end united in a long straight portion adapted to be secured to the edge of the skirt to support the same, all of said parts being substantially in the same plane, and a stud provided with a groove adapted to receive said clamping portions of said hook and hold the same and the base of the stud substantially parallel.

3. In a placket fastening device, in combination, a spring wire hook of a single thickness and consisting of a long straight portion having end loops adapted to be secured to the edge of the material, curved portions bent back upon said straight portion and meeting at substantially the center of the hook, curved clamping portions forming continuations of said curved portions and terminating in free ends each provided with a retaining loop, all of the parts of said hook being substantially in the same plane, and a stud provided with an annular groove for receiving the curved clamping portions of said hook.

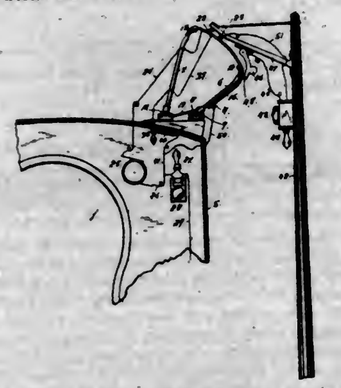
882,088. PIN TAG OR TICKET. CHARLES WINKLER, New York, N. Y. Filed May 7, 1906. Serial No. 315,512.



1. In a tag or label, a strip of sheet material folded transversely to form a screen at substantially the middle thereof, the folded parts being glued or pasted to one another, a pair of wire fasteners projecting from the edges of said strip, and a reverse tag having free flaps adapted to be inserted beneath said fasteners.

2. In a tag or label, a strip of sheet material having wire fasteners projecting from both ends thereof adapted to be inserted through a fabric, and a reverse or supplemental tag having free flaps adapted to be inserted beneath said fasteners.

882,089. ELECTRICAL SIGNALING APPARATUS. BENJAMIN F. WOODING, Denver, Colo. Filed Jan. 4, 1907. Serial No. 350,840.



1. In electrical signaling apparatus for railways, the combination with line conductors arranged along the track, a source of electricity mounted on the train, and signaling devices also mounted on the train, of a contact carried by the train and connected to close the circuit between the said conductors and the signaling devices, the said contact consisting of two arms pivotally connected with the train to permit a swinging or folding movement, and a contact member having a ball and socket connection with both of said arms, the said contact member being insulated from the said arms, and arranged to engage the line conductors.

2. In electrical signaling apparatus, the combination with line conductors forming a block signaling system, a source of electricity mounted on the train, and signaling devices also mounted on the train, of a contact carried by the train and connected to close the circuit between said conductors and the signaling devices, the said contact including two members insulated from each other and connected to engage the line conductors, the inner extremities of said contacts being provided with V-shaped grooves which are engaged by tongues of counterpart shape for the purpose described, a pilot lamp located on the train and connected with a source of electricity and connections between the said lamp and the two contact members, whereby the circuit is constantly closed through the lamp.

3. In electrical signaling apparatus, the combination with line conductors arranged along the track and forming a block signaling system, a source of electricity mounted on the train, and signaling devices also mounted on the train, of a contact carried by the train and connected to close the circuit between the line conductors and the signaling devices, said contact consisting of two arms pivotally connected with the train to permit a swinging or folding movement, a contact member having a ball and socket connection with both of said arms and adapted to engage the line conductors, and an auxiliary contact carried by the main contact but insulated therefrom, local signaling mechanism arranged at intervals along the track, and connections between the said mechanism, the line conductors and the auxiliary contact whereby the circuit is closed through the local signaling devices each time the train passes.

882,090. LOOPER-HOOK. WILLIAM H. ZELLERS, Philadelphia, Pa. Filed Nov. 19, 1903. Serial No. 181,774.



1. A looper hook comprising a shank, a thread engaging member extending at right angles thereto, and having side members provided with bent ends, and a screw extending between said side members and into said shank, and provided with a head to engage said members to detachably secure the thread engaging member to the shank.

2. A looper hook comprising a shank having a transverse groove in one end thereof, a thread engaging member extending at right angles to the shank and fitted to the groove therein, and a screw extending through said member and provided with a head to engage said member to detachably secure it to the shank.

3. A looper hook comprising a shank, a thread-engaging member extending at right angles thereto, a screw to detachably clamp said shank and member together, means on the shank to engage said member and prevent it from turning about the axis of the shank before the screw is moved into clamping position, and means on the shank to engage said member and prevent it from moving in a direction at right angles to the shank before the screw is moved into clamping position.

4. A looper hook comprising a shank provided with a depression in one end thereof, a thread-engaging member arranged within the depression and extending at right angles to the shank, the walls of said depression being adapted to engage said member to prevent it from moving in one direction at right angles to the shank and to prevent it from turning about the axis of the shank, and means to detachably secure the member to the shank.

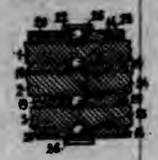
5. A looper hook comprising an elongated shank having an axial opening therein, a thread-engaging member extending from one end thereof and at substantially right angles thereto, and a screw extending through said opening and provided with an integral head and an adjustable clamping head one of which is adapted to engage said member and the other of which is adapted to engage said shank, whereby said shank and member are detachably secured together.

[Claims 6 and 7 not printed in the Gazette.]

882,091. SPEED-CHANGE MECHANISM. ALBERTO BALLOCO, Turin, Italy, assignor to Itala Fabbrica di Automobili, Turin, Italy, a Company. Filed Dec. 4, 1906. Serial No. 346,204.

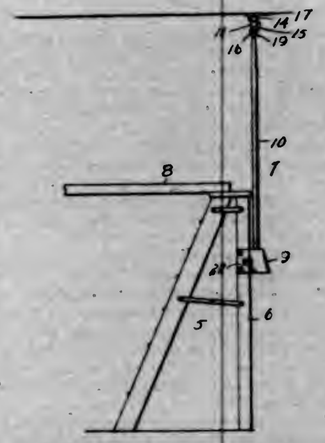
1. In an interlocking mechanism, the combination of a stationary member having ribs forming parallel channels between them, said ribs having co-axial recesses therein, balls loose in said recesses, a transversely slidable member engaging the balls in the outer ribs, and sliding members in said channels having recesses on opposite sides to receive the balls in the ribs, whereby each sliding member is capable of being locked on both sides.

2. In an interlocking mechanism, the combination of a stationary member having ribs forming three or more parallel channels, said ribs having co-axial recesses, a sliding member mounted in each channel having entering recesses



on both faces, a ball mounted in the rib recesses adapted to interlock the slides and a retaining member slidably mounted in the stationary members having arms in contact with the balls in the outer ribs.

882,092. PAPER-HANGING DEVICE. JAMES F. BRENNAN, Brooklyn, N. Y. Filed Oct. 8, 1907. Serial No. 396,483.

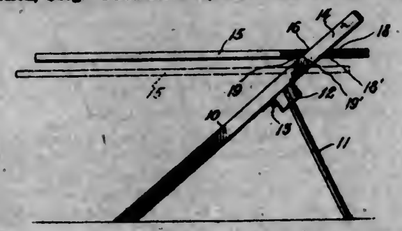


1. A paper hanging attachment for step ladders comprising a supporting block adapted to be secured to one of the legs of the ladder and provided with a socketed upper face; a vertical pole having its lower end fitted in the socket in said block; and a head rotatably connected to the upper end of said pole and including a pair of clamping members adapted to engage one end of a roll of wall paper, to hold said end against the ceiling of a room.

2. A paper hanging attachment for step ladders comprising a supporting block adapted to be secured to one of the legs of the ladder and provided with a socketed upper face; a vertical pole having its lower end fitted in the socket in said block and having a socket formed in its upper end; a clamping member provided centrally with a depending shoulder having a stem rotatably engaged in the pole socket; a clamping member mounted upon the first-mentioned clamping member, said clamping members being adapted to receive one end of a roll of wall paper therebetween to hold the same against the ceiling of a room, and means for holding said members in contact with each other.

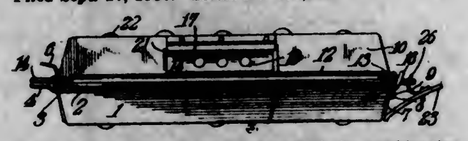
3. A paper hanging attachment for step ladders comprising a supporting block adapted to be secured to the legs of the ladder; a pole secured at its lower end to said block, the latter being provided at each side with an inwardly-tapered vertical seat in which the side bar is adapted to be received; and a head rotatably connected to the upper end of said pole and including a pair of clamping members adapted to engage one end of a roll of wall paper, to hold the same against the ceiling of a room.

882,093. IRONING-BOARD. GEORGE A. BRINK, St. Helen, Oreg. Filed Nov. 29, 1907. Serial No. 404,414.



The hereindescribed device comprising, in combination, an ironing board having one end free and the other provided with an inclined slot, a rigid member secured within said slot comprising horizontal plates having gripping edges and vertical side plates connecting and integral with the aforesaid plates, an inclined, rigid standard having its upper end free and received within the said member and there gripped at any desired point of elevation by said edges, and foldable means to normally maintain said standard at the proper predetermined angle of inclination, substantially as set forth.

882,094. BAKING-PAN. THOMAS BOYD, Cleveland, Ohio. Filed Sept. 17, 1907. Serial No. 393,271.



In a device of the character described the combination with a pan having beads along the edges thereof and a reinforcing device extending continuously through the beads, said device having integral outstanding loops extending beyond the ends of the pan and rigid in relation thereto, there being a notch in one wall of the pan intersected by the reinforcing device; of a cover having edge beads, a reinforcing device extending continuously through the beads and having an integral outstanding loop disposed to register with either loop of the pan and to contact therewith throughout its length, said reinforcing device also having integral hooks disposed to project into the notches and to engage those portions of the pan reinforced within the notches, and means adjacent one of the loops of the pan for engaging a bead of the cover to lock the loops in contact.

882,095. WIRE TIE FOR INSULATORS. WALDO H. CALLANS, Flora, Ind. Filed Nov. 19, 1906. Serial No. 344,102.



1. A tie of the character described, comprising an insulator engaging element, a wire engaging element located at one side of the same, and a spring connection between the elements disposed transversely of the insulator engaging element for urging said elements toward each other.

2. A tie of the character described, comprising an insulator engaging element, a wire engaging element, and a yielding connection between the elements for urging them toward each other, said connection comprising angularly disposed arms connected respectively to the elements.

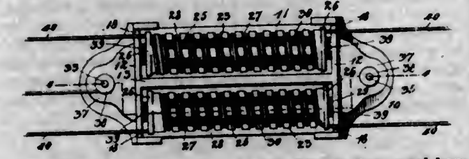
3. A tie of the character described, comprising an insulator engaging element, a wire engaging element, and a yielding connection between the elements for urging them toward each other, said connection comprising angularly disposed arms connected respectively to the elements and a coiled spring connecting the arms.

4. A tie of the character described, comprising an insulator engaging bar, a wire engaging hook, arms connected respectively to the bar and hook, and a spring connection between the arms for urging them toward each other.

5. A tie of the character described, comprising an insulator engaging element, spaced wire engaging elements located at one side of the insulator engaging element, and spaced yielding insulator embracing connections between the wire engaging element and the insulator elements that urge the former toward the latter, said connections extending from the same side of the insulator engaging element.

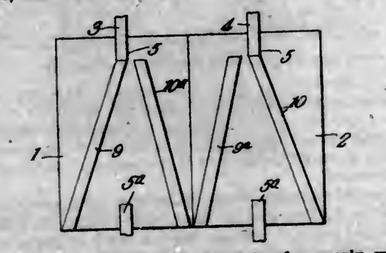
[Claims 6 to 8 not printed in the Gazette.]

882,096. LIGHTNING-ARRESTER. FRANKLIN P. CAUBLE, Lincolnton, N. C. Filed May 3, 1906. Serial No. 315,020.



A lightning arrester comprising an insulating spool having an axial bore, and slots extending radially from said bore to the outside of the spool; a grounded core in the aforesaid bore, having radial ribs extending into the slots with their outer edges spaced from the outside of the spool; and a coil connected to the line, and wound on the spool out of contact with the aforesaid ribs.

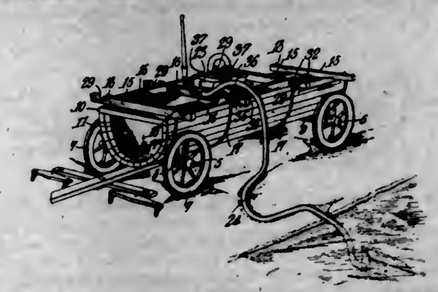
882,097. CAR-REPLACER. HORACE M. CAWOOD, Los Angeles, Cal. Filed Dec. 3, 1907. Serial No. 404,904.



1. A car replacer comprising a pair of convexly curved coöperating plates each plate adapted to lie across one rail of a railroad track and be supported on the ground at its forward and rear edges only, said edges having each a notch for the passage therethrough of said track rail, parallel longitudinal strengthening ribs on the under surface of the curved plate, and two rails or ribs on the upper side of said plate converging from the forward edge of said plate towards the notch in the rear edge of the same, one of said ribs or rails terminating in line with said notch.

2. A car replacer comprising a pair of convexly curved coöperating plates each plate adapted to lie across one rail of a railroad track and be supported on the ground at its forward and rear edges only, said edges having each a central notch to engage the track rail, a plurality of longitudinal strengthening ribs on the under side of said curved plate slightly concaved from end to end, reinforcing blocks between each side of said notches and the adjacent ribs, and two straight rails or ribs on the upper surface of said plate converging at different angles from the forward corners of said plate towards the rear edge thereof, one of said ribs terminating in line with the forward notch and the other rib a short distance therefrom.

882,098. WATER-TANK. JOHN CHIAL, Lake Park, Minn. Filed Mar. 25, 1907. Serial No. 364,845.



1. A tank having main and auxiliary liquid containing chambers, a filling spout carried by the tank and having its lower end disposed within the main chamber and its upper end extended vertically above the top of the tank, a discharge pipe communicating with the main chamber and extending through the auxiliary chamber, and doors forming a closure for the auxiliary chamber.

2. A tank having main and auxiliary liquid containing chambers, a filling spout carried by the tank and having one end thereof extended within the main chamber and provided with oppositely disposed openings and its opposite end projected vertically above the top of the tank, a discharge pipe extending through the auxiliary chamber and communicating with the main chamber, pivoted doors forming a closure for the auxiliary chamber, and means for controlling the discharge of liquid through said pipe.

3. A tank having a liquid containing chamber and provided with a plurality of spaced reinforcing bars the ends of which are recessed to form terminal sockets, a filling spout extending through the top of the tank and communicating with the liquid containing chamber, a pump associated with the tank, and an auxiliary conducting pipe connected with the pump and adapted to engage the sockets in the reinforcing bars.

4. A tank including a semi-cylindrical body portion having a liquid containing chamber and provided with a cover spaced transverse bars engaging the cover and having their opposite ends provided with sockets, reinforcing rods embracing the exterior walls of the tank and having their terminals threaded and extended vertically through the reinforcing bars, nuts engaging the threaded ends of the rods and bearing against the adjacent bars for locking the latter in engagement with the cover, and a filling spout extending through the cover of the tank and having its lower end communicating with the interior of the tank and its upper end extended vertically above the top of the tank.

5. A tank including a body portion provided with a liquid receiving chamber and having one end thereof reduced to form an auxiliary liquid containing chamber, bars extending transversely across the top of the tank, reinforcing rods embracing the exterior walls of the tank and engaging the transverse bars, a filling spout extended through the top of the tank and communicating with the main chamber, pivoted closures for the auxiliary chamber, and a discharge pipe extending through the auxiliary chamber and communicating with the interior of the main chamber.

[Claims 6 to 8 not printed in the Gazette.]

882,099. APPARATUS FOR INFLATING AUTOMOBILE-TIRES. ALBERT J. E. DAFFRIN, Dieppe, France, assignor to Addison L. Melvin, Chicago, Ill. Filed Dec. 7, 1907. Serial No. 405,566.

1. An apparatus for inflating the pneumatic tire of automobiles comprising a suitable casing having means for

attachment to the automobile frame, a pump pivotally mounted in said casing, a tubular plunger having a telescoping connection with said barrel, a crank shaft journaled in said casing and having its crank connected with said plunger, suitable check valves for controlling the passage of air, means for operating said crank shaft from the engine of an automobile and means for connecting the pump barrel to the tire to be inflated.



2. An apparatus for inflating the pneumatic tires of automobiles, comprising a suitable casing having means for attachment to an automobile frame, a pump barrel having one end pivotally supported in one end of the casing, a hollow plunger working within the barrel, a crank shaft journaled in the opposite end of the casing and having its crank connected with said plunger, check valves for controlling the flow of air through the plunger barrel, and means for conveying the air from the barrel to the tire to be inflated.

3. An apparatus for inflating the pneumatic tires of automobiles, comprising a suitable casing having means for attachment to an automobile frame, a pump barrel having one end pivotally supported in one end of the casing, a hollow plunger working within the barrel, asbestos packing rings between the barrel and plunger, a crank shaft journaled in the opposite end of the casing and having its crank connected with said plunger, check valves for controlling the flow of air through the plunger and barrel, and means for conveying the air from the barrel to the tire to be inflated.

4. An apparatus for inflating automobile tires comprising a suitable casing having means for attachment to an automobile frame, said casing having an open end, a pump barrel having one end pivotally mounted in proximity to said open end, a plunger working within the opposite end of the barrel and having an air passage through the same, a check valve in said plunger, an operating shaft journaled in the opposite end of said casing having an operating connection to the plunger, and a nipple carried by the barrel and projecting from the open end of the casing for the attachment of an air hose or pipe.

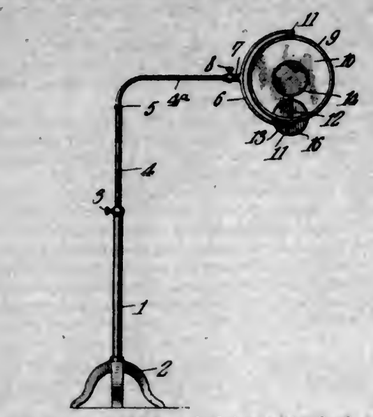
5. An apparatus for inflating automobile tires comprising a suitable casing having means for attachment to an automobile frame, said casing having an open end, a pump barrel having one end pivotally mounted in proximity to said open end, a plunger working within the opposite end of the barrel and having an air passage through the same, a check valve in said plunger, an operating shaft journaled in the opposite end of said casing having an operating connection to the plunger, a cap carried by the end of the barrel accessible through said open end, a check valve within said cap, and a nipple on the cap for the attachment of an air hose.

882,100. SOLAR GERMICIDE. JOSEPH O. DAY, Mayfield, Ky. Filed July 3, 1907. Serial No. 382,047.

1. A solar germicide comprising a standard, a bracket supported thereby, a yoke adjustably mounted on the bracket, a collector-carrying frame rotatably assembled with the yoke, an arm carried by the frame, and a plurality of modifier-carrying frames supported by the arm.

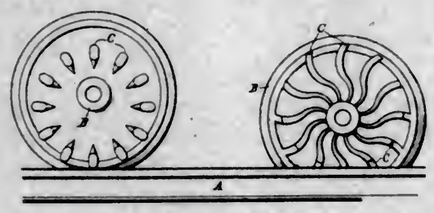
2. A solar germicide comprising a standard, a bracket supported thereby, a yoke adjustably mounted on the bracket, a collector-carrying frame rotatably assembled with the yoke, an arm carried by the frame, and a plurality of modifier-carrying frames, each having a split collar to engage with the arm and to be held in adjusted position by frictional contact therewith.

3. A solar germicide comprising an adjustably supported collector-carrying frame, an arm carried by the frame, and a plurality of modifier-carrying frames, each having a split collar to engage frictionally with the arm.



4. A solar germicide embodying a standard, a collector or lens adjustably combined therewith, and a plurality of modifiers of colors supported adjacent to the lens and in such manner as to permit the ready positioning of one or more of them in focal range of the collector in order to split up and modify the sun's rays according to the requirements of the disease being treated.

882,101. CAR-REPLACING WHEEL. OWEN T. DOUGHERTY, Minneapolis, Minn. Filed June 28, 1907. Serial No. 381,307.



1. A car-replacing wheel comprising a car-wheel having a flange on the inner side of its tread, the outer circular side of the wheel being extended and successive peripheral portions thereof being located upon the circumference of a circle eccentric to the axis of the car-wheel, substantially as described.

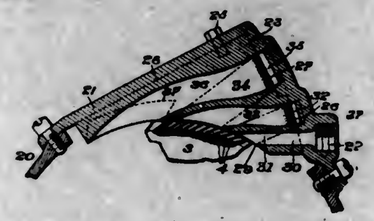
2. A car-replacing wheel comprising a car-wheel having its outer circular side provided with a plurality of extensions, the ends of said extensions being located upon a curved line and arranged at different distances from the center of the wheel, substantially as described.

3. A car-replacing wheel comprising a car-wheel having its outer circular side provided with a plurality of extensions and one end of each extension being located upon the circumference of a circle eccentric to the axis of the car-wheel, substantially as described.

4. A car-replacing wheel comprising a car-wheel having its outer circular side provided with a plurality of extensions, the end of one of the said extensions being arranged even with the tread of the wheel and the ends of the remaining extensions being located at different distances from the center of the car-wheel, subtantially as described.

882,102. STEAM-TURBINE. WILLIAM O. DUNTLEY, Chicago, Ill. Filed July 30, 1907. Serial No. 386,289.

1. In a fluid turbine, a recessed stator member comprising inlet and outlet channels having their outer walls projecting from said stator member, and a detachable member adapted to be held in the recess of said stator member constituting the inner wall of said channels, said detachable member having a smooth and unbroken surface and periphery.



2. In a fluid turbine, a casing, a rotor in said casing, a recessed stator member supported by said casing, inlet and outlet channels having their outer walls projecting from said stator member and a member adapted to be detachably held in the recess of said stator member and constituting the inner wall of said channels.

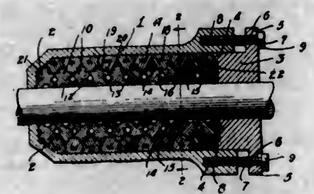
3. In a turbine, a stator body comprising a plurality of intercommunicating inlet and outlet channels, the outer walls of said channels being integral with said stator body, and a detachable member forming a common inner wall of said channels.

4. In a fluid turbine, a stator body provided with a longitudinal recess, a plurality of corresponding inlet and outlet channels in serial communication, the outer walls of said channels being integral with said stator body, and a detachable member adapted to be held in said recess and forming a common inner wall of said channels.

5. In the stator body of a fluid turbine, a fluid inlet, a plurality of inlet and outlet channels communicating serially and forming an approximate spiral path for the fluid, said channels having their outer walls connected to the stator body, and a detachable member adapted to form the inner wall of said channels.

[Claims 6 to 12 not printed in the Gazette.]

882,103. ROD-PACKING. JOSHUA C. EDGECUMBE, Cranford, N. J. Filed Aug. 1, 1907. Serial No. 386,662.



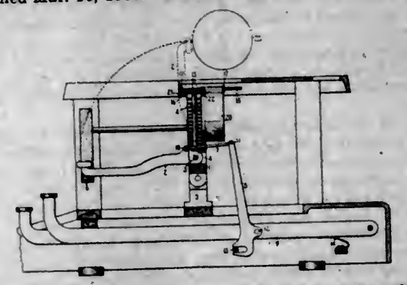
1. A rod packing comprising a series of metal rings having formed in their inner edges annular grooves, on each side of which are formed flat annular rod engaging surfaces, a radially disposed outwardly projecting bead formed on the outer edge of said rings, a series of fiber packing rings arranged around said metal rings to break joint therewith, said fiber rings having annular grooves in their inner edges to engage the beads on said metal rings, and an elastic core arranged in each of said fiber rings, substantially as described.

2. A rod packing comprising a series of metal packing rings having formed in their inner edges and in their opposite sides annular grooves, a centrally disposed, radially projecting annular bead formed on the outer edge of each of said rings, beveled or inclined surfaces formed on the opposite outer corners of the same, a series of fiber rings having formed on the opposite corners of their inner edges annular grooves adapted to fit against or engage the beads on said metal rings, beveled or inclined surfaces formed on the opposite outer corners of said fiber rings, and an annular elastic core arranged in each of said fiber rings, said elastic core being rectangular in cross section, substantially as described.

3. A rod packing comprising an inner series of metal rings having formed in their meeting faces coincident annular grooves, and an outer series of fiber rings arranged around said metal rings, substantially as described.

4. A rod packing comprising an inner series of metal rings having formed in their meeting faces coincident annular grooves, and an outer series of fiber rings arranged around said metal rings to break joint therewith, said fiber rings having formed therein an elastic core, substantially as described.

882,104. TYPE-WRITING MACHINE. JACOB FELBEL, New York, N. Y., assignor to Union Typewriter Company, Jersey City, N. J., a Corporation of New Jersey. Filed Mar. 16, 1904. Serial No. 198,456.



1. In a front strike typewriting machine, a dust shield mounted in the machine and normally removed from over the type bar bearings but adapted to be moved on its support to a position between the type bar bearings and the printing line, to cover said bearings when erasures are to be made.

2. In a front strike typewriting machine, a movably mounted dust shield normally at rest and arranged out of the paths of travel of the type bars but adapted, when erasures are to be made, to be moved on its support to a position between the type bar bearings and the printing line to protect the type bar bearings.

3. In a front strike typewriting machine, a dust shield which covers the type bar bearings when erasures are made but which when the type bars are actuated occupies a position of rest in rear of said type bar bearings.

4. In a front strike typewriting machine, a movably-supported dust shield arranged to be adjusted by hand to either of two positions in the machine, one to cover the type bar bearings and the other to uncover them.

5. In a front strike typewriting machine, a dust shield arranged normally in rear of the type bar bearings and provided with means for moving it forwardly over said type bar bearings.

[Claims 6 to 19 not printed in the Gazette.]

882,105. VEHICLE BRAKE MECHANISM. ROWLAND FIRTH, Phillipsburg, N. J., assignor to Rowland Firth & Son, Phillipsburg, N. J., a Copartnership. Filed Oct. 10, 1907. Serial No. 396,789.



1. A vehicle brake mechanism having means for arresting the rotation of a rotary member and means for applying such means, such applying means being actuated by a clutch rotated by the rotating member, the said clutch having two parts which are mutually movable to apply the brake, there being means for mutually moving the clutch part, such means being in duplicate, and actuated by relative rotary movement, and connections in opposite direc-

tions with the latter means for imparting rotary movement to them.

2. A vehicle brake mechanism having a brake shoe and a clutch and connections between the clutch and the brake shoe for applying the latter, the said clutch being formed of two members, one of which rotates with the wheels of the vehicle, and the other is normally at rest and is connected to the brake applying mechanism, there being means for engaging the two clutch parts together, such means comprising two rings having cams which mutually co-act, the cams being so arranged that the rings will be separated by their mutual relative rotation and the clutch parts thereby engaged, and means connected in opposite directions for operating one or both of the rings.

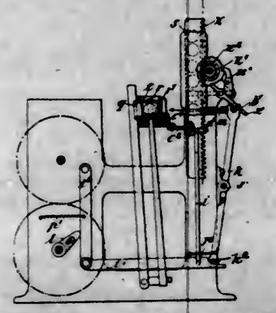
3. A vehicle brake mechanism having a clutch for applying the brake, the said clutch having a portion permanently secured to its supporting axle, a sleeve loosely surrounding such portion and free to turn thereon, a clutch member surrounding the sleeve and free to turn thereon, and a plurality of cam rings surrounding the sleeve and connected thereto and to the clutch member by ball bearings.

4. A vehicle brake mechanism having a clutch for applying the brake, the said clutch being rotated by one of the supporting axles of the vehicle and having a clutch member permanently secured to the axle, the said clutch member being formed in parts, a sleeve loosely surrounding the clutch member and free to turn thereon, the said sleeve being formed in parts, a second clutch member formed in parts and loosely surrounding the sleeve and a plurality of cam rings formed in parts and surrounding the sleeve with ball bearings between one of the rings and the sleeve and between the other ring and the clutch part.

5. A vehicle brake mechanism having a clutch mounted upon one of the axles of the vehicle and connected to the brake, the said clutch comprising a clutch part permanently secured to the axle and a second clutch part mounted thereon but free to turn independently of the axle, and means for applying the two clutch parts together, such means comprising two rings, cams upon the rings, such cams engaging together, and means for relatively moving the rings, whereby the clutch parts are applied together.

[Claim 6 not printed in the Gazette.]

882,106. WEFT-REPLENISHING MECHANISM FOR LOOMS. JOHANNES GABLER, Hornberg, Germany, assignor to Societe Anonym des Metiers Gabler, Basel, Switzerland. Filed Mar. 11, 1903. Serial No. 147,292.

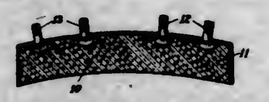


1. In an automatic apparatus for exchanging and inserting bobbins in the shuttle for looms operating with one shuttle, comprising a batten or lay r, the arrangement of a shuttle t, provided with a lateral slot in front and a slotted wall q behind, a slotted binder r', a thread guide o' and a bobbin frame o in connection with pressure levers m and m', which serve to introduce the bobbin horizontally into the shuttle t and causing the ejecting of the empty bobbin from the shuttle through the slotted wall q of the batten and by the pressure of the full bobbin, the slot opening of the shuttle for the reception of the bobbin being parallel with the bottom rail of the batten and allowing the insertion of the bobbin from the front through the slot opening of the binder r'.

2. In a device for inserting and ejecting bobbins into and from shuttles, a yieldingly arranged weft detector or feeler f, which passes like a caliper over the bobbin as soon as it is almost exhausted and contains only a few courses of yarn, and gives, in connection with a lever a, by which moving a lever b is raised, and a rock shaft d turned, a leverage to a link i, thereby transferring the motion of a lever i' to a lever k, the latter pushing the new bobbin ready for insertion in the hopper into the shuttle t.

3. In a device for inserting and ejecting weft bobbins for looms, a hopper consisting in two graduated or sectional bars provided with lateral guide holes s⁸ for the reception of a suitable number of weft bobbins and a ratchet wheel s⁹ and ratchet pawls s and s' to operate said sectional rack bars to regulate the feed of the said bars, so as to replace every exhausted bobbin in the shuttle by a full bobbin in succession upon the advance movement of the batten or lay.

882,107. BRAKE-SHOE. WILLIAM B. GOODWIN, Columbus, Ohio. Filed June 17, 1907. Serial No. 379,396.

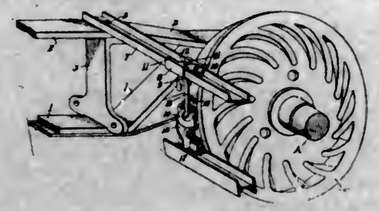


1. A brake-shoe comprising a back member, an integral shell member, said members having registering openings therethrough, a composition of matter in said shell member, bolts anchored in said composition of matter and extending outwardly through said registering openings whereby said back and shell members are removably secured together.

2. A brake-shoe comprising a back member, a single integral shell member adapted to be applied throughout its length to said back member, a composition of matter in said shell member, and fastening means removably uniting said members, whereby the shell member may be replaced when the composition of matter is worn away without renewing the back member.

3. A brake-shoe comprising a back member, a single integral shell member having back, side, and end walls, a filling therefor formed of a composition of matter adapted to engage frictionally with a wheel, bolts embedded in said composition extending outwardly through said back member to secure said shell member removably thereto.

882,108. BRAKE-BEAM HANGER. WILLIAM HAMILTON, Erie, Pa. Filed Oct. 11, 1907. Serial No. 396,893.



1. In a car truck, the combination with the side arch bars, of column bolts, a transversely extending member secured by said column bolts and tying the top arch bars, said column bolts prevented from loosening by said member, and a brake hung from said member.

2. In a car truck, the combination with the side arch bars, of separating columns therefor, column bolts, a transversely extending member secured by said column bolts and tying the top arch bars and preventing said bolts from loosening, and a brake shoe hung from said transversely extending member.

3. In a car truck, the combination with the side arch bars, of separating columns therefor, column bolts, a transversely extending channel iron secured by said column bolts and tying the top arch bars, a hanger member on said channel iron, and a brake beam and brake shoes hung from said hanger member.

4. In a car truck, the combination with the side arch bars, of column bolts, a transversely extending channel iron secured by said column bolts and tying the top arch bars, said channel iron serving as a lock to prevent rotation of said column bolts.

5. In a car truck, the combination with the side arch bars, of column bolts, a transversely extending channel iron, said column bolts passing through said channel iron to secure the same to the top arch bars, whereby the top arch bars are tied, the heads of said column bolts engaging a flange of said channel iron to prevent rotation of said column bolts.

[Claims 6 to 15 not printed in the Gazette.]

882,109. HEEL-SUPPORT FOR SHOES. VAY E. HARRIS, Way Cross, Ga. Filed May 17, 1907. Serial No. 374,243.



1. The combination with a shoe, of a heel plate having oppositely disposed arms which extend upwardly through the body of the heel for engagement with the counter of the shoe.

2. The combination with a shoe, of a heel plate secured to the tread surface of the heel of the shoe and provided with oppositely disposed arms which extend upwardly through the body of the heel and are thence bent laterally and interposed between the counter and lining of the shoe.

3. The combination with a shoe, of a heel plate counter sunk in the tread surface of the heel of the shoe and provided with oppositely disposed arms which pierce the body portion of the shoe and are provided with curved terminals interposed between the counter and lining of said shoe.

4. The combination with a shoe, of a heel plate counter sunk in the tread surface of the heel of the shoe and having one end thereof curved to conform to the curvature of the heel, and arms extending laterally from the opposite sides of the plate and projecting vertically through the heel with their upper ends interposed between the counter and lining of the shoe.

5. The combination with a shoe, of a heel plate secured to the tread surface of the heel of the shoe and provided with oppositely disposed spring arms which extend vertically through the body of the heel and are thence bent laterally and curved to conform to the counter of the shoe, the terminals of said arms being rounded and interposed between said counter and the lining of the shoe.

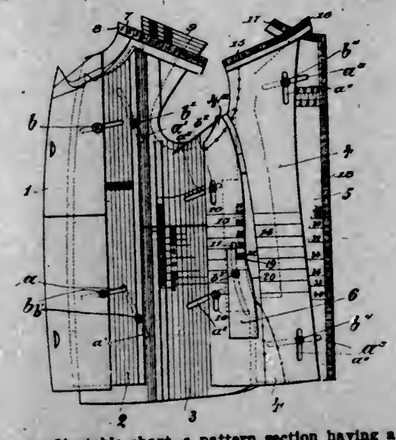
[Claim 6 not printed in the Gazette.]

882,110. ANODE. ALBERT M. HILL, New Haven, Conn., assignor to C. Upham Ely, Brooklyn, N. Y. Filed Apr. 15, 1907. Serial No. 368,189.

The combination with an anode having at one end a head formed with a flat transverse horizontal face which is at right angles to the longitudinal axis of the anode and is formed with side faces below said flat face, which side faces are inwardly inclined at an angle to the said flat face vertically and are likewise longitudinally inclined so that the head partakes of the form of a double wedge shape, of a supporting hook having a socket at its lower end adapted to engage said wedge shape head, said socket containing a flat side which rests on the flat face of the head and also is formed with lateral flanges interiorly inclined in two directions so as to correspond to and engage with the double inclination of the sides of the head, all arranged so that an interlocking of the socket with the head may be effected when the two parts are connected together, the interlocking being of such a character as to prevent the hook from being disengaged from the anode except when moved in a particular direction for that purpose, substantially as and for the purpose set forth.



882,111. ADJUSTABLE CHART. WENZEL HORESCHI, Zurich, Switzerland. Filed July 13, 1906. Serial No. 326,013.



In an adjustable chart, a pattern section having a first curved slot, and a second curved slot having an edge concentric with the first curved slot, combined with a slide having a pin adapted to engage the first curved slot, and a convex edge adapted to register with the edge of the second curved slot, substantially as specified.

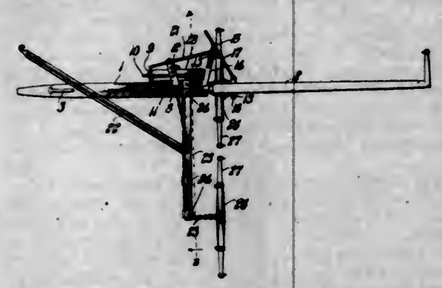
882,112. STEEL. ROBERT H. ILLINGWORTH, Newark, N. J., assignor to Crucible Steel Company of America, a Corporation of New Jersey. Filed July 30, 1907. Serial No. 386,257.

1. Steel containing from .50 per cent. to five per cent. of nickel, from .10 per cent. to five per cent. of chromium, and from .25 per cent. to three per cent. of tungsten.

2. Steel containing from two per cent. to three per cent. of nickel, from one per cent. to two per cent. of chromium, and from .25 per cent. to one per cent. of tungsten.

3. Steel containing 2.50 per cent. of nickel, 1.25 per cent. of chromium, one per cent. of tungsten, and less than one per cent. of carbon, and characterized by high elastic limit, high tensile strength, and high elongation.

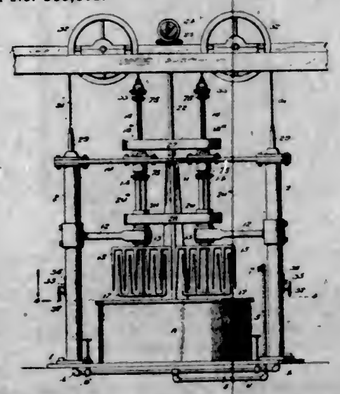
882,113. TONGUE-TRUCK FOR HARVESTERS. LEVI G. JOHNSON, Apple, Minn. Filed May 14, 1907. Serial No. 373,552.



1. In combination with a tongue proper and a stub tongue, means pivotally connecting said tongues together for relative lateral movement only, a crank shaft journaled in the stub tongue, a ground wheel journaled upon the crank of the said shaft, a bar attached to said shaft, a second bar pivoted to the stub tongue, a means connecting said bars together and a means connecting the last said bar with the means pivotally connecting the tongues together.

2. In combination with a tongue proper and a stub tongue, a clevis pivoted to the stub tongue for lateral movement only and pivotally connected with the tongue proper, whereby the latter may swing vertically, a crank shaft journaled in the stub tongue, a ground wheel journaled upon the crank of shaft, an arm adjustably fixed to said shaft, a bar pivoted to the stub tongue, an adjustable rod connecting said arm and bar together, and an adjustable rod connecting said bar with the clevis.

882,114. MACHINE FOR MIXING EXPLOSIVES. GEORGE P. JONES, Emporium, Pa. Filed Apr. 22, 1907. Serial No. 369,602.



1. In a machine for mixing explosives, the combination with a mixing receptacle, of a mixer adapted to be lowered into or raised from the mixing receptacle, means for overbalancing said mixer tending to raise it, and means for causing the lowering of the mixer into the receptacle against the action of said overbalancing means.

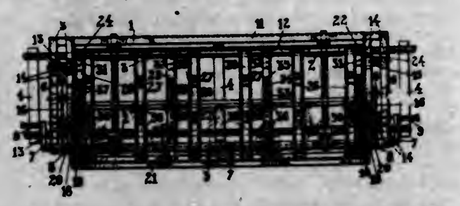
2. In a machine for mixing explosives, the combination with a mixing receptacle of a mixer, motive fluid operated means for causing the lowering of the mixer into the mixing receptacle, and means for automatically raising the mixer on the release of the fluid pressure.

3. In a machine for mixing explosives, the combination with a mixing receptacle, of a mixer, motive fluid operated means for causing the lowering of the mixer into the mixing receptacle, and overbalancing means for automatically raising the mixer on the release of the motive fluid pressure.

4. In a machine for mixing explosives, the combination with a mixing receptacle and a mixer, of a cylinder, an overbalancing piston playing in the cylinder, a wheel, and a flexible connection between the overbalancing piston and the mixer which passes over the wheel whereby the piston tends to raise the mixer.

5. In a machine for mixing explosives, the combination with a mixing receptacle, and a mixer, of a vertical cylinder, an overbalancing piston playing in the cylinder, a wheel, a flexible connection between said piston and the mixer which passes over the wheel, and fluid operated means for raising said piston.

882,115. MACHINE FOR GRINDING AND POLISHING THE EDGES OF PLATES OF GLASS, MARBLE, AND THE LIKE. VICTOR KINON, Aix-la-Chapelle, Germany. Filed Feb. 18, 1907. Serial No. 357,873.



1. A machine of the character described, provided with a work-holder capable of being wheeled across the face of the carriage of said machine, resilient abutments arranged upon the face of said work-holder, and rotatable elastic work-piece carriers likewise arranged upon the face of said work-holder.

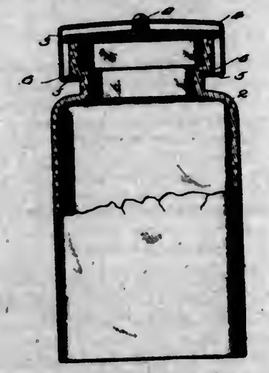
2. A machine of the character described, provided with a work-holder capable of being wheeled across the face of the carriage of said machine at right angles to the direction of travel of said carriage, resilient abutments adjustably attached to the face of said work-holder, carrier-races likewise adjustably attached to the face of said work-holder, and rotatable elastic work-piece carriers running in said carrier-races.

3. A machine of the character described, provided with a work-holder mounted upon the carriage of said machine to be wheeled on rails across the face of said carriage at right angles to the direction of travel of said carriage, resilient abutments detachably and adjustably secured to the top of said work-holder, trough-shaped carrier-races detachably and adjustably mounted on said work-holder, and rotatable elastic work-piece carriers guided in said carrier-races.

4. A machine of the character described, provided with a work-holder consisting of a frame adapted to travel upon the carriage of said machine at right angles to the direction of travel of said carriage and a work-table hinged to said frame and held in a horizontal position by arms pivotally connected with said frame, resilient abutments faced with elastic cushions and detachably and adjustably connected with said work-holder, carrier-races provided with sub-divisions and adjustably mounted on said work-holder, and rotatable elastic work-piece carriers separately guided in the sub-divisions of said carrier-races.

5. In a machine of the character described, the combination with the carriage thereof, of rails entering with their tread into the grooves of the wheels of said carriage, cross-rails arranged in pairs upon the top of said carriage, a work-holder consisting of a frame and a work-table hinged to the latter, arms on said frame passing in a downward direction between said cross-rails, caster-wheels on said arms for providing a rolling contact between the frame of said work-holder and said cross-rails, means for preventing said work-holder from accidentally leaving said carriage, means for moving said work-holder to and fro on said cross-rails, resilient abutments adjustably connected with the table of said work-holder, carrier-races subdivided and adjustably mounted upon the table of said work-holder, and rotatable elastic work-piece carriers separately guided in the subdivisions of said carrier-races.

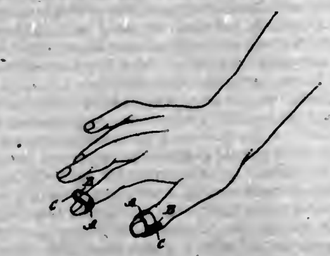
882,116. JAR-CLOSURE. FRANCES LOFFI, Garrett, Ind. Filed May 4, 1907. Serial No. 371,826.



1. A device of the character described, comprising in combination with a bottle or jar, a cover disk adapted to fit over the mouth of the bottle or jar and having a screw-threaded aperture in its upper surface, a clamp operatively engaging the bottle or jar and provided with a screw-threaded aperture, and a headed screw engaging in said aperture and adapted to take into the threaded aperture in the cover, substantially as and for the purpose specified.

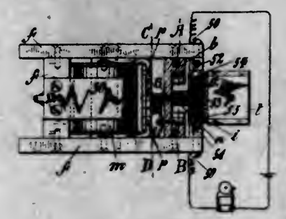
2. A device of the character described, comprising, in combination with a bottle or jar, a gasket adapted to fit over the mouth of the bottle or jar, a rigid cover-disk adapted to completely cover said gasket and having a screw-threaded aperture in its upper surface, a clamp operatively engaging the bottle or jar and provided with a screw-threaded aperture, and a screw passing through and held in the aperture in the clamp and adapted to take into the screw-threaded aperture in the cover-disk, substantially as and for the purpose specified.

882,117. FINGER-PAD. MARY H. MCELHONE, New York, N. Y. Filed Oct. 21, 1907. Serial No. 398,521.



A finger pad consisting of a continuous, comparatively thin band of highly resilient material formed into a circular member adapted to encircle a finger, said band being free of all metallic parts and having its ends turned at right angles to the circular portion and securely joined together to form a handle whereby the entire pad may be adjusted upon the finger of the wearer.

882,118. ANNUNCIATOR. JOHN T. NEEDHAM, Bayonne, N. J., assignor of one-half to Postal Telegraph-Cable Company, New York, N. Y., a Corporation of New York. Filed May 27, 1907. Serial No. 375,767.



1. In an annunciator the combination of a suitable semaphore, a rotatable support therefor, an electro-magnet controlling said support, a pair of spring jacks opening from opposite sides and means whereby the insertion of a jack plug sets the semaphore.

2. In an annunciator the combination of a suitable semaphore, a rotatable support therefor, an electro-magnet controlling said support, a pair of spring jacks opening upon different sides, and means whereby the insertion of a jack-plug in either opening restores the semaphore.

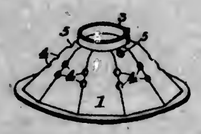
3. The combination in an annunciator of an indicating device, an electro-magnet, a pair of spring-jacks opening in different directions and means whereby the insertion of a jack plug in either spring jack resets the indicator.

4. The combination with a suitable switching apparatus of an annunciator consisting of an indicating device, a controlling magnet and a circuit closer for an alarm circuit, said circuit closer consisting of a pair of fixed contacts, a pair of balls, a coiled expansion spring between said balls and a device fixed to said indicator for holding the balls and spring in fixed position with respect to each other.

5. In an annunciator the combination of a suitable semaphore, a vertical rotating support therefor, a controlling magnet, a retracting spring for the support, a spring jack in close proximity to the support and a projection on the support moving in the path of the spring jack plug.

[Claims 6 to 8 not printed in the Gazette.]

882,119. LINER FOR CENTRIFUGAL SEPARATORS. OLOF OHLSSON, Södertelje, Sweden, assignor, by mesne assignments, to Empire Cream Separator Company, Bloomfield, N. J., a Corporation of New Jersey. Filed Feb. 26, 1902, Serial No. 95,719. Renewed May 10, 1904. Serial No. 207,300.

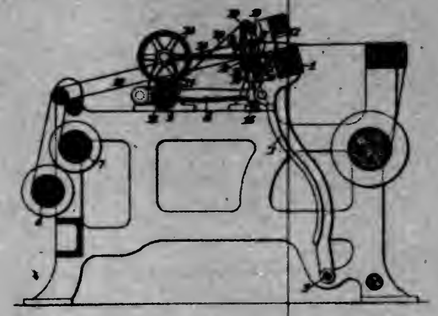


1. A liner for a centrifugal separating apparatus, consisting of a plurality of superposed and spaced plates, said plates having each the form of a relatively low pyramid, and each having apertures for the upward flow of the liquid through the plate, said apertures being situated at the radial angles formed by the meeting lateral edges of the faces of the pyramidal plate, substantially as and for the purpose set forth.

2. A liner for a centrifugal separating apparatus, consisting of a plurality of superposed and spaced plates of general pyramidal shape, each of said plates having radially extending guiding channels on its underside, and

apertures for the passage of the liquid through the plate, the said apertures being situated at the respective channels, whereby the latter serve to gather the liquid and guide it to the apertures.

882,120. LOOM. FREDERICK OTT, South Bethlehem, Pa. Filed May 1, 1907. Serial No. 371,305.



1. In a loom, the combination with means for guiding a series of standard threads; of a comb of needles carrying a series of binder threads; means for moving said threads with respect to one another in a vertical plane; and means for displacing said binder and standard threads laterally with respect to one another in alternate directions in a horizontal plane, whereby a binder and a standard thread may be twisted together.

2. In a loom, the combination with means for guiding a series of standard threads; of a comb of needles each carrying a binder thread; means for moving said threads with respect to one another in a vertical plane; and means for displacing said binder and standard threads laterally with respect to one another in a horizontal plane in alternate directions, whereby a binder and a standard thread may be twisted together.

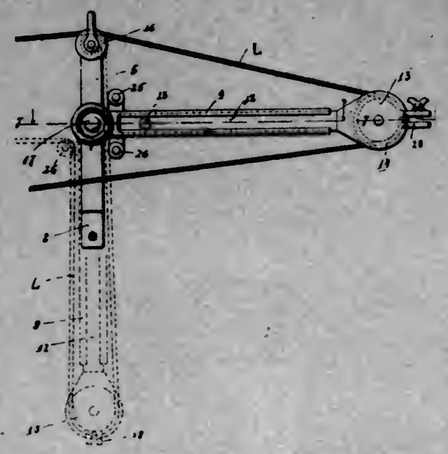
3. In a loom, the combination with means for guiding a series of standard threads; of a comb of needles each carrying a binder thread; means for reciprocating said comb in a vertical plane; and means for displacing said binder threads and standard threads laterally with respect to one another in a horizontal plane when said comb is in its lowermost position and twist said binder threads about said standard threads in alternate directions.

4. In a loom, the combination with a reed having a series of standard and binder threads passing therethrough; of a comb of needles each carrying a binder thread; means for reciprocating said comb in a vertical plane; and means for displacing said binder threads and standard threads laterally with respect to one another in a horizontal plane, when said comb is in its lowermost position and twist said binder threads about said standard threads in alternate directions.

5. In a loom, the combination with means for guiding a series of standard threads; of a comb of needles each carrying a binder thread; means for reciprocating said comb in a vertical plane; and means for guiding the needles to deflect their ends laterally in alternate directions.

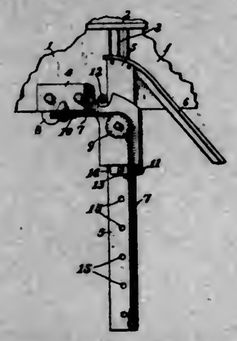
882,121. WASHLINE-HANGER. FREDERICK OTTUSCH, Brooklyn, N. Y. Filed Sept. 12, 1907. Serial No. 392,471.

A washline hanger, comprising a piece adapted to be stationarily fixed to either side of the window casing, a frame removably carried by said piece, a spindle projecting at a right angle from said frame and having two threaded radial bores adjacent to each other, a guide piece and a sleeve formed on said guide piece, said sleeve being loosely mounted on the said spindle and having two slots adapted to register with the threaded bores in the spindle, a set screw engaging either of the threaded bores to hold the guide piece in adjusted position, an arm slidably borne in the said guide piece, a line pulley carried by said arm, a second line pulley carried by the above named frame,



and guide pulleys on said guide piece, substantially as set forth.

882,122. CUTTER-GUARD FOR BUZZ-PLANERS. C. OSCAR PORTER and ALVIN D. PORTER, Grand Rapids, Mich. Filed July 8, 1907. Serial No. 382,626.



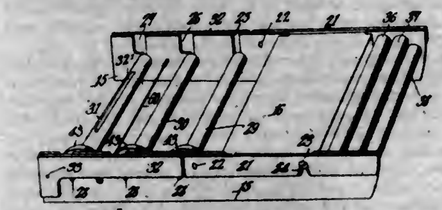
1. A cutter guard for buzz planers comprising a bracket adapted to be attached to the bed of a buzz planer and provided with guiding means, a bar slidable longitudinally of said guiding means, the bar having spaced apertures and provided with a laterally directed inclined arm at its inner end, friction rollers carried by the bracket and between which said bar operates, guide pulleys carried by said bracket, a cable working over said guide pulleys and connected to the bar at the one end and provided with a weight at the other end, and a stop pin insertible interchangeably in the apertures in said bar.

2. In a device of the class described, a bracket formed with spaced guide ways and adapted to be connected to the bed of a planer, a bar having a plurality of spaced apertures and slidable in said guide ways above the cutter elements of the planer, an arm connected to the bar at its inner end and extending at an angle therefrom and toward the feed end of the planer, and a stop pin adapted to be inserted interchangeably in said apertures.

3. The combination with a planer including cutter elements and a work guide, of a bracket adapted to be attached to the bed of the planer and provided with guiding means parallel to the longitudinal plane of the cutter elements and above the same, a bar slidable in said guiding means, an arm attached to said bar at its inner end and

extending at an angle therefrom and toward the feed end of the planer, and a stop having means for adjustable connection to said bar.

882,123. RECORDING AND DUPLICATING DEVICE. JULIUS C. PROMBSTEL, Portland, Oreg. Filed Apr. 29, 1907. Serial No. 370,896.



1. In a device of the class described, a casing having an open top, a frame arranged therein and removable bodily therefrom, said frame comprising a pair of opposite side plates, and a cross piece connecting the side plates and forming a platen, the width of such cross piece being considerably less than the length of the side plates, slots arranged at the rear ends of said side plates, paper strip carrying rollers having end pintles disposed within said slots, a strip guiding roller also journaled in the side plates at a point beyond the discharge edge of the platen, and a detachable covering and protecting plate extending over the frame and provided with an opening through which that portion of the strip passing over the platen is exposed.

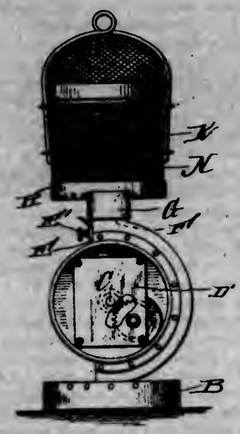
2. In a device of the class described, a casing, a frame bodily removable therefrom, a record strip, a pair of carrying rollers therefor, a manually operable means on said rollers for effecting movement of the strip in either direction, a check strip carrying roller, a check strip arranged thereon, a plurality of feed rollers between which the check strip and record strip are guided and held, a platen over which the strips are fed, means for clamping carbon or transfer sheets in place over the platen and between the strips, the feeding rollers serving to transmit movement from the record strip to the check strip in both directions to adjust the position of the strips with respect to the platen, or to carry off portions of the strips on which records have been made.

3. In a device of the class described, a casing, a frame bodily removable therefrom and comprising a pair of spaced side plates, a platen serving to connect said side plates, a record strip, a pair of record strip carrying rollers arranged to the rear of the platen, manually operable means on said rollers to effect movement of the record strip in either direction, a check strip, a roller carrying the same, and a tension rod connecting the side plates and serving to bind the same against the ends of the rollers to retard rotative movement of the latter.

4. In a device of the class specified, a casing, a frame bodily removable therefrom, a plurality of rolls having shafts or pintles, strips carried by said rollers the frame having recesses for the reception of said shafts or pintles, pivotally mounted strips serving to hold the shafts or pintles within the recesses, friction disks secured to the ends of the rolls and arranged for manual operation, a platen connecting the members of the frame and over which the strips are fed, and a pair of pivotally mounted carbon sheet confining strips for holding the ends of carbon sheets in place between the strips.

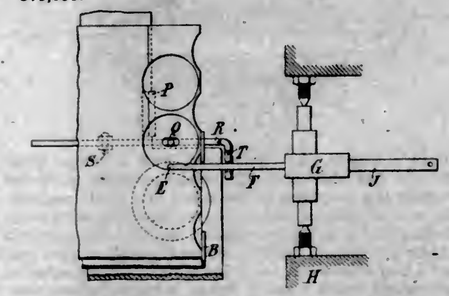
5. In a device of the class specified, the combination with an open top casing, a platen, a frame carrying the platen, a plurality of rollers journaled in the frame, a record strip and check strip, mounted on said rollers, a friction disk arranged on each roller for permitting manual operation of the same, and a covering plate extending from the frame and provided with an opening in alinement with the platen and with an opening in alinement with the friction disk, said plate having a discharge slot for the check strip, and the end of the plate being sharpened to form a severing edge for said check strip.

882,124. FLY-TRAP. JOSEPH F. RICHBOURG and ROBERT F. RICHBOURG, Alba, Tex. Filed July 10, 1907. Serial No. 383,018.



A fly trap comprising a casing, a rotatable cylinder mounted therein, means for operating the same, adjusting screws mounted upon the casing a slide provided with slots adapted to receive said screws, integral handles upon said slide, a cage mounted upon the casing, eyes projecting from said cage, a ball-shaped member passing through said eyes and secured to the cage, as set forth.

882,125. MEANS FOR CONTROLLING THE FEEDING OF SHEETS. JOHN J. RIGBY, New York, N. Y., assignor to E. W. Bliss Company, Brooklyn, N. Y., a Corporation of West Virginia. Filed May 11, 1907. Serial No. 373,095.



1. Means for controlling the feeding of a sheet to a punch to form successive lines of punchings staggered relatively to each other, including in combination means for controlling the spacing of successive punchings in a line at a determined uniform distance apart, and means for locating the sheet in a position to effect the first punching of a line at a determined greater distance from the advancing edge of the sheet.

2. Means for controlling the feeding of a sheet to a punch to form successive lines of punchings staggered relatively to each other, including in combination a pair of gages against which the advancing edge of the sheet may be set in succession to determine the positions of the first punchings in two successive lines and means for controlling the spacing of successive punchings in a line at a determined uniform distance apart.

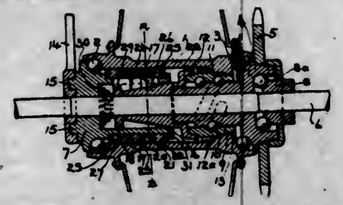
3. Means for controlling the feeding of a sheet to a punch to form successive lines of punchings staggered relatively to each other, including in combination a gage for controlling the spacing of the first punchings of one series of lines from the advancing edge of the sheet and also the spacing of the successive punchings in each line, a second

gage for controlling the spacing of the first punching of an alternate series of lines, means for rendering the second gage operative and the first inoperative at the beginning of one of the alternate series of lines, and means for automatically rendering the second gage inoperative and the first operative upon the first punching operation of such line.

4. Means for controlling the feeding of a sheet to a punch to form successive lines of punchings staggered relatively to each other, including in combination a feed table, a gage E above the feed table and adapted to be lowered thereto when the punch is lifted, a gage Q adapted to be projected upward through the table to gage the first punching of a row, means for lifting the gage E while the gage Q is projected up through the table, and means operative upon the descent of the punch for depressing the gage Q below the table, said gage Q being arranged to remain depressed during a number of operations of the punch to permit the forming of all the punchings of a row after the first under control of the gage E.

5. Means for controlling the feeding of a sheet to a punch to form successive lines of punchings staggered relatively to each other, including in combination a feed table, a gage E above the feed table and adapted to be lowered thereto when the punch is lifted, a gage Q adapted to project upward through the table, a lever carrying said gage frictionally mounted and having an arm underlying a part of the gage E whereby the elevation of the gage Q lifts the gage E to inoperative position, and said lever adapted when so elevated to stand in the path of a part of the punch to be pressed down thereby upon the descent of the punch to render the gage Q inoperative and restore the gage E to operative position.

882,126. FREE-WHEEL HUB FOR BICYCLES. CARL O. RYDBERG, Göteborg, Sweden. Filed Nov. 12, 1907. Serial No. 401,788.



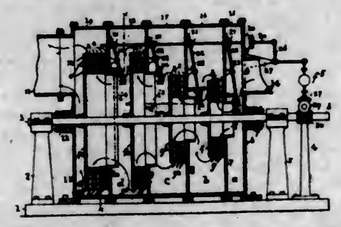
1. In a bicycle, the combination with a driving-wheel hub body, and wheel propelling means arranged inside the hub body and controlled by the rider; of a fixed, longitudinally slotted cylinder disposed in the hub body, a ring surrounding said cylinder and divided into as many segments as there are slots in the cylinder and having on each segment a heel disposed in one of the slots and terminating in a sloped end which forms a wedge, a tapered sleeve movable endwise in the cylinder and engaged with the ends of the heels, a sleeve movable endwise in the hub body and having a cone at one end to engage said body and arranged when moved in one direction to engage the hub body and when moved in the opposite direction to push the tapered sleeve against the tapered ends of the heels on the segments to force the latter outward, and means intermediate the wheel propelling means and the said coned sleeve for shifting the latter.

2. In a bicycle, the combination with a driving-wheel hub body, and wheel propelling means arranged inside the hub body and controlled by the rider; of a device movable radially toward and from the hub body and held against turning with the hub body and having an inwardly extending heel terminating in a beveled end, an exteriorly tapered, endwise movable sleeve engaging said beveled end, a second endwise movable sleeve having a cone to engage the hub body and arranged to be shifted in one direction to engage the hub body and also arranged to be shifted in the opposite direction to push the tapered sleeve against the tapered or beveled end of the heel on the radially movable device, means intermediate the wheel propelling means and the said coned sleeve for shifting the latter, and a spring connected at one end to and surrounding the coned sleeve and interposed between the same and the hub body.

3. The combination of a wheel hub, a longitudinally slotted cylinder fixed therein, a ring surrounding the cylinder and having in one side a channel the said ring being divided into segments and the segments being provided with projecting heels disposed in the slots of the cylinder and terminating in beveled ends, an exteriorly tapered sleeve for engaging said beveled ends, means for shifting said sleeve, and a spring disposed in the channel of the ring.

4. In a bicycle, the combination of a driving-wheel hub body, a fixed cone disposed in one end of the body and having a lateral extension forming a slotted cylinder, segments interposed between said cylinder and the hub body and having heels disposed in the slots of the cylinder and terminating in beveled ends, an endwise movable tapered sleeve engaging said beveled ends, a rotary cone disposed in the opposite end of the hub body, a sleeve surrounding the latter cone and arranged when shifted in one direction to frictionally engage the hub body and when shifted in the opposite direction to push the first mentioned sleeve against the beveled ends of the segment heels, and a thread-shaped ball bearing interposed between the rotary cone and the second mentioned sleeve.

882,127. TURBINE-MOTOR. BYRON STEVENS, Oakland, Cal. Filed Dec. 9, 1907. Serial No. 405,695.



1. A turbine-motor composed of a series of chambers, a shaft extending through the chambers, a series of wheels in the chambers, each composed of a movable part and an immovable part, the former part being connected to the shaft while the latter part is connected to a wall of a chamber, the vanes of the wheels being located in interleaved tubes alternately connected to said parts, a central fluid inlet for each wheel, a regulating valve in said inlet, and a governor or regulator adapted to operate the valves.

2. A turbine-motor composed of a series of chambers composed of circular rings, ends and cross walls or partitions, a central orifice in each partition, a tubular valve in each orifice, a shaft extending through the chambers, a series of wheels in the chambers, consisting of movable and immovable interleaved tubes provided with vanes registering with each other, the movable tubes being connected to the shaft and the immovable tubes connected to a cross wall of a chamber, a governor or regulator adapted to operate the valves and an inlet and an outlet pipe, as set forth.

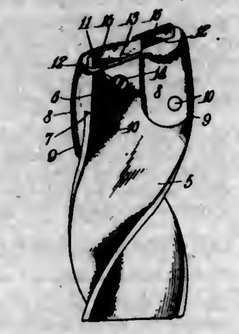
3. In a turbine-motor wheel composed of a series of interleaved tubes, each alternate tube being movable while the others are immovable, a central axial fluid inlet chamber, the tubes having vanes coinciding with each other, the vanes of the inner tube being divergent toward the said chamber, and in direct proximity thereto.

4. In a turbine-motor wheel composed of a series of interleaved tubes, each alternate tube being movable while the others are immovable, a central axial inlet chamber, the tubes having vanes coinciding with each other, the inner tube being immovable and having its vanes divergent toward the chamber, and in direct proximity thereto.

5. A turbine-motor composed of a series of chambers, a shaft extending through the chambers, a series of wheels in the chambers each composed of a movable part and an immovable part, the former part being connected to the shaft while the latter part is connected to a wall of a chamber, the vanes of the wheels being located in interleaved tubes alternately connected to said parts, a central fluid inlet for each wheel, a regulating valve in said inlet, a valve rod extending through the chambers with connecting means between the same and each regulating valve, and a governor or regulator adapted to operate said valve rod.

[Claim 6 not printed in the Gazette.]

882,128. AUGER. MARTIN E. THOMAS, Ottumwa, Iowa, assignor of one-half to William Hall and one-fourth to Elmer Warren Steele, Ottumwa, Iowa. Filed Oct. 14, 1907. Serial No. 397,421.



1. An auger having a bit holder secured to one end thereof and provided with oppositely disposed enlargement having sockets formed therein, the walls of the holder opposite the enlargements being provided with bearing surfaces disposed flush with the adjacent walls of the holder, removable bits seated in the sockets, and clamping devices piercing the walls of the holder and bearing against the adjacent bits.

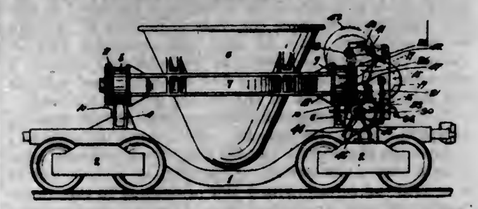
2. An auger having a bit holder secured to one end thereof and provided with oppositely disposed enlargements having sockets formed therein, the walls of the holder opposite the enlargements being provided with bearing surfaces, bits seated in said sockets, and clamping devices piercing the walls of the holder and engaging the adjacent bits.

3. An auger having a bit holder secured to one end thereof and provided with a longitudnal stop shoulder adapted to bear against the adjacent end of the bit, enlargements formed on the opposite sides of the holder and each having one end thereof extended beyond the shoulder to form an attaching lug, there being sockets formed in said enlargements, removable bits seated in said sockets, and clamping devices piercing the walls of the holder and engaging the adjacent bits.

4. The combination with a spirally disposed auger barrel, of a bit holder secured to one end of the auger barrel and provided with a transverse stop shoulder adapted to engage the adjacent end of said barrel, said holder being provided with oppositely disposed enlargements having sockets formed therein and each having one end thereof extended beyond the shoulder for attachment to the adjacent wall of the auger barrel, the inner faces of the enlargements being curved to conform to the adjacent walls of the auger barrel, there being a bearing surface formed on the holder opposite each enlargement and disposed flush with the adjacent wall of the auger, removable bits seated in said sockets, and clamping devices piercing the bearing faces of the holder and engaging the adjacent bits.

882,129. DUMPING-CAR. MUNSON H. TREADWELL, New York, N. Y. Filed Feb. 20, 1907. Serial No. 358,346.

1. In a dumping car, the combination with a movable car body, and manual means for moving it to discharging position, of means independent of the manual actuating mechanism for controlling the rate of movement of the car body, substantially as described.



2. In a dumping car, the combination with a movable car body, and manual means for moving it to discharging position, of fluid checking means for controlling the movement of the car body and movable therewith, substantially as described.

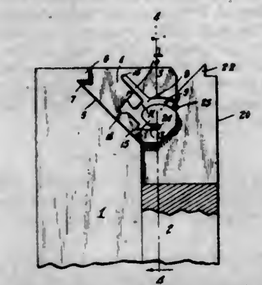
3. In a dumping car, the combination with a pivoted and bodily movable car body, and a movable power cylinder for moving the car body, of a movable fluid checking cylinder for controlling the entire movement of the car body and moving with the power cylinder.

4. In a dumping car, the combination with a pivoted and bodily movable car body, and a movable power cylinder for moving the car body, of a movable fluid checking cylinder carried thereby for controlling the entire movement of the car body, and means for varying the fluid flow, substantially as described.

5. In a dumping car, the combination with a pivoted and bodily movable car body, and a movable power cylinder for moving the car body, of means for positioning the cylinder to move the car body to opposite sides, and means independent of the power cylinder and moving therewith for uniformly controlling the entire movement of the car body, and means for varying the effect of said controlling means, substantially as described.

[Claims 6 to 12 not printed in the Gazette.]

882,130. FOLDING SQUARE. ALBERT G. URBAN, Johnstown, Pa. Filed Oct. 25, 1907. Serial No. 399,174.



1. A folding square, comprising a body formed at one end with a tongue, a diagonally arranged shoulder and a seat, said tongue being formed with the irregular shaped slot H having the communicating branches 9, 10, 11, 12, 13 and an entrance at the outer end of the tongue, said branches being formed with the seats 14, 15, 16, 17, 18, a blade having one end slotted to receive the tongue and beveled to engage said shoulder, said end of the blade being also provided with a projection to engage the first mentioned seat upon the body, and the transverse pins 23, 24 arranged in the slotted end of the blade and adapted to enter the slot in the tongue and to engage said seats in the branches of said slot, substantially as and for the purpose set forth.

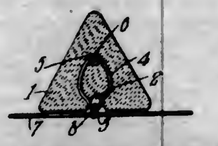
2. A folding square comprising a body having at one end an extension provided with recessed faces to form a tongue, the latter being formed with an irregular shaped slot and with seats in said slot, the reduction of the extension to provide the tongue also forming upon opposite faces of the body inclined shoulders and notches or seats

at the ends of said shoulders, a blade having its inner end beveled and formed with a slot to receive said tongue, the extremity of said end of the blade being cut away to provide projections to enter the seats or notches at the ends of the shoulders upon the body, and transverse pins arranged in the slot or opening in the blade and adapted to enter the slot in said tongue and to engage said seats in the slot, substantially as and for the purpose set forth.

3. A folding square comprising a body formed with an extension having its opposite faces reduced to provide a tongue, the shoulders 5 and the seats 7, said tongue being formed with a slot having the seats 14, 15, a blade, having a beveled end formed with a slot or opening to receive the tongue and with projections on said beveled end to engage the seats 7, the beveled edges of said end being adapted to engage the shoulders 5, and transverse pins in said end of the blade adapted to enter the slot in the tongue and to engage the seats 14, 15, substantially as and for the purpose set forth.

4. A folding square comprising a body having an extension reduced to provide a tongue and an inclined shoulder, said tongue being formed with a slot having the seats 16, 17, a blade having a beveled end formed with a slot to receive the tongue, and transverse pins in said blade to enter the slot in the tongue and to engage said sheets 16, 17, the edge of said blade being adapted to engage the shoulder 5, substantially as and for the purpose set forth.

882,131. CONCRETE FENCE-POST. FRANKLIN P. VAN HOOK, Normal, Ill. Filed Nov. 7, 1906. Serial No. 342,439.



A device of the character described consisting of a molded post having a longitudinally extending annular groove in one face thereof, a reinforcing rod extending longitudinally within the post, and fastening loops disposed transversely within the groove, each loop having converging oppositely bowed end portions embedded within the post, the terminals of said end portions constituting superposed alining eyes engaging the rod, said loops being disposed entirely within the groove.

882,132. MACHINE FOR GATHERING AND TRANSPORTING SNOW. WILLIAM A. WARMAN, Moncton, New Brunswick, Canada. Filed Nov. 2, 1907. Serial No. 400,415.



1. A snow gathering equipment for railways comprising a power car designed to be located at the rear of a train of cars and provided with a scoop beneath it and an elevator for conveying the snow gathered by the scoop to the top of the car, a car next adjacent to the power car and normally housing a snow plow, other cars connected to the plow car, and a conveyer receiving motion from the power car, said conveyer extending through but inoperative to the plow car and also extending through and in operative relation to the snow receiving cars.

2. A snow collecting and conveying equipment for railroads comprising a power car provided with a snow scoop and snow elevator leading therefrom to the top of the car, another car connected to the power car and housing a snow plow, still other cars for receiving snow and through which the plow is adapted to move, a conveyer extending through the several cars from the power car, said conveyer being inoperative to the plow car but in operative relation to the snow receiving cars, and a tension means for maintaining the conveyer in taut condition irrespective of the stretching or bunching of the train.

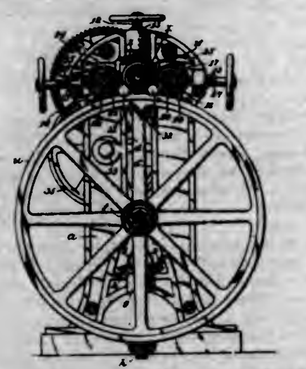
3. In a snow gathering equipment for railways, a power car provided with a snow scoop, operative in the active direction of travel of the car and having the end adjacent to the ground movable to and from the same and also provided with teeth on its active edge, means on the power car for elevating or depressing the movable section of the scoop without disturbing the remainder thereof, and an elevator for the gathered snow inclined upwardly toward the top of the car in the direction of active travel of said car.

4. In a snow gathering equipment for railways, a power car provided with a snow-gathering scoop, adjustable side wings for directing snow toward the scoop from the sides of the track, and an elevator leading from the scoop upwardly through the car in the direction of the active travel of the car.

5. In a snow gathering equipment for railways, a car without flooring for housing a plow adapted to be moved through the other cars containing snow, a conduit on said car above the space reserved for the plow, and means throughout the length of the conduit for supporting the conveyer therein.

[Claims 6 to 8 not printed in the Gazette.]

882,133. BENDING-MACHINE. JOHN R. WELCH, Alexandria, Ind., assignor to Keefer-Heart Iron and Steel Company, Alexandria, Ind., a Corporation of Indiana. Filed March 28, 1907. Serial No. 365,084.



1. A bending machine including a frame provided with vertical guides and also a plurality of pairs of approximately horizontal guides, a pair of journal-boxes mounted adjustably in the vertical guides, a pattern roll having a shaft journaled in the journal-boxes, a plurality of pairs of journal-boxes mounted each in a pair of the horizontal guides, a plurality of roll shafts each mounted in a pair of the plurality of pairs of journal-boxes and provided with a bending roll to coöperate with the pattern roll, a bending roll mounted opposite to the pattern roll between the other bending rolls, and a supplementary roll inserted removably between the pattern roll and two of the bending rolls and retained thereby.

2. A bending machine including an upright frame provided with a plurality of pairs of guides, a pattern roll mounted on the frame, a plurality of pairs of journal-boxes provided with controlling screws and mounted each in a pair of the guides adjustably, a plurality of roll shafts each mounted in a pair of the journal-boxes and provided with a bending roll to coöperate with the pattern roll and also having a gear wheel secured thereto, a single roll shaft journaled in the frame between two of the plurality of roll shafts and provided with a bending roll to coöperate with the pattern roll, a gear wheel mounted rotatively on the single roll shaft in engagement with the gear wheels of the plurality of roll shafts, and transmission driving gearing connected with one of the plurality of roll shafts.

3. A bending machine including an upright frame, a pattern roll mounted on the frame, two roll shafts mounted in the frame and provided each with a bending roll to coöperate with the pattern roll, each roll shaft being adjustable toward or from the other one and having a gear wheel secured thereto, one roll shaft having also a driving gear wheel secured thereto, a counter-shaft mounted in the frame and having a pinion secured thereto in engagement with the driving gear wheel, a drive pulley mounted on the counter-shaft, a single roll shaft mounted in the frame between the two roll shafts and provided with a bending roll to coöperate with the pattern roll, and two gear wheels having different diameters mounted rotatively on the single roll shaft and movable on the shaft either one into engagement with the gear wheels of the two adjustable roll shafts.

4. A bending machine including an upright frame, a pattern roll to shape a rim or tire mounted adjustably on the frame, a plurality of relatively small bending rolls mounted on the frame to coöperate with the pattern roll and adjustable thereto, an intermediate bending roll mounted on the frame between two of the plurality of bending rolls to coöperate with the pattern roll and also with the plurality of rolls, and a pair of supplementary rolls having flanges on their ends to coöperate with and retained by the pattern roll and an adjacent pair of the bending rolls, the plurality of rolls being geared together and driving the pattern roll, and the intermediate roll being driven by the pattern roll.

882,134. WRAPPER FOR FRUITS. MINERVA E. WOODARD, Folsom, Cal. Filed June 11, 1906. Serial No. 321,298.



1. A wrapper for fruit or similar commodities comprising a sheet of thin flexible material having its central portion provided with perforations to permit a free circulation of air about the fruit and having tabs arranged about the perforated portion to be twisted together to secure the wrapper after being fitted about the fruit.

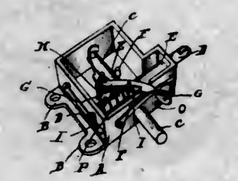
2. A wrapper for fruit or similar commodities comprising a sheet of thin flexible material having its central portion provided with perforations to permit a free circulation of air, and having imperforate projecting portions exterior to the centrally perforated portion to form tabs for securing the wrapper in position upon the fruit.

3. A new article of manufacture, a wrapper for fruit, or the like, comprising a rectangular sheet of thin paper having its central portion provided with a series of concentric perforations forming annular bands around the fruit to permit a free circulation of air and having the corners of the rectangular sheet imperforated and constituting tabs for securing the wrapper about the fruit by twisting the said corner tabs together.

882,135. SASH-FASTENER. GEORGE ZELIFF, New York, N. Y. Filed Apr. 25, 1907. Serial No. 370,177.

1. In a sash fastener two bolts at an angle to each other, a lever adapted to retract the bolts, and means for holding the lever and bolts in engagement so that the bolts may be retracted independent of each other and without disturbing the lever, and means for locking the bolts against retraction.

2. In a sash fastener two bolts at an angle to each other, a lever adapted to retract the bolts, and means for holding the lever and bolts in engagement so that the bolts may be retracted independent of each other and without disturbing the lever, and a pivoted arm for locking each bolt separately against retraction.



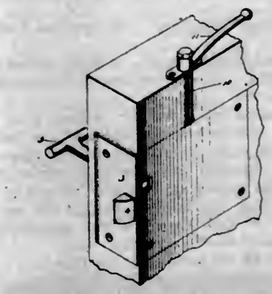
3. In a sash fastener two bolts at an angle to each other, a lever adapted to retract the bolts, and means for holding the lever and bolts in engagement so that the bolts may be retracted independent of each other and without disturbing the lever and for holding the bolts normally in their unretracted position.

4. In a sash fastener two bolts at an angle to each other, a lever adapted to retract the bolts and so connected to them that the bolts may be retracted independent of each other and without disturbing the lever.

5. In a sash fastener two bolts at an angle to each other, a lever adapted to engage pins on the bolts and springs tending to hold the pins in engagement with the lever so that both bolts may be retracted by the lever but permitting of retracting the bolts independent of each other and of the lever.

[Claim 6 not printed in the Gazette.]

882,136. LATCH FOR VEHICLE-DOORS. FRANK C. ALTMANN, New Haven, Conn., assignor to The English & Mersick Co., New Haven, Conn., a Corporation. Filed Dec. 16, 1907. Serial No. 406,631.



1. In a latch for vehicle doors, the combination with a horizontally movable bolt, of a vertically arranged shaft, and connections between the shaft and bolt whereby with the rotation of the shaft the bolt is moved.

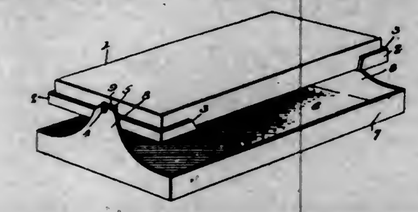
2. In a latch for vehicle doors, the combination with the bolt thereof, of a rotatable shaft, a cam on said shaft adapted to engage with said bolt, and an operating handle at the upper end of the shaft, substantially as described.

882,137. HOLDER FOR HONES. RICHARD J. BRANDENBURG, Oxford, Ohio, assignor of one-half to John A. White, Oxford, Ohio. Filed July 2, 1906. Serial No. 324,449.

1. A hone holder comprising a plate of resilient metal having its edges upturned to form flanges adapted to engage the edges of the hone, lugs projecting from the end of said plate, and a support having recesses therein adapted to receive said lugs.

2. In a device of the character described, the combination, with a hone holder comprising a single plate of resilient metal having its edges upturned at the sides and

ends thereof to form resilient flanges adapted to engage the edges of the hone, and pivot lugs fixed to said upturned edges at the opposite ends of said hone, of a receptacle mounted beneath said hone holder and comprising a body portion having its edges upturned to form flanges,



having upwardly extending portions of resilient material formed integral with said flanges at the opposite ends of said receptacle and having recesses in the upper edges thereof adapted to receive said pivot lugs.

882,138. PIN FOR DREDGES OR DREDGING-CHAINS. WALTER BRINTON, High Bridge, N. J., assignor to Taylor Iron & Steel Company, High Bridge, N. J., a Corporation of New Jersey. Filed June 15, 1907. Serial No. 379,285.



1. An unmachineable metal, tubular dredge-bucket or chain pin.

2. An unmachineable metal, cast, tubular dredge-bucket or chain pin.

3. An unmachineable metal, tubular dredge-bucket or chain pin having a pair of separated tubular thoroughly toughened surfaces.

4. A manganese steel, tubular dredge-bucket or chain pin having a pair of treated surfaces, one forming the interior and the other the exterior surface thereof.

5. A cast manganese steel dredge-bucket or chain pin, heat treated and having exterior and interior tubular surfaces, one forming the interior wall of the pin and the other the exterior wall thereof, with a thoroughly treated zone between such outer and inner walls.

[Claims 6 to 14 not printed in the Gazette.]

882,139. RESTORING ATTACHMENT TO TROLLEY-WHEELS AND ELECTRIC SIGNAL FOR THE SAME. GEORGE H. BROOKS, Louisville, Ky., assignor to Graman, Beckman and Brooks, Louisville, Ky., a Copartnership. Filed June 17, 1907. Serial No. 379,528.



1. A trolley finder and replacer for electric cars, comprising a bell-crank fulcrumed on the rear side of the trolley-pole below the harp, its upper member bifurcated to receive a wheel and its lower member provided with means for attaching a manipulating line, a relatively long, grooved finder and replacer-roller mounted in the upper member of said bell-crank and positioned to the rear of the trolley-wheel, all so arranged that when the manipulating line is drawn downward and backward, the lower member of the bell-crank is drawn backward, thus elevating the replacer-roller mounted in the upper member of the bell-crank to a higher plane than that of the trolley-wheel, so that when the trolley-pole is allowed to rise to replace the trolley wheel the replacer-roller first contacts with the line wire and guides the trolley-wheel to such position vertically under the line wire that when further released it straddles the wire.

2. A trolley finder and replacer, comprising a bell-crank fulcrumed on the trolley-pole below the journals of the trolley wheel, a fork in the upper member of said bell-crank, a relatively long finder and replacer-wheel mounted in said fork, and annunciator circuit, means for closing said annunciator circuit by pressure of said bell-crank, yielding means for normally holding said bell-crank out of contact with said annunciator-closing means, provision for attaching a manipulating-line to the lower member of said bell-crank, all so arranged that when the trolley-wheel leaves the trolley-wire the finder contacts therewith, is pressed downward thereby causing the bell-crank to close the annunciator circuit and notify the attendant, and when the operating line is drawn downward the trolley-wheel is lowered and guided by the replacer-roller, so that when released it finds its place automatically on the wire.

882,140. SPRING-HINGE. WILLIAM K. BUCHER, Cleveland, Ohio, assignor to The Columbian Hardware Company, Cleveland, Ohio, a Corporation of Ohio. Filed Sept. 20, 1905. Serial No. 279,298.



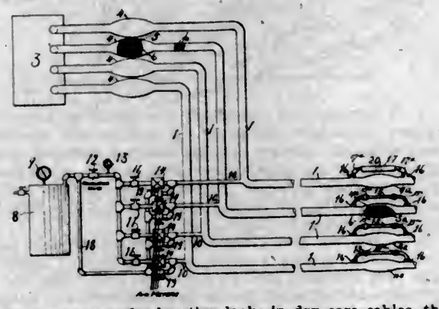
1. In a spring hinge, the combination of hinge members provided with knuckles, and a spring housing or casing, a ball bearing for said parts comprising a ball cup applied to one of the knuckles, balls in the race-way of said cup, a ball cone, a spring holder secured to the housing or casing, and a tongue and a groove connection between the ball cone and the spring holder.

2. In a spring hinge, the combination of hinge members provided with knuckles and a spring housing or casing, a spring, and a spring holder provided with a recess receiving the lower end of the spring, and a short lug extending from the web of the hinge member into the interior of the housing or casing and entering the said recess of said spring holder.

3. In a spring hinge, the combination of hinge members provided with knuckles and a spring housing or casing, a ball bearing for said parts comprising a ball cup applied to one of the knuckles, balls in the race-way of said cup, a ball cone located wholly outside the housing between the end of the housing and the ball-cup, and means for securing the ball cone against turning relatively to the said housing or casing.

4. In a spring hinge, the combination of hinge members provided with knuckles and a spring housing or casing, a ball bearing for said parts comprising a ball cup applied to one of the knuckles, balls in the race-way of said cup, a ball cone, a spring holder secured to the housing or casing and extending beyond the same, and means for positively and directly connecting the ball cone and spring holder against relative turning.

882,141. CABLE INSULATING AND TESTING SYSTEM. TROY COPE, New Waterford, Ohio. Filed June 30, 1906. Serial No. 324,136.



1. In a system for locating leaks in dry core cables, the combination with a plurality of metal sheathed cables having voids for the passage of air or gas between the wires of the said cable, means for introducing air or gas under pressure into said voids of each cable, and means for indicating the quantity of air or gas passing into each of said cables, of solid sectional air tight interruptions of said voids at intervals in said cables, by-pass tubes around said sectional interruptions, and an indicator to be inserted successively in each of said by-pass tubes, substantially as described and for the purpose set forth.

2. In a system of the class described, the combination with a plurality of dry core cables containing air or gas under pressure and having meters to indicate the quantity of air or gas passing into each of said cables, and by-pass tubes at the joints of said cables, of independent means for introducing higher pressure into any one cable, substantially as and for the purpose set forth.

882,142. INSECT-DESTROYER. WILLIAM R. CRAUN, Butler, Ind. Filed Jan. 4, 1908. Serial No. 409,324.

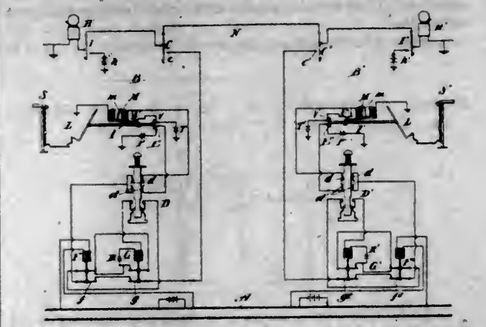


A device of the character described comprising a shell consisting of permanently connected top and bottom portions simulating a pie, the top of said shell having a plurality of incisions, an absorbent completely filling the shell and constituting a closure for the incisions, said absorbent being exposed through the incisions, there being an inlet opening in the wall of the shell and overhung by the tops thereof, and a closure for said opening.

882,143. BLOCK-SIGNAL SYSTEM. WILLIAM DAVES, Bloomington, Ill., assignor to The Inter-State Signal Company, Camden, N. J., a Corporation of New Jersey. Filed Dec. 23, 1907. Serial No. 407,799.

1. In a signal system, a signal lever, a lock therefor, a magnet for actuating said lock, means associated with said lock for completing a maintaining circuit for said magnet, and an actuating circuit for said magnet.

2. In a signal system, a signal lever, an electromagnetic lock therefor, an actuating circuit for said lock, and means associated with said lock for completing a maintaining circuit therefor.



3. In a signal system, a signal lever, an electromagnetic lock therefor, a lock-actuating circuit, means associated with said lock for completing a maintaining circuit therefor, and means associated with said lever for interrupting said maintaining circuit upon operation of the lever.

4. In a signal system, a signal lever, a polarized magnetic lock therefor, an actuating circuit for said lock, an auxiliary translating device, an actuating circuit for said translating device including a portion of the actuating circuit for the lock, and independent sources of current supply for said circuits connected thereto in such a manner that the current from said sources flows in opposite directions through the portion which said circuits have in common with each other.

5. In a block signal system, a signal lever, an electromagnetic lock therefor, an actuating circuit for said lock, a maintaining circuit for said lock, an auxiliary translating device, an actuating circuit for said translating device, said actuating circuits having a portion in common, and sources of current supply connected to said circuits in such a manner that current in the actuating and maintaining circuits for the lock flows in the same direction while the current in the lock-actuating circuit and the translating-device-actuating circuit flow in opposite directions through said common portion.

[Claim 6 not printed in the Gazette.]

882,144. STORAGE-BATTERY ELECTRODE. THOMAS A. EDISON, Llewellyn Park, Orange, N. J., assignor to Edison Storage Battery Company, West Orange, N. J., a Corporation of New Jersey. Filed Mar. 30, 1905. Serial No. 252,929.



1. A support for the active material of an alkaline battery, comprising a non-active metallic conducting structure in the form of minute connected irregularly disposed and shaped cells, having flimy or scale-like walls, substantially as and for the purposes set forth.

2. A support for the active material of an alkaline battery, comprising a multitude of conducting metallic flakes welded together to form a cellular integral structure, substantially as set forth.

3. A support for the active material of an alkaline battery, comprising a cellular non-active metallic conducting structure composed wholly or in part of metallic cobalt, substantially as set forth.

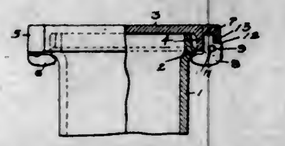
4. A support for the active material of an alkaline battery, comprising a multitude of conducting metallic particles welded together to form a cellular integral structure, composed wholly or in part of metallic cobalt, substantially as set forth.

5. A support for the active material of an alkaline bat-

tery, comprising a multitude of conducting metallic flakes welded together to form a cellular integral structure, composed wholly or in part of metallic cobalt, substantially as set forth.

[Claims 6 to 26 not printed in the Gazette.]

882,145. SHUT-OFF BOX. FRANK M. EIBER, Millvale, Pa. Filed Jan. 26, 1907. Serial No. 354,182.



1. In shut off boxes, an exterior flange on said box, a lid for the exposed extremity of said box, a hollow projection rigid with said lid and a gripping finger removably secured in said projection and adapted to engage said flange, substantially as and for the purpose set forth.

2. In shut off boxes, an exterior flange on said box, a lid for the exposed extremity of said box, a hollow projection rigid with said lid, a downwardly depending gripping finger of substantially L shape seated in said projection and engaging said flange and a securing member holding said finger in said projection, substantially as and for the purpose set forth.

3. In shut off boxes, an exterior flange on said box, a lid for the exposed extremity of said box, a hollow projection rigid with said lid, a downwardly depending gripping finger of substantially L shape seated in said projection and adapted to engage said flange and a member passing through the wall of said projection and said finger whereby said finger is held in place, substantially as and for the purpose set forth.

882,146. LAMP. HORACE E. FINE, Trenton, N. J. Filed Mar. 2, 1907. Serial No. 360,143.



1. In a lamp, a casing having glass in the front end, a reflector in the rear end, a removable glass side and a stencil in one side, and a glass and a removable reflector in the opposite side, said removable reflector and said removable glass being interchangeable.

2. In a lamp, a casing having one end hinged, a glass in one end, and a reflector in the opposite end, a glass and a removable reflector in one side, and a glass and a stencil in the opposite side, said side glasses, stencil and reflector being interchangeable, being held in position by said hinged end.

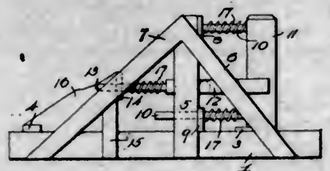
3. In a lamp a casing having a portion of one side formed of a piece of clear glass and an inwardly facing reflector, and a portion of the opposite side formed of a transparency, said reflector and transparency being interchangeable and a stencil adjacent one side of said lamp.

4. In a lamp a casing having a portion of one side formed of a piece of clear glass and an inwardly facing reflector, and a portion of the opposite side formed of opal glass and a stencil, said reflector and said opal glass being removable and said reflector adapted to fit in the space of said opal glass to reverse the light.

5. In a lamp a casing having one side formed of a glass and a reflector slidably mounted, and the opposite side formed of a glass and a stencil slidably mounted, and a hinged door retaining said glasses and reflector in position when the door is closed, the glass opposite the reflector being replaceable by the reflector to reverse the light.

[Claims 6 to 12 not printed in the Gazette.]

882,147. BUMPING-POST. GEORGE HOPSON, Dickson, Tenn. Filed July 1, 1907. Serial No. 381,685.



1. A bumping-post comprising a base, uprights carried thereby, guide bars carried by the uprights and provided with openings, a plunger carrying slide bars engaging openings in one of the guide bars, a buffer carried by the plunger and having slide bars to engage the openings in the other guide bars, and springs carried by the slide bars to retain the bumper in yielding position.

2. A bumping post comprising a base, guide bars supported upon the base, a spring-controlled plunger carrying slide bars extending through one of the guide bars, and a spring-controlled buffer carried by the plunger and having slide bars extending through the other of the guide bars.

3. A bumping post comprising guide bars, supporting means therefor, one of said guide bars arranged forwardly of the other, a plunger carrying slide bars extending through the rearward guide bar, a buffer carried by the plunger and having slide bars extending through the forward guide bar, and compression springs mounted upon the slide bars.

4. A bumping post comprising a base, guide bars supported upon the base, a spring-controlled plunger carrying slide bars extending through one of the guide bars, a spring-controlled buffer carried by the plunger and having slide bars extending through the other of the guide bars, and means engaging the lower end of the buffer and in connection with the slide bars for preventing lateral movement of the buffer when shifted.

5. A bumping post comprising a plunger having rearward extensions, guides for said rearward extensions, a vertically-extending buffer connected to the forward end of the plunger and having rearward extensions, guides for the rearward extensions of the buffer, and compression springs mounted upon the rearward extensions of the plunger and the rearward extensions of the buffer, combined with supporting means.

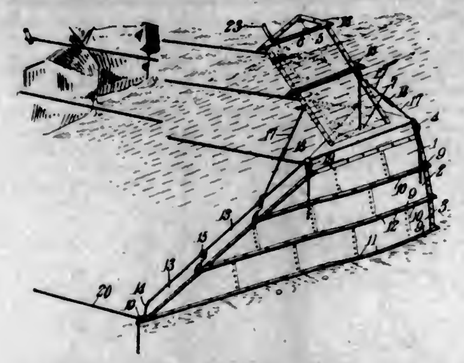
882,148. MINING APPARATUS. JOHN W. HUNSAKER, VICTOR BEISSWINGERT, and ROBERT L. DAVIS, Anna, Ill. Filed Oct. 21, 1907. Serial No. 398,492.

1. A placer mining apparatus comprising a caisson having an approximately triangular base and similar top of less area and having the approaching sides also slanting from the base toward the top.

2. A placer mining apparatus comprising a caisson having an approximately triangular base and similar top of less area and having the approaching sides also slanting from the base toward the top, and a companionway leading into the top and projecting above the same.

3. A placer mining apparatus comprising a caisson having an approximately triangular base and similar top of less area and having the approaching sides also slanting from the base toward the top, and a companionway leading from the top and projecting above the same, said companionway having sides sloping toward each other in the direction of the approaching sides of the base.

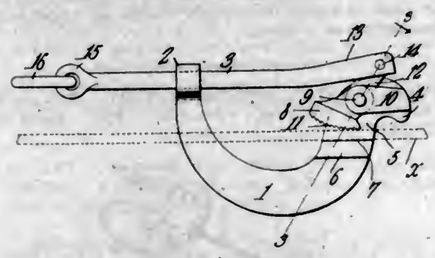
4. A placer mining apparatus comprising a number of assembled or separable sections each having an approximately triangular base and bottom and top parallel one to the other but with the top of smaller area than the base with the sides approaching each other and forming a slanting cutwater.



5. A placer mining apparatus comprising a caisson broader at the base than at the top and shaped to direct water flowing against the same in an upward and outward direction whereby the reaction of the flowing water tends to depress the caisson.

[Claims 6 to 9 not printed in the Gazette.]

882,149. WIRE-STRETCHER. MARTIN A. JOHNSON, Waterford, Cal. Filed May 6, 1907. Serial No. 372,166.



A wire stretcher comprising a yoke having an enlargement at one end and an eye at the other end, a draw bar slidably mounted within the eye, the axis of the eye being disposed at an acute angle to the plane of the yoke, a projection upon one face of the yoke and adjacent the enlargement, said projection being disposed in a plane parallel to the axis of the eye and to the bar, a reinforcing bracket secured upon one side of the yoke and adjacent the enlargement, a coöperating jaw pivoted within the bracket and having an operating face disposed to clamp a wire upon the projection, and an arm extending from the pivoted jaw and pivotally connected to the draw bar, the operating face of the projection being disposed on a straight line extending across the space within the yoke.

882,150. PICTURE-CARD. AMBROSE KINNICUTT, West Albany, N. Y. Filed Mar. 11, 1907. Serial No. 361,858.

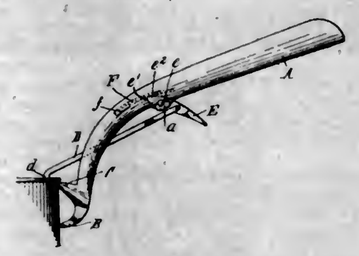
1. A card provided with a folded over portion; a picture on said card; an attachable representation of a portion of the picture; said attachable portion having a part thereof attached to said picture in the position that the picture would illustrate the part attached to it, instead of being attached thereto, it was painted or printed upon the card itself; the unattached portion creased to fold when the card is folded and in the movement of folding and unfolding to be moved to and from the picture; with a means for guiding and retaining the over turned portion of the paper within proper distance of the card during the folding process.

2. A card provided with a folded over portion; a picture on said card; an attachable representation of a portion of the picture; said attachable part having a portion attached only to that part of said card which folds over the other part thereof and in the position on the picture that the picture would illustrate the part to be if instead of



being an attachable portion it was printed or painted upon the card itself; the unattached portion creased to fold when the card is folded and in the movement of folding and unfolding to be moved in contact with the card from one portion of the picture to another.

882,151. KITCHEN UTENSIL. ALBERT KOEPPEN, Buffalo, N. Y. Filed Apr. 15, 1907. Serial No. 368,205.



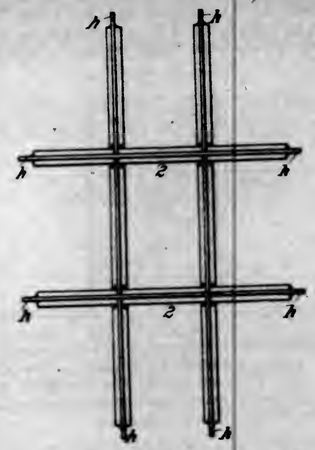
1. In a combined lid and utensil lifter, a shank having at its end a lid-engaging foot, spaced opposite lugs projecting upwardly from said shank in the rear of and spaced from said foot whereby a stationary utensil-engaging jaw is provided having three bearing points, and a jaw member movably mounted on said shank and having an engaging part opposed to said stationary jaw at a point between its three bearing points, substantially as set forth.

2. In a lifter of the character described, a shank having a downwardly-extending portion provided at its end with a lid-engaging foot, spaced opposite lugs projecting upwardly from said downwardly-extending portion of said shank in the rear of and spaced from said foot whereby a stationary utensil-engaging jaw is provided having three bearing points, a clamping rod having a sliding bearing on said downwardly-extending portion of said shank and extending beyond the same, a utensil-engaging jaw on the forward end of said rod in advance of and opposed to said stationary jaw at a point between its three bearing points, and means at the rear end of said rod for operating the same, substantially as set forth.

882,152. WINDOW-FRAME. JOSEPH LANG, Mannheim, Germany. Filed July 22, 1907. Serial No. 385,078.

A metal window frame comprising four external pieces having their ends beveled off and welded together, said external pieces having holes therein for the reception of the internal pieces, a number of internal pieces disposed in one direction, and having openings therein of a shape corresponding to the cross sectional shape of the internal

pieces, and other internal pieces extending at right angles to the first mentioned internal pieces, and passing



through said openings, the ends of all of said internal pieces being welded into openings in the external pieces.

882,153. TROLLEY-HEAD. JAMES LENNOX, Brackenridge, Pa. Filed July 24, 1907. Serial No. 385,359.

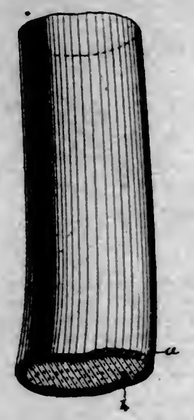


1. In a trolley head, the combination with a yoke including spaced arms, of disks having central bearing openings therein secured in parallel relation against the inner faces of the arms, with the arms in position to close the outer portions of the openings, and a trolley wheel having trunnions engaged in the bearing openings.

2. In a trolley head, the combination with a yoke including an attaching stock and an arm formed integral therewith, said yoke including also an arm detachably connected with the yoke, said arms having their outer portions enlarged laterally in one direction and having their opposite sides cut off to present vertical edges, of disks secured against the inner faces of the arms, said disks having oppositely located central passages formed therethrough and terminating at the inner faces of the arms, said disks and arms being grooved on their mutually adjacent faces to form lubricant passages communicating with the passages of the disks and opening through the straight edges of the arms, and a peripherally grooved trolley wheel having trunnions revolubly engaged in the bearing passages, said disks extending outwardly beyond the wheel and having outwardly extending portions beveled outwardly.

3. In a trolley head, the combination with a yoke including separable spaced arms, of disks having central bearing openings therein secured in parallel relation against the inner faces of the arms with the arms in position to close the outer portions of the openings, and a trolley wheel having trunnions engaged in the bearing openings.

882,154. FUSE FOR MINES. LOUIS LHEURE, Paris, France. Filed Jan. 27, 1905. Serial No. 242,042.



An improved method for the manufacture of fuses for mines consisting in melting trinitrotoluene, in filling the melted trinitrotoluene into a tube and in drawing out the filled tube to the required length in reducing its diameter, substantially as set forth.

882,155. DENTAL IMPRESSION-TRAY. WILLIAM T. LYON, Portland, Oreg. Filed Aug. 6, 1907. Serial No. 387,322.



1. An impression tray comprising a plurality of sections hingedly secured together on an axis lying substantially in the central plane of the tray, substantially as shown and described.

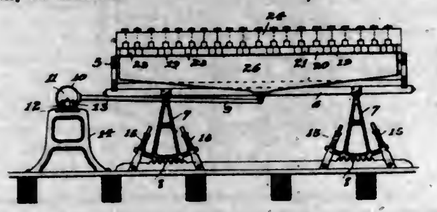
2. An impression tray comprising a plurality of tray sections hingedly secured together, each of said sections including a bottom portion and a side portion, said sections being hinged together along the bottom portion, and a handle swivelly secured to one of said sections.

3. In an impression tray, a plurality of cup-shaped sections having bottom segments, means for hingedly securing said sections together along the adjacent edges of said bottom segments, the hinge axes lying substantially parallel with the position of the teeth when the impression is being made.

4. In a device of the class described, an impression tray comprising a plurality of sections hingedly secured together with the hinge axes in the central longitudinal plane of the tray, said sections having their ends cutaway substantially as shown and described.

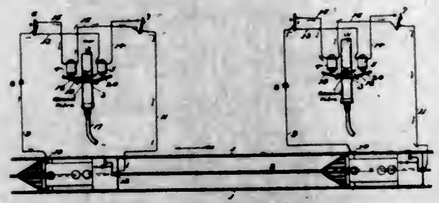
882,156. MACHINE FOR SEPARATING HULLED FROM UNHULLED GRAIN. ALEXANDER P. MCDONALD, Morris, Ill. Filed Apr. 18, 1907. Serial No. 368,976.

1. In a machine for separating hulled from unhulled grain, a transversely inclined separating table provided on its upper surface with a series of transversely extending channels formed with zigzag side walls and friction-surfaced bottom walls, in combination with means for feeding grain to said channels at points intermediate the ends of the latter, and means for imparting a shaking movement to said separating table in a direction transverse to said channels whereby the unhulled grain is buffeted back and forth between the side walls and discharged at the higher end of said channels while the hulled grain is retarded by said friction-surfaced bottom walls against contact with said side walls and descends under the combined action of gravity and agitation to the lower ends of said channels from which it is discharged, substantially as described.



2. In a machine for separating hulled from unhulled grain, a transversely inclined separating table provided on its upper surface with a series of transversely extending channels formed with staggered zigzag side walls and rubber-surfaced bottom walls, in combination with means for feeding grain to said channels at points intermediate the ends of the latter, and means for imparting a shaking movement to said separating table in a direction transverse to said channels whereby the unhulled grain is buffeted back and forth between the side walls and discharged at the higher end of said channels while the hulled grain is retarded by said rubber-surfaced bottom walls against contact with said side walls and descends under the combined action of gravity and agitation to the lower ends of said channels from which it is discharged, substantially as described.

882,157. SAFETY APPLIANCE FOR RAILWAY-TRAINS. ROBLEY C. MILLARD, Atlanta, Ga. Filed July 17, 1907. Serial No. 384,245.



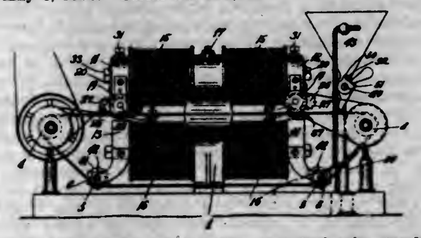
1. In railway safety appliances, the combination of a valve for venting the main pipe line controlling the brake mechanism, electric controllers for said valve, the one for opening the same to vent the main pipe line to effect a setting of the brakes, and the other to close said valve to release the brakes.

2. In combination with railway safety appliances, the combination of a valve in the main pipe line for controlling the brake apparatus, electric controllers for operating said valve both to open or close the same, and switches for controlling the current to send the same either through one electric controller or the other, according as the valve is to be opened or closed.

3. In railway safety appliances, the combination of a valve for controlling the brake mechanism, an electric circuit, electric controllers in the circuit for opening or closing said valve, and switches in said circuit for directing the current through one or the other of said electric controllers, according as the valve is to be opened or closed.

4. In railway safety appliances, the combination of a valve for controlling the brake mechanism, a cross head having connection with the operating part of said valve, electric controllers each consisting of an electromagnet and its armature, the latter having a portion extending in the path of the aforesaid cross head, an electric circuit including said electric controllers and switches for directing the current through one or the other of the electric controllers, according as the valve is to be opened or closed.

882,158. MAGNETIC ORE-SEPARATOR. RICHARD R. MOFFATT, New York, N. Y., assignor to Imperial Ore Separator Company, a Corporation of New York. Filed May 6, 1905. Serial No. 259,116.



1. In a magnetic ore separator, a central yoke standard having an aperture, two sets of upper and lower poles arranged on opposite sides of the central yoke standard, upper and lower core pieces extending laterally from both sides of said yoke standard and in magnetic circuit with the poles and yoke standard, a feed conveyer passing between the two sets of poles and through the aperture of the yoke standard, and cross conveyers intersecting the feed conveyer.

2. In a magnetic ore separator, an upper pole, a lower pole having a passage, a feed conveyer passing between the two poles, a plunger located in the passage of the lower pole, and means for actuating said plunger to strike the feed conveyer.

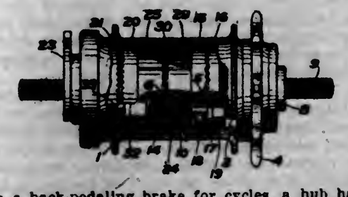
3. In a magnetic ore separator, the combination with upper and lower poles, of a feed conveyer passing between the said poles, means for removing the material attracted by the upper pole and means extending through the lower poles for agitating the feed conveyer.

4. In a magnetic ore separator: the combination of an upper and a lower pole, means for removing the material attracted by the upper pole, a feed conveyer passing between the poles and below the neutral zone of the field, and means for projecting the particles of ore above the neutral zone of the field of force.

5. In a magnetic ore separator: the combination with a feed belt and means for operating the same, of a hopper, a revoluble member adapted to close the discharge end of the hopper, a rockshaft adapted to turn said member to its open position, a cap on the projecting hub of the member, a spring mounted therein and adapted to hold the member normally in its closed position, a brake adapted to contact with the cap, and, when operated, to hold the member in its open position, and means controlled by the magnetic circuit adapted to operate said brake.

[Claims 6 to 8 not printed in the Gazette.]

882,159. BACK-PEDALING COASTER-BRAKE. ALEXANDER P. MORROW, Elmira, N. Y. Filed July 6, 1905. Serial No. 268,591.



1. In a back-pedaling brake for cycles, a hub having a driving clutch member, a stationary block adapted to be

attached to the frame of the cycle having a brake clutch member, a shiftable brake carrier having clutch members for coöperating with the brake clutch member and with the driving clutch member and carrying one or more movable brake shoes, a shiftable nut carried by said brake carrier and having wedge means for actuating said brake shoes when the nut is moved in one direction and means for causing engagement of the driving clutch when the nut is moved in the other direction, and driving means for operating said nut.

2. In a back pedaling brake for cycles, a hub having a driving clutch member, a stationary block adapted to be attached to the frame of the cycle and having a brake clutch member, a shiftable brake carrier having clutch members for coöperating with the brake clutch member and with the driving clutch member and carrying one or more movable brake shoes, a shiftable nut carried by said brake carrier and movable relatively thereto and having wedge means for actuating said brake shoes when the nut is moved in one direction and means for causing engagement of the driving clutch when the nut is moved in the other direction, and driving means for operating said nut.

3. In a back pedaling brake for cycles, a hub having a driving clutch member, a stationary block adapted to be attached to the frame of the cycle and having a brake clutch member, a shiftable brake carrier having clutch members for coöperating with the brake clutch member and with the driving clutch member and carrying one or more brake shoes movable relatively to said carrier, a shiftable nut carried by said carrier and axially movable in ways therein, and provided with wedge means for actuating said brake shoes when the nut is moved in one direction and with means for engaging the driving clutch members when the nut is moved in the other direction, and driving means for operating said nut.

4. In a back pedaling brake for cycles, a hub having a driving clutch member, a stationary block adapted to be attached to the frame of the cycle and having a brake clutch member, an axially shiftable brake carrier situated between the said driving clutch member and the said brake clutch member and having clutch members for coöperating therewith and carrying one or more movable brake shoes; a shiftable nut carried by said brake carrier and having means for actuating said brake shoes when the nut is moved in one direction and with means for causing engagement of the driving clutch members when the nut is moved in the other direction, and driving means for actuating said nut.

5. In a back pedaling brake for cycles, a hub having a driving clutch member, a stationary block adapted to be attached to the frame of the cycle having a brake clutch member, a shiftable brake carrier having clutch members for coöperating with the brake clutch member and with the driving clutch member and carrying one or more movable brake shoes, a shiftable nut carried by said brake carrier and having wedge means for actuating said brake shoes when the nut is moved in one direction and means for causing engagement of the driving clutch when the nut is moved in the other direction, driving means for operating said nut, and spring means for simultaneously separating the driving clutch members and the brake clutch members.

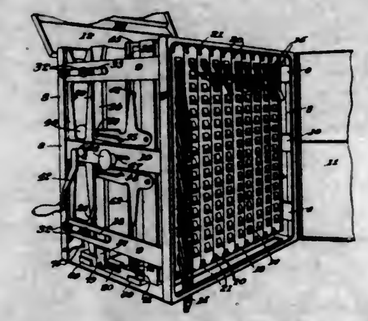
[Claims 6 to 13 not printed in the Gazette.]

882,160. VOTE-REGISTERING MACHINE. DAVID L. NEWCOMB, San Diego, Cal. Filed June 17, 1903. Serial No. 161,773.

1. In combination, separate and independent registers, a ballot carrier, a detached ballot and means for moving the ballot carrier and actuating said registers through the medium of said ballot.

2. In combination, separate and independent registers, a ballot carrier, a detached ballot and means for moving said ballot carrier and actuating the registers through the medium of said ballot, and means for lifting the ballot.

3. In combination, a casing registering mechanism carried thereby, a ballot carrier mounted therein, a detached ballot adapted to be connected with the carrier, means for operating the ballot carrier and actuating said registering mechanism through the medium of said ballot, a rock shaft, a lever carried by the rock shaft and under said ballot a hand lever carried by said shaft outside of said casing.

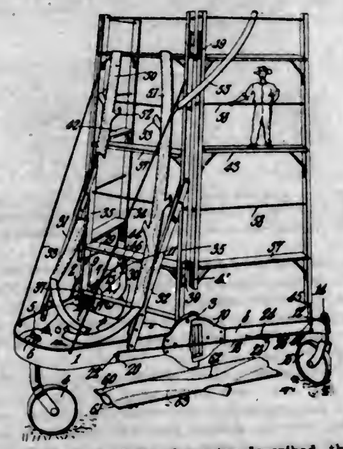


4. In combination, a casing, a registering mechanism carried thereby, a ballot carrier mounted therein, a ballot connected with the carrier, means for operating the ballot carrier and actuating said registering mechanism through the medium of said ballot, a rock shaft, a lever carried by the rock shaft, an antifriction roller carried on the end of said lever, and under said ballot a hand lever carried by said shaft outside the casing.

5. In combination, a registering mechanism, a ballot carrier, a detached ballot adapted to be connected thereto, means for operating the ballot carrier and actuating said registering mechanism through the medium of said ballot and means for restoring the ballot to normal condition after the registering mechanism has been operated.

[Claims 6 to 128 not printed in the Gazette.]

882,161. PORTABLE LADDER-LIKE SCAFFOLD. LEONIDAS T. OLIVE, Sarasota, Fla. Filed July 1, 1907. Serial No. 381,794.



1. In a structure of the character described, the combination with a supporting frame, of a set of ladder-like sections mounted thereon and adjustable angularly relatively to one another so as to lie in different vertical planes.

2. In a structure of the character described, the combination with a supporting frame, of a set of ladder-like sections pivotally connected to turn on vertical axes.

3. In a structure of the character described, the combination with a supporting frame embodying an intermediate section, and relatively adjustable sections pivotally connected thereto, of an intermediate ladder-like section rigidly mounted on the intermediate section of the frame, and adjustable ladder-like sections pivotally connected to the intermediate section and operatively connected to the adjustable frame sections.

4. In a structure of the character described, the combination with a supporting frame embodying an intermediate section, and a pair of arms pivotally attached thereto, of a central ladder-like section rigidly mounted on the intermediate section of the supporting frame, and a pair of adjustable ladder-like sections pivotally attached to the central ladder-like section on axes substantially in alinement with the axes of adjustment of the frame arms and operatively connected to the latter.

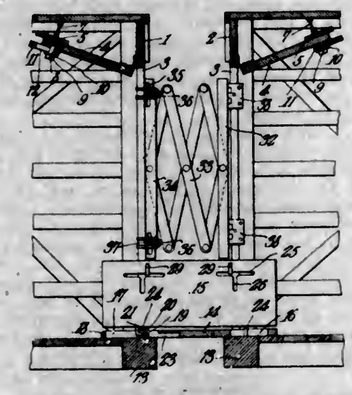
5. In a structure of the character described, the combination with a supporting frame embodying an intermediate portion and a pair of arms pivotally connected thereto, of a central ladder-like section detachably mounted on the intermediate frame section, a pair of adjustable ladder-like sections foldable relatively to the central ladder-like section and detachably connected to the said arms of the frame.

[Claims 6 to 10 not printed in the Gazette.]

882,162. METHOD OF HARDENING STEEL. WILLIAM A. PAINTER, Allegheny, Pa. Filed Apr. 13, 1907. Serial No. 368,099.

The herein-described method of hardening a piece of steel to impart hardness to a portion of the steel, which consists in protecting that portion of the piece not to be hardened by a thin covering of a thickness that will not prevent a graduated heating and a graduated cooling of the piece and leaving exposed that portion to be hardened, heating the piece while in its thin covering to a temperature necessary to produce hardening, then suddenly cooling the piece and its covering.

882,163. VESTIBULE STOCK-CAR. GEORGE F. PETTIT, Springfield, Ill. Filed May 20, 1907. Serial No. 374,700.



1. A vestibule stock car provided with an end opening and a closure therefor comprising a gangway section hinged to the car and movable in a vertical plane and another removable section adapted to constitute one side of the gangway.

2. In a vestibule stock-car, a gangway section hinged to the car end and movable through a vertical plane and having slidable connections with the bottom of the car in the direction of the length of the car.

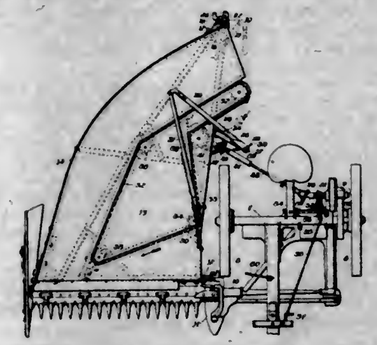
3. In a vestibule stock car, an end therefor provided with a through passage or opening, a gangway section, a hinge connection between the same and the bottom of the car said section being movable through a vertical plane and provided with a slot coacting with the hinge to form a slidable connection with the car in the direction of the length of the latter, and another slot at the other end arranged to engage suitable holding means in the next adjacent car.

4. In a vestibule stock car, a gangway section a hinge connection between the same and the car, said section being movable through a vertical plane around the hinge and slidable thereon, another section having longitudinal slots, and hangers on the side of the car arranged to enter the slots in the last-named section to hold the latter in position to operate as sides for the gangway.

5. In a vestibule stock car, an end therefor having a through opening, a gangway section hinged to move in a vertical plane into said opening or to a horizontal position to constitute part of a gangway and slidable longitudinally with relation to the car, another or guard section arranged to coact with the gangway section to form in part a closure for the end of the car, a hinged door coacting with both sections to complete the closure of the end of the car,, and a sliding lock member for holding the sections within the opening in the end of the car and carried by the door.

[Claims 6 and 7 not printed in the Gazette.]

882,164. REAPING ATTACHMENT FOR MOWERS. JOHN W. PRIDMORE, Chicago, Ill., assignor to International Harvester Company, a Corporation of New Jersey. Filed Oct. 9, 1907. Serial No. 396,541.



1. In a reaping attachment for mowers, and in combination with the cutting apparatus thereof, a platform adapted to be attached in rear of the cutting apparatus and extending in rear of the machine, an endless chain mounted on said platform and adapted to travel substantially parallel with the surface thereof, the path of movement of said chain being in the form of an irregular figure having a plurality of sides disposed at varying angles relative to the line of draft of the machine, a rake pivotally connected with said chain and having a rearwardly extending arm, a rake controlling bar having one end pivotally supported upon the stubbleward side of said platform and its opposite end pivotally connected with the rear end of said arm, said chain being operative to move said rake forward and grainward and then rearward and stubbleward.

2. In a reaping attachment for mowers, and in combination with the cutting apparatus thereof, a platform adapted to be attached in rear of the cutting apparatus and extending in rear of the machine, an endless chain mounted upon said platform and adapted to travel substantially parallel with the surface thereof, the path of movement of said chain being in the form of an irregular figure having a plurality of sides disposed at varying angles relative to the line of draft of the machine, a rake pivotally connected with said chain and having a rearwardly extending arm, a rake controlling bar having one end pivotally supported upon the stubbleward side of said platform and its opposite end pivotally connected with the rear end of said arm, said chain being operative to move said rake forward and grainward and then rearward and stubbleward under the control of said bar, and a buffer spring adapted

to contact with said bar when said rake has reached a predetermined limit of its stubbleward movement.

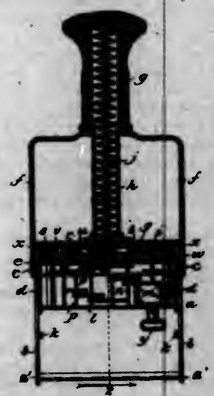
3. In a reaping attachment for mowers, and in combination with the cutting apparatus thereof, said cutting apparatus comprising a cutter bar having a hinge connection with the coupling frame of the machine permitting it to be raised to a substantially vertical position, a platform adapted to be attached in rear of the cutting apparatus and extending in rear of the machine, a caster-wheel supporting the rear end of said platform, a crank arm upon which said wheel is journaled, a bracket connected with said platform and adapted to turn about a horizontal axis located above the axis of said wheel upon said crank-arm and substantially coincident with the hinge connection of said cutter bar, said bracket having a vertically arranged journal bearing adapted to receive said crank arm.

4. In a reaping attachment for mowers, and in combination with the cutting apparatus thereof, said cutting apparatus comprising a cutter-bar having a hinge connection with the coupling frame of the machine permitting it to be raised to a substantially vertical position, a platform adapted to be attached in rear of the cutting apparatus and extending in rear of the machine, a caster-wheel supporting the rear end of said platform, a crank arm upon which said caster-wheel is journaled, a bracket connected with said platform and adapted to turn about a horizontal axis located above the axis of said wheel upon said crank-arm and substantially coincident with the hinge connection of said cutter-bar, said bracket having a vertically arranged journal bearing adapted to receive said crank arm, and means for locking said bracket against rotation about its horizontal axis.

5. In a reaping attachment for mowers, and in combination with the cutting apparatus thereof, said cutting apparatus comprising a cutter-bar having a hinge connection with the coupling frame of the machine permitting it to be raised to a substantially vertical position, a platform adapted to be attached in rear of the cutting apparatus and extending in rear of the machine, said platform being supported in a manner permitting it to be raised with said cutter-bar, a rake adapted to move parallel with the surface of said platform, means for controlling the movement of said rake, said controlling means comprising a bar pivotally connected with said platform, and means for adjusting said pivotal connection in a fore and aft direction.

[Claim 6 not printed in the Gazette.]

882,165. TIME-STAMP. FREDERICK PURDY, Chicago, Ill. Filed Apr. 24, 1903. Serial No. 154,057.



1. In a portable stamping device, in combination an impression mechanism movable to make an impression and having means for varying the character of the impression adapted to be made thereby, a frame supporting said impression mechanism and having gage parts arranged to bear upon the surface to be stamped and permit said impression mechanism to pass between the same so as to insure proper contact of said impression mechanism with said surface in making an impression, a horologic motor mounted to move with said impression mechanism and connected with said impression mechanism to operate the same, and a pad carried stationarily on said frame and arranged to engage and thereby automatically ink said impression mechanism.

2. In a stamping device, in combination, an impression mechanism movable to make an impression and having means for varying the character of the impression adapted to be made thereby, a frame supporting said impression mechanism, a horologic motor for operating said means, said motor being movable with said impression mechanism, means for revolving said impression mechanism when the device is operated to make an impression so as to bring the face of said impression mechanism into engagement with the surface to be stamped, and means for automatically inking said impression mechanism without interfering with the progressive movement thereof and without interfering with the direct engagement of said impression mechanism with the surface to be impressed.

3. In a stamping device, in combination, an impression mechanism movable to make an impression and having means for varying the character of the impression adapted to be made thereby, a frame supporting said impression mechanism, a horologic motor connected with said means to operate the same and movable with said impression means, means for revolving said impression mechanism when the device is operated to make an impression so as to bring the face of said impression mechanism into engagement with the surface to be stamped, and means for automatically inking said impression mechanism without interfering with the progressive movement thereof, and without interfering with the direct engagement of said impression mechanism with the surface to be impressed.

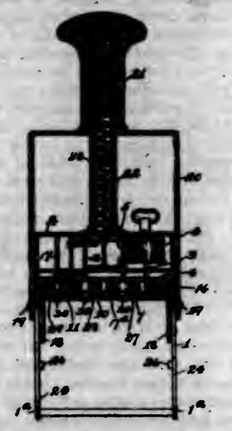
4. In a stamping device, in combination, an impression mechanism movable to make an impression and having means for varying the character of the impression adapted to be made thereby, a frame supporting said impression mechanism, a horologic motor connected with said means to operate the same and movable with said impression mechanism, a pad for inking said impression mechanism and having movable parts to engage said means, and means for revolving said impression mechanism when the device is operated to make an impression so as to bring the face of said impression mechanism into engagement with the surface to be stamped.

5. In a stamping device, in combination, an impression mechanism movable to make an impression and having means movable in a horizontal plane for varying the character of the impression adapted to be made thereby, a frame supporting said impression mechanism, a horologic motor connected with said means to operate the same and mounted to move with said impression mechanism, pads movable in horizontal planes and engaging said means to ink the same, and means for revolving said impression mechanism when the device is operated to make an impression so as to bring the face of said impression mechanism into engagement with the surface to be stamped.

[Claims 6 to 31 not printed in the Gazette.]

882,166. AUTOMATIC TIME-STAMP. FREDERICK PURDY, Chicago, Ill. Filed June 14, 1902, Serial No. 111,723. Renewed Apr. 24, 1903. Serial No. 154,187.

1. A plateniess portable self inking time stamp, comprising a self contained unitary structure having an open frame with gage parts which engage the surface to be impressed, said open frame permitting an unobstructed view of said surface and permitting said gage parts to be readily disposed thereon at the desired place, impression mechanism having time controlled elements and adapted to directly engage the surface to be impressed in making an impression, said impression mechanism partaking of a right line movement in approaching said surface whereby the impression mechanism aids the gage parts in smoothing out the surface to be impressed without blurring the impression made thereby, a spring actuated clock movement carried wholly upon the portable frame and mechanically connected with the time controlled elements of said impression mechanism to drive the same, automatic inking means by which said impression mechanism is automatically inked between successive impressions without interfering with the direct engagement of the impression mechanism with the impressed surface and without interfering with the progressive movement of said time controlled elements, and which is entirely disengaged from the impression mechanism after the same has been inked and is moved to make an impression, and a handle for readily handling and positioning the stamp and movable with the impression mechanism for making the impression.



2. A plateniess portable self-inking time stamp, comprising a self-contained unitary structure having an open frame with gage parts which engage the surface to be impressed, said open frame permitting an unobstructed view of said surface and permitting said gage parts to be readily disposed thereon at the desired place, a spring-actuated clock movement for driving the time controlled elements of the impression mechanism wholly carried by and mounted stationarily, with respect to said frame, impression mechanism having time controlled elements and movable relatively to said clock movement in making an impression and adapted to directly engage the impressed surface, inking means by which said impression mechanism is automatically inked between successive impressions without interfering with the direct engagement of the impression mechanism with the impressed surface, without interfering with the movement of the impression mechanism relatively to the clock movement and without interfering with the progressive movement of said time controlled elements and which is entirely disengaged from the impression mechanism after the same has been inked and is moved to make an impression, and a handle for readily handling and positioning the stamp and movable with the impression mechanism for making the impression.

3. A plateniess portable self-inking time stamp, comprising a self-contained unitary structure having an open frame with gage parts which engage the surface to be impressed, said open frame permitting an unobstructed view of said surface and permitting said gage parts to be readily disposed thereon at the desired place, impression mechanism having time controlled elements and adapted to directly engage the surface to be impressed in making an impression, said impression mechanism partaking of a right line movement in approaching said surface whereby said impression mechanism aids said gage parts in smoothing out the surface to be impressed without blurring the impression made thereby, a spring actuated clock movement carried wholly upon the portable frame and mechanically connected with the time controlled elements of said mechanism, a flat faced inking pad by which said impression mechanism is automatically inked between successive impressions without interfering with the direct engagement of the impression mechanism with the impressed surface, and without interfering with the progressive movement of said time controlled elements, and which is entirely disengaged from the impression mechanism after the same has been inked and is moved to make an impression, and a handle for readily handling and positioning the stamp and movable with the impression mechanism for making the impression.

4. A plateniess portable self-inking time stamp, comprising an open frame having gage parts which engage the surface to be impressed, said open frame permitting an unobstructed view of said surface and permitting said gage parts to be readily disposed thereon at the desired place, a spring-actuated clock movement for driving the time controlled elements of the impression mechanism wholly carried by and mounted stationarily with respect to said frame, impression mechanism having time controlled elements and movable relatively to said clock movement in making an impression and adapted to directly engage the impressed surface, a flat faced inking pad by which said impression mechanism is automatically inked between successive impressions without interfering with the direct engagement of the impression mechanism with the impressed surface, without interfering with the movement of the impression mechanism relatively to the clock movement, and without interfering with the progressive movement of said time controlled elements, and which is entirely disengaged from the impression mechanism after the same has been inked and is moved to make an impression, and a handle for readily handling and positioning the stamp and movable with the impression mechanism for making the impression.

5. A plateniess portable self inking time stamp, comprising a self-contained unitary structure having an open frame provided with gage parts which engage the surface to be impressed, said open frame permitting an unobstructed view of said surface and enabling said gage parts to be readily disposed thereon at the desired place, a spring actuated clock movement mounted wholly upon said frame, a yoke having a handle above said frame and arms extending down beneath said clock movement, said yoke and frame being mechanically connected whereby said handle serves as a means for handling and positioning the stamp, impression mechanism carried by said arms of the yoke beneath said clock movement, said impression mechanism having time controlled elements operatively connected with said clock movement and driven thereby, said impression mechanism being movable relatively to said clock movement and arranged to be depressed by said yoke and handle to make an impression, said impression mechanism partaking of a right line movement in approaching said surface whereby the impression mechanism assists the gage parts in smoothing out the surface to be impressed to prevent blurring the impression made thereby and inking means by which said impression mechanism is automatically inked between successive impressions without interfering with the direct engagement of the impression mechanism with the impressed surface and without interfering with the progressive movement of said time controlled elements, and which is entirely disengaged from the impression mechanism after the same has been inked and is moved to make an impression.

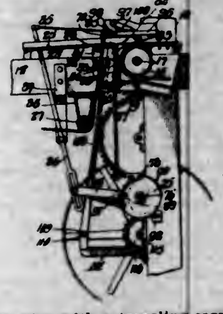
[Claims 6 to 29 not printed in the Gazette.]

882,167. FEEDING MECHANISM FOR COATING-MACHINES AND THE LIKE. RALPH R. RICHARDSON, Ottawa, Ill. Filed June 24, 1907. Serial No. 380,413.

1. The combination with a traveling carrier, of mechanism for delivering articles thereto comprising a feed belt in the approximate plane of the carrier, a rising and falling stop-bar between the carrier and feed belt closely adjacent to the carrier, and means for transferring the articles to the carrier when the stop-bar is moved out of the path of said articles.

2. The combination with a traveling carrier, of mechanism for delivering articles thereto comprising a feed

belt, a rising and falling stop bar between the carrier and feed belt and normally in the path of the articles advanced by the feed belt and arranged to arrest said articles in rows, and a pusher for transferring each row of articles bodily to the carrier when the stop-bar is moved out of the path of said articles.



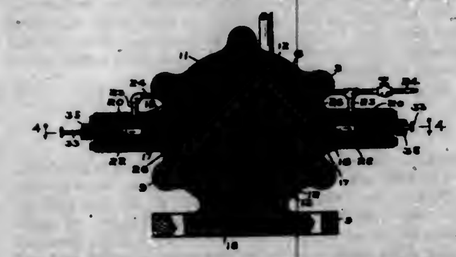
3. The combination with a traveling carrier, of mechanism for delivering articles thereto comprising a feed belt, a rising and falling stop-bar between the carrier and feed belt, a pusher for transferring the articles to the carrier when the stop-bar is lowered, and mechanism for operating and controlling said pusher constructed to advance the same in a straight line and to raise it during its retraction.

4. The combination with a traveling carrier, of mechanism for delivering articles thereto comprising a feed belt, a stop-bar arranged between the feed belt and carrier, means for raising and lowering the stop-bar, a horizontally reciprocating pusher arranged in front of said feed bar, means operating the pusher constructed to advance it to transfer a row of articles to the carrier when the stop-bar is lowered, the stop-bar being elevated before the retraction of the pusher, and means acting on the pusher during its retractive movement to raise it above said stop-bar.

5. The combination with a traveling carrier, of mechanism for delivering articles thereto comprising an intermittently advanced feed belt, a stop-bar arranged between the feed belt and carrier, means for raising and lowering the stop-bar, a horizontally reciprocating pusher arranged in front of said stop bar, means operating the pusher constructed to advance it to transfer a row of articles to the carrier when the stop-bar is lowered, the stop-bar being elevated before the retraction of the pusher, and means acting on the pusher during its retractive movement to raise it above said stop-bar.

[Claims 6 to 12 not printed in the Gazette.]

882,168. ROTARY ENGINE. CHARLES E. RHOADS, Columbus, Ind. Filed May 6, 1907. Serial No. 372,269.



1. In a rotary engine, a stationary cylinder having a round bore, heads at each end of the cylinder, a shaft, a rotary piston mounted in the cylinder upon said shaft in close running contact with the cylinder heads, said piston making steam-tight fits at a plurality of its peripheral points and being reduced in diameter back of said points to form steam receptacles, steam ports emptying into the cylinder, valves sliding radially of the cylinder to open and close said ports and making constant contact with the periphery of the piston, each valve having a transverse opening forming a chamber through which the live steam passes, and said piston increasing in diameter near the ends of its steam receptacles to force out the valves and thereby close the port inlets.

2. In a rotary engine, a stationary cylinder having a round bore, in heads bolted to the cylinder, means for varying the distance between the heads, a shaft, a rotary piston mounted in the cylinder upon said shaft in close running contact with the cylinder heads, said piston making steam-tight fits at a plurality of its peripheral points and being abruptly reduced in diameter back of said points to form steam receptacles, steam ports emptying into the cylinder at two diametrically opposite points, radially sliding valve-plates intersecting said steam-ports and having a transverse opening forming a continuation of the steam port therethrough when the valve is at its inner position, said valve closing the port when the valve is in its outer position and said valve making constant contact with the periphery of the piston, said piston increasing in diameter near the ends of said steam receptacles to force out the valves and close the port inlets.

3. In a rotary engine, a stationary cylinder having a round bore, a shaft, a rotary piston mounted in the cylinder upon said shaft, heads at each end of the cylinder in close contact with the sides of the piston, means for varying the distance between the heads to take up wear, said piston making steam-tight fits at a plurality of its peripheral points and being abruptly reduced in diameter back of said points to form steam receptacles the diameter of the piston being uniform for the major portion of the length of the said receptacles and then being increased to form an oblique shoulder, steam ports emptying into the cylinder, valves sliding radially of the cylinder to open and close said ports and making constant contact with the periphery of the piston, spaces at the outer ends of the valves and pipes supplying steam to said spaces to press the valves normally against the piston.

4. In a rotary steam engine, a stationary cylinder having a round bore, heads at each end of the cylinder, a shaft, a rotary piston mounted in the cylinder upon said shaft, said piston making steam-tight fits at a plurality of its peripheral points and being reduced in diameter between said points to form steam receptacles, steam ports emptying into the cylinder, valve plates crossing said steam ports and sliding radially of the cylinder to open and close the ports and making constant contact with the periphery of the piston, said valve-plates having transverse openings for the free passage of live steam therethrough and said piston periphery being shaped to properly regulate the movements of the valve plates and means by the pressure of partly spent steam against the outer ends of the valve plates for forcing the latter normally into contact with the piston.

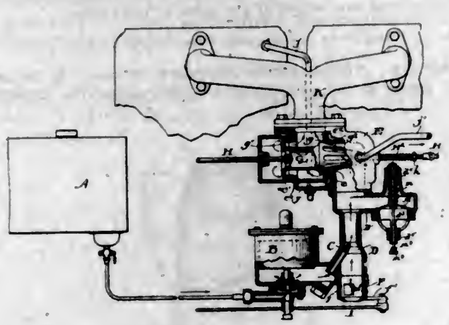
5. In a rotary steam engine, a stationary cylinder having a round bore, a rotary piston mounted within the cylinder and making steam-tight fits therewith at a plurality of its peripheral points, radially sliding valve plates making constant contact with the periphery of the piston, steam ports entering the cylinder and opened and closed by the sliding valve plates, the periphery of said piston being shaped to impart the required movement to the valve plates and push-rods bearing loosely against the outer ends of the valve plates and terminating outside of the engine.

882,169. ELECTRODE. MARCUS RUTHENBURG, Philadelphia, Pa. Filed Sept. 20, 1901. Serial No. 75,969.

1. An electrode of the class specified, consisting of a solid mass of uniform non-ferruginous composition, comprising silicon and another ingredient, capable of resisting the action of free chlorin, chlorous acid and nitric acid; said electrode being characterised by its capacity to conduct electricity through its mass, substantially as set forth.

2. An electrode of the class specified, consisting of a solid mass of uniform non-ferruginous composition, comprising silicon and carbon, capable of resisting the action of free chlorin, chlorous acid and nitric acid; said electrode being characterised by its capacity to conduct electricity through its mass, substantially as set forth.

882,170. CARBURETER. CHARLES SCHMIDT, Cleveland, Ohio, assignor to The Peerless Motor Car Company, Cleveland, Ohio, a Corporation of West Virginia. Filed Feb. 15, 1906. Serial No. 301,169.



1. In a carbureter, the combination of a valve casing having an outlet, two valve seats which are located within the casing and on opposite sides respectively of said outlet, a sleeve which is adjustably secured within the casing and upon which one of said valve seats is formed, a valve provided with two faces which are respectively adapted for coöperation with the two valve seats within the casing, and means for operating said valve,—there being fuel passages for the admission of the gas into the casing at both ends of said valve.

2. In a carbureter, the combination of a valve casing having an inlet and an outlet and two valve seats on opposite sides of said outlet,—one of them being between said inlet and outlet, with a valve having surfaces opposing said valve seats, and having a fuel passage through it from one end to the other.

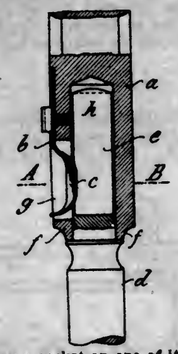
3. In a carbureter, the combination of a valve casing containing two valve seats, and having an outlet located between said valve seats, and an inlet at a point which is not between said valve seats, a longitudinally movable valve in said casing having two faces which are opposed to the said seats upon the casing, and having a longitudinal hole through it from end to end through which gas may pass freely from the inlet end of the casing to the opposite end thereof, and means for moving said valve.

4. In a carbureter, the combination of a valve casing having an inlet at one end and an outlet near the middle, and two valve seats located on opposite sides of the outlet opening, one of them being between the outlet and inlet, a sleeve adjustably secured within the casing upon which one of said valve seats is formed, a valve having two valve faces adapted to respectively coöperate with the said valve seats on the casing, said valve having a longitudinal hole extending through it from end to end through which gas may freely flow from the inlet end of the casing to the other end thereof, and means for operating said valve.

5. In a carbureter, the combination of a valve casing having an inlet and an outlet and two valve seats on opposite sides of said outlet,—one of them being between said inlet and outlet, with a valve having surfaces opposing said valve seats,—said valve being tubular and having through one end a plurality of slots which communicate with the interior of said valve.

[Claim 6 not printed in the Gazette.]

882,171. COMPASSES. GEORG SCHOENNER, Nuremberg, Germany. Filed Nov. 28, 1906. Serial No. 345,543.



A compass having a socket on one of its legs, said socket having a slot therein, a plate-spring on the leg extending into the slot and into which a boss is pressed, so that a nipple is created and an attachment having a slot therein with which the nipple engages, so that the attachment when being introduced into the socket is guided by the nipple and insured against turning.

882,172. DRAWING-PEN. GEORG SCHOENNER, Nuremberg, Germany. Filed Oct. 25, 1907. Serial No. 399,184.



A drawing pen having an opening in one of its blades, an adjusting screw passing through said opening and secured in the other blade, and a U-shaped piece pivotally mounted on said bolt and having its ends adapted to engage with the spring blade when the pen is closed and adapted to be turned to the side to allow the spring blade to enter its hollow portion when the pen is open, substantially as described.

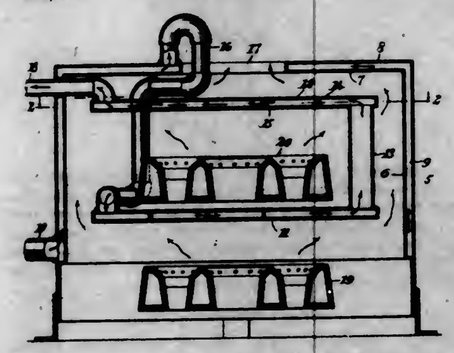
882,173. METHOD OF MAKING LEGUMINOUS FOOD. WILLIAM A. SCHWALBE, Mosinee, Wis. Filed Nov. 19, 1906. Serial No. 344,118.

1. The herein described method of making prepared food which consists in grinding dried legumes into a coarse meal, sifting the meal to remove the shells, reducing the coarse meal by grinding the same, thoroughly stirring the material and incorporating a quantity of salt therewith, sterilising and partly cooking the meal by subjecting the same to the action of dry steam at high pressure and subsequently drying the meal by an application of hot air to eliminate any possible moisture present.

2. The herein described method of making prepared food which consists in grinding dried peas or beans into a coarse meal, removing the shells, reducing the coarse meal by regrinding the same, thoroughly stirring the ma-

terial and incorporating two tablespoons full of salt to each pound of meal, sterilizing and partly cooking the meal by subjecting the same to the action of dry steam at high presure and subsequently drying the meal by an application of hot air to eliminate any possible moisture present.

882,174. WATER-HEATER. ABRAHAM SHATZKY, New York, N. Y., assignor of one-half to Jacob Martin, Brooklyn, N. Y. Filed Feb. 15, 1907. Serial No. 357,487.



1. A water heater, consisting of a jacketed casing forming a water space and provided with an opening in the top at the center thereof, a cold water pipe leading into the water space, a shallow chamber arranged horizontally in the casing a short distance below the top, a discharge pipe leading from the chamber out through the casing, a second shallow water chamber arranged horizontally below and a considerable distance from the first chamber, each chamber being provided with partitions projecting alternately from opposite sides of the chamber and terminating short of the side of the chamber toward which they extend, a pipe connecting the said chambers, a feed pipe leading from the water jacket at the top of casing down into the casing and connected with the second water chamber opposite the pipe connecting the said chambers, a burner arranged below the lower water chamber, and a burner arranged above the lower chamber and below the upper chamber.

2. A water heater, comprising a jacketed casing forming a water space and having an apertured top, a supply pipe leading into the said water space, a shallow water chamber arranged horizontally in the upper part of the casing, a discharge pipe leading from the chamber out through the casing, a second shallow water chamber arranged horizontally in the casing below the first chamber and spaced therefrom, a pipe connecting the chambers, a feed pipe leading from the water space at the top of the casing down into the casing and connected to the second water chamber, a burner arranged in the lower part of the casing below the lower water chamber, and a burner arranged above the lower chamber and below the upper chamber.

882,175. CROSS-LINE BUCKLE. FORREST E. SIGGINS, Craddock, W. Va. Filed Jan. 24, 1907. Serial No. 353,860.



1. A buckle comprising a sleeve, an internal partition dividing the passage through the sleeve into a plurality of strap receiving openings, a stud projecting from one end of the partition in the plane of said partition, the extremity of the stud being approximately flush with one end of the sleeve, while the opposite end of the partition is flush with the opposite end of the sleeve, and means carried by the sleeve for engaging a strap.

2. A buckle comprising a sleeve, an internal partition dividing the passage through the sleeve into a plurality of strap receiving openings, a stud projecting from one end of the partition in the plane of said partition, the extremity of the stud being approximately flush with one end of the sleeve, while the opposite end of the partition is flush with the opposite end of the sleeve, and a loop formed in conjunction with the sleeve, the sides of the loop being continuous of the sides of the sleeve.

882,176. THERAPEUTIC PESSARY. FRANCIS M. SINER, Diamond, Ind. Filed Nov. 18, 1907. Serial No. 402,698.



1. A pessary of the class described, comprising a body portion, a cavity in said body, a plurality of fingers arranged in series upon the wall of said cavity and means to secure tampon or absorbent material in said cavity.

2. A pessary of the class described, comprising a yielding body having a cavity therein, a plurality of fingers arranged in series on the wall of said cavity, and a partition in said body forming a socket in one end of the body, the wall of the body at the outer end of the socket being restricted.

3. A pessary of the class described, comprising a yielding body portion having a cavity in one end thereof, ligatures extending across the mouth of said cavity to retain tampon therein, a partition in said body having openings therein, said partition forming a socket in the opposite end of the body, the wall of the body at the outer end of the socket being restricted, whereby the inner end of the socket will be of greater diameter than the outer end thereof.

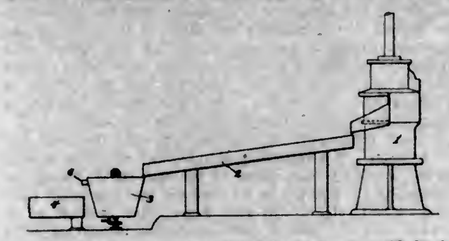
4. In a pessary of the class described, the combination with a body having a cavity in one end thereof and a socket in the opposite end, the wall of the body at the outer end of the socket being restricted, a partition between said cavity and socket having openings therein and means at the open end of the cavity to retain tampon therein; of a cup adapted to be seated in said socket, the closed end of said cup being greater in diameter than the open end thereof, whereby the restricted portion of the body will securely hold the cup in the socket, said cup having openings therein adapted to aline with the openings in the partition.

5. In a pessary of the class described, the combination with a body having a cavity in one end thereof and a socket in the opposite end thereof, the wall of the body, at the outer end of the socket, being restricted and a partition between said cavity and socket; of a cup adapted to enter said socket and rest on said wall, the closed end of said cup being larger than the outer end thereof, whereby the restricted portion of the wall will hold the cup in the socket.

882,177. SEPARATOR. HAL J. SISTY, Caborca, Mexico, assignor of one-fourth to George F. Smith, Pittsburg, Pa. Filed Feb. 14, 1907. Serial No. 357,345.

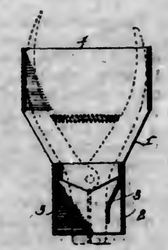
In combination in separating apparatus, a tank of a metal adapted to unite with and hold an amalgam, a vertical

directing partition extending across the upper portion of the tank and having its central portion curved outwardly



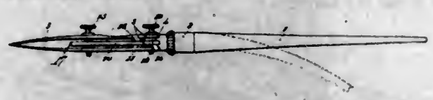
to receive a drive means, and a drive means provided with horizontally extending paddles beneath the partition.

882,178. PUNCH-HOLDER. LOUIS J. SLOAT, Cleveland, Ohio. Filed Feb. 19, 1907. Serial No. 358,253.



A ticket punch holder consisting of a base plate having a wide upper end, a reduced lower end and a tapered intermediate portion, the wide upper end of said base plate being provided with side flanges and a transversely disposed strap connecting said flanges, and the reduced lower portion of the base plate being provided with a tubular neck adapted to receive the head of a ticket punch, in combination with downwardly converging holding springs secured interiorly upon the side walls of the tubular neck, and means for attaching the holder to a garment.

882,179. FOUNTAIN-PEN. EDWIN R. SMITH, Paris, Tex. Filed May 28, 1906. Serial No. 319,184.



1. In a fountain pen, an ink-containing handle, pen blades pivotally mounted with respect to the handle, and a feed tube extending from the handle toward the points of the pen blade to feed ink to the latter and disposed to permit the blades to be moved to one side to allow ink to be supplied to the handle through the feed tube.

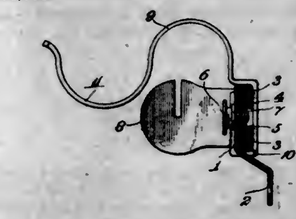
2. In a fountain pen, an ink-containing handle, a coupling, a feed tube extending from the coupling and communicating with the handle, and pen blades pivotally mounted on the coupling so as to permit of their being freely swung away from the filling tube to permit ink to be supplied to the latter.

3. In a fountain pen, an ink-containing handle, a coupling attached thereto and provided with abutments and with a tongue, pen blades pivoted on the tongue and provided with portions to engage the abutments, and a feed tube for supplying ink from the handle to the pen point and which is arranged at one side of the pivot of the blades to permit the latter to be turned away from the tube.

4. In a fountain pen, an ink-containing handle, a coupling attached thereto and provided with abutments and with a grooved tongue, pen blades, a spacing block adjacent to one end of the blades to hold them separated to embrace the tongue of the coupling, a set screw for clamping and pivotally mounting the blades on the tongue, means on the blades for engaging the abutments, and a device mounted in the groove of the coupling for supplying ink to the pen blades.

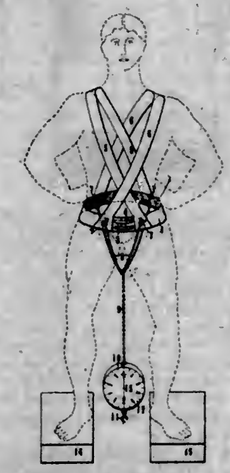
5. In a fountain pen, a handle, a coupling attached thereto and provided with abutments and with a grooved tongue, pen blades, a spacing block adjacent to one end of the blades to permit the latter to embrace the tongue, a set screw for clamping and pivotally mounting the blades on the tongue, and means on the blades for engaging the abutments.

882,180. COMBINED CURTAIN-POLE AND SHADE-ROLLER SUPPORT. AIKEN C. TAYLOR and FRANK W. DAWSON, Charleston, S. C. Filed May 3, 1907. Serial No. 371,592.



In a curtain-pole and shade-roller support, the combination, of an attaching plate or bracket formed of sheet metal and comprising a slotted horizontal body portion, attaching ears depending therefrom and rearwardly projecting angular flanges at the upper and lower edges of said body portion; a flat metal strip slidably engaging the angular flanges and having threaded screw-holes spaced apart and a shade-roller bracket formed at one end of the strip; a set-screw engaging the slot of the attaching plate and one of the screw-holes in the metal strip to provide for adjusting and holding the metal strip on the attaching-plate; and a curved pole supporting arm bent into rectangular shape at one end for attachment to one end of the attaching-plate or bracket, as herein shown and described.

882,181. EXERCISING APPARATUS. JULIAN P. THOMAS, New York, N. Y. Filed June 28, 1907. Serial No. 381,180.

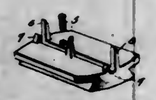


1. In an exercising apparatus, in combination, a belt adapted to be passed about the body and to rest upon the hips of the user, a plurality of members connected to the

front and rear portions of said belt, said members extending downwardly and being connected at their lower ends at a point intermediate the legs of the user, an exercising device connected with a fixed support, and means for connecting said exercising device with the lower ends of said downwardly extending members.

2. In an exercising apparatus, in combination, a belt adapted to be passed about the body and to rest upon the hips of the user, a plurality of straps connected with said belt and extending over the shoulders, a plurality of cords or chains extending downwardly from the front and rear portions of said belt and joined at their lower ends at a point intermediate the legs of the user, an exercising device secured to the floor, and a cord or chain connected to the lower end of said first-named cord or chains and also connected with said exercising device.

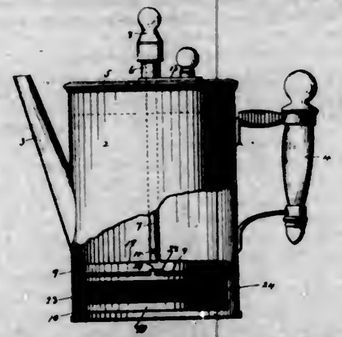
882,182. FRONT SIGHT FOR FIREARMS. JAMES E. THOMPSON, Madrid, N. Y. Filed Nov. 27, 1907. Serial No. 404,082.



1. A front sight for firearms comprising a base having spaced spurs at opposite ends, a body fitted between said spurs, and an indicator coöperating with the body and of contrasting color therewith.

2. A front sight for firearms comprising a base having a pair of spaced spurs at opposite ends, one spur of each pair being long and the other spur short, a body fitted between said spurs and held in place thereby, and an indicator projected from the base on the same side of the body as the short spurs and of contrasting color with said body and coöperating therewith substantially in the manner specified.

882,183. COFFEE-POT. HORACE L. WELLS, New Haven, Conn. Filed June 10, 1907. Serial No. 378,168.



1. In a coffee pot, the combination with the body and cover thereof, of a rotatable and vertically movable spindle formed at its upper and lower ends respectively with annular grooves for its suspension in the said cover, a coffee-container carried by the lower end of the spindle, and locking means carried by the said cover and co-acting with the said annular grooves in the spindle for suspending the same in its elevated and depressed positions respectively, in the said cover, with freedom to be rotated therein there being a space between the bottom of the container and the bottom of the body when the former is in its depressed position in which it is supported entirely from the said cover.

2. In a coffee pot, the combination with the body and cover thereof, of a slotted collar mounted in and extending above the top of the cover, a vertically movable and rotatable spindle bearing in the said collar formed at its upper and lower ends respectively with annular grooves for its suspension in the same, a coffee-container carried by the lower end of the spindle, and a locking-plate entering the slot in the collar for engagement with the grooves in the spindle for suspending the same in its elevated and depressed positions respectively, in the said cover, with freedom to be rotated in either position there being a space between the bottom of the container and the bottom of the body when the former is in its depressed position in which it is supported entirely from the said cover.

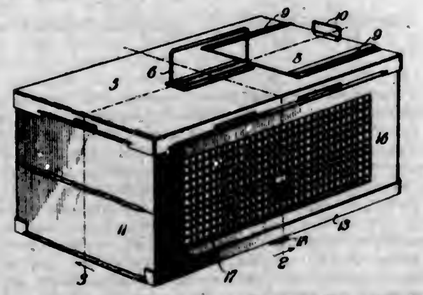
3. In a coffee pot, the combination with the body and cover thereof, of a vertically movable and rotatable spindle having bearing in the center of the said cover, means for suspending the spindle in its elevated and depressed positions respectively, in the said cover, with freedom to be rotated therein, and a coffee-container consisting of a cap fixed to the lower end of the spindle, and a removable container-body attached to the said cap, the cap and container being formed with openings filled with wire cloth and there being a space between the bottom of the container and the bottom of the body when the former is in its depressed position in which it is supported entirely from the said cover.

4. In a coffee pot, the combination with the body and cover thereof, of a vertically movable and rotatable spindle having bearing in the center of the said cover, means for suspending the spindle in its elevated and depressed positions respectively, in the said cover, with freedom to be rotated within, and a coffee-container consisting of a cap fixed to the lower end of the said spindle, and a container-body removably applied to the said cap, the body being reinforced by a wire frame, and the said cap and body having openings filled with wire cloth.

5. In a coffee pot, the combination with the body and cover thereof, of a vertically movable and rotatable spindle having bearing in the center of the said cover, means for suspending the said spindle in its elevated and depressed positions respectively, in the said cover, with freedom to be rotated therein, and a metal coffee-container carried by the lower end of the spindle, having a foraminous top, bottom and sides, whereby it is adapted to take in water at its top and bottom and discharge it laterally, and made relatively large with respect to the size of the body of the pot to secure the maximum effect of centrifugal force.

[Claim 6 not printed in the Gazette.]

882,184. FROG-BOX. FREDERICK S. WILLARD and ROBERT E. DONALDSON, Chicago, Ill. Filed Nov. 13, 1907. Serial No. 401,923.

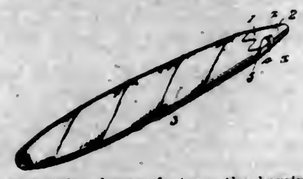


1. A folding ventilated frog-box comprising a top having an opening provided with a movable cover, a bottom, end-bracing sides hingedly suspended at their upper ends from the top and separate at their lower ends from the bottom, one of said sides being penetrable to light to render visible the interior of the box, collapsible ends permanently connecting the top and bottom, and means for releasably locking together the bottom and the lower ends of the sides to fasten the box in its expanded condition.

2. A folding frog-box comprising a top having an opening provided with a movable cover, a bottom, sides hingedly suspended from the top and separate at their lower ends from the bottom, one of said sides having openings, collapsible ends connecting the top and bottom, and automatic locking means operating to lock together the free ends of said sides and the bottom to fasten the box in its expanded condition.

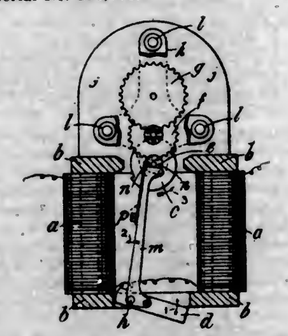
3. A folding frog-box comprising a flanged top having a hand-hole provided with a movable cover, end-bracing sides hingedly suspended from flanges of the top to adapt said sides to fold one over the other upon the under side of said top, and one of said sides having an open-work center; a bottom carrying spring-catches normally projecting into the paths of the free ends of the sides, and ends each formed of a section hinged to the top and a section hinged to the bottom, said sections of each end being hinged together at their meeting-edges to adapt the ends to fold inwardly.

882,185. CIGAR-TIP. WILLIAM E. BOSTICK, Lancaster, Pa. Filed July 8, 1907. Serial No. 382,769.



As a new article of manufacture, the herein described cigar tip, consisting of a sheet of material initially formed with converging side edges and with a tongue at one edge and an opening near the other edge and formed with a series of spurs, the said strip being designed to be wrapped around the tip end of a cigar and the tongue being adapted for insertion through the opening so that it may be bent against the outer side of the sheet, the spurs being adapted to penetrate the cigar whereby to hold the wrapper to the filler and the device on the end of the cigar.

882,186. SECONDARY ELECTRIC CLOCK. GEORGE B. BOWELL, Westminster, London, England. Filed Dec. 14, 1905. Serial No. 291,776.

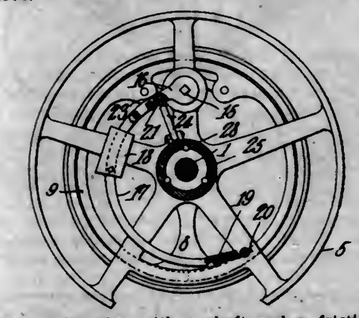


1. In an electric clock, the combination of a rotary step-by-step operating device comprising an electro magnet, a double cam shaped disk mounted to rotate in the field of the magnet and actuated by the magnet when energized, means for locking said disk against actuation, means for unlocking said locking means and adapted to bring said disk into starting position.

2. In an electric clock, the combination of a rotary step-by-step operating device comprising an electro magnet, a double cam-shaped disk mounted to rotate in the field of the magnet and actuated by the magnet when energized, a detent for locking said disk against actuation, and an armature for releasing said detent to bring said disk into starting position.

3. In an electric clock, the combination of a rotary step-by-step operating device comprising an electro magnet, a double cam-shaped disk mounted to rotate in the field of the magnet and actuated by the magnet when energized, said disk having a pinion provided with projecting pins, means for engaging said pins to lock said pinion against actuation and means for releasing said locking means actuated when the magnet ceases to be energized.

882,187. FRICTION-CLUTCH. FRANK A. COLWELL, Oakesdale, Wash. Filed Mar. 21, 1907. Serial No. 363,576.



1. The combination with a shaft and a friction rim revoluble therewith; of a pulley loosely mounted on the shaft, a friction ring revoluble therewith and within the rim, a revoluble spreading device connected to the end portions of the ring, centrifugally operated means upon the pulley for actuating the spreading device, and manually operated means for rotating the spreading device within, and during the rotation of the pulley.

2. The combination with a shaft and a friction rim revoluble therewith; of a pulley loosely mounted on the shaft, an expansible friction ring within the rim and upon and movable with the pulley, a revoluble spreading device connected to the ring, centrifugally operated means upon the pulley for actuating the spreading device, and manually operated means for rotating the spreading device within, and during the rotation of the pulley.

3. The combination with a shaft and a friction rim revoluble therewith; of a pulley loosely mounted on the shaft, an expansible friction device within the rim and upon and revoluble with the pulley, a revoluble spreading device connected to the expansible friction device, a spring controlled centrifugally operated means upon the pulley for actuating the spreading device, an adjustable reguiating device upon the centrifugally operated means, and manually operated means for rotating the spreading device within, and during the rotation of the pulley.

4. The combination with a revoluble rim and a pulley; of an arm secured upon the pulley, oppositely extending bowed members extending from the arm and constituting an expansible friction ring within the rim, centrifugally operated revoluble means upon the pulley for spreading said members against the rim, and manually operated means for rotating the spreading device within, and during the rotation of the pulley.

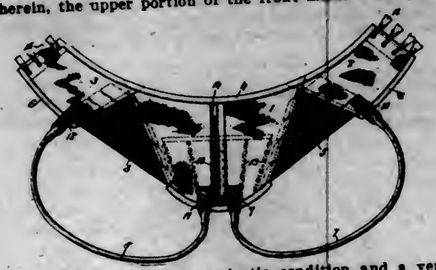
5. The combination with a revoluble rim and a pulley revoluble independently thereof; of oppositely disposed bowed members connected to the pulley and within the rim, said members constituting an expansible friction device, a revoluble head upon the pulley, link connections between the head and friction device, and centrifugally operated means for actuating the head to expand the friction device against the rim.

[Claims 6 to 8 not printed in the Gazette.]

882,188. ABDOMINAL SUPPORT. VALLEY V. DAVIDS, New York, N. Y. Filed Aug. 29, 1904. Serial No. 222,494.

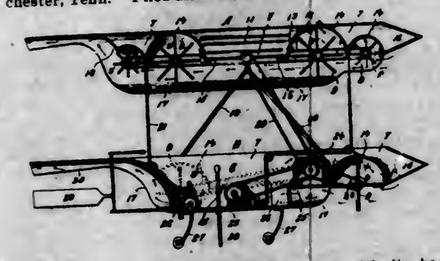
An abdominal support comprising non-elastic flexible front and back members united at the top of the support to form a flexible non-elastic upper portion, elastic gores interposed between portions of the front and back mem-

bers, means for connecting the free ends of the back members, bowed stiffeners located in the lower portion only of the front member to form a shallow reinforced pocket therein, the upper portion of the front member being left



in its original flexible non-elastic condition and a vertically disposed stiffening tape connecting the top and bottom edges of the front member for preventing the vertical distortion of said member.

882,189. FLYING-MACHINE. EDWIN L. DRAKE, Winchester, Tenn. Filed Mar. 25, 1907. Serial No. 364,240.



1. In a flying machine the combination with its body portion, of fan wheels, mounted thereon and adapted to develop high speed currents, and means for directing the said currents to make them effective for uplift and propulsion of the vessel.

2. In a flying machine the combination with its body portion of fan wheels mounted thereon and adapted to develop high speed currents, and means for directing these currents against portions of the body adapted to receive them and on impact therewith to bear the vessel upward and forward.

3. In a flying machine the combination with its body portion of revolving fans and a forward and downward extended plate, said plate being adapted to receive currents from its fan and direct them downward, with motor connections for the fans.

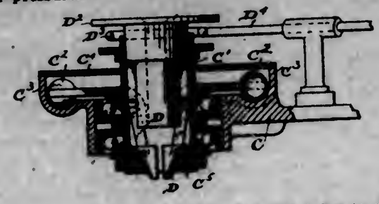
4. In a flying machine the combination with its body portion of, forward and downward revolving fans, a casing covering the upper orbit of each fan and a longitudinal plate connecting the adjacent casings, with means for revolving the said fans.

5. In a flying machine the combination with its body portion of, longitudinal parallel fans and of a chamber located between said fans, the said chamber being substantially closed, except superiorly, and said fans being adapted to revolve inwardly and upwardly from below and direct their currents against the presenting chamber walls, and on their discharge outwardly to draw air from the chamber and diminish the density of its content of air accordingly, with motive connections for said fans.

[Claims 6 to 10 not printed in the Gazette.]

882,190. MACHINE FOR HEATING GLASS TUBES. JOHN T. FAGAN, Cleveland, Ohio, assignor to The National Electric Lamp Company, Cleveland, Ohio, a Corporation of New Jersey. Filed Apr. 20, 1906. Serial No. 312,747.

1. Mechanism adapted for holding glass tubes to a heating means comprising a reciprocatable rotatable chuck for holding said tubes, and means for transmitting rotative motion to said chuck through the medium of fluid under pressure.



2. Mechanism adapted for holding glass tubes to a heating means comprising a chuck, mechanical connections for reciprocating the chuck and means for applying fluid under pressure to rotate the chuck.

3. An attachment adapted for machines designed to heat glass tubes, comprising an inclosing cup, a chuck having vanes which project into the cup, said chuck being rotatably mounted, and means for leading fluid into said cup.

4. An attachment adapted for machines designed to heat glass tubes comprising an inclosing cup, a chuck sleeve rotatably mounted and provided with jaw closing means and having vanes projecting into said cup, chuck jaws in said sleeve so supported as to be adapted to be thrown in or out of operative condition.

5. Mechanism adapted for holding glass tubes to a heating means comprising a reciprocatable chuck, means for reciprocating the chuck, a hand hold for said reciprocating means and means operable by said hand hold for opening said chuck.

[Claim 6 not printed in the Gazette.]

882,191. SELF-REGISTERING LAND-MEASURING DEVICE. JAY FINN, Elmo, Kans. Filed May 21, 1907. Serial No. 374,870.



A land measuring device comprising a measuring wheel, a frame provided with forwardly converging side bars having the measuring wheel mounted between their front ends, the rear ends of the side bars forming handles, said frame being also provided at an intermediate point with a casing having a fixed bottom, and a movable top or cover provided with apertures, calculating mechanism arranged within the casing, an eccentric mounted upon the shaft, and an actuating member or pitman operated by the eccentric and actuating the calculating mechanism.

882,192. PADLOCK. SAMUEL R. FRAIM, Lancaster, Pa., assignor to E. T. Fraim Lock Company, Lancaster, Pa., a Corporation of Pennsylvania. Filed Nov. 27, 1907. Serial No. 404,169.



1. In a padlock of the class described, in combination, the shackle pivoted within the sides of the case, said shackle formed with a recessed heel extending downward from its pivot point, consisting of a body portion, a recess formed in said heel open on the side and end thereof, a main spring having its coil and one arm contained within said recessed heel, and its other arm extending inwardly and bearing against a stud within said case, and means for retaining said shackle in a locked position.

2. In a padlock of the class described, formed of a back-case and cover, a shackle pivoted between the sides thereof, and formed with a hooked nose and a recessed heel extension, a two armed spring bearing against the inner side of said recess and a stud within said case, a main locking lever pivoted within said case, and formed with a lug adapted to engage the hooked nose of said shackle, a notched arm extending rearwardly upon said lever and adapted to engage the end of the shackle heel, and means for retaining said lever in engagement with the nose and heel of said shackle, for the purpose set forth.

3. In a padlock of the class described, formed of a case and cover, a shackle pivoted within said case, and formed with a recessed heel, a spring for actuating said shackle, a main lever pivoted within said case, and formed with lug ends adapted to engage the ends of said shackle, a supplementary lever containing parallel slots slidably embracing studs within said case, said supplementary lever partly curved upon its lower edge and having an upwardly extending bearing point and a lug formed upon one end thereof, said bearing point adapted, when in a normal position, to engage the lower surface of the notched arm of the main lever, and means for retaining said supplementary lever in a normal position, for the purpose set forth.

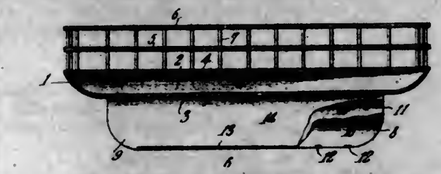
4. In a padlock of the class described, a main locking lever formed with a lug upon the forward end and a notched extension upon the rear end thereof, and pivoted at its forward end within the lock case, a supplementary lever slidably mounted within said case, and having an upwardly extending bearing point, in engagement with said main lever when said supplementary lever is in a normal position, a coiled spring mounted within said case and having one of its arms bearing against the lug of said supplementary lever and the other against the inner side of said case, for the purpose set forth.

5. In a padlock of the class described, comprising a case and cover, in combination, a shackle having a hooked nose and a heel extension pivoted within said case, a recess formed in the side and end of said heel, a two armed spring, one arm bearing within said recess and the other arm within said case, a main locking lever pivoted within said case, and formed with a lug to engage the hooked nose of said shackle and a notched extension to engage the heel of said shackle, a dog formed upon said locking lever and adapted to engage registering slots in the key tumblers; a supplementary lever slidably mounted within said case, and formed with a bearing point adapted to engage the end of said notched main locking lever, and a lug formed upon said supplementary lever at right angles to its surface, a coil spring mounted within said case and engaging said case side and said lug of the supplementary lever, key tumblers pivoted within said case and formed with an upper point adapted to engage the point of the main lever dog, and having a curved upper edge extending from said point to the end of said tumblers and pierced by an inwardly extending slot, and having a curved lower edge adapted to be engaged by the steps of the key bit, all for the purpose set forth.

882,193. METHOD OF REDUCING LEAD ORES. ALFRED FRANCIS, St. Louis, Mo. Filed Aug. 21, 1907. Serial No. 389,592.

The method of treating sulfid ores of lead or concentrates of such ores, which consists in melting ore having fluxes and fuel mixed therewith to produce an approximately pure lead matte, allowing said lead matte to flow onto a bath of molten lead, and blowing air into said bath of molten lead to oxidize the lead and convert the matte into metallic lead; substantially as described.

882,194. BOAT. JOHN W. GAY, Rickreall, Oreg. Filed June 24, 1907. Serial No. 380,531.



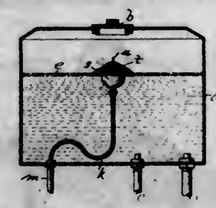
1. A boat having a wide shallow body for flotation and having the sides continued downward below the bottom of said body, longitudinal partitions adjacent to the downwardly continued sides of the flotation body, and bottom partitions connecting the said sides and adjacent partitions to form through longitudinal channels without ends.

2. A boat having a wide shallow body for flotation, longitudinal through channels on each side of the center line of said flotation body and below the same, and other through channels between the first-named through channels and the sides of the boat.

3. A boat comprising a wide shallow body for flotation, decks above said body, downwardly-extended longitudinal partitions constituting continuations of the sides of the flotation body, a central longitudinal partition extending downward from said body, and a plurality of longitudinal open-ended channels between the central partition and each downwardly-extending side of the boat.

4. A boat having a wide shallow body for flotation, a central partition extending below the same, side partitions coincident with the sides of the boat and also extending below the same, intermediate partitions between the central and side partitions, bottom partitions joining the intermediate and side partitions, and other diagonal partitions extending from the lower end of the intermediate partitions to the upper end of the central partition.

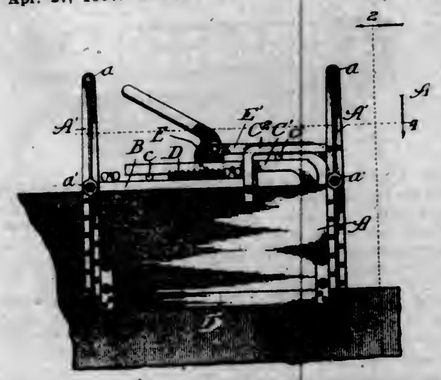
882,195. RETURN WATER-TANK. PETER J. GRAHN, Boston, Mass. Filed Nov. 29, 1907. Serial No. 404,267.



1. In a return water-tank of the character described, a float, a substantially vertical pipe extending through said float without being connected with its interior, a screen supported by the float and provided with a central opening connecting with the upper end of said pipe, a series of pieces or strands of yarn arranged substantially radially on the screen and with their inner ends extending down into the upper end of the pipe, and a tube connecting the lower end of said pipe with the outlet-pipe of the tank, for the purpose set forth.

2. In a return water-tank of the character described, a float, a substantially vertical pipe extending through said float without being connected with its interior, a dome-shaped screen provided with a central opening, a short tube connecting the said opening with the upper end of said pipe, a series of strands of yarn arranged substantially radially on the screen and with their inner ends extending down through said opening and tube into the upper portion of the pipe, a flexible tube connecting the lower end of the pipe with the outlet-pipe of the tank, and a small rod extending down through and among the inner ends of the strands in the upper portion of the pipe, for the purpose set forth.

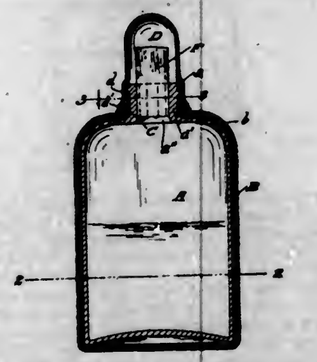
882,196. METHOD FOR BUILDING MONOLITHIC WALLS. HOWARD H. HAHN, Kenosha, Wis. Filed Apr. 27, 1907. Serial No. 370,740.



1. The method of building monolithic walls which consists in constructing successive superimposed layers by placing material for each layer in a mold, compressing the material within the mold, and moving the mold forward by the compressing force, the mold when forming each layer being mounted upon the preceding layer.

2. The method of building monolithic walls of plastic material, which consists in placing the material in a mold open at one end, compressing the material in the mold and moving the mold forward by the compressing force, the mold being supported by the formed portion of the wall and being guided in its forward travel by the sides of the mold engaging the sides of the formed portion of the wall.

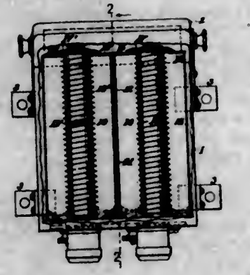
882,197. SHOE-POLISHER. LAFAYETTE J. HARDIN, Sherman, Ill. Filed July 8, 1907. Serial No. 382,796.



1. The combination of a flask adapted to contain a polishing compound and having a throat, a dauber consisting of a channeled core and a wrapping surrounding said core and fitting in the throat of said flask, a fibrous covering on said flask and a hollow handle on said flask inclosing said dauber.

2. A dauber comprising, a cork core having longitudinal channels, a winding surrounding said core and a wrapping surrounding said winding; in combination with a flask having a chamber adapted to contain a polishing compound, and a throat in which said dauber fits; and a hollow handle fitting on said flask and inclosing said dauber.

882,198. INDUCTION-COIL. JOHN O. HEINZE, Jr., Lowell, Mass. Filed Sept. 13, 1907. Serial No. 392,628.



1. In a spark coil having an electro-magnet and one or more members of magnetic material, independent of the electro-magnet, and mounted adjacent to the core of the electro-magnet; an iron mass which forms part of a magnetic circuit upon the pole adjacent to said member, through said member, and through said iron mass, to the opposite pole of the core of the electro-magnet.

2. In a spark coil having an electro-magnet and one or more members of magnetic material independent of the electro-magnet, and mounted adjacent to the core of the electro-magnet; an iron mass with which one of said members may be moved and held in magnetic contact, and which forms part of a magnetic circuit from the pole adjacent to said member, through said member, and through said iron mass to the opposite pole of the core of the electro-magnet.

3. In a spark coil having an electro-magnet and one or more members of magnetic material independent of the electro-magnet, and mounted adjacent to the core of the electro-magnet; an iron plate with which one of said members may be moved and held in magnetic contact, and which form part of a magnetic circuit from the pole adjacent to said member, through said member, and through said iron plate to the opposite pole of the core of the electro-magnet.

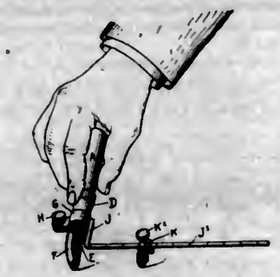
4. In a spark coil having an electro-magnet and one or more members of magnetic material independent of the electro-magnet, and mounted adjacent to the core of the electro-magnet; iron masses, one for each of said members, and with which said member may be moved and held in magnetic contact; each mass forming a part of a magnetic circuit from the pole adjacent to said member, through said member, and through said iron mass to the opposite pole of the core of the electro-magnet.

5. In a spark coil having an electro-magnet and one or more members of magnetic material independent of the electro-magnet, and mounted adjacent to the core of the electro-magnet; iron plates, one for each of said members, and with which said member may be moved and held in magnetic contact; each plate forming a part of a magnetic circuit from the pole adjacent to said member, through said member, and through said iron plate to the opposite pole of the core of the electro-magnet.

[Claims 6 and 7 not printed in the Gazette.]

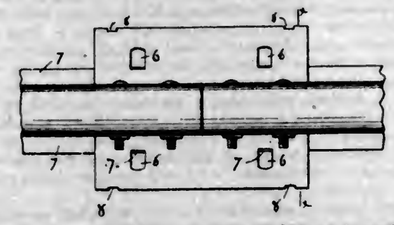
882,199. MARKING DEVICE. RAYMOND L. HERMAN, New York, N. Y., assignor to Hall-Borchert Dress Form Co., New York, N. Y., a Corporation of New Jersey. Filed Mar. 23, 1907. Serial No. 364,164.

The combination, with a marking device having a rotary marker, of an attachment comprising means for securing it to the marking device, a transversely extending bar, a slide adjustable along said bar, and a rotary guide carried



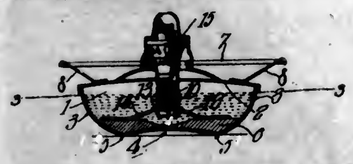
by said slide and mounted to turn about an axis parallel to that of the rotary marker.

882,200. RAILWAY JOINT-CHAIR. CALAWAY HERNDON, Wagoner, Okla. Filed Sept. 16, 1907. Serial No. 393,054.



A railway joint-chair, consisting of a base 1, perfectly flat on its top and bottom surfaces, said base provided at each edge, and near each end, with a recess 8; flanges 2, extending from each edge of said base inwardly, and slightly upwardly, and fish-plates 3, provided with bolt-holes 5, extending vertically from the inner edges of said flanges, leaving between them space for the web of a railway rail, said flanges 2, and base 1, provided with spike-holes 6, their inner sides extending so far inwardly as to allow the edges of the rail flanges to extend outwardly, a little beyond the inner walls of said holes, said chair provided at each end with a flaring mouth, substantially as shown and described, and for the purposes set forth.

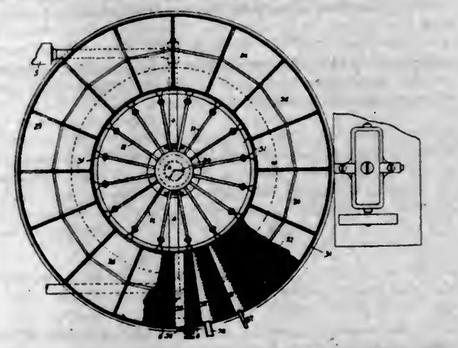
882,201. LANTERN. JOSIAH F. HORN, Hazleton, Pa. Filed Nov. 9, 1907. Serial No. 401,483.



1. A lantern having a shallow bowl shaped oil pot with convexly curved sides extending downwardly and inwardly, a concave bottom connected to said sides forming a ring base, a shallow weight fastened in the bottom of the oil pot, a diaphragm dividing the oil pot into an upper and lower part, a wick tube closed at its lower end and passing tightly through said diaphragm nearly to the bottom of the oil pot adapted to support a burner on its upper end and having minute openings in the sides of said wick tube near the closed bottom, and capillary strands filling said openings and passing from the oil pot into said wick tube.

2. A lantern having a shallow oil pot weighted on the bottom, a stop ring of greater diameter than the oil pot and supported above the same by brackets, a diaphragm dividing the oil pot into an upper and lower part the latter part containing the oil, a wick tube closed at its lower end and passing tightly through said diaphragm nearly to the bottom of the oil pot and provided with a burner at its upper end the wick of which is contained wholly within said tube, and capillary strands passing from the oil pot into said wick tube through and filling small holes in the side of said tube near the bottom.

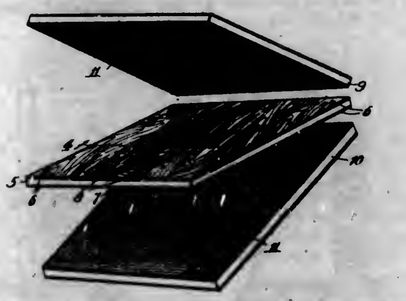
882,202. CONTINUOUS FILTER FOR CYANIDING AND THE LIKE. BERTRAM HUNT, San Francisco, Cal. Filed Jan. 17, 1907. Serial No. 352,796.



1. In a filter, the combination of an annular filter casing adapted to support a suitable layer of sand as a filtering medium, an annular layer of sand on said casing, means for continuously adding sand and for continuously feeding on to the successive points of the sand the material to be filtered, and means for continuously removing the residue and the impure sand from the successive points of the sand, substantially as described.

2. In a filter, the combination of a rotatable filter casing adapted to support a layer of sand, sand thereon, means for rotating said casing, means for feeding on to said sand the material to be filtered, means for feeding clean sand thereon, and means for removing the residue and impure sand, substantially as described.

882,203. METHOD OF VENEERING. WILLIAM J. KELLY, Clinton, Iowa. Filed Oct. 12, 1907. Serial No. 397,130.



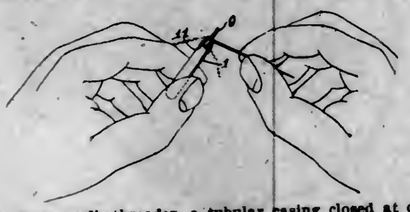
1. The method of veneering, which consists in applying sheets of veneer with their edges contiguous to a form-surface and nailing them thereto at intervals along their said edges, applying the veneer-carrying surface of said form to the glue-coated surface of a core to be veneered, subjecting the veneer in said core-surface to pressure and drying, and stripping the form from the veneer.

2. The method of veneering, which consists in applying sheets of veneer with their edges contiguous to a form-surface and nailing them thereto at intervals along said edges by driving nails flush, or approximately flush, with the veneer-surface, applying the veneer-carrying surface

of said form to the glue-coated surface of a core to be veneered, subjecting the veneer on said core-surface to pressure and drying, and stripping the form from and thereby drawing the nails through the veneer.

3. The method of veneering, which consists in applying sheets of veneer with their edges contiguous to opposite sides of a form and nailing them thereto at intervals along said edges, applying the veneer-carrying surfaces of said form to the glue-coated surfaces of cores to be veneered, subjecting a stack of said cores with the interposed forms to pressure and drying, and stripping the forms from and thereby drawing the nails through the veneer.

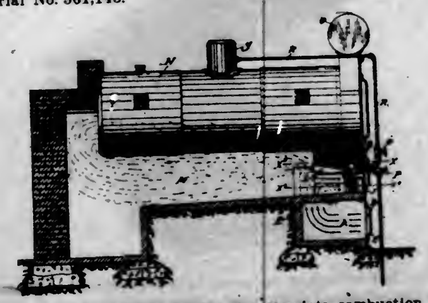
882,204. NEEDLE-THREADER. MAX E. LASSEN, Brooklyn, N. Y., and ANTON T. LASSEN, Chicago, Ill. Filed Nov. 25, 1907. Serial No. 403,721.



1. In a needle-threader, a tubular casing closed at one end, a spring actuated plunger slidable in said casing and provided at its outer extremity with a V-shaped notch and a slot extending inwardly therefrom, and an auxiliary shallow slot intersecting the first slot; and a T-shaped pusher or tongue having an outward extending shank, and a head secured in the casing and operating in the first mentioned slot of the plunger.

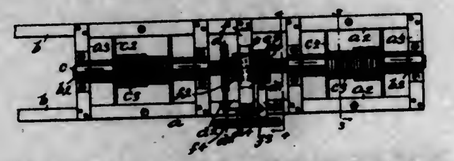
2. A needle threader comprising a tubular casing closed at one end, a plunger slidable in the open end of the casing and provided with intersecting slots at its outer extremity and with an angular notch communicating with one of the slots, a T-shaped tongue secured at the outer end of the casing and operating in one of the slots of the plunger, and a spring seated in the casing and forcing the plunger in an outward direction.

882,205. MEANS FOR BURNING OIL. THOMAS C. MASON, Los Angeles, Cal., assignor, by mesne assignments, to Mason Smokeless Combustion Company, Carson City, Nev., a Corporation of Nevada. Filed Mar. 7, 1907. Serial No. 361,143.



The apparatus for effecting the complete combustion of oil, consisting of a bottom chamber, doors at the front of said chamber, openings one at each side and at the inner end of the bottom chamber leading into lateral flues, one such flue on each side of the apparatus, a transverse flue uniting the lateral flues, the single central discharge flue having curved walls projecting inwardly to the lower part of the combustion chamber, the flue having curved walls being of gradually decreasing cross-sectional area, a burner in the combustion chamber, pipes connecting the burner within the combustion chamber with sources of steam and oil, all operating to cause the air flowing through the flues to become highly heated and to be discharged at a high velocity beneath the oil burner in the combustion chamber in the manner and for the purposes substantially as hereinbefore set forth.

882,206. SCAFFOLD. WILLIAM J. MURRAY, New York, N. Y. Filed June 3, 1907. Serial No. 377,081.



1. A scaffold, comprising overhead drums, a platform, cables dependent from said drums to said platform, means operative from the platform for rotating said drums and thereby moving said platform, locks for said drums and devices operated by said means for unlocking said drums.

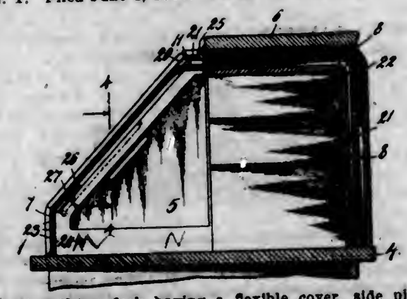
2. A scaffold, comprising a platform, overhead drums, locks for said drums, cables on said drums and secured to said platform, drum operating devices operative from said platform, means for making said devices inoperative and means connected with said devices for unlocking said drums.

3. A scaffold, comprising a platform, overhead drums, cables thereon and secured to said platform, a lock for said drums, a worm and worm-gear in operative connection with said drums, an endless rope for rotating said worm and means operative by said rope for making said lock inoperative.

4. A scaffold, comprising a platform, overhead drums, cables thereon and secured to said platform, a lock for said drums, an endless rope operative from said platform for rotating said drums and means operated by said rope for unlocking said drums.

5. A scaffold, comprising a platform, devices for moving said platform vertically, operating means for said devices and a lock for said devices, said operating means raising said platform when operated in one direction and releasing said lock and lowering said platform when operated in the opposite direction.

882,207. DESK. JENNINGS S. MCCOMB, Dobbs Ferry, N. Y. Filed June 8, 1907. Serial No. 377,893.



1. A roll-top desk having a flexible cover, side pieces each formed with a guide groove having a substantially straight portion, each of said side pieces comprising a movably mounted support containing the straight portion of said guide groove, each of said supports being pivoted to the corresponding side piece and the upper end of said support and coöperating face of said side piece having curved faces to remain in coöperation as said support is swung about its pivot, a pivoted leg mounted in a rabbet in each side piece to hold the corresponding support in raised position, said desk having a regular flexible cover mounted in a guide to coöperate with the guides in said supports in closing the desk when said supports are lowered into closer position against the side pieces and said desk having a supplemental flexible cover provided with an enlarged front ledge and operating in a guide which coöperates with the guides in said supports when in raised operative position.

2. A roll-top desk having side pieces each formed with a guide having a substantially straight portion, each of said side pieces comprising a movably mounted support carrying the straight portion of said guide, each of said supports being pivoted to the corresponding side piece and the upper end of said support and coöperating portion of said side piece having curved faces to remain in coöperation as said support is swung about its pivot, means to hold said supports in raised position, a regular flexible cover mounted in a guide in said desk to coöperate with the guides on said supports in closing the desk when said supports are lowered into closed position and said desk having a supplemental flexible cover mounted in a guide which coöperates with the guides on said supports when in raised operative position.

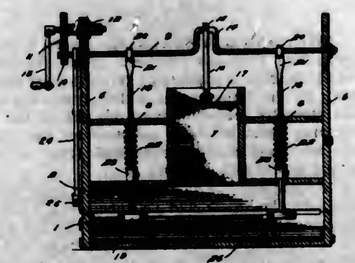
3. A roll-top desk having side pieces each formed with a guide having a substantially straight portion, each of said side pieces comprising a pivoted support carrying the straight portion of said guide, a movable leg mounted in each side piece to hold the corresponding support in raised position, a regular flexible cover mounted in a guide in said desk to coöperate with the guides in said supports in closing the desk when said supports are lowered into closed position, and a supplemental flexible cover mounted in a guide in said desk which coöperates with the guides of said supports when in raised operative position.

4. A roll-top desk having side pieces each formed with a guide having a substantially straight portion, each of said side pieces comprising a movably mounted support carrying the straight portion of said guide, a flexible cover mounted in a guide in said desk to coöperate with the guides in said supports in closing the desk when said supports are lowered into regular closed position, and a supplemental cover mounted in a guide in said desk which coöperates with the guides of said supports when raised into operative position.

5. A roll-top desk having side pieces each formed with a guide, each of said side pieces comprising a movably mounted support carrying a portion of said guide, means to hold said supports in raised operative position, a cover mounted in a guide in said desk to coöperate with the guides in said supports in closing the desk when said supports are in lowered position and a supplemental flexible cover mounted in a guide in said desk to coöperate with the guides of said supports when in raised operative position.

[Claim 6 not printed in the Gazette.]

882,208. CARPET AND RUG CLEANING MACHINE. JOHN R. NYE, Waterville, Me. Filed Feb. 8, 1907. Serial No. 356,426.



1. In a machine of this character, the combination of a casing, composed of an upper and a lower section, separated so as to allow the free passage therebetween of the article to be cleaned, hinges securing said sections together, a pair of standards carried by the upper section, a shaft journaled therein, a pair of beaters mounted in the upper section to act upon the article within the casing and operably connected to said shaft, a device for forcing air upon and through the article carried by the upper section and operably connected to the shaft, and means for revolving said shaft to operate the beaters and air forcing device.

2. In a machine of this character, the combination of a casing divided horizontally into an upper and a lower section, hinges securing the sections together so that the upper section can be tilted to admit a carpet or rug between the sections, a pair of standards carried by the upper section, a shaft journaled therein, two pairs of rolls secured to the sections so that the rug or carpet will pass between the pairs when between the sections, means operably connected with one roll and the shaft whereby as the shaft is revolved, the roll is revolved to feed the rug or carpet between the sections, a pair of beaters mounted in the upper section to act upon the rug or carpet, said beaters being operably connected with the shaft, means for forcing air upon and through the rug or carpet carried by the upper section and operably connected with the shaft, and means for revolving the shaft and thereby operating the feeding roll, air forcing means and beaters, simultaneously.

882,209. DRUM-TRAP. WILLIAM A. REID, St. Louis, Mo., assignor to N. O. Nelson Manufacturing Company, St. Louis, Mo., a Corporation. Filed June 9, 1905. Serial No. 264,367.



A drum trap of soft metal having an open upper and a closed lower end and having in its wall, near its upper end, a pair of beads; one of said beads extending inwardly beyond the inner plane of the remainder of the wall of the drum and the other bead extending outwardly beyond the outer plane of the remainder of the wall of the drum, and pipes extending from the wall of the drum.

882,210. AUTOMATIC BRAKE FOR ROAD-VEHICLES. ROBERT J. SCHEIDT, California, Mo. Filed Aug. 20, 1906. Serial No. 331,310.



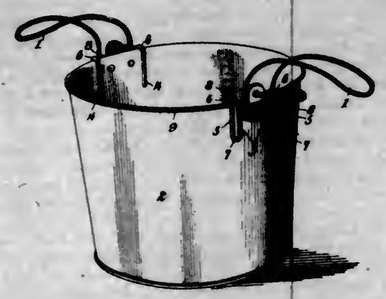
In a road vehicle, a tongue, a neck-yoke slidable thereon, a plate having a sliding movement carried near the rear end of the tongue, a curved bar carried by the plate, a draft connecting means between the plate and bar, a bolt connecting the said means, plate and bar together, a push-bar connected to the upper end of said bolt, a brake mechanism, and means operably connecting the push-bar and brake mechanism.

882,211. MILK-PAIL SUPPORT. JOHN SCHUSTER, Clay Banks, Wis. Filed Oct. 8, 1907. Serial No. 396,372.

1. A milk pail support consisting of a single piece of wire and composed of an outwardly extending body portion arranged to rest upon the leg of the milker, and a pair of pail-engaging clamps located at the inner end of the body portion and composed of an outer jaw provided at the top with a shoulder to engage under the bead of a milk pail, and an inner jaw coöperating with the outer jaw and connected with the same.

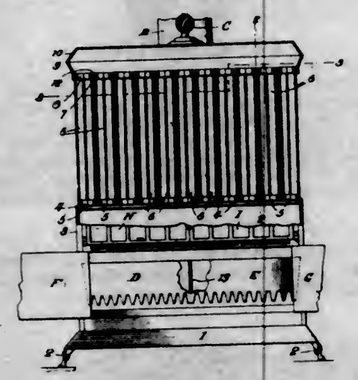
2. A milk pail support consisting of a single piece of

wire and comprising an outwardly extending body portion, and a clamp arranged at the inner end of the body portion and composed of an outer jaw provided at the top with a substantially horizontal portion forming a shoulder to engage under the bead of a milk pail and connecting the



outer jaw with the said body portion, an inner jaw cooperating with the outer jaw and provided at the top with a bend to engage over the said bead, and a connecting portion extending from the bend of the inner jaw to the lower end of the outer jaw.

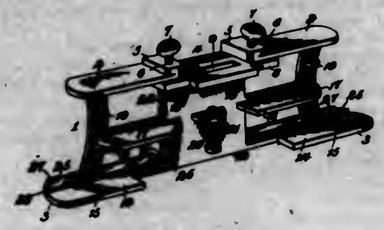
882,212. HEATING-STOVE. ELWOOD SCOTT, Marion, Ind., assignor, by direct and mesne assignments, to The Scott Stove and Furnace Company, Cambridge City, Ind. Filed Feb. 25, 1907. Serial No. 359,134.



1. In a heating stove, the combination with a combustion chamber and a discharge chamber, and a plurality of upright radiating flues extending between and communicating with said chambers, of means for securing said flues in position, consisting of a plate having apertures snugly receiving the flues at one end, and a clamping plate extending across the same ends of the flues and provided with flanges which inclose apertures in said plate and fit tightly within the ends of the flues, clamping the latter against the margins of the apertures in the first-named plate.

2. In a heating stove, the combination with a combustion chamber and a discharge chamber, and a plurality of upright radiating flues extending between and communicating with said chambers, of means for securing said flues in position, consisting of a plate having apertures snugly receiving the flues at one end, and a clamping plate extending across the same ends of the flues and provided with flanges which inclose apertures in said plate and fit tightly within the ends of the flues, clamping the latter against the margins of the apertures in the first-named plate, said clamping plate being constructed in sections, each section clamping the ends of a plurality of the flues.

882,213. SAW-GAGE AND FILING-TOOL. ZECHARIAH N. SEELYE, Centralia, Wash. Filed Apr. 17, 1906. Serial No. 312,259.



1. A device of the class described comprising a frame having spaced projecting flanges, adjusting screws mounted on the flanges at opposite sides of the space between the same, a file plate having a slot for the raker teeth of a saw and extending across the said space and carried by the adjusting screws and connected with each of the latter, whereby the file plate is adapted through the adjustment of the screws to assume different angles with relation to the same, said adjusting screws being also adapted to raise and lower either or both ends of the file plate for holding the same in a horizontal position to file the raker teeth to a uniform length or to set the file plate at an angle to file one of the raker teeth shorter than the other, and a screw mounted on the frame and arranged to engage the lower face of the file plate at a point between the ends thereof and coöperating with the said adjusting screws to rigidly clamp the file plate in its adjusted position.

2. A device of the class described comprising a frame having spaced projecting portions arranged to rest upon a saw blade, and a fixed gage plate located in the space between the said projecting portions and having an inclined gage line arranged at an angle to the said projecting portions, and graduations located at intervals along the gage line to enable the raker teeth to be swaged different lengths without adjusting the device.

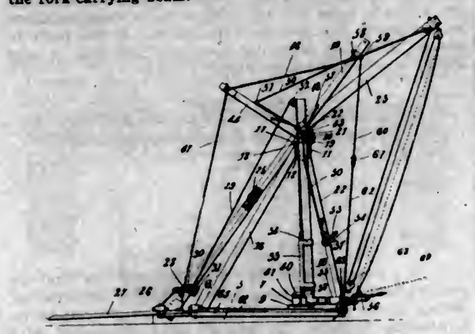
3. A device of the class described comprising a frame having a flange cut away at an intermediate point to form projecting portions and to provide an intervening space, said projecting portions being adapted to rest upon a saw blade, and a fixed gage consisting of a plate secured to the frame and constructed of a material relatively lighter in color than the frame, said plate being provided with a reduced portion extending outwardly into the space between said projecting portions, an inclined gage line arranged at an angle to the projecting portions and extending inwardly from the reduced portion of the plate at the inner end of one of the said projecting portions, and graduations arranged at intervals along the gage line, said reduced portion of the plate extending beyond the gage line so that the teeth of a saw projecting beyond the gage line will be clearly visible.

882,214. SWINGING HAY-STACKER. RALPH J. SPARKS, Browning, Mo. Filed Dec. 26, 1906. Serial No. 349,435.

1. In a hay-stacker, a supporting frame, a mast mounted for rotation on the frame, a bar slidably mounted on the frame and pivotally connected with one end of the mast, a fork-carrying beam pivotally mounted on the opposite end of the mast, and a draft device operatively connected with one end of the fork-carrying bar.

2. In a hay-stacker, a supporting frame, a mast mounted for rotation on the frame and provided with a laterally extending arm, a fork-carrying beam pivotally mounted on the mast, a bar slidably mounted on the frame and operatively connected with the free end of the arm, and a draft device connecting the arm with the fork-carrying beam.

3. In a hay-stacker, a supporting frame, a mast mounted for rotation on the frame and provided with a laterally extending arm, a fork-carrying beam pivotally mounted for rocking movement on said mast, a bar slidably mounted on the frame and pivotally connected with the arm, and a draft device extending between the arm and one end of the fork-carrying beam.

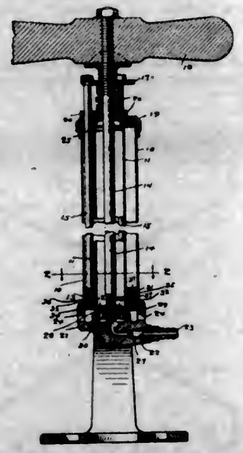


4. In a hay-stacker, a supporting frame, a mast mounted for rotation thereon, a fork-carrying beam pivotally mounted on the mast and provided with stationary and movable frames, a bar operatively connected with the mast, a draft device secured to the mast and one end of the fork-carrying beam, and a connection between the movable frame and the supporting frame.

5. In a hay-stacker, a supporting frame, a mast mounted for rotation thereon, a fork-carrying beam pivotally mounted for rotation on the mast and provided with stationary and movable frames, means for adjusting the movable frame laterally, a flexible connection between one side of the movable frame and the supporting frame, and a draft device connecting the mast and the fork-carrying beam.

[Claims 6 to 18 not printed in the Gazette.]

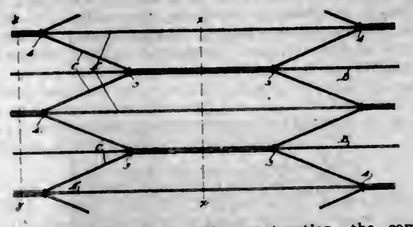
882,215. TIRE-PUMP. WILLIAM S. STAPLEY, Bridgeport, Conn., assignor to The Bridgeport Brass Company, Bridgeport, Conn., a Corporation of Connecticut. Filed Oct. 27, 1905. Serial No. 284,657.



1. In a pump, the combination with inner and outer tubes concentrically placed and a base having an eduction passage leading from the inner tube, of an inner rod and piston provided with a flexible washer whereby the piston is made operative during the downward stroke and air is permitted to pass during the upward stroke, and a plurality of rods and a piston in the outer tube, said piston consisting of rings threaded to engage each other and flexible washers clamped between said rings and engaging the inner and outer tubes respectively whereby said piston is made operative during the upward stroke and air is permitted to pass during the downward stroke, all of the piston rods being connected to move in unison.

2. A pump consisting of inner and outer tubes concentrically placed and opening into each other at one end, a rod and piston in the inner tube and a plurality of rods and a piston in the outer tube, said piston consisting of rings threaded to engage each other and flexible washers clamped between said rings and engaging the inner wall of the outer tube and the outer wall of the inner tube respectively, one of said rings being provided with air passages leading against the inner sides of the washers so that when the piston is moved in one direction the washers will collapse and permit air to pass, and when the piston is moved in the opposite direction the washers will engage the walls of the tubes respectively and carry air before it, all of the piston rods being connected to move in unison.

882,216. REINFORCED CONCRETE CONSTRUCTION. PIETRO STRAGIOTTI, Berkeley, Cal. Filed June 13, 1907. Serial No. 378,725.

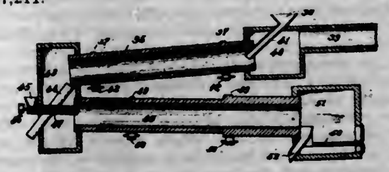


1. In a reinforced concrete construction, the combination of horizontal upper bars, horizontal lower bars alternating with the upper bars, and closely arranged bent bars disposed parallel with each other and extending parallel with the upper and lower bars and connected at intervals both to the upper and lower bars.

2. In a reinforced concrete construction, the combination of a series of horizontal upper bars, a series of horizontal lower bars alternating with the upper bars, and a third set of bars, each of which has a portion arranged close to and running parallel with a corresponding lower bar and then bent upwardly toward and secured to a corresponding upper bar.

3. In a reinforced concrete construction, the combination of a series of horizontal upper bars, a series of horizontal lower bars alternating with the upper bars, a third set of bars, each of which has a portion arranged close to and running parallel with a corresponding lower bar and then bent upwardly toward and secured to a corresponding upper bar, and a series of tranaversal bars connecting the upper and lower bars and coöperating with said bent bars to give rigidity to the structure.

882,217. ORE-TREATING PROCESS. WALTER G. SWART, Denver, Colo. Filed Feb. 25, 1905. Serial No. 247,211.



1. The ore treating process which consists in continuously feeding zinc blende through a roaster, in continuously roasting pyritical heating material out of contact with said zinc blende, in leading the hot sulfurous gases from said pyritical material into substantial contact with the partly desulfurized zinc blende, said gases moving in the opposite direction from the feed of

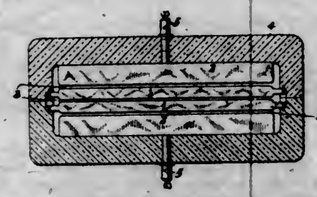
said blende so as to heat the same and mix with the gases evolved therefrom.

2. The ore treating process which consists in roasting difficultly roasting sulfid ore, in roasting pyritical heating material substantially out of contact with said ore, in supplying heat from said pyritical material to said ore and in mixing the sulfurous gases from said pyritical material with the gases evolved from said ore.

3. The ore treating process which consists in roasting difficultly roasting ore, in roasting non-carbonaceous oxidizable heating material, developing an excess of heat on its oxidation and in supplying heat from said heating material to said roasting ore and subsequently using the gases in the manufacture of sulfuric acid.

4. The ore treating process which consists in roasting difficultly roasting sulfid ore, in roasting non-carbonaceous oxidizable heating material developing an excess of heat on its oxidation and in supplying heat from said heating material to said roasting ore and subsequently using the gases in the manufacture of sulfuric acid.

882,218. ELECTRIC-DISCHARGE APPARATUS. PERCY H. THOMAS, Pittsburg, Pa., assignor to Westinghouse Electric & Manufacturing Company, a Corporation of Pennsylvania. Filed Feb. 6, 1903. Serial No. 142,240.



1. An electrical discharge device comprising a discharge plate having large face area presented to the discharge as compared with its thickness and composed of intermingled particles of conducting material and non-conducting material, the conducting particles being held in a substantially invariable relation but out of contact with each other.

2. An electrical discharge device comprising a discharge plate having large face area presented to the discharge as compared with its thickness and composed of particles of good conducting material and a mass of non-conducting binding material which holds the conducting particles in a substantially invariable relation but out of contact with each other and terminal plates for said discharge plate.

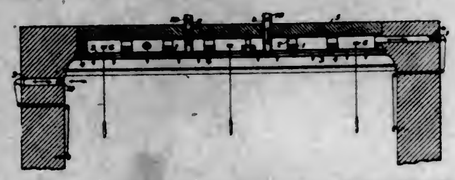
3. An electrical discharge device comprising one or more plates of resistance material having great face area presented to the discharge as compared with its or their thickness and one or more air gaps, the specific resistance of the material of which the plate is composed being such that dynamo current cannot follow a static discharge at any point.

4. An electrical discharge device comprising a block or plate having comparatively high resistance particles so disposed as to provide discharge paths between them and having a large face area presented to the discharge as compared with its thickness.

5. In an electrical discharge device, a plate or block composed of a mixture of conducting and non-conducting particles of such dimensions and so disposed that each conducting particle has a comparatively high resistance and discharges may take place between said particles, and having a large face area presented to the discharge as compared with its thickness.

882,219. VENTILATING SYSTEM FOR ROOMS AND THE LIKE. SERGIUS TIMOCHOWITSCH, Moscow, Russia. Filed Mar. 7, 1905. Serial No. 248,802.

1. In a ventilating system for rooms and the like, the combination of a chamber located directly beneath the ceiling of the room and having its under side closed by a filtering medium, air supply ways connecting said chamber with the outer air, air exhaust ways separated from said chamber and leading from the top of the room to connect the room with the outer air, and fans in said supply ways and exhaust ways.

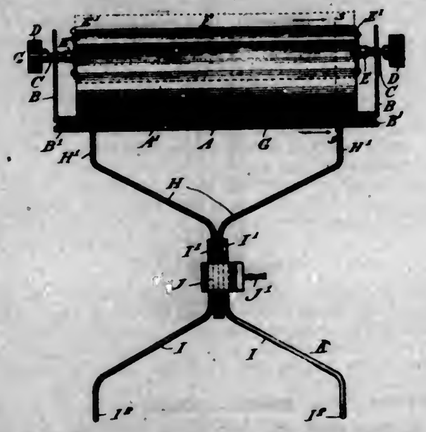


2. In a ventilating system for rooms and the like, the combination of a chamber located directly beneath the ceiling of the room and having its under side closed by a filtering medium, air supply ways connecting said chamber with the outer air, air exhaust ways passing through the walls of the room adjacent to the ceiling and air exhaust ways separated from said chamber and passing through the ceiling of the room.

3. In a ventilating system for rooms and the like, the combination of a chamber located directly beneath the ceiling of the room and having its under side closed by a filtering medium, air supply ways connecting said chamber with the outer air, and air exhaust ways passing through the walls of the room adjacent to the ceiling.

4. In a ventilating system for rooms and the like, the combination of a plurality of horizontally perforated beams extending across the ceiling of the room, a covering of a filtering medium fastened to the underside of said beams to form a chamber directly beneath the ceiling, air supply ways connecting said chamber with the outer air, and air exhaust ways separated from said chamber and leading from the top of the room to connect the room with the outer air.

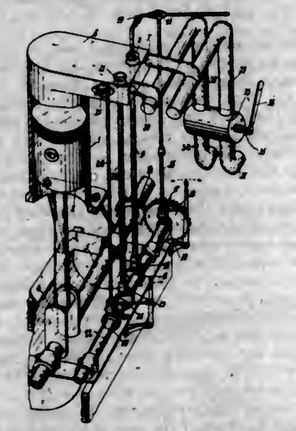
882,220. COPY-HOLDER. BENJAMIN F. TRUAX, Keosauqua, Iowa. Filed Jan. 2, 1907. Serial No. 350,510.



1. In a copy holder, the combination with a base carrying a roller and a spring bearing plate, said base being provided with apertures, of arms secured in said apertures, arms secured to the base of the machine, and a sleeve surrounding the upper and lower ends of the arms respectively, provided with a thumb-screw for clamping the arms, together for the purpose described.

2. In a copy holder, the combination with a base provided with spaced apertures in its rear edge, of plates secured on said base, shafts mounted in said plates provided with flanged apertured ends, a roller secured between said flanged sleeves, arms provided with angled ends arranged in the apertures of the base, and supporting arms adjustably connected to said arms, for the purpose described.

882,221. INTERNAL-COMBUSTION ENGINE. THOMAS VEITCH, New York, N. Y., assignor to International Patent Corporation, Jersey City, N. J., a Corporation of South Dakota. Filed Dec. 5, 1906, Serial No. 346,409. Renewed Aug. 24, 1907. Serial No. 390,043.



1. The combination in an explosive engine, with a combustion-chamber, of a take-in and an exhaust, and means containing a single valve having more than one pair of passages and adapted to reverse the function and operation of said take-in and exhaust.

2. The combination in an explosive engine, with a combustion-chamber, of a take-in and an exhaust, means containing a single valve having more than one pair of passages and adapted to reverse the function and operation of said take-in and exhaust, and means capable of operating said reversing means.

3. The combination in an explosive engine, with a combustion-chamber, of a take-in and an exhaust, means adapted to reverse the function and operation of said take-in and exhaust, means capable of operating said reversing means, and means fit to interconnect said take-in and exhaust.

4. The combination in an explosive engine, with a combustion-chamber, of a take-in and an exhaust, means adapted to reverse the function and operation of said take-in and exhaust, means fit to interconnect said take-in and exhaust, and means capable of operating said reversing means and said interconnecting means.

5. The combination with a plurality of ducts or pipes, of a valve in the same, passages in said valve suitable to straight-connect said ducts, passages suitable to cross-connect said ducts, and passages suitable to inter-connect said ducts.

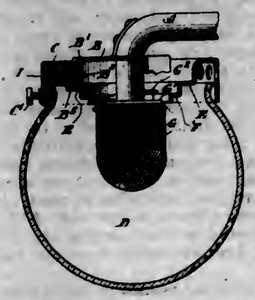
[Claims 6 to 36 not printed in the Gazette.]

882,222. INVERTED GAS-LAMP. ELIAS R. WILNER, New York, N. Y. Filed May 15, 1906. Serial No. 316,926.

1. In an incandescent gas lamp, a burner tube, a spider on said burner tube having a plurality of arms, oppositely extending lugs on each of said arms, and a mantle support adapted for detachable connection with said spider and arranged to engage said lugs.

2. In an incandescent gas lamp, a burner provided with a spider having a plurality of lugs some extending inwardly and others extending outwardly, and a mantle support detachably connected with said spider and arranged to engage said lugs.

3. In an incandescent gas lamp, a burner tube, a support for the globe and for the mantles and means on said burner tube adapted to engage said support on opposite surfaces thereof for locking the support in position.

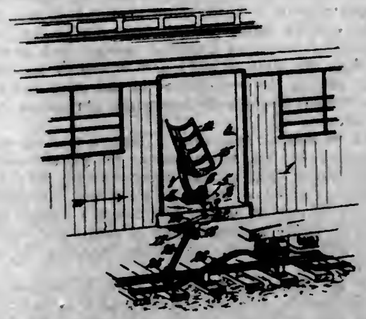


4. In a gas lamp, a burner tube, a support provided with means for supporting the globe and with means for supporting the mantle, and a spider provided with lugs adapted to engage opposite surfaces of said support for locking said support in position.

5. In an incandescent gas lamp, a burner, a mantle support provided with slots and means adapted to enter said slots and arranged to engage the support on opposite surfaces to maintain the support in operative position.

[Claim 6 not printed in the Gazette.]

882,223. MAIL-POUCH-DELIVERING APPARATUS. CHARLES A. WILLIS, Washington, D. C., assignor of one-fourth to Charles E. Creager, Washington, D. C., and one-fourth to Abram B. Appler, Albany, N. Y. Filed Aug. 15, 1907. Serial No. 388,603.



1. A mail pouch delivering apparatus comprising a throwing lever suspended above the bottom of the car and having an elongated and a short arm, a pouch support secured to the elongated arm of said lever and means connected to the shorter arm of the lever and operated exteriorly of the car for actuating said lever causing thereby the shifting of the support and the throwing therefrom of the mail matter carried thereby.

2. A mail pouch delivering apparatus comprising a curvilinear throwing lever suspended above the bottom of the car and comprising an elongated and a short arm, a pouch support secured to the elongated arm of said lever and means connected to the shorter arm of said lever for actuating said lever, thereby shifting the support and the throwing therefrom of the mail matter supported thereby.

3. A mail pouch delivering apparatus comprising a pivoted throwing lever suspended above the bottom of the car and embodying an elongated and a short arm, a pouch support secured to the elongated arm of said lever at an inclination, and means connected to the shorter arm of the lever for actuating the latter thereby causing the shift-

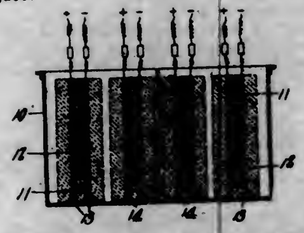
ing of the support and the throwing therefrom of the mail matter carried thereby.

4. A mail pouch delivering apparatus comprising a pivoted throwing lever suspended above the bottom of the car and embodying an elongated and a short arm, a pouch support secured to the elongated arm of said lever at an inclination, a rock shaft supported below the bottom of the car, a lever arm extending therefrom, a vertically-extending link pivoted to the shorter arm of said lever and to said lever arm, and an automatically actuated operating means for said rock shaft, said means actuated exteriorly of and during the travel of the car.

5. A mail pouch delivering apparatus, a pivoted curvilinear throwing lever suspended entirely above the floor of a car, a pouch support secured to the elongated arm of said lever, and means extending through the floor of the car and connected to the shorter arm of the lever for actuating the latter thereby causing the shifting of the support and throwing therefrom of the pouch supported thereby.

[Claims 6 to 18 not printed in the Gazette.]

882,224. ICE-MAKING APPARATUS. EDWARD T. WILLIAMS, New York, N. Y. Filed July 28, 1906. Serial No. 328,199.



1. In ice making apparatus, a tank, an expansion coil arranged therein, a metal plate arranged at one side of the coil and on which the ice forms during the freezing operation, a source of electrical energy, and means for connecting the plate to the source of energy for the purpose of raising the temperature of the plate and freeing the ice without stopping the flow of the refrigerant through the expansion coil.

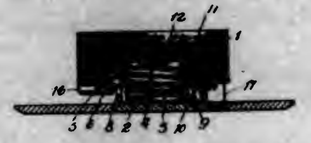
2. In ice making apparatus, a tank, a freezing member arranged therein and having means for the circulation of the refrigerant, said member being provided with a solid continuous surface on which the ice forms, and means for passing a current of electricity through a portion of said member to raise the temperature of said solid continuous surface and thus free the ice without stopping the flow of the refrigerant.

3. In ice making apparatus, a tank, an expansion coil arranged therein, a metal plate arranged on each side of the coil and on which the ice forms during the freezing operation, said plates being spaced apart to form an intermediate freezing chamber which communicates with the interior of the tank, a source of electrical energy, and means for connecting the plates to the source of energy for the purpose of raising the temperature of the plates and freeing the ice without stopping the flow of refrigerant through the coil.

4. In ice making apparatus, a tank, a vertically arranged expansion coil disposed therein, plates arranged on opposite sides of the coil and electrically insulated from the tank, said plates being spaced apart to form an intermediate freezing chamber which communicates with the interior of the tank, a source of electrical energy, and means for connecting the plates to the source of energy to raise the temperature of such plates and free the ice without stopping the flow of refrigerant through the coil.

5. In ice making apparatus, a freezing member including means for the circulation of a refrigerant, and means for passing an electrical current through a portion of said member to thereby heat the same and detach the ice without stopping the flow of the refrigerant.

882,225. FLUSH-RECEPTACLE. FRANK T. WHEELER, Plainville, Conn., assignor to Trumbull Electric Manufacturing Company, Plainville, Conn., a Corporation of Connecticut. Filed Jan. 29, 1907. Serial No. 354,601.

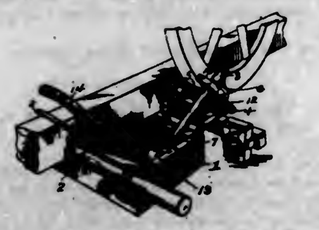


1. A flush receptacle comprising a base or block of insulating material having a central opening, a threaded sleeve contact and a central stud contact mounted therein and insulated one from the other, terminals extending along the face of the block and connected respectively with the threaded contact and the central stud contact, an annular flange or projection surrounding the central opening and rising from the face of the block of insulating material, isolated bosses of insulating material arranged on opposite sides and also rising from the face of the block to a greater distance than the height of the annular flange, a face plate resting upon said bosses and eyes secured to the bosses and providing a means of attachment for the face plate, and a means of attachment for the block of insulating material.

2. In a flush receptacle, in combination, a base of insulating material, provided with a central cavity, a threaded sleeve contact and a central stud contact mounted therein and insulated one from the other, terminals connected respectively with the threaded sleeve contact and the central stud contact and resting upon the face of the base piece, an annular flange extending about the central opening and above the face of the base piece, isolated bosses of a less width than the width of the base piece, said bosses extending above the face of said base piece and forming supports for a face plate, means for attaching said face plate to the bosses, and guards of insulating material extending from the face of the base piece adjacent to the terminals.

3. In a device of the class specified, a base of insulating material having a central recess in its front face, a rim of insulating material encircling the central opening and extending above the face of the base and provided with a cutaway portion, bosses arranged upon opposite sides of said central projection and provided with means for attachment of a face plate, terminal contacts mounted upon the front face of the base, one of said contacts extending through the cutaway portion in the rim and connected with the tubular sleeve contact within the central opening, the second of said conductors connected with the central stud contact, and a conductor uniting the central stud contact and its terminal.

882,226. MEANS FOR FORCING COOLING LIQUIDS TO ENGINES. ABRAHAM M. ZIMMERMAN, New Holland, Pa., assignor to New Holland Machine Co., New Holland, Pa. Filed Aug. 22, 1906. Serial No. 331,639.



1. In a device of the character described, the combination of a tank and a liquid forcing device having mountings independent of each other, and one of said devices movable relatively to the other.

2. In a device of the character described, the combination with a tank and an engine of a pump to receive water from the tank driven by the fly wheel of the engine and a movable mounting or support for said pump.

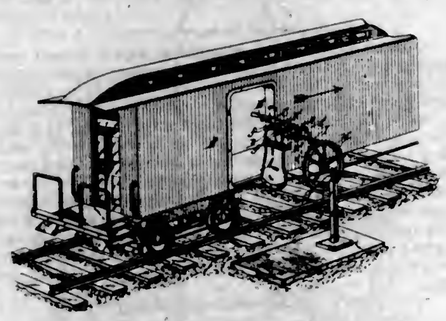
3. In a device of the character described, the combination with a tank and an engine, of a movable bracket, a shaft supported thereby, a friction wheel on the shaft to engage a wheel of an engine, a pump in the tank operated by the shaft, and a spring holding the friction wheel in engagement with the fly wheel.

4. In a device of the character described, the combination with an engine, and a tank located below the cooling jacket of the cylinder of the engine and into which said cooling jacket drains, of a pivotally supported pump in the tank and a pipe to convey water from the pump to the cooling jacket of the engine cylinder.

5. The combination of a tank and a pump, one movable relatively to the other, and engine means for connecting said pump with the water jacket of the engine cylinder and means for connecting said water jacket with the tank.

[Claims 6 to 8 not printed in the Gazette.]

882,227. PACKAGE OR MAIL CATCHER. GEORGE ZURCHER, La Salle, N. Y. Filed Oct. 25, 1907. Serial No. 399,125.



1. A package or mail catcher comprising a support, a member rotatable in a vertical plane on said support and adapted to be rotated by the impact of a package or bag, and means for receiving a package or bag arranged on said member on one side of its pivot, substantially as set forth.

2. A package or mail catcher comprising a support, a member rotatable in a vertical plane on said support and adapted to be rotated by the impact of a package or bag, means for receiving a package or bag arranged on said member on one side of its pivot, and means for yieldingly holding said member in its normal position, substantially as set forth.

3. A package or mail catcher comprising a support, a vertically rotatable member pivotally supported on said support, a receiving arm arranged on said member for engaging a package or bag on a car, and means for yieldingly holding said member in its normal position, substantially as set forth.

4. A package or mail catcher comprising a support, a vertically rotatable member pivotally supported on said support, a receiving arm arranged on said member on one side of its pivot, and a weight arranged on said member on the opposite side of its pivot and operating to hold said member and arm in their normal position, substantially as set forth.

5. A package or mail catcher comprising a standard, a wheel pivoted on said standard so as to be rotatable in a vertical plane, a receiving arm projecting laterally from the wheel on one side of its pivot and adapted to engage with a package or bag on a car, and a weight arranged on the wheel on the opposite side of its pivot and operating normally to hold the receiving arm in an elevated position, substantially as set forth.

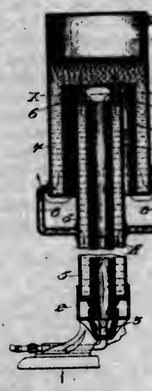
[Claims 6 to 8 not printed in the Gazette.]

882,228. RAZOR-STROP. CHARLES W. BABCOCK, Portland, Oreg. Filed Feb. 2, 1907. Serial No. 355,376.



An improved razor strop consisting of a central portion of a mixture of wool and cotton fibers in about equal proportions, a strip of satin fixed to opposite sides of the base, a thin layer of soft rubber compressed into the fibers of one of the strips of satin, a corresponding layer of rubber between the body and the other strip of satin and compressed into the fibers of the latter, and an exterior filling of soap rubbed into the fibers of the second-named piece of satin and forming the finishing side of the strop.

882,229. HEATER. GEORGE H. BARTLETT, San Francisco, Cal. Filed Apr. 4, 1907. Serial No. 366,294.

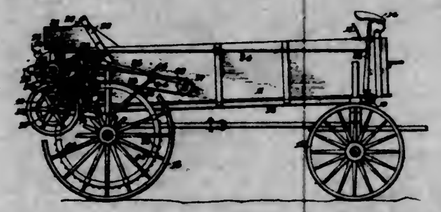


In a heating apparatus of the character described, a vertical open-ended tube, a burner centrally located below the tube, and means for supplying air thereto, a casing with a closed top and open bottom surrounding the upper part of the tube, and supported to allow heat to pass from the tube into the casing and be discharged downwardly, a liquid containing chamber located between the inner tube and the casing, and extending to substantially the lower end of the inner tube, a second chamber concentric with the tube and first-named chamber and of greater diameter than the latter, said second chamber containing a liquid and having its lower end connected to a corresponding portion of said casing, tubes connecting the upper end of the inner chamber with the exterior chamber, and return pipes connecting the lower end of the exterior liquid containing chamber with the interior liquid containing chamber at a point which is below the plane of the open bottom of the casing.

882,230. FERTILIZER-DISTRIBUTER. NICKLAS H. BLOOM and JOSEPH H. BLOOM, Nashua, Iowa. Filed Feb. 13, 1906. Serial No. 300,892.

1. In a distributer of the character described, the combination with material moving means movable in opposite directions, of mechanism for automatically effecting the movement of the means in one direction at one speed and in an opposite direction at a different speed, said mechanism including relatively fixed wheels of different diameters connected to the moving means, actuating

means alternately movable into and out of coaction with the different wheels for moving the same in opposite directions at different speeds, a ground wheel, and connections between said ground wheel and actuating means for moving the latter at a uniform rate of speed whether in coaction with the larger or smaller wheel.



2. In a distributer of the character described, the combination with material-moving means movable in opposite directions, of mechanism for effecting the movement of the means in one direction at one speed and in an opposite direction at a different speed, said mechanism including ratchet wheels of different diameters connected to the moving means, actuating dogs alternately movable into and out of coaction with the wheels for moving them in opposite directions, means for moving the dogs at a uniform rate of speed and means for effecting the movement of one dog into coaction with its wheel, and the movement of the other out of coaction with its wheel.

3. In a distributer of the character described, the combination with a vehicle body, of a conveyer operating therein, a driving shaft for the conveyer, opposite ratchet wheels of different diameters secured to the shaft, actuating dogs coöperating with the different wheels for moving the same in opposite directions to effect the movement of the conveyer in one direction at one speed and in an opposite direction at a different speed, and means for engaging the different dogs with and disengaging them from their respective wheels.

4. In a distributer of the character described, the combination with a vehicle, of material moving means operating therein, opposite ratchet wheels connected to the moving means, a lever fulcrumed between its ends, a plurality of dogs pivoted to the lever on one side of the fulcrum and coacting with the different wheels, a plurality of dogs pivoted to the lever on the other side of its fulcrum and coacting with the different wheels, and means for operating the lever.

5. In a distributer of the character described, the combination with a vehicle, of material-moving means operating therein, opposite ratchet wheels connected to the means, a lever fulcrumed between its ends, separate dogs pivoted to the lever on one side of the fulcrum and coacting with the different wheels, separate dogs pivoted to the lever on the other side of its fulcrum and coacting with the different wheels, and means for operating the lever.

[Claims 6 to 54 not printed in the Gazette.]

882,231. JUG-HOLDER. CHARLES R. BROWN, Kansas City, Mo., assignor of one-half to Isaac Alexander, Kansas City, Mo. Filed Apr. 9, 1906. Serial No. 310,783.

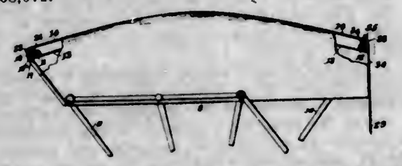
1. In a jug holder, the combination with a support having two fulcra, of a jug supporting frame comprising two horizontal rings disposed one above the other, and two oppositely disposed vertical wires connected at their upper and lower ends to the upper and lower rings respectively and having coils formed therefrom for pivotally receiving said two fulcra respectively, and a device for embracing the neck of the jug comprising a wire doubled to embrace opposite sides of the neck of the jug, the ends of the doubled wire being hinged to one side of the upper ring, said doubled wire being downwardly and inwardly turned so as to spring over and lock with the opposite side of the upper ring.

2. In a jug holder, the combination with a support, of a basket for containing and supporting the jug, said basket being pivotally mounted at opposite sides upon said support and provided at its upper end with a horisontal wire ring forming a part thereof, and a device for embracing the neck of the jug comprising a doubled wire hinged at its ends to one side of the said ring and adapted to embrace opposite sides of the neck of the jug, said doubled wire having a portion downwardly and inwardly turned so as to spring over and releasably lock with the opposite side of the ring.



3. In a jug holder, the combination with a support comprising two U shaped wires the side arms of which incline toward and are joined at their upper ends to each other, said upper ends being inwardly turned to form fulcra, of a basket for containing and supporting the jug, said basket being pivotally supported at opposite sides upon said fulcra, said basket having at its upper end and forming a part thereof a horisontal ring, and a device for embracing the neck of the jug and comprising a doubled wire adapted to embrace opposite sides of the neck of the jug and having its ends hinged to one side of the ring and having a portion bent downwardly and inwradly so as to swing over and releasably lock with the other side of said ring.

882,232. VEHICLE-TOP. OSCAR E. BURG and HOMER L. BURG, Dallas City, Ill. Filed Mar. 26, 1906. Serial No. 308,071.



1. In a vehicle top, the combination with a supporting bar, of a lining, a valance cover, means fastening the lining and valance cover together independently of the supporting bar, means other than said fastening means and covered by the valance cover for securing the same and the lining to the supporting bar, a deck or cover, and means for securing the deck or cover and the valance to the upper portion of the supporting bar.

2. In a vehicle top, the combination with a supporting bar, of a lining, a valance cover, stitching connecting the lining and valance cover, fasteners passing through the secured portions of the lining and valance cover into the bar, said valance cover being doubled over the stitching and the fasteners and having its upper portion located on the bar, a deck or cover located on the bar, and fastenings passing therethrough and through the valance cover.

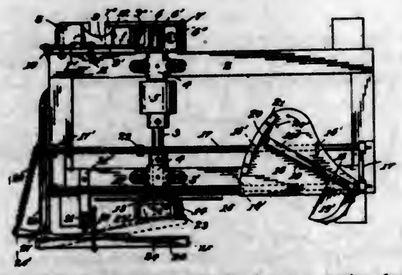
3. In a vehicle top, the combination with a supporting bar, of a lining, a valance cover, stitching connecting the lining and valance cover, fasteners passing through the secured portions of the lining and valance cover into the front portion of the bar, said valance cover being doubled over the stitching and the fasteners and having its upper portion located on top the bar, a deck or cover having a looped portion located on top the bar over the portion of the valance cover disposed thereon, a clamping strip arranged in the loop and covered thereby, and fasteners passing through the strip, the portion of the deck or cover arranged beneath the same, through the valance cover, and into the bar.

4. In a vehicle top, the combination with a carriage top bow including a cross bar, of a valance cover extending over the front face of the bow and having its upper margin located on the top of the bow, a deck or cover having a looped portion located on top of the bow and upon the said margin of the valance cover, fasteners securing the under edge of the same to the cross bar in rear of the valance, a strip located in said loop and over the margin of the valance cover, and fasteners passing through the strip, and through the portions of the deck or cover and valance cover located beneath the same, into the top bow.

5. In a vehicle top, the combination with a carriage top bow having a cross bar, of a deck or cover having a loop located on and fastened to the cross bar, a strip slipped into said loop from the inner side and located on the bar, and fasteners passing through the deck or cover from the exterior thereof, through the strip, through the portion of the deck or cover located beneath the strip, and into the cross bar of the bow.

[Claims 6 to 8 not printed in the Gazette.]

882,233. SHINGLE-BUTT-CUTTING MACHINE. JOHN D. CALDWELL, Olympia, Wash., assignor to Ivan Bushong, Seattle, Wash. Filed Aug. 15, 1904. Serial No. 220,154.



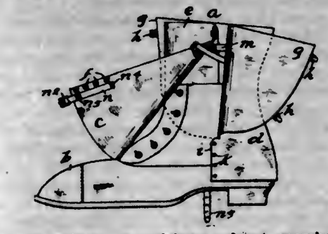
In a device of the class described, a supporting frame, standards spaced apart and extending above said frame, track bars arranged in parallel relation and supported at their ends in said standards, a shingle carriage slidably mounted upon said track bars, an arbor mounted for rotation on said frame and extending transversely of said track bar and between the frame and track bars, cutting devices carried by said arbor, a table swinging at one end from said frame, means for adjusting said table toward and away from said cutting devices, and means for regulating the movement of said table.

882,234. SMELTING SULFID OKES. JAMES T. CARRICK and STUART PATTISON, Johannesburg, Transvaal. Filed Oct. 16, 1906. Serial No. 339,236.

1. The process of treating sulfid ores of the class specified which consists in smelting the ore to produce a matte, treating such matte for the production of sulfureted hydrogen, utilizing such gas as fuel in subsequent smelting, and treating the residues resulting from the treatment of the matte for the recovery of the metals therefrom.

2. In the smelting of sulfid ores of the class specified, the process of treating matte with dilute sulfuric acid for the production of sulfureted hydrogen, utilizing such gas as fuel in subsequent smelting, treating the flue gases, of which the sulfur dioxid contents have been enriched by the sulfureted hydrogen, for the manufacture of sulfuric acid and digesting the matte with such sulfuric acid for the production of a further quantity of sulfureted hydrogen, and utilizing such gas as fuel in subsequent smelting.

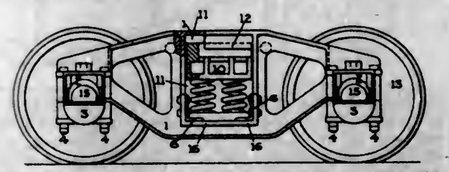
882,235. GAITER. HYMAN COHEN, Brooklyn, N. Y. Filed Mar. 19, 1907. Serial No. 363,170.



1. An overgaiter, comprising a front member, and a rear member provided with integral forwardly directed flaps passing over said front member and with integral forwardly directed members passing under said front member, a strap secured at each side of said gaiter, at a distance from the lower edge thereof, and supplemental devices for detachably connecting said straps to the lower edge of said gaiter and detachable means for connecting said flaps in front of said gaiter.

2. An overgaiter, comprising a front member, a rear member provided with integral forwardly directed flaps passing over said front member and with integral forwardly directed flaps passing beneath said front member, devices for detachably connecting said first named flaps to each other in front of said gaiter, devices for connecting said last named flaps to said front member a strap secured at each side of said gaiter, at a distance from the lower edge thereof, and supplemental devices for detachably connecting said straps to the lower edge of said gaiter and a strap detachably connected with said front member, at each side thereof, for holding the same in position.

882,236. CAR-TRUCK. THEODORE H. CURTIS, Louisville, Ky. Filed July 12, 1907. Serial No. 383,462.



1. In a railway car-truck, the combination of the side-frames having bolster-openings to receive the ends of the truck-bolster, that portion of each side-frame over each bolster-opening being provided with a pair of thrust-lug-guides, and a truck-bolster having upstanding thrust-lugs to coöperate with said pair of thrust-lug-guides in each side frame, the pair of thrust-lug-guides in each side-frame and said coöperating thrust-lugs constituting the means for preventing endwise shifting of the truck-bolster, substantially as described.

2. In a railway car-truck, the combination of side-frames having bolster-openings to receive the ends of the truck bolster, that portion of said side-frames over said bolster-openings being provided with thrust-lug-guides and a truck-bolster having upstanding thrust-lugs to coöperate with said thrust-lug-guides, the latter and said thrust-lugs constituting the means for preventing endwise shifting of the truck-bolster and journal-box saddles at ends of each side-frame and removable oil cellars attached to the journal-box saddles, substantially as described.

3. In a railway car-truck, the combination of side-frames having bolster-openings to receive the ends of the truck-bolster, that portion of said side-frames over said bolster-openings being provided with thrust-lug-guides, and a truck-bolster having upstanding thrust-lugs to co-operate with said thrust-lug-guides, the latter and said thrust-lugs constituting the means for preventing endwise shifting of the truck-bolster and journal-box-saddles at

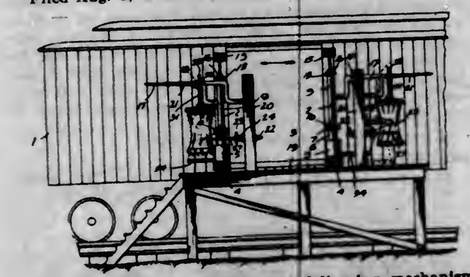
ends of each side-frame and cast integral with the side-frame and removable oil-cellars attached to the journal-box-saddles, substantially as described.

4. In a railway car-truck, the combination of side-frames having bolster-openings to receive the ends of the truck-bolster, that portion of said side-frames over said bolster-openings being provided with thrust-lug-guides and a truck-bolster having upstanding thrust-lugs to coöperate with said thrust-lug-guides, the latter and said thrust-lugs constituting the means for preventing endwise shifting of the truck-bolster and journal-box-saddles at ends of each side-frame and permanently secured to the side-frames and removable oil-cellars attached to the journal-box-saddles, substantially as described.

5. In a railway car-truck, the combination of side-frames having bolster-openings to receive the ends of truck-bolsters, that portion of said side-frames over said bolster-openings being provided with thrust-lug-guides, and a truck-bolster having upstanding thrust-lugs to co-operate with said thrust-lug-guides, the latter and said thrust-lugs constituting the means for preventing endwise shifting of the truck-bolster and journal-box-saddles at ends of each side-frame and removable oil-cellars attached to the side-frames, substantially as described.

[Claim 6 not printed in the Gazette.]

882,237. MAIL-BAG CATCHING AND DELIVERING APPARATUS. JOHN C. DAYTON, Petersburg, W. Va. Filed Aug. 8, 1907. Serial No. 387,670.



1. In a mail-bag catching and delivering mechanism, the combination with a car, of a vertical post located at one side of the car door and including a section rotatable into and out of operative position; a bag-receiving arm carried by said section; means for normally holding said section against rotation; and means for releasing said section from engagement with said holding means, to permit its rotation.

2. In a mail-bag catching and delivering mechanism, the combination, with a car, of a vertical post located at one side of the car door and including a section rotatable into and out of operative position; a bag-receiving arm carried by said section; means for holding said section against rotation; means for raising said section, to effect its disengagement from said holding means, and permit its rotation; and means for returning said section into reëngagement with said holding means.

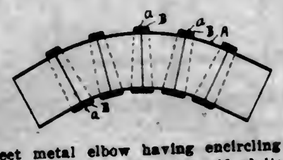
3. In a mail-bag catching and delivering mechanism, the combination, with a car, of a vertical post located at one side of the car door and including a rotatable sleeve and means for supporting the same; a laterally-projecting bag-receiving arm carried by said sleeve; a collar carried by said sleeve and provided with a ratchet-faced disk; a collar carried by said supporting means and provided with a ratchet-faced disk adapted for engagement with said first-mentioned disk; means for retaining said disks normally in engagement with each other, to hold said sleeve against rotation; and means for releasing said disks from engagement with each other, to permit the rotation of said sleeve.

4. In a mail-bag catching and delivering mechanism, the combination, with a car, of a vertical post located at one side of the car door and including a stationary lower sleeve, and a rotatable upper sleeve extending into the latter; a laterally-projecting bag-receiving arm carried by said rotatable sleeve; a collar carried by said upper sleeve and provided with a ratchet-faced disk; a collar carried by said lower sleeve and provided with a ratchet-faced disk adapted for engagement with said first-mentioned disk; means for normally retaining said disks in engagement with each other, to hold said upper sleeve against rotation; a rod extending through said sleeves; and means secured to said upper sleeve and engaged with said rod for raising said upper sleeve, to effect the disengagement of said disks from each other, and permit the rotation of said upper sleeve.

5. In a mail-bag catching and delivering mechanism, the combination, with a car, of a vertical post located at one side of the car and including a stationary lower sleeve, and a rotatable upper sleeve extending into the latter; a laterally-projecting bag-receiving arm carried by said rotatable sleeve; a collar carried by said upper sleeve and provided with a ratchet-faced disk; a collar carried by said lower sleeve and provided with a ratchet-faced disk adapted for engagement with said first-mentioned disk; a spring disposed within the lower sleeve beneath the end of the upper sleeve, and connected with the latter for normally engaging said ratchet disks with each other, to prevent the rotation of the upper sleeve; a rod extending through said sleeves, said rod being threaded towards its upper end; a collar formed upon the upper end of said upper sleeve and provided with a threaded axial opening through which said rod extends; and a handle carried by said collar, for raising said upper sleeve, to effect the disengagement of said disks, and permit the rotation of said upper sleeve.

[Claims 6 to 9 not printed in the Gazette.]

882,238. SHEET-METAL ELBOW. ADOLPH DIECKMANN, Cincinnati, Ohio. Filed Sept. 21, 1906. Serial No. 335,654.



1. A sheet metal elbow having encircling plaits and strengthening ribs encompassed by said plaits.

2. A sheet metal elbow having encircling plaits and a longitudinal seam, and strengthening ribs embraced within said plaits and locked therein by said seam.

3. A sheet metal elbow having encircling double or box plaits and stripe embraced within said plaits, said stripe being so shaped as to limit the movement of said plaits in forming the curve of the elbow.

4. A sheet metal elbow having double or box plaits completely encircling the elbow, the plaits increasing in width from the outside to the inside of the elbow curve.

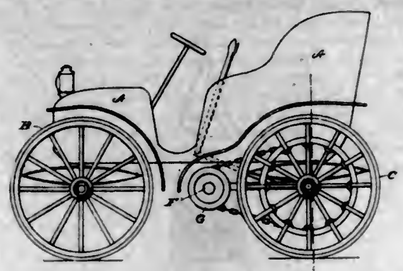
5. A sheet metal elbow having double or box plaits completely encircling the elbow and a longitudinal seam, the plaits increasing in width from the outside to the inside of the elbow curve, and the ends of said plaits abutting where the elbow seam is formed.

[Claim 6 not printed in the Gazette.]

882,239. AUTOMOBILE. CHARLES W. DUBB, Austin, Ill. Filed Dec. 14, 1906. Serial No. 347,971.

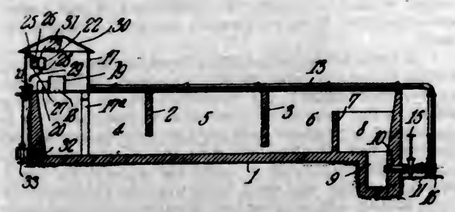
1. In an automobile, the combination with a rear axle and obliquely set traction wheels thereon, of opposing chain sprockets set obliquely to each other to drive the traction wheels, and flexible and twistable chain belts uniting said sprockets.

2. The combination, in an automobile, of a non-rotating axle having downwardly bent journals, outwardly dished wheels mounted on said journals in such relation that the spokes in their revolution always come perpendicularly to the tread, a counter-shaft, chain wheels upon each end of the counter-shaft, chain gears secured to the dished wheels on the axle, obliquely to the chain wheels upon the counter-shaft, and flexible and twistable chain-belts connecting said chain wheels and gears.



3. The combination, in an automobile, of an axle having downwardly bent journals, outwardly dished traction wheels mounted on said journals in such relation that the spokes always come perpendicularly to the tread, a counter-shaft, wild-cat pulleys on the counter-shaft, oblique wild-cat gears secured to the spokes of said traction wheels between the rim and the hub, and open link flexible and twistable chain-belts connecting said pulleys and gears.

882,240. WATER-PURIFYING APPARATUS. JOHN B. FENDER, Kaufman, Tex. Filed June 4, 1907. Serial No. 377,170.



1. In a water purifying apparatus, a settling basin having an outlet for purified water, combined with a circular mixing tank, means for directing water tangentially into the tank, said tank having a central outlet opening leading to said basin, and a box for holding a purifying chemical salt through which a stream of water from the water to be treated passes and which is poured into the water to be purified at its entrance into the mixing tank.

2. In a water purifying apparatus, a settling basin, having a wall at one end over which the purified water pours to an outlet main, combined with a mixing apparatus at the other end consisting of a circular mixing tank having a flanged central delivery, opening over said basin, and tangential plates or blades on said flange, a box in the upper end of said tank longitudinally divided for the greater part of its length in which the purifying chemical is placed, a main leading to and entering said mixing tank at a tangent, a branch pipe from said main to said box and a delivery pipe from said box to the mouth of the main within the mixing tank.

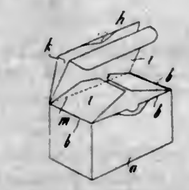
3. In a water purifying apparatus, a settling basin having a plurality of partitions extending transversely across the same, their lower edges raised above the floor of the basin, the space between each partition and the basin decreasing towards the outlet end, a curved wall at the outlet end of the basin and rising therefrom to a height less than the first mentioned partitions and having an outlet leading to the distributing main combined with a mixing tank at the receiving end of the basin into which the water to be treated enters and having an outlet therefrom into the basin, and a box for holding a purifying material through which a stream of water enters and after traveling a tortuous passage therein empties into said tank.

4. In a water purifying apparatus a settling basin having a plurality of cross partitions open below to permit water to pass thereunder, said openings decreasing in height towards the outlet end of the basin, a curved wall at the outlet end of the basin over which the purified water flows, combined with a mixing tank at the receiving end of the basin having deflectors and an opening into the basin below, a box containing a purifying material over the mixing tank and having an outlet leading thereinto, a main for nonpurified water having a by pass main leading to the purifying tank with a valve therein, a valved pipe leading from said by pass main in front of its valve to the chemical box, and a short main connecting the purified water receptacle behind the curved wall to the principal main, a valve in said main and a valve in the principal main between the by pass main, and the purified water main.

5. In a water purifying apparatus, a settling basin, a mixing tank supported over one end of said basin, a central outlet opening in said tank surrounded by an internal flange, tangential wings or plates extending into said tank from the flange, a water inlet pipe entering the side of the pipe at a tangent to produce a vortical movement of the water therein, and a chemical tank feeding small quantities of a solution of water purifying material to the water as it emerges from the inlet pipe and with which it is thoroughly mixed by said wings or plates and the vortical motion of the water.

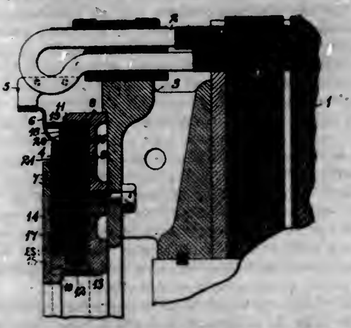
[Claims 6 and 7 not printed in the Gazette.]

882,241. WRAPPER FOR BOXES AND SIMILAR ARTICLES. FRANZ FETTBACK, Hanover, Germany. Filed May 9, 1907. Serial No. 372,720.



A paper box having a hinged cover, combined with an inclosing wrapper having a tearing string extending along the top of the box at the sides and front thereof, said tearing string being provided with a downwardly extending bulge secured to the front of the wrapper opposite the hinge of the cover, substantially as specified.

882,242. CROSS CONNECTION FOR DYNAMO-ELECTRIC MACHINES. WILLIAM H. FOOT, Wilkinsburg, Pa., assignor to Westinghouse Electric & Manufacturing Company, a Corporation of Pennsylvania. Filed Apr. 28, 1906. Serial No. 314,205.



1. In a dynamo-electric machine, the combination with a substantially cylindrical core, and a winding therefor, of

an annular case supported by the core structure, cross-connecting strap conductors concentrically disposed in said case, and insulating rings and plates between which said conductors are clamped.

2. In a dynamo-electric machine, the combination with a core, a winding and a combined clamping ring and coil-support, of an annular case attached to the core support, concentrically-disposed ring shaped strap conductors rigidly clamped in said case, and strap leads between said conductors and suitable points in the winding.

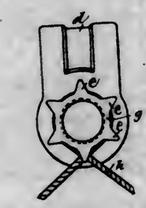
3. In a dynamo-electric machine, the combination with a cylindrical core member and a winding, of concentrically mounted cross-connecting rings for said winding, insulating stripe between the cross-connecting rings, insulating rings and plates surrounding said connecting rings, and means for clampng said parts together and to said core member.

4. In a dynamo-electric machine, the combination with a core, a winding and a combined clamping ring and coil support, of an annular case attached to the coil support, ring shaped strap conductors concentrically mounted in said case to which suitable points in the winding are connected, inner, outer and intervening insulating rings and insulating side plates for said strap conductors, and a plurality of radial adjusting screws located in a flange of the annular case.

5. In a dynamo-electric machine, the combination with an armature core and winding, of cross-connecting conductors which interconnect equipotential points in the winding and comprise concentrically mounted strap conducting rings, insulating rings and plates between and around said conducting rings, and a casing in which said parts are clamped.

[Claims 6 to 9 not printed in the Gazette.]

882,243. PICTURE-HANGER. MASON B. FRANKLIN, Providence, R. I. Filed Jan. 30, 1906. Serial No. 298,668.



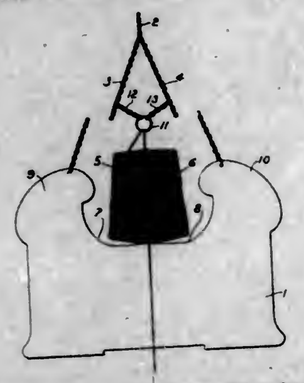
1. The picture hanger blank comprising the sheet metal body portion A, the wings *a a* and *b*, the radiating slits *c c*, and the intermediate lips *e e*, substantially as described.

2. A picture hanger comprising a plate having an upper hook portion, an intermediate ring of projections formed by making a series of radial slits in the plate and bending the lips so formed up and back, and a lower portion having a groove formed by a plurality of lips made by slitting the lower edge of the plate and bending the lips so formed up and back, substantially as described.

3. A picture hanger comprising a sheet metal plate having an upper hook portion, and a lower disk portion provided with an outwardly turned circular flange, having projections at its edge, which are adapted to guide the picture cord into the groove formed at the base of the said flange, and outwardly turned hooks formed at the lower edge of the said plate, said hooks being constructed to retain portions of the said picture cord in a relatively crossed condition below the said groove of the said circular flange, substantially as described.

4. The picture hanger blank comprising the sheet metal body portion A, the wings *a a* and *b*, the radiating slits *c c*, the intermediate lips *e e*, and the depressed panel *d*, substantially as described.

882,244. TWINE-HOLDER. FRANCIS W. GIBSON, West Roxbury, Mass., assignor to The H. D. Beach Company, Coshocton, Ohio, a Corporation of Ohio. Filed Jan. 23, 1908. Serial No. 412,299.



1. A twine holder comprising a steadying sheet or plate, means connected thereto to suspend the same from an overhead support, the connection of the suspending means to the sheet or plate being such that the latter is maintained in equipoise, said sheet or plate having a member adapted to penetrate a package of twine and to support the same for use, said sheet or plate presenting an extended surface to steady the oscillations of the holder when the twine is drawn upon for use and to balance the same.

2. A twine holder comprising a steadying sheet or plate, flexible means connected thereto to suspend the same from an overhead support, the connection of the suspending means to the sheet or plate being such that the latter is maintained in equipoise, said sheet or plate having formed therewith and extending upwardly therefrom a projecting portion adapted axially to enter and support for use a package of twine, said sheet or plate acting to balance the twine package and to present an extended surface to steady the oscillations of the holder when the twine is drawn upon for use.

3. A twine holder comprising a steadying sheet or plate, means connected thereto to suspend the same from an overhead support, the connection of the suspending means to the sheet or plate being such that the latter is maintained in equipoise, said sheet or plate having a member adapted to penetrate a package of twine and to support the same for use, the sheet or plate being recessed upon opposite sides of the penetrating member for the reception of the twine package.

4. A twine holder comprising a steadying sheet or plate, means connected thereto to suspend the same from an overhead support, the connection of the suspending means to the sheet or plate being such that the latter is maintained in equipoise, said sheet or plate having a member adapted to penetrate a package of twine and support the same for use, the sheet or plate being recessed upon opposite sides of the penetrating member for the reception of the twine package, thereby providing opposite upwardly extending portions, to which the suspending means is connected, said sheet or plate acting to balance the twine package and to oppose an extended surface to steady the oscillations of the holder when the twine is drawn upon for use.

882,245. TWINE-HOLDER. FRANCIS W. GIBSON, West Roxbury, Mass., assignor to The H. D. Beach Company, Coshocton, Ohio, a Corporation of Ohio. Filed July 19, 1907. Serial No. 384,545.

1. A twine holder comprising a reticulated, open topped twine receptacle having an opening in the lower portion thereof, through which the twine may be delivered for use, a steadying sheet or plate, said sheet or plate having a portion thereof shaped to conform substantially to the outline of said twine receptacle and partially encompassing the same, there being means for permanently securing said sheet or plate and said twine receptacle so that the former partially encompasses the twine holder, and flexible means for suspending said twine holder from an overhead support, said suspending means being connected to said sheet or plate, thereby to support the twine holder, the connection of the suspending means to the sheet or plate being such that the latter is maintained in equipoise, the twine receptacle being balanced by the said sheet or plate, thereby maintaining the receptacle with its mouth upright when the twine is drawn upon for use and steadying the movements thereof.



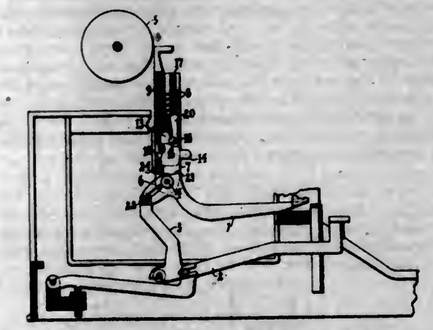
2. A twine holder comprising a twine receptacle from which the twine may be delivered for use, a steadying sheet or plate, said sheet or plate being shaped to conform to the contour of the twine receptacle and partially encompassing the same and being connected to said twine receptacle to move therewith, and means for suspending said twine holder from an overhead support, said suspending means being connected to said sheet or plate, thereby to support the twine holder, the connection of the suspending means to the sheet or plate being such that the latter is maintained in equipoise the twine receptacle being balanced by the said sheet or plate, thereby maintaining the receptacle with its mouth upright when the twine is drawn upon for use and steadying the movements thereof.

3. A twine holder comprising a twine receptacle from which the twine may be delivered for use, a steadying sheet or plate presenting a relatively large substantially plane surface, said sheet or plate being connected to said twine receptacle to move therewith, and flexible means for suspending said twine holder from an overhead support, said suspending means being connected to said twine holder to support the same, the connection of the suspending means to the twine holder being such that the sheet or plate is maintained in equipoise the twine receptacle being balanced by the said sheet or plate, thereby maintaining the receptacle with its mouth upright when the twine is drawn upon for use and steadying the movements thereof.

4. A twine holder comprising a twine receptacle from which the twine may be delivered for use, a steadying sheet or plate presenting a relatively large substantially flat surface, said sheet or plate being connected to said twine receptacle to move therewith, and means for suspending said twine holder from an overhead support, said suspending means being connected to said twine holder to support the same, the connection being such that the twine receptacle and sheet or plate are maintained in equipoise, the twine receptacle being balanced by the said sheet or plate, thereby maintaining the receptacle with its mouth upright when the twine is drawn upon for use and steadying the movements thereof.

5. A twine holder comprising an open topped wire mesh twine receptacle having an opening in the lower portion thereof, through which the twine may be delivered for use, a metallic sheet or plate, said sheet or plate having a portion thereof shaped to conform substantially to the outline of said twine receptacle and partially encompassing the same and in close proximity thereto, said sheet or plate having projecting tangs, whereby the sheet or plate may be attached to the twine receptacle, and a chain for suspending said twine holder from an overhead support, said chain being connected to said sheet or plate upon opposite sides of the twine receptacle, the connection of the chain to the sheet or plate being such that the latter is maintained in equilibrium, the twine receptacle being balanced by the said sheet or plate, thereby maintaining the receptacle with its mouth upright when the twine is drawn upon for use and steadying the movements thereof.

882,246. TYPE-WRITING MACHINE. CHARLES GIBBS, New York, N. Y., assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of New Jersey. Filed July 8, 1907. Serial No. 382,665.



1. The combination of a segment having radiating slots, hangers in the form of thin plates detachably fitted in said slots, thin plate-like releasable locking devices fitted to vibrate in said slots, one for each hanger, each of said locking devices mounted for a swinging movement, to lock its hanger in its socket or release it therefrom independently of all the other hangers, and type-bars pivoted to portions of the hangers which project from the slots.

2. The combination of a segment having sockets, hangers in the form of thin plates fitted in said sockets, two separate seats being provided upon the segment for each of said hangers, pivoted cam plates fitted in said sockets for locking the hangers against all of said seats, and type-bars pivoted to portions of the hangers which project from the sockets.

3. The combination of a segment having radiating slots, hangers in the form of thin plates fitting in said slots, the segment being provided with seats, thin plate-like individual locking means fitted to vibrate in said slots, each of said locking means mounted to press its hanger against its seat independently of all of the other hangers, and type-bars pivoted to portions of the hangers which project from the slots.

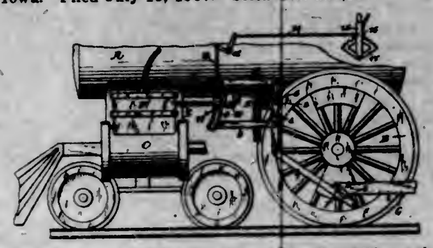
4. The combination of a segment having sockets, hangers in the form of thin plates fitting in said sockets, said segment provided with two separate seats for each hanger, individual releasable pivoted locking devices fitting in said sockets for pressing each hanger against both of its seats, independently of all the other hangers, and type-bars pivoted to portions of the hangers which project from the sockets.

5. The combination of a segment having sockets, hangers in the form of thin plates detachably fitted in said sockets, a curved rod secured upon said segment to form seats for the hangers, the latter having shoulders to bear

against the body of the segment, individual locking means pressing each hanger against said rod, and also pressing each shoulder against the segment, and type-bars pivoted to portions of the hangers which project from the sockets.

[Claims 6 to 15 not printed in the Gazette.]

882,247. VALVE-GEAR. JOHN HAAS, Fort Madison, Iowa. Filed July 19, 1907. Serial No. 384,587.



In a locomotive valve gear, the combination with a valve rod secured through a block adjacent one end, of a movable link within which said block is adjustably carried, a pivoted rocker arm, rocker rods extending parallel with one another at all times and pivotally connecting the upper and lower ends of said link to said rocker arm above and below the pivot thereof, a connecting rod pivotally secured to the free end of said rocker arm and extending therefrom, and a drag-link pivotally connected at one end to the free end of said connecting rod and pivotally connected at its other end to the main pin of the locomotive driving wheel, substantially as described.

882,248. ATTACHMENT FOR CHAIRS. GUSTAVE W. HAAS, Los Angeles, Cal., assignor of one-half to Margaret B. Fowler, Pasadena, Cal. Filed Nov. 25, 1907. Serial No. 403,731.



1. An attachment for chairs embodying independent clamp frames, wheels journaled on said frames, separated clamping members on each frame and means for holding the axes of the wheels in alinement when the clamps are applied to a chair.

2. An attachment for chairs embodying a removable caster wheel frame and wheel for the rear of the chair, and independent front clamp frames each having separated clamping members, and inwardly extending projections, supporting wheels journaled on the clamp frames and a cross shaft coöperating with the projections for holding the axes of the wheels in alinement when applied to a chair.

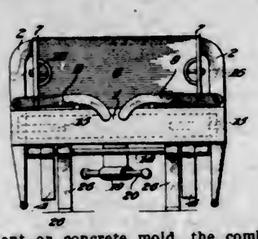
3. An attachment for chairs embodying a removable caster wheel frame and wheel for the rear of the chair, separate clamp frames having wheels journaled thereon for the front of the chair, separated clamps on each clamp frame located at one side of the axis of the wheels and a cross shaft for holding the axes of the wheels in alinement when the frames are clamped to a chair.

4. An attachment for chairs embodying a removable caster wheel frame and wheel for the rear of the chair and separate clamp frames for the front of the chair having supporting wheels journaled on stud axles projecting from one side of said frames and spaced clamp arms projecting from the opposite side of said frames.

5. An attachment for chairs embodying a removable caster wheel frame and wheel for the rear of the chair and separate clamp frames for the front of the chair having supporting wheels journaled on stud axles projecting from the outer side of said frames, spaced clamp arms projecting from the innerside of said frames, projections on the inner side of the frames and a cross shaft coöperating at the ends with said projections to hold the axes of the wheels in alinement.

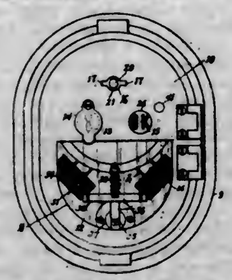
[Claims 3 to 9 not printed in the Gazette.]

882,249. CEMENT OR CONCRETE BLOCK MOLD. ARTHUR M. HAIGHT, Jackson, Mich., assignor to Day P. Vining, Jackson, Mich. Filed Jan. 7, 1907. Serial No. 351,069.



In a cement or concrete mold, the combination of a frame having two outwardly projecting knobs made integral therewith, a front frame having swinging connection with said frame, a pallet supported on said frame, shafts rigidly connected to said frame, end frames slidably mounted on said shafts, arms connected to said end frames and having slidable action on said knobs, means for reciprocating said end frames and arms, said arms engaging said pallet for the purpose described.

882,250. FIRE-ALARM BOX. MAYNARD W. HAMBLIN, Milwaukee, Wis., assignor to American District Telegraph Company, New York, N. Y., a Corporation of New Jersey. Filed Feb. 27, 1902. Serial No. 96,010.



1. The combination of a main circuit, a plurality of signaling instruments within the main circuit, a shunt or short circuit for each signaling instrument, a make and break device for each signaling instrument and within the main circuit, means for operating said make and break in order to transmit a signal through the main circuit from the instrument which is operated, a make and break device in each shunt circuit, said make and break device being normally broken, a connection between the two make and break devices, and adapted when operated to a certain extent to cause the make and break of the main circuit to make and break said circuit, but allow the short circuit to remain broken, whereby a signal is transmitted from the signaling instrument from which the signal is sent through the main circuit, and means for operating the connection between the two make and break devices in such manner as to cause the make and break of the main circuit to be operated an augmented number of times, whereby an increased number of signals are transmitted thereby, and to also cause the make and break of the short circuit to be closed, whereby the current is completed through said short circuit.

2. The combination of a main electrical circuit, a plurality of signaling instruments within the main circuit, a short or shunt circuit for each signaling instrument, a toothed wheel for each signaling instrument and within the main circuit, a make and break brush for each signaling instrument and within the main circuit, and adapted to act on the toothed periphery of each wheel and thereby make and break said main circuit, a rotatable disk in the shunt or short circuit of each instrument, a make and break contact brush in each instrument and normally out of contact with the rotatable disk, a connection between the toothed wheel and the rotatable disk and adapted when operated to a certain extent to cause the toothed wheel to rotate a limited distance and cause the make and break brush relating thereto to act on the toothed periphery of the wheel and thereby make and break the current through the main circuit, the rotatable disk at the same time being rotated only to such limited extent as to leave the free end of the make and break brush relating thereto in its normal position out of contact with said disk, whereby a signal is sent from the instrument which is operated and through the main circuit, and means for operating the connection between the toothed wheel and the rotatable disk in such manner as to cause said wheel and the disk to rotate to a greater extent, said increased rotation of the toothed wheel causing an increased number of signals to be sent, and said increased rotation of the disk causing said disk to contact with the make and break brush relating thereto, whereby the current is completed from the instrument which is operated through the short circuit.

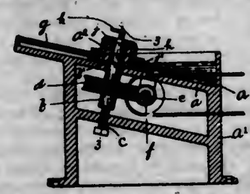
3. The combination of a main circuit, a plurality of signaling instruments within said main circuit, a short or shunt circuit for each signaling instrument, a toothed wheel for each signaling instrument, and within the main circuit, a make and break brush for each signaling instrument and within the main circuit, and adapted to act on the toothed periphery of each wheel, and thereby make and break the main circuit, a rotatable disk in each signaling instrument, said disk provided with a notch in its periphery, a make and break contact brush within each instrument and having its free end normally in the notch of the disk, whereby electrical contact between the two is broken, a connection between the toothed wheel and the rotatable disk and adapted when operated to a certain extent to cause the toothed wheel to rotate a limited distance and thereby bring the make and break brush relating thereto into and out of engagement with the teeth of said wheel and thereby make and break the current through the main circuit, the rotatable disk at the same time being rotated only to such limited extent as to leave the free end of the make and break brush relating thereto in the notch of the disk, whereby a signal is transmitted from the instrument from which the signal is sent through the main circuit, and means for operating the connection between the toothed wheel and the rotatable disk so as to cause said toothed wheel and the disk to rotate to a greater extent, said increased rotation of the disk causing the unnotched portion of the disk to be brought into contact with the brush relating thereto, whereby the current is completed from the instrument from which the signal is sent through the short circuit, and said increased rotation of the toothed wheel causing an increased number of signals to be sent from the instrument which is operated.

4. The combination of a main circuit, a plurality of signaling instruments within said main circuit, a short or shunt circuit for each signaling instrument, a make and break device for each signaling instrument, and within the main circuit, means for operating each main circuit make and break in order to transmit a signal through the main circuit from the instrument which is operated, a make and break device in each shunt circuit, said make and break device being normally broken, a connection between the two make and break devices and adapted when operated to a certain extent to cause the make and break of the main circuit to make and break said circuit, but allow the short circuit to remain broken, whereby a signal is transmitted from the signaling instrument from which the signal is sent through the main circuit, and means for operating the connection between the two make and break devices in such manner as to cause the main circuit make and break of any signaling instrument of the series to be operated an augmented number of times, whereby an increased number of signals are sent, and to also cause the make and break of the short circuit to be closed, whereby the current is completed through said short circuit, the short circuiting, furthermore, when a plurality of instruments are operated at the same time, causing the short circuit of one of the instruments which is operated, and which is nearest to a receiving station, to deprive the other operated instruments of current, and hence permitting only the signal from said instrument to be received at the receiving station.

5. In alarm transmitting apparatus, the combination with transmitting means comprising current-varying devices, spring-operated driving means therefor including a spring normally under tension, detent means normally holding the spring under tension but including means permitting increase of spring tension but adapted to arrest operation of such driving means upon return of the spring to normal tension, and winding means for said spring, of a case inclosing said transmitting means but having an opening opposite said winding means adapted to permit the insertion therethrough of an instrument to engage and operate said winding means, and detent-releasing means inclosed within said case and comprising an operating member adapted for manual operation, said casing comprising means normally preventing access to said operating member but adapted to be operated to permit such access.

[Claim 6 not printed in the Gazette.]

882,251. CEMENTING-MACHINE. WILLIAM A. KNIPE, Ward Hill, Mass. Filed Oct. 1, 1907. Serial No. 395,340.



1. A cementing machine comprising a support and means for rotating the same, a table having an annular, work-receiving surface on its upper side and centrally mounted, with relation to said surfaces, on said support in position to hold said surface adjacent the horisontal, and a cement holding and distributing gate extending across said surface with its lower edge at a uniform distance therefrom, substantially as described.

2. A cementing machine comprising a support and means for rotating the same, a circular table having an approximately flat work-receiving surface on its upper side and centrally mounted on said support in position to hold said surface adjacent the horisontal, and a cement holding and distributing gate extending from a point adjacent the center to the edge of said table with its lower edge at a uniform distance from said surface, substantially as described.

3. A cementing machine comprising a support and means for rotating the same, a table having an annular, work-receiving surface on its upper side and centrally mounted, with relation to said surface, on said support in position to hold said surface adjacent the horisontal, a cement

holding and distributing gate extending across said surface with its lower edge at a uniform distance therefrom, and a retaining wall extending from a point adjacent the end of said gate in a direction opposite the direction of rotation of said support, substantially as described.

4. A cementing machine comprising a support and means for rotating the same, a circular table having an approximately flat work-receiving surface on its upper side and centrally mounted on said support in position to hold said surface adjacent the horizontal, a tank supported beneath said table having sides disposed adjacent and beyond the edge thereof, and a cement holding and distributing gate extending from a point adjacent the center of said table to the edge thereof, substantially as described.

5. A cementing machine, comprising a tank having a bearing extending through the bottom thereof, a shaft mounted to rotate in said bearing, a table axially supported on the upper end of said shaft and axially movable into and out of driving engagement therewith, means for supplying the upper surface of said tank with cement, and means below the tank for driving said shaft, substantially as described.

[Claim 6 not printed in the Gazette.]

882,252. GUARD FOR THE KNIVES OF MACHINES. PAUL KNUTH, St. Joseph, Mich. Filed Mar. 28, 1907. Serial No. 365,143.



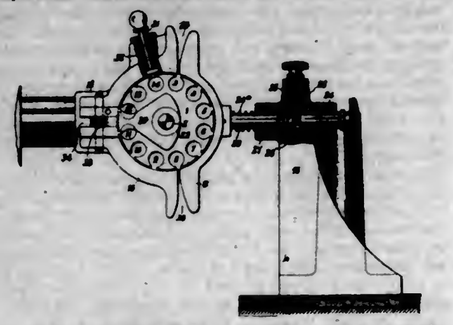
1. A guard attachment for the knives of rotary cutters, having in combination a supporting arm adapted to be attached to the table substantially parallel with the path of travel of a board toward the knives, a plate pivoted near one corner to a part of said arm intermediate its ends and extending over that portion between the point of pivoting and the end nearest the knives, and over the knives, and means engaging between said end of the arm nearest the knives and a projecting lug portion of the plate, whereby the displacement of the plate by the engagement thereagainst of an object approaching it from a particular direction is yieldingly opposed, and the plate restored to its normal position upon the cessation of the displacing pressure thereagainst, substantially as described.

2. In combination with a supporting table provided with a crosswise extending knife cavity, a knife rotatably supported therein, an arm piece adapted to be attached to said table in a position of parallelism with respect to its longitudinal axis, a guard plate provided with downwardly depending flanges on two sides pivotally supported by said arm in a horizontal plane above said cavity, said knife and that portion of said arm between the point of pivoting of the plate thereto and the end nearest said knife, and a spring connecting said guard plate to the covered end of said arm whereby its movement away from its normal position because of the engagement thereagainst of an object moving lengthwise of the table is yieldingly opposed, substantially as described.

3. In combination with an arm adapted to be secured to a table, a plate having depending flanges around two of its sides pivotally secured to said arm and adapted to swing thereon with a part of said arm within the cavity formed by the body of the plate and said depending flanges, substantially as described.

4. In combination with an arm adapted to be secured to a table, a plate pivotally secured to said arm and adapted to swing thereon with a part of said arm at all times beneath the plate, a projection extending below the said guard upon which the guard may rest and a spring connecting the arm and the plate, whereby the plate is yieldingly held from displacement from its normal position, substantially as described.

882,253. COIL-WINDING MACHINE. FRED R. KUNKEL, Wilkinsburg, Pa., assignor to Westinghouse Electric & Manufacturing Company, a Corporation of Pennsylvania. Filed June 12, 1905. Serial No. 264,871.



1. The combination with a rotatable member comprising two bearings, the axes of which are in alinement and are perpendicular to the axis of rotation of said member, of two segmental guide plates, one of which is a part of said member, while the other is rotatably mounted upon a separate base.

2. The combination with a rotatable driving member that comprises two bearings, the axes of which are in alinement and are substantially perpendicular to the axis of rotation of said member, and a semi-cylindrical plate, of a second complementary plate that is rotatably mounted on a separate base, both of said rotatable plates having a common axis of rotation.

3. A rotatable winding device for slotted armature cores comprising a plurality of shaft bearings, the common axis of which is perpendicular to the axis of rotation of said device, means for guiding a conductor into a predetermined pair of core slots as said core is rotated, and means for engaging any one of the core slots to lock the core in the winding device.

4. A rotatable winding device for longitudinally slotted cylindrical cores comprising a plurality of bearings, the common axis of which is perpendicular to the axis of rotation of said device, means for guiding a conductor into a predetermined pair of core slots as said core is rotated, and a locking pin that engages a core slot to prevent the core from rotating on its axis.

5. A rotatable winding device for slotted armature cores comprising a fixed shaft-bearing and a detachable shaft-bearing having a common axis which is perpendicular to the axis of rotation of said device, means for guiding a conductor into a predetermined pair of core slots as said core is rotated, and a locking device that engages one of the core slots.

[Claims 6 to 8 not printed in the Gazette.]

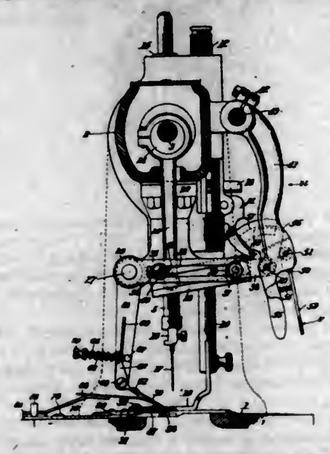
882,254. RUFFLING MECHANISM FOR SEWING-MACHINES. ALEXANDER LAUBSCHER, Bridgeport, Conn., assignor, by mesne assignments, to Singer Manufacturing Company, a Corporation of New Jersey. Filed June 19, 1905. Serial No. 265,978.

1. In a ruffling mechanism for sewing machines, a presser-foot, an edge-turner carried by the presser-foot, a pivoted folder-blade arranged alongside of and coöperating with the edge-turner to fold over the edge of the material, and a crimping-blade, the upper portion of the edge-turner serving as a stripper-plate which in conjunction with the folder-blade acts to hold the work as the crimping-blade recedes.

2. In a ruffling mechanism for sewing machines, a presser-foot, a folder-blade, and a crimping-blade, in combination with an edge-turner carried by the presser-foot, said presser-foot having an opening through which the edge-turner is exposed to the action of the said blades.

3. In a ruffling mechanism for sewing machines, a presser-foot having a lateral extension beyond the needle-hole

therein and cut away at one side between the needle-hole and lateral extension, an edge-turner arranged beneath the presser-foot and supported upon said lateral extension with its upper surface exposed by said cut-away portion, a folder-blade pivotally arranged alongside of the edge-turner, a crimping-blade and a support therefor by which said crimping-blade is maintained above the presser-foot and engages the said upper surface of the edge-turner.

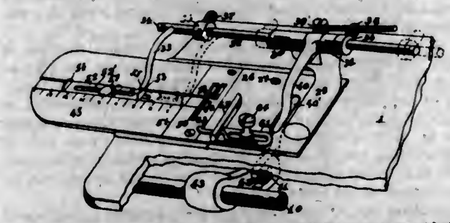


4. In a ruffling mechanism for sewing machines, an adjustably secured vibrating crimping-blade, an adjustably secured folder-blade, an edge-turner, and a presser-foot carrying said edge-turner and having an opening to expose the upper surface of the edge-turner to the action of the crimping-blade and folder-blade, to form ruffles or plaits as the material is fed to the action of the stitch-forming mechanism.

5. In a ruffling mechanism for sewing machines, an adjustably secured vibrating crimping-blade, an adjustably secured folder-blade, an edge-turner, and a presser-foot carrying said edge-turner and having an opening to expose the upper surface of the edge-turner to the action of the crimping-blade and folder-blade to form ruffles or plaits as the material is fed to the action of the stitch-forming mechanism, in combination with means including a hand-lever for controlling the movements of the crimping-blade at the will of the operator.

[Claims 6 to 15 not printed in the Gazette.]

882,255. TUCK-MARKER FOR SEWING-MACHINES. ALEXANDER LAUBSCHER, Bridgeport, Conn., assignor, by mesne assignments, to The Singer Manufacturing Company, a Corporation of New Jersey. Filed Dec. 9, 1905. Serial No. 291,089.



1. In a tuck-marker for sewing machines, a gage plate, an adjustable gage thereon, and an adjustable spring plate with which said adjustable gage is slidably connected for effecting independent adjustments of the adjustable gage and spring plate, in combination with a marking finger, means to adjust it with relation to the adjustable gage and means for vibrating it.

2. In a tuck-marker for sewing machines, a slotted gage plate, a slotted adjustable gage and a slidable spring plate adjustably secured relatively to said gage plate and adjusting gage, in combination with a marking finger and means for actuating it.

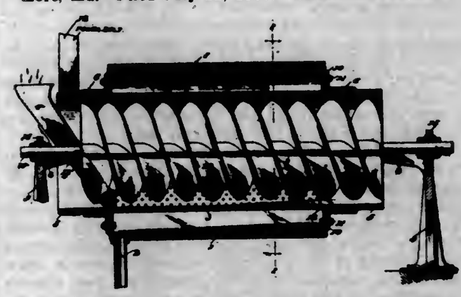
3. In a tuck-marker for sewing machines, the combination of an edge gage, an adjustable gage, a marking finger, a shaft upon which said finger is mounted, a feed lift rock-shaft and connections between said feed lift rock-shaft and marking finger for transmitting rocking movements from said feed lift rock-shaft to said marking finger.

4. In a tuck-marker for sewing machines, the combination of an edge gage, a marking finger, an adjustable gage provided with upturned lips which coact with the marking finger, an adjustable spring plate, connections between said spring plate and adjustable gage, a graduated gage plate, a feed lift rock-shaft, a marking finger rock-shaft, and connections, including a lever provided with a disengaging member, between said feed-lift rock-shaft and marking finger rock-shaft.

5. A tuck-marker for sewing machines, having a gage plate slotted longitudinally, an adjustable gage flanged at its opposite ends, slotted longitudinally and supported in said gage plate in alinement with its slot, and a stop device connecting the said gage plate and gage, in combination with a tuck-marker finger, a rock-shaft therefor, and means to vibrate said rock-shaft.

[Claims 6 to 8 not printed in the Gazette.]

882,256. CENTRIFUGAL SAND-DRIER. CHARLES S. LEE, Baltimore, Md., assignor to Frank G. Turner, Baltimore, Md. Filed July 11, 1907. Serial No. 383,814.



1. A combined drying and conveying device comprising a fixed imperforate casing, a rotatable perforated cylinder contained therein and a stationary screw conveyer supported in said perforated cylinder.

2. A combined drying and conveying device comprising a fixed imperforate casing, a perforated cylinder passing therethrough and entirely open at the discharge end thereof, bearings for said cylinder engaging the periphery thereof, means for rotating said cylinder also engaging the periphery thereof, and a stationary screw conveyer contained in said perforated cylinder.

3. A combined drying and conveying device comprising a fixed imperforate casing, a perforated cylinder of uniform bore throughout and entirely open at its discharge end passing therethrough, bearings for said cylinder engaging the periphery thereof, means for rotating said cylinder also engaging the periphery thereof, and a stationary screw conveyer contained in said perforated cylinder.

4. A combined drying and conveying device comprising a fixed imperforate casing, a perforated cylinder contained therein and entirely open at both ends, bearings for said cylinder engaging the periphery thereof, means for rotating said cylinder also engaging the periphery thereof, and a stationary screw conveyer supported in said perforated cylinder.

5. A combined drying and conveying device comprising a fixed imperforate casing, a perforated cylinder of uniform bore throughout and open at both ends passing therethrough and provided at each end with a thickened bearing

surface, bearings for said cylinder engaging said bearing surfaces, means for rotating said cylinder also engaging one of said bearing surfaces, and a stationary screw conveyer supported in said perforated cylinder.

[Claim 6 not printed in the Gazette.]

882,257. INCANDESCENT LAMP. MATTHEW M. MERRITT, Middleton, Mass., assignor to National Electric Lamp Company, Cleveland, Ohio, a Corporation of New Jersey. Filed Feb. 11, 1907. Serial No. 356,666.



1. An incandescent lamp having a bulb and a base portion, the latter comprising a thin shell of electrolytically deposited conductive material in which the neck of said bulb is secured by an intervening body of cementitious material, said shell having threaded sides to adapt it to fit a threaded lamp holding socket, a body of insulating material at the bottom of said shell, the end of the latter being secured by physical adherence to the adjacent surface of said insulating body and conforming to the contour and irregularities of the surface thereof, conductive material secured to the tip end of said insulating body, but separated from the threaded shell by the intervening and exposed surface of said insulating body, and lamp terminals connected one to said shell and the other to the conductive material at the tip of said insulating body.

2. As a new article of manufacture, an incandescent lamp base comprising a thin shell of electrolytically deposited conductive material in which the neck of an incandescent lamp bulb is adapted to be secured, said shell having threaded sides to fit a threaded lamp holding socket, a body of insulating material at the bottom of said shell, the end of the latter being secured by physical adhesion to the outer surface of said insulating body thereby to conform to the contour and irregularities thereof for preventing displacement thereof and conductive material secured to the tip end of said body, but separated from said threaded shell by an intervening and exposed surface of said insulating body.

3. As a new article of manufacture, a base for incandescent lamp bulbs, comprising a body 9 of insulating material, a thin shell 13 of electrolytically disposed conductive material secured by physical adherence to the outer surface of said insulating body conforming to the contour and irregularities thereof, and provided with auxiliary anchoring means 8 for retaining it thereon, said shell extending above said insulating body to present a socket in which the stem of an incandescent lamp bulb may be secured, conductive material 12 upon the opposite end of said body, but separated from said shell by an intervening and exposed surface of said insulating body, and anchoring means for said end conductive material.

4. An incandescent lamp having a bulb and a base portion, the latter comprising a thin shell of electrolytically deposited conductive material in which the neck of the bulb is secured, said shell having threaded sides to adapt it to fit a threaded lamp holding socket, there being a body of insulating material connected to said shell, conductive material secured to the tip end of said insulating material, but separated from the threaded shell by the intervening and exposed surface of said insulating material, and lamp terminals connected one to said shell and the other to the conductive material at the said tip of said insulating body.

882,258. PROCESS FOR THE MANUFACTURE OF INCANDESCENT-LAMP BASES. MATTHEW M. MERRITT, Middleton, Mass., assignor to National Electric Lamp Company, Cleveland, Ohio, a Corporation of New Jersey. Original application filed Feb. 11, 1907, Serial No. 356,666. Divided and this application filed May 27, 1907. Serial No. 375,829.

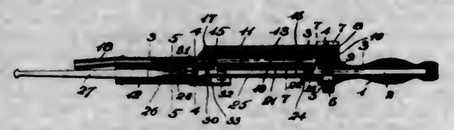


1. The process of forming an incandescent lamp base which consists in providing a suitably formed support of fusible material, electrolytically depositing a coating of conducting metal thereon, and providing insulating material for separating the end and side contacts of the electrolytically deposited shell.

2. The process of forming an incandescent lamp base which consists in forming a false base of fusible material, and producing through the aid of such false support electrolytically deposited metal shell portions separated by intervening insulating material.

3. The process of forming an incandescent lamp base which consists in providing a suitable mold, placing an insulating filler in the bottom of the mold, filling the mold above the filler with a material having a low fusing point, electrolytically depositing a coating of conducting material upon the sides of the fusible material and upon the tip or base of the insulating filler, and withdrawing said fusible material by subjecting it to a temperature above its melting point.

882,259. PNEUMATIC CARVING-DRILL. HERMAN MEYER, St. Louis, Mo. Filed Sept. 24, 1907. Serial No. 394,422.



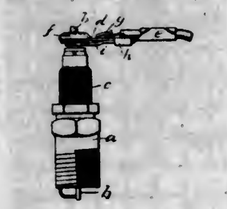
1. A tool of the class described, comprising a handle, a driving ring arranged for operation therein, in the periphery of which ring is formed a plurality of pockets, and which driving ring is operated by compressed air carried through a portion of the handle, a shaft arranged for operation in the handle and driven by the driving ring, a bit carried by the forward end of the shaft, and means whereby the exhaust from the driving ring is discharged onto the forward end of the bit for blowing away the cuttings of the bit.

2. In a tool of the class described, a handle, portions of which are tubular, a housing arranged between the tubular portions of the handle, a driving ring arranged for operation in the housing, in the periphery of which ring is formed a plurality of pockets, a controlling valve arranged in one of the tubular portions of the handle to the rear of the driving ring, a shaft arranged for rotation in the handle and operated by the driving ring, and a bit carried by the forward end of the shaft.

3. In a tool of the class described, a handle, portions of which are tubular, a housing arranged between the tubular portions of the handle, a driving ring arranged for operation in the housing, in the periphery of which ring is formed a plurality of pockets, a controlling valve arranged in one of the tubular portions of the handle to the rear of the driving ring, a shaft arranged for rotation in the handle and operated by the driving ring, a bit carried by the

forward end of the shaft, and means whereby the exhaust from the driving member is conveyed and discharged onto the forward end of the bit.

882,260. SPARK-PLUG CLIP. CHARLES A. MEZGER, New York, N. Y., assignor to C. A. Mezger Inc., New York, N. Y., a Corporation of New York. Filed Sept. 6, 1906. Serial No. 333,420.



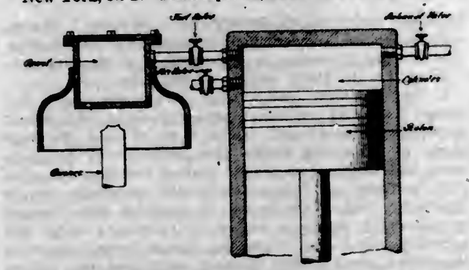
1. A spark plug clip, comprising a body having at one end pliable fingers adapted to engage the insulated portion of the wire and a tongue struck up from the body and adapted to be electrically connected with the wire, said body also having a cupped cap with a radial slot therein and pliable prongs at the sides of the body and a fork arranged under the body and held rigidly thereto by means of said pliable prongs the bifurcated portion of the fork registering with the slot in the cap.

2. A spark plug clip having two separate opposing members, spaced from each other and adapted to receive part of the plug between them, each of said members being slotted and adapted to receive a part of the plug in the slot pliable fingers on one member engaging the other member and means for connecting a wire to the clip.

3. A spark plug clip having two separate opposing members spaced from each other, and adapted to receive a part of the plug between them, the outer or top member being slotted to receive in the slot the central electrode of the plug pliable fingers on one member engaging the other member to hold them together and means for connecting a wire to the clip.

4. A spark plug clip having a body terminating in a slotted cap, a fork lying against the under side of the body and having its bifurcated end coincident to the slotted cap, whereby the fork and cap may receive between them the nut of the plug and the slotted parts may straddle parts of the plug, means for connecting the fork with the body and means for electrically and mechanically connecting the wire to the body.

882,261. ART OF DERIVING ENERGY FROM THE DIRECT COMBUSTION OF FUEL. CHARLES A. MEZGER, New York, N. Y. Filed Apr. 19, 1902. Serial No. 103,738.

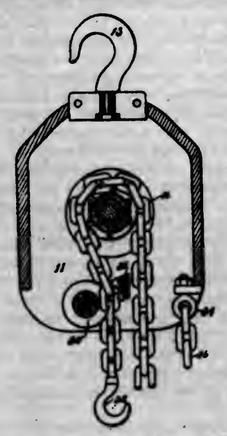


1. The method of deriving energy directly from the combustion of fuel, which consists, first, in heating by fire a non-gaseous fuel devoid of oxygen to a temperature sufficient to transform the fuel into a gas and raise the temperature of the gas sufficiently to cause the gas to burn spontaneously upon supplying oxygen, and in maintaining constantly a quantity of said gas heated to said temperature, second, in withdrawing a minor portion of said quantity of gas heated to said temperature, third, in bringing said minor portion of said gas heated to said temperature into association with oxygen, whereby spontaneously to ignite and burn the gas, and, fourth, in permitting the gases of combustion to expand thereby deriving energy from the force of expansion.

2. The method of deriving energy directly from the combustion of fuel, which consists, first, in heating by fire a liquid fuel devoid of oxygen to a temperature sufficient to transform the liquid fuel into a gas, and to raise the temperature of said gas to a degree sufficient to cause the gas to ignite and burn spontaneously upon bringing it into association with oxygen and in maintaining constantly a body of such gas heated to such temperature, second, in withdrawing a minor portion of said body of gas heated to said temperature, and causing it to associate with oxygen, whereby spontaneously to ignite and burn the gas, and, third, in permitting the gases of combustion to expand, thereby deriving energy from the force of expansion.

3. The method of deriving energy directly from the combustion of fuel which consists, first, in heating by fire a liquid fuel devoid of oxygen and separately heating by compression, air devoid of fuel and carrying such heating of fuel and air to a point at which the liquid fuel is transformed into a gas and the combined temperatures of the air and gas are sufficient to cause the fuel spontaneously to ignite and burn upon associating it with the air and in maintaining constantly a body of such gas heated to such temperature, second, in associating a minor portion of the gas with the air to bring about ignition and combustion of the gas, and third, in permitting the gases of combustion to expand thereby deriving energy from the force of expansion.

882,262. HOIST. EDWARD Y. MOORE, Cleveland, Ohio. Filed Feb. 1, 1907. Serial No. 355,254.

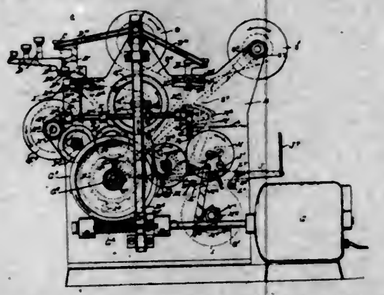


1. The combination of a hoist frame, a supporting hook having its shank swiveled thereto, a lift wheel directly below the said shank, a guide roller below the lift wheel but offset from the plane through said shank and axis of the lift wheel, said roller having a peripheral groove to receive the links facing at right angles to the axis of the roller and a cylindrical portion on each side of the groove to receive the links facing parallel with said axis, a chain extending over the lift wheel and along the inner side of the guide roller, and a chain guard carried by the hoist frame coöperating with said roller and providing a chain-raceway between them limited to a single chain, said guide being out of the way of the portion of the chain depending from the other side of the lift wheel.

2. In a hoist, the combination of a frame including a pair of side plates, a hook having its shank swiveled to said frame, a lift wheel carried by the frame, a guide roller carried by the frame on an axis parallel with the

lift wheel and lower than the axis of the lift wheel and out of the plane through the shank of the supporting hook and the axis of the lift wheel, a chain carried by the lift wheel and deflected by the roller substantially into said plane, and a chain guard consisting of a block stationarily carried between the side plates of the frame and cooperating with said roller, said roller and guard having grooves facing each other.

882,263. APPARATUS FOR AUTOMATICALLY OPERATING TYPE-WRITERS. THOMAS A. MCCALL, Xenia, Ohio. Filed May 29, 1905, Serial No. 262,893. Renewed Jan. 20, 1908. Serial No. 411,756.



1. An automatic actuating apparatus for typewriting mechanism, comprising a movable stencil strip, balls adapted to pass through perforations of said strip, and mechanism coöperating with said balls to cause a type bar to be actuated, as set forth.

2. An automatic actuating apparatus for typewriting mechanism, comprising a movable stencil strip, balls adapted to be moved by said strip and to pass through the perforations of the latter, and mechanism coöperating with said balls for causing a type bar to be actuated, as set forth.

3. An automatic actuating apparatus for typewriting mechanism, comprising a movable stencil strip, balls adapted to fall into the perforations of said strip, and be moved by the latter, and mechanism coöperating with said balls for actuating a type bar, as set forth.

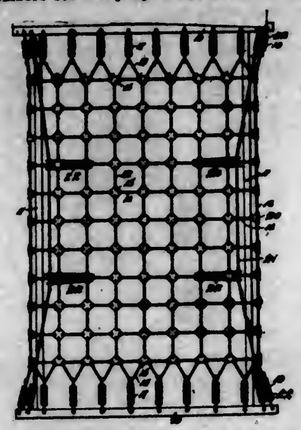
4. An automatic actuating apparatus for typewriting mechanism, comprising a plurality of stencil strips, balls adapted to pass through the perforations of said strips, means for moving one of said strips while the other is at rest, and mechanism coöperating with said balls for causing a type bar to be actuated, as set forth.

5. An automatic actuating apparatus for typewriting mechanism, comprising a plurality of stencil strips, balls adapted to fall into perforations of said strips and be moved by the latter, means for moving one of said strips while the other is at rest, and mechanism coöperating with the balls for causing a type bar to be actuated, as set forth.

[Claims 6 to 31 not printed in the Gazette.]

882,264. BED-SPRING. BURTNETT MCINTOSH, New York, N. Y., assignor to Frank A. Hall, Montclair, N. J. Filed July 25, 1907. Serial No. 385,413.

1. In a bed spring, the combination with a rigid frame comprising side and end rails, of links, connecting members articulating said links in angular formation, springs joining the links to the end bars of the frame, tension strands extending along the side edges of the spring, springs exerting longitudinal tension on said strands and joining them to the end portions of the end bars of the frame, connecting members joining said strands to the adjacent links of the spring, additional tension strands extending along the side edge portions of the spring, springs exerting longitudinal tension on said additional tension strands and joining them to the end portions of said end bars and transverse ties extending from said additional tension strands inward toward the middle portion of the spring and engaged with certain of the first named connecting members for the purpose specified.



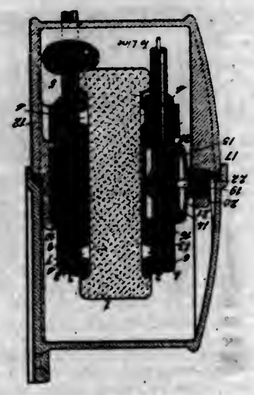
2. In a bed spring, the combination with a rigid rectangular frame having side and end rails, of links, connecting members articulating the same in angular formation, elastic means joining the links to the end rails of the frame, tension strands extending longitudinally along the side edge portions of the spring, elastic means connecting the ends of the tension strands with the end rails of the frame, the second named elastic means being independent of the first named means and transverse ties fastened to the tension strands and extending inward toward each other and toward the center of the spring and joined to parts of the spring at their inner ends, whereby to exert strain on the transverse links and relieve the strain on the middle portions of the end rails of the frame.

3. In a bed spring, the combination with a rigid rectangular frame having side and end rails, of links, connecting members articulating the same in angular formation, elastic means joining the links to the end rails of the frame, tension strands extending longitudinally along the side edge portions of the spring, elastic means connecting the ends of the tension strands with the end rails of the frame, the second named elastic means being independent of the first named elastic means and transverse ties fastened to the tension strands and extending inward toward each other and toward the center of the spring, and joined to certain of the said connecting members at the inner ends of the ties, whereby to exert strain on the transverse links and relieve the strain on the middle portions of the end rails of the frame.

882,265. LIGHTNING-ARRESTER. NEWITT J. NEALL, Pittsburg, Pa., assignor to Westinghouse Electric & Manufacturing Company, a Corporation of Pennsylvania. Filed Jan. 24, 1906. Serial No. 297,691.

1. In a lightning arrester, the combination with a discharge block and conducting plates provided with lateral projections and secured to the faces of said discharge block, of insulating blocks that support the discharge block and are provided with central recesses and with other recesses into which the lateral projections of the conducting plates are seated, a terminal plate located in the central recess in one of the insulating blocks and provided with a boss, insulating sheets having apertures interposed between the terminal plate and one of the plates on the discharge block and directly opposite the boss on the terminal plate, and means for clamping the parts together.

2. In a lightning arrester, the combination with a discharge block and conducting plates secured to the faces thereof, of an apertured sheet of insulating material secured to one of the conducting plates, a terminal piece having a boss located directly opposite the aperture in the insulating sheet, and insulating blocks for supporting the discharge block and for securing the terminal plate in position.



3. In a lightning arrester, the combination with a discharge block, conducting plates secured to the faces thereof, and means for making circuit connection to one of the plates, of a terminal plate having a boss, an apertured insulating sheet interposed between the terminal plate and the other conducting plate upon the face of the discharge block, and insulating blocks for supporting the discharge block, one of which is provided with a central recess in which the terminal plate is located.

4. In a lightning arrester, the combination with a discharge block, conducting plates secured to the faces thereof, and means for making circuit connection to one of the plates, of an apertured insulating sheet interposed between the terminal plate and the other conducting plate upon the face of the discharge block, insulating blocks for supporting the discharge block, one of which is provided with a central recess in which the terminal plate is located, and means for clamping the parts together.

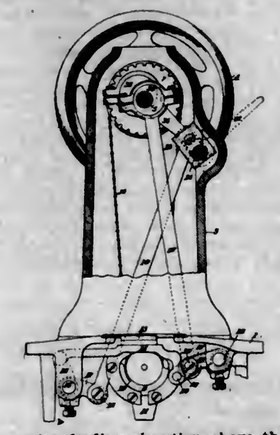
5. In a lightning arrester, the combination with a discharge block, conducting plates secured to the faces thereof, and means for making circuit connection to one of the plates, of an apertured insulating sheet interposed between the terminal plate and the other conducting plate upon the face of the discharge block, insulating blocks for supporting the discharge block, one of which is provided with a central recess in which the terminal plate is located, an inclosing casing, and means for clamping and supporting the parts between the walls thereof.

[Claims 6 to 8 not printed in the Gazette.]

882,266. FEEDING MECHANISM FOR SEWING-MACHINES. DONALD NOBLE and JOHN S. FINCH, Bridgeport, Conn., assignors, by mesne assignments, to The Singer Manufacturing Company, a Corporation of New Jersey. Filed Dec. 4, 1905. Serial No. 290,131.

1. In a feeding mechanism for sewing machines, a feeding eccentric, a feed-dog, and connections between said eccentric and feed-dog for effecting horizontal movements of said feed-dog, in combination with a lifting eccentric, and connections between said lifting eccentric and said feed-dog for giving vertical movements to said feed-dog, said connections between the lifting eccentric and feed-dog including means coacting with the means for effecting the horizontal movements of the feed-dog for maintaining said feed-dog in active feeding elevation above the cloth-plate throughout its feeding movements.

2. In a feeding mechanism for sewing machines, a feeding eccentric, a feed-dog, and connections between said eccentric and feed-dog for effecting horizontal movements of said feed-dog, in combination with a lifting eccentric, and connections between said lifting eccentric and said feed-dog for giving vertical movements to said feed-dog, said connections between the lifting eccentric and feed-dog including a link, coacting with the means for effecting the horizontal movements of the feed-dog for maintaining said



feed-dog in active feeding elevation above the cloth-plate throughout its feeding movements.

882,267. SHUTTLE FOR LOOMS. JOHN A. PERKINS and OAIN J. PERKINS, Salem, Mass. Filed June 3, 1907. Serial No. 376,947.



1. A shuttle of the character described, provided in one of its side walls with a longitudinal slot extending the greater part of the length of the shuttle, and with an eye intersecting the slot near one end, whereby the thread passes through the eye and along and through the slot, for the purpose set forth.

2. A shuttle of the character described, provided in one of its side walls with a longitudinal slot extending the greater portion of the length of the shuttle, said slot extending entirely through the wall opposite the chamber in the shuttle and the portions of the slot at the opposite ends of the shuttle being groove-shaped, said shuttle being provided with an eye intersecting the slot near one end, whereby the thread passes through the eye and along and through the slot, for the purpose set forth.

3. In a shuttle of the character described provided with a longitudinal slot in one of its side walls, a hollow screw constituting an eye located horizontally and transversely in the head of the shuttle and intersecting the slot, said eye being provided in its opposite walls with two horizontal slots of unequal length extending from its outer end, the longer of the two said slots being located nearer the bobbin and registering with the longitudinal slot in the shuttle, and a hole for guiding the thread to the interior of the eye, for the purpose set forth.

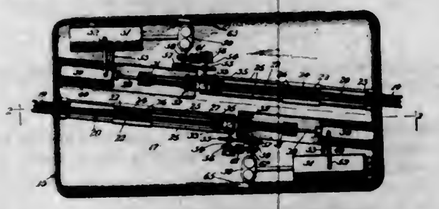
4. In a shuttle of the character described provided with a longitudinal slot in one of its side walls, an eye located longitudinally and transversely in the head of the shuttle and intersecting said slot, and a partition located in and transversely with the shuttle between its head and the adjacent end of the bobbin, said partition being provided with a downwardly extending notch having oppositely inclined sides and a flaring upper edge located in the path of the thread as it passes from the bobbin to the eye and an inwardly extending substantially V-shaped notch between the eye and the longitudinal slot in the wall of the shuttle, whereby the portion of the thread between the bobbin and the eye and the portion of the thread extending from the eye into said longitudinal slot are prevented from becoming entangled together.

882,268. CUSHION-HEEL. REUBEN W. PERRY, Stoneham, Mass., assignor of one-half to George H. Stevens, Melrose, Mass. Filed July 22, 1907. Serial No. 384,858.



A boot or shoe heel having three lifts secured together by a row of stitches passing through all of the lifts near the margin thereof, the bottom lift being composed of leather, the top lift having a marginal portion of leather and an inner portion of rubber, the intermediate lift having its rear portion of rubber which overlaps the rear end of the rubber portion of the top lift, the portions of the top and bottom lifts through which the stitches pass being of leather.

882,269. WAVE-MOTOR. FRANK M. PRATHER, Los Angeles, Cal. Filed Apr. 30, 1907. Serial No. 371,110.



1. In a wave motor, a floating barge, a cable anchored at one end to the sea bottom and passing upwardly to said barge, means to utilize the relative movements of the barge and cable for power purposes, and pressure means attached to the upper end of said cable adapted to pull said cable toward said barge.

2. In a wave motor, a floating barge, a sliding frame mounted on said barge, a cable secured at one of its ends to said sliding frame and at its other end to the sea bottom, a sheave mounted on said sliding frame, an air compressor mounted on the barge adapted to be operated from a rotating drum, an air storage chamber, a small and a large cylinder mounted on the barge, said cylinders provided with pistons and being in open communication with said storage chamber, and a cable attached at one end to the piston of the small cylinder, passing around said rotating drum, over said sheave on said sliding frame, and attached at its other end to the piston in said large cylinder.

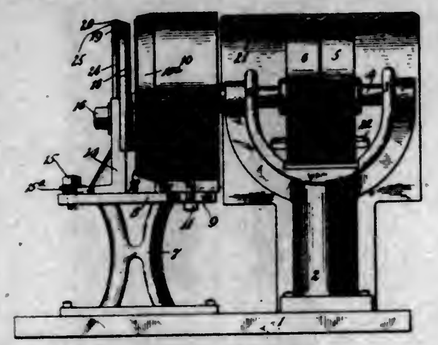
3. In a wave motor, a floating barge, a frame slidably mounted on said barge, a cable secured at one of its ends to said sliding frame and at its other to the sea bottom, a sheave mounted on said sliding frame, a rotating drum mounted on said barge, a large and a small air pressure cylinder mounted on said barge, said cylinders being provided with pistons, a cable secured at one end to the piston in said small cylinder, passing around said rotating drum, over said sheave on said sliding frame and secured at its other end to the piston in said large cylinder.

4. In a wave motor, a floating barge, cables anchored to the sea bottom and extending upwardly to said barge, resilient pneumatic pressure means adapted to pull said cable toward said barge, means whereby the movement of said cable in said barge is reduced, and means to utilize said reduced movement for power purposes.

5. In a wave motor, a floating barge, a cable anchored to the sea bottom and extending upwardly to said barge, a reciprocating carriage mounted in said barge and provided with a plurality of sheaves, said barge being provided with a like number of sheaves, said cable passing successively over the sheaves on said carriage and the sheaves on said barge, and pneumatic pressure means connected to said carriage adapted to hold said cable taut.

[Claim 6 not printed in the Gazette.]

882,270. FLESHING APPARATUS. LAURENTS RUFF, Montreal, Quebec, Canada. Filed Nov. 23, 1906. Serial No. 344,696.



1. A fleshing knife comprising the combination of a rotary blade, a shaft secured to the blade, a pedestal supporting the shaft, loose and fixed pulleys on the shaft, and a hood disposed over the pedestal and the pulleys and provided with belt openings.

2. A fleshing knife comprising the combination of a rotary blade, a pedestal adjacent the knife, a casing disposed on the pedestal, a set screw adjustably securing the casing, and an adjustable guard plate carried by the pedestal.

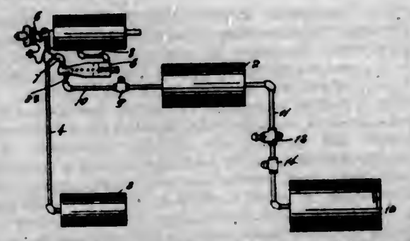
3. A fleshing knife comprising the combination of a rotary blade, a pedestal adjacent the knife, a casing adjustably secured to the pedestal, a bracket disposed on the pedestal, a set screw adapted to hold the bracket, a set screw carried by the bracket, and a guard plate provided with a slot adapted to receive the second set screw.

4. In a fleshing knife, the combination comprising a base plate, a rotary knife supported by the base plate, a pedestal on the base plate, a slotted plate on the pedestal, a casing carried by the slotted plate and disposed around the knife, a bracket disposed on the plate, and a guard plate carried by the bracket.

5. A fleshing knife comprising the combination of a rotary blade, a tubular casing surrounding said knife and spaced therefrom, a beveled edge on said casing adapted to guide the hide to be treated, and means for adjusting said tubular casing toward or from the cutting edge of the knife.

[Claims 6 and 7 not printed in the Gazette.]

882,271. SAFETY-VALVE FOR WATER SYSTEMS IN CONNECTION WITH AIR-BRAKE SYSTEMS. WILLIAM D. SCOTT, Sherman, Tex. Filed June 22, 1907. Serial No. 380,213.



1. A safety device for railway trains comprising a cylinder having a large portion and a reduced portion, a large piston operating in the large portion of said cylinder and a small piston operating in the reduced portion of said cylinder, a common piston rod carrying said pistons, a spring coöperating with said large piston, an adjusting spring seat for said spring, a pipe connecting the large portion of said cylinder with an air brake cylinder, a pipe connecting the reduced portion of said cylinder with the auxiliary reservoir of an air-brake system, and a pipe connecting said reduced portion of said cylinder with an air storage tank.

2. A safety valve for the water system of a train using an air-brake system having communication with the air brake cylinder, communicating with the train line pressure and the auxiliary reservoir of the air brake system, communication with an air-storage tank, and pistons for opening and closing the communication of said valve with said air storage tank.

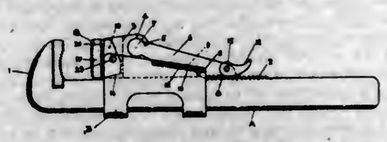
3. In a safety device for water systems of railway trains, the combination with the brake cylinder and the auxiliary reservoir, of a valve operatively connected to said brake cylinder and said reservoir, an air storage tank connected to said valve, a water tank operatively connected to said air storage tank, and pistons movable in said valve to cut off communication of said brake cylinder and auxiliary reservoir with said water tank.

4. In an air-brake system provided with an auxiliary reservoir, a brake cylinder, and pipes connecting said reservoir and said cylinder; a safety valve operatively connected with said cylinder and said reservoir, a water tank, an air storage tank between said valve and said water tank, a pipe forming a communication of said air storage tank and said water tank provided with a non-return check valve and a reducing valve, a pipe connecting said valve and said air storage tank and provided with a non-return check valve, and pistons mounted in said safety valve to open and close the communication between said safety valve and said water tank.

5. A safety valve for the water system of cars connected with an air brake system having communication with the water system and having communication with the air brake system and pistons movable therein for opening and closing the communication between said water system and said air-brake system.

[Claim 6 not printed in the Gazette.]

882,272. PIPE-WRENCH. HENRY W. SIMMS, Bay City, Mich. Filed Apr. 20, 1907. Serial No. 369,280.

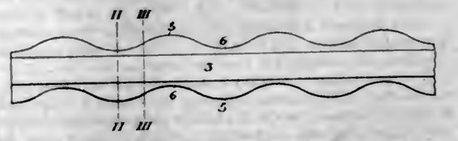


1. A wrench comprising a toothed handle, a jaw slidable thereon, a rigid lever pawl, one end of which is pivotally connected to the jaw, the sides of the jaw being cut away to loosely receive and guide the lever pawl, the opposite end of the pawl extending beyond the jaw and being toothed, the teeth meshing with the teeth on the handle, a spring separate from the pawl for normally maintaining the teeth of the pawl in engagement with the teeth of the handle, the pawl being removable from the jaw against the tension of the spring, and a dog extending rearwardly from the pawl and in substantial alinement therewith, the head of the dog being eccentric and pivotally connected to the toothed end of the pawl, and resting on the toothed edge of the handle, the tail of the pawl being upcurved away from the handle, the dog and pawl forming a toggle.

2. A wrench comprising a toothed handle, a jaw slidable thereon, the jaw having a kerf therein, a T-shaped head, the web of the head being loosely received in the kerf, the web being slotted transversely, a pin passing through the slot and the walls of the kerf, teeth on the head, a rigid lever pawl, one end of which is pivotally connected to the jaw, the sides of the jaw being cut away to loosely receive and guide the lever pawl, the opposite end of the pawl extending beyond the jaw and being toothed, the teeth meshing with the teeth on the handle, a spring separate from the pawl for normally maintaining the teeth of the pawl in engagement with the teeth of the handle, the pawl being removable from the jaw against the tension of the spring, and a dog extending rearwardly from the pawl and in substantial alinement therewith, the head of the dog being eccentric and pivotally connected to the toothed end of the pawl, and resting on the toothed edge of the handle, the tail of the pawl being upcurved away from the handle, the dog and pawl forming a toggle.

3. A wrench comprising a toothed handle, a jaw slidable thereon, the jaw having a kerf therein, a T-shaped head, the web of the head being loosely received in the kerf, the web being slotted transversely, a pin passing through the slot and the walls of the kerf, the upper kerfed edge of the jaw being slanted downward at an angle to the gripping position of the head, the head sliding on such slanted edge, teeth on the head, a rigid lever pawl, one end of which is pivotally connected to the jaw, the sides of the jaw being cut away to loosely receive and guide the lever pawl, the opposite end of the pawl extending beyond the jaw and being toothed, the teeth meshing with the teeth on the handle, a spring separate from the pawl for normally maintaining the teeth of the pawl in engagement with the teeth of the handle, the pawl being removable from the jaw against the tension of the spring, and a dog extending rearwardly from the pawl and in substantial alinement therewith, the head of the dog being eccentric and pivotally connected to the toothed end of the pawl, and resting on the toothed edge of the handle, the tail of the pawl being upcurved away from the handle, the dog and pawl forming a toggle.

882,273. BAR FOR REINFORCED CONCRETE CONSTRUCTION. EDWIN E. SLICK, Pittsburg, Pa. Filed Apr. 20, 1907. Serial No. 369,272.



1. A concrete reinforcing bar having a central body portion and a plurality of flanges projecting beyond the body portion, at least two of said flanges being corrugated in the direction of their projection and the edges of the corrugated flanges being parallel; substantially as described.

2. A concrete reinforcing bar having a central body portion and a plurality of flanges projecting beyond the body portion of the bar, at least two of said flanges being corrugated in the direction of their projection, the corrugated flanges being of uniform thickness throughout the length of the bar when measured in a plane at right angles to their plane of projection; substantially as described.

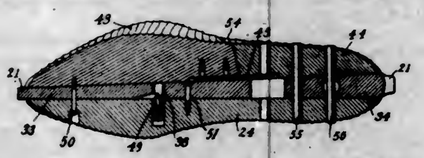
3. A concrete reinforcing bar having a rectangular body portion connecting oppositely projecting flanges extending beyond the body portion on opposite sides of the bar, and two sides of the rectangular body portion having parallel plane faces, at least two of said flanges being corrugated in the direction of their projection with the corrugated face of the flange on one side parallel with that on the opposite side of the body portion of the bar; substantially as described.

4. A concrete reinforcing bar having a rectangular body portion connecting oppositely projecting flanges extending beyond the body portion on opposite sides of the bar, and two sides of the rectangular body portion having parallel plane faces, at least two of said flanges being corrugated in the direction of their projection, the bottom of the corrugation on one flange being opposite the top of the corrugation on the flange on the opposite side of the bar; substantially as described.

5. A concrete reinforcing bar having a rectangular body portion with flat parallel sides, at least two of said sides having outwardly projecting flanges, extending beyond the face of the body portion of the bar, the edges of the flanges being corrugated in the direction of the projection of the flanges and the corrugated edges of the flange on one side being parallel with that on the opposite side of the body portion of the bar; substantially as described.

[Claim 6 not printed in the Gazette.]

882,274. PROCESS OF MAKING LASTS. JOSEPH J. SMITH, New York, N. Y. Filed Dec. 8, 1906, Serial No. 346,852. Renewed Sept. 9, 1907. Serial No. 392,045.



1. The process of making a sectional last which consists in first forming it in the shape of a last of larger than the ultimate size, sawing it into a plurality of pieces, re-assembling said pieces, and reducing the last to its ultimate size.

2. The process of making a sectional last which consists in first turning said last from the rough block to a size exceeding its ultimate size, then saw-cutting the last into a plurality of pieces, then re-assembling said pieces, and finally re-turning the last to its ultimate size and surface-finishing the re-turned lost.
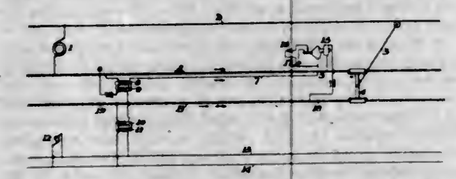
3. The process of making a sectional last which consists in dividing the last vertically lengthwise into two side-pieces and a middle-piece, dividing the middle-piece transversely into fore and heel parts, and re-assembling the heel-part of the middle-piece permanently with the heel parts of the side-pieces.

4. The process of making a sectional last which consists in dividing the last vertically lengthwise to leave a side-piece separate from the remainder of the forward body of the last, then separating the forward side-portion from the heel-portion by a transverse saw-cleft so shaped as to make a joint between fore and heel parts with complemental horizontal salient and reëntrant portions, and attaching the forward side-section thus removed to the heel part.

5. The process of making a sectional last which consists in dividing the last longitudinally to remove a filler-piece from the fore-part before the last is reduced to its ultimate size, separating one of the fore-part side-sections from the heel part, re-assembling said last-parts in rigid relation and turning the last down to its ultimate size.

[Claim 6 not printed in the Gazette.]

882,275. RAILWAY SIGNALING APPARATUS. JOHN D. TAYLOR, Edgewood Park, Pa., assignor to The Union Switch & Signal Company, Swissvale, Pa., a Corporation of Pennsylvania. Filed Jan. 4, 1908. Serial No. 409,250.



1. In a signaling system of the character described, a generator and connections arranged to produce a counter-electro-motive force which will substantially balance the fall of potential in the return rail, and thereby prevent the flow of propulsion current in the signaling circuit; substantially as described.

2. In a signaling system of the character described, a counter-electro-motive force generator connected in shunt with the return rail for the propulsion of current and arranged to oppose the flow of propulsion current in the signaling circuit; substantially as described.

3. In a signaling system of the character described, a transformer having a primary coil connected in shunt with the return rail for the propulsion current and having its secondary in the signaling circuit; substantially as described.

4. In a railway signaling system of the single rail return type, a transformer having its primary coil connected in shunt with the return rail, and its secondary in series with the secondary of the track transformer; substantially as described.

5. In an electric railway signaling system employing an alternating propulsion and using one rail for the purpose of carrying a signaling circuit, while the other rail is used for carrying both the propulsion return current and the signaling current, a transformer having its primary in parallel with a section of the return rail for the propulsion current, and its secondary in series with the secondary of the track transformer and arranged to oppose the flow of propulsion current therein; substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

882,276. ELECTRIC SIGNALING SYSTEM. JOHN D. TAYLOR, Edgewood Park, Pa., assignor to The Union Switch & Signal Company, Swissvale, Pa., a Corporation of Pennsylvania. Filed Jan. 30, 1908. Serial No. 413,301.



1. In a continuous rail block signaling system, track rails having portions of increased impedance; substantially as described.

2. In a continuous rail block signaling system, track rails having portions thereof near the ends of the blocks of increased impedance; substantially as described.

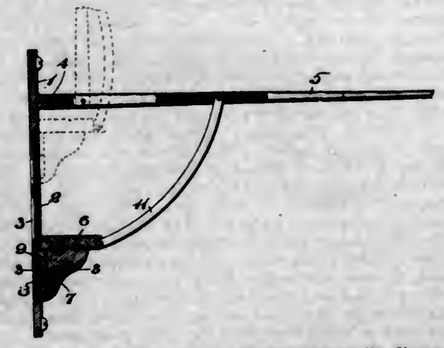
3. In a continuous rail block signaling system, means for increasing the impedance of the track rails adjacent to the ends of the blocks, and signal controlling relays connected to the track rails at opposite sides of the portions thereof of increased impedance; substantially as described.

4. In a block signaling system, track rails which are electrically continuous for all currents, and having portions thereof provided with means for increasing their impedance, means for impressing signaling currents upon the track rails, and signal controlling relays connected to the track rails adjacent to those portions thereof which are of increased impedance; substantially as described.

5. In a block signaling system, track rails which are electrically continuous for all currents, means for increasing the impedance of said rails at the block limits, transformers connected to said rails at intermediate portions of the respective blocks, and signal controlling relays also connected to said rails between the portions of increased impedance and on opposite sides of the points of connection of the transformers; substantially as described.

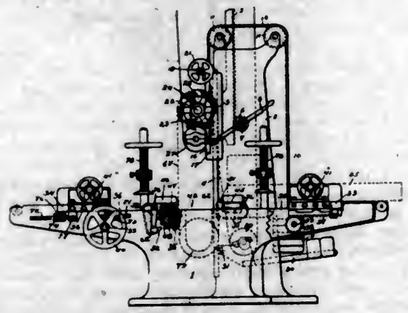
[Claims 6 to 11 not printed in the Gazette.]

882,277. CLOTHES-RACK. HENRY C. TEIPEL, St. Louis, Mo. Filed June 15, 1907. Serial No. 379,267.



A folding clothes rack, comprising a vertically disposed base, in which is formed a slot, a block secured to the upper portion of the base on the front side thereof, a series of radially arranged arms hinged to the block, a semi-circular block arranged to slide on the lower portion of the base, a bracket fixed to and supporting said last mentioned block, and the rear end of which bracket extends through the slot in the base, a plate fixed to the rear end of said bracket behind the base, and a series of curved arms pivotally connected to the radially arranged arms and to the block carried by the bracket.

882,278. VERTICAL TENONING-MACHINE. JOHN R. THOMAS, Cincinnati, Ohio, assignor to J. A. Fay & Egan Co., Cincinnati, Ohio, a Corporation of West Virginia. Filed Aug. 24, 1907. Serial No. 389,937.



1. In a vertical tenoning machine, the combination with a vertical frame and cutter-head movable up and down on said frame, of a laterally movable table at each side of the range of movement of said cutter-head, a stationary table at each side of said range of movement and between said range of movement and said laterally movable table, an end-gage for the stock at the inner edge of said stationary tables projecting within said range of movement and mounted for swinging out of said range of movement, and means for clamping said stock to said laterally movable tables respectively.

2. In a vertical tenoning machine, the combination of a cutter-head saddle having movement up and down, and arranged for supporting a cutter-head, a laterally movable table, a supplemental table, between said laterally movable table and the path of travel of said cutter-head, stock-clamping means for said laterally movable table, an end-gage pivoted to one side of said supplemental table and having an upwardly extending member thereon at the other side of said supplemental table, projecting into said path of travel when in stock-obstructing position, and securing means for said end-gage, constructed and arranged for permitting said end-gage to swing upon its pivot out of the path of travel of said cutter-head upon release of said securing means.

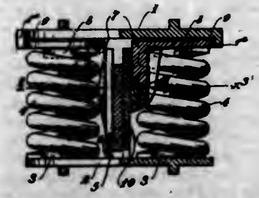
3. In a vertical tenoning machine, the combination with a cutter-head saddle arranged for supporting a cutter-head and having up and down movement and a laterally movable table, of a supplemental table, between said laterally movable table and the range of movement of said cutter-head, stock-clamping means for said laterally movable table, and an end-gage for the stock and a positioning arm therefor pivoted at one side of said supplemental table, said end-gage having an upwardly extending member at the other side of said supplemental table projecting into said path of travel when in stock-obstructing position and a connecting member between said pivot and said upwardly extending member under said table, substantially as described.

4. In a vertical tenoning machine, the combination with a cutter-head saddle arranged for supporting a cutter-head and having up and down movement and a laterally movable table, of a supplemental table, between said laterally movable table and the range of movement of said cutter-head, an end-gage for the stock, and a positioning arm therefor pivoted at one side of said supplemental table, said end-gage having an upwardly extending member at the other side of said supplemental table projecting into said range of movement when in stock-obstructing position and a connecting member between said pivot and said upwardly extending member under said table, and securing means on said arm for said end-gage, substantially as described.

5. In a vertical tenoning machine, the combination of a cutter-head saddle having up and down movement, a laterally movable table, a supplemental table, an end-gage and a positioning arm therefor pivoted at one side of said table, said end-gage having a gage-face at the other side of said supplemental table and a connecting member between said pivot and gage-face, and a positioning pin for said end-gage slidable in said arm, said supplemental table and end-gage having apertures for receiving said pin, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

882,279. SPRING-CUSHION. EDWIN C. WASHBURN, Minneapolis, Minn. Filed Aug. 10, 1907. Serial No. 388,026.



1. The combination with a pair of bearing plates and a friction plate secured to one thereof, of a pair of reversely disposed angle plates fulcrumed against the other bearing plate, a pair of opposing friction shoes held against the opposite faces of said friction plate, by said angle plates, and coiled springs compressed between the bases of said angle plates and the bearing plate to which said friction plate is secured, substantially as described.

2. The combination with a pair of bearing plates and a friction plate secured to one thereof, of a pair of reversely acting angle plates fulcrumed at the outer edges of their bases to the other bearing plate and having arms intermediately extended from their inner edges, friction shoes pivotally connected to the arms of said angle plates and held thereby against the opposite faces of said friction plate, and coiled springs arranged in pairs and compressed between the bases of the coöperating angle plates and the bearing plate to which the said friction plate is secured, substantially as described.

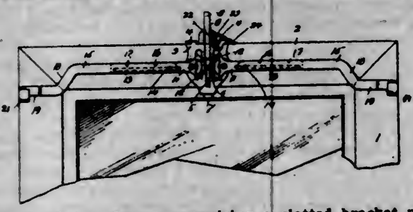
3. The combination with bearing plates 1 and 2 and a friction plate 5 secured to and projecting from the latter, of angle plates 7 having fulcrumed lugs 9 at their outer edges engaging said plates 1 adjacent to its stop flanges 1^a, said angle plates also having bosses 8, coiled springs 4 compressed between said plate 2 and the bases of said angle plates 7 and telescoping with said bosses 3 and 8, and friction shoes 10 engaging the opposite faces of said friction plate 5 and having rounded bearing lugs 11 seated in the arms of said angle plates 7, substantially as described.

4. The combination with a pair of bearing plates and a friction plate secured to one thereof, of an angle plate fulcrumed against the other bearing plate, a friction shoe held against said friction plate, by said angle plate, and a coiled spring compressed between the base of said angle plate and the bearing plate to which said friction plate is secured, substantially as described.

882,280. CURTAIN-FIXTURE. THOMAS WIDZISZOWSKI, Donora, Pa. Filed Dec. 2, 1907. Serial No. 404,763.

1. A window fixture comprising a bracket provided with hooks to engage the upper edge of the cross bar of a win-

dow-frame, a rack vertically movable on said bracket, slotted arms pivotally secured to said bracket and provided with sectors engaging said rack, a slide carried by said rack having a projection to engage the lower edge of said cross-bar, and arms secured to said slotted arms.



2. A window fixture comprising a slotted bracket provided with hooks at its upper end, a rack movably supported on said bracket, a slide secured to said rack and provided with a projecting hook, means for moving said rack and slide vertically comprising arms pivotally secured to said bracket and sectors on said arms engaging said rack, and means for locking said rack.

3. A window fixture comprising a slotted bracket provided with hooks at its upper end, a rack movably supported on said bracket, a slide secured to said rack and provided with a projecting hook, means for moving said rack and slide vertically comprising arms pivotally secured to said bracket and sectors on said arms engaging said rack, and means for locking said rack consisting of a spring-pressed dog pivoted to said bracket and adapted to engage the teeth of the rack.

4. The combination with the upper cross bar of a window-frame, of a vertically slotted bracket provided at its upper end with gripping hooks, a slide on the rear side of said bracket carrying a gripping hook, a rack on the front of said bracket secured to said slide, longitudinally slotted arms pivotally secured to said bracket, and formed with sectors engaging said rack, and arms pivotally secured to said slotted arms and provided with roller-and-pole supporting brackets.

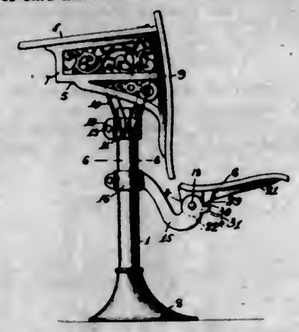
882,281. PIPE. WILLIAM J. WILLIAMS, Carrick, Pa., assignor of one-half to Edmond E. Schellhase, Uniontown, Pa. Filed Oct. 17, 1907. Serial No. 397,783.



In a pipe, the half sections 1 and 2, the said section 1 having dovetailed grooves in its vertical walls and having a curved flange along its lower side projecting beyond the matching face of the section and terminating at the base of one of said grooves in an inclined shoulder, the section 2 having dovetailed tongues to engage said grooves and having a groove along its base to receive the curved flange of the section 1, one of the vertical tongues of the section 2 inclined at its lower end to engage and fit with said inclined shoulder, each section provided beneath the bowl-chamber with a recess and having an opening leading from the recess to the bowl-chamber and located adjacent to the smoke outlet from the bowl-chamber.

882,282. SCHOOL-DESK. HUGO R. WITTKE, Chicago, Ill. Filed Mar. 4, 1907. Serial No. 360,470.

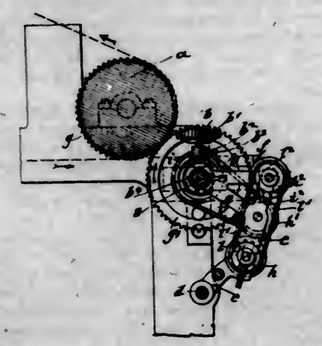
1. A school desk comprising a hollow cylindrical supporting standard having a substantially circular base disposed eccentric thereto, said standard having a vertical groove formed with one straight wall and an opposing wall provided with recesses at regular intervals, collars longitudinally movable on said standard, an inwardly extending projection on each of collars movable in said groove and adapted to enter said recesses to support said collars at different elevations, arms integral with the upper collar, a desk member carried thereby, arms on the lower collar, and a seat member pivotally secured to the free ends of said arms.



2. A school desk comprising a hollow standard having a vertical groove, said groove having one straight wall and an opposing wall provided with recesses at regular intervals, collars longitudinally movable on said standard, an inwardly extending projection on each of collars movable in said groove and adapted to enter said recesses to support said collars at different elevations, arms integral with the upper collar, a desk member carried thereby, arms on the lower collar, and a seat member pivotally secured to the free ends of said arms.

3. A school desk comprising a hollow cylindrical standard having a vertical groove, said groove being formed with one straight wall and an opposing wall provided with recesses at regular intervals, split collars longitudinally movable on said standard and adapted to be contracted to form a clamping connection with the standard, an inwardly extending projection on each of collars movable in said groove and adapted to enter said recess to support said collars at different elevations, arms integral with the upper collar, a desk member carried thereby, arms on the lower collar, and a seat member pivotally secured to the free ends of said arms.

882,283. STAMPING ATTACHMENT FOR CLOTH-MEASURING MACHINES. FRANK WOLF, New York, N. Y. Filed Oct. 30, 1907. Serial No. 399,844.



In a stamping attachment for cloth measuring machines, the combination, with a driving-roll, of a rotary shaft connected therewith to be rotated thereby, a stamp mounted on said shaft, a rod below said shaft, bracket-frames applied at their lower ends to said rod and extending loosely around the rotary shaft at their upper

ends, means for adjusting the shaft and stamp relatively to the driving-roll, color-rolls journaled between said bracket-frames, and means for driving said color-rolls.

882,284. LOOSE-LEAF BINDER. HERMAN M. ADLER, Boston, Mass. Filed June 13, 1907. Serial No. 378,730.



1. A loose-leaf binder comprising cover leaves having eyes, and bent resilient bars passing through said eyes, adapted to have the loose leaves threaded over them, and to serve as yielding clamps to press the leaves together.

2. A loose-leaf binder comprising cover leaves having eyes, and bent resilient bars passing through said eyes, adapted to be placed in different positions, serving as guides for the leaves when in one position, whereby the covers and leaves may be opened in the manner of a book, and as clamps when in another position to hold the binder closed.

3. A loose-leaf binder comprising the leaves or boards forming the cover and having eyes, and a resilient rod passing through adjacent eyes, having a head at one end and bent between its ends so as to serve when in different positions respectively as a clamp and as a guide about which the leaves may be turned.

4. The combination in a loose-leaf binder of leaves or boards forming a cover and having eyes, perforated loose sheets, and spring rods passing through the eyes and perforations, each rod being bent to provide an arm adapted to lie against one of the cover leaves for clamping the leaves together, and to be swung outward from the adjacent edges of the cover leaves and sheets so that the covers may be opened and the loose sheets turned while remaining in contact with the rods.

5. The combination in a loose-leaf binder of leaves or boards forming a cover and having eyes, perforated loose sheets, and spring rods passing through the eyes and perforations, each rod being coiled at one of its ends to form a head lying against one of the cover leaves, and being sharply bent between its ends to form an arm adapted to bear yieldingly upon one of the cover leaves and to be swung outward perpendicularly to the adjacent edges of the leaves and sheets, so as to permit the covers to be opened and the sheets turned and slipped along the rods while remaining continuously in engagement therewith.

[Claims 6 to 11 not printed in the Gazette.]

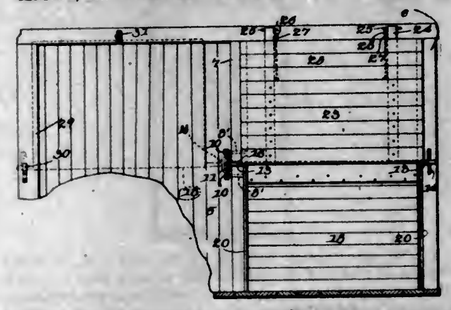
882,285. BIAS BINDING AND TRIMMING. JOHN ARMSTRONG, Bridgeport, Conn. Filed Jan. 12, 1906. Serial No. 295,731.



1. A binding comprising a strip of fabric cut on the bias and having its two longitudinal edges turned under, an ornamental pattern laid upon the face of the strip, stitching passing through the strip and the pattern and one of the turned under edges only, and a further central longitudinal fold throughout the length of the strip which overlaps the stitched edge.

2. A binding comprising a strip of fabric cut on the bias and having its two longitudinal edges turned under, an ornamental pattern laid upon the face of the strip and extending laterally beyond the opposite sides of the turned under edge, a line of stitching passing through the pattern and one thickness only of the strip, and a line of stitching passing through the pattern and the intermediate portion of the strip and the turned under edge thereof, and a further central longitudinal fold throughout the length of the strip which overlaps the stitched edge.

882,286. GRAIN-CAR DOOR. WILLIAM L. AURAND, Milford, Ill. Filed March 26, 1906. Serial No. 308,196.



1. The combination with a car having a plurality of spaced side posts two of which are spaced apart to form a door opening, spaced brackets secured to one of the door posts on the opposite side thereof from the door opening, a link pivotally mounted in said brackets, there being a transverse recess formed in the bracket carrying post and sockets counter sunk in the adjacent posts and disposed in horizontal alinement with the transverse recess, a horizontally disposed rod seated in the transverse recess and one of said sockets and having one end thereof secured to the link, a door depending from the rod and forming a closure for the door opening, the free end of said rod being movable in a horizontal plane in engagement with the other socket, thereby to permit the door to be swung upwardly to inoperative position against the adjacent inner walls of the car.

2. The combination with a car having spaced door posts defining a door opening, spaced brackets secured to one of the posts on the opposite side thereof from the door opening and having their free ends bent to form angularly disposed arms terminating in eyes, a link extending through the eyes in the brackets and having the opposite ends threaded and an intermediate portion thereof bowed laterally and provided with a centrally disposed aperture forming a bearing, there being a transverse recess formed in the adjacent post and disposed in alinement with said bearing, a socket counter sunk in the opposite post and arranged in horizontal alinement with the recess, a horizontally disposed rod seated in the recess and socket, respectively, and having one end thereof extended through the aperture in the link and provided with an enlarged head bearing against the bowed portion of said link, a door section depending from the rod and forming a closure for the lower portion of the door opening, said rod and door being movable laterally in a horizontal plane and thence upwardly to inoperative position in contact with one side of the car, means for supporting the rod in inoperative position, and a catch for locking the door against accidental displacement when the latter is tilted upwardly to elevated position.

882,287. BOTTLE-CLOSURE. HERRMANN BEHR, Philadelphia, Pa. Filed July 11, 1907. Serial No. 383,166.

1. The combination with a bottle neck; of an inner stopper of resilient material fitted to said neck; a baffle plate of frangible material above said stopper, extending from side to side of said neck and comprising an upwardly extending flange; and, means in stationary relation with said bottle neck engaging said flange and preventing the

withdrawal of said plate, comprising a tube distinct from said neck, and separate means interengaging said tube and said neck in stationary relation, comprising a split ring of resilient hard rubber, substantially as set forth.



2. The combination with a bottle neck; of an inner stopper of resilient material fitted to said neck; a baffle plate of frangible material above said stopper extending from side to side of said neck and comprising an upwardly extending flange; and means in stationary relation with said bottle neck engaging said flange and preventing the withdrawal of said plate, comprising a tube distinct from said neck and separate means interengaging said tube and said neck in stationary relation, comprising a split ring of resilient material, substantially as set forth.

3. The combination with a bottle neck; of an inner stopper of resilient material fitted to said neck; a baffle plate of frangible material above said stopper, extending from side to side of said neck and comprising an upwardly extending flange; and, means in stationary relation with said bottle neck engaging said flange and preventing the withdrawal of said plate, comprising a tube distinct from said neck and separate means interengaging said tube and said neck in stationary relation, substantially as set forth.

4. The combination with a bottle neck; of a baffle plate of frangible material extending from side to side of said neck and comprising an upwardly extending flange; and means above said baffle plate preventing withdrawal of said plate, comprising means engaging said flange, substantially as set forth.

5. The combination with a bottle neck; of a baffle plate of frangible material extending from side to side of said neck; and means above said baffle plate preventing withdrawal of said plate, substantially as set forth.

[Claims 6 to 10 not printed in the Gazette.]

882,288. PIANO-ACTION FRAME. FREDERICK G. BILLINGS, Milwaukee, Wis. Filed May 2, 1907. Serial No. 371,755.

1. The combination with a series of vertically disposed brackets of a piano action, of a plurality of continuous metal rails in the form of angle bars rigidly fixed to the brackets, and which rails are provided in their faces with continuous grooves.

2. A piano action frame, comprising a series of vertically disposed brackets, a plurality of lugs formed integral with each bracket, the corresponding lugs of the brackets being in horizontal alinement, metal rails in the form of angle bars rigidly fixed to the series of horizontally alined lugs, and there being grooves formed in the faces of said metal rails.

3. A piano action frame, comprising a series of vertically disposed brackets, a plurality of lugs formed integral with each bracket, the corresponding lugs of the brackets being in horizontal alinement, and metal rails in the form of angle bars rigidly fixed to the series of horizontally alined lugs, there being continuous grooves formed in the faces of said rails.

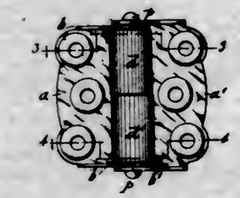
4. A piano action frame, comprising a series of vertically disposed brackets, lugs integral with the front and rear edges of said brackets, and continuous rails in the form of angle bars rigidly fixed to said lugs, there being continuous grooves formed in the faces of the continuous rails.



5. A piano action frame, comprising a series of vertically disposed brackets, lugs integral with the rear sides of the brackets, a series of continuous rails in the form of angle bars rigidly fixed to said lugs, a lug integral with the front side of each bracket, and a continuous rail in the form of an angle bar adjustably secured to the lugs on the front of the brackets.

[Claim 6 not printed in the Gazette.]

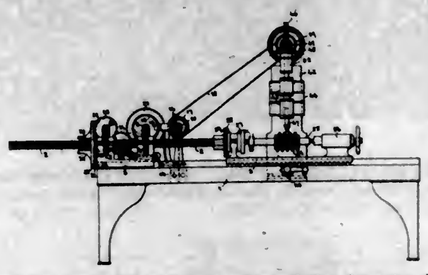
882,289. SPRING-HINGE FOR SCREEN-DOORS. EMIL BOMMER, New York, N. Y. Filed June 5, 1907. Serial No. 377,292.



A spring-hinge for screen-doors, comprising a pair of hinge-leaves, each of which is provided at its upper and lower ends with perforated ears, a housing-section on each leaf open at the back and formed integral with one leaf at its upper end and with the other leaf at its lower end, a pintle connecting said ears, and a coil-spring arranged within said housing-sections and having its ends extending laterally through similar perforations formed at opposite sides in said housing-sections and adjacent to their connection with the leaves.

882,290. MACHINE FOR CUTTING SCREWS, &c. JAMES BOWEN, Philadelphia, Pa., assignor to Sayre Stamping Company, Sayre, Pa. Filed Dec. 28, 1906. Serial No. 349,835.

1. The combination, in a machine of the character described, of a lead screw, a bed above which the lead screw is mounted, means at one end of the bed for transmitting rotary and longitudinal motions to the screw, a carriage mounted to slide upon the bed and having a bearing in which one end of the screw rotates, a tail stock on the carriage opposite the end of the screw, means for mounting a piece of work between the screw and tail stock, means for transmitting rotary motion from the screw to the work, a cutting tool, a driving spindle for the tool mounted on the machine at right angles to the axis of the blank, and means for rotating said spindle and for adjusting it to and from the blank.



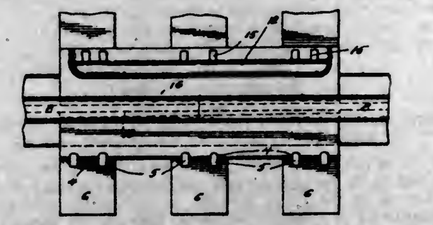
2. The combination, in a machine of the character described, of a lead screw, a bed above which the lead screw is mounted, means at one end of the bed for transmitting rotary and longitudinal motions to the screw, a carriage mounted to slide upon the bed and having a bearing in which one end of the screw rotates, a tail stock on the carriage opposite the end of the screw, means for holding a piece of work in the carriage between the screw and tail stock, a standard at one side of the bed, a driving spindle adjustably mounted on the standard at right angles to the line of travel of the screw, means for attaching a cutting tool to the spindle to operate upon the work, a driving shaft geared to the spindle at the top of the standard, means for imparting motion to the driving shaft from a source of power, and means for transmitting motion from said shaft to the screw operating means.

3. The combination, in a machine of the character described, of a bed, a carriage mounted to slide upon the bed, means for mounting a piece of work at each end in the carriage, means for imparting longitudinal motion to the carriage, means for rotating the work in the carriage, and a cutting tool in position to operate upon the work.

4. The combination, in a machine of the character described, of a bed, a carriage mounted to slide upon the bed, means for mounting a piece of work at each end in the carriage, a lead screw having connection with the carriage, means for imparting rotary and longitudinal motions to the screw, and a cutting tool in position to operate upon the work.

5. The combination, in a machine of the character described, of a bed, a carriage mounted to slide upon the bed, means for mounting a piece of work at each end to rotate in the carriage, a lead screw, means for imparting simultaneous rotary and longitudinal motions to the screw, means for imparting the longitudinal motion from the screw to the carriage, means for imparting the rotary motion from the screw to the work in the carriage, and a cutting tool in position to operate upon the work.

882,291. RAIL-JOINT. GEORGE C. BROWN, Leechburg, Pa. Filed July 5, 1907. Serial No. 382,330.



In a rail joint, the combination with the confronting ends of two rails, of a chair embodying a base plate for supporting said rails, an integral splice bar carried by said base plate and embracing the outer sides of said rails and having a recess on its inner face, said chair having vertically disposed spike grooves formed therein, a fastener adapted to rest upon said base plate and having a longitudinally recessed outer edge provided with spike openings adapted to register with similar openings formed in said base plate, a splice bar carried by said fastener for bracing the inner sides of said rails and provided with a recessed inner face, and wedges interposed in the recesses in the splice bars and engaging the webs of the rails.

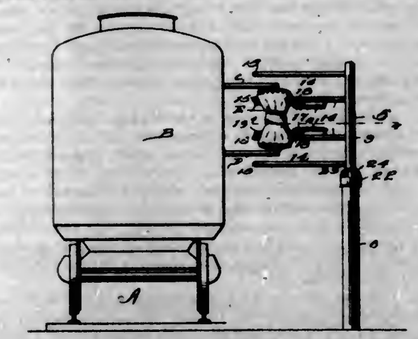
882,292. FLEXIBLE CONDUIT. WILLIAM S. BROWN, New York, N. Y. Filed Aug. 21, 1907. Serial No. 389,452.



1. A flexible electrical conduit comprising a tubular body of flexible material including a plurality of superposed layers two of which are of plastic composition and an intermediate layer between said plastic composition layers having separate strips or members of resilient material extending longitudinally or parallel to the elements of the circular outline, said strips being independent of one another and capable of relative displacement in a longitudinal direction.

2. A flexible electrical conduit comprising a tubular body of flexible material and independent corrugated strips or members embedded therein and extending longitudinally thereof.

882,293. MAIL-BAG-RECEIVING APPARATUS. LELAND H. BURCH, Dryden, N. Y. Filed Nov. 6, 1907. Serial No. 400,915.



1. The combination with a vertically disposed post having a ball race at its upper end, of a vertically extending bar revolubly connected with said post and having a portion disposed in said ball race, a cap engaged with said post and with said bar, a plurality of spaced rods carried by said bar, and bag holding means carried by said rods.

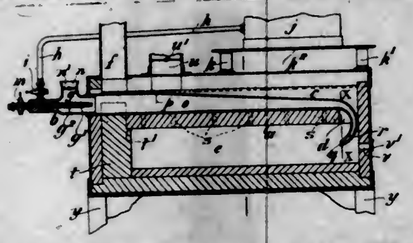
2. The combination with a vertically disposed post having a ball race at its upper end, of a vertically extending bar revolubly connected with said post and having a portion disposed in said ball race, a plurality of spaced rods carried by said bar, bag receiving means carried by said rods, and means for normally holding said bag receiving means in a receiving position.

3. The combination with a vertically disposed post having a revoluble bar at its upper end, and a plurality of

spaced rods carried by said bar, of pivotally mounted forks carried by said rods, and means for holding said forks normally with their open ends at one side of said rods.

4. A mail bag receiving apparatus comprising a vertically disposed post, a bar revolubly connected therewith, a plurality of spaced rods carried by said bar, pivoted forks carried by said rods, and spring means for holding said forks with their open ends at one side of said rods.

882,294. LIQUID-FUEL FURNACE. JOHN BURDON, WILLIAM M. BURDON, and MATTHEW M. BURDON, Bellshill, Scotland. Filed Sept. 12, 1907. Serial No. 392,562.



1. A liquid fuel furnace comprising a body with two compartments therein the one compartment extending the length of the furnace and forming a hot chamber and the other compartment forming a chamber for the reception of the articles to be heated or fired, a liquid fuel atomizer, means for supplying liquid fuel to the atomizer and for spraying the same and a tubular and tapered mixing and vaporizing chamber which extends through the compartment constituting the hot chamber and is bent into the other compartment.

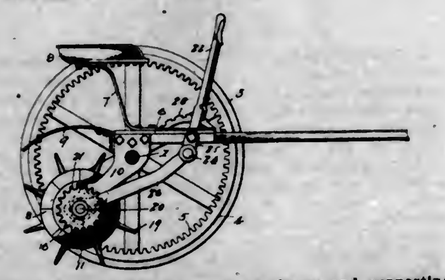
2. A liquid fuel furnace comprising a body with two compartments therein the one compartment extending the length of the furnace and forming a hot chamber and the other compartment forming a chamber for the reception of the articles to be heated or fired, a liquid fuel atomizer comprising an inner air or steam nozzle, a second outer concentric oil nozzle and a third outer air chamber, means for supplying liquid fuel to the second nozzle, means for supplying compressed air or steam to the inner nozzle and means for regulating the air supply to the outer chamber and a tubular and tapered mixing and vaporising chamber extending from said air chamber through the compartment constituting the hot chamber into the other compartment.

3. A liquid fuel furnace comprising a body with two superposed compartments therein the one compartment forming a hot chamber and the other compartment a chamber for the reception of the articles to be heated or fired, a liquid fuel atomizer, means for supplying fuel to the atomizer and a long mixing and vaporising chamber extending from the atomizer through the hot chamber into the other chambor, said mixing and vaporising chamber being of tubular shape and gradually tapered and flattened towards its end.

4. A liquid fuel furnace comprising a body with two superposed compartments therein the one compartment forming a hot chamber and the other compartment a chamber for the reception of the articles to be heated or fired, a partition between said compartments made with an opening at one end thereof, a liquid fuel atomizer, means for supplying liquid fuel to the atmomizer, means for supplying steam or compressed air to the burner, means for supplying air to the burner and a tubular and tapered mixing and vaporising chamber which extends along the bottom of the hot chamber and is bent downwards through the opening at the end of the partition into the other chamber.

5. A liquid fuel furnace comprising a body with two superposed compartments therein the one compartment forming a hot chamber and the other compartment a chamber for the reception of the articles to be heated or fired, a partition between said compartments, holes being made in the partition and a large opening at the one end thereof, a liquid fuel atomiser arranged so as to deliver the flame into the upper compartment means for supplying liquid fuel to the atomiser, means for supplying compressed air or steam to the atomiser, an air chamber surrounding the burner, an air inlet valve therein, and a tubular mixing and vaporising chamber connected to said air chamber and extending along the bottom of the hot compartment and being bent down into the other compartment, the said tubular mixing and vaporising chamber being gradually tapered and also flattened at its end.

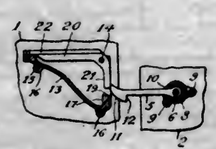
882,295. CLOD-CRUSHER. HARRISON H. BUTLER and RUDOLPH DECKER, Marine City, Mich. Filed Nov. 28, 1906. Serial No. 345,568.



1. A clod crusher comprising a frame and supporting wheels having internal gear teeth, hangers depending from the frame, journal boxes slidably engaged in said hangers, crusher rolls journaled in said boxes and provided with gear pinions to mesh with the internal gear teeth on the wheels, a swinging shaft depending from the frame, links connected between the swinging shaft and journal boxes and a handle for operating the swinging shaft for engaging or disengaging the rolls from the wheels.

2. A clod crusher comprising a supporting axle and wheels, a platform supported by the axle, the wheels having internal gear teeth, angular rearwardly extending hangers depending from the platform and forming guideways, journal boxes slidably engaged in the guideways of the hangers, crusher rolls having their axles journaled in the journal boxes, pinions on said axles meshing with the gear teeth on the supporting wheels, swinging links depending from the platform, a swinging shaft supported thereby, rods connected between said shaft and the journal boxes, a lever fulcrumed to shift the swinging shaft laterally, and a fender depending from the platform and overhanging the rolls.

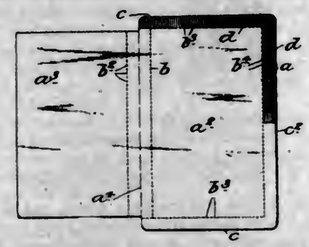
882,296. SLIDING-DOOR FASTENER. WILLIAM N. CAROLL, Minneapolis, Minn., assignor of one-fourth to Henry F. Schlink and one-fourth to Daniel G. Tyler, Minneapolis, Minn. Filed May 21, 1907. Serial No. 374,819.



1. A lock for a sliding door, comprising a case having slots in its top and one end, and providing a catch at the bottom of the latter opening, a gravitating locking-dog consisting of a flanged horizontal body portion adapted to and adapted to close said end slot, and a horizontal pivoted latch having a hook and arranged to thrust said arm inward and permit it to gravitate to locking position upon engagement of the hook with said catch, substantially as set forth.

2. A lock for a sliding door, comprising a case having slots in its top and one end, and providing a catch at the bottom of the latter opening, a gravitating locking-dog consisting of a flanged horisontal body portion adapted to cover the top slot and a depending arm pivoted to the case and adapted to close said end slot, the opposite end portions of the case and locking-dog body having openings to receive a padlock or car-seal, and a horisontal pivoted latch having a hook and arranged to thrust said arm inward and permit it to gravitate to locking position upon engagement of the hook with said catch, substantially as set forth.

882,297. COMBINED ENVELOP AND LETTER-SHEET. CHARLES W. COOK, Holyoke, Mass. Filed June 22, 1907. Serial No. 380,205.

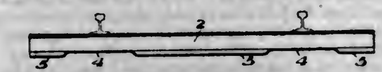


1. A combination envelop and letter sheet comprising a main body member and a supplemental folding member integrally connected with one side edge thereof, a folding line at the point of connection between said members, parallel lines of perforations at the opposite sides of said folding line, and lines of perforations extending around the main member at both ends and at the side edge thereof opposite the folding member and forming in the main member a body portion of the same dimensions as the folding member.

2. A combination envelop and letter sheet, comprising a main body member and a supplemental folding member integrally connected with one side edge thereof, a folding line at the point of connection between said members, parallel lines of perforations at the opposite sides of said folding line, and lines of perforations extending around the main member at both ends and at the side edge thereof opposite the folding member and forming in the main member a body portion of the same dimensions as the folding member, one of the end strips of the body member formed by the adjacent end row of perforations being gummed on its inner side and the adjacent side strip formed by the row of perforations opposite the folding member being gummed for half its length, and the corresponding part or strip of the back of the folding member being gummed for half its length.

3. A combination envelop and letter sheet, comprising a main body member and a supplemental folding member integrally connected with one side edge thereof and separated therefrom by a folding line, parallel lines of perforations at the opposite sides of said folding line, and lines of perforations extending around the main member at both ends thereof and at the side edge thereof opposite the folding member the folding member being smaller than the main body member.

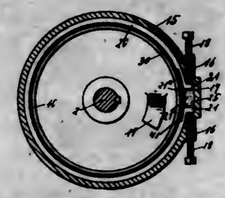
882,298. METALLIC RAIL-TIE. LOUIS R. CUSTER, Munhall, Pa. Filed May 2, 1907. Serial No. 371,517.



1. An I-beam tie having continuous base flanges, parts of which are in their normal rolled position the remaining parts thereof being bent downwardly in substantially parallel planes; substantially as described.

2. An I-beam tie having the base flanges bent downwardly in parts thereof with shoulders between the bent-down portions and the normal portions; substantially as described.

882,299. FRICTION-CLUTCH. TALBOT C. DEXTER, Pearl River, N. Y. Filed Mar. 20, 1907. Serial No. 363,410.



1. In a friction clutch, the combination of coöperating clutch members, one of which consists of a band or rim with separated ends, a strap or band of friction material interposed between said clutch members, and means interposed between the strap of friction material and the adjacent ends of the surrounding split band or rim, overlapping said adjacent ends and covering the space between them.

2. In a friction clutch, the combination of the cooperating clutch members, one of which comprises a split band or rim with separated ends, a strap or band of friction material interposed concentrically between said clutch members and having its ends separated, and means overlapping the adjacent ends of the split band or rim, and bridging or covering the space between said ends.

3. In a friction clutch, the combination of a clutch wheel, a coöperating concentrically arranged band or rim with separated ends, a strap or band of friction material interposed between the clutch wheel and the surrounding band or rim and a blade or finger overlapping the adjacent separated ends of the band or rim, and bridging the space between them for the purpose set forth.

4. In a friction clutch, the combination of a clutch wheel, a clamping band with separated ends encircling the wheel, a strap or band of compressible friction material interposed between the clutch wheel and clamping band, and a blade or finger overlapping and bridging or covering the space between the adjacent ends of the clamping band for the purpose set forth.

5. In a friction clutch, the combination of a clutch wheel, a split clamping band concentric with the wheel, a strap of friction material interposed between the wheel and the split band, means engaging the ends of the split band for securing the band in frictional engagement with the interposed strap, and a blade or finger secured to one end of the split band and projecting toward the other end of the split band, for the purpose set forth.

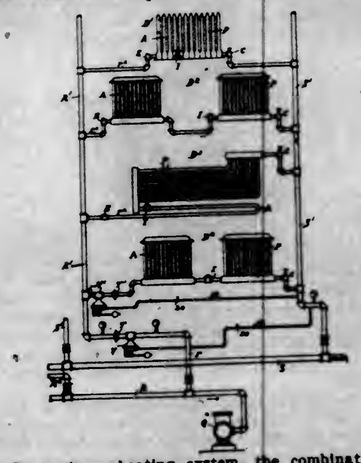
[Claims 6 to 11 not printed in the Gazette.]

882,300. STEAM-HEATING SYSTEM. JAMES A. DONNELLY, New York, N. Y. Filed Oct. 21, 1904. Serial No. 229,410.

1. In a steam heating system, the combination of a steam supply pipe, a return for the air and for the water of condensation, a primary radiating device communicating with the steam supply pipe, an auxiliary radiating device communicating with the outlet of the primary radiating device and with the return, and means within said communication between the primary and auxiliary radiating devices for restricting the flow of fluid, and means beyond said means within the communication acting to automatically control the pressure existing on the inlet side of said means and to control the flow through said return.

2. In a steam heating system, the combination of a steam supply pipe, a return for the air and for the water of condensation, a primary radiating device communicating with the steam supply pipe, an auxiliary radiating device communicating with the outlet of the primary radi-

ating device and with the return, and means within said communication between the primary and auxiliary radiating devices for restricting the flow of fluid, and means beyond said radiating devices located in the return, and acting to automatically control the pressure in the inlet side of said means and to control the flow through said return.



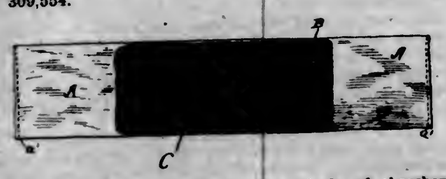
3. In a steam heating system, the combination of a steam supply pipe, a return for the air and for the water of condensation, a primary radiating device communicating with the steam supply pipe, an auxiliary radiating device communicating with the outlet of the primary radiating device and with the return, means within said communication between the primary and auxiliary devices for restricting the flow of fluid, and means for automatically establishing a predetermined substantially constant difference of pressure between the supply and the return.

4. In a steam heating system, the combination of a steam supply pipe, a return for the air and for the water of condensation, a primary radiating device communicating with the steam supply pipe, an auxiliary radiating device communicating with the outlet of the primary radiating device and with the return, means within said communication between the primary and auxiliary radiating devices for restricting the flow of fluid, and means for automatically controlling the difference of pressure between the supply and the return.

5. In a steam heating system, the combination of a steam supply pipe, a return for the air and for the water of condensation, a primary radiating device communicating with the steam supply pipe, an auxiliary radiating device communicating with the outlet of the primary radiating device and with the return, means within said communication between the primary and auxiliary radiating devices for restricting the flow of fluid, means beyond the auxiliary radiating device for automatically restricting the flow of fluid, and means for controlling the difference of pressure between the supply and the return.

[Claims 6 to 12 no printed in the Gazette.]

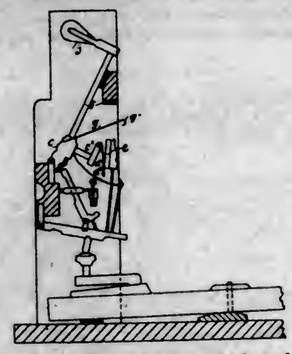
882,301. CATAMENIAL BANDAGE. MARY E. DOYLE, Constableville, N. Y. Filed Apr. 2, 1906. Serial No. 309,554.



1. A catamenial bandage having a body of absorbent material and an inclosing open netting of non-absorbent material.

2. A catamenial bandage, having a foundation piece with a backing layer thereon of non-absorbent cotton, a facing of absorbent cotton, and a non-absorbent open netting, inclosing the two said cotton parts.

882,302. PIANO-ACTION. RICHARD EASTWOOD, Colne, England. Filed Aug. 4, 1906. Serial No. 329,184.



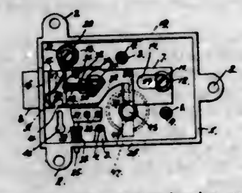
1. A piano action comprising a check and a countercheck, a plate and means whereby said plate is supported in engagement with one of said parts during their approach to each other but moves out from between said parts before the latter impinge against each other, as and for the purposes described.

2. A piano action comprising a check and a countercheck, a plate and means whereby said plate is supported on one of said parts so as to engage the other during their approach to each other but moves out from between said parts before the latter impinge against each other, as and for the purposes described.

3. In upright pianos, the combination with a check and counter check having an interposed spring-actuated part, and a hammer butt and rest, of a spring secured to said hammer butt and adapted to engage the hammer rest on the striking movement of the hammer.

4. In upright pianos, the combination with the hammer butt and rest, of a spring secured to said butt and adapted to engage the hammer rest on the striking movement of the hammer.

882,303. LOCK. ERNST EICHLER, Pittsburg, Pa., assignor to American Electric Alarm Company, Pittsburg, Pa., a Corporation of New Jersey. Filed July 18, 1907. Serial No. 384,463.



1. A lock consisting of a casing having openings formed therein, a spring pressed movable lock bolt arranged in said casing and normally extending into one of said openings, said lock bolt having its lower edge cut away providing a notch and a shoulder, a movable spring held slide mounted upon said bolt, said slide being cut away to provide a lug lying normally parallel with said shoulder, an extension carried by said slide for normally closing the lower end of said notch, a spring pressed trap pin slidably mounted in said casing for engaging in said notch and holding said bolt in a withdrawn position, a key adapted to be inserted in said casing for first moving said slide and then said bolt, and means for lowering said trap pin and releasing said bolt and said slide.

2. In a lock, a lock casing, a lock bolt slidable therein having a shoulder and also provided with a notch, a plate mounted on the lock bolt having an extension normally projecting over the notch in the bolt and said plate having a lug to engage the shoulder on the lock bolt whereby when engaged by a key the lock bolt is withdrawn and the slide is moved to uncover the notch in the bolt, means for engagement with the notch of the bolt to hold the latter in withdrawn position and in the path of withdrawal of said key, and means whereby the first mentioned means is released to permit of the return of the lock bolt to its normal position.

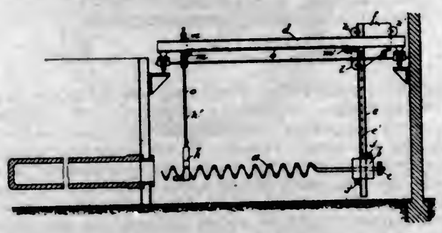
3. A lock embodying a casing, a spring held lock bolt movably mounted therein, and normally protruding from said casing, said bolt having a notch formed therein, a spring held slide movably mounted upon said bolt, an extension carried by said slide for normally closing the lower end of said notch, a spring pressed trap pin engaging said slide and adapted to enter the notch of said bolt, means for moving said slide and simultaneously moving said lock bolt, and releasing said spring pressed pin, and means for moving said spring pressed pin and releasing said slide and lock bolt.

4. In a spring lock, the combination with a casing, and a key, of a spring pressed lock bolt movably mounted in said casing and normally projecting therefrom, a spring pressed slide movably mounted upon said bolt, a spring pressed trap pin movably mounted in said casing for engaging said lock bolt and holding the same in a withdrawn position, means permitting of said key first moving said slide and then said bolt, and means for moving said spring pressed pin, and releasing said slide and lock bolt.

5. In a spring lock, the combination with a casing, of a spring pressed lock bolt mounted in said casing and projecting therefrom, a spring pressed slide mounted upon said bolt, and cutaway to permit of a key moving said slide and said bolt, means located in said casing for engaging said bolt to hold same withdrawn and in position to prevent withdrawal of the actuating key, and means for releasing the first mentioned means and allowing said slide and bolt to assume their normal position.

[Claims 6 to 9 not printed in the Gazette.]

882,304. EXTRACTING APPARATUS FOR HORIZONTAL RETORTS. CHRISTIAN EITLE, Stuttgart, Germany. Filed Oct. 27, 1903. Serial No. 178,691.

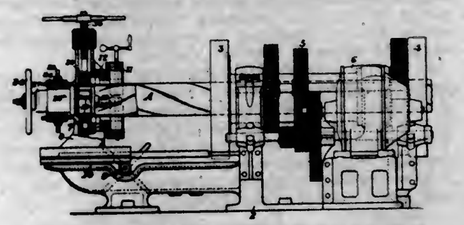


1. In a device of the class described a supporting frame, a plurality of spiral conveyers revolubly mounted in the frame adapted to enter into a retort, and means for bringing the said conveyers into and out of registry with the mouth of the retort.

2. In a device of the class described, a plurality of spiral conveyers axially movable with relation to horizontal retorts, a carriage, a frame carried by the carriage, a movable support carried by the frame, and a journal-box in which the spiral conveyers are revolubly mounted carried by the support, substantially as shown and described.

3. In a device of the class described, a plurality of spiral conveyers axially movable in relation to horizontal retorts and revolubly mounted in journal-boxes, a hanger supporting the journal-boxes, and means for displacing the hanger and journal boxes in a vertical direction, substantially as shown and described.

882,305. PIPE-EXPANDING APPARATUS. CHARLES FELL, Lorain, Ohio, assignor to National Tube Company, Pittsburg, Pa., a Corporation of New Jersey. Filed Oct. 4, 1907. Serial No. 395,914.



1. The combination with a pipe-threading machine, having a threading carriage and head, of an expanding tool pivotally attached to the carriage and arranged to be swung out of the way of the threading operations, said head having a series of radially movable expanding rollers; substantially as described.

2. The combination with a pipe-threading machine having a threading carriage and head, of an expanding tool pivotally attached to said carriage and arranged to be swung out of the way of the threading operations; substantially as described.

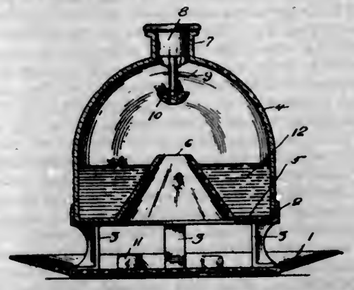
3. The combination with a pipe-threading machine having a threading carriage and chuck, the said carriage having an opening therein through which the pipes are passed, a head adapted to enter the said opening and within the end portion of a pipe, a series of tapered radially movable expanding rollers seated in said head, an expanding member for forcing the series of rollers simultaneously outward, and a gage collar carried by said head, said collar also acting as a guard for the said rollers, substantially as described.

4. In a pipe-threading and expanding machine, a threading carriage, a frame hinged thereto, and an expanding tool pivoted in said frame; substantially as described.

5. In a pipe-threading and expanding machine, a threading carriage, a frame hinged thereto, an expanding tool pivoted in said frame, and means for adjusting the tool longitudinally in the frame; substantially as described.

[Claim 6 not printed in the Gazette.]

882,306. FLY-TRAP. GUSTAFVA FREDRICKSON, Pittsburg, Pa. Filed Dec. 13, 1907. Serial No. 406,295.



1. A fly trap embodying a plate, an annulus supported above said plate, a dome-like structure carried thereby and having its base provided with a frustrated cone-shaped mouth, a flanged neck carried by the top of said structure, a stopper fitting in said neck, a depending stem carried by said stopper and a cup carried by said stem, substantially as described.

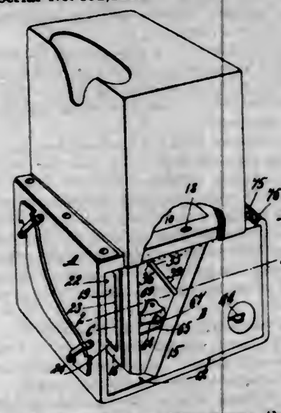
2. A fly trap embodying a plate, an annulus supported above said plate, a dome-like structure supported by said annulus and adapted to contain a liquid, said structure having an inwardly extending frustrated cone-shaped mouth, a stopper mounted in the top of said structure.

a depending cup supported by said stopper and adapted to contain a sweet substance.

3. A fly trap comprising a plate, an annulus supported above said plate, a dome-like structure supported by said annulus and adapted to contain a liquid, said structure having an inwardly projecting frustrated cone-shaped mouth, a stopper mounted in the top of said structure, and a cup suspended from said stopper.

4. In a fly trap, a supporting-annulus provided with an upwardly extending annular flange, supporting-legs for said annulus, a transparent dome-like structure supported on said annulus and having an upwardly-extending frusto-conical mouth rising centrally of the base of said structure, a stopper removably-mounted in the top of said structure, a depending stem carried by said stopper, and a cup carried on the lower end of said stem.

882,307. LENS-SHUTTER REFLECTING-CAMERA. JULIUS D. GARFIELD, Springfield, Mass. Filed Sept. 3, 1907. Serial No. 391,115.



1. In a reflecting photographic camera, the combination with a camera box having a front lens opening, a rear exposure opening, and a top screened opening, of a mirror carrying plate pivotally mounted at its rear edge within an upper portion of the box, having a shutter member curved and downwardly continuous from its free forward edge, and constructed with a light opening therein, means for downwardly swinging and "setting," and for reversely moving to its normal position, said pivotally mounted mirror carrying plate, a slide movable on the curved shutter member, and means for causing said slide to assume an open relation to the said light opening of said curved shutter member when the shutter is swung to its lower, set position, and means for causing said slide to assume a closed relation to said light opening when the shutter moves to its normal position.

2. In a reflecting photographic camera, the combination with a camera box having a front lens opening, a rear exposure opening and a top screened opening, of a mirror carrying plate pivotally mounted at its rear edge within an upper portion of the box, having a shutter member curved and downwardly continuous from its free forward edge, and constructed with a light opening therein, means for reversely operating said pivotally mounted shutter carrying plate, a slide movable on the curved shutter member, an abutment within a lower portion of the camera box, against which, in the setting movement of the shutter, the said slide contacts and by which it is opened relatively to said light opening, and an abutment within an upper forward part of the box against which said slide contacts, thereby closing said light opening during the upward movement of the shutter.

3. In a reflecting photographic camera, the combination with a camera box having a front lens opening, a rear, plate exposure opening and a top screened opening, of a mirror carrying plate pivotally mounted at its rear edge within an upper portion of the box, having a shutter member curved and downwardly continuous from its free forward edge, and constructed with a light opening therein, means for reversely operating said pivotally mounted plate, a slide movable on the curved shutter member, an abutment located and adjustable within a lower portion of the box against which in the setting movement of the shutter said slide contacts, and by which it is opened relatively to said light opening, in an extent as predetermined and corresponding to the adjustment of said abutment, and means for causing said slide to assume a closed relation to said light opening when the shutter moves upwardly to its normal position.

4. In a reflecting photographic camera, the combination with a camera box having a front lens opening, a rear plate exposure opening and a top screened opening, of a mirror carrying plate pivotally mounted at its rear edge within an upper portion of the box, having a shutter member curved and downwardly continuous from its free forward edge, said shutter member being provided with a light opening therein, and said plate having opposite side members extended from its pivotal point to and angularly continuous with said curved shutter member, means for reversely operating said pivoted appliance, a slide movable on the outer face of the curved shutter member, springs frictionally holding the said slide on the curved member, and means for causing said slide to assume respectively opened and closed relations to the said light opening when the shutter is swung to its lower set position and is approaching its normally upper position.

5. In a reflecting photographic camera, the combination with a camera box having a front lens opening, a rear, plate exposure opening and a top screened opening, of a mirror carrying plate pivotally mounted at its rear edge within an upper portion of the box, having a shutter member curved and downwardly continuous from its free forward edge, and constructed with a light opening therein, means for reversely operating said pivotally mounted plate, a slide movable on the curved shutter member, an abutment located within a lower portion of the box against which in the setting movement of the shutter said slide contacts, and by which it is opened relatively to said light opening, a part by which said abutment is bodily carried pivotally mounted within the camera box, and having a member by which it is adjustably moved, projecting to and accessible for operation at the exterior of the box, and means for causing said slide to assume a closed relation to said light opening when the shutter moves upwardly to its normal position.

[Claims 6 to 16 not printed in the Gazette.]

882,308. GRAIN-DOOR FOR CARS. GEORGE H. GILMAN, St. Paul, Minn. Filed Oct. 5, 1907. Serial No. 396,068.

1. The combination with a car body having a door opening and horizontally extended outside guide rails located one above and the other below said door opening, of a grain door supported by said upper guide rail with freedom for sliding and lateral swinging movements, and an outside door mounted for sliding movements on said lower guide rail to and from a closed position, substantially as described.

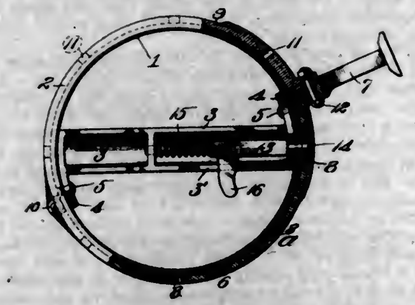
2. The combination with a car body having a door opening, and an outside guide rail extended horizontally above said door opening, of guide heads mounted to slide on said guide rail and carrying depending door-guiding shoes, a grain door adapted to fit within said door opening, links connecting the upper portion of said grain door to said guide heads, and a slidably mounted outside door arranged to be slid into a closed position with its upper edge portion engaged between said guide shoes and links and holding the latter, and hence said grain door, in a closed position, substantially as described.

3. The combination with a car body having a door opening, a stop cleat secured to the upper portion of said door opening, and an outside horizontally extended guide rail secured above said door opening, of a grain door adapted to fit within said door opening, guide heads slidably mounted on said guide rail and carrying depending door-guiding shoes, links connecting the upper portion of said grain door to said sliding guide heads, a slidably mounted outside door adapted to be moved into a closed position with its upper edge portion located between said guide shoes



and links and serving to hold said links pressed inward, and hence the upper edge of said grain door, interlocked with said stop cleat, and means for locking the lower edge of said grain door to the door sill, substantially as described.

882,309. COMBINED BASE-RING AND BRACKET FOR SIGNAL-LAMPS. ALEXANDER H. HANDLAN, Jr., St. Louis, Mo. Filed Jan. 2, 1908. Serial No. 408,925.



1. The combination with a lamp of the character described, of a reinforcing ring fitted to the lower portion of the shell of said lamp, and a cross bar within said shell secured to the shell and reinforcing ring, substantially as set forth.

2. The combination with a lamp of the character described, of a reinforcing ring fitted to the lower portion of the shell of said lamp, and a cross bar within said shell having lips secured to the shell of the lamp and the reinforcing ring, substantially as set forth.

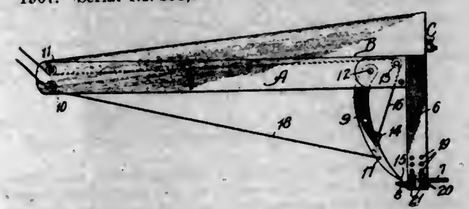
3. The combination with a lamp of the character described, of a reinforcing ring fitted to the lower portion of the shell of said lamp, a cross bar within said shell having lips extending laterally at its ends, and rivets or the like extending through said lips, shell and reinforcing ring to connect said parts, substantially as set forth.

4. The combination with a lamp of the character described, of a reinforcing ring fitted to the lower portion of the shell of said lamp, a cross bar within said shell secured to said shell and reinforcing ring, and a bracket ring fitted to said reinforcing ring, substantially as set forth.

5. The combination with a lamp of the character described, of a reinforcing ring fitted to the lower portion of the shell of said lamp, a cross bar within said shell secured to said shell and reinforcing ring, a bracket ring fitted to said reinforcing ring, and a locking bolt mounted in said cross bar and arranged for engagement with said bracket ring, substantially as set forth.

[Claim 6 not printed in the Gazette.]

882,310. DEVICE FOR RECOVERING SUBMERGED LOGS. FRANK J. HATHWAY, Chicago, Ill. Filed Oct. 1, 1907. Serial No. 395,427.



1. In a device for recovering submerged logs, a frame comprising horizontal and vertical pieces rigidly secured together at an angle one to the other, an air chamber secured on the top of said horizontal piece, a swinging hook on said frame coöperating with said vertical piece to grasp a log and means for swinging said hook alternately to and from said vertical piece, substantially as described.

2. In a device for recovering submerged logs, an air chamber having beam pieces fastened to the bottom thereof, downwardly projecting pieces rigidly secured to the rear of said beam pieces, an adjustable drag shoe on the rear of the lower portion of said downwardly projecting pieces, a dog on the front of the lower portion of said downwardly projecting pieces, a swinging hook pivoted to said beam pieces, sheaves or eyes, and cables adapted alternately to swing said hook away from said downwardly projecting pieces and into coöperation therewith to form a log lock, substantially as described.

3. In combination with an air chamber having a beam piece secured beneath it, downwardly projecting pieces adapted to strike objects in their path of travel, adjustable and interchangeable drag shoes and dogs thereon, said shoes being adapted to limit the depth said projecting piece may sink into the bottom and said dogs to engage submerged logs, substantially as described.

4. In combination with an air chamber having a beam piece secured beneath it, downwardly projecting pieces adapted to strike objects in their path of travel, a swinging hook adapted to coöperate with said downwardly projecting pieces to form a log lock, means for swinging said hook alternately in and out of such coöperation and for drawing said beam from its forward end, and a drag shoe on the rear of the lower portion of said downwardly projecting pieces adapted to limit the depth said legs may sink into the bottom or bed.

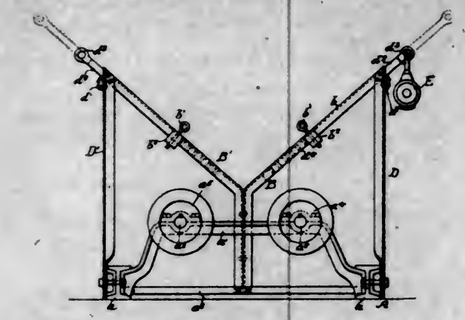
5. In combination with a frame comprising a horizontal beam and a vertical piece secured on one end thereof and a swinging hook, an air chamber secured above said frame, the buoyancy of said chamber being adapted normally to maintain said frame with its beam in horizontal position and permit said parts to sink gradually and an air cock in said chamber whereby the buoyancy of said chamber may be alternately increased or decreased, substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

882,311. DERRICK. HENRY A. HETTINGER, Bridgeton, N. J. Filed May 17, 1907. Serial No. 374,284.

1. The combination of a pair of hoisting drums, a frame therefor, and a derrick mounted on said frame, said derrick consisting of two substantially vertical structures respectively mounted on said frame outside of the drums, a third structure supported by the frame in a vertical plane between the drums, and arms carried by said struc-

tures for the reception of pulley blocks, said arms being adjustable to vary the amount of their projection beyond one of said structures, substantially as described.



2. The combination with two hoisting drums, of a frame therefor, and a derrick mounted on said frame, said derrick consisting of two substantially vertical structures mounted on the frame on the outer sides of the drums, and a member connected to the frame at points lying in a plane between the drums and arms adjustably mounted on said structures for the reception of pulley blocks, substantially as described.

3. The combination with two hoisting drums of a frame therefor, and a derrick mounted on the frame, said derrick consisting of two substantially vertical structures connected to the frame, a third structure having its support located in a plane extending between the drums, and arms carried by said structures for the reception of pulley blocks, said arms being adjustable to vary the heights of their outer ends, substantially as described.

4. The combination of a hoisting drum having a supporting frame, and a substantially vertical frame connected to one side of said supporting frame on one side of said drum, a member mounted on the opposite side of the drum and extended from the drum to the upper part of the said vertical frame, with an adjustable block-holding arm mounted on said member, substantially as described.

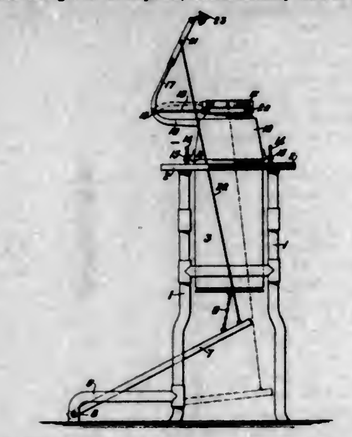
5. The combination with a hoisting drum having a supporting frame, of a substantially vertical frame mounted on said supporting frame on one side of the drum, a member on the other side of the drum and also connected to the supporting frame, said member extending upwardly and then being inclined over the drum and upwardly to the upper portion of the vertical frame, with an arm adjustably mounted on said inclined portion of the member, and means for retaining said arm in any adjusted position, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

882,312. APPARATUS FOR FACILITATING THE PUTTING ON OF INDIA-RUBBER GLOVES. CAREL A. HOEFFTCKE, London, England. Filed Dec. 9, 1907. Serial No. 405,780.

1. An apparatus for facilitating the application of indiarubber gloves to the hands of the wearer, consisting of a chamber having an annular opening at the top sufficiently large for the insertion of the hand, an annular collar around said top opening over which the wrist of the glove is stretched, so that it depends into said chamber and forms a closure therefor, means for securing the wrist portion of the glove to said collar, and means for temporarily reducing the pressure of air in said chamber, whereby the glove is stretched to admit the wearers hand, substantially as set forth.

2. In an apparatus for facilitating the application of indiarubber gloves to the hands of the wearer; the combination of a chamber having an open top, an annular collar around said opening over which the wrist of the glove is stretched while the body of the glove depends into said chamber, an expansible bellows connected to the lower part of said chamber, said bellows being closed at its lower end, means for expanding said bellows to reduce the atmospheric pressure in said chamber, whereby the glove is stretched to admit the wearers hand, substantially as set forth.

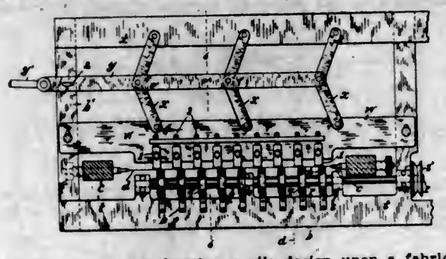


3. In an apparatus for facilitating the application of indiarubber gloves to the hands of the wearer; the combination with a chamber having an open top, an annular collar around said opening over which the wrist of the glove is stretched while the body of the glove depends into said chamber, an expansible bellows connected to the lower part of said chamber, said bellows being closed at its lower end, and means for expanding said bellows to reduce the atmospheric pressure in said chamber; of a release ring to pass over the collar of said chamber and to be located below the turned-over portion of the wrist of the glove, a clamping ring to pass over the collar to clamp the wrist of the glove to the release ring, and means for temporarily connecting the clamping ring to the release ring, substantially as set forth.

4. In an apparatus for facilitating the application of indiarubber gloves to the hands of the wearer; the combination with a chamber having an open top, an annular collar around said opening over which the wrist of the glove is stretched while the body of the glove depends into said chamber, an expansible bellows connected to the lower part of said chamber said bellows being closed at its lower end, a framework to support said chamber, and a treadle pivoted to said framework at one end and connected to the lower end of said bellows at its other end for extending said bellows to reduce the atmospheric pressure in said chamber; of a bracket extending from said chamber, a release ring passing over the collar of said chamber and an arm pivoted to said bracket to carry said release ring, a clamping ring adapted to pass over said collar of said chamber above said release ring, an arm to carry said clamping ring pivoted to said bracket, a spring bolt on said clamping ring to temporarily connect the latter ring to said release ring, and connecting rods pivoted to said clamping ring and extending to said treadle to bring said clamping ring to its clamping position upon the depression of said treadle, substantially as set forth.

882,313. MACHINE FOR CUTTING PILE DESIGNS ON FABRICS. GEORGE D. VON HOFE, New York, N. Y. Filed Apr. 27, 1907. Serial No. 370,542.

1. The means for forming a design upon a fabric, comprising a stretcher holding the fabric constantly in flat form, a tool contiguous to one side of the fabric for working the design from that side and held normally clear from the fabric, a movable gage or presser upon the opposite side of the fabric held normally clear from the fabric and means for moving the gage and tool intermittently toward one another to operate upon the fabric, and the fabric being shifted intermediate to the successive movements of the gage, to bring various parts of its surface in contact with the tool to produce the required design.



2. The means for forming a pile design upon a fabric, comprising a stretcher holding the fabric constantly in flat form, a cutter contiguous to one side of the fabric, means for intermittently moving the fabric contiguous to the cutting edge, means for intermittently moving the fabric from the cutting edge and a gage or presser to move the fabric to the cutter during the cutting movement.

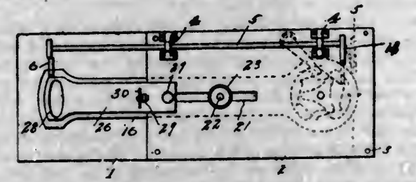
3. The means for cutting a series of similar designs upon a fabric, consisting of a row of tools, means for moving the fabric contiguous to the tools, and a row of gages held movably opposite such tools with means for retracting them from the tools intermediate to the movements of the fabric.

4. The means for cutting a series of similar pile-designs upon a fabric, consisting of a spindle carrying a series of rotary cutters, means for moving the fabric in the desired design contiguous to such rotary cutters, spring-guards to hold the fabric normally from the edges of the cutters, and a series of gages opposed to the cutters with means for moving the gages to press the cloth upon the guards and into contact with the cutters.

5. The means for cutting a series of similar pile-designs upon a fabric, consisting of a spindle carrying a series of rotary cutters, a stretcher holding the fabric contiguous to the edges of the cutters, means, as a pantograph, for moving the fabric in the given design, a series of gages opposed to the cutters, and means provided with a hand-lever for pressing the gages toward the cutters during the cutting movement of the fabric.

[Claims 6 to 10 not printed in the Gazette.]

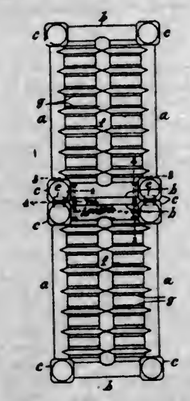
882,314. BUTTON-SEWING ATTACHMENT. WILLIAM S. HOLDAWAY and HALL N. HOLDAWAY, Union, Oreg. Filed Aug. 1, 1907. Serial No. 386,544.



1. A button sewing attachment comprising a pair of movement plates, a rock shaft journaled on the upper of said plates and carrying an element to be moved by contact with a moving part of the sewing machine, a rock lever depending from the end of the shaft and a pawl carried by said rock lever, a ratchet journaled between the movement plates and a triangular cam carried thereby, an oscillatory bar adjustably pivoted between the movement plates, said bar having an irregular partly circular opening in one end to receive the triangular cam, and a transversely arranged elliptical opening in its opposite end, a spring clamp arranged above said elliptical opening in the bar and provided with a like opening, and a cam for forcing the clamp in engagement with the bar.

2. A button sewing attachment comprising a pair of movement plates, a rock shaft journaled on one of said plates and provided with an element to be moved by contact with a moving part of the machine, a rock lever depending from the end of the shaft and a pawl carried by said rock lever, a vertical shaft journaled between the movement plates, a ratchet on said shaft to be engaged by the pawl and a three cornered cam also on the shaft, an oscillatory bar mounted between the plates, means for changing the oscillatory center of such bar, said bar having an opening in one end thereof in the shape of a circle the contour of which is broken by a pair of oppositely arranged transversely disposed inwardly extending lugs, said opening to receive the three cornered cam and said lugs to be moved by contact with said cam, the opposite end of the bar having a transversely disposed elliptical opening therein, a spring clamp carried by the bar and having an elliptical opening in alinement with the one in the bar, and cam mechanism for holding the clamp in engagement with the bar.

882,315. CONNECTION FOR RADIATOR WALL-SECTIONS. JOHN A. HOLFELDER, Uniontown, Pa., assignor to McCrum-Howell Company, Norwich, Conn., a Corporation of Connecticut. Filed Nov. 2, 1907. Serial No. 400,427.

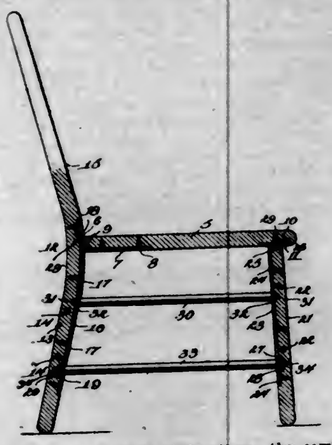


1. A radiator wall section of rectangular form having four side-tubes and heads upon the corners with seats for sockets upon the two outer sides of the head, one seat upon each corner having a nipple-socket therein, and integral sleeves extended through the radiator-tubes upon all the four sides adjacent to the corners, adapting either the long or short sides of such sections to be placed in contiguity to form a wall radiator.

2. In a wall radiator, sections of rectangular form having the marginal tubes *a* and *b* united by heads *c* at the corners, seats for outwardly flared sockets upon the outer sides of the heads with sockets formed in the adjacent seats, push-nipples fitted in the said sockets, the longitudinal tubes *f* between the tubes *a*, the plurality of tubes *g* connecting the tubes *a* and *f*, and each of the marginal tubes having adjacent to the corners the integral sleeve *k* formed therethrough, whereby the long or short sides of the sections may be placed in contiguity and a bolt *h* extended through the tubular sleeves and secured by nuts upon the inner sides of the marginal tubes, to clamp the push-nipples in their sockets.

3. In a wall radiator, sections of rectangular form having the marginal tubes *a* and *b* united by heads *c* at the corners with sockets for fluid connections upon the contiguous sides of the heads, nipples fitted to such sockets, the longitudinal tube *f* between the tubes *a* and the plurality of tubes *g* connecting the tubes *a* and *f*, and the marginal tubes having adjacent to the corners the integral sleeves *k* formed therethrough and the sleeves formed upon the inner sides of said marginal tubes with the resesses *j*, loose nuts *i* fitted therein flush with the surface of the tubes, and the bolt *h* reversely threaded at opposite ends and fitted to the nuts, to clamp the nipples in their sockets.

882,316. TAKE-DOWN CHAIR. JOSEPH M. HORTON, Arcata, Cal. Filed Oct. 22, 1906. Serial No. 340,001.



1. In a takedown article of furniture, the combination with a member to be supported, of spaced leg members for supporting said member, devices carried by the leg members and disposed longitudinally thereof, said devices having elements at their upper ends that are detachably engaged with the member to be supported, and a tie between the lower portion of the leg members, said tie being detachably engaged with the lower ends of said devices.

2. In a takedown article of furniture, the combination with a member to be supported having rearwardly extending hooks and having sockets in their front portions, of a rear leg member having sockets to receive the hooks, a front leg member having upstanding hooks engaging the sockets of the member to be supported, and tie devices detachably engaged with the leg members to hold them against relative movement and maintain them in interlocking engagement with the member to be supported.

3. In a takedown chair, the combination with a seat member to be supported, of spaced leg members, devices carried by and seated in the legs, being disposed longitudinally thereof, said devices having offset hooks at their upper ends that are detachably engaged with the seat members and terminate at their lower ends in threaded stems, rockers detachably fitted on the stems, and nuts threaded on the stems and securing the rockers in place.

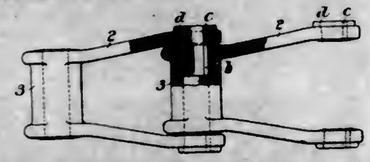
4. In a takedown chair, the combination with a seat member, of relatively movable leg members detachably interlocked therewith and detached upon their relative movements, a rocker associated with the lower end) of the leg members, and means for detachably securing the lower ends of the leg members and the rocker together to prevent their said relative movements.

5. In a takedown chair, the combination with a seat member, of relatively movable leg members detachably engaged therewith and detached therefrom upon their relative movements, said leg members having depending stems, a rocker having openings that receive the stems and prevent the relative movement and consequent detachment of the legs from the seat members, and means for securing the stems in the rockers.

[Claims 6 to 11 not printed in the Gazette.]

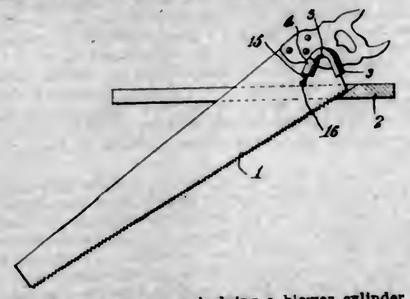
882,317. CHAIN-LINK. GLENN G. HOWE, Indianapolis, Ind. Filed June 26, 1905. Serial No. 266,969.

A chain comprising a link having a tubular connecting portion at one end, and open at the opposite end, the side members at the open end being thickened at the outer side and formed with openings therethrough, and a tubular pin extending through the said openings and through the tubular connecting portion of the adjacent link, said pin being interlocked with and upset in the side members in the thickened portions thereof to prevent



rotation and also endwise movement of the pin; the outer ends of the pin being flush with the outer surfaces of the side members substantially as described.

882,318. SAW ATTACHMENT. ISAAC H. HOWE, Beloit, Kans. Filed Nov. 14, 1907. Serial No. 402,200.



1. A blower for saws embodying a blower cylinder and piston, and an expansion tube for receiving and delivering air furnished thereto by the piston, said tube having an outlet of less diameter than the cylinder.

2. A blower for saws and the like embodying a tubular casing, a piston operating therein and having a stem which projects outside of the casing, an expansion tube arranged in the casing of less diameter than the casing, and couplings connecting said expansion tube with the casing, substantially as described.

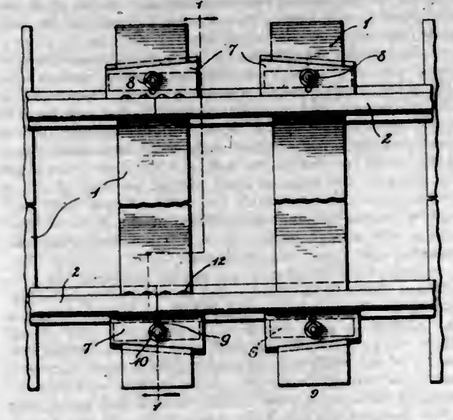
3. A blower for saws and the like comprising a blower casing having a removable section, a piston working in the removable section and having a projecting stem, and an expansion tube receiving the air from the piston and having an outlet opening smaller than the casing section in which the piston works.

4. A blower for saws and the like comprising a blower casing having a removable section, inlet and outlet couplings removably fitted in the ends of the main casing section, an expansion tube extending lengthwise of said main section and connected with the inlet and outlet couplings, and a spring-returned piston working in the removable section of the casing and provided with a stem which projects outside of the removable casing section, the outlet opening being of less diameter than the casing, substantially as described.

882,319. RAILWAY-TIE AND RAIL-JOINT MEANS THEREFOR. PETER HUEBSCHWERLEN and JOHN F. ROMIG, Estevan, Saskatchewan, Canada. Filed June 25, 1907. Serial No. 380,666.

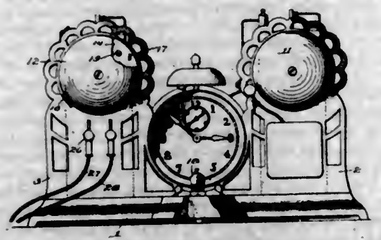
1. In combination, a railway tie, a rail supported thereon, means securing the rail to the tie including a transversely movable angle-bar engaging the rail and having wedging coöperation with the tie, a transverse slidably movable plate interlocking with the tie, and a pin and slot connection between said plate and the angle-bar and located at a right angle to the line of movement of the angle bar.

2. In combination, a tie having a transverse dove-tail shaped seat therein forming edge flanges, a rail supported in said seat and engaged by one of said flanges, a transversely movable wedge-shaped angle-bar engaging the rail and bearing against the tie, a plate interlocking with the



tie at the bottom of the recess, and a fastening projecting from said plate and entering a slot in the angle-bar.

882,320. FLASH-LIGHT ELECTRICAL ALARM AND BANK AND CALL CLOCK. AUGUSTA Y. JANSEN, Chicago, Ill. Filed Mar. 9, 1907. Serial No. 361,563.



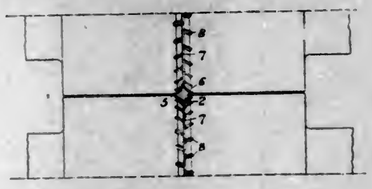
1. A device of the character described comprising a clock provided with an alarm arbor, an electrical bell, a circuit for said bell, means connected with said arbor to interrupt said circuit, means for supplying current to said bell, an electrical lamp, a circuit for said lamp, a circuit parallel with said first mentioned circuit, and a metallic push button switch for closing the circuit of said lamp when pressed and completing the circuit of said bell when pressed against said clock.

2. A device of the character described comprising a clock, an electrically operated bell in electrical connection with said clock and adapted to be set into operation thereby, an electrical lamp, means operated by said clock for closing the circuit of said bell and a metallic push button interposed in the circuit of said lamp and said bell whereby when said button is pressed against the clock said bell will operate and said lamp will be lighted.

3. A device of the character described comprising a clock, an electrically operated bell designed to be set into operation by said clock, an electrical lamp, an electrical circuit for said bell, an electrical circuit for said lamp, a source of current for both of said circuits, and a metallic push button for closing said lamp circuit when pressed and for closing both circuits when pressed against said clock.

882,321. METHOD OF ROLLING RIBBED BARS. THOMAS W. JENKS, Avalon, Pa. Filed Apr. 2, 1907. Serial No. 365,931.

1. The herein described method of rolling ribbed bars which consists in forming a blank of diamond or lozenge shape in cross-section with a continuous rib or projection at each of its angles, and having one of its axes or dimensions greater than the other, and then rolling said blank between die rolls to effect a reduction in which its axes are approximately equalized, and the excess of metal is caused to flow laterally to form ribs or projections at substantially right angles to the first-named ribs or projections; substantially as described.



2. The method of shaping metal bars, which consists in rolling a blank of lozenge or diamond shape in cross-section to increase one of its dimensions and reduce its other dimension, and causing the excess of metal to flow laterally into cross-grooves which are in the walls forming the passes of the rolls so as to form ribs or projections extending approximately at right angles to the longitudinal axis of the bar; substantially as described.

3. The method of forming metal bars having longitudinally-extending ribs or projections at its angles, and other ribs or projections connecting the same at approximately right angles, which consists in forming a blank or shape of diamond or lozenge form in cross-section, with one of its cross axes or dimensions greater than the other, and having a continuous longitudinally-extending rib or projection at each of its angles, and then rolling said shape between die rolls to approximately equalize its two axes or dimensions, and force the excess of metal laterally outward between the longitudinal projections at recurring intervals in the form of connecting ribs; substantially as described.

4. The method of forming metal bars having transversely ribbed surfaces, which consists in rolling a blank of diamond shape in cross-section to reduce one of its cross axes and to increase the other one, but to a lesser extent than the decrease of the first-named axis, and at the same time forcing the excess metal to flow laterally outward in cross grooves in the walls of the roll passes so as to form successive spaced ribs; substantially as described.

5. The method of rolling ribbed bars, consisting in forming a blank of substantial lozenge shape with at least two longitudinal ribs at its corners or angles, and having one axis greater than the other, and then reducing one of its axes and increasing the length of the other between rolls having grooved portions in the walls, which form the sides of the roll passes, and thereby forming cross-ribs or projections thereon in said pass; substantially as described.

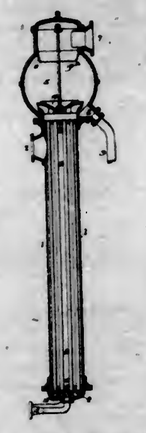
[Claim 6 not printed in the Gazette.]

882,322. APPARATUS FOR CONCENTRATING LIQUIDS. PAUL KESTNER, Lille, France, assignor to Kestner Evaporator Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Sept. 14, 1906. Serial No. 334,698.

1. In a vertical tube evaporator, the combination of a receiving chamber at the base of the tubes for the liquid under treatment, evaporating tubes leading upwardly from said chamber, portions of said tubes extending into the receiving chamber, and an inlet pipe for said liquid, said pipe having its discharge outlet within said receiving chamber at a point above the tube inlets.

2. In a vertical tube evaporator, the combination of a receiving chamber at the base of the tubes for the liquid under treatment, evaporating tubes leading upwardly from said chamber, portions of said tubes extending into the receiving chamber, an inlet pipe for said liquid, and a discharge nozzle carried by said pipe having its outlet

within said receiving chamber at a point above the tube inlets.



3. In a tubular evaporator, the combination of a receiving chamber for the liquid to be concentrated, evaporating tubes leading from said chamber and having portions extending therein, said portions being slotted, and an inlet pipe for said liquid having its outlet above the upper margin of said slots.

4. In a tubular evaporator, the combination of a receiving chamber for the liquid to be concentrated, evaporating tubes leading from said chamber and having portions extending therein, said portions being slotted, an inlet pipe for said liquid, and a discharge nozzle for said pipe having its outlet above the upper margin of said slots.

5. In tubular evaporators, the combination of a series of vertical evaporating tubes, a receiving chamber for the liquid to be evaporated communicating with said tubes, the latter having slotted extensions extending into said receiving chamber, and a feed pipe for delivering liquid to said receiving chamber having its outlet extending above the inlet openings to said tubes.

[Claims 6 to 11 not printed in the Gazette.]

882,323. RUFFLER ATTACHMENT FOR SEWING-MACHINES. AMHERST G. LAMB, Torrington, Conn., assignor to Excelsior Needle Company, Torrington, Conn., a Corporation of Connecticut. Filed May 22, 1906. Serial No. 318,126.



1. In a ruffler attachment for sewing machines embodying a frame and a reciprocatory ruffler blade, the combination with a link pivoted to the blade, of an arm having a fixed face for engaging the link and shifting the ruffler blade in one direction, a plate adjacent to said arm and having a face for engaging the opposite side of said link and returning the blade, said arm having a slot, a screw stud traversing said slot and rigidly carried by the plate, and a set nut upon said stud.

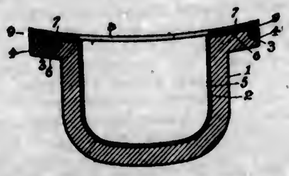
2. In a ruffler attachment for sewing machines, the combination with a frame, of a ruffler blade reciprocatory upon the frame, a link pivoted to said frame and engaging said ruffler blade, an arm pivoted concentrically with said link and having means for engaging one side of said link for shifting the same in one direction, said arm having a slot, a plate having means for engaging the opposite side of said link, a stud traversing said slot and carried by said plate, and a set nut upon said stud.

3. In a ruffler attachment for sewing machines, the combination with a frame, of a ruffler blade reciprocatory relative to the frame, a pivot stud mounted upon the frame, a link pivoted on said stud and pivoted to the rear of said blade, an arm pivoted on said stud and projecting forwardly of the blade for the engagement of a sewing machine needle bar and having a face at the rear of said link for engaging the same, a plate pivoted on said stud and having a face for engaging the front of said link, said arm having an upstanding portion provided with a sector slot, a screw stud carried by said plate and traversing said slot, and a nut upon said stud.

4. In a ruffler attachment for sewing machines, the combination with a frame, of a ruffler blade reciprocatory relative to the frame, a pivot stud carried by the frame, a link pivoted on said stud and pivoted to the rear of said blade, an arm pivoted on said stud and projecting forwardly of the blade for engagement with a sewing machine needle bar and having a lug at the rear of said link for engaging the same, a plate pivoted on said stud and having a face for engaging the front of said link, said arm having an upstanding portion provided with a sector slot, said plate having an upstanding portion, a screw stud carried by said upstanding portion of the plate and traversing said slot, a nut upon said stud, and a block upon said stud between the plate and arm equal in width to the thickness of the frame and link in addition to sufficient working space.

5. In a ruffler attachment for sewing machines, the combination with a sheet metal frame having an upstanding portion, of a ruffler blade reciprocatory on the frame, a sheet metal arm having a portion for engaging an operative part of the sewing machine, a stud mounted in said upstanding portion of the frame and fast with the arm, a flat face of said arm being in engagement with a flat face of said frame at one side, a sheet metal link pivoted upon said stud and having a flat face in engagement with a flat face of said frame opposite that engaged by the arm, a sheet metal plate pivoted upon said stud and having a flat face in engagement with a flat face of the link opposite that which engages the face of the frame, said arm having a lug for engaging one edge of the link, said plate having a lug for engaging the opposite edge of said link, said arm having a slot, a screw stud carried by the plate and traversing said slot, a set nut upon said stud, and a block between said plate and arm at the region of the stud for maintaining these at their proper distance of separation.

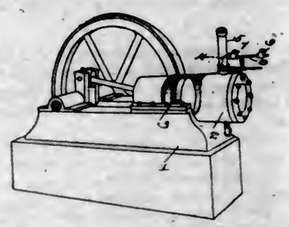
882,324. MOLD FOR HATS. FRANK H. LEE, Danbury, Conn. Filed May 17, 1907. Serial No. 374,276.



1. In a mold for hats, the combination with the mold comprising a matrix for the hat crown and a suitably contoured flange upon which the hat brim is placed, of a presser ring whose superficial area is plain and unbroken and initially conforms to the contour of the surface of said flange, which ring is provided with a central opening which is continuous and unbroken and coincides with the mouth of said matrix, and means for securing said ring as against lateral movement independent of said flange.

2. In a mold for hats, the combination with the mold comprising a matrix for the hat crown and a suitably contoured flange upon which the hat brim is placed, of a presser ring whose superficial area is plain and unbroken and is in initial conformity with the contour of the surface of said flange, which ring is provided with a central opening whose sides are plain and unbroken and which is in coincidence throughout its extent with the mouth of said matrix, and dowel pins depending from the outer edges of said ring and engaging sockets in said flange, whereby the lines of conformity and coincidence will be at all times maintained and the ring rendered stationary as against lateral shifting movements independent of said flange.

882,325. FIRING DEVICE FOR GAS-ENGINES. LESTER L. LEWIS, Oil City, Pa., assignor to E. J. Curran, Oil City, Pa. Filed Nov. 24, 1906. Serial No. 344,966.



1. The combination with a gas engine, of a relatively long hot tube in communication therewith, and valves in the length of said hot tube for enabling and controlling the intake and exhaust to and from said tube.

2. The combination with a gas engine, of a relatively long hot tube in communication therewith, a valve at the inner end thereof, and a valve at the outer end of the tube.

3. The combination with a gas engine, of hot tubes communicating with the cylinder thereof, one of the same being relatively small and being closed at its outer end, and the other being relatively large and valved at each end, and means for heating said tubes.

4. The combination with a gas engine having a hot tube for regularly firing the same, of a tube valved at each end and communicating with said engine, and means for heating said last mentioned tube.

5. As an article of manufacture, a hot tube adapted to be applied to a gas engine cylinder independently of the regular firing device thereof and without interfering with the communication of such firing device with the cylinder, and valves in the length of said hot tube for enabling and controlling the intake and exhaust to and from said hot tube.

882,326. MITTEN-PRESSING MACHINE. RANSOM S. LEWIS, Omaha, Nebr. Filed July 3, 1907. Serial No. 382,099.

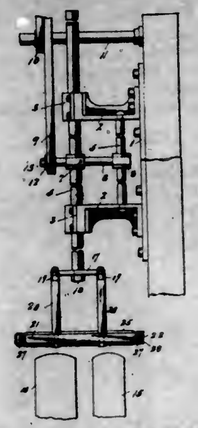
1. A presser comprising standards of desired shape, a reciprocating member, co-acting rollers carried by the reciprocating member to engage the standards and means for operating the reciprocating member.

2. A shaping machine comprising formers, a reciprocating member, crank mechanism for operating the same a frame carried by the reciprocating member, and adjustably mounted co-acting rolls journaled in the frame to pass on each side of the formers.

3. A pressing machine comprising flat upright formers, a reciprocating shaft, means for operating said shaft, a frame carried by the shaft, and coacting presser rolls journaled in the frame and adapted to pass down over the formers.

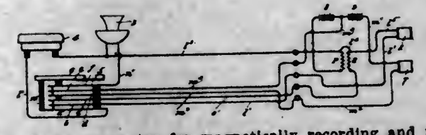
4. The combination with a reciprocating shaft and means for operating the same, of formers, a frame carried by the shaft, and coacting presser rolls adjustably mounted in the frame and adapted to engage the formers.

5. A mitten shaping machine comprising formers, a reciprocating member and a frame carried thereby, journal blocks slidably mounted in the frame, springs tending to



force the journal blocks together, and co-acting rolls mounted in the journal blocks to engage the formers.

882,327. CIRCUIT-CONTROLLING DEVICE FOR TELEGRAPHONES. JOHN A. LIEB, New York, N. Y., assignor to American Telegraphone Company, a Corporation of the District of Columbia. Filed Mar. 25, 1907. Serial No. 364,506.



1. In an apparatus for magnetically recording and reproducing sound, a recording magnet and an obliterating or erasing magnet, a switch having a plurality of contacts, and having two positions of throw, reproducing and recording or obliterating circuits, and means for establishing the reproducing circuit when said switch is in one position of its throw and the recording and obliterating circuits when the switch is in the other position of its throw.

2. In an apparatus for magnetically recording and reproducing sound, a recording medium and an erasing or obliterating magnet, and a transmitting and receiving instrument having a key or switch therein, recording and obliterating circuits and a repeating circuit, and circuit connections for establishing the recording and obliterating circuits or the repeating circuit by the movements of said key or switch.

3. In an apparatus for magnetically recording and reproducing sound, a recording medium and an erasing or obliterating magnet, circuits therefor including separate batteries, and a switch adapted to complete recording and obliterating circuits for the respective magnets at one position of its throw, and a repeating circuit through the recording magnet at the other position of its throw.

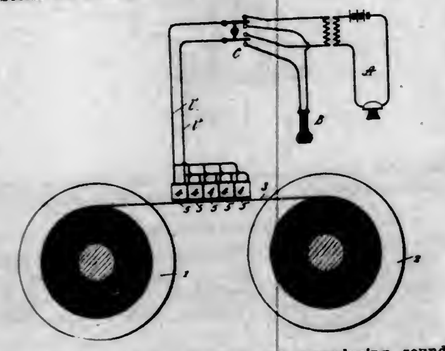
4. In an apparatus for magnetically recording and reproducing sound, a recording magnet and an erasing or obliterating magnet, separate batteries therefor, a transmitter, receiver and an induction coil, a switch having two positions of throw, said switch completing primary and secondary voice current circuits through said coil at one position of its throw for the purpose of making a record, and establishing a continuous circuit through said receiver and recording magnet at the other position of its throw.

5. In an apparatus for magnetically recording and reproducing sound, a recording magnet and an erasing or obliterating magnet, separate batteries therefor, a transmitter, receiver and an induction coil, a switch having two

positions of throw, said switch completing primary and secondary voice current circuits through said coil at one position of its throw for the purpose of making a record, and establishing a continuous circuit through said receiver and recording magnet at the other position of its throw, said switch simultaneously completing a circuit through said erasing or obliterating magnet at the time when a record is being made.

[Claims 6 to 11 not printed in the Gazette.]

882,328. AMPLIFYING-MAGNET SYSTEM FOR TELEGRAPHONES. JOHN A. LIEB, New York, N. Y., assignor to American Telegraphone Company, a Corporation of the District of Colnmbia. Filed Mar. 25, 1907. Serial No. 364,507.



1. The method of recording and reproducing sound, which consists in transforming the sound into telephonic currents, dividing the energy thereof among a plurality of separate magnets, moving a single steel medium past all of said magnets so that different paths are traced thereon by the poles of said magnets, said medium moving at a comparatively slow speed, and finally reproducing the sound by repeating said operation with said magnets in a single receiver circuit.

2. In an apparatus for magnetically recording sound, a plurality of magnets in a common telephone circuit, and a steel medium moving past said magnets, the different magnet poles describing different paths thereon.

3. In an apparatus for magnetically recording sound, a plurality of magnets in a common telephone circuit, and a steel tape or ribbon movable past said magnets, the different poles describing different paths thereon.

4. In an apparatus for magnetically recording sound, means in a telephone circuit for producing a plurality of magnet poles, and a steel tape or ribbon movable past said poles, the different poles describing different paths thereon.

5. In an apparatus for magnetically recording sound, a plurality of magnets in a common telephone circuit, each of said magnets being of just such a size that the entire number just absorb the available energy of the telephone circuit, and a medium movable past the poles of said magnets the different poles describing different paths thereon.

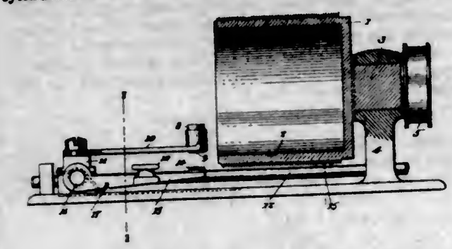
[Claim 6 not printed in the Gazette.]

882,329. TELEGRAPHONE. JOHN A. LIEB, New York, N. Y., assignor to American Telegraphone Company, a Corporation of the District of Columbia. Filed Mar. 25, 1907. Serial No. 364,508.

1. In an apparatus for magnetically recording and reproducing sound undulations, a hollow drum or member, and a steel plate sprung into said drum or member and retained therein by its own resiliency.

2. An apparatus for magnetically recording and reproducing sound undulations, comprising a hollow drum or member having a steel plate fitted to its interior surface and forming an interior surface of revolution, and a recording and reproducing device coöperating with such surface.

3. A means for magnetically recording and reproducing sound undulations comprising a steel plate sprung into a hollow supporting drum or member and constrained into cylindrical outline therein by its own resiliency.

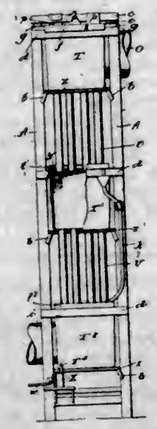


4. A means for magnetically recording and reproducing sound undulations comprising a hollow drum having an interior surface of revolution, a steel plate closely received against said surface of revolution and held thereto by its own resiliency.

5. In an apparatus for magnetically recording and reproducing sound undulations, a hollow drum having an interior face of steel, means for rotating said drum on its axis, a carriage movable in a direction parallel to the axis of said drum, a recording and reproducing device connected with said carriage and coöperating with the interior surface of said drum, and means of coöperating with the outside of said drum for feeding said carriage with respect thereto.

[Claim 6 not printed in the Gazette.]

882,330. COOLING AND CONDENSING TOWER. ALBERT A. MARLOW, Boundbrook, N. J. Filed Nov. 19, 1907. Serial No. 402,822.



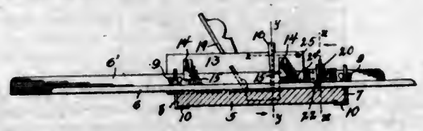
1. A cooling or condensing tower comprising a plurality of superposed closed chambers, having exposed flues connecting the upper side of one chamber with the lower side of the next chamber, water pans on the upper sides of the chambers; the lower ends of the flues extending through the adjacent pan or pans but not communicating therewith, and means for effecting a flow of water through the pans.

2. A cooling or condensing tower comprising an open framework, superposed closed condensing or cooling chambers mounted therein, series of vertical exposed flues connecting the adjacent sides of the chambers, open top water pans on the upper sides of the chambers but having no communication therewith, and means for effecting a flow of water through the pans and from one pan to the other.

3. A cooling or condensing tower comprising, an open framework, superposed chambers supported therein, vertical series of flues connecting the adjacent sides of the chambers, the lower chamber having an inlet and the upper chamber an outlet, water pans on the top of the chambers, baffles in the pans to form a zig-zag course for the water, and means for effecting a flow of water through the pans and around the lower ends of said pipes.

4. A cooling or condensing tower comprising, an open work frame including uprights, longitudinal bars, floors supported on said bars, chambers supported on said floors, vertical flues connecting the adjacent sides of the chambers, water pans on top of the chambers, a connection between the outlet end of one pan and the inlet end of the pan therebelow, baffle plates in the lower pans, cross pieces over the upper pan and baffle forming cleats connecting the cross pieces with the bottom of the upper pan.

882,331. GROOVING OR ROUTING TOOL. JOHN M. MASSEY, Gahanna, Ohio. Filed June 3, 1907. Serial No. 376,911.



1. The combination with a guide adapted to guide a routing plane or tool, of a clamp adapted to clamp said guide at one edge of the board, and a second clamp movable longitudinally of the guide and adapted to clamp said guide to the board at the opposite edge of said board.

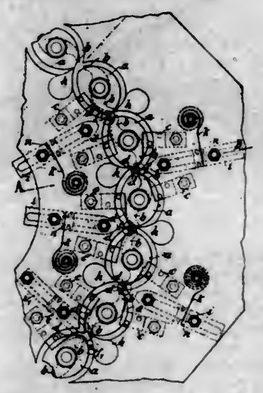
2. The combination with a guide adapted to guide a routing plane or tool, of a clamp adapted to clamp said guide pivotally at one edge of the board to be routed, a second clamp movable longitudinally of the guide and adapted to clamp said guide to the board at the opposite edge thereof, a routing plane or tool, and members secured to the sides of said routing plane or tool, said members having offset portions adapted to engage over a portion of the guide.

3. The combination with a guide adapted to guide a routing plane or tool, of a clamp adapted to clamp said guide pivotally at one edge of the board to be routed, a second clamp movable longitudinally of the guide and adapted to clamp said guide to the board at the opposite edge thereof, a routing plane or tool, members secured to the sides of said routing plane or tool, said members having offset portions adapted to engage over a portion of the guide, and a member adapted to be clamped to said guide in the path of said tool to form a stop for said tool.

4. The combination with a guide comprising a body portion and a longitudinally extending upstanding rib, of a clamping member adapted to pivotally clamp said guide at one edge of a board to be routed, a second clamp longitudinally movable with relation to the body portion of said guide and adapted to clamp said guide at the opposite edge of the board to be routed, a grooving or routing tool, and members carried by said tool and adapted to engage over the longitudinally extending upstanding rib.

5. The combination with a guide comprising a body portion and a longitudinally extending upstanding rib, of a clamping member adapted to pivotally clamp said guide at one edge of a board to be routed, a second clamp longitudinally movable with relation to the body portion of said guide and adapted to clamp said guide at the opposite edge of the board to be routed, a grooving or routing tool, members carried by said tool and adapted to engage over the longitudinally extending upstanding rib, and a clamping member adapted to be clamped to said upstanding rib in the path of movement of the tool and to form a stop for said tool.

882,332. BRAIDING AND LACE-MAKING MACHINE. FERDINAND MEYER, Barmen Germany, assignor to Bartels, Dierichs & Co. Gesellschaft mit beschränkter Haftung, Barmen, Germany. Filed June 7, 1907. Serial No. 377,833.



1. A braiding and lace making machine comprising crossing tracks and bobbin drivers, bobbins with pins, trays of greater dimension in the direction of the wheel circle than in that of the width, spring holders for the bobbin pins constituting an inlet guide and arranged at each crossing to act as a bobbin stopping device, slides independent of one another for moving the bobbins free from the holders into reach of the drivers, and pattern gears for controlling the slides.

2. A braiding and lace making machine comprising crossing tracks and bobbin drivers, bobbins with pins, trays of greater dimension in the direction of the wheel circle than in that of the width, spring holders for the bobbin pins constituting an inlet guide and arranged at each crossing to act as a bobbin stopping device, slides independent of one another for moving the bobbins, pattern gears controlling the slides and bobbin stopping devices secured to the slides.

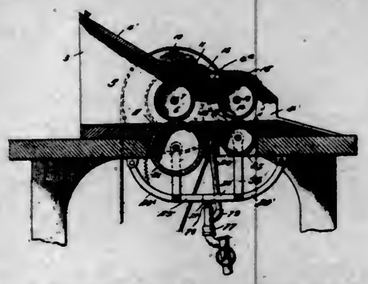
3. A braiding and lace making machine comprising crossing tracks and bobbin drivers, bobbins with pins, trays of greater dimension in the direction of the wheel circle than in that of the width, spring holders for the bobbin pins constituting an inlet guide and arranged at each crossing to act as a bobbin stopping device, slides independent of one another for moving the bobbins, switches at the crossings, and pattern gears connected to the slides and to the switches for controlling the movements of such slides and switches.

882,333. VINE-CUTTER. WILLIAM E. MOLDENHAUER, Wild Rose, Wis. Filed Jan. 9, 1907. Serial No. 351,516.



The combination with a wheel having a broad rim which is provided with a plurality of bolt openings, an annular flange member which is conoidal in cross section, ears formed integral with one side of the member and extending laterally therefrom in a plane with the base of the conoid, said ears being provided with bolt openings which register with the bolt openings in the rim of the wheel, and bolts engaged through said ears and rim.

882,334. DAMPENING-MACHINE. DAVID P. MOORE, Washington, D. C. Filed Dec. 20, 1906. Serial No. 348,816.



1. In a dampening machine, the combination of means for supplying moisture to the article, means controlled by the thickness of the article for actuating the moisture supplying means, and means for continuing said action after the article has passed the first mentioned means, actuated by the article.

2. In a dampening machine, the combination of a casing adapted to receive and deliver the article, a moisture supplying mechanism mounted in the path of the article, means actuated by the article for controlling the supplying mechanism, and means for continuing said action after the article has passed the first mentioned means, said means being actuated by the article.

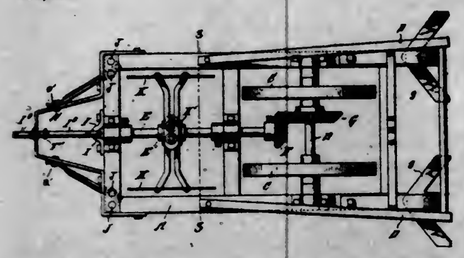
3. In a dampening machine, the combination of a casing adapted to receive and deliver the article, a moisture supplying mechanism mounted in the path of the article, means actuated by the thickness or "ply" of the article during passage, for controlling the supplying mechanism and means for continuing said action after the article has passed the first mentioned means, said means being actuated by the article.

4. In a dampening machine, the combination of a support, a moisture supplying mechanism supported thereby, means for controlling the supplying means operated by the article, and means for continuing the operation of the supplying means after the article has passed the first actuating means, said moisture supplying mechanism being intermediate of both of said means.

5. In a dampening machine, the combination of means whereby the articles are subjected to the spraying of moist mist upon opposite sides simultaneously, preparatory to a final moistening, and means for finally moistening the article.

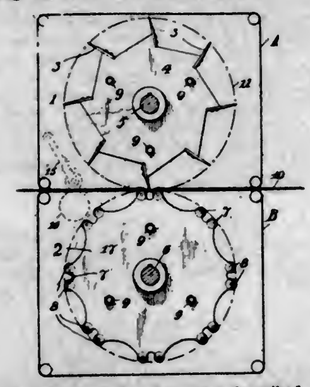
[Claims 6 to 33 not printed in the Gazette.]

882,335. COTTON-CHOPPER. WILLIAM D. MCCLURE, Kirksey, S. C., assignor of one-half to William A. Strom, Pleasant Lane, S. C. Filed Dec. 5, 1907. Serial No. 405,220.



In combination with the frame of a cotton chopper, an extension bracket bar secured to the end of the frame, a draw bar fastened to the frame intermediate the arms of said bracket bar, a clevis straddling the draw bar and having an eye in each of its ends to receive the draw bar, the latter designed to rest upon the upper edge of the bracket bars, and its upper throw limited by said clevis, as shown and described.

882,336. TREATMENT OF GUM-PAPER AND THE LIKE. RICHARD A. MCLAURIN, Kelvinside, Scotland. Filed Aug. 31, 1907. Serial No. 390,946.



1. In a machine of the character described, a pair of treating rolls one of which is provided with blades and the other with pairs of supports for the paper with which said knives mesh, substantially as described.

2. In a machine of the character described, a pair of treating rolls one of which is provided with blades and the other with pairs of supporting rollers for the paper with which said knives mesh, substantially as described.

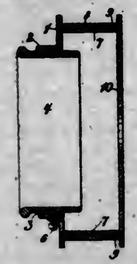
3. In a machine of the character described, a pair of treating rolls one of which is provided with blades and the other with pairs of supports for the paper with which said knives mesh, substantially as described, said knives meeting the paper at an angle to its feed.

4. In a machine of the character described, a pair of treating rolls one of which is provided with blades and the other with pairs of supports for the paper with which said knives mesh, substantially as described, in combination with means for feeding the paper to said rolls at a speed varying from the peripheral speed of the rolls.

5. In a machine of the character described, a pair of treating rolls one of which is provided with blades and the other with pairs of supports for the paper with which said knives mesh, substantially as described, and means for protecting the ungummed side of the paper from the action of said knives.

[Claims 6 and 7 not printed in the Gazette.]
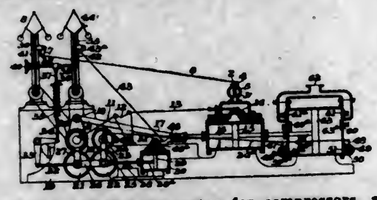
882,337. JUNCTION-BOX FOR ELECTRICAL CONDUITS. ADNAH MCMURTRIE, New York, N. Y., assignor to Thomas and Betts, New York, N. Y., a Corporation of New York. Filed Aug. 29, 1901. Serial No. 73,692.



As a new article of manufacture, a curb for junction boxes or electrical conduit members of the class described, said curb comprising a cylindrical member of sheet metal

the material whereof is turned outwardly at one mouth to form an exterior plaster retaining lip, and is curved at its inner mouth to form a non-abrasive shoulder, the body portion of said member being arranged to enter the mouth of said junction box or the like, substantially as described.

882,338. REGULATOR FOR COMPRESSORS. FRED E. NORTON and IRVING H. REYNOLDS, Youngstown, Ohio. Filed Mar. 8, 1907. Serial No. 361,239.



1. In a regulating apparatus for compressors, a compressor motor, a governor controlling the motor, a governor controlling the compressor, and mechanism whereby the motor governor is loaded in proportion as the compressor governor unloads the compressor so as to maintain constant discharge of the compressor; substantially as described.

2. In a regulating apparatus for compressors, a governor for the compressor motor, and a compressor governor with interconnected mechanism to load the motor governor as the compressor is unloaded; substantially as described.

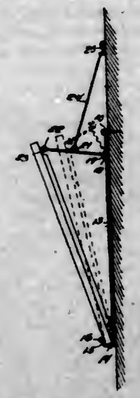
3. In an air compressor, an inlet valve, mechanism for shifting the position of the valve, a governor for controlling the shifting mechanism, a compressor motor, a governor for the motor, a loading connection between the two governors and means for loading the motor governor as the compressor is unloaded; substantially as described.

4. In an air compressor, a main inlet valve, an auxiliary inlet valve, mechanism for shifting the position of the auxiliary valve, a governor for controlling the shifting mechanism, a compressor motor, a governor for the motor, a loading connection between the two governors, and means for loading the motor governor as the compressor is unloaded; substantially as described.

5. In an air compressor, an inlet valve, mechanism for shifting said valve, a governor for controlling the shifting mechanism, a compressor motor, a governor for said motor, and a connection between the valve shifting mechanism and both governors; substantially as described.

[Claims 6 to 14 not printed in the Gazette.]

882,339. PICTURE-HANGER. OLAF S. OLSON, Rosholt, Wis. Filed Mar. 6, 1907. Serial No. 360,858.

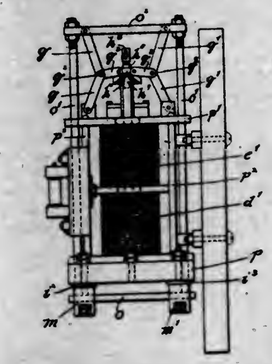


1. A hanger of the class described comprising a pair of legs having a tendency to separate, said legs being arranged at their lower ends for engagement with the lower edge of a picture frame or the like, a member connecting the legs and slidable thereon to hold the legs against such separation and to permit such separation, and an arm connected with the connecting member and with the frame to hold the same at an angle with respect to the legs.

2. A hanger of the class described comprising a pair of legs having a tendency to separate, said legs being arranged at their lower ends for engagement with the lower edge of a picture frame or the like, said legs being notched at corresponding points, a member connecting the legs and slidable thereon to hold the legs against separation and when moved into engagement with the notches to permit such separation of the legs, and a member pivotally connected with the said member and with the picture frame to hold the same at an angle with respect to the legs.

3. A hanger of the class described comprising a pair of legs having a tendency to separate, said legs being arranged at their lower ends for engagement with the lower edge of a picture frame or the like, said legs being notched at corresponding points, a member connecting the legs and slidable thereon to hold the legs against separation and when moved into engagement with the notches to permit such separation of the legs, and a member pivotally connected with the said member and with the picture frame to hold the same at an angle with respect to the legs, the said frame supporting member being adjustable to vary the angle of inclination of the frame with respect to the legs.

882,340. ELECTRICALLY-CONTROLLED SWITCH MECHANISM. GRANVILLE E. PALMER, Boston, Mass., assignor of one-fourth to Charles B. Price and one-fourth to Frank S. Price, Salem, Mass. Filed May 5, 1906. Serial No. 315,442.



1. An electrically controlled switch mechanism, comprising a base and fixed contacts, a vertically moving rectangular frame carrying two pairs of switch contacts, two electro-magnets adapted for multiple connection with the main circuit, a vertically moving solenoid core common to both electro-magnets, and toggle lever means connecting the moving switch frame with the solenoid core.

2. An electrically controlled switch mechanism, comprising a base and fixed contacts, a vertically moving frame carrying switch contacts, two electro-magnets, a vertically moving solenoid core common to both, and toggle lever mechanism connecting said core with the switch frame whereby the latter and the core rise and fall together.

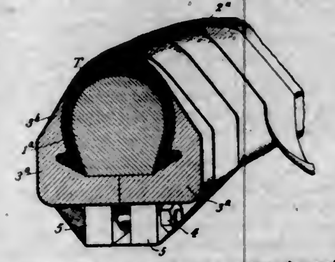
3. A switch-operating mechanism, comprising one or more vertically movable contacts, a pair of electromagnets, a vertically moving solenoid core for said electromagnets, two oppositely arranged pairs of toggle levers, each pair having one link stationarily pivoted and the other connected to said movable contacts, and a toggle

lever connected at its knuckle to the solenoid core and at the outer ends of its links to the links of the first mentioned toggle levers.

4. An electrically controlled switch mechanism, comprising a stationary frame supporting two electromagnets and a common vertically moving core therein, contacts on the base of said frame, a vertically moving frame carrying contacts to engage those on the stationary frame and toggle levers connecting the moving frame with the core and with the stationary frame.

5. An electrically controlled switch mechanism, comprising a stationary frame supporting two electromagnets and a common vertically moving core therein, contacts on the base of said frame, a vertically moving frame carrying contacts to engage those on the stationary frame and toggle levers connecting the upper part of the moving frame with the core and with the upper part of the stationary frame.

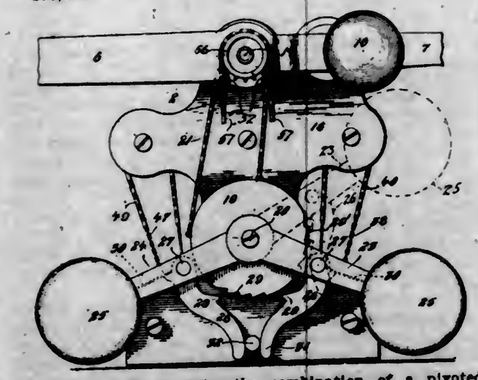
882,341. METHOD OF CURING OR VULCANIZING RUBBER GOODS. CHARLES L. PEPPER, Indianapolis, Ind. Filed Sept. 15, 1906. Serial No. 334,791.



1. The method of vulcanizing or curing the outer shoes or casings for pneumatic tires for vehicles, which consists in supporting and securing the shoe or casing in form, applying a porous cover to the exposed surface of the shoe or casing, and subjecting the shoe or casing so supported and covered to the action of vulcanizing heat.

2. The method of vulcanizing or curing the outer sheaths or casings for pneumatic tires for vehicles which consists in supporting the shoe or casing upon a core, clamping the shoe or casing in position on the core with the tread portion exposed, placing a porous covering over the exposed surfaces of the tire shoe or casing and in contact therewith, and subjecting the shoe or casing so supported, clamped and covered to the action of vulcanizing heat.

882,342. AUTOMATIC RAILWAY-GATE. JOHN PERNAT, Cleveland, Ohio. Filed Dec. 17, 1907. Serial No. 406,853.



1. In a railway gate, the combination of a pivoted gate a sprocket wheel carried by the gate, an oscillatory element, a sprocket chain passed around the wheel and connected to said element, oppositely arranged ratchets upon said element, weighted levers, spring-actuated pawls carried by the levers for engagement with said ratchets, means for disengaging the pawls from the ratchets, and means for lifting said levers.

2. In a railway gate, the combination of a gate, an oscillatory element for actuating the same, a ratchet upon said element, a weighted lever, a pawl carried by the lever for engagement with the ratchet when the lever is elevated, and means for disengaging the pawl from the ratchet when the lever is lowered.

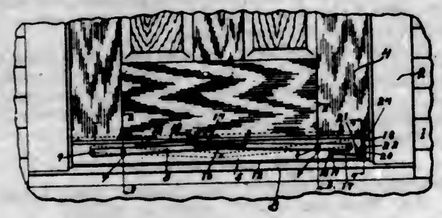
3. In a railway gate, the combination of a gate, an oscillatory element for actuating the same, oppositely arranged ratchets upon said element, weighted levers, spring actuated pawls pivoted upon the levers for engagement with the ratchets when the levers are lifted, and means arranged in the path of the pawls for disengaging them from the ratchets when the levers are lowered.

4. In a railway gate, the combination of a plurality of gate arms operatively connected for simultaneous swinging movement, an oscillatory element provided with oppositely arranged ratchets, weighted levers fulcrumed concentric with said element, spring actuated pawls pivoted upon the levers for engagement with the ratchets, means arranged in the path of the pawls for disengaging them from the ratchets, trip devices adapted to be actuated by passing cars, and operative connections between said trip devices and said levers, substantially as described.

5. In a railway gate, the combination of a gate, an oscillatory element for actuating the same, a pair of oppositely disposed levers having their inner ends pivoted and their free ends weighted, pawls carried by said levers for engaging said element and actuating it in opposite directions when said levers move downwardly, and means for elevating said levers.

[Claims 6 to 8 not printed in the Gazette.]

882,343. WEATHER-STRIP. CHARLES A. PIKE, Paw Paw, Mich. Filed Aug. 26, 1907. Serial No. 390,211.



1. The combination with a door, of a plate having vertical slots therein; screws arranged through said slots for securing said plate to said door; a pair of levers mounted on said screws, pivotally connected to each other at their inner ends, and to said plate at their outer ends; a closing spring carried by said plate for applying tension to said levers, said spring being connected to the inner ends of said levers to lift the same, whereby said plate is forced downwardly; a vertically-arranged plate lifting lever provided with a laterally projecting curved arm; a pin on said plate arranged to be engaged by said arm; a pivot for said plate lifting lever; a post projecting from said door, said plate having vertical slots therein to receive said post and said pivot for said plate lifting lever; a spring connected to said post and to said plate lifting lever, said spring being of sufficient strength to raise said plate against the tension of said closing spring; and a trip pin adapted to actuate said plate lifting lever to release said plate when the door is in its closed position.

2. The combination with a door, of a plate having vertical slots therein; screws arranged through said slots for securing said plate to said door; a pair of levers mounted on said screws, pivotally connected to each other at their inner ends, and to said plate at their outer ends; a closing spring carried by said plate for applying tension to said levers, said spring being connected to the inner ends of said levers to lift the same, whereby said plate is forced downwardly; a plate lifting lever; a pin on said plate arranged to be engaged by said plate lifting lever; a pivot for said plate lifting lever; a post projecting from said door, said plate having vertical slots therein to receive said post and said pivot for said plate lifting lever; a spring connected to said post and to said plate lifting lever, said spring being of sufficient strength to raise said plate against the tension of said closing spring, and a trip pin adapted to actuate said plate lifting lever to release said plate when the door is in its closed position.

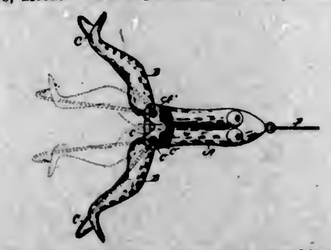
3. The combination with a door, of a plate having vertical slots therein; screws arranged through said slots for securing said plates to said door; a pair of levers mounted on said screws, pivotally connected to each other at their inner ends, and to said plate at their outer ends; a vertically arranged plate lifting lever provided with a laterally projecting curved arm; a pin on said plate arranged to be engaged by said arm; a pivot for said plate lifting lever; a post projecting from said door, said plate having vertical slots therein to receive said post and said pivot for said plate lifting lever; a spring connected to said post and to said plate lifting lever; and a trip pin adapted to actuate said plate lifting lever to release said plate when the door is in its closed position.

4. The combination with a door, of a plate having vertical slots therein; screws arranged through said slots for securing said plate to said door; a pair of levers mounted on said screws, pivotally connected to each other at their inner ends, and to said plate at their outer ends; a plate lifting lever; a pin on said plate arranged to be engaged by said plate lifting lever; a pivot for said plate lifting lever; a post projecting from said door, said plate having vertical slots therein to receive said post and said pivot for said plate lifting lever; a spring connected to said post and to said plate lifting lever; and a trip pin adapted to actuate said plate lifting lever to release said plate when the door is in its closed position.

5. The combination with a door, of a plate adjustably mounted thereon; a pair of pivotally mounted levers connected to each other, and to said plate; a closing spring carried by said plate for applying tension to said levers; a vertically-arranged pivoted plate-lifting lever provided with a laterally projecting curved arm; a pin on said plate arranged to be engaged by said arm; a spring connected to said door and to said plate lifting lever, said spring being of sufficient strength to raise said plate against the tension of said closing spring; and a trip pin adapted to actuate said plate lifting lever to release said plate when the door is in its closed position.

[Claims 6 to 10 not printed in the Gazette.]

882,344. ARTIFICIAL BAIT. JAY B. RHODES, Kalamazoo, Mich., assignor to William Shakespeare, Jr., Kalamazoo, Mich. Filed Sept. 15, 1905. Serial No. 278,682.



1. In an artificial bait or lure, the combination of a body having a horizontal slot in its rear end; hooks provided with eyes arranged in said slot with their points upward; legs arranged in said slots upon the shanks of said hooks, so that the points of the hooks are guarded thereby; pivot pins arranged through the eyes of the hooks for securing them to the body; and a forwardly pointing V-shaped spring engaging said legs for holding them normally outward, arranged in said slot in said body, for the purpose specified.

2. In an artificial bait or lure, the combination of a body; hooks provided with eyes, arranged with their points upward; legs arranged upon the shanks of said hooks, so that the points of the hooks are guarded thereby; pivot pins arranged through the eyes of the hooks for securing them to the body; and a forwardly pointing V-shaped spring engaging said legs for holding them normally outward, for the purpose specified.

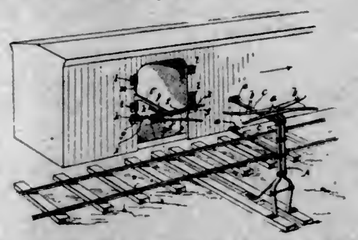
3. In an artificial bait or lure, the combination of a body having a horizontal slot in its rear end; hooks provided with eyes; legs arranged in said slot upon the shanks of said hooks, so that the points of the hooks are guarded thereby; pivot pins arranged through the eyes of the hooks for securing them to the body; and a forwardly pointing V-shaped spring engaging said legs for holding them normally outward, arranged in said slot in said body, for the purpose specified.

4. In an artificial bait or lure, the combination of a body; hooks provided with eyes; legs arranged upon the shanks of said hooks, so that the points of the hooks are guarded thereby; pivot pins arranged through the eyes of the hooks for securing them to the body; and a forwardly pointing V-shaped spring engaging said legs for holding them normally outward, for the purpose specified.

5. In an artificial bait or lure, the combination of a body having a horizontal slot in its rear end; hooks arranged in said slot with their points upward; legs arranged in said slots upon the shanks of said hooks, so that the point of the hooks are guarded thereby; pivot pins arranged through the eyes of the hooks for securing them to the body; and means for holding said legs normally outward, for the purpose specified.

[Claims 6 to 17 not printed in the Gazette.]

882,345. MAIL-BAG DELIVERER AND CATCHER. WILLIAM H. ROGERS, Lookout Mountain, Tenn. Filed Dec. 30, 1907. Serial No. 408,649.

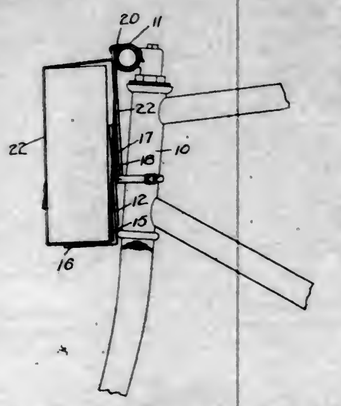


1. The combination of a car and a pair of horizontal tubular bearings one at each side of the doorway and each having a notch in its inner end, a reversible grab-hook tapered toward one end and having a pin at its other end adapted to engage either of said notches, for the purpose set forth.

2. In combination, a post erected adjacent to the roadbed and provided with a double-pronged receiver, a delivering device on the car consisting of a vertical post pivotally mounted adjacent to the doorway and provided with an arm adapted to be swung out at right angles to the car, said arm being provided with a pair of pivoted fingers adapted to be swung out in opposite directions at right angles to the arm.

3. In combination with a suitable receiver on the roadbed, of a delivering device on the car consisting of two pairs of vertical tubular bearings one at each side of the car door opening, the upper edge of each lower bearing being notched, a post or bar adapted to be mounted vertically in either set of bearings and to be rotated therein and provided with a pin adapted to engage in the notch in the lower bearing and also provided with a right angle arm whose outer end is provided with a pair of oppositely extending fingers, for the purpose set forth.

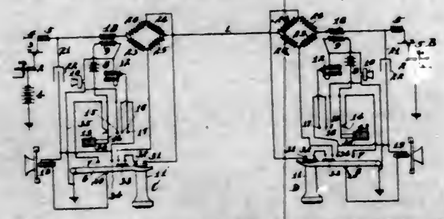
882,346. PARCEL-CARRIER FOR BICYCLES. CHESTER W. ROSENCRANCE, Oacoma, S. D. Filed Apr. 27, 1907. Serial No. 370,640.



1. A parcel carrier for bicycles comprising a head-bar adapted to extend forward from the rider and provided with a carrying device, laterally projecting arms pivoted together at their inner ends and also pivoted on the head-bar, each of said arms being provided on its end with a short strap adapted to secure it to the handle-bar of a bicycle, and a longer strap adapted to encompass a parcel on the carrying device and confine it thereon.

2. A parcel carrier for bicycles comprising a head-bar adapted to extend forward from the rider and provided with a carrying device, comprising a bar adjustable on the head-bar and having a right-angular stop-bar at its lower end, laterally projecting arms pivoted together at their inner ends and also pivoted on the head-bar, each of said arms being provided on its end with a short strap adapted to secure it to the handle-bar of a bicycle, and a longer strap adapted to encompass a parcel on the carrying device and confine it thereon.

882,347. COMPOSITE SIGNALING AND TELEPHONE SYSTEM. HARRY O. RUGH, Sandwich, Ill. Filed June 14, 1906. Serial No. 321,769.

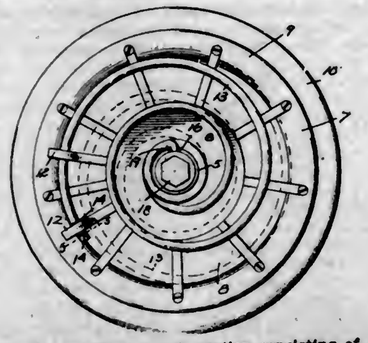


1. In a composite telegraph and telephone system, the combination with a transmission conductor affording passage for telegraphic current, a plurality of telegraph stations connected thereby, a plurality of telephone stations also connected thereby, said transmission conductor normally permanently extending to all of said telegraph and telephone stations, a quadrilateral of connections at each telephone station, the telephone receiver circuit at each telephone station having one terminal connected between two of a pair of the sides of said quadrilateral and the other terminal connected between the two sides of the remaining pair of sides of said quadrilateral, the said pairs of sides of said quadrilateral each being connected in series with the transmission conductor, the telegraph stations also being in serial relation with said quadrilateral, opposite sides of said quadrilateral possessing impedance to telephonic current and interposed between the associate telephone receiver circuit and the telegraph stations while the remaining sides of said quadrilateral afford passage for voice currents, all of the sides of said quadrilateral affording passage for telegraph currents, and conductors extending from the transmission conductor and completing the telephonic circuit.

2. In a composite telegraph and telephone system, the combination with a transmission conductor affording passage for telegraphic current, a plurality of telegraph stations connected thereby, a plurality of telephone stations also connected thereby, said transmission conductor normally permanently extending to all of said telegraph and telephone stations, a quadrilateral of connections at each telephone station, the telephone receiver circuit at each telephone station having one terminal connected between two of a pair of the sides of said quadrilateral and the other terminal connected between the two sides of the remaining pair of sides of said quadrilateral, the said pairs of sides of said quadrilateral each being connected in series with the transmission conductor, the telegraph stations also being in serial relation with said quadrilateral, opposite sides of said quadrilateral possessing impedance to telephonic current and interposed between the associate telephone receiver circuit and the telegraph stations while the remaining sides of said quadrilateral afford passage for voice currents, all of the sides of said quadrilateral affording passage for telegraph currents, and conductors extending from the transmission conductor and completing the telephonic circuit, and condensers in said conductors.

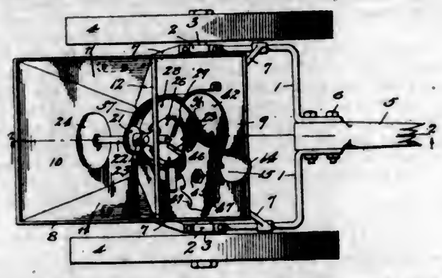
3. In a composite telegraph and telephone system, the combination with a transmission conductor affording passage for telegraphic current, a plurality of telegraph stations connected thereby, a plurality of telephone stations also connected thereby, said transmission conductor normally permanently extending to all of said telegraph and telephone stations, a quadrilateral of connections at each telephone station, the telephone receiver circuit at each telephone station having one terminal connected between two of a pair of the sides of said quadrilateral and the other terminal connected between the two sides of the remaining pair of sides of said quadrilateral, the said pairs of sides of said quadrilateral each being connected in series with the transmission conductor, the telegraph stations also being in serial relation with said quadrilateral, opposite sides of said quadrilateral possessing impedance to telephonic current and interposed between the associate telephone receiver circuit and the telegraph stations while the remaining sides of said quadrilateral afford passage for voice currents, all of the sides of said quadrilateral affording passage for telegraph currents, and conductors extending from the transmission conductor and completing the telephonic circuit.

882,348. SPRING-WHEEL. HENRY E. SCHINDLER, Sisseton, S. D. Filed July 6, 1907. Serial No. 382,468.



A wheel comprising a web portion consisting of a pair of annular plates secured together, said plates having their outer peripheries flanged to form a felly, and their inner peripheries bowed outwardly in opposite directions to form an internal chamber; a hollow cylindrical hub yieldingly mounted with respect to said web and provided with a circumferential flange disposed within said chamber, each end of said hub being internally threaded and provided with a notch; a threaded plug fitted in each end of said hub; and a pair of coil-springs disposed upon opposite sides of said web and reversely wound with respect to each other, each spring having one end fastened to the adjacent plate and having its other end extending through the notch in the adjacent end of the hub into the interior thereof.

882,349. POTATO-PLANTER. CHARLES F. SCHMIDT, Jeffersontown, Ky. Filed Dec. 21, 1907. Serial No. 407,643.



1. In a potato planter of the character described, the combination of a frame, a hopper carried thereby having an inclined side provided with a feed opening adjacent its upper end, means for feeding the potatoes up said inclined side, and means for withdrawing the superfluous potatoes from said feeding means, substantially as described.

2. In a potato planter of the character described, the combination of a frame, a hopper carried thereby having an inclined side provided with a feed opening adjacent its upper end, a feeding mechanism for feeding the potatoes upwardly upon said inclined side and dropping the same through said feed opening and a singling member operated from said mechanism for withdrawing the superfluous potatoes therefrom, substantially as described.

3. In a potato planter of the character described, the combination of a wheeled frame, a hopper carried thereby having an inclined side provided with a feed opening adjacent its upper end, means for feeding the potatoes up said inclined side operated from said wheeled frame, and means for withdrawing the superfluous potatoes from said feeding means, substantially as described.

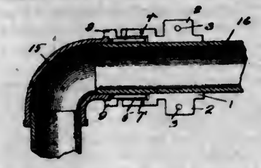
4. In a potato planter of the character described, the combination of a wheeled frame, a hopper carried thereby having an inclined side provided with a feed opening adjacent its upper end, a feeding mechanism for feeding the potatoes upwardly upon said inclined side and dropping the same through said feed opening, and a singling member operated from said mechanism for withdrawing the superfluous potatoes therefrom, substantially as described.

5. In a planter of the character described, the combination with a hopper having an inclined side provided with a feed opening adjacent its upper end, of a rotatable feed plate having fingers projecting therefrom, a plate mounted beneath said fingers and rotating with said feed plate, a shield surrounding said last named plate and between which and said feed plate the potatoes are fed upwardly upon said inclined side, a dropping plate to receive the potatoes and convey the same to said feed opening, and a singling plate for withdrawing the superfluous potatoes from said dropping plate, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

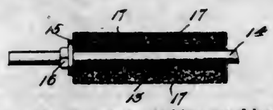
882,350. SEAL FOR PIPE-JOINTS. BERNARD F. SHAUGHNESSY, Pittsburg, Pa. Filed Mar. 21, 1907. Serial No. 363,753.

In a pipe seal, a sleeve embodying two half sections having interlocking tongues, and grooved in their meeting faces, one end of said sleeve being enlarged and the remainder thereof being exteriorly threaded, stepped shoulders formed in said enlarged head to respectively receive a packing and the end of an abutting pipe, and a



clamp embodying two half sections fitting together and having an enlarged interiorly-threaded end to engage the threaded portion of the sleeve, and means for securing said clamp sections together.

882,351. ROLLER FOR PAPER-MAKING MACHINES AND PROCESS OF MANUFACTURING SAID ROLLERS. WILLIAM E. SHEEHAN, Albany, N. Y. Filed Jan. 15, 1906. Serial No. 296,174.



1. A couch roller for paper making machines, consisting of a shaft surrounded by carded wool compressed into a dense elastic, homogeneous mass and turned down into cylindrical form.

2. A couch roller for paper making machines, consisting of a shaft surrounded by layers of carded wool wrapped in successive turns about the shaft and compressed and turned down into a dense, elastic, cylindrical mass.

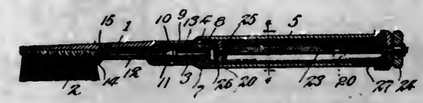
3. A couch roller for paper making machines, consisting of a shaft surrounded by fibrous material treated at its inner portion about the shaft, with an agglutinating substance, whereby said portion is made a rigid mass and thereby retains the fibrous material in proper form.

4. A couch roller for paper making machines, consisting of a shaft having clamped thereon several disks of compressed fibrous material each treated, at its inner portion about the shaft, with an agglutinating substance whereby said portion is made a rigid mass and retains the disk in proper form.

5. A disk for composite couch rollers in paper making machines, consisting of compressed fibrous material treated, at its inner portion about the shaft, with an agglutinating substance whereby said portion is made rigid and thereby retains the material in its compressed form.

[Claims 6 to 10 not printed in the Gazette.]

882,352. TOOTH-BRUSH. FREDERICK F. SHUMER, Norwalk, Ohio. Filed Aug. 30, 1907. Serial No. 390,774.



1. A brush having a tubular handle member constituting a receptacle, a tubular shank detachably connected therewith, a tubular discharge member movable in the tubular shank and having an extension connected thereto by a ball and socket joint, and a stationary closure for the free end of the extension of the tubular discharge member.

2. A brush having a tubular handle member constituting a receptacle, a tubular shank detachably connected therewith, and having an apertured plug, a spring actuated discharge tube longitudinally movable in the tubular shank, a tubular extension member connected with the discharge tube for universal movement with relation thereto, and a stationary brush.

3. A brush having a tubular handle member constitut-

ing a receptacle, a tubular shank connected detachably therewith, and a tubular spring actuated discharge member seated for longitudinal movement in the tubular shank, said discharge member including a discharge tube and an extension member connected therewith for universal movement and a closure for the discharge member consisting of a flange stationary on the shank and an elastic washer supported upon said flange.

4. A brush having a tubular handle member constituting a receptacle, a tubular shank detachably connected therewith, and having an apertured plug, a spring actuated tubular discharge member longitudinally slidable in the tubular shank, a follower movable longitudinally in the tubular handle member, a threaded cap constituting a closure for the latter, and an operating screw supported for rotation in the cap and having threaded engagement with the follower.

882,353. PLOW-DISK AND THE LIKE. PETER SPEIRS, Tullamarine, Victoria, Australia. Filed Oct. 3, 1907. Serial No. 395,777.

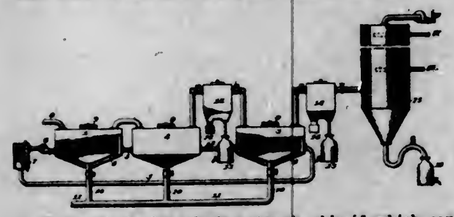


1. A disk constituting a plow, having a basin within which is located a detachable cone, having a central aperture to receive a fastening means, and key holes to aid in attaching the same, substantially as described.

2. The combination of a disk constituting a plow having a basin, and a detachable cone, located in the same, said cone provided with a screw threaded aperture and key holes, a rod connecting said cone and disk, fitting said aperture, and said holes, adapted to receive an instrument to aid in attaching and detaching said disk, substantially as described.

3. The combination of a disk constituting a plow having a basin and a hub, provided with a screw aperture and a detachable cone, also having a screw threaded aperture, a rod, screw threaded at each end and fitting said apertures, said cone also provided with key holes to aid in readily attaching and detaching said cone to said disk, substantially as described.

882,354. METHOD OF MAKING STANNIC CHLORID. ELMER A. SPERRY, Brooklyn, N. Y., assignor to Chemical Reduction Company, New York, N. Y., a Corporation of New York. Filed Nov. 23, 1905. Serial No. 288,780.



1. The method of producing stannic chlorid which consists in bringing chlorin into contact with a body of tin-bearing material in the presence of anhydrous stannic chlorid, maintaining the stannic chlorid substantially saturated with free chlorin, cooling the reacting mass, and maintaining therein during reaction a temperature not exceeding the vaporizing point of anhydrous stannic chlorid.

2. The method of producing stannic chlorid which consists in reacting on a tin-bearing material with diluted chlorin in the presence of anhydrous stannic chlorid and cooling the reacting mass.

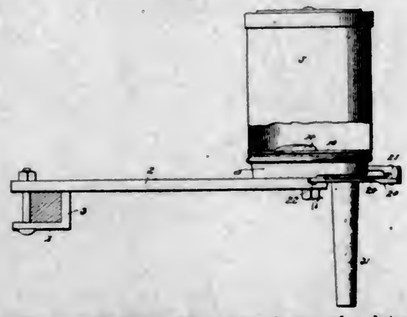
3. The method of producing stannic chlorid which consists in reacting on a tin-bearing material with chlorin containing moisture as a diluent in the presence of anhydrous stannic chlorid and cooling the reacting mass.

4. The method of producing stannic chlorid which consists in reacting on a tin-bearing material with chlorin containing moisture and air as diluents in the presence of anhydrous stannic chlorid and cooling the reacting mass.

5. The method of producing stannic chlorid which consists in reacting on a tin-bearing material with free chlorin in presence of liquid hydrated stannic chlorid.

[Claims 6 to 21 not printed in the Gazette.]

882,355. REPLANTING ATTACHMENT FOR CULTIVATORS. EDWARD H. SUHL, Sparks, Okla., assignor of one-half to Bert Springer, Sparks, Okla. Filed Nov. 29, 1907. Serial No. 404,385.



1. The combination with a plow beam, of a laterally extending beam attached thereto, a seed box carried by the outer end of said beam, a rotary disk for feeding the grain from said box, ratchet teeth carried by the outer periphery of said disk, a lever pivoted to the seed box, a pawl carried by the outer end of said lever, a spring for normally holding the lever in its outward position and holding the pawl in engagement with the ratchet teeth of the disk, and an operating cable attached to the pawl for drawing the same forward and operating the disk.

2. The combination with a plow beam, of a laterally-extending beam attached thereto, a seed box carried by the outer end of the said beam, a saucer-shaped bottom carried by the lower end of the seed box, a plate carried by the upper edge of said bottom within the box, a disk within the saucer-shaped bottom below the plate and having a series of vertical openings registering with an opening in the bottom, the plate having a segmental slot above the openings in the disk, a spring carried by the plate and extending through the segmental slot and engaging the outer periphery of the disk having ratchet teeth, a bolt passing through the saucer-shaped member, the disk and the plate, a lever pivotally carried by the lower face of the saucer-shaped member, a pawl carried by the outer end of said lever, a spring surrounding the pivot of the lever and having one end secured to the member and the other end secured to the pawl, and normally holding the lever in its outward position, and the pawl in an inward position passing through an opening in the side walls of the saucer-shaped bottom and engaging the ratchet teeth of the disk, and an operating cable attached to said pawl.

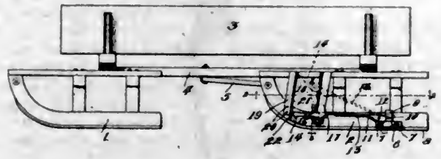
3. The combination with a plow beam, of a laterally-extending beam attached thereto, a seed box carried by the outer end of said beam, a plate within said box and having a segmental slot therein, a disk below the plate and having openings registering with the slot, a spring carried by the upper face of the plate and extending through the segmental slot, and engaging the disk, and a spring carried by the lower face of the plate and adapted to force the grain from the openings in the disk.

4. The combination with a plow beam, of a laterally-extending beam attached thereto, a seed box carried by the outer end of the beam, a bottom secured within the lower end of the box and having an opening adjacent one side, a ratchet disk resting upon the bottom and having a series of openings registering with the opening in the bottom, a plate above the disk and having a segmental slot registering with the openings in the disk, a spring carried by the upper face of the plate and extending through the segmental slot, and frictionally engaging the disk, a spring carried by the lower face of the plate and adapted to force the grain from the openings in the disk, a bolt passing through the bottom, disk and plate, a lever pivotally carried by the lower face of the bottom, a pawl pivotally carried by the outer end of said lever, a spring surrounding the pivot of the lever and having one end secured to the bottom and the other end secured to the pawl and normally holding the lever in its outward position with the pawl in engagement with the ratchet disk, a rod or cable attached to the pawl, and an operating lever pivoted to the handle of the cultivator and having the rod or cable attached thereto.

5. The combination with a plow beam, of a laterally-extending beam attached thereto, a seed-box carried by the outer end of said beam, a ratchet disk within the seed box and having feed openings therein, a lever pivoted to the seed box, a pawl carried by the lever, and a coil spring surrounding the pivot of the lever and having one end secured to the seed box and the opposite end secured to the inner end of the pawl, substantially as described.

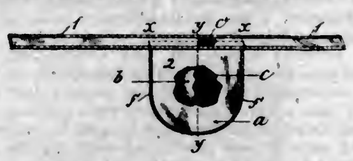
[Claim 6 not printed in the Gazette.]

882,356. SLEIGH. ARTHUR E. TAYLOR, Necedah, Wis. Filed Oct. 29, 1907. Serial No. 399,625.



An attachment for sleighs comprising a keeper secured to the side of one of the runners of the sleigh, a blade mounted to move in said keeper and secured to the end of a lever, said lever being pivoted to the runner, a rack bar, a spring secured to said lever and bearing upon the rear side of said rack bar to prevent detachment of the lever therefrom, and a guard disposed in front of the lever handle.

882,357. CHAFING-SHIELD. ERNEST A. TIETJEN, New York, N. Y. Filed May 26, 1905. Serial No. 262,426.

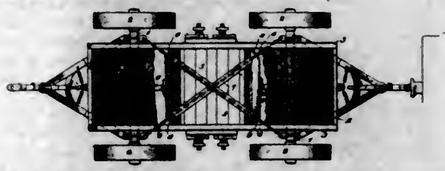


As a new article of manufacture, a chafing shield composed of a flat band adapted to pass between the legs and beneath the body from front to back, and having a shield directly secured to the under side of the band and hanging vertically therefrom, said shield and also said band for a distance approximating the width of the shield, being lined with rubber, substantially as set forth.

882,358. RUNNING-GEAR FOR DUMP-WAGONS. MARQUIS J. TODD, Buffalo, N. Y., assignor to Buffalo Pitts Company, Buffalo, N. Y., a Corporation of New York. Filed Oct. 19, 1907. Serial No. 398,287.

1. A dump wagon having, in combination, two pivoted axles and carrying wheels thereon, a body, doors for closing the bottom of such body, and cross reaches secured to the opposite axles and extended through the body at a point near the bottom thereof.

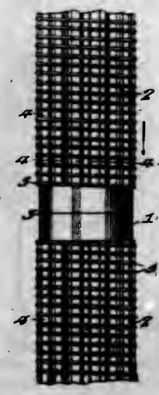
2. A dump wagon having, in combination, two pivoted axles and carrying wheels thereon, a body, doors for closing the bottom of such body, cross reaches secured to the opposite axles and extended through the body at a point near the bottom thereof, and means located within the wagon body for inclosing the cross reaches.



3. A dump wagon having, in combination, two pivoted axles and carrying wheels thereon, a body, doors for closing the bottom of such body, tubes intersecting said body at a point near its bottom, and cross reaches secured to the opposite axles and extended through said tubes.

4. A dump wagon having, in combination, two pivoted axles and carrying wheels thereon, a body, doors for closing the bottom of such body, and flexible cross reaches secured to the opposite axles and extended through the body at a point near the bottom thereof.

882,359. WELL-TUBE AND STRAINER. MARVIN B. VAN NESS, Welsh, La. Filed Feb. 7, 1906. Serial No. 299,997.



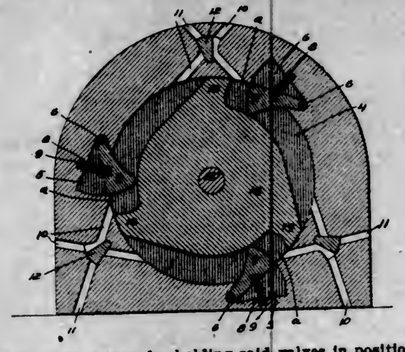
The herein described well tube lining and strainer consisting of an inner tube provided with a series of longitudinal slots extending nearly to the ends of said tube, a series of strips applied to said tube to cover the metal between the slots and a spirally wound wire binding wrapped around the strips, the coils of said binding wire being of equal distances apart to provide rectangular strainer interstices.

882,360. ROTARY ENGINE. STANFORD W. VINCENT, Nashua, N. H. Filed Sept. 4, 1907. Serial No. 391,302.

1. A rotary engine comprising a casing, a piston rotating in said casing, yielding abutments in said casing, intersecting inlet and exhaust ports, valves pivoted at the intersection of said ports, tappets connected to said valves outside of the cylinder, and tappet arms carried by the piston shaft for moving the said tappets to shift said valves.

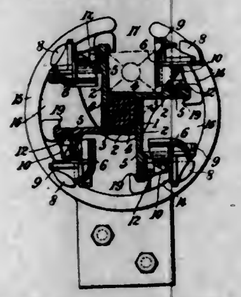
2. In a rotary engine, a casing, a piston mounted on a shaft extending through said casing, yielding abutments in said casing, intersecting inlet and exhaust ports, valves mounted at the intersection of said ports, tappets on said valves outside the casing, springs for normally holding said valves in position to admit steam to the casing and means for automatically shifting said valves to open the exhaust ports.

3. In a rotary engine, the combination of a casing, a piston rotating therein, yielding abutments, intersecting inlet and exhaust ports, valves pivoted at the intersection



of said ports, means for holding said valves in position to admit steam to the cylinder, and means for alternately shifting said valves to permit the steam to exhaust.

882,361. SHUTTLE-BOX FOR ROTARY-BOX LOOMS. ALBERT E. WALKER, ARTHUR WALKER, and GEORGE WALKER, Norwood Green, near Halifax, England. Filed Oct. 23, 1905. Serial No. 284,029.



1. In shuttle boxes for rotary-box looms comprising several compartments, the combination of an axial shaft forming the foundation for each compartment, bearings for said shaft, a series of plates secured to said shaft so that one side of each plate forms the bottom of a compartment, and part of the other side of same plate forms the front wall of an adjoining compartment, a swell to each compartment and means for retaining the shuttle in each compartment, substantially as described.

2. In shuttle boxes for rotary-box looms comprising several compartments, the combination of an axial shaft forming the foundation for the shuttle box, bearings for said shaft, a series of plates secured to said shaft so that one side of a plate forms the bottom of a compartment and part of the other side of the same plate forms the front wall of an adjoining compartment, a swell to each compartment, and supports having shuttle-retaining ledges for each compartment, substantially as described.

3. In shuttle boxes for rotary-box looms comprising several compartments, the combination of an axial shaft forming the foundation for each compartment, bearings for said shaft, a series of plates secured to said shaft so that each plate is common to two compartments, a swell for each compartment, and bracket pieces provided with shuttle retaining ledges secured to said plates for carrying said shuttle-retaining ledges, substantially as described.

4. In shuttle boxes for rotary-box looms comprising several compartments, the combination of an axial shaft, an end bearing for said shaft, a series of plates secured to said shaft so that each plate is common to two compartments, bracket pieces provided with shuttle retaining ledges and having arcs formed thereon, and means for admitting a shuttle into a compartment, comprising a circular plate having an opening therein and a flange forming a cup bearing within which said arc-shaped bracket pieces are capable of revolving, substantially as described.

5. In shuttle boxes for rotary-box looms, the combination of an axial shaft, a series of plates secured to said shaft so that each plate is common to two compartments, a swell for each compartment, bracket pieces secured to each plate within which the free ends of said swells rest, a spring secured to each plate for controlling the motion of the swells, said bracket pieces having shuttle-retaining ledges for each compartment, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

882,362. WRENCH. JOHN J. WISH, Pittsburg, Pa. Filed Dec. 5, 1907. Serial No. 405,172.



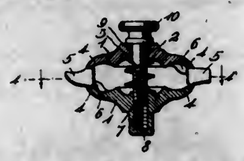
1. A wrench embodying a shank having oppositely disposed edges, provided with teeth, the teeth upon one edge being reverse to the teeth of the opposite edge, a fixed jaw carried by said shank, a detachable handle carried by said shank, a movable jaw slidably mounted upon said shank and having diagonally opposed recesses formed therein, pawls pivotally mounted in said recesses and having toothed ends for engaging the teeth of said shank, coil springs mounted in said recesses for engaging the opposite ends of said pawls and retaining the toothed ends thereof in engagement with said shank.

2. A wrench comprising a toothed shank, a fixed jaw carried thereby, a jaw movably mounted upon said shank and having diagonally opposed recesses formed therein, pawls pivotally mounted in said recesses and having toothed ends for engaging said toothed shank, one of said pawls overlapping the top of the movable jaw and the other of said pawls overlapping the bottom of said movable jaw and springs mounted in said recesses for engaging the opposite ends of said pawls, and retaining the toothed ends thereof in engagement with said shank.

3. A wrench comprising a toothed shank, a fixed jaw carried thereby, a jaw movably mounted upon said shank and having diagonally opposed recesses formed therein, pawls pivotally mounted in said recesses and having toothed ends for engaging said toothed shank, one of said pawls overlapping the top of the movable jaw and the other of said pawls overlapping the bottom of the movable jaw and means mounted in said recesses for retaining said pawls in engagement with said toothed shank.

882,363. DENTAL INSTRUMENT. JULIAN T. WRIGHT, Richmond, Va., assignor of one-half to Eddie Snowden Davis, Richmond, Va. Filed Sept. 18, 1907. Serial No. 393,444.

1. A dental instrument for clamping a tooth while being ground, consisting of an upper and a lower holding jaw, one of said jaws being provided with an integral projecting stop, and means for adjustably securing the jaws and for holding said tooth in position between the jaws with a yielding pressure.



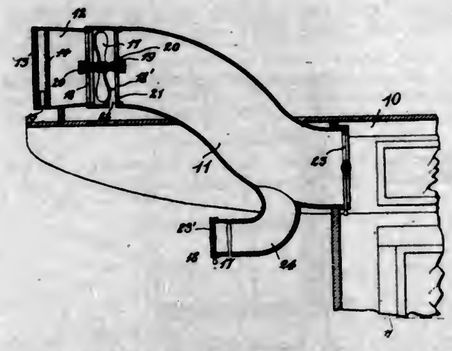
2. A dental instrument for clamping teeth while being ground, consisting of a pair of members having a plurality of projections on their meeting edges, said projections constituting jaws for the reception of one or more teeth, and means for adjusting elastically one of said members towards the other to hold said teeth in position.

3. A dental instrument for holding teeth while being ground, consisting of a pair of members provided with a plurality of radially arranged projections on their meeting edges constituting jaws for holding teeth in position, and means for adjustably securing said members to rigidly clamp said teeth between the jaws.

4. A dental instrument for holding teeth while being ground, consisting of two holding members connected together by a screw, the lower member being connected with the screw by a screw-thread and the upper member being mounted to slide on said screw, both of said members being formed with a series of projections constituting jaws adapted to receive and secure one or more teeth between their meeting edges.

5. A dental instrument for holding teeth while being ground, comprising an upper and a lower member, the upper member having a series of concaves in its lower face, and the lower member provided with a series of concaves in its upper face or surface, and means for adjustably securing the members together whereby one or a series of teeth may be rigidly clamped between them.

882,364. RAILWAY-CAR VENTILATOR. HARRY W. YOUNG, Alameda, Cal. Filed Sept. 30, 1907. Serial No. 395,186.



1. The hereindescribed ventilator for railway cars comprising, in combination, an air conduit, a funnel detachably secured to one end of the conduit, a plurality of screens guarding the mouth of the funnel, the bottom of the funnel being slotted between the planes of the screens, a rotary baffled member journaled in the conduit in proximity to the funnel, a stationary deflector in the conduit adjacent to the said baffle member, the conduit being slotted just outside of said deflector, and means for controlling the passage of air through the conduit.

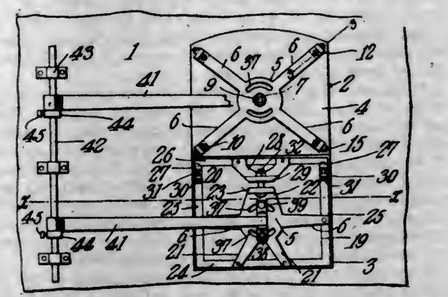
2. In combination with a railway car, a ventilator therefor comprising a conduit leading from the exterior to the interior of the car and secured thereto, a funnel secured to the outer end of said conduit, means for excluding coarse particles of foreign matter from the funnel, means for excluding dust, rain, and the like from the conduit, such latter means comprising a baffle member journaled for rapid rotation in the conduit and in a plane transversely thereof and a stationary deflector adjacent thereto, the bottom of the conduit being slotted just outside of said deflector, and hand operated means for controlling the passage of air through the conduit.

3. In combination with a railway car, a ventilator therefor comprising conduit means to convey air into a plurality of compartments of the car, a baffle member mounted for free rotation in the conduit near its forward end, the conduit being slotted beneath the said baffle, a stationary deflector coöperating with said baffle to direct foreign particles of dust and the like outwardly through said slot, and means for controlling the passage of air into any compartment of the car.

4. In combination with a railway car ventilator conduit, baffle and deflector means therefor comprising a rotary baffle member of substantially the diameter of the conduit and a stationary crescent shaped deflector adjacent to and in the rear of the said rotary member, the conduit being slotted below the rotary member, supports for the rotary baffle member, one of said supports constituting an extension of said stationary deflector, and bearings for the baffle member mounted in said supports.

5. In combination with a railway car, a ventilator therefor comprising a tubular conduit, a flaring funnel removably secured to the outer forward end of the conduit, a plurality of screens at the mouth of the funnel and the funnel being slotted at its bottom between said screens, the conduit being slotted at its bottom in rear of the funnel, and means located adjacent said latter slot for positively forcing foreign particles of dust, and the like, outward through said last mentioned slot, substantially as and for the purpose set forth.

882,365. COKE-OVEN DOOR. JOHN J. ALLEY, Bristol, Va. Filed June 1, 1907. Serial No. 376,757.



1. A coke oven door comprising a body of refractory material, and a metallic spider support therefor having arms extending from a central point and secured at the ends at isolated points on the cool side of the door and spaced therefrom for the circulation of air between the metallic support and the refractory material.

2. A coke oven door comprising a body of refractory material constituting the fire side of the door, and a metallic spider support therefor on the cool side of the door, said support having arms radiating from a central point and at their ends connected to the refractory material, near the outer edges thereof and also connected to the refractory material at the central point, said spider being spaced from the refractory material to permit the circulation of air between the latter and the metallic support.

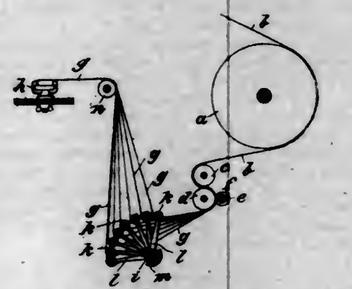
3. A coke oven door comprising a refractory fire surface, a supporting spider secured at isolated points thereto and spaced therefrom, said spider having oppositely arranged arc-shaped slots at the central portion, and a hinged support for the door connected to said spider through the arc-shaped slots.

4. A coke oven door comprising a refractory fire sur-

face, a supporting spider secured at isolated points thereto and spaced therefrom, and a hinged support for the door to which the latter is connected so as to be adjusted in a plane at right angles to the plane through which the door is swung on its hinge.

5. A coke oven door comprising a face of refractory material for the fire side of the door, a support for said casing attached to the cool side of the door at isolated points near the edges of the door and also at an intermediate point and spaced from said refractory material, a supporting arm secured to approximately the center of the support and adjustable about a central axis with relation to said door, and another arm carrying said supporting arm and hinged to one side of the opening to be closed by the door.

882,366. DEVICE FOR ASSEMBLING PRINTED-PAPER STRIPS IN TRUE REGISTER. PAUL ARNELM, Berlin, Germany. Filed Nov. 25, 1907. Serial No. 403,822.



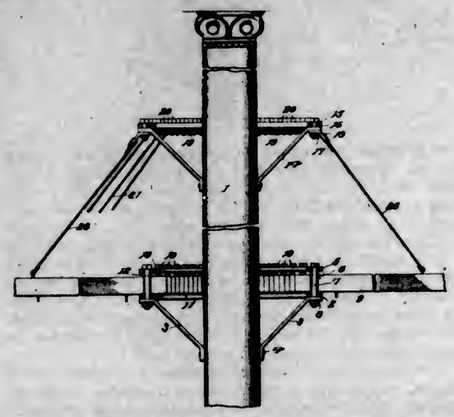
1. In machines for assembling printed paper strips for block calendars, ticket pads and the like, a device for shifting the individual strips into true register of the print, composed of guide rolls, one for each strip, of levers carrying said guide rolls of a shaft upon which said levers are fulcrumed, and of means to set the levers fast in their adjusted position.

2. In machines for assembling printed paper strips for block-calendars, ticket pads and the like, cutters dividing the paper into a number of strips for the pad, and a device for shifting the individual strips into true register of the print arranged in front of said cutters, composed of guide rolls, one for each strip, of levers carrying said guide rolls of a shaft upon which said levers are fulcrumed, and of means to set the levers fast in their adjusted position, and of a guide roll and the turning prongs at a level therewith, substantially as described.

3. In machines for assembling printed paper strips for block-calendars, ticket pads, and the like, a device for shifting the individual strips into true register of the print, composed of guide rolls, one for each strip, of levers carrying said guide rolls, of a shaft upon which said levers are fulcrumed, means to vary the length of said levers and to adjust the distance of the guide rolls from the shaft, and of means to set the levers fast in their adjusted position.

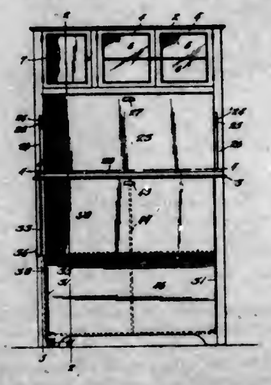
882,367. DISPLAY-RACK. WILEY G. BARNES, Wilson, N. C. Filed July 5, 1907. Serial No. 382,217.

1. The combination with a vertical support, two plates surrounding the standard one above the other, brackets carried by the standard and upon which the lower plate rests, sleeves between said plates, bolts passing through the plates and the sleeve and through the brackets, arms between said plates and of a width less than the distance between the plates, bolts passing through the plates and the arms, a washer upon each bolt below and above the arm, a coiled spring surrounding each bolt, between the upper washer and upper plate, a plate secured to the support and of a size and shape to correspond with the before-mentioned plates, eyebolts carried by the lower face of the last named plates, wires secured to the eyes of said bolts and to the arms intermediate their ends, and each arm having two series of oppositely-arranged hooks carried by the lower face.



2. The combination with a vertical support, two plates surrounding the standards one above the other, brackets carried by the standard and upon which the lower plate rests, sleeves between said plates, bolts passing through the plates and the sleeve and through the brackets, arms between said plates and of a width less than the distance between the plates, bolts passing through the plates and the arms, a coil spring surrounding each bolt above the arm, brackets carried by the vertical support, a plate resting upon the upper end of the brackets and of a size to correspond with the before-mentioned plates, bolts securing the plate to the brackets, eye bolts extending upwardly through the plates, wires secured to said eye bolts, eyes carried by the arms and to which the wires are attached, and the lower face of each arm having two series of oppositely-arranged hooks.

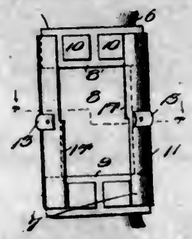
882,368. KITCHEN-CABINET. ELLA M. BENNETT, Sulphur, Okla. Filed Aug. 7, 1907. Serial No. 387,468.



1. A kitchen cabinet comprising upper compartments having shelves therein and closed by doors, a flour bin in one of said compartments, a table, a sliding door for the front of the cabinet, said sliding door having pins at the opposite sides thereof, and hooks or brackets connected to the cabinet for supporting said door in closed position.

2. In a kitchen cabinet, the combination of a door fitted to slide in vertical guideways, a table, a hinge, one leaf of which is connected to the cabinet, a spring connected to the other leaf of said hinge, the opposite end of said spring being connected to the lower side of said table, said sliding door being supported upon one leaf of said hinge, a connecting rod attached to said leaf, and a foot pedal attached to said connecting rod.

882,369. NUT-LOCK. WILLIAM F. BROWN, Baltimore, Md. Filed Apr. 24, 1907. Serial No. 370,095.



1. The combination with a pair of spaced reversely threaded nuts, of a lock therefor comprising a longitudinally split spring band of a length and diameter to extend between and partially encompass said nuts, said band being provided with means to interlock peripherally with the nuts, and handles applied to the band whereby it may be expanded and sprung out of engagement with the nuts.

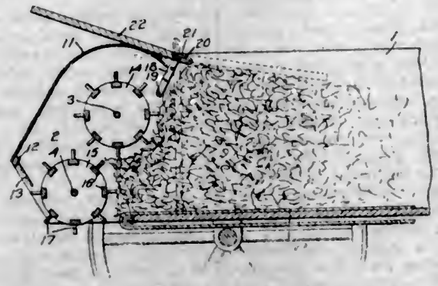
2. A nut lock comprising a spring metal band having inturned engaging members at its free edges to interlock with notches in a pair of spaced nuts, and divergent handles applied to the rear of the band whereby it may be expanded.

3. A nut lock comprising a nearly circular band of spring sheet metal, having portions of its free edges bent to provide locking members respectively arranged above and below its transverse center, and handles connected with the band and extending outwardly in divergent relation.

4. The combination with a pair of spaced reversely threaded nuts, each having a series of peripheral locking notches, of a lock therefor comprising a longitudinally split spring band of a length and diameter to extend between and partially encompass said nuts, said band being provided at its free edges with inturned locking portions to engage the notches in the nuts, and handles projecting from the rear of the band whereby it may be expanded and sprung out of engagement with the nuts.

5. A nut lock comprising a nearly circular band of spring sheet metal having locking portions at its free edges and handles connected with the band and extending outwardly in divergent relation from the back thereof.

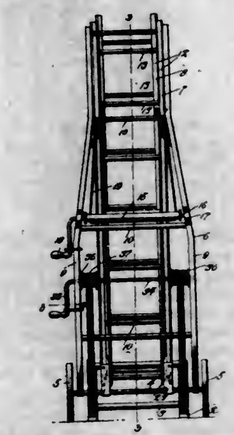
882,370. MANURE-SPREADER. BENJAMIN M. BUEHLER, Odebolt, Iowa. Filed June 12, 1907. Serial No. 378,603.



1. An apparatus of the type set forth comprising the combination with a wagon having rearward extensions, of a hood supported transversely between said extensions, a rake head provided at the lower end of said hood, upper and lower toothed cylinders supported for rotation between said extensions and a follower disposed transversely between the sides of said wagon and pivotally supported therefrom to lie upon the load in said wagon as and for the purpose set forth.

2. An apparatus of the type set forth, comprising the combination with a wagon having rearward extensions, of a toothed cylinder supported for rotation between said extensions, straps secured to said extensions, a series of pins projecting laterally from each of said straps, a follower board disposed transversely between the sides of said wagon, and rearwardly extending straps carried by said follower board, and formed with longitudinal slots to surround selected ones of said pins on each of said straps.

882,371. EXTENSION-LADDER. JOHN A. CAFLISCH, Union City, Pa. Filed Sept. 21, 1907. Serial No. 393,953.



1. An extension ladder comprising a base frame, a series of ladder sections mounted thereon, one of the sections having pivotal connections with the frame, an adjusting cable carried by one of said sections, and a semi-cylindrical guide secured to the frame and formed with a groove to receive the cable, said guide forming an arc of the circle of which the pivot point of the pivoted ladder section is the center.

2. An extension ladder comprising a base frame, a series of ladder sections mounted thereon, one of the sections having pivotal connection with the frame, an adjusting cable carried by one of said sections, and a semicylindrical guide secured to the frame and formed with a groove to receive the cable, the respective ends of the cable being secured to the respective ends of the guide, said guide forming an arc of the circle of which the pivot point of the pivoted ladder section is the center.

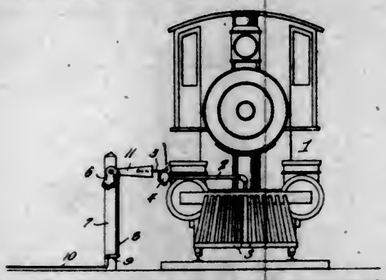
3. An extension ladder comprising a wheeled frame, a ladder section pivotally mounted on said frame, a shaft mounted in said section, a cable wound about the shaft and terminally projected in opposite directions therefrom, and a guide secured to the frame and receiving the projected portions of the cable, said shaft being supported for movement immediately above the guide and adapted in movement to travel in concentric relation with the guide, whereby operation of the shaft in either direction will wind the cable projecting in said direction and incline the ladder section.

4. An extension ladder comprising a wheeled frame, a ladder section pivotally mounted on said frame, a shaft mounted in said section, a cable wound about the shaft and terminally projected in opposite directions therefrom, and a guide secured to the frame and receiving the projected portions of the cable, the terminals of the cable being secured to opposing ends of the guide, said shaft being supported for movement immediately above the guide and adapted in movement to travel in concentric relation with the guide, whereby operation of the shaft in either direc-

tion will wind the cable projecting in said direction and incline the ladder section.

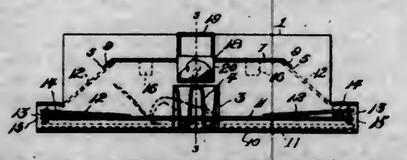
5. An extension ladder comprising a wheeled frame including an axle extending transversely of the frame, a series of ladder sections mounted on the frame, an elevating cable operatively connecting the sections, said cable passing longitudinally of the respective sections, cable receiving pulleys carried by one of the sections, and guard plates for said pulleys, the ends of said guard plates depending below the section to engage the axle when the sections are in lowered position.

882,372. AUTOMATIC AIR-BRAKE-OPERATING DEVICE. EDGAR M. CAIN, Wilmington, Del. Filed Nov. 6, 1907. Serial No. 400,961.



Automatic air brake operating apparatus comprising an air brake controlling angle cock arranged adjacent to one side of the train and embodying an operating lever or handle adapted to be raised and lowered, and a signal embodying an arm adapted to be set in the path of movement of said lever or handle to turn the same and operate the angle cock when said lever or handle is in its operative position, substantially as described.

882,373. ANIMAL-TRAP. HILLERY E. CARTER, Brooklyn, Iowa. Filed Aug. 15, 1907. Serial No. 388,664.



1. In a trap, an inlet compartment consisting of a passage having doorways at the ends thereof, a vertically movable flooring strip, transversely disposed supporting rods adjacent to the lower edges of the doorways, doors supported loosely upon the rods, and links connecting the doors with the ends of the flooring strip.

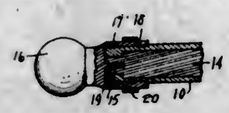
2. In a trap, a cage box provided with a doorway an entrance compartment consisting of a longitudinal passage adjacent to the cage box and communicating therewith through the doorway, a gravity gate closing the doorway of the cage box, said entrance compartment having doorways at the ends thereof, supporting rods adjacent to the lower edges of the doorways of the entrance compartment, doors supported loosely upon the rods, a flooring strip extending the full length of the entrance compartment, and links connecting the doors with the ends of the flooring strip.

3. In a trap, a cage box, an entrance compartment consisting of a longitudinal passage adjacent to said box and having doorways at the ends thereof, means for obstructing the doorways and a bait box supported intermediate the doorways and having a U-shaped open ended supporting member.

4. In a trap, a cage box provided with a doorway an entrance compartment consisting of a longitudinal passage adjacent to the cage box and communicating therewith through the doorway, said compartment having doorways at the ends thereof, and a top piece provided with a slot or aperture intermediate the doorways, a gravity gate closing the doorway of the cage box, and a bait box supported upon the top of the entrance compartment and having a U-shaped supporting member adapted to extend through the slot or aperture therein.

5. In a trap, a cage box provided with a doorway, an entrance compartment consisting of a longitudinal passageway adjacent to the cage, means formed in the top of the entrance compartment for connecting the latter to the cage box, flanges formed on the top and sides of the entrance compartment, a vertically movable flooring strip, doors hingedly connected with the ends of the flooring strip and door supporting rods disposed transversely adjacent to the lower edges of the doorway.

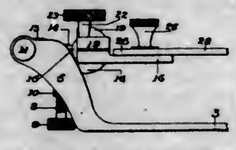
882,374. CURTAIN-POLE. JOSEPH S. COMISSIONG, Gulfport, Miss. Filed Mar. 28, 1907. Serial No. 365,111.



1. A curtain pole formed of a pair of members adapted to clamp a curtain therebetween, and means for holding the members in clamped relation, said means comprising a band engaged around the members and having its ends turned to extend radially, one end being formed with an opening and the other with a shouldered lug for engagement in said opening to hold the band closed.

2. A curtain pole comprising a pair of hinged members, a strip received between said members, said strip being formed in its ends with threaded sockets, the ends of the members being threaded exteriorly, and knobs engaged upon the threaded ends of the members and formed with a threaded stud for engagement in the threaded sockets in the ends of the strip.

882,375. DENTAL ARTICULATOR. ALBERT V. DEAR, Malvern, Victoria, Australia, assignor of one-half to David Philip Dear, Wollongong, Australia. Filed Sept. 6, 1907. Serial No. 391,718.



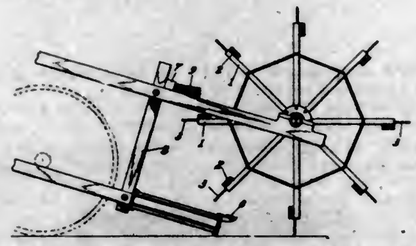
1. In a dental articulator, a lower plate, a yoke pivoted thereto, an upper plate having a cover hinged thereto, said plates being correspondingly recessed to form a socket, a ball on said yoke engaging said socket, and a cast holding device secured to said upper plate.

2. In a dental articulator, a lower cast holding plate, a head plate, a part chamber therein, a head plate cover hinging by a pivot pin to said head plate, a part chamber in said head plate cover, said head plate cover being pressed to the head plate by a locking screw, in combination with an upper cast holding plate, said upper cast holding plate having a slot through its pivotal end, a locking screw passing through said slot and into said head plate, all as and for the purposes hereinbefore described or as illustrated in the drawings.

3. In a dental articulator, a lower member, upwardly extending arms on the pivotal end of said member, a pivot pin passing through said arms, lugs pivoted to said pivot pin, a shoulder piece between said lugs, a bent neck protruding from said shoulder piece, a spherical head upon said neck in combination with a head plate, a part chamber therein, a head plate cover hinging by a pivot pin to said head plate, a part chamber in said head plate cover, said head plate cover being pressed to the head plate by a locking screw, and an upper cast holding device mounted on said head plate all as and for the purposes hereinbefore described or as illustrated in the drawings.

4. In a dental articulator, a lower member, upwardly extending arms on the pivotal end of said member, a pivot pin passing through said arms, lugs pivoted to said pivot pin, a shoulder piece between said lugs, a bent neck protruding from said shoulder piece, a spherical head upon said neck, in combination with a head plate, a part chamber therein, a head plate cover hinged by a pivot pin to said head plate, a part chamber in said head plate cover, said head plate cover being pressed to the head plate by a locking screw, an upper cast holding plate, said upper cast holding plate having a slot in its pivotal end, a locking screw passing through said slot and into the said head plate, all as and for the purposes hereinbefore described or as illustrated in the drawings.

882,376. COMB-REEL FOR HEADERS. JOHN C. EICHELBERGER, Stockton, Cal. Filed May 14, 1907. Serial No. 373,695.



1. In a device of the character described a header, a reel thereon, slats on said reel, a plurality of wire teeth secured to said slats, and means for brushing said teeth, as set forth.

2. In a device of the kind described a header, a reel thereon, slats on said reel, wire teeth secured to said slats, a cross beam disposed to the rear of said reel, and a broom secured to said beam and adapted to brush said wire teeth, as set forth.

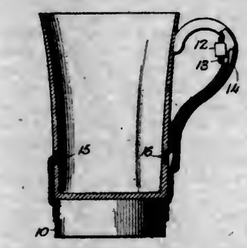
3. The combination in a header of a reel, slats on said reel, wire teeth secured to said reel, said teeth having spring coils intermediate their ends, a cross beam disposed to the rear of said reel, and means on said beam for brushing said teeth, as described.

882,377. ATTACHMENT FOR PENCILS AND THE LIKE. FRED W. EVANS, Park City, Utah. Filed Mar. 30, 1905, Serial No. 252,829. Renewed Sept. 21, 1907. Serial No. 393,915.



A pencil attachment formed of one piece of vulcanized rubber and comprising a cap-like body of a size to rest and frictionally retain itself on one end of a pencil, and three equidistant, stiff arms, of V-shape in outline, reaching outwardly at right angles from the base of the cap-like body and having points at their outer ends; the adjacent edges of each pair of arms being arranged to rest at one time on a desk or the like.

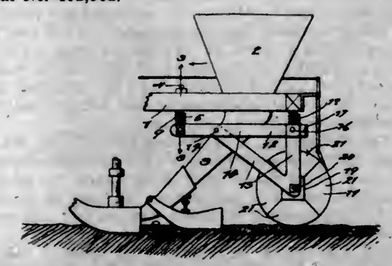
882,378. DRINKING VESSEL. EMANUEL FRIENDLICH, New York, N. Y. Filed Jan. 23, 1907. Serial No. 353,667.



1. A vessel of the class described having a hollow handle, a battery attached to the bottom of the vessel, a conductor leading from the battery through the hollow handle and having electrodes presented to the action of liquid in the vessel, and a make-and-break for such conductor, attached to the handle.

2. A vessel of the class described having a battery, a conductor leading therefrom and having electrodes presented to the action of liquid in the vessel, and a make-and-break for such conductor having a movable element at a portion of the vessel grasped when the vessel is in use to cause the act of grasping the vessel to also close the electric circuit.

882,379. ATTACHMENT FOR PLANTERS. WALKER D. GILBREATH, Arapaho, Okla. Filed Nov. 15, 1907. Serial No. 402,302.



1. In a device as set forth, a planter frame having a drill, a presser roller having a frame vertically yieldable with relation to the planter frame and attached thereto, said frame being composed of triangular sides having a flexible connection.

2. In a device as set forth, a planter frame having a drill, a presser roller having a frame vertically yieldable with relation to the planter frame and attached thereto, said frame being composed of triangular sides, and an arch connected between said sides.

3. In a device as set forth, a planter frame having a presser roller yieldingly attached thereto through the medium of an intermediate frame, said roller comprising a shaft, quarter sections being fixed thereto and bolts for securing the quarter sections.

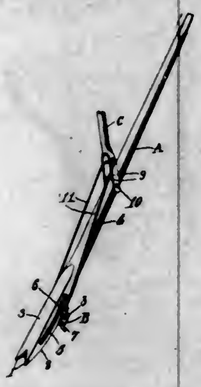
4. In a device as set forth, a planter frame having a drill, a presser roller frame having flexible connections with the planter frame, said presser roller frame being composed of two sides having a flexible connection therebetween, and a presser roller to follow in rear of the drill.

5. In a device as set forth, a planter frame having a drill, a presser roller frame having flexible connections with the planter frame, said presser roller frame being

composed of two sides having a flexible connection therebetween and a presser roller composed of quarter sections to follow in rear of the drill.

[Claim 6 not printed in the Gazette.]

882,380. SPIKE-PULLER. JAMES B. GILLIS, Eden, Md. Filed Oct. 19, 1907. Serial No. 398,195.



1. The combination of a spike puller comprising a bar having claws, a fulcrum member mounted on and disposed under the bar adjacent the claws thereof, means for guiding the member to slide longitudinally of the bar, an operating lever connected with the bar, and a connection between the lever and member for sliding the latter back and forth.

2. The combination of a spike puller comprising a bar having claws, a fulcrum member made of two parts to be assembled on the bar for sliding movement longitudinally of the latter, means for securing the parts together, and mechanism carried by the bar for actuating the member.

3. The combination of a bar having claws and also having longitudinal slots in its opposite surfaces, a fulcrum member provided with lugs bent into the slots for slidably mounting the member on the bar, an operating lever mounted on the bar, and a connection between the lever and member for actuating the latter.

4. The combination of a bar having claws at one end and longitudinal slots, a two-part fulcrum member slidable on the bar, means for holding the two parts of the member together, means on the member engaging in the slots for slidably supporting the member on the bar, and means carried by the bar for actuating the member.

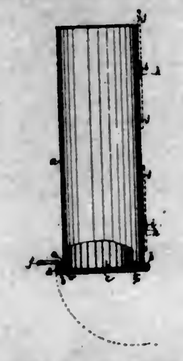
5. The combination of a bar having claws, a fulcrum element provided with members disposed at opposite sides of the bar, means for slidably connecting the members with the bar to permit of movement of the element longitudinally of the bar, a lever fulcrumed on the bar, and rods connected with the members and lever.

882,381. MAIL-RECEIVING CASE. ALBERT HAENTZE, Chicago, Ill. Filed Apr. 5, 1907. Serial No. 366,529.

1. The combination with a cylinder closed at top and fully open at its bottom end and provided with a fixed catch, of a catch provided with a handle at one end and a gate at its other end and hinge-mechanism to said gate and cylinder.

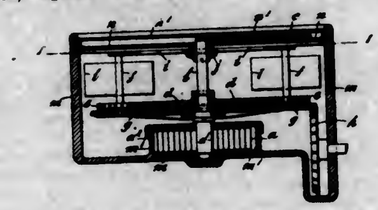
2. The combination with a cylinder, closed at its top and fully open at its bottom, and beaded at its bottom, of a doubled wire provided with a handle at its center, to which is connected a catch, and to said catch is connected a gate having spread end parts provided with hinges.

3. The combination with a mail-receiving case, closed at its top and beaded and fully open at its bottom and provided with centrally pivoted and rotatable supporting-bars, of a doubled wire provided with a handle at its center, a catch to said handle and a gate to said catch said



doubled parts parallel and the end parts thereof spread and hinged and connected to said case.

882,382. SPEED-INDICATOR. ROBERT T. HAINES, London, England. Filed Apr. 29, 1907. Serial No. 371,006.



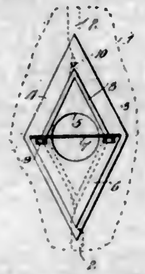
1. In a speed indicator the combination of a moving part driven at a speed proportional to the speed to be indicated, a spring, means actuated by said part and adapted to move in a given direction and thereby put said spring under tension, said means also actuated by said part against a resistance, and adapted to cause a slip in the transmission of power from said moving part to said spring, and an indicating means for showing the speed, substantially as described.

2. In a speed indicator the combination of a moving part, a spring, means actuated by said part in a given direction and thereby imparting a tension to said spring, said means also actuated by said part, but against a resistance, and adapted to cause a slip in the transmission of power between said moving part and said spring, means permitting said spring to aid in increasing said slip, and an indicating means for showing the speed, substantially as described.

3. In a speed indicator, the combination of a moving part, a pivot, a casing, a coil spring attached at its center to said pivot and at its outer end to a convenient part of the said casing, a pointer fixed to said pivot and adapted to be moved over a dial, a toothed wheel fixed to said pivot, a small toothed wheel in gear with said first mentioned wheel, a fan for controlling said small wheel, a large toothed wheel upon which said fan and small wheel are rotatably mounted and free to rotate about said pivot and in gear with said moving parts, whereby the combined efforts of said fan and said spring on said small wheel is opposed to the efforts of said moving part, and said indicator represents the difference of said efforts, substantially as described.

4. In a speed indicator the combination of a moving part, a spring, means actuated by said part in a given direction, and thereby tensioning said spring, a second means consisting of a fan, having two vanes adjustable to and from its axis, also actuated by said moving part in the same direction as said first means, and adapted to create a slip to lessen the effect of said first means on said spring, said spring adapted to lessen said slip in an increasing ratio, and a dial and pointer for indicating the speed at which the machine is running, substantially as described.

882,383. FRAME FOR TENT-OPENINGS. GEORGE V. HANLON, Mountainair, N. Mex. Filed May 3, 1907. Serial No. 371,640.



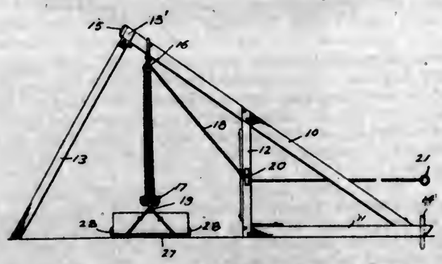
1. In a device of the class described, the combination of a tent or the like composed of strips of fabric connected together by seams, one of the seams being ripped for a portion of its length, with a frame inserted in the open part of the seam, said frame comprising a plate having an opening and adapted to be disposed at the outside of the tent, a second plate disposed at the inside of the tent and having an opening registering with that of the first plate and composed of a section rigidly secured to the first plate and another section detachably connected with the first plate, and means between the plates with which the edges of the opening in the seam engages for holding the edges of the fabric away from the said openings.

2. In a device of the class described, the combination of a pair of spaced plates having registering openings, one of the plates being smaller than the other and composed of hingedly connected sections, and means for securing the sections of the smaller plate to the larger plate.

3. In a device of the class described, the combination of an outside plate having an opening, an inside plate having an opening registering with the first opening and composed of a fixed and a movable section, hinges between the sections to permit the movable section to swing inwardly, a spacing member disposed between the plates and around the openings thereof, and means for securing the plates together.

4. In a device of the class described, the combination of a fabric body composed of members connected together by a seam, and a diamond shaped frame adapted to be placed in an opening of the body formed by ripping a portion of the seam thereof, said frame comprising an outside plate, a parallel inside plate composed of hingedly connected parts, and a spacing member between the plates arranged to engage the edge of the opening of the body.

882,384. LOADING APPARATUS. NELS D. HANSEN, Fairfax, S. D. Filed Jan. 29, 1907. Serial No. 354,649.

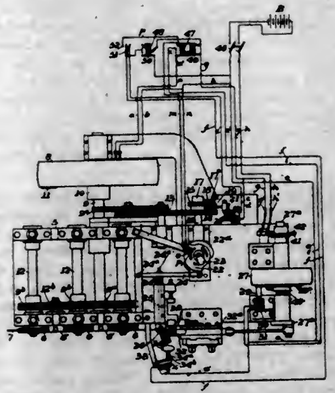


1. An apparatus of the class described comprising a frame including inclined side sills, pulleys suspended from the side sills, a dumping box having a bottom formed of a plurality of hinged doors, hangers secured to the ends of the box, pulleys connected with the hangers, and a cable having one stretch engaged over the first and last mentioned pulleys at one side of the frame and box and its other stretch engaged over the corresponding pulleys at the other side of the frame and box.

2. A dumping box for an apparatus of the class described including a bottom comprised of transverse fixed cleats, doors hinged to the cleats in opposition with respect to each other, cleats provided upon the doors adjacent their free edges, and keepers secured to the sides of the box and extending therebeneath and in position for engagement therewith of the ends of the pivoted cleats, whereby the doors may be normally held closed.

3. A dumping box for an apparatus of the class described including a bottom comprised of transverse fixed cleats, doors hinged to the cleats in opposition with respect to each other, cleats pivoted upon the doors adjacent their free edges, keepers secured to the sides of the box and extending therebeneath and in position for engagement therewith of the ends of the pivoted cleats, whereby the doors may be normally held closed, and means for limiting the swinging movement of said pivoted cleats.

882,385. MACHINE FOR THE MANUFACTURE OF COILED SPRINGS. NOAH S. HARTER, Waukegan, Ill., assignor to American Steel & Wire Company, Chicago, Ill., a Corporation of New Jersey. Filed Dec. 2, 1907. Serial No. 404,821.



1. In mechanism for forming coil springs, wire coiling means, an electrically controlled clutch for controlling the operation of the coiling means, a cutting mechanism, an electrically controlled clutch for controlling the operation of the cutting mechanism, controlling circuits for said clutch, and means for automatically controlling said circuits to effect the starting and stopping of the coiling means and the operation of the cutting means in proper time relation to the starting and stopping of the coiling means; substantially as described.

2. In a machine for forming coil springs, coiling means, an electrically controlled clutch for operating the coiling means, a cutting mechanism, an electrically controlled clutch for operating the cutting mechanism, and means actuated by the movement of the coil for the purpose of stopping the coiling mechanism and tripping the cutting mechanism; substantially as described.

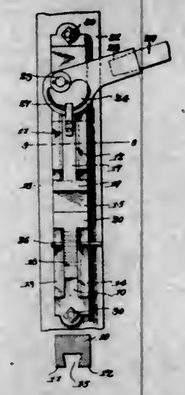
3. A machine for forming coil springs, a coiling mechanism, electro-magnetically controlled gearing for operating the coiling mechanism, cutting mechanism, means for electrically controlling the time of operation of the cutting mechanism, and contact devices actuated by the movement of the coil as it is formed for effecting the operation of the coiling and cutting mechanisms; substantially as described.

4. In a machine for forming coil springs, a coiling mechanism, means for regulating the pitch of the coils, means for removing excess pitch from the coils continually as they are formed, and means whereby the pitch regulating device can be periodically moved into and out of operating position during the coiling operation and whereby it may be held either in or out of operative position during the coiling operation; substantially as described.

5. In a machine for forming coil springs, a coiling mechanism, a tool for regulating the pitch of the coils as they are formed, and means for periodically moving the pitch-regulating tool out of operative position and then again advancing the same, and devices for rendering the said means inoperative at will; substantially as described.

[Claims 6 to 16 not printed in the Gazette.]

882,386. TIRE-REMOVER. FRANK HATTON, Portersville, Cal. Filed Apr. 23, 1906. Serial No. 313,347.

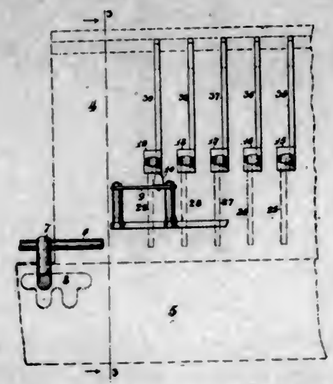


A tire remover comprising a stock having its intermediate portion provided with a transverse stop shoulder defining a reduced extension, spaced under cut guides secured to the reduced extension, a relatively stationary plunger engaging the under cut walls of the guides and provided with a transverse head adapted to engage the tire for forcing the latter in contact with the stop shoulder, spaced guides extending longitudinally of the upper portion of the stock and off set with respect to the lower guides, said upper guides terminating short of the adjacent end of the stock to form a seating recess and having their inner faces under cut, a relatively movable plunger engaging the under cut edges of the upper guide and provided with an enlarged head adapted to bear against the felly, an eccentric pivotally mounted in the seating recess and provided with an operating handle, a strap secured to the upper plunger and bearing against the eccentric, there being a plurality of transverse recesses formed in the lower plunger, and a pin extending through one of said openings and bearing against the adjacent ends of the lower guides for locking the head of the lower plunger in engagement with the tire.

882,387. CALCULATING-MACHINE. WILLIAM F. HAUSSTEIN, Lyndhurst, N. J., assignor to The Keuffel & Esser Company, Hoboken, N. J., a Corporation of New Jersey. Filed Nov. 22, 1904. Serial No. 233,883.

1. In a machine of the character described, the combination with the stationary portion thereof, of a slidable carriage having slots, a series of slides carried thereby in said slots, and means for locking the left hand slide in its normal position when the carriage is in its normal position.

2. In a machine of the character described, the combination with the stationary portion thereof, of a slidable carriage having slots, a series of slides carried thereby in said slots, and means carried by the stationary portion for locking the left hand slide in its normal position when the carriage is in its normal position.



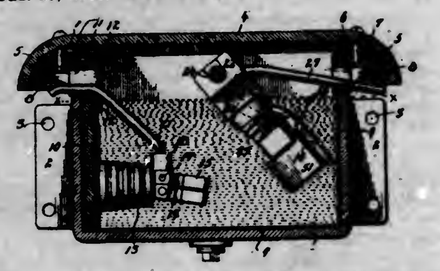
3. In a machine of the character described, the combination with the stationary portion thereof, of a slidable carriage having slots, a series of slides carried thereby, in said slots, and a pawl for locking the left hand slide in its normal position when the carriage is in its normal position.

4. In a machine of the character described, the combination with the stationary portion thereof, of a slidable carriage having slots, a series of slides carried thereby in said slots, and a pawl carried by the stationary portion for locking the left hand slide in normal position when the carriage is in its normal position.

5. In a machine of the character described, the combination with the stationary portion thereof, of a slidable carriage having slots, slides carried thereby in said slots, and means for locking the left hand slide in its normal position when the carriage is in its normal position and releasing the same when the carriage is moved out of its normal position.

[Claims 6 to 8 not printed in the Gazette.]

882,388. ELECTRIC OIL-SWITCH. JOHN D. HILLIARD, Jr., and CHARLES E. PARSONS, Glens Falls, N. Y. Filed Jan. 29, 1906. Serial No. 298,532.



1. An electrical switch comprising a stationary contact, a hollow externally insulated movable contact coöperating therewith, insulating fluid surrounding the contacts, and means for quickly separating the same and producing accelerated motion of the movable contact through said fluid, whereby a jet is produced in the path of the arc to extinguish it.

2. An oil switch comprising a fixed contact and a coöperating movable contact, oil surrounding the contacts, and insulating means carried by the movable contact adapted to confine the arc, and to direct a jet of oil into the path of the same so as to extinguish it.

3. In an electrical switch, a fixed contact and a movable contact, oil surrounding the contacts, means to produce

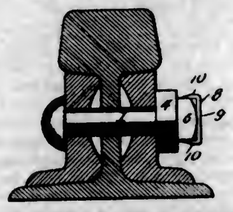
rapid motion of the movable contact in the oil in breaking, and an insulating funnel or duct carried on the movable contact, whereby the path of the arc is restricted, and a jet of oil is produced therein to extinguish it.

4. An electrical switch comprising a fixed contact, a movable contact, oil surrounding said contacts, insulating means carried by the movable contact for restricting the path of the arc formed in breaking, and for producing a jet of oil due to the motion of the contact, in said restricted path, to extinguish the arc.

5. An electrical switch comprising a fixed contact and a movable contact, both having extended contact surfaces lying in the plane of motion, oil surrounding said contacts, and insulating means carried by and surrounding the movable contact so as to restrict the path of the arc formed upon breaking and at the same time direct a jet of oil due to the motion of the contact, across the surface thereof and into the path of the arc to extinguish it.

[Claims 6 to 9 not printed in the Gazette.]

882,389. NUT-LOCK. CLYDE L. HINE, Tuscola, Ill. Filed July 16, 1907. Serial No. 384,004.



In combination with a bolt having screw threads on its stem and a reversely screw threaded stem extension, a main nut on said threaded stem provided with openings extending to its outer side and substantially parallel with the axis of the bolt, a locking nut on the reversely threaded stem, of less width than the main nut and having grooves in its sides, the bottoms of such grooves converging toward the inner side of such locking nut and communicating with the openings of the main nut, and a key comprising a central portion bearing on the outer side of the locking nut and inwardly converging spring arms, such spring arms lying in the grooves in the sides of the locking nut, coacting with the bottoms of such grooves to secure such key on such locking nut and having their inner ends inserted in the said openings in the main nut to lock the locking nut to the main nut.

882,390. COUPLING. ALFRED JOHNSON, Quincy, Ill. Filed May 25, 1907. Serial No. 375,658.

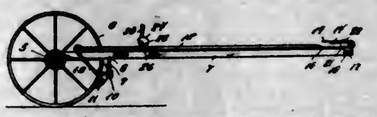


1. A rope coupling comprising a body formed with a longitudinally disposed bore, said body being formed with a threaded bore arranged at an angle to an opening in the longitudinal bore, and a hook threaded for engagement with the threaded bore and adapted to be arranged with its threaded end projecting into said longitudinal bore, the angular arrangement of the threaded bore relative to the longitudinal bore serving to introduce the hook terminal into the longitudinal bore so that the transverse and longitudinal plane of said terminal are both at an angle to the longitudinal plane of the bore.

2. A rope coupling comprising a body formed with a longitudinally disposed bore, said body being formed with a threaded bore arranged at an angle to an opening in the longitudinal bore, and a hook threaded for engagement with the threaded bore and adapted to be arranged with its threaded end projecting into said longitudinal bore, the bill of the hook being disposed in alinement with the body, the angular arrangement of the threaded bore relative to the longitudinal bore serving to introduce the hook terminal into the longitudinal bore so that the transverse and longitudinal plane of said terminal are both at an angle to the longitudinal plane of the bore.

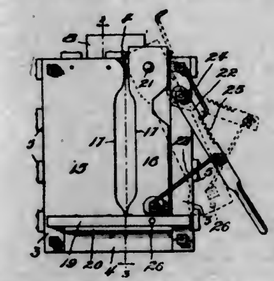
3. A rope coupling comprising a body formed with a longitudinally disposed bore, said body being formed with a threaded bore arranged at an angle to an opening in the longitudinal bore, and a hook threaded for engagement with the threaded bore and adapted to be arranged with its threaded end projecting into said longitudinal bore, the bill of the hook being disposed in alinement with the bore in the body, whereby the adjacent end of said body forms a guard for the hook, the angular arrangement of the threaded bore relative to the longitudinal bore serving to introduce the hook terminal into the longitudinal bore so that the transverse and longitudinal plane of said terminal are both at an angle to the longitudinal plane of the bore.

882,391. WAGON-BRAKE. JAMES B. JONES, Maxie, Miss. Filed June 8, 1906. Serial No. 320,839.



In a device of the class described, the combination with a vehicle tongue and its hounds, of a brake beam supported by the hounds, a brake rod supported upon the tongue and connected with the beam, said rod being bent back upon itself at its forward end, a plate secured upon the forward end of the tongue and bent to form an overlying portion, the attaching and overlying portion of the plate being provided with openings, a yoke received in the bent back portion of the brake rod, and a bolt engaged through the yoke and the said portion of the rod and through the slots on the plate.

882,392. CRATE. ARTHUR M. KENEIPP, Owensville, Ind. Filed Oct. 2, 1907. Serial No. 395,592.

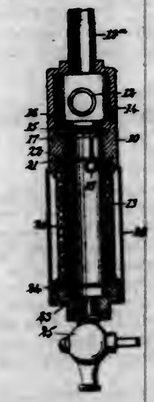


1. A crate comprising an inclosed structure, a door at one end of the crate, and a trap at the opposite end, said trap comprising a fixed section and a movable section each of the full height of the interior of the crate, the proximate edges of the fixed section and movable section being cut away to form a trap opening when the sections are in operative position, the movable section being pivotally supported on the crate at the upper end of the latter, a lever mounted on the crate beyond the movable section, and means removably connecting the lever and the lower end of the movable section, said crate being provided with means for securing the movable end of the movable section in operative relation to the fixed section of the trap, whereby the lever and section connecting means may be removed from the crate and the movable section locked in position to close the end of the crate together with the fixed section.

2. A crate including a frame having closed sides top and bottom, a door movably mounted at one end of the crate for closing said end, a trap arranged to close the

opposite end of the crate said trap comprising a fixed section and a movable section coöperating with the fixed section, the movable section being pivotally mounted on the crate frame at the upper end thereof, manually operable means engaging the lower end of the movable section to operate said section relative to the fixed section, cleats carried by the crate frame and arranged on opposite sides of the movable end of the movable section, said cleats and movable section being formed with openings adapted to register when the section is in closed position, and a pin arranged to be inserted through the registering openings, whereby the movable section may be adapted as a fixed part of the crate to form with the fixed section a closure for said crate end after the removal of the manually operable means.

882,393. GASOLENE-TRAP. WILLIAM J. KRAMER, New York, N. Y. Filed Nov. 14, 1907. Serial No. 402,115.



1. A trap, comprising a body having an inlet, an outlet above said inlet, and a draw-off beneath said inlet, a screen intermediate the inlet and the outlet, a glass tube within said body, said body having sight openings intermediate the ends of the tube, and means closing the lower end of said body and retaining said tube in position, said screen being removable through the lower end of said tube when said means is removed.

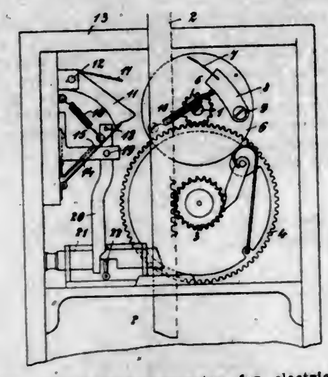
2. A trap having an inlet, an outlet, a glass tube communicating with said inlet and serving as a sediment chamber, a screen above said tube and intermediate said inlet and outlet, a detachable bottom, and means whereby said screen may be detached and removed through said tube.

3. A trap, comprising a body presenting a downwardly-facing shoulder intermediate the ends thereof and having an inlet and sight openings below said shoulder, and an outlet above said shoulder, a screen within said body, detachable means for holding said screen in engagement with the under surface of said shoulder, a glass tube within said body, covering said sight openings and having an interior diameter greater than the diameter of said screen, and a removable plug closing the lower end of said body and retaining said tube in position, said screen being removable through said tube upon the removal of said plug.

882,394. CONTACT APPARATUS FOR ELECTRIC IGNITERS. JOHANN KRANNICHFELDT, Cologne, Germany. Filed Dec. 16, 1905. Serial No. 292,018.

1. Magnet induction apparatus for electric blasting, comprising in combination, a rotary disk, a centrifugal piece pivoted to said disk, means restraining said centrifugal piece, a contact disposed in proximity to said centrifugal piece and adapted to close said circuit when said centrifugal piece has attained a certain speed, and a rack adapted to drive said disk, substantially as, and for the purpose, set forth.

2. Magnet induction apparatus for electric blasting, comprising in combination, a rotary disk, a centrifugal piece pivoted to said disk, means restraining said centrifugal piece, a contact disposed in proximity to said centrifugal piece and adapted to close said circuit when said centrifugal piece has attained a certain speed, a rack adapted to drive said disk, and means to hold said rack in the bottom position, substantially as, and for the purpose, set forth.



3. Magnet induction apparatus for electric blasting, comprising in combination, a rotary disk, a centrifugal piece pivoted to said disk, means restraining said centrifugal piece, contacts disposed apart in proximity to said centrifugal piece, means adapted to bring said contacts together and close the circuit when said centrifugal piece has attained a certain speed and touches one of said contacts, and means enabling said disk to be operated by hand, substantially as set forth.

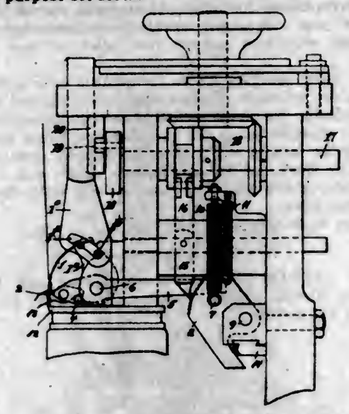
4. Magnet induction apparatus for electric blasting, comprising in combination, a rotary disk, a centrifugal piece pivoted to said disk, means restraining said centrifugal piece, a contact disposed in proximity to said centrifugal piece and adapted to close the circuit when said centrifugal piece has attained a certain speed, a rack adapted to drive said disk, a notch in said rack, a bolt adapted to engage in said notch, and a key to move said bolt and thus release said rack, substantially as, and for the purpose, set forth.

5. Magnet induction apparatus for electric blasting, comprising in combination, a rotary disk, a centrifugal piece pivoted to said disk, means restraining said centrifugal piece, a contact disposed in proximity to said centrifugal piece and adapted to close the circuit when said centrifugal piece has attained a certain speed, a rack adapted to drive said disk, a notch in said rack, a bolt adapted to engage in said notch, a key to move said bolt and thus release said rack, a lever likewise adapted to be moved by said key and thus to move the contact and open the circuit closed by the action of said centrifugal piece, and a catch adapted to hold said contact in the open position, substantially as, and for the purpose, as set forth.

882,395. MACHINE FOR SOLING FOOTWEAR. JULIUS LARSEN, Copenhagen, Denmark. Filed Nov. 28, 1906. Serial No. 345,439.

1. The combination of a lever provided with a long arm and with a short arm, a needle guide engaging said short arm, means for normally maintaining said long arm in a predetermined raised position and for tensioning said long arm, a movable shoe, and means for locking said lever during the movement of the needle.

2. The combination of a lever provided with a long arm and with a short arm, a needle guide engaging said short arm, a movable member for sustaining said long arm, a spring for normally sustaining said member and the said long arm of the lever in a predetermined position, means for moving the said member to overcome the tension of the said spring, and a spring weaker than the first mentioned spring and exerting tension on said long arm of the lever, for the purpose set forth.

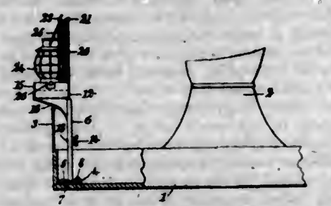


3. The combination of a lever provided with a long arm and a short arm, a needle guide for engaging said short arm, a ratchet member mounted to turn and provided with means for sustaining said long arm, a spring for maintaining said ratchet member in a predetermined position, a pawl for engaging and moving the ratchet member against the tension of said spring, and a spring weaker than the first mentioned spring, and exerting tension on the said long arm of the lever.

4. The combination of a lever provided with a long arm and with a short arm, a needle guide engaging said short arm, a movable member for sustaining said long arm, a spring for maintaining said member in a predetermined position, and a wedge for locking the said movable member, in said position.

5. The combination of a stitch plate, a lever provided with a long arm and a short arm, a needle guide for engaging the short arm, a member mounted to turn, a bolt on the said member and on which the long arm of the lever rests, a spring for holding the said member and bolt in raised position, to cause the work to be firmly held between the needle guide and the stitch plate, during the movement of the needle and the forming of the stitch, means for moving the said member to overcome the tension of said spring on the long arm of the lever, and a weaker spring exerting tension on the long arm of the lever.

882,396. LANTERN-HOLDER. CHESTER W. LEANING, Yankton, S. D. Filed June 6, 1907. Serial No. 377,583.

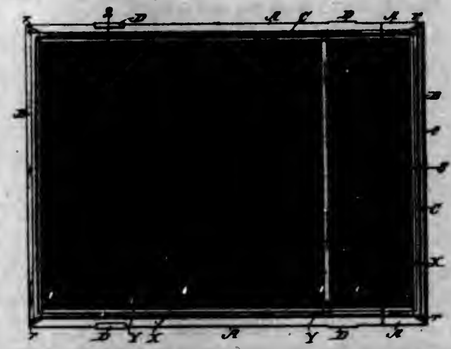


1. A lantern holder comprising a socket having an elongated recess, an upright having a laterally disposed foot removably arranged in said recess and engaging the sides thereof, said upright having an elongated recess presenting a slot, a member removably arranged in said recess of said upright engaging the sides thereof and having a projection extending through said slot, means upon said projection for holding said member in position, a support carried by said member, a base-plate arranged on said support and resiliently held thereupon, said base-plate serving to carry a lantern, said member having a loop, and a hook having an eye loosely mounted in said loop, said hook serving to engage the lantern.

2. A lantern holder, comprising a socket having an elongated recess presenting under-cut sides, an upright having a laterally disposed foot removably arranged in said recess and engaging said under-cut sides, said upright having an elongated recess presenting under-cut sides and a slot, a member removably arranged in said recess of said upright engaging said under-cut sides and having a screw-pin projecting through said slot, a thumb-nut upon said screw-pin and adapted to hold said member in position, a support carried by said member, a base-plate arranged on said support and resiliently held thereupon, said base-plate serving to carry a lantern, said member having a loop, and a hook having an eye loosely mounted in said loop, said hook serving to engage the lantern.

3. A lantern holder, comprising a socket having an elongated recess presenting under-cut sides, an upright having a laterally disposed foot removably arranged in said recess, engaging said under-cut sides, said upright having an elongated recess presenting under-cut sides and a slot, a member removably arranged in said recess of said upright, engaging said under-cut sides and having a screw-pin projecting through said recess, a thumb-nut upon said screw-pin and serving to clamp said member in position, a cylindrical support carried by said member, a base-plate in said support, a helical spring between said base-plate and the bottom of said support, said base-plate serving to carry a lantern, a reflector having outwardly-disposed curved sides carried by said member above said support, said member having a loop, and a hook having an eye loosely mounted in said loop, said hook serving to engage the lantern, said support having cut-away portions at the sides.

882,397. METALLIC EXTENSION-SCREEN. TELLESPHORE LIMOGE, Burlington, Vt., assignor to Porter Screen Manufacturing Company, Burlington, Vt. Filed Dec. 19, 1906. Serial No. 348,571.



1. In a metallic extension screen, three sided frame sections each made from one continuous strip of metal longitudinally folded upon itself and then bent and folded transversely of its length to form the end bar B and top and bottom bars A A, wire cloth X and its inner center iron Y inserted and held between the folds of the frame bars of each section, longitudinal corrugations C in the frame bars which secure the wire cloth and its center iron in place between the compressed folds of the frame bars and serve also as a lateral tongue and groove connection between the overlapping side faces of the top and bottom bars of the frame sections, and clips D for holding together the frame sections against lateral separation.

2. In a metallic extension screen composed of sections sliding on one another, top and bottom section frame bars of folded sheet metal, and retaining clips integral with the bars on which they are located, the clip being formed from a tongue or strip of metal cut from the inner fold of

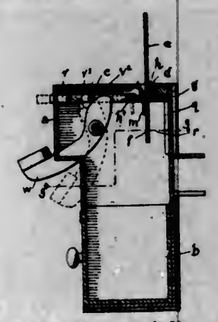
the bar, and extending from the folded edge of the bar part way only to the other edge, so as to leave the last named edge intact, substantially as set forth.

882,398. COLUMN FOR INTERIOR DECORATION. THOMAS B. LUPO, New York, N. Y. Filed Jan. 31, 1907. Serial No. 355,127.



The herein described column comprising a hollow tube made up of strips of flexible material wound spirally, one layer upon another, and each alternate layer being spirally wound in the direction opposite to the next adjacent layer, a wood veneer covering for said column, a cap having a projecting portion fitted within the top of the column, and a base having an annular groove to receive the lower end of the column, substantially as described.

882,399. CHECKING DEVICE FOR LUNCH-COUNTERS, &c. JAMES C. MALONEY, Chicago, Ill. Filed Apr. 25, 1907. Serial No. 370,275.



1. A ticket checking device including a case having an opening for insertion of the ticket, clamping and indenting means for the ticket including edged alined jaws, means for holding said jaws normally pressed towards each other and means for causing said jaws to separate from each other.

2. A ticket checking device including a case having an opening for insertion of the ticket, clamping and indenting means for the ticket including edged alined jaws, means for holding said jaws normally pressed towards each other and a lever device for separating said jaws.

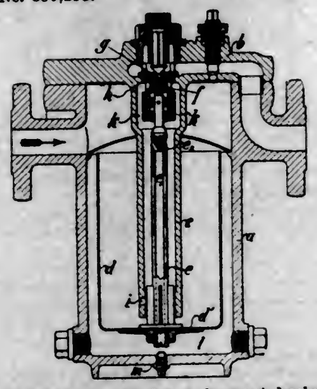
3. A ticket checking device including a case having an opening in its top wall for insertion of the ticket and a slot in its rear wall, clamping and indenting means for the ticket including edged horizontally-alined jaws, spring means for holding said jaws normally pressed towards each other, and a lever device extending through said slot for temporarily separating said jaws.

4. A ticket checking device including a case having an opening for insertion of the ticket, clamping and indenting means for the ticket including beveled alined stationary and movable jaws, the movable jaw being provided with spring means for holding it normally pressed towards the fixed jaw, and a lever device for temporarily holding said jaws separated against the action of said spring means.

5. A ticket checking device including a case having an opening for insertion of the ticket, clamping and indenting means for the ticket including beveled alined stationary and movable jaws, the movable jaw being provided with spring means for holding it pressed towards the stationary jaw, and an anti-friction roller, and a lever device having a cam portion engaging said roller for separating the jaws.

[Claim 6 not printed in the Gazette.]

882,400. STEAM-TRAP. ISIDOR MAYER and ERWIN MAYER, Vienna, Austria-Hungary. Filed Dec. 31, 1906. Serial No. 350,295.



1. In a steam trap having a buoyant bucket with a water space surrounding it, the combination of a discharge valve arranged above the top of said bucket, a casing surrounding said valve and projecting into and communicating with the interior of said bucket, and a conduit connecting the space surrounding the discharge valve with the water space surrounding the bucket.

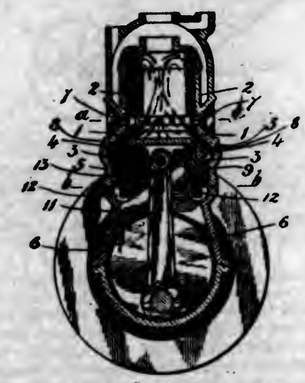
2. In a steam trap having a buoyant bucket with a water space surrounding it, the combination of a discharge valve, a pipe surrounding said valve and depending into said bucket and communicating therewith, and a conduit connecting the space surrounding the discharge valve and the water space surrounding the bucket and projecting into the space below the bucket bottom.

3. In a steam trap having a buoyant bucket with a water space surrounding it, the combination of a discharge valve having a space surrounding it and a pipe connecting the space around said valve with the space below said bucket, said pipe being provided with apertures opening into the space around said valve.

4. In a steam trap having a bucket with a water space surrounding it, the combination of a discharge valve, a conduit having apertures opening into the space around said discharge valve and connecting said space with a space below the bottom of the bucket, and means through which the steam passes when the water level is lowered in said bucket to force the water of condensation in the bucket through the discharge valve before the latter is closed.

882,401. INTERNAL-COMBUSTION ENGINE. ALFRED G. MELHUISH, Edmonton, England. Filed Jan. 9, 1905. Serial No. 240,311.

1. An internal combustion engine having a cylinder formed of a fixed and a shiftable section, a jacket surrounding said shiftable section and terminating at one end in said fixed section, said jacket and said shiftable section forming a passage for the supply of the combustible mixture, and means carried to the shiftable section and engaging the jacket for adjustably connecting the shiftable section to the jacket so that the width of the said passage can be increased or decreased.



2. An internal combustion engine having a cylinder formed of a fixed and a shiftable section, a jacket surrounding said shiftable section and terminating at one end in said fixed section, said jacket and said shiftable section forming a passage for the supply of the combustible mixture, said jacket having its inner face provided with screw threads, and screw-threaded ribs carried by the shiftable section and engaging the screw threads of the jacket for adjustably connecting the shiftable section to the jacket, thereby permitting the increasing and decreasing of the width of said passage.

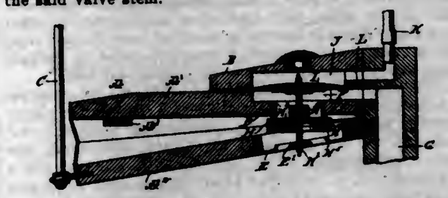
3. An internal combustion engine comprising a cylinder formed of a fixed and a shiftable section, a jacket surrounding said shiftable section and having its upper portion extending towards and connected to said fixed section, the upper portion of said jacket being substantially conical in cross section, said shiftable section of the cylinder having its upper portion corresponding in contour to the shape of the upper portion of said jacket, said jacket and said shiftable section forming a supply passage for the combustible charge, and means for adjustably connecting the shiftable section to the jacket for increasing and decreasing the width of the passage.

4. An internal combustion engine comprising a cylinder formed of a fixed and a shiftable section, a jacket surrounding said shiftable section and having its upper portion extending towards and connected to said fixed section, the upper portion of said jacket being substantially conical in cross section, said shiftable section of the cylinder having its upper portion corresponding in contour to the shape of the upper portion of said jacket, said jacket and said shiftable section forming a supply passage for the combustible charge, and means carried by the shiftable section and engaging the jacket for adjustably connecting the shiftable section and jacket together, thereby permitting the increasing and decreasing of the width of said passage.

5. An internal combustion engine having a cylinder formed of a fixed and a shiftable section, a jacket surrounding said shiftable section and terminating at one end in said fixed section, said jacket and said shiftable section forming a passage for the supply of the combustible mixture, and means for adjustably connecting the shiftable section to the jacket thereby permitting the increasing and decreasing of the width of the passage.

882,402. PNEUMATIC ACTION. HERMANN MEYER, New York, N. Y. Filed Sept. 13, 1907. Serial No. 392,740.

1. A pneumatic action comprising a pneumatic provided with oppositely arranged valve seats in the fixed and movable members of the pneumatic, a diaphragm in alinement with the said valve seats, and a valve adapted to be seated on either valve seat and having its stem screwing in the said diaphragm, the body of the valve being formed of a ring, a disk-shaped facing of flexible material secured to the said ring on one face thereof, and a button secured centrally to the said facing and in which screws the said valve stem.



2. A pneumatic action comprising a pneumatic provided with oppositely arranged valve seats in the fixed and movable members of the pneumatic, a diaphragm in alinement with the said valve seats, a valve adapted to be seated on either valve seat and having its stem screwing in the said diaphragm, the body of said valve being formed of a ring, a disk-shaped facing of flexible material secured to the said ring on one face thereof and a button secured centrally to the said facing and in which screws the said valve stem, and a ring-shaped facing at the other side of the said ring, the said facings being adapted to be seated on the said valve seats.

882,403. TOY. WENCESLAUS F. MIKOLASEK, Vodnany, S. Dak. Filed July 26, 1907. Serial No. 385,722.

1. A toy of the character described, embodying a body portion, arms, a head and two legs, the upper portions of which legs are hinged to the body portion, the said legs being provided with relatively movable foot portions, a pair of crank rods mounted in the body portion and each provided with a pair of cranks set opposite each other, the cranks of one rod being in alinement with the corresponding cranks of the other rod, bars connecting the cranks of one rod with the movable portions of the respective legs, and a pitman connected to the cranks of the other rod and having a sliding connection with the said movable portions of the legs.

2. In a toy of the character described, the combination with the casing, of three parallel rods mounted therein, the two outermost rods, being each provided with a pair of cranks, and the cranks of both of said rods connected together for simultaneous movement, means for rotating said two outermost rods, bars suspended from the cranks of one of the outermost rods, pitmen suspended from the cranks of the other outermost rod, legs having upper portions hinged to the casing and lower portions movable in the upper portions, hanger rods suspended from the intermediate rod, the pitmen having a sliding connection

with the said hanger rods, respectively, and couplings connecting the hanger rods to the movable portions of the legs.

3. In a toy of the character described, the combination with the body portion, hinged legs, and the means for moving said legs alternately, said means including a crank shaft, of rods connected to the cranks of said shaft, there being two such cranks, a tank mounted for tilting movement in the casing and containing pulverulent material, the ends of the said tank being mounted over the said legs, and the said ends of the tank being connected to the said rods, respectively, as and for the purpose set forth.

4. In a toy of the character described, the combination of a casing, legs upon which said casing is mounted, a head pivotally supported on said casing, a shaft extending vertically in the casing, means for turning said shaft, the shaft being provided at its upper end with a wheel, and a link eccentrically connected at one end to said wheel and at its other end to the said head.

5. In a toy of the character described, the combination of a casing, legs upon which said casing is mounted, a head pivotally supported on said casing, a shaft extending vertically in the casing, means for turning said shaft, the shaft being provided at its upper end with a wheel, a link eccentrically connected at one end to said wheel and at its other end to the said head, arms held stationary and extending up into the head, and eyeballs carried by said arms.

[Claims 6 and 7 not printed in the Gazette.]

882,404. DENTAL FORCEPS. WALTER C. MINER, Boston, Mass. Filed July 3, 1907. Serial No. 382,006.



1. Dental forceps consisting of a pair of levers pivotally secured together and each having at its working end a jaw curved bodily in the plane of the working face of the jaw and out of a plane passed perpendicular to the axis about which said levers turn; said jaws lying in their closed position beside but free from engagement with each other; the working end of one of said jaws being bifurcated to permit the passage of the ligature through the fork; and said bifurcated end being formed with a pair of claws grooved for the reception of the expansion wire.

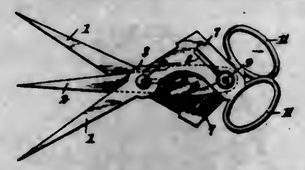
2. Dental forceps consisting of a pair of levers pivotally secured together and each having at its working end a jaw curved bodily in the plane of the working face of the jaw; the working end of one of said jaws being bifurcated to permit the passage of the ligature through the fork; said bifurcated end being formed with a pair of claws grooved for the reception of the expansion wire; and the working end of the other jaw being formed with a depression for engagement with the tooth.

3. Dental forceps consisting of a pair of levers pivotally secured together and having each at its working end a jaw curved bodily out of and away from a plane passed through said levers at their handle end; the working end of one of said jaws being bifurcated to permit the passage of the ligature through the fork; and the working end of the other jaw being shaped to engage the tooth to be ligated.

882,405. DIVIDERS. CHARLES G. MORRAO, Keelerville, Saskatchewan, Canada, assignor of one-half to William H. Gibson, Orillia, Canada. Filed Apr. 23, 1907. Serial No. 369,735.

1. A tool of the character described, comprising three or more legs, and means directly connecting said legs together automatically operating to maintain the extremities thereof in alinement when said legs are separated.

2. A tool of the character described, comprising two legs, a pivot directly connecting said legs together, a third leg having a sliding connection with said pivot, and means fixed to said third leg having a sliding connection with the other two legs and coacting with the pivot to automatically retain the extremities of the legs in alinement when the legs are separated.



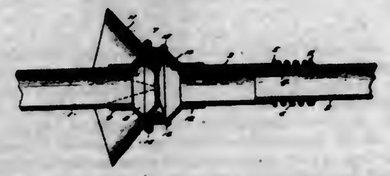
3. A tool of the character described, comprising two legs, a pivot connecting said legs together, a third leg having a sliding connection with said pivot, and means for clamping said legs in adjusted position, carried by said third leg, and having a sliding connection with said two other legs.

4. A tool of the character described, comprising two legs, a pivot connecting said legs together, finger loops for operating said legs, a third leg having a sliding connection with said pivot, and means connecting all of said legs together automatically operating in conjunction with the pivot to maintain the extremities thereof in alinement.

5. A tool of the character described, comprising two legs having slotted arms, a pivot connecting said legs together, a third leg having a sliding connection with said pivot, and means for clamping said legs in adjusted position, carried by said third leg and passing through the slots of said arms.

[Claims 6 and 7 not printed in the Gazette.]

882,406. AUTOMATIC COUPLING FOR AIR-BRAKE SYSTEMS. BENJAMAN J. MORGAN, Bevier, Mo. Filed Mar. 16, 1907. Serial No. 362,671.



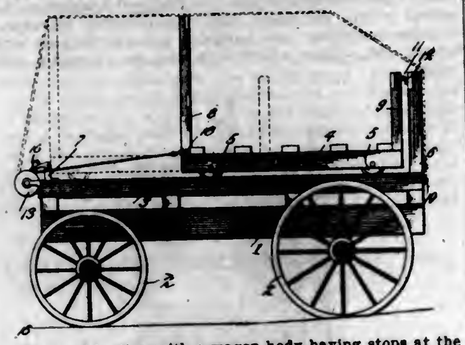
1. In an automatic coupler, the combination of a pair of conduits, a head fixedly secured on the extremity of one of the conduits, a fixed seat on the other conduit shaped to receive the head, a pair of members hinged to the seat at diametrically opposite points and arranged to swing on parallel axes, said members being in the form of frustums of a cone connected and flaring in opposite directions, and an endless spring surrounding the members for yieldingly holding the latter together.

2. In an automatic coupler, the combination of a pair of conduits, a head on one of the conduits, a seat on the other, outwardly movable means adapted to be engaged by the head as the conduits are coupled and uncoupled and arranged to yieldingly hold the head against the seat, and an elastic means arranged in coöperative relation with the first-mentioned means and held in place by its elasticity.

3. In an automatic coupler, the combination of a head, a seat, hinged members connected with the seat and having oppositely extending flaring portions forming a mouth for receiving the head and for holding the head against the seat, and a device surounding the hinged portions and held in place thereon by the oppositely flaring portions.

4. In an automatic coupler, the combination of a pair of conduits, a head on one of the conduits, a seat on the other conduit, semi-funnel shaped members movably connected with the seat and arranged to be engaged by the head during the coupling operation and to hold the head against the seat, and an elastic annular member extending around the outside of the first-mentioned members to yieldingly hold them in position.

882,407. HAY-RACK. EDWARD H. MOYER, Rockford, Ohio, assignor of one-half to John Moyer, Van Wert, Ohio. Filed Oct. 12, 1907. Serial No. 397,143.



The combination with a wagon body having stops at the opposite ends thereof, of a wheeled truck movable lengthwise of said body, means for securing said truck to one of the stops, and means for moving the truck lengthwise of the body and also binding the load on the truck and wagon, said means consisting of a ratchet windlass, and a rope or cable for said windlass provided with a terminal fastening device detachably connected to the truck and also adapted to pass over the load lengthwise of the body and connect to the wagon body at the end opposite the windlass.

882,408. CLOTHES-LINE CLAMP. WILLIAM MULLIN, New York, N. Y. Filed Oct. 1, 1907. Serial No. 395,399.



1. A line clamp consisting of connected barrels open at their ends, a bolt mounted to slide between the barrels, having a gripping head opposite one side of the said barrels and a nut upon the bolt located opposite the opposing sides of the barrels.

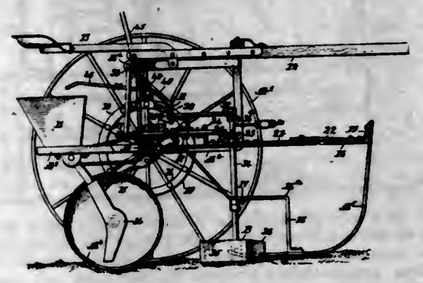
2. A clothes line clamp consisting of parallel connected barrels open at both ends, a bolt mounted to slide between the barrels having a head concaved upon its surface facing the barrels, a nut at the opposite end of the bolt, and means for preventing the bolt from turning.

3. In a clothes line clamp consisting of parallel connected barrels open at both ends, a tension-controlled bolt mounted to slide between the barrels, having a head concaved upon its inner face, a nut at the opposite end of the bolt, and means for preventing the bolt from turning.

4. A line clamp consisting of parallel barrels, a web connecting said barrels, located at a point between opposing faces, the said web being provided with an opening, and a key-way in the wall of the said opening, a bolt having sliding movement in the said opening in the web, a projection from the bolt adapted to enter the said key-way, a nut located at one end of the bolt, a head located at the opposite end of the bolt having a wing formation and also having its under face concaved, and a spring coiled around said bolt between its head and the opposing faces of the barrels.

882,409. COTTON-CHOPPER. WILLIAM MCCALEB, Bluffs, Ill. Filed Dec. 4, 1907. Serial No. 404,984.

1. The combination with a cultivator or like machine, of a cotton chopping attachment consisting of a frame, shafts mounted to revolve in the frame, opposing hoes carried by the shafts, a plunger, connections between the plunger and said shafts whereby through the movement of the plunger the shafts are rocked to carry the hoes to and from each other, means for operating the plunger in one direction by the movement of the machine, and means independent of the machine for operating the plunger in an opposite direction.



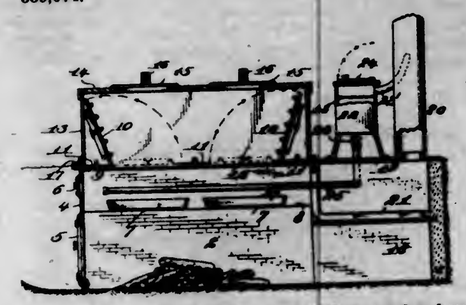
2. The combination with wheel-supported cultivator or like machine, and circularly arranged projections extending from one of the supporting wheels, of a cotton chopping attachment consisting of a frame secured to the said machine, vertical opposing shafts mounted to revolve in said frame, opposing angular hoes secured at the lower ends of the shafts, a spring-controlled plunger having sliding movement relatively to the frame, crank and link connections between the plunger and the shafts, and an actuating shaft engaging with the plunger and also with the projections from the said supporting wheel of the machine.

3. The combination with a cultivator or like machine, and circularly arranged projections from one of its supporting wheels, of a frame carried by the said machine, vertical shafts carried by the frame, crank arms at the upper ends of the shafts, angular horizontally located hoes carried at the lower ends of the shafts, a spring-controlled plunger mounted to slide in the frame, diverging links pivotally connected with the plunger and one with a crank arm of each of said shafts, and an actuating shaft having a member that engages with the plunger, and a member that engages with the projections from the said supporting wheel.

4. A cotton chopping attachment for cultivators and like machines, consisting of a frame, vertical shafts mounted to turn in the frame, angular hoes horizontally located at the lower ends of the shafts, a spring-controlled plunger, guides therefor, links pivotally attached at their rear ends to said plunger and at their forward ends to said shafts, and an actuating shaft comprising a horizontal member and downwardly extending members, the downwardly extending members being at angles to each other, one of said members being adapted for engagement with the said plunger.

5. In a cotton chopping attachment for cultivators and like machines, a frame fitted at one end for attachment to the forward portion of the machine and fitted at its opposite end for hinged connection with the machine, parallel vertical shafts mounted to revolve in the frame and extending downwardly therefrom, a crank arm at the upper end of each of said shafts, a hoe secured to the lower end of each of said shafts, said hoes being of angular formation and comprising a long rearwardly and outwardly extending member attached to the shaft and a shorter and forwardly extending member free from the shaft, the forwardly extending members in one position of the hoes being adapted for engagement, a spring-controlled plunger, guides therefor, a horizontal cap piece pivotally connected with the said plunger, diverging arms pivoted to the said cap piece and one to each of the said crank arms of the said shafts, and an actuating shaft comprising a horizontal member and downwardly extending members, one of the downwardly extending members being adapted to enter an opening in the rear end of the said plunger.

882,410. SANITARY APPLIANCE. JAMES H. MCCALL, Huntingdon, Tenn. Filed Oct. 15, 1906. Serial No. 339,074.



1. In a sanitary appliance, a combustion chamber having an excrement catching device, a privy box in coöperative relation with said combustion chamber, means for closing communication between the privy box and combustion chamber when it is desired to incinerate the contents of said combustion chamber or for opening communication between the privy box and combustion chamber to obtain deposit of matters in said chamber from said box, a second combustion chamber in communication with said first mentioned combustion chamber, and a urine receptacle outside of said first mentioned chamber and provided with a pipe for conveying the contents of the same into said first mentioned chamber.

2. In a sanitary appliance, a combustion chamber having excrement catching means, a stack in communication with said combustion chamber, a urine receptacle exterior to the chamber, a ventilating tube connecting said urine receptacle and said stack, a pipe for delivering the contents of said urine receptacle into said combustion chamber, and a privy box arranged in coöperative relation with said combustion chamber.

3. In a sanitary appliance, a combustion chamber, an excrement catching pan in said chamber, a urine receptacle outside of the chamber, and a pipe for conducting the contents of said receptacle into said chamber, said pipe being perforated, and the perforated portion extending across said pan.

4. In a sanitary appliance, a combustion chamber, excrement catching pans in said chamber, a privy box supported above the combustion chamber, a urine receptacle outside the chamber, and a valved pipe for conducting the contents of said receptacle into said chamber, said pipe extending across the pans and being perforated to deliver the urine into said pans.

5. In a sanitary appliance, a combustion chamber, a privy box associated with said combustion chamber, a urine receptacle outside the combustion chamber, a conduit for conducting the contents of said receptacle into said chamber, a stack in communication with said combustion chamber, and a ventilating pipe extending from said urine receptacle into said stack.

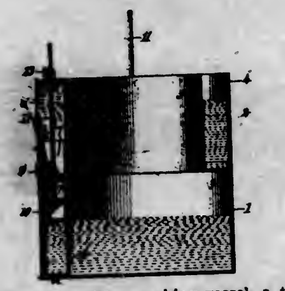
[Claim 6 not printed in the Gazette.]

882,411. COOKING VESSEL. FRENCH NESTOR, Elkins, W. Va. Filed May 29, 1907. Serial No. 376,228.

1. In combination with a cooking vessel, a tank composed of two cylinders forming an annular space therebetween adapted to contain a liquid, and float-controlled means arranged at the outside of the tank for automatically feeding said liquid from said annular space to said vessel when the level of the liquid in the vessel sinks below a predetermined point.

2. In combination with a cooking vessel, a tank adapted to contain a liquid, float actuated means for automatically feeding said liquid from said tank to said vessel when the level of the liquid in the vessel sinks below a predetermined point, and means for vertically adjusting the float to regulate the height of the liquid maintained in the vessel.

3. In combination with an open cooking vessel, a tank superposed thereon and substantially unobstructing the opening in the vessel, whereby the vapor may escape therefrom when the tank is filled, a float-well adapted to be passed within the vessel and communicating therewith, a valve-controlling communication between the tank and vessel, and a float within said well for operating said valve.

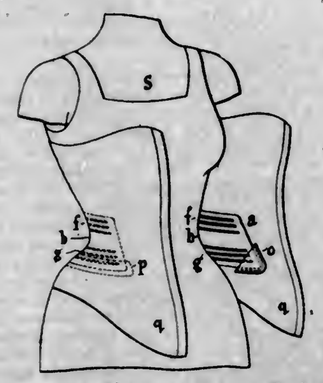


4. In combination with a cooking vessel, a tank seated thereon composed of two cylinders concentrically arranged, providing an annular space therebetween, adapted to contain a liquid, a longitudinal slot formed in said tank, a float well within the slot adapted to project into the vessel, a valve for controlling the passage of the liquid from the tank to the vessel, and a float for operating said valve.

5. In combination with a cooking vessel, a tank seated thereon composed of two cylinders concentrically arranged, providing an annular space therebetween, adapted to contain a liquid, a longitudinal slot formed in said tank, a float well within the slot adapted to project into the vessel, a float within the well having a standard fixed thereto, a lever pivotally supported from the tank adapted to be adjustably fixed to said standard, and a valve pivotally suspended from said lever for controlling the passage of the liquid from the tank to the vessel.

[Claim 6 not printed in the Gazette.]

882,412. ATTACHMENT FOR CORSETS AND OTHER GARMENTS. WILLIAM J. PARKER, Wandin South, Victoria, Australia. Filed June 10, 1907. Serial No. 378,216.



1. A flexible shield for corsets, composed of a sheet of thin springy material of truncated conical form, curved to fit against the wearer's body, and extending above and below the waist line of the corset, but a greater distance below than above said waist line, having elongated transverse slots, and skived or tapered edges to give flexibility thereto, substantially as described.

2. An attachment for corsets composed of a single curved piece of springy leather slotted parallel to the waist line to allow of adjustment of form during wear, and variations of form during bending, and extending above said waist line and also a greater distance below it, substantially as described.

3. An attachment for corsets composed of a single curved resilient piece of perforated leather with skived edges and of a truncated conical form adapted to extend above and below the waist line, but a greater distance below said line than above it, and having parallel slots both above and below said line, substantially as described.

4. A corset provided with pockets, and a shield adapted to be held in said pockets, said shield composed of a single curved resilient piece of perforated leather with skived edges and of a truncated conical form adapted to extend above and below the waist line, but a greater distance below said line than above it, and having parallel slots both above and below said line, substantially as described.

882,413. RAZOR. JOHN E. PARKISON, Colorado Springs, Colo. Filed Apr. 24, 1905. Serial No. 257,019.



1. A razor having a handle, a backing plate supported by and extending transversely across one end of the handle, means for connecting a razor blade to said plate with its cutting edge projecting beyond the same, a guard with a straight edge, and means for supporting the guard with said edge parallel to but wholly separated at all points from the edge of the razor blade.

2. A razor comprising a handle, a backing plate occupying a position transversely of the handle, a guard having a straight edge wholly separated at all points from the backing plate, and means for supporting the razor blade on the backing plate with its cutting edge forward of the latter and parallel to but at all points away from the edge of the guard.

3. A razor comprising a handle, a backing plate provided with end lips formed integral with the plate and extending outwardly therefrom on one side, a blade having end recesses which the lips engage, the recesses being open at the ends of the blade and means for holding the blade in place on the plate.

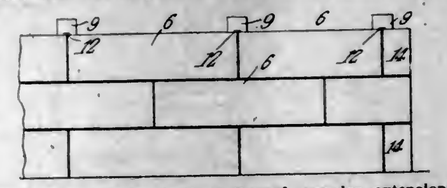
4. A razor comprising a handle, a backing plate, a blade mounted on the plate, a clasp for holding the blade in place, the clasp being pivotally connected at one end of the backing plate and composed of two separated parallel members adapted to swing over and straddle the rear edge of the backing plate and blade whereby it is made to engage both ends of the latter.

5. A razor comprising a handle, a backing plate connected with the handle and extending at an angle thereto, the plate having end lips, a blade having end recesses engaged by the lips of the plate, a clasp composed of two parallel members pivoted to the plate to swing over the rear edges of the plate and blade, the clasp members being separated to engage said parts and hold them in operative relation, and a guard below and in front of the cutting edge of the blade.

[Claims 6 to 14 not printed in the Gazette.]

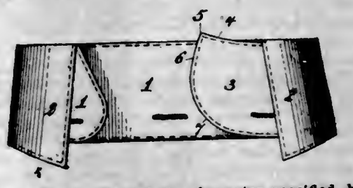
882,414. HOLLOW CONCRETE BLOCK. HERBERT N. PETTIGREW, New Orleans, La. Filed May 15, 1907. Serial No. 373,791.

A wall formed of a plurality of side and corner blocks laid in superposed courses and arranged to break joint, said side blocks each consisting of separable parallel side members having their inner faces provided with terminal intermediate projections of equal width and extending the entire height of the blocks, transverse web blocks interposed between the side members and having their longitudinal edges bearing against the adjacent projections of the side members and their upper ends projected above said side members, bonding members embedded in the web blocks and having their opposite ends extended laterally beyond the adjacent ends of the web blocks for engagement with the longitudinal edges of the adjacent side



members at the projections thereof, angular extensions formed on the corner blocks, and diagonally disposed web blocks having similar bonding members adapted to bear against the angular extensions of the corner blocks, said web blocks being independent of the side members and corner blocks.

882,415. COLLAR. JAMES K. P. PINE, Troy, N. Y., assignor to United Shirt and Collar Company, Troy, N. Y., a Corporation of New York. Filed July 2, 1904. Serial No. 215,062.



1. A turn-down collar of the character specified, having one end of its neck band extended beyond the end of the body of the collar and adapted to fit into the folded portion of the other end of the collar, the upper edge of the said extended portion terminating in substantially a sharp corner.

2. A collar of the type specified, having a neck band and a folded over body portion, the neck band extending beyond the body portion at one end of the collar and adapted to fit into the folded over portion of the other end of the collar, the upper and end edges of the neck band terminating and uniting in a substantially right angled corner.

3. A collar of the type specified, having a neck band and a folded over body portion, the neck band having a tab or extension projecting beyond the body portion at one end of the collar and adapted to fit into the folded over portion of the other end of the collar, said tab or extension having an upper sharp corner and a lower rounded corner substantially as and for the purpose specified.

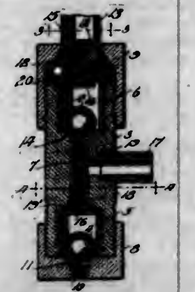
4. A turn-down collar of the character specified, having one end of its neck band extended beyond the end of the body of the collar and adapted to fit into the folded portion of the other end of the collar, the upper edge of the said extended portion terminating in substantially a sharp corner, and the lower edge thereof rounded and cut away sufficiently to prevent exposure thereof below the lower line of the body of the collar, should the collar spread.

882,416. CHECK-VALVE. MARION W. PITNER, Chicago, Ill. Filed May 29, 1907. Serial No. 376,312.

1. The combination of a casing having threaded passages, seats at the inner ends of the passages, a ball valve arranged to engage either one of the seats, and a removable stop threaded in the passage serving as an abutment for preventing the valve from engaging the seat of the outlet passage.

2. The combination of a casing having oppositely disposed passages, seats at the inner ends of the passages, a valve adapted to engage one of the seats, and a removable

stop of flat T-shaped form adapted to fit interchangeably in either of the passages for preventing the valve from engaging the seat of such passage.



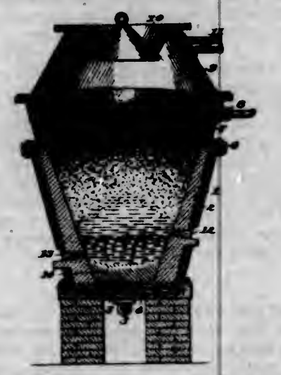
3. The combination of a casing provided with a chamber having a passage, a removable member closing one side of the chamber and provided with a passage, said passages being threaded and counterbored at their inner ends to form suitable valve seats, a ball valve in the chamber for engaging one of the seats, and a stop having a threaded engagement with either one of the passages for preventing the valve from closing the seat of such passage.

4. The combination of a casing having chambered ends, ball valves in the chamber, valve seats in the chambers, a threaded passage between the chambers, threaded inlet and outlet passages, and stops for the valves having threaded engagement with the outlet passages of the chambers.

5. The combination of a casing having two chambers, admission and discharge openings for each chamber, ball valves in the chambers, a conduit in the casing connecting the discharge opening of one chamber with the admission opening of the other chamber, a combined inlet and outlet passage communicating with the conduit, and removable stops at the discharge openings for preventing the valves from closing the latter and adapted to be used interchangeably in either of the openings of each chamber for reversing the action of the valves.

[Claims 6 and 7 not printed in the Gazette.]

882,417. PROCESS OF PRODUCING FERROSILICON. EDGAR F. PRICE, Niagara Falls, N. Y., assignor, by mesne assignments, to Central Trust Company of New York, a Corporation of New York, trustee under first mortgage. Filed Nov. 14, 1905. Serial No. 287,848.

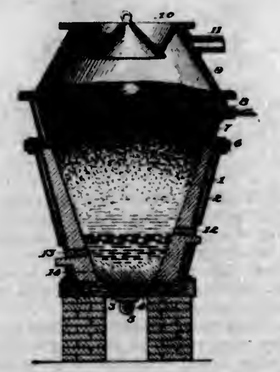


1. The continuous process of producing ferrosilicon, which consists in smelting a charge containing a silicon compound, carbon and a source of iron, by means of an electrically-heated resistance-conductor, withdrawing the molten product from the furnace, and supplying the charge-mixture as required, as set forth.

2. The process of producing ferrosilicon, which consists in smelting a charge containing a silicon compound, carbon and a source of iron, by passing an electric current through the charge, serving as a resistance-conductor, withdrawing the product from the furnace, and supplying the charge-mixture as required, as set forth.

3. The process of producing ferrosilicon, which consists in smelting a charge containing a silicon compound, carbon and a source of iron, by passing an electric current through the charge, serving as a resistance-conductor, and increasing the current or energy density through the charge to a point where reduction is effected, withdrawing the product from the furnace, and supplying the charge-mixture as required, as set forth.

882,418. PROCESS OF PRODUCING SILICOSPIEGEL. EDGAR F. PRICE, Niagara Falls, N. Y., assignor, by mesne assignments, to Central Trust Company of New York, a Corporation of New York, trustee under first mortgage. Filed Nov. 14, 1905. Serial No. 287,852.

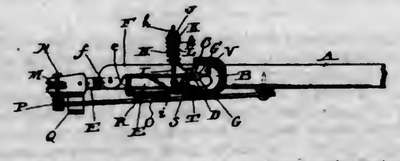


1. The continuous process of producing silico-spiegel, which consists in smelting a charge containing compounds of manganese and silicon, carbon and a source of iron, by means of an electrically-heated resistance-conductor, withdrawing the molten product from the furnace, and supplying the charge-mixture as required, as set forth.

2. The process of producing silico-spiegel, which consists in smelting a charge containing compounds of manganese and silicon, carbon and a source of iron, by passing an electric current through the charge, serving as a resistance-conductor, withdrawing the product from the furnace, and supplying the charge-mixture as required, as set forth.

3. The process of producing silico-spiegel, which consists in smelting a charge containing compounds of manganese and silicon, carbon and a source of iron, by passing an electric current through the charge, serving as a resistance-conductor, and increasing the current or energy density through the charge to a point where reduction is effected, withdrawing the product from the furnace, and supplying the charge-mixture as required, as set forth.

882,419. AUTOMATIC POWER-RELEASING DEVICE FOR DRAFT-ENGINES. WILLIAM H. RHODES, Brandenburg, Ky., assignor of one-half to George Storms, Louisville, Ky. Filed Sept. 24, 1907. Serial No. 394,329.



1. A draft-attaching device comprising spring-actuated arms, means to secure them to the load, and means to hold

the arms apart when uncoupled from the load in position for recoupling, substantially as shown and described.

2. A draft-attaching device comprising spring-actuated arms, a drawhead secured to the load, a coupling-pin secured to the draw-head and engaging said arms, and means to hold the arms apart when uncoupled from the load in position for recoupling, substantially as shown and described.

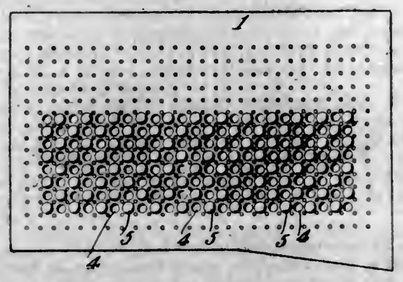
3. A draft-attaching device comprising spring-actuated arms pivotally secured together and provided with mating recesses, a drawhead secured to the load, a coupling-pin secured to said drawhead and inserted through said recesses, and means to hold the arms apart when uncoupled from the load in position for recoupling, substantially as shown and described.

4. A draft-attaching device comprising an arm, another arm pivotally secured thereto, a rod having one end bifurcated and straddling the last mentioned arm and secured to the first mentioned arm, the upper end of said rod threaded, a set-nut mounted on said threaded end, a coil-spring on said rod and engaging said nut and the edge of the pivotally secured arm, and means to secure said attaching device to a load so that an excess of draft will cause said arms to swing apart against the tension of said coil-spring to release the load, substantially as shown and described.

5. A draft-attaching device comprising an arm, another arm pivotally secured thereto, said arms provided with mating recesses, a rod having one end bifurcated and straddling the last mentioned arm and secured to the first mentioned arm, the upper end of said rod threaded, a set-nut mounted on said threaded end, a coil-spring on said rod and engaging said nut and the edge of the pivotally secured arm, a beam secured to the load, a drawhead secured to said beam, and a coupling-pin secured to said drawhead and engaging the recesses in the arms aforesaid, substantially as shown and described.

[Claims 6 to 9 not printed in the Gazette.]

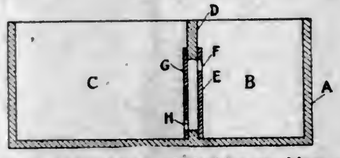
882,420. SHEET FOR BOILER-FURNACES. THOMAS C. ROGERSON and PHILIP RENTCHLER, Jacksonville, Ill. Filed Sept. 21, 1907. Serial No. 393,932.



A sheet forming a wall between the fire-box and water space of a steam boiler, said sheet having concaved dents projecting from its plane into the area of the water space and convexed dents projecting from its plane into the area of the fire-box, said dents being alternately arranged in rows and stay bolts connected at their outer ends with the outer wall of the water space and at their inner ends with said sheet at points lying in the plane of the body portion of the sheet so that the ends of the said stay bolts lie at points between the planes occupied by the middle portions of the oppositely disposed dents.

882,421. SOW-BOX OF SIZING OR SLASHING MACHINES. JAMES RUSHTON, JOSEPH L. HOPPER, and JOHN H. HADDACRE, Nelson, England. Filed Jan. 7, 1907. Serial No. 351,188.

1. A sow box for sizing and slashing machines, comprising a receptacle, a transverse vertical partition dividing the receptacle into a boiling chamber for the sizing, and a compartment for the immersion rollers, the partition being provided with a vertical passage having an inlet at its upper end communicating with the upper portion of the boiling chamber and adapted to receive sizing from the upper portion of the latter in a boiling condition, the said passage having an outlet at its lower end for discharging the boiling sizing from said chamber into the roller compartment.



2. A sow box for sizing and slashing machines comprising a receptacle, a transverse vertical partition having an enlarged opening therein, the partition dividing the receptacle into a boiling chamber for the sizing, and a compartment for the immersion rollers, and a pair of plates composed of non-corrosive material secured to the opposite sides of said partition and covering the opening therein, the plate within the boiling chamber having a slot in its upper portion to receive the boiling sizing from the upper portion of said chamber, and the plate within the roller compartment having a slot in its lower portion through which the sizing from the boiling chamber is discharged, the opening in the compartment serving as a vertical connecting passage between the upper and lower slots in the said plates.

882,422. DOLL. LILLIAN A. SACKMAN, New York, N. Y. Filed Nov. 13, 1907. Serial No. 401,950.



A rag doll having movable limbs separate from the body, stiff disks one fitted within the covering of the body and one fitted within the covering of the limbs at the junction of each limb with the body, and coupling pins inserted through the said disks, the said pins being provided at one end with a head to bear against one disk and having its other end divided and the members of said divided end coiled into springs to bear against the other disk.

882,423. SHAVING-BRUSH. SAMUEL SALOMAN, Washington, D. C. Filed Oct. 22, 1907. Serial No. 398,606.

1. A brush comprising a handle having a threaded socket, a brush body of sponge rubber having an integral neck or shank, and a clamping cup slotted from one end forming opposite clamping jaws or sections and threaded internally and externally, the internal threads operating to engage with the shank of the brush body and the external threads to be screwed into the socket of the handle, substantially as and for the purpose set forth.

2. A brush comprising a handle having a threaded socket at one end, a brush body having a neck or shank of compressible material, and a slotted clamping cup

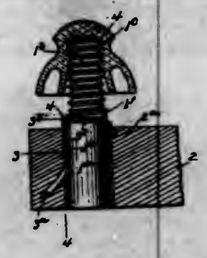
adapted to be spread to receive said neck or shank, and threaded externally whereby it may be screwed into the socket of the handle.



3. A brush comprising a handle having a threaded socket, a brush body of rubber sponge having a compressible neck, and a cup adapted to receive said neck and threaded internally to screw upon said neck and also threaded externally whereby it may be screwed into the socket of the handle.

4. A brush comprising a handle having a threaded socket, a brush body having a neck or shank of soft rubber grooved longitudinally, a cup split from its outer end and receiving said shank with the grooves thereof opposite the slots in the cup, and a handle having a socket to receive the said cup, substantially as set forth.

882,424. INSULATOR-PIN. WILLIAM SCHARFHAUSEN, Payette, Idaho, assignor to Payette Insulator Pin Company, Limited, Payette, Idaho. Filed June 10, 1907. Serial No. 378,178.



1. An insulator pin comprising a base portion and an insulator carrying portion said base portion having a longitudinal slot, and said insulator carrying portion having a transverse slot, said longitudinal slot at one end terminating adjacent said transverse slot, substantially as shown and described.

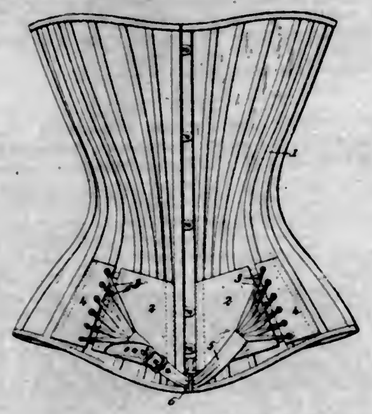
2. An insulator pin comprising a base portion and a reduced insulator carrying portion, said base portion having a longitudinal slot terminating at its lower end in an outwardly beveled portion, and said insulator carrying portion having a transverse slot held at substantially right angles to the longitudinal slot, all being arranged substantially as shown and described.

3. The combination with an insulator pin having a base portion and a cross arm having an aperture to receive such base portion, said insulator pin having an insulator carrying portion projecting upwardly from the base portion, said base portion having a longitudinal slot, of a locking member held in said longitudinal slot and projected into said cross arm, and means carried by the insulator carrying portion of the pin for coöperatively engaging with the locking member to lock the locking member in place, substantially as shown and described.

4. The combination with an insulator pin having a base portion and a cross arm having an aperture to receive such base portion, said insulator pin having an insulator carrying portion projecting upwardly from the base portion, said base portion having a longitudinal slot, of a locking member held in said longitudinal slot and projected into said cross arm, means carried by the insulator carrying portion of the pin for coöperatively engaging with the locking member to lock the locking member in place, said last named means consisting of a groove in the insulator carrying portion of the pin to receive an upset or bent-over portion of the locking means, substantially as shown and described.

5. An insulator pin comprising a base portion and an insulator carrying portion, said base portion having a longitudinal slot in its outer wall, combined with a cross arm or support having an aperture to receive said base portion, a locking member held in said longitudinal slot and projected into the cross arm and having its upper end bent around said insulator carrying portion of the pin to lie in a plane substantially at right angles to that containing the longitudinal slot, substantially as shown and described.

882,425. CORSET. MARTHA SCHOTTLANDER, New York, N. Y. Filed Apr. 17, 1907. Serial No. 368,668.



1. In combination with a corset, lacings attached to the corset at each side of the longitudinal center of the front and near the bottom thereof, said lacings having a sliding connection with the corset further to the sides, a strap located at the front of the corset, the extreme ends of which are attached to said lacings, means for adjusting the strap, and a depending hook for retaining the strap depressed at its center.

2. In combination with a corset, a flap attached thereto at each side of the longitudinal center of the front and near the bottom thereof, second flaps having eyelets and attached to the corset further to the sides adjacent to the first-named flaps, a strap across the front of the corset, and lacings attached to the extreme ends of said strap slidable through said eyelets and attached to said first-named flaps.

3. In combination with a corset, a flap attached thereto at each side of the longitudinal center of the front and near the bottom thereof, second flaps having eyelets and attached to the corset further to the sides adjacent to the first-named flaps, a strap across the front of the corset, lacings attached to the extreme ends of said straps slidable through said eyelets and attached to said first-named flaps, and a depending hook carried by the corset for retaining said strap depressed at its center.

4. In combination with a corset opening at the front and of the straight-front type, of flaps attached to the corset at each side of the longitudinal center, at the front and near the bottom thereof, of means fixed to the adjacent flaps and slidable through the other flaps where they are reversely turned and connected together across the front of the corset for the purpose described.

882,426. BUTTON-BLANK-CUTTING MACHINE. GARRETT W. SCHAEURR, Muscatine, Iowa. Filed Dec. 29, 1906. Serial No. 350,080.



1. In a button blank cutting machine, the combination of a stock, a pusher slidably mounted in the stock, a rotatable shaft extending into the pusher, and interrupted screw-threads on the shaft and pusher for converting the rotary motion of the shaft into a sliding motion of the pusher.

2. In a button blank cutting machine, the combination of a pusher, a block attached thereto having internal interrupted screw threads, a spindle extending into said block, and having external interrupted screw threads adapted to engage those of the block during part of the revolution of the spindle for projecting the pusher, and means for rotating the spindle.

3. In a button cutting machine, the combination of a tubular pusher, a plug-holder in one end of the pusher having a threaded opening extending axially thereof, and a screw fixed in the pusher and engaging the threaded opening in the plug holder.

4. In a button cutting machine, the combination of a pusher, a rotatable shaft, and means for imparting reciprocating motions to the pusher by rotating said shaft; with a plug holder in the pusher having a threaded opening extending axially thereof, and a screw in the pusher engaging said opening for adjusting said holder in the pusher.

5. In a button blank cutting machine, the combination of a stock, a pusher slidably mounted therein, a spring for retracting said pusher, a spindle arranged axially of said tail-stock, and having interrupted threads engaging corresponding threads on the pusher; and means for rotating said spindle.

[Claim 6 not printed in the Gazette.]

882,427. SAFETY-MATCH. GEORGE E. SCHULTZ, New York, N. Y. Filed Jan. 12, 1906, Serial No. 295,741. Renewed Jan. 25, 1908. Serial No. 412,635.

1. A safety match having an incision extending partly through the body of the match, whereby the match will break on a line extending from the inner end of the incision across the match, and an igniting composition on one of the surfaces of the incision.

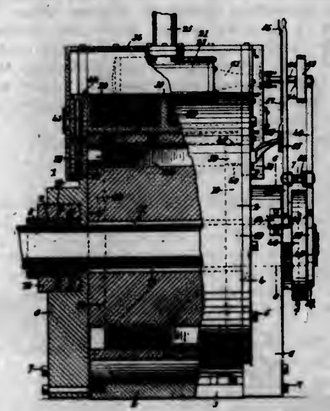
2. A match having a thickened portion near one end, and an inclined incision located adjacent to said thickened portion and having an igniting composition on the surface thereof farthest from the lighting composition.

3. A match, the stick of which is adapted to be separated into two parts, said parts having respectively burning and ignition compositions thereon, and the match



having means for normally protecting the ignition composition.

882,428. ROTARY ENGINE. CARL O. SHERMAN, Rutland, Vt. Filed July 12, 1907. Serial No. 383,455.



1. In a rotary engine, in combination, a cylindrical stator, an eccentric rotor therewithin, a sliding abutment movable into said stator, said rotor having at one end a guide groove conforming to the periphery of said rotor, and a movable member operatively arranged outside of said stator and having an extension projecting into said stator and engaging said guide groove, said movable member controlling said abutment.

2. In a rotary engine, in combination, a cylindrical stator, a rotor therewithin, a sliding abutment movable radially into said stator, said rotor having substantially one-half of the periphery concentric with said stator and the other half of the periphery eccentrically extended and engaging the stator along an element thereof at the element of greatest eccentricity of said rotor, said rotor having at each end a guide groove conforming to the periphery of said rotor, and movable members arranged at the outside of said stator and having extensions projecting into said stator and each located in one of said guide grooves, said members controlling said abutment.

3. In a rotary engine, in combination, a cylindrical stator, an eccentric rotor therewithin, a sliding abutment movable radially into said stator, said rotor having substantially one-half of the periphery concentric with said stator and the other half of the periphery eccentrically extended and engaging the stator along an element thereof at the element of greatest eccentricity of said rotor, said rotor having at each end a guide groove conforming to the periphery of said rotor, said rotor further having open-

ings therethrough connecting said guide grooves, movable members at the sides of said stator and having extensions projecting thereinto, each of said extensions being located in one of said guide grooves and having shoes engaging the walls of said grooves, and adjustable means for securing said members to said abutment.

4. In a rotary engine, in combination, a cylindrical stator, an eccentric rotor therewithin, a sliding abutment movable into said stator, said rotor having a portion of the periphery concentric with said stator and the remainder of the periphery eccentrically extended and engaging the rotor along an element thereof at the element of greatest eccentricity of said rotor, said rotor having at each end a guide groove conforming to the periphery of said rotor, guide chambers arranged at the sides of said stator and communicating interiorly therewith, movable members in said chambers and having extensions projecting into said stator, each of said extensions being located in one of said guide grooves and controlling said abutment, and adjustable means for securing said members to said abutment.

5. In a rotary engine, in combination, a cylindrical stator, an eccentric rotor therewithin, a sliding abutment movable radially into said stator, said rotor having at each end a guide groove conforming to the periphery of said stator, said rotor further having openings therethrough connecting said guide grooves, guide chambers arranged at the sides of said stator and communicating interiorly therewith, movable members arranged in said chambers and having extensions projecting therefrom, each of said extensions being located in one of said guide grooves, and adjustable means for securing said members to said abutment.

[Claims 6 to 14 not printed in the Gazette.]

882,429. LOOSE-LEAF BINDER. ISAAC SHULTIS, Martin, Mich. Filed July 22, 1907. Serial No. 384,950.



A binding device comprising a plurality of strips provided with laterally projecting tongues, the tongues upon each strip being arranged alternately with respect to the tongues upon the next adjacent strips so as to be received within the spaces between the same, the leaves to be bound being designed to be secured to the said tongues.

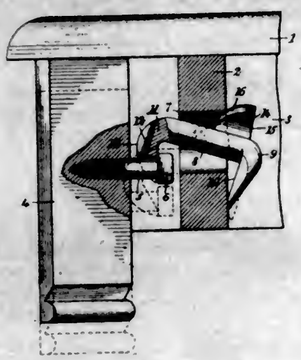
882,430. FASTENER. PIERRE SICOTTE, Lansing, Kans. Filed July 2, 1907. Serial No. 381,854.

1. A fastener, comprising a shank having at one end a laterally disposed head, at the opposite end a laterally disposed claw, and on the side opposite to said head and said claw, a wing presenting a shoulder.

2. A fastener comprising a shank having at one end a laterally disposed head and at the other end a claw laterally disposed in the same direction, said claw and said head being mutually inclined.

3. A fastener comprising a shank having at one end a laterally disposed head and at the opposite end a laterally disposed claw, said claw and said head being located at the same side of the shank and being mutually inclined, said shank further having at the side opposite to said head and said claw a wing presenting a shoulder.

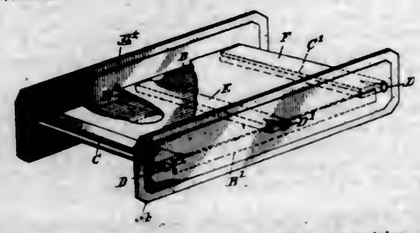
4. A fastener comprising a shank, a laterally disposed head integral with said shank and arranged at one end thereof, and a laterally disposed claw integral with said shank and at the end thereof opposite to said head, said head and said claw being inclined toward said shank, said shank having at the side opposite to said head and said claw a wing presenting a shoulder at the side adjacent to said head, and a curved face at the side opposite to said head, said claw having at the outer face a groove arranged transversely of the length of said shank.



5. The combination, with an article of furniture having a support and a part provided with a lag screw, of a fastener having a shank, a head, and a claw, said head being laterally disposed and adapted to engage the support at a point remote from said shank, said claw being adapted to engage the screw, said head acting as a fulcrum for the fastener whereby the same is swung about said head to force the part toward the support when the part is driven home.

[Claims 6 to 9 not printed in the Gazette.]

882,431. REEL FOR RUCHINGS, &c. LEOPOLD SONN, New York, N. Y. Filed May 10, 1906. Serial No. 316,122. (Model.)

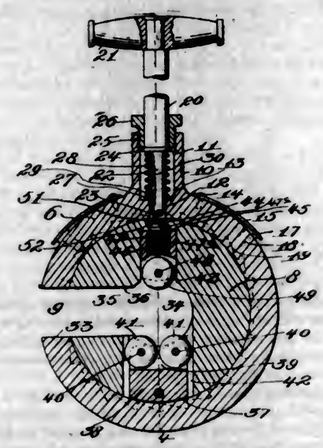


1. A reel for ruchings and the like, comprising side pieces, a flexible connecting web having flanges at its sides secured to the inner faces of the said side pieces, and stiff reinforcing end pieces engaging the ends of the said web and secured to the said side pieces a short distance from their ends and about the middle of the width thereof.

2. A reel for ruchings and the like, comprising side pieces, a flexible connecting web having flanges at its sides secured to the inner faces of the said side pieces, and stiff reinforcing end pieces having in their inner edges at the center thereof transverse grooves receiving the ends of the said web, the said end pieces being secured to the said side pieces a short distance from their ends and about the middle of the width thereof.

3. A reel for ruchings and the like, comprising side pieces, a flexible connecting web having flanges at its sides secured to the inner faces of the said side pieces, stiff reinforcing end pieces having in their inner edges grooves receiving the ends of the said web and secured to the said side pieces a short distance from their ends and about the middle of the width thereof, a reinforcing bar extending transversely across the said web at a point intermediate the said end pieces, the ends of the bar resting against the web flanges, means for uniting the said bar to the side pieces and the web flanges, and a covering for the web, end pieces, and cross bar.

882,432. PIPE-CUTTER. ROY L. THOMAS, San Marcos, Tex. Filed Oct. 3, 1907. Serial No. 395,801.



1. A pipe cutter comprising a head, a carrier mounted therein and provided with a ratchet, an adjustable block mounted in the carrier, a cutter disk rotatably mounted in the block, a pair of cutter disks mounted in the carrier and arranged diametrically opposite said cutter disk, an adjustable supporting means for said pair of cutter disks, an adjustable handle for oscillating said head, means carried by and extending through the head and engaging the ratchet for intermittently rotating the carrier during the oscillating of the head, and means operated by the handle for adjusting said block whereby said cutter disk can be shifted towards the pair of cutter disks.

2. A pipe cutter comprising a head, a carrier mounted therein and provided with a ratchet, an adjustable block mounted in the carrier, a cutter disk rotatably mounted in the block, a pair of cutter disks mounted in the carrier and arranged diametrically opposite said cutter disk, an adjustable supporting means for said pair of cutter disks, an adjustable handle for oscillating said head, means carried by and extending through the head and engaging the ratchet for intermittently rotating the carrier during the oscillating of the head, means operated by the handle for adjusting the block whereby said cutter disk can be shifted towards the pair of cutter disks, and means whereby said pair of cutter disks can be adjusted towards said single cutter disk.

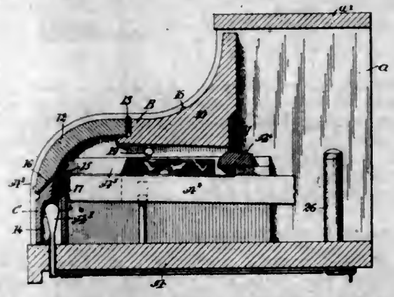
3. A pipe cutter comprising a head provided with an opening, a carrier mounted in the head and having a centrally arranged opening terminating in an opening adapted to communicate with the opening in the head whereby the carrier can be positioned upon a pipe section, an adjustable cutter disk mounted in the carrier, a pair of adjustable cutter disks mounted in the carrier diametrically opposite said single cutter disk, means whereby said single cutter disk and said pair of cutter disks can be adjusted towards each other, means for oscillating said head, means for intermittently rotating the carrier during the oscillation of the head, and means whereby the carrier can be locked to the head, causing thereby the moving in unison of the carrier and head.

4. A pipe cutter comprising an oscillatory head provided with an opening, a carrier mounted therein and having a centrally arranged opening communicating with an angularly disposed opening which communicates with the opening in the head, said openings providing means whereby the cutter can be slid upon the pipe section at a point intermediate the ends thereof, an adjustable cutter disk mounted in the carrier, a pair of adjustable cutter disks mounted in the carrier, means whereby said single cutter disk can be adjusted during the oscillation of the head, means for intermittently rotating said carrier during the oscillation of the head, and means whereby the carrier can be locked with the head, causing thereby the moving thereof in unison.

5. A pipe cutter embodying a shiftable carrier, a cutter disk mounted therein, said carrier provided with an opening, one wall of which is formed with a series of recesses and the other wall with a slot, an adjustable block mounted in said opening, a pair of cutter disks rotatably mounted in the block, and a clamping screw extending through the slot and block and engaging in one of said recesses for fixing said block in its adjusted position.

[Claims 6 to 8 not printed in the Gazette.]

882,433. LOCK-SLIP FOR AUTOMATIC PIANOS. ROBERT K. THUMLER, New York, N. Y., assignor to Henry & S. G. Lindeman, New York, N. Y., a Corporation of New York. Filed Oct. 14, 1907. Serial No. 397,278.

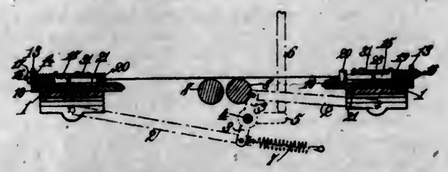


1. In automatic pianos, the combination with the keyboard, expression levers carried by said keyboard in front of the keys thereof and the fall board of the instrument, of a lock slip adapted to cover said expression levers, which lock slip is carried by and constitutes a portion of said fall board.

2. In automatic pianos, the combination with the keyboard, expression levers carried by the keyboard and the fall board of the instrument, of a lock slip for said expression levers hinged to the fall board and adapted when the fall board is lowered to cover the expression levers and to fold upon the fall board when the latter is opened.

3. In automatic pianos, the combination with the expression levers of the instrument and its fall board, of a lock slip hinged to the lower edge of the fall board, being capable of folding upward thereon or downward therefrom, which lock slip when the fall is down conceals and protects the expression levers, and when the fall is raised folds thereon out of the way.

882,434. ATTACHMENT FOR PLATE-DOUBLING MACHINES. FELIX WESTWOOD, Short Creek, W. Va. Filed Dec. 31, 1906. Serial No. 350,222.



1. The combination with a plate doubling machine, of slides at the ends thereof, and locking means for the slides operated by the movement of the latter.

2. The combination with a plate doubling machine, of slides at opposite extremities provided with openings, and reversely movable locking devices operated by the slides to engage the said openings.

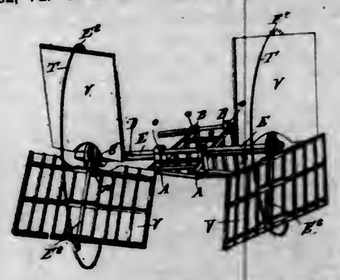
3. The combination with a plate doubling machine, of slides at the ends thereof adjustable to and from each other, and locking means for the slides operated by the movement of the latter and adjustable to correspond to the adjustment of the slides.

4. The combination with a plate doubling machine, of slides at the ends thereof adjustable to and from each other, and reversely movable locking bolts connected to said slides and comprising telescopic parts, the locking bolts being adapted to engage portions of the slides.

5. The combination with a plate doubling machine, of slides at the ends thereof adjustable to and from each other and having openings in the outer portions of the same, adjustable bolts to engage the slides, and levers connecting the slides and bolts.

[Claims 6 to 14 not printed in the Gazette.]

882,435. FLYING-MACHINE. THOMAS J. WHALEN, Middlebrook, Va. Filed Oct. 13, 1906. Serial No. 338,781.



1. A flying machine, comprising a car frame, a motor mechanism and lifting and propelling devices consisting of two rotary shafts each bearing at each end three equally spaced radial arms, a circumferential ring connecting the outer ends of said three arms and three relatively wide blade panels axially mounted along their middle lines on the radial arms and means for changing their plane of action in sequence as described.

2. A flying machine comprising a car frame made in triangular shape with a sharp horizontal edge at front and gradually increasing in vertical height to the rear, motor mechanism within the same, four outwardly extending arms rigidly attached to the car frame and having bearings at their outer ends and two rotating shafts arranged in said bearings in the arms and provided with paddles adjustable about radial axes.

3. A flying machine, comprising a car frame having outwardly projecting rigid arms provided at their outer ends with shaft bearings and a waved cam, rotary shafts journaled on said arms and having at their ends rigid hubs with radial spokes, and paddles hinged about the radial spokes and connected to the waved stationary cam to be turned to different planes.

4. A flying machine having an aeroplane body made as a right triangle having a flat bottom with horizontal sharp edge in front and a gradually increased vertical thickness toward the rear.

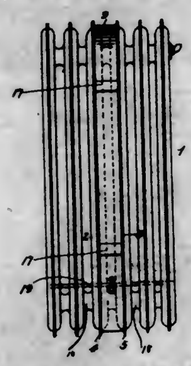
5. An aerial car having a triangular shaped body with a sharp horizontal front edge to form an aeroplane and having overhanging side chambers with glased bottoms arranged above the bottom of the car.

[Claims 6 and 7 not printed in the Gazette.]

882,436. HOT-WATER HEATER. CARRIE M. WHEELOCK, Washington, D. C., assignor to Sanitary Hot Water Radiator Co., Inc., of New Jersey. Filed Nov. 16, 1907. Serial No. 402,365.

1. The combination with a hot-water heater or radiator formed of parallel communicating sections; of a burner supported by the radiator and adapted to be removably secured between said sections.

2. The combination with a radiator formed of parallel communicating sections spaced apart; of a burner supported by the radiator and adapted to be placed in the space between any two of the sections.



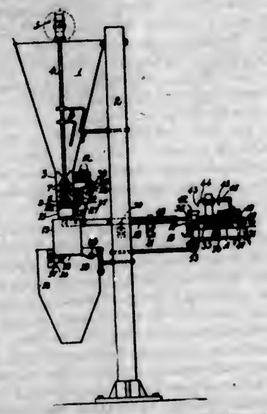
3. The combination with a radiator formed of a plurality of water-containing sections spaced apart; of a burner supported by the radiator and adapted to be introduced in the spaces between said sections and transversely of the horizontal axis of the radiator.

4. The combination with a radiator formed of a plurality of water-containing communicating sections; of a burner supported by the radiator and adapted to be introduced into any one of the spaces between the sections and at a point above the base of said sections, said burner extending transversely of the horizontal axis of the radiator.

5. The combination with a hot-water heater formed of communicating sections; of a burner supported by the radiator and adapted to be introduced between any two of said sections and a one-piece shield partially inclosing the space between the sections of the radiator.

[Claim 6 not printed in the Gazette.]

882,437. AUTOMATIC WEIGHING-MACHINE. THOMAS WHITEHORN, Coburg, Victoria, Australia. Filed Apr. 24, 1907. Serial No. 370,066.



1. An automatic machine for weighing tea, flour, and like substances, comprising a balance lever, a weighing receptacle at one end thereof, an automatically controlled hinged bottom for the receptacle, a feed hopper above said receptacle provided at its discharge end with a movable grid, a pair of hinged doors below the latter, and automatic means for closing said grid prior to the closing of the doors.

2. In an automatic machine of the class described, a balance lever, a weighing receptacle at one end thereof, an automatically controlled hinged bottom for the receptacle, a feed hopper above said receptacle and having a feeding device therein and provided with a spring-operated grid, a pair of spring-controlled hinged doors below the grid, a series of electro-magnets adapted to be automatically energised by the tilting of the balance lever for holding said grid open and allowing said hinged doors to close.

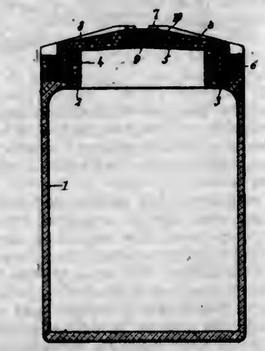
3. In a machine of the class described, a hopper having in its discharge end a grid formed in two parts, springs for closing such parts, a pair of automatically controlled electro-magnets for opening said parts, a pair of spring-operated hinged doors situated below said grid and adapted to be opened by the balance lever, a pair of electro-magnets, contacts carried by the balance lever for engagement with the electro-magnets, and a trigger coöperative with the magnets to hold open the doors.

4. In a machine of the class described, a balance lever having contacts at one end and a receptacle at the other end, a feed hopper above said receptacle, a grid in the discharge end of said hopper and formed of two parts, spring-controlled pivoted levers connected with said parts, a pair of electro-magnets automatically controlled by the contacts and the balance lever for alternately opening and closing the two parts of said grid, substantially as described.

5. In a machine of the class described, a hopper, an automatically controlled movable grid in its discharge end, a pair of hinged doors below said grid, an arm on each door, a spring-controlled vertical sliding block, a link for connecting each arm with the block, a pivoted balance lever having a bifurcated arm for raising said block, a trigger for supporting said block, a pivoted over-balance lever carrying the trigger, an armature associated with the lever, and a pair of electro-magnets automatically controlled by the over-balance lever.

[Claims 6 to 12 not printed in the Gazette.]

882,438. PRESERVING-JAR. ALFRED WILKIN, New York, N. Y. Filed May 8, 1907. Serial No. 372,593.



1. A preserving jar or vessel, comprising a body having an annular groove in its upper end, and a cap seated over said body having a threaded flange projecting into said groove, said threaded flange being externally and internally spaced from the walls of said groove whereby when the groove is filled with a sealing material it will envelop said flange both exteriorly and interiorly.

2. A preserving jar or vessel comprising a body having an annular groove in its upper end, a cap seated over said body, having a recess forming a vent-cup which communicates with said groove, and a threaded flange projecting from the cap into said groove, said threaded flange being externally and internally spaced from the walls of said groove whereby a sealing material introduced into the groove will envelop the flange at both sides.

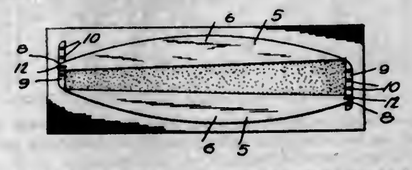
3. A preserving jar or vessel comprising a body having a groove surrounding the neck thereof, a cap seated over the neck of said body, having a recess forming a vent-cup which communicates with said groove, and a projecting portion formed on the cap passing into said groove.

4. A preserving jar or vessel, comprising a body having an annular groove in its upper end, a cap, seated over said body having a threaded flange projecting into said groove, and a sealing material filling said groove and entering the threads on said flange.

5. A preserving jar or vessel comprising a body having an annular groove in its upper end, a cap seated over said body having a recess forming a vent-cup which communicates with said groove, a flange projecting from said cap into said groove, and a sealing material substantially filling said cup and groove.

[Claim 6 not printed in the Gazette.]

882,439. FENCE-POST MOLD. JORDAN D. WILLIAMS, Indianapolis, Ind. Filed Sept. 14, 1907. Serial No. 392,831.



1. A mold comprising a pair of oppositely-disposed L-shaped members, the longitudinal edges of the arms of each member being bent laterally outward to form parallel supporting flanges, the flanges of the arms of each member being provided with alining perforations, and means for separably connecting the adjacent ends of said members together, said means passing through said perforations.

2. A mold comprising a pair of oppositely-disposed L-shaped members having arms of unequal lengths, the longitudinal edges of said arms being bent laterally outward to form supporting flanges, the flanges of the shorter arm of each member being provided with a series of alining perforations, and the flanges of the longer arms of said members having a single perforation formed in the free ends thereof, and means for separably connecting the adjacent ends of said members together, said means passing through said perforations.

3. A mold comprising a pair of oppositely-disposed L-shaped members having arms of unequal lengths, the longitudinal edges of said arms being bent laterally outward to form horizontal supporting flanges, the flanges on the longer arms of each member extending beyond the free end of the latter, each extension having a single perforation formed therethrough, the flanges on the shorter arm of each member being provided with a series of perforations adapted for interchangeable registration with the corresponding perforations in the flange extension of the opposite member, to permit said member to be adjusted towards and from each other, and pins passing through said perforations for holding said members in adjusted position.

882,440. GUIDE FOR MOLDING-MACHINES. WILLIAM L. G. WILLIAMS, Paget, Clermont, Bermuda. Filed Sept. 24, 1907. Serial No. 394,323.

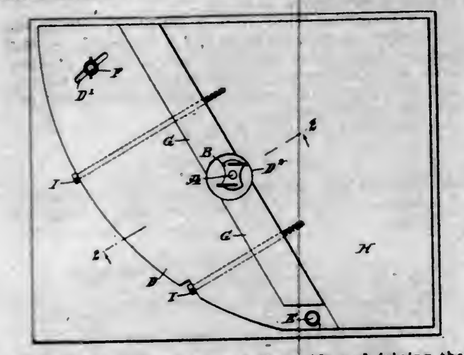
1. In a molding machine, a guide mounted to swing and having an aperture for the passage of the cutter head, and an abutment on the guide and intersecting the said aperture, said guide having an extension for supporting the wood while moving it along the guide.

2. In a molding machine, a guide having an abutment for the wood to slide against while being cut by the cutter head of the molding machine, the said guide having a removable extension for supporting the wood while moving it along the said abutment.

3. A molding machine having a revoluble cutter head, a table and a guide mounted to swing on top of the said table, the guide having an aperture for the passage of the cutter head, an abutment intersecting the said aperture, and a removable extension held on the guide and joining the same at the abutment.

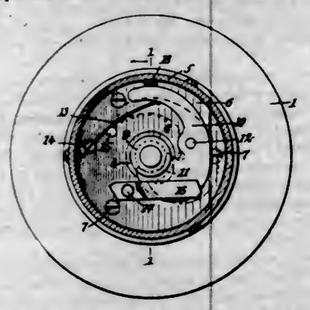
4. A molding machine having a revoluble cutter head, a

table and a guide mounted to swing on top of the said table, the guide having an aperture for the passage of the cutter head, an abutment intersecting the said aperture,



a removable extension held on the guide and joining the same at the abutment, and means for securing the guide in place on the said table.

882,441. WHEEL-HUB. ROSS L. WILSON, Salina, Kans. Filed Sept. 21, 1907. Serial No. 393,986.



1. A device of the class described, comprising a hub body adapted to be mounted upon an axle spindle, a pivoted member carried by said body and adapted to engage the spindle to hold said body in position, means for holding said member normally in engagement with the spindle, and a holding member secured to said body at a point remote from said pivoted member and extending over the same to secure said pivoted member against movement longitudinal to the spindle, said body having means for permitting the introduction of a tool whereby said member can be displaced to an inoperative position.

2. A device of the class described, comprising a hub body adapted to be mounted upon an axle spindle having an annular groove, a pawl pivotally carried by said body and adapted to engage the groove of the spindle to hold said body in position, a clip secured to said body at a point remote from said pawl and extending over said pawl to secure it against movement longitudinal to the spindle, and a spring for holding said pawl normally in engagement with the spindle, said body having means for permitting the introduction of a tool whereby said pawl can be displaced to an inoperative position.

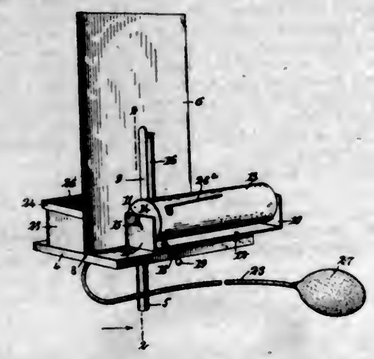
3. In a device of the class described, the combination with an axle spindle having a flange, of a hub body carrying a pivoted member adapted to engage at said flange to hold said body upon said spindle, said hub body having means for normally holding said member in engagement with said flange, and a holding member mounted upon said body at a point remote from said pivoted member and extending over the same to secure said pivoted member against movement longitudinal to said spindle.

4. A device of the class described, comprising a hub body adapted to be mounted upon an axle spindle, a pawl carried by said body and adapted to engage the spindle to hold said body in position, a spring for holding said pawl normally in engagement with the spindle, a hub band upon said body, and a cap removably mounted upon said band and covering said pawl and said spring said hub band having an opening therethrough, permitting the insertion of a tool to displace said pawl.

5. In a device of the class described, the combination, with an axle spindle having an annular groove, of a hub body carrying a pawl adapted to engage said groove to hold said body in position, said hub body having a spring for holding said pawl in engagement with said groove, a clip for holding said pawl against movement longitudinal to said spindle, a hub band, and a cap removably mounted upon said band, said band having an opening therethrough for permitting the insertion of a tool to displace said pawl.

[Claim 6 not printed in the Gazette.]

882,442. REVOLVING FLASH-LAMP. ERNEST E. ADAMS, Omaha, Nebr. Filed June 19, 1907. Serial No. 379,744.

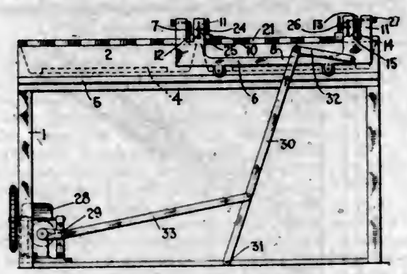


1. A device of the class described, comprising a base, a vertically slotted plate arranged perpendicular to the base, a powder receptacle on one side of the plate adjacent to the slot, a U-shaped bracket on the other side, a substantially cylindrical lamp having trunnions at its ends journaled in the bracket, said lamp being parallel with the plate and provided with a burner tube in alinement with the slot, said lamp having a radial arm projecting therefrom, a pneumatic cylinder provided with a piston connected with the arm, a shield connected with the lamp and adapted to close the slot of the plate when the burner tube is rocked into contact with the powder receptacle, and a counterpoise for returning the lamp to its original position.

2. A device of the class described, comprising a base, a vertically slotted plate arranged perpendicular to the base, a powder receptacle on one side of the plate adjacent to the slot, a U-shaped bracket on the other side, a substantially cylindrical lamp having trunnions at its ends journaled in the bracket, said lamp being parallel with the plate and provided with a burner tube in alinement with the slot, said lamp having a radial arm projecting therefrom, a pneumatic cylinder provided with a piston connected with the arm, and a shield connected with the lamp and adapted to close the slot of the plate when the burner tube is rocked into contact with the powder receptacle.

3. A device of the class described, comprising a substantially vertical slotted plate, a powder receptacle on one side of the plate, a substantially cylindrical lamp mounted for rocking movement on the other side of the plate and provided with a burner tube registering with the slot, said lamp being provided with a radial arm, means in connection with the arm for rocking the lamp in one direction to bring the burner tube into contact with the powder receptacle, and a counterpoise for returning the lamp to its original position.

882,443. APPARATUS FOR ETCHING PLATES. JACOB N. AXT, New York, N. Y., assignor to Boyce Automatic Etching Company, New York, N. Y., a Corporation of South Dakota. Filed Jan. 18, 1908. Serial No. 411,493.



1. In an etching machine, the combination with a frame, of a plurality of troughs for the acid supported thereby, guide-rails on said frame, a carriage adapted to alternate thereon, brushes supported by said carriage and adapted to extend into said troughs, means for alternating said carriage, and means for imparting a wavy motion to said brushes.

2. In an etching machine, the combination with a frame, of a plurality of troughs for the acid supported thereby, guide-rails on said frame, a carriage adapted to alternate on the same, vertically adjustable brushes supported by said carriage and adapted to extend into said troughs, means for alternating said carriage, and means for imparting a wavy motion to said brushes.

3. In an etching machine, the combination with a frame, of a plurality of troughs for the acid supported thereby, guide-rails on said frame, a carriage adapted to alternate on the same, vertically and independently adjustable brushes supported by said carriage and extending into said troughs, means for alternating said carriage, and means for imparting a wavy motion to said brushes.

4. In an etching machine, the combination with a frame, of a plurality of troughs for the acid supported thereby, guide-rails on said frame, a carriage adapted to alternate thereon, brush-holders slidably mounted upon said carriage, brushes supported by said brush-holders and extending into said troughs, means for alternating said carriage, and means for reciprocating said brush-holders on said carriage at right angles to the direction of travel of the same.

5. In an etching machine, the combination with a frame, of a plurality of troughs for the acid supported thereby, guide-rails on said frame, a carriage adapted to alternate on the same, brush-holders slidably mounted upon said carriage, vertically adjustable brushes supported by said brush-holders and extending into said troughs, means for alternating said carriage, and means for reciprocating said brush-holders on said carriage at right angles to the direction of travel of the same.

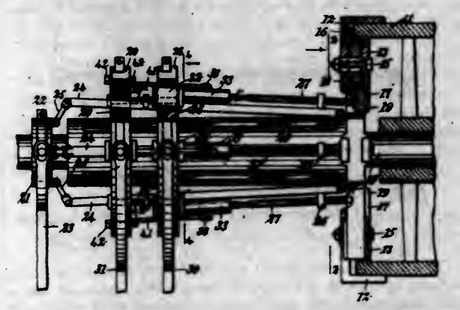
[Claims 6 to 10 not printed in the Gazette.]

882,444. FRICTION-PULLEY. HORACE H. BALLIET, Coplay, Pa. Filed Nov. 4, 1907. Serial No. 400,668.

1. The combination of a shaft, a pulley journaled on the shaft, means for frictionally securing the pulley to the shaft, including an operating mechanism therefor having a device revoluble with the shaft, and means operable during the revolution of the shaft for adjusting said device to increase or decrease the frictional engagement with the pulley.

2. The combination of a shaft, a pulley journaled on the shaft, means for frictionally securing the pulley to the shaft, an operating mechanism for said means including a screw revoluble with the shaft, and means operable during the revolution of the shaft for adjusting said screw to increase or decrease the frictional engagement with the pulley.

3. The combination of a shaft, a pulley journaled on the shaft, clamping-jaws for engaging the rim of the pulley and securing it to the shaft, means for operating said jaws including a screw revoluble with the shaft, and means operable during the revolution of the shaft for adjusting said screw.

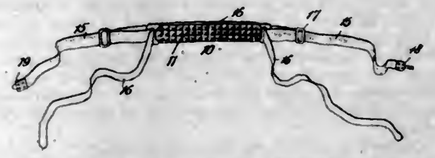


4. The combination of a shaft, a pulley journaled on the shaft, means for frictionally connecting the pulley with the shaft, an operating mechanism for said means including a screw, and means shiftable on the shaft during the rotation thereof to revolve said screw for the purpose of adjusting it.

5. The combination of a shaft, a pulley journaled on the shaft, means for frictionally connecting the pulley with the shaft, means for operating said last-named means including a screw adjustable to vary the frictional engagement between the pulley and shaft, and means slidably mounted on said shaft to revolve said screw during the rotation of the shaft for the purpose of adjusting the screw.

[Claims 6 to 15 not printed in the Gazette.]

882,445. GARMENT-RETAINING DEVICE. DAVID BASCH, New York, N. Y. Filed Sept. 16, 1907. Serial No. 392,983.



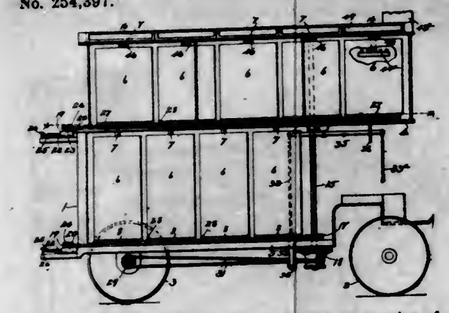
1. A device of the character described comprising a friction member, an elastic belt forming a continuation thereof, and a non-elastic band for securing said friction member and belt firmly in position upon the wearer.

2. A device of the character described comprising a friction member having a number of inwardly facing projections, elastic straps secured to opposite ends of the friction member and having devices by which they may be secured together at their ends, and a non-elastic belt also connected with said friction member.

3. A device of the character described comprising a friction member provided at its end with transverse slots, elastic straps secured at opposite ends to said friction member, and a non-elastic belt threaded through said slots, the central portion of said belt being arranged to the rear of said friction member.

4. A device of the character described comprising a friction member having a plurality of inwardly facing projections, and provided at its opposite ends with transverse slots, adjustable elastic straps looped through the said slots, and provided at their outer ends with devices by which they may be secured together, and a non-elastic tape threaded through the said slots, the middle portion of the tape passing to the rear of said friction member, and the ends being left free, substantially as set forth.

882,446. ADVERTISING-VEHICLE. FRANK X. BIMMERLE, Cincinnati, Ohio. Filed Apr. 7, 1905. Serial No. 254,397.



1. An advertising device provided with two series of rotatable cylinders, one of said series being arranged above the other series and each series connected by a cable, and means for simultaneously operating both of said series, substantially as shown and described.

2. An advertising device comprising a vehicle provided with upper and lower platforms, a series of display cylinders mounted on each platform, means for operatively connecting each series, and means for operating both of said series simultaneously, substantially as shown and described.

3. An advertising device comprising a wheeled vehicle provided with upper and lower platforms each provided with a series of rotatable cylinders, a pulley secured to each cylinder, a cable running over said pulleys and connecting each series, a drive shaft and means for operating said drive shaft, substantially as shown and described.

4. An advertising device comprising a vehicle, provided with upper and lower platforms, a series of display cylinders mounted on each platform, each series operatively connected together and a drive shaft for operating both of said series simultaneously, and means for operating said drive shaft from the axle of one of the wheels, substantially as shown and described.

5. An advertising device comprising a vehicle provided with upper and lower platforms, a single series of display cylinders mounted on the upper platform, a double series of display cylinders on the lower platform, means for operatively connecting the cylinders of the single series, means for operatively connecting the cylinders of the double series and means for simultaneously operating said single and double series, substantially as shown and described.

[Claims 6 to 16 not printed in the Gazette.]

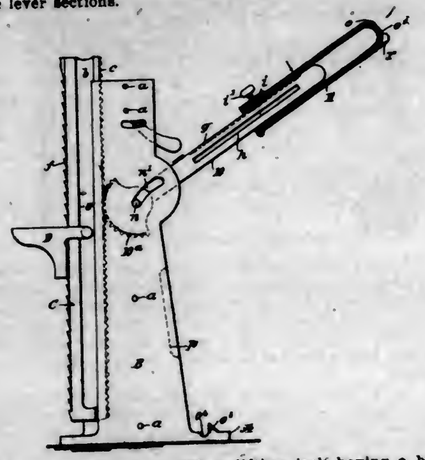
882,447. LEVER FOR LIFTING-JACKS. GLEN R. BOOTH, Chana, Ill. Filed Oct. 23, 1907. Serial No. 398,721.

1. The combination with a lifting jack, of a lever formed in two sections, one section being solid and the other section hollow but closed at one end, said end having a notch therein.

2. The combination with a lifting jack, of a lever formed in two sections, one section that engages the jack being solid, and the other section hollow but closed at one end, said end having an annular notch therein, and an elastic lining in said notch.

3. The combination with a lifting jack, of a lever formed in two sections, one solid the other hollow, the solid section having a longitudinal channel in one side that is converged in its bottom, and the other or hollow section a keeper pin that engages the channel and is shaped on its end to conform therewith, the pin by its contact with the channel preventing rattling between the lever sections.

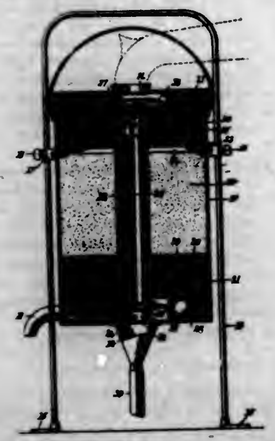
4. A telescoping lever formed in two sections, one section solid and the other section hollow, the hollow section having an end wall, parallel side walls, and transversely curved upper and lower walls, the other section conforming in contour to that of the hollow section's internal surface and wherein it slides, the solid lever section having a longitudinal channel in one side, and the other section an insertible keeper pin that projects into the channel and contacts with its bottom to prevent rattling between the lever sections.



5. The combination with a lifting jack having a base and a vertically slotted standard, of an extensible lever pivoted by one end upon said standard and adapted for downward folding movement, and means for locking the depressed end of the lever upon the base of the jack.

[Claims 6 to 10 not printed in the Gazette.]

882,448. FILTER. ISHAM BOYD, Eminence, Ky. Filed June 20, 1907. Serial No. 379,910.



1. A filter having a centrally-disposed tube, a filtering material surrounding said tube, a main discharge outlet and a waste outlet below the filtering material, an inlet above said filtering material, a baffle plate adjacent the upper end of the tube and adapted to prevent the passage of water therethrough, a valve for controlling the waste outlet, and means connecting the baffle plate and the valve whereby the valve is closed by the momentum of the fluid impinging upon the baffle plate during the admission thereof.

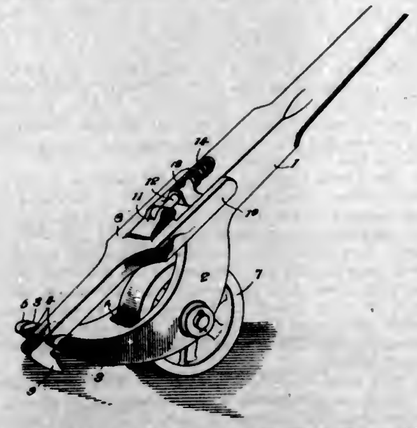
2. A filter, comprising a container adapted to contain a filtering material and having an inlet opening above the filtering material and a main discharge and a waste outlet both below the same, a tube extending through said filtering material, a valve for controlling the waste outlet, and means operatively connected to said valve for preventing the passage of fluid through said tube and for closing said valve during the admission of fluid through the inlet opening.

3. A filter, comprising a container adapted to contain a filtering material and having an inlet opening above the filtering material and a main discharge and a waste outlet below the same, a tube extending through said filtering material, a valve for controlling the waste outlet, means operatively connected to said valve for preventing the passage of fluid through said tube and for closing said valve during the admission of fluid through the inlet opening, and means within said container and below said filtering material for normally holding said valve open.

4. A filter, comprising a container, an annular casing within the upper end thereof and having means adapted to engage with the walls of the container for supporting said casing and provided with an inwardly-directed flange or projection at its lower end, a plurality of dome-shaped filtering screens within said casing and supported upon said flange or projection and detachable from said casing, a cover for said container and casing and having an inlet opening above said screens, and a filtering material within said container below said screens.

5. A filter, comprising a container, an annular casing within the upper end thereof and having means adapted to engage with the walls of the container for supporting said casing and provided with an inwardly-directed flange or projection at its lower end, a plurality of dome-shaped filtering screens within said casing and supported upon said flange or projection and detachable from said casing, a cover for said container and casing and having an inlet opening above said screens, a filtering material within said container below said screens, said container being provided with an outlet below said filtering material, a valve for said outlet, and a baffle plate connected to said valve and disposed within the dome of said screens for automatically closing said valve during the admission of liquid through the inlet opening of the cover.

882,449. SPIKE-PULLER. RICHARD A. BRADSHAW, Winters, Tex. Filed June 4, 1907. Serial No. 377,219.



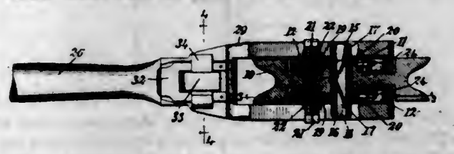
1. In a device of the character described, the combination of a lever, a head at one end of the lever provided with a claw, a guard-arm coöperating with the claw, and a stem connecting the guard arm and head, the said stem being pivotally connected to one of the members and having a yielding connection with the opposite member.

2. In a device of the character described, the combination of a lever, a head at one end of the lever provided with a claw, a guard arm coöperating with the claw, a stem connecting the guard arm and head and pivotally connected to one of the members, a keeper upon the opposite member loosely receiving the stem, and a spring surrounding the stem and coöperating with the keeper to hold the guard arm in an operative position.

3. In a device of the character described, the combination of a lever, a head at one end of the lever provided with a claw, and a guard arm coöperating with the claw and having a yielding connection with the head, one end of the guard arm being bifurcated and the arms of the bifurcation fitting upon opposite sides of the head.

4. In a device of the character described, the combination of a lever, a head at one end of the lever provided with a claw, a guard arm coöperating with the claw and having an end thereof bifurcated to receive the head, and a stem connecting the head and claw, the said stem having a pivotal connection with one of the members and a yielding connection with the opposite member.

882,450. TROLLEY. FRANK E. BRAZEAL, Monson, Mass., assignor of one-half to Herman S. Mowry, North Adams, Mass. Filed June 15, 1907. Serial No. 379,127.



1. In a trolley, a trolley-wheel, lubricating reservoirs arranged at opposite sides of the wheel, contact pieces within said reservoirs, and means for adjusting said contact pieces exteriorly of the reservoirs.

2. In a trolley, a trolley-wheel having lubricating reservoirs stationarily supported at the opposite sides thereof, contact pieces carried within said reservoirs, and set-screws threaded through said reservoirs for adjusting said contact pieces.

3. In a trolley, a trolley-wheel, an axle upon which the trolley-wheel is revolubly mounted, lubricating reservoirs attached to the opposite ends of said axle, a trolley-pole having a fork, and a yoke for holding said reservoirs against relative movement and detachably connecting the wheel with the fork.

4. In a trolley, a trolley-wheel, lubricating reservoirs arranged at the opposite sides of the wheel, contact pieces within the reservoirs, set-screws for adjusting said contact pieces, a trolley-pole having a fork, and a yoke detachably connecting the wheel with the fork, engaging said reservoirs and said set-screws.

5. In a trolley, a trolley-pole having a fork provided with rounded outer ends, a yoke seated on the fork conforming to and engaging the rounded outer ends of the fork at both the upper and under sides thereof, and means for detachably connecting the yoke to the inner end of the fork.

[Claims 6 to 8 not printed in the Gazette.]

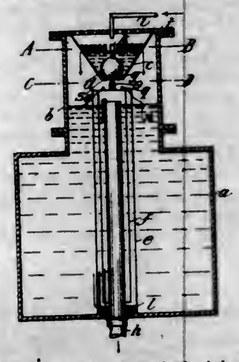
882,451. AUTOMATIC FLUSHING APPARATUS. ROBERT BROCKE, Aachen, Germany. Filed Oct. 12, 1907. Serial No. 397,200.

1. An automatic flushing apparatus comprising a tank, a siphon-tube vertically fixed in said tank, a siphon-bell coacting with said tube to form a siphon, a float combined with said siphon-bell, a filling chamber arranged above said siphon and having apertures in the upper part and an opening in the lower part thereof, a float-ball coacting as a valve with said opening, a projection on said siphon-bell for lifting said float-ball and means for admitting water to said filling chamber.

2. An automatic flushing apparatus comprising a tank, a fixed siphon-tube arranged in said tank, a siphon-bell coacting with said tube to form a siphon, an air-bell fixed around said siphon-bell, a filling chamber arranged above said siphon and having apertures in the upper part and an opening in the lower part thereof, a float-ball coacting as a valve with said opening, a projection on said siphon-bell for lifting said float-ball and means for admitting water to said filling chamber.

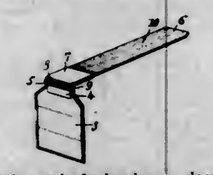
3. An automatic flushing apparatus comprising a tank,

a head detachably mounted on said tank and provided with perforations in its upper part, a conical filling vessel mounted in said head and provided with water-outlet-apertures in its upper part and with an open bottom forming a valve-seat, a spherical float-valve arranged in said filling vessel and coacting with said valve-seat, a water-supply



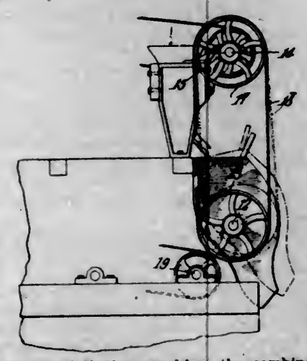
pipe to said filling vessel, a vertical siphon-tube fixed in said tank and open at its upper end, a siphon-bell coacting with said siphon-tube, a float combined with said siphon-tube, and a projection on said siphon-bell for lifting said float-valve.

882,452. TAG. SAMPSON H. BROWN, Lockhart, Tex. Filed May 6, 1907. Serial No. 372,242.



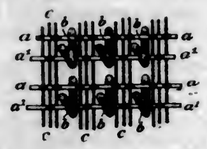
A tag comprising a body having a sleeve, an attaching member consisting of a single strip and presenting an adhesive surface, said attaching member being adapted to be inserted between a bolt-board and the roll thereupon at one side of the board, a strip bent upon itself and having the ends secured at the opposite sides of said attaching member near one extremity thereof whereby is formed a sleeve at the end of said member, and a shackle loosely mounted in said sleeves and connecting said body and said member.

882,453. COTTON-SEED-LINTING MACHINE. JOSEPH DAVIDSON, Atlanta, Ga., assignor of one-half to Walter D. Nash, Atlanta, Ga. Filed June 18, 1906. Serial No. 322,258.



In a cotton seed linting machine, the combination with a movable breast arranged to be lifted by accumulations of cotton therein, of a float shaft supported by the breast, pulleys on said float shaft, a revoluble shaft having stationary bearings, and driven independently of the linting machine connection and, also, provided with pulleys, and a pair of belts connecting the float shaft to said revoluble shaft, said belts being slackened to lessen or stop the driving movement of the float shafts in proportion to the extent to which the breast is raised, the decreasing driving speed of the float shaft being in inverse proportion to the quantity of cotton accumulated in the breast.

882,454. METHOD FOR FORMING WOVEN PILE FABRICS. JAMES K. DALKRANIAN, New York, N. Y., assignor, by mesne assignments, to United States Persian Carpet Company, New York, N. Y., a Corporation of New York. Filed Mar. 20, 1905, Serial No. 250,980. Renewed June 11, 1906. Serial No. 321,236.



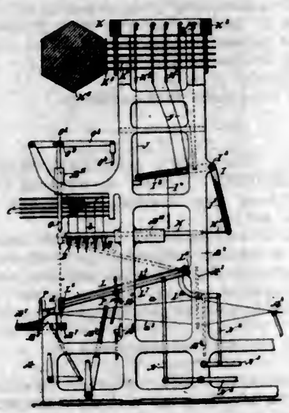
1. The herein-described method for weaving tufted pile fabrics having Persian knots, consisting in passing a pile warp thread between a pair of normally parallel ground warp threads, then crossing the said ground warp threads, then looping the pile warp thread around the crossing of the ground warp threads in the direction of the length of the ground warp threads, then returning the ground warp threads to parallel position, inserting a weft between the ground warp threads, and beating up the weft and pile warp thread.

2. The herein-described method for weaving tufted pile fabrics, consisting in passing a pile warp thread between a pair of normally parallel ground warp threads, then crossing the said ground warp threads, then looping the pile warp thread around the crossing of the ground warp threads in the direction of the length of the ground warp threads, and with the ends of the pile warp thread extending upwardly on opposite sides of the crossing, returning the ground warp threads to parallel position, inserting a weft between the ground warp threads, and beating up the weft and pile warp thread.

3. The herein-described method for weaving tufted pile fabrics having Persian knots, consisting in passing a pile warp thread between a pair of normally parallel ground warp threads, at an angle thereto, then crossing the ground warp threads at one side of the said pile warp thread, then passing the loose end of the pile warp thread around the crossing of the ground warp threads in the direction of the length of the ground warp threads and up between the ground warp threads at the other side of the crossing, and then returning the ground warp threads to parallel position.

4. The herein-described method for weaving a tufted pile fabric having Persian knots, consisting in passing a pile warp thread between a pair of normally parallel ground warp threads, at an angle thereto, then crossing the ground warp threads at one side of the said pile warp thread, then passing the loose end of the pile warp thread around the crossing of the ground warp threads in the direction of the length of the ground warp threads and up between the ground warp threads at the other side of the crossing, then returning the ground warp threads to parallel position, then inserting a weft between the ground warp threads in front of the loose end of the pile warp thread, and finally beating in the weft thread and the pile warp thread.

882,455. YARN-SELECTING MECHANISM FOR TUFTED-FABRIC LOOMS. JAMES K. DALKRANIAN, New York, N. Y., assignor, by mesne assignments, to United States Persian Carpet Company, New York, N. Y., a Corporation of New York. Filed Apr. 19, 1905. Serial No. 256,386.



1. A yarn-selecting mechanism provided with a shiftable yarn tube-support, and a plurality of tuft yarn tubes detachably supported on the said adjustable support.

2. A yarn-selecting mechanism provided with a plurality of shiftable tuft yarn tube-supports, each having means for detachably supporting a plurality of tuft yarn tubes.

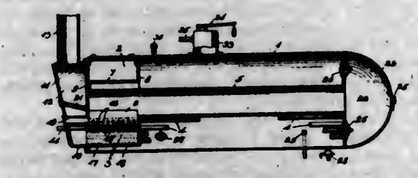
3. A yarn-selecting mechanism provided with a plurality of movable tuft yarn tube-supports arranged side by side, and a plurality of tuft yarn tubes on each support.

4. A yarn-selecting mechanism provided with a plurality of movable tuft yarn tube-supports arranged side by side, and a plurality of tuft yarn tubes detachably held on each support and spaced from each other in the direction of the line of movement of the supports.

5. A yarn-selecting mechanism provided with a plurality of movable tuft yarn tube-supports arranged side by side, a plurality of tuft yarn tubes detachably held on each support and spaced from each other in the direction of the line of movement of the supports, and means for shifting the said supports independent one of the other.

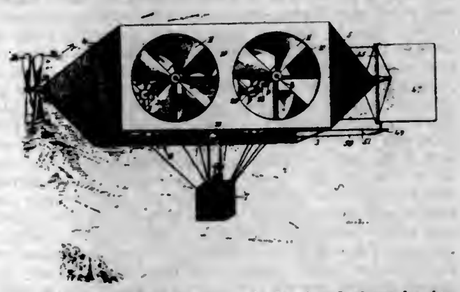
[Claims 6 to 29 not printed in the Gazette.]

882,456. COMBINED BOILER AND FURNACE. WILLIAM J. ELLIS, Andrews, N. C. Filed Aug. 8, 1907. Serial No. 387,675.



A combined boiler and furnace, comprising a boiler having an open topped firebox at one end and a smoke box arranged at each end, a combustion chamber extending centrally through said boiler and communicating at its opposite ends with said smoke boxes, and having an opening in its bottom communicating with said firebox, a water jacket surrounding the upper portion of said chamber within the firebox, said boiler having a fuel supply opening arranged above the jacket portion of said combustion chamber, tubes extending through said boiler and connecting said smoke boxes, and a plurality of air supply passages through the front smoke box into the fire box.

882,457. FLYING-MACHINE. EMIL R. ERNST, Warrenpoint, N. J. Filed Apr. 30, 1907. Serial No. 371,058.



1. A flying machine having a body closed above having side walls and open below, in combination with mechanism for drawing air into the interior of said body between said side walls, whereby an upper pressure is developed sustaining said machine.

2. A flying machine having a body closed above and open below, and having openings in the side wall thereof, and fans at said openings adapted to draw air into the interior of said body, and generating an upward pressure sustaining said body.

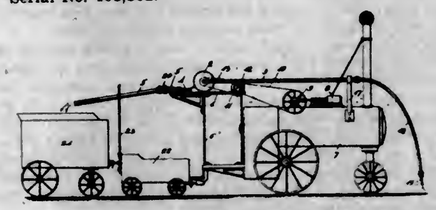
3. A flying machine having a body open below and having side walls with openings therein, fans disposed at said openings and having blades of a character adapted to force the incoming air toward the center of said body, said body having a covering receiving an upward pressure from the incoming air to sustain said body.

4. A flying machine having a covered body open below and having oppositely disposed openings in the side walls thereof, transverse shafts opposite said openings, fans carried by said shafts and adapted to draw air into said body through said openings, whereby an upward pressure is developed under said covering, and means for driving said shafts.

5. A flying machine having a body closed above and having openings in the side walls thereof, a pair of shafts respectively opposite said openings, fans carried by said shafts and adapted to draw air in through said openings whereby an upward pressure is developed, a motor comprising a reciprocating cross head, and connecting rods connecting said cross head with said shafts and driving said shafts in opposite directions.

[Claims 6 and 7 not printed in the Gazette.]

882,458. COTTON-PICKER. CHARLES H. FEARY and DANIEL H. FEARY, Guthrie, Okla. Filed Nov. 25, 1907. Serial No. 403,802.

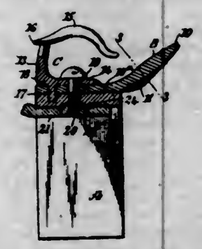


1. In combination, a traction engine having a cab, a plurality of fan blowers mounted on said cab, suction pipes from said blowers passing forwardly over said traction engine, a brace for the forward end of said pipes, flexible hose fastened on the forward end of said pipes, discharge pipes leading from said blower fans, said dis-

charge pipes converging and merging into a large rearwardly extending pipe.

2. In combination, a traction engine having a supporting brace mounted forwardly thereon, a cab mounted to the rear of said traction engine, a tender attached rearwardly of said cab, and a receiving-wagon attached to the rear of said tender, a broad foundation plate mounted on said cab, a plurality of blowers mounted on said foundation plate, each blower consisting of an outer casing bearing a journal in which is mounted for rotation a shaft to actuate a fan contained in said casing, the fans of two of said blowers being mounted on a single shaft, suction pipes leading from approximately the center of a side of said casing forwardly over said traction engine and said brace-support, flexible hose communicating with the forward end of said suction pipes, a nozzle on the free end of said hose, exhaust pipes leading tangentially from the lower side of said casings and converging and merging into a larger exhaust pipe, a flexible coupling between the ends of said larger exhaust pipe, a brace on the rear end of said tender to support said larger exhaust pipe, whereby the cotton will be directed into said wagon, and means on said traction engine whereby said traction engine may be caused to move between the rows of cotton or not, at will, while the fans are being operated.

882,459. HARNESS-FITTING. WALLACE H. FERRIS, Sault Ste. Marie, Mich. Filed Apr. 3, 1907. Serial No. 366,146.



1. In a harness attachment, a tree, a saddle carried by the tree, a check hook located on the saddle, an attaching plate adapted to be located below the arch of the tree, which attaching plate is provided with an opening therein having tapering walls, a nut adapted to enter said opening in the attaching plate and to enter a corresponding recess in the tree, and a screw adapted to the nut, passed through the check hook and saddle, and a spur from the hook passed through the saddle and into the said tree.

2. In a harness fitting, a tree shaped to conform to the part of the horse to which it is applied, a saddle carried by the tree, a check hook having a foot portion located on the saddle and provided with a lug extending from its bottom near its forward end, the said lug extending through an aperture in the saddle and entering said tree, an attaching plate located below the arch of the tree, and means for clamping the saddle and the tree between the foot of the check hook and the attaching plate.

3. In a harness attachment, a tree, a saddle carried by the tree, a check hook located on the saddle, an attaching plate located at the arch of the tree and engaging the under face thereof, the said plate being provided with an opening, and having an upturned lip at its forward end, a nut adapted to fit in the opening in the attaching plate, and a screw passing through openings in the check hook, saddle and tree and engaging the said nut, the nut when the bolt is tightened being flush at its under face with the under face of the attaching plate.

4. In a harness attachment, a tree, a saddle carried by the tree, a check hook having a foot portion located on the saddle, an attaching plate located below the arch of the tree and engaging the under face thereof, the said plate having an opening therein, a nut fitting in said opening, the upper end of the nut projecting above the upper face of the attaching plate and entering the said tree, and a screw passing through the foot of the check hook, saddle and tree and engaging said nut.

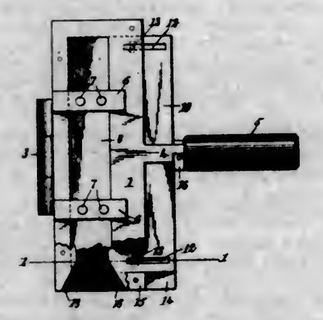
5. In a harness fitting, a tree shaped to conform to the part of the horse to which it is applied, a saddle carried by the tree, a check hook having a foot portion located on the saddle, an attaching plate engaging the under face of the arch of the tree, the said plate projecting at its forward end beyond the tree, and means for clamping the saddle and the tree between the foot of the check hook and the attaching plate.

[Claim 6 not printed in the Gazette.]

882,460. PROCESS OF MANUFACTURING AMMONIUM CHLORID. ANDREW G. FRENCH, Grey Lynn, near Auckland, New Zealand. Filed Aug. 28, 1905. Serial No. 276,164.

A process of manufacturing ammonium chlorid which consists in drenching carbonized coal containing sulfur and nitrogen with a strong brine and then burning said drenched carbonized coal by subjecting it to a current of air containing at least 10 per cent. of steam.

882,461. CASTING-TOOL. HOWARD GODDARD, Canton, Ohio. Filed May 7, 1907. Serial No. 372,382.



1. In a casting tool, the combination of two mold sections hingedly connected together, a platen carried by one of said sections adjustable to and from the other, and a laterally adjustable side for the other section.

2. In a casting tool, the combination of two mold sections hingedly connected together having operating handles, clamping means carried by one of said sections movable independently with respect thereto, and a side for the other section having a lateral adjustment independent of the movement of said section.

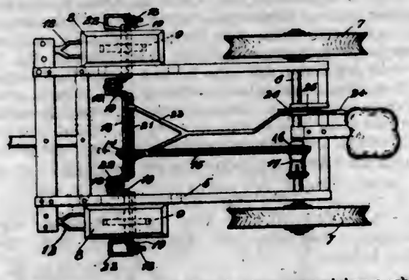
3. In a casting tool, the combination of two mold sections hingedly connected together, one of said sections being provided with a flange surrounding one end and one side thereof, a laterally movable side carried by the other section and adjustable to and from said flange providing a casting space therebetween, and clamping means carried by said other mold section independent of the pivotal movement of said sections.

4. In a casting tool, the combination of two mold sections of extended width hingedly connected together, one of said sections having an opening therein, a keeper bridging said opening, a platen mounted within said opening, and an adjusting screw threaded through said keeper for forcing said platen in the direction of the other mold section.

5. In a casting tool, the combination of two mold sections, one of which is provided with an opening, a keeper bridging said opening, a platen within said opening, and means carried by the keeper for forcing said platen in the direction of the other mold section.

[Claims 6 to 10 not printed in the Gazette.]

882,462. MARKER ATTACHMENT FOR PLANTERS. GEORGE W. GOLDSBORO, Tulsa, Okla. Filed Sept. 3, 1907. Serial No. 391,251.



1. A marker-attachment for planters comprising a wheel-driven crank-shaft, a marker loosely hung on the crank, and means for tilting the marker to prevent its contact with the ground.

2. A marker attachment for planters comprising a wheel-driven crank-shaft, a normally erect marker loosely hung on the crank, and a bar slidable into the path of the marker for holding it out of contact with the ground.

3. A marker attachment for planters comprising a wheel-driven crank-shaft, and markers loosely hung on the cranks, said cranks being set so that the markers will operate alternately.

882,463. EDUCATIONAL APPLIANCE. MARY G. GRIGGS, Atlanta, Ga. Filed June 8, 1907. Serial No. 378,005.



1. A chart for teaching painting provided with a design in colors to be copied and portions of said design in an incompleted state, symbolistic means for indicating in what direction the colors should be applied when copying the design, and means for indicating the mixing of certain colors to obtain the color to be used in copying the design.

2. A chart for teaching painting provided with a design, and a symbolistic means in connection with said design for indicating in what direction colors should be applied when copying the design.

3. A chart for teaching painting provided with a design, symbolic means in connection with said design for indicating in what direction colors should be applied when copying the design, and means for indicating what colors should be mixed to obtain a color similar to a color of the design when copying the latter.

4. A chart for teaching painting provided with a design in colors to be copied and fragmentary portions of said design in an incompleted state, symbolistic means in connection with said fragmentary portions of the design for indicating in what direction colors should be applied when copying the design, and means for indicating what colors are to be mixed to obtain a color similar to a color of the design when copying the latter.

882,464. PUZZLE DEVICE. RICHARD HALDENWANG, Jr., New York, N. Y. Filed Aug. 5, 1907. Serial No. 387,140.

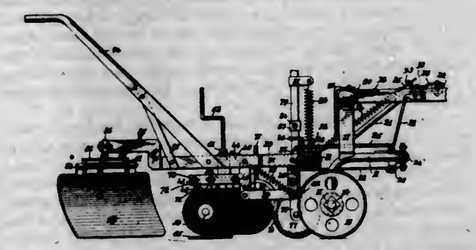


1. In a puzzle device, a portable inclosure provided with a transparent top and an elevated support beneath the top having a body portion of a figure produced thereon, the said support having slots at portions of the body of the figure where the limbs are to be located, and dismembered parts of said figure movable upon the support, which dismembered parts are provided with flap members adapted to enter the said slots.

2. The combination with a box having a transparent top and an elevated false bottom provided with the representation of a portion of a figure thereto, and slots on said portion of the figure where limbs are to be connected, the dismembered parts of the figure being slidable upon said false bottom and having downwardly extending flaps at one end integral therewith and adapted to enter said slots.

3. The combination of a box having a transparent top and an elevated false bottom provided with the representation of a portion of a figure fixed thereto, and slots at various points on said figure, of dismembered parts adapted to match the fixed portion of the figure, which dismembered parts are provided with flaps at their joints or inner ends extending down at a right angle thereto, and adapted to enter said slots the edges of which flaps are curved.

882,465. BEET-TOPPING MACHINE. JOHN N. HANNA and DAVID K. WAUGH, Ordway, Colo. Filed May 16, 1907. Serial No. 373,954.



1. In a beet topping machine a wheeled truck, a beet topping mechanism, and a double parallel motion connecting said mechanism and said truck and permitting said mechanism to be moved laterally and in a vertical plane.

2. In a beet topping machine a truck mounted on

wheels, a frame normally occupying a position intermediate of said wheels but adjacent to one of said wheels, a beet topping mechanism mounted in said frame, a parallel motion connecting said frame with said truck and permitting said frame to be swung laterally, and a spring serving to hold said frame in said normal position.

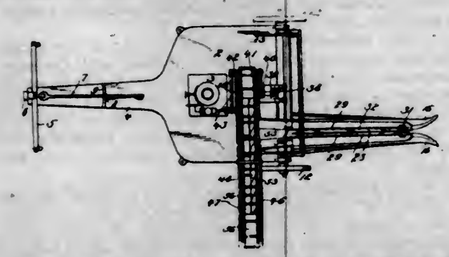
3. In a beet topping machine a wheel-supported truck, a frame connected to said truck and adapted to move laterally but in parallel relation with said truck, and a beet topping mechanism mounted in said frame and adapted to move vertically but in parallel relation with said frame.

4. In a beet topping machine a wheel-supporting main frame, a secondary frame mounted in said main frame and adapted to move vertically but in parallel relation with said main frame, a series of parallel disks supporting said secondary frame and mounted to rotate in the direction in which said machine is adapted to travel, and a transverse knife supported on said secondary frame at the rear of said disks.

5. In a beet topping machine a wheel-supported main frame, a secondary frame mounted to swing vertically but in parallel relation with said main frame, a series of hangers carried by said secondary frame, a disk carried by each of said hangers and adapted to rotate in the direction in which said machine is adapted to travel, said disks being positioned successively one in advance of another, and a knife supported on said secondary frame to the rear of and approximately parallel with said disks.

[Claims 6 to 17 not printed in the Gazette.]

882,466. CORN-HUSKING MACHINE. EDWARD B. HARMAN and LEVERETT TAYLOR, Fullerton, Nebr., assignors of one-third to George D. Meiklejohn, Fullerton, Nebr. Filed Feb. 13, 1907. Serial No. 357,192.



1. In a machine of the class described, husking mechanism involving a pair of rollers, one of which is spirally ribbed and is provided with annularly-arranged teeth, the other roller comprising a series of longitudinally-alined endwise-separated sections, the teeth of the first mentioned roller being revoluble in the spaces between the sections of said second mentioned roller.

2. In a machine of the class described, husking mechanism involving a pair of rollers one of which is spirally ribbed and is provided with annularly-arranged teeth, the other roller comprising a series of longitudinally-alined endwise-separated sections, the teeth of the first mentioned roller being revoluble in the spaces between the sections of the second mentioned roller, and spring arms rotatively supporting said sections at the opposite ends therof.

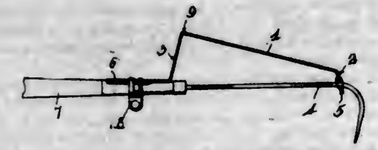
3. In a machine of the class described, husking mechanism involving a pair of rollers, one of which consists of independent, longitudinally-alined sections, spring arms supported by and pendent from the frame-work of the machine, said spring arms rotatively supporting the respective sections at the opposite ends thereof, and means connected with said spring arms for adjusting the tension thereof.

4. In a machine of the class described, husking mechanism involving two rollers, one of which is spirally ribbed, and is provided with annularly-arranged teeth, and the other of which consists of a plurality of longitudinally-alined endwise-separated sections, the teeth of the first mentioned roller being revoluble in the spaces between the ends of said sections, and spring arms rotatively supporting said several sections.

5. In a machine of the class described, a trough-like member, endless belts supported by said trough-like member, cross bars connecting the belts, husking mechanism extending longitudinally of the belts between the runs thereof and below the sides of said trough-like members, said husking mechanism including two rollers, one of which is composed of independent bodily movable sections, and said cross bars serving to move the ears of corn along said rollers, and spring arms for supporting said sections.

[Claims 6 and 7 not printed in the Gazette.]

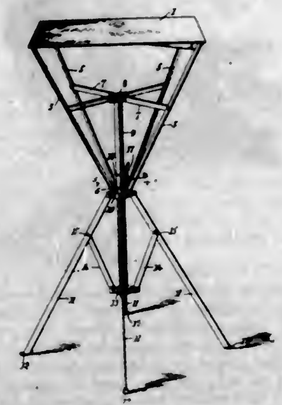
882,467. ATTACHMENT FOR HAND-RAKES. ORTON HUBBELL, Petaluma, Cal. Filed Oct. 21, 1907. Serial No. 398,470.



1. In a device of the character described, a plate of sheet metal having a flange upon a side thereof, a tongue upon said flange for attachment to a rake handle, and means for securing the opposing edge of said plate upon the rake, substantially as described.

2. In a device of the class described, a plate provided upon one edge with a relatively narrow flange, a wider flange upon the opposing edge thereof, a tongue extending laterally from said wide flange and adapted for attachment to the handle of a rake. and means for securing the narrow flange to the rake head.

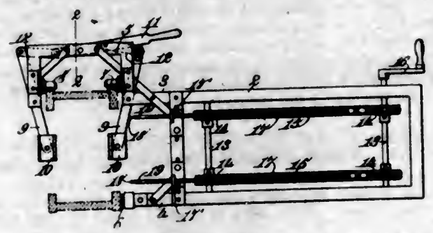
882,468. CAMP-STOOL. ERNEST HUEBNER and HERMANN KLOSS, New York, N. Y. Filed May 10, 1907. Serial No. 372,907.



1. In a camp stool, the combination of a central bar, stationary collars secured to the ends of said bar, a head having a sliding engagement on said bar intermediate its ends, seat supports pivotally attached to said sliding head, spreaders pivoted to said seat supports and one of said collars, legs pivotally attached to said head, spreaders pivotally connected to the other of said collars and said legs at a point adapted to enable said legs to be inverted and folded against said seat supports, with the free end of said legs extending in the same direction as the free end of said seat supports, and a latch adapted to hold said head against movement on the central bar.

2. In a camp stool, the combination with a central bar, of stationary collars secured to the ends of said bar, a head having a sliding engagement on said bar intermediate its ends, seat supports pivotally attached to said sliding head, spreaders pivoted to said seat supports and one of said collars, legs pivotally attached to said head, and spreaders pivotally connected to the other of said collars, and said legs at a point adapted to enable said legs to be inverted and folded against said seat supports, with the free end of said legs extending in the same direction as the free end of said seat supports.

882,469. BALING-PRESS ATTACHMENT. JAMES H. JACKSON, Denison, Tex. Filed Feb. 20, 1907, Serial No. 358,384. Renewed Oct. 22, 1907. Serial No. 398,615.



1. In an attachment of the class described, a bodily movable frame, clamping means connected with said frame. a needle operatively associated with the frame, and means for actuating the needle to move the same through a bale.

2. In an attachment of the class described, a bodily movable frame having anti-friction rollers adapted to travel against the exterior surface of the baling box of a baling press, clamping means for fixing the frame in position, a needle operatively associated with said frame, and means for actuating the needle to drive the same through a bale in said box.

3. In an attachment of the class described, a frame, a pair of coöperative wheels, an endless band passing around said wheels, and a needle connected with said band.

4. In an attachment of the class described, a frame, clamping means associated with the frame, a plurality of shafts supported by the frame, rotary sprocket wheels carried by the shafts, sprocket chains passing around the respective sprocket wheels, and needles connected with the respective chains.

5. In an attachment of the class described, a frame, a yoke carried by said frame, levers supported by the yoke and provided with jaws, means for operating the levers to move the jaws toward and from each other, a band carried by the frame, and a needle connected with said band.

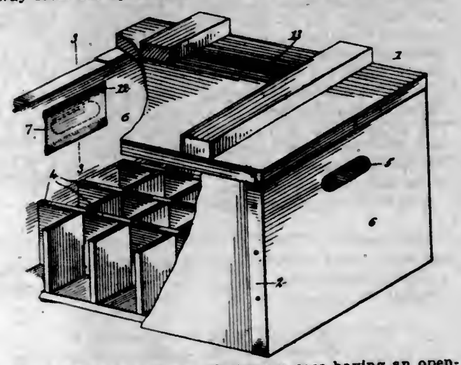
[Claims 6 to 8 not printed in the Gazette.]

882,470. BEER-CASE CURTAIN. JOHN M. JETTES and FREDERICK DREWS, South Omaha, Nebr. Filed July 3, 1907. Serial No. 382,072.

1. As an article of manufacture, a case having an opening in one of its ends, the upper edge of which opening is adapted to be used as a handle, an opaque flexible curtain for the opening secured at one edge to the inner side of the box above the opening, a piece of flat metal secured to the upper edge of the curtain, and a rod secured to its lower edge.

2. As an article of manufacture, a case having an opening in one of its ends, the upper edge of which opening is adapted to be used as a handle, an opaque curtain of flexible material for the opening secured to the inside of the box above the said opening, and a weight at the bottom of the curtain which keeps the curtain normally in place but which does not prevent its swinging when the fingers of the operator are inserted in the opening.

3. As an article of manufacture, a case having an opening in one of its ends, the upper edge of said opening being adapted to be used as a handle, and a flexible hanging curtain for the opening secured to the inside of the box above the opening, said curtain having members which act as stiffeners to hold the curtain normally in position but which do not prevent the curtain from being readily swung away from the opening by the fingers of the operator.

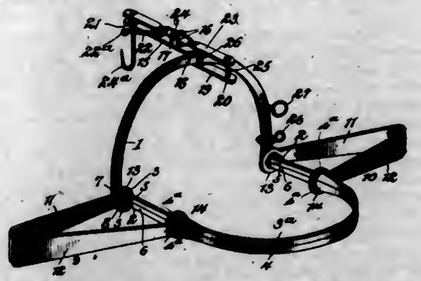


4. As an article of manufacture, a case having an opening in one of its ends, the upper edge of said opening being adapted to be used as a handle, a flexible curtain for the opening secured at its top to the inside of the box above the opening, said curtain having pieces of metal at its top and bottom which serve to hold the curtain normally in position but which do not prevent its being swung away from the opening by the fingers of the user.

5. As an article of manufacture, a case having an opening in one of its ends, the upper edge of said opening being adapted to be used as a handle, and a flexible curtain for the opening secured to the box above the opening.

[Claim 6 not printed in the Gazette.]

882,471. ANIMAL-TRAP. MARTIN L. LARSON, Hawick, Minn. Filed Oct. 26, 1907. Serial No. 399,280.



1. An animal trap comprising a base of inverted U-shape, clamping jaws pivoted to said base adjacent to the ends thereof, a platform fixed on the base adjacent to the middle thereof and extending at an angle to the base, a tripping lever fulcrumed at an intermediate point of its length on said platform and having bait-holding means on one portion thereof and means on its other portion for holding one of the jaws, and a spring for closing the jaws.

2. An animal trap consisting of a stationary base having a pair of oppositely movable clamping jaws pivoted thereto, a platform having a rigid connection with the said base member, said platform having its ends provided with an opening and a slot, a tripping lever pivotally mounted on said platform and having its ends provided with a bait hook and a pendent pin adapted to be projected through said slot and said opening respectively, the said pendent pin serving to retain one of said jaws in an open position, and the said hook serving to release said pin from engagement with said jaw, and a spring mechanism for returning said jaw to its closed position.

3. An animal trap consisting of a base having a pair of clamping jaws pivoted thereto, a tripping mechanism for

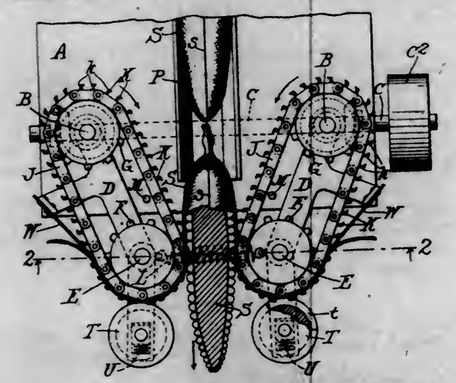
normally retaining said jaws in an open position and means for locking said tripping mechanism in its jaw engaging position.

4. An animal trap consisting of a base provided with suspending and separate fastening means, a pair of clamping jaws pivoted to said base, tripping mechanism for normally retaining said jaws in an open position, and a latch for locking said tripping mechanism in its jaw engaging position.

5. An animal trap consisting of a base having a pair of oppositely movable jaws pivoted thereto, a platform carried by said base, a tripping lever for normally retaining said jaws in an open position, and a pivoted latch carried by said platform and serving to retain said tripping lever in its jaw engaging position.

[Claim 6 not printed in the Gazette.]

882,472. GREEN-CORN-HUSKING MACHINE. WILLIAM J. LATCHFORD, Chicago, Ill. Filed Mar. 16, 1907. Serial No. 362,605.



1. A green corn husking machine comprising a pair of endless belts opposed to each other and provided with teeth projecting into the intervals between their proximate plies, said teeth being angularly hooked with their points extending forward in the direction of travel of the belts; means by which such belts are carried and driven, longitudinally with respect to the position of the ears to be husked, in the same direction and at substantially the same speed at their proximate plies, and means for supporting and guiding the ears into the path of the teeth as the belts travel.

2. A green corn husking machine comprising a pair of opposed endless belts provided with projecting teeth which are angularly hooked with their points extending forward in the direction of travel of the belts; means by which such belts are carried so that their proximate plies converge towards the forward end of their path; means for driving said proximate plies in the same direction and at substantially the same speed, and means for supporting and guiding the ears into the path of the teeth as the belts travel.

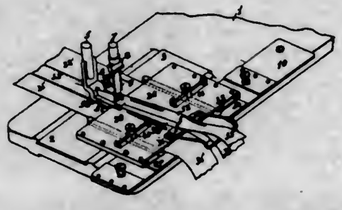
3. A green corn husking machine comprising a pair of endless link belts opposed to each other and having their links provided with barbs projecting into the interval between their paths; sprocket wheels by which such belts are driven and carried; yielding means connecting the bearings of the respective sprocket wheels at the forward end of the path of their proximate plies, and a support and guide for the ears of corn to be husked located between said plies back of the point of nearest approach.

4. A green corn husking machine comprising two pairs of endless link belts, the belts of each pair being parallel, the corresponding belts of the two pairs being opposed to each other; sprocket wheels by which such belts are carried, such opposed belts being mounted with their proximate plies converging toward the forward end of their path; means for driving their proximate plies in the same direction and at substantially the same speed; means yieldingly connecting their forward sprocket wheels, the belts having barbs projecting into the intervals between their proximate plies, and a support and guide for the ears of corn located in such interval.

5. A green corn husking machine comprising a table for supporting the ears of corn to be husked; two parallel vertical shafts extending through the table; means for rotating said shafts in opposite directions; horizontal brackets pivoted on said shafts respectively and extending therefrom convergingly past the margin of the table; a spring connecting their proximate ends and stops on the table limiting their approach; shafts journaled in their proximate ends parallel with the first-mentioned shafts respectively; sprocket wheels on all said shafts and endless link belts about the sprocket wheels connecting the two shafts in each bracket, the links of said belts being provided with barbs projecting into the interval between their proximate plies for engaging the husks with the ears of corn which may be lodged on the table there-between.

[Claims 6 to 8 not printed in the Gazette.]

882,473. STRIP-GUIDE FOR SEWING-MACHINES. ALEXANDER LAUBSCHER, Bridgeport, Conn., assignor to The Singer Manufacturing Company, a Corporation of New Jersey. Filed June 27, 1907. Serial No. 381,113.



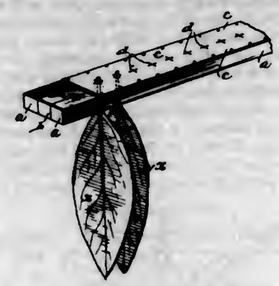
1. In a strip-guide for sewing machines, a throat-plate, the upper surfaces of which are arranged in different horizontal planes, a presser-foot having oppositely arranged members and provided with needle-openings, and a central strip-guide having an arched portion extending in between said needle-openings, in combination with oppositely arranged adjustable strip-guides provided with adjustable edge-guides for the purpose specified, substantially as described.

2. In a strip-guide for sewing machines, a throat-plate, a presser-foot, and a central strip-guide having flanged portions arranged on opposite sides of an arched portion, the delivery end of said arched portion extending in between the needle openings in said presser-foot, in combination with oppositely arranged complemental strip-guides capable of adjustment in directions transverse to each other and provided with edge-guides capable of adjustment in directions transverse to the line of the seam formation.

3. In a strip-guide for sewing machines, the following instrumentalities in combination: a presser-foot, a throat-plate, a central strip-guide having flanged portions arranged on opposite sides of an arched portion, oppositely arranged complemental strip-guides mounted capable of independent adjustment in directions transverse to each other, oppositely arranged complemental edge-guides capable of adjustment in directions transverse to the line of the seam formation, and oppositely arranged complemental fold-guide adjusting plates adjustably mounted in the base plate, for the purpose specified.

882,474. TOBACCO-HANGER. HENRY M. LOTT, Havana, Fla. Filed Aug. 10, 1907. Serial No. 388,012.

The improved tobacco hanger composed of a frame formed of parallel bars *a*, *a*, spaced apart and blocks inserted between them and serving to connect and space them, and a plate of rubber secured on one face of said bars and spanning the space between them, and provided with slits and elastic teeth which are arranged along the middle



of the plate and opposite the space between the bars as described.

882,475. COAL-AUGER. MATTHEW MARTIN, Gilmore, Md. Filed June 19, 1907. Serial No. 379,696.



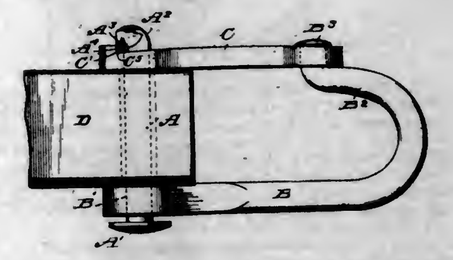
1. A coal auger comprising a ring having one of its edges provided with a plurality of teeth, the other edge of the ring being externally screw threaded, and provided with a shoulder between the screw threaded portion and the ring, a tubular holder for the ring, said holder being internally screw threaded at one end, said ring being threaded into the threaded end of the holder, means engaging the opposite end of the holder for rotating the cutter, and means within the holder for breaking the core formed by the bit, said means comprising a plate detachably connected with the inner surface of the holder, one of the corners of said plate being turned outwardly at an angle to the plate and having its edges formed into cutting edges for the purpose set forth.

2. A coal auger comprising a ring having one of its edges provided with a plurality of teeth, the other edge of the ring being externally screw threaded and provided with a shoulder between the screw threaded portion and the ring, a tubular holder for the ring, said holder engaging the threaded end of said ring, means engaging the opposite end of the holder for rotating the cutter, and means within the holder for breaking the core formed by the bit, said means comprising a plate detachably connected with the inner surface of the holder, one of the corners of said plate being turned outwardly at an angle to the plate and having its edges formed into cutting edges for the purpose set forth.

3. A coal auger comprising a ring having one of its edges provided with a plurality of teeth, a tubular holder detachably connected with the other edge of the ring, means engaging the holder for rotating the cutter, and means within the holder for breaking the core formed by the bit, said means comprising a plate detachably connected with the inner surface of the holder, one of the corners of said plate being turned outwardly at an angle to the plate and having its edges formed into cutting edges for the purpose set forth.

4. A coal auger, comprising a ring having one of its edges provided with a plurality of teeth, a tubular holder for the ring, means connected with the holder for rotating the cutter, and means within the holder for breaking the core formed by the bit, said means comprising a plate connected with the inner surface of the holder, one of the corners of said plate being turned outwardly at an angle to the plate.

882,476. CLEVIS. LEWIS K. MCCLELLAN, Billings, Mont. Filed Aug. 3, 1907. Serial No. 386,962.



1. The clevis herein described consisting of the main bar having an upturned end and provided at the extremity thereof with a pivot stud and having at its opposite end an opening for a bolt, a bolt passed through said opening and having a head at one end and having at its other or point end a lateral wing whose under side is undercut and a latch pivoted at one end on the stud of the main clevis bar whereby it may be swung laterally and having near its swinging end an opening for the bolt, such opening having a lateral wing at one side conforming to the wing of the bolt and having at the side of the opening opposite said wing a shoulder for engagement by the wing of the bolt, the said wing of the bolt being undercut at its lower end and the outer face of the swinging bar adjacent to the shoulder thereof being depressed to coincide with the undercut end of the wing of the bolt, substantially as and for the purpose set forth.

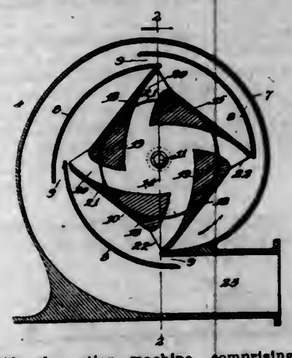
2. A clevis comprising a main bar, a latch bar having a swinging connection with the main bar, and a bolt pivoting in the main bar and interlocking with the latch bar, substantially as set forth.

3. The combination in a clevis of a bolt having a lateral wing whose inner end is undercut and a swinging latch bar having an opening for the bolt and provided at one side of the opening with a lateral wing corresponding to that of the bolt and having on the opposite side of the opening from its said wing a shoulder for operation by the wing of the bolt, the outer face of the latch bar adjacent to the said shoulder being depressed to coincide with the undercut end of the bolt wing, substantially as set forth.

4. The combination with a bolt having a lateral wing, of a latch bar having an opening for the said bolt and having at one side of the opening a wing or extension coinciding with the wing of the bolt and having at the other side of the opening from its said wing or extension a shoulder for abutment by the wing of the bolt, substantially as set forth.

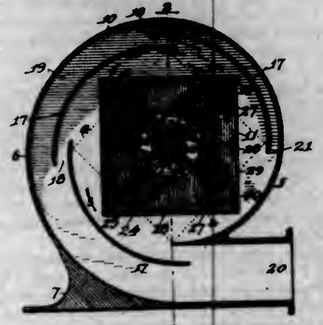
5. A clevis comprising a main bar, a latch bar pivoted at one end to the main bar and having at its swinging end a bolt hole provided with a lateral wing, a latch bar having on the opposite side of its bolt hole from said wing a shoulder and a bolt having its point end provided with a lateral wing corresponding to the wing of the bolt hole in the latch bar and arranged to be interlocked with the shoulder of the latch bar, substantially as set forth.

882,477. CENTRIFUGAL SUCTION-MACHINE. CHRISTIAN NEUMANN, St. Louis, Mo., assignor to Natural Power Company, St. Louis, Mo., a Corporation. Filed Jan. 30, 1905. Serial No. 243,352.



A centrifugal suction machine, comprising an outer casing provided with an inlet in one of its walls, a revolving member, a disk having a conical hub forming the foundation of the revolving member, castings secured to the disk forming air passages, extending from the conical hub to the exterior of the revolving member whereby a suction is created by the centrifugal action of the revolving member, substantially as specified.

882,478. PRESSURE-BLOWER. CHRISTIAN NEUMANN, St. Louis, Mo., assignor to Natural Power Company, St. Louis, Mo. Filed July 31, 1905. Serial No. 271,911.



1. A pressure blower comprising a rectangular revolving-member, a housing, a hub forming part of the revolving member, partitions formed integral with the hub, and extending to the ends of the revolving member four air-passages formed in the revolving-member by said partitions and leading from the center to each corner, and each provided with inlets for the admission of air, the outer surface of the revolving-member forming corners of perfect right angles, substantially as specified.

2. A device of the class described comprising a housing provided with air inlets and an air outlet, a revolving-member rectangular in form revolubly mounted within said housing, a shaft supporting said revolving-member, a hub formed in the revolving-member by which it is secured to the shaft and at which point openings are formed in the walls of the revolving-member, partitions formed integral with the hub, and extending to the ends of the revolving-member and air-passages formed by said partitions connecting the air inlets and discharging the air into the housing during the revolution through discharge openings formed in the outer surface of the revolving-member, substantially as specified.

3. A device of the class described comprising a rectangular revolving member, a housing, the rectangular revolving member composed of a hub, a plurality of partitions extending radially from the hub and formed rectangular with the plurality of partitions forming passages through which the air is delivered under pressure, the sides of said revolving member provided with openings for the admission of air into the passages around the hub, the outer ends of the revolving member provided with openings through which the air is discharged from the passages, rings formed on the sides of the revolving member and grooves formed in the sides of the casing in which the rings project for the purpose of steadying the revolving member while in revolution, substantially as specified.

882,479. SHOE-LACE FASTENER. GEORGE H. NICHOLLS, Galveston, Tex. Filed Aug. 16, 1907. Serial No. 388,800.



1. The combination with a boot or shoe and its tongue, of a stud secured to said tongue and having a transverse opening in its upper portion, and a clamp adapted to pass over the head of the stud and below the top of the same, substantially as described.

2. The combination with a boot or shoe and its tongue of a stud secured to the upper portion of the tongue and having a transverse opening, a device in the nature of a clamp, the same being adapted to pass over the head of the stud and below the top of the same, and a shoe-lace passed through the opening in the stud below the clamp and repassed through the said opening above the clamp, substantially as described.

3. The improved shoe-lace fastener consisting of a stud adapted to be secured to the tongue of a boot or shoe, the same having a shank provided with a transverse opening in its upper portion, and a device in the nature of a clamp which is adapted to pass over said head, substantially as set forth.

4. The improved shoe-lace fastener consisting of a stud having a head provided with a transverse opening, and a device in the nature of a clamp which is hinged at one side to the stud head and adapted to swing down over the same for securing a shoe-lace in the manner described.

5. The improved shoe-lace fastener consisting of a stud having its head provided with a transverse opening, and a lace-clamping device hinged to one side of the head and adapted to close down over the same, the shank being cut away below the head to provide space for the shoe-lace, substantially as described.

[Claim 6 not printed in the Gazette.]

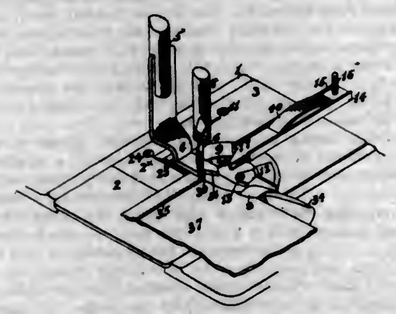
882,480. BINDING ATTACHMENT FOR SEWING-MACHINES. ALBERT RONTKE, Bridgeport, Conn., assignor to The Singer Manufacturing Company, a Corporation of New Jersey. Filed Mar. 18, 1907. Serial No. 363,064.

1. In a binding attachment for sewing machines, a needle-bar, an eye pointed needle carried by said needle-bar, a binder-head, said binder-head normally occupying a position substantially in line with the seam formation, and means for adjusting said binder-head into operative relationship with the transversely arranged edge of the material next to be bound.

2. In a binding attachment for sewing machines, a needle-bar, an eye pointed needle carried by said needle-bar, a binder-head, said binder-head normally occupying a position substantially in line with the seam formation, and means, including an adjustable slide, for adjusting said binder-head into operative relationship with the transversely arranged edge of the material next to be bound.

3. In a binding attachment for sewing machines, a needle-bar carrying an eye pointed needle, a throat-plate, a feed-dog, a binder-head, and means for adjusting said binder-head into operative relationship with the transversely arranged edge of material next to be bound.

4. In a binding attachment for sewing machines, the following instrumentalities in combination: a throat-plate, a presser-foot, a feed-dog, a needle-bar carrying an eye pointed needle, an adjustable plate, a binder-head mounted on said plate, and means for adjusting said binder-head into operative relationship with the transversely arranged edge of material next to be bound, said throat-plate being provided with an opening for the feed-dog and having a raised portion immediately surrounding said feed-dog.



5. In a binding attachment for sewing machines, a needle-bar carrying an eye pointed needle, and a binder-head mounted capable of adjustment about the vertical line of needle actuation a distance sufficient to permit the binder-head to present the binding strip to the transversely arranged edges of the material, in combination with folding-blades adjustably controlled to co-act, at times, with the delivery ends of the binder-head scroll-guides to form folds in the binding strip.

[Claims 6 and 7 not printed in the Gazette.]

882,481. PROCESS FOR THE EXTRACTION OF GLUE FROM MINERAL-DRESSED OR CHROME-TANNED LEATHER. ALBERT R. WEISS, Jr., Hilchenbach, Germany. Filed Aug. 28, 1907. Serial No. 390,540.

1. A process for extracting glue from mineral dressed and chrome tanned leather, consisting in treating the leather with combinations of the light metals showing alkaline qualities and then boiling it down for the purpose of isolating the glue.

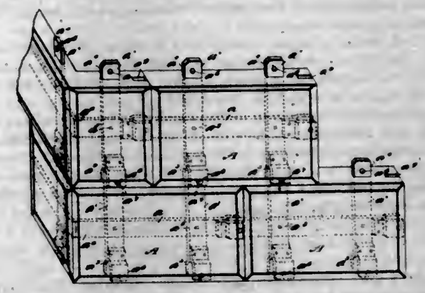
2. A process for extracting glue from mineral dressed and chrome tanned leather, consisting in treating the leather with the hydroxids of the light metals and then boiling it down for the purpose of isolating the glue.

3. A process for extracting glue from mineral dressed and chrome tanned leather consisting in boiling leather with the alkaline salts of the light metals at temperatures up to 125° C. till the glue is isolated.

4. A process for extracting glue from mineral dressed and chrome tanned leather, consisting in treating the leather with hydroxid of the light metals and then boiling it with alkaline salts of the light metals at temperatures up to 125° C. till the glue is isolated.

882,482. CONSTRUCTION OF BUILDINGS. CHARLES H. WILSON, Red Oak, Iowa, assignor of one-half to John Gilligan, Falls City, Nebr. Filed Aug. 17, 1907. Serial No. 389,045.

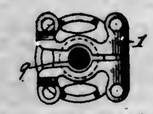
1. A structure comprising a filling of plastic material, and a facing of molded plastic blocks, each of said blocks containing a reinforce comprising connected horizontal and vertical bars, each of said bars having at one end a pair of ears, and at the other projecting beyond the block and adapted to be received between the ears of a bar in an adjacent block, said bars being arranged with the ears flush with the face of the block, the block being recessed between the ears, said ears and the projecting ends being provided with alined openings, a pin traversing the openings for securing the parts together, whereby to form a plurality of continuous vertical reinforces and a plurality of horizontal reinforces, said horizontal reinforces being bent at the corners of the structure, sundry of said blocks in each course being provided with vertical grooves in their ends for the purpose set forth, and a plurality of ties for connecting the facing with the filling, said ties comprising each a plate having one of its ends split, the portions of the plate on each side of the split being bent in opposite directions, the other end of the tie being bent at a right angle to the remainder thereof and overlapping the horizontal reinforce.



2. A structure comprising a filling of plastic material, and a facing of molded plastic blocks, each of said blocks containing a reinforce comprising connected horizontal and vertical bars, each of said bars having at one end a pair of ears, and at the other projecting beyond the block and adapted to be received between the ears of a bar in an adjacent block, said bars being arranged with the ears flush with the face of the block, the block being recessed between the ears, said ears and the projecting ends being provided with alined openings, a pin traversing the openings for securing the parts together, whereby to form a plurality of continuous vertical reinforces and a plurality of horizontal reinforces, said horizontal reinforces being bent at the corners of the structure, sundry of said blocks in each course being provided with vertical grooves in their ends for the purpose set forth, and a plurality of ties for connecting the facing with the filling.

3. A structure comprising a filling of plastic material, and a facing of molded plastic blocks, each of said blocks containing a reinforce comprising connected horizontal and vertical bars, each of said bars having at one end a pair of ears and at the other projecting beyond the block and adapted to be received between the ears of the bar of an adjacent block, the block being recessed between the ears said ears and projecting ends being provided with alined openings, pins traversing the openings for securing the parts together, and means for tying the facing to the filling.

882,483. GARMENT-FASTENER. FRANK E. WILSON, Cleveland, Ohio. Filed Dec. 22, 1905. Serial No. 292,964.



1. A socket member comprising a front end portion having a flat face, means whereby said end portion may be secured with its flat face against the material, clamping members united at one end in said front end portion, and an independent foot portion upon the other end of each of said clamping members for inclining the same outward from the plane of the material to which the device is applied.

2. A socket member, comprising a long front end portion having a flat face, means whereby said end portion may be secured with its flat face against the material, yielding members having free ends, and an independent foot portion upon the free end of each of said yielding

members and upset from the body of the socket member whereby said yielding members and said front end portion are adapted when applied to be at an inclination to the plane of the material.

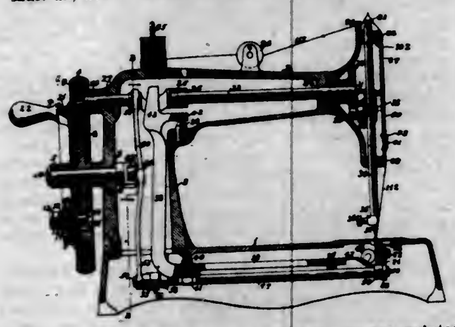
3. A socket member, comprising a long front end portion having a flat face, means whereby said end portion may be secured with its flat face against the material, yielding clamping members having free ends, and a fastening loop upon the free end of each of said clamping members and upset from the body of the socket member whereby when it is applied the clamping member thereof will be at an inclination to the plane of the material to which the socket member is applied.

4. A socket member, comprising a single piece of material having a beveled face at the front edge and upon the side face which is applied to the cloth, and a pair of clamping members rigid therewith.

5. A socket member, comprising a single piece of material and consisting of a long front end portion having a beveled face extending from one end to the other and tapering off to a thin edge at the front, and a pair of clamping members united in said long front end portion and extending to the rear.

[Claims 6 to 8 not printed in the Gazette.]

882,484. SEWING-MACHINE. EDWARD B. ALLEN, Bridgeport, Conn., assignor to The Singer Manufacturing Company, a Corporation of New Jersey. Filed Mar. 12, 1907. Serial No. 362,071.



1. In a sewing machine, a needle-bar, an eye pointed needle carried by said bar, a shuttle-carrier, a shuttle, a bobbin carried by said shuttle, a feed-bar provided with a feed-dog, a two-part rotary shaft comprising a needle-carrying bar actuating shaft and a cam shaft, the latter having formed integral with it a feed-cam and a shuttle-actuating crank, and connections for operatively connecting said two-part shaft with the needle-bar, shuttle-carrier and feed-bar, the connection for operatively connecting said shaft with the shuttle-carrier being bifurcated to engage said shuttle-actuating crank, the engaging walls of said bifurcated portion consisting of plane surfaces formed integral with the lever.

2. In a sewing machine, a needle-bar, a shuttle-carrier, a shuttle, a feed-bar provided with a feed-dog, a two-part rotary shaft comprising a needle-carrying bar actuating shaft and a cam shaft, the latter having formed integral with it a feed-cam and a shuttle-actuating crank, said crank being provided with an enlarged annular portion having a convex periphery formed at an angle to the axis of said cam shaft, and connections for operatively connecting said two-part shaft with the needle-bar, shuttle-carrier and feed-bar, the connection for connecting said shaft with said shuttle-carrier being bifurcated to engage the convex periphery of said crank, the engaging walls of said bifurcated portion consisting of plane surfaces.

3. In a sewing machine, a needle-bar, an eye pointed needle carried by said bar, a shuttle-carrier, a shuttle, a bobbin carried by said shuttle, a feed-bar provided with a feed-dog, a two-part rotary shaft comprising a needle-bar-actuating shaft and a cam shaft, the latter having formed integral with it a feed-cam and a shuttle-actuating crank, said needle-bar-actuating shaft and cam-shaft each being journaled in a single bearing formed in the overhanging arm and arm standard, respectively, and connections for operatively connecting said two-part shaft with the needle-bar, shuttle-carrier and feed-bar, including a shuttle-actuating lever bifurcated to coact with said shuttle-actuating crank.

4. In a sewing machine, a needle-bar, an eye pointed needle carried by said bar, a shuttle carrier, a shuttle, a feed-bar provided with a feed-dog, a feed-bar lever, bearing lugs on the bed-plate, said feed-bar and feed-bar lever being operatively connected by a circular bearing and held in vertical alinement with each other by said bearing lugs, a two-part rotary shaft, and connections for operatively connecting said two-part shaft with the needle-carrying bar, shuttle carrier and feed bar.

5. In a sewing machine, a needle-bar, an eye pointed needle carried by said bar, a shuttle-carrier, a shuttle, a bobbin carried by said shuttle, a feed-bar provided with a feed-dog and a two-part rotary shaft comprising a needle-bar-actuating shaft and a cam shaft, the latter having formed integral with it a feed-cam and a shuttle-actuating crank, a driving pulley mounted independently of said two-part shaft, and connections for operatively connecting said two-part shaft with the needle-carrying bar, shuttle-carrier and feed-bar, in combination with means for varying the amplitude of the feed movements of said feed-bar including a stitch-regulating lever mounted to turn on the same axis as said driving pulley.

[Claim 6 not printed in the Gazette.]

882,485. CHECK-FORM. WILLIAM H. BERTRAM, Springfield, Mo. Filed July 25, 1907. Serial No. 385,588.



The improved blank check form, comprising two duplicate stubs, each having a block or square formed by ten parallel vertical lines, horizontal rows of numerals from one to zero arranged in the spaces thus provided and suitably designated for expressing value in cents and dollars from unity upward, and a series of rows of identifying numerals arranged horizontally between the rows of numerals designated for indicating value, and a body portion A having a suitable space designated for direction of payment of a certain sum, and also a block or square having horizontal rows of identifying numerals similar to those on the two duplicate stubs, the spaces between each two rows of identifying numerals being blank for entry of figures or numerals for expressing the amount specified in the body of the instrument, as described.

882,486. SUSPENDER-BUCKLE. WILLIAM BLOOMBERG, New York, N. Y. Filed June 28, 1906. Serial No. 323,893.



1. A suspender buckle comprising a front composed of a finger piece and a lever; a back pivoted thereto and provided with a transversely deflected loop-retainer adapted to clamp a web between its deflected edge and the lever.

2. A suspender buckle comprising a front composed of a finger piece and a lever; a back pivoted thereto and provided with a bottom bar and a transversely deflected loop-retainer adapted to clamp the web between its deflected edge and the lever.

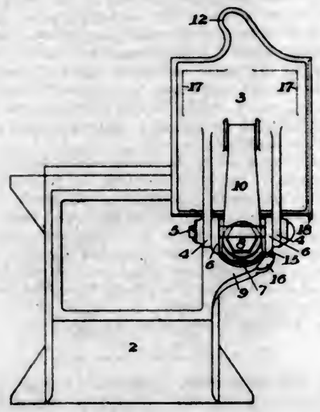
3. A suspender buckle comprising a front composed of a finger piece and a lever; a back pivoted thereto and provided with a bottom bar and a transversely deflected, toothed loop-retainer adapted to clamp a web between its deflected, toothed edge and the lever.

4. A suspender buckle comprising a front composed of a finger piece and a lever; a back pivoted thereto having a bottom bar and a transversely deflected, toothed loop-retainer, the upper part of the back being inclined rearwardly at the pivots; said retainer being adapted to clamp a web between its edge and the lever.

5. A suspender buckle comprising a front composed of a finger piece and a lever; a back composed of a bottom bar, a transversely deflected, toothed loop-retainer and pivots carried by a rearwardly inclined portion of the back; said retainer being adapted to clamp a web between its deflected toothed edge and the lever.

[Claims 6 to 8 not printed in the Gazette.]

882,487. JOURNAL-BOX. ALBERT O. BUCKIUS, Jr., Chicago, Ill., assignor to The National Malleable Castings Company, Cleveland, Ohio, a Corporation of Ohio. Filed Nov. 16, 1906. Serial No. 343,706.



1. A journal-box, a hinge piece, and an edgewise movable lid pivotally connected to the hinge-piece, said hinge-piece being pivoted to turn in the direction of edgewise motion of the lid.

2. A journal-box, a hinge piece, an edgewise movable lid pivotally connected to the hinge-piece, said hinge-piece being pivoted to turn in the direction of edgewise motion of the lid, and a spring which bears upon the lid.

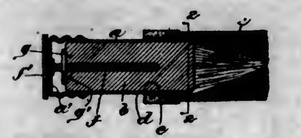
3. A journal-box, a hinge piece, an edgewise movable lid pivotally connected to the hinge-piece, said hinge-piece being pivoted to turn in the direction of edgewise motion of the lid, and a spring which bears upon the lid, said spring being attached to the hinge-piece.

4. A journal-box, a hinge piece, an edgewise movable lid pivotally connected to the hinge-piece, a pivot-bolt on which said hinge-piece is pivoted to turn in the direction of edgewise motion of the lid, and is held by the pivot-bolt, of edgewise motion of the lid, and a spring which bears upon the lid and is held by the pivot-bolt.

5. A journal-box, a hinge piece, an edgewise movable lid pivotally connected to the hinge-piece, said hinge-piece being pivoted to turn in the direction of edgewise motion of the lid, and a stop by which the pivotal motion of the lid on the hinge-piece is limited.

[Claims 6 to 12 not printed in the Gazette.]

882,488. SHAVING APPLIANCE. EDWIN D. CHAPLIN, Boston, Mass., assignor to Willard E. Robinson, Malden, Mass. Filed Feb. 2, 1907. Serial No. 355,378.



1. A shaving appliance comprising a hollow handle open at one end to receive a stick of soap, a screw journaled in the closed end of said handle and projecting into the interior thereof, said screw being adapted to enter the soap stick, means for rotating the screw, a flat disk working on said screw and having one face provided with means to engage the end of said soap stick to prevent relative rotation thereof, whereby rotation of the screw will cause said disk to feed the soap stick forward, and a brush contiguous to the open end of said handle.

2. A shaving appliance comprising a hollow handle open at one end to receive a stick of soap, a screw journaled in the closed end of said handle and projecting into the interior thereof, an operating handle on said screw, a disk working on said screw and having its under face provided with pins adapted to engage the end of said soap stick to prevent relative rotation thereof, and a brush contiguous to the open end of said handle.

882,489. PROCESS FOR MAKING LEATHER-DRESSING FROM SAPPED OR EXHAUSTED TANNING LIQUORS. GEORGE W. CHILDS, New York, N. Y. Filed May 16, 1906. Serial No. 317,141.

1. The process of treating sapped or exhausted organic tan liquors and adapting them for impregnating leather, which consists in neutralizing mineral acid impurities therein, by adding an alkali adapted to form a precipitate; separating the precipitate and concentrating the resultant liquid to a specific gravity of from 1.05 to 1.3.

2. The process of treating sapped or exhausted organic tan liquors, and adapting them for impregnating leather, which consists in neutralizing mineral acid impurities therein, by adding alkali, and concentrating the resultant liquid to a specific gravity of from 1.05 to 1.3.

3. The process of treating sapped or exhausted organic tan liquors and adapting them for impregnating leather, which consists in precipitating sulfuric acid therein, in combination with a barium derivative, by adding the latter and concentrating the resultant liquid to a specific gravity of from 1.05 to 1.3.

882,490. PROCESS OF MAKING LIQUID LEATHER-DRESSING FROM TANNING LIQUORS. GEORGE W. CHILDS, New York, N. Y. Filed Sept. 24, 1907. Serial No. 394,303.

1. The process of making leather dressing which consists in mixing waste tanning liquor with active tanning material and concentrating the mixture until it is from 1.05 to 1.3 specific gravity.

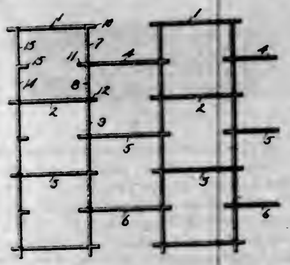
2. The process of making leather dressing from tanning liquors, which consists in mixing waste tanning liquor with active tanning liquor and concentrating the mixture until it is of from 1.05 to 1.3 specific gravity.

882,491. EXPANDED METAL AND METHOD OF PRODUCING THE SAME. NORRIS E. CLARK, Plainville, Conn. Filed Dec. 11, 1907. Serial No. 406,079.

1. An expanded metal fabric consisting of connected bent strands forming tension members having offsets and short straight beams forming anchors in staggered arrangement.

2. An expanded metal fabric consisted of connected strands forming tension members and short beams forming anchors in staggered arrangement, the ends of the beams extending beyond the tension members.

3. An expanded metal fabric consisting of staggered series of beam members short strands connecting the beam members and offsets at the points of connection.

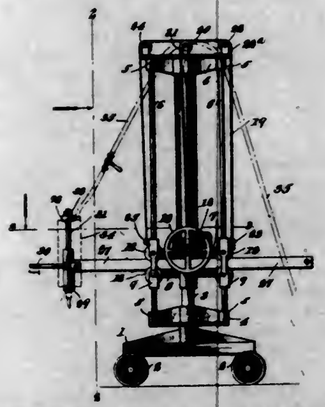


4. An expanded metal fabric consisting of staggered series of beam members and short strands connecting the beam members, the strands being connected to the beam members at points short distances from the ends of the beam members.

5. An expanded metal fabric consisting of parallel series of short straight beams and strands with offsets connecting the beams in staggered relation.

[Claims 6 to 15 not printed in the Gazette.]

882,492. POWER-HAMMER FRAME. LEONARD J. CLOSSEY, Montpelier, Vt. Filed Oct. 29, 1907. Serial No. 399,630.



1. A power hammer frame comprising a base, a vertical shaft arranged centrally thereon, cross bars rotatably mounted on the shaft at its top and bottom, rods connecting the corresponding free ends of the cross bars, an intermediate cross bar having at its center a bearing for receiving the shaft, and at its ends bearings for receiving the rods, a pair of horizontal bars arranged on each side of the cross bar, grooved wheels supported by the intermediate cross bar and engaging the upper and lower edges of each of said horizontal bars, a yoke for supporting the hammer and connecting one end of said horizontal bars, a handle for manipulating the bars adjacent to the U-shaped bracket, a drum journaled on the sliding cross bar and provided at the outer end of its journal with a hand wheel, a pawl and ratchet in connection with the drum, a plurality of pulleys on the upper cross bar, a pulley at one end of the sliding cross bar, a rope connected with the drum, and extending therefrom upwardly over one of the pulleys on the top cross bar, downwardly over the pulley on the sliding cross bar, upwardly over another pulley, and downwardly to the opposite end of the sliding cross bar, said bar being provided with a boss to which the rope is connected.

2. A power hammer frame comprising a base, a vertical shaft arranged centrally thereon, cross bars rotatably mounted on the shaft at its top and bottom, rods connecting the corresponding free ends of the cross bars, an intermediate cross bar having at its center a bearing for receiving the shaft, and at its ends bearings for receiving the rods, a pair of horizontal bars arranged on each side of the cross bar, grooved wheels supported by the cross bar and engaging the upper and lower edges of each of said bars, a bracket for supporting the hammer connecting one end of said bars, a handle for manipulating the bars adjacent to the bracket, a drum journaled on the sliding cross bar and provided at its outer end with a hand wheel, and means in connection with the drum for raising and lowering the sliding cross bar.

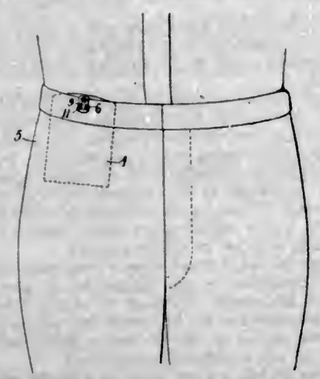
3. A power hammer frame comprising a base, a vertical shaft arranged centrally thereon, cross bars rotatably mounted on the shaft at its top and bottom, rods connecting the corresponding free ends of the cross bars, an intermediate cross bar having at its center a bearing for receiving the shaft, and at its ends bearings for receiving the rods, a pair of horizontal bars arranged on each side of the cross bar, grooved wheels supported by the cross bar and engaging the upper and lower edges of each of said bars, a bracket for supporting the hammer connecting one end of said bars, a handle for manipulating the bars adjacent to the bracket, and means for adjusting the bar vertically on the shaft.

4. A power hammer frame comprising a base, a vertical shaft arranged centrally thereon, cross bars rotatably mounted on the shaft at its top and bottom, rods connecting the corresponding free ends of the cross bars, an intermediate cross bar slidably mounted on the shaft and frame, a pair of horizontal bars arranged on each side of the cross bar, grooved wheels supported by the cross bars and engaging the upper and lower edges of each of said bars, a bracket for supporting the hammer connecting one end of said bars, a handle for manipulating the bars arranged adjacent to the bracket, and means for adjusting the cross bar on the shaft.

5. A power hammer frame, comprising a base, a vertical shaft arranged centrally thereon, a frame rotatably mounted on the shaft, a cross bar adjustable vertically on the frame and shaft, a pair of horizontal bars arranged on each side of the cross bar, grooved wheels supported by the cross bar and engaging the upper and lower edges of each of said bars, a bracket supporting the hammer connecting one end of said bars, and a handle for manipulating the bars adjacent to the bracket.

[Claims 6 to 8 not printed in the Gazette.]

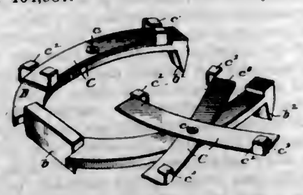
882,493. POCKET-BOOK. HAROLD A. DODGE, Newark, N. J. Filed Apr. 30, 1907. Serial No. 371,926.



1. A receptacle comprising two hinged walls of flexible material, a U-shaped frame, a U-shaped spring therein, a lever fulcrumed on to a plate comprising one leg of said U-shaped frame, said lever having an off-set end adapted to throw one end of said spring transversely across the interval between the respective plates comprising the legs of said U-shaped spring, a shank rigidly secured to, and outwardly projecting at right angles to the frame comprising the other leg of said U-shaped frame, said shank penetrating through an opening in one wall of said receptacle, a fastener comprising a stud member and a socket member adapted to be snapped into connection with each other, one of said members being rigidly connected with the free end of said shank and adapted to maintain the U-shaped frame in rigid engagement with the aforesaid wall of the receptacle, and the other of said members being secured to the adjacent face of the opposing wall of said receptacle, the said stud and socket members being normally opposed with respect to each other and adapted to engage each other when the two walls of the receptacle are brought in contact with each other.

2. A receptacle comprising two hinged walls of flexible material, a U-shaped frame, a U-shaped spring therein, a lever fulcrumed on to a plate comprising one leg of said U-shaped frame, said lever having an off-set end adapted to throw one end of said spring transversely across the interval between the respective plates comprising the legs of said U-shaped spring, means for rigidly securing said U-shaped frame to the outer face of one of said walls, a fastener comprising a stud member and a socket member adapted to be snapped into connection with each other, one of said members being rigidly connected with the said U-shaped frame and being positioned upon the opposing face of the wall from that to which the U-shaped frame is connected, and the other of said members being secured to the adjacent face of the opposing wall of said receptacle, the said stud and socket members being normally opposed with respect to each other and adapted to engage each other when the two walls of the receptacle are brought in contact with each other.

882,494. HORSESHOE. EDWARD M. DUNN and WALTER H. FRANCIS, Fairhaven, Mass. Filed Dec. 4, 1907. Serial No. 404,987.



1. A horse shoe, comprising a shoe proper provided with a plurality of spaced pairs of notches on its inner face, and a detachable facing for the shoe, said facing being provided with toe and heel calks, a pair of scissors plates pivoted to each arm of the facing and provided at each end with an overhanging lug for engaging into a notch, whereby to retain the facing in place on the shoe, the lug at one end of the plate being on the opposite side to the lug at the other end of the plate, one of said plates being provided with a slot, and the other with a catch for engaging into the notch whereby to lock the plates together.

2. A horse shoe comprising a shoe proper, provided with a plurality of notches on its inner face and a detachable facing for the shoe, a pair of scissors plates pivoted to each arm of the facing and provided at each end with an overhanging lug for engaging the inner face of the shoe, whereby to retain the facing in place, the lug at one end of each plate being on the opposite side to the lug at the other end, and means for locking the plates in closed position.

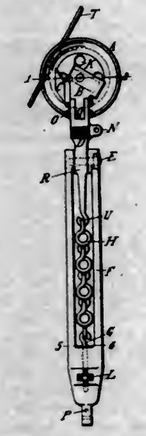
3. A horse shoe comprising the shoe proper, and a detachable facing for the shoe, and means for securing the facing to the shoe, said means comprising scissors plates pivoted to the facing, and provided at each end with a lug for engaging the inner face of the shoe whereby to retain the facing on the shoe, and means for locking the plates in closed position.

4. A facing for horse shoes, said facing being shaped to fit the shoe and being provided with toe and heel calks, and means for securing the facing to the shoe, said means comprising scissors plates pivoted to the facing, and provided at each end with a lug for engaging the inner face of the shoe whereby to retain the facing on the shoe, and means for locking the plates in closed position.

5. A horse shoe comprising a shoe proper, a detachable facing for the shoe, and scissors plates pivoted to the facing and provided with lugs for engaging the shoe to retain the facing in place and means for locking the plates in closed position.

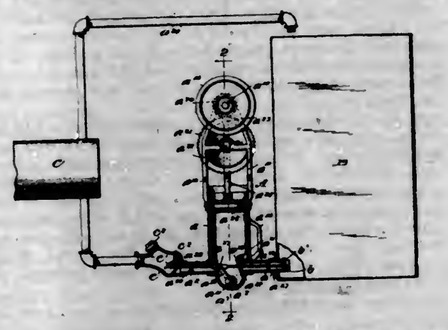
[Claim 6 not printed in the Gazette.]

882,495. TROLLEY-CAR-POLE ATTACHMENT. GEORGE R. DUNN, San Diego, Cal., assignor of one-half to Solan Bryan, San Diego, Cal. Filed Aug. 30, 1906. Serial No. 332,615.



The improved trolley-pole attachment comprising the bifurcated frame F, the harp journaled therein and adapted to swing laterally, the trolley wheel arranged in the harp in a plane parallel to said frame, and a spring chain connecting the shank of the harp with the frame and arranged between the forks of the same, as described.

882,496. GASOLENE ENGINE AND PUMP DRAIN. GUSTAV G. FORESTER, Bagley, Iowa. Filed July 6, 1907. Serial No. 382,509.



1. The combination with the engine cylinder and the cooling tank, of a pump comprising a cylinder, the bottom of said cylinder being formed into a horisontal cylindrical chamber, one end of the chamber having its exterior formed into a valve seat, said seat being provided with a slot leading into the cylinder, a shaft journaled in the cylindrical chamber and provided on one of its ends

with a disk valve resting on the valve seat, an arm on the other end of the shaft, brackets connected with the opposite end of the cylinder, a shaft journaled in the brackets, and provided on one of its ends with a governor, one of said brackets being provided with bearings, a link connected with the arm of the shaft and slidable through the bearings, the upper end of said link having an inclined portion, a governor on the end of the shaft, a sleeve slidable on the shaft and moved by the governor, said sleeve having a disk for engaging the inclined portion of the link, a piston in the pump, means whereby said shaft may drive the piston, a pipe leading from the cylinder to the cooling tank, a pipe leading from the cylinder to the engine cylinder, a check valve in each of said pipes, one of said checks opening toward the cooling tank, and the other towards the engine cylinder, said shaft in the cylindrical chamber being provided with an arm, links connected with the arm and adapted for engaging the check valves when the shaft is rotated, and a check valve between the cooling tank and the cylinder, said check valve opening towards the cylinder, said disk valve being provided with a perforation adapted to register with the slot of the valve seat when the pump is in an inoperative position.

2. The combination with the engine cylinder and the cooling tank, of a pump arranged therebetween, and communicating with said cylinder and cooling tank, a check valve between the pump and the cooling tank, a check valve between the pump and the engine cylinder, a normally open drainage valve in connection with the pump, a governor in connection with the pump, means whereby the movement of the pump will actuate said governor to close the drainage valve, and means whereby the closure of the drainage valve will open the check valve between the pump and the cooling tank, and will close the check valve between the engine cylinder and the pump.

3. The combination with the engine cylinder and the cooling tank, of a pump arranged therebetween and communicating with the cylinder and with the tank, a normally open drainage valve in connection with the pump, a normally open check valve between the pump and the engine cylinder, a check valve between the pump and the cooling tank, a second check valve within the cooling tank for closing the communication between the said tank and the pump, means whereby the starting of the pump will close the drainage valve, and means whereby the closure of the drainage valve will close the check valve between the pump and the engine cylinder, and will open the check valve within the cooling tank.

4. The combination with the engine cylinder and the cooling tank, of a pump arranged therebetween, and communicating with the cylinder and with the tank, a normally open drainage valve in connection with the pump, a normally closed check valve between the pump and the cooling tank, a second normally closed check valve within the cooling tank for closing communication between the tank and the pump, means whereby the starting of the pump will close the drainage valve, and means whereby the closure of the drainage valve will open the said second check valve.

5. The combination with the engine cylinder and the cooling tank, of a pump arranged therebetween and communicating with said cylinder and cooling tank, a check valve between the pump and the cooling tank, a check valve between the pump and the engine cylinder, a normally open drainage valve in connection with the pump, means whereby the starting of the pump will close the drainage valve, and means whereby the closing of the drainage valve will open the check valve between the pump and the cooling tank.

[Claim 6 not printed in the Gazette.]

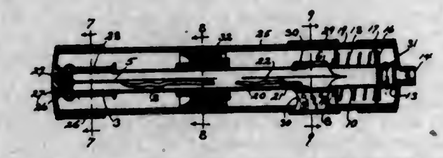
882,497. HOSE-COUPLING. ELIAS GUNNELL, Manitowoc, Wis. Filed Jan. 24, 1906. Serial No. 297,616.

A hose coupling comprising a pair of coöperating members, each of which members comprises a shank, a head and a plurality of hooks thereon having rounded ends and provided with curved recesses, which recesses are adapted to receive the rounded ends of the hooks on the opposing member and are of such size as to receive the hooks



loosely and permit of a relative rotary movement of the members after the hooks are seated in the recesses.

882,498. PROTECTIVE APPLIANCE FOR ELECTRIC CIRCUITS AND APPARATUS. HARRY H. HORNSBY and EDWARD W. ANGER, Jr., Chicago, Ill. Filed Dec. 19, 1901. Serial No. 86,506.



1. In a protective appliance for electric circuits and apparatus, the combination with an insulating sheath, of a fuse wire within the sheath, suitable terminals mounted upon said sheath and electrically connected with the said fuse wire, stationary contacts to receive said terminals and arranged to include the said appliance in an electric circuit, and a longitudinally movable indicating spring pressed plunger at one end of the said sheath, said plunger being normally held in non-indicating position against the tension of its spring and protruded thereby when the fuse wire is disrupted, said plunger being free from the external circuit conductors whereby its action is unimpeded thereby, substantially as described.

2. In a protective appliance for electric circuits and apparatus, the combination with an inclosed sheath of insulating material, of circuit terminals mounted upon the exterior of said sheath in proximity to the ends thereof, stationary contact devices to receive said terminals and connect the appliance in the electric circuit to be protected, a fuse wire within the sheath and in electrical connection with said terminals, and a spring plunger located in the end of the sheath normally held in non-indicating position against the tension of the spring and ejected when the fuse wire is disrupted, said plunger being free from the external conductors of the electric circuit so as not to be impeded thereby, in its movement, substantially as described.

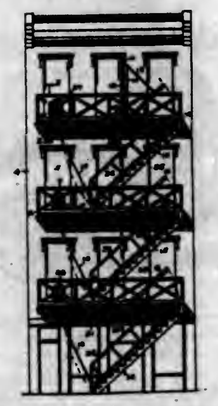
3. In a protective appliance for electric circuits and apparatus, the combination with an inclosed fuse tube of insulating material, of metallic circuit terminals mounted upon the exterior of said tube, stationary contacts to receive said terminals and adapted to connect the appliance in the electric circuit to be protected, a fuse wire within the tube and electrically connected with said terminals, a spring plunger located in the end of the tube and secured to one end of the fuse wire, and normally held thereby against the tension of its spring in non-indicating position, whereby when the fuse is blown the plunger is released and protruded beyond the end of the sheath to indicate the blowing of the fuse, substantially as described.

4. The combination with a sheath having terminals carried thereon, of stationary contact devices to receive said terminals and connect the sheath in the electric circuit to be protected, of a spring plunger in the end of said sheath to give a signal, a fuse wire within the sheath, means independent of said fuse wire to normally retain the plunger in non-indicating position, the spring serving to eject the plunger upon the blowing of the fuse to give a signal, substantially as described.

5. In a protective appliance for electric circuits, the combination with a sheath, of a main fuse-wire therein connected in the circuit to be protected and carrying the principal portion of the electric current, a spring-pressed signal to indicate when said fuse is blown, and an auxiliary fuse-member of small electric carrying capacity for normally holding said signal against operation and arranged to be severed by the blowing of the main fuse.

[Claims 6 to 24 not printed in the Gazette.]

882,499. FIRE-ESCAPE. JOHN W. HULL, Sr., Zion City, Ill., assignor to Zion City Manufacturing Co. Filed June 4, 1906. Serial No. 320,200.



1. In a fire escape for a building having several stories, a platform for each story, a stairs hinged at one end to each of said platforms, a trap-door in each of said platforms hinged to said platforms, a pulley under each platform and a cable for each pulley passing over the pulley and attached at one end to the next lower stairs and at the other end to the next lower trap-door whereby the lowering of a stairs will automatically raise the trap-door next below it.

2. In a fire escape, a series of platforms arranged one above the other, a trap-door leading through each of said platforms, a stairs hinged at one end to one of said platforms, a cable for elevating the lower or free end of the stairs, means for reeling up the cable to elevate the stairs, means for locking the said elevating means, means operated by the raising of the trap-door for releasing the stairs, a pulley, and a cable passing over the pulley and attached at one end to the stairs and at its other end to the trap-door of the next lower platform.

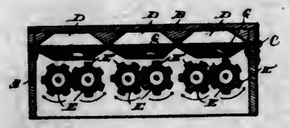
3. In a fire escape for a building of several stories, a platform opposite each of said stories, trapdoors in each of said platforms hinged to said platforms, a stairs hinged at one end to each of said platforms, a pulley above each of said platforms and a cable for each pulley passing over said pulley and having one end attached to the next trap-door below the pulley and the other end attached to the next stairs below the trap door.

4. In a fire escape, a series of platforms arranged one above the other, a trap-door leading through each of said platforms, each trap-door having a depending arm, a stairs hinged at one end to one of said platforms, a pulley, a cable passing over the pulley and attached at one end to the stairs and at the other end to the trap-door of the next lower platform, a shaft mounted above the free end of said stairs, a drum on said shaft, a cable wound upon the drum having one of its ends attached to the free end of said stairs, a ratchet-wheel on said shaft, a pawl-lever, a spring to draw the pawl-lever into engagement with the ratchet-wheel, means for rotating the drum to wind the cable thereon, and a connection between the pawl-lever and the depending arm of the trap-door of the platform to which said stairs is hinged.

5. In a fire escape, a platform, a stairs hinged at one end to the underside of said platform, a trapdoor through the platform over the hinged end of the stairs, said trapdoor having a depending arm and said trapdoor having a counter-weight, a shaft over the free end of the stairs, a drum on said shaft, a cable wound upon the drum having an end attached to the free end of the stairs, a ratchet wheel on said shaft, a pawl lever, a spring to draw the lever into locking engagement with the ratchet wheel, a sprocket wheel on the drum shaft, a crank shaft above the drum shaft, a crank on said crank shaft, a sprocket wheel also on said crank shaft, a link belt connecting the two sprocket wheels, and a cable connecting the pawl lever with the depending arm of the trap door.

[Claims 6 and 7 not printed in the Gazette.]

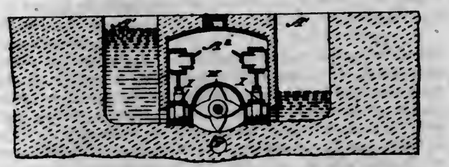
882,500. CORN-HUSKER. FRANK A. INGERSOLL, New York, N. Y. Filed Nov. 4, 1907. Serial No. 400,637.



1. A corn husker comprising a box or casing, a hinged top therefor, husking rolls arranged in pairs with the rolls of each pair fluted longitudinally and meshing with each other, the ribs of the rolls extending diagonally to the axes thereof and arranged in sets with one set inclining to the right and the adjoining set to the left and so on throughout the length of the rolls, troughs leading to the spaces between the coöperating rolls, and shed-like portions between the adjacent pairs of rolls, all substantially as set forth.

2. A corn husker comprising a pair of coöperating rolls, each having longitudinal flutes or ribs ranging diagonally to their axes and formed in sets alternately inclining to right and left, substantially as set forth.

882,501. CANAL-LOCK. SAMUEL S. JAMISON, Saltsburg, Pa. Filed May 28, 1907. Serial No. 376,052.



1. A lock substantially as herein described, comprising a pair of lock chambers side by side and having gates at the opposite ends and a connection between the bottoms of said chambers, valves controlling said connection with the respective chambers and a pump in the connection between the valves and adapted to pump the water from either chamber into the other substantially as and for the purpose set forth.

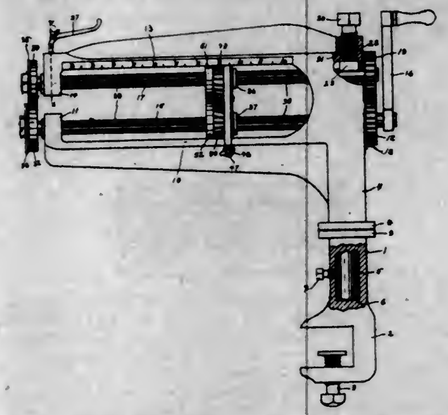
2. A lock comprising a pair of chambers connected together whereby water may be circulated from one to the other together with a pump whereby water may be forced from one chamber to the other.

3. A lock comprising a pair of lock chambers having gates at their opposite ends, means connecting said chambers whereby water may be circulated from one to the other and provided with valves corresponding to their respective chambers and a pump between the valves and adapted to be reversed for operation to pump the water from either chamber to the other.

4. The improvement in locks herein described, comprising a pair of lock chambers side by side, a valve chamber between the lock chambers, a connection extending within said valve chamber and between the opposite lock

chambers, valves in said connection corresponding to their respective lock chambers and a pump in said connection between the said valves and arranged for operation, substantially as described.

882,502. MACHINE FOR CUTTING AND CRIMPING PIPES. THEODORE A. JANSSEN and HARRY W. MOATS, Sterling, Ill.; said Moats assignor to said Janssen. Filed July 27, 1907. Serial No. 385,860.



1. A device of the class named, comprising a pair of parallel spaced-apart arms, rigidly united at one end; a pair of rotary shafts, supported by said arms, one of said shafts being capable of adjustment with reference to the other shaft; a pair of cutter-wheels on the outer ends of said shafts; a pair of crimping-rolls slidably mounted on said shafts, between said arms; a pair of feed-rolls, integral with said crimping-rolls, and between said crimping rolls and the cutter-wheels; means for securing said crimping-rolls in adjusted position, longitudinally of said shafts; means for preventing the insertion of the pipe between said crimping-rolls; and means for rotating said shafts in opposite directions, substantially as shown and for the purpose named.

2. A pipe cutting and crimping machine, comprising a pair of parallel, spaced-apart arms, rigidly united at one end; a pair of rotary shafts, supported by said arms, one of said shafts being capable of adjustment with reference to the other shaft; a pair of cutter-wheels on the outer ends of said shafts; a plate, adapted to be adjustably secured to one of said arms; a pair of collars, slidably mounted on said shafts, and engaged by said plate; a pair of crimping rolls, loosely mounted on said shafts, and secured to said collars; a pair of feed-rolls, integral with said crimping rolls; and means for rotating said shafts in opposite directions, substantially as shown.

3. A pipe cutting and crimping machine, comprising a pair of parallel, spaced-apart arms, rigidly united at one end; a pair of rotary shafts, supported by said arms, one of said shafts being capable of adjustment with reference to the other shaft; a pair of cutter-wheels on the outer ends of said shafts; a plate, adapted to be adjustably secured to one of said arms; a pair of collars, slidably mounted on said shafts, and engaged by said plate; a pair of crimping-rolls, loosely mounted on said shafts, and secured to said collars; a pair of feed-rolls, integral with said crimping rolls; a plate, adapted to be removably attached to the outer face of said first-named plate, to prevent the insertion of the end of the pipe between said crimping-rolls; and means for rotating said shafts in opposite directions, substantially as described.

4. A pipe-cutting and crimping machine, comprising a pair of parallel, spaced-apart arms, rigidly united at one end; a pair of rotary shafts, supported by said arms, one of said shafts being capable of adjustment with reference to the other shaft; a pair of cutter-wheels on the outer ends of said shafts; a pair of feed-rolls integral with said cutter-wheels; a plate, adapted to be adjustably secured in position longitudinally of said shafts; a pair of collars, slidably mounted on said shafts, and engaged by said plate; a pair of crimping rolls, loosely mounted on said shafts, and secured to said collars; a pair of feed-rolls, integral with said crimping rolls, and between said rolls and the cutter-wheels; a plate, adapted to be removably attached to the outer face of said first-named plate, to prevent the insertion of the end of the pipe between the crimping-rolls; and a scale on the face of one of said arms, whereby the length of cut of the pipe may be predetermined.

882,503. AIR-HOSE COUPLING. WALTER W. KILPATRICK, Atlanta, Ga., assignor to Air-Brake and Steam-Heat Connection Company, Atlanta, Ga. Filed Oct. 30, 1907. Serial No. 399,876.



1. The combination in a pipe coupling of two coupling heads, means for interlocking said heads by rotating them in contact in opposite directions, means for retaining them yieldingly locked after a partial rotation, and means for retaining them rigidly locked after a further rotation.

2. The combination in a pipe coupling of two duplicate heads having lateral communicating openings, means for interlocking said heads against endwise separation by rotating them in opposite directions, means for retaining them rigidly locked when they have been rotated a certain distance, and means for retaining them yieldingly locked when they have been rotated a less distance.

3. The combination in a pipe coupling of two duplicate heads having lateral communicating openings, curved interlocking ribs carried by said heads, the said ribs being upon opposite sides of the opening, and one rib of each interlocking pair being formed in two parts, one part being rigid and the other being yieldingly supported.

4. The combination in a pipe coupling of two duplicate heads having lateral communicating openings, curved interlocking ribs carried by said heads, the said ribs being upon opposite sides of the opening and one rib of each interlocking pair being formed with its lower part rigid with the head and its upper part separate and spring supported.

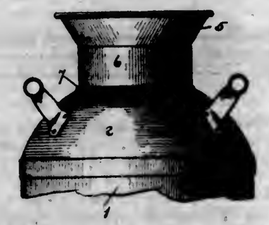
5. The combination in a pipe coupling, of two duplicate heads having lateral communicating openings, two lateral semi-circular ribs upon each head arranged concentric with the openings, one rib upon each head being rigid and the other being rigid throughout part of its length, and being spring pressed laterally throughout the balance of its length.

[Claims 6 to 8 not printed in the Gazette.]

882,504. REINFORCED NECK FOR MILK-CANS. ERNST MOHR, Milwaukee, Wis., assignor to National Enameling and Stamping Company, a Corporation of New Jersey. Filed Jan. 18, 1908. Serial No. 411,392.

1. A milk can comprising a body; a breast member secured to said body and having a circular opening; an integral neck and mouth member,—the lower end of the neck portion of said member projecting into the opening of the breast and secured on the under side thereof to prevent its withdrawal from said opening, and means seated on the upper side of the breast and carried by the integral neck and mouth member for preventing inward movement of said member with respect to the breast.

2. A milk can comprising a body; a breast member secured to said body,—said breast member having a flangeless circular opening in the top thereof; a neck having its upper end spread to produce an integrally-formed flared mouth and also having its lower end projecting through the circular opening of the breast and turned laterally thereunder and a reinforce band encircling the neck and having a flange at its lower end which is turned laterally over the top surface of said breast and the upper end of said band contacting with the flared wall of the integral neck mouth.



3. A milk can comprising a body; a breast member secured to said body,—said breast member having a circular opening in the top thereof; a neck having its lower end projecting through the said circular opening of the breast and turned to form a locking flange on the inner side of the breast, and an exterior band encircling the neck and having its lower edge resting on top of the said breast where the latter surrounds the neck.

882,505. WHEEL ADVERTISING DEVICE. JOHN W. ROBERTS, Denver, Colo. Filed June 10, 1907. Serial No. 378,099.

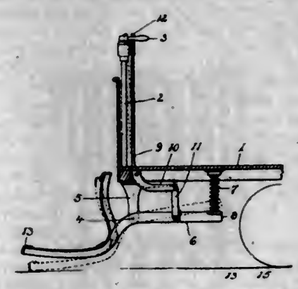


1. In an advertising device for vehicle wheels, the combination with the wheel, of angle plates applied to the wheel on opposite sides of the axle, one member of each plate projecting outwardly from the wheel and being provided with flanges, a U-shaped bracket having parallel arms to engage the flanged members of the angle plates, the said arms being slotted to register with openings formed in the flanged angle plate members, means for connecting the bracket with the angle plates, and an advertising plate pivotally mounted on the bracket, the axis of the pivot being in alinement with the axis of the wheel, the advertising plate being weighted to maintain it in a uniform position during the rotation of the wheel, substantially as described.

2. The combination with a vehicle wheel, of angle plates applied to the wheel spokes on opposite sides of the axle, one member of each angle plate projecting outwardly from the wheel and being provided with flanges, a U-shaped bracket whose parallel members engage the flanged members of the angle plates, the bracket members being slotted and the angle plate members being provided with openings, and screws passing through the said slots and openings, nuts applied to the screws for securing the same in place, a pin applied to the bracket in line with the axis of the wheel, and an advertising plate loosely mounted on the pin and weighted to maintain a uniform position during the rotation of the wheel, substantially as described.

882,506. CAR-FENDER. AUGUSTUS W. SHANK, Detroit, Mich., assignor of one-fourth to Oscar Plant, one-fourth to Fred Mohn, one-eighth to Ernest W. Battishill, and one-eighth to Otto Wachsmann, Detroit, Mich. Filed June 19, 1907. Serial No. 379,728.

1. In a car having a manually controlled brake, the combination with a manually operated lever controlling the brake, of a normally horizontal counterbalanced frame pivotally supported at the forward end of the car, a lever, whose load arm is substantially parallel to the frame and whose power arm is operatively engaged by said member when the brake is applied, and a link articulating the rear end of the frame and the load arm of the lever.



2. In a car having a brake and a manually operated lever, adapted to control the brake, pivoted on the car front within reach of the operator, a normally horizontal counterbalanced fender pivotally supported at the forward end of the car, and a lever adapted to tilt the fender forward, fulcrumed on the car, whose load arm is coupled by a link to the rear of the fender, and whose power arm passes through the plane of rotation of the brake lever, and is engaged by said brake lever when the brake is applied.

3. In a car having a manually operated brake controlling lever, a fender pivotally supported at the forward end of the car above the car track, counterbalancing means adapted to hold the fender normally in a horizontal position, a lever operatively engaged by the brake lever when the brake is applied, pivoted to the car, articulated to the fender and adapted to tilt the fender forward when engaged by the brake lever.

4. In a car having a manually operated brake controlling lever mounted on the car platform in reach of the operator, a fender pivotally supported between its ends in a normally horizontal position below the platform and above the track, a bell crank lever pivoted to the platform whose horizontal arm is substantially parallel to the fender and whose upright arm lies in the path of the brake lever and is depressed thereby when the brake is applied, and a link articulating the end of the horizontal arm and the rear of the fender.

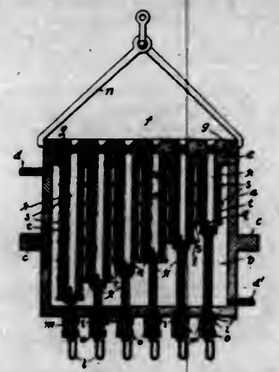
5. In a car having an upright brake-stand on the forward platform, a manually operated brake-controlling lever pivoted thereon, the combination with said stand and lever of a fender whose longitudinal members are pivotally supported between their ends beneath the car above the track, with their rear portions extending beneath the platform, a counterbalance engaging the fender in rear of the pivot support adapted to maintain it normally in a horizontal position, a bell-crank lever pivoted near the base of the stand, extending through the platform, whose lower rearward arm below the platform is substantially parallel to the longitudinal fender members, and whose upright arm is engaged and thrown forward by the brake controlling lever when the brake is applied, and a rigid link articulating the end of the lower arm and the rear end of the fender, adapted to return the lever to its initial position through the medium of the counterbalence, when the brake is released by return of the hand lever.

[Claims 6 and 7 not printed in the Gazette.]

882,507. CHILL-MOLD. EDWARD A. TVEEDAHL, Coshocton, Ohio, assignor of one-half to Charles W. Burrows, Coshocton, Ohio. Filed Apr. 30, 1907. Serial No. 371,123.

1. The combination with a chill casing, and a tube therein, of a plug extending through the casing and into the end of the tube, said plug having a bore adapted to hold an insert for the casting, and a rod extending into

the bore from the exterior of the casing, to support the insert.

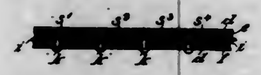


2. The combination with a chill casing, and a tube therein, of a plug extending through the wall of the casing and into the end of the tube, a packing washer and a nut on the plug, and a spring between the nut and washer.

3. A mold comprising a jacket having trunnions whereby it may be inverted, and a tube therein opening at one end through one side of the jacket, and a plug fitting in the other end of the tube and extending through the opposite side of the jacket, said plug having a longitudinal bore and a removable rod therein.

4. A mold comprising a water jacket, and a tube therein having strengthening plates around the same and rods extending through said plates.

882,508. STATIC-INFLUENCE ELECTRIC MACHINE. HEINRICH WOMMELSDORF, Charlottenburg, Germany. Filed Apr. 27, 1906. Serial No. 314,011.



1. In an influence machine, a disk consisting of two insulating side-plates, conducting inductors or sectors situated between the side-plates, and of an insulating plate carrying alternatively the inductors following one to the other in tangential direction, on different sides.

2. In an influence machine, a disk consisting of two insulating side-plates, and provided on its outside with a layer, the face of which layer retains its insulating power under the influence of electrical discharge or of the gases produced thereby, continuously or for a longer time than the surface of the disk, conducting inductors or sectors situated between the side-plates and of an insulating plate carrying alternatively the inductors following one to the other in tangential direction, on different sides.

3. In an influence machine, a disk consisting of two side-plates of ebonite and provided on its outside with a layer of celluloid, conducting inductors or sectors situated between said side-plates and of an insulating plate carrying alternatively the inductors following one to the other in tangential directions, on different sides.

4. In an influence machine a disk consisting of a plurality of insulating plates arranged one above the other, and conducting conductors or carriers or sectors following one upon the other in a circle, two successive sectors being situated between different insulating plates.

5. In an influence machine, a disk consisting of a layer on the outside of the disk, the face of which layer retains its insulating power under the influence of electrical discharge or of the gases produced thereby continuously or for a longer time than the surface of the disk, a plurality of insulating plates arranged one above the other and conducting sectors following one upon the other in a circle, two successive sectors being situated between different insulating plates.

[Claim 6 not printed in the Gazette.]

882,509. APPARATUS FOR PRODUCING OZONE. ALBERT C. WOOD, Philadelphia, Pa. Filed Oct. 18, 1904. Serial No. 228,941.



1. In apparatus of the class described a tubular electrode, a rod extending through said electrode, insulators secured to said rod and movable in said electrode for alining said rod and electrically separating it from said electrode, means for passing oxygen through said electrode, and means for effecting an electrical discharge between said rod and electrode.

2. In apparatus of the class described, a tubular electrode, a rod extending through said electrode and having means for effecting a brush discharge, insulators secured to said rod and movable in said electrode for alining said rod and electrically separating it from said electrode, and means for passing oxygen through said electrode, substantially as specified.

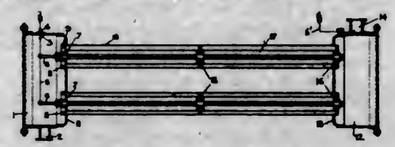
3. In apparatus of the class described, a tube, an axial rod extending through said tube, a perforated insulating cap fixed to an end of said rod and fitting into and against an end of said tube, a perforated insulating disk or spider fixed to said rod and movably supported in said tube, chambers communicating with the ends of said tube, and means for effecting an electrical discharge between said rod and tube, substantially as specified.

4. In apparatus of the class described, a tube, an axial rod in said tube, insulating supports fixed to said rod and movable in said tube for centering and supporting said rod, said supports having air passages therethrough, combs for effecting an electrical discharge between said rod and tube, and means for passing air into said tube through said electrical discharge, substantially as specified.

5. In apparatus of the class described, a tube, an axial rod in said tube, a perforated insulating cap on said rod and fitted to an end of said tube, a binding connection which holds said cap on said rod, a chamber, a conductor engaged by said binding connection, said conductor passing through the wall of said chamber and insulated therefrom, and a conductor electrically connected with said tube, substantially as specified.

[Claims 6 to 12 not printed in the Gazette.]

882,510. APPARATUS FOR PRODUCING OZONE. ALBERT C. WOOD, Philadelphia, Pa. Original application filed Oct. 18, 1904. Serial No. 228,941. Divided and this application filed May 12, 1906. Serial No. 316,489.



1. In apparatus of the class described a mechanism providing a conduit and an electrode through and in contact with which oxygen is passed, said mechanism having a metal body and inserts of highly refractory metal more difficultly oxidizable than the metal of said body, in combination with a second electrode and means for discharging electricity between the second electrode and the inserts, substantially as described.

2. In apparatus of the class described a mechanism

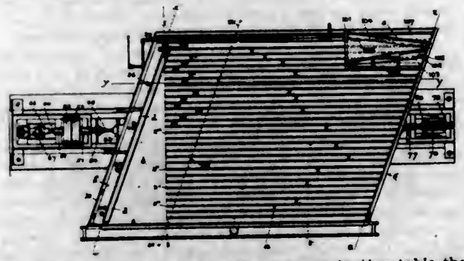
providing a conduit and an electrode through and in contact with which oxygen is passed, said mechanism having a metal body with rings therein of highly refractory metal more difficultly oxidizable than the metal of said body, in combination with a second electrode and means for discharging electricity between the second electrode and said rings, substantially as specified.

3. In apparatus of the class described a mechanism providing a conduit and an electrode through and in contact with which oxygen is passed, said mechanism comprising nickel rings and spacing rings alternating therewith in combination with a second electrode and means for discharging electricity between the second electrode and said nickel rings.

4. In apparatus of the class described a mechanism providing a conduit and an electrode through and in contact with which oxygen is passed, in combination with a second electrode, comprising a disk or disks between which and said first electrode electricity is discharged.

5. In apparatus of the class described, a mechanism providing a conduit and an electrode through and in contact with which oxygen is passed, said mechanism having a metal body and a lining of highly refractory metal more difficultly oxidizable than the metal in said body, in combination with a second electrode and means for effecting an electrical discharge between said second electrode and said lining, substantially as specified.

882,511. ORE-CONCENTRATING TABLE. GEORGE E. WOODBURY, San Francisco, Cal. Filed Apr. 19, 1907. Serial No. 369,186.



1. An ore concentrator having a concentrating table the surface of which has a riffled section, the riffles of which terminate on a line extending across the table and approximately at right angles to the lay of the riffles, and an unriffled or plain section beyond the riffles toward the discharge end of the table, this unriffled section being substantially triangular with its apex in close proximity to the uppermost riffles and its base coincident with the gangue discharge side of the table, the section being adapted to discharge concentrates along the whole of the concentrates end of the table whereby the concentrates from the upper riffles are free to escape quickly after leaving the riffles, and those from successively lower riffles take gradually increasing paths of travel, and means arranged adjacent to the discharge end of the table for feeding water to the said plain surface thereof.

2. An ore concentrator having a table the surface of which has a riffled section, the riffles of which terminate on a line extending across the table approximately at right angles to the lay of the riffles, and an unriffled section beyond the riffles toward the discharge end of the table, this unriffled section being substantially triangular with its apex in close proximity to the uppermost riffles and its base coincident with the gangue discharge side of the table, the section being adapted to discharge concentrates along the whole of the concentrates end of the table, whereby the concentrates from the upper riffles are free to escape quickly after leaving the riffles, and those from successively lower riffles take gradually increasing paths of travel, and the table being tiltable about a line parallel with the riffles so as to incline downward from the feeding-on edge of the table, means arranged adjacent to the discharge end of the table for feeding water on to the said unriffled surface, and a concentrates-receiving trough at the end of the unriffled section.

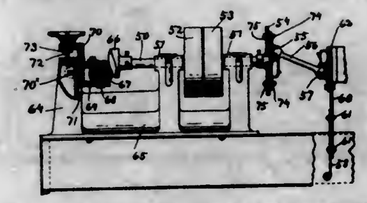
3. An ore concentrator having a table the surface of which has a riffled section with longitudinal riffles terminating on a line extending across the table approximately at right angles to the lay of the riffles, and an unriffled section beyond the riffles toward the delivery end of the table, the table being tiltable to cause its surface to incline transversely across the riffles the table being formed with a fixed, transverse hinge or joint extending obliquely across the table on a line back of the terminal line of the riffles, means arranged adjacent to the discharge edge of the table for feeding water to the plain unriffled section thereof, and means by which the said unriffled section may be adjusted vertically with respect to the main riffle-bearing section of the table about said fixed hinge or joint to cause such section to stand at a greater or less angle thereto.

4. In an ore-concentrating table, a transversely inclined concentrating surface composed of a riffled portion having riffles in parallel rows, and a plain or unriffled portion extending from the terminal-line of the riffles to the discharge end of the table, the ends of the riffles having a common terminal-line at right angles to the lay of the riffles, and the discharge edge of the unriffled portion being oblique to said terminal-line of the riffles, thereby producing an unriffled portion of gradually increasing longitudinal extent in the direction of the transverse inclination the table being formed with a fixed transversely arranged hinge or joint extending across the riffles behind the terminal line substantially parallel with the discharge edge of the unriffled section of the table; in combination with means for distributing water in streams perpendicularly against said unriffled surface on a line parallel with the oblique side of said unriffled surface; means for feeding the material upon the riffled portion of the concentrating-surface, means for varying at will the angular relation of the unriffled portion of the concentrator surface to the riffled portion and means for giving the concentrating-surface a variable reciprocating movement.

5. In an ore-concentrating table the combination of a main-frame standards carried by the main frame, a reciprocating-frame supported by the standards and composed of the longitudinal-bars and the end bars set obliquely to the longitudinal bars; the deck or concentrating surface covering the said frame having a yielding joint extending obliquely across it parallel with the oblique side of the frame at the discharge end of the table, the said deck having a riffled surface on one side of the yielding-joint and an unriffled portion upon the opposite side of said joint, means for adjusting the said unriffled portion about the said joint as an axis at varying angles to the riffled portion; and means for imparting reciprocating movement to the frame carried by the standards.

[Claims 6 to 8 not printed in the Gazette.]

882,512. DRIVE MECHANISM FOR ORE-CONCENTRATORS. GEORGE E. WOODBURY, San Francisco, Cal. Original application filed Apr. 19, 1907, Serial No. 369,186. Divided and this application filed June 5, 1907. Serial No. 377,457.



1. In a drive-mechanism for an ore-concentrator, the combination with the concentrating table, of a rotatable and longitudinally movable shaft, a head on one end of the shaft, a toggle-bar interposed between said head and

the end of the concentrator-table; a cam-faced disk on the opposite end of the rotatable shaft having a gradually increasing elevation of surface from a line of lowest depression both radially and circumferentially to a line of greatest elevation, a roller rotatably mounted and in working-contact with the face of said disk, and a spring adapted to apply its power in opposition to the thrust of the toggle-bar.

2. In a drive-mechanism for an ore-concentrator, the combination with the concentrating table, of a shaft movable longitudinally and also rotatable in its bearings, a toggle-bar having one end bearing against one end of the shaft at a point eccentric to the axis of rotation and at the opposite end bearing against the movable-frame of the concentrator; a face-cam on the opposite end of the shaft, a roller in contact with said cam, adjustably mounted in a fixed support; and means for adjusting the bearing-point of the said roller against the face of the cam more or less eccentrically with respect to the axis of rotation.

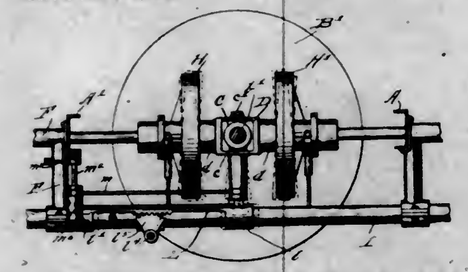
3. In a drive-mechanism for an ore-concentrator, the combination with the concentrating table, of a shaft rotatable and having also a limited movement longitudinally in its said bearings; a head on one end of said shaft, provided with a socket set eccentrically to the axis of rotation, a toggle-bar having one end seated in said socket and the opposite end bearing against the part to be driven, a cam-faced disk on the opposite end of the said shaft the surface of said disk gradually increasing in elevation from the center outward on radial lines and also circumferentially of the disk, the surfaces of greatest elevation being joined to the surface of least elevation by a continuous incline; a roller rotatably mounted and having peripheral contact with the face of the disk, and means for adjusting the roller to set the bearing-point of the roller against the face of the disk more or less eccentrically to the axis of rotation of the disk, consisting of the movable box and the adjusting screws.

4. In a drive mechanism for an ore concentrator, the combination with the concentrating table, of a shaft free to be rotated and to be reciprocated longitudinally, connections between one end of the shaft and the frame of the concentrator through which the reciprocations of the shaft are transmitted, a face cam at the opposite end of said shaft, an abutment against which the face cam is held and means for adjusting the said abutment radially across the face of the cam.

5. In a drive mechanism for an ore concentrator, the combination with a concentrating table, of power-transmitting devices for imparting to and fro motions to the table, devices independent of the said power-transmitting devices for imparting to the table through the said power-transmitting devices "kicking" motions, and means for adjusting the last mentioned devices to regulate the "kick" imparted to the table, substantially as set forth.

[Claims 6 to 8 not printed in the Gazette.]

882,513. POWER-TRANSMITTING MECHANISM. WILLIAM O. WORTH, Evansville, Ind. Filed Nov. 21, 1906. Serial No. 344,428.



1. In a friction transmission mechanism of the class described the combination with the driving friction members of driven friction members, means for adjusting the driven friction members obliquely to the contact radius of the driving friction members and simultaneously shifting the driven friction members on different horizontal planes, whereby the driving friction members automatically move the driven friction members across the faces thereof.

2. In a friction transmission mechanism the combination with a driving shaft of a friction member thereon, a transmission shaft, a driven friction member thereon adapted to engage the driving friction member, means for shifting the driven friction member to contact the driving friction member above and below the normal radius of contact and at an angle therewith, a universal joint for each end of said transmission shaft and means for moving the inner end of the transmission shaft to throw the friction members into engagement.

3. In a device of the class described the combination with one or more driving friction members of one or more driven friction members arranged in operative relation thereto, means for adjusting the driven friction members into engagement with the driving friction member or members, and means for simultaneously adjusting one or more of the driven friction members obliquely with the contact radius of the driving friction member and above or below its normal point of contact, to automatically shift the driven friction members outwardly, or inwardly.

4. In a device of the class described the combination with one or more driving friction members, of one or more driven friction members arranged in operative relation thereto, means for adjusting the driven friction members into engagement with the driving friction member or members, means for simultaneously adjusting one or more of the driven friction members obliquely with the contact radius of the driving friction members and above or below the normal point of contact, and means for manually adjusting said driving friction members inwardly or outwardly along the radius of the driving friction members.

5. In a device of the class described the combination with a pair of parallel driving friction members, of a pair of driven friction members disposed on opposite sides of the center thereof, means for adjusting the driven friction members one into engagement with one of the driving friction members, the other into engagement with the other, a casing supported below the friction members, rack bars in said casing, said bars at each end being without teeth, friction rollers between said bars, means operatively connecting the bars and the driven friction members and means for manually actuating the rack bars oppositely thereby shifting the driven friction members radially across the face of the driving friction members.

[Claims 6 to 35 not printed in the Gazette.]

882,514. CONNECTION FOR ELECTRIC CONDUCTORS. FREDERICK O. BALL, Plainfield, N. J., assignor of one-half to F. H. Ball, Plainfield, N. J. Filed Jan. 31, 1906. Serial No. 298,736.



1. In a connection for electric conductors comprising a thin plate having an opening therein, the edge of which is adapted to form electrical contact; a contact piece opposing the thin plate; a spring arranged to exert pressure on the thin plate and contact pieces to press the contact surfaces thereon toward each other; and an electric conductor connected with the plate.

2. A connection for electric conductors comprising two thin conductor plates, each having an opening therein and contact surfaces along the edges of the openings; a spring exerting pressure on said plates in opposite directions and at right angles to the edges forming the contact surfaces to hold said surfaces in spring pressed contact with an electric conductor; and an electric conductor connected with one plate.

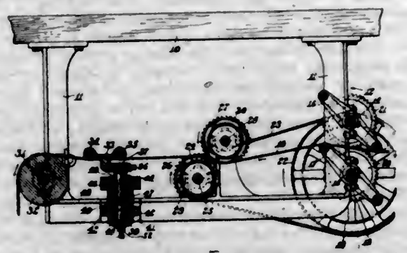
3. In a connection for electric conductors, the combination of a thin conductor plate having a contact surface along an exposed edge; a serrated electric conductor; a spring arranged to exert an edgewise pressure on said plate to hold the contact surface thereon in spring pressed contact with said conductor; a contact piece opposing the thin plate and acted upon by the spring; and a second electric conductor connected with said conductor plate.

4. In a connection for electric conductors the combination of a thin conductor plate having an opening therein along the edge of which is a contact surface; a serrated electric conductor arranged in the opening; a spring arranged to exert edgewise pressure on the plate to hold the contact surface thereon in spring pressed contact with said conductor; a contact piece opposing the thin plate and acted upon by the spring and a second electric conductor connected with said conductor plate.

5. In a connection for electric conductors the combination of a thin conductor plate having an opening therein along the edge of which is a contact surface; a serrated electric conductor arranged in the opening; a spring arranged to exert pressure on the plate substantially at right angles to the edge of the plate to hold the contact surfaces thereon in spring pressed contact with said conductor; a contact piece opposing the thin plate and acted upon by the spring and a second electric conductor connected with said conductor plate.

[Claims 6 to 17 not printed in the Gazette.]

882,515. CLOTH OPENER, SPREADER, AND GUIDER. ALBERT BIRCH, Belmont, Mass. Filed Apr. 13, 1907. Serial No. 367,926.



1. In a machine of the class described, the combination of a frame; a device on said frame for beating the cloth; a device on said frame for spreading the cloth; a delivery roll; a pivoted cloth governor interposed between said delivery roll and said spreading devices; a cup-shaped member provided with suitable bearings for said pivot and adapted to receive and support the end thereof; means for adjusting said governor vertically relative to said member; and means secured to said pivot limiting its vertical movement.

2. In a machine of the class described, the combination of a frame; a device thereon for beating the cloth; a device thereon for spreading the cloth; a delivery roll; a pivoted cloth governor interposed between said delivery roll and said spreading devices; a cup-shaped member provided with a suitable bearing adapted to receive and support the end of said pivot; a top plate secured to the upper end of said member and provided with a depending bearing for said pivot extending nearly to the bottom of said cup; and means secured to said pivot co-acting with the lower end of said bearing to prevent the displacement of said pivot.

3. In a machine of the class described, the combination with a frame provided with a cross tie; of a cup-shaped support secured to said tie; a cloth governor provided with a vertical pivot extending into said support; a top plate for said support having a depending hub extending into said support and provided with a bearing for said pivot; a second bearing for said pivot in said support; means secured to said pivot coöperating with the lower end of said hub preventing the displacement of said pivot; and an adjustable member extending through the bottom of said support against the lower end of said pivot.

4. In a machine of the class described, the combination of a frame; a device in said frame for beating the cloth; a device on said frame for spreading the cloth; a delivery roll; a cloth governor interposed between said delivery roll and said spreading devices consisting of a transverse bar secured to a suitable pivot and two revoluble rolls supported in ears secured on the ends of said bar in positions parallel to said bar and one on each side thereof; and a cup-shaped member adapted to receive and support the end of said pivot and provided with suitable bearings adapted to contact with peripheral surfaces of said pivot at the upper and lower ends thereof.

882,516. VESTIBULE-DIAPHRAGM. JAMES H. DONALDSON, Chicago, Ill. Filed July 1, 1907. Serial No. 381,582.



1. A vestibule-diaphragm having legs made up of a plurality of connected sections, the effective width of said sections being greater at one end than at the other.

2. A vestibule-diaphragm made up of a number of sections arranged to permit a predetermined distention of the diaphragm when the faces of the diaphragm are maintained parallel and a greater distention of one end of the diaphragm upon inclining the faces of the diaphragm towards each other.

3. A vestibule-diaphragm made up of a number of connected sections whose effective width is greater at the bottom than at the top.

4. A vestibule-diaphragm made up of a number of sections connected together so as to have a uniform effective width throughout a portion of their lengths and a greater effective width throughout the remainder of their length.

5. A vestibule-diaphragm made up of a number of sections arranged in pairs, each pair being formed of a strip folded longitudinally, and means for fastening the sections of each pair together throughout a portion of their length along a line with the folded edge.

[Claims 6 and 7 not printed in the Gazette.]

882,517. PROCESS OF TREATING ORES. ARTHUR S. DWIGHT and RICHARD L. LLOYD, Cananea, Mexico. Filed Mar. 22, 1906. Serial No. 307,431.



1. The process of treating metal bearing ores in a mass of fine particles containing combustible elements and

adapted to be sintered by internal combustion in the mass, which consists in igniting the combustible ingredients of the said ore, causing oxygen or a combustion supporting gas to pass to the interior of the mass of ore thereby causing the combustion to extend from the place of initial igniting gradually into the interior of and through the mass, said mass having at all points substantially similar gas passages therethrough raising the temperature of the interior of the mass by such internal combustion to the point of sinter forming, and restraining from agitation or movement (in relation to the adjacent parts of the mass) those particles which are on the side where the gases or products of combustion escape until they have been sintered.

2. The process of treating metal-bearing ores in a mass of fine particles containing combustible elements and adapted to be sintered by internal combustion in the mass, which consists in igniting the combustible ingredients of the said ore, causing oxygen or a combustion supporting gas to pass to the interior of the ore mass, thereby causing the combustion to extend from the place of initial igniting gradually into the interior of and through the mass, said mass having at all points substantially similar gas passages therethrough preventing the agitation of movement (in relation to the adjacent parts of the mass) of those particles which are on the side where the gases and products of combustion escape, and forming a solid sinter extending from the surface of ignition to the surface of gas exit, substantially as described.

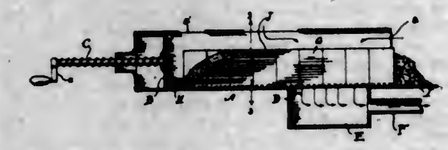
3. The process of treating metal bearing ore in a relatively fine condition containing combustible elements and adapted to be sintered by internal combustion in the mass which consists in forming a mass thereof of substantially uniform thickness, and having at all points substantially similar gas passages therethrough igniting the combustible elements of the said ore at points near one of the surfaces of said mass, supplying combustion supporting gas to the interior of the mass, causing the ignition to gradually permeate the mass, producing a sintering heat by internal combustion, preventing the agitation of any of the particles of the mass while the combustion is taking place and gradually sintering the entire mass from the surface of ignition to the surface of gas exit, substantially as set forth.

4. The herein described process of treating a metal bearing ore in an initially relatively fine condition containing combustible elements for the production of a sintered mass containing substantially all the metallic particles of the said ore which consists in forming of the fine ore a mass having at all points substantially similar gas passages therethrough, igniting the combustible ingredients of the said ore, causing currents of combustion supporting gas to positively enter and permeate the interior of the mass, thereby causing the internal combustion of the mass, holding all the particles of the mass against agitation or movement in relation to each other while the combustion is taking place, and forming a sinter extending from the surface of ignition to the surface of gas escape, substantially as set forth.

5. The process of treating metal bearing ores in a relatively fine condition containing combustible elements and adapted to be sintered by internal combustion in the mass, which consists in forming a mass of said ore having at all points substantially similar gas passages therethrough and two surfaces adapted to permit gases to pass through them to and from the interior of the said mass, holding or restraining the ore near said surfaces from agitation or movement in relation to the neighboring body of the mass, positively causing oxygen or combustion supporting gas to pass through one of the said surfaces into the interior of the said mass, igniting the combustible ingredients of the said ore at or near one of the said surfaces, causing the ignition to gradually pass to the interior of and through said mass while the parts thereof are held stationary and quiescent as aforesaid, agglomerating the particles of the said mass into relatively large sinter blocks or cakes and withdrawing the gases or products of combustion through one of the said restrained surfaces, substantially as set forth.

[Claims 6 to 19 not printed in the Gazette.]

882,518. PROCESS OF ROASTING AND SINTERING ORES. ARTHUR S. DWIGHT and RICHARD L. LLOYD, Cananea, Mexico. Filed July 30, 1906. Serial No. 328,387.



1. The herein-described process of treating ores containing combustible elements to sinter them, which consists in moving a mass of the ore, firing it while being moved, beginning at the upper portions thereof, and subjecting the mass to a current of gas for supporting combustion, moving in a direction to cause combustion in the mass to progress in a downward direction, substantially as set forth.

2. The herein-described process of treating ores containing combustible elements to sinter them, which consists in supporting the ore mass on a pervious screen, advancing the screen and ore mass together, igniting or firing the ore mass, and passing a blast through the mass toward the screen, substantially as set forth.

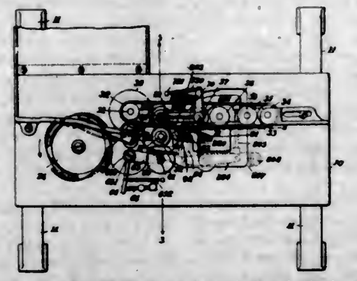
3. The herein-described continuous process of treating ores containing combustible elements to sinter them, which consists in supporting the ore on a pervious screen or grate, advancing the screen and ore mass together, igniting the ore from above at a point intermediate between the positions of feed and discharge, and passing a blast through the mass to cause combustion to take place therein in a downward direction, substantially as set forth.

4. The herein-described continuous process of treating ore containing combustible elements to sinter it, which consists in moving the ore mass, successively igniting, roasting, and sintering it by the aid of a blast of air or combustion supporting gas while in motion, maintaining the particles of the ore mass in quiescence relative to each other while these operations are taking place, and then cooling the sintering mass, substantially as set forth.

5. The herein-described continuous process of treating ores containing combustible elements to sinter them, which consists in moving the ore between a position of feed and one of discharge, igniting the ore at a point intermediate between these positions, passing a blast downward through the ore mass at points between its feed and discharge, and removing the sintered mass, substantially as set forth.

[Claims 6 to 17 not printed in the Gazette.]

882,519. CANCELING AND POSTMARKING MACHINE. MARTIN V. B. ETHRIDGE, New York, N. Y. Original application filed June 1, 1905, Serial No. 263,237. Divided and this application filed May 21, 1906. Serial No. 317,957.



1. In a machine of the kind described, relatively movable impression and marking elements, means for conveying mail matter of varying thickness between the same and a regulating mechanism adapted to maintain a substantially constant tension between said elements and comprising a plurality of springs and means whereby each of said springs acts yieldably to hold one of said elements toward the other and the springs are placed successively under tension for such action.

2. In a machine of the kind described, relatively movable impression and marking elements, means for conveying mail matter of varying thickness between the same and a regulating mechanism adapted to maintain a substantially constant tension between said elements and comprising a pair of springs successively brought into operation for mail exceeding a predetermined thickness, one of said springs being active for thickness within that predetermined and the other inactive for the same and exerting its pressure for thickness in excess thereof.

3. In a machine of the kind described, relatively movable impression and marking elements, means for conveying mail matter of varying thickness between the same, and a regulating mechanism, having a swinging arm provided with a plurality of fulcrums, means acting upon said arm to turn it upon one of its fulcrums for mail up to a predetermined thickness, said means having a primary spring which is set to operate for mail up to said predetermined thickness, and also having a device whereby the arm is locked against movement on said fulcrum by an excess of such thickness, a second spring connected with said arm and operated by the movement of the arm on its second fulcrum for thickness in excess of that predetermined for the primary spring, and connections between said arm and one of said elements.

4. In a machine of the kind described, relatively movable impression and marking elements, means for conveying mail matter of varying thickness between the same, and a regulating mechanism, comprising a swinging arm carrying one of said elements, a second swinging arm having a plurality of fulcrums, a link connecting said arms with each other, means connected with said arms at one of the fulcrums thereof and adapted to turn it upon said fulcrum for mail up to a predetermined thickness, said means having a primary spring which is placed under tension in the movement of said arm on said fulcrum and also having a device whereby the arm is locked against further movement on said fulcrum by an excess of said predetermined thickness, and a second spring connected with said arm and operated by the movement of the arm on its second fulcrum for thickness in excess of that predetermined for the primary spring.

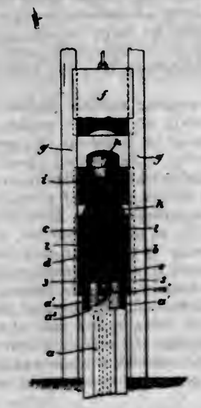
5. In a machine of the kind described, relatively movable impression and marking elements, means for conveying mail matter of varying thickness between the same, and a regulating mechanism, comprising a swinging arm carrying one of said elements, a second swinging arm having a plurality of fulcrums, a swinging bearing for the first of said fulcrums, a link connecting said arms with each other, means connected with said arms at the second of its fulcrums and adapted to turn it upon said first fulcrum for mail up to a predetermined thickness, said means having a primary spring which is placed under tension in the movement of said arm on said fulcrum and also having a device whereby the arm is locked against further movement on said first fulcrum by an excess of said predetermined thickness, and a second spring connected with said arm and operated by the movement of the arm on its second fulcrum for thickness in excess of that predetermined for the primary spring, said arm in the latter movement swinging said bearing of the first fulcrum.

[Claims 6 to 41 not printed in the Gazette.]

882,520. MEANS FOR SINKING PILES. FRANK B. GILBRETH, New York, N. Y., assignor to Corrugated Concrete Pile Company of America, New York, N. Y., a Corporation of Maine. Original application filed July 3, 1905, Serial No. 268,240. Divided and this application filed Sept. 25, 1906. Serial No. 336,147.

1. Pile sinking protecting means comprising a casing, cushioning material within said casing and a plunger member movable within the casing above the cushioning material to receive the hammer blow.

2. Pile sinking protecting means comprising a casing, cushioning means within said casing and relatively movable means within said casing for transmitting the hammer blow to the cushioning means.



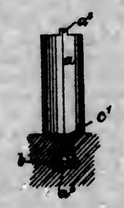
3. In a pile sinking protecting device, the combination with a casing, cushioning means within said casing, a stationary wall on one side thereof and a movable wall at the other side.

4. A pile protecting device having a cushion both of solid and loose cushioning material to protect the pile from the blow of the hammer.

5. The combination with a concrete pile having a non-circular cross-section, head forcing means and jetting means and cushioning means therefor, said cushioning means being applicable to the non-circular heads of piles of varying size and different cross-section shapes.

[Claims 6 to 29 not printed in the Gazette.]

882,521. TURBINE. ALEXANDER JUDE, Birmingham, England, assignor to Belliss & Morcom Limited, Birmingham, England. Original application filed Oct. 13, 1906, Serial No. 337,253. Divided and this application filed July 20, 1907. Serial No. 384,739.



1. Means for securing turbine guide-blades and vanes, formed from a strip of uniform section to their carrying elements, comprising an under-cut ring-groove in the said elements respectively, and a piece having a fang which on being forced into the ring-groove, will be distorted to occupy the recess beneath the overhanging wall of the groove.

2. Means for securing turbine guide-blades and vanes, formed from a strip of uniform section, their carrying elements, comprising an under-cut ring-groove in the said elements respectively, a shank formed integrally with the guide-blade and vane respectively, having a tangentially extending foot portion, and a piece having a fang which, on being forced into the portion of the ring-groove con-

taining the said foot will be distorted to occupy the recess beneath the overhanging wall of the groove, the head of the said piece overlying and retaining the foot.

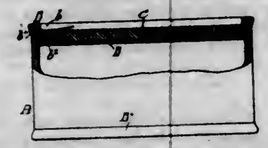
3. Means for securing turbine guide-blades and vanes, formed from a strip of uniform section, their carrying elements, comprising an under-cut ring-groove in the said elements respectively, a bifurcated piece, and means for directing the bifurcations into the undercut portions of the groove.

4. Means for securing turbine guide-blades and vanes, formed from a strip of uniform section, their carrying elements, comprising an under-cut ring-groove in the said elements respectively, a bifurcated piece, and means for directing the bifurcations into the under-cut portions of the groove which means consist of a longitudinal rod.

5. Means for securing turbine guide-blades and vanes, formed from a strip of uniform section, to their carrying elements, comprising an under-cut ring-groove in the said elements respectively, a shank formed integrally with the guide-blade and vane respectively having a tangentially extending foot portion and a bifurcated piece the bifurcations of which, on being forced into the portion of the ring-groove containing the said foot will be distorted to occupy the recesses beneath the overhanging walls of the groove, the head of said piece overlying and retaining the foot.

[Claims 6 to 10 not printed in the Gazette.]

882,522. PAPER BOX OR CONTAINER. JAMES C. KIMSEY, Philadelphia, Pa., assignor to American Paper Bottle Company, Philadelphia, Pa., a Corporation of Pennsylvania. Original application filed Oct. 8, 1904, Serial No. 227,677. Divided and this application filed Mar. 17, 1906. Serial No. 306,669.



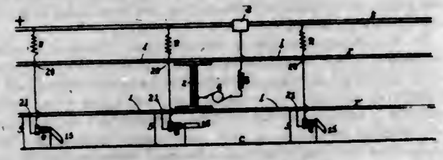
1. The combination in a box, of a body of yielding material, a flexible closure extending into the body portion, and having a flange on a line parallel with the inner surface of the body, and a lateral flange extending over the end of the body, a metallic ring for securing the closure to the body, said ring having an inner flange on a line parallel with the inner surface of the body, said flange holding the flange of the closure snug against the inner surface of the body, said ring having a relatively short outer flange embedded in the yielding body, substantially as described.

2. The combination in a box, of a paper body having straight sides and sharp corners, a paper closure mounted within the body and having a flange on a line parallel with the inner surface of the body and the edge of the closure being turned down over the outer edge of the body portion of the box, with a metallic ring having a straight non-embedded inner flange holding the flange of the closure snug against the inner surface of the body, and a relatively short outer flange and having sharp corners at the junction of the flange with the body portion of the ring, the sharp corners of the body and the overlying closure fitting the recess between the flanges of the ring, the outer flange of the ring being embedded in the yielding body at such point as to press the yielding material of the body and the closure against the inner corner of the ring, thereby insuring a tight fit at that point, substantially as described.

3. The combination in a box, of a body, a paper closure greater in diameter than the body, a metallic ring having an inner and an outer flange, the inner flange having a projecting rim acting as a support for the closure and forming a seat, with a supplementary cover of heavy yielding material fitting snugly within the ring and held to the seat by friction, said cover acting as a support for the fixed closure before said closure is broken and acting as a cover when the closure is broken, substantially as described.

4. The combination in a paper box, of a body portion of heavy paper, a closure of comparatively light paper, said closure being mounted within the body of the box and having an annular flange extending parallel with the inner surface of the box, the edge of the closure being turned down over the outer edge of the body portion of the box, a narrow metallic ring having an inner flange extending parallel with the inner surface of the box and clamping the flange of the paper closure against the inner walls of the body portion and having an inturned rim, said ring having a short outer flange extending over the edge of the body portion and embedded with the edge of the closure in the said body portion, the ring acting only as a means for securing the closure to the body portion, substantially as described.

882,523. BLOCK-SIGNAL SYSTEM. FRANK. E. KINSMAN, Plainfield, N. J. Original application filed Dec. 8, 1903, Serial No. 184,268. Divided and this application filed Nov. 29, 1904. Serial No. 234,731.



1. The combination with a line of way and with an electrically-propelled vehicle movable therealong, of an electrically controlled device for indicating a danger condition on the line of way, a power circuit governing the movement of said vehicle and embodying a continuous working conductor through which working current normally flows continuously and which is permanently connected with a track-rail through a current-reducing device for supplying controlling current to a controlling circuit, and a controlling circuit fed by current from the power circuit and governing the electrically-controlled device.

2. The combination with a line of way and with an electrically-propelled vehicle movable therealong, of an electrically-controlled device for indicating a danger condition on the line of way, a power circuit governing the movement of said vehicle, and embodying a continuous working conductor through which working current normally flows continuously and which is permanently connected with a track-rail through a current-reducing device for supplying controlling current to a controlling circuit, and a controlling circuit fed by current from the power circuit and governing the electrically-controlled device and adapted to be short-circuited by said vehicle.

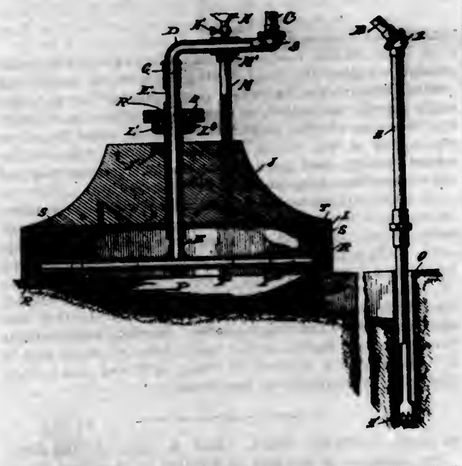
3. The combination with a line of way and with an electrically-propelled vehicle movable therealong, of a signal device on the line of way, a power circuit governing the movement of said vehicle and embodying a continuous working conductor through which working current normally flows continuously and which is permanently connected with a track-rail through a current-reducing device for supplying controlling current to a controlling circuit, and a signal-controlling circuit fed by current from the power circuit.

4. The combination with a line of way and with an electrically-propelled vehicle movable therealong, of a signal device on the line of way, a power circuit governing the movement of said vehicle and embodying a continuous working conductor through which working current normally flows continuously and which is permanently connected with a track-rail through a current-reducing device for supplying controlling current to a controlling circuit, and a normally closed signal-controlling circuit fed by current from the power circuit.

5. The combination with a line of way and with an electrically-propelled vehicle movable therealong, of a signal device on the line of way, a power circuit governing the movement of said vehicle and embodying a continuous working conductor through which working current normally flows continuously and which is permanently connected with a track-rail through a current-reducing device for supplying controlling current to a controlling circuit, and a normally closed signal-controlling circuit fed by current from the power circuit and including a track rail.

[Claims 6 to 16 not printed in the Gazette.]

882,524. PUMP. MILTON LATTA, Valentine, Nebr. Filed Oct. 17, 1907. Serial No. 307,868.



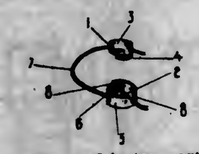
1. In an apparatus substantially as herein described, the combination of a casing, a bearing tube projecting upwardly therefrom and provided at its upper end with a cup forming a ball race, balls in said cup, frame plates mounted on the casing on opposite sides of the bearing tube and below the ball cup, a centrifugal pump having laterally extending pump tubes within the casing and a feed tube extending upwardly within the bearing tube, a band pulley on the feed tube above the ball cup of the bearing tube, balls in said cup below the band pulley, valves seating against the outer ends of the pump tubes within the casing, springs supporting said valves and secured at one end to the valves and at their other ends to the pump tubes, adjusting springs connected with said valve springs, pipe connections with the feed tube, a primer connected with said pipe connections, an air pump supported on the frame plates and a tube connecting said air pump with the pipe connections, all substantially as and for the purpose set forth.

2. The combination with the casing and frame plates mounted thereon, of a bearing tube held between the frame frame plates, a centrifugal pump having a feed pipe within said bearing tube, and pump tubes connected with the feed pipe and extending laterally within the casing and provided at their outer ends with means for retarding the discharge of water, substantially as set forth.

3. The combination with a casing and frame plates mounted thereon, of a bearing tube held between the frame plates and provided with a ball cup and a centrifugal pump operating within the casing and having a feed tube extending upwardly through the bearing tube, and means on the feed tube above the ball cup, and forming a bearing for the balls in the ball cup and balls in the cup, substantially as set forth.

4. The combination in a pump substantially as described, of pump tubes, valves seating against the outer ends of said tubes, springs carrying said valves, and adjusting springs connected with said valve springs.

882,525. METAL SEAL. VINCENZO MAZZATENTA, Turin, Italy. Original application filed Dec. 14, 1905, Serial No. 291,794. Divided and this application filed Jan. 7, 1907. Serial No. 351,221.

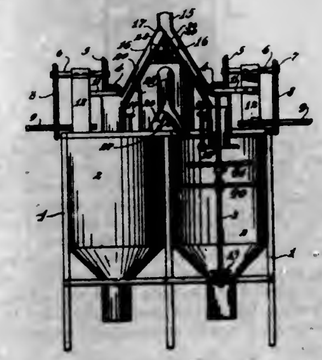


1. A metallic seal formed in two parts, one of which is adapted to lie within the other, and a flexible connection fastened to the outer part and passing diametrically through the inner part, said outer part being provided with diametrically arranged open-ended notches coinciding in position with such connection on each side of said inner part whereby when the parts are united said connection lies in such notches.

2. A metallic seal formed of two sections 3 and 5, the section 3 having faces 1 and 4, and the section 5 having a recess provided with faces 2 and 6 for contacting with the faces 1 and 4, and a flexible connection between such parts.

3. A metallic seal formed of two sections 3 and 5, the section 3 having faces 1 and 4, and the section 5 having a recess provided with faces 2 and 6 for contacting with the faces 1 and 4, a flexible connection between such parts, and a notch 8 formed in the part 5 and adapted to receive such flexible connection.

882,526. APPARATUS FOR BLEACHING AND AGING FLOUR AND OTHER GRAIN PRODUCTS. FRED MEARS, Minneapolis, and JOSEPH CRAIG, Princeton, Minn., assignors, by direct and mesne assignments, to Hygienic Refiner Company, Princeton, Minn., a Corporation of Minnesota. Filed Apr. 27, 1907. Serial No. 370,719.

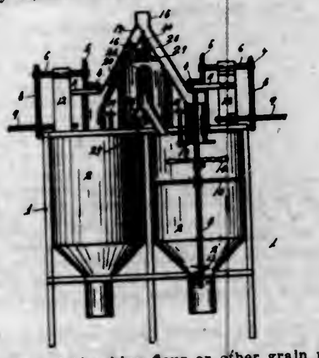


1. The combination of a nitric oxid generator and an inclosed flour and gas mixer admitting only the gas and flour.

2. The combination of a nitric oxid generator and an inclosed flour and gas mixer, receiving the gas by gravity, and having a feed entrance and exit adapted, when in use, to become packed with flour.

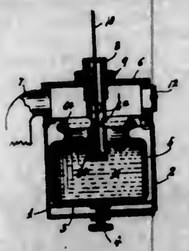
3. The combination of a nitric oxid generator, an inclosed mixing chamber receiving the gas by gravity, and having feed entrance and exit adapted, when in use, to become packed with flour, and a distributer for scattering the flour through the gas chamber.

882,527. PROCESS FOR BLEACHING AND AGING FLOUR AND OTHER GRAIN PRODUCTS. FRED MEARS, Minneapolis, and JOSEPH CRAIG, Princeton, Minn., assignors, by direct and mesne assignments, to Hygienic Refiner Company, Princeton, Minn., a Corporation of Minnesota. Original application filed Apr. 27, 1907, Serial No. 370,719. Divided and this application filed July 31, 1907. Serial No. 386,500.



The process of bleaching flour or other grain products, which consists in subjecting the flour to nitric oxid gas (NO), substantially as described.

882,528. GAS-GENERATOR. FRED MEARS, Minneapolis, and JOSEPH CRAIG, Princeton, Minn., assignors, by direct and mesne assignments, to Hygienic Refiner Company, Princeton, Minn., a Corporation of Minnesota. Original application filed Apr. 27, 1907, Serial No. 370,719. Divided and this application filed Sept. 25, 1907. Serial No. 394,534.

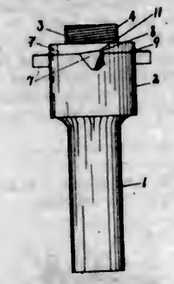


1. In a generator for producing compounds of nitrogen and oxygen, the combination with a retort and a generating rod, of a holder for said rod, which holder is adjustably suspended within the retort and supports said rods with freedom for the gravity feed of the rod as it is consumed by the acid, substantially as described.

2. The combination with the retort 5, collector 6 and generating rod 10, of the tube 8 adjustably suspended from the collector 6 by the nuts 9 and supporting the rod 10 with freedom for gravity feed of the same as the rod is eaten away by the acid, substantially as described.

882,529. REAMER AND BORING-HEAD. ROY N. MELVIN, Meadville, Pa., assignor of one-half to Winters D. Hamaker, Meadville, Pa. Filed Dec. 13, 1906. Serial No. 347,657.

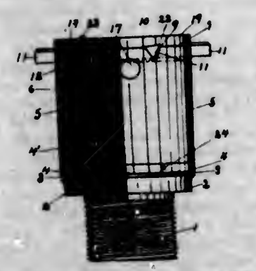
1. In a cutting tool, in combination with a removable cutter triangular in cross-section, a supporting head having a socket to receive the cutter substantially bodily, said socket having its walls at different angles to the plane outer surface of the head, said cutter having one of its plane faces projected angularly above said surface, a clamping ring, said ring having a slanting cut-away portion on its inner face of substantially the same length as the projected plane face of the cutter and adapted to bear on said face, and means to press said ring and cutters together, substantially as described.



2. In a cutting tool, in combination with a removable cutter, a supporting head having a socket to receive the cutter, said cutter having a plane face projected angularly beyond the socket, a clamping ring having a slanting cut-away portion substantially of the same length as the width of the cutter face and directly opposite the socket opening, and means to lock said clamping ring and cutter together, substantially as described.

3. In a cutting tool, in combination with a removable, triangular cutter, a supporting head having a V-shaped socket with its walls diverging outwardly to the plane outer surface of the head, and at different angles thereto, said cutter being supported in said socket and having one of its plane faces projected beyond the same, a clamping ring having a slanting cut-away portion terminating in a shoulder, said slanting portion bearing substantially throughout its length on the said projected plane face of the cutter, and a lock-nut to clamp said ring and cutters together, substantially as described.

882,530. BORING-TOOL. ROY N. MELVIN, Meadville, Pa., assignor of one-half to Winters D. Hamaker, Meadville, Pa. Filed May 6, 1907. Serial No. 372,215.



1. In a cutting tool, in combination with a longitudinally movable head having sockets in its outer edge, removable cutters mounted in said sockets, a threaded clamping ring beyond said head and adapted to bear directly upon said cutters, and pressure means to hold said cutters locked between said head and ring, substantially as described.

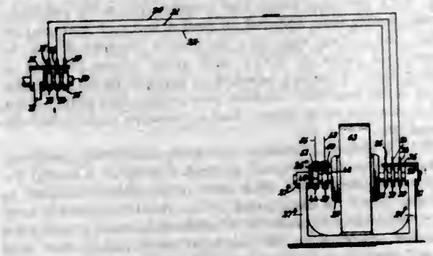
2. In a cutting tool, in combination with a longitudinally movable head, said head having cutter sockets in its outer edge, removable cutters mounted in said sockets and having portions projecting beyond the head, a threaded clamping ring adapted to bear on said projected portions of the cutters and a threaded lock-nut mounted in the tool and adapted to press against the inner end of said head to force the cutters against the ring, substantially as described.

3. In a boring tool, in combination with a cutter having triangular similar end faces and similar longitudinal faces and having the end faces at right angles to the longitudinal faces, a supporting head, said head having sockets supporting the cutters with said end faces perpendicular to a radius of the tool and with the major width of said cutter extending beyond said radius in the direction of the cutting movement so that a clearance of the outer end face behind the cutting edge is effected, whereby the cutter may be adjusted so that any one of the edges may be used as the cutting edge, substantially as described.

4. In a cutting tool, in combination with a fixed shank stem, a longitudinally slidable head mounted on said stem, radially movable cutters mounted in said head, pressure means to engage said head and cutters, a ring loosely mounted on said stem and capable of a free longitudinal and rotary movement thereon, said ring having exterior cam-projections adapted to bear against the cutters, and having a series of teeth in its inner face, said head having a radial aperture which covers the line of said teeth and is adapted to receive a rotatable toothed tool to operate said toothed ring, substantially as described.

5. In a cutting tool, in combination with a fixed shank-stem, a longitudinally movable head thereon, said head having an outer shoulder having cutter-sockets, radially movable cutters mounted in said sockets, a cam-ring loosely mounted in said head behind said shoulder and having a series of teeth on its inner surface, said stem having its outer and inner portions threaded to receive a threaded cutter-clamping ring, and a lock-nut respectively, means extending through said clamping-ring to press said cam-ring to its seat, said head having a radial aperture extending across the line of the cam teeth to receive a rotatable toothed tool adapted to rotate the cam ring, substantially as described.

882,531. ROTARY CONVERTER. JOHN L. MURDOCK, Boundbrook, N. J. Filed Mar. 28, 1906. Serial No. 308,477.

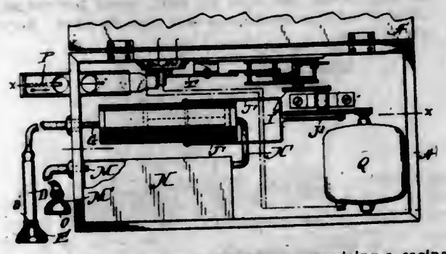


In a three-phase rotary converter, the combination of a stationary field, an armature provided with three windings, two sectors connected with each winding, each of said sectors representing approximately 120 degrees of a circle, and two brushes each having a contact length representing approximately 60 degrees of a circle and being adapted to rest throughout said contact length upon one or more of said sectors.

882,532. PNEUMATICALLY-OPERATED MASSAGE APPARATUS. THOMAS A. MCCALL, Xenia, Ohio. Filed May 31, 1906, Serial No. 319,600. Renewed Jan. 15, 1908. Serial No. 410,996.

1. A pneumatic massage apparatus comprising a casing, a cylinder mounted therein, a piston stem, a plurality of pistons mounted upon said stem, means outside the cylinder for actuating said stem, pipes communicating with the ends of said cylinder, and a suction cup connected to one of said pipes, as set forth.

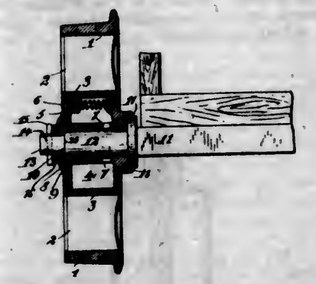
2. A pneumatic massage apparatus comprising a casing, a cylinder mounted therein, a piston stem, a plurality of pistons mounted upon said stem, means outside the cylinder for actuating said stem, pipes communicating with the ends of said cylinder, a suction cup connected to one of said pipes, a chamber communicating with one of said pipes, and a suction cup with a pipe leading therefrom to said chamber, as set forth.



3. A pneumatic massage apparatus comprising a casing, a cylinder mounted therein, a piston stem mounted within said cylinder, pistons secured to said stem, a valve-regulated pipe opening through one end of the cylinder and through the casing, a suction cup connected to the pipe, a pitman, a pin secured thereto and passing through the wall of the cylinder and connected to said stem, and means for reciprocating said pitman, as set forth.

4. A pneumatic massage apparatus comprising a casing, a cylinder mounted therein, a piston stem mounted within said cylinder, pistons secured to said stem, a valve-regulated pipe opening through one end of the cylinder and through the casing, a hollow handle secured to said pipe, a suction cup secured to the end of said handle, and a screen disk seated upon a shoulder in said cup and against which the handle is adapted to bear, as set forth.

882,533. RUNNING-GEAR FOR MINE-CARS. JOHN M. PHILLIPS and ROBERT F. PHILLIPS, Carrick, Pa. Filed Nov. 30, 1907. Serial No. 404,560.

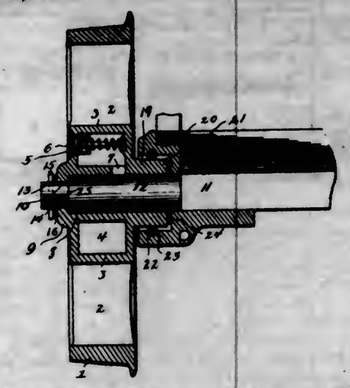


1. In running gear for mine cars, a wheel having a hub with an oil cavity and an axle bore with a cap integral with the hub having a central opening of less diameter than said axle bore, in combination with an axle having a cylindrical spindle fitting the bore of the hub, and having a stub-axle fitting the opening in the cap, the shoulder back of said stub-axle abutting against the inner face of the cap.

2. In running gear for mine cars, a wheel having a chambered lubricating hub with an axle bore communicating with the lubricating chamber, the outer end of said bore extending through the hub and being of diminished diameter, in combination with an axle having a portion fitting the enlarged bore of the hub and a stub-axle portion fitting the contracted portion of the bore, said stub-axle portion being pierced diametrically and a linch pin passed through the pierced hole.

3. In running gear for mine cars, a wheel having an axle bore reduced in diameter at its outer end and having a cylindrical socket in the inner face of the hub, in combination with an axle having a collar fitting said socket, a cylindrical portion fitting the bore of the hub, a stub-axle fitting the reduced portion of the bore, a washer fitting the outer end of the stub-axle, and a linch pin passing through the stub-axle outside said washer.

882,534. RUNNING-GEAR FOR MINE-CARS. JOHN M. PHILLIPS and ROBERT F. PHILLIPS, Carrick, Pa. Original application filed Nov. 30, 1907, Serial No. 404,560. Divided and this application filed Jan. 21, 1908. Serial No. 411,969.



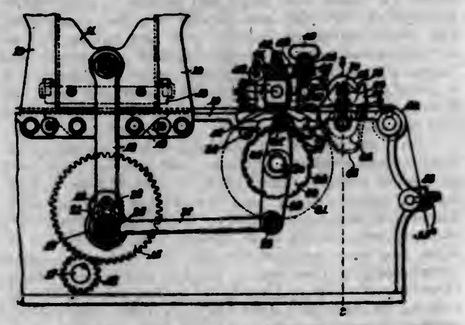
In running gear for mine cars, a wheel having a chambered lubricating hub, with an axle bore having a diminished outer end piercing the face of the hub, the latter being formed with an integral cap through which said bore extends, and said hub having a cylindrical sleeve projecting from its inner face, through which said axle also extends, in combination with an axle passing through the hub, and a box in which the said hub sleeve rotates.

882,535. VALVE-LOCKING MEANS. JAMES POWELL, Cincinnati, Ohio, assignor to The William Powell Co., Cincinnati, Ohio, a Corporation of Ohio. Filed Jan. 7, 1907. Serial No. 351,052.



In a lubricator, the combination of an oil-retainer consisting of a shell and a top and bottom, a hollow tie-post seated in the bottom by means of a screw-connection and extending through shell and top and above this latter where it is diametrically increased to form an integral shoulder which, by bearing against the top, serves to hold the parts of the oil-retainer together, there being also vertical serrations on the outside of the tie-post above this shoulder and a valve-seated outlet near its lower end, a carrier adjustably supported within the upper part of the tie-post, a valve for the seat mentioned which has a stem extending upwardly through the lower part of the tie-post, and through and above the carrier in which latter it is supported so as to have a sliding adjustment with reference to the valve-seat, a handle at the upper end of this stem to manipulate the valve for the purpose of opening or closing the outlet and to control passage of oil therethrough and a combined adjusting and locking lever rigidly connected to the upper end of the carrier and shaped to yieldingly engage the serrations in the tie-post and whereby the carrier may be adjusted to regulate the rate of flow through the open outlet and at the same time locked in its adjusted position.

882,536. DAMPENING DEVICE FOR PRINTING-PRESSES AND SIMILAR MACHINES. GEORGE W. PROUTY, Dorchester, Mass. Original application filed Dec. 17, 1906, Serial No. 348,135. Divided and this application filed Feb. 23, 1907. Serial No. 358,806.



1. In a printing press, the combination with positively driven mechanism adapted to feed a strip of material between the platen and type bed; of a trough adapted to contain liquid; a dampening roller revoluble therein over which said strip is adapted to move as it moves toward said feeding mechanism; a pressure roller revoluble therewith; and means on either side of said strip holding it taut as it passes to said dampening device.

2. In a printing press, the combination with positively driven mechanism adapted to feed a strip of material between the platen and type bed; of a friction device between two parts of which said strip passes adapted to hold it taut; a trough adapted to contain liquid; a dampening roller revoluble therein over which said strip of material is adapted to move; and a pressure roller revoluble therewith.

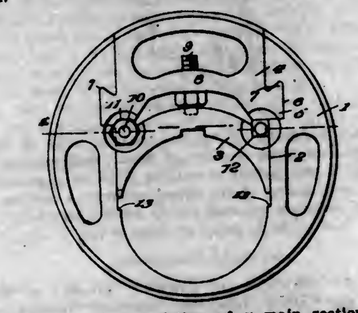
3. In a printing press, the combination with positively driven mechanism adapted to feed a strip of material between the platen and type bed; of a trough adapted to contain liquid; a dampening roller revoluble therein over which said strip of material is adapted to move; means for applying pressure to the material as it passes over said roller; and friction strips between which said strip passes to said dampening device.

4. In a printing press, the combination of a trough adapted to contain liquid; a dampening roller revoluble in part therein; a pressure roller revoluble with said dampening roller; a friction device bearing on both sides of the strip of material through which said strip is fed to the dampening roller; and a pair of feed rolls interposed between the impression device and said trough.

5. In a printing press, the combination of a trough adapted to contain liquid; a dampening roller revoluble in part therein; a pressure roller revoluble with said dampening roller; a friction device bearing on both sides of the strip of material through which said strip is fed to the dampening roller; a pair of feed rolls interposed between the impression device and said trough; and means for adjusting the pressure of said feed rolls to regulate the amount of dampness in said strip.

882,537. SKELETON ECCENTRIC FOR LOCOMOTIVES. GEORGE M. RIED, Meridian, Miss., assignor of one-half to George A. Baxter, Meridian, Miss. Filed Aug. 26, 1907. Serial No. 390,229.

1. An eccentric, consisting of a main section formed with a recess by which it is adapted to be slipped over a shaft, a key designed to fit in said recess and complete the encircling of the shaft, said key being formed at its outer corners with transversely extending shoulders, the side walls of the recess being formed with sockets, a fillet block closing the outer end of the recess and formed with lugs seated in said sockets, said lugs extending into the recess, wedges interposed between the block and key and bearing against the shoulders of the latter and the opposing portions of the lugs of the block, and nuts screwing on said wedges and overlapping the main section, the key, and the block.



2. An eccentric, consisting of a main section formed with a recess by which it is adapted to be slipped over a shaft, a key fitting in said recess and adapted to complete the encircling of the shaft, a fillet block closing the outer end of the recess and held from endwise movement therein, wedges interposed between the block and key, the block being formed with a cross-bar, and a set screw working through said cross bar, the key being formed with a socket receiving the head of the screw.

3. An eccentric, consisting of a main section formed with a recess by which it is adapted to be slipped over a shaft, a key designed to fit in said recess and complete the encircling of the shaft, a fillet block closing the outer end of the recess, means for preventing the outward movement of the fillet block in the recess, wedges interposed between the block and key at the corners of the latter, and nuts screwing on said wedges and overlapping the main section, the key, and the block.

882,538. PLASTIC. ALLSTON SARGENT, New York, N. Y. Filed Nov. 29, 1907. Serial No. 404,382.

1. The art of forming receptacles which consists in mixing cement, granulated cork and water in proportions to form a somewhat fluid but plastic mass, molding the same on a core so that the cement settles towards the core and forms a relatively hard and dense interior surface for the receptacle.

2. The art of forming receptacles which consists in mixing cement and particles of lighter material with water in such proportions as to produce a consistency permitting the cement to settle and the lighter material to rise, molding the mixture and then allowing it to set.

3. The art of forming plastic receptacles which consists in mixing a material such as hydraulic cement with a comminuted material of irregular sized and shaped particles and water in such proportions as to produce a somewhat fluid mass, casting the same in a mold over a smooth core, so that the finer particles of the mixture settle toward the core, allowing the same to set and become hard, removing the hard receptacle and then coating it on the interior with a preparation, impervious to gas and water.

882,539. RATCHET MECHANISM. EDMUND A. SCHADE, New Britain, Conn. Filed June 2, 1906. Serial No. 319,827.

1. In a ratchet mechanism, comprising driving and driven parts, a spindle connecting said parts, a ratchet carried by one of said parts and having teeth facing outward from the axis thereof, a pawl fulcrumed at one end of said ratchet, a spring engaging the end face of said pawl and carried by the driving part, and an operating member having a cam portion arranged to cooperate with said pawl to hold it from engagement with the ratchet.



2. A ratchet mechanism, comprising driving and driven parts, a spindle connecting said parts, a ratchet carried by one of said parts and having teeth facing outwardly from the axis thereof, a plurality of independent sets of pawls, the teeth of one set facing in a direction opposite to the teeth of the other set, a fulcrum for said pawls at one end of said ratchet and springs engaging the end faces of said pawls, and a pawl-operating device arranged to coöperate with said pawls.

882,540. EYEGLASS OR SPECTACLE MOUNTING. HERMAN SILBERT, Buffalo, N. Y., assignor of one-half to Alexander Allan, Buffalo, N. Y. Filed Oct. 14, 1907. Serial No. 397,311.



1. An eyeglass or spectacle mounting comprising a bridge, two coils arranged with their axes transversely to the bridge and each connected at one end to one end of the bridge, laterally projecting loops adapted to be attached to the lenses and each connected at one end with the other end of one of the coils, and two guards each comprising an upwardly arched bearing loop having its front arm connected with the other end of one of said attaching loops, a clamping arm arranged between the arms of the bearing loop and connected at its lower end with the lower end of the rear arm of the bearing loop, and a presser finger projecting from the upper end of the clamping arm inwardly beyond the inner side of the arms of the bearing loop, substantially as set forth.

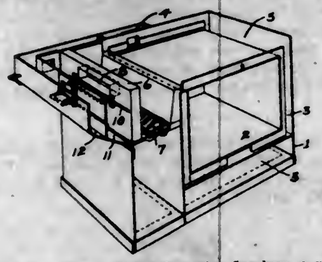
2. An eyeglass or spectacle mounting comprising a bridge, two coils arranged with their axes transversely to the bridge and each connected at one end to one end of the bridge, laterally projecting loops adapted to be attached to the lenses and each connected at one end with the other end of one of the coils, two guards each comprising an upwardly arched bearing loop, an upright connecting arm connected at its lower end with the lower end of the front arm of the bearing loop and a coil connected at one end with the upper end of the connecting arm and at its other end with the other end of the adjacent attaching loop, substantially as set forth.

3. An eyeglass or spectacle mounting comprising a bridge, two laterally projecting attaching loops each connected at one end with one end of the bridge, two guards each having a bearing loop, an intermediate arm connected at one end with the bearing loop, and a coil connecting the other end of said intermediate arm with the other end of the adjacent attaching loop, substantially as set forth.

4. An eyeglass or spectacle mounting comprising a bridge, two transverse front coils each connected at one end with one end of the bridge, two laterally projecting attaching loops adapted to be connected with the lenses and each connected at one end with one end of the bridge, and two guards each comprising an upwardly arched bearing loop having front and rear arms, an upright intermediate arm connected at its lower end with the lower end of the front arm of the adjacent

bearing loop, a rear coil having its axis in line with the corresponding front coil and connected at one end with the upper end of the adjacent intermediate arm and at its opposite end with the other end of the companion attaching loop, an upright clamping arm arranged between the front and rear arms of each bearing loop and connected at its lower end with the lower end of said rear arm, and a presser finger projecting inwardly from the upper end of the clamping arm beyond the inner side of the arms of the adjacent bearing loop, substantially as set forth.

882,541. WATER-HEATING ATTACHMENT FOR RANGES, &c. EUGENE W. VEST, Tacoma, Wash. Filed Oct. 20, 1905. Serial No. 283,683.



1. In a stove, the combination of a fire box, a removable water receptacle forming one side thereof, a heating chamber on the opposite side of the water receptacle, flue connections with said heating chamber at a side and end thereof, said water receptacle being formed with a passage establishing communication between the fire box and the heating chamber, and dampers controlling said passage and flue connections.

2. In a stove, the combination of a fire-box, an oven on one side thereof and a water receptacle on the opposite side and forming one wall thereof, the oven and water receptacle providing independent passages to a common exit for the products of combustion, and means in one of said passages whereby the heat of the products of combustion may be caused to act upon a greater or less surface of the water receptacle as desired.

3. In a stove, the combination of a fire-box, of a water receptacle forming one wall thereof, a heating chamber on the opposite side of the water receptacle from the fire-box, means communicating the fire-box with the heating chamber, and means controlling the amount of surface of the water receptacle affected by the heat of the products of combustion.

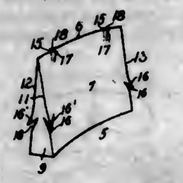
4. In a stove, a fire box, a plurality of removable water receptacles, one of which forms one wall of the fire box, a heating chamber on one side of the outer water receptacle, and a flue section extending around the side and end walls of the heating chamber, said water receptacles and side wall of the heating chamber being formed with registering damper controlled ports and the end wall of the heating chamber being also formed with a damper controlled port in communication with the said flue section.

5. In a stove, a fire box, a water receptacle on one side thereof having a damper-controlled port, a heating chamber on the opposite side of the water receptacle in communication through the said port with the fire box and provided in its side and rear walls with damper-controlled ports, and a flue extending around the said side and rear walls of the heating chamber and in communication therewith through said ports, said flue leading to the usual stove flue.

[Claim 6 not printed in the Gazette.]

882,542. METALLIC PROTECTOR FOR HEELS OR SOLES OF BOOTS AND SHOES. JOHN H. VINTON, Boston, Mass. Filed July 15, 1907. Serial No. 383,872.

1. A metallic protector for the heels or soles of boots and shoes comprising a strip of metal wedge-shaped in cross section and having a cutting edge, said strip having a cut extending transversely thereof from said cutting edge, the metal upon opposite sides of said cut being turned in opposite directions and projecting beyond the opposite faces, respectively, of said strip and forming barbs.



2. A metallic protector for the heels or soles of boots and shoes comprising a strip of metal wedge-shaped in cross section and having a cutting edge, said protector having a cut in one of its edges, whereby a portion of said metal adjacent to said cut is forced outwardly beyond the face of said metal to form a barb.

882,543. PROCESS OF DYEING. GUSTAV A. WALDINGER and CARL F. ISERLOTH, Elberfeld, Germany, assignors to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany, a Corporation of Germany. Original application filed Dec. 29, 1906, Serial No. 349,973. Divided and this application filed June 7, 1907. Serial No. 377,763.

1. The herein-described process for dyeing the vegetable fiber with sulfur dyestuffs, which process consists in dyeing the fiber in a sulfur dyestuff bath in the presence of an acid, substantially as described.

2. The herein-described process for dyeing the vegetable fiber with sulfur dyestuffs, which process consists in dyeing the fiber in a sulfur dyestuff bath in the presence of sulfuric acid, substantially as described.

882,544. BUNSEN BURNER. PHILIPP VON WOUWERMANS, Vienna, Austria-Hungary, assignor to Gasspar-Unternehmung Nach System Wouwermans Halbmayr & Co., Vienna, Austria-Hungary, a Corporation. Filed Dec. 4, 1906. Serial No. 346,321.



1. In a Bunsen burner, the combination with a gas-nozzle and a mixing tube having air-inlets in its lower portion; of a distributing grating in the burner head having parallel top and base planes at an angle to the vertical axis of the mixing tube, the passage walls in said grating being vertical to the horizontal plane of the mixing tube, and a cap provided with inner and outer rows of holes, the holes of the inner rows being smaller in diameter than those of the outer row, substantially as set forth.

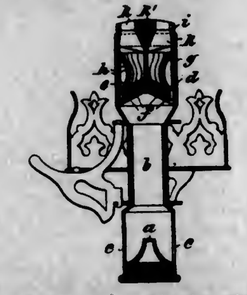
2. In a Bunsen burner, the combination with a gas-nozzle and a mixing tube having air inlets in its lower portion; of a distributing grating in said mixing tube having

parallel base and top planes oblique to the vertical axis of the mixing tube and constructed with passage walls vertical to the horizontal plane of the tube, the bottom edges of said walls being beveled to form cutting edges, and a cap provided with inner and outer rows of holes, the holes of the inner rows being smaller in diameter than those of the outer row, substantially as set forth.

3. In a Bunsen burner, the combination with a gas nozzle and a mixing tube having air inlets in its lower portion; of a distributing grating constructed in the shape of a double sloping roof having walls vertical to the horizontal plane and with lower edges beveled to form cutting edges; and a cap provided with rows of holes the holes of the inner rows being smaller in diameter than those of the outer rows, substantially as set forth.

4. In a Bunsen burner, the combination with a gas nozzle and a mixing tube having air inlets in its lower portion; of a distributing grating constructed in the shape of a double sloping roof and having vertical walls whose lower edges are beveled to form cutting edges; and a cap provided with circumferential rows of holes the holes of the inner row or rows being of smaller diameter than those of the outer row, substantially as set forth.

882,545. BUNSEN BURNER. PHILIPP VON WOUWERMANS, Vienna, Austria-Hungary, assignor to Gasspar-Unternehmung Nach System Wouwermans Halbmayr & Co., Vienna, Austria-Hungary, a Corporation. Filed Dec. 4, 1906. Serial No. 346,322.



In a Bunsen burner the combination with the gas nozzle and the mixing tube provided with air inlets, of a thick head-piece made of a metal having great heat conductivity and provided with radial slits the width of which increases outward and downward, cutting edges formed on the lower ends of the partitions between said openings, a tubular body provided with ribs of segment like shape made of a metal having great heat conductivity extending radially inward into the path of the combustible mixture and provided with cutting edges, said tubular body being inserted below the said head piece and in contact therewith, and a distributing grate placed between said tubular body and the mouth of the mixing tube and being composed of a number of vertical channels, substantially as and for the purposes stated.

882,546. CLOSURE FOR CONTAINING VESSELS. EUGENE D. CHELLIS, Portland, Me., assignor, by mesne assignments, to National Metal Seal Company, Portland, Me., a Corporation of Maine. Filed Aug. 11, 1906. Serial No. 330,217.



1. A closure for containing vessels comprising a cap formed with a depending marginal flange and provided with a locking lip adapted to engage the exterior walls of the vessel, said cap being provided with spring clamping arms adapted to embrace said vessel.

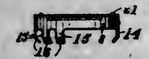
2. A closure for containing vessels having a depending locking lip and provided with spring clamping arms adapted to embrace the neck of the bottle, and an integral web connecting the cap and spring clamping arms.

3. A closure for containing vessels comprising a cap provided with a depending spring locking tongue and formed with integral clamping arms the terminals of which are spaced apart and deflected laterally.

4. A closure for containing vessels formed of a single piece of metal bent to form a plate provided with a depending marginal flange and having a central depression formed therein, a spring locking tongue depending from the flange, and a pair of spring clamping arms connected to the plate by an integral web.

5. A closure for containing vessels comprising a cap, spring clamping arms adapted to embrace said vessel and an integral web connecting said cap and clamping arms.

882,547. CAP FOR BOTTLES. EUGENE D. CHELLIS, Portland, Me., assignor, by mesne assignments, to National Metal Seal Company, Portland, Me., a Corporation of Maine. Filed Jan. 23, 1907. Serial No. 353,711.



1. A closure for containing vessels, comprising a cap, a cover pivoted thereto for lateral movement, and a locking lip on said cover adapted to engage, in the closed position thereof, the said containing vessel.

2. A closure for containing vessels, comprising a cap having on one side thereof clamping means, a cover pivoted to said cap for lateral movement, and a locking lip on said cover adapted to engage, in the closed position thereof, the said containing vessel.

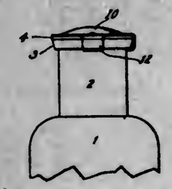
3. A closure for containing vessels having a reduced portion below the mouth thereof, comprising a cap, having on one side thereof means for engaging such reduced portion, a cover pivoted to said cap and laterally movable thereon, and a locking lip on said cover to engage said reduced portion when the cover is closed.

4. A closure for containing vessels comprising a cap having a delivery opening therein, a cover mounted on said cap for lateral movement thereon, said opening in the cap being extended to the outside edge in the line of movement of said cover.

5. In combination with a containing vessel having a reduced portion below its mouth, a cover, means for providing for a relative lateral movement between said cover and bottle, and a locking lip on said cover adapted to engage, in its closed position, the said reduced portion.

[Claims 6 to 16 not printed in the Gazette.]

882,548. CLOSURE FOR CONTAINING VESSELS. EUGENE D. CHELLIS, Portland, Me., assignor, by mesne assignments, to National Metal Seal Company, Portland, Me., a Corporation of Maine. Filed Mar. 21, 1907. Serial No. 363,734.



1. A device of the class described consisting of a plate, means for engaging the mouth of a vessel internally, a cover pivoted to said plate and adapted to be swung laterally thereon, and means on said cover to engage an exterior shoulder on a vessel neck when in closed position.

2. A device of the class described consisting of a plate, a depending flange for engaging the mouth of a vessel internally, a cover pivoted to said plate and adapted to be

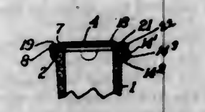
swung laterally thereon, and means on said cover to engage an exterior shoulder on a vessel neck when in closed position.

3. A device of the class described consisting of a plate having a central opening therein, a depending flange for engaging the mouth of a vessel internally, a cover pivoted to said plate and adapted to be swung laterally thereon, and means on said cover to engage an exterior shoulder on a vessel neck when in closed position.

4. A closure for a containing vessel having a shoulder about its mouth comprising a cap consisting of a plate having a central opening therein, a depending flange for engaging the mouth of the vessel internally, a packing between said flange and the interior of the vessel mouth, a cover pivoted to said plate and adapted to be swung laterally thereon, and a lip on said cover to engage the shoulder when in a closed position.

5. In a closure for containing vessels, a pair of members, means for providing relative movement between said members, means on one member for internally engaging the mouth of a vessel and on the other of said members to engage an exterior shoulder on a vessel neck when said members are in closed position.

882,549. CLOSURE FOR CONTAINING VESSELS. EUGENE D. CHELLIS, Portland, Me., assignor to National Metal Seal Company, Portland, Me., a Corporation of Maine. Filed Oct. 9, 1907. Serial No. 396, 531.



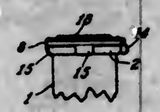
1. A laterally swinging cover for a containing vessel having a bent vessel engaging lip, said lip having an inwardly turned side flange on its bent portion.

2. In a closure for a containing vessel having a shoulder about its mouth, a laterally movable cover and a spring locking lip on said cover comprising an arched section terminating in a shoulder engaging lip.

3. A closure for a containing vessel having a shoulder about its mouth, a laterally movable cover and a spring locking lip on said cover having an arched section terminating in a shoulder engaging lip and a segmental guard on the side of the lip arch to cover the edge of the same.

4. A laterally swinging cover for a containing vessel having a shoulder about its mouth, and a spring locking lip thereon comprising an arched section terminating in a shoulder engaging lip.

882,550. CLOSURE FOR CONTAINING VESSELS. EUGENE D. CHELLIS, Portland, Me., assignor to National Metal Seal Company, Portland, Me., a Corporation of Maine. Filed Oct. 9, 1907. Serial No. 396,532.



1. A closure for a containing vessel having a shoulder about its mouth comprising a cap, a depending flange about said cap and oppositely disposed spring shoulder engaging fingers on said cap, and adapted to draw said flange down over the vessel mouth when the cap is laterally slid thereon.

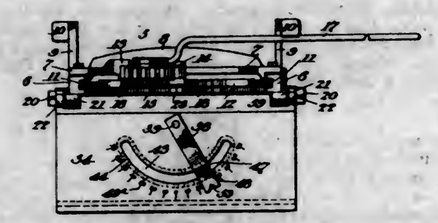
2. A closure for a containing vessel having a shoulder about its mouth comprising a cap having a delivery opening therein, a pair of oppositely disposed shoulder engaging fingers on said cap, a laterally movable cover on said cap, a shoulder engaging lip on said cover and adapted to be disposed between said fingers when the cover is in closed position.

3. A closure for a containing vessel having a shoulder about its mouth comprising a cap, a depending marginal flange entirely about said cap and a pair of oppositely disposed spring shoulder engaging fingers on said cap and adapted to draw said flange down over the vessel mouth when said cap is laterally slid thereon.

4. A closure for a containing vessel having a shoulder about its mouth comprising a cap having a delivery opening therein, a depending marginal flange entirely about said cap, a pair of oppositely disposed spring shoulder engaging fingers on said cap and adapted to draw said flange down over the vessel mouth when said cap is laterally slid thereon, a laterally movable cover on said cap and a shoulder engaging lip on said cover and adapted to be disposed between said fingers when the cover is in its closed position.

REISSUES.

12,763. WOOD-TRIMMING MACHINE. CLAUDE E. BROWN and WILLIAM J. GIBBS, Denver, Colo. Filed Feb. 13, 1908. Serial No. 415,788. Original No. 873,837, dated Dec. 17, 1907, Serial No. 368,977.



1. In a wood trimming machine, in combination a vertically reciprocating, plane knife having two cutting edges extending from its vertical edges upwardly to a central point of intersection, a bed having a shearing edge in cooperative proximity to the said knife and movable about a horisontal axis, and a table upon the said bed movable in parallel relation to the knife.

2. In a wood trimming machine, in combination, a vertically reciprocating, plane knife having two cutting edges extending from its vertical edges upwardly to a central point of intersection, a bed having a shearing edge in cooperative proximity to the said knife and movable about a horisontal axis, a table upon the said bed movable in parallel relation to the knife, a gage upon the said table movable about an axis at right angles to its upper surface, and means to hold the said gage in its adjusted position.

3. In a wood trimming machine, in combination a vertically reciprocating, plane knife having two cutting edges extending from its vertical edges upwardly to a central point of intersection, a bed having a shearing edge in cooperative proximity to the said knife and movable about a horizontal axis, a table upon the said bed movable in parallel relation to the knife, means connected with the bed to measure the angle between its upper surface and the face of the knife, a gage upon the table movable about an axis at right angles to its upper surface, and means upon the table to measure the angle between the said gage and a plane passing through its pivotal axis.

12,764. PROCESS OF PRODUCING ALLOYS OR COMPOUNDS OF COPPER AND TITANIUM. AUGUSTE J. ROSSI, New York, N. Y., assignor, by mesne assignments, to The Titanium Alloy Manufacturing Company, a Corporation of Maine. Filed Jan. 31, 1908. Serial No. 414,000. Original No. 700,244, dated May 20, 1902, Serial No. 39,331.

1. The process of producing alloys of metals assembled in the metallic state with metals in oxygenated state which consists in providing a bath of molten reducing metal the heat of the formation of whose oxid is at a given temperature greater than that of the said oxygenated metal; introducing into said bath the said metals assembled in the metallic state and reducing them likewise to a molten condition; introducing into said bath the said metals in oxygenated state, and developing in the charge a temperature sufficiently high to insure the requisite reaction between said reducing metal and the oxygen of the oxygenated metals leaving the liquefied metallic residuum of the latter to become alloyed with the liquefied metals which were introduced in the metallic state, substantially as and for the purposes described.

2. The process of producing alloys of metals assembled in the metallic state with metals in oxygenated state, which consists in introducing into a bath of aluminium and of such metals in the metallic state molten together the oxygenated metal and then developing in the charge a temperature sufficiently high to insure the requisite reaction between the said molten aluminium and the oxygen of said metals in the oxygenated state leaving the metallic residuum of said last mentioned metals to become alloyed with the said liquefied metal which was introduced in its metallic state into the charge other than aluminium, while the latter combines with the oxygen of said oxygenated metals and as an alumina slag containing also other impurities of the charge is separated from the metallic alloy aforesaid, substantially as and for the purposes described.

3. The process of producing an alloy or compound of copper and titanium which consists in introducing, into a bath of aluminium and copper molten together, titanic acid and then developing in the charge a temperature sufficiently high to insure the requisite reaction between the said molten aluminium and the oxygen of the titanic acid leaving the molten titanium to become alloyed with the molten copper while the aluminium combines with the oxygen of the said titanic acid and as an alumina slag containing also other impurities of the charge is separated from the said alloy of copper and titanium, substantially as and for the purposes described.

4. As a new article of manufacture a compound or alloy containing an important quantity of copper say not less than 10 per centum of the mass and titanium in industrially important proportions that is to say not less than 5 per centum of the mass, substantially as and for the purposes described.

5. As a new article of manufacture an alloy or compound of copper and titanium, substantially as and for the purposes described.

DESIGNS.

39,194. BADGE. FRANK PERSIC, Minonk, Ill., assignor of one-half to Jack Tomsic, Minonk, Ill. Filed Jan. 20, 1908. Serial No. 411,822. Term of patent 7 years.



The ornamental design for a badge, as shown.

39,195. EMBLEM. FORREST E. MANN, Grand Rapids, Mich. Filed Nov. 22, 1907. Serial No. 403,403. Term of patent 3½ years.



The ornamental design for an emblem, as shown.

39,196. EMBLEM. FORREST E. MANN, Grand Rapids, Mich. Filed Nov. 22, 1907. Serial No. 403,404. Term of patent 3½ years.



The ornamental design for an emblem, as shown.

39,197. EMBLEM. GEORGE H. MAISCH, Springfield, Ohio, assignor to The Springfield Metallic Casket Company, Springfield, Ohio, a Corporation of Ohio. Filed Dec. 26, 1907. Serial No. 408,199. Term of patent 7 years.



The ornamental design for an emblem, as shown.

39,198. DECORATIVE PLATE. AUGUST J. FONDEVILLE, West Hoboken, N. J. Filed Jan. 22, 1908. Serial No. 412,218. Term of patent 7 years.



The ornamental design for a decorative plate, as shown.

39,199. MATCH-BOX. JULIUS J. KWIK, North Caldwell, N. J., assignor to Simons, Bro. & Co., a Corporation of Pennsylvania. Filed Jan. 7, 1908. Serial No. 409,720. Term of patent 7 years.





The ornamental design for a match box, as shown.

39,200. HAND-BAG. JOSEPH L. CUTLER, Fort Myers, Fla. Filed Dec. 3, 1907. Serial No. 404,965. Term of patent 14 years.





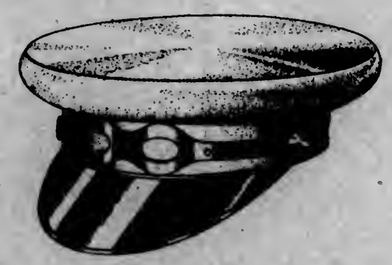
The ornamental design for a hand-bag, as shown.

39,201. LACING-HOOK. MELLEN N. BRAY, Boston, Mass. Filed Aug. 10, 1904. Serial No. 220,273. Term of patent 14 years.



The ornamental design for a lacing hook as shown.

39,202. CAP. MAX MATTES, New York, N. Y. Filed Dec. 20, 1907. Serial No. 407,430. Term of patent 3½ years.



The ornamental design for caps, as shown.

39,203. SHOE. SAMUEL BORCHARDT, New York, N. Y. Filed Dec. 30, 1907. Serial No. 408,709. Term of patent 14 years.



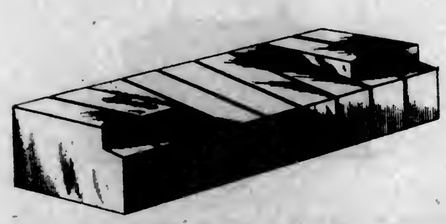
The ornamental design for a shoe, as shown.

39,204. POCKET SAVINGS-BANK. CHARLES FISHER, Oak Park, Ill. Filed Aug. 1, 1907. Serial No. 386,673. Term of patent 7 years.



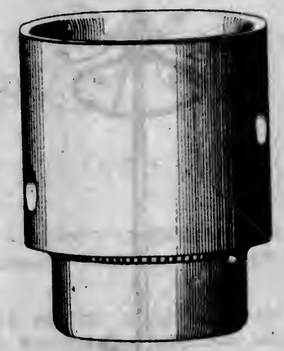
The ornamental design for a pocket savings-bank, as shown.

39,205. WINDOW-SILL. MONTROSE P. MCARDLE, St. Louis, Mo., assignor to Hydraulic Press Brick Company, St. Louis, Mo., a Corporation. Filed Sept. 3, 1907. Serial No. 391,275. Term of patent 3½ years.



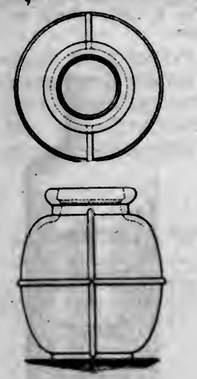
The ornamental design for a window-sill as shown.

39,206. POTTERY JAR. GEORGE E. PATTON, Monmouth, Ill. Filed Dec. 2, 1907. Serial No. 404,978. Term of patent 14 years.



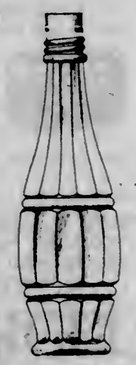
The ornamental design for a pottery jar as shown.

39,207. BOTTLE. GRACE G. DURAND, Lake Bluff, Ill. Filed Jan. 29, 1908. Serial No. 413,325. Term of patent 14 years.



The ornamental design for a bottle, as shown.

39,208. BOTTLE. CHARLES W. JONES, Louisville, Ky. Filed Jan. 28, 1908. Serial No. 413,100. Term of patent 7 years.



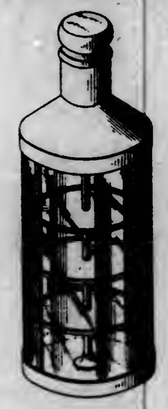
The ornamental design for a bottle, as shown.

39,209. DISPLAY-RACK. JOHN A. LARSON, Hayfield, Minn. Filed Jan. 3, 1908. Serial No. 409,246. Term of patent 7 years.



The ornamental design for a display rack, as shown.

39,210. DISPLAY-CABINET. HUGO HEIMANN, St. Louis, Mo. Filed Feb. 8, 1907. Serial No. 356,491. Term of patent 14 years.



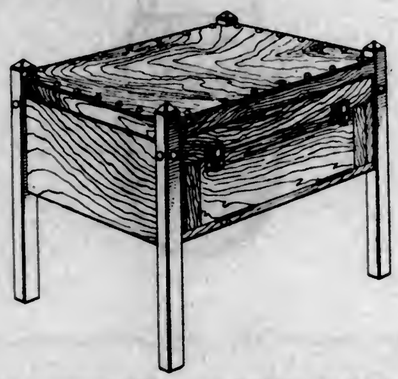
The ornamental design for a display cabinet, as shown.

39,211. ALTAR OR SHRINE. PATRICK MURPHY, Brooklyn, N. Y. Filed Oct. 29, 1907. Serial No. 399,782 Term of patent 7 years.



The ornamental design for an altar or shrine as shown.

39,212. INCUBATOR. ANNA L. PINKERTON-GARDINER, Los Angeles, Cal. Filed Dec. 7, 1907. Serial No. 405,620. Term of patent 14 years.



The ornamental design for an incubator, as shown.

TRADE-MARKS

PUBLISHED MARCH 17, 1908.

The following trade-marks have been adjudged entitled to registration under the act of February 20, 1905, and are published in compliance with section 6 of said act. Said section provides:

"Any person who believes he would be damaged by the registration of a mark may oppose the same by filing notice of opposition, stating the grounds therefor, in the Patent Office within thirty days after the publication of the mark sought to be registered, which said notice of opposition shall be verified by the person filing the same before one of the officers mentioned in section two of this act. If no notice of opposition is filed within said time the Commissioner shall issue a certificate of registration therefor, as hereinafter provided for."

Marks which are stated to have been "Used ten years" are registrable under the last proviso of section 5 of said act, which is as follows:

"And provided further, That nothing herein shall prevent the registration of any mark used by the applicant or his predecessors, or by those from whom title to the mark is derived, in commerce with foreign nations or among the several States, or with Indian tribes, which was in actual and exclusive use as a trade-mark of the applicant or his predecessors from whom he derived title for ten years next preceding the passage of this act."

Section 14 of said act provides for the following fee:

"On filing notice of opposition to the registration of a trade-mark, ten dollars."

Ser. No. 1,946. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) STEUBEN COUNTY WINE CO., Chicago, Ill. Filed Apr. 17, 1905.

Beach Run

Particular description of goods.—Whisky.

Ser. No. 9,770. (CLASS 48. MALT EXTRACTS AND LIQUORS.) ANHEUSER-BUSCH BREWING ASSOCIATION, St. Louis, Mo. Filed July 3, 1905.



The upper and lower portion of the shield is red, the central panel blue, and the border of the shield and panel yellow.

Particular description of goods.—Extract of Malt and Hops.

Ser. No. 12,532. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) THE UNITED STATES GRAPHITE COMPANY, Saginaw, Mich. Filed Sept. 13, 1905. Used ten years.

RAVEN

Particular description of goods.—Stove-Polish.

Ser. No. 14,327. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS, NOT INCLUDING ELECTRICAL APPARATUS.) J. G. HEBART, Nuremberg, Germany. Filed Nov. 4, 1905.



Particular description of goods.—Floating Wicks or Night-Lights.

Ser. No. 14,511. (CLASS 16. PAINTS AND PAINTERS' MATERIALS, NOT INCLUDING OILS AND POLISHES.) RINALD BROS., Philadelphia, Pa. Filed Nov. 11, 1905. Used ten years.

PORCELAIN

Particular description of goods.—Enamel Paint.

Ser. No. 14,787. (CLASS 9. EXPLOSIVES, FIREARMS, EQUIPMENTS, AND PROJECTILES.) MARY ELIZABETH JOHNSON, trustee, Fitchburg, Mass. Filed Nov. 18, 1905. Used ten years.

IVER JOHNSON

Particular description of goods.—Rifles, Shotguns, Pistols, and Revolvers.

Ser. No. 15,257. (CLASS 5. ADHESIVES.) JEFFERY'S PATENT MARINE GLUE WORKS, Stratford, London, England. Filed Dec. 7, 1905.



Particular description of goods.—Marine Glue and Marine-Glue Pitch.

Ser. No. 16,208. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) LOUIS ALEXANDER MARNIER LAPOSTOLLE, Paris, France. Filed July 7, 1905.



Particular description of goods.—Menthe and Crème de Menthe.

Ser. No. 17,472. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) CHEMISCHE WERKE HANSA GESELLSCHAFT MIT BESCHRÄNKTER HAFTUNG, Hemelingen, near Bremen, Germany. Filed Feb. 19, 1906.

Cupressymol

Particular description of goods.—Remedies for Diseases of the Brain, Eyes, Nose, Ears, Throat, and Jaws, for Bronchial Troubles, Diseases of the Head, Hair, Lungs, Heart, Kidneys, Gall, and Liver, for Biliousness, Stomach and Bowel Trouble, Affections of the Spleen, Dropsy, Sexual Diseases, Diseases of Women, of the Skin, Muscles, Bones, Lymphatic Enlargement, for the Treatment of Wounds, and for Seasickness.

Ser. No. 17,475. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) CHEMISCHE WERKE HANSA GESELLSCHAFT MIT BESCHRÄNKTER HAFTUNG, Hemelingen, near Bremen, Germany. Filed Feb. 19, 1906.

Fetron

Particular description of goods.—Remedies for Diseases of the Brain, Eyes, Nose, Ears, Throat, and Jaws, for Bronchial Troubles, Diseases of the Head, Hair, Lungs, Heart, Kidneys, Gall, and Liver, for Biliousness, Stomach and Bowel Trouble, Affections of the Spleen, Dropsy, Sexual Diseases, Diseases of Women, of the Skin, Muscles, Bones, Lymphatic Enlargement, for the Treatment of Wounds, and for Seasickness.

Ser. No. 20,103. (CLASS 28. JEWELRY AND PRECIOUS-METAL WARE.) SAVARD & FILS, Paris, France. Filed June 7, 1906.

FIX

Particular description of goods.—Ornamental Clasps, Wedding-Rings, Resilient Split Rings, and Rings of All Kinds for Men and Women, Metal Trimmings for Alms-Bags and Purses, Bracelets, Lockets, Charms, and Medals, Chains of All Kinds, Necklaces, Chaplet Beads and Crosses, Pins of All Kinds, Shirt-Studs, Medallions, Fobs, Pencil-Cases, Letter-Openers, Handles for Canes and Umbrellas, Crosses, and Ornamental Backs for Mirrors, Made of Precious-Metal Ware.

Ser. No. 20,104. (CLASS 28. JEWELRY AND PRECIOUS-METAL WARE.) SAVARD & FILS, Paris, France. Filed June 7, 1906.

TITRE FIXE

Particular description of goods.—Ornamental Clasps, Wedding-Rings, Resilient Split Rings, and Rings of All Kinds for Men and Women, Metal Trimmings for Alms-Bags and Purses, Bracelets, Lockets, Charms, and Medals, Chains of All Kinds, Necklaces, Chaplet Beads and Crosses, Pins of All Kinds, Shirt-Studs, Medallions, Fobs, Pencil-Cases, Letter-Openers, Handles for Canes and Umbrellas, Crosses, and Ornamental Backs for Mirrors, Made of Precious-Metal Ware.

Ser. No. 20,845. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) FRANK WEDEHASE, Sebastopol, Cal. Filed July 10, 1906. Used ten years.

Fig Yeast

Particular description of goods.—Fig Yeast.

Ser. No. 21,189. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS, NOT INCLUDING ELECTRICAL APPARATUS.) EDWIN M. ROSENBLUTH, Philadelphia, Pa. Filed July 26, 1906.

Albosol

Particular description of goods.—Acetylene-Gas Generators and Acetylene-Gas Lamps and Parts Thereof.

Ser. No. 25,235. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) THE DEXINE PATENT PACKING AND RUBBER COMPANY LIMITED, London, England. Filed Feb. 11, 1907.

DEXINE

Particular description of goods.—Rubber Sheeting.

Ser. No. 25,243. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) MICHIGAN SOAP WORKS, Detroit, Mich. Filed Feb. 11, 1907.



Particular description of goods.—Laundry Soap.

Ser. No. 25,697. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) DECATUR FOUNTAIN COMPANY, Decatur, Ill. Filed Mar. 2, 1907.



Particular description of goods.—Soda-Fountains.

Ser. No. 25,953. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) STANDARD SANITARY MFG. CO., Pittsburg, Pa. Filed Mar. 13, 1907.



Particular description of goods.—Bath-Tubs, Sinks, Stationary Washstands, Lavatories, Water-Closets, Bidets, Shower-Baths, Urinals, Latrines, Seat-Tubs, Foot-Tubs, Valves, Cocks, Faucets, and Traps.

Ser. No. 25,998. (CLASS 39. CLOTHING.) JOHN H. PARKER, Malden, Mass. Filed Mar. 15, 1907. Used ten years.



Particular description of goods.—Combination Rubber and Leather Boots and Shoes.

Ser. No. 26,414. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) EDWARD EDWIN PHILBRICK, Tallahassee, Fla. Filed Apr. 2, 1907.



Particular description of goods.—A Remedy for the Treatment of Indigestion, Diarrhea, and Dysentery.

Ser. No. 27,056. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) WOLVERINE BRASS WORKS, Grand Rapids, Mich. Filed May 2, 1907.

WOLVERINE

Particular description of goods.—Plumbers' Tools and Appliances, Comprising Pipe-Vises, Pipe-Wrenches, Bending-Pins, Caulking Tools and Chisels, and Hose-Pliers.

Ser. No. 27,086. (CLASS 39. CLOTHING.) PARAMOUNT KNITTING COMPANY, Chicago, Ill. Filed May 3, 1907.



Particular description of goods.—Hosiery.

Ser. No. 27,212. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) GRAPE CAPSULE COMPANY, Allentown, Pa. Filed May 8, 1907.

COLSATHYL

Particular description of goods.—Medicines in Capsule Form for Rheumatism, Gout, Neuralgia, Megrim, Sciatica, Iritis, and Kindred Neuralgia Diseases.

Ser. No. 27,217. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) GRAPE CAPSULE COMPANY, Allentown, Pa. Filed May 8, 1907.

Ricinol Grape

Particular description of goods.—Castor-Oil in Capsules.

Ser. No. 27,595. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) STREETT AND COBERAN COMPANY, Baltimore, Md. Filed May 23, 1907. Used ten years.



Particular description of goods.—Hams and Bacon.

Ser. No. 27,864. (CLASS 2. RECEPTACLES.) LEADER IRON WORKS, Decatur, Ill. Filed June 3, 1907.



Particular description of goods.—Storage-Tanks and Parts of Same.

Ser. No. 27,868. (CLASS 18. AGRICULTURAL AND DAIRY MACHINERY AND PARTS THEREOF.) GAAR, SCOTT & CO., Richmond, Ind. Filed June 4, 1907.



Particular description of goods.—Threshing-Machines.

Ser. No. 27,869. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) GAAR, SCOTT & CO., Richmond, Ind. Filed June 4, 1907.



Particular description of goods.—Traction and Portable Steam-Engines.

Ser. No. 29,882. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) E. WERTHEIMER & CIE., Paris, France. Filed Sept. 12, 1907.



Particular description of goods.—Perfumery, Complexion-Powders, and Face-Tints.

Ser. No. 29,883. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) E. WERTHEIMER & CIE., Paris, France. Filed Sept. 12, 1907.



Particular description of goods.—Perfumery, Toilet and Complexion Powders, and Tints.

Ser. No. 29,884. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) E. WERTHEIMER & CIE., Paris, France. Filed Sept. 12, 1907.

MANON LESCAUT

Particular description of goods.—Perfumery and Face-Tints.

Ser. No. 29,885. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) E. WERTHEIMER & CIE., Paris, France. Filed Sept. 12, 1907.



Particular description of goods.—Perfumery and Face-Tints.

Ser. No. 29,886. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) E. WERTHEIMER & CIE., Paris, France. Filed Sept. 12, 1907.



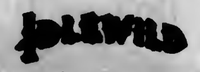
Particular description of goods.—Toilet Powder.

Ser. No. 29,887. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) E. WERTHEIMER & CIE., Paris, France. Filed Sept. 12, 1907.



Particular description of goods.—Perfumery, Toilet Powders, and Face-Tints.

Ser. No. 30,126. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) CROCKER GROCERY COMPANY, Wilkes-Barre, Pa. Filed Sept. 21, 1907.



Particular description of goods.—Canned Fruits and Vegetables, Dried Fruits and Spices.

Ser. No. 30,277. (CLASS 28. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) THE B. L. RYDER COMPANY, Chambersburg, Pa. Filed Sept. 28, 1907. Used ten years.

"AMERICAN"
EVAPORATOR

Particular description of goods.—Evaporators for Fruits and Vegetables.

Ser. No. 30,541. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) CHARLES URBAN, London, England. Filed Oct. 11, 1907.

KINETO

Particular description of goods.—Kinematographic Apparatus.

Ser. No. 30,794. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) THE ASHCROFT MANUFACTURING COMPANY, Bridgeport, Conn. Filed Oct. 26, 1907.



Particular description of goods.—Pipe-Stocks and Dies.

Ser. No. 30,900. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) THE ASHCROFT MANUFACTURING COMPANY, Bridgeport, Conn. Filed Oct. 31, 1907.



Particular description of goods.—Pulleys, Pumps, and Reducing-Motions for Indicators.

Ser. No. 30,985. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) GEORGE LISS & CO., New York, N. Y. Filed Nov. 4, 1907.

Highwood

Particular description of goods.—Maple-Syrup.

Ser. No. 30,986. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) GEORGE LISS & CO., New York, N. Y. Filed Nov. 4, 1907.

HIGHWOOD

Particular description of goods.—Canned Salmon.

Ser. No. 30,987. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) GEORGE LISS & CO., New York, N. Y. Filed Nov. 4, 1907.

HIGHWOOD

Particular description of goods.—Canned Fruits and Vegetables, Spices, Extracts, Mince-Meat, and Jelly-Powder.

Ser. No. 30,989. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) GEORGE LISS & CO., New York, N. Y. Filed Nov. 4, 1907.

HIGHWOOD

Particular description of goods.—Chocolate and Cocoa.

Ser. No. 31,353. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE EVANS CHEMICAL CO., Cincinnati, Ohio. Filed Nov. 25, 1907.



Particular description of goods.—A Preparation for the Treatment of Inflammations, Irritations, Ulcerations, and other derangements of the Mucous Membrane.

Ser. No. 31,357. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) HENRY F. FOSTER, Toledo, Ohio. Filed Nov. 25, 1907.

"WUNDER"

Particular description of goods.—A Detergent Washing Compound in Wafer Form.

Ser. No. 31,475. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) DELANO, POTTER & CO., Boston, Mass. Filed Nov. 30, 1907. Used ten years.

JUNGLE
CHOP

Particular description of goods.—Tea.

Ser. No. 31,476. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) DELANO, POTTER & CO., Boston, Mass. Filed Nov. 30, 1907.



Particular description of goods.—Tea.

Ser. No. 31,605. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) WILLIAM COOPER & NEPHEWS, Berkhamsted, England. Filed Dec. 7, 1907.

AMOROSA

Particular description of goods.—A Liquid Preparation to be Used as a Toilet Soap.

Ser. No. 31,623. (CLASS 29. BROOMS, BRUSHES, AND DUSTERS.) AMSTERDAM BROOM CO., Amsterdam, N. Y. Filed Dec. 9, 1907.



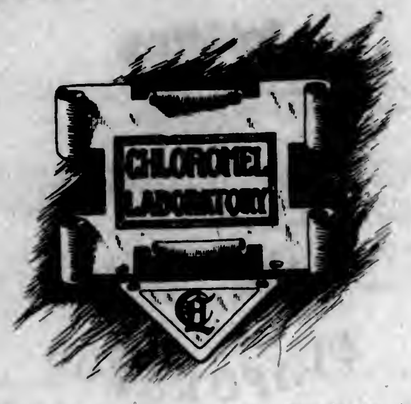
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Particular description of goods.—Brooms and Brushes.

Ser. No. 31,672. (CLASS 39. CLOTHING.) WAGNER BROTHERS, Pittsburg and Sharpsburg, Pa. Filed Dec. 11, 1907.



Particular description of goods.—Leather Shoes.

Ser. No. 31,680. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) GEORGE BENJAMIN, New York, N. Y. Filed Dec. 12, 1907.



Particular description of goods.—Remedy for Acute Bronchitis and Cough.

Ser. No. 31,684. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) DICKINSON DISTRIBUTING COMPANY, INC., Providence, R. I. Filed Dec. 12, 1907.



Particular description of goods.—Antiseptic Soap Powder for Toilet Purposes.

Ser. No. 31,731. (CLASS 3. BAGGAGE, HORSE EQUIPMENTS, PORTFOLIOS, AND POCKET-BOOKS.) THE GEORGE WORTHINGTON COMPANY, Cleveland, Ohio. Filed Dec. 16, 1907.



Particular description of goods.—Harness and Whips.

Ser. No. 31,795. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) GRIFFITH-DURNEY COMPANY, San Francisco, Cal. Filed Dec. 17, 1907.



Particular description of goods.—Canned Salmon.

Ser. No. 31,814. (CLASS 37. PAPER AND STATIONERY.) JAMES DAVIS, Chicago, Ill. Filed Dec. 18, 1907.



Particular description of goods.—A Pressed-Paper Wall-Covering.

Ser. No. 31,816. (CLASS 39. CLOTHING.) CHIPPEWA SHOE MFG. CO., Chippewa Falls, Wis. Filed Dec. 18, 1907.



Particular description of goods.—Leather Boots and Shoes and Leather Tops for Rubbers.

Ser. No. 31,820. (CLASS 14. METALS AND METAL CASTINGS AND FORGINGS.) WILLIAM B. HOUGH COMPANY, Chicago, Ill. Filed Dec. 18, 1907.



Particular description of goods.—Metal Bars for Reinforcing Concrete Construction.

Ser. No. 31,824. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS, NOT INCLUDING ELECTRICAL APPARATUS.) THE RAMIE CO. LIMITED, Manchester, Bredbury, and Marple Bridge, England. Filed Dec. 18, 1907.

ZEIMAR

Particular description of goods.—Mantles for Incandescent Gas-Burners.

Ser. No. 31,874. (CLASS 14. METALS AND METAL CASTINGS AND FORGINGS.) THE MANGANESE BRONZE & BRASS COMPANY LIMITED, London, England. Filed Dec. 21, 1907.

IMMADIUM

Particular description of goods.—Metallic Alloys.

Ser. No. 31,875. (CLASS 14. METALS AND METAL CASTINGS AND FORGINGS.) THE MANGANESE BRONZE & BRASS COMPANY LIMITED, London, England. Filed Dec. 21, 1907.

CROTORITE

Particular description of goods.—Metallic Alloys.

Ser. No. 31,876. (CLASS 14. METALS AND METAL CASTINGS AND FORGINGS.) THE MANGANESE BRONZE & BRASS COMPANY LIMITED, London, England. Filed Dec. 21, 1907.

DAMAXINE

Particular description of goods.—Antifriction Alloys.

Ser. No. 31,909. (CLASS 39. CLOTHING.) HENRY HARRY TREFFER, Davenport, Iowa. Filed Dec. 24, 1907.



Particular description of goods.—Corsets.

Ser. No. 31,936. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) MARQUISE CHOCOLATE CO., INC., New York, N. Y. Filed Dec. 27, 1907.



Particular description of goods.—Chocolate and Candles.

Ser. No. 31,937. (CLASS 39. CLOTHING.) CONHAIM & CO., New York, N. Y. Filed Dec. 27, 1907.

GAITER SUIT

Particular description of goods.—Two-Piece Outer Suits for Ladies' and Misses' Wear.

Ser. No. 31,953. (CLASS 9. EXPLOSIVES, FIREARMS, EQUIPMENTS, AND PROJECTILES.) HARRINGTON & RICHARDSON ARMS CO., Worcester, Mass. Filed Dec. 28, 1907.

Target
Grip

Particular description of goods.—Revolvers, Pistols, Rifles, and Shotguns.

Ser. No. 31,980. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) THE GEORGE WORTHINGTON COMPANY, Cleveland, Ohio. Filed Dec. 30, 1907.



Particular description of goods.—Razor-Strops.

Ser. No. 32,014. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) EDUARD MEYER, Friedrichswerth, Germany. Filed Jan. 2, 1908.

„Otwor"

Particular description of goods.—Roasted Cereals.

Ser. No. 32,052. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) VALDOSTA BOTTLING WORKS, Valdosta, Ga. Filed Jan. 4, 1908.

Plymouth Rock

Particular description of goods.—Non-Intoxicating Carbonated Beverages.

Ser. No. 32,055. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ALEXANDER MACWILLIE, Detroit, Mich. Filed Jan. 4, 1908.

Eagle



Particular description of goods.—Peanut-Butter.

Ser. No. 32,058. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) D. BERNHARD & Co., Boston, Mass. Filed Jan. 4, 1908.



Particular description of goods.—Non-Intoxicating Carbonated Beverages.

Ser. No. 32,060. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) JOHN C. ASCHENBECK, Wharton, Tex. Filed Jan. 4, 1908.

AA

Particular description of goods.—Non-Intoxicating Carbonated Beverages.

Ser. No. 32,101. (CLASS 39. CLOTHING.) BARNET SOLASH, New York, N. Y. Filed Jan. 6, 1908.



Particular description of goods.—Cloth Hats and Caps.

Ser. No. 32,118. (CLASS 47. WINES, EXCEPT MEDICATED.) SOCIEDAD VINICOLA S & L DURLACHER, Hamburg, Germany. Filed Jan. 7, 1908.



Particular description of goods.—Still Wine.

Ser. No. 32,123. (CLASS 14. METALS AND METAL CASTINGS AND FORGINGS.) SPRING PERCH COMPANY, Bridgeport, Conn. Filed Jan. 7, 1908.



Particular description of goods.—Rolled Steel in Strips and Bars.

Ser. No. 32,148. (CLASS 36. MUSICAL INSTRUMENTS AND SUPPLIES.) GEORGE STECK & Co., New York, N. Y. Filed Jan. 9, 1908. Used ten years.

George Steck & Co.

Particular description of goods.—Pianos and Player-Pianos.

Ser. No. 32,153. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE HEYDEN CHEMICAL WORKS, New York, N. Y. Filed Jan. 9, 1908.

Argoferment

Particular description of goods.—Colloidal Silver for Therapeutic Use.

Ser. No. 32,157. (CLASS 39. CLOTHING.) EDWARDS MANUFACTURING COMPANY, Clinton, Iowa. Filed Jan. 10, 1908.

CZARINA

Particular description of goods.—Petticoats.

Ser. No. 32,158. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) RED CROSS POWDER COMPANY, New York, N. Y. Filed Jan. 10, 1908.



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Particular description of goods.—An Antiseptic Toilet Powder, Tooth-Powder, Animal-Healing Powder, Glove-Powder, and Foot-Powder.

Ser. No. 32,162. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) CHAS. H. CONRAD, Chicago, Ill. Filed Jan. 10, 1908.

MOKANA

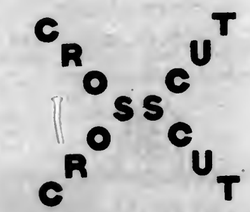
Particular description of goods.—Coffee.

Ser. No. 32,164. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) CHAS. H. CONRAD, Chicago, Ill. Filed Jan. 10, 1908.

BLUE RIBBON

Particular description of goods.—Coffee.

Ser. No. 32,169. (CLASS 37. PAPER AND STATIONERY.) ALBANY PERFORATED WRAPPING PAPER COMPANY, Albany, N. Y. Filed Jan. 10, 1908. Used ten years.



Particular description of goods.—Packages of Toilet-Paper.

Ser. No. 32,189. (CLASS 3. BAGGAGE, HORSE EQUIPMENTS, PORTFOLIOS, AND POCKET-BOOKS.) BURLINGTON BLANKET COMPANY, Burlington, Iowa. Filed Jan. 13, 1908. Used ten years.

"STAY-ON"

Particular description of goods.—Horse-Blankets.

Ser. No. 32,193. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) DAVID A. MAXWELL, Anthony, Kans. Filed Jan. 13, 1908.



Particular description of goods.—A Remedy for Pulmonary and Bronchial Diseases and Affections.

Ser. No. 32,212. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) THE TORSION BALANCE COMPANY, New York, N. Y. Filed Jan. 14, 1908. Used ten years.

TORSION BALANCE

Particular description of goods.—Balances and Scales.

Ser. No. 32,233. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE H & H COMPANY, Attica, Ind. Filed Jan. 15, 1908.

THE H&H BALM

Particular description of goods.—A Remedy for Catarrhal Affections of the Air-Passages, Including Catarrh, Hay-Fever, Rose-Cold, Cold in the Head, Sore Throat, Asthma, Croup, Catarrhal Headache, Deafness Due to Catarrh and Earache, and for Rheumatism, Erysipelas, Eczema, and Piles.

Ser. No. 32,308. (CLASS 38. PUBLICATIONS.) LA HACIENDA COMPANY, Buffalo, N. Y. Filed Jan. 18, 1908.

LaHacienda

Particular description of goods.—Periodicals.

Ser. No. 32,316. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) DOWNING, CLARK & COMPANY, New York, N. Y. Filed Jan. 20, 1908.



Particular description of goods.—Woolen and Worsted Cloth.

Ser. No. 32,322. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) H. O. WILBUR & SONS, Philadelphia, Pa. Filed Jan. 20, 1908.



Particular description of goods.—Chocolate.

Ser. No. 32,323. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) H. O. WILBUR & SONS, Philadelphia, Pa. Filed Jan. 20, 1908.



Particular description of goods.—Chocolate and Cocoa.

Ser. No. 32,341. (CLASS 39. CLOTHING.) KING BROS. SHOE CO., Bristol, Tenn. Filed Jan. 21, 1908.



Particular description of goods.—Leather Shoes.

Ser. No. 32,344. (CLASS 17. TOBACCO PRODUCTS.) LUDWIG LIPTAI, New York, N. Y. Filed Jan. 21, 1908.



Particular description of goods.—Cigars, Cigarettes, Cheroots, Stogies, Smoking-Tobacco, Chewing-Tobacco, and Scrap-Tobacco.

Ser. No. 32,367. (CLASS 47. WINES, EXCEPT MEDICATED.) P. DEMPSEY & Co., Boston, Mass. Filed Jan. 22, 1908.

REAL TORO

Particular description of goods.—Sherry-Wine, Oporto Wine, Marsala Wine, Madeira and other Wines.

Ser. No. 32,375. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE BRENNER CANDY CO., Green Bay, Wis. Filed Jan. 22, 1908.



Particular description of goods.—Chocolates.

Ser. No. 32,393. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) EDWIN SHIVELL, Boston,. Mass. Filed Jan. 23, 1908.

Crystal Sea

Particular description of goods.—Sardines, Salmon, and Herrings.

Ser. No. 32,395. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE IMPERIAL CHOCOLATES CO., Cambridge, Mass. Filed Jan. 23, 1908.



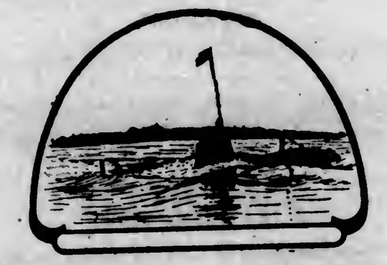
Particular description of goods.—Chocolates.

Ser. No. 32,396. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE IMPERIAL CHOCOLATES CO., Cambridge, Mass. Filed Jan. 23, 1908.



Particular description of goods.—Chocolates.

Ser. No. 32,402. (CLASS 16. PAINTS AND PAINTERS' MATERIALS, NOT INCLUDING OILS AND POLISHES.) SUB-MARINE PAINT COMPANY, Portland, Me. Filed Jan. 24, 1908.



Particular description of goods.—Paints.

Ser. No. 32,408. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) NORTH-WEST MILLS COMPANY, Winona, Minn. Filed Jan. 24, 1908.

SUGAROTA

Particular description of goods.—Molasses Feed for Stock.

Ser. No. 32,418. (CLASS 39. CLOTHING.) JOHN A. HUGHES, Boston, Mass. Filed Jan. 24, 1908.



Particular description of goods.—Leather Boots and Shoes.

Ser. No. 32,440. (CLASS 17. TOBACCO PRODUCTS.) ALBERT ROSENDAHL, New York, N. Y. Filed Jan. 25, 1908.



Particular description of goods.—Cigars.

Ser. No. 32,451. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) HARDIE BROS. Co., Pittsburg, Pa. Filed Jan. 27, 1908.



Particular description of goods.—Candies and Peanut-Candies.

Ser. No. 32,454. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) ALEX BLOOM, Chicago, Ill. Filed Jan. 27, 1908.

OLD WISHER

Particular description of goods.—Whisky.

Ser. No. 32,462. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) GRIFFITH-DURNEY COMPANY, San Francisco, Cal. Filed Jan. 27, 1908.

SAN BERNARDO

Particular description of goods.—Canned Fruits and Vegetables.

Ser. No. 32,463. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE KNOWLTON DANDERINE CO., Chicago, Ill. Filed Jan. 27, 1908. Used ten years.

DR. KNOWLTON'S
Massage Cream

Particular description of goods.—A Plastic Preparation for Use in Massage Treatment of the Skin.

Ser. No. 32,465. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) DR. J. J. KROM CO., Atlanta, Ga. Filed Jan. 27, 1908. Used ten years.

Krom

Particular description of goods.—A Remedy for Diseases of the Scalp.

Ser. No. 32,469. (CLASS 46. FOODS AND INGREDIENTS OF FOOD.) E. M. CHASE COMPANY, Nebraska City, Nebr. Filed Jan. 28, 1908.

THE CHASE



Particular description of goods.—Flavoring Extracts for Foods.

Ser. No. 32,472. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) HENRY MAUSS, New York, N. Y. Filed Jan. 28, 1908.

MARROWFOOD

Particular description of goods.—A Carbonated Non-Alcoholic Sparkling Beverage.

Ser. No. 32,473. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) HENRY MAUSS, New York, N. Y. Filed Jan. 28, 1908.



Particular description of goods.—A Carbonated Non-Alcoholic Sparkling Beverage.

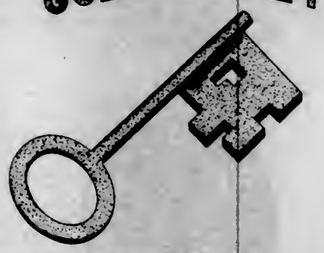
Ser. No. 32,493. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) BOWERSOCK MILLS & POWER CO., Lawrence, Kans. Filed Jan. 30, 1908.

ZEPHYR

Particular description of goods.—Wheat-Flour.

Ser. No. 32,496. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE GREAT ATLANTIC AND PACIFIC TEA COMPANY, New York, N. Y. Filed Jan. 30, 1908.

GOLDEN KEY



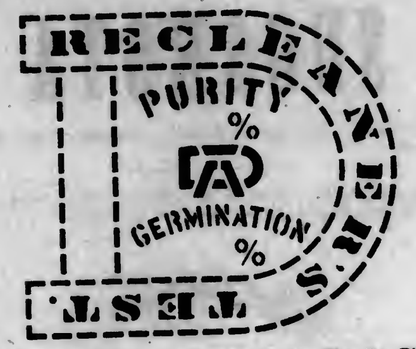
Particular description of goods.—Teas.

Ser. No. 32,509. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) LAFAYETTE COLTRIN, Omaha, Nebr. Filed Jan. 31, 1908.

UNCLE SAM

Particular description of goods.—A Cereal Breakfast Food.

Ser. No. 32,513. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) THE ALBERT DICKINSON COMPANY, Chicago, Ill. Filed Jan. 31, 1908.



Particular description of goods.—Clover, Timothy, Blue-Grass, Redtop-Grass, Orchard-Grass, Rye-Grass, Bromus-Grass, Hungarian-Grass, and Millet-Grass Seed.

Ser. No. 32,549. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) MEYER BROTHERS COFFEE AND SPICE COMPANY, St. Louis, Mo. Filed Feb. 3, 1908.

DAY BREAK

Particular description of goods.—Coffee.

Ser. No. 32,550. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) MEYER BROTHERS COFFEE AND SPICE COMPANY, St. Louis, Mo. Filed Feb. 3, 1908.

VERDICT

Particular description of goods.—Coffee.

Ser. No. 32,553. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) MEYER BROTHERS COFFEE AND SPICE COMPANY, St. Louis, Mo. Filed Feb. 3, 1908.

JA-SAN-MO

Particular description of goods.—Coffee.

Ser. No. 32,555. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) MEYER BROTHERS COFFEE AND SPICE COMPANY, St. Louis, Mo. Filed Feb. 3, 1908.

CASCADE

Particular description of goods.—Coffee.

Ser. No. 32,561. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) SOUTHERN MEDICINE CO., Atlanta, Ga. Filed Feb. 4, 1908.

HER-TRU-LINE

Particular description of goods.—Hair-Tonics.

Ser. No. 32,564. (CLASS 43. THREAD AND YARN.) BLODGETT & ORSWELL CO., Pawtucket, R. I. Filed Feb. 4, 1908.

ELCO

Particular description of goods.—Cotton Thread.

Ser. No. 32,565. (CLASS 43. THREAD AND YARN.) BLODGETT & ORSWELL CO., Pawtucket, R. I. Filed Feb. 4, 1908.



Particular description of goods.—Cotton Thread.

Ser. No. 32,566. (CLASS 43. THREAD AND YARN.) BLODGETT & ORSWELL CO., Pawtucket, R. I. Filed Feb. 4, 1908.

MARVEL

Particular description of goods.—Cotton Thread.

Ser. No. 32,567. (CLASS 43. THREAD AND YARN.) BLODGETT & ORSWELL CO., Pawtucket, R. I. Filed Feb. 4, 1908.

WARRIOR

Particular description of goods.—Cotton Thread.

Ser. No. 32,568. (CLASS 43. THREAD AND YARN.) BLODGETT & ORSWELL CO., Pawtucket, R. I. Filed Feb. 4, 1908.

J.J.C.

Particular description of goods.—Cotton Thread.

Ser. No. 32,569. (CLASS 43. THREAD AND YARN.) BLODGETT & ORSWELL CO., Pawtucket, R. I. Filed Feb. 4, 1908.

B&O

Particular description of goods.—Cotton Thread.

Ser. No. 32,583. (CLASS 39. CLOTHING.) CHARLES A. EATON COMPANY, Brockton, Mass. Filed Feb. 4, 1908. Used ten years.

Crawford

Particular description of goods.—Boots, Shoes, and Slippers of Leather, Either Alone or in Combination with Canvas or other Material.

Ser. No. 32,587. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) DANIEL DOODY, Washington, D. C. Filed Feb. 5, 1908.

BUCK HORN CLUB



Particular description of goods.—Whisky.

Ser. No. 32,595. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) J. SPENCER TURNER CO., New York, N. Y. Filed Feb. 5, 1908.



HOUSE BOAT

Particular description of goods.—Cotton Ducks, Drillings, and Sheetings.

Ser. No. 32,597. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) NEIL C. POLSON, Kingston, Ontario, Canada, and Hartford, Conn. Filed Feb. 5, 1908.

CATARRHOZONE

Particular description of goods.—Remedy for Catarrh, Colds, Coughs, Bronchitis, Asthma, Hay-Fever, Deafness, La Grippe, Throat Trouble, and Consumption.

Ser. No. 32,607. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) SAMUEL MOFFITT, New York, N. Y. Filed Feb. 6, 1908.

Restaurator Vital



Particular description of goods.—A Tonic Preparation in the Form of a Pill.

Ser. No. 32,609. (CLASS 12. MASONRY MATERIALS.) COPLAY CEMENT MANUFACTURING COMPANY, Philadelphia, Pa. Filed Feb. 6, 1908.



Particular description of goods.—Portland Cement.

Ser. No. 32,610. (CLASS 12. MASONRY MATERIALS.) FISHER BROS. PAPER COMPANY, Fort Wayne, Ind. Filed Feb. 6, 1908.

FLEXOID

Particular description of goods.—Roofing-Paper.

Ser. No. 32,614. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) SAMUEL WOOLSTON, Monmouth, Ill. Filed Feb. 6, 1908.

LADEAUS

Particular description of goods.—A Remedy for the Liquor Habit, Headache, and Diseases of the Kidney and Bladder.

Ser. No. 32,630. (CLASS 10. FERTILIZERS.) VIRGINIA-CAROLINA CHEMICAL COMPANY, Jersey City, N. J.; Richmond and Norfolk, Va.; Charleston, S. C.; Savannah and Atlanta, Ga.; Montgomery, Ala.; Durham, N. C., and Memphis, Tenn. Filed Feb. 7, 1908.



The mark is colored red.
Particular description of goods.—Fertilizers.

Ser. No. 32,644. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ASPEGREN & CO., New York, N. Y. Filed Feb. 7, 1908.

CRACKER JACK

Particular description of goods.—Cotton-Seed Oil.

Ser. No. 32,648. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ELLIOTT AND SHARP, Coatesville, Pa. Filed Feb. 7, 1908.

NO-NAIL

Particular description of goods.—Horse Medicine Used in the Treatment of Nail Wounds, Torn Quarters, Thrush, Scratches, Greased Heels, Festered Corns, Barb-Wire Cuts, Foul Claw in Cattle.

Ser. No. 32,657. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) DETROIT LUBRICATOR CO., Detroit, Mich. Filed Feb. 8, 1908.



Particular description of goods.—Water-Gages.

Ser. No. 32,697. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) SWIFT & COMPANY, Chicago, Ill. Filed Feb. 10, 1908.



Particular description of goods.—Soap.

Ser. No. 32,705. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) WALKER & HARP MFG CO., Cohoes, N. Y. Filed Feb. 11, 1908.

Lasticbat

Particular description of goods.—Cotton-Batting.

Ser. No. 32,712. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) BLANKE-WENNEKER CANDY CO., St. Louis, Mo. Filed Feb. 11, 1908.

PIN MONEY

Particular description of goods.—Candy.

Ser. No. 32,718. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) D. R. BRADLEY & SON, Pleasantville and New York, N. Y. Filed Feb. 12, 1908. Used ten years.

BRADLEY'S

Particular description of goods.—Soap.

Ser. No. 32,756. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) RAGON BROTHERS, Evansville, Ind. Filed Feb. 13, 1908. Used ten years.

BRIGHT RED

Particular description of goods.—Canned Tomatoes.

TRADE-MARKS

REGISTERED MARCH 17, 1908.

68,201. THREADING AND CUTTING-OFF MACHINES. DAVID N. ARMSTRONG, Bridgeport, Conn.
Filed December 5, 1907. Serial No. 31,573. PUBLISHED JANUARY 14, 1908.

68,202. WRENCHES AND VISES. BONNEY VISE & TOOL WORKS, INC., Philadelphia, Pa.
Filed November 27, 1907. Serial No. 31,399. PUBLISHED JANUARY 14, 1908.

68,203. INSULATED WIRE. DURANT ELECTRIC SUPPLIES CO., Chicago, Ill.
Filed September 5, 1907. Serial No. 29,755. PUBLISHED JANUARY 14, 1908.

68,204. LAWN-MOWERS. THE GEORGE WORTHINGTON COMPANY, Cleveland, Ohio.
Filed October3 1906. Serial No. 22,451. PUBLISHED JANUARY 14, 1908.

68,205. SASH-LOCKS AND DOOR-BOLTS. THE H. B. IVES COMPANY, New Haven, Conn.
Filed September 25, 1905. Serial No. 13,010. PUBLISHED JANUARY 14, 1908.

68,206. STATIONARY AND MARINE INTERNAL-COMBUSTION ENGINES. THE "NEW WAY" MOTOR COMPANY, Lansing, Mich.
Filed December 4, 1907. Serial No. 31,544. PUBLISHED JANUARY 14, 1908.

68,207. CERTAIN AMMUNITION. THE PETERS CARTRIDGE COMPANY, Cincinnati, Ohio.
Filed April 20, 1907. Serial No. 26,824. PUBLISHED JANUARY 14, 1908.

68,208. CERTAIN AMMUNITION. THE PETERS CARTRIDGE COMPANY, Cincinnati, Ohio.
Filed April 20, 1907. Serial No. 26,825. PUBLISHED JANUARY 14, 1908.

68,209. CERTAIN AMMUNITION. THE PETERS CARTRIDGE COMPANY, Cincinnati, Ohio.
Filed April 20, 1907. Serial No. 26,826. PUBLISHED JANUARY 14, 1908.

68,210. CERTAIN AMMUNITION. THE PETERS CARTRIDGE COMPANY, Cincinnati, Ohio.
Filed April 20, 1907. Serial No. 26,827. PUBLISHED JANUARY 14, 1908.

68,211. STAPLES. THE STANDARD RIVET COMPANY, Boston, Mass.
Filed December 4, 1907. Serial No. 31,562. PUBLISHED JANUARY 14, 1908.

68,212. FERTILIZERS. ALABAMA COTTON OIL COMPANY, Montgomery, Ala.
Filed December 10,1907. Serial No. 31,658. PUBLISHED JANUARY 14, 1908.

68,213. ABRASIVE SOAP. THE CUDAHY PACKING CO., Chicago, Ill., and South Omaha, Nebr.
Filed November 30, 1907. Serial No. 31,485. PUBLISHED JANUARY 14, 1908.

68,214. FEED AND ENSILAGE CUTTERS. JOSEPH DICK, Canton, Ohio.
Filed June 24, 1907. Serial No. 28,348. PUBLISHED JANUARY 14, 1908.

68,215. SHOE-POLISHES. KYLE & COMPANY, Chicago, Ill.
Filed November 29, 1907. Serial No. 31,447. PUBLISHED JANUARY 14, 1908.

68,216. KITCHEN-SINKS, LAUNDRY-TUBS, AND URINALS OF SLATE. PORTLAND-MONSON SLATE COMPANY, Portland, Me.
Filed May 15, 1907. Serial No. 27,391. PUBLISHED JANUARY 14, 1908.

68,217. CERTAIN PERFUMED ANTISEPTIC PREPARATION. LOUIS FÉRET, Paris, France.
Filed June 7, 1906. Serial No. 20,113. PUBLISHED JANUARY 14, 1908.

68,218. DRIED FRUITS. THE J. K. ARMSBY COMPANY, Chicago, Ill., and San Francisco, Cal.
Filed November 22, 1907. Serial No. 31,296. PUBLISHED JANUARY 14, 1908.

68,219. DRIED FRUITS. THE J. K. ARMSBY COMPANY, Chicago, Ill., and San Francisco, Cal.
Filed November 22, 1907. Serial No. 31,297. PUBLISHED JANUARY 14, 1908.

68,220. DRIED FRUITS. THE J. K. ARMSBY COMPANY, Chicago, Ill., and San Francisco, Cal.
Filed November 22, 1907. Serial No. 31,298. PUBLISHED JANUARY 14, 1908.

68,221. BOILER-CLEANING COMPOUNDS. ALFRED W. MORRIS, Philadelphis, Pa.
Filed November 27, 1907. Serial No. 31,406. PUBLISHED JANUARY 14, 1908.

68,222. CERTAIN CHEMICALS. N. P. PRATT LABORATORY, Atlanta, Ga.
Filed April 12, 1905. Serial No. 1,307. PUBLISHED JANUARY 14, 1908.

68,223. CERTAIN RAILWAY SUPPLIES. RAILWAY STEEL SPRING COMPANY, New York, N. Y.
Filed October 5, 1907. Serial No. 30,433. PUBLISHED JANUARY 14, 1908.

68,224. WASHING-BLUE. THE SAWYER CRYSTAL BLUE COMPANY, Boston, Mass.
Filed October 3, 1905. Serial No. 13,244. PUBLISHED JANUARY 14, 1908.

68,225. CERTAIN CHEMICALS. CHARLES F. SHARKEY, Somerville, Mass.
Filed December 4, 1907. Serial No. 31,558. PUBLISHED JANUARY 14, 1908.

68,226. BIRD-SEED AND BIRD FOOD. BROOKMAN MANUFACTURING COMPANY, Chicago, Ill.
Filed July 25, 1907. Serial No. 29,028. PUBLISHED JANUARY 14, 1908.

68,227. BREAD. GREELEY PRINTERY OF ST. LOUIS, St. Louis, Mo.
Filed November 16, 1907. Serial No. 31,201. PUBLISHED JANUARY 14, 1908.

68,228. DRIED FRUITS. THE J. K. ARMSBY COMPANY, Chicago, Ill., and San Francisco, Cal.
Filed November 22, 1907. Serial No. 31,292. PUBLISHED JANUARY 14, 1908.

68,229. DRIED FRUITS. THE J. K. ARMSBY COMPANY, Chicago, Ill., and San Francisco, Cal.
Filed November 22, 1907. Serial No. 31,293. PUBLISHED JANUARY 14, 1908.

68,230. CHOW-CHOW. SYLVANIA KING, Pomeroy, Wash.
Filed June 27, 1907. Serial No. 28,435. PUBLISHED JANUARY 14, 1908.

68,231. WHEAT-FLOUR. SAGINAW MILLING COMPANY, Saginaw, Mich.
Filed July 22, 1905. Serial No. 10,724. PUBLISHED MARCH 27, 1906.

68,232. OLEO-OIL. SCHWARZSCHILD AND SULZBERGER COMPANY, Chicago, Ill., and New York, N. Y.
Filed July 24, 1907. Serial No. 29,017. PUBLISHED JANUARY 14, 1908.

68,233. BISCUITS, CRACKERS, CAKES, AND BREAD. IOWA BISCUIT CO, Burlington, Iowa.
Filed November 18, 1907. Serial No. 31,244. PUBLISHED JANUARY 7, 1908.

68,234. FUSES. COAST MANUFACTURING & SUPPLY CO., Berkeley, Cal.
Filed January 7, 1907. Serial No. 24,481. PUBLISHED FEBRUARY 5, 1907.

68,235. DRIED FRUITS. THE J. K. ARMSBY COMPANY, Chicago, Ill., and San Francisco, Cal.
Filed September 25, 1907. Serial No. 30,205. PUBLISHED JANUARY 14, 1908.

68,236. REMEDY FOR CERTAIN DISEASES. GEO. B. BEST, Englewood, N. J.
Filed November 12, 1907. Serial No. 31,143. PUBLISHED JANUARY 14, 1908.

68,237. COMPOUND MEDICINAL PREPARATION FOR INTERNAL USE FOR THE BLOOD. IRA ROBERT BLACKBURN, Dayton, Ohio.
Filed June 12, 1907. Serial No. 28,068. PUBLISHED JANUARY 14, 1908.

68,238. CERTAIN MEDICINES AND TOILET PREPARATIONS. BOKSCHITZKY AND ROTKOWITZ, New York, N. Y.
Filed November 23, 1907. Serial No. 31,324. PUBLISHED JANUARY 14, 1908.

68,239. CERTAIN CLOTHING. FROHSIN & KELLY, Philadelphia, Pa.
Filed November 7, 1907. Serial No. 31,064. PUBLISHED JANUARY 14, 1908.

68,240. CERTAIN TOILET PREPARATIONS. HALL & RUCKEL, New York, N. Y.
Filed November 25, 1907. Serial No. 31,352. PUBLISHED JANUARY 14, 1908.

68,241. POWDERED VETERINARY MEDICINE, USED AS A TONIC FOR ANIMALS. BIDDLE N. HUNT, Stratford, N. J.
Filed November 16, 1907. Serial No. 31,206. PUBLISHED JANUARY 14, 1908.

68,242. DRIED FRUITS. THE J. K. ARMSBY COMPANY, Chicago, Ill., and San Francisco, Cal.
Filed November 22, 1907. Serial No. 31,294. PUBLISHED JANUARY 14, 1908.

68,243. DRIED FRUITS. THE J. K. ARMSBY COMPANY, Chicago, Ill., and San Francisco, Cal.
Filed November 22, 1907. Serial No. 31,295. PUBLISHED JANUARY 14, 1908.

68,244. REMEDY FOR GALL-STONES. KELLEY REMEDY COMPANY, Fairmont, W. Va.
Filed November 26, 1907. Serial No. 31,389. PUBLISHED JANUARY 14, 1908.

68,245. CERTAIN CLOTHING. LEVI STRAUSS & CO., San Francisco, Cal.
Filed October 3, 1907. Serial No. 30,396. PUBLISHED JANUARY 14, 1908.

68,246. REMEDY FOR DISEASES OF THE KIDNEYS, BLADDER, AND PROSTATE GLAND. F. AUGUST LUYTIES, St. Louis, Mo.
Filed November 26, 1907. Serial No. 31,377. PUBLISHED JANUARY 14, 1908.

68,247. BEER. MINNEAPOLIS BREWING COMPANY, Minneapolis, Minn.
Filed November 15, 1907. Serial No. 31,198. PUBLISHED JANUARY 14, 1908.

68,248. CERTAIN REMEDY. LEA PIENAR, Rotterdam, Netherlands.
Filed November 26, 1907. Serial No. 31,365. PUBLISHED JANUARY 14, 1908.

68,249. REMEDY FOR DISEASES OF THE LIVER. S. T. W. SANFORD & SONS, Long Island City, N. Y.
Filed November 15, 1907. Serial No. 31,188. PUBLISHED JANUARY 14, 1908.

68,250. REMEDY FOR CHILBLAINS. THE SHEFFIELD CHEMICAL CO., Sheffield, Iowa.
Filed August 26, 1907. Serial No. 29,593. PUBLISHED JANUARY 7, 1908.

68,251. REMEDY FOR FALLING HAIR. CHARLES SCOTT SMITH, Pueblo, Colo.
Filed November 16, 1907. Serial No. 31,212. PUBLISHED JANUARY 14, 1908.

68,252. CERTAIN MEDICINES. UNITED INCUBATOR AND POULTRY SUPPLY MANUFACTURING COMPANY, New York, N. Y., and Boundbrook, N. J.
Filed November 25, 1907. Serial No. 31,332. PUBLISHED JANUARY 14, 1908.

68,253. CERTAIN REMEDY. JAMES MORTON YOUNG, Jr., Waycross, Ga.
Filed November 21, 1906. Serial No. 23,524. PUBLISHED JANUARY 14, 1908.

68,254. GAME IN WHICH A SPOOL OR DOUBLE SPINNING TOP IS USED. A. G. SPALDING & BROS., New York, N. Y.
Filed November 13, 1907. Serial No. 31,149. PUBLISHED JANUARY 14, 1908.

68,255. CERTAIN CLOTHING. HERMAN BROTHERS COMPANY, Lincoln, Nebr.
Filed March 16, 1907. Serial No. 26,014. PUBLISHED APRIL 30, 1907.

68,256. WAX-WIRE USED FOR MAKING VENT-HOLES IN MOLDS FOR CASTINGS. HOUSEMAN & THOMPSON, LIMITED, Newcastle-upon-Tyne, England.
Filed November 19, 1907. Serial No. 31,250. PUBLISHED JANUARY 14, 1908.

68,257. CIGARS. FRANK SCHWARB, Cincinnati, Ohio.
Filed November 23, 1907. Serial No. 31,329. PUBLISHED JANUARY 14, 1908.

68,258. TOILET SOAP. SOLON PALMER, New York, N. Y.
Filed August 24, 1907. Serial No. 29,557. PUBLISHED JANUARY 14, 1908.

68,259. SOAPS. SMITH KLINE AND FRENCH COMPANY, Philadelphia, Pa.
Filed February 26, 1907. Serial No. 25,616. PUBLISHED JANUARY 14, 1908.

68,260. HARMONICAS. STRAUSS, BROTHERS & CO., New York, N. Y.
Filed December 4, 1907. Serial No. 31,561. PUBLISHED JANUARY 14, 1908.

68,261. SOFT SOAPS. CHAS. W. YOUNG & CO., Philadelphia, Pa.
Filed December 2, 1907. Serial No. 31,498. PUBLISHED JANUARY 14, 1908.

68,262. PLUG-TOBACCO. SAMUEL REID TOBACCO COMPANY, St. Paul, Minn.
Filed November 26, 1907. Serial No. 31,380. PUBLISHED JANUARY 14, 1908.

68,263. STOVES AND RANGES. BRIDGE & BEACH MANUFACTURING COMPANY, St. Louis, Mo.
Filed November 11, 1907. Serial No. 31,125. PUBLISHED JANUARY 14, 1908.

68,264. COGNACS AND CORDIALS. CAEMEL WINE COMPANY, New York, N. Y.
Filed November 7, 1907. Serial No. 31,041. PUBLISHED JANUARY 14, 1908.

68,265. PAPER BAGS. THE CLEVELAND-AKRON BAG CO., Cleveland, Ohio.
Filed November 29, 1907. Serial No. 31,445. PUBLISHED JANUARY 14, 1908.

68,266. CARDS CONTAINING CULINARY RECIPES. GEORGE FORBES, Baltimore, Md.
Filed November 16, 1907. Serial No. 31,215. PUBLISHED JANUARY 14, 1908.

68,267. LEATHER BOOTS AND SHOES. GEO. G. SNOW CO Brockton, Mass.
Filed August 17, 1906. Serial No. 21,635. PUBLISHED JANUARY 14, 1908.

68,268. SAFETY-PAPER. GEORGE LA MONTE & SON, Nutley, N. J., and New York, N. Y.
Filed November 27, 1907. Serial No. 31,407. PUBLISHED JANUARY 14, 1908.

68,269. SAFETY-PAPER. GEORGE LA MONTE & SON, Nutley, N. J., and New York, N. Y.
Filed November 27, 1907. Serial No. 31,408. PUBLISHED JANUARY 14, 1908.

68,270. LEATHER BOOTS AND SHOES. HOLLINS SONS & CO., Nashville, Tenn.
Filed October 28, 1907. Serial No. 30,838. PUBLISHED DECEMBER 10, 1907.

68,271. RUBBER BOOTS, RUBBER SHOES, RUBBER OVERSHOES, AND RUBBER TIRES FOR MOTOR-VEHICLES. HOOD RUBBER COMPANY, Boston, Mass.
Filed November 13, 1907. Serial No. 31,151. PUBLISHED JANUARY 14, 1908.

68,272. LEATHER BOOTS AND SHOES. ISIDORE KEIFFER & Co., New Orleans, La.
Filed December 9, 1907. Serial No. 31,626. PUBLISHED JANUARY 14, 1908.

68,273. ENAMEL-PAINT. THE LOWE BROTHERS CO. Dayton, Ohio.
Filed December 7, 1907. Serial No. 31,609. PUBLISHED JANUARY 14, 1908.

68,274. RUBBER BOOTS. SANDERS DUCK AND RUBBER COMPANY, St. Louis, Mo.
Filed September 19, 1907. Serial No. 30,077. PUBLISHED JANUARY 14, 1908.

68,275. MONTHLY MAGAZINE. SELF-EDUCATOR PUBLISHING CO. INC., New York, N. Y.
Filed November 8, 1907. Serial No. 31,087. PUBLISHED JANUARY 14, 1908.

68,276. TEMPORARY BINDERS. ASA L. SHIPMAN'S SONS, New York, N. Y.
Filed December 5, 1907. Serial No. 31,587. PUBLISHED JANUARY 14, 1908.

68,277. MEN'S, WOMEN'S, AND CHILDREN'S LEATHER SHOES. CONRAD G. SMITH, Cumberland, Md.
Filed September 6, 1906. Serial No. 21,933. PUBLISHED OCTOBER 30, 1906.

68,278. STEREOTYPE MATRIX-PAPER AND STEREOTYPE TISSUE-PAPER. STANDARD PAPER M'N'F'G CO., Manchester, Va.
Filed November 16, 1907. Serial No. 31,205. PUBLISHED JANUARY 14, 1908.

68,279. HYDRAULIC PACKING. STRONG MACHINERY & SUPPLY CO., New York, N. Y.
Filed November 1, 1907. Serial No. 30,914. PUBLISHED JANUARY 14, 1908.

68,280. HAND-BAGS. THOMAS A. SUTTON, Johnstown, N. Y.
Filed November 23, 1907. Serial No. 31,325. PUBLISHED JANUARY 14, 1908.

68,281. WHIPS. UNITED STATES WHIP COMPANY, Westfield, Mass.
Filed December 11, 1907. Serial No. 31,665. PUBLISHED JANUARY 14, 1908.

68,282. LEATHER SHOES. THE VAL DUTTENHOFER SONS CO., Cincinnati, Ohio.
Filed August 9, 1906. Serial No. 21,421. PUBLISHED MAY 28, 1907.

68,283. STYLOGRAPHIC PENS. LOUIS C. WITKOWSKI, Washington, D. C.
Filed December 6, 1907. Serial No. 31,602. PUBLISHED JANUARY 14, 1908.

LABELS

REGISTERED MARCH 17, 1908.

14,089.—*Title:* "A LITTLE RYE." (For Whisky.) J. CLINTON SMITH, Columbus, Ohio. Filed February 5, 1908.

14,090.—*Title:* "LA COVIA BLEND COFFEE." (For Coffee.) WM. DAVIDSON, Chicago, Ill. Filed February 7, 1908.

14,091.—*Title:* "ORTEGA'S SALSA." (For Green-Chilli Sauce.) E. C. ORTEGA, Los Angeles, Cal. Filed February 18, 1908.

14,092.—*Title:* "TOWLE'S CIRCUS BRAND." (For Molasses.) THE TOWLE MAPLE SYRUP COMPANY, St. Paul, Minn. Filed February 17, 1908.

14,093.—*Title:* "FIG BREAD." (For Fig Bread.) FRANK WEDEHASE, Sebastopol, Cal. Filed February 13, 1908.

14,094.—*Title:* "ANOTHER ORIGINAL COLGATE PACKAGE." (For Dental Cream.) COLGATE & Co., New York, N. Y. Filed February 6, 1908.

14,095.—*Title:* "MONARCH CREAM." (For a Preparation for Purifying, Cleansing, and Healing the Skin.) THE MONARCH CREAM Co., Ramsey, N. J. Filed February 15, 1908.

14,096.—*Title:* "WOOLLEY SALVE." (For Salve.) THE WOOLLEY SALVE COMPANY, Lancaster, Pa. Filed February 13, 1908.

14,097.—*Title:* "COLUMBIA OIL SOAP." (For Soap.) COLUMBIA REFINING COMPANY, New York, N. Y. Filed February 18, 1908.

14,098.—*Title:* "DOROTHY DAINTY UMBRELLAS." (For Umbrellas.) FOLLMER CLOGG & Co., New York, N. Y. Filed February 17, 1908.

14,099.—*Title:* "DOROTHY DAINTY PARASOLS." (For Parasols.) FOLLMER CLOGG & Co., New York, N. Y. Filed February 17, 1908.

PRINTS

REGISTERED MARCH 17, 1908.

2,239.—*Title:* "MY FAVORITE FOOD DRINK." (For Malted Milk.) HORLICK'S MALTED MILK COMPANY, Mount Pleasant and Racine, Wis. Filed February 17, 1908.

2,240.—*Title:* "TAKE NOTICE!" (For Flour.) WASHBURN-CROSBY COMPANY, Minneapolis, Minn. Filed February 17, 1908.

2,241.—*Title:* "HOLTITE." (For a Pocket-Clasp.) MAX FISCHER, Cincinnati, Ohio. Filed January 2, 1908.

2,242.—*Title:* "B. V. D. LOOSE FITTING UNION SUIT." (For Men's Underwear.) ERLANGER BROTHERS, New York, N. Y. Filed January 30, 1908.

2,243.—*Title:* "B. V. D. LOOSE FITTING UNION SUIT." (For Men's Underwear.) ERLANGER BROTHERS, New York, N. Y. Filed January 30, 1908.

2,244.—*Title:* "B. V. D. LOOSE FITTING UNION SUIT." (For Men's Underwear.) ERLANGER BROTHERS, New York, N. Y. Filed January 30, 1908.

2,245.—*Title:* "B. V. D. LOOSE FITTING UNION SUIT." (For Men's Underwear.) ERLANGER BROTHERS, New York, N. Y. Filed January 30, 1908.

2,246.—*Title:* "ADLER'S LATEST SPRING APPAREL FOR 1908." (For Men's Spring and Summer Apparel.) DAVID ADLER & SONS CLOTHING Co., Milwaukee, Wis. Filed February 14, 1908.

DECISIONS

OF THE

COMMISSIONER OF PATENTS

AND OF

UNITED STATES COURTS IN PATENT CASES.

COMMISSIONER'S DECISIONS.

OAKLEY & COMPANY *v.* BABCOCK.

OPPOSITION.

Decided December 23, 1907.

1. OPPOSITION—ALLEGATIONS—NOTICE OF.

Where an application for registration of a trade-mark alleges that the mark had been used on "perfumery, toilet powder, and talcum powder," a notice of opposition which alleges that the opposer used the same mark on perfumeries is sufficient to warrant the acceptance of proof.

2. SAME—APPEAL FROM DECISION DENYING MOTION TO DISMISS.

An appeal from a decision of the Examiner of Interferences denying a motion to dismiss a notice of opposition will not be allowed.

3. SAME—AMENDMENT TO NOTICE OF.

An amendment to a notice of opposition setting forth that the opposer believes he would be damaged by the registration of the mark *Held* to have been properly admitted.

APPEAL from Examiner of Interferences.

TRADE-MARK FOR PERFUMERIES.

Mr. John J. Schwartz for Oakley & Company.

Mr. Simon Lyon and *Mr. Hubert E. Peck* for Babcock.

MOORE, *Commissioner:*

This is an appeal by Babcock from the decision of the Examiner of Interferences denying her motion to dismiss the original and amended notices of opposition filed by Oakley & Company.

The record shows that a demurrer was filed to the original notice of opposition which was overruled by the Examiner of Interferences, with leave, however, to the opposers to file an amended notice of opposition specifically alleging that said opposer would be injured by the registration opposed. An amended notice of opposition was filed in which the former pleadings were elaborated throughout. The applicant then filed a motion to dismiss both the original and amended notices of opposition. The Examiner of Interferences denied the motion, holding that in so far as it related to the original notice of opposition the question was *res adjudicata* by reason of his decision overruling the demurrer, and, further, that the amended notice of opposition did not include new matter. He fixed a limit of appeal from this decision. The motion to dismiss the original and amended notices of opposition is analogous to a demurrer to these pleadings. In the case of *Drevet Manufacturing Company* v. *Liquozone Company* (122 O. G., 3014) it was held that an appeal from the decision of the Examiner of Interferences overruling a demurrer to a notice of opposition would not be entertained except under circumstances of such unusual or extreme character as would justify the exercise of the supervisory authority of the Commissioner. For the same reasons an appeal from a decision denying a motion to dismiss a notice of opposition should not be allowed.

In view, however, of the fact that the Examiner of Interferences set a limit of appeal in the present case the merits of the present appeal have been considered. The first three grounds of the appeal allege an error of the Examiner of Interferences in not holding that the opposition is restricted solely to the use of the trade-mark upon "perfumeries," whereas the application for registration covers "perfumeries, toilet powder, and talcum powder."

The original notice of opposition alleges that the trade-mark was used by the opposer and others as applied to "perfumeries, etc.," and submitted certain labels in connection therewith, which it was alleged had been used by the aforesaid parties for a period of thirty years. These labels show the mark as applied to perfumeries and also to sachets. Whether the opposer has used the trade-mark upon all the goods mentioned in the application for registration is a matter which can be determined upon proof presented, and it is believed that the allegations in the notice of opposition are sufficient to warrant the acceptance of such proof. In any event proof that the applicant is not the owner of the trade-mark in issue as applied to perfumeries would bar the registration of the mark as now presented, and in such event the notice of opposition would be sustained. For this reason the notice of opposition should not be dismissed.

The fourth and fifth grounds of appeal are that the Examiner of Interferences erred in not dismissing the original notice of opposition as insufficient because there is no positive allegation of belief as to damage by such registration. As stated by the Examiner of Interferences, this question is *res adjudicata* in view of his decision overruling the demurrer. Furthermore, it is well settled that amendments to pleadings to set forth jurisdictional averments are liberally permitted, and in this case the terms of the original notice of opposition are clearly sufficient to warrant the amendment permitted by the Examiner of Interferences.

The sixth ground of appeal is that the Examiner of Interferences erred in not dismissing the amended

notice of opposition as setting up new grounds. For the reason stated by the Examiner of Interferences I am of the opinion that the amended notice of opposition does not set forth material matter not included in the original pleading.

The decision of the Examiner of Interferences is affirmed.

IN RE BAYLE, JR.

Decided February 11, 1908.

ACCESS TO PENDING APPLICATION.

A corporation which held an exclusive license to make and use an article disclosed in certain applications went into bankruptcy, and the trustee in bankruptcy included this license in the assets of the company. *Held* that the purchaser of said assets at the trustee's sale did not acquire such a title to the license as will entitle him to be permitted to inspect these applications.

Messrs. Knight Bros. for George A. Bayle, Jr.

Mr. N. M. Goodlett for Edwin E. Johnson.

BILLINGS, *Assistant Commissioner:*

This is a petition by George A. Bayle, Jr., that he be given permission to inspect the files of two applications of Edwin E. Johnson.

These applications were assigned to M. J. Pope and Frank D. Thorne, who gave an exclusive license to the Mazo Manufacturing Company, of St. Louis, Mo., a corporation of Missouri, to manufacture and sell the compound disclosed in these applications and to practice the process of compounding the same. This company went into bankruptcy, and the trustee in bankruptcy sold to George A. Bayle, Jr., all the assets of the said Mazo Manufacturing Company, and he included in the assets the license above referred to.

It is by virtue of this sale that Bayle claims to be entitled to inspect these Johnson applications. The petition is opposed by the assignees of Johnson on the ground that Bayle never acquired any title to the license.

The right of a trustee in bankruptcy to take title to patent property is defined in the Bankruptcy Act of July 1, 1898. It was held by Judge Shiras *in re McDonald*, (101 F. R., 239,) and again by Judge Seaman *in re Dann*, (129 F. R., 495,) that a bankrupt's title to a pending application did not under the act above referred to pass to the trustee in bankruptcy. If a trustee cannot acquire a title to the application of a bankrupt, it is not seen that he can acquire a title to a license to make and use the article described in such application. It must be held, therefore, that the petitioner has not shown such title to the license referred to as will entitle him to be permitted to inspect these applications.

The petition is denied.

DECISIONS OF THE U. S. COURTS.

Supreme Court of the United States.

WHITE-SMITH MUSIC PUBLISHING COMPANY *v.* APOLLO COMPANY.

Decided February 24, 1908.

COPYRIGHT—INFRINGEMENT—MUSICAL COMPOSITION.

The copyright of a musical composition which is published in the form of sheet-music is not infringed by a perforated roll of paper designed to be used in connection with an automatic piano-player in reproducing the music recorded in the copyrighted sheets, since such perforated roll is not a "copy" within the meaning of the copyright statutes.

Mr. Livingston Gifford for the appellant.

Mr. Charles S. Burton, *Mr. John J. O'Connell*, *Mr. John W. Munday*, and *Mr. Charles A. Brodek* for the appellee.

Mr. Justice DAY delivered the opinion of the Court.

These cases may be considered together. They are appeals from the judgment of the Circuit Court of Appeals of the Second Circuit (147 Fed., 226), affirming the decree of the Circuit Court of the United States for the Southern District of New York, rendered August 4, 1905 (139 Fed., 427), dismissing the bills of the complainant (now appellant) for want of equity. Motions have been made to dismiss the appeals, and a petition for writ of certiorari has been filed by appellant. In view of the nature of the cases the writ of certiorari is granted, the record on the appeals to stand as a return to the writs. (*Montana Mining Co.* v. *St. Louis Mining Co.*, 204 U. S., 204.)

The actions were brought to restrain infringement of the copyrights of two certain musical compositions, published in the form of sheet-music, entitled, respectively, "Little Cotton Dolly" and "Kentucky Babe." The appellee, defendant below, is engaged in the sale of piano-players and player-pianos, known as the "Apollo," and of perforated rolls of music used in connection therewith. The appellant, as assignee of Adam Geibel, the composer, alleged compliance with the Copyright Act, and that a copyright was duly obtained by it on or about March 17, 1897. The answer was general in its nature, and upon the testimony adduced a decree was rendered, as stated, in favor of the Apollo Company, defendant below, appellee here.

The action was brought under the provisions of the Copyright Act, section 4952 (3 U. S. Comp. Stat., Sup. 1907, p. 1021), giving to the author, inventor, designer or proprietor of any book, map, chart, dramatic or musical composition the sole liberty of printing, reprinting, publishing, completing, copying, executing, finishing and vending the same. The circuit courts of the United States are given jurisdiction under section 4970 (3 U. S. Comp. Stat., 3416) to grant injunctions according to the course and principles of courts of equity in copyright cases. The appellee is the manufacturer of certain musical instruments adapted to be used with perforated rolls. The testimony discloses that certain of these rolls, used in connection with such instruments, and being connected with the mechanism to which they apply, reproduce in sound the melody recorded in the two pieces of music copyrighted by the appellant.

The manufacture of such instruments and the use of such musical rolls has developed rapidly in recent years in this country and abroad. The record discloses that in the year 1902 from seventy to seventy-five thousand of such instruments were in use in the United States, and that from one million to one million and a half of such perforated musical rolls, to be more fully described hereafter, were made in this country in that year.

It is evident that the question involved in the use of

such rolls is one of very considerable importance, involving large property interests, and closely touching the rights of composers and music publishers. The case was argued with force and ability, orally and upon elaborate briefs.

Without entering into a detailed discussion of the mechanical construction of such instruments and rolls, it is enough to say that they are what has become familiar to the public in the form of mechanical attachments to pianos, such as the pianola, and the musical rolls consist of perforated sheets, which are passed over ducts connected with the operating parts of the mechanism in such manner that the same are kept sealed until, by means of perforations in the rolls, air-pressure is admitted to the ducts which operate the pneumatic devices to sound the notes. This is done with the aid of an operator, upon whose skill and experience the success of the rendition largely depends. As the roll is drawn over the tracker-board the notes are sounded as the perforations admit the atmospheric pressure, the perforations having been so arranged that the effect is to produce the melody or tune for which the roll has been cut.

Speaking in a general way, it may be said that these rolls are made in three ways. First. With the score or staff notation before him the arranger, with the aid of a rule or guide and a graduated schedule, marks the position and size of the perforations on a sheet of paper to correspond to the order of notes in the composition. The marked sheet is then passed into the hands of an operator who cuts the apertures, by hand, in the paper. This perforated sheet is inspected and corrected, and when corrected is called "the original." This original is used as a stencil and by passing ink-rollers over it a pattern is prepared. The stenciled perforations are then cut, producing the master or templet. The master is placed in the perforating-machine and reproductions thereof obtained, which are the perforated rolls in question. Expression-marks are separately copied on the perforated music-sheets by means of rubber stamps. Second. A perforated music-roll made by another manufacturer may be used from which to make a new record. Third. By playing upon a piano to which is attached an automatic recording device producing a perforated matrix from which a perforated music-roll may be produced.

It is evident, therefore, that persons skilled in the art can take such pieces of sheet-music in staff notation, and by means of the proper instruments make drawings indicating the perforations, which are afterwards outlined and cut upon the rolls in such wise as to reproduce, with the aid of the other mechanism, the music which is recorded in the copyrighted sheets.

The learned counsel for the parties to this action advance opposing theories as to the nature and extent of the copyright given by statutory laws enacted by Congress for the protection of copyright, and a determination of which is the true one will go far to decide the rights of the parties in this case. On behalf of the appellant it is insisted that it is the intention of the Copyright Act to protect the intellectual conception which has resulted in the compilation of notes which, when properly played, produces the melody which is the real invention of the composer. It is insisted that this is the thing which Congress intended to protect, and that the protection covers all means of expression of the order of notes which produce the air or melody which the composer has invented.

Music, it is argued, is intended for the ear as writing is for the eye, and that it is the intention of the Copyright Act to prevent the multiplication of every means of reproducing the music of the composer to the ear.

On the other hand, it is contended that while it is true that copyright statutes are intended to reward mental creations or conceptions, that the extent of this protection is a matter of statutory law, and that it has been extended only to the tangible results of mental conception, and that only the tangible thing is dealt with by the law, and its multiplication or reproduction is all that is protected by the statute.

Before considering the construction of the statute as an independent question the appellee invokes the doctrine of *stare decisis* in its favor, and it is its contention that in all the cases in which this question has been up for judicial consideration it has been held that such mechanical producers of musical tones as are involved in this case have not been considered to be within the protection of the Copyright Act; and that, if within the power of Congress to extend protection to such subjects, the uniform holdings have been that it is not intended to include them in the statutory protection given. While it may be that the decisions have not been of that binding character that would enable the appellee to claim the protection of the doctrine of *stare decisis* to the extent of precluding further consideration of the question, it must be admitted that the decisions so far as brought to our attention in the full discussion had at the bar and upon the briefs have been uniformly to the effect that these perforated rolls operated in connection with mechanical devices for the production of music are not within the Copyright Act. It was so held in *Kennedy* v. *McTammany*, (33 Fed., 584.) The decision was written by Judge Colt in the first circuit; the case was subsequently brought to this Court, where it was dismissed for failure to print the record. (145 U. S., 643.) In that case the learned judge said:

> I cannot convince myself that these perforated sheets of paper are copies of sheet-music within the meaning of the copyright law. They are not made to be addressed to the eye as sheet-music but they form a part of a machine. They are not designed to be used for such purposes as sheet-music, nor do they in any sense occupy the same field as sheet-music. They are a mechanical invention made for the sole purpose of performing tunes mechanically upon a musical instrument.

Again the matter was given careful consideration in the Court of Appeals of the District of Columbia in an opinion by Justice Shepard, (*Stern* v. *Rosey*, 17 App. D. C., 562,) in which that learned justice, speaking for the court, said:

> We cannot regard the reproduction, through the agency of a phonograph, of the sounds of musical instruments playing the music composed and published by the complainants, as the copy or publication of the same within the meaning of the act. The ordinary signification of the words "copying," "publishing," etc., cannot be stretched to include it.
>
> It is not pretended that the marking upon waxed cylinders can be made out by the eye or that they can be utilized in any other way than as parts of the mechanism of the phonograph.
>
> Conveying no meaning, then, to the eye of even an expert musician and wholly incapable of use save in and as a part of a machine specially adapted to make them give up the records which they contain, these prepared waxed cylinders can neither substitute the copyrighted sheets of music nor serve any purpose which is within their scope. In these respects there would seem to be no substantial difference between them and the metal cylinder of the old and familiar music-box, and this, though in use at and before the pas-

sage of the Copyright Act, has not been regarded as infringing upon the copyrights of authors and publishers.

The question came before the English courts in *Boosey* v. *Whight*, (1899, 1 Ch., 836; 80 L. T. R., 561,) and it was there held that these perforated rolls did not infringe the English Copyright Act protecting sheets of music. Upon appeal Lindley, master of the rolls used this pertinent language (1900, 1 Ch., 122; 81 L. T. R., 265):

> The plaintiffs are entitled to copyright in three sheets of music. What does this mean? It means that they have the exclusive right of printing or otherwise multiplying copies of those sheets of music, *i. e.*, of the bars, notes, and other printed words and signs on these sheets. But the plaintiffs have no exclusive right to the production of the sounds indicated by or on those sheets of music; nor to the performance in private of the music indicated by such sheets; nor to any mechanism for the production of such sounds or music.
>
> The plaintiff's rights are not infringed except by an unauthorised copy of their sheets of music. We need not trouble ourselves about authority; no question turning on the meaning of that expression has to be considered in this case. The only question we have to consider is whether the defendants have copied the plaintiff's sheets of music.
>
> The defendants have taken those sheets of music and have prepared from them sheets of paper with perforations in them, and these perforated sheets, when put into and used with properly-constructed machines or instruments, will produce or enable the machines or instruments to produce the music indicated on the plaintiff's sheets. In this sense the defendant's perforated rolls have been copies from the plaintiff's sheets.
>
> But is this the kind of copying which is prohibited by the Copyright Act; or rather is the perforated sheet made as above mentioned a copy of the sheet of music from which it is made? Is it a copy at all? Is it a copy within the meaning of the Copyright Act? A sheet of music is treated in the Copyright Act as if it were a book or sheet of letter-press. Any mode of copying such a thing, whether by printing, writing, photography, or by some other method not yet invented, would no doubt be copying. So, perhaps, might a perforated sheet of paper to be sung or played from in the same way as sheets of music are sung or played from. But to play an instrument from a sheet of music which appears to the eye is one thing; to play an instrument with a perforated sheet which itself forms part of the mechanism which produces the music is quite another thing.

Since these cases were decided Congress has repeatedly had occasion to amend the copyright law. The English cases, the decision of the district court of appeals, and Judge Colt's decision must have been well known to the members of Congress; and although the manufacture of mechanical musical instruments had not grown to the proportions which they have since attained they were well known, and the omission of Congress to specifically legislate concerning them might well be taken to be an acquiescence in the judicial construction given to the copyright laws.

This country was not a party to the Berne convention of 1886, concerning international copyright, in which it was specifically provided:

> It is understood that the manufacture and sale of instruments serving to reproduce mechanically the airs of music borrowed from the private domain are not considered as constituting musical infringement.

But the proceedings of this convention were doubtless well known to Congress. After the Berne convention the act of March 3, 1891, was passed. Section 13 of that act provides (3 U. S. Comp. Stat., 3417):

> SECTION 13. That this act shall only apply to a citizen or subject of a foreign state or nation when such foreign state or nation permits to citizens of the United States of America the benefits of copyright on substantially the same basis as to its own citizens; and when such foreign state or nation is a party to an international agreement which provides for reciprocity in the granting of copyright, by the terms of which agreement the United States of America may, at its pleasure, become a party to such agreement. The existence of either of the conditions aforesaid shall be determined by the President of the United States by proclamation made from time to time as the purposes of this act may require.

By proclamation of the President July 1, 1891, the benefit of the act was given to the citizens of Belgium, France, British possessions and Sweden, which countries permitted the citizens of the United States to have the benefit of copyright on the same basis as the citizens of those countries. On April 30, 1892, the German Empire was included. On October 31, 1892, a similar proclamation was made as to Italy. These countries were all parties to the Berne convention.

It could not have been the intention of Congress to give to foreign citizens and composers advantages in our country which according to that convention were to be denied to our citizens abroad.

In the last analysis this case turns upon the construction of a statute, for it is perfectly well settled that the protection given to copyrights in this country is wholly statutory. (*Wheaton* v. *Peters*, 8 Pet., 591; *Banks* v *Manchester*, 128 U. S., 244, 253; *Thompson* v. *Hubbard*, 131 U. S., 123, 151; *American Tobacco Company* v. *Werckmeister*, 207 U. S., 284.)

Musical compositions have been the subject of copyright protection since the statute of February 3, 1831, (4 Stat., 436,) and laws have been passed including them since that time. When we turn to the consideration of the act it seems evident that Congress has dealt with the tangible thing, a copy of which is required to be filed with the Librarian of Congress, and wherever the words are used (copy or copies) they seem to refer to the term in its ordinary sense of indicating reproduction or duplication of the original. Section 4956 (3 U. S. Comp. Stat., 3407) provides that two copies of a book, map, chart or musical composition, etc., shall be delivered at the office of the Librarian of Congress. Notice of copyright must be inserted in the several copies of every edition published, if a book, or if a musical composition, etc., upon some visible portion thereof. (Sec. 4962, Copyright Act, 3 U. S. Comp. Stat., 3411.) Section 4965 (3 U. S. Comp. Stat., 3414) provides in part that the infringer "shall forfeit every sheet thereof, and one dollar for every sheet of the same found in his possession," etc., evidently referring to musical compositions in sheets. Throughout the act it is apparent that Congress has dealt with the concrete and not with an abstract right of property in ideas or mental conceptions.

We cannot perceive that the amendment of section 4966 by the act of January 6, 1897, (3 U. S. Comp. Stat., 3415,) providing a penalty for any person publicly performing or representing any dramatic or musical composition for which a copyright has been obtained, can have the effect of enlarging the meaning of the previous sections of the act which were not changed by the amendment. The purpose of the amendment evidently was to put musical compositions on the footing of dramatic compositions so as to prohibit their public performance. There is no complaint in this case of the public performance of copyrighted music; nor is the question involved whether the manufacturers of such perforated music-rolls when sold for use in public performance might be held as contributing infringers. This amendment was evidently passed for the specific purpose referred to, and is entitled to little consideration in construing the meaning of the terms of the act theretofore in force.

What is meant by a copy? We have already referred to the common understanding of it as a reproduction or duplication of a thing. A definition was given by Bailey, J., in *West* v. *Francis*, (5 B. & A., 743,) quoted with approval in *Boosey* v. *Whight*, *supra*. He said:

> A copy is that which comes so near to the original as to give to every person seeing it the idea created by the original.

Various definitions have been given by the experts called in the case. The one which most commends itself to our judgment is perhaps as clear as can be made, and defines a copy of a musical composition to be "a written or printed record of it in intelligible notation." It may be true that in a broad sense a mechanical instrument which reproduces a tune copies it; but this is a strained and artificial meaning. When the combination of musical sounds is reproduced to the ear it is the original tune as conceived by the author which is heard. These musical tones are not a copy which appeals to the eye. In no sense can musical sounds which reach us through the sense of hearing be said to be copies as that term is generally understood, and as we believe it was intended to be understood in the statutes under consideration. A musical composition is an intellectual creation which first exists in the mind of the composer; he may play it for the first time upon an instrument. It is not susceptible of being copied until it has been put in a form which others can see and read. The statute has not provided for the protection of the intellectual conception apart from the thing produced, however meritorious such conception may be, but has provided for the making and filing of a tangible thing, against the publication and duplication of which it is the purpose of the statute to protect the composer.

Also it may be noted in this connection that if the broad construction of publishing and copying contended for by the appellants is to be given to this statute it would seem equally applicable to the cylinder of a music-box, with its mechanical arrangement for the reproduction of melodious sounds, or the record of the graphophone, or to the pipe-organ operated by devices similar to those in use in the pianola. All these instruments were well known when these various copyright acts were passed. Can it be that it was the intention of Congress to permit them to be held as infringements and suppressed by injunctions?

After all, what is the perforated roll? The fact is clearly established in the testimony in this case that even those skilled in the making of these rolls are unable to read them as musical compositions, as those in staff notation are read by the performer. It is true that there is some testimony to the effect that great skill and patience might enable the operator to read this record as he could a piece of music written in staff notation. But the weight of the testimony is emphatically the other way, and they are not intended to be read as an ordinary piece of sheet-music, which to those skilled in the art conveys, by reading, in playing or singing, definite impressions of the melody.

These perforated rolls are parts of a machine which, when duly applied and properly operated in connection with the mechanism to which they are adapted, produce musical tones in harmonious combination. But we cannot think that they are copies within the meaning of the Copyright Act.

It may be true that the use of these perforated rolls, in the absence of statutory protection, enables the manufacturers thereof to enjoy the use of musical compositions for which they pay no value. But such considerations properly address themselves to the legislative and not to the judicial branch of the Government. As the act of Congress now stands we believe it does not include these records as copies or publications of the copyrighted music involved in these cases.

The decrees of the circuit court of appeals are affirmed.

Mr. Justice HOLMES, concurring specially.

In view of the facts and opinions in this country and abroad to which my brother DAY has called attention I do not feel justified in dissenting from the judgment of the Court, but the result is to give to copyright less scope than its rational significance and the ground on which it is granted seem to me to demand. Therefore I desire to add a few words to what he has said.

The notion of property starts, I suppose, from confirmed possession of a tangible object and consists in the right to exclude others from interference with the more or less free doing with it as one wills. But in copyright property has reached a more abstract expression. The right to exclude is not directed to an object in possession or owned, but is *in vacuo*, so to speak. It restrains the spontaneity of men where but for it there would be nothing of any kind to hinder their doing as they saw fit. It is a prohibition of conduct remote from the persons or tangibles of the party having the right. It may be infringed a thousand miles from the owner and without his ever becoming aware of the wrong. It is a right which could not be recognized or endured for more than a limited time, and therefore, I may remark in passing, it is one which hardly can be conceived except as a product of statute, as the authorities now agree.

The ground of this extraordinary right is that the person to whom it is given has invented some new collocation of visible or audible points,—of lines, colors, sounds, or words. The restraint is directed against reproducing this collocation, although but for the invention and the statute any one would be free to combine the contents of the dictionary, the elements of the spectrum, or the notes of the gamut in any way that he had the wit to devise. The restriction is confined to the specific form, to the collocation devised, of course, but one would expect that, if it was to be protected at all, that collocation would be protected according to what was its essence. One would expect the protection to be coextensive not only with the invention, which, though free to all, only one had the ability to achieve, but with the possibility of reproducing the result which gives to the invention its meaning and worth. A musical composition is a rational collocation of sounds apart from concepts, reduced to a tangible expression from which the collocation can be reproduced either with or without continuous human intervention. On principle anything that mechanically reproduces that collocation of sounds ought to be held a copy, or if the statute is too narrow ought to be made so by a further act, except so far as some extraneous consideration of policy may oppose. What license may be implied from a sale of the copyrighted article is a different and harder question, but I leave it untouched, as license is not relied upon as a ground for the judgment of the Court.

Interference Notices.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., March 5, 1908.

William E. Woodyear, his assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of The Northwestern Elevator & Mill Company, of Mount Vernon, Ohio, for registration of a trade-mark and a trade-mark registered to William E. Woodyear, of 304 Spears Wharf, Baltimore, Md., and the notice of said declaration sent by the Patent Office by registered mail to the said William E. Woodyear and also the notice sent to his attorney of record in the usual manner having been returned undelivered, notice is hereby given to the said William E. Woodyear, his assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents in order that the notices of declaration heretofore sent by and returned to the Office may be forwarded to them.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will be proceeded with as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., March 4, 1908.

Frank Mellersh, his assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of William O. Fralley, of East King and Shippen streets, Lancaster, Pa., for registration of a trade-mark and a trade-mark registered to Frank Mellersh, of 130 West Thirty-fourth street, New York, N. Y., and the notice of said declaration sent by the Patent Office by registered mail to the said Frank Mellersh, as well as the copy mailed in the usual way to his attorney of record, having been returned undelivered, notice is hereby given to the said Frank Mellersh, his assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents in order that the notices of declaration heretofore sent by and returned to the Office may be forwarded to them.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will be proceeded with as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., February 24, 1908.

A. E. Jeaneret, his assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of The Matchless Metal Polish Company, of 65-69 Frankfort street, New York, N. Y., and 86 South Market street, Chicago, Ill., for registration of a trade-mark, a trade-mark registered to this company, and a trade-mark registered to A. E. Jeaneret, of Boston, Mass., and the notice of said declaration sent by the Patent Office by registered mail to the said A. E. Jeaneret having been returned undelivered, notice is hereby given to the said A. E. Jeaneret, his assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents in order that the notice of declaration heretofore sent by and returned to the Office may be forwarded to them.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will be proceeded with as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., February 21, 1908.

Jacob Baiz, his assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of The German-American Coffee Company, of 406 Greenwich street, New York, N. Y., for registration of a trade-mark and a trade-mark registered to Jacob Baiz, of 162 Front street, New York, N. Y., and the notice of said declaration sent by registered mail to the said Jacob Baiz having been returned undelivered, notice is hereby given to the said Jacob Baiz, his assigns or legal representatives, that if he or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents in order that the notices of declaration heretofore sent by and returned to the Office may be forwarded to them.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will be proceeded with as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., February 19, 1908.

George Riggs, his assigns or legal representatives, take notice:

An interference has been declared by this Office between an application of The Old Bleach Linen Company, Limited, of Randalstown, Ireland, for registration of a trade-mark and a trade-mark registered to George Riggs, of Newark, N. J., and the notice of said declaration sent by registered mail to the said George Riggs has been returned by the Post-Office Department undelivered.

Notice is therefore hereby given to George Riggs, his assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., February 13, 1908.

Thomas W. Farnsworth, his assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of the Kahn Mfg. Company, of No. 416 Dauphin street, Mobile, Ala., for registration of a trade-mark and a trade-mark registered to Thomas W. Farnsworth, of 81 Summer street, Boston, Mass., and the notice of said declaration sent by registered mail to the said Thomas W. Farnsworth having been returned undelivered, notice is hereby given to the said Thomas W. Farnsworth, his assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents in order that the notices of declaration heretofore sent by and returned to the Office may be forwarded to them.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will be proceeded with as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., February 8, 1908.

Robert G. McCorkle & Company, their assigns or legal representatives, take notice.

An interference has been declared by this Office between an application of Charles Shaffner & Company, of Chicago, Ill., for registration of a trade-mark and a trade-mark registered to Robert G. McCorkle & Company, of Louisville, Ky., and it appears from the record of the case that the registrant, Robert G. McCorkle & Company, cannot be located.

Notice is therefore hereby given to said Robert G. McCorkle & Company, their assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., February 8, 1908.

Mariano Sanz, his assigns or legal representatives, take notice:

An interference having been declared by this Office between the applications of Bennett Sloan & Company, National Grocer Company, and Mariano Sanz for registration of a trade-mark, a letter having been received from the attorney of record for said Mariano Sanz stating that he is informed and believes that Sanz is dead and that he cannot say whether or not there is a successor to the business, and the Office having been unable to obtain any communication from said Mariano Sanz, notice is hereby given to the said Mariano Sanz, his assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will be proceeded with as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., February 8, 1908.

Thomas N. Dwyer, his assigns or legal representatives, take notice:

An interference has been declared by this Office between an application of James E. Moroney, of Philadelphia, Pa., for registration of a trade-mark and a trade-mark registered to Thomas N. Dwyer, whose known address is 26 South William street, New York, N. Y., and it appears from the record of the case that the registrant, Thomas N. Dwyer, cannot be located.

Notice is therefore hereby given to said Thomas N. Dwyer, his assigns or legal representatives, that if they or any of them desire to contest said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

THE
OFFICIAL GAZETTE
OF THE
United States Patent Office.
[BY AUTHORITY OF CONGRESS.]

VOL. 133—No. 4. TUESDAY, MARCH 24, 1908. PRICE—$5 per year.

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Patents	611—No. 882,551 to No. 883,161,	inclusive.
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Trade-Marks	37—No. 68,284 to No. 68,320,	inclusive.
Labels	14—No. 14,100 to No. 14,113,	inclusive.
Prints	None.	
Reissues	5—No. 12,765 to No. 12,769,	inclusive.
Total	681	

TO CITIZENS OF THE UNITED STATES.

States.	Patents and Designs.	Trade-Marks, Labels, and Prints.	States.	Patents and Designs.	Trade-Marks, Labels, and Prints.
Alabama	1	....	New Hampshire	2	....
Alaska, District of	....	....	New Jersey	28	4
Arizona Territory	1	....	New Mexico Ter't'y	....	....
Arkansas	1	....	New York	77	22
California	25	2	North Carolina	3	....
Colorado	9	....	North Dakota	3	....
Connecticut	14	....	Ohio	41	....
Delaware	2	....	Oklahoma	6	....
District of Columbia	5	....	Oregon	1	....
Florida	2	2	Panama	....	....
Georgia	7	1	Pennsylvania	53	5
Hawaii Territory	....	....	Philippine Islands	....	....
Idaho	....	....	Rhode Island	6	1
Illinois	56	....	South Carolina	2	2
Indiana	18	1	South Dakota	1	....
Iowa	6	....	Tennessee	8	....
Kansas	8	....	Texas	17	....
Kentucky	5	....	Utah	2	....
Louisiana	5	1	Vermont	1	....
Maine	2	....	Virginia	5	....
Maryland	4	....	Washington	11	....
Massachusetts	28	....	West Virginia	5	1
Michigan	21	1	Wisconsin	13	....
Minnesota	18	1	Wyoming	....	....
Mississippi	1	....	U. S. Army	....	....
Missouri	18	....	U. S. Navy	....	....
Montana	....	2			
Nebraska	6	....	Total to citizens of the United States	552	46
Nevada	1	....			

TO CITIZENS OF FOREIGN COUNTRIES.

Countries.	Patents and Designs.	Trade-Marks and Prints.	Countries.	Patents and Designs.	Trade-Marks and Prints.
Argentina	....	....	Natal	....	....
Austria-Hungary	4	....	Netherlands	2	....
Belgium	4	....	Newfoundland	....	....
Brazil	....	....	New South Wales	2	....
British West Indies	....	....	New Zealand	1	....
Canada	5	....	Norway	1	....
Cape Colony	....	....	Persia	....	....
Chile	....	....	Queensland	....	....
China	....	....	Roumania	....	....
Costa Rica	....	....	Russia	1	....
Cuba	....	....	Scotland	....	....
Denmark	3	....	South Australia	....	....
Ecuador	....	....	Spain	....	....
England	13	2	Sweden	1	....
France	11	1	Switzerland	....	1
Germany	23	1	Transvaal, South Africa	1	....
Haiti	....	....	Victoria	....	....
Ireland	....	....	Western Australia	....	....
Italy	....	....			
Japan	....	....	Total to citizens of foreign countries	73	5
Java	....	....			
Mexico	1	....			

Change in Price of Copies of Patents—Amendment to Rule 203.

(ORDER No. 1,756.)

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., March 13, 1908.

Acting with the approval of the Secretary of the Interior, Rule 203 of the Rules of Practice of this Office is amended by canceling lines 3 and 4 of page 60, (edition of Rules of Practice dated July 17, 1907,) relating to class and subclass orders for copies of patents. The price of uncertified copies of specifications and drawings of patents, if in print, will be five cents each on and after April 1, 1908.

EDWARD B. MOORE,
Commissioner.

Notice.

The OFFICIAL GAZETTE of the United States Patent Office is now being mailed by the Superintendent of Documents from the Government Printing Office, the place of its production. All communications respecting the GAZETTE and all subscriptions should be addressed to the Superintendent of Documents.

EDWARD B. MOORE,
Commissioner.

Attorneys.

(ORDER No. 1,755.)

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., March 13, 1908.

Pursuant to the provisions of section 487 of the Revised Statutes, and with the approval of the Secretary of the Interior, Warren E. Willis, of Philadelphia, Pa., registry No. 2,389, is hereby disbarred from practice before the United States Patent Office for gross misconduct.

E. B. MOORE,
Commissioner.

APPLICATIONS UNDER EXAMINATION.

Condition at Close of Business March 17, 1908.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action. Amended	New.	No. of applications awaiting action.
308	XVII. Clutches; Linotyping; Matrix-Making; Nut and Bolt Locks; Printing.	Mar. 3	Nov. 23	210
244	XXXV. Buckles, Buttons, and Clasps; Card, Picture, and Sign Exhibiting; Garment-Supporters; Signals; Toilet.	Mar. 2	Dec. 26	658
179	XX. Artificial Limbs; Builders' Hardware; Dentistry; Locks and Latches; Safes; Undertaking.	Feb. 20	Jan. 28	223
172	XXXI. Alcohol; Ammonia, Water, and Wood Distillation; Charcoal and Coke; Gas, Heating and Illuminating; Hides, Skins, and Leather; Liquid Coating Compositions; Mineral Oils; Oils, Fats, and Glue; Water Purification.	Feb. 19	Dec. 28	243
312	VII. Games and Toys; Mechanical Motors; Optics; Paper Manufactures; Velocipedes.	Feb. 14	Jan. 14	290
252	IV. Bridges; Conveyers; Cranes and Derricks; Excavating; Hoisting; Hydraulic Engineering; Iron Structures; Loading and Unloading; Towers.	Feb. 13	Feb. 14	335
313	I. Fences; Harrows and Diggers; Plows; Seeders and Planters; Trees, Plants, and Flowers.	Feb. 13	Jan. 9	318
304	XXXIV. Railways; Railway-Brakes; Railway Rolling-Stock.	Feb. 12	Jan. 9	388
378	XXXVIII. Artesian and Oil Wells; Bottles and Jars; Care of Live Stock; Educational Appliances; Fishing and Trapping; Stationery; Stone-Working.	Feb. 11	Feb. 12	315
144	XXIV. Apparel; Apparel Apparatus; Sewing-Machines; Surgery.	Feb. 10	Feb. 4	312
167	V. Bookbinding; Harvesters; Jewelry; Music.	Feb. 10	Jan. 8	327
147	XXIX. Coopering; Fire-Escapes; Ladders; Roofs; Wheelwright-Machines; Wooden Buildings; Wood-Sawing; Wood-Turning; Woodworking; Woodworking-Tools.	Feb. 10	Dec. 7	405
135	VIII. Beds; Chairs; Furniture; Kitchen and Table Articles; Store Furniture.	Feb. 7	Dec. 10	396
264	XXXVI. Curtains, Shades, and Screens; Drafting; Driers; Engraving; Measuring Instruments; Wind-Wheels.	Feb. 6	Jan. 25	490
327	XVIII. Injectors and Ejectors; Steam and Vacuum Pumps; Steam-Boilers; Steam-Engines; Steam-Engine Valves.	Feb. 5	Jan. 7	269
308	XV. Bread, Pastry, and Confection Making; Coating; Fuel; Glass; Hydraulic Lime and Cement; Laminated Sheets and Fabrics; Paper-Making; Paving; Photography; Plastic Block and Earthenware Apparatus; Plastic Compositions; Plastics.	Feb. 4	Jan. 20	660
164	XXXIII. Cutlery; Domestic Cooking Vessels; Electric Signaling; Electricity, Medical and Surgical; Fireproof Buildings; Masonry; Tents, Canopies, Umbrellas, and Canes.	Feb. 1	Jan. 27	291
154	XI. Boot and Shoe Making; Boots, Shoes, and Leggings; Button, Eyelet, and Rivet Setting; Harness; Leather Manufactures; Nailing and Stapling; Whips and Whip Apparatus.	Feb. 1	Jan. 4	343
379	XXIII. Accoustics; Coin-Handling; Horology; Recorders; Registers; Time-Controlling Mechanism.	Feb. 1	Nov. 29	250
322	XII. Elevators; Journal-Boxes; Lubrication; Machine Elements; Pulleys and Shafting.	Jan. 31	Jan. 10	515

Applications Under Examination—Continued.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action. Amended	New.	No. of applications awaiting action.
247	XXII. Air-Guns, Catapults, and Targets; Ammunition and Explosive Devices; Boats and Buoys; Firearms; Marine Propulsion; Ordnance; Railway-Rails and Joints; Railway-Ties and Fasteners; Ships.	Jan. 29	Dec. 10	604
278	XXXII. Carbonating Beverages; Dispensing Beverages; Dispensing-Cans; Metallic Shipping and Storing Vessels; Packaging Liquids; Refrigeration.	Jan. 29	Nov. 18	493
318	VI. Bleaching and Dyeing; Chemicals; Explosives; Fertilizers; Medicines; Preserving; Sugar and Salt.	Jan. 24	Dec. 19	262
332	X. Carriages and Wagons	Jan. 23	Dec. 19	525
105	XXVI. Electric Heating and Rheostats; Electric Railways; Electricity, Generation; Motive Power.	Jan. 21	Oct. 18	337
238	XIX. Furnaces; Heating and Cooking Stoves, Liquid and Gaseous Fuel; Stoves and Furnaces.	Jan. 20	Nov. 16	559
375	XXVII. Brushing and Scrubbing; Grinding and Polishing; Laundry; Washing Apparatus.	Jan. 18	Jan. 18	458
152	XXX. Fluid-Pressure Regulators; Lamps and Gas-Fittings; Liquid and Gaseous Fuel Burners; Type-Writing Machines.	Jan. 17	Jan. 7	326
280	XL. Baggage; Check-Controlled Apparatus; Cloth, Leather, and Rubber Receptacles; Deposit and Collection Receptacles; Fine Arts; Lighting-Fixtures; Package and Article Carriers; Paper Receptacles; Special Receptacles and Packages; Wooden Receptacles.	Jan. 14	Jan. 2	735
382	XXVIII. Internal-Combustion Engines; Miscellaneous Heating Plants.	Jan. 10	Dec. 19	527
142	IX. Air and Gas Pumps; Fire-Extinguishers; Hydraulic Motors; Pumps; Sewerage.	Jan. 9	Jan. 27	249
329	XIII. Arms, Projectiles, and Explosive Charges, Making; Metal-Working, etc.	Jan. 8	Dec. 21	625
128	II. Bee Culture; Dairy; Label-Affixers; Paper Files and Binders; Pneumatics; Presses; Store-Service; Tobacco.	Jan. 2	Dec. 21	426
307	XIV. Compound Tools; Cutting and Punching Sheets and Bars; Farriery; Metal-Bending; Metal-Ornamenting; Sheet-Metal Ware, Making; Tools; Wire-Working.	Jan. 2	Nov. 8	381
315	XXV. Butchering; Mills; Threshing; Vegetable Cutters and Crushers.	Dec. 26	Dec. 31	439
112	XXI. Brakes and Gins; Carding; Cloth-Finishing; Cordage; Felt and Fur; Knitting and Netting; Silk; Spinning; Weaving.	Dec. 20	Oct. 22	567
107	XXXVII. Electric Lighting; Electricity, Conductors; Electricity, General Applications.	Dec. 18	Oct. 14	666
109	XVI. Telegraphy; Telephony	Dec. 2	Oct. 22	617
321	XXXIX. Baths and Closets; Water Distribution.	Nov. 21	Oct. 8	384
352	XLI. Railway Draft Appliances; Resilient Tires and Wheels.	Nov. 20	Sept. 12	364
175	III. Annealing and Tempering; Coating with Metal; Electrochemistry; Metal-Founding; Metallurgy; Shaping Fluid Metal.	Nov. 19	Nov. 14	517

Total number of applications awaiting action 18,328

161	TRADE-MARKS, DESIGNS, LABELS, AND PRINTS.			
	Trade-Marks	Mar. 13	Feb. 25	308
	Designs	Mar. 6	Feb. 17	83
	Labels and Prints			

PATENTS

GRANTED MARCH 24, 1908.

882,551. TARGET-PRACTICE ATTACHMENT FOR FIREARMS. JAMES M. CLARK, 3d, Attleboro, Mass., assignor of one-third to Thomas F. Williams, Attleboro, Mass. Filed Sept. 8, 1906. Serial No. 333,823.



1. In a fire arm, an automatic target practice attachment actuated by the firing mechanism of the fire arm and comprising a tube adapted to be removably secured in the bore of the fire arm, a spring actuated rod in the tube, and means on the outer end of the rod for piercing a target when actuated by the firing mechanism.

2. In a fire arm, an automatic target practice attachment comprising a tube adapted to removably fit the bore and cartridge chamber of the fire arm, a rod in the tube adapted to be thrown outward by the action of the firing mechanism of the fire arm, a coiled spring on the rod adapted to return the rod to its normal position, and means on the outer end of the rod for indenturing or piercing a target, whereby a fire arm may be used for target practice without the use of ammunition.

3. In a fire arm, an automatic target practice attachment comprising a tube adapted to removably fit the bore and cartridge chamber of the fire arm, a rod reciprocally supported in the tube and adapted to be thrown outward by the action of the firing mechanism of the fire arm, a coiled spring on the rod adapted to return the rod to its normal position, and a needle on the outer end of the rod adapted to pierce a target, whereby a fire arm may be used for target practice without the use of ammunition and without altering the fire arm.

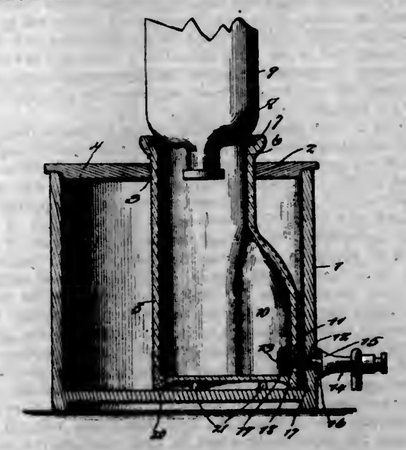
4. The combination with a fire arm of a target practice attachment b comprising a cylindrical tube 15 adapted to fit in the bore of the fire arm and having an enlarged breech end 16 with the annular lip 17 adapted to fit in the cartridge chamber of the fire arm, the internal fixed bushings 18 and 20 with the central holes 19 and 21, a light rod 23 extending in the tube through the holes in the bushings and constructed to have a hardened pin 24 removably secured in the breech end of the rod, a fixed collar 25 on the rod, a screw-threaded muzzle end 26, a cylindrical head 27 on the end 26, and having a circular recess 28 in the outer end, a central needle 29 in the recess 28, a ring of soft rubber 30 in the recess surrounding the needle 29 and extending slightly beyond the point of the needle, and a coiled spring 31 on the rod 23 one end of which engages with the fixed bushing 20 and the opposite end with the collar 25 on the rod 23, as described.

5. In attachments for small arms, the combination with a rigid rod adapted to be slidably mounted in the bore of a gun in the path of the firing pin and provided with a target marking point at its end opposite the firing pin, of a spring adapted to yieldingly resist forward movement of the rod.

[Claims 6 and 7 not printed in the Gazette.]

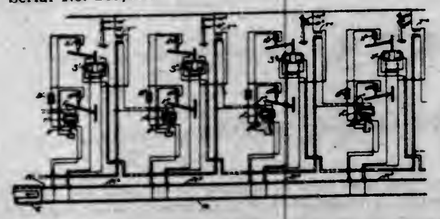
882,552. WATER-COOLER. HENRY G. CORDLEY, Glenridge, N. J. Filed Dec. 19, 1906. Serial No. 348,630.

1. In a water cooler, an outer receptacle provided with a cover having an opening therein near its center, and provided also with an opening in its side wall near its bottom, in combination with an inner or water containing jar having its upper portion cylindrical and adapted to receive an inverted water bottle, and having its lower portion provided on one side with a bulged portion 10 extending to the bottom of the jar so as to afford an extended base for the jar, and having an opening therein near its bottom, the jar being arranged with its base resting on the bottom of the outer receptacle with its cylindrical portion extending through the opening in the cover and adapted to support the water bottle with its center of gravity near the center of the outer receptacle, and having its bulged portion extending approximately to the wall of the outer receptacle, and a draw off tube extending through the openings in the outer receptacle and inner jar and serving to secure the jar in position, substantially as described.



2. In a water cooler, an outer receptacle provided with a cover having an opening therein near its center, and provided also with an opening in its side wall near its bottom, in combination with an inner or water containing jar having its upper portion cylindrical and adapted to receive an inverted water bottle, and having its lower portion provided on one side with a bulged portion 10 extending to the bottom of the jar so as to afford an extended base for the jar, and having an opening therein near its bottom, the jar being arranged with its base resting on the bottom of the outer receptacle with its cylindrical portion extending through the opening in the cover and adapted to support the water bottle with its center of gravity near the center of the outer receptacle, and having its bulged portion extending approximately to the wall of the outer receptacle, and a faucet having its draw off tube screw threaded and extending through the openings in the wall of the outer receptacle and in the bulged portion of the jar and having a shoulder in contact with the exterior of the outer receptacle, and a nut on the inner end of the draw off tube, the shoulder and nut on the draw off tube serving to clamp the jar in position, substantially as described.

882,553. BLOCK-SIGNAL SYSTEM. FRED B. COREY, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Mar. 9, 1905. Serial No. 249,178.



1. In a block signal system, separate sources for supplying current to the track circuits of the several blocks, relays each comprising two coils, one connected to the rails of a block and the other connected to the same source of current that supplies the track circuit of an adjacent block, and signals controlled by said relays.

2. In a block signal system, separate sources for supplying current to the track circuits of the several blocks, relays each comprising two relatively-removable coils, one connected to the rails of a block and the other connected to the same source of current that supplies the track circuit of the block in advance, and signals controlled by said relays.

3. In a block signal system, a source of alternating current extending along the roadway, transformers energized therefrom and each having its secondary connected to the track circuit of a block, relays each comprising two coils, one connected to the track circuit of a block and the other connected to the secondary of the same transformer that supplies the track circuit of the block in advance, and signals controlled by said relays.

4. In a block signal system, a source of alternating current extending along the roadway, transformers energized therefrom and each having its secondary connected to the track circuit of a block, relays each comprising two relatively-movable coils, one connected to the track circuit of a block and the other connected to the secondary of the same transformer that supplies the track circuit of the block in advance, and signals controlled by said relays.

5. In a block signal system, home and distant signals for each block, means for supplying current to the track circuits of the several blocks, relays each comprising two coils, one connected to the rails of a block and the other connected to the same source of current that supplies the track circuit of the block in advance, and a reversing switch operatively connected to each home signal and arranged when operated to reverse the relative direction of current flow through the preceding block without reversing the relative direction of flow through the relay coil supplied from the same source.

[Claims 6 to 14 not printed in the Gazette.]

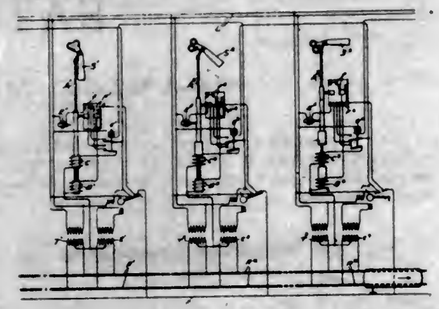
882,554. SIGNAL. FRED B. COREY, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Feb. 17, 1906. Serial No. 301,584.

1. In a signal for electrically-operated roads employing separate circuits for the power-current and signal-current, means for shifting the signal mechanism operated by power-current, and means operated by current from the signal circuit for locking the signal when shifted.

2. In a signal for electrically-operated roads employing separate circuits for the power-current and signal-current, a magnet for shifting the signal mechanism supplied with current from the power-circuit, and a magnet supplied with current from the signal circuit for locking the signal when shifted.

3. In a signal for electrically-operated roads employing separate circuits for the power-current and signal-current, a magnet for shifting the signal mechanism connected on a branch from the power circuit, and a magnet connected in a branch from the signal circuit for locking the signal when shifted.

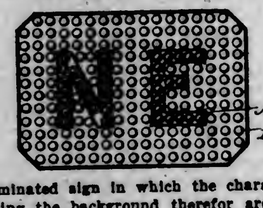
4. In a signal for electrically-operated roads employing a direct-current power-circuit and an alternating-current circuit for supplying signal-current to the track circuits, means energized by direct-current for shifting the signal mechanism, and means energized by alternating-current for locking the signal when shifted.



5. In a signal for electrically-operated roads employing a direct-current power circuit and an alternating-current circuit for supplying signal-current to the track circuits, a magnet for shifting the signal mechanism connected in a branch from the direct-current power-circuit, and a magnet connected in a branch from the alternating-current supply-circuit for locking the signal when shifted.

[Claims 6 to 12 not printed in the Gazette.]

882,555. ELECTRIC SIGN. SAMUEL E. DOANE, Cleveland, Ohio. Filed Apr. 25, 1907. Serial No. 370,137.



An illuminated sign in which the characters and the field forming the background therefor are composed of incandescent lamp bulbs, the bulbs of the characters and those of the field being contrasted in color.

882,556. LAST. AMOS G. FITZ, Auburn, Me. Filed June 6, 1907. Serial No. 377,534.



1. The combination with a last having a spindle hole and vertical truss-receiving recesses therein, of a truss extending across the bottom of said hole, its sides extending upwardly and positioned in said recesses and its ends anchored in the last.

2. The combination with a last having a spindle hole and vertical truss-receiving recesses therein, of a truss extending across the bottom of said hole, its sides extending upwardly and positioned in said recesses and its ends anchored in the last near the top thereof.

3. The combination with a last having a spindle hole, vertical truss-receiving holes and diverging anchor holes therein, of a truss extending across the bottom of said spindle hole, its sides positioned in said recesses and its ends bent to conform to said anchor holes.

882,557. CONTAINER FOR PERFORATED MUSIC-ROLLS. JOSIAH B. GATHRIGHT, Louisville, Ky. Filed May 21, 1906. Serial No. 317,933.



1. The combination with a housing adapted to hold a perforated music roll and having a removable cover, of a flexible band arranged in the housing below the cover and adapted in length to form a swing for the roll, whereby the weight of the roll prevents its coils from reacting on its spindle.

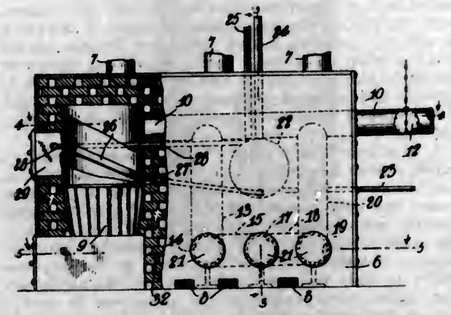
2. A box adapted to house a perforated music roll, having a flexible band suspended transversely of the interior thereof and adapted in length to form a swing for the roll, whereby the weight of the roll prevents its coils from reacting on its spindle.

3. A box adapted to house a perforated music roll, having a flexible band suspended transversely thereof and adapted in length to form a swing for the roll, whereby the weight of the roll prevents its coil from reacting on its spindles, and apertured means adapted to receive the spindles of the roll.

4. A box adapted to house a perforated music roll, provided with a rubber band extending transversely thereof and adapted in length to form a swing for the roll, whereby the weight of the roll prevents its coils from reacting on its spindle, and means for securing the ends of the band removably to the side walls of the housing.

5. A box adapted to house a perforated music roll, having its side walls provided with inwardly extending hooks, a flexible band having its ends removably engaged with the hooks and extending transversely of the box and adapted in length to form a swing for the roll, whereby the weight of the roll prevents its coils from reacting on its spindle.

882,558. AIR AND WATER HEATING FURNACE. CLARENCE A. GIBBS, Williamsport, Pa. Filed May 11, 1907. Serial No. 373,059.



1. The combination of a horizontally-arranged casing containing a filling of heat retaining material, a fire box in one end of the casing and a water tank in the other, surrounded by said material, a flue extending from the fire box through said filling and around the water tank, a water heating device exposed to the fire and having circulation connections to the tank, and supply and service pipes connected to the tank.

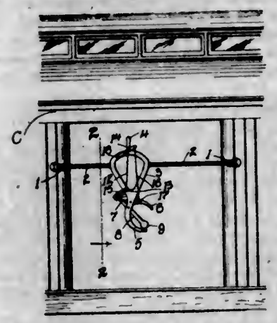
2. The combination of a casing having a secondary heating chamber containing a filling of heat retaining material, a fire box having a flue extending through said chamber, a water tank provided with supply and service pipes and located within said chamber and surrounded by said material, and a water heating device exposed to the fire and having circulation connections to the tank.

3. A combined air and water heater comprising, in combination, a casing having air inlet and outlet openings at bottom and top respectively, and a filling of heat retaining material, a fire box therein having a tortuous flue extending through said material, a water tank within the casing and surrounded by said material and having supply and service pipes, and a water heating device located in the fire box and having circulation pipes connecting same to the tank.

4. A furnace comprising a casing having air inlets and outlets, a fire box in one end thereof, a water tank and pipe connections in the other end, a flue leading from the fire box and back and forth in the lower part of the casing under the tank, and a checker work filling in the casing.

5. A water heater comprising a casing, a fire box and water tank therein, the latter having supply and service pipes, a water heating device located within the fire box and having circulation pipe connections to the tank, and a checker work filling within the casing and around the tank.

882,559. MAIL-BAG CATCHER. DAVID S. GREEN, St. Louis, Mo. Filed Jan. 31, 1908. Serial No. 413,663.

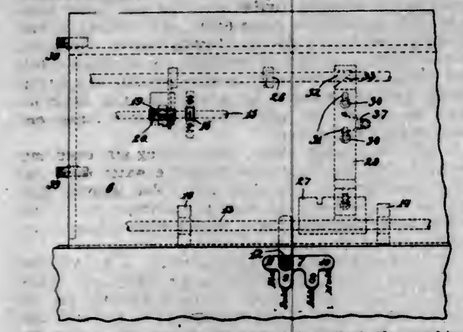


1. In a mail-bag catcher, a suitable member adapted to be swung in the path of suspension of the bag, a fixed jaw, a movable jaw, an impact lever disposed in proximity to the jaws, intermediate connections between the movable jaw and lever for opening the former upon a movement of the impact lever in one direction, the lever being actuated by impact against the bag, whereby the movable jaw is driven toward the fixed jaw and caused to close over the bag, substantially as set forth.

2. In a mail-bag catcher, a suitable member adapted to be swung in the path of suspension of the bag, a fixed jaw, carried by said member, a movable jaw pivotally mounted in connection with the fixed jaw, a hinged impact lever adjacent to the movable jaw, a link connection between the lever and movable jaw, the latter being oscillated toward the fixed jaw upon impact of the bag with the impact-lever, and means for locking the lever after impact, substantially as set forth.

3. A mail-bag catcher comprising a member adapted to be swung in the path of suspension of the bag, a fixed jaw, carried by said member, a movable jaw pivotally mounted in connection with the fixed jaw, a hinged impact lever adjacent to the movable jaw, a link connection between the lever and movable jaw, a rack carried by the catcher, a pawl on the impact lever engaging said rack, a trigger-lever mounted on the frame, a cord or cable having one end secured to one arm of said trigger adjacent the pivot thereof, the opposite end being coupled to the pawl, a second cord or cable having one end secured to the same trigger-arm and its opposite end secured to the movable jaw, the parts operating substantially as, and for the purpose set forth.

882,560. CALCULATING-MACHINE. WILLIAM F. HAUSSTEIN, Lyndhurst, N. J., assignor to The Keuffel & Esser Company, Hoboken, N. J., a Corporation of New Jersey. Filed Nov. 10, 1904. Serial No. 232,115.



1. In a machine of the character described, the combination with a shaft, numeral wheels thereon, and an indicator on said shaft bearing an appropriate legend, of a slidable rock shaft, a lever secured thereto, and means for locking the shaft and lever against movement in any direction when said legend is displayed.

2. In a machine of the character described, the combination with a shaft, numeral wheels thereon, and an indicator on said shaft bearing an appropriate legend, of a slidable rock shaft, a pivoted lever, and means for locking the lever against pivotal movement when said legend is displayed.

3. In a machine of the character described, the combination with a shaft, numeral wheels thereon, and an indicator on said shaft bearing an appropriate legend, of a laterally movable lever, and means for locking the lever against lateral movement when said legend is displayed.

4. In a machine of the character described, the combination with a numeral wheel shaft, and an indicator thereon bearing an appropriate legend, of a lever adapted to be moved to various positions and means governed by the movement of the numeral wheel shaft for locking the lever against any movement when the indicator is in position to display the legend.

5. In a machine of the character described, the combination of a numeral wheel shaft, an indicator thereon bearing an appropriate word, a lever adapted to be moved to various positions, a locking bar to engage the lever to prevent any movement thereof, a pivoted finger adapted to operate the locking bar, and connections between the shaft and the pivoted finger whereby the position of the indicator controls the position of the finger.

[Claims 6 to 12 not printed in the Gazette.]

882,561. REPEATING FIREARM. LEWIS L. HEPBURN, New Haven, Conn., assignor to Marlin Fire Arms Company, New Haven, Conn., a Corporation of Connecticut. Filed May 31, 1906. Serial No. 319,447.



1. In a take-down repeating firearm, a receiver divided vertically to form two independent side plates, an overhanging top piece on one of said side plates, a barrel rigidly carrying said side plate and overhanging top piece, a stock rigidly carrying the other side plate, a breech block arranged to reciprocate in the space between said plates, means for detachably engaging the breech-block with the overhanging top piece to prevent the lateral disengagement of the latter when the gun is taken down and the breech block is advanced, said means freeing said breech block to permit it to be detached when it is in a retracted position.

2. In a take-down repeating firearm, a separable receiver, a breech bolt arranged to reciprocate therein, a barrel portion detachable from the stock portion upon the separation of the receiver, a firing-pin carried by the breech bolt, a rib on the firing-pin arranged to enter a groove in the barrel portion of the receiver when said breech bolt is in an advanced position and to be freed from said groove when the breech bolt is in a rearward position.

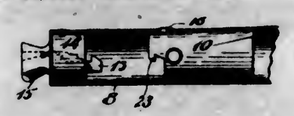
3. In a take-down repeating firearm, a receiver, said receiver being divided longitudinally and vertically to form two independent plates respectively carried by the barrel and stock, means for detachably securing said plates in an operative position, a reciprocating breech bolt within the receiver, a longitudinal rib carried by the upper part of the breech bolt and arranged to prevent the accidental displacement of said breech bolt when the gun is taken down, and a groove in the upper part of the receiver adapted to receive said rib when the breech bolt is advanced, said rib being free of said groove when said breech bolt is partially retracted.

4. In a repeating firearm, a breech bolt, a firing-pin carried thereby, a spring for retracting said firing-pin, shoulders on the firing-pin to receive said spring between them, the upper and lower ends of said shoulders being connected, and a shoulder on the breech block to receive the thrust of said spring when the firing-pin is advanced.

5. In a repeating firearm, a breech bolt, a firing-pin carried thereby, a spring for retracting said firing-pin, shoulders on the firing-pin to receive said spring between them, the upper and lower ends of said shoulders being connected, and a shoulder on the breech block to receive the thrust of said spring when the firing-pin is advanced, and means to prevent the accidental displacement of said spring from the space between said shoulders.

[Claims 6 to 11 not printed in the Gazette.]

882,562. REPEATING FIREARM. LEWIS L. HEPBURN, New Haven, Conn., assignor to Marlin Fire Arms Company, New Haven, Conn., a Corporation of Connecticut. Filed Mar. 26, 1907. Serial No. 364,595.



1. In a take-down repeating firearm, in combination, a barrel portion removable from the receiver by rotation, and including a magazine slidable relatively to the barrel proper and operating to lock said barrel portion against rotation when retracted, a sliding action rod carried by the barrel portion, means to hold the magazine in both its forward and rearward positions, and a stop on the magazine proper to limit the forward excursion of the action rod.

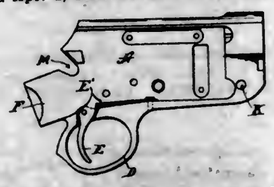
2. In a take-down repeating firearm, in combination, a barrel portion removable from the receiver by rotation, and including a magazine slidable relatively to the barrel proper and operating to lock said barrel portion against rotation when retracted, a sliding action rod carried by the barrel portion, means to hold the magazine in both its forward and rearward positions, a stop on the magazine proper to limit the forward excursion of the action rod, and means coöperating with the action rod to hold it against accidental retraction when the gun is taken down.

3. In a repeating firearm, a barrel, a magazine carried thereby and slidable relatively thereto, a block carried by the barrel, a latch on the magazine arranged to engage the block when in one position, and a latch on the block arranged to engage the magazine when in another position.

4. In a take-down magazine gun, a barrel detachable from the receiver by rotation, a magazine carried thereby and slidable relatively thereto and operating when in one position to prevent the rotation of said barrel relatively to the receiver, a guide block on the barrel, a latch on the magazine arranged to engage said block and hold the magazine in one position, and a latch on said block arranged to engage the magazine and hold the latter in another position.

5. In a repeating firearm, a barrel, a magazine carried thereby and slidable relatively thereto, a guide block carried by the barrel and supporting and guiding the forward end of the magazine, a latch carried by the magazine and arranged to engage said block to hold the magazine in one position, a latch carried by said block and arranged to engage the magazine when the latter is in another position.

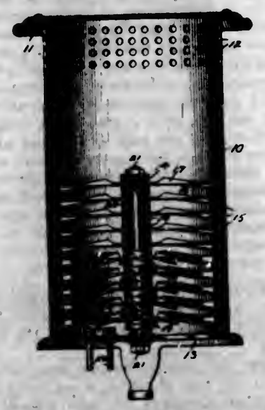
882,563. REPEATING FIREARM. LEWIS L. HEPBURN, New Haven, Conn., assignor to The Marlin Firearms Company, New Haven, Conn., a Corporation of Connecticut. Filed Apr. 4, 1907. Serial No. 366,297.



1. In a firearm, a receiver divided so as to form two independent separable members, means for detachably securing said members together, a trigger carried by one of said separable members, a hammer carried by the other separable member, said hammer and trigger being separated when the gun is taken down.

2. In a firearm, a receiver divided longitudinally to form two independent separable members, means for detachably securing said members together, a trigger carried by one of said separable members, and a handle carried by the other separable member, said hammer and trigger being separated when the gun is taken down, a portion of the member carrying the trigger overstanding a portion of the hammer when the gun is assembled.

882,564. ELECTRIC HEATER. EDWARD M. HEWLETT, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Aug. 3, 1907. Serial No. 386,959.



1. A resistance unit comprising a support, a plurality of disks mounted thereon, each consisting of a resistance strip extending back and forth from the support, and connections between said disks whereby a continuous path for the current is established throughout the said disks.

2. A resistance unit comprising a plurality of disks each consisting of a resistance strip extending back and forth from a common center, a central support therefor, and connections whereby a continuous path for the current is established throughout the said disks.

3. A resistance unit comprising a plurality of disks each consisting of a resistance strip extending back and forth from a common center and provided with stiffening webs, a central support therefor, and connections whereby a continuous path for the current is established throughout the said disks.

4. An electric heater comprising a casing having a plurality of grid-shaped resistance disks mounted in parallel arrangement thereon, and connections whereby a continuous path for the current is established throughout the said disks.

5. An electric heater comprising a casing, a support therein, a plurality of disks each consisting of a resistance strip mounted upon said support and extending back and forth therefrom, and connections whereby a continuous path for the current is established throughout the said disks.

[Claims 6 to 8 not printed in the Gazette.]

882,565. BRUSH-HOLDER. FRED B. HOWELL, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed June 4, 1906. Serial No. 320,036.



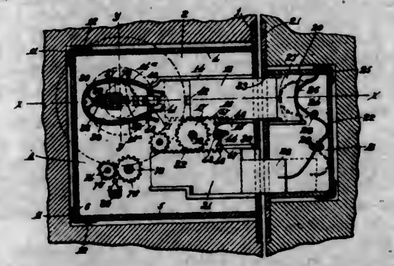
1. In a brush-holder, a tension spring comprising a helical body portion, and a helical separator threaded into it, so that the turns of the spring and the separator lie side by side and are free to move relatively to one another.

2. In combination, a helical spring formed of steel, and a helix of a different metal having its turns threaded into the turns of said spring so as to form a separator, the turns of the spring and the separator lying side by side and being free to move relatively to one another.

3. In a brush-holder, a follower member pivoted to turn about an axis, said follower member having a portion cylindrical with said axis, a steel tension spring having a helical portion surrounding said cylindrical portion, and a strip of brass bent edgewise into a helix, the turns of said strip being located between the turns of the spring whereby each adjacent pair of turns of the spring are separated by the strip and the strip and spring are free to move relatively to one another.

4. In combination, a tempered steel rod formed into a helix, and a partition of non-rusting material separating adjacent turns of said helix, so that the turns of the rod and the partition lie side by side and are free to move relatively to one another.

882,566. LOCK. CHRIST JENSEN, Chicago, Ill. Filed Oct. 28, 1907. Serial No. 399,410.



1. In a lock, a bolt, in combination with a rotary device for reciprocating said bolt from the inside, a horizontally reciprocatory device adjacent to said bolt and normally

disconnected therefrom for operating said bolt from the outside, means for engaging the same with said bolt when the latter is in retracted position and means for preventing the same from being engaged with said bolt when the latter is in locked position, substantially as described.

2. In a lock, a bolt, in combination with means for reciprocating said bolt from the inside, a block mounted in alinement with said bolt, means for reciprocating said block from the outside, a pair of flexible arms secured to said block, means for causing said arms to engage said bolt, when moved in one direction and means for disengaging said arms from said bolt at the last part of its movement in the opposite direction, substantially as described.

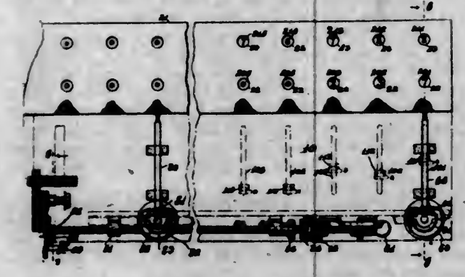
3. In a lock, a suitable case, in combination with a bolt mounted thereon, means for reciprocating said bolt from the inside, means for reciprocating said bolt from the outside, means operable from the outside to prevent reciprocation of said bolt after having been locked from the outside and means operable from the inside for the same purpose, substantially as described.

4. A lock comprising a suitable case, a bolt arranged therein and means for reciprocating said bolt, in combination with a keeper, an auxiliary bolt arranged within said keeper and adapted to be operated by the first said bolt to enter said lock case, and means in said lock case for ejecting said auxiliary bolt therefrom as the first said bolt is retracted, substantially as described.

5. A lock comprising a suitable case, a main bolt mounted therein, means for reciprocating said bolt, in combination a keeper, an auxiliary bolt mounted in said keeper and adapted to enter said lock case as said main bolt enters the keeper and a blind bolt operable simultaneously with the retraction of the main bolt for ejecting the auxiliary bolt from the lock case, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

882,567. CALCULATING-MACHINE. WILLIE L. E. KEUFFEL, Hoboken, N. J., assignor to The Keuffel & Esser Company, Hoboken, N. J., a Corporation of New Jersey. Filed Dec. 13, 1904. Serial No. 236,661.



1. The combination in a machine of the character described, of a main shaft, a motor-driven shaft, an idler extension of the motor-driven shaft geared with the main shaft, a clutch connecting the motor-driven shaft with its extension, a pivoted yoke for operating the clutch, a manual key secured to the yoke, and means, carried by the yoke and operated simultaneously therewith for locking the extension against rotation while disengaged from the motor-driven shaft, and releasing it from such locking when connected with said shaft.

2. The combination in a machine of the character described, of a stationary portion, a carriage slidable with relation thereto, a main shaft, means for locking the carriage, and means operated automatically for actuating the locking means into engagement with the carriage during each revolution of the main shaft and releasing it at the end of each revolution.

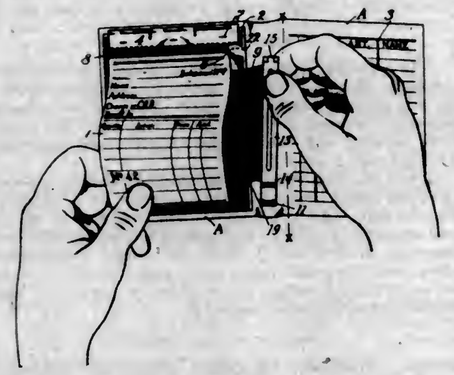
3. The combination in a machine of the character described of a stationary portion, a slidable carriage, a main shaft, a second shaft driven from the main shaft, a locking bar, and a cam on the second shaft for operating the locking bar to engage it with and disengage it from the carriage once during each revolution of the main shaft.

4. The combination in a machine of the character described, of a stationary portion, a sliding carriage having a series of recesses in the edge thereof, a main shaft, and a locking bar actuated by the operation of the machine to engage in said recesses *seriatim* as the carriage progresses during each operation.

5. The combination in a machine of the character described, of a stationary portion, a sliding carriage having a series of recesses in the edge thereof, a main shaft, and a locking bar actuated by the operation of the machine to enter into and recede from one of said recesses during each revolution of the main shaft.

[Claim 6 not printed in the Gazette.]

882,568. MANIFOLDING SALES-BOOK. CARROLL M. KIRKLAND, St. Paul, Minn., assignor to George W. Hughes, St. Paul, Minn. Filed July 13, 1907. Serial No. 383,571.



1. In a manifolding sales-book, the combination, with a pack of sales sheets held at the top, of a carbon sheet holder arranged along the side edge of the pack and hinged at the bottom so as to swing outwardly in a plane parallel with the side edges of the sales sheets, and a carbon sheet removably secured in the holder along its side edge and extending laterally over the sales-sheets.

2. In a manifolding sales-book, the combination, with a cover and a pack of sales-sheets removably secured to the cover at the top, of a carbon sheet holder arranged along the side edge of the pack and hinged at the bottom upon the cover so as to be capable of being swung downwardly and outwardly in a plane at right angles with the secured edge of the pack, and a carbon sheet removably secured in the holder along its side edge in position to extend laterally over the sales sheets.

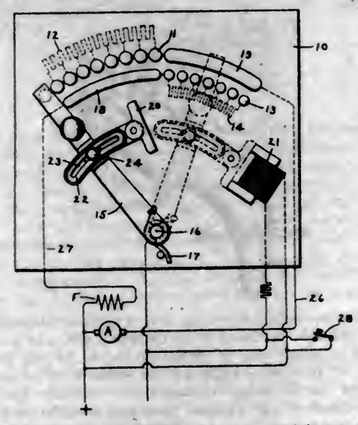
882,569. RHEOSTAT. CHARLES D. KNIGHT, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed July 18, 1907. Serial No. 384,464.

1. A rheostat for electric motors comprising a resistance, a controlling arm therefor, a retaining magnet for said arm, and an armature for said magnet adjustably mounted upon the arm.

2. A rheostat for electric motors comprising a resistance, a retaining magnet, a controlling arm having an armature coöperating with said magnet, and means for locking said armature in various positions on the arm.

3. A rheostat for electric motors comprising a starting resistance and a field resistance, a controlling arm therefor, a retaining magnet for said arm, and an armature for said magnet adjustably mounted upon the arm.

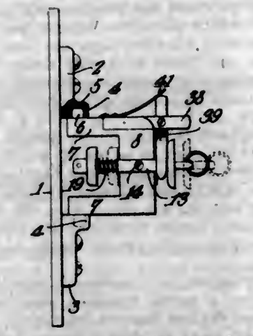
4. A rheostat for electric motors comprising a resistance, a controlling arm therefor, a retaining magnet for said arm, an armature for said magnet adjustably mounted upon the arm, and a key for locking the armature in various positions.



5. A rheostat for electric motors comprising a starting resistance and a field resistance, a controlling arm therefor, a retaining magnet for said arm, an armature for said magnet adjustably mounted upon the arm, and a key for locking the arm in various positions.

[Claim 6 not printed in the Gazette.]

882,570. BURGLAR-ALARM. COSMO LIACI, New Haven, Conn. Filed June 6, 1907. Serial No. 377,627.



1. A burglar alarm comprising an electric circuit, a movable spring-controlled contact device included in said circuit, connections between the same and the point to be protected for actuating the contacts against the action of the spring to close the circuit, other contacts operated by the spring for closing the circuit, and a removable insulating retaining device introduceable between the spring-actuated contacts.

2. A burglar alarm contact device comprising a supporting frame, a conducting rod carried thereby and provided with contact plates on each side of said frame, other contact plates carried by said frame in operative relation to the contact plates on the rod, the contact plates on the frame being arranged to constitute one terminal of an electric circuit and the contact plates on the rod being arranged to constitute the other terminal of the electric circuit, means for maintaining the circuit normally open at the contact plates, and means for closing the circuit at said contact plates.

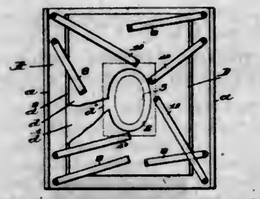
3. In a burglar alarm, a supporting frame, a spring-actuated conducting rod carried thereby and extending therethrough, connected contact plates on each side of said frame and arranged to constitute one terminal of an electric circuit, other contact plates carried by said rod and arranged to constitute the other terminal of the electric circuit and to make contact with the plates on the frame, and an insulating stop member introduceable between one of the contact plates on the rod and the corresponding contact plate on the frame.

4. In a burglar alarm, a frame, a conducting rod extending therethrough, conducting plates on each side of said frame and surrounding but out of contact with said rod, contact plates carried by said rod on each side of said frame, a spring on said rod between one of the contact plates and the frame, a nut carried by said rod and engaging the contact plate adjacent to said spring, and means for moving the rod and contact plates against the action of the spring.

5. In a burglar alarm, a frame, a conducting rod extending through and beyond the same, connected contact plates on each side of said frame and surrounding said rod, other contact plates on said rod on each side of said frame and in operative relation to the contact plates on the latter, a spring surrounding the rod between the frame and one of said contact plates, and an insulating block introduceable between the other contact plate on the rod and corresponding contact plate on the frame.

[Claim 6 not printed in the Gazette.]

882,571. PHOTOGRAPHIC-PRINTING APPARATUS. ALBERT C. Y. MACADAM, Revere, Mass. Filed June 24, 1907. Serial No. 380,392.



1. In photographic printing apparatus, a frame, and a mask combined with a plurality of sets of holding devices mounted on the face of the frame, one set acting to hold the mask and the other set acting to hold the negative, whereby the mask and negative may be adjusted separately and confined in adjusted position.

2. In photographic printing apparatus, a frame, and a mask combined with a plurality of sets of holding devices mounted on the face of the frame, one set acting to hold the mask and the other the negative, whereby the mask and negative may be adjusted separately and confined in adjusted position, said frame having feet at its side to guard the holding devices.

3. In photographic printing apparatus, a frame, a back board having stops to contact with the back of the frame, and a plurality of sets of spring holding devices pivotally mounted on the front of the frame to act upon and maintain in their adjusted positions both a mask and a negative or film.

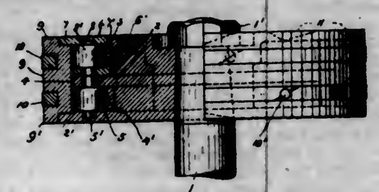
4. In photogrsphic printing apparatus, a frame, a two-part back board each part provided with stops and a spring, and a mask having an opening and adapted to sustain a negative or film, combined with independent means mounted on the face of the frame to respectively maintain the mask and the negative or film each in their adjusted position whereby the negative or film may be adjusted through the back of the frame after adjusting the mask and without interfering with the position of the mask.

5. A mask for photographic printing apparatus, the same comprising two sheets, each having an opening through which may be observed a negative located between said sheets, and in the line of said openings.

882,572. PISTON. KARL MATHEUS and EDWARD T. HENDEE, Chicago, Ill. Filed July 22, 1907. Serial No. 384,867.

1. In a device of the class described the combination with a disk of means affording a rotative wearing surface

on its periphery and means adapting said surface to be rotated by fluid pressure.



2. In a device of the class described the combination with a disk of a peripheral ring rotatively engaged thereon and means for rotating the same during the operation of the piston.

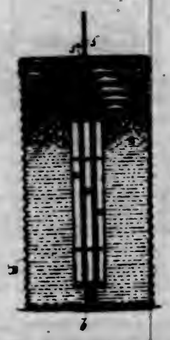
3. In a reciprocating piston, a built ring providing the wearing surface therefor and roller bearings for said ring.

4. In a device of the class described the combination with a spider of an automatically rotating ring thereon and means for securing said ring in place.

5. In a device of the class described the combination with a spider of roller bearings thereon and a ring mounted on said bearings and affording a wearing surface.

[Claims 6 to 14 not printed in the Gazette.]

882,573. STORAGE BATTERY. WILLIAM L. MERRIN, Fredericktown, Ohio. Filed Oct. 5, 1896. Serial No. 607,956.



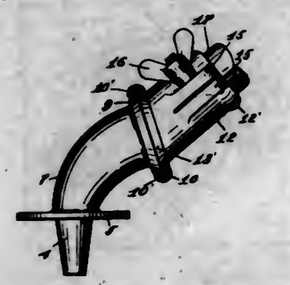
1. A storage battery comprising a container of corrugated sheet iron, an electrode shell therein of corrugated sheet iron, an electrolyte having no chemical effect on said container and electrode shell, and active material in said shell.

2. A storage battery comprising a sheet iron, corrugated receptacle adapted to constitute a terminal of the battery, an electrolyte contained within said receptacle, hollow electrode shells made of imperforate sheet iron immersed in said electrolyte, and active material contained within said hollow electrode shells, substantially as set forth.

3. A blank for a hollow electrode for a storage battery, consisting of a single piece of sheet iron adapted to be bent upon itself and having lateral flanges to constitute edge walls of the hollow electrode, said blank also having a lug or binding post at one end, and a tongue projecting from said lug or binding post and adapted to assist in supporting the electrode, substantially as set forth.

4. An electrode for a storage battery consisting of a piece of sheet metal bent to form a box to contain electrolyte and having a lug or binding post projecting therefrom and a tongue projecting from said lug or binding post, substantially as set forth.

882,574. PNEUMATIC CLEANING-TOOL. CHARLES MOUKOS, Milwaukee, Wis., assignor to Frank J. Matchette, Milwaukee, Wis. Filed Apr. 8, 1907. Serial No. 366,954.



1. In a pneumatic cleaning tool, a tubular member having its end face cut away at an oblique angle, and provided with an annular rim, a rotatable barrel having its end face cut at an oblique angle and provided with an annular rim, said barrel being mounted for rotation upon the tubular member, the annular rims and angular end faces of the parts interfitting and adjustable means for securing these parts in operative position and to permit rotation of the barrel about the tubular member, substantially as described.

2. In a pneumatic cleaning tool of the character described, a tubular member having its end face cut at an oblique angle, an annular rim formed thereon and provided with a rabbet, said rim being provided with a projecting portion, a rotatable barrel having its end face cut at an oblique angle and provided with an annular rim having a projecting portion and a recess, said projecting portion of the rim being adapted to seat within the rabbet of the tubular member when the parts are brought into operative relation, and means for loosely clamping said parts in operative relation to permit the rotation of said barrel to vary its horizontal and vertical angular relation to the tubular member.

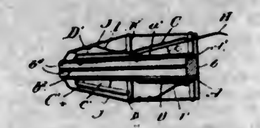
3. In a pneumatic cleaning tool, a tubular member having its end face cut away at an oblique angle, a barrel having its end face cut at an oblique angle and rotatably mounted upon said tubular member, an adjustable clamping means for securing the barrel upon the tubular member, said clamping means permitting the free rotation of the tubular member, and a tubular handle mounted within said barrel.

4. The combination, in a pneumatic cleaning tool, of a tubular member, a barrel rotatably mounted upon said tubular member, the end faces of the tubular member and barrel being cut away at oblique angles and contacting, and adjustable clamping means for holding said barrel in rotative relation to the tubular member, and permitting the horizontal and vertical angular adjustment of the barrel with respect to the tubular member, substantially as described.

5. In a pneumatic cleaning tool, a tubular supporting member mounted upon the tool, an annular rim disposed at the outer end of said supporting member, said rim being provided with a bearing face and a rabbet, a barrel provided with a rim coöperating with the rim of the supporting member and seating within the rabbet thereof and against the bearing face of said suporting member rim, and means for loosely clamping said barrel and supporting member in operative relation, to permit free rotation of said barrel.

882,575. REED-HARMONICA. JOSEPH E. MURPHY, Chicago, Ill. Filed Mar. 10, 1906. Serial No. 305,370.

1. In a reed harmonica, two reed banks, one bank containing reeds which are tuned to all the tones which supplement the usual diatonic scale to complete the chromatic scale, and the reeds of each bank being arranged for playing chords and means for controlling the passage of air alternately to the two reed banks at will, for the purpose set forth.



2. In a reed harmonica, two reed banks, the reeds of one of which are tuned to the tones which supplement the diatonic scale to complete the chromatic scale and also to the seventh tone of the diatonic scale, and means for controlling the passage of air to the two reed banks at will.

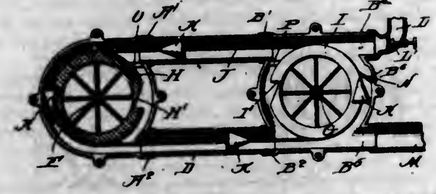
3. In a reed harmonica, two reed banks, the reeds of one bank being tuned to the tones of the major diatonic scale with the seventh tone omitted, and the reeds of the other bank being tuned to the remaining tones necessary to complete the chromatic scale and including the seventh tone of the diatonic scale.

4. In a reed harmonica, two reed banks, one tuned to the tones of the major diatonic scale with the seventh tone omitted and the other tuned to the remaining tones of the chromatic scale including the seventh tone of the diatonic scale, and means for allowing air to pass through the reed banks alternately.

5. In a reed harmonica, two reed plates each bearing a set of reeds, the reeds of the two plates taken together being tuned to the tones of the chromatic scale and cut-off plates movable toward and away from the reed plates for the purpose set forth, each plate having marginal ribs or flanges to close on the plate around said reeds.

[Claims 6 to 11 not printed in the Gazette.]

882,576. ROTARY ENGINE. JOHN MURRAY, Waterford, N. Y. Filed Apr. 15, 1907. Serial No. 368,294.



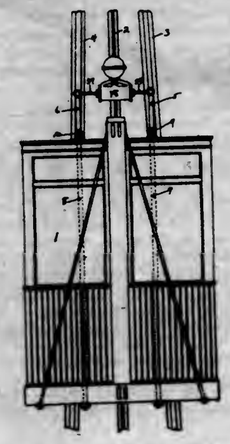
1. In an engine, the combination with casings connected together by tubes, wheels mounted in said casing provided with notches, an endless cable mounted on said wheels, cone-shaped pistons carried by said cable adapted to fit in the notches of the wheels, and a pivoted abutment mounted in one of said casings adapted to engage and ride over the beveled side of said piston for the purpose described.

2. In an engine, the combination with a pair of casings connected together by parallel tubes, of grooved wheels mounted in said casings, an endless cable mounted on said wheels provided with pistons, and a pivoted abutment mounted in one of said casings.

3. In an engine, the combination with a pair of casings provided with parallel sleeves, of tubes secured in said sleeves, grooved notched wheels mounted in said casings, and an endless cable mounted on said wheels, pistons secured to said cables adapted to fit in said notches of the wheels, a supply pipe connected to one of said casings, provided with a valve, an exhaust pipe connected to said casing and a pivoted abutment mounted in said casings.

882,577. RETARDING MECHANISM FOR ELEVATORS. ALBERT J. MYER, Lake View, N. Y. Filed Aug. 9, 1905, Serial No. 273,435. Renewed June 10, 1907. Serial No. 378,285.

1. A retarding mechanism for an elevator car comprising pivotally mounted means secured to said car, inclined guideways secured to the elevator shaft, friction producing means which are adapted to travel in said inclined guideways and are carried by said pivotally mounted means, and means, supported by said pivotally mounted means, for governing the said friction producing means.



2. A retarding mechanism for an elevator car comprising brake beams pivotally mounted to said car, rollers pivotally mounted on said brake beams, inclined guideways in which said rollers are adapted to travel, a fluid governed cylinder supported by said brake beams, piston-heads in said cylinder, means connecting said piston-heads with said brake beams and means for governing the speed of travel of said piston-heads.

3. A retarding mechanism for an elevator car comprising pivotally mounted brake beams secured to the car, inclined guideways secured to the elevator shaft, friction producing means carried by said brake beams and adapted to travel in said inclined guideways, a fluid containing cylinder, piston-heads adapted to travel in said cylinder, means for governing the speed of travel of said piston-heads in said cylinder and means for connecting said piston-heads with said brake beams.

4. A retarding mechanism for an elevator car comprising pivotally mounted brake beams secured to the car, inclined guideways secured to the elevator shaft, friction producing means carried by said brake beams and adapted to travel in said inclined guideways, a fluid containing cylinder, piston-heads closely fitting said cylinder and adapted to travel therein and means for connecting said piston-heads with said brake beams.

5. A retarding mechanism for an elevator car comprising pivotally mounted brake beams secured to the car, inclined guideways secured to the elevator shaft, friction producing means carried by said brake beams and adapted to travel in said inclined guideways, a fluid containing cylinder, piston-heads closely fitting said cylinder and adapted to travel therein, valve controlled means for allowing the passage of fluid in said cylinder from the ends to the center thereof or oppositely as the said piston-heads move back and forth therein and means for connecting said piston-heads with said brake beams.

[Claims 6 to 9 not printed in the Gazette.]

882,578. STREET-SWEEPER. JOHN NELSON, Chicago, Ill. Filed Oct. 21, 1907. Serial No. 398,321.

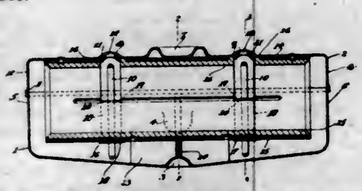
1. In a street-sweeper, a main frame mounted upon wheels and provided with means for attaching it to a wagon or cart, in combination with an auxiliary frame pivotally mounted on said main frame, a belt arranged in said auxiliary frame, a shoe arranged at the lower end of said auxiliary frame, a plurality of brushes for sweeping the street and depositing the sweepings on said belt and means for regulating the height of the shoe from the ground, said means comprising a transverse shaft mounted

on said main frame, a pair of arms rigidly fixed thereto, links connecting said arms with said auxiliary frame and a lever for turning said shaft, substantially as described.



2. In a street sweeper, a main frame mounted upon wheels and provided with means for attaching it to a wagon or cart, in combination with an auxiliary frame pivotally mounted on said frame, a belt arranged in said auxiliary frame, a pair of angularly disposed brushes arranged upon said main frame, a smaller brush arranged between the adjacent ends of the first said brushes and a shoe arranged at the lower end of said auxiliary frame between the inner ends of said angularly disposed brushes, said smaller brush and the lower end of said belt, and overhanging the latter, substantially as described.

882,579. SHAFT OR JOURNAL BOX. HAAKAN E. NORBOM, Philadelphia, Pa. Filed May 26, 1906. Serial No. 318,848.



1. A pressed steel hanger box comprising upper and lower external and internal shells, and a cruciform cradle interposed between the internal and external lower shells and adapted to take pressure in three directions.

2. A pressed steel hanger box comprising upper and lower external and internal shells of which the lower external shell is provided with a depression and with two flat lateral bearing surfaces, and a cradle interposed between and immovably connecting the internal and external lower shells and adapted to take pressure in three directions.

3. The combination in a pressed hanger box of external and internal lower shells of which the external shell is provided with three points of support, and a member interposed between immovably connecting the two shells and adapted to bridge them to sustain pressure, substantially as described.

4. The combination in a pressed hanger box of external and internal lower shells of which the external shell is provided with three points of support, and a U-shaped member arranged edgewise and interposed between and immovably connecting the two shells and adapted to bridge them to sustain pressure, substantially as described.

5. In a pressed metal hanger box the combination of internal and external shells whereof the external shell is provided with a depression constituting a point of support, and a lengthwise ranging member interposed edgewise between the shells and adapted to resist pressure.

[Claims 6 to 10 not printed in the Gazette.]

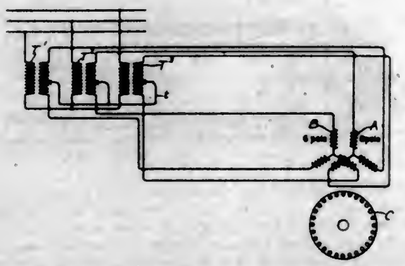
882,580. BORING-MILL. FRANK W. PARKER, New York, N. Y., assignor to Niles-Bement-Pond Company, Jersey City, N. J. Filed July 31, 1907. Serial No. 386,351.

1. A boring mill comprising a base-piece, a face-plate mounted for rotation thereon on a vertical axis in a fixed vertical plane, wings extending sidewise from the base-piece, housings mounted for sliding adjustment on the wings to and from each other and to and from the axis of the face-plate in a vertical plane tangent to a circle struck from the center of the face-plate, a saddle fitted for vertical sliding motion on the front of one of said housings, a horizontal rail having its front disposed in a vertical plane tangent to a circle struck from the center of said face-plate and having one of its ends fitted for longitudinal sliding motion in said saddle, and a connecting device engaging the other end of said rail and the other housing, combined substantially as set forth.



2. A boring mill comprising a base-piece, a face-plate mounted for rotation thereon on a vertical axis in a fixed vertical plane, wings extending sidewise from the base-piece, housings mounted for sliding adjustment on the wings to and from each other and to and from the axis of the face-plate in a vertical plane tangent to a circle struck from the center of the face-plate, saddles fitted for vertical sliding motion on the fronts of said housing, and a horizontal rail having its front disposed in a plane tangent to a circle struck from the center of said face-plate and having its ends fitted for longitudinal sliding motion in said saddles, combined substantially as set forth.

882,581. INDUCTION-MOTOR CONTROL. KARL A. PAULY, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Mar. 9, 1906. Serial No. 305,026.



1. The method of operating an induction motor at varying speeds which consists in establishing two sets of connections adapted to produce tendencies toward operation at two different limiting or synchronous speeds, supplying current to both sets of connections simultaneously, and varying the relative torques produced thereby.

2. The method of operating an induction motor at varying speeds which consists in establishing two sets of connections adapted to produce tendencies toward operation at two different limiting or synchronous speeds, supplying current to both sets of connections simultaneously, and varying the relative voltages supplied to the two sets.

3. The method of operating an induction motor at varying speeds which consists in establishing two sets of connections adapted to produce operation at two different speeds, supplying current to both sets of connections simultaneously, and varying simultaneously and oppositely the torques produced by the two sets of connections.

4. The method of operating at varying speeds an induction motor having two windings of different pole numbers, which consists in connecting both windings to a source of voltage so as to cause them to produce simultaneously in the motor tendencies to run at two different speeds and varying the relative torques produced by the two windings.

5. The method of operating at varying speeds an induction motor having two windings of different pole numbers, which consists in connecting both windings to a source of voltage and varying simultaneously and oppositely the torques produced by the two windings.

[Claims 6 to 21 not printed in the Gazette.]

882,582. PROCESS OF PRODUCING MANGANESE SILICID. EDGAR F. PRICE, Niagara Falls, N. Y., assignor, by mesne assignments, to Central Trust Company of New York, a Corporation of New York, trustee under first mortgage. Filed Nov. 14, 1905. Serial No. 287,350.

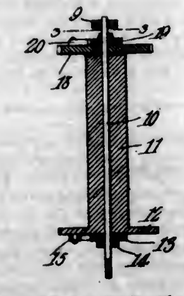


1. The continuous process of producing manganese silicid, which consists in smelting a charge containing compounds of manganese and silicon and carbon, by means of an electrically-heated resistance-conductor, withdrawing the molten product from the furnace, and supplying the charge-mixture as required, as set forth.

2. The process of producing manganese silicid, which consists in smelting a charge containing compounds of manganese and silicon and carbon, by passing an electric current through the charge, serving as a resistance-conductor, withdrawing the product from the furnace, and supplying the charge-mixture as required, as set forth.

3. The process of producing manganese silicid, which consists in smelting a charge containing compounds of manganese and silicon and carbon, by passing an electric current through the charge, serving as a resistance-conductor, and increasing the current or energy density through the charge to a point where reduction is effected, withdrawing the product from the furnace, and supplying the charge-mixture as required, as set forth.

882,583. WEIGHT-MOTOR. JOHN C. RACKLEY, Robert Lee, Tex. Filed July 13, 1907. Serial No. 383,678.

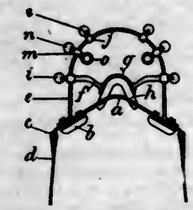


1. A motor comprising a train of gearing, having a power driving shaft at one end and a power delivery shaft at the opposite end, a drum and a gear wheel each loosely mounted on the driving shaft, a ratchet wheel keyed to one end of the shaft and a pawl pivoted to said drum in engagement with the ratchet wheel, a second ratchet wheel keyed to the shaft near the opposite end and a pawl pivoted to said gear wheel in engagement with said second ratchet wheel, and a weighted cord attached to said drum adapted when wound thereon to operate the mechanism.

2. A motor comprising a train of gearing, having a power driving shaft and a power delivery shaft at opposite ends of said train, a winding drum having a flange on one end and loosely mounted on said driving shaft, a gear wheel loosely mounted on the same shaft in close proximity to and serving as a flange for the other end of the drum but having independent movement, ratchet wheels on opposite ends of said driving shaft a pawl on the drum and one on the gear wheel in engagement with the respective ratchet wheels, and a cord and weight attached to said drum.

3. A motor comprising a train of gearing, having a driving shaft, a drum and a gear wheel each loosely mounted thereon, a cord and weight attached to said drum, separate ratchet devices for connecting the shaft to said drum and to said gear wheel, and so disposed that when the shaft is turned in one direction the drum will be turned by one ratchet and wind the cord on the drum without operating the gear wheel and when the weight turns the drum in opposite direction it will turn the shaft and the latter through the other ratchet, rotate the gear wheel and the motor.

882,584. HARNESS FOR HORSE-TRAINING. HANS RASMUSSEN, Skovgaarde, Denmark. Filed Oct. 8, 1906. Serial No. 338,046.



1. In a harness, a saddle or girth element, a pad engaging the withers, and a vertically movable arm connected to the saddle or girth element and on which said pad is mounted and with which it is movable.

2. In a harness, a saddle or girth element, a bow mounted thereon, an arm connected to said bow and vertically movable thereon, and a pad engaging the withers and mounted on said arm.

3. In a harness, a saddle or girth element, a bow mounted thereon, a forwardly projecting element vertically adjustable on said bow, and a pad engaging the withers and connected to said element.

4. In a harness, a saddle or girth element, a bow mounted thereon, a pad engaging the withers, and arms connecting said bow and pad.

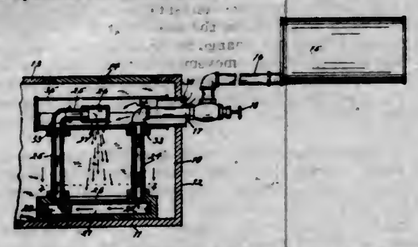
5. In a harness, a saddle or girth element, a bow mounted thereon, a pad engaging the withers, and arms connecting said bow and pad and vertically adjustable on said bow.

[Claims 6 to 9 not printed in the Gazette.]

882,585. HYDROCARBON-BURNER. GEORGE W. REED, Greenfield, Ind. Filed July 11, 1907. Serial No. 383,335.

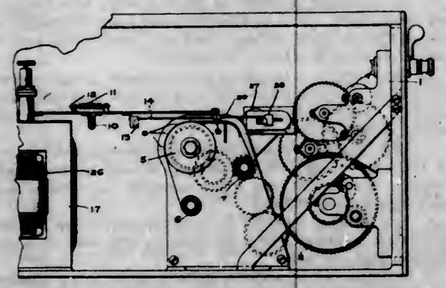
1. A hydro-carbon burner including a retort at the lower part thereof, a vertical hydro-carbon supply pipe leading thereto, a vertical pipe leading therefrom, a nozzle arranged to discharge the gas from said last mentioned pipe downwardly towards the retort, and an air chamber on the upper end of said pipes extending over said retort and surrounding the nozzle with an opening under and registering with the port from the nozzle.

2. A hydro-carbon burner including a retort at the lower part thereof, a vertical hydro-carbon supply pipe leading thereto, a vertical pipe leading therefrom, a nozzle arranged to discharge the gas from said last mentioned pipe that discharges the gas downwardly towards the retort, an air chamber on the upper end of said pipes extending over said retort and surrounding the nozzle with an opening under and registering with the port from the nozzle, and a pipe extending into said air chamber and connecting with said hydro-carbon supply pipe, substantially as set forth.



3. A hydro-carbon burner including a retort at the lower part thereof, a vertical hydro-carbon supply pipe leading thereto, a vertical pipe leading therefrom, a nozzle arranged to discharge the gas from said last mentioned pipe that discharges the gas downwardly towards the retort, a horizontal pipe leading to said hydro-carbon supply pipe, and an air chamber formed of two portions of tubing, one portion surrounding said pipe leading to the hydro-carbon supply pipe with the other end open and the major portion thereof cut away on the upper side and with the lower side secured to said pipes leading to and from the retort and the other portion being closed and at one end open so as to slip over said first portion and slotted on the under side to enable it to be put in place or removed, and means for securing said air chamber portions to the pipes leading to and from the retort.

882,586. ELECTRICAL RECORDING INSTRUMENT. LEWIS T. ROBINSON, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Sept. 29, 1902. Serial No. 123,194.



1. An electrical recording instrument having stationary and movable elements, one excited by a source of constant potential and the other by the current or energy to be measured, a damping magnet in circuit with the constant source, a conductor carried by the movable element and cutting the field of the magnet, a flexible jointed recording arm also secured to the movable element, a recording pen having a siphon capillary feed carried by the arm, and means for supporting a recording surface in coöperative relation to the pen.

2. An electrical recording instrument having a moving element suspended by a spring and comprising an armature, a flexible jointed arm, and a recording pen having a siphon capillary feed carried by said arm, field coils for cooperation with said armature, and means for supporting a recording surface beneath the pen.

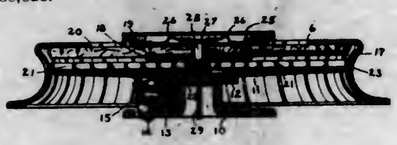
3. An electrical recording instrument having a moving element suspended by a spring and comprising an armature, a flexible arm, and a recording pen having a siphon capillary feed carried by said arm, an adjustable stop for preventing excessive vibration of the moving element, field coils for coöperation with said armature, and means for supporting a recording surface beneath the pen.

4. In an electrical recording instrument, a recording arm having a stylus secured thereto, an ink well for supplying said stylus, and a tube with one end secured to said stylus and the other end bent to enter the ink well, said tube and ink well being relatively movable to permit withdrawal of the tube from the ink well.

5. In an electrical recording instrument, a recording arm having a stylus, means for removably securing said stylus to said arm, an ink well carried by said arm, and a tube bent to pass over the edge of the ink well to bring one end near the bottom of said well and having the other end secured to said stylus.

[Claims 6 to 13 not printed in the Gazette.]

882,587. CABLE-REEL. EDMOND ROSENBERG, Paris, France, assignor to General Electric Company, a Corporation of New York. Filed Aug. 16, 1907. Serial No. 388,825.



1. In combination, a vehicle arranged for forward and reverse movement, a cable reel carried thereby, a flexible cable having one end connected to said reel and the other secured at a fixed point, and a positive but yielding driving connection between said reel and a part which rotates with the movement of the vehicle.

2. In combination, a movable vehicle, a cable reel carried thereby, a flexible cable having one end connected to said reel and the other secured at a fixed point, and a spring driving connection between said reel and a part which rotates with the movement of the vehicle.

3. In combination, a movable vehicle, a cable reel carried thereby, a flexible cable having one end connected to said reel and the other secured at a fixed point, and a spring driving connection between said reel and axle of the vehicle.

4. In combination, a movable vehicle, a cable reel carried thereby, a flexible cable having one end connected to said reel and the other secured at a fixed point, a driving member, a spring serving as a yielding connection between said reel and said driving member, and means for causing a positive rotation of said driving member in both directions.

5. In combination, a movable vehicle, a cable reel carried thereby, a flexible cable having one end connected to said reel and the other secured at a fixed point, a driving member, a spring serving as a yielding connection between said driving member and said reel, and a positive driving connection between said driving member and a part which rotates with the movement of the vehicle.

[Claims 6 and 7 not printed in the Gazette.]

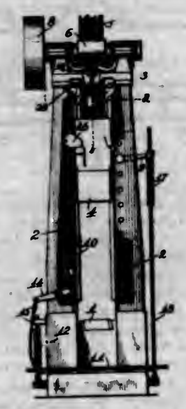
882,588. DROP-HAMMER. WILLARD T. SEARS, Philadelphia, Pa., assignor to Niles-Bement-Pond Company, Jersey City, N. J. Filed Dec. 11, 1907. Serial No. 406,005.

1. A drop hammer comprising an anvil, vertical guides, a hammer fitted to work in the guides, a stem projecting upward from the hammer, a pair of pinching rolls adapted for rotation in contact with the stem and adapted for relative movement to and from each other so as to be in or out of contact with the stem, a fluid-pressure cylinder, a piston therein, a connection between said piston and one of said pinch rolls to cause the movement of the piston to bring about the opening and closing of the rolls upon the stem, a valve for controlling the flow of fluid to and from the cylinder, a treadle, and connections between the treadle and valve for controlling the movements of the valve, combined substantially as set forth.

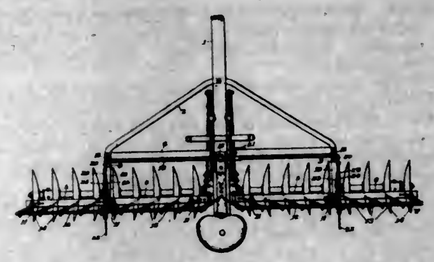
2. A drop hammer comprising an anvil, vertical guides, a hammer fitted to work in the guides, a stem projecting upward from the hammer, a pair of pinching rolls adapted for rotation in contact with the stem and adapted for relative movement to and from each other so as to be in or out of contact with the stem, a fluid-pressure cylinder, a piston therein, a connection between said piston and one of said pinching rolls to cause the movement of the piston to bring about the opening and closing of the rolls upon the stem, a valve for controlling the flow of fluid to and from the cylinder, a treadle, connections between the treadle and valve for controlling the movements of the valve, and tappet mechanism connected with the hammer and valve to cause the hammer to act on the valve at the upper end of its stroke, combined substantially as set forth.

3. A drop hammer comprising an anvil, vertical guides, a hammer fitted to work in the guides, a stem projecting upward from the hammer, a pair of pinching rolls adapted for rotation in contact with the stem and adapted for relative movement to and from each other so as to be in or out of contact with the stem, a fluid-pressure cylinder, a piston therein, a connection between said piston and one of said pinching rolls to cause the movement of the piston to bring about the opening and closing of the rolls upon the stem, a valve for controlling the flow of fluid to and from the cylinder, a treadle, a controlling rod extending vertically and having connection with the treadle, and a cam carried by the controlling rod and coöperating with the stem of the valve in such manner that the vertical movements of the controlling rod bring about the shifting of the valve, combined substantially as set forth.

4. A drop hammer comprising an anvil, vertical guides, a hammer fitted to work in the guides, a stem projecting upward from the hammer, a pair of pinching rolls adapted for rotation in contact with the stem and adapted for relative movement to and from each other so as to be in or out of contact with the stem, a fluid-pressure cylinder, a piston therein, a connection between said piston and one of said pinching rolls to cause the movement of the piston to bring about the opening and closing of the rolls upon the stem, a valve for controlling the flow of fluid to and from the cylinder, a treadle, a controlling rod extending vertically and having connection with the treadle, a cam carried by the controlling rod and coöperating with the stem of the valve in such manner that the vertical movements of the controlling rod bring about the shifting of the valve, and tappet mechanism connected with the hammer and controlling rod to cause the hammer to lift the controlling rod and shift the valve at the upper end of the hammer stroke, combined substantially as set forth.



882,589. DISK HARROW. CHARLES S. SHARP, Auburn, N. Y., assignor to International Harvester Company, a Corporation of New Jersey. Filed Dec. 23, 1907. Serial No. 407,671.



1. A harrow having, in combination, a draft-frame, a plurality of gang-frames connected with said draft-frame, disks mounted in said gang-frames, rock-shafts mounted in bearings upon said gang-frames, scrapers secured to said rock-shafts and adapted to engage with said disks, lever arms secured to said rock-shafts, a rocker-bar mounted in bearings upon said draft-frame, said rocker-bar having crank arms at opposite ends thereof, link connections between said crank-arms and said lever-arms, and means whereby said rocker-bar may be rocked in its bearings.

2. A harrow having, in combination, a draft-frame, gang-frames connected with said draft-frame by means of vertically arranged pivots, disks mounted in said gang-frames, rock-shafts mounted in bearings upon said gang-frames, scrapers secured to said rock-shafts and adapted to engage with said disks, lever-arms secured to said rock-shafts, the outer ends of said arms being substantially in line with the axes of the pivotal connections of the draft-frame and gang-frames, a rocker-bar mounted in bearings upon said draft-frame, said rocker-bar having crank-arms at opposite ends thereof, link connections between said crank-arms and the outer ends of said lever-arms, and means whereby said rocker-bar may be rocked in its bearings.

3. A harrow having, in combination, a draft-frame, gang-frames connected with said draft-frame by means of vertically arranged pivots, disks mounted in said gang-frames, rock-shafts mounted in bearings upon said gang-frames, scrapers secured to said rock-shafts and adapted to engage with said disks, lever-arms secured to said rock-shafts, the outer ends of said arms being substantially in line with the axes of the pivotal connections of the draft-frame and gang-frames, a rocker-bar mounted in bearings upon said draft-frame, said rocker-bar having crank-arms at opposite ends thereof, coiled springs connecting said crank-arms with said gang-frame in a manner to rock said bar in one direction, adjustable link connections between said crank arms and the outer ends of said lever-arms, and means whereby said rocker-bar may be rocked in its bearings against the action of said springs.

4. A harrow having, in combination, a draft-frame, gang-frames connected with said draft-frames by means of vertically arranged pivots, disks mounted in said gang-frames, rock-shafts mounted in bearings upon said gang-frames, scrapers secured to said rock-shafts and adapted to engage with said disks, arms secured to said rock-shafts, adjustable link connections between said arms and said gang-frames whereby a rocking movement of said shafts may be controlled in one direction, curved lever-arms secured to said rock-shafts, the outer ends of said arms being substantially in line with the axes of the pivotal connections of the draft-frames and gang-frames, a rocker-bar mounted in bearings upon said draft-frame, said rocker-bar having crank-arms at opposite ends thereof, coiled springs connecting said crank-arms with said gang-frames in a manner to rock said bar in one direction, adjustable link connections between said crank-arms and the outer ends of said curved lever-arms, and a

foot lever secured to said rocker-bar intermediate said crank-arms whereby said bar may be rocked in its bearings against the action of said springs.

882,590. MANUFACTURE OF SALICYLIC ACID GLYCERIN ESTERS. CARL SORGER, Frankfort-on-the-Main, Germany. Filed Jan. 14, 1907. Serial No. 352,261. (Specimens.)

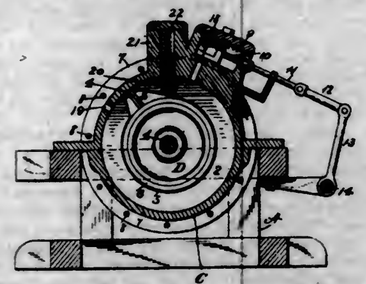
1. The herein described process of producing a salicylic acid glycerin ester, which consists in heating a mixture of an alphyl ester of salicylic acid and glycerin to a temperature at which the alcohol set free is distilled off, and isolating the glycerin ester from the oily product of reaction by the addition of a non-solvent.

2. The herein described process of producing a salicylic acid glycerin ester, which consists in heating a mixture of an alphyl ester of salicylic acid and glycerin to a temperature at which the alcohol set free is distilled off, and isolating the glycerin ester from the oily product of reaction by the addition of cold water.

3. The herein described process of producing a salicylic acid glycerin ester, which consists in heating a mixture of an alphyl ester of salicylic acid and glycerin to a temperature at which the alcohol set free is distilled off, isolating the glycerin ester from the oily product of reaction by means of cold water and separating the same from its solution in water by the addition of ether.

4. The herein described process of producing a salicylic acid glycerin ester, which consists in heating a mixture of an alphyl ester of salicylic acid, glycerin and a sodium compound to a temperature at which the alcohol set free is distilled off, and isolating the glycerin ester from the oily product of reaction by the addition of a non-solvent.

882,591. ROTARY ENGINE. WILLIAM M. SPENCER, Burns, Tenn. Filed Oct. 4, 1907. Serial No. 395,859.

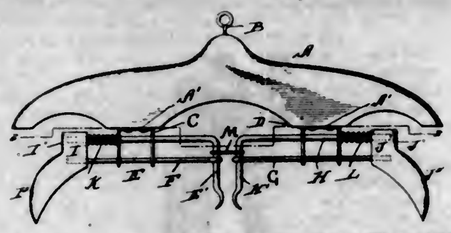


1. In a rotary engine, the combination with a frame, a casing mounted on the frame, of a shaft, wheels within the casing mounted on the shaft, buckets on the wheels, pivoted wings in the buckets adapted to bear against the casing, means for admitting steam to the wheels, and gate valves for preventing the steam from passing but one way through the casing.

2. In a rotary engine, the combination with a frame, a casing mounted on the frame and having exhaust ports therein, of a shaft, wheels in the casing mounted on the shaft, buckets on the wheels, pivoted spring pressed wings in the buckets adapted to bear against the casing, valves for regulating the flow of steam to the wheels, means for actuating the valves alternately, and gate valves for preventing the flow of steam in more than one direction through the casing.

3. In a rotary engine, the combination with a frame, a casing mounted on the frame, of a shaft, wheels within a casing mounted on the shaft, buckets on the wheels, pivoted wings in the buckets, a steam chest mounted on the casing having ports therein for the admission of steam to the casing, valves in the chest for regulating the flow of steam to the wheels, means connected to the shaft for operating the valves, and gate valves for preventing the flow of steam in but one direction.

882,592. GARMENT-HANGER. GEORGE S. STANTON, Knoxville, Tenn. Filed May 31, 1907. Serial No. 376,688.



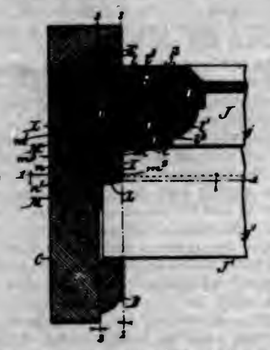
1. In a garment hanger, the combination with a cross-tree provided with brackets on its under side, of rods slidably mounted in said brackets provided with depending angled end portions, skirt-supporting members secured on the other ends of said rods, coiled springs surrounding said rods between said brackets and skirt supporting members, and a hook for locking said depending end portions, together, for the purpose described.

2. In a garment hanger, the combination with a cross-tree, of U-shaped brackets secured to the under side of the tree provided with spaced openings, of rods slidably mounted in said openings, the upper rods being provided with depending inner ends, to which the inner ends of the lower rods are connected, supporting members secured on the outer ends of said rods, and coiled-springs surrounding the upper rod between said members and brackets.

3. In a garment hanger the combination with a cross-tree provided with brackets on its under sides, of spring actuated rods slidably mounted in said brackets provided with depending inner ends, supporting members secured on the outer end of said rods, and a hook carried by one of the depending ends of said rod adapted to fit over the depending end of the other rod, for the purpose described.

4. In a garment hanger, the combination with a form provided with guide-brackets, of parallel rods slidably mounted in said brackets carrying skirt-supporting members at their outer ends, the inner ends of the upper rods being bent downwardly to form handles, coiled springs arranged on the upper rod between the brackets and members, and a hook pivotally mounted on the depending portion of one of said rods adapted to fit over the depending portion of the other rod, for the purpose described.

882,593. WEATHER-STRIP. CLINTON D. TABOR, New York, N. Y., assignor of one-half to Albert Schraft, Newark, N. J. Filed July 28, 1904. Serial No. 218,512.



1. A window guard comprising a stop arranged in a groove in the frame and having its rear part reduced and a weather strip arranged between said reducing part of the stop and the opposing wall of said groove, substantially as set forth.

2. A window guard comprising a stop arranged in a groove in the frame and having its rear part reduced by beveling one side thereof from its front edge to its rear edge, and a weather strip arranged between the reduced part of the stop and the opposing wall of said groove, substantially as set forth.

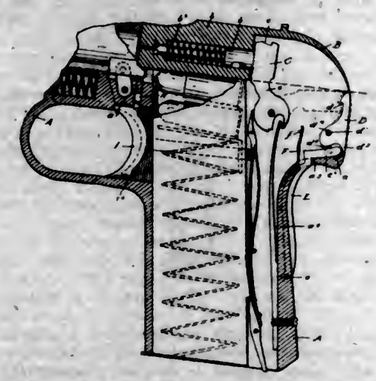
3. A window guard comprising a stop seated in a groove in the frame and a weather strip having a curved web arranged between said stop and the frame, substantially as set forth.

4. A window guard comprising a stop seated in a groove in the frame and having its rear part reduced, and a weather strip having a curved web arranged between the reduced part of said stop and the opposite wall of said groove, substantially as set forth.

5. A window guard comprising a stop seated in a groove in the frame and having its rear part reduced, and a weather strip constructed of sheet metal to form a curved web, a flange at the rear edge of the web and a shoulder at the front edge of the web, the web of said strip bearing at its crown against the reduced part of the stop and its opposite edges bearing against the opposing wall of the groove while said flange bears against the rear edge of said strip and said shoulder bears against the outer side of said frame, substantially as set forth.

[Claims 6 and 7 not printed in the Gazette.]

882,594. FIREARM. HENRY H. TALBOT, St. Joseph, Mo. Filed Oct. 30, 1906. Serial No. 341,298.



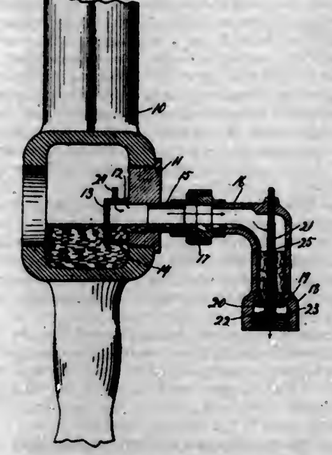
1. The combination in a fire arm with a carriage which contains a breech block, an extractor, an ejector, a reciprocating barrel, a recoil spring seated beneath the barrel, a magazine, a main spring, a sear, a sear trigger and magazine catch spring and a magazine catch, of a frame provided with a slot through that portion of it immediately in front of the magazine channel and above the trigger slot which intersects a hole drilled in the right wall for the reception of a trigger lock, a slot in the rear and center of the handle for the reception of a grip bar, an open rear end above the curvature of the handle for the reception of a safety head, a beveled recess in the left wall immediately in the rear and at the top of the magazine channel for the reception of the ejector extension, an open and unobstructed path for the hammer to the magazine channel, a hammer, the upward and forward bending shank of which bears the entire head forward of a line vertical with the pivotal center of the hammer tumbler, a notch in the top of the hammer, an automatic grip bar, a spring attached thereto and a bearing pin thereon, an automatic safety head adapted to interlock with said grip bar and clutch the hammer and to restrain said hammer when cocked until pressure is brought upon it by the hand grasping the fire arm handle, a trigger provided with a notch, a guide and bearing roll, a trigger lock, a shoulder thereon adapted to recover the movement of the trigger, a spring to lift the lock into the recess in the carriage rail, and a perforated beveled extension on said ejector to engage the beveled recess in the wall of said frame, substantially as shown and described.

2. The combination in a firearm with a frame having a trigger slot, the top and bottom of which are horizontal and parallel and which extend through the frame from the trigger guard to the magazine channel, a reciprocating barrel and a reciprocating breech block carriage, of a trigger having only a horizontal movement provided with a notch and a guide and bearing roll which tracks on the floor of said slot, a trigger lock, a shoulder thereon adapted to engage with the notch and recover the horizontal, longitudinal movement of the trigger, said lock being lifted by a spring and operated by the moving parts, substantially as shown and described.

3. In a firearm the combination with the frame of an automatic safety head in line with and forming a part of the frame, a pivoted hammer, a notch in the top thereof and a clutch pawl in the safety head to engage therewith, a grip-bar provided with a slot, and a rocker cam on said safety head to engage with said slot, a downward curved extension on said head forming a closed joint with the frame, and the grip-bar from the end of which said curved end receives motion for the head when the hammer is down, and the shoulder in the frame by contacting with which the outward motion of the head is restricted, substantially as set forth and shown.

4. In a magazine pistol the combination with a frame having a recess in the inner left wall at the top and immediate rear of the magazine channel and an ejector mounted on the top of the frame, of an extension on said ejector adapted to vertically enter said recess and fill it making said frame wall continuous and offering no interior obstruction in the frame, substantially as described and shown.

882,595. STEAM-TRAP AND AIR-VENT FOR RADIATORS. CHARLES B. THOMPSON, Buffalo, N. Y., assignor to American Radiator Company, a Corporation of New Jersey. Filed July 5, 1907. Serial No. 382,216.

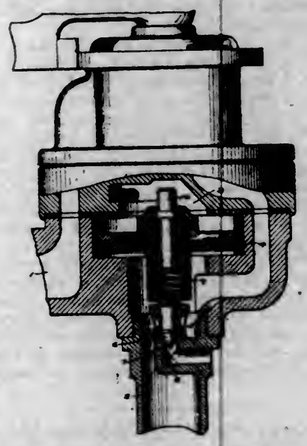


1. A trap return connection for radiators having in combination, a body having a chamber whose outlet is higher than its inlet, the chamber having an air vent through an upper wall; an elbow connected with the chamber and having its remoter leg directed downward, an outwardly-opening spring-seated valve within the vertical arm of the elbow; a stem carrying the valve and being vented therethrough.

2. In combination, a chambered body, its chamber having openings in its upper and lower walls; an elbow connected with the chamber and having a down-turned leg, with an outwardly-facing valve-seat, a valve stem located on the vertical axis of the down-turned leg and extending through and in threaded engagement with the elbow wall, and having a duct opening through its inner end and lat-

erally adjacent its upper end, a valve loosely fitting on the stem and adapted to the valve-seat, and a spring reacting between the valve and a shoulder at the inner end of the stem.

882,596. ENGINEER'S BRAKE-VALVE. WALTER V. TURNER, Wilkinsburg, Pa., assignor to The Westinghouse Air Brake Company, Pittsburg, Pa., a Corporation of Pennsylvania. Filed June 23, 1905. Serial No. 266,587.



1. In a fluid pressure brake, the combination with a train pipe, a discharge valve for releasing fluid therefrom in making service applications a yielding resistance device for opposing the movement of the valve to its full open position and of means for automatically varying the maximum area of the discharge port opening in proportion to the length or volume of the train pipe.

2. In a fluid pressure brake, the combination with a train pipe, a discharge valve for releasing fluid therefrom in making service applications a yielding resistance device for opposing the movement of the valve to its full open position and of means operated by train pipe pressure for varying the maximum capacity of the discharge port opening for a given reduction in proportion to the volume of the train pipe.

3. In a fluid pressure brake, the combination with a train pipe, and a discharge valve for releasing fluid therefrom in making service applications, of a movable abutment subject to opposing fluid pressures for operating said discharge valve, and a yielding resistance means for opposing the movement of the valve to its position of maximum port opening.

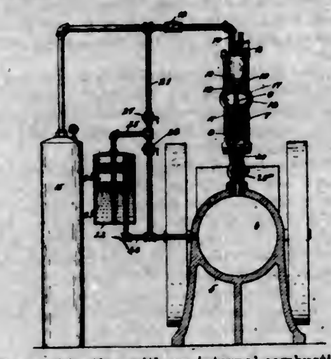
4. In a fluid pressure brake, the combination with a train pipe, and a discharge valve for releasing fluid therefrom and having a graduated port opening, of a movable abutment subject to opposing fluid pressures for operating said discharge valve, and a spring for opposing the movement of the valve to its extreme open position.

5. An engineer's brake valve device comprising a chamber or reservoir, a train pipe discharge valve having a graduated port opening, a movable abutment subject to the opposing pressures of the train pipe and said chamber for operating said discharge valve, a manually operated valve for controlling the pressure in said chamber, and a yielding resistance means for opposing the movement of the discharge valve to its position of maximum port opening.

[Claims 6 to 8 not printed in the Gazette.]

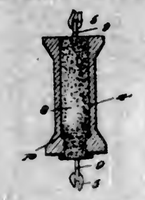
882,597. STARTING DEVICE FOR INTERNAL-COMBUSTION ENGINES. FRANK H. WALKER, Atwood, Kans. Filed July 20, 1907. Serial No. 384,786.

1. The combination with an internal-combustion engine, of a carbureter, a source of compressed air, a pipe connecting said source with the explosion chamber of the engine and having a branch leading to the carbureter, and an outlet from the carbureter connecting with the first mentioned pipe.



2. The combination with an internal-combustion engine, of a carbureter, a source of compressed air, a pipe connecting said source with the explosion chamber of the engine and having a branch leading to the carbureter, an outlet from the carbureter connecting with the first mentioned pipe, and valves in said pipe on opposite sides of the junction of the branch pipe therewith.

882,598. GUN-CLEANER. ORLO P. WARD, Canton, Pa. Filed May 8, 1907. Serial No. 372,474.



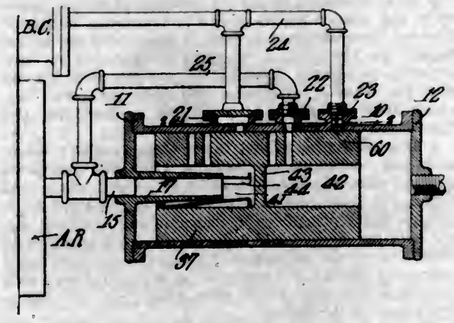
1. In a gun cleaner, the combination of a cleaning implement having eyes at opposite ends thereof, cords provided with hooks designed to detachably engage the said eyes, and a spool for the cord, the said spool being formed with a recess designed to receive the cleaning implement when the latter is not in use.

2. In a gun cleaner, the combination of a swab receiving ring, a brush, a cord designed to be detachably connected to the ring or the brush, and a spool for the cord, the said spool having an opening extending therethrough and designed to receive the ring and the brush and the said ring being engaged by the brush and held in position within the opening thereby.

882,599. TRIPLE VALVE. WILLIAM A. WEANT, Mocksville, N. C. Filed Dec. 16, 1907. Serial No. 406,732.

1. In air brake systems, the combination with an auxiliary reservoir, a brake cylinder, and a train pipe, of a valve casing connected at one end to the auxiliary reservoir, and at the opposite end to the train pipe, said casing having an exhaust port, and being provided with ports in communication with the brake cylinder and the auxiliary reservoir, a valve mounted within the casing and having non-communicating bored or chambered ends, and separate ports leading through said valve and arranged to be moved into alinement with the various casing ports, said valve being movable under variations in train pipe pressure.

2. In air brake systems, the combination with an auxiliary reservoir, a brake cylinder, and train pipe, of a valve casing having one end communicating with the auxiliary reservoir and the other end with the train pipe, a brake cylinder exhaust port extending through the casing, additional ports extending through the casing and communicating with the auxiliary reservoir and brake cylinder, and a valve mounted in the casing and movable under variations in train pipe pressure, said valve having ports movable into alinement with the casing ports for controlling the various braking operations.



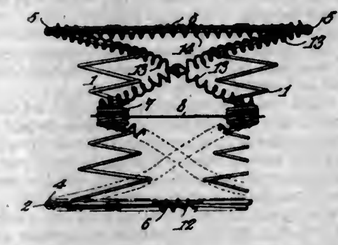
3. In an air brake system, the combination with an auxiliary reservoir, a brake cylinder, and train pipe, of a casing having one end communicating with the auxiliary reservoir, and the other end with the train pipe, a chamber connected to the casing and to the brake cylinder, a pair of ports leading from the chamber through the casing, one of said ports forming a feed from the auxiliary reservoir to the brake cylinder, and the other the exhaust from the brake cylinder, a second chamber connected to the casing and to the auxiliary reservoir, there being an auxiliary reservoir feed port for placing said chamber in communication with the interior of the casing, a valve mounted in the casing and having non-communicating chambered ends, an exhaust cavity formed in the valve and arranged to place the brake cylinder exhaust port in communication with the outer air, a port leading through the valve and arranged to establish communication between the auxiliary reservoir and the brake cylinder, and ports leading through the valve from the train pipe end thereof, one of said ports being normally in communication with the auxiliary reservoir port when the brakes are in release position, and the other forming a recharging port through which the supply of air in the auxiliary reservoir may be replenished while the brakes are set.

4. In an air brake system, the combination with an auxiliary reservoir, a brake cylinder, and a train pipe, of a valve casing, one end of which communicates with the auxiliary reservoir, and the other with the train pipe, a pair of chambers mounted on the casing and connected to each other and to the brake cylinder, ports for placing said chambers in communication with the interior of the casing, a third chamber mounted on the casing and having ported communication therewith, said casing being connected to the auxiliary reservoir, and a ported valve arranged in the casing and having non-communicating chambered ends, the valve ports being movable by variations in train-pipe pressure to establish communication between the auxiliary reservoir and the brake cylinder; to recharge the auxiliary reservoir while the brakes are set; and to place both the train pipe and the auxiliary reservoir in communication with the brake cylinder on an emergency reduction in said train pipe.

5. In an air brake system, an auxiliary reservoir, a brake cylinder, and a train pipe, a valve casing having one end in communication with the auxiliary reservoir and the other end with the train pipe, a plurality of sets of ports spaced from each other, and disposed in parallel relation with the axis of the casing, one port of each set being in communication with the brake cylinder, two of the ports of adjacent sets being in communication with the auxiliary reservoir, and one of the ports of one set being, also, in communication with the brake cylinder, and a valve arranged in the casing and provided with non-communicating chambered ends, said valve having ports arranged in sets corresponding to those of the casing, the valve being movable under variations in train pipe pressure to open or close the ports of one set to the exclusion of the others.

[Claims 6 to 10 not printed in the Gazette.]

882,600. FURNITURE-SPRING. ALBERT WEBORG, Jamestown, N. Y. Filed June 14, 1907. Serial No. 378,998.



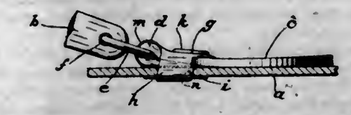
1. A spring seat or the like comprising a plurality of coiled springs, superposed frames secured to the springs, lapping spacing devices interposed between intermediate whirls of the springs and engaging opposite sides of the frames, and inclined spring coils extending upwardly and downwardly respectively from the spacing devices to the frames.

2. A spring seat or the like comprising a plurality of coiled springs having contracted intermediate portions, frames surrounding and secured to the end portions of the springs, overlapping spacing strips having their overlapped portions interposed between the intermediate whirls of each spring, said overlapped portions having oppositely extending projections surrounded by said whirls, and transversely and diagonally disposed spring coils engaging opposite sides of the frames.

3. A spring seat or the like comprising a plurality of coiled springs having contracted intermediate portions, frames surrounding and secured to the end portions of the springs, overlapping spacing strips having their overlapped portions interposed between the intermediate whirls of each spring, said overlapped portions having oppositely extending projections surrounded by said whirls, transversely and diagonally disposed spring coils engaging opposite sides of the frames and the end and intermediate whirls of the adjoining springs.

4. A spring seat or the like comprising a plurality of coiled springs having contracted intermediate portions, frames surrounding and secured to the end portions of the springs, overlapping spacing strips having their overlapped portions interposed between the intermediate whirls of each spring, said overlapped portions having oppositely extending projections surrounded by said whirls, transversely and diagonally disposed spring coils engaging opposite sides of the frames and the end and intermediate whirls of the adjoining springs, and transversely extending coiled springs connecting the sides of each frame and engaging the end whirls of adjoining springs.

882,601. FASTENING FOR HANDLES OF SUIT-CASES, &c. FRANK H. WHITE, Philadelphia, Pa. Filed Nov. 16, 1907. Serial No. 402,424.



1. In a suit case, the combination with the handle comprising a gripping portion, a leather end portion and a ring, of a metallic piece bent with the leather end portion to form loops one within the other, said ring extending through said loops and also engaging the gripping portion, and means to secure the end portion to the case body.

2. In a suit case, the combination with the handle comprising a gripping portion, a leather end portion provided with a loop, and a ring engaging the end of the gripping portion and the adjacent loop, of a metallic loop exterior to and bent with the leather loop and through which also the ring extends, and means to secure the end portion to the case body.

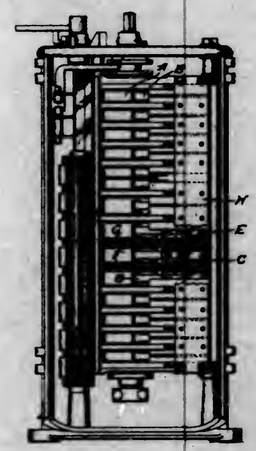
3. In a suit case, the combination with the handle comprising a gripping portion, a leather end portion provided with a loop, and a ring engaging the end of the gripping portion and the adjacent loop, of a metallic loop extending outside the leather loop and through which also the ring extends, and having, at the end of its lower turn, teeth adapted to engage the case body, and additional means to secure the end portion to the case body.

4. In a suit case, the combination with the gripping portion of the handle, of a leather end portion having a neck, a metallic loop the ends of which extend respectively above and below the neck, a ring extending through one end of the gripping portion and the adjacent metallic loop, and means to secure the end portion to the case body.

5. In a suit case, the combination with the handle comprising a gripping portion, a leather end portion provided with a loop, and a ring, engaging the end of the gripping portion and the adjacent loop, of a fastener comprising a top plate, overlying the end portion of the handle, and side flanges adapted to extend through the case body, and a metallic loop bent similarly to the leather loop and through which also said ring extends.

[Claims 6 to 9 not printed in the Gazette.]

882,602. CONTROLLING-SWITCH. HAROLD E. WHITE, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Sept. 18, 1906. Serial No. 335,051.



1. In a controlling switch, in combination with a rotary drum and contact-fingers engaging therewith, individual blow-out coils connected directly in series with the several fingers, auxiliary pole-pieces in magnetic contact with the cores of said coils, and main pole-pieces separated from the auxiliary pole-pieces by insulation and magnetised inductively thereby.

2. In a controlling switch, in combination with a rotary drum and contact-fingers engaging therewith, individual blow-out coils connected directly in series with the several fingers, auxiliary pole-pieces in magnetic contact with the cores of said coils, main pole-pieces separated from the auxiliary pole-pieces by insulation and magnetised inductively thereby, and means for so supporting said main pole-pieces that they are movable away from the coils to give access to the fingers.

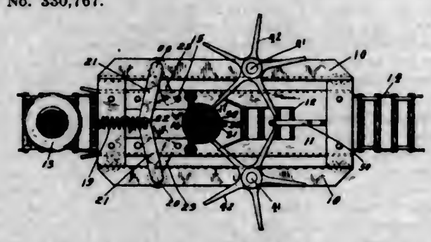
3. In a controlling switch, in combination with a rotary drum and contact-fingers engaging therewith, individual blow-out coils connected directly in series with the several fingers, auxiliary pole-pieces in magnetic contact with the cores of said coils, main pole-pieces separated from the auxiliary pole-pieces by insulation and magnetised inductively thereby, and a pivotally-mounted member supporting the main pole-pieces.

4. In a controlling-switch, in combination with a rotary drum and contact-fingers engaging therewith, individual blow-out coils connected directly in series with the several fingers, one end of each coil being connected to its core, auxiliary pole-pieces in magnetic and electrical contact with the cores of said coils, and main pole-pieces separated from the auxiliary pole-pieces by insulation and magnetised inductively thereby.

5. In a controlling switch, in combination with a rotary drum and contact-fingers engaging therewith, individual blow-out coils connected directly in series with the several fingers, the inner turn of each coil being connected to its core, auxiliary pole-pieces in magnetic and electrical contact with the cores of said coils, main pole-pieces separated from the auxiliary pole-pieces by insulation and magnetised inductively thereby, and means for so supporting said main pole-pieces that they are movable away from the coils to give access to the fingers.

[Claims 6 to 8 not printed in the Gazette.]

882,603. CAN-CAP-PLACING MACHINE. WILLIAM I. WHITE, Greenwood, Ind. Filed Aug. 16, 1906. Serial No. 330,767.



1. The combination, with a feeding table, of a cap-holding tube arranged over the table and movable toward and from the table, a cap ejecting member adapted to engage the interior of the initial cap, and means for driving the ejecting member beneath the said tube.

2. The combination, with a feeding table, of a cap-holding tube arranged over the table and movable toward and from the table, a cap-ejecting plunger, means for carrying cans successively beneath the table, means operated by the cans for operating the plunger, and means operated by the cans for depositing ejected caps upon the cans.

3. The combination, with a feeding table, of means for carrying cans in succession beneath said table, a cap-holding tube arranged above the table and movable toward and from the table, a plunger mounted on the table and adapted to be projected beneath said tube, a portion of said plunger lying initially beneath the tube and adapted to enter the cupped under-side of the lowermost cap, means operated by the cans for reciprocating said plunger, and means operated by the cans for shoving the ejected caps from the table and depositing them upon the cans.

4. The combination, with a feeding table, of means for carrying cans in succession beneath said table, a cap-holding tube arranged above the table and movable toward and from the table, a plunger mounted on the table and adapted to be projected beneath said tube, means operated by the cans for reciprocating said plunger, and means operated by the cans for shoving the ejected caps from the table and depositing them upon the cans.

5. The combination, with means for holding a series of nested cupped elements in a stack, which means comprises a guard yieldingly movable axially of the stack and engaging two or more of the cupped elements thereof, of ejecting means movable transversely of the line of movement of said yielding guard and adapted to engage the interior of the initial element of the stack and project the same beneath the guard.

[Claims 6 and 7 not printed in the Gazette.]

882,604. TOY. WILLIAM T. WOOD, Nashville, Tenn. Filed Feb. 20, 1906. Serial No. 302,028.



1. A toy comprising a movable figure, means for projecting the figure through the air, a sound producing device carried by the figure, and means also carried by the figure for operating the sound producing device.

2. A toy comprising a movable figure, means for projecting the figure through the air, a sound producing device located within and carried by the figure, and means also carried by the figure for operating the sound producing device after the figure has been set in motion.

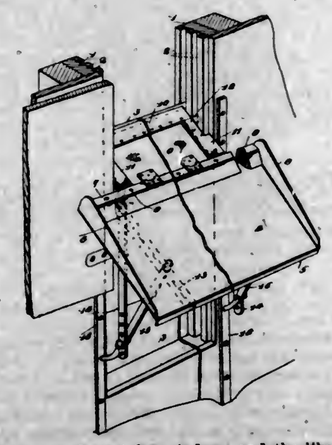
3. A toy comprising a movable figure, means for projecting the figure bodily through the air, a sound producing device carried by the figure, and means for operating the sound producing device after the figure has been set in motion.

4. A toy comprising a movable figure, means for projecting the figure through the air, a sound producing device carried by the figure, and means for operating the sound producing device, the last mentioned means being separate from the first mentioned means.

5. A toy comprising a movable figure, a sound producing device carried thereby, means for causing the said figure to be projected through the air, and means for operating the sound producing device, said last mentioned means being held inactive until the initial force of the first mentioned means has been spent.

[Claims 6 to 22 not printed in the Gazette.]

882,605. CHUTE ATTACHMENT FOR WINDOWS. CHARLIE R. YOUNG, Oberlin, Kans. Filed Oct. 15, 1907. Serial No. 397,563.



1. In an attachment for windows and the like, the combination of a chute having a sliding connection with the window, and coöperating members pendent from the chute and adjustably connected to each other to admit of regulating the inclination of the chute, the said members also engaging the window to hold the chute at the required elevation.

2. In an attachment for windows and the like, the combination of a rack carried by the window, a chute having a sliding connection with the window, and coöperating members pendent from the chute for adjusting the inclination thereof, one of the said members being adapted to engage the rack to hold the chute at the required elevation.

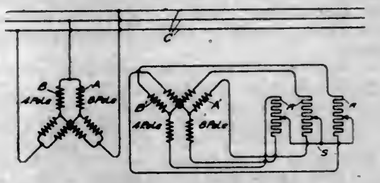
3. In an attachment for windows and the like, the combination of a rack applied to the window, a chute, a leaf carried by the chute and adapted to project between the window jambs, and a brace for the chute, the said brace engaging the before mentioned rack to hold the chute in an adjusted position.

4. In an attachment for windows and the like, the combination of a rack applied to the window, a chute, means for securing a sliding connection between the inner end of the chute and the window jambs, an upright member pendent from the chute, and a brace for the chute, the said brace having an adjustable connection with the before mentioned upright member to permit the inclination of the chute to be regulated and also engaging the rack to hold the chute in an adjusted position.

5. In an attachment for windows and the like, the combination of a chute, a swinging leaf carried by the chute and projecting between the window jambs, an upright pendent from the chute, a brace member for the chute, the said brace member having an adjustable connection with the upright to permit the inclination of the chute to be regulated, and a rack applied to the window to engage the brace and hold the chute in an adjusted position.

[Claims 6 to 8 not printed in the Gazette.]

882,606. INDUCTION-MOTOR CONTROL. ERNST F. W. ALEXANDERSON, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Mar. 7, 1906. Serial No. 304,650.



1. The method of controlling an induction motor having both primary and secondary members adapted for connection for different pole numbers, which consists in supplying current to both sets of primary connections simultaneously, and varying the relative impedances of the circuits formed by the two sets of secondary connections.

2. The method of controlling an induction motor having both primary and secondary members adapted for connection for different pole numbers, which consists in supplying current to both sets of primary connections simultaneously, and varying simultaneously and oppositely the impedances of the circuits formed by the two sets of secondary connections.

3. The method of operating at varying speeds an induction motor having two windings of different pole numbers on both primary and secondary members, which consists in supplying air current to both primary windings and varying the relative impedances of the circuits of the secondary windings.

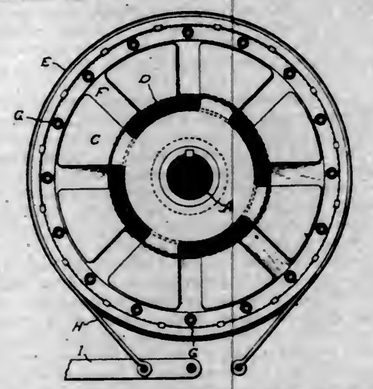
4. The method of operating at varying speeds an induction motor having two windings of different pole numbers on both primary and secondary members, which consists in supplying current to both primary windings and varying simultaneously and oppositely the impedances of the circuits of the secondary windings.

5. In combination, an induction motor having both primary and secondary members adapted for connection for different pole numbers, means for supplying current to both sets of primary connections simultaneously, and

means for varying the relative impedances of the circuits formed by the two sets of secondary connections.

[Claims 6 to 11 not printed in the Gazette.]

882,607. MAGNETIC CLUTCH. ROBERT ANDERSON, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Sept. 18, 1906. Serial No. 335,079.



1. A magnetic clutch comprising a magnet, an energizing winding therefor, and two mechanically connected armatures on opposite sides of said magnet movable towards each other into engagement with said magnet, the magnet being arranged to attract both armatures simultaneously.

2. In a magnetic clutch, in combination with a shaft, a magnet carried by and surrounding the shaft, an energizing winding therefor, and two mechanically-connected ring-shaped armatures on opposite sides of said magnet axially movable into engagement with said magnet, the magnet being arranged to attract both armatures simultaneously.

3. A magnetic clutch comprising a magnet, an energizing winding therefor, two mechanically-connected armatures on opposite sides of said magnet movable towards each other into engagement with said magnet, the magnet being arranged to attract both armatures simultaneously, and compression springs between said armatures adapted to move them apart when said engaging winding is de-energized.

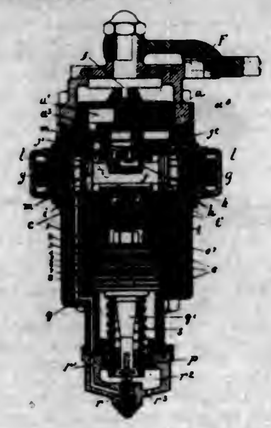
4. In a magnetic clutch, in combination with a shaft, a magnet carried by and surrounding the shaft, an energizing winding therefor, two mechanically-connected ring-shaped armatures on opposite sides of said magnet axially movable into engagement with said magnet, the magnet being arranged to attract both armatures simultaneously, and compression springs between said armatures adapted to move them apart when said energizing winding is de-energized.

5. In a magnetic clutch, in combination with axially-alined driving and driven shafts, a magnet carried by and surrounding one of said shafts, an energizing winding therefor, and two ring-shaped armatures carried by the other shaft on opposite sides of said magnet and axially movable into engagement therewith, the magnet being arranged to attract both armatures simultaneously.

[Claims 6 to 10 not printed in the Gazette.]

882,608. ENGINEER'S VALVE FOR AIR-BRAKES. WALTER M. AUSTIN, Swissvale, Pa., assignor to The Westinghouse Air Brake Company, Pittsburg, Pa., a Corporation of Pennsylvania. Filed Oct. 29, 1903. Serial No. 179,043.

1. In a fluid pressure brake, the combination with a train pipe and an engineer's brake valve having a plurality of positions, of a mechanism for altering the train pipe pressure and operated by opposing forces, one of which is derived from the train pipe pressure, and means controlled by the movement of the engineer's brake valve to its different positions for varying the effective resultant of the force due to train pipe pressure.



2. In a fluid pressure brake, the combination with a train pipe and an engineer's brake valve having a plurality of positions, of a valve device for controlling the charging and discharging of the train pipe, and operated by the train pipe pressure in one direction and an opposing constant force, and means controlled by the movement of the engineer's brake valve to its different positions for varying the effective resultant of the train pipe pressure acting on said valve device.

3. In a fluid pressure brake, the combination with a train pipe, of a mechanism for altering the train pipe pressure and normally balanced by the opposing forces of said train pipe pressure and a constant force, and means whereby such balance is automatically maintained at any predetermined degree of train pipe pressure.

4. In a fluid pressure brake, the combination of a spring having a constant force, means for balancing different train pipe pressures against said force, and means whereby such balance is automatically maintained at any predetermined degree.

5. In a fluid pressure brake, the combination with a train pipe and an engineer's brake valve having a plurality of positions, of a valve mechanism for altering the train pipe pressure and normally balanced by the opposing forces of said train pipe pressure and a constant force, and means operated by the movement of the engineer's brake valve to a given position for automatically maintaining such balance at a corresponding predetermined degree of train pipe pressure.

[Claims 6 to 31 not printed in the Gazette.]

882,609. BONDING-PIN. FREDERICK H. AYER, Chicago Heights, Ill. Filed Feb. 23, 1907. Serial No. 358,781.



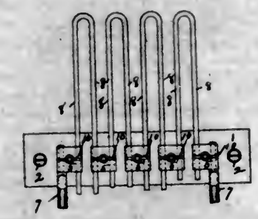
1. A channeled bonding pin, exteriorly circular in cross-section, except for said channel, and provided with a longitudinal channel extending the full length of the pin and the sides whereof are formed respectively concentric with points co-incident with the juncture of the channel edges and outer surface of the pin, and the extreme width of said channel being equal to the distance between either of its edges and the deepest point of the channel.

2. A channeled bonding pin, exteriorly circular in cross-section, except for said channel, and provided with a longitudinal channel of substantially uniform depth throughout, the sides whereof are formed respectively concentric with points co-incident with the juncture of the channel edges and outer surface of the pin, and the extreme width of said channel being equal to the distance between either of its edges and the deepest point of the channel.

3. A rail bond mechanism, comprising a truncated-cone shaped pin, the taper whereof is of small degree throughout the main length thereof, provided in one side with an open channel extending the length of the pin and of substantially uniform depth and cross-sectional form throughout, and a bond wire drawn to a cross-sectional form and dimensions to accurately fit and fully occupy said channel, the outer side of said wire conforming in arc of curvature to the exterior of the pin and being substantially flush with the latter when arranged in said channel.

4. In combination, a rail bond pin exteriorly circular in cross-section, except for said channel, and provided with a longitudinal channel of substantially uniform depth throughout, the sides whereof are formed on arcs respectively concentric with points co-incident with the juncture of the channel edges and outer surface of the pin, and the extreme width of said channel being equal to the distance between either of its edges and the deepest point of the channel, and a bonding wire or rod having a pin-engaging portion of equi-lateral triangular form in cross-section, the several sides whereof are respectively formed on arcs concentric with the point of the angle opposed thereto, and the diametric dimensions of said pin-engaging portion being the same as those of the channel of the pin.

882,610. ADJUSTABLE ELECTRICAL RESISTANCE. FREDERICK O. BALL, Plainfield, N. J. Filed Nov. 21, 1907. Serial No. 403,109.



1. The combination of the insulating base; a series of clamps upon the base insulated from each other; and a loop secured by them, the sides of the loop being adjustable in the clamps to vary the length of the loop.

2. The combination of the insulating base; a series of clamps upon the base insulated from each other; and a series of loops arranged in said clamps, one side of each loop being secured by one clamp, and the opposite side of the loop by another clamp to carry the current from clamp to clamp, said loops being adapted to be adjusted as to length in the clamps.

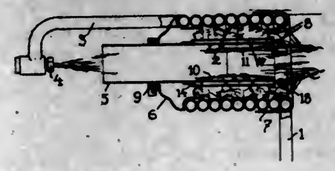
3. The combination of the insulating base; a series of loops and a series of clamps, and each clamp being adapted to secure one side of a loop at the one side of the clamp, one side of another loop at the opposite side of the clamp; and clamping bolts extending through the clamps between the parts of the loops secured, said loops being adapted to be adjusted as to length in said clamps.

4. The combination of the insulating base; clamping blocks 3, 4 and 5 arranged on the base and adapted to secure a plurality of loops with one side of each loop in one clamp, and the opposite side of the loop in another clamp; and a plurality of loops each having one side secured by one clamp, and the opposite side by another clamp.

5. The combination of the base 1; the clamps composed of blocks 3, 4 and 5; clamping bolts extending through the blocks; and a double series of loops one between the blocks 3 and 4; and another series between the blocks 4 and 5, said loops being adjustable as to length in said clamps.

[Claim 6 not printed in the Gazette.]

882,611. BUNSEN BURNER. GUSTAV BARTHEL, Dresden, Germany. Filed Sept. 15, 1906. Serial No. 334,769.



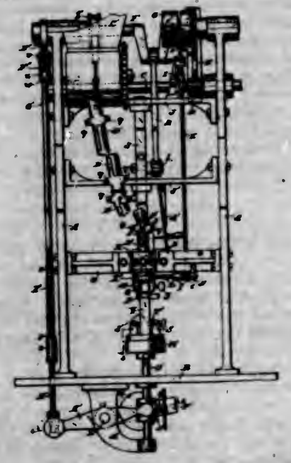
1. In a Bunsen burner, a mixing tube provided with perforations and a constricted exit opening, causing peripheral particles of gas to deviate through said perforations, and a vaporizer surrounding said mixing tube, the space between the tube and vaporizer forming a chamber to receive said diverted gases, said chamber at its exit end having openings for the issue of the diverted gas which, when ignited, forms an auxiliary flame for heating the vaporizer, substantially as and for the purpose set forth.

2. In a Bunsen burner, a mixing tube provided with perforations and a constricted exit opening, causing peripheral particles of gas to deviate through said perforations, and a vaporizer consisting of a pipe coiled around the mixing tube and forming a chamber for receiving the gases thus diverted from the mixing tube, said chamber having openings at its exit end where the ignited gases form an auxiliary flame for heating the vaporizer, substantially as and for the purpose set forth.

3. In a Bunsen burner a mixing tube provided with a constricted gas outlet, a vaporizer inclosing the same and two sockets closing the space between the vaporizer and the mixing tube and supporting the latter, substantially as and for the purpose set forth.

4. In a Bunsen burner, a mixing tube provided with perforations and a constricted gas outlet, a vaporizer inclosing the same, sockets closing the space between the vaporizer and the mixing tube and supporting the latter, the front of which sockets is provided with a ring of perforations, all substantially as and for the purpose set forth.

882,612. CORKING-MACHINE. FERDINAND BARTHOLD, Milwaukee, Wis., assignor to The Vilter Manufacturing Company, Milwaukee, Wis. Filed Mar. 12, 1907. Serial No. 362,009.



1. In a corking-machine, the combination of a start-and-stop mechanism comprising a throw-rod and a suitably arranged spindle provided with a pair of cranks one of which has swivel-union with said rod; a reciprocative

bottle-rest, a cork-passage head-block against which a bottle is chucked by a movement of said rest, a reciprocative cork-compressor engageable with said block, and a reciprocative plunger by which a compressed cork is forced into a chucked bottle, which bottle actuates the other of the aforesaid cranks when positioned on the aforesaid rest.

2. In a corking-machine, the combination of a reciprocative bottle-rest, a cork-passage head-block against which a bottle is chucked by a movement of said rest, a reciprocative cork-compressor engageable with the head-block, a reciprocative plunger by which a compressed cork is forced into a chucked bottle, a suitably arranged forked bracket, a bottle-gage having pins held in adjustable engagement with the fork-branches of the bracket, and a start-and-stop mechanism comprising a spindle having bearing in said bracket and a trip-crank fast on the spindle between said bracket-branches to have its free end in the path of the bottle when the same is placed on the aforesaid rest to abut said gage.

3. In a corking-machine, the combination of a reciprocative bottle-rest, an adjustable bottle-gage carried by the same, a cork-passage head-block against which a bottle is chucked by a movement of said rest, a reciprocative cork-compressor engageable with said block, a reciprocative plunger by which a compressed cork is forced into a chucked bottle, a suitably arranged bracket, another bottle-gage in adjustable connection with the bracket, and a start-and-stop mechanism comprising a spindle in bearing with said bracket, and a crank fast on the spindle to have its free end in the path of the bottle when the same is positioned on the aforesaid rest to abut said gages.

4. In a corking-machine, the combination of a bottle-rest having a stem loose in guides, a counterweighted lever in connection with the stem, a cork-passage head-block against which a bottle is chucked by a movement of said rest against resistance of the weight governing said lever, means in conjunction with the aforesaid lever by which yielding pressure is had on the bottle subsequent to the chucking of same, means for feed, compression and insertion of a cork in the chucked bottle; and a start-and-stop mechanism arranged to be actuated by said bottle when the same is positioned on the aforesaid rest.

5. In a corking-machine, the combination of a bottle-rest having a stem for which guides are provided, a lever in connection with the stem, a weight-controlled spindle with which the lever is connected and for which suitable bearings are provided, a lever-actuating rod, a sleeve fast on the rod, a tubular tension-screw loose on said rod in engagement with said sleeve, a spiral-spring opposing the screw, another sleeve supported by the spring and in telescopic engagement with the aforesaid rod, a stem fast in the spring-supported sleeve, a lever connected to the stem, and a lever-actuating eccentric on a shaft of the machine; a cork-passage head-block against which a bottle is chucked by a movement of said rest, a reciprocative cork-compressor, a reciprocative plunger by which a compressed cork is forced into a chucked bottle, and a start-and-stop mechanism comprising a trip-crank having yield to the bottle when the same is positioned on the aforesaid rest.

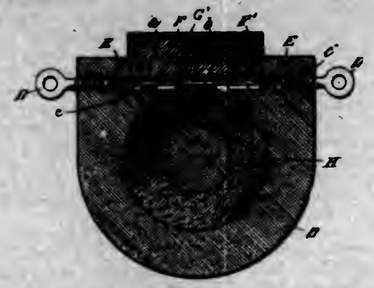
[Claims 6 to 8 not printed in the Gazette.]

882,613. STUFFING-BOX. FERDINAND M. BEAMER, Philadelphia, Pa. Filed July 18, 1907. Serial No. 384,391.

1. A packing for shafts comprising a stuffing box, a packing adapted to surround the shaft, oppositely disposed adjusting screws connected to the ends of said packing and adapted to draw the ends of said packing toward each other.

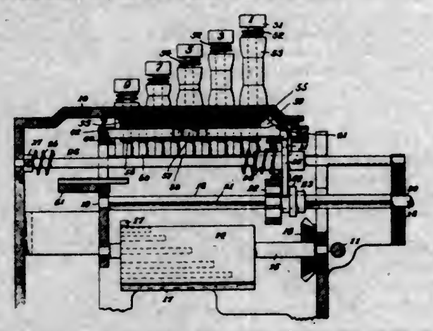
2. A packing for shafts comprising a stuffing box, oppositely disposed adjusting screws entering said box, a packing adapted to surround the shaft, and means for connecting said screws to the ends of said packing, whereby the adjustment of the screws will draw the ends of said packing toward each other.

3. A packing for shafts comprising a stuffing box, oppositely disposed adjusting screws entering said box, a packing adapted to surround the shaft, and straps connecting the ends of said packing to said screws, whereby the adjustment of the screws will draw the ends of said packing toward each other.



4. A packing for shafts comprising a stuffing box, oppositely disposed adjusting screws entering said box, a packing adapted to surround a shaft, straps connected to the ends of said packing, and springs connecting the straps and the ends of the screws.

882,614. CALCULATING-MACHINE. CARL M. BERNGAU, Hoboken, N. J., assignor to The Keuffel & Esser Company, Hoboken, N. J., a Corporation of New Jersey. Filed Nov. 27, 1906. Serial No. 345,398.



1. In a calculating machine of the class described, the combination with depressible keys, numeral wheels, a drum, mutilated gears thereon, and a shaft for actuating the numeral wheels, of means for gearing the drum with said shaft, normally held inoperative, and means actuated by depressing the keys for releasing and permitting said gearing means to operate.

2. In a calculating machine of the class described, the combination with numeral wheels, a shaft for actuating them, a drum, and a series of mutilated gears thereon, of a pinion on the shaft, means for bringing it into mesh with the mutilated gears, normally held inoperative, and manual means for releasing and permitting the gearing means to operate.

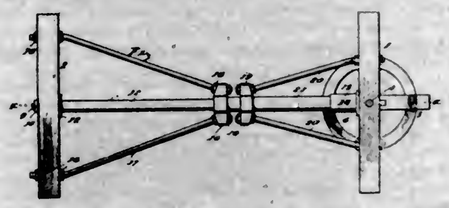
3. In a calculating machine, the combination with a row of depressible keys numbered from 1 to 9 and a drum provided with mutilated gears, of a shaft between the drum and the keys, a slidable pinion on said shaft, and a connection between the keys and the pinion whereby the latter may be moved into line with the mutilated gears by depressing the keys.

4. In a calculating machine, comprising depressible keys, numeral wheels and drums each having mutilated gears, the combination therewith of a shaft for actuating the numeral wheels, slidable pinions adapted to actuate said shaft means for shifting said pinions into line with said mutilated gears and means actuated by depressing by the keys, for permitting said shifting means to operate.

5. In a calculating machine, the combination with a row of depressible keys numbered from 1 to 9 and a drum provided with mutilated gears, of a shaft between the drum and the keys, a slidable pinion on said shaft, and a connection between the keys and the pinion whereby the latter may be moved into line with a predetermined tooth on the mutilated gear upon the depression of the proper key.

[Claims 6 to 24 not printed in the Gazette.]

882,615. VEHICLE-REACH. FREDERICK W. BLECKLEY, Hazleton, Pa. Filed May 29, 1907. Serial No. 376,341.



1. In combination with fore and hind gears of a vehicle, a rod passed through openings in said gears, a king bolt connecting the front end of the rod with the fore gear, a set nut threaded upon the rear end of the rod and engaging with the rear side of the hind gear, a tube mounted upon said rod and abutting against the inner or opposing sides of said fore and hind gears and having positive connection at its rear end with the hind gear and connected by a swivel joint at its front end with the fore gear, and front and rear stays between the respective fore and hind gears and the said tube, each of the stays being of similar construction and comprising a collar and diverged braces.

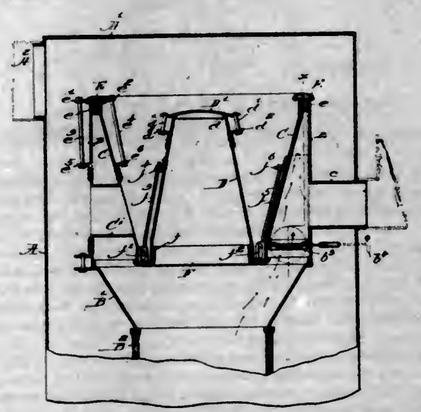
2. In combination with the fore and hind gears of a vehicle, the fore gear having a pillow formed with a seat and an intersecting transverse groove, coupling means between said gears and abutting at its ends against the inner or opposing sides thereof, said coupling means having positive connection at its rear end with the hind gear and a swivel connection at its front end with the fore gear, said swivel connection being formed by a flange at the front end of the coupling means fitting the said transverse groove of the aforementioned pillow.

3. In combination with the fore and hind gears of a vehicle, the fore gear having a pillow formed with a seat and an intersecting transverse groove, coupling means between said gears and abutting at its ends against the inner or opposing sides thereof, said coupling means having positive connection at its rear end with the hind gear and a swivel connection at its front end with the fore gear, said swivel connection being formed by a flange at the front end of the coupling means fitting the said transverse groove of the aforementioned pillow, and similarly formed front and rear stays having their inner ends abutting and their outer ends connected to the respective gears, each of said stays embodying a collar and braces extended from the collar upon divergent lines and having positive connection with a gear.

4. In combination, fore and hind gears, a rod having king bolt connection with the fore gear and screw thread connection with the hind gear, a tube mounted upon the rod and having its ends abutting against the inner or opposing sides of the said gears and having positive connection at one end with the hind gear and swivel connection at its opposite end with the fore gear, a collar fast to said tube, rearwardly diverged braces connecting said collar with the outer lower portions of the hind gear, a tube mounted upon the coupling tube and abutting at its rear end against the said collar and at its front end with a flange at the front end of the said coupling tube, a collar fast to said tube and forwardly diverged, stays connecting the collar with the outer lower portions of the upper member of the fore gear.

5. In combination, fore and hind gears, the fore gear comprising upper and lower members having a fifth wheel connection between them and the upper member having a pillow formed in its top side with a longitudinal seat and with a transverse groove, a rod having king bolt connection with an upper member of the fore gear and having its rear end threaded and passed through an opening of the hind gear and receiving a set nut, a tube mounted upon the rod and flanged at opposite ends, one flange being secured to the hind gear and the other flange engaging a transverse groove of the pillow of the fore gear, and front and rear stays of similar construction, the rear stay embodying a yoke and rearwardly diverged braces, and the front stay embodying a tube, yoke and forwardly diverged braces, the braces of the stays being connected to the outer lower portions of the respective gears.

882,616. FURNACE. HENRY BLUHM and JOSEPH H. REGAN, Boston, Mass. Filed May 20, 1907. Serial No. 374,593.



1. In a furnace, a heating surface comprising outer and inner walls, a central dome having a cap, a ring sustaining the lower end of said dome and fitting the lower end of said inner wall, said inner wall, ring and dome each having ears, and tie rods to connect said ring respectively with the ears of the dome and inner wall.

2. In a furnace, an outer and inner wall, each having ears, combined with a ring resting upon the upper ends of said walls, said ring having a flange depending between said walls, tie rods to connect said ring respectively with the ears of said outer and inner walls, a central dome having a cap, a ring sustaining the lower end of said dome and fitting the lower end of said inner wall and tie rods connecting said last mentioned ring respectively with said dome and inner wall.

3. In a furnace, a heating surface comprising an outer and inner wall, the outer wall having a smoke pipe, combined with a frame interposed between said walls, said frame having baffle-plates differing in height, and a damper in the bottom of said frame, said damper when closed insuring the passage of the products of combustion about said heating surface between said inner and outer walls and over the shorter baffle-plate into the smoke-pipe.

4. In a furnace, a heating surface comprising outer and inner walls, a smoke pipe connected with said outer wall, a frame presenting baffle-plates of different height, and a damper at the lower end of said frame said damper when opened permitting the products of combustion to pass immediately from the grate into the smoke pipe.

882,617. STOVE. STANHOPE BOAL, Piqua, Ohio. Filed Apr. 12, 1906. Serial No. 311,368.

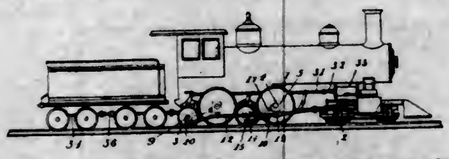
In a stove, a feed door comprising three skeleton sections, an intermediate section, an outer and an inner section, said intermediate section provided with a series of lugs projecting from the front face thereof, mica secured against the lugs by the outer frame section, forming air passages between the intermediate section and mica, fo-

raminous metal plates secured to the rear face of the intermediate section by said inner section, whereby air is



supplied through the door to the combustion chamber of the stove, substantially as described.

882,618. LOCOMOTIVE. GEORGE A. BOTHWELL, Owen Sound, Ontario, Canada. Filed June 14, 1907. Serial No. 379,067.



1. A locomotive provided with ordinary driving wheels; normally idle wheels; means for raising the driving wheels clear of the track; and means for driving the idle wheels when the ordinary driving wheels are so raised.

2. A locomotive provided with ordinary driving wheels; normally idle wheels; means for raising the driving wheels clear of the track; means for driving the idle wheels from the ordinary driving wheels; and means for freeing the idle wheels when the ordinary driving wheels are in engagement with the track.

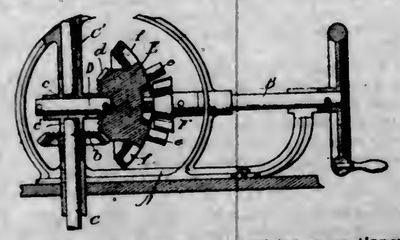
3. A locomotive provided with ordinary driving wheels; normally idle wheels; means for driving the idle wheels from the ordinary driving wheels; and means for freeing either sets of wheels at will.

4. A locomotive provided with ordinary driving wheels; normally idle wheels; supplemental wheels; means for lowering the supplemental wheels to raise the driving wheels; means for driving the supplemental wheels and idle wheels from the ordinary driving wheels; and means for freeing the idle wheels when the ordinary driving wheels are lowered to drive.

5. A locomotive provided with ordinary driving wheels; normally idle wheels; supplemental wheels; a tender provided with normally idle wheels; means for lowering the supplemental wheels to raise the driving wheels; means for driving the supplemental wheels and idle wheels from the ordinary driving wheels; and means for freeing the idle wheels when the ordinary wheels are lowered to drive.

[Claims 6 to 19 not printed in the Gazette.]

882,619. GEARING FOR WASHING-MACHINES. HENRY BRAMMER, St. Louis, Mo. Filed June 27, 1907. Serial No. 381,095.



1. A mechanical movement comprising a continuously revoluble drive-shaft, a rotary reciprocal shaft arranged at an angle thereto, and rotary reciprocal means deriving its motion from said drive-shaft having a transversely vibratory axis and operatively connected to and imparting its motion to said rotary reciprocal shaft.

2. A mechanical movement comprising a continuously revoluble drive-shaft, a rotary reciprocal shaft arranged at an angle thereto, and rotary reciprocal means deriving its motion from said drive-shaft on one side and engaging the rotary reciprocal shaft on the opposite and having a transversely vibratory axis and operatively connected to and imparting its motion to said rotary reciprocal shaft.

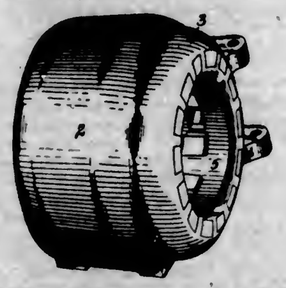
3. A mechanical movement comprising a continuously revoluble drive-shaft, a rotary reciprocal shaft arranged at an angle thereto, a rotary reciprocal mangle-wheel deriving its motion from said drive-shaft having a transversely vibratory axis and having a pinion integral with its side opposite said drive-shaft which is operatively connected to and imparts its motion to said rotary reciprocal shaft.

4. A mechanical movement comprising a continuously revoluble drive-shaft, a rotary reciprocal shaft arranged at an angle thereto, a rotary reciprocal mangle-wheel deriving its motion from said drive-shaft having a transversely vibratory axis and having a pinion integral with its side opposite said drive-shaft which is operatively connected to and imparts its motion to said rotary reciprocal shaft.

5. A mechanical movement comprising a continuously revoluble drive-shaft, a rotary reciprocal shaft arranged at an angle thereto, a rotary reciprocal mangle-wheel-shaft to which said rotary reciprocal shaft is secured, pivoted bearings for said mangle-shaft in the same plane as the bearings of said drive-shaft, the axis of the pivot of which alines with the axis of said rotary reciprocal shaft, and means integral with said mangle-wheel that is operatively connected to and imparts its motion to said rotary reciprocal shaft.

[Claims 6 and 7 not printed in the Gazette.]

882,620. BURGLAR-PROOF SAFE AND VAULT. WALTER BRINTON, High Bridge, N. J., assignor to Taylor Iron & Steel Company, High Bridge, N. J., a Corporation of New Jersey. Original application filed May 7, 1904, Serial No. 206,844. Divided and this application filed Jan. 30, 1906. Serial No. 298,610.



1. An integral cast, toughened and strain-free manganese steel safe or vault body formed by casting it and then heating it while it has retained therein a part of its casting heat, and then rapidly cooling it.

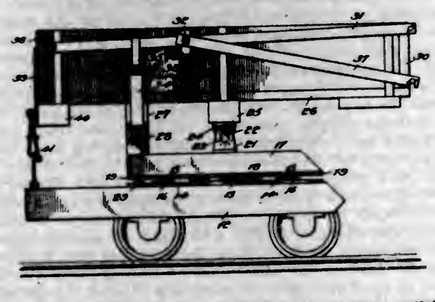
2. An integral cast, toughened and strain-free steel safe or vault body or member having therein from 7 to 30 per cent. of manganese and formed by casting it and then heating it up to a predetermined temperature while it has retained therein a part of its casting heat ranging upwardly, according to the size of the casting, from a point above normal atmospheric temperature, and then rapidly cooling it by immersing it in a bath.

3. An integral cast, toughened and strain-free manganese steel safe or vault body formed by casting it and then rapidly heating it while it has retained therein a part of its casting heat ranging from a point above normal atmospheric temperature to substantially 1000 degrees Fahrenheit, according to the size and design of the casting, and then rapidly cooling it by plunging it in water.

4. An integral cast, toughened and strain-free unmachineable-metal safe or vault body having therein a predetermined quantity of manganese and formed by casting it, then rapidly heating it while it has retained therein a part of its casting heat, and then cooling it.

5. An integral cast, toughened, strain-free unmachineable-metal safe or vault body or member having a predetermined quantity of manganese therein and provided with a reinforced surface around its doorway and formed by casting it and then rapidly heating it up to a predetermined temperature while it has retained therein a part of its casting heat, and then rapidly cooling it by quenching the casting in a bath.

882,621. DUMPING-CAR. ARTHUR G. BROWN, Spokane, Wash. Filed Nov. 16, 1907. Serial No. 402,380.



1. In a dumping car, the combination with a tilting body, of a suitable support on which said body is mounted, standards rigid with said support, an end-gate, longitudinal bars by which said end gate is supported, said bars being pivotally connected with said body and engaging stops on said standards, so that when the said body is tilted the said longitudinal bars may move forward and said end-gate will be held in a raised position, thus permitting the contents of the tilting body to be discharged.

2. In a dumping car, the combination with a tilting body, of a suitable support on which said body is mounted, standards rigid with said support; rollers on said standards an end-gate, longitudinal bars by which said end gate is supported, said bars being pivotally connected with said body and passing beneath said rollers so that when the said body is tilted the said longitudinal bars may move forward and said end-gate will be held in a raised position, thus permitting the contents of the tilting body to be discharged.

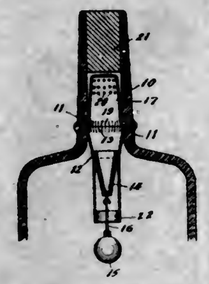
3. In a dumping car, the combination with a tilting body, of a suitable turn-table on which said body is mounted, standards rigid with said turn-table, rollers on said standards, an end-gate, longitudinal bars by which said end gate is supported, said bars being pivotally connected with said body and passing beneath and in contact with said rollers which serve as stops for preventing upward movements of the rear ends of said bars, while permitting free longitudinal movements thereof, so that when the said body is tilted said bars may move freely forward and the said end gate will be held in a raised position, thus permitting the contents of the tilting body to be discharged.

4. In a dumping car, the combination with a suitable truck, of a turn-table mounted on said truck and loosely connected therewith, a tilting car body having an open hinged connection with the said turn-table; whereby should the car be accidentally overturned in dumping the car body may become detached from the turn-table, and the turn-table from the truck, to permit these parts to be more easily handled in restoring the car to its proper position.

5. In a dumping car, the combination of a suitable truck provided with anti-friction balls, a turn-table pivotally mounted on said truck and having a circular plate to engage said balls, and a tilting car-body pivotally mounted on said turn-table, said turn-table being provided with standards rearward of the hinge or pivot of said tilting body, said standards having loops, an end-gate, and longitudinal bars supporting said end-gate and passing loosely through said loops and engaging stops on said standards.

[Claims 6 and 7 not printed in the Gazette.]

882,622. BOTTLE-NECK CHECK-VALVE. MARK J. BROWN, Chicago, Ill. Filed Nov. 15, 1907. Serial No. 402,238.



1. In combination, a bottle-neck having a retaining recess within its base, a valve-seat member retained in said recess, a cup-formed weighted valve normally seated in said valve seat member, and a perforate protective cap above the aforesaid valve device and likewise retained in said recess, substantially as specified.

2. In combination, a bottle neck having a retaining recess within its base, a valve-seat member retained in said recess, a cup-formed weighted valve normally seated in said valve seat member, and a laterally perforate protective cap above the aforesaid valve device and likewise retained in said recess, substantially as specified.

3. In combination, a bottle neck having a retaining recess within its base, a valve-seat member retained in said recess, the top of said valve-seat member being peripherally slitted, a cup-formed weighted valve normally seated in said valve seat member, and a perforated protective cap above the aforesaid valve device and likewise retained in said recess, substantially as specified.

4. In combination, a bottle neck having a retaining recess within its base, a valve-seat member retained in said recess, a cup-formed weighted valve normally seated in said valve seat member, and a perforate protective cap above the aforesaid valve device and likewise retained in said recess, the base of said cap being rimmed and peripherally slitted, substantially as specified.

5. In combination, a bottle-neck having a retaining recess within its base, a valve-seat member retained in said recess, a cup-formed weighted valve normally seated in said valve seat member, and a perforate protective cap above the aforesaid valve device and likewise retained in said recess, substantially as specified.

[Claims 6 to 11 not printed in the Gazette.]

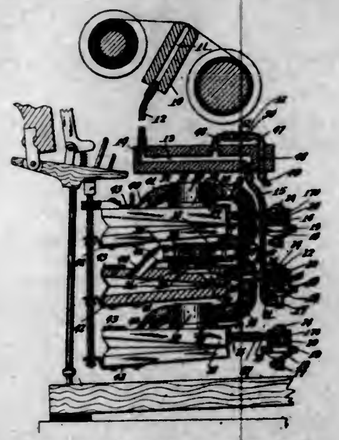
882,623. PNEUMATICALLY-OPERATED MUSICAL INSTRUMENT. THEODORE P. BROWN, Worcester, Mass., assignor to Simplex Piano Player Company, Worcester, Mass., a Corporation of Massachusetts. Filed Jan. 7, 1907. Serial No. 351,098.

1. In a pneumatic musical instrument, the combination of an operating pneumatic, and a secondary valve box removably mounted on one of the leaves thereof.

2. In a pneumatically controlled musical instrument, the combination of an operating pneumatic, a valve box mounted on the outside thereof, and removable means for connecting the pneumatic with the valve box, whereby air may pass from one to the other.

3. In a musical instrument, the combination of an operating pneumatic, a valve box mounted on one of the leaves thereof, and a connection between the valve box and the interior of the pneumatic, comprising a pipe section connected with the valve box, a pipe section connected with the pneumatic, and a flexible tube connecting said pipe sections.

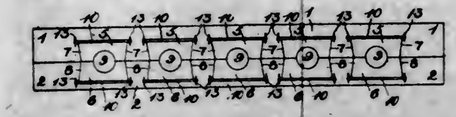
4. In a musical instrument, the combination of an operating pneumatic, a valve box mounted on the outside of one of the leaves thereof, removable means for connecting the interior of the valve box with the interior of the pneumatic, said means being accessible from the outside of the pneumatic and valve box, a wind-chest, and removable means for connecting the wind-chest with the valve-box.



5. In a musical instrument, the combination with an operating pneumatic, of a valve box mounted on the outside of one of the leaves thereof, removable means for connecting a chamber of the valve box with the interior of the pneumatic, a pipe section extending from the interior of the valve box, a wind-chest having a pipe section extending therefrom, and a flexible tube connecting said pipe sections.

[Claims 6 to 16 not printed in the Gazette.]

882,624. GUIDE-BLOCK OF STAMP-MILLS. WILLIAM T. BYNG, Krugersdorp, Transvaal. Filed June 26, 1906. Serial No. 323,442.



1. In a guide-block for the stamps of stamp-mills, the combination of the two parallel longitudinal members of the frame constructed on the inside with dovetailed and tapered recesses and the slips correspondingly dovetailed and tapered in said recesses and means for retaining said slips in said recesses, said means consisting of an arched or bow spring engaging screws fixed to the frame and wing-nuts engaging said screws and springs.

2. In a guide-block for the stamps of stamp-mills, in combination, two parallel members each formed on the inside with a recess dovetailed in horizontal section and tapered vertically from the top to the bottom, slips in each of said recesses correspondingly dovetailed and tapered and formed with hemi-cylindrical recesses, the screws fixed to the frame at opposite sides of the dovetailed recesses, arched or bow springs constructed with elongated slots engaging said screws, and wing-nuts engaging the ends of the screws above the springs, substantially as described.

882,625. MAGAZINE-RIFLE. JOHN J. CATRON, Bonham, Tex. Filed Aug. 13, 1907. Serial No. 388,324.

1. In a magazine rifle, the combination of a barrel, a magazine, a breech frame fixed with respect thereto, a combined breech block and cartridge carrier movable in said frame, means for translating the combined breech block and cartridge carrier, a device for controlling the rearward feed of cartridges and automatically locking the breech block and cartridge carrier near its foremost position when the magazine is empty, and means for elevating a cartridge in the combined breech block and cartridge carrier.



2. In a magazine rifle, the combination of a barrel, a magazine, a breech frame fixed to the barrel and magazine, a breech block and cartridge carrier movable in the frame and having a slot in its underside and forward end, the intermediate portion of the forward end of which is comparatively narrow and also having a horizontal notch intersecting the said narrow portion of the slot, and a cartridge elevator mounted in the slot of the frame and arranged to be moved by the block and having a lip for coöperation with the said horizontal notch of the block.

3. In a magazine rifle, the combination of a barrel, a magazine, a breech frame fixed with respect thereto, a combined breech block and cartridge carrier movable in said frame and arranged to grip a cartridge at opposite sides thereof, means for translating the combined breech block and cartridge carrier, a device for controlling the rearward feed of cartridges and automatically locking the breech block and cartridge carrier near its foremost position, when the magazine is empty, and means for elevating a cartridge in the combined breech block and cartridge carrier.

4. In a magazine rifle, the combination of a barrel, a magazine, a breech frame fixed with respect thereto, a combined breech block and cartridge carrier movable in said frame and arranged to grip a cartridge at opposite sides thereof, means for translating the combined breech block and cartridge carrier, a device for controlling the rearward feed of cartridges and automatically locking the breech block and cartridge carrier near its foremost position, when the magazine is empty, and a device mounted in the breech frame and operated by the combined breech block and cartridge carrier for elevating a cartridge in said block and carrier incident to rearward movement thereof.

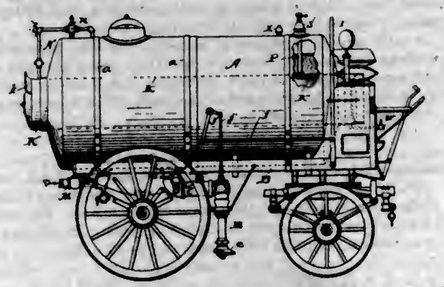
5. In a magazine rifle, the combination of a barrel, a magazine arranged under the barrel, a breech frame fixed with respect to the barrel and magazine; a hand-grip movable on and guided by the magazine, a bar connected to and movable with the hand grip and extending through an opening in the front wall of the breech frame and having a notch, a combined breech-block and cartridge carrier arranged in said frame and connected and movable with said bar; said breech block and cartridge carrier having flanges for engaging opposite sides of a cartridge, a pivoted locking device arranged in the breech frame below and in rear of the magazine and having an arm for engaging the notch in the said bar, when the magazine is empty; said device being also arranged to control the rearward feed of cartridges, and a device mounted in the breech frame and operated by the breech block and cartridge carrier for elevating a cartridge in said block and carrier incident to rearward movement thereof.

[Claims 6 to 15 not printed in the Gazette.]

882,626. STREET-FLUSHING APPARATUS. DANIEL CONNELLY, Cleveland Heights, and CHRISTIAN E. SCHAFER, Cleveland, Ohio. Filed June 10, 1905. Serial No. 264,569.

1. In a flushing wagon, the combination of a water tank secured upon the wagon body and having a valve controlled discharge pipe, an air tank extending horizontally through the water tank and out through both ends thereof, and a valve-controlled connection between said tanks.

2. In a flushing wagon, the combination of a horizontal water tank secured upon the wagon body, and having a valve controlled discharge pipe, an air tank which extends horizontally through the water tank and out through one end thereof, a pipe connected with the projecting end of said air tank and with the water tank, and a reducing valve in said pipe.



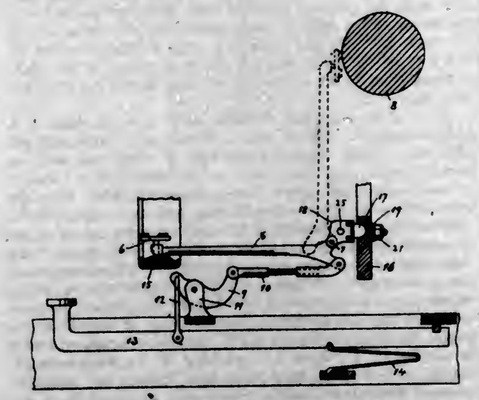
3. In a flushing wagon, the combination of a water tank secured upon the wagon body and having valve controlled discharge pipe, an air tank extending horizontally through the water tank from end to end, and projecting through the rear end of said tank, and a flange secured along the upper edge of the projecting rear end of said air tank,—said water tank having, near its rear end, a valve controlled feed pipe to which a flexible pipe may be connected.

4. In a flushing wagon, the combination of a horizontal water tank secured upon the wagon body, an air tank in the water tank, a valved pipe connected with the air tank and extending out through the water tank, a hood secured to the water tank over said pipe, a valve operating rod extending through the wall of said hood, and mechanism mounted upon the outside of said hood for operating said rod.

5. In a flushing wagon, the combination of a water tank, an air tank contained therein, a pipe connecting said tanks, a discharge pipe connected with the water tank having a discharge nozzle connected with said pipe, a valve in said pipe, mechanism operable from the driver's seat for moving said valve, a second valve in said discharge pipe and a spring for closing the same against the pressure in the tank.

[Claims 6 and 7 not printed in the Gazette.]

882,627. HANGER FOR TYPE-WRITER TYPE-BARS. CHARLES F. CRANDALL, Ilion, N. Y. Filed July 15, 1907. Serial No. 383,881.

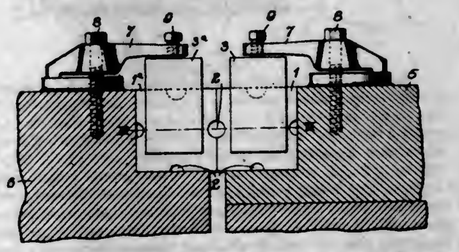


1. A hanger for a type bar having substantially semi-spherical bearing, a frame bar having socket to receive the bearing and a bolt engaging in the hanger and passing through the socket and the bar and arranged to bind the hanger to the bar, substantially as set forth.

2. A hanger for a type bar having substantially semi-spherical bearing, a frame bar having a socket to receive the bearing, a bolt movably engaging the hanger and passing through the socket and frame bar, substantially as set forth.

3. A hanger for a type bar having spaced walls and a substantially semispherical bearing, a type bar mounted between said walls and having bearing pivots engaging in the walls, a frame bar having a socket to receive the bearing, means for binding the hanger to the frame bar with the semispherical bearing engaging in the socket and means for adjusting said side walls toward and from each other to adjust the bearings of the type bar in the hanger, substantially as set forth.

882,628. BOLT-HEADING DIE. WILLIAM F. DOWERMAN, Pittsburg, Pa. Filed Feb. 11, 1907. Serial No. 356,790.



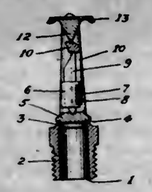
1. Bolt heading dies having in combination blocks provided with means for holding the rod to be headed and auxiliary blocks forming two oppositely disposed sides or portions of the head shaping matrix adapted to be adjusted with reference to each other on the main blocks.

2. Bolt heading dies having in combination blocks provided with grooves for the reception of the rod to be headed, and angular blocks bearing on adjacent sides of the main blocks, each portion of the angular blocks being adapted to form a side or portion of a two sided head shaping matrix.

3. Bolt-heading dies having in combination blocks provided with mating grooves for the reception of the rod to be headed, interchangeable blocks removably held against the main blocks on opposite sides of the rod-receiving grooves their opposing surfaces adapted to form a two sided head-shaping matrix and other shaping dies on the opposite sides of the interchangeable blocks, substantially as set forth.

4. An improved die block having suitable rod gripping means in combination with two legs angularly arranged each leg adapted to form on either face or both faces one side of a two-sided bolt heading matrix.

882,629. HEAD FOR AUTOMATIC FIRE-EXTINGUISHERS. LEWIS E. FAGAN, Minneapolis, Minn. Filed Apr. 29, 1907. Serial No. 370,807.

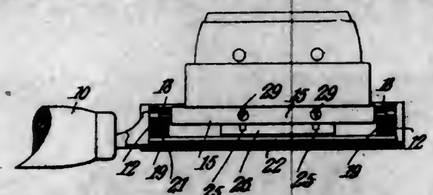


1. A sprinkler head, comprising a nozzle, a cap therefor, an open frame formed on the nozzle and having a wedge-shaped inner surface opposite the nozzle, a resilient U-shaped lever the body of which bears against said wedge-shaped surface, a strut engaging said cap and lever

body, a spring connecting the ends of the lever arms and a fusible link for flexing said arms and spring and connecting them to the strut, substantially as set forth.

2. A sprinkler head, comprising a nozzle, a cap therefor, an open frame formed on the nozzle, a U-shaped lever loosely seated on said frame opposite the nozzle and having resilient arms, a strut engaging said cap and lever body, a spring connecting the ends of the lever arms and a fusible link for flexing said arms and spring and connecting them to the strut, substantially as set forth.

882,630. RAZOR-STROPPER. ALLISON H. FLEMING, Fairmont, W. Va. Filed Dec. 7, 1907. Serial No. 405,591.

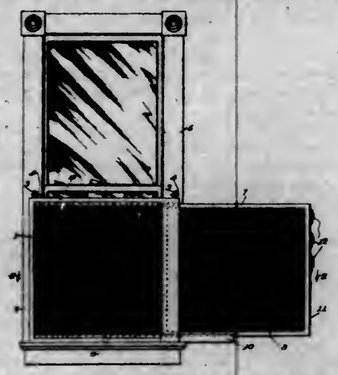


1. In a razor stropper, a bar or support having a pair of angularly related surfaces arranged for contact with the strap, a pivotally mounted shaft arranged in the support, a blade carrier, and means for adjustably securing the blade carrier to said shaft.

2. In a razor stropper, a bar or support having a pair of angularly related surfaces arranged for contact with the strap, a pivotally mounted shaft carried by said support, a blade holder adjustable in a radial line toward and from the axis of said shaft, and means for locking said blade holder in adjusted position.

3. In a razor stropper, a bar or support having a pair of angularly related surfaces arranged for contact with the strap, a pivotally mounted shaft arranged in said support and provided with a diametrical slot, a blade carrier, and an elongated web forming a support for the carrier and adjustably mounted within the slot, and locking screws for clamping the shaft and web together.

882,631. FLY-TRAP. WILLIAM D. FULLER, Springfield, Ohio. Filed June 7, 1907. Serial No. 377,672.



1. A fly trap comprising a frame adapted to be secured to a window casing, a screen secured at its edges to said frame, guideways formed in said frame at a distance from said screen, and a second screen slidably mounted in said guideways and adapted to be moved in front of the first-mentioned screen.

2. A fly trap comprising a frame and a plurality of screens mounted therein at a distance one from the other, one or more of said screens being slidably mounted in said frame.

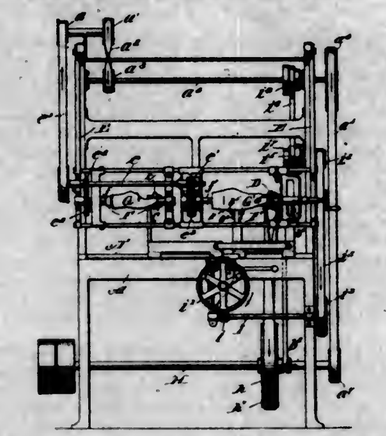
3. A fly trap comprising a frame, a screen secured to said frame, a plurality of guideways formed in said frame at a distance one from the other, and screens slidably mounted in said guide ways and adapted to form receptacles when in their closed positions.

4. A fly trap comprising a frame, a screen secured thereto, and a second screen slidably mounted in said frame in front of the first-mentioned screen, and a support carried by said frame and extending beneath said slidable screen when the same is in its outermost position.

5. A fly trap comprising a frame, a plurality of screens mounted therein at a distance one from the other, one of said screens being slidably mounted, and flexible means for closing the space between the ends of said screens

[Claim 6 not printed in the Gazette.]

882,632. MACHINE FOR TURNING IRREGULAR OBJECTS. FRANK HANSES, Chicago, Ill., assignor of one-fourth to Henry P. Decker, one-fourth to Fillmore Decker, and one-fourth to Royal A. Eastman, Chicago, Ill. Filed Oct. 21, 1907. Serial No. 398,380.



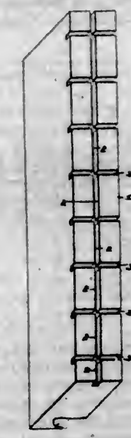
1. In a machine for turning lasts, a work-support, a pattern-support, means for rotating said work-support and said pattern-support about axes in alinement with or parallel with each other and at the same rate of speed, a small revoluble guide wheel mounted adjacent to said pattern-support so as to engage with and be rotated by a pattern held in said pattern-support and at the same time move the pattern-support and the work-support at right angles to their axis of rotation as the radius from the point of contact between the guide wheel and the pattern and the axis of the pattern-support varies, a tool mounted for rotation about an axis at right angles to the axis of the work-support and in position to act upon a blank held in the work-support, and means for rotating said tool.

2. In a machine for turning lasts, a work-support, a pattern-support, means for rotating said work-support and said pattern-support about axes in alinement with or parallel with each other and at the same rate of speed, a small revoluble guide wheel mounted with its axis parallel to the axes of said supports and arranged to engage with a pattern held in said pattern-support so as to move the pattern-support and the work-support at right angles to their axes of rotation as the length of the radius from the point of contact between the guide wheel and pattern and the axis of the pattern-support varies, a tool mounted for rotation about an axis at right angles to the axes of the work and pattern-supports and in position to act upon a blank held in the work-support, means for rotating said tool, and means for simultaneously feeding the guide wheel and the tool in a direction parallel with the axes of rotation of the work-support and the pattern support.

3. In a machine for turning lasts, a work-support, a pattern-support, means for rotating said work-support and said pattern-support about axes in alinement with or parallel with each other and at the same rate of speed, a small revoluble guide wheel mounted with its axis parallel to the axes of said work-support and arranged to engage with a pattern held in said pattern-support so as to move the pattern-support and the work-support at right angles to their axes of rotation as the length of the radius from the point of contact between the guide wheel and pattern and the axis of the pattern-support varies, a tool mounted for rotation about an axis at right angles to the axes of the work and pattern-supports and in position to engage and act upon a blank held in the work support, means for rotating said tool, said tool having a cutting edge or edges which describes a surface of revolution which has a cross-section corresponding to a cross-section taken through the contact portion of the guide wheel along a plane containing the axis of the guide wheel.

4. In a machine for turning lasts, a work-support, a pattern-support, means for rotating said work-support and said pattern-support about axes in alinement with or parallel with each other and at the same rate of speed, a small revoluble guide wheel mounted adjacent to said pattern-support so as to engage with and be rotated by a pattern held in said pattern-support and at the same time move the pattern-support and the work-support at right angles to their axis of rotation as the radius from the point of contact between the guide wheel and the pattern and the axis of the pattern-support varies, a tool mounted for rotation about an axis at right angles to the axis of the work-support and in position to act upon a blank held in the work-support, means for rotating said tool, and means for adjusting said guide wheel and said tool independently of each other.

882,633. BUILDING-BLOCK AND MANNER OF ASSEMBLING. ROBERT A. HARRIS, Tucson, Ariz. Filed Sept. 20, 1906. Serial No. 335,388.

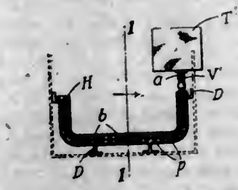


1. The combination of parallel walls, each composed of building blocks having alining longitudinal grooves, said blocks having transverse grooves extending from side to side thereof and intersecting the longitudinal grooves, longitudinal tie rods extending continuously through the longitudinal grooves and securing the blocks of each wall together, and transverse tie rods passing through the transverse grooves and tying the two walls together and securing means at the ends of said longitudinal and transverse rods.

2. The combination of two parallel walls spaced apart and each composed of building blocks, each block having a longitudinal groove extending from end to end thereof and each block having a transverse groove extending from side to side thereof, tie rods passing through said longitudinal and transverse grooves, means independent of the grooves for securing said blocks and walls, and columns between the parallel walls.

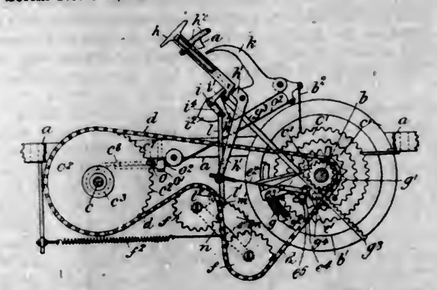
3. The combination with parallel walls composed of building blocks each block having intersecting longitudinal and transverse grooves in its upper face, each longitudinal groove extending from end to end of a block and each transverse groove extending from side to side of a block, longitudinal tie rods in said grooves securing the blocks of a wall together and transverse tie rods securing the two walls together, columns between the walls, and ornamental blocks secured to and adapted to bear against the wall formed by said blocks.

882,634. OIL-GRATE. ROBERT HELD, Randolph, Mo. Filed Dec. 2, 1907. Serial No. 404,791.



A vapor-burning grate for locomotive boilers comprising a hollow terminal U-shaped header disposed in a vertical plane at the front of the fire-box, a series of rearwardly extending burner pipes communicating with the interior of the header and collectively forming the bottom and sides of the grate, and having peripherally disposed nozzles directed toward the inside of the fire box, suitable saddles for supporting the several pipes, said saddles being provided with depressions for receiving the individual pipes, a source of oil supply, and suitable check and supply valves interposed between the source of supply and the header, substantially as set forth.

882,635. BELT, ROPE, OR CHAIN GEARING. EDMUND H. HODGKINSON, London, England. Filed July 8, 1907. Serial No. 382,712.

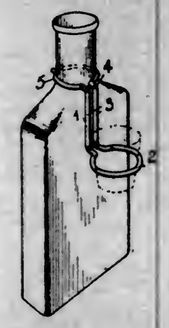


1. The combination of a driving shaft, an engine clutch thereon, a driven shaft, a secondary clutch thereon, a chain geared with the shafts, a chain lifter, and means for actuating the chain lifter interlocked with the clutches.

2. The combination of a driving shaft, an engine clutch thereon, a driven shaft, a secondary clutch thereon, a chain geared with said shafts, a chain lifter, jockey wheels engaging with the chain, and means for locking the jockey wheels when the chain is in its working position.

3. The combination of a driving shaft, an engine clutch thereon, a driven shaft, a secondary clutch thereon, a chain gearing with the shafts, a chain lifter, means for actuating said chain lifter interlocked with the clutches, jockey wheels engaging with the chain, and means for locking the jockey wheels when the chain is in its working position.

882,636. GLASS-HOLDING ATTACHMENT FOR BOTTLES. WILLIAM K. HOPKINS, Wolfe City, Tex. Filed Aug. 26, 1907. Serial No. 390,221.

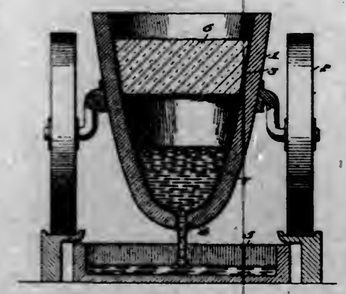


1. A device of the character described, comprising a glass holder, curved bottle engaging fingers adapted to be engaged with the neck of a bottle, and spring clamping arms to connect said fingers and glass holder, substantially as described.

2. A glass holding attachment for bottles formed of a single piece of wire bent to form a glass receiving loop, integrally formed upwardly projecting spring arms connected with said loop, and right-angularly formed outwardly curved bottle clamping fingers on the upper ends of said spring arms to engage the neck of a bottle, substantially as described.

3. A device of the character described comprising a glass holder in the form of a spring metal ring, curved spring metal bottle engaging fingers adapted to grip the neck of the bottle, and vertically disposed spring clamping arms adapted to clamp said fingers into engagement with the bottle neck and to support said glass holding ring against the side of the bottle, substantially as described.

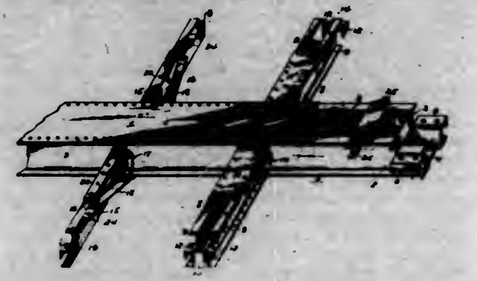
882,637. PROCESS OF PRODUCING SLAG-FREE FERROCHROMIUM. JOHN B. HUFFARD, Ferris, W. Va., assignor to Electro Metallurgical Company, Chicago, Ill., a Corporation of West Virginia. Filed July 10, 1907. Serial No. 383,059.



1. The process of producing metals free from slags of relatively-high melting-points, which consists in discharging the molten metal and slag into a vessel, allowing the metal and slag to stratify and the slag to solidify, and separating the molten metal from the solid slag.

2. The process of producing slag-free ferrochromium, which consists in discharging the molten ferrochromium and slag into a vessel, allowing the alloy and slag to stratify and the slag to solidify, and separating the molten alloy from the solid slag.

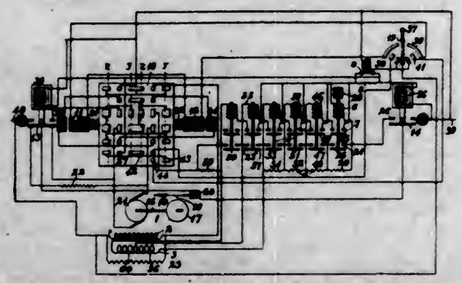
882,638. STEEL UNDERFRAMING FOR RAILWAY-CARS. FRANK L. IRWIN, Columbus, Ohio, assignor to The Ralston Steel Car Company, Columbus, Ohio. Filed Apr. 15, 1907. Serial No. 368,375.



1. In a car underframe, the combination with a center girder, of transverse members secured thereto, each of said transverse members slit vertically near the outer end and bent laterally and downwardly, forming depressed seats for longitudinal members, and a bracing member secured to the center girder and to the side of the transverse member.

2. In a car underframe, the combination with a center girder, of a cross bearer comprising a plurality of transverse members secured to the center girder, the outer end of each transverse member slit vertically and bent laterally and downwardly, forming a depressed seat for a longitudinal member, and bracing means secured to the side faces of the cross bearer members.

882,639. CONTROLLING SYSTEM FOR ELECTRIC MOTORS. HENRY D. JAMES, Pittsburg, Pa., assignor to Westinghouse Electric & Manufacturing Company, a Corporation of Pennsylvania. Filed Apr. 3, 1905. Serial No. 253,632.



1. The combination with a translating device, and a reversing switch that normally occupies an open circuit position, of means for preventing the reversing switch from being moved from one position to another while the electromotive force generated by the translating device is greater than a predetermined amount.

2. The combination with a translating device, a reversing switch that normally occupies an open circuit position, and means for operating the reversing switch, of means for preventing the reversing switch from being moved from one position to another while the counter electromotive force generated by the translating device is greater than a predetermined amount.

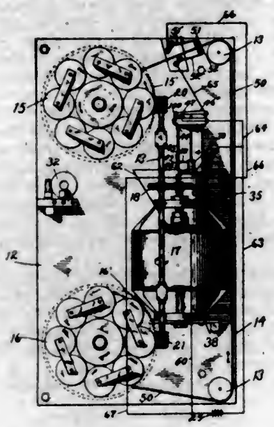
3. The combination with a translating device and a reversing switch which is normally maintained in its open circuit position, of means for retaining the reversing switch in its closed circuit position while the counter electromotive force generated by the translating device exceeds a predetermined amount.

4. The combination with a translating device, a master switch, a reversing switch which is normally maintained in its open circuit position and electro-magnetic operating means therefor, of electro-magnetic means for retaining the reversing switch in its closed circuit positions while the counter electromotive force generated by the translating device exceeds a predetermined amount.

5. The combination with an electric motor, a reversing switch which is normally maintained in its open circuit position and operating magnet windings therefor, of holding magnet windings that retain the reversing switch in its closed circuit position while the counter electromotive force generated by the motor exceeds a predetermined amount.

[Claims 6 to 11 not printed in the Gazette.]

882,640. ADVERTISING-INDICATOR. CHARLES E. JOHNSON, Indianapolis, Ind. Filed July 15, 1907. Serial No. 383,897.



1. In an apparatus of the class described, the combination, with a pair of reels and a web carried thereby, of a pair of magnetic clutches, one for each reel, a motor for driving said clutches, and means controlled by the movement of the web for alternately energizing the clutches.

2. In an apparatus of the class described, the combination, with a pair of reels and a web carried thereby, of a pair of magnetic clutches, one for each reel, a motor for driving said clutches, a circuit for each of said clutches, a switch for alternately making and breaking the clutch circuits, and means carried by the reels and controlled by the movement of the web for shifting said switch.
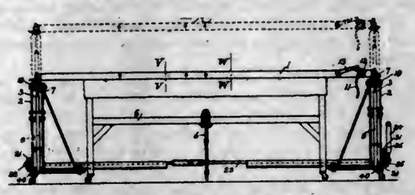
3. In an apparatus of the class described, the combination, with a pair of reels and a web carried thereby, of a pair of magnetic clutches, one for each reel, a motor, for driving said clutches, a circuit for each of said clutches, a switch for alternately making and breaking the clutch circuits, a pair of solenoids for shifting said switch in opposite directions, a circuit for each of said solenoids, a pair of normally separated terminals in each of said solenoid circuits, and a movable member carried by each reel and each adapted to engage one of said terminals when in abnormal position, and means engaged by the web for normally holding said member away from engagement with its coacting terminal.

4. In an apparatus of the class described, the combination, with a pair of reels and a web carried thereby, of a motor for driving said reels, a circuit controller for said motor, a solenoid for operating said controller in one direction, means for controlling said solenoid, and a dash-pot controlling the reverse movement of said motor-controller.

5. In an apparatus of the class described, the combination, with a pair of reels and a web carried thereby, of a motor for driving said reels, a circuit controller for said motor, a solenoid for operating said controller in one direction, means controlled by the movement of the web for controlling said solenoid, and a dash-pot controlling the reverse movement of said motor-controller.

[Claim 6 not printed in the Gazette.]

882,641. INVALID-BED. CHARLES T. JOSLIN, Jerusalem, N. Y. Filed July 5, 1907. Serial No. 382,180.



1. An invalid bed consisting of a frame; a cloth covering said frame; the upper portion of said cloth covering adjoining the head of the bed attached to iron bars hinged to said frame; means whereby the said iron bars may be sustained in a reclining or in a perpendicular position; the central portion of said cloth covering being fixedly attached to the sides of said frame, and the lower portion of said cloth covering adjoining the foot of the bed being unattached to the sides of the frame and adjustably attached to the foot of the bed, whereby the same may be relaxed, thereby affording space for the feet and legs of a person sitting on the central portion of said cloth covering and using the upper portion thereof for a pack, the whole being adapted to thus assume the form of a chair, substantially as described.

2. An invalid bed, consisting of a frame; a cloth covering on said frame; one portion of said cloth covering attached to bar irons hinged upon said frame; braces attached to said bar irons, whereby the same may be sustained in a reclining or perpendicular position, in the form of a chair; the central portion of said cloth covering being fixedly attached to the frame of said bed, and the lower portion of said cloth covering being attached to a roller at the foot of the bed and adapted to be rolled thereon; a roller at the foot of said bed with bearings in the sides of the frame; a crank attached thereto, whereby said roller may be turned; a ratchet wheel attached to said crank; a dog attached to said frame adapted to engage said ratchet wheel; whereby the loose portion of said covering may be wound tightly upon said roller and held by said dog or may be unrolled, forming a space for the feet of the person occupying the said bed when made in the form of a chair, substantially as described.

3. An invalid bed consisting of a frame covered with cloth; two upright posts slidably mounted in standards and adapted to support said frame thereon; two pulleys, one mounted in each of said standards near the top thereof; two drums, one mounted in each of said standards near the bottom thereof; straps extending from the foot of said posts over said pulleys and attached to said drums; recesses in one side of each of said drums; two ratchet wheels, each provided with lugs on one side thereof adapted to engage the recesses in said drums; openings in the center of said ratchet wheels; a shaft connecting said ratchet wheels and fitting in the said openings therein and adapted to turn said ratchet wheels; said ratchet wheels adapted to be mounted upon said shaft with the lugs engaging the recesses in the drums or in the reverse position, whereby the lugs would not engage the said recesses in said drums; means for operating said shaft thereby raising and lowering both ends of said bed simultaneously or either end separately.

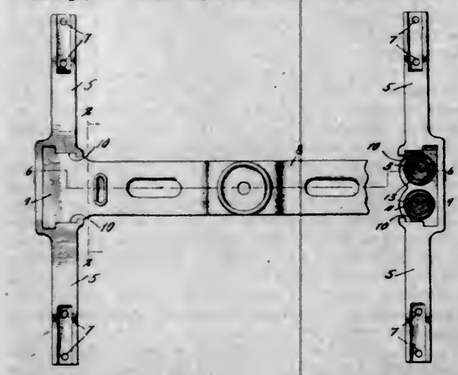
4. An invalid bed consisting of a frame covered with cloth; two upright posts slidably mounted in standards and adapted to support said frame thereon; two pulleys, one mounted in each of said standards near the top thereof; two drums, one mounted in each of said standards near the bottom thereof; recesses in the sides of said drums; ratchet wheels provided with lugs on the sides adapted to engage the recesses in said drums; angular

openings in the center of said ratchet wheels; an iron bar connecting said ratchet wheels and fitting said angular openings, whereby the turning of one ratchet wheel will turn the other; a cam idly mounted upon one end of said bar; a handle attached to said cam; a dog attached to said cam, adapted to engage said ratchet wheel and move the same forward; another dog attached to said standard and adapted to engage said ratchet wheel and prevent the same turning backward, whereby said ratchet wheel may be turned forward, thereby winding said straps upon said drums and raising the bed and holding it in the position desired.

5. An invalid bed consisting of a frame covered with cloth; two upright posts slidably mounted in standards and adapted to support said frame thereon; two pulleys, one mounted in each of said standards near the top thereof; two drums, one mounted in each of said standards near the bottom thereof; recesses in the sides of said drums; ratchet wheels provided with lugs on the sides adapted to engage the recesses in said drums; angular openings in the center of said ratchet wheels; an iron bar connecting said ratchet wheels and fitting said angular openings, whereby the turning of one ratchet wheel will turn the other; a cam idly mounted upon one end of said bar; a handle attached to said cam; a dog attached to said cam, adapted to engage said ratchet wheel and move the same forward; another dog attached to said standard and adapted to engage said ratchet wheel and prevent the same from turning backward; a weight hinged on the back of said first mentioned dog and beyond the pivot attaching the same to said cam, whereby the folding over of said weight will counterbalance the weight of the head and raise it from contact with the teeth of said ratchet wheel; a bracket pivotally attached to said standard having one end enlarged and counterbalancing the rest of said bracket, and containing a shoulder and a notch in the thick end and a lug on the thin end, whereby upon the movement of said handle and cam backward said shoulder will cause the head of said dog to engage said ratchet teeth and the corner of said cam will press the head of the second dog, above mentioned, out of contact with said ratchet wheel, and the tail of said dog in the notch of said bracket, whereby the reverse motion of said handle will cause the ratchet wheel to reverse its movement until said cam strikes the lug upon the thin part of said bracket and releases the second dog, whereby the suspended bed may be lowered.

[Claim 6 not printed in the Gazette.]

882,642. RAILWAY-CAR TRUCK. MARTIN KENNEDY, Chicago, Ill., assignor of one-half to William Renshaw, Chicago, Ill. Filed Sept. 16, 1907. Serial No. 392,977.



1. In a railway car truck, a pair of integral arch bars each consisting of a central, box-like structure open on the inside and closed on the outside, with its end walls jutting inwardly in off-set planes, cups forming spring seats in the bottom of said box-like structure, horizontal bars extending forward and back from the box-like structure, diagonal braces from the bottom of the box to said horizontal bars, in combination with a bolster having heads formed to correspond with the interior of the box-like structures of the arch bars so as to interlock therewith and constitute slidable engagements between the bolster and the arch bars which allow free movement to the bolster and retain the arch bars at a proper distance apart and substantially parallel, and springs in said cups upon which the bolster rests.

2. In a railway car truck, a pair of integral arch bars each consisting of a central, box-like structure open on the inside and closed on the outside with its end walls jutting inwardly in off-set planes and the lower parts thereof having cup-like formations forming spring seats, and members extending forward and back from said box-like structure for attachment of the axle boxes, in combination with a bolster having heads formed to correspond with the interior of the box-like structures of the arch bars, so as to interlock therewith and constitute slidable engagements between the bolster and the arch bars which allow free movement to the bolster and retain the arch bars at a proper distance apart and substantially parallel, and springs in said cup-like formations in which the bolster rests.

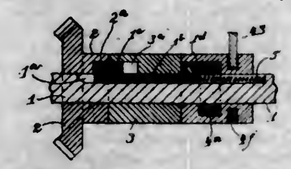
3. A railway truck comprising side members, a transverse member having interlocking and slidable engagement with the side members, the ends of said transverse member being inclosed by said side members, which latter form abutments for the ends of the transverse member, and elastic means for supporting the transverse member.

4. A railway truck comprising side members, a transverse member having interlocking and slidable engagement with the side members, said side members having side plates against which the ends of the transverse member abut, and elastic means for supporting the transverse members.

5. A railway truck comprising side members, a transverse member having interlocking and slidable engagement with the side members, the ends of said transverse member being inclosed and guided on three sides by the side members, and springs interposed between the side members and the transverse member.

[Claims 6 to 19 not printed in the Gazette.]

882,643. POWER-TRANSMISSION DEVICE. JOHN W. LUNDGREN, Duluth, Minn. Filed Aug. 17, 1906, Serial No. 330,976. Renewed Nov. 30, 1907. Serial No. 404,580.

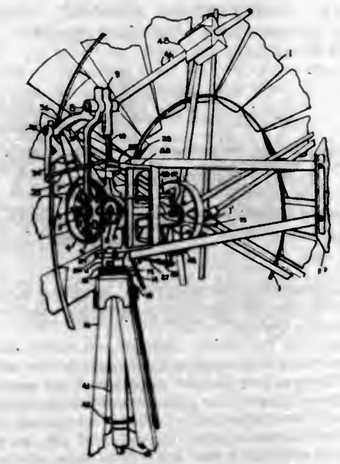


1. In constructions and means for the purposes described, the combination of a power shaft having a sliding key positioned therein, said key being provided at each end with a tongue, a sleeve or gear mounted on said shaft and adapted to receive a portion of said key, a collar mounted on said shaft adjacent to said gear and adapted to receive a portion of said key, a sleeve mounted on said shaft adjacent to said collar and provided with an interior annular groove, the forward wall of said groove having a slot formed therethrough, a segment of said forward wall of said groove being adapted to form a cam or wedge beginning at the outer end of said slot and extending inwardly the full thickness of said forward wall, said groove being adapted to receive one of the tongues formed on said key, and said slot being adapted to receive said tongue, and said wedge being adapted to engage said tongue and retract it, and elastic means adapted to thrust said key forward into said gear.

2. In constructions and means for the purposes described, the combination of a power shaft a longitudinally sliding key engaging said shaft, a sleeve or gear carried by said shaft and adapted to receive a portion of said key, a collar carried by said shaft and adapted to receive the portion of the key receivable by said sleeve or gear, a second sleeve carried by said shaft, said second sleeve being provided with an interior cam or wedge, adapted in operation to engage said key and retract the same, and means for thrusting said key forward into operative position with relation to the first said sleeve or gear.

3. In constructions and means for the purposes described, the combination of a power shaft, a longitudinally sliding key engaging said shaft, a sleeve or gear mounted on said shaft and adapted to engage said key, a second sleeve mounted on said shaft and provided with an interior cam or wedge adapted in operation to engage said key and retract the same from engagement with the first said sleeve, and means for thrusting said key forward into operative relation with the first said sleeve.

882,644. WINDMILL. HERBERT H. MACOMBER, Kendallville, Ind., assignor to Flint & Walling Manufacturing Company, Kendallville, Ind., a Corporation of Indiana. Filed Jan. 9, 1907. Serial No. 351,422.



1. A windmill comprising a rotatable member, a pitman connected to the member, a reciprocable rod, a forked walking beam embracing the pitman and rod to prevent lateral or twisting movements, and a common pivot connection between the pitman, the rod and the walking beam.

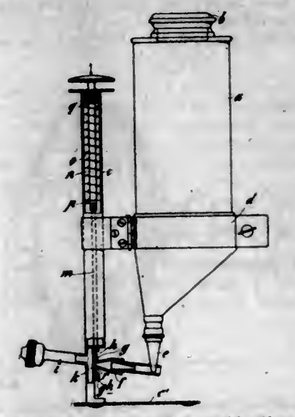
2. A windmill comprising a swiveled support, a pivoted rudder mounted on the support, a forked one-piece pivoted bracket carried by the support, a link directly connecting the rudder and one arm of the bracket, and a flexible member connected to the other arm of the bracket and extending through the swivel support.

3. A windmill comprising a mounting, a swiveled support thereon having a bearing, a shaft mounted in the bearing, a windwheel to drive the shaft, a stem sustaining frame carried by the support and movable relatively thereto, and a stem connected to the frame and extending into the support and mounting to hold the support in position.

4. A windmill comprising a windwheel, a shaft therefor, a swiveled support for the shaft, a double-ring washer interposed between the wheel and support having registering dished portions and balls therein, and a shield for the washer.

5. A windmill comprising a windwheel, a shaft therefor, a swiveled support for the shaft, a mounting for the support, a double ring washer interposed between the support and mounting, having registering dished portions and balls therein, and a stem extending from the support into the mounting to hold the support in position on the mounting.

882,645. HAND-OPERATED SAND-BLAST. HANS MIKOREY, Schöneberg, near Berlin, Germany, assignor to The Firm of W. Graaff & Compagnie, Ges. mit beschr. Haftung, Berlin, Germany. Filed Mar. 5, 1907. Serial No. 360,733.



1. In sand blast apparatus, the combination with sand delivering means and pressure fluid delivering means, of means intermediate between said fluid delivering and sand delivering means for the simultaneous control of the opening and closing of all said delivering means and means for moving and displacing said delivering means and said closing and opening means relatively to each other.

2. In sand blast apparatus, the combination with sand admitting means and pressure fluid admitting means, of substantially tubular shaped means for controlling the opening and closing of said pressure fluid delivering means and said sand delivering means and intermediate of the same and registering with any of said delivering means and means for moving and displacing said delivering means and said closing and opening means relatively to each other.

3. In sand blast apparatus, the combination with a sand admitting nozzle and pressure fluid admitting means, of means for securing said sand admitting nozzle and said pressure fluid admitting means at an angle to each other, means for controlling the opening and closing of said pressure fluid admitting means and said sand admitting nozzle and intermediate of the same and means for moving and displacing the said closing and opening means and the sand admitting and fluid admitting means relatively to each other.

4. In sand blast apparatus, the combination with sand delivering means and pressure fluid delivering means, of means for securing said delivering means at an angle to each other, tubular closing and opening means intermediate between said pressure fluid and sand delivering means and means for displacing said delivering means in common and at an angle to said closing and opening means relatively to the latter.

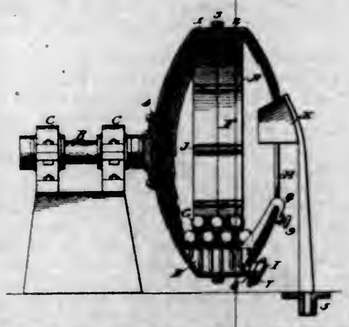
5. In sand blast apparatus, in combination, sand delivering nozzle and pressure fluid delivering means, arranged at an angle to each other, tubular closing and opening means, intermediate between said nozzle and delivering means, the bore of said closing and opening means registering with said fluid delivering means, a perforated part in the wall of said tubular closing and opening means registering with said sand delivering nozzle and allowing the passage of said nozzle, and means for displacing said delivering means and nozzle and said tubular closing and opening means in relation to each other.

[Claims 6 and 7 not printed in the Gazette.]

882,646. MACHINE FOR MAKING CHOCOLATE. WYCLIFFE E. MURRAY, London, England. Filed June 21, 1907. Serial No. 380,107.

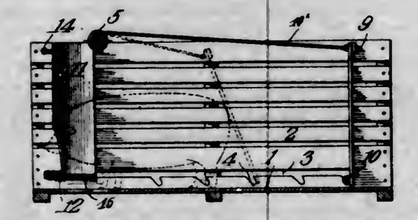
1. A machine for making chocolate having, in combination, a drum constructed with a circumferential crushing

surface within its perimeter and with a concentric circular opening in its front, means for rotating said drum without obstructing its open front, an equipment of suitable balls to interact with said surface, a front guard projecting into the upper portion of said front opening to prevent the chocolate from falling out when the drum is in motion without obstructing the lower portion of said opening, and an independent support for said guard external to the drum.



2. A machine for making chocolate having, in combination, an open-front drum constructed with a circumferential crushing surface within its perimeter and a normally closed outlet for the liquid product adapted to be located at the bottom of the drum by turning the latter, an equipment of balls to interact with said crushing surface, and a removable oulet guard fitted to the inner surfaces of the drum at and adjacent to said outlet, and provided with means for fastening it in place preliminary to turning the drum into its discharging position, in which position said guard supports said balls out of contact with said surfaces at the outlet and facilitates the escape of the liquid product through said outlet, substantially as hereinbefore specified.

882,647. HOG-TRAP. EDGAR H. NELSON, Glenville, Minn. Filed Oct. 19, 1907. Serial No. 398,217.



A trap comprising a body having in its sides elongated slots the lower edges of which are provided with depressions, a head piece mounted upon the body and having an opening, a door hingedly mounted in said slots and adapted to move longitudinally thereof and having hinged members adapted to enter the depressions of the slots and means for operating the door.

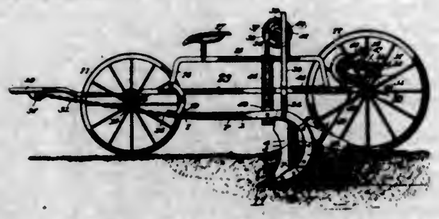
882,648. WASHABLE HAT. WILLIAM NEUGASS, New York, N. Y. Filed Sept. 24, 1907. Serial No. 394,310.



1. A washable hat comprising a flat brim having a central opening and a plurality of circular cords, the innermost circular cord being of larger diameter than the opening in said brim, a series of fastening tabs secured around the opening in said brim, a removable band having a series of fastening tabs secured to the outer side thereof adjacent its upper edge, said fastening tabs being adapted to be engaged with the fastening tabs of the brim, and a cover adapted to be frictionally engaged with said band.

2. A washable hat comprising a brim having a central head opening and a plurality of circular cords, all of said circular cords being located a considerable distance away from said central opening, a lining secured to said brim around the edges of said central opening, a draw-string for said lining, a series of fastening tabs secured to said brim around the central opening therein, each of said fastening tabs having an outwardly-extending male fastening member, a band of approximately the diameter of the opening in the brim, a plurality of fastening tabs secured to the upper edge of said band, each of said last-mentioned fastening tabs having a female fastening member adapted to receive the male fastening member of the tabs on the brim, and a removable cover adapted to be frictionally held in engagement with said band.

882,649. CABLE-LAYING MACHINE. GEORGE W. NOBLE, Colbran, Colo. Filed June 15, 1907. Serial No. 379,236.



1. A machine for laying cables including means for forming a tunnel by temporarily elevating without laterally displacing the soil.

2. A machine for laying underground cables including tunneling means for temporarily displacing the soil in a vertical direction only for the reception of the cable.

3. In a machine of the class described, means for detaching and for temporarily slightly elevating without laterally displacing a slice of soil and for permitting said slice to settle back into the furrow from which it was taken, without removal from said furrow.

4. In a machine of the class described, means for temporarily forcing in an upward direction only a detached slice of soil, means for feeding a cable beneath the raised portion of the slice, and means for guiding the slice into the trench or furrow from which it was lifted.

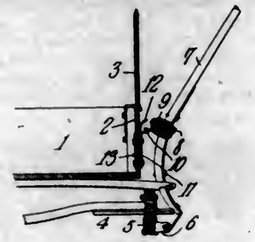
5. In a machine of the class described, means for temporarily forcing in an upward direction only a detached slice of soil and for feeding a cable between the sides of said slice and the walls of the trench from which it was taken.

[Claims 6 to 20 not printed in the Gazette.]

882,650. THILL-SUPPORT. AMOS W. PERRY, Wakefield, R. I., assignor of one-half to James C. Davis, Peace Dale, R. I. Filed Sept. 3, 1907. Serial No. 391,171.

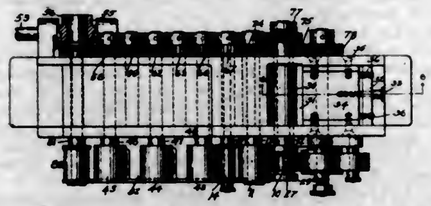
1. The combination with a vehicle and thills connected thereto and having a cross bar; of a forwardly extending supporting hook connected to the vehicle, a guide plate secured back of the hook and overhanging the same, the overhanging portion of said plate being enlarged laterally and curved forwardly in the direction of its length, and a resilient longitudinally slotted supporting link pivotally connected to the cross bar and disposed to engage the hook to support the thills, said link being shiftable into position upon the rear face of the cross bar.

2. The combination with a vehicle, and thills connected thereto and having a cross bar; of lapping plates secured upon the front of the vehicle, a supporting hook integral with and extending forward from one of the plates, a forwardly and upwardly curved guide extending from the other plate and overhanging the hook, a plate secured upon the rear face of the cross bar and extending longitudinally



thereof, a longitudinally slotted link pivotally mounted upon said plate and normally parallel therewith and disposed entirely in rear of the bar, said link being shiftable into position above the bar to engage the hook.

882,651. PAPER-STRIP CONTROLLING AND PRINTING MECHANISM FOR CIGARETTE-MACHINES. SYDNEY I. PRESCOTT, New York, N. Y., assignor to The American Tobacco Company, New York, N. Y., a Corporation of New Jersey. Filed May 14, 1906. Serial No. 316,687.



1. The combination with mechanism for forming a thin paper strip into a tube, of a source of supply from which the strip is continuously drawn, a traveling surface located and operating on the strip between the source of strip supply and the forming means, and means for driving the surface at a speed in excess of the speed of the strip.

2. The combination with mechanism for forming a thin paper strip into a tube, of a source of supply from which the strip is continuously drawn by the forming mechanism, a plurality of wheels located between the source of supply and the forming means, and means for driving some of the wheels at a speed in excess of the speed of the strip.

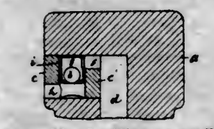
3. The combination with mechanism for forming a thin paper strip into a tube, of a source of supply from which the strip is continuously drawn by the forming mechanism, a plurality of pairs of wheels between which the strip passes, said wheels being located between the source of supply and the forming mechanism, and means for driving some of the pairs of wheels at a speed in excess of the speed of the strip.

4. The combination with mechanism for forming a thin paper strip into a tube, of a source of supply from which the strip is continuously drawn by the forming mechanism, a pair of printing wheels, and a revolving strain relieving mechanism between the printing wheels and the forming mechanism, with which relieving mechanism the strip is in contact, said relieving mechanism moving at a greater speed than the speed of the strip.

5. The combination with means for forming a thin paper strip into a tube, of a source of supply from which the strip is continuously drawn by the forming means, a pair of printing wheels in the path of the strip, bronze applying means in the path of the strip, and means for driving the bronze applying means at a greater speed than the speed of the strip whereby said bronze applying means also operates to relieve the strain on the strip.

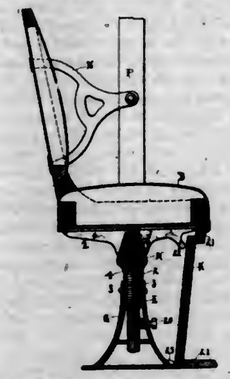
[Claims 6 and 7 not printed in the Gazette.]

882,652. VALVE-BUNG. ALBERT SCHAPER, Hanover, Germany. Filed Jan. 14, 1907. Serial No. 352,121.



A valve bung, combined with a reversible cork plug having a longitudinal duct and a pair of transverse ducts extending in opposite directions from the top and bottom of the longitudinal duct respectively, an inclosed cup having a valve-seat and a cylindrical wall that extends within the longitudinal duct from the valve-seat to the surface of the plug, and a valve within said cup, substantially as specified.

882,653. CONVERTIBLE AND INTERCHANGEABLE SEAT. TERENCE SCULLIN and SOREN R. SKOV, Cleveland, Ohio. Filed Jan. 22, 1907. Serial No. 353,557.



1. In cars, a car seat having an open slot centrally at its bottom, in combination with separate standards, rotatable supports in said standards having open slotted heads, and a rail loosely engaged in said slotted heads and in the open slot in the bottom of the seat and supporting the seat.

2. In cars, a seat support comprising a plurality of standards adapted to be fixed to a car floor and a separate removable and adjustable head on each standard, a rail resting in said heads and car seats having open slotted parts on their bottom engaged over said rail.

3. In cars, a plurality of seats, a single rail on which said seats are removably seated, and a plurality of standards in a line centrally beneath said seats and separate means in each standard to fix the elevation of said rail.

4. In cars, a plurality of seats and a support comprising a series of separate standards arranged in a line and adjustable supports on said standards, in combination with a seat supporting rail removably engaged in said several supports and extending transversely beneath said seats from one to the other.

5. In cars, a plurality of disconnected standards adapted to be fastened to the floor of a car and having open slotted heads adjustably engaged therein, a seat supporting rail removably supported between the walls of said heads, and a seat having an open slot at its center removably engaged on said rail.

[Claims 6 to 11 not printed in the Gazette.]

882,654. SPRING STRUCTURE. WATSON R. SMITH, Jackson, Mich., assignor to Ventilated Cushion and Spring Company, Chicago, Ill., a Corporation. Filed Oct. 29, 1906. Serial No. 341,126.

1. In a spring cushion, the combination of a frame, a plurality of spiral springs secured thereto, a cross-piece secured to and spanning the base of each of said springs,

and a plurality of shorter spiral springs, each of the same being secured to one of said cross-pieces within and substantially concentric with one of said longer springs.



2. In a spring cushion, the combination of a frame having a plurality of spiral springs secured thereto, a cross-piece secured to and spanning one of the convolutions of each of said springs, and a plurality of shorter spiral springs each secured to one of said cross-pieces within one of the longer spiral springs.

3. In a spring cushion, the combination of a frame having a plurality of spiral springs secured thereto, a cross-piece secured to and spanning one of the convolutions of each of said springs, each of said cross-pieces being provided with struck-up lips, and a plurality of shorter spiral springs each having one of its convolutions in contact with said cross-piece and secured thereto by means of said lips.

4. In a spring cushion, a frame comprising a series of parallel rods, cross-pieces connecting pairs of said rods, and a plurality of pairs of spiral springs, each pair consisting of a longer and a shorter spring arranged concentrically, the lower ends of the longer springs being attached to said rods, and the lower ends of the shorter springs being attached to said cross-pieces.

5. In a spring cushion, a frame comprising a series of parallel rods, sheet metal cross-pieces connecting pairs of said rods, and a plurality of pairs of spiral springs, each pair consisting of a longer and a shorter spring arranged concentrically, the lower ends of the longer springs being attached to said rods by means of said cross-pieces, and the lower ends of the shorter springs being attached to said cross-pieces.

882,655. POMPADOUR-ROLL. HENRY H. TAYLOR, Bridgeport, Conn. Filed Nov. 6, 1907. Serial No. 401,009.

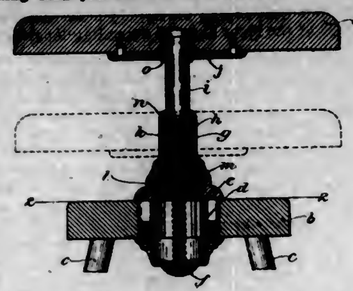


1. A pompadour roll comprising a body portion made from a woven wire blank cut on the bias, the edges of said blank being contracted to give the required fullness to said body, a backing secured at a tension to the rear portion of the contracted body by means of a paper binder stitched around said edges, a tape bound around said edges outside of the paper binder, said bound edges being soft and flexible and extending beyond the plane of said backing, and eyelets set within the roll at the ends und the sides thereof.

2. A device of the character described, consisting of a body portion made from a woven wire blank cut on the bias, the edges of which are contracted to produce the required fullness to said body, a soft flexible binding around the edges of said body portion, a flexible backing secured at a tension to the rear of said body portion in a plane inside that of the bound edges, and eyelets set within these bound edges at the sides and ends of the device.

882,656. FURNITURE. WALFRID J. TINGDAHL, Lowell, Mass. Filed June 14, 1905. Serial No. 265,160.

1. In a swivel chair, the combination of a stationary screw, a nut engaging said screw and provided with a hollow spindle at its upper end, a bearing sleeve inclosing said nut, a journal box inclosing said bearing sleeve, means for connecting said spindle to the chair body, and means for attaching said journal box to the base.



2. In a swivel chair, the combination of a stationary screw, a nut engaging said screw and provided with a hollow spindle at its upper end, a bearing sleeve inclosing said nut, a journal box inclosing said bearing sleeve, a washer secured to said journal box and supporting said screw, and means for securing said spindle to the chair body.

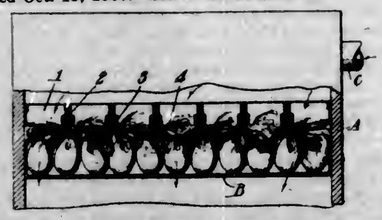
3. In a swivel chair, the combination of a stationary screw, a nut engaging said screw and provided with a hollow spindle at its upper end, a bearing sleeve inclosing said nut, a journal box inclosing said bearing sleeve, a washer securing said journal box to the chair base and supporting said screw and means for securing said spindle to the chair body.

4. In a swivel chair, the combination of a stationary screw, a shouldered nut engaging said screw and having a hollow spindle at its upper end, a shouldered bearing sleeve inclosing said nut with soft metal bearings for said nut, a journal box inclosing said bearing sleeve having soft metal bearings for said sleeve and a shoulder for limiting the upward movement of same, a washer secured to said journal box and supporting said screw, and means for securing said spindle to the chair body.

5. An article of furniture having a supporting portion and an adjustable portion and adjustable connections between said portions comprising a raised member, a sleeve longitudinally slidable in said raised member, and threaded engaging members within said sleeve, one of said members being in sliding engagement with said sleeve.

[Claims 6 to 9 not printed in the Gazette.]

882,657. ATTACHMENT FOR INCUBATORS AND BROODERS. WILLIAM E. TREDWAY, Blackwell, Okla. Filed Oct. 19, 1907. Serial No. 398,227.



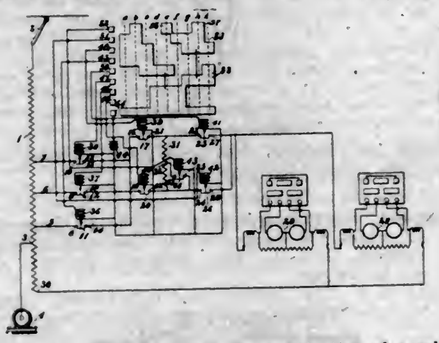
1. An attachment of the character described comprising a frame, cross strips secured therein and arranged in pairs to constitute holding members, and feathers secured between and extending beyond the holding members.

2. An attachment for incubators and the like comprising a frame, cross strips secured therein and arranged in pairs to constitute holding members, and separated fibrous material secured between and extending beyond the holding members.

3. An attachment for incubators and the like comprising a frame, coöperating holding members arranged in rows, and separated fibrous material held and supported between and extending beyond said members and constituting a continuous mass extending over and concealing one face of the frame.

4. The combination with a structure having an upper head compartment and a lower compartment; of a frame interposed between said compartments; coöperating holding members arranged in rows, and separated fibrous material held and supported between and extending beyond said members, said material constituting a continuous mass concealing one face of the frame and forming a shield for the contents of the lower compartment.

882,658. CONTROL SYSTEM FOR ELECTRIC MOTORS. HERMON L. VAN VALKENBURG, Pittsburg, Pa., assignor to Westinghouse Electric & Manufacturing Company, a Corporation of Pennsylvania. Filed Sept. 2, 1904. Serial No. 223,139.



1. In a system of control, the combination of a subdivided transformer winding, a translating device or devices, means for connecting the same between one terminal of the said winding and the various points of subdivision thereof, a resistance and means for connecting the same either between leads from successive points of subdivision of the transformer winding or in series with said leads.

2. In a system of control, the combination of a subdivided transformer winding a translating device or devices, means for connecting the same between points of subdivision of the transformer winding, a resistance and means for connecting the same either between leads from successive points of subdivision of the transformer winding or in series with said leads.

3. In a system of control, the combination of a subdivided transformer winding, a translating device or devices, a resistance, and means for connecting the same either between leads from successive points of subdivision of the transformer winding or in series with said leads.

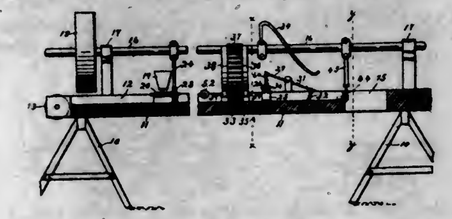
4. In a system of control, the combination of a subdivided transformer winding, a translating device or devices, means for connecting the same between points of subdivision of the said winding, a resistance, and means for connecting the same between points of subdivision of the transformer winding when a change in connection of the translating device or devices is being made from one to the other and for connecting the same in the circuit of the said devices when no such change is being made.

5. In a system of control, the combination of a subdivided transformer winding, a translating device or devices, means for connecting the same between points of subdivision of the said winding, a resistance which serves alternately to prevent short-circuiting portions of the transformer winding and as a starting or regulating resistance in the circuit of the translating device or devices.

[Claims 6 to 37 not printed in the Gazette.]

882,659. WRAPPING-MACHINE. WILLIAM R. WILLIAMS, Salt Lake City, Utah. Filed Oct. 1, 1907. Serial No. 395,449.

1. A candy wrapping machine comprising a suitably supported body having a longitudinal recess therein, a roll paper holder at one end of said recess and a discharge exit at the other end, a shaft mounted above said recess, a band wheel thereon connecting with the power, a feeder on said body, an arm on said shaft to actuate said feeder, a segmental cog wheel on said shaft, lateral flanges on said wheel, a bisected cog wheel recessed in said body and engaged by said segmental wheel, pivoted arms at each side of said wheels operated by the flanges on said segmental wheel, means to draw the paper along said recess and a cutter to separate the wrapped candy as described.

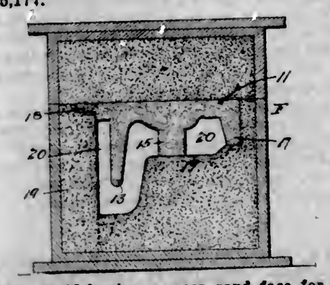


2. In a candy wrapping machine provided with means to propel a continuous sheet of paper loosely folded upon the caramel, a bisected cog wheel revoluble in a recess and provided with means whereby it is automatically opened to receive, and to hold said wrapped caramel, a shaft above said wheel, a segmental cog wheel rigid on said shaft and intermittently engaging said bisected wheel, and means to hold said paper during the revolution of said bisected wheel, for the purpose herein set forth.

3. A candy wrapping machine comprising a body having a longitudinal recess adapted for the movement of continuous sheet paper therein, a straight arm pivoted on said body and having a longitudinal slot therein, a block having a pin movable in the slot of said arm, a vertical peg on said arm, a shaft above said straight arm, a curved arm on said shaft adapted to engage said peg, a tiltable plate around which the outer end of said straight arm passes, a bisected cog wheel through which said sheet with the inclosed candy passes, a cog wheel on said shaft to intermittently rotate said bisected cog wheel and means to separate said sheets between the caramels, as herein set forth.

4. In a candy wrapping machine employing a continuous wrapping sheet and means to longitudinally move said sheet, a bisected cog-wheel through which said sheet with the inclosed candy passes, a power-actuated cog-wheel to intermittently rotate said bisected cog-wheel, lateral flanges on said power-actuated wheel, arms at each side of said bisected wheel and intermittently depressed by said flanges to hold said paper, and means to separate said sheets between the caramels, as herein set forth.

882,660. APPARATUS FOR MOLDING RAIL-JOINT CASTINGS. JOHN H. ALLEN, New York, N. Y., assignor to The Rail Joint Company, New York, N. Y., a Corporation of New York. Filed Jan. 31, 1907. Serial No. 355,177.



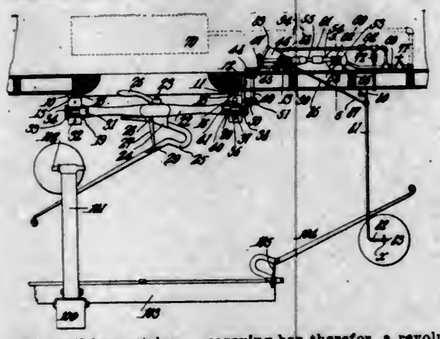
1. A sand mold having a green sand face for one wall of the molding cavity, and an inserted baked sand face arranged to form the entire opposite wall of said cavity.

2. A sand mold having a green sand face and an inserted

baked sand face arranged in matching relation, and respectively forming opposite differently shaped sides of the molding cavity.

3. A sand mold having a green sand face for one wall of the molding cavity provided with a pattern impression of one side of the casting, and a baked sand face arranged in matching relation to the green-body sand face and having a pattern impression of the opposite differently shaped side of the same casting.

882,661. MAIL CATCHING AND DELIVERING DEVICE. COLTON C. ANDREWS, Memphis, Tenn. Filed Jan. 10, 1908. Serial No. 410,152.



1. A mail bag catcher, a carrying bar therefor, a revoluble support for said bar, interlocking means on said bar and support adapted to rotate said bar as the support is rotated, automatic means for disengaging said interlocking means under the shock incident to the mail bag catching operation, and means for rotating said support.

2. A mail bag catcher, a carrying bar therefor, supports in which the bar is mounted for revoluble and longitudinal movement, interengaging means between the bar and one of the supports for maintaining the catcher in operative position, said catcher and bar being movable to release position under the shock incident to the mail bag catching operation, and means for turning the last mentioned support to restore the catcher to operative position.

3. In combination, a mail bag catcher, a supporting bar carrying the same, a pair of end supports in which said bar is mounted for revoluble and endwise movement, interengaging means between one of the supports and the bar, means for turning said support to move the catcher from inoperative to operative position, the catcher and bar being movable under the shock incident to the mail bag catching operation to disconnect the interengaging means and permit the catcher to fall to inoperative position, and a restoring spring for moving the bar back to engaging position.

4. In combination, a mail bag catcher, a carrying bar therefor, said bar having reduced circular end portions, a pair of supports receiving the end portions of the bar, means for turning one of the supports, balancing springs arranged in the supports and bearing against the opposite ends of the bar, a projecting pin extending from one end of the bar, and a series of lugs carried by the movable support and arranged to engage said pin.

5. In a mail bag catcher, a catcher arm, a cam arranged thereon, and a pivotally mounted bell crank lever having a pair of arms arranged to frictionally engage the cam, one of said arms normally extending across the holding crook of the arm in the path of the mail bag.

[Claims 6 to 18 not printed in the Gazette.]

882,662. HOOF-CUTTING KNIFE. HARRY ANDREWS, Stratton, Nebr. Filed July 11, 1907. Serial No. 383,355.

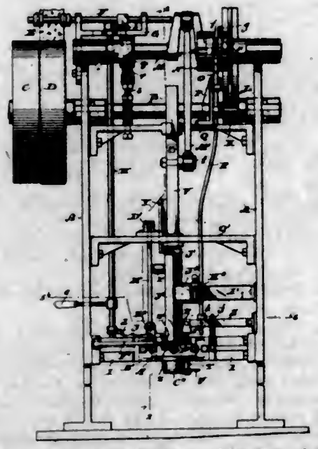
1. A hoof-cutting knife formed with an opening for the insertion of the hand or foot of the operator, an arched shank extending from the hand-hold, and a blade formed on the shank and at an angle to the hand-hold.

2. A hoof-cutting knife, consisting of a handle having an opening for the hand or foot of the operator, an arched shank extending from the handle, a blade carried by the



shank, and a shoulder between the shank and blade, said shoulder having a striking surface.

882,663. CORKING-MACHINE. FERDINAND BARTHOLD, Milwaukee, Wis., assignor to The Vilter Manufacturing Company, Milwaukee, Wis. Filed Mar. 12, 1907. Serial No. 362,008.



1. In a corking-machine, the combination of a movable device in the path of a receptacle to be corked, a starting mechanism controlled by said device, a cork passage engageable with the receptacle, a reciprocative plunger by which a cork is forced under compression through said passage into said receptacle, and means whereby the return of the movable device first aforesaid is had in synchrony with the working stroke of the plunger.

2. In a corking-machine, the combination of a starting-mechanism, a vertically reciprocative plate and means in connection with the same for actuating said starting-mechanism on lift of the plate, a cork-receiver having a depending nozzle for the engagement of a receptacle to be corked, the lift of said plate being a result of such engagement; and a reciprocative plunger by which a cork is forced under compression through said nozzle in synchrony with a return of the aforesaid plate to normal position, whereby said receptacle is stoppered and disengaged from the aforesaid nozzle.

3. In a corking-machine, the combination of a starting-mechanism, a vertically reciprocative plate and means in connection with the same for actuating said starting-

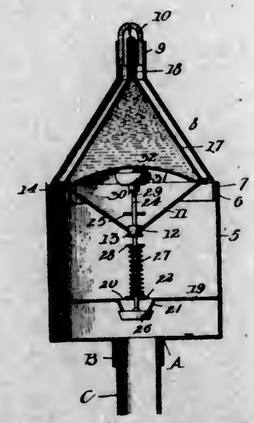
mechanism on lift of the plate, an adjustable lift-limiting stop, a cork-receiver having a depending nozzle for the engagement of a receptacle to be corked, the lift of the said plate being the result of an engagement of said nozzle by the receptacle; and a reciprocative plunger by which a cork is forced under compression through said nozzle in synchrony with a return of the aforesaid plate to normal position, whereby said receptacle is stoppered and disengaged from the aforesaid nozzle.

4. In a corking-machine, the combination of a movable device in the path of a receptacle to be corked, a starting-mechanism controlled by said device, a cork-passage engageable with the receptacle, a reciprocative device by which a cork is compressed in said passage, a reciprocative plunger by which the compressed cork is forced through the aforesaid passage into said receptacle, and means whereby the return of the movable device first aforesaid is had in synchrony with the working stroke of the plunger.

5. In a corking-machine, the combination of a movable device in the path of a receptacle to be corked, a starting-mechanism controlled by said device, a cork-receiver engageable with the receptacle, a cork-magazine, means controlling feed of the corks one at a time from the magazine and for compressing the feed cork in the receiver, a reciprocative plunger by which the compressed cork is forced through said receiver into said receptacle, and means whereby the return of the movable device first aforesaid is had in synchrony with the working stroke of the plunger.

[Claims 6 to 12 not printed in the Gazette.]

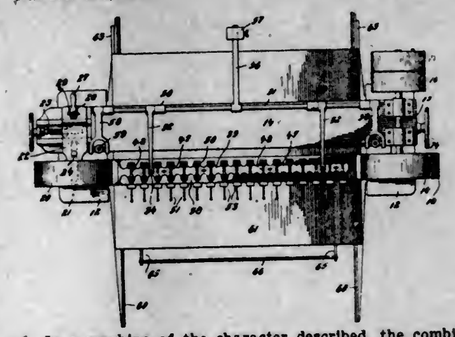
882,664. AUTOMATIC GAS-BURNER. LUKE T. BURNS, Waterbury, Conn. Filed Aug. 8, 1907. Serial No. 387,716.



1. In a mechanism of the class described, the combination with a casing, of a tip communicating with the casing, a valve arranged to govern the supply of gas to the tip, means for holding the valve normally closed, a container located within the casing, a diaphragm in the container, a closed tube communicating with the container at one side of the diaphragm, a filling in said portion of the container, a valve rod connected with the valve and located at the opposite side of the diaphragm for movement when the diaphragm is moved and a guide for the rod.

2. In a thermostatic mechanism, the combination with hollow conical members open at their major ends and having outwardly extending flanges in parallel relation, of a diaphragm secured between the flanges, a closed tube communicating with the interior of one of said members, expansive matter within said member and extending into the tube, a guide in the other conical member, said member having an opening at its minor end and a rod slidably engaged in the guide and in the opening and disposed to receive the diaphragm against its inner end.

882,665. ABRADING OR POLISHING MACHINE. JOHN J. CANAVAN, Brooklyn, N. Y. Filed May 22, 1907. Serial No. 375,019.



1. In a machine of the character described, the combination with an abrading or polishing belt, of a flexible belt guide, and gravity controlled means for causing said belt guide to conform to the configuration of the work being operated upon.

2. In a machine of the character described, the combination with an abrading or polishing belt, of a flexible belt guide, and gravity controlled means for causing said belt guide to conform to the configuration of the work being operated upon, and for pressing said belt guide toward said work.

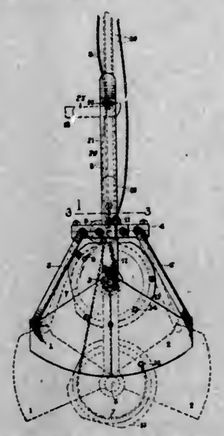
3. In a machine of the character described, the combination with an abrading or polishing belt, of a flexible guide belt, and gravity controlled means for causing said belt guide to conform to the longitudinal and lateral configuration of the work being operated upon.

4. In a machine of the character described, the combination with an abrading or polishing belt, of a flexible belt guide, and gravity controlled means for causing said belt guide to conform to the longitudinal and lateral configuration of the work being operated upon, and for pressing said belt-guide toward said work.

5. In a machine of the character described, the combination with an abrading or polishing belt, of a belt-guide, and a plurality of independently adjustable gravity-controlled devices for pressing said belt guide toward the work.

[Claims 6 to 26 not printed in the Gazette.]

882,666. GRAB-BUCKET. CLARK CHASE, Fall River, Mass. Filed Apr. 3, 1907. Serial No. 366,090.

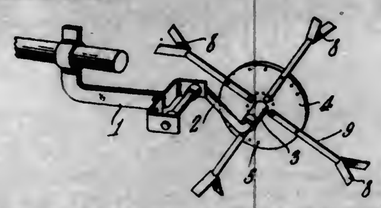


1. In a grab-bucket, the combination of a jaw door shaft and a bail, for the purpose of holding said jaw doors

closed, while the bucket is supported through the bail; the hoisting rope and dumping rope of the grab-bucket being left free to be used for a purpose other than that of sustaining the weight of the bucket.

2. In a grab-bucket, a head, a jaw door shaft, a bail mounted in suitable guides in said head, and having therein bearings for said jaw door shaft.

882,667. COTTON-CULTIVATOR ATTACHMENT. ALEXANDER H. CONNELL, Annona, Tex. Filed Apr. 27, 1907. Serial No. 370,664.



A cultivator attachment comprising means for attaching with a cultivator, a hub journaled upon said means and having an annular perforated flange, a V-shaped protector having a rod at its apex which is adapted to be attached to said flange the side edges of said protector being spaced apart along their entire lengths.

882,668. SHAVING-CUP. CHARLES M. DAVIS, Battle Creek, Mich. Filed Jan. 21, 1907. Serial No. 353,254.



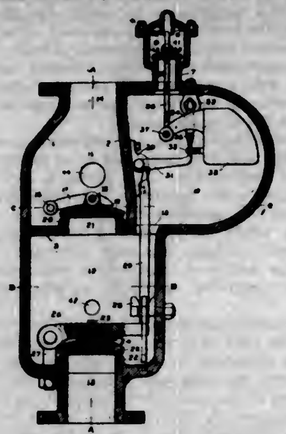
1. A shaving cup having a removable cover provided with a threaded throat, and a shaving brush having a handle provided with spaced threaded portions constructed to engage the said throat of the cover separately, the said cover being formed to constitute a lather guard, substantially as described.

2. A shaving cup having a bottom provided with a perforated projection, and a flexible bottom located below the said first mentioned bottom leaving a space between them, the said flexible bottom being constructed to be pressed inwardly with the fingers thereby injecting the contents of the said chamber into the cup, substantially as described.

3. A shaving cup having a bottom provided with a perforated projection, and a box connected with the cup and having a flexible bottom located below the said bottom of the cup leaving a space between them, the said flexible bottom being constructed to be pressed inwardly with the fingers thereby injecting the contents of the said chamber into the cup, substantially as described.

4. A shaving cup, having an opening leading into it, and means connected with the said cup and including a flexible portion constructed to be pressed inwardly whereby lather-forming material may be injected into the cup through the said opening, substantially as described.

882,669. DRY-PIPE VALVE. LEWIS R. FAGAN, Minneapolis, Minn. Filed Apr. 29, 1907. Serial No. 370,806.



1. In a dry-pipe valve, a casing providing main chambers, a supplemental chamber and an auxiliary air-chamber, air and water valves in the main chambers, a valve in the auxiliary chamber having a stem extending into the supplemental chamber, a strut extending from the water-valve into the latter chamber, and a trigger mechanism connecting said stem and strut and comprising a lever, a pivoted strut, and a weight provided with a pair of arms and a strut, substantially as set forth.

2. In a dry-pipe valve, a trigger mechanism comprising a lever, a pivoted strut, a depending swinging strut, and a weight provided with a pair of arms and a strut, substantially as set forth.

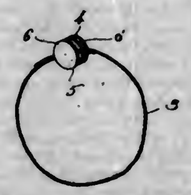
3. In a dry-pipe valve, a trigger mechanism, comprising a lever fulcrumed to the casing, a swinging strut depending from the casing, a free weight provided with a pair of arms and a strut, substantially as set forth.

4. In a dry-pipe valve, a trigger mechanism, comprising a lever fulcrumed to the casing, a swinging strut depending from the casing, a free weight having an arm for engaging said strut and lever and another arm provided with a pivoted strut, substantially as set forth.

5. In a dry-pipe valve, the combination with a strut for the water-valve and the stem of an auxiliary air-valve, of a trigger mechanism comprising a lever fulcrumed to the casing, a swinging strut depending from the casing, a free weight provided with a pair of arms and a strut, substantially as set forth.

[Claims 6 to 9 not printed in the Gazette.]

882,670. CAR-SEAL. HENRY C. FOLGER, Everett, Mass. Filed Apr. 29, 1907. Serial No. 370,755.



1. A car seal having an annular attaching member of hard metal, a wire passed through the central opening of said member, and sealing material filling the attaching member and overlying and substantially covering the sides thereof thereby locking the wire thereto, the outer periphery of said attaching member being exposed.

2. A car seal comprising an attaching member provided with an opening, a sealing band having each end passed through said opening and doubled back on itself, and sealing material filling the opening and overlying and covering the sides thereof thereby locking the sealing band to the attaching member.

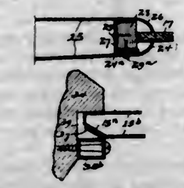
3. A car seal comprising a spool-shaped sealing member having two heads connected by a neck, a hard metal attaching member encircling the neck, and a sealing band or wire having its ends passed through said attaching member.

4. A car seal comprising a sealing member having two heads connected by a neck, an attaching member of hard material loosely surrounding the neck, and having a diameter substantially the same as that of said heads and a sealing band adapted to be connected to the attaching member.

5. A car seal comprising a sealing member having two heads connected by a neck, a ring loosely encircling said neck, said neck being longer than the thickness of the ring, and a sealing band to be connected to the ring.

[Claim 6 not printed in the Gazette.]

882,671. METAL WINDOW CONSTRUCTION. GEORGE H. FORSYTH, Chicago, Ill. Filed Apr. 24, 1905. Serial No. 257,151.



1. The combination with a sash, of a guide therefor, said guide having a lateral sash-confining member provided with an integral angularly-yieldable sash-contacting strip, substantially as described.

2. The combination with a sash, of a guide therefor, said guide having a lateral sash-confining member provided with an integral angularly-yieldable sash-contacting strip normally disposed in a plane oblique to the plane of the sash, substantially as described.

3. The combination with a sash, having a beveled margin, of a guide therefor, said guide having a lateral sash-confining member provided with an integral angularly-yieldable sash-contacting strip lying against said beveled margin of the sash, substantially as described.

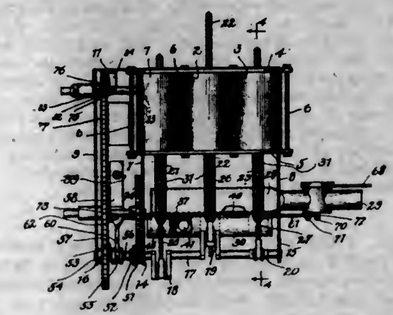
4. The combination with a sash, of a lateral guide therefor, said guide having a hollow member provided with an elastic angularly-movable part adapted to engage the sash, substantially as described.

5. The combination with a sash, of a lateral guide therefor, said guide having a hollow member provided with an elastic angularly-movable part adapted to engage the sash and tending to move the latter in its own plane, substantially as described.

[Claims 6 to 20 not printed in the Gazette.]

882,672. FLUID-MOTOR. CHARLES FREBORG, De Kalb, Ill., assignor to Gulbransen, Dickinson Company, Chicago, Ill., a Corporation of Illinois. Filed May 7, 1906. Serial No. 315,465.

1. In a fluid motor, the combination with a plurality of cylinders 1, 2 and 3, each having a piston therein, of a crank shaft having angularly displaced crank arms connected with said piston, a common valve chest in the form of a cylindrical tube, a cylindrical valve in said valve chest for each cylinder, each valve being connected with the corresponding crank arm to be oscillated upon rotation of the crank shaft, a supply chamber adjacent said valve chest and communicating therewith, a connection from the front end of each cylinder to a port opening in said valve chest, a connection from the rear end of each cylinder to another port opening in the valve chest, exhaust openings from said valve chest, a supply channel 50 for each valve adapted upon oscillation of the valve to alternately connect with the port openings whereby fluid is alternately fed to front and rear ends of the cylinders, and exhaust channels 48 and 49 for each valve adapted to connect one end of the cylinder with the atmosphere, while the other end is in connection with the supply source.



2. In a fluid motor, the combination with a cylinder having a piston therein, of a crank shaft connected with the piston to be rotated, a driving pinion on said crank shaft, a driving gear on said crank shaft, a valve chest, a supply chamber connected with a fluid supply source through a supply pipe, a valve within the valve chest controlled by the movements of the piston to control the supply of energy from said supply chamber to the cylinder, a valve in the supply pipe, clutch mechanism associated with the driving pinion and gear, lever mechanism extending from the clutch mechanism and in engagement with the valve in the supply pipe, said valve when moved in one direction causing the supply pipe to be open and causing movement of the lever, mechanism to engage the clutch mechanism with the driving gear, said valve when moved in the opposite direction causing closure of the passageway and causing actuation of the lever mechanism to engage the clutch mechanism with the driving pinion.

3. In a fluid motor, the combination with a cylinder having a piston adapted for reciprocation therein, of a crank shaft connected with the piston, driving gears on said shaft, a valve chest, a fluid supply chamber adjacent said valve chest and in communication therewith, a supply pipe in said supply chamber, a supply valve in said supply pipe, a controlling valve in said valve chest controlled by the reciprocation of the piston to control the flow of energy to the cylinder from the supply chamber, a clutch collar keyed to the shaft between the driving gears, lever mechanism extending from the clutch mechanism to the main valve, extensions 70 and 71 from the main valve, and extensions 72 from the lever mechanism adapted for engagement with the extensions 70 and 71 when the valve approaches its extreme position, said main valve when moved toward one extreme position causing opening of the passageway and actuation of the lever mechanism to connect the clutch with one driving gear, actuation of the valve toward its other extreme position causing closing of the passageway and actuation of the lever mechanism to move the clutch mechanism into engagement with the other gear.

4. In a fluid motor, the combination of a cylinder having a piston for reciprocating therein, a crank shaft connected with the piston to be rotated upon reciprocation of the piston, a driving gear, and a driving pinion loosely mounted on said crank shaft, a clutch collar on said crank shaft between the gear and pinion, said collar being longitudinally movable on said crank shaft but keyed thereto to rotate therewith, a valve chest, a fluid supply chamber connected with the valve chest, a valve in the chest for controlling the fluid supply to the cylinder, a main valve controlling the flow of fluid to the fluid chamber, and connecting means between the clutch collar and the main valve mechanism, said main valve mechanism through a certain range of movement being independent of the connecting mechanism but adapted for actuating said connecting mechanism throughout another range of movement to

cause movement of the clutch collar to connect the crank shaft with either the gear or pinion thereon.

5. In a fluid motor, the combination of a cylinder having a piston for reciprocating therein, a crank shaft connected with the piston, a fluid supply reservoir, a valve for controlling the connection of the cylinder with the fluid reservoir, a main valve controlling the supply of fluid to the reservoir, clutch mechanism on the crank shaft, gearing mechanism adapted for connection with said clutch mechanism, and connecting mechanism between the clutch mechanism and the main valve adapted to be actuated during certain ranges of movement of the main valve mechanism to operate the clutch mechanism, said main valve mechanism during another range of movement being independent of the connecting mechanism whereby the flow of fluid to the fluid reservoir may be controlled.

[Claims 6 and 7 not printed in the Gazette.]

882,673. LIGHTNING-ARRESTER. WALTER T. GODDARD, Victor, N. Y., assignor, by mesne assignments, to Garton-Daniels Company, Keokuk, Iowa, a Corporation of Iowa. Filed Aug. 7, 1905. Serial No. 273,134.



1. In a lightning arrester, the combination with a suitable insulating base, of binding posts near the ends of said base, an operating magnet, a tube of insulating material carrying said magnet and having arranged within the same the core of said magnet, and a single supporting means for said tube near its upper end upon the base.

2. In a lightning arrester, the combination with an insulating base, of an operating magnet, an insulating tube carrying said magnet and having the core of said magnet arranged within the same, a discharge point carried at one end of said tube, a discharge point connected with the ground mounted beneath said first mentioned discharge point, and a single supporting means for the tube arranged upon said base at the end of the tube farthest from the discharge points.

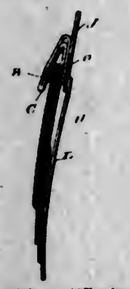
3. In a lightning arrester, the combination with an insulating base, of a resistance, a binding post mounted on said base near one end of said resistance, and a single supporting means arranged near the other end of said resistance farthest away from the binding post for supporting said resistance upon the base, so that a large surface distance is interposed on said base between said supporting means and said binding post.

4. In a lightning arrester, the combination with an insulating base, of a discharge point connected with the line and mounted upon said base, a resistance, a second discharge point mounted at one end of said resistance cooperating with said first mentioned discharge point, and a low resistance supporting member arranged near the other end of said resistance farthest away from the discharge point connected with the line, so that a large surface distance is interposed between said low resistance member and said discharge point connected with the line.

5. In a lightning arrester, the combination with an insulating base, of a discharge point carried thereby adapted to be connected with the line, of a resistance, a discharge point coöperating with said first mentioned discharge point and carried by one end of said resistance, and single means positioned near the other end of said resistance for supporting said resistance upon said base.

[Claims 6 and 7 not printed in the Gazette.]

882,674. STIFFENING-CAPE FOR COAT-COLLARS. JOHN W. GRAY, Salt Lake City, Utah. Filed Oct. 16, 1907. Serial No. 397,713.



1. A coat provided with a stiffening cape under its collar and inside the lining at the back thereof, said cape composed of a plurality of layers material, one of which is hair cloth having its hairs running up and down the back of the coat and thereby preventing the coat from wrinkling under the collar when in use, substantially as described.

2. A coat provided with a stiffening cape under its collar and inside the lining at the back thereof, said cape composed of an outer layer of fabric, a middle layer of hair cloth, having all its hairs running up and down the back of the coat, and an inner layer of canvas, and said cape serving to prevent the coat from wrinkling under its collar when in use, substantially as described.

3. A stiffening cape for coat collars shaped to fit the coat under the collar at the back thereof and comprising an outer layer of fabric, a middle layer of hair cloth having all its hairs running in the direction of the shortest dimensions of the cape, and an inner layer of canvas, substantially as described.

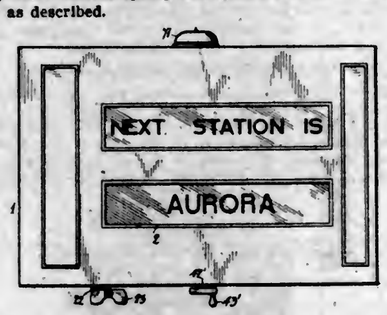
4. A coat provided with a stiffening cape under its collar, said cape being composed of a plurality of layers of material, one of which is hair cloth having its hairs running up and down the back of the coat, and another of which is a longitudinally disposed strip of hair cloth having the hairs running at right angles to those of the first named layer, thereby preventing wrinkling of the coat under the collar when in use, substantially as described.

5. A coat provided with a stiffening cape under its collar, and inside the lining at the back thereof, said cape being composed of an outer layer of fabric, a middle layer of hair cloth, having its hairs running up and down the back of the coat, an inner layer of canvas, and a narrow horizontal strip of hair cloth in the inside of the cape, near its lower edge, having all the hairs thereof running horizontally, substantially as described.

[Claim 6 not printed in the Gazette.]

882,675. ANNOUNCING OR STATION INDICATOR FOR RAILROADS AND STREET-CARS. WILLIAM S. GUNTER, Swedeburg, and CARRIE E. WELTON, Fairbury, Nebr. Filed Oct. 18, 1906, Serial No. 339,479. Renewed Jan. 30, 1908. Serial No. 413,467.

1. In an announcing or station indicator for railways and street cars, the combination with a suitable casing, of upper and lower apron winding rolls journaled therein, an indicating apron adapted to be wound on and off said rolls, an operating roller to move said apron in either direction, a driving mechanism connected with said roller, a governor to retard the movement of said driving mechanism, an electrically-actuated controlling mechanism, a reversing mechanism, means to automatically control said reversing mechanism, spur gear pinions mounted on the shafts of said winding rolls, revolubly mounted winding drums, spur gear wheels mounted on the shafts of said drums to engage the spur gear pinions on said winding roll shafts, a cord adapted to be wound on said drums in opposite directions, whereby the movement of one roll will be imparted to the other, and a tension spring arranged in said cord, substantially as described.



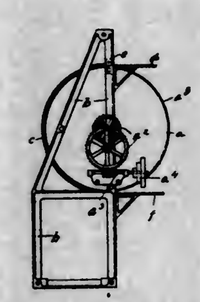
2. In an announcing or station indicator for railways and street cars, the combination with a casing, of a pair of apron winding rolls journaled therein, an indicating apron adapted to be wound on and off said rolls, an operating roller to move said apron in either direction, beveled gears loosely mounted on the shaft of said roller, a clutch adapted to be shifted into engagement with one or the other of said beveled gears to lock the same into engagement with said shaft, a driving mechanism connected with said gears, whereby when the latter are locked to the shaft, the same will be driven in one direction or the other, a clutch-shifting mechanism, said mechanism comprising a revolubly-mounted disk, an eccentrically-mounted wrist pin arranged on said disk, a connecting rod to connect said wrist pin with the shifting lever of said clutch, an operating spring connected to said disk, locking shoulders formed on the periphery of the latter, shouldered stop bars adapted to be engaged with one or the other of the shoulders on said disk to hold the same against movement, said bars being provided with cam projections, a pivotally mounted releasing lever, releasing rollers on said lever to engage said cam projections, whereby when said lever is rocked in one direction or the other, said bars will be disengaged from said disk, an operating lever connected to said releasing lever, a pivotally mounted operating disk having formed therein a series of apertures, a lever-engaging pin adapted to be inserted in one of said apertures, whereby when said disk is turned, said pin will be engaged with one side or the other of said operating lever to actuate the same and the releasing lever, a worm gear arranged on said apertured disk, a disk operating shaft having thereon a worm to engage said worm gear, a spur gear on said shaft adapted to be engaged by a similar gear on the shaft of said operating roller, and means whereby the spring on said locking disk may be wound, substantially as described.

3. In an announcing or station indicator for railways and street cars, the combination with an apertured casing, of an indicating apron mounted therein, a roller for moving said apron in either direction, actuating means for the roller provided with a clutch, a shouldered crank disk, a rod connected therewith for actuating the clutch, shouldered bars adapted to engage with said disk, and means for moving said bars for releasing the disk.

882,676. PHOTOGRAPHIC-PRINTING APPARATUS. BENJAMIN J. HALL, Barnes, England. Filed June 19, 1907. Serial No. 379,690.

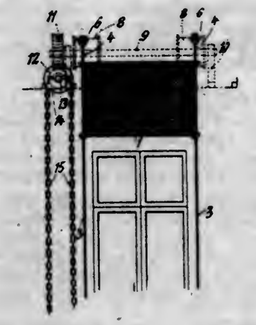
1. In a photographic printing apparatus, a rotary drum provided with a fibrous cover, and a curved glass plate mounted adjacent to one side thereof.

2. In a photographic printing apparatus, a frame, a rotatable drum mounted therein, a curved glass plate partly inclosing said drum and arranged adjacent thereto, and means for feeding a flexible sheet between said plate and said drum.



3. In a photographic printing apparatus, a frame, a rotatable drum mounted therein, a curved glass plate partly inclosing said drum and arranged adjacent thereto, and means for feeding a flexible sheet between said plate and said drum, said drum being also provided with a felt or other flexible cover.

882,677. BALCONY FIRE-ESCAPE. CARL J. A. HANSSEN, Christiania, Norway, assignor to Axel Winge, Christiania, Norway. Filed Sept. 17, 1907. Serial No. 393,334.

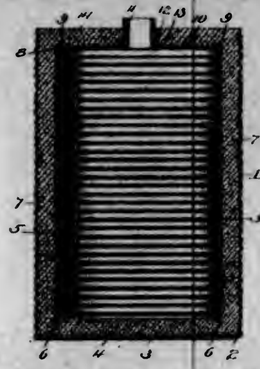


In a sliding balcony fire-escape the combination of a balcony arranged outside a vertical row of windows, ropes carrying the balcony, drums keyed on the same shaft and around which said ropes are coiled up, said drums being preferably arranged in the loft of the house, a worm wheel keyed on said shaft, a worm meshing with the worm wheel and being keyed on a horizontal shaft projecting out through the wall, a chain wheel keyed on the outer end of the last-mentioned shaft and a driving chain passing around the chain wheel and hanging down at one side of the window row so that it may be reached and operated both from the balcony and from each of the windows.

882,678. STEEL TANK. OWEN K. HARRY, St. Louis, Mo., assignor to O. K. Harry Steel Co., a Corporation of Missouri. Filed Mar. 18, 1907. Serial No. 363,021.

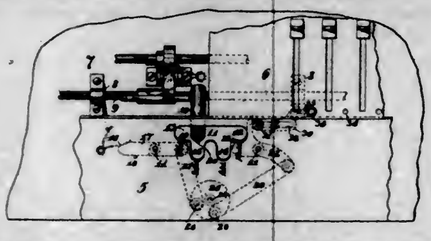
A tank comprising an outer metallic shell having a closed bottom and open top, a layer of cement within and upon the bottom of said shell, an inner metallic shell of smaller diameter and less height than the outer shell having a metal top and open bottom, placed in the inside of the outer shell with its wall spaced from that of the outer shell and projecting partially through the layer of cement and its top at a lower level than the top of the outer shell, a filling wall of cement between the two shells joining the

bottom layer, and an upper layer of cement resting upon the top of the inner shell and joining the filling wall, a



suitable opening being provided through the top of the inner shell and the top layer of cement.

882,679. CALCULATING-MACHINE. WILLIAM F. HAUSSTEIN, Lyndhurst, N. J., assignor to The Keuffel & Esser Company, Hoboken, N. J., a Corporation of New Jersey. Filed Nov. 9, 1904. Serial No. 232,028.



1. In a calculating machine provided with a plate having a slot therein, a slidable shaft, a lever secured to the shaft projecting through the slot and adapted to be moved from a normal intermediate position to either end of said slot, and a pawl automatically operated to secure the lever against accidental movement from either end position.

2. In a calculating machine provided with a plate having a slot therein, the combination therewith of a lever adapted to be moved to either end of said slot, a pawl automatically operated to secure the lever against accidental movement from either of such positions, a sliding carriage, an adjustable stop thereon, and means actuated by said stop at the termination of the carriage movement to release the pawl.

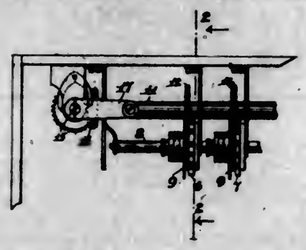
3. In a calculating machine the combination with the stationary top provided with a slot having an end space, a starting lever adapted to be moved into said end space to start the machine, a pawl normally in position to secure the starting lever in such position, a sliding carriage, a terminal pin thereon, a slidable plate on the stationary portion of the machine in the path of the pin, and connections whereby the pawl, at the termination of the operation of the carriage, is released by said slidable plate.

4. In a calculating machine the combination with the stationary top provided with a slot having two end spaces a starting lever adapted to be moved into either of said end spaces to start the machine, two pawls normally in position to secure the starting lever in either of such positions, a sliding carriage, a terminal pin thereon, a slidable plate on the stationary portion of the machine in the path of the pin, and connections whereby the pawls, at the termination of the operation of the carriage, are released by said slidable plate.

5. In a calculating machine the combination with the stationary top provided with a slot having an end space, a starting lever adapted to be moved into said end space to start the machine, a pawl normally in position to secure the stationary lever in such position, a disk pivoted to the stationary top of the machine, a link connecting it with the pawl, a sliding carriage, a terminal pin thereon, a slidable plate on the stationary portion of the machine in the path of the pin, and connections whereby the pawl, at the termination of the operation of the carriage, is released by said slidable plate.

[Claim 6 not printed in the Gazette.]

882,680. CALCULATING-MACHINE. WILLIAM F. HAUSSTEIN, Lyndhurst, N. J., assignor to The Keuffel & Esser Company, Hoboken, N. J., a Corporation of New Jersey. Filed Nov. 22, 1904. Serial No. 233,884.



1. The combination in a calculating machine of a shaft, a series of numeral wheels mounted loosely thereon, a parallel shaft provided with means for returning all of the numeral wheels to the zero position said shaft being manually actuated in one direction and automatically returned, a disk rotating with said parallel shaft, and means coacting with said disk for limiting the rotation of said parallel shaft to one revolution in either direction.

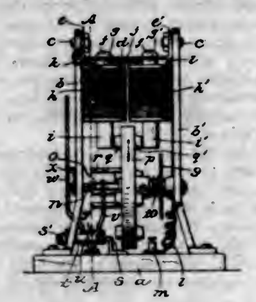
2. The combination in a calculating machine of a shaft, a series of numeral wheels mounted loosely thereon, a parallel shaft provided with means for returning all of the numeral wheels to the zero position said shaft being manually actuated in one direction and automatically returned a disk rotating with said parallel shaft, and having oppositely located teeth, and a yoke pawl embracing said disk and limiting the rotation of said parallel shaft to one revolution in either direction.

3. The combination in a calculating machine of a shaft, a series of numeral wheels mounted loosely thereon each being provided with a gear mutilated by the removal or omission of its teeth at one point, a parallel shaft, a series of gears rigidly secured thereon in numbers equal to those of the numeral wheels and similarly mutilated, such mutilations in the gears of the parallel shaft being in line with each other, a spring for actuating said parallel shaft in one direction, manual means for actuating it in the opposite direction, a disk rotating with said parallel shaft and having oppositely located teeth, and a yoke pawl embracing said disk and limiting the rotation of the parallel shaft to one revolution in either direction.

4. The combination in a calculating machine, of a shaft, a series of numeral wheels mounted loosely thereon each being provided with a gear mutilated by the removal or omission of its teeth at one point, a parallel shaft, a series of gears in number equal to those of the numeral wheels rigidly secured thereon and similarly mutilated, such mutilations being in line with each other in all the gears of the latter series, a vertical shaft, gearing connecting it with said parallel shaft, a spring for actuating said vertical shaft in one direction, manual means for operating it in the opposite direction, and automatic means for limiting the rotation in either direction to one revolution.

5. The combination in a calculating machine, of a shaft, a series of numeral wheels mounted loosely thereon each being provided with a gear mutilated by the removal or omission of its teeth at one point, a parallel shaft, a series of gears in number equal to those of the numeral wheels rigidly secured thereon and similarly mutilated, such mutilations being in line with each other in all the gears of the latter series, a vertical shaft, gearing connecting it with said parallel shaft, a spring for actuating said vertical shaft in one direction, manual means for actuating it in the opposite direction, a disk on the vertical shaft having oppositely located teeth, and a yoke-pawl embracing said disk and limiting the rotation of said vertical shaft to one revolution in either direction.

882,681. ELECTROMAGNETIC TOY ENGINE. HARRY G. HAWEKOTTE and HENRY W. KLAUSMANN, Indianapolis, Ind. Filed Dec. 18, 1907. Serial No. 407,000.



1. In an electro-magnetic toy engine, the combination of two upright frame members having each a journal bearing, a yoke attached to portions of the frame members, two wound electro-magnet cores attached to the yoke and extending therefrom, the cores having extensions projecting beyond the windings thereof, a shaft mounted rotatively in the journal bearings, an armature-wheel secured to the shaft and extending between the extensions of the two cores and having a plurality of armatures on opposite sides thereof to be carried thereby between opposing sides of the two core-extensions.

2. In an electro-magnetic toy engine, the combination of a base, two upright frame members having each a bearing that is adjustable toward or from the other in horizontal direction, a shaft mounted rotatively on the bearings, a yoke secured to the frame members above the shaft, two armature cores attached to the under side of the yoke and extending towards the shaft, an armature-wheel secured to the shaft and carrying armatures on the two sides thereof between the lower ends of the cores, pins projecting from a side of the armature-wheel, a contact-finger mounted in the path of the pins, a binding post on the base in connection with the finger, and windings on the cores connected with the frame members.

3. In an electro-magnetic toy engine, the combination of a base, two upright frame members on the base, two binding posts on the base, a shaft mounted rotatively between the frame members above the base, a yoke attached to the uppermost portions of the frame members above the shaft, two magnet cores attached to the under side of the yoke and extending downward toward the shaft, an armature-wheel secured to the shaft and carrying armatures on the two sides thereof between the opposing sides of the lower ends of the cores, pins on one side of the armature-wheel, a bearing mounted on the base, a bearing mounted on one of the frame members, a rock shaft mounted on the two bearings and provided with a reverse-lever, a connector-plate secured on the rock shaft and insulated therefrom, a contact-plate in engagement with the connector-plate and having connection with one of the binding posts, two contact fingers on the connector-plate and movable to or from the path of the pins, windings on the cores connected together and a frame member and also to the other binding post, a pinion secured to the shaft, an axle mounted on one of the frame members, a gear wheel on the axle and engaging the pinion, and a pulley carried by the gear wheel.

882,682. COMMUTATOR FOR POLYPHASE CURRENTS. ALEXANDER HEYLAND, Brussels, Belgium. Filed Jan. 21, 1903. Serial No. 140,025.



1. In a dynamo electric machine, the combination with a commutator comprising electrically insulated sections arranged in the circumference of a circle, of a winding having a plurality of connections to a part only of said sections, and current collecting devices bearing upon said commutator, said current collecting devices being so spaced about said commutator with relation to the length of the said sections that a section of said commutator to which a given winding connection is made, comes into connection with each of said current collecting devices before the connection with the preceding current collecting device is broken.

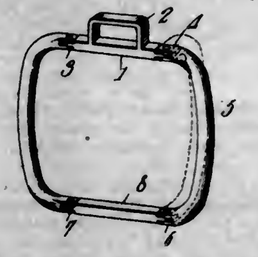
2. The combination with a commutator, of brushes bearing thereon, means for causing relative movement of said commutator and brushes, circuits connected to a portion of the segments of said commutator, and resistances connecting said circuits to the brushes when the latter bear on segments not connected with said circuits and intermittently connecting segments to which said circuits are connected as the brushes and commuator are relatively moved, substantially as and for the purpose described.

3. The combination with a commutator, of brushes bearing thereon, means for causing relative movement of the commutator and brushes, circuits connected to a portion of the segments of the commutator, and resistances connecting said circuits to the brushes when the latter bear upon segments not connected to said circuits and intermittently connecting said brushes together, substantially as described.

4. The combination with a commutator, of brushes bearing thereon, means for causing relative movement of the commutator and brushes, circuits connected to a portion of the segments of the commutator, and resistances connecting said circuits to said brushes, when the latter are bearing on segments not connected to said circuits, and intermittently connecting the segments with which said circuits are connected.

5. The combination with a commutator, of windings connected thereto, brushes bearing upon the commutator, auxiliary brushes bearing upon the commutator, resistances connected to each pair of main and auxiliary brushes, circuits connected with the main brushes, and means for causing relative movement of the commutator and brushes, the brushes being of such size and so arranged with relation to the commutator that the circuits of said windings are constantly closed through changing brush circuits, substantially as described.

882,683. SAFETY-STIRRUP. JOHN M. HIBBARD, Oregon, Mo. Filed Sept. 9, 1907. Serial No. 392,013.



1. In a stirrup the combination with upper and lower members; of side members pivotally connected thereto and constituting the sole connections therebetween, the

pivots of said members being disposed along lines perpendicular to the bottom of the stirrup.

2. A stirrup comprising upper and lower members, and side members having inturned ends pivotally connected to and constituting the sole connections between the upper and lower members, said upper and lower members being disposed in a plane intersecting the paths of movements of the side members.

3. In a stirrup the combination with upper and lower members; of side members pivotally connected thereto and constituting the sole connections therebetween, each of said side members having inturned ends, the pivots of the side members extending longitudinally of the stirrup.

4. In a stirrup the combination with upper and lower members; of side members having inturned ends pivotally connected to the end portions of the upper and lower members, the pivots of said members extending longitudinally of the stirrup, and means upon the upper member for engagement by the supporting device.

882,684. SOUND-MUFFLER. JOHN F. HIRSH and HAROLD M. HIRSH, St. Louis, Mo. Filed Aug. 5, 1907. Serial No. 387,220.



1. A device of the character described, comprising an inner and outer shell of semispherical shape, a layer of felt interposed between said shells and extending slightly beyond the edge thereof, and a flange on the inner shell for clamping said felt in position; substantially as described.

2. A device of the character described, comprising an inner and outer shell formed of material that can be molded into shape, a layer of sound-deadening material interposed between said shells, said sound-deadening material projecting beyond the edge of said shells to form a yielding cushion, and an outwardly projecting flange on the inner shell for clamping said material; substantially as described.

3. A device of the character described, comprising an inner and outer shell of approximately semi-spherical shape, a layer of sound-deadening material interposed between said shells, a socket piece secured to the outer shell, a spring clamp provided with a shank which fits in said socket piece, and shoulders on said clamp which fit in notches in the edge of the socket piece; substantially as described.

4. A device of the character described, comprising an inner and outer shell of approximately semi-spherical shape, a layer of sound-deadening material interposed between said shells, a socket piece secured to the outer shell, a spring clamp provided with a shank which fits in said socket piece, shoulders on said clamp which fit in notches in the edge of the socket piece, a cross pin in the end of said shank, and a suspending cord connected to a clip which is fastened to the socket piece; substantially as described.

882,685. TABLE FOR MANUFACTURING UPHOLSTERY-PADS. EDWIN M. HULSE, Columbus, Ohio. Filed May 31, 1906. Serial No. 319,480.



1. In an apparatus for the manufacture of upholstery, the combination with a table for supporting the upholstery, of a button-holder located at the edge of the table and beneath the plane of the under side thereof, and movable substantially wholly thereunder, and means for supporting the button-holder, said button-holder being movable inward and outward with respect to the edge of the table.

2. In apparatus for the manufacture of upholstery, the combination with a table for supporting the upholstery, of a button-holder located at the edge of the table and beneath the plane of the under side thereof, and movable substantially wholly thereunder, means for supporting the button-holder, and means for moving the button-holder inward and outward with reference to the edge of the table.

3. In apparatus for the manufacture of upholstery, the combination with a table for supporting the upholstery, of a button-holder located at the edge of the table and beneath the plane of the under side thereof, and movable substantially wholly thereunder, means for supporting the button-holder, means for moving the button-holder inward and outward with respect to the edge of the table, and means for holding the button-holder in the position to which it is moved.

4. In apparatus for the manufacture of upholstery, the combination with a table for supporting the upholstery, of a button-holder located at the edge of the table and beneath the plane of the under side thereof, and movable substantially wholly thereunder, means for supporting the button-holder, means for moving the button-holder inward and outward with respect to the edge of the table, and means for holding the button-holder in its outward position.

5. In apparatus for the manufacture of upholstery, the combination with a table for supporting the upholstery, of a button-holder located at the edge of the table and beneath the plane of the under side thereof, means for supporting the button-holder, and means for moving the same inward and outward with respect to the edge of the table, said button-holder comprising a bar consisting of separable parts to permit removal of the buttons therefrom.

[Claims 6 and 7 not printed in the Gazette.]

882,686. CAP FOR THE PROTECTION OF THE HUMAN HEAD. ROBERT IRELAND and HECTOR W. COLE, Kalgoorlie, Western Australia, Australia. Filed July 27, 1907. Serial No. 386,148.



1. An improved cap for the protection of the human head consisting of cotton, silk, leather, or other suitable material provided with spiral fluting so arranged as to carry, secure and protect a pair of air tubes, substantially as set forth.

2. In an improved cap for the protection of the human head a pair of air tubes secured in the material and ascending spirally from the base to the crown, substantially as set forth.

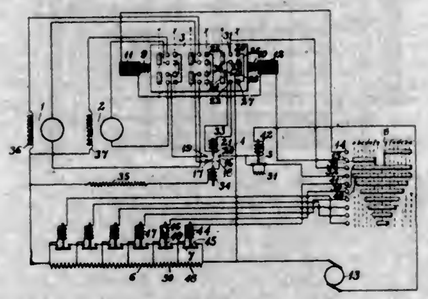
3. In an improved cap for the protection of the human head the combination of a spirally fluted body or bed of any suitable material; and a pair of spirally arranged air tubes and the necessary valves; substantially as set forth.

4. In a protective cap of the class described, the combination with a thick, tight-fitting body-portion, having suitable recesses therein and forming a partial protection for the head, of pneumatic chambers positioned within said recesses and closely adjacent, throughout the surface of the cap, substantially as set forth.

5. In a protective head-covering, the combination with a body-portion of relatively thick material, and a plurality of pneumatic tubes associated therewith and covering a considerable area of the same, whereby a maximum of protection is secured, substantially as set forth.

[Claims 6 to 8 not printed in the Gazette.]

882,687. ELECTRICAL CONTROL SYSTEM. HENRY D. JAMES, Pittsburg, Pa., assignor to Westinghouse Electric & Manufacturing Company, a Corporation of Pennsylvania. Filed Apr. 3, 1905. Serial No. 253,634.



1. The combination with one or more electric motors, a reversing switch, and a circuit-breaker, of means for preventing closing of the circuit-breaker while the electromotive force generated by the motor or motors exceeds a predetermined amount, and means operated by the circuit-breaker for connecting the motor or motors in a closed circuit while the circuit-breaker is open.

2. The combination with one or more electric motors, a reversing switch, and a circuit-breaker, of means for retaining the circuit-breaker in open position after the reversing switch has been moved from one closed-circuit position to another and while the electromotive force generated by the motor or motors exceeds a predetermined amount, and means operated by the circuit-breaker for connecting the motor or motors in a closed circuit while the circuit-breaker is open.

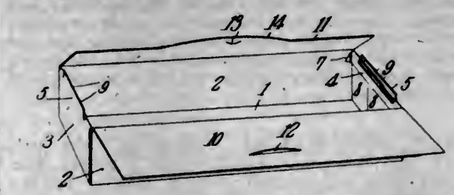
3. The combination with one or more electric motors, and a reversing switch, of a circuit-breaker, having an operating magnet winding the circuit connections of which are governed by the reversing switch, and a holding magnet winding the circuit of which may be established only when the circuit-breaker is open.

4. The combination with one or more electric motors, and a reversing switch, of a circuit-breaker, having an operating magnet winding the circuit connections of which are governed by the reversing switch, and a holding magnet winding for retaining the circuit-breaker in open position after the reversing switch has been moved from one closed-circuit position to another and while the electromotive force exceeds a predetermined amount, the circuit of said holding magnet winding being established only when the circuit-breaker is open.

5. The combination with one or more electric motors, a reversing switch, and a circuit-breaker, of an operating magnet winding for the circuit-breaker the circuit connections of which are governed by the reversing switch, a holding magnet winding for retaining the circuit-breaker in open position after the reversing switch has been moved from one closed-circuit position to another and while the electromotive force exceeds a predetermined amount, and means operated by the circuit-breaker for connecting the motor or motors in a closed circuit while the circuit-breaker is open.

[Claim 6 not printed in the Gazette.]

882,688. EGG-CARTON. HORACE W. JANICKE, Augusta, Kans. Filed June 3, 1907. Serial No. 377,089.

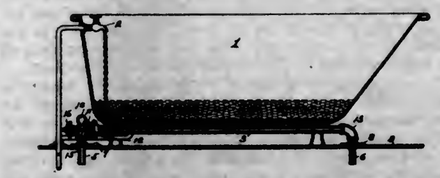


1. A carton having inturned corner flaps provided with locking tongues, and end walls provided with slits through which the tongues project and with tucking flaps embodying keepers coacting with the side walls of the carton to hold the flaps in operative position.

2. A carton having inturned corner flaps provided with locking tongues, and end walls provided with slits through which the tongues project and with tucking flaps embodying keepers coacting with side walls of the carton to hold the flaps in operative position and with guards to brace the end walls against inward yielding.

3. A carton having inturned corner flaps provided with locking tongues, and end walls provided with slits through which the tongues project and with tucking flaps embodying angular keepers coacting with the side walls of the carton to hold the flaps in operative position and with guards to brace the end walls against yielding movements.

882,689. BATH-TUB-HEATING DEVICE. THOMAS B. JARVIES, Kansas City, Mo. Filed Sept. 4, 1906. Serial No. 333,196.



1. The combination with a bath tub, of means for introducing water into the tub adjacent one end thereof, and a burner disposed longitudinally under the tub and having a series of discharge openings disposed at increasing distances apart along the length of the burner, the openings being closer together adjacent the end of the tub in which the water enters.

2. The combination with a bath tub, of means for introducing water into the tub adjacent one end thereof, and a burner disposed lengthwise of the tub and having its ends independently adjustable toward and from the tub, the burner having a series of discharge openings disposed along its length at increasing distances apart, the openings adjacent where the water enters the tub being closer together than at the other end of the burner.

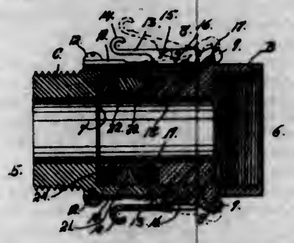
3. The combination with a bath tub, of means for introducing the water into the tub adjacent one end thereof, a burner tube disposed longitudinally under the bath tub and having a longitudinal row of discharge openings disposed apart at distances increasing from one end of the tube to the other, and means for varying the distance of the burner tube relative to the tub.

4. The combination with the bath tub, of means for introducing water into the tub adjacent one end thereof, a burner tube disposed longitudinally under the tub and having holes for discharging the fluid against the tub, supports for the burner tube vertically adjustable toward and from the tub, one of the supports being tubular and conveying the gas used in the burner, an air mixing chamber connected to the said tubular support and to said burner tube and having air inlet openings, and a valve controlling the passage of gas from the tubular support to said mixing chamber.

5. The combination with a bath tub, of means for intro-

ducing water into the tub adjacent one end thereof, a burner disposed lengthwise under said tub, two vertical externally screw threaded members for supporting said burner at opposite ends respectively, one member being tubular and discharging into said burner the gas used, and two plates adapted to be supported on the floor and having screw threaded holes in which said two members are respectively fitted.

882,690. HOSE-COUPLING. THEODORE N. JONES, Boulder, Colo., assignor of one-half to John T. Powers, Hastings, Nebr., and one-fourth to N. S. Shannon and one-fourth to W. H. Ferguson, Lincoln, Nebr. Filed Apr. 1, 1907. Serial No. 365,683.

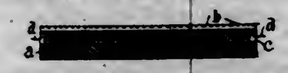


1. A hose coupling composed of two members, one of the said members having an interior shoulder, the other member also having a shoulder, a gasket engaging said last named shoulder, the last named member having a forward extension beyond the gasket, a loose expanding ring applied to the gasket and surrounding the said extension, the said ring being counterbored at its outer end, and a nut inserted in the counterbore of the ring and engaging threads formed on the outer extremity of the extension of the said member, the said nut serving to lock the expansion ring in place, substantially as described.

2. A coupling composed of two coöperating members, one of which is provided with an interior shoulder, the other member having a gasket, a reduced extension projecting beyond the gasket, an expansion ring surrounding the said extension and engaging the gasket, and suitable means for retaining the expansion ring in place upon the member, whereby when the two parts are connected, the ring may be forced against the gasket whereby the latter is expanded to form a water tight joint.

3. A hose coupling composed of male and female members, the female member having an interior shoulder, and the male member having a gasket and a reduced extension projecting beyond the gasket, an expansion ring surrounding the said extension and engaging the gasket, said ring having an expanding rib on its gasket-engaging end, the outer extremity of the ring being counterbored around the extension, a nut inserted in the counterbore of the ring and connected with the extension which is exteriorly threaded for the purpose, the outer end of the ring normally projecting beyond the outer end of the nut, whereby when the two parts are connected, the said ring engages the shoulder of the female member whereby the ring is crowded against the gasket with sufficient force to form a water tight joint, substantially as described.

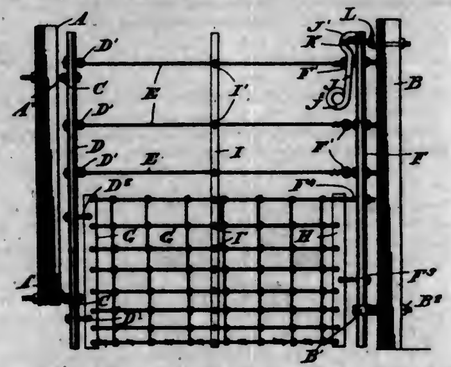
882,691. TORREFYING APPARATUS FOR THE TEXTILE INDUSTRY. CHARLES F. KAISSER, Lille, France. Filed Nov. 26, 1906. Serial No. 345,258.



1. In an apparatus of the character described, the combination with a body of refractory material having an interior cavity, and a slot in one face, of a heating device arranged within the said cavity.

2. In an apparatus of the character described, the combination with a body of refractory material having an interior cavity, and a T-shaped slot in one face extending the entire length of the body, of a heating device arranged within the cavity.

882,692. GATE. GEORGE O. KIDDER, Marcus, Iowa. Filed Feb. 7, 1907. Serial No. 356,187.



1. In a gate, the combination with a pair of posts, of a bar hinged to one of said posts, provided with wires carrying another bar plates carried by said bars connected together by wire netting, a socket pivoted to the lower end of the other post, adapted to receive said second bar, a hook secured to said post, and a bar mounted on said second bar carrying a link adapted to fit over said hook for the purpose described.

2. In a gate, the combination with a pair of gate-posts, of a bar hinged to one of said posts carrying wires, a bar carried by the ends of said wires, a plate carrying wire netting pivotally connected to the hinged bar, a plate secured on the end of said netting, remote from the said bar, a socket pivoted to a bolt secured in the lower portion of the other post, adapted to receive said second bar and means for securing the upper end of said bar to said post, for the purpose described.

3. In a gate, the combination with a pair of posts, of a bar hinged to one of said posts carrying wires, a bar adjustably connected to the opposite ends of said wires, a plate hinged to the hinged bar carrying a wire netting terminating in a second plate, a bolt connecting the lower end of the second plate to the bar carried by the wires, a bolt loosely carried by said plate slidably mounted in said bar, a socket pivoted to the lower end of the other post adapted to receive said bar, a hook carried by said post, and a lever pivotally mounted on said bar carrying a link adapted to fit over said hook, for the purpose described.

882,693. FRICTION-CLUTCH. ALBERT KINGSBURY, Pittsburg, Pa., assignor to Westinghouse Electric & Manufacturing Company, a Corporation of Pennsylvania. Filed Mar. 6, 1905. Serial No. 248,737.



1. The combination with an annular clutch member and a shaft on which said member is rotatably mounted, a supporting device keyed to said shaft, and a concentrically and radially slotted ring mounted upon said supporting device and expansible by centrifugal force exerted solely through its own weight to engage the annular clutch member.

2. The combination with an annular clutch member and a shaft upon which said member is rotatably mounted, of a supporting device keyed to the shaft, a concentrically and radially slotted ring mounted upon the supporting device having its ends connected by a spring which normally clamps the ring to the supporting device and the pull of which is overcome by centrifugal force when the shaft attains a predetermined speed.

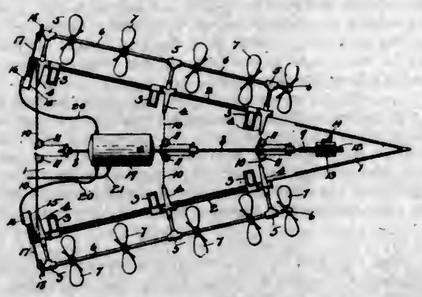
3. The combination with a shaft having a supporting device fastened thereto, and a normally loose member having an annular flange, of a concentrically and radially slotted split ring mounted upon the supporting device inside the flange of said loose member and held against all except radial movement and expansible against the flange by centrifugal force, and a spring for connecting the ends of the ring together.

4. The combination with a shaft and a divided ring provided with a plurality of similar concentrically curved slots and a plurality of radial slots such widths as to effect a static balance, said ring being so supported by the shaft as to have no independent rotative movement, of a normally loose member having an annular flange that projects over the ring to be engaged thereby when the ring is expanded.

5. The combination with a shaft, a split metal ring having concentrically curved and radial slots and supported by said shaft against independent rotative movement and a spring that connects the ends of the ring together, of a normally loose member having a flange that projects over said ring to be engaged thereby when the ring is expanded by centrifugal force exerted solely through its own weight.

[Claims 6 to 8 not printed in the Gazette.]

882,694. CURRENT-MOTOR. JOHN KIRSCHWENG, Spokane, Wash. Filed May 7, 1907. Serial No. 372,426.



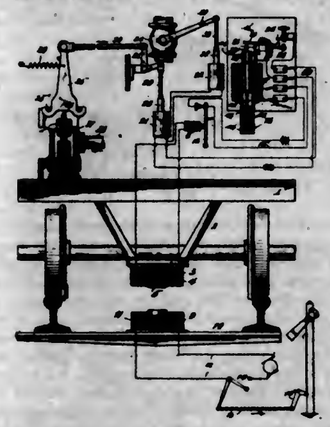
1. In a current motor, a float, rock shafts journaled on said float, arms secured to said rock shafts, propeller wheels journaled in said arms, a rod slidably mounted on said float, flexible devices connecting said rod and arms, means to slide said rod so as to rock said shafts and submerge said propeller wheels or lift them from the water, and means to utilize the power generated by said propeller wheels when submerged, substantially as shown and described.

2. In a current motor, a triangular shaped float having one angle pointed up stream, a rock shaft journaled on each side of the float, arms secured to each rock shaft having journal bearings on their ends, shafts journaled in said bearings, propeller wheels secured to said shafts, a rod slidably mounted on said float, flexible devices connecting said rod and arms, means to slide said rod so as to rock said shafts and submerge said propeller wheels or lift them from the water, and means to utilize the power generated by said propeller wheels when submerged, substantially as shown and described.

3. In a current motor, a triangular shaped float having one angle pointing up stream, a rock shaft journaled on each side of the float, angular arms secured to each rock shaft, a journal bearing on one of said arms, shafts journaled in said bearing, propeller wheels secured to said shafts, other arms secured at the rear ends of said shafts, an air-compressor secured to each of the last mentioned arms, a storage tank secured to the float, pipes connecting the air-compressors and storage tank, a pipe to convey the contents of the storage tank therefrom, and means to actuate said rock shafts so as to submerge said propeller wheels or lift them from the water, substantially as shown and described.

4. In a current motor, a triangular shaped float having one angle pointing up stream, a rock shaft journaled on each side of the float, angular arms secured to each rock shaft, journal bearings on one of said arms, shafts journaled in said bearings, other arms secured at the rear ends of said shafts, an air-compressor secured to each of the last mentioned arms, a storage tank secured to the float, pipes connecting the air-compressors and storage tank, a pipe to convey the contents of the storage tank therefrom, a rod slidably secured longitudinally of said float, chains connecting said rod with the free ends of said angular arms, a rack bar secured to said rod, gearing meshing with said rack bar, and means to actuate said gearing, substantially as shown and described.

882,695. SYSTEM FOR AUTOMATICALLY STOPPING CARS OR TRAINS. EDWARD E. KLEINSCHMIDT, New York, N. Y., assignor to George M. Seeley, New York, N. Y. Filed Feb. 8, 1906. Serial No. 300,038.



1. A system of the character described comprising a track electromagnet, a signal, a normally open circuit for said magnet, means for closing said circuit and maintaining it closed when the signal is set at danger, a coil carried by the car or train wherein an induced current is set up by the passage thereof over said magnet when the latter is energized, said coil comprising inner and outer separated sections and means controlled by said induced current to effect the stoppage of the car or train.

2. A system of the character described comprising a track electromagnet, means to energize said magnet, a coil carried by the car or train wherein an induced current is set up by the passage thereof over said magnet when the latter is energized, said coil consisting of inner and outer separated sections, and means controlled by said induced current to effect the stoppage of the car or train.

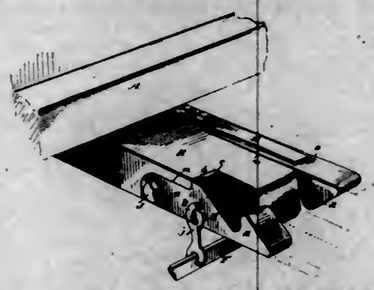
3. A system of the character described comprising a track electromagnet, means to energize said magnet, a coil carried by the car or train wherein an induced current is set up by the passage thereof over said magnet when the latter is energized, a solenoid and a normally open controlling circuit for the same, a core for said solenoid, means controlled by said induced current to close said circuit, means actuated by the movement of said core when the solenoid is energized to effect the stoppage of the car or train, and means to retard the return movement of said core.

4. A system of the character described comprising a track electromagnet, a signal, a normally open circuit for said magnet, means for closing said circuit and maintaining it closed when the signal is set at danger, a coil carried by the car or train wherein an induced current is set up by the passage thereof over said magnet when the latter is energized, said coil comprising inner and outer separated sections, a brake mechanism, and means controlled by said induced current to actuate said brake mechanism to effect the stoppage of the car or train.

5. A system of the character described comprising a track electromagnet, a normally open controlling circuit for said magnet, a signal, means actuated by the signal mechanism to close said circuit and maintain it closed when the signal is set at danger, a coil carried by the car or train wherein an induced current is set up by the passage thereof over said magnet, said coil comprising inner and outer separated sections and means controlled by said induced current to effect the stoppage of the car or train.

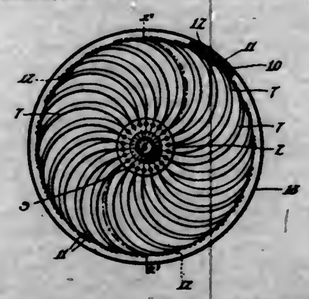
[Claims 6 to 11 not printed in the Gazette.]

882,696. CAR-COUPLING. AMBROSE KLINGLESMITH, Noble, Okla. Filed Aug. 26, 1907. Serial No. 390,119.



A car-coupler comprising a draw-head having mortises upon its opposite sides with shoulders to form stops, coupling-links seated in said mortises and pivoted thereto and having shoulders to act against the stops, and flat curved springs connected at one end to the draw-head and the opposite end or extremity bent upward, said springs being connected to the draw-head upon the upper and lower sides thereof so that the links will be actuated by the springs in opposite directions, and means for releasing the coupling-links consisting of a hand-lever pivoted to a clip upon the under side of the draw-head and connecting with the links by means of hangers loosely connecting with the links and with the lever, substantially as and for the purpose set forth.

882,697. SHOCK-ABSORBING VEHICLE-WHEEL. HERVEY R. KUMLER, Etiwanda, Cal. Filed Jan. 30, 1907. Serial No. 354,954.



In a wheel, a hub having a flange at its inner end and a longitudinal bore at its outer end, the flange being conically recessed at its base and flat and perforated in its outer portion and the recessed end of the hub being of the same diameter and exteriorly screw threaded to a point beyond the bottom of said recess, said screw threads being continuous and uniform, a flange loosely seated upon the hub adjacent to said threaded portion having its base conically recessed and its outer portion flat and perforated, a nut on said threaded portion in engagement with the base of said loosely mounted flange, a cap on the outer end of the hub in engagement with said nut, a felly provided with shouldered recesses upon its inner surface, a series of curved spokes, the outer portion of each of which is tapered and fits in one of said recesses, the inner end of each spoke being provided with a pair of lateral, wedge shaped wings which fit in the conical portions of said flanges, two of the sides adjacent thereto being parallel and fitting between the flat sides of said flanges and the other two sides converging toward each other at the inner end of the spoke and being each provided with a half round recess which is adapted to register with the perforations through said disk, bolts through said perforations and recesses, and bolts through the outer end of each spoke and the felly.

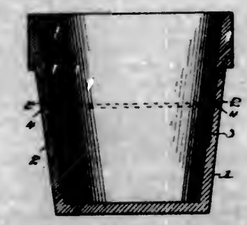
882,698. NAIL-PICK-UP DEVICE. EDWARD LAHL, San Francisco, Cal. Filed May 13, 1907. Serial No. 373,462.



1. A nail pick up device comprising a body portion having a flange designed to receive the end of a tool handle, and having an opening therein to receive a screw for connecting said body portion with the tool handle, and a series of tines fixed to one edge of said body portion, and having spaces between them.

2. A nail pick up device, comprising a body portion having an extension thereon formed with two rows of openings, the openings in one row being spaced apart further than those in the other row, a series of tines placed in one of said rows of openings and capable of being removed and replaced in the other row of openings and a hinged retaining plate designed to securely hold said tines in position.

882,699. ELECTRICAL RECEPTACLE FOR PLANTS. HARRY S. LATSHAW, Jersey Shore, Pa. Filed Jan. 24, 1906. Serial No. 297,698.



1. In an electric receptacle for plants, the combination with a body of a negative and positive element located within said receptacle and a metallic conductor passing entirely around said receptacle and connected to each of said elements for forming a return path for an electrical current.

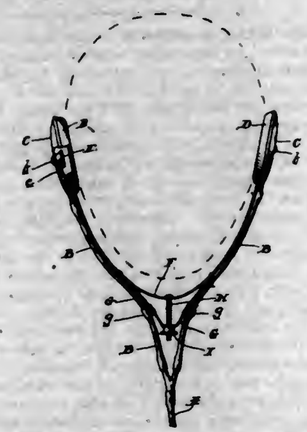
2. An electrical receptacle comprising a body provided with a negative and a positive element surrounded by said body, and a metallic conductor embedded within the said body, and connecting the negative and positive elements.

3. An electrical receptacle for plants, comprising a body provided with plates countersunk in its walls, said plates being positioned within said body and comprising a negative and a positive element, and a metallic conductor connecting said plates.

4. An electrical receptacle for plants comprising a body, plates constituting a negative and a positive element countersunk in the inner side of the walls of said body, and a wire embedded in and extending entirely around the walls of said body in engagement with said plates.

5. In an electrical receptacle for plants, the combination with a body constituting inclosing means, of a positive and negative plate located in contact with the walls of said body and a wire connected to the back of each plate for forming a path for the flow of electrical current.

882,700. HEARING-TUBE FOR SOUND-REPRODUCING DEVICES. GEORGE A. LEWIS, Detroit, Mich. Filed May 13, 1907. Serial No. 373,206.



1. In a hearing tube for sound reproducing devices, the combination with the bowed spring and sound conveying tube having branches supported on the spring, of ear pieces secured to the ends of the bow spring and adapted to suspend the whole device on the head of the wearer, each ear piece comprising an outer shell and an inner drum communicating with the branch tubes, the outer shell forming an air chamber around the inner drum of a size to freely encompass the ear, the shell being provided with an aperture for introducing the ear which is smaller than the size of the chamber whereby the shell is adapted to engage with the ear and support the ear pieces thereon independently of the clamping action of the spring.

2. In a hearing tube for sound reproducing devices, the combination with the bowed spring and branch tubes supported thereon, of ear pieces secured to the ends of the bow spring and adapted to suspend the device from the ears of the wearer, said ear pieces made of thin sheet aluminium each with an outer shell forming a chamber of a size to freely encompass the ear and having an aperture of lesser size for the introduction of the ear, whereby the ear piece is adapted to engage with the ear.

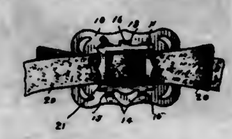
3. In a hearing tube for sound reproducing devices, the combination with the bowed spring and the branch tubes supported thereon, of ear pieces secured to the ends of the bowed spring and adapted to suspend the device from the head of the wearer, each ear piece comprising an outer shell and an inner drum in communication with the branch tubes, the outer shell forming an air chamber around the inner drum and adapted to encompass the ear and support the ear piece thereon independently of the clamping action of the spring and means on the spring for regulating its tension.

4. An ear piece for a hearing tube for sound reproducing devices comprising an outer shell and a sound transmitting interior drum secured in the outer shell and provided with a nipple for connecting it to the sound conveying tube, the outer shell forming an air chamber around the inner drum of a size to freely inclose the ear and provided with an aperture of smaller size through which the ear is adapted to be introduced into the chamber and forming the means of supporting the ear piece in position on the ear.

5. In a hearing tube for sound reproducing devices, the combination with ear pieces, of a bow-spring to which the ear pieces are connected, said bow-spring provided at its middle portion with a reinforcing member separately connecting the spring at two points intermediate between its ends and its middle portion and an adjusting screw connecting the spring and its reinforcing member.

[Claims 6 and 7 not printed in the Gazette.]

882,701. SHOE-LACE FASTENER. MARY B. LOLLER, New York, N. Y. Filed July 5, 1907. Serial No. 382,144.



1. A fastener for shoe laces comprising a base plate having a central opening through which the ends of the lace are passed and slots 13 and 14, a securing plate having lugs adapted to engage slots 14, and a lug adapted to engage slot 13 and a pivoted latch on the base plate adapted to engage the lug in slot 13 to secure the plates together.

2. A fastener for shoe laces comprising a base plate having an opening through which the ends of the lace are passed and slots 13 and 14, a securing plate having outwardly turned lugs adapted to engage slots 14 and a lug adapted to engage slot 13 and provided with an opening 17, and a latch pivoted to the base plate and adapted to engage opening 17.

882,702. VIOLIN. JOHN D. LOPPENTIEN, Orange, Cal. Filed Sept. 4, 1907. Serial No. 391,292.



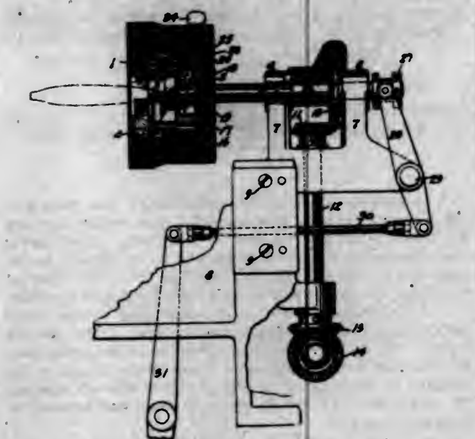
1. A musical instrument of the character described, having plates on the inner side of its belly and back, sound bars secured to said inner sides respectively and extending across said plates, said bars being provided with recessed portions registering with said plates, and a sound post supported at its inner end against the plates of the belly and at its opposite end in the recess of that bar which is secured to the back.

2. A musical instrument of the character described, provided on the inner side of its belly and back with inner and outer plates, a bass bar extending longitudinally of the belly and secured to the inner side thereof and extending over the said plates, another bar extending longitudinally along the inner side of the back and secured thereto and extending over the plates of the back, each of said bars being provided in registry with the plates with a recess, and a sound post abutting at one end against the plates of the belly in alinement with the edge of the inner plate and supported at its other end in the recess of the bar that is secured to the back.

3. A musical instrument of the character described, provided on the inner sides of its belly and back with plates located at about the waist of the instrument and offset

from the median line of the body thereof, longitudinally extending bars secured to the inner side of the belly and back and in contact therewith substantially throughout their length, said bars extending across the plates and provided in their free edges with recesses in registry with the said plates, and a sound post abutting at one end against the plates of the belly and supported at its other end within the recess of the bar that is secured to the back.

882,703. WRAPPER-SMOOTHING MECHANISM FOR CIGAR-MACHINES. WILLIAM S. LUCKETT, East Orange, N. J., and MATHIAS FOGDE, New York, N. Y., assignors to International Cigar Machinery Company, New York, N. Y., a Corporation of New Jersey. Filed June 14, 1906. Serial No. 321,618.



1. In a cigar smoothing mechanism, the combination with two members operating in planes at angles to each other, of means for effecting a relative rotary movement between the members and the cigar.

2. In a cigar smoothing mechanism, the combination with two members operating in planes at right angles to each other, of means for rotating the members around the cigar.

3. In a cigar smoothing mechanism, the combination with an ironing device, of two members operating in planes at an angle to each other, and means for effecting a relative rotary movement between said device and members and the cigar.

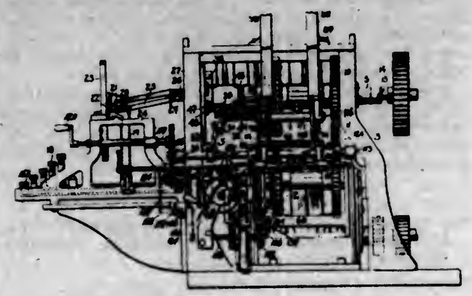
4. In a cigar smoothing mechanism, the combination with an ironing device, of two members operating in planes at an angle to each other, and means for rotating the ironing device and members around the cigar.

5. In a cigar smoothing mechanism, the combination with two members rotating in planes at right angles to each other, of means for effecting a relative rotary movement between the members and the cigar.

[Claims 6 to 18 not printed in the Gazette.]

882,704. MACHINE FOR PRODUCING PRINTING-SURFACES. ALEXANDER LYLE and CHARLES OWENS, Chattanooga, Tenn.; said Lyle assignor to Dwight P. Montague, Chattanooga, Tenn. Filed Feb. 20, 1907. Serial No. 358,376.

1. In combination a rotary die carrier, a rotary impression member arranged with its impression surface in a plane parallel with the plane of the face of the die when in position to operate a sliding support, whereby the impression members are brought together, guide means at each end of said support whereby the parallel relation of the impression member and the die is maintained, means for driving the rotary die carrier and the impression means, stop means, keys and connections leading therefrom for operating the stop means and means whereby the power is transferred from the rotating mechanism to the die closing means, when the rotary movement is arrested by the stop, substantially as described.



2. In combination in apparatus of the class described, a rotary die wheel, an impression member adapted to be elevated in respect thereto, two constantly driven shafts, a clutch between one of said shafts and the die wheel, a clutch between the other shaft, and the means for elevating the impression member, stop means for arresting the die wheel, and means for simultaneously throwing one clutch out of connection and the other clutch into connection, said stop means and clutch controlling means being operated from the keys, substantially as described.

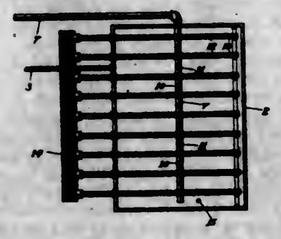
3. In combination in a machine of the class described, a die carrier and an impression member, means for rotating the die carrier, a clutch for controlling the said means, means for closing the die carrier and impression means together, a clutch for controlling the said closing means, key connections, stops arranged to be set thereby, and means to engage the said stops to arrest the movement of the die wheel and to positively operate both of the said clutches to control the clutches, substantially as described.

4. In combination in a machine of the class described, a rotary die wheel, an impression member coöperating therewith, means for closing the die and impression member for the impression, a clutch controlling said means, a clutch controlling the rotary movement of the die, keys, stops arranged to be set thereby, and a coacting stop device rotating with the die wheel and arranged to have movement on striking one of the stops, both of the said clutches being controlled from said coacting stop, by the movement thereof substantially as described.

5. In combination in a machine of the class described, a rotary die carrier, key connections, stops arranged to be set thereby, the stop member rotating with the die carrier, said stop member being adapted to yield, and a clutch controlled by the yielding movement of said stop member, and in turn controlling the rotary movement or stoppage of the die wheel, substantially as described.

[Claims 6 to 21 not printed in the Gazette.]

882,705. OIL-BURNER. OSCAR B. LYON, Modesto, Cal. Filed Aug. 12, 1907. Serial No. 388,082.



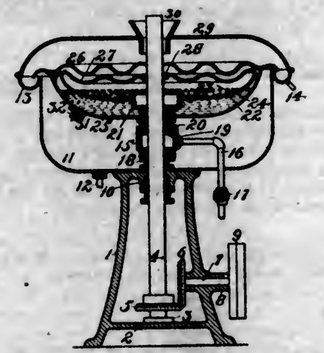
1. In a device of the character described a tank, water therein, an oil supply pipe leading into and along the bottom of said tank, upwardly extending tubes on said pipe and balls disposed in the tops of said tubes, as set forth.

2. In a device of the character described a tank, an oil supply pipe extending into and along the bottom thereof, tubes extending upward from said pipe, balls disposed on the tops of said tubes and means for retaining said balls in such position, as set forth.

3. In a device of the character described a tank, an oil supply pipe leading into and along the bottom thereof, tubes extending upward from said pipe, balls disposed in the tops thereof, auxiliary tubes screwed onto the tops of said first named tubes, and wires disposed across the upper ends of said auxiliary tubes, as set forth.

4. In a device of the character described a tank, water therein, air supply pipes disposed transversely across the top of said water, a main air tube disposed at a distance to one side of said tank and joined transversely to said air supply tubes, said main air tube being open at both ends to the atmosphere as described.

882,706. PASTEURIZING APPARATUS. EDWARD J. MILLER, Canton, Ohio. Filed Nov. 16, 1907. Serial No. 402,463.



1. A device of the class described comprising a closed rotatable tank the top of which constitutes a treating plate, means for receiving the liquid driven from said top by centrifugal force, means for causing portions of said treating plate to differ in temperature whereby the edge portions thereof are hotter than the central portions, and means for rotating the same.

2. A device of the class described comprising a closed rotatable tank the top of which constitutes a treating plate, means for receiving liquid driven from said top by centrifugal force, means for heating the outer portions of said treating plate hotter than the more central portions, and means for rotating the same.

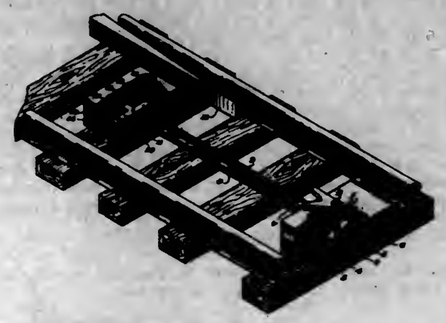
3. A device of the class described comprising a closed rotatable tank the top of which constitutes a treating plate, a diaphragm within said tank spaced apart from the top thereof, means for receiving the liquid driven from said top by centrifugal force, means for introducing a temperature controlling medium into the space between said top and diaphragm, and means for rotating said tank.

4. A device of the class described comprising a closed rotatable tank the top of which constitutes a treating plate, a perforated diaphragm within said tank spaced apart from said top, means for receiving a liquid driven from said top by centrifugal force, means for introducing a temperature controlling medium into the space between said diaphragm and top, and means for rotating said tank.

5. A device of the class described comprising a closed rotatable tank the top of which constitutes a treating plate, a perforated diaphragm in said tank spaced apart from said top and provided with a central opening, means for receiving a liquid driven from said top by centrifugal force, means for introducing a temperature controlling medium into the outer portions of said tank between said diaphragm and top, and means for rotating said tank.

[Claims 6 to 16 not printed in the Gazette.]

882,707. RAILROAD SWITCHING DEVICE. ROYAL R. MILLER, Pueblo, Colo. Filed Mar. 5, 1907. Serial No. 360,732.



1. In a railroad switching device, the combination with hermetically sealable switch boxes connected by a pipe, and wire connected levers, of a spear shaped dog 1 attached to a shaft pivotally connected in a switch box in such manner that said dog will serve to engage a single switch rod, or arm, subtended from a car truck, on both of its sides to be operative to move switch levers in either horizontal direction, substantially as described.

2. In a railroad switching device the combination with hermetically sealable switch boxes connected by a pipe, wire connected levers, and a spear shaped dog, all connected in such manner so as to be operative to move the switch levers from right to left and from left to right, by a single switching rod or arm, subtended from the truck frame of a car, of a pair of springs engaging opposite ends of one of the switch levers in such manner as to press the said lever to the extreme limit of its movements, substantially as set forth.

3. In a railroad switching device the combination with hermetically sealable switch boxes connected by a pipe, wire connected levers and a single spear shaped switching dog, of a switching rod, carried by a casting mounted on the truck frame of a car, a coil spring attached to said rod and casting in such manner as to return said rod, by the torsional action of said spring, to a central position over the railroad track after said rod passes along either side of said dog, substantially as described.

4. In a railroad switching device the combination with hermetically sealable switch boxes connected by a pipe, wire connected levers, a single spear shaped switching dog 1, a switching arm 13 and a spring controlled switching rod 22, of a lever having a guide channel means of accommodating the movements of rod 22 along and under the same, substantially as described.

882,708. SEPARABLE FASTENING. CHRISTOPHER C. MUND, Cincinnati, Ohio. Filed Aug. 19, 1907. Serial No. 389,119.



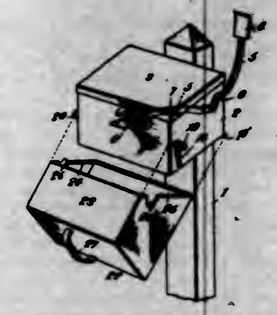
1. In an article of the character indicated a member having means for attaching its base to the garment, and upwardly and inwardly turned ribs; a member bent upon itself to constitute a shoe having means for attaching it to the garment and a tongue overhanging said shoe and connected thereto by a neck, said tongue being adapted to engage beneath the inturned ribs of said first named member, and means for frictionally locking the members against accidental disengagement.

2. In an article of the character indicated, a member comprising a base having a tubular projection upon one side to attach said base to a garment, and converging

ways projecting up from the opposite side of said base; and a second engaging member bent upon itself to constitute a shoe and a tongue united by a narrow neck adapted to pass between the converging ways of said first member, the base of said second member having a tubular projection to attach said member to a garment.

3. In an article of the character indicated, a member having means for attaching its base to a garment, said member being provided with converging ways; a member comprising a shoe having means for attaching to the garment, an overhanging tongue having converging edges to engage with the converging ways of said first named member and a narrow, free, terminal neck connecting said tongue and shoe, and being of a width to pass between said ways and to guide the tongue into engagement therewith.

882,709. MAIL-BOX. WILLIS W. PALMER, Jericho, Vt. Filed June 9, 1906. Serial No. 321,035.



1. The combination with a mail box having a hinged bottom, studs carried by the bottom, and a receptacle adapted to engage said studs and to work in conjunction therewith for opening the bottom and receiving the mail from the box.

2. The combination with a mail box having a hinged bottom, studs carried by the bottom, and a receptacle having notches to receive the studs whereby the bottom is opened for discharging the contents of the box into the receptacle.

3. The combination with a mail box having a hinged bottom, studs carried by the bottom and extending through slots in the box, and a receptacle having notches to receive said studs whereby the bottom is moved downwardly with the receptacle for discharging the contents of the box therein.

4. The combination with a mail box having a hinged normally spring-closed bottom, studs carried thereby, and a receptacle having notches to receive the studs, whereby the bottom is opened for discharging the contents of the box into the receptacle.

5. The combination with a mail box having a hinged normally spring-closed bottom, inclined fins or ribs carried by the bottom for guiding the mail towards the forward end of the box, studs carried by the bottom and projecting through segmental slots in the box, and a receptacle having notches to receive the studs, whereby the bottom and receptacle are moved downwardly together for discharging the contents of the box into the receptacle.

[Claims 6 to 10 not printed in the Gazette.]

882,710. BORDER FOR PICTURES. GEORGE F. E. PEARSALL, New York, N. Y. Filed Apr. 3, 1907. Serial No. 366,069.

1. The combination of a picture and a border therefor, the said border having the same tones and notan as said picture and applied around the latter with its light portion and dark portion reversed relatively thereto.

2. The combination of a picture, a border therefor, and a mat, the said border having the same tones and notan as said picture and applied around the latter with its light



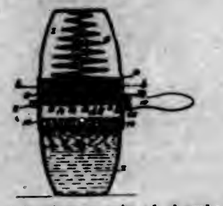
portion and dark portion reversed relatively thereto, said picture and border being mounted on said mat.

882,711. DENTAL INSTRUMENT. WILLIAM B. PEARSALL, Hampstead, London, England. Filed Aug. 6, 1906. Serial No. 329,457.



A dental instrument of the character described consisting of a stem or handle having a bent end *c*, the latter being reduced in diameter and having a shoulder *d*, a head rotatably mounted on the end *c* and abutting against the said shoulder, and an expanded head on the end *c* to hold the rotatable head in position on said end.

882,712. COFFEE-POT. HARVEY A. PIKE, New York, N. Y. Filed Mar. 1, 1907. Serial No. 360,099.



1. A coffee pot having a pair of chambers or compartments adapted to contain liquid and separated by a body of pulverized or ground coffee, and means for quickly transferring the liquid within the coffee pot bodily from one chamber or compartment to the other about the body of coffee.

2. A coffee pot having a pair of separate chambers or compartments adapted to contain liquid, a coffee container disposed between said chambers and cutting off free communication from one to the other, and means for transferring liquid bodily within the coffee pot from one chamber to the other about such container.

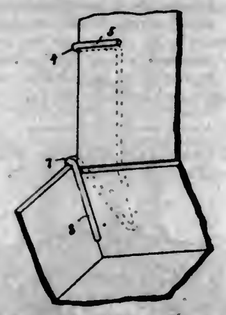
3. The combination of a pair of receptacles detachably connected together, and a coffee container carried by said receptacles and mounted so as to be capable of movement with respect to the same when they are in assembled condition.

4. The combination of a pair of liquid holding receptacles detachably connected together, one of said receptacles having a pouring spout, and a coffee container carried by said receptacles and mounted so as to be capable of movement with respect to the same when they are in assembled condition.

5. The combination of a pair of receptacles detachably connected together, a coffee container carried by the same, and means carried by said receptacles for moving said container relatively thereto when the receptacles are in their assembled condition.

[Claims 6 to 24 not printed in the Gazette.]

882,713. BOX-LID SUPPORT. NICHOLAS H. PRILEY, Duluth, Minn. Filed May 3, 1907. Serial No. 371,630.



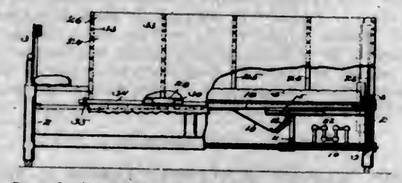
1. A box lid support consisting of a wire having a single lateral loop at its upper end for engagement with the lid of the box, an angularly-disposed loop at the lower end for engagement with the body of the box, and an offset portion for resting upon the edge of the end of the box.

2. A box lid support consisting of a vertical wire having a single laterally-disposed loop at its upper end for engaging the lid of the box, and at its lower end an upwardly-extending oblique portion having a horizontal loop terminating in a downwardly-extending vertical portion.

3. A box lid support, comprising a vertical wire having a single laterally-disposed loop at its upper end for engaging the lid of the box, and its lower end bent upwardly at an acute angle and having a horizontal small loop formed therein, and the wire terminating in a downwardly-extending vertical portion.

4. A box lid support, comprising a vertical wire having a single laterally-disposed loop at its upper end for engaging the lid of the box, and its lower end bent upwardly at an acute angle and having a horizontal small loop formed therein, and its outer end in a vertical line with the outer end of the laterally-disposed loop and the wire terminating in a downwardly-extending vertical portion.

882,714. DEVICE FOR WARMING BEDS. WILLIS H. PROCTOR, Corning, N. Y. Filed May 11, 1907. Serial No. 373,124.



1. In a device of the character described, the combination of a bed, a housing located under the bed, a heat retaining box positioned within the housing, heating means within the said box, a slidably mounted cover for the box, and means for sliding the cover to regulate the escape of the heat from the heat retaining box into the housing.

2. In a device of the character described, the combination of a bed, a housing located under the bed, a heat retaining box located within the housing, heating means within the said box, a cover slidably mounted upon the box, a spring normally holding the cover in a closed position, and means for sliding the cover to regulate the escape of heat from the heat retaining box into the housing.

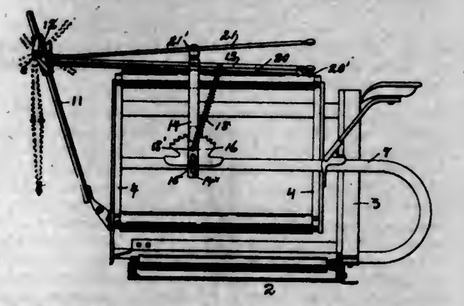
3. In a device of the character described, the combination of a bed, a housing located adjacent the bed, a heat retaining box within the housing, heating means within the box, and a bodily removable cover for regulating the escape of the heat from the heat retaining box into the housing.

4. In a bed, the combination with a bedstead, of a housing mounted thereon, rails secured to the top of said housing, a mattress mounted so as to impinge against said rails, said rails being formed with apertures therein, and heat containing means positioned within said housing.

5. In a bed, the combination with a bedstead, of a housing mounted thereon, heating means positioned within said housing, a mattress mounted above said housing, rails for supporting said mattress provided with apertures for permitting heat to escape from said housing, and a hood positioned above said mattress for retaining said heat, said hood being movable so as to inclose any desired portion of the mattress.

[Claims 6 to 15 not printed in the Gazette.]

882,715. HARVESTER-REEL AND ACTUATING MECHANISM THEREFOR. GEORGE V. RATZ, Pekin, Ind. Filed May 28, 1907. Serial No. 376,115.



1. In a harvester, a reel standard pivoted at its lower end and movable backward or forward on said pivot, a reel shaft support shiftable up and down on the reel standard, a rotatable reel shaft carried on said shaft support, an expansible reel carried thereon, a shaft adjusting lever connected to the reel shaft support and pivoted for movement in a vertical plane, a support for the fulcrum of said lever independent of the reel standard and shiftable forward and back, and a reel expanding lever pivoted to the support of the shaft-adjusting lever for movement in planes at right angles to the movement of the shaft-adjusting lever.

2. In a harvester, a reel standard movable backward or forward, a reel shaft support shiftable up and down on the reel standard, a rotatable reel shaft carried on said shaft support, an expansible reel carried thereon, a shaft adjusting lever connected to the reel shaft support and pivoted for movement in a vertical plane, a support for the fulcrum of said lever shiftable forward and back, and a reel expanding lever having a universal joint connection with the support of the shaft-adjusting lever, whereby it may have movement in a vertical or horizontal plane.

3. In a harvester, a reel standard pivoted at its lower end, a reel shaft support surrounding said standard and shiftable up and down thereon, a rotatable reel shaft passing through bearings on said shaft support, an expansible reel carried thereon, a shaft adjusting lever pivoted at one end to the reel shaft support for movement in a vertical plane, a support for the fulcrum of said lever shiftable forward and back, means for locking the lever support to any position to which it may be adjusted, means for locking the shaft support to any position on the reel standard to which it may be adjusted, and a reel expanding lever having a universal joint connection with the support of the shaft adjusting lever whereby it may have movement in a vertical or horizontal plane.

4. In a harvester, a reel standard pivoted at its lower end, a reel shaft support surrounding said standard, a rotatable reel shaft passing through bearings on said shaft support, an expansible reel carried thereon, a sector rack rigidly mounted on the frame of the machine, a standard having a vertically shiftable pivotal engagement with said sector, a fixed detent tooth on the standard adapted to engage with the teeth of the sector rack when the standard is in its lowermost position, and a reel adjusting lever

pivoted at the upper end of the standard and connected at one end to the reel shaft support.

5. In a harvester, a reel standard pivoted at its lower end, a reel shaft support surrounding said standard, a rotatable reel shaft passing through bearings on said shaft support, an expansible reel carried thereon, a sector rack rigidly mounted on the frame of the machine, a standard having a vertically shiftable pivotal engagement with the said sector, a fixed detent tooth on the standard adapted to engage with the tooth of the sector rack when the standard is in its lowermost position, a reel adjusting lever pivoted at the upper end of the standard and pivoted at one end to the reel shaft support, and hand operated means attached to the said lever whereby the reel support may be held adjusted in any desired position upon the reel standard.

[Claims 6 to 16 not printed in the Gazette.]

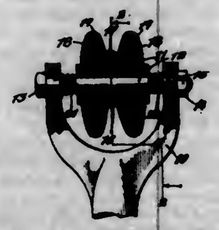
882,716. IGNITING DEVICE FOR GAS-ENGINES. JOHN V. RICE, Jr., Bordentown, N. J. Filed June 5, 1906. Serial No. 320,231.



1. In a gas engine iguiter, a yielding oscillating electrode consisting essentially of a contact finger having a lug-provided end, stationary hooked jaws engaging the lugs of said end, a sliding spring-provided spindle, and a pin having pointed ends and loosely situated between the end of the spindle and the contact finger, the pointed ends of said pin engaging angular indentations in the end of the spindle and in the enlarged head of the contact finger.

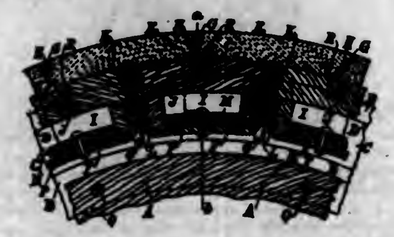
2. In a gas engine igniter, an electrode consisting essentially of an oscillating finger having an arc-shaped head provided with rounded projections, hook-shaped stationary jaws loosely engaged by said projections, an endwise movable spindle suitably supported so as to have a certain play, a loose pin having pointed ends engaging an angular indentation in the end of the spindle and also an angular indentation in the enlarged head of the electrode, together with elastic means bearing on said spindle, substantially as described.

882,717. COMBINED TROLLEY-WHEEL AND SLEET-CUTTER. EDMUND M. SCHOLLENBERGER, Chicago, Ill., assignor of one-half to August C. Berwanger, Chicago, Ill. Filed Oct. 30, 1907. Serial No. 399,903.



A combined trolley wheel and sleet cutter comprising an axle, a central member longitudinally adjustable on the axle, end members of a diameter larger than the diameter of the central member and laterally adjustable with relation thereto and longitudinally adjustable on the axle, said end members being provided with a recess in the adjacent faces thereof to receive the respective extremities of the central member, and yielding means for holding the end members in position with respect to the central member and to cause the members to grip the conductor wire, said members being adapted to be adjusted in either direction substantially the entire length of the axle.

882,718. ROAD-VEHICLE WHEEL. JOHN SLEE, Newton-le-Willows, England. Filed Oct. 23, 1906. Serial No. 340,164.



1. The combination of a wheel, a tire extending around the rim of the wheel and comprising a series of cradles abutting against each other and designed to yield circumferentially, and a sectional tread carried by the cradles, the abutting ends of the tread sections and the cradles alternating with each other.

2. The combination of a wheel, flanges projecting outwardly from the periphery of the wheel, a series of cradles arranged between the flanges, a tread carried by the cradles, and saddle pieces carried by the cradles and cooperating with the before mentioned flanges to limit the movement of the cradles.

3. The combination of a wheel, flanges projecting outwardly from the rim of the wheel and formed with annular grooves, a series of cradles disposed between the flanges and designed to yield circumferentially, and a tread carried by the cradles and provided with side flanges fitting within the before mentioned grooves in the flanges projecting from the rim.

4. The combination of a wheel, flanges projecting outwardly from the rim of the wheel, said flanges being formed with annular grooves, a series of cradles disposed between the flanges and designed to yield circumferentially, saddles carried by the craddles and engaging the grooves in the before mentioned flanges, and a tread portion carried by the saddles, the said tread portion being formed with side flanges fitting within the annular grooves in the flanges projecting from the rim of the wheel.

882,719. CARCASS-SCRUBBER. CARLTON L. SMITH, Chicago, Ill., assignor to Armour & Company, Chicago, Ill., a Corporation of Illinois. Filed Oct. 8, 1906. Serial No. 338,011.

1. In a carcass scrubber, the combination of a plurality of brushing devices adapted to clean different portions of the carcass, each of said brushing devices including a sprocket chain or belt adapted to travel and one or more brushes secured thereto, the field of operation of each of said brushing devices being at substantially the same angle as the general angle of that part of the carcass' surface operated upon thereby, and means to convey carcasses or parts thereof in a definite position through the fields of operation of said brushing devices, substantially as described.

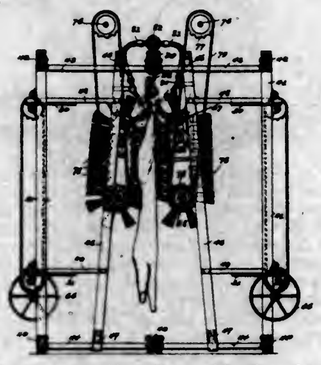
2. In a carcass scrubber, the combination of a plurality of brushing devices adapted to clean different portions of the carcass, each of said brushing devices including a sprocket chain or belt adapted to travel and one or more brushes secured thereto, the field of operation of each of said brushing devices being fixed and at substantially the same angle as the general angle of that part of the carcass' surface operated upon thereby, and means to convey carcasses or parts thereof in a definite position through the fields of operation of said brushing devices, substantially as described.

3. In a carcass scrubber, the combination of a plurality of brushing devices adapted to clean different portions of the carcass, each of said brushing devices including a sprocket chain or belt adapted to travel and one or more brushes secured thereto, the field of operation of each of said brushing devices being at substantially the same angle as the general angle of that part of the carcass' surface operated upon thereby, and means to convey carcasses or parts thereof in a definite position through the fields of operation of said brushing devices transverseely to the paths of travel of said brushes, substantially as described.

4. In a carcass scrubber, the combination of a plurality of brushing devices adapted to clean different portions of the carcass by brushing downwardly, the field of operation of each of said devices being fixed and at substantially the same angle as the general angle of that part of the carcass' surface operated upon thereby, and means to convey carcasses in a definite position or parts of carcasses through the fields of operation of said brushing devices, said carcasses or parts thereof depending from said conveying means, substantially as described.

5. In a carcass scrubber, the combination of a pair of sprocket wheels adapted to rotate, a sprocket chain coacting with said sprocket wheels, one or more brushes fastened to said chain, means to revolve one of said sprocket wheels to actuate said chain and brush or brushes, and means to convey the carcass to be scrubbed through the field of operation of said brush or brushes transversely to the plane of said sprocket chain, substantially as described.

[Claims 6 to 18 not printed in the Gazette.]

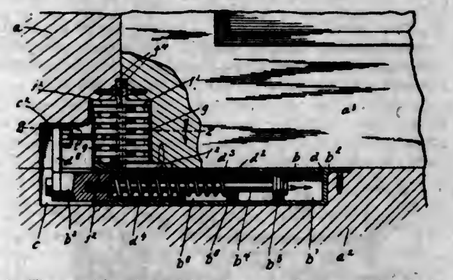


882,720. METHOD OF PRODUCING CHILLED CASTINGS. MITCHELL J. SOMERS, South Bend, Ind., assignor to South Bend Foundry Co., South Bend, Ind., a Corporation of Indiana. Filed Oct. 12, 1907. Serial No. 397,196.



The method of producing castings having a chilled rim consisting; first, in tamping in a flask a pattern of a portion of the article to be cast, together with a pattern of a chilling element having connected thereto the remainder of the article to be cast; second, removing the pattern of the chilling element and its said attached pattern portion; third, inserting a chilling element into the cavity formed by the removal of the chilling element pattern; fourth, removing the first mentioned pattern portion; fifth, placing a cope element having suitable sprues upon the flask; sixth, inserting the molten metal.

882,721. DOOR-CHECK. JOSEPH SOSS, New York, N. Y. Filed Apr. 8, 1907. Serial No. 367,074.



1. The combination with a door check, comprising in its construction a cylinder placed in the door sill and extending beneath one side of the door frame, a plunger movable in the end of said cylinder beneath said side of the door frame, the opposite end portion being divided by a partition into different chambers having air inlets and outlet ports, a piston rod connected with said plunger and passing through said partition and provided with a piston movable in the chamber opposite said plunger, and a spring placed between said plunger and said partition; of a hinge composed of separate parts secured in said side of the door frame and in the door, and means for connecting said hinge with said plunger so as to operate the latter.

2. A door check comprising in its construction a cylinder adapted to be seated in a door sill and to have one end thereof extend beneath one side of the door frame, a transverse partition in the opposite end of said cylinder to divide the same into separate compartments each provided with an air inlet and outlet port, a plunger movable in one compartment of the cylinder, a rod connected with said plunger and passing through said partition, a piston secured to said rod and movable in the other compartment of said cylinder, and a spring mounted on said rod between said plunger and partition.

3. In combination with a door check, comprising in its construction a cylinder adapted to be seated in a door sill and to have one end thereof extended beneath one side of the door frame, a transverse partition in the opposite end of said cylinder to divide the same into separate compartments each provided with an air inlet and outlet port, a plunger movable in one compartment of the cylinder, a rod connected with said plunger and passing through said partition, a piston secured to said rod and movable in the other compartment of said cylinder, and a spring mounted on said rod between said plunger and partition; a hinge composed of similar holders adapted to be respectively secured in the door frame and door over the end of the cylinder in which the plunger is mounted, one or more sets of curved swinging arms pivotally and slidably secured in said holders, and means for operatively connecting said arms with said plunger whereby the latter may be operated in said cylinder.

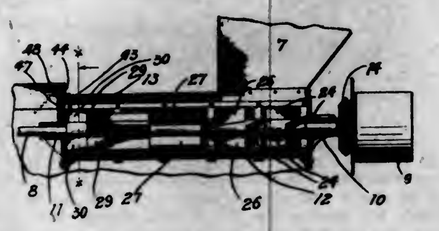
882,722. MELON-CARRIER. WILLIAM A. STARK, Tacoma, Wash. Filed Dec. 16, 1907. Serial No. 406,778.



A melon carrier comprising a handle, a pair of arms extending therefrom, a kerfed clamping-member, a trans-

verse pin in the kerf, cords connected at one end to the arms, respectively, and passing through the kerf between its inner end and the aforesaid pin, one of said cords being connected to the clamping-member, and the other cord being of greater length than said cord and extending beyond the clamping-member.

882,723. CORN-SHELLER. JOHN V. STRADLEY, Minneapolis, Minn., assignor to The Minneapolis Threshing Machine Co., Minneapolis, Minn., a Corporation of Minnesota. Filed July 13, 1906. Serial No. 326,042.



1 In a corn sheller, the combination, with a hopper, of a shaft provided beneath the same, a shelling cylinder cast on said shaft and having a casing provided with a cob-discharge opening at one end, spiral cob breaking and feeding beaters mounted on said cylinder at its receiving end, spirally arranged feeding wings whereto the ears are delivered from said beaters, a series of straight shelling wings extending lengthwise of said cylinder in position to receive the ears from said spirally arranged feeding wings, a second series of straight wings alternating in position with said first series, a series of tapering lugs arranged between the straight wings of said second series to throw the cobs outwardly toward the wall of the cylinder casing, and a series of cob discharging beaters located at the discharge end of said cylinder near said cob discharge opening, substantially as described.

2. In a corn sheller, the combination, with a casing and a hopper provided at one end thereof, said casing having a discharge opening at the opposite end, of a shaft concentric with said casing, a shelling cylinder formed integrally on said shaft, a series of lugs mounted on the periphery of said cylinder beneath the receiving opening in said casing, said lugs having flat surfaces and arranged diagonally on said cylinder and provided with inclined outer ends, and spirally arranged wings adjacent to said lugs on said cylinder, said wings gradually decreasing in depth from their receiving to their discharge ends, substantially as described.

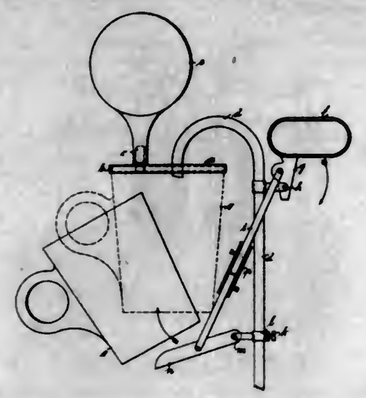
882,724. INSECTICIDE. HENRY C. TAYLOR, Gilmer, Tex. Filed Oct. 23, 1907. Serial No. 398,781.

An insecticide consisting of a mixture of oil of sassafras, sulfate of magnesia, chalk and water.

882,725. DEVICE FOR RAISING LIQUIDS. GEORG WALDMANN, Geestemünde, Germany. Filed Oct. 4, 1906. Serial No. 337,430.

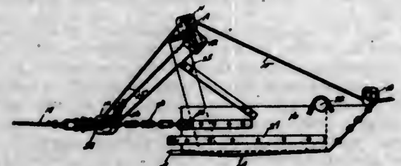
1. In a device for raising liquids, the combination of a suction pipe, a plate secured to the same, a nipple on said plate, a suction device on said nipple, and means for supporting a vessel with its rim under said plate, said means being mounted on said suction pipe.

2. In a device for raising liquids, the combination of a suction pipe, a plate attached to the same, a nipple on said plate, a rubber suction ball on said nipple, an arm *h* on said pipe, a handle lever *g* pivoted on said arm, a two-part link *i* pivoted on said lever *g*, an adjustable arm *m* on said



suction pipe, and a lever *n* on said arm, said lever being pivotally connected to the other end of the link *i*.

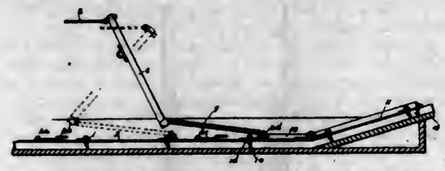
882,726. EXCAVATING APPARATUS. WILLIAM C. WEEKS, Spokane, Wash. Filed May 22, 1907. Serial No. 375,167.



1. In an apparatus for excavating, dredging, and transporting earth and other materials, the combination of a scoop having closed back, bottom and sides, and open front and top, with a stationary bail near the front end thereof, two pulleys made stationary at the top of the bail and one at the rear of the scoop and made stationary therewith, a chain linked at the front end of the scoop and to the sides thereof with a pulley at the center, to which pulley is linked a cable adapted to draw the scoop forward and another cable passing from thence over one of the pulleys at the top of the bail, thence back over the pulley at the center of the chain, thence over the other pulley at the top of the bail, thence under the pulley made stationary to the back end of the scoop, thence over a pulley to the rear of the scoop and adapted to draw the scoop backward, substantially as set forth.

2. In an apparatus for excavating, dredging and transporting earth and other materials, the combination of a scoop having closed back, bottom and sides and open front and top, with strengthening plates secured to the sides and bottom thereof and extending a distance forward beyond the scoop, the ones on the sides adapted to engage the earth when the scoop is tilted forward in loading and to prevent the scoop from tipping sidewise, and the ones on the bottom inclined upward from the horizontal as they extend forward for a distance from the front and beveled at the front ends thereof and adapted for cutting engagement with the earth when the scoop is tilted forward and to release the scoop from cutting engagement with the earth when the same is in a horizontal position, with two cables operating over pulleys attached to the scoop, one of which cables is adapted to draw the scoop forward and the other to draw the scoop backward, substantially as set forth.

882,727. RAKING-MACHINE FOR GRAINERS. GEORGE B. WILLCOX, Bay City, Mich. Filed Mar. 2, 1903. Serial No. 145,785.



1. In a raker for grainers the combination of an oscillating frame near each end of the grainer; tension cables connecting the upper ends of said frames; forwardly extending thrust bars secured to the lower end of one frame, and rearwardly extending thrust bars secured to the lower end of the other frame; a tension strap at each side of the grainer connecting the extremities of a forward and a rearward thrust bar; scraper blades transverse the grainer and pivotally supported by said straps; suitable guides supporting said side straps; and means for imparting back and forth movement to the scrapers.

2. In a salt raker operated by back and forth movement and having longitudinal tension members and scraping blades carried thereby; a pivotally supported oscillating frame near each end of the raker adapted to swing back and forth through a small arc; thrust bars connecting the lower ends of said frames to the tension members, and cables connecting the upper ends of the frames whereby tension is maintained in said tension members.

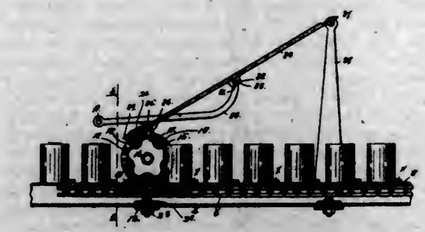
3. In a salt raker operated by back and forth movement and having longitudinal tension members and scraping blades carried thereby; a pivotally supported oscillating frame near each end of the raker adapted to swing back and forth through a small arc; thrust bars connecting the lower ends of said frames to the tension members, and means connecting the upper ends of the frames, whereby tension is maintained in said tension members.

4. In a salt raker operating by back and forth movement and having longitudinal tension members and scraping blades carried thereby; a pivotally supported oscillating frame near each end of the raker adapted to swing back and forth through a small arc; means connecting the lower ends of said frames to the raker and means connecting the upper ends of the frames whereby tension is maintained in the tension members.

5. In a raking machine having side straps and scrapers carried thereby, means for maintaining tension and yielding downward pressure in the side straps of the machine, comprising a pair of forwardly and downwardly extending bars near the front end of the raker and a pair of rearwardly and downwardly extending bars near the rear end of the raker together with means for exerting longitudinal thrust in said bars.

[Claims 6 to 18 not printed in the Gazette.]

882,728. CAN-CAP-PLACING APPARATUS. JOHN T. WILMORE, Denver, Colo. Filed Mar. 20, 1906. Serial No. 306,978.



1. In can-cap-placing apparatus, the combination with a conveyer for the cans to be capped, of a can cap chute movably mounted above the cans and in the plane of the conveyer, the lower extremity of the chute being provided with springs arranged on opposite sides, and a top spring projecting beyond the discharge extremity thereof and acting on the caps from above.

2. In a can cap placing apparatus, the combination with a conveyer for the cans to be capped, of a can-cap-carrying chute movably mounted above the cans and inclined to the plane of the travel of the conveyer, and suitable means acting on the chute whereby the latter is alternately raised and lowered.

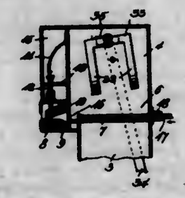
3. In can-cap-placing apparatus, the combination with a conveyer for the cans to be capped, a can-cap-carrying chute mounted above the cans and inclined to the plane of the conveyer, the lower extremity of the chute being open for the escape of the caps and provided with tension springs arranged on opposite sides, and a top spring acting on the caps from above, all of the said springs protruding from or beyond the lower extremity of the body of the chute.

4. In can-cap-placing apparatus, the combination with a conveyer for carrying the cans to be capped, of an inclined can cap chute mounted above the conveyer and in the plane thereof, and suitable means acting on the chute whereby the latter is alternately raised and lowered.

5. In can-cap-placing apparatus, the combination of a conveyer for carrying the caps, the said conveyer being provided with a chain, a sprocket wheel propelled by the chain, the sprocket wheel being provided with a gear, another gear occupying a position at right angles to the sprocket gear and carrying a cam composed of alternating recesses and projections, an inclined can-cap-carrying chute arranged in the plane of the conveyer and the cans mounted thereon, and an arm movably connected with a stationary support at one extremity while its other extremity is pivotally connected with the chute, the said arm having a projection adapted to engage said cam whereby as the cam is rotated, the chute is alternately raised and lowered.

[Claim 6 not printed in the Gazette.]

882,729. MATCH HOLDER, LIGHTER, AND CIGAR-CUTTER. JOHN ZANDER, Hoboken, N. J. Filed Apr. 11, 1907. Serial No. 367,606.



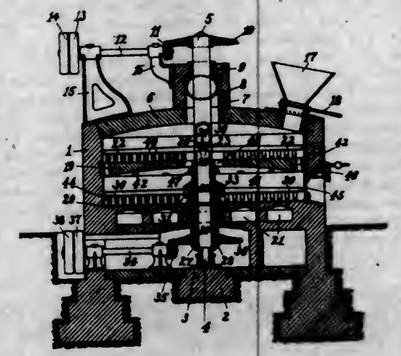
1. A device of the character described comprising a base, a match hopper arranged on said base, a plunger adapted to eject a match from said hopper, a rod depending from the rear end of said plunger, a guide to slidably receive the lower end of said rod, a guiding mechanism whereby the match ejected from said hopper is lighted, pivoted means to hold the matches against the bottom of the hopper, a lever secured to said pivoted means, a pin laterally projecting from said depending rod, a depending lever adapted to be swung by contact with said pin when said rod and plunger are moved, and a link connecting said depending lever and the lever secured to said pivoted means whereby said pivoted means is swung when said pin moves said depending lever.

2. A device of the character described comprising a base, a match hopper arranged on said base, a plunger adapted to eject a match from said hopper, a rod rigidly connected to and depending from and supporting the rear end of said plunger, a guide to slidably receive the lower end of said rod, a guiding mechanism whereby the match ejected from said hopper is lighted, pivoted means to hold the matches against the bottom of the hopper, a lever secured to said pivoted means, a pin laterally projecting

from said depending rod, a depending lever adapted to be swung by contact with said pin when said rod and plunger are moved, and a link connecting said depending lever and the lever secured to said pivoted means whereby said pivoted means is swung when said pin moves said depending lever.

3. A device of the character described comprising a base, a match hopper arranged on said base, a plunger adapted to eject a match from said hopper, a rod rigidly connected to and depending from and supporting the rear end of said plunger, a guide to slidably receive the lower end of said rod, a guiding mechanism whereby the match ejected from said hopper is lighted, and means to hold the matches against the bottom of the hopper in position to be acted upon by the plunger, and operating means therefor, consisting of a lever fastened thereto, a second lever pivoted to said base, a link connecting the free ends of said levers and a laterally projecting means on said depending rod adapted to contact said second lever.

882,730. MECHANICAL ROASTING-FURNACE. ROMAN VON ZELEWSKI, Engis, Belgium. Filed Sept. 11, 1907. Serial No. 392,363.



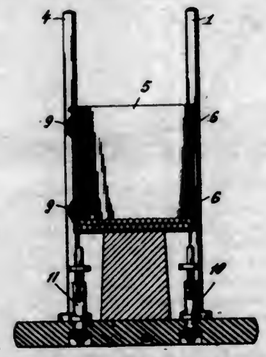
1. A mechanical roasting-furnace provided with a plurality of sets of rabbles, means for operating and for setting at rest one set of rabbles, and means for operating and for setting at rest another set of rabbles independently of the first-named set of rabbles.

2. A mechanical roasting-furnace, provided with a plurality of sets of rabbles arranged to work in different roasting-surfaces, a rotatable tubular shaft for sustaining one set of rabbles, means for rotating and for stopping said tubular shaft, a rotatable sleeve for sustaining another set of rabbles, and means for rotating and for stopping said sleeve independently of said tubular shaft sustaining said first-named set of rabbles.

3. A mechanical roasting-furnace provided with a plurality of sets of rabbles arranged in different planes and working on different roasting-surfaces of said furnace, a rotatable tubular shaft detachably supporting one set of said rabbles, means for rotating said tubular shaft in opposite directions and for setting it at rest, a sleeve for detachably supporting another set of said rabbles, means for rotating said sleeve in opposite directions and for setting it at rest independently of said tubular shaft supporting the first-named set of rabbles.

4. In combination, a multi-chambered mechanical roasting-furnace, a central tubular shaft, rabbles working in one of said furnace-chambers and detachably connected with said tubular shaft, means for reversibly driving and for setting said tubular shaft at rest, a sleeve revolubly mounted on said tubular shaft, rabbles working in another furnace-chamber and detachably carried by said sleeve and means for reversibly driving and for setting said sleeve at rest independently of said tubular shaft carrying the first-named set of rabbles.

882,731. METHOD OF AND APPARATUS FOR TESTING JELLY. JEROME ALEXANDER, New York, N. Y. Filed May 5, 1906. Serial No. 315,410.



1. The method of testing jelly, which consists in subjecting a block of jelly to compression in one direction while it is free to expand in another direction, and increasing the compression until the dimension of the block in the direction of compression is decreased to a predetermined degree.

2. In a jelly-testing apparatus the combination of a weighted carrier having a bottom forming a conductor of electricity, vertical guides forming bearings therefor, vertically adjustable uprights beneath said carrier, the said uprights forming the terminals of an electric circuit containing an indicating device, the said electric circuit being adapted to be closed by the contact of said weight-holding cup with said uprights.

3. In a jelly-testing device, the combination of a vertically-traveling carrier adapted to be weighted, provided with bearings engaging the standards laterally supporting said carrier, said standards mounted upon a common base, provided with two adjustable screws adapted to limit the descent of said carrier and to close an electric circuit, said circuit including therein a signaling device adapted to be operated electrically by the closing of said circuit.

882,732. RIB FOR COTTON-GINS. THOMAS A. ANDREWS, Grantville, Ga. Filed Feb. 9, 1907. Serial No. 356,618.



1. A rib for a cotton gin having a seed receiving trench extending longitudinally straight through the center thereof and located adjacent the point of engagement of the saws with the cotton roll, the trench means being formed within the body of the rib.

2. A rib for a cotton gin having a trench extending longitudinally of the upper portion thereof and provided with a longitudinal septum to form seed receiving spaces.

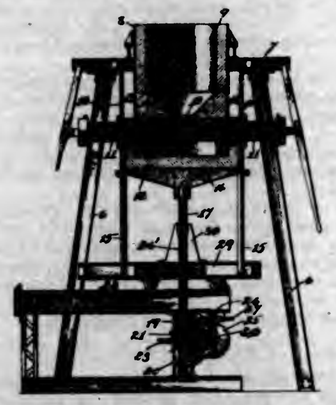
3. A rib for a cotton gin having a straight seed receiving trench formed in the upper portion of the body thereof and extending longitudinally through the center of the side which is located adjacent the cotton roll, the deepest portion of seed receiving trench being near the lower terminal thereof and adapted to receive seed which passes down over the remaining part of the same side in which seed receiving trench is formed.

4. The combination with a cotton gin, of a plurality of ribs having trenches in the faces thereof nearest the cotton roll, the trenches being centrally divided by longitudinal septums terminating above the lower ends of the said trenches.

5. A rib for a cotton gin having a trench or cavity in the side thereof adapted to be located adjacent to the cotton roll and near the upper extremity, the said trench or cavity having a septum extending centrally therethrough and converging toward its lower end, the lower end of the septum terminating above the lower end of the trench or cavity.

[Claims 6 and 7 not printed in the Gazette.]

882,733. ELECTRIC FURNACE. EDWIN APPLEBY, Chicago, Ill. Filed Mar. 26, 1906. Serial No. 308,040.



1. In an electric furnace, the combination of a frame, a vertically disposed receptacle mounted in said frame, a pair of electrodes extending into said receptacle, means for withdrawing said receptacle downwardly in said frame and away from said electrodes, horizontally disposed trunnions on said receptacle, and bearings mounted in said frame and adapted to engage said trunnions for supporting said receptacle when the same has been lowered to a certain position below said electrodes, said receptacle being adapted to be tilted on said trunnions for discharging its contents.

2. In an electric furnace, the combination of a frame, a vertically disposed receptacle mounted in said frame, a pair of electrodes extending into the lower part of said receptacle, a strut supporting said receptacle and adapted to gradually lower the same away from said electrodes, a pair of horizontally disposed trunnions on said receptacle, a pair of bearings mounted in said frame and adapted to engage said trunnions for supporting the receptacle when the same had been lowered to a certain position, said strut being adapted to be removed from engagement with said receptacle to permit the receptacle to be tilted on its trunnions for discharging its contents.

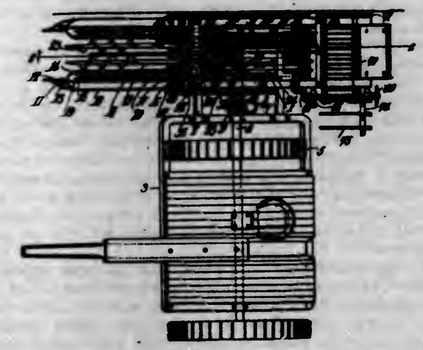
3. In an electric furnace, the combination of a frame, a vertically disposed receptacle mounted in said frame, a pair of electrodes extending into the lower part of said receptacle, a strut supporting said receptacle and adapted to gradually lower the same away from said [illegible] pair of horizontally disposed trunnions on [illegible] a pair of Y-bearings open upward and locate[illegible] of said trunnions and adapted to engage sai[illegible] for supporting said receptacle when the same[illegible] lowered, and said strut being adapted to contin[illegible] scend after said trunnions have been engaged by s[illegible] ings, to permit said receptacle to be tilted on its [illegible] for discharging its contents.

4. In an electric furnace, the combination of a f[illegible] a vertically disposed receptacle mounted in said fra[illegible] a pair of electrodes mounted in said frame and exte[illegible] ing into the lower part of said receptacle, said rece[illegible] tacle having a bottom movable downwardly away from said electrodes, the walls of said receptacle being of suitable construction to permit a considerable range of vertical movement of said bottom without breaking the continuity of said walls, tracks for supporting said receptacle, said receptacle being adapted to be moved toward one side on said tracks when said bottom has reached a certain lowered position, and means for discharging the contents of said receptacle.

5. In an electric furnace, the combination of a frame, a vertically disposed receptacle mounted in said frame, a pair of electrodes extending into said receptacle, a strut supporting said receptacle and adapted to gradually lower the same away from said electrodes, a car adapted to support said receptacle when it is lowered clear of said electrodes, tracks for supporting said car, and mechanism below said tracks for raising and lowering said strut, said strut being adapted through the continued operation of said mechanism to be withdrawn from engagement with said receptacle after the receptacle has been lowered upon the car, all being arranged to permit the receptacle to be moved along the tracks away from said mechanism for discharging its contents.

[Claims 6 to 11 not printed in the Gazette.]

882,734. CORN HARVESTER AND HUSKER. IRVING J. BALL, Brock, Nebr. Filed May 15, 1907. Serial No. 373,769.



1. A corn gatherer comprising rolls and rotating ear-snapping mechanism located transversely above the rolls.

2. A corn gatherer comprising rolls, bars located at the sides thereof and lifters attached to the ends of the bars, said lifters having forwardly extending portions and upwardly, outwardly and rearwardly extending portions.

3. A corn gatherer comprising rolls, a knife located above the rolls and having its cutting edge inclined toward the rolls.

4. A corn gatherer comprising rolls, ear snapping mechanism coöperating with the same, a knife located above the rolls and having its edge portion disposed away from the rolls.

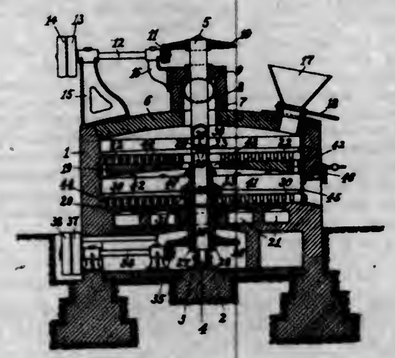
5. A corn gatherer comprising rolls, conveyers operating at the sides of the rolls, a shaft for actuating the conveyers and ear snapping elements carried by said shaft.

[Claims 6 to 13 not printed in the Gazette.]

from said depending rod, a depending lever adapted to be swung by contact with said pin when said rod and plunger are moved, and a link connecting said depending lever and the lever secured to said pivoted means whereby said pivoted means is swung when said pin moves said depending lever.

3. A device of the character described comprising a base, a match hopper arranged on said base, a plunger adapted to eject a match from said hopper, a rod rigidly connected to and depending from and supporting the rear end of said plunger, a guide to slidably receive the lower end of said rod, a guiding mechanism whereby the match ejected from said hopper is lighted, and means to hold the matches against the bottom of the hopper in position to be acted upon by the plunger, and operating means therefor, consisting of a lever fastened thereto, a second lever pivoted to said base, a link connecting the free ends of said levers and a laterally projecting means on said depending rod adapted to contact said second lever.

882,730. MECHANICAL ROASTING-FURNACE. ROMAN VON ZELEWAKI, Engis, Belgium. Filed Sept. 11, 1907. Serial No. 392,363.



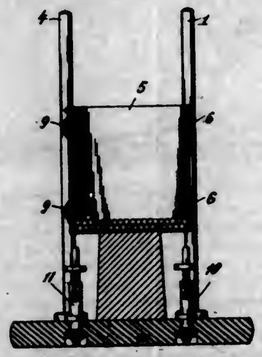
1. A mechanical roasting-furnace provided with a plurality of sets of rabbles, means for operating and for setting at rest one set of rabbles, and means for operating and for setting at rest another set of rabbles independently of the first-named set of rabbles.

2. A mechanical roasting-furnace, provided with a plurality of sets of rabbles arranged to work in different roasting-surfaces, a rotatable tubular shaft for sustaining one set of rabbles, means for rotating and for stopping said tubular shaft, a rotatable sleeve for sustaining another set of rabbles, and means for rotating and for stopping said sleeve independently of said tubular shaft sustaining said first-named set of rabbles.

3. A mechanical roasting-furnace provided with a plurality of sets of rabbles arranged in different planes and working on different roasting-surfaces of said furnace, a rotatable tubular shaft detachably supporting one set of said rabbles, means for rotating said tubular shaft in opposite directions and for setting it at rest, a sleeve for detachably supporting another set of said rabbles, means for rotating said sleeve in opposite directions and for setting it at rest independently of said tubular shaft supporting the first-named set of rabbles.

4. In combination, a multi-chambered mechanical roasting-furnace, a central tubular shaft, rabbles working in one of said furnace-chambers and detachably connected with said tubular shaft, means for reversibly driving and for setting said tubular shaft at rest, a sleeve revolubly mounted on said tubular shaft, rabbles working in another furnace-chamber and detachably carried by said sleeve and means for reversibly driving and for setting said sleeve at rest independently of said tubular shaft carrying the first-named set of rabbles.

882,731. METHOD OF AND APPARATUS FOR TESTING JELLY. JEROME ALEXANDER, New York, N. Y. Filed May 5, 1906. Serial No. 315,410.



1. The method of testing jelly, which consists in subjecting a block of jelly to compression in one direction while it is free to expand in another direction, and increasing the compression until the dimension of the block in the direction of compression is decreased to a predetermined degree.

2. In a jelly-testing apparatus the combination of a weighted carrier having a bottom forming a conductor of electricity, vertical guides forming bearings therefor, vertically adjustable uprights beneath said carrier, the said uprights forming the terminals of an electric circuit containing an indicating device, the said electric circuit being adapted to be closed by the contact of said weight-holding cup with said uprights.

3. In a jelly-testing device, the combination of a vertically-traveling carrier adapted to be weighted, provided with bearings engaging the standards laterally supporting said carrier, said standards mounted upon a common base, provided with two adjustable screws adapted to limit the descent of said carrier and to close an electric circuit, said circuit including therein a signaling device adapted to be operated electrically by the closing of said circuit.

882,732. RIB FOR COTTON-GINS. THOMAS A. ANDREWS, Grantville, Ga. Filed Feb. 9, 1907. Serial No. 356,618.



1. A rib for a cotton gin having a seed receiving trench extending longitudinally straight through the center thereof and located adjacent the point of engagement of the saws with the cotton roll, the trench means being formed within the body of the rib.

2. A rib for a cotton gin having a trench extending longitudinally of the upper portion thereof and provided with a longitudinal septum to form seed receiving spaces.

3. A rib for a cotton gin having a straight seed receiving trench formed in the upper portion of the body thereof and extending longitudinally through the center of the side which is located adjacent the cotton roll, the deepest portion of seed receiving trench being near the lower terminal thereof and adapted to receive seed which passes down over the remaining part of the same side in which seed receiving trench is formed.

4. The combination with a cotton gin, of a plurality of ribs having trenches in the faces thereof nearest the cotton roll, the trenches being centrally divided by longitudinal septums terminating above the lower ends of the said trenches.

5. A rib for a cotton gin having a trench or cavity in the side thereof adapted to be located adjacent to the cotton roll and near the upper extremity, the said trench or cavity having a septum extending centrally therethrough and converging toward its lower end, the lower end of the septum terminating above the lower end of the trench or cavity.

[Claims 6 and 7 not printed in the Gazette.]

882,733. ELECTRIC FURNACE. EDWIN APPLEBY, Chicago, Ill. Filed Mar. 26, 1906. Serial No. 308,040.



1. In an electric furnace, the combination of a frame, a vertically disposed receptacle mounted in said frame, a pair of electrodes extending into said receptacle, means for withdrawing said receptacle downwardly in said frame and away from said electrodes, horizontally disposed trunnions on said receptacle, and bearings mounted in said frame and adapted to engage said trunnions for supporting said receptacle when the same has been lowered to a certain position below said electrodes, said receptacle being adapted to be tilted on said trunnions for discharging its contents.

2. In an electric furnace, the combination of a frame, a vertically disposed receptacle mounted in said frame, a pair of electrodes extending into the lower part of said receptacle, a strut supporting said receptacle and adapted to gradually lower the same away from said electrodes, a pair of horizontally disposed trunnions on said receptacle, a pair of bearings mounted in said frame and adapted to engage said trunnions for supporting the receptacle when the same had been lowered to a certain position, said strut being adapted to be removed from engagement with said receptacle to permit the receptacle to be tilted on its trunnions for discharging its contents.

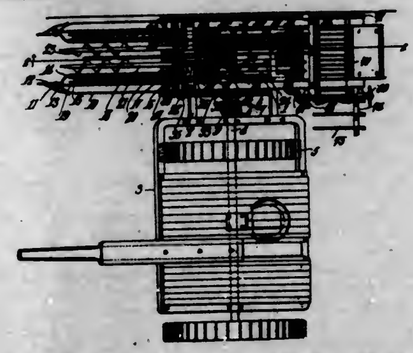
3. In an electric furnace, the combination of a frame, a vertically disposed receptacle mounted in said frame, a pair of electrodes extending into the lower part of said receptacle, a strut supporting said receptacle and adapted to gradually lower the same away from said electrodes, a pair of horizontally disposed trunnions on said receptacle, a pair of Y-bearings open upward and located in the path of said trunnions and adapted to engage said trunnions for supporting said receptacle when the same has been lowered, and said strut being adapted to continue to descend after said trunnions have been engaged by said bearings, to permit said receptacle to be tilted on its bearings for discharging its contents.

4. In an electric furnace, the combination of a frame, a vertically disposed receptacle mounted in said frame, a pair of electrodes mounted in said frame and extending into the lower part of said receptacle, said receptacle having a bottom movable downwardly away from said electrodes, the walls of said receptacle being of suitable construction to permit a considerable range of vertical movement of said bottom without breaking the continuity of said walls, tracks for supporting said receptacle, said receptacle being adapted to be moved toward one side on said tracks when said bottom has reached a certain lowered position, and means for discharging the contents of said receptacle.

5. In an electric furnace, the combination of a frame, a vertically disposed receptacle mounted in said frame, a pair of electrodes extending into said receptacle, a strut supporting said receptacle and adapted to gradually lower the same away from said electrodes, a car adapted to support said receptacle when it is lowered clear of said electrodes, tracks for supporting said car, and mechanism below said tracks for raising and lowering said strut, said strut being adapted through the continued operation of said mechanism to be withdrawn from engagement with said receptacle after the receptacle has been lowered upon the car, all being arranged to permit the receptacle to be moved along the tracks away from said mechanism for discharging its contents.

[Claims 6 to 11 not printed in the Gazette.]

882,734. CORN HARVESTER AND HUSKER. IRVING J. BALL, Brock, Nebr. Filed May 15, 1907. Serial No. 373,769.



1. A corn gatherer comprising rolls and rotating ear-snapping mechanism located transversely above the rolls.

2. A corn gatherer comprising rolls, bars located at the sides thereof and lifters attached to the ends of the bars, said lifters having forwardly extending portions and upwardly, outwardly and rearwardly extending portions.

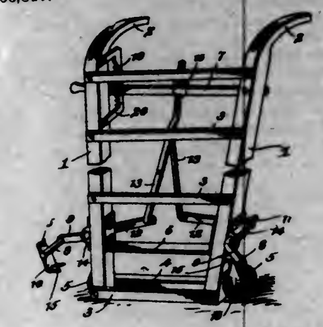
3. A corn gatherer comprising rolls, a knife located above the rolls and having its cutting edge inclined toward the rolls.

4. A corn gatherer comprising rolls, ear snapping mechanism coöperating with the same, a knife located above the rolls and having its edge portion disposed away from the rolls.

5. A corn gatherer comprising rolls, conveyers operating at the sides of the rolls, a shaft for actuating the conveyers and ear snapping elements carried by said shaft.

[Claims 6 to 13 not printed in the Gazette.]

882,735. WAREHOUSE-TRUCK. RASMUS S. BERGSATHER, Northwood, Iowa. Filed Apr. 6, 1907. Serial No. 366,817.



1. The combination of a truck, bearings upon opposite sides of the truck, a rock shaft journaled within each of the bearings, crank arms upon the two ends of each of the shafts, one pair of the crank arms being located above the truck while the opposite pair are located below the truck, loosely mounted gripper members carried by the first mentioned pair of crank arms, and means coöperating with the crank arms under the truck to rotate the rock shafts.

2. The combination of a truck comprising longitudinal bars having wheels at one end thereof and handles at the opposite ends, bearings applied to the sides of the longitudinal bars, a rock shaft journaled within each of the bearings, crank arms at the two ends of each of the rock shafts, one set of the crank arms being located above the truck while the opposite set are located below the truck, an operating lever connecting the longitudinal bars of the truck, the said lever being pivotally connected to one of the bars and adjustably engaging the opposite bar, and rods connecting the operating lever to the crank arms under the truck for rotating the rock shafts to cause the crank arms above the truck to engage a member to be carried upon the truck.

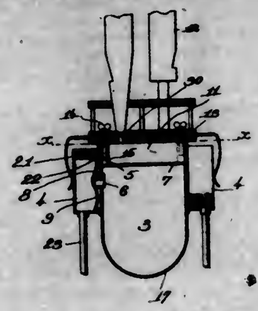
3. The combination of a truck, bearings upon opposite sides of the truck, a rock shaft journaled within each of the bearings, crank arms at the two ends of each of the rock shafts, an operating lever mounted upon the truck, the said lever being pivotally connected to one side of the truck and adjustably engaging the opposite side, a block carried by the operating lever, and a rod adjustably connected to the block and serving as a connecting means between the lever and the crank arms at one end of the before mentioned rock shafts, the crank arms at the opposite end of the said rock shafts being provided with gripper members.

4. The combination of a truck, bearings upon opposite sides of the truck, a rock shaft journaled within each of the bearings, crank arms at the two ends of each of the rock shafts, one set of the crank arms being located above the truck while the opposite set are located below the truck, an operating lever mounted upon the truck, and connecting means between the operating lever and the crank arms below the truck for actuating those crank arms above the truck.

882,736. ORGAN. JACOB BINNIG, Cambridge, Mass., assignor of one-half to Mason & Hamlin, Cambridge, Mass., a Corporation of Delaware. Filed July 27, 1906. Serial No. 328,029.

1. In an organ, an elongated wind-chest having a plurality of separate compartments above the same, said compartments extending transversely of the wind-chest and each being wider at one end than at the other, a pipe communicating with each compartment, and means to control communication between the wind-chest and each compartment.

2. In an organ, an elongated wind-chest having a plurality of separate compartments above the same, said compartments extending transversely of the wind-chest and each being wider at one end than at the other, the wide ends of adjacent compartments being situated on opposite sides of the wind-chest, a pipe communicating with each compartment, and means to control communication between the wind-chest and each compartment.



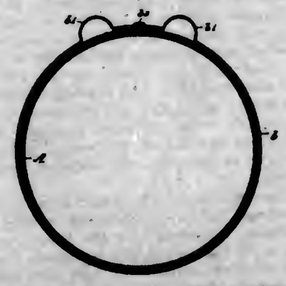
3. In an organ, an elongated wind-chest having metal walls, a plurality of separate compartments above said wind-chest, said compartments extending transversely of the wind-chest and each being wider at one end than at the other, the wide ends of adjacent compartments being situated on opposite sides of the wind-chest, a pipe communicating with each compartment, and means to control communication between the wind-chest and each compartment.

4. In an organ, a plurality of pipes a longitudinally-extending wind-chest, a series of compartments above the wind-chest and extending transversely from one side thereof to the other, each compartment communicating with a pipe, and means exterior to the wind-chest to control communication between said wind-chest and each compartment.

5. In an organ, a metallic member substantially U-shape in cross section divided by a horisontal partition to present a longitudinally-extending wind-chest and by other partitions to present transversely-extending compartments above the wind-chest, and means to control communication between the wind-chest and each compartment.

[Claims 6 to 11 not printed in the Gazette.]

882,737. EMBROIDERY-HOOP. GEORGE H. BIXBY, Chicago, Ill. Filed June 19, 1905. Serial No. 265,945.

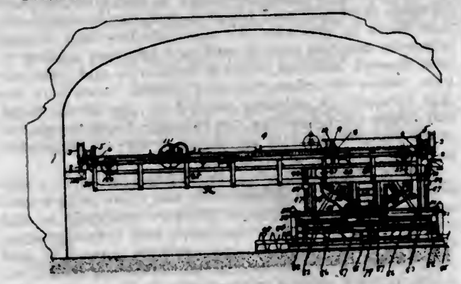


1. In an embroidery device, an integral inner hoop, and an outer hoop embracing said inner hoop and formed with one or more integral loops, and means for securing together the ends of said outer hoop.

2. In an embroidery device, an inner hoop without joints, an outer hoop formed with integral loops having its end portions overlapped, and means for securing said end portions together.

3. In an embroidery device, an inner unbroken hoop, an outer embracing hoop having integral loops formed therefrom, the end portions of said outer hoop overlapped, and a bridge piece adapted to embrace the portions of the inner hoop not engaged by the loops of the outer hoop, said bridge piece also adapted to secure together the ends of said outer hoop.

882,738. FILTER-MACHINE. HIRAM W. BLAISDELL, Los Angeles, Cal. Filed June 24, 1905. Serial No. 266,867.



1. A filter machine provided with a conduit having a plurality of passages, a valve in said conduit having a plurality of ports, cylinders in connection with said valve, inlet and outlet connections for said cylinders and a conveyer connected with the pistons of said cylinders, whereby said conveyers can be retracted and extended by the operation of said valve.

2. A filter machine, a stationary structure on which said machine is adapted to travel, auxiliary conveyers mounted in said machine, means for automatically extending and retracting said conveyers and means mounted on said stationary structure for causing the actuation of said extending and retracting means.

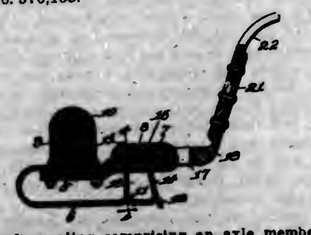
3. In a filter cleaning apparatus, a frame, mechanism for operating upon the surface of the filter pivotally supported in said frame and a counter poise to assist said mechanism in turning about said pivotal point.

4. In a filter cleaning apparatus, a frame and mechanism for operating upon the surface of the filter pivotally supported in said frame in such manner that the weight thereof is distributed to assist said mechanism in turning about said pivotal point.

5. In a filter cleaning apparatus, a frame, mechanism for operating upon the surface of the filter pivotally mounted in said frame, an adjustable shoe carried by said frame and means for raising and lowering said shoe to elevate or depress said frame.

[Claims 6 to 12 not printed in the Gazette.]

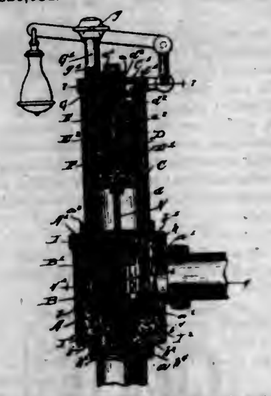
882,739. SHAFT-COUPLING. ARTHUR H. BOMMER and WILLIAM J. ROBERT, St. Louis, Mo. Filed May 28, 1907. Serial No. 376,135.



1. A shaft-coupling comprising an axle member, a jaw pivotally connected to the axle member, a spring carried by the axle member, a shaft member detachably held in position upon the axle member, a link carried by the shaft member and contacting with the spring to retain the shaft member in contact with the axle member and a link surrounding the jaw, axle member and spring, substantially as specified.

2. A shaft coupling comprising an axle member provided with a semi-circular recess, a jaw provided with a corresponding semi-circular recess and hinged to the front end of the axle member, a shaft member, a pin carried by the shaft member to rest in the semi-circular recesses formed by the axle member and jaw, a spring carried by the axle member and extending horizontally beneath the same, a link carried by the pin and supported on a hook formed on the end of the spring, a link surrounding the jaw axle member and supported in a recess formed in the top of the jaw, and a recess formed in the spring to retain the jaw in close contact upon the axle member, substantially as specified.

882,740. FLUID-CONTROLLED FLUSHING-VALVE. ROBERT A. BROOKS, Chicago, Ill. Filed June 4, 1906. Serial No. 320,081.



1. A valve of the class described embracing a casing having an inlet and an outlet pipe, a valve seat in the casing, a differential closure for said seat, a vent valve in said closure adapted to be manually actuated preliminary to flushing, adapting inlet pressure and gravity to unseat the closure, a closed fluid containing cup regulating the closure and means rigidly engaged to said cup and extending through the top of the casing for manual actuation.

2. A valve of the class described embracing a casing having an inlet and an outlet pipe, a seat in the casing, a differential closure for said seat, a valve controlled passage in the closure adapted to admit inlet pressure above the same, said closure adapted to be opened by manual actuation and aided by gravity, inlet pressure and manually and a closed movable fluid containing cup regulating the closure.

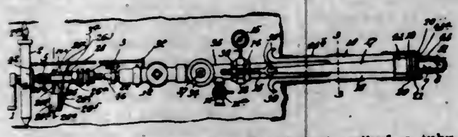
3. A valve of the class described embracing a casing having an inlet and an outlet, a valve seat in the casing, a differential closure normally seated on said seat adapted to be unseated by inlet pressure, gravity and manually prior to flushing, a closed movable cup containing a fluid and means through which the fluid passes to vary the rate of closing of said differential closure.

4. A flushing valve of the class described embracing a casing having an upwardly opening inlet and laterally opening outlet pipe, an inlet valve closing with the pressure to close the inlet pipe, a vent valve controlling the same, a wholly closed fluid containing vessel, a piston therein, one of the same movable relative to the other, a stem connecting said movable element to open the vent valve and means for actuating said movable element.

5. A flushing valve of the class described comprising a casing having an inlet and an outlet, a valve seat in the casing, a closure therefor, manually operated means adapted when actuated to open the closure by manual actuation, gravity and inlet pressure a wholly inclosed cup within the casing having a fluid therein, a free stem projecting thereinto, a piston rigidly secured to the lower end of the stem and means locking said stem and piston from rotation.

[Claims 6 to 31 not printed in the Gazette.]

882,741. SAFETY BORING APPARATUS. GEORGE BURNSIDE, Shiney Row, England. Filed Nov. 26, 1906. Serial No. 345,272.

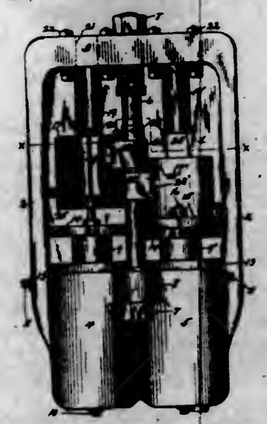


1. In a boring apparatus of the class described, a tubular boring rod, a screw for feeding the same forwardly, a pump mounted on a movable spindle connected with said rod and said feed screw, means whereby the pump is operated by the operation of said feed screw, spindle and boring rod, and means to prevent the pump from turning with said parts.

2. In a boring apparatus of the class described a tubular drill provided at one end with a point and at the other end with an inner annular shoulder, and a valve movable in said drill and provided with a spring whereby it is normally held seated on said shoulder.

3. In an apparatus of the class described, a stationary pump mounted on a rotatable spindle, said spindle being provided with an eccentric disk by which the piston of the pump is operated, and the cylinder of the pump being in communication with the interior of said spindle.

882,742. LEAD-PRESS. DAVID CARLIN, Bellevue, Pa. Filed July 11, 1907. Serial No. 383,197.



1. A lead press comprising a frame formed from a single piece of cast metal, said frame comprising a back wall, a head block and two hydraulic cylinders, the back wall being provided with charging openings, a column connecting the cylinders with the head block, plungers operating in said cylinders, the one independent of the other, means for introducing pressure to operate said plungers, lead cylinders attached to each of said plungers, mandrel plates between the lead cylinders and plungers and provided with sockets, mandrels located above said lead cylinders and in line therewith, dies located in said mandrels, and mandrel bars located in said lead cylinders adapted to pass through said dies and having tapered heads on their lower ends engaging said sockets, as and for the purpose described.

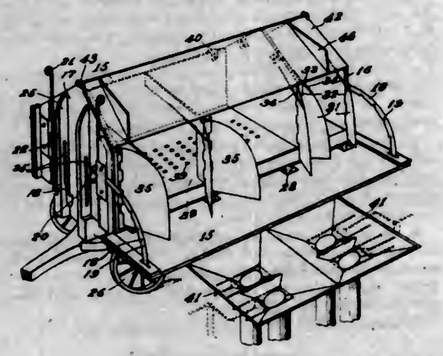
2. A frame for a lead press comprising an integrally formed back wall, side walls, head block, and hydraulic cylinders, and a front column for connecting the hydraulic cylinders with the head block.

3. In a hydraulic lead press as described, a supporting frame having a head block, a pair of hydraulic cylinders carried by said frame, a front column tying the cylinders to the head block, plungers operating in said cylinders, lead cylinders connected to each of said plungers, mandrels carried by the head block in line with said lead cylinders, dies located in said mandrels, and mandrel bars located in said lead cylinders adapted to pass through said dies.

4. In a double lead press, a supporting frame embodying a back wall provided with charging openings, side walls, a head block, and a pair of hydraulic cylinders, the back wall, side walls, head block, and cylinders being in one piece, a front column connecting the cylinders with the head block, plungers operating in said cylinders, lead cylinders carried by said plungers, mandrels carried by the head block in line with the lead cylinders, dies in said mandrels, mandrel bars in said lead cylinders adapted to pass through said dies, slidable carriers on said front column, means for connecting said slidable carriers to the lead cylinders, a swinging bracket on the front column and means for connecting the swinging bracket with one of the plungers and with one of the carriers on the column, as and for the purpose described.

5. In a double lead press, the combination with a supporting frame having a head block, and a pair of hydraulic cylinders carried thereby, of plungers operating in said cylinders, a front column connecting said hydraulic cylinders with the head block, lead cylinders carried by said plungers, slidable carriers on said front column, means for connecting said slidable carriers with the lead cylinders, a swinging bracket on said column, and means for connecting said swinging bracket with one of the plungers and with one of said slidable carriers.

882,743. COMBINATION WAGON OR OTHER VEHICLE. TIMOTHY CARROLL, Anaheim, Cal. Filed Apr. 11, 1906. Serial No. 311,056.



1. The combination with a bed and a support therefor, of a tank carried by said bed having an outlet, walls hinged to said bed having an outward travel, a container carried by said bed having a perforated bottom and communication with said tank, guides mounted on said container, means for limiting the movement of said guides, and a dry compartment on said bed and adjacent said container.

2. A vehicle bed comprising a body portion having a central opening extending longitudinally thereof and a lining fitting in said body portion and extending over said opening, said lining being perforated to allow of the drainage of liquid, and a tank fixed to the bottom of said body portion and in line with the opening, said tank being adapted to receive the drainage from the body portion, and a drain pipe connected with said tank.

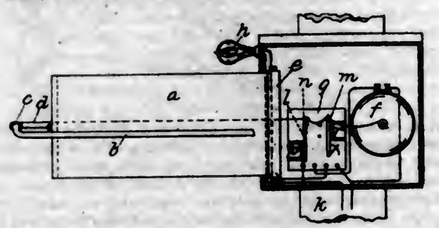
3. A vehicle bed comprising a body portion having an opening provided centrally thereof and extending longitudinally therethrough, a lining in said body portion, said lining being perforated to permit of drainage, and a tank connected with the bottom of said body portion having a sloping bottom, and a drain-pipe at the point of intersection of the sloping bottom.

4. A vehicle bed comprising a body portion having united therewith a tank, said tank extending downwardly and away from the body portion of the bed and provided with a sloping bottom, a drain-pipe at the terminus of the slope, and a container having perforations in the bottom and arranged to be placed on said body portion.

5. A vehicle bed comprising a body portion having a perforated lining and walls hingedly secured to said bed, said bed having united with the bottom thereof, a tank extending downwardly away from the bottom of the same and provided with a sloping bottom, a drain pipe at the terminus of the slope, a lever extending lengthwise of said vehicle body and arranged to cause said walls to open and close.

[Claims 6 to 8 not printed in the Gazette.]

882,744. SIGNALING DEVICE. SPENCER C. CART, Spokane, Wash. Filed Apr. 6, 1907. Serial No. 366,855.



1. A device of the class described, consisting of a support, a spring roller vertically mounted thereon, a signal flag wound upon the roller, and electrical means for unwinding and holding the flag in an extended position, and for releasing and allowing the flag to be rewound upon the roller.

2. A device of the class described, consisting of a support, a spring roller vertically mounted thereon, a signal flag wound upon the roller, means for unwinding the flag, consisting of an electric motor attached by a cord or wire to the flag, and electrically actuated means for holding the flag in an extended position and for releasing and allowing the flag to be rewound upon the roller.

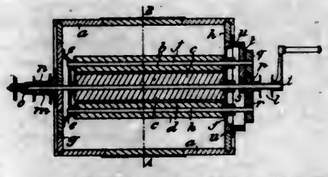
3. A device of the class described, consisting of a support, a vertical spring roller mounted thereon, a signal flag wound upon the roller, and means for unwinding and holding the flag extended, and for rewinding the flag upon the roller, actuated by the closing and opening of an electric circuit.

4. A device of the class described, consisting of a support, a spring roller vertically mounted thereon, a signal flag wound upon the roller, means for unwinding the flag, consisting of an electric motor attached by a cord or wire to the flag, and means between the motor and roller for stopping the motor when the flag is extended, consisting of a contact point in the motor circuit at one end of an arc, an electro magnet on an electric circuit independent from the motor circuit at the other end of the arc and towards the motor, a contact arm pivoted at or near the center of the circle bounded by the arc and normally held in contact with the point by a spring, an eyelet in the end of the contact arm through which the cord or wire is threaded, and a knot in the cord or wire which engages the side of the eyelet, breaks the motor circuit, and pulls the contact arm against the electro-magnet when the flag is extended.

5. A device of the class described, consisting of a support, a spring roller vertically mounted thereon, a signal flag wound upon the roller, means for unwinding the flag consisting of an electric motor attached by a cord or wire to the flag, and for stopping the motor when the flag is extended, and means for holding the flag in an extended position and for releasing and allowing the flag to be rewound upon the roller, consisting of a support between the motor and roller, a lever arm pivoted thereto above its center of gravity, a pivoted fork on the upper end of the lever having a shoulder preventing motion on the pivot in the opposite direction from the motor, said fork being held in longitudinal relation to the lever by a spring; an electromagnet on an electric circuit independent from the motor circuit in electrical contact on the side next the roller with the lower end of the lever arm when in its normal vertical position; the said cord or wire running through the fork of the lever arm and having a knot which passes over and engages the sides of the fork when the motor is stopped and the flag is extended.

[Claims 6 and 7 not printed in the Gazette.]

882,745. COMBINED CHURN AND BUTTER-WORKER. OLE CHRISTENSEN and CHRISTIAN P. SÖLBECK, Copenhagen, Denmark. Filed Sept. 18, 1907. Serial No. 393,536.



1. In a combined churn and butter worker, the combination with a receptacle of a central roller therein, rollers at the sides of said central roller, a central shaft carrying said central roller and being in direct connection with the driving device, means for driving the side rollers from the central shaft and means for coupling and uncoupling the receptacle and said central shaft.

2. In a combined churn and butter worker, the combination with a churn barrel of a central roller therein, rollers at the sides of said central roller, a central shaft carrying said central roller, a driving member in direct connection with the driving shaft and means for transmitting the movement of the central shaft to the churn barrel at a reduced speed.

3. In a combined churn and butter worker, the combination with a churn barrel, of a central roller and two side rollers with bearings in the churn barrel, a centrally arranged driving device, means for transmitting the movement to the side rollers, and means for transmitting the movement at two speeds to the churn barrel, said barrel not being circular in the plane of rotation.

4. In a combined churn and butter worker, the combination with a receptacle, of a central driving shaft mounted therein, a roller carried by the shaft, rollers at the sides of the central roller, gearing connecting the central and side rollers, and gearing connecting the driving shaft and receptacle.

5. In a combined churn and butter worker, the combination with a receptacle, of a central driving shaft extending through the receptacle, a roller carried by the shaft, lateral shafts mounted in journals fixed to one side of the receptacle and extending through the latter parallel with the driving shaft, rollers on the lateral shafts, gears connecting the driving and lateral shafts, a gear on the receptacle, gears connecting the latter gear with the driving shaft and a coupling device to connect the shaft and receptacle.

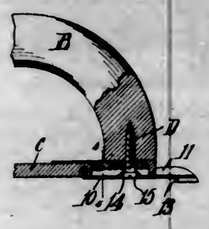
882,746. LOAD-HOLDING DEVICE. ALVIN L. COX, Madison, Mo. Filed Feb. 21, 1906. Serial No. 302,239.



A device of the character described, comprising a pointed stake having an enlarged head provided with super-

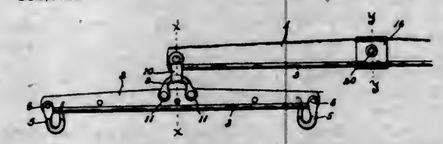
posed openings extending therethrough at right angles to one another and adapted for the reception of binding ropes, said head being further provided with a longitudinal slot above said opening, an operating lever having a squared end for engagement within said slot, and having its outer rounded end formed with a hook thereon, and a locking pivot pin adapted for insertion through alined openings in said head and said lever at an approximately central point of said slot and forming a positive pivot for said lever to allow of the depression of the same to engage said outer hooked end with one of said binding ropes, substantially as described.

882,747. SAD-IRON HANDLE. JOHN H. COX, Erie, Kans. Filed Sept. 12, 1907. Serial No. 392,585.



As a new article of manufacture, a sad-iron attachment comprising a sheet metal plate having a perforated shank, the opposite sides of the shank being bent to form a pair of parallel flanges, the body portion of the plate being rearwardly and laterally extended to form a pair of spaced arms, and the rear edge of the plate and the metal which forms the arms being flanged, substantially as specified.

882,748. WHIFFLETREE. GUSTAVE F. DANIELSON, Youngstown, Ohio. Filed Sept. 1, 1906. Serial No. 332,892.



1. The combination with a cross-bar of whiffletrees, of attaching means secured to said bar formed of sheet metal rolled into tubular form and a reinforcing member within said tubular portion.

2. The combination with a cross-bar of whiffletrees, of attaching means formed of sheet metal rolled into tubular form and bent into the form of a loop and a solid reinforcing rod stationarily secured within the tubular portion at the bend of the loop.

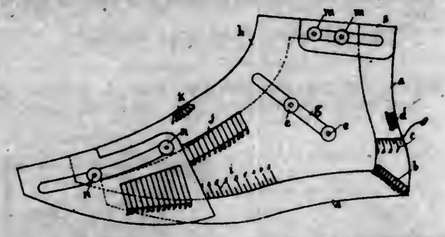
3. The combination with a cross-bar of whiffletrees, of attaching means formed of sheet metal rolled into tubular form intermediate its ends and bent in the form of a loop with the meeting edges of the metal at the inner side of the loop, ears integrally formed with the ends of said means for securing the same to the cross-bar, and a reinforcing member within the tubular portion at the bent end of the loop.

4. The combination with a swingletree bar, of hooks pivotally attached to the ends of said bar and each formed of sheet metal with parallel ears at one end and rolled into tubular form and bent into the form of a hook, said tubular portion being tapered to form an extended and curved bill, and a solid reinforcing rod stationarily secured within the tubular portion at the bend of the hook.

5. The combination of the bar of whiffletrees formed of sheet metal bent U-shape in cross-section and rolled at its free edges to form outwardly projecting ribs, and a clevis having ears pivotally attached to the parallel sides of the bar and provided with shoulders adjacent to the ribs to engage the same.

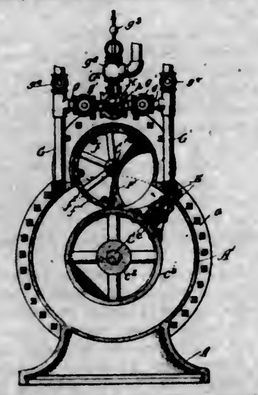
[Claims 6 to 9 not printed in the Gazette.]

882,749. PATTERN FOR CUTTING OUT BOOTS AND SHOES. JEAN J. DUMONCHAU, Brussels, Belgium. Filed Sept. 27, 1907. Serial No. 394,806.



A device for cutting out boots and shoes for abnormal feet, comprising a base plate, having scales at the end of and above the heel portion, a movable plate adjustable on said base plate and having a scale on its lower edge and another scale at its upper edge, and an independent plate having scales at both ends, substantially as and for the purpose set forth.

882,750. ROTARY ENGINE. JAMES A. EATON, Chicago, Ill. Filed May 31, 1907. Serial No. 376,523.



1. In a device of the class described a casing embracing a cylindric steam chamber and a cylindric valve chamber intersecting each other with parallel axes each beyond the periphery of the other chamber, a rotative piston in the steam chamber, a piston head rigidly secured thereon comprising radially arranged abutments, one or more sheets of packing material engaged between the same and bearing against the inner walls of the cylinder to afford a steam tight joint, and a ring of packing material bearing against each end of the piston.

2. In a device of the class described a casing embracing a cylindric steam chamber and a cylindric valve chamber intersecting each other with parallel axes, each beyond the periphery of the other chamber, a rotative piston in one chamber, a rotative valve in the other notched to receive the piston head therein, intermeshing gears of equal size connected with said piston and valve to drive the same isochronously, said cylinder having ports on opposite sides of the valve either adapted for induction or eduction, pipes communicating with said ports and with each other, an oscillating plug valve controlling either of said pipes, packing around the periphery of the rotative valve and packing around the periphery of the piston adapted to bear against the same.

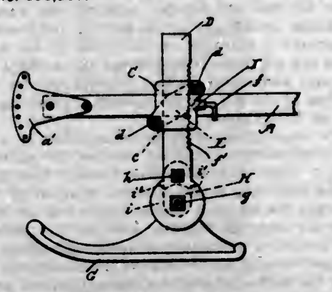
3. In a device of the class described a casing embracing a cylindric steam chamber and a cylindric valve chamber intersecting each other with parallel axes each beyond the periphery of the other chamber, a rotative piston in the steam chamber, a piston head rigidly secured thereon comprising radially arranged abutments, one or more sheets of packing material engaged between the same and bearing against the inner wall of the cylinder to afford a steam tight joint, a ring of packing material bearing against each end of the piston, a follower bearing against said packing material affording a means of tightening said packing in case of wear.

4. A device of the class described embracing a casing containing a cylindric piston chamber and a cylindric valve chamber intersecting each other with axes parallel but each beyond the periphery of the other, a rotative piston carrying a piston head in one chamber, a rotative valve in the other acting to receive the piston head therein, intermeshing approximately equal gears connected with said piston and valve to drive the same isochronously and ports either adapted for inlet or for exhaust opening into said cylinders on opposite sides of the valve, a controlling valve to admit pressure through either, an eccentric and link for operating the controlling valve and a plurality of manually operated valves for each port adapted one to admit the inlet fluid and the other to close to the atmosphere and the valves for the other port adapted one to open the atmosphere and the other close to prevent admission of the motive fluid.

5. In a device of the class described a casing embracing a cylindric piston chamber and a cylindric valve chamber intermeshing each other with parallel axes, each axis being beyond the periphery of the other chamber, a rotative piston in one chamber, a head on the periphery thereof to receive the pressure, a rotative valve in the other chamber shaped to receive the piston head therein, intermeshing equal gears connected with said piston, and valve to drive the same isochronously, ports opening into said cylinder on opposite sides of the valve, a pressure supply pipe, branches leading therefrom to each port, a manually operated valve in each branch adapted either to act as inlet valves and either to close against admission of the motive fluid, an exhaust pipe connected in each branch, a manually actuated valve in each, either adapted to exhaust to the atmosphere and either to prevent escape of the motive fluid when the other is acting as the exhaust, a cut off valve in the supply pipe adapted to afford communication between the same and either branch and an eccentric and link to actuate the same and shift the valve to reversing position.

[Claims 6 to 18 not printed in the Gazette.]

882,751. RUNNER ATTACHMENT FOR PLOWS. ERNEST E. EDWARDS, Ithaca, Mich. Filed Sept. 18, 1907. Serial No. 393,507.



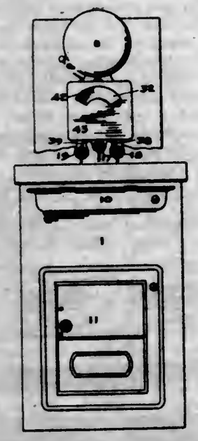
1. In a runner attachment, the combination, with a plow beam, of a socket secured to the front end portion of the said beam, a standard adjustable vertically in the said socket, a runner pivoted to the lower end portion of the said standard, and stops for limiting the pivotal movements of the said runner.

2. In a runner attachment, the combination, with a plow beam, of a socket formed of two separable [illegible] plates, means for securing the said socket against [illegible] of the said beam, a standard adjustable vertically in the said socket, a runner pivoted to the lower end portion of the said standard, and stops for limiting the pivotal movements of the said runner.

3. In a runner attachment, the combination, with a plow beam, of a socket formed of two separable grooved plates, means for securing the said socket against one side of the said beam, a standard provided with a series of notches and adjustable vertically in the said socket, a spring-actuated catch carried by the said socket for engaging with the said notches, and a runner pivoted to the lower end portion of the said standard.

4. In a runner attachment, the combination, with a plow beam, of a socket secured to the said beam, a standard adjustable vertically in the said socket, a plate, a bolt securing the said plate against the lower end portion of the said standard to form a jaw, and a runner provided with a disk which is pivoted in the said jaw and provided with stops for engaging with the said bolt to limit its pivotal movement.

882,752. LETTER-BOX ALARM AND INDICATOR. OSCAR F. ERICKSON, Berkeley, and RICHARD H. BRADSHAW, Oakland, Cal. Filed Sept. 5, 1907. Serial No. 391,444.

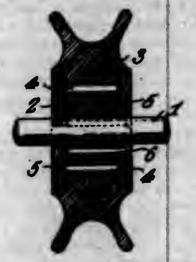


1. An apparatus of the character described, comprising a letter box having a lid for closing the opening through which the letters are deposited, and a door for removing said letters, an electro magnetic alarm, a battery therefor, a rotary contact maker, a wire leading from one pole of said battery to the electro-magnet of said alarm, two semi-circular contact plates from which said rotary contact maker can alternately contact as it rotates, means for rotating said contact maker simultaneously with the operation of said alarm, conductors leading in parallel from said plates to the other pole of the battery, having breaks therein, contacts for closing the respective breaks, and means for closing the contacts by opening the lid and door respectively, substantially as described.

2. An apparatus of the character described, comprising a letter box having a lid for closing the opening through which the letters are deposited, and a door for removing said letters, an electro-magnetic alarm, a battery therefor, a rotary contact maker, a visible signal device carried by said rotary contact maker, a wire leading from one pole of said battery to the electro-magnet of said alarm, two semi-circular contact plates with which said rotary contact maker can alternately contact as it rotates, means for rotating said contact maker simultaneously with the operation of said alarm, conductors leading in parallel from said plates to the other pole of the battery, having

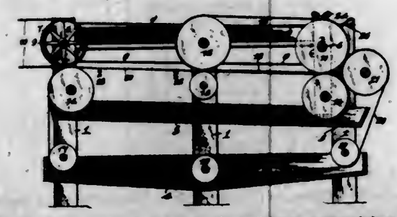
breaks therein, contacts for closing the respective breaks, and means for closing the contacts by opening the lid and door respectively, substantially as described.

882,753. TROLLEY-WHEEL. DANIEL D. GRANT, Pittsfield, Mass. Filed Feb. 11, 1907. Serial No. 356,839.



In a trolley wheel, the combination with an axle and a core secured thereon; of a ring surrounding the core and constituting the wheel body, the sides of said ring being countersunk, a circular guard plate upon one face of the core and having threaded openings therein, a similar plate upon the opposite face of the core and having openings therein, the peripheral portions of the two plates being disposed within the countersunk portions of the ring, bolts extending through the openings in the last mentioned plate and engaging the threads in the first mentioned plate, said bolts extending through the core and disposed to bind the plates thereon, said plates constituting means for preventing independent lateral movement of the core and ring, and a continuous series of anti-friction rollers interposed between the core and ring and movable around the core, said guard plates being disposed to hold the rollers against longitudinal movement.

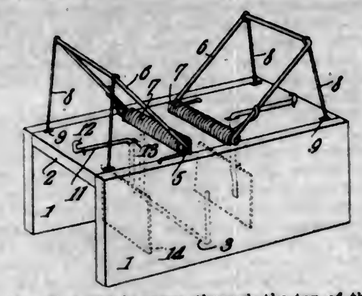
882,754. CIDER-PRESS. OSCAR G. HALEY, Kents Store, Va. Filed Aug. 3, 1907. Serial No. 386,967.



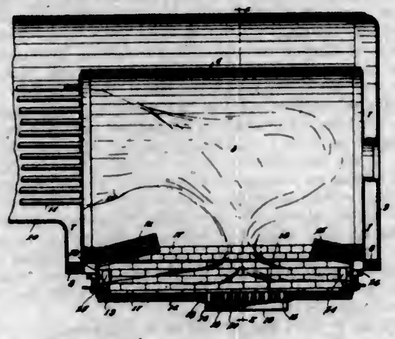
In a cider press a supporting frame comprising uprights alined in pairs and provided with horizontal supporting beams therebetween, liquid trays superposed within said frame, the upper of said trays being slightly inclined and having a discharge opening at its lower end to discharge the liquid into said lower tray, rollers mounted between said vertical uprights above said upper and lower trays, a gauze belt arranged to travel about said rollers and through the liquid within said lower tray, a pair of rollers mounted above said upper tray rollers and carrying a cloth belt thereon, means for adjusting one of said rollers, means for driving said rollers, a roller adjustably mounted adjacent one of said last named rollers and one of said upper tray rollers, and having said gauze belt trained thereover, and means for adjusting said last named roller to and from its adjacent rollers, for a more thorough pressing of the material and for the purpose of tightening and loosening said gauze belt, substantially as described.

882,755. ANIMAL-TRAP. ALMON A. HAMILTON, Pawnee City, Nebr. Filed Nov. 1, 1907. Serial No. 400,248.

A trap comprising a body made up of a top and side pieces, a bait support located between the side pieces trapping mechanisms located at the opposite ends of the body and each consisting of a spring actuated frame mounted upon the top of the body, a loop attached to the frame and passing through the top of the body, a trip pivoted on the top of the body and having a hooked end for engagement with the free edges of the frame, said hook having a depending portion which passes through the top of the body and a plate attached to the lower end of the trip, said plates being located upon opposite sides of the bait support and substantially closing the transverse area of the space between the sides of the trap body.



882,756. OIL-BURNING STEAM-BOILER. CHARLES A. HAMMEL, Los Angeles, Cal. Filed Feb. 4, 1907. Serial No. 355,535.

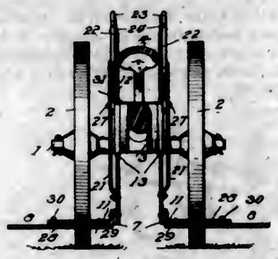


1. The combination, with a steam boiler, of a fire box having a refractory lining on the bottom and sides; of oppositely disposed hydrocarbon burners located at the front and rear end of the fire box adapted to discharge their flames toward each other; means for establishing a draft of air into the fire box adjacent the burners; deflector means extending into the fire box and located above said burners; a plurality of air inlets in the bottom of said fire box adjacent to and under the meeting point of the flames; and means located beneath the air inlets in the bottom of the fire box for equally distributing the volume of air to the inlets.

2. The combination, with a steam boiler of a fire box having a refractory lining on the bottom and sides; of oppositely disposed hydrocarbon burners located at the front and rear ends of the fire box, adapted to discharge their flames toward each other; means for establishing a draft of air into the fire box adjacent the burners; deflecting arches of refractory material extending into the fire box and located above said burners; a plurality of air inlets in the bottom of said fire box adjacent to and under the meeting point of the flames, said air inlets comprising a series of metallic tubes held in place by a refractory material; a horizontally disposed metallic shield secured to the bottom plate of said fire box beneath said air inlets; and a centrally disposed vertical partition secured to the upper face of said shield, whereby the volume of air to the inlet tubes is equally distributed.

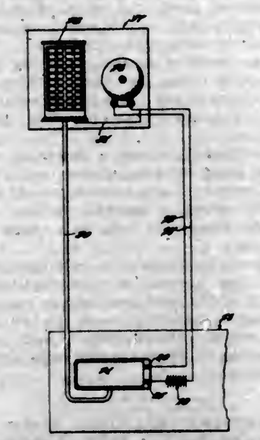
3. The combination with a steam boiler having a fire box, of means for delivering hydrocarbon flames from the front and rear of the fire box toward each other into the fire box, means for establishing a draft of air into the fire box adjacent the flame delivery means, means for admitting air directly into the fire box adjacent to and under the meeting point of the flames, and means located beneath said air admission means for equally distributing the volume of air to said admission means.

882,757. COTTON-CHOPPER. REEVES HENRY, Forney, Tex. Filed Apr. 16, 1907. Serial No. 368,471.



In combination, a suitably supported beam, a metallic yoke carried transversely thereof adjacent an end thereof, said yoke terminating in depending angular end portions, a lever pivoted to each of the depending portions of the yoke, guides on the beam, links secured to the levers engaging the guides on the beam, levers secured to the links, means engaging each of the second named levers for raising and lowering the same, and cutter blades carried by the first named levers.

882,758. FIRE-ALARM SYSTEM. HENRY H. HILLIER, Pasadena, Cal. Filed Apr. 13, 1907. Serial No. 368,111.



1. In a fire alarm system, a signaling device comprising a case; a shaft rotatively mounted in said case; a spaced series of metallic disks rigidly mounted on said shaft having notches in their peripheries; a series of insulating disks mounted between said metallic disks and having a diameter greater than the diameter of the bottom of said notches in the metallic disks and less than the diameter of the metallic disks; a contact adapted to follow the contour of the metallic disks and rest on said insulating disks when it is in the notches of the metallic disks; and means to rotate said shaft and disks.

2. A signaling device comprising a case; a shaft rotatively mounted in said case; an indicator plate on the top of said case having designations thereon; a plurality of disks on said shaft, there being a disk located directly beneath each designation on said indicator plate, and each of said disks being provided with notches in its periphery to correspond with the designation directly above said disk; a contact adapted to engage with the periphery of any one of said disks; means to rotate said disk; and means to automatically release said rotating means when said contact is brought into a position to contact with any of said disks.

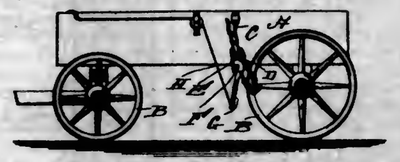
3. In a signaling device, a plurality of rotative disks; a contact adapted to engage with any of said disks; means to rotate said disks; and means to lock said disks from rotation; and means to automatically release said disks when said contact is placed in engagement with one of said disks.

4. In a signaling device, a plurality of rotative disks; a contact adapted to engage with any of said disks; means to rotate said disks; means to lock said disks from rotation; means to automatically release said disks when said contact is placed in engagement with one of said disks; and means to lock said disks from rotation after one revolution thereof.

5. In a closed circuit signaling device, a plurality of rotative notched disks; a contact adapted to engage with said disks; means to lock said disks from rotation until said contact is placed in engagement with said disks; an external signaling circuit of which said disks and said contact form the terminals; and means to hold said circuit closed around said contact and disks while said disks are locked from rotation.

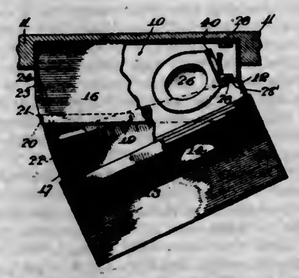
[Claims 6 and 7 not printed in the Gazette.]

882,759. VEHICLE-WHEEL BRAKE. BENJAMIN F. HORNSBY, Grangeville, La. Filed Nov. 9, 1907. Serial No. 401,503.



A brake for vehicle wheels comprising, in combination with a vehicle wheel and box, a hook fastened to the box, a chain having a link intermediate its end engaging said hook, a ring fastened to one end of said chain, a hook fastened to the other end of the chain, said hook having a shank portion designed to normally hold its hook in engagement with said ring, a cord connected to the end of said shank portion, and a pulley over which the cord passes affording means whereby the shank of said hook may be lifted to allow the hook at the end thereof to disengage said ring, as set forth.

882,760. EXTENSIBLE CHAMBER. PHILIP G. HUBERT, Los Angeles, Cal. Filed Aug. 19, 1907. Serial No. 389,133.



1. In a device of the class described, a chamber, a hinged closure for said chamber, a door adapted to close the space between the walls of the chamber and the closure

therefor when the closure is in its open position, a ceiling for said chamber, and a panel attached to the top of said closure and extending horizontally from the rear of the same.

2. In a device of the class described, a chamber, closure means for said chamber hinged at one side of the opening thereof, a swinging door hinged to the other side of the opening of said chamber, a ceiling for said chamber, a panel secured to the top of said closure and immediately below said ceiling, said panel extending horizontally from the rear of said closure, and an expansive closure means pivotally secured to said panel.

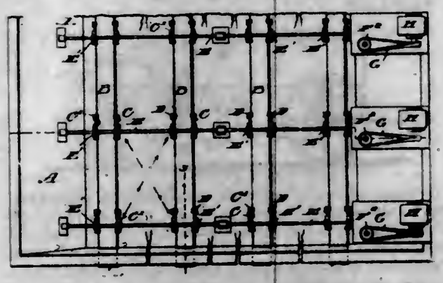
3. In a device of the class described, a chamber, said chamber being provided with rear and side walls and a ceiling, a swinging closure for said chamber comprising an article of furniture pivotally mounted on the front end of one of said side walls, a swinging door pivotally mounted on the front end of the other of said side walls, and a panel attached to the top of said closure and immediately below the chamber ceiling, said panel extending horizontally from the rear of said closure.

4. Extension means for a chamber comprising a hinged closure therefor, and a closure extending horizontally into the chamber from the top of said hinged closure.

5. Extension means for a chamber comprising a hinged closure therefor, a closure extending horizontally into the chamber from the top of said hinged closure, and a closure between the chamber and the free end of said hinged closure.

[Claims 6 to 12 not printed in the Gazette.]

882,761. RESERVOIR. THOMAS J. JACKSON, Pine Ridge, S. D. Filed Jan. 25, 1908. Serial No. 412,605.



1. A reservoir having upon its bottom or floor a series of approximately parallel drainage conduits having the outlet openings in their sides, the adjacent outlet openings in the several conduits being opposite each other and the openings of the several conduits being arranged in transverse or lateral series, upright valve guides on the opposite sides of the inlet openings, valves movable vertically in said guides and having racks, cross-shafts common to the several valves of their respective series and having pinions meshing with the racks of the said valves, worm wheels on the said cross-shafts, and upright shafts having worms meshing with their respective worm wheels, all substantially as and for the purposes set forth.

2. A reservoir having a series of approximately parallel drainage conduits provided with inlet openings, the inlet openings of the several conduits being arranged in transverse series crossing the reservoir, valves controlling said inlets and arranged in corresponding transverse series, and means common to the valves of the transverse series for operating the same.

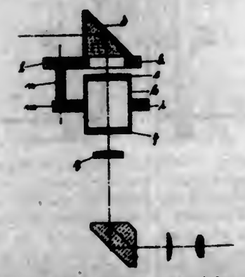
3. The combination of a reservoir, a series of approximately parallel drainage conduits at the bottom thereof and having inlet openings, and valves controlling the same, and arranged in transverse or laterally extending series, and means common to the several valves of the transverse series for operating said valves as and for the purpose set forth.

4. A reservoir having upon its bottom drainage conduits provided in their upright sides with inlet openings through which water, sediment and the like may enter such conduits, and valves controlling said inlet openings, substantially as set forth.

5. A reservoir having upon its floor or bottom a series of approximately parallel drainage conduits provided in their upright sides with inlet openings through which water may enter said conduits, the inlet openings of the several conduits being arranged in transverse or laterally extending series, valves controlling said openings, and means common to the several valves of the transverse series for operating said valves, substantially as set forth.

[Claims 6 and 7 not printed in the Gazette.]

882,762. PANORAMIC TELESCOPE. HEINRICH JACOB, Steglitz, near Berlin, Germany, assignor to The Firm of Optische Anstalt C. P. Goerz Aktiengesellschaft, Friedenau, near Berlin, Germany. Filed July 16, 1907. Serial No. 383,958.



1. An image-reversing system comprising a plurality of optical systems adapted to focus pencils of parallel rays in a single line, said optical systems being arranged in pairs in such relation to each other that the focal lines of each pair coincide with each other.

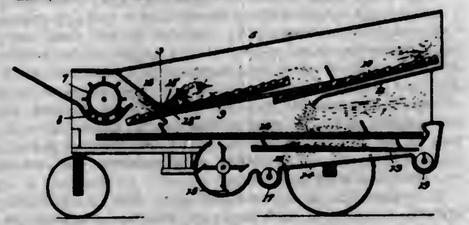
2. An image-reversing system comprising at least one pair of cylindrical lenses the lenses of each pair being placed relatively to each other in such a manner that their focal lines coincide with each other.

3. An image-reversing system comprising at least one pair of cylindrical lenses, the lenses of each pair having the same focal length and being placed relatively to each other in such a manner that their focal lines coincide with each other.

4. In a panorama-telescope a rotatable receiving reflector and an image-reversing system inserted in the ray-path of the instrument and coupled to said reflector, the image-reversing system comprising at least one pair of optical systems adapted to focus in a single line pencils of parallel rays.

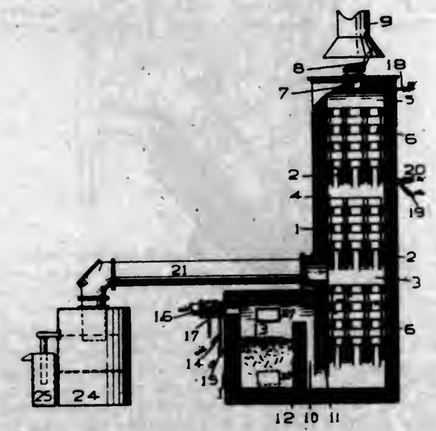
5. In a panorama-telescope a rotatable receiving reflector and at least one pair of cylindrical lenses inserted in the ray-path of the instrument and so coupled with the receiving reflector that they move at half the angular speed of the reflector, the elements of each pair of cylindrical lenses being so placed opposite each other that their focal lines coincide.

882,763. THRESHING-MACHINE. GEORGE KLEIN, Medina, N. D. Filed June 6, 1907. Serial No. 377,526.



The combination in a threshing machine, of a frame and casing, the threshing cylinder and concave, and the reciprocating straw carrier having a serrated working surface, and a deflecting plate having a bent upper edge whereby it is secured to the frame, an inclined surface facing the threshing mechanism, and the lower edge curved to form a convex surface engaging the straw etc., as it is pulled away from the cylinder, whereby the upper portion of the threshed material is slightly retarded by the convex edge of the deflector while the lower portions thereof are pulled away by the serrated surface of the carrier to permit the escape of the grain.

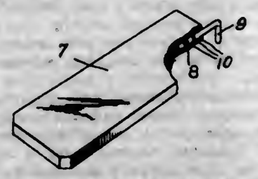
882,764. PROCESS OF MAKING GAS. LEON P. LOWE, San Francisco, Cal. Filed Aug. 23, 1905. Serial No. 275,336.



1. The process of manufacturing gas which consists in passing products of combustion of oil and air entirely through a chamber containing loosely piled refractory material, to highly heat said refractory material then excluding the air and passing the oil partly through the chamber and the refractory material therein in the same direction as in the heating stage, and simultaneously passing steam and oil through the chamber and the refractory material in the opposite direction and drawing off the generated gases together, substantially as described.

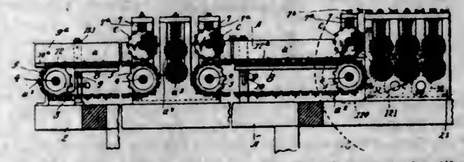
2. The process of manufacturing gas which consists in passing products of combustion of oil and air entirely through a chamber containing loosely piled refractory material, to highly heat said refractory material then excluding the air and passing the oil partly through the chamber and the refractory material therein in the same direction as in the heating stage, and simultaneously passing in the opposite direction steam through part of the refractory material to superheat the same, and oil commingled with the steam so superheated through refractory material in the chamber and drawing off the generated gases together, substantially as described.

882,765. ROOFING-TILE. MICHAEL MARTE, East Syracuse, N. Y. Filed Apr. 13, 1907. Serial No. 368,017.



A roofing tile formed of baked clay and provided with a single attaching member having its stem portion embedded in the upper end of the tile during the molding process and prior to the firing of the clay, said member having a laterally bent upper end adapted to form a hook for engagement with the slating-bars of the roof, the embedded portion of said member being provided with spurs to prevent its withdrawal from the tile.

882,766. DECORTICATING APPARATUS. THOMAS E. MITCHELL and THOMAS H. TOMBYLL, Montreal, Quebec, Canada, assignors to Louis Ovide Grothe, trustee, Montreal, Canada. Filed July 19, 1906. Serial No. 326,950.



1. In an apparatus for decorticating flax and the like the combination with means for simultaneously feeding and combing the flax, of a pair of parallel traveling crushing or breaking members with their adjacent sides moving in the same direction and presenting a plurality of axial edges, a pair of parallel traveling stripping members with their adjacent sides moving in the same direction and presenting a plurality of axial edges, stripping members having a greater speed than the crushing or breaking members for the purpose of expelling the woody matter from the flax and the like, the stripping members being in close contiguity to the crushing or breaking members and receiving the flax or the like directly therefrom, and the first mentioned pair of parallel traveling crushing or breaking members being in close contiguity to and receiving the combed flax directly from the feeding and combing means.

2. A decorticating apparatus consisting of a sequence comprising a feeding and combing device, a series of groups of axially corrugated rolls, a series of pairs of webs presenting a plurality of transverse projecting edges and the edges of one of the webs of each pair being intercurrent with the edges of the other, the said groups of rolls and pairs of webs alternating and being in close contiguity and in direct communication with one another and the first member of the said series being in direct communication with the combing and feeding device.

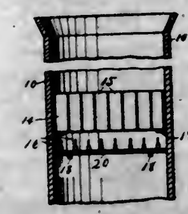
3. A decorticating apparatus consisting of a sequence comprising a feeding and combing device, a series of groups of axially corrugated rolls, a series of pairs of webs presenting a plurality of transverse projecting edges and the edges of one of each pair being intercurrent with the edges of the other, the said groups of rolls and pairs of webs alternating and being in close contiguity and in direct communication with one another, each group and pair traveling at a greater speed than the group or pair following it and the first member of the said series being in direct communication with the combing and straightening device.

4. A decorticating apparatus consisting of a sequence comprising a series of groups of axially corrugated rolls a series of pairs of webs presenting a plurality of transverse projecting edges and the edges of one of the webs of each pair interdigitating with the edges of the other, the said groups of rolls and pairs of webs alternating and being in close contiguity and in direct communication with one another, and means for condensing the decorticated matter into a sliver.

5. A decorticating apparatus consisting of a sequence comprising a series of groups of axially corrugated rolls, a series of pairs of webs presenting a plurality of transverse projecting edges and the edges of one of each pair interdigitating with the edges of the other, the said groups of rolls and pairs of webs alternating and being in close contiguity and in direct communication with one another, each group and pair traveling at a greater speed than the group or pair following it, and means for condensing the decorticated matter into a sliver.

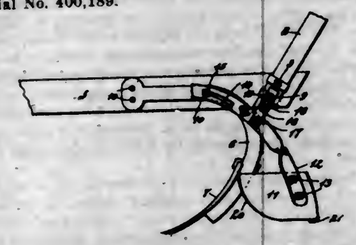
[Claims 6 and 7 not printed in the Gazette.]

882,767. SMOKE-CONSUMER. MICHAEL V. MORAN and JAMES S. DONOHUE, Washington, D. C. Filed July 19, 1907. Serial No. 384,647.



The combination with a smoke-stack, of a plurality of flues having parallel sides and extending across said stack, the openings of said flues being in line with the draft of said stack, steam pipes between the fire box and said flues, nipples on said pipes, one for each of said flues and directed towards the entrance of said flues, said nipple having a terminal, and also lateral perforations, for the purposes specified.

882,768. SIDING ATTACHMENT FOR PLOWS. ANDREW T. MCILWAIN, Abbeville, S. C. Filed Nov. 1, 1907. Serial No. 400,189.



1. An attachment for plows comprising a blade having a slotted shank, a slotted strap extending from the shank, and fastening bolts passing through said slots.

2. An attachment for plows comprising a blade carried thereby and set obliquely with respect to the plow shovel behind the same, the landside edge of said blade extending in a curve toward the lower edge thereof.

882,769. ATTACHMENT FOR SWINGING SCAFFOLDS OR STAGES. WILLIAM B. STOOPS, Coraopolis, Pa., assignor of one-half to George W. Scott and John M. McCabe, Coraopolis, Pa. Filed Apr. 22, 1907. Serial No. 369,502.



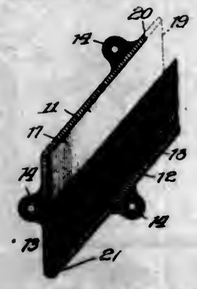
1. In combination with an outrigger for a swinging scaffold or stage, a stirrup iron attached thereto, a pulley block, means for connecting said block to said stirrup iron and means for locking said block and stirrup iron to prevent rocking or swinging at said connection, as described.

2. In combination with an outrigger for a swinging scaffold or stage, a stirrup iron having a slot or elongated opening at the top, a pulley having means comprising parallel bars projecting therefrom, openings formed in said bars and removable pins arranged in said openings to engage with the slot of the stirrup iron, whereby a rigid and non-swinging connection is made between said block and stirrup iron, as described.

882,770. PROCESS OF FORMING HYGIENIC METALLIC ENDS ON CIGARS AND THE LIKE. ANNE A. VAN DER MEULEN, Amsterdam, Netherlands. Filed Aug. 19, 1907. Serial No. 389,093.

A process of treating cigars which consists in dissolving pure para rubber in benzin in the proportion of 75 grams rubber to 3 liters benzin, adding talc powder, benzin and aluminium powder in proportion of 50, 40 and 20 grams respectively, stirring the mixture, dipping the cigars point downward therein, and finally drying the same, whereby a coating of microscopic thinness is produced having substantially the ornamental and hygienic qualities of aluminium foil.

882,771. TICKET-HOLDER. EDMUND Z. WILKOSHESKY, Chicago, Ill. Filed Nov. 8, 1907. Serial No. 401,248.



1. A ticket-holder comprising a casing consisting of a side having parallel oblique flanges extending laterally from opposite edges and a perpendicular inner-end flange, said flanges extending at right-angles to the casing-side, the casing being adapted to be secured in inclined position against an inner side of a mail-receptacle and cause its inner-end to extend vertically in said receptacle, for the purpose set forth.

2. A ticket-holder comprising a casing consisting of a side having parallel oblique flanges extending laterally from opposite edges and a perpendicular inner-end flange joining said edge-flanges and extending at a right-angle thereto, the opposite side of the casing being open whereby said casing is adapted to be secured in inclined position with its open side against an inner side of a mail-receptacle and cause its inner-end to extend vertically in said receptacle, for the purpose set forth.

3. A ticket-holder comprising a casing consisting of a side having parallel oblique flanges extending laterally from opposite edges and a perpendicular inner-end flange with an opening in the lower oblique flange near its inner end, said flanges extending at right-angles to the casing-side and being provided with ears and the opposite side of the casing being open, whereby said casing is adapted to be secured at said ears in inclined position with its open side against an inner side of a mail-receptacle and cause its inner-end to extend vertically in said receptacle, for the purpose set forth.

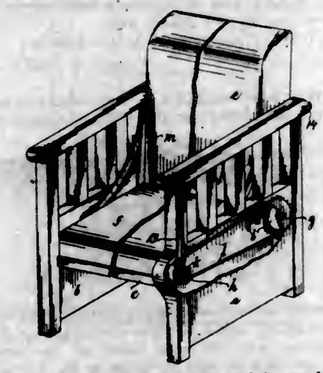
4. A ticket-holder comprising a casing consisting of a side having parallel oblique flanges extending laterally from opposite edges and a perpendicular inner-end flange, said lower oblique flange projecting at its outer end beyond the adjacent edge of said casing-side, the opposite side of the casing being open, whereby said casing is adapted to be secured in inclined position with its open side against an inner side of a mail-receptacle and cause its inner end to extend vertically in said receptacle, for the purpose set forth.

5. A ticket-holder comprising a casing consisting of a side having parallel oblique flanges extending laterally from opposite edges and a perpendicular end-flange extending at a right-angle thereto, with a recess in the outer end of the upper oblique flange, said flanges extending at right-angles to the casing-side, and the opposite side of the casing being open and adapted to be secured in inclined position with its open side against an inner

side of a mail-receptacle and cause its inner end to extend vertically in said receptacle, for the purpose set forth.

[Claim 6 not printed in the Gazette.]

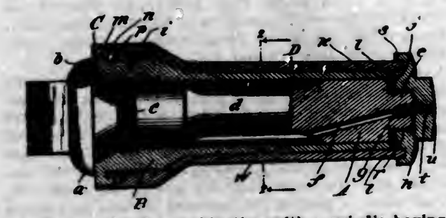
882,772. COMBINATION FURNITURE. THOMAS J. YOUNG, New York, N. Y. Filed June 3, 1907. Serial No. 376,935.



1. In a combined bed and couch and in combination, a frame, a seat section pivoted forward in the frame, a back section pivoted at its lower end in the said frame, and devices connected to the said pivotal points and also connected together for simultaneous action, whereby the seat section is turned over and outwardly and back section turned downwardly.

2. In a combined bed and couch and in combination, end members, connecting members extending between and connected to said end members, a back section and a seat section, trunnions secured in the said back section, bearings to receive the same in the said frame end members, trunnions secured in the said seat section, bearings to receive the same in the said frame end members, sprockets secured on the said trunnions within the frame end members and chains running over the said sprockets and operating within the said frame end members to cause the shifting of one of the said sections to effect the simultaneous shifting of the other section, the relation of the said sprockets being such that in shifting the seat section through an angle of 180° effects a movement of the back section from its upright to its horizontal position and vice versa.

882,773. AXLE. ERVIA P. ZAHNTER and JACOB KUNZMANN, Highland, Cal. Filed June 11, 1907. Serial No. 378,457.



1. In an axle, the combination with a spindle having a shoulder at its inner end and a thread adjacent to said shoulder and also having a reduced and threaded outer end; of a skein removably arranged on the spindle and having an interior thread to engage the inner thread of the spindle and also having an inwardly-directed and threaded flange at its outer end engaging the reduced and threaded outer end of the spindle.

2. The combination in an axle, of a spindle having a shoulder at its inner end, in which is a key seat, and a thread adjacent to said shoulder, and also having a reduced and threaded outer end, a skein removably arranged on the spindle and having an interior thread to engage the inner thread of the spindle, and an inwardly-directed and threaded flange at its outer end engaging the reduced and threaded outer end of the spindle, and also having a key seat in its inner end opposed to that of the collar, and a key removably arranged in the opposed key-seats in the collar and skein.

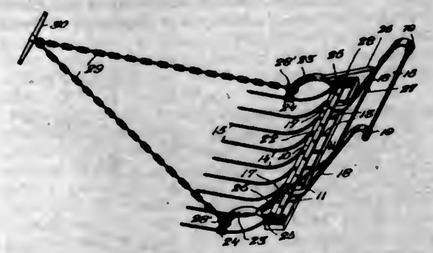
3. The combination of an axle spindle having a shoulder at its inner end and a thread adjacent to said shoulder and also having a reduced and threaded outer end, a skein removably arranged on the spindle and having an interior thread to engage the inner thread of the spindle, and an inwardly-directed and threaded flange at its outer end engaging the reduced and threaded outer end of the spindle, and also having an outwardly-directed circular flange on its inner portion, a hub box arranged on and projecting beyond the outer end of the skein and having a circular groove in its inner end receiving the circular flange of the skein, and a nut mounted on the reduced outer end of the spindle and having a circular groove in its inner side receiving the projecting portion of the box.

882,774. FIREPROOF PAINT. PHILIP F. APPEL, Seattle, Wash., and RALPH L. EARNEST, Portland, Oreg. Filed July 27, 1907. Serial No. 385,767.

1. A fireproof paint consisting of gypsum and magnesite, iron carbonate, and iron oxid, and an aqueous solution of magnesium chlorid.

2. A fireproof paint consisting of gypsum and magnesite in equal parts, iron carbonate, and iron oxid, and an aqueous solution of magnesium chlorid.

882,775. COMBINED SCRAPER AND CONVEYER. LORENZ ARMS, Wimbledon, N. D. Filed Aug. 2, 1907. Serial No. 386,724.



1. An agricultural implement for the purpose described, comprising tines, a handle fixed with respect to the tines and provided with portions arranged to form runners when the implement is inverted, and a draft connection arranged in one position of the implement to extend forward from points above the tines and in the other position of the implement to extend forward from points below the tines.

2. An agricultural implement comprising a beam, a plurality of tines carried thereby, a handle, and common means for retaining the tines and handle in engagement with said beam.

3. An agricultural implement comprising a beam, a plurality of tines carried thereby, a handle, common means for retaining the tines and handle in engagement with said beam, and a draft connection.

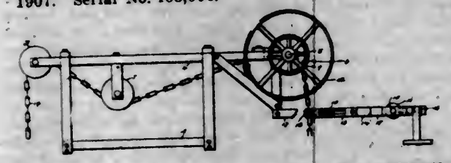
4. An agricultural implement comprising a beam, a plurality of tines carried thereby, and a strap for securing both the tines and handle to said beam.

5. An agricultural implement comprising a beam, a plurality of tines projecting from one portion thereof, a handle projecting from its other portion, said tines being provided with means upon which the implement may be rocked and also forming runners, and said handle being provided with a portion which forms runners when the implement is reversed, and a draft connection carried by said imple-

ment, said draft connection being provided with means whereby it automatically adjusts itself to the implement when said implement is used in either of its positions.

[Claims 6 to 10 not printed in the Gazette.]

882,776. MACHINE FOR GALVANIZING CHAIN. EZRA C. BULL, Naugatuck, Conn., assignor of one-half to Charles E. Graham, West Haven, Conn. Filed Nov. 20, 1907. Serial No. 403,004.

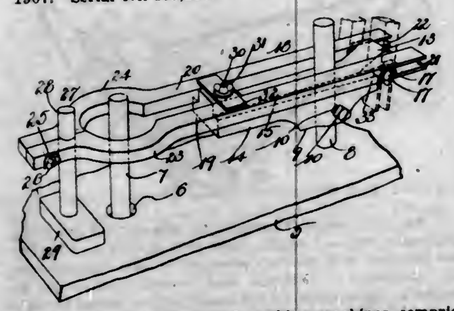


1. In a machine for galvanizing chain, the combination with a frame, rollers supported thereby including a drawing roller, an eye arranged below the drawing roller, and means for moving the eye transversely to the movement of the chain substantially as described.

2. In a machine for galvanizing chain, the combination with roller supporting frames, of rollers mounted therein including a drawing roller, means for driving said drawing roller, a slide arranged below the drawing roller and carrying an eye, and means for moving the eye back and forth in a horizontal plane, substantially as described.

3. In a machine for galvanizing chain, the combination with a frame supporting longitudinal bars, three rollers supported thereby, means for driving one of said rollers, a transversely movable eye arranged below the driven roller, a slide by which the said eye is carried, a crank connected with said slide, and means for driving said crank.

882,777. PRESSER-FOOT FOR IRREGULAR MOLDERS. JOHN C. BURCHILL, Jamaica Plain, Mass. Filed Dec. 5, 1907. Serial No. 405,150.



1. A presser foot for wood working machines comprising in its construction a bracket adapted to be fastened to a standard, a horizontal pivot on said bracket, a presser arm pivoted thereto and adjustable longitudinally thereon, and a presser block fast to said presser arm.

2. A presser foot for wood working machines comprising in its construction a bracket adapted to be fastened to a standard, a horizontal bolt constituting a pivot fast to said bracket, a presser arm in two parts pivoted to and fastened together by said bolt, a presser block, and a clamp-bolt adapted to clamp said presser block between said parts.

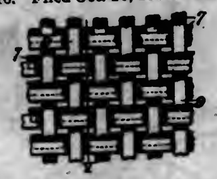
3. A presser foot for wood working machines comprising in its construction a bracket adapted to be fastened to a standard, a horizontal pivot on said bracket, a presser arm pivoted thereto, and a presser block fast to said presser arm, said bracket having a shoulder thereon forming a stop against which said arm may rest when in a substantially vertical position.

4. A presser foot for wood working machines comprising in its construction a bracket adapted to be fastened to a standard, a horizontal pivot on said bracket, a presser arm pivoted thereto, a presser block fast to said presser arm, a horizontally extending arm on said bracket, a clamp-plate, and a bolt on said bracket arm, whereby said presser block is pressed against the work.

5. In a wood working machine, a vertical standard, a bracket rotatably mounted on said standard and adjustable longitudinally thereof, a horizontal pivot on said bracket, a presser arm mounted on said pivot, and a presser block fast to said presser arm.

[Claims 6 and 7 not printed in the Gazette.]

882,778. WINDOW-SCREEN. FREDERICK BURCKHARDT, St. Charles, Mo. Filed Oct. 10, 1907. Serial No. 396,784.



1. A window screen comprising a stationary screen having flat wire fabric, and a movable screen having flat wire fabric opposing said flat wire fabric of the stationary screen and shiftable to close the mesh in the flat wire fabric therein.

2. A window screen comprising a stationary screen containing flat wire fabric having a flat face, and a movable screen containing flat wire fabric having a flat face opposing the flat face of the flat wire fabric of the stationary screen; said movable screen being shiftable to close the mesh in the flat wire fabric of the stationary screen.

3. A window screen comprising a stationary screen containing flat wire fabric, and a movable screen containing flat wire fabric and opposing said flat wire fabric of the stationary screen; said movable screen being shiftable to close the mesh in the flat wire fabric of said stationary screen.

4. A window screen comprising a casing, a screen having flat wire fabric and secured to said casing, and a second screen having flat wire fabric and movably mounted in said casing and shiftable to close the mesh of the flat wire fabric in said first named screen.

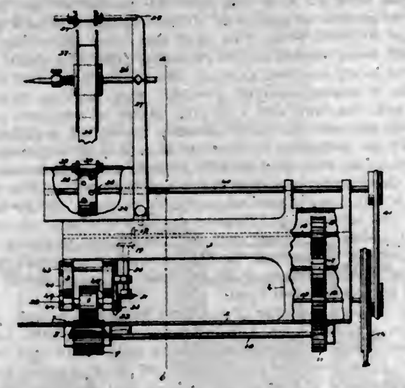
5. A window screen comprising a casing, a screen having flat wire fabric and secured to said casing, a second screen having flat wire fabric and movably mounted in said casing and shiftable to close the mesh of the flat wire fabric in said first named screen, and means for moving said second screen, substantially as set foth.

[Claims 6 to 11 not printed in the Gazette.]

882,779. MACHINE FOR APPLYING STRIPS OF TAPE TO FABRIC. RAYMOND E. DODGE, Derby, Conn., assignor of one-half to Cyrus Brewster, Derby, Conn. Filed Jan. 2, 1908. Serial No. 408,949.

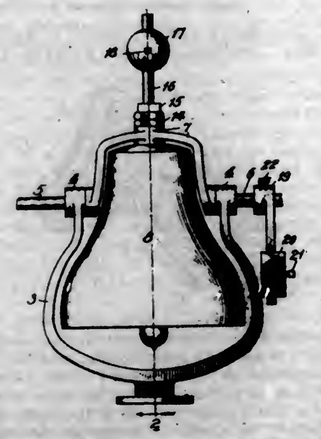
1. In a machine for applying strips of tape to fabric comprising a table, an upper arm, a depending foot carried by the outer end of said arm, a feed roll mounted therein, a lower shaft beneath the table, and a feed roll carried thereby in line with the upper feed roll, an upper shaft, means for driving the upper and lower shafts, connections with the upper shaft for driving the upper roll, a paste tank, a pasting roll mounted therein, and means for supporting a roll of tape and conducting the same over the face of the pasting roll and between the said feed rolls, substantially as described.

2. In a machine for applying strips of tape to fabric comprising a table, an upper arm, a depending foot carried by the outer end of said arm, a feed roll mounted therein, a lower shaft beneath the table and a feed roll carried thereby in line with the upper feed roll, an upper shaft extending through the upper arm, means for driving the upper and lower shafts, connections with the upper shaft for driving the said upper roll, a paste tank, a pasting roll mounted therein and formed in its face with paste pockets, means for driving said pasting roll, an upright post having cross-arms, idler rolls carried by said arms, idlers carried by the upper edge of said paste tank, a roll of tape mounted above the tank and adapted to be passed over the pasting roll and between the feed rolls, substantially as described.



3. A machine for applying strips of tape to fabric, comprising a table, an upper arm, a depending foot carried by the outer end of said arm, a feed roller supported in said foot, a bell crank lever pivoted to the foot and having an arm projecting beneath the shaft of the upper roller, an eccentric for turning the said bell crank lever, means for driving said feed rolls, and means for applying paste to the face of the strip and conducting the pasted strip to the feed rolls, substantially as described.

882,780. SWINGING BELL. WILLIAM P. ELLIOTT and WILLIAM P. ELLIOTT, Jr., La Grange, Ill. Filed July 26, 1907. Serial No. 385,677.

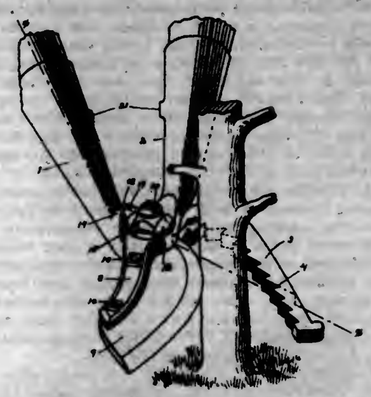


1. In combination with a swinging bell provided with trunnions, a crank-arm on a trunnion thereof and provided with a weight, for the purpose set forth.

2. In combination with a swinging bell provided with trunnions, a crank-arm adjustably secured on one of the trunnions thereof and provided with a weight, for the purpose set forth.

3. In combination with a swinging bell provided with trunnions, a crank-arm adjustably secured on a trunnion thereof, and a weight adjustably secured on said arm, for the purpose set forth.

882,781. PRUNING IMPLEMENT. WILLIAM H. GERFIN, East Petersburg, Pa. Filed Nov. 15, 1907. Serial No. 402,286.

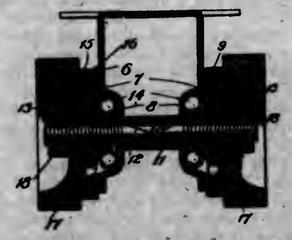


1. As an article of manufacture, a pruning implement, consisting of two pivoted jaws; one jaw provided with a grasping edge and the other jaw with a cutting edge: a pivot-boss extending upward from the grasping jaw member: a pivot-socket formed in the cutting jaw member and embracing the pivot-boss upon said grasping member: a washer slotted upon its upper surface and formed with a recess upon its lower surface, and provided with an extending lug: stop-lugs formed upon the handle-socket of the grasping member and engaging the lug of said washer, and means for retaining said washer in place, as set forth.

2. As an article of manufacture, a pruning implement, consisting of two pivoted jaws, a pivot-socket formed in one jaw, embracing and pivoted upon a boss formed upon the other jaw: a washer formed with a recess in its lower surface, said recess bearing upon the projecting top of said pivot-boss, and means for securing said washer in place.

3. As an article of manufacture, a pruning implement, consisting of two jaws, a cutting jaw and a grasping jaw, one pivoted upon the other, a pivot-boss upon one jaw working within a pivot-socket contained within the other jaw: a washer formed with a recess in its lower surface, embracing the top of said pivot-boss, and an extending lug engaged by stop-lugs formed upon the handle of said grasping jaw: a pivot bolt and a nut engaging the same, a nut-cap formed with a recess in its under surface and an orifice vertically through its center, adapted to slip over the end of the pivot-bolt and nut and be securely held within the sides of the recess in said washer, and a lock nut on the bolt for securing the nut-cap for the purpose set forth.

882,782. ROLLER-SKATE. THOMAS J. HRUBY, Chicago, Ill. Filed Dec. 9, 1907. Serial No. 405,679.



1. In a ball-bearing roller-skate, the combination of a support connected with the foot-plate, cones on said support opening outwardly, an axle extending through said cones and carrying cones beyond said first-named cones

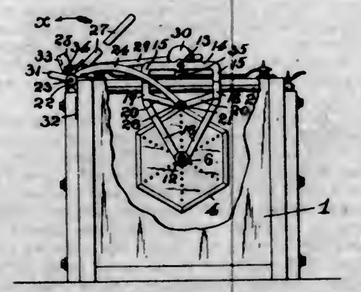
between which and the cones on the axle the balls forming the bearings are confined, and rollers fixed on the axle to rotate therewith.

2. In a ball-bearing roller-skate, the combination of a support connected with the foot-plate and provided with openings extending transversely of the skate, dish-shaped cones provided with circumferential flanges fitting in the openings in said support to open outwardly with their flanges fitting flatwise against the supports, an axle extending through said cones, cones carried by the axle beyond said first-named cones between which and the cones on the axle the balls forming the bearings are confined, and rollers fixed on the axles beyond the cones.

3. In a ball-bearing roller-skate, the combination of two depending brackets formed integrally with the foot plate and having openings in their lower end-portions, dish-shaped cones fitting in said openings to open outwardly and provided with flanges about their circumferences fitting flatwise against said brackets, an axle extending through said cones, cones carried by the axle beyond said first-named cones between which and the cones on the axle the balls forming the bearings are confined, and rollers fixed on the axle beyond the cones.

4. In a ball-bearing roller-skate, the combination of a support connected with the foot-plates, cones on said support opening outwardly, an axle extending through said cones, and rollers fixed on the shaft and provided with cones formed integrally with the rollers between which said last-mentioned cones and the cones on the support the balls forming the bearings are confined.

882,783. BASKET RAISING AND LOWERING DEVICE FOR ELECTROPLATING APPARATUS. WILLIS R. KING, Newark, N. J., assignor to The Hanson & Van Winkle Company, a Corporation of New Jersey. Filed Sept. 13, 1906. Serial No. 334,405.



1. In an apparatus of the kind described, a tank provided with an open top, bearings secured at the upper front portion of said tank, a shaft mounted in said bearings, a lever secured to said shaft for oscillating the same, arms secured to and extending from said shaft, said arms being provided at their free end-portions with bearings, a suspension-frame provided with journals mounted in said bearings, and a dipping basket or container rotatably mounted in said suspension frame, all arranged so that the oscillatory movements of said shaft will radially swing said arms and produce a rapid swinging movement of the dipping basket or container from within the tank to a point above and substantially in front of the tank, or vice versa, from in front of the tank to within the tank, substantially as and for the purposes set forth.

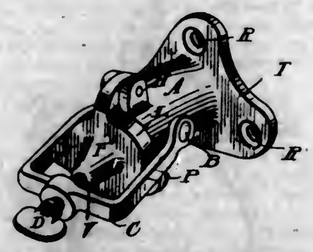
2. In an apparatus of the kind described, a tank provided with an open top, bearings secured at the upper front portion of said tank, a shaft mounted in said bearings, a lever secured to said shaft for oscillating the same, arms secured to and extending from said shaft, said arms being provided at their free end-portions with bearings, a suspension-frame provided with journals mounted in said bearings, and a dipping basket or container rotatably mounted in said suspension frame, all arranged so that the oscillatory movements of said shaft will radially swing said arms and produce a rapid swinging movement of the dipping basket or container from within the tank to a point above and substantially in front of the tank, or vice versa, from in front of the tank to within the tank, substantially as and for the purposes set forth.

3. In an apparatus of the kind described, a tank provided with an open top, bearings secured at the upper front portion of said tank, a shaft mounted in said bearings, a lever secured to said shaft for oscillating the same, arms secured to and extending from said shaft, said arms being provided at their free end-portions with bearings, a suspension-frame provided with journals mounted in said bearings, and a dipping basket or container rotatably mounted in said suspension frame, all arranged so that the oscillatory movements of said shaft will radially swing said arms and produce a rapid swinging movement of the dipping basket or container from within the tank to a point above and substantially in front of the tank, or vice versa, from in front of the tank to within the tank, and means connected with said shaft for retaining the suspension frame and the dipping basket or container in their raised positions above the tank, substantially as and for the purposes set forth.

4. In an apparatus of the kind described, a tank, provided with an open top, bearings secured at the upper front portion of said tank, a shaft mounted in said bearings, a lever secured to said shaft for oscillating the same, arms secured to and extending from said shaft, said arms being provided at their free end-portions with bearings, a suspension-frame provided with journals mounted in said bearings, and a dipping basket or container rotatably mounted in said suspension frame, all arranged so that the oscillatory movements of said shaft will radially swing said arms and produce a rapid swinging movement of the dipping basket or container from within the tank to a point above and substantially in front of the tank, or vice versa, from in front of the tank to within the tank, a rod extending from said shaft, and a counterweight on said rod, substantially as and for the purposes set forth.

5. In an apparatus of the kind described, a tank provided with an open top, bearings secured at the upper front portion of said tank, a shaft mounted in said bearings, a lever secured to said shaft for oscillating the same, arms secured to and extending from said shaft, said arms being provided at their free end-portions with bearings, a suspension-frame provided with journals mounted in said bearings, and a dipping basket or container rotatably mounted in said suspension frame, all arranged so that the oscillatory movements of said shaft will radially swing said arms and produce a rapid swinging movement of the dipping basket or container from within the tank to a point above and substantially in front of the tank, or vice versa, from in front of the tank to within the tank, a rod extending from said shaft, and a counterweight on said rod, and means connected with said shaft for retaining the suspension frame and the dipping basket or container in their raised positions above the tank, substantially as and for the purposes set forth.

882,784. DRAINAGE-VALVE. ANTON V. KNOLL, Davenport, Iowa. Filed May 18, 1906. Serial No. 317,443.

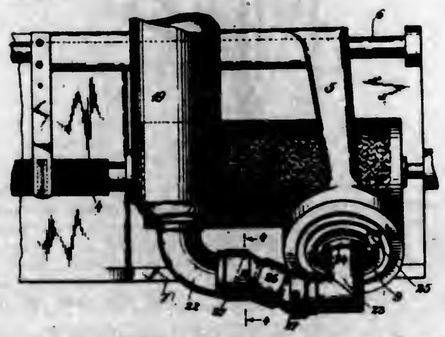


1. The combination with a faucet-barrel provided with a plane face a hinged gate fitted against said face, an open frame trunnioned on opposite sides of the barrel straddling the front part of the barrel, a set screw in the frame pressing the gate against the face of the barrel, shoulders on gate adapted to arrest the descent of the frame when the gate shall be fully closed, substantially as set forth.

2. The combination with a faucet-barrel provided with a plane face a hinged gate fitted against said face, a clamp trunnioned on opposite sides of the barrel and extending across the face of the barrel, a forwardly extending set screw in the clamp adapted to press the gate against the face of the barrel, a metallic tip on the gate adapted to engagement with the set screw, shoulders on the gate adapted to arrest the descent of the clamp, substantially as described.

3. The combination with a faucet-barrel provided with a plane face, a hinged gate fitted against said face, a clamp trunnioned on opposite sides of the barrel and extending across the face of the barrel when the valve is in a closed position, a set screw in the front of the clamp, a raised metallic tip centrally disposed on the outer surface of the gate and adapted to receive the set screw, shoulders on the gate adapted to arrest the descent of the clamp, a gasket interposed on the inner portion of the gate, a stem adapted to connect the gasket to the gate, a gasket seat at the inlet end of the barrel, a flange provided with a plurality of apertures adapted to secure the faucet to a vessel, substantially as described.

882,785. TALKING-MACHINE. THOMAS KRAEMER, Philadelphia, Pa., assignor to Hawthorne & Sheble Manufacturing Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Oct. 7, 1907. Serial No. 396,134.



1. The combination with a talking machine having a motor-box, a holder for a cylindrical sound-record mounted above the top of the box, means for rotating the holder, and a reproducer slidable in a straight line across the record, of a coupling member rising from the box, a horn supported thereby, a tone-arm having one end pivotally connected to said member, and a flexible, tubular, connection consisting of metallic tube sections pivotally connected between the free end of said tone-arm and said reproducer, substantially as set forth.

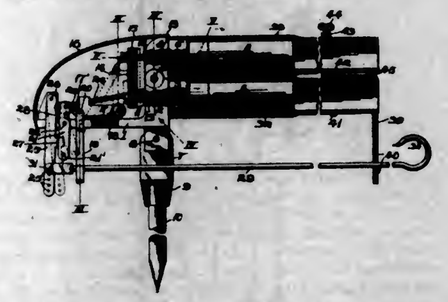
2. The combination with a talking machine having a motor-box, a holder for a cylindrical sound-record mounted above the top of the box, means for rotating the holder, and a reproducer slidable in a straight line across the record, of a coupling member having an opening therethrough rising from said box, a horn mounted thereon, a vertically disposed pin on said coupling member, a tone-arm pivotally mounted on said pin in communication with said horn through the opening in the coupling member, and a flexible, tubular connection consisting of metallic tube sections pivotally connected between the free end of said tone-arm and said reproducer, substantially as set forth.

3. The combination with a talking machine having a motor-box, a holder for a cylindrical sound-record mounted above the top of the box, means for rotating the holder, and a reproducer slidable in a straight line across the record, of a coupling member secured to the box and rising therefrom, a horn supported thereby, a horizontally disposed tone-arm pivotally connected to the coupling member, a flexible tubular connection consisting of metallic tube-sections pivotally connected between the free end of the tone-arm and said reproducer, and means for clamping the end of one of said sections to said reproducer, substantially as set forth.

4. The combination with a talking machine having a motor-box, a holder for a cylindrical sound-record mounted above the top of the box, means for rotating the holder, and a reproducer slidable across the record, of a coupling member secured to the box and rising therefrom, a horn supported thereby, a tone-arm pivotally connected to the coupling member, a metallic tubular member secured to the reproducer, and a second metallic tubular member pivotally connected at its ends to one end of the first-named tubular member and to the free end of said tone-arm, substantially as set forth.

5. The combination with a talking machine having a motor-box, a holder for a cylindrical sound-record mounted above the top of the box, means for rotating the holder, and a reproducer slidable across the record, of a coupling member secured to the box and rising therefrom, a horn supported thereby, a tone-arm pivotally connected to the coupling member, and a metallic tubular connection between the free end of the tone-arm and the reproducer, said connection having two universal joints therein, substantially as set forth.

882,786. TRAP-GUN. CHARLES D. LOVELACE, San Angelo, Tex. Filed Aug. 1, 1907. Serial No. 386,582.



1. In a trap gun, the combination of a breech provided with a breech block, a barrel attachable to said breech block, a firing pin movable in said breech block, a spring actuated hammer supported by said breech, a pull arm pivoted to said hammer and extending through said breech, a trigger arranged for engagement with said hammer, means whereby said trigger may be actuated, and a housing inclosing said hammer and a portion of said trigger which engages said hammer, substantially as set forth.

2. In a trap gun, the combination of a breech provided with a breech block, a barrel attachable to said breech block, a firing pin operable in said breech block, a spring actuated hammer for operating said firing pin and which is provided with a prong, a trigger pivoted to said breech and having a sear adapted to engage the prong of said hammer, a pull arm pivoted to said hammer and extending through said breech, means whereby said trigger may be actuated, and a housing inclosing said hammer and the sear carrying portion of said trigger, substantially as set forth.

3. In a trap gun, the combination of a breech having a breech block, a barrel attachable to said breech block, a firing pin operable in said breech block, a spring actuated hammer supported by said breech, means whereby said hammer may be retracted, a trigger pivoted to said breech and arranged for engagement with said hammer, a trip lever supported by said breech whereby said trigger may be actuated, and a bait rod whereby said trip lever may be actuated, substantially as set forth.

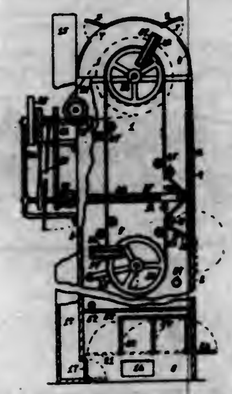
4. In a trap gun, the combination of a breech having a breech block, a barrel attachable to said breech block, a firing pin operable in said breech block, a spring actuated hammer supported by said breech, means whereby said hammer may be retracted, a trigger pivoted to said breech and arranged for engagement with said hammer, a trip lever supported by said breech whereby said trigger may be actuated, and a bait rod whereby said trip lever may be actuated; said trip lever being provided with a plurality of key holes permitting attachment of said bait rod thereto at different points, substantially as set forth.

5. In a trap gun, the combination of a breech having a breech block, a barrel attachable to said breech block, a firing pin operable in said breech block, a spring actuated

hammer supported by said breech, means whereby said hammer may be retracted, a trigger pivoted to said breech and arranged for engagement with said hammer, a trip lever supported by said breech whereby said trigger may be actuated, and a bait rod whereby said trip lever may be actuated; said trip lever being provided with means whereby said trigger is actuated upon either a forward or rearward movement of the lever, substantially as set forth.

[Claims 6 to 9 not printed in the Gazette.]

882,787. SMOKE-HOUSE. EDWARD T. MALLOY, Hamilton, Ohio. Filed Dec. 19, 1906. Serial No. 348,624.



1. The combination of wheels, endless chains depending therefrom, a closed receptacle supported between the chains and means for rotating the wheels with the chains.

2. The combination of wheels, endless chains depending therefrom, a perforated closed receptacle supported between the chains, and means for simultaneously rotating the wheels with the chains.

3. The combination of wheels, endless chains depending therefrom, a receptacle provided with a movable bottom and supported between the chains, and means for simultaneously rotating the wheels with the chains.

4. The combination of wheels, endless chains depending therefrom, a receptacle provided with a perforated top and a perforated movable bottom, and supported between the chains, and means for simultaneously rotating the wheels with the chains.

5. The combination of depending endless chains, a receptacle supported thereby and provided with springs, a perforated bottom yieldingly supported on the springs, and means for simultaneously driving the chains.

[Claims 6 to 18 not printed in the Gazette.]

882,788. ELECTRIC FURNACE. ALBERT L. MARSH, Lake Bluff, Ill., assignor to Hoskins Company, Chicago, Ill., a Corporation of Illinois. Filed Sept. 19, 1907. Serial No. 393,730.

1. An electric furnace, the lining of which forms a variable-resistance rheostat constituting the furnace-resister, said lining consisting of contacting bodies of solid electro-conductive material in series, with compressing means for the sections adapted to increase and decrease the pressure-contact between said bodies, for the purpose set forth.

2. An electric furnace, the lining of which forms a variable-resistance rheostat constituting the furnace-resister, said lining consisting of contacting bodies of solid electro-conductive material in series, and a compression-device working against said series of bodies endwise thereof to increase and decrease the pressure-contact between them, for the purpose set forth.

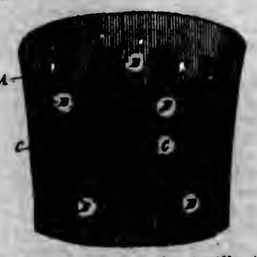
3. An electric furnace, the lining of which forms a variable-resistance rheostat constituting the furnace-resister, said lining consisting of flatwise contacting rings of electro-conductive material and a head of similar material, with compressing means for the lining adapted to increase and decrease the pressure-contact between the sections thereof, for the purpose set forth.



4. An electric furnace having a casing of insulating material provided with a sheathing of metal and the lining of which forms a variable-resistance rheostat constituting the furnace-resister, said lining consisting of a series of flatwise-contacting rings of electro-conductive material and a head of similar material, a cover on said casing and a compression-screw working against said head, for the purpose set forth.

5. In an electric furnace, the combination of a resister composed of a series of contacting rings of solid carbonaceous material forming the furnace-chamber provided with a head of similar material having a terminal-post extending from it, the outer ring of said series having a similar post, said posts affording lead-connections with the resister, a metal-sheathed casing of insulating material inclosing said resister, and through the base of which the terminal-post on said head protrudes, a cover removably secured on said casing and through which the other terminal-post protrudes, legs supporting the furnace, arms depending from the casing, a nut supported by said arms, a screw working in said nut, and a bearing supported to be engaged by said screw and forming a seat for the terminal-post on said head, for the purpose set forth.

882,789. STOCKING-CAP. LILLIAN M. MILLS and HARRY E. MILLS, New York, N. Y. Filed Nov. 7, 1907. Serial No. 401,067.



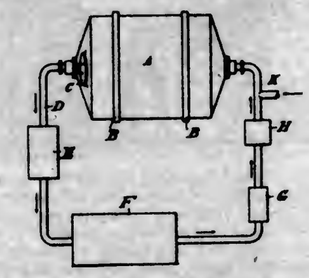
1. A stocking cap consisting of a textile, tubular body, provided with a reinforced portion, and adapted to be folded upon itself so as to surround and embrace the upper end of a stocking leg.

2. A stocking cap consisting of a textile, tubular body, provided with a folding guide-line or weft, and adapted to be folded upon itself so as to surround and embrace the upper end of a stocking leg.

3. A stocking cap consisting of a textile, tubular body, provided with a folding guide-line or weft and with a reinforced portion, and adapted to be folded upon itself so as to surround and embrace the upper end of a stocking leg.

4. A stocking cap consisting of an elastic, textile, tubular body, provided with a light, centrally-disposed guide-line or weft and with reinforced sections alternately disposed on opposite sides of said guide-line, and adapted to be folded upon itself so as to surround and embrace the upper end of a stocking leg.

882,790. METHOD AND APPARATUS FOR PRODUCING CELLULOSE. ALVAR MÜNTZING, Stockholm, Sweden. Filed July 10, 1906. Serial No. 325,550.



1. In a process of manufacturing cellulose by boiling wood or the like, the steps which consist in causing the lye to flow through the boiler, causing the detached fibers to escape from the boiler with the lye, catching the fibers outside the boiler, and causing the lye to run back to the boiler, substantially as and for the purpose set forth.

2. In a process of manufacturing cellulose by boiling wood or the like, the steps which consist in causing the lye to flow through the boiler, causing the fibers detached within the boiler to escape therefrom with the lye, catching the fibers outside the boiler, causing the lye to run back to the boiler, and adding fresh lye to the inflowing lye before used, substantially as and for the purpose set forth.

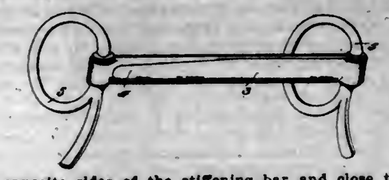
3. In a process of manufacturing cellulose by boiling wood or the like, the steps which consist in causing the lye to flow through the boiler, causing the fibers detached within the boiler to escape therefrom with the lye, catching the fibers outside the boiler by straining the lye, and forcing the lye freed from the fibers back into the boiler, substantially as and for the purpose set forth.

4. In a process of manufacturing cellulose by boiling wood or the like, the steps which consist in placing the wood in the boiler in the shape of blocks, causing the lye to flow through the boiler, causing the fibers detached from the blocks within the boiler to escape therefrom with the outflowing lye, catching the fibers outside the boiler, and forcing the lye freed from the fibers back into the boiler, substantially as and for the purpose set forth.

5. In an apparatus for manufacturing cellulose by boiling wood or the like, the combination of a boiler, a conduit connected to the boiler in such a manner as to allow the lye flowing through the boiler to withdraw therefrom the fibers of cellulose detached during boiling, means for causing the lye to circulate through the boiler and conduit, and a filtering apparatus inserted in the conduit for retaining the fibers, substantially as and for the purpose set forth.

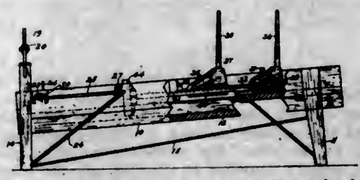
882,791. BRIDLE-BIT. HARRY H. MACNIVEN, Breedsville, Mich. Filed Aug. 3, 1907. Serial No. 386,965.

The herein described bit, consisting of a spring stiffening bar, two strips on opposite sides of said stiffening bar, a one-piece outer strip extending along the outer side of one of the inner strips and bent at intermediate points to form sockets for the rein rings, the ends of said outer strip extending along the outer side of the inner strip and being scarfed and overlapped, and two rows of stitching extending through all of said strips, the said rows being located



on opposite sides of the stiffening bar and close to the latter.

882,792. CHEESE-PRESS. ELMER L. MCKINNON, Sheboygan Falls, Wis. Filed May 2, 1907. Serial No. 371,561.



1. A cheese press, comprising a main frame for holding the cheese and having supports at one end, a presser bar extending across the frame and adapted to engage the cheese, and an inclined bar mounted on the floor and connected with the presser bar so as to be moved by the movements of the main frame for giving continuous pressure to the cheese by reason of the weight of the main frame and its contents.

2. A cheese press, comprising a main frame for holding the cheese and having supports at one end, a presser bar extending across the frame and adapted to engage the cheese, an inclined bar mounted on the floor and connected with the presser bar so as to be moved by the movements of the main frame for giving continuous pressure to the cheese by reason of the weight of the main frame and its contents, and a tie rod connecting the lower part of the inclined rod with the main frame.

3. A cheese press, comprising a main frame for holding the cheese and having supports at one end, a presser bar extending across the frame and adapted to engage the cheese, a link connected to the presser bar, and an inclined bar mounted on the floor and connected with the link so as to be moved by the movements of the main frame for giving continuous pressure to the cheese by reason of the weight of the main frame and its contents.

4. A cheese press, comprising a main frame for holding the cheese and having supports at one end, a presser bar extending across the frame and adapted to engage the cheese, a link connected to the presser bar, a guide on the main frame against which the link bears, and an inclined bar mounted on the floor and connected with the link for giving continuous pressure to the cheese by reason of the weight of the main frame and its contents.

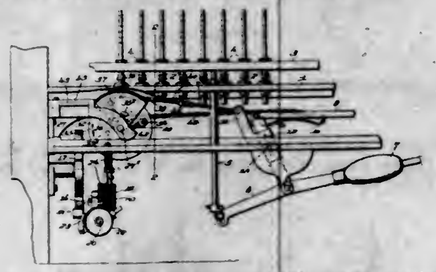
5. A cheese press, comprising a main frame for holding the cheese and having supports at one end, a presser bar extending across the frame and adapted to engage the cheese, a link connected to the presser bar, a roller guide on the main frame against which the link bears, an inclined bar mounted on the floor and connected with the link, and a tie rod connecting the inclined rod with the main frame.

[Claims 6 and 7 not printed in the Gazette.]

882,793. TRAVERSE-MOTION FOR YARN-SPINNING APPARATUS. JONAS NORTHROP, Hopedale, Mass., assignor to Draper Company, Hopedale, Mass., a Corporation of Maine. Filed Feb. 13, 1907. Serial No. 357,116.

1. In apparatus of the class described, a builder-motion, including a builder-arm having a constant stroke, a reciprocating ring-rail, and connections between it and the

builder-arm, including means to effect reciprocation of the ring-rail with a gradually increasing traverse to a predetermined maximum, and thereafter to continue automatically the reciprocation of the ring-rail with a uniform traverse, said connections including means to reduce the speed of the ring-rail at the upper part of its stroke during the period of gradually increasing traverse.



2. In apparatus of the class described, a builder-motion, including a builder-arm having a constant stroke, a reciprocating ring-rail, separate connection between said ring rail and the builder-arm, each connection being operated directly by the latter, one connection including means to effect a uniform traverse of the ring-rail, the other connection including means to effect a gradually increasing traverse of the ring-rail to a predetermined maximum, and a controller to govern automatically the rate of increase in the traverse due to the second-named means.

3. In apparatus of the class described, a builder-motion, including a builder-arm having a constant stroke, means mounted independently of said arm but actuated thereby to effect automatically the formation of a primary winding with a gradually increasing traverse, and thereafter a secondary winding with a uniform traverse, of yarn upon a yarn-receiver, said means including an instrumentality to reduce the speed of the traverse at the upper portion of the stroke during the period of primary winding.

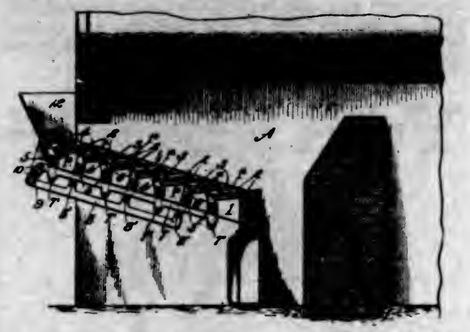
4. In apparatus of the class described, a builder-motion, including an oscillating member having a constant stroke, and separate means each actuated directly by said member to effect through the builder-motion the automatic formation of a primary winding with a traverse gradually increasing from minimum to maximum, and a secondary winding with the maximum traverse, of yarn upon a yarn-receiver.

5. In apparatus of the class described, a builder-motion, including an oscillating member, a single actuating device to impart a constant stroke thereto, and means actuated by and mounted independently of the said member to effect automatically the formation of two successive windings of yarn upon a yarn-receiver, the first winding being laid with a gradually increasing traverse, said means including an instrumentality to intermittingly assume control of and reduce the speed of the traverse during the first winding specified.

[Claims 6 to 34 not printed in the Gazette.]

882,794. FURNACE-GRATE. JOHN J. O'BRIEN, St. Louis, Mo. Filed Oct. 15, 1906. Serial No. 338,999.

1. A furnace grate, comprising bearing bars each formed with a stepped series of ribs, grate-bars mounted upon said ribs, pusher bars of right angle shape in cross section, adapted to slide between the grate-bars, and each having a forwardly extending arm within its angle, a series of rocker rods each having trunnions loosely mounted in the bearing bars, double armed levers fixed to the rocker rods having their upper arms pivotally connected to the arms of the pusher bars, an upper throw bar to which alternate lower arms of the double armed levers are pivotally connected and on which the upper throw bar is supported, a lower throw bar to which the lower arms of the double armed levers, alternating with the first named lower arms are pivotally connected and from which the lower throw bar is suspended, and an actuating device consisting of a rock shaft journaled in the bearing bars, and a double armed lever fixed to the rock shaft and having its upper arm pivotally connected to the upper throw bar and its lower arm pivotally connected to the lower throw bar whereby the alternate pusher bars are made to move simultaneously in opposite directions.



2. A furnace grate comprising bearing bars each formed with a stepped series of L-shaped ribs forwardly inclined, grate bars mounted upon said L-shaped ribs, pusher bars of right angle shape in cross section, adapted to slide between the grate-bars, and each having a forwardly extending arm within its angle, a series of rocker rods each having trunnions loosely mounted in the bearing bars, double armed levers fixed to the rocker rods having their upper arms pivotally connected to the arms of the pusher bars, an upper throw bar to which alternate lower arms of the double armed levers are pivotally connected and on which the upper throw bar is supported, a lower throw bar to which the lower arms of the double armed levers, alternating with the first named lower arms are pivotally connected and from which the lower throw bar is suspended, and an actuating device consisting of a rock shaft journaled in the bearing bars, and a double armed lever fixed to the rock shaft and having its upper arm pivotally connected to the upper throw bar and its lower arm pivotally connected to the lower throw bar whereby the alternate pusher bars are made to move simultaneously in opposite directions.

3. A furnace grate comprising bearing bars, each formed with a stepped series of ribs, grate bars mounted upon said ribs, pusher bars of right angle shape in cross section, adapted to slide between the grate bars, and each having a plurality of forwardly extending arms within its angle, a series of rocker rods each having trunnions loosely mounted in the bearing bars, inner arms fixed to the rocker bars and pivotally connected to the inner forwardly extending arms of the pusher bars, double armed levers fixed to the rocker rods having their upper arms pivotally connected to the outer arms of the pusher bars, an upper throw bar to which alternate lower arms of the double armed levers are pivotally connected and on which the upper throw bar is suspended, a lower throw bar to which the lower arms of the double armed lever, alternating with the first named lower arms are pivotally connected and from which the lower throw bar is suspended, and an actuating device consisting of a rock shaft journaled in the bearing bars, and a double armed lever fixed to the rock shaft and having its upper arm pivotally connected to the upper throw bar and its lower arm pivotally connected to the lower throw bar whereby the alternate pusher bars are made to move simultaneously in opposite directions.

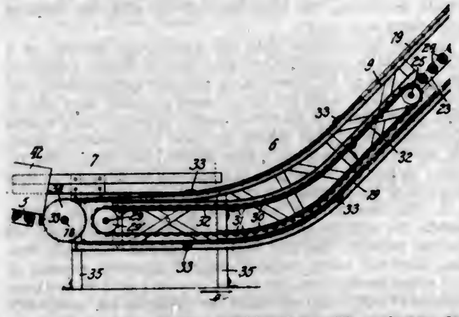
4. A furnace grate, comprising bearing bars each formed with a stepped series of ribs, grate-bars mounted upon said ribs, pusher bars of right-angle shape in cross section, adapted to slide between the grate-bars, and each having a forwardly extending arm within its angle, and end guide webs adapted to slide against the bearing bars, a series of rocker rods each having trunnions loosely mounted in the bearing bars, double armed levers fixed to the rocker rods having their upper arms pivotally connected to the arms

of the pusher bars, an upper throw bar to which alternate lower arms of the double armed levers are pivotally connected and on which the upper throw bar is supported, a lower throw bar to which the lower arms of the double armed levers, alternating with the first named lower arms are pivotally connected and from which the lower throw bar is suspended, and an actuating device consisting of a rock shaft journaled in the bearing bars, and a double armed lever fixed to the rock shaft and having its upper arm pivotally connected to the upper throw bar and its lower arm pivotally connected to the lower throw bar whereby the alternate pusher bars are made to move simultaneously in opposite directions.

5. A furnace grate, comprising bearing bars each formed with a stepped series of ribs, grate-bars mounted upon said ribs, pusher bars of right-angle shape in cross section, adapted to slide between the grate-bars, and each having a forwardly extending arm within its angle, a series of rocker rods each having trunnions loosely mounted in the bearing bars, double armed levers fixed to the rocker rods having their upper arms inclined forwardly to the axis of the rocker rods and pivotally connected to the arms of the pusher bars, an upper throw bar to which alternate lower arms of the double armed levers are pivotally connected and on which the upper throw bar is supported, a lower throw bar to which the lower arms of the double armed levers, alternating with the first named lower arms are pivotally connected and from which the lower throw bar is suspended, and an actuating device consisting of a rock shaft journaled in the bearing bars, and a double armed lever fixed to the rock shaft and having its upper arm pivotally connected to the upper throw bar and its lower arm pivotally connected to the lower throw bar whereby the alternate pusher bars are made to move simultaneously in opposite directions.

[Claim 6 not printed in the Gazette.]

882,795. CONVEYER. JOHN T. H. PAUL, Chicago, Ill., assignor to E. Goldman & Co., Inc., Chicago, Ill., a Corporation of Illinois. Filed Dec. 6, 1907. Serial No. 405,819.



1. In a conveyer, the combination with a lower delivery-section, of a hoisting-section extending from the delivery-end of said delivery-section, traveling flight-carrying means on said hoisting section, and a package-arresting transfer-member interposed between said sections and coöperating with said flight-carrying means, for the purpose set forth.

2. In a conveyer, a rotary shaft carrying at intervals wheels and interposed between the adjacent ends of the intermediate elevator section of the conveyer and its lower delivery section, and traveling flight-carrying means coöperating with said wheels, for the purpose set forth.

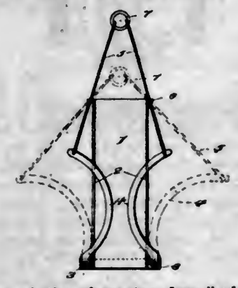
3. In a conveyer, the combination with a lower delivery-section, of a hoisting section extending from the delivery-end of said delivery-section, traveling flight-carrying means and an endless traveling apron on said hoisting section, and a package-arresting member interposed between said sections and coöperating with said flight-carrying means, for the purpose set forth.

4. In a conveyer, the combination with the inclined intermediate section, of endless flight-carrying traveling chains, an endless traveling apron coöperating with said chains and extending throughout a portion of said section including the curved part thereof, and a roller-portion extending from the upper end of said apron, for the purpose set forth.

5. In a conveyer, the combination with the inclined intermediate section, of endless flight-carrying traveling-chains, an endless traveling apron coöperating with said chains and extending throughout a portion of said section including the curved part thereof, a platform interposed in the path of travel of said apron for reinforcing it, and a roller-portion extending from the upper end of said apron, for the purpose set forth.

[Claims 6 to 8 not printed in the Gazette.]

882,796. GRAPPLE. LUTHER T. PEDIGO, Greensburg, Kans. Filed Jan. 2, 1908. Serial No. 408,950.

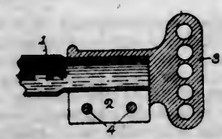


1. A device of the character described, comprising a tubular casing formed with longitudinally extending slots extending therethrough, a ring encircling and secured to the lower end of the casing, curved jaws pivotally connected at their lower ends to the ring and extending upwardly therefrom in registry with said slots, the casing being formed at its upper edge with outstanding ears, link rods pivotally connected to the upper ends of said jaws and extending upwardly through said ears, and a ring connecting together the upper ends of said link rods.

2. A device of the character described, comprising a tubular casing formed with longitudinally extending slots, jaws pivotally supported on the casing below said slots, link rods secured to said jaws, the casing being provided above the slots with guiding means through which the link rods extend, and a connection between the upper ends of said rods.

3. A device of the character described, comprising a tubular casing formed with longitudinal slots, jaws pivotally supported on said casing in registry with the respective slots, links secured to said jaws, a connection between said links, and a guiding connection between said links and said casing.

882,797. CLEVIS FOR PLOWS. CHARLES C. RANKIN, Louisville, Ky., assignor of one-third to Samuel T. Crofts, Louisville, Ky. Filed June 24, 1907. Serial No. 380,483.

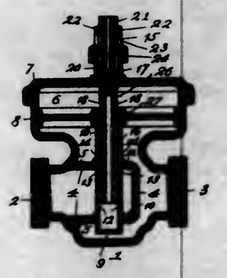


1. A plow-clevis having a cylindrical portion to fit over the draft end of a plow-beam, the wall of said cylindrical portion being slit longitudinally and having longitudinal flanges provided with holes for bolts for clamping said cylindrical portion on said beam.

2. A plow-clevis, comprising a transverse flat portion

provided with a row of transverse holes, a socket member to fit over the end of a plow-beam adapting the clevis to be rotated on the plow-beam, said socket member being longitudinally slit and provided with means for clamping over the end of the plow-beam.

882,798. AUTOMATIC STOP-VALVE. FRANK T. REID, Kansas City, Mo. Filed Aug. 5, 1907. Serial No. 387,184.



1. An automatic valve consisting of a casing having inlet and outlet openings and a chamber communicating therewith, a tubular stem having valves for closing communication between the openings, said stem having inlet and outlet ports 13 14 communicating respectively with the inlet opening and the chamber, means within the tubular stem for opening and closing communication between ports 13 14, and fluid pressure operable means reciprocably arranged within the chamber for actuating the tubular stem.

2. An automatic valve consisting of a casing having inlet and outlet openings and a chamber communicating therewith, a tubular stem having valves for closing communication between the openings, said stem having inlet and outlet ports 13 14 communicating respectively with the inlet opening and the chamber, means within the tubular stem for opening and closing communication between ports 13 14, and a fluid pressure operable piston-head reciprocably arranged within the chamber for actuating the tubular stem.

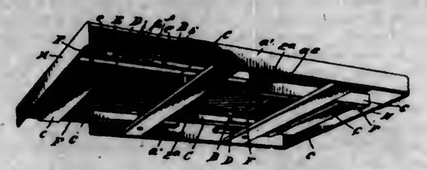
3. An automatic valve consisting of a casing having inlet and outlet openings and a chamber communicating therewith, a tubular stem having valves for closing communication between the openings, said stem having inlet and outlet ports 13 14 communicating respectively with the inlet opening and the chamber, a stem within the tubular stem for opening and closing communication between ports 13 and 14, and fluid pressure operable means reciprocably arranged within the chamber for actuating the tubular stem.

4. An automatic valve consisting of a casing having inlet and outlet openings and a chamber communicating therewith, a tubular stem having valves for closing communication between the openings, said stem having ports 12 communicating with the inlet opening, a fluid pressure operable piston-head reciprocably arranged within the chamber for actuating the tubular stem, and means within the tubular stem for opening and closing communication between ports 12 and the upper portion of the chamber.

5. An automatic valve consisting of a casing having inlet and oulet openings and a chamber communicating therewith, a tubular stem having valves for closing communication between the openings, said stem having ports 12 communicating with the inlet opening, fluid pressure operable means within the chamber for actuating the tubular stem, and a slidable stem within the tubular stem adapted when in its lowermost position to close ports 12 and provided with a counterbore and a port whereby communication is established between ports 12 and the upper portion of the chamber when said slidable stem occupies its lowermost position.

[Claims 6 to 8 not printed in the Gazette.]

882,799. EXTENSION-TABLE. FREDERICK L. RIVARD and LAWRENCE B. RIVARD, Marine City, Mich. Filed Jan. 28, 1907. Serial No. 354,514.



1. In combination with the stationary table sections, and the extensible frame slidable thereon; of a supplemental top section loosely mounted on the slide frame and movable with it during a part of its outward pull, the said slide frame and the top section having coöperating means for automatically raising the said supplemental top section in line with the main table section as the slide frame is pulled out, and another automatic means for sustaining said top section at its elevated position as the slide frame is pushed back under it, as set forth.

2. The combination with the main table section and the extensible frame slidably mounted thereon; of a supplemental top section, means on the said section for engaging the main table section that limit the outward adjustment of the supplemental top section, the said supplemental top section being loosely mounted on the extensible frame, cooperating means on the said frame and the top section for interlocking the said members to move together until the outward movement of the top section is arrested, and for raising the said top section as the extensible frame completes its outward thrust and automatic means on the extensible frame for sustaining the supplemental top at its elevated position as the slide frame is pulled back.

3. The combination with the main table section; of a slide frame, the supplemental table top loosely mounted on and movable with the slide frame, a stop on the main frame for limiting the outward movement of the supplemental top as it is pulled out with the slide frame and means controlled by the further movement of the slide frame for lifting the supplemental top after its outward movement is arrested.

4. The combination with the main table section; of a slide frame, a supplemental table section loosely supported thereon, means for interlocking the said supplemental section, at times, with the slide frame whereby said section and the frame will move outwardly together, said means including devices for lifting the said supplemental frame on the final outward movement of the slide frame and another means for sustaining the said frame during the first portion of the inthrust of the slide frame, as set forth.

5. The combination with the main table, the supplemental top slidable on the main table, said supplemental top having pendent convexed lugs; of the slide members having concaved seats, counterbalanced members pivoted to the slides mounted on the frame to swing with their upper ends above the concaved seats for engaging the under side of the supplemental top for the purposes described.

[Claim 6 not printed in the Gazette.]

882,800. WEB-PRINTING MACHINE. WALTER SCOTT, Plainfield, N. J.; Isabella Scott and David John Scott executors of said Walter Scott, deceased. Filed May 19, 1905. Serial No. 261,148.

1. The combination of two web printing machines, one of which runs at a slower speed than the other, additional printing cylinders for giving an imprint on the product or a portion of the product of one machine, means for associating the products of each machine into a separate product, means for cutting the two products, means for associating the two products into one product, means for folding the associated products as one product, and two deliveries adapted to alternately receive the associated and folded products.

2. The combination of two web printing machines, one of which runs at a slower speed than the other, additional printing cylinders for giving an imprint on the product or a portion of the product of one machine, means for associating the products of each machine into a separate product, means for cutting the two products, means for associating the two products into one product, means for folding the two products as one product, and two deliveries adapted to alternately receive the associated and folded products.

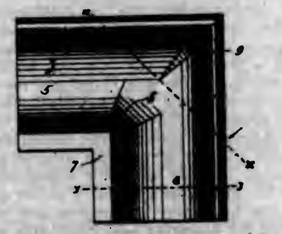
3. The combination of two web printing machines, one of which runs at a slower speed than the other, additional printing cylinders for giving an imprint on the product or a portion of the product of the slow speed machine, means for associating the products of each machine into a separate product, means for cutting the two products, means for associating the two products into one product, means for folding the two products as one product, and two deliveries adapted to alternately receive the associated and folded products.

4. The combination of two web printing machines, one of which runs at a slower speed than the other, additional printing cylinders for giving an imprint on the product or a portion of the product of the slow speed machine, means for associating the products of each machine into a separate product, means for cutting the product of the slow speed machine, means for associating the cut product of the slow speed machine with an uncut portion of the full speed machine, means for cutting the product of the full speed machine, means for folding the two products as one product, and two deliveries adapted to alternately receive the associated and folded products.

5. The combination of two web printing machines, one of which runs at a slower speed than the other, web turners for turning a portion of the product of one machine so as to associate it with its companion portion from the same machine, additional printing cylinders for giving an imprint on the product or a portion of the product of one machine, means for associating the products of each machine into a separate product, means for cutting the two products, means for associating the two products into one product, and means for folding and delivering the two products as one product.

[Claims 6 to 47 not printed in the Gazette.]

882,801. SHEET-METAL GUTTER. SYLVESTER D. SHOEMAKER, Grogan, Ohio. Filed July 19, 1907. Serial No. 384,562.

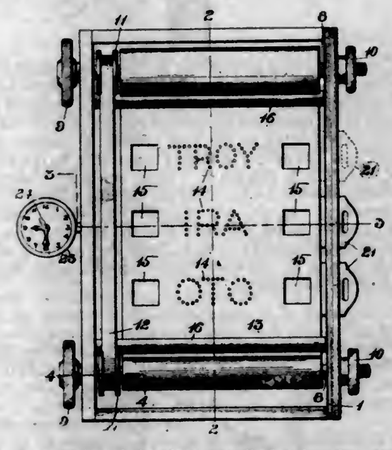


1. A stamped sheet metal gutter having substantially semi-circular portions in cross section which lie at right angles with each other and portions which lie at an angle to both of the first named portions the latter portions exhibiting a straight line in horizontal section.

2. In a device of the character described the combination with gutter portions which lie substantially at right angles with each other and which exhibit a substantially semi-circular cross section of connecting members located at the juncture of said gutter portions said connecting members exhibiting a straight line in horizontal section, and said members being tapering.

3. In a device of the character described, the combination with gutter portions which lie substantially at right angles with each other and which exhibit a substantially semi-circular cross section, of a connecting member which lies at an angle to both of the gutter portions, said connecting member exhibiting a straight line in horizontal section and said connecting member being narrow at the top and wide at the bottom.

882,802. SAFETY-INDICATOR FOR RAILWAYS. OSCAR STANKEY and MARTIN CHRIST, East St. Louis, Ill. Filed Apr. 17, 1907. Serial No. 368,776.

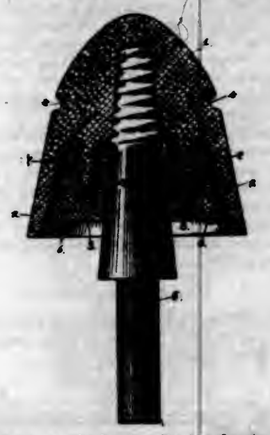


1. In a device of the class described, a housing, a partition arranged therein, in which partition is formed a series of openings, sections of colored glass arranged immediately to the rear of said openings, a perforated sheet arranged for operation so as to pass in front of all of the openings in the partition, a lamp arranged in the housing to the rear of the partition, and non-transparent plates arranged to slide in the housing immediately to the rear of the sections of colored glass.

2. In a device of the class described, a housing in the front wall of which is formed a glazed opening, a partition within the housing in which partition is formed a series of openings, sections of colored glass arranged over said openings, non-transparent plates adapted to be positioned over the sections of colored glass, a lamp arranged within the housing to the rear of the partition, a pair of rollers operated in the housing in front of the partition, a perforated flexible sheet arranged to wind upon the rollers, and means whereby both rollers are simultaneously rotated.

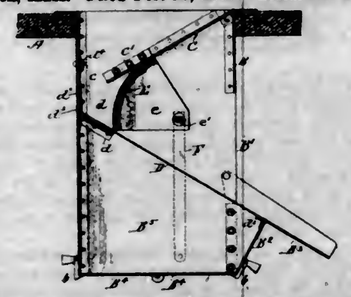
3. In a device of the class described, a housing in the front wall of which is formed a glazed opening, a partition within the housing in which partition is formed a series of openings, sections of colored glass arranged over said openings, non-transparent plates adapted to be positioned over the sections of colored glass, a lamp arranged within the housing to the rear of the partition, a pair of rollers operated in the housing in front of the partition, a perforated flexible sheet arranged to wind upon the rollers, means whereby both rollers are simultaneously rotated, and means whereby said rollers are locked against rotation.

882,803. INSULATOR. LEONARD W. STORROR, San Francisco, Cal. Filed Jan. 2, 1906. Serial No. 294,099.



In an insulator, a pin having its top frusto-conical and threaded for a part of the length of said frusto-conical top, a protecting member made of an insulating material and adapted to fit tightly on the frusto-conical part of the pin for the entire depth of the said protecting member, said member also having an upwardly projecting flange whose outer surface is a portion of a cone, and a wire-carrying insulating member having internal threads adapted to fit the threads of the pin, said wire-carrying member having a skirt adapted to project down into the space between the flange on the protecting member, said wire-carrying member also having an outer skirt extending below the bottom of the protecting member.

882,804. GATE FOR COAL-POCKETS. ADOLPH SUCK, Boston, Mass. Filed Feb. 13, 1907. Serial No. 357,136.



1. A coal gate comprising a vertical chute, a shelf extending from one wall thereof towards the opposite wall to partially close its outlet whereby a narrow mouth is provided for the exit of the coal between the end of said shelf and said opposite wall, and means such as a screen lying under said mouth to change the direction of the coal issuing from said mouth and screen it, and a cut-off located within said chute for controlling the issue of coal from said mouth, as described.

2. A coal gate comprising a vertical chute, a shelf extending from one wall thereof towards the opposite wall to partially close its outlet whereby a narrow mouth is provided for the exit of the coal, and means such as a screen lying under said mouth to change the direction of the coal issuing from said mouth and screen it, and a cut-off located within said chute for controlling the issue of coal from said mouth, as described.

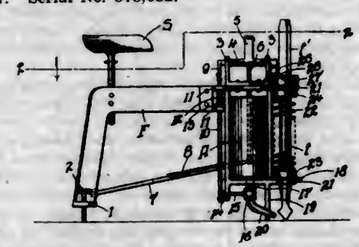
3. A coal gate comprising a vertical chute, a shelf extending from one wall thereof towards the opposite wall to partially close its outlet whereby a narrow mouth is provided for the exit of the coal between the end of said shelf and said opposite wall, and a removable screen located below said outlet and serving to carry off the larger coal and at the same time to screen therefrom the smaller particles and a cut-off located within said chute and adapted to coöperate with said shelf to close the outlet therefrom.

4. In a coal gate, a vertical chute, an extensible shelf extending outward from one wall towards the other wall to partially close its outlet and serve as a guide therefrom, a removable screen located below said shelf and extending from the opposite wall of said chute to change the direction of movement of the coal and screen therefrom the smaller particles thereof.

5. In a coal gate, a vertical chute having an opening at one side, a shelf extending part way across said chute above said opening and partially closing the discharge opening from said gate, a swinging shelf adapted when in its lowest position to receive the coal from said outlet and change its direction and when in its upper position to make room for a screen, and means to support said shelf when in its lower position and to support said screen when said shelf is in its upper position, as described.

[Claims 6 to 11 not printed in the Gazette.]

882,805. STONE-DRILLING MACHINE. ADOLF WEISS and EMIL NAGEL, Fredericksburg, Tex. Filed May 22, 1907. Serial No. 375,032.



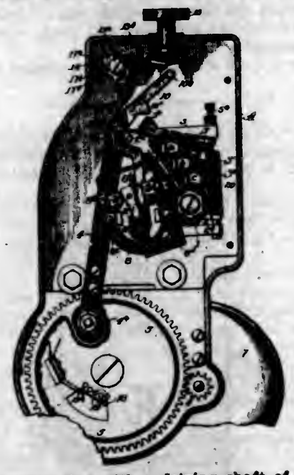
In a drill, a suitable rotatable drilling tool, a spring for normally disengaging the same from the surface operated on, a ratchet carried by the tool-shank, a rock-shaft, a pawl coupled to the shaft and engaging the ratchet, a water-tank, a spout leading from the tank to a point in proximity to the cutter of the tool, a rock-valve controlling the flow of water through the spout, a pedal coupled to the rock-shaft, a connecting-rod interposed between the rock-shaft and rock-valve, and a spring coupled to the connecting rod for actuating the same in one direction and impelling the rock-shaft in a corresponding direction, the pedal serving to actuate the shaft in the opposite direction, the parts operating substantially as, and for the purpose set forth.

882,806. ADDING-MACHINE ATTACHMENT. HAROLD R. WELLMAN, Riverside, Ill., assignor to Western Electric Company, Chicago, Ill., a Corporation of Illinois. Filed Sept. 30, 1905. Serial No. 280,741.

1. In a calculating machine, the combination with the driving shaft thereof, of a crank arm connected to said shaft, a motor, a circuit therefor a gear wheel driven by said motor, a rod connecting said gear wheel and crank arm, a switch carried by said crank arm for cutting said motor in or out of circuit, and a key accessible to the operator of the machine for closing said switch.

2. In a calculating machine, the combination with the driving shaft thereof, of a crank arm secured on said shaft, a motor, a circuit therefor a switch carried by said crank arm for cutting said motor in or out of circuit, an operator's key for closing said switch, and means driven by the motor for operating said crank arm, substantially as described.

3. In a calculating machine, the combination with the driving shaft thereof, of a crank arm connected to said shaft, a gear wheel, a rod connecting said gear wheel and crank arm, a motor for driving said gear wheel, a circuit for said motor a switch arm carried by said crank arm, a switch member pivoted to said connecting rod and adapted to operate said switch arm to open or close the motor circuit, a finger key, a tripping lever actuated by said key to engage the switch member and thereby close the switch, whereby said gear wheel makes one revolution for a momentary depression of said key, and a restoring lever in the path of movement of the switch member and adapted to operate the same on the return stroke of the connecting rod to open the switch, substantially as described.



4. The combination with a driving shaft of a calculating machine, of a crank arm secured on said shaft, a motor, a circuit therefor, means driven by the motor for rocking said crank arm, said means being adjustable to compensate for currents of different voltages, a switch mounted on the crank arm for cutting said motor in or out of circuit, a finger key for closing said switch, and a restoring lever adapted to open the switch on the return stroke of the crank arm.

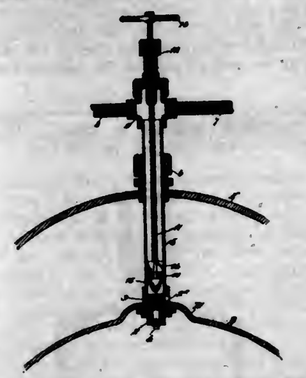
5. The combination with a calculating machine provided with registering and recording mechanisms, a shaft for driving the same and means for locking the shaft, of a crank arm secured on said shaft, a lever pivoted on said arm, a gear wheel, a rod connecting said gear wheel and lever, a motor for driving the gear wheel, a circuit for said motor a switch for cutting the motor in or out of circuit, and a spring connecting the lever and crank arm, the tension of said spring preventing the movement of said lever on the arm during the normal operation of the shaft, but said lever being responsive to the pull of said rod to open the switch when said shaft is locked.

[Claims 6 to 9 not printed in the Gazette.]

882,807. LOW-WATER ALARM. GEORGE WOODALL, Sacramento, Cal., assignor of one-half to Francis J. Hickey, Sacramento, Cal. Filed Nov. 16, 1907. Serial No. 402,423.

1. A low water alarm apparatus for steam boilers, consisting of a chambered stopper having openings transversely through its sides forming an open connection with the steam space near to the danger point, a fusible plug normally closing said transverse openings, a pipe extending upwardly and having an alarm connection therewith exterior to the boiler, said pipe being in open communication with the steam space of the boiler by the melting of the fusible plug.

2. In an apparatus of the character described, a socket-piece fixed in the top of the crown-sheet, a pipe extending upwardly therefrom, said pipe being fixed to the upper end of said socket piece, and a whistle or alarm connection with the upper part of the pipe, said socket piece having transverse openings forming an open communication between said socket-piece and the interior of the boiler, and a fusible plug by which said openings are normally closed while the plug remains intact.



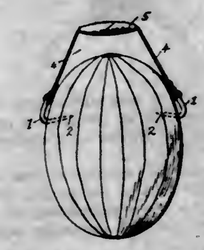
3. In an apparatus of the character described, a chambered socket-piece fixed in the upper part of the crown-sheet of a boiler, and having open communication with the interior of the boiler, a fusible plug by which said opening is normally closed, and exposed by the melting of said plug, a tube extending upwardly from the socket-piece having the whistle or like alarm attachment connected with it exterior to the boiler, and a manually-actuated stopper whereby the opening exposed by the melting of the plug may be again closed.

4. In an apparatus of the character described, a crown-sheet having its upper portion raised above the general level of the sheet, a chambered socket-piece fixed in said raised portion, said socket-piece having openings transversely through its sides forming an open communication with the interior of the boiler-space, a fusible plug filling the chamber and normally closing said side openings, an extension of the chamber below that portion occupied by the fusible plug, said extension adapted to receive the fused metal after it has passed from the chamber, and a pipe connected with the socket-piece having an exterior alarm connecting therewith.

5. In an apparatus of the character described, and in combination with the boiler, a fire-box crown-sheet having an elevated central portion, a chambered socket-piece fixed in said elevated portion having openings transversely through its sides forming an open communication with the interior of the boiler above the crown-sheet, a tube connecting with said chamber, a stuffing-box through which said tube passes through the boiler-shell, a whistle and alarm connection with said tube, and a manually operated supplemental stopper movable to close the passage through the chambered socket after the alarm has been given.

[Claim 6 not printed in the Gazette.]

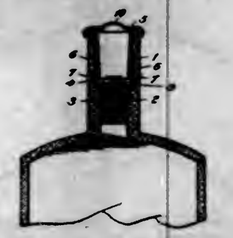
882,808. WATERMELON-CARRIER. CLARENCE A. WOODWARD, Baltimore, Md. Filed Oct. 19, 1907. Serial No. 398,301.



The herein described watermelon carrier, consisting of a handle, a suspension cord on which said handle is mounted

and two independent hooks, each of said hooks consisting of a relatively narrow strip embodying two members disposed at an acute angle to each other, one of said members of each hook being tapered to a point so as to penetrate the rind of a melon, and the other member of each hook being formed with an aperture, the ends of the suspension cord being inserted through and tied in the apertures and terminating thereat, as and for the purpose set forth.

882,809. BOTTLE. GEORGE E. ZEIGLER, Economy, Pa. Filed Dec. 20, 1907. Serial No. 407,310.

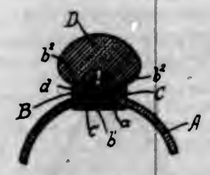


1. A bottle neck having its inner walls of unequal diameters separated by an annular groove the walls of least diameter flaring upward and terminating at said groove, in combination with a cork seated on the flaring walls below the groove, and a shell having cuts forming claws adapted to engage said groove and seated upon the neck-walls of greatest diameter above the cork, and having a handle at its upper end, and the said claws terminating in cutting points, for the purpose stated.

2. A bottle neck having its inner walls of unequal diameters separated by a groove the walls of least diameter flaring upward and terminating at said groove, in combination with a cork seated on the flaring walls below the groove, and a shell seated on the neck walls of greatest diameter above the cork and having cutter claws adapted to engage said groove, and a handle by which to rotate the shell, the said shell having inward turned lips overhanging the cork, for the purpose stated.

3. A bottle neck having its inner walls of unequal diameters separated by an annular groove—the walls of least diameter flaring upward and terminating at said groove, in combination with a cork seated on the flaring walls below the groove, and a shell seated on the neck-walls of greatest diameter above the cork, means integral with the shell adapted to engage the groove, and means integral with the shell overhanging the upper end of the cork, to prevent it from being forced from its seat by inward pressure of gases resulting from the contents.

882,810. RING. DEWEY F. ADAMS, Providence, R. I. Filed June 28, 1907. Serial No. 381,216.



1. In a finger ring the combination with a split hoop, of a shell inclosing the ends of the hoop, a plate within the shell, an ornament, and means upon the ornament for engaging the plate.

2. In a finger ring the combination with a split hoop, of a shell inclosing the ends of the hoop, a plate within the shell provided with a threaded opening, an ornament, and a threaded member upon the ornament registering in the threaded opening.

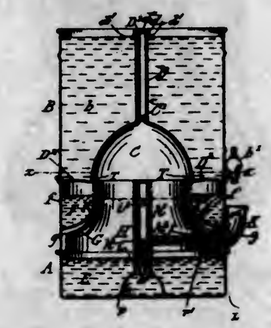
3. In a finger ring the combination with a split hoop, of a shell inclosing the ends of the hoop, a locking plate fixed within the shell and engaging the ends, an opening in the locking plate, an ornament, and a member upon the ornament registering in the opening.

4. In a finger ring the combination with a split hoop provided with openings adjacent its ends, of a shell inclosing said ends, a plate within the shell, studs upon the plate registering in the openings, an ornament, and means upon the ornament for engaging the plate.

5. In a finger ring the combination with a split hoop provided with openings adjacent its ends, of a shell inclosing said ends, a plate within the shell, studs upon the plate entering the openings, means upon the shell for retaining the plate, an ornament, and means upon the ornament for engaging the plate.

[Claims 6 to 11 not printed in the Gazette.]

882,811. WATER-STILL. ARTHUR R. BAILEY, New York, N. Y., assignor to The Sanitary Water-Still Company, Brooklyn, N. Y. Filed Sept. 17, 1902. Serial No. 123,724.



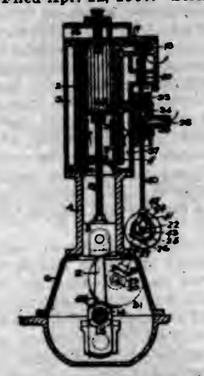
1. A water-still comprising a lower part having a retort, and a distilled water reservoir thereover, formed with an inner wall providing a mouth leading upwardly from the retort, and an upper part having a water supply reservoir, and a condensing dome, whose lower end surrounds the upper end of the mouth, and from which the water trickles into the said reservoir, the said dome having a jet orifice in its apex, a vertical ventilating flue surrounding the jet orifice and a cap supported over the upper end of the ventilating flue and having a depending flange surrounding the upper end of the ventilating flue and spaced therefrom to provide outlet openings.

2. A water-still comprising a lower part having a retort, a distilled water reservoir thereover formed with an inner wall providing a mouth leading upwardly from the retort, a feed cup, a horisontal sleeve projecting inwardly from the feed-cup between the retort and the distilled water reservoir, for conducting water and air into the retort of the still, a condensing dome whose lower end surrounds the upper end of said mouth and means leading from the dome for conducting off the impure gases.

3. A water still having an aerating device comprising a hollow base, having a central orifice, a vertical jet tube connected with the central orifice, a vertical flue having a closed bottom and a closed top and surrounding the jet tube, an inlet-branch tube, an outlet orifice beneath the branch tube, and outlet ports above the branch-tube.

4. A water-still comprising a lower part having a retort, a distilled water reservoir thereover, formed with an inner wall providing a mouth leading upwardly from the retort, a sleeve for conducting water and air into the still, and an aerating device comprising a hollow base having a central orifice, a vertical jet tube connected with the central orifice, a vertical flue having a closed bottom and a closed top and surrounding the jet tube, an inlet branch tube fitted to the sleeve, an outlet orifice beneath the branch-tube, and outlet ports above the branch-tube.

882,812. GAS-ENGINE. CHARLES O. CARLSON, Port Richmond, N. Y. Filed Apr. 12, 1907. Serial No. 367,863.



1. In a gas engine, the combination of a cylinder, a piston therein, a piston rod, connections between said rod and the engine shaft, a gas inlet port at the upper end of said cylinder, an exhaust valve, a main air port, an air port leading to the upper portion of said cylinder at a point just above the lowest position of said piston, a second air port leading to the lower end of said cylinder, a valve controlling said ports and means for operating said valve, whereby air is drawn into the lower end of said cylinder by the ascent of said piston, compressed therein, and admitted to the upper end of said cylinder when said piston in its descent passes the air port leading thereto.

2. In a gas engine, the combination of a cylinder, a piston therein, a piston rod, connections between said rod and engine shaft, a gas inlet port at the upper end of said cylinder, an exhaust valve, a main air port, an air port leading to the upper portion of said cylinder at a point just above the lowest position of said piston, a second air port leading to the lower end of said cylinder, a valve controlling said ports, cam mechanism for operating said valve, connections between said cam mechanism and the engine shaft, whereby air is drawn into the lower end of said cylinder by the ascent of said piston, compressed therein and admitted to the upper end of said cylinder when said piston in its descent passes the air port leading thereto.

3. In a gas engine, the combination of a cylinder, a piston therein, a piston rod, connections between said rod and the engine shaft, a gas inlet port at the upper end of said cylinder, an exhaust valve, a main air port communicating directly with the atmosphere, an air port leading to the upper portion of said cylinder at a point just above the lowest position of said piston, a second air port leading to the lower end of said cylinder, a valve controlling said port and means for operating said valve whereby air is drawn into the lower end of said cylinder by the ascent of said piston, compressed therein, and admitted to the upper end of said cylinder when said piston in its descent passes the air port leading thereto.

882,813. HINGE FOR WINDOW-SCREENS. RUSH W. CARRINGTON, Kansas City, Mo. Filed May 27, 1907. Serial No. 375,993.



A hinge for window screens, comprising a screw threaded shank adapted to be secured to the window screen, and a stem on said shank and an arm on said stem, forming an L shaped head lying in a plane in which each arm of said head is at right angles to said shank, the outer end of which is adapted to engage a second screw member.

882,814. TOUCH-ADJUSTING MECHANISM FOR PIANO-KEYS. WILLIAM M. CLEMANS, Wheeling, W. Va. Filed Apr. 11, 1907. Serial No. 367,479.

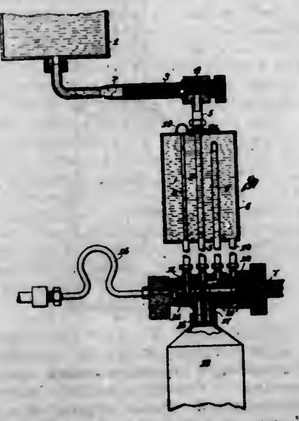


1. A slotted piano-key having mounted therein a touch-adjusting device, said device comprising a threaded bolt extending longitudnially of said slot, supports for the ends of said bolt, said supports comprising securing-plates which lie in the ends of said slot and have parallel legs embracing opposite sides of the key, said legs lying in mortises provided in said key, and locking-nuts carried by said bolt in bearing engagement with said plates for holding said bolt in fixed position, and a weight adjustably mounted upon said bolt intermediate its ends.

2. A piano-key having a slot therein at a point behind its pivotal connection with the balance-rail and having mortises in its opposite sides at the opposite ends of said slot, a threaded bolt lying in said slot, securing-plates for supporting the opposite ends of said bolt, each plate having parallel legs, said plates having their legs rigidly held in the mortises at the ends of the slot, lock-nuts carried by said bolt in bearing engagement with said plates, and a weight adjustably mounted upon said bolt intermediate its ends.

3. A piano comprising in its construction a key pivotally mounted upon the balance-rail thereof, said key having a longitudinal slot therein behind its pivotal connection with the balance-rail, and a touch-adjusting device mounted in said slot, said bolt having a head at one end, a securing-plate supporting said bolt at said end, said plate having parallel legs fixed in mortises provided in opposite sides of the key at one end of said slot, a nut carried by said bolt in bearing engagement with said plate, a second securing-plate supporting said bolt at its opposite end, said plate having parallel legs fixed in mortises provided in opposite sides of the key at the opposite end of said slot, a lock-nut threaded into bearing engagement with said second securing-plate for holding the bolt rigidly in place, and a weight adjustably mounted upon said bolt intermediate its ends.

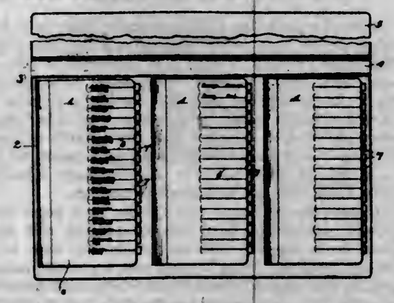
882,815. DEVICE FOR AUTOMATIC KINDLING OF INCANDESCENT LAMPS. JOSEPH DANISCHEVSKI, St. Petersburg, Russia. Filed Sept. 14, 1906. Serial No. 334,676.



In a device for the automatic kindling of incandescent lamps, the combination with a reservoir for a liquid com-

bustible and a burner conduit, of a closed tank, a supply conduit communicating with the reservoir, a supply tube leading into the tank, a casing connected to the supply conduit and tube, a discharge tube communicating with the burner conduit and tank, a drain in the latter, a cock in the casing to simultaneously connect the supply tube and supply conduit and close the drain and to simultaneously disconnect said tube and conduit and open the drain.

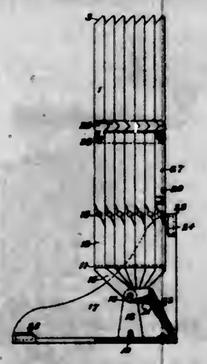
882,816. INDEXED BOOK. ALBERT F. DEAN, Chicago, Ill. Filed Feb. 11, 1904. Serial No. 193,099.



1. A book having an index word on each leaf, an index tag secured to each alternate leaf of said book, an indicating line leading from each tag, two index words printed adjacent each line, one of the words being the index word of the leaf to which the corresponding tag is secured, the other word being the index word of the leaf next preceding said leaf to which the tag is secured, each line forming a guide path to the tag from the two words associated therewith.

2. A book having an index word on each leaf, an index tag secured to each alternate leaf, an indicating line leading from each tag, an index word printed directly over each line, an index word printed directly below each line, the word over each line being the index word of the leaf to which the corresponding tag is secured, the word below the line being the index word of the leaf next preceding the leaf to which the tag is secured, each line forming a guide path from the two words associated therewith to the corresponding tag.

882,817. ACCOUNT-REGISTER. FARNUM F. DORSEY, New York, N. Y., assignor to Albert F. Staples, Dorchester, Mass., and Charles W. Potter, Waltham, Mass. Filed May 4, 1907. Serial No. 371,884.



1. An account register having, in combination, a plurality of independent bill-holder frames, means for movably supporting the frames, connections between the supporting means and the frames constructed to permit the ready removal and replacement of the frames, and means mounted on one of the frames for securing the frames together when so removed.

2. An account register having, in combination, a plurality of independent bill-holder frames, means for movably supporting the frames, connections between the supporting means and the frames constructed to permit the ready removal and replacement of the frames, and means for holding the frames in alinement when so removed.

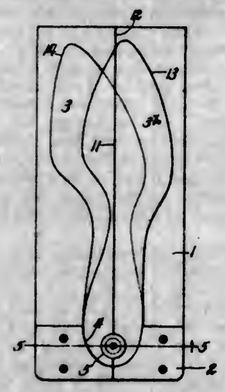
3. An account register having, in combination, a plurality of independent bill-holder frames, means for movably supporting the frames, connections between the supporting means and the frames constructed to permit the ready removal and replacement of the frames, and means for securing the frames together and holding them in alinement when so removed.

4. An account register having, in combination, a plurality of independent bill-holder frames, means for movably supporting the frames, connections between the supporting means and the frames constructed to permit the ready removal and replacement of the frames, interlocking projections and recesses on the frames to hold them in alinement when so removed, and means for securing the frames together when removed.

5. An account register having, in combination, a plurality of bill-holder frames, a movable supporting member for each frame, and connections between each frame and its supporting member constructed to permit the ready removal and replacement of the frame.

[Claims 6 to 19 not printed in the Gazette.]

882,818. LAST-DEMONSTRATOR. ERNEST A. EASTMAN, Chicago, Ill., assignor of one-half to Crawford McGregor & Canby Company, Dayton, Ohio, a Corporation. Filed Oct. 29, 1907. Serial No. 399,650.



1. A device for the purpose set forth, comprising means showing the outline of a forepart, and means showing the outline of a heel part, including means for showing varying positions of the heelpart outline with relation to the forepart outline consisting of a plurality of sole-parts having their forward portion arranged at varying directions with relation to the same heel contour, and means for compelling the corresponding heelpart contours to substantially coincide when said sole-parts are superposed.

2. A device for the purpose set forth, comprising a sole-part whose forepart terminates free and unrestricted at its edge-boundaries which have the peripheral outline of the insole of a shoe, and a vertical wall conforming in outline to the contour of the heel portion of said sole-part.

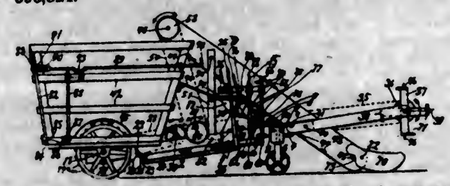
3. A device for the purpose set forth, comprising a sole-part having the peripheral outline of the insole of a shoe, and a base for receiving said sole-part provided with a vertical wall conforming in outline to the contour of the heel portion of said sole-part.

4. A device for the purpose set forth, comprising a sole-part having the peripheral outline of the insole of a shoe, a separable wall conforming to the outline of the heel part thereof, and means for detachably positioning said heel-part in exact engagement with said wall.

5. A device for the purpose set forth, comprising a sole-part having the peripheral outline of the insole of a shoe, a vertical wall conforming in outline to the contour of the heel portion of said sole-part, and means for indicating visually the axis line of said sole-part with relation to said wall and heel portion.

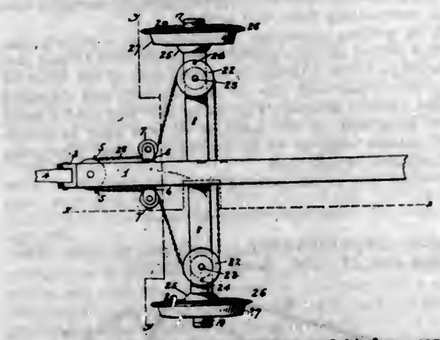
[Claims 6 to 8 not printed in the Gazette.]

882,819. SHOCK-GATHERER. MARTIN ERICKSON and JOHN O. JYSTAD, Galesburg, N. D. Filed Feb. 26, 1906, Serial No. 303,144. Renewed Oct. 7, 1907. Serial No. 396,324.



A shock gatherer comprising a suitable frame and wheels supporting the same, a dumping rack or box upon the rear end of the frame, and forward of the rack an inclined elevator adapted to gather up and convey the shocks into the rack, said elevator being operatively connected with one of the supporting wheels of the machine; and having its frame divided into two sections secured together by a downwardly yielding knee-joint, one of the sections being pivotally supported near its middle in the main frame and the other section being link-supported to said frame, a spring holding normally the knee-joint closed and means for bending and for holding bent the said knee-joint, for the purpose set forth.

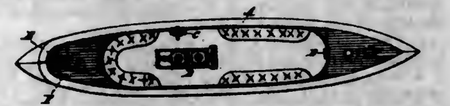
882,820. TONGUE-TRUCK FOR HARVESTERS AND BINDERS. JOHN FLAIG, Leon, Wis. Filed Apr. 30, 1907. Serial No. 371,146.



1. A tongue truck for harvesters and binders, consisting of a longitudinal beam 1, having pivoted to its front end a tongue holder 3, on each side of which is a staple 5 and to each side of which is journaled a grooved pulley 7, and in the under side of said beam is a cross recess 12; bearings 11, secured about midway and to the under face of said beam; rock bar 9, pivoted in said bearings; axle 8, secured to said rock bar and at right angles to said beam, said axle terminating at each end in a projection 14; bifurcated spindle holders 15, pivoted to said projections, the outer end of the spindle holder on the left hand end of the axle inclined inwardly from the top downwardly, the spindle also inclined downwardly at right angles to said inclined end 18; the outer end 16, of the spindle holder on the right hand end of the axle inclined downwardly and outwardly, the spindle 17, turning slightly upwardly at a right angle to said incline 16; wheels 20, each provided with an annular flange 26, and shoulder 27; grooved pulleys 22, rigidly secured on the top faces of said spindle holders 15; a chain 28, passing around pulleys 7 and 22, and through recess 12, and having its ends secured to staples 5, and a tongue 4, hinged in said tongue holder 7, substantially as shown and described, and for the purposes set forth.

2. In a tongue truck for harvesters and binders, the combination of a longitudinal beam 1, having in its lower face a cross recess 12; bearings 11, secured near the middle and to the under face of said beam; rock bar 9, journaled in said bearings; axle 8, secured to said rock bar at right angles to said beam; a spindle holder pivoted to each end of said axle; wheels 20, journaled on the spindles of said holders; pulleys 22, rigidly secured on the upper faces of said spindle holders; pulleys 7, one journaled on each side of said beam and in front of the axle; a tongue holder 3, pivoted to the front end of said beam; a chain passing around said pulleys and having its ends secured, one to each side of said tongue holder, said chain adapted to turn said wheels to the right or left when said spindle holders are turned to the right or left, and a tongue 4, pivoted in the front end of said tongue holder, substantially as shown and described and for the purposes set forth.

882,821. STEERING DEVICE FOR POWER-BOATS. JAMES A. GARRETT, Auburn, N. Y. Filed Jan. 5, 1906. Serial No. 294,775.



1. A supplemental steering mechanism attachable to a boat between the steering wheel and the tiller, and having a rocking member engaging with a sliding member, and means to connect the tiller rope with the sliding member.

2. In a power-boat having a steering-wheel, a tiller and and a tiller-rope, an attachable and detachable steering device having in combination a supporting plate, a toothed segment rockable thereon, means to rock the segment, a rack-bar meshing with the segment, a slide support for the rack-bar, and means to secure the tiller-rope unbroken to the rack-bar at a point between the steering-wheel and the tiller.

3. In a power-boat having a steering-wheel, a tiller and a tiller-rope, an attachable and detachable steering device having in combination a supporting plate, a toothed segment rockable thereon, a lever on the segment, a rack-bar meshing with the segment, and means to secure the tiller-rope unbroken to the rack-bar at a point between the steering-wheel and the tiller.

4. In a power-boat having a steering-wheel, a tiller and a tiller-rope, a supplemental steering mechanism connected to the tiller-rope, at a point between the steering-wheel and the tiller, having in combination a supporting plate, a toothed segment rockable thereon, means to rock the segment, a rack-bar meshing with the segment, a slot in the rack-bar, and a slide support in said slot.

5. In a power-boat having a steering-wheel, a tiller and a tiller-rope, a supplemental steering device having in combination a supporting plate, a toothed segment rockable thereon, means to rock the segment, a rack-bar with which the segment meshes, a slot in the rack-bar, a slide support in said slot, a plate on the slide, and means to secure the tiller-rope to the rack-bar at a point between the steering-wheel and the tiller.

[Claim 6 not printed in the Gazette.]

882,822. EMERGENCY-VALVE FOR SPRINKLER SYSTEMS. CHARLES A. GRAY, Kansas City, Kans., assignor to Bertram W. Boxmeyer, Kansas City, Mo. Filed July 12, 1907. Serial No. 383,527.

1. A valve for sprinkler heads, comprising a bar provided at one side with a compressible washer, a second

bar pivoted to the first out of alinement with the axial center of such washer and at the opposite side of the first-named bar from the said washer, and provided at its free end and opposite side from the first-named bar with notches, a spring interposed between the bars to press their free ends apart, and a pivoted bail carried by the first-named bar and adapted to fit over the free end of the other bar and engage one of its notches.



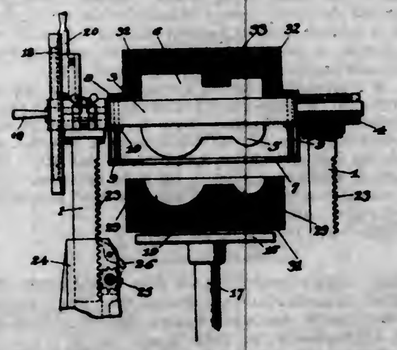
2. The combination with a sprinkler head, comprising a tubular portion and an arch bridging the bore thereof, of a valve, comprising a bar to project through such arch and equipped at its lower side with a compressible washer to bridge the bore of said tubular portion, and a lever pivoted to said bar, out of alinement with the center of the bore of the tubular portion.

3. The combination with a sprinkler head comprising a tubular portion, and an arch bridging the bore thereof, of a valve comprising a bar to project through said arch and equipped at its lower side with a compressible washer to bridge the bore of said tubular portion, and with a depending lug to engage said tubular portion to prevent the bar being slipped too far through the arch, and a lever pivoted to said bar, out of alinement with the center of the bore of the tubular portion.

4. The combination with a sprinkler head, comprising a tubular portion and an arch bridging the bore thereof, of a valve comprising a bar to project through such arch and equipped at its lower side with a compressible washer to bridge the bore of said tubular portion, a lever pivoted to said bar, out of alinement with the center of the bore of the tubular portion, and means engaging the bar and lever to clamp said parts respectively firmly against the upper end of the tubular portion and the upper part of the arch.

5. A valve for sprinkler heads, comprising a bar provided at one side with a compressible washer, a second bar pivoted to the first out of alinement with the axial center of such washer and at the opposite side of the first-named bar from the said washer, and provided at its free end and opposite side from the first-named bar with notches and at the same side but opposite end with laterally projecting wings, a spring interposed between the bars to press their free ends apart, and a pivoted bail carried by the first-named bar and adapted to fit over the free end of the other bar and engage one of its notches.

882,823. MOLDER'S APPARATUS. STANTON GRIFFITH, Beloit, Wis., assignor of one-half to Percy C. Brooks, Beloit, Wis. Filed June 1, 1905. Serial No. 263,223.



1. In molding apparatus, in combination, a reversible pattern support, a stripper plate upon each side thereof adapted to support one of the members of a flask, means adapted to guide said stripper plates alternately into operative relation to said pattern support, and clamping means pivotally mounted upon said pattern support and adapted to swing over and clamp a flask mounted upon either side thereof, whereby said support may be reversed to overlie said flask without causing a displacement of said flask.

2. In molding apparatus, in combination, a pivotally mounted pattern support adapted to swing in a substantially vertical plane, a stripper plate mounted upon each side thereof, guide rods secured to said stripper plates and connecting the same, said guide rods being slidably mounted within said pattern support, clamping means mounted upon said pattern support and adapted to retain a flask member against either side thereof during a reversal of said support, and a vertically movable table positioned beneath said pattern support and adapted to receive and lower the underlying flask from said pattern support.

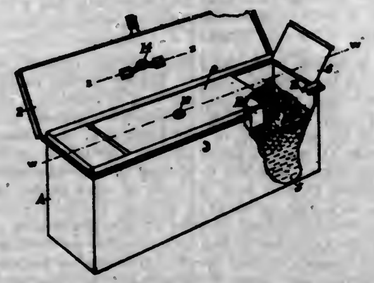
3. In molding apparatus, in combination, a reversible pattern support, a stripper plate on each side thereof adapted to support one of the members of a flask, means adapted to guide said stripper plates alternately into operative relation to said pattern support, means adapted to adjust the height of said pattern support and lock the same in each of a plurality of predetermined positions, means for enabling said pattern support to be reversed without displacing the flask, and means for receiving and downwardly withdrawing the underlying flask from the pattern support.

4. In molding apparatus, in combination, a reversible pattern support, a stripper plate on each side thereof adapted to support one of the members of a flask, means adapted to guide said stripper plates alternately into operative relation to said pattern support, means adapted to adjust the height of said pattern support and lock the same against vertical movement in each of a plurality of predetermined positions, means adapted to impart a rotary movement to said pattern support, means adapted to lock said pattern support against rotary movement in each of a plurality of predetermined positions, detachable means for retaining a flask against said support in underlying relation therewith, and a table for carrying said flask downwardly from said support.

5. In molding apparatus, in combination, a pattern support, a pair of stripper plates movable relative to said pattern support and adapted to support one of the members of a flask upon each side of said support, and clamping means adapted alternately to swing over and hold a cover plate upon each of the members of said flask to enable said pattern support to be reversed without displacing the members of said flask.

[Claims 6 to 10 not printed in the Gazette.]

882,824. REFRIGERATOR. LEE HALL, St. Paul, Minn. Filed Sept. 17, 1906. Serial No. 334,949.



1. A refrigerator comprising an outer receptacle and a cover therefor, an open-topped provision box arranged within the receptacle, a bell telescoping over the box and formed in its top with a vent hole, and an elastically supported plug adapted to be thrust by the cover into vent-sealing position.

2. A refrigerator comprising a receptacle and its cover, an open topped provision box arranged within the receptacle and having its walls spaced apart from the walls thereof, a telescoping bell fitting loosely over the box, the top of the bell being formed with a vent-hole, and means carried upon the inside of the cover for stopping the vent-hole when the cover is closed.

3. A refrigerator comprising a receptacle and its cover, an open topped provision box arranged within the receptacle and having its walls spaced apart from the walls of the receptacle, a telescoping bell fitting loosely over the box, the top of the bell being formed with a vent-hole, and a plug elastically supported upon the inside of the cover in position to stop the vent-hole when the cover is closed.

4. A refrigerator comprising an outer receptacle and a cover therefor, an open-topped provision box within the receptacle, a bell telescoping over the box, an ice chamber arranged between the bell and the wall of the receptacle, and a cover for the ice chamber having frictional engagement with the bell to secure it against accidental opening.

5. A refrigerator comprising an outer receptacle and a cover therefor, an open-topped provision box within the receptacle, a bell telescoping over the box, an ice chamber arranged between the bell and the wall of the receptacle, an ear at the upper end of the bell, and a cover hinged to the wall of the receptacle and having frictional engagement with the ear whereby it is secured against accidental opening.

[Claims 6 to 8 not printed in the Gazette.]

882,825. CIGAR AND CIGARETTE HOLDER. ISSACHAR A. HEALD, Washington, D. C. Filed Nov. 19, 1906. Serial No. 344,149.



1. A holder of the class described having a mouth piece provided with a socket and cams in said socket, a cup element in the socket to receive the end of the cigar or cigarette, and clamping means on said cup element, coacting with the cams to engage and hold the cigar or cigarette.

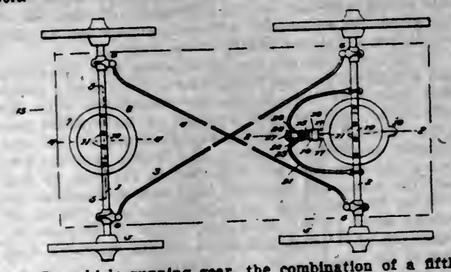
2. A holder of the class described having a mouth piece provided with a socket and cams in said socket, a cup element in the socket to receive the end of a cigar or cigarette, and spring clamping arms on said cup element, coacting with the cams to engage and hold the cigar or cigarette.

3. A holder of the class described having a mouth piece provided with a socket, a cup element in said socket, to receive the inner end of the cigar or cigarette, and a movable sleeve on said cup element, the latter and the sleeve having co-acting means to regulate the draft.

4. A holder of the class described comprising a mouth piece having a socket, a cup element detachably fitted in the socket, a sleeve movable on said cup element and coacting therewith to regulate the draft, and a spring clamping means on said cup element and sleeve, to detachably secure them together, adapt one for movement with reference to the other, and to also coact with the cup element in holding a cigar or cigarette.

882,826. RUNNING-GEAR. MARTIN W. HEYENGA, Chicago, Ill. Filed Feb. 1, 1907. Serial No. 355,332.

1. In vehicle running gear, the combination of a fifth wheel connection between an axle and a vehicle body, the same comprising complemental members, a slidable locking bolt carried by one of the complemental members and designed to engage the opposite complemental member, a member applied to the axle and formed with a cam, and an operative connection between the cam and the locking bolt.



2. In vehicle running gear, the combination of a fifth wheel connection between an axle and a vehicle body, the same comprising complemental members, a flared keeper carried by one of the complemental members, a slidable locking bolt mounted upon the opposite complemental member and provided with a beveled end designed to engage the before mentioned flared keeper, a member applied to the axle and formed with a cam, and an operative connection between the cam and the locking bolt.

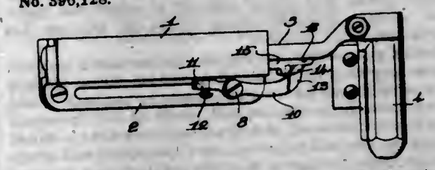
3. In vehicle running gear, the combination of a fifth wheel connection between an axle and a vehicle body, the same comprising a lower ring applied to the axle and an upper ring carried by the vehicle body and engaging the lower ring, an extension projecting from the upper ring, a keeper carried by the lower ring, a locking bolt mounted upon the before mentioned extension and adapted to engage the keeper, and means for automatically releasing the locking bolt from engagement with the keeper.

4. In vehicle running gear, the combination of a fifth wheel connection between the rear axle and the vehicle body, the same comprising complemental members, a flared keeper carried by one of the complemental members, a slidable locking bolt mounted upon the opposite complemental member and formed with a beveled end for engaging the flared keeper, a member applied to the rear axle and formed with a cam, means for causing the cam to release the locking bolt from engagement with the keeper when the rear axle is turned, a front axle, and an operative connection between the front axle and the rear axle.

5. In vehicle running gear, the combination of a fifth wheel between an axle and the vehicle body, the same comprising complemental members, one member being of circular form and the other member consisting of sections, each having a recurved flange to embrace an edge portion of the first mentioned member, and also provided with an inwardly extended arm, the said arms of the two sections being connected and serving the double function of holding the sections together and of forming a means for connecting them to the vehicle body.

[Claims 6 to 12 not printed in the Gazette.]

882,827. LOOM-TEMPLE. CALVIN L. JOY, Lowell, Mass., assignor to Draper Company, Hopedale, Mass., a Corporation of Maine. Filed Oct. 7, 1907. Serial No. 396,128.



1. In a loom-temple, the combination with the stand, and a slide-bar movable longitudinally therein, of a guide-shoe having an extended surface coöperating with the side of the slide-bar, and adjustable means to support and position the shoe in parallelism with the bar irrespective of the adjustment of said means.

2. In a loom-temple, the combination with a slide-bar

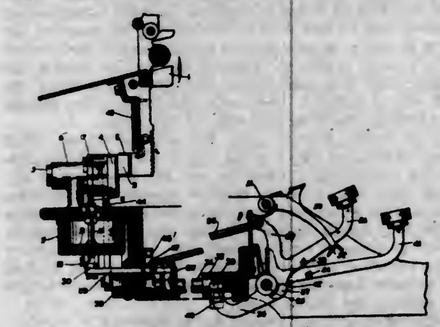
provided with the temple-head having a roll, and the temple-stand, of a guide-shoe coöperating with the inner side of the slide-bar, and an adjustable arm mounted on the stand and coöperating with and maintaining the shoe in position to prevent tipping of the slide-bar.

3. In a loom-temple, the combination with the stand, and a slide-bar movable longitudinally therein, of a guide-shoe having an extended surface coöperating with the side of the slide-bar, and provided on its opposite face with a socket, a fulcrum-stud on the stand, an arm mounted on the stud to swing in a lateral path, the rear end of the arm entering the socket in the shoe, to support the latter and maintain it pressed flat against the slide-bar irrespective of the angle of the arm, and an adjusting screw in the outer end of and to regulate the angularity of the arm, said screw bearing against a fixed part of the stand.

4. In a loom-temple, the combination with the stand, and a slide-bar movable longitudinally therein, of a shoe having an extended flat face to bear against the inner side of the slide-bar adjacent the stand, and means adjustably mounted on the latter and frictionally engaging the outer face of the shoe to maintain the latter pressed against the slide-bar and at all times in parallelism therewith.

5. In a loom-temple, in combination, the slide-bar, a stand in which it is longitudinally movable, a laterally movable arm fulcrumed on the stand, means to adjust said arm, and a guide-shoe loosely interposed between the side of the slide-bar and the free end of the arm, to prevent tipping of the slide-bar.

882,828. CARRIAGE-SHIFTING MECHANISM FOR TYPE-WRITERS. WELLINGTON P. KIDDER, Boston, Mass., assignor to Parker Machine Company, Buffalo, N. Y., a Corporation of New York. Filed June 24, 1905. Serial No. 266,812.



1. In a typewriting machine, in combination, a carriage, means for shifting the carriage from initial position to a second position, movable means adapted to arrest the movement of the carriage in such position, said first-mentioned means being adapted to shift the carriage to a third position upon a movement of said movable arresting means, and means adapted to arrest the movement of said arresting means when the carriage has reached the third position.

2. In a typewriting machine, in combination, a carriage, means adapted to shift the carriage from initial position to a second position, a shift lever for actuating said means, movable means adapted to arrest the movement of said carriage when such position is reached, a second shift lever adapted to actuate said first-mentioned means to shift said carriage to a third position upon a movement of said arresting means, and means actuated by said second-mentioned shift lever adapted to allow a movement of said arresting means.

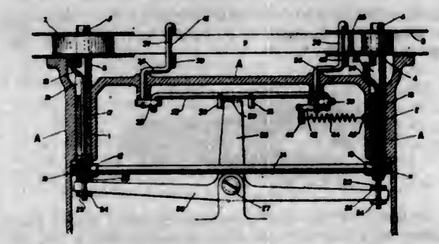
3. In a typewriting machine, in combination, a carriage, means adapted to shift the carriage from initial position to a second position, a shift lever for actuating said means, movable means adapted to arrest the movement of said carriage when such position is reached, a second shift lever adapted to actuate said first-mentioned means to shift said carriage to a third position upon a movement of said arresting means, and means actuated by said second shift lever adapted to permit a movement of said arresting means, said last-mentioned means operating to arrest the movement of said carriage in said third position.

4. In a typewriting machine, in combination, a carriage, means for shifting the carriage from initial position to a second position, and means pivoted to the frame of the machine adapted to arrest the movement of the carriage in such position, said first-mentioned means being adapted to shift the carriage to a third position upon a movement of said pivoted arresting means in the direction of the movement of the carriage.

5. In a typewriting machine, in combination, a carriage, means adapted to shift the carriage from initial position to a second position, a shift lever for actuating said means, means pivoted to the frame of the machine adapted to arrest the movement of said carriage when such position is reached, and a second shift lever adapted to actuate said first-named means to shift said carriage to a third position upon a movement of said arresting means in the direction of the movement of the carriage.

[Claims 6 to 42 not printed in the Gazette.]

882,829. RIBBON-REVERSING MECHANISM FOR TYPE-WRITING MACHINES. WELLINGTON P. KIDDER, Boston, Mass., assignor to Parker Machine Company, Buffalo, N. Y., a Corporation of New York. Filed Sept. 11, 1905. Serial No. 277,911.



1. In a typewriting machine, the combination with an inking ribbon of a pair of ribbon spools, driving means for said spools, a movable member for each spool adapted to connect said spool with the driving means, and means controlled by the tension of the ribbon adapted simultaneously to move said connecting members in opposite directions, whereby one of said spools is connected with the driving means and the other of said spools is disconnected therefrom.

2. In a typewriting machine, the combination with an inking ribbon, of a pair of ribbon spools, means adapted alternately to drive said spools in opposite directions, and a pair of balanced connecting members, one for each spool, adapted to connect one of said spools with its driving means and simultaneously to disconnect the other of said spools from its driving means, said connecting and disconnecting operations being operated by the tension of the ribbon.

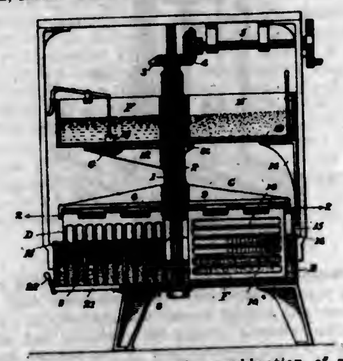
3. In a typewriting machine, the combination with an inking ribbon, of a pair of ribbon spools, means adapted alternately to drive said spools in opposite directions, a pair of connecting members, one for each spool, a balanced member adapted at either end thereof to support one of said members, and means controlled by the tension of the ribbon adapted to tilt said balanced member to engage one of said connecting members with its spool and simultaneously to disengage the other of said connecting members from its spool.

4. In a typewriting machine, in combination, a pair of spools adapted to carry the inking ribbon and feed the same in opposite directions, driving means for each spool, means adapted alternately to connect each of said spools with its driving means, a balanced tilt-beam upon either end of which one of said connecting means is supported, and means controlled by the tension of the ribbon adapted to tilt said beam to engage one of said connecting means with one of said ribbon spools and simultaneously to disengage the other of said connecting means from its ribbon spool.

5. In a typewriting machine, in combination, a pair of spools adapted to carry the inking ribbon and feed the same alternately in opposite directions, means adapted alternately to connect each of said spools with its driving means, a balanced tilt-beam upon either end of which one of said connecting means is supported, means controlled by the tension of the ribbon adapted to tilt said beam to engage one of said connecting means with one of said ribbon spools and simultaneously to disengage the other of said ribbon spools from its driving means, and means adapted to accelerate said engaging and disengaging operations.

[Claims 6 to 18 not printed in the Gazette.]

882,830. CONCRETE-MIXER. JOHN D. LUTTRELL, Benton Harbor, Mich., assignor to Elmer M. Barnes, St. Joseph, Mich. Filed Jan. 25, 1907. Serial No. 354,055.



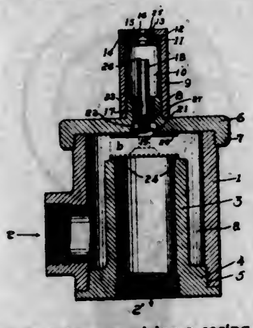
1. In a mixing apparatus the combination of a pan, a shaft arranged centrally in respect to the pan, mixers carried by the shaft, a receptacle having a perforated bottom for pulverized material, means for agitating the receptacle, means for spraying water upon the material in the pan as gradually deposited therein, and means for rotating the shaft together with the receptacle.

2. The combination of the pan, a rotatable cross-head, a curved rake and a curved grid connected with said cross-head, a water tank, and a receptacle having a perforated bottom supported to rotate with the cross head, and means for agitating the receptacle.

3. The combination with the pan having a serrated edge, its spraying device and receptacle having a perforated bottom, of a bracket extending over the receptacle and provided with a roller resting upon the edge of the pan.

882,831. VALVE. SAMUEL MATTHES and JOHN B. RINEHART, Mansfield, Ohio. Filed May 8, 1907. Serial No. 371,645.

1. A gas safety mechanism comprising a casing substantially tubular in form, said casing having inlet and outlet openings at right angles with each other, a separable upwardly extending tubular member secured to the valve casing and extending above the inlet opening, a valve seat formed upon the upper extremity of said tubular member, a cap threadably connected to the valve casing having a chamber formed therein with a valve seat formed upon the lower extremity of the wall of the chamber, a double faced valve of light specific gravity provided with an upwardly extending tubular stem loosely fitted to an aperture in the cap and adapted to move within the casing and close communication between the inlet and outlet apertures and the chamber in the cap, and means to increase or decrease the weight of the tubular valve.



2. A gas safety valve comprising a casing having an inlet and outlet opening, a tubular member extending within the casing having a valve seat formed upon the free end, a cap secured to the casing provided with a chamber and a valve seat, a double faced valve formed of sheet metal with one disk cone shape and the other flat, said valve being adapted to close communication between the outlet and inlet apertures by its own specific gravity aided by the pressure of gas and to prevent the escape of gas when the valve is maintained in open position by the pressure, a tubular stem fitted to said double faced valve whereby the inner periphery can be fitted with shot or other foreign substance to vary the specific gravity of the valve to maintain said valve in open position at a predetermined pressure.

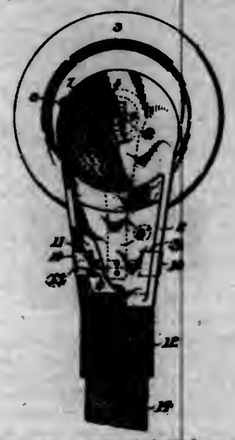
3. A safety valve for gas comprising a casing with inlet and outlet openings, a tubular member fitted to the outlet opening and projecting above the inlet opening, a double faced valve formed of sheet metal with one disk formed cone shape and the other flat mounted within the casing, a tubular stem fitted to said double faced valve, means to increase the weight of said valve, a cap provided with a boss secured to said valve casing, a removable casing fitted to the periphery of said boss to inclose the tubular stem of the valve stem and to provide means to manually raise the valve without disassembling any other part of the valve mechanism.

882,832. CLOTH. GEORGE MOSS, St. Peter, Minn. Filed Mar. 27, 1907. Serial No. 364,845.



As an article of manufacture, a cloth having medicinal properties and consisting of a backing of open mesh woven fabric, a facing comprising a sheet or bat of thoroughly intermingled wool having the natural animal fat retained therein and spread out in a flat layer against one side of the backing, in order to permit both to be pressed through a sewing machine and intersecting lines of stitching passing through both the facing and backing and securing the sheet or bat of fiber to and against the woven fabric, leaving the outer face of the sheet or bat substantially flat and exposed so as to come in direct contact with the skin of the wearer, said sheet or bat lying flat against the backing between the lines of stitching and covering the open meshes in the fabric.

882,833. TROLLEY-HARP. FRANK M. MUDLER, Pittsburg, Pa. Filed Dec. 5, 1907. Serial No. 405,191.



1. In a trolley harp, a pair of slotted separable sections, one at each side of the trolley, and a projection on each section arranged to enter the slot in the other section to lock the sections together.

2. In a trolley harp, a pair of slotted separable sections, one at each side of the trolley, a projection on each section arranged to enter the slot in the other section to lock the sections together, and means for preventing the projections from withdrawal from the slots.

3. In a trolley harp, a pair of slotted separable sections, one at each side of the trolley, a projection on each section arranged to enter the slot in the other section to lock the sections together, and a screw passed through one section into engagement with the projection on the other section to prevent the sliding of one section on the other.

882,834. STOCKING. EUGENE H. MCCOLLOCH, New Orleans, La. Filed July 6, 1907. Serial No. 382,456.

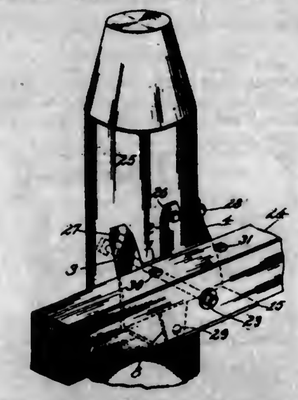


1. A stocking having its top portion turned downward and attached to its major portion to form a hem, and a strip or band arranged in said hem, and reinforcing strips depending from said strip or band, and also having a device attached to the said strip or band and adapted for the engagement of the attaching member of a stocking supporter.

2. A stocking having its top portion turned downward and attached to its major portion to form a hem, and a strip or band arranged in said hem; said hem and strip or band being quilted, and reinforcing strips depending from the strip or band and attached to the major portion of the stocking, and also having a device attached to the said strip or band and adapted for the engagement of the attaching member of a stocking supporter.

3. A stocking having its top portion turned downward and attached to its major portion to form a hem, and a strip or band arranged in said hem; said hem and strip or band being quilted, and reinforcing strips depending from the strip or band at the inner side of the major portion of the stocking; said depending strips and major portion of the stocking being quilted, and a device attached to the said strip or band and adapted for the engagement of the attaching member of a stocking supporter.

882,835. DEVICE FOR ATTACHING CROSS-ARMS TO TELEGRAPH-POLES. JOHN E. MCGILLIVRAY, Walla Walla, Wash. Filed Jan. 21, 1907. Serial No. 353,278.



1. A device of the kind described, comprising a plate provided with a body part, upper and lower lugs in the same plane, and a shelf located substantially at right angles thereto, whereby it may be assembled and adjusted with other devices, substantially in the manner specified.

2. A device of the kind described, comprising a body part, upper and lower medial lugs, lateral lugs lying in the same plane, and a shelf located substantially at right angles thereto, the body part, lugs, and shelf being provided with apertures, whereby the device may be secured to a cross-arm and to a pole, respectively, the lateral lugs being adapted to be bent back and secured to the pole.

3. A device of the kind described, comprising a body part and lugs in the same plane and a shelf substantially at right angles thereto, the said body part, lugs, and shelf being provided with apertures for the several reception of members for securing the device to a cross-arm and to a pole, in service, substantially as set forth.

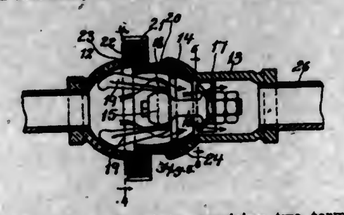
4. A device of the kind described, comprising a body part, shelf and lug made of sheet metal, the lug and shelf being cut one from the other, and the shelf struck up at right angles to the lug and body part.

5. A device of the kind described, comprising a body part, shelf, and lug made of sheet metal, the body part and lug being in the same plane, and the shelf being at right angles to the body part and lug.

[Claims 6 to 17 not printed in the Gazette.]

882,836. FLEXIBLE CONDUIT-JOINT. MILTON P. MCLAUGHLIN, Wakefield, Mass. Filed Mar. 13, 1907. Serial No. 362,064.

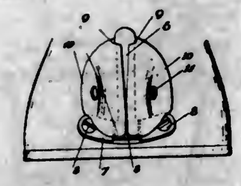
1. A flexible conduit joint comprising two terminal sections, one having an internally concave socket portion, and the other an externally convex expansible inner portion fitting said socket, the joint being formed with an open space around the expansible portion between the edge of the concave socket portion and the coupling which connects the expansible portion to its terminal section, complemental coupling members attached to the sections, and located within the conduit, the said inner portion being provided internally with an expanding spring.



2. A flexible conduit joint comprising two terminal inexpansible sections separated by an intervening space, a ball coupling member attached to one section, a socket coupling member attached to the other section, said members projecting from the respective sections, and being interengaged between the same and within the conduit, one section having an internally concave socket, an expansible, externally convex extension carried by the other section, and bridging said space, the said extension fitting the said socket, and means for detachably securing the extension to the section by which it is carried.

3. A flexible conduit joint comprising two terminal inexpansible sections separated by an intervening space, a ball coupling member attached to one section, a socket coupling member attached to the other section, said members projecting from the respective sections, and being interengaged between the same and within the conduit, one section having an internally concave socket, while the other has an annular seat and a screw-threaded portion outside the seat, an expansible, externally convex extension fitting said socket, and having a flange bearing on said seat, and a flanged coupling nut engaging the flange of the extension and the said screw-threaded portion.

882,837. TOE-WEIGHT. MILES NORTON, Cleveland, Ohio. Filed July 29, 1907. Serial No. 385,991.



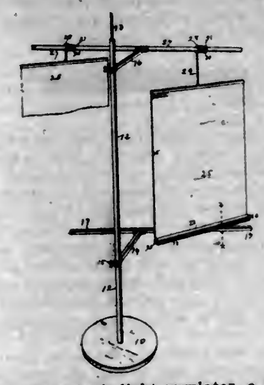
1. A toe weight comprising an attaching member adapted to be fixed to the hoof and having an undercut stem, a pair of weight sections having a dovetailed groove which receives said stem, a screw connecting said sections, and a spring between the screw and one section and arranged to hold said sections yieldingly together.

2. A toe weight comprising an attaching member having a cross piece at the bottom adapted to be fixed to the hoof and an upwardly extending undercut stem with shoulders at the top, and a pair of weight sections having a spring connection and an undercut groove adapted to receive said stem.

882,838. PHOTOGRAPHER'S LIGHT-REGULATOR. ALONZO C. NOYES, Rochester, N. Y. Filed Aug. 8, 1907. Serial No. 388,047.

1. In a photographer's light regulator, a standard fixed to a base, a bearer slidably connected with the standard, a cross bar fixed to said bearer and a roller carrier pivotally and slidably connected with the cross bar fixed to said bearer, to operate as set forth.

2. In a photographer's light regulator, a standard fixed to a base, a bearer slidably connected with the standard, a cross bar fixed to said bearer, a roller carrier pivotally and slidably connected with the cross bar fixed to said bearer, a longitudinal slot in the roller carrier and a pivotal bolt extended through the slot and the cross bar, to operate as set forth.



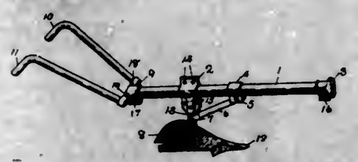
3. In a photographer's light regulator, a standard fixed to a base, a bearer slidably connected with the standard, a cross bar fixed to said bearer, a roller carrier pivotally and slidably connected with the cross bar fixed to said bearer, a longitudinal slot in the roller carrier, a pivotal bolt extended through the slot and the cross bar, roller bearings at the ends of the roller carrier and a curtain roller mounted in said bearings, to operate as set forth.

4. In a photographer's light regulator, a standard fixed to a base, a bearer slidably connected with the standard, a cross bar fixed to said bearer, a roller carrier pivotally and slidably connected with the cross bar fixed to said bearer, a longitudinal slot in the roller carrier, a pivotal bolt extended through the slot and the cross bar, roller bearings at the ends of the roller carrier, a curtain roller mounted in said bearings, a curtain fixed to the roller and means to elevate and suspend the curtain at different points of elevation, to operate as set forth.

5. In a photographer's light regulator, a standard fixed to a base, a bearer slidably connected with a cross bar fixed to said bearer, a roller carrier pivotally and slidably connected with the cross bar fixed to said bearer, a longitudinal slot in the roller carrier, a pivotal bolt extended through the slot and the cross bar, roller bearings at the ends of the roller carrier, a curtain roller mounted in said bearings, a curtain fixed to the roller, a rod fixed to the upper end portion of the standard, a pulley slidably and rotatably mounted on the rod to elevate and suspend the curtain at different points of elevation, to operate as set forth.

[Claims 6 to 9 not printed in the Gazette.]

882,839. PLOW. CHARLES C. RANKIN, Louisville, Ky., assignor of one-third to Samuel T. Crofts, Louisville, Ky. Filed May 4, 1907. Serial No. 371,845.



In a plow, the combination of a tubular beam, and a clevis, a standard fixture, and a handle-fixture clamped about said tubular beam to hold by friction only and adjustable at angles relative to the plane passing through the axis of said tubular beam.

882,840. BOTTLE-CLOSURE. WILLIAM H. REID, Brooklyn, N. Y., assignor to William G. Lamprecht, Brooklyn, N. Y. Filed Oct. 19, 1907. Serial No. 398,231.

1. A bottle closure comprising a disk adapted to engage the top of the bottle, and a series of flexible disks of

fibrous material secured to the top disk and fitting into the bottle neck, said series of disks being very thin relative to their diameters and secured at their central portions with the marginal portions free to slide upon each other and also to separate upon flexure.



2. A bottle closure comprising a disk adapted to engage the top of the bottle, a relatively thin bottom disk of tough and resilient fibrous material adapted to fit the bottle neck, and a series of disks of a relatively low grade fibrous material secured between the bottom and top disks and of a size to fit the bottle neck, said series of disks being very thin relative to their diameters and secured at their central portions with the marginal portions free to slide upon each other and also to separate upon flexure.

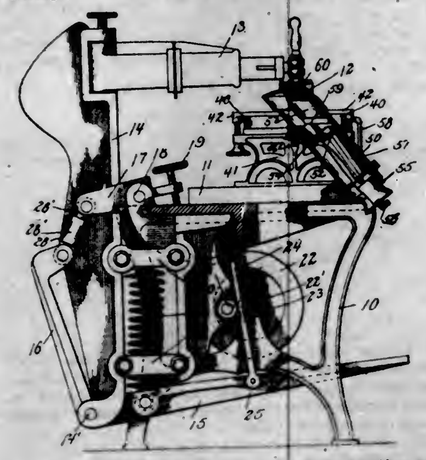
3. A bottle closure comprising a disk adapted to engage the top of the bottle, and a series of flexible disks of fibrous material secured to the top disk and fitting into the bottle neck, said series of disks being very thin relative to their diameters and secured at their central portions with the marginal portions free to slide upon each other and also to separate upon flexure, the series of disks comprising two or more intermediate disks polygonal in shape with their apexes lying in the periphery of the series of disks and one or more bottom disks that are circular.

4. A bottle closure comprising a disk adapted to engage the top of the bottle, and a series of flexible disks of fibrous material secured to the top disk and fitting into the bottle neck, said series of disks being very thin relative to their diameters and secured at their central portions with the marginal portions free to slide upon each other and also to separate upon flexure, one or more intermediate disks of the series being polygonal in shape with their apexes extending to the periphery of the series.

5. A bottle closure comprising a disk adapted to engage the top of the bottle, and a plurality of relatively thin flexible disks secured to the top disk and of a size to engage the bottle neck.

[Claims 6 to 11 not printed in the Gazette.]

882,841. CLOTHES-PRESSING MACHINE. JAMES B. REPLOGLE, Chicago, Ill., assignor to Joseph Saltzman, Chicago, Ill. Filed Apr. 2, 1906. Serial No. 309,312.



1. In a press of the character described, coacting press members, one of which is movable, a lever system for moving said press member comprising a power initiating member arranged for limited oscillating movement, and means for applying to said lever system, at the termination of its movement, power expended in the initial stages of movement of said lever system.

2. In a press, coacting press members, one whereof is movable toward and from the other, a lever system for moving said movable member, comprising a manually operable power initiating lever and a fly wheel associated with said lever system, arranged to be set in movement by the initial movement of said lever system, and to apply power to the lever system tending to create a pressure between the press members at the termination of the movement of said lever system.

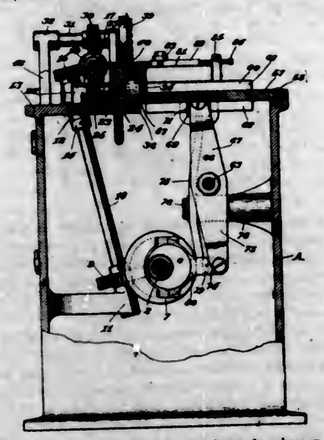
3. In a toggle press, the combination with the coacting press members, of a toggle lever system for moving one of said press members relative to the other, a fly wheel, a gear associated for rotation with said fly wheel, and a rack meshing with said gear, connected with a member of the lever system.

4. In a toggle press, the combination with the press member, of the vertical beam and a beam-moving toggle construction, one member of said toggle comprising interfitting parts, a spring for maintaining said members in relatively extended position, and means for limiting the relative movement of said parts in both directions, whereby said link is made yielding in the direction of its length.

5. In a toggle press, in combination, press members, one of which is movable toward and from the other, a lever system comprising a manually operable power-initiating lever for moving said movable member, a fly wheel operatively connected with a member of said lever system to be set in rotation during the initial portion of the movement of said lever system, and to translate its momentum into power applied to said lever system at the termination of its movement, and connections between said lever members to which the power of the fly wheel is applied and the movable press member including a yielding element.

[Claims 6 to 8 not printed in the Gazette.]

882,842. CARVING-MACHINE. FRANCIS H. RICHARDS, Hartford, Conn. Filed May 22, 1902. Serial No. 108,461.



1. In a carving machine, a carriage having a perimetrical rabbet, and an apertured frame embracing and supporting said carriage by engagement in said rabbet and permitting within the limits of the engagement of said frame in said rabbet a free movement of said carriage in transverse directions, a cutting tool upon said carriage, a coöperating tool rotatably mounted for incising the stock in a different direction, and stock-feeding and guiding means.

2. In a carving machine, a carriage, an apertured frame supporting said carriage by engagement with an under surface thereof and permitting a free movement of said carriage within limits in transverse directions, power driven mechanism connected with said carriage through the aperture in said frame for imparting a circuitous translational movement to said carriage in transverse directions, a knife upon said carriage for incising the stock in some of the movements of the carriage, a coöperating knife rotatably mounted for incising the stock in a different direction, and stock feeding and guiding means.

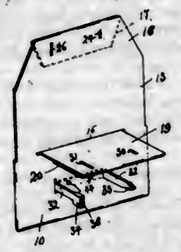
3. In a carving machine, a carriage, an apertured frame supporting said carriage by engagement with an under surface thereof and permitting within the limits of such engagement a free movement of said carriage, relatively transverse guideways in the under surface of said carriage, and power driven mechanism engaging said guideways for imparting a circuitous translational movement to said carriage.

4. In a carving machine, a carriage having a perimetrical rabbet, an apertured frame supporting said carriage by engagement in said rabbet and permitting within the limits of the engagement of said frame in said rabbet a free movement of said carriage, relatively transverse guideways in the under surface of said carriage, and power driven mechanism engaging said guideways for imparting a circuitous translational movement to said carriage.

5. In a carving machine, a carriage having a perimetrical groove, an apertured frame supporting said carriage by engagement in said groove and permitting within the limits of the engagement of said frame in said groove a free movement of said carriage, relatively transverse guideways in the under surface of said carriage and cam driven mechanism engaging said guideways for imparting a circuitous translational movement to said carriage.

[Claims 6 to 33 not printed in the Gazette.]

882,843. ENVELOP. FRANK L. RICHARDSON, Manifest, La. Filed Oct. 5, 1907. Serial No. 396,099.



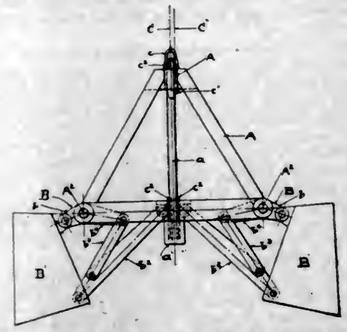
1. An envelop blank comprising a sheet of paper divided by folding lines into a front portion having sealing flaps at the ends and a back portion extending from one side and a closure portion extending from the other side, said back portion and closure portion being uniform in size with the front portion and with a slit at the juncture of the closure portion and front portion, said back portion having a sealing flap extending from its free edge and of less length than the back portion, whereby an envelop may be formed by folding the back portion over the front portion and folding the end flaps over the back portion and passing the reduced sealing flap through said slit and passing the closure portion with its sealing flap around the folded front and back portions with the reduced sealing flap overlapping the sealing flap of the closure portion.

2. An envelop comprising a sheet of paper divided by folding lines into a front portion having sealing flaps at the ends and a back flap extending from one side and a closure flap extending from the other side and with a slit at the juncture of the closure flap and the front portion said back flap having a reduced sealing flap extending from its free edge and said closure flap having a sealing flap extending from its free edge with the outer portions of said sealing flaps folded upon themselves and cemented, and said front portion and sealing flaps provided with spaced apertures adapted to register when the envelop is in folded position, a metal fastening device having yieldable barbs at one end and a socket having an enlarged interior and adapted to receive and hold said barbs at the other end and adapted to be bent into U-form and thrust through said apertures and the barbed end inserted into the socket after the envelop is closed, to secure the same.

3. An envelop formed with a front and back and overlapping sealing flaps provided with registering apertures, and a fastening device formed of a metal member having resilient barbs at one end and a socket having an enlarged interior at the other end and adapted to be looped through said apertures and the barbed end inserted into the socket after the envelop is closed.

4. An envelop having front and back portions and with overlapping sealing flaps provided with registering apertures, a fastening device comprising a metal member having resilient barbs at one end and a socket having a reduced interior at the other end and adapted to be looped through said apertures and the barbed end inserted into the socket after the envelop is closed, and fastening devices securing said metal member to said envelop.

882,844. CLAM-SHELL BUCKET. ARNOLD RUETSCHI, Cleveland, Ohio. Filed June 3, 1907. Serial No. 376,934.



1. In a device of the character described, the combination of a frame; a cross-head vertically movable in said frame; scoop members pivotally attached at their outer ends to said frame; and links connecting the inner ends of said scoop members with said cross-head.

2. In a device of the character described, the combination of a frame; a cross head vertically movable in said frame; arms oscillatorily mounted in said frame on either side of said cross-head; scoop members pivotally attached at their outer ends to said arms; and links connecting the inner ends of said scoop members with said cross-head.

3. In a device of the character described, the combination of a frame; a cross head vertically movable in said frame; arms oscillatorily mounted in said frame on either side of said cross-head; scoop members pivotally attached at their outer ends to said arms; links connecting the inner ends of said scoop members with said cross-head; and means for positively rocking said arms.

4. In a device of the character described, the combination of a frame; a cross head vertically movable in said frame; arms oscillatorily mounted in said frame on either side of said cross-head; scoop members pivotally attached at their outer ends to said arms; links connecting the inner ends of said scoop members with said cross-head; and means connecting said arms with said cross-head whereby the former are positively rocked upon movement of the latter.

5. In a device of the character described, the combination of a frame; a cross-head vertically movable in said frame; bell-cranks oscillatorily mounted in said frame on either side of said cross-head; scoop members pivotally attached at their outer ends to the lower arms of said bell cranks, respectively; and links connecting the inner ends of said scoops and the upper arms of said bell-cranks with said cross-head.

[Claims 6 to 8 not printed in the Gazette.]

fibrous material secured to the top disk and fitting into the bottle neck, said series of disks being very thin relative to their diameters and secured at their central portions with the marginal portions free to slide upon each other and also to separate upon flexure.



2. A bottle closure comprising a disk adapted to engage the top of the bottle, a relatively thin bottom disk of tough and resilient fibrous material adapted to fit the bottle neck, and a series of disks of a relatively low grade fibrous material secured between the bottom and top disks and of a size to fit the bottle neck, said series of disks being very thin relative to their diameters and secured at their central portions with the marginal portions free to slide upon each other and also to separate upon flexure.

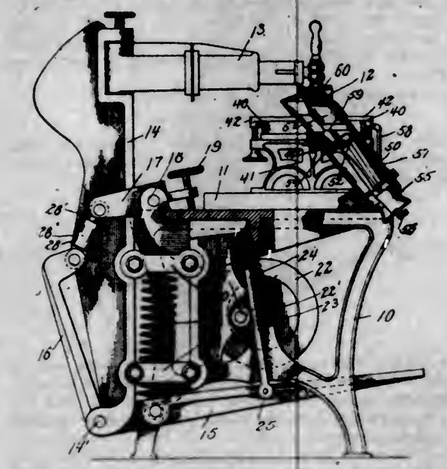
3. A bottle closure comprising a disk adapted to engage the top of the bottle, and a series of flexible disks of fibrous material secured to the top disk and fitting into the bottle neck, said series of disks being very thin relative to their diameters and secured at their central portions with the marginal portions free to slide upon each other and also to separate upon flexure, the series of disks comprising two or more intermediate disks polygonal in shape with their apexes lying in the periphery of the series of disks and one or more bottom disks that are circular.

4. A bottle closure comprising a disk adapted to engage the top of the bottle, and a series of flexible disks of fibrous material secured to the top disk and fitting into the bottle neck, said series of disks being very thin relative to their diameters and secured at their central portions with the marginal portions free to slide upon each other and also to separate upon flexure, one or more intermediate disks of the series being polygonal in shape with their apexes extending to the periphery of the series.

5. A bottle closure comprising a disk adapted to engage the top of the bottle, and a plurality of relatively thin flexible disks secured to the top disk and of a size to engage the bottle neck.

[Claims 6 to 11 not printed in the Gazette.]

882,841. CLOTHES-PRESSING MACHINE. JAMES B. REPLOGLE, Chicago, Ill., assignor to Joseph Saltzman, Chicago, Ill. Filed Apr. 2, 1906. Serial No. 309,312.



1. In a press of the character described, coacting press members, one of which is movable, a lever system for moving said press member comprising a power initiating member arranged for limited oscillating movement, and means for applying to said lever system, at the termination of its movement, power expended in the initial stages of movement of said lever system.

2. In a press, coacting press members, one whereof is movable toward and from the other, a lever system for moving said movable member, comprising a manually operable power initiating lever and a fly wheel associated with said lever system, arranged to be set in movement by the initial movement of said lever system, and to apply power to the lever system tending to create a pressure between the press members at the termination of the movement of said lever system.

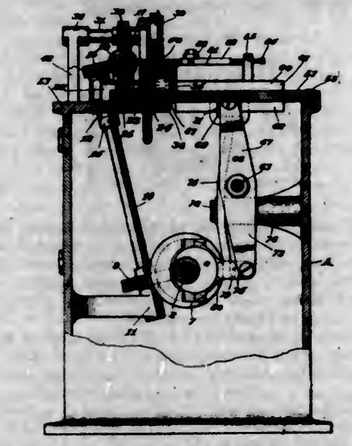
3. In a toggle press, the combination with the coacting press members, of a toggle lever system for moving one of said press members relative to the other, a fly wheel, a gear associated for rotation with said fly wheel, and a rack meshing with said gear, connected with a member of the lever system.

4. In a toggle press, the combination with the press member, of the vertical beam and a beam-moving toggle construction, one member of said toggle comprising interfitting parts, a spring for maintaining said members in relatively extended position, and means for limiting the relative movement of said parts in both directions, whereby said link is made yielding in the direction of its length.

5. In a toggle press, in combination, press members, one of which is movable toward and from the other, a lever system comprising a manually operable power-initiating lever for moving said movable member, a fly wheel operatively connected with a member of said lever system to be set in rotation during the initial portion of the movement of said lever system, and to translate its momentum into power applied to said lever system at the termination of its movement, and connections between said lever members to which the power of the fly wheel is applied and the movable press member including a yielding element.

[Claims 6 to 8 not printed in the Gazette.]

882,842. CARVING-MACHINE. FRANCIS H. RICHARDS, Hartford, Conn. Filed May 22, 1902. Serial No. 108,461.



1. In a carving machine, a carriage having a perimetrical rabbet, and an apertured frame embracing and supporting said carriage by engagement in said rabbet and permitting within the limits of the engagement of said frame in said rabbet a free movement of said carriage in transverse directions, a cutting tool upon said carriage, a coöperating tool rotatably mounted for incising the stock in a different direction, and stock-feeding and guiding means.

2. In a carving machine, a carriage, an apertured frame supporting said carriage by engagement with an under surface thereof and permitting a free movement of said carriage within limits in transverse directions, power driven mechanism connected with said carriage through the aperture in said frame for imparting a circuitous translational movement to said carriage in transverse directions, a knife upon said carriage for incising the stock in some of the movements of the carriage, a coöperating knife rotatably mounted for incising the stock in a different direction, and stock feeding and guiding means.

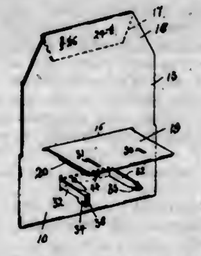
3. In a carving machine, a carriage, an apertured frame supporting said carriage by engagement with an under surface thereof and permitting within the limits of such engagement a free movement of said carriage, relatively transverse guideways in the under surface of said carriage, and power driven mechanism engaging said guideways for imparting a circuitous translational movement to said carriage.

4. In a carving machine, a carriage having a perimetrical rabbet, an apertured frame supporting said carriage by engagement in said rabbet and permitting within the limits of the engagement of said frame in said rabbet a free movement of said carriage, relatively transverse guideways in the under surface of said carriage, and power driven mechanism engaging said guideways for imparting a circuitous translational movement to said carriage.

5. In a carving machine, a carriage having a perimetrical groove, an apertured frame supporting said carriage by engagement in said groove and permitting within the limits of the engagement of said frame in said groove a free movement of said carriage, relatively transverse guideways in the under surface of said carriage and cam driven mechanism engaging said guideways for imparting a circuitous translational movement to said carriage.

[Claims 6 to 33 not printed in the Gazette.]

882,843. ENVELOP. FRANK L. RICHARDSON, Manifest, La. Filed Oct. 5, 1907. Serial No. 396,099.



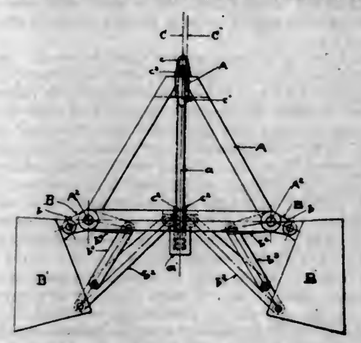
1. An envelop blank comprising a sheet of paper divided by folding lines into a front portion having sealing flaps at the ends and a back portion extending from one side and a closure portion extending from the other side, said back portion and closure portion being uniform in size with the front portion and with a slit at the juncture of the closure portion and front portion, said back portion having a sealing flap extending from its free edge and of less length than the back portion, whereby an envelop may be formed by folding the back portion over the front portion and folding the end flaps over the back portion and passing the reduced sealing flap through said slit and passing the closure portion with its sealing flap around the folded front and back portions with the reduced sealing flap overlapping the sealing flap of the closure portion.

2. An envelop comprising a sheet of paper divided by folding lines into a front portion having sealing flaps at the ends and a back flap extending from one side and a closure flap extending from the other side and with a slit at the juncture of the closure flap and the front portion said back flap having a reduced sealing flap extending from its free edge and said closure flap having a sealing flap extending from its free edge with the outer portions of said sealing flaps folded upon themselves and cemented, and said front portion and sealing flaps provided with spaced apertures adapted to register when the envelop is in folded position, a metal fastening device having yieldable barbs at one end and a socket having an enlarged interior and adapted to receive and hold said barbs at the other end and adapted to be bent into U-form and thrust through said apertures and the barbed end inserted into the socket after the envelop is closed, to secure the same.

3. An envelop formed with a front and back and overlapping sealing flaps provided with registering apertures, and a fastening device formed of a metal member having resilient barbs at one end and a socket having an enlarged interior at the other end and adapted to be looped through said apertures and the barbed end inserted into the socket after the envelop is closed.

4. An envelop having front and back portions and with overlapping sealing flaps provided with registering apertures, a fastening device comprising a metal member having resilient barbs at one end and a socket having a reduced interior at the other end and adapted to be looped through said apertures and the barbed end inserted into the socket after the envelop is closed, and fastening devices securing said metal member to said envelop.

882,844. CLAM-SHELL BUCKET. ARNOLD RUETSCHI, Cleveland, Ohio. Filed June 3, 1907. Serial No. 376,934.



1. In a device of the character described, the combination of a frame; a cross-head vertically movable in said frame; scoop members pivotally attached at their outer ends to said frame; and links connecting the inner ends of said scoop members with said cross-head.

2. In a device of the character described, the combination of a frame; a cross head vertically movable in said frame; arms oscillatorily mounted in said frame on either side of said cross-head; scoop members pivotally attached at their outer ends to said arms; and links connecting the inner ends of said scoop members with said cross-head.

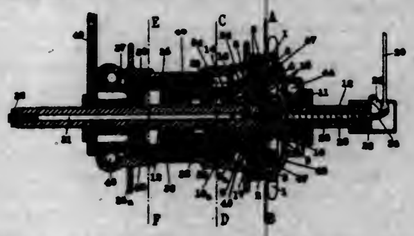
3. In a device of the character described, the combination of a frame; a cross head vertically movable in said frame; arms oscillatorily mounted in said frame on either side of said cross-head; scoop members pivotally attached at their outer ends to said arms; links connecting the inner ends of said scoop members with said cross-head; and means for positively rocking said arms.

4. In a device of the character described, the combination of a frame; a cross head vertically movable in said frame; arms oscillatorily mounted in said frame on either side of said cross-head; scoop members pivotally attached at their outer ends to said arms; links connecting the inner ends of said scoop members with said cross-head; and means connecting said arms with said cross-head whereby the former are positively rocked upon movement of the latter.

5. In a device of the character described, the combination of a frame; a cross-head vertically movable in said frame; bell-cranks oscillatorily mounted in said frame on either side of said cross-head; scoop members pivotally attached at their outer ends to the lower arms of said bell cranks, respectively; and links connecting the inner ends of said scoops and the upper arms of said bell-cranks with said cross-head.

[Claims 6 to 8 not printed in the Gazette.]

882,845. TWO-SPEED DRIVING-GEAR AND FREE-WHEEL MECHANISM FOR CYCLES. ERNST SACHS, Schweinfurt, Germany. Filed Feb. 26, 1906. Serial No. 302,934.



1. In a device for varying the speed of cycles, the combination with a hub and axle, of a sprocket-wheel not connected to said hub, a bearing-cone therefor fast on the axle, an internal hub-driving sleeve, a differential gear mechanism between said sleeve and sprocket-wheel, including an axially-displaceable central pinion between the driving-sleeve and cone, means for shifting said pinion, and means for locking said pinion with said cone in its one end-position and with said driving-sleeve in its other end-position.

2. In a device for varying the speed of cycles, the combination with the hub and axle, of a sprocket-wheel not connected to said hub, a bearing-cone therefor fast on the axle, an internal hub-driving sleeve, a differential gear mechanism between said sleeve and sprocket-wheel, including an axially-displaceable central pinion between the driving-sleeve and cone, means for shifting said pinion, and means for locking said pinion with said cone in its one end-position and with said driving-sleeve in its other end-position, a clutch-device locking said driving-sleeve to the hub only on forward propulsion, and a brake-device operated by a backward propulsion.

3. A variable speed gear for cycles, having an axially displaceable pinion; and a hand-operated shifting mechanism for the said pinion, comprising two rings encircling the hub-axle and oppositely situated within the bore of the pinion, an interiorly directed projection of the pinion inclosed betwen the said rings, a shifting rod movably guided within a longitudinal bore of the axle, two plates axially movable in a diametrical slot of the axle and detachably connected with one another and with the inner end of the shifting rod, and lugs at the opposite ends of the plates, exteriorly engaging recesses of the said rings, thus attaching the rings to the shifting rod in such a manner that the pinion, although being rotatable on the rings, is carried with the axial displacement of the shifting rod.

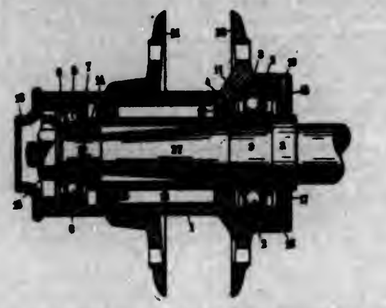
4. In a variable speed gear for cycles, having an axially displaceable pinion, the combination with a shifting mechanism for the pinion, arranged within a bore of the one end of the hub-axle; of a stop device for the said shifting mechanism, consisting of a bolt inserted from the opposite end of the bore of the hub axle; and means for adjustably fixing the said bolt.

5. In a variable speed gear for cycles, having an axially displaceable pinion, the combination with a shifting mechanism for the said pinion; of a stop device for the said shifting mechanism; and means for adjustably fixing the said stop device.

[Claims 6 to 9 not printed in the Gazette.]

882,846. WHEEL-HUB WITH BALL-BEARINGS. ERNST SACHS, Schweinfurt, Germany. Filed Dec. 31, 1906. Serial No. 350,228.

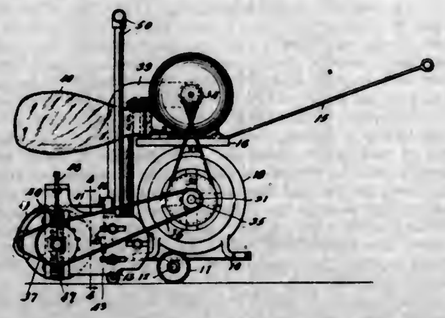
1. In a wheel bearing, the combination with a hub-barrel, of an axle-journal, a plurality of ball-bearings comprising concentric race-rings and balls received in grooves formed in the confronting portions of the said rings, the larger ball-bearing being fixed with its outer ring in the inner end of the hub-barrel between a shoulder and a ring screwed into the hub, and with its inner ring on the journal, the smaller ball-bearing being arranged displaceable so as to be released from end-thrust, a fixed collar on the inner end of the journal, a nut screwed to the free extremity of the journal and a sleeve interposed between the nut and the inner race-ring of the larger ball-bearing, so as to secure the said race-ring against axial movement between the collar on one side and the sleeve and nut on the other side.



2. In a wheel-bearing, the combination of an axle-journal and hub-barrel thereon, an interposed ball-bearing in fixed axial relation to both the hub and axle adapted to sustain end thrust as well as radial pressure, and an interposed ball-bearing not in fixed axial relation to both the hub and axle but displaceable relative to one of said parts so as to take only radial pressure and a thrust-member interposed between the two ball-bearings.

3. In a wheel-bearing, the combination of an axle-journal and hub-barrel thereon, a collar provided on the inner end of said axle-journal, an annular ball-bearing comprising concentric grooved rings and interposed balls, arranged in the inner end of the hub and in fixed relation to both the hub-barrel and axle-journal, the inner ring of said bearing abutting said collar, and a similar ball-bearing in the outer end of the hub, only one ring of the latter being in fixed relation, a nut screwed on the outer end of said axle-journal, and a thrust-member interposed between said nut and the inner ring of the first-mentioned ball-bearing.

882,847. FLOOR-SURFACING MACHINE. MAX L. SCHLUETER, Chicago, Ill. Filed Mar. 21, 1907. Serial No. 363,531.



1. A floor surfacing machine provided with a surfacing drum, a motor for actuating the drum, a pair of supporting wheels, and a propelling handle, the drum and the handle being located upon opposite sides of the supporting wheels so that the drum may be depressed by lifting on the handle, the portion of the machine in which the drum is mounted being provided with means whereby it may be automatically lifted when pressure upon the handle is withdrawn.

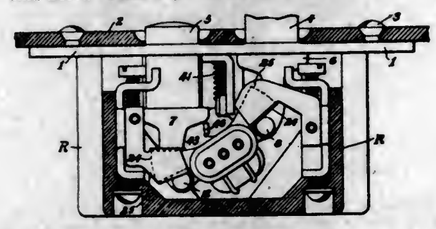
2. The surfacing machine having a surfacing drum at one end normally supported above its acting position by springs, centrally located supporting wheels upon the axle of which the machine may be tipped to carry the drum into or out of action, a motor for said drum located over said wheels, and a handle at the other end of the machine adapted both to propel the machine and to depress the drum into action.

3. The surfacing machine provided with a surfacing drum, a tipping frame in one end of which the drum is mounted on yielding bearings, a pushing handle at the other end of the frame, and yielding caster supports under the drum end of the frame, whereby the vibrations imparted to the drum are absorbed.

4. The surfacing machine having carrying wheels upon which it may be tipped, a surfacing drum at one end, a motor driving said drum, located over said wheels but independent thereof a handle at the other end by raising which the drum is lowered into action, and spring by which the drum is kept out of action when the operator is not lifting on the handle.

5. The surfacing machine the surfacing drum whereof is provided with spring-supported bearings allowing either end of the drum to drop or rise without the other, and thus conform to the inequalities of the floor and screws 48 bearing upon and regulating the action of the springs.

882,848. SNAP-SWITCH. WILLIAM M. SCOTT and JAMES H. WYATT, Philadelphia, Pa.; said Wyatt assignor to said Scott. Filed Sept. 10, 1907. Serial No. 392,157.



1. In a snap switch, the combination with a pivoted contact carrying member, of an independent locking member engaging the same, a latch restraining said locking member, a spring, a spring winding member, and a loose cam member having lost motion with respect to but operated by said spring winding member, said loose cam member adapted to actuate said latch to release said locking member.

2. In a snap switch, the combination with a pivoted contact carrying member, of a locking member pivoted concentric therewith and engaging the same, a latch engaging said locking member, a spring, a spring winding member, a loose cam member pivoted independently of said spring winding member, and adapted to be engaged after a time by said spring winding member to actuate said latch.

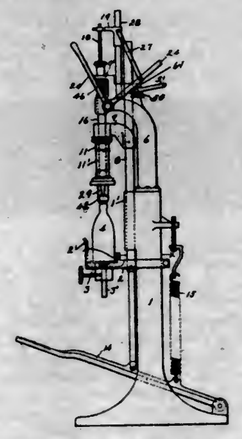
3. In a snap-switch, the combination with a base plate, of an integral switch and latch supporting member secured to said base, a movable contact member pivoted on said switch supporting member, an independent locking member engaging said contact carrying member, a latch pivoted in said integral latch supporting member and restraining said locking member, a spring, a spring winding member, and a loose cam member engaged after a time by said spring winding member to actuate said latch.

4. In a snap switch, the combination with a shaft, of a contact carrying member mounted thereon, an independent locking member mounted upon said shaft and engaging said contact carrying member, a latch restraining said locking member, a spring, a spring winding member pivoted upon said shaft, and a loose cam member pivoted upon said shaft and engaged after a time by said spring winding member to actuate said latch.

5. In a switch, the combination with a contact carrying member, of a locking member engaging the same, a latch for restraining said locking member, a switch actuating member, and a loose cam member operated by said switch actuating member, said loose cam member adapted to actuate said latch to release said locking member.

[Claim 6 not printed in the Gazette.]

882,849. BOTTLE-FILLING MACHINE. LOUIS STREBEL, New York, N. Y., assignor to Globe Machine & Stopper Company, New York, N. Y., a Corporation of New York. Filed Dec. 4, 1906. Serial No. 346,249.



1. In a bottle filling and capping machine, a filling tube discharging in the neck of the bottle and a capping die combined for successive operation in the same housing, as and for the purpose described.

2. In a bottle filling and capping machine, a filling tube discharging in the neck of the bottle and a laterally movable capping die combined for successive operation in the same housing, as and for the purpose described.

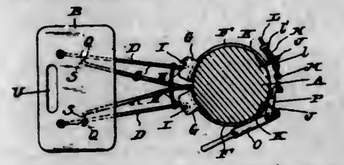
3. In a bottle filling and capping machine, the combination of a reciprocating filling tube discharging in the neck of the bottle and a laterally movable capping die adapted to be displaced by the filling tube, said tube and die being combined for successive operation in the same housing, as and for the purpose described.

4. The combination, substantially as described, of a die stock, a reciprocating filling tube passing through the die stock, and a laterally movable capping die mounted on the die stock.

5. The combination, substantially as described, of a filling tube discharging in the neck of the bottle, a stock provided with a rack, a laterally movable capping die and cap holder carried by said stock, and a pinion meshing with said rack.

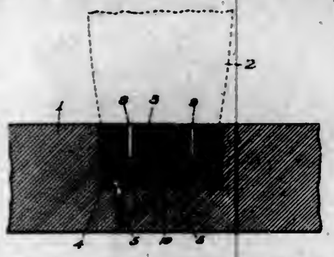
[Claims 6 to 20 not printed in the Gazette.]

882,850. LINEMAN'S PORTABLE TELEGRAPH AND TELEPHONE POLE SEAT. CHARLES T. TROELL, Seguin, Tex. Filed May 11, 1906. Serial No. 316,263.



A portable pole seat for telegraph and telephone linemen comprising in combination with a pole, a seat consisting of a board secured to a frame, curved clamp-bars secured to said frame, adapted to embrace said pole and having spikes to engage the pole, ears extending from the free ends of said clamp-bars, one of said ears being perforated and having an eyebolt slidably mounted therein, a coil spring mounted on said eyebolt and engaging said ear, a flexible element secured to said eyebolt, a lever fulcrumed on the ear on the other bar, and a hook pivotally secured to said lever and adapted to engage the links of said chain, substantially as shown and described.

882,851. BOWLING-ALLEY. WILLIAM W. VEARING, Philadelphia, Pa. Filed May 31, 1907. Serial No. 376,473.



1. In a bowling-alley, the combination of an alley having a recess formed in the surface thereof, a base inserted in the bottom of the said recess formed in the alley, a disk of the same diameter as the recess formed in the alley, and means for securing said disk in said base.

2. In a bowling-alley, the combination of an alley having a recess formed in the surface thereof, a base secured in the bottom of the said recess formed in the alley, a disk of the same diameter as the recess in the alley, a screw threaded portion on said disk and a screw threaded portion in said base in which said disk is screwed.

3. In a bowling-alley, the combination of an alley having a recess formed in the surface thereof, a base secured in the bottom of said recess formed in the alley, a cylindrical wall on said base, a disk of the same diameter as the recess formed in the alley, a reduced portion on said disk and means for securing said reduced portion of said disk in the said cylindrical wall of said base.

4. In a bowling-alley, the combination of an alley having a recess formed in the surface thereof, a base secured in the bottom of said recess formed in the alley, a cylindrical wall on the said base having a screw thread formed therein, a disk of the same diameter as the recess formed in the alley, a reduced portion on said disk, and a screw thread formed on the said reduced portion of said disk whereby the said disk may be screwed into the said cylindrical wall of said base.

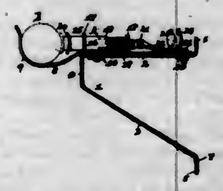
882,852. BREAD AND PROCESS OF MAKING SAME. CHARLES E. WAIT, Knoxville, Tenn. Filed Mar. 24, 1905. Serial No. 251,865.

1. A food product for man comprising a cooked mixture of dehulled cotton-seed meal or flour free from part of its oil, and a cereal flour, substantially as described.

2. A food product for man comprising a cooked mixture of de-hulled cotton-seed meal or flour free from part of its oil, a cereal flour, and a fatty substance in normal amount for shortening, substantially as described.

3. A food product for man comprising a cooked mixture of dehulled cotton-seed meal free from part of its oil, and corn-meal or flour, substantially as described.

882,853. CURTAIN AND POLE HOLDER. GEORGE WALKER, Carnegie, Pa., assignor of one-third to John Burnstiel, Carnegie, Pa., and one-third to Milton Zeugschmidt, Pittsburg, Pa. Filed Nov. 11, 1907. Serial No. 401,606.



1. In a curtain and pole holder, the combination with the bracket, of a supporting member, and a spring operated sliding bar on said member for clamping the curtain and pole.

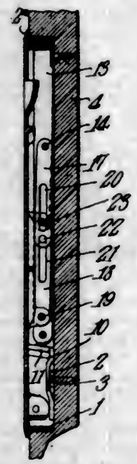
2. In a curtain and pole holder, the combination with the bracket, of a supporting member, and a spring operated sliding bar on said member adapted to be held and released for clamping the curtain and pole.

3. In a curtain and pole holder, the combination with the bracket, of a supporting member, a spring operated sliding bar on said member, and means for holding said bar and for releasing the same to permit the clamping of the curtain and pole.

4. In a curtain and pole holder, the combination with the bracket, of a supporting member, a spring operated sliding bar on said member, and a lever on said bar and adapted to engage with said member for holding said bar.

5. In a curtain and pole holder, the combination with the bracket, of a supporting member, a spring operated sliding bar on said member, a hand lever pivoted to said bar having a hole within the same, and a lug on said member and fitting within said hole for holding said bar.

882,854. FOLDING MILK-BOTTLE RECEPTACLE. WILLIAM S. WEAVER, Bethlehem, Pa. Filed May 23, 1907. Serial No. 375,356.



1. In a device of the class described, the combination of a frame, a plate hinged thereto, a U-shaped guard hinged to the frame, and links connecting the guard with the plate.

2. In a device of the class described, the combination of a frame, a bottle supporting plate arranged to fold into and unfold out of the frame, a guard hinged to the frame to fold and unfold with the plate, and springs arranged to snap the plate into its folded position.

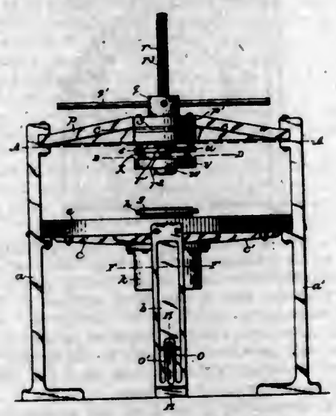
3. In a device of the class described, the combination of a frame, a plate hinged at one end to the frame to fold into and unfold out of the same, a guard hinged on the frame for retaining bottles on the plate, a stop on the frame with which the guard engages when the plate is in unfolded position, and links connecting the guard with the plate.

4. In a device of the class described, the combination of a frame, a plate foldably mounted on the frame and provided with suitably arranged webs for receiving the bottom ends of the bottles, a guard hinged on the frame to cooperate with the said webs for retaining the bottles in place, means connecting the guard with the plate, stops on the frame with which the guard engages to limit the unfolding movement of the plate, and a spring secured to the lug and arranged with its free end in engagement with the plate to hold the latter in folded position.

5. In a device of the character described, the combination with a frame, a door pivotally connected thereto and adapted to serve as a bottle support, a bottle guard also pivotally connected to the frame, means for insuring a parallel movement of the door and guard during opening and closing movements, and braces interposed between the door and guard for supporting the door in open position and permitting a free opening and closing movement thereof.

[Claim 6 not printed in the Gazette.]

882,855. WHEEL-ASSEMBLING MACHINE. JOHN R. WELCH, Alexandria, Ind., assignor to Keefer-Heart Iron and Steel Company, Alexandria, Ind., a Corporation of Indiana. Filed Mar. 27, 1907. Serial No. 364,905.



1. A wheel-assembling machine including a support, a table secured to the support and provided with a circular gage on the top thereof and also a socket head mounted movably centrally of the gage, means for supporting the socket head yieldingly, and a ram mounted movably above the socket head to coöperate therewith.

2. A wheel-assembling machine including a support, a table secured to the support and provided with a circular gage on the top thereof, a ram mounted movably opposite to the center of the gage, a socket head movably mounted in the table centrally of the gage to coöperate with the ram and provided with a stop limiting the movement thereof away from the ram, and means for moving the socket head towards the ram.

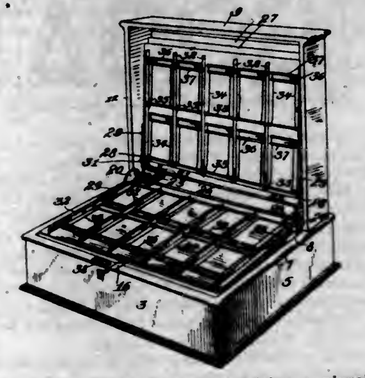
3. A wheel-assembling machine including a support, a table secured to the support and having an opening therein, a circular gage on the table concentric to the opening, a ram mounted movably toward or from the table opposite to the opening, a socket head mounted movably in the opening of the table opposite to the ram and provided with a stop limiting the movement thereof toward the ram, and means for moving the socket head toward the ram.

4. A wheel-assembling machine including a pair of posts, a table secured to the posts and having a central opening therein, a socket head mounted movably in the opening and normally spring-pressed upwardly, a stop for limiting the upward travel of the socket head, a circular gage secured detachably on the table concentric to the socket head, a beam secured to the posts above the table and provided with a central housing, a screw-nut mounted rotatively in the housing and provided with an operating lever, and a screw-threaded ram mounted in the screw-nut opposite to the socket head.

5. A wheel-assembling machine including a support, a table mounted securely on the support and provided with a housing and also an opening above the housing, a socket head mounted movably in the opening, means in the housing for supporting the socket head yieldingly, an adjustable stop for limiting the downward travel of the socket head, a circular gage mounted on the table concentric to the socket head, and a ram mounted movably opposite to the socket head to coöperate therewith.

[Claims 6 to 8 not printed in the Gazette.]

882,856. ACCOUNTING APPLIANCE. JOSEPH E. WILDMAN, Landover, Md., assignor, by mesne assignments, to Albert F. Staples, Alliance, Ohio, and Charles W. Potter, Waltham, Mass. Filed July 24, 1907. Serial No. 383,331.



1. An accounting appliance comprising a plurality of bill-holding leaves carrying bill-retaining devices and having a socket at each side, a pivot rod for each of said leaves, each of said rods having angular ends adapted to extend in said sockets for detachably connecting the leaves to the rod, said rods constituting supports for the leaves and imparting rigidity thereto, and a spring mounted upon each of the rods and having one end abutting against an angular end of the rod and its other end abutting against an adjacent rod.

2. In an accounting appliance, the combination with a plurality of independently-detachable bill-holding leaves, each provided at each side with a vertically-extending socket, of a pivoted support for each of said leaves, said support comprising a U-shaped rod, having the vertical arms thereof detachably engaging in said sockets.

3. The combination with a plurality of independently detachable bill-holding leaves each provided with a pair of sockets, of a pivotal support for each of said leaves, said support consisting of a U-shaped rod having the vertical portions thereof detachably secured in said sockets.

4. The combination with a plurality of independently detachable bill-holding leaves each provided with a pair of sockets, of a pivotal support for each of said leaves, said support consisting of a U-shaped rod having the vertical portions thereof detachably secured in said sockets, combined with means for supporting said rod at an inclination thereby maintaining one leaf above the other when said leaves are in an upright position.

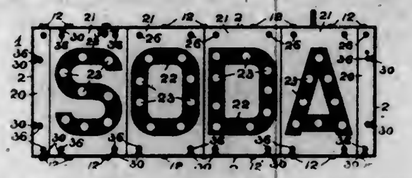
5. An accounting appliance comprising a cabinet consisting of a stationary section and a shiftable section, means for hinging and slidably connecting the shiftable section to the stationary section, a lid or cover carried by the shiftable section and adapted to close the stationary section when the shiftable section is moved to an upright position, and a plurality of bill-holding leaves carried by the shiftable section.

[Claims 6 to 15 not printed in the Gazette.]

882,857. SIGN. EDGAR B. WOLFE, Newark, N. J., assignor to The Electric Motor & Equipment Company, a Corporation of New Jersey. Filed Sept. 21, 1907. Serial No. 393,899.

1. In a sign, the combination with an open-faced frame, of a series of face and letter plates adapted to be arranged over the open face of the frame, and slidable fas-

tening devices for securing said plates in position, each fastening device comprising a plate-like element, and a retaining plate upon one face of said plate-like element, a holding member connected with said retaining plate for securing the edge-portion of said face and letter-plates to said fastening devices, and means for securing said fastening devices in fixed positions.



2. In a sign, the combination with an open-faced frame, of a series of face and letter plates adapted to be arranged over the open face of the frame, and slidable fastening devices for securing said plates in position, each fastening device comprising a plate-like element, and a retaining plate upon one face of said plate-like element, a holding member connected with said retaining plate for securing the edge-portion of said face and letter-plates to said fastening devices, said plate-like elements, retaining-plates and said face and letter-plates being provided with screw-receiving holes, and screws for securing said fastening devices in fixed positions.

3. In a sign, the combination with an open-faced frame, of a series of face and letter plates adapted to be arranged over the open face of the frame, and slidable fastening devices for securing said plates in position, each fastening device comprising a plate-like element, and a retaining plate upon one face of said plate-like element, a holding member connected with said retaining plate for securing the edge-portions of said face and letter-plates to said fastening devices, said plate-like elements being provided with screw-threaded holes formed with enlarged open portions providing finding means, said retaining-plates and said face and letter-plates being provided with correspondingly disposed openings, and screws for securing said fastening devices in fixed positions.

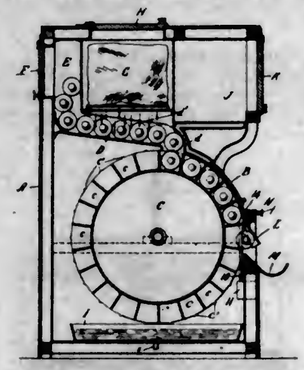
4. In a sign, the combination with an open-faced frame, of a series of face and letter-plates adapted to be arranged over the open face of the frame, and slidable fastening devices for securing said plates in position, each fastening device comprising a plate-like element, a retaining plate upon one face of said plate-like element, a holding member upon the upper portion of said retaining plate fitted over the upper edge of the plate-like element, a second holding member at the lower portion of said retaining plate for securing the edge-portions of said face and letter-plates to said fastening devices, and means for securing said fastening devices in fixed positions.

5. In a sign, the combination with an open-faced frame, of a series of face and letter-plates adapted to be arranged over the open face of the frame, and slidable fastening devices for securing said plates in position, each fastening device comprising a plate-like element, a retaining plate upon one face of said plate-like element, a holding member upon the upper portion of said retaining plate fitted over the upper edge of the plate-like element, a second holding member at the lower portion of said retaining plate for securing the edge-portions of said face and letter-plates to said fastening devices, said plate-like elements, retaining-plates and said face and letter-plates being provided with screw-receiving holes, and screws for securing said fastening devices in fixed positions.

[Claims 6 to 19 not printed in the Gazette.]

882,858. BOTTLE-VENDING MACHINE. ABIJAH J. ALEXANDER and ISAAC B. ALEXANDER, Hartsville, S. C. Filed Feb. 7, 1907. Serial No. 356,213.

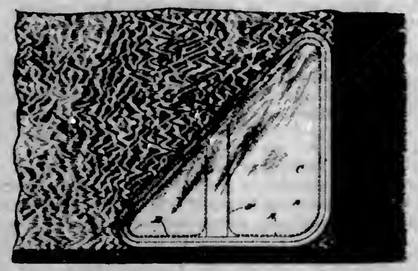
1. In an automatic vending machine, the combination of a casing, a revoluble carrier-drum mounted therein adapted to hold bottles or packages arranged lengthwise on the periphery of the drum, a superposed inclined feed-chute having a mouth arranged for discharging the bottles or packages one at a time to the drum as it is successively turned under said mouth of said feed-chute, an open-bottomed ice chamber above said chute, a normally closed exit through which the bottles are one at a time delivered from the drum as it successively turns past said exit, and means for controlling motion of the drum.



2. In a bottle-vending machine, the combination of a casing, an ice-chamber therein, an inclined feed-chamber under and adjacent to said ice-chamber in which the bottles are arranged side by side, being exposed to cold from the ice-chamber, a carrier-drum having its periphery spaced to hold bottles and arranged to revolve under the mouth of said feed-chute, an exit in the casing through which the bottles are delivered from the drum, and means for controlling motion of the drum.

3. In a bottle-vending machine, the combination of a casing, a revoluble carrier-drum therein adapted to receive bottles at its top and to deliver them from its front, a feed-chute above the drum for feeding the bottles thereto, an ice-chamber above said feed-chute, a chamber behind said ice-chamber for introducing the bottles, a supplemental refrigerator-chamber in front of said ice-chamber, an exit for the bottles in the front of the casing, and means in connection with the drum for controlling the motion thereof.

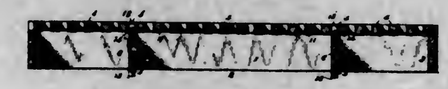
882,859. RUG CORNER-WEIGHT. PETER B. AMMERMAN, Brooklyn, N. Y. Filed Dec. 13, 1907. Serial No. 406,363.



A corner weight for rugs, consisting of a substantially triangular cloth casing, and a plurality of metal strips sewed into said casing, said strips having edges parallel with one of the shorter sides of the casing.

882,860. SECTIONAL GRATE. DAVID B. BAKER and JOHN A. STEIN, Hoquiam, Wash. Filed Feb. 2, 1907. Serial No. 355,398.

1. A grate comprising a reversible support, and a grate section placed thereon, said support being provided with corresponding upper and lower faces and adapted to be turned over to present the underside to the grate section and to counter-act sagging or warping.



2. A grate comprising a support having corresponding upper and lower faces and adapted to be turned up-side-down, and a grate section arranged upon the top of the support and having corresponding upper and lower faces to fit either the upper or lower face of the support and adapted to be reversed to present either face to the same.

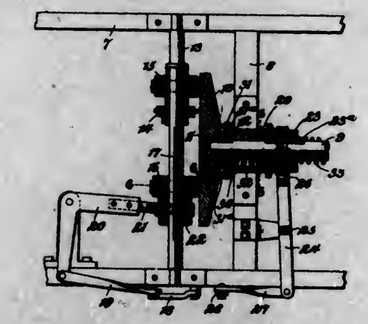
3. A grate comprising a support having upper and lower faces and adapted to be turned up-side-down, a grate section arranged upon the top of the support and having corresponding upper and lower faces to fit either the upper or the lower face of the support and adapted to be reversed to present either face to the same, and means extending from the top to the bottom of the support for interlocking the grate section with the same.

4. A grate comprising a reversible support adapted to be turned over to bring its underside to the top and consisting of a frame and having lugs projecting beyond its upper and lower faces, and a reversible grate section provided with openings and adapted to receive the lugs, whereby it is interlocked with the support.

5. A grate comprising a support consisting of a frame having a cross piece connecting the sides of the frame and provided with spaced lugs, an intervening beveled edge extending across the space between the lugs, and a reversible grate section having openings for receiving the lugs.

[Claims 6 to 8 not printed in the Gazette.]

882,861. FRICTION-GEARING. JOHN D. BAKER, Lisbon, Ohio, assignor of one-third to Alpheus Arter and one-third to George B. Harvey, Lisbon, Ohio. Filed Apr. 6, 1907. Serial No. 366,734.



1. In mechanism of the character set forth, the combination with a rotatable friction member, of a shaft held against longitudinal movement, another friction member slidable on the shaft, actuating means movable with respect to the shaft and second friction member to operate the latter, and yielding means interposed between the second friction member and the moving means to transmit motion from the latter to the former.

2. In mechanism of the character set forth, the combination with a rotary friction member, of a shaft disposed in angular relation to the axis of rotation of the friction member, another friction member slidably mounted on the shaft and movable into and out of coaction with the first-mentioned member, an actuating device movable longitudinally of the shaft, and a spring interposed between the shaft and friction member mounted thereon.

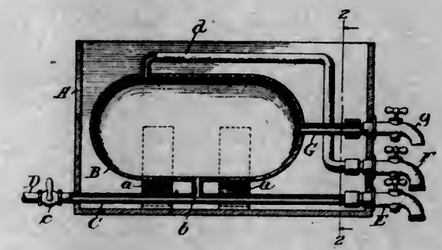
3. In mechanism of the character set forth, the combination with a driving shaft having a crank and held against longitudinal movement, of a friction disk slidably mounted on the shaft and held against rotation with respect thereto, means for sliding the disk, said means having a yielding bearing against the same, a shaft disposed transversely of the disk, and a friction wheel mounted on the shaft and adjustable longitudinally thereof, said wheel coöperating with the disk.

4. In mechanism of the character set forth, the combination with a rotatable friction member, of another friction member movable into and out of engagement therewith, means for moving the second member, yielding means interposed between the moving means and member, and a cover for said yielding means constituting a rigid bearing between the second friction member and operating means when the yielding means has been compressed to a predetermined degree.

5. In mechanism of the character set forth, the combination with a shaft, of a friction wheel slidably mounted on the shaft, another shaft, a friction disk carried by the latter shaft and movable into and out of frictional engagement with the wheel, actuating means for the disk including a collar slidably mounted on the shaft and having a portion movable into positive engagement with a portion of the member to move the same, and a spring interposed between the collar and member to normally hold said portions out of contact and permit a yielding engagement of the disk with the wheel, said spring being inclosed by the sleeve.

[Claims 6 to 12 not printed in the Gazette.]

882,862. BEER COOLING AND PURIFYING APPARATUS. VALENTINE F. BOEHM, Chicago, Ill. Filed Dec. 17, 1906. Serial No. 348,284.



1. An apparatus for purifying and cooling beer comprising a suitable receptacle, a supply-pipe extending directly and entirely through said receptacle, a reservoir above said supply-pipe having communication therewith, a valve controlled exit for said supply-pipe outside of said receptacle, and an outlet-pipe connected to said reservoir above its bottom and provided with a valve-controlled exit.

2. An apparatus for purifying and cooling beer comprising a suitable receptacle, a valve-controlled supply-pipe extending directly and entirely through the same, a reservoir above said supply-pipe, a pipe leading from the bottom of said reservoir and connected to said supply-pipe mediate the ends thereof, a valve-controlled exit for said supply-pipe outside of said receptacle, an outlet-pipe connected to said reservoir above its bottom and provided with a valve-controlled exit outside of said receptacle, and a vent leading from the top of said reservoir and provided with a valve-controlled exit outside of said receptacle.

882,863. PACKAGE-TIE. THOMAS BOYD, Cleveland, Ohio. Filed Sept. 20, 1907. Serial No. 393,836.

A package tie comprising a flat plate having projecting from one side thereof a plurality of transversely dished longitudinally curved tongues, two of which are disposed in parallelism and with their tips projecting in opposite directions, and a third locking tongue disposed obliquely

to the other two, the plate being provided with a key-hole-shaped orifice the slot of which is disposed at right



angles to the two parallel tongues, and a binder secured in the slot of the orifice.

882,864. BOTTLE. NELLIE G. BURKE, Hot Springs, Ark. Filed Oct. 23, 1907. Serial No. 398,725.

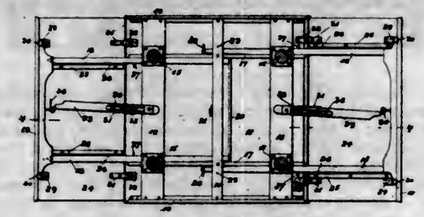


1. A bottle, consisting of a body 1, a neck 2, swollen in its center so as to be larger in its center than at its top end 5, or bottom end 6, a cap 3, extending upwardly from the upper end of said neck, said neck having an annular groove 4, around the top dividing the said neck from said cap, the bottom of the bottle having a circular perforation 8, in the center thereof, and a recess 9, surrounding said perforation, a hollow filler 12, fitting in the neck of said bottle, a stopper fitting in the upper end of said filler, said filler and stopper adapted to be thrust in said neck by means of a plunger 14, a plate 10, provided with a nipple 11, fitting in said recess, and melted glass 16, sealing said plate in place, substantially as shown and described and for the purposes set forth.

2. A bottle consisting of a body 1, a neck 2, swollen in its center, a cap 3, extending from the top of said neck, but being partly divided therefrom by an annular groove 4, said bottle having in its bottom a perforation 8, surrounded by a recess 9; a hollow, resilient filler 12, fitting the neck of said bottle, a resilient stopper, fitting in said filler, its upper end adapted to fit against the inner wall of the cap, and a plate 10, fitting and sealed in said recess, substantially as shown and described and for the purposes set forth.

882,865. EXTENSION-TABLE. MARY F. BURNS, Marine City, Mich., administratrix of Peter Francis, deceased. Filed July 25, 1907. Serial No. 385,510.

An extension-table comprising a stationary top, side-rails depending therefrom, end and intermediate cross-bars connecting the side-rails, a catch on the intermediate cross-bar, longitudinal guide-rails between the top and the cross-bars, extension slides comprising longitudinal bars having end rails at their outer ends, the longitudinal bars of one of the slides working on the inner sides of the guide-bars and connected at their inner ends by a cross-bar which is engageable with the aforesaid catch to limit the outward movement of the slide, and the



longitudinal bars of the other slide working on the outer sides of the guide-bars and having catches, and pins on the aforesaid intermediate cross-bar engageable with said catches to limit the outward movement of the last mentioned slide.

882,866. PROCESS OF MANUFACTURING YARN. JOHN S. BUTTERWORTH, Wallingford, Pa., assignor of one-half to Benjamin C. Fox, Chester, Pa. Filed Feb. 16, 1907. Serial No. 357,705.

1. The process of producing yarn, which consists in forming a stock of material composed of a mixture of vegetable and animal fibers, spinning a single strand yarn of combined vegetable and animal fibers from said stock, twisting a plurality of said single strand yarns together to produce a multiple ply yarn, each ply being formed of the combined vegetable and animal fiber, and afterwards, prior to forming fabric therefrom, carbonizing the vegetable fiber in the multiple ply yarn, leaving a yarn of multiple ply composed exclusively of animal fiber.

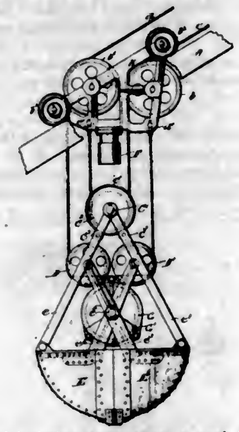
2. The process of producing yarn, which consists in forming a stock of material composed of a thoroughly commingled mixture of animal and vegetable fibers, spinning a single strand yarn of combined vegetable and animal fibers from said composite stock with a predetermined number of twists to the inch, twisting together a plurality of said single strands in a direction opposed to the twists of the single strand and with a different number of twists to the inch to produce a multiple ply of yarn of said composite stock, each ply thereof being formed of both the animal and vegetable fiber, forming said multiple ply yarn into hanks or skeins, and carbonizing the vegetable fiber in said yarn while formed into said hanks or skeins, leaving hanks or skeins of multiple ply yarn composed exclusively of animal fiber.

882,867. COAL-HOISTING APPARATUS. JEREMIAH CAMPBELL, Providence, R. I. Filed Feb. 13, 1907. Serial No. 357,127.

1. A hoisting apparatus of the character specified comprising a grab having swinging jaws, crossed arms secured to said jaws, a pivotal support at the intersection of said arms, sheaves carried by said arms beyond the point of intersection thereof, which sheaves are adapted to receive a rope by which said jaws may be operated, and a sheave mounted upon the pivotal support of said intersecting arms and coöperating with the sheaves carried thereby, substantially as described.

2. A hoisting apparatus of the character specified comprising a grab having swinging jaws, a pair of arms secured to each of said jaws and arranged whereby the pairs of arms may cross one another, a pivotal support for said crossed arms, a sheave carried by each pair of arms upon the outer ends thereof, said sheave being adapted to receive a rope by which said jaws may be operated, and a sheave mounted upon the pivotal support of said arms with which the sheaves carried by said arms are adapted to coöperate whereby the rope operating the jaws of the grab may be maintained in a proper operative position with respect to said sheaves.

3. A hoisting apparatus of the character specified comprising a grab having swinging jaws, crossed arms secured to said jaws, a pivotal support for said intersecting arms, an idler sheave mounted upon said pivotal support, sheaves carried by said arms and adapted to receive a rope for operating said jaws, said sheaves being located on said arms to be carried around said idler sheave and coöperate therewith during the operation of said arms, whereby the operating rope may be maintained in a constant operative position by said idler sheave, and means for over weighting said sheaves to maintain a proper upright position for said rope to render freely over the same.

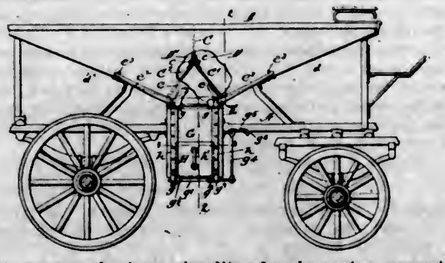


4. In a coal hoisting apparatus, a grab having a hoisting means and operating means, said operating means comprising two pairs of crossed arms pivotally connected together, each of said pairs of arms being connected to one of the jaws of said grab at one end and carrying an operating sheave at its outer end, an idler sheave mounted on the pivot of said arms, said idler sheave so coöperating with said sheaves that an operating rope passing around said operating sheaves may lie approximately in contact with the upper periphery of said idler sheave when said rope is taut, and may rest upon a larger portion of the periphery thereof when said rope is loose, said sheaves being provided with weighted housings adapted to be maintained always in the same position with relation to the horizontal, as described.

5. In a coal hoisting apparatus, a grab having hoisting means comprising a hoisting sheave and hoisting rope surrounding said sheave, and operating means comprising one or more operating sheaves and an operating rope, each of said sheaves being provided with housings weighted to maintain them always in substantially the same vertical position.

[Claims 6 to 9 not printed in the Gazette.]

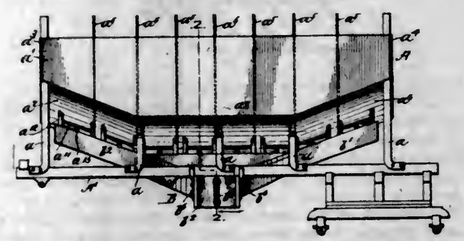
882,868. COAL-DELIVERY WAGON. JEREMIAH CAMPBELL, Providence, R. I. Filed Mar. 15, 1907. Serial No. 362,538.



1. A wagon having a plurality of coal-carrying compartments, a hopper common to said compartments, releasable means closing each of said compartments from said hopper, a chute leading from said hopper, and releasable means closing said hopper from said chute.

2. A wagon having a plurality of coal-carrying compartments, a hopper common to said compartments into which the coal empties therefrom, releasable means closing each of said compartments from said hopper, a plurality of delivery chutes leading from said hopper, and releasable means closing said hopper from each of said chutes.

882,869. CHUTE-WAGON. JEREMIAH CAMPBELL, Providence, R. I. Filed Mar. 15, 1907. Serial No. 362,539.



1. A wagon the body of which is divided into a plurality of bottomed compartments each of which is provided through its bottom with an outlet, and an inclined chute common to all said compartments located outside the body of the wagon and below the outlets to its said compartments.

2. A wagon having a plurality of bottomed compartments each of which is provided through its bottom with an outlet, and an inclined chute having a change of direction in its inclination common to all said compartments and the outlets thereof.

3. A wagon having a plurality of bottomed compartments each of which is provided through its bottom with an outlet, and an inclined chute extending longitudinally the wagon and common to all said compartments for receiving the contents thereof through said outlets.

4. A wagon the body of which is divided into a plurality of bottomed compartments, each of which compartments is provided with an outlet through the bottom thereof and an inclined chute extending longitudinally below the body of said wagon beneath the compartments thereof and outlets to said compartments for receiving the contents of said compartments through said outlets.

5. A wagon the body of which is provided with sides, ends and a bottom and divided into a plurality of separate compartments, which bottom of the wagon is inclined downwardly and inwardly from the sides thereof to a common longitudinal center, an opening in said inclined bottom of the wagon for each of said several compartments at points adjacent said longitudinal center of the wagon, releasable means closing each of said openings, and a longitudinal inclined chute arranged below said openings and common to all.

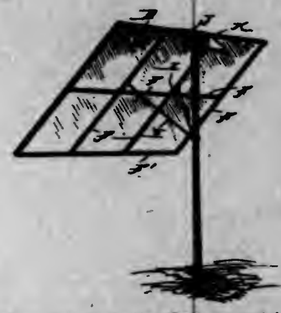
[Claims 6 to 9 not printed in the Gazette.]

882,870. SHELTER-SHED. FREEMAN O. CARY, Hamilton, Wash., assignor of one-half to George Savage, Birdsview, Wash. Filed June 19, 1906. Serial No. 322,437.

1. A shed comprising a standard, a T-shaped tube adjustably mounted on the upper end of said standard, a half-round tube provided with a central rounded portion secured in the horizontal portion of the T-shaped head by pins, said tube being free to rotate, a canvas covered frame carried by said tube, rods pivotally mounted on said frame and a sleeve loosely mounted on the standard provided with apertured ears between which the ends of the rods are pivoted, said sleeve being held in an adjusted position by frictional contact with said standard.

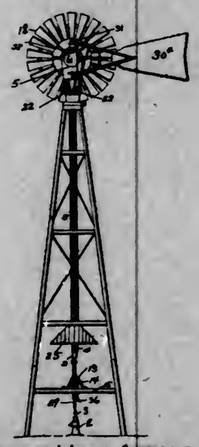
2. A shed of the kind described, comprising a standard, a T-shaped tube mounted on said standard provided with a

cam lever adapted to engage the standard, a half-round tube provided with a central round portion mounted in the horizontal portion of the T-shaped tube, a canvas covered rectangular frame secured to said half-round tube, a sleeve mounted on the standard provided with rods connected to the frame and a canvas covered frame extending out from said half-round tube to the other side, for the purpose set forth.



3. A shed of the kind described, comprising a pointed tube adapted to be driven into the ground, a T-shaped tube mounted on the upper end of said tube, a cam lever carried by said T-shaped tube adapted to engage said tube, a half-round tube provided with a central round portion adapted to be secured in the horizontal portion of the T-shaped tube by wedge-shaped pins passing through openings, formed to each side of the central round portion, a canvas covered rectangular frame secured to said half round tube provided with bars connected to a sleeve mounted on said tube and a canvas covered frame secured to the half round tube extending out to the other side, for the purpose set forth.

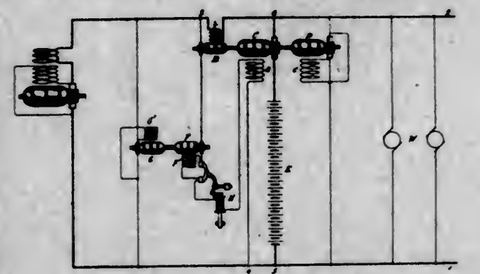
882,871. WINDMILL. BERTIE E. CASSELL, Sparland, Ill. Filed Oct. 5, 1906. Serial No. 337,609.



1. A windmill comprising a frame; a hollow rotatable support mounted in said frame and carrying a housing at its upper end; a windwheel journaled in said housing; a pulley in said housing adapted to be rotated by said windwheel; a vane projecting from the opposite side of said housing; a split tubular section carried by the lower end of said rotatable support and terminating in a flat open section; a tubular section mounted in the lower portion of said frame and having a projecting flat open portion that is connected with the open section of the split tubular portion; a pulley mounted in the flat open projecting portion of said lower tube, and a cable connecting the said two pulleys.

2. The combination in a windmill, of a frame, an upright, rotary and hollow support journaled in said frame and having a housing at its upper end, disposed above the frame, a lower pulley mounted on the lower portion of the hollow, rotary support, a shaft journaled in the housing and bearing a windwheel, an upper pulley fixed on said shaft and contained in the housing, lower and upper pairs of anti-friction and guide sheaves carried by the hollow, rotary support, a connecting belt mounted on the pulleys and engaged with said sheaves and extending through the housing and having its stretches disposed in the hollow, rotary support, a tube fixed to and depending from a hollow, rotary support, a pitman pivoted to the lower pulley off the center thereof and having an anti-friction wheel movable up and down in said tube, a rod pivotally connected to and depending from the pitman, and a second rod swiveled to the said rod.

882,872. SYSTEM OF ELECTRICAL DISTRIBUTION. RUFUS N. CHAMBERLAIN, Depew, N. Y., assignor to Gould Storage Battery Company, a Corporation of New York. Filed Jan. 17, 1906. Serial No. 296,622.



1. The combination of a main generator, battery and booster of a coil for controlling the booster E. M. F. energized by the resultant of opposing potential differences, and means for applying another potential difference to said coil operated by changes of electrical condition in the circuit containing said coil.

2. The combination of a main generator, battery and booster of a coil for controlling the booster E. M. F., and means actuated by changes of electrical condition in the circuit containing said winding due to increases of the voltage acting upon said coil, for applying to the coil a potential difference opposing said voltage.

3. The combination of a main generator, battery and booster of a coil for controlling the booster E. M. F., means for applying to said coil a varying voltage, and apparatus acted upon by increase of current in the circuit of said coil to generate a protective counter E. M. F. in said circuit.

4. The combination of a main generator, battery and booster of a coil for controlling the booster E. M. F., means for applying the resultant of opposing potential differences to said coil, one of said potential differences being substantially constant and the other varying with the current strength of the main generator circuit and devices acted upon by the electrical condition of the circuit of said coil to insert therein a protective counter electro-motive force.

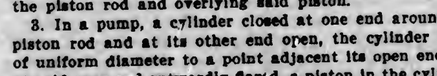
5. The combination of a main generator, battery and booster of a coil for controlling the booster E. M. F., means for applying a varying voltage to said coil, and means, dependent upon increase of said voltage, for causing the current traversing the circuit of said coil to cause a counter E. M. F. in said circuit.

[Claims 6 to 11 not printed in the Gazette.]

882,873. CARPET-STRETCHER. THOMAS E. DAVIS, Crystal City, Manitoba, Canada. Filed Feb. 13, 1907. Serial No. 357,158.

1. In a carpet stretcher, the combination comprising a plurality of members extensibly connected together, one of which members is provided with a shoulder, a jaw attached to said shoulder means adapted normally to maintain the jaw open, means for closing the jaw, and a fixed jaw carried by said member having the shoulder.

2. In a carpet stretcher, the combination comprising a plurality of members extensibly connected together, a shoulder on one of said members a jaw pivoted to said shoulder and provided with an offset upturned end, a jaw fixed on said member and provided with a downturned end, and means for forcing the pivoted jaw towards the fixed jaw.



3. In a carpet stretcher, the combination comprising a plurality of members extensibly connected, a jaw pivoted to one of said members, a jaw fixed to the said member, a headed plunger disposed through the jaws and provided with a screw-threaded end, a yoke disposed over the screw-threaded end of the plunger, a bar disposed on the yoke over the screw-threaded end of the plunger, a nut on the screw-threaded end of the plunger adapted to bear on the bar, and a spring disposed around the plunger.

882,874. PUMP. JOHN DESMOND, Chicago, Ill. Filed Feb. 12, 1906. Serial No. 300,599.



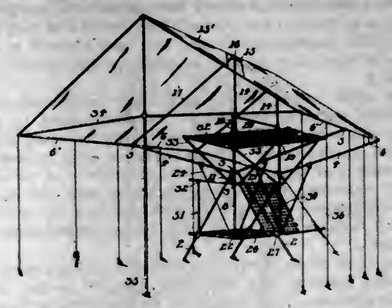
1. In a pump the combination of a piston, a piston rod for moving said piston, and an annular lubricating medium loosely encompassing the piston rod.

2. In a pump the combination of a piston, a piston rod for moving said piston, a pump barrel and an annular lubricating medium in said barrel, loosely encompassing the piston rod and overlying said piston.

3. In a pump, a cylinder closed at one end around the piston rod and at its other end open, the cylinder being of uniform diameter to a point adjacent its open end and at said open end outwardly flared, a piston in the cylinder, the piston rod, a ring of rubber of flaring shape having its smaller end overlying the flaring end of the cylinder, and at its expanded end free and projecting beyond the cylinder, and means for securing said ring upon the cylinder.

882,875. FOLDING TENT. WALTER R. DIEHL, Pittsburg, Pa., assignor of one-half to Edwin Johnson, Pittsburg, Pa. Filed May 24, 1907. Serial No. 375,442.

1. A folding tent frame having at each end a pair of downwardly diverging leg members pivotally connected at their upper ends, a pair of outwardly and oppositely extending arms at each end of the frame, said arms being pivotally united at their inner ends to the upper ends of the leg members, eaves members at the outer ends of said arms, a ridge member, and supports for the ridge member extending upwardly from the junctures of said arms and leg members at each end of the frame.



2. A folding tent frame having at each end a pair of downwardly diverging leg members pivotally connected at their upper ends and adapted to fold together, a pair of outwardly and oppositely extending arms at each end of the frame, said arms being pivotally connected at their inner ends to the upper end of said leg members and adapted to fold downwardly and together like the leg members, a ridge member, vertically movable ridge supports extending upwardly from the junctures of the pivotally connected arm and leg members, eaves members at the outer ends of said arms, and roof members pivotally connected to each of said eaves members and to the ridge member.

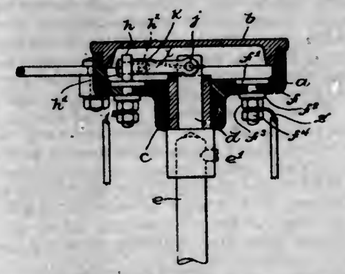
3. A folding tent frame having at each end pivotally connected leg members adapted to fold together, eaves members, a ridge member, and supports for the ridge and eaves members adapted to fold into compact relation with the folding leg members.

4. A folding tent frame having at each end leg members adapted to fold together, folding roof forming members adapted to fold into compact relation with the leg members, and folding bunk frames supported by the leg members and adapted to fold into compact relation with the folding leg and roof members.

5. A folding tent frame comprising joint members, downwardly diverging leg members hinged thereto and adapted to fold inward or toward each other, and roof sustaining members hinged to and extending outwardly from the joint members and adapted to turn downward and toward each other.

[Claims 6 to 19 not printed in the Gazette.]

882,876. SPARK-TIMING APPARATUS. CHARLES C. DODGE, Wollaston, Mass., assignor to The Dodge Lubricator Company, Boston, Mass., a Corporation of Massachusetts. Filed Nov. 29, 1905. Serial No. 289,617.



1. A spark timing device comprising a casing having a flat surface, one or more contacts whose surfaces are flush with the flat surface of the casing, an arbor perpendicular to said flat surface, an arm carried by said arbor extending laterally therefrom, and a rotatable cylindrical contact on the end of said arbor adapted to roll over said stationary contact or contacts in its rotation.

2. A spark timing device comprising a casing formed of insulating material and having a flat surface, one or more

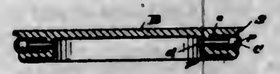
contacts on said casing having their faces flush with the flat surface of the casing, an arbor perpendicular to said surface, an arm on said arbor, and a movable contact comprising a cylindrical roll journaled on the end of said arm on an axis longitudinal of said arm and adapted to roll over said stationary contact or contacts, substantially as described.

3. A spark timing device comprising a casing formed of insulating material, stationary contacts secured to said casing and having their faces located in the same plane, an arbor perpendicular to said plane, an arm pivoted on said arbor and extending laterally therefrom, a movable contact consisting of a roll journaled on said arm on an axis longitudinal of said arm, and a spring for holding said roll towards the face of said casing, substantially as described.

4. A spark timing device comprising a casing formed of insulating material, flat stationary contacts having their faces in the same plane, an arbor, an arm pivoted to said arbor, a roll journaled on the end of said arm, and a spring bearing against the free end of said arm, substantially as described.

5. A spark timing device comprising a casing formed of insulating material and having a flat surface, a cover for closing said casing, an arbor extending into said casing, a yoke in said casing pivoted upon the end of the arbor, a movable contact consisting of a roll journaled upon the free end of said arm, stationary contacts consisting of flat headed bolts passed through said casing and having their heads substantially flush with said flat surface, and means on the ends of said bolts for securing electrical conductors thereto.

882,877. DECK-PLATE. WILLIAM H. DURKEE, New York, N. Y. Filed Feb. 6, 1907. Serial No. 355,994.



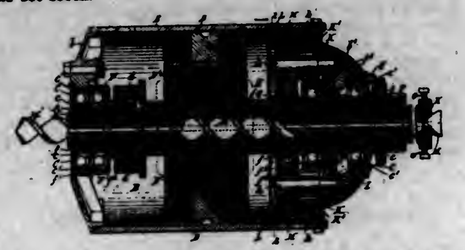
1. A face plate or frame having a shouldered recess and an annular flange depending from the shoulder, and a plate or cover having a finger recess, and a projecting rim to engage the said shoulder, and a depending flange to register with the first named flange, in combination with means, consisting of a self locking device comprising a groove and a spring dog to coact therewith, for interlocking and detaching the two parts by a simple pressure, or pulling action, on the cover.

2. A face plate or frame having a shouldered recess and an annular flange depending from the shoulder, and a plate or cover having a finger recess, and a projecting rim to engage the said shoulder, and a depending flange to register with the first named flange, in combination with means, consisting of a self locking device comprising a groove and a spring dog to coact therewith, for interlocking and detaching the two parts by a simple pressure, or pulling action, on the cover, and also with means whereby a watertight jointure between the two plates is formed.

3. A face plate or frame having a shouldered recess and an annular flange depending from the shoulder, and a plate or cover having a finger recess, and a projecting rim to engage the said shoulder, and a depending flange to register with the first named flange, in combination with means, consisting of a self locking device comprising a groove and a spring dog to coact therewith, for interlocking and detaching the two parts by a simple pressure, or pulling action, on the cover, a suitable retaining object, and intermediate flexible connecting means for attaching the cover thereto.

882,878. COAL AND ROCK DRILL. HENRY R. FORD, Buffalo, N. Y. Filed Dec. 17, 1906. Serial No. 348,287.

1. The combination of a frame, a drive shaft bearing in the opposite ends of said frame, a motor located between said shaft bearings and having a shaft concentric with said drive shaft, bearings for said motor shaft on said drive shaft at opposite sides of the motor, drive connections between said shafts, and a tool shaft arranged concentrically of and driven by said drive shaft, substantially as set forth.



2. The combination of a frame, a hollow drive shaft bearing in the opposite ends of said frame, a motor located between said shaft bearings and having a hollow shaft surrounding said drive shaft, bearings for said motor shaft on said drive shaft at opposite sides of the motor and between said bearings for the drive shaft, drive connections between said motor and drive shafts, a tool, and a shaft to which said tool is attached passing through and driven by said drive shaft, substantially as set forth.

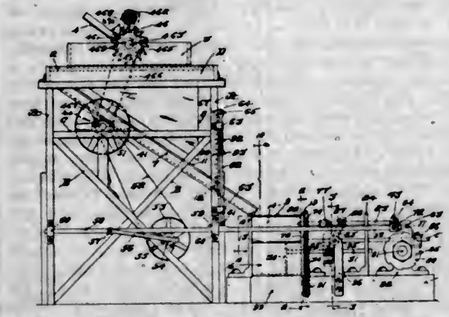
3. The combination of a frame, a drive shaft bearing at opposite ends in said frame, a motor having a shaft concentric with said drive shaft, bearings for said motor shaft, drive connections betwen said shafts, a hollow tool shaft concentric with said other shafts, and a tool which passes through and is secured to said tool shaft, substantially as set forth.

4. The combination of a hollow drive shaft, bearings for the opposite ends of said shaft, a motor having a hollow shaft surrounding said drive shaft, bearings for said motor shaft at opposite sides of the motor, drive connections between said shafts, a hollow tool shaft located in said drive shaft and driven thereby, and a tool which passes through and is secured to said tool shaft, substantially as set forth.

5. The combination of a hollow drive shaft, bearings for the opposite ends of said shaft, a motor having a hollow shaft surrounding said drive shaft, bearings for said motor shaft at opposite sides of the motor, a hollow screw-threaded tool shaft passing through and driven by said drive shaft, screw-feed means for advancing said tool shaft, and a tool passing through and secured to said tool shaft, substantially as set forth.

[Claims 6 to 8 not printed in the Gazette.]

882,879. MACHINE FOR BOXING TOOTHPICKS. CHARLES C. FREEMAN, Dixfield, Me. Filed Feb. 18, 1907. Serial No. 357,183.



1. In a machine for boxing tooth picks, in combination, means for separating the picks from a mass, a chute through which the picks pass, a receptacle into which said chute discharges, means for evening up the end of a pile of picks in said receptacle, a second receptacle into which the first mentioned receptacle discharges, means for evening up the picks in said second receptacle and means for opening both said receptacles to cause them to discharge their contents at stated times.

2. In a machine for boxing tooth picks, in combination, means for separating the picks from a mass, an inclined chute down which the picks pass and which is so shaped as to cause the picks to assume a position parallel with each other, a receptacle into which said chute discharges, means for evening up a pile of picks in said receptacle, a second receptacle into which the first mentioned receptacle discharges, means in said second receptacle for evening up the picks which are contained therein, and means for opening both said receptacles to cause them to discharge their contents at stated times.

3. In a machine for boxing tooth picks, in combination, means for separating the picks from a mass, an inclined chute down which the picks pass and which is so shaped as to cause the picks to assume a position parallel with each other, a receptacle into which said chute discharges of greater length than the picks, a follower in said receptacle and means for moving said follower in a lengthwise direction in said receptacle to engage said picks at one end thereof and move them towards the opposite end of said receptacle until the space in the receptacle which holds the picks is shortened by the follower equal to the length of the picks and thereby causes the picks to lie with even ends and means for discharging the picks from said receptacle.

4. In a machine for boxing tooth picks, in combination, means for separating the picks from a mass, an inclined chute down which the picks pass and which is so shaped as to cause the picks to assume a position parallel with each other, a receptacle into which said chute discharges of greater length than the picks, a second receptacle into which the first mentioned receptacle discharges and which is of greater length than the picks, a follower in one of said receptacles, means for moving said follower in a lengthwise direction in said receptacle to engage said picks at one end thereof and move them towards the opposite end of said receptacle until the space in the receptacle which holds the picks is shortened by the follower equal to the length of the picks and thereby causes the picks to lie with even ends and means for discharging the picks from said receptacles.

5. In a machine for boxing tooth picks and the like, in combination, means for separating the picks from a mass, an inclined chute down which the picks are caused to pass endwise, a receptacle into which said chute discharges, said receptacle being V-shaped in cross-section and said picks being delivered thereto lengthwise of the said receptacle, said receptacle being of greater length than the picks, means for pushing the mass of picks in said receptacle endwise so as to even the ends of the mass of picks therein and means for discharging said picks from the bottom of said receptacle.

[Claims 6 to 13 not printed in the Gazette.]

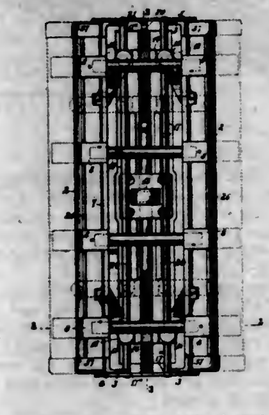
882,880. BINDER-FRAME. FRANK GREINER, Jersey City, N. J., assignor to Anderson & Prigge, New York, N. Y., a Firm. Filed May 9, 1907. Serial No. 372,654.

1. A binder frame comprising a back, binding plates, guide rods, traveling members engaging with said guide rods, means connecting said members with said binding plates and means for moving said members and plates, substantially as described.

2. A binder frame comprising a back, binding plates, guide rods, members mounted and sliding upon said guide rods, means connecting said members with said binding plates, and means for moving said members and plates, substantially as described.

3. A binder frame comprising a back, binding plates, guide rods extending lengthwise of said back, members mounted and sliding upon said guide rods, means connecting said members with said binding plates, and means for moving said members and plates, substantially as described.

4. A binder frame comprising a back having end flanges extending upwardly therefrom, binding plates, guide rods extending between and supported by said end flanges, members mounted and sliding upon said guide rods, means connecting said members with said binding plates, and means for moving said members and plates, substantially as described.



5. A binder frame comprising a back and binding plates moving transversely thereon, means including traveling nuts connected with said back and binder plates for moving the latter, said back being provided with ribs extending lengthwise thereof, the ends of said ribs forming stops for said traveling nuts, substantially as described.

882,881. BOX-FASTENER. JOHN A. HAUGH, Colusa, Cal. Filed June 13, 1907. Serial No. 378,695.



1. A box fastener comprising a box, a lid therefor, spring wires secured in one end of said box and having loops at their upper ends, links secured to the lower ends of said wires, wires secured to said links at one end and secured to the box at their other ends, means on said lid engaging said first named loops, and means securing the lid to said box at the other end thereof, as set forth.

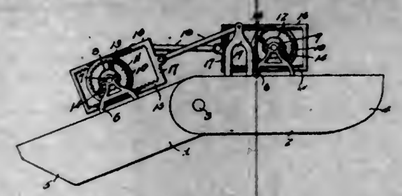
2. A box, a lid therefor having notches cut inward from one of its ends, spring wire members secured to the top of said lid and extending vertically into said notches, horisontal looped projections on said vertical extensions, spring wires secured vertically to the outside of the corresponding end of said box, horizontal looped projections on the upper ends of said wires, the same extending into said notches and engaging said first named looped projections, and means locking the other end of said lid to said box, as set forth.

882,882. FISH-HOOK. JOHN G. HENZEL, Chicago, Ill. Filed May 27, 1907. Serial No. 375,886.



A hook consisting of a single shank provided with a front hook projecting in one direction and a rear hook projecting in the opposite direction, and a piece on the shank flattened on top and with an excess of weight below the shank to cause the hooks to ride with the front hook up and the rear hook down, when drawn through the water.

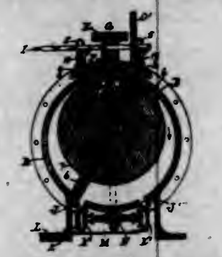
882,883. WAVE-MOTOR. WILLIAM E. HILLSON, Crandon, Wis. Filed Aug. 8, 1907. Serial No. 387,686.



1. A wave motor comprising a sectional float the sections of which are pivoted to one another, and rack and pinion converting mechanism mounted on said sections and embodying a pinion member mounted on one section, and a pinion actuating rack connected with and actuated by the adjoining float section.

2. A wave motor comprising a sectional float the sections of which are pivoted to one another, and converting mechanism comprising a rotary member mounted on one float section, a rigid stanchion on the adjoining section, a reciprocating member coöperating with the rotary member, and a connecting rod extending from said stanchion to the reciprocating member.

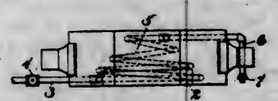
882,884. ROTARY ENGINE. JAMES F. HOPPER, Sherman, Tex. Filed May 27, 1907. Serial No. 375,906.



1. In a rotary engine, the combination with a cylinder, of a drum therein provided with pistons, a disk forming one head of the cylinder, said disk provided with two vertically disposed sliding valves covering ports in the disk, each valve having a stem extending upwardly by which it is actuated, a revolving disk provided with slots for admitting steam through the valves to the cylinder, and exhaust passages substantially as described.

2. A rotary engine comprising a cylinder, a drum mounted therein and provided with pistons, a disk forming one head of the cylinder and having ports therein, sliding valves covering the ports in the disk, operating stems extending upward from the valves, a slotted rotatable disk for admitting steam from the valves to the cylinder, and exhaust passages leading from the cylinder.

882,885. MOLDING APPARATUS. BASTIAN HORN, Chicago, Ill., assignor of one-half to Hans Christian Lows, Chicago, Ill. Filed June 19, 1907. Serial No. 379,684.



1. The combination with a mold casing, of a steam pipe carried thereby and extending through the sand therein in such manner as to secure a drying of such sand.

2. The combination with a mold casing, of a steam pipe carried thereby and extending through the sand therein in a series of coils.

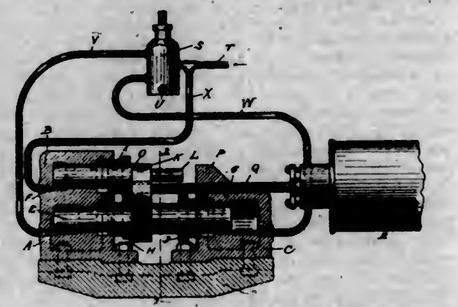
3. The combination with a cope and drag, of a steam pipe extending through the sand in each of the members and a coupling between adjacent ends of the two pipes.

882,886. CLIP. ROSS W. HORTON and JEHIEL E. MOLESWORTH, New Athens, Ohio. Filed Apr. 4, 1907. Serial No. 366,353.



As an improved article of manufacture, the herein described paper clip consisting of a single strip of spring wire bent at five different equidistant points forming two isosceles triangles of co-extensive areas, the extremities of the strip being integrally connected together, and the wire being crossed at one point, as and for the purpose set forth.

882,887. REVERSING DEVICE FOR ENGINE-VALVES AND OTHER USES. KINNEY C. HOXIE, Duluth, Minn. Filed Oct. 9, 1907. Serial No. 396,634.



1. In a reversing device for engine valves and other uses, the combination of a plurality of cylinders, two of which oppose a third, said third cylinder being larger than either of the others, means for controlling the supply and exhaust of fluid pressure to said cylinders, and means actuated by one or more of said cylinders.

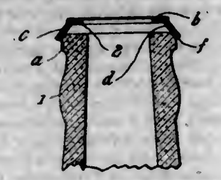
2. In a reversing device for engine valves and other uses, the combination of a plurality of cylinders and plungers, two of said cylinders opposing a third, and the area of the plunger of said third cylinder being greater than the area of the plungers of either of the others, means for controlling the supply and exhaust of fluid pressure to said cylinders, and means adapted to be actuated by said plungers.

3. In a reversing device for engine valves and other uses, the combination of sets of opposed cylinders and their plungers, the combined plunger area of one set exceeding the plunger area of the other set, means for controlling the supply and exhaust of fluid pressure to said cylinders, and means adapted to be actuated by one or more of said plungers.

4. In a reversing device for engine valves and other uses, the combination of a movable cross-head, a part connected to be actuated by the reversing device, a pair of opposed cylinders having differentially acting plungers connected to said cross-heads, and a third cylinder having its plunger connected to said cross-head and adapted to assist one of said pair of plungers.

[Claims 6 to 8 not printed in the Gazette.]

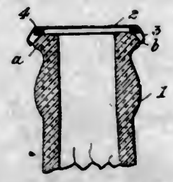
882,888. SEALING-CAP FOR BOTTLES. LEWIS KALLING, Baltimore, Md. Filed Nov. 22, 1906. Serial No. 344,540.



1. In combination with a sealing cap comprising a crown and a pendent flange adapted for attachment to a bottle head provided with an annular lip or shoulder, a joint-forming gasket placed within the cap and in contact with the crown thereof, and a multiplicity of prongs which extend from the edge of the said flange and have their points in contact with the said gasket whereby the same is held in place, substantially as specified.

2. In combination with a bottle having an annular lip or shoulder a sealing cap comprising a crown and a pendent flange provided with a multiplicity of prongs which are inturned so as to produce an inner wall or lining for the flange which is expansible and compressible independently of the flange proper, and a joint-forming gasket which is held within the cap by the said prongs, substantially as specified.

882,889. BOTTLE-SEALING CAP. LEWIS KALLING, Baltimore, Md. Filed Aug. 6, 1907. Serial No. 387,285.



1. In combination with a bottle head, a sealing cap for the same which comprises a crown, a pendent annular flange and a joint-forming device, the edge of the said flange being turned inward and corrugated, substantially as specified.

2. A sealing cap for a bottle which consists of a crown having a downwardly extending annular flange the edge of which is turned inward and corrugated, substantially as specified.

882,890. FIRE AND WATER PROOF COMPOSITION. GEORGE KELLY, Hinsdale, Ill. Filed Apr. 18, 1906. Serial No. 312,441.

1. A fire and water-proof composition, consisting of a mixture of asphaltum incorporated directly with liquid glass.

2. A fire and water-proof composition, consisting of a mixture of asphaltum reduced to liquid form and liquid glass.

3. A fire and water-proof composition, consisting of a mixture of gilsonite and liquid glass.

4. A fire and water-proof composition, consisting of a mixture of gilsonite reduced to liquid form and liquid glass.

5. A fire and water-proof composition, comprising a mixture of gilsonite and liquid glass in equal parts.

882,891. FIRE AND WATER PROOF COMPOSITION. GEORGE KELLY, Hinsdale, Ill. Filed Aug. 29, 1907. Serial No. 390,685.

1. A composition of the character set forth, consisting exclusively of bituminous substance and liquid glass.

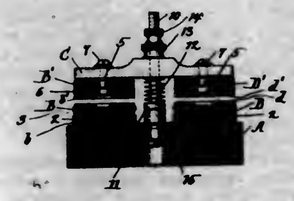
2. A composition of the character set forth, consisting exclusively of coal tar and liquid glass.

3. A composition of the character set forth, consisting exclusively of substantially equal parts of bituminous substance and liquid glass.

4. A composition of the character set forth, consisting exclusively of substantially equal parts of coal tar and liquid glass.

5. A composition of the character set forth, consisting of substantially equal parts by weight of coal tar and liquid glass, the latter being at substantially forty degrees Baumé.

882,892. ELECTRICAL PROTECTIVE APPARATUS. JAMES A. KENNY, Chicago, Ill. Filed Jan. 7, 1904. Serial No. 188,056.



1. A protective apparatus for electric circuits comprising a base-board, a cup-shaped carbon holder fixed to said base board, a post on said base-board, an arm adjustably carried on said post and a pair of carbon disks one removably secured to said arm and the other removably held in the holder on said base, said carbon disks having oppositely disposed elevations on their adjacent faces, substantially as described.

2. A protective apparatus for electric circuits comprising a base-board, a pair of carbon holders fixed thereto, a post fixed to said base-board intermediate said carbon holders, a cross arm adjustably mounted on said post and two pairs of carbons, two of which are removably secured to said arm and two of which are removably arranged within said carbon holders, substantially as described.

3. A protective apparatus for electrical circuits comprising two carbon-holders, one of which is provided with means whereby it may be electrically connected to the ground and the other of which is provided with means whereby it may be electrically connected to a telephone or like circuit, one at least of the opposing faces of the carbons of said holders being formed with elevations and depressions, a spring for separating said carbon-holders and screw mechanism for adjusting said carbon-holders relatively to each other.

4. A protective apparatus for electrical circuits comprising two carbon-holders, one arranged above the other, a carbon block within each of said holders, a flexible spring support for one of said carbon-holders connecting the same to the working circuit and electrical connection for uniting the other of said carbon-holders to ground, and means for adjusting said carbon-holders relatively to each other.

5. A protective apparatus for electrical circuits comprising two pairs of carbon-holders, a base supporting the lower one of the carbon-holders of each pair, a connection uniting together the upper carbon-holders of each pair a spring for separating said carbon-holders and screw mechanism for simultaneously adjusting the carbon-holders and their carbons relatively to each other.

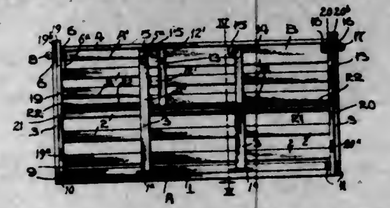
[Claims 6 to 8 not printed in the Gazette.]

882,893. SECTIONAL HOG AND POULTRY CRATE. CHARLES E. KNIGHT, Shelbyville, Ill. Filed June 24, 1907. Serial No. 380,454.

1. A crate of the character described, comprising a main section having an upward extension at one end, and a supplemental section detachably mounted on said main section against the upward extension, substantially as set forth.

2. A crate of the character described, comprising a main section having an upward extension at one end, a supple-

mental section detachably mounted on said main section against the upward extension, and a door removably mounted in said main section and the upward extension thereof, substantially as set forth.



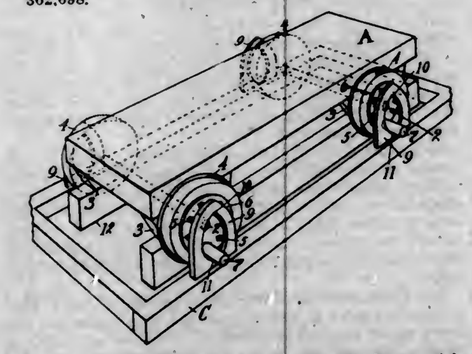
3. A crate of the character described, comprising a main section having an upward extension at one end, a supplemental section detachably mounted on said main section against the upward extension, a door removably mounted in said main section and the upward extension thereof, and a door common to, and removably mounted in, said main and supplemental sections at the other end of the crate, substantially as set forth.

4. A crate of the character described, comprising a main section having an upward extension at one end, and a supplemental section detachably mounted on said main section against the upward extension; said supplemental section being provided at its forward end with means for engaging the upward extension of said main section, substantially as set forth.

5. A crate of the character described, comprising a main section having an upward extension at one end, a supplemental section detachably mounted on said main section against the upward extension, doors for closing the ends of said sections, and a false floor detachably mounted upon said main section, beneath the supplemental section, substantially as set forth.

[Claim 6 not printed in the Gazette.]

882,894. LOAD-MOVING APPARATUS. FRITZ KOCH, St. Paul, Minn. Filed Mar. 16, 1907. Serial No. 362,698.



1. An apparatus of the character described, comprising a carriage having side rails, a frame provided with a horisontally disposed rotatable shaft, and coöperating means on said shaft and on the side rails of the carriage for causing both the frame and carriage to be alternately raised bodily from the ground and moved forwardly as the shaft revolves; substantially as described.

2. An apparatus of the character described, comprising a frame provided with a horisontally disposed rotatable shaft, lifting members connected to said shaft and disposed eccentrically thereto, and a carriage provided with separated upper and lower bearing surfaces that are adapted to be engaged by said lifting members to cause the carriage and frame to be alternately raised bodily from the ground and moved forwardly; substantially as described.

3. An apparatus of the character described, comprising a frame provided with supporting members that are adapted to rest on the ground, a carriage which rests on the ground, a rotatable shaft carried by said frame and provided with eccentrically disposed lifting members, and bearing surfaces on the carriage coöperating with said lifting members for causing the frame and carriage to be alternately raised from the ground and moved forwardly as the shaft revolves; substantially as described.

4. The combination, with a frame having a shaft and means for turning it, of lifting pins eccentrically connected with the shaft, and a carriage having side rails that are provided with upper and lower bearing surfaces that are engaged by said pins as the shaft revolves to alternately lift the frame and carriage away from the ground and move them forwardly; substantially as described.

5. In combination, a frame, a shaft rotatably supported by the frame and means to turn it, a crank and crank-pin carried by the shaft at each end thereof, a skeleton carriage coöperating with the frame, and a bearing frame on each side of the carriage in position to receive the crank-pin, the bearing frame having upper and lower interior bearings in position to be alternately engaged by the pin in its revolution.

[Claims 6 to 8 not printed in the Gazette.]

882,895. GO-CART. OTTO KURZ, Sturgis, Mich., assignor by mesne assignments, to Sturgis Steel Go-Cart Company, Sturgis, Mich. Filed Feb. 28, 1907 Serial No. 359,788.



1. The combination of downwardly, forwardly projecting fixed side pieces, having a handle at their upper ends; adjustable side pieces arranged across and pivotel to said fixed side pieces; axles carried by said side pieces; side rails slotted to receive the upper ends of said adjustable side pieces, pivotally mounted on said fixed side pieces; vertically-arranged links pivoted at the forward end of said side rails; side bars pivoted to the upper end of said vertically-arranged links and to said fixed side pieces, a seat carried by said side rails; a foot-rest; supporting arms therefor pivoted on said vertically-arranged links; means for locking said foot-rest in its adjusted positions, comprising a ball-shaped lever pivoted to the said foot-rest supporting arms, links pivoted to said lever and to said vertically-arranged links, the said links having their pivots so arranged relative to the pivots of said ball-like lever as to lock the foot-rest in either adjusted position.

2. The combination of a foot-rest; pivoted supporting arms therefor; means for locking said foot-rest in its adjusted positions, comprising a ball-shaped lever pivoted to the said foot-rest supporting arms, links pivoted to said lever, the said links having their pivots so arranged relative to the pivots of said ball-shaped lever as to lock the foot rest in either adjusted position.

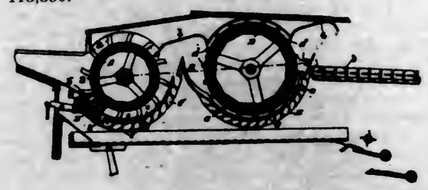
3. The combination of the fixed side pieces; adjustable side pieces arranged across and pivoted to said fixed side pieces; axles carried by said fixed side pieces; side rails to which said adjustable side pieces are slidably connected, pivotally mounted on said fixed side pieces; vertically arranged links pivoted at the forward end of said side rails, connected at their upper ends to said fixed side pieces; a seat carried by said side rails; a foot rest; pivoted supporting arms therefor; means for locking said foot rest in its adjusted position comprising a lever pivoted to said foot rest; and a link pivoted to said lever and to said vertically arranged link, said link having its pivot so arranged relative to the pivot of said lever as to lock the foot rest in its adjusted position.

4. In a carriage, the combination with an axle, of a support for said axis made up of sections, the meeting ends of the said sections being cut away on their upper edges to form shoulders; a coupling for said sections, having a cylindrical portion at the top and parallel side portions adapted to receive the ends of said sections, the edges of the said side portions being V-shaped and provided with inturned flanges forming stops for limiting the movement of the said sections therein; rivets for pivotally securing said sections in said coupling; and a coiled spring arranged in the cylindrical portion of said coupling between the shoulders on said sections, for the purpose specified.

5. In a carriage, the combination with an axle, of a support for said axle made up of sections, the meeting ends of the said sections being cut away on their upper edges to form shoulders; a coupling for said sections having a cylindrical portion at the top and parallel side portions adapted to receive the ends of said sections; stops for limiting the movement of said sections in said coupling; rivets for pivotally securing said sections in said coupling; and a coiled spring arranged in the cylindrical portion of said coupling between the shoulders on said sections, for the purpose specified.

[Claims 6 to 15 not printed in the Gazette.]

882,896. THRESHING-MACHINE. FRANK F. LANDIS, Waynesboro, Pa. Filed June 26, 1902. Serial No. 113,350.



1. A threshing machine comprising a threshing cylinder, a concave, a separating grate extending back from said concave, a second cylinder behind the first, and a grate beneath said second cylinder, both of said grates being in close relation to their respective cylinders and composed of transverse bars with webs on their top edges extending in the direction of the travel of the straw, substantially as set forth.

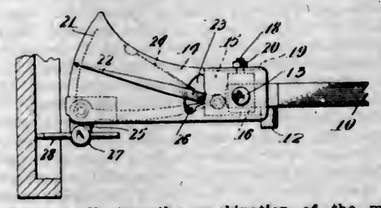
2. A threshing machine, comprising a threshing cylinder, a concave, a separating grate behind said concave and in near relation to said cylinder, a second cylinder behind the threshing cylinder provided with teeth, a separating grate beneath said second cylinder and in near relation thereto, both of said grates being formed with longitudinally extending webs on their top surfaces, the upper edges of which are above the plane of the transverse bars substantially as set forth.

3. A threshing machine comprising a cylinder having threshing teeth, a concave with teeth arranged to cooperate therewith, a curved grate extending back from said concave substantially concentric with said cylinder, a second cylinder behind the first cylinder provided with short teeth set nearer together than those of said first cylinder and said second cylinder being of greater diameter than said first cylinder and having greater peripheral speed, a second grate located under said second cylinder and curved around to its rear side substantially concentric therewith, both of said grates being composed of transverse deflecting bars having webs on their top edges extending in line with the travel of the straw, substantially as set forth.

4. In a threshing machine, the combination, of the threshing cylinder, the concave, the separating grate extending rearwardly from said concave on a curve near to said cylinder and comprising transverse angular deflecting bars with webs on their top edges extending in the direction of the travel of the straw, a second cylinder with teeth located behind said threshing cylinder, and a second separating grate located near said second cylinder and also formed with transverse bars having longitudinally extending webs on their upper edges, substantially as set forth.

5. A threshing machine comprising a threshing cylinder, a concave arranged to coöperate therewith, a grate behind said concave formed of transverse deflecting bars with webs on their tops extending in the direction of the travel of the straw and formed curved substantially concentric with the cylinder, a second cylinder behind said threshing cylinder having teeth, another grate located near to said cylinder and formed like said first grate, the teeth of said second cylinder and the webs of said second grate being nearer to each other than those of said first cylinder and grate and arranged in line, the webs of each grate with its cylinder, substantially as set forth.

882,897. INDICATOR. HENRY F. LARAVA, Worcester, Mass. Filed Aug. 29, 1907. Serial No. 390,604.



1. In an indicator, the combination of the moving pointer, a lever for operating the pointer, and a contact member mounted on said lever and adjusted longitudinally and axially thereon.

2. In an indicator, the combination of the moving pointer, a lever for operating the pointer, a contact member connected with said lever and adjustable longitudinally and axially with respect thereto, means for clamping said contact member against longitudinal movement, and means for clamping it against axial movement.

3. In an indicator, the combination of the moving pointer, a lever for operating said pointer having an arm provided with a perforation, a holder entering said perforation and adapted to turn about the center therof, a fastening device on the underside of said arm for clamping the holder to the arm and preventing said axial movement, a contact member consisting of a rod passing through said holding member and longitudinally movable with respect thereto, and means on the holding member for clamping the contact member against longitudinal movement.

4. In an indicator, the combination of the moving pointer, a bell-crank having a long arm and a short arm, the long arm of the bell-crank engaging the pointer for moving it, a holder mounted on the short arm of the bell-crank and axially adjustable thereon, means for clamping the holder in adjusted positions, and a contact member supported by said holder.

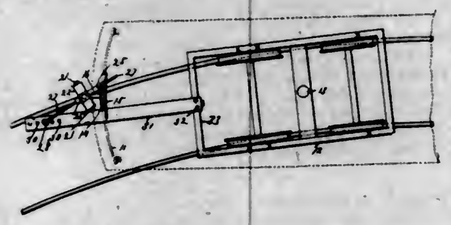
5. In an indicator, the combination of a plate having a scale, a pointer pivotally mounted on said plate, a spring for moving the pointer in one direction, a bell-crank pivotally mounted on the plate and having an arm for engaging the pointer near its pivotal point of support to move the same over the scale, said bell-crank having a short arm, and a contact member adjustably mounted on said short arm.

[Claims 6 to 14 not printed in the Gazette.]

882,898. HEADLIGHT-SUPPORT. LOUIS L. LEMAY, Pepperell, Mass. Filed Nov. 29, 1907. Serial No. 404,227.

1. An automatically-adjusting head-light supporting mechanism for street-cars and other vehicles, comprising a substantially vertical rotative support for the head-light,

a supporting frame adapted to extend substantially horizontally from the car or vehicle-body and provide bearings for the rotative support whereby the head-light may be sustained in front of the dashboard, a substantially horizontal tubular holder rigidly connected with the lower end of said rotative support and constituting a horizontal slideway, a substantially horizontal rod supported and adapted to slide horizontally in said holder, a bar rigidly connected with the truck and extending forward horizontally therefrom under said holder and horizontal rod, and a vertical pivotal connection between the forward portion of said rod and bar, for the purpose set forth.



2. An automatically-adjusting head-light supporting mechanism for street-cars and other vehicles, comprising a substantially vertical rotative support for the head-light, a supporting frame adapted to extend substantially horizontally from the car or vehicle-body and provide bearings for the rotative support whereby the head-light may be sustained in front of the dashboard, a substantially horizontal tubular holder rigidly connected with the lower end of said rotative support and constituting a horizontal slideway, a substantially horizontal rod supported and adapted to slide horizontally in said holder, a bar rigidly connected with the truck and extending forward horizontally therefrom under said holder and horizontal rod and provided with vertical holes in its forward end, a vertical pivot-pin extending from the front end of the sliding rod into one of said holes, and a stop arranged on said pin under the horizontal bar at a distance to allow vertical play of the pin in the hole, for the purpose set forth.

3. An automatically-adjusting head-light supporting mechanism for street-cars and other vehicles, comprising a substantially vertical rotative support for the head-light, means secured to the car or vehicle for sustaining said rotative support at the forward end thereof, a substantially horizontal tubular holder rigidly connected with the lower portion of the rotative support and constituting a horizontal slideway, a bar extending forward from the truck under the car-body, a horizontal rod adapted to move longitudinally and rotatively in said slideway, and a pivotal connection between said sliding rod and stationary bar, whereby the swinging of the bar as the truck travels over a curve imparts longitudinal or endwise movement to the sliding rod and causes it to swing in a horizontal plane for the purpose of rotating the head-light support, and the tubular holder is adapted to rock on the horizontal rod.

882,899. SUSTAINING AND PROPELLING MECHANISM. DANIEL B. LITTLEFIELD, Chicago, Ill. Filed Feb. 27, 1907. Serial No. 359,688.

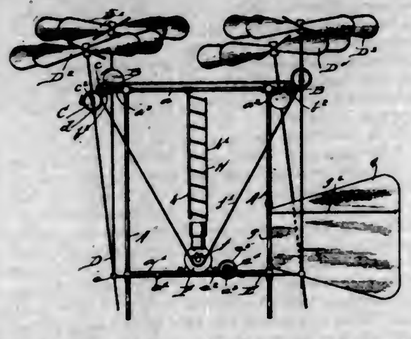
1. A propeller adapted to rotate, reciprocate and oscillate simultaneously, and a motor for actuating the propellers.

2. A propeller adapted to rotate, reciprocate and oscillate simultaneously, and means varying the angle of oscillation and reciprocation.

3. A propeller and mechanism acting to rotate, gyrate and reciprocate the propeller.

4. In a device of the class described a propeller and mechanism acting to continuously rotate and to reciprocate and gyrate the same, the gyrations and reciprocations being synchronous.

5. The combination with a suitable motor, of propellers driven thereby, means simultaneously reciprocating and oscillating said propeller during rotation thereof and



means varying the angle at which the same reciprocates.

[Claims 6 to 27 not printed in the Gazette.]

882,900. CHILD'S CARRIAGE. ANTHONY W. LOSHBOUGH, Sturgis, Mich., assignor, by mesne assignments, to Sturgis Steel Go-Cart Company, Sturgis, Mich. Filed July 29, 1907. Serial No. 386,065.



1. In a collapsible carriage, the combination with the downwardly and forwardly projecting fixed side pieces, having a handle at their upper ends, of adjustable side pieces arranged across and pivoted to the said fixed side pieces; axles carried by said side pieces; side rails to which said adjustable side pieces are slidably connected pivotally mounted on said fixed side pieces; side bars pivotally connected to said fixed side pieces; vertically-arranged links connected to the forward ends of said side rails and side bars; a foot rest; supporting arms therefor pivotally mounted on connecting pivots for said links to said side rails; a seat carried by said side rails; a back pivotally mounted on the connecting pivots for said side rails to said fixed side pieces, said back having arms projecting rearwardly and downwardly beyond the pivots thereof; L-shaped links pivotally connected to said arms on said back and to said foot rest carrying arms; pins on said back, and a bail-like support for said back pivotally mounted on the connecting pivots for said side bars to said fixed side pieces, said support having return bends adjacent to its pivots and loop-like bends in the side pieces thereof, said bends being adapted to engage the said pins on said back, for adjustably supporting the same, said support also having shoulder-like offsets adjacent to the outer end or cross-piece thereof, for the purpose specified.

2. In a collapsible carriage, the combination with the downwardly and forwardly projecting fixed side pieces, having a handle at their upper ends, of adjustable side pieces arranged across and pivoted to said fixed side pieces; axles carried by said side pieces; side rails to which said adjustable side pieces are slidably connected pivotally mounted on said fixed side pieces; vertically arranged links connected to the forward ends of said side rails and side bars; a foot rest; supporting arms therefor pivotally mounted on the connecting pivots for said side rails to said fixed side pieces, said back having arms projecting rearwardly and downwardly beyond the pivots thereof; L-shaped links pivotally connected to said arms on said back and to said foot rest carrying arms; and means for adjustably supporting said back, for the purpose specified.

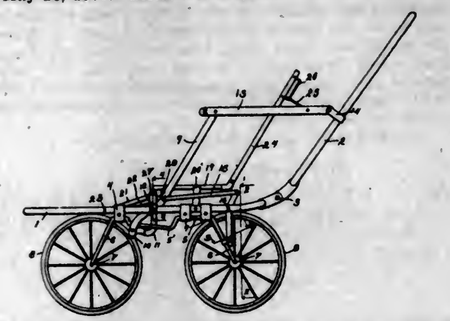
3. In a collapsible carriage, the combination with the downwardly and forwardly projecting fixed side pieces, having a handle at their upper ends; of adjustable side pieces arranged across and pivoted to said fixed side pieces; axles carried by said side pieces; side rails to which said adjustable side pieces are slidably connected pivotally mounted on said fixed side pieces; side bars pivotally connected to said fixed side pieces; vertically arranged links pivotally connected to the forward ends of said side rails and side bars; a foot rest pivotally mounted on connecting pivots for said links to said side rails; a seat carried by said side rails; a back pivotally mounted on the connecting pivots for said side rails of said fixed side pieces, said back having arms projecting downwardly beyond the pivots thereof; links pivotally connected to said arms on said back and to said foot rest; pins on said back, and a ball-like support for said back pivotally mounted on the connecting pivots for said side bars to said fixed side pieces, said support having return bends adjacent to its pivots and loop-like bends in the side pieces thereof, said bends being adapted to engage said pins on said back for adjustably supporting the same, said support also having shoulder-like offsets adjacent to the outer end or cross-piece thereof, for the purpose specified.

4. In a collapsible carriage, the combination with the downwardly and forwardly projecting fixed side pieces, having a handle at their upper ends, of adjustable side pieces arranged across and pivoted to said fixed side pieces; axles carried by said side pieces; side rails to which said adjustable side pieces are slidably connected pivotally mounted on said fixed side pieces; vertically arranged links pivotally connected to the forward ends of said side rails and side bars; a foot rest pivotally mounted on connecting pivots for said links to said side rails; a seat carried by said side rails; a back pivotally mounted on the connecting pivots for said side rails of said fixed side pieces, said back having arms projecting downwardly beyond the pivots thereof; links pivotally connected to said arms on said back and to said foot rest, and means for adjustably supporting said back, for the purpose specified.

5. In a collapsible carriage, the combination with the downwardly and forwardly projecting fixed side pieces, having a handle at their upper ends, of adjustable side pieces arranged across and pivoted to said fixed side pieces; axles carried by said side pieces; side rails to which said adjustable side pieces are slidably connected pivotally mounted on said fixed side pieces; a foot rest pivotally mounted on the forward ends of said side rails; a seat carried by said side rails; a back pivotally mounted on said fixed side pieces, said back having arms projecting rearwardly and downwardly beyond the pivots thereof; L-shaped links pivotally connected to said arms on said back and to said foot rest carrying arms; pins on said back, and a ball-like support for said back pivotally mounted on the connecting pivots for said side bars to said fixed side pieces, said support having return bends adjacent to its pivots and loop-like bends in the side pieces thereof, said bends being adapted to engage said pins on said back for adjustably supporting the same, said support also having shoulder-like offsets adjacent to the outer end of the cross-piece thereof, for the purpose specified.

[Claims 6 to 8 not printed in the Gazette.]

882,901. BABY-CARRIAGE. JAMES E. LOSHBOUGH, Elkhart, Ind., assignor, by mesne assignments, to Sturgis Steel Go-Cart Company, Sturgis, Mich. Filed May 16, 1907. Serial No. 373,924.



1. In a collapsible carriage, the combination with the running gear frame, of wheel supports pivotally mounted on said running gear frame, said wheel supports having downwardly-extending wheel carrying arms; a pair of levers pivotally secured to said frame and connected to said wheel supports, whereby said wheel supports are folded inwardly or erected by the actuation of the said levers; means for locking said levers in their erected position; a pair of braces pivoted on said frame; connecting links for the upper ends of said braces to said wheel support actuating levers; a cross piece connecting the lower ends of said braces; and forked clips on said wheel-carrying arms of said wheel supports adapted to receive said braces when the parts are in their erected position, for the purpose specified.

2. In a collapsible carriage, the combination with the running gear frame, of wheel supports pivotally mounted on said running gear frame, said wheel supports having downwardly-extending wheel carrying arms; a pair of levers pivotally secured to said frame and connected to said wheel supports, whereby said wheel supports are folded inwardly or erected by the actuation of the said levers; a pair of braces pivoted on said frame; connecting links for the upper ends of said braces to said wheel support actuating levers; a cross piece connecting the lower ends of said braces; and forked clips on said wheel-carrying arms of said wheel supports adapted to receive said braces when the parts are in their erected position, for the purpose specified.

3. In a collapsible carriage, the combination with the running gear frame, of wheel supports pivotally mounted on said running gear frame, said wheel supports having downwardly-extending wheel carrying arms; a pair of levers pivotally secured to said frame and connected to said wheel supports, whereby said wheel supports are folded inwardly or erected by the actuation of the said levers; means for locking said levers in their erected position; a pair of braces pivoted on said frame; connecting links for the upper ends of said braces to said wheel support actuating levers; and forked clips on said wheel carrying arms of said wheel supports adapted to receive said braces when the parts are in their erected position, for the purpose specified.

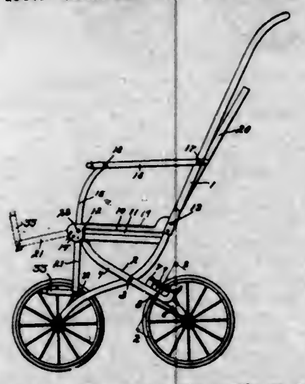
4. In a collapsible carriage, the combination with the running gear frame, of wheel supports pivotally mounted on said running gear frame, said wheel supports having downwardly-extending wheel carrying arms; a pair of levers pivotally secured to said frame and connected to said wheel supports, whereby said wheel supports are folded inwardly or erected by the actuation of the said levers; a pair of braces pivoted on said frame; connecting links for the upper ends of said braces to said wheel support actuating levers; and forked clips on said wheel carrying arms of said wheel supports adapted to receive said braces when the parts are in their erected position, for the purpose specified.

5. In a collapsible carriage, the combination with the

running gear frame, of wheel supports pivotally mounted on said running gear frame; a pair of levers pivotally secured to said frame and connected to said wheel supports, whereby said wheel supports are folded inwardly or erected by the actuation of said levers; means for locking said levers in their erected position; a pair of braces pivoted on said frame adapted to engage said wheel supports when erected; a cross-piece connecting the lower ends of said braces; and connecting links for the upper ends of said braces to said wheel support actuating levers, for the purpose specified.

[Claims 6 to 15 not printed in the Gazette.]

882,902. FOLDING BABY-CARRIAGE. JAMES E. LOSHBOUGH, Elkhart, Ind., assignor, by mesne assignments, to Sturgis Steel Go-Cart Company, Sturgis, Mich. Filed June 14, 1907. Serial No. 379,079.



1. In a carriage, the combination with an axle, of a support therefor, comprising two sections arranged with their ends overlapped, said sections having laterally-projecting arms on their overlapped ends, a pivot for said sections arranged between the said arms thereof, and a coiled spring connected to said arms, for the purpose specified.

2. In a carriage, the combination with an axle, of a support therefor, comprising a pair of pivotally connected sections having laterally projecting arms thereon, and a coiled spring connected to said arms, for the purpose specified.

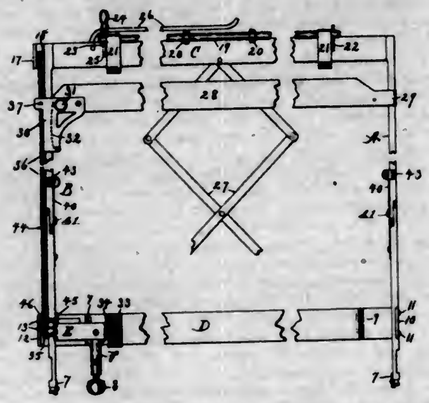
3. In a carriage, the combination with an axle, of a support therefor, comprising a pair of pivotally connected sections having laterally projecting arms thereon, and a spring connection for said arms, for the purpose specified.

4. In a carriage, the combination with a body, of an axle; a support therefor comprising a pair of pivotally connected members, one of said members being connected to said body and the other to said axle; and a spring arranged to connect said members so that it is put under stress by the movement of the members on their connecting pivot, for the purpose specified.

5. In a folding carriage, the combination of the downwardly and forwardly projecting fixed side pieces, having a handle at their upper ends; adjustable side pieces arranged across and pivoted to said fixed side pieces; axles carried by said side pieces; side rails to which the upper ends of said adjustable side pieces are slidably connected pivotally mounted on said fixed side pieces; vertically arranged links pivoted at the forward ends of said side rails; side bars pivoted to the upper ends of said vertically arranged links and said fixed side pieces; a foot rest; supporting arms therefor pivotally secured to the forward ends of said side rails; a pair of latch rods having finger pieces at their inner ends slidably arranged through the supporting arms of said foot rest; hangers for the inner ends of said latch rods through which they are slidably arranged, said side rails being provided with a plurality of holes adapted to receive said latch rods for adjustably supporting said foot rest, said latch rods being adapted to automatically engage said side rails for holding the carriage in its collapsed or folded position; coiled springs arranged on said latch rods with their inner ends bearing against the hangers therefor; and collars secured to said latch rods adapted to receive the thrust of said springs whereby said latch rods are held normally outward.

[Claims 6 to 14 not printed in the Gazette.]

882,903. COPY-HOLDER. CHARLES F. LUDINGTON, New Britain, Conn. Filed July 17, 1907. Serial No. 384,184.



1. A copy holder comprising a back or frame, a vertically sliding marking bar arranged to move up and down on the said frame, a forwardly extended arm projecting from the lower part of the said frame at one side, a finger wheel and connected driving wheel mounted in the forward part of the said side arm, and a flexible connection between the said driving wheel and marking bar, whereby the operator may lower the said marking bar by a movement of the said finger wheel.

2. A copy holder comprising a back or frame formed by uprights and cross-bars, a forwardly extended arm projecting from one of the said uprights, a slide fitted to one of the said uprights, a marking bar secured by one end to the said slide and extending across the frame to the other upright, an actuating device mounted to rotate in the forward part of the said arm, and a flexible connection between the said actuating device and slide whereby the operator may lower the said marking bar by partially rotating the said actuating device.

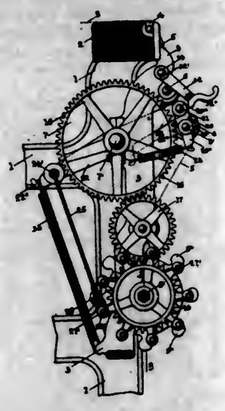
3. A copy holder comprising a back or frame formed of side uprights and cross-bars, the said uprights being jointed at their lower part for folding forwardly and downwardly, means for securing the said jointed uprights in their upright position, a marking bar arranged to be moved down and up on the said frame, means for moving the said marking bar, a paper or book clamp mounted on the top bar of the said frame and a folding skeleton rack depending from the said top bar of the frame.

4. A copy holder comprising a back or frame having a top bar, clamp springs secured to the said bar, a clamping rod or bar hinged in the ends of the said springs, and an operating lever mounted on the said clamping rod and acting on the said top bar for opening and closing the clamp.

5. A copy holder comprising a back or frame, a sliding marking bar mounted thereon, a forwardly extended arm projecting from the said back at one side, and provided with a hinge joint, an actuating device for moving the said marking bar, the said actuating device being mounted in the forward part of the said forwardly projecting arm, and an extensible leg for raising or lowering the actuating device.

[Claim 6 not printed in the Gazette.]

882,904. TAKE-UP MECHANISM FOR LOOMS. WILLIAM J. LUTTON, Paterson, N. J., assignor to Crompton & Knowles Loom Works, a Corporation of Massachusetts. Filed July 5, 1906. Serial No. 324,768.



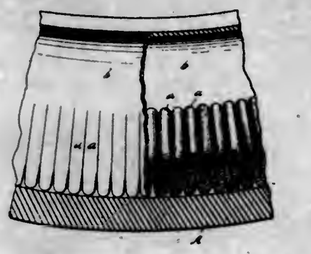
1. In the take-up mechanism of a loom, a cloth roll, a rotary take-up roll, two pivoted levers, a roll over which the fabric from said take-up roll passes, said roll carried by said levers and movable therewith, means for holding said roll in yielding engagement with said take-up roll, means for yieldingly holding said levers in their raised position and friction driving mechanism for the cloth-roll, and connections intermediate said levers and said friction driving mechanism, to automatically regulate the rotary motion of the cloth-roll, by the raising and lowering of said levers, and the raising and lowering of the roll carried by said levers.

2. In the take-up mechanism of a loom, a cloth roll, a rotary take-up roll, two pivoted levers, a roll over which the fabric from said take-up roll passes, said roll carried by said levers and movable therewith, means for holding said roll in yielding engagement with said take-up roll, means for yieldingly holding said levers in their raised position and friction driving mechanism for the cloth-roll, and connections intermediate said levers and said friction driving mechanism of the cloth-roll, to automatically regulate the rotary motion by the raising and lowering of said levers, and the raising and lowering of the roll carried by said levers, said connections comprising a connector from said levers to a wheel having a threaded hub and turning on a threaded collar, and said wheel connected with said connector, and adapted to be automatically rotated by the raising and lowering of said levers and the raising and lowering of the roll carried on said levers, to regulate the frictional engagement of the friction driving mechanism of the cloth-roll.

3. In the take-up mechanism of a loom, a cloth roll, a rotary take-up roll, two pivoted levers, a roll over which the fabric from said take-up roll passes, said roll carried by said levers and movable therewith, means for holding said roll in yielding engagement with said take-up roll, means for yieldingly holding said levers in their raised position and friction driving mechanism for the cloth-roll, and connections intermediate said levers and said friction driving mechanism, to automatically regulate the rotary motion of the cloth-roll by the raising and lowering of said levers, and the raising and lowering of the roll carried by said levers, and movable means for positively holding the outer ends of said levers and the roll supported on said levers, in their lowered position.

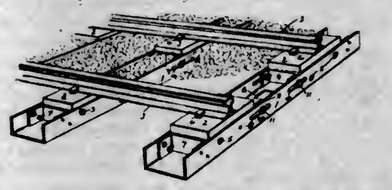
4. In the take-up mechanism of a loom, a rotary take-up roll, two pivoted levers, a roll over which the fabric from said take-up roll passes, said roll carried by said levers and movable therewith, means for holding said roll in yielding engagement with said take-up roll, means for yieldingly holding said levers in their raised position, and movable means for positively holding the outer ends of said levers and the roll supported on said levers, in their lowered position.

882,905. PNEUMATIC TIRE. ELON A. MARSH, Detroit, Mich. Filed Nov. 7, 1906. Serial No. 342,331.



In a pneumatic tire, in combination with an outer covering, an inner tube adapted to contain air provided with truss-shaped folds extending in close relation, transversely of and partly around the tread side of said inner tube, whereby provision is made for retaining the folds in proper position for yielding before a puncturing article and for pressing the edges of a puncture in one of said folds against each other, substantially as described.

882,906. RAILWAY-TIE. CHARLES M. PHILLIPS and CHARLES M. ROYER, Middlebranch, Ohio. Filed Apr. 29, 1907. Serial No. 370,988.



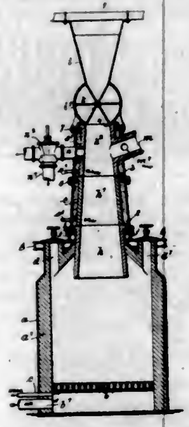
In a railway tie, the combination of a channel bar formed of metal, the vertical flanges of said bar provided with slots, rail-supporting blocks located between the vertical members of the channel bar and extended above said vertical flanges, outer angled flange members secured in fixed position to the channel bar, inner angled flange members adjustably attached to said channel bar, and adapted to abut against the ends of said rail-supporting blocks, substantially as and for the purpose specified.

882,907. APPARATUS FOR MANUFACTURING GAS. HENRY M. PIERSON, New York, N. Y. Filed Apr. 22, 1907. Serial No. 369,466.

1. In an apparatus for the production of gas, the combination with a generator and means for introducing air and steam alternately into the same, of a downwardly flaring retort vertically disposed and connected with and forming a substantial prolongation or extension of the generator, and in which the bodies of fuel are continuous, means for feeding bituminous coal to this retort and means at the upper end of the retort for conveying away both the blast and all other gases.

2. In an apparatus for the production of gas, the combination with a generator and means for introducing air and steam alternately into the same, of a downwardly flaring retort vertically disposed and connected with and forming a substantial prolongation or extension of the generator and in which the bodies of fuel are continuous, means for feeding bituminous coal to this retort, means for conveying away the blast and all other gases from the upper end of the retort and means for introducing air into the means for conveying away the gases.

3. In an apparatus for the production of gas, the combination with a generator and means for introducing air and steam alternately into the same, of a downwardly flaring retort vertically disposed and connected with and forming a substantial prolongation or extension of the generator, and in which the bodies of fuel are continuous, means for feeding bituminous coal to this retort, means for conveying away the blast and all other gases from the upper end of the retort, means for introducing air into the means for conveying away the gases and means for introducing liquid hydro-carbon into the retort.



4. In an apparatus for manufacturing gas, the combination with a generator and means for introducing air and steam alternately into the generator, of a vertically and centrally disposed retort forming a prolongation or extension of the said generator and opening into the same, said retort being continuously tapering, largest at the lower end within the generator and smallest at the upper end, a hopper for receiving and a feeder for discharging bituminous coal into the retort and means for conveying away from the upper end of said retort both the blast and all other gases produced.

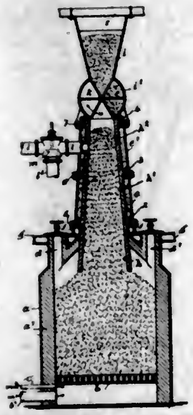
5. In an apparatus for making gas, the combination with a generator of suitable character and pipes for introducing air and steam alternately into the lower portion of said generator, of a retort formed of a plurality of tapering and super-imposed flanged sections rising from said generator, forming a substantial prolongation thereof, the largest lower end of said retort opening into the generator, a shell surrounding said retort sections, supports from said shell to the flanges of said sections and suitable means beneath for supporting the shells and the retort so that the weight thereof is carried independently of the generator.

[Claim 6 not printed in the Gazette.]

882,908. METHOD OF MANUFACTURING GAS. HENRY M. PIERSON, New York, N. Y. Filed Apr. 22, 1907. Serial No. 369,467.

1. The method herein described of manufacturing gas, the same consisting in forcing air into and heating a body of fuel and making therein producer gas, passing the producer gas on and directly through a body of bituminous coal superimposed upon the body of fuel and forming an uninterrupted continuation thereof and thereby extracting the chemical substances therefrom and distilling the bituminous coal and conveying the hot gases so produced away for immediate use in the arts.

2. The method herein described of manufacturing gas, the same consisting in forcing air into and heating a body of fuel and making therein producer gas, passing the producer gas on and directly through a body of bituminous coal superimposed upon the body of fuel and thereby extracting the chemical substances therefrom and distilling the bituminous coal and conveying the hot gases so produced away for immediate use in the arts, closing off the supply of air beneath the bed of fuel and the discharge of the gas and opening up the gas discharge in a different direction and then forcing steam through the bed of incandescent fuel and body of coke and bituminous coal and resolving the same into its component parts for the production of water or non-luminous gas and conveying the same away and storing it for future use.

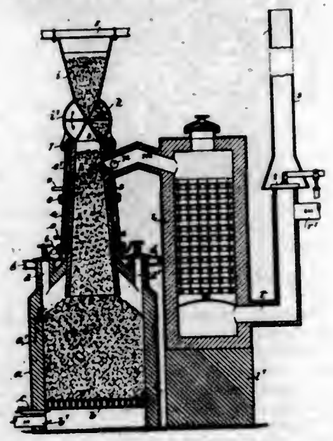


3. The method herein described of manufacturing gas, the same consisting in forcing air into and heating a body of fuel and making therein producer gas, passing the producer gas on and directly through a body of bituminous coal superimposed upon the body of fuel and thereby extracting the chemical substances therefrom and distilling the bituminous coal and conveying the hot gases so produced away for immediate use in the arts, closing off the supply of air beneath the bed of fuel and the discharge of the gas and opening up the gas discharge in a different direction and then forcing steam through the bed of incandescent fuel and body of bituminous coal and resolving the same into its component parts for the production of water or non-luminous gas and conveying the same away and storing it for future use and so producing a fuel coke from the bituminous coal, progressively delivering the coke so formed onto the body of the fuel to replenish the same and progressively repeating the operations of the manufacture of gas.

4. The method herein described of manufacturing gas, the same consisting in forcing air into and heating a body of fuel and making therein producer gas, passing the producer gas on and directly through a body of bituminous coal superimposed upon the body of fuel and thereby extracting the chemical substances therefrom and distilling the bituminous coal and conveying the hot gases so produced away for immediate use in the arts, progressively delivering the distilled bituminous coal as coke upon the body of fuel to replenish the same as the ashes of the body of fuel are removed and progressively replenishing the body of bituminous coal.

5. The method herein described of manufacturing gas, the same consisting in forcing air into and heating a body of fuel and making therein producer gas, passing the producer gas on and directly through and heating a body of bituminous coal superimposed upon the body of fuel and thereby extracting the chemical substances from and distilling the bituminous coal and conveying the hot gases so produced away for immediate use in the arts, closing off the supply of air beneath the bed of fuel and the discharge of the gas and opening up a gas discharge in a different direction, then forcing steam through the bed of incandescent fuel and through the bed of heated bituminous coal and fully decomposing the same, re-converting the carbonic acid $C.O_2$ into carbonic oxid C.O. by the extra element of oxygen of the $C.O_2$ combining with or taking up an element of carbon in the heated body of bituminous coal, all for the production of water or non-luminous gas and conveying the same away and storing it for future use.

882,909. METHOD OF MANUFACTURING GAS. HENRY M. PIERSON, New York, N. Y. Filed Apr. 22, 1907. Serial No. 369,468.



1. The method herein specified of making illuminating gas, the same consisting in blowing up a body of fuel to substantial incandescence and making therein producer gas, passing the producer gas through a body of bituminous coal which forms a substantially vertical continuation of the heated body of fuel and heating up the said fuel, adding air to the producer gas beyond this body of bituminous coal and burning the same and so heating up a fixing chamber; closing off all the air and introducing steam and passing the same through the body of incandescent fuel, decomposing the steam and forming water gas and passing the said water gas through the body of bituminous coal for the extraction of the chemical substances therefrom and the production of a fuel coke, simultaneously supplying liquid hydro-carbon to be vaporized and taken up by the decomposed steam or water gas in transit through the coke and bituminous coal and conveying the said gases and commingling and fixing the same in the presence of the stored up heat of the fixing chamber, and then conveying away the gases to a suitable receptacle.

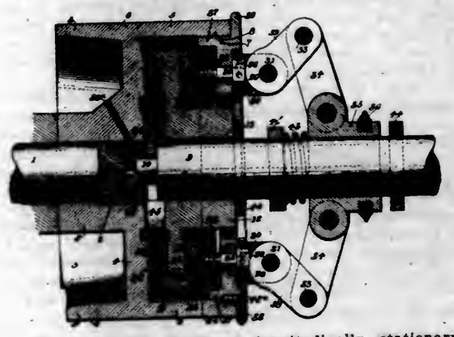
2. The method herein specified of making illuminating gas, the same consisting in blowing up a body of fuel to substantial incandescence and making therein producer gas, passing the producer gas through a body of bituminous coal which forms a substantially vertical continuation of the heated body of fuel and heating up said fuel, adding air to the producer gas beyond this body of bituminous coal and burning the same and so heating up a fixing chamber; closing off all the air and introducing steam and passing the same through the body of incandescent fuel, decomposing the steam and forming water gas and passing the said water gas through the body of bituminous coal for the extraction of the chemical substances therefrom and the production of a fuel coke, simultaneously supplying liquid hydro-carbon to be vaporized and taken up by the decomposed steam or water gas in transit through the coke and bituminous coal and conveying the said gases and commingling and fixing the same in the presence of the stored up heat of the fixing chamber, then conveying away the gases to a suitable receptacle, the coke formed from the bituminous coal being progressively delivered onto the body of fuel in the generator to replenish the same and supplying additional bituminous coal and successively repeating the operations.

882,910. SAFETY-EXPLOSIVE. BERTHOLD G. RESCHKE, Hamburg, Germany. Filed June 19, 1906. Serial No. 322,447.

1. An ammonium nitrate explosive consisting of ammonium nitrate and fennel seed, in about the proportions stated.

2. An ammonium nitrate explosive consisting of ammonium nitrate, fennel seed and wood pulp, in about the proportions stated.

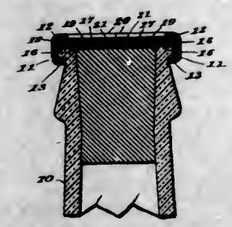
882,911. CLUTCH. THOMAS B. RICE, Jr., Philadelphia, Pa. Filed Sept. 25, 1905. Serial No. 279,911.



1. In a friction clutch, a longitudinally stationary member, a ring carried thereby, screws freely passing through said ring, a frictional ring carried by said screws and adjustable thereon, a longitudinally movable member, a web extending therefrom between said stationary member and said frictional ring, independent annular bearing faces extending entirely around the faces of said web on each side thereof, and means for actuating said frictional ring for causing the two annular bearing faces to be engaged by said stationary member and said frictional ring.

2. In a frictional clutch, a longitudinally stationary member, a ring carried thereby, screws freely passing through said ring, a frictional ring carried by said screws and adjustable thereon, a longitudinally movable member, a web extending therefrom between said stationary member and said frictional ring, oppositely extending flanges on said web annular bearing faces on each side of said web and seated against said flanges, and means for actuating said frictional ring for causing the two annular bearing faces to be engaged by said stationary member and said frictional ring.

882,912. COMBINED METALLIC AND FRANGIBLE CAP FOR BOTTLES. FRANK T. ROBINSON, Chicago, Ill., assignor to Twin Bottle-Cap Company. Filed Jan. 28, 1907. Serial No. 354,506.



1. A cap for bottles and the like, comprising a disk having on its upper surface spaced apart and upwardly and inwardly inclined catches, and two frangible members each having its outer edge downturned and bent inwardly and provided on its lower surface with means to slidably engage the disk and also with teeth to engage the catches on the disk.

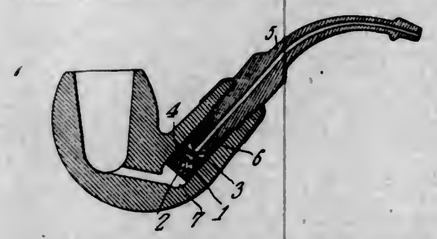
2. A cap for bottles and the like, comprising a metallic

disk having on its upper surface a pair of spaced apart ribs and provided between said ribs with upwardly and inwardly inclined spaced apart catches, and two frangible members each having its outer edge downturned and bent inwardly and provided on its lower surface with grooves to receive the ribs on the disk and also provided between said grooves with teeth to engage the catches on the disk.

3. A cap for bottles and the like, comprising a disk having on its upper surface a pair of spaced apart ribs located in parallelism and provided between said ribs with spaced apart and upwardly and inwardly inclined catches, and two frangible members each having its outer edge downturned and bent inwardly and provided on its upper and lower surfaces with depressions, the lower surfaces of each of said members having a pair of parallel grooves to receive the ribs on the disk and between said grooves to engage the catches on the disk.

4. A cap for bottles and the like, comprising a metallic disk having on its upper surface a pair of spaced apart ribs located in parallelism with one another and also provided between said ribs with upwardly and inwardly inclined catches, and two frangible members each having its outer edge downturned and bent inwardly and provided on its upper and lower surfaces with diametrically disposed recesses located one above the other, each of said members having on its lower surface a pair of spaced apart grooves located in parallelism with one another to receive the ribs on the disk and between said grooves a series of downwardly and outwardly inclined teeth to engage the catches on the disk.

882,913. SMOKE-FILTERING ATTACHMENT FOR PIPES, &c. CLAUDE W. ROWE, Concord, N. C. Filed Mar. 11, 1907. Serial No. 361,779.

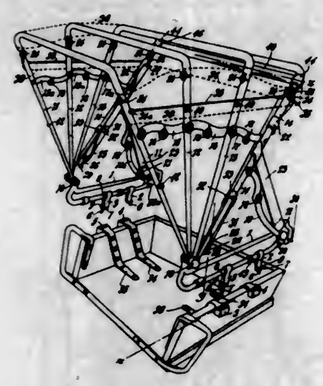


1. The combination with tobacco holding means having a bore extending therethrough, a mouth piece, and a nipple upon the mouth piece projecting into and spaced from the wall of the bore; of a smoke filtering attachment for said holding means and comprising a cylindrical casing disposed within the bore and having one end surrounding the nipple and fitting snugly thereon, porous diaphragms extending transversely within the casing, and a filtering material interposed between the diaphragms, one of said diaphragms being disposed to spread smoke througbout one end of the filtering tube prior to its passage through said material and the other diaphragm being disposed to spread smoke throughout the other end of the filtering material and prior to its passage into the nipple.

2. An article of manufacture comprising a tubular casing, porous diaphragms disposed transversely thereon, means surrounded by the diaphragms for clamping them against the casing, and a filtering material interposed between and retained by the diaphragms.

3. The combination with tobacco holding means having a bore extending therethrough, a mouth piece, and a nipple upon the mouth piece and projecting into and spaced from the wall of the bore; of a smoke filtering attachment comprising a cylindrical casing detachably mounted within the bore and having one end detachably surrounding the nipple and fiting snugly thereon, a porous diaphragm disposed transversely of the casing and connected thereto, and a filtering material within the casing and interposed between the diaphragm and nipple.

882,914. VEHICLE-TOP. BERNARD H. SCHEPER, Lexington Pike, Kenton county, Ky. Filed Oct. 7, 1907. Serial No. 396,198.

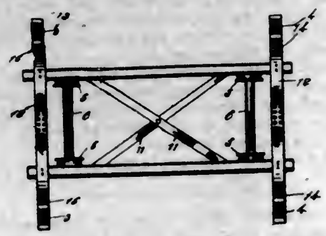


1. In a vehicle top, bows comprising side members and top transverse members, toggle-joints between said side members and said top transverse members, pivotal connections between said bows, braces adapted to hold said bows apart, toggle-joints in said braces, supports for said bows, braces adapted to hold said bows in raised position, and toggle-joints in said braces whereby said bows may be folded down on said supports, and said supports and the side members of said bows may be folded toward the top transverse members of said bows, substantially as and for the purposes specified.

2. In a vehicle top, bows comprising side members and top transverse members pivoted together, supports for said bows, a cover supported by said bows, side-curtain rollers adjustably mounted on one of said bows, studs on said supports adapted to hold said side-curtain rollers in position for use, side-curtains mounted on said side-curtain rollers, springs adapted to roll the side-curtains on the side-curtain rollers, holders adapted to hold said side-curtain rollers adjacent said bow, guides for said side-curtains, studs and rings adapted to hold said side-curtains in stretched position, a back-curtain roller mounted on one of said bows parallel to the top transverse member of said bow, a back-curtain mounted on said back-curtain roller, a spring in said back-curtain roller adapted to roll the back-curtain on the back-curtain roller, loops whereby said back-curtain may be lapped over said side-curtain roller and attached to said side-curtains, flaps on said cover adapted to lap over the side-curtains and the back-curtain, means whereby said vehicle top may be conveniently attached to and detached from a vehicle, and whereby said curtains may be conveniently adjusted to allow said bows to be folded down on said supports, and said side members and supports folded inward toward the top transverse members of said bows, substantially as and for the purposes specified.

3. In a vehicle top, bows comprising side members and top transverse members pivoted together, supports for said bows, concentric pivotal connections between said supports and said bows whereby said bows may be folded down on said supports and the side members of the bows and said supports may be folded inward toward the top transverse members of said bows, a side-curtain roller, a shaft for said side-curtain roller, a pivotal connection between said shaft and one of said bows, a stud on one of said supports, an eye on said shaft adapted to engage with said stud to hold said side-curtain roller in position for use, and a holder on one of said bows adapted to hold said side-curtain roller out of position for use, said shaft being so inclined that said side-curtain roller may swing from said holder towards said stud to allow the engagement of the shaft with the stud, substantially in a single plane.

882,915. TRAM-CAR. JACOB J. SCHIMPF, Texarkana, Tex. Filed Aug. 5, 1907. Serial No. 387,038.



1. A tram car having a pair of longitudinal beams, journals provided with roller bearings bolted to said beams, axles engaged by said journal bearings and wheels rigid with said axles, carrying arms extending under said beams and curved upwards at the sides of said car, and braces for said carrying arms placed above said beams and bolted to said carrying arms and clamping said carrying arms to said beams.

2. A tram car having a pair of longitudinal supporting beams, roller bearings secured to said beams, axles journaled in said bearings and having wheels rigid with the axles, transverse carrying arms extending under said beams and curved upwards at the outer ends, and transverse bars clamping said carrying arms to said beams and bracing said carrying arms against outward strain.

3. A tram car having a pair of longitudinal supporting beams, axle bearings attached to said beams, axles journaled in said bearings and provided with wheels rigid with said axles, braces for said beams holding the same at a fixed distance apart, transverse carrying arms extending under said beams and curved upwards at the outer ends thereof, and transverse bars clamping said carrying arms to said beams and bracing said carrying arms against outward strain.

882,916. LIQUID COMPOSITION TO BE USED IN THE MANUFACTURE OF FANCY STAINED PAPERS. REINHARD SCHMIEDEL, Dresden, Germany. Filed May 19, 1904. Serial No. 208,660.

A liquid composition to be used in the manufacture of stained paper consisting of a diluted and easily drying mixture of an agglutinant soluble in water or alcohol with soap, oil, glycerin, alcohol and water, substantially as herein described.

882,917. SAFETY-PIN. ASA W. STRAIGHT, Chicago, Ill. Filed Sept. 4, 1906. Serial No. 333,249.

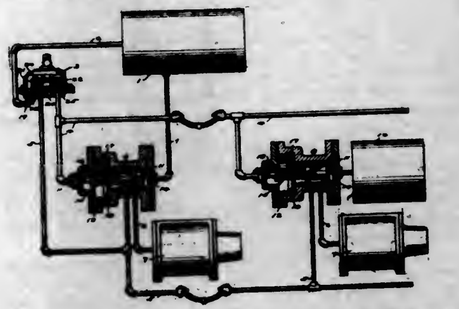


1. A pin comprising a suitable base plate a portion of which adjacent to one end is turned back upon said plate and is provided with a pivot bearing for a pin tong, a pin tong mounted in said bearing and means for securing said pin tong in its bearing, said means comprising a head on said pin tong secured between said base plate and the turned over portion thereof.

2. A pin comprising a suitable base plate an end of which is turned back upon itself and is provided with a pivot bearing for a pin tong, a pin tong mounted in said bearing and means for securing said pin tong in its bearing, said means comprising a head on said pin tong secured between said base plate and the turned over end thereof.

3. A pin comprising a suitable base plate a portion of which adjacent to one end is turned back upon said plate and is provided with a hole or opening which extends through the same, a bushing removably secured in said hole provided with a pivot bearing for a pin tong, a pin tong mounted in said bearing and means to secure said pin tong in its bearing comprising a head on the end thereof of less diameter than the bearing bushing, said head being secured between the inner end of said bushing and said base plate.

882,918. AIR-BRAKE. WALTER V. TURNER, Wilkinsburg, Pa., assignor to The Westinghouse Air Brake Company, Pittsburg, Pa., a Corporation of Pennsylvania. Filed June 10, 1905. Serial No. 264,625.



1. In an air brake apparatus, the combination with a main reservoir, train pipe, straight air pipe, and brake cylinder, of a brake valve for controlling the supply of air from the main reservoir to the straight air pipe and to the train pipe, and a valve device operated by a reduction in train pipe pressure for closing communication through the straight air pipe and for supplying air to the brake cylinder.

2. In an air brake, the combination with a main reservoir, train pipe, straight air pipe, and brake cylinder, of a brake valve having means for controlling the supply and release of air to and from the straight air pipe and the supply and release of air to and from the train pipe, and a valve device operated by a reduction in train pipe pressure for closing communication through the straight air pipe to the brake cylinder and for supplying air to the brake cylinder.

3. In an air brake, the combination with a main reservoir, train pipe, straight air pipe, and brake cylinder, of a brake valve having means for controlling the supply of air through the straight air pipe to the brake cylinder and for supplying air to the train pipe while the brake is applied with straight air, and a valve device subject to the train pipe pressure for also controlling communication through the straight air pipe.

4. In an air brake, the combination with a main reservoir, train pipe, straight air pipe, and brake cylinder, of a brake valve having ports for controlling the supply and release of air to and from the brake cylinder through the straight air pipe, and for supplying air to the train pipe when the straight air brake is applied, and a valve device operated by a reduction in train pipe pressure for closing communication through the straight air pipe and for supplying air to the brake cylinder.

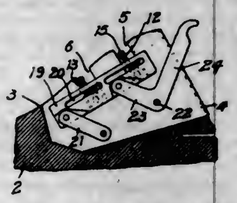
5. In an air brake, the combination with a main reservoir, train pipe, straight air pipe and brake cylinder, of a brake valve for controlling the supply of air from the main reservoir to the straight air pipe and brake cylinder, and an automatic valve device operated by a reduction in train pipe pressure for opening communication from the main reservoir to the brake cylinder.

[Claims 6 to 11 not printed in the Gazette.]

882,919. TEMPORARY SHOE-LACING. JOHN W. WASHBURN and FRANK P. RONEY, Minneapolis, and BÖRRE H. BÖRRESON, St. Paul, Minn. Filed May 13, 1907. Serial No. 373,480.

1. The combination, with a last, of arms permanently mounted thereon and adapted to engage the lacing edges

of a shoe upper, a lever device and mechanism operatively connecting said arms and said lever device.



2. The combination, with a last, of arms mounted thereon, and adapted to engage the lacing edges of a shoe upper, said arms being loosely mounted in their support to adapt them for entering differently spaced eyelet holes, and means for moving said arms to draw the said lacing edges together.

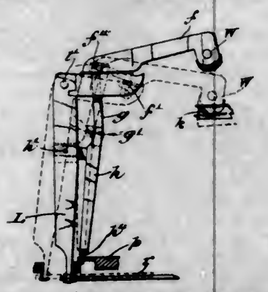
3. The combination, with a last, of arms mounted thereon, and adapted to engage the lacing edges of a shoe upper, means for moving said arms to draw the said edges together and said arms normally projecting beyond the surface of the last but being capable of retraction to adapt the last for use in a boot, substantially as described.

4. The combination, with a last, of lacing devices mounted thereon and adapted to temporarily engage the edges of the shoe upper, and means for operating said lacing devices to tighten the upper over the last, and said means being adjustable to vary the degree of tension of the lasting device on the upper, substantially as described.

5. The combination, with a last, of arms loosely mounted at one end therein, and having opposite free ends adapted to enter the eyelets of a shoe upper, and means for moving the free ends of said arms to draw the lacing edges of the upper together.

[Claims 6 to 14 not printed in the Gazette.]

882,920. KEY-STRIKING MECHANISM FOR MUSICAL INSTRUMENTS. FRANCIS L. YOUNG, New York, N. Y., assignor to The Aeolian Company, New York, N. Y., a Corporation of Connecticut. Filed Nov. 14, 1905. Serial No. 287,244.



1. In combination in key striking mechanism, a striking finger, a striking pneumatic by which said finger is actuated, and actuating connections extending between the two and including means for giving a high momentum to the finger before it strikes the key, for substantially the purposes set forth.

2. In key striking mechanism the combination of a striking pneumatic, a striking finger and actuating connections including a compound lever mechanism for actuating the finger by the power of the pneumatic.

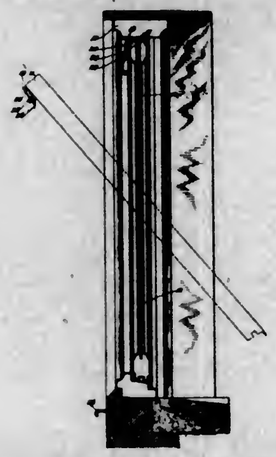
3. In key striking mechanism the combination of a striking pneumatic, a striking finger and actuating connections deriving their power from the pneumatic and including a compound lever mechanism having a fixed center, a movable arm actuated by the pneumatic and a second movable arm connected to the finger, for substantially the purposes set forth.

4. In key striking mechanism the combination of a striking pneumatic, a striking finger and actuating connections including a compound lever mechanism having a lever with a normally fixed center, and with a pivotal connection with the finger and an intermediate connection from said lever to another part of the said finger, for substantially the purposes set forth.

5. In key striking mechanism the combination of a striking pneumatic, a striking finger and actuating connections including a compound lever mechanism connected to actuate the finger at two different points, for substantially the purposes set forth.

[Claims 6 to 17 not printed in the Gazette.]

882,921. GRAVITY-LOCK. GOTTLIEB YUNKER, Newark, N. J., assignor to Newark Cornice & Skylight Works, Newark, N. J., a Corporation of New Jersey. Filed Dec. 27, 1907. Serial No. 408,289.



1. In a window of the swinging sash type: a gravity lock for said window comprising, a lock casing secured to the sash of said window; a latch bolt guided therein; means in connection with the frame of said window, adapted to receive said latch bolt to lock said window sash; and a lever provided with an adjustable weight and adapted to normally cause said latch bolt to project beyond its said casing.

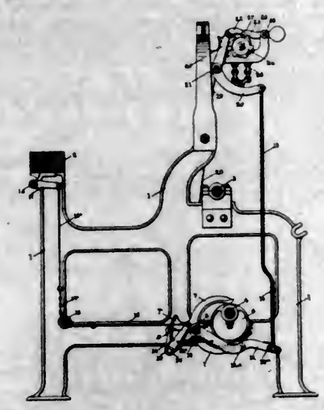
2. In windows of the swinging sash type; a gravity lock for said window comprising, a lock casing secured to the sash of said window; a latch bolt guided therein and provided with an upper and a lower lug, adapted to act against the walls of said casing to limit the extent of vertical movement of said latch bolt; a hook integral with said latch bolt and outside of said casing; a lever pivotally connected to said casing, its inner arm being adapted to engage said hook and its outer arm provided with an adjustable weight; and an eye at the lower end of said latch bolt.

882,922. LOOM. HENRY BARDSLEY, Providence, R. I., assignor to Crompton & Knowles Loom Works, a Corporation of Massachusetts. Filed Mar. 19, 1906. Serial No. 306,732.

1. In a loom, a driven cam, a lever operated by said cam, a second lever connected with a rod or connector of the pattern chain driving mechanism, and said rod or connector, a projection on said second mentioned lever to be engaged by the first mentioned lever, a pawl pivoted on said second mentioned lever and adapted to engage the first mentioned lever, and means for moving said pawl out of operative engagement with the first mentioned lever to leave the second mentioned lever at rest.

2. In a loom, a driven cam, a lever operated by said cam, a second lever connected with a rod or connector of

the pattern chain driving mechanism, and said rod or connector, a projection on said second mentioned lever to be engaged by the first mentioned lever, a pawl pivoted on said second mentioned lever and adapted to engage the first mentioned lever and the rock shaft of the filling fork mechanism and means operated from said rock shaft for moving said pawl out of operative engagement with the first mentioned lever to leave the second mentioned lever at rest.



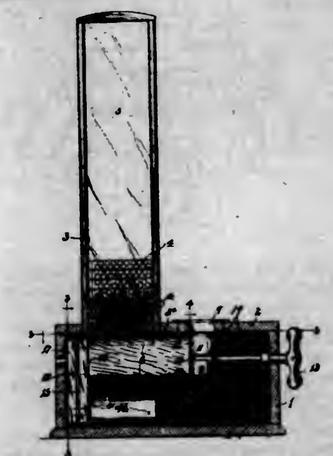
3. In a loom, a driven cam, a lever operated by said cam, a second lever connected with a rod or connector of the pattern chain driving mechanism, and said rod or connector, a projection on said second mentioned lever to be engaged by the first mentioned lever, a pawl pivoted on said second mentioned lever and adapted to engage the first mentioned lever and an arm connected with said pawl, and the rock shaft of the filling fork mechanism and a connection from said arm to said rock shaft to move said pawl out of operative engagement with the first mentioned lever and leave the second mentioned lever at rest.

4. In a loom stop motion for pattern chain driving mechanism, a driven cam, a cam lever operated by said cam, a second lever connected with a rod or connector of the pattern chain driving mechanism, and said rod or connector, a projection on said second mentioned lever to be engaged by the first mentioned lever, a pawl pivoted on said second mentioned lever, and adapted to engage the first mentioned lever, and an arm connected with said pawl and means connected with said arm to move said pawl out of operative engagement with the first mentioned lever, and leave the second mentioned lever at rest.

882,923. VENDING-MACHINE. EDGAR B. BICKER and CHARLES R. SCHILLING, St. Louis, Mo., assignors of one-half to said Bicker and one-half to Harry H. Nolte, St. Louis, Mo. Filed Apr. 3, 1907. Serial No. 366,135.

1. In a vending machine, a cylindrical ejecting device, an operating shaft upon which said device is loosely mounted, a disk rigidly connected to said shaft adjacent one end of the ejecting device and provided with a slot extending longitudinally of the shaft to receive a coin, a pin or stud projecting laterally from the ejecting device and adapted to be engaged by the coin mounted in said disk, and a pair of spring-actuated levers coöperating with portions on the operating shaft and on one end of the ejecting device for holding them in predetermined positions; substantially as described.

2. A vending machine comprising a receptacle for holding the articles to be vended, an ejecting device, an operating shaft having a coin-receiving member rigidly connected thereto, means on said ejecting device for causing it to be moved only when a coin is mounted in said member, and a stationary stop arranged in alinement with the coin-receiving member and adapted to be engaged by a coin that has become lodged therein for preventing said coin from actuating the ejecting device more than once; substantially as described.



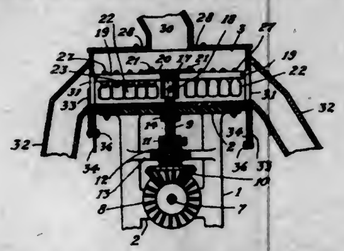
3. A vending machine comprising a rectangular-shaped casing provided with a hinged lid, a receptacle secured to said lid for holding the articles to be vended and being open at its lower end, a horizontal shaft journaled in the end walls of said casing, a cylinder loosely mounted on said shaft and provided with a plurality of recesses for receiving the articles from said receptacle, a disk rigidly connected to the operating shaft adjacent one end of said cylinder and provided with a plurality of slots disposed longitudinally of the shaft to receive coins, projections on the end of the cylinder that are adapted to be engaged by a coin in one of the slots of said disk and thus transmit the rotary movement of the shaft to the cylinder, a chute into which the articles are discharged from said cylinder, means for holding the cylinder and the operating shaft in position so that only one recess of the cylinder is in alinement with the lower end of the receptacle, and a rigid stop on the underneath side of the lid of the casing arranged in alinement with the coin-receiving disk for preventing the shaft from making more than one complete revolution when a coin has become wedged in the coin disk; substantially as described.

4. A vending machine consisting of a casing having a hinged cover, a receptacle carried by said cover and having its lower end open, said cover also being provided with a coin slot, a horizontal operating shaft journaled in the walls of the casing, an ejecting device loosely mounted on said shaft for receiving articles from said receptacle, a disk, a pair of spring-actuated levers coöperating with coin slot in the lid of the casing and provided with a plurality of cross slots for holding coins, pins on one end of the ejecting device projecting toward the coin-receiving disk, a pair of spring-actuated levers coöperating with flat-faced portions on the ejecting device and operating shaft, a stop on the underneath side of the lid of the casing arranged in alinement with the coin-receiving disk, and a magnet on the underneath side of said lid at one end of the coin slot to withdraw a slug or washer out of alinement with the pins on the ejecting device; substantially as described.

882,924. MILL-STOCK MIXER AND DISTRIBUTER. FREDERICK C. BOYNTON, Minneapolis, Minn. Filed Apr. 11, 1907. Serial No. 367,502.

1. A mill stock mixer and distributer, comprising a casing forming a circular chamber having a plurality of outlets at its sides, means for introducing stock to the center thereof, a revolving spider therein having radial arms, a series of independently adjustable flights carried by said arms adapted to work the stock from the center to the cir-

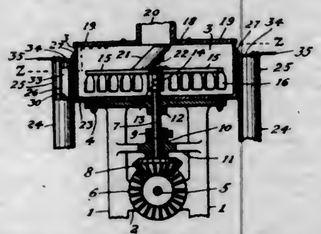
cumference, discharge spouts connected with said outlets, and controllable valves for regulating the passage of stock through the outlets, substantially as set forth.



2. A mill stock mixer and distributer, comprising a casing forming a circular chamber having a plurality of outlets at its sides, means for introducing stock to the center thereof, a revolving spider therein having radial arms, a series of flights carried by said arms adapted to work the stock from the center to the circumference, discharge spouts connected with said outlets, and controllable valves for regulating the passage of stock through the outlets, substahtially as set forth.

3. A mill stock mixer and distributer, comprising a casing forming a circular chamber, a rotating central spindle, radial arms revolved thereby, a series of flights on each of said arms, means for adjusting the inclination of the flights with respect to the arms, means for introducing material at or near the center and means for discharging it at or near the circumference of the chamber, said introducing and discharging means being connected to said casing, substantially as set forth.

882,925. MILL-STOCK MIXER AND DISTRIBUTER. FREDERICK C. BOYNTON, Minneapolis, Minn. Filed Aug. 8, 1907. Serial No. 387,592.



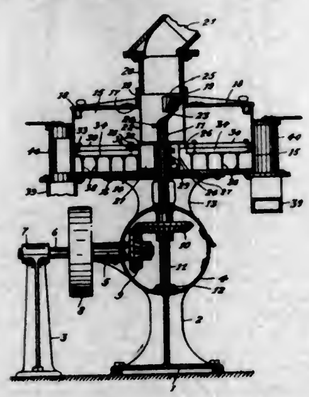
1. A mill-stock mixer and distributer, comprising a casing providing a circular chamber having a plurality of outlets at its sides, means for introducing stock to the center thereof, a revolving spider therein having radial arms provided with flights adapted to work the stock from the center to the circumference, discharge spouts, hollow rotary valves having openings in their sides for controlling the passage of stock from said outlets to said spouts, and means for adjustably rotating such valves, substantially as set forth.

2. A mill-stock mixer and distributer, comprising a casing providing a revolving feed-trough for introducing stock in a circular path around the center of the chamber, a revolving spider in the chamber having radial arms provided with flights adapted to work the stock from the center to the circumference, discharge spouts connected with said outlets, and controllable valves therefor for regulating the passage of stock through the outlets, substantially as set forth.

3. A mill-stock mixer and distributer, comprising a casing providing a circular chamber having a plurality of outlets at its sides, means for introducing stock to the center thereof, a revolving spider therein having radial arms provided with flights adapted to work the stock from the center to the circumference, discharge spouts, hollow rotary valves having openings in their sides for controlling the passage of stock from said outlets to said spouts, and tangential flanges and passage-ways for directing the stock to such openings, and means for adjustably rotating such valves, substantially as set forth.

4. A mill-stock mixer and distributer, comprising a casing providing a circular chamber having a plurality of outlets at its sides, means for introducing stock to the center thereof, a revolving spider therein having radial arms provided with flights adapted to work the stock from the center to the circumference, a feed-trough carried in inclined position by the spider for introducing stock in a circular path around the axis of the spider, and discharge spouts connected with said outlets, substantially as set forth.

882,926. MILL-STOCK MIXER AND DISTRIBUTER. FREDERICK C. BOYNTON, Minneapolis, Minn. Filed Nov. 25, 1907. Serial No. 403,595.



1. A mill stock mixer and distributer, comprising a casing forming a circular chamber having a plurality of outlets at its sides, means for introducing the stock about the center thereof, a revolving spider therein, flight-carriers adjustably connected to the spider arms, and flights connected to said carriers and arranged to work the material centrifugally, substantially as set forth.

2. A mill stock mixer and distributer, comprising a casing forming a circular chamber having a plurality of outlets at its sides, means for introducing the stock about the center thereof, a revolving spider therein, flight-carriers pivotally and adjustably connected to the spider arms, flights connected to said carriers and arranged to work the material centrifugally, discharge spouts connected with said outlets, and valves therefor for regulating the discharge of stock, substantially as set forth.

3. A mill stock mixer and distributer, comprising a casing forming a circular chamber having a plurality of outlets at its sides, means for introducing the stock about the center thereof, a revolving spider therein, flight-carriers adjustably connected to the spider arms, flights connected to said carriers and arranged to work the material centrifugally, and controllable valves for regulating the discharge of stock, substantially as set forth.

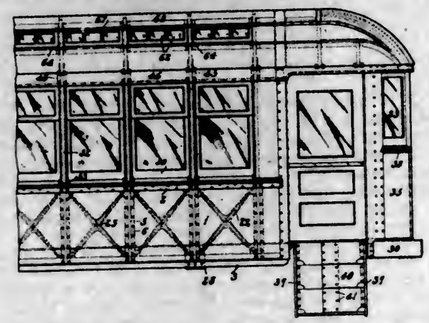
4. A mill stock mixer and distributer, comprising a casing forming a circular chamber having a plurality of outlets at its sides, means for introducing the stock about the center thereof, revolving sweepers for working the stock away from the center, a revolving spider therein, flight-carriers adjustably connected to the spider arms, and flights connected to said carriers and arranged to work the material centrifugally, substantially as set forth.

5. A mill stock mixer and distributer, comprising a casing forming a circular chamber having a plurality of outlets at its sides, means for introducing the stock about the center thereof, a revolving spider therein having radial

arms, adjustable flight-carriers pivoted to the outer ends of said arms, and flights arranged on planes at right angles to their carriers, substantially as set forth.

[Claims 6 to 10 not printed in the Gazette.]

882,927. RAILWAY PASSENGER-CAR. THOMAS R. BROWN, New York, N. Y., assignor to American Car & Foundry Company, St. Louis, Mo., a Corporation of New Jersey. Filed July 6, 1905. Serial No. 268,461.



1. In a railway passenger car, plate girder sides comprising diaphragms having upper and lower flanges integral therewith, separate flanged members connected to the upper portions of said diaphragms and having flanges disposed in directions opposite to the upper flanges of the diaphragms, a flasher connected to the respective upper flanges, and a flanged bottom chord member connected to the lower flanges of the diaphragms; substantially as described.

2. In a railway passenger car, plate girder sides having top reinforcing members comprising continuous rolled members secured to the upper edges of said plate girder sides and extending from car end to car end, inwardly disposed flanges carried by the upper portions of the plate girder sides, flashers connected to the continuous rolled members and to the inwardly disposed flanges of the plate girder sides, flanges carried by the bottoms of the plate girder sides, and reinforcing flanged members connected to the bottom flanges of the plate girder sides; substantially as described.

3. In a passenger car, the combination with plate girder sides having top and bottom chords, of vertical reinforcing members comprising pressed steel post members which form piers between the windows, and pressed steel diaphragms between said posts; substantially as described.

4. In a railway passenger car, the combination with plate girder sides, vertical post members carried by said sides and framing in the window openings, and diaphragm members interposed between the post members and arranged to brace the car sides; substantially as described.

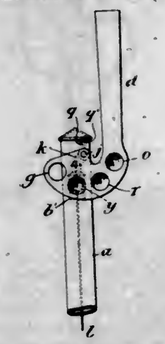
5. In a railway passenger car, the combination with plate girder sides, vertical post members carried by said sides, and framing in the windows, and diagonal bracing members interposed between said post members and formed of pressed steel, substantially as described.

[Claims 6 to 40 not printed in the Gazette.]

882,928. RAILWAY-SEMAPHORE. CLARENCE W. COLEMAN, Westfield, N. J., assignor to The Hall Signal Company, a Corporation of Maine. Filed Oct. 31, 1905. Serial No. 285,271.

1. The combination, with a semaphore-support, of a semaphore including a semaphore-blade and spectacle portion, the semaphore being pivotally mounted on a center at one side of the blade and supported so that the blade is located at one side of the support, and a signal-lamp located at the other side of the support, the spectacle portion of the semaphore having a spectacle-opening disposed so as to coöperate with the lamp, and the semaphore being arranged so that the blade moves downward from the safety to the danger position.

2. The combination, with a semaphore-support, of a semaphore including a semaphore-blade and spectacle portion, the semaphore being pivotally mounted on a center at one side of the blade and arranged relatively to its pivotal center so that the blade is at one side of the pivoted center and the spectacle portion is largely disposed at the other side of the pivotal center when the semaphore is in the safety position and so that as the blade moves downward from the safety to the danger position, the center of gravity of the spectacle portion rises on the opposite side of the pivotal center and occupies, when the blade is in horizontal position, a position at a substantial distance in the rear of the center, so that the spectacle portion has a counterbalancing effect when the blade is in safety position.



3. The combination, with a semaphore-support, of a semaphore including an integral semaphore-blade and spectacle portion, the semaphore being pivotally mounted on a center at one side of the blade and arranged relatively to its pivotal center so that the blade is at one side of the pivotal center and the spectacle portion is largely disposed at the other side of the pivotal center when the semaphore is in the safety position and so that the blade moves downward from the safety to the danger position.

4. The combination, with a semaphore-support, of a semaphore including a semaphore-blade and spectacle portion, the semaphore being pivotally mounted on a center at one side of the blade and supported so that the blade is located at one side of the support, a signal-lamp located at the other side of the support, the spectacle portion of the semaphore having a spectacle-opening disposed so as to coöperate with the lamp, and the semaphore-blade and spectacle portion being so arranged relatively to the pivotal center that the blade is at one side of the pivotal center and the spectacle portion is largely disposed at the other side of the pivotal center when the semaphore is in the safety position and so that the blade moves downward from the safety to the danger position.

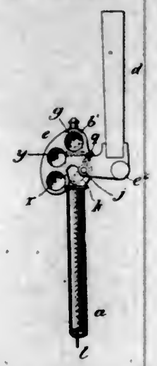
5. The combination, with a semaphore-support, of a semaphore including an integral semaphore-blade and spectacle portion, the semaphore being pivotally mounted on a center at one side of the blade and supported so that the blade is located at one side of the support, a signal-lamp located at the other side of the support, the spectacle portion of the semaphore having a spectacle-opening disposed so as to coöperate with the lamp, and the semaphore-blade and spectacle portion being so arranged relatively to the pivotal center that the blade is at one side of the pivotal center and the spectacle portion is largely disposed at the other side of the pivotal center when the semaphore is in the safety position and so that the blade moves downward from the safety to the danger position.

[Claims 6 to 11 not printed in the Gazette.]

882,929. RAILWAY-SEMAPHORE. CLARENCE W. COLEMAN, Westfield, N. J., assignor to The Hall Signal Company, a Corporation of Maine. Filed Oct. 31, 1905, Serial No. 285,272. Renewed Oct. 12, 1907. Serial No. 397,169.

1. The combination, with a semaphore-support, of a pivotally mounted semaphore including a spectacle portion

and a semaphore-blade, the semaphore-blade being movable with the spectacle portion and movable downward from the safety to the danger position, the semaphore having a spectacle-opening on one side of its pivot and being weighted on the other side of its pivot so as to go to danger by gravity independently of the blade.



2. The combination, with a semaphore-support, of a pivotally mounted semaphore including a spectacle portion and a semaphore-blade, the spectacle portion and semaphore-blade being in separate pieces connected so as to move together and the blade being movable downward from the safety to the danger position, the semaphore having a spectacle-opening on one side of its pivot and being weighted on the other side of its pivot so as to go to danger by gravity independently of the blade.

3. The combination, with a semaphore-support, of a pivotally mounted semaphore including a spectacle portion and a semaphore-blade, the spectacle portion and semaphore-blade being in separate pieces connected so as to move together about a common pivotal center, the semaphore-blade being located at one side of the pivotal center and arranged so as to move downward from the safety to the danger position and the semaphore having a spectacle-opening located at the side of the pivotal center opposite that at which the blade is located and being weighted on the blade side of the pivotal center so as to go to danger by gravity independently of the blade.

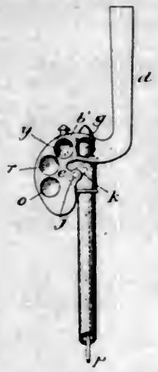
4. The combination with a semaphore-support, of a semaphore including a pivotally mounted spectacle portion and a semaphore-blade, the spectacle portion and semaphore-blade being in separate pieces connected so as to move together and the blade being movable downward from the safety to the danger position, the spectacle portion having a spectacle-opening on one side of its pivot and being separately weighted on the other side of its pivot so as to go to danger by gravity independently of the blade.

5. The combination, with a semaphore-support, of a semaphore including a pivotally mounted spectacle portion and semaphore-blade, the spectacle portion and semaphore-blade being in separate pieces connected so as to move together about a common pivotal center, the semaphore-blade being located at one side of the pivotal center and arranged so as to move downward from the safety to the danger position, and the spectacle portion having a spectacle-opening located at the side of the pivotal center opposite that at which the blade is located and being separately weighted on the blade side of the pivotal center so as to go to danger by gravity independently of the blade.

[Claims 6 to 12 not printed in the Gazette.]

882,930. RAILWAY-SEMAPHORE. CLARENCE W. COLEMAN, Westfield, N. J., assignor to The Hall Signal Company, a Corporation of Maine. Filed Oct. 31, 1905. Serial No. 285,273.

1. The combination, with a semaphore-support, of a semaphore including a semaphore-blade and spectacle portion, the semaphore being pivotally mounted on a center at one side of the blade, and a signal-lamp located on top of the support, the spectacle portion of the semaphore having spectacle-openings disposed so as to coöperate with the lamp in both the upper and the lower positions of the blade and the semaphore being arranged so that the blade is at one side of the pivotal center when the semaphore is in the safety position and moves downward at that side of the pivotal center from the safety to the danger position.



2. The combination, with a semaphore-support, of a semaphore including an integral semaphore-blade and spectacle portion, the semaphore being pivotally mounted on a center at one side of the blade, and a signal-lamp located on top of the support, the spectacle portion of the semaphore having a spectacle-opening disposed so as to coöperate with the lamp and the semaphore being arranged so that the blade is at one side of the pivotal center when the semaphore is in the safety position and moves downward at that side of the pivotal center from the safety to the danger position.

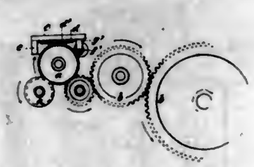
3. The combination, with a semaphore-support, of a semaphore including a semaphore-blade and spectacle portion, the semaphore being pivotally mounted on a center at one side of the blade and arranged relatively to its pivotal center so that the blade is at one side of the pivotal center and a substantial part of the spectacle portion is disposed at the other side of the pivotal center in all positions of the semaphore and so that the blade moves downward from the safety to the danger position.

4. The combination, with a semaphore-support, of a semaphore including an integral semaphore-blade and spectacle portion, the semaphore being pivotally mounted on a center at one side of the blade and arranged relatively to its pivotal center so that the blade is at one side of the pivotal center and a substantial part of the spectacle portion is disposed at the other side of the pivotal center in all positions of the semaphore and so that the blade moves downward from the safety to the danger position.

5. The combination, with a semaphore-support, of a semaphore including a semaphore-blade and spectacle portion, the semaphore being pivotally mounted on a center at one side of the blade, the spectacle portion being provided with spectacle-openings adapted to coöperate with a signal-lamp on top of the support and also with a signal-lamp at the side of the support, and with additional spectacle-openings each adapted to coöperate with a signal-lamp in one only of such positions, the semaphore being arranged so that the blade is at one side of the pivotal center when the semaphore is in the safety position and moves downward at the side of the pivotal center from the safety to the danger position.

882,931. DRAWING-ROLL CLEANER FOR SPINNING-FRAMES. ROSE E. DEELEY, Bellingham, administratrix of James S. Deeley, deceased, and WILLIAM W. OLLENDORFF, West Medway, Mass., assignors, by mesne assignments, to William W. Ollendorff, West Medway, Mass. Filed Apr. 19, 1907. Serial No. 369,129.

1. A drawing roll cleaner for spinning frames comprising a head plate, a side piece in the nature of a guide stop pendent from one side thereof, a propelling mechanism pendent from the opposite side of said plate, whereby said side piece and said mechanism will retain and guide the cleaner on the drawing roll, and abrasive material to engage said roll.



2. A drawing roll cleaner for spinning frames comprising a head plate, abrasive material on the under side thereof adapted to engage the upper periphery of a drawing roll, a propeller cone mounted in pendent bearings adjacent to one edge of the said head, and a pendent guide-stop on the side of said head opposite said cone, whereby the said device is held in position on the drawing roll.

3. A drawing roll cleaner for spinning frames comprising a head plate, a metallic card on the under side thereof, the teeth of which are adapted to engage the upper periphery of a drawing roll, a propeller cone mounted in pendent bearings adjacent to one edge of the said head, and a pendent guide-stop on the side of said head opposite said cone, whereby the said device is held in position on the drawing roll.

4. A drawing roll cleaner for spinning frames comprising a head plate, abrasive material on the under side thereof adapted to engage the upper periphery of a drawing roll, a pendent yoke, mounted adjacent to one edge of the said head, a propeller cone mounted in said yoke, means whereby the opposite ends of said yoke may be adjusted toward and from said card to adjust the axis of said cone, and a pendent guide-stop on the side of said head opposite said cone, whereby the said device is held in position on the drawing roll.

5. A drawing roll cleaner for spinning frames comprising a head plate having a plurality of laterally elongated slots therein, abrasive material on the under side thereof adapted to engage the upper periphery of a drawing roll, a pendent yoke, a propeller cone mounted in said yoke, adjustable fastening means adapted to engage said yoke, pass through said openings respectively and engage said head, whereby the opposite ends of said yoke may be adjusted toward and from said card and set in the adjusted position, to adjust the axis of said cone, and a pendent guide-stop on the side of said head opposite said cone whereby the said device is held in position on the drawing roll.

[Claim 6 not printed in the Gazette.]

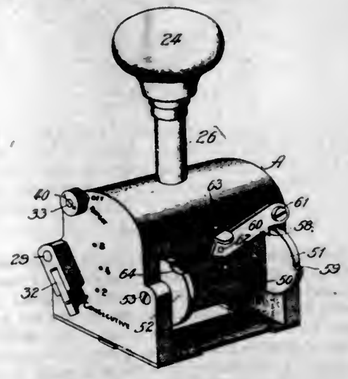
882,932. NUMBERING-MACHINE. WILLIAM C. DOWNING, Chicago, Ill. Filed Apr. 1, 1907. Serial No. 365,870.

1. In a numbering-machine, the actuating pawls, a movable rod, a plate suspended therefrom and having its lower end positioned to temporarily engage and hold said pawls stationary, and means for moving said plate into and out of engagement with reference to said pawls.

2. In a numbering-machine, the actuating-pawls, a rod having both an endwise and a turning movement, a plate carried by said rod and having the lower end thereof stop in position to be in and away from engagement with said pawls for locking the same away from their operative connection and means for controlling the position of said plate.

3. In a numbering-machine, the actuating-pawls, a movable rod having its respective ends supported in the inclosing casing, a plate suspended from said rod and having its lower free end bifurcated, one part extending outward and is then bent upward against the outside of said casing and the other part extending downward and held normally in a position to be temporarily moved into engagement with said pawls when disengaging the same from their working position, and means for holding said plate in its locking position.

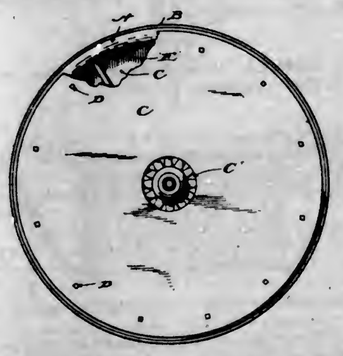
4. In a numbering-machine, the actuating pawls, one of which has a shoulder formed thereon, a movable rod, a plate suspended therefrom and having the lower end bifurcated one part being turned upward in engagement with the casing, the other prong-part being positioned to be moved into engagement with said shoulder when disengaging said pawls from their operative connection, a spring mounted on said rod between the wall of the casing and said plate and imparting an endwise movement to said rod in bringing said prong into the path of said shoulder and means for locking said rod against an endwise movement and holding said prong free from engagement with said shoulder.



5. In a numbering machine, an inking pad-holder provided with notches in the respective flanged ends thereof which have overhanging hook edges, and the end-bars of the reciprocating frame-part provided with integral lugs loosely engaging said notches, said hook-edges having an overlapping bearing on said lugs.

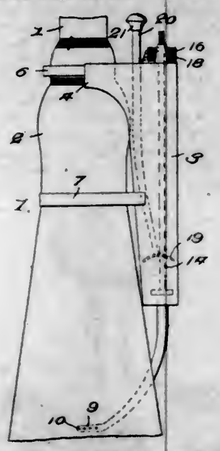
[Claims 6 to 9 not printed in the Gazette.]

882,933. MUD-GUARD FOR VEHICLE-WHEELS. WILLIAM B. DRAKE, Chandlerville, Ill. Filed May 18, 1907. Serial No. 374,505.



A wheel, plate sections secured to and for covering each side thereof to inclose the felly and the spokes but leaving an annular space surrounding the hub between said sections and said hub to partially expose the hub ends of the spokes and the spaces therebetween for the purpose described, bolts extending through the plates for clamping the latter to the wheel, and members secured to the plates for reinforcing them and through which the bolts extend and with certain of which the said bolts engage as set forth.

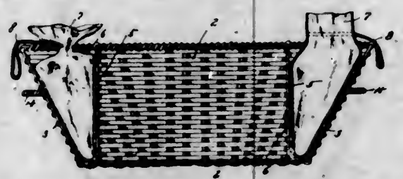
882,934. BROOM-MOISTENER. LEROY G. EGGER, Buffalo, Iowa. Filed Aug. 28, 1907. Serial No. 390,518.



1. A moistener of the class described, comprising the combination with a tank, a lateral extension at the upper end of said tank, a plurality of curved spouts at the lower end of said tank, and means to secure the tank to the broom and direct the lower ends of the spouts into the broom, of a valve in said tank, seats at the upper ends of said spouts, a supporting stem for said valve the upper end of which is provided with threads, a nut on the threaded end of said stem, a bracket adapted to hold said nut and cause the stem to move through the nut when the nut is turned, and means to force the contents of the tank through the spouts.

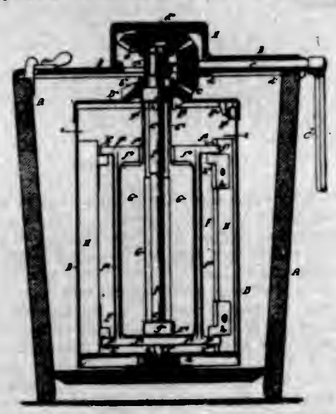
2. A moistener of the class described, comprising a tank, a lateral extension at the upper end of said tank having a cavity at its longitudinal center, a plurality of spouts depending through said tank, seats at upper ends of said spouts, a valve adapted to engage said seats and stop the flow of the fluid through the spouts, a supporting stem for said valve, means at the upper end of said stem to adjust said valve, a curved plate slidably mounted on said stem, means to lower and raise said plate whereby the fluid will be directed through the spouts, and means to secure the tank to a broom.

882,935. BASKET. MARY A. ENGEL, Carrick, Pa. Filed Jan. 5, 1907. Serial No. 350,877.



In combination a clothes basket having flaring ends, a vertically disposed partition arranged therein adjacent to each end thereof and forming thereby in connection with the ends of the basket a pair of pockets which gradually increase in width upwardly and further providing a rectangular compartment of a height of the basket, a flexible receptacle mounted in each of said pockets and formed with a mouth, a draw string connected to each of the receptacles and adapted to close the mouth thereof, a fastening member carried by each of said receptacles, and a fastening member carried by each of said partitions, said fastening members carried by the partitions adapted to interengage with the fastening members carried by the receptacles, thereby securing the receptacles within the pockets.

882,936. ICE-CREAM FREEZER. THOMAS J. FEGLEY, Philadelphia, Pa., assignor to North Brothers Manufacturing Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Apr. 10, 1906. Serial No. 310,958.



1. The combination in an ice cream freezer, of a can, a main dasher consisting of a rectangular frame having a central spindle and made with the top member offset around said spindle, and a central dasher, said central dasher being removable from the can through the space left by said offset member of the main dasher, substantially as described.

2. The combination in an ice cream freezer, of a can and its lid, a main dasher having a bearing in the bottom of the can, a central dasher consisting of two rings and two blades connecting the same, said rings being arranged to serve as positioning means for said central dasher and the parts being arranged to permit the withdrawal of the central dasher independently of the main dasher, substantially as described.

3. The combination in an ice cream freezer, of a can having a lid, a main dasher including a flat frame having an offset top member, a central dasher arranged to rotate within the main dasher, said central dasher being removable through the space provided by the offset portion of the main dasher, substantially as described.

4. The combination in an ice cream freezer, of a tub, a cross bar, a driving shaft carried by the cross bar and having a bevel wheel, a stud on the upper portion of the cross bar, a bevel wheel mounted on the stud engaging with the driving bevel wheel said bevel wheel having a projecting hub with a squared opening therein, a can mounted in the tub, a cap for the can, a bevel wheel on the cap meshing with the driving bevel wheel, said lid having an opening, a main dasher having a pivot mounted in a socket in the bottom of the can and having a central stem extending through the opening in the lid and shaped to fit the squared opening in the hub of the upper bevel wheel so that said dasher is driven by said bevel wheel in one direction, a central dasher having a portion extending into the opening in the can lid and connected thereto so that it will be turned with the can in a direction opposite to that of the main dasher, substantially as described.

5. The combination in an ice cream freezer, of a tub, a cross bar, gearing carried by the cross bar, including driving and driven bevel gears, a can pivoted in the tub, a lid for the can, a bevel wheel carried by the lid and engaging the driving bevel wheel, a main dasher having its pivot mounted in the bottom of the can and consisting of a central stem extending through the lid and into the hub of the driven gear, arms at the base and uprights extending from the arms, scrapers carried by the uprights, and a connecting member connecting the upper ends of the uprights and curved around the stem, with a central dasher having its lower bearing on the main dasher and having its upper bearing in the can lid and arranged to turn with the lid, said dasher consisting of side wings and a curved connecting portion passing up between the stem and the connecting portion of the main dasher, the parts being so arranged that the central dasher can be removed without disturbing the main dasher, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

882,937. SCREW-EYE DRIVER. THOMAS J. FEGLEY, Philadelphia, Pa., assignor to North Bros. M'f'g Co., Philadelphia, Pa., a Corporation of Pennsylvania. Filed Jan. 2, 1907. Serial No. 350,360.



1. The combination in a screw driver, of a shank, a head on said shank recessed so as to be capable of engaging limited portions of opposite sides of a screw eye, a sleeve on the head and coöperating therewith to hold the screw eye, a sliding clamp having spring jaws capable of engaging the screw eye, and a spring for retracting the clamp, substantially as described.

2. The combination in a screw driver, of a shank, a head on the shank, a slot in the head, a sleeve mounted on the head and having V-grooves alining with the slot in the head, a clamp consisting of a ring having two spring jaws attached thereto extending on each side of the head, said jaws being arranged to clamp the shank of the screw eye, substantially as described.

3. The combination in a screw driver, of a shank, a head secured to the shank, said head being slotted, a sleeve surrounding the head and secured thereto, and having V-shaped notches alining with the slot in the head, a spring clamp consisting of a ring having two spring jaws extending between the head and the sleeve, and the ends of the jaws abutting and notched to enter the shank of the screw eye, and a spring for retracting the jaws, substantially as described.

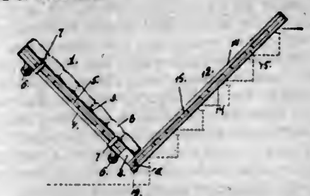
4. The combination in a screw driver, of a shank, a head slotted to receive the eye portion of the screw eye and constructed to engage limited portions of opposite sides of said eye, a sliding spring clamp having two jaws arranged to clamp and center the shank of the screw eye, and means for retracting the clamp, substantially as described.

5. The combination in a screw driver, of a shank, a head on the shank having V-shaped seats for the screw eye, and a pair of spring clamping jaws, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

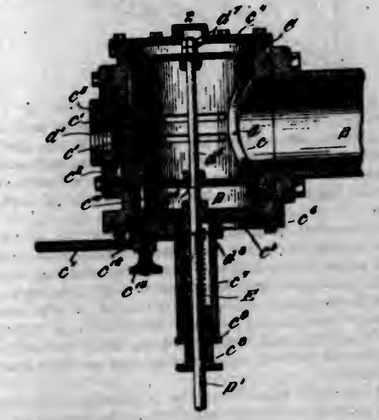
882,938. MOVING DEVICE. GEORGE FLEISCHMANN, McKees Rocks, Pa. Filed Mar. 27, 1907. Serial No. 364,812.

1. A moving device consisting of a platform formed of a head block and spaced boards, said head block being provided with longitudinal openings and projecting pierced lugs, rollers attached to said platform, a cushion carried by said platform, a skid having angularly extending dowel pins at one end thereof adapted to enter the openings in said head block and recesses in said end communicating with a transverse opening and adapted to receive said lugs carried by the head block, a pin fitting said transverse opening and engaging said pierced lugs to detachably connect the skid to said platform at right angles thereto, said skid being formed of spaced boards and rollers journaled in one end of said skid.



2. A moving device consisting of a movable platform, a cushion attached thereto, and a skid detachably connected to said platform by dowel pins and by pierced lugs engaged in suitable recesses by a binding pin and rollers journaled in one end of said skid.

882,939. MIXING-VALVE FOR EXPLOSIVE-ENGINES. HARRY C. FRICKE and GEORGE E. TURNER, Pittsburg, Pa., assignors to Turner-Fricke Manufacturing Company, Pittsburg, Pa. Filed July 30, 1907. Serial No. 386,218.



1. A mixing valve for explosive engines, having a continuously open and unobstructed fuel inlet, an outlet for the mixture in line with the fuel inlet, and separate air inlets on opposite sides of the fuel inlet, substantially as described.

2. A mixing valve for explosive engines, having a continuously open and unobstructed fuel inlet, an outlet for the mixture in line with the fuel inlet, and separate air inlets on opposite sides of the fuel inlet and located between the fuel inlet and said outlet, substantially as described.

3. A mixing valve for explosive engines, having a continuously open and unobstructed fuel inlet, an outlet for the mixture in line with the fuel inlet, and separate air inlets on opposite sides of the fuel inlet and so arranged that a line connecting the centers of said air inlets is substantially perpendicular to a line connecting the centers of said outlet and fuel inlet, substantially as described.

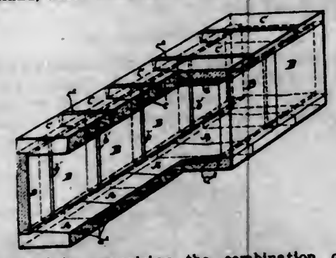
4. In a mixing valve for explosive engines, the combination with the valve casing provided with a fuel inlet port, an outlet for the mixture opposite and in line with said inlet port, and air inlet ports arranged opposite to each other and on opposite sides of the fuel inlet port, a rotary

and vertically movable valve in said casing provided with ports adapted to be brought into registration with the ports and apertures of the casing, a hand operated means for adjusting said valve in one of said directions and a governor for adjusting said valve in the other of said directions, substantially as described.

5. In a mixing valve for explosive engines, the combination with a cylindrical valve casing provided with a fuel inlet port, air inlet ports, and an outlet for the mixture and a removable head for closing one end of said casing, of a cylindrical valve fitting said casing and provided with apertures adapted to be brought into registration with the apertures in said casing, a valve rod extending through said valve, a removable securing device adjacent to said removable head, for securing the valve to the valve rod, whereby said head may be removed, and the valve removed from said rod and the valve casing; a governor connected to said rod, and a hand operated adjusting device detachably engaging said valve, substantially as described.

[Claims 6 to 10 not printed in the Gazette.]

882,940. SEWER CONSTRUCTION. ARCHIE J. GALVIN, Cleveland, Ohio. Filed Mar. 12, 1906. Serial No. 305,466.



1. A conduit comprising the combination of blocks respectively adapted to form the bottom, sides and top of such conduit, the contiguous edges of said top and side blocks being beveled to form mortar spaces, and said top and bottom blocks having recessed sides adapted to receive the top and bottom edges respectively of said side blocks.

2. A conduit comprising the combination of bottom blocks having a central longitudinal depression and recessed sides, lateral blocks fitted to the recessed sides of said bottom blocks and having their adjoining edges beveled to form mortar spaces on the inside of the conduit, and top blocks having recessed sides fitted to the upper ends of said lateral blocks and having their adjoining edges beveled to form transverse grooves on the outside of the conduit.

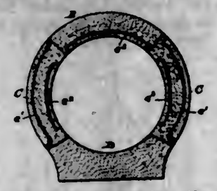
3. A conduit comprising the combination of bottom blocks having a central longitudinal depression and recessed sides, lateral blocks fitted to the recessed sides of said bottom blocks and having their adjoining edges beveled to form mortar spaces on the inside of the conduit, and top blocks having recessed sides fitted to the upper ends of said lateral blocks and having their adjoining edges beveled to form mortar spaces on the outside of the conduit, all of said blocks being formed of concrete and having tension members embedded therein in the process of making.

4. A conduit comprising the combination of bottom blocks having a central longitudinal depression and recessed sides, lateral blocks fitted to the recessed sides of said bottom blocks and having their adjoining edges beveled to form mortar spaces on the inside of the conduit, and top blocks having recessed sides fitted to the upper ends of said lateral blocks and having their adjoining edges beveled to form mortar spaces on the outside of the conduit, all of said blocks being formed of concrete and having reinforcing members embedded therein in their respective regions of tension.

5. As an article of manufacture, a substantially rectangular block for the side wall of a conduit or like structure, such block having its vertical edges beveled and being formed of concrete with reinforcing material vertically embedded therein near the surface designed to be turned inwardly.

[Claims 6 and 7 not printed in the Gazette.]

882,941. SEWER CONSTRUCTION. ARCHIE J. GALVIN, Cleveland, Ohio. Filed Aug. 3, 1906. Serial No. 329,012.



1. An arch structure comprising the combination of blocks formed and disposed to bring the division lines or joints between adjacent blocks approximately at the points in the arch ring where the equilibrium polygon crosses the middle line of such ring.

2. An arch structure comprising the combination of blocks formed and disposed to bring the division lines or joints between adjacent blocks approximately at the points in the arch ring where the equilibrium polygon crosses the middle line of such ring, said blocks being formed of concrete with tension members embedded therein.

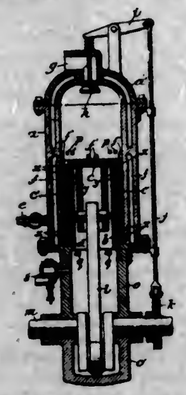
3. An arch structure, comprising the combination of blocks formed and disposed to bring the division lines or joints between adjacent blocks approximately at the points in the arch where the equilibrium polygon crosses the middle line of such ring, said blocks being formed of concrete with reinforcing members embedded therein in their several regions of tension.

4. An arch structure composed of an invert portion, lateral portions, and a crown portion, the division lines or joints between such portions being located approximately at the points where the equilibrium polygon crosses the middle line of the arch ring.

5. A concrete arch structure composed of an invert portion, lateral portions, and a crown portion, said portions being reinforced in their respective regions of tension, and the division lines or joints between said portions being located approximately at the points where the equilibrium polygon crosses the middle line of the arch ring.

[Claim 6 not printed in the Gazette.]

882,942. EXPLOSIVE-ENGINE. GEORGE W. GIBBS, Jr., Atlanta, Ga. Filed Nov. 15, 1907. Serial No. 402,287.



1. In an explosive engine, the combination of a power cylinder having an exhaust port at its rear end, a valve controlling the same, a fixed coaxial sleeve in said cylinder forming a compression chamber therewith and of the same diameter thereas, a hollow trunk piston operating in said power cylinder and compression chamber, a crank casing in which compression is effected by the piston, conduits connecting the crank casing and compression chamber, respectively, with the power cylinder near the forward end of the piston travel, an inlet to the crank casing, and an inlet to the compression chamber.

2. In an explosive engine, the combination of a power cylinder having an exhaust port at its rear end, a valve controlling the same, a fixed coaxial sleeve connected to the forward end of said power cylinder and projecting within the same to form with the walls thereof an annular compression chamber of the same diameter as said power cylinder, a hollow trunk piston, the cylindrical walls of which engage the inner surface of the power cylinder and the outer surface of said sleeve, a crank casing in which compression is effected by the piston, conduits connecting the crank casing and compression chamber, respectively, with the power cylinder near the forward end of the piston travel, an inlet to the crank casing, and an inlet to the compression chamber.

3. In an explosive engine, the combination of a power cylinder having an exhaust port at its rear end, a fixed coaxial sleeve extending rearwardly in said cylinder and forming therewith an annular compression chamber of the same diameter thereas, a hollow trunk piston operating in the power cylinder, the cylindrical walls of which engage the inner surface of the power cylinder and the outer surface of said sleeve, a crank casing in which compression is effected by the piston, passages formed in the engine casing connecting the crank casing with the power cylinder and the compression chamber with the power cylinder, respectively, near the forward end of the piston travel, an inlet to the crank casing, and an inlet to the compression chamber.

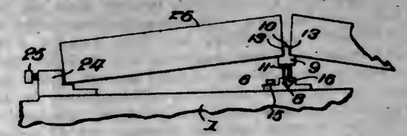
4. In an explosive engine, the combination of a power cylinder having an exhaust port at its rear end, a valve controlling the same, a fixed coaxial sleeve in said cylinder forming a compression chamber therewith, a hollow trunk piston operating in said power cylinder and compression chamber, a crank casing in which air is compressed by the piston, conduits connecting the crank casing and compression chamber, respectively, with the power cylinder near the forward end of the piston travel, means for admitting air to the crank casing, and means for admitting fuel to the compression chamber.

5. In an explosive engine, the combination of a power cylinder having an exhaust port at its rear end, a valve controlling the same, a fixed coaxial sleeve connected to the forward end of said power cylinder and projecting within the same to form with the walls thereof an annular compression chamber, a hollow trunk piston, the cylindrical walls of which engage the inner surface of the power cylinder and the outer surface of said sleeve, a crank casing in which air is compressed by the piston, a conduit connecting the crank casing and power cylinder and opening into the latter near the forward end of the piston travel, a conduit connecting the compression chamber with the power cylinder and opening into the latter at a point nearer the forward end of the piston stroke than the connection with the crank casing, means for admitting air to the crank casing, and means for admitting fuel to the compression chamber.

882,943. PLANER-CHUCK. LAFAYETTE H. GINN, Atlanta, Ga., assignor of one-half to Clayton & Bently Co., a Corporation of Georgia. Filed Aug. 29, 1906. Serial No. 332,451.

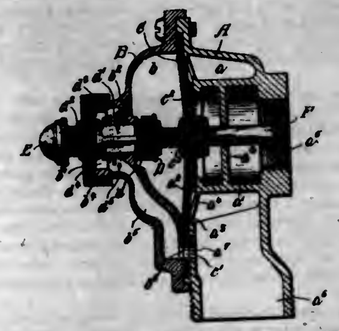
1. A chuck of the class described, comprising a base, a head on said base, a plate rising from said head and provided with prongs on its vertical face, and means whereby said head may be adjusted vertically and means to hold it in its adjusted position, said head having substantially horizontal shoulders in proximity to said prongs to receive and support the end of the article being acted upon.

2. A chuck of the class described comprising a base, a block on said base, a head having lateral prongs and shoulders to support the end of the article to be planed, a stem on said head adapted to engage an opening in said block and means carried by the block adapted to engage said stem and hold the head in its adjusted position.



3. In a device of the class described, a chuck comprising a base, a block on said base, a head, means to secure said head in vertically adjusted position on said block, an upstanding plate on said head having supports for the ends of the article to be planed, and prongs on said plate above said supports.

882,944. WATER-CLOSET VALVE. PHILIP HAAS, Dayton, Ohio. Filed June 22, 1906. Serial No. 322,892.



1. In a water closet valve, the combination with the casing provided with an inlet passage extending into the same and provided with a valve seat, a discharge chamber surrounding said inlet passage, a discharge passage communicating with said chamber, and a back pressure chamber opposite said inlet passage and discharge chamber, of a diaphragm valve interposed between the back pressure chamber and the inlet passage and discharge chamber, and having a central portion for engaging said valve seat, a reinforcing metal disk molded in the seat engaging portion of said diaphragm, and provided with a metal sleeve extending through both faces of the valve and forming a central aperture therethrough, said aperture forming the only communication between the inlet passage and the back pressure chamber, a controlling stem mounted independently of said diaphragm valve, and extending through said sleeve, with an easy fit, a relief valve for said back pressure chamber, and a manually operated connection from said relief valve, independent of said stem extending to the exterior of said casing, substantially as described.

2. In a water closet valve, the combination with the casing provided with an inlet passage extending into the same, and having a valve seat at its inner end, an annular web surrounding said valve seat, connected to the walls of said inlet passage, and extending to the walls of the casing and provided with water apertures, an annular discharge chamber surrounding said inlet passage, and communicating with the apertures in said web, a discharge passage communicating with said discharge chamber and a back pressure chamber located opposite said inlet passage and discharge chamber, of a diaphragm valve located between said back pressure chamber and the inlet passage and discharge chamber, having a central portion for engaging said valve seat, and annular portions adapted to engage said web to prevent injury to said valve, said diaphragm valve having a single aperture therethrough forming the only communication between said inlet passage and the back pressure chamber, a stem mounted independently of said diaphragm valve, and engaging said aperture, a relief valve for said back pressure chamber, and a manually op-

erated device extending to the outside of said casing for operating said relief valve, substantially as described.

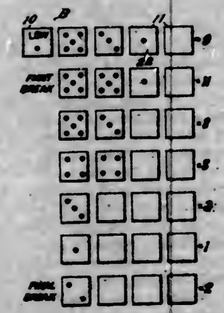
3. In a water closet valve, the combination with the casing provided with a water inlet passage extending into said casing and having a valve seat at its inner end, a discharge chamber surrounding said inlet passage, a discharge passage communicating with said discharge chamber, a back pressure chamber, located opposite to said inlet passage and discharge chamber, a relief aperture for said back pressure chamber, a by-pass extending from said relief aperture to said discharge passage, and an annular web extending from the walls of said casing to the inlet passage adjacent to the valve seat thereof, and provided with water apertures, of a diaphragm valve extending between said back pressure chamber and the inlet passage and discharge chamber, having a central perforated portion for engaging the valve seat of the inlet passage, a reinforcing disk molded within the central portion of the diaphragm valve, and having an integral sleeve at its center extending through both faces of the diaphragm, and forming a central aperture therethrough, a spring operated normally closed relief valve for said relief aperture, a push button for operating said relief valve, and a controlling stem secured to said relief valve, and fitting within said sleeve of the diaphragm valve, with an easy fit, substantially as described.

4. In a water closet valve, the combination with the casing provided with a water inlet passage, a discharge passage, a back pressure chamber, a main valve interposed between the inlet passage and the back pressure chamber, means for permitting the passage of a small quantity of water at all times from the inlet passage to the back pressure chamber, a relief valve for the back pressure chamber, a manually operated device extending outside of the casing for operating the relief valve, and an adjustable stop for limiting the opening movement of the main valve to regulate the volume and duration of flushing, substantially as described.

5. In a water closet valve, the combination with the casing provided with a water inlet passage, a discharge passage, a back pressure chamber, a main diaphragm valve interposed between the inlet passage and the back pressure chamber, a controlling stem engaging the aperture in the diaphragm valve, with an easy fit, a relief valve for the back pressure chamber, a manually operated device connected to said relief valve and extending outside of the casing, and an adjustable stop for said main valve, surrounding said stem, for limiting adjustably the opening movement of said main valve to regulate the volume and duration of flow, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

882,945. GAME APPARATUS. Otto E. Huast, Staten Island, N. Y. Filed Dec. 4, 1907. Serial No. 405,079.



1. A game apparatus comprising a plurality of objects each having a plurality of sides differently marked and provided with a blank side, and a ruling combination object also having a plurality of sides and differently marked from the other objects and serving to govern the progress of the game.

2. A game apparatus comprising a plurality of dice each having sides progressively marked up to five and having a single blank side, and a combination die also having six sides and differently marked from the other dice and serving to govern the progress of the game.

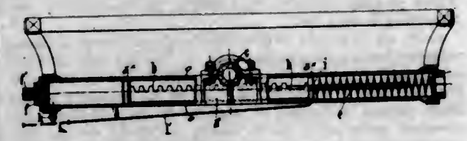
3. A game apparatus comprising a plurality of objects each having six sides five of which are differently marked, and a combination die also having six sides and differently marked from the other objects and three sides differently marked from the other three sides and serving to govern the progress of the game.

4. A game apparatus comprising four dice each having six sides, certain of the sides being progressively marked up to five, and a combination die also having six sides, three of which sides are marked with the word "High" and characters from one to three, and the other sides with the word "Low" also progressively marked with characters from one to three.

5. A game apparatus comprising four objects each having a plurality of sides differently marked, and a combination object having a plurality of sides, some of which sides are marked with the word "High" and other characters, and the other sides with the word "Low" also with other characters.

[Claims 6 to 10 not printed in the Gazette.]

882,946. STARTING DEVICE FOR MOTORS. Maxence J. S. A. Isnard, Grenoble, France, assignor to Paul Drevet and Louis Augustin Nove-Josserand, Lyon, France, and Noel Dumond, Tassin la Demi-Lune, near Lyon, France. Filed Mar. 20, 1906. Serial No. 306,967.



1. The combination, with the cylinder, of a shaft mounted transversely thereof, a pinion on said shaft, a rack meshing with said pinion and movable longitudinally in said cylinder, a clutch member slidable on said shaft, and an operative connection between said rack and said clutch member.

2. In a starting device, the combination of a cylinder, a piston-carrying element movable therein, a shaft to which said element transmits its movement, a clutch member slidable on said shaft, and a connection between said element and said member whereby the latter is slid along said shaft in opposite directions according to the direction of movement of said element.

3. In a starting device for motors, the combination of a cylinder having a longitudinal slot, a rack in said cylinder, pistons carried by said rack at the ends thereof, a shaft carrying a pinion meshing with said rack, a clutch member slidable on said shaft, and an operative connection between said rack and said clutch member, said connection embodying a device extending through the slot in said cylinder.

4. In a starting device for motors, the combination of a cylinder, an element movable longitudinally therein, a clutch comprising a shiftable member driven by said element, means for moving said clutch into and out of operative position, and means carried by said element for operating said means and opening the cylinder to the escape of gas.

5. In a starting device for motors, the combination, with the cylinder and the element movable longitudinally therein, of a shiftable clutch member driven by said element, means connecting said element with said clutch member and comprising a device carried by said element for shifting said clutch member into and out of operative position, and means carried by said last-named means for opening the cylinder to the escape of gas.

[Claims 6 to 8 not printed in the Gazette.]

882,947. PAINT AND VARNISH REMOVER AND PROCESS OF PREPARING THE SAME. Leighton Kramer, Philadelphia, Pa. Filed Sept. 19, 1907. Serial No. 393,590.

1. A paint and varnish remover consisting of a fatty acid and a fatty oil in combination with a substance capable of softening or cutting paint and varnish.

2. A paint and varnish remover consisting of a fatty acid and an oil, dissolved in a solution containing alcohol, benzol and acetone.

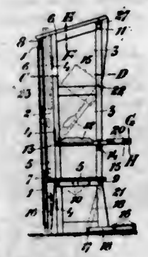
3. A paint and varnish remover consisting of stearic acid and lard oil in a solution containing a substance capable of cutting paint or varnish.

4. A paint and varnish remover which consists of stearic acid, lard oil, an alcohol body, benzol and acetone.

5. A paint and varnish remover which consists in three pints of alcohol, one pint of benzol, one pint of acetone, one half pound of stearic acid and three quarters of a pint of lard oil.

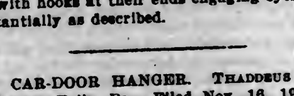
[Claim 6 not printed in the Gazette.]

882,948. FOLDABLE BEACH-CHAIR. Theodor Krech, Meiningen, Germany. Filed June 10, 1907. Serial No. 378,234.



A beach chair comprising a rear wall, side walls hinged to said rear wall, a roof hinged to the rear wall, an arm rest flexibly connected with the rear wall, the arm rest having a table flexibly connected therewith, and a foot rest comprising levers and a foot portion removably supported by said levers, the levers being jointed to said sides.

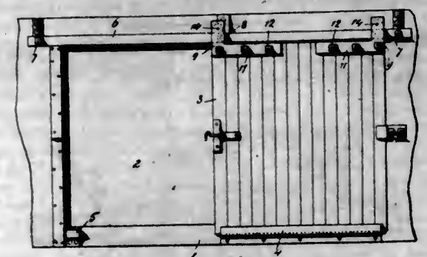
882,949. ADVERTISING-SIGN OR THE LIKE. Simon Krotoschin, Leipzig, Germany. Filed June 21, 1907. Serial No. 380,063.



In advertising signs a support for the single letters adapted to be alined to the sign reading, which consists of suitable lengths of flexible members made of transparent material with hooks at their ends engaging eyes in the letters substantially as described.

882,950. CAR-DOOR HANGER. Thaddeus S. Merriman, Beaver Falls, Pa. Filed Nov. 16, 1907. Serial No. 402,384.

A door hanger comprising a pair of suspension devices, each consisting of an inner and an outer angle-shaped member formed of a vertical and a horizontal arm, said members arranged in parallelism with respect to each other and the vertical arms thereof connected together at their top, the vertical arm of the outer member having a semi-cylindrical recess in close proximity to its lower end, said recess constituting a clearance, and said horizontal arm of each of said members provided with a plurality of openings, and a roller journaled between the vertical arms of said members in close proximity to the top.



882,951. HOSIERY. John W. Mettler, East Millstone, N. J., assignor to Interwoven Stocking Company, New Brunswick, N. J., a Corporation of New Jersey. Filed Sept. 22, 1905. Serial No. 279,679.



1. A stocking made of a dyed thread of one character and having an undyed thread knitted into the bottom of the foot, said additional thread being plaited so as to appear on and form the inner surface of the bottom of the foot, substantially as described.

2. A stocking having the leg and top of the foot of the stocking made from a dyed thread, and the bottom of the foot made of the same thread and an additionel undyed thread, said additional thread being plaited so as to appear upon and form the inner surface of the bottom of the foot of the stocking, substantially as described.

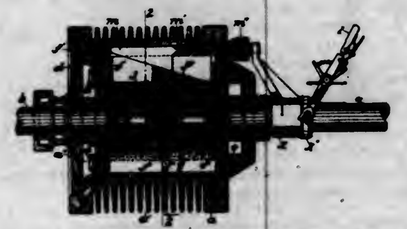
3. A stocking having the leg and top of the foot composed of a dyed thread and the heel bottom of the foot and toe formed from thread of the same character and an additional undyed thread, the said additional thread being plaited so as to appear upon and form the inner surface of the heel bottom of the foot, and toe of the stocking, the outer surface of the stocking being of one uniform character of thread throughout, substantially as described.

4. A stocking having the leg and top of the foot composed of a common or ordinarily dyed yarn and the heel bottom of the foot and toe of the stocking composed of thread or yarn of the same character and an additional undyed thread or yarn, said additional yarn being plaited so as to appear upon and form the inner surface of the heel bottom of the foot and toe of the stocking, substantially as described.

5. A stocking composed of colored thread, and a white thread, the said white thread being plaited upon the inside

of the web at the heel bottom of the foot and toe of the stocking to form the inner surface of the stocking at those points, substantially as described.

882,952. VARIABLE-SPEED-TRANSMITTING MECHANISM. AUGUST J. MEYER, Cleveland, Ohio. Filed Jan. 26, 1907. Serial No. 354,169.



1. In apparatus of the class described, the combination with driven and driving members, of an associated fluid-chamber and contained fluid-medium, diametrically movable vanes or blades, an arching deflector-part movably positioned within the chamber and partially surrounding said vanes, whereby the action of the fluid-medium on the blades is controlled, and means for governing the position of said deflector-part, substantially as set forth.

2. In a variable-speed transmitting-appliance, the combination with a fluid-chamber associated with one of the members to be operatively connected, of a plurality of rotatable blades or vanes disposed within said fluid chamber, and attached to the other member to be operatively connected, and a restricting controller-part movably positioned within said chamber, partially inclosing and adapted to govern the action of the blades with respect to the fluid contained within said chamber, substantially as set forth.

3. In a variable-speed transmitting-appliance, the combination with a fluid-chamber associated with one of the members to be operatively connected, of a plurality of rotatable blades or vanes disposed within said fluid-chamber, and attached to the other member to be operatively connected, and a deflector movably mounted within said chamber in position partially to inclose the rotatable blades, whereby the fluid within the chamber may be placed under different working pressures, and the transmitted speed of the motor altered, substantially as set forth.

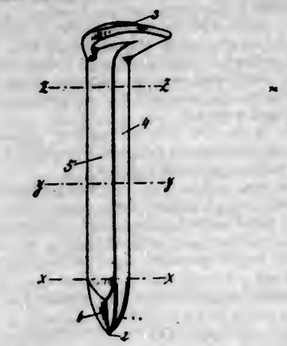
4. In a variable-speed transmitting-mechanism, the combination with a casing forming a fluid-chamber, and secured to one of the parts to be operatively connected, of a movable deflector within said chamber, and means for governing its position therein, and a plurality of blades or vanes rotatably positioned beneath the deflector and connected with the opposing part to be operatively connected; said blades or vanes being relatively movable under the control of the deflector, whereby the contained fluid may be placed under varying working pressures, and the transmitted speed may be altered as required, substantially as set forth.

5. In a variable-speed transmitting-mechanism, the combination with a casing forming a fluid-chamber, and secured to one of the parts to be operatively connected, of a movable deflector within said chamber, and means for governing its position therein, conical heads or disks positioned to engage co-acting seats within the fluid chamber, and a plurality of blades or vanes rotatably positioned beneath the deflector and connected with the opposing part to be operatively connected; said blades or vanes being relatively movable under the control of the deflector, whereby the contained fluid may be placed under varying working pressures, and the transmitted speed may be altered as required, substantially as set forth.

[Claims 6 to 12 not printed in the Gazette.]

882,953. SPIKE FOR RAILWAYS. ELWIN R. MINER, New York, N. Y. Filed Apr. 17, 1907. Serial No. 368,749.

1. A four cornered spike, adapted to be driven into wood, having the rear and front face channeled from the spike end upward, said channeling having its greatest depth near the spike end and gradually flattening out into a flat surface near the spike head.



2. A four cornered spike, adapted to be driven into wood, having the rear and front face channeled across the whole width of the face from the spike end upward, said channeling having its greatest depth near the spike end and gradually flattening out into a flat surface near the spike head.

882,954. FODDER AND CORN-SHOCK BINDER. FRANCIS M. MOSS, Burkes Garden, Va. Filed Nov. 4, 1907. Serial No. 400,647.



1. In a device of the type described, a supporting frame, a cross-bar slidably mounted thereon, means for securing said cross bar in desired position on the frame, a tightening-bar slidably mounted on said frame, a compressing-rope secured at one end to said tightening-bar and operating over said cross-bar, means carried by said cross-bar for clamping said compressing-rope thereto, and means for effecting a hitch of said rope with said tightening bar.

2. In a corn shock binder, a supporting frame provided at its lower end with flared supporting-legs, a vertically adjustable cross-bar carried by said frame, a tightening-bar slidably-mounted on said frame, a compressing rope attached at one end to said tightening-bar and operating over said cross-bar, means for detachably connecting the other end of said rope with the tightening-bar, and means for clamping the rope to the tightening bar after compression of the shock.

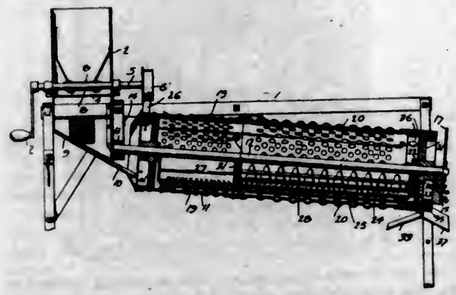
3. In a corn shock binder, a supporting frame, a vertically-adjustable rope-carrying member on said frame, a compression rope, a tightening-member slidable on the frame having one end of said rope fixedly-secured thereto, means for effecting a hitch between the other end of said rope and the tightening-bar, and means for clamping the rope after compression of the shock to the rope-carrying member.

4. In a corn shock binder, a supporting frame, a cross-bar adjustable thereon, means for securing the cross bar in adjusted position, a pulley carried by said bar, a tightening bar slidably-mounted on the frame, a compression-rope connected at its one end to said tightening bar and operating over said pulley, a catch for detachably-securing the other end of the rope to said tightening bar, means carried by the cross-bar for connecting the compression rope therewith to hold the tightening-bar suspended, and means for clamping the rope onto the pulley after compression of the shock is effected.

5. In a shock binder, a supporting frame, a cross-bar slidable thereon, means for securing said cross bar in adjusted position, a pulley carried by the cross-bar, a compression rope operating over said cross-bar pulley, a stirrup carried by the cross-bar, a rope-clamp carried by said stirrup for binding the rope to the pulley, a tightening bar slidable on said frame, and means carried by the tightening-bar for detachably connecting one end of the compression rope thereto.

[Claims 6 to 8 not printed in the Gazette.]

882,955. GRAIN-SEPARATOR. JOHN A. NEUFELD, Mountain Lake, Minn. Filed July 22, 1907. Serial No. 384,887.



1. The combination, in a grain separator, of a supporting frame; an inclined shaft journaled at opposite ends in said frame; an open-ended cylinder revolubly mounted upon said shaft and provided adjacent its rear end with a series of discharge openings, the inner surface of the cylinder having cells formed therein, the cells in one section of the cylinder having a different diameter from those in the other section; a trough disposed within the cylinder and carried by said shaft, the bottom wall of said trough being separated from the inner surface of the cylinder; a second trough secured to said cylinder towards the front end thereof, and superposed upon the first-mentioned trough, said troughs having a common front wall provided with a pair of discharge openings, the bottom wall of the second trough being arranged in spaced relation to that of the first-mentioned trough; a screw conveyer disposed within each trough and adapted to discharge through the corresponding opening the material deposited therein from the corresponding set of cells; means for revolving the cylinder and for simultaneously operating the conveyers; a hopper for feeding grain into the cylinder; a chute disposed beneath the discharge openings in the cylinder; and a chute located adjacent the lower end of the cylinder.

2. The combination, in a grain separator, of a supporting frame; an inclined shaft journaled at opposite ends in said frame; a cylinder revolubly mounted upon said shaft and having an annular series of discharge openings formed therein adjacent its lower end, the inner surface of the cylinder being provided with cells, those of one section of the cylinder having a different diameter from those of the other section; a gear revolubly mounted upon the lower end of said shaft and rigidly connected with the cylinder; a trough secured to said shaft and disposed within the cylinder said trough having its bottom wall arranged in spaced relation to the cylinder; a second trough secured to said cylinder directly above the first-named trough, at the forward end thereof, said troughs having a common front wall provided with a pair of discharge openings, one of said discharge openings communicating with said series of openings; a chute disposed adjacent the other of said openings; a screw conveyer disposed within each trough for ejecting through the corresponding discharge opening the material deposited therein from the corresponding set of cells; a pair of gears secured to the opposite ends of one of said conveyer shafts, one of said gears meshing with the first-mentioned gear; a gear secured to the other shaft in mesh with the other of said gears; and means for feeding grain into the cylinder.

3. The combination, in a grain separator, of a supporting frame; a hopper mounted on the frame, at the rear end thereof; a rotatable shaft journaled at opposite ends in the walls of the hopper; a pulley mounted upon one end of said shaft; a hopper disposed beneath the first-mentioned hopper; means carried by said shaft for discharging grain from the first hopper into the second hopper; an inclined shaft journaled at opposite ends in the frame; a cylinder revolubly mounted upon said inclined shaft, and provided adjacent its lower end with a series of discharge openings; a discharge spout carried by the second hopper and extending into the upper end of the cylinder; a belt connection between the pulley and the cylinder for effecting the revolution of the latter when the first-mentioned shaft is rotated; a trough disposed within the cylinder and secured to said inclined shaft, the bottom wall of said trough being arranged in spaced relation to the inner surface of the cylinder; a second trough secured to said inclined shaft and located directly over the first-mentioned trough at the front end thereof, said troughs having a common front wall provided with a pair of discharge openings; means for depositing material into each trough during the revolution of the cylinder; rotatable means disposed within each trough for discharging the contents thereof through the corresponding discharge opening; and means for operating said discharging means.

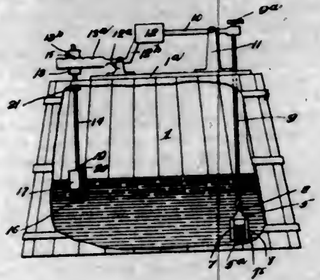
4. The combination, in a grain separator, of a supporting frame; a hopper mounted thereon at one end; an inclined shaft journaled at opposite ends in the frame; a wheel revolubly mounted upon each end of said shaft; a cylinder secured to the periphery of said wheels; means for discharging the contents of said hopper into the cylinder; means for revolving said cylinder; a trough disposed within the cylinder and secured to said shaft, the bottom wall of the trough being arranged in spaced relation to the inner surface of the cylinder; means for depositing material in said trough during the revolution of the cylinder; a gear carried by the hub of one of said wheels; a screw conveyer disposed within the trough; and a gear carried by the conveyer shaft in mesh with said first-mentioned gear.

5. The combination, in a grain separator, of a supporting frame; a hopper mounted on the frame, at the rear end thereof; a rotatable shaft journaled at opposite ends in the walls of said hopper; a pulley mounted upon one end of said shaft; a hopper disposed beneath the first-mentioned hopper; means carried by the shaft for discharging grain from the first hopper into the second hopper; an inclined shaft journaled at opposite ends in the frame; a wheel revolubly mounted upon each end of the inclined shaft; a cylinder secured to the periphery of said wheels; a discharge spout carried by the second hopper and extending into the upper end of the cylinder; a belt connection between the pulley and the cylinder for effecting the revolution of the latter when the first-mentioned shaft is rotated; a trough disposed within the cylinder and secured to the inclined shaft, the bottom wall of said trough being arranged in spaced relation to the inner surface of the cylinder; means for depositing material into said trough during the revolution of the cylinder; a gear carried by the hub of one of said wheels; a screw conveyer disposed within the trough; and a gear carried by the conveyer shaft in mesh with said first-mentioned gear.

882,956. AUTOMATIC CUT-OFF. WILLIAM P. NORRIS, Sistersville, W. Va. Filed Aug. 12, 1907. Serial No. 388,207.

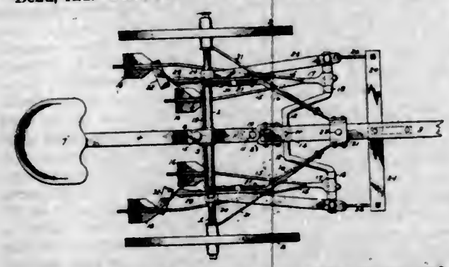
1. The combination with a tank having an outlet pipe extending through the wall of the tank, and a casing con-

nected to the inner end of the outlet pipe and having an inclined port communicating with the outlet pipe, a gate valve slidably-mounted in said casing and having a port normally registering with the port in the casing, a rod connected to the upper end of the gate valve and extending through the top of the tank, a bracket mounted on the top of said tank, a lever pivotally mounted in said bracket and engaging said rod, a weight on said lever, a lever-arm pivotally-mounted on the top of the tank and engaging said weight, a float-rod suspended from said lever-arm and extending into the tank, and a float slidably-mounted on said float-rod.



2. In combination with a tank having an outlet pipe extending into the same, a casing connected to said pipe and having a port communicating with said pipe, and a gate slidable in said casing provided with a port normally registering with the port in the casing, a rod connected to said gate and extending through the tank top, a weighted lever pivotally-supported on the top of the tank and connected to said rod, a lever-arm pivotally-supported on the tank top and engaging said weighted lever, the said lever-arm having a bifurcated outer end, a sleeve mounted in the bifurcated end of said lever-arm, a float-rod adjustably-mounted in said sleeve and extending into said tank, and a hollow float slidable on said float-rod within the tank.

882,957. CULTIVATOR. WILLIAM L. PAUL, South Bend, Ind., assignor to Oliver Chilled Plow Works, South Bend, Ind. Filed Jan. 15, 1907. Serial No. 352,442.



1. In a cultivator the combination with a frame and a pole having a pivotal mounting thereon, and a seat bar pivotally connected between its ends to the frame and a pivotal connection between the forward end of the seat bar and the rear end of the pole.

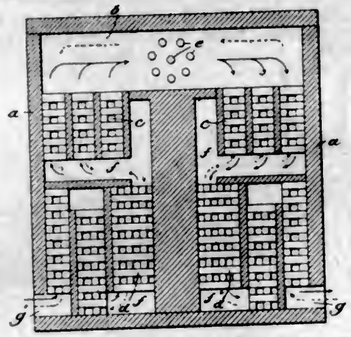
2. In a cultivator, the combination with an arch axle, of a frame thereon, a pole pivotally connected to the frame, a front arch, connections between said front arch and frame, furrow openers connected with the front arch, and a seat bar pivotally connected with the frame and having pivotal connection with the pivoted pole to move the frame angularly to the pole.

3. In a cultivator, the combination with an axle, of a frame thereon, a pole pivotally connected to the frame, a front arch, hounds pivotally connecting the front arch and frame, furrow opening gangs connected to the front arch and carrying foot rests or stirrups, a seat bar pivotally secured to the frame between its ends and pivotally connected at its forward end to the end of the pole, to swing the frame angularly to the pole.

4. In a cultivator, the combination with an axle, of a frame thereon, a pole pivotally connected with the frame, a front arch, hounds pivotally connecting the front arch and frame, furrow opening gangs connected with the front arch, a seat bar pivotally attached to the frame between its ends and pivotally connected at its forward end with the end of the pole.

5. An agricultural implement comprising a wheeled frame, a pole pivotally connected forwardly of its rear end with said frame, a seat bar pivotally connected between its ends with the frame and pivotally connected with the pole, a front arch connected with the frame, a connection between said front arch and the pivoted pole, and furrow openers connected with said front arch.

882,958. PROCESS FOR MANUFACTURING NITRIC ACID BY MEANS OF SUPERHEATING, &c. HARRY PAULING, Brandau, Austria-Hungary, assignor to Westdeutsche Thomasphosphat-Werke G. M. B. H., Berlin, Germany. Filed Aug. 12, 1902. Serial No. 119,393.



1. The process of oxidizing nitrogen, which consists in heating a gas-mixture containing nitrogen and oxygen to the oxidation-point of nitrogen, cooling said mixture and storing the heat, and transferring the stored heat to a fresh mixture of nitrogen and oxygen.

2. The process of manufacturing nitric acid, which consists in heating a gas-mixture containing nitrogen and oxygen to the oxidation-point of nitrogen, cooling said mixture and storing the heat, transferring the stored heat to a fresh mixture of nitrogen and oxygen, and adding steam to convert the gaseous product into nitric acid.

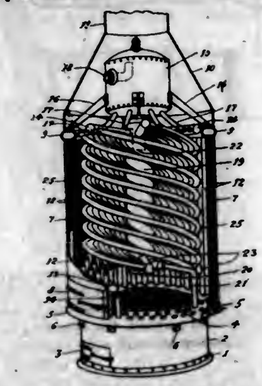
3. The process of oxidising nitrogen, which consists in heating the surfaces of a plurality of refractory bodies to a high temperature, and heating a gas-mixture containing nitrogen and oxygen to the oxidation-point of nitrogen by bringing said mixture in contact with said heated surfaces, alternately.

4. The process of oxidising nitrogen, which consists in heating a chamber to a high temperature, discontinuing the supply of heat, and introducing into said chamber a gas-mixture containing nitrogen and oxygen and thereby heating the mixture to the oxidation-point of nitrogen.

82,959. MARINE BOILER. HERBERT E. PENNEY, Minneapolis, Minn., assignor to Nott Fire Engine Company, Minneapolis, Minn., a Corporation. Filed Sept. 28, 1907. Serial No. 394,953.

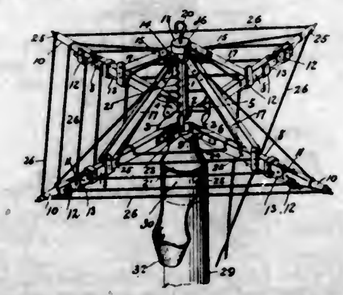
1. In a marine boiler, the combination with a water-ring and a steam-ring and a series of closely arranged return pipes connecting them and inclosing the combustion chamber, of a steam-dome in communication with the steam-ring, a cylindrical drum in communication with the base of the steam-dome and with the water-ring, and tube-sections comprising upper and lower radial headers connected to said drum, and series of coils extending spirally around the drum and connecting the lower with the upper headers, substantially as set forth.

2. In a marine boiler, the combination with a water-ring and a steam-ring and a series of closely arranged return pipes connecting them and inclosing the combustion chamber, of a steam-dome in communication with the steam-ring, a cylindrical drum in communication with the base of the steam-dome and with the water-ring, and tube-sections comprising upper and lower radial headers connected to said drum, and series of coils extending spirally and trending in substantially equidistant courses around the drum and connecting the lower with the upper headers, substantially as set forth.



3. In a marine boiler, the combination with a shell, a water-ring, and a steam-ring and a series of closely arranged staggering return pipes connecting them and inclosing the combustion chamber, of a steam-dome, pipes extending from the bottom of the dome to the steam-ring, a cylindrical drum connected centrally to the base of the dome, an intake pipe connecting the lower portion of the drum and the water-ring, and tube-sections comprising series of lower and upper radially-arranged headers connected to the drum and having their outer ends closed, and series of coils extending on substantially equidistant spiral planes around the drum and connecting the lower with the upper headers, substantially as set forth.

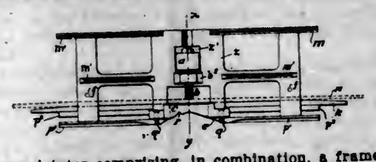
882,960. CLOTHES-DRIER. MADS P. PETERSON, Eastlake, Mich. Filed Dec. 2, 1905. Serial No. 289,970.



1. In a clothes drier a combination with an upright having a block slidably mounted thereon, a member hingedly connected with said block, outwardly extending arms hingedly connected with the block and with the hinged member, sleeves loosely engaging the upright, and braces hingedly connected with the sleeves and with the outwardly extending arms.

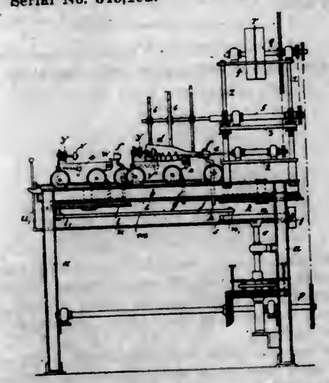
2. In a device of the class described an upright, a block slidably mounted upon said upright, a member connected with said block, lugs formed integral with said member, rods connecting said lugs, outwardly extending arms hingedly supported on said rods, sleeves engaging the upright, braces connected hingedly with the sleeves and with the outwardly extending arms, a notched bar connected with one of the sleeves and adapted to engage an arm supporting rod of the slidable block, and a sleeve slidably engaging the notched bar and having a hook member.

882,961. SAW-JOINTER. CECIL R. PIERCE, Rainier, Wash. Filed Sept. 6, 1904. Serial No. 223,449.



A saw jointer comprising, in combination, a frame provided with outwardly projecting flanges formed on opposite sides thereof, and with a centrally disposed vertical slot; a gage plate carried by one of said flanges and disposed in line with said slot; a member slidable against one face of the frame and provided upon one side with a lateral shoulder projecting through said slots; a lateral shoulder formed on the frame between the gage plate and the first-mentioned shoulder and alining with the same; a bolt engaged with said shoulder for moving said slide, said bolt having loose connection with one of said shoulders, and threaded connection with the other shoulder; and a lateral shoulder formed on the other side of said slide, whereby a file may be clamped between the last-mentioned shoulder and the adjacent flange on one side of the frame, or between the bolt end and the gage plate on the other side of the frame.

882,962. BOTTLE-CLEANING MACHINE. ANDERS A. PINDSTOFTE, Frederiksberg, Denmark. Filed Nov. 18, 1906. Serial No. 343,192.



In a bottle cleaning machine having a frame provided with horisontally arranged quickly rotating brush-spindles for the internal cleaning of the bottles, the combination with conveyer carriages carrying the bottles to and from said brush spindles and having rotatable rollers for supporting the bottles in such inclined position that their axis lies above and forms an angle with the axis of the brush spindles, of one or more rotating cylinders of an elastic material adjustably mounted in the frame of the machine above said brush spindles and being of such a size that they come into contact with and rotate the bottles, but only at the moments where the bottles are fully inserted upon the brush spindles.

882,963. SAFETY-RAZOR. EDGAR M. QUINT, Concord, N. H. Filed Oct. 8, 1907. Serial No. 396,489.

1. A safety-razor comprising a guard-plate, a table below the guard plate, a blade supported on the guard-plate, a blade cap on the blade provided at its ends with clamping

means to extend below the guardplate and inward, taking over the ends of the table.



2. A safety-razor comprising a double-edge guard-plate having notches in its ends, a table below the guard-plate, a double-edge blade supported on the guard-plate, a blade-cap on the razor provided at its ends with clamping hooks, the shanks of which extend through the said notches in the guard-plate, the ends taking over the ends of the table.

3. In a safety-razor, the combination with the bed and a double-edge razor supported thereon, a table supporting the guard-plate, a cap-plate on the razor connected at its ends with the table, and a vertical handle having a pivoted and screw-thread clamping connection with the table.

4. A safety-razor comprising a bed, a table below the bed a blade on the bed, a cap-plate on the blade engaged over the ends of the guard-plate with the table, the bed and table being also connected pivotally, and a vertical handle having a pivotal and screw-thread clamping connection with the table.

882,964. RAILWAY-TRACK. ADAM RAMBACHER, Rosenheim, Germany. Filed Aug. 9, 1906. Serial No. 329,931.



1. In a railway track, the combination, with wood cross-ties provided with dove-tailed wedge-shaped recesses, hard wood blocks driven therein, metal plates resting upon the blocks, rails supported by the plates, and means securing the whole together.

2. In a railway track, the combination, with cross-ties provided with recesses of dove-tailed cross section, hard wood blocks fitted therein and metal plates resting upon the blocks, of rails, wedge members interposed between the rails and plates, and means for securing the whole together.

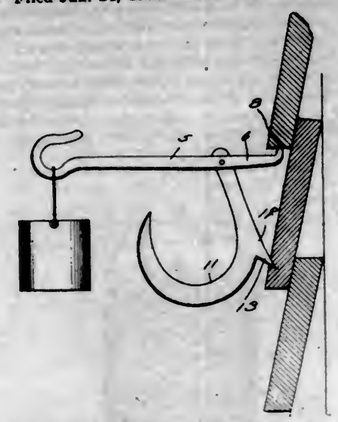
3. In a railway track, the combination, with cross-ties and blocks supported thereby, the ties and blocks being of fibrous material with the fiber lying in opposite directions, of rails, wooden wedge members interposed between the rails and blocks, and means securing the whole together.

4. In a railway track, the combination, with cross-ties, hard wood blocks supported thereby and metal plates resting upon the blocks, of rails, hard wood wedge members interposed between the rails and plates, and means securing the whole together.

5. In a railway track, the combination, with cross-ties, hard wood blocks supported thereby, and metal plates resting on the blocks, of rails, wedge members interposed between the rails and plates, and means for securing the whole together.

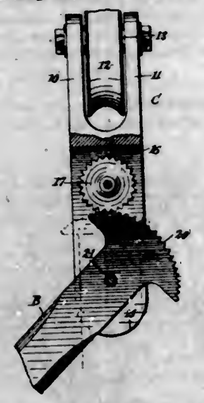
[Claims 6 to 14 not printed in the Gazette.]

882,965. PAINTER'S HOOK. FRANK L. RAND, Pittsfield, N. H. Filed Jan. 24, 1906. Serial No. 297,700.



A painter's hook comprising a tapering bar having a hook at one end and a slot at the other to form spaced arms which are bent outwardly and have their extreme ends bent upwardly and pointed, the opposing faces of said arms near the beginning of said slot running parallel to form a bearing, each arm having a pin perforation extending through its face, a pin within said perforations, and a second hook ended bar of a length less than said first mentioned bar provided with an extending spur at the point where the hook is formed outwardly from said bar, said last mentioned hook and spur extending in opposite directions.

882,966. TROLLEY. HENRY C. REYNOLDS, Portersville, Cal., assignor of one-half to Albert J. De Laney, Portersville, Cal. Filed Aug. 24, 1907. Serial No. 389,969.



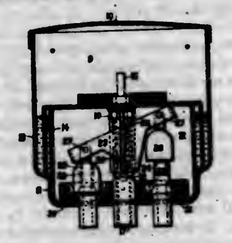
1. In a trolley, a trolley head, a pinion mounted thereon, a trolley pole mounted in the head, a toothed segment carried by the pole, which segment is in mesh with said pinion, the movement of the segment relatively to the pinion being limited in both directions by the formation of the toothed surface of the segment.

2. In a trolley, a trolley head, a pole on which the head is pivoted, a pinion mounted in the head, and a segmental gear in mesh with the pinion and constituting a head for the entering end of the pole.

3. In a trolley, a trolley head, a pole on which the head is pivoted for lateral movement, a pinion mounted in the trolley head, and a segmental gear at the entering end of the trolley pole, the teeth whereof mesh with the said pinion and are eccentric to the pivot for the pole.

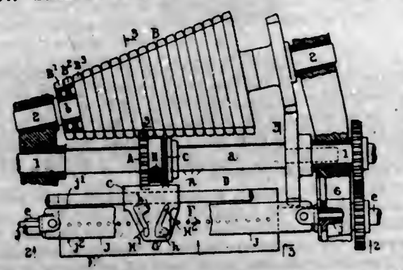
4. In a trolley, a trolley head, a pole on which the said head is mounted for lateral and for vertical movement, a pinion mounted in the trolley head, and a segmental gear at the entering end of the trolley pole, the teeth whereof mesh with the said pinion and are eccentric to the pivot of the pole, the toothed surface of the said gear being also given a downward and inward inclination from the upper portion of the gear.

882,967. GAS LIGHTING AND EXTINGUISHING MECHANISM. GEORGE ROBSON, Sydney, New South Wales, Australia. Filed Aug. 24, 1906. Serial No. 331,900.



A gas lighting and extinguishing apparatus, comprising a gas chamber, a movable cover therefor, a tubular standard secured to the bottom of the gas chamber, two liquid seals in the gas chamber, one on either side of the tubular standard, and two gas outlet pipes for the gas chamber extending through the bottom of the seals to a point above the level of the liquid in the same, one of the outlet pipes leading to the main burner and the other leading to the pilot burner, in combination with a trunnion secured to the tubular standard, a rockable beam mounted at its center on the trunnion, so that its arms can extend above the outlet pipes and having a centrally located angular projection extending downwardly therefrom, two hoods pivotally hung from the arms of the beam above the outlet pipes, a guide rod slidably mounted in the tubular standard a downwardly extending bracket attached to the guide rod, and guided by the trunnion, and a hanging link pivoted to the bracket and engaging under the angular projection of the beam, alternately passing to the right and left of the angular projection to rock the latter in one direction or the other and cause a hood to alternately close one or the other of the outlet pipes during the movements of the movable cover.

882,968. VARIABLE-SPEED DRIVING MECHANISM. RICHARD M. RUCK, London, England. Filed Aug. 10, 1907. Serial No. 388,027.

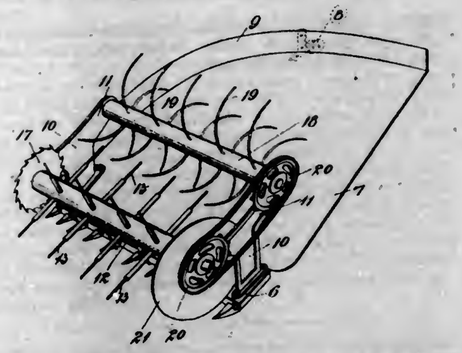


1. A variable-speed driving mechanism comprising a cone constituted by juxtaposed rings having progressively varying numbers of gear teeth and fixed side by side upon a common axis so that a straight row of teeth extends from end to end of the cone, a toothed pinion movable in the direction of its own axis so as to be capable of gearing with any one of the toothed rings alternatively, a drum mounted to rotate about an axis parallel to that of the pinion at an angular velocity corresponding to that of the cone and carrying a row of studs corresponding in number and distance apart to the number and width of the individual toothed rings of the cone; a slide movable parallel to the axis of the pinion and adapted to shift the pinion lengthwise of the cone; cams carried by the slide and respectively adapted to be brought into position to coact with the studs so as to shift the pinion in one or the other direction; and means for moving either of the cams into and out of said position at the proper moments with reference to the bringing of the straight row of teeth on the cone into the common plane of the axes of the cone and pinion.

2. In variable-speed driving mechanism the combination of a toothed cone, a toothed pinion gearing with the cone, a drum provided with studs, a slide adapted to move parallel to the axis of the pinion; cams mounted side by side so as to be movable radially of the drum carrying the studs and normally held out of engagement with the slide; a presser bar mounted to rock about its longitudinal axis, which is parallel to that of the drum, so as to act alternatively on the respective cams; and means for preventing the rocking of the bar so as to bring either of the cams to operative position or its return, when rocked, to neutral position so as to permit the retraction of the operative cam, excepting at the proper moments with reference to the bringing of the straight row of teeth on the cone into the common plane of the axes of the cone and pinion, substantially as described.

3. In variable-speed driving mechanism, a drum provided with studs, cams mounted side by side so as to be movable radially of the drum, a presser bar, and means for controlling the same, comprising a disk having flanges, a lever having pallets and oscillating as one with the bar but normally prevented from thus moving by the contact of the pallets with the flanges of the disk which rotates as one with the drum, and has each face provided with an annular groove which open out at the periphery of the disk so as to give passage to the pallets when the row of studs on the drum is not in position to act upon the cams, substantially as described.

882,969. HARVESTER. FRIEDERICH RUMP, Cheboygan, Mich. Filed Oct. 30, 1907. Serial No. 399,790.



1. An attachment for mowing machines, comprising a delivery platform adapted to be supported behind the cutting devices, a front reel over the front of the platform, and a rear reel over the platform behind said front reel and having clearing devices operating on said front reel, said reels coöperating with the platform to carry material backward upon said platform and under the reels.

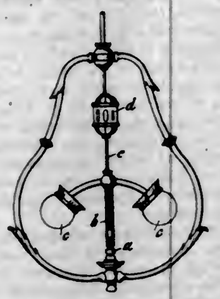
2. An attachment for mowing machines, comprising a delivery platform, a reel extending horizontally over the front end of the platform, and a circular guard disk mounted on the inner end of the reel, substantially as and for the purpose described.

3. An attachment for mowing machines, comprising a delivery platform, a front reel having projecting fingers, located over the front of the platform, and a rear reel,

mounted over the platform behind the front reel and having curved clearing fingers which work between the fingers of the front reel to clear the same said reels coöperating with the platform to carry backward material on said platform.

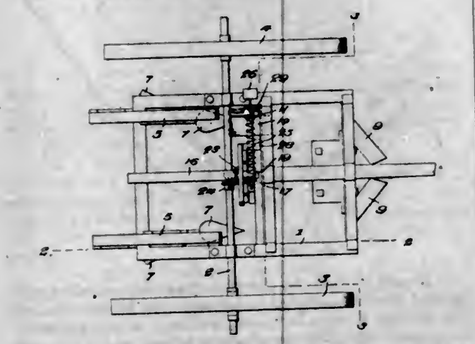
4. A reel of the kind described, comprising a shaft and a series of fingers projecting therefrom, each finger consisting of a tube fixed at one end to the shaft, a rod projecting from the other end of the tube, and movable in and out, and a spring in the tube, behind the rod.

882,970. GAS BRACKET, PENDANT, AND THE LIKE. EDUARD SCHWERIN, Berlin, Germany. Filed Sept. 24, 1906. Serial No. 336,012.



In a carrier for gas incandescent lamps, the combination of a suspended clock-work; a mixing-tube suspended from said clock-work and carried and adapted to be rotated by the same; a plurality of gas incandescent lamps attached to and being uniformly distributed around said mixing tube; a stationary gas-nozzle taking into the lower end of the mixing-tube, and a rigid frame supporting said gas-nozzle and connecting it with the suspended clock-work so as to keep the parts in their proper relative position and distance, for the purpose as described.

882,971. COMBINED COTTON CHOPPER AND CULTIVATOR. GEORGE W. SHARP, Baum, Okla. Filed Oct. 14, 1907. Serial No. 397,423.



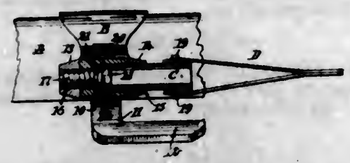
1. The herein described combined cotton chopper and cultivator, comprising the combination with a frame; of an axle rotatably mounted on said frame, wheels on said axles, a disk, pinions on said disk and axles, to rotate the disk, an arm pivotally mounted adjacent said disk, a lug on said arm, a plurality of auxiliary lugs on said disk, adapted to engage said lug on the arm and oscillate said arm, a blade yieldingly mounted at the lower end of said arm and means to quickly return the arm and blade to their initial positions when the lug on the arm is released from the lug on the disk.

2. A cotton chopper of the class described, comprising the combination with a frame, an axle on said frame and wheels on said axle; of a stub shaft carried by said frame, a disk rotatably mounted on said shaft, coöperating pinions on said disk and axle, adapted to rotate the disk, an arm pivotally and longitudinally movably mounted on the outer end of the stub-shaft, a lug on said arm, means on said disk to successively engage said lug and move the lower end of the arm to one side of the longitudinal center of the frame, means at the upper end of the arm to return the lower end of the arm to its initial position, when the lug on the arm is released, means to move said arm longitudinally on the stub shaft and a blade yieldingly mounted on the lower end of said arm.

3. The herein described cotton chopper, comprising the combination with a frame, an axle rotatably mounted on said frame and supporting wheels for said axle, one of said wheels being fixed to the axle; of a stub shaft carried by said frame, an arm pivotally and longitudinally movably mounted on said shaft, a blade for the lower end of said arm, a socket having a horizontally disposed slot therein, means extending through said slot and into the arm to hold the blade and socket in position on the arm, a spring carried by the arm, adapted to direct pressure on the rear edge of the blade and normally hold the same in its initial position and means to swing the blade across the path of the growing plants, whereby a portion of said plants will be removed.

4. In a cotton chopper of the class described, the combination with a frame, an axle on said frame and means to rotate said axle; of a stub shaft carried by said frame, a disk rotatably mounted on said stub shaft, pinions on said axle and disk, adapted to rotate the disk, an arm pivotally and longitudinally movably mounted on the stub shaft, means between the disk and arm to rotate said arm in one direction, a spring secured to the upper end of the arm, adapted to rotate the arm in the opposite direction, a standard on said frame, means to adjustably secure the opposite end of the spring to the standard, whereby the tension of the spring may be increased or decreased, a blade yieldingly secured to the lower end of the arm and means to move said arm longitudinally when the same is rotated in one direction.

882,972. THILL-COUPLING. JACOB S. SHOEMAKER, New Lothrop, Mich. Filed July 8, 1907. Serial No. 382,567.



1. In a thill coupling, a clip, a draft bolt loosely passed through one eye of the clip, being threaded in the opposing eye, projections on the peripheral portion of the bolt adjacent its plain end, a bifurcated spring key having its members apertured and adapted to be sprung into engagement with the said projections, and means for holding the key in a predetermined position.

2. In a thill coupling, a clip, the locking plate whereof is provided with a forwardly located arm at an angle thereto, one eye of the clip being of greater diameter than the other, the smaller eye having a thread, a draft bolt in two diameters adapted to be received by the eyes of the clip, the reduced section of the said bolt being threaded and made to enter the smaller eye of the clip, a spring coiled around the reduced portion of the bolt, and a spring key removably and pivotally mounted upon the larger end portion of the bolt outside of the eye through which said end is passed.

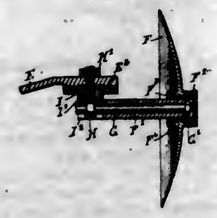
3. In a thill coupling, the combination with a clip having spaced eyes one eye larger than the other, and the smaller eye threaded, a bolt in two diameters passed through said eyes, the reduced portion of the bolt being threaded, and a spring coiled around the reduced section of the bolt, of a shaft iron having an eye adapted to receive the said bolt, the interior of which eye is proportionately reduced in diameter, and a removable key at the plain end of the bolt.

4. In a thill coupling, a clip, a bolt loosely passed through one eye of the clip and screwed into the opposite eye, the threaded end of the said bolt being of lesser diameter than its plain end, a spring coiled around the reduced portion of the bolt, opposing projections from the peripheral portion of the larger end of the bolt outside of the clip, and a bifurcated spring key, the members of its bifurcated end having apertures therein to receive the projections from the said bolt.

5. In a thill coupling, the combination with a clip, the locking plate whereof is carried forwardly and downwardly and provided at its forward end with an arm at right angles thereto, one eye of the said clip being interiorly larger than the other and the bore of the smaller eye being threaded, of a draft bolt of greater length than the width of the eye portion of the clip, the said bolt being in two diameters and exteriorly threaded at its reduced portion to enter the threaded eye of the clip, a spring coiled around the reduced portion of the bolt between the eyes of the clip, a shaft iron the interior diameter of the eye of which corresponds to the exterior diameter of the said bolt, which is adapted to pass through said eye whereby the spring on the bolt is held between a shoulder on the latter and a shoulder in the eye of the shaft iron, and a bifurcated spring key pivotally and removably mounted upon the larger end of the bolt outside of the said clip.

[Claim 6 not printed in the Gazette.]

882,973. WEED-CUTTER AND CULTIVATOR. OTTO E. SLAYTON, Dillon, Okla. Filed June 19, 1907. Serial No. 379,734.

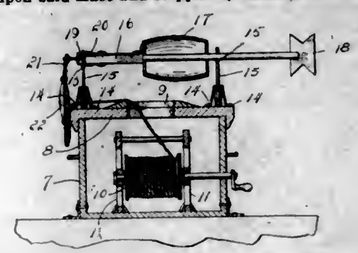


1. In a weed cutter and cultivator, a plurality of shafts, a disk for each shaft, a hub portion journaled on the shaft, a collar adjustably connected with the hub portion, a nut threaded onto the end of the hub portion and provided with a reduced portion upon which the disk is seated, said collar engaging the inner face of the disk.

2. In a weed cutter and cultivator, a shaft, and a disk, a hub portion through which the shaft passes, a nut on the end of the shaft for securing the hub portion in position, a collar adjustably connected with the hub portion, a nut threaded onto the end of the hub portion and provided with a reduced portion upon which the disk is seated, the collar engaging the inner face of the disk, and the nut inclosing the nut on the shaft.

882,974. WRECK-INDICATOR. JOSEPH ST. ANTOINE, Cheboygan, Mich. Filed Sept. 7, 1906. Serial No. 333,717.

In the device of the character described, the combination with a slotted lid-provided chest, of standards mounted within said chest, cross-rods securing the upper ends of said standards, a shaft revolubly supported by said standards, a reel upon said shaft, a scale marked cable secured at one side to said reel, an I-bolt secured to the remaining end of said cable, a swivel secured to said I-bolt, a mast having a shoulder forming portion, said swivel being secured to said shoulder forming portion, a barrel shaped buoy upon said mast and stopped by said shoulder forming



portion, said cable passing between said cross-rods, and a weight secured to said cable near said mast.

882,975. PROCESS FOR MANUFACTURING ARTIFICIAL STONE. JACOB STAUDT, Bonn, Germany. Filed Sept. 18, 1905. Serial No. 278,945.

1. The herein described process of manufacturing artificial stone, which consists in mixing a pulverized stone-filling material with an oxidizable and vulcanizable oily or fatty binding agent, sulfurizing or partly vulcanising said binding agent, stiffening the mixture by exposing it to the action of the air at an elevated temperature, and then molding the mixture into stone; substantially as described.

2. The herein described process of making artificial stone, which consists in stiffening a mixture of a sulfurized or partly vulcanized oxidizable oily or fatty binding agent and a pulverized stone-filling material by exposing said mixture to the action of the air at an elevated temperature, and thereafter molding the mixture into stone; substantially as described.

3. The herein described process of making artificial stone, which consists in stiffening a mixture of a sulfurized or partly vulcanized oxidizable oily or fatty agent and pulverized filling material by exposing said mixture to the action of the air at an elevated temperature, and thereafter molding the mixture into stone, the hardening of the stone being accelerated by heating; substantially as described.

4. The herein described process of making artificial stone, which consists in mixing a refractory pulverized material with an oily or fatty binding agent, adding a sulfurizing or vulcanising agent, the three materials in quantity being sufficient to produce a moist loose powder, stiffening the mixture by exposing it to the action of the air at an elevated temperature, and thereafter molding the mixture into stone; substantially as described.

5. The herein described process of manufacturing artificial stone, which consists in mixing 100 parts by weight of kieselguhr with from 15 to 20 parts by weight of flowers of sulfur and with 75 parts by weight of linseed oil, heating the mixture until vulcanization takes place, and exposing it to the action of air, as long as its plasticity is preserved and thereafter molding the mixture into stone; substantially as described.

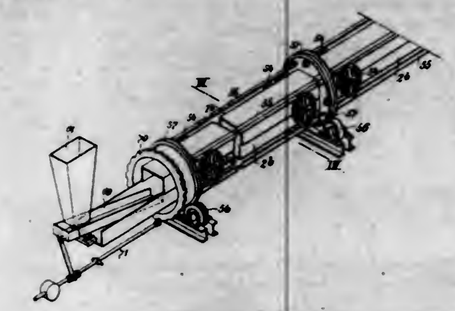
882,976. TRANSPORTING APPARATUS. ADOLPH SUESS, Witkowitz, Austria-Hungary. Filed Jan. 14, 1907. Serial No. 352,238.

1. A transporting apparatus comprising a plurality of conveying members extending from the receiving to the delivery end of the apparatus, means to relatively displace the members longitudinally and means to revolve said members simultaneously around a common axis.

2. A transporting apparatus, comprising a plurality of conveying members extending from the receiving to the delivery end of the apparatus, means to alternately displace the members longitudinally and means to revolve said members simultaneously around a common axis.

3. In a transporting apparatus, the combination of a plurality of conveying members extending from the receiving to the delivery end of the apparatus, rotatable supports

for the conveying members and means to relatively displace said members longitudinally.

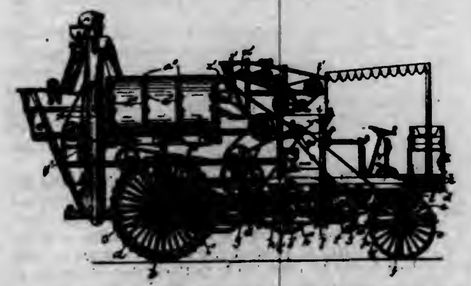


4. A transporting apparatus comprising a plurality of conveying members forming a rectangular trough extending from the receiving to the delivery end of the apparatus, rotatable supports for said members, and means to alternately displace each member longitudinally.

5. A transporting apparatus comprising a plurality of conveying members mounted at right angles to each other, circular rotatable supports for said member, a displacing member, and controlling members on the conveying members in contact with the displacing member.

[Claims 6 and 7 not printed in the Gazette.]

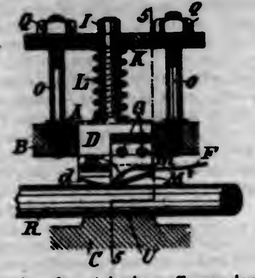
882,977. TRAVELING THRESHER. RICHARD SYLVESTER, Lindsay, Ontario, Canada. Filed Feb. 4, 1907. Serial No. 355,738.



A threshing machine comprising a traction truck consisting of a main carriage, a set of traction wheels located at the sides of the main carriage, a main carriage axle for the traction wheels from which the main carriage is supported, side beams for the main carriage located below the plane of the main carriage axle, a motor supported by the side beams, uprights connected to the front ends of the side beams, a fore carriage supported at its rear end by the uprights, steering wheels pivotally connected to the fore carriage, a separator detachably connected to the traction truck and mounted on the main carriage in rear of the fore carriage, and a feeder located at the top of the separator and extending over the main carriage axle whereby the separator is comparatively evenly balanced on both sides of the main carriage axle.

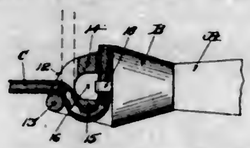
882,978. METHOD OF AND APPARATUS FOR STRIPPING WEAVING-STRIPS FROM RATAN CANES. HEINRICH W. TEMPS, Harburg-on-the-Elbe, Germany. Filed May 25, 1906. Serial No. 318,667.

1. The method of simultaneously stripping off weaving strips ready for use from the periphery of a ratan cane, consisting in passing the cane rectilinearly through a set of stripping knives disposed radially round its circumference, and at the same time compressing the cane just beyond the cutting edge of the knife, the strips which are bent by the cutting action being bent in the opposite direction immediately behind the cutting edge.



2. In apparatus for stripping off weaving strips from ratan canes, the combination of a fixed support having a concave surface, a fixed part opposing said support and having an opening, a spring-pressed block guided in said opening and urged toward said support, said block being provided near one end with a presser-foot and cut away near the other end and opposite said support to form a guide surface for the weaving strip, and a stripping knife extending over said guide-surface and having cheeks or sides applied to opposite sides of the block.

882,979. STRAIN-INSULATOR. WILLIAM C. TERRY, Boston, Mass., assignor, by mesne assignments, to The Macallen Company, Boston, Mass., a Corporation of Massachusetts. Filed Feb. 14, 1907. Serial No. 357,269.



1. The improved insulator provided with an end cap having thereon a pair of side walls converging toward each other and cross pieces between the said side walls, between and about which the wire passes, whereby the strain placed upon the wire tends to pinch the wire between the converging faces of the said side walls.

2. The improved insulator provided with an end cap having thereon two side walls, cross pieces between the said side walls, between and about which the wire to be attached to the insulator passes, and a lug to be bent about the said wire.

3. The improved insulator provided with an end cap having two side walls whose adjacent faces converge in two planes toward each other, and cross pieces between the said side walls, between and about which the wire to be attached to the insulator passes, whereby the strain placed upon the wire tends to pinch the wire between the converging faces of the said side walls.

882,980. SUBMARINE PROJECTILE. THEOPHILUS TUCKER, Oakland, Cal. Filed Dec. 18, 1907. Serial No. 407,003.



1. A projectile having a body composed of longitudinally disposed ribs separated by perforations, and an axial passage extending through the body from end to end.

2. A projectile having a body composed of longitudinally disposed ribs alternating with open spaces, an axial passage open from end to end of the body, and a head having prongs corresponding in number with the ribs.

3. A projectile having a body composed of longitudinally disposed ribs alternating with open spaces, an axial passage open from end to end of the body and a tail terminating in finte-like projections.

4. A projectile having a body composed of spirally set ribs separated by perforations, and a passage extending axially through the body from end to end.

5. A projectile having a body composed of spirally set ribs separated by perforations, a passage extending axially from end to end of the body and a head having spirally-set prongs and an open center.

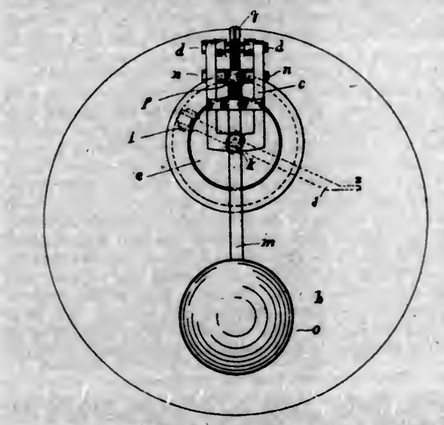
[Claims 6 to 14 not printed in the Gazette.]

882,981. VEHICLE-COUPLING. MILES TURNER, Steamboat Springs, Colo. Filed June 5, 1906, Serial No. 320,355. Renewed Dec. 23, 1907. Serial No. 407,714.



The combination, with the bolster and a steel clip encompassing the same and extending rearward therefrom, of the axle and sand-board, a clip embracing both of the same and having a rearward extension indented centrally, the reach having its forward end seated in said indentation, the rearward extensions of said clips and the said end of the coupling pole being provided with vertically registering apertures, and a king-bolt extending through and secured in said apertures.

882,982. STEERING APPARATUS FOR TORPEDOES. ABRAHAM J. VAN STOCKUM, Amsterdam, Netherlands. Filed Nov. 17, 1906. Serial No. 343,904.

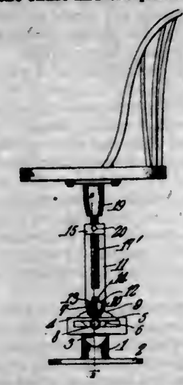


1. In a submersion gear for torpedoes and submarine boats, a plate movable by the water pressure and adjustable means for controlling the movement of said plate, said means consisting of an inclined member making a moderate angle with said plate and having a part engaging with the plate and a weight engaging with the said member.

2. In a submersion gear for torpedoes and submarine boats, a plate movable by the water pressure, a member suspended in an oblique position and making a moderate angle with the plate and having a portion engaging with the plate, and an adjustable weight engaging with the inclined member.

882,983. ADJUSTABLE CHAIR. LESLIE C. WENTWORTH, Webster, Mass. Filed May 8, 1907. Serial No. 372,553.

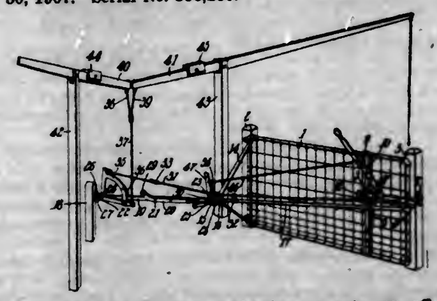
1. In a stand of the character described, the combination with a suitable base, and a bracket supported thereon, of a supporting post having a laterally turned portion at its lower end arranged to coöperate with the said bracket and having a laterally turned portion at its upper end provided with an aperture having its axis arranged substantially in alinement with the laterally turned portion first mentioned, a shaft extending through the said aperture and adjustable vertically relatively to the post, and a device for locking the shaft and the post in fixed relation.



2. In a stand of the character described, the combination with a suitable base, and a bracket supported thereon, of a supporting post having a laterally turned portion at its lower end arranged to coöperate with the bracket and having a laterally turned portion at its upper end provided with an aperture having its axis arranged substantially in alinement with the laterally turned portion first named, a shaft extending through the aperture and adjustable vertically relatively to the post, and means for automatically locking the shaft and post in fixed relation.

3. In a stand of the character described, a base having a stem, a longitudinally slotted guide carried by the stem and disposed parallel with the base, a segmental toothed bracket having an offset bearing upon the guide, a clamping bolt passing through the slot and into the bracket for holding the latter in adjusted positions relatively to the guide, a post having a toothed segmental longitudinally slotted offset bearing upon the bracket and interlocking with the teeth thereof, a bolt passing through the slotted offset and into the bracket for holding the post in adjusted positions relatively to the bracket, and a vertically adjustable shaft carried by the post.

882,984. GATE-OPERATING MECHANISM. HENRY E. WILLIAMS, Savannah, Tenn., assignor of one-sixth to Archibald U. Walker, one-sixth to Hardin E. Ross, and one-sixth to John W. Ross, Savannah, Tenn. Filed July 30, 1907. Serial No. 386,280.



1. In a gate operating mechanism, a gate, an offset bracket fixed to the hinged end of the gate and having a brace rod connected to the outer end thereof and to the latch end of the gate, a support adjacent to the hinged end of the gate but spaced therefrom, a toggle connected at its

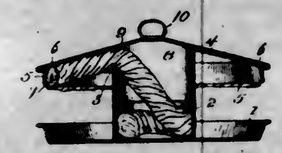
two ends to the bracket and support, respectively, and so proportioned that when the gate is closed the toggle members are in alinement and when the gate is opened the toggle members are in the same position of alinement as when the gate is closed, an elbow lever pivoted to the toggle near its attachment to said support for flexing said toggle, said elbow lever having a limited independent movement on said toggle, and means for operating the elbow lever and through the latter flexing the toggle to move the gate from the closed position to the opened position and from the open to the closed position, respectively.

2. In a gate operating mechanism, a gate, a laterally offset bracket thereon, a support adjacent to the gate, a toggle pivotally connected at the ends to the bracket and support, respectively, and so proportioned that its members are all in alinement when the gate is closed and in like alinement when the gate is opened, an elbow lever pivoted to the toggle near its attachment to said support and having a limited independent movement for unlatching the gate, roadside means for operating the elbow lever to first open the latch and then to flex the toggle to operate the gate in either direction, and means carried by the gate and in operative relation to but unconnected to the toggle for flexing the latter to open or close the gate.

3. In a gate operating mechanism, a gate having a laterally offset bracket thereon, a support adjacent to the gate, a toggle pivotally connected at its two ends to the support and bracket, respectively, a bell-crank lever connected to the toggle for flexing the same, said bell-crank lever having a limited independent movement but acting on the toggle, flexible connections extending from the bell-crank lever, and a latch on the gate operated by said flexible connection.

4. The combination with a gate having a laterally offset bracket, and a reciprocating locking member for retaining the gate in closed position, and a support arranged adjacent to the gate, of a toggle pivotally connected to the support and to the bracket on the gate and capable of retaining the latter in two different positions, a bell crank operatively connected to and capable of a limited pivotal movement relatively to one of the toggle members, and a connection between the bell crank and the locking device for unlocking the latter during the initial movement of the bell crank.

882,985. POULTRY-GREASER. WILLIAM W. WILSON, Dallas, Tex. Filed June 22, 1907. Serial No. 380,320.



1. A poultry greaser comprising a feed pan having a centrally disposed tank therein, a cover supported upon said tank, and an absorbent body carried by said cover above the edges of said pan.

2. A poultry greaser comprising a feed pan having a centrally disposed tank therein, a cover supported upon said tank, a wick holder extending about the edges of said cover, and a wick disposed in said holder and communicating with said tank.

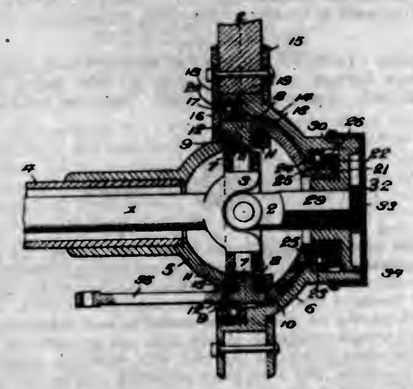
3. A poultry greaser comprising a feed pan having a centrally disposed tank therein, a cover provided with a wick casing adapted to enter said tank, a peripheral wick holder upon the under face of said cover, and an absorbent wicking carried by said holder and extending into said casing.

4. A poultry greaser comprising a feed pan having a centrally disposed tank therein, a cover provided with a wick casing adapted to enter said tank, a peripheral wick holder upon the under face of said cover, an absorbent wicking carried by said holder and extending into said casing, and a radially disposed holder extending from the peripheral holder to an opening in said casing.

5. In a poultry greaser, a pan, a centrally disposed tank therein cut away at its upper portion, a cover supported on said tank, an annular wick holder carried by said cover above the edges of said pan, and an absorbent wick in said holder having its opposite ends extended to said tank.

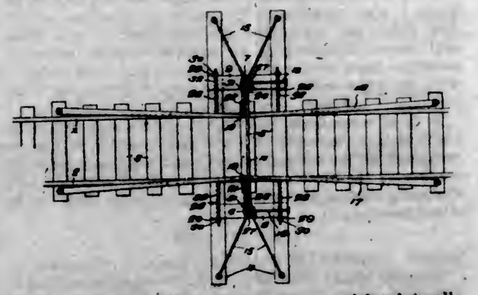
[Claims 6 to 8 not printed in the Gazette.]

882,986. AXLE. OTTO ZACHOW and WILLIAM BESSERDICH, Clintonville, Wis. Filed Aug. 1, 1907. Serial No. 386,612.



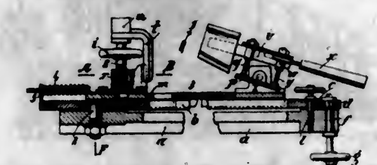
A device of the character described, comprising an axle and a spindle coupled together by a universal joint, a semi-globular journal-casing, bearing rings seated in said journal-casing, a correspondingly shaped skein-member, stub axles or trunnions having heads threaded into said skein-members and inserted through said bearing rings, said heads being provided with races containing ball-bearings adapted for pivoting said skein-member upon said journal-casing, and a semi-globular hub-member having a sleeve-extension at its outer end, a locking ring threaded upon said sleeve extension means for the retention in place of said hub-member at its sleeve extension end against endwise displacement, said skein-member having an annular flange at its inner end, and a hub-member having a corresponding recess opposed to said flange, cone-sections being arranged in said annular recess and retained by said flange, ball-bearings interposed between said cone-sections, said hub-member having its sleeve-extension provided interiorly with an annular ledge or shoulder and said skein-member having a like sleeve extension, additional cone-sections arranged within said hub-sleeve extension and between said ledge and said skein-sleeve extension, with ball-bearings interposed between said additional cone-sections, said locking ring and annular ledge or shoulder being adapted to effect the retention of said additional cone-sections in place.

882,987. GATE. OSCAR H. AHLEMEIER, Poland, Ind. Filed Oct. 1, 1907. Serial No. 395,371.



A gate of the character described, comprising laterally swinging levers arranged in pairs, the levers of each pair having their meeting ends overlying the rails of a railroad track and pivotally connected together, one of each pair of said levers having a lateral bar or arm provided with teeth, a support for said bar or arm, spring encircled rods having their ends connected to the levers and slidably supported in position, the springs of said rods delivering their stress upon said levers, a gate composed of duplicate swinging sections, each having its hinging post provided upon its perimeter with teeth engaging the teeth of the arm of the respective lever, and springs applied to the hinging posts of said gate sections and delivering their stress upon said gate-sections for automatically closing said gate-sections.

882,988. APPARATUS FOR SIGHTING RIFLES. NEMETH ALOIOS and OTTO STROHBACH, Raab, Austria-Hungary. Filed Mar. 5, 1907. Serial No. 360,728.



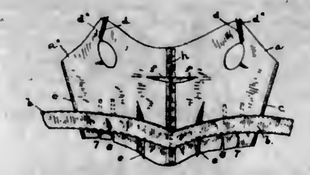
1. Sighting apparatus for rifles, composed of a table provided with a vertical pivot in the front end thereof, of a guide bar pivotally connected to the table by the vertical pivot at its front end, means to adjust said guide bar around said pivot in a horizontal plane, of a slide movable on said guide bar, of recoil springs connecting the slide with the guide bar, of a fork at the front end of the slide to support the barrel of the gun provided with means to raise and lower the same, of a clamp at the rear end of the slide for the butt-end of the gun pivotally connected to the slide and of buffer-springs connecting the front end of the slide with the front end of the guide bar, substantially as described.

2. Sighting apparatus for rifles, composed of a table provided with a vertical pivot in the front end thereof, of a guide bar pivotally connected to the table by the vertical pivot at its front end, a toothed sector at the rear end and a hand wheel with pinion in gear with said sector to adjust said guide bar around said pivot in a horizontal plane, of a slide movable on said guide bar, of recoil springs connecting the slide with the guide bar, of a fork at the front end of the slide to support the barrel of the gun provided with means to raise and lower the same, and to lock it in adjusted position, of a clamp at the rear end of the slide for the butt-end of the gun, pivots in uprights projecting from the slide, engaging the clamp and supporting it on a horizontal axis at right angles to the shooting direction, and of buffer-springs connecting the front end of the slide with the front end of the guide bar, substantially as described.

3. Sighting apparatus for rifles, composed of a table provided with a vertical pivot in the front end thereof, of a guide bar pivotally connected to the table by the vertical pivot at its front end, a toothed sector at the rear end, and a hand wheel with pinion in gear with said sector, means to adjust said guide bar around said pivot in a horizontal plane, means to lock the bar in adjusted position, of a slide movable on said guide bar, of recoil springs connecting the slide with the guide bar, of a fork at the front end of the slide to support the barrel of the gun provided with means to raise and lower the same, and to lock it in adjusted position, of a clamp at the rear end of the slide for the butt-end of the gun, pivots in uprights projecting from the slide, engaging the clamp and supporting it on a horizontal axis at right angles to the shooting direction, and of buffer-springs connecting the front end of the slide with the front end of the guide bar, substantially as described.

882,989. FORM-FITTING WAIST-LINING. HERMINE J. RAHM, San Francisco, Cal. Filed July 2, 1907. Serial No. 381,907.

1. The herein described form-fitting waist-lining comprising the separate halves, each having the front, side and back integral, the two halves and parts being united by the longitudinal edges and at the shoulder seams, and the corselet.

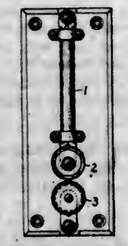


2. In a form-fitting waist-lining, the separate halves each comprising a front, a side and a back cut from a single piece of fabric, and having the perpendicular dart in the front, and the transverse dart on the breast-portion, in combination with the corselet.

3. In a form-fitting waist-lining, the separate halves each comprising a front, a side and a back cut from a single piece of fabric, and having the perpendicular dart in the front, the transverse dart on the breast-portion and slits along the bottom edge in combination with the corselet.

4. The herein described form-fitting waist lining comprising separate halves, each having the front, side and back cut from a single piece of fabric, the said halves being united along their longitudinal edges, in combination with the corselet, substantially as set forth.

882,990. RESISTANCE-UNIT. LAWRENCE E. BARRINGER, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Sept. 30, 1907. Serial No. 395,130.



1. A resistance member consisting of alundum, graphite and fire clay.

2. A resistance member consisting of fused alumina, refractory conducting material, and a suitable binder.

3. A resistance member consisting of a mixture of alundum, graphite and clay.

4. A resistance member consisting of 20 parts of alundum, 20 parts of clay base, and 1½ to 2½ parts of graphite.

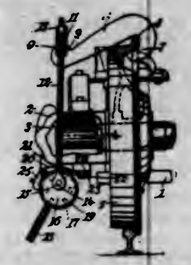
5. The combination of a resistance member consisting of alundum, graphite, and clay, an enamel upon the surface of said member, and means for making electrical contacts with the ends of said rods.

882,991. LIFTING-JACK. EMIL H. ZUM BERGE, Dallas, Tex. Filed Oct. 4, 1907. Serial No. 395,856.

1. In a device of the class described, in combination, a support adapted to engage a car wheel and carrying a hanger, a member mounted upon said hanger, and rotatable about a substantially horizontal axis elevating means controlled by said member and adapted operatively to engage a journal box and means for preventing the movement of said member in one direction.

2. In a device of the class described, in combination, a support adapted to engage a car wheel and carrying a hanger, a rotatable member mounted upon said hanger and adapted to be manually operated, a shoe adapted to engage said member and a journal box and to be moved by said member, and means for preventing the movement of said member in one direction, said member being rotatable about

an axis substantially at right angles to the direction of movement of said shoe.



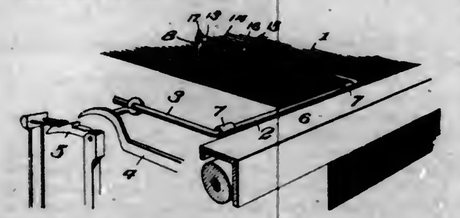
3. In a device of the class described, in combination, a support adapted to engage a car wheel and carrying a hanger, a rotatable member mounted upon said hanger and having a cam, and means for operating said member to rotate said cam, said cam being arranged operatively to engage a journal box, said member being rotatable about an axis substantially at right angles to the direction of the movement of the journal box effected by said cam.

4. In a device of the class described, in combination, a support adapted to engage a car wheel and carrying an adjustable hanger, a rotatable member mounted upon said hanger and having a cam adapted operatively to control a journal box, means for manually operating said rotatable member, and means for preventing the movement of said member in one direction, said member being rotatable about a substantially horizontal axis.

5. In a device of the class described, in combination, a support adapted to engage a car wheel and carrying a removable hanger, said hanger being adjustable, a rotatable member mounted upon said hanger and adapted to be manually operated, said rotatable member including a cam, a shoe removably arranged upon said cam and adapted to engage a journal box, and means for preventing the movement of said member in one direction.

[Claims 6 and 7 not printed in the Gazette.]

882,992. DETECTOR OR FEELER-POINT. ERNST A. BOSTROM, Atlanta, Ga., assignor to Clayton & Bentley Co., a Corporation of Georgia. Filed July 11, 1907. Serial No. 383,238.



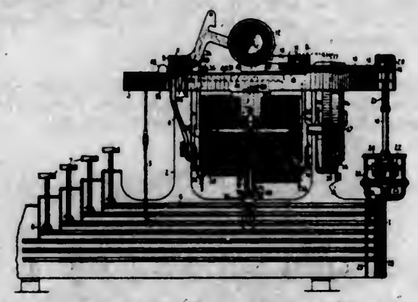
1. The herein described automatic feeler point, or detector finger, comprising the combination with a feeler arm; of a finger normally disposed in a substantially vertical position, a movable collar, bearing against said finger and means to direct said collar against said finger with sufficient force to restore the finger to its normal position if removed therefrom.

2. A detector or feeler point, for looms, consisting of the combination with a feeler arm, having a slot; of a normally vertically disposed finger, pivoted in said slot and means consisting of a movable collar and a controlling spring adapted to hold said finger normally in an upright position.

3. The combination with the finger arm, having a slot in its free end; of a detector point or finger pivoted in said slot and having a curved edge, a movable member fitting around said arm and bearing against said curved edge, and means to regulate the force brought to bear by said collar against said edge.

4. The combination with a feeler arm, having a slot in one end thereof; of a finger pivotally mounted in said slot, said finger having curved portions on one edge, spring-operated means on said arm adapted to engage said curved sections and normally hold the finger in a vertical position and means to limit the forward swing of the finger.

882,993. TYPE-WRITING MACHINE. ALEXANDER T. BROWN, Syracuse, N. Y. Filed June 4, 1904. Serial No. 211,129.



1. In a printing device, the combination with means for feeding and guiding two ink ribbons, of means for bringing one or the other of said ribbons to printing position, and separate means for reversing the direction of feed of said ribbons.

2. In a printing mechanism, the combination with means for guiding and feeding two ink ribbons, of means for bringing one or the other of said ribbons to printing position, and separate automatically operated devices for reversing the feed of said ribbons.

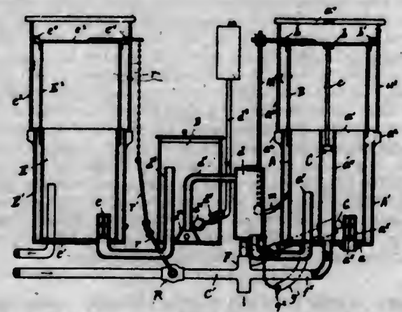
3. In a printing device, the combination of a plurality of ink ribbons, driving means common to said ink ribbons, and separate reversing means for each ribbon, whereby the direction of feed of one of said ribbons may be reversed without reversing another.

4. In a printing device, the combination of a plurality of ink ribbons, driving means common to said ink ribbons, and separate means, each automatically controlled by its ribbon, for reversing the direction of feed of said ribbons.

5. In a printing device, the combination of a plurality of ink ribbons, means for bringing one or another of said ribbons to printing position, means for imparting a longitudinal feed to that ribbon only that is in printing position, and separate means for reversing the direction of the longitudinal feed of said ribbons.

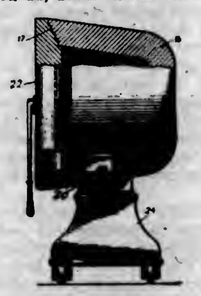
[Claims 6 to 63 not printed in the Gazette.]

882,994. AIR-FORCING MEANS FOR A GAS-GENERATOR. GEORGE P. CAMPBELL and FRANK H. RINGEMANN, Cincinnati, Ohio. Filed Apr. 1, 1904. Serial No. 201,035.



An air forcing means consisting of a stationary vessel closed at its lower end and open at its upper end and a second vessel open at its lower end and closed at its upper end and telescoping into the lower vessel in combination with a piston cylinder, a piston within the cylinder whose reciprocation actuates the movable vessel of the air reservoir, a water supply pipe for admitting water under pressure to the piston cylinder for actuating the piston and a valve for regulating the supply of water to the piston cylinder consisting of a valve casing having a discharge opening and a channel leading into the piston cylinder, a valve for regulating the opening and closing of the channel and the opening and closing of the discharge, whose valve stem extends beyond its valve casing, an arm pivoted adjacent to the water valve and carrying a weight at its outer end, means for coupling it to the upper vessel of the air reservoir whereby the raising of the vessel throws the arm in contact with the valve stem actuating it to open the discharge and close off the supply of water to the piston cylinder and the lowering of the vessel actuates the arm to close the discharge and open the supply to the piston cylinder, substantially as shown and described.

882,995. SAFE. CHARLES U. CARPENTER, New York, N. Y. Filed Oct. 14, 1907. Serial No. 397,871.



A safe, consisting of the combination of a body formed of a single piece of forged steel, with a door.

882,996. FASTENER. ALFRED M. CLARK, Kalamazoo, Mich. Filed May 29, 1906. Serial No. 319,270.



1. The combination with a band or tape of a fastener formed of a single piece of sheet metal consisting of a body portion, a transversely arranged hook-like engaging member having a forwardly projecting lug on its forward edge, a transversely arranged hook-like engaging member arranged at the rear thereof, a guide piece projecting from said body below said engaging members, and a projecting finger piece on the opposite side of said body.

2. The combination with a band or tape, of a fastener formed of a single piece of sheet metal consisting of a body portion, a transversely arranged hook-like engaging member having a forwardly projecting lug on its forward edge, a transversely arranged hook-like engaging member arranged at the rear thereof, and a guide piece projecting from said body below said engaging members.

3. The combination with a band or tape, of a fastener formed of a single piece of sheet metal consisting of a body portion, a transversely-arranged hook-like engaging member having a forwardly-projecting lug on its forward edge and a transversely-arranged hook-like member arranged at the rear thereof, said front engaging member being adapted to receive a single thickness of tape and said rear engaging member being adapted to receive a double thickness of tape, whereby said tape may be passed under both of said engaging members and turned rearwardly over the front engaging member and again passed under the rear engaging member, as specified.

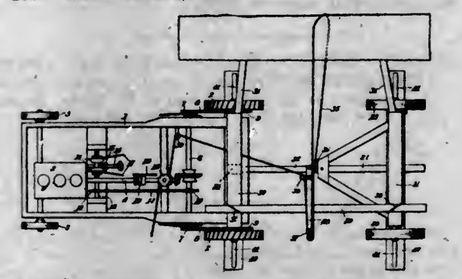
4. The combination with a band or tape, of a fastener formed of a single piece of sheet metal consisting of a body portion, a transversely-arranged hook-like engaging member, and a transversely-arranged hook-like member arranged at the rear thereof, said front engaging member being adapted to receive a single thickness of tape and said rear engaging member being adapted to receive a double thickness of tape, whereby said tape may be passed under both of said engaging members and turned rearwardly over the front engaging member and again passed under the rear engaging member, as specified.

882,997. BLOWPIPE. GEORGES CLAUDE, Paris, France. Filed Dec. 27, 1906. Serial No. 349,737.



In a blow pipe adapted for using a mixture of oxygen and a combustible gas, a mixing chamber, a main burner connected therewith by a coiled tube and a supplemental burner connected with said mixing chamber and located in proximity to said tube, said last named burner being adapted to utilise a portion of the gaseous mixture in heating the gases passing through said coiled tube, substantially as described.

882,998. SIX-WHEELED LOGGING-AUTOMOBILE. NATHAN F. COFFEY, Black Rock, Ark. Filed Oct. 1, 1907. Serial No. 395,362.



1. The combination, with a main truck, of a two-wheeled extension truck connected to said main truck, a derrick post on said extension truck, a capstan on said main truck, and a cable extending from said capstan over pulleys on said derrick post for the purpose specified.

2. The combination, with a main truck, of a two-wheeled extension truck connected to said main truck, a derrick post hinged to said extension truck and adapted to be inclined towards either side of the vehicle, means to retain said post in either position, a capstan on said main truck, and a cable extending from said capstan over pul-

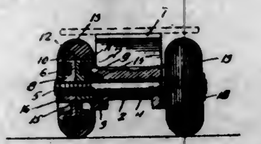
leys on said derrick post for the purpose of drawing articles from either side of the vehicle.

3. The combination, with a main truck, of a two-wheeled extension truck having a reach bar connected to said main truck, a derrick post hinged to said reach bar and adapted to be inclined towards either side of the vehicle, a beam secured to said post, bolsters on said main and auxiliary truck, means to secure the ends of said beams to said bolsters in either position of said post, a capstan on the main truck and a cable extending from said capstan over pulleys on said post for the purpose specified.

4. The combination, with a motor driven main truck, of a two-wheeled extension truck connected to said main truck, a derrick post on said extension truck, a capstan on said main truck and geared up with the driving motor, and a cable extending from said capstan over pulleys on said derrick post for the purpose specified.

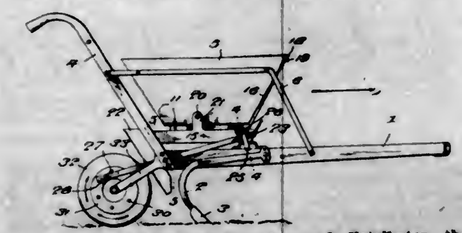
5. The combination, with a motor driven main truck, of a two-wheeled extension truck connected to said main truck, an auxiliary shaft on said main truck having driving connection with the motor shaft, two facing beveled friction wheels on said auxiliary shaft, a beveled friction wheel on the steering shaft and arranged between said wheels on said auxiliary shaft, means to move either of said latter wheels into contact with the wheel on the steering shaft for the purpose specified, a derrick post on said extension truck, a capstan on said main truck and geared up with the motor shaft, and a cable extending from said capstan over pulleys on said derrick post for the purpose specified.

882,999. ROLLER-SKATE. EMORY H. COPENHAVER and WALTER COLVIN, Dunlevy, Pa. Filed Dec. 18, 1907. Serial No. 407,039.



The combination with a roller skate bearing, and an axle extending therethrough, of wheels fixed upon the ends of said axle, each wheel comprising an outer part and an inner part, ball bearings arranged between said skate bearing and the inner parts of said wheels, each part having a hub portion and a rim portion, the rim portions of said wheels providing a circumferential dove-tail shaped groove, a resilient tire fitting upon said rim and having a dove-tail shaped tongue engaging in the groove provided therefor, substantially as described.

883,000. COMBINED FURROW-MAKER AND FERTILIZER-DISTRIBUTER. WILLIAM O. CUMMING, Macon, Ga., assignor to R. C. Hicks and J. W. Hicks, Macon, Ga. Filed Dec. 19, 1907. Serial No. 407,170.



1. In a combined furrow maker and distributer, the combination with a beam; of a hopper, means to support said hopper above the beam, a regulating board at the lower end of said hopper, a pan pivotally secured to said hopper and below the regulating board and means to simultaneously agitate said pan and regulating board.

2. In a distributer of the class described, the combination with a beam; of a hopper supported above said beam, a frame at the lower end of said hopper having a passage at its forward end, a regulating board pivotally secured in said frame, means to adjustably support the free end of the regulating board, a pan pivoted to said hopper and extending below said frame and means to simultaneously agitate said pan and board, whereby the contents of the hopper will be directed into the pan and moved to the rear end thereof.

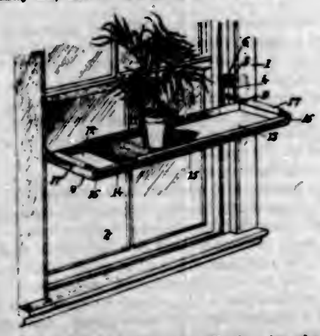
3. In a distributer of the class described, the combination with a beam; of a hopper fixed to said beam a frame at the lower end of the hopper, said frame having a passage at one end thereof, a regulating board, means to adjustably pivot one end of the regulating board in the closed end of the frame, adjusting means at the opposite end of the board, a pan pivotally secured to the hopper and extending below the same, a rod carried by the pan adapted to raise the free end of the regulating board and means to swing said pan, whereby the contents of the hopper will be fed into the pan and the contents of the pan moved to the rear end thereof.

4. In a distributer of the class described, the combination with a beam, a hopper carried by the beam, a pan pivotally mounted on said hopper and below the lower end thereof and means to feed the contents of the hopper into the pan; of a rocking bar, means to pivotally mount the rocking bar on the beam, a friction roller on said pan adapted to be engaged by the forward end of the rocking bar, a trigger on the opposite end of said bar and means to engage said trigger and lower the same and direct the opposite end of the bar into engagement with the friction roller and tilt the pan, when the distributer is moved forwardly.

5. In a distributer of the class described, the combination with a hopper, a pan pivotally secured at the lower end of said hopper and means to support the contents of the hopper and gradually feed the same into said pan; of a rocking bar pivoted to said beam, a loop to loosely receive the forward end of the rocking bar, a trigger at the opposite end of said bar, means to adjust the angle of the trigger with respect to said bar, a wheel carried by said beam and means on the wheel adapted to engage and lower said trigger and elevate the forward end of the bar, whereby the pan will be rocked and the contents thereof moved to the rear end of the pan.

[Claims 6 to 10 not printed in the Gazette.]

883,001. SHELF. GEORGE W. CURTIS, New Britain, Conn. Filed May 28, 1907. Serial No. 376,050.



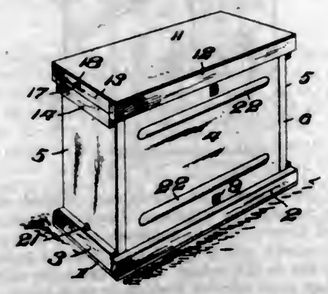
1. In a device of the class described, a bracket comprising an angle member having flanges, one of said flanges having an opening formed to receive and operatively engage a supporting projection, and a supporting member comprising a U-shaped bar having the ends rigidly mounted at a flange of said angle member.

2. In a device of the class described, a bracket comprising an angle member having flanges presenting protective outer faces, said flanges having elongated openings presenting enlarged portions to receive supporting projections, and a supporting member comprising a U-shaped bar having the ends rigidly mounted at a flange of said angle member.

3. In a device of the class described, a bracket comprising an angle member having flanges, one of said flanges having an opening arranged to receive and operatively engage a supporting projection, a supporting member comprising a U-shaped bar having the ends rigidly mounted at a flange of said angle member, and an extensible shelf comprising telescoping pans, one of said pans having at the end a supporting flange adapted to be removably carried by said bar.

4. In a device of the class described, brackets comprising angle members having flanges presenting protective outer faces, said flanges having elongated openings presenting enlarged portions to receive supporting projections, said brackets having supporting members comprising U-shaped bars having the ends rigidly mounted at flanges of said angle members, and an extensible shelf comprising telescoping pans having at the ends supporting flanges adapted to be removably carried by bars of said supporting members.

883,002. CRATE. EDWIN N. DAVIS, Lodi, Wis. Filed Mar. 8, 1907. Serial No. 361,801.

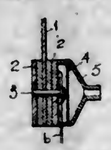


1. The herein described crate comprising a floor, rails at the edges of said floor, blocks interposed between said rails and at the ends of said floor, said blocks and rails being of different height upwardly extending hooks on said blocks, end walls having slots therein adapted to receive said hooks, L-shaped terminals on said end walls, side walls having L-shaped terminals at the ends thereof adapted to telescopically interlock with the terminals on the end walls, said side walls having ribs, a partition wall adapted to engage inwardly directed ears on the side walls, a cover for said walls said cover having rails at its edges and blocks at the ends thereof between said rails, said rails and blocks being opposite in height with respect to those on the floor thereof, and a spring-latch on the upper blocks adapted to engage eye-bolts on the strips and lower blocks whereby said cover may be secured over the walls in their folded or assembled position.

2. A crate of the class described comprising a floor section, rails secured to the edges of said floor section, blocks between the ends of said rails and extending above the same, said rails and blocks forming a cavity, end walls adapted to enter said cavity and engage said blocks, hooks on the blocks adapted to engage and hold the end walls from upward movement, L-shaped terminals on the end walls, side walls adapted to enter said cavity and engage said rails, L-shaped terminals on said side-walls adapted to telescopically receive the terminals on the end wall, ears arranged in pairs and formed by directing inwardly portions of the side walls, a partition wall adapted to engage said ears and longitudinal ribs on said side walls.

3. The herein described crate comprising a floor, end and side walls for said floor, means to hold said walls into engagement with the floor, a cover for said walls, a lining for said cover and floor, said lining having right angled extensions thereon and hooked terminals at the free edges of said extensions whereby when said linings are placed in position foreign particles will be excluded from the interior of the crate.

883,003. AUDIPHONE. ORRIN J. DAVI, Washington, D. C., assignor to George G. Schroeder, Washington, D. C. Filed May 3, 1907. Serial No. 371,649.



1. An audiphone comprising a flat yoke, discus pieces secured directly to the ends of said yoke, funnel shaped ear pieces having their larger ends closed by said discus pieces, a diaphragm in each ear piece, and means for electrically vibrating said diaphragms.

2. An audiphone comprising a flat yoke, discus pieces secured directly to the ends of said yoke, funnel shaped ear pieces having their larger ends closed by said discus pieces, a diaphragm in each ear piece, a core for each diaphragm, each core being passed through one end of said yoke and also through the adjacent discus pieces, and means for energizing said cores.

3. An audiphone comprising a flat yoke, discus pieces secured directly to each face of said yoke adjacent each end thereof, funnel shaped ear pieces having their larger ends closed by the innermost discus pieces of each set, a diaphragm in each ear piece, and means for electrically vibrating said diaphragms.

4. An audiphone comprising a flat yoke, discus pieces secured directly to each face of said yoke adjacent each end thereof, funnel shaped ear pieces having their larger ends closed by the innermost discus pieces of each set, a diaphragm in each ear piece, a core for each diaphragm, each core being passed through one end of said yoke and also through the adjacent discus pieces, and means for energizing said cores.

5. An audiphone comprising a flat yoke, discus pieces secured directly to the ends of said yoke, funnel shaped ear pieces having their larger ends closed by said discus pieces, a diaphragm in each ear piece, a core for each diaphragm, each core being passed through one end of said yoke and also through the adjacent discus pieces, and an electric circuit for energizing said core, said circuit including said yoke.

[Claims 6 to 8 not printed in the Gazette.]

883,004. ADJUSTABLE ARM-SUPPORTER. CATHERINE H. DINGMAN, San Francisco, Cal. Filed Sept. 6, 1907. Serial No. 391,667.



A sling for an arm and hand composed of a pocket having a rounded upper portion, one end being closed and the other open, adapting the elbow to rest in the closed end and the hand to extend to the open end, a padded shoulder strap, made in rounded form, permanently connected at the upper edge of the closed end and adapted to be adjustably connected with the upper edges of the open end.

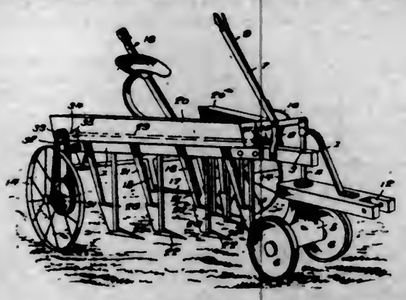
883,005. POST. JOHN H. DODDRIDGE, Vincennes, Ind. Filed Aug. 17, 1907. Serial No. 389,032.

A fence post comprising a composition body having perforated reinforcing bars located therein and extending in the direction of the length of the body, and a helical coil

arranged longitudinally in the body contiguous to said bars, with the convolutions crossing the perforations therein, whereby the composition of the body forms a bond between the bars and coil through said perforations.



883,006. COMBINED CULTIVATOR AND PLANTER. HENRY H. ENNS, DIETRICH H. ENNS, and JOHN J. WIEBE, Hooker, Okla. Filed Dec. 10, 1907. Serial No. 405,893.

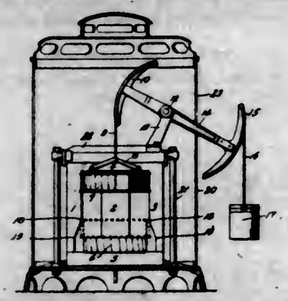


1. In a combined cultivator and planter, the combination with a converging frame, supports for each end of said frame and means to operate said supports to raise or lower the frame; of hoppers on the converging portions of the frame, spouts depending from said hoppers, shanks depending from the frame and immediately in front of the lower ends of the spouts, cultivating shovels on the lower ends of said shanks, shafts extending longitudinally through said hoppers, pinions on the meeting ends of said shafts adapted to mesh with each other and rotate said shafts in unison, plates slidably mounted in said hoppers, above said spouts, said plates having openings therein, means to normally hold said openings out of registration with the spouts and means on said shafts to move said plates longitudinally and register the openings in the plates with the spouts.

2. In a combined cultivator and planter, the combination with a converging frame, shanks depending from said frame, shovels on said shanks, a standard at the forward end of said frame, a supporting truck for the standard, means to adjust the forward end of the frame on said standard, an axle at the rear end of the frame, supporting wheels on said axle, a crank at the longitudinal center of said axle and means connected to said crank to raise and lower the rear end of the frame; of hoppers on the converging portions of said frame, spouts depending from said hopper and adapted to feed the grain in the rear of said shovels and means to deposit the grain in said spouts.

3. In a combined cultivator and planter, the combination with a substantially V-shaped frame, supporting means for each end of said frame, means to independently raise or lower the ends of the frame, shanks depending from said frame and cultivating shovels on said shanks; of hoppers on the converging portions of said frame, shafts extending longitudinally of said hoppers, plates slidably mounted in said hoppers, said plates having openings therein, spouts depending from said hoppers and below said plates, disks on said shafts, means on said disks to move said plates longitudinally and register the openings therein with the spouts and means to rotate said shafts in unison.

888,007. ALTERNATING-CURRENT REGULATOR. AUGUSTINE R. EVERETT, Rugby, England, assignor to General Electric Company, a Corporation of New York. Filed July 13, 1906. Serial No. 326,022.



1. The combination of inductively related windings, means for causing the windings to separate upon increase in current therein and to approach each other upon decrease of current, and means for varying the mean length of the air gap in the leakage path between the coils as the coils change their relative position to each other.

2. In combination, a stationary coil, a movable coöperating coil, a core leg surrounded by the two coils, and a coöperating core leg beside the first, said core legs being so arranged that the distance between them adjacent the stationary coil is greater than at a portion remote therefrom.

3. In combination, a stationary core, a stationary winding, and a movable coöperating winding, said windings and core being so arranged that the mean length of the air gap in the leakage path between the windings is increased as the windings approach each other.

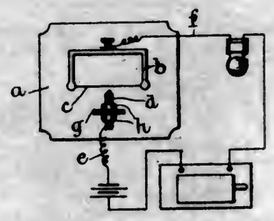
4. In a constant current transformer, the combination of a primary winding, a secondary winding, means for allowing the said windings to move away from each other upon increase in current and to approach each other upon decrease in current in the secondary winding, and means for varying the mean length of the air gap in the path of the leakage flux between said windings as said windings change their relative position.

5. In a constant current transformer, a core leg, a primary winding surrounding said core leg, a secondary winding also surrounding said core leg, and a coöperating core leg, the space between adjacent sides of said core legs being greater in the vicinity of the position occupied by the windings when they are in the full load position than the average length of the gap or space between the portions of adjacent sides of the legs when the windings are separated in the no load or partial load conditions.

[Claim 6 not printed in the Gazette.]

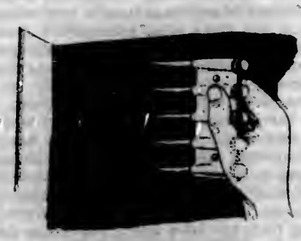
883,008. THERMOSTAT. CHARLES J. FOX, London, England. Original application filed Apr. 3, 1906, Serial No. 309,603. Divided and this application filed Jan. 28, 1907. Serial No. 354,531.

1. A thermostat comprising a non-metallic base, an approximately U-shaped metal frame on the base and connected to one pole of an electric circuit, a horizontally disposed straight strip of metal stretched between the members of the frame and adapted to sag downwards, when expanded by heat, an adjustable screw terminal connected to the other pole of the electric circuit and with which the metal strip is adapted to make contact, an insulator support carried by the base and in which the screw is mounted, nuts on the screw, one on each side of the support, for adjusting and locking the terminal in position, a battery interposed in the electric-circuit and capable of sending a current through said circuit when the latter is closed by contact of the metal strip with the adjustable terminal, and an alarm interposed in the circuit and capable of being set in operation when the circuit is traversed by a current, substantially as specified.



2. A thermostat comprising a non-metallic base, an approximately U-shaped metal frame, on the base and connected with one pole of an electric circuit, pillars arranged between the members of the frame and in alinement with the ends thereof, a plurality of horizontally disposed straight strips of metal stretched across between the ends of the frame and the pillars and adapted to sag downwards, when expanded by heat, a plurality of adjustable screw terminals connected to the other pole of the electric circuits and with which the metal strips are adapted to make contact, insulator supports carried by the base and in which the screws are mounted, means for adjusting and locking the terminals on the insulator supports, a battery interposed in the electric circuit and connected with a metal frame and capable of sending a current through any of the circuits when the latter are closed by contact of the metal strips with the adjustable terminals, and alarms interposed in the circuits and capable of being set in operation when any of the circuits are traversed by a current, substantially as specified.

883,009. CRAYON-HOLDER. MARY M. GEE, Orange, N. J. Filed Jan. 4, 1908. Serial No. 409,256.



1. A crayon holder comprising two oppositely-disposed members of sheet material, each having substantially one-half of each of a series of crayon sockets formed therein, and means connecting said members together.

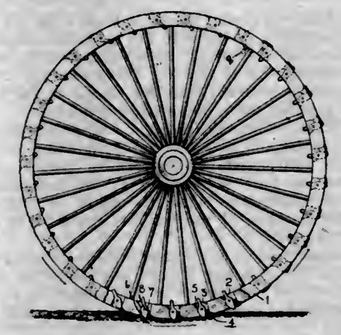
2. A crayon holder comprising two members, each having substantially one-half of each of a series of crayon sockets, and means pivotally connecting said members together, whereby the sockets may be expanded and contracted.

3. A crayon holder comprising two opposed members hinged together, each having substantially one-half of each of a series of crayon sockets formed therein, and a spring pressing on said members to normally close the sockets and clamp the crayons therein.

4. A crayon holder comprising two sheet metal members hinged together, each consisting of a leaf having a series of depending elements registering with and forming in connection with the like elements of the opposite leaf, a series of crayon sockets.

5. A crayon holder comprising two opposed sheet metal members comprising a series of depending elements forming in connection with the like elements of the opposite member when brought together, conical crayon sockets, means pivotally connecting the two members together, and a spring carried on the pivot, having the free ends thereof pressing on said leaves and forcing the depending elements of said members together.

883,010. TRACTION-WHEEL. ALFRED E. GLASCOCK, Washington, D. C., assignor, by mesne assignments, to Farm Motor Company, a Corporation of South Dakota. Filed Mar. 8, 1907. Serial No. 361,369.



1. A traction wheel a tractor pivotally mounted in said wheel and adapted to project beyond the rim thereof, said tractor being held normally retracted by the centrifugal force developed in the rotation of the wheel, and a fixed means for positively withdrawing the tractor when projected, at each revolution of the wheel.

2. A traction wheel, a tractor mounted thereon and adapted to be normally retracted within the rim of the wheel by the centrifugal force developed in the rotation thereof, and means whereby earth will be forced between the tractor and said rim by the spinning of said wheel.

3. A traction wheel, a tractor mounted in the rim thereof and free to swing under the influence of the centrifugal force developed in the rotation of said wheel, and means whereby earth will be forced between said tractor and said rim by the spinning of said wheel.

4. A traction wheel having a rim provided with perforations each having an inclined duct and a panduriform tractor movably mounted in each perforation.

5. A traction wheel having a rim provided with perforations each having an inclined duct and a panduriform tractor pivotally mounted in each perforation.

[Claims 6 to 21 not printed in the Gazette.]

883,011. BRAZING. WILLIAM E. GLEISSNER, Abilene, Kans. Filed Feb. 5, 1907. Serial No. 355,953.

The herein described process of brazing a broken casting, which consists in commingling a solution of borax, water and solvent with a compound consisting of two thirds of powdered iron and one third of refined powdered borax until the mixture is of about the consistency of thick cream, then applying the mixture to the break while the casting is cold, then drying the mixture, then applying powdered borax around the joint and bringing the casting to an even bright red heat and applying powdered borax and spelter in the order named to the joint while heated, and then permitting the casting to slowly cool.

883,012. BRAKE-HEAD. CHARLES B. GOSNELL and ADAM M. HARRIS, Keyser, W. Va. Filed June 21, 1907. Serial No. 380,173.



1. A brake comprising a head, a shoe, a key for detachably connecting the shoe with the head, and a hanger on which the head is held by the shoe, in combination with means independent of the key for preventing the head from becoming detached from the hanger in the event of the key dropping out or detachment of the shoe.

2. A brake comprising a head, a shoe, means for detachably connecting the shoe with the head, and a hanger on which the head is held by the shoe, in combination with means on the head independent of the first-mentioned means for engagement with the hanger to prevent the head from dropping off the latter in the event of detachment of the shoe.

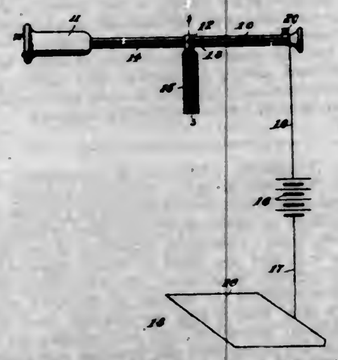
3. The combination of a hanger, a brake pivotally mounted thereon and including a head, and means on the head located adjacent the portion of the hanger on which the brake swings for preventing accidental detachment of the head.

4. The combination of a link-shaped hanger, a brake comprising a head and shoe detachably connected and mounted on the link, and laterally extending members on the head arranged to engage the link for preventing the head from dropping off the latter.

5. The combination of a head, a shoe, a key for connecting the shoe and head, and a hanger on which the head is mounted, with an attachment applied to the head for preventing the latter from dropping off the hanger in the event of breakage or displacement of the key.

[Claims 6 to 8 not printed in the Gazette.]

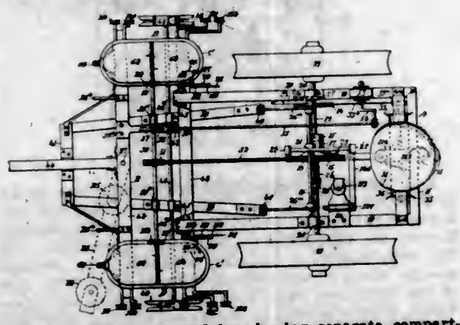
883,013. VIBRATOR. ANDREW G. GRAY, St. John, New Brunswick, Canada. Filed Sept. 4, 1907. Serial No. 391,297.



1. A device of the class described, comprising a tube having a longitudinally-disposed slot therein, a slide within said tube extending longitudinally thereof and having a portion thereof extending through said slot, and a plurality of springs carried by said slide and adapted to vibrate and transmit vibrations to the tube as the slide is moved longitudinally of the latter.

2. A device of the class described, comprising an insulating handle, an induction coil disposed therein, a metallic face plate in electrical connection with said coil, a tube connected to said handle and also connected to said coil, a slide movable longitudinally of said tube and adapted to mechanically vibrate the same, a battery, means connecting said battery and said tube, and means also connected to said battery and adapted to engage with the body.

883,014. PLANTER. WILLIAM B. HAMPTON, Fremont, Mo. Filed July 2, 1907. Serial No. 381,830.



1. In a planter, a seed box having separate compartments therein, a discharge opening for each compartment, a seed discharge chute receiving material from each of said openings, a seed drop disk in each compartment, a gear controlling the movement of each of the disks, a driving pinion for the gears, and means for shifting said pinion for engagement with either or both of said disk gears.

2. In a planter, a seed drop box divided into separate compartments, each compartment having separate seed discharge openings, a seed delivery chute common to both of said openings in each compartment, the pockets whereof are adapted to successively register with the discharge openings, and means adjustable to either or simultaneously to both of the seed disks, to revolve the same.

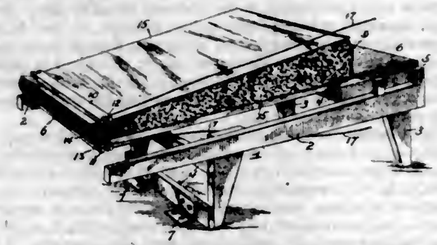
3. In a planter, a seed drop box divided into compartments, each compartment having a separate seed delivery opening, a seed delivery chute common to both of said openings, a rotatable seed drop disk in each compartment, the pockets of the disks being arranged to consecutively register with the respective discharge openings in said compartments, and means for revolving said disks independently or collectively.

4. In a planter, a seed drop box divided into compartments, each compartment having a separate seed delivery opening, a seed delivery chute common to both of said openings, a rotatable seed drop disk in each compartment, a gear secured to each of the said disks, the teeth of the gear on one disk being at a greater elevation than the teeth on the gear of the opposing disk, a drive shaft, a pinion driven from the drive shaft, and means for raising and lowering the pinion to bring it in engagement with one or the other of the disk gears or in engagement with both of said gears.

5. In a planter, a seed drop box divided into compartments, each compartment having a separate seed delivery opening, a seed delivery chute common to both of said openings, a rotatable seed drop disk in each compartment, a gear secured to each of the said disks, the teeth of the gear on one disk being at a greater elevation than the teeth on the gear of the opposing disk, a drive shaft, a pinion driven from the drive shaft, and means for raising and lowering the pinion to bring it in engagement with one or the other of the disk gears or in engagement with both of said gears, a false bottom for each compartment located over the disk therein, each of the said false bottoms being provided with a seed exit opening arranged correspondingly to and over the seed pockets in the disks, and spring fingers extending down from the opening in the false bottom, the said fingers projecting into both of the pockets in the disks as said disks are revolved.

[Claims 6 to 10 not printed in the Gazette.]

883,015. MATTRESS-MAKING MACHINE. DANIEL HAYNES, Atlanta, Ga. Filed Nov. 22, 1907. Serial No. 403,400.



1. A mattress making machine comprising a table free at one end, means for clamping one end of a bat to the free end of the table, and means for withdrawing the clamping means after a ticking has been placed over and made to inclose the table, the bat and the clamp which secures the bat to the table.

2. A mattress making machine comprising a table free at one end, a clamp comprising two members removably connected together at their ends, for securing one end of a bat to the free end of the table, and means for separately withdrawing the respective members of the clamp after the clamp, the table and the bat shall have been inclosed within a ticking.

3. A mattress making machine comprising a table free at one end, a clamp comprising two members removably connected together at their ends for clamping one end of a bat to the clamp, the table and the free end of the table, and a cord attached to each member of the clamp for withdrawing the latter after the bat shall have been inclosed in a ticking.

4. The combination with a table free at one end, of a clamp for securing one end of a bat to the free end of the table, said clamp comprising two members, one to be disposed under the table and the other over the bat, and flexible connectors at the ends of the clamping members, and a cord attached to each clamping member for withdrawing the same after the clamp, the table and the bat shall have been inclosed within a ticking.

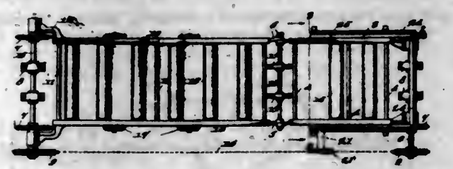
5. In a mattress making machine, the combination with a frame and means for hinging said frame to a support, whereby the frame can be tilted, of a table secured at one end over the frame and free at the other end, a clamp comprising two members removably connected together at their ends for clamping one end of a bat to the free end of the table, and means for separately withdrawing the respective members of the clamp after the clamp, the table and the bat shall have been inclosed within the ticking.

[Claim 6 not printed in the Gazette.]

883,016. SECTIONAL CONVEYER-FRAME FOR EXCAVATING-MACHINES. ANDERSON C. HECK, Findlay, Ohio. Filed May 27, 1907. Serial No. 375,928.

1. The combination with a conveyer for excavating machines comprising two frame members pivotally connected together having guiding rollers 16 journaled in said frame, members, and provided with guiding disks 15 journaled in the pivotal portion of said frame, of a hopper disposed at the receiving end of the conveyer comprising a suitably-supported three sided frame provided with depending flexible means disposed substantially in engagement with the conveyer apron, substantially as described.

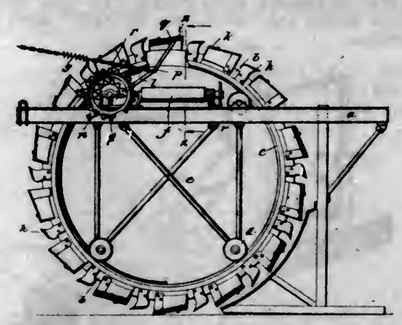
2. The combination with a conveyer frame for excavating machines comprising two frame members pivotally connected together having guiding rollers 16 journaled in said frame members and provided with guiding disks 15, journaled in the pivotal portion of said frame, of a hopper disposed at the receiving end of said conveyer frame, and comprising a three sided suitably-supported frame provided with depending sides projecting into engagement with the apron of said conveyer, and composed of canvas or similar material, substantially as described.



3. The combination of a conveyer frame for ditching machines comprising two frame members hingedly connected together, one of said frame members being adapted to be rigidly secured to the machine, of guiding rollers 16 journaled within said frame members, guiding disks 15 journaled in said hinged portion, means for driving an endless conveyer apron over said rollers, a hopper carried by said rigid frame member and comprising a suitably supported three sided frame provided with depending sides of canvas or similar material projecting into engagement with the conveyer apron, and guiding gearing located under said sides, substantially as described.

4. A conveyer support for excavating machines containing as elements a two-part frame member provided with projecting bearing arms at one end thereof, a shaft passing through said bearings pivotally connecting said frame member, rotatably mounted wheels on said shaft, rotatable end shafts and wheels carried thereby, rollers journaled within said frame, idle sprocket wheels disposed along said frame, driving means carried by said end shafts, said sprockets, rollers and wheels coöperating to movably support an endless conveyer apron, brackets 23 supported on said frame, a three sided frame 24 supported on said brackets and flexible sides 25 supported by said three sided frame and reaching down and slidingly engaging said apron, substantially as described.

883,017. DITCHING-WHEEL. ANDERSON C. HECK, Findlay, Ohio. Filed July 22, 1907. Serial No. 384,910.



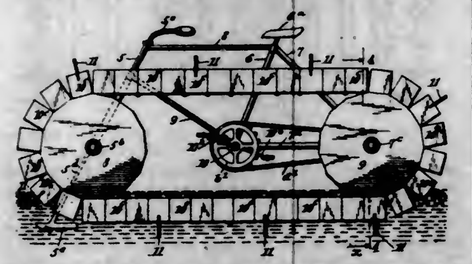
1. The combination of a ditching wheel, having buckets thereon, a supporting frame for said wheel and a scraper consisting of the frame *l* provided with pivots, bent portions and the loop *q* mounted on said frame, and adapted, as the wheel revolves, to clean out the dirt from the interior of the buckets successively, substantially as described.

2. The combination of a ditching wheel, having buckets thereon, open at both ends, each bucket being provided with a pivoted bottom at one end thereof, a supporting

frame for said wheel, and a scraper pivotally mounted on said frame, substantially as described.

3. The combination of a ditching wheel, provided with buckets thereon, each of said buckets being provided with a hinged bottom, a supporting frame, a scraper pivotally mounted on said frame and adapted to contact with the bottoms of said buckets successively, and means for holding said scraper yieldingly against the bottom of said buckets as the wheel revolves, substantially as described.

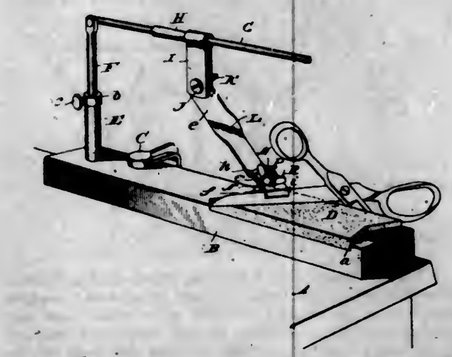
883,018. WATER-BICYCLE. JOHN L. HENRY, Watsonville, Cal. Filed July 25, 1907. Serial No. 385,464.



1. A device of the class described, comprising a frame, spaced axles journaled on the frame, a hollow water-tight drum having a polygonal contour secured on the ends of each axle, endless bands formed of a series of water-tight rectangular boxes hinged together at adjacent corners, running on the drums, the boxes composing the bands being of substantially the same area as the polygonal surfaces of the drums whereby to contact therewith as the drums are rotated, and means for rotating the drums.

2. The combination with a frame, spaced axles rotatable on the frame, and means for rotating one axle by foot power, of two hollow water-tight drums secured on respective ends of each axle, said drums having polygonal contours, two endless bands, each band formed of a series of water-tight rectangular boxes hinged together at adjacent corners, the bands having looped ends, boxes composing the loops having contact throughout their areas with respective sides on the peripheries of the drums whereon said bands are mounted, means for rotating the drums by applied foot power, and blades radiating from the drums at intervals.

883,019. SCISSORS-SHARPENER. MICHAEL HENRY, Terre Haute, Ind. Filed Dec. 17, 1907. Serial No. 406,914.



1. A device for sharpening scissors and other edge tools, comprising an abrasive medium, an upright mounted to rotate about its axis and fixed with respect to the abrasive medium, a guide pivotally connected with the said upright and arranged to be moved up and down thereon, and means for holding the tool to be sharpened; the said means being carried by and movable rectilinearly on the said guide.

2. A device for sharpening scissors and other edge tools, comprising an abrasive medium, an upright fixed with respect to the abrasive medium and mounted to turn about its axis, a guide pivotally connected with the said upright and arranged to swing vertically, means carried by and movable rectilinearly on the said guide, an arm connected with and extending downward and forward relative to said means and terminating at its lower and forward end in a clamping member having a shoulder disposed at an acute angle to the line of movement of said means and also having a lip reaching forward from the said shoulder, a clamping member disposed on the first mentioned member and having a forward depending flange disposed at an acute angle to the line of movement of said means and arranged to coöperate with the lip of the lower clamping member, and means for crowding the said clamping members against a tool.

3. A device for sharpening scissors and other edge tools, comprising a base, an abrasive medium carried thereby, means connected with the base and guided to move rectilinearly with respect to the base and the abrasive medium, a clamping member connected with the said means and having a shoulder disposed at an acute angle to the line of movement of said means and also having a lip reaching forward from the said shoulder, a clamping member disposed on the first mentioned member and having a forward depending flange disposed at an acute angle to the line of movement of the said means and arranged to cooperate with the lip of the lower clamping member, and means adjustably connecting the said members.

4. A device for sharpening scissors and other edge tools, comprising a base, an abrasive medium fixed to and carried thereby, an upright mounted to rotate about its axis on the base and fixed with respect to the abrasive medium, a guide rod pivotally connected with the said upright and arranged to swing vertically, a sleeve movable rectilinearly on said rod, and means for holding the tool to be sharpened, carried by and movable with the said sleeve.

5. A device for sharpening scissors and other edge tools, comprising a base, an abrasive medium fixed to and carried by the base, an upright fixed with respect to the abrasive medium and mounted to rotate about its axis on the base, a guide rod pivotally connected with the said upright and arranged to swing vertically, a sleeve movable rectilinearly on said guide rod and having depending clamping members, and also having a bolt extending through said clamping members and a nut on the bolt, and an arm mounted on the bolt between the said clamping members and provided with means for holding the tool to be sharpened.

[Claim 6 not printed in the Gazette.]

883,020. REPEATING FIREARM. LEWIS L. HEPBURN, New Haven, Conn., assignor to The Marlin Firearms Company, New Haven, Conn., a Corporation of Connecticut. Filed Mar. 18, 1907. Serial No. 362,871.



1. In a repeating firearm, a barrel, a reciprocating breech-bolt, a magazine adjacent to the barrel and opening into the breech-frame, a carrier therein, a cartridge guard coöperating with the carrier to hold the cartridge against displacement, said guard being spring-pressed pivotally mounted at its lower end and projecting upwardly and laterally to overstand the carrier when the latter is depressed.

2. In a repeating firearm, a receiver, a barrel, a breech-block, a magazine parallel with the barrel and opening into the forward end of the receiver, a reciprocating action rod entering the receiver at the forward end and at one side of the magazine, a spring cut-off arranged to coöperate with the cartridges in the magazine, a lateral offset on said cut-off coöperating with the action rod, said cut-off being actuated to release the cartridges in the magazine when said action rod is advanced.

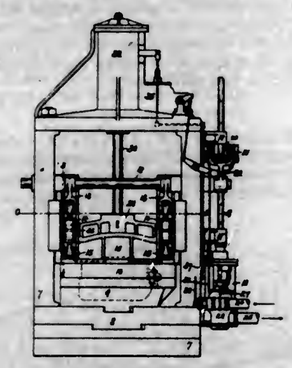
3. In a repeating firearm, a receiver, a barrel, a breech-block, a magazine parallel with the barrel and opening into the forward end of the receiver, a reciprocating action rod entering the receiver at the forward end and at one side of the magazine, a spring cut-off arranged to coöperate with the cartridges in the magazine, a lateral offset on said cut-off coöperating with the action rod, said cut-off being actuated to release the cartridges in the magazine when said action rod is advanced, said receiver being divided vertically to form separate detachable side-plates, one carried by the barrel, the other by the stock, the line of division being coincident with the line upon which the action rod enters the receiver, and means for detachably securing said separable parts in operative position.

4. In a repeating firearm, a barrel, a magazine, a receiver, breech mechanism therein, including a hinged carrier, a guard pivoted at its lower end in a recess in one side of said receiver and coöperating with said carrier to prevent the displacement of the cartridges thereon when said guard is projected, a spring therefor, said carrier operating to depress said guard when moved in one direction.

5. In a repeating firearm, a stock, a barrel, a magazine, breech mechanism, a receiver containing said breech mechanism and including one side plate permanently connected to the stock and another side plate removable from the first side plate and permanently connected to the barrel, an operating rod for the breech mechanism, said rod entering the receiver at its forward end and at one side of the magazine and on the line of division of the receiver, a yielding guide mounted in a recess in the receiver directly to the rear of and above the plane of the barrel, a guard coacting with the breech mechanism to prevent the displacement of a cartridge while carried by the breech mechanism, and a cut-off within the receiver and directly below the rear end of the magazine, a lateral projection from said cut-off coacting with said operating rod.

[Claim 6 not printed in the Gazette.]

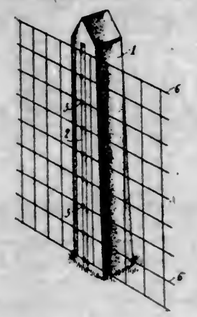
883,021. DRAWING-PRESS. HENRY J. HINDS, Toledo, Ohio, assignor to The Toledo Machine & Tool Company, Toledo, Ohio. Filed Apr. 19, 1907. Serial No. 369,175.



1. In a press of the class described, a frame, a blank-holder vertically movable in the frame, a forming plunger adapted to work downwardly through the blank-holder in its forming operation, a cylinder at the top of the frame, a piston mounted in the cylinder, a piston-rod projecting downwardly from the piston and carrying the forming plunger at its lower end, a second cylinder mounted at the side of the frame, a piston operating therein, a piston-rod projecting upwardly from said latter piston, a pair of rock-shafts journaled transversely of the frame and having cranks projected therefrom and connected to said latter piston-rod, toggle-connection between the rock-shafts and blank-holder, and independent means associated with each cylinder for controlling the movement of the pistons.

2. In a press of the class described, a frame, a vertically-disposed cylinder at the top of the frame, a piston mounted in said cylinder, a piston-rod projecting downwardly from the piston, a forming plunger carried at the lower end of the rod, a second vertically-disposed cylinder carried at the side of the frame, a piston operating therein, a piston-rod projecting from the piston, a blank-holder movable in the frame and having an opening through which the plunger works, toggle mechanism connecting said latter rod and blank-holder to impart movement from one to the other, and independent means associated with each cylinder for controlling the movements of the pistons.

883,022. CEMENT POST. CHARLES HORNSHAW, Port Huron, Mich. Filed Aug. 27, 1907. Serial No. 390,375.

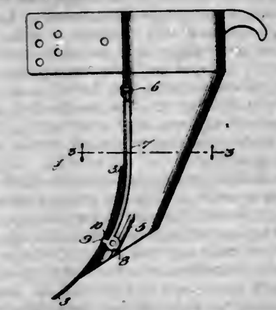


1. A fence post formed of plastic material and having embedded therein a wooden core, said wooden core having its edges lying flush with opposite sides of the post to provide means for the insertion of staples for holding the line wires of the fence in place.

2. A cement post comprising a cement body portion, an embedded wooden core, said core having openings therein through which the cement extends to anchor the core in place, said core lying flush at its edges with the opposite sides of the post.

3. A concrete fence post having embedded therein a wooden core treated with a preservative coat or dressing, said wooden core having openings therein through which the cement passes to anchor the core in the post, and the outer edges of said core lying flush with the opposite sides of the post.

883,023. DRILL-BOOT. WILEY HOUCK, Monte Vista, Colo., assignor of one-half to William S. French and S. Moses Keller, Monte Vista, Colo. Filed Oct. 16, 1907. Serial No. 397,757.

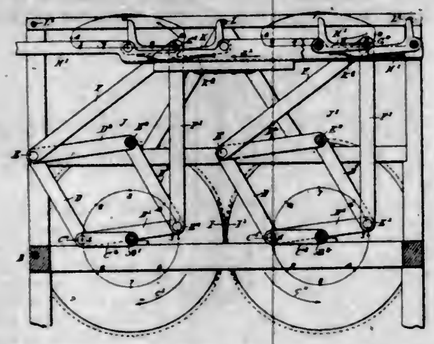


1. The combination with a drill boot having recesses formed in its side walls, of a point having lips to engage the recesses, and a spring pressed stud carried by the boot to engage the point.

2. The combination with a drill boot, of a point arranged for sliding connection with the boot, and means carried by the boot to engage and hold the point against sliding movement, said means being spring pressed toward the point and freely movable in a direction away from the point.

3. The combination with a drill boot having recesses formed in its side walls, of a point having lips to slidably engage the recesses, a stud adapted to be passed through an aperture in the boot and engage an alined aperture in the point, and a spring arm secured to the boot and carrying the stud.

883,024. MECHANICAL MOVEMENT. GEORGE A. HUMPERT, Pittsfield, Ill. Filed May 6, 1907. Serial No. 372,237.



1. A mechanical movement comprising a crank shaft, a reciprocating member, and a link mechanism connecting the said reciprocating member with the crank arm of the said crank shaft, the link mechanism having a fixed fulcrum located between the crank shaft and the connection with the reciprocating member and the links of the link mechanism being arranged to cause an even straight travel in one direction of the reciprocating member corresponding to and during one-half revolution of the said crank shaft.

2. A mechanical movement comprising a crank shaft, a reciprocating member, and a link mechanism connecting the said reciprocating member with the crank arm of the said crank shaft, the link mechanism having a fixed fulcrum located between the crank shaft and the connection with the reciprocating member and the links of the link mechanism being arranged to cause an even straight travel in one direction of the reciprocating member corresponding to and during one-half revolution of the said crank shaft, the travel of the reciprocating member in the reverse direction being in a curve and irregular relative to the other half revolution of the crank shaft.

3. A mechanical movement comprising a reciprocating member, crank shafts geared together to run in opposite directions, link mechanisms independently connected with the reciprocating member and with the crank arms of the crank shafts, each link mechanism having a fixed fulcrum, and means for throwing the link mechanisms alternately out of engagement with the said reciprocating member at the ends of the forward and backward strokes of the said reciprocating member.

4. In a mechanical movement a crank shaft, a pair of links pivotally connected with the crank arm of the said crank shaft, a second pair of links having a common fixed pivot and pivotally connected with the said first pair of links, a third pair of links pivotally connected with the parts connecting the first and second pairs of links with each other, and a reciprocating member with which the pivot of the third pair of links engages.

5. In a mechanical movement a crank shaft, a pair of links pivotally connected with the crank arm of the said crank shaft, a second pair of links having a common fixed pivot and pivotally connected with the said first pair of links, the said links being alike in length, the latter corresponding to the diameter of the circle described by the said crank arm, and the said fixed pivot of the second pair of links being a distance from the center of the crank shaft corresponding to the length of one of the said links, a third pair of links pivotally connected with the pivots connecting the first and second pairs of links with each other, and a reciprocating member with which the pivot of the third pair of links engages.

[Claims 6 and 7 not printed in the Gazette.]

883,025. ALARM. HAROLD IRWIN, Tikokino, New Zealand. Filed May 1, 1907. Serial No. 371,224.



1. An alarm comprising a casing provided with a removable cover, and a hopper-shaped bottom, a perforate explosion chamber detachably connected with the casing and into which the hopper discharges, a spider within the casing provided with a plurality of U-shaped hooks, a main fuse supported by the hooks, and a plurality of detonating devices having their fuses connected with the hooks and contacting with the main fuse.

2. An alarm comprising a slow burning fuse, means for supporting the same, suspended detonating devices having fuses, each of the latter being in contact with the said slow burning fuse, the latter on burning successively igniting the fuses of the said detonating devices to successively detach the latter, the detached detonating device being set off by its own burning fuse, a casing having a hopper-shaped bottom and containing the said slow burning fuse and the said detonating devices, and an open mesh receptacle hung on the said casing and into which discharges the said hopper.

3. An alarm comprising a casing having a hopper-shaped bottom, an explosion chamber into which discharges the said bottom, a spirally arranged support within the said casing and carrying spaced hooks for supporting a main slow burning fuse, and detonating devices having fuses each secured to one of the said hooks and in contact with the said main fuse.

883,026. SIGNALING ON RAILWAYS. CHARLES M. JACOBS and ROBERT J. INSELL, Reading, and ERNEST A. B. BOWDEN, Hanwell, England. Filed Aug. 9, 1907. Serial No. 387,859.

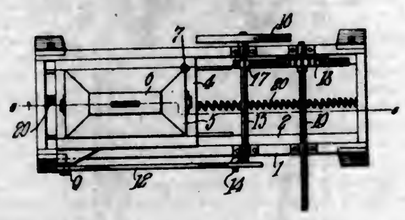


1. In an installation for signaling on railways, a ramp on the track, a mechanical device carried by the train and adapted to be operated by the ramp, a danger signal on the train adapted to be operated positively while the said mechanical device is being actuated by the ramp, a normally open electric circuit in part carried by the train and in part by the ramp, an electromagnetic device on the train situated in the said normally open electric circuit and adapted, when energised, to restrain the said danger signal, and means outside the track for closing the said normally open circuit.

2. In an installation for signaling on railways, a ramp on the track, a lever carried by the train and adapted to be raised by contact with the said ramp, a danger signal on the train, a mechanical connection between the said lever and the said signal whereby the latter is operated when the lever is raised, a normally open electric circuit in part carried by the train and in part by the ramp, an electromagnetic device on the train situated in the said normally open electric circuit and adapted when energized to restrain the said danger signal, and means outside the track for closing the said normally open circuit.

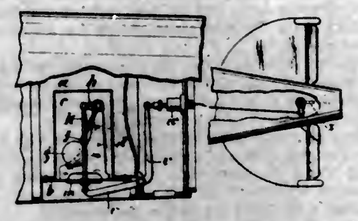
3. In an installation for signaling on railways, a ramp on the track, a lever carried by the train and adapted to be raised by contact with the said ramp, a whistle on the train, a valve controlling the said whistle, a lever controlling the said valve, a disk adapted to turn on its axis, a cam fixed on the said disk and adapted to engage the said valve controlling lever, a drum free to turn on its axis, an electromagnet mounted within the said drum and adapted to turn therewith, a pivoted armature to the said electromagnet adapted to extend through a slot in the said disk, means connecting the said drum with the said lever that comes in contact with the said ramp, the said means being adapted to turn the drum when the lever is raised, a normally open electric circuit in part carried by the train and in part by the said ramp, the said circuit including the said electromagnet, and means outside the track for closing the said normally open circuit.

883,027. CHURN. HARRY JAMES, Rush Springs, Okla. Filed Jan. 13, 1908. Serial No. 410,622.



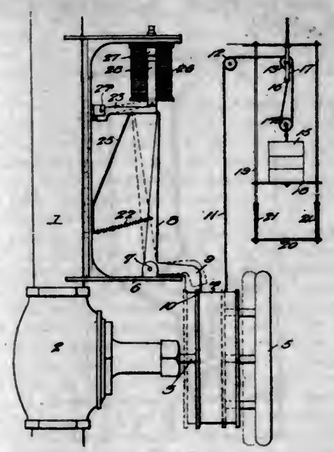
A churn comprising a frame, a body mounted for reciprocation thereon, a pitman connected with the body, at one side thereof, means for reciprocating the pitman, and springs attached at one end to the frame and traversing the length of the body and crossing each other and connecting at their other ends with the body.

883,028. MEANS FOR ACTUATING SUBMERSION-RUDDERS FOR TORPEDOES. ALBERT E. JONES, Fiume, Austria-Hungary. Filed Apr. 4, 1906. Serial No. 309,828.



In depth or submersion governors a hydrostatic chamber, a closed box within said hydrostatic chamber, a membrane forming one side of the box and being exposed to the water pressure, a pendulum suspended in said box, and means for positively connecting the membrane with the pendulum and holding the pendulum inclined to the vertical position.

883,029. ENGINE-STOP. VERNON J. KING, Lorain, Ohio. Filed May 3, 1907. Serial No. 371,638.



1. In an apparatus of the class described, the combination of a supply pipe, a valve therein, a drum on the stem of the valve, a bracket on the supply pipe, a locking device on the bracket directly engaging the drum, a latch fulcrumed on the bracket, an electro magnet controlling the latch, and a motor connected with the drum for actuating the valve.

2. In an apparatus of the class described, the combination of a supply pipe, a valve therein, a bracket on the valve, a locking device mounted on the bracket, a spring tending to unlock the said device, a latch mounted on the bracket and adapted to engage the device, an electro magnet provided with an armature hingedly connected with the latch, and a motor for closing the valve when the said device is unlocked.

3. In an apparatus of the class described, the combination of a supply pipe, a valve therein, a support on the pipe, a bell crank lever having one arm formed into a dog, a spring for actuating the lever, a latch mounted on the support and arranged to engage behind one arm of the lever, a stop for the latch and lever, an electro magnet having an armature hingedly connected with the latch a drum on the stem of the valve engaged by the dog, a motor for turning the valve in one direction when the dog is released, and a wheel attached to the drum for turning the valve in the opposite direction.

4. In an apparatus of the class described, the combination of a supply pipe, a valve therein, a drum on the stem of the valve, a hand wheel connected with the valve, a cable adapted to wind on the drum, a weight attached to the cable, pulleys over which the cable passes means for guiding the movement of the weight, and cushioning devices for checking the fall of the weight.

5. In an apparatus of the class described, the combination of a pipe, a valve therein, a drum on the stem of the valve, a weight, and a flexible element arranged to wind and unwind on the drum and connected with the weight, with a bracket mounted on the pipe and provided with spaced arms, a bell crank lever fulcrumed on one of the arms and provided with a pawl for interlocking with the drum, a spring attached to the bracket and lever for disengaging the pawl, an electro-magnet disposed between the arms and supported on the one opposite from that having the lever, a latch hinged on the bracket and adapted to engage behind the free end of the lever, a core for the electro-magnet hingedly connected with the outer end of the latch and serving as a weight for holding the latch in normal position behind the lever, and a yielding stop on the bracket arranged to support the latch in normal position and to receive the lever when the latter is released.

883,030. VAPOR ELECTRIC APPARATUS. OSIAS O. KAUH, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Sept. 15, 1905, Serial No. 278,554. Renewed Jan. 31, 1908. Serial No. 413,612.



1. In a vapor electric apparatus, an exhausted envelop having a plurality of anodes each located in a separate chamber, a cathode, and a tube confining the discharge from the cathode and extending past the openings into the chambers containing the anodes.

2. A vapor electric apparatus comprising an exhausted envelop having a plurality of anodes and a cathode, and a tubular member confining the discharge from the cathode.

3. In a vapor electric apparatus, an exhausted receptacle having a cathode and a plurality of anodes therein, a condensing chamber having a contracted opening, and means for directing the discharge or blast from the cathode towards said opening.

4. In a vapor electric apparatus, an exhausted envelop or receptacle having a cathode and a plurality of anodes located therein, and a tube for carrying the blast or discharge from the cathode past the anodes.

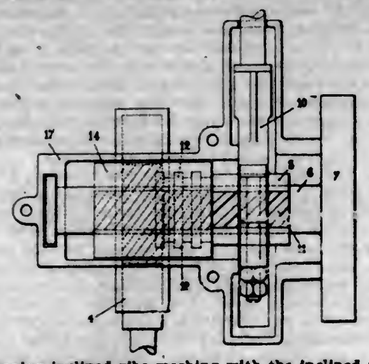
5. In a vapor electric apparatus, the combination of an envelop or receptacle having a plurality of projecting arms or chambers, electrodes in said arms or chambers, a vaporizable electrode located also in said envelop, and means for causing the arc of discharge from said vaporizable electrode to be projected past the openings into said arms or chambers.

[Claim 6 not printed in the Gazette.]

883,031. SHIFTING ECCENTRIC. HUGO LENTZ, Halensee, near Berlin, Germany, and CHARLES BELLENS, Neuilly-sur-Seine, France. Filed Apr. 28, 1906. Serial No. 314,125.

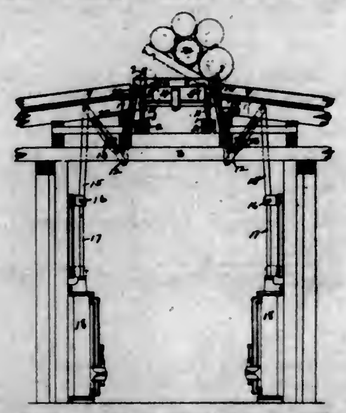
1. In a shifting eccentric, the combination with a crank stud, of a sleeve rotatable with the stud but not relatively thereto, and adapted to slide longitudinally on the stud, said sleeve being provided with two sets of ribs, one set inclined and the other circular, an eccentric provided internally with inclined grooves meshing with the inclined ribs of the sleeve so as to be displaceable in its plane, a sleeve slidable on the stud but not rotatable therewith, said sleeve being provided with circular grooves meshing with the circular ribs of the first named sleeve, and with inclined ribs, an operating rod having inclined ribs meshing with the inclined ribs of the sleeve, operating levers for displacing the rod, and a casing supporting the eccentric and the whole mechanism.

2. In a shifting eccentric, the combination of a crank stud, a sleeve mounted to slide on and turn with the stud and provided with inclined ribs, an eccentric provided with inclined grooves receiving the ribs of the sleeve, a second sleeve mounted on the crank stud and connected with the first sleeve to slide but not to turn therewith, said second sleeve being provided with inclined ribs, and an operating



rod having inclined ribs meshing with the inclined ribs of said second sleeve.

883,032. LOG-DUMPING DEVICE. WILLIAM D. LINK, Erie, Pa. Filed July 18, 1907. Serial No. 384,441.



1. In a log dumping device the combination with a track; of a dumping bar extending along the track and adapted to dump a car independently of a movement of the track; and means for actuating the bar.

2. In a log dumping device the combination with a track; of a dumping bar extending along the track and adapted to dump a car independently of a movement of the track; and means for actuating the bar comprising a plurality of devices acting on the bar at different points.

3. In a log dumping device the combination with a track; of two dumping bars, one on each side of the track and extending along the same; and means for actuating said bars independently.

4. In a log dumping device the combination with a track; a car provided with tilting bolsters; a bar for actuating said bolsters to drop a bar independently of a movement of the track and means for actuating the bar.

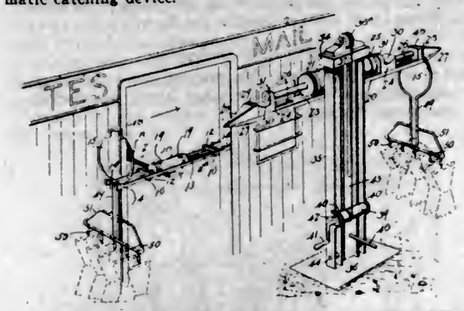
5. In a log dumping device the combination with a track; of two dumping bars, one on each side of the track and extending along the same; and means for locking the bar and bolster together while the bolsters are tilted.

[Claims 6 to 13 not printed in the Gazette.]

883,033. MAIL-BAG CATCHING AND DELIVERING MECHANISM. WILLIAM H. LUKER, Scottdale, Pa., assignor of three-fourths to Joseph R. Stauffer, Scottdale, Pa. Filed Jan. 13, 1908. Serial No. 410,624.

1. In a mail bag handling apparatus, a car crane carrying a piston-and-cylinder pneumatic catching device, and a

station receiver also having a piston-and-cylinder pneumatic catching device.



2. In a mail bag handling apparatus, a car crane carrying a pneumatic catching and delivering device comprising a frame for supporting and catching mail bag hangers, an air cylinder, and a piston operating within the cylinder and having a double piston rod carrying impact heads at its opposite ends, and a station receiver coöperating with said car crane.

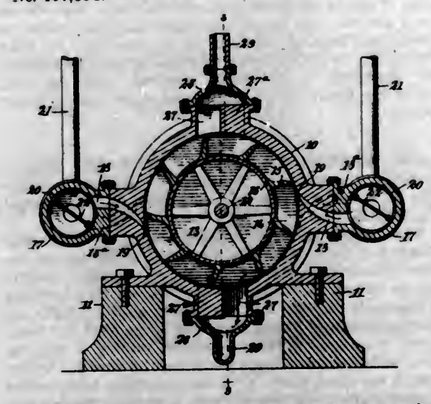
3. In a mail bag handling apparatus, a car crane carrying a pneumatic catching and delivering device having an air cylinder, and a piston operating within the cylinder and carrying a rod provided with an impact head, and a station receiver.

4. In a mail bag handling apparatus, a car crane carrying a double-ended pneumatic catching and delivering device comprising a frame having duplicate end portions for supporting and catching mail bag hangers, an air cylinder supported by said frame, a piston rod working through both ends of the cylinder and having a single piston, and impact heads slidable within the frame and connected to opposite ends of the piston rod, and a station receiver.

5. In a mail bag handling apparatus, a car crane having a horizontally swinging crane arm and vertically supported rock shaft, a swinging carrier arm slidable and foldable upon the crane arm, a keeper for supporting the carrier arm in its extended and elevated position, a catching and delivering device mounted upon the carrier arm, and a station receiver.

[Claims 6 to 11 not printed in the Gazette.]

883,034. ROTARY ENGINE. RICHARD LUNDQUIST, Laguna de Terminos, Mexico. Filed Dec. 24, 1907. Serial No. 407,894.

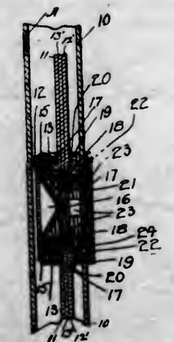


1. In a rotary engine, a rotary member having a plurality of rows of blades, a valve casing, passages leading from said valve casing to each of said rows, the passages leading to each alternate row terminating in nozzles extending substantially tangentially of the member in one direction, and the passages leading to the intermediate rows terminating in nozzles extending substantially tangentially of the rotary member and in the opposite direction, and a valve within said valve casing for controlling the admission of fluid to said passages, said valve comprising a hollow valve body, a perforated partition plate extending therethrough, and means connected to said plate for rotating the valve.

2. In a rotary engine, a rotatable drum or cylinder, a plurality of sleeves secured thereto, each of said sleeves carrying an annular ring or flange, and a plurality of radially-disposed baffle plates, the baffle plate of one ring adapted to receive motive fluid against one side thereof and the baffle plates of the adjacent ring adapted to receive a motive fluid upon the opposite side.

3. In a rotary engine, a rotatable member having a plurality of annular rows of blades, a casing inclosing said rotatable member, a motive fluid supply conduit, nozzles communicating therewith for directing a motive fluid against certain of said blades to rotate the member in one direction, nozzles communicating therewith for directing the motive fluid against other of said rows for rotating the member in the opposite direction, said nozzles being disposed at substantially diametrically opposite points, exhaust ports in said casing at substantially diametrically opposite points and intermediate said nozzles, exhaust conduits communicating with said exhaust ports, and branch exhaust conduits leading from said casing at the ends of said rotatable member.

883,035. ENVELOP-FASTENER. HOMER F. MANLEY, Victor, N. Y. Filed Dec. 18, 1906. Serial No. 348,420.



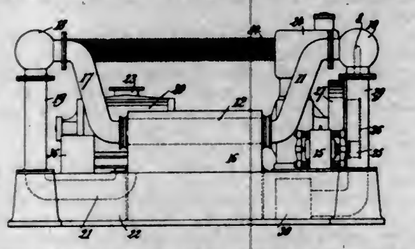
A seal for envelop and cognate means consisting of an outside and an inside disk, a riveting disk secured to the inside disk, a ring provided with clenching tongues secured on the riveting disk and the outside and inside disks being provided with riveting means, the said disks and ring being adapted, as described, to clenchingly secure the parts together and connecting the material thereto between them, and washer rings on opposite sides of the material.

883,036. APPARATUS FOR PRODUCING A GASEOUS MIXTURE HAVING DISINFECTING AND EXTINGUISHING PROPERTIES. RENÉ MABOT, Paris, France. Filed July 7, 1904. Serial No. 215,682.

1. An apparatus for effecting a reaction between a mixture of sulfur dioxid and air, comprising a fan, a motor for driving the fan, a reservoir adapted to contain the liquid sulfur dioxid, a mixing chamber for receiving the sulfer dioxid and air, means for conveying the liquid dioxid to the mixing chamber, a motor, an exhaust pipe from the motor arranged to impart its heat to the liquid dioxid and means for transforming a part of the mixture of dioxid and air into sulfuric anhydrid.

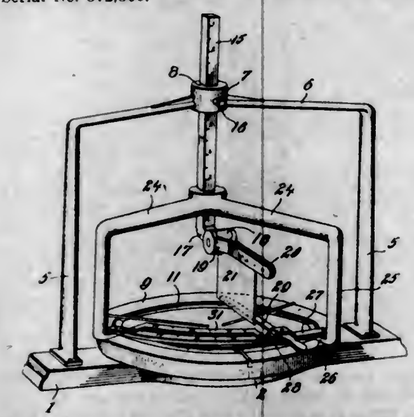
2. An apparatus for effecting a reaction between a mixture of sulfur dioxid and air, comprising a fan arranged to circulate the said gaseous mixture, means arranged to

drive the said fan, a reservoir adapted to contain liquid sulfur dioxid, a perforated duct for permitting the liquid dioxid to escape into a mixing chamber, an exhaust pipe from the motor arranged in position to receive thereon the liquid dioxid as it escapes from the perforated duct, means for circulating water around the motor, means for circulating the motor cooling water around the duct



through which the liquid dioxid passes, a glass tube, electrodes in the said glass tube, a mixing chamber for mixing the liquid dioxid with air, means for conducting the mixture of dioxid and air to the glass tube, coils connected to said electrodes for producing a silent electric discharge and electric sparks in said glass tube and a dynamo adapted to supply current to the said coils and driven by the said motor.

883,037. MACHINE FOR CUTTING BUTTER, &c. JOHN H. MAURER, Oakland, Cal. Filed May 7, 1907. Serial No. 372,300.



1. In an apparatus of the character described the combination with a movable table; of a blade supported thereabove for cutting a horizontal incision within a cake upon the table, and a blade supported above the table for cutting into a cake at right angles to said incision, said blades being separately movable.

2. In an apparatus of the character described the combination with a movable table; of separately movable blades supported above the table for cutting along intersecting planes, and a gage for indicating the depths of the cuts produced by the respective blades.

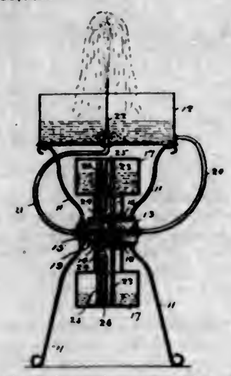
3. In an apparatus of the character described the combination with a movable table; of blades adjustably supported thereabove for cutting along horizontal and vertical planes respectively.

4. In an apparatus of the character described the combination with a movable table; of blades adjustably supported thereabove for cutting along horizontal and vertical planes respectively, and means for indicating the depth of the respective cuts.

5. In an apparatus of the character described the combination with a table having grooves therein; of horizontally disposed means for cutting transversely into a cake upon the table, and longitudinally movable blades removably seated within the grooves for holding a cake immovably upon the table during the cutting operation.

[Claims 6 to 9 not printed in the Gazette.]

883,038. MECHANICAL FOUNTAIN. NICHOLAS P. METROFANOFF, Bridgeport, Conn. Filed July 29, 1907. Serial No. 386,008.



1. A mechanical fountain comprising two oppositely placed reservoirs, a hub by which said reservoirs are carried, a body on which said hub is mounted to rotate and which is provided with ducts, a tank above the reservoir, induction and eduction pipes in the reservoirs which are adapted to register with ducts in the body, pipes leading from the tank to the body and from the body to the tank, and means for preventing the passage of water from the lower reservoir to the upper reservoir.

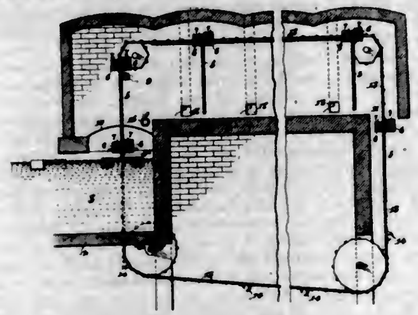
2. In a device of the character described, the combination with a tank, two oppositely placed reservoirs each provided with an induction and an eduction pipe and a hub by which the reservoirs are carried, of a body having ducts adapted to register with the induction and eduction pipes, and pipes communicating with ducts in the body and leading out of and into the tank, means being provided whereby water can not pass into the upper reservoir nor air escape therefrom.

3. In a device of the character described, the combination with a body having ducts, a tank and a hub mounted to rotate on the body, of oppositely placed reservoirs carried by the hub, induction and eduction pipes in the reservoirs adapted to register with the ducts, a guard extending from the mouth of each eduction pipe, float valves in said guards, and pipes communicating with ducts in the body and leading into and out of the tank, the float valve in the lower reservoir preventing the passage of water therefrom to the upper reservoir, and the float valve in the upper reservoir preventing the escape of air therefrom.

883,039. METHOD OF PRODUCING GLASS. EUGENE MORENUS, Cleveland, N. Y., assignor of one-half to Granville W. Morenus, Kane, Pa. Filed Mar. 5, 1907. Serial No. 360,649.

1. The method of producing glass sheets, which consists in forming a body of molten glass and producing an annealing temperature having its hottest portion directly above the molten glass, drawing successive sheets from the body upwardly directly into the hottest portion of the annealing temperature by drawing each sheet from the body, severing it in close proximity thereto, leaving a bait for the succeeding sheet, allowing said bait to remain stationary until the sheet above is in the annealing temperature and passing the sheet through said annealing temperature to the coolest portion thereof.

2. The method of producing glass sheets which consists in producing a body of molten glass and an annealing temperature having its hottest portion directly above the molten glass, drawing successive sheets from the body upwardly directly into the hottest portion of the annealing temperature by drawing each sheet from the body, severing it in close proximity thereto, leaving a bait for the succeeding sheet, carrying the severed sheet away from the bait, and subjecting its lower severed end to a heat sufficient to weld cracks or fractures therein, allowing the bait to remain stationary until the sheet above is in the annealing temperature, and passing the sheets through the annealing temperature.



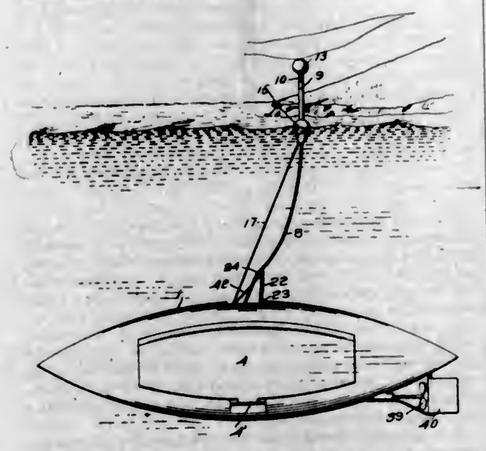
3. The method of producing glass sheets which consists in drawing an upright sheet from a molten mass into an annealing temperature, severing the lower end of the sheet from the molten mass, and after said severance, subjecting the lower end to a welding temperature higher than the annealing temperature and sufficient to weld cracks or fractures caused by the severing operation.

4. The method of producing glass sheets, which consists in drawing a sheet from a molten body, severing the sheet, and reheating the severed portion.

5. The method of producing glass sheets, which consists in drawing a sheet from a molten body, severing the sheet, and passing the severed sheet through a welding heat.

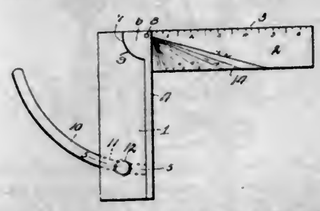
[Claims 6 and 7 not printed in the Gazette.]

883,040. SUBMARINE BOAT. FRANK MOTT, Shabbona, Mich. Filed Apr. 20, 1907, Serial No. 369,302. Renewed Feb. 10, 1908. Serial No. 415,164.



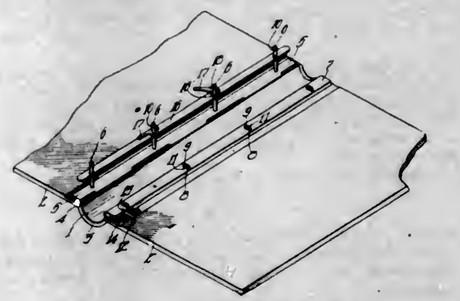
In a submarine boat, a hull, inflatable air bags carried exteriorly thereof, an air pump, valved connections between said air pump and said air bags, an air hose connected to said pump and projected through said hull, a suspension means therefor comprising an inflatable bag surrounding said hose and having valved communication therewith, and a cable depending from said bag and projected through said hull, a rigid pipe section connected to the upper end of said hose and imposed on said last named bag, said pipe section having air openings in the upper end thereof and an internal valve seat, a stem projected through said valve seat, a valve on the lower end of said stem and a float on the upper end of said stem.

883,041. TRY-SQUARE. JAMES F. MCCURDY, San Jose, Cal. Filed June 28, 1906, Serial No. 323,808. Renewed Sept. 6, 1907. Serial No. 391,700.



A try square including a stock and a fixed blade projecting therefrom, an arm pivotally secured to the blade on opposite sides thereof, a guiding strip projecting from the arm adjacent its free edge and operative through an opening formed in the stock, means to secure the strip in adjusted relation, and extensions projecting from the arm adjacent the pivoted end thereof, said extensions seating in recesses formed in the stock of a depth corresponding to the thickness of the extension, one wall of the recess and the contacting wall of the extension being curved concentric with the pivot point of the blade, whereby said walls are in engagement during full movement of the arm to guide the arm.

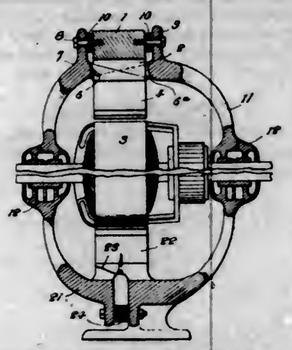
883,042. LOOSE-LEAF BINDER. MARTIN C. NEUNER, Los Angeles, Cal., assignor to The Neuner Specialty Book Co., Los Angeles, Cal., a Corporation of California. Filed May 22, 1905. Serial No. 261,549.



1. A loose-leaf binder comprising a leaf-engaging member, a movable locking member therefor, an operating means for the locking member having a limited movement, said operating member being removable to allow further movement of the locking member, and means engaging the locking member to lock the same on such further movement.

2. A loose-leaf binder comprising a leaf-engaging member, a locking member therefor, a case wherein the locking member is slidably mounted, a lever detachably pivoted on the case and engaging the locking member to move the same longitudinally a limited distance, the locking member being movable a further distance when the lever is removed, and a projection in the case engaging the locking member on such further movement, to prevent back movement thereof.

883,043. DYNAMO-ELECTRIC MACHINE. JOHN P. NIKONOW, Pittsburg, Pa. Filed Apr. 13, 1907. Serial No. 368,029.



1. A dynamo electric machine comprising a plurality of poles each formed of a series of cores constituting parts of distinct magnetic circuits, the cores being arranged to cause the magnetic circuits to flow from the far side of one pole to the adjacent side of the next pole.

2. A field construction for dynamo electric machines comprising a series of magnetically independent yokes, and a plurality of poles each being formed of a series of cores constituting parts of distinct magnetic circuits, the cores of each pole being arranged to cause the magnetic circuits to flow from the far side of one pole to the adjacent side of the next pole.

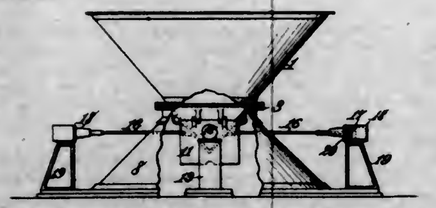
3. A field construction for dynamo electric machines comprising a plurality of magnetically insulated yokes in the form of rings and poles carried by the yokes, each pole comprising a plurality of magnetically insulated cores connected to the respective yokes, the cores of each pole being arranged to cause the magnetic circuits to flow from the far side of one pole to the adjacent side of the next pole.

4. A field construction for dynamo electric machines comprising a main yoke, cores carried by the main yoke, a yoke member located upon each side of the main yoke and magnetically insulated therefrom, and auxiliary cores located upon opposite sides of the before mentioned cores and magnetically connected to the respective yoke members.

5. A field construction for compound wound dynamo electric machines comprising poles formed of a plurality of core pieces each having an independent magnetic circuit, the series winding being limited to a selected one of the cores while the main winding surrounds the several cores collectively.

[Claim 6 not printed in the Gazette.]

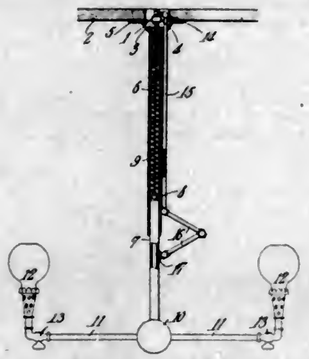
883,044. STOCK-DISTRIBUTER AND GAS-SEAL FOR METALLURGICAL FURNACES. MERRILL B. PARKER, Rockwood, Tenn. Filed Mar. 30, 1906. Serial No. 308,951.



1. In a stock distributer and gas seal of the class specified, the combination with a receiving hopper and a furnace having a bell, of opposing pairs of doors hinged at their upper extremities to the lower portion of the hopper above the bell, and mechanism coöperating with the doors for either simultaneously moving the opposing pairs of doors inwardy at an angle of inclination, or opening one door of the pair and permitting the other to remain in inwardly inclined position, and also for alternately similarly actuating the opposing pairs of doors, the said mechanism including radially disposed straight piston rods rigid throughout their entire lengths, each piston rod being movably and directly attached to the outer side of one door below the upper hinged extremity of the latter, and fixed cylinders in alinement with the centers of the outer portions of the doors and having pistons therein to which the said piston rods are individually connected.

2. In an apparatus of the class specified, the combination with a receiving hopper and furnace bell, of pairs of doors movably held above the bell and disposed opposite to each other, the doors being hinged to and depending from the lower portion of the hopper, longitudinally straight piston rods rigid throughout their lengths and directly connected to the outer portions of the doors below the hinge connections for the latter, stationary cylinders having pistons therein to which the piston rods are connected, the cylinders being individually disposed in alinement with the points of attachment of the piston rods to the doors so that one cylinder and one piston rod coöperate with each door, and fluid pressure conveying means connected to the cylinders for operating each pair of doors to project the latter simultaneously inward in pairs at opposing angles of inclination or to open one door and permit the other of the opposing doors to remain at an inward angle of inclination and to simultaneously operate each pair of doors in a similar manner while the remaining doors are inactive and serve as end closing means for the active doors, the fluid pressure conveying means emanating from one portion of the apparatus and provided with separate controlling valves to render each pair of doors independently operative.

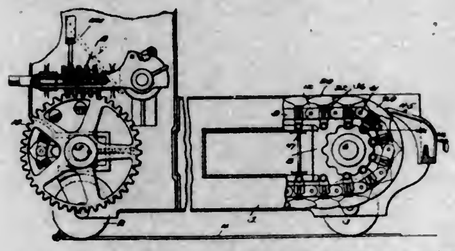
883,045. CHANDELIER. WILLIAM T. H. PAULEY, Waynesburg, Pa. Filed May 27, 1907. Serial No. 376,014.



1. A gas chandelier for gas burners having incandescent mantles, comprising a fixed hollow stem; a burner-supporting stem closed at the upper end and there entering and guided by the fixed stem, and also constituting a gas conduit; gas connections independent of the hollow stem, connected at one end to a fixed gas supply pipe and at the other end to the burner-supporting stem, with interposed flexible gas-conveying connections, and a spring entirely inclosed and concealed in the fixed stem, said spring being connected at one end to the closed end of the burner-supporting stem within the fixed stem and at the other end hung from a fixed structure.

2. A gas chandelier for gas burners having incandescent mantles, comprising a fixed tubular stem; a movable gas pipe closed at the upper end and there entering and guided by said stem; a spring connected at one end to a fixed support and at the other end to the closed end of the movable gas pipe within the tubular stem, said spring being entirely inclosed and concealed within the tubular stem; a gas conduit independent of the tubular stem and leading from the main gas supply pipe along the length of the tubular stem, flexible connections between the gas conduit and the movable gas pipe; gas burner-supporting arms connected to and leading from the movable gas pipe, and a weight independent of and additional to that of the movable gas pipe and burner-supporting arms, carried by the gas pipe at the junction therewith of the burner-supporting arms.

883,046. GRATE. CHARLES PEKAT, Chicago, Ill. Filed May 11, 1907. Serial No. 373,105.



1. A furnace grate comprising a plurality of moving chains, grate bars directly and removably secured to said chains, grate sections removably secured to said bars and to said chains, and a key running longitudinally of said bars for locking said grate sections in position.

2. A grate comprising a plurality of chains, grate sections mounted on said chains, a plurality of grate bars mounted between said chains grate sections mounted on said grate bars, a single means for securing said grate sections directly to said chains and to said grate bars, and means for supporting said chains.

3. A chain grate comprising grate bars formed with beveled ways and chains comprising links, each link of said chains being formed with a lug on one side thereof having a beveled way therein, said beveled way extending longitudinally of said chain, said lug also having an aperture passing through said link at right-angles to said beveled way and communicating therewith, grate sections directly secured to said grate bars and chains, said beveled ways being adapted to receive said grate sections, and locking means passing through said chains and said bars for locking in position said sections, said aperture accommodating said locking means.

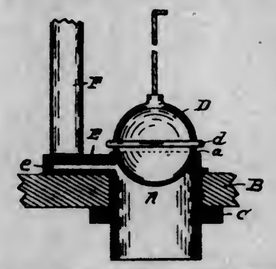
4. A chain grate comprising a plurality of chains, grate bars mounted therebetween, grate sections secured to said bars, grate sections secured directly to said chains, means for moving said chains, and a plurality of lugs positioned on the links of said chains for preventing undue sagging of the chains, the lugs of one link impinging against the end of adjoining link.

5. A grate comprising parallel chains, sustaining members depending therefrom, arc-shaped grate sections secured directly to said chains, sprocket wheels for supporting said sustaining members, grate bars carried by said chains, a plurality of grate sections supported directly by said chains, and tracks for supporting the sustaining members, between the sprocket wheels, in combination with a stationary grate at the discharge ends of the chains, in contact with the outer surface of the grate sections.

883,047. ESCAPE-VALVE FOR WATER-CLOSET FLUSHING-TANKS. CHARLES PFAU and EDWARD G. PFAU, Cincinnati, Ohio, assignors to The Pfau Manufacturing Company, Cincinnati, Ohio, a Corporation of Ohio. Filed Nov. 22, 1906. Serial No. 344,565.

1. In an escape valve for water closet flushing tanks, the combination of a flexible valve ball provided with an exterior strengthening rib at or near its middle and an interior vertical connecting piece disposed at right angles to said strengthening rib, with a valve seat consisting of the upper end of an open pipe, substantially as set forth.

2. In an escape valve for water closet flushing tanks, the combination of valve seat A consisting of the upper end of an open pipe of a diameter somewhat smaller than said ball and having rounded edges *a*, with flexible valve ball D having a flexible exterior strengthening rib *d* formed integral therewith and upon the outer surface thereof and in addition thereto to stiffen the ball against collapsing, and adapted to engage said valve seat and serve as a stop in case of partial collapse of the ball, substantially as set forth.



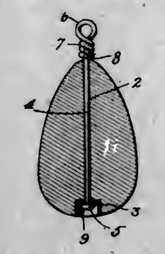
3. In an escape valve for water closet flushing tanks, the combination of a flexible valve ball provided with an exterior strengthening rib at or near its middle and an interior vertical connecting piece disposed at right angles to said strengthening rib, with a valve seat consisting of the upper end of an open pipe and having substantially a line contact with said ball below the rib, substantially as set forth.

4. In an escape valve for water closet flushing tanks, the combination of valve seat A having rounded edges *a* with flexible valve ball D having exterior strengthening rib *d* formed integral therewith and upon the outer surface thereof, and adapted to engage said valve seat and serve as a stop, and interior connecting piece d^1, substantially as set forth.

5. A valve ball for water closet flushing tanks consisting of a flexible ball D having a flexible exterior strengthening rib *d* near its middle formed integral therewith upon the outer surface thereof to stiffen the ball against collapsing, and adapted to engage said valve seat and serve as a stop in case of partial collapse of the ball, substantially as set forth and for the purposes specified.

[Claim 6 not printed in the Gazette.]

883,048. SINKER FOR FISHING-TACKLE. EARNEST A. PFLUEGER, Akron, Ohio, assignor to The E. A. Pflueger Company, Akron, Ohio, a Corporation of Ohio. Filed Oct. 26, 1907. Serial No. 399,256.



1. A sinker for fishing tackle, embodying a body portion centrally apertured throughout its length and having an enlarged recess or chamber at its lower end, and a shank passing through said aperture and having a headed lower end lying in said recess or chamber to prevent longitudinal movement, said body portion being freely rotatable on said shank.

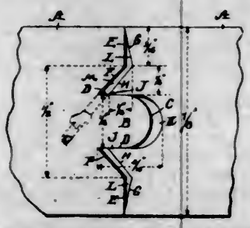
2. A sinker for fishing tackle, embodying a body portion centrally apertured throughout its length and having an enlarged recess or chamber at its lower end, and a shank passing through said aperture and having a headed lower end lying in said recess or chamber to prevent longi-

tudinal movement, said shank being formed into a loop at its upper end and coiled upon itself to maintain its position longitudinally, said body portion being freely rotatable on said shank.

3. A sinker for fishing tackle, embodying a body portion centrally apertured throughout its length and having an enlarged recess or chamber at its lower end, a shank passing through said aperture and having a headed lower end lying in said recess or chamber, and a washer in said recess or chamber interposed between said body portion and said headed end of said shank, said body portion being freely rotatable on said shank.

4. A sinker for fishing tackle, embodying a body portion centrally apertured throughout its length and having an enlarged recess or chamber at its lower end, a shank passing through said aperture and having a headed lower end lying in said recess or chamber, and a flanged washer fitted in said recess or chamber and receiving the headed end of said shank, the flange edge of said washer lying flush with the outer surface of the body portion, said body portion being freely rotatable on said shank.

883,049. TONGUE-AND-GROOVE JOINT FOR FLOORING. JOHN W. PIVER, Lakeland, Fla. Filed Sept. 12, 1907. Serial No. 392,590.



1. A board having on one edge thereof a tongue provided with a semi-cylindrical outer edge C and flat parallel sides D, D, said board also provided with the flat surfaces E, E, extending substantially perpendicular to the outer faces of the board, and with the inclined surfaces F joining said surfaces E and D, substantially as described.

2. A board having a tongue on one edge, and a groove K on the other of a width the same as the thickness of the said tongue, said latter edge also provided with the inclined surfaces G, G, extending inward from the outer faces of said board, and with the surfaces H extending at an obtuse angle to the said surfaces G, G, and joining the latter with the outer edges of the groove K, thereby forming the sharp tongues J, substantially as described.

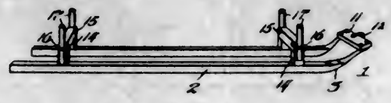
3. A matched floor having a smooth surface composed of boards having on the one edge thereof a tongue provided with a semi-cylindrical outer edge C, and flat parallel sides D, D, said board also provided with the flat surfaces E, E, extending substantially perpendicular to the outer faces of the board, and with the inclined surfaces F joining said surfaces E and D, and said boards having on the other edge thereof a groove K of a width the same as the thickness of the said tongue, said latter edge also provided with the inclined surfaces G, G, extending inward from the outer faces of said board, and with the surfaces H extending at an obtuse angle to the said surfaces G, G, and joining the latter with the outer edges of the groove K, thereby forming the sharp tongues J, substantially as described.

4. A matched floor having a smooth surface composed of boards having on the one edge thereof a tongue provided with a semi-cylindrical outer edge C and flat parallel sides D, D, said board also provided with the flat surfaces E, E, extending substantially perpendicular to the outer faces of the board, and with the inclined surfaces F joining said surfaces E and D and said boards having on the other edge thereof a groove K of a width the same as the thickness of the said tongue, said latter edge also provided with the inclined surfaces G, G, extending inward from the outer faces of said board, and with the surfaces H extending at an obtuse angle to the said surfaces G, G, and joining the latter with the outer edges of the groove K, thereby forming the sharp tongues J and the spaces L and M on each side of said tongue, substantially as described.

5. A joint for matched floors composed of boards having a groove K provided with parallel straight walls, a curved bottom, and sharp tongues J at the outer extremities of said groove, and said boards also provided with a tongue B of a thickness equal to the width of said groove, said tongue having parallel flat walls matching the walls of said groove, and also having a semi-cylindrical outer edge C, whereby the ready entrance of said tongue B in between the said tongues J, is facilitated, and said boards also having means enabling their extreme outer corners or edges to come into touching contact, substantially as described.

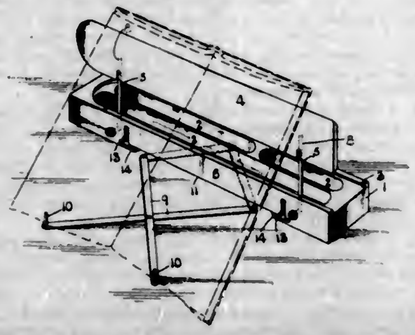
[Claim 6 not printed in the Gazette.]

883,050. SLED. THOMAS B. POINDEXTER, Alexandria, Ind. Filed May 13, 1907. Serial No. 373,317.



A straight sled runner having a metal crook on its upper side at its front end, said metal crook having its rear portion provided with a recess in its under side to receive the front upper corner of the runner and providing a shoulder to bear against the front end of the runner, and fastening means connecting the runner and the rear portion of the crook together, the under side of the crook in advance of the runner being longitudinally corrugated, substantially as described.

883,051. COMBINED PENCIL-BOX AND BOOK-SUPPORT. ANTON SCHLAGER, Gaggenau, Baden, Germany, assignor of one-half to Franzis Schlager and one-half to Magdalena Liermann, St. Louis, Mo. Filed June 29, 1907. Serial No. 381,567.



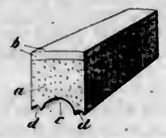
1. A device of the character described, consisting of a block provided with an opening, a member adapted to be arranged longitudinally of said block to form the upper member of a book support, movable supports arranged in the opening in the block and adapted to be moved into an upright position to sustain said member, an adjustable lower member connected to said block, and a plurality of projections on said lower member for supporting the lower edge of the book; substantially as described.

2. A device of the character described, consisting of a block provided with a recess, a plurality of standards pivotally connected to said block and normally resting in the recess therein, said standards being adapted to be moved into an upright position, a member adapted to be connected to each of said standards for supporting the upper end of a book or other object, and an expansible member connected to said block and provided with a plurality of projections for supporting the lower edge of the book; substantially as described.

3. A device of the character described, comprising a pencil box, two standards pivotally connected to one of the walls of said box, a member provided with recesses to receive the upper ends of said standards, a lazy-tongs connected to the bottom of said box, and a plurality of projections on said lazy-tongs; substantially as described.

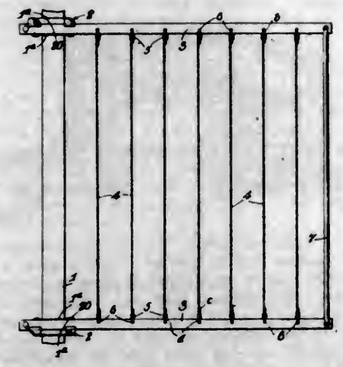
4. A device of the character described, comprising a block, a lazy-tongs connected to the bottom of said block and provided at its outer front end with two upwardly projecting devices, said block being provided with openings to receive said devices when the lazy-tongs is closed, standards pivotally connected to said block, and a member adapted to be attached to the block or mounted on said standards; substantially as described.

883,052. SET FOR TRAMWAY-RAIL CHANNELS. FRIEDRICH O. SCHNELLER, Munich, Germany. Filed July 5, 1907. Serial No. 382,372.



Sets for tramway rail channels consisting of stone blocks laid one after the other at each side of each rail said blocks being covered on the top with a layer of asphalt and provided on the bottom with longitudinal grooves filled with elastic material, substantially as set forth.

883,053. CLOTHES-DRIER. WILLIAM SCULLY, Chicago, Ill. Filed Apr. 20, 1907. Serial No. 369,270.



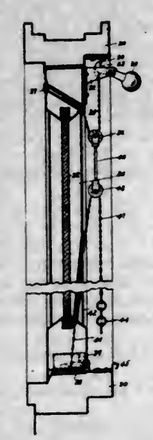
1. A clothes drier comprising a pair of holders adapted for attachment to a suitable support, said holders having depending hooked flanges to hook under such support, a pair of bars supported by the holders and movable lengthwise therein, and supports extending between the bars.

2. A clothes drier comprising a pair of flanged bars, clothes supports extending between the same, and a pair of holders for the bars, adapted for attachment to a suitable support, each holder having rollers at opposite ends bearing against opposite sides of the flanges of the bar, and between which the bars are slidable.

3. A clothes drier comprising a pair of angle bars, clothes supports extending between the same, and a pair of holders for the bars, adapted for attachment to a suitable support, each holder having overhanging parts provided with rollers bearing on top of the bar, and also having rollers bearing against the side and in the angle of the bar, the bars being movable lengthwise between the rollers.

4. In clothes drier, the combination with an extensible angle bar, of a holder comprising a plate adapted for attachment to a suitable support, and having uprights at its opposite ends with angular grooves or ways therein, through which the bar extends and in which it is slidable.

883,054. FIREPROOF GRAVITY-SASH. FRANK F. SMITH, Newark, N. J. Filed May 23, 1907. Serial No. 375,306.



1. In a fire-proof window: a pivoted gravity sash; a pivoted gravity latch at the top of said sash; a stop secured to the frame of said window and engaged by said latch to lock said window at the top of said sash; a gravity catch at the bottom of said sash; a series of ridges upon said frame adapted to be engaged by said catch to lock the sash at the bottom; a fusible link provided with a pulley wheel at each end; a chain in connection with said latch, passing about the upper pulley wheel of said fusible link, and secured to said sash; and a second chain in connection with said catch and passing about the lower pulley wheel of said fusible link and provided with means whereby it may be secured to the frame.

2. In a fire-proof window: a pivoted gravity sash; a pivoted lever or latch at the top of said sash, its outer arm being provided with a suitable weight; a stop secured to the frame of said window, and adapted to be engaged by the inner arm of said lever or latch to lock the said window sash at the top; a hinged gravity catch at the bottom of said sash, a series of ridges upon a piece mounted upon the frame and adapted to be engaged by said catch to lock the window sash at the bottom; a fusible link provided with a pulley wheel at each end; a chain connected to the inner arm of said pivoted lever or latch, passing freely about said upper pulley wheel, and freely through the upper portion of said sash; fusible means to secure said chain at the outer side of said sash; a second chain passing freely through the said catch and secured thereto by fusible means, and passing also freely through the lower portion of said sash, and thence through the inner sash bar and about the lower pulley wheel of said fusible link; and means to secure said second chain to said frame.

3. In a fire-proof window: a pivoted gravity sash; a pivoted lever or latch at the top of said sash; its outer arm being provided with a suitable weight; a stop secured to the frame of said window and adapted to be engaged by the inner arm of said lever or latch to lock the said window sash at the top; means to limit the extent of the downward motion of said inner arm; a hinged gravity catch at the bottom of said sash; a series of ridges upon a piece mounted upon the frame and adapted to be engaged by said catch to lock the window sash at the bottom; a fusible link provided with a pulley wheel at each

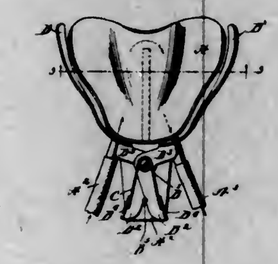
end; a chain connected to the inner arm of said pivoted lever or latch, passing freely about said upper pulley wheel, and freely through the upper portion of said sash; fusible means to secure said chain at the outer side of said sash; and a second chain passing freely through the said catch and secured thereto by fusible means, and passing also freely through the lower portion of said sash, and thence through the sash bar and about the lower pulley wheel of said fusible link; means to secure said second chain to said frame; an adjustable latch pivotally connected to said sash, passing through a portion of the frame of said window, and a stop secured to the frame and adapted to engage with said latch to prevent the window from being opened beyond a predetermined extent.

4. In combination with a fire-proof window; a bracket adapted to be secured to and to fit over a wall of the sash of said window; a gravity lock, comprising: a lever pivotally secured to the said bracket, its inner arm being provided with a latch and the outer arm with a weight; and a stop secured to the frame of said window and adapted to engage the latch of said lever to lock said window.

5. In combination with a fire-proof window: a bracket adapted to be secured to and to fit over a wall of the sash of said window; a gravity lock, comprising: a lever pivotally secured to the said bracket, its inner arm being provided with a latch and the outer arm with a weight; and an adjustable stop secured to the frame of said window and adapted to engage the latch of said lever to lock said window.

[Claim 6 not printed in the Gazette.]

883,055. DENTAL IMPRESSION-TRAY. HORACE F. SMITH, Seattle, Wash. Filed June 22, 1907. Serial No. 380,313.

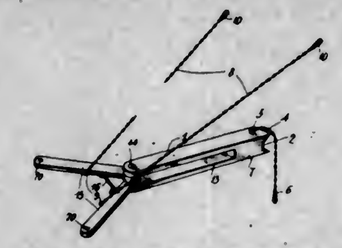


1. An impression tray made hollow and having connections for the circulation through it of a cooling fluid and provided with a forwardly projecting handle plate, and the spring actuated guard or dilator plates separate from and conformed to and extending along side the tray and pivoted to the handle plate and having handle portions extending thereover whereby they may be operated to spread the dilator plates independent of the tray, substantially as and for the purposes set forth.

2. An impression tray provided with the pivoted guard or dilator plates independent of the tray and extending along its opposite sides and movable radially therefrom and normally spring actuated to closed position and adapted to be spread to prevent the cheeks from folding while taking the impression, substantially as set forth.

3. An impression tray provided with a projecting handle plate in combination with guard or dilator plates extending along side the tray and provided at their front ends with inwardly projecting handle portions a pivot upon the handle plate for said handle portions and having diverging portions extending over the handle plate and provided with upturned plates and a spring coiled around the pivot of the handle portions and bearing at its end against the upturned parts of said handle portions, substantially as described.

883,056. FEEDING DEVICE FOR DRAFT-ANIMALS. ROBERT L. SMITH, Lynchburg, Va. Filed July 16, 1907. Serial No. 384,025.

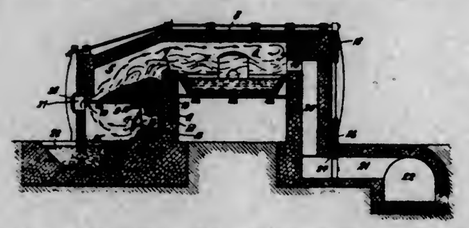


1. A feeding device for animals comprising a slotted supporting bar having a notch at one end adapted to fit against the horse collar, a chain for securing said bar to the horse collar, chains for supporting the bar, said chains being adapted for connection to the terrets of the hame, a latch, links pivoted in a slot in said bar, and adapted to be folded therein and to be held in extended position by a latch, and a feed receptacle having chains secured to the opposite sides thereof and provided with hooks to engage said links.

2. A feeding device for animals comprising a supporting bar having a slot therein, links pivoted in said slot, a latch for holding said links in extended position, and a feed receptacle supported upon said links.

3. A feeding device comprising a supporting bar having a slot therein, links pivoted in said slot, means for holding said links in operative position, chains secured to said bar for supporting the same upon an animal, and a feed receptacle provided with chains and hooks to engage said links.

883,057. FURNACE. MARTIN VAN BUREN SMITH, New York, N. Y. Filed Nov. 30, 1906. Serial No. 345,584.



1. In a puddling furnace, the combination with a combustion chamber and means for evolving gases at a low temperature therein, of a puddling chamber adapted to receive gases thus evolved from the combustion chamber, means for supplying highly heated air from the combustion chamber to the puddling chamber in a condition substantially unmixed with the gases from the combustion chamber, and means within the puddling chamber to cause the mixture of the gas and air therein.

2. In a furnace, the combination with a combustion chamber for containing fuel, of a work chamber in which heat is to be applied, said combustion and work chambers separated by a bridge wall, means for supplying air to be heated to the combustion chamber, and for carrying the heated air and the products of combustion, one over the other, across the bridge wall into the work chamber, and deflecting means at the end of the work chamber opposite the bridge wall, for deflecting the air back toward the work and the incoming gases.

3. In a furnace, the combination with a combustion chamber for containing fuel, of a work chamber in which heat is to applied, said combustion and work chambers separated by a bridge wall, means for supplying air to be heated to the combustion chamber, and for carrying the heated air and the products of combustion, one over the other, across the bridge wall into the work chamber, and deflecting means at the end of the work chamber opposite the bridge wall, for deflecting the air back toward the work and the incoming gases, said deflecting means comprising a dead wall at the upper portion of the furnace, and provided with a restricted opening for waste gases, below same.

4. In a furnace, the combination with a chamber containing a hearth for receiving the fuel for combustion, and a work chamber in which heat is to be applied, in communication wtih said combustion chamber, of means for admitting air beneath and around said hearth and fuel contained therein, whereby said air will be directed toward the upper portion of said furnace chamber and into the work chamber at the upper portion thereof over the top of the products of combustion, and deflecting means at the end of the work chamber opposite the combustion chamber, for deflecting the air back toward the lower portion of the work chamber and toward the incoming gases.

5. In a puddling furnace the combination with a chamber containing a hearth for receiving the fuel for combustion, and a puddling chamber arranged in communication with said combustion chamber, of means for admitting air beneath and around said hearth and fuel contained therein, whereby said air will be directed towards the upper portion of said furnace chamber and into the puddling chamber at the upper portion thereof.

[Claims 6 to 11 not printed in the Gazette.]

883,058. APPARATUS FOR GOLF PRACTICE. ALMERIN R. SPRAGUE, Sacramento, Cal. Filed Apr. 19, 1907. Serial No. 369,121.



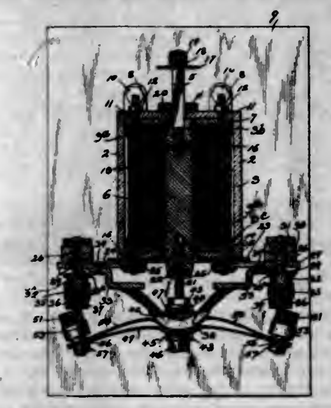
1. In an apparatus of the class described, a stake having an enlarged head, a ring loosely embracing the stake below the head, a bar 3 having a swivel connection with the ring, a ring 4 swiveled on the bar 3, a clevis 6, an adjustable and flexible connection between the clevis 6 and ring 4, a piece of elastic webbing 7, leather loops secured to each end thereof one of which is connected to the clevis 6, a clevis 9 connected to the other loop, a ball and an eyebolt secured therein and connected with the clevis 9.

2. In an apparatus for golf practice, the combination with a stake, a ball, and a flexible connection between them, of a ball-support or tee adapted to be detachably secured to said connection.

883,059. ELECTRICALLY-OPERATED SWITCH. HENRY F. STARRETT, Milwaukee, Wis., assignor to the Cutler-Hammer Manufacturing Company, Milwaukee, Wis., a Corporation of Wisconsin. Filed Feb. 7, 1902. Serial No. 93,028.

1. In an electrically operated switch, the combination with a frame adapted to contain a magnet coil and surround said coil upon its sides and ends, of a supporting plate secured to the upper part of said frame, outwardly turned lugs formed upon said plate, a suitable base to which said lugs are adapted to be secured, insulated bridging plates secured to the lower part of said frame, contact plates secured to said bridging plates and electrically conductive posts mounted on said base and secured to said bridging plates; to support said frame, substantially as described.

2. In an electrically operated switch, the combination with a rectangular frame of ductile and magnetic material, surrounding a magnet coil, of a supporting plate secured to the upper part of said frame and having outwardly extending lugs, a suitable base to which said lugs are adapted to be secured, insulated bridging plates secured to the lower part of said frame, contact plates secured to said bridging plates and electrically conductive posts mounted on said base and secured to said bridging plates; to support the frame, substantially as described.



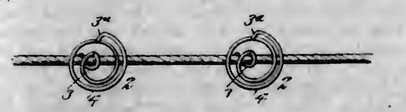
3. In an electrically operated switch, the combination with a rectangular frame adapted to accommodate a magnet coil, of a reciprocating plunger for said coil, stationary contacts mounted with said frame upon opposite sides of said plunger, a bridging member for electrically connecting said contacts carried upon one end of said plunger, and an extended member of non-circular cross section carried upon the opposite end thereof and extending through a correspondingly shaped aperture in said frame, whereby rotary movement of said plunger is prevented.

4. In an electrically operated switch, the combination with a rectangular frame adapted to accommodate a magnet coil, the upper part of said frame having a non-circular aperture, of an extending member carried by the armature of said magnet and adapted to fit and be guided by said aperture, the metal of the frame being formed up about said aperture to provide a collar for a longer bearing for said member, a lateral projection upon said member and a resilient buffer surrounding said collar; substantially as described.

5. In an electrically operated switch, the combination with a solenoid magnet, of a rectangular frame of magnetic material adapted to be included in the magnetic circuit, a reciprocating core for said magnet, stationary contacts mounted with said frame upon opposite sides of said core, a bridging member for electrically connecting said contacts carried upon one end of said core, and an extended member of non-magnetic material and non-circular cross section carried upon the opposite end thereof and extending through a correspondingly shaped aperture in said frame whereby rotary movement of said core is prevented.

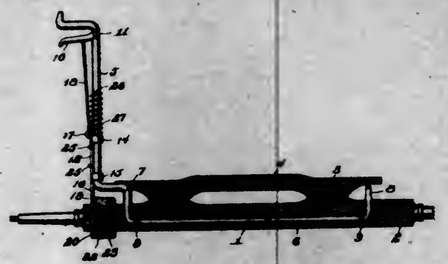
[Claims 6 to 28 not printed in the Gazette.]

883,060. CLOTHES-PIN. ALBERT STRATTON, Lake City, Ark., assignor of one-half to William Craddock, Lake City, Ark.; Josie Stratton administratrix of said Albert Stratton, deceased. Filed June 16, 1906. Serial 375,292.



A clothes-pin comprising a helical body consisting of an apex convolution and a base convolution, the end of the apex convolution being extended longitudinally through the body and formed to provide a hook attaching element adapted to secure the pin to a clothes-line, the end of the base convolution being bent to provide a member overlapping a portion of this convolution and thus providing a substantially annular base member adapted to engage the clothes-line.

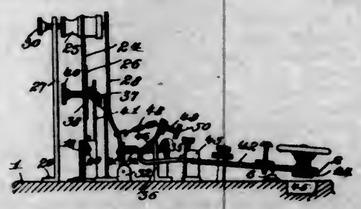
883,061. VEHICLE BRAKE APPARATUS. JOHN W. TAYLOR, Fulton, Ky. Filed May 23, 1907. Serial No. 375,292.



1. An axle having a skein provided with an inwardly extending portion bearing under the axle and against the vertical sides thereof, a segment bracket comprising a wing bearing against one vertical side of the axle and said inner portion of the skein, said bracket further provided with a segment wing at right angles to the first mentioned wing, means securing the first mentioned wing of the bracket to the axle and a lever mounted on the axle and having a dog coacting with said segment wing.

2. In combination with a vehicle axle having a skein provided with an inwardly extending portion bearing under the axle and against the vertical sides thereof, a skein bracket comprising a vertical wing and a vertical segment wing at right angles thereto, the first mentioned wing of said bracket bearing against one vertical side of the axle and one vertical side of the inwardly extending portion of the skein, a clip bolt securing said wing, axle and axle skein altogether, a lever mounted on the axle and a dog carried by said lever and coacting with the segment wing of the bracket.

883,062. STRAIN-RELIEVING ATTACHMENT FOR TELEGRAPH-KEYS. WILLIAM H. TRACHWORTH, Waxahachie, Tex. Filed June 1, 1906. Serial No. 319,796.



1. A strain relieving attachment for telegraph keys comprising the combination with the key, of a key member arranged in operative relation with respect to said key, a contact, a vertically-extending vibratory arm released by said key member and adapted to intermittently engage said contact, a vibratory spring secured to the lower end of said arm, and means shiftably mounted upon the spring for adjusting the flexibility thereof.

2. A strain relieving attachment for telegraph keys comprising the combination with the key, of a key member arranged in operative relation with respect to said key, a contact, a vertically-extending vibratory arm released by said key member and adapted to intermittently engage said contact, a vibratory spring secured to the lower end of said arm, means shiftably mounted upon the spring for adjusting the flexibility thereof, and suitable circuit connections.

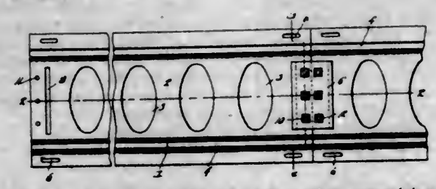
3. An attachment for telegraph keys comprising a vibratory arm, a releasing member therefor, a contact adapted to be engaged by said arm, a shiftable key member, and an adjustable connection between the key member and said releasing member for operating the latter when the key member is shifted.

4. An attachment for telegraph keys embodying a dot sounding device operated independently of the key, means for adjusting the movement of said device, means for normally locking said device, and a shiftable key member adjustably connected to said locking means and adapted when operated in one direction to release said locking means thereby permitting of the operation of the dot sounding device.

5. An attachment for telegraph keys embodying the combination with a key, of a shiftable key member arranged in suitable relation with respect to the key, a normally locked sounding device, and means flexibly and adjustably connected with the key member for releasing such device to permit of the operation thereof when said key member is shifted in one direction.

[Claims 6 to 10 not printed in the Gazette.]

883,063. RAILWAY-TRACK STRUCTURE. JOHN O. ULRICH, Tamaqua, Pa. Filed June 21, 1907. Serial No. 380,139.

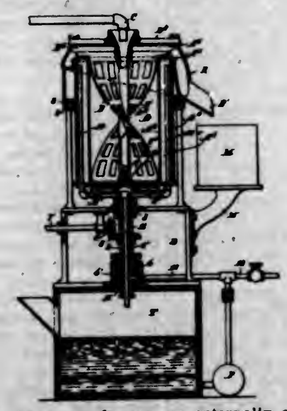


1. In a track structure, a track section comprising a bed plate having rails integral therewith, said plate having end portions coextensive in width therewith and extending transversely flush with the rail ends to abut against the corresponding ends of coöperating plates.

2. In a track structure, a bed plate having rails integral therewith and provided with straight transverse ends flush with the ends of the rails to abut against the corresponding end of coöperating plates, said plate being further provided with longitudinal attaching flanges projecting laterally beyond and coextensive in length with the rails.

3. In a track structure, track sections comprising bed plates carrying integral rails, said plates being provided with abutting ends coextensive in width therewith, a junction plate bridging across the joint between the abutting ends and having an interlocked engagement with the ends of the bed-plates between the rails, and means for securing the said junction plate to the bed plates against displacement.

883,064. ICE-CREAM FREEZER. THEODORE L. VALERIUS, Fort Atkinson, Wis., assignor to The Creamery Package Mfg. Company, Chicago, Ill., a Corporation of Illinois. Filed July 28, 1906. Serial No. 328,222.



1. In an ice cream freezer, an externally cooled cylindrical freezing vessel mounted for rotation upon a vertical axis and open at the top, in combination with stirring and scraping means extending downward through the open top of said vessel, means for supplying freezing fluid to the walls of said vessel, and an annular receiver surrounding the upper end of said vessel to receive partially frozen ice cream from the rim or upper edge thereof.

2. In an ice cream freezer, an externally cooled cylindrical freezing vessel mounted for rotation upon a vertical axis and open at the top, being provided with an outwardly flared upper edge or rim, in combination with means for supplying freezing fluid to the walls of said vessel, stirring and scraping means arranged in said vessel to clear its walls and agitate its contents, and means continuously operating to clear the rim of said vessel.

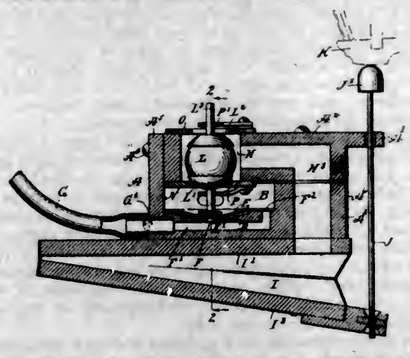
3. In an ice cream freezer, an externally cooled cylindrical freezing vessel mounted for rotation upon a vertical axis and provided with an outwardly turned or flared upper edge or rim, in combination with means for supplying freezing fluid to the walls of said vessel, means for supplying the liquid to be frozen, scraping and agitating means within said vessel, a rim scraper, and an annular receiver into which the semi-frozen liquid is discharged from said rim, substantially as described.

4. In an ice cream freezer an externally cooled cylindrical freezing vessel mounted for rotation upon a vertical axis and having an outwardly turned or flared upper edge or rim, in combination with a dasher and scraper within said vessel and stationary means at the rim of the vessel for receiving and discharging the semi-frozen liquid therefrom, substantially as described.

5. In an ice cream freezer a cylindrical freezing vessel having a hollow wall and provided with an outwardly flared upper edge or rim, in combination with means for rotating said vessel upon its vertical axis, means for circulating freezing fluid in the hollow wall of the vessel while the latter is in rotation, a dasher in said vessel, and means at the top of the vessel to receive semi-frozen liquid from the rim thereof, substantially as described.

[Claims 6 to 16 not printed in the Gazette.]

883,065. PNEUMATIC-VALVE MECHANISM. THEODORE VRANA and BRETISLAV SCHIBA, New York, N. Y.; said Vrana assignor to Josef Renz, New York, N. Y. Filed Jan. 31, 1907. Serial No. 355,020.



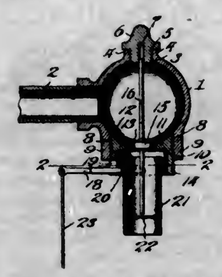
1. A pneumatic valve mechanism for self playing instruments, comprising a valve chest having a suction chamber, a diaphragm chamber having a port in its bottom, a diaphragm between the said suction chamber and the said diaphragm chamber, a channel below the diaphragm chamber and into which opens the port thereof, the channel being in connection with a tracker board, a minute connection between the said suction chamber and the said channel, a valve chamber connected with the said suction chamber and the atmosphere, a valve in the said valve chamber and controlled by the said diaphragm, and a pneumatic controlled by the said valve and connected with the said valve chamber.

2. A pneumatic valve mechanism for self playing instruments comprising a valve chamber, a suction chamber, a diaphragm chamber having a port in its bottom, a channel below the diaphragm chamber and with which the said port opens, said channel having one end extending up and opening into the suction chamber and its other end in connection with a tracker board, a diaphragm between the suction and diaphragm chambers, said diaphragm extending over the channel and having a minute opening therein, a valve in the valve chamber and having its stem engaging the diaphragm, and a pneumatic controlled by the valve.

3. A pneumatic valve mechanism for self playing musical instruments, comprising a valve chest having a suction chamber, a diaphragm chamber having a port in its bottom, a channel into which opens the said port, said channel having a minute connection with the suction chamber a diaphragm between the said suction chamber and the said diaphragm chamber, a pneumatic a valve chamber provided with valve seats and having connection with the pneumatic and by one valve seat with the atmosphere, and by the other valve seat with the said suction chamber, and a self closing double valve having spherical faces and normally seated on the said seat connecting the said suction chamber with the said valve chamber, the stem of the said double valve being seated on the said diaphragm for the latter to actuate the valve to close the valve seat to the atmosphere and to connect the suction chamber with the said valve chamber.

4. A pneumatic valve mechanism, comprising a valve chest made in top and bottom sections hinged together, the valve chest being provided with a locking plate secured to the free ends of the said sections to lock the same together, a suction chamber formed in the bottom section and closed by the top section, a diaphragm chamber in the bottom chamber below the suction chamber and having connection with a tracker board by way of the said locking plate, a diaphragm between the said suction chamber and the said diaphragm chamber, a valve chamber in said top section and having a channel extending through both sections, a pneumatic having its fixed member secured to the under side of the said bottom section, the said channel opening into the said pneumatic by way of its fixed member, and a valve in the said valve chamber and controlling a port to the atmosphere and a port leading into the said suction chamber.

883,066. GAGE-COCK. THOMAS R. WHITTAKER, Lawrence, Mass. Filed Apr. 3, 1907. Serial No. 366,194.



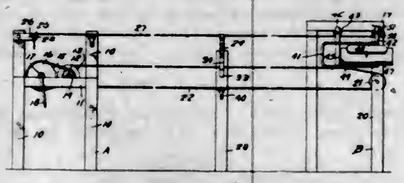
1. A gage cock comprising a casing formed with an opening, a seat plug removably secured in the casing and having its upper surface coincident with the interior surface of the casing, said plug being projected to form an annular extension and being formed with a valve opening communicating with the extension, a valve for said opening, a stem carried by the valve, a sleeve mounted within the extension of less exterior diameter than the interior diameter of the extension, means carried by the sleeve to engage the lower end of the valve stem on movement of the sleeve, and means for operating the sleeve so as to engage the stem and elevate the valve, the movement of the sleeve to elevate the valve serving to

arrange one end of the sleeve concentric with and beyond the valve opening.

2. A gage cock comprising a casing formed with an opening, a seat plug removably secured in the opening of the casing and formed with a valve opening, an annular extension projecting from the plug and below the casing, a valve for the opening in the plug, a valve stem projecting in opposite directions from the valve, means removably connected with the casing for guiding one end of the stem, a sleeve loosely seated in the plug extension and encircling the opposite end of the valve stem, said sleeve having an interior diameter greater than the diameter of the valve opening, means arranged within the sleeve to engage one end of the valve stem and operate the valve in the movement of the sleeve, said means being so arranged as to cause the sleeve to engage the seat plug about the valve opening therein when the valve has been fully elevated, and means supported by the plug extension for operating the sleeve.

3. A gage cock comprising a casing formed with an opening, a seat plug removably secured in the opening of the casing and formed with a valve opening, an annular extension projecting from the plug and below the casing, a valve for the opening in the plug, a valve stem projecting in opposite directions from the valve, means removably connected with the casing for guiding one end of the stem, a sleeve loosely seated in the plug extension and encircling the opposite end of the valve stem, said sleeve having an interior diameter greater than the diameter of the valve opening, means arranged within the sleeve to engage one end of the valve steam and operate the valve in the movement of the sleeve, said means being so arranged as to cause the sleeve to engage the seat plug about the valve opening therein when the valve has been fully elevated, and an operating lever pivotally supported on the plug extension and engaging the sleeve for the operation of the latter.

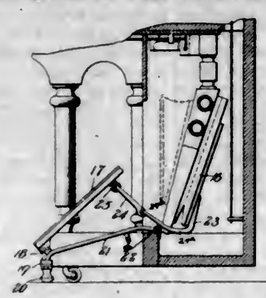
883,067. MAIL-CONVEYER. FOLKERT E. WOLKEN, Diller, Nebr. Filed Apr. 17, 1907. Serial No. 368,660.



A mail transporting system comprising a driven shaft, a pulley carried by the shaft, a terminal post, a pulley journaled upon the post, a cable engaged around the pulleys, a track wire extending above the upper stretch of the cable, means whereby the track wire may be tightened, a frame, pulleys mounted in the frame and designed for travel upon the track wire, the frame having connection with the upper stretch of the cable, a mail receptacle carried by the frame, and a bracket carried by the terminal post and having a curved resilient portion which is adapted to frictionally engage a portion of the frame when the same reaches the terminal.

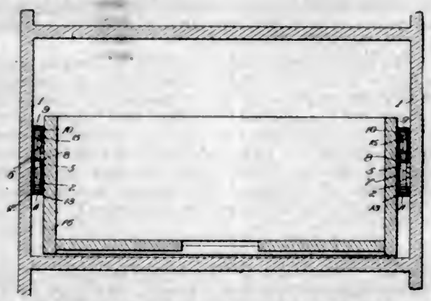
883,068. AUTOMATIC PIANO-PLAYER TREADLE. FLINT W. WRIGHT and PHILLIP H. COMMERFORD, Binghamton, N. Y. Filed Mar. 18, 1907. Serial No. 363,065.

The combination with the piano case and bellows arranged therein, of the treadle attachment comprising a frame hinged to said case, pedals hinged to the frame, jointed arms attached to the bellows, their front ends being foldable inward and provided with a rule joint which renders them self-supporting in position for co-action with the pedals, the aforesaid frame having feet and the parallel rods 21 having a transverse connecting bar 26 arranged a short distance from the hinges of the rods for engagement with the jointed foldable parts of the jointed arms, whereby said parts are raised and held in folded



position in contact with the pedals when the attachment is folded into the case as shown and described.

883,069. DRAWER-SUPPORT FOR FILING-CASES. PHILIP H. YAWMAN, Rochester, N. Y., assignor to Yawman & Erbe Manufacturing Company, Rochester, N. Y., a Corporation of New York. Filed Mar. 16, 1905. Serial No. 250,348.



1. The combination with a casing having a drawer opening therein and supporting devices arranged on opposite walls of the casing, of a drawer operating within the opening, supporting devices on opposite sides thereof and supports movable freely between the sides of the drawer and casing each provided with separate ways adapted to receive the supporting devices of the drawer and casing respectively, each way being accessible only from the side at which its coöperating device is mounted.

2. The combination with a cabinet having a drawer opening therein, a drawer adapted to operate in said opening, and suitable supporting devices on the drawer and the cabinet, of slidable supports arranged to operate between the drawer and cabinet, each having oppositely turned horizontal ways to coöperate with said supporting devices respectively, each way being accessible only from the side of the support on which its coöperating device is mounted, and guiding edges arranged angularly to said ways for preventing lateral disengagement of the supporting devices from their ways.

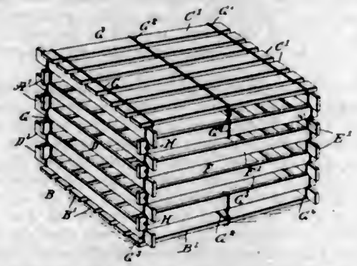
3. The combination with a cabinet, a drawer mounted to operate therein and supporting devices arranged between the sides of the drawer and cabinet, of movable supports having ways thereon coöperating with said supporting devices, each way being accessible from the side of the movable support on which its respective coöperating device is mounted, and having a guiding portion extending laterally of said coöperating device to prevent its disengagement.

4. The combination with a cabinet, a drawer adapted to operate therein, and supporting devices provided on the cabinet and drawer, of supports mounted to operate between the drawer and cabinet each composed of sheet material bent to form an intermediate track section having the supporting devices of the drawer and cabinet arranged on opposite sides thereof, and flanges formed above and below said track section for preventing tilting between the drawer and casing.

5. The combination with a cabinet, a drawer adapted to operate therein, and supporting devices provided on the cabinet and drawer, of supports mounted to operate longitudinally between the drawer and cabinet each embodying a horizontal intermediate track section having said supporting devices of the drawer and cabinet arranged on opposite sides thereof, flanges arranged above and below said track section and arranged to engage said supporting devices to prevent relative tilting between the drawer and cabinet, and portions on said flanges extending toward the intermediate track section for preventing lateral disengagement of the supporting devices and support.

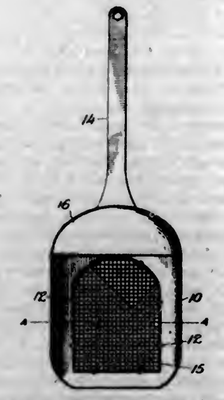
[Claims 6 to 18 not printed in the Gazette.]

883,070. MANUFACTURE OF CRATES. WALLACE C. YEOMANS, Pe Ell, Wash. Filed Jan. 22, 1907. Serial No. 353,441.



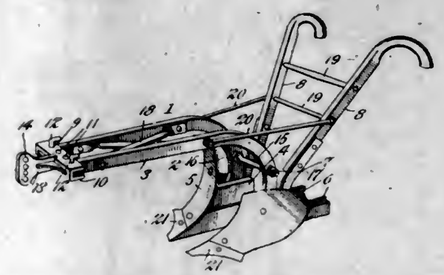
A crate of the class described composed of spaced slats wired together, and comprising a back, a bottom and a top, the slats composing which parts are arranged parallel with each other and secured together by end wires and intermediate wires, ends the slats of which are interposed between the ends of the slats of the back and secured in place by the end wires of said back, the outer ends of said ends being wired together, and a front the slats of which are interposed between the outer ends of the slats of one of the ends, the other ends of said slats being adapted to be interposed between the outer ends of the slats of the other end, the intermediate wires of the back, top and bottom being extended, for securing the top and bottom to the front when the crate is set up.

883,071. SHOVEL AND SCOOP. BARTHOLOMEW ZIMMEL, New York, N. Y. Filed May 11, 1907. Serial No. 373,125.



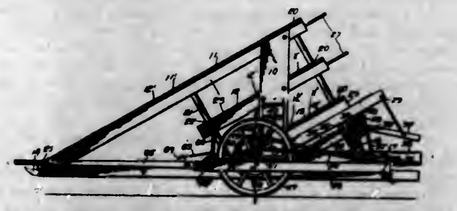
In a shovel or scoop the combination with a shovel having its rear edge slotted and with an opening having spurs or prongs around its edge, of a sieve adapted to be secured by the spurs and a hood with prongs adapted to enter the slots and secure it to the shovel to form a pocket at the rear of the shovel and near the handle.

883,072. FARMING IMPLEMENT. MILO ABBOTT, Blytheville, Ark. Filed Mar. 29, 1907. Serial No. 365,369.



A combination breaking implement adapted for use as a lister or middle breaker comprising independent beams, mold-boards carried by the beams and facing in opposite directions and provided with removable points, a pair of handles, one handle connected to each beam, a coupling head for the forward ends of the beams, said coupling head being formed with a transverse channel for slidably receiving the ends of the beams, the upper and lower walls of the channel being formed with a series of alined holes to register with holes formed in the ends of the beams, pins engaging the respectively alined holes to secure the beams in position in the head, the holes in the head being so spaced as to permit the beams and mold-boards to be arranged in contact with each other or in spaced relation, brace members for connecting the spaced beams, and a double cutting point applicable to the mold-boards when the latter are in contact.

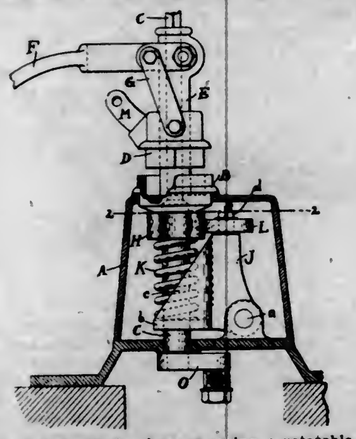
883,073. COMBINED CORN HARVESTER AND HUSKER. JAMES L. ALLENDER, Arlington, Ind. Filed Aug. 22, 1906. Serial No. 331,647.



In a machine of the class described, in combination, a main frame; a supplemental frame rigidly connected to the main frame at each side thereof; a member secured to a side sill of each supplemental frame and provided with a vertical opening; a traction wheel carried by each supplemental frame and having the opposite ends of its axle loosely fitting in the openings in the adjacent members; means mounted upon said supplemental frames for bodily raising or lowering the same and said main frame relatively to said traction wheels; separate means mounted on one of said supplemental frames and connected with said main frame, for tilting said frames; a plurality of pairs of upwardly and rearwardly inclined elevators mounted one above another on said main frame; stalk-cutting means connected to the lowest elevators; a drive-shaft carried by said main frame and operatively connected with one of said traction wheels; driving connections between said shaft and said elevators for operating all of the latter simultaneously; snapping rollers mounted in the rear of said main frame and operatively connected

with said shaft; means carried by said elevators for forcing the cut stalks between said snapping rollers; and a pair of shucking rollers operatively connected with said shaft and disposed adjacent said snapping rollers.

883,074. SWITCH-STAND. WILLIAM W. ALLEN, Cincinnati, Ohio. Filed Feb. 11, 1907. Serial No. 356,804.



1. In a switch stand, a base or casing, a rotatable shaft mounted therein, means pivotally mounted at its one end while the other or free end is adapted to act on said shaft, and mechanism having controlling connection with said means whereby the rotation of the shaft is affected.

2. A switch-stand comprising a base or casing, a rotatable shaft taking there-through, said base or casing being provided with a collar which forms one member of a lock or clutch, a second member slidably mounted on the shaft and adapted to take into said first member, whereby the shaft is locked against rotation independently of the lock or cintch, and a block loosely mounted on said shaft, in combination with means pivotally mounted within the base or casing, and a spring acting on said pivoted means whereby the rotation of the shaft is affected when both members of the clutch are in their normal position.

3. A switch stand comprising a rotatable shaft, means pivotally mounted adjacent to said shaft and adapted to swing in the arc of a circle, and a spring exerting its tension on said means, compelling it to move through the arc of a circle and act on said shaft at right angles to its axis, thereby affecting the rotation of said shaft when automatically operated.

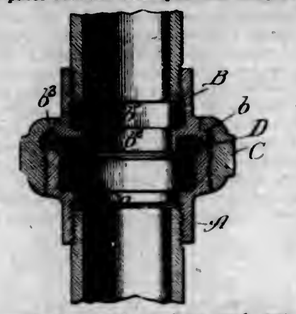
4. A switch-stand comprising a rotatable shaft, a block loosely mounted thereon, pivoted means adjacent to said shaft, one end of said means adapted to contact with and bear against said block, and a spring arranged to exert tension on the other end of said pivoted means whereby said means is made to bear against said shaft to affect its rotation when automatically operated.

5. A switch-stand comprising a rotatable shaft, means pivoted adjacent to said shaft and having its one end bifurcated and extending about said shaft, while its other end is adapted to bear against the shaft, and a spring bearing on the bifurcated end of said pivoted means whereby the other end affects the rotation of the shaft when the same is operated automatically.

[Claims 6 to 8 not printed in the Gazette.]

883,075. PIPE-UNION. ANTON G. ANDERSON, Chicago, Ill., assignor to Illinois Malleable Iron Company, Chicago, Ill., a Corporation of Illinois. Filed Aug. 9, 1907. Serial No. 387,796.

1. The combination with an iron nut, spud and tail-piece, the spud and tail-piece having conical seats opposed to each other, of a brass ring tapered at its outer edges only to provide bearing surfaces to fit said conical seats and held in place between said spud and tail-piece.



2. The combination with an iron spud, nut and tail-piece, the spud having a conical seat and the tail-piece having an annular channel opposed thereto, one side of which is conical, of a brass ring in the channel of the tail-piece and said ring being tapered at its outer edges only to provide bearing surfaces to fit said conical surfaces.

3. The combination with an iron spud having a conical seat and an iron tail-piece having a transversely-extending web with a cylindrical flange at its inner margin and a shoulder presenting a conical surface opposed to the conical seat upon the spud, of an iron nut holding the spud and tail-piece together, and a brass ring held by the shoulder and flange of the tail-piece out of contact with the web and pressed against the conical seat on the spud.

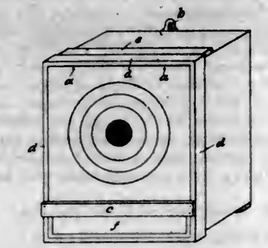
4. The combination with an iron tail-piece having a transverse web flanged at its inner margin and channeled outside of said flange, said channel having a conical outer margin, of an iron spud having a conical surface opposed to said conical surface, an iron nut holding the spud and tail-piece together, and a brass ring lying within said channel and having surfaces to conform to the conical seat on the spud and the conical surface of the channel of the tail-piece the ring being held by the flange and the outer conical margin of the channel out of contact with the bottom of the channel.

883,076. INSERTIBLE SAW-TOOTH. WILLIAM H. ASKINS, Garrison, Tex. Filed Mar. 2, 1907. Serial No. 360,286.



In a saw, the combination of a blade having a pair of notches formed therein, one of the notches forming a throat while the opposite notch has an approximately tangential arrangement, the longitudinal edges of the second mentioned notch each terminating in an abutment and being parallel and of V form, the base of the notch being oppositely inclined and a depression being formed in one of the before mentioned longitudinal edges, and a detachable saw tooth comprising a shank received within the notch and shoulders engaging the before mentioned abutments, the edges of the shank having an interlocking connection with the V shape edges of the notch and the inner end of the shank being bifurcated to form spring arms, the extremity of the shank being oppositely inclined whereby the spring arms are positively forced apart when the end of the shank impinges against the oppositely inclined base of the notch, one of the spring arms carrying a projection designed to enter the before mentioned depression in one of the longitudinal edges of the notch when the tooth is inserted in position within the notch.

883,077. TARGET AND BULLET-CATCHER FOR USE WITH AIR-GUNS. WILLIAM BAKER, Caversham, near Reading, England. Filed May 14, 1907. Serial No. 373,639.



1. A target comprising a box open at the front, means for suspending a flexible target across the front opening, a detachable frame adapted to be slipped on over the front of the box and to hold the target in position, and stop devices to limit the backward movement of said frame on said box comprising a bar secured to the top of the box adjacent to the front thereof and another bar secured to the front bottom portion of the box.

2. A target comprising a box open at the front, hooks at the top of the box for suspending a flexible target across the front opening, and a detachable frame adapted to be slipped on over the front of the box and to hold the target in position, said box and said frame being provided with stops to limit the backward movement of the frame on the box.

3. A target comprising a box open at the front, means for suspending a flexible target across the front opening, a detachable frame adapted to be slipped on over the front of the box and to hold the target in position, and stop devices connected with the box and with said frame for limiting the backward movement of the same, said box being also provided in the back thereof with a cushion and in the bottom thereof with a drawer.

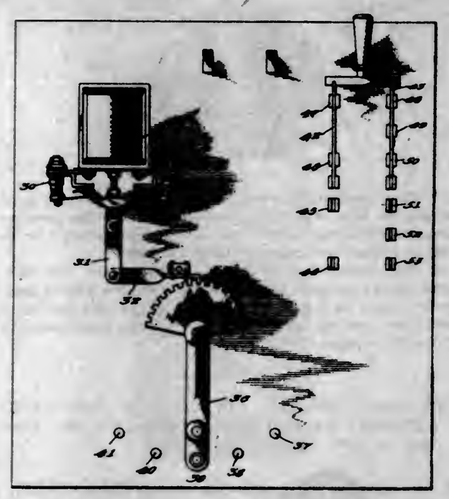
4. A target comprising a box open at the front, means for suspending a flexible target across the front opening, a detachable frame adapted to be slipped on over the front of the box and to hold the target in position, and stop devices to limit the backward movement of said frame on said box comprising a bar secured to the top of the box adjacent to the front thereof and another bar secured to the front portion of the frame, said box being also provided in the back thereof with a cushion and in the bottom thereof with a drawer.

5. A target comprising a box open at the front, hooks at the top of the box for suspending a flexible target across the front opening, and a detachable frame adapted to be slipped on over the front of the box and to hold the target in position, said box and said frame being provided with stops to limit the backward movement of the frame on the box, and said box being also provided in the back thereof with a cushion and in the bottom thereof with a drawer.

883,078. CONTROLLER FOR ELECTRIC MOTORS. THOMAS E. BARNUM, Milwaukee, Wis., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis., a Corporation of Wisconsin. Filed Mar. 2, 1904, Serial No. 196,188. Renewed Feb. 21, 1906. Serial No. 302,269.

1. In a motor controller, the combination with a motor, of means for controlling the direction of operation thereof, means for operating the motor in successive periods of time throughout its range of operation, means for automatically stopping the motor at the end of each period, and means to prevent the operation of the motor for more than one period at a time.

2. In a motor controller, the combination with a motor, of means for controlling the direction of operation of the same, means for dividing its operation into a number of stages, and means for preventing the operation of the motor for more than a single stage with a single operation of the controller and means to prevent more than one operation of the controller at a time.



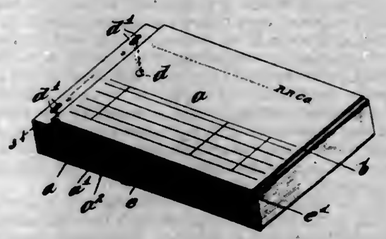
3. In a motor controller, the combination with a motor, of manually operated means for controlling the direction of operation of the same, means for dividing the operation of the motor into stages, and means for insuring the stoppage of the motor at the end of each stage previous to again proceeding on the succeeding stage.

4. In a motor controller, the combination with a motor, of a manually operated contact switch and an automatically operated switch for opening and closing the motor circuit, said switches being functionally connected to permit the operation of the manual switch only when the automatic switch is in a certain relation thereto.

5. In a motor controller, the combination with a motor, of an electromagnetic switch for controlling the same and means operated at predetermined periods for operating said switch.

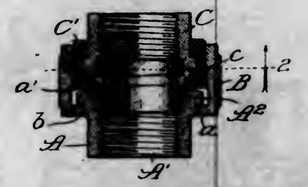
[Claims 6 to 30 not printed in the Gazette.]

883,079. MANIFOLDING RECEIPT. WALTER F. BLAKE, Chicago, Ill., and LEWIS C. HUNTER, Fort Wayne, Ind. Filed Feb. 18, 1907. Serial No. 357,789.



A loose leaf manifolding book, comprising a plurality of sheets of paper each of which is perforated transversely and folded to form triplicate slips, manifold material upon one side of two of said slips, a cover having one end thereof adapted to be folded under the slips being written upon, and means for binding the folded sheets and cover together at one end thereof, said binding means being adapted for tightening adjustment as the slips are torn from the book.

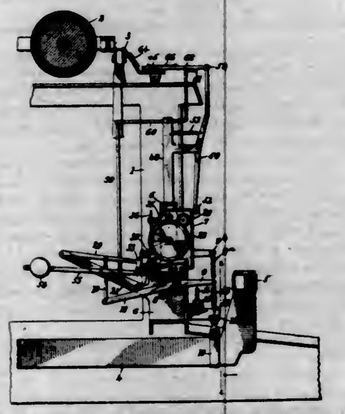
883,080. UNION. HENRY E. BULLOCK, Chicago, Ill., assignor to Illinois Malleable Iron Company, Chicago, Ill., a Corporation of Illinois. Filed Sept. 23, 1907. Serial No. 394,198.



1. The combination with an iron nut, of an iron spud having an iron seat and provided with a brass annulus threaded to engage the nut, and a tail-piece having a brass seat to engage the iron seat upon the spud.

2. The combination with an iron nut, of an iron tail-piece having an inset brass annulus provided with a seat, an iron spud having an iron seat to engage said seat upon said inset, and provided with a surrounding brass annulus threaded to engage the nut.

883,081. ADDING ATTACHMENT FOR TYPEWRITERS. HENRY H. BURTON, Los Angeles, Cal. Filed Aug. 18, 1906. Serial No. 331,156.



1. In combination with a typewriter having a carriage, an adding device adapted to be attached thereto, said adding device comprising a plurality of numeral wheels, a shaft upon which said wheels are mounted, an arm pivoted to said shaft adjacent each wheel, and means adapted to engage with said levers in succession to rotate said wheels.

2. In combination with a typewriter having a carriage, an adding device adapted to be attached thereto, said adding device comprising a plurality of numeral wheels, a shaft upon which said wheels are mounted, an arm pivoted to said shaft adjacent each wheel, means for rotating each numeral wheel when its corresponding arm is moved in one direction, and means adapted to engage with said arms in succession to rotate said wheels.

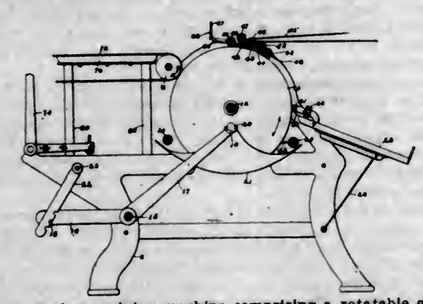
3. In combination with a typewriter having a carriage, an adding device adapted to be attached thereto, said adding device comprising a plurality of numeral wheels, a shaft upon which said wheels are mounted, a plurality of arms pivoted to said shaft, one arm being adjacent each wheel, means adjacent the end of each arm for engaging with the corresponding wheel for rotating the same when the arm is moved in one direction, means for preventing the rotation of the wheels when the arms are moved in the opposite direction, and means adapted to engage with said arms in succession to rotate said wheels.

4. In combination, a plurality of numeral keys, a shaft, a plurality of wheels on said shaft, a lever arm pivoted on said shaft and adjacent each of said numeral wheels, means connected to said keys and adapted to operate said levers, and means for moving the numeral wheels in respect to said operating means, whereby any one of the levers may be operated to rotate its corresponding wheel.

5. In combination, a typewriter having a carriage, a plurality of numeral keys, an adding device attached thereto, means for moving said adding device each time a numeral key of the typewriter is operated, and means attached to the typewriter carriage for controlling the movement of the adding device, said means comprising a ratchet bar on said carriage, a second ratchet bar on the adding device, and a lever in engagement with both of said ratchet bars.

[Claims 6 to 22 not printed in the Gazette.]

883,082. GLUE-APPLYING MACHINE. JAMES A. BUTLER, Winthrop, and CLARK REYNOLDS and ALBERT J. SEAMAN, Boston, Mass. Filed Nov. 19, 1906. Serial No. 344,004.



1. A glue applying machine comprising a rotatable glue roll, means for applying glue thereto, means for stripping paper from the glue roll, a delivery belt, and rotatable means for turning the paper from said stripper on to the delivery belt with the glued side uppermost.

2. A glue applying machine comprising a glue roll, means for supplying glue thereto, vibrating means for stripping paper from said roll, a delivery belt, and a rotatable brush roll acting against the glued surface of the paper to turn said paper on to said delivery belt.

3. A glue applying machine comprising a glue roll, means for supplying glue thereto, means for stripping paper from said roll, a delivery belt, and a turning roll, located above the stripper and having spirally arranged bristles.

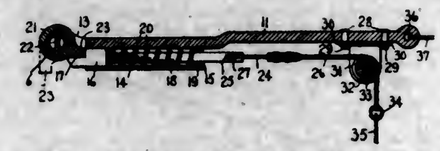
4. A glue applying machine comprising a glue roll, having a smooth periphery, a vibratory stripper bearing on said glue roll, means for vibrating said stripper and rotatable means for receiving the glued material from said stripper.

5. In a glue applying machine, the combination with a glue roll, a shaft slidably mounted in bearings above the glue roll and having a cam, a series of stripper arms pivotally mounted on said shaft and bearing at their forward ends on the glue roll, and yielding means for supporting the rear ends of said arms, of a brush roll journaled in bearings in front of the stripper shaft and having a gear, a second gear meshing with said brush roll gear, the cam end of the stripper shaft extending through said slot, and means for driving the brush roll, as and for the purpose described.

883,083. TRIP FOR HAY-NETS. JOHN C. CALVERT, Golconda, Nev. Filed Sept. 19, 1907. Serial No. 393,743.

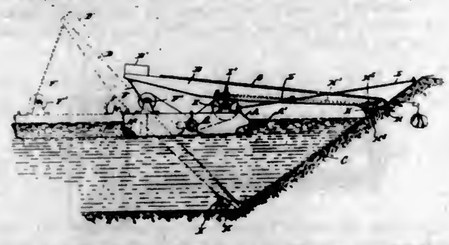
In a hay-loading net, the combination with two separable sections, a bar permanently secured to one section and removably connected to the other section, and a collar rigidly secured upon said bar, and provided with a lug, of a plate loosely connected with the bar a latch

mounted upon the plate for coöperation with the lug upon the collar, a bracket mounted upon the plate for rocking movement transversely thereof, a roller journaled in the



bracket, and a hook-shaped member engaged through the stem of the latch, and a strap secured to said member and passed over the roller.

883,084. APPARATUS FOR PLACING BED AND BANK COVERINGS IN WATERWAYS. ALPHONSE CASSE, Brussels, Belgium. Filed Aug. 5, 1907. Serial No. 387,109.



1. In an apparatus for laying protective coverings on the banks and beds of waterways, the combination of the float, tilting platform carried thereby, the driven roller journaled at the outer edge of said platform and a motor mechanism for driving said roller.

2. In an apparatus for laying protective coverings on the banks and beds of waterways, the combination of the float, tilting platform mounted on the float in proximity to one edge thereof and a power driven roller journaled in the platform at its free edge and adapted to move the platform and float by contact with the surface on which the covering is laid.

3. In an apparatus for laying protective coverings on the banks and beds of waterways, the combination of the following instrumentalities, to wit; a float, a platform forming a support and slideway for the covering, said platform being pivotally mounted on the float and means carried by the platform for moving the platform and float in accord with the movement necessary to discharge the covering in the form of a layer or sheet from the edge of the platform onto the surface to be covered.

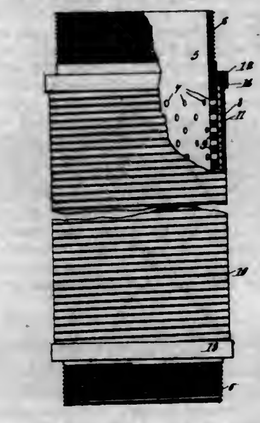
4. In an apparatus for laying protective coverings on the banks and beds of waterways, the combination of the float, the platform forming a support and slideway for the covering, pivotally mounted on the float, a roller journaled in the free edge of the platform, a motor on the float and driving gearing between the motor and roller.

5. In an apparatus for laying protective coverings on the banks and beds of waterways, the combination of the float, the platform forming a support and slideway for the covering, pivotally mounted on the float, a roller journaled in the free edge of the platform, a motor on the float, and driving gearing between the motor and roller embodying a gear having an axis coincident with the pivotal axis of the platform and a worm shaft and gear.

[Claim 6 not printed in the Gazette.]

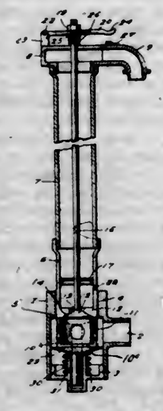
883,085. WATER OR OIL WELL SCREEN. AUTHEY E. CHILDRESS and HENRY CATHRINER, Houston, Tex. Filed Mar. 16, 1907. Serial No. 362,701.

A well strainer comprising a barrel having circumferential rows of orifices, a jacket consisting of a metallic strip disposed in convolutions around the barrel and having spaced lugs forming in conjunction therewith vertical passages each of which communicates throughout its entire length directly with the orifices, thus to utilize the entire extent of such passages for conducting purposes, the opposed faces of the convolutions being provided with channels that intersect the vertical passages to permit en-



trance of liquid thereto, and collars rigidly secured to the barrel near its ends and having integral inward projecting flanges that inclose the adjacent convolutions of the jacket to retain the same in position on the barrel and also to close the terminals of the passages, thereby to prevent the escape of liquid and to cause the latter to flow into the barrel.

883,086. HYDRANT. CHRIS J. CHRISTENSON, Kellogg, Iowa. Filed Feb. 5, 1907. Serial No. 355,880.



1. A hydrant comprising a stock, a delivery pipe communicating therewith, a detachable head closing the upper end of the pipe and provided with a discharge spout, a valve controlling the discharge of water through the stock and into the delivery pipe, a rod connected with the valve and extending upwardly through the head and provided with a shoulder and a threaded portion, a standard upon the rear portion of the head, a lever pivoted at one end to the standard and having a hooked free end overhanging the spout, said lever being provided with an intermediate opening for the upward passage of the threaded end of the

rod and resting below said opening on the shoulder, a nut engaging the threaded end of the rod and holding the lever in contact with said shoulder, a spring surrounding the rod between the head and shoulder and serving to return the lever and rod to normal position, and a pivoted latch upon the spout to engage the lever and hold the same depressed in valve-opening position.

2. A hydrant comprising a stock having a side inlet and a contracted opening at the top thereof, the wall of which forms a seat shoulder above the plane of the inlet, a detachable head closing the bottom of the stock, a valve casing threaded into the contracted opening and having a portion depending into the casing and provided with a closed bottom, side ports, and a constricted upper outlet port and valve seat, an outlet valve arranged in said casing and adapted to engage said seat, an outlet pipe connected with the valve casing and provided with a discharge nozzle, a rod connected with the valve and extending upwardly through the outlet pipe, means for operating the rod, and a spring actuated cut-off valve supported by the bottom head of the stock and bearing against the closed lower end of the valve casing, said valve being normally held depressed by said casing and adapted upon the withdrawal thereof to engage said seat shoulder and cut off the flow of water.

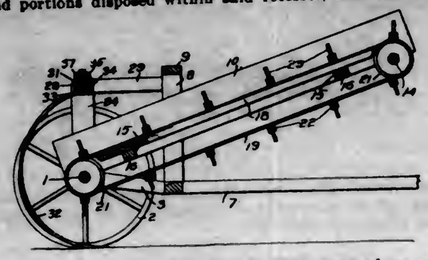
3. A hydrant comprising a stock having a side inlet and a detachable bottom head, the latter being provided with a socket, a valve casing detachably fitted in the upper end of the stock and having a chambered portion entering the same, a valve arranged in said chambered portion and controlling the flow of water through the valve casing, a cut-off valve within the stock normally held depressed by the valve casing and having a stem movable in said socket, and a spring operating on the valve to move it to a position above the inlet to cut off the flow of water through the stock when the valve casing is removed.

4. A hydrant comprising a stock having a side inlet, a removable bottom head, and a threaded opening in its top of less diameter than the stock, a valve casing entering the stock through and engaging with the threaded opening and having a port therein and provided below the port with inlet openings, a valve controlling said port, a valve movably supported by the bottom head of the stock and normally held depressed by the valve casing, and a spring for operating said valve to close the threaded opening when the valve casing is removed.

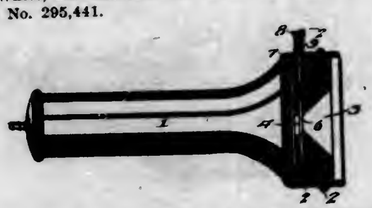
5. A hydrant comprising a stock having a side inlet and a detachable bottom head, said stock being provided at its upper end with a contracted internally threaded opening, the wall of which forms a seat shoulder above the plane of the inlet, a valve casing having a threaded portion engaging said threaded opening, and provided at its lower end with a chambered portion entering the stock and arranged opposite the inlet, the said chambered portion being closed at its lower end and provided with side inlets and having at its upper end an annular flange forming a discharge port and a valve seat, a valve arranged in said chambered portion and adapted to engage said seat, a rod connected with the valve and extending upwardly from the outlet port, means for controlling the rod, and a spring actuated cut-off valve supported by the detachable bottom head of the stock and bearing against and normally held depressed by the closed bottom of the chambered portion of the valve casing, said cut-off valve being adapted upon the removal of the valve casing to be forced upward by its spring to engage said seat shoulder and cut off the flow of water through the stock.

883,087. HAY-LOADER. CHARLES E. CLUGSTON, Bigspring, Nebr. Filed May 14, 1907. Serial No. 373,681.

A machine of the type set forth comprising a wheeled frame, an endless conveyer supported from said frame and movable forwardly and upwardly, means for operating said conveyer, vertical posts supported from said frame, a rake bar having trunnions journaled in said posts, means for rocking said rake bar to selected positions, said rake bar having recesses in its upper surface extending transversely thereof in parallelism, rake teeth having angular end portions disposed within said recesses, said end portions having flat upper faces and a bar imposed on said rake bar and bearing against said flat upper faces.

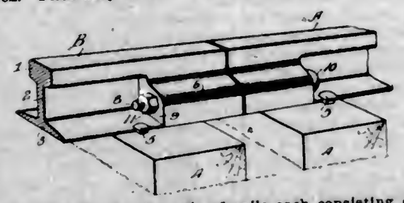


883,088. TELEPHONE INSTRUMENT. CLIFFORD E. COLE, Birmingham, Ala., assignor of one-half to Sarah A. White, Birmingham, Ala. Filed Jan. 10, 1906. Serial No. 295,441.



A telephone instrument comprising a head having a bell-shaped mouth and a transverse slot or aperture intersecting the mouth, in combination with an imperforate slide engaging the slot or aperture, and capable of being moved bodily into the path of the mouth of the instrument, said slide being provided with a stem projecting exteriorly of the body of the instrument and having a push button or head, and a spring coiled on the stem adjacent to the push button and engaging the latter to move the slide in one direction.

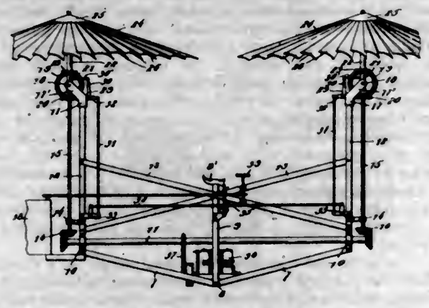
883,089. RAIL-JOINT. FRANK A. COLLIER, Galveston, Tex. Filed May 3, 1907. Serial No. 371,611.



The combination of a pair of rails each consisting of a head, a base, and a web and provided with terminal enlargements at opposite sides of the web and integrally connected with the latter and also with the head and base and having longitudinally-extending bores, the enlargements extending inwardly from the end surfaces of the rails to such distance as to extend partially over the two adjacent cross ties at the meeting ends of the rails, and bolts extending through the bores of corresponding enlargements to secure the abutting ends of the rails together, said enlargements forming housings for the shank portions of the bolt.

883,090. FLYING-MACHINE. HOMER J. CRAGUN, Logansport, Ind. Filed Mar. 6, 1907. Serial No. 360,810.

In the flying machine, the combination with a frame consisting of two longitudinally extending bottom side bars which are mutually connected at their ends and which diverge toward their centers, the bottom side bars being bent downwardly at their centers, convergent rods secured to the side bars and at the center thereof and extending upwardly, a pair of uprights secured at each end of the side bars, crossed brace rods connecting the uprights, the lower ends of the uprights having bearing blocks, a longitudinally extending drive shaft journaled in the bearing blocks, the upper ends of the convergent rods being secured to the crossed brace rods, a motor carried by the frame and supported upon the side bars, connections between the motor and the drive shaft, vertical shafts carried by the uprights, and connected with the drive shaft, yokes carried by the uprights, members pivotally mounted in the yokes, shafts revolubly connected

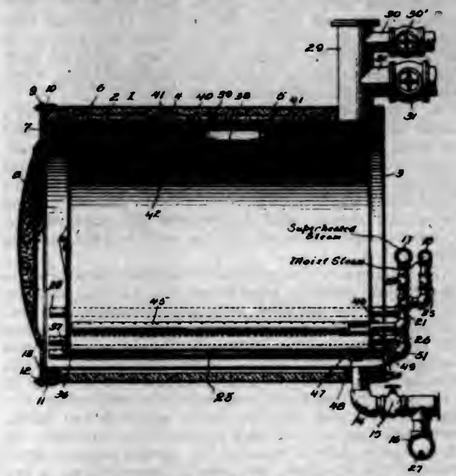


with the members, gears pivotally mounted upon the yokes concentrically with the pivot points of the members, gears carried by the vertical shaft and by the second named shafts respectively and meshing with the first named gears, angle levers pivoted to the yokes, connections between the angle levers and the members between the yokes, angle levers pivoted to the uprights and beneath the first named angle levers, rods connecting the horizontal arms of the angle levers, a rod connecting the vertical arms of the last named angle levers, a lever pivoted to the convergent rods and to the rod connecting the vertical arms of the last named angle levers and arranged to shift the rod to tilt the members between the yokes, and a steering apparatus arranged at the rear of the frame.

883,091. APPARATUS FOR DISTILLING WOOD. WILLIAM DANNER, New Orleans, La., assignor of one-half to James D. Lacey, Chicago, Ill. Filed July 9, 1907. Serial No. 382,956.

1. In a distilling apparatus, the combination of a horizontal oven closed at one end and provided with a doorway at its opposite end, a door for closing said doorway, track rails extending longitudinally within the oven, a retort comprising a vessel closed at one end and provided with a doorway at its opposite end, a door for closing the same, said retort being provided with wheels to traverse said rails, heating pipes extending longitudinally within the oven, heating pipes extending longitudinally within the retort and having entrance ends projecting through the closed head thereof, steam supply nozzles adapted to automatically couple with and uncouple from said entrance ends upon the insertion and removal of the retort, and a system of valve supply pipes for supplying superheated steam to the pipes within the oven and either live or superheated steam to the nozzle.

2. In a distilling apparatus, the combination of a horizontal retort having track rails therein and closed at one end and provided with a doorway at its opposite end, a door for closing the doorway, a retort comprising a vessel having an opening and a closure therefore at one end and provided with a vapor outlet in the top thereof, a vapor discharge pipe leading from the oven and provided with valved branches located at different elevations, heating pipes extending longitudinally within the oven, heating pipes within the retort having their inlet ends projecting through the closed end wall thereof, steam supply pipes upon the closed end of the oven including nozzles to telescopically engage the inlet ends of the retort pipes, main live and superheated steam supply pipes, and valves controlling the passage of steam and arranged for the supply of superheated steam to the oven and either live or superheated steam at will to the retort.



3. In a distilling apparatus, an oven closed at one end and open at the other end, the closed end being provided with an opening, a door for closing the open end of the oven, a removable retort having an open end provided with a door and a closed end provided with a draft member for connection with a cable or the like adapted to pass through the said opening in the closed end of the oven, a closure for said opening, and means for supplying a heating medium to the oven and retort.

4. In a distilling apparatus, an oven, a retort insertible therein and withdrawable therefrom, pipes for supplying superheated steam to the oven, nozzles for supplying live steam to the retort, steam pipes upon the retort adapted to connect with said nozzles, and valves controlling the first named pipes and nozzles for supplying superheated steam to the oven and either live or superheated steam to the retort.

5. In a distilling apparatus, the combination of an oven, a retort disposed therein, said oven and retort being provided with heating pipes, main live and superheated steam supply pipes arranged exteriorly at one end of the oven, valve branches from the superheated steam supply pipe to supply steam therefrom to the oven pipes, and branches from both main supply pipes for the supply at will of either live or superheated steam to the retort pipe, said branches being provided with valves controlling the flow of steam from the respective main pipes.

[Claims 6 and 7 not printed in the Gazette.]

883,092. CONDUIT CONSTRUCTION. WILLIAM P. DAY, Altoona, Pa. Filed Jan. 10, 1908. Serial No. 410,256.



1. A conduit of the character described, constructed in a series of longitudinal sections laid end to end and formed at their abutting ends with lips, and supports for said sections said supports being formed with pockets receiving said lips.

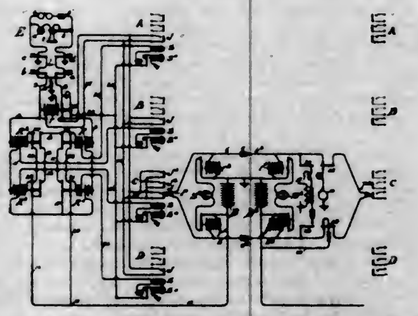
2. A conduit of the character described, constructed in a series of longitudinal sections laid end to end and formed at their adjoining ends with downwardly extending lips, metallic ties formed with longitudinal and transverse webs intersecting each other and provided at the intersections with downwardly sloping converging surfaces in which the said lips are received.

3. A conduit of the character described, constructed in longitudinal sections laid end to end, ties formed with shoulders between which said sections fit and are held against lateral movement, the ties being also formed, in connection with the conduit sections with means for holding sections as against longitudinal movement, and covers for said sections resting upon said ties.

4. A conduit of the character described constructed in a series of longitudinal sections, ties for supporting said sections, the ties being formed with pockets and the sections with downwardly extending lips fitting in said pockets, the ties being further formed with inwardly facing shoulders between which the sections fit, and the ties being also formed with downwardly and outwardly inclined recesses, and covers for the sections fitting in said recesses.

5. A conduit of the character described, constructed in longitudinal sections, supports or ties for said sections, said ties being provided with a longitudinal web and transverse webs, one of said transverse webs, intersecting the longitudinal web at the middle thereof, and said webs being formed at such point of intersection with converging sloping walls, the sections being formed with downwardly extending lips resting on said walls, the longitudinal web being formed with inwardly facing shoulders and beyond said shoulders on both sides thereof, with outwardly and downwardly inclined recesses, the conduit sections fitting between the shoulders, and angular covers fitting in said recesses and extending over the said sections.

883,093. DIVIDED-CENTRAL TELEPHONE SYSTEM. WILLIAM W. DEAN, Chicago, Ill., assignor to Kellogg Switchboard & Supply Company, Chicago, Ill., a Corporation of Illinois. Filed June 15, 1903. Serial No. 161,531.



1. In a telephone system, the combination with a telephone line having a plurality of connection terminals located upon the different divisions of a divided central switchboard, of a signal for the line upon each division of said switchboard, cord circuits at each of the divisions of the switchboard to establish connections with the line through the medium of said connection terminals for conversational purposes, a common source of current at the central office adapted to be connected with the telephone line by means of said cord circuits to furnish current over the line for talking, and means controlled from the substation for causing currents of different strengths to flow from said source over the telephone line to selectively operate said signals upon the various divisions of the switchboard, substantially as described.

2. In a telephone system, the combination with a telephone line having a plurality of connection terminals located upon the different divisions of a divided central switchboard, of a signal for the line upon each division of said switchboard, cord circuits at each of the divisions of the switchboard to establish connections with the line through the medium of said connection terminals for conversational purposes, a common source of current at the central office adapted to be connected with the telephone line by means of said cord circuits to furnish current over the line for talking, and means at the substation for closing high resistance and low resistance paths for current over the telephone line from said common source to selectively operate said signals upon the various divisions of the switchboard, substantially as described.

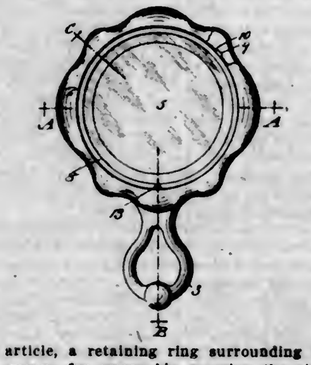
3. In a four-division, divided central telephone circuit, the combination with a telephone line, having a connection terminal upon each of the four divisions of the switchboard at the central office, a signal for the line in each of said divisions of the switchboard, cord circuits at each division of the switchboard to establish connections with the telephone line through the medium of said connection terminals for conversational purposes, a common source of current at the central office associated with said cord circuits adapted when a connection exists at any of said divisions to furnish current over the line for talking, two of said signals being connected with each line conductor of the telephone line, and means at the substation to cause current of different strengths to flow from said source over either of said line conductors to selectively operate the signals connected therewith, substantially as described.

4. In a telephone system, the combination with a telephone line terminating in connection terminals upon the various divisions of a divided central switchboard, of a plurality of signals for the line—one upon each of said divisions, a central common source of current, a resistance at the substation of the line, and means under the control of the subscriber to close circuits from said central source over the telephone line and to at will include or exclude said resistance to thereby selectively operate said signals, substantially as described.

5. In a telephone system, the combination with a telephone line, of a plurality of signals therefor located upon the different divisions of a divided central switchboard, a central common source of current, a relay at the central office connected with the line for each of said signals and serving to control the same, said relays being responsive to currents of different strengths, and means at the substation for causing currents of different strengths to flow over the line from said source and selectively operate said relays and thereby the said signals, substantially as described.

[Claims 6 to 11 not printed in the Gazette.]

883,094. FRAME FOR MIRRORS, BRUSHES, PICTURES, AND THE LIKE. ROBERT R. DEBACHER, Hoboken, N. J. Filed Sept. 10, 1907. Serial No. 392,099.

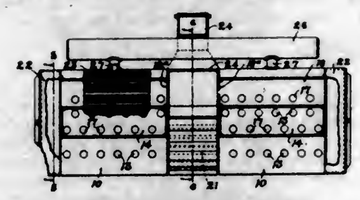


1. An article, a retaining ring surrounding the same, a frame, means for removably securing the ring within the frame comprising a lug and slit connection between the ring and frame, and a spring catch in the frame arranged to engage the ring.

2. An article, a retaining ring surrounding the same, a frame, means for removably securing the ring within the frame comprising lugs on the ring entering slits in the frame, and a spring catch in the frame having a lug arranged to normally overlap the periphery of the ring.

3. An article, a retaining ring surrounding the same, lugs on the ring entering slits in the frame, a spring catch comprising a flat strip and a lug normally overlapping the periphery of the ring, and a tongue struck from the frame for holding the spring catch in position therein.

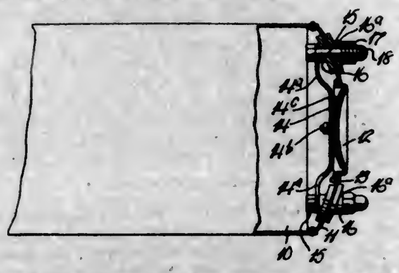
883,095. STEAM-GENERATOR. HARRY DEL MAR, New York, N. Y., assignor to Boilers and Engineering Company, Jersey City, N. J., a Corporation of New Jersey. Filed Apr. 15, 1907. Serial No. 368,155.



1. A steam generator comprising a water holding shell, combustion chambers closed at the ends and arranged at the sides of the shell, cross fire tubes leading through the shell from the under side and discharging into the combustion chambers, outlet flues parallel with the combustion chambers, and fire tubes leading through the shell from the combustion chambers and discharging into the outlet flues.

2. A steam generator comprising a water holding shell, combustion chambers at the sides of the shell, said combustion chambers being closed at the ends, outlet flues parallel with the combustion chambers, cross tubes leading through the shell from the under side and discharging into the combustion chambers, cross tubes leading through the shell from the combustion chambers into the outlet flues, longitudinally arranged fire tubes leading through the shell and means for directing the products of combustion from the outlet flues to the longitudinal fire tubes.

883,096. MANHOLE-COVER. HARRY DEL MAR, New York, N. Y., assignor to Boilers and Engineering Company, Jersey City, N. J., a Corporation of New Jersey. Filed July 9, 1907. Serial No. 382,945.



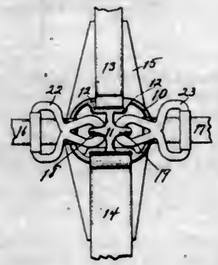
1. The combination with a pressure containing receptacle and the manhole plate therefor, of the spring secured to the wall of the receptacle and crossing the manhole, and a plate spring arranged between the brace and the manhole plate.

2. The combination with a pressure-containing receptacle and manhole plate therefor, of a brace crossing the manhole on the inside of the receptacle, fastening bolts extending through the wall of the receptacle and operated from the outside, and a spring arranged between the brace and the manhole plate, so as to bear directly on the latter.

3. The combination with a receptacle and the manhole cover therefor, of a cross-brace on the inside of the receptacle, said cross-brace connecting with the manhole cover, bolts passing through the wall of the receptacle and connecting with the cross-brace, and caps on the outer ends of the bolts to make a tight joint.

4. The combination with a receptacle and a manhole cover therefor of a cross-brace on the inside of the receptacle, bolts passing through the wall of the receptacle, cap nuts on the outer ends of the bolts to make a tight joint, and a spring carried by the cross-brace and bearing upon the manhole plate.

883,097. TRACE-CARRIER. WILLIAM E. DIPPERT, Des Moines, Iowa. Filed May 14, 1907. Serial No. 374,105.



1. A trace-carrier, comprising a single ring, a single arched bar extending across the center of the ring with its ends integral with the inner portion of said ring, said arched-bar provided ou opposite sides of its center with downwardly-extending arms, the ends of the arms terminating beyond the side of the arched bar and below the plane of the ring.

2. A trace-carrier, comprising a single ring, an arched bar extending across the center of the ring with its ends integral with the inner portion of said ring, said arched bar provided on opposite sides of its center with a downwardly-extending arm, the ends of the arms terminating in knobs or bosses beyond the sides of the arched bar and below the plane of the ring.

3. A trace-carrier, comprising a single ring, an arched bar crossing said ring, the ends of the arched bar forked and integral with the inner portion of the ring, arms on and extending laterally and downwardly from opposite sides of the center of the arched bar, and knobs or bosses on the extremities of said arms below the plane of the ring.

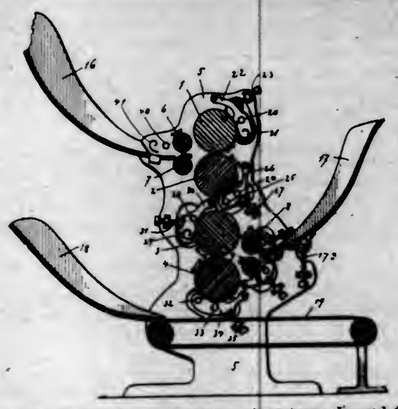
883,098. MACHINE FOR CLEANING AND POLISHING TIN. BRADFORD H. DIVINE, Utica, N. Y. Filed June 19, 1907. Serial No. 378,073.

1. The combination in a machine of the character described, having polishing rolls, of a blast pipe arranged adjacent to the roll and provided with orifices to direct a blast tangentially on the rolls, and means for adjusting the said pipe with reference to the periphery of the roll, substantially as set forth.

2. The combination in a machine of the character described, having polishing rolls, of a blast pipe arranged approximate to the roll and provided with orifices to direct a blast on the periphery of the roll, and a slotted suction pipe arranged adjacent to the blast pipe and adapted to receive and remove the dirt dislodged by the blast, substantially as set forth.

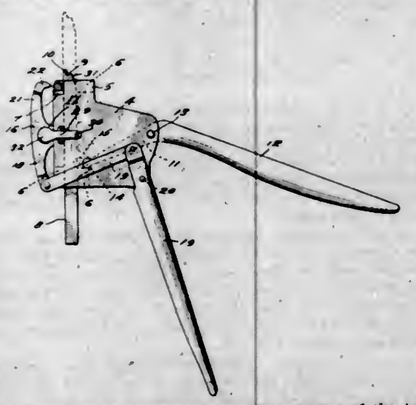
3. The combination in a machine of the character described, rolls, a blast pipe arranged adjacent to the periphery of the roll having orifices adapted to direct blast tan-

gentially on the periphery of the roll, and a slotted receiving pipe arranged adjacent to the blast pipe and means for



adjusting the blast and receiving pipes towards and from the periphery of the roll, substantially as set forth.

883,099. HOSE-CLAMP APPLIER. DAVID DUBENDORF, Middletown, Pa. Filed July 23, 1907. Serial No. 385,160.



1. A tool for applying annular wire clamps of the type described to hose comprising a head carrying stationary clamps, a pivoted clamp to coöperate therewith, a pivoted lever for operating the pivoted clamp, a sliding strainer bar, and a pivoted operating lever therefor pivotally connected with said bar.

2. A tool for applying annular wire clamps of the type described to hose comprising a head carrying stationary clamps, a pivoted clamp to coöperate therewith, a pivoted lever for operating the pivoted clamp, a sliding strainer bar, locking means for normally holding said bar inoperative, and a pivoted lever for operating the bar.

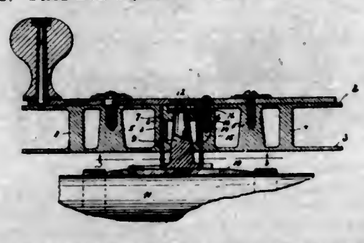
3. A tool for applying annular wire clamps of the type described to hose comprising a head carrying pairs of superposed stationary clamping jaws, the lower clamping jaws being formed in their forward edges with grooves and projecting in advance of the upper clamping jaws, the latter being provided with beading edges, a clamping lever pivotally mounted upon the forward portion of the head and having a pair of pointed clamping jaws to move between the pairs of stationary jaws, a strainer bar arranged to slide upon the head in rear of said stationary clamping jaws, a pivoted lever for operating the clamping lever, a locking means for holding the bar inoperative, and a pivoted lever for sliding said bar.

4. A tool for applying annular wire clamps of the type described to hose comprising a head carrying stationary clamping jaws, a pivoted clamping lever carrying coöperating clamping jaws, an operating lever therefor fulcrumed on the head, a link connection between said lever and the clamping lever, a strainer bar slidably mounted on the head, and an operating lever therefor fulcrumed on the head and pivotally connected to said bar.

5. A tool for applying annular U-shaped ties to hose, comprising a head, stationary clamps upon the head, a movable clamp to operate therewith to hold the ends of the tie, means for operating said movable clamp, a sliding strainer bar to engage the bight of the tie and draw thereon to contract the tie about the hose, locking means for normally holding said bar inoperative, and means for actuating said bar.

[Claim 6 not printed in the Gazette.]

883,100. FISHING-REEL. FELIX DÜMMIG, New York, N. Y. Filed Dec. 19, 1907. Serial No. 407,194.



1. In a fishline reel, the combination with the base plate, of a stationary bushing, an adjustable bushing slidably borne in the first bushing, a conical pivot borne in said adjustable bushing, and projecting from the base plate, means for the adjustment of the movable bushing upon the conical pivot to tighten the parts, and means for locking the said pivot to the stationary bushing, substantially as set forth.

2. In a fishline reel, the combination with the base plate, of a stationary bushing, an adjustable bushing slidably borne therein, a recessed conical pivot borne in said adjustable bushing and projecting from the base plate, means for the adjustment of the movable bushing, and a spring actuated locking bar engaging with the recessed end of the conical pivot to lock the latter in position, substantially as set forth.

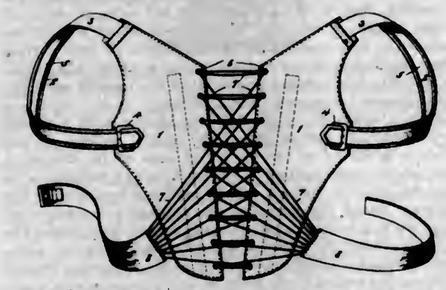
3. In a fishline reel, the combination with the base plate, of a stationary bushing, one end of which projects outward from the reel, an adjustable bushing therein, a recessed conical pivot borne in said movable bushing and projecting from the base plate, and a hook shaped arm pivoted to the latter and adapted, when swung against the stationary bushing, to frictionally engage the latter so as to act as a brake, substantially as set forth.

4. In a fishline reel, a handle consisting of a radial bar pivoted at its center to the reel, a knob at one end thereof which normally is adapted to rest over the center of the reel and by swinging the handle is brought to the circumference of the reel, and means for limiting the swinging movement of the handle, substantially as set forth.

883,101. SHOULDER-BRACE. WILLIAM M. EISEN, New York, N. Y. Filed Dec. 16, 1907. Serial No. 406,704.

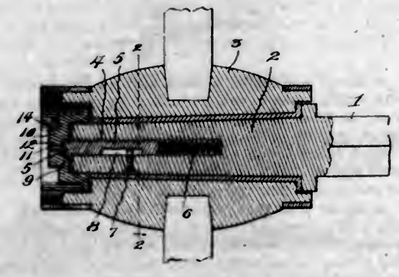
1. In a device of the character described, the combination with a pair of back stays provided with eyelets along their adjacent edges, of means for adjustably holding said back stays together, said means comprising as many lacing cords as there are eyelets, each lacing cord having one of its ends secured to the back stay adjacent an eyelet and running parallel for a portion of its length with the lacing cord secured in the back stay near the eyelet opposite to said first mentioned eyelet.

2. In a shoulder brace of the character described, the combination with a pair of back stays provided with eyelets along their edges, shoulder straps secured to said back stays by elastic members, waist bands, and means for adjustably holding said back stays together, said means comprising a series of independent lacing cords, there being as many lacing cords as there are eyelets and each



lacing cord having one end secured in proximity to an eyelet and passing parallel for a portion of its length to the lacing cord secured near the eyelet opposite to the first mentioned eyelet, and said lacing cords being then crossed outside the back stays and having their opposite free ends secured to said waist bands.

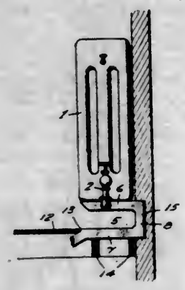
883,102. NUT-LOCK FOR AXLE-SPINDLES. WILLIS O. C. ELLIS, Greenfield, Ohio. Filed May 16, 1907. Serial No. 373,913.



1. In a nut lock, the combination of a member provided with a bore extending inwardly from one end and with a threaded aperture disposed transversely to the bore and leading into the latter, a longitudinally-movable locking piece held from rotation in the bore, a spring disposed in the bore and bearing against the inner end of the said piece, a nut threaded on the member and having a central opening, an element held on the member by the nut, a stem on the piece normally filling the opening of the nut to exclude dirt, and a screw in the threaded aperture of the member and arranged with its inner end engaged in a longitudinal slot in the said piece for removably holding the latter in place, the screw being retained in position by the said element and having its outer end countersunk in the member.

2. In a nut lock, the combination of an axle having a longitudinal, central bore extending inwardly from one end, a locking element movable longitudinally in the bore and provided with a longitudinal slot in one side, a spring in the bore acting on the element, a wheel on the axle, a nut on the axle for holding the wheel in place and having a central opening, a pin-like extension on the element passing through the opening of the nut and normally filling the latter, a removable retaining device secured in the axle and engaging in the groove of the element for removably holding the latter in place, said retaining device being located at such a point as to be retained in position by the wheel.

883,103. RADIATOR CONNECTION. ROBERT C. EVARTS, Beaver Falls, Pa. Filed June 21, 1907. Serial No. 380,177.



1. A combined support and pipe connector for radiators, comprising a casting having an upper horizontal limb to support the radiator, said limb being provided with means for connecting it with a pipe communicating with the radiator, a lower horizontal limb adapted to occupy an opening in the floor below the radiator and provided with a downturned portion for connection with a supply or return pipe, and a vertical limb connecting the rear ends of the horizontal limbs.

2. A combined support and pipe connector for radiators, comprising a conductor having integral upper and lower horizontal limbs, and a vertical limb connecting said horizontal limbs at one end, the upper horizontal limb being provided with a side aperture for connection with a pipe communicating with the radiator, and the lower horizontal limb having a depending portion provided with an opening for connection with a supply or return pipe.

3. A combined support and pipe connector for radiators, comprising a substantially U-shaped casting, the upper limb of the casting having a side opening and the lower limb a downwardly offset terminal provided with an opening.

4. A combined support and pipe connector for radiators, comprising a U-shaped conductor, having upper and lower horizontal limbs and a vertical limb connecting the horizontal limbs at one end of the device, said limbs being integral with each other, the upper limb being provided with a side opening and the lower limb with an offset terminal having an opening.

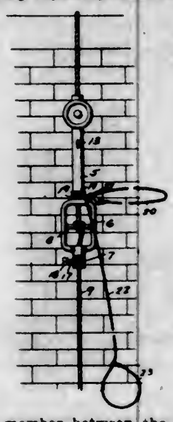
5. A combined support and pipe connector for radiators, comprising a substantially U-shaped casting, forming upper and lower horizontal arms and a vertical arm connecting said horizontal arms at one end of the connector, the upper horizontal arm being adapted to support the radiator above the floor line and being provided with a side opening for connection with a pipe communicating with the radiator, and the lower horizontal arm being adapted to fit within an opening in the floor below the radiator, and provided at its free end with a downwardly projecting terminal having an opening for connection with a supply or return pipe.

[Claims 6 and 7 not printed in the Gazette.]

883,104. FIRE-ESCAPE. EDGAR L. FLOWERS, Hickory, N. C. Filed July 16, 1907. Serial No. 384,080.

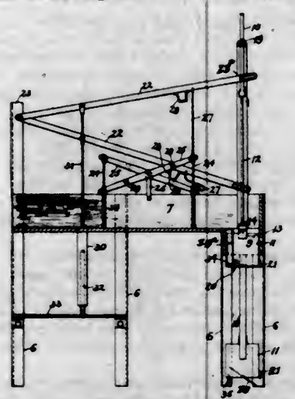
A fire escape comprising alined upper and lower tubular members and a connecting open frame having a width greater than the external diameter of the upper tubular member, a cross-bar connecting the sides of the frame, a rope passed through the tubular members and around the cross-bar, a brake carried by the upper tubular member in position to impinge upon the rope, a circumscribing flange

upon the upper tubular member spaced from the frame, and a weight-carrying rope looped between its ends about



the upper tubular member between the frame and flange and having a slip noose at each end.

883,105. HYDRAULIC MOTOR. BENJAMIN F. FOWLER, Minneapolis, Minn., assignor of one-third to Edward E. Austin and one-third to George H. Richards, Minneapolis, Minn. Filed Aug. 21, 1907. Serial No. 389,564.



1. In a hydraulic motor of the character set forth, the combination with a plurality of oppositely reciprocating buckets, of means for delivering motive fluid thereto, means for discharging liquid therefrom, a gear wheel between the buckets, means connected to the buckets and engaged with the gear wheel for effecting the opposite movements of said buckets, a pump for each bucket, and an operating device for each pump connected to said connecting means between said bucket and the gear wheel.

2. In a hydraulic motor of the character set forth, the combination with a flume having a discharge end, of a pump having an inlet communicating with the flume, an actuating bucket movable from and toward the discharge end of the flume, means for controlling the passage of fluid from the flume to the bucket, means for effecting the discharge of fluid from the bucket, a lever located longitudinally over the flume, a connection between the lever and the bucket, and another connection between the lever and the pump.

3. In a hydraulic motor of the character set forth, the combination with a flume, of a pump located below the flume having its upper end communicating with the bottom thereof, an actuating bucket movable from and toward the flume, means for controlling the passage of fluid from the flume to the bucket, means for effecting the discharge of fluid from the bucket, a lever located longitudinally over the flume, a piston rod for the pump connected to an intermediate portion of the lever, and connections between the end of the lever and the bucket.

4. In a hydraulic motor of the character set forth, the combination with a vertically movable bucket, of a bottom for the bucket pivoted between its ends thereto, means for delivering fluid to the bucket when the same is elevated, means located in the path of movement of one side of the bottom for effecting the closing movement of said bottom when the bucket moves to its elevated position, and means for effecting the opening movement of the bottom when the bucket moves to its lowermost position.

5. In a hydraulic motor, the combination with a plurality of flumes, of vertically movable buckets movable to and beneath positions at the discharge ends of the flumes, a gear wheel, racks secured to the buckets and meshing with opposite sides of the gear wheel, swinging bottoms for the buckets, means for swinging the bottoms to closed positions when the buckets are elevated, means for opening the bottoms when the buckets are depressed, separate oppositely swinging substantially parallel levers located side by side and connected to the buckets, and pumps having inlets connected to the flumes and having piston rod connections with the levers.

[Claims 6 to 15 not printed in the Gazette.]

883,106. DENTAL APPLIANCE. CHARLES C. GALLOWAY, Washington, D. C. Filed July 22, 1907. Serial No. 384,992.



1. A dental appliance, substantially as described, comprising a chin spoon having an outwardly extending shank, a mouth member having an upwardly extending shank at its lower end pivoted to said chin spoon shank intermediate the length thereof, and a vertically disposed dog for locking said mouth piece and fulcrumed between its ends to the outer end of said chin spoon shank.

2. A dental appliance, substantially as described, comprising a chin spoon having an outwardly extending shank, a swinging mouth member fulcrumed to said shank and having a longitudinal series of ratchet teeth, and a dog arranged longitudinally of and outwardly beyond said member and at its free upper end arranged to engage said ratchet teeth, said dog being fulcrumed intermediate its length to said shank and having a depending thumb piece.

3. A dental appliance, substantially as described, comprising a chin member, a swinging mouth member fulcrumed to said chin member and having a series of ratchet teeth, and a vertically disposed locking dog arranged longitudinally of and outwardly beyond said mouth member and fulcrumed to said chin member and at its free upper end arranged to engage said teeth and having an arm lapping behind said mouth member and at its lower end having a thumb piece.

4. A dental appliance of the character substantially as described, comprising a chin spoon having a shank, a mouth member composed of a shank pivotally joined to said chin spoon shank and at its upper end forked and forming forwardly extending diverging tongue spoon and cheek arm, and a dog.

883,107. DERAILMENT-GUARD. FRIEDRICH GEHRICKE, Berlin, Germany, assignor of one-half to Friedrich Bollmann, Berlin, Germany. Filed Sept. 7, 1906. Serial No. 333,626.

1. In a derailment guard for railway vehicles, the combination of a slide bar, means to oscillatingly support said slide bar on the vehicle, and means to adjust its distance from the track.



2. In a derailment guard for railway vehicles, the combination of a slide bar, means to oscillatingly support said slide bar on the vehicle, rods regulating the distance of the guard from the track, and means to connect said rods to a part of the vehicle not affected by the change of the load.

3. In a derailment guard for railway vehicles, the combination of a slide bar, means to oscillatingly support said slide bar on the vehicle, a bearing, a lever, means to connect one end of said lever to the rods carrying the guard, the free end of the lever pressing against the frame of the vehicle, and means to lower the free end and raise the opposite end of the lever to which the guard is suspended by the load of the vehicle.

4. In a derailment guard for railway vehicles, the combination of a slide bar, means to oscillatingly support said slide bar on the vehicle, a bearing, a pivoted lever, and means to suspend the guard nearer to the pivot of the lever than the distance between the said pivot and the one of the frames of the vehicle.

5. In a derailment guard for railway vehicles, the combination of a slide bar, means to oscillatingly support said slide bar on the vehicle, a bearing, a double armed lever, a second horizontally placed lever, means to connect the same with the shorter arm of the double armed lever, means to suspend the slide bar on the shorter arm of said second lever, and means to connect its longer arm with the shorter one of the double armed lever, said means being adapted to reduce to a minimum the influence of the changes in the load of the vehicle.

[Claim 6 not printed in the Gazette.]

883,108. ADJUSTABLE CLEANING-BRUSH. ROBERT T. GILLESPIE, Bloomfield, N. J. Filed Apr. 5, 1906. Serial No. 310,064.

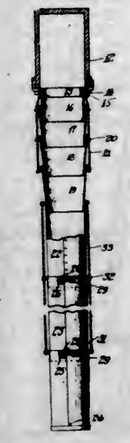


1. In a brush, the combination of a main shank adapted to surround and guide the operating rod and having a holding terminal provided with corrugated locking faces, a longitudinally movable operating rod mounted within said main shank and having a rear loop, also provided with corrugated locking faces arranged for coöperation with said holding terminal, a brush block pivoted at the other end of said main shank and pivotally connected with the operating rod and provided with a doubled bristle-holding wire extending forwardly and spirally twisted together, and bristles mounted between and held by twisted portions of the said wire, substantially as set forth.

2. In a brush, the combination of a main shank adapted to surround and guide the operating rod and having a holding handle provided with an enlarged rounded terminal, a longitudinally movable operating rod mounted within said main shank and having a rear finger loop located adjacent to said rounded terminal and adapted to be pressed against the holding handle for fixedly holding the handle and operating rod together by the operator, a brush block pivoted at the other end of said main shank and pivotally connected with the operating rod at one side of said pivotal mounting, and so arranged whereby the pivotal connection between the operating rod and the block will limit the travel of the block to extreme positions substantially in longitudinal alinement with and substantially at right angles to the main shank respectively, a doubled spirally-twisted bristle-holding wire connected with and extending forwardly in alinement with the block, and brush bristles mounted between and held by said twisted wire, substantially as set forth.

3. In a cleaning implement of the class described, the combination with a holding shank provided with connected terminal cheeks, of a brush block pivotally mounted between said cheeks and having a shouldered bracing portion adapted to act against the connection between the cheeks, a brush structure consisting of a bristle-holding wire passed through the forward portion of said block and spirally twisted together securing the brush bristles between said twisted wire portions, and an operating rod connected to the brush block laterally of the pivoting hinge portion, extending backwardly along the main shank, and provided with a finger terminal, substantially as set forth.

883,109. FLEXIBLE SPOUT. JOHN H. GILMAN, Ottawa, Ill., assignor to King & Hamilton Company, Ottawa, Ill., a Corporation of Illinois. Filed Nov. 4, 1907. Serial No. 400,477.



1. In a discharge spout, the combination with the split section permanently secured at one end and provided with an expansible securing means at the other end, and a companion section with which the expansible end coöperates, said securing means consisting of the curved base plate secured to the cylinder on one side of the split portion, an ear secured on the other side, a lever pivoted on the base plate, a link pivoted on the lever at one end and passed through the ear at the other end, and provided with abutments on either side of the ear, substantially as described.

2. In a discharge spout, the combination with the split section permanently secured at one end and provided with an expansible securing means at the other end, and a companion section with which the expansible end coöperates, said securing means consisting of the curved base plate secured to the cylinder on one side of the split portion, an ear secured on the other side, a lever pivoted on the base plate at one end and passed through the ear at the other end, and provided with adjustable abutments on either side of the ear, substantially as described.

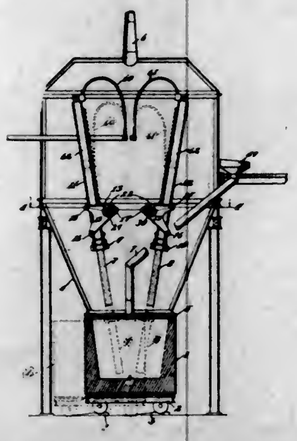
3. In a discharge spout, the combination with the split section permanently secured at one end and provided with an expansible securing means at the other end, and a companion section with which the expansible end coöperates, said securing means consisting of the curved base plate secured to the cylinder on one side of the split portion, an ear secured on the other side, a link pivoted on the lever at one end and passed through the ear at the other end, and provided with adjustable abutments on either side of the ear, consisting of nuts threaded on the end of the link, substantially as described.

4. In a discharge spout, the combination with the split section permanently secured at one end and provided with an expansible securing means at the other end, comprising link and lever connections adapted to be swung past a center and a companion section with which the expansible end coöperates, said securing means being adjustable to vary the firmness with which one section clamps the other, substantially as described.

5. In a discharge spout, the combination of a plurality of telescoping sections with connecting means for preventing their entire separation longitudinally, some of said sections consisting of split sections permanently secured at one end and provided with an expansible securing means at the other end by which they may be clamped upon an adjacent section.

[Claims 6 to 11 not printed in the Gazette.]

883,110. ELECTRIC FURNACE. HERMAN L. HARTENSTEIN, Constantine, Mich., assignor, by mesne assignments, to Continental Investment Company, Duluth, Minn., a Corporation of Minnesota. Filed Nov. 30, 1906. Serial No. 345,752.



1. In an electric furnace, the combination of an inclosure constituting a furnace chamber, movable electrodes situated within said chamber, conductors leading into said chamber, and yielding connections between the electrodes and said conductors.

2. In an electric furnace, the combination of movable electrodes, movable means for supporting and operating the electrodes, and a furnace chamber completely inclosing the said electrodes and their said supporting and operating means.

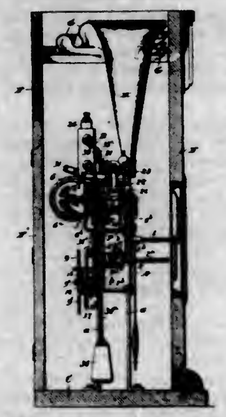
3. In an electric furnace, the combination of a furnace chamber, stationary electric leads extending through the wall of the chamber, electrodes situated within the chamber, and movable means for supporting and operating the electrodes situated wholly within the chamber and electrically connected with said leads.

4. In an electric furnace, the combination of an inclosure forming a furnace chamber, electric leads extending into said chamber, electrodes situated within the chamber, and means for supporting and operating the electrodes situated wholly within the chamber and movable with respect to said leads and electrically connected therewith.

5. In an electric furnace, the combination of an inclosure forming a furnace chamber, electric leads extending into said chamber, electrodes situated within the chamber, means for supporting and operating the electrodes, comprising members movable transversely of the wall of the furnace chamber, and an electrical connection between the electrodes and said leads, all of the said parts of the electrode supporting and operating means which move transversely of the wall of the chamber being situated wholly within the chamber.

[Claims 6 to 12 not printed in the Gazette.]

883,111. GRAPHOPHONE-CLOCK. CHRISTIAN W. HENRICH, Detroit, Mich., assignor of one-third to Charles H. Bredin and one-third to Hugh E. Kenny, Detroit, Mich. Filed Jan. 23, 1905. Serial No. 242,350.



1. In combination with a talking machine having a record and support therefor, of a clock mechanism connected therewith, the clock mechanism comprising means for rendering the talking machine inoperative including a slotted disk in gear with said support, a dog adapted to engage said slots, and means for releasing said dog including a pivoted arm, and braking means operated by the clock mechanism for insuring a slow gradual start to the talking machine when released.

2. In combination with a talking machine including a record and support therefor, of a clock mechanism associated with the talking machine and comprising means for rendering the talking machine inoperative including a slotted disk mounted for rotary movement and in gear with said support, a dog adapted to engage said slots, means for releasing said dog including a pivoted arm therefor, a rock shaft for the arm, a hand shaft, cams on the hand shaft, and means arranged in the path of the cams for operating the rock shaft in combination with means operated by the cam for insuring a slow gradual start to the talking machine when released.

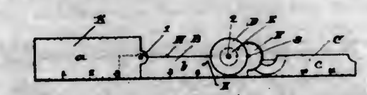
3. In combination with a talking machine, a clock mechanism connected directly therewith by a train of gearing, the said mechanism including a slotted disk on one of the gear shafts, and a locking member for engaging and disengaging said slots to actuate and release the talking machine, in combination with braking means operated by the clock mechanism for insuring a slow gradual start to the talking machine when released.

4. In combination with a talking machine, a clock mechanism for operating the latter comprising means for normally rendering the talking machine inoperative including a rotary disk having engaging portions and a dog adapted to contact with said engaging portions, releasing means for the dog, and means for exerting a quick limited movement to the disk when released.

5. In combination with a clock, of mechanism therefor, a talking machine connected therewith, the clock mechanism comprising means for normally rendering the talking machine inoperative, including a rotatable slotted disk, and a dog adapted to engage the slots therein, and releasing means for the dog, said disk adapted to automatically rotate out of registration with said slot by a quick initial limited movement.

[Claims 6 to 27 not printed in the Gazette.]

883,112. COMBINED CARPENTER'S TOOL. BARTHOLOMEW JACOB, New Rochelle, N. Y. Filed May 21, 1907. Serial No. 374,876.



1. In an improved carpenter's tool, the combination of two arms hinged together for the purpose of angular movements and foldable parallel to and flush with each other; a graduated dial sunk in one arm near the hinge end, rigidly attached to a pin extending through said arm; a cogged-wheel rigidly attached to said pin on inner side of said dial, meshing with cogged arc-like end of other arm, so that a movement of the latter will cause said dial to rotate, substantially as described.

2. In an improved carpenter's tool, the combination of two arms hinged together for the purpose of angular movements and foldable parallel to and flush with each other; a graduated dial sunk in one arm near the hinge end; a cogged-wheel rigidly attached to said dial on inner side of latter, both dial and cogged-wheel rotating on a pin extending through and rigidly attached to said arm, said cogged-wheel meshing with cogged arc-like end of other arm, so that a movement of the latter will cause said dial to rotate, substantially as described.

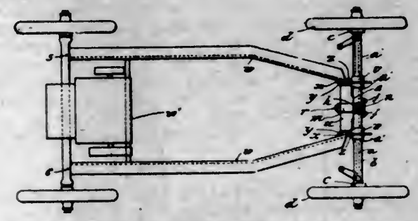
3. In an improved carpenter's tool, the combination of sections B and C of similar thickness, graduated on either side, each consisting of three plates riveted together, b, b^1, b^2, and c, c^1, c^2, respectively, which sections are hinged together for the purpose of angular movements and foldable parallel to and flush with each other; graduated dial D sunk in section B and flush with the surface thereof, rigidly attached to pin 2; cogged-wheel E rigidly attached to pin 2 on inner side of dial D, meshing with cogged arc-like end F of plate c^1 of section C; and pointer K on exterior of section B; said sections when folded being flush and level on both sides; all of said parts operating substantially as described.

4. In an improved carpenter's tool, the combination of sections B and C of similar thickness, graduated on either side, each consisting of three plates riveted together, b, b^1, b^2, and c, c^1, c^2, respectively, which sections are hinged together for the purpose of angular movements and foldable parallel to and flush with each other; graduated dial D sunk in section B and flush with the surface thereof; cogged-wheel E rigidly attached to dial D on inner side of latter, both said dial and cogged-wheel rotating on pin 2 extending through and rigidly attached to plate b^2 of section B, cogged-wheel E meshing with cogged arc-like end F of plate c^1 of section C; and pointer K on exterior of section B; said sections when folded being flush and level on both sides, all of said parts operating substantially as described.

5. In an improved carpenter's tool, the combination of sections A, B, and C, of similar thickness, graduated on either side, each consisting of three plates riveted together a, a^1, a^2; b, b^1, b^2; and c, c^1, c^2, respectively, sections A and B being hinged together for the purpose of forming an angle of ninety degrees and no less, plate b^1 of section B extending at hinge 1 further than plates b and b^2 of said section and fitting into section A between plates a, a^2, when section A is extended and completing a square corner when section A is at an angle of ninety degrees with section B; sections B and C being hinged together for the purpose of angular movements, and foldable parallel to and flush with each other when section A is extended to one hundred and eighty degrees; graduated dial D sunk in section B and flush with the surface thereof, rigidly attached to pin 2 extending through section B; cogged-wheel E rigidly attached to pin 2 on the inner side of said dial D, meshing with cogged arc-like end F of plate c^1 of section C; and pointer K on the exterior of section B; said sections B and C when folded as aforesaid being flush and level with each other and with section A on both sides; all of said parts operating substantially as described.

[Claim 6 not printed in the Gazette.]

883,113. SUSPENSION DEVICE FOR MOTOR-FRAMES. HARRY A. KNOX, Springfield, Mass. Filed Oct. 17, 1906. Serial No. 339,347.



1. In a motor frame of the three-point suspension type, a forward axle, a spring-post secured thereto and having oppositely extending arms, a spring-yoke carried by said axle and connected to the reaches of the frame, and springs located between the outer ends of the yoke and the axle.

2. In a suspension device for the forward end of a three-point suspension motor-frame, a forward axle, a spring-post secured thereto and having oppositely extending arms, yokes embracing said axle and located at opposite sides of the spring-support for attaching the forward end of the reaches to the axle, a spring-yoke located in the vertical plane of the spring-post and receiving the extended arms of the same, a spring surrounding said arms whereby the axle is permitted to move freely in the vertical plane about a stud carried by the spring-yoke, said stud being in the same vertical plane as the spring-post, as described.

3. In a suspension device for the forward end of a three-point suspension truck, a forward axle, a front frame-piece slidably secured thereto, a spring-post secured to the axle and having oppositely extending arms with a shoulder portion between the arms and the body portion of the post, a spring-yoke receiving the oppositely extended arms, a stud carried thereby for receiving a bored-out hub portion on the front frame-piece whereby free vertical movement of the forward end of the motor-frame is permitted, and whereby the forward axle and motor frame can oscillate freely about said stud, as described.

4. In a motor frame construction, a rear axle, a forward axle, reaches connecting the same, a motor supported on the reaches and near the rear axle, the forward end of the reaches being connected to a front frame end plate, said plate being pivotally connected to a stud supported by the forward axle, a spring post carried by the axle, a yoke member connected to the spring post, springs between the axle and the ends of the yoke member, the stud being secured to the yoke member, whereby the reaches and front axle can move independently of each other, as described.

5. In a motor frame construction, a rear axle, a forward axle, reaches connecting the same, a motor supported on the reaches and near the rear axle, the forward end of the reaches being connected to a front frame end plate, said plate being pivotally connected to a stud supported by the forward axle, a spring-post carried by the axle, a yoke-member connected to the spring-post, springs between the axle and the ends of the yoke member, the stud being secured to the yoke member, whereby the reaches and front axle can move independently of each other.

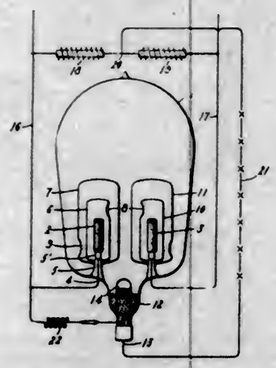
883,114. VAPOR ELECTRIC APPARATUS. OSIAS O. KRUH, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Oct. 18, 1905. Serial No. 283,258.

1. The combination of a receptacle or container, electrodes therein, and shields therefor arranged one inside of the other.

2. The combination of a receptacle or container, electrodes therein, and shields for said electrodes having non-registering openings therein.

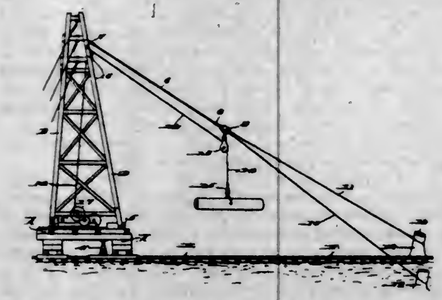
3. The combination of a receptacle or container, a vaporizable electrode therein, a plurality of coöperating

electrodes, and shields for each of said coöperating electrodes, the shields for each electrode being located one inside the other.



4. The combination of a receptacle or container, electrodes therein, and shields for one at least of said electrodes, said shields being arranged one about the other and provided with openings located to produce a change in direction of the arc stream going to the electrode.

883,115. LOADING APPARATUS. THOMAS S. MILLER, South Orange, and JOSEPH H. DICKINSON, Montclair, N. J. Filed June 23, 1906. Serial No. 323,014.



1. The combination with a support erected above the track, of a cable connected to said support and extending parallel with and above the track, a sheave suspended from said cable and a hoisting rope passing over said sheave.

2. The combination, with a support erected above the track, of a cable connected to said support, guy ropes coupled to said cable and extending to opposite sides of said track, a sheave suspended above the track, a hoisting rope passing over said sheave and an engine for operating said rope.

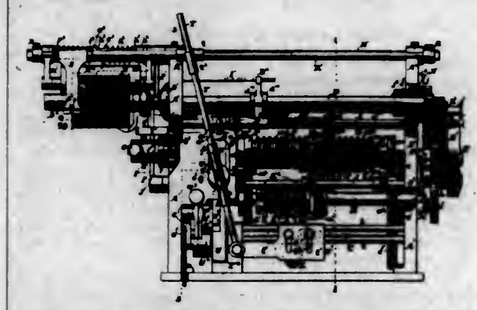
3. The combination with a frame, a support erected thereon, a cable connected to said support, guy ropes coupled to said cable, a sheave suspended at the point of coupling of the cable and guy ropes, a hoisting rope passing over said sheave, log gripping means connected to said hoisting rope and means for operating the hoisting rope.

4. The combination, with a frame, of a support erected thereon, a cable connected to said support, diverging guys coupled to said cable, a hoisting rope, an engine for operating said rope and means for suspending said rope adjacent to the point of coupling of the cable and the guy ropes.

5. The combination of a frame adapted to straddle a railway track and to permit the passage of cars therebeneath upon the track, a pivoted support carried by the frame, a cable connected to said support and extending above the track, rope suspending means, a hoisting rope, and an engine for actuating said hoisting rope.

[Claims 6 to 10 not printed in the Gazette.]

883,116. TWINE-WINDING MACHINE. CHARLES P. MITCHELL, Boston, Mass. Filed Feb. 9, 1898. Serial No. 669,659.



1. In a twine winding machine, the combination of a positively driven mandrel; means for rotating the mandrel during the winding of a plurality of cop sections; a reciprocating twine guide coöperating with the cop during the winding; and means for maintaining the relative movements of the driving shaft and guide constructed and arranged to automatically change the relative rate of movement of said twine guide and said mandrel at predetermined times during the winding, each change of rate terminating a series of layers constituting a section of a cop.

2. In a twine winding machine, the combination of a driving shaft; a positively driven mandrel; a revoluble shaft carrying a cam thereon; a twine guide coöperating with the cop during the winding; means connecting said guide and cam and actuated by said cam to reciprocate said guide lengthwise of the mandrel; mechanism connecting the driving and cam shafts for automatically changing the relative rate of rotations of said driving and cam shafts at predetermined times during the winding; and mechanism connecting said mandrel and driving shaft for maintaining the relative rotations of said driving shaft and mandrel at a fixed ratio until a predetermined time, including devices effective at such time for automatically changing said rate to wind the layers added after said change upon the cop at a decreased circumferential speed relative to the layers in the cop section wound immediately before said change, each of said changes of rate terminating a series of layers.

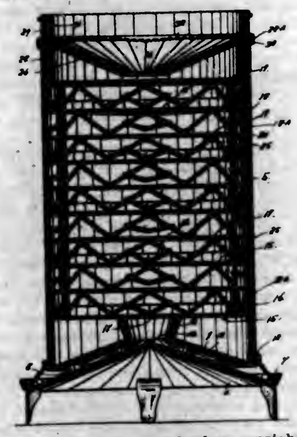
3. In a twine winding machine, the combination of a positively driven shaft carrying a mandrel thereon; a reciprocating twine guide coöperating with the face of the cop during the winding; a driving shaft; mechanism interposed between said driving shaft and twine guide and between said driving shaft and mandrel for automatically changing the relative rate of movement of said mandrel and guide at predetermined times during the winding; and for maintaining the relative rotations of said mandrel and driving shafts at a fixed ratio until a predetermined time and then to automatically change said fixed ratio whereby the number of helixes in the completed layers of the cop section wound thereafter will be different from those previously wound while the number of convolutions in the length of the cop remains unchanged in the layers immediately preceding and succeeding said change of rate, each of said changes terminating a series of layers.

4. In a twine winding machine, the combination of a positively driven mandrel; a fixed rod; a twine guiding arm mounted upon and movable endwise of said fixed rod; a revoluble cam; a reciprocating carriage operated by said cam; a movable fulcrum pin; a two-armed lever connected at one end to said guide and at its other end to said reciprocating carriage and movable about said fulcrum pin; a vertically movable bar carrying said fulcrum pin; a cam or lifter toe supporting said bar; a weight connected to said lifter toe; means for locking said lifter toe against the descent of said weight; and means for tripping said locking device to permit the descent of said weight at a predetermined time, and thus automatically raise said bar and adjust the fulcrum of said two-armed lever and the traverse of the twine guiding arm.

5. In a twine winding machine, the combination of a winding mandrel; a reciprocating guide arm provided at its free end with a twine guiding eye bounded by a convex bearing surface; means for maintaining said bearing surface in contact with the cop with a yielding pressure; means for maintaining the relative movements of said mandrel and arm during the winding, said means including devices for automatically changing the relative rate of movement of said guide arm and winding mandrel at predetermined times, and means for automatically changing the length of traverse of said guide arm at predetermined times during the winding whereby cop-sections of different lengths may be wound upon the mandrel in building the same cop, each of said changes terminating a series of layers.

[Claims 6 to 44 not printed in the Gazette.]

883,117. AMALGAMATOR. JAMES P. MCGINN, Denver, Colo., assignor, by direct and mesne assignments, of three-fourths to Charles T. Roach, Glenwood Springs, Colo. Filed Feb. 2, 1907, Serial No. 355,365. Renewed Jan. 17, 1908. Serial No. 411,327.



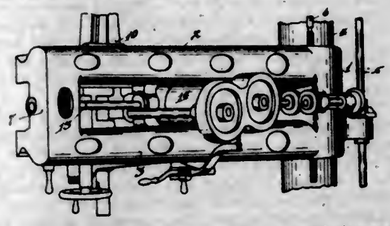
1. An amalgamator composed of an upright tank containing a series of removable disks having central openings, and a series of removable disks having marginal openings, the disks of the two sets being alternately arranged, wire spacing means interposed between the two disks but independent therefrom, the disks as well as the inner wall of the tank being coated with mercury, substantially as described.

2. An amalgamator composed of an upright tank whose body portion is provided with a series of removable disks composed of two sets, one set having central openings and one set having marginal openings, the two sets of disks being alternately arranged and wire means for suitably spacing said disks, the apparatus being provided with a conical base having segmental troughs to retain a certain quantity of material, and means interposed between the base and the body of the tank for delivering the material under treatment to the apex of the base, whereby it is caused to enter the said troughs, substantially as described.

3. An amalgamator composed of an upright tank provided with amalgamating devices suitably separated and constructed to allow the material under treatment to pass from the top to the bottom of the tank, the base of the structure being cone-shaped and provided with segmental troughs arranged in different zones, the troughs of each zone being separated and arranged in staggered relation with reference to the adjacent set of troughs, and a cover for the base which is also cone-shaped and adapted to rest upon the troughs, the said cover having an upturned flange which surrounds the lower extremity of the tank and a central opening to allow the material to enter, substantially as described.

4. An amalgamator composed of an upright tank whose body part is provided with a series of disks having central openings, and another series of disks having marginal openings, the two series of disks being alternately arranged and suitably separated the one from the other, wire members for separating said disks, the top of the tank being provided with a hopper provided with a depending flange which engages the upper rim of the tank and a tray whose bottom is composed of mesh material, and the bottom of the tank with a base provided with mercury troughs, substantially as described.

883,118. ARM FOR RADIAL DRILLS. HENRY M. NORRIS, Cincinnati, Ohio, assignor to The Bickford Drill & Tool Company, Cincinnati, Ohio, a Corporation. Filed Oct. 29, 1907. Serial No. 399,750.



An arm for radial drills, comprising two tubular sections parallel with each other, integrally connected at each end, a head-stock gibbed to said tubular sections, and having a bearing projection extended between said tubular sections, and ways formed on the inner opposing faces of the tube sections, providing rigid abutments between and against which the head may be clamped, substantially as described.

883,119. CLIP. WILLIAM F. OAKLEY, New York, N. Y. Filed Feb. 19, 1907. Serial No. 358,301.



1. A clip adapted to slidably engage a garment, comprising a curvilinear body adapted to engage a rigid support, a spring-arm of a compound-curve configuration and arched in cross-section across the greater portion of the width thereof at the point where the curve is of shortest radius, the radius of curvature of said arch being considerably less than the radius of curvature of said curvilinear body, and said arm being integral with said body and extending both above and below the point of junction therewith and conforming substantially in transverse curvature, immediately adjacent the point of junction with said body, with the curvature of said body.

2. A clip, comprising a split-ring-shaped, tubular barrel, provided with recesses extending inwardly from the upper and lower edges respectively of said barrel, a transversely extending neck between said recesses, a spring-arm comprising a compound-curve and arched in cross-section at its point of greatest curvature across substantially its entire width, said arm being integral with the neck between the aforesaid top and bottom recesses and extending both above and below the same, and a plurality of V-shaped grooves at the lower end of said spring-arm adapted to increase the friction of the end upon an opposing surface without preventing sliding engagement of the end with such surface, substantially as described.

883,120. RING SPINNING AND TWISTING APPARATUS. THOMAS C. POWELL, Boston, Mass. Filed Apr. 5, 1907. Serial No. 366,468.



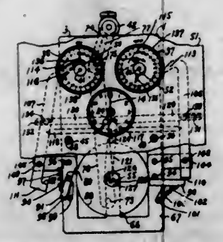
1. The combination of a spinning ring, of a supporting plate or holder; an intermediate member secured to said ring and movable upon said plate or holder; means for holding together said plate and intermediate member; and means for securing said plate or holder to the ring rail said intermediate member and plate being provided with means for centering them.

2. The combination with a spinning ring, of a supporting plate or holder provided with a pair of holes extending through said plate; an intermediate member secured to said ring and movable upon said plate provided with a corresponding pair of holes; means for holding together said plate and intermediate member; means for securing said plate or holder to the ring rail.

3. The combination with a spinning ring, of a supporting member consisting of a plate; a flat intermediate member secured to said ring and movable upon said plate provided with an annular rib projecting from its under face; means for holding together said plate and intermediate member; means for securing said plate rigidly to the ring rail; and means for limiting the movement of said intermediate member relative to said plate in either direction.

4. The combination with a spinning ring, of a supporting member consisting of a plate; a flat intermediate member secured to said ring and movable upon said plate; a rib upon one of said members and contacting with the adjacent face of the other member; means for holding together said plate and intermediate members; means for securing said plate rigidly to the ring rail; and means for limiting the movement of said intermediate member relative to said plate in either direction.

883,121. AUTOMATIC TIME-VALVE. ARCH A. SHINGLETON, Cincinnati, Ohio. Filed May 27, 1907. Serial No. 375,797.



1. In an automatic time valve, the combination of a clock mechanism, a valve, a crank shaft journaled adjacent to said clock mechanism and to said valve, operative connection between said valve and said crank shaft whereby said valve may be opened and closed by the rotation of said crank shaft, means for rotating said crank shaft, a sheave on said crank-shaft, a lug on said sheave, a stop pivotally mounted adjacent to said sheave and operative connection between said stop and said clock mechanism whereby the operation of said cam is controlled, substantially as and for the purposes herein specified.

2. In an automatic time valve, the combination of a clock mechanism, a valve, a crank shaft journaled adjacent to said clock mechanism and said valve, operative connection between said valve and said crank shaft whereby said valve may be opened and closed by the rotation of said crank shaft, a sheave on said crank shaft, a lug on said sheave, a stop pivotally mounted adjacent to said sheave and adapted to be engaged by said lug, a cam lever adapted to engage said stop, a cam adapted to control said cam lever, and operative connection between said cam and said clock mechanism whereby the operation of said cam is regulated, substantially as and for the purposes specified.

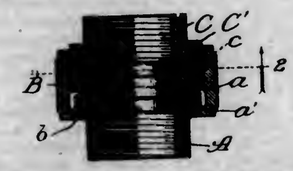
3. In an automatic time valve, the combination of a clock mechanism, a frame in which said clock mechanism is mounted, means for supporting said frame, a crank shaft, bearings for said crank shaft on said frame, a crank disk adjustably mounted on said crank shaft, a valve adjacent to which said clock mechanism is supported, adjustable operative connection between said valve and said crank disk, means for rotating said crank shaft, a sheave on said crank shaft, a lug on said sheave, a stop pivotally mounted adjacent to said sheave, and operative connection between said stop and said clock mechanism, whereby the operation of said stop is controlled, substantially as and for the purposes herein specified.

4. In an automatic time valve, the combination of a clock mechanism, a valve, a crank shaft journaled adjacent to said clock mechanism and to said valve, operative connection between said valve and said crank shaft whereby said valve may be opened and closed by the rotation of said crank shaft, means for rotating said crank shaft, a sheave on said crank shaft, a lug on said sheave, a stop pivoted adjacent to said sheave and adapted to be engaged by said lug, a cam lever pivoted adjacent to said stop and adapted to engage said stop whereby said stop may be caused to limit the rotation of said crank shaft, a finger on said cam lever, a cam rotatably mounted adjacent to said finger and having a recess adapted to receive said finger whereby said cam lever may be allowed to disengage said stop to allow the rotation of said crank shaft and operative connection between said cam and said clock mechanism whereby the rotation of said cam may be regulated, substantially as and for the purposes specified.

5. In an automatic time valve, the combination of a clock mechanism, a valve, a crank shaft journaled adjacent to said clock mechanism and to said valve, operative connection between said valve and said crank shaft whereby said valve may be opened and closed by the rotation of said crank shaft, means for rotating said crank shaft, engaging means adapted to limit the rotation of said crank shaft, a cam adapted to control the operation of said engaging means, operative connection between said cam and said clock mechanism whereby the operation of said cam is regulated, and a setting mechanism adapted to be controlled by the rotation of said crank shaft whereby the position of said engaging means relative to said cam and to said crank shaft may be controlled, substantially as and for the purposes specified.

[Claims 6 to 16 not printed in the Gazette.]

883,122. UNION. JOHN R. STENECK, Oak Park, Ill., assignor to Illinois Malleable Iron Company, Chicago, Ill., a Corporation of Illinois. Filed Sept. 23, 1907. Serial No. 394,199.

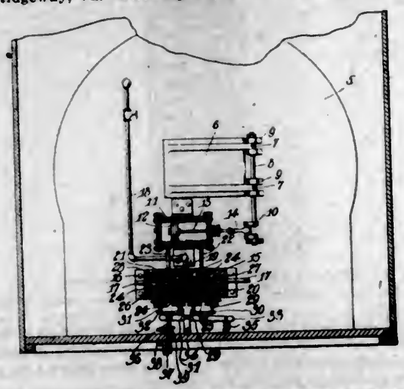


1. In a device of the class described, the combination with an iron nut, of an iron spud having an iron seat and a brass annulus screw-threaded to engage the nut, and a tail-piece having a seat and shoulder of brass whereby non-corrodible joints are secured at all three contact points.

2. The combination with an iron nut, of an iron spud having an iron seat and a brass screw-threaded annulus secured to and forming part of the spud and engaging the nut, and a brass tail-piece having a seat to engage the iron seat of the spud and a shoulder to engage the nut.

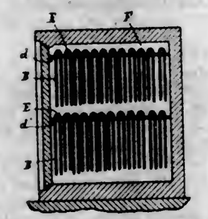
3. In a device of the class described, a spud comprising two portions, an inner iron portion having a seat and an outer screw-threaded portion of brass, an iron nut engaging the threads upon said outer portion of the spud, and a brass tail-piece engaging the nut and having a seat cooperating with the seat upon the spud.

883,123. VALVE MECHANISM. WILLIAM B. WADE, Ridgeway, Va. Filed Apr. 6, 1907. Serial No. 366,688.



The combination with a cylinder having ports at its ends, and a piston working in the cylinder, of a pair of inlet and exhaust valves for the respective ends of the cylinder, a lever, a connection between the lever and one of said pair of valves on one side of its fulcrum, and a connection between the lever and the other pair of valves on the other side of its fulcrum, and means for operating the lever.

883,124. PROCESS OF TREATING HIDES. FRANK R. WESSA, Norwood, Ohio. Filed Mar. 30, 1907. Serial No. 365,445.



1. The process of treating hides comprising the following steps, attaching the hides to frames and applying a coat of enamel, detaching the hides and suspending them in a vertical position in an oven to bake the enamel, removing the hides from the oven attaching them to frames and stoning and re-coating them, then removing them from the frames and suspending them as before in an oven to be baked.

2. The process of treating hides which comprises the use of a series of permanently located frames and consists of the following steps, straining the hides upon the first series of frames and applying a filler coat, detaching the hides from said frames and suspending them side by side upon horizontal bars in an oven and baking said coat thereon, removing said hides and straining them upon a second series of frames, stoning the hides and then re-coating them while so strained upon the frames, detaching the hides from said second series of frames and suspending them side by side upon horizontal bars in an oven, and baking the last mentioned coat.

3. The process of treating hides which comprises the use of a series of permanently located frames and consists of the following steps, straining the hides upon the first series of frames and applying a filler coat, detaching the hides from said frames and suspending them side by side upon horizontal bars in an oven and baking said coat thereon, removing said hides and straining them upon a second series of frames, stoning the hides and then re-coating them while so strained upon the frames, detaching the hides from said second series of frames and suspending them side by side upon horizontal bars in an oven, baking the last mentioned coat, and repeating the stoning, re-coating and baking steps as above described until the desired result is attained.

883,125. COMBINED CORSET AND CORSELET. ROSA A. WHITEHOUSE, Birmingham, England. Filed May 29, 1907. Serial No. 376,243.



1. A combined corset and corselet, the top portion of the corset extending above the waist line when in position and being enlarged, the bottom edge of the corselet and the top edge of the corset being adapted to fit one within the other, and means for connecting said parts.

2. A combined corset and corselet, the top portion of the corset extending above the waist line when in position and being enlarged, the bottom edge of the corselet and the top edge of the corset being adapted to fit one within the other, and means for connecting said parts consisting of eyelets placed in both of said parts and a lace cord passed therethrough.

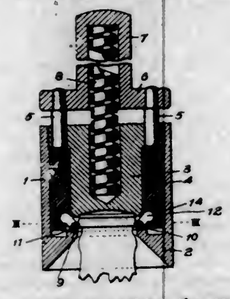
883,126. WIRE-FEED AND NAIL-FORMING DEVICE. WILLIAM WOLFE, Batavia, Ohio, assignor to The American Heel Machine Company, Cincinnati, Ohio, a Corporation. Filed Jan. 19, 1907. Serial No. 353,145.



1. In a machine of the class described, a reciprocating nail driver, means for actuating the same, a tube through which the wire is fed, a pair of grippers operating through a slit in the tube, means for holding said grippers normally apart, an arm projected from the reciprocating nail driver, having an orifice through which the tube passes, the meeting surfaces of the said orifice and grippers having corresponding tapers, whereby the grippers are clamped upon the wire when the arm is moved downward with the arm at predetermined strokes, being released when the arm is retracted, and means for returning the grippers to initial position, substantially as described.

2. In a machine of the class described, a reciprocating nail driver, means for actuating the same, a tube through which the wire is fed, a U-arm movably mounted on the tube, a spring around the tube for holding the arm normally in its upper position, a pair of wire grippers supported by the U-arm and operating through slits in said tube, means holding said grippers normally separated, a device actuated by the reciprocating nail driver, adapted to engage the grippers, clamping them on the wire and moving them downward in the tube when the nail is driven, and to release the grippers on the return stroke of the nail driver, substantially as described.

883,127. MACHINE FOR CAPPING BOTTLES. SAMUEL C. BOND, Wilmington, Del., assignor, by mesne assignments, to Bond Bottle Sealing Company, a Corporation of Delaware. Filed Aug. 20, 1906. Serial No. 331,306.



1. In a bottle capping machine the combination of a head having a cap bearing portion or block, an annular tool having independently movable portions, a plunger movable relatively to the head for effecting a constricting movement of the tool, and a yielding cushion or spring interposed between the plunger and tool.

2. In a bottle capping machine an annular cap securing tool, consisting of portions the inner walls of which are capable of independent radial movement when acting on the cap.

3. In a bottle capping machine an annular cap securing tool formed of wire bent to form a spiral.

4. In a bottle capping machine the combination of a head, an annular cap securing tool having its inner wall formed of portions radially movable independently of each other, and adapted to support the cap in position to receive the end of the bottle neck.

5. In a bottle capping machine the combination of a head, an annular cap securing tool consisting of portions the inner walls of which are capable of independent radial movement when acting on the cap, and means including a resilient member for forcing said portions into operative engagement with the cap.

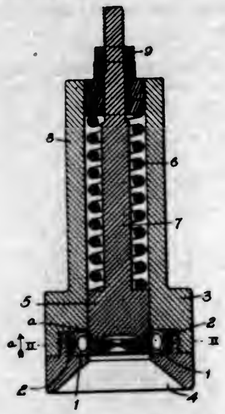
[Claim 6 not printed in the Gazette.]

883,128. METAL-SHAPING TOOL. SAMUEL C. BOND, Wilmington, Del., assignor, by mesne assignments, to Bond Bottle Sealing Company, a Corporation of Delaware. Filed Oct. 29, 1906. Serial No. 341,050.

1. A tool consisting of a series of wings arranged at an angle less than a right angle to the surface operated on, a wall or abutment for holding the wings in operative relation to the surface operated on and resilient means for holding the wings in normal angular relation to said surface.

2. An annular tool for applying caps on bottles, having its operative portion formed of a series of independently movable parts arranged at an angle to the radii of the ring formed by said parts and resiliently held in such relation to each other, that the normal length of the inner periphery of the tool is less than the peripheral length of the cap to be applied.

3. A tool for applying caps on bottles having in combination an annular abutment or ring, a series of wings arranged within the abutment at an angle to radii of the ring, and resilient means for holding the wings in normal angular relation to the radii.



4. A tool for applying caps on bottles having in combination an annular abutment or ring, and a series of resilient wings arranged within the ring or abutment at an angle to radii of the ring or abutment.

5. A tool for applying caps on bottles having in combination a ring or annular abutment, and a ring formed of spirally coiled spring wire arranged within the abutment.

[Claims 6 to 8 not printed in the Gazette.]

883,129. CARPET-FASTENER. JOHN C. F. BORGER, Curwensville, Pa. Filed June 18, 1907. Serial No. 379,563.



1. As a new article of manufacture, a carpet fastener consisting of a barrel adapted to be set in the floor, a movable member fitted to slide within said barrel, ratchet teeth formed upon the movable member, and a stationary tooth formed upon one wall of the barrel and a flat spring for forcing the tooth into engagement.

2. The herein described combination of a barrel adapted to be set in the floor, a movable member, a shank formed with said member, ratchet teeth formed upon the shank, a stationary tooth carried by one wall of the barrel, a flat spring secured to the movable member and adapted to force the teeth into engagement and permit the movable member to be forced sidewise to carry the teeth out of engagement, and a prong formed with the movable member adapted to engage the carpet, as specified.

883,130. WINDOW. JOSEPH EMENAKER, Hamilton, Ohio, assignor of one-third to George Mitchell and one-third to Mike F. Fritterer, Hamilton, Ohio. Filed July 11, 1906. Serial No. 325,691.

1. A window sash comprising side sections, an interposed glass carrying section, rack plates secured to the outer face of each side section and each provided with an integral pin extended through its respective side section and detachably engaging the glass carrying section, and means carried by the upper ends of said rack plates for engaging said glass carrying section.

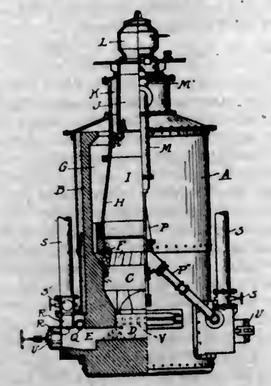
2. A window sash comprising side sections, an interposed glass carrying section, rack plates secured to the outer face of each side section and each provided with an integral pin extended through its respective side section and detachably engaging the glass carrying section, the upper end of each rack-plate being enlarged and extended over the end of its respective side section, and means carried by said enlarged portions for engaging the top of the glass carrying section.



3. A window sash comprising side sections, an interposed glass carrying section, rack plates secured to the outer edges of said side sections and each provided with an enlargement overlapping the top of its respective side section, a pivoted locking member mounted on the enlargement of each rack plate and adapted to engage the top of said glass carrying section, and means carried by said side sections for engaging the bottom of said glass carrying section.

4. A window sash comprising side sections provided with grooved seats, an interposed glass carrying section, packing strips located in the grooves of said side sections, rack plates secured to the outer faces of said side sections and each provided with an enlargement overlapping the top of its respective side section, the lower end of each rack plate being provided with an integral pin extended through its respective side section and packing, whereby said packing is secured in posistion, said pins being adapted to engage the bottom of the glass carrying section, and means carried by the enlarged portions of said rack plates for engaging the top of the glass carrying section.

883,131. GAS-PRODUCER. HEINRICH GERDES, Berlin, Germany, assignor, by mesne assignments, to Olds Gas Power Company, Lansing, Mich., a Corporation of Michigan. Original application filed July 31, 1905, Serial No. 272,057. Divided and this application filed Sept. 1, 1906. Serial No. 332,954.



1. A gas producer comprising a casing containing a chamber for the incandescent fuel, a hearth for supporting the fuel within said chamber, a combustion chamber within said casing at the side of and extending along said hearth and means for burning combustible material within said combustion chamber arranged for the passage of the products of combustion therefrom through the incandescent fuel on said hearth.

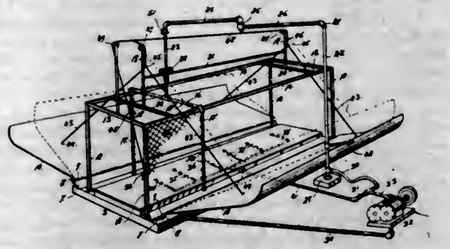
2. A gas producer comprising a casing containing a chamber for incandescent fuel, a hearth for supporting the fuel within said chamber, a distillation chamber above said incandescent fuel chamber, a combustion chamber at the side of and extending along said hearth and means for drawing off the distilled gases from said distillation chamber and burning the same in said combustion chamber and for passing the products of combustion through the incandescent fuel.

3. A gas producer comprising a casing containing a chamber for incandescent fuel, a hearth for supporting the fuel within said chamber, a combustion chamber adjacent to and opening upon said hearth, a gas burner within said combustion chamber, and an air inlet adjacent to said gas burner.

4. A gas producer comprising a casing containing a chamber for incandescent fuel, a combustion chamber adjacent to the base of said chamber for incandescent fuel, and a gas burner extending across said combustion chamber substantially as and for the purpose set forth.

5. A gas producer comprising a casing containing a chamber for the incandescent fuel and a distillation chamber thereabove, a combustion chamber adjacent to the base of said incandescent fuel chamber, a gas burner therein, a conduit connecting the top of said distillation chamber with said gas burner and an ejector for propelling the distilled gas through said conduit whereby the gas is burned in said combustion chamber and the product thereof passed through the incandescent fuel.

883,132. APPARATUS FOR TREATING ANIMALS. FRANK C. GOFF, Denver, Colo. Filed Nov. 9, 1907. Serial No. 401,434.



1. The combination with a suitable frame work, of a spraying device mounted to travel thereon, substantially as described.

2. The combination with an inclosure in which animals may be placed, of a spraying device mounted to travel in such proximity thereto that the sprays issuing therefrom may be caused to enter the inclosure, substantially as described.

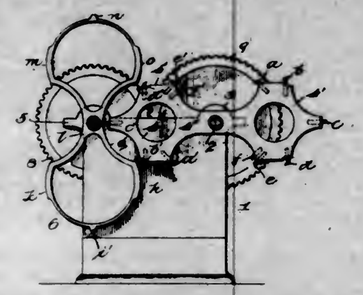
3. The combination with an inclosure, of a spraying device provided with nozzles directed into the inclosure, the spraying device being mounted to travel in suitable proximity to the inclosure, substantially as described.

4. The combination with a suitable frame work, of a spraying device provided with a trolley, a track engaged by the trolley whereby the spraying device is movably mounted, and suitable means for manipulating the spraying device whereby the trolley is caused to travel upon the track, substantially as described.

5. In apparatus of the class described, the combination with a suitable frame work, of a wire netting attached to the sides of the frame work, and a spraying device exteriorly arranged and adapted to deliver sprays through the wire netting and into the inclosure, substantially as described.

[Claims 6 to 12 not printed in the Gazette.]

883,133. BORING AND FINISHING DEVICE. THOMAS W. GREEN, Philadelphia, Pa., assignor to Wilbraham-Green Blower Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Dec. 8, 1904. Serial No. 236,056.



1. In a device for boring and finishing the convex, concave, or cycloidal contact or locking surfaces of impeller blades for rotary blowers, the combination with a supporting frame and suitable rotary impeller-holding bearings mounted therein, of a combined slidable and rotary tool adapted to co-act with a rotary impeller-blade carried by said bearings to bore and finish the convex, concave, or cycloidal contact or locking surfaces of said impeller blade.

2. In a device for boring and finishing the convex, concave, or cycloidal contact or locking surfaces of impeller blades for rotary blowers, the combination with a supporting frame and suitable rotary impeller-holding bearings mounted therein, of a longitudinally slidable rotary tool geared to said impeller-holding bearings, and adapted during its sliding rotation to contact with and bore and finish the contact or locking surfaces of the impeller carried by said rotary bearings.

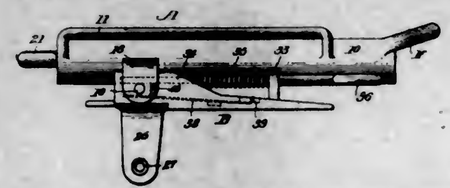
3. In a device for boring and finishing the convex, concave, or cycloidal contact or locking surfaces of impeller blades for rotary blowers, the combination with a supporting frame and suitable rotary impeller-holding bearings mounted therein, of a longitudinally slidable rotary tool-head geared with said impeller-holding bearings, a series of cutters mounted in said tool-head at predetermined points, said cutters being adapted during the sliding rotation of the tool-head to contact with and bore and finish the convex, concave, or cycloidal locking surfaces of the impeller blade carried by said rotary bearings.

4. In a device for boring and finishing the convex, concave, or cycloidal contact or locking surfaces of impeller blades for rotary blowers, the combination with a supporting frame and suitable rotary impeller-holding bearings mounted therein, of a longitudinally slidable rotary tool-head, said tool-head being of the same general shape as the impeller blade to be bored and finished, a series of cutters mounted in said tool-head, each cutter being so positioned and mounted as to bore and finish a particular portion of the contact or locking surface of the impeller blade during the co-acting rotation of said impeller blade and tool-head, and means for rotating said tool-head and impeller blade.

5. In a device for boring and finishing the convex, concave, or cycloidal contact or locking surfaces of impeller blades for rotary blowers, the combination with a supporting frame and suitable rotary impeller-holding bearings mounted therein, of a longitudinally slidable rotary tool-head being of the same general shape as the impeller blade to be bored and finished, a series of cutters mounted in said tool-head, each of said cutters being so positioned and mounted as to bore and finish a particular portion or surface of the impeller blade during the co-acting rotation of said impeller blade and tool-head, gears connecting said tool-head and said rotary bearings whereby the relative position of the impeller blade to the tool-head will be maintained during the operation of the device.

[Claims 6 to 16 not printed in the Gazette.]

883,134. DEVICE FOR ATTACHING AND DETACHING HORSES TO AND FROM VEHICLES. FRANCIS H. GRIFFETH, Athens, Ga., assignor to Griffeth Manufacturing Company, Athens, Ga., a Copartnership. Filed May 1, 1907. Serial No. 371,334.



1. A device of the character described comprising a member attached to the harness and a member attached to the shaft, said harness carried member having a connecting bar, said shaft carried member having a slot to receive said connecting bar, a reciprocal spring pressed plunger adapted to engage and lock said bar in said slot and means to hold said plunger in its retracted position when said connecting bar is not engaged with said slot.

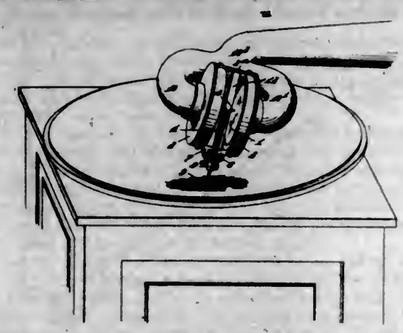
2. A device of the character described comprising a member attached to the harness and a member attached to the shaft, said harness carried member having a connecting bar, said shaft carried member having a slot to receive said connecting bar, a reciprocal spring pressed plunger adapted to engage and lock said bar in said slot, a spring in said shaft carried member adapted to bear against said connecting bar when in said slot for the purpose of ejecting the same when released by said plunger, and means to hold said plunger in its retracted position when said connecting bar is not engaged with said slot.

3. A device of the character described comprising a member attached to the harness and a member attached to the shaft, said harness carried member having a connecting bar, said shaft carried member having a slot to receive said connecting bar, a retractable spring pressed plunger adapted to lock said bar in said slot, a spring in said shaft carried member adapted to bear against said connecting bar when in said slot for the purpose of ejecting the same when released by said plunger, and a projection on said spring adapted to engage the ends of said plunger and hold it in its retracted position when said connecting bar is not engaged with said slot.

4. A device of the character described comprising a member attached to the harness and a member attached to the shaft, said harness carried member having a connecting bar, and provided with a yielding draft rod, said shaft carried member having a slot to receive said connecting bar, a reciprocal spring pressed plunger adapted to engage and lock said bar in said slot and means to hold said plunger in its retracted position when said connecting bar is not engaged with said slot.

883,135. GRAMOPHONE. LUTHER T. HAILE, Philadelphia, Pa., assignor, by direct and mesne assignments, of one-fifth to Maurice N. Weyl and William A. Mackie, one-fifth to Joseph W. Shannon, one-twentieth to Frederick J. Geiger, and one-twentieth to Logan W. Mulford, Philadelphia, Pa. Original application filed July 6, 1906, Serial No. 324,978. Divided and this application filed Feb. 21, 1907. Serial No. 358,661.

1. In an instrument for reproducing sound-waves from a disk sound-record, the combination with a pair of oppositely-facing diaphragm holders operating as a multiple sound-box, each member containing a diaphragm, means to support said holders in spaced relation, with their respective diaphragms facing each other, a single needle-arm operatively supported between said diaphragms and mounted to respond to the vibratory movements of the needle, a flexible connection between the needle-arm and each diaphragm, means to operatively support the multiple sound-box in such relation to the disk-record that the vibrations of the needle-arm will be in a plane parallel with the faces of the diaphragms, and a single tubular horn diverging into two branches communicating independently with the respective rearward walls of the multiple sound-box.



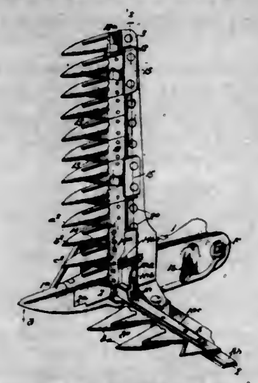
2. In an instrument for reproducing sound-waves from a disk sound-record, the combination with a pair of oppositely-facing diaphragm holders operating as a multiple sound-box, each member containing a diaphragm, means to support said holders in spaced relation, with their respective diaphragms facing each other, a single hollow needle-arm operatively supported between said diaphragms, a flexible connection passing through the interior of said needle-arm and connecting it with each diaphragm, and means to adjust the tension on said flexible connection, means to operatively support the multiple sound-box in such relation to the disk-record that the vibrations of the needle-arm will be in a plane parallel with the faces of the diaphragms, and a single tubular horn diverging into two branches communicating independently with the respective rearward walls of the multiple sound-box.

3. In an instrument for reproducing sound-waves, the combination with a pair of oppositely-disposed diaphragm holders operating as sound-boxes, each containing a diaphragm, means to support said holders in spaced relation with their respective diaphragms facing each other, a stylus or record needle and a single needle-arm operatively supported between said diaphragms and mounted to respond to the vibratory movements of the needle, connecting means between the needle-arm and each of the diaphragms, adapted to permit the diaphragms to vibrate in opposite directions to each other and operating to transmit the sound vibrations of the needle to each diaphragm separately but simultaneously, and a single tubular horn diverging into two tubular branches communicating independently with each of the pair of diaphragm holders.

4. In an instrument for reproducing sound-waves, the combination with a pair of diaphragms facing each other, a pair of sound boxes in which said diaphragms are mounted, bars connecting said sound-boxes with each other, externally, and operating to support them, in spaced relation; one of said bars being perforated and operating as a guide-plate for the vibrating needle-arm; a stylus or record needle and a single needle-arm mounted to respond to the sound vibrations of the needle and operatively supported in the space between said diaphragms, means between the single needle arm and each diaphragm adapted to permit the diaphragms to vibrate in opposite directions to each other and operating to transmit the sound vibrations of the needle to each diaphragm separately but simultaneously, each of said sound-boxes having an aperture in its wall opposite the diaphragm, with means communicating with said apertures to receive and convey the sound-waves.

883,136. MOWING-MACHINE. HENRY P. JOHNSON, Terre Haute, Ind., assignor of one-half to James R. Thomas, Terre Haute, Ind. Filed June 13, 1907. Serial No. 378,768.

1. The combination with a horisontal cutting mechanism including the reciprocally movable horisontal sickle bar, the standard projected from the shoe end of the said mechanism, and a supplemental cutter mechanism including the vertically reciprocal sickle bar, a vertically slidable block secured to the vertically reciprocal sickle bar, and having a slide bearing groove inclined outward and downward and a corresponding inclined bearing member cooperating therewith and secured to the horisontal sickle bar, substantially as shown and described.



2. In an apparatus of the class described, the combination with a main cutting mechanism and a supplemental cutting mechanism held substantially at right angles thereto, of means for imparting the motion of the main cutting mechanism to the supplemental cutting mechanism, said means comprising a slideway, a block slidable therein, and secured to the sickle bar of the supplemental cutting mechanism, said block having a groove inclined outward and downward, and a corresponding inclined bearing member secured to the sickle bar of the main cutting mechanism and coöperating with the inclined groove in said block, substantially as shown and described.

3. In an apparatus of the class described, the combination with a main cutting mechanism and a supplemental cutting mechanism held substantially at right angles thereto, of means for imparting the motion of the main cutting mechanism to the supplemental cutting mechanism, said means comprising a slideway, a block slidable therein, and secured to the sickle bar of the supplemental cutting mechanism, said block having a groove inclined outward and downward and a corresponding inclined bearing member secured to the sickle bar of the main cutting mechanism and coöperating with the inclined groove in said block, and a guard plate held over said reciprocating block, substantially as shown and described.

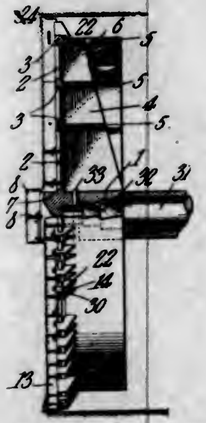
4. In an apparatus of the class described, the combination with a main cutting mechanism and a supplemental cutting mechanism held substantially at right angles thereto, of means for imparting the motion of the main cutting mechanism to the supplemental cutting mechanism, said means comprising a slide-way, a block slidable therein and secured to the sickle bar of the supplemental cutting mechanism, said block having a portion inclined outward and downward, a corresponding inclined bearing member secured to the sickle bar of the main cutting mechanism and coöperating with the inclined portion of said block, a guard plate held over said reciprocating block, and a fixedly held guard member secured to the shoe of said main cutting mechanism, substantially as shown and decribed.

5. An apparatus of the class described, a shoe, a main cutting mechanism including guard fingers and a reciprocating sickle bar, said main cutting mechanism being secured to said shoe, a supplemental cutting mechanism secured to said shoe and held in a different plane from that containing the main cutting mechanism, said supplemental cutting mechanism comprising a guard carrying support and a supplemental sickle bar reciprocably held therein, knives carried by said supplemental sickle bar, said knives including a section formed of a plate with a plurality of integrally formed knives, said section being

secured at the lower end of the supplemental sickle bar and having a T-slot, a sliding block secured to said supplemental sickle bar adjacent said section plate, and having a T-groove to merge with said T-slot, said block having its T-groove inclined outward and downward, slideways for said block, and means coöperating with the main sickle bar for reciprocating said block and said supplemental sickle bar.

[Claims 6 to 11 not printed in the Gazette.]

883,137. DRILL-HEAD AND CUTTER-BLADE THEREFOR. JOHN P. KARNS, Boulder, Colo., assignor to The J. P. Karns Tunneling Machine Co., Boulder, Colo. Original application filed Feb. 23, 1907, Serial No. 358,867. Divided and this application filed June 8, 1907. Serial No. 377,981.



1. In a drilling machine, a drill-head provided with radial cutter blades projecting beyond the periphery of the drill-head to constitute reaming members thereof and adjustable radially to maintain a predetermined diameter of cut.

2. In a drilling machine, a drill-head provided with radial reaming cutters having a fine radial adjustment, and other reaming cutters having a coarse or quick radial adjustment.

3. In a drilling machine, a drill-head provided with cutters adjustable radially beyond the periphery of the drill-head, and provided with adjusting means for the gradual projection of said cutters in a radial direction.

4. In a drilling machine, a drill-head having reaming cutters projecting radially beyond the periphery of the drill-head, and means for the adjustment of said cutters step by step radially outward.

5. In a drilling machine, a drill-head provided with cutters projecting radially outward from the periphery of the drill-head and having means for the fine or gradual adjustment of the same in a radially outward direction, and other cutters projecting radially outward from the periphery of the drill-head and having means for the coarse or step by step adjustment of the same radially outward upon the drill-head.

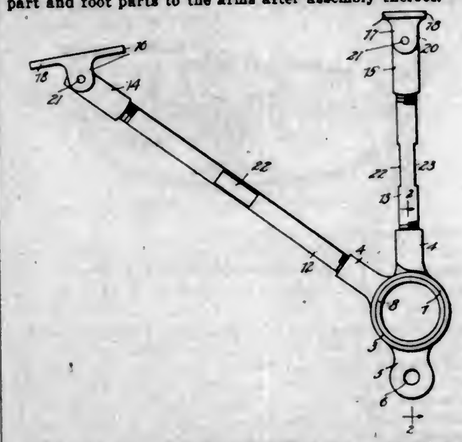
[Claims 6 to 13 not printed in the Gazette.]

883,138. ADJUSTABLE BRACKET. WILLIAM G. KIRCHHOFF, Chicago, Ill. Filed Sept. 27, 1907. Serial No. 394,878.

1. In a device of the class described, the combination of a head part, foot members, and adjustable arms connecting said head with the foot members.

2. In a bracket, the combination of a head part, supporting arms having adjustable connection with the head part, and foot members having adjustable connection with the arms.

3. In a bracket, the combination of a head part, arms having separable and adjustable connection with the head part, foot members having separable and adjustable connection with the arms, and means for securing the head part and foot parts to the arms after assembly thereof.



4. In a device of the class described, the combination of a head part having openings therethrough for receiving a rod or cord, lugs extending from the head part, arms having separable engagement in said lugs, foot members having separable engagement with the other ends of the rods, and means for securing together the head members, foot members and rods after assembly thereof.

5. In a device of the class described, the combination of head members and foot members adapted to be connected together by separable arms of different lengths whereby the bracket becomes adjustable.

[Claims 6 to 12 not printed in the Gazette.]

883,139. CYCLIC PROCESS OF RECOVERING METALLIC TIN. FRANZ VON KÜGELGEN, Holcombs Rock, Va. and GEORGE O. SEWARD, New York, N. Y. Filed June 10, 1907. Serial No. 378,294.

1. The cyclic process of recovering metallic tin from tin-bearing materials, which consists in treating a charge of the material with an anhydrous selective solvent of tin and producing a tin compound, decomposing said compound into metallic tin and an acid radical, and employing said acid radical to treat another charge of material.

2. The cyclic process of recovering metallic tin from tin-bearing materials, which consists in treating a charge of the material with an anhydrous selective solvent of tin and producing a tin compound, hydrating said compound, decomposing the hydrated compound into metallic tin and an acid radical, drying said acid radical and employing it to treat another charge of material.

3. The cyclic process of recovering metallic tin from tin-bearing materials, which consists in treating a charge of the material with anhydrous chlorin and producing stannic chlorid, hydrating said chlorid, decomposing the hydrated chlorid into metallic tin and chlorin, drying said chlorin and employing it to treat another charge of material.

4. The cyclic process of recovering metallic tin from tin-bearing materials, which consists in treating a charge of the material with an anhydrous selective solvent of tin and producing a tin compound, electrolytically decomposing said compound, and employing the anode product to treat another charge of material.

5. The cyclic process of recovering metallic tin from tin-bearing materials, which consists in treating a charge of the material with an anhydrous selective solvent of tin and producing a tin compound, electrolytically decomposing said compound, and employing the anode product in a dry state to treat another charge of material.

[Claims 6 to 9 not printed in the Gazette.]

883,140. PROCESS OF ELECTROLYZING AQUEOUS SOLUTIONS OF STANNIC CHLORID. FRANZ VON KÜGELGEN, Holcombs Rock, Va., and GEORGE O. SEWARD, New York, N. Y. Filed June 10, 1907. Serial No. 378,295.

1. The process of electrolyzing aqueous solutions of stannic chlorid, which consists in conducting the electrolysis in a diaphragm cell and combining the stannic hydroxid and hydrochloric acid present in the anolyte and catholyte, respectively.

2. The process of electrolyzing aqueous solutions of stannic chlorid, which consists in conducting the electrolysis in a diaphragm cell until stannic hydroxid and hydrochloric acid accumulate in the anolyte and catholyte, respectively, removing the electrolyte from the cell, and combining the accumulated stannic hydroxid and hydrochloric acid with the production of stannic chlorid.

3. The process of electrolyzing aqueous solutions of stannic chlorid, which consists in conducting the electrolysis in a diaphragm cell until stannic hydroxid and hydrochloric acid accumulate in the anolyte and catholyte, respectively, removing the electrolyte from the cell, and combining the accumulated stannic hydroxid and hydrochloric acid with the production of stannic chlorid by mixing the anolyte and catholyte and evaporating the mixture.

4. The process of electrolyzing aqueous solutions of stannic chlorid, which consists in conducting the electrolysis in a diaphragm cell until stannic hydroxid and hydrochloric acid accumulate in the anolyte and catholyte, respectively, removing the electrolyte from the cell, and combining the accumulated stannic hydroxid and hydrochloric acid with the production of stannic chlorid by mixing the anolyte and catholyte and evaporating the mixture to a density of about 1.4 to 1.5 degrees Baumé.

5. The process of electrolyzing aqueous solutions of stannic chlorid, which consists in conducting the electrolysis in a diaphragm cell until stannic hydroxid and hydrochloric acid accumulate in the anolyte and catholyte, respectively, removing the electrolyte from the cell, combining the accumulated stannic hydroxid and hydrochloric acid with the production of stannic chlorid by mixing the anolyte and catholyte and evaporating the mixture, and returning the product to the electrolytic cell.

[Claim 6 not printed in the Gazette.]

883,141. PROCESS OF ELECTROLYZING AQUEOUS STANNIC-CHLORID SOLUTIONS. FRANZ VON KÜGELGEN, Holcombs Rock, Va., and GEORGE O. SEWARD, New York, N. Y. Filed June 10, 1907. Serial No. 378,296.

1. The process of electrolyzing aqueous tin chlorid solutions, which consists in passing an electric current successively through a hydrochloric acid anode solution and a tin chlorid cathode solution, until a considerable percentage of the hydrochloric acid has passed into said cathode solution, then adding tin chlorid to said anode solution and passing an electric current through the two solutions in the opposite direction.

2. The process of electrolyzing aqueous tin chlorid solutions, which consists in passing an electric current successively through an anode solution containing about twenty per cent. of hydrochloric acid and a cathode solution of tin chlorid, until a considerable percentage of the hydrochloric acid has passed into said cathode solution, then adding tin chlorid to said anode solution and passing an electric current through the two solutions in the opposite direction.

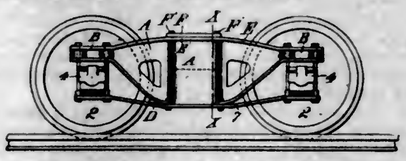
883,142. NON-DARKENING LITHOPONE AND PROCESS OF MAKING THE SAME. IENS P. LIHME, Cleveland, Ohio, assignor to The Grasselli Chemical Company, Cleveland, Ohio, a Corporation of Ohio. Filed Dec. 11, 1905. Serial No. 291,225.

1. The process of manufacturing a non-darkening lithopone, which consists in adding to the lithopone a soluble nitrate for preventing reaction among the impurities present, substantially as set forth.

2. The process of manufacturing a non-darkening lithopone, which consists in preparing in solution commercial barium sulfid and zinc sulfate, purifying and mixing the solutions, muffling the product and adding thereto a soluble nitrate for preventing reaction among the impurities, substantially as set forth.

3. A commercial lithopone, comprising a mixture of barium sulfate, zinc sulfid and a soluble nitrate; the latter being present in quantities corresponding to the reacting or darkening impurities, substantially as set forth.

883,143. CAR-TRUCK SIDE FRAME. ARTHUR LIPSCHUTZ, Chicago, Ill. Original application filed Oct. 22, 1906, Serial No. 340,019. Divided and this application filed Dec. 10, 1906. Serial No. 347,089.



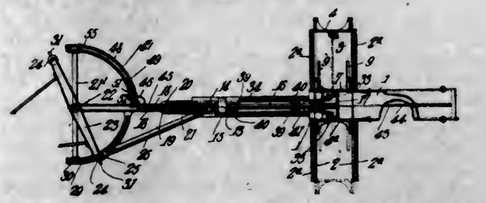
The herein described improvements in car trucks, comprising a single member side frame having continuous top and bottom chordal portions, said top chordal portion being bowed outwardly at the middle to admit a bolster, a vertical plate portion extending between said chordal portions and at the middle substantially conforming to the bowed out part of the top chordal portion and an inwardly bowed vertical plate portion of less height than the main plate portion, a spring pocket being formed between the inwardly and outwardly bowed portions, substantially as described.

883,144. COLOR-SPRAYING APPARATUS. HANS MIKOREY, Schöneberg, near Berlin, Germany. Filed May 27, 1907. Serial No. 375,933.



Sprayer for liquid colors compriaing a color tube *a* and an air tube *b* arranged at an angle to each other, a resilient dash plate *c* secured to the nozzle *b* near the opening of the nozzle *a*, with a deflector *d* in line with the nozzle *b*, a set screw *e* in a bar rigidly connected to the nozzle *b* and adapted to act on the dash plate *c* substantially as described and for the purpose set forth.

883,145. BALING-PRESS. EMMET H. MCMURRY, Marianna, Ark., assignor of one-fourth to James L. West, one-sixth to Hal S. Mixon, one-sixth to Robert L. Mixon, and one-sixth to Larimore Robinson, Marianna, Ark. Filed June 14, 1907. Serial No. 379,065.



1. In a baling press the combination with a press box, and separate means for producing an initial and a final compression of material in the press box; of a revoluble actuating device disposed to actuate one of said means to produce two final compressions during each rotation of said device, a slidable cross head disposed to be recipro-

cated by said device, and means disposed to be alternately engaged by opposite portions of said cross head to shift the initial compressing means twice during each rotation of the actuating device.

2. In a baling press the combination with initial compressing means including simultaneously movable followers; of a flexible power transmitting device connected to the followers and having an intermediate loop, means designed to alternately engage opposite portions of the loop, and revoluble means for actuating said engaging means during a part of the rotation of said revoluble means.

3. In a baling press the combination with a press box, a plunger mounted to reciprocate therein, and laterally movable followers designed to produce an initial compression of material in the path of the plunger; of a revoluble actuating device disposed to actuate the plunger to produce two compressions during each rotation of said device, a slide in the path of said device, a clutch member movable therewith, and means disposed to be alternately engaged by said clutch member to shift the followers twice during each rotation of the actuating device.

4. In a baling press the combination with a press box, a plunger designed to reciprocate therein, and followers adjacent the press box and disposed to produce an initial compression of material in the path of the plunger; of a revoluble actuating device, means operated thereby for actuating the plunger, a flexible power transmitting device connected to the followers and having a loop guided adjacent the plunger, clutch members carried by opposite portions of said loop, a cross head designed to alternately engage said members to actuate the power transmitting device and shift the followers, and means operated by the actuating device for shifting the cross head during a portion of the rotation of said device.

5. In a baling press the combination with a press box, a plunger mounted to reciprocate therein, followers designed to produce an initial compression of material in the path of the plunger; of a revoluble actuating device, means operated thereby for reciprocating the plunger during a portion of the rotation of the device, a flexible power transmitting device connected to the followers forming an intermediate loop, clutch members carried by the loop, a cross head disposed to alternately engage the clutch members, means operated by the actuating device for shifting the cross head to actuate the clutch members, and deflecting means for directing the clutch members successively into the path of the cross head.

[Claims 6 to 17 not printed in the Gazette.]

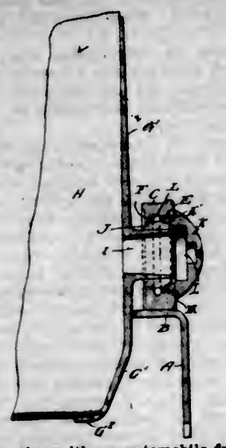
883,146. BEARING FOR SUPPORTING RADIATORS IN AUTOMOBILE-FRAMES. PERCY W. NOBLE, New York, N. Y., assignor to Charles A. Singer, Larchmont, N. Y., and Henry U. Palmer, Brooklyn, N. Y. Filed Nov. 23, 1907. Serial No. 403,493.

1. In combination, an automobile frame carrying a bearing box provided with a bearing seat, a radiator supporting saddle carrying a trunnion provided with a bearing surface, and a retaining bearing cone adapted to engage with said bearing box and the said surface of the trunnion.

2. In combination, an automobile frame carrying a bearing box provided with a circular concaved bearing seat, a radiator supporting saddle carrying a trunnion provided with a convexed bearing surface, and a retaining bearing cone adapted to engage with said bearing box and having a concaved bearing surface.

3. In combination, an automobile frame carrying a bearing box provided with a circular bearing seat, a radiator supporting saddle provided with a bearing trunnion, and a retaining bearing cone adapted to engage with said bearing box and being provided with a bearing surface coöperating with the said bearing seat.

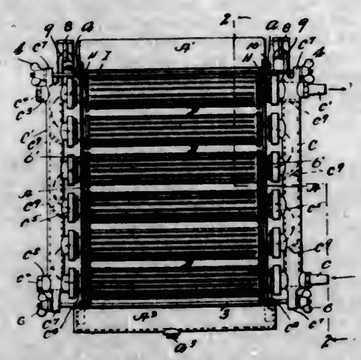
4. A universal bearing support for radiators consisting of an upright bearing box carrying one member of a bearing surface, a retaining cone adapted to engage with said bearing box and provided with a surface forming the other member of the bearing surface, and a radiator supporting saddle provided with a trunnion having a bearing ring which engages with the bearing surfaces of said bearing box and said retaining cone.



5. The combination with an automobile frame and a radiator, of a radiator supporting saddle having longitudinally movable universal trunnion bearing connections with the frame.

[Claim 6 not printed in the Gazette.]

883,147. MILK-COOLER. HENRY C. ROOT, Avondale, Pa., assignor to The Root Dairy Supply Company, Westgrove, Pa., a Limited Partnership. Filed Oct. 18, 1906. Serial No. 339,470.



1. In a milk cooler, the combination, of the frame consisting of hollow stand-pipes having circular bearings in their adjacent faces, a series of corrugated cylinders mounted one above another with their ends formed to rest and rotate in said bearings when released from clamping devices, and said clamping devices comprising rods with adjustable nuts extending through suitable ears on said stand-pipes and adapted to hold said parts clamped in fixed relation or release them to permit the rotation of said cylinders, the supply trough, and the discharge receptacle, all substantially as set forth.

2. A milk cooler comprising a frame, a series of corrugated metal cylinders supported in horizontal position one above the other in said frame, each of which is connected at each end to a stand pipe, said stand pipes connected with a water supply, the several parts being secured together by clamping rods with adjustable nuts whereby by loosening said nuts the parts may be allowed to relax to permit the cylinders to be rotated and cleaned, substantially as set forth.

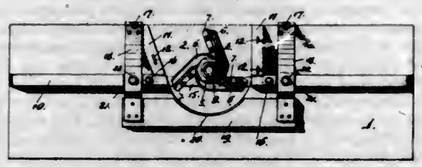
3. A liquid cooler comprising a frame, a series of corrugated cylinders supported in a horizontal position in said frame with an air space between them, a pipe or water column with which each end of said cylinders is connected to form a passage way through said cylinders and said columns for the passage of a cooling agent, means for adjustably securing said parts together, whereby said cylinders may be held clamped in fixed position or held loosely to permit their rotation a receptacle on the top of said frame provided with a perforated bottom for distributing the liquid to be cooled over said corrugated cylinders, and a receptacle beneath said corrugated cylinders for receiving the same, substantially as set forth.

4. A milk cooler comprising a frame, a series of corrugated cylinders supported a distance apart in said frame, each of said cylinders being provided at each end with a hollow bushing secured thereon by a tight joint and formed with a flange projecting beyond the surface of the cylinder proper, the water columns at each end of the cylinders connected and communicating with each, and means for securing the parts together, substantially as set forth.

5. A milk cooler comprising a frame, a series of corrugated cylinders supported a distance apart and one above the other in said frame, each of said cylinders being provided with a hollow bushing in each end, said bushing being formed with rounded outer ends, the water columns at each end formed with necks containing compressible washers for receiving the ends of said bushings and clamping rods for clamping said parts together and securing a tight joint between the ends of said bushings and said compressible washers, substantially as set forth.

[Claim 6 not printed in the Gazette.]

883,148. MOLDING-MACHINE FOR CUTTING PANELS. FRANK SANDERS, McKeesport, Pa. Filed June 7, 1907. Serial No. 377,698.



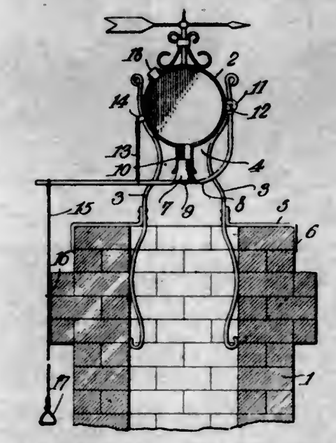
1. In a molding machine, the combination with two sets of adjustable and revoluble cutting blades, of a plate cut away to clear said blades, guide boards carried by said plate, side boards carried by said plate, a guard rail adjustably mounted between the confronting ends of said guide boards and arranged between said sets of cutting blades, a clamp board hinged to the rear edge of said plate and resiliently connected to the upper edges of said guide boards, and a shield detachably secured to the upper edges of said side boards.

2. In a molding machine, the combination with two sets of adjustable and revoluble cutting blades, of a plate cut away to clear said blades, longitudinally disposed guide boards carried by said plate, a guard rail extending between the sets of said blades and having its ends adjustably held in the ends of said guide boards, a clamp board hinged to the rear edge of said plate, and resiliently connected to said guide boards, and a shield detachably mounted over said blades.

883,149. FIRE-EXTINGUISHER. JOHN C. SHAFER, Edina, Mo., assignor of one-half to John R. Shumate, Edina, Mo. Filed Sept. 18, 1906. Serial No. 335,093.

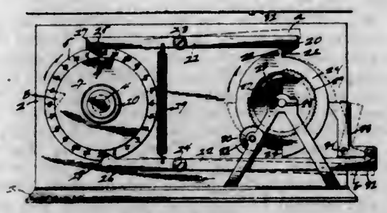
1. The combination with a chimney of a frame having spring arms fitted into said chimney and clamps engaging the upper end of said chimney, a receptacle supported by said frame and adapted to contain fire extinguishing material, a fusible stopper fitted into said receptacle, and manually-operated means for withdrawing said stopper.

2. A fire extinguishing device having a frame adapted to be engaged with a chimney, a receptacle supported by said frame and adapted to contain fire extinguishing material, a fusible stopper adapted to be destroyed by excessive heat fitted into said receptacle, and means adapted to be manually-operated for withdrawing said stopper.



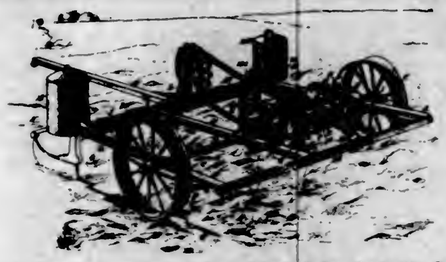
3. A fire extinguishing device having a frame consisting of a plurality of springs, an approximately semi-circular cradle connecting the upper ends of said springs, angular clamps secured to said springs and adapted to engage the upper end of a chimney, a receptacle supported in said cradle and having a flared outlet, a lever fulcrumed upon said receptacle, a fusible, bell-shaped stopper connected with said lever, a spring secured at one end to the receptacle and at the other end to said lever for holding said fusible stopper in said flared outlet, and a draw rod connected with the free end of said lever.

883,150. ACTUATING MECHANISM FOR ELECTRIC SWITCHES. HARRY B. SNELL, Toledo, Ohio, assignor to The Snell-Judd Company, a Corporation of Ohio. Filed Jan. 26, 1907. Serial No. 354,175.



In a switch-actuating mechanism, a clock, a pair of disks rotated thereby to complete one rotation in twenty-four hours, each provided with a notch in its periphery, a pair of substantially parallel levers having their ends in spring-pressed contact with the peripheries of the notched disks and having projections adapted to enter the notches, a spring-rotated switch carrying a cam-disk provided with oppositely disposed shoulders, the end of one of said parallel levers being provided with a hook-shaped end in the path of the shoulders of the cam-disk, an L-lever pivoted to the end of the other parallel lever and disposed in the path of the shoulders of the cam-disk, the end of the L-lever adapted to engage and release the shoulders of the cam-disk being arranged relative to the hook-shaped end of the first parallel lever at a quarter distance about the periphery of the cam-disk, whereby the shoulders of the cam-disk will be successively engaged and released and intermittent quarter movements imparted to the cam-disk, substantially as described.

883,151. CORN-PLANTER. CHARLES W. SPARKS, Cherryvale, Kans., assignor of one-half to J. W. Sparks, Thayer, Kans. Filed Dec. 20, 1907. Serial No. 407,383.



1. The combination, in a machine of the character described, with the dropping bar *j* rockably mounted on the framing, said bar having a crank arm flexible in one direction, a rotatable gear wheel having a lateral projection for engaging the said crank arm for rocking the bar *j* when moving forwardly and for slipping over the said crank arm when moving backward, and drive mechanism mounted on the axle and geared with the said gear wheel for the purposes specified.

2. In a corn planter of the character described, the combination with the framing, the drive axle, the rotary gear wheel I having lateral projection mounted on the frame, and clutch controlled drive gearing that joins the said wheel with the axle; of the dropper bar *j* rockably mounted on the frame in close relation to the wheel I, said bar *j* having a crank arm flexible in one direction for coöperating with the lateral projection on the wheel I.

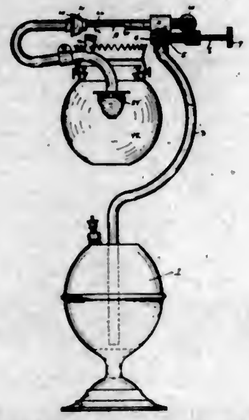
3. In a machine of the character described, the combination with the frame, the drive axle and the dropper shaft or rod, and means for intermittently actuating the said rod, said means comprising two sleeves loosely mounted on the axle, one of which has a clutch face, a clutch member fixedly mounted on the axle for engaging with the clutch sleeve, means for moving one sleeve independent of the other or both together, a marker mechanism set to its operative or inoperative position by the adjustment of the independently movable sleeve, a gear wheel rotatable with the independently slidable sleeve, and an actuating wheel coupled with the said gear wheel for intermittently engaging the dropper rod.

4. In a corn planter, the combination with the frame, the drive axle, the clutch member fixedly mounted on the drive axle, a dropper member, and means for intermittently actuating the dropper member; of a clutch sleeve slidably mounted on the drive axle, marker devices mounted on the sleeve and projected radially therefrom, another sleeve slidably mounted on the drive axle and rotatable therewith, said other sleeve having a slidable coupling connection with the marker carrying clutch sleeve, a gear mounted upon the sliding sleeve, rotatable with the shaft, connected with and adapted for operating the dropper bear actuating means and devices connected with the sleeve that rotates with the shaft for moving the marker out of an operative position when the sleeve is moved in one direction and automatic means for moving the marker to its operative position when said rotatable sleeve is moved in the opposite direction, as set forth.

5. In a corn planter of the character described, the combination with the main frame, the drive axle, the dropper bar rockably mounted upon the frame, means for intermittently rocking said bar and the clutch sleeve fixedly mounted upon the axle; of the clutch sleeve E slidably mounted upon the axle, said sleeve having longitudinal slots E' and one or more radially extended tubular members H, the sleeve F having extensions *f*, slidable in the slots E' said sleeve F being rotatable with the drive axle, lever mechanism for shifting the said sleeve F to turn therewith, said gear being coupled with and adapted to operate the dropper bar actuating devices, the markers slidably mounted in the tubular members H, spring forced outwardly, a flexible connection joined at one end to the inner end of the said markers and at the other end to the sleeve F, substantially as shown and for the purposes described.

[Claim 6 not printed in the Gazette.]

883,152. HYDROCARBON-LAMP. WILLIAM TURES, Milwaukee, Wis., assignor to Rex Light and Stove Company, Milwaukee, Wis., a Corporation of Wisconsin. Filed Mar. 25, 1907. Serial No. 364,213.



1. In a hydro-carbon lamp, the combination of a standard provided with a suitable head piece having a tubular projection, means for supplying liquid hydro-carbon thereto, a generator tube connected with said projection and arranged in communication with the hydro-carbon supply, a gas tube telescoped over the generator tube and fitted to said projection and a burner supported by the gas tube substantially underneath the generator, said generator being horizontally disposed and adapted to support the gas tube by a detachable connection therewith, and said gas tube being out of contact with the central portion of the generator tube and apertured along its underside directly over the burner.

2. In a hydro-carbon lamp, the combination of a standard provided with a suitable head piece having a tubular projection and means for supplying liquid hydro-carbon thereto, a generator tube connected with and arranged to receive oil from said projection, and a gas tube telescoped over the burner and provided with an elongated opening on its under side, said gas tube being curved downwardly and backwardly and provided with a burner substantially underneath the generator, and said gas tube having its upper wall perforated above the burner and above said opening.

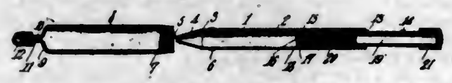
3. In a hydro-carbon lamp the combination with a suitable reservoir, of a horizontally projecting generator tube arranged in communication with the reservoir, a gas tube having one end portion telescoped over the generator tube and slidably supported at the respective ends of said generator tube, and a burner connected with the other end of the gas tube, said gas tube being curved in goose neck form and arranged to support the burner underneath the generator, and said gas tube being provided with an opening in its underside exposing the generator directly over the burner.

4. In a hydro-carbon lamp, the combination with a suitable reservoir, of a horizontally projecting generator tube arranged to receive liquid hydro-carbon therefrom, a gas tube having one end portion telescoped over the generator and provided with an opening along its under side exposing the generator, and a burner supported by the gas tube underneath the exposed portion of the generator, said generator having a nozzle arranged to discharge into the gas tube, a cleaning needle adapted to enter the nozzle, and a crank mechanism operatively connected with the needle, and adapted to move the same a predetermined distance into and out of the nozzle.

5. In a hydro-carbon lamp, the combination with a suitable reservoir, of a horizontally projecting generator tube arranged to receive liquid hydro-carbon therefrom, a gas tube having one end portion telescoped over the generator and provided with an opening along its under side exposing the generator, and a burner supported by the gas tube underneath the generator, said gas tube having a collar telescoped thereon and threaded on its outer surface, an air bell having a tubular hub telescoped on the gas tube, and a valve nut adjustably mounted on the collar and provided with a tapered portion adapted to enter the bell.

[Claim 6 not printed in the Gazette.]

883,153. SYRINGE. THOMAS H. WALLIS, Ocala, Fla.; Marie Odona Wallis, administratrix of said Thomas H. Wallis, deceased, assignor to W. J. Acosta, Guyton, Ga. Filed June 28, 1907. Serial No. 381,346.

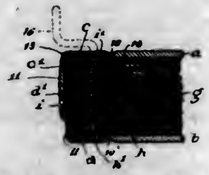


1. A syringe comprising an open barrel having a double thread on one end, a nozzle fitted to one thread and a cap inclosing said nozzle and screwed on the other thread, and a valved air inlet on said cap.

2. A syringe comprising an open barrel having two threads on one end of different diameters and an internal flange at the other end, a nozzle, a cap covering said nozzle and having a valved air inlet, a hollow piston in the barrel having a collar on its lower end and a screw cap on its outer end.

3. A syringe comprising an open barrel having a removable nozzle, a cap having a valved opening adapted to fit over the nozzle end of the syringe, a piston having a receptacle formed therein and open only on the outside of the barrel, and a cover cap for said hollow piston.

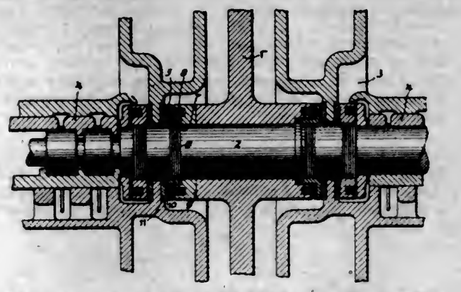
883,154. LOOSE-LEAF BOOK. ALEXANDER WATTERS, Chicago, Ill. Filed Dec. 19, 1906. Serial No. 348,543.



In a loose-leaf book or binder, the combination with a pair of angular members having sides and overlapping back portions, and interfitting posts and tubes respectively secured to said members, of a central tubular internally screw-threaded post secured to the side of one of the angular members, an adjusting screw within said tubular post having a flange at its outer end, and a strip fixed to the inner side of the other of said angular members and having an outer socket therein in which the flange of said screw is revolubly held between said strip and said angular member.

883,155. SHAFT-PACKING. GEORGE WESTINGHOUSE, Pittsburg, Pa., assignor to The Westinghouse Machine Company, a Corporation of Pennsylvania. Original application filed Feb. 12, 1904, Serial No. 193,354. Divided and this application filed Mar. 5, 1906. Serial No. 304,388.

1. In combination with a turbine and its shaft, a packing comprising an L-shaped ring surrounding said shaft, a stationary ring surrounding said shaft and mounted on the casing of said turbine, means for yieldingly forcing said L-shaped ring into contact with said stationary ring and a plurality of split rings located between said shaft and said L-shaped ring.

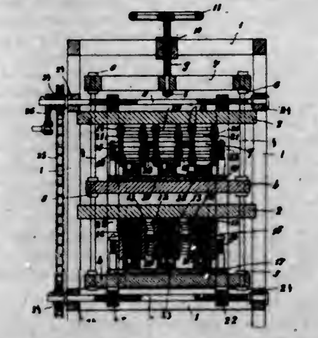


2. In combination with a turbine, a shaft, a packing comprising a rotatable ring surrounding said shaft, a stationary ring surrounding said shaft and secured to said casing, a spring for forcing said rotatable ring longitudinally of said shaft into contact with said stationary ring and a plurality of packing rings mounted on said shaft and located between said shaft and said rotatable ring.

3. In combination with a turbine and its shaft, a packing comprising a floating ring surrounding said shaft, a stationary ring surrounding said shaft and secured to the casing of said turbine, means for yieldingly forcing said floating ring into contact with said stationary ring and a plurality of packing rings between said floating ring and said shaft.

4. In combination with a turbine and its shaft, a packing comprising a floating ring surrounding said shaft, a stationary ring surrounding said shaft and secured to said casing, a plurality of springs yieldingly forcing said floating ring into contact with said stationary ring and a plurality of rotatable packing rings mounted on said shaft and located between it and said floating ring.

883,156. METHOD OF PRESSING CIGARS. ROBERT WOERNER, Mannheim, Germany. Original application filed Nov. 15, 1905, Serial No. 287,445. Divided and this application filed Mar. 5, 1907. Serial No. 360,666.

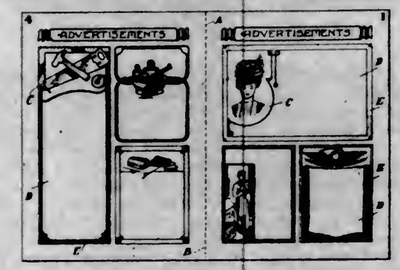


1. The herein described method of pressing cigars, which consists in pressing the cigars alternately in directions at right angles to each other and to the cigars step by step, and slightly relieving the pressure of the cigars prior to each step to permit them to expand in that direction during the following step, until the cigars are sufficiently compressed.

2. The herein described method of compressing cigars, which consists in placing extensible partitions between the cigars, in pressing the cigars alternately in directions at right angles to each other and to the cigars step by step, and slightly relieving the pressure of the cigars prior to each step to permit them to stretch in that direction during the following step, until the cigars are sufficiently compressed.

3. The herein described method of compressing cigars, which consists in putting the mouth-ends of the cigars in forms of an elastic material, in placing extensible partitions between the cigars, in pressing the cigars alternately in directions at right angles to each other and to the cigars step by step, and slightly relieving the pressure of the cigars prior to each step to permit them to expand in that direction during the following step, until the cigars are sufficiently compressed.

883,157. SHEET TO BE USED FOR PRINTING PUBLICATIONS. JAMES W. BROOKS and JOHN H. KINSALY, Ferguson, Mo. Filed Nov. 5, 1906. Serial No. 342,065.



1. A sheet of paper to be used for printing publications, having illustrations thereon suggestive of different businesses, and having spaces adjacent to said illustrations free from printed matter and of sufficient dimensions to receive the necessary advertising matter relating to the subject matter of said illustrations, substantially as described.

2. A sheet of paper to be used for printing publications, having illustrations thereon suggestive of different businesses, and having spaces adjacent to said illustrations free from printed matter and of sufficient dimensions to receive the necessary advertising matter relating to the subject matter of said illustrations, and having borders identifying said spaces with their respective illustrations, substantially as described.

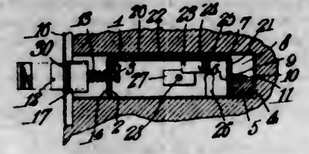
3. A sheet of paper to be used for printing publications, having illustrations thereon suggestive of different businesses, each of which is illustrative of some phase of the business which it suggests, and having spaces adjacent to said illustrations free from printed matter and of sufficient dimensions to receive the necessary advertising matter relating to the subject matter of said illustrations, substantially as described.

4. A sheet of paper to be used for printing publications, having illustrations thereon suggestive of different businesses, and having spaces adjacent to said illustrations free from printed matter and of sufficient dimensions to receive the necessary advertising matter relating to the subject matter of said illustrations, said illustrations and spaces being positioned to appear on the pages of the publication when said sheet is folded, substantially as described.

5. A sheet of paper to be used for printing publications, having illustrations thereon suggestive of different businesses, and having spaces adjacent to said illustrations free from printed matter and of sufficient dimensions to receive the necessary advertising matter relating to the subject matter of said illustrations, and borders identifying said spaces with their respective illustrations, the illustrations and spaces being positioned to appear on the pages of the publication when said sheet is folded, substantially as described.

883,158. DOOR-LOCK. DONALDSON H. BUETCH, Morgan City, La., assignor of one-third to Marville T. Gautreaux, Morgan City, La. Original application filed July 10, 1907, Serial No. 383,053. Divided and this application filed Dec. 10, 1907. Serial No. 405,910.

1. In a lock, a lock-bolt, an elastic strap extending therefrom, a spring tending to force said strap in one direction, a laterally-projecting member on the strap, a stop in the path of the said member behind which the latter is movable by the spring, and a key-operated member carried by the elastic strap and arranged in the path of an inserted key for carrying the laterally-projecting member out of the path of the stop against the action of the spring.

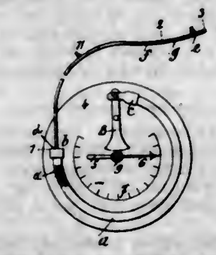


2. In a lock, a lock-bolt, an elastic strap extending therefrom, a spring tending to force said strap in one direction, a laterally-projecting member on said strap, a stop in the path of said laterally-projecting member behind which the said member is movable by the spring, and a key-operated member carried by the elastic strap and arranged in the path of an inserted key for carrying the laterally-projecting member from engagement with the stop against the action of the spring, said key-operating member having rollers in the path of the key.

3. In a lock, a lock-bolt, an elastic strap extending therefrom, and having the end remote from the lock-bolt formed with a laterally-projecting member, a spring tending to force the strap in a direction at right angles to the direction of travel of said strap, another spring tending to project the lock-bolt, a slotted plate in the path of the projecting member of the elastic strap, when the lock-bolt is in its forward position, a stop in the path of the projecting member of the elastic strap when in its retracted position, and means carried by the elastic strap in the path of an inserted key for moving the lock-bolt against the action of the spring tending to project the same when the key is turned in one direction, and for permitting the key to lift the elastic strap against the action of the spring tending to move the same laterally when the key is turned in the other direction.

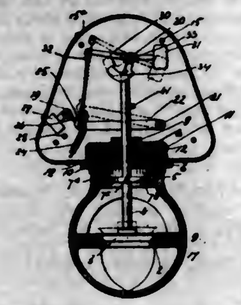
4. In a lock, a lock-bolt, a stem projecting therefrom, a spring on said stem tending at all times to move the lock-bolt to the projected position, an elastic strap fast on said stem and having the end remote from the stem bent at an angle, a spring carried by the elastic strap and tending to move the latter laterally, a block having two spaced stops in the path of the bent end of the elastic strap and serving one to limit the forward movement of the lock-bolt and the other to hold the lock-bolt in the retracted position each by engagement with the bent end of the elastic strap, and means in the path of the inserted key and carried by the elastic strap permitting the manipulation of the lock-bolt through the key.

883,159. MEANS FOR SHOWING FROM A DISTANCE THE VARIATIONS IN TEMPERATURE. JOSEPH B. FOURNIER, Paris, France. Original application filed Nov. 17, 1904, Serial No. 233,158. Divided and this application filed Dec. 7, 1905. Serial No. 290,806.



The combination of a curved tube or manometer, of a movable, flexible, narrow tube, one end of which is connected to the manometer tube and of which the other end is closed, of a not very volatile liquid in the manometer tube and a large part of the flexible tube, and of a volatile liquid in a part of the closed end of the tube, the diameter of the flexible tube being sufficiently small to allow of the capillary forces maintaining the liquid columns in the tube in their respective positions, irrespective of the movements imparted to the said tube.

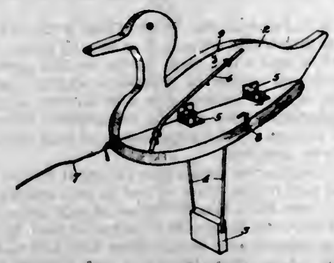
883,160. AUTOMATIC SHUT-OFF VALVE. GEORGE A. FULLIFF, East McKeesport, Pa., assignor of one-half to William H. Lang, East McKeesport, Pa. Filed Aug. 10, 1907. Serial No. 387,978.



1. In a regulating valve, the combination with a valve casing provided at its upper end with a cylindrical chamber and having a valve seat in alinement with said chamber, of a valve stem extending through said chamber and into said casing, a valve on the lower end of said stem and adapted to fit against said seat, an adjustable disk carried by the stem and positioned within said cylindrical chamber, and means arranged exteriorly of the valve casing and engaging the outer end of the valve stem for locking it when the valve is closed.

2. In a regulating valve, the combination with a valve casing formed with an internal seat and having in its upper portion an opening with the wall thereof threaded, of a cap having a depending exteriorly threaded flange extending in said opening and engaging the threads of the casing, said flange forming a cylindrical chamber at the top casing, a valve seat within the casing and in alinement with said chamber, a valve stem extending through said chamber and into said casing, a valve on the lower end of said stem adapted to engage said seat, a disk mounted on said stem, positioned within said cylindrical chamber and constituting a piston, and means exterior of the valve casing and engaging the outer end of the valve stem for locking it when the valve is seated.

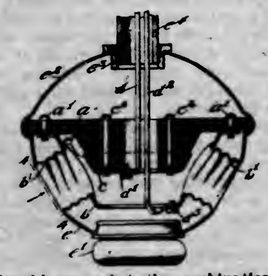
883,161. FOLDING DECOY. EMIL R. ROSENTRETER, Chicago, Ill. Filed Sept. 10, 1906. Serial No. 333,885.



A folding decoy of the kind described, comprising a float member and an upright member pivotally secured thereto on an axis longitudinal of the float member, means tending normally to resiliently hold the upright member in operative position substantially at a right angle to the transverse axis of the float, means for temporarily holding the upright member in its folded position as desired substantially in a plane parallel to the plane of the float, and folding balancing means arranged on the under part of said float to maintain the upright member in operative position above the water.

REISSUES.

12,765. PLURAL-LAMP SOCKET. REUBEN B. BENJAMIN, Chicago, Ill., assignor to The Benjamin Electric Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed Feb. 6, 1908. Serial No. 414,653. Original application filed May 20, 1898. Renewed Aug. 10, 1901, Serial No. 71,635. Original No. 721,774, dated Mar. 3, 1903.



1. In a plural-lamp socket, the combination with an insulating-base, of a metallic bowl-shaped contact-plate mounted thereon and having oblique side walls provided with a plurality of openings to accommodate the center lamp and socket terminals and carrying the contacts for the ring-terminals of the lamps, contacts for the end terminals of the lamps supported within said bowl-shaped contact-plate and placed opposite the openings therein, and means adapted to secure the lamps in operative relation with said contacts, substantially as described.

2. An electric-lamp cluster, comprising a plurality of metallic receivers for the lamps, a metallic truncated portion carrying the receivers and attached to the base, an electric connection with the receivers, an additional contact for each receiver and an electric connection with said contacts, as set forth.

3. An electric-light-lamp cluster, consisting of a non-conductor base, a metallic truncated lower portion attached to the base and having a plurality of lamp-receivers and suitable electric connections extending to said truncated portion, substantially as described.

4. In a plural-lamp socket, the combination with an insulating-base, and a metallic contact-plate mounted thereon, of a plurality of metallic threaded shells for the lamp-bases, supported thereon and in electrical contact therewith, and contacts for the central-lamp terminals arranged opposite the respective shells, substantially as described.

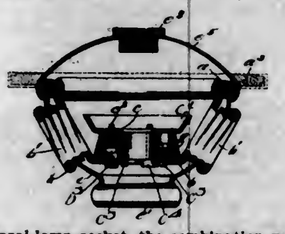
5. In a plural-lamp socket, the combination with a suitable base, of a plate mounted thereon having side walls provided with openings to accommodate the central lamp and socket terminals, a plurality of threaded shells mounted on said walls, and central terminals for the lamps, substantially as described.

[Claims 6 to 27 not printed in the Gazette.]

12,766. PLURAL-LAMP SOCKET. REUBEN B. BENJAMIN, Chicago, Ill., assignor to The Benjamin Electric Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed Feb. 6, 1908. Serial No. 414,652. Original application filed May 20, 1908, Serial No. 681,202. Renewed Aug. 10, 1901, Serial No. 71,635. Divided and application filed Feb. 7, 1902, Serial No. 93,011. Original No. 721,777, dated Mar. 3, 1903.

1. In a plural-lamp socket, the combination with a suitable base, of a contact-plate mounted on said base, a plurality of shells for the lamp-bases carried on said plate, an

exterior casing having openings to accommodate the lamp-bases, and insulating-rings passing through said openings and engaging said shells, substantially as described and for the purposes set forth.



2. In a plural-lamp socket, the combination with a suitable base, of a contact-plate mounted on said base, a plurality of threaded shells for the lamp-bases carried on said plate, an exterior casing having openings to accommodate the lamp-bases, and threaded insulating-rings passing through said openings and threaded upon said shells, substantially as described.

3. A cluster-lamp socket comprising an insulating-base, suitably supported lamp-holding devices and associated contacts associated with said base, conducting parts or members interconnecting said contacts in the desired circuit relation, suitable connection terminals for the leading-in wires, a casing having an opening opposite each lamp-holding device, and insulating-rings associated with said openings to maintain the same in alinement with said lamp-holding devices.

4. A cluster-lamp socket comprising an insulating-base, suitably supported lamp-holding devices and associated contacts associated with said base, conducting parts or members interconnecting said contacts in the desired circuit relation, suitable connection terminals for the leading-in wires, a casing having an opening opposite each lamp-holding device, and insulating-rings fitting in said openings and secured to parts supported upon said base independently of said casing.

5. A cluster-lamp fixture comprising an insulating-base, a plurality of threaded shells suitably associated therewith, a casing having an opening opposite each shell, and insulating-rings fitting in said openings and secured to said shells.

[Claims 6 to 14 not printed in the Gazette.]

12,767. ELECTRICALLY-OPERATED BAGGAGE-TRUCK. TRACY V. BUCKWALTER, Altoona, Pa. Filed Feb. 19, 1908. Serial No. 416,806. Original No. 875,893, dated Jan. 7, 1908, Serial No. 363,559.



1. A truck having four wheels each movable about a vertical axis, and means adapted to be operated at each end of said truck for simultaneously moving said wheels about said axes.

2. A truck having a pair of wheels at each end, a knuckle joint for each wheel, mechanism for connecting said wheels so that they are movable simultaneously on the axes of their respective joints, and a steering device at each end of said truck for operating said mechanism and simultaneously shifting the respective pairs of said wheels in opposite directions.

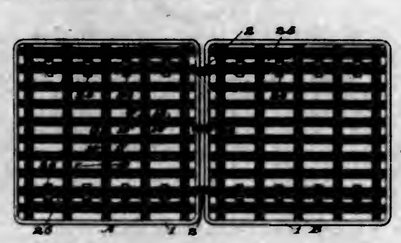
3. A truck having a frame with four relatively fixed points of support, wheels having pivotal connections with said frame at the respective points of support, mechanism connecting said wheels so that they are moved together about their respective pivotal connections, and a lever at each end of said truck for operating said mechanism.

4. A truck having a beam at each end thereof, a platform rigidly fixed to said beam, a pair of wheels having knuckle joint connections with each beam, an arm connected to each knuckle for oscillating a corresponding wheel, links connecting the arms of the respective pairs of wheels, a rock shaft at each end of said truck, an arm fixed to each rock shaft and connected to the corresponding pair of wheels, a second arm fixed to each rock shaft, and means for connecting and operating said last named arms together.

5. A truck having a beam, a pair of wheels having pivotal connections with said beam, an arm connected with each of said wheels so as to move it about its pivotal connection, a link connecting said arms, a rock shaft having an arm connected with the first named arms and link and a second arm for rocking it, a fulcrumed arm, means connecting said fulcrumed arm with the second arm of said rock shaft, and means for rocking said fulcrumed arm.

[Claims 6 to 8 not printed in the Gazette.]

12,768. BED-SPRING. HARRY W. PENNEPACKER, Allegheny, Pa., assignor to Fort Pitt Bedding Company, Allegheny, Pa., a Corporation of Pennsylvania. Filed Nov. 2, 1907. Serial No. 400,423. Original No. 819,671, dated May 1, 1906, Serial No. 282,782.



1. In a bed-spring, the combination with two rectangular hinged frames, of longitudinally and transversely arranged wires connected to said frames, helical springs supported by said wires, and having their largest convolutions interwoven in said wires, rectangular frames supported by said springs, slats carried by said rectangular frames and connected to said springs, stirrups pivotally mounted between said slats adjacent to the longitudinal edges of said frames, and hangers carried by said stirrups, substantially as described.

2. In a bed-spring, the combination with two rectangular frames hinged together and adapted to fold upon one another, of interwoven wires carried by said frames, springs connected to said wires, transversely-disposed slats carried by said springs, rectangular frames supported by said slats, stirrups pivotally connected to said slats, and hangers connected to said stirrups, substantially as described.

3. In a bed-spring, the combination with two hinged frames, of interwoven wires carried by said frames, springs supported by said wires, slats carried by said springs, rectangular frames carried by said slats, stirrups carried by said slats, hangers connected to said stirrups adjacent to the longitudinal edges of said rectangular frames, and means to prevent lateral displacement of said springs, substantially as described.

4. The combination with a bed, of hinged frames, springs carried by said frames, slats carried by said springs, frames carried by said slats, means carried by said slats adjacent to and within the longitudinal edges of said last-named frames, to support said frames upon said bed, and means to prevent lateral displacement of said springs, substantially as described.

5. A bed-spring of the type described consisting of hinged frames, springs carried by said frames, transversely-disposed slats carried by said springs, stirrups pivotally carried by said slats, and hangers connected to said stirrups, substantially as described.

[Claim 6 not printed in the Gazette.]

12,769. THREAD-GUIDE. ISAAC E. PALMER, Middletown, Conn. Filed Dec. 31, 1907. Serial No. 409,014. Original No. 855,803, dated June 4, 1907, Serial No. 349,240.



1. The combination with a finger board, of a thread guide having its shank provided with means for interlocking the shank with the finger board.

2. The combination with a wooden finger board, of a thread guide having its shank provided with projections for piercing the surface of the finger board and means for fastening the guide to the finger board.

3. The combination with a wooden finger board of a thread guide having its shank turned back along itself, said shank having means on its inner face for interlocking it with the finger board and means for fastening the guide to finger board.

4. The combination with a wooden finger board, of a thread guide having its shank turned back along itself to form a loop, said loop portion of the shank having means on its inner face for interlocking it with the finger board and means for fastening the guide to the finger board.

5. The combination with a wooden finger board, of a thread guide having its shank turned back along itself to form a loop, said shank having means on its face for interlocking with the finger board, a washer arranged to partially embrace the shank to prevent the loop from spreading and a fastening device for holding the parts in assembled adjustment.

[Claims 6 to 9 not printed in the Gazette.]

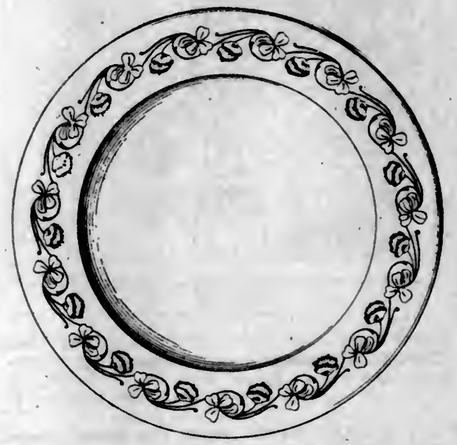
DESIGNS.

39,213. HANDLE FOR SPOONS, FORKS, AND SIMILAR ARTICLES. THOMAS B. LASHAR, Bridgeport, Conn., assignor to International Silver Company, Meriden, Conn., a Corporation of New Jersey. Filed Feb. 24, 1908. Serial No. 417,608. Term of patent 7 years.



The ornamental design for a handle for spoons, forks and similar articles, as shown.

39,214. PLATE OR SIMILAR ARTICLE. JOHN WILLIAM POINTON, Burslem, England, assignor to Maddock & Miller, New York, N. Y., a Corporation of New York. Filed Feb. 24, 1908. Serial No. 417,609. Term of patent 7 years.



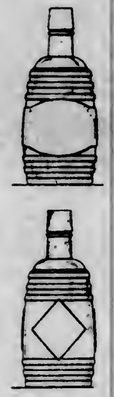
The ornamental design for a plate, or similar article, as shown.

39,215. BOTTLE. PAUL GARRETT, Norfolk, Va. Filed Feb. 6, 1908. Serial No. 414,658. Term of patent 14 years.



The ornamental design for a bottle, as shown.

39,216. BOTTLE. CHARLES H. HEMMANN, Chicago, Ill. Filed Feb. 14, 1908. Serial No. 415,966. Term of patent 14 years.



The ornamental design for a bottle as shown.

39,217. POCKET-BANK. BENNO VOM EIGEN, Newark, N. J., assignor to Aug. Goertz & Co., a Corporation of New Jersey. Filed Mar. 14, 1907. Serial No. 362,427. Term of patent 7 years.



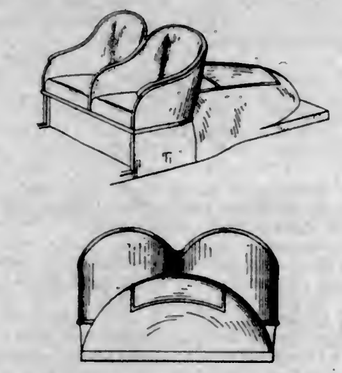
The ornamental design for a pocket bank, as shown.

39,218. BAG-FASTENING MEMBER. CHRISTIAN HERRING and ALBERT FULLER, Newark, N. J. Filed June 19, 1907. Serial No. 379,319. Term of patent 7 years.



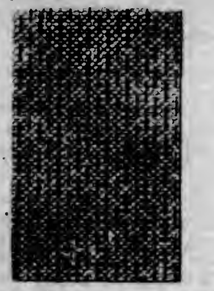
The new and ornamental design for a bag fastening member, as shown.

39,219. AUTOMOBILE-BODY. CHARLES SCHMIDT, Cleveland, Ohio, assignor to The Peerless Motor Car Company, Cleveland, Ohio, a Corporation of West Virginia. Filed Feb. 7, 1907. Serial No. 356,270. Term of patent 14 years.



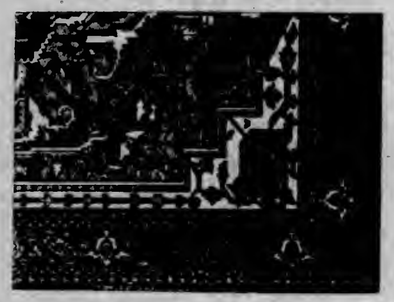
The ornamental design for an automobile body, substantially as shown.

39,220. WALL-COVERING. JOSEPH N. WIGGIN, Orange, and ROBERT W. CORNELISON, Bloomfield, N. J., assignors to H. B. Wiggin's Sons Company, a Corporation of New Jersey. Filed Mar. 14, 1907. Serial No. 362,425. Term of patent 14 years.



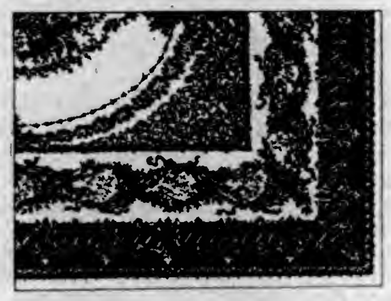
The ornamental design for wall covering, as shown.

39,221. RUG. WILLIAM A. PERRY, Worcester, Mass., assignor to Matthew J. Whittall, Worcester, Mass. Filed Feb. 17, 1908. Serial No. 416,430. Term of patent 3½ years.



The ornamental design for a rug as shown.

39,222. RUG. FRANK A. HAAS, New York, N. Y., assignor to Matthew J. Whittall, Worcester, Mass. Filed Feb. 17, 1908. Serial No. 416,431. Term of patent 3½ years.



The ornamental design for a rug as shown.

39,223. TEXTILE FABRIC. EMILE SINS, Paris, France, assignor to Cheney Brothers, a Corporation of Connecticut. Filed Jan. 20, 1908. Serial No. 411,847. Term of patent 3½ years.



The ornamental design for a textile fabric, as shown.

39,224. TEXTILE FABRIC. EMILE SINS, Paris, France, assignor to Cheney Brothers, a Corporation of Connecticut. Filed Jan. 20, 1908. Serial No. 411,848. Term of patent 3½ years.



The ornamental design for a textile fabric, as shown.

39,225. TEXTILE FABRIC. EMILE SINS, Paris, France, assignor to Cheney Brothers, a Corporation of Connecticut. Filed Jan. 20, 1908. Serial No. 411,849. Term of patent 3½ years.



The ornamental design for a textile fabric, as shown.

39,226. TEXTILE FABRIC. EMILE SINS, Paris, France, assignor to Cheney Brothers, a Corporation of Connecticut. Filed Jan. 20, 1908. Serial No. 411,850. Term of patent 3½ years.



The ornamental design for a textile fabric, as shown.

TRADE-MARKS

PUBLISHED MARCH 24, 1908.

The following trade-marks have been adjudged entitled to registration under the act of February 20, 1905, and are published in compliance with section 6 of said act. Said section provides:

"Any person who believes he would be damaged by the registration of a mark may oppose the same by filing notice of opposition, stating the grounds therefor, in the Patent Office within thirty days after the publication of the mark sought to be registered, which said notice of opposition shall be verified by the person filing the same before one of the officers mentioned in section two of this act. If no notice of opposition is filed within said time the Commissioner shall issue a certificate of registration therefor, as hereinafter provided for."

Marks which are stated to have been "Used ten years" are registrable under the last proviso of section 5 of said act, which is as follows:

"And provided further, That nothing herein shall prevent the registration of any mark used by the applicant or his predecessors, or by those from whom title to the mark is derived, in commerce with foreign nations or among the several States, or with Indian tribes, which was in actual and exclusive use as a trade-mark of the applicant or his predecessors from whom he derived title for ten years next preceding the passage of this act."

Section 14 of said act provides for the following fee:

"On filing notice of opposition to the registration of a trade-mark, ten dollars."

Ser. No. 7,070. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS, NOT INCLUDING ELECTRICAL APPARATUS.) KELSEY HEATING COMPANY, Syracuse, N. Y. Filed May 31, 1905. Used ten years.

KELSEY
WARM AIR
GENERATOR

Particular description of goods.—Furnaces.

Ser. No. 9,149. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) EDDY PALMER, New York, N. Y., assignor to Solon Palmer, a Corporation of New York. Filed June 27, 1905.

·ARISTON·

Particular description of goods.—Perfumes and Perfumed Toilet Powders.

Ser. No. 17,764. (CLASS 39. CLOTHING.) WILLIAM F. TAUBEL, Riverside, N. J. Filed Mar. 12, 1906. Used ten years.



Particular description of goods.—Stockings.

Ser. No. 20,443. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) NEW ENGLAND BISCUIT CO., Worcester, Mass. Filed June 20, 1906.

LITTLE BROTHERS

Particular description of goods.—Lunch Biscuits and Crackers.

Ser. No. 21,768. (CLASS 39. CLOTHING.) HARSH, SMITH & EDMONDS SHOE CO., Milwaukee, Wis. Filed Aug. 27, 1906.



Particular description of goods.—Leather Shoes.

Ser. No. 23,507. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) H. P. D. KINGSBURY, Redlands, Cal. Filed Nov. 20, 1906.

CROWN K BRAND

Particular description of goods.—Jams, Marmalades, Jellies, Flavoring Extracts, and Preserved Fruits.

Ser. No. 25,153. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) NOVELTY MANUFACTURING COMPANY, Waterbury, Conn. Filed Feb. 5, 1907.



Particular description of goods.—Metallic Fixtures for Bath-Rooms and Lavatories.

Ser. No. 25,248. (CLASS 39. CLOTHING.) AMERICAN HAND SEWED SHOE CO., Omaha, Nebr. Filed Feb. 11, 1907.



Particular description of goods.—Rubber Boots, Shoes, and Overshoes.

Ser. No. 26,690. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) ADOLPH STRAUSS & CO., New York, N. Y. Filed Apr. 13, 1907. Used ten years.



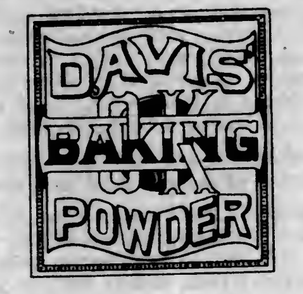
Particular description of goods.—Razors.

Ser. No. 28,255. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) FARBWERKE VORM. MEISTER LUCIUS & BRÜNING, Höchst-on-the-Main, Germany. Filed June 19, 1907.

ARTERENOL

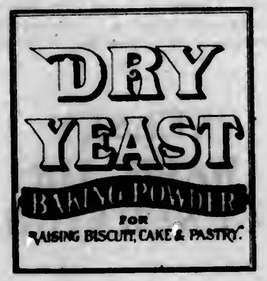
Particular description of goods.—A Pharmaceutical Preparation Having Astringent and Hemostatic Properties and Thereby Acting to Increase the Pressure of the Blood When Introduced Into the Circulation.

Ser. No. 28,297. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) R. B. DAVIS COMPANY, Hoboken, N. J., and New York, N. Y. Filed June 22, 1907. Used ten years.



Particular description of goods.—Baking-Powder.

Ser. No. 28,298. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) R. B. DAVIS COMPANY, Hoboken, N. J. Filed June 22, 1907. Used ten years.



Particular description of goods.—Baking-Powder.

Ser. No. 29,451. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) G. H. BALLOU COMPANY, San Diego, Cal. Filed Aug. 19, 1907.



Particular description of goods.—Baking-Powder.

Ser. No. 29,827. (CLASS 12. MASONRY MATERIALS.) PORTLAND CEMENTFABRIK "GERMANIA" AKTIENGESELLSCHAFT, Lehrte, near Hannover, Germany. Filed Sept. 10, 1907.



Particular description of goods.—Hydraulic Cement.

Ser. No. 29,974. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) WRIGHT'S INDIAN VEGETABLE PILL COMPANY, New York, N. Y. Filed Sept. 14, 1907. Used ten years.



Particular description of goods.—A Remedy to Produce Sleep and Composure, to Relieve Pain and Irritation, Nervous Excitement, and Morbid Irritability of Body and Mind, and to Allay Convulsive and Spasmodic Actions.

Ser. No. 29,979. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ACTIEN-GESELLSCHAFT FÜR ANILIN-FABRIKATION, Berlin, Germany. Filed Sept. 16, 1907.



Particular description of goods.—Remedies for Dietetic Purposes, Nervous Diseases, and Diseases of the Skin and Scalp, Urinary Antiseptics, Ointments, Sedatives, Anesthetics, Intestinal Astringents, Preparations for Dyeing the Hair, Synthetic Perfumes and Bases for Perfumes, and Preparations for Increasing the Strength of the Aroma of Perfumes.

Ser. No. 30,276. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) A. C. POOLE AUGER CO., Scarbro, W. Va. Filed Sept. 28, 1907.



Particular description of goods.—Mining-Augers.

Ser. No. 30,671. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE MOREL COMPANY, Savannah, Ga. Filed Oct. 19, 1907.



Particular description of goods.—Pepper-Sauce.

Ser. No. 30,744. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) CLEMENS LAGEMAN, Aachen, Germany. Filed Oct. 23, 1907.

Thürpil

Particular description of goods.—A Veterinary Medicine in the Form of Pills or Powders.

Ser. No. 30,869. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) SHARP & DOHME, Baltimore, Md. Filed Oct. 30, 1907.

QUINADOL

Particular description of goods.—A Liquid Preparation for Treatment of Malaria, Chills, and Fevers.

Ser. No. 30,905. (CLASS 38. PUBLICATIONS.) THE SPORTING LIFE PUBLISHING COMPANY, Philadelphia, Pa. Filed Nov. 1, 1907.

SPORTING LIFE

Particular description of goods.—A Newspaper.

Ser. No. 31,036. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) AUTOMATIC DISINFECTING CO., Minneapolis, Minn. Filed Nov. 6, 1907.



Particular description of goods.—A Powdered Disinfecting and Cleaning Preparation.

Ser. No. 31,108. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) NETTIE M. HOON, Mercer, Pa. Filed Nov. 9, 1907.

SAVOL-CREAM

Particular description of goods.—An Antiseptic Cream for Wounds and Abrasions of the Skin.

Ser. No. 31,148. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) PARIS NOVELTY CO., Duluth, Minn. Filed Nov. 13, 1907.



Particular description of goods.—Whirling Tops.

Ser. No. 31,164. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) CHARLES URBAN, London, England. Filed Nov. 14, 1907.



Particular description of goods.—Kinematographic Apparatus and Photographic Films Bearing Finished Pictures for Use Therewith.

Ser. No. 31,227. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) WILLIAM HUTTER, New York, N. Y. Filed Nov. 18, 1907.



Particular description of goods.—Metal-Polishes.

Ser. No. 31,307. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE PARK DENTAL SUPPLY COMPANY, Ridgefield Park, N. J. Filed Nov. 22, 1907.

Ad Lib

Particular description of goods.—Anesthetical Preparations to be Used in Dentistry.

Ser. No. 31,515. (CLASS 23, CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) ILLINOIS SEWING MCH. CO., Chicago, Ill. Filed Dec. 2, 1907.

FREE

Particular description of goods.—Sewing-Machine Needles Used in Family Sewing-Machines.

Ser. No. 31,616. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) VALLAT & PERRONNET, St. Etienne, France. Filed Dec. 7, 1907.



Particular description of goods.—Ribbons.

Ser. No. 31,677. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) SIDNEY BLUMENTHAL AND CO., INC., New York, N. Y. Filed Dec. 11, 1907.

"No 10,

Particular description of goods.—Dress Fabrics Composed of Worsted, Silk, Cotton, and Mohair.

Ser. No. 31,786. (CLASS 10. FERTILIZERS.) BIRMINGHAM FERTILIZER COMPANY, Birmingham, Ala. Filed Dec. 17, 1907.



Particular description of goods.—Fertilizers.

Ser. No. 31,791. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) GRIFFITH-DURNEY COMPANY, San Francisco, Cal. Filed Dec. 17, 1907.

BONITA

Particular description of goods.—Canned Salmon.

Ser. No. 31,800. (CLASS 10. FERTILIZERS.) VIRGINIA-CAROLINA CHEMICAL COMPANY, Jersey City, N. J.; Richmond and Norfolk, Va.; Charleston, S. C.; Savannah and Atlanta, Ga.; Montgomery, Ala.; Durham, N. C., and Memphis, Tenn. Filed Dec. 17, 1907.

LITTLE GIANT

Particular description of goods.—Fertilizers.

Ser. No. 31,823. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) THE FIBRE CONDUIT COMPANY, Orangeburg, N. Y. Filed Dec. 18, 1907.



The central field, outer annular border, and the words "The Fibre Conduit Co., Orangeburg, N. Y." being printed in orange.

Particular description of goods.—Fiber Conduits.

Ser. No. 31,879. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) THE RAIL JOINT COMPANY, New York, N. Y. Filed Dec. 21, 1907.



Particular description of goods.—Electrical Insulating Material.

Ser. No. 31,880. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) THE RAIL JOINT COMPANY, New York, N. Y. Filed Dec. 21, 1907.



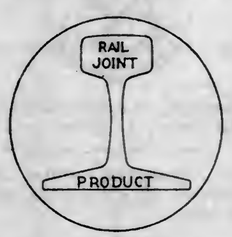
Particular description of goods.—Electrical Insulating Material.

Ser. No. 31,881. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) THE RAIL JOINT COMPANY, New York, N. Y. Filed Dec. 21, 1907.



Particular description of goods.—Electrical Insulating Material.

Ser. No. 31,882. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) THE RAIL JOINT COMPANY, New York, N. Y. Filed Dec. 21, 1907.



Particular description of goods.—Electrical Insulating Material.

Ser. No. 31,962. (CLASS 39. CLOTHING.) ADLER & AST, New York, N. Y. Filed Dec. 28, 1907.

"Merry Widow"

Particular description of goods.—Dresses, Dress-Suits, and Outer Suits for Ladies, Comprising Waists and Skirts, Dress-Waists, Shirt-Waists, Dress-Skirts, and Underskirts.

Ser. No. 32,018. (CLASS 32. FURNITURE AND UPHOLSTERY.) PNEUMATIC ROCKER TIRE COMPANY, Denver, Colo. Filed Jan. 2, 1908.



Particular description of goods.—Pneumatic Treads for Rocking-Chairs.

Ser. No. 32,022. (CLASS 39. CLOTHING.) FRANK P. HEID & COMPANY, INCORPORATED, Philadelphia, Pa. Filed Jan. 2, 1908.



Particular description of goods.—Hats and Caps of All Kinds for Men, Women, and Children.

Ser. No. 32,023. (CLASS 39. CLOTHING.) FRANK P. HEID & COMPANY, INCORPORATED, Philadelphia, Pa. Filed Jan. 2, 1908.



Particular description of goods.—Hats and Caps of All Kinds for Men, Women, and Children.

Ser. No. 32,047. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE KELLY CO., Cleveland, Ohio. Filed Jan. 3, 1908.

DIXIE

Particular description of goods.—Peanuts and Peanut-Butter.

Ser. No. 32,053. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) THE MATTATUCK MANUFACTURING COMPANY, Waterbury, Conn. Filed Jan. 4, 1908.



Particular description of goods.—Metallic Fabrics Composed of Plates Connected by Wire Links and Intended for Use for Spring-Beds, Mattresses, and other Purposes.

Ser. No. 32,077. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) COVERT MANUFACTURING COMPANY, Watervliet, N. Y. Filed Jan. 6, 1908.



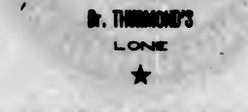
Particular description of goods.—Hooks, Attaching-Rings, Clevises, Chains, Eyes, Combined Buckles and Snaps, Metallic Bull-Leads and Trimmings Therefor, Metallic Trimmings for Breast-Straps, Metallic Trimmings for Leads, Metallic Hitching-Pins and Hitching-Posts and Trimmings Therefor, Hammock-Trimmings, Metallic Hitching Devices, Breech-Irons, Combination Lariat, Tether, and Picket-Pin formed of Metal, Breast-Strap Protectors, Combination Snaps and Thimbles, Metallic Trimmings for Trace-Carriers, Metallic Tie-Trimmings, Buckles, Animal-Weights, and Thimbles.

Ser. No. 32,106. (CLASS 38. PUBLICATIONS.) THE VOGUE COMPANY, New York, N. Y. Filed Jan. 6, 1908. Used ten years.

VOGUE

Particular description of goods.—A Weekly Magazine.

Ser. No. 32,120. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) WILLIAM JACKSON THURMOND, Dallas, Tex. Filed Jan. 7, 1908. Used ten years.



Particular description of goods.—Remedies for Scrofula, Salt-Rheum, Erysipelas, Eczema, Skin and Scalp Eruptions, Old Sores, Rheumatism, Catarrh, Kidney and Liver Troubles, Indigestion, Dyspepsia, Biliousness, Sick Headaches, Stomach Complaints, Loss of Appetite, General Debility, Fever and Ague, Constipation, Sour Stomach, Torpid Liver, Lame Back, Stiff Joints, Neuralgia, Toothache, Sprains, Cuts and Burns, Piles, Either Acute or Chronic, Coughs, Colds, Croup, Sore Throat, Hoarseness, Bronchitis, Influenza, and All Diseases of the Eyes, Throat, Chest, and Lungs, Diseases of the Kidneys and Bladder, Bladder Irritation, Bright's Disease, Irritated Conditions of the Bladder, Kidney, and Urinary Tract, Hysteria, Nervous Prostration, Wakefulness, Weakness, Lassitude, Nervous Debility, Catarrhal Deafness, La Grippe, Heartburn, Catarrh of the Stomach, Flatulency, Malassimilation of Food, Impaired Digestion and Derangement of the Digestive Organs, Sciatica, Jaundice, Pimples, Blackheads, Poor Complexion, Nervousness, and All Diseased Conditions Arising from Chronic Constipation.

Ser. No. 32,121. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) JACOB ALEXANDER BUMGARDNER, Greenville, Va. Filed Jan. 7, 1908. Used ten years.



Particular description of goods.—Whisky.

Ser. No. 32,132. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) DELMER D. RICHARDSON, Chicago, Ill. Filed Jan. 8, 1908.

$GenO_4$

Particular description of goods.—"Gas" for Disinfecting and Medicinal Purposes.

Ser. No. 32,252. (CLASS 39. CLOTHING.) WOODBURY SHOE COMPANY, Portland, Me., and Beverly and Boston, Mass. Filed Jan. 16, 1908.

Nightingale

Particular description of goods.—Leather Boots and Shoes Having Rubber Heels.

Ser. No. 32,256. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) JAMES V. MAWBY, Philadelphia, Pa. Filed Jan. 16, 1908.



Particular description of goods.—Carpets and Rugs.

Ser. No. 32,257. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) JAMES V. MAWBY, Philadelphia, Pa. Filed Jan. 16, 1908.



Particular description of goods.—Carpets and Rugs.

Ser. No. 32,260. (CLASS 39. CLOTHING.) DR. JAEGER'S SANITARY WOOLEN SYSTEM CO., New York, N. Y. Filed Jan. 16, 1908. Used ten years.



Particular description of goods.—Woolen Knit Outer Garments, Underwear, Hose, Undershirts, Outside Shirts, Underskirts, Sweaters, Night-Dresses, and Shirt-Waists.

Ser. No. 32,261. (CLASS 39. CLOTHING.) DR. JAEGER'S SANITARY WOOLEN SYSTEM CO., New York, N. Y. Filed Jan. 16, 1908. Used ten years.

JAEGER

Particular description of goods.—Woolen Knit Outer Garments, Underwear, Hose, Undershirts, Outside Shirts, Underskirts, Sweaters, Night-Dresses, and Shirt-Waists.

Ser. No. 32,281. (CLASS 12. MASONRY MATERIALS.) AMERICAN CEMENT WATERPROOFING CO., Camden, N. J. Filed Jan. 17, 1908.

AQUABAR

Particular description of goods.—A Waterproofing Solution for Use with Plastic Masonry Materials.

Ser. No. 32,300. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) CHARLESTON METALLIC PACKING CO., Charleston, S. C. Filed Jan. 18, 1908.

DIXIE

Particular description of goods.—Rod and Piston Packing.

Ser. No. 32,324. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) H. O. WILBUR & SONS, Philadelphia, Pa. Filed Jan. 20, 1908.



Particular description of goods.—Chocolate and Cocoa.

Ser. No. 32,336. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ABRAHAM M. GOLDSTANDT, St. Louis, Mo. Filed Jan. 20, 1908.



Particular description of goods.—A Medicinal Preparation Used in the Treatment of Epileptic Fits or Falling Sickness, Spasmodic Diseases, Chorea or St. Vitus's Dance, Convulsions, Heart Trouble, and Nervous Diseases in General.

Ser. No. 32,339. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) DWIGHT C. MITCHELL, Gasport, N. Y. Filed Jan. 21, 1908.

PLAYING THE RACES



Particular description of goods.—A Card Game in Which the Racing of Horses is Simulated.

Ser. No. 32,353. (CLASS 39. CLOTHING.) THE MANSS SHOE MFG. CO., Cincinnati, Ohio. Filed Jan. 21, 1908. Used ten years.

Particular description of goods.—Leather Boots and Shoes.

Ser. No. 32,354. (CLASS 39. CLOTHING.) THE MANSS SHOE MFG CO., Cincinnati, Ohio. Filed Jan. 21, 1908. Used ten years.

KENTUCKY FLAT.

Particular description of goods.—Leather Boots and Shoes.

Ser. No. 32,384. (CLASS 14. METALS AND METAL CASTINGS AND FORGINGS.) KLEWE & CO INC., New Haven, Conn. Filed Jan. 23, 1908.

KLEWCO

Particular description of goods.—Casting Metal.

Ser. No. 32,394. (CLASS 39. CLOTHING.) E. A. MALLORY AND SONS, INCORPORATED, Danbury, Conn. Filed Jan. 23, 1908.

ESTABLISHED 1823 Mallory

E. A. MALLORY & SONS SOLE MAKERS

Particular description of goods.—Felt Hats.

Ser. No. 32,404. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) T. HILL MANSFIELD, Glenridge, N. J. Filed Jan. 24, 1908. Used ten years.



Particular description of goods.—A Remedy for Scalp and Skin Disorders, for Blackheads, Pimples, Sunburn, Chapped Skin, and Face Eruptions, and Eczema, Salt Rheum, Burns, and Inflammation of Mucous Membrane.

Ser. No. 32,409. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) HOME REMEDY COMPANY, Fredonia, N. Y. Filed Jan. 24, 1908.

ALARIA

Particular description of goods.—Medical Preparations for Malaria, Chills, and Malarial Poisoning.

Ser. No. 32,416. (CLASS 48. MALT EXTRACTS AND LIQUORS.) ACME BREWING COMPANY, Macon, Ga. Filed Jan. 24, 1908.

Acme

Particular description of goods.—Non-Intoxicating Malt Beverages.

Ser. No. 32,437. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ROBERT A. SMITH, Pana, Ill. Filed Jan. 25, 1908.



Particular description of goods.—Remedy for Nervous Diseases.

Ser. No. 32,468. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) BACHMANN BROTHERS, Philadelphia, Pa. Filed Jan. 28, 1908.



Particular description of goods.—Hair-Pins.

Ser. No. 32,480. (CLASS 37. PAPER AND STATIONERY.) TOBIAS LIEBMAN & SONS, Philadelphia, Pa. Filed Jan. 29, 1908.



Particular description of goods.—Souvenir Postal Cards.

Ser. No. 32,504. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) JAMES QUIRK, Minneapolis, Minn. Filed Jan. 31, 1908.



Particular description of goods.—Wheat-Flour.

Ser. No. 32,512. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) JOHN LEAVITT, Boston, Mass. Filed Jan. 31, 1908.



Particular description of goods.—Whisky, Brandy, Gin, Rum, Cocktails, and Alcoholic Punch.

Ser. No. 32,517. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) MICHAEL WINEBURGH, New York, N. Y. Filed Feb. 1, 1908.

SPARKLING
Fruito

Particular description of goods.—Carbonated Fruit-Juice.

Ser. No. 32,524. (CLASS 17. TOBACCO PRODUCTS.) ANDREW J. LIVINGSTON, Newport, Ky. Filed Feb. 1, 1908.



Particular description of goods.—Chewing and Smoking Tobacco.

Ser. No. 32,537. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) THE KIOWA COMPANY, Chicago, Ill. Filed Feb. 3, 1908.



Particular description of goods.—Whiskies.

Ser. No. 32,556. (CLASS 37. PAPER AND STATIONERY.) THE COMPENDIUM COMPANY INC., Roanoke, Va. Filed Feb. 4, 1908.

SIMPLEX

Particular description of goods.—Account-Books.

Ser. No. 32,586. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ALBERT M. NEUMAN, Denver, Colo. Filed Feb. 5, 1908.

King of the Turf

Particular description of goods.—Hoof-Oil.

Ser. No. 32,589. (CLASS 14. METALS AND METAL CASTINGS AND FORGINGS.) THE NATIONAL MALLEABLE CASTINGS COMPANY, Cleveland, Ohio. Filed Feb. 5, 1908.



Particular description of goods.—Railway-Car Castings.

Ser. No. 32,593. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) FRANK M. EDWARDS, Portsmouth, Ohio. Filed Feb. 5, 1908.



Particular description of goods.—A Remedy for Diseases of the Liver.

Ser. No. 32,615. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ROTH-HOMEYER COFFEE CO., St. Louis, Mo. Filed Feb. 6, 1908.



Particular description of goods.—Coffee, Tea, Spices, and Flavoring Extracts.

Ser. No. 32,622. (CLASS 10. FERTILIZERS.) VIRGINIA-CAROLINA CHEMICAL COMPANY, Jersey City, N. J.; Richmond and Norfolk, Va.; Charleston, S. C.; Savannah and Atlanta, Ga.; Montgomery, Ala.; Durham, N. C., and Memphis, Tenn. Filed Feb. 7, 1908.



Particular description of goods.—Fertilizers.

Ser. No. 32,631. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) TENNESSEE COFFEE COMPANY, Tennessee, Tenn. Filed Feb. 7, 1908.

THOROUGHBRED LINE



Particular description of goods.—Roasted and Ground Coffee.

Ser. No. 32,632. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) TENNESSEE COFFEE COMPANY, Tennessee, Tenn. Filed Feb. 7, 1908.

BELLE MEADE

Particular description of goods.—Roasted and Ground Coffee.

Ser. No. 32,634. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) TENNESSEE COFFEE COMPANY, Tennessee, Tenn. Filed Feb. 7, 1908.

STATE HOUSE



Particular description of goods.—Roasted and Ground Coffee.

Ser. No. 32,635. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) STANLEY RULE & LEVEL COMPANY, New Britain, Conn. Filed Feb. 7, 1908.

ZIG ZAG

Particular description of goods.—Folding Rules.

Ser. No. 32,636. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) STANLEY RULE & LEVEL COMPANY, New Britain, Conn. Filed Feb. 7, 1908.

ZZ

Particular description of goods.—Folding Rules.

Ser. No. 32,682. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) RIO CHEMICAL CO., New York, N. Y. Filed Feb. 10, 1908. Used ten years.

S. H. KENNEDY'S CONCENTRATED EXTRACT OF
PINUS CANADENSIS.

Particular description of goods.—Mucous Astringent for Internal and External Use.

Ser. No. 32,683. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) RIO CHEMICAL CO., New York, N. Y. Filed Feb. 10, 1908. Used ten years.

S. H. KENNEDY'S
White Pinus Canadensis

Particular description of goods.—Mucous Astringent for Internal and External Use.

Ser. No. 32,703. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) EVALANG CHEMICAL COMPANY, New York, N. Y. Filed Feb. 10, 1908.

HYDRABONA

Particular description of goods.—A Metal-Polish.

Ser. No. 32,753. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) AMERICAN BEET SUGAR CO., New York, N. Y. Filed Feb. 13, 1908. Used ten years.

PACIFIC SUGAR REFINERY

Particular description of goods.—Beet-Sugar.

Ser. No. 32,762. (CLASS 36. MUSICAL INSTRUMENTS AND SUPPLIES.) STANDARD MUSIC ROLL COMPANY, Orange, N. J. Filed Feb. 14, 1908.

ELECTRA

Particular description of goods.—Perforated Music-Rolls.

Ser. No. 32,767. (CLASS 36. MUSICAL INSTRUMENTS AND SUPPLIES.) KOHLER & CAMPBELL, New York, N. Y. Filed Feb. 14, 1908.

J. C. Campbell

Particular description of goods.—Pianos.

Ser. No. 32,771. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) BAY STATE OPTICAL COMPANY, Attleboro, Mass. Filed Feb. 14, 1908.

DEFI

Particular description of goods.—Spectacles, Eyeglasses, and Their Mountings and Parts.

Ser. No. 32,820. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) CLAFLIN MILL & ELEVATOR COMPANY, Claflin, Kans. Filed Feb. 17, 1908.



Particular description of goods.—Wheat-Flour.

Ser. No. 32,872. (CLASS 11. INKS AND INKING MATERIALS.) PEN-CARBON MANIFOLD COMPANY, New Brunswick, N. J. Filed Feb. 19, 1908.

COTTON KING

Particular description of goods.—Carbon-Paper and Type-Writer Ribbons.

Ser. No. 32,874. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) BARCLAY & BARCLAY, New York, N. Y. Filed Feb. 19, 1908.



Particular description of goods.—Soap.

Ser. No. 32,882. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) SAM BLUM, New Orleans, La. Filed Feb. 20, 1908.

MARCA LA REGINA

Particular description of goods.—Spaghetti and Macaroni.

Ser. No. 32,884. (CLASS 1. RAW OR PARTY-PREPARED MATERIALS.) PITTSBURG-BUFFALO COMPANY, Pittsburg, Pa. Filed Feb. 20, 1908.

HAZEL PERLES.

Particular description of goods.—Coal.

Ser. No. 32,891. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) NATIONAL STARCH COMPANY, Jersey City, N. J. Filed Feb. 20, 1908. Used ten years.

OTTUMWA

Particular description of goods.—Corn-Starch.

Ser. No. 32,898. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) NEW YORK GLUCOSE COMPANY, Jersey City, N. J., and New York, N. Y. Filed Feb. 20, 1908.

ROYAL

Particular description of goods.—Corn-Starch.

Ser. No. 32,917. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) CORN PRODUCTS REFINING COMPANY, Jersey City, N. J., and New York, N. Y. Filed Feb. 21, 1908.

ROYAL

Particular description of goods.—Grape-Sugar.

TRADE-MARKS

REGISTERED MARCH 24, 1908.

68,284. COAL. BERWIND WHITE COAL MINING COMPANY, Philadelphia, Pa.
Filed December 3, 1906. Serial No. 23,716. PUBLISHED JANUARY 21, 1908.

68,285. CERTAIN FIREARMS AND PARTS THEREOF. THE BIRMINGHAM SMALL ARMS CO., LIMITED, Small Heath, near Birmingham, England.
Filed November 9, 1907. Serial No. 31,098. PUBLISHED JANUARY 21, 1908.

68,286. WINES. CARMEL WINE COMPANY, New York, N. Y.
Filed November 7, 1907. Serial No. 31,049. PUBLISHED JANUARY 21, 1908.

68,287. WINES. CARMEL WINE COMPANY, New York, N. Y.
Filed November 7, 1907. Serial No. 31,050. PUBLISHED JANUARY 21, 1908.

68,288. WINES. CARMEL WINE COMPANY, New York, N. Y.
Filed November 7, 1907. Serial No. 31,052. PUBLISHED JANUARY 21, 1908.

68,289. RUBBER SUBSTITUTE. CORN PRODUCTS REFINING COMPANY, Jersey City, N. J., and New York, N. Y.
Filed November 26, 1907. Serial No. 31,372. PUBLISHED JANUARY 21, 1908.

68,290. CANARY BIRDS. CUGLEY & MULLEN, Philadelphia, Pa.
Filed November 29, 1907. Serial No. 31,444. PUBLISHED JANUARY 21 1908.

68,291. SAFETY-PAPER. GEORGE LA MONTE & SON, Nutley, N. J., and New York, N. Y.
Filed February 26, 1906. Serial No. 17,343. PUBLISHED OCTOBER 22, 1907.

68,292. TYPE-WRITING MACHINES AND PARTS THEREOF. UNDERWOOD TYPEWRITER COMPANY, New York, N. Y.
Filed December 9, 1907. Serial No. 31,621. PUBLISHED JANUARY 21, 1908.

68,293. ALIMENTARY PREPARATION FOR INFANTS AND INVALIDS. CHASSAING & CIE., Paris, France.
Filed November 30, 1907. Serial No. 31,491. PUBLISHED JANUARY 21, 1908.

68,294. SUGAR-CANE SYRUP AND MOLASSES. FLORIDA-GEORGIA SYRUP CO., Jacksonville, Fla.
Filed November 27, 1907. Serial No. 31,397. PUBLISHED JANUARY 21, 1908.

68,295. BLENDED PURE CORN AND CANE SYRUP AND MOLASSES. FLORIDA-GEORGIA SYRUP CO., Jacksonville, Fla.
Filed November 30, 1907. Serial No. 31,486. PUBLISHED JANUARY 21, 1908.

68,296. FOOT-POWDER AND REMEDIES FOR CORNS. WALTER K. PEEK, New York, N. Y.
Filed October 25, 1907. Serial No. 30,787. PUBLISHED JANUARY 21, 1908.

68,297. CERTAIN CHEMICALS. ALOIS VON ISAKOVICS, Monticello, N. Y.
Filed November 18, 1907. Serial No. 31,225. PUBLISHED JANUARY 21, 1908.

68,298. CERTAIN CHEMICALS. ALOIS VON ISAKOVICS, Monticello, N. Y.
Filed November 18, 1907. Serial No. 31,226. PUBLISHED JANUARY 21, 1908.

68,299. COGNAC AND CORDIALS. CARMEL WINE COMPANY, New York, N. Y.
Filed November 7, 1907. Serial No. 31,043. PUBLISHED JANUARY 21, 1908.

68,300. COGNAC AND CORDIALS. CARMEL WINE COMPANY, New York, N. Y.
Filed November 27, 1907. Serial No. 31,398. PUBLISHED JANUARY 21, 1908.

68,301. MINERAL WATER. COLD SPRING MINERAL WATER CO., Cold Spring, Minn.
Filed December 7, 1906. Serial No. 23,854. PUBLISHED JANUARY 21, 1908.

68,302. LUBRICATING-OILS AND LUBRICATING-GREASES. COOK & COKEFAIR, New York, N. Y.
Filed August 31, 1907. Serial No. 29,708. PUBLISHED JANUARY 21, 1908.

68,303. FRUIT SYRUPS. GIUSEPPE FINORA, San Francisco, Cal.
Filed December 3, 1907. Serial No. 31,517. PUBLISHED JANUARY 21, 1908.

68,304. CANDY. G. S. FEENY CO., Wheeling, W. Va.
Filed November 26, 1907. Serial No. 31,374. PUBLISHED JANUARY 21, 1908.

68,305. COTTON PIECE GOODS. GRINNELL WILLIS & CO., New York, N. Y.
Filed November 29, 1907. Serial No. 31,416. PUBLISHED JANUARY 21, 1908.

68,306. COTTON PIECE GOODS. GRINNELL WILLIS & CO., New York, N. Y.
Filed November 29, 1907. Serial No. 31,417. PUBLISHED JANUARY 21, 1908.

68,307. COTTON PIECE GOODS. GRINNELL WILLIS & CO., New York, N. Y.
Filed November 29, 1907. Serial No. 31,418. PUBLISHED JANUARY 21, 1908.

68,308. COTTON PIECE GOODS. GRINNELL WILLIS & CO., New York, N. Y.
Filed November 29, 1907. Serial No. 31,420. PUBLISHED JANUARY 21, 1908.

68,309. SOAP. INTERNATIONAL CHEMICAL CO., Los Angeles, Cal.
Filed December 3, 1907. Serial No. 31,521. PUBLISHED JANUARY 21, 1908.

68,310. WHISKY. JAMES BUCHANAN & COMPANY LIMITED. London, England.
Filed November 23, 1907. Serial No. 31,313. PUBLISHED JANUARY 21, 1908.

68,311. ARTIFICIAL SALINE LAXATIVE. MILLER BROS., New York, N. Y.
Filed December 10, 1907. Serial No. 31,644. PUBLISHED JANUARY 21, 1908.

68,312. LEATHER BOOTS AND SHOES. MONROE BROS. & CO., Philadelphia, Pa.
Filed November 29, 1907. Serial No. 31,440. PUBLISHED JANUARY 21, 1908.

68,313. GRAPE-JUICE. PAW PAW GRAPE JUICE CO. LTD., Paw Paw, Mich.
Filed November 26, 1907. Serial No. 31,378. PUBLISHED JANUARY 21, 1908.

68,314. SHEETINGS AND DRILLINGS. PICKENS MILL, Pickens, S. C.
Filed November 15, 1907. Serial No. 31,186. PUBLISHED JANUARY 21, 1908.

68,315. SHEETINGS AND DRILLINGS. PIEDMONT MFG. Co., Piedmont, S. C.
Filed November 14, 1907. Serial No. 31,167. PUBLISHED JANUARY 21, 1908.

68,316. PORCELAIN DISHES AND UTENSILS FOR HOUSEHOLD USE. PORZELLANFABRIK PH. ROSENTHAL & Co. AKTIENGESELLSCHAFT, Selb, Bavaria, Germany.
Filed April 27, 1907. Serial No. 26,989. PUBLISHED JANUARY 21, 1908.

68,317. KNITTED WAISTS. JOHN F. QUINN, Cohoes, N. Y.
Filed October 5, 1907. Serial No. 30,441. PUBLISHED JANUARY 21, 1908.

68,318. SILK BOLTING-CLOTH. SCHWEIZERISCHE SEIDENGAZEFABRIK A. G., Zurich, Switzerland.
Filed November 29, 1907. Serial No. 31,455. PUBLISHED JANUARY 21, 1908.

68,319. LAWNS. STRAWBRIDGE & CLOTHIER, Philadelphia, Pa.
Filed December 4, 1907. Serial No. 31,569. PUBLISHED JANUARY 21, 1908.

68,320. INCUBATORS AND BROODERS. UNITED INCUBATOR AND POULTRY SUPPLY MANUFACTURING COMPANY, New York, N. Y., and Boundbrook, N. J.
Filed November 26, 1907. Serial No. 31,385. PUBLISHED JANUARY 21, 1908.

LABELS

REGISTERED MARCH 24, 1908.

14,100.—*Title:* "SHACKELFORD." (For Cigars.) SCHMIDT & Co., New York, N. Y. Filed February 19, 1908.

14,101.—*Title:* "TOWN AND COUNTRY, REAL TURKISH CIGARETTES." (For Cigarettes.) WM. A. STICKNEY CIGAR COMPANY, St. Louis, Mo. Filed February 20, 1908.

14,102.—*Title:* "R AND R." (For a Liquor.) CHAS. JACQUIN ET CIE., INC., New York, N. Y. Filed February 21, 1908.

14,103.—*Title:* "APRICOT CORDIAL." (For a Liqueur.) CHAS. JACQUIN ET CIE., INC., New York, N. Y. Filed February 21, 1908.

14,104.—*Title:* "CREME DE CACAO." (For a Liqueur.) CHAS. JACQUIN ET CIE., INC., New York, N. Y. Filed February 21, 1908.

14,105.—*Title:* "COCA GINGER." (For a Non-Alcoholic Beverage.) ALBERT DAVID LEWIS, Atlanta, Ga. Filed February 21, 1908.

14,106.—*Title:* "THE ORIGINAL BERMUDA MILK PUNCH." (For a Milk-Punch.) F. H. TUCKER & Co., Providence, R. I. Filed February 1, 1908.

14,107.—*Title:* "SUM-MO." (For Cane-Syrup and Glucose.) COLUMBIA COFFEE MILLS, LTD., New Orleans, La. Filed February 19, 1908.

14,108.—*Title:* "CHARCOAL CHEWING GUM." (For Charcoal Chewing-Gum.) JOHN L. MESSER, Pittsburg, Pa. Filed February 20, 1908.

14,109.—*Title:* "JAP-A-ICE." (For an Ointment.) ROY REAMES, Kansas City, Mo. Filed February 10, 1908.

14,110.—*Title:* "FOOD LAXATIVE." (For a Medical Preparation.) THE LAXATIVE FOOD COMPANY, Marion, Ind. Filed February 19, 1908.

14,111.—*Title:* "AMERICAN." (For Pads and Inks.) JOSEPH H. BEARNS, JR., & Co., New York, N. Y. Filed February 19, 1908.

14,112.—*Title:* "BRAID FILET LACE." (For Embroidered Lace.) THE KURSHEEDT MANUF'G. Co., New York, N. Y. Filed December 14, 1907.

14,113.—*Title:* "SHAMAR EMBROIDERY." (For Embroidered Lace.) THE KURSHEEDT MANUF'G. Co., New York, N. Y. Filed December 14, 1907.

PRINTS

REGISTERED MARCH 24, 1908.

(None.)

DECISIONS

OF THE

COMMISSIONER OF PATENTS

AND OF

UNITED STATES COURTS IN PATENT CASES.

COMMISSIONER'S DECISIONS.

EX PARTE GALLY.

APPLICATION FOR PATENT.

Decided March 9, 1908.

1. ABANDONMENT OF APPLICATION—RESPONSIVENESS OF ACTION—REINSERTION OF CLAIMS AFTER ELECTION.

An amendment which is otherwise responsive to an action by the Office is not rendered unresponsive by reason of the fact that it includes a claim to an independent invention, claims for which were previously canceled upon requirement for division. In such cases the Examiner should require the cancelation of such claim on the ground that it covers an invention different from that originally elected, and the amendment should otherwise receive action as though such claim were not present.

2. PRACTICE—AMENDMENT—REINSERTING CLAIMS TO AN INDEPENDENT INVENTION AFTER ELECTION.

Where an applicant cancels claims to an independent invention upon requirement for division and just within the year allowed by law for action responds to a rejection by amending the rejected claims and adding a series of new claims, one of which is drawn to the independent invention, the amendment should be entered and a requirement should be made that the reinserted claim be canceled on the ground that applicant was bound by his original election, and at the same time action should be given on the merits of the claims of the invention elected.

ON PETITION.

PNEUMATIC AND SELF-PLAYING MUSICAL APPARATUS.

Mr. Robert A. Gally pro se.

MOORE, *Commissioner:*

This is a petition seeking the reversal of the decision of the Primary Examiner holding an application to have become abandoned through lack of proper prosecution. The question at issue relates to the sufficiency of the amendment filed within the year allowed by law for action.

The application relates to pneumatic self-playing musical apparatus and as originally filed contained claims to several different inventions. Division was required, and after considerable correspondence between applicant and the Examiner the requirement of division was avoided by the cancelation of claims to certain of the independent inventions and by the amendment of other claims. The application was then placed in interference, after the termination of which the prosecution of the case was resumed. On January 20, 1906, some of the claims in the case were rejected and certain inquiries made. Within a year following this rejection an unresponsive letter was filed, to which the Examiner replied, calling attention to the fact that such action was not responsive and would not operate to save the case from abandonment at the expiration of the year allowed for action, which began to run from January 20, 1906.

On January 19, 1907, an amendment was filed amending the rejected claims and adding sixty-one new claims, one of which was directed to one of the independent inventions the claims of which had been previously canceled in response to the requirement for division. The Examiner took the position that this action was not a proper response to the action of January 20, 1906, refused to enter the amendment, and held the application to have become abandoned. The Examiner regarded the action as unresponsive because—

as regards the possibility of action on the merits the case stands in exactly the same position as when it was originally filed.

Aside from the reintroduction of the claims previously canceled from the case the action by applicant of January 19, 1907, appears to be a responsive action, and it is not understood that the Examiner has held otherwise. Having otherwise made a responsive action, does the attempt to reinsert such claims to a different invention make the action as a whole unresponsive? It is now the practice where an applicant has complied with a requirement for division and subsequently attempts to reinsert the claims of the invention eliminated from the case to enter the amendment and require the cancelation of such claims. This practice is founded upon the decision of the Supreme Court in the case of *Steinmetz* v. *Allen*, (109 O. G., 549,) which makes the question of independence of inventions a question of merits to be considered on appeal by the Examiners-in-Chief in the first instance. It is believed that such practice should be followed in this case.

The Examiner's answer to this petition points out that the action of January 19, 1907, instead of advancing the prosecution of the case placed it in the same condition that it was when filed. No reason is seen, however, why an action of this kind should stop the further prosecution of the case. Where the applicant has made his election upon requirement for division, he is bound thereby. For this reason where claims which have been canceled upon requirement for division are reinserted the fact that they relate to an invention different from that elected is a sufficient ground for refusing their allowance in such application. At the same time the claims to the invention elected may be treated as though they stood alone—rejected or allowed, as the state of the art seems to warrant. No action on the

merits of the reinserted claims, however, need be given. In this way all questions as to the merits of the claims elected and as to the independence of the inventions covered by the original and reinserted claims may be determined by the Examiners-in-Chief upon one appeal. Such a practice will bring to a speedy conclusion all those cases in which the decision of the Primary Examiner upon the independence of the inventions is found by the Examiners-in-Chief to be correct and will not in the least prolong the prosecution of those cases in which the decision of the Examiner is reversed. In the latter event action on the merits of the reinserted claims will be given when the case is returned from the Examiners-in-Chief.

The circumstances of this case are similar to those of *ex parte Scott*, (100 O. G., 681; 1902, C. D., 258,) which was rendered prior to the decision of the United States Supreme Court in the case of *Steinmetz* v. *Allen*, *supra*, changing the practice on the question of division. The practice laid down in the case of *ex parte Scott*, *supra*, is believed to be proper, and it has been followed in this case except in so far as it was necessary to modify it to meet the views expressed by the Supreme Court in the decision to which reference is above made.

The petition is granted.

FLOYD *v.* ROHLFING.

PATENT INTERFERENCE.

Decided March 14, 1908.

1. INTERFERENCE—PRELIMINARY STATEMENT—AMENDMENT AFTER TESTIMONY TAKEN.

Where a party in preparing a preliminary statement recollects having had a conversation in which the invention in issue was discussed and writes a letter addressed to the party with whom the conversation was had to find out whether the invention was disclosed to him at that time, but gets no reply, and does nothing further with respect thereto, and it does not appear whether the letter was returned or whether it even had a return card on it, or that applicant endeavored to find out through mutual friends of such party's whereabouts, *Held* that such party was negligent and that he was not entitled to amend his preliminary statement after testimony was taken carrying his date of disclosure back to the date of such conversation on the plea of poverty, applicant having failed to take the steps within his means to secure the information sought.

2. SAME—MOTION TO AMEND PRELIMINARY STATEMENT—DELAY IN BRINGING.

A motion to amend a preliminary statement should be brought promptly after the discovery of the facts on which the motion is based, and delay in bringing the motion is a sufficient ground for denying it.

3. SAME—SAME—BASED ON TESTIMONY—DEFINITENESS.

Where a motion to amend a preliminary statement is based upon testimony taken in the case, it is indefinite if it fails to point out the particular parts of the testimony upon which reliance is placed.

4. SAME—PRELIMINARY STATEMENT—AMENDMENT TO CARRY BACK DATE OF DISCLOSURE.

Since the rule regarding the allegations of preliminary statements requires a specific statement as to disclosure as well as to conception of the invention, a party may not amend his statement by carrying back the date alleged for disclosure to the date alleged for conception on the theory that disclosure is merely evidence of conception.

APPEAL on motion.

RAILWAY-TRUCK.

Messrs. Offield, Towle, & Linthicum and *Messrs. Bacon & Milans* for Floyd.

Messrs. Sheridan & Wilkinson for Rohlfing.

MOORE, *Commissioner:*

This is an appeal by Rohlfing from a decision of the Examiner of Interferences denying a motion by appellant to amend his preliminary statement.

The original preliminary statement alleged June 15, 1905, as the date of conception, and June 15, 1906, as the date of disclosure of the invention to others. The proposed preliminary statement carries back the date of disclosure to June 15, 1905.

The moving party, Rohlfing, is the senior party. During the taking of his testimony one of the witnesses, one Kirby Whitman, testified that appellant disclosed the invention to him more than a year prior to the date of disclosure alleged in the original preliminary statement. Thereupon appellant gave notice on the record that either before or at final hearing he would bring a motion to amend his preliminary statement.

The reasons for failure to allege the earlier date in the original statement appear alone from the testimony taken on behalf of appellant in the interference proceeding. Appellant states in his testimony that:

> I remembered of having spoken about the idea to Mr. Kirby Whitman while in Alliance, and wrote to him asking whether he remembered our conversation at the time. I received no reply, and it left me with the idea that probably I had not said anything to him about it, although I distinctly remember a conversation with Mr. Whitman about—

the invention in issue. (Rohlfing, Q. 23.)

Since appellant at the time of making the original preliminary statement remembered having had a conversation with witness Whitman with respect to the invention, the well-established doctrine of diligence in the preparation of preliminary statements requires that he should have ascertained from Whitman what was disclosed to him, and before his failure to determine this matter prior to the execution of the original statement can be excused a very satisfactory explanation of his inability to communicate with the witness at that time must be given.

The only excuse offered is that of poverty. It is urged that in sending a letter to the witness appellant did all that should be expected of him under the circumstances and that he was financially unable to make a trip from St. Louis to Alliance, where the witness lived, to secure the information sought. On this point it appears from the testimony that appellant was not in good financial circumstances at the time his statement was prepared; but it is believed that he did not take the steps which were then within his means. There is no evidence that anything whatever was done except to send the letter to Whitman referred to in the above answer, no response to which appears to have been received. It does not appear that the letter was returned to appellant or that he even took the precaution to place his return card upon the letter to insure its return to him in case of non-delivery. Appellant, had he been exercising proper diligence, could have sent a registered letter, by means of which he would have been advised whether his inquiry had reached its proper destination. Moreover, it appears that appellant had friends in the city where the witness resided, and it does not appear that he tried to locate the witness through such channels. In view of these facts the conduct of appellant in the preparation of his preliminary statement indicates carelessness and lack of diligence, and it is believed that the Examiner of Interferences properly refused to permit him to change the dates alleged therein.

Moreover, the claim of poverty has not been satisfactorily established. Some one is furnishing means to prosecute this interference at this time, and it has not been shown that the parties who are interested in the interference now were not interested at the time the original statement was prepared. Appellant testifies that the invention involved in the issue has not been assigned and that he does not know who is paying the expenses of the proceedings. When asked if any agreement with respect to the invention had been made, he stated that he had tried to come to an agreement with the chief mechanical engineer of the American Foundry Company, with whom he took the matter up about May or June, 1907. The original statement was not executed until August 27, 1907, about three months thereafter. This testimony tends to indicate that the parties who are now interested in this case were interested at that time, and hence the plea of poverty is not borne out by the evidence upon which reliance is placed.

It is to be noted also that after the discovery by appellant of the facts on which the motion is based a delay of practically a month occurred before the motion was brought. It is generally necessary to proceed with the utmost diligence when it is desired to amend a preliminary statement, and no reason is seen for relaxing the rule in this case, for had the motion been brought promptly it might have been determined before the taking of appellee's rebuttal testimony. The failure to move promptly furnishes an additional reason for denying the motion.

The motion was not accompanied by the usual verified showing, reliance being placed entirely upon the testimony taken in the case to justify the admission of the amendment. The Examiner of Interferences stated in his decision that the motion was indefinite, because the opposing party was not notified of the grounds on which the motion was based; but he waived this objection and considered the motion on its merits in the absence of any authority which required the moving party in such case to point out the particular portions of the testimony he intended to rely upon. It is believed that the Examiner's objection was well taken, and he would have been justified in refusing consideration to the motion in its present form.

The point is also made by appellant that inasmuch as the original statement alleged June 15, 1905, as the date of conception appellee—

> has not been taken at any disadvantage in the matter of presenting his testimony, for the reason that he had warning from the start that Rohlfing (appellant) intended to prove conception on June 15, 1905, the date of disclosure which he now desires to insert in his preliminary statement.

It is further said that disclosure to others is not a part of the inventive act, but only evidence of conception. As to the latter point, all that need be said is, whether disclosure is a question of evidence or not, the rule requires a specific statement on this point, and it is believed that parties should be held as strictly to their original statements upon this matter as upon any other. As to the first point, it may be that appellee took his testimony on the theory that conception could not well be shown prior to any disclosure. In such case a change in the date of such disclosure might very materially affect his attitude with respect to the character of the proofs to be adduced.

The decision of the Examiner of Interferences is affirmed.

GOLD *v.* GOLD.

PATENT INTERFERENCE.

Decided February 28, 1908.

INTERFERENCE—TESTIMONY—SURREBUTTAL.

The junior party took testimony as to priority, but did not attack the operativeness of the senior party's device. The senior party took the testimony of two witnesses to show that the device shown in Figure 3 of his application was operative, and certain exhibits were introduced, which one of the witnesses testified were tested by him. In rebuttal the junior party offered expert testimony to show certain structural differences between the exhibits and the invention disclosed in the senior party's application. *Held* that such testimony afforded no ground for allowing the senior party to take surrebuttal testimony.

APPEAL on motion.

HOSE-COUPLING.

Messrs. Arthur C. Fraser & Co. for Edward E. Gold.

Messrs. Raymond & Barnett for Egbert H. Gold.

BILLINGS, *Assistant Commissioner:*

This is an appeal by E. H. Gold, the senior party, from the decision of the Examiner of Interferences denying the motion for leave to take surrebuttal testimony. It appears from the record of the case that during the *ex parte* prosecution of E. H. Gold's application claims corresponding to the counts in issue were rejected upon the ground that the drawings did not show an arrangement which would operatively effect the function of the claims. Upon appeal to the Examiners-in-Chief, however, this holding of the Examiner was overruled and the claims were allowed.

After the declaration of the interference E. E. Gold, the junior party, moved to dissolve the interference upon the ground, *inter alia*, that E. H. Gold had no right to make the claims. This ground of the motion was predicated upon the questions which had been considered by the Examiners-in-Chief on *ex parte* appeal and was denied by the Examiner in view of their decision.

It appears that the *prima facie* testimony taken on the part of E. E. Gold, the junior party, related to the question of priority only and did not attack the operativeness of the senior party's disclosures or his right to make the claims in issue. The senior party, however, apparently anticipating that an attack on the operativeness of his device might be made at the final hearing, took the testimony of two witnesses, Jennings and Roth, for the purpose of showing that the device disclosed in Fig. 3 of his application and involved in this interference was operative. Certain exhibits were introduced, and Jennings testifies that the exhibit devices were successfully tested by him. He also made a sketch in evidence for the purpose of showing the conditions under which the tests were made.

In rebuttal E. E. Gold offered the expert testimony of one Freeman, purporting to show certain structural differences between the exhibits introduced in Jennings's testimony and the invention disclosed in E. H. Gold's application; also, that these exhibit devices were

tested under conditions which did not ordinarily obtain in practice. Certain mathematical deductions were also introduced to show that the practical operativeness of the device was impossible.

It was contended in behalf of E. H. Gold that Freeman's testimony is in the nature of new matter in avoidance but not in denial of the testimony of Jennings and Roth and that opportunity should be given to him to present evidence controverting the statement of this witness. This contention is not well founded.

By his introduction of testimony relative to the operativeness of the device E. H. Gold, in effect, challenged the production of testimony to the contrary upon the part of his adversary. The testimony of Freeman, it is believed, is strictly rebuttal testimony, and there is no showing of reasons why this testimony is in the nature of a surprise or that it is new evidence. Inasmuch as E. H. Gold recognized that the operativeness of his device would be likely to be attacked and offered testimony to show that his device was operative, it would seem that reasonable prudence should have induced him to present all the testimony necessary to establish the successful operativeness of the device at that time. Exhibits were presented in support of this position, and it was the duty of E. H. Gold to anticipate and guard against all ordinary attacks upon the same. No reason therefore appears for granting him leave to take surrebuttal testimony in this case.

The decision of the Examiner of Interferences is affirmed.

G. W. COLE CO. *v.* MARSHALL OIL CO.

OPPOSITION.

Decided February 29, 1908.

1. TRADE-MARKS—OPPOSITION—RESEMBLANCE OF MARKS.

Applicant's mark consists of the representation of two hands above the figure "5" and the words "To One" associated therewith. The mark of the opposer consists of the numeral "1" with the numeral "3" and the word "In" contained within the numeral "1" and the words "Three in One" associated therewith. *Held* that these marks do not so resemble each other that purchasers would be likely to be deceived thereby.

2. SAME—SAME—ACTUAL CONFUSION.

Where the marks of the opposer and the applicant do not so nearly resemble each other that it is apparent that confusion in trade would be likely to arise from their use, registration of applicant's mark will not be refused in the absence of proof that confusion has taken place.

APPEAL from Examiner of Interferences.

TRADE-MARK FOR GUN-OIL.

Messrs. Steuart & Steuart for G. W. Cole Company.

Mr. Fred Gerlach for Marshall Oil Company.

BILLINGS, *Assistant Commissioner:*

This is an appeal by the G. W. Cole Company from a decision of the Examiner of Interferences dismissing its opposition to the registration by the Marshall Oil Company of a trade-mark for oil consisting of the representation of two hands above a figure "5" and the words "To One" associated therewith.

The opposition is based on the ground that this mark so nearly resembles a mark owned and used by the opposer and applied to the same class of goods that the use of the two marks would cause confusion in trade and deceive purchasers.

The mark used by the opposer, as appears from the testimony and from certain certificates of registration, consists of the numeral "1" having the numeral "3" and the word "In" contained within the numeral "1" and the words "Three in One" associated therewith.

The testimony shows that the G. W. Cole Company, the opposer, has used its mark since 1894 and that the Marshall Oil Company, the applicant, has used its mark since 1904.

The only question to be considered, therefore, is whether there is such a resemblance between the marks that purchasers are likely to be deceived, since if there is, registration must be refused in view of the opposer's prior use.

The Examiner of Interferences held that the marks did not so resemble each other in appearance, sound, or significance and pointed out that there was no testimony that actual confusion had taken place.

It is evident from an inspection of the marks that they do not so nearly resemble each other in appearance that confusion would be likely to arise from their use. It is argued by the opposer that he is entitled to use his mark in the form of the numeral "3" with the "In" and the numeral "1" placed in the lower curve of the "3," in which case the resemblance between the marks would be quite close. In both of the certificates of registration of the opposer, however, it is stated that the numeral "3" is placed within the numeral "1," and there is no proof that it was ever used in any other manner.

There is a greater similarity in the sound of the spoken words "Three in One" and "Five to One" than there is in the appearance of the marks; but even here it is not believed that the similarity is such as to justify a refusal to register the applicant's mark in the absence of proof of actual confusion in trade. It is well settled that in cases where the marks are so alike that it is evident confusion is likely to arise it is not necessary for the opposer to prove actual confusion in order to prevent the applicant's registration. This, however, is not such a case. As pointed out above, there is a decided difference in the appearance of the marks, and while the difference between the sounds of the spoken words is less it is nevertheless a substantial one.

If confusion had arisen, it would apparently not have been very difficult to establish that fact. The record shows that the opposer's attention was called to applicant's use of the mark very soon after such use commenced; but the president of the G. W. Cole Company, the opposer, admits that he did not know of a single instance in which the oil of the Marshall Oil Company had been substituted for that of the opposer.

Furthermore, it appears from the record that on February 28, 1905, the attorneys for the G. W. Cole Company notified the Marshall Oil Company that the mark was considered to be an infringement of the "Three in One" mark and threatened to bring suit if such infringing use was not discontinued. It appears from the testimony on behalf of the Marshall Oil Company that no such suit was ever brought.

The decision of the Examiner of Interferences dismissing the opposition and holding that applicant is entitled to register its mark is affirmed.

DECISIONS OF THE U. S. COURTS.

Court of Appeals of the District of Columbia.

E. MCILHENNY'S SON *v.* NEW IBERIA EXTRACT OF TABASCO PEPPER COMPANY, LIMITED.

Decided February 4, 1908.

1. TRADE-MARKS—CANCELATION—PLEADING—SUFFICIENCY OF PETITION.

As the statute providing for the cancelation of registered trade-marks (act of Feb. 20, 1905, sec. 26, 33 Stat. L.) does not contemplate that any one may petition the Commissioner to cancel a trade-mark regularly registered, but it does provide that any one who "shall deem himself injured" may do so, the petition for cancelation must contain a statement of fact on this jurisdictional question sufficiently full to show that the petitioner has been injured by the registration, and this fact must not be left to conjecture, but must affirmatively appear, and where such a statement of fact is lacking the petition is demurrable.

2. SAME—SAME—SAME.

An averment in a petition for the cancelation of the registered trade-mark "Tabasco" for pepper-sauce that petitioner has used such trade-mark is not sufficient, for the reason that unless the word has been used in the same business no injury contemplated by the statute would have followed.

3. SAME—SAME—SAME—SAME.

In a petition for the cancelation of a registered trade-mark a general averment that the registration "has been much to the prejudice, damage, and loss" of the petitioner unsupported by averments of facts is merely the conclusion of the pleader and is not a sufficient averment of damage to give petitioner a standing in a cancelation proceeding.

Mr. Melville Church and *Mr. J. B. Church* for the appellant.

Mr. C. S. Walton for the appellee.

ROBB, *J.:*

This is an appeal from a decision of the Commissioner of Patents overruling a general demurrer filed by appellant to a petition filed by appellee for the cancelation of the word "Tabasco," which appellant had registered in the Patent Office as a trade-mark for pepper-sauce.

The petition demurred to was filed under the provisions of section 13 of the act of February 20, 1905, (33 St. at L., pt. 1, 742,) which reads as follows:

That whenever any person shall deem himself injured by the registration of a trade-mark in the Patent Office he may at any time apply to the Commissioner of Patents to cancel the registration thereof. The Commissioner shall refer such application to the Examiner in charge of interferences, who is empowered to hear and determine this question, and who shall give notice thereof to the registrant. If it appear after a hearing before the Examiner that the registrant was not entitled to the use of the mark at the date of his application for registration thereof, or that the mark is not used by the registrant, or has been abandoned, and the Examiner shall so decide, the Commissioner shall cancel the registration. Appeal may be taken to the Commissioner in person from the decision of Examiner of Interferences.

The only averments found in the petition as to the right of the petitioner to apply for a cancelation of the trade-mark are contained in the fifth and sixth paragraphs, and read as follows:

5. That the corporation of your petitioner, as well as others, had used the word "Tabasco" as a trade-mark in trading throughout the United States and with foreign nations generally for several years prior to the registration of this mark.

6. The registration of said word "Tabasco" as a trade-mark by the firm of E. McIlhenny's Son has been much to the prejudice, damage and loss of your petitioner and his corporation, organized under the laws of Louisiana.

Subsequently certain affidavits were filed by the petitioner, in which its interests more fully appear, but these affidavits were not referred to in the petition, and, of course, form no part thereof; (*Robinson Tobacco Co.* v. *Phillips*, In Equity, 20 Blatch., U. S., 569; *Hiatt* v. *Goblt*, 18 Ind., 494; *Howard Co.* v. *Water Lot Co.*, 53 Ga., 689; *Statham* v. *Life Insurance Co.*, 45 Miss., 581; *Moses & Co.* v. *Brodie*, 1 Tenn. Ch., 397; 8 *Enc. Pl. & Pr.*, p. 740.)

Pursuant to the authority vested in him by section 26 of said act of February 20, 1905, the Commissioner in notifying appellant of the filing of said petition for cancelation, said:

The practice of the United States equity courts should be followed in pleadings.

The right of the petitioner to intervene was dependent upon a showing of interest. The statute does not contemplate that any one may petition the Commissioner to cancel a trade-mark regularly registered, but it does provide that any one who "shall deem himself injured" may do so. The petition, therefore, must contain a statement of fact on this jurisdictional question sufficiently full to show that the petitioner has been injured by the registry of the mark he seeks to have canceled, and this fact must not be left to conjecture but must affirmatively appear. As was said by Mr. Justice Story, in *Harrison* v. *Nixon*, (9 Peters, 503):

Every bill must contain in itself sufficient matters of fact, *per se*, to maintain the case of the plaintiff; so that the same may be put in issue by the answer, and established by the proofs. The proofs must be according to the allegations of the parties; and if the proofs go to matters not within the allegations, the court cannot judicially act upon them as a ground for its decision, for the pleadings do not put them in contestation. The *allegata* and the *probata* must reciprocally meet to conform to each other.

The petition of the appellee does not contain an averment that it had used the word "Tabasco" as a trade-mark for pepper-sauce. The averment that it had used the word as a trade-mark is not sufficient for the obvious reason that unless the word had been used in the same business as that in which it was used by appellant, no injury contemplated by the statute would have resulted, and no right to intervene would have followed. The averment in the sixth paragraph of the petition is merely a conclusion of the pleader unsupported by the facts previously set out. Such an allegation is not sufficient; (*St. Louis Ry. Co.* v. *Johnson*, 133 U. S., 577; *Story on Equity Pl.*, sec. 257.)

The demurrer should have been sustained, and the decision of the Commissioner of Patents is, therefore, reversed. The clerk of the court will certify this opinion, and the proceedings of the court in the premises to the Commissioner of Patents according to law. Reversed.

Interference Notices.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., March 5, 1908.

William E. Woodyear, his assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of The Northwestern Elevator & Mill Company, of Mount Vernon, Ohio, for registration of a trade-mark and a trade-mark registered to William E. Woodyear, of 304 Spears Wharf, Baltimore, Md., and the notice of said declaration sent by the Patent Office by registered mail to the said William E. Woodyear and also the notice sent to his attorney of record in the usual manner having been returned undelivered, notice is hereby given to the said William E. Woodyear, his assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents in order that the notices of declaration heretofore sent by and returned to the Office may be forwarded to them.

This notice will be published [in the OFFICIAL GAZETTE for

six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will be proceeded with as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., March 4, 1908.

Frank Mellersh, his assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of William O. Frailey, of East King and Shippen streets, Lancaster, Pa., for registration of a trade-mark and a trade-mark registered to Frank Mellersh, of 130 West Thirty-fourth street, New York, N. Y., and the notice of said declaration sent by the Patent Office by registered mail to the said Frank Mellersh, as well as the copy mailed in the usual way to his attorney of record, having been returned undelivered, notice is hereby given to the said Frank Mellersh, his assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents in order that the notices of declaration heretofore sent by and returned to the Office may be forwarded to them.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will be proceeded with as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., February 24, 1908.

A. E. Jeaneret, his assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of The Matchless Metal Polish Company, of 65-69 Frankfort street, New York, N. Y., and 28 South Market street, Chicago, Ill., for registration of a trade-mark, a trade-mark registered to this company, and a trade-mark registered to A. E. Jeaneret, of Boston, Mass., and the notice of said declaration sent by the Patent Office by registered mail to the said A. E. Jeaneret having been returned undelivered, notice is hereby given to the said A. E. Jeaneret, his assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents in order that the notice of declaration heretofore sent by and returned to the Office may be forwarded to them.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will be proceeded with as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., February 17, 1908.

Jacob Baiz, his assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of The German-American Coffee Company, of 426 Greenwich street, New York, N. Y., for registration of a trade-mark and a trade-mark registered to Jacob Baiz, of 102 Front street, New York, N. Y., and the notice of said declaration sent by registered mail to the said Jacob Baiz having been returned undelivered, notice is hereby given to the said Jacob Baiz, his assigns or legal representatives, that if he or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents in order that the notices of declaration heretofore sent by and returned to the Office may be forwarded to them.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will be proceeded with as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., February 13, 1908.

Thomas W. Farnsworth, his assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of The Kahn Mfg. Company, of No. 416 Dauphin street, Mobile, Ala., for registration of a trade-mark and a trade-mark registered to Thomas W. Farnsworth, of 31 Summer street, Boston, Mass., and the notice of said declaration sent by registered mail to the said Thomas W. Farnsworth having been returned undelivered, notice is hereby given to the said Thomas W. Farnsworth, his assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents in order that the notices of declaration heretofore sent by and returned to the Office may be forwarded to them.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will be proceeded with as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., February 13, 1908.

George Riggs, his assigns or legal representatives, take notice:

An interference has been declared by this Office between an application of The Old Bleach Linen Company, Limited, of Randalstown, Ireland, for registration of a trade-mark and a trade-mark registered to George Riggs, of Newark, N. J., and the notice of said declaration sent by registered mail to the said George Riggs has been returned by the Post-Office Department undelivered.

Notice is therefore hereby given to George Riggs, his assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., February 8, 1908.

Robert G. McCorkle & Company, their assigns or legal representatives, take notice:

An interference has been declared by this Office between an application of Charles Shaffner & Company, of Chicago, Ill., for registration of a trade-mark and a trade-mark registered to Robert G. McCorkle & Company, of Louisville, Ky., and it appears from the record of the case that the registrant, Robert G. McCorkle & Company, cannot be located.

Notice is therefore hereby given to said Robert G. McCorkle & Company, their assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., February 8, 1908.

Mariano Sanz, his assigns or legal representatives, take notice:

An interference having been declared by this Office between the applications of Bennett, Sloan & Company, National Grocer Company, and Mariano Sanz for registration of a trade-mark, a letter having been received from the attorney of record for said Mariano Sanz stating that he is informed and believes that Sanz is dead and that he cannot say whether or not there is a successor to the business, and the Office having been unable to obtain any communication from said Mariano Sanz, notice is hereby given to the said Mariano Sanz, his assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication the interference will be proceeded with as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., February 8, 1908.

Thomas N. Dwyer, his assigns or legal representatives, take notice:

An interference has been declared by this Office between an application of James E. Moroney, of Philadelphia, Pa., for registration of a trade-mark and a trade-mark registered to Thomas N. Dwyer, whose known address is 36 South William street, New York, N. Y., and it appears from the record of the case that the registrant, Thomas N. Dwyer, cannot be located.

Notice is therefore hereby given to said Thomas N. Dwyer, his assigns or legal representatives, that if they or any of them desire to contest said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

THE
OFFICIAL GAZETTE
OF THE
United States Patent Office.
[BY AUTHORITY OF CONGRESS.]

VOL. 133—No. 5. TUESDAY, MARCH 31, 1908. PRICE—$5 per year.

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TO CITIZENS OF THE UNITED STATES.

States.	Patents and Designs.	Trade-Marks, Labels, and Prints.	States.	Patents and Designs.	Trade-Marks, Labels, and Prints.
Alabama	1	.....	New Hampshire	.....	.....
Alaska, District of	.....	.....	New Jersey	32	13
Arizona Territory	1	.....	New Mexico Ter't'y	.....	.....
Arkansas	3	1	New York	82	10
California	21	2	North Carolina	3	.....
Colorado	4	1	North Dakota	1	.....
Connecticut	4	2	Ohio	32	5
Delaware	2	.....	Oklahoma	6	.....
District of Columbia	3	.....	Oregon	5	.....
Florida	2	.....	Panama	1	.....
Georgia	7	.....	Pennsylvania	36	.....
Hawaii Territory	1	.....	Philippine Islands	.....	.....
Idaho	2	.....	Rhode Island	4	.....
Illinois	49	9	South Carolina	2	1
Indiana	9	1	South Dakota	6	.....
Iowa	14	.....	Tennessee	1	1
Kansas	16	.....	Texas	11	2
Kentucky	5	.....	Utah	1	1
Louisiana	4	.....	Vermont	1	.....
Maine	6	2	Virginia	7	1
Maryland	1	2	Washington	9	.....
Massachusetts	24	4	West Virginia	2	1
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Minnesota	13	.....	Wyoming	.....	.....
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Montana	3	.....	Total to citizens of the United States	480	62
Nebraska	6	.....			
Nevada	2	1			

TO CITIZENS OF FOREIGN COUNTRIES.

Countries.	Patents and Designs.	Trade-Marks and Prints.	Countries.	Patents and Designs.	Trade-Marks and Prints.
Argentina	.....	.....	Natal	.....	.....
Austria-Hungary	.....	.....	Netherlands	.....	.....
Belgium	1	.....	Newfoundland	.....	.....
Brazil	.....	.....	New South Wales	2	.....
British West Indies	.....	.....	New Zealand	.....	.....
Canada	7	1	Norway	3	.....
Cape Colony	.....	.....	Persia	.....	.....
Chile	.....	.....	Queensland	.....	.....
China	.....	.....	Roumania	.....	.....
Costa Rica	.....	.....	Russia	.....	.....
Cuba	.....	.....	Scotland	1	.....
Denmark	.....	.....	South Australia	.....	.....
Ecuador	.....	.....	Spain	1	.....
England	15	3	Sweden	3	.....
France	11	7	Switzerland	2	.....
Germany	10	.....	Transvaal, South Africa	.....	.....
Haiti	.....	.....	Victoria	.....	.....
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Change in Price of Copies of Patents—Amendment to Rule 203.

(ORDER No. 1,756.)

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., March 13, 1908.

Acting with the approval of the Secretary of the Interior, Rule 203 of the Rules of Practice of this Office is amended by canceling lines 3 and 4 of page 60, (edition of Rules of Practice dated July 17, 1907,) relating to class and subclass orders for copies of patents. The price of uncertified copies of specifications and drawings of patents, if in print, will be five cents each on and after April 1, 1908.

EDWARD B. MOORE,
Commissioner.

Notice.

The OFFICIAL GAZETTE of the United States Patent Office is now being mailed by the Superintendent of Documents from the Government Printing Office, the place of its production. All communications respecting the GAZETTE and all subscriptions should be addressed to the Superintendent of Documents.

EDWARD B. MOORE,
Commissioner.

Notice.

On November 27, 1907, the Circuit Court of the United States for the Southern District of New York held Reissue Patent No. 11,995, *Henry S. Blackmore*, "revoked, vacated, and declared null and void" in a decree which has been recorded in Liber H 78, page 497, of the assignment records of the United States Patent Office.

APPLICATIONS UNDER EXAMINATION.

Condition at Close of Business March 24, 1908.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action. Amended	New.	No. of applications awaiting action.
303	XVII. Clutches; Linotyping; Matrix-Making; Nut and Bolt Locks; Printing.	Mar. 11	Feb. 25	182
244	XXXV. Buckles, Buttons, and Clasps; Card, Picture, and Sign Exhibiting; Garment-Supporters; Signals; Toilet.	Mar. 9	Jan. 11	661
172	XXXI. Alcohol; Ammonia, Water, and Wood Distillation; Charcoal and Coke; Gas, Heating and Illuminating; Hides, Skins, and Leather; Liquid Coating Compositions; Mineral Oils; Oils, Fats, and Glue; Water Purification.	Feb. 27	Feb. 1	210
312	VII. Games and Toys; Mechanical Motors; Optics; Paper Manufactures; Velocipedes.	Feb. 26	Jan. 13	275
304	XXXIV. Railways; Railway-Brakes; Railway Rolling-Stock.	Feb. 25	Jan. 20	411
252	IV. Bridges; Conveyors; Cranes and Derricks; Excavating; Hoisting; Hydraulic Engineering; Iron Structures; Loading and Unloading; Towers.	Feb. 24	Feb. 21	334
167	V. Bookbinding; Harvesters; Jewelry; Music.	Feb. 24	Jan. 8	322
179	XX. Artificial Limbs; Builders' Hardware; Dentistry; Locks and Latches; Safes; Undertaking.	Feb. 21	Jan. 28	267
313	I. Fences; Harrows and Diggers; Plows; Seeders and Planters; Trees, Plants, and Flowers.	Feb. 20	Jan. 20	308
144	XXIV. Apparel; Apparel Apparatus; Sewing-Machines; Surgery.	Feb. 19	Feb. 18	348
264	XXXVI. Curtains, Shades, and Screens; Drafting; Driers; Engraving; Measuring Instruments; Wind-Wheels.	Feb. 18	Feb. 8	514
378	XXXVIII. Artesian and Oil Wells; Bottles and Jars; Care of Live Stock; Educational Appliances; Fishing and Trapping; Stationery; Stone-Working.	Feb. 17	Jan. 9	328
135	VIII. Beds; Chairs; Furniture; Kitchen and Table Articles; Store Furniture.	Feb. 17	Dec. 18	378
322	XII. Elevators; Journal-Boxes; Lubrication; Machine Elements; Pulleys and Shafting.	Feb. 13	Jan. 13	519
147	XXIX. Coopering; Fire-Escapes; Ladders; Roofs; Wheelwright-Machines; Wooden Buildings; Wood-Sawing; Wood-Turning; Woodworking; Woodworking-Tools.	Feb. 12	Dec. 7	407
308	XV. Bread, Pastry, and Confection Making; Coating; Fuel; Glass; Hydraulic Lime and Cement; Laminated Sheets and Fabrics; Paper-Making; Paving; Photography; Plastic Block and Earthenware Apparatus; Plastic Compositions; Plastics.	Feb. 7	Jan. 14	686
154	XI. Boot and Shoe Making; Boots, Shoes, and Leggings; Button, Eyelet, and Rivet Setting; Harness; Leather Manufactures; Nailing and Stapling; Whips and Whip Apparatus.	Feb. 7	Jan. 4	363
247	XXII. Air-Guns, Catapults, and Targets; Ammunition and Explosive Devices; Boats and Buoys; Firearms; Marine Propulsion; Ordnance; Railway-Rails and Joints; Railway-Ties and Fasteners; Ships.	Feb. 7	Dec. 20	577
327	XVIII. Injectors and Ejectors; Steam and Vacuum Pumps; Steam-Boilers; Steam-Engines; Steam-Engine Valves.	Feb. 5	Jan. 7	282
278	XXXII. Carbonating Beverages; Dispensing Beverages; Dispensing-Cans; Metallic Shipping and Storing Vessels; Packaging Liquids; Refrigeration.	Feb. 5	Nov. 25	522
332	X. Carriages and Wagons	Feb. 3	Dec. 30	534

Applications Under Examination—Continued.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action. Amended	New.	No. of applications awaiting action.
105	XXVI. Electric Heating and Rheostats; Electric Railways; Electricity, Generation; Motive Power.	Feb. 3	Oct. 31	332
379	XXIII. Acoustics; Coin-Handling; Horology; Recorders; Registers; Time-Controlling Mechanism.	Feb. 2	Dec. 23	240
164	XXXIII. Cutlery; Domestic Cooking Vessels; Electric Signaling; Electricity, Medical and Surgical; Fireproof Buildings; Masonry; Tents, Canopies, Umbrellas, and Canes.	Feb. 1	Jan. 31	322
260	XL. Baggage; Check-Controlled Apparatus; Cloth, Leather, and Rubber Receptacles; Deposit and Collection Receptacles; Fine Arts; Lighting-Fixtures; Package and Article Carriers; Paper Receptacles; Special Receptacles and Packages; Wooden Receptacles.	Feb. 1	Jan. 6	675
128	II. Bee Culture; Dairy; Label-Affixers; Paper Files and Binders; Pneumatics; Presses; Store-Service; Tobacco.	Jan. 29	Jan. 4	441
318	VI. Bleaching and Dyeing; Chemicals; Explosives; Fertilisers; Medicines; Preserving; Sugar and Salt.	Jan. 24	Jan. 15	295
238	XIX. Furnaces; Heating and Cooking Stoves, Liquid and Gaseous Fuel; Stoves and Furnaces.	Jan. 23	Dec. 2	554
375	XXVII. Brushing and Scrubbing; Grinding and Polishing; Laundry; Washing Apparatus.	Jan. 21	Jan. 18	472
152	XXX. Fluid-Pressure Regulators; Lamps and Gas-Fittings; Liquid and Gaseous Fuel Burners; Type-Writing Machines.	Jan. 17	Jan. 17	330
382	XXVIII. Internal-Combustion Engines; Miscellaneous Heating Plants.	Jan. 13	Dec. 21	524
315	XXV. Butchering; Mills; Threshing; Vegetable Cutters and Crushers.	Jan. 11	Jan. 11	434
329	XIII. Arms, Projectiles, and Explosive Charges, Making; Metal-Working, etc.	Jan. 10	Dec. 21	641
142	IX. Air and Gas Pumps; Fire-Extinguishers; Hydraulic Motors; Pumps; Sewerage.	Jan. 9	Jan. 27	229
307	XIV. Compound Tools; Cutting and Punching Sheets and Bars; Farriery; Metal-Bending; Metal-Ornamenting; Sheet-Metal Ware, Making; Tools; Wire-Working.	Jan. 7	Nov. 11	382
112	XXI. Brakes and Gins; Carding; Cloth-Finishing; Cordage; Felt and Fur; Knitting and Netting; Silk; Spinning; Weaving.	Dec. 26	Oct. 28	669
107	XXXVII. Electric Lighting; Electricity, Conductors; Electricity, General Applications.	Dec. 23	Oct. 14	666
109	XVI. Telegraphy; Telephony	Dec. 9	Sept. 13	616
321	XXXIX. Baths and Closets; Water Distribution.	Dec. 7	Oct. 8	366
175	III. Annealing and Tempering; Coating with Metal; Electrochemistry; Metal-Founding; Metallurgy; Shaping Fluid Metal.	Dec. 6	Nov. 26	406
352	XLI. Railway Draft Appliances; Resilient Tires and Wheels.	Dec. 4	Sept. 12	843
	Total number of applications awaiting action			18,207
161	TRADE-MARKS, DESIGNS, LABELS, AND PRINTS.			
	Trade-Marks	Mar. 20	Feb. 29	330
	Designs	Mar. 6	Feb. 24	101
	Labels and Prints			

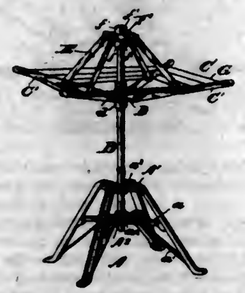
Money by Mail.

Money sent by mail to the Patent Office will be at the risk of the sender. Letters containing money should be registered.

PATENTS

GRANTED MARCH 31, 1908.

883,162. CLOTHES-DRIER. ALFRED BAECKER, Detroit, Mich., assignor of one-half to John Wagner, Detroit, Mich. Filed Apr. 19, 1907. Serial No. 369,076.



In a clothes drier, a supporting structure comprising a head having a transverse guide way and with radially disposed bars extending at an angle to the transverse plane of the head, a guide member having a guide way in alinement with the guide way of the head and with radial bars connected at their free ends with the angularly disposed bars of the head, a standard movably engaging the guide ways of said head and guide member, means for adjustably connecting said standard to said head and guide member, a plurality of collars arranged in pairs and movably disposed upon said standard, means for adjustably connecting said collars to said standard, two frames rotative upon said standard respectively between said pairs of collars and supported thereby, clothes line carrying arms swingingly supported by one of said frames, and a plurality of braces swingingly connected at one end to the other frame and pivoted at their free ends to said clothes line carrying bar.

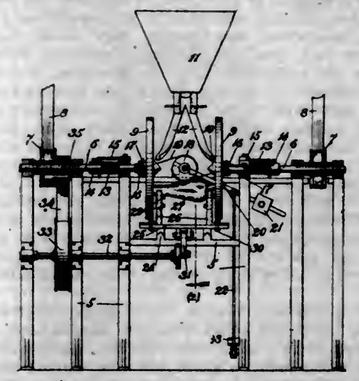
883,163. GRINDING-MACHINE. CHARLES E. BALL, Alexandria, Ind., assignor to Macbeth-Evans Glass Company, Pittsburg, Pa., a Corporation of Pennsylvania. Filed Nov. 20, 1905. Serial No. 288,253.

1. The combination of a pair of vertically revolving grinding disks, means including a weighted lever for drawing said disks together, means for automatically reciprocating the article to be ground between and along the surface of said disks and for stopping the grinding at a previously determined point, substantially as described.

2. The combination of a pair of vertically revolving grinding disks having their flat faces opposite and their axes in substantially parallel planes, yielding means for drawing such disks together, means for reciprocating the article to be ground between and along the flat surfaces of said disks, with the axis of such article at substantially right angles to the plane of the disks and means for stopping the grinding at a previously determined point.

3. In combination in a grinding machine, a pair of opposite vertical grinding disks mounted for movement toward and from each other, a carriage between the disks, means for reciprocating the carriage between the disks, a weight and connections whereby the disks may be fed toward each other, and spring means for returning the disks to their outer position when the weight is raised.

4. A machine for grinding chimneys comprising a rotatable grinding disk, a carrier movable transversely of the disk, means for reciprocating the carrier, means on the carrier for supporting a chimney with its axis at substantially right angles to the disk, and means for securing yielding engagement between the end of the chimney and the disk.



883,164. CHIMNEY OR STACK. OSCAR T. BENSON, Worcester, Mass. Filed Apr. 4, 1907. Serial No. 366,424.



1. In a chimney or stack, the combination of a circular strengthening angle-iron, upright strengthening rods secured thereto at their lower ends, inclined rods connected with the upright rods and having their lower ends secured at about the level of the circular strengthening iron, a solid body of concrete surrounding all of said irons and rods to constitute a foundation, a circular wall resting on said foundation and consisting of spiral or helical tie rods secured to said uprights, and a hollow cy-

lindrical body of concrete surrounding the uprights and tie rods.

2. In a chimney or stack, the combination of a concrete foundation, an angle iron embedded in the base of said foundation, reinforcing bars having their lower ends secured to the upwardly projecting portion of said angle iron and extending upwardly therefrom through the entire length of the structure, a series of angle irons embedded in the base outside of the first named angle iron and in substantially the same plane, strengthening bars secured to, and extending at an angle from, the last named angle irons upwardly and connecting with said reinforcing bars, said foundation having projections for receiving said strengthening bars, said foundation extending up to a point slightly above the top of said strengthening bars and projections, and a hollow cylindrical stack formed of concrete resting on the top of said foundation.

3. In a chimney or stack, the combination of a concrete foundation, an iron embedded in the base of said foundation, reinforcing bars having their lower ends secured to said iron and extending upwardly therefrom through the entire length of the structure, a series of irons embedded in the base outside said first named iron and in substantially the same plane, strengthening bars secured to, and extending at an angle from, the last named irons upwardly and connecting with said reinforcing bars, said foundation having projections for receiving said strengthening bars, said projections being integral with the main body of the foundation, each of said inclined strengthening bars being provided with a plurality of hooks extending inwardly into the main body of said foundation and located at different elevations along the same, and a hollow stack resting on the top of said foundation.

4. In a chimney or stack, the combination of a solid concrete foundation, series of metallic bars embedded near the bottom thereof, a circular angle iron embedded in the base of said foundation above said bars, vertical reinforcing bars having their lower ends secured to the upwardly projecting portion of said angle iron and extending upwardly therefrom through the entire length of the structure, a series of angle irons embedded in the base outside said circular angle iron and in substantially the same plane, strengthening bars secured to, and extending at an angle from, the last named angle irons upwardly and connecting with said reinforcing bars, said foundation having projections with slanting outer walls for receiving said strengthening bars, said projections being integral with the main body of the foundation, said foundation being solid up to a point slightly above the top of said strengthening bars and projections, and a hollow cylindrical stack formed of concrete resting on the top of said foundation and having tie rods embedded in the body thereof and secured to said reinforcing bars.

5. In a chimney or stack, the combination of a solid concrete foudation, a series of metallic bars embedded near the bottom thereof, a circular angle iron embedded in the base of said foundation above said bars, vertical reinforcing bars having their lower ends secured to the upwardly projecting portion of said angle iron and extending upwardly therefrom through the entire length of the structure, a series of four angle irons embedded in the base outside said circular iron and in substantially the same plane, strengthening bars secured to, and extending at an angle from, the last named angle irons upwardly and connecting with said reinforcing bars, said foundation having four projections with slanting outer walls for receiving said strengthening bars, said projections being integral with the main body of the foundation, each of said inclined strengthening bars being provided with a plurality of substantially horizontal hooks extending inwardly into the main body of said foundation and located at different elevations along the same, said foundation being solid up to a point slightly above the top of said strengthening bars and projections, and a hollow cylindrical stack formed of concrete resting on the top of said foundation and having tie rods embedded in the body thereof and secured to said reinforcing bars.

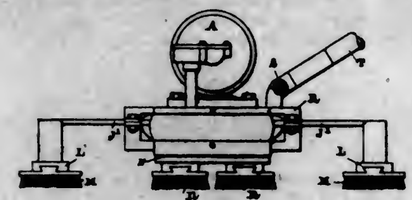
[Claims 6 and 7 not printed in the Gazette.]

883,165. BAKING-POWDER. FERDINAND BLUMENTHAL, Biebrich, Germany. Filed July 20, 1907. Serial No. 384,814.

1. Baking powder composed of glycolic acid and bi-carbonate of soda, substantially in the proportions described.

2. Baking powder composed of bi-carbonate of soda and acid salts of glycolic acid, substantially in the proportions described.

883,166. BRUSH FOR PARQUETRY-FLOORING AND THE LIKE. JOSEPH BRUYÈRE, Le Puy, France. Filed Sept. 27, 1906. Serial No. 336,446.

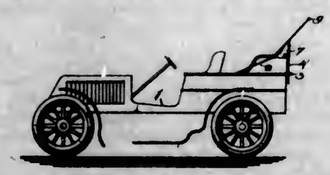


1. In a floor brushing apparatus, the combination of a portable frame, a wheel mounted on said frame, means for rotating said wheel, a brushing system caused to rotate with the rotation of the wheel, a slotted member arranged above the wheel, arms projecting from the slotted member, brushes carried by the arms, and a pin on the wheel extending within the slot of the slotted member.

2. In a floor brushing apparatus, the combination of a portable frame, a wheel mounted on said frame, means for rotating said wheel, a brushing system caused to rotate with the rotation of the wheel, a slotted member arranged above the wheel, arms projecting from the slotted member, brushes carried by the arms, a pin on the wheel extending within the slot of the slotted member, and guides carried by the frame for supporting the arms of the slotted member.

3. In a floor brushing apparatus, the combination of a portable frame, a wheel mounted on said frame, means for rotating said wheel, a brushing system caused to rotate with the rotation of the wheel, a slotted member arranged above the wheel, arms projecting from the slotted member, brushes carried by the arms, a pin on the wheel extending within the slot of the slotted member, and rollers carried by the frame for supporting the arms of the slotted member.

883,167. ATTACHMENT FOR MOTOR-VEHICLES. JOSEPH H. CARPENTER, JR., and GEORGE J. F. CARPENTER, Ossining, N. Y. Filed Jan. 9, 1904. Serial No. 188,297.



A device of the character described including a frame adjustably fastened to the rear frame of a vehicle comprising a sheet of canvas rigidly mounted on said frame, strengthening ribs intermediate of the side rods of said frame, said strengthening ribs being so shaped as to form a double deflecting line at the rear end of said vehicle.

883,168. WRENCH. LA ROY CHAPMAN, Berwind, Colo. Filed Dec. 24, 1907. Serial No. 407,956.

1. A wrench comprising a handle, a flat plate continuous therewith having fixed jaws on its outer end, a slidable threaded plate on each side of said flat plate, a nut mounted on said threaded plates for moving them in unison, and a head pivoted between the outer ends of said threaded plates having a jaw at each end.



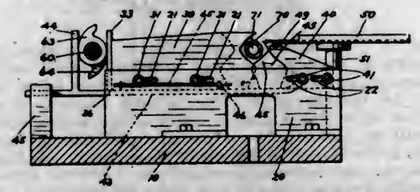
2. A wrench comprising a flat body plate having oppositely disposed fixed jaws on its outer end thicker than said plate, a threaded plate slidable on each side of said flat plate and guided by a channel between said jaws, a nut for moving said threaded plates, and a head intermediately pivoted between the ends of said threaded plates having a jaw on each end.

3. A wrench having a fixed jaw and a movable jaw, a flat plate narrower than said fixed jaw and integral therewith, a plate having an outer curved threaded face and a flat face slidable on each side of said flat plate and pivotally supporting said movable jaw, and a nut for moving said threaded plates.

4. A wrench having a double fixed jaw and a double movable jaw, a flat plate narrower than said fixed jaws and connected thereto, a plate having an outer curved threaded face and an inner flat face slidable on each side of said flat plate and guided by a channel between said fixed jaws and pivotally supporting said movable jaws, a nut mounted on said threaded plates and bearing against the under side of the jaws, and a removable pin extending through said flat plate below said nut.

5. A wrench having a flat body plate with a fixed jaw on each edge at one end, said jaws being thicker than the plate and forming a channel between them, a plate having a curved face with inclined ribs and a flat face joining said curved face slidable on each side of said flat plate, a head pivoted to the upper ends of said ribbed plates having a jaw on each side adapted to engage with the fixed jaws, and a nut engaging said inclined ribs to move the pivoted head.

883,169. MACHINE FOR MAKING PAPER SHELLS. JOHN CHESNEY, Paulsboro, N. J., assignor to The E. I. du Pont de Nemours Powder Company, Wilmington, Del., a Corporation of New Jersey. Filed Dec. 11, 1906. Serial No. 347,381.



1. In a machine for making paper shells, the combination with the rotatable mandrel, of two reciprocating folders adapted to move toward each other in front of the mandrel, one folder having two forwardly projecting blades spaced apart and cut away to form a mouth, the other folder having a forwardly projecting blade also cut away to form a mouth and adapted when advanced to enter between the blades of the other folder, the front edge of the first folder between its blades being cut away to substantially conform to the front edge of the blade of the second folder, and the front edges of the second folder on opposite sides of its blade being cut away to substantially conform to the front edges of the blades of the first folder, and means to advance and retract the folders.

2. In a machine for making paper shells, the combination with the rotatable mandrel, of a guide-plate, folders slidable toward and from each other on said plate, an abutment on one folder, a second abutment, a bar connecting the second folder with the second abutment, a shaft extending between the abutments, and cams on the shaft adapted to engage the said abutments respectively.

883,170. ELECTRODE FOR THE RECOVERY OF METALS FROM SOLUTIONS BY ELECTROLYSIS. SAMUEL B. CHRISTY, Berkeley, Cal. Filed Mar. 10, 1906. Serial No. 305,247.



1. Compound pervious electrodes, each consisting of a suitable mass of pervious electro-conducting material, arranged to act as a cathode on one side and as an anode on the other, and contained in a suitable portable non-conducting frame with pervious sides; means for retaining said compound pervious electrodes at suitable intervals in the solution to be treated, between a suitable anode and a suitable cathode, both preferably also pervious; means for connecting, by suitable metallic conductors, said anode with the positive and said cathode with the negative pole of an external direct-current electric generator of sufficient voltage to force a direct electric current to pass continuously in the same direction and in series through said anode, the several intervening compound pervious electrodes, the cathode, and the intervening solution in which all are placed; and means for passing said electric current from said anode through the solution to each intervening compound pervious electrode, through the same and the intervening solution to the next intervening compound pervious electrode, and so on finally to the cathode at the end of the series, without the use of metallic conductors, and in such a manner as to cause that face of each intervening compound pervious electrode nearest the anode to be negatively electrified, and that face nearest the cathode to be positively electrified, and so that there is a continuous fall of voltage from the anode where the current enters the solution, to the cathode, where it leaves it, all substantially as described.

2. Compound pervious electrodes consisting of a fragmental or filamental charcoal made electro-conducting by suitable means; means for retaining the same in a box of non-conducting material provided with pervious sides through which the solution to be treated may circulate; and means for passing a direct electro current through said solution and charcoal in such a manner that one face of said pervious electro-conducting charcoal masses shall be negatively electrified while the other is positively electrified.

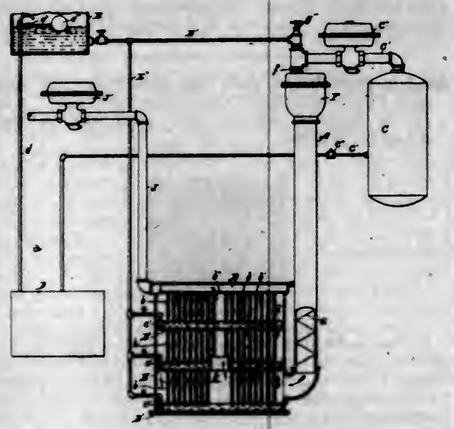
3. Compound pervious electrodes containing on the anode side some suitable pervious electro-conducting material insoluble in the electrolyte, and on the cathode side some suitable pervious electro-conducting substance in electric contact with the anode side.

4. Simple pervious electrodes, composed of fragmental or filamental charcoal, made electro-conducting by suitable means, contained in suitable portable non-conducting frames with pervious sides; and means for connecting said simple pervious electrodes to the positive and negative poles of an external direct-current electric generator, so as to continuously charge all external parts of said pervious electrodes with either positive or negative electricity.

according as they are to serve as anodes or cathodes, all substantially as described.

5. Simple pervious anodes made of wires presenting a peroxid of lead surface, stretched upon suitable wooden frames.

883,171. CARBURETER. MONROE D. COLBATH, Hampden, Me. Filed May 20, 1905. Serial No. 261,395.



1. The combination of a carbureter chamber; an air supply pipe; a carbureter air or gas delivery pipe; a pressure regulator for said air pipe; an air supply tank; a liquid hydro-carbon storage reservoir; a pipe connecting said air supply tank to the upper end of said liquid hydro-carbon storage reservoir; a feed reservoir; a pipe connecting said storage reservoir to said feed reservoir; a valve in the said pipe; a float therefor arranged in said feed reservoir; a combined air and liquid hydro-carbon valve, consisting of an exterior casing opening into said main carbureter chamber, an inner U-shaped tubular casing, ports in said inner casing, a hollow piston valve arranged therein adapted to control said ports, a liquid in said inner casing adapted to hold said valve normally in its seat; a liquid hydro-carbon delivery tube having ports therein extending into said valve, said valve being adapted to close said ports when in its closed position; a cylinder arranged within said liquid hydro-carbon delivery tube, having openings therein adapted to be brought into register with said ports; and a rod for adjusting said cylinder, for the purpose specified.

2. The combination of a carbureter chamber; an air supply pipe, a carbureted air or gas delivery pipe; a pressure regulator for said air pipe; an air supply tank; a liquid hydro-carbon storage rerervoir; a feed reservoir; a pipe connecting said storage reservoir to said feed reservoir; a valve in the said pipe; a float therefor arranged in said feed reservoir; a combined air and liquid hydro-carbon valve, consisting of an exterior casing opening into said main carbureter chamber, an inner U-shaped tubular casing, ports in said inner casing, a hollow piston valve arranged therein adapted to control said ports, a liquid in said inner casing adapted to hold said valve normally in its seat; and a liquid hydro-carbon delivery tube having ports therein extending into said valve, said valve being adapted to close said ports when in its closed position; for the purpose specified.

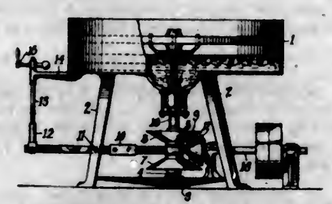
3. The combination with a carbureter chamber; an air supply pipe; a carbureted air or gas delivery pipe; a pressure regulator for said air pipe; an air supply tank; a liquid hydro-carbon storage reservoir; a pipe connecting said air supply tank to the upper end of said liquid hydro-carbon storage reservoir; a feed reservoir; a pipe connecting said storage reservoir to said feed reservoir; a valve in the said pipe; a float therefor arranged in said feed reservoir; a combined air and liquid hydro-carbon valve, consisting of an exterior casing opening into said main carbureter chamber, an inner U-shaped tubular casing, ports in said inner casing, a hollow piston valve arranged therein adapted to control said ports; a liquid hydro-carbon feed reservoir; a combined air and liquid hydro-carbon valve, consisting of an exterior casing opening into said main carbureter chamber, an inner tubular casing, ports in said inner casing, a hollow piston valve arranged therein adapted to control said ports; and a liquid hydro-carbon delivery tube having ports therein extending into said valve, said valve being adapted to close said ports when in its closed position, for the purpose specified.

4. The combination of a carbureter chamber; an air supply pipe; a carbureted air or gas delivery pipe; a pressure regulator for said air pipe; an air supply tank; a liquid hydro-carbon storage reservoir; a pipe connecting said air supply tank to the upper end of said liquid hydro-carbon storage reservoir; a feed reservoir; a pipe connecting said storage reservoir to said feed reservoir; a valve in the said pipe; a float therefor arranged in said feed reservoir; a combined air and liquid hydro-carbon valve, consisting of an exterior casing opening into said main carbureter chamber, an inner tubular casing, ports in said inner casing, a hollow piston valve arranged therein adapted to control said ports; and a liquid hydro-carbon delivery tube having ports therein extending into said valve, said valve being adapted to close said ports when in its closed position, for the purpose specified.

5. The combination of a carbureter chamber; an air supply pipe; a pressure regulator for said pipe; a liquid hydro-carbon feed reservoir; a combined air and liquid hydro-carbon valve, consisting of an exterior casing, an inner U-shaped tubular casing, ports in said inner casing a hollow piston valve arranged therein adapted to control said ports, and a liquid in said inner casing adapted to hold said valve normally in its seat; a liquid hydro-carbon delivery tube having ports therein extending into said valve, said valve being adapted to close said ports when in its closed position; a cylinder arranged within said liquid hydro-carbon delivery tube, having openings therein adapted to be brought into register with said ports; and a rod for adjusting said cylinder, for the purpose specified.

[Claims 6 to 9 not printed in the Gazette.]

883,172. WHEEL-PAINTING MACHINE. HENRY P. CORBIN, Moline, Ill., assignor to C. A. Willey Company, New York, N. Y., a Corporation of New York. Filed Dec. 3, 1907. Serial No. 404,903.

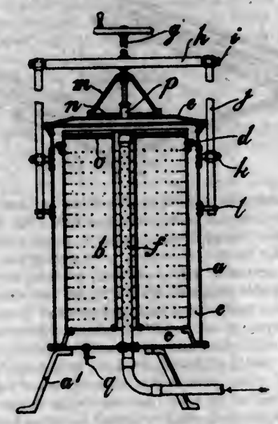


1. In a wheel-painting machine, a wheel-supporting spindle in which is comprised a hollow, vertical shaft; means for rotating the same; a collar having a square perforation therethrough fixed to the upper extremity of the hollow shaft; a square rod arranged to move longitudinally within the hollow shaft; a spring between said rod and a stop at the bottom of the hollow shaft; and a wheel-support mounted on the square rod.

2. In a wheel-painting machine, the cobmination with a tank or receptacle for paint, of a hollow rotatable shaft projecting through the bottom of said receptacle, and a longitudinally movable wheel-supporting rod located within the hollow shaft.

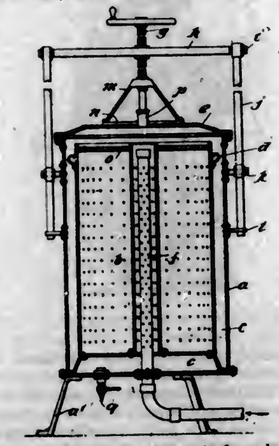
3. In a wheel-painting machine, the combination with a receptacle for paint, of a hollow, vertical, rotatable shaft extending into the bottom thereof, and a spring-controlled, vertically movable wheel-support carried by the hollow shaft.

883,173. HOP-EXTRACTING APPARATUS. FRANCIS S. DAVIDSON and WILLIAM P. BURRA, Ashford, England. Filed Apr. 19, 1907. Serial No. 369,176.



In a device of the class described, a casing open at the top, a removable perforated walled holder for the material within the casing out of contact with the side and bottom walls of the casing, a central perforated pipe forming the inner annular wall of the holder concentric with the outer wall of the holder, a perforated steam pipe within the central pipe of the holder passing through the wall of the casing, an annular press-plate in the holder, a cover for the casing, and means for forcing the cover down onto the casing and for forcing the press-plate down into the holder.

883,174. PROCESS OF FORMING EXTRACTS FROM HOPS AND YEAST. FRANCIS S. DAVIDSON and WILLIAM P. BURRA, Ashford, England. Filed Apr. 10, 1907. Serial No. 367,426.



1. The process of forming extracts from hops and yeast, which consists in mixing the hops and yeast, subjecting the mixture to the action of a solvent vapor, and condensing the resultant product.

2. The process of forming extracts from hops and yeast, which consists in mixing the hops and yeast and then subjecting the mixture to the action of steam under a pressure of approximately 25 pounds per square inch and drawing off the resultant product.

3. The process of forming extracts from hops and yeast, which consists in making a mixture of the hops and yeast, subjecting the mixture to the action of steam, and drawing off the resultant liquid from the residue mixture of hops and yeast.

4. The process of forming extracts from hops and yeast, which consists in making a mixture of the hops and yeast, subjecting the mixture to the action of live steam under a pressure greater than atmospheric pressure, shutting off the steam supply and allowing the mixture to cool, pressing the mixture, and finally drawing off the resultant condensed liquid extract.

5. The process of forming extract from hops and yeast, which consists in making a mixture of the hops and yeast in substantially the proportion of 41 lbs. of yeast to 301 lbs. of hops, steaming the mixture out of contact with the atmosphere, cooling the steamed mixture, and drawing off the resultant condensed liquid extract.

883,175. DUST-SETTLER FOR BROOMS. EDWARD A. DAVIS, New Orleans, La. Filed Aug. 6, 1907. Serial No. 387,841.



The combination with a broom head; of an attachment therefor comprising a receptacle removably mounted within and inclosed by the head, said receptacle having an inlet and an outlet, and a resilient band surrounding the head and clamping it about the receptacle to hold said receptacle against displacement, said band being detachable from the head.

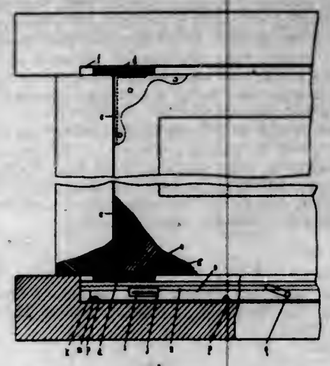
883,176. FAUCET ATTACHMENT. FRANK S. DAVIS, Detroit, Mich. Filed Oct. 7, 1907. Serial No. 396,165.



1. A faucet attachment consisting of a flat spring metal strip provided with a plurality of transverse corrugations and bent into a hoop, the folds of the opposite ends of the corrugated portion being adapted to be adjustably interlocked whereby the diameter of the hoop may be changed, and the hoop being adapted to be compressed within and frictionally engage the mouth of a faucet.

2. A faucet attachment consisting of a flat spring metal strip provided with a plurality of deep transverse corrugations for a portion of its length and bent into a closed hoop with the end corrugations adjustably interlocked in a smooth lap joint and with the smooth portion of the strip bent into a segmental spring arm partially encircling the hoop, the whole being adapted to be secured in the mouth of a faucet by frictional engagement therewith.

883,177. WINDOW. HENRY J. DAVISON, Bexhill, England. Filed Aug. 26, 1907. Serial No. 390,183.



1. In a window the combination of two sashes and means hinging them together, a window frame with guiding grooves at the top and bottom thereof, sliding pieces pivotally attached to the sashes near their free ends and working in the grooves, and a bar in the groove at the bottom of the frame adapted to be raised into locking engagement with the lower sliding members or to be lowered away from said members to leave them free for movement in the adjustment of the window.

2. In a window the combination of two sashes and means hinging them together, a window frame with guiding grooves at the top and bottom thereof, sliding pieces pivotally attached to the sashes near their free ends and working in the grooves, rack teeth on the lower sliding member of each sash, and a locking rack in the window frame with means for raising it into locking engagement with the sliding members and for lowering it out of engagement with said members.

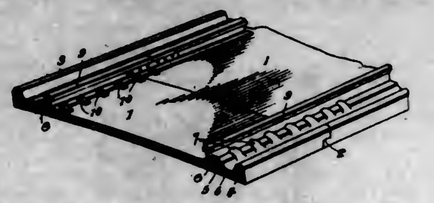
3. In a window the combination of two sashes and means hinging them together, a window frame with guiding grooves at the top and bottom thereof, sliding pieces pivotally attached to the sashes near their free ends and working in the grooves, rack teeth on the lower sliding member of each sash, a locking rack mounted in the lower groove beneath the sliding members, said rack being free to make a small longitudinal motion, a set of stationary cross pins over which inclined surfaces on the rack bar are adapted to work, and means for pushing the bar longitudinally whereby it is caused to slide up over the cross pins and to come into engagement with the teeth on the sliding members.

4. In a window the combination of two sashes and means hinging them together, a window frame with guiding grooves at the top and bottom thereof, sliding pieces pivotally attached to the sashes near their free ends and working in the grooves, rack teeth on the lower sliding member of each sash, a rack bar mounted with freedom for a small longitudinal movement in the lower groove of the window frame, means adapted to cause said bar to rise when moved longitudinally in one direction and to fall when moved in the other direction, a lever and means for supporting it upon the window frame and connecting means between the lever and the rack bar.

883,178. ROAD-BED. JOSIAH L. DICKSON, Winfield, Kans. Filed June 28, 1907. Serial No. 381,288.

1. The herein described roadbed for railway rails, consisting of a series of metal sections laid edge to edge, the said sections being provided with means for securing rails thereto.

2. The herein described roadbed for railway rails, consisting of a series of metal sections laid edge to edge, the abutting edges being formed with a scarf joint, the said sections being provided with a series of inwardly extending lugs at opposite sides, adapted to take over one base flange of a track rail, and fastening devices extending over the other base flange of a rail and secured to said bed.

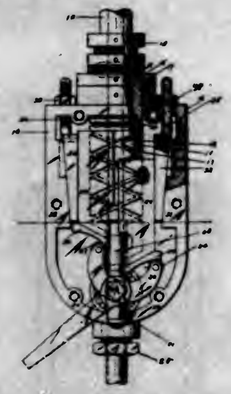


3. The herein described roadbed for railway rails, consisting of a series of metal sections laid edge to edge, the abutting edges being formed with a scarf joint, the said sections being provided with a series of inwardly extending lugs at opposite sides, adapted to take over one base flange of a track rail, and fastening devices extending over the other base flange of a rail and secured to said bed, the several sections of the roadbed being transversely arched.

4. The herein described roadbed for railway rails, consisting of a series of metal sections laid edge to edge, the said sections being provided with a series of lugs at opposite sides adapted to take over one base flange of a track rail, and fastening devices designed to extend over the opposite flange of a rail and be secured to said sections.

5. The herein described roadbed for railway rails, consisting of a series of metal sections laid edge to edge, whereby to form a solid metal structure, said sections being provided with means for securing track rails thereto, and formed outside of said means with longitudinally extending channels, as and for the purpose set forth.

883,179. STEERING-GEAR FOR MOTOR-MACHINES. HOMER B. DITWILER, Mansfield, Ohio, assignor of one-fourth to Lewis W. Roe, Mansfield, Ohio. Filed Nov. 7, 1907. Serial No. 401,075.



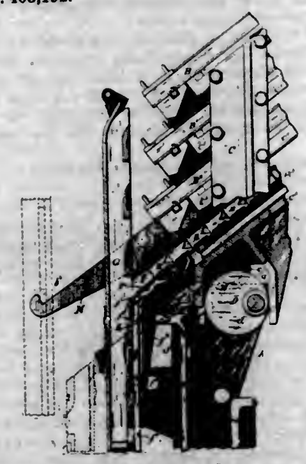
1. In a steering gear for motor machines, a steering shaft formed with right and left screw threads, companion blocks having relatively opposite threads for engagement with the threads of said shaft, said blocks being formed with concave under faces and a yoke mounted for rocking movement and having its ends free and in constant contact with the corresponding concave under faces of said blocks.

2. In a steering gear for motor machines a casing having opposite inner faces oppositely inclined, a shaft having right and left threads, companion blocks having relatively opposite threads for engagement with the threads of said shaft, a rocking member actuated by said blocks, plates bearing against each and having their outer faces inclined correspondingly to said respective inclined inner faces with which they lie in contact and means for moving each plate in either direction along said inclined inner faces.

3. In a steering gear for motor machines, the combination with a right and left threaded steering shaft and movable blocks thereon and a yoke designed to be operated by said blocks; a rectangular boxing curved at its base comprising in combination two longitudinal sides curved at their base, a rectangular lug mounted centrally on the inner portion near the lower end of each of said longitudinal sides, said lugs being directly opposite to each other and designed to operate as companions, two other longitudinal side portions, provided with wedge shaped lugs on their inner surfaces, said boxing having an orifice centrally located in the top thereof all arranged and combined substantially as shown and described.

4. A steering gear for motor machines comprising in combination a steering shaft provided with right and left screw threads; a boxing incasing said screw threaded portion; movable companion blocks within said boxing one designed to be operated by the right screw threads and the other by left screw threads on the said steering shaft; said blocks each having inwardly inclined lower surfaces; a yoke concaved in its upper surface mounted in the said boxing immediately below and between the said movable blocks, said yoke having an orifice centrally thereof; rectangular lugs mounted in the said boxing, in such a position as to cause them to be between the said movable blocks at their lower extremities; means for adjusting the position of the movable blocks on the said shaft, substantially as shown and described.

883,180. LINOTYPE-MACHINE. PHILIP T. DODGE, Washington, D. C., assignor to Mergenthaler Linotype Company, a Corporation of New York. Filed Apr. 13, 1907, Serial No. 368,056. Renewed Nov. 21, 1907. Serial No. 403,192.



1. In combination, superposed magazines, a raceway to receive the matrices from the magazines, an intermediate escapement mechanism movable vertically that it may be brought into operative relation to any magazine, and means for moving the magazines horizontally to and from their operative positions to permit the adjustment of the escapement mechanism.

2. In a linotype machine, the combination of a main-frame, an escapement mechanism movable vertically at will, an upright raceway to receive the matrices, superposed inclined magazines, and a magazine supporting frame mounted to move horizontally in the main-frame.

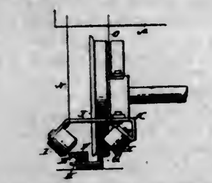
3. In a linotype machine, the combination of the following elements: a main-frame, a secondary frame movable horisontally therein, plural magazines sustained in the secondary frame, an escapement mechanism movable vertically at will in the main-frame to coöperate with one magazine or another as required, a stationary raceway in position to receive the matrices from the escapement mechanism, escapement actuating reeds sustained by and movable vertically with the escapement frame, actuating slides mounted in the main-frame, and intermediate devices for communicating motion from the slides to the reeds in each position of the latter.

4. In a linotype machine, and in combination with an escapement mechanism movable only in a vertical direction, plural magazines movably mounted in the machine so that any magazine may be brought into operative relation to the escapement mechanism when the latter is adjusted to the corresponding height.

5. In a linotype machine, the combination of superposed magazines, a movable support for said magazines, a vertically movable escapement mechanism adapted to coöperate with any one of the magazines, and means for moving the magazine support to carry the magazines endwise to and from the escapement mechanism.

[Claims 6 to 12 not printed in the Gazette.]

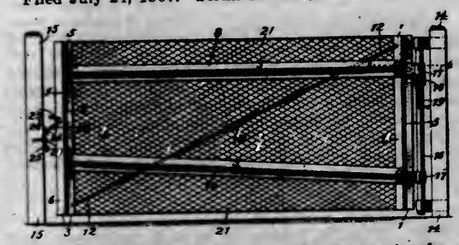
883,181. ELECTRIC STREET-RAILWAY SWITCH. JOHN P. DOWD and THOMAS P. DOWD, Cedar Rapids, Iowa. Filed Sept. 30, 1907. Serial No. 395,292.



1. In combination with a movable switch rail and a car substantially as described, electro-magnets mounted immovably each side and in advance of the car-wheel flange, electrical conductors therefor, a conductor leading to the trolley-wire, and an electric switch to close said magnets in circuit, alternately.

2. In combination with a car having electro-magnets mounted each side and a little in advance of the wheel flanges, and near the track, conductors adapted to energize said magnets alternately from the trolley wire, and electrical switches for the respective circuits, the combination of main and side-track rails, a guard rail, and a switch rail pivoted to swing a limited distance between the side and guard rails, the switch rail being provided with a guide-plate coöperating with the rails each side, to prevent its lifting under the influence of magnetism.

883,182. GATE. FRANCIES E. ELDREDGE, Waverly, Iowa. Filed July 24, 1907. Serial No. 385,385.



1. A gate comprising a substantially rectangular frame including vertical end bars and top and bottom longitudinal bars, each of said vertical end bars being made up of two ribbed strips secured together with their ribs facing outwardly, and each of the longitudinal bars being made up of ribbed strips secured to the vertical end bars at the opposite sides thereof with their ribs facing outwardly.

2. A gate comprising a substantially rectangular frame including vertical end bars and top and bottom longitudinal bars, each of said vertical end bars being made up of two ribbed strips secured together with their ribs facing outwardly, and each of the longitudinal bars being

made up of two ribbed strips secured to the vertical end bars at opposite sides thereof with their ribs facing outwardly and a stay rod connecting the vertical end bars and extending in a straight line diagonally of the frame between the strips forming the top and bottom longitudinal bars, said strips being spaced to permit the passage of the stay rod therebetween.

3. A gate comprising a substantially rectangular frame including vertical end bars and top and bottom longitudinal bars, each of said vertical end bars being made up of two ribbed strips secured together with their ribs facing outwardly, and each of the longitudinal bars being made up of ribbed strips secured to the vertical end bars at the opposite sides thereof with their ribs facing outwardly and abutting the ribs of the vertical end bars, said frame being adapted to and having a supporting hinge connection at one end thereof, the bottom longitudinal bar of said frame being upwardly inclined from the vertical end bar nearest the hinged connection to the outer vertical end bar of the frame to prevent sagging of the frame at its outer end.

4. A gate comprising a substantially rectangular frame including vertical end bars and top and bottom longitudinal bars, each of said vertical end bars being made up of ribbed strips secured to the vertical end bars at the opposite sides thereof with their ribs facing outwardly, and a wire filler arranged intermediate the opposite members of each of the respective bars of the frame and securely clamped therebetween.

5. In a gate, the combination of a substantially rectangular frame comprising vertical end bars and top and bottom longitudinal bars, each of said vertical end bars being cross shaped in section and made up of two ribbed strips of T-shaped form in cross section, said strips being secured together with their ribs facing outwardly and oppositely disposed, and each of the longitudinal bars being made up of ribbed strips secured to the vertical end bars at the opposite sides thereof with their ribs facing outwardly, a pintle, and hinge members connecting the gate frame with the pintle, each hinged member comprising a strip embracing the pintle and having separated extended end portions to receive therebetween one of the flat vertical portions of one of the vertical end bars.

883,183. PROTECTIVE DEVICE FOR COOKING UTENSILS. DAVID ELLIOTT and LEMUEL B. STANTON, Saugerties, N. Y., assignors of one-third to said Elliott and one-third to Jacob Bruckner, Saugerties, N. Y., and one-third to Carrie D. B. Nearing, New York, N. Y. Filed Mar. 26, 1907. Serial No. 364,633.



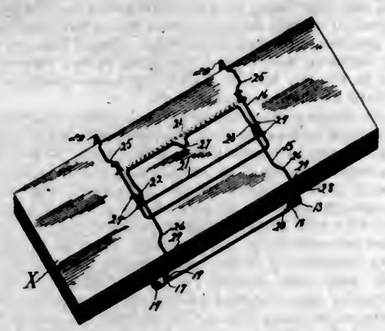
As a new article of manufacture, a protective device of the character described consisting of a dish-like lower member of sheet metal formed with an integral upwardly-turned flange; and a sheet metal cover for said member; said sheet metal cover being formed with an integral downwardly-extending flange which fits snugly over said upwardly-turned flange; the top and bottom of said device being formed with apertures which are out of register or staggered with relation to one another.

883,184. CLASP. SAMUEL F. ESTELL, Los Angeles, Cal. Filed Aug. 8, 1907. Serial No. 387,700.

1. In a clasp, in combination, a base having a yielding contact surface, leaves hinged to the base at opposite marginal edges thereof and adapted to fold over its contact surface, and means for detachably uniting the free ends of the leaves when so folded.

2. In a clasp, in combination, a base having a yielding contact surface, a leaf hinged to a marginal edge of the base and adapted to fold over its contact surface, and means for detachably connecting the free end of the leaf with the opposite marginal edge of the base when so folded.

3. In a clasp, in combination, a base, an elastically flexible contact member carried by the base and extending over its surface, a leaf hinged to a marginal edge of the base and adapted to fold over the contact member, and means for detachably connecting the free end of the leaf with the opposite marginal edge of the base when so folded.

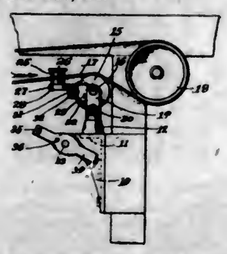


4. In a clasp, in combination, an open rectangular frame formed of spring wire and having an eye at each of its corners, a yielding contact leaf extending over the frame from each of two opposite marginal edges thereof, each of such leaves being formed of spring wire and such wire adjacent each of its ends being threaded through the eye at a corner of the frame and being bent to form an angle, the adjacent end of the wire being secured to a side member of the frame, hinged leaves adapted to fold over the contact leaves, and means for detachably uniting the free ends of the hinged leaves.

5. In a clasp, in combination, a base having a yielding contact surface, an angular leaf hinged to the base at each of two opposite marginal edges thereof, one leg of each leaf extending upwardly from the base when the clasp is closed, and the other leg extending over the base, and means for detachably uniting the free ends of the leaves.

[Claim 6 not printed in the Gazette.]

883,185. BELT-GUIDE. SAMUEL D. FELSING, Crookston, Minn., assignor to The Maplebay Wind Stacker Company, Crookston, Minn., a Corporation. Filed May 17, 1906. Serial No. 317,354.



1. In an automatic belt guide, the combination with a suitable bracket, of a pulley frame journaled to swing freely in said bracket, a pulley adapted to receive a flat belt journaled in said frame, the axes of said frame and pulley being in the same plane but at right angles to each other, a pair of guide members mounted on said swinging pulley frame and arranged at one side of said pulley and out of line with the axis of said frame and engaging the edges of the belt at a point in advance of said pulley, whereby the pressure of the belt against one or the other of said guide members will shift said pulley frame and pulley, said guide members being adjustable on said pulley frame about the axis of the pulley, whereby they will properly engage the edges of the belt when the latter passes on to the pulley at different angles to the axis of the pulley frame and means for securing said guide members in adjusted position on said pulley frame, substantially as described.

2. In an automatic belt guide, the combination with a suitable bracket, of a pulley frame journaled in said bracket, a pulley adapted to receive a flat belt journaled in said frame, the axes of said pulley and said frame lying in the same plane but at right angles to each other, a support mounted on said swinging pulley frame and projecting laterally therefrom, a pair of guide rolls journaled on said support at one side of said pulley and at right angles to the axis thereof, said guide rolls being arranged to engage the opposite side edges of the belt at a point in advance of said pulley, said support and the guide rolls journaled thereon being adjustable on said swinging pulley frame about the axis of said pulley, whereby the guide rolls will properly engage the edges of the belt when the latter passes onto the pulley at different angles to the axis of the pulley frame and means for securing the said support in adjusted position upon said pulley frame, substantially as described.

3. A belt guide comprising a suitable bracket, a pulley frame journaled to swing freely in said bracket, a pulley adapted to receive a flat belt journaled in said frame at right angles to the axis thereof, a pair of connected arms pivotally mounted at their inner ends upon the shaft of said pulley, means adjustably connecting said arms to the pulley frame and guide rolls mounted on said arms at one side of said pulley and arranged to engage the opposite edges of the belt in advance of said pulley, whereby the pressure of the belt upon one or the other of said guide rolls will automatically shift said pulley frame and pulley, substantially as described.

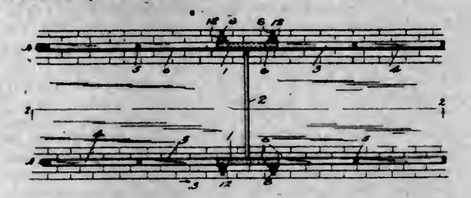
4. A belt guide comprising a suitable bracket, a pulley frame pivoted on said bracket, a pulley journaled in said frame, a pair of arms connected at their outer ends and pivoted at their inner ends upon the shaft of said pulley, guide rolls journaled on the outer ends of said arms for engaging the edges of the belt, and means for adjustably connecting said arms to the pulley frame comprising a curved arm concentric with the pulley shaft fixed at one end to one of said parts and adjustably secured to the other of said parts.

5. In an automatic belt guide, the combination with a suitable bracket, of a pulley frame journaled to swing freely upon a vertical axis in said bracket, a pulley adapted to receive a flat belt journaled in said frame upon a horizontal axis, the axes of said frame and said pulley being arranged in the same vertical plane, a pair of connected supporting arms secured to and laterally projecting from said frame, guide rolls journaled on vertical axes on the outer ends of said arms and arranged to engage the opposite edges of the belt, said rolls having flanges at their upper ends above the belt, a horizontal cross roll journaled between the ends of said arms and arranged to extend beneath the belt, said guide rolls and said horizontal cross roll being arranged at one side of said pulley to engage the belt at a point in advance of the pulley, said arms and said guide rolls carried thereby being adjustable on said pulley frame in vertical direction to properly engage the belt when the latter passes to the pulley at different angles to the axis of the pulley frame and means for securing said supporting arms in adjusted position on said swinging pulley frame, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

883,186. HOSE-BRIDGE. JACOB FINE, Louisville, Ky. Filed Jan. 13, 1908. Serial No. 410,705.

1. In a hose bridge of the character described, the combination with the track rails, of supplemental rail sections increasing in thickness toward one another and alined in pairs upon said track rails, and provided with reduced tongues upon their adjacent ends having threaded bolts extending at right-angles thereto, hose housings spanning the adjacent ends of each pair of said sections and connected by a transverse bar and being provided with openings for the passage of hose, and with slotted openings to receive said bolts therein, and nuts for engagement with said bolts to lock said housings in position, sustantially as described.

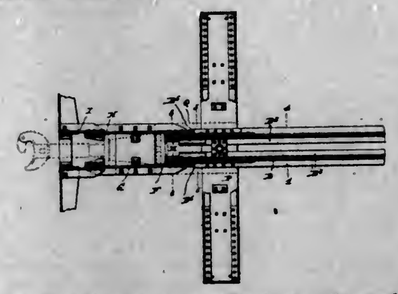


2. In a hose bridge of the character described, the combination with the track rails, of supplemental rail sections increasing in thickness toward one another and alined in pairs upon said track rails, and provided with reduced tongues upon their adjacent ends having threaded bolts extending at right angles thereto, hose housings spanning the adjacent ends of each pair of said sections and embracing said reduced tongues thereof, said housings being connected by a two-part transverse bar, said housings being further provided with openings for the passage of hose and with slotted openings to receive said bolts therein, and nuts for engagement upon said bolts to lock said housings in position substantially as described.

3. In a hose bridge of the character described, the combination with the track rails, of supplemental rail sections increasing in thickness toward one another and alined in pairs upon said track rails, said sections being pivotally hinged intermediate their ends and provided with reduced tongues upon their adjacent ends having threaded bolts extending at right angles thereto, hose housings spanning the adjacent ends of each pair of said sections and connected by a transverse bar and being provided with openings for the passage of hose, and with slotted openings to receive said bolts therein, and nuts for engagement with said bolts to lock said housings in position, substantially as described.

4. In a hose bridge of the character described, the combination with the track rails, of supplemental rail sections increasing in thickness toward one another and alined in pairs upon said track rails, said sections being pivotally hinged intermediate their ends and provided with reduced tongues upon their adjacent ends having threaded bolts extending at right angles thereto, hose housings spanning the adjacent ends of each pair of said sections and embracing said reduced tongues thereof, said housings being connected by a two-part transverse bar having an adjusting element connecting said parts, said housings being further provided with openings for the passage of hose and with slotted openings to receive said bolts therein, and clamping nuts for engagement upon said bolts to lock said housings in position, substantially as described.

883,187. FRAME FOR RAILWAY-CARS. RICHARD D. GALLAGHER, Jr., New York, N. Y. Filed May 29, 1907. Serial No. 376,838.



1. In an under frame for railway cars, the combination with draft sills forming housings for the draft and buffing gears at opposite ends of the car, of a truss girder

extending from one housing to the other and embodying a plurality of substantially vertical webs having edge strengthening flanges and located centrally from the line of the draft sills a distance greater than the thickness of the webs, said webs being a distance apart less than the width of the rear end of the draft and buffing gear and having their ends positioned to form the rear stops, whereby buffing thrusts are in alinement with and directly against the ends of the truss girder.

2. In an under frame for railway cars the combination with draft sills forming housings for the draft and buffing gear at opposite ends of the car, of a girder extending from one housing to the other and embodying webs projecting between the draft sills, filling pieces between said webs and sills of greater thickness than the thickness of the webs whereby the webs will be separated from each other a distance less than the width of the rear end of the buffing gear said webs themselves forming the stops for the buffing gear.

3. In a frame for railway cars, truss girder web plates extending beyond the bolster at each end of the car, longitudinal angle irons secured to the inner faces of said web plates, strengthening plates secured to the outer faces of said web plates, said web plates, angle irons and strengthening plates forming at their ends the inner stops for the draft and buffing rigging and draft irons overlapping and secured to the outer faces of the plates and web plates.

883,188. ROTARY ENGINE. CARL GAUSE and PHILIPP CONRADY, Berlin, Germany. Filed Oct. 16, 1906. Serial No. 339,270.



1. Engine of the type described, comprising in combination a cylinder, a drum-shaped piston not touching the periphery of said cylinder, a pair of hinged flaps forming partition-walls between the cylinder and the piston, said flaps being arranged opposite one another and being able to turn in an opposite direction and channels arranged in such a manner that each cylinder space will be connected to the corresponding channels.

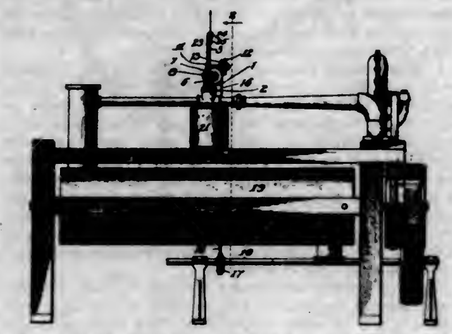
2. Engine of the type described, comprising in combination a cylinder, a drum-shaped piston not touching the periphery of said cylinder, a plurality of pairs of hinged flaps, every two of said flaps being situated opposite one another and being able to turn in an opposite direction, whereby the cylinder-space is divided into two parts which receive the different pressures, and channels arranged in such a manner that each cylinder space will be connected to the corresponding channels.

3. Engine of the type described, comprising in combination a plurality of cylinders and drum-shaped pistons, hinged flaps in each cylinder, every two of said flaps being situated opposite one another and being able to turn in an opposite direction, whereby the space of each cylinder is divided into two parts which receive the different pressures, and channels or pipes connecting the single spaces of the different cylinders.

4. Engine of the type described, comprising in combination a stationary cylinder, a crank-shaft, a drum-shaped piston in, and a ring-shaped piston around the said cylinder, another stationary cylinder around the latter piston, both pistons connected to each other and to the crank of the said shaft, flaps hinged to the cylinders and sliding on the pistons, in each cylinder every two of said flaps being situated opposite one another and being able to turn in an opposite direction, whereby the space of each cylinder is divided into two parts which receive the different pressures, openings leading to the single spaces of the cylinders, and slide-valves working on the said openings.

5. Engine of the type described, comprising in combination two cylinders arranged in juxtaposition, a crank-shaft the cranks of which being rotated 180° relatively to one another, two drum shaped pistons not touching the periphery of the said cylinders and attached to the cranks of the said shaft in each cylinder, pairs of hinged flaps in the cylinders, every two of said flaps being situated opposite one another and being able to turn in an opposite direction, channels arranged in such a manner that each cylinder space will be connected to the corresponding channels, and pipes connecting the emission channel of the one and the admission channel of the other cylinder.

883,189. FEED-REGULATOR FOR GAS-GENERATORS. CLARENCE L. GERRARD, Columbus, Nebr. Filed Sept. 6, 1907. Serial No. 391,556.



1. In a gas generator, the combination with an acid-containing receptacle, of a device for gradually feeding a wire into the acid in said receptacle, said device comprising a feed roller frictionally engaging said wire, and adjustable driving gear for driving said feed roller at a predetermined speed.

2. In a gas generator, the combination with an acid-containing receptacle, of a device for gradually feeding a wire into the acid in said receptacle, said device comprising a feed roller, a spring-pressed roller coöperating with said feed roller to frictionally grip the wire, a worm-gear for driving said feed roller, and a driving gear provided with adjustable means for regulating the speed at which said worm-gear is driven.

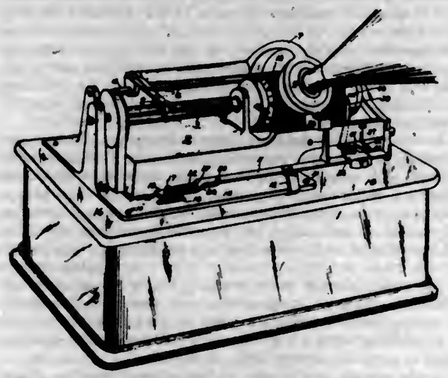
3. In a gas generator, the combination with an acid containing receptacle, of a device for gradually feeding a wire into the acid in said receptacle, said device comprising a feed roller provided with a V-shaped groove in its periphery adapted to receive the wire to be fed, of a spring-pressed roller for holding said wire in frictional engagement with said feed roller, and adjustable driving means for driving said feed roller at a predetermined speed.

4. In a gas generator, the combination with an acid containing receptacle, of a device for gradually feeding a wire into the acid in said receptacle, said device comprising a feed roller provided with a V-shaped groove in its periphery, of an opposing spring-pressed roller having in its periphery a groove in which said feed-roller rides, said rollers being thereby adapted to receive between them and to frictionally grip wires of various sizes, and adjustable means for driving said feed-roller.

5. In a gas generator, the combination with an acid containing receptacle, of a device for gradually feeding a wire into the acid in said receptacle, said device comprising a feed-roller arranged to engage and in its rotation to feed a wire, a worm-gear for driving said feed-roller, a ratchet-wheel for operating said worm-gear, a ratchet-arm carrying a pawl for engaging the teeth of said ratchet-wheel, a set-screw for regulating the throw of the ratchet-arm and thereby the number of teeth said ratchet-wheel is rotated for each stroke of the ratchet-arm, and means for reciprocating said ratchet-arm.

[Claims 6 to 10 not printed in the Gazette.]

883,190. PHONOGRAPH-STOP. SYLVESTER W. GIBBS, Canton, Ohio, assignor of one-half to The Gibbs Manufacturing Company, Canton, Ohio, a Corporation of Ohio. Filed Aug. 12, 1907. Serial No. 388,172.



1. In a phonograph having a frame with a movable speaker-arm and a motor mechanism with a spring-controlled starting-lever; a stop-mechanism comprising a controlling-lever pivotally connected with the frame, a shoulder on one end of the controlling-lever adapted to hold the starting-lever open, a bracket on the other end of the controlling-lever, an indicating-finger on the bracket, and a trip-lever pivoted on the bracket and having a trip-arm in the path of the speaker-arm and a cam-acting shoulder abutting the frame whereby the movement of the speaker-arm rotates the controlling-lever to disengage its shoulder from the starting-lever.

2. In a phonograph having a frame with a movable speaker-arm and a motor-mechanism with a spring-controlled starting-lever; a stop-mechanism comprising a controlling-lever pivotally connected with the frame, a shoulder on the controlling-lever adapted to hold the starting-lever open, a bracket on the controlling-lever, an indicating-finger on the bracket, and a trip-lever pivoted on the bracket and having a trip-arm in the path of the speaker-arm and a cam-acting shoulder abutting the frame whereby the movement of the speaker-arm rotates the controlling-lever to disengage its shoulder from the starting-lever.

3. In a phonograph having a frame with a movable speaker-arm and a motor mechanism with a spring-controlled starting-lever; a stop-mechanism comprising a controlling-lever pivotally connected with the frame, means for detachably engaging the controlling-lever with the starting-lever in its open position, a bracket on the controlling-lever, an indicating-finger on the bracket, and a trip-lever pivoted on the bracket and having a trip-arm in the path of the speaker-arm and a cam-acting shoulder abutting the frame whereby the movement of the speaker-arm rotates the controlling-lever to disengage the starting-lever.

4. In a phonograph having a frame with a movable speaker-arm and a motor-mechanism with a spring-controlled starting-lever; a stop-mechanism comprising a controlling-lever pivotally connected with the frame, means for detachably engaging the controlling lever with the starting-lever in its open position, a bracket on the controlling-lever, a trip-lever pivoted on the bracket and having a trip-arm in the path of the speaker-arm and a cam-acting shoulder abutting the frame whereby the movement of the speaker-arm rotates the controlling-lever to disengage the starting-lever.

5. In a phonograph having a frame with a movable speaker-arm and a motor-mechanism with a starting-lever; a stop-mechanism comprising a controlling-lever pivotally connected with the frame, a shoulder on the controlling-lever adapted to hold the starting-lever in its open-position, a spring acting to draw the starting-lever into the angle of the shoulder, and means on the controlling-lever in the path of the speaker-arm whereby the movement of the speaker-arm rotates the controlling-lever to disengage its shoulder from the starting-lever.

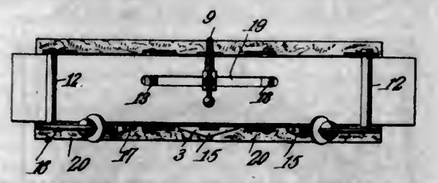
[Claims 6 to 10 not printed in the Gazette.]

883,191. FEED-WATER HEATER. RICARDO ZARAGOZA DE GRAU, Barcelona, Spain. Filed June 9, 1905. Serial No. 271,704.



The combination with a furnace and smoke flue of a feed water heater located in the smoke flue and comprising in combination a closed chamber having an exterior wall of corrugated cross section an inverted conical member forming the bottom of said chamber, a plurality of lateral connections near the upper part of said wall for connection at will of several such chambers in series, a pipe extending from outside the flue for inlet of liquid to the lower part of said chamber, and another pipe extending outside the flue for discharge of heated liquid therefrom.

883,192. HARNESS-SADDLE. JOSEPH Y. GRAY, Clanton, Ala. Filed Nov. 9, 1907. Serial No. 401,454.



1. A harness saddle comprising resilient members, brackets connecting the members, rollers carried by the brackets, a girth strap disposed beneath the series of rollers, a tug strap disposed over certain of the rollers and under certain of the others, a check-rein hook, and means for holding the tug strap assembled with the said hook for sliding movements relatively thereto.

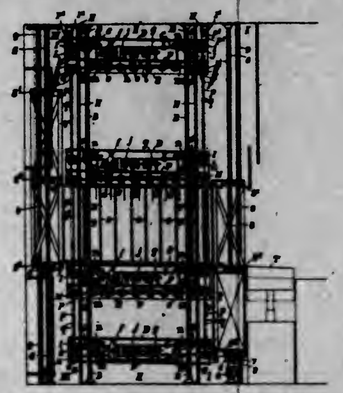
2. A harness saddle provided with rollers, a tug strap disposed over certain of the rollers and beneath the others and provided with a longitudinal slot, and a check rein hook having a shank projecting through the slot.

883,193. SCENE-SHIFTING DEVICE. ENRICO GIULIETTI, Milan, Italy. Filed Mar. 14, 1905. Serial No. 250,088.

1. In theater staging, a vertically adjustable structure comprising an upper floor adapted for use as a stage, an under floor, means on said under floor for raising and lowering said structure, and a part adapted for use as a ceiling on its under side.

2. In theater staging, a vertically adjustable structure comprising an upper floor adapted for use as a stage, an under floor, means on said under floor for raising and lowering said structure, a part adapted for use as a ceiling on its under side, ceiling curtains, means above said part for receiving and holding said curtains and apertures in said part.

3. In theater staging, a vertically adjustable structure comprising an upper floor adapted for use as a stage, an under floor, vertical guides for said structure, a motor located on said under floor, and mechanisms connecting said motor to said guide.

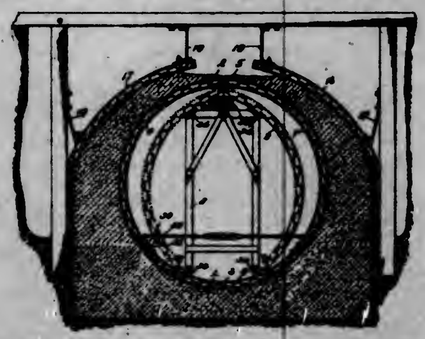


4. In theater staging, a plurality of self-actuated vertically adjustable structures each comprising a stage, a motor and a floor carrying said motor, vertical guides or tracks common to all of said structures, means for operating said structures intermediate their respective motors and the said guides or tracks.

5. In theater staging, a plurality of vertically adjustable structures each comprising a stage, independent actuating means for their raising and lowering, and a floor carrying said actuating means and means for raising and lowering any of said structures together.

[Claim 6 not printed in the Gazette.]

883,194. SEWER-MOLD. KEITH O. GUTHRIE, Brooklyn, N. Y. Filed Nov. 19, 1907. Serial No. 402,903.



1. In a mold for tubular concrete structures, a collapsible mold section comprising a flexible face-plate supported and reinforced by a flexible metallic web-section, in combination with a divided stiffening chord attached to the intermediate web-section to form the whole into a continuous truss structure except at the point of division of the chord, and means for temporarily uniting the parts of the divided stiffening chord to complete the continuity of the truss structure throughout, whereby when the parts of the stiffening chords are united the truss structure is complete and when the said parts are not united the mold section may be bent at the point of division and thereby collapsed, substantially as described.

2. In a mold for tubular concrete structures, a collapsible mold section comprising a flexible face-plate supported and reinforced by a flexible web-section of thin metal bent to form diagonally extending reaches and intermediate connecting portions, alternate connecting portions being secured to the face-plate, in combination with a divided stiffening chord secured to the other alternate connecting portions to form the whole into a continuous truss structure except at the point of division of the chord, and means for temporarily uniting the parts of the divided stiffening chord to complete the continuity of the truss structure throughout, whereby when the parts of the stiffening chord are united the truss structure is complete and when the said parts are not united the mold-section may be bent at the point of division and thereby collapsed, substantially as described.

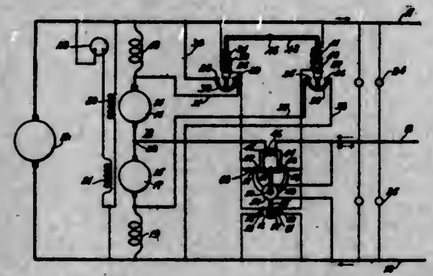
3. In a mold for tubular concrete structures, a main collapsible mold-section comprising a flexible face-plate supported and reinforced by a flexible metallic web-section having a divided stiffening chord forming the whole into a continuous truss structure except at the point of division of the chord, and means for temporarily uniting the parts of the divided stiffening chord to complete the continuity of the truss structure throughout, in combination with a supplemental invert mold section adapted to support the edges of the main mold section and complete the mold, whereby there is formed a light tubular mold having an open interior through which other collapsed mold-sections may be carried, substantially as described.

4. In a mold for tubular concrete structures, an upper arched mold section comprising a flexible face-plate supported and reinforced by a flexible metallic truss web-section of thin metal bent to form diagonally extending reaches and intermediate connecting portions, alternate intermediate portions being secured to the face-plate, and a stiffening chord attached to the other alternate intermediate portions, to form the whole into an arched truss structure, in combination with means for supporting the lower edges of the said section in an invert mold, whereby there is formed a tubular mold having an open interior through which other collapsed mold sections may be carried, substantially as described.

5. In a mold for tubular concrete structures, an upper arched mold section comprising a flexible face-plate supported and reinforced by a flexible metallic truss web-section of thin metal bent to form diagonally extending reaches and intermediate connecting portions, alternate intermediate portions being secured to the face-plate, and a stiffening chord attached to the other alternate intermediate portions, to form the whole into an arched truss structure, in combination with a supplemental invert member adapted to support the lower edges of the upper mold section, whereby there is formed a tubular mold having an open interior through which other collapsed mold sections may be carried, substantially as described.

[Claims 6 to 10 not printed in the Gazette.]

883,195. SYSTEM OF DISTRIBUTION. DAVID HALL, Norwood, Ohio, assignor to The Bullock Electric Manufacturing Company, a Corporation of Ohio. Filed Feb. 7, 1906. Serial No. 299,863.



1. In a multiple voltage system of distribution, more than two conductors, a balancer including a plurality of compound-wound dynamo-electric machines connected to said conductors, and means for automatically cutting out

of service one of the field windings of one of said machines when the ratio of the loads between the different conductors departs from normal.

2. In a three-wire system of distribution, a source of current, two main conductors, a neutral conductor, a balancer set including two compound-wound dynamo-electric machines connected to said conductors and automatic means for cutting out one of the field windings of one of said dynamo-electric machines when the currents become unbalanced on the two sides of the system.

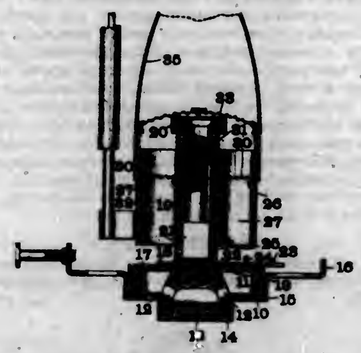
3. In a multiple voltage system of distribution, a plurality of feeder conductors, a plurality of compound wound dynamo-electric machines connected to said conductors and adapted to act as motors or generators to supply current to the branch or branches of the system which carry the heaviest currents to maintain the voltages at the proper values, and means for automatically short-circuiting the series field of the machine which acts as a motor to drive another machine as a generator when the currents are unbalanced.

4. In a multiple voltage system of distribution, more than two feeder conductors, a balancer consisting of a plurality of compound-wound dynamo-electric machines mechanically connected together and electrically connected to the conductors of the system, and automatic means for rendering inoperative the series field of that machine which drives another as a generator when the currents become unbalanced.

5. In a multiple-voltage system of distribution, more than two conductors, a balancer consisting of a plurality of compound-wound dynamo-electric machines connected to the conductors of the system, and automatic means for transforming that dynamo-machine which acts as a motor to drive another as a generator, from a compound-wound to a shunt wound dynamo-electric machine, when the currents are unequal.

[Claims 6 to 19 not printed in the Gazette.]

883,196. GAS-BURNER. HENRY A. B. HELANDER, St. Louis, Mo. Filed July 10, 1907. Serial No. 382,981.



1. In a gas burner, the combination with a base provided with a plurality of gas outlets, of a central stem carried by said base, a member provided with a plurality of mixing chambers and a central opening for said stem, and a mantle supported from said member and receiving the gas and air discharged from said mixing chambers.

2. In a gas burner, the combination with a base provided with a plurality of gas outlets, of a member centrally supported over said base and provided with a plurality of mixing chambers, a mantle arranged to receive the gas and air discharged from said mixing chambers, and means situated between said base and member for controlling the supply of gas.

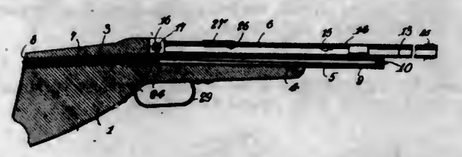
3. In a gas burner, the combination with a base provided with a distributing chamber and a plurality of gas outlets, of a member provided with a plurality of mixing chambers and centrally supported above said base to leave an unobstructed peripheral air passage, a perforate partition in said mixing chambers, and a common perforate cover for all of said mixing chambers.

4. In a gas burner, the combination with a base having a plurality of gas outlets, of a member provided with a plurality of mixing chambers and a central opening, a stem carried by said base and passing through said central opening, a coil spring surrounding said stem at each end of said member, and locking means engaging the upper end of said stem.

5. In a gas burner, the combination with a base having a plurality of gas outlets, of a stem carried by said base, a controlling device for said outlets surrounding said stem, a spring surrounding said stem and resting on said controlling device, and a member provided with a plurality of mixing chambers, said member surrounding said stem and bearing on said spring.

[Claim 6 not printed in the Gazette.]

883,197. TOY GUN. BERNT HESTNESS, Rockford, Wash., assignor of one-half to I. J. Blåkkan, Rockford, Wash. Filed Aug. 5, 1907. Serial No. 387,166.



1. In a device of the character described, the combination with the stock and forearm, of a barrel arranged above the forearm and projecting in advance of the same, a hub member having oppositely inclined ratchet teeth journaled in rear of the rifle barrel, a plunger having an inwardly projecting member with a catch at its free end adapted to engage one of the ratchet teeth of said hub, means carried by the stock and forearm for exerting a forward pull on the plunger when set, and a trigger normally holding the hub against rotation.

2. In a toy gun of the character described, the combination with a barrel, forearm and stock, the latter having a bore or opening throughout its length, of a longitudinally extending tube arranged under the barrel, one end of the tube projecting into the opening of the stock, a detachable plate arranged at the outer end of the stock, a coiled spring arranged in the opening in the stock, one end of the spring being attached to said plate and the other end projecting into the inner end of the tube, a plunger movable in the barrel, and a flexible connecting element arranged between the inner or free end of the spring and the plunger.

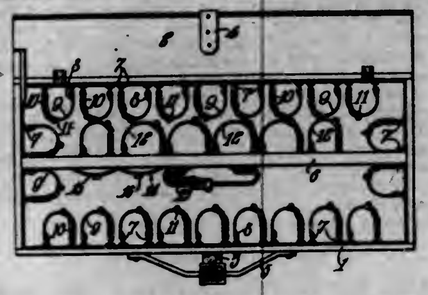
3. In a toy gun, the combination with the stock and forearm, of a barrel arranged above the forearm, a hub member having two series of oppositely inclined teeth on its periphery journaled rearwardly of the barrel, a plunger arranged in the barrel and having an inwardly extending catch member adapted to engage one of the teeth of one series of the hub member, a trigger pivoted to the stock and adapted to normally engage one of the teeth of the other series and means carried by the stock and forearm for exerting a forward pull on the plunger when set.

4. In a toy gun, the combination with a stock and forearm, of a barrel arranged above the forearm, a hub member having two series of oppositely inclined teeth journaled in the rear of the barrel, a plunger arranged in the barrel and having an inwardly extending catch adapted to engage either of the teeth of one series of the hub member, a trigger pivoted to the stock and adapted to normally engage either of the teeth of the other series, a pull spring arranged in the stock, and a flexible connecting member arranged between the spring and plunger.

883,198. MAIL-HOLDER. THOMAS A. HILL, Bivins, Tex. Filed Oct. 28, 1907. Serial No. 399,549.

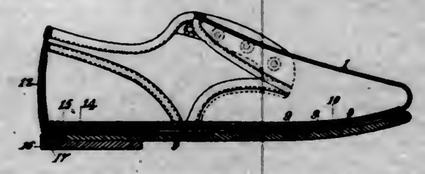
A device of the character described comprising a portable receptacle, a cross strip secured within the receptacle

and spaced above the bottom thereof, and elastic independently adjustable straps secured upon the inner faces of the walls of the receptacle, elastic independently adjustable straps secured upon the cross strip, all of said



straps being disposed above the bottom of the receptacle, the space formed below said straps and the cross strip constituting an article receiving compartment, a closure for the receptacle, and a handle.

883,199. SHOE. FRANK W. HOMAN, Swampscott, Mass. Filed Oct. 22, 1906. Serial No. 340,020.



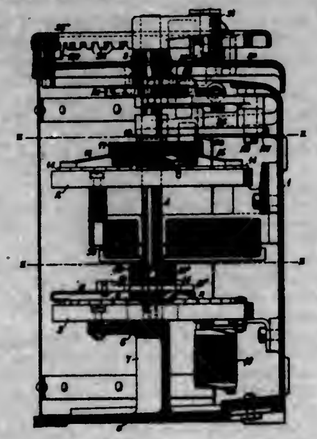
1. A boot or shoe comprising an upper and an outsole, the outsole having an extended edge slit inwardly upon opposite sides between the heel and shank portions, the extended sole edge along the shank and about the fore-part turned over upon the inner surface of the outsole and the upper stitched to the inturned edge of the sole along the shank and about the fore-part, and a lacing extending across the inner face of the sole and engaging the inturned edges of the upper and sole, an insole, the edge of the upper lasted inward upon the insole at the heel and secured between the insole and the rear end of the outsole and heel and the outstanding edge of the sole at the heel trimmed to conform thereto, substantially as described.

2. A boot or shoe comprising an upper and an outsole, the outsole having an extended edge slit inwardly upon opposite sides between the heel and shank portions and the extended edge along the shank and about the fore-part turned over upon the inner surface of the outsole, the upper stitched to the inturned edge of the outsole along the shank and about the fore-part, means for securing the inturned edge of the upper and outsole, the edge of the upper lasted inward upon the insole at the heel and secured between the insole and the rear end of the outsole, a heel secured to the outsole, and the outstanding edge of the outsole at the heel trimmed to conform thereto and forming a part of the heel, substantially as described.

883,200. CONTROLLER FOR ELECTRIC MOTORS. HENRY D. JAMES, Pittsburg, Pa., assignor to Westinghouse Electric & Manufacturing Company, a Corporation of Pennsylvania. Filed May 16, 1906. Serial No. 317,228.

1. A controller for electric motors comprising a field rheostat, an armature-reversing faceplate member, a single operating handle, a rheostat contact arm rigidly connected to said handle, and a contact arm for said faceplate member having a lost-motion connection with said handle.

2. A controller comprising a field rheostat, an armature-reversing faceplate member, a single operating handle and suitable contact arms having a rigid and a lost-motion connection therewith, respectively.



3. In a controller, the combination with an annular set of stationary contact terminals, and a pair of rigidly connected but electrically independent contact arms to engage said contact terminals, of a field rheostat and a single operating handle for the movable contact arms and the field rheostat.

4. In a controller, the combination with a pair of stationary insulating plates disposed in substantially parallel planes, stationary contact terminals circumferentially arranged on each insulating plate, a rotatable shaft substantially perpendicular to the planes of the insulating plates, a contact arm projecting from said shaft to engage one set of contact terminals, and a multiple contact arm the extremities of which are adapted to engage the other set of contact terminals, of a lost-motion connection between said shaft and said multiple contact arm.

5. In a controller for electric motors, the combination with an annular set of stationary contact terminals, a pair of rigidly connected but electrically independent contact arms to engage said contact terminals, a second set of stationary contact terminals similarly disposed in a plane parallel to that of the first set, and a single movable contact arm therefor, of a rotatable shaft for said movable contact arms, and means for temporarily disconnecting said pair of contact arms from said shaft after the shaft has been rotated through a predetermined angle in either direction from the "off" position of the controller.

[Claims 6 to 17 not printed in the Gazette.]

883,201. TERMINAL CONNECTOR. HARRY T. JOHNSON, New York, N. Y. Filed Mar. 22, 1906. Serial No. 307,393.

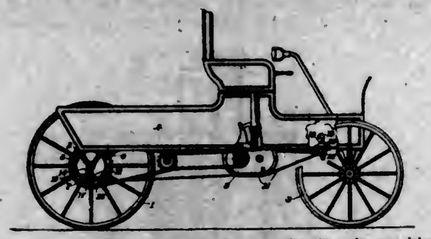


1. A terminal connector comprising an apertured plate, and flexible integral arms offset from the plate and extending outwardly from the aperture on opposite sides thereof, terminal seats formed by the offsets of the arms, said plate having portions projecting beyond the seats and said arms being adapted to be bent over the terminal to hold the terminal against the seats and the projecting portions of the plate.

2. The combination with a contact member, of a conductor terminal, an apertured plate provided with radially projecting arms on opposite sides of the aperture bent around the conductor terminal, and a clamping member on the contact member and having indentations on its clamping surface which engage the bent arms of the plate.

3. The combination with a contact member, of an apertured plate provided with flexible projecting arms, offset therefrom, and with portions intermediate the arms which project beyond the offsets, and a conductor terminal held by the arms between said intermediate portions and said arms.

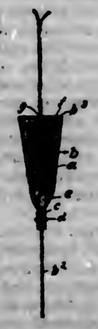
883,202. VEHICLE-BRAKE. EDWARD A. JOHNSTON, Sterling, Ill., assignor to International Harvester Company, a Corporation of New Jersey. Filed Aug. 16, 1907. Serial No. 388,761.



1. A brake mechanism for vehicles having, in combination, rotatable friction elements deriving motion from the road wheels, relatively fixed friction elements mounted upon a part of the vehicle, means for causing said fixed elements to engage with said rotatable elements, said means comprising separate rock-shafts, means for rocking said shafts in opposite directions, said means including separate lever arms secured to said shafts and extending in opposite directions from the axes thereof, a flexible connection between the outer ends of said arms, a brake controlling member adapted to be manipulated by the operator and having one end slidably engaging with said flexible connection intermediate the ends thereof.

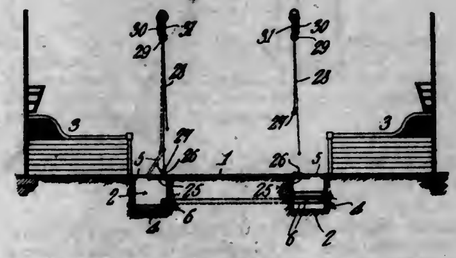
2. A brake mechanism for vehicles having, in combination, friction elements secured to road wheels upon opposite sides of the vehicle and rotatable coaxially therewith, relatively fixed friction elements mounted upon the vehicle, means for causing said fixed elements to engage with said rotatable elements, said means comprising a two-part rock-shaft having its outer ends operatively engaging with said fixed friction elements, means for rocking the parts of said shaft in opposite directions, said means including lever arms secured to the inner adjacent ends of said shaft and extending in opposite directions from the axis thereof, a flexible connection between the outer ends of said arms, a brake controlling member adapted to be manipulated by the operator and having one end engaging with said flexible connection intermediate the ends thereof.

883,203. FLY-CATCHER. THOMAS KAY, Moorfield, Stockport, England, assignor to Kay Brothers, Limited, Stockport, England. Filed Feb. 4, 1907. Serial No. 355,589.



The herein described fly catching device, comprising a receptacle composed of a thin tapered tube provided with a cap at the larger end and the smaller end of which is provided with a reinforcing band, the sides of said tube at the smaller end and the sides of said band being compressed and secured together, a strip of folded flexible material placed in said receptacle and one end of which is passed out between the compressed side of the tube and band at the smaller end of the tube, said receptacle being also provided with adhesive material which is placed therein before the cap is secured in position.

883,204. ATTACHMENT FOR STABLES. SYLVESTER R. KIMBALL, Sisseton, S. D. Filed Mar. 26, 1907. Serial No. 364,728.



1. In a stable, the combination with a series of stalls therein, of pits arranged in operative relation to said stalls, interconnected conveyers in said pits, a discharge conveyer at the discharge end of the interconnected conveyers, and means whereby there may be imparted to the discharge conveyer a higher relative rate of speed than that of the other conveyers.

2. In a stable, pits arranged longitudinally of and in juxtaposition to the rear of the stalls in said stable beneath the floor thereof, conveyers housed in said pits and arranged to convey material deposited thereon to a point of discharge, movable covers for said pits constituting continuations of the floors and stalls of the stable, and pivots for the covers connected to the upper edges of the pits and mounted to swing above the same, about which pivots the covers may be tilted while being raised from the pits, to cause material deposited on said covers to gravitate into the pits.

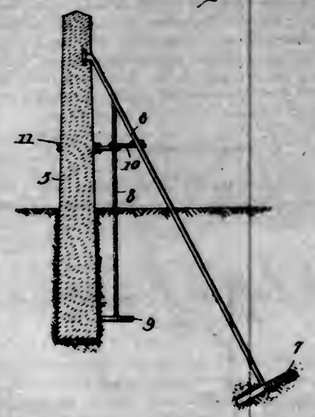
3. In a stable, pits arranged longitudinally thereof and in juxtaposition to the rear ends of the stalls in said stable, beneath the floor thereof, conveyers housed in said pits and arranged to convey material placed thereon to a point of discharge, movable covers for said pits one located at each stall and constituting continuations of the floor and stalls of the stable, pivotal mountings for the covers, and means whereby the pivots of the covers may be elevated above the floor but still in operative relation to the pits so that the covers may be tilted while being elevated to cause material deposited on them to gravitate into the pits.

4. In a stable, a series of conveyers arranged in operative relation to the stalls and interconnected for simultaneous motion, another conveyer extendible to the exterior of the stable and receiving material from the discharge end of the series of conveyers, and a friction drive for the series of interconnected conveyers arranged to vary their rate of speed without affecting the speed of the delivery conveyer.

883,205. POST-BRACE. CHRISTIAN KRABILL, Edgerton, Ohio. Filed Nov. 19, 1907. Serial No. 402,869.

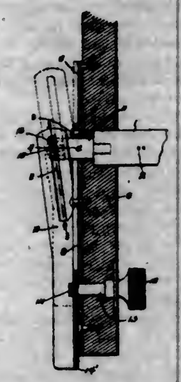
The combination with a fence post, of a brace therefor, the brace including a downwardly inclined brace bar, the brace bar having a head at its lower end, a vertical wire connected to the brace rod, the wire having a horizontally

extending head at its lower end, and a connecting wire secured at one end to the brace rod, the rod being se-



cured to the vertical wire, the wire also being secured to the post.

883,206. SHIFTABLE TRACKER-BAR. ARTHUR KUHLE, West New York, N. J., assignor to Hardman, Peck & Company, New York, N. Y., a Corporation of New York. Filed Oct. 25, 1907. Serial No. 399,187.



1. In a device of the character described, the combination with a support and longitudinally shiftable tracker bar, of a cam slidably mounted for shifting the tracker bar, and means for moving said cam.

2. In a device of the class described, the combination with a support and a tracker bar shiftably mounted therein, of a cam connected with and adjustable transversely of the tracker bar for shifting the same, and gearing connected with said cam and extending beyond the support for enabling manual shifting of the cam.

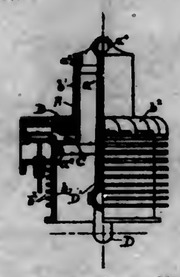
3. In a device of the class described, the combination with a support and a tracker bar shiftably carried thereby, of a cam movable transversely of and connected to said bar for shifting the same when the cam is moved, a slide plate carrying said cam, and gears for actuating said slide plate.

4. In a device of the class described, the combination with a support and a tracker bar shiftably mounted therein, of a bar disposed in angular relation thereto and shiftable transversely of the tracker bar, means connecting the bars, a plate for shifting the tracker bar when the second mentioned bar is shifted, and means for shifting the second mentioned bar.

5. In a device of the class described, the combination with a support and a tracker bar shiftably mounted thereon, of a bar mounted to move transversely with respect to the tracker bar and having a guide disposed in angular relation to the tracker bar, means connecting said tracker bar with said guide, and means for shifting the second mentioned bar.

[Claims 6 to 9 not printed in the Gazette.]

883,207. AIR-COOLED GAS-ENGINE. CYRUS B. KURTZ, Cleveland, Ohio, assignor of one-half to Frederick C. Bosworth, Cleveland, Ohio. Filed Aug. 27, 1906. Serial No. 332,127.



1. In an explosion motor, the combination with a crank-shaft and connecting-rod; of a cylinder open at both ends and comprising two portions having different diameters; and a hollow piston comprising two bearing portions fitted to the two portions of said cylinder, respectively, the portion of said piston having the smaller diameter being adapted in said piston's upper position to project without said cylinder and said connecting-rod being attached to such portion whereby the pin holding said connecting rod may be removed without withdrawing the piston from the cylinder.

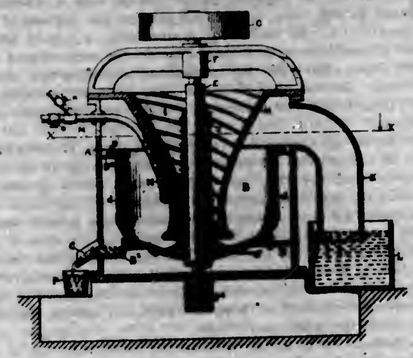
2. In an explosion motor, the combination with a crank-shaft and connecting rod; of a cylinder open at both ends and comprising two portions having different diameters; and a hollow piston likewise open at both ends and comprising two bearing portions fitted to the two portions of said cylinder, respectively, the portion of said piston having the smaller diameter being adapted in said piston's upper position to project without said cylinder and said connecting-rod being attached to such portion whereby the pin holding said connecting-rod may be removed without withdrawing the piston from the cylinder.

3. In an explosion motor, the combination with a cylinder open at both ends and comprising two portions having different diameters, of an annular piston fitting in the larger of said cylinder portions, and provided on one side with a tubular extension fitting in the smaller of said cylinder portions, whereby an annular explosion chamber is formed, the inner surface of said larger cylinder portion being exposed to the air save for the portion included within such annular chamber.

4. In an explosion motor, the combination with a cylinder open at both ends and comprising two portions having different diameters; of an annular piston fitting in the larger of said cylinder portions and provided on one side with a tubular extension fitting in the smaller of said cylinder portions, whereby an annular explosion chamber is formed, the inner surface of said larger cylinder portion being exposed to the air save for the portion included within such annular chamber; a crank-shaft located opposite the larger end of said cylinder; and a connecting rod joining said shaft to said piston, the outer end of said connecting rod being attached to the tubular portion of said piston.

5. In an explosion motor, the combination with a cylinder open at both ends and comprising two portions having different diameters, of an annular piston fitting in the larger of said cylinder portions, and provided on one side with a tubular extension fitting in the smaller of said cylinder portions, a crank-shaft located substantially directly against the larger end of said cylinder, and a connecting rod joining said shaft to said piston, the outer end of said connecting rod being attached to the tubular portion of said piston, and the throw of said crank-shaft being sufficient to cause said outer rod end to project without the cylinder at the end of the piston's outward stroke.

888,208. PROCESS OF SEPARATING INCOMBUSTIBLE MATERIALS HAVING DIFFERENT MELTING TEMPERATURES. MEREDITH LEITCH, Brooklyn, N. Y., assignor, by mesne assignments, to Metal Process Company, a Corporation of New York. Original application filed Apr. 2, 1904, Serial No. 201,230. Divided and this application filed Sept. 28, 1904. Serial No. 226,305.



1. The improvement in the process of separating a material of low melting temperature from a material of higher melting temperature, one of which at least is oxidizable, which consists in first producing by combustion a deoxidized atmosphere artificially heated by said combustion to a temperature at least equal to the low melting temperature and then subjecting the materials to be treated to said atmosphere and then cooling said material of high melting temperature to a substantially non-oxidising temperature prior to exposure to the air.

2. The improved process of separating an incombustible material of low melting temperature from an incombustible material of high melting temperature, one of which materials at least is oxidisable and both of which are solid at normal temperature, which consists in producing by combustion a deoxidised atmosphere artificially heated by said combustion to a temperature at least equal to the low melting temperature but less than the high melting temperature, subjecting the materials to said atmosphere and thereby reducing one of said materials to a molten condition and simultaneously also subjecting them to an artificial mechanical separating force and then cooling said material of high melting temperature to a substantially non-oxidising temperature prior to exposure to the air.

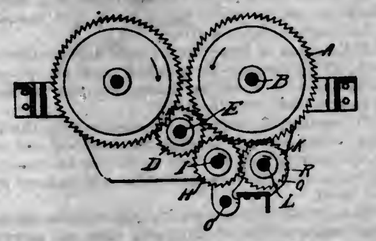
3. The improved process of separating incombustible materials of low melting temperature from incombustible materials of high melting temperature, one of which materials, at least, is oxidisable, which consists in producing a deoxidised atmosphere artificially raised to a temperature at least equal to the low melting temperature, but less than the high melting temperature, continuously passing the materials through said atmosphere, and meanwhile rapidly revolving said materials so as to subject them to centrifugal force, and separately collecting the materials thus thrown off.

4. The improved process of separating incombustible materials of low melting temperature from incombustible materials of high melting temperature, of which at least one is oxidisable, which consists in continuously feeding such materials into a deoxidised atmosphere, artificially heated to a temperature at least equal to the low melting temperature, but less than the high melting temperature, and while in this atmosphere acting upon them by a mechanical separating force, collecting the materials of low melting temperature at one point, and discharging the materials of high melting temperature at another point.

5. The improved process of separating incombustible materials of low melting temperature from incombustible materials of high melting temperature which consists in continuously feeding the materials to be acted upon into a furnace normally sealed except as to its receiving opening, subjecting said materials to artificial heat having a temperature at least equal to the low melting temperature but less than the high melting temperature, meanwhile acting upon said materials by a mechanical separating force, and collecting the melted material separated thereby at one point and continuously discharging the unmelted material at another point, and causing the products of combustion to pass through the orifice where the material is supplied and thereby when the apparatus is in operation sealing said orifice so as to prevent the entrance of air.

[Claims 6 and 7 not printed in the Gazette.]

883,209. TIN-SCRAP RENDING AND SHREDDING APPARATUS. MEREDITH LEITCH, Elizabeth, N. J., assignor to Metal Process Company, a Corporation of New York. Filed Nov. 30, 1906, Serial No. 345,816. Renewed Jan. 10, 1908. Serial No. 410,198.



1. In an apparatus for treating tin cans and the like, the combination of a gang of rotating disks having teeth, an abutment also having teeth coacting with the teeth upon the rotating disks, and a means for causing the teeth upon said disks to move slowly relatively to the teeth upon said abutment so as to tear or rend apart tin cans which may be impaled upon them.

2. In an apparatus for treating tin cans and the like, the combination of a gang of rotating disks having teeth, an abutment also having teeth coacting with the teeth upon the rotating disks, and a means for causing the teeth upon said disks to move slowly relatively to the teeth upon said abutment so as to tear or rend apart tin cans which may be impaled upon them, the teeth upon said rotating disks being pointed in a forward direction while the teeth upon the abutment are pointed in a backward direction.

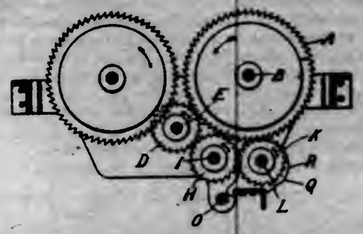
3. In an apparatus for treating tin cans and the like, the combination of a gang of rotating disks having teeth, an abutment also having teeth coacting with the teeth upon the rotating disks, and a means for causing the teeth upon said disks to move slowly relatively to the teeth upon said abutment so as to tear or rend apart tin scrap which may be subjected to them, said abutment being itself in the form of a revolving gang of toothed disks.

4. In an apparatus for treating tin cans and the like, the combination of a gang of rotatable disks having teeth, an abutment also consisting of a rotatable gang of disks having teeth coacting with the teeth upon the first mentioned disks, and a means for causing the teeth upon said disks to move at slightly different rates of speed so as to tear or rend apart tin scrap which may be subjected to them.

5. In an apparatus for treating tin cans and the like, the combination of two gangs of disks geared together so as to rotate in opposite directions, the peripheries of said disks being close to one another, but not overlapping and a third gang of disks having teeth moving at a faster rate than the peripheries of said first mentioned disks and penetrating the spaces between the disks of one of said other gangs.

[Claims 6 to 10 not printed in the Gazette.]

883,210. METHOD OF TREATING TIN-SCRAP. MEREDITH LEITCH, Elizabeth, N. J., assignor to Metal Process Company, a Corporation of New York. Original application filed Nov. 30, 1906, Serial No. 345,816. Divided and this application filed May 17, 1907. Serial No. 374,132.



1. The method of preparing tin cans and the like for detinning, which consists in heating the cans in a deoxidised atmosphere and tearing them apart while still heated.

2. The method of preparing tin cans and the like for detinning, which consists in heating them in a deoxidised atmosphere, tearing them apart while still heated, and then cutting them up into strips.

3. The method of preparing tin cans and the like for detinning, which consists in impaling them on two sets of teeth having a slow relative movement, and moving said teeth so as to tear the cans apart.

4. The method of preparing tin cans and the like for detinning, which consists in impaling them on two sets of teeth and moving said teeth so as to tear the cans apart, and later sawing the torn cans while still impaled on said sets of teeth.

5. The method of preparing tin cans and the like for detinning, which consists in flattening them out and tearing them apart so as to open the seams and then cutting them into strips.

[Claim 6 not printed in the Gazette.]

883,211. APPARATUS FOR TREATING TIN-SCRAP. MEREDITH LEITCH, Springfield, Mass., assignor, by mesne assignments, to Metal Process Company, a Corporation of New York. Filed Aug. 2, 1907. Serial No. 386,716.



1. In an apparatus for treating tin scrap, the combination of a revolving cylinder having an opening at one end for receiving the material to be treated and a discharge opening at the other end sealed against the ingress of atmospheric air, and means located near the discharge end of the cylinder for maintaining a heated deoxidised atmosphere within said cylinder, the axis of said cylinder being approximately horizontal and a body having projections and located within said cylinder in the neighborhood of its discharge end, and means for rapidly revolving said body.

2. In an apparatus for treating tin scrap, the combination of a revolving cylinder having an opening at one end for receiving the material to be treated and a discharge opening at the other end sealed against the ingress of atmospheric air, and means located near the discharge end of the cylinder for maintaining a heated deoxidised atmosphere within said cylinder, the axis of said cylinder being lower at the discharge end than at the receiving end and a body having projections and located within said cylinder in the neighborhood of its discharge end, and means for rapidly revolving said body.

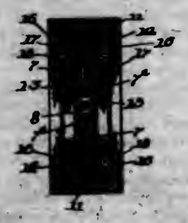
3. In an apparatus for treating tin scrap, the combination of a revolving cylinder having an opening at one end for receiving the material to be treated and a discharge opening at the other end sealed against the ingress of atmospheric air, and means for maintaining a heated deoxidised atmosphere within said cylinder, the axis of said cylinder being lower at the discharge end than at the receiving end, said cylinder being provided with internal projections and a body having projections and located within said cylinder in the neighborhood of its discharge end, and means for rapidly revolving said body.

4. In an apparatus for treating tin scrap, the combination of a revolving cylinder having an opening at one end for receiving the material to be treated and a discharge opening at the other end sealed against the ingress of atmospheric air, and means for maintaining a heated deoxidised atmosphere within said cylinder, the axis of said cylinder being approximately horizontal, a combustion chamber near the discharge end of said cylinder surrounded with projections and means for rapidly revolving said projections.

5. In an apparatus for treating tin scrap, the combination of a revolving cylinder having an opening at one end for receiving the material to be treated and a discharge opening at the other end sealed against the ingress of atmospheric air, and means for maintaining a heated deoxidised atmosphere within said cylinder, the axis of said cylinder being lower at the discharge end than at the receiving end, said cylinder being provided with internal projections, a combustion chamber near the discharge end of said cylinder surrounded with projections and means for rapidly revolving said projections.

[Claims 6 to 14 not printed in the Gazette.]

883,212. SPIRIT-LEVEL. GEORGE W. LINGLE, Chicago, Ill. Filed Apr. 9, 1906. Serial No. 310,717.



1. A spirit level comprising a ring and side plates arranged to constitute a liquid container, a liquid, and means extending to near the center of the container and coöperating with a transparent side thereof for holding the upper surface of the liquid in more than one plane at the time of reading.

2. A spirit level comprising a ring and side plates arranged to constitute a liquid container, a liquid, and a reading bar close to one of the plates with a thin passage therebetween for the employment of capillary attraction to maintain the liquid in more than one plane at the time of reading.

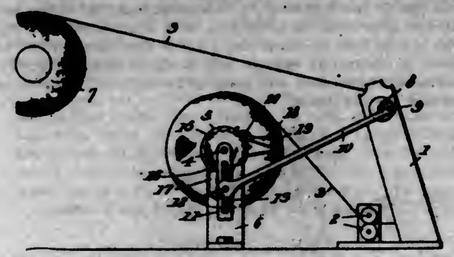
3. A spirit level comprising a ring and side plates arranged to constitute a liquid container, a liquid, and a plurality of reading bars close to the plates for the purpose of holding the upper surface of the liquid in more than one plane at the time of reading.

4. A spirit level comprising a ring and transparent side plates arranged to constitute a liquid container, a liquid, and a plurality of reading bars extending inwardly from the ring to near the center thereof and adapted to maintain the upper surface of the liquid in more than one plane at the time of reading.

5. In a spirit level the combination of a ring having a plurality of reading bars extending inwardly therefrom with a transparent plate on each side of the ring.

[Claim 6 not printed in the Gazette.]

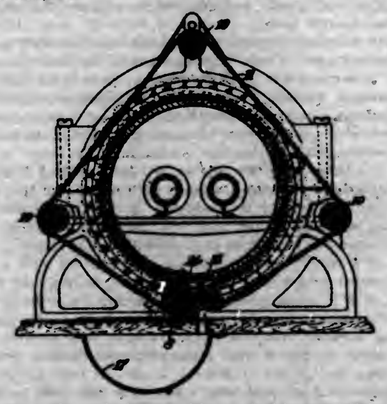
883,213. REWINDER FOR PERFORATING-MACHINES. EDWARD F. LITTLEFIELD and HERBERT A. DRINKWATER, Belfast, Me. Filed May 2, 1907. Serial No. 371,524.



1. In an apparatus of the class described, a perforator, a distributing roll sustained adjacent thereto, a receiving roll operatively supported near the perforator, said rolls being interchangeable for permitting reversal of a backing strip which is adapted to be led from the distributing roll through the perforator to the receiving roll to bring either of its faces into position for receiving the impress of the perforator, and means operable from the latter for imparting a step-by-step rotation to the receiving roll.

2. In an apparatus of the type described, a perforator, a distributing and a receiving roll sustained for rotation adjacent thereto, an arm fixed on the shaft of the latter, a pitman engaged with said arm, a toothed ratchet fixed upon said shaft, a spring-pressed pawl carried by the arm for engagement with the ratchet to impart a step-by-step rotation to the roll, and means for preventing retrograde movement of the latter, said rolls being interchangeable to permit of the reversal of a backing strip which is adapted to be led from the distributing rolls through the perforator to the receiving roll, for bringing either of its faces into position for receiving the impress of the perforator.

883,214. BLUE-PRINTING DEVICE. CHARLES DE LUKACSEVICS, New York, N. Y. Filed July 5, 1907. Serial No. 382,170.



1. In a blue-printing machine, a light-transmitting cylinder composed of a plurality of parts, the edges of which are ground and fitted closely together.

2. In a blue-printing machine, a light-transmitting cylinder composed of a plurality of parts, the adjacent edges of which are fitted closely together in substantial contact, so as to form a smooth, unbroken surface.

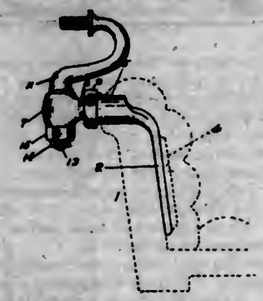
3. In a blue-printing machine, a light-transmitting cylinder, a source of light therein, means for causing said cylinder to rotate, rings or bands of elastic, yielding material, surrounding the said cylinder, and ball bearings between said rings or bands and their supports.

4. In a blue-printing-machine, a light-transmitting cylinder, a source of light therein, means for causing said cylinder to rotate, rings or bands surrounding the said cylinder, a frame supporting the same and provided with circular openings, and ball bearings between the said rings or bands and the frame, the ring or band at one end of said cylinder being capable of longitudinal movement relative to said frame.

5. In a blue-printing machine, a light-transmitting cylinder, a source of light therein, means for causing said cylinder to rotate, rings or bands surrounding the said cylinder, a frame supporting the same and provided with circular openings, and ball bearings between the said rings or bands and the frame, both of said rings or bands being grooved to receive the balls, and the frame being similarly grooved at one end only.

[Claims 6 to 8 not printed in the Gazette.]

883,215. SEAT-IRON. GEORGE W. LUKE, Jackson, Mich. Filed Sept. 12, 1907. Serial No. 392,442.



1. The combination with a vehicle body of a seat iron secured to the inner side of the seat frame, and having an interiorly screw-threaded socket extending outwardly from the upper end thereof, a bracket support having a shank in screw-threaded engagement with the socket, a check-nut on the shank bearing against the socket and a goose neck removably secured to the outer end of the bracket support, the bracket support being provided with a tapering aperture and the gooseneck with a corresponding foot seated in said aperture.

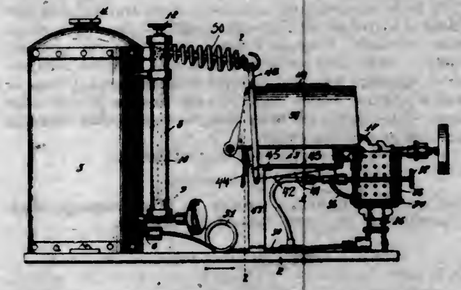
2. The combination with a vehicle body of a seat iron having a flattened lower portion secured to the inner side of the vehicle seat, an outturned horizontal interiorly screw-threaded socket integrally formed on the upper end thereof, a bracket support having a screw-threaded shank for engagement with the socket and a tapering aperture in its outer end at right angels to the shank, and a check-nut on the shank bearing against the socket of the iron, a goose neck having a tapering foot engaging the aperture, and terminating in a screw-threaded extension, a tapered split nut on said extension, and a locking washer telescoping with the nut.

3. The combination with a vehicle body of a seat iron secured to the inner side of the seat having an integral outturned interiorly screw-threaded socket at its upper end, a bracket support having a screw-threaded shank engaging into said socket and a check-nut on the shank bearing against the end of the socket the bracket-support being provided at its outer end with an aperture at right angles to the axis of the shank and a gooseneck removably secured to the outer end of the bracket support.

883,216. SOLDERING-FURNACE. NATHAN W. LUNDY, Marshalltown, Iowa. Filed May 17, 1907. Serial No. 374,170.

1. In a soldering iron heater, the combination with a supporting base, of a furnace comprising a bottom plate having a fuel conducting channel arranged around the same, a central fuel feeding tube fixed to, and delivering the fuel into said channel, and a deflector secured to the interior of said channel, in alinement with the interior of said tube for directing the fuel through both arms of said fuel conducting channel and a burner having a forward

end cross-piece having an outwardly delivering passage, said fuel conducting channel also delivering into lateral portions of said burner, and means for utilizing the heating action of the flame delivered through the forward end burner passages.



2. In a soldering iron heater, the combination with a supporting base, of a furnace comprising a bottom plate having fuel conducting channels therein, an iron supporting portion, surrounded by said channel, a fuel conducting tube connected with said channel, an open bottomed burner with the lower edges of its lateral walls arranged in a seat around the upper edge of said channel, a packing between said burner and said seat, a vaporizer having a valved discharge passage connecting with said fuel conducting tube, means for furnishing a fuel supply to said vaporizer, substantially as described.

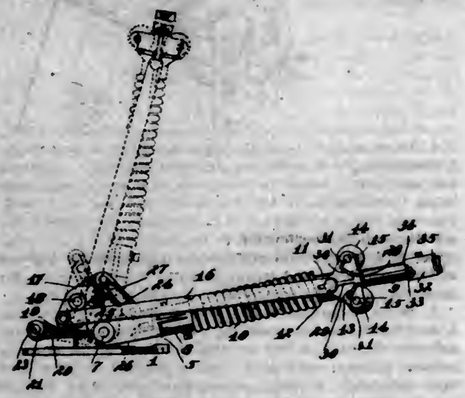
3. In a soldering iron heater, the combination with a supporting base, of a furnace comprising a bottom plate having a fuel conducting channel therein, an open iron supporting portion surrounded by said channel, a fuel separating and deflecting lug arranged in said channel, a fuel conducting tube connected with the latter, said lug or deflector being arranged in alinement with the interior of said tube, a burner comprising two sides and an end piece, said side and end pieces having formed therein a continuous chamber opening downwardly into said channel, said side pieces having longitudinal burner passages opening through their inner surfaces and said end piece having burner passages opening through its forward portion, iron supporting ribs formed on said open iron supporting portion of the bottom plate between the sides of the burner, and means adapted to receive the heating action of the flame issuing through the burner passages in said burner forward end piece, and mixer connected to said furnace, and means to primarily heat said vaporizer, substantially as described.

4. A soldering iron furnace comprising a base, a furnace arranged thereon, said furnace consisting of a bottom plate having an open fuel conducting channel arranged therein, an open centrally disposed iron supporting portion arranged on said plate, a horse-shoe-shaped burner adapted to open downwardly into said fuel channel, a rearwardly inclined cover plate arranged below the central open portion of the base plate, a plate over the open end of said cover plate, and means for furnishing fuel supply to said furnace.

5. A soldering iron heater comprising a base, a furnace arranged thereon, said furnace consisting of a bottom plate having an open fuel conducting channel arranged therein, an open central iron supporting portion arranged on said plate, a horse-shoe shaped burner adapted to open downwardly into said fuel channel, and a fuel supply stand-pipe having a heating plate subjected to the heating action of the flame issuing from the burner openings in the end of said burner.

883,217. AUTOMATICALLY-TRIPPING TROLLEY-POLE MECHANISM. THOMAS H. MARS, Chicago, Ill. Filed Apr. 5, 1906. Serial No. 309,964.

1. In a trolley mechanism, the combination with a turret member and a pole pivoted thereon to oscillate vertically, of a trip lever pivoted between its ends on said turret member, a main spring, a part actuated by said main spring, a link connecting the spring-actuated part with one end of the trip lever, a link connecting the other end of said trip lever with the pole at a point removed from the pivotal axis of the latter, a latch with which the trip lever is adapted to engage, and a tappet member moving with the trolley pole and adapted to actuate the latch to release the trip lever.



2. In a trolley mechanism, the combination with a turret member and a pole pivoted thereon to oscillate vertically, of a trip lever pivoted between its ends on said turret member, a main spring mounted upon the pole and immovably confined at one end by a part of the pole, a shiftable member mounted upon the pole and actuated upon by the opposite end of said main spring, a link connecting said shiftable member with one end of the trip lever, a second link connecting the other end of said trip lever with the pole at a point between its pivotal axis and the shiftable member, a latch with which the trip lever is adapted to engage, and a tappet member moving with the trolley pole and adapted to actuate the latch to release the trip lever.

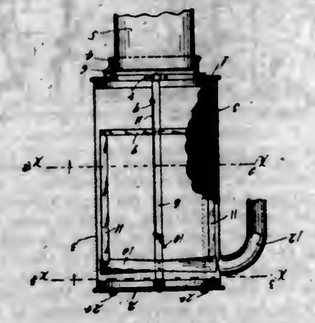
3. In a trolley mechanism, the combination with a turret member and a pole pivoted thereon to oscillate vertically, of a trip lever pivoted between its ends on said turret member, a main spring, a part shiftably mounted upon said pole and actuated by said main spring, a link connecting said shiftable member with one end of the trip lever, a lost motion link connection connecting the other end of said trip lever with the pole at a point removed from the pivotal axis of the latter, a latch with which the trip lever is normally engaged in operation, and a tappet member moving with the trolley pole and operating to release the latch when the pole rises to a predetermined angle.

4. In a trolley mechanism, the combination with a turret member and a pole pivoted thereon to oscillate vertically, of a tripping lever pivoted between its ends on said turret member, a main spring mounted upon the pole, a sliding member mounted upon the pole and actuated by said main spring, a link connecting the sliding member with one end of the trip lever, a second link connecting the other end of said trip lever with the pole, a latch with which the trip lever is normally engaged, a member moving with the trolley pole and adapted to actuate the latch to release the the trip lever, and a friction clutch mechanism carried by said shiftable member and operating automatically to lock the main spring against movement during the upward movement of the pole in a position intermediate its limit of movement.

5. In a trolley mechanism, the combination with a turret member, and a pole provided at its lower end with yoke arms pivoted to opposite sides of said turret member so as to oscillate vertically, of a pair of trip levers pivoted between their ends at opposite sides of said turret member to move in planes parallel with the plane of movement of the trolley pole, a main expansion spring mounted upon the lower part of the trolley pole and having its lower end engaging a fixed part upon said pole, a shiftable collar mounted upon the pole and engaged by the opposite end of said spring, a pair of tension links connected with the opposite sides of said shiftable member and extending thence to and connected with the lower ends of the corresponding trip levers, a pair of links connecting the upper ends of the respective trip levers with the corresponding yoke arms, each of the latter links having a slot-and-pin lost motion connection at one of its ends, a latch mechanism with which the lower end of each trip lever is normally engaged, and a part or parts moving with the trolley pole arranged to engage and release said latch mechanism when the pole rises to an abnormal angle.

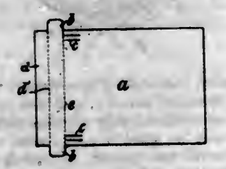
[Claims 6 and 7 not printed in the Gazette.]

883,218. SPARK-ARRESTER. NATHANIEL MARTIN, Seaforth, Minn. Filed Apr. 18, 1907. Serial No. 368,066.



In a spark arrester, the combination with the screen-equipped body portion thereof serving as a section of a smoke stack, of a cinder delivery pipe tapping the upper portion of said arrester body, a rotary beater mounted within said arrester body and having blades extending lengthwise of said screen and working near the same, oblique propeller blades constituting the upper portion of said rotary beater and extending approximately in line with the opening of said cinder delivery pipe and arranged to assist in forcing the cinders into said opening, substantially as described.

883,219. MEANS FOR MOUNTING CARBON-SHEETS. CLARENCE H. MEGSON and GEORGE H. SCULTHORP, Manchester, England, assignors to Milton Bartholomew, London, England. Filed July 9, 1906. Serial No. 325,426.



A holder for a carbon sheet or for carbon sheets, formed of a sheet of tinfoil paper, said sheet comprising a main body portion, an extended portion at one end thereof, and having projecting tongues adjacent to the main body portion, slits in the body portion adjacent to the extended portion; the extended portion together with the tongues serving, when folded over the carbon sheet or sheets and the tongues inserted in the slits, to secure the carbon sheet or sheets to the holder, substantially as set forth.

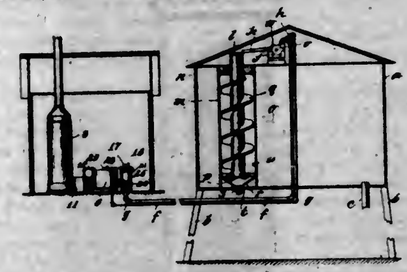
883,220. CLAMP FOR GAS-HOSE. WILLIAM H. MIDDLEBROOK, Southport, Conn., assignor of one-half to Jeremiah P. Osterhoudt, Kingston, N. Y. Filed Sept. 6, 1907. Serial No. 391,620.



1. A clamp of the character described comprising clips parallel to each other, arms connecting said clips, and a hook connected to one of said arms and adapted to engage the other arm.

2. A clamp of the character described comprising clips parallel to each other, arms connecting the open sides of said clips and a hook having an eye engaging one of said arms and sliding freely thereon, the hook proper being adapted to engage the other arm.

883,221. APPARATUS FOR TREATING, STORING, AND DELIVERING WATER. MARSHALL MILLER, St. Louis, Mo. Filed July 2, 1906. Serial No. 324,441.



1. In an apparatus of the class described, the combination of a receptacle provided with a water treating chamber, means for forming a current of water to be treated and causing it to pass into such chamber, a pump for pumping a chemical solution into the water to be treated, and governor mechanism operatively connected with the pump and adapted to be operated by the current of water to be treated for regulating the operation of the pump.

2. In an apparatus of the class described, the combination of a tank for containing water to be treated, means for introducing a current of water into such tank, a chemical solution containing tank, a pump for pumping chemical solution from such chemical solution containing tank into the water to be treated, a motor for operating such pump, and governor mechanism connected with the chemical pump and adapted to be operated by the motor, for automatically changing the speed of operation of the pump with relation to the motor and thereby controlling the quantity of chemical solution pumped into the water to be treated.

3. In an apparatus of the class described, the combination of a receptacle for containing liquid to be treated, means for introducing a current of liquid into such receptacle, a motor adapted to be operated by such current of liquid, a chemical solution containing tank for containing a chemical solution to be intermixed with the liquid to be treated, a pump operatively connected with the motor and provided with a passage communicating with the chemical solution tank and having a passage adapted to empty into the liquid to be treated, and means for changing the speed of operation of such pump with relation to the motor and thereby governing the proportion of chemical solution pumped into the liquid to be treated.

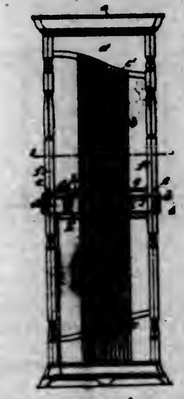
4. In an apparatus of the class described, the combination of a receptacle for containing liquid to be treated, means for forcing a current of liquid into such receptacle, a pump operating motor arranged in the path of such cur-

rent of liquid and adapted to be operated thereby, a chemical solution containing tank, a pump connected with and driven by such pump operating motor and provided with a passage communicating with the chemical solution containing tank and having a discharge passage adapted to empty into the liquid to be treated, and means whereby the length of the stroke of the pump plunger is made dependent upon the rapidity of its oscillation.

5. In an apparatus of the class described, the combination of a receptacle for containing water to be treated, means for producing a current of water and causing it to pass into such receptacle, pump operating mechanism arranged in the path of such current of water and adapted to be operated thereby, a pump connected with such pump operating mechanism for introducing a liquid solution into such water, and means for automatically varying the length of stroke of the pump plunger, said means being dependent upon the rate of reciprocation of said plunger.

[Claims 6 to 13 not printed in the Gazette.]

883,222. STRINGED MUSICAL INSTRUMENT. HENRY MÜLLER and JACOB STEIN, London, England. Filed Aug. 12, 1905. Serial No. 273,959.



1. In a stringed instrument a sliding device, keys provided thereon, sliding pins operated by the keys and a plectrum operated by the sliding pins in the manner and substantially as described.

2. In a stringed instrument, a tubular guide, a slide moving therein, an operating device attached thereto and keys provided on the operating device substantially as described.

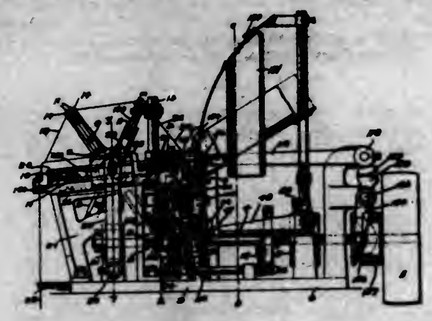
3. In a stringed instrument, a sliding device, keys provided thereon, sliding pins operated by the keys, a plectrum operated by the sliding pins and means for limiting the movement of the plectrum substantially as described.

883,223. MACHINE FOR STRINGING TAGS. LAWRENCE A. MCGRATH, Randolph, Mass., assignor of one-fourth to Michael F. Cunningham, Randolph, Mass. Filed June 6, 1907. Serial No. 377,582.

1. In a tag-stringing machine, the combination with means to sustain a tag, of a threader, means to move the threader to carry a loop of string through the eye of said tag and around the edge thereof, and means to draw the end of the string through said loop.

2. In a tag-stringing machine, the combination with means to sustain a tag, of a threader having at its end a string-engaging portion, means to move the string-engaging portion of the threader through the eye of the tag and around the edge thereof thereby to loop a string through said eye and carry the looped end around the edge of the tag onto that side thereof from which the loop was inserted, and means to draw the end of the string through said loop.

3. In a tag-stringing machine, the combination with means to sustain a tag, of means to sustain a string at one side of the tag, a threader, having a string engaging portion and means to move the string engaging portion of the threader against the string, through the eye of said tag and around the edge thereof thereby to loop the string through said eye of the tag and carry the looped end around the edge of the tag onto that side thereof from which the loop was inserted.



4. In a tag-stringing machine, the combination with means to sustain a tag in a fixed position, of means to sustain a string at one side of the tag, a threader having a portion to engage said string, means to move said portion of the threader against the string, through the eye of said tag and around the edge thereof thereby to loop the string through said eye of the tag and carry the looped end around the edge of the tag onto that side thereof from which the loop was inserted, and means to draw the ends of the string through said loop.

5. In a tag-stringing machine, the combination with an oscillatory threader arranged to loop a length of string through the eye of the tag, of means to draw the ends of said string through said loop.

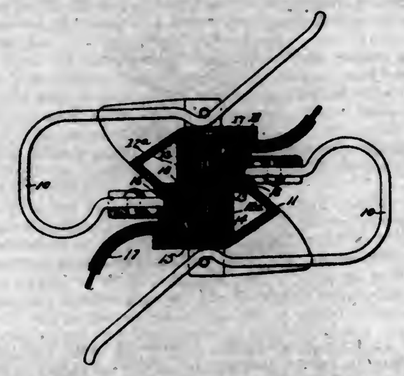
[Claims 6 to 66 not printed in the Gazette.]

883,224. ROTARY PUMP. JOSEPH F. NEVILLE, Woodruff, Utah. Filed Jan. 17, 1907. Serial No. 352,758.



A rotary pump comprising a cylinder, a rotary piston concentrically mounted therein, said piston consisting of a pair of separable semi-circular sections having their meeting faces grooved to form a transverse bearing opening extending through the piston, a piston blade slidably mounted in said bearing opening and provided at its longitudinal center with a longitudinal slot, a transverse bolt-opening formed in the sections at right angles to the plane of movement of the blade and in line with the slot in the latter, a connecting bolt entered into said bolt-opening and through said slot for detachably connecting the piston sections and holding the blade against escape from the piston, yieldable packing strips applied to the active edges of the sliding blades, a movable resistance block arranged to bear at one side of the piston and means for adjusting the block to take up wear on the piston.

883,225. COUPLING APPARATUS FOR ELECTRIC CIRCUITS. NICHOLAS F. NIEDERLANDER, St. Louis, Mo., assignor to Westinghouse Automatic Air & Steam Coupler Company, St. Louis Mo., a Corporation of Illinois. Filed Sept. 2, 1902. Serial No. 121,776.



1. The combination in a coupling, of opposing carrying members, spring contact studs mounted thereon, hollow posts slidably mounted on the studs, springs for holding the posts in advanced position and guiding means for causing the ends of the posts to slide over and into engagement with each other.

2. The combination in a coupling, of opposing carrying members, split spring contact studs slidably mounted thereon, hollow posts fitting over the spring studs, springs for holding the posts in advanced position and guiding means for causing the ends of the posts to slide over and into engagement with each other.

3. The combination in a coupling, of opposing carrying members, telescoping pairs of studs and posts having sliding spring engagement carried by the members, springs for holding the movable members of the telescoping pairs in advanced position, and guiding means for causing the ends of said movable members to slide over and engage each other.

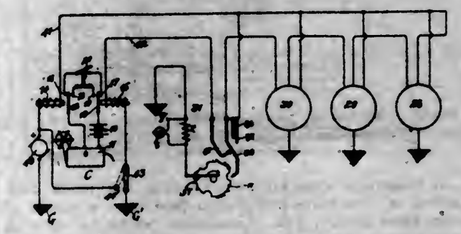
4. The combination in a coupling, of opposing carrying members, a terminal mounted on each of the carrying members, a sliding contact member for each terminal having resilient engagement therewith, means for yieldingly holding the contact members in advanced position, and means for guiding the carrying members so that the ends of the contact members are caused to slide over and engage each other.

5. The combination in a coupling, of opposing carrying-ing members, a contractible spring contact stud projecting at right angles from each of the carrying members, a hollow contact post slidably mounted upon each of the contact studs, a spring encircling each of the studs and pressing the posts into advanced position, and means for guiding the carrying members so that the ends of the contact posts are caused to slide over and engage each other.

883,226. FIRE-ALARM AND SIGNALING SYSTEM. JOHN D. NOLEN, Toledo, Ohio, assignor, by mesne assignments, to John E. Shepherd, Chicago, Ill. Filed Sept. 15, 1905. Serial No. 278,683.

1. In a signaling system, the combination with a line circuit leading from a central office to a series of circuit controlling substations, of two sets of make and break mechanism at each station, means at each station for limiting the movement of the associated make and break mechanism, and means for removing said limiting means and effectively changing the control of the circuit from one of said make and break mechanisms to the other simultaneously.

2. In a signaling system, the combination with a main line circuit leading from a central office to a series of circuit controlling stations, of switch mechanism at each substation, two break mechanisms at each substation associated with said switch mechanisms, a detent at each station serving to limit the movement of the associated make and break mechanism, and means for simultaneously removing said detent and changing the control of said switch mechanism from one break mechanism to the other.



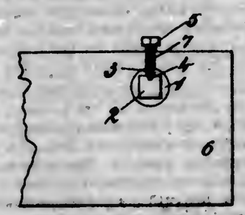
3. In a signaling system, the combination with a main line extending from a central office to a series of circuit controlling stations, of switch mechanism controlling said circuit, two break wheels at each station for controlling said circuit, normally wound mechanism for actuating said break wheels, a detent at each station for limiting the movement of said normally wound mechanism, and means which, when actuated, simultaneously causes the removal of said detent and the transfer of the control of said switch mechanism from one break wheel to the other.

4. In an alarm box of the class described, the combination with normally wound clock work, of an actuating lever associated therewith, two break wheels adapted to be driven by said clock work, switching mechanism associated with one of said break wheels, a detent to limit the movement of said actuating lever, means for controlling said detent, and means whereby an actuation of said controlling means to release said detent transfers the operative control of said switching mechanism from one of said break wheels to the other.

5. In a fire alarm and signaling system, the combination with a line leading from a central office through a series of stations, of a pair of switch contacts at each station included in the main line circuit, two sets of switch controlling mechanisms at each substation for actuating said switch contacts, means for transferring the control of said switch contacts from one of said switch mechanism sets to the other, an auxiliary pair of switch contacts controlling a circuit in shunt of the other stations on the line, and means whereby the actuation of said transferring means causes the actuation of said auxiliary pair of switch contacts.

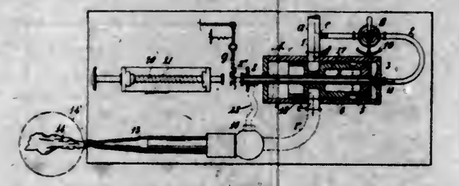
[Claims 6 to 12 not printed in the Gazette.]

883,227. INSULATOR. EDWARD F. PADDEN, Chicago, Ill. Filed Sept. 23, 1907. Serial No. 394,132.



The combination with a support having a threaded hole through the same and a slot communicating with said hole, of an insulator comprising a threaded cylindrical integral body screwed into said hole and having a longitudinal groove in the side which registers with said slot and a tap in the side of the body at the groove, and a screw extending through the slot and tap and into the groove, to hold the conductor therein.

883,228. INDICATING AND CONTROLLING APPARATUS FOR INFLATING MECHANISMS. CHARLS D. A. PASTEUR, Paris, France, assignor of one-third to Alfred Ernest Duqueane and one-third to Louis Lazare Dockes, Paris, France. Filed May 31, 1907. Serial No. 376,716.



1. Indicating apparatus for inflating mechanism comprising in combination, a branch pipe from a source of compressed gaseous fluid, a graduated regulating valve on said pipe, a closed chamber in communication with said pipe, a piston in said chamber adapted to move under the pressure of the compressed gaseous fluid, a lever mechanism connected to said piston and an indicating apparatus operated by said lever mechanism.

2. Indicating apparatus for inflating mechanism for the simultaneous inflation of a number of articles comprising in combination, a main pipe from a source of compressed gas, a series of nozzles adapted to receive articles to be inflated, a branch pipe from the source of compressed gas, a controlling valve on said main pipe, a cylinder connected to said branch pipe, a piston in said cylinder adapted to move under the gas pressure and indicating and recording apparatus adapted to be operated by the motion of said piston.

3. Indicating apparatus for inflating mechanism comprising in combination, a branch pipe from a source of compressed gas, a closed chamber in communication with said pipe, a movable partition in said chamber adapted to move under the pressure of the compressed gas, means for regulating the admission of compressed gas to the chamber, an indicating apparatus in operative connection with said movable partition, and means for shutting off the supply of compressed gas to the articles to be inflated adapted to be operated by the motion of the aforesaid movable partition.

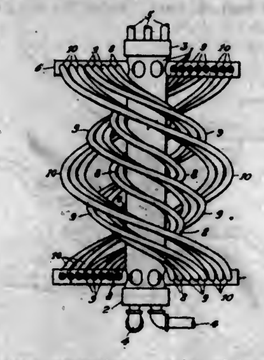
4. In combination with indicating apparatus for inflating mechanism, means for shutting off the supply of compressed gas to the articles to be inflated, comprising a closed chamber, a communication to said chamber from a source of compressed gas, a movable partition in said chamber, a projection attached to the said movable partition, a piston valve on the main gas supply pipe and a spring adapted to be released by the said projection in a given position of the partition, and to close the said main valve.

5. In combination with a compressed gas inflating mechanism, an adjustable indicator, apparatus adapted to operate the said indicator under pressure from the compressed gas supply, and a connection between the main valve of the inflating mechanism and the apparatus controlling the indicator whereby on the indicator attaining a predetermined position the main gas valve is closed.

883,229. STEAM-GENERATOR. HERBERT E. PENNEY, Minneapolis, Minn., assignor to Nott Fire Engine Company, Minneapolis, Minn., a Corporation. Filed Sept. 28, 1907. Serial No. 394,952.

1. In a steam generator, a series of lower and upper headers in radial arrangement around a vertical axis, and coiled tubes connecting the lower with the upper headers, the coils being arranged in groups of varying pitch and depth and those of each group being of the same pitch but of different depths, substantially as set forth.

2. In a steam generator, a series of lower and upper headers in radial arrangement around a vertical axis, and coiled tubes connecting the lower with the upper headers, the coils being of varying pitch, those of like pitch being aggrouped and the pitch of the coils of the successive groups increasing in length from the inner to the outer groups, substantially as set forth.



3. In a steam generator, a series of lower and upper headers in radial arrangement around a vertical axis, and coiled tubes connecting the lower with the upper headers, the coils being of varying depth and aggrouped in groups of like pitch, the pitch of the coils of the successive groups increasing in length from the inner to the outer groups, substantially as set forth.

4. In a steam generator, a series of lower and upper headers in radial arrangement around a vertical axis, and coiled tubes connecting the lower with the upper headers, the coils being of varying pitch and depth, those of like pitch and depth being aggrouped and the pitch and depth of the coils of the successive groups increasing in length from the inner to the outer groups, substantially as set forth.

883,230. CAR. CHARLES K. PICKLES, Danville, Ill., assignor to J. G. Brill Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Aug. 9, 1907. Serial No. 387,747.



1. A car having stanchions and provided with a roof pocket, a plurality of sashes movable into said pocket, one of said sashes having a lever with edge adapted to be rubbed and extending into the path of the second sash and adapted to be rocked by the latter, means on the said lever adapted to engage the second sash upon the movement of the lever, a guide in the roof pocket, and means on the said lever adapted to be thrown into engagement with the guide upon the rocking of said lever, so as to guide the said sashes.

2. A car having stanchions and provided with a roof pocket, an upper and lower sash, movable into the roof pocket, a lever on the upper sash adapted to be rocked by the lower sash and having a hook which engages the lower sash when the said lever is rocked, and a hook carried near the top of said upper sash adapted to engage a member of the car and support the upper sash in its closed position.

3. A car having stanchions, and a roof pocket, guides in said pocket, having a projecting flange, an upper and lower sash, a lever on the upper sash adapted to be rocked by the lower sash, a projecting portion on said lever adapted to be placed into engagement with the lower sash when said lever is rocked and a roller on said lever adapted to engage the flange of said guide and guide the upper ends of the said sashes.

4. A car having stanchions and a roof pocket, sashes movable into the roof pocket, a guide in the roof pocket consisting of a plate having a plurality of laterally extending flanges, a lever on one of said sashes adapted to be rocked by the second sash, and a roller on said lever adapted to move between the flanges on said guide.

5. A car having stanchions and a roof pocket a sash guide in the roof pocket having a flange, partly cut away near its lower end, a lever on one of the sashes, adapted to be rocked by the second sash, and a roller on the said lever, adapted to engage the flange of the guide and having a projection engaging with the reduced portion of said flange for preventing the lever from disengaging from the said guide.

883,231. CLASP. JOSEPH H. PILKINGTON, Waterbury, Conn. Filed May 13, 1907. Serial No. 373,251.



1. A clasp jaw consisting essentially of a pad holder having a longitudinal depression, a hollow pad inclosing the holder and means for securing the pad holder and pad in place.

2. A clasp jaw consisting essentially of a pad holder having a longitudinal depression, a pad consisting of a piece of rubber tubing inclosing the holder and means for securing the pad holder and pad in place.

3. A clasp jaw consisting essentially of a pad holder formed from a strip of sheet metal bent to substantially U-shape in cross-section, a hollow pad inclosing the holder and means for securing the pad holder and pad in place.

4. A clasp jaw consisting essentially of a pad holder having a longitudinal depression, a pad carried thereby, ears at the end of the pad holder, and bosses struck in from the ears and engaging the ends of the pad holder whereby the pad holder and pad are retained in place.

5. A clasp comprising arms one of which is provided with a yielding jaw consisting of a pad holder having a longitudinal depression, and a tubular pad inclosing the holder, the other arm being provided with a smaller jaw adapted to force the pad downward into the depression in the pad holder, substantially as described, for the purpose specified.

[Claim 6 not printed in the Gazette.]

883,232. DENTAL MOUTH-PROP. NATHANIEL L. POLINGER, New York, N. Y. Filed Nov. 21, 1907. Serial No. 403,197.

1. A mouth prop comprising a barrel, an internally and externally threaded sleeve telescoping therein, and a screw threaded shank telescoping within said sleeve.

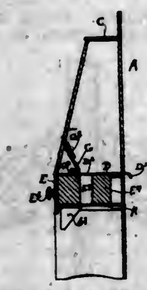
2. A mouth prop comprising a barrel, a plurality of telescoping sections fitting therewithin, and a cushion holding socket swiveled to said barrel.

3. A mouth prop comprising a plurality of telescoping sections mounted for relative rotation and screw threaded together, the two end sections having cushion carrying sockets swiveled thereto, said sockets having undulating



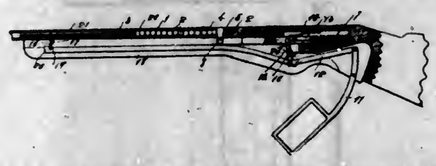
edges with high and low portions at diametrically opposite points.

883,233. AUTOMATIC SEED-CABINET. SCOTT B. POWERS, Springfield, Mo. Filed Jan. 10, 1908. Serial No. 410,181.



In a device of the character described, the combination with a cabinet of a drawer slidably disposed therein, said drawer comprising a front member and side members carried by said front member, a fixed block at the front end of and completely filling said drawer, a block slidably mounted in said drawer, set screws carried by said block which pass through slots formed in the side members of said drawer, a spout into which said drawer discharges when at its foremost limit of movement, means for limiting the forward movement of said drawer, a slide overlying said drawer and controllable from the exterior of the cabinet, there being an opening formed through said slide, and a scraper adjustably mounted in groove of the cabinet, said scraper comprising an inclined body portion and a V-shaped portion carried thereby.

883,234. TOY MAGAZINE-GUN. WILLIAM D. RANEY, Fort Worth, Tex., assignor of one-half to David Evans, Fort Worth, Tex. Filed June 4, 1907. Serial No. 377,179.



1. A toy magazine gun having a magazine, an exploding recess, an exploding bar, a lever operatively connected with said exploding bar, a handle for actuating said bar, and means actuated by the movement of said handle for feeding balls through said magazine.

2. A toy magazine gun having a magazine, a stock for said gun provided with a recess therein to receive balls from said magazine and a recess for an exploding bar, an exploding bar mounted in said recess, a lever for retracting said bar, a spring for throwing said bar when said bar is released by said lever, a handle operatively connected with said lever, and means actuated by said handle for feeding balls through said magazine.

3. A toy magazine gun having a magazine, means for feeding balls through said magazine, a bar for exploding balls as they are fed from said magazine, said bar having a slot therein, a pivoted bar mounted in said slot, a lever for actuating said pivoted bar to retract said exploding

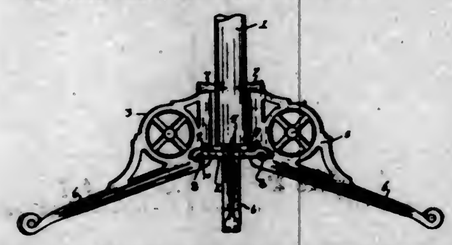
bar, a spring for throwing said exploding bar when released by said lever, and means for actuating said lever.

4. A toy magazine gun having a magazine for containing a plurality of balls, devices for exploding balls as they are fed from said magazine, a rack, and means actuated by and simultaneously with said exploding devices for moving said rack in said magazine.

5. A toy magazine gun having a magazine for containing a plurality of balls, devices for exploding the balls, and means for feeding balls through said magazine consisting of a rack movable in said magazine, a spring pressed lever engaging said rack, and means for actuating said lever.

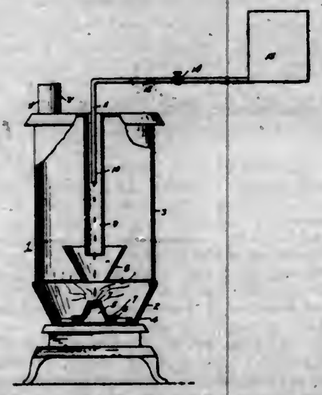
[Claims 6 to 8 not printed in the Gazette.]

883,235. TREE-HOLDER. FRANK RAUCH, Milwaukee, Wis. Filed June 6, 1907. Serial No. 377,517.



In a tree holder of the class described, a central member comprising a plurality of radial arms and a central barb, the other end of each of said arms having recesses on the under side and projections on the upper side above the recesses in combination with a plurality of supporting brackets, integrally formed radial barbs, and supporting lugs formed on each side of each of said brackets, some of said lugs engaging each of the radial arms above the projection and others, each of the radial arms beneath the recesses, whereby said radial arms and said brackets are interlocked all substantially as and for the purpose specified.

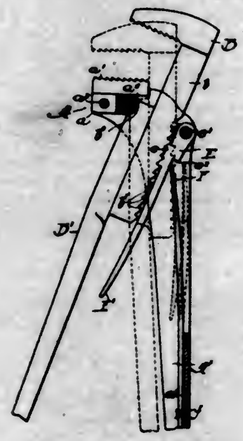
883,236. HYDROCARBON-BURNER. GEORGE REHBEIN, Canton, Kans. Filed Sept. 30, 1907. Serial No. 395,216.



1. In a hydrocarbon burner of the character described, the combination with a stove having an upright drum closed in at its upper end and a vertically disposed air pipe depending from said end, of a hollow spreader having a downwardly inclined outer surface arranged below said air pipe and an upright hollow burner closed in at one end, recessed in said end and bent upwardly at its base to form an annular trough arranged directly beneath said spreader, a drip pan under said burner and means for supplying oil to the burner.

2. In a hydrocarbon burner of the class specified, the combination with a stove or furnace having an upright drum closed in at its upper end and an air pipe depending from said end, of a hollow spreader having a downwardly inclined outer surface arranged in said drum below said air pipe, a hollow upright burner closed in at its upper end recessed in said end and having its base bent upwardly to form an annular trough removably positioned beneath said spreader, a drip pan under the burner and a feed pipe having one end arranged in the air pipe and its other end adapted for communication with a source of oil supply.

883,237. WRENCH. JOSEPH REIF, Jr., Hebron, Ind. Filed Mar. 29, 1906. Serial No. 308,648.



1. A wrench of the character described, comprising a stationary jaw, a handle for said stationary jaw provided adjacent its end with two fulcra, a movable jaw provided with a shank extending between said fulcra and a handle for said movable jaw having a non-revoluble part slidably engaging said shank, said handle having its end pivoted to one of said fulcra, said handle and said movable jaw being arranged to automatically change their position with respect to each other, as the handles of the jaws are opened and closed.

2. A wrench of the character described comprising a stationary jaw having a handle, a movable jaw having a shank and arranged to swing towards the stationary jaw and a pivoted handle for shifting said movable jaw, said pivoted handle being fulcrumed at its end and having a bearing face engaging the shank of the movable jaw and arranged to automatically slide longitudinally with respect to said shank as the handle of the movable jaw is shifted towards the handle of the stationary jaw.

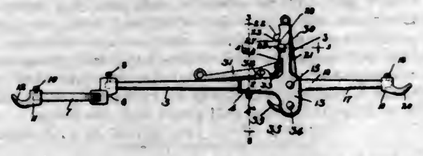
3. A wrench of the character described comprising a stationary jaw having a handle, said jaw being provided with a part serving as a fulcrum for the handle of the movable jaw and being provided at its back with a part serving as a fulcrum for the shank of the movable jaw, a movable handle pivoted to said stationary jaw and a movable jaw having a shank extending upon opposite sides of the fulcrum of the movable jaw and between said fulcrum and said part that serves as a fulcrum for said shank, the shank of said movable jaw being free to slide automatically with respect to its handle as the said handle is shifted.

4. A wrench of the character described comprising a stationary jaw having front and rear parts serving as fulcra for the movable jaw and its handle, a swinging movable jaw and a movable handle for shifting said jaw arranged between said fulcra, said movable handle having a non-revoluble part in sliding engagement with said movable jaw whereby said jaw is free to slide with respect to its handle as the said handle is shifted.

5. A wrench of the character described comprising a stationary jaw formed with an opening to receive the shank and handle of a movable jaw and having parts serving as fulcra for said movable jaw and its handle, a movable jaw having a shank and a pivoted handle having a non-revoluble part for shifting said movable jaw arranged between said fulcra, said shank and said movable handle being in sliding engagement with each other and means for holding said shank and said movable handle in engagement as the movable jaw is swung towards the stationary jaw.

[Claims 6 to 8 not printed in the Gazette.]

883,238. HARNESS-SWING. JOHN B. RENO, Canton, Ohio. Filed Oct. 24, 1907. Serial No. 398,979.



1. A harness suspending and releasing apparatus comprising a hanger of angular form, means for suspending portions of a harness from one branch of the hanger, a bell-crank fulcrumed to the other branch of the hanger and having one arm provided with means for suspending a portion of a harness, the other arm of said bell-crank forming a latch member, and a coacting latch member upon the bell-crank carrying branch of said hanger.

2. A harness suspending and releasing apparatus comprising a hanger of angular form, means for suspending portions of a harness from one branch of the hanger, a bell-crank fulcrumed to the other branch of the hanger and having one arm provided with means for suspending a portion of a harness, the other arm of said bell-crank having a beveled tongue formed with a notched portion, and a spring-actuated sliding keeper upon the bell-crank carrying branch of said hanger to engage the beveled portion of the tongue and to enter the notch therein.

3. A harness suspending and releasing apparatus comprising a hanger of angular form, means for suspending portions of a harness from one branch of the hanger, a bell-crank fulcrumed to the other branch of the hanger and having one arm provided with means for suspending a portion of a harness, the other arm of said bell-crank having a beveled tongue formed with a notched portion, a spring-actuated sliding keeper upon the bell-crank carrying branch of said hanger to engage the beveled portion of the tongue and to enter the notch therein, and a lever for disengaging the keeper from the notch in said tongue.

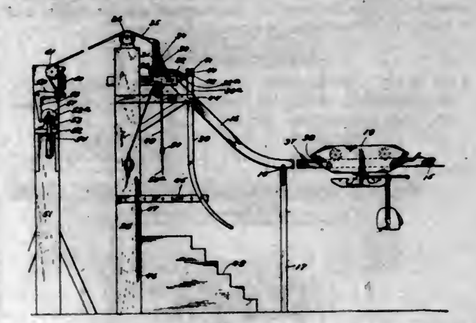
4. A harness suspending and releasing apparatus comprising a hanger of angular form, means for suspending portions of a harness from one branch of the hanger, a bell-crank fulcrumed to the other branch of the hanger and having one arm provided with means for suspending a portion of a harness, a latch device for securing the other arm of the bell crank to the branch of the hanger on which said bell-crank is fulcrumed, a harness suspending arm pivoted upon said hanger, and meshing segmental gears provided upon said harness suspending arm and said bell crank.

5. A harness suspending and releasing apparatus comprising a hanger, harness suspending arms pivoted thereto and carrying segmental gear portions in mesh with each other, and a latch device for locking one of said arms against movement with respect to the hanger.

[Claim 6 not printed in the Gazette.]

883,239. DEVICE FOR TRANSFERRING PARCELS TO AND FROM MOVING TRAINS. ALEXANDER J. RUDOLPH, Chicago, Ill. Filed Jan. 21, 1908. Serial No. 411,922.

1. In a device of the class described, an auxiliary track parallel with a main railway track, a carriage on the auxiliary track, means located near said auxiliary track for giving said carriage a movement along it and means for transferring a burden between the said carriage and a car on the main railway track.



2. In a device of the class described, an auxiliary track parallel with a main railway track, upwardly inclined tracks connected to the ends of the auxiliary track, a carriage on the auxiliary track, and means for transferring a burden between the said carriage and a car on the main railway track.

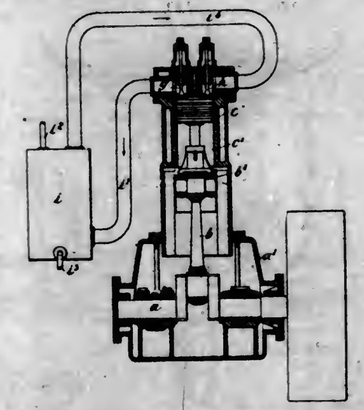
3. In a device of the class described, an auxiliary track parallel with a main railway track, a carriage on the auxiliary track, means located near the auxiliary track for giving to the carriage a certain velocity along said track, and means for transferring a burden between the said carriage and a car on the main railway track.

4. In a device of the class described, a main car, a movable carriage adapted to travel beside the car in the same direction therewith and with a speed slightly different therefrom, and means for transferring a burden between the main car and the carriage.

5. In a device of the class described, an auxiliary track beside a main railway track parallel therewith, a carriage on the auxiliary track, means for projecting the carriage along the auxiliary track from one end thereof, and means actuated by an approaching car on the main track for setting the said projecting means in action.

[Claims 6 to 18 not printed in the Gazette.]

883,240. INTERNAL-COMBUSTION ENGINE. LOUIS G. SABATHÉ, Paris, France. Filed Nov. 23, 1905. Serial No. 288,712.

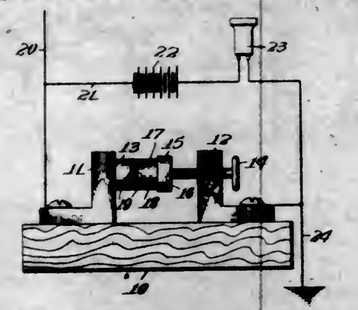


1. In an internal combustion engine, the combination, with means for introducing a charge of inert gas, of means for subsequently and separately introducing a charge of combustible material and a charge of oxygen.

2. In an internal combustion engine, the combination with a cylinder and means for introducing into said cyl-

inder a charge of gas incapable of supporting combustion, of means for compressing said gaseous charge, and means for separately introducing during the compression of said gaseous charge a charge of combustible gas or vapor, and a proportionate charge of oxygen.

883,241. WIRELESS RECEIVING INSTRUMENT. FREDERICK G. SARGENT, Westford, Mass. Filed May 22, 1907. Serial No. 375,124.



1. A coherer for a receiving instrument of the class described, comprising a loose, dry mechanical mixture of fine particles of zinc and carbon.

2. A receiving instrument of the class described, having a coherer comprising two electrodes of different conductivity, and a dry mechanical mixture of zinc filings and granulated carbon between said electrodes.

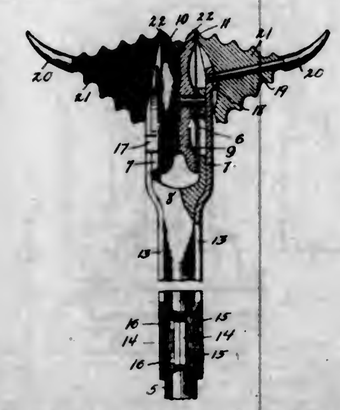
3. A receiving instrument of the class described, having a coherer comprising a steel electrode, a carbon electrode, and a loose dry mechanical mixture of zinc filings and carbon between said electrodes.

4. A coherer having a carbon electrode, and a steel electrode, said electrodes having their active surfaces provided with a series of non-conducting protuberances.

5. A coherer, the active surface of an electrode of which is provided with numerous small nonconducting protuberances interspersed throughout said active surface.

[Claims 6 to 15 not printed in the Gazette.]

883,242. ATTACHMENT FOR TROLLEY-HARPS. WILLIAM F. SAVAGE, Columbus, Ohio. Filed May 3, 1907. Serial No. 371,578.



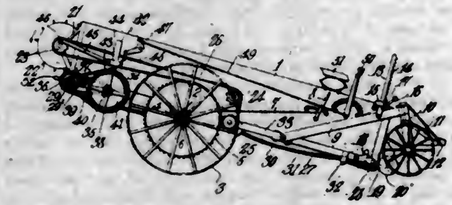
1. In a device of the character described, the combination with an ordinary trolley pole and wheel, of members adapted to be clamped to said trolley pole, and conical spirally grooved rotative members carried by the members that are clamped to the trolley pole.

2. In a device of the character described, the combination with an ordinary trolley harp and wheel, of a pair of members adapted to be clamped to the sides of said trolley harp, and conical spirally grooved rotative members carried by said first named members which lie upon each side of the trolley wheel and are adapted to guide said trolley wheel beneath the trolley wire.

3. In a device of the character described, the combination with an ordinary trolley harp and wheel, of a pair of members adapted to be clamped to the sides of said trolley harp, conical spirally grooved rotative members carried by said first named members which lie upon each side of the trolley wheel and are adapted to guide said trolley wheel beneath the trolley wire, and fixed upturned horns located at the ends of said spirally grooved members.

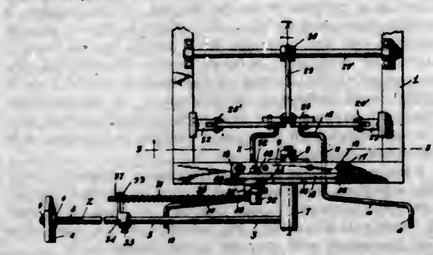
4. In a device of the character described, the combination with an ordinary trolley wheel and harp, of a pair of plates, means for securing said plates to the sides of the trolley harp, inclined shafts projecting from said plates, upturned horns carried upon the outer ends of said shafts, and conical spirally grooved members mounted upon said shafts between said plates and said horns.

883,243. COMBINED MANURE LOADER AND SPREADER. FRANK E. SCHEE, Athens, Mo. Filed Apr. 25, 1907. Serial No. 370,254.



A combined load gatherer and spreader comprising traction wheels, a body having a closed bottom and an open forward end tiltably mounted upon said wheel, a conveyer traversing the length of the body, a gatherer located at the forward end of the body, a rotating spreader located at the opposite end of the body, means operatively connecting the spreader with the traction wheels for rotating the spreader in the opposite direction from that in which the traction wheels rotate and means operatively connecting the spreader with the conveyer.

883,244. ROW-MARKER FOR PLANTERS. HENRY SHRADER, Dixon, Ill. Filed Sept. 23, 1907. Serial No. 394,175.



1. In a row marker, a swinging marker arm, means for turning the same from one side to the other of the machine and a tension device connected to the arm and having a single actuating spring whereby it will force the arm downwardly upon either side of the machine.

2. In a row marker, a swinging marker arm, means for turning the same from one side to the other of the machine and a tension device connected to the arm and having a shiftable fulcrum and a single actuating spring, whereby it will both assist said actuating means in moving the marker arm over the vertical center of its pivot and force the arm downwardly upon either side of the machine.

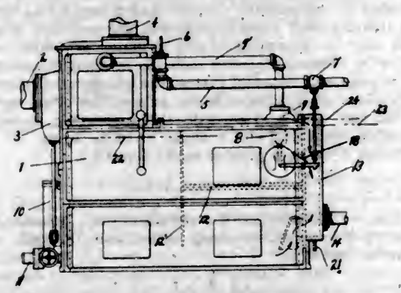
3. In a row marker, a swinging marker arm, means for turning the same from one side to the other of the machine and a spring device connected to the arm and having a shiftable fulcrum upon the machine, whereby it will assist the arm over the vertical center of its pivot and also force it downwardly upon either side of the machine.

4. In a row marker, a swinging marker arm, means for turning the same from one side to the other of the machine, a guide and bearing member, a tension rod connected to the arm and having a shiftable pivot mounted in said member, and a spring to co-act with said rod and arm.

5. In a row marker, a swinging marker arm, means for turning said arm from one side to the other of the machine, a guide member having a slot provided with seats, a tension rod having a pivot to work in said slot and engage said seats, an element upon said arm to slidably receive said rod and a coil spring arranged upon the rod and bearing against said element, substantially as set forth.

[Claims 6 to 13 not printed in the Gazette.]

883,245. MEANS FOR PURIFYING AND REGULATING WATER. HORACE E. SIBSON, Philadelphia, Pa., assignor to Joseph S. Lovering Wharton, William S. Hallowell, and John C. Jones, doing business under the firm-name of Harrison Safety Boiler Works, Philadelphia, Pa. Filed July 27, 1907. Serial No. 385,872.



1. In a heater, a filter and an exteriorly arranged vertically reversed by-pass.

2. In a feed water heater, the combination of an interior horizontal filter and an exteriorly arranged vertically reversed by-pass.

3. In a feed water heater, the combination of a feed supply; a filter; a vertically reversed exterior by-pass having its inlet at a point most remote from the feed supply.

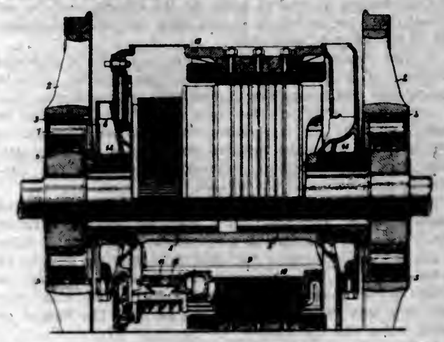
4. In a heater, the combination of a feed supply; an exhaust steam supply; a chemical supply; a filter; an exterior vertically reversed by-pass adjacent the filter for automatically supplementing the outflow from the filter by an increment of chemically treated but unfiltered water.

5. The combination of a heater; a filter; a by-pass exterior and about the filter; said by-pass formed of two channels; openings into said by-pass above and below the filter; an outlet and a drain for said by-pass in one of said channels.

[Claims 6 to 11 not printed in the Gazette.]

883,246. DYNAMO-ELECTRIC MACHINE. ROBERT SIEGFRIED, Pittsburg, Pa., assignor to Westinghouse Electric & Manufacturing Company, a Corporation of Pennsylvania. Filed Mar. 3, 1906. Serial No. 304,089.

1. The combination with an axle, wheels mounted thereon having annular sets of chambers, and a two-part sleeve or quill surrounding the axle and having flanges or radial arms at its extremities and bosses that project therefrom into the chambers in the wheels, of a dynamo-electric machine comprising a rotatable member and a supporting structure mounted upon the quill or sleeve.



2. The combination with an axle, wheels mounted thereon having annular sets of chambers, and a two-part sleeve or quill surrounding the axle and having flanges or radial arms at its extremities and bosses that project therefrom into the chambers in the wheels, of a dynamo-electric machine comprising a rotatable member and a supporting structure therefor that is mounted upon the quill or sleeve and is of smaller external diameter than the flanges or radial arms.

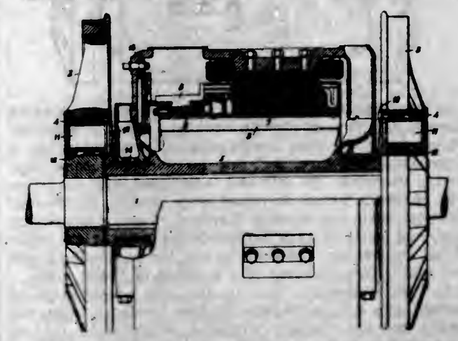
3. The combination with an axle, wheels mounted thereon and a transversely divided quill or sleeve surrounding the axle and resiliently connected to the wheels, of a dynamo-electric machine comprising a rotatable, magnetizable core and a supporting structure mounted upon the quill or sleeve.

4. The combination with an axle, wheels mounted thereon and a transversely divided quill or sleeve surrounding the axle and provided with flanges or radial arms at its extremities and resilient connections between the quill and the wheels, of a dynamo-electric machine comprising a laminated, magnetizable core and a supporting structure mounted upon the quill or sleeve.

5. The combination with an axle, wheels mounted thereon and a transversely divided quill or sleeve surrounding the axle and provided with flanges or radial arms at its extremities and resilient connections between the quill and the wheels, of a dynamo-electric machine comprising a laminated, magnetizable core and a supporting structure therefor that is mounted upon the quill or sleeve and is of less external diameter that the flanges or radial arms.

[Claims 6 to 14 not printed in the Gazette.]

883,247. SUPPORTING STRUCTURE FOR DYNAMO-ELECTRIC MACHINES. ROBERT SIEGFRIED, Pittsburg, Pa., assignor to Westinghouse Electric & Manufacturing Company, a Corporation of Pennsylvania. Filed Mar. 3, 1906. Serial No. 304,090.



1. The combination with an axle and wheels mounted thereon, of a dynamo-electric machine located between the

wheels and comprising a rotatable, magnetizable core, and a supporting structure for the dynamo-electric machine having flanges or radial arms at its extremities the external diameter of which is less than the internal diameter of the magnetizable core.

2. The combination with an axle and wheels mounted thereon, of a dynamo-electric machine located between the wheels and comprising a rotatable, magnetizable core, a supporting structure for said core having flanges or radial arms at its extremities the external diameter of which is less than the internal diameter of the magnetizable core, and resilient connections between the supporting structure and the wheels.

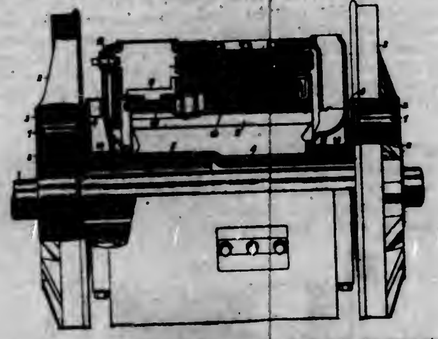
3. The combination with an axle and wheels mounted thereon, of a dynamo-electric machine located between the wheels and comprising a rotatable, magnetizable core, a supporting structure for said core having flanges or radial arms at its extremities the external diameter of which is less than the internal diameter of the magnetizable core, and resilient connections between the flanges or radial arms and the wheels.

4. The combination with an axle and wheels mounted thereon having annular sets of chambers, of a dynamo-electric machine located between the driving wheels and comprising a rotatable, laminated core, and a supporting structure for the core that loosely surrounds the axle and is provided, at its extremities, with flanges or radial arms the external diamter of which is less than the internal diameter of the core laminæ and with bosses that project therefrom into the wheel chambers, and resilient cushioning means that surround the bosses within the chambers.

5. The combination with an axle and wheels mounted thereon having annular sets of chambers, of a dynamo-electric machine located between the driving wheels and comprising a rotatable, laminated core and a removable commutator cylinder.

[Claims 6 to 8 not printed in the Gazette.]

883,248. SUPPORTING STRUCTURE FOR DYNAMO-ELECTRIC MACHINES. ROBERT SIEGFRIED, Pittsburg, Pa., assignor to Westinghouse Electric & Manufacturing Company, a Corporation of Pennsylvania. Filed Mar. 3, 1906. Serial No. 304,091.



1. The combination with an axle and wheels mounted thereon, of a dynamo-electric machine located between the wheels and comprising a rotatable, magnetizable core, a supporting structure for the magnetizable core that loosely surrounds the axle and is provided with an extension having a flange or radial arms greater in external diameter than the internal diameter of the magnetizable core, and a sleeve that surrounds the axle at the other end of the machine and projects into the supporting structure and is also provided with a flange or radial arms.

2. The combination with an axle and wheels mounted thereon, of a dynamo-electric machine located between the wheels and comprising a rotatable, magnetizable core, a supporting structure for the magnetizable core that loosely surrounds the axle and is provided with an extension having a flange or radial arms, and a sleeve that surrounds the axle at the other end of the machine and projects into the supporting structure and is also provided with a flange or radial arms.

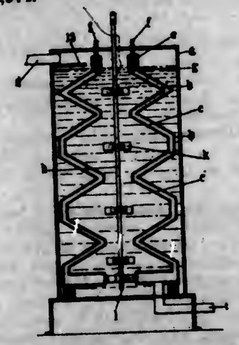
3. The combination with an axle and wheels mounted thereon having annular sets of chambers, of a dynamo-electric machine located between the wheels and comprising a rotatable, magnetizable core, a removable commutator cylinder and a supporting structure therefor that loosely surrounds the axle and is provided with an extension having a flange or radial arms and with bosses which project therefrom into the wheel chambers, a sleeve that surrounds the axle at the other end of the machine and projects into the supporting structure and is also provided with a flange or radial arms and with bosses that project into the wheel chambers, and resilient cushioning means that surrounds the bosses within the chambers.

4. The combination with an axle and wheels mounted thereon having annular sets of chambers, of a dynamo-electric machine located between the wheels and comprising a rotatable, magnetizable core and a supporting structure therefor that loosely surrounds the axle and is provided with a flange or radial arms having bosses that project into the wheel chambers, a sleeve that surrounds the axle at the other end of the machine and projects into the supporting structure and is also provided with a flange or radial arms having bosses that project into the wheel chambers, and resilient cushioning means that surround the bosses within the chambers.

5. The combination with an axle and wheels mounted thereon, of a dynamo-electric machine located between the wheels and comprising a rotatable, magnetizable core, a removable commutator cylinder and a supporting structure therefor that loosely surrounds the axle and is provided with an extension having a flange or radial arms greater in external diameter than the internal diameter of the magnetizable core and that of the commutator cylinder, and a sleeve that surrounds the axle at the other end of the machine and projects into the supporting structure and is also provided with a flange or radial arms.

[Claims 6 to 9 not printed in the Gazette.]

883,249. CARBURETING APPARATUS. HUBERT E. SMITH, Edinburgh, Scotland. Filed Mar. 18, 1907. Serial No. 362,974.



1. In carbureting apparatus the combination of an inner casing having upper surfaces sloping down from a center in such manner as to be adapted to spread out a hydrocarbon, with an outer casing inclosing and closely fitting said inner casing so as to leave a narrow space between the two, hydrocarbon and air supply pipes and an exit pipe.

2. In carbureting apparatus the combination of an inner casing having surfaces at first sloping down from a center in such manner as to be adapted to spread out a hydrocarbon and afterwards nearly vertical, with an outer casing closely fitting said inner casing, but leaving a narrow space between the two, hydrocarbon and air supply pipes and an exit pipe.

3. In carbureting apparatus the combination of an inner casing having upper surfaces sloping down from a center in such manner as to be adapted to spread out a hydrocarbon, with an outer casing inclosing and closely fitting said inner casing so as to leave a narrow space between the two, means for distributing the hydrocarbon about the center of said upper surfaces, hydrocarbon and air supply pipes and an exit pipe.

4. In carbureting apparatus the combination of an inner casing having upper surfaces sloping down from a center in such a manner so as to be adapted to spread out a hydrocarbon, with an outer casing inclosing and closely fitting said inner casing so as to leave a narrow space between the two, hydrocarbon supply pipes terminating in a perforated channel surrounding the center of said upper surfaces, an air supply pipe and an exit pipe.

5. In carbureting apparatus the combination of an inner casing having upper surfaces sloping down from a center and adapted to spread out a hydrocarbon with an outer casing closely fitting said inner casing so as to leave a narrow space between the two, hydrocarbon and air supply pipes, an exit pipe, a containing vessel surrounding said casings and adapted to hold liquid which is in contact with both casings, and means for stirring said liquid, said means comprising a vertical rod passing through the center of the inner casing and carrying blades, with mechanism for causing the movement of said blades.

[Claims 6 and 7 not printed in the Gazette.]

883,250. SAD-IRON WAXER, POLISHER, AND HOLDER. ARTHUR SOLOMON, Buffalo, N. Y. Filed Apr. 9, 1906. Serial No. 310,753.



1. A pot for holding liquid wax, a pocket constructed by means of two parallel bars arranged transversely in the central part of the pot and supported at opposite ends on the side walls thereof while their lower sides are separated from the bottom of said pot, and a feeding wick arranged in said pocket and projecting with its upper and lower ends above and below said pocket, substantially as set forth.

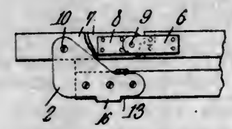
2. A pot for holding liquid wax, a feeding wick projecting upwardly from the lower part of said pot, a pair of inwardly and outwardly projecting flanges arranged at the upper edge of the pot in front and in rear of the wick and each pair having the upper side thereof constructed to form a pocket and the inner and outer walls thereof forming scrapers, substantially as set forth.

3. The combination of a frame consisting of a table having an opening and legs supporting the table, and a pot for holding wax removably supported in said opening, substantially as set forth.

4. The combination of a frame consisting of a horizontal table provided with an opening, downwardly projecting flanges at opposite longitudinal edges of the table, and supporting feet at the ends of said flanges, a wax pot arranged in said opening and having shoulders resting on the table at the edges of said opening, substantially as set forth.

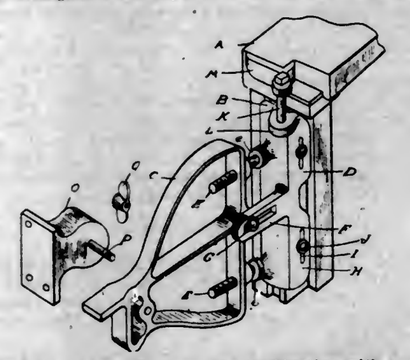
5. The combination of a lower frame consisting of a horizontal table having an opening at its front end, downwardly projecting flanges at the longitudinal edges of the table, feet at the ends of said flanges and upwardly turned ears at the rear ends of said flanges, a pot for holding wax arranged in said opening and having shoulders resting on said table at the edges of said opening, a feeding wick arranged in said pot, an upper frame consisting of a horizontal table, upwardly projecting flanges arranged at the longitudinal edges of the upper table, downwardly, projecting ears arranged at the rear ends of the flanges of the upper table, a transverse rod pivotally connecting the rear ends of the upper and lower frame, downwardly projecting ears arranged at the front ends of the flanges of the upper frame and adapted to rest in seats formed in the wax pot, a transverse rod connecting said front ears of the upper frame, a wiping sheet resting on said upper table and passing underneath said transverse rods, and stop lugs projecting upwardly from the flanges of the upper frame at the ends thereof, substantially as set forth.

883,251. FOLDING CRATE OR BOX. CHARLES E. SOMMERS, Hastings, Minn. Filed Apr. 10, 1907. Serial No. 367,320.



A collapsible crate comprising flat top and bottom panels, end panels hingedly connected to the top and bottom panels and disposed to assume positions in alinement and parallel therewith when the crate is folded, each end panel being disposed to lap one end of one of the top and bottom panels and to be lapped by the other one of said panels when the crate is set up, front and rear panels hingedly connected to the bottom panel and disposed to fold thereon and to constitute a support for the top panel when the crate is folded, said front and rear panels being movable into position perpendicular to the top and bottom panels and being limited in their movement in one direction by contact of one edge portion of each front and rear panel with the bottom panel, and separate means carried by the front and rear panels and the top panel for automatically locking said panels together when the crate is set up.

883,252. DETACHABLE AUTOMATIC ACTION FOR PIANOS. EDWARD A. STEEL, Detroit, Mich., assignor to The Farrand Company, Detroit, Mich., a Corporation of Michigan. Filed Sept. 21, 1907. Serial No. 393,874.



1. In an automatic piano, the combination with a case and the piano action therein, of an automatic action, a detachable mounting for said automatic action within said case, and means on said mounting for adjusting said automatic action while attached to said case in relation to the piano action.

2. In an automatic piano, the combination with a case and a piano action therein, of an automatic action, supporting end brackets for said automatic action detachably secured to said case, and means of adjustment between said action and brackets, for the purpose described.

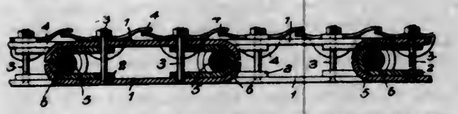
3. In an automatic piano, the combination with an automatic action, of an adjustable mounting therefor comprising members permanently attached to the opposite sides of the piano case, brackets detachably clamped to said members, and connections between said brackets and

said action permitting of vertical and longitudinal adjustment of the latter.

4. In an automatic piano, the combination with an automatic action, of an adjustable mounting therefor comprising a bracket formed of two members, one of said members being secured to the action, a screw threaded stud connecting said members for adjusting the one in relation to the other longitudinally of the action, and means for adjusting said action member vertically in relation to the action.

5. In an automatic piano, the combination with an automatic action, of an adjustable mounting therefor comprising a bracket formed of two members longitudinally adjustable in relation to each other, a threaded shank for adjusting said members, a piano case a bracket secured to the piano case to which one of said members is clamped, means for securing the other member to the action, and a threaded shank for adjusting the action in relation to said member.

883,253. CASTING APPARATUS. MARCUS C. STEESE, Steubenville, Ohio. Filed May 2, 1907. Serial No. 371,492.



1. A link for endless chains having in combination two side bars or legs having their ends bent inwardly, and two U-shaped pieces arranged between the side bars or legs.

2. The combination in a casting machine of links consisting of side bars or legs having their ends bent inwardly, U-shaped pieces arranged between said side bars or legs, casting pans arranged on the links and bolts for securing the parts of the link and casting pan in position.

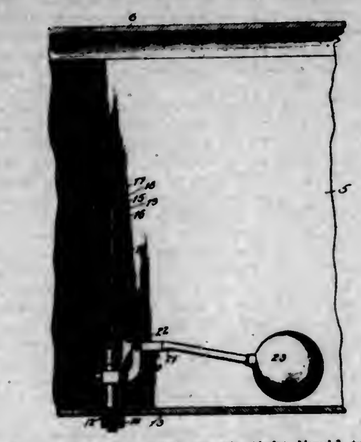
3. In a casting machine, the combination of a shaft, sectional sleeves fitting loosely on said shaft, links bearing at their ends on two of the sleeves, wheels loosely mounted on two other sleeves, and means for holding the sleeves, links and wheels in position on the shaft.

4. In a casting machine, the combination of a shaft, an intermediate sleeve loosely mounted on the shaft, link sleeves arranged at the ends of the intermediate sleeve, links bearing on the latter sleeves, wheel sleeves arranged outside of the link sleeves, wheels loosely mounted on the wheel sleeves, washers interposed between the link and wheel sleeves and between the link and intermediate sleeves, and means engaging the shaft for holding the several parts in position on the shaft.

883,254. FLOAT-VALVE FOR FILLING-MACHINES. FRANK C. H. STRASBURGER, Chicago, Ill., assignor to Bottlers Machinery Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed Oct. 1, 1906. Serial No. 336,930.

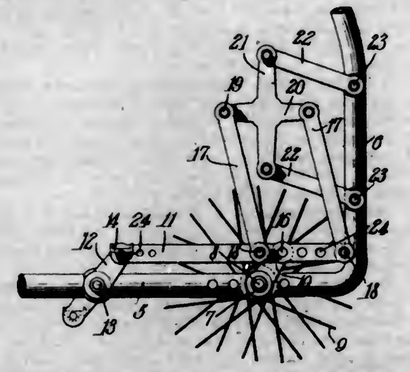
1. The combination with an air tight liquid tank of a filling machine, of an air escape tube mounted in the bottom of said tank and extending therethrough, a valve at the upper end of said tube, a lever pivotally supported on said tube, a float on one end of said lever, a toe on the other end of said lever to operate said valve, and a heel on the lever below the toe to bear against the tube and limit the downward movement of the float.

2. The combination with an air tight liquid tank of a filling machine, of an air escape tube mounted within the tank and communicating with the atmosphere, a sleeve slidably mounted on the tube, a valve at the upper end of said sleeve, there being lateral ports in the sleeve below said valve, a lever pivotally supported on said tube beneath the sleeve, a float on one end of said lever, and a toe and heel on the other end of said lever, the toe being arranged to raise the sleeve and open said valve and the heel being arranged beneath the toe to bear against the tube and limit the downward movement of the float.



3. The combination with an air tight liquid tank of a filling machine, of an air escape tube mounted in the bottom of the tank and extending therethrough, the upper end of said tube being tapered, a sleeve slidably mounted on said tube and provided with lateral ports opposite said tapered end of the tube, a cap on the upper end of said sleeve, a disk held by the cap and forming a valve to seat on the upper end of the tube, an arm adjustably mounted on the tube below the sleeve, a lever pivoted on the arm, a float on one end of said lever, a toe on the other end of said lever beneath the sleeve to raise the same and unseat the valve, and a heel on the lever beneath the toe to bear against the tube and limit the downward movement of the float.

883,255. POWER-LEVER. WILLIAM W. SUTHERLAND, Griswold, Iowa. Filed Aug. 26, 1907. Serial No. 390,215.



1. The combination with a frame, of a driving shaft provided with a crank arm, a pedal shaft having a similar crank arm, a pitman connecting the crank arms, levers pivotally connected with the pitman on opposite sides of one of the crank arms, and links pivotally connecting the levers with the frame.

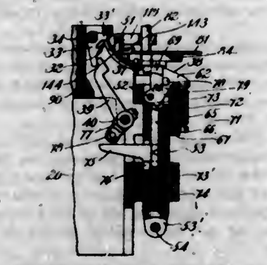
2. The combination with a frame, of a driving shaft provided with a crank arm, a pedal shaft having a similar crank arm, a pitman connecting the crank arms, a cross head having intersecting vertical and horizontally disposed arms, levers forming a pivotal connection between the pitman and horizontal arms of the cross head, and links pivotally connecting the opposite ends of the vertical arms of the cross head with the frame.

3. The combination with a frame, of a driving shaft provided with a crank arm, a pedal shaft journaled in advance of the driving shaft and provided with a similar crank arm, a pitman connecting said crank arms and having a series of openings formed therein, a cross head provided with intersecting horizontal and vertical arms, levers forming a pivotal connection between the opposite ends of the horizontal arms of the cross head and the pitman, and links pivotally connected with the opposite ends of the vertical arm of said cross head and pivotally connected with the frame.

4. The combination with a frame, of a driving shaft provided with a crank arm, a pedal shaft journaled in the frame in advance of the driving shaft and provided with oppositely disposed crank arms, pedals pivotally mounted on the crank arms of the pedal shaft, a pitman connecting the crank arm of the driving shaft with one of the crank arms of the pedal shaft, a cross head having intersecting horizontal and vertical arms, levers pivotally connected with the opposite ends of the horizontal arm of the cross head and having their opposite ends pivotally connected with the pitman on each side of the crank arm of the driving shaft, and links forming a pivotal connection between the opposite ends of the vertical arm of the cross head of the frame.

5. The combination with a frame having a vertical extension, of a driving shaft having one end thereof provided with a crank arm, a pedal shaft journaled on the frame in advance of the driving shaft and provided with a similar crank arm, a pitman connecting said crank arms, a cross head having intersecting horizontal and vertical arms, levers pivotally connected with the opposite ends of the horizontal arm of the cross head and pivotally connected with the pitman, links forming a pivotal connection between the opposite ends of the vertical arm of the cross head and the extension of the frame, and pedals operatively connected with the pedal shaft for actuating the crank arms to rotate the driving shaft.

883,256. LACING-HOOK-SETTING MACHINE. SYDNEY E. TAFT, South Framingham, Mass., assignor to American Lacing Hook Co., a Corporation of New Jersey. Filed Apr. 2, 1907. Serial No. 366,033.



1. In a machine for setting lacing hooks in the uppers of boots and shoes, a slide, a carrier adapted to receive a lacing hook and pivoted to rock on said slide, means to lock said carrier to said slide, and a spring adapted to rock said carrier on its pivot.

2. In a machine for setting lacing hooks in the uppers of boots and shoes, a slide, a carrier adapted to receive a lacing hook and pivoted to said slide, instrumentalities adapted to rock said carrier on said slide, a stop on said slide adapted to engage said carrier and prevent the same from rocking, and means adapted to operate said stop to release said carrier and allow the same to be rocked while said slide is stationary.

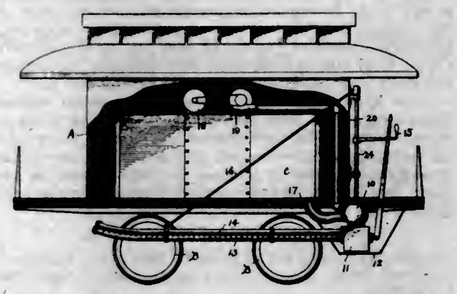
3. In a machine for setting lacing hooks in the upper of a boot or shoe, a slide, a carrier adapted to receive a lacing hook and pivoted to rock on said slide about a horizontal axis, means on said slide adapted to lock said carrier to said slide, and means to feed said upper in a direction substantially longitudinally of said horizontal axis.

4. In a machine for setting lacing hooks in the uppers of boots and shoes, a slide, a carrier adapted to receive a lacing hook and pivoted on said slide about a horizontal axis, instrumentalities adapted to rock said carrier on said slide, means on said slide adapted to lock said carrier to said slide, and means to feed said upper in a direction substantially longitudinally of said horizontal axis.

5. In a machine for setting lacing hooks in the uppers of boots and shoes, a slide, a carrier adapted to receive a lacing hook and pivoted to rock on said slide about a horizontal axis, instrumentalities adapted to rock said carrier on said slide, a stop supported on said slide and movable relatively thereto adapted to engage said carrier and prevent the same from rocking on its pivot, and means to feed said upper in a direction substantially longitudinally of said horizontal axis.

[Claims 6 to 42 not printed in the Gazette.]

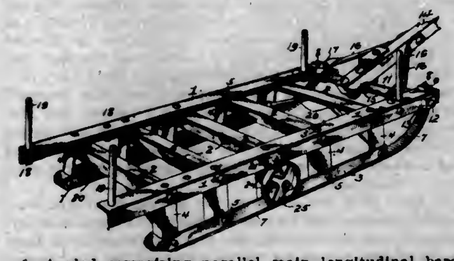
883,257. SPRAYING DEVICE FOR WATERING STREETS. ALFRED THOMAS, Worcester, Mass. Filed Nov. 23, 1899. Serial No. 738,029.



1. In an apparatus for watering streets, the combination of a car-body, a tank mounted therein, a sprinkler arm pivotally mounted at the side of the car, and comprising a water pipe or passage, an air pipe or passage arranged above said water pipe or passage, said pipes or passages being provided with registering perforations arranged to vaporize the water distributed by said sprinkler arm, an air forcing device, and connections for supplying air to said pipe or passage.

2. In an apparatus for watering streets, the combination of a sprinkler arm, an air pipe arranged parallel with the arm, said arm and pipe having registering perforations, an air supply for the pipe and water supply for the arm, a cock having passages for conducting air to the pipe and water to the arm, and a shut-off valve for the water supply located in said cock.

883,258. SLED. WILLIAM J. TOLLE, Reesville, Ohio. Filed Jan. 21, 1907. Serial No. 353,335.



1. A sled comprising parallel main longitudinal bars, parallel lower angle bars having vertical outside flanges, knees connecting the vertical flanges of the main and lower bars, angle cross bars connecting the horizontal flanges of the main bars, said lower bars having their vertical flanges removed in advance of the forward knees and curved up to the main bars, runners extending throughout

the length of the lower bars and secured thereto, lugs on the forward ends of the runners projected through openings in the lower and main bars, and nuts screwed onto said lugs above the main bars.

2. In a sled, the combination with parallel longitudinal angle bars, of bearing brackets secured to the under faces thereof, a sleeve in said brackets, a bolt passed through the bars, brackets and sleeve and securing them together, a tongue clamped on said sleeve, and braces secured to the sides of the tongue and clamped onto said sleeve.

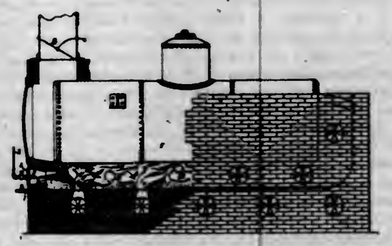
883,259. BOTTLE-STOPPER. HUGO TUECKMANTEL, Newark, N. J. Filed July 9, 1907. Serial No. 382,921.



1. As a new article of manufacture a bottle stopper comprising a cap having a clamping flange to extend down on the outer side of a bottle to have holding engagement therewith, means in the top of said cap to extend down on the inner side of a bottle to have clamping engagement therewith and a disk lining for the inside of said cap.

2. As a new article of manufacture a bottle stopper comprising a disk lined cap having a clamping flange to extend down on the outer side of the bottle to have holding engagement therewith and provided with a central depression in the top of said cap to extend down on the inner side of the bottle to have clamping engagement therewith.

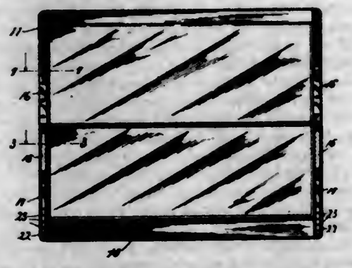
883,260. FLUID-FUEL FURNACE. EDWARD C. VOORHEIS, Sutter Creek, Cal. Filed June 9, 1902. Serial No. 110,929.



1. In a fluid fuel furnace for the purpose set forth, the combination of a combustion chamber formed to constitute a continuous, completely free passage for the gaseous fuel therethrough, a fuel feeding device to introduce fluid fuel at one end of the combustion chamber of the furnace consisting of a controllable conduit for liquid fuel and a controllable conduit for gaseous fluid under pressure, the exhausts of both of said conduits being adjacent, whereby the liquid is atomized, and a damper to regulate the flow of the inflaming gases through the combustion chamber, the bottom wall and side walls of the furnace being each provided with a series of valve controlled air inlet passages arranged at regular intervals whereby a regular and progressive combustion of fluid fuel throughout the entire combustion chamber is effected, combustion being initiated and sustained only at predetermined points along the combustion chamber.

2. In a fluid fuel furnace, the combination of a combustion chamber having a substantially flat horizontal bottom wall and substantially flat vertical side walls to form a continuous, completely free passageway for the gaseous fuel throughout the entire combustion chamber of the furnace, a fuel feeding device to introduce fluid fuel at one end of the combustion chamber of the furnace consisting of a controllable conduit for liquid fuel and a controllable conduit for gaseous fluid under pressure, the exhausts of both of said conduits being adjacent whereby the liquid is atomized, said bottom wall and side walls of the furnace being provided with a series of valve controlled air inlet passages arranged at regular intervals, the air inlet passages of the side walls being arranged at directly opposite points along said walls and the air inlet passages of the bottom walls being arranged alternately with respect to the air inlet passages of the side walls, whereby a regular and progressive combustion of fluid fuel throughout the entire combustion chamber is effected and combustion is initiated and sustained only at predetermined points along the combustion chamber.

883,261. WIND-SHIELD. JAMES WEBSTER, Chicago, Ill. Filed Feb. 6, 1907. Serial No. 356,073.



1. In a wind shield, in combination, a plurality of sections, hinges uniting adjacent sections and having a sliding engagement with one of the sections.

2. In a wind shield, in combination, a plurality of sections, hinges uniting adjacent sections and having a sliding engagement with one of the sections, a rigid strap secured to one section and being prolonged to engage the other, and a locking device for securing the section last referred to to such strap.

3. In a wind shield, in combination, a plurality of sections, hinges uniting adjacent sections and having a sliding engagement with one of the sections, a rigid strap secured to one section and being prolonged to engage the other, a locking device for securing the section last referred to to such strap, and a locking device for rigidly securing the two sections together when in their folded relation.

4. In a wind shield, in combination, a plurality of sections, hinges uniting adjacent sections and having a sliding engagement with one of the sections, and a stop for limiting the movement of the slidable member of the hinge.

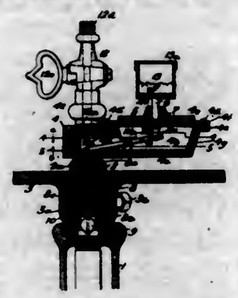
5. In a wind shield, in combination, a plurality of sections, hinges for uniting the two sections, one leaf thereof being fixed to the upper section, a screw-bolt for securing the lower leaf of the hinge to the lower shield section and being longitudinally slidable in one of such members, and means for securing the upper shield section in the position of service.

[Claims 6 to 9 not printed in the Gazette.]

883,262. GAS STREET-LIGHT EXTINGUISHER. STERLING WELLS, Schaller, Iowa. Filed July 5, 1907. Serial No. 382,337.

1. An apparatus of the class described, comprising in combination with the lamp gas supply pipe, a casing having a nipple threaded into said supply pipe and provided with a gas passage and a valve seat, a valve for coöperating with said valve seat, a valve stem projecting into said gas passage of the nipple, a lever fulcrumed in said casing and connected with said valve stem, means controlled by gas pressure and connected with said lever for maintaining the valve open while gas is passing through under normal pressure, means for rocking said lever to close said valve when the gas pressure falls below a predetermined amount, said casing having an outlet aperture and a threaded cock receiving portion merging therewith, and a stop-cock connected in said cock receiving portion.

2. The combination with the gas supply pipe having a threaded mouth, a casing having an internal chamber and an inlet passage and an outlet passage communicating therewith, a nipple having a threaded portion adapted to screw into said gas supply pipe, said nipple having a gas passage communicating with the gas chamber of the casing, valve devices for said gas passage of the nipple, means for normally holding said valve open by gas pressure, and means for closing said valve when the gas pressure drops below a predetermined amount, a stop-cock mounted in said casing at the outlet passage thereof, all being arranged as shown and described.



3. In an apparatus of the class described, a casing having a gas chamber and a gas passage in communication therewith, a nipple projecting from said casing at the gas passage and having a bore in communication with said gas passage, said casing having an internally threaded cock receiving portion in communication with said gas passage, an inlet valve to said casing, means for holding said inlet valve normally open, and means for closing said inlet valve when the gas pressure drops below a predetermined amount.

4. In an apparatus of the class described, a casing having a gas chamber and a gas passage in communication therewith, a nipple projecting from said casing at the gas passage and having a bore in communication with said gas passage, said casing having an internally threaded cock receiving portion in communication with said gas passage, an inlet valve to said casing, means for holding said inlet valve normally open, means for closing said inlet valve when the gas pressure drops below a predetermined amount, said last named means comprising a weighted member, a lever fulcrumed within the casing and connected with said weighted member and said valve, substantially as shown and described.

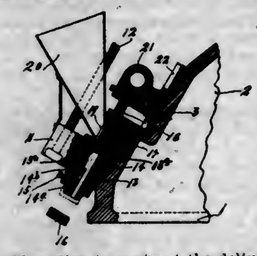
5. In an apparatus of the class described, a casing having a gas chamber and a gas passage in communication therewith, a nipple projecting from said casing adjacent the gas passage thereof, and having a bore in communication with said gas passage, said casing having a cock receiving portion in communication with said gas passage, said nipple having a valve seat at its entrant end, an inlet valve coöperating with said valve seat and having a stem projecting through said nipple, a lever fulcrumed in said casing and projecting through the gas passage thereof and connected with said valve stem, means cooperating with the lever for holding the inlet valve normally open, and means coöperating with said last named means for closing said inlet valve when the gas pressure drops below a predetermined amount, substantially as shown and described.

[Claim 6 not printed in the Gazette.]

883,263. BRIQUET-MACHINE. KARL WESSEL, St. Paul, Minn. Filed May 7, 1906. Serial No. 315,526.

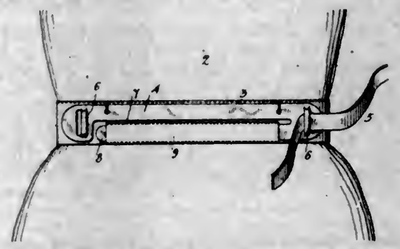
1. In a machine of the kind described, the combination with a mold and a coöperating compression plunger, of means for reciprocating said plunger, and a cap rigidly but detachably securable to the delivery end of said mold and serving when applied to confine the material being compressed within the mold, substantially as described.

2. In a machine of the kind described, the combination with a mold and a coöperating compression plunger, said mold having at its delivery portion a segmental section, means for imparting a lateral angular adjustment to said



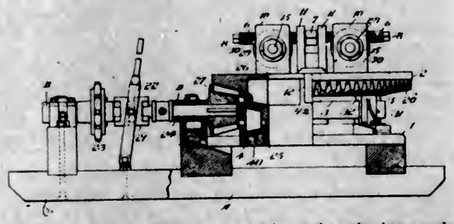
segmental mold section to contract the delivery end thereof, means for reciprocating said plunger, and a cap rigidly but detachably securable to the delivery end of said mold, substantially as described and for the purposes set forth.

883,264. SKIRT-SUPPORTER. GEORGE WETTLAUFER, Stratford, Ontario, Canada. Filed Oct. 22, 1906. Serial No. 340,048.



In a skirt supporter and in combination with a garment having a rear open-ended pocket, a supporting member comprising a length of flexible material having transverse straps struck therefrom at points adjacent its ends and provided between said straps with a longitudinal slot terminating at one end in an outwardly opening transverse slot, providing the member with a single longitudinally disposed tongue adapted to extend wholly through the pocket and for entrance thereinto by an endwise movement of the member in one direction only, and a tape passed through said straps and designed to encircle the wearer's waist.

883,265. ROTARY WELL-BORING MACHINE. JAMES A. WIGGS, Jr., Beaumont, Tex. Filed July 22, 1907. Serial No. 385,044.



1. In a rotary well-boring machine tube-gripping mechanism, comprising shafts carrying tube gripping devices and adjusting shafts and having normally a quadrilateral form as a whole, but provided at its corners with nuts having concave sides and contiguous parts having convex faces fitting said sides, the said parts connecting the ends of said shafts to each other and allowing horizontal flexure for the purpose set forth.

2. In a rotary well boring machine, tube-gripping mech-

anism comprising two shafts carrying tube gripping devices, two screw-threaded adjusting shafts for the same, four grip heads arranged at the corners of the system of mechanism thus formed and nuts within said grip heads receiving said screw-threaded shaft and locked against vertical or endwise movement, the said nuts and grip-heads being provided with curvilinear parts in contact within each other, whereby they are adapted to swivel slightly in a horizontal plane for the purpose set forth.

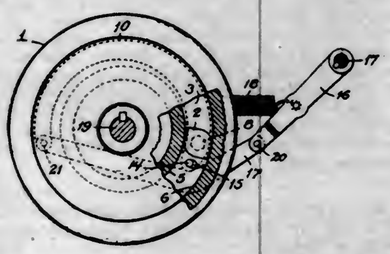
3. In a rotary well boring machine, a pair of shafts carrying tube gripping devices, in combination with screw-threaded shafts for adjusting said grip-roller shafts, nuts engaging said screw-threaded shafts and hollow grip-heads inclosing said nuts and connecting the proximate ends of said grip-roller shafts and screw-threaded shafts, the said nuts having concavities in their sides and the said grip-heads having convex parts which fit into said concavities, to permit a swiveling action of the nuts and grip-heads in a horizontal plane substantially as set forth.

4. In a rotary well-boring machine, a pair of shafts carrying tube-gripping devices having flattened faces, in combination with screw-threaded shafts for adjusting said grip-roller shafts, nuts on said grip roller shafts having flattened faces in contact with the similar faces of said shafts but provided with curvilinear sides, and grip heads which hold said nuts in contact with such shaft faces but allow said nuts to swivel in a horizontal plane substantially as set forth.

5. A nut provided with concave surfaces in its sides but flat on top and below, in combination with a screw threaded adjusting shaft engaging said nut, a shaft carrying a tube-gripping device having a flat face on top and a hollow grip head provided with inwardly facing convex parts fitting said concave parts of the sides of the nut and holding the lower face of the latter in contact with the flattened face of the shaft substantially as set forth.

[Claims 6 to 8 not printed in the Gazette.]

883,266. STARTING CLUTCH. JOHN F. WILKINSON, Gloucester, Mass. Filed Apr. 19, 1907. Serial No. 369,093.



1. A clutch mechanism comprising a rotary member having an annular groove in a lateral face thereof, a stud having an eccentric head located in said groove, an arm supported so as to be movable bodily about the axis of said member by which said stud is carried non-rotatably, and driving means so engaged with the arm as to move the same both oscillatively and bodily to crowd the head of said stud between the walls of the groove and turn the said member.

2. A clutch mechanism comprising two members, one of which is provided with inner and outer concentric surfaces, and the other comprising a stud having an integral head of greater length than width located between said surfaces, said stud being mounted with capability of oscillating about a center within its own periphery, whereby the head thereof may be caused to bind against the said surfaces.

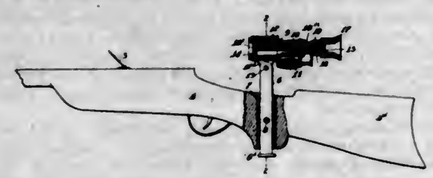
3. A clutch comprising a disk having concentric inner and outer faces, a holder mounted to oscillate concentrically with and relatively to said disk, a stud pivotally mounted in said holder and having a rigid elongated head entering the space between said faces, and an arm to which said stud is rigidly secured adapted to swing the stud so as to bind the elongated head thereof against said faces and thereafter to rotate the disk.

4. A clutch comprising a disk having concentric inner and outer faces, a holder mounted to oscillate concentrically with and relatively to said disk, a stud pivotally mounted in said holder and having a rigid elongated head entering the space between said faces, an arm to which said stud is rigidly secured, whereby an oscillatory motion of said arm will cause the said head to bind against said concentric faces, an operating member, and a link connecting said operating member with said arm for moving the latter angularly and bodily to connect the clutch members and drive the disk.

5. A clutch comprising a disk having a groove, an elongated clutch dog arranged in said groove, a holder in which said dog is pivotally mounted, an arm rigidly connected with said dog adapted to oscillate the same and thereby cause its end to bind against the walls of the groove, an actuator, and a link pivoted to said arm and actuator, for driving the former from the latter, the parts being movable to bring the pivots of the link substantially in line with and on opposite sides of the pivotal axis of the clutch dog.

[Claims 6 to 22 not printed in the Gazette.]

883,267. AIMING DEVICE FOR FIREARMS. CHRISTIAN WILLIAMS, Wittenberg, Wis. Filed Aug. 12, 1907. Serial No. 388,263.



1. The combination with a fire arm, of a field glass, an aiming tube within the field glass and having its ends located centrally of the lenses in the field glass, and means for supporting the field glass on the fire arm.

2. The combination with a fire arm, of a field glass, an aiming tube comprising a plurality of telescopic sections located within the field glass, and means for supporting the field glass on the fire arm.

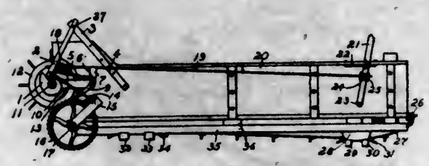
3. The combination with a fire arm, of a field glass, a telescopic aiming tube located centrally within the field glass and having its ends supported in the lenses of said field glass, and means for supporting the field glass on the fire arm.

4. The combination with a fire arm, of a field glass comprising a fixed member and a movable member, an aiming tube located within the field glass and comprising a plurality of telescoping sections, one section being rigid with the fixed member and the other section being rigid with the movable member, means for adjusting the movable member of the field glass and the movable section of the aiming tube simultaneously and relatively to the fixed member of the field glass and the fixed section of the aiming tube, and means for supporting the field glass on the fire arm.

5. The combination with a fire arm, of a field glass comprising a fixed member and a movable member, a lens in each member, an aiming tube located within the field glass and comprising a plurality of telescopic sections, one section having its outer end supported in the lens of the fixed member and the other section having its outer end supported in the lens of the movable member, means for adjusting the movable member of the field glass with the tube section therein relatively to the fixed member of the field glass and the tube section therein, and means for supporting the field glass on the fire arm.

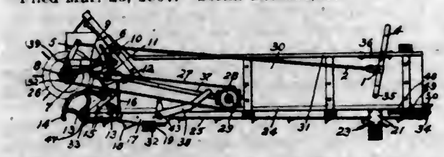
[Claims 6 to 8 not printed in the Gazette.]

883,268. MANURE-SPREADER. DALTON K. WILSON, Waterloo, Iowa, assignor to The William Galloway Company, Waterloo, Iowa. Filed May 11, 1907. Serial No. 373,179.



In a manure spreader, the combination with a box containing a movable endless longitudinal apron, a beater-drum supported on a rotatable shaft at the rear of said apron, a cam-wheel on said shaft, a driving-shaft for said apron, a ratchet-wheel on said apron-shaft, a pawl adapted to operatively engage the teeth of said ratchet-wheel, a lever pivotally supported by said box and having one end in operative contact with said cam-wheel, a link between said lever and said pawl, a rack-bar on said box, a hand-lever pivoted to said box and adapted to removably engage any of the teeth of said rack-bar, a connecting-rod having a swivel connection with said hand-lever and a resilient connection with said cam-driven-lever, a guard-pawl pivotally supported above and adapted to engage with the teeth of said ratchet-wheel, and a spring connected between said cam-driven-rod and said guard-pawl adapted to ordinarily maintain the latter in engagement with the teeth of said ratchet-wheel.

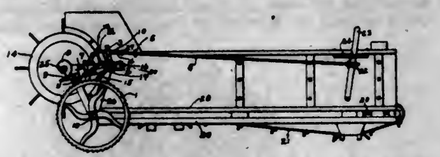
883,269. MANURE-SPREADER. DALTON K. WILSON, and EUGENE BUSWELL, Waterloo, Iowa, assignors to The William Galloway Company, Waterloo, Iowa. Filed Mar. 23, 1907. Serial No. 364,051.



In a manure spreader, in combination, a box mounted on carrying-wheels, a movable apron in said box, a ratchet-wheel adapted to move said apron, a beater-drum secured to a rotatable shaft at one end of said apron, an eccentric secured on one end of said shaft, a strap on said eccentric having a projecting pitman, a bell-crank lever whose lower member is slotted pivoted to said box, a hand-lever pivoted to said box, a connecting-rod between said hand-lever and the upper member of said bell-crank lever, a second bell-crank lever whose upper member is slotted pivoted to said box and provided with oppositely directed lower arms, arms pivoted on the end of the ratchet-wheel shaft, pawls pivoted to said arms and adapted to operatively engage the teeth of said ratchet-wheel, connecting-rods between said pawls and the oppositely directed arms of the second bell-crank lever, the outer end of the said pitman being adapted to enter and slidably engage the slots in both said bell-crank levers.

883,270. MANURE-SPREADER. DALTON K. WILSON, Waterloo, Iowa, assignor to The William Galloway Company, Waterloo, Iowa, a Corporation. Filed June 17, 1907. Serial No. 379,355.

1. In a manure spreader, the combination of a wagon-box, a movable apron therein, a rotatable shaft adapted to drive said apron, a ratchet-wheel secured to said shaft, a rotatable driving-shaft supported near said ratchet-wheel, a cam-wheel secured to said wagon-box and adapted to be actuated by said cam-wheel, a pawl pivoted to said lever and adapted to drive said ratchet-wheel, a holding pawl pivoted to said box and adapted to engage the teeth of said ratchet-wheel, a resilient connection between said pawls adapted to keep them both in contact with the teeth of said ratchet-wheel, a projecting arm secured to the upper end of the holding pawl, a rack-bar on said wagon-box, a hand-lever pivoted to said wagon-box and adapted to engage said rack-bar, and a link between said hand-lever and said projecting arm.



2. In a manure-spreader, the combination of a wagon-box, a movable apron therein, a rotatable shaft adapted to drive said apron, a ratchet-wheel secured to said shaft, a rotatable driving-shaft supported near said ratchet-wheel, a cam-wheel secured to said driving-shaft, a lever pivotally connected to said wagon-box and adapted to be actuated by said cam-wheel, a weight on the forward end of said lever adapted to keep the rear end thereof in operative contact with said cam-wheel, a pawl pivotally suspended from said lever and adapted to drive said ratchet-wheel, a holding pawl pivoted to said box forward of the driving pawl and adapted to engage with the teeth of said ratchet-wheel, a projecting arm secured to the upper end of the holding pawl, a rack-bar on said wagon-box having grooves, a hand-lever pivoted to said wagon-box and adapted to engage the grooves of said rack-bar, and a link-connection between said hand-lever and said projecting arm.

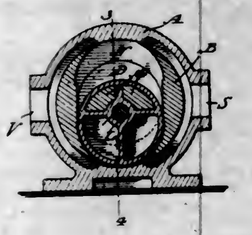
3. In a manure-spreader, the combination of a wagon-box, a movable apron therein, a rotatable shaft adapted to drive said apron, a ratchet-wheel secured to said shaft, a rotatable driving-shaft supported near said ratchet-wheel, a cam-wheel secured to said driving-shaft, a lever pivotally connected to said wagon-box and adapted to be actuated by said cam-wheel, a weight on the forward end of said lever adapted to keep the rear end thereof in operative contact with said cam-wheel, a pawl pivotally connected to said lever and adapted to drive said ratchet-wheel, a holding pawl pivoted to said box and engaging the teeth of said ratchet-wheel, a projecting arm secured to the upper end of said holding pawl, a rack-bar on said wagon-box a hand-lever pivoted to said wagon-box and adapted to engage said rack-bar, a link between said hand-lever and said projecting arm, and a resilient connection between said link and the forward member of the cam-actuated lever.

4. In a manure spreader, the combination of a wagon-box, a movable apron therein, a rotatable shaft adapted to drive said apron, a ratchet-wheel secured to said shaft, a rotatable driving-shaft supported near said ratchet-wheel, a cam-wheel secured to said driving-shaft, a lever pivotally connected to said wagon-box and adapted to be actuated by said cam-wheel, a weight on the forward end of said lever adapted to keep the rear end thereof in operative contact with said cam-wheel, a pawl pivoted to said lever and adapted to drive said ratchet-wheel, a holding pawl for said ratchet-wheel, a resilient connection between said pawls adapted to keep them both in contact with the teeth of said ratchet-wheel, a projecting arm secured to the upper end of the holding pawl, an upwardly extending arm on the forward end of the pawl-carrying lever, a rack-bar on said wagon-box, a hand-lever pivoted to said wagon-box and adapted to engage said rack-bar, a link between said hand-lever and the projecting arm on the forward pawl, and a resilient connection between said link and the upwardly extending arm on the forward end of the pawl-carrying lever.

883,271. ROTARY PUMP. GEORGE WILSON, Sharrow, Sheffield, England. Filed Sept. 16, 1907. Serial No. 393,000.

In a rotary pump, a cylindrical casing provided at its opposite sides with inlet and outlet ports and having end

plates provided in their inner faces with central circular recesses, a shaft passing eccentrically through said casing and said recesses, an eccentric drum keyed to said shaft, a second drum mounted on the eccentric drum within said casing and provided with a longitudinal and diametric slot which opens at the opposite sides thereof to form ports which correspond with the ports in the casing, said second drum being provided with end openings the diameter of which is equal to the width of the transverse slot therein,



and said second drum being also provided with end plates having on their inner faces eccentric bosses which fit in the end openings in said drum and on their outer faces eccentric bosses which fit in the recesses in the inner faces of the end plates of the casing, said end plates of the second drum being also provided with central openings through which the shaft eccentrically passes, and one of said openings being provided with an internal gear, and said shaft being also provided with a pinion which meshes with said gear.

883,272. COMBINED FUSED CONNECTOR AND LIGHTNING-ARRESTER FOR ELECTRIC WIRES. FREDERICK C. WOODS, Galesburg, Ill. Filed Feb. 27, 1907. Serial No. 359,662.



1. A device of the character described including a container, insulating material therein, contact members embedded in said material and coiled means exterior to the container for connecting said members whereby electric current may flow therebetween.

2. A device of the character described including a container, insulating material therein, spaced contact-members embedded in said material and a coiled fuse exterior to the container for connecting said members.

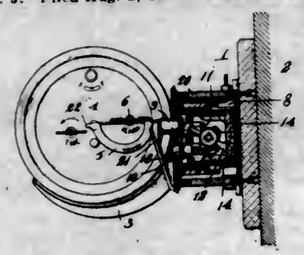
3. A device of the character described including a container, insulating material therein, contact members embedded in said material and a coiled fuse exterior to the container connecting said members.

4. A device of the character described including a housing of non-current-conducting material, a metal container secured thereto, insulating material therein, contact members embedded in said material, and coiled means exterior to the container for uniting them whereby electric current may flow from one to the other.

5. A device of the character described including a metallic container, foramens therethrough, insulating material within said container, centrally disposed contact-members embedded in said material, and radial pins projecting from said members through said insulation and foramens.

[Claims 6 to 12 not printed in the Gazette.]

883,273. TIME-SWITCH. CHARLES E. AVERY, Jersey City, N. J. Filed Aug. 1, 1906. Serial No. 328,688.



1. In a time switch, the combination of a time keeping device, a rotating arbor controlled thereby, a cam carried thereby, a push button switch, a lever actuated by said cam to operate a push button of the switch and a spring secured to said lever to furnish a yielding connection between the cam and the lever substantially as set forth.

2. In a time switch, the combination of a time keeping device, a rotating element controlled thereby to operate at a predetermined time, a cam carried thereby, a push button switch, and a lever engaged by said cam having a spring arm which engages a push button of the switch, substantially as set forth.

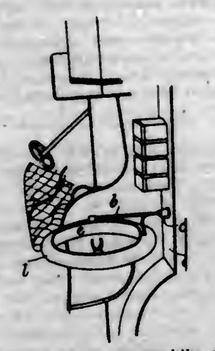
3. In a time switch, the combination of a time keeping device having an alarm train arranged to operate at a predetermined time, a winding arbor for the alarm, a cam secured thereto, a push button switch, a lever arranged to be actuated by said cam and a spring which furnishes a yielding connection between a push button of the switch and said cam.

4. In a time switch, the combination of a time keeping device, a rotating element controlled thereby, a cam carried by said element, a lever actuated thereby, a push button switch having a button for closing and a button for opening the switch, and a support for said switch upon which the switch mechanism is reversible to bring either one of said push buttons into operative relation with said lever.

5. In a time switch, the combination of a time keeping device, a rotating element controlled thereby to operate at a predetermined time, a push button switch having a button for opening and a button for closing the switch, a cam carried by said rotating element and a support for said switch upon which the switch mechanism is reversible to bring either one of said push buttons into operative relation with said cam.

[Claim 6 not printed in the Gazette.]

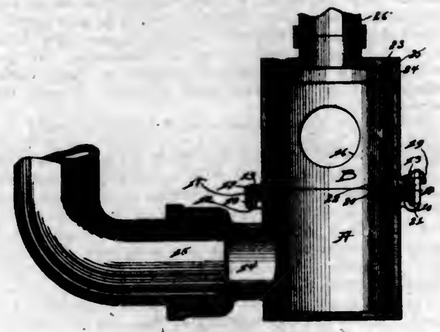
883,274. DEVICE FOR CARRYING SPARE WHEELS OR TIRES ON MOTOR-CARS. ALFRED J. BAILEY, Salford, England. Filed May 28, 1907. Serial No. 376,180.



1. In combination with an automobile, a vertical standard mounted thereon, a frame extending laterally from the standard, means for swiveling the frame on the standard, and means for holding a tire to the frame.

2. In combination with an automobile, a vertical standard mounted thereon, a ring shaped frame extending laterally from the standard, means for swiveling the frame to the standard, and means for holding a tire to the frame.

883,275. ADJUSTABLE TRAP FOR SOIL-PIPES. EDGAR T. BARKER, Marshalltown, Iowa. Filed Apr. 11, 1907. Serial No. 368,088.



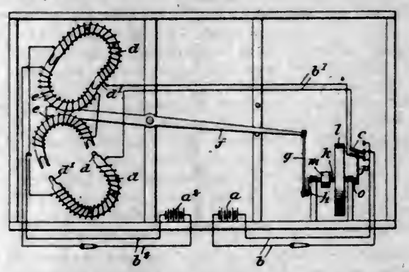
1. In an adjustable trap for soil pipes and the like, a lower cylindrical part having a lateral extension, a closed bottom and an open top, a continuous flange extending outward at its top, a continuous groove in the underside of the flange and a continuous groove in the top face of the flange, an upper cylindrical part provided with a lateral extension and open at its bottom and top, an internal screw at its top, a continuous flange extending outward at its bottom, and a continuous enlargement projecting downward from the bottom of the flange, bolt holes in the flange, bolts extended up in said bolt holes, nuts on the bolts, and hooks at the lower ends of the bolts extended into the groove in the underside of the flange at the top of the lower part, arranged and combined to operate as set forth.

2. An adjustable trap for soil pipes and the like comprising a lower cylindrical part, closed at its bottom and open at its top and provided with a flange at its top having continuous grooves in its under and top faces and also provided with a lateral extension, an upper mating part having a lateral extension, an open top having an internal screw, a pipe connected with the open top, a continuous flange extending outward from its bottom fitted to the grooved flange of the mating lower part and provided with bolt holes, bolts in the bolt holes, nuts on the bolts and hooks at the lower ends of the bolts extended into the groove in the under face of the flange at the top of the lower part, to operate as set forth.

883,276. ELECTROMAGNETIC MOTOR. ARTHUR H. BEARD, Memphis, Tenn. Filed Jan. 31, 1906. Serial No. 298,778.

1. An electro-magnetic motor, comprising a pivoted lever bearing on one end two electro-magnets with oppositely projecting poles arranged on lines radial to the center of the lever and continuously wound helices, a single electric circuit normally closed through both said helices, two stationary electro-magnets arranged on opposite sides of the movable magnets with poles facing those of the intermediate movable magnets and arranged on the radial lines of the lever's center, an electric circuit passing through the coils of both stationary magnets, a pole changer for alternately reversing this circuit, and mechanical means for shifting the pole changer by the oscillation of the lever.

2. An electro-magnetic motor, comprising a pivoted lever bearing on one end two magnets with oppositely projecting poles arranged on lines radial to the center of the lever, two stationary electro-magnets arranged on opposite sides of the movable magnets with poles facing those of the intermediate movable magnets and arranged on the radial lines of the lever's center, an electric circuit passing through the coils of both stationary magnets, a pole changer for alternately reversing this circuit and mechanical means for shifting the pole changer by the oscillations of the lever.



3. An electro-magnetic motor, comprising a pivoted lever bearing at one end two magnets with oppositely projecting poles arranged on lines radial to the center of the lever, two stationary electro-magnets arranged on opposite sides of the movable magnets with poles facing those of the intermediate movable magnets and arranged on the radial lines of the lever's center, the oppositely facing poles of the movable and stationary magnets being formed with coaxially interlocking pole ends, an electric circuit passing through the coils of both stationary magnets, a pole changer for alternately reversing this circuit and mechanical means for shifting the pole changer by the oscillations of the lever.

4. In a motor, the combination of four electro-magnets, two batteries, a pole changer, conductors connecting one battery with the pole changer, and the latter with its field magnets, a crank shaft, a link connecting the crank shaft with the pole changer, a pivoted lever, a link connecting one end of the lever with the crank shaft, movable electro-magnets mounted on the other end of the lever between the field magnets and energized by the second battery, and conductors connecting this battery with the movable electro-magnets.

5. In a motor, the combination of semi-circular field magnets, a circuit for supplying a current thereto, a pole changer in said circuits, a double semi-circular plunger magnet between the field magnets and acting as armatures thereto, and recessed to receive the poles thereof, a pivoted lever upon one end of which the double magnet is mounted, a shaft, means for connecting the other end of the lever with said shaft to operate it, and means for operating the pole changer from said shaft.

883,277. COLLAPSIBLE UMBRELLA. JOE BELLIS, Shreveport, La. Filed Dec. 2, 1907. Serial No. 404,727.

1. An umbrella comprising a handle and a top, the latter being a body hollow throughout its entire extent and composed wholly of soft pliable material, and means to inflate said top.

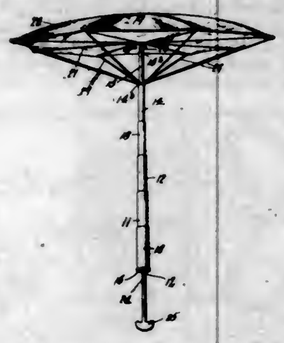
2. An umbrella comprising a top, a collapsible hollow handle, and pneumatic means to extend said handle.

3. An umbrella comprising a top, a collapsible sectional tubular handle, and pneumatic means coöperating with one of the handle sections to extend all the other sections thereof.

4. The herein described collapsible umbrella comprising, in combination, a top composed of a hollow pliable body, a collapsible sectional tubular handle attached to and communicating with the interior of said top, and pneumatic means to simultaneously extend the handle and inflate the top.

5. A pneumatic umbrella comprising a top composed

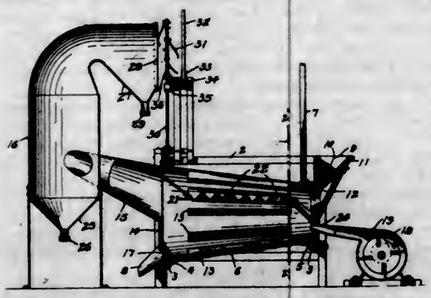
wholly of a hollow inflatable body having an upper member, a smaller lower member, said members being coextensive at their peripheries and being there hermetically attached to each other, the line of said attachment con-



stituting the periphery of said top, and connections extending between said members at intervals to prevent too great separation thereof, a handle, and means to inflate said top.

[Claim 6 not printed in the Gazette.]

883,278. ORE-SEPARATOR. JARED E. BELT, Minneapolis, Minn. Filed May 13, 1907. Serial No. 373,492.



1. In a separator of the class described, the combination, with a rotatable drum provided with a series of buckets upon its inner surface, of a series of hoppers supported in a stationary position within said drum and adapted to receive the material carried up by said buckets, means for discharging the material in thin sheets from said hoppers, and means for creating a current of air through said drum below said hoppers.

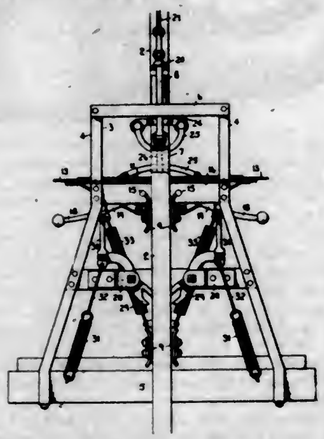
2. In a separator of the class described, the combination, with a rotatable drum provided with a series of buckets upon its inner surface, of a series of hoppers supported in a stationary position within said drum and adapted to receive the material carried up by said buckets, means for discharging the material in thin sheets from said hoppers, said sheets being inclined towards the rear end of said drum, and means for creating a current of air through said drum below said hoppers.

3. In a separator of the class described, the combination with a rotatable drum provided with a series of buckets upon its inner surface, of a series of hoppers supported in a stationary position within said drum and adapted to receive the material carried up by said buckets, means for discharging the material in thin sheets from said hoppers, means for creating a current of air through said drum below said hoppers and suitable settlings chambers into which said air current passes and in which the light material taken up by said air current is deposited.

4. In a separator of the class described, the combination, with a rotatable drum provided with a series of buckets upon its inner surface, of a series of hoppers supported in a stationary position within said drum and adapted to receive the material carried up by said buckets, means for discharging the material in thin sheets from said hoppers, means for creating a current of air through said drum below said hoppers, settlings chambers into which said air current passes, one of said chambers being provided with an open side having a strainer cloth arranged thereon and suitable beaters arranged to engage said cloth, for the purpose set forth.

5. In a separator of the class described, the combination, with a rotatable drum provided with a series of buckets upon its inner surface, of a series of hoppers supported in a stationary position within said drum and adapted to receive the material carried up by said buckets, means for creating a current of air through said drum below said hoppers and means for discharging the material in thin sheets from said hoppers at right angles substantially to the direction of movement of said air current.

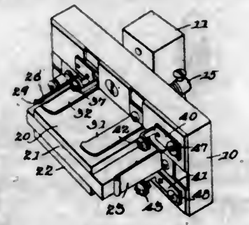
883,279. SAFETY DEVICE FOR ELEVATORS. JOHN J. BENNETT and JOSEPH KLEIN, Centralia, Ill. Filed Apr. 15, 1907. Serial No. 368,337.



In an elevator, a pair of vertical guides, a car arranged for movement between said guides, guide plates carried by the car for travel on the vertical guides, horizontal operating rods journaled in the car frame and having long, outwardly extending operating arms and short operating arms fixed for movement therewith, safety devices pivoted on the car for engagement with the guides to lock the car against downward movement, links connecting the outer free ends of the safety devices with the outer ends of the long operating arms a perforated extension on the lower end of each of said links, coiled springs connecting said extensions with the floor of the car, coiled springs connecting said operating arms with the sides of the car, an angle bar with a perforation at its middle point connected to the car, a vertical bolt slidable in said perforation and supported by a cable, and supporting said angle bar and car, an eyed supporting plate on the lower end of said bolt, a clevis connecting the eyed ends of said supporting plate, a clevis connecting the free ends of the short operating arms, a link connecting the first and second-named clevises, and a removable washer on said bolt between said angle bar and said supporting plate.

883,280. LIGHTNING-ARRESTER. MILLARD BERRY, Fayetteville, Ark. Filed Oct. 18, 1906. Serial No. 339,567.

1. In an apparatus of the class described, a base plate of insulating material, an insulating strip to which said base plate is secured and from each side of which the base plate projects, a lightning arrester carried by said base plate on the side remote from the strip, connections between the terminals of the lightning arrester through and to the rear of the base plate, wire connecting means forming the terminals of said connections, and wire clips carried by the insulating strip at a point adjacent to the rear of the base plate.

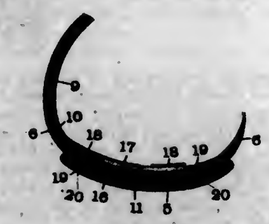


2. In an apparatus of the class described, a distributing board frame including a vertically disposed strip of insulating material, a base plate also formed of insulating material and secured to the front of the strip and having end portions of its rear face projecting beyond the edges of said strip, metallic clips secured to the front of the base plate, wire connecting means accessible from the rear face of the base plate and connected to said clips, other metallic clips secured to the front of the base plate, fuse connections carried by said last-named clips on the front of the base plate, other fuse connections also carried on the front of the base plate, a plurality of carbon blocks held in place by the clips and insulated from each other, and wire clips carried by the insulating strip at a point adjacent to the rear of the base plate.

3. In apparatus of the class described, a base plate of insulating material, a set of carbon blocks thereon insulated one from the other, metallic clips engaging the ends of one of the blocks and located near the ends of the base plate, wire receiving means on the rear face of the base plate near the ends thereof and electrically connected through the base plate to the clips, a pair of clips engaging each of the other carbon blocks at points near the ends of the respective blocks, one of said clips carrying a fuse support, a wire receiving means at the rear face of the block for each other one of the last-named pairs of clips, said wire receiving means being electrically connected through the base of the respective clips, and other fuse supports upon the face of the base plate.

4. In apparatus of the class described, a distributing board frame including a vertically disposed strap of insulating material, a base plate also formed of insulating material and secured to the front of the strip and having end portions of its rear face projecting beyond the edges of said strip, a plurality of metallic clips secured to the front of the base plate, a plurality of carbon blocks held in place by the clips and insulated from each other, wire connecting means accessible from the rear face of the base plate, and wire clips carried by the vertically disposed strip at point adjacent to the rear of the base plate.

883,281. SHOE. LEONARD L. BLOOMINGTON, St. Louis, Mo. Filed Mar. 28, 1906. Serial No. 308,514.



1. In a shoe, the combination with the vamp, quarter and outer sole, of a counter extending around the heel below the ankle, and thence increasing in height toward the instep whereby a support for the arch of the foot is formed.

2. In a shoe, the combination with the vamp, quarter and outer sole, of a counter extending around the heel and thence upwardly and forwardly on the inner side to a point in front of the ankle and the outer side of which inclines forwardly and downwardly from the heel.

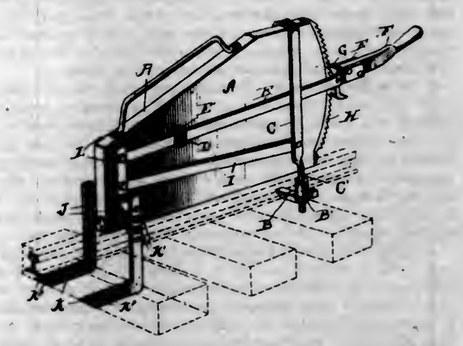
3. In a shoe, the combination with the vamp, quarter and outer sole, of a counter the inner side of which inclines upwardly and forwardly from the heel to a point in front of the ankle and thence downwardly and forwardly adjacent to the lace of the quarter.

4. In a shoe, the combination with the vamp, quarter and outer sole, of a counter the inner side of which inclines upwardly and forwardly from the heel to a point in front of the ankle and thence downwardly and forwardly adjacent to the lace of the quarter, and the outer side of which inclines forwardly and downwardly from the heel.

5. In a shoe, the combination with the vamp, quarter and outer sole, of a counter the edges of which meet at the bottom, the inner side of said counter being inclined upwardly and forwardly to a point in front of the ankle, and a spring metal stiffener secured to the bottom of said counter.

[Claim 6 not printed in the Gazette.]

883,282. TIE-HOLDER. GEORGE BREEZE and CHARLES BREEZE, New Straitsville, Ohio. Filed July 15, 1907. Serial No. 383,842.



1. A tie holder comprising a block, arms pivotally mounted on said block, and supporting brackets carried by said arms.

2. A tie holder comprising a block provided with means for securing it to a rail, arms pivotally mounted on said block, supporting brackets carried by said arms, and means for locking said arms.

3. A tie holder comprising a block adapted to rest on a rail carrying a rack, arms pivotally mounted on said block, supporting brackets carried by said arms, and a pawl carried by said arms adapted to engage said rack.

4. A tie holder comprising a block adapted to be secured on a rail, arms pivotally mounted on said block, adjustable brackets carried by said arms, and means for locking said arms.

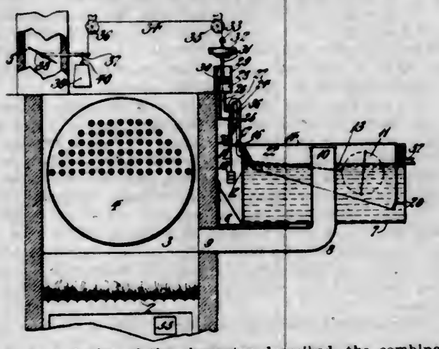
5. A tie holder comprising a block carrying an adjustable foot for securing it on a rail, arms pivotally mounted on said block carrying a lever, adjustable angled brackets carried by said arms provided with teeth, and means for locking said arms.

[Claims 6 and 7 not printed in the Gazette.]

883,283. COMBUSTION AND DAMPER REGULATOR FOR FURNACES. FRANCIS H. BROWN, Philadelphia, Pa., assignor to Combustion Engineering Company, a Corporation of Delaware. Filed Apr. 25, 1907. Serial No. 370,160.

1. In a device of the character described, the combination with a furnace, of a damper controlling the discharge

of gases therefrom, a pivoted member operatively connected with said damper, and an adjustable counterbalance for said member, said member being normally maintained in a substantially horizontal position, and being actuated in one direction by a constant pressure and in the other direction by the pressure of the furnace gases.



2. In a device of the character described, the combination with a furnace of a container, a member pivoted therein and normally maintained in a substantially horizontal position, an adjustable counterbalance for said member, a damper operatively connected with said member and controlling discharge of gases from said furnace, said member having on one side thereof a constant pressure and said member being acted upon on the other side thereof by the pressure of the furnace gases.

3. In a device of the character described, the combination with a furnace of a container, a member pivoted therein and normally maintained in a horizontal position, a counterbalance for said member, means for varying the weight of said counterbalance, and a damper controlling discharge of gases from said furnace and to which said member is operatively connected, said member being acted upon in one direction by a constant pressure and in the opposite direction by the pressure of the furnace gases.

4. In a device of the character described, the combination with a furnace having a combustion chamber, of a container communicating therewith, a member pivoted in said container and normally maintained in substantially a horizontal position, an adjustable counterbalance for said member, a valve mechanism actuated by said member, a motor controlled by said valve mechanism, and a damper controlled by said motor and controlling discharge of gases from said furnace, said member being acted upon in one direction by a constant pressure and in the opposite direction by the pressure of the furnace gases.

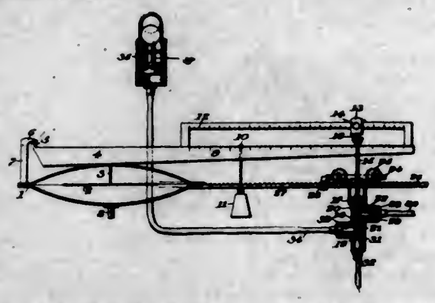
5. In a device of the character described, the combination with a furnace having a combustion chamber, of a container in communication therewith, a member pivoted in said container and normally maintained in substantially a horizontal position, an adjustable counterbalance for said member, a valve mechanism actuated by said member, a motor controlled by said valve mechanism, said motor discharging into said container, the latter having an overflow therefrom, and a damper controlled by said motor and controlling discharge of gases from said furnace.

[Claims 6 to 9 not printed in the Gazette.]

883,284. AUTOMATIC GOVERNING MECHANISM. FRANCIS H. BROWN, Philadelphia, Pa., assignor to Combustion Engineering Company, a Corporation of Delaware. Filed June 18, 1907. Serial No. 379,554.

1. In a device of the character described, the combination with a fluid actuated scale beam, of a valve mechanism including a valve member and a casing member, one of said members being carried by said beam and longitudinally movable thereon, a motor controlled by said valve mechanism and a governing mechanism controlled by said motor.

2. In a device of the character described, the combination with a fluid actuated scale beam, of a valve mechanism including a valve member and a casing member, one of said members being longitudinally adjustable on said beam, a motor controlled by said valve mechanism, a lever actuated by said motor, and a governing mechanism controlled by said lever.



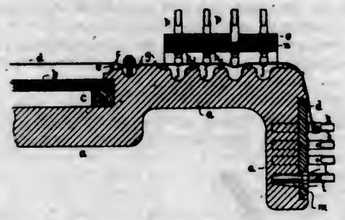
3. In a device of the character described, the combination with a fluid actuated scale beam, including a valve member, and a casing member, one of said members being carried by said beam and longitudinally adjustable thereon, means for fixing said adjustable member in position on said beam, a motor controlled by said valve mechanism, and a governing mechanism controlled by said motor.

4. In a device of the character described, the combination with a fluid actuated scale beam, of a valve adjustably carried by said beam, a stationary track, a carriage longitudinally movable thereon, a valve casing supported by said carriage and having ports controlled by said valve, a motor in communication with said valve casing and controlled by said valve, and a governing mechanism controlled by said motor.

5. In a device of the character described, the combination with a fluid actuated scale beam, of a block carried thereby and longitudinally adjustable with respect thereto, a valve stem connected by a universal joint with said block, a stationary track, a carriage movable thereon, a valve casing carried by said carriage and having inlet and outlet ports controlled by said valve, a motor in communication with said valve casing and controlled by said valve, and a governing mechanism controlled by said motor.

[Claims 6 to 14 not printed in the Gazette.]

883,285. PIANO-TUNING PIN. JEFFREY J. BRUER, Adelaide, South Australia, Australia. Filed Oct. 10, 1905. Serial No. 282,173.



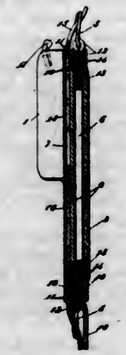
1. In a piano the combination of a string plate having parallel grooves therein, bridges placed between the grooves over which the strings are passed, a plate located above the strings and grooves, and having screw-threaded holes therein located directly over the grooves, locking pins for holding the strings and screw threaded tuning pins passing through the holes in the plate and having their ends adapted to bear on that portion of the strings between the bridges and over the grooves.

2. In a piano, a string plate having wedge-shaped holes therein, a plate covering the hole-containing-portion of the string plate and having tapered openings therein registering with the wedge shaped holes, one half of each of said openings being of greater width at its larger end than the locking pins, while the other half is multi-sided, and locking-pins adapted to fit in said holes and each having a tapered multi-sided portion adapted to engage with the multi-sided portion of the opening.

883,286. METHOD OF MANUFACTURING AND TREATING COMPOSITE ALUMINIUM OXIDS. MAX BUCHNER, Mannheim-Waldhof, Germany. Filed May 10, 1907. Serial No. 372,911.

A process for the manufacture of combinations of fused aluminium oxid and oxygen compounds of the metals or metalloids or metals and metalloids characterized (1) by the arrangement that fused aluminium oxid is mixed with the said oxygen compounds with or without inorganic or organic binding materials and is heated (2) by the arrangement wherein an already burned mixture of fused aluminium oxid and other oxids in the grain condition is mixed with aluminium oxid, one or more oxids with or without binding materials, burned and molded.

883,287. WINKER-BLIND. WILLIAM L. BUERGER, Williamsport, Pa., assignor to Williamsport Staple Company, Williamsport, Pa., a Corporation of Pennsylvania. Filed Feb. 6, 1906. Serial No. 299,812.



1. A molded cheek-piece having a socket with an embedded metallic lining therein, the material of the cheek-piece being formed or molded exteriorly on said lining, and a buckle-strap or keeper having on its end a metallic cap adapted to enter said socket, the cap and lining constituting a strap-fastening whereby the cap when inserted into said socket is permanently retained therein by engagement with said lining.

2. As a new article of manufacture, an integral winker-blind and cheek-piece molded in one piece from suitable moldable material and with sockets in the ends of the cheek-piece provided with embedded metallic linings around which the material of the cheek-piece is molded, said linings being constructed to engage with fastenings for buckle-straps or keepers.

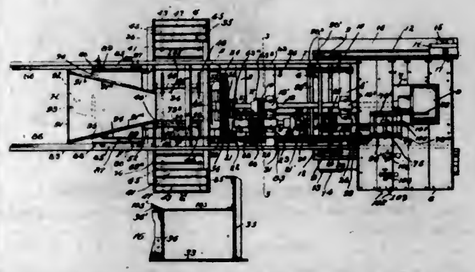
3. A molded cheek-piece having a socketed end and metal strips lining the same, the material of the cheek-piece being molded or formed around said strips, leaving the latter embedded in the material.

4. A unitary article comprising a cheek-piece and winker-blind rigid therewith, the cheek-piece having sockets in its ends, doubled or U-shaped spring-clips adapted to hold the straps or keepers of fastening devices, and the sockets in the ends of said cheek-piece being formed to engage and retain said spring-clips when the latter are inserted therein.

5. A unitary article comprising a cheek-piece and winker-blind, the cheek-piece having end sockets, sheet-metal linings in said sockets having inwardly-projecting abutments, and spring-clips adapted to hold fastenings for incorporating the article in a bridle and for insertion into said sockets to engage behind said abutments.

[Claims 6 to 8 not printed in the Gazette.]

883,288. BOX-CAR LOADER. FREDERICK D. BUFFUM, Columbus, Ohio, assignor, by mesne assignments, to The Jeffrey Manufacturing Company, a Corporation of Ohio. Filed Aug. 29, 1903. Serial No. 171,244.



1. In a box car loader, the combination of a longitudinally movable platform frame, a loading mechanism supported on the front end of said frame, a supplementary frame secured to the platform frame and extending over and in front of the loading mechanism, and a chute supported upon the said upper frame, substantially as set forth.

2. In a box car loader, the combination of a longitudinally movable platform frame, a loading mechanism supported at the front end of the said frame, a frame secured to the platform frame, and situated above the loading mechanism and extending to the front thereof, an adjustable chute upon the said upper frame, and means for adjusting the said chute, substantially as set forth.

3. The combination with the loading mechanism and the means for moving it into and out from the car, of the adjustable chute, and means movable with the loading mechanism for supporting the said chute, substantially as set forth.

4. In a box car loader, the combination of the loading mechanism, the movable support therefor, means for bodily moving the loading mechanism to and from its operative position, and the chute movable bodily with the loading mechanism and adapted to have its delivery end adjustable laterally relatively to the loading mechanism, substantially as set forth.

5. In a box car loader, the combination of the loading mechanism, the means for supporting and bodily moving the loading mechanism, the chute movable bodily with the loading mechanism and adapted to be bodily adjusted vertically, independently of the loading mechanism, substantially as set forth.

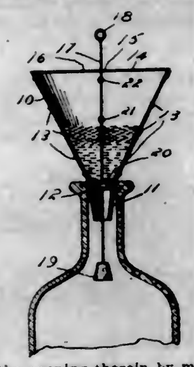
[Claims 6 to 40 not printed in the Gazette.]

883,289. FUNNEL. BERTHA R. BURG, Pana, Kans. Filed Mar. 7, 1907. Serial No. 361,140.

1. A funnel having the body thereof composed of glass scribed with a scale indicating its contents, a rod extending from above the top of the funnel through its spout and provided on the lower end with a floating stopple and with a second stopple inside the funnel above the spout directly connected with and controlled by the wire, a bar extended across the top of the funnel provided with a central opening having narrow slots at each side of the opening, and balls on the rod in spaced relation above the stopple inside the funnel.

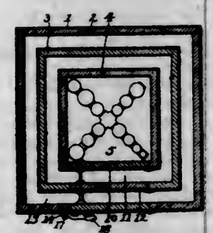
2. A funnel provided with a bar across its top having a relatively large opening in its center and narrow slots at the sides thereof, a wire extended through said opening and through the spout and provided with a float stopper below the spout, and a ball on the wire within the funnel adapted to pass through the central opening in the

bar when the wire is raised by the float stopple the wire being adapted to be passed into the slots in the cross-bar



at the sides of the opening therein by merely being moved laterally therein.

883,290. STAGE APPARATUS. NEILSON BURGESS, Highlands, N. J. Filed July 16, 1902. Serial No. 115,787.



1. In combination in a stage apparatus for producing certain audible, illusory effects, a sound chamber, means for producing sound vibrations within the chamber, exterior sound impeding chambers having doors for controlling the emission of said vibrations from the sound chamber and having insulated walls, and means for varying the tone produced by the vibrations within the chamber.

2. In a stage apparatus for producing audible, illusory effects, a sound producing mechanism, a plurality of chambers surrounding said mechanism, and means for controlling the passage of the sound from the innermost to the outermost chamber, and from either of said chambers to the exterior of the apparatus, whereby certain audible, illusory effects are produced.

3. In combination in a stage apparatus for producing audible, illusory effects, a sound producing mechanism, means for actuating the said mechanism, and means for controlling said actuating means, a plurality of chambers surrounding said sound producing mechanism, each provided with an opening, and means for controlling said openings whereby one or more of said chambers may be opened to the exterior of the apparatus whereby certain illusory, audible effects are produced.

4. In a device of the class specified comprising a sounding mechanism and a plurality of sounding chambers, doors arranged in the walls of each of said chambers, and an operating handle arranged upon the outermost door and provided with connections for engaging or disengaging either of the other doors.

5. In a device of the class specified, comprising a sounding mechanism and a plurality of sounding chambers, doors arranged in the walls of each of said chambers, an operating handle arranged upon the outermost door and provided with connections for engaging or disengaging either of the other doors, and a tube projecting from the sounding mechanism.

[Claims 6 to 12 not printed in the Gazette.]

883,291. APPARATUS FOR PRODUCING ILLUSORY DRAMATIC EFFECTS. NEILSON BURGESS, Highlands, N. J. Filed Apr. 17, 1906. Serial No. 312,166.



1. In a stage appliance, an actuator located on the stage, an inanimate object formed in imitation of an animate object and mounted to be moved by the actuator, and a screen arranged to hide that portion of the animate object represented by the inanimate object.

2. In a stage appliance, an actuator located on the stage and projecting beyond the wings thereof, an inanimate object formed in imitation of an animate object and mounted to be moved by said actuator, and a screen arranged to hide that portion of the animate object represented by the inanimate object.

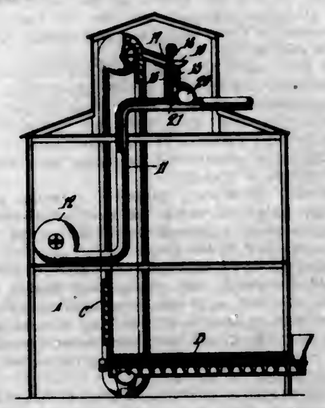
3. In a stage appliance, an actuator located on the stage, an inanimate object formed in imitation of an animate object and mounted to be operated by the actuator, means for attaching said object to an animate object, and a screen arranged to hide that portion of the animate object represented by the inanimate object.

4. In a stage appliance, an actuator located on the stage, an inanimate object formed in imitation of an animate object and mounted to be operated by the actuator, but movable independently thereof, means for securing said inanimate object to an animate object, and a screen arranged to hide that portion of the animate object represented by the inanimate object.

5. In a stage appliance, a shaft mounted on the stage for turning movement, an inanimate object formed in imitation of an animate object and connected to be operated by said shaft, and a screen arranged to hide that portion of an animate object represented by the inanimate object.

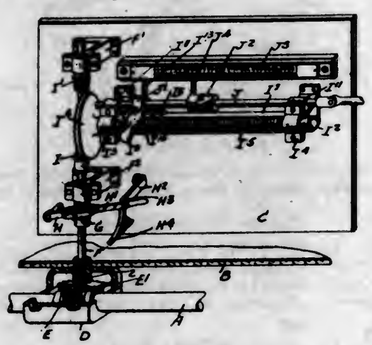
[Claims 6 to 23 not printed in the Gazette.]

883,292. PNEUMATIC GRAIN-CONVEYER. WILLIAM F. CARLTON, Advance, Mo. Filed Sept. 6, 1907. Serial No. 391,660.



In combination, a conveyer pipe, means for forcing a current of air therethrough, a feed casing, a passage connecting the lower end of the feed casing to the pipe, a shaft arranged within the casing, a forcing screw on said shaft, and a plate carried by the shaft and serving to direct the material outward from the casing through said passage.

883,293. AUTOMATIC TRAIN-BRAKE-APPLYING DEVICE. ALONZO W. CAVANAGH and ARTHUR ALLAN, North Bay, Ontario, Canada. Filed Dec. 4, 1907. Serial No. 405,123.



1. In an automatic brake applying device, the combination with the train valve and the car axle of a movable member operated from the car axle, a slidable member adjustably and normally supported at a distance from the movable member and connected to the train valve and means operated by the axle for gradually moving the movable member into contact with the slidable member to move the same, as and for the purpose specified.

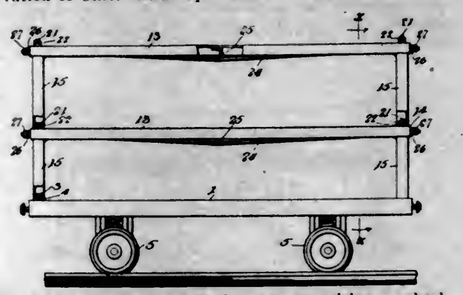
2. In an automatic brake applying device, the combination with the train valve and the car axle, of a graduated scale bar, a longitudinally slidable bar connected to the train valve and provided with a pointer coacting with the scale bar, a threaded spindle parallel to the said bar, a nut therein designed to be fed longitudinally over the threaded spindle into contact with the pointer and means operated by the axle of the car for rotating the spindle as and for the purpose specified.

3. In an automatic brake applying device, the combination with the train valve and the car axle, of a graduated scale bar, longitudinally movable slide bar, a stop adjustably secured thereto, a pointer on the stop coacting with the scale, a threaded spindle supported parallel to the bar and in suitable bearings, a rod parallel to the threaded screw spindle, an arm swung on the rod, a segmental nut forming part of the arm and meshing with the threaded spindle and designed to engage with the stop on the slidable bar and means for rotating the spindle from the axle as and for the purpose specified.

4. In an automatic brake applying device, the combination with the train valve, car axle, scale bar, threaded spindle, the nut meshing with the spindle and the stop on the bar, of a worm on the axle, a vertical movable shaft, a worm gear slidably held therein, a bevel gear on the threaded spindle, a pair of bevel pinions on the vertical shaft and designed to be alternately brought into engagement with the bevel gear by the vertical movement of the shaft and a suitable lever and rack designed to give such vertical adjustment to the shaft as and for the purpose specified.

5. In an automatic brake applying device, the combination with the train valve, car axle, scale bar, threaded spindle, the nut meshing with the spindle, and the stop on the bar, of a worm on the axle, a vertical shaft, a worm wheel thereon meshing with the worm on the axle, bevel gears connecting the vertical shaft with the threaded shaft and means for reversing the drive to compensate for the change in direction of the train as and for the purpose specified.

883,294. TRANSPORTING AND DRYING CAR FOR CEMENT OR CONCRETE BLOCKS. SHERWOOD M. CHASE, Columbus, Ohio, assignor to The Chase Foundry and Manufacturing Company, Columbus, Ohio, a Corporation of Ohio. Filed Apr. 6, 1906. Serial No. 310,204.



1. A transporting and drying car comprising a wheel-supported main platform or deck and a supplemental platform or deck adapted to be superposed thereon and provided with supporting legs at its corners, said legs comprising members arranged in substantially vertical planes extending at an angle to each other, the deck on which said legs rest having upwardly extending projections which lie within the angles of the leg members to engage the same and prevent horizontal displacement, substantially as described.

2. A transporting and drying car comprising a wheel-supported main platform or deck and a supplemental platform or deck adapted to be superposed thereon and provided with supporting legs at its corners, said legs comprising members arranged in substantially vertical planes extending at an angle to each other, the deck on which said legs rest having upwardly extending projections which lie within the angles of the leg members to engage the same and prevent horizontal displacement, said projections consisting of bolts and nuts which also serve to connect the members of the supporting platform or deck, substantially as described.

3. A supporting deck or platform comprising a deck frame and corner legs constructed of angle bars, the side and end members of the frame and a leg meeting at each corner, in combination with a supporting bracket at each corner to which said three members are secured, said bracket having three arms arranged at right angles to each other, each arm extending parallel to one of said members and having angular contact surfaces against which the corresponding angular members fit, substantially as described.

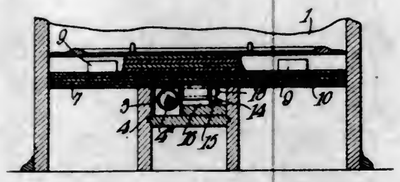
4. A supporting deck or platform comprising a deck frame and corner legs constructed of angle bars, the side and end members of the frame and a leg meeting at each corner, in combination with an internal supporting bracket to which said three members are secured, said bracket having three arms arranged at right angles to each other, and each arm extending parallel to one of said members and having two external contact surfaces against which the angular surfaces of the members fit, substantially as described.

5. In a supporting deck or platform, an internal corner bracket comprising three arms arranged at right angles to each other, each arm having angularly arranged external contact surfaces, in combination with side and end frame members constructed of angle bars and having their horizontal webs overlapped at the corner and secured to two of the bracket arms, one of said arms being rabbeted or cut away to receive the lower frame member, and an angle bar leg fitting and secured to the third arm of the bracket, substantially as described.

883,295. TICKET-CASE. RUSSELL R. CLARK, Smith Center, Kans. Filed Jan. 30, 1908. Serial No. 413,463.

1. A device of the character described adapted to contain cards or tickets, a sliding member arranged in the

base portion of said device, a superposed separable member carried by said slide adapted to engage a contiguous card or ticket, said slide having a lateral projection and said superposed plate carrying a lug straddling said projection, and means arranged in connection with said lateral projection for engagement with a ratchet below the same for indicating the limit of the forward movement of said slide.



2. A device of the character described comprising a casing for containing tickets or cards, a slide arranged in the base portion of said casing, a plate superposed upon said slide having a slot therein, an additional plate arranged upon the aforesaid plate having a pendent lug, said slide having a lateral projection for engagement with said pendent lug, said lateral lug also having a dog, and a ratchet member arranged in said base member adapted to be engaged by said dog.

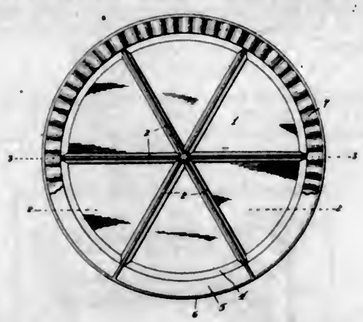
3. In a device of the character described embracing the casing for containing cards or tickets, a sliding member arranged in the base of said casing and having a pendent projection upon its under side, said base portion of said casing having a longitudinal groove receiving said pendent projection, a separable plate member superposed with relation to said slide and having a pendent projection adapted to engage a lateral projection of said slide, a ratchet member arranged in said base member and adapted to be engaged by a dog on said slide.

4. A device of the character described embracing a casing adapted to contain cards or tickets, a sliding member arranged in the base portion of said casing, a plate member arranged upon said sliding member having a slot therein, an additional plate member superposed with relation to the aforesaid plate member and having a pendent bifurcated lug or projection, said slide having a lateral projection adapted to be engaged by said bifurcated lug or projection, said lateral projection having a dog, and a ratchet member arranged in the base portion of said casing adapted to be engaged by said dog.

5. A device of the character described comprising a casing adapted to contain cards or tickets, a sliding member arranged in the base portion of said casing, a spring or resilient member adapted to deliver tension or pressure upon said sliding member, a superposed plate member arranged with relation to said slide and having a slot therein, an additional plate member arranged upon the aforesaid plate member and having a pendent bifurcated projection, said slide member having a lateral projection adapted to be strided by said bifurcated projection, said lateral projection having a dog, and a ratchet member arranged in said portion of said casing adapted to be engaged by said dog.

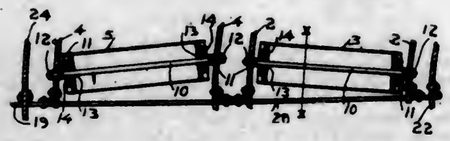
883,296. PIE-TIN. ETHEL O. COOK, Norman, Okla. Filed Aug. 27, 1906. Serial No. 332,259.

A pie baking plate composed of sheet metal and comprising a bottom and an upstanding marginal rim, said plate having a plurality of integral vertically disposed radiating partitions upstruck from said bottom and subdividing the plate into a series of sector-shaped compartments, the partitions being of inverted V-shape in cross-section, presenting sharpened upper edges and having their lower sides open to permit free circulation of heat upward through the partitions, said rim being provided with a horizontal outturned marginal flange disposed in a plane below that of the upper edges of the partitions and having a continuous, vertically uprising marginal lip having its upper edge in a plane flush with that of the upper edges



of the partitions, and a removable crimping ring designed to fit on said horizontal flange within the marginal lip.

883,297. GRAVITY FREIGHT-CARRIER. WILLIAM E. COURTNEY, St. Paul, Minn., assignor to Mathews Gravity Carrier Company, St. Paul, Minn., a Corporation of Minnesota. Filed Sept. 17, 1907. Serial No. 393,390.



1. A gravity freight carrier comprising spirally arranged rails, and a series of carrying rollers mounted in said rails with their axes at an angle to lines radiating from the center of said spiral.

2. A gravity freight-carrier comprising spirally arranged rails, an inner series of carrying rollers mounted in said rails with their axes arranged in lines radiating from the center of said spiral, and an outer series of rollers mounted in said rails with their axes at an angle to lines radiating from the center of said spiral, substantially as described.

3. A gravity freight-carrier comprising, in combination, spirally arranged rails, and rollers mounted in said rails with the outer ends of the rollers in advance of the inner ends, for the purpose set forth.

4. A gravity freight-carrier comprising, in combination, two sets of spirally arranged rails, and rollers supported in each set of rails, the outer ends of the outer set of rollers being in advance of the inner ends, for the purpose set forth.

5. A gravity carrier comprising an inner and outer series of spirally arranged rollers and spirally arranged vertical rails wherein said rollers are journaled the journals of the outer ends of the outer series of rollers being above the level of the journals of the inner ends of said rollers, substantially as described.

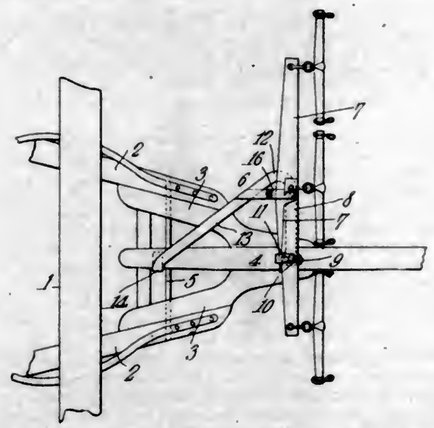
[Claims 6 to 8 not printed in the Gazette.]

883,298. DRAFT-EQUALIZER. FRANK DURGIN, Sioux, Nebr. Filed July 16, 1907. Serial No. 384,071.

1. In a draft equalizer, a tongue, combined with an integral angular or V shaped bracket projecting from one side thereof, the front arm of said bracket being firmly bolted to said tongue, and the rear arm provided with a hooked end to engage the side of the tongue in rear of the first arm, and means for attaching an equalizer bar to the bracket.

2. In a draft equalizer, a tongue, combined with an angular or V shaped bracket, the front arm of said bracket firmly bolted to said tongue and projecting to one side of

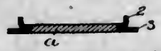
and perpendicular to the same, a brace arm integral with and extending from the first mentioned arm rearwardly and at an angle thereto and has its end shaped into a hook to engage one side of the tongue in rear of its pivot bar, a hammer strap attached to the brace arm and extending forwardly over the other arm, and an equalizer bar pivoted between the hammer strap and the bracket arm below.



3. In a draft equalizer, a tongue, combined with a skeleton bracket of angular or V shape the front arm of said bracket having a transverse head on one end having a plurality of holes through which the bolt is passed for attaching it to the tongue, said arm projecting perpendicular to the tongue on one side and having an opening for a draft bolt, an integral brace arm extending rearward from the first mentioned arm and having its end hooked around the pole, and a hammer strap attached to the brace arm and extending over said first named arm perpendicular thereto, and an equalizer mounted on the bracket.

4. As an article of manufacture, a bracket for draft equalizers comprising an integral V-shaped skeleton structure, one arm of which has at its end a transverse head with bolt openings therethrough disposed in a line transverse to said arm, the other arm having its end formed into a hook, and a hammer strap fastened to the last named arm and extending over the first named arm perpendicular thereto and in a different plane, a bolt hole passing through the hammer strap and the first named arm in line with each other.

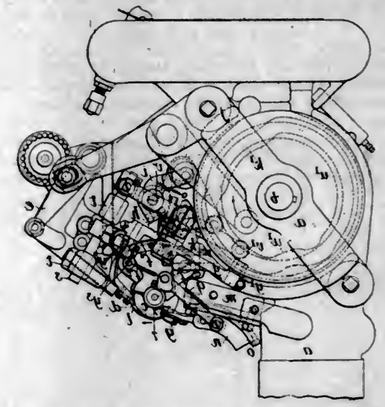
883,299. SOLE FOR BOOTS AND SHOES. OSCAR C. DAVIS, Brockton, Mass. Filed Dec. 29, 1906. Serial No. 349,971.



A sole composed of a sheet of fibrous material treated with a water-proof bonding and stiffening material and channeled and having an upwardly bent permanently stiffened lip.

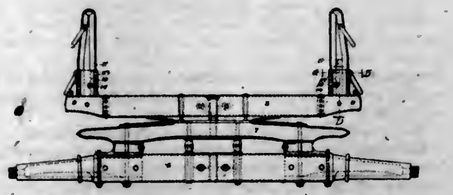
883,300. BOOT AND SHOE SEWING MACHINE. MARK T. DENNE, Rushden, England, assignor to John Cave and Sons, Limited, Rushden, England. Filed Apr. 7, 1905. Serial No. 254,306.

In a chain stitch machine for sewing welts to boots and shoes, the combination with the needle of the looper provided with an eye for receiving the thread, said looper being mounted on an arm provided with a fork at its outer end and secured to a shaft mounted to rock and slide in its bearings, a lever connected to said shaft and a lever engaging the said forked end of the said arm and mechanism to actuate said levers, the relation of the needle and the looper eye being such that the movements given the shaft



carry the thread entirely around the needle, substantially as described.

883,301. WAGON RUNNING-GEAR. SAMUEL K. DENNIS, Chicago, Ill., assignor to International Harvester Company, a Corporation of New Jersey. Filed Sept. 27, 1907. Serial No. 394,785.



1. In a wagon running gear, the combination of a bolster provided with standard sockets, standards adapted to be received by said sockets, said standards being formed from single bars having a cross section of T-shape and a portion of one web thereof cut away intermediate the ends of the bar, said bar being bent in substantially U-form and one of the legs thereof being provided with a bolt receiving opening whereby said standards may be secured in said sockets.

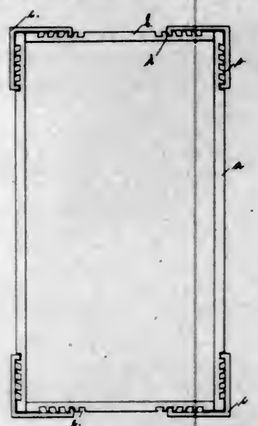
2. In a wagon running gear, the combination of a bolster provided with standard sockets, standards adapted to be received by said sockets, said standards being formed from single bars having a cross section of T-shape and a portion of one web thereof cut away intermediate the ends of the bar, said bar being bent in substantially U-form, and one of the legs thereof being provided with a series of bolt receiving openings whereby said standards may be secured in said sockets and be adjusted vertically therein.

3. A running gear for wagons having, in combination, a bolster, said bolster comprising a pair of U-shaped bars secured together in tubular relation and having at opposite ends thereof extensions secured thereto, said extensions comprising separate plates having body portions substantially conforming in shape with that of said U-shaped bars, and vertical members integral therewith and spaced apart in a manner to form a pair of standard-sockets and standards having legs received by said sockets.

4. A running gear for wagons having, in combination, a bolster, said bolster comprising a pair of U-shaped bars secured together in tubular relation and having at opposite ends thereof extensions secured thereto, said extensions comprising separate plates having body portions conforming in shape substantially with said U-shaped bars, and vertical members integral therewith, said vertical members being spaced apart in a manner to receive stand-

ards between them, standards, said standards having two legs and securing means adapted to clamp said plates against said standard legs.

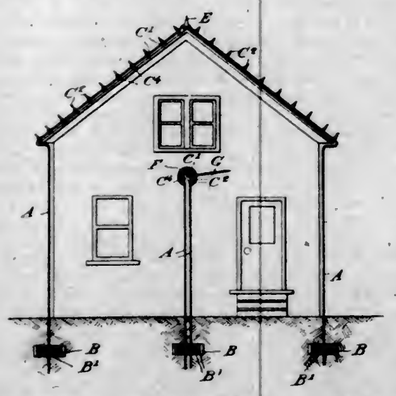
883,302. HOLDER FOR STANDING MATTER. EMIL DOMSGEN and FRIEDRICH L. KUJAWA, Magdeburg, Germany. Filed Mar. 4, 1907. Serial No. 360,582.



1. In a contrivance for holding standing matter the combination of straight bars and connecting pieces bent at right angles, provided near their ends with dovetailed grooves and rectangular ribs extending over the whole breadth of said bars and connecting pieces and adapted to be fitted into each other as described and for the purpose set forth.

2. In a contrivance for holding standing matter the combination of straight bars having near their ends a series of dovetailed grooves extending over the whole breadth of the bar, with connecting pieces bent at right angles, having inside near each end a dovetailed rib adapted to be interlocked with any one of said grooves, all as described and shown.

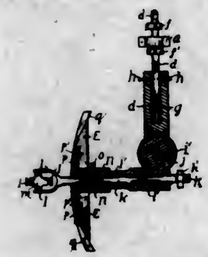
883,303. SECURITY LIGHTNING-ARRESTER. WILLIAM E. DRAKE, Grand Island, Nebr. Filed Feb. 21, 1907. Serial No. 358,572.



1. A device of the kind described comprising a conductor of electricity, means for grounding the ends of said conductor, a semi-circular ring inclosing an electrical wire, the conductor looping around said wire within the ring, and a plurality of brackets provided with needles, said brackets being secured to the ring and straddling the conductor as and for the purpose set forth.

2. A device of the kind described comprising conductor wires, anchor plates through which said wires pass and to which they are secured, said plates having serrated edges and a plurality of needles carrying brackets having bowed portions, said brackets straddling the conductor.

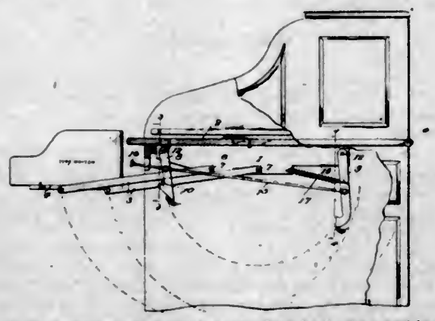
883,304. CULTIVATOR ATTACHMENT FOR THINNING COTTON. JOHN W. ESPICH, Carney, Okla., assignor of one-third to E. G. Powell, Carney, Okla. Filed May 31, 1907. Serial No. 376,582.



1. A cultivator attachment for thinning cotton having an arch or yoke with a pair of legs having thereon vertically adjustable collars, arch-supporting blocks and duplicate socket-standards in which said legs terminate and in which they are adjustably secured; journal-box sleeves adjustably secured to said standards; disk shafts *k k* rotatably secured in said sleeves their outer ends being provided with threads and nuts and their inner ends terminating in stirrups or yokes having equal arms *l* in the ends of which are located the terminals of the equal armed cross *m* to form a universal joint and insure the uniform reciprocal rotation of the two shafts, for the purposes set forth.

2. A cultivator attachment for thinning cotton consisting of an arch the legs of which have secured thereon adjusting collars and arch-supporting blocks to be clamped to cultivator beams said legs terminating in socket-standards adjustably secured thereto and said standards having adjustably secured to their lower ends journal-box sleeves carrying rotatable disk shafts; the disks E E having peripheral off-sets *q* together with and including the disk-collars *n n* to which the disks are bolted, the outer terminals of said collars forming dust-bands to protect from abnormal wear the shafts to which the said collars are adjustably secured, as described and for the purposes set forth.

883,305. TYPE-WRITER SUPPORT. WILLIAM E. FETCH, Mingo Junction, Ohio. Filed Aug. 8, 1906. Serial No. 329,789.



1. In a device of the character described, the combination of a support, swinging arms pendent from the support, a shelf carried by the swinging arms, and catches pendent from the support and designed to hold the shelf either in an operative or inoperative position.

2. In a device of the character described, the combination of a support, swinging arms connected to the support, a shelf carried by the swinging arms, catches mounted upon the support and designed to lock the shelf in an operative or inoperative position, and an operating bar connecting the catches.

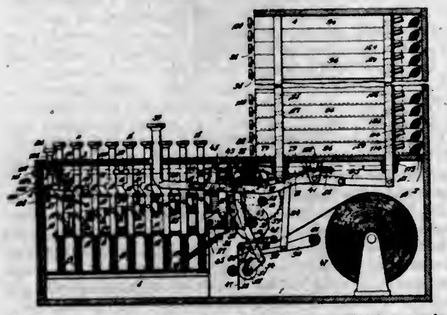
3. In a device of the character described, the combination of a support, swinging arms connected to the support, a shelf carried by the swinging arms, a lug projecting from one of the swinging arms, and swinging catches carried by the support and designed to engage the lug to lock the shelf either in an operative or inoperative position.

4. In a device of the character described, the combination of a support, a pair of swinging arms connected to the support, a shelf carried by the swinging arms, a lug projecting from one of the swinging arms, swinging catches mounted upon the support and engaging the lug to lock the shelf either in an operative or inoperative position, and an operating bar connecting the catches.

5. In a device of the character described, the combination of a pair of brackets, swinging arms connected to the brackets, a shelf carried by the swinging arms, catches mounted upon the brackets and designed to lock the shelf either in an operative or inoperative position, and rods connecting corresponding catches upon the two brackets to cause the same to operate in unison.

[Claims 6 to 9 not printed in the Gazette.]

883,306. ACCOUNT-REGISTER. CHARLES F. FOGG, New York, N. Y. Filed Mar. 28, 1907. Serial No. 365,101.



1. An account register in which is comprised a series of drawers for containing credit bills; a series of computing keys; a series of printing wheels; a series of total adding wheels; means for moving the printing wheels and total adding wheels in unison, and means for moving the printing wheels independently of the adding wheels, means for locking all of said parts against movement; means for simultaneously unlocking said parts, and means for automatically closing the drawers containing the credit bills.

2. In an account register, a series of computing keys; a series of printing wheels; a series of total adding wheels, and means for moving the printing wheels and adding wheels in unison, in combination with a series of drawers each provided with a closing spring and with means for holding in an open position, and a single key adapted to actuate the printing mechanism, adding mechanism, and release the drawer holding mechanism.

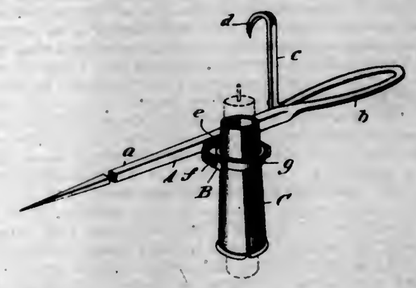
3. In an account register, a series of computing keys; a series of independent, horizontally movable bars superposed one above the other and arranged to be moved by said keys, each of said bars having a slot therein near its inner end, in combination with a toothed segment, a vertically movable bar carried by the segment, and independent means for moving said segment in opposite directions.

4. In an account register, a series of computing keys; a series of independent, horizontally movable bars superposed one above the other and arranged to be moved by said keys, each of said bars having a slot therein near its inner end, in combination with a toothed segment, a vertically movable bar carried by the segment, and printing wheels adapted to be rotated by said segment.

5. In an account register, a series of rows of computing keys; a series of rows of independent, horizontally movable bars superposed one above the other, each of said bars having a slot therein near its inner extremity, in combination with a series of segmental gears, each of said gears being provided with a vertically movable bar; a series of printing wheels arranged to be moved by the segmental gears, and a series of total adding wheels arranged substantially as shown and described.

[Claims 6 to 20 not printed in the Gazette.]

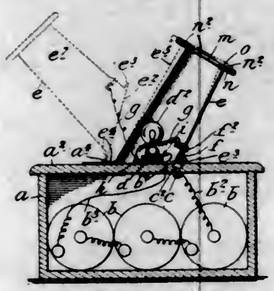
883,307. MINER'S CANDLESTICK. MILTON M. GAULT, Medford, and JANIE L. STOCKBRIDGE, Portland, Oreg. Filed Aug. 5, 1907. Serial No. 387,096.



1. As a new article of manufacture, the device described made up of a body adapted to be arranged horizontally or in an approximate horizontal position in the wall of a mine; the said body being formed of a continuous bar and comprising a straight end portion tapered to a point at its extremity, a loop-shaped handle extending from the inner end of the straight portion and lying in the same plane as said portion, and a shank resting close to the inner end of the straight portion and extending upward from the inner end of the handle and terminating in a downwardly disposed hook, a horizontal pin *e* fixed to and extending laterally from one vertical side of the straight portion of the body, at an intermediate point in the length thereof, and having a head at its outer end, a U-shaped, horizontal carrier B having its loop portion pivoted on the pin *e* and confined between the head thereof and the straight portion of the body, whereby it is enabled to swing vertically at one side of the body, and a holder for a light-affording medium, arranged in the open side of the carrier B and pivoted between the end portions of the carrier and arranged to hang from the carrier at the side of the straight portion of the body and to swing vertically in the carrier at a right angle to said straight portion of the body.

2. The herein described device consisting essentially of a body formed of a continuous bar and comprising a straight portion tapered to a point at its outer end, a loop-shaped handle extending from the inner end of the straight portion and lying in the same plane as said straight portion, and a shank extending upward from the inner end of the handle and terminating in a downwardly disposed hook, a horizontal pin *e* fixed to and extending laterally from one vertical side of the straight portion of the body, at a point considerably in advance of the loop-shaped handle, and having a head at its outer end, a U-shaped carrier B pivoted at its middle on the pin and confined between the head thereof and the straight portion of the body, whereby it is enabled to swing vertically, and open at its side remote from the straight portion of the body, and a holder for a light-affording medium, pivoted between the end portions of the carrier and arranged to swing vertically in the carrier and at a right angle to the direction of the swinging movement of said carrier.

883,308. EGG-TESTING DEVICE. FRANK W. GAYLOR, White Plains, N. Y. Filed Dec. 16, 1907. Serial No. 406,620.



1. An egg testing device comprising a box or support, an electric light mounted thereon, a hood hinged thereto at one side of the electric light and adapted to be turned into a closed or an open position so as to inclose or expose said light, said electric light and said hood being in an electric circuit which is closed by fully closing the hood and opened by the opening of the hood.

2. An egg testing device comprising a box or support, an electric light mounted thereon, a hood hinged thereto at one side of the electric light and adapted to be turned into a closed or an open position so as to inclose or expose said light, said electric light and said hood being in an electric circuit which is closed by fully closing the hood and opened by the opening of the hood, said hood being normally tensionally held in a partially closed position.

3. An egg testing device comprising a box or case containing a source of electricity, an electric light mounted thereon, a contact device passing through the top of the box or case at one side of the electric light, a tubular hood hinged to the top of the box or case at the other side of the electric light and adapted to be swung into a closed or an open position so as to inclose or expose said light, said hood, said contact device and said light being in an open circuit which is closed by fully closing the hood and opened by opening the hood.

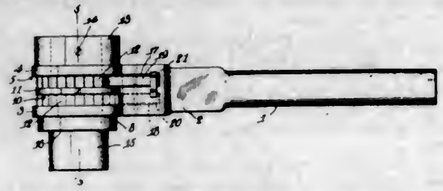
4. An egg testing device comprising a box or case containing a source of electricity, an electric light mounted thereon, a contact device passing through the top of the box or case at one side of said light, a contact hood open at both ends and hinged to the box or case at the opposite side of said light, the bottom of said hood being cut off obliquely said light, contact device and said hood being in an electrical circuit adapted to be closed by the closing of the hood and opened by the opening of the hood.

5. An egg testing device comprising a bar or case containing a source of electricity, an electric light mounted thereon, a contact device passing through the top of the box or case at one side of said light, a contact hood open at both ends and hinged to the box or case at the opposite side of said light, the bottom of said hood being cut off obliquely, said light, contact device and said hood being in an electrical circuit adapted to be closed by the closing of the hood and opened by the opening of the hood, said hood being provided at its free end with an annular cushion.

[Claims 6 and 7 not printed in the Gazette.]

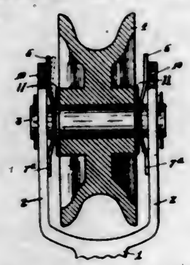
883,309. RATCHET-WRENCH. HORACE E. GEFFCKEN, Dublin, Ga. Filed May 17, 1907. Serial No. 374,113.

In a wrench, the combination with a stock provided with a head having spaced longitudinally extending arms integral therewith, said arms having alined openings passing transversely therethrough, a barrel mounted to rotate in the openings in said arms and having an angular opening extending longitudinally therethrough, said barrel projecting on opposite sides of the arms and having a shoulder at one end to limit its longitudinal movement in one direction, a collar detachably keyed to its other end to prevent movement thereof in the opposite direction, a nut engaging member having an angular shank to removably engage the opening in said barrel, a ratchet wheel mounted between said arms and detachably keyed to the barrel, said wheel having two peripheral rows of teeth fixed in reverse direction and separated by a smooth peripheral ridge, a pair of pawls mounted to lie between said arms



in position to engage the respective rows of teeth, and a pair of latches pivoted on either side of the stock and adapted to swing transversely across the same to engage the rear end of and lock the pawls out of engagement with the ratchet wheel.

883,310. TROLLEY-HARP. EDWARD J. HARRISON, South Bend, Ind. Filed June 10, 1907. Serial No. 378,206.



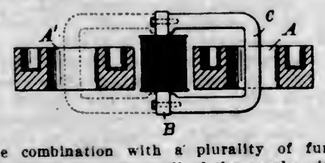
1. As an article of manufacture, a contact spring for trolley heads or harps embodying a bowed body portion having one end bifurcated and its opposite end provided with a locking element.

2. In a trolley head, the combination with the wheel and spindle therefor, of a bowed contact spring adapted for slidable movement into straddling engagement with the spindle, the bowed portion bearing against the wheel, and means carried by the spring for engagement with the head to lock the spring against accidental displacement.

3. In a trolley head having spaced arms provided with perforations in the ends thereof, the wheel and spindle therefor, and contact springs adapted to straddle the spindle and bear against the wheel, the contact springs having projections for engagement with the perforations in the arms to lock the springs in position in the head.

4. In a trolley head, the combination with a wheel and spindle therefor, of a contact spring having one end bifurcated to fit the spindle and its opposite end carrying means for engagement with the trolley head to secure the spring against displacement.

883,311. ELECTRICAL SMELTING-FURNACE. KARL A. F. HIORTH, Christiania, Norway. Filed Nov. 20, 1906. Serial No. 344,303.

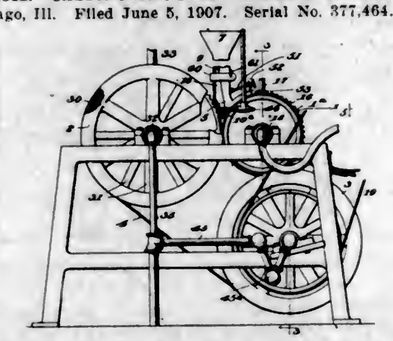


1. The combination with a plurality of furnaces, a magnetic circuit common to all of them and a single magnetized coil for said circuit.

2. The combination with a plurality of concentric furnaces, of a magnet, its core and means to complete the magnetic circuit between the ends of the core and through the furnaces.

3. The combination with a plurality of annular furnaces, of a magnet, its core and means to complete the magnetic circuit between the ends of the core, said means passing through the centers of the annular furnaces.

883,312. CASTING-MACHINE. ROBERT B. HOLLEY, Chicago, Ill. Filed June 5, 1907. Serial No. 377,464.



1. In combination with a rotary body having a surface which is conformed endlessly to its path of rotation, and having mold recesses in such surface; an endless flexible element adapted to conform to such path of rotation, and thereby cover the mold recesses over the extent of such conformation; means guiding and actuating such flexible cover in an endless path of travel, and holding it at one part of such path conformed to part of the recessed molding surface; means delivering molten metal onto such recessed surface at a point back of that which is covered by the flexible cover, and for heating said surface opposite the point at which the metal is thus delivered thereonto, and means for cooling said surface at the portion of its path where it is covered by the flexible cover beyond the point of delivery of the metal thereonto.

2. In combination with a rotary body having a surface which is conformed endlessly to its path of rotation and having mold recesses in such surface, an endless flexible element adapted to conform to such path of rotation and thereby to cover the molding recesses in such surface over the area of such conformation; means guiding and actuating such flexible cover in an endless path of travel, and holding it at one part of said path conformed to the part to be covered of the recessed molding surface; means delivering molten metal onto such recessed surface at a portion thereof which is not covered by said endless flexible cover; means for heating such rotary body at the point of delivery of the molten metal thereonto, said body having back of its molding surface a continuous cavity, and means supplying a cooling liquid to such cavity at a point in its path of rotation beyond the point of delivery of the molten metal, and for draining such cooling liquid from such cavity at a point in such path back of the means for heating said rotary body.

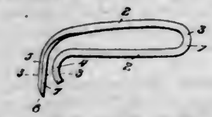
3. A casting machine comprising a rotary body having a surface which is conformed endlessly to its path of rotation; a spout having its end in contact with said surface and having its discharge mouth opening through such end to deliver molten metal into the recesses of such surface, all portions of said surface intervening between the recesses formed for the purpose of the casts to be made, and all portions corresponding to the apertures or interrupted areas in such casts being provided with supplemental recesses separated from the recesses made for the casts and from each other by narrow walls or ridges, whereby the closing of the metal-supplying mouth of the spout by the surface of such rotary body passing it is avoided.

4. A casting machine comprising a rotary body having a surface which is conformed endlessly to its path of rotation, and having in such surface recesses for castings to be formed therein; means for depositing molten metal onto such recessed surface and for limiting such deposit to the recesses thereof, said surface having, in addition to the recesses for producing the casts to be formed, grooves connecting such recesses to form gates connecting the casts successively, and continuous marginal grooves at the opposite sides, and grooves connecting such marginal grooves with the casting recesses, whereby the cast produced forms a continuous web with marginal beads and strips protruding into the marginal grooves as the rotary body revolves to engage said beads to strip the cast web therefrom.

5. A casting machine comprising a rotary body having a surface which is conformed endlessly to its path of rotation, said surface having recesses for producing casts to be formed therein; a spout having an end in contact with said surface and having a duct opening through said end to deliver molten metal into the recesses, whereby the deposit of such metal is limited to the recesses; means covering said recesses for a portion of the path of rotation after the deposit of the metal, and for cooling said body over such portion, the casting recesses in said surface being connected with each other successively by grooves forming gates joining the casts together, said surface having also marginal grooves and other grooves connecting them with the casting recesses, whereby the casting produced in such surface constitutes a continuous web of marginal beads, and strippers protruding into said marginal grooves beyond the covered area to engage the marginal beads of the cast web to strip the latter from the recessed surface.

[Claims 6 to 10 not printed in the Gazette.]

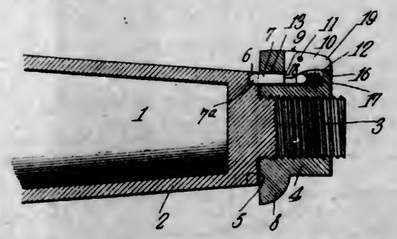
883,313. CAN-OPENER. LOWBER D. JACKSON, Harrington, Del. Filed Aug. 3, 1907. Serial No. 386,991.



1. A can opener formed of a single length of wire and comprising a handle formed with spaced sides, corresponding ends and sides being bent laterally to form spaced arms, one of the arms terminating in a prong and being formed with a cutting edge while the opposite arm is curved to form a fulcrum.

2. A can opener formed of a single length of material doubled upon itself at an intermediate point to form a handle comprising spaced sides connected by a curved end, the free ends of the sides being bent to form laterally projecting arms, one of the arms being curved to form a rounded fulcrum while the opposite arm projects beyond the first mentioned arm and terminates in a prong, the second mentioned arm being sharpened to form a cutting edge.

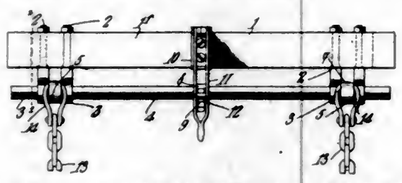
883,314. AXLE-NUT. WILEY W. JONES, Downs, Kans. Filed Mar. 7, 1907. Serial No. 361,128.



A nut having an opening formed therethrough parallel with the axis of the nut, a pin slidable in said opening and provided on its inner end with a neck, a lever pivoted to said nut within said opening and having one end forked

and straddling the necked portion of said pin and the other end extending outwardly to form a finger piece, and a spring adapted to project said pin beyond the base of the nut.

883,315. AUTOMATIC RELEASING DEVICE FOR GANG-PLOWS. MICHAEL JOYCE, Jr., Burdette, S. D. Filed July 24, 1907. Serial No. 385,364.



1. In combination with a draft means and a series of independent trailing members, a releasing device interposed between the draft means and said members and adapted to operate for liberating the members simultaneously when any one of them is subjected to excessive stress.

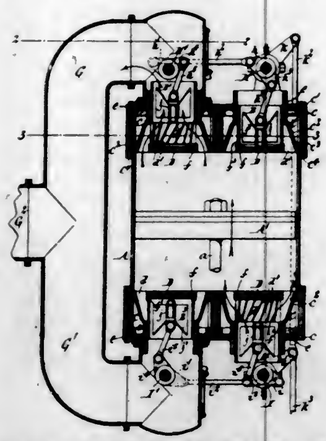
2. In combination with a draft means and a series of independent trailing members, a releasing device consisting of a shaft journaled for rotation, a breakable means retaining the shaft against rotation and lugs located upon the shaft for engagement with the trailing members.

3. In combination with a draft means and a trailing member, a shaft journaled for rotation, a lug mounted upon the shaft and adapted to be adjusted longitudinally thereof, the trailing member engaging said lug and a breakable means for holding the shaft against rotation.

4. In combination with a draft means and a trailing member, a releasing device comprising a shaft journaled for rotation and having means for engaging the trailing member, an arm fixed to the shaft, a link pivoted to the draft means and having a fragile pin adapted to engage said arm.

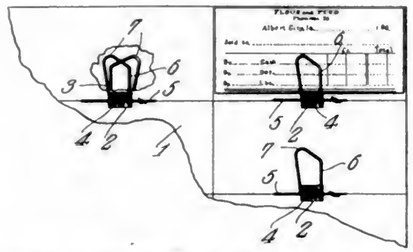
5. In combination with a draft means and a trailing member, a releasing device consisting of a shaft journaled for rotation and having means for engaging the trailing member, an arm fixed to the shaft and having a series of teeth, a link pivoted to the draft means and carrying a fragile pin adapted to engage the teeth of the arm.

883,316. BLOWING-ENGINE. PATRICK H. KANE, Buffalo, N. Y. Filed Feb. 14, 1907. Serial No. 357,293.



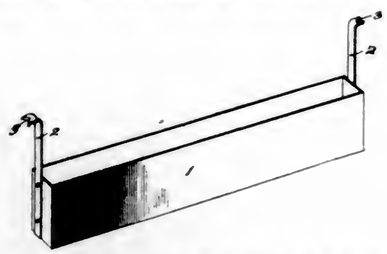
In a blowing engine, the combination of a cylinder, an inlet valve and an outlet valve arranged in each head of the cylinder, rock shafts arranged opposite the respective valves and each having an actuating arm connected with the corresponding valve, and means for operatively connecting the two shafts at the same end of the cylinder, the actuating arms of the valves at the same end of the cylinder being arranged to close one of said valves when the other is opened and the arm of each valve being arranged to move across the dead center in the closed position thereof, substantially as set forth.

883,317. DEVICE FOR HOLDING BILLS AND THE LIKE. AXEL T. KINDWALL, Albert City, Iowa. Filed Dec. 21, 1907. Serial No. 407,512.



A holder comprising a clasp having a coiled intermediate portion with extended end portions, said end portions being of the same contour and each having a projecting portion disposed laterally beyond the edge of the opposite portion, a sheet interposed between the end portions and having an opening which receives the coiled portion of the holder and a securing means attached to the sheet and passing through the coiled portion of the holder.

883,318. FLY-TRAP. GUST KOMM, Buckeye, Wash. Filed July 11, 1907. Serial No. 383,280.

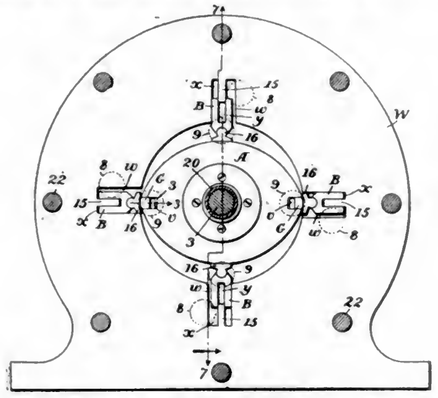


An insect trap adapted to be applied to a window sash, the said trap comprising an elongated trough fitting against the glass, and spring hangers extending upwardly from the ends of the trough, the extremities of the hangers being deflected outwardly and provided with teeth serving to bite into the sides of the sash and retain the trough in position.

883,319. ROTARY ENGINE. JAMES A. LEASK, Cranbrook, British Columbia, Canada. Filed June 19, 1907. Serial No. 379,820.

1. A rotary engine provided with a circular cylinder, a piston elliptical in cross section rotating within said cylinder, a disk carried by the piston and provided with inlet and exhaust ports, abutments radially movable within recesses in the cylinder, and ports in the cylinder head for admitting steam to and conducting it from the respective inlet and outlet ports in the said disk.

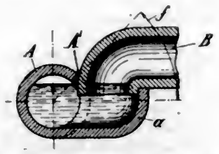
2. The combination of the circular cylinder, a piston elliptical in cross section, radially movable abutments, a disk carried by the piston and having inlet and exhaust ports, a cylinder head having concentric circular channels communicating with inlet and exhaust pipes and with equidistant ports leading from the inner face of the head to the steam inlet channel, and exhaust ports communicating with the steam outlet channel and extending to the inner face of the head and arranged upon radial lines at one side of those passing through the inlet ports.



3. The combination of the circular cylinder having radial recesses, abutments sliding in said recesses and carrying pivoted shoes, an elliptical piston against which the shoes bear, a cylinder head having inlet and outlet ports, and an intermediate disk connected to be carried with the piston and having inlet and outlet ports, each abutment arranged to afford a passage between one side and the side of the recesses in the cylinder.

4. The combination of the circular cylinder, piston elliptical in cross section, radially movable abutments bearing upon the piston, a passage at one side of each abutment leading to one end of the piston and another passage at the opposite side of each abutment leading to the opposite end of the piston, a disk at each end of the cylinder having inlet ports adapted to be brought to communicate with the said passages and exhaust ports intermediate the inlet ports, and cylinder heads having inlet and outlet ports and passages, as set forth.

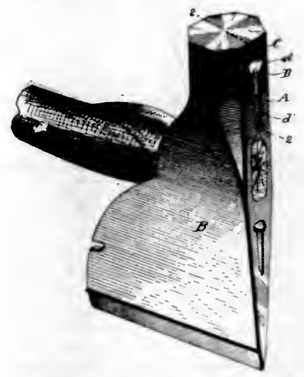
883,320. PIPE-UNION. EMIL LIENERT-MARKET, Einsiedeln, Switzerland. Filed Aug. 11, 1904. Serial No. 220,389.



The combination with a branch pipe having its end curved through a right angle, of a main pipe unit having a lateral branch inlet trough turned upwardly from the bottom of the unit and terminating at a level between the summit of the unit and its center, the wall of the unit having a cut away portion within the trough extending from a point between ninety degrees and a horizontal to the bottom of the unit, said cut away portion forming a seat for the curved end of the branch pipe in the trough and the body of the branch pipe resting on the upwardly presented end of the trough.

883,321. NAIL PULLER AND STARTER. BENJAMIN F. LINDEMAN, McKees Rocks, Pa., assignor of three-eighths to Rutherford Hays Clever, McKees Rocks, Pa. Filed Feb. 16, 1907. Serial No. 357,635.

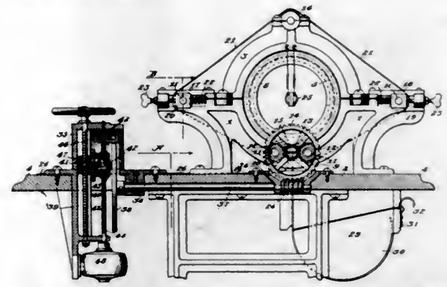
1. The improved tool herein described, provided with a key-hole opening in its face having an enlarged entering portion, a tapered slot or wing leading therefrom, and having an internal groove or recess forming an undercut portion leading from the enlarged entering portion in rear of the tapered slot or wing, and also provided with a head receiving opening intersecting the under-cut groove or recess and arranged out of alinement with the enlarged entering portion opening at the face of the tool, and having a tapered slot and an under-cut groove or recess leading from said inner head receiving opening, all substantially as and for the purposes set forth.



2. The tool substantially as herein described, having an octagonal head and provided with the key-hole slot in the face thereof and having an enlarged entering portion and a slot or wing leading therefrom, and also having in rear of said slot or wing an under-cut portion or recess communicating with the enlarged entering portion, substantially as and for the purposes set forth.

3. A nail puller and starter comprising a body having an outer undercut opening forming a nail pulling recess and an inner under-cut opening in communication with the outer one and forming a seat for a nail in setting or starting the same, substantially as set forth.

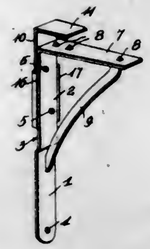
883,322. BLUE-PRINTING MACHINE. CHARLES LUKACSEVICS, New York, N. Y. Filed Mar. 30, 1905. Serial No. 252,869.



1. In a photographic printing machine, traveling means for holding a sensitized sheet and a sheet from which a print is to be taken, said means comprising an endless apron supported by rolls, two of said rolls being in juxtaposition and positively driven, other of said rolls being so located as to form a hollow geometric figure, and a transparent cylinder located at the center of such figure, and over which said apron travels.

2. In a photographic printing machine comprising a traveling apron and a transparent cylinder over which such apron is adapted to move, means for driving said apron comprising a pair of juxtaposed, positively driven rolls, the arrangement being such that the apron passes from one of said rolls, over the surface of said cylinder, and then around the other of said rolls.

883,323. BRACKET. JAMES B. MACDUFF, Brooklyn, N. Y. Filed Nov. 25, 1907. Serial No. 403,804.



1. A bracket comprising an inverted L-shaped member and a clamping member adjustably mounted on one arm of said first-mentioned member and having a shelf-engaging member extending in a plane parallel with the other arm of said L-shaped member and adjustable toward and from said arm for clamping a shelf between them.

2. A bracket comprising an inverted L-shaped member and a similarly shaped clamping member adjustably mounted for coaction therewith and having a tooth on one arm for engagement with the shelf to be supported, said tooth carrying-arm extending in a plane parallel with one of the arms of the first-mentioned member and adjustable toward and from said member.

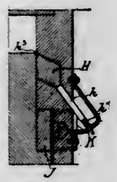
3. A bracket comprising a body member having a laterally extending arm and provided with a recess in its rear face, and a clamping member or anchor slidably mounted in said recess.

4. A bracket comprising a body member having a laterally extending arm and provided with a recess in its rear face, and a clamping member or anchor slidably mounted in said recess and having a laterally extending arm adapted to coöperate with the lateral arm of said body member to clamp a shelf between them.

5. A bracket comprising an inverted L-shaped body member having a recess formed in the face of one arm, and a member slidably mounted in said recess and having means for coacting with the other arm of said body member to clamp an object between them.

[Claims 6 to 8 not printed in the Gazette.]

883,324. ROTARY ENGINE. FREDRICK F. MACLEAN, Philadelphia, Pa. Filed July 18, 1906. Serial No. 326,765.



1. An engine having a rotatable piston and a casing therefor, means for supplying motive fluid to said piston, a ring set in the flat interior face of the casing, and means pressing diagonally against the ring for forcing the same against the piston.

2. An engine having a rotatable piston and a casing therefor, means for supplying motive fluid to the piston, rings set in the flat interior faces of the casing, and means for forcing the rings against the piston, said means pressing against the rings in a direction other than perpendicular to the surface of the piston.

3. An engine having a rotatable piston and a containing casing therefor, means for supplying motive fluid to the piston, and a ring of substantially diamond-shape cross-section set in each side of the casing adjacent to the outer portion of the piston, with springs acting on the rings to force them toward the piston, said springs acting against the rings in lines other than perpendicular to the surface of the piston.

4. An engine having a rotatable piston and a containing chamber therefor having plane walls, a portion of the ends of the piston being in substantial contact with said walls and the remainder at an appreciable distance therefrom, with anti-friction bearings interposed between the walls of the casing and the distant parts of the piston.

5. An engine having a rotatable piston and a containing chamber therefor, rings of relatively hard material carried by one of the members comprised by the piston and the casing, and ball bearings carried by the other of said members so as to engage said rings, with means radially beyond the rings for preventing the passage of gas under pressure.

[Claims 6 to 9 not printed in the Gazette.]

883,325. BED SCREEN AND TABLE FRAME. KATHERINE C. MACMILLAN, Portland, Oreg. Filed June 10, 1907. Serial No. 378,207.

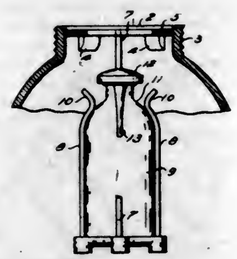


1. A bed screen and table frame comprising a pair of lower tubular standard sections, clamping lugs on the lower ends of said sections, set-screws in said clamping lugs, a pair of centrally-apertured upper standard sections adapted to be detachably connected to the upper ends of said lower standard section to form the end bars of a top or tray supporting frame, telescopic side bars adapted to form the side pieces of said top or supporting frame, means to detachably secure the said side bars to said end bars and set screws to hold the telescopic sections of said side bars adjustably connected together, substantially as described.

2. A bed screen and table frame comprising a pair of lower tubular standard sections, clamping lugs on the lower ends of said sections, set-screws in said clamping lugs, a pair of centrally-apertured upper standard sections adapted to be detachably connected to the upper ends of said lower standard sections to form the end bars of a top or tray supporting frame, telescopic side bars adapted to form the side pieces of said top or supporting frame, means to detachably secure the said side bars to said end bars, set-screws to hold the telescopic sections of said side bars adjustably connected together and brace rods adapted to be detachably connected to said standard sections when arranged to form a tray supporting frame, substantially as described.

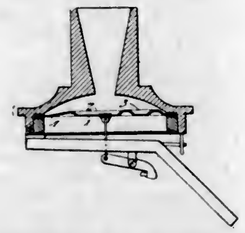
883,326. ACID-BOTTLE CAGE FOR FIRE-EXTINGUISHERS. JOSEPH M. MILLER, Chicago, Ill. Filed April 30, 1906. Serial No. 314,534.

In a fire extinguisher, the combination of a casing having an upwardly opening neck with an internal seat for a ring, a ring supported on said seat, a pair of rods depending from the ring, a bottom supported by said rods, a second pair of rods of spring material, having their upper ends diverging and terminating below and free from said ring, and each having an inwardly projecting shoulder, a bottle adapted to pass freely through said ring while said ring is on said seat, and being held upon said bottom by said shoulders with the bottle mouth upward, said shoulders being adapted to also support said bottle in a partly withdrawn position, with its mouth projecting above the ring, while said ring is on said seat, and the



bottle holder formed of said ring, rods and bottom being adapted to be lifted bodily from said casing with said bottle.

883,327. DIAPHRAGM. WALTER H. MILLER, Orange, N. J., assignor to New Jersey Patent Company, West Orange, N. J., a Corporation of New Jersey. Filed Sept. 24, 1906. Serial No. 335,878.



1. A diaphragm having a perforation at its geometrical center and having an acoustical center at a substantial distance therefrom, substantially as set forth.

2. In a device of the class described, the combination with a circular diaphragm whose acoustical center is at a substantial distance from its geometrical center, of a stylus connected to said diaphragm at its geometrical center, substantially as set forth.

3. In a device of the class described, the combination with a stylus, of a diaphragm stiffened in such a way that stress applied to its center by said stylus produces the greatest amplitude of vibration at a point at a substantial distance from said center, substantially as set forth.

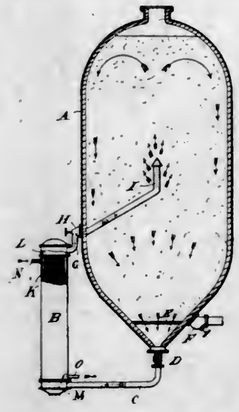
4. A circular diaphragm provided with a perforation at its center and stiffened in such a way that stress applied to its central portion produces the greatest amplitude of vibration at a substantial distance from said central portion, substantially as set forth.

5. In a device of the class described, the combination of a diaphragm having stiffened means applied to its central portion and extending farther from the center of the diaphragm in one direction than in the opposite direction and so shaped as to produce its greatest stiffening effect along a line passing through said center, and a reproducer stylus connected to said diaphragm at its center, substantially as set forth.

[Claims 6 to 12 not printed in the Gazette.]

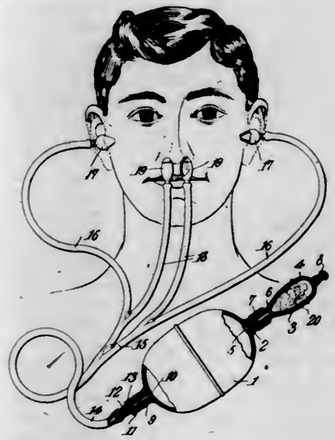
883,328. MANUFACTURE OF CELLULOSE. EINAR MORTERUD, Christiania, Norway. Filed Apr. 11, 1906. Serial No. 311,192.

The combination with a pulp digester for the sulfite process, of a heating device outside of the digester, said heating device connected at its lower end to the lower end of the digester, and a discharge pipe from the upper end of the device into the digester above its bottom and sufficiently below the surface of the contents of the digester to produce an upwardly directed current of solution through



the central part of the digester, maintaining the circulation through the heater and digester and thereby maintaining substantially a constant temperature throughout the contents of the digester, substantially as described.

883,329. DOUBLE MASSEUR AND MEDICATOR. CLAUDE H. MURRAY, Macon, Ga. Filed Apr. 20, 1907. Serial No. 369,358.

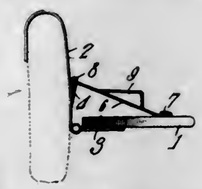


1. An apparatus of the character described comprising ear and nose tubes and reversible means for directing air within the tubes toward or from the outlets thereof simultaneously.

2. An apparatus of the character described comprising ear and nose tubes and reversible means for directing air within the tubes toward or from the outlets thereof simultaneously, and means for medicating the air prior to its discharge through the nose and ear tubes.

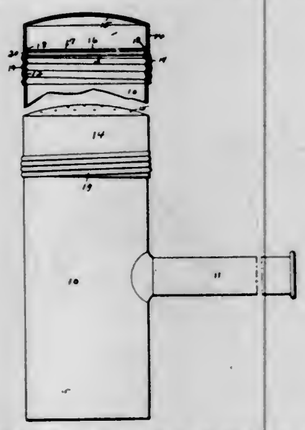
3. The herein described apparatus comprising a distributing tube, branch tubes extending therefrom and arranged in pairs, one pair of tubes being insertible into the nasal passages and the other pair into the outer auditory canals of the ears, and means detachably connected to the distributing tube for withdrawing air therefrom or for forcing air thereinto.

883,330. CHAIR ATTACHMENT. ISAAC W. MCCLANAHAN, Spokane, Wash. Filed Oct. 12, 1907. Serial No. 397,195.



An attachment comprising a seat, spring hangers pivotally attached at their lower ends to the rear edge of the seat and being rearwardly curved at their upper ends, pins mounted upon said hangers, arms pivotally attached to the seat and adapted to engage the pins for holding the hangers and the seat in fixed positions with relation to each other the hangers being so mounted upon the seat that they may be swung against the under side of the same with the curved portions receiving the forward edge of the seat.

883,331. CLOTHES-SPRINKLER. DAYSIE A. MCCLELLAND, Gas, Kans. Filed June 1, 1904. Serial No. 210,688.



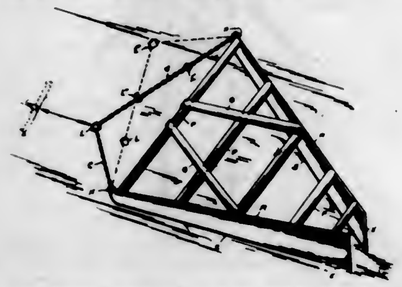
A clothes sprinkler consisting of a body, the upper portion of which is screw-threaded, a gasket adapted to be seated upon the upper edge of said body portion, a foraminated diaphragm provided with a depending marginal flange, adapted to be seated upon said gasket, a perforated cover the lower portion of which is provided with screw-threads and a flange upon the interior of said cover so disposed that when the cover is screwed down onto the body, the said flange will contact with the foraminated diaphragm and cause its depending marginal flange to tightly bind upon the said gasket, and a handle carried by the said body portion.

883,332. ROAD DRAG AND SCRAPER. DOC MCDANIEL, Macon, Ill. Filed Dec. 20, 1907. Serial No. 407,443.

1. A scraper consisting of upright runners converging toward their rear ends which are separated from each other, and also growing wider toward said rear ends, and braces for holding the runners in this position.

2. A scraper consisting of upright runners converging toward their rear ends which are separated from each other, and also growing wider toward said rear ends, braces for holding the runners in this position; and a chain connected with the front ends of the runners and having a central loop and two side loops at such points that when the draft is attached to either side loop the adjacent runner will follow the line of draft, for the purpose set forth.

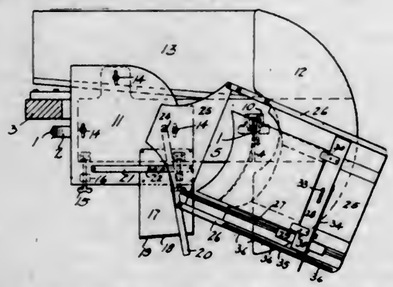
3. A scraper consisting of upright runners converging toward their rear ends which are separated from each other, and braces for holding the runners in this position; and a chain connected with the front ends of the runners and having loops at such points that when the draft is attached to either loop the adjacent runner will follow the line of draft, for the purpose set forth.



4. The herein described scraper, comprising two upright runners converging toward their rear ends which are separated and faced on their lower edges with metal shoes, cross pieces and braces connecting the upper edges of said runner to hold them relatively spaced, hooks at their front ends, and a chain connecting said hooks and having a central loop and two loops at points sufficiently near the runners to cause either of the latter to follow the line of draft when power is attached to the loop nearest it.

5. The herein described scraper, comprising two upright runners converging toward their rear ends which are separated and faced on their lower edge with metal shoes, cross pieces and braces connecting the upper edges of said runners to hold them relatively spaced, hooks at their front ends, and a chain connecting said hooks and having a central loop and two loops at points sufficiently near the runners to cause either of the latter to follow the line of draft when power is attached to the loop nearest it, the runners growing wider toward their rear ends whereby the rearmost cross pieces are respectively higher from the shoes, for the purpose set forth.

883,333. SEGMENT-SAWING MACHINE. WATSON W. MCKEE, Tacoma, Wash. Filed June 17, 1907. Serial No. 379,411.

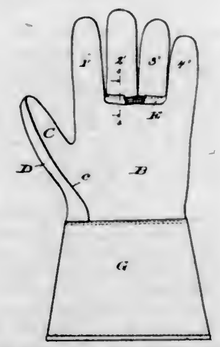


1. In a segment sawing machine, the combination with a frame having a fixed table thereon and a saw acting at right angles to said table; of a lever pivotally mounted on said fixed table and carrying a second pivot pin; a strip secured to said fixed table and having two notches therein adapted to receive and hold said lever whereby said pivot pin is removably held in either of two positions; and a swinging table supported by said fixed table and engaging said pivot pin, and holding the wood to be sawed, whereby the wood is carried with a circular motion past the saw.

2. In a segment sawing machine, the combination with a frame having a fixed table thereon and a saw acting at right angles to said table; of a strap mounted on said fixed table and having a series of holes therein; a lever having a pivot engaging any one of said series of holes and carrying a second pivot pin; a strip secured to said fixed table and having two notches therein adapted to receive and hold said lever whereby said second pivot pin is removably held in either of two positions for every position of said first pivot; and a swinging table supported by said fixed table and engaging said second pivot pin, and holding the wood to be sawed, whereby the wood is carried with the circular motion past the saw.

3. In a segment sawing machine, the combination with a frame having a fixed table thereon and a saw acting at right angles to said table; of an extension adjustably secured to said fixed table; a lever pivotally mounted on said adjustable extension and carrying a second pivot pin; a strip secured to said fixed table and having two notches therein adapted to receive and hold said lever whereby said pivot pin is removably held in either of two positions, said positions being adjustable relatively to the saw by the adjustment of said extension to the table; and a swinging table supported by said fixed table and engaging said pivot pin, and holding the wood to be sawed, whereby the wood is carried with a circular motion past the saw.

883,334. GLOVE. AUGUST NEWMAN, Rockford, Ill., assignor to Henry W. Price Co., Rockford, Ill. Filed Oct. 26, 1906. Serial No. 340,747.



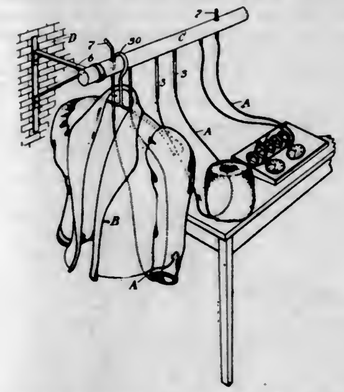
1. A glove having the front C of its thumb integral with its palm provided with a lap *b* extended over a back-piece D to which it is stitched, the seam being far enough in the rear to be out of the way unexposed to wear, whereby the glove is smooth and seamless in front at the quirk of the thumb, and a reinforce piece F caught between the front and back of the glove and lapped on the thumb-back outside said glove where it is secured by the stitching in the rear seam of said thumb.

2. A glove having second and third finger fourchette pieces or fronts 2′ 3′, on which the palm is lap-seamed and another piece E that is separately stitched wrong side out to said palm and first and fourth finger extensions thereof below the lap-seam aforesaid and thereafter folded right side out to form a welt that covers its own seam and said lap-seam, whereby both these seams are concealed and protected, the exposed portion of the welt-piece being free.

883,335. ELECTRIC THEFT-ALARM SYSTEM. JOHN J. O'CONNOR, St. Paul, Minn. Filed Sept. 26, 1907. Serial No. 394,652.

1. In an alarm system of the class described, the combination, with an electric circuit and an alarm device controlled thereby, of a separable loop arranged in the circuit and adapted, when separated, to be passed through articles of merchandise.

2. In an alarm system of the class described, the combination, with an electric circuit and an alarm device controlled thereby, of a separable loop arranged in the circuit and adapted, when separated, to actuate the alarm through the breaking of the circuit.



3. In an alarm system of the class described, the combination, with an electric circuit and an alarm device controlled thereby, of a plurality of separable loops arranged in the circuit, each loop being adapted, when separated, to break the circuit and cause the alarm to be operated, the loops being of a size sufficient to be passed through articles of merchandise.

4. In an electric alarm system the combination, with a main circuit and an alarm device controlled thereby, of a separable loop arranged in said circuit and adapted to be passed through articles to be displayed, and a shunt circuit for cutting the loop out of the main circuit so as to permit the loop to be separated without operating the alarm device.

5. In an electric alarm system the combination, with a main circuit and an alarm device controlled thereby, of a separable loop arranged in the circuit and adapted to be passed through articles to be displayed, a shunt circuit bridged across the main circuit between the loop and the source of electric supply, and a switch arranged at a convenient point in the shunt circuit for opening and closing the same for the purpose set forth.

[Claims 6 and 7 not printed in the Gazette.]

883,336. NEWSPAPER-HOLDER. JOHN OHSOL, Jersey City, N. J. Filed Aug. 22, 1907. Serial No. 389,626.

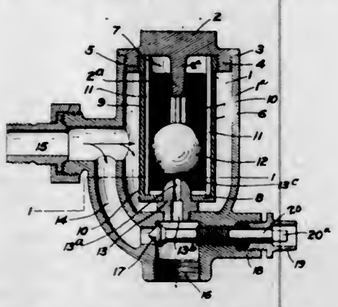


1. A paper holder consisting of the combination of tubes of successively smaller and smaller diameter, fitting into

each other, bayonet joints holding the tubes together, and paper fasteners attached to some of the tubes.

2. A paper holder, consisting of the combination of a telescopic tube, an arc shaped piece fastened to said tube, jaws L, carried by said arc shaped piece, puncturing pin points P, on the jaws, a pivot pin *l*, for the jaws to turn upon, and a spring N, for holding the jaws together.

883,337. DRAINAGE-VALVE. CASSIUS C. PECK, Rochester, N. Y. Filed Mar. 25, 1907. Serial No. 364,538.



1. In a water drainage valve, a valve body having a valve chamber, an open inlet port into said chamber, an outlet port from said chamber, a discontinuous, removable valve seat for said outlet port; a float for said seat adapted to control said outlet port and to discharge water automatically from the valve chamber when raised from its seat by water in the chamber; and a removable frame loosely inclosing the valve and adapted to lead the valve to its seat.

2. In a water drainage valve, a valve body having a valve chamber, an open inlet port into said chamber, an outlet port from said chamber, and a removable valve seat for said outer port, a removable cover for said chamber; a float valve for said seat adapted to control said outlet port and to discharge automatically from the valve chamber when raised from its seat by water in the chamber, and a frame removably attached to said cover loosely inclosing the valve and having guides to lead the valve to its seat.

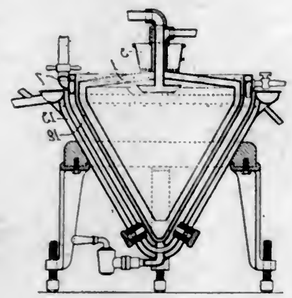
3. In a radiator drainage valve, a valve body having in combination a valve chamber, provided with an inlet port and an outlet port, and a valve seat for said outlet port having a plurality of channels in the face thereof proportioned in number, size and spacing; for discharging air and some water, but not to allow passage of enough steam to reduce the desired amount of differential pressure between the valve chamber and the outlet thereof; and a float valve having less flotation than needful to raise it against existing differential pressure from its seat if the seat were unprovided with said channels, but adapted through the receiving effect of the channels to be freely floated from its seat by influx of water into the valve chamber, and to dicharge said water.

4. In a water drainage valve, a valve body having a valve chamber, an open inlet port into said chamber, an outlet port from said chamber, a discontinuous, removable valve seat for said outlet port; a float for said seat adapted to control said outlet port and to discharge water automatically from the valve chamber when raised from its seat by water in the chamber; a removable frame loosely inclosing the valve and adapted to lead the valve to its seat; a by-pass passage connecting the inlet and outlet of the valve body; and a valve for closing the by-pass.

5. In a water drainage valve, a valve body having a valve chamber, an open inlet port into said chamber, an outlet port from said chamber, and a removable valve seat for said outlet port; a removable cover for said chamber, a float valve for said seat adapted to control said outlet port and to discharge automatically from the valve chamber when raised from its seat by water in the chamber, a frame removably attached to said cover loosely inclosing the valve and having guides to lead the valve to its seat; a by-pass passage connecting the inlet and outlet of the valve body; and a valve for closing the by-pass.

[Claims 6 to 9 not printed in the Gazette.]

883,338. APPARATUS FOR COOLING AND VENTILATING MILK, CREAM, &c. ALEXANDER T. PFEIFF, Stockholm, Sweden. Filed Aug. 14, 1907. Serial No. 388,540.



1. An apparatus for cooling and ventilating hot milk, cream and the like, comprising a cooling-agent holder, of circular form in plan, the upper side of which is inclined downward from its central portion outward, a receptacle arranged over the central portion of the holder and having a plurality of radially disposed apertures in its lower portion, and an air-distributing pipe arranged at the circumference of the holder and having apertures arranged to discharge air over the holder toward the center thereof.

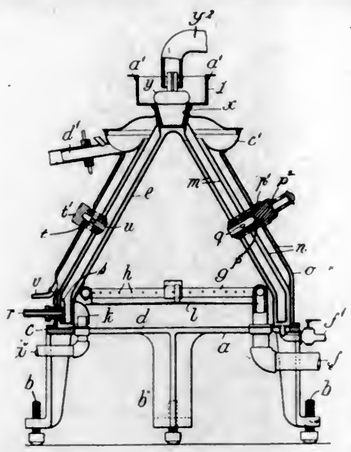
2. An apparatus for cooling and ventilating hot-milk, cream and the like, comprising a cooling-agent holder, of circular form in plan, the upper side of which is inclined downward from its central portion outward; said holder having an inlet and an outlet, a receptacle arranged over the central portion of the holder and having a plurality of radially disposed apertures in its lower portion, an air-distributing pipe arranged at the circumference of the holder and having apertures arranged to discharge air over the holder toward the center thereof, and an annular device arranged to receive the liquid from the upper side of the holder and having a discharge for said liquid.

3. An apparatus for cooling and ventilating hot milk, cream and the like, comprising a cooling-agent holder, of circular form in plan, the upper side of which is inclined downward from its central portion outward, and an air-distributing pipe arranged at the circumference of the holder and having apertures arranged to discharge air over the holder toward the center thereof.

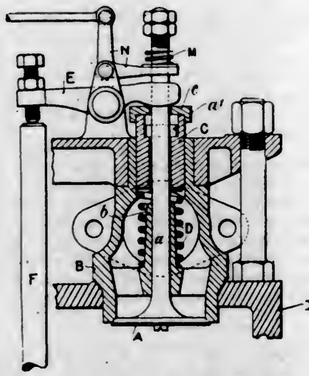
883,339. LIQUID-HEATING APPARATUS. ALEXANDER T. PFEIFF, Stockholm, Sweden. Filed May 3, 1907. Serial No. 371,660.

1. In a liquid heating apparatus the combination, of a number of heating elements placed one around the other and forming between them a liquid passage of V-shaped vertical cross-section, the said heating elements being tapering upwards so as to give the inlet- and outlet-ends of the said liquid passage a small extension in horizontal direction, and connections between said heating elements, substantially as and for the purpose set forth.

2. In a liquid heating apparatus the combination, of a number of heating elements placed one around the other and forming between them a liquid passage of V-shaped vertical cross-section, the said heating elements being tapering upwards so as to give the inlet- and outlet-ends of the said liquid passage a small extension in horizontal direction, connections between said heating elements, outlets on the latter for the condensed water, and water-seals closing the said outlets, substantially as and for the purpose set forth.



883,340. INDUCTION-VALVE FOR INTERNAL-COMBUSTION ENGINES. ROBERT E. PHILLIPS, Westminster, London, England. Filed Apr. 22, 1904. Serial No. 204,448.



1. In induction valve mechanism for internal combustion or explosion engines of the four-cycle type, a valve casing carrying an induction valve and seat therefor and having a guide for the stem of the valve, a projection on the valve stem, a hollow plunger sliding in the casing and adapted to engage the said projection and through which the stem of the valve passes, a spring between the casing and the plunger acting to retain the valve in its closed position, and mechanical means for depressing the plunger to compress the spring and thus relieve the valve of its pressure.

2. In induction valve mechanism for internal combustion or explosion engines of the four-cycle type, a valve casing carrying an induction valve and seat therefor and having a guide for the stem of the valve, a projection on the valve stem, a hollow plunger sliding in the casing and encircling but not in frictional contact with the stem of the valve, said plunger being adapted to engage the projection on the valve stem, a spring operating between the casing and the plunger to retain the valve in its closed position, and mechanical means for depressing the plunger to compress the spring and thus relieve the valve of its pressure.

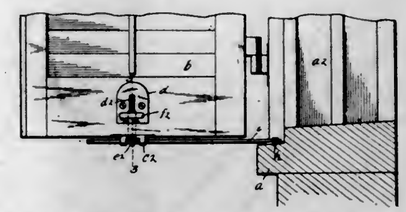
3. In an induction valve mechanism for internal combustion or explosion engines of the four-cycle type, a valve casing carrying an induction valve and seat therefor, and forming a guide for the stem of the valve, a projection on the valve stem, a hollow plunger sliding in the said casing and encircling but not in frictional contact with the valve stem and adapted to engage the said projection, a spring operating between the casing and the plunger, and a rocking member for operating the plunger.

4. In induction valve mechanism for internal combustion or explosion engines of the four-cycle type, a valve casing carrying an induction valve and seat therefor, the stem of the said valve having a projection, a hollow plunger adapted to engage the said projection and sliding in the casing and through which the stem of the valve passes, a spring operating between the casing and the plunger, and means to depress the plunger to thereby relieve the valve from the action or the spring.

5. In an internal combustion or explosion engine of the four-cycle type, the combination with an induction valve of the lift type arranged to open downwards, of a spring acting between the stem of the valve and its seat to retain said valve in its closed position, means for removing the pressure of said spring from said valve so that it is free to open by gravity, a spring adapted to break the fall of the valve on opening, and means for restoring the pressure of the closing spring to the valve.

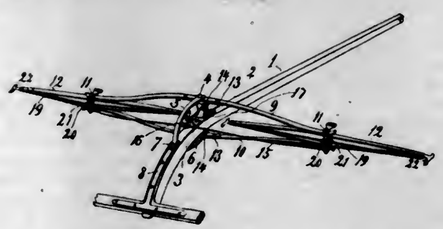
[Claims 6 to 11 not printed in the Gazette.]

883,341. SHUTTER-WORKER. ARTHUR S. PIERSON, Morristown, N. J. Filed Mar. 28, 1907. Serial No. 365,158.



A window shutter having a vertically arranged non-rotatable tubular sleeve secured in the bottom thereof, a rotatable keeper mounted on the lower end of said sleeve and the bottom of which is open, an arm adapted to be pivoted to the bottom portion of the window frame and passing loosely through said keeper, a vertically movable plunger placed in said tubular sleeve and adapted to pass through holes or apertures in said arm, and means for raising said plunger.

883,342. TRUSS-BRACED TREE. BENJAMIN F. PINSON, Jr., Skiatook, Okla. Filed Mar. 21, 1907. Serial No. 363,788.



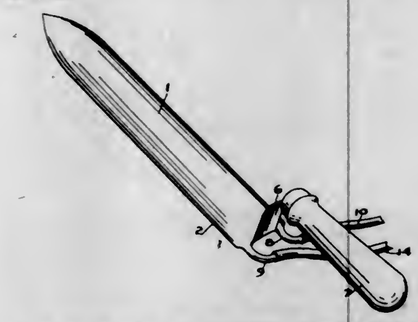
1. A draft appliance comprising a tongue, two hollow trunnions secured one to the under side of the tongue and the other opposite thereof to the upper side, a doubletree composed of an upper and a lower metal strip, each having at its middle a reinforcing piece with a bearing fitting one on each of the trunnions, the ends of the strips at

each side of the tongue being converged together, bolts passed through the converging ends, swingletrees pivoted on said bolts, and a pivot bolt passed through the trunnions, the tongues and the strips.

2. A draft appliance comprising a tongue, two hollow trunnions secured one to the under side of the tongue and the other opposite thereof to the upper side, a doubletree composed of an upper and a lower metal strip, each having at its middle a reinforcing piece with a bearing fitting one on each of the trunnions, the ends of the strips at each side of the tongue being converged together, bolts passed through the converging ends, swingletrees pivoted on said bolts, and a pivot bolt passed through the trunnions, the tongue and the strips, and braces extending rearwardly from near the ends of the pivot bolt to the tongue.

3. A draft compliance comprising a tongue, two hollow trunnions secured one to the under side of the tongue and the other opposite thereof to the upper side, a doubletree composed of an upper and a lower metal strip, each having at its middle a reinforcing piece with a bearing fitting one on each of the trunnions, the ends of the strips at each side of the tongue being converged together, bolts passed through the converging ends, swingletrees pivoted on said bolts and a pivot bolt passed through the trunnions, the tongue and the strips, braces extending rearwardly from near the ends of the pivot bolt to the tongue, and metallic strips joined to said braces and extending to the rear end of the tongue.

883,343. BEE-KEEPER'S KNIFE. HENRY J. PORTER, San Luis Obispo, Cal. Filed June 13, 1907. Serial No. 378,752.



1. A bee-keeper's knife comprising a hollow blade having a sharp edge, a handle attached to said blade and a flexible tube attached to said blade and adapted to convey a heated fluid thereto, substantially as described.

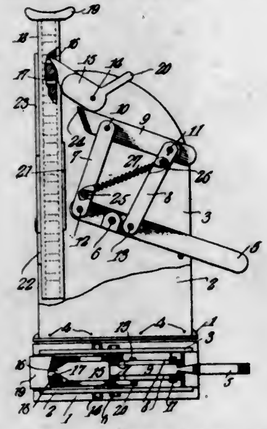
2. A bee-keeper's knife comprising a hollow blade having a sharp edge, a handle attached to said blade and flexible tubes attached to said blade and adapted to convey a heated fluid to and from the blade, substantially as described.

3. A bee-keeper's knife comprising a hollow blade having a sharp edge, and having a longitudinal partition dividing the blade into chambers, a handle attached to said blade and a flexible tube attached to said blade and adapted to convey a heated fluid thereto, substantially as described.

4. A bee-keeper's knife comprising a hollow blade having a sharp edge, a handle attached to said blade out of the plane of the blade, and a flexible tube connected with the interior of the blade and adapted to convey a heated fluid thereto, substantially as described.

883,344. WAGON-JACK. WILLIAM L. PRESTON, Lincoln, Ill. Filed Oct. 28, 1907. Serial No. 399,533.

1. A wagon jack comprising a frame or support, a lifting bar arranged for vertical movement therein, and provided with spaced orifices, a locking pawl to engage the orifices, an operating lever, a lifting pawl, lifting and lowering links connecting the pawl and the operating lever, and a spring having its terminals operatively connected with the two sets of links.



2. A wagon jack comprising a frame or support, a lifting bar guided for vertical movements and provided with spaced orifices, a locking pawl, a lifting pawl, a lever fulcrumed within the frame, pairs of lifting and lowering links connecting the lifting pawl and the operating lever, and means for causing the lifting pawl automatically to engage with the orifices when the operating lever is manipulated.

3. A wagon jack comprising a frame or support, a lifting bar, a lifting lever pivoted intermediate of its ends within the frame, a pair of lifting links pivotally connected with the inner end of the lever, a pair of lowering links pivotally connected with the intermediate portion of the lever, a lifting pawl pivotally connected with the links, and a locking pawl.

4. A wagon jack comprising a frame or support, a lifting lever pivoted intermediate of its ends within the support, a pair of lifting links pivotally connected with the lever on one side of its fulcrum, a pair of lowering links pivotally connected with the lever on the other side of its fulcrum, a lifting pawl pivotally connected with the two sets of links, a locking pawl, a lifting bar with which the two pawls are adapted to coact, and a spring operatively connected with the two sets of links.

883,345. BUTTER-PRINTING MACHINE. JEREMIAH R. PROUTY, Reedsburg, Wis. Filed Nov. 18, 1907. Serial No. 402,673.

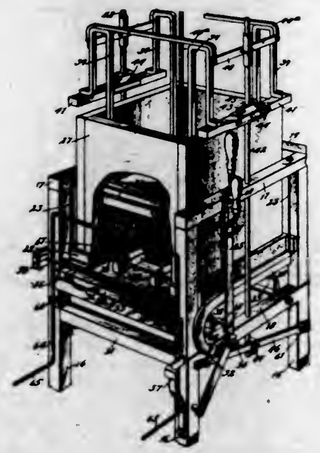
1. In a butter-printing machine, the combination with a stationary cutting-frame, of a movable bed below said cutting-frame, a follower above said cutting-frame, movable in the same direction as said bed and means for operating said bed and said follower independently of each other.

2. In a butter-printing machine, the combination with a stationary cutting-frame, of a movable bed below said cutting-frame, a follower above said cutting-frame, means for operating said bed and follower independently of each other, and means for operatively locking together the operating means for said bed and follower, respectively.

3. In a butter-printing machine, the combination with a stationary cutting-frame, of a vertically movable bed disposed below said cutting-frame, means for operating said bed, a receptacle disposed upon said cutting-frame, a vertically movable follower operating within said receptacle, and means for operating said follower.

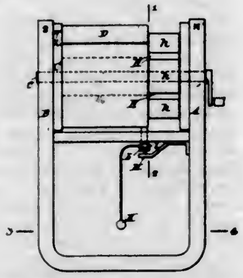
4. A butter-printing machine comprising a receptacle having a grated bottom, a plunger adapted to move vertically in said receptacle, and a bed adapted to move simultaneously with said plunger.

5. A butter-printing machine comprising a receptacle, a bottom for said receptacle having openings for the passage of butter therethrough, a plunger for forcing the butter through said bottom, and a bed adapted to move in unison with said plunger.



[Claims 6 to 19 not printed in the Gazette.]

883,346. INDUCTOR ELECTRIC GENERATOR. PARNELL RABBIDGE, Neutral Bay, near Sydney, New South Wales, Australia. Filed Oct. 31, 1906. Serial No. 341,411.



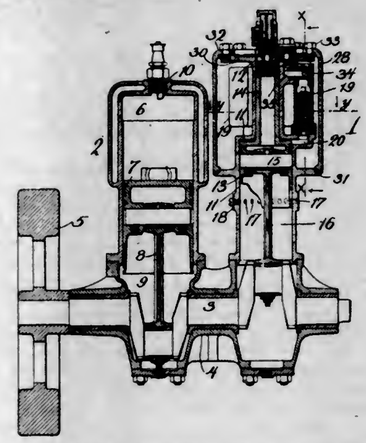
A horse shoe field magnet, a core, and a cylindrical casing concentric therewith, both attached to one of the poles of the field magnet, a coil or coils wound upon the core between the core and the casing, projections, at regular intervals, from the edge of the core, and from the edge of the casing, alternating with one another, and an inductor adapted to rotate between the projections and the other pole of the field magnet, for the purpose of closing the magnetic circuit alternately inside and outside the coil or coils, as specified.

883,347. COMPRESSOR. EDMUND W. ROBERTS, Clyde, Ohio. Filed Sept. 29, 1906. Serial No. 336,755.

1. A multi-stage compressor comprising in combination compression cylinders of different stages, and an intercooler comprising a hollow annulus connected to both said cylinders and surrounding one of them.

2. A multi-stage compressor comprising in combination compression cylinders of different stages, and an intercooler connected to both said cylinders and surrounding one of them and having the form of a hollow annulus, there being space for the circulation of cooling fluid on both sides of such annulus.

3. A multi-stage compressor comprising in combination compression cylinders of different stages, and an intercooler comprising a hollow annulus connected to both said cylinders and arranged substantially concentrically with respect to one of them.

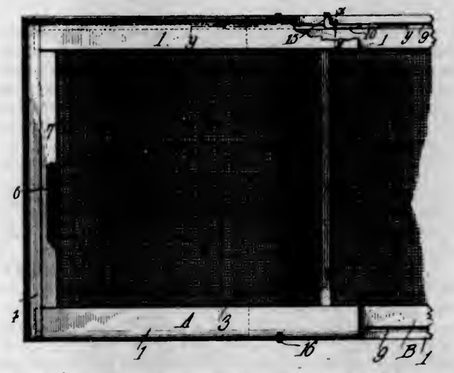


4. A multi-stage compressor comprising in combination compression cylinders of different stages and an intercooler removably connected to both said cylinders and having the form of a hollow horseshoe, the gap between its horns adapted to permit lateral removal of said intercooler.

5. A multi-stage compressor comprising in combination compression cylinders of different stages, an intercooler comprising a hollow annulus connected to both said cylinders and surrounding one of them, and a jacket surrounding both said cylinders and said intercooler and adapted to contain cooling fluid.

[Claims 6 to 27 not printed in the Gazette.]

883,348. WINDOW-SCREEN. BYRD C. ROCKWELL, Malvern, Ark. Filed July 5, 1907. Serial No. 382,304.



1. An extensible screen comprising oppositely disposed contacting sections, each section having longitudinal grooves therein, means upon each section for lapping and slidably engaging the opposite section to hold said sections against spreading, and an extension runner projecting beyond each section and disposed to travel within the groove of the other section.

2. An extensible screen comprising oppositely disposed lapping sections, each section having longitudinal grooves therein, means secured to each section for lapping and

slidably engaging the opposite section to prevent the sections from spreading, and extension slides integral with said means and projecting beyond the ends of the sections, each of said slides being mounted to travel within one of the grooves.

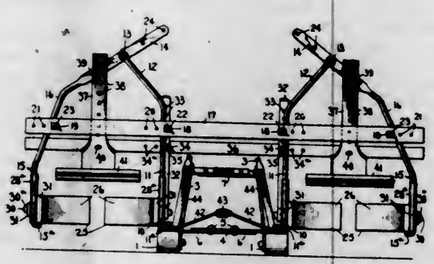
3. An extensible screen comprising oppositely disposed lapping sections, each of said sections comprising longitudinally grooved top and bottom rails, and end rails, means carried by the top and bottom rails of each section for lapping and slidably engaging the corresponding rails of the other section, and extension slides movable with and projecting beyond each section and disposed to travel within the grooves, said slides being disposed to project into the end rails.

4. An extensible screen comprising lapping oppositely disposed sections, each of said sections having longitudinal grooves, and means secured within and extending beyond the end of each groove for slidably engaging the inner face of the opposite section, and means integral therewith for engaging the outer face of the opposite section.

5. An extensible screen comprising oppositely disposed lapping sections, each section having longitudinal grooves, and means secured within each groove for slidably engaging the outer and inner faces of the adjoining section, each of said means comprising a body, an extension slide at one end thereof, an arm, and a finger upon the arm.

[Claim 6 not printed in the Gazette.]

883,349. COTTON-CLEANER. ALPHONES ROUQUIER, Natchitoches, La. Filed Oct. 25, 1907. Serial No. 399,111.



1. In a machine of the type set forth, in combination, a pair of shoes, means for supporting a poison pan at the one side of each of said shoes, adjustable connections between said shoes, members carried by said supporting means and a transverse brush bar connected to said members, said members being adjustable laterally with relation to said brush-bar.

2. In a machine of the type set forth, in combination, a pair of shoes, means for supporting a poison pan at the one side of each of said shoes, adjustable connections between said shoes, members carried by said supporting means and a transverse brush bar connected to said members, and adjustable vertically with relation thereto.

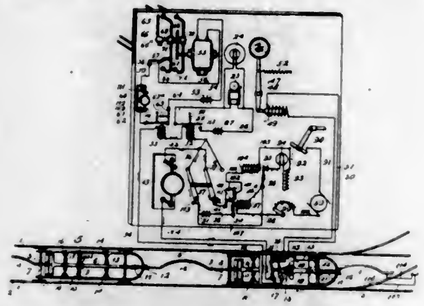
3. In a machine of the type set forth, a pair of shoes, means for supporting a poison pan at one side of each said shoes and transverse braces connecting said means.

4. In a machine of the type set forth, a pair of shoes, means for supporting a poison pan at one side of each of said shoes, adjustable connections between said shoes, and transverse braces connecting said means, said means being adjustable laterally with relation to said braces.

5. In a machine of the type set forth, in combination, a pair of shoes, means for supporting a poison pan at one side of each of said shoes, members carried by said supporting means, a transverse brush bar connected to said members, vertically disposed bars secured to each of said means and transverse brushes carried at the lower ends of said bars.

[Claims 6 to 23 not printed in the Gazette.]

883,350. COMBINATION SIGNAL AND TRAIN-STOPPING APPARATUS. ALFRED L. RUTHVEN, Topeka, Kans. Filed June 15, 1907. Serial No. 379,177.



1. In an apparatus of the character described, a series of sectional conductors arranged along the track, suitable connecting means with the train, a circuit, an automatically-operable pole-changer in said circuit, means at intervals along the track for automatically shifting the pole-changer, a visual signal which is operated by the closing of the circuit, and a target which is thrown in front of the visual signal each time the circuit is closed and the pole-changer is shifted.

2. In an apparatus of the character described, sectional conductors arranged along the track, suitable connecting means with the train, a circuit, an automatically-operable pole-changer in said circuit, means at intervals along the track for automatically shifting the pole-changer, a visual signal which is operated by the closing of the main circuit, a transiucent target which is thrown in front of the visual signal each time the circuit is closed and the pole-changer is shifted, and means for retracting said target each time the circuit is opened.

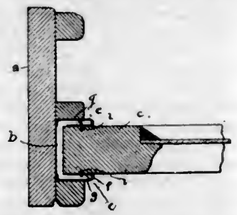
3. In an apparatus of the character described, a series of sectional conductors arranged along the track, suitable connecting means with the train, a main circuit, an automatically-operable pole-changer in said circuit, means at intervals along the track for automatically shifting the pole-changer, a combination audible and visual signal circuit which is closed by the closing of the main circuit, and a colored transiucent target which is thrown in front of the visual signal each time the combination circuit is closed and the pole-changer is shifted.

4. In an apparatus of the character described, a series of sectional conductors arranged along the track, suitable connecting means with the train, a main circuit, an automatically-operable pole-changer in said circuit, means at intervals along the track for automatically shifting the pole-changer, a toggle connected with the throttle for closing the same, said toggle including a plunger and a link which latter extends through the throttle latch-rod, a cylinder in which the plunger operates, a pipe for conducting motive fluid to the cylinder, a valve for normally closing said pipe, a motor for opening said valve, a circuit containing said motor which circuit is closed by the closing of the main circuit, and means actuated by the motor for breaking its circuit after the valve has been opened.

5. In an apparatus of the character described, a series of sectional conductors arranged along the track, suitable connecting means with the train, a battery, a main circuit, an automatically-operable pole-changer in said circuit, means at intervals along the track for automatically shifting the pole-changer, means connected with the throttle for closing the same, a pipe for conducting motive fluid to the throttle closing means, a valve for normally closing said pipe, a motor for opening said valve, a circuit containing said motor which circuit is closed by the closing of the main circuit, and adjustable means actuated by the motor for breaking its circuit after the valve has been opened.

[Claims 6 to 18 not printed in the Gazette.]

883,351. WEATHER-STRIP. JAMES E. SCOTT, Louisville, Ky. Filed Oct. 2, 1907. Serial No. 395,551.

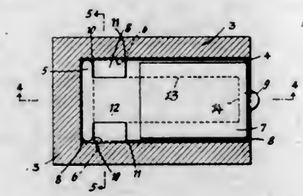


1. The combination with a window casing having a sash groove, and a window sash fitting in such groove, of a weather strip having inner and outer oppositely disposed flanges, the inner flange being provided with perforations at suitable intervals and having a curved connection with the outer flange, and headless pins carried by the sash and engaging the perforations of the inner flange, said outer flange overhanging said inner flange and headless pins.

2. The combination with a window casing having a sash groove, and a window sash fitting in such groove, of a weather strip having inner and outer oppositely disposed flanges, the inner flange being provided with perforations at suitable intervals, and the outer flange being wider than the inner flange, having a curved connection therewith, and a terminal angularly disposed lip extending towards the inner flange, and headless pins carried by the sash and engaging the perforations of the inner flange, said outer flange overhanging said inner flange and headless pins.

3. The combination with a window casing having a sash groove and a window sash fitting in such groove, of separate weather strips having each inner and outer oppositely disposed flanges, the inner flange being provided with perforations at suitable intervals and the outer flange being wider than the inner flange, having a curved connection therewith and a terminal angularly disposed lip portion extending toward the inner flange, and headless pins carried by the sash and engaging the perforations of the inner flange said outer flange overhanging said inner flange and headless pins.

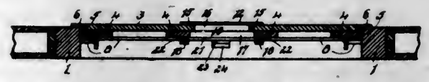
883,352. PICTORIAL MAILING-CARD. ALFONSO M. SIMON, New York, N. Y. Filed Nov. 26, 1907. Serial No. 403,872.



1. A card of the character described, provided with an address member, a pictorial member, a member containing a longitudinal slot, and a picture slide wider than such slot and having portions cut away coincident with such slot, and adapted to enter the same and to move under the part bounding said slot, to its termination, substantially as described and shown.

2. In a card of the character described, the combination of a member having a longitudinal slot, and a slide portion adapted to receive folded pictures; such slide portion wider than the slot, and having portions separated by slits terminating at lines coincident with such slot with the separated portions passing into such slot and adapted to move under the parts bounding such slot, substantially as described and shown.

883,353. GRAIN-DOOR FOR FREIGHT-CARS. JOHN B. SMILEY, South Omaha, Nebr. Filed Dec. 31, 1906. Serial No. 350,311.



1. A grain door formed with a relief door opening, an angular hood secured to the door at the top of such opening having, upwardly and downwardly, extending portions on opposite faces of said door, vertical bars secured to the outer face of the door and having offset upper ends secured to the upwardly extending portion of said hood, a relief door in said opening engaging the downwardly extending portion of the hood, and a hinge bar on said relief door engaging said offset ends of said vertical bars.

2. A grain door having an opening extending through its lower edge, an angle iron of substantially the same length as said door composed of a base and web secured to the lower edge of said door and spanning said opening, a hood having a downwardly extending part on the inner side of said door, and a relief door in said opening normally engaging said web of the angle iron and said downwardly extending part of the hood.

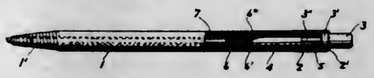
3. The combination in a grain door of the character described having a rectangular opening near its lower edge, of bars skirting the vertical edges of said opening and having offset portions, an angle iron forming the lower edge of said door and the fourth side of said rectangular opening, a relief door working within said opening and against said angle iron, a bar secured to the upper outer edge of said relief door, having projecting ends forming pivots held within the offsets of said bars, so that said relief door may be moved vertically upward and then pivotally without, and a pivotally held tongue secured to said grain door adapted to be held in a pendent condition to ride against the upper edge of said relief door, to lock said relief door against vertical displacement.

4. In combination with the door posts of a grain car, a grain door, W-shaped bars secured to the vertical edges of said door and having one portion adapted to engage the rear faces of said posts, another portion the outer side faces of the posts and a third portion engaging the outer face of said door, said door having an opening therein extending through its lower edge, an angle iron extending approximately the length of said door having its base secured to the lower edge of the door and having its web engaging the outer face of said door and a relief door in said opening to seat on said base and engaging said web.

5. A grain door formed with a relief door opening, a hood comprising a horizontal part engaging the top wall formed by said opening, a downwardly extending part on the inner face of the door, and an upwardly extending part on the outer face of the door, vertical bars secured to the outer face of said doors and having offset upper ends secured to said upwardly extending part of the hood, a relief door in said opening, a hinge bar on said door having reduced ends received in said offset ends of the vertical bars, a vertical bar central of the width of said relief door, and a tongue pivoted to said upwardly extending part of the hood and engaging the top end of said bar of the relief door.

[Claims 6 to 9 not printed in the Gazette.]

883,354. PENCIL. CHARLES A. SMITH, Philadelphia, Pa., assignor to Blaisdell Paper Pencil Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Dec. 14, 1907. Serial No. 406,502.



1. A pencil having a hollow body, a marking rod movable in said body, a catch fixed to said rod, a segmental rack with means between the edges thereof for engaging

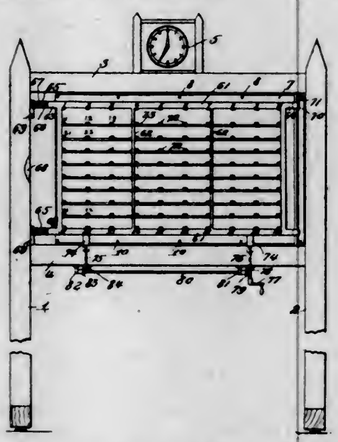
said catch to propel said rod, a catch for holding said catch first named in engagement with said rack and engaging said body to prevent the retraction of said rod, and a button for operating said rack.

2. A pencil having a hollow body comprising a cylindrical tube formed by winding sheet material, a marking rod movable in said tube, a perforated channel movable in said body, elastic catches fixed to said rod, one of said catches engaging the perforations of said channel and the other engaging said body, a movable button for operating said channel, and a collar fixed to said body for controlling the movements of said button.

3. A pencil having a hollow body, a ratch movable in said body, a marking rod movable in said body, catches fixed to said rod so as to engage said ratch and said body, a revoluble device having a cam connected with said ratch so as to move it in said body, and means for engaging said device to said body.

4. A pencil having a hollow body, a marking rod movable in said body, a catch on said rod, a rack movable in said body to engage said catch and propel said rod, a spring fixed to said body and rack to retract the latter, a button movable to propel said rack, and a collar engaging said button to said body, said collar being fixed to said body and loosely engaging said button.

883,355. TIME-RECORDER. JOHN D. SMITH, St. Louis, Mo. Filed June 11, 1906, Serial No. 321,235. Renewed Aug. 21, 1907. Serial No. 389,543.



1. A time recorder embodying a horizontally shiftable carrier having a chart provided with record spaces, a vertically-movable guide frame arranged forwardly of said carrier and provided with guide sockets positioned in suitable relation with respect to the spaces of the record chart, and stamping members adapted to be passed through the sockets and to engage the chart to make a record in the spaces.

2. A time recorder comprising a horizontally-shiftable chart carrier, means for shifting the carrier, means for retarding the shifting movement of the carrier, a vertically-movable guide frame arranged forwardly of the carrier and provided with guide sockets, means for imparting a vertical movement to said frame, and stamping members adapted to be inserted through the guide sockets and to engage the chart upon the carrier for impressing a record on the chart.

3. A time recorder comprising a horizontally-shifting carrier for a chart, means for shifting the carrier, means for retarding the shifting movement of the carrier, a vertically-movable guide frame arranged forwardly of the carrier and provided with guide sockets, means for imparting a vertical movement to said frame, stamping members adapted to be inserted through the guide sockets and to engage the chart upon the carrier for impressing a record on the chart, and means for throwing said retarding device out of operation when the carrier has arrived at the limit of its movement in one direction.

4. A time recorder embodying a horizontally shiftable carrier having a chart provided with record spaces, a hinged and vertically-movable guide frame arranged forwardly of said carrier and provided with guide sockets, said sockets positioned in suitable relation with respect to the record spaces of the record chart, and stamping members adapted to be passed through the sockets and to engage the chart to make a record in the spaces.

5. A time recorder embodying a horizontally-movable carrier for a record chart, means for moving said carrier horizontally, a device for retarding the movement of said carrier, a clock mechanism for operating said device, a vertically-movable guide frame arranged forwardly of said carrier and provided with guide sockets, and stamping members adapted to be inserted through said sockets and engage the chart upon the carrier for making a record on the chart.

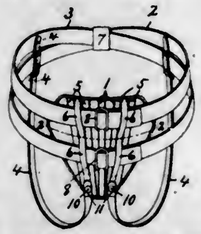
[Claims 6 to 17 not printed in the Gazette.]

883,356. VEHICLE-SPRING. WILLIAM H. SMITH and JACOB H. KLASSEN, Los Angeles, Cal. Filed Feb. 13, 1907. Serial No. 357,170.



In a vehicle spring, a leaf securing clip, comprising an upper and a lower member, the lower member provided with an outwardly projecting lug adapted to enter the spring holding plate, in combination with a spring having a plurality of leaves, the said leaves being provided with an off set portion.

883,357. COMBINED ABDOMINAL AND HERNIA PAD. MYRTLE A. SNELL and CHARLES A. SNELL, Syracuse, N. Y. Filed Dec. 28, 1904. Serial No. 238,620.

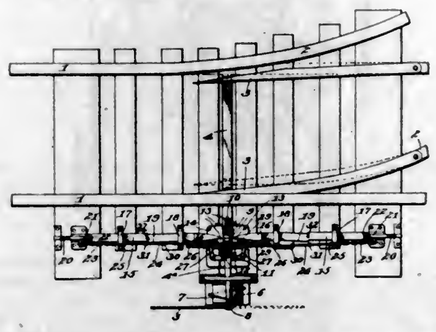


1. A device of the class described comprising a pad body, having downwardly converging sides and with upwardly diverging stays arranged in the intermediate portion of the pad, strap receiving loops near the upper and lower ends of said pad, two body straps passing through said loops and crossed rearwardly of the pad, and a keeper engaging said straps at their crossing point.

2. A device of the class described comprising a pad body having spaced vertical stays, upper and lower strap receiving loops spaced apart near the ends of said pad, a body strap passing at one end through one of said upper loops and at the other end through one of said lower loops, a body strap passing at one end through the other of said upper loops, and at the other end through the other of said lower loops, said straps crossing each other rearwardly of the pad, and a keeper device engaging said straps at their crossing point.

3. A device of the class described comprising a pad body having spaced vertical stays, upper and lower strap receiving loops spaced apart near the ends of said body, a body strap passing at one end through one of said upper loops and at the other end through one of said lower loops, a body strap passing at one end through the other of said upper loops and at the other end through the other of said lower loops, said straps crossing each other rearwardly of the pad, a keeper device engaging said straps at their crossing point, and thigh straps connected at one end to said pad and at their other ends respectively to said body straps.

883,358. AUTOMATIC RAILWAY-SWITCH. JOHN W. SPARKS and CHARLES J. ALLEN, Sabina, Ohio. Filed Oct. 16, 1907. Serial No. 397,657.



1. In a railway-switch, the combination with the movable switch-points, of a switch-bar joining said switch-points, and a switch-throwing device operatively-connected thereto, said switch-bar being divided or separable between the track and switch-throwing device but normally connected to operate as a unitary bar, a wedge adapted to enter between bearing surfaces, one of which is on the displaceable member of said switch-bar, and train-operable means for actuating said wedge.

2. In a railway switch, the combination with the movable switch-points, of a switch-bar joining said switch-points, and a switch-throwing device operatively connected thereto, said switch-bar being divided between the track and switch-throwing device and having that member which is connected to the switch-points displaceable, said displaceable member having a bearing surface, an adjacent bearing surface, a plunger-bar beside the track carrying wedge adapted to enter between said bearing surfaces to displace said displaceable member, a trip at the outer end of said plunger-bar adapted when engaged by means carried by the locomotive to actuate said plunger-bar and shove in the wedge, and connections between said trip and switch-bar whereby the trip is raised to operative position when the switch is opened.

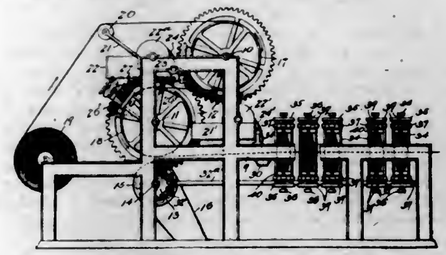
3. In a railway-switch, the combination with the movable switch-points, of a switch-bar joining them, and a switch-throwing device operatively connected thereto, said switch-bar being divided between the track and switch-throwing device, means for displacing that member of said switch-bar to which the switch-points are joined, a trippet for actuating the same adapted to be engaged by an instrumentality on the approaching train, and means for moving said trippet into operative or inoperative position by the opening or the closing of the switch.

4. In a railway-switch, the combination with the movable switch-points, of a switch-bar joining them, and a switch-throwing device operatively-connected thereto, said switch-bar being divided between the track and switch-throwing device, that member of the switch-bar to which the switch-points are joined being movably connected to the other member, a bearing surface, an adjacent bearing surface on the movable member of the switch-bar, oppositely-arranged devices respectively adapted to part said bearing surfaces, trippets for actuating said devices respectively located at removed points at opposite sides of said switch-bar and adapted to be engaged by means on the approaching train, and connections between said trippets and devices whereby when one trippet is engaged and displaced by the train the other trippet is moved to inoperative position.

5. In a railway-switch, the combination with the movable switch-points, of a switch-bar joining them, and a switch-throwing device operatively-connected thereto, said switch-bar being divided between the track and switch-throwing device, oppositely arranged wedges respectively adapted to enter and part two bearing surfaces, one of which is on the displaceable member of said divided bar, and train-operable means for shoving in said wedges.

[Claims 6 to 11 not printed in the Gazette.]

883,359. PAPER-COATING MACHINE. CHARLES F. SPAULDING, Tarrytown, N. Y. Filed Nov. 16, 1907. Serial No. 402,453.



1. In a coating machine, a plurality of web turning and guiding means arranged to engage only the uncoated portion of the web, and a pair of gravity coating-distributing members under which the two sides of web are successively directed in substantially horizontal planes as it leaves the turning and guiding means.

2. In a coating machine, a pair of gravity coating-distributing members, means for guiding one side of the web to be coated under one of said members, and means for turning the web and guiding the opposite side thereof under the other member, reciprocating brushes for acting on both coated surfaces all of said web turning and guiding means being arranged to engage only the uncoated surfaces of the web said surfaces being thereby kept free from contact until acted on by the brushes.

3. In a coating machine, a web turning member around which the under surface of the web is guided uncoated from an upper horizontal plane to a lower horizontal plane, and a pair of gravity coating-distributing members disposed one above that portion of the web in the upper plane and the other above that portion of the web in the lower plane.

4. In a coating machine, a frame, a pair of web guiding cylinders having their axes in different horizontal and vertical planes and both arranged to engage the uncoated portion of the web, means for revolving the cylinders to feed the web from the lower portion of the upper cylinder, to the uppermost portion of the lower cylinder, a gravity coating-distributer above the lower cylinder and a second gravity coating-distributer beyond the discharge side of said lower cylinder.

5. In a coating machine, a pair of web feeding cylinders arranged to engage only the uncoated surface of the web, and guiding it in successively descending planes means for driving said cylinders and a pair of gravity coating distributing members operating beyond the discharge sides of the cylinders respectively.

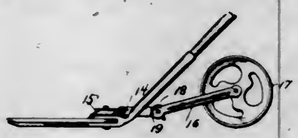
[Claims 6 to 9 not printed in the Gazette.]

883,360. PROCESS FOR THE MANUFACTURE OF FLOATING SOAP. ANTON STÖHR, Harthau, Chemnitz, Germany. Filed Apr. 28, 1904. Serial No. 205,404.

The process of manufacturing moldable floating soap, which consists in first melting resin over a slow fire, then removing and stirring the same, then adding to it a fine jet of caustic soda solution of 42 degrees B. previously heated to 144 F. and stirring till the saponified resin be-

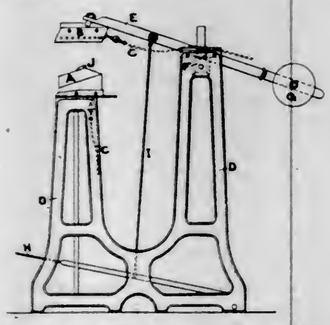
comes crumbly and sandy, then adding same to saponified cocoanut-oil and stirring over a slow fire to boil for an hour, then removing into shallow vessels in a cool chamber, and finally removing the resinous top portion and mixing same with hot soap-paste, as stated.

883,361. PLANT-CUTTER. STEPHEN F. STOLTZFUS, Leola, Pa. Filed Aug. 24, 1907. Serial No. 390,000.



In a device of the character described, a wheeled carrier, a lever, an enlargement carried by the lever, said enlargement being provided with a transverse opening, a boss projecting from the enlargement from the lever, a second lever passing through the transverse opening of the enlargement of the first named lever, a bolt pivotally connecting the first and second levers, said bolt passing through the boss of the enlargement, said boss being pivotally engaged by the wheeled carrier, and means for engaging the bolt for holding the wheeled carrier against displacement from the boss, and cutting blades removably carried by the levers.

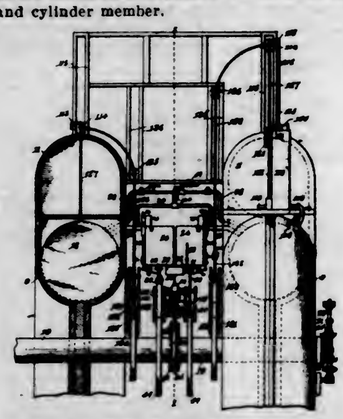
883,362. MACHINE FOR PRESSING COATS. ALFRED W. TINDALL, Leeds, England. Filed July 20, 1906. Serial No. 327,031.



In a machine for pressing coat collars, the combination, with a supporting frame, of a hollow lower pressing-box secured to the said frame, said lower box being curved to conform to the inner surface of a coat collar and provided with an inclined pressing surface at its top and having an upwardly projecting guide-lip at the top of the middle part of its concave side, an operating lever pivoted to the said frame, a hollow upper pressing-box secured to the said lever over the said lower box, said upper box being curved to conform to the upper surface of a coat collar and provided with an inclined pressing surface at its bottom, and heating devices arranged within the said pressing-boxes.

883,363. ROTARY EXPLOSIVE-ENGINE. JAMES C. WALKER, Waco, Tex. Filed June 12, 1907. Serial No. 378,567.

1. In an engine of the character set forth, the combination with a cylinder member, of a cylinder located alongside the same, a rotary piston member operating in the cylinder member, and a piston operating in the cylinder, a conduit leading from the cylinder into the cylinder member and disposed transversely of both, a valve operating across the conduit transversely thereof and longitudinally of the cylinder, means for periodically operating the valve, means for supplying an explosive mixture to the cylinder, and ignition mechanism located in the conduit between the valve and cylinder member.



2. In an engine of the character set forth, the combination with a cylinder member, of a cylinder located alongside the same, a rotary piston member operating in the cylinder member and a reciprocatory piston operating in the cylinder and having a piston rod projecting therefrom, a conduit leading from the cylinder to the cylinder member and disposed transversely of both, a reciprocatory valve operating across the conduit transversely thereof and longitudinally of the cylinder, means movable longitudinally of the piston rod and operated thereby for periodically operating said valve, and means for supplying an explosive mixture to the cylinder.

3. In an engine of the character set forth, the combination with a cylinder member and a rotary piston member operating therein, of a compression pump including a piston, a conduit connecting the pump and cylinder member, a valve operating in the conduit, and actuating means for the valve including a movable device connected thereto and a trip pivotally connected to the piston and movable past the device, said trip engaging said device and having its movement limited in one direction with respect to the piston.

4. In an engine of the character set forth, the combination with a cylinder member and a rotary piston member operating therein, of a compression pump including a reciprocatory piston and piston rod, a conduit leading from the pump to the cylinder member, a reciprocatory valve operating in the conduit and having a stem, a lever fulcrumed between its ends and connected to the stem, and a trip pivotally mounted on the piston rod and movable past the lever, said lever being disposed in the path of movement of the trip, and said trip having its pivotal movement in one direction on the piston rod limited.

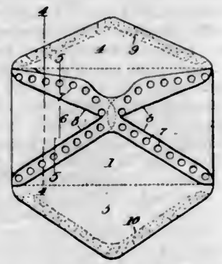
5. In an engine of the character set forth, the combination with a cylinder member and a rotary piston member operating therein, of a compression pump delivering to the cylinder member and comprising a cylinder and a piston operating in the cylinder, an igniter for exploding the charges delivered by the pump, and controlling means for the igniter having a portion projecting into the cylinder and into the path of movement of and operated by the piston.

[Claims 6 to 23 not printed in the Gazette.]

883,364. ENVELOP. MARTIN L. WALTER, Kramer, N. D. Filed July 31, 1906. Serial No. 328,585.

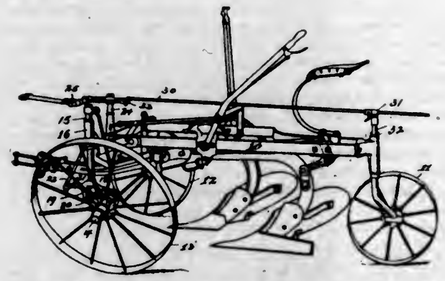
1. An envelop having a frangible seal in the form of a sheet of paper secured to the back of the envelop, and having portions free of the envelop, the free portions having perforations through which the closure flap is connected to the envelop, the sealing flap also adhering to said sheet, the frangible seal having fugitive ink thereon.

2. An envelop having a seal in the nature of a frangible sheet secured to the outer face of the folded end flaps, the upper and lower edges of the sheet being free of the end flaps and provided with perforations disposed to have both closure flaps secured to the back of the envelop through



the perforations when the envelop is sealed, the closure flaps also adhering to the sheet when the envelop is sealed, whereby the sheet and envelop will be torn when either closure flap is opened.

883,365. WHEELED PLOW. IRA A. WEAVER, Springfield, Ill., assignor to Racine-Sattley Company, Springfield, Ill., a Corporation of Illinois. Filed Dec. 16, 1903. Serial No. 185,384.



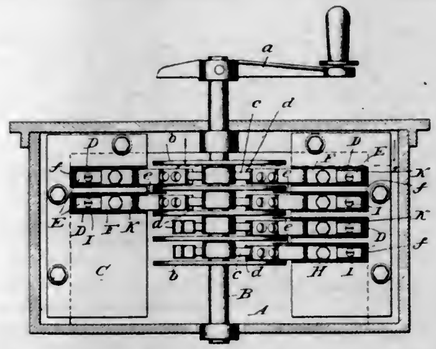
1. In a wheeled plow, the combination of the plow frame, of a caster wheel, a front furrow wheel, and a land wheel, said wheels disposed forwardly of the plow points, and mounted to turn about vertical axes; a pole or tongue, and adjustable connections between the pole or tongue and said wheels, substantially as described.

2. In a wheeled plow, the combination of a frame, a caster wheel at the rear thereof, a furrow wheel at the forward end of the frame and a land wheel opposite the front furrow wheel, a pole or tongue, connections between the pole or tongue and said forward wheels, said wheels being mounted to turn around vertical axes and the land wheel being free to swivel or turn on its axis independently of its connection to the pole, substantially as described.

3. In a wheeled plow, the combination of a frame, a caster wheel at the rear thereof, a furrow wheel at the front thereof, a land wheel located substantially to transverse alinement with the front furrow wheel, a pole or tongue, and connections between the pole or tongue and the front wheels, the latter being mounted to swivel or turn upon vertical axes and the connection between the pole and the land wheel being elastic whereby to permit a swinging movement of said wheel around its axis and a stop to limit said independent swing during the forward movement of the plow.

4. In a wheeled plow, the combination with the plow frame, of a caster wheel, a front furrow wheel and a land wheel, of a pole or tongue connected to the frame on the land side of the line of draft, connections between the pole and the front furrow and land wheels, the latter being mounted to turn around vertical axes, and a connection between the pole and the caster wheel, substantially as set forth.

883,366. ELECTRIC SWITCH. ARTHUR L. WHITE, Cresco, Iowa. Filed Nov. 21, 1907. Serial No. 403,161.



1. In an electric switch, the combination of a support, a metallic device connected to the support and carrying a brush, and an insulating and non-carbonizing section having a portion interposed between the metallic device and the support and also having a portion disposed at an angle to the first mentioned portion and arranged adjacent to the metallic device.

2. In an electric switch, the combination of a support, a metallic device connected to the support and carrying a brush, and an insulating and non-carbonizing section, of right angle form in cross-section, having one of its sides interposed between the metallic device and the support and its other side arranged in close proximity to the metallic device.

3. In an electric switch, the combination of a support, a metallic device connected to and extending beyond the support and carrying a brush, and an insulating section, of right angle form in cross-section, having a short side interposed between the metallic device and the support and also having a comparatively long side extending beyond the support and the first mentioned side and disposed in close proximity to the metallic device.

4. In an electric switch, the combination of a support comprising sections of wood, a section of insulating material secured between said wood sections, a plurality of metallic devices connected to one side of and extending beyond the support and carrying brushes, and angle sections, of insulating material, having short sides interposed between the metallic devices and the support and also having long sides disposed at an angle to and extending beyond the support and arranged between the metallic devices.

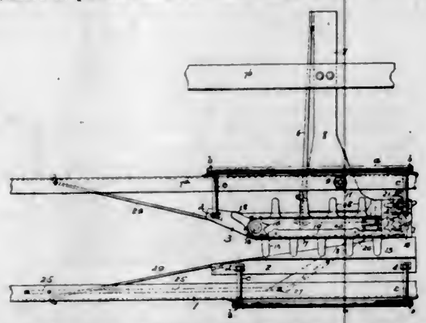
5. In an electric switch, the combination of a support, a plurality of metallic devices connected to and extending beyond the support and carrying brushes, and insulating sections, of right angle form in cross-section, having short sides interposed between the metallic devices and the support and also having comparatively long sides extending beyond the support and the first mentioned sides and disposed between the metallic devices.

883,367. CUTTING MECHANISM FOR CORN-HARVESTERS. FRANCIS M. WIDERMAN, Harrison, N. J. Filed Jan. 10, 1907. Serial No. 351,720.

1. In a cutting mechanism for corn harvesters, the combination with a frame, two series of fingers disposed in different horizontal planes, and means for supporting said fingers and moving both series simultaneously in the same direction, of a cutting blade secured to said frame and disposed in a plane between the two series of fingers, said blade having a cutting edge disposed diagonally with respect to the direction of movement of the two series of fingers.

2. In a cutting mechanism for corn harvesters, the combination with a harvester frame, of a vertically movable

elastically supported cutting frame, a cutting blade on said frame, an endless chain, and fingers on the chain movable in paths above and below the cutter.



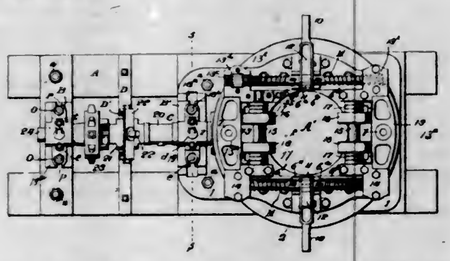
3. In a cutting mechanism for corn harvesters, the combination with a harvester frame, of a vertically movable elastically supported cutter frame, a blade secured on said cutter frame, an endless chain, parallel feeding fingers on the chain straddling the blade, said blade having a cutting edge disposed diagonally to the path of movement of said fingers.

4. In a cutting mechanism for corn harvesters, the combination with a harvester frame, of a vertically movable elastically supported cutter frame, a blade secured on the cutter frame, an endless chain on the cutter frame, parallel fingers on the chain straddling the blade said blade having a cutting edge disposed diagonally to the path of movement of said fingers, and guide bars holding the fingers against tilting movement.

5. In a cutting mechanism for corn harvesters, the combination with a harvester frame, of a vertically movable elastically supported cutter frame, a blade secured on the cutter frame, an endless chain on the cutter frame, parallel fingers on the chain straddling the blade, said blade having a cutting edge disposed diagonally to the path of movement of said fingers, flanges or lips on the inner ends of the fingers, and grooved guide bars to receive the flanges or lips and hold the fingers against backward tilting.

[Claims 6 to 12 not printed in the Gazette.]

883,368. ROTARY BORING MECHANISM. JAMES A. WIGGS, Jr., Beaumont, Tex. Filed July 24, 1906. Serial No. 327,483.



1. In rotary boring mechanism, two pairs of tube-gripping rollers, which are free to turn on their shafts and arranged opposite to each other, in combination with said shafts, each of which is flattened at one end, grip-frames supporting said shafts, parts clamped against the flattened parts of said shafts to prevent them from turning, adjusting devices for moving said shafts toward or from each other and a rotary table or support for carrying them in rotation about a common axis substantially as set forth.

2. In rotary boring mechanism, two pairs of tube-gripping rollers which are free to turn on their shafts and arranged opposite to each other, in combination with said shafts which are flattened on top at one end of each, a table having an opening in its center, means for supporting said shafts from said table, plates adapted to be fastened in contact with said flattened parts to prevent such shafts from turning, adjusting devices for moving said shafts toward and from each other and mechanism for rotating said table for the purpose set forth.

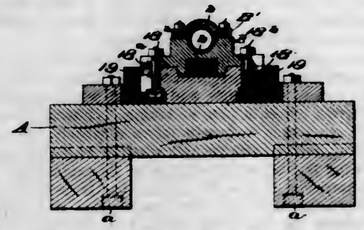
3. In rotary boring mechanism, a rotary table, having a central opening for the tube or rod to be rotated, in combination with two grip frames arranged on opposite sides of the center of said table and free from engagement with any other device adapted to prevent independent automatic vertical upward movement of said grip-frames, tube-gripping devices carried by the said grip-frames, slide-frames carried by said table, supporting said grip-frames and provided with stops to prevent the said grip frames from turning pivotally, though permitting them to rise independently, adjusting devices for moving each grip-frame and its slide-frame together toward or from the center of the table at the will of the operator, and mechanism for rotating the said table and the above parts carried thereby for the purpose set forth.

4. In rotary boring mechanism, a rotary table having a central opening, in combination with a pair of grip-frames on opposite sides of said table, tube-gripping devices carried by said grip-frames, posts on which the said grip-frames are vertically movable. slide frames having said posts fixed thereon, adjusting devices for moving said grip-frames and slide frames toward or from the center of the table and means for rotating said table substantially as set forth.

5. In rotary boring mechanism, a rotary table having a central opening, in combination with a pair of grip frames, each having a vertical opening at its middle, tube gripping devices carried by said frames, a pair of slide frames on opposite sides of the center of said table, each of said slide frames having a post which passes up through such opening of one of said grip-frames, permitting the latter to rise independently thereon at need, screw-shafts for adjusting said grip-frames and slide frames toward each other and mechanism for rotating the said table substantially as set forth.

[Claims 6 to 19 not printed in the Gazette.]

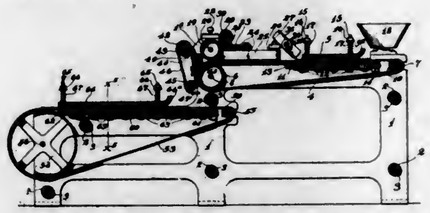
883,369. BEARING FOR DRIVING AND OTHER SHAFTS. JAMES A. WIGGS, Jr., Beaumont, Tex. Original application filed July 24, 1906, Serial No. 327,483. Divided and this application filed Dec. 13, 1906. Serial No. 347,610.



1. In combination with a shaft, a removable bearing therefor, a block or plate supporting such bearing and bolts connecting the said bearing and plate together, said plate being provided with lateral slots for said bolts, each slot consisting of a broader lower part and a narrower upper part and a pocket, into which the head of the bolt may be drawn to prevent lateral motion and out of which the said bolt may be lowered to permit the same, substantially as set forth.

2. In combination with a shaft a removable bearing therefor, a block or plate supporting such bearing and prismatic headed bolts connecting the said bearing and plate together, said plate being provided with lateral slots for said bolt, each slot consisting of a broader lower part and a narrower upper part and having a prismatic pocket into which the head of one of the bolts may be drawn to lock said bearing to said plate and said bolt against turning, the said slots permitting the lateral escape of the bolt heads when lowered from said pockets and the consequent release of the shaft and bearings substantially as set forth.

883,370. BREAD KNEADING AND MOLDING MACHINE. WILLIAM H. WOOD, Minneapolis, Minn. Filed Sept. 18, 1907. Serial No. 393,464.



1. In a dough kneading and molding machine, the combination with primary and secondary rolling devices, of means interposed between said two rolling devices for action on the dough to flatten and coil the same, substantially as described.

2. In a dough kneading and molding machine, the combination with primary and secondary rolling devices, of means for shifting, flattening and coiling the dough loaf as it is passed from said primary rolling device to said secondary rolling device, substantially as described.

3. In a dough kneading and molding machine, the combination with primary and secondary rolling devices, each comprising an endless apron and a coöperating presser plate, of flattening rollers interposed between said two rolling devices, a shifting device operative on the dough loaf as the same is passed from said primary rolling device to said flattening rollers, and means for coiling the flattened loaf as the same is passed from said flattening rollers to said secondary rolling device, substantially as described.

4. In a dough kneading and molding machine, the combination with primary and secondary rolling devices, each comprising an endless apron and a coöperating presser plate, of means for flattening and coiling the loaf as it passes from said primary to said secondary rolling devices, said coiling means comprising a yielding belt arranged for coöperation with the delivery portion of the endless apron of said primary rolling device, substantially as described.

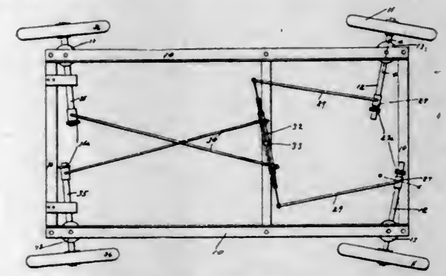
5. In a dough kneading and molding machine, the combination with primary and secondary rolling devices, each comprising an endless apron and coöperating presser plate, with the apron of the former overlapping the apron of the latter, a pair of flattening rollers, over the lower of which the apron of said primary rolling device is passed, and a coiling device comprising a roller and coöperating endless belt, the latter having its lower portion yieldingly held for coöperation with the delivery portion of the apron of said primary rolling device, substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

883,371. VEHICLE STEERING DEVICE. GEORGE H. YOUNG, Des Moines, Iowa. Filed May 21, 1907. Serial No. 374,929.

1. In a device of the class described, the combination of a vehicle frame, four axles pivotally supported therein, a spring bar pivotally connected with the frame, a collar mounted on the inner end of each axle, arms connecting the ends of the spring bar with the collars on the forward axles, and crossed arms for connecting the spring bar with the collars on the rear axles.

2. In a device of the class described, the combination of a vehicle frame, four axles pivotally supported therein, a spring bar pivotally connected with the frame, a collar mounted on the inner end of each axle, arms connecting the ends of the spring bar with the collars on the forward axles, and crossed arms for connecting the spring bar with the collars on the rear axles, and a cushioning cylinder in each collar.



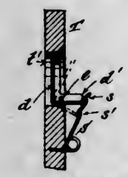
3. In a device of the class described, the combination of an axle, a collar surrounding the axle, a cylindrical cushion within the collar, and a cylindrical bearing within the cushion, said bearing being in engagement with the axle.

4. In a device of the class described, the combination of an axle, a collar surrounding the axle, a cylindrical cushion within the collar, and a cylindrical bearing within the cushion, said bearing being in engagement with the axle, lugs formed on the collar, and forked arms pivotally connected with said lugs.

5. In a device of the class described, the combination of an axle, a hub mounted upon the axle, plates above and below the hub and rotatably connected therewith, cushions above the upper plate and below the lower plate, and means for connecting said hub with a vehicle frame.

[Claims 6 and 7 not printed in the Gazette.]

883,372. TOY. JOHN ZIMMERMANN, New York, N. Y. Filed Nov. 1, 1907. Serial No. 400,264.



1. In a toy target of the character designated, the combination with the base board, of a target board hinged thereto and formed with a series of apertures, a series of pivoted target plates each arranged to appear through one of said apertures, each target plate being formed with a rear extension, spring latches, one for each of said target plates arranged to engage with the rear extension thereof and formed with shoulders for sustaining its target plate in either an advanced or retracted position, and a return ball or projectile arranged in front of said target board, for the purpose described.

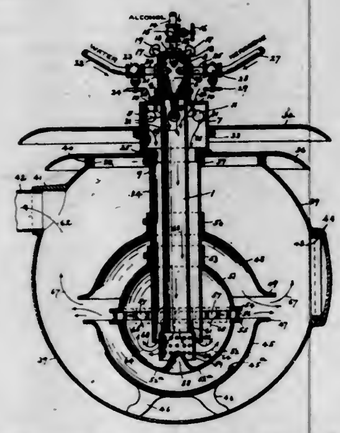
2. In a toy target of the character designated, the combination with the base board of a target board hinged thereto and formed with a series of apertures, a folding brace pivotally connected to and between said base board and said target board, a series of pivoted target plates each arranged to appear through one of said apertures, each target plate being formed with a rear extension, spring latches, one for each of said target plates arranged to engage with the rear extension thereof and formed with shoulders for sustaining its target plate in either an advanced or retracted position, and a return ball or projectile arranged in front of said target board, for the purpose described.

3. In a toy target of the character designated, the combination with the base board, of a target board hinged thereto and formed with a series of apertures, a folding brace pivotally connected to and between said base board and said target board and formed with a stop for sustain-

ing the parts in extended position, a series of pivoted target plates each arranged to appear through one of said apertures, each target plate being formed with a rear extension, spring latches, one for each of said target plates arranged to engage with the rear extension thereof and formed with shoulders for sustaining its target plate in either an advanced or retracted position, and a return ball or projectile arranged in front of said target board, for the purpose described.

4. In a toy target of the character designated, the combination with the base board, of a target board hinged thereto and formed with a series of apertures, a series of pivoted target plates each arranged to appear through one of said apertures, each target plate being formed with a rear extension, spring latches, one for each of said target plates arranged to engage with the rear extension thereof and formed with shoulders for sustaining its target plate in either an advanced or retracted position, a detachable bow shaped body supported in sockets on the front end of the base board, an elastic cord the ends of which are slidably attached to the parallel side members of the said bow shaped body, and a return ball or projectile on said elastic cord, for the purpose described.

883,373. HYDROCARBON-BURNER. ANDERS AKESON, Worcester, Mass. Filed June 11, 1907. Serial No. 378,460.



1. The improved feeding device for hydro-carbon burners herein described, consisting of the combination of a chambered receptacle, a plurality of nozzles discharging into the chamber of said receptacle different liquids from separate sources; means for controlling at will the discharge of each of said nozzles; air vent plugs opening into said chamber and adjustable to control the air currents passing through them, respectively; and a nozzle extending from said receptacle and adapted to discharge from said chamber the mingled contents of said chamber.

2. In a hydrocarbon burner, the combination of an air pipe having an air inlet at the top and an open bottom; a vaporizing tube within the air pipe and concentric therewith; air inlets in said tube admitting air therein from said pipe; a perforated discharge tube at the bottom of the vaporizing tube located and adapted to discharge hydrocarbon vapor into the air currents which flow from the bottom of the air pipe; means for feeding hydrocarbon fluids to the vaporizing tube at the upper end thereof; and means for the combustion of said vapors at and near the lower end of said pipe and tube.

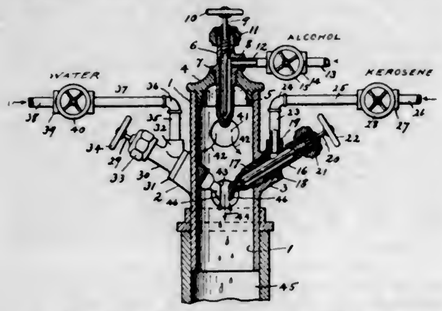
3. In a hydrocarbon burner, the combination of a combustion chamber having discharge openings; a concavo-convex deflector directed upwardly from the bottom of said chamber; a vaporizing tube whose open bottom surrounds concentrically and partially extends downward over said deflector; a feed device near the top of said tube for feeding liquid fuel thereto; and an air pipe surrounding concentrically said tube and discharging at its lower end near to the lower end of said tube.

4. In a hydrocarbon burner, the combination of a vaporizing tube having an air inlet near its upper end; a combustion chamber into which the lower end of said tube extends and which consists of two hemispherical shells or parts circumferentially connected with an intervening circumferential space or opening; a deflector on the bottom of the combustion chamber extending upwardly into the vaporizing tube; an air pipe having air inlets at its upper end and surrounding the vaporizing tube concentrically and having an open bottom adjacent to the lower end of the vaporizing tube; and means for feeding liquid fuel to said vaporizing tube.

5. In a hydrocarbon burner, the combination of a hemispherical shell having an annular flange; a second hemispherical shell having an annular flange; stud bolts passing through both of said flanges at equi-spaced intervals and keeping said flanges parallel with each other with an intervening space, said hemispherical shells constituting a combustion chamber; an air pipe entering at the top of the combustion chamber and extending below said intervening space; a vaporizing tube within said pipe; means for feeding a liquid fuel to said tube at the top thereof; a perforated tube secured upon the bottom end portion of said vaporizing tube; and a deflector on the lower hemispherical shell and extending upwardly into said perforated tube.

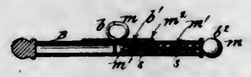
[Claims 6 to 8 not printed in the Gazette.]

883,374. FEED DEVICE FOR HYDROCARBON-BURNERS. ANDERS AKESON, Worcester, Mass. Filed June 14, 1907. Serial No. 379,073.



In a feed device for a hydrocarbon burner, the combination of a vaporizing chamber; a feed tube communicating with said chamber and provided with air inlets; a needle valve adapted to discharge alcohol into said tube; a needle valve adapted to discharge water into said tube, and said latter valve having a nozzle which terminates in a radially disposed dropping point capable of discharging the liquid from said valve in drops by gravity; and a needle valve adapted to discharge kerosene into said tube, and said valve having a nozzle which terminates in a radially disposed dropping point capable of discharging the liquid from said valve in drops by gravity.

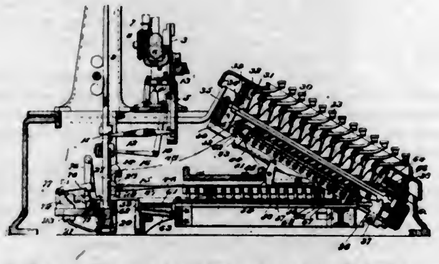
883,375. PIN. FRANCESCO P. ANELLO, Newark, N. J. Filed Oct. 23, 1907. Serial No. 398,691.



1. In a pin of the character designated, the combination of a hollow bar formed with a stationary jaw and a slot in line therewith, a movable rod mounted in said hollow bar and formed with a jaw projecting through said slot, and a coiled spring on said movable rod interposed between a lateral projection thereon and the end plate of the hollow bar, for the purpose described.

2. In a device of the character designated, the combination of a hollow bar formed with a stationary jaw and a slot in line therewith, a movable rod mounted in said hollow bar and formed with a jaw projecting through said slot and contacting normally with said stationary jaw to form a continuous loop, a shield plate for said slot attached to the movable jaw, a coiled spring on said movable rod interposed between a lateral projection thereon and the end plate of the hollow bar and tending constantly to maintain contact between the movable and the stationary jaws, and a pin on the hollow bar for attaching the device to a garment, for the purpose described.

883,376. KEYBOARD PERFORATING-MACHINE. JOHN S. BANCROFT and MAURITZ C. INDAHL, Philadelphia, Pa., assignors to Lanston Monotype Machine Company, Philadelphia, Pa., a Corporation of Virginia. Filed Jan. 30, 1904, Serial No. 191,389. Renewed Aug. 19, 1905. Serial No. 274,965.



1. In a perforating machine such as described, the combination of the following elements, to wit, a series of punch bars; an actuator therefor; a series of interponents intermediate the atcuator and the punch-bars; a motor for the actuator; controlling devices for said motor including a retaining latch and a trip, the latter coupled with the actuator; and a series of keys operatively connected with the interponents for selection, and with the motor control devices for inaugurating its action.

2. In a perforating machine such as described, the combination with the punch-bars, actuator, motor, interponents and keys, of a valve controlling the motor, actuating devices for shifting said valve, a latch for retaining the valve in shifted position, and a trip for said latch coupled with the actuator and operating to release the valve by the movement and at the end of the stroke of said actuator.

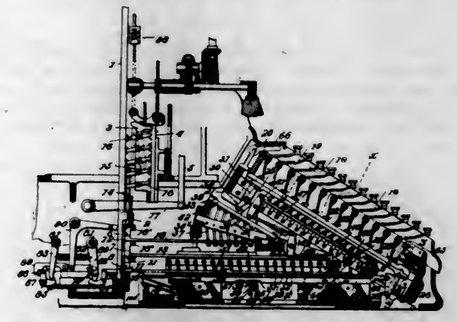
3. In a perforating machine such as described the combination of the following elements, to wit; a plurality of punch-bars; an actuator provided with a motor; a series of controllable interponents intermediate said punch-bars and actuator; a series of keys coupled with the interponents; a motor valve; setting devices coupled with the keys for shifting the valve; a latch coupled with the valve for retaining it in position; and a trip bar movable with the actuator to release the latch and permit the return of the actuator.

4. In a perforator such as described the combination of the following elements, to wit; an actuator provided with opposed engaging surfaces and a motor; a plurality of punch-bars each with an off-set located intermediate the opposed surfaces on the actuator; a series of interponents, one for each punch-bar, adapted to enter between its off-set and the engaging surface of the actuator; a control valve for the motor governing the pressure and exhaust in the latter; a lever engaging said valve and provided with a shoulder; a latch engaging said shoulder when the valve is moved to admit pressure to the motor; and a trip engaging said lever to shift the valve, and connected to move in unison with the actuator for operating the latch to release the valve.

5. In a perforating machine such as described, the combination with the actuator, its motor, a plurality of punch-bars and a series of interponents, of a valve controlling the motor, a shifting lever for the valve, a latch for retaining the valve in shifted position until withdrawn, and a trip-bar engaging a lug on the valve lever for shifting the valve, and moved by the actuator to disengage said trip-bar from the valve lever and to engage and release the latch.

[Claims 6 to 24 not printed in the Gazette.]

883,377. RECORD-STRIP COMPOSING-MACHINE. JOHN S. BANCROFT and MAURITZ C. INDAHL, Philadelphia, Pa., assignors to Lanston Monotype Machine Company, Philadelphia, Pa., a Corporation of Virginia. Filed Mar. 29, 1904. Serial No. 200,559.



1. In a punching machine such as described, the combination of the following elements, to wit; a series of punch bars divided into groups of which two represent position and one dimension; an actuator; a series of selective interponents; one for each punch bar; a series of selective actuating devices for the interponents of each group of punch bars, and a series of keys each coupled to the selective actuating devices of the three groups to control an interponent in each of said groups.

2. In a punching machine such as described, provided with a series of punch bars divided into groups representing position and dimension, and a series of keys and selective devices controlled thereby for bringing into action individual members of both groups of positioning punch bars, and in combination therewith the following elements, to wit; an actuator; a selective interponent for each punch bar of the dimensioning group; and a permutation system of transmitting devices intermediate said interponents and the keys, whereby the dimensioning elements of the signals corresponding to given keys may be varied.

3. In a punching machine such as described, the combination of the following elements, to wit; a series of punch bars divided into groups; an actuator for the punch bars; a series of selecting interponents, one for each punch bar; a series of keys; and a selective actuating mechanism, intermediate the interponents and keys and comprising a series of key bars, a series of transmitters, each coupled to a group of key bars and to one of the interponents pertaining to one group of punch bars and two series of permutation devices intermediate the keybars and the interponents pertaining to the remaining groups of punch bars.

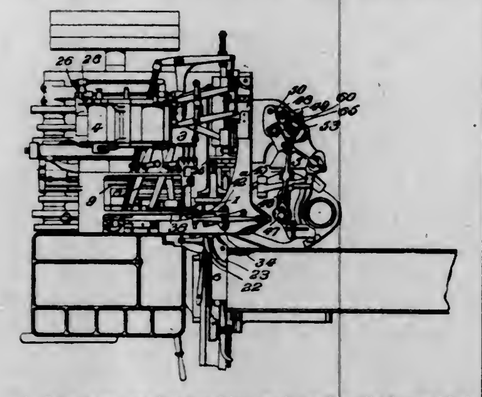
4. In a punching machine such as described, the combination with a plurality of groups of punch-bars and a series of controlling keys of a selective actuating mechanism including the following elements, to wit; an actuator; a series of interponents, one for each punch bar; a series of transmitters each coupled to an interponent of one group of punch bars; two independent permutation systems each coupled with or controlling the interponents of separate groups of punch bars, and a series of keybars, one for each key, individually coupled with the two permutation systems and in groups with each of the series of transmitters.

5. In a punching machine such as described, provided

with groups of punch bars representing different qualities or movements, a series of interponents, one for each punch bar, an actuator, and a series of controlling keys, and in combination therewith, a selective control system or mechanism comprising the following elements, to wit; a series of transmitters separately coupled to the interponents of one group of punch bars; two series of bars the individual members whereof are coupled to the interponents of the two remaining groups of punch bars; two series of transmitters, one for each of said series of bars the individual members whereof are adapted for connection with any bar of its series; a series of keybars, one for each key, means for separately connecting the key bars in groups to the respective transmitters of the first named series, and means for separately connecting each keybar to any transmitter of the two remaining series.

[Claims 6 to 33 not printed in the Gazette.]

883,378. TYPE-MACHINE. JOHN S. BANCROFT and MAURITZ C. INDAHL, Philadelphia, Pa., assignors to Lanston Monotype Machine Company, Philadelphia, Pa., a Corporation of Virginia. Filed Dec. 1, 1904, Serial No. 235,126. Renewed Nov. 8, 1905. Serial No. 286,366.



1. In a type casting machine such as described provided with a mold a type carrier and matrix case centering and metal injecting mechanism and in combination therewith, an auxiliary compression device for the centering plunger, a device for augmenting the motion desired from the actuator of the type carrier, and an auxiliary controller for the pump mechanism.

2. In a type casting machine such as described the combination with the centering and holding plunger for the matrix of an auxiliary compression device removably inserted between the actuating lever and the plunger and adapted to reinforce the action of the normal compression device.

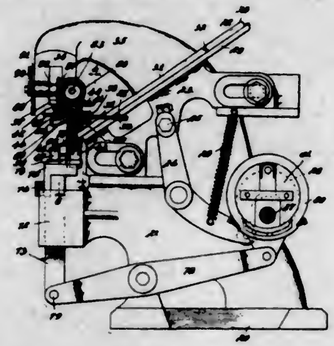
3. In a type casting machine such as described the combination with the matrix centering and holding plunger its actuating device or lever and interposed compression spring, of an auxiliary compression device comprising end plates, and separating spring or springs, said end plates being provided with open bearings for engaging the actuating device and a collar on the plunger.

4. The combination to form an auxiliary compression device for the matrix centering and holding plunger of two plates each provided with a lateral opening communicating with a seat for the reception of a collar on the plunger or the actuating device therefor, tie rods connecting said plate on opposite sides of said bearings, and a plurality of tension springs located intermediate the plates.

5. In a type casting machine, such as described and in combination with the die-case thereof and its centering mechanism, of a matrix holder fitted to said die-case and provided with a seat for the centering plunger and gages for positioning the matrix in justified relation to said seat.

[Claims 6 to 24 not printed in the Gazette.]

883,379. HOOK-SETTING MACHINE. JOSEPH W. BARNA and VALENTINE HOFFMAN, Chicago, Ill. Filed Apr. 23, 1906. Serial No. 313,143.



1. In a machine of the class described, punching mechanism, opposed series of coöperating hook-setting sets, and means to adjust the punching mechanism and the sets of both series to vary the spacing thereof.

2. In a machine of the class described, punching mechanism, opposed series of coöperating hook-setting sets, and means common to the punching mechanism and the sets of both series to adjust them laterally to vary the spacing thereof.

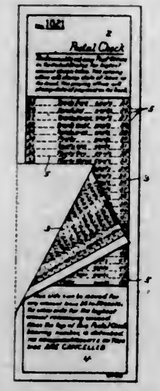
3. In a device of the class described, punching mechanism, opposed series of coöperating hook-setting sets one of which series is movable relatively to the other, a carrier for each opposing pair of sets, and means to adjust the carriers and punching mechanism simultaneously.

4. In a machine of the class described, opposed series of coöperating hook-setting sets, means for moving the sets of one series relatively to the other, a carrier for each opposing pair of sets, punching-mechanism on the carriers and means to adjust the carriers simultaneously to vary the spacing of the sets.

5. In a device of the class described, a plurality of carriers each of which is provided with a fixed set and a relatively movable set and with punching mechanism, means for moving the movable sets to coöperate with the fixed sets, and means to adjust the carriers simultaneously to vary the spacing of the sets.

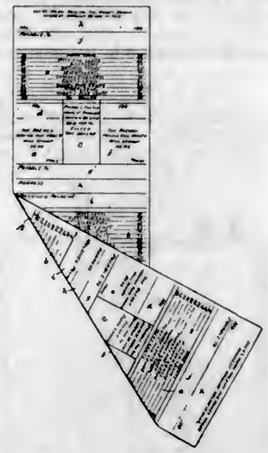
[Claims 6 to 42 not printed in the Gazette.]

883,380. CHECK. JOHN C. BELL, Cleveland, Ohio. Filed Apr. 21, 1906. Serial No. 313,053.



A check having on each face a contract portion and a series of value designations, the value designations on one face being different from and registering with those on the other face, except that the series of value designations upon one face of the check begins with the same number with which the series of value designations on the obverse face of the check ends, and ends in a position out of register with the last value designation on said obverse face, the arrangement of said contract portion and value designations on one side of the check being reverse to the corresponding arrangement on the other side.

883,381. CHECK OR MONEY-ORDER. JOHN C. BELL, Cleveland, Ohio. Filed Dec. 24, 1907. Serial No. 407,957.



1. A money order having two duplicate series of value designations on each face, the duplicate series of value designations on one face being different from those on the other face of the order, and the duplicate series of value designations on each face separated by a contract portion, one series of said value designations on one face being opposite one of the series of value designations on the other face with the series of value designations on one face beginning with the same number with which the series of value designations on the obverse face ends.

2. A money order having two duplicate series of value designations on each face, the duplicate series of value designations on one face being different from those on the other face of the order, and the duplicate series of value designations on each face separated by a contract portion, one series of said value designations on one face being opposite one of the series of value designations on the other face with the series of value designations on one face beginning with the same number with which the series of value designations on the obverse face ends, the matter on the respective faces of the order being printed in different colors.

883,382. REMOVABLE DENTAL BRIDGEWORK. ERNEST C. BENNETT, New York, N. Y. Filed Apr. 16, 1907. Serial No. 368,493.



1. A denture comprising a stationary or crown abutment, an interlocking shoulder thereon, a frame member extending from said abutment above and to one side of the ridge of the gum and having a laterally offset end portion forming a second abutment, and a removable bridge member adapted at one end to said interlocking shoulder and at its other end to said second abutment, said frame lying along the side of said bridge when the latter is in place.

2. A denture comprising a stationary tooth abutment, a frame member secured thereto extending above and to the side of the ridge of the gum and having a curved end portion forming a second abutment, and a removable bridge adapted to be embraced on both sides by said frame and to be secured between both of said abutments.

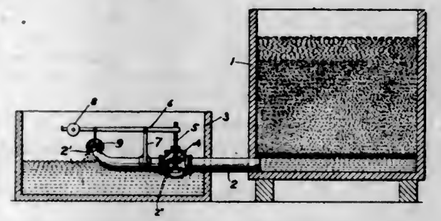
3. A denture comprising a stationary abutment, a removable bridge member, a frame member extending from the side of the abutment above and to the side of the ridge of the gum and on the exterior of said bridge member when in place and having a curved end portion, one of said members having a longitudinally yielding portion, said bridge being secured between said abutment and said curved portion of the frame.

4. A denture comprising a removable bridge member, a stationary abutment, a frame extending logitudinally from the side thereof above and to one side of the ridge of the gum and having a laterally curved end portion, said bridge being adapted when in place to be engaged and held at both ends and along the side.

5. A denture comprising a stationary abutment, a member carried by said abutment and following the line of the gum, and a removable bridge member adapted to be engaged by said abutment and said longitudinally extending member, the latter extending along the side of said bridge above the gum.

[Claims 6 to 9 not printed in the Gazette.]

883,383. AUTOMATIC FLUID-CONTROLLER. MORO M. BORDEN, Collingswood, N. J., assignor to Simplex Valve & Meter Company, Camden, N. J., a Corporation of New Jersey. Filed Aug. 31, 1907. Serial No. 390,863.



1. The combination of a conduit, with a valve, means connected with said valve for holding it normally in the open position, a device connected with said means for receiving fluid impact by which said valve is moved toward the closed position, and means for directing a fluid jet against said device.

2. The combination of a valve, mechanism for balancing said valve, said mechanism having a device for receiving fluid impact, and a conduit having an orifice through which fluid is thrown against said device to regulate the position of said valve, said device being exterior to said conduit.

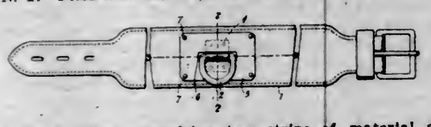
3. The combination of a conduit having a contracted outlet, with a valve in said conduit, a fulcrumed lever connected with said valve, and a device connected with said lever for receiving the impact of fluid discharged from said outlet.

4. The combination of a filter, an effluent chamber, a conduit leading from said filter to said chamber, said conduit having a contracted outlet, a valve for controlling the flow through said conduit, mechanism for balancing said valve, and a device subject to the impact of fluid discharged through said outlet for regulating the position of said valve.

5. The combination of a conduit having an outlet, a valve for controlling said conduit, and means for receiving the impact of liquid discharged through said outlet and regulating the position of said valve, the means for receiving the liquid impact being exterior to said conduit.

[Claim 6 not printed in the Gazette.]

883,384. DOG-COLLAR. ISIDOR M. BREMER, New York, N. Y. Filed Oct. 25, 1907. Serial No. 399,099.



1. In a collar comprising two strips of material secured together, a metal plate on the outside of the collar secured through both layers, said plate having an opening, a leash-ring carrying member which projects through said opening in the plate and through the layer of collar next to the plate, and said member having a foot located between the layers of the collar and riveted to the layer next the plate.

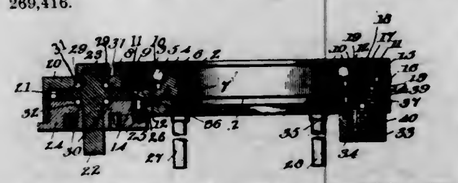
2. In a collar comprising two layers of material, a metal name-plate on said collar said name-plate having an opening, and leash attaching means comprising a member which projects through the opening in the name plate and has a base portion anchored between the two layers of the collar.

3. In a collar, the combination of a metal plate on said collar said plate having an opening, and leash attaching means projecting through the opening in said plate and secured directly to the collar.

4. In a collar comprising two layers of material the outer layer having an opening, a metal name-plate on said collar having an opening therein corresponding with the opening through the upper layer of the collar, a strip located between the layers of the collar and elevated at its middle to pass through the aforesaid openings and formed into a projecting sleeve, and a leash-ring mounted in said sleeve.

5. In a collar having an opening therethrough, a metal name-plate on said collar having an opening therein corresponding to the opening through the collar, a strip of material elevated at its middle to pass through the aforesaid openings and formed into a projecting sleeve, the axis of which extends lengthwise of the collar, and a leash-ring mounted in said sleeve.

883,385. ROTATION-INDICATING INSTRUMENT. HARRY P. C. BROWNE and WILLIAM H. PALMER, Jr., New York, N. Y. Filed July 12, 1905. Serial No. 269,416.



1. A rotation indicating apparatus comprising two members, the one held against rotation and the other rotary, and the two connected together to form a unitary structure, with rotary means carried by said non-rotating member for transmitting a measure of the rotation of the rotary member to a separate indicating instrument, substantially as described.

2. A rotation indicating apparatus comprising two annular members, the one held against rotation and the other rotary, and the two connected together to form a unitary structure, with rotary means carried by said non-rotating member for transmitting a measure of the rotation of the rotary member to a separate indicating instrument, substantially as described.

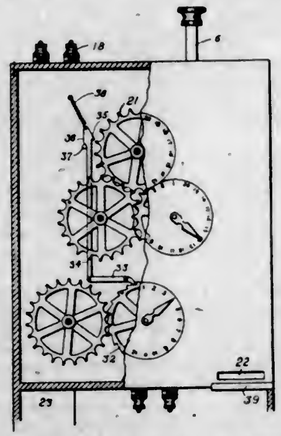
3. A rotation indicating apparatus comprising two members, the one held against rotation and the other rotary, and the two connected together to form a unitary structure, a separate indicating instrument, with rotary means carried by said non-rotating member for transmitting a measure of the rotation of the rotary member to said indicating instrument, substantially as described.

4. In an apparatus of the character described, the combination with two members secured together to form a unitary structure, the one fixed and the other rotary, of rotary means carried by the fixed member and actuated by the rotary member for transmitting a measure of the rotation of the rotary member, and separate means operated by said transmitting means, for indicating the motion of the rotary member, substantially as described.

5. In an apparatus of the character described, the combination with two annular members secured together to form a unitary structure, the one fixed and the other rotary, of means carried by the fixed member and actuated by the rotary member for transmitting a measure of the rotation of the rotary member, and independent means operated by said transmitting means, for indicating the rotation of the rotary member, substantially as described.

[Claims 6 to 26 not printed in the Gazette.]

883,386. COIN-CONTROLLED ATTACHMENT FOR VENDING-MACHINES. BRYANT D. CAMPBELL, Oakland, Cal. Filed Dec. 4, 1905. Serial No. 290,281.



1. In a coin controlled mechanism, a meter to register effective operations of an apparatus, mechanism for operating the meter, rebating mechanism for the meter, means to return the coin for non-effective operations of the apparatus and means operatively connecting the last mentioned means and the rebating mechanism whereby the latter is actuated by the former.

2. In a coin controlled mechanism, a meter to register effective operations of an apparatus, mechanism to operate the meter, a recorder to register non-effective operations of said apparatus, means to return the coin for non-effective operations of the apparatus, means to actuate the recorder and means operatively associated with the recorder to reversely actuate the meter.

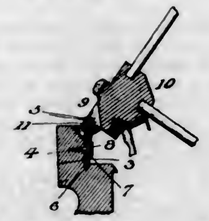
3. In a coin controlled mechanism, a meter to register effective operations of an apparatus, mechanism to operate the meter, means to return the coin for non-effective operations, a recorder to register the non-effective operations of said apparatus, means operatively connecting the last mentioned means and the recorder to actuate the recorder and means operatively associated with the recorder to reversely actuate the meter.

4. In a coin controlled mechanism, a casing, a rotatable coin carrier, devices to be operated by the coin carrier, means for giving the carrier a partial rotation to operate said devices and means for returning the coin carrier to its initial position, a discharge guide leading to the exterior of the casing to receive the coin from the coin carrier, a movable member to support the coin in said guide, a second guide leading to a coin receptacle, and a member mounted on the coin carrier to direct the coin from the first mentioned guide to the second guide.

5. In a coin controlled mechanism, a casing, a rotatable coin carrier, devices to be operated by the coin carrier, means for giving the carrier a partial rotation to operate said devices and means for returning the coin carrier to its initial position, a discharge guide leading to the exterior of the casing to receive the coin from the coin carrier, a movable member to support the coin in said guide, a second guide leading to a coin receptacle, and a member yieldable in one direction mounted on the coin carrier to direct the coin from the first mentioned guide to the second guide on the forward movement of the carrier.

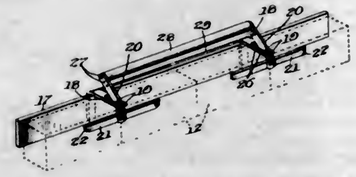
[Claims 6 to 9 not printed in the Gazette.]

883,387. PIANO-FLANGE. GEORGE H. CAMPBELL, Harrisburg, Pa. Filed Mar. 25, 1907. Serial No. 364,421.



In combination with a rail having a series of recesses of a flange extending within each of the recesses, said flange being formed of a single piece of metal bent upon itself and having registering apertures, the bend of the metal being flattened, and coinciding tongues projecting from the free ends of the metal, one of said tongues being provided with a transverse groove adjacent its free end.

883,388. BRICK-HANDLING APPLIANCE. OSCAR CARLSON, Chicago, Ill., assignor of one-half to Frank G. Theselius, Chicago, Ill. Filed June 13, 1907. Serial No. 378,703.

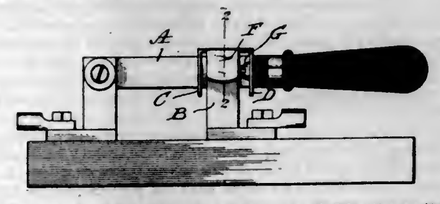


1. A brick handling appliance consisting of a member having a laterally extending bracket on its upper portion between its ends, a lever fulcrumed near the free end of said bracket and adapted to move transversely with respect to said member, and a clamping member mounted for restricted movement on the lower portion of the lever and extending longitudinally with respect to the first-named member.

2. A brick handling appliance consisting of a member having a plurality of spaced apart and laterally extending brackets on its upper portion, a lever fulcrumed on each of said brackets, a clamping member mounted on the lower portion of each of said levers and extending longitudinally with respect to the bracket-carrying member, and a handle uniting the upper portion of the levers.

3. A brick handling appliance consisting of a member having at its upper portion a plurality of laterally extending brackets, a lever fulcrumed on each of said brackets, a clamping member mounted for restricted movement on the lower portion of each of said levers and extending longitudinally with respect to the bracket-carrying member, and a handle uniting the upper portion of said levers.

883,389. SWITCH-CLIP. JOHN CLAY, New York, N. Y. Filed Aug. 20, 1907. Serial No. 389,404.



1. In an electrical switch, a clamp carried by the switch arm and secured thereto, consisting of a pair of perforated lugs and a pair of contact clips integrally formed with said clamp and the said clips, being adapted to engage a switch clip upon the closing of the switch.

2. An attachment for electrical switches comprising a supplemental clip provided with jaws connected by intermediately disposed integrally formed perforated lugs, said clip being carried by and secured to a switch blade of the said switch and adapted to engage the co-acting switch clip and force the same into contact with the said blade upon the closing of the switch.

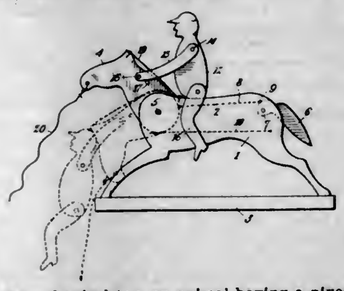
3. In an electrical switch an attachment for the switch blade, consisting of a clip provided with lateral jaws and perforated securing lugs integrally formed therewith, said lateral lugs adapted upon the closing of the switch, to thrust the switch clip against the blade of said switch.

4. In an electrical switch, a clamp carried by the switch blade, consisting of a blank formed about the switch blade and provided with a pair of securing lugs and a pair of lateral clips, said clamp being attached to the said blade by the securing lugs and a perforation in one of the said securing lugs adapted to receive the neck of a screw, said switch clamp being adapted to engage the switch clip upon the closing of the switch.

5. In an electrical switch, provided with a switch arm and a switch clip co-acting therewith, the combination with the said arm and said switch clip, of a clamp provided with a perforated securing lug secured to the said switch blade and lateral contact lugs adapted to contact with the switch clip upon the closing of the switch.

[Claims 6 and 7 not printed in the Gazette.]

883,390. TOY. BELLE B. COLEMAN, Berlin, Conn., assignor of one-half to Sarah J. Schack, New York, N. Y. Filed Dec. 31, 1907. Serial No. 408,788.



1. In a mechanical toy, an animal having a pivoted head and a pivoted tail, a flexible inelastic cord connecting said head and tail, said connection with the tail being made on a line above the axis of pivotal movement thereof, whereby the tail rises when the head is moved, a cord connected to said animal's head for jerking it out of its normal position, a human figure adapted to be displaced from a normal position of repose to one which is uncouth and amusing, and an elastic band connected to the animal's head at a point near the ears thereof and operating to return said figure to its normal position of repose when said cord is released, said head of the animal having an engaging relation with said figure to displace the latter into its uncouth or amus-

ing relation when said head is moved with a rapid or jerking movement.

2. In a mechanical toy, a supporting base, an animal having a body with legs fixed to said base and having a head pivoted to said body, a retractile member 19 connected to said head closely behind the ears thereof and joined to the back of said body, a figure having arms pivoted to the neck of the animal, and a cord for jerking said animal's head.

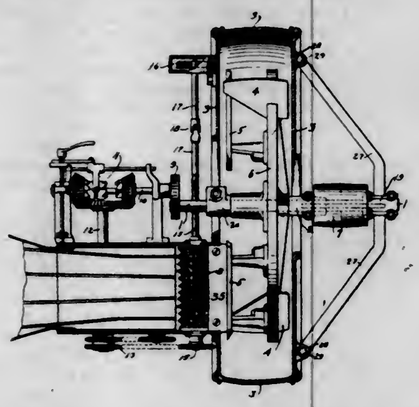
3. In a mechanical toy, a supporting base, an animal having a body with legs fixed to said base and having a pivoted head and a pivoted tail, a retractile member connected to said head at a point near the ears thereof and to said body, whereby said head is raised, yielding means for limiting the upward movement of the head, a figure having arms pivoted to said head, means for jerking the head downward, and means for raising said tail when the head is lowered.

4. In a mechanical toy, a supporting base, an animal having a body with legs fixed to said base and having a pivoted head, a figure having arms pivoted to the neck of the animal, a retractile member fixed to said head and said body to normally raise said head, and a cord connected to the mouth of the head at a point to constitute a bridle or tether.

5. In a mechanical toy, a supporting base, an animal having a body with legs fixed to said base and having a head and a tail pivoted to said body, a figure having pivoted arms pivoted to the head of the animal, a retractile member joining said head to said body whereby the head is raised, means for raising said tail when the head is lowered, and a cord pivoted to said head to constitute a bridle or tether.

[Claims 6 to 8 not printed in the Gazette.]

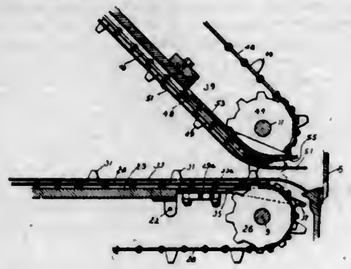
883,391. FODDER-CUTTER. JOSEPH DICK, Canton, Ohio. Filed Apr. 28, 1906. Serial No. 314,132.



1. In a fodder cutter, an axial shaft having a pulley thereon outside the case, a journal bearing for the shaft outside the pulley, there being a transverse slot in the bearing having the faces tapered toward each other at one side, a detachable supporting brace between the bearing and the case, a lateral bracket detachably connected with the case at its ends and located in the transverse slot of the bearing, with means for forcing the bracket into the tapered side of the slot.

2. In a fodder cutter, a case with a cutter-bar in one end thereof, a shaft journaled in the case and having cutting knives thereon adapted to shear against the cutter bar, a pulley on the shaft outside the case, a bearing for the shaft outside the pulley, a supporting brace and a bracket for the bearing connected with the case, and means for adjusting and securing the bearing on the brace and bracket.

883,392. FODDER-CUTTER. JOSEPH DICK, Canton, Ohio. Original application filed Apr. 28, 1906, Serial No. 314,142. Divided and this application filed July 9, 1907. Serial No. 382,964.



1. A feed-hopper for a forage-cutter and the like comprising opposed-faced variably-balanced separable conveyers having longitudinal slits therein, the faces being converged to form a constricted throat and thence diverged toward the cutters, and teeth protruded through the slits and adapted to be operated toward and through the constricted throat and to be withdrawn into the slits in the diverged parts of the faces.

2. A feed-hopper for a forage-cutter and the like comprising opposed-faced variably-balanced separable conveyers having longitudinal slits therein, the faces being converged to form a throat and thence extended toward the cutters, and teeth protruded through the slits and adapted to operate toward and through the beginning of the throat and to be withdrawn into the slits in the extended parts of the faces.

3. A feed-hopper for a forage-cutter and the like comprising opposed-faced conveyers adapted to be adjusted apart and having longitudinal slits therein, the faces being converged to form a constricted throat and thence diverged toward the cutters, and teeth protruded through the slits and adapted to be operated toward and through the constricted throat and to be withdrawn into the slits in the diverged parts of the faces.

4. A feed-hopper for a forage-cutter and the like comprising opposed-faced conveyers adapted to be adjusted apart and having longitudinal slits therein, the faces being converged to form a throat and thence extended toward the cutters, and teeth protruded through the slits and adapted to operate toward and through the beginning of the throat and to be withdrawn into the slits in the extended parts of the faces.

5. A feed-hopper for a forage-cutter and the like comprising opposed-faced conveyers having longitudinal slits therein, the faces being converged to form a constricted throat and thence diverged toward the cutters, and teeth protruded through the slits and adapted to be operated toward and through the constricted throat and to be withdrawn into the slits in the diverged parts of the faces.

[Claims 6 to 8 not printed in the Gazette.]

883,393. TYPE-WRITING MACHINE. JOHN A. EDLUND, Syracuse, N. Y., assignor to Alexander T. Brown, Syracuse, N. Y. Filed May 20, 1901. Serial No. 60,973.



1. The combination of a hanger, a type bar, one of said members being formed of folded sheet metal and also having a cleft hub provided with a separate internal peripherally-grooved hub, and the other of said members having an eye portion surrounding said hub, and a set of bearing balls working between the eye and the hub.

2. In a typewriting machine, the combination of a type bar, a hanger, and a ball bearing joint between the type bar and hanger, said ball bearing joint comprising a grooved one-piece hub separate from but connected to the type bar, the groove in said hub being in the median plane of the type bar, an eye on the hanger, said eye having an adjustable member for effecting a relative adjustment between the bearings, and a set of balls between said eye and hub.

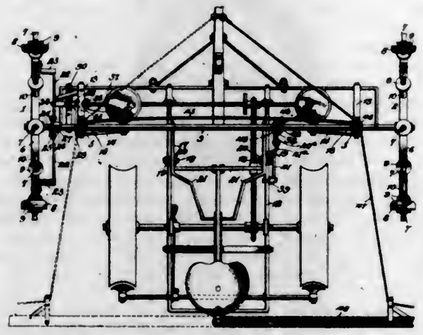
3. In a type bar and hanger ball-bearing joint, the combination of a peripherally grooved one-piece hub, an interiorly grooved eye surrounding said hub, a set of bearing balls confined between the eye and the hub, and opposing plates between which the eye and the hub are confined, said plates being secured to said hub and forming part of one of the type bar and hanger members, and one of said eye and hub elements having an adjustable ball-bearing surface.

4. The combination of a hanger, a type bar, one of said members having an eye portion provided with an interior groove with relatively adjustable side walls and the other of said members being cleft so as to straddle said eye portion, said cleft member having an exteriorly grooved internal hub surrounded by said eye portion, and a set of bearing balls running in the race formed by the coöperation of said grooves.

5. The combination of a hanger, a type bar, one of said members having a hub and the other having a two-part eye, one eye-part being mounted upon the other eye-part, and said eye-parts being provided with opposing ball bearing surfaces which together form an interior groove in the eye, and a set of bearing balls.

[Claims 6 to 49 not printed in the Gazette.]

883,394. WIRELESS ATTACHMENT FOR CHECK-ROW CORN-PLANTERS. JOHN ELDER and CHARLES M. SCOGGINS, Louisiana, Mo. Filed Aug. 29, 1907. Serial No. 390,645.



1. In an attachment of the class described, the combination of a marking wheel having a rim and provided thereat with traction spurs, markers projecting from the rim of the marking wheel, and stops rigidly mounted on the spurs and on the markers and arranged to engage the ground to limit the penetration of the spurs and markers.

2. In an attachment of the class described, the combination of a marking wheel, traction spurs mounted on and projecting from the periphery of the wheel, markers also projecting from the periphery of the marking wheel, said spurs and markers being provided with shanks and sleeves arranged on the said shanks and provided at their outer ends with projecting flanges forming stops for engaging the ground to limit the penetration of the spurs and the markers.

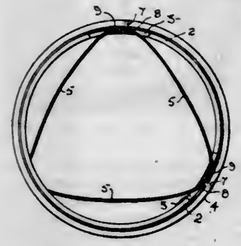
3. In an attachment of the class described, the combination of a marking wheel, traction spurs projecting from the periphery of the wheel, markers also extending from the periphery of the said wheel, radially arranged tappet arms carried by the wheel and connected at their outer ends with the periphery of the said wheel, and a lever extending into the path of the tappet arms.

4. In an attachment of the class described, the combination of a wheel having a rim, markers extending from the rim of the wheel, radially arranged tappet arms located at the inner side of the wheel and secured at their outer ends to the markers beyond the rim, and a lever arranged in the path of the arms.

5. In an attachment of the class described, the combination of a shaft, a wheel having a rim, markers extending from the rim of the wheel, radially arranged marking arms located at the inner side of the wheel and connected at their outer ends to the markers beyond the rim, means mounted on the shaft for supporting the inner ends of the tappet arms, and a lever extending into the path of the arms.

[Claims 6 to 18 not printed in the Gazette.]

883,395. BOTTLE-HOLDER. ADOLPH C. E. ERICHSEN, Cranston, R. I., assignor to Gorham Manufacturing Company, Providence, R. I., a Corporation of Rhode Island. Filed June 20, 1906. Serial No. 322,600.



1. A bottle-holder comprising a casing open at the bottom, and a holding device normally extending across the open bottom of said casing, said holding device being adapted when engaged by the bottle to be moved toward the wall of said casing to permit the passage of the bottle, substantially as described.

2. A bottle-holder comprising a casing open at the bottom, and a holding device normally extending across the open bottom of said casing, said holding device being adapted, when engaged by the bottle, to be moved toward the wall of said casing to permit the passage of the bottle, and to resume its normal position when the bottom of the bottle has passed by said holding device, substantially as described.

3. A bottle-holder comprising a casing open at the bottom, a holding device normally extending across the open bottom of said casing, said holding device being adapted, when engaged by the bottle, to be moved toward the wall of said casing, and to resume its normal position when the bottom of the bottle has passed by the same, and means for withdrawing said holding device to release the bottle, substantially as described.

4. In a bottle-holder, the combination of a casing open at the bottom, a ring mounted to turn on said casing, and a holding device normally extending across the open bottom of said casing, said spring being connected at one end to said ring, substantially as described.

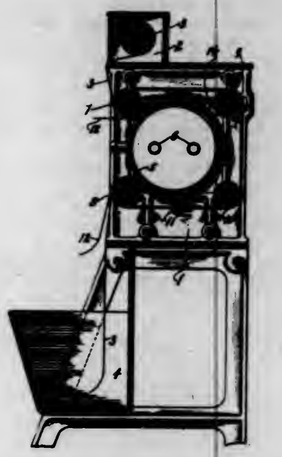
5. In a bottle-holder, the combination of a casing open at the bottom, a ring mounted to turn on said casing, and a holding device normally extending across the open bottom of said casing, said spring being connected at one end to said ring and at the other end to said casing, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

883,396. PHOTOGRAPHIC-PRINTING MACHINE. CHARLES J. EVERETT and JOHN V. MCADAM, New York, N. Y., assignors to Revolute Machine Company, New York, N. Y., a Corporation of New York. Filed Feb. 14, 1906. Serial No. 300,988.

1. A photographic printing machine comprising a rotary transparent cylinder, means for supplying light there-

to, and means for passing a photographic sheet and an interposed sheet of drawings around the periphery of the said cylinder, said means comprising a plurality of narrow belts.



2. A photographic printing machine comprising a rotary transparent cylinder, means for supplying light thereto and means for passing a photographic sheet and an interposed sheet of drawings around the periphery of the said cylinder, said means comprising a plurality of rollers and a plurality of belts carried thereby.

3. A photographic printing machine comprising a rotary transparent cylinder, means for supplying light thereto and means for passing a photographic sheet and an interposed sheet of drawings around the periphery of the cylinder, said means comprising a plurality of rollers and a plurality of belts carried thereby, one or more of the said rollers being provided with a plurality of crowns over which the belts are caused to pass.

4. A photographic printing machine comprising a rotary transparent cylinder, means for supplying light thereto, a plurality of rollers located in proximity to the said cylinder and a plurality of belts passing partially around the cylinder and around the said rollers for passing a photographic sheet and an interposed sheet of drawings into and out of contact with the periphery of the cylinder.

5. A photographic printing machine comprising a rotary transparent cylinder, means for supplying light thereto, upper and lower front rollers and upper and lower back rollers located in proximity to the cylinder and a plurality of belts passing partially around the cylinder and around the said rollers for passing a photographic sheet and an interposed sheet of drawings into and out of contact with the periphery of the cylinder.

[Claim 6 not printed in the Gazette.]

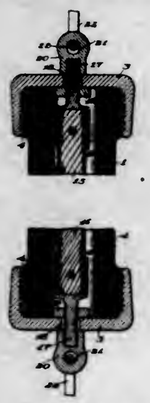
883,397. INSULATOR. WALTER T. GODDARD and JOHN S. LAPP, Victor, N. Y., assignors to The Locke Insulator Manufacturing Company, Victor, N. Y., a Corporation of New York. Filed July 29, 1907. Serial No. 385,947.

1. In an insulator, attaching devices, and a pair of tension elements made of insulating material connecting the attaching devices and having different tensile strength.

2. In an insulator, attaching devices, a tension element made of insulating material connecting said devices, and an insulating element surrounding the first mentioned element.

3. In an insulator, attaching devices, a tension member made of insulating material connecting said devices, and a tubular insulating element surrounding said member throughout the length of the latter.

4. In an insulator, attaching devices, a fibrous insulating element connecting said devices, and a tubular, insulating element surrounding the fibrous element.



5. In an insulator, a pair of attaching devices, an asbestos rope connecting said devices, and a tubular insulating element surrounding the rope.

[Claims 6 to 12 not printed in the Gazette.]

883,398. FLEXIBLE TIRE FOR VEHICLE-WHEELS. CLÉMENT C. GOUIN, Paris, France. Filed Oct. 2, 1906. Serial No. 337,074.



1. A vehicle wheel tire consisting essentially of pieces of leather disposed edgewise and secured together, separate end plates secured to the respective ends of said tire and separated by a space, a securing plug filling said space, and a device mechanically connecting said plug to said end plates and also adapted to secure the plug to the wheel rim.

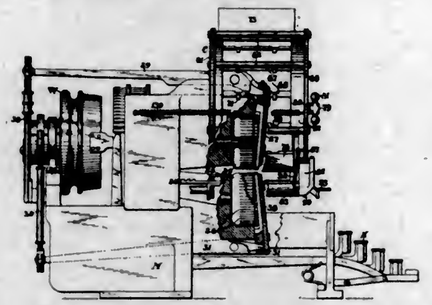
2. A vehicle wheel tire composed of leather disposed edgewise, end plates of metal, securing bands passing through said end plates and pieces, ears on said plates, and an anchor engaging said ears and secured to the rim of the wheel.

3. A vehicle wheel tire composed of pieces of leather disposed edgewise, end plates of metal, securing bands passing through said pieces and plates, ears on said plates, an anchor having hooks engaging with said ears, and a plug composed of pieces engaged by said anchor and filling the space between the adjacent end plates of the tire.

883,399. FEEDING MECHANISM FOR RELIEFOGRAPHS. RICHARD GRIESER, New York, N. Y., assignor to Pollard-Ailling Manufacturing Company, New York, N. Y., a Corporation of New York. Filed July 14, 1906. Serial No. 326,203.

1. The combination with a pair of coöperating impression members movable relatively to and from a certain fixed position, of a carriage member, and a carrier rotatable on the carriage member, the carriage and carrier being organized to support a series of printing blanks, and to advance the blanks successively to said printing position by the rotation of the carrier.

2. The combination with a pair of coöperating impression members movable relatively to and from a certain fixed position, of a carriage member, a carrier rotatable on the carriage member, the carriage and carrier being organized to support a series of printing blanks and to advance the blanks successively to said printing position by the rotation of the carrier, and a hopper arranged at the upper portion of the carriage and arranged to feed the blanks to be advanced, the carriage being provided with an exit portion at which the blanks are delivered after passing the impression position.



3. The combination with a pair of coöperating impression members movable relatively to and from a certain fixed position, of a carriage member, and a carrier rotatable on the carriage member, the carriage and carrier being organized to support a series of printing blanks and to advance the blanks successively to said printing position by the rotation of the carrier, the carriage being supported for bodily movement in the path of the axis of the rotary member.

4. The combination with a pair of coöperating impression members movable relatively to and from a certain fixed position, of a carriage member, a carrier rotatable on the carriage member, the carriage and carrier being organized to support a series of printing blanks and to advance the blanks successively to said printing position by the rotation of the carrier, the carriage being supported for bodily movement in the path of the axis of the rotary member, and means for intermittently moving the carriage.

5. The combination with a pair of coöperating impression members movable relatively to and from a certain fixed position, of a carriage member, a carrier rotatable on the carriage member, the carriage and carrier being organized to support a series of printing blanks and to advance the blanks successively to said printing position by the rotation of the carrier, the carriage being supported for bodily movement in the path of the axis of the rotary member, and means for moving the carriage at each operation of the impression device to present a fresh place on the plate to be impressed.

[Claims 6 to 16 not printed in the Gazette.]

883,400. DIE-CARRIER. RICHARD GRIESER, New York, N. Y., assignor to Pollard-Ailling Manufacturing Company, New York, N. Y., a Corporation of New York. Filed Jan. 11, 1907. Serial No. 351,795.



1. In a type wheel, a holder containing a series of sockets, type-bars slidable in the sockets, a second series of sockets in the holder, a series of spring members having one end arranged to engage each type-bar, the other end portions of the springs being bent from one side and provided with a ledge at the opposite side of such end, whereby upon insertion of this end of the spring in the second socket the bent portion of the spring will cause the ledge to engage the end portion of the second socket and removably retain the type-bar in such socket.

2. In a type wheel, a holder having a series of sockets with slots at one side of the holder at the intermediate portion of the socket, type-bars slidable in the sockets and each provided with a recess opposite said slotted portion, the holder being provided with a second series of sockets, and a plurality of spring members each being bent from one side near one end portion and having a lug projecting from the opposite side at said end, the springs being removably retained in the second set of sockets by said end portions, the other ends of the springs projecting through said slots and yieldably retained in engagement with the type-bars at their recessed portions.

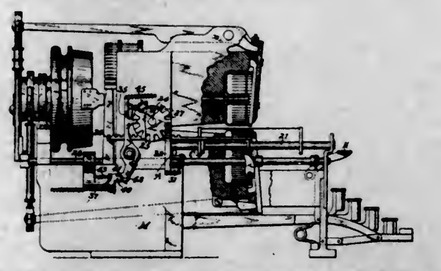
3. In a type wheel, a holder having a series of sockets and having slots at one side of the holder, type-bars slidable in the sockets and each provided with a recess opposite said slotted portion, the holder having a flange portion provided with a series of sockets, a plurality of springs, each spring being bent from one side at one end portion and having a ledge on the opposite side at such end, the springs being removably retained in the flange sockets by such end portions, the springs being bowed and having their other ends projecting through said slots into the recessed portions of the type-bars, whereby the type-bars are yieldably retained in normal position and have their travel limited by the movement of the springs through such slots.

4. In a type wheel, a holder provided with a series of radially arranged sockets, a type-bar slidable in each socket and provided with a recess on one side, the holder having a slot at the intermediate portion of each socket adjacent the recess of the type-bar, and a series of spring members each attached to the holder at one end and having the other end projecting through one of said slots respectively and engaging the recess in the type-bar, whereby a limited movement of the type-bar is permitted that is returned to normal position by the spring, the spring being retained in engagement with the type-bar by its resilient structure.

5. In a type wheel, a holder provided with a series of radially arranged sockets, a type-bar slidable in each socket and provided with a recess on one side, the holder having a slot at the intermediate portion of each socket adjacent the recess of the type-bar, and a series of spring members each attached to the holder at one end and having the other end projecting through one of said slots respectively and engaging the recess in the type-bar, whereby a limited movement of the type-bar is permitted that is returned to normal position by the spring, the holder being provided with a second set of openings, said spring having its other end removably retained in said openings.

[Claims 6 to 11 not printed in the Gazette.]

883,401. CARRIAGE-OPERATING MECHANISM FOR RELIEFOGRAPHS. RICHARD GRIESER, New York, N. Y., assignor to Pollard-Ailling Manufacturing Company, New York, N. Y., a Corporation of New York. Filed Jan. 29, 1907. Serial No. 354,706.



1. The combination with a carriage supported to be shifted, of a rotary member arranged to advance the car-

riage, a rock shaft, means connected with the rock shaft arranged to be advanced by the rock shaft to turn the rotary member, a stop member arranged to engage and lock the rotary member, means for yieldably retaining the stop member in engagement with the rotary member, and means connected with the rock shaft arranged to move the stop member out of engagement with the rotary member upon the initial advance movement of said means to turn the rotary member, said means being also arranged to release the stop member to permit it to return to locking position and to retain the rotary member locked until the next advance movement of said means.

2. The combination with a carriage supported to be shifted, of a ratchet wheel arranged to advance the carriage, a rock shaft, a drive pawl connected with the rock shaft and arranged to be advanced upon oscillation of the rock shaft to turn the ratchet wheel, a stop pawl normally engaging the ratchet wheel to lock it against movement, means for yieldably retaining the stop pawl engaging the ratchet wheel, and means connecting the stop pawl with the rock shaft and arranged to move the stop pawl out of engagement with the ratchet wheel upon the initial movement of the drive pawl to turn the ratchet wheel, such means being also arranged to permit the stop pawl to return to normal position to lock the ratchet wheel at the limit of the actuating movement of the drive pawl and to retain the ratchet wheel locked during the entire return movement of the drive pawl.

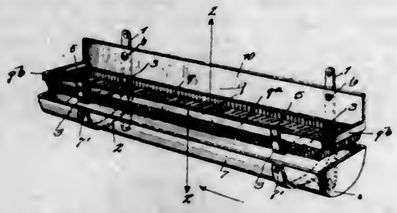
3. The combination of a shiftable carriage, a ratchet wheel, means for advancing the carriage from the ratchet wheel, a rock shaft, means on the rock shaft arranged to engage the ratchet wheel to advance it upon the swinging of the rock shaft, a stop pawl arranged to engage the ratchet wheel, a spring normally holding the pawl in engagement with the ratchet wheel, a carrier fast on said rock shaft, a dog pivoted on the carrier and arranged to engage the stop pawl, said dog and stop pawl being organized whereby upon the initial movement the pawl will be rocked out of engaging position with the ratchet wheel, and thereupon the dog will release the stop pawl permitting it to be returned by its spring to engage the ratchet wheel upon the end of the advance movement of the actuating means.

4. The combination of a shiftable carriage, a ratchet wheel, means for advancing the carriage from the ratchet wheel, a rock shaft, an arm fixed on the shaft, a drive pawl pivoted on said arm and arranged to engage the ratchet wheel to advance it upon the swinging of the rock shaft, a spring tending to hold the pawl in engagement with the ratchet wheel, a stop pawl arranged to engage the ratchet wheel, a spring normally holding the stop pawl in engagement with the ratchet wheel, a carrier fast on said rock shaft, a dog pivoted on the carrier and arranged to engage the stop pawl, said dog and stop pawl being organized whereby upon the initial movement of the drive pawl the stop pawl will be rocked out of engaging position with the ratchet wheel, and thereupon the dog will release the stop pawl permitting it to be returned by its spring to engage the ratchet wheel at the end of the advance movement of the drive pawl.

5. The combination of a shiftable carriage, a ratchet wheel, means for advancing the carriage from the ratchet wheel, a rock shaft, an arm fixed on the shaft, a drive pawl pivoted on said arm and arranged to engage the ratchet wheel to advance it upon the swinging of the rock shaft, a spring tending to hold the pawl in engagement with the ratchet wheel, a stop pawl arranged to engage the ratchet wheel, a spring normally holding the stop pawl in engagement with the ratchet wheel, a carrier fast on said rock shaft, a dog pivoted on the carrier and arranged to engage the stop pawl, a stop on the carrier, a spring holding the dog normally against the stop, said dog and stop pawl being organized whereby upon the initial movement of the drive, the stop pawl will be rocked out of engagement with the ratchet wheel, and upon further advance of the drive pawl the dog will swing and release the stop pawl permitting it to be returned by its spring to engage the ratchet wheel upon the end of the advance movement of the drive pawl.

[Claims 6 to 14 not printed in the Gazette.]

883,402. TRAY ATTACHMENT FOR BLACKBOARDS. JOHN W. HAINLINE, Great Bend, Kans. Filed May 27, 1907. Serial No. 376,034.



1. A device of the class described, comprising superposed trays one of perforate and the other of imperforate material disposed to have a wide open space therebetween.

2. A device of the class described comprising vertical base strips brackets supported on said strips, an imperforate receptacle on the lower of said brackets, and a reticulate receptacle on the upper of said brackets, said receptacles having a wide open space therebetween.

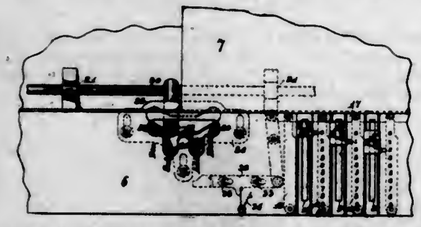
3. A device of the class described, comprising supporting base members, superposed brackets on each of said base members, retaining hooks or fingers on the upper of said brackets, an imperforate sheet metal receptacle on said lower brackets, and a reticulate receptacle on said upper brackets.

4. A device of the class described, comprising supporting base members, approximately U-shaped brackets supported on said base members one above the other, with a wide open space between said brackets, retaining hooks on the outer ends of the upper brackets, a receptacle of imperforate material mounted on said lower brackets and secured thereto, and an oblong open frame having a reticulate bottom portion mounted on said upper brackets and secured by said hooks of the upper brackets, and a wide back plate carried by said open frame and secured to said base members, and seating on the inner ends of the upper brackets.

5. A tray attachment for blackboards consisting of a trap of foraminous material having a frame formed of a front member and end members each of strip-like form, a wide back plate to abut the blackboard and protect the latter, said end members being connected to the lower portions of the back plate, means to secure the back plate to the blackboard, and a receptacle of imperforate material secured to the blackboard below said tray so as to leave a wide open space between the two, said receptacle being removable independent of the tray from the blackboard.

[Claim 6 not printed in the Gazette.]

883,403. CALCULATING-MACHINE. WILLIAM F. HAUSSTEIN, Lyndhurst, N. J., assignor to The Keuffel & Esser Company, Hoboken, N. J., a Corporation of New Jersey. Filed Nov. 9, 1904. Serial No. 232,002.



1. In a machine of the character described, numeral wheels, mechanism for operating them; means for setting up numbers, a motor, a shaft actuated thereby, means for connecting said shaft with the mechanism for operating the numeral wheels, and means for preventing such connection brought into operative position by setting up zero.

2. In a machine of the character described, numeral wheels, mechanism for operating them; means for setting up numbers, a motor, a shaft actuated thereby, means for connecting said shaft with the mechanism for operating the numeral wheels, and automatic means for preventing such connection normally held in operative position while the setting means is at zero.

3. In a machine of the character described, numeral wheels, mechanism for operating them; means for setting up numbers, a motor, a shaft actuated thereby, means for connecting said shaft with the mechanism for operating the numeral wheels, and means for preventing the operation of such connection normally held in operative position when the setting means is at zero and rendered inoperative by setting up a number greater than zero.

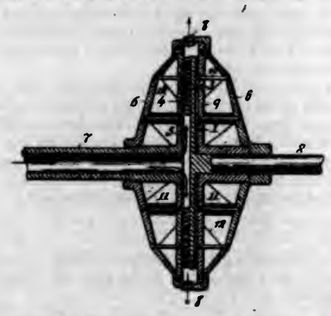
4. In a machine of the character described, numeral wheels, mechanism for operating them; means for setting up numbers, a motor, a shaft actuated thereby, means for connecting said shaft with the mechanism for operating the numeral wheels, and automatic means for preventing the operation of such connection normally held in operative position when the setting means is at zero and rendered inoperative by setting up a number greater than zero.

5. In a machine of the character described, numeral wheels, mechanism for operating them; means for setting up numbers, a motor, a shaft actuated thereby, means for connecting said shaft with the mechanism for operating the numeral wheels, and spring-actuated means for preventing the operation of such connection normally held in operative position when the setting means is at zero and rendered inoperative by setting up a number greater than zero.

[Claims 6 to 20 not printed in the Gazette.]

883,404. STEAM-TURBINE. PER J. HEDLUND, Stockholm, Sweden. Filed Dec. 21, 1907. Serial No. 407,591.

1. In an elastic fluid turbine, a turbine disk, and a casing for said turbine disk formed in two parts each part comprising a disk and a shell connected thereto.



2. In an elastic fluid turbine, a turbine disk and a casing formed in two parts each part comprising a disk, a shell connected to said disk and internal stay plates connected to said shell and disk.

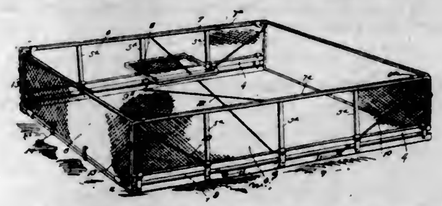
3. In an elastic fluid turbine, two shafts disposed end to end, a turbine disk carried by one of said shafts, and a casing carried by the other shaft; the said casing being formed in two parts, each comprising a shell and a disk connected thereto, the said disks receiving the turbine disk between them.

4. In an elastic fluid turbine, a turbine disk, a casing completely inclosing said disk, bucket rings on a face of said disk and on the opposing face of said casing, a hollow shaft carrying said casing and a shaft carrying said turbine disk and journaled in said casing; the said shafts being placed end to end.

5. In an elastic fluid turbine, an inclosing casing formed in two parts, each part comprising a disk and a shell connected thereto, a shaft supporting said casing, a turbine disk interposed between said casing disks and a shaft carrying said turbine disk; the said turbine disk and one of the casing disks having concentric alternately disposed rings of buckets on their opposing faces.

[Claim 6 not printed in the Gazette.]

883,405. FOLDING COOP. GEORGE E. JACKSON, Newark, Ill. Filed Mar. 23, 1907. Serial No. 364,074.



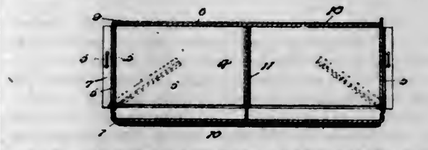
1. A coop, comprising a bottom, hinged sides and ends, a top, arms slidingly connecting the ends and top, and brace rods adapted to hold said ends in vertical position, said brace rods being carried by said arms.

2. A coop, comprising a bottom, hinged sides and ends, arms connected to the ends at the corners thereof and provided with angularly disposed extremities having a sliding connection with the top, brace rods carried by said arms and arranged for detachable engagement with the bottom.

3. A coop, comprising a bottom, sides and ends hinged to the bottom and adapted to fold inwardly thereon, arms connected to the ends, a top with which said arms have a sliding engagement, and brace rods carried by said arms, the bottom being formed at its side edges with studs on the outside of the coop and over which the ends of said brace rods are adapted to be placed, said sides extending upwardly on the outer sides of said rods whereby to hold them on said studs.

4. A coop, consisting of a bottom, sides and ends hinged to the bottom and adapted to fold down upon the same, spring latches adapted to lock the sides and ends together in vertical position, arms secured to the corners of the ends, a top with which said arms have a sliding connection, the top being adapted to lower upon the ends when the latter are folded inwardly, and brace rods connecting the corners of the ends with the bottom and adapted to hold said ends in vertical position.

883,406. FOLDING EGG CRATE OR CASE. GEORGE E. JACKSON, Newark, Ill. Filed Mar. 23, 1907. Serial No. 364,075.

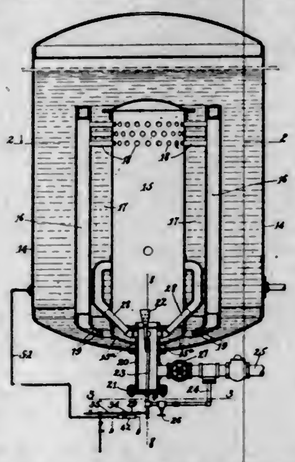


1. A case of the character described, consisting of a bottom portion provided with longitudinal and transverse reinforcing straps and formed with up-turned side edges, the sides hinged at one edge to the edges of the bottom, one in a higher plane than the other and adapted to fold down one upon the other, ends hinged to the ends of the bottom and adapted to fold down thereupon underneath the said sides, the said sides being provided with returned end edges thereby to form channels, the channels of the same side facing each other, the ends being provided with angle strips at their side edges, one member of said angle strip being adapted to enter the said channels when the ends are swung outwardly, spring latches secured to the sides and adapted to extend across the channels into locking engagement with said angle strips, the outer edges of said sides being formed with inturned flanges, and a lid adapted to slide underneath said flanges and provided at one edge with a spring latch adapted to spring down over the upper edge of the ends.

2. A case of the character described, consisting of a bottom, sides hinged to said bottom, one in a higher plane than the other and adapted to fold down upon said bottom, the end edges of said sides being provided with inwardly facing channels, ends hinged to the bottom and provided

at their side edges with angle strips adapted to slip into the channels when the ends are swung outwardly, spring latches adapted to lock the said angle strips to the sides and a lid for said case.

883,407. STEAM-GENERATOR. GEORGE W. JESSUP, Jr., Waltham, Mass. Filed Apr. 29, 1905. Serial No. 257,985.



1. In a steam generator, a boiler, a combustion chamber therein, provided with openings in its lower portion to afford communication between said chamber and boiler, a burner within the combustion chamber and located above said openings, a fuel supply pipe leading to the burner and an air pipe communicating with the combustion chamber away from the burner.

2. In a steam generator, a boiler, a combustion chamber within the boiler, a second chamber within the boiler and communicating with the upper portion of the combustion chamber said chamber having its lower portion provided with openings communicating with the boiler, a burner within the combustion chamber, and a fuel supply pipe leading to the burner.

3. In a steam generator, a boiler, a combustion chamber within the boiler and having its lower portion opening into the boiler, a second chamber within the boiler and communicating with the upper portion of the combustion chamber said chamber having its lower portion provided with openings communicating with the boiler, a burner within the combustion chamber, and a fuel supply pipe leading to the burner.

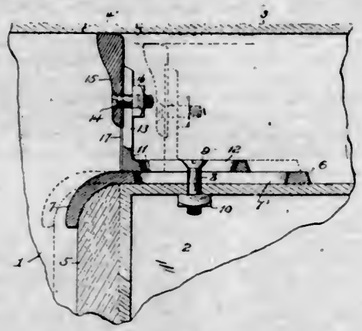
4. In a steam generator, a boiler, a combustion chamber therein, a second chamber within the boiler and surrounding the combustion chamber, said second chamber having its upper portion communicating with the upper portion of the combustion chamber and its lower portion communicating with the boiler, a burner within the combustion chamber, and a fuel supply pipe leading to the burner.

5. In a steam generator, a boiler, a combustion chamber provided with openings in its lower portion to afford communication between said chamber and boiler therein and communicating therewith, a burner within the combustion chamber and located above said openings, a fuel supply pipe leading to the burner, and means under the control of the boiler pressure for automatically regulating the supply of fuel to the burner.

[Claims 6 to 10 not printed in the Gazette.]

883,408. FIRE-BRICK CLAMP AND STOVE-TOP BRACE. FRANK JONES, Scranton, Pa. Filed Mar. 22, 1907. Serial No. 363,824.

1. In a device of the character described, the combination of a bar constructed to clamp a fire brick in place, a stove top supporting plate mounted upon said bar, and means for effecting an adjustment of said part longitudinally of said bar.



2. In a device of the character described, the combination of a bar constructed to clamp a fire brick in place, a top supporting post mounted upon said bar, means for effecting vertical adjustment of said post, and means for effecting adjustment of said post on the bar longitudinally of the latter.

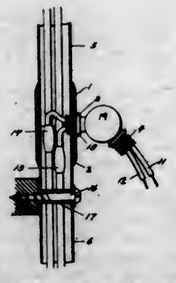
3. In a device of the character described, the combination of a bar constructed to clamp a fire brick in place, a stove top supporting post provided at its lower end with a horizontal portion resting upon said bar, and means adjustably securing the horizontal portion of the post to said bar.

4. In a device of the character described, the combination of a bar constructed to clamp a fire brick in place, a stove top supporting post comprising two members, one adjustable vertically relatively to the other, the lower member of said post having a horizontal portion resting upon said bar, and means securing said horizontal portion of the post to said bar and permitting adjustment of the same longitudinally of the bar.

5. In a device of the character described, the combination of a bar having a lip at one end to engage a fire brick, means permitting longitudinal adjustment of said bar on the oven top of a stove, a stove-top supporting post mounted upon said bar, and means permitting adjustment of said post upon the bar longitudinally of the latter.

[Claims 6 to 12 not printed in the Gazette.]

883,409. SECTIONAL OUTLET-CONDUIT. JOHN L. KAUGER, New York, N. Y. Filed Mar. 27, 1906. Serial No. 308,205.



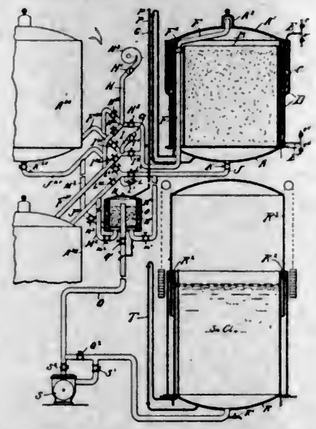
1. In a sectional outlet conduit in combination, a sleeve having a plain internal surface, an outlet member provided with a shank threaded into and through the wall of the sleeve, conduit tubes one entering one end of the sleeve and another entering the other end and adapted to be slid longitudinally into place, conductors in the tubes and passing through the member.

2. In a sectional outlet conduit in combination, a sleeve having an outlet member in its wall and protruding within the sleeve to act as a stop, tubes entering said sleeve from opposite ends and limited by said stop in their position, said tubes adapted to be slid longitudinally into place.

3. In a sectional outlet conduit in combination, a sleeve having an outlet member in its wall and protruding within the sleeve to act as a stop, tubes entering said sleeve from opposite ends and limited by said stop in their position, said tubes being cut away to embrace the stop at at least one point with their ends substantially abutting.

4. In a sectional outlet conduit in combination, a sleeve having an outlet member threaded therein, tubes within the sleeve and longitudinally insertible therein, stop means for preventing the closure of the outlet member by said tubes, said stop means comprising a protruding end of the outlet member and said tubes having cut away portions adapted to surround said protruding end when the ends of the tubes are substantially abutting.

883,410. APPARATUS FOR DETINNING TIN-SCRAP. MEREDITH LEITCH, Elizabeth, N. J., assignor to Metal Process Company, a Corporation of New York. Filed Nov. 30, 1906. Serial No. 345,815.



1. In an apparatus for detinning tin scrap, the combination of a detinning chamber, a holder for stannic chlorid, means for supplying an anhydrous chlorin gas to the detinning chamber, and means for transferring the stannic chlorid to the detinning chamber and withdrawing it from the detinning chamber to the holder so as to expel and draw in gases into said detinning chamber, and valves for controlling the course and source of said gases.

2. In an apparatus for detinning tin scrap, the combination of a detinning chamber, a holder for stannic chlorid, means for supplying an anhydrous chlorin gas to the detinning chamber, and means for transferring the stannic chlorid to the detinning chamber and withdrawing it from the detinning chamber to the holder so as to expel from and draw in to said detinning chamber gases, and valves for controlling the course and source of said gases and the time when the gases shall be admitted.

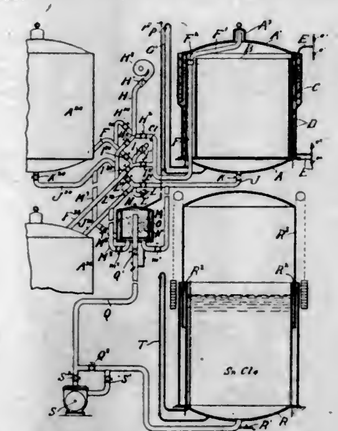
3. In an apparatus for detinning tin scrap, the combination of a detinning chamber, a holder for stannic chlorid, means for supplying an anhydrous chlorin gas to the detinning chamber, and means for transferring the stannic chorid to the detinning chamber and withdrawing it from the detinning chamber to the holder, and means for causing a vacuum to be formed upon the withdrawal of said stannic chlorid.

4. In a detinning chamber, the combination of a wall having a recess therein, a removable cover having a depending flange adapted to fit within said recess, a seal in said recess consisting of an inert material which changes into liquid form upon a rise of temperature, and means within said recess for varying the temperature of said seal.

5. In a detinning apparatus, the combination of a detinning chamber, sources of heating and cooling mediums, and means for circulating said heating and cooling mediums about said chamber at different times, and means for supplying chlorin gas to said chamber.

[Claims 6 to 12 not printed in the Gazette.]

883,411. METHOD OF DETINNING TIN-SCRAP. MEREDITH LEITCH, Elizabeth, N. J., assignor to Metal Process Company, a Corporation of New York. Original application filed Nov. 30, 1906, Serial No. 345,815. Divided and this application filed May 17, 1907, Serial No. 374,131. Renewed Jan. 10, 1908. Serial No. 410,199.



1. The process of detinning tin scrap which consists in surrounding the scrap alternately with dry chlorin gas and with anhydrous stannic chlorid.

2. The process of detinning tin scrap which consists in surrounding the scrap with anhydrous stannic chlorid while in a closed chamber and thereby expelling the gases from said chamber and then withdrawing said stannic chlorid and surrounding said scrap with anhydrous chlorin gas.

3. The process of detinning tin scrap, which consists in surrounding the tin scrap with anhydrous chlorin gas in a closed chamber and expelling said gas by surrounding said scrap with anhydrous stannic chlorid.

4. The process of detinning tin scrap, which consists in surrounding the tin scrap with anhydrous chlorin gas in a closed chamber and expelling said gas by surrounding said scrap with anhydrous stannic chlorid and then creating a vacuum within the chamber containing said scrap.

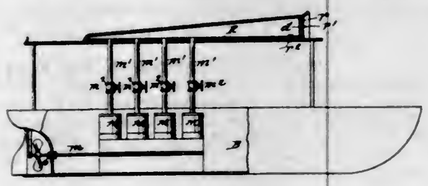
5. The process of detinning tin scrap, which consists in surrounding the tin scrap with anhydrous chlorin gas in a closed chamber and expelling said gas by surrounding said scrap with anhydrous stannic chlorid, then creating a vacuum within the chamber containing said scrap and then cooling said chamber so as to condense any vapors therein.

[Claims 6 to 14 not printed in the Gazette.]

883,412. HYDROCARBON-MOTOR. ABBOT A. LOW, Horseshoe, N. Y. Filed Nov. 5, 1906. Serial No. 342,002.

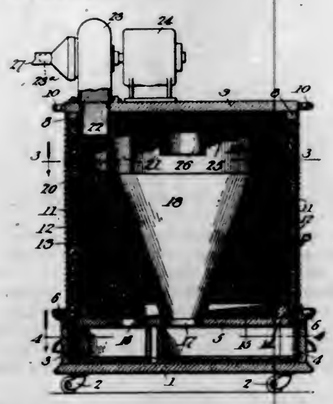
1. In a motor boat, the combination with a hydrocarbon motor, of an over head awning or roof consisting of a compartment formed with a forward air receiving aperture, an inwardly swinging flap door arranged in conjunction with said aperture, a draining gutter within the compartment and under said flap door, and a conduit connecting the compartment with the combustion chamber of the motor, for the purpose described.

2. In a motor boat the combination with a plurality of hydro-carbon motors, of an over head awning or roof consisting of a compartment formed with a forward air receiving aperture, an inwardly swinging flap door arranged



in conjunction with said aperture, a draining gutter within the compartment and under said flap door, and conduits connecting the compartment with the combustion chambers of the motors, for the purpose described.

883,413. PNEUMATIC DUST-COLLECTOR. WILLIAM F. MAHONY, Washington, D. C. Filed July 20, 1907. Serial No. 384,705.



1. In a pneumatic dust collecting apparatus, a cylindrical casing, having porous walls, means for delivering dust laden air thereto, and a hopper-shaped bottom for said casing, having its discharge opening disposed eccentrically of said casing, whereby, by tilting said casing, the collected dust may be caused to gravitate toward said opening.

2. In a pneumatic dust collecting apparatus, a cylindrical casing having walls through which air may seep, means for delivering dust laden air thereto, a hopper-shaped bottom for said casing having a discharge opening eccentrically formed therein, and a removable dust box located beneath said opening.

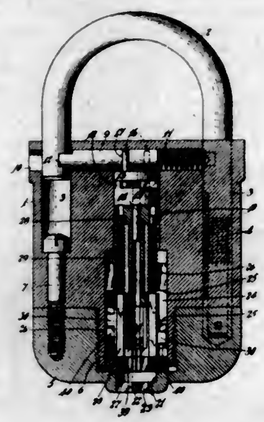
3. In a pneumatic dust collecting apparatus, a casing having porous walls, a chamber having impervious walls mounted wholly within said casing and provided with a discharge opening communicating therewith, and a conduit for delivering dust laden air directly into said chamber.

4. In a pneumatic dust collecting apparatus, a casing having porous walls, a chamber mounted wholly within said casing and communicating therewith at its upper end, means for delivering dust laden air into said chamber, and a discharge mouth formed at the lower end of said chamber.

5. In a pneumatic dust collecting apparatus, a casing having porous walls, a bottom therefor having a discharge opening formed therein, a chamber having impervious walls mounted within said casing and communicating therewith at its upper end, and a discharge mouth formed at the lower end of said chamber and projecting through the bottom of said casing.

[Claims 6 to 12 not printed in the Gazette.]

883,414. PADLOCK. FRANK M. MERRILL, Los Angeles, Cal. Filed May 13, 1907. Serial No. 373,512.



1. A lock comprising a case having a chamber with two slotted ward flanges, a barrel rotatable in said chamber, a plurality of tumbler slides longitudinally movable in said barrel and having fins to enter the ward slots, the fins being of a length nearly equal to the distance between the ward flanges and being in different longitudinal positions on the different tumblers, and a guard member closing the end of the case and having slots, the wards having slots which are slightly wider than said slots in the guard, for the purpose set forth.

2. A lock comprising a case having a chamber with two slotted ward flanges, a barrel rotatable in said chamber, a plurality of tumbler slides longitudinally movable in said barrel and having fins to enter the ward slots, the fins being of a length nearly equal to the distance between the ward flanges and being in different longitudinal positions on the different tumblers, and a guard member closing the end of the case and having slots, one of said slots being longer than the others.

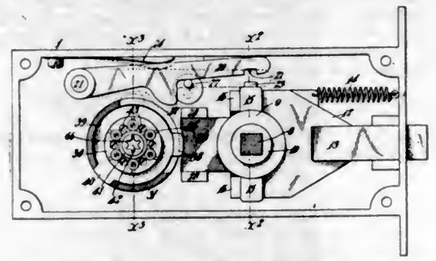
3. A lock comprising a case having a chamber with two slotted ward flanges, a barrel rotatable in said chamber, and a plurality of tumbler slides longitudinally movable in said barrel and having fins to enter the ward slots, the fins being of a length nearly equal to the distance between the ward flanges, and being in different longitudinal positions on the different tumblers, said fins being chamfered near each end.

4. A lock comprising a case having a chamber with two slotted ward flanges, a barrel rotatable in said chamber, a plurality of tumbler slides longitudinally movable in said barrel, and having fins to enter the ward slots, said fins being chamfered near each end, the longitudinal length of the chamfered portions being different in the different tumbler slides.

5. In a lock, the combination of the bolt, a spring for moving the bolt to unlocking position, dogs for holding the bolt in locked position, a rotatable barrel provided with key controlled means, a plate having projections engaging the dog and the barrel, said plate being adapted to turn freely with respect to both the dog and the barrel through a limited angle, and means for preventing withdrawal of the key except when the barrel is in locking position.

[Claims 6 to 8 not printed in the Gazette.]

883,415. DOOR-LOCK. FRANK M. MERRILL, Los Angeles, Cal. Filed June 4, 1907. Serial No. 377,248.

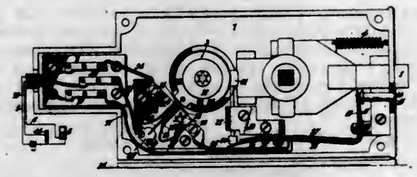


1. The combination with a lock case, of a barrel rotatably mounted therein, a lock bolt controlled by the rotative movement of said barrel, a ward ring in the case provided with means for preventing rotation thereof, said ward ring having notches, slides movable longitudinally in the barrel and extending into said notches, said barrel having a longitudinal bore with slots radiating therefrom and receiving the slides, each slide having notches on opposite sides of the ward ring, the distance of the notches from the ward ring being different in different slides.

2. The combination with a lock case, of a barrel rotatably mounted therein, a lock bolt controlled by the rotative movement of said barrel, a ward ring in the case provided with means for preventing rotation thereof, said ward ring having notches, slides movable longitudinally in the barrel and extending into said notches, said barrel having a longitudinal bore with slots radiating therefrom and receiving the slides, each slide having notches on opposite sides of the ward ring, the distance of the notches from the ward ring being different in different slides, and spring means for each slide for returning the same to normal position on displacement thereof in either longitudinal direction.

3. The combination with a lock case, of a barrel rotatably mounted therein, a lock bolt controlled by the rotative movement of said barrel, a ward ring in the case provided with means for preventing rotation thereof, said ward ring having notches, slides movable longitudinally in the barrel and extending into said notches, said barrel having a longitudinal bore with slots radiating therefrom and receiving the slides, each slide having notches on opposite sides of the ward ring, the distance of the notches from the ward being different in different slides, and spring means for each slide for returning the same to normal position on displacement thereof in either longitudinal direction and the said slides having depressions on each side acting as blind notches to guard the ward releasing notches.

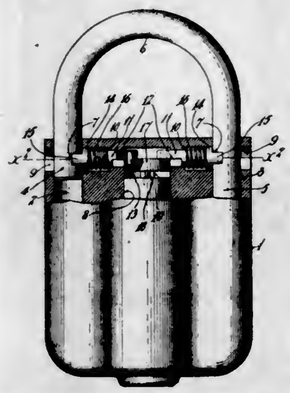
883,416. ELECTRIC ALARM FOR LOCKS. FRANK M. MERRILL, Los Angeles, Cal. Filed June 11, 1907. Serial No. 378,443.



1. The combination with a door lock having key-operated controlling means, an electric burglar alarm comprising an alarm circuit, a circuit controller connected thereto and responsive to the opening of the door, and means for disabling said circuit controller responsive to the movement of the key-operated means.

2. The combination with a door lock having a key-operated controlling member and a ward member for normally preventing movement of the controlling member, of an electric alarm circuit and a circuit controller therefor responsive to movement of the ward member, and an annunciator circuit also controlled by said circuit controller.

883,417. PADLOCK. FRANK M. MERRILL, Los Angeles, Cal. Filed Aug. 22, 1907. Serial No. 389,744.



1. A padlock comprising a case having two shackle sockets, a shackle with its legs received in said sockets, each of the shackle legs having a locking notch, a pair of sliding bolts in line with each other and provided with lugs adapted to engage in the respective notches in the shackle legs, a cam disk provided with cam slots, and means on the sliding bolts engaging in the cam slots.

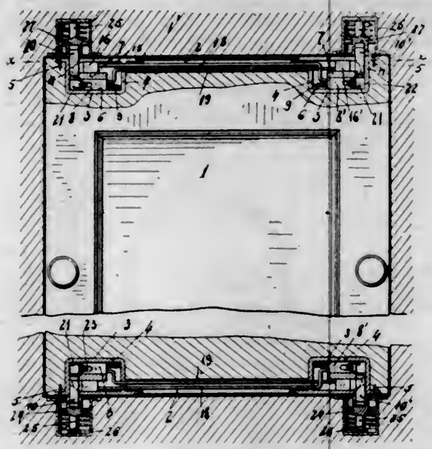
2. A padlock comprising a case having two shackle sockets, a shackle with its legs received in said sockets, each of the shackle legs having a locking notch, a pair of sliding bolts in line with each other and provided with lugs adapted to engage in the respective notches in the shackle legs, the case having transverse sockets in alinement with each other and intersecting with the shackle sockets, each transverse socket being formed with a shoulder, one of said sliding bolts in each transverse socket, and having a flange, a coiled spring in each transverse socket between the flange of the sliding bolt and the shoulder of the socket, and a cam disk having two cam slots and studs on the sliding bolts engaging in said slots.

3. A padlock comprising a case having two shackle sockets, a shackle with its legs received in said sockets, each leg having a locking notch, the case having transverse sockets in alinement with each other and intersecting with the shackle sockets, a sliding bolt in each transverse socket and formed with a flattened end and with a lug on the other end adapted to engage a notch in the shackle leg, a cam disk under the flattened ends of the sliding bolts and having two cam slots, a stud on each bolt projecting into a cam slot, the cam disk having a stem and adapted to be operated by key mechanism.

883,418. SWINGING DOOR. KARL METZKER, New York, N. Y. Filed Aug. 14, 1907. Serial No. 388,509.

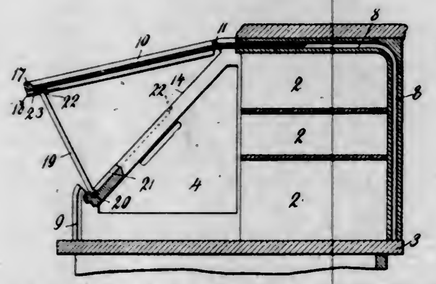
In combination with the frame, of a door, automatically operating blades projecting outward from the upper and lower ends of the door, one at each side thereof, pivots rotatively borne in said frame opposite the said blades and projecting outward therefrom, said pivots having cam shaped notches to receive said blades and to hold the same so as to be capable of turning with the said pivots, means to normally hold the blades in engagement with said pivots and means operating the said blades by the

swinging movement of the door so as to lock the same at one side of the door and to permit those on the other side



to disengage the pivot, substantially as and for the purpose specified.

883,419. DESK. JENNINGS S. MCCOMB, Dobbs Ferry, N. Y. Filed June 14, 1907. Serial No. 379,002.



1. A roll-top desk having the ordinary flexible cover and curved guides, side pieces each formed of a plurality of parts, one of which is adapted to move relatively to the other to support the flexible cover of the desk in an elevated position, and means for holding the movable part of the side piece in such elevated position.

2. A roll-top desk having the ordinary flexible cover and curved guides, side pieces each having a groove to cooperate with the ends of the flexible cover, said side pieces each being formed in two parts, one part being movable relatively to the other, and a leg to support the movable part in its elevated position.

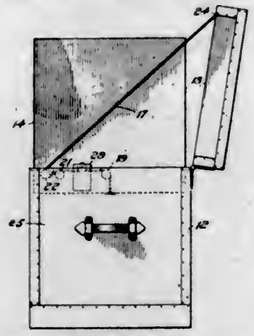
3. A roll-top desk having the ordinary flexible cover and curved guides, side pieces each formed in two parts and pivotally connected together, one portion of each side piece having a rabbeted seat for the reception of a pivoted leg to be concealed therein, a leg pivoted to said side piece and mounted within said seat and adapted to support the movable part of the side piece in elevated position.

4. A roll-top desk having the ordinary flexible cover and curved guides, side pieces each formed in two parts and pivotally connected together, one portion of each side piece having a rabbeted seat for the reception of a pivoted leg to be concealed therein, a leg pivoted to said side piece and mounted within said seat and adapted to support the movable part of the side piece in elevated position, and means to lock the parts of the two side pieces together.

5. A roll-top desk having a flexible cover, side-pieces each having a guiding groove having a substantially straight portion to coöperate with the ends of the flexible cover in closing the desk, each of said side pieces having a movably mounted part comprising the straight portion of said guiding groove, and a leg to support the movable part in elevated position.

[Claim 6 not printed in the Gazette.]

883,420. TRUNK. THOMAS J. MCKAY, Atlanta, Ga. Filed Oct. 7, 1907. Serial No. 396,322.



1. In a trunk, the combination with an exterior body portion provided with a lid or cover, of an inner receptacle fitted within said body portion for vertical movement therein, a flexible connector fixed at one end to said receptacle and at the other to said lid or cover, said connector being of a sufficient length to provide a certain amount of slack when said lid is closed, and means for taking up said slack.

2. In a trunk, the combination with an exterior body portion provided with a lid or cover, of an inner receptacle fitted within said body portion for vertical movement therein, means for connecting said lid and said inner receptacle whereby when said lid is opened said receptacle will be elevated, said means being constructed and arranged to provide lost motion between said connected parts, and means for taking up said lost motion when said lid is closed.

3. In a trunk, the combination with an exterior body portion provided with a lid or cover, of an inner receptacle fitted within said body portion for vertical movement therein, a flexible connector attached at one end to said receptacle and at the other to said lid or cover, and a sliding weight carried by said connector intermediate its ends.

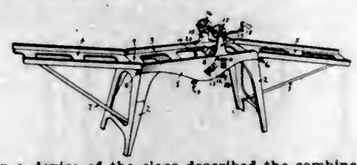
4. In a trunk, the combination with an exterior body portion having vertical grooves in its end walls and provided with a lid or cover, of an inner receptacle provided with lugs adapted to slide in said grooves, flexible connectors attached at one end to said lugs and at the other to said lid or cover, and sliding weights carried by said connectors intermediate their ends.

5. In a trunk, the combination with an exterior body portion having vertical grooves in its end walls and provided with a lid or cover, of an inner receptacle provided with lugs adapted to slide in said grooves, sheaves carried by said body portion, flexible connectors attached at one end to said lugs and at the other to said lid or cover, and sliding weights carried by said connectors intermediate their ends.

[Claims 6 to 10 not printed in the Gazette.]

883,421. AUTOMATIC PRINTING-MACHINE. FRANK H. NELSON and LEWIS BABD, Norma, N. J. Filed Mar. 14, 1907. Serial No. 362,404.

1. In a device of the class described, the combination of a frame having a guide-way for the objects to be printed, a roll disposed under the guide-way and provided with longitudinal and spaced type-receiving grooves, a member rotating with the roll and extending into the guide-way for bringing the objects, one at a time into printing relation with the roll, and means disposed above the roll for feeding the objects past the latter.



2. In a device of the class described the combination of a structure provided with a guide-way for the objects to be printed, a roll having a plurality of rows of type extending longitudinally thereof, a star wheel at one end of the roll mounted to rotate therewith and adapted to engage with the said objects as they are advanced over the roll, and a mechanism operating on the objects and through the star wheel for rotating the roll.

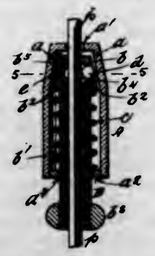
3. In a device of the class described, the combination of a way along which the objects to be printed are rolled, a rotatable member, means thereon for holding type, a device connected with the member and arranged to be engaged successively by the objects for rotating the member by the rolling movement of the objects, and an inking roll arranged in coöperative relation on the said members.

4. In a device of the class described, the combination of a guide way through which the objects to be printed are fed, a roll rotatably mounted under the guide way and provided with a plurality of spaced type-receiving-grooves, a star wheel at one end of the roll and connected therewith and located in the path of the objects moving through the way, and means arranged to coöperate with the said star wheel to feed the objects over the type roll and operate through the star wheel to rotate the roll.

5. In a device of the class described, the combination of a guide way, a transversely extending type-carrying-roll for printing the objects fed along the way, adjustable cushion bearings for the roll, a star wheel connected with the roll and arranged in the path of the objects to receive rotation therefrom, an inking roll arranged adjacent the type-carrying-roll, adjustable cushion bearings for the inking roll, a rotatable shaft disposed above the star wheel and type roll, and feed wheels on the shaft for frictionally engaging the objects to feed them over the type roll.

[Claims 6 and 7 not printed in the Gazette.]

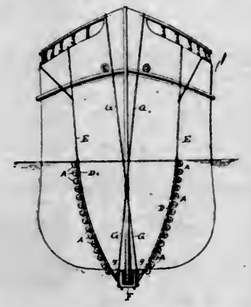
883,422. DEVICE FOR SECURING SCARF-PINS. ISRAEL REINESS, New York, N. Y. Filed July 13, 1907. Serial No. 383,564.



1. As an improved article of manufacture, a stick pin retainer comprising a casing having a conical end, a movable clutch tube disposed axially within said casing and projecting through one end thereof and having a conical head conforming to the conical portion of the casing, said head being formed with diametrically disposed recesses, a rolling gripping device disposed in one of said recesses to engage the pin and the wall of the conical part of the casing, and a flat clutch plate disposed in the other recess for engaging the pin and the wall of the conical part of the casing, and a spring acting on the head of the tube to normally force it into the conical end of the casing.

2. As an improved article of manufacture, a stick pin retainer comprising a casing having a conical end, a movable clutch tube disposed axially within said casing and projecting through one end thereof and having a conical head conforming to the conical portion of the casing, said head being formed with diametrically disposed recesses, a rolling gripping device disposed in one of said recesses to engage the pin and the wall of the conical part of the casing, and a flat clutch plate disposed in the other recess for engaging the pin and the wall of the conical part of the casing, and a spring acting on the head of the tube to normally force it into the conical end of the casing, one of said recesses being vertically disposed and the other horizontally disposed with relation to the tube and extended inwardly beyond the axial center of the tube.

883,423. SHIP-CLEANING APPARATUS. ARTHUR R. ROGERS, Jonesport, Me. Filed Mar. 18, 1907. Serial No. 362,954.



1. In a ship cleaning apparatus, the combination with an adjustable support, of a series of superimposed cone shaped scrapers, each connected at one end with said support, and free at the other end, and each scraper having a spiral flange.

2. The combination with an adjustable support, a series of superimposed scrapers having spiral flanges, and universal joints connecting one end of each scraper with the support, the other ends of said scrapers being free.

3. The combination with a flexible support, of a series of revolving bodies provided with rigid spiral flanges and constituting scrapers free at one end, and universal joints for securing the other ends of said scrapers to the flexible support.

4. The combination with a wire rope, of a conical scraper provided with spiral flanges, a sleeve adjustably mounted on the wire rope, a link pivoted to the sleeve, and a rotary connection between the link and scraper substantially as set forth.

5. The combination with a guiding frame constructed to engage the keel of a vessel, and ropes attached to said frame, of a series of revolving scrapers free at one end and connected at their other ends with the guiding frame, substantially as set forth.

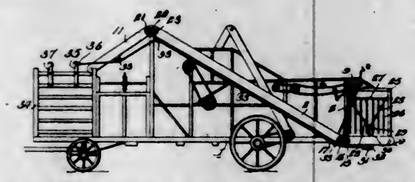
[Claims 6 to 9 not printed in the Gazette.]

883,424. ATTACHMENT FOR HARVESTERS AND SEPARATORS. BENJAMIN F. ROGERS and EDWARD L. RUCKER, Lewiston, Idaho. Filed Dec. 9, 1907. Serial No. 405,756.

1. An attachment of the character described, comprising an endless conveyer, a straw slide at one end of said conveyer, and means whereby said straw slide may be thrown into and out of operation.

2. In a device of the character described, an endless conveyer, a straw slide secured at one side of one end of the conveyer, said straw slide comprising a frame, a piv-

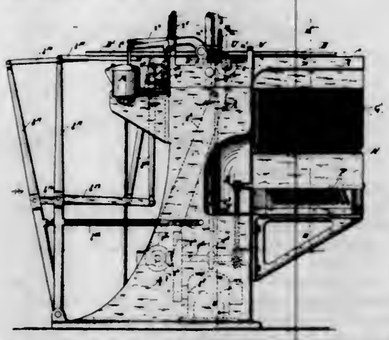
oted gate, a rope connected to said gate and extending to the opposite end of the machine, and means for holding said rope in positions to render the slide operative or inoperative.



3. In an attachment of the character described, an endless conveyer, a straw slide embodying a pivoted gate, a straw rack at the opposite end of the conveyer, hooks on the rack, and a rope connected to the gate and engaged with one of said hooks.

4. In an attachment of the character described, an endless conveyer, a straw slide at one end and side thereof, a straw rack at the opposite end of said conveyer, and means extending from the straw slide to the rack for throwing said slide into and out of operation.

883,425. TYPE CASTING AND COMPOSING MACHINE. JOHN R. ROGERS, Brooklyn, N. Y., assignor to Mergenthaler Linotype Company, a Corporation of New York. Filed Feb. 27, 1906. Serial No. 303,316.



1. In combination, a series of molds acting in rotation, matrices, a single series of finger-keys indicating the various characters, and means whereby the matrices are presented in the order of their selection to the successive molds.

2. In combination, matrices, finger-keys representing the matrix characters, a number of molds acting in rotation, and means controlled by the finger-keys for presenting the matrix characters in the order of selection to the successive molds.

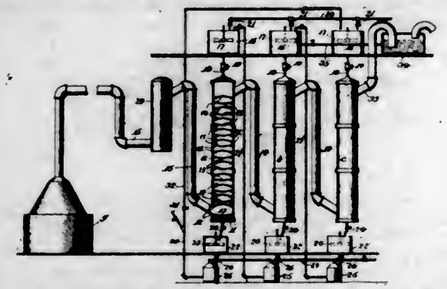
3. A plurality of type molds, a series of matrices to cooperate with each mold, a single series of finger-keys representing the characters, and intermediate means controlled by the keys for presenting the selected matrix characters to the successive molds in the order of selection, whereby the casting of the type in one mold may be carried on during the selection and presentation of a matrix to another mold.

4. The combination of plural type molds adjustable runningwise to vary the width of the type, plural and like series of matrices coöperating with the respective molds and controlling their adjustment, a single series of finger-keys, and means controlled thereby to determine the presentation of matrices to the respective molds.

5. In a machine for casting and composing type, a series of adjustable molds operating in rotation, a series of matrices, and means for selecting the matrices, in the order in which the characters are to appear in print and presenting them in like order to the successive molds.

[Claims 6 to 35 not printed in the Gazette.]

883,426. PROCESS OF MAKING ZINC CHLORID. ROBERT R. RUST, Waukegan, Ill. Filed June 12, 1905. Serial No. 264,812.



1. The method of making zinc chlorid from oxidized zinkiferous material, which consists in admixing the pulverized material in a limited quantity of a suitable liquid carrier and circulating the same by aid of such liquid carrier through a retainer chamber, the charge being there subjected, in course, to hydrochloric acid gas, filling the space in said chamber about the charge, substantially as described.

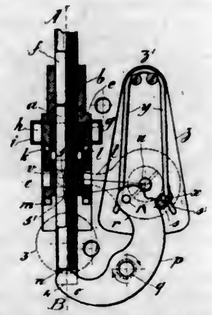
2. The method of making zinc chlorid from oxidized zinkiferous material, which consists in admixing the pulverized material in a limited quantity of a watery carrier sufficient to form a slime, circulating the slime, in divided masses, through a retainer chamber in one direction and there subjecting the charge, in course, to hydrochloric fumes circulating in opposite direction in the free space in said chamber about the divided masses of charge, substantially as described.

3. The method of making zinc chlorid from oxidized zinkiferous material, which consists in admixing the pulverized material with a limited quantity of a watery carrier sufficient to form a sluggish slime, circulating the slime by gravity flow, in divided masses, through a retainer chamber free from liquid submersion, and subjecting the divided masses, in course, to hydrochloric acid gas circulating oppositely in the space about the divided masses of charge, whereby the resultant zinc chlorid becomes more concentrated as the charge advances from stage to stage, substantially as described.

4. The method of making zinc chlorid from oxidized zinkiferous material, which consists in admixing the pulverized material with a limited quantity of a watery carrier sufficient to form a slime, circulating the slime in divided masses through retainer chambers, there subjecting the charge, in course, to hydrochloric acid gas circulating oppositely in the space about the divided mass of charge and making further addition of pulverized zinkiferous material to the charge at intermediate points, substantially as described.

883,427. WINDING AND SETTING MECHANISM FOR WATCHES. HENRI SANDOZ, Tarannes, Switzerland. Filed Oct. 1, 1906. Serial No. 336,962.

1. A winding and setting mechanism of the negative type for watches, comprising a winding stem, a crown stem, means for supporting the crown stem in the watch pendant, a winding pinion on the winding stem, an intermediate hand setting wheel mounted near the winding stem, an axially movable sleeve on the winding stem having gear teeth at one end, clutch teeth at the other end and a circumferential groove, an arm pivoted at one end and arranged to engage with its free end in the groove, a pin on the pivoted end of the arm, a two-armed lever arranged with one end in contact with said pin and the other end in contact with the inner end of the winding stem, a pin on the end of the lever remote from the stem, a single U-shaped spring bearing against said pin on the lever, and against the pin on the pivoted arm aforesaid, and adapted to hold the lever and arm in operative connection and to act through the said arm on the axially movable sleeve to effect its engagement with the winding pinion or the hand setting wheel according to the position of the crown stem.



2. A winding and setting mechanism comprising in combination, a winding stem, a winding gear, a setting gear, an intermediate gear adapted to be shifted into operative relation with either said winding or setting gear, said intermediate gear being operated by said winding stem, a shifting member for said intermediate gear, a movable member operated by said winding stem, and yielding means having two portions engaging said shifting and movable members respectively and being normally under tension to act initially upon movement of said stem to yieldingly shift and hold said intermediate gear into operative relation with either said winding or setting gear, one of said portions having a greater tension than the other.

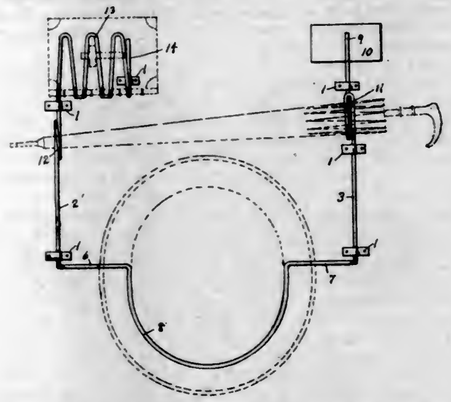
3. A winding and setting mechanism comprising in combination, a winding stem, a winding gear, a setting gear, an intermediate member adapted to be shifted into driving relation with either said winding or said setting gear and driven from said stem, a shifting member for said intermediate gear, a movable member actuated by said stem, and a single spring engaging said shifting and movable members and serving when said stem is operated to yieldingly shift and hold said intermediate member in driving relation with either said winding or said setting gear, said spring being tensioned to exert a greater pressure on the movable member than on the shifting member whereby said intermediate gear is normally held in driving relation with said winding gear.

4. A winding and setting mechanism comprising in combination, a winding stem, a winding gear, a setting gear, an intermediate gear adapted to be shifted into driving relation with said winding or setting gears and driven by said winding stem, a shifting member for said intermediate gear, a movable member actuated by said stem, and a spring engaging said shifting and movable members and acting initially when said stem is operated to yieldingly shift and hold said intermediate gear in driving relation with either said winding or said setting gear, said spring being tensioned to exert an unequal pressure on said movable and shifting members.

5. A winding and setting mechanism comprising in combination, a winding stem, a winding member, a setting member, an intermediate member adapted to be shifted into driving relation with either said winding or setting members, said intermediate member being driven from said stem, mechanism operatively associated with said stem and intermediate member, and yieldingly acting differential means operating on said mechanism and serving upon movement of said stem to initially shift and hold said intermediate member in driving relation with either said winding or said setting member.

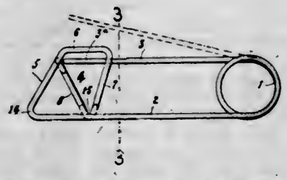
883,428. GARMENT AND BOOK SUPPORT. FREDERICK W. SELINSKY, Sr., Dearborn, Mich. Filed Sept. 12, 1907. Serial No. 392,521.

A new article of manufacture comprising parallel rods adapted to be secured to the back of a pew or chair, a semi-circular loop connected to the rods and off-set from the same to form a hat support, a book support and a



ring formed at the free end of one of the rods, and a hook formed at the free end of the other rod.

883,429. SAFETY-PIN. JAMES E. SINGLETON, Morden, Manitoba, Canada, assignor of one-half to John Fletcher Grimmett, Boissevain, Manitoba, Canada. Filed Aug. 28, 1905. Serial No. 275,984.



1. In a safety pin, a spring coil, an integral pointed member, and a two part retaining loop, said loop having a folded portion between the parts thereof which serves as a fulcrum in separating the parts.

2. In a safety pin, a spring coil, an integral pointed member, and a two part retaining loop of resilient material, said loop having a folded portion between the parts thereof which serves as a fulcrum in separating the parts.

3. In a saftey pin, a spring coil, an integral pointed member, and a two part retaining loop, all formed of resilient material, said loop having a folded portion between the parts thereof which serves as a fulcrum in separting the parts.

4. In a safety pin, a spring coil, an integral pointed member, and a two part retaining loop having a recess therein adapted to engage said pointed member, said loop having a folded portion between the parts thereof which serves as a fulcrum in separating the parts.

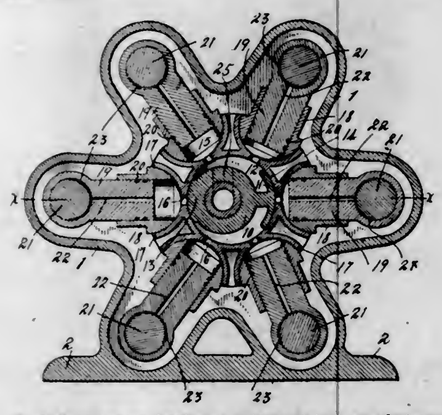
5. In a safety pin, a spring coil, an integral pointed member, and a two part retaining loop having recesses in approximately parallel portions thereof adapted to engage said pointed member, said loop having a folded portion between the parts thereof which serves as a fulcrum in separating the parts.

[Claims 6 to 8 not printed in the Gazette.]

883,430. FLUID-PRESSURE ENGINE. DANIEL F. SMITH and WILLIAM F. PUACELL, New York, N. Y. Filed May 16, 1907. Serial No. 374,069.

1. A fluid engine having a rotary piston, an abutment, and non-rotary counterbalanced means for causing fluid pressure to effect relative movement between the piston and the abutment.

2. In a rotary engine, a rotating piston member, a primary pressure chamber on one side of the piston and an exhaust chamber on the other side, variable auxiliary steam chambers communicating with said pressure chamber, and means for balancing the pressure in the pressure chamber.



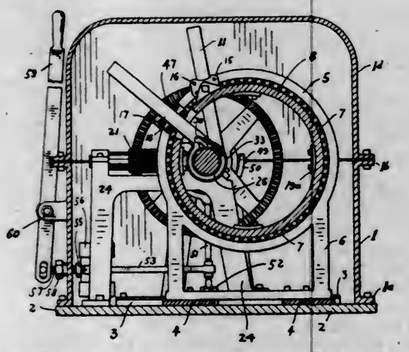
3. A fluid engine having a rotary piston, an abutment, and neutralized telescopic non-rotary means for causing fluid pressure to effect relative movement between the piston and the abutment.

4. In a rotary engine, the combination with a rotating piston of a primary pressure chamber upon one side and an exhaust upon the other side thereof, a plurality of auxiliary steam chambers communicating with and forming part of the pressure chamber, means operated by said piston for varying the capacity of the said auxiliary chambers during the entire cycle, and means for exhausting the auxiliary chambers while they communicate with the exhaust chamber.

5. In a rotary engine, a rotating piston member, a primary pressure chamber on one side of the piston and an exhaust chamber on the other side, means for balancing the pressure in the pressure chamber, and auxiliary chambers communicating with and forming part of the pressure chamber.

[Claims 6 to 60 not printed in the Gazette.]

883,431. POWER-TRANSMISSION DEVICE. RUFUS M. THORNBURG and MORTON C. THORNBURG, Muncie, Ind. Filed Apr. 10, 1907. Serial No. 367,409.



1. A device of the kind described comprising a driving-shaft, a driven-shaft, a drum adapted to rotate about the driven-shaft, power transmitting connections between the driving-shaft and the drum, spokes to transmit motion from the drum to the driven-shaft in movable engagement with the drum and the driven-shaft, and means to vary and maintain the location of said drum with reference to the axial line of the driven shaft whereby all of the spokes but the one measuring the shortest distance from the drum to the axial line of the driven-shaft will be thrown out of actual engagement.

2. A device of the kind described, comprising a driving-shaft, a driven-shaft, a drum adapted to rotate about the driven-shaft, power-transmitting connections between the driving-shaft and the drum, means to vary and maintain the location of said drum with reference to the axial line of said driven-shaft, means to transmit motion from the drum to the driven-shaft including a plurality of spokes pivotally-slidingly connected to said drum, and ratchet connections between the said motion-transmitting means and the driven-shaft.

3. A device of the kind described, comprising a driving-shaft, a driven-shaft, a drum adapted to rotate about the driven-shaft, power-transmitting connections between the driving-shaft and the drum, means to vary and maintain the location of said drum with reference to the axial line of said driven-shaft, means to transmit motion from the drum to the driven-shaft including a plurality of spokes pivotally-slidingly connected to said drum, ratchet connections between the said motion transmitting means and the driven-shaft, a supplemental driven-shaft detachably coupled to the driven-shaft, a rack-wheel secured on said supplemental driven-shaft so as to slide but not to rotate thereon, an idler-pinion actuated by the drum, and means to throw the rack-wheel into engagement with the idler-pinion whereby the supplemental driven-shaft will be revolved in a direction opposite to that of the drum.

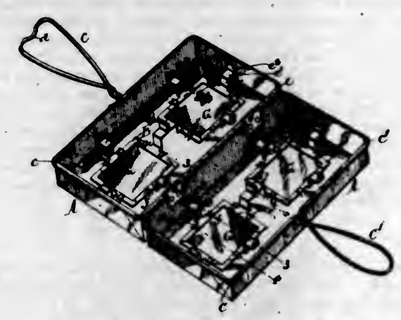
4. A device of the kind described, comprising a base-plate, a driving-shaft and a driven-shaft mounted thereon, a carriage adapted to be moved on a line at a right angle to the axial line of the driven-shaft, a drum mounted revolubly in said carriage, power-transmitting connections between the driving-shaft and the drum, a lever to move said carriage, means to lock said carriage in different positions, ratchets on said driven-shaft, spokes to engage said ratchets having their free ends extended through the drum slide-rockers secured to the drum to slidingly-pivotally retain said spokes, a casement including a flanged bottom member, and a like cover-member adapted to be joined and secured together at the line of the center of said shafts.

5. A device of the kind described comprising a base-plate, a driving shaft and a driven shaft mounted thereon, a carriage adapted to be moved on a line at a right angle to the axial line of the driven-shaft, a drum mounted revolubly in said carriage, power transmitting connections between the driving shaft and the drum including a rack secured to the lateral face of the drum and a pinion actuated by the driving shaft to engage said rack, a lever to move said carriage, means to lock said carriage in different positions, ratchets on said driven-shaft, spokes to engage said ratchets having their free ends extended through the drum slide rockers secured to the drum to slidingly-pivotally retain said spokes, a supplemental driven-shaft detachably coupled to the driven-shaft, power-transmitting connections between the drum and supplemental driven-shaft, including a rack secured to the lateral face of the drum, and an idler-pinion actuated thereby, a rack-wheel secured on said supplemental driven-shaft so as to slide but not to rotate thereon, and means to throw the rack-wheel into and out of engagement with the idler pinion, a casement including a flanged bottom member and a like cover-member adapted to be joined and secured together at the line of the center of said shafts.

[Claims 6 to 8 not printed in the Gazette.]

883,432. TOASTER. AUGUSTUS E. TRAEGER, Buffalo, N. Y., assignor to A. E. Traeger Specialty Manufacturing Company, Buffalo, N. Y., a Corporation of New York. Filed Apr. 29, 1907. Serial No. 370,918.

1. A toaster comprising a pair of pans hinged together at one edge and provided at their opposite free edges with wire handle-loops, one of the loops being wider than the other and provided at its outer end with a lip or bend arranged to interlock with the adjacent end of the other loop, substantially as set forth.



2. In a toaster, a pan having opposing bread-supports each consisting of a seat raised above the bottom of the pan and provided with a stop for preventing displacement of the bread on the seat, substantially as set forth.

3. In a toaster, a pan having opposing bread-supports each consisting of a standard rising from the bottom of the pan, a substantially horizontal seat at the upper end of the standard and a stop arranged on the seat, substantially as set forth.

4. In a toaster, the combination of a pan, a sheet-metal frame or plate secured to the interior of the pan-bottom and bread-supports formed integral with said frame and each comprising a strip bent upward from the frame substantially at right angles to the pan bottom, thence outward to form a seat and thence upward to form a stop, substantially as set forth.

5. A toaster, comprising a pair of connected pans having sight-openings covered by transparent panes and containing bread-supports raised above the bottoms of the pans, substantially as set forth.

[Claims 6 and 7 not printed in the Gazette.]

883,433. BOOK-HOLDER. HENRIETTA B. UTZ, College Hill, Ohio. Filed Jan. 31, 1908. Serial No. 413,501.



1. In a book holder, a frame provided with means for attaching it to a vertical surface and having its lower part divergent from the lower surface when thus attached, and clamping members pivotally mounted on the lower part of the frame and movable independent of each other, substantially as and for the purposes specified.

2. In a book holder, a frame provided with means for attaching it to a vertical surface and having its lower part divergent from the vertical surface when attached thereto, and bent to form a ledge, and clamping members pivotally mounted on the ledge and movable independent of each other, substantially as and for the purposes specified.

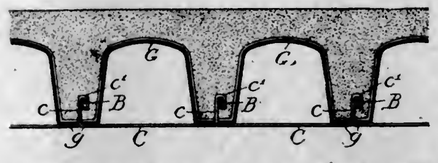
3. In a book holder, a frame provided with meana for attaching it to a vertical surface and having its lower part divergent from the vertical surface when attached thereto, and bent to form a ledge, a lower transverse brace attached to the sides of the frame adjacent to the ledge, and a hook on the lower transverse brace adapted to bear against the vertical surface and form one of the points of support of said frame, substantially as and for the purposes specified.

4. In a book holder, a frame provided with means for attaching it to a vertical surface and having its lower part divergent from the vertical surface when attached thereto, a broad flat brace attached to the sides of the frame, and clamping members pivotally mounted on the lower part of the frame movable independent of each other and adapted to bear toward the broad flat brace, substantially as and for the purposes specified.

5. In a book holder, a frame provided with means for attaching it to a vertical surface and having its lower part divergent from the lower surface when attached thereto and provided with a ledge to form a book support, said ledge terminating forwardly in the lower transverse part of the frame, clamping members pivotally mounted on the lower transverse part of the frame, curved so that they present convex sides toward the vertical surface and being movable independently of each other, whereby they are, respectively, adapted to bear with equal facility regardless of the thickness of the book or of the relative thicknesses of the respective sides of the book to be held, substantially as and for the purposes specified.

[Claim 6 not printed in the Gazette.]

883,434. CENTERING FOR FIREPROOF FLOOR CONSTRUCTIONS. GUY B. WAITE, New York, N. Y. Filed Apr. 16, 1906. Serial No. 311,986.



1. In a centering construction, the combination with a mold or center consisting of a plurality of telescoping sections of arch-shape in cross-section, each provided with integral laterally projecting marginal flanges adapted to support the filling material between laterally adjacent molds, of hangers each extending between and beneath said flanges and supporting said mold sections, substantially as described.

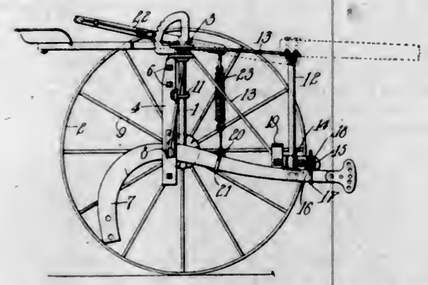
2. In a centering construction, the combination with a series of bars extending between and supported at their ends on adjacent floor-beams, of a series of arch-shaped molds lying between and parallel with said bars and having marginal flanges extending laterally beneath the latter, and hangers supporting said molds from said bars and permitting the latter to be embedded on all sides in the filling material, substantially as described.

3. In a centering construction, the combination with a series of bars extending between and supported on adjacent floor beams, of hangers having hooks turned in the same direction hung from and across said bars, and molds or centers supported on said hangers, substantially as described.

4. In a centering construction, the combination with a series of bars extending between and supported at their ends on adjacent floor beams, of hangers having hooks turned in the same direction hung from and across said bars, and molds or centers supported on said hangers and provided with lateral flanges that extend beneath said bars, substantially as described.

5. In a centering construction, a multipart extensible and contractible mold or center consisting of a main intermediate section of a general arch-form in cross-section and end sections of the same form telescoping therewith, said end sections being closed at their outer ends to support and give form to the filling material lying thereagainst, substantially as described.

883,435. MEANS FOR ATTACHING IMPLEMENTS TO CULTIVATOR-FRAMES. WILLIAM E. WALDEN, Marietta, Okla., assignor of one-half to William S. Hale, Marietta, Okla. Filed Aug. 27, 1907. Serial No. 390,313.



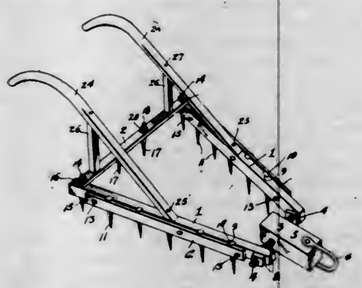
1. In combination with a cultivator frame, of means for attaching the beam of an implement thereto comprising guides depending from the cultivator frame and adapted to be shifted laterally thereof, brace rods attached to the lower portions of the guides and clamping mechanism for securing said brace rods to the cultivator frame.

2. In combination with a cultivator frame, a means for attaching an implement beam thereto, comprising guides depending from the cultivator frame, brace rods pivotally attached to the lower portions of the guides and clamping means for securing the brace rods to the cultivator frame.

3. In combination with a cultivator frame, a means for attaching an implement beam thereto comprising guides depending from the frame of the cultivator, clamping plates adjustably mounted upon the forward portion of the cultivator frame, a slotted cross bar pivotally mounted between the clamping plates and a cross piece also connecting the clamping plates together.

4. In combination with a cultivator frame, a means for attaching an implement beam thereto, comprising guides depending from the cultivator frame, a slotted cross bar pivotally mounted at the forward portion of the cultivator frame and a clamping means adjustably located in the slot of said cross bar.

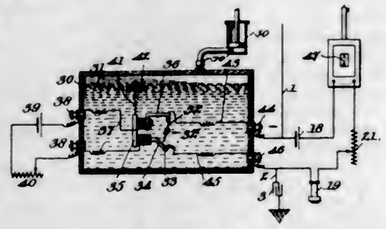
883,436. HARROW. GEORGE H. WELLS, Neinda, Tex. Filed Mar. 27, 1907. Serial No. 364,871.



1. An implement of the character described comprising diverging tooth bars having horizontal apertures at their front ends and vertical apertures at their rear ends, a front cross piece comprising a block having threaded studs projecting therefrom and extending through the apertures in the front ends of said bars, nuts upon said studs on opposite sides of said bars, a rear cross bar having apertures to aline with those in the rear ends of the tooth bars, threaded shanks passed through the alining apertures in said bars and nuts upon said shanks.

2. An implement of the character described comprising diverging tooth bars having horizontal apertures at their front ends and vertical apertures at their rear ends, a front cross piece comprising a block having threaded studs projecting therefrom and extending through the apertures in the front ends of said bars, nuts upon said studs on opposite sides of said bars, a rear cross bar having apertures to aline with those in the rear ends of the tooth bars, threaded shanks passed through the alining apertures in said bars, nuts upon said shanks, upwardly and rearwardly inclined handle bars pivotally connected at their forward ends to said tooth bars, braces for supporting said handle bars and adjustable connections between said braces and the rear cross bar.

883,437. RECEIVER FOR SPACE SIGNALING SYSTEMS. LEONARD D. WILDMAN, San Francisco, Cal. Filed July 24, 1906. Serial No. 327,591.



1. Receiving apparatus for space signaling by Hertzian oscillations, comprising a conductor arranged to be excited by said oscillations, relatively movable conducting surfaces in close proximity to each other, means normally separating said contacts but permitting contact when said oscillations are received on said conductor, said means reëstablishing said separation after the passage of each oscillation, and means to damp the movement of said surfaces.

2. Receiving apparatus for space signaling by Hertzian oscillations, comprising a conductor to be set in a state of electrical excitation by said oscillations, relatively movable conducting surfaces in close proximity to each other, means separating said contacts and operated upon by said oscillations received on said conductor, establishing an electrical contact, said means reëstablishing said separation after the passage of each oscillation, and damping means surrounding the contact portion of said conducting surfaces.

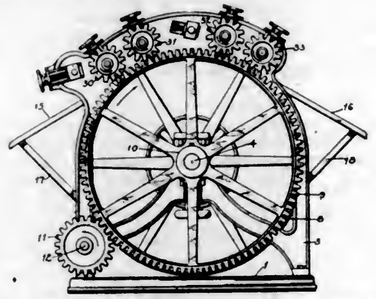
3. Receiving apparatus for space signaling by Hertzian oscillations, comprising a conductor to be set in a state of excitation by said oscillations, conducting surfaces in close proximity to each other and relatively movable, a film separating said surfaces and adapted to be punctured by the passage of said oscillations received on said conductor, and a non-conducting bath in which said conducting surfaces are submerged which reëstablishes said separating film.

4. Receiving apparatus for space signaling by Hertzian oscillations, comprising a conductor to be set in a state of excitation by said oscillations, conducting surfaces in close proximity to each other and relatively movable, a self-restoring liquid film separating said surfaces and adapted to be punctured by said oscillations received on said conductor, and an oil bath in which said conducting surfaces are submerged.

5. Receiving apparatus for space signaling by Hertzian oscillations, comprising an antenna, relatively movable conducting surfaces located in close proximity to each other, a self-restoring film separating said surfaces and adapted to be punctured by oscillations received on said antenna, a bath of non-conducting liquid in which said conducting surfaces are submerged, and means for placing said liquid under compression.

[Claims 6 to 20 not printed in the Gazette.]

883,438. LEATHER-BLACKING MACHINE. LOUIS WIMMER, Elizabethport, N. J., assignor of one-third to Samuel Levenson, Elizabeth, N. J., and one-third to Abraham Marx, Newark, N. J. Filed May 25, 1907. Serial No. 375,613.



1. In a leather blacking machine, the combination of a cylinder, brushes arranged along the outer surface of said cylinder forming therewith a passage-way for the leather, a large gear mounted in axial alinement with said cylinder, pinions upon said brushes meshing with said gear, and means for independently driving said cylinder and large gear.

2. The combination of the cylinder, brushes arranged parallel to said cylinder adjacent to its outer surface and forming therewith a passage-way, a large gear in axial alinement with said cylinder, pinions upon the brushes meshing with said gear, supply rollers each adjacent to one of said brushes and driven therefrom, and means for independently driving said cylinder and large gear.

3. The combination with the cylinder and means for rotating the same, of brushes forming with said cylinder a passage-way, pinions on said brushes, a common driving gear for all said pinions, supply rollers each adjacent to one of said brushes, and means for driving said rollers from said brushes at their ends opposite those having the said pinions.

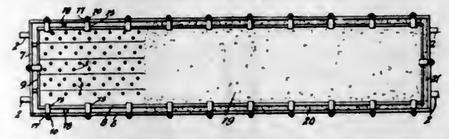
4. In a leather blacking machine, the combination with a cylinder and means for rotating the same, of rotary brushes arranged adjacent to said cylinder and forming therewith a passage-way for the leather, a common driving member adapted to rotate said brushes at a higher speed than that at which the surface of the cylinder moves, supply rollers each adjacent to one of said brushes, means for driving each supply roller from its adjacent brush at a slower rate of speed, means for adjusting said brushes with respect to the cylinder, and means for adjusting said rollers with respect to the brushes.

5. In a leather blacking machine, the combination of a cylinder, tangential feed and discharge boards inclined downwardly away from opposite sides of the cylinder at points near its top and including between themselves a portion of the cylinder surface forming a platen for the leather to travel over, a plurality of sets of brushes arranged in series adjacent to the outer surface of said platen and adapted to apply different coating successively to the leather, said sets being on opposite sides of the top of the cylinder and closely contiguous one to each of the said tangential boards, and means for rotating said cylinder and brushes.

[Claims 6 and 7 not printed in the Gazette.]

883,439. MOLD FOR MAKING FLORISTS' BENCHES. LOUIS WITTBOLD, Chicago, Ill. Filed Aug. 9, 1907. Serial No. 387,830.

1. In a mold for making concrete florists benches, the combination of a separable and removable bottom, removable outer and inner side walls spaced apart, with each inner side wall elevated above the bottom, removable outer and inner end walls spaced apart with each inner end wall elevated above the bottom, a series of detachable brackets upwardly extending on the outside of the outer side and end walls, a series of depending hangers for supporting the inner side and end walls, and means adjustably connecting the hangers with the brackets, substantially as described.



2. In a mold for making florists concrete benches, the combination of a supporting base, a separable and removable bottom, removable outer and inner side walls, removable outer and inner end walls, with a clearance between the bottom and the inner side and end walls and with the outer and inner walls spaced apart, a series of inner hangers each hanger having a vertical member and a horizontal flange at the lower end of the vertical member for holding the inner side and end walls elevated and against inward movement, and each hanger having an outwardly extending longitudinal arm at its upper end for connection with a companion bracket, and a series of detachable outer brackets, each bracket having a vertical member holding the outer side and end walls against outward movement, and a horizontal member for securing the bracket in place, and each bracket having suspended from its upper end a hanger, substantially as described.

3. In a mold for making florists concrete benches, the combination of a supporting base, a separable and removable bottom on the base, removable outer and inner side walls spaced apart with each inner side wall elevated above the bottom, removable inner and outer end walls spaced apart with each inner end wall elevated above the bottom, a series of outer brackets and a series of inner hangers arranged in pairs, one bracket and one hanger for each pair, each bracket having a vertical member holding the outer side and end walls against outward movement, and each hanger having a vertical member and a horizontal flange at the lower end of the vertical member for holding the inner side and end walls elevated and against inward movement and each hanger at its upper end supported from the upper end of its companion bracket, and means for retaining the outer and inner side and end walls spaced apart and supported against the vertical members of the brackets and hangers, substantially as described.

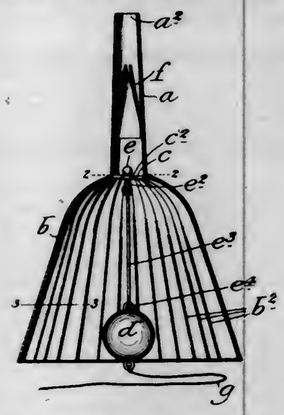
4. In a mold for making florists concrete benches, the combination of a supporting base, a separable and removable bottom on the base, removable outer and inner side walls spaced apart with each inner side wall elevated above the bottom, removable inner and outer end walls spaced apart with each inner end wall elevated above the bottom, a series of outer brackets and a series of inner hangers arranged in pairs, one bracket and one hanger for each pair, each bracket having a vertical member holding the outer side and end walls against outward movement, and each hanger having a vertical member and a horizontal flange at the lower end of the vertical member for holding the inner side and end walls elevated and against inward movement and each hanger at its upper end supported from the upper end of its companion bracket, means for adjusting the hangers in and out, and means for retaining the outer and inner side and end walls spaced apart and supported against the vertical members of the brackets and hangers, substantially as described.

883,440. CAMPAIGN TOY DEVICE. ERNEST WOLFF, New York, N. Y. Filed Jan. 13, 1908. Serial No. 410,525.

1. A device of the class described, comprising a horn having its larger end constructed to act as a bell, and provided with longitudinal ribs and a loosely supported ball or clapper adapted to swing therein.

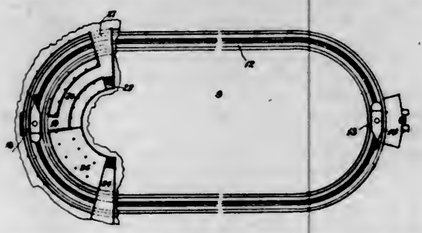
2. A device of the class described, comprising a horn having its larger end constructed to act as a bell, and the inner surface of which is provided with longitudinal ribs,

and a ball or clapper loosely suspended from the apex of the bell and adapted to swing therein.



3. A device of the class described, comprising a horn having its larger end constructed to act as a bell, and the inner surface of which is provided with longitudinal ribs, a ball or clapper loosely suspended from the apex of the bell and adapted to swing therein, and a flexible device connected with said ball or clapper.

883,441. AMUSEMENT DEVICE. ALBERT G. ANDREWS, Pittsburg, Pa. Filed Dec. 14, 1907. Serial No. 406,406.



1. The combination in an amusement device, of a passage-way of glass surrounded by water, a body of water, a submarine car, and means whereby the car is moved beneath the surface of the body of water and brought to a position for unloading in the said passage above the surface of the body of water.

2. The combination in an amusement device, of a body of water, a submarine car, a track beneath the water on which the car rides, means for moving the car along the track beneath the surface of the water and a passage way of glass surrounded by water to which the track leads, and in which passage-way the track brings the car to the surface of the body of water to permit a landing of the passengers.

3. In combination, a submarine boat in the form of a fish, a transverse partition intermediate the ends of the boat provided with a water-tight door, and a water tight swinging door representing the upper jaw of the fish and giving access to the front compartment.

4. In an amusement device, a passage-way of glass, a casing of glass spaced away from the passage-way, a body of water interposed between the passage-way and the casing, and an exhibit in the space outside the casing.

5. In an amusement device, a passage-way of glass, a casing of glass spaced away from the passage-way, a body of water interposed between the passage-way and the casing and means for causing a thin sheet of water to flow down in front of the glass of the passage-way.

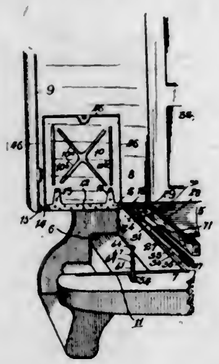
[Claims 6 to 9 not printed in the Gazette.]

883,442. FELT-LIKE SUBSTANCE. DAVID BEATTY and SAMUEL C. IRVING, Berkeley, Cal. Filed Feb. 19, 1906. Serial No. 301,810.

1. A roofing felt containing magnesian cellulose and a resin, substantially as described.

2. The process of making a felt roofing which consists in treating a magnesian cellulose with bisulfid of carbon and magnesium chlorid, afterwards incorporating a solution of a resin, and then forming the resulting product into sheets, substantially as described.

883,443. TRAP-DOOR. LAAS J. BERG, Chicago, Ill., assignor to Metallic Sheathing Company, a Corporation of Illinois. Filed Mar. 19, 1907. Serial No. 363,207.



1. The combination of a door, a shaft connected with the door, an arm on the shaft, a rod pivoted to the arm, a pivotally mounted cage into which the arm is entered, a guide plate on the free end of the arm and slidably mounted within the cage and a spring surrounding the arm within the cage and adapted to be put under tension by a movement of the arm in one direction, and released from tension by a movement of the arm in the opposite direction, substantially as described.

2. The combination of a trap door, a shaft for swinging the door, an arm on the shaft, a rod connected with the arm, a spring adapted to be put under tension when the rod is moved in one direction and released from tension when the rod is moved in another direction, a latch adapted to hold the door locked, a link adapted to retract the latch, a vertically movable rod, a pivoted lever connected with the rod and connected with the link, and a spring for returning the rod to normal position, substantially as described.

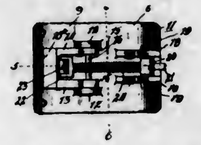
3. A vestibule car trap door comprising a metallic body provided with reinforcing ribs and provided around its edges with overlying lips, and a tiling secured to the surface of the door and retained in place by the overlying lips, substantially as described.

4. A vestibule car trap door comprising a metallic body provided with diagonal reinforcing ribs and parallel reinforcing ribs and having around its edge an overturned lip, wooden strips entered into the channels formed by the ribs, and a rubber tiling secured to the wooden strips and retained by the lips, substantially as described.

883,444. CURTAIN CATCH OR HOLDER. LAAS J. BERG, Chicago, Ill., assignor to Metallic Sheathing Company, a Corporation of Illinois. Filed Aug. 2, 1907. Serial No. 386,770.

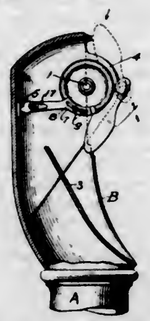
In a curtain catch, a face plate, a catch member formed integral with a movable frame, a movable frame, a forked rod, a roller positioned within the forked rod at the inner

end thereof, trunnions at the outer end of the forked rod, lugs adapted to retain the aforesaid trunnions, and a



spring encircling the forked rod, substantially as described.

883,445. HEEL-SCOURER GUARD. NICHOLAS C. BOHR, Boston, Mass., assignor, by mesne assignments, to Thomas G. Plant, Boston, Mass. Filed Aug. 30, 1907. Serial No. 390,721.



1. In a machine for scouring the heels of boots and shoes, the combination of a scouring wheel, a bracket arm, a guard carried by said bracket arm and having a protecting portion extending circumferentially about said scouring wheel, said bracket arm and guard being provided the one with a curved slot and the other with clamping bolts to permit adjustment, said protecting portion having its end disposed in the path of movement of a shoe as it is turned to present the heel to the action of the scouring wheel and acting as a stop in its various positions of adjustment.

2. In a machine for scouring the heels of boots and shoes, the combination of a scouring wheel, a bracket arm having a rigid portion adjacent said scouring wheel, a guard plate supported by said rigid portion and having a protecting portion extending circumferentially about said scouring wheel, and means for adjusting the protecting portion with respect to the rigid portion and in a direction circumferentially about the said wheel to present said protecting portion in the path of movement of a shoe as it is turned to subject the heel to the scouring action of said wheel.

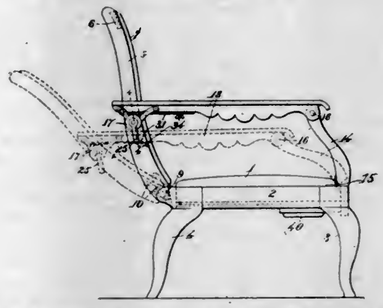
3. In a machine for scouring the heels of boots and shoes, the combination of a scouring wheel, a guard plate disposed about a portion of said scouring wheel and extending over the scouring wheel in the path of movement of a shoe as it is turned to subject the heel to the scouring action of said wheel, said guard plate terminating in a turned or thinned outer edge to permit maximum turning movement of the shoe and a support for said guard plate.

4. In a machine of the character described, the combination of a scouring wheel, a guard plate extending about a portion of said wheel, and having side and face protecting portions 10 and 11 for said scouring wheel, a support for said guard plate, and means for adjustably connecting the guard plate and support to enable the former to be moved in a curved path to cover different portions of the scouring wheel in accordance with the work being done.

5. In a machine of the character described, the combination of a scouring wheel, a guard plate having a protecting portion extending circumferentially of the scouring wheel and provided with a turned or thinned edge 12, a support for said guard plate, and means for adjusting the guard plate about the scouring wheel to cover different portions thereof.

[Claims 6 to 8 not printed in the Gazette.]

883,446. CHAIR. JAMES H. BROWNELL, Chicago, Ill. Filed May 27, 1907. Serial No. 375,780.



1. In a device of the class described, a seat, and a frame supporting the same, in combination with a back pivoted upon said frame, arms pivoted at their forward ends to said frame, and pivotal connections between each said arm and said back, comprising a conical member, and a spring arranged within said conical member, and having its ends bearing against said arm and said back respectively to normally hold said back in vertical position and cause the same to offer yielding resistance to the weight of the occupant of the chair, substantially as described.

2. In a device of the class described, a seat, and a frame supporting the same, in combination with a back pivoted upon said frame, arms pivoted at their forward ends to said frame, and pivotal connection between each said arm and said back, comprising a conical member attached to said back and similar socket member upon said arm adapted to receive said conical member, and a spring, arranged within said conical member and having its ends bearing against said arm and said back respectively to normally hold said back in vertical position, and cause the same to offer yielding resistance to the weight of the occupant of the chair and means for locking said members whereby the back may be held at any inclination, substantially as described.

3. In a device of the class described, a seat, and a frame supporting the same, in combination with a back pivoted upon said frame, arms pivoted at their forward end to said frame, and pivotal connection with each said arm and said back, comprising a conical member attached to said back and a similar socket member upon said arm, a spring arranged within said pivotal connection for normally holding said back in vertical position and a cam lever adapted to bind said members upon each other to lock the back at any inclination, substantially as described.

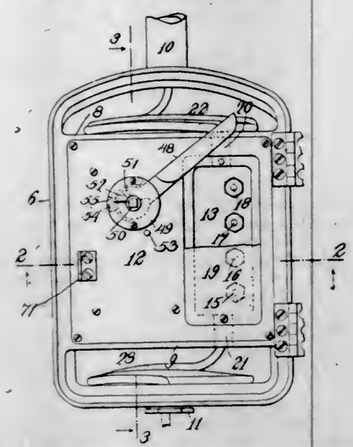
4. In a device of the class described, a seat, and a frame supporting the same, in combination with a back pivoted upon said frame, arms pivoted at their forward ends to said frame and pivotal connections between each said arm and said back, comprising a conical member attached to said back and similar socket member upon said arm, a cam lever adapted to bind said members upon each other, to lock the back at any inclination, teeth upon said conical member, a rack bar in mesh with said teeth and arranged to slide longitudinally of said arm and means for locking said rack bar against longitudinal movement, substantially as described.

5. In a device of the class described, a seat, and a frame supporting the same, in combination with a back pivoted upon said frame, arms pivoted at their forward ends to said frame, a pivotal connection between each said arm and said back, comprising a conical member at-

tached to said back and similar socket member upon said arm adapted to receive said conical member, a spring arranged within said conical member and having its end bearing against said arm and back respectively to yieldingly hold said back in vertical position, a cam lever adapted to bind said members upon each other to lock the back at any desired inclination, substantially as described.

[Claims 6 to 11 not printed in the Gazette.]

883,447. CALL-BOX. HENRY S. BULLOCK, Jr., New York, N. Y., assignor to American District Telegraph Company, New York, N. Y., a Corporation of New Jersey. Filed Dec. 15, 1906. Serial No. 347,945.



1. A signal transmitter comprising in combination transmitting means for transmitting successively and in alternation two different signals, mechanism arranged to operate said transmitting means a greater or less number of times at will, and a mechanical cutout preventing the transmission of one of said signals, but not the other, during a selected period of the operation of said transmitting means.

2. A signal transmitter comprising in combination transmitting means for transmitting successively and in alternation two different signals, mechanism arranged to operate said transmitting means a greater or less number of times at will, and a mechanical cutout preventing the operation of means for transmitting one of said signals during a selected period of the operation of the transmitter.

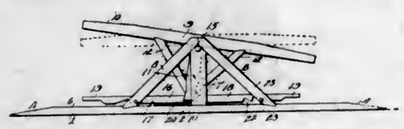
3. A signal transmitter comprising in combination two transmitting devices and operating mechanism arranged to cause same to operate successively and in alternation a greater or less number of times at will, and a mechanical cutout throwing one of said transmitting devices out of operation during a selected period of the operation of the transmitter.

4. A signal transmitter comprising in combination two transmitting devices and operating mechanism arranged to cause same to operate successively and in alternation a greater or less number of times at will, and a mechanical cutout for one of said transmitting devices throwing same out of operation during the last round of signals.

5. A signal transmitter comprising in combination two transmitting devices and operating mechanism arranged to cause same to operate successively and in alternation a greater or less number of times at will, and a mechanical cutout having mounted thereon a member of one of said transmitting devices and operated by said operating mechanism to hold said member out of operative position during a selected period of the operation of the transmitter.

[Claims 6 to 18 not printed in the Gazette.]

883,448. LIFTING APPARATUS. VOLNEY B. CAHILL, Portland, Oreg. Filed June 1, 1907. Serial No. 376,745.



1. In an apparatus of the character described, the combination of supporting means, lifting means comprising a pair of bars intermediately pivoted to said supporting means for tilting motion above and below the horizontal in either direction, and a set of locking devices for each lifting bar, including a pair of locking members upon the supporting means, and a locking bar shiftable by said lifting bar into and out of engagement with the locking members to secure the lifting bar in either of its operative positions, said locking bar embodying a pair of manually-controlled sections.

2. In an apparatus of the character described, the combination of supporting means, a pair of tilting lifting bars intermediately pivoted upon said supporting means for a tilting motion above or below the horizontal in either direction, a pair of locking devices upon the supporting means for each lifting bar, and a locking bar connected with each lifting bar for adjustment thereby to engage such locking devices, such being provided with rack teeth to engage the locking devices and comprising sections adapted for independent manual adjustment to throw them out of locking engagement.

3. In an apparatus of the character described, the combination of supporting means, a pair of locking bars intermediately pivoted upon the supporting means, said bars having duplicate end portions, locking members upon the supporting means for each bar, said members being arranged beyond the plane of the pivotal supports, and a locking bar intermediately connected with each lifting bar for adjustment thereby into and out of engagement with said locking devices, said bar comprising sections adapted for independent manual adjustment to throw them out of locking engagement.

4. In an apparatus of the character described, the combination of a supporting frame, a pair of lifting bars intermediately pivoted upon said frame and having duplicate end portions, a pair of locking pins for each lifting bar mounted upon the opposite end portions of the frame, and a locking bar pivotally connected with each lifting bar and comprising sections adapted to interlock with said locking means, said sections being adapted for independent manual adjustment to throw them into and out of locking engagement.

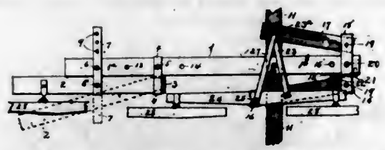
5. In an apparatus of the character described, the combination of a supporting frame having uprights, a pair of lifting bars intermediately pivoted to the respective uprights and having arms centrally depending therefrom, a pair of locking pins upon the frame of each lifting bar, said pins being arranged on opposites of the uprights, and a locking bar for each lifting bar, said locking bar being pivotally connected with the depending arm for longitudinal movement when the lifting bar is tilted, and comprising end sections provided with notches to engage the locking pins, said sections being independently operable for manual adjustment to throw them out of engagement with said pins.

[Claim 6 not printed in the Gazette.]

883,449. DIFFERENTIAL-DRAFT APPLIANCE. WILLIAM R. CAMPBELL, Little York, Ill. Filed Feb. 11, 1907. Serial No. 356,838.

1. An equalizer including a main bar having unequal arms, divergent and like compensating arms pivoted at the outer end of the shorter arm, a yoke in which said connection is made, an auxiliary equalizer bar pivoted to the longer arm of the main bar, and selective means whereby its outer end may be caused to diverge therefrom.

2. An equalizer including a main bar having unequal arms, divergent and like compensating arms yoked to and extending along the sides of the shorter arm, an extension bar at the other end of the main bar, selective means for pivoting it thereto at its midlength whereby its outer end may be caused to diverge therefrom, and a loop into which its inner end is adapted to slip freely.



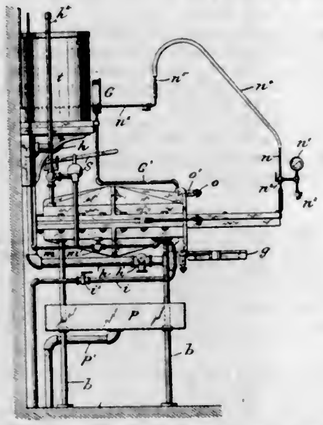
3. In an equalizer including a main bar having unequal arms, divergent compensating arms connected thereto at the end of the shorter arm, one on each side thereof, an extension bar at the other end of the main bar, a loop with which one end of the extension bar is adapted to be loosely engaged, and selective means for pivotally connecting said extension bar for causing its free end to diverge from the main bar.

4. In a device of the character described, a main evener bar, a wear plate thereon near the end of its shorter arm, and compensating arms, one of which includes a wear plate adapted to take against the aforesaid plate.

5. In a device of the character described, compensating arms, a main evener bar to which they are pivoted, and means fixed to said bar whereby endwise movement of one of said arms is prevented.

[Claim 6 not printed in the Gazette.]

883,450. APPARATUS FOR COVERING ARTICLES WITH MATERIALS. CHARLES F. CHURCH, Brooklyn, N. Y. Filed Oct. 15, 1907. Serial No. 397,502.



1. In a machine for covering articles by celluloid or other materials, the combination of a compartment provided with a hinged gate at one end, means for supplying hot water and steam to the interior of said compartment, a removable chase or bags provided with means for supporting the articles to be covered, a flexible diaphragm above the same, and a vacuum-pipe connected with the said chase below the diaphragm for establishing the required degree of vacuum in the same.

2. In a machine for covering articles by celluloid or other materials, the combination, with a compartment and means for supplying water and steam to the same, of a chase provided with a flexible diaphragm placed in said compartment, a vacuum-pipe connected with the chase below the diaphragm, a vacuum-pipe connected with the vacuum-pump, and a flexible pipe provided with a glass indicator-tube between the vacuum-pipe on the chase and the vacuum-pump.

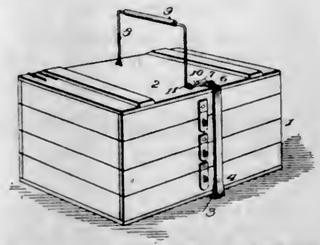
3. In a machine for covering articles with materials the combination of a casing, the said casing having a flexible diaphragm, a means for forcing liquid under great pressure against the said diaphragm, a means for withdrawing all fluids from said casing, a means for indicating the presence of any liquid.

4. In a machine for covering articles with materials, the combination of a casing, the said casing having a flexible diaphragm, a means for forcing liquid under great pressure against the said diaphragm, a means for withdrawing all fluids from the said casing, and for reducing the extent of any leak and means for indicating the presence of any liquid in the said inclosure.

5. In a machine for covering articles with materials, the combination of an inclosure, means for forcing a fluid against a part of the said inclosure, a means for withdrawing all fluids from the said inclosure and means for indicating the presence of any liquids in the said inclosure.

[Claim 6 not printed in the Gazette.]

883,451. BAIL AND HASP FASTENER. OSCAR G. COLLIER, Fairbury, Nebr. Filed Apr. 13, 1907. Serial No. 368,106.

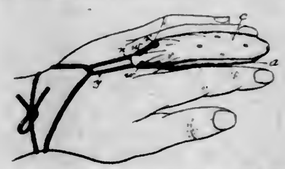


1. The combination with the body and lid of a receptacle, of a hasp secured to the body, a keeper secured to the lid and arranged for engagement with said hasp, and a bail pivotally mounted on the lid and provided with an angularly disposed latch adapted to be moved over upon the hasp upon the raising of the bail to a carrying position, whereby to hold the hasp in engagement with the keeper.

2. The combination with the body and lid of a receptacle, of a hasp secured to the body, a keeper secured to the lid and arranged for engagement with the said hasp, the hasp being formed at one end with an outwardly facing shoulder, and a bail pivotally mounted on the lid and provided at one side with an angularly disposed latch adapted to be moved across and against the shoulder upon the raising of the bail to a carrying position.

3. The combination with the body and lid of a receptacle, of a hasp secured to the body and provided with an eye, a keeper secured to the lid and adapted to be received in said eye, the hasp being formed beyond its eye with an outwardly facing shoulder, and a bail pivotally mounted on the lid and provided at one side with an angularly disposed latch rigidly connected therewith and adapted to be moved across and against the shoulder upon the raising of the bail to a carrying position.

883,452. FINGER-COT. FRANCES A. COALISS, Boston, Mass. Filed June 20, 1907. Serial No. 379,844.

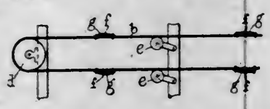


1. A finger-cot having a contracted closed and comparatively narrow outer end of size or diameter to fit approxi-

mately snugly over and around the end of the finger, and a comparatively broad central or main portion enlarging or broadening abruptly from the contracted end portion and being of sufficient diameter to inclose the sore portion of the finger without pressing on the affected part, said contracted and main portions being whole and unslitted on the top and bottom sides; and a lacing secured in and extending through suitable holes near the outer ends of the main portion only, whereby the cot is contracted by the lacing process at its outer end only leaving the broadened main portion unaffected.

2. A finger-cot comprising upper and lower integral flexible pieces secured together at their edges and having comparatively narrow outer ends *g*, *b* and comparatively broad central or main portions *e*, *a* broadening abruptly at *c*, *h* from the contracted end portion, whereby the contracted end portions may fit approximately snugly over the tip of the finger and the broadened central or main portions may surround the finger without pressing on the sore or affected part, a tongue or extension *n* integral with the upper piece *e*, and a lacing extending through suitable holes in the upper and lower pieces *e*, *a* near their outer ends and thence through holes in the outer end of said tongue or extension whereby the cot may be contracted at its outer end only without affecting its broadened or main portion.

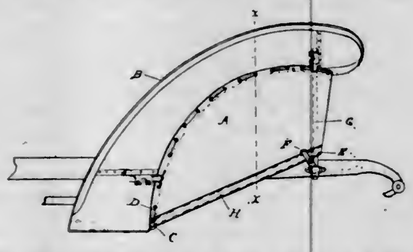
883,453. CONVEYER FOR DRYING-BOXES. MAX E. DEJONGE, Fitchburg, Mass. Filed Dec. 10, 1906. Serial No. 347,031.



1. A conveyer of the character described, comprising an endless belt or apron of fibrous material, fibrous flat casings extended transversely of said belt or apron to form pockets, and thin substantially flat pieces of rigid material inserted in said pockets and entirely closed thereby, substantially as described.

2. A flexible conveyer of the character described, divided into lengths or portions separated by thin, substantially flat, transverse, rigid members entirely inclosed in flat casings and secured to said conveyer, for the purpose set forth.

883,454. MUD-SHIELD FOR VEHICLE-WHEEL GUARDS. GEORGE W. DUNHAM, Lansing, Mich., assignor to Olds Motor Works, Lansing, Mich., a Corporation of Michigan. Filed Dec. 1, 1906. Serial No. 345,918.

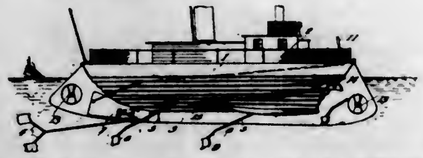


1. The combination with a wheel fender, of a sector-shaped shield attached to one edge of said fender, a fender supporting arm, and an attachment between said shield and said supporting arm near the center of the sector.

2. The combination with a wheel fender, of a sector-shaped shield laced to one edge of said fender, and extending inwardly therefrom, and a reinforcement for the inner edge of said shield.

3. In a motor vehicle, the combination with the fender for the forward wheel, of a sector-shaped shield secured to the inner edge of said fender and extending to the lower end thereof, a reinforcement for the lower edge of said shield, and means for attaching said shield to the vehicle frame near the center of the sector.

883,455. BOAT. ALBERT H. FRIEDEL, Cleveland, Ohio. Filed Sept. 16, 1905, Serial No. 278,812. Renewed Feb. 11, 1908. Serial No. 415,371.



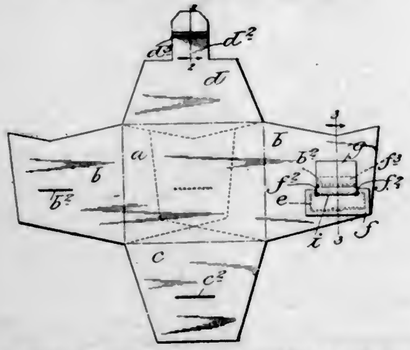
1. In combination, a boat or vessel having the bottom of the hull thereof provided with longitudinal passages, air receivers arranged at one end of the vessel exterior of the hull, each receiver being partially submerged and adapted to cause air to travel to the passages upon the bottom of the hull, and means for adjusting the positions of the receivers to regulate the quantity of air entering the same.

2. In combination, a boat or vessel having the bottom of the hull thereof provided with longitudinal passages, receivers arranged at one end of the vessel exterior of the hull, each receiver being partially submerged and adapted to cause air to travel to the passages upon the bottom of the hull, and means for raising and lowering the receivers to submerge the same to a greater or less extent and thereby regulate the quantity of air conducted by the receivers to the passages on the bottom of the hull.

3. In combination, a boat or vessel provided upon the bottom of the hull thereof with passages, and adjustably mounted air receivers carried by the hull at one end and adapted to conduct air to the passages beneath the hull for the purpose specified.

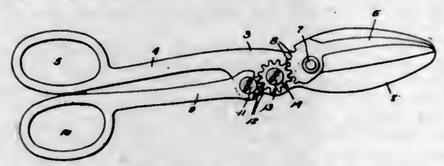
4. In combination, a boat or vessel having the bottom thereof provided with longitudinal passages, air receivers arranged at one end of the hull exterior thereof and inclining upwardly in their length, said receivers being arranged so as to be partially submerged when the vessel is afloat, and hoisting mechanism connected with the receivers to raise and lower the same to regulate the quantity of air which will be conducted by said receivers to the passages beneath the hull.

883,456. ENVELOP. TERESINA GABRIELE, New York, N. Y. Filed Aug. 8, 1907. Serial No. 387,617.



An envelop made from a blank comprising a body portion having folding end members, a folding side portion and a folding sealing flap opposite the folding side portion, said end members and folding side portion being provided with a slot and the sealing flap with a projecting tongue, one of the folding end members being provided on the inner side thereof and on the side of the slot therein opposite the folding sealing flap with a wire link or loop which is secured in position by a sheet sealed to said folding end member and provided with a tongue adapted to be passed through the slot in said folding end member, and the slots in the other folding end member and the folding side member, and a small sheet folded around the side of said link or loop adjacent to the said slot and sealed to the back of the said folding end member on the opposite side of said slot, the tongue of the sealing flap being also provided on its opposite sides with transverse shoulders or projections and being adapted to be passed through the slots in the folding end members and folding side members.

883,457. SHEARS. CHARLES GEIS, Wilkinsburg, Pa. Filed Dec. 19, 1907. Serial No. 407,120.

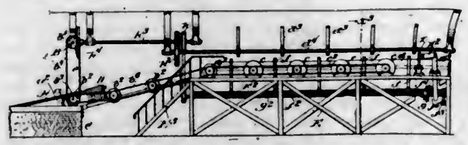


1. A shear consisting of a continuous handle and blade, a blade pivotally mounted at one side of said blade and handle, an independent operating handle pivotally mounted and operable on the continuous handle, and gearing embodying an idler gear arranged to transmit motion from said handle to the pivoted blade.

2. A shear consisting of a continuous handle and blade, a blade pivotally mounted thereon provided with segmental teeth, an independent pivotally mounted handle provided with segmental teeth of less radii than the blade teeth, and an intervening idler gear meshing into the teeth of the blade and handle respectively, substantially as set forth.

3. In a shear, the combination of a blade and handle therefor, a blade pivotally mounted thereon and provided with gear teeth, a pivotally mounted handle provided with gear teeth, and an intervening toothed gear arranged to transmit motion from said handle to said blade, substantially as set forth.

883,458. GALVANIZING APPARATUS. LEONARD L. GIBBS, South Boston, Mass. Filed July 23, 1906. Serial No. 327,273.



1. In a galvanizing apparatus, the combination with the galvanizing tank; of an automatic conveyer to act upon the material which has been in the tank; supports for the material beyond said conveyer; wipers between the tank and the conveyer; a water tank located at one side of the conveyer; and means for laterally transferring the material from the supports into the water tank.

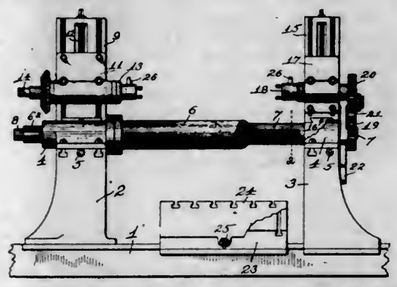
2. In a galvanizing apparatus, the combination with a galvanizing tank; of an automatic conveyer to act on the material which has been in the tank; rotating supports for the material beyond the conveyer; a water tank located at the side of said rotating supports; means for laterally transferring the material from the said supports into the water tank; and means for automatically discharging the material from the water tank.

3. The combination with a galvanizing tank; of a conveyer wheel having a concave beveled surface to afford a frictional grip on the material; a series of rotating supports beyond the said conveyer; a water tank adjacent to said supports; and arms movable across the path of said supports to engage the material thereon and discharge it into the water tank.

4. The combination with the galvanizing tank; of adjustable wipers located adjacent thereto; an adjustable conveyer wheel to engage the material issuing from the tank at a point beyond said wipers; a conveying support beyond the conveyer wheels; a water tank having a concave bottom and located adjacent to said support; and revolving arms, the ends of which travel through said water tank adjacent to the bottom thereof to engage and eject the material therein.

5. In a galvanizing apparatus, the combination with a galvanizing tank; of an automatic conveyer to act upon the material which has been treated in the tank; wipers between said tank and said conveyer; a water tank; means for discharging the material from the conveyer into the water tank; and means operated by the material for causing the operation of the discharging means.

883,459. CYLINDER-BORING MACHINE. WILLIAM J. HAGMAN, Philadelphia, Pa., assignor to Niles-Bement-Pond Company, Jersey City, N. J. Filed Jan. 18, 1908. Serial No. 411,408.



1. A cylinder boring machine comprising, a bed-plate, a pair of housings mounted thereon, a bearing mounted for horizontal adjustment on each housing, a main boring-bar journaled in said bearings, a secondary boring-bar journaled in the housings parallel with the main boring-bar, a super-housing mounted for adjustment on one of the housings transversely of the bed-plate, a bearing-bracket mounted for vertical adjustment on the super-housing, a tool-bar journaled in said bearing bracket and adapted to carry a facing tool at its inner end, and means for transmitting rotation to said boring bars and tool-bar, combined substantially as and for the purpose set forth.

2. A cylinder boring machine comprising, a bed-plate, a pair of housings mounted thereon, a bearing mounted for horizontal adjustment on each housing, a main boring-bar journaled in said bearings, a secondary boring-bar journaled in the housings parallel with the main boring-bar, super-housings mounted for adjustment on the housings transversely of the bed-plate, bearing brackets mounted for vertical adjustment on the super-housings, tool-bars journaled in said bearing brackets and adapted to carry facing tools at their inner ends, and means for transmitting rotation to said boring bars and tool-bars, combined substantially as and for the purpose set forth.

3. A cylinder boring machine comprising, a bed-plate, a pair of housings mounted thereon, a bearing mounted for horizontal adjustment on each housing, a main boring-bar journaled in said bearings, a secondary boring-bar journaled in the housings parallel with the main boring-bar, super-housings mounted for adjustment on the housings transversely of the bed-plate, bearing-brackets mounted for vertical adjustment on the super-housings, tool-bars journaled in said bearing brackets and adapted to carry facing tools at their inner ends, a gear fast on the outer end of one of the boring-bars, a gear fast on one of the tool-bars, an intermediate gear engaging said two gears, and an adjustable tumbler carrying said intermediate

gear, combined substantially as and for the purpose set forth.

4. A cylinder boring machine comprising, a bed-plate, a pair of housings mounted thereon, a main boring-bar and a secondary boring-bar supported by said housings, a table-base mounted for adjustment on the bed-plate between the housings and having sloping upper surfaces, super-tables secured to said sloping surfaces over the table-base and having horizontal upper surfaces, and means for adjusting the super-tables up and down said sloping surfaces, combined substantially as and for the purpose set forth.

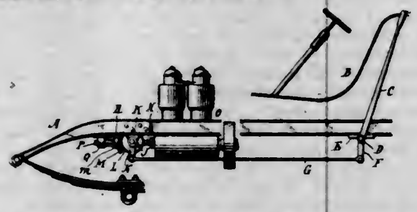
883,460. INDEXED BOOK. WILLIAM I. HARP, Galax, Va. Filed Feb. 20, 1906. Serial No. 302,035.



1. In a book, the combination with a cover and a series of leaves, the edges of said leaves being located inside the edge of the cover, of a marginal index carried by the leaves, and a handle element mounted on one of the leaves and arranged to be projected beyond the cover in rear of the index, said handle element being foldable inside the outer margins of the leaves and cover.

2. In a book, the combination with a cover, and a series of leaves therein, the edges of said leaves being located inside the edges of the cover, of a marginal index carried by the leaves, and a handle plate hinged to one of the leaves and arranged to swing between a position in projecting relation thereto and to the cover and a position inside the outer margins of the leaves and cover.

883,461. EXPLOSIVE-ENGINE STARTER. CARL C. ILG, New York, N. Y., assignor, by direct and mesne assignments, of one-third to Nathan B. L. Cosel and one-third to Richard Frankenbush, New York, N. Y. Filed Mar. 15, 1907. Serial No. 362,492.



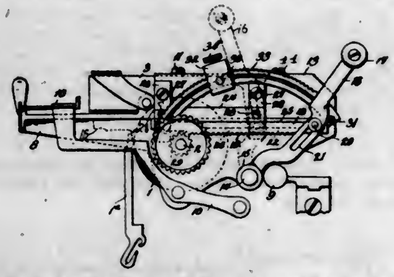
1. In an explosive engine starter, the combination with an engine, of a shaft connected with the engine and by which the engine may be actuated, a wheel fitting said shaft movably, the said wheel having internal ratchet teeth, the said shaft having recesses extending lengthwise from one end, the said wheel being placed on the shaft over the said recesses, pawls constructed to be inserted from the end of the shaft into said recesses after the wheel is in place and arranged to engage the ratchet teeth of the wheel, means for retaining the pawls against longitudinal displacement, and means for operating the wheel from a distance.

2. In an explosive engine starter, the combination with an engine, of a shaft connected with the engine and by which the engine may be actuated, a wheel fitting said shaft movably, the said wheel having internal ratchet teeth, the said shaft having recesses extending lengthwise from one end, the said wheel being placed on the shaft over the said recesses, pawls constructed to be inserted from the end of the shaft into said recesses after the wheel is in place and arranged to engage the ratchet teeth of the wheel, the said recesses having cavities and the said pawls having correspondingly shaped portions constructed to engage the said cavities whereby the pawls are movably retained in the cavities against lateral displacement, means for retaining the pawls against longitudinal displacement, and means for operating the said wheel from a distance.

3. In an explosive engine starter, the combination with an engine, of a shaft connected with the engine and by which the engine may be actuated, a wheel fitting said shaft movably, the said wheel having internal ratchet teeth, the said shaft having recesses extending lengthwise from one end, the said wheel being placed on the shaft over the said recesses, pawls constructed to be inserted from the end of the shaft into said recesses after the wheel is in place and arranged to engage the ratchet teeth of the wheel, the said recesses having longitudinal cylindrical cavities and the said pawls having correspondingly shaped portions constructed to enter the said cavities from the end of the shaft only whereby the pawls are movably retained in the cavities against lateral displacement, means for retaining the pawls against longitudinal displacement, and means for operating the said wheel from a distance.

4. In an explosive engine starter, the combination with an engine, of a shaft connected with the engine and by which the engine may be actuated, a wheel fitting said shaft movably, the said wheel having internal ratchet teeth, the said shaft having recesses extending lengthwise from one end, the said wheel being placed on the shaft over the said recesses, pawls constructed to be inserted from the end of the shaft into said recesses after the wheel is in place and arranged to engage the ratchet teeth of the wheel, means for retaining the pawl against longitudinal displacement, the end of the said shaft being threaded, a shaft-end engaging the threaded end of the shaft, and means for operating the said wheel from a distance.

883,462. TYPE-WRITING MACHINE. CHARLES E. KELLEY, New York, N. Y., assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of New Jersey. Filed Dec. 31, 1907. Serial No. 408,805.



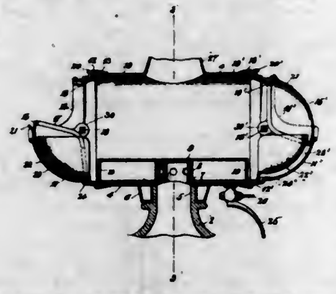
1. In a typewriting machine, the combination with a revoluble platen and a platen frame, of a pinion on the platen axle and connected thereto, a straight rack extending backwardly from the pinion, an upstanding lever loosely connected to said rack, and means for limiting the forward and backward strokes of the lever; said lever connected to move said rack into and out of engagement with the pinion, and guiding means being provided for the rack to maintain the latter in mesh with the pinion until the completion of the return stroke of the lever.

2. In a typewriting machine, the combination with a revoluble platen, of a pinion mounted upon the platen axle and connected to the platen, a straight rack in rear of the pinion and normally out of engagement therewith, a lever mounted upon the platen frame and connected to said rack to move it into engagement with the pinion, means maintaining the engagement of the rack and pinion during the forward and return strokes of the lever, the lever being capable upon its return stroke of moving the rack out of mesh with the pinion, and adjustable means for limiting the lever stroke.

3. In a typewriting machine, the combination with a revoluble platen and a platen frame, of a pinion connected to the platen, a straight rack mounted upon the platen frame and extending forwardly and backwardly and normally out of engagement with the pinion, said rack of sufficient length to effect more than an entire revolution of the pinion and platen, a lever connected to the rack to move the same into engagement with the pinion to rotate the latter, means for maintaining engagement between the rack and pinion during the reciprocation of the lever, and adjustable means to limit the stroke of the lever; the latter being connected to withdraw the rack from the pinion.

4. In a typewriting machine, the combination with a revoluble platen, a platen axle, a platen frame, in which said axle is journaled and a line-space mechanism for the platen, of a pinion mounted on the platen axle outside of the platen frame, a rack normally out of mesh with the pinion and extending rearwardly therefrom, means for guiding said rack in a forward and backward movement, a crank pivoted at its lower end upon the platen frame in rear of the platen axle and having a pin-and-slot connection to the rear portion of said rack, the rack being movable by the crank into engagement with the pinion, and rack-guiding means being constructed to maintain engagement of the rack with the pinion during the forward and rearward strokes of the rack, and the latter being movable by the crank rearwardly out of engagement with the pinion, a sector provided with an adjustable stop for limiting the forward stroke of the crank, and a stop to limit the return stroke of the crank.

883,463. STERILIZING APPARATUS. EDWARD KRONMAN, New York, N. Y. Filed July 18, 1907. Serial No. 384,458.



1. A sterilizing receptacle provided with a rounded end, a hand-opening formed in the upper part of the rounded end, a door conforming to the shape of such end for closing the opening, a pocket formed below the opening and into which the door slides, and drain holes between said pocket and the interior of the receptacle substantially as described.

2. A sterilizing receptacle comprising a horizontal elongated body provided with rounded ends, a hand-opening in the upper part of the end, a door shaped like the segment of a sphere for closing said opening and pivoted at its respective ends and adapted to gravitate into open position, and releasable means for holding the door in closed position.

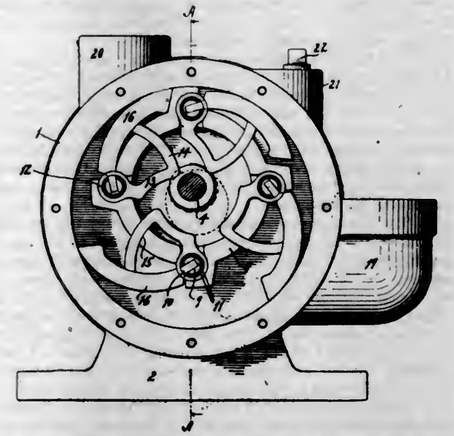
3. A sterilizing receptacle comprising a horizontally-arranged elongated body provided with rounded ends each having a hand-opening formed in the upper part thereof, a curved pivoted door for each end conforming to the rounded shape thereof for closing said opening, and releasable means for holding the door in closed position, substantially as described.

4. A sterilizing receptacle comprising a horizontally-arranged elongated body provided with rounded ends of a hemispherical shape, each having the upper part thereof cut away to form a hand opening, the lower edge of said hand opening being provided with a notch, a curved pivoted door for each end conforming to the shape thereof, a finger-piece mounted upon the outside of said door for raising the same into closed position and adapted to stand in the notch in the edge of the opening when the door is open, and releasable means for holding the door in closed position, substantially as described.

5. A sterilizing receptacle comprising an elongated body arranged horizontally and provided with rounded ends each formed with an annular offset or shoulder for fitting against the end of said body, each of said ends having a portion of its upper part cut away to form a hand-opening, a pivoted door for each end comprising a curved part conforming to the shape of the end and pivoted so as to gravitate into open position, and releasable means for holding the door in closed position, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

883,464. BLOWER. GEORGE W. LEIMAN and WILLIAM H. LEIMAN, New York, N. Y. Filed July 13, 1906. Serial No. 326,019.



1. The combination with a cylinder, a shaft extending through the cylinder and swinging blades indirectly connected with the shaft, of roller bearings for the blades and blade regulating dogs arranged to hold the roller bearings in position and a cam for operating the blade regulating dogs.

2. The combination with a cylinder, a shaft extending through the cylinder and swinging blades connected with the shaft, of blade regulating dogs hinged concentric with the blades and fixed cams for operating the dogs to regulate the positions of the blades during the rotary movement of the shaft.

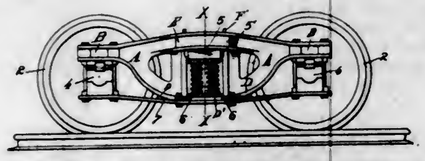
3. The combination with a cylinder, a blade support eccentrically located therein and blades hinged to the support, the said support having its ends recessed, of blade regulating dogs hinged to the blade support and extending through said recessed ends of the support and fixed cams in position to engage the dogs to positively hold the blades in position.

4. The combination with the cylinder, the blade support, the blades and the shaft connected with the blade support and extending through the cylinder, of a washer comprising a plurality of disks, one of said disks having a substantially non-yielding bearing face to close the joint between the shaft and the cylinder and another of said disks being of elastic material and a spring in position to bear against the elastic disk and through said elastic disk force the joint-closing disk toward the joint.

883,465. CAR-TRUCK SIDE FRAME. ARTHUR LIPSCHUTZ, Chicago, Ill. Filed Oct. 22, 1906. Serial No. 340,019.

1. The herein described improvement in car trucks comprising a single member side frame, adapted to rest upon the tops of the journal boxes, having bolster column portions and provided with continuous bottom and top chordal

portions, the latter curved outwardly at the middle, exposing the upper ends of the column portions, in combination with a locking bar bridging the otherwise open space between the tops of said column portions and brake hanger brackets formed on said locking bar, substantially as described.



2. The herein described improvement in car trucks, comprising a side frame having an opening in its top to receive a bolster, in combination with a locking bar closing the top of said opening and provided with integral brake hanger brackets, substantially as described.

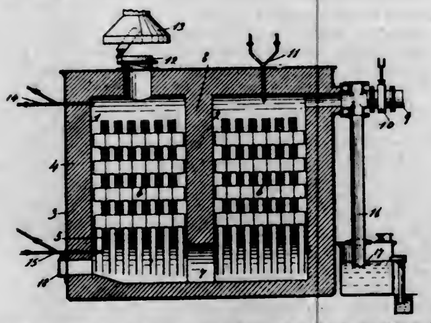
3. The herein described improvement in car trucks, comprising a single member cast steel side frame having ends to rest upon the tops of truck journal boxes and provided with a bolster and spring opening in its middle portion, a bottom flange, a top flange above said bolster and spring opening, and formed to permit a bolster to be dropped vertically into said opening, and an intermediately positioned supplementary flange on the outer side of said frame, substantially as described.

4. The herein described improvement in car trucks, comprising a single member side frame, adapted to rest upon truck journal boxes, and having a bolster and spring opening in its middle portion, said frame being composed of a bottom flange which forms a spring seat, a top flange above said opening and bent or bowed outwardly adjacent thereto to avoid closing the top of the opening, suitable vertical portions forming or framing the sides of said opening, vertical web portions, and an intermediate flange, parallel with said top flange, substantially as described.

5. The herein described improvement in car trucks, comprising a single member side frame, having a bolster and spring opening in its middle portion and composed of a bottom flange, vertical portions rising therefrom at the sides of said opening, a top flange meeting and bowed out adjacent to the upper ends of said vertical portions, a flange below the top flange and parallel therewith, and suitable web portions, substantially as described.

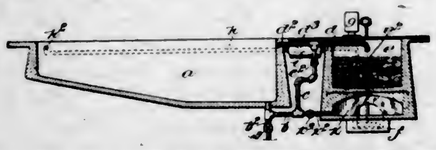
[Claims 6 to 14 not printed in the Gazette.]

883,466. PROCESS OF MAKING GAS AND COKE. LEON P. LOWE, San Francisco, Cal. Filed Jan. 30, 1905, Serial No. 243,171. Renewed Feb. 25, 1908. Serial No. 417,704.



The process of making gas and coke which consists in simultaneously highly heating two segregated bodies of loosely piled refractory material and a retort chamber, discontinuing the step of heating, passing steam into contact with one body of refractory material to superheat the steam, passing oil directly into the retort chamber to distil the oil, retaining the non-volatile components of the oil in said chamber in the form of coke, and passing only the steam so superheated and the volatile portion of the oil so distilled together into contact with the second body of refractory material, to make combustible gases, substantially as described.

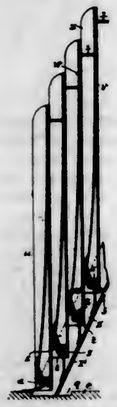
883,467. WATER-PURIFYING SYSTEM FOR SWIMMING-TANKS. GARRYT D. MITCHELL, Chelsea, Mass., assignor to The Swimming Pool Filtration Company, a Corporation of Massachusetts. Filed Mar. 10, 1905. Serial No. 249,355.



1. The combination with a swimming tank; of a filter adjacent thereto; a pipe leading from the bottom of the tank and having an outlet above the top of the filter; a pipe leading from a point below the filter to the top of the tank; a pump to convey filtered water to the tank through said pipe; a heating device adjacent to said pipe; a by-pass between the bottom of the tank and the pipe which leads from below the filter; and means for controlling the pipes whereby water can be circulated and heated without being passed through the filter.

2. The combination with a swimming tank; of a filter bed; a reservoir below said filter bed; a pipe leading from the bottom of the tank directly to said reservoir and provided with a valve; a pipe leading from the bottom of the tank to the top of the tank and provided with a valve; and a pipe leading from the reservoir to the top of the tank, substantially as described.

883,468. BILL-FILE. WILLIAM MOLENAAR, Paterson, N. J. Filed July 27, 1907. Serial No. 385,774.



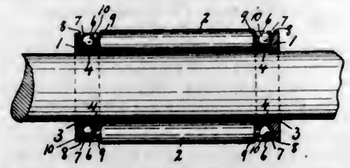
1. The combination, of a suitable support, a pivot arranged therein, and a bill-holder, said bill-holder comprising a member having a bearing on said pivot and a lip parallel with the same and another member opposed to said first-named member and having its lower end turned in between said lip and the pivot and then turned off at an angle, substantially as described.

2. The combination, of a suitable support, a pivot arranged therein, a bill-holder, said bill-holder comprising a member having a bearing on said pivot and a lip parallel with the same and another member opposed to said first-named member and having its lower end turned in between said lip and the pivot and then turned off at an angle, and springs arranged on said pivot and bearing against the support and said other member, substantially as described.

3. A bill-holder comprising a pivot and two members, one of said members being arranged on the pivot and the other member having a portion thereof extended between the pivot and said first-named member and having a bend locking it in position, substantially as described.

4. The combination of a suitable support and pairs of coactive bill-holder members pivoted therein face to face, each relatively rear member in each pair having the free edge-portion thereof cut out to form a lip and said lip being bent off at an angle to the body of said members exposing the upper portion of the corresponding front member and spacing said rear member from the front member of the pair of members back of it, substantially as described.

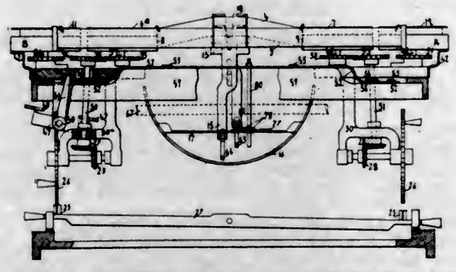
883,469. ROLLER-BEARING. GEORGE A. MCKEEL, Jackson, Mich., assignor to George A. McKeel & Company, Limited, Jackson, Mich., a Partnership Association. Filed Feb. 16, 1905. Serial No. 245,894.



1. In a roller bearing, two rings spaced apart and each provided on its inner face with a plurality of approximately semi-spherical spaced recesses opening through the periphery of the rim, each of said rings having a channel in the periphery surrounding each opening to form a marginal flange at the upper end of the opening, rollers having ball-ends bearing in said recesses, the said flanges on the periphery of the rings surrounding said recesses overlapping the ball-ends of the rollers and forming the upper wall of the ball seat and also holding the rollers in position in the rings.

2. In a roller bearing, two rings spaced apart and provided with a plurality of approximately semi-spherical spaced recesses in their inner faces, the inner ends of said recesses being of slightly less width than those of the recesses, the said recesses being open through the periphery of the rings, and said rings having channels surrounding the recesses to form flanges, rollers having balls at their ends seated in said recesses and having necks seated in the inner ends of the recesses, the said flanges formed on the rings extending over the ball-ends to form a part of the bearing wall therefor and hold the balls in the recesses.

883,470. TYPE-WRITING MACHINE. JOHN C. MCLAUGHLIN, New York, N. Y., assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of New Jersey. Filed Oct. 19, 1905. Serial No. 283,440.



1. In a typewriting machine, the combination of two pairs of spools, each spool provided with a gear, two winding gears for said spools, and means for vibrating said winding gears to engage with either pair of spool gears.

2. In a typewriting machine, the combination of two pairs of spools, each spool provided with a gear, two winding gears for said spools, and means for vibrating said winding gears to engage with either pair of spool gears, and means for reversing the direction of winding of the ribbons.

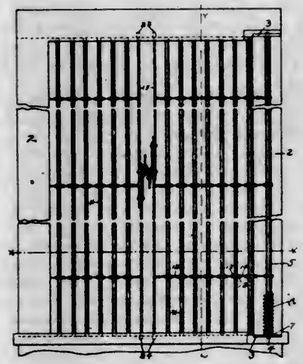
3. In a typewriting machine, the combination with two pairs of spools, each provided with a gear, of two winding gears, shafts upon which said winding gears are mounted, means for vibrating said shafts so that their gears may mesh with either pair of spool gears, means for rotating said shafts, and means for reversing said shaft rotating means so as to reverse the direction of winding of the ribbons.

4. In a typewriting machine, the combination with a platen and types mounted to strike thereon, of two pairs of spools mounted edge to edge, one pair of spools between the spools of the other pair, so that two spools are at each side of the printing point, gears upon all of said spools, two winding gears one at each side of the printing point, and means for vibrating said winding gears simultaneously either towards, or away from each other, so as to engage either pair of spool gears.

5. In a typewriting machine, the combination with a platen, of two pairs of spools mounted edge to edge, one pair of spools between the spools of the other pair, so that two spools are at each side of the printing point, gears upon all of said spools, winding gears one at each side of the printing point, shafts whereon said winding-gears are mounted, means for vibrating said shafts so as to cause said winding gears to mesh with either pair of spool gears, means for rotating said shafts, and means for changing the direction of rotation of said shafts so as to cause the direction of travel of the ribbon to reverse.

[Claims 6 to 15 not printed in the Gazette.]

883,471. LOCKING-BOLT FOR GUARDS TO OPENINGS. CLARENCE W. MCNEIL, San Antonio, Tex., assignor of one-half to J. B. Armstrong, Cameron county, Tex. Filed Mar. 22, 1907. Serial No. 363,991.

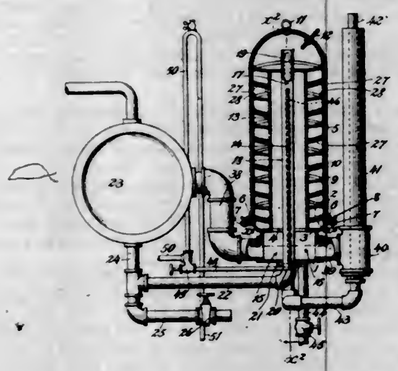


1. In combination with a guard or the like, means for locking the same composed of two movable members, means whereby said members may have a sliding movement, a bar connected to one of the members, and an operating lever connected to said bar and to the other member whereby when said lever is operated said members will be actuated towards and away from one another in unison.

2. In combination with a guard or the like, means for locking the same composed of two movable members having a pair of pin and slot connections, therebetween, a bar pivotally connected at one of its ends to one of said pins, and an operating lever pivoted to the other pin near its

base and pivoted to the other end of said bar at an intermediate point whereby when said lever is operated said members will be actuated towards and away from one another in unison.

883,472. OIL-GASIFIER. WILLIAM H. NEHER, Inglewood, Cal. Filed Feb. 26, 1906. Serial No. 302,892.



1. A base, a vaporizing member above the base, a dome housing and nesting with the vaporizing member, flanges on the vaporizing member extending to the wall of the dome and forming a series of chambers, the flanges having openings whereby a tortuous passage is formed, means for conveying fuel to the flanges, means for conducting heated air through the tortuous passage, and means for conveying gas from the interior of the dome.

2. A base, a vaporizing member above the base, a dome housing and nesting with the vaporizing member, means for conducting exhaust gas through the vaporizing member, flanges on the vaporizing member extending to the wall of the dome and forming a series of chambers, the flanges having openings whereby a tortuous passage is formed, means for conveying fuel to the flanges, means for conducting heated air through the tortuous passage, and means for conveying gas from the interior of the dome.

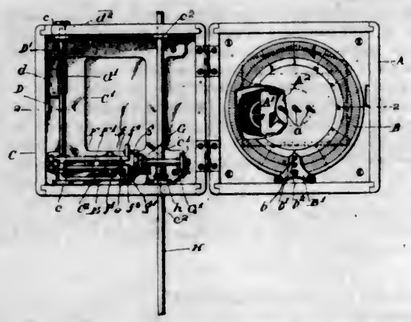
3. A base, a vaporizing member above the base, a dome housing and nesting with the vaporizing member, flanges on the vaporizing member extending to the wall of the dome and forming communicating chambers, means for conducting fuel to the flanges, and means for conducting hot air to the passages, so that as the fuel flows down the flanges it is brought into direct contact with the hot air which is passing up through the chambers.

4. A base, a vaporizing member above the base, a dome housing and nesting with the vaporizing member, means for conducting exhaust gas through the vaporizing member, flanges on the vaporizing member extending to the wall of the dome and forming communicating chambers, means for conducting fuel to the flanges, and means for conducting hot air to the passages, so that as the fuel flows down the flanges it is brought into direct contact with the hot air which is passing up through the chambers.

5. A base, a vaporizing member above the base, a dome housing and nesting with the vaporizing member, flanges on the vaporizing member extending to the wall of the dome and forming communicating chambers, means for conducting fuel to the flanges, and means for conducting hot air to the passages, so that as the fuel flows down the flanges it is brought into direct contact with the hot air which is passing up through the chambers, the vaporizing member having a diametrical partition which gives an up and down circuit of the exhaust gas in its passage through the vaporizing member.

[Claims 6 to 28 not printed in the Gazette.]

883,473. TIME-RECORDER. ABRAHAM A. NEWMAN, Chicago, Ill. Filed Jan. 12, 1906. Serial No. 295,700.



1. The combination with a reciprocating device having long movements which it is desired to record of a second device capable of shorter reciprocations, a clock operated record-carrying device, two recording devices arranged to produce different records on a sheet carried by said record-carrying device, means whereby the second reciprocating device produces alternate operations of the recording devices as it is reciprocated, and means of connection between said two reciprocating devices whereby they complete their reciprocations at approximately the same time.

2. The combination with a reciprocating device having long movements which it is desired to record, of a second device capable of shorter reciprocations, a clock operated record-carrying device, two recording devices arranged to produce different records on a sheet carried by said record-carrying device, means whereby the second reciprocating device produces alternate operations of the recording devices as it is reciprocated, and means of connection between said two reciprocating devices whereby said first device moves throughout a part of its stroke without affecting said second device and then moves the same for a comparatively short stroke.

3. The combination with a reciprocating device having long movements which it is desired to record, of a second device capable of shorter reciprocations, a clock operated record-carrying device, means for marking in a distinguishable manner on a sheet carried by said record-carrying device the successive reciprocations of said second reciprocating device, and means of connection between said two reciprocating devices whereby they complete their reciprocations at substantially the same time.

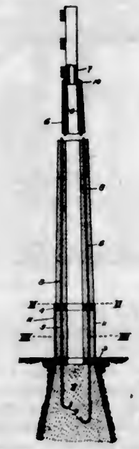
4. The combination with a clock-movement and means operated thereby for carrying a record-dial, of two independent markers arranged to produce records in different radial positions on the record-dial, a rock-shaft, projections carried by the rock-shaft and engaging the markers to move one of them when the rock-shaft is turned in either direction, a second projection on the rock-shaft, a reciprocating rod, and means on the rod engaging said second projection on the rock-shaft to rock it in opposite directions as the rod is reciprocated.

883,474. POLE. ROBERT S. ORR, Allegheny, Pa. Filed Oct. 11, 1907. Serial No. 396,900.

1. A pole, the combination of a supporting base of concrete or the like, a hollow cylindrical tapering body portion of concrete provided with a metallic base ring, an upper terminal element set on the top of the pole, and metallic tension members connected with said terminal element, passing through the concrete wall and base of the pole, and having holding ends anchored in the base, substantially as set forth.

2. In a pole, the combination of a supporting base of concrete, a hollow cylindrical tapering body portion of concrete provided with a terminal base ring set on said base and a supplemental strengthening ring transversely arranged across the body portion of the pole somewhat

above said base ring, an upper terminal member, and metallic tension members connected with said terminal, passing through the body portion of the wall of the pole and through the supplemental and base rings respectively and having anchoring terminals embedded in the supporting base, substantially as set forth.



3. A pole comprising a base of concrete, an oppositely located terminal, a hollow body portion of concrete provided with a terminal base ring and a supplemental upper strengthening ring, tension members connected with the terminal, passing through the body portion of the shell of the pole and through said rings and anchored in the concrete base, and a surrounding protecting apron inclosing the base portion of the pole between said rings, substantially as set forth.

4. The combination with a supporting base, of a ring set thereon, a hollow cylindrical section of concrete set on said ring, an upper hollow cylindrical tapering section with an intervening strengthening ring, a terminal element, and tension members connected with said element extending downwardly through the wall of the hollow concrete sections and rings and anchored in the supporting base, substantially as set forth.

5. The combination with a supporting base, of a ring set thereon, a hollow cylindrical section of concrete set on said ring, an upper hollow cylindrical tapering section with an intervening strengthening ring, a terminal element, tension members connected with said element extending downwardly through the wall of the hollow concrete sections and rings and anchored in the foundation base, and a surrounding sheet metal apron embracing the lower section of concrete and said rings, substantially as set forth.

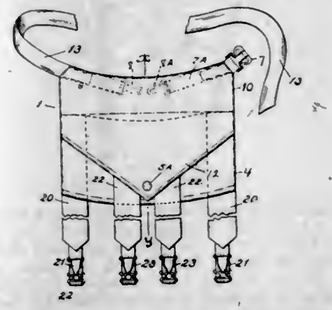
[Claims 6 to 8 not printed in the Gazette.]

883,475. COMBINED POCKET AND GARMENT SUPPORTER. BERTHA OBTELL, New York, N. Y. Filed Sept. 29, 1905. Serial No. 280,699.

1. An abdominal pocket comprising a main portion and a flap, said flap being adapted to cover the pocket, means for securing the pocket to the body, hose supporters attached to the main portion of the pocket, and other hose supporters attached to the flap.

2. An abdominal pocket comprising a main portion and a flap, a waist-band secured to the main portion, metallic fasteners adapted to engage with the stud of a corset, hose supporters attached to the main portion of the pocket, and other hose supporters attached to the flap.

3. An abdominal pocket comprising a main portion and a flap, the flap being arranged to cover the pocket, means for securing the flap in closed position, a waist-band secured to the main portion of the pocket, means for adjustably securing said band about the body, metallic fasteners secured to said band, said fasteners being adapted to engage with the stud of a corset, elastic hose supporters attached to the main portion of the pocket, other elastic hose supporters attached to the flap, and means for adjusting the length of said hose supporters.

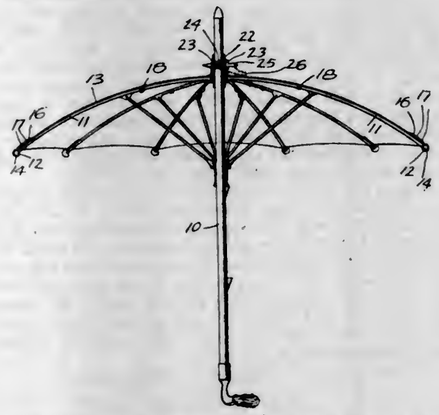


4. An abdominal pocket, a flap covering said pocket, means for holding the flap in closed position, a waist-band for securing the pocket to a body, hose supporters attached to said pocket, and other hose supporters attached to the flap.

5. An abdominal pocket comprising a main portion and a flap, said flap being adapted to cover the pocket, a waist-band secured to the main portion of the pocket, means for adjustably securing said band about the body, means for connecting the pocket with the stud of a corset, hose supporters attached to the main portion of the pocket, and other hose supporters attached to the flap.

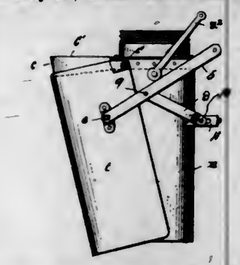
[Claim 6 not printed in the Gazette.]

883,476. REMOVABLE UMBRELLA-COVERING. MARY E. PARIS, Newkirk, Okla. Filed Apr. 13, 1907. Serial No. 368,042.



The combination with a parasol frame including a staff and ribs, of a cover adapted for detachable engagement upon the frame, means located at the edge of the cover and engageable detachably with the ends of the ribs for securing the edge of the cover to the ribs at this point, means separate from the cover for securing the same to the ribs adjacent their middle, said means comprising a clip adapted to engage the rib of the umbrella and having pins pivoted thereto embracing the rib, the pins being adapted to be passed through the edges of the seamed part of the cover and engaged on their ends with a keeper, a ferrule located centrally of the cover and engageable over the end of the staff, and a pin for securing the ferrule in this engagement.

883,477. BAG-HOLDER. RICHARD V. PARR, Fordwick, Va. Filed May 27, 1904. Serial No. 210,118.



1. A bag holder comprising a closed top, a fixed section on one side thereof, a hinged section on the other the edges of which overlap the edges of said fixed section, said hinged section being provided with a closed top, levers pivoted to one section and connected by links to the other, and a yielding connection between said parts, whereby the size of the bag holder when expanded may adjust itself automatically to the size of the bag, substantially as set forth.

2. In a bag holder, the combination of the top, the fixed section, the pivoted section, the pivoted levers for operating the pivoted section, links connecting them with the other section, said links being joined by a bar mounted in horizontal slots in a bracket on the side of said section and a spring interposed between the outer end of said bracket and said bar, substantially as set forth.

3. A bag holder comprising a pipe, a valve for covering the lower end of said pipe, levers for operating said valve, a fixed section secured on one side of said pipe, a pivoted section secured on the other side, and a link and lever connection for operating said pivoted section, the levers for operating said valve and said pivoted section being arranged on the same side of the device adjacent to each other, substantially as set forth.

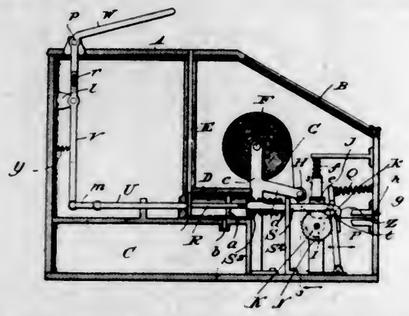
4. In a bag holder, the combination of the main pipe, a valve for closing its lower end, means for operating said valve, the fixed section of the bag holder on one side of the main pipe, the pivoted section on the other side arranged with its edges overlapping the edges of said fixed section, a top for closing the top of said sections, levers pivoted to said pivoted section and connected by links to said fixed section, and a yielding connection between them, the levers for operating said valve and said pivoted section being arranged on the same side of the device adjacent to each other, substantially as set forth.

5. In a bag holder, the combination of the delivery tube, the rock-shaft in its top, a valve for closing its lower end connected with said rock-shaft, an agitator also mounted on said rock-shaft, levers for operating said rock-shaft, the fixed section of the bag holder on one side of said pipe, the pivoted section on the other side, and a link and lever connection for operating said pivoted section, the levers for operating said valve and said pivoted section being arranged on the same side of the device adjacent to each other, substantially as set forth.

[Claims 6 and 7 not printed in the Gazette.]

883,478. COIN-CONTROLLED APPARATUS. THOMAS S. PATTERSON, Morgantown, W. Va. Filed Nov. 6, 1907. Serial No. 400,926.

1. An apparatus for the purpose described, comprising a casing having a slot for the passage of a strip, means within the casing for supporting a rolled strip, a slide movable fore and aft and having a forwardly extending rack bar, means for moving said slide and rack bar rearward, a shaft disposed transversely in the casing and having a strip feeding roller fixed thereon, a roller yieldingly pressed toward the feed roller for retaining the strip in frictional contact therewith, a peripherally toothed gear fixed on the shaft and having a ratchet, a gear loose on the shaft and having peripheral teeth in mesh with the rack bar and also having a pawl arranged to engage the teeth of the ratchet, a spring-pressed lever, toothed to engage the peripheral teeth of the first mentioned gear, and a swinging catch carried by said lever and arranged to engage the rack bar.



2. An apparatus for the purpose described, comprising a casing having a slot for the passage of a strip, means within the casing for supporting a rolled strip, a slide movable fore and aft and having a forwardly extending rack bar, a shaft disposed transversely in the casing and having a strip feeding roller fixed thereon, a roller yieldingly pressed toward the feed roller for retaining the strip in frictional contact therewith, a ratchet fixed on the shaft, a gear loose on the shaft and having peripheral teeth in mesh with the rack bar and also having a pawl arranged to engage the teeth of the ratchet, and means for moving the rack bar rearward.

3. The combination in an apparatus for the purpose described, of a feed roller, a bar movable in opposite directions, means intermediate the bar and the roller for turning the latter on movement of the former in one direction, and spring-actuated means for normally locking the roller against rotation; the said means being arranged to be moved out of engagement with the roller on movement of the bar in the said direction and being also arranged to move out of engagement with the bar and into engagement with the roller, for the purpose set forth.

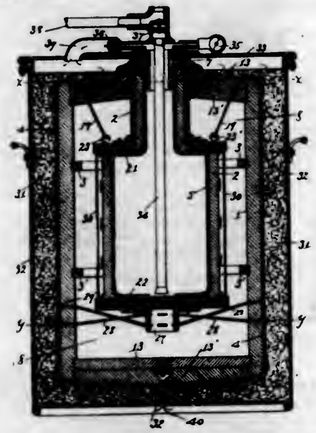
4. The combination in an apparatus for the purpose described, of a feed roller, a bar movable in opposite directions, means intermediate the bar and the roller for turning the latter on movement of the former in one direction, a spring-pressed lever arranged to normally hold the roller against rotation, and a swinging catch on said lever for engaging said bar.

5. The combination in an apparatus for the purpose described, of a feed roller, a toothed wheel fixed with respect to the feed roller, a loosely mounted toothed wheel, a ratchet connection between said wheels, a rack bar arranged to engage the second mentioned toothed wheel, means for moving the bar in one direction, a spring-pressed lever arranged to engage and lock the first mentioned toothed wheel, and a swinging catch on said lever for engaging the rack bar.

[Claim 6 not printed in the Gazette.]

883,479. INSULATED CONTAINER FOR LIQUID AIR, &c. JAMES F. PLACE, Glenridge, N. J., assignor to American Air Liquefying Co., a Corporation of New York. Filed Apr. 28, 1905. Serial No. 257,844.

1. A vessel for holding and preserving liquid air or other liquid gases, comprising in operative combination, an outer rigid case of wood or other material of relatively low thermal conductivity, inclosing a vacuum space; an impervious air-tight sheet metal envelop around said outer case; and an inner bottle made of impervious sheet metal suspended from said outer case within said vacuum space by non-conducting cords of silk or other fibrous material, said bottle having a long neck which is soldered or brazed to said air-tight envelop around said outer case—said envelop and said neck and bottle forming one complete air-tight inclosure, which incloses said outer case and the vacuum space therein.



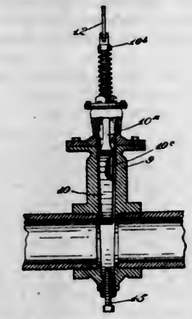
2. A container for holding liquid air or other substances and insulating the same against the normal heat of its environments, comprising in operative combination an outer rigid case having or surrounding therein a vacuum space; an impervious sheet metal envelop around and completely inclosing said outer case; and an inner insulating vessel within the vacuum space in said outer case, having a long tubular neck soldered or brazed air-tight to said impervious inclosure—said inner vessel being hung from said outer case by a plurality of pendent supports of fiber or other material of low thermal conductivity inside of said impervious inclosure.

3. A container for holding liquid air, or other substances and insulating the same against the normal heat of its environments, comprising in operative combination an outer rigid case of wood or other material of relatively low thermal conductivity, having or surrounding therein a vacuum space; an impervious sheet metal envelop around or inclosing said outer case; an inner insulating vessel within the vacuum space in said outer case, having a tubular neck connected or joined air-tight to said impervious envelop,—said inner vessel being hung from said outer case by a plurality of pendent supports of fiber or other material of low thermal conductivity, and forming with said tubular neck and said sheet-metal envelop one complete air-tight inclosure around said outer case and the vacuum space therein; and guys or lateral stays of low thermal conductivity fixed radially to said inner insulating vessel and to the walls of said outer rigid case.

4. A container for holding liquid air or other substances, and insulating the same against circumambient temperatures, comprising in operative combination an outer rigid case of wood or other material of relatively low thermal conductivity, having or surrounding therein a vacuum space; an impervious envelop around or inclosing said outer case; an inner insulating vessel within the vacuum space in said outer case, having a tubular neck connected or joined air-tight to said impervious envelop—said inner vessel being hung from said outer case by a plurality of pendent supports of fiber or other material of relatively low thermal conductivity, and forming with said tubular neck and said impervious envelop one complete air-tight inclosure around said outer case and the vacuum space therein; and guys or lateral stays of low thermal conductivity fixed radially to said inner insulating vessel and to the walls of said outer rigid case.

883,480. EMERGENCY CUT-OFF VALVE FOR STEAM-ENGINES. WILLIAM D. RANNEY, Columbus, Ohio. Filed Aug. 31, 1907. Serial No. 390,846.

1. A cut-off valve for the supply pipe of a steam engine consisting of a valve casing, a sliding gate therein, means for normally pressing said gate into open position, and means for manually and directly pulling said gate into closed position.

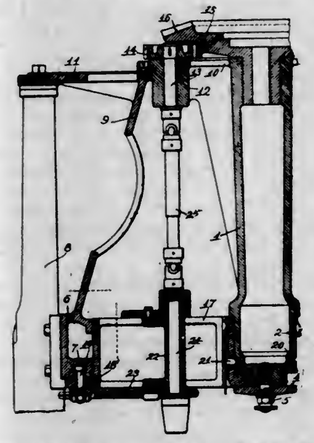


2. A cut-off valve for the supply-pipe of a steam-engine consisting of a valve-casing, a sliding gate therein, means for normally and yieldingly holding said gate in open position, and means for closing said gate on its seat, said gate being provided with a port in its face at the steam-supply side to admit steam pressure above it.

3. A cut-off valve for the supply-pipe of a steam-engine consisting of a valve-casing, a wedge-shaped rectilinearly sliding gate therein, means for normally and yieldingly holding said gate in open position, and manually operative means for closing said gate on its seat, said casing provided with a screw-jack to turn against the end of the gate to unseat the same after it has been closed.

4. A cut-off valve for the supply pipe of a steam engine consisting of a valve casing, a sliding gate therein, means for normally pressing said gate into open position, means for manually and directly pulling said gate into closed position, and a screw-jack to turn against the end of the gate after it is closed to unseat the same.

883,481. MULTIPLE DRILL. GEORGE T. REISS, Hamilton, Ohio, assignor to Niles-Bement-Pond Company, Jersey City, N. J. Filed Mar. 4, 1907. Serial No. 360,573.



1. A multiple drill comprising a central bearing, a ring concentrically surrounding the bearing, means for supporting the bearing and ring, a series of radial bars having their inner ends engaging the bearing and their outer ends engaging the ring, means for clamping the inner ends of the bars to the bearing, means for clamping the outer ends of the bars to the ring, and a spindle-bearing mounted for longitudinal adjustment on each bar, combined substantially as set forth.

2. A multiple drill comprising a central bearing, a ring

concentrically surrounding the bearing, means for supporting the bearing and ring, a series of radial bars having their inner ends removably engaging the bearing and having their outer ends removably engaging the ring, means for clamping the inner ends of the bars to the bearing, means for clamping the outer ends of the bars to the ring, and a spindle-bearing mounted for longitudinal adjustment on each bar, combined substantially as set forth.

3. A multiple drill comprising a central bearing, a ring concentrically surrounding the bearing, a connection between and above the bearing and ring, means for supporting the connected bearing and ring, a series of radial bars having their inner ends engaging the bearing and their outer ends engaging the ring, means for clamping the inner ends of the bars to the bearing, means for clamping the outer ends of the bars to the ring, and a spindle-bearing mounted for longitudinal adjustment on each bar, combined substantially as set forth.

4. A multiple drill comprising a central bearing, a ring concentrically surrounding the bearing and provided with a downwardly open annular bolt slot, means for supporting the bearing and ring, a series of radial bars having their inner ends engaging the bearing and their outer ends engaging upwardly against the slotted portion of the ring, said bars being removable downwardly from the ring and central bearing, means for clamping the inner ends of the bars to the bearing, bolts engaging said annular slot and the outer ends of the bars to serve in clamping the outer ends of the bars to the ring, and a spindle-bearing mounted for longitudinal adjustment on each bar, combined substantially as set forth.

5. A multiple drill comprising a central bearing provided with a downwardly presenting surface, a ring concentrically surrounding the bearing, means for supporting the bearing and ring, a series of radial bars having their inner ends engaging the bearing and their outer ends engaging the ring, a removable clamping disk carried by the end of the bearing below the inner ends of the bars and serving to clamp the inner ends of the bars against said downwardly presenting surface, means for clamping the outer ends of the bars to the ring, and a spindle-bearing mounted for longitudinal adjustment on each bar, combined substantially as set forth.

[Claims 6 and 7 not printed in the Gazette.]

883,482. STOPPER-EXTRACTOR. EDWARD RENKENBERGER, Buffalo, N. Y. Filed Apr. 28, 1906. Serial No. 314,219.

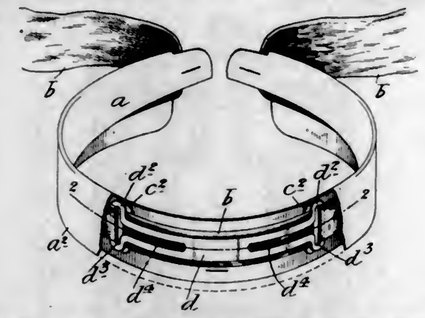


A stopper extractor comprising a handle having flat bottom surface, and a plurality of stopper engaging members, each member consisting of a piece of wire formed into a shank, an offset at one end of the shank, and a pointed hook-shape extremity, the shanks and offsets of the members being embedded in the handle so that the offsets prevent rotation of the members and the pointed extremities of the latter being disposed at an inclination of the said flat surface of the handle and pointing in a direction to permit all of the extremities to be engaged in a stopper by a turning movement of the handle.

883,483. NECKTIE SLIP DEVICE. CHARLES REYNOLDS, Jersey City Heights, N. J. Filed Oct. 24, 1907. Serial No. 398,881.

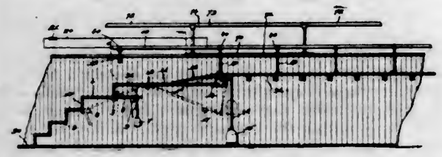
1. A slip device for neck ties comprising two oblong strips or plates of elastic material, one of said strips or plates being longer than the other and each being provided with transverse holes or apertures in their ends.

2. A slip device for neck ties comprising two oblong strips or plates of elastic material, one of said strips or plates being longer than the other and each being provided with transverse holes or apertures in their ends,



which communicate with longitudinal slots or openings formed therein.

883,484. AMUSEMENT DEVICE. HERBERT N. RIDGWAY, Boston, Mass. Filed Mar. 1, 1906. Serial No. 303,592.



1. In an amusement apparatus, the combination with a runway having a sinking floor section, of electrically charged hand rails adjacent said floor section.

2. In an amusement apparatus, a runway having a pivoted floor section in combination with electrically charged hand rails adjacent said floor section.

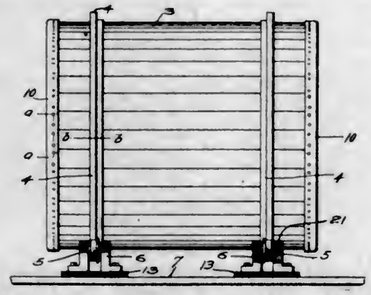
3. In an amusement device, a runway having a portion of the floor thereof movably mounted, in combination with electrically charged hand rails adjacent said portion of the floor.

4. An amusement apparatus comprising a runway having two pivoted floor sections arranged to turn about separate axes, one of said floor sections overlapping the other, and means to counterbalance said floor sections.

5. An amusement apparatus comprising a runway having a counterbalanced pivoted floor section 11 and a second pivoted floor section 12 extending in the opposite direction to the floor section 11 and overlapping the latter.

[Claim 6 not printed in the Gazette.]

883,485. AMUSEMENT APPARATUS. HERBERT N. RIDGWAY, Boston, Mass. Filed July 29, 1907. Serial No. 385,970.



1. An amusement apparatus comprising a horizontally-arranged disconnected and idle cylinder having each end entirely unobstructed and completely open and adapted for people to enter it through said open ends and stand upright therein, and rolls on which said cylinder is revolubly supported to freely turn in either direction by the weight of a person or persons within said cylinder at one side of the low point thereof.

2. An amusement apparatus comprising a horizontally-arranged, disconnected, idle, open-ended cylinder adapted for people to enter it at either end and stand upright therein, and a plurality of separate idler rolls on which the cylinder is revolubly supported to freely turn in either direction, said cylinder having a protecting strip 10 embracing each end thereof, said protecting strip being flush with the inner surface of the cylinder.

883,486. SWITCH-ACTUATING DEVICE. NORMAN F. ROADHOUSE, Detroit, Mich., assignor, by direct and mesne assignments, of one-fourth to John T. Etzel, one-half to William C. Gendron, and one-fourth to August Koernig, Detroit, Mich. Filed Jan. 18, 1907. Serial No. 352,844.



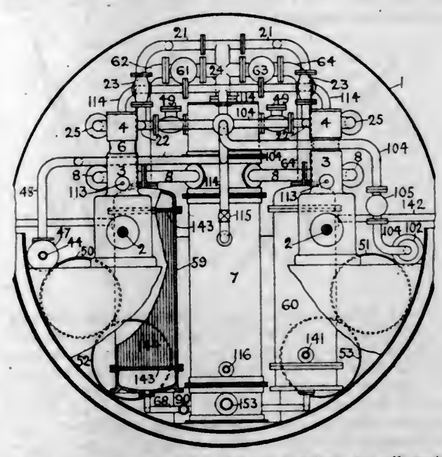
The combination of the track rails, turn out rails communicating therewith, a movable switch member at the junction of said rails, an operating lever lying within the rails of the track and jointedly connected with said switch member, said lever having an integral transverse portion crossing between the track rails and provided with rounded terminals, a car truck-frame movable along the track, shoes pivotally mounted on the truck-frame adjacent to and in advance of the wheels, said shoes being provided with means for engaging the track rails and each shoe having a depending lip to engage the rounded end of the transverse portion of said lever, means for independently depressing the shoes to carry them into contact with the rails of the track, and means for raising said shoes from the track rails.

883,487. AMMONIA APPARATUS. JOHN ROBSON, Wallsend, England, assignor to Clarke Chapman & Company Limited, Durham, England. Filed May 3, 1907. Serial No. 371,651.

1. The combination of a driven member, an oil motor and an ammonia motor connected to be severally and collectively operative on said driven member, means for storage of and supply of ammonia to the ammonia motor and means operable by the oil motor for regenerating the ammonia supply.

2. The combination of a driven member, an oil motor and an ammonia motor connected to be severally and collectively operative on said driven member, an ammonia generator in communication with the exhaust of the oil motor, means for supplying ammonia from the generator to the ammonia motor, an absorber, means for passing the gaseous exhaust from the ammonia motor to said absorber and means for returning ammonia in solution from the latter back to the generator.

3. The combination of a driven member, an oil motor and an ammonia motor connected to be severally and collectively operative on said driven member, an ammonia generator comprising a main chamber, a series of tubes therein, an intermediate chamber in communication with the exhaust of the oil motor, a series of tubes in said intermediate chamber, a water separator above said intermediate chamber, and a series of baffles in said separator, the latter being in communication with the main chamber through the aforesaid series of tubes in the intermediate chamber; means for supplying ammonia from the generator to the ammonia motor, a series of interconnected absorbers, means for passing the exhaust of the ammonia motor to the first of said absorbers, and means for returning ammonia in solution from the latter back to the generator.



4. The combination of a driven member, an oil motor having a water jacket and an ammonia motor connected to be severally and collectively operative on said driven member, an ammonia generator in communication with the exhaust of the oil motor, means for supplying ammonia from the generator to the ammonia motor, a series of interconnected absorbers, means for passing the gaseous exhaust from the ammonia motor to the first of said absorbers, a heat interchanger means for returning strong ammonia solution from the first absorber through the heat interchanger and oil motor water jacket back to the generator, and means in the last absorber for completely absorbing gaseous exhaust arriving therein from a preceding absorber.

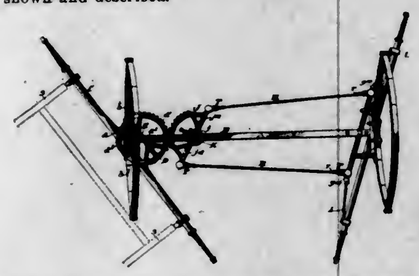
5. The combination of a driven member, an oil motor, and an ammonia motor connected to be severally and collectively operative on said driven member, an ammonia generator, means for passing exhaust gases from the oil engine through the generator, means for supplying ammonia from the generator to the ammonia motor, a series of interconnected absorbers, refrigerating coils therein, an auxiliary anhydrous ammonia receiver in communication with said refrigerating coils, means for passing products of evaporation in said coils to the ammonia motor, means for passing the gaseous exhaust from the ammonia motor to the first of said absorbers and means for returning ammonia solution from the latter back to the generator.

[Claims 6 to 11 not printed in the Gazette.]

883,488. SHORT-TURNING GEAR. THEODORE SANDSTROM, Indianapolis, Ind. Filed Aug. 9, 1907. Serial No. 387,767.

1. A vehicle gearing of the character described, comprising in combination with the front and rear axles and the reach bar having means at the opposite ends for sustaining the vehicle body, a fifth wheel having a king bolt connection with the front end of the reach bar, and supporting the front axle, a sixth wheel having a king bolt connection with the rear end of the reach bar and supporting the rear axle, a supplemental fifth wheel disposed in the plane of the fifth wheel and having a direct gear connection therewith, and coupled with the sixth wheel, an adjustable king bolt connection that joins the supplemental wheel of the reach bar, for the purposes specified.

2. In a vehicle gearing of the character described, the combination of a reach bar, the front and rear axles, a fifth wheel on the front axle, a sixth wheel on the rear axle, an adjustable supplemental fifth wheel in direct gear connection with the other fifth wheel, king bolt connections for pivotally mounting the fifth and sixth wheels on the reach bar, and rod connections that join the supplemental fifth wheel with the sixth wheel, substantially as shown and described.



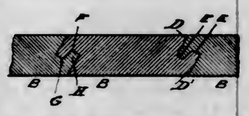
3. In a vehicle running gear of the character described, the combination with the front and rear axles, the fifth and sixth wheels mounted respectively on the said front and rear axles, the reach bar having means at the opposite ends for supporting the vehicle body, king bolt connections that pivotally join the fifth and sixth wheels with the reach bar; of a supplemental fifth wheel pivotally mounted on the reach bar, having direct gear connection with the front fifth wheel and having adjustment in the horizontal plane relatively to the said fifth wheel, and coupling devices that join with the supplemental fifth wheel at diametrically opposite points and with the sixth wheel, substantially as shown and described.

4. A vehicle gearing of the character described which comprises a fifth wheel mechanism and a sixth wheel mechanism, combined with means for transmitting motion from one mechanism to the other, the said means including a supplemental fifth wheel meshing with the fifth wheel mechanism and a journal bearing for the supplemental fifth wheel, adjustable in the longitudinal plane of the gearing.

5. In a vehicle gearing of the character described, the combination with the front axle, the rear axle, and the reach bar; of a fifth wheel mechanism fixedly connected with the front axle and pivotally mounted on the reach bar, the sixth wheel mechanism fixedly connected with the rear axle and pivotally mounted on the reach bar, and a supplemental fifth wheel mechanism that coöperates with the fifth and sixth wheel mechanisms for transmitting motion from one of the said mechanisms to the other, said fifth wheel mechanism being pivotally and adjustably mounted on the reach bar.

[Claims 6 to 11 not printed in the Gazette.]

883,489. JOINT FOR WOOD MEMBERS. FREDERICK A. SCHOSSOW, Detroit, Mich. Filed Oct. 19, 1907. Serial No. 398,253.

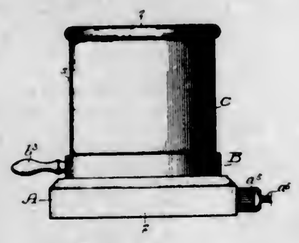


1. A joint for wood members formed with two edge faces spaced apart and parallel to each other and obliquely to the side faces of the members, the material between the spaced edge faces formed into an alternate block and socket, the face of the block which forms one wall of the socket being oblique to the said parallel edge faces, whereby the socket is formed with one converging wall and the block formed wedge shaped at one side.

2. A joint for wood members formed with two edge faces spaced apart and parallel to each other and extending obliquely to the side faces of the members, the material between the spaced edge faces formed into an alternate block and socket with the face of the block which forms one wall of the socket oblique to the said parallel edge faces, and provided with an intermediate longitudinal recess, whereby when two members are united the parallel edge faces will engage and the oblique sides block will enter the correspondingly formed sockets with the recesses disposed at opposite relations, and a dowel pin disposed in said recesses.

3. A member of the class described comprising a body formed with its edges provided with spaced parallel faces extending obliquely to the side faces of the body, the material between the parallel faces formed into alternate blocks and sockets with the faces of the blocks which form the outer walls of the socket oblique to the said parallel edge faces, whereby when a plurality of bodies are interengaged at their edges each alternate body is locked in position by the other alternate body and fastening means required in said last mentioned bodies only.

883,490. WATER-HEATER. ADOLPH W. SCHRAMM, Riverton, N. J., assignor to Electro Dental Manufacturing Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Nov. 14, 1907. Serial No. 402,066.



1. The combination in a heater of a supporting structure, and an electrical heating device movably mounted thereon, with current regulating means for said heating device having its parts placed so that it is operated when one of the members of the heater is moved relatively to the other.

2. The combination in a heater of a base, a cup structure movably mounted thereon, an electrical heating device for the cup structure, and a regulating device controlled by the movement of said structure relatively to the base.

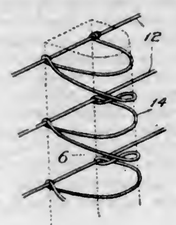
3. The combination of a base, a cup movably mounted thereon and provided with electrical heating means, a series of contacts attached to the heating means of the cup structure, terminals on the base for the attachment of current conductors, with contact members carried by the base in electrical connection with the terminals and engaging said contacts of the heating means.

4. The combination of a base, a cup structure having electrical heating means, a substantially vertical pivot movably connecting the cup structure to the base, a series of contacts mounted on the cup structure and respectively connected to different points of the heating means, a contact member or members carried by the base so as to be capable of engaging said contacts, with terminals for connecting said parts to a source of current supply.

5. The combination of a base, a cup structure mounted on said base and having electrical heating means, a series of contacts connected to said heating means and carried by the cup structure, a contact member carried by the base so as to be capable of engaging said contacts, with means tending to maintain the cup structure in such position relatively to the base that the contact member shall tend to remain in full engagement with each one of the contacts.

[Claims 6 to 15 not printed in the Gazette.]

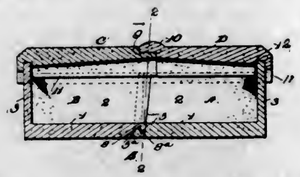
883,491. FENCE-POST. LOUIS H. SCOTT, Princeton, Ill. Filed Jan. 16, 1908. Serial No. 411,151.



1. In combination, a concrete fence-post having a flat face formed with a series of grooves and a rounded back portion, a vertical series of fence-wire strands crossing the face in said grooves, and means for fastening said strands in place comprising a single wire fastened at one end to the upper strand at one side of the post, passing thence across said back portion to the other side of the post where it is looped around the same strand, passing thence across said back portion to the next lower strand around which it is looped first at one and then the other side of the post, the strands being all thus fastened in succession by the wire looped around them at opposite sides of the post, in the manner set forth.

2. In combination, a concrete fence-post having a flat face formed with a series of grooves and a rounded back portion, a vertical series of fence-wire strands crossing the face in said grooves, and means for fastening the said strands in place comprising a single wire fastened at its upper end to the upper strand at one side of the post, passing thence across said back portion to the other side of the post where it is looped around the same strand, passing thence across said back portion to the next lower strand around which it is looped first at one end then at the other side of the post, the strands being all thus fastened in succession by the wire looped around them at opposite sides of the post in the manner set forth, the lower end of said single wire being embedded in the ground to form a lightning arrester.

883,492. PORTABLE BURIAL-VAULT. FRANK C. SEARLE, Wilmington, Del. Filed Oct. 5, 1907. Serial No. 396,062.

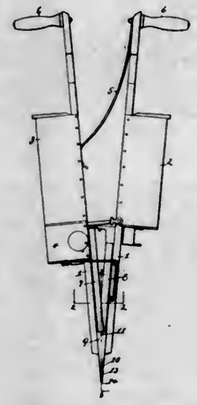


1. A grave vault comprising several slidably united sections arranged end to end in continuation of each other, said sections overlapping at the vertical and horizontal portions of their meeting ends and at said horizontal overlapping portions formed with interlocking depressions and corresponding raised portions fitting therein, substantially as described.

2. A grave vault comprising several sections arranged end to end in continuation of each other, each section comprising side walls and a floor and formed at its end with a groove extending throughout the width of each side wall and floor with a parallel adjacent raised portion, the meeting ends of the sections overlapping and interlocking with the raised portions fitting in the grooves, substantially as described.

3. A grave vault comprising sections arranged end to end with the end of one section slidable vertically down into the end of the other section, the floors of the sections formed with depressions and raised portions to vertically interlock, the side walls of the overlapping ends of the sections having vertical depressions and raised portions slidably interlocking, and a cover having depending flanges and grooves to receive the upper edges of the sections, said cover formed of overlapping sections, substantially as described.

883,493. COMBINED PLANTER AND FERTILIZER-DISTRIBUTER. GEORGE S. SHEFFIELD, Burr Oak, Mich., assignor to Sheffield Manufacturing Company, Burr Oak, Mich. Filed Oct. 20, 1906, Serial No. 339,834. Renewed Feb. 24, 1908. Serial No. 417,395.



1. In a combined planter and fertilizer distributer, the combination of a pair of pivotally connected bars having handles thereon; a bifurcated blade therefor, one point of which extends below the other, said blade consisting of two plate-like members secured to said bars, said members having telescoping flanges on their edges, and one of said members being provided with a vertical rib dividing said delivery blade into conduits leading to its said points; hoppers carried by said bars; and delivery chutes leading from said hoppers to the said conduits in said delivery blade, for the purpose specified.

2. In a combined planter and fertilizer distributer, the combination of a pair of pivotally connected bars having handles thereon; a bifurcated blade therefor, said blade consisting of two plate-like members secured to said bars, said members having telescoping flanges on their edges, and one of said members being provided with a vertical rib dividing said delivery blade into conduits leading to its said points; hoppers carried by said bars; and delivery chutes leading from said hoppers to the said conduits in said delivery blade, for the purpose specified.

3. In a combined planter and fertilizer distributer, the combination of a pair of pivotally connected bars having handles thereon; a bifurcated blade therefor, one point of which extends below the other, said blade consisting of two plate-like members secured to said bars, said blade having conduits leading to its said points; hoppers carried by said bars; and delivery chutes leading from said hoppers to the said conduits in said delivery blades, for the purpose specified.

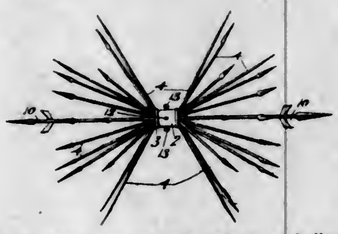
4. In a combined planter and fertilized distributer, the combination of a pair of pivotally connected bars having handles thereon; a bifurcated blade therefor, said blade consisting of two plate-like members secured to said bars, said blade having conduits leading to its said points; hoppers carried by said bars; and delivery chutes leading from said hoppers to the said conduits in said delivery blade, for the purpose specified.

5. In a combined planter and fertilizer distributer, the combination of a bifurcated delivery blade, one point of which extends below the other, said delivery blade having conduits leading to its said points; seed and fertilizer hop-

pers and delivery chutes leading from said hoppers to the said conduits in said delivery blade, for the purpose specified.

[Claims 6 and 7 not printed in the Gazette.]

883,494. PORTABLE BARBED MACHINE FOR MILITARY DEFENSE. KAZUMA SHIRAMINE, Vancouver, British Columbia, Canada. Filed Dec. 6, 1907. Serial No. 405,375.



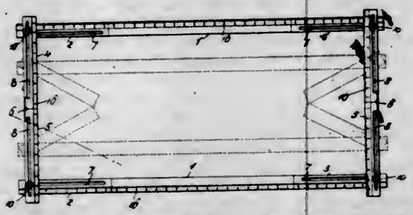
1. As a machine for military defense, a hollow cylindrical body in the ends of which a series of pointed rods are pivotally mounted, means for radially spreading such rods, said means comprising pistons the faces of which toward the inwardly projecting ends of the rods are inwardly conical or concave and means for forcing such pistons apart and into contact with the inwardly projecting ends of the rods.

2. As a machine for military defense, a hollow cylindrical body in the ends of which a series of pointer rods are pivotally mounted and means for radially extending such rods.

3. In a device of the class described, a hollow cylindrical body in the ends of which pointed rods are pivotally mounted the inner ends of such rods being curved toward the axis of the cylinder, pistons endwise movable within the hollow cylinder the faces of which pistons toward the inwardly projecting end of the rods are concave or inwardly conical, and means for forcing such pistons into contact with the ends of the rods.

4. In a device of the class described, a hollow cylindrical body, ends to this cylinder having apertures radially angled outward, a series of pointed rods pivotally mounted in these apertures and susceptible of being radially spread therefrom the inner ends of these rods being inwardly curved towards the axis of the cylinder, pistons endwise movable within the cylinder the faces of which pistons toward the ends of the cylinder are inclined toward the center, a rod or rods secured to each piston and projecting through the ends of the cylinder parallel to the axis of it, and an elliptic cam rotatable between the pistons.

883,495. CURTAIN-STRETCHER. JAMES SINES, Empire, Ohio. Filed Nov. 20, 1907. Serial No. 403,030.



1. A curtain stretcher comprising longitudinal bars each consisting of a central section, and end sections hinged thereto and adapted to fold under said central sections, and transverse bars each consisting of hinged sections adapted to fold inward above the end sections of the longitudinal bars.

2. A curtain stretcher comprising longitudinal bars each consisting of a central section, and end sections hinged thereto and adapted to fold under said central sections, and transverse bars each consisting of hinged sections adapted to fold inward above the end sections of the longitudinal bars, said end sections of the longitudinal bars and said hinged sections of the transverse bars being longitudinally slotted and adjustably connected together.

3. A curtain stretcher comprising longitudinal bars, each consisting of a central section grooved on its under side, and end sections hinged thereto, and recessed and grooved on their under sides, legs curved at the upper ends and pivotally secured within the recess of said end sections, and transverse bars adjustably secured to the end sections of the longitudinal bars, and each consisting of two hinged sections adapted to fold inward above said end sections.

4. In a curtain stretcher, the combination with sectional longitudinal bars provided with pins, of transverse bars also provided with pins, and each consisting of two hinged sections adjustably secured to the longitudinal bars and adapted to fold inward above the latter, and folding legs pivotally secured to the ends of said longitudinal bars.

883,496. PUMP. GOTLIEB SIPPERT, Bowdle, S. D. Filed Dec. 11, 1907. Serial No. 406,065.

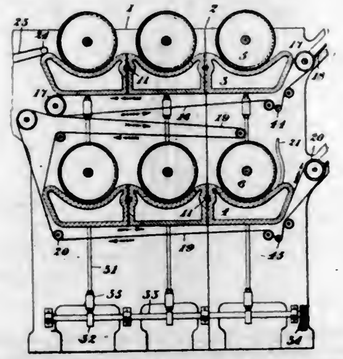


1. In a pump, the combination with the pump cylinder, the piston operable therein, and the piston rod, of a compression cylinder, a water conveying pipe passing through the compression cylinder and in communication with the pump cylinder, combined with a coupling member for the pump cylinder, the compression cylinder, and the water conveying pipe, said coupling comprising a threaded portion to receive the compression cylinder, and another threaded portion to receive the pump cylinder and an apertured disk portion to receive the water conveying pipe.

2. In a pump, the combination with the pump cylinder, the piston operable therein, and the piston rod, of a compression cylinder, a water conveying pipe passing through the compression cylinder and in communication with the pump cylinder, combined with a coupling member for the pump cylinder, the compression cylinder, and the water conveying pipe, said coupling comprising a threaded portion to receive the compression cylinder and an apertured disk portion to receive the water conveying pipe, said disk portion having a series of apertures opening communication between the pump and the compression cylinders.

3. In a pump, the combination with the pump cylinder, the piston operable therein, and the piston rod, of a compression cylinder, a water conveying pipe passing through the compression cylinder and in communication with the pump cylinder, combined with a coupling member for the pump cylinder, the compression cylinder, and the water conveying pipe, said coupling comprising a threaded portion to receive the compression cylinder, and another threaded portion to receive the pump cylinder, an apertured disk portion to receive the water conveying pipe, said disk portion having a series of apertures opening communication between the pump and the compression cylinder, said compression cylinder and said water conveying pipe being integrally formed and said compression cylinder having an internally threaded collar or neck portion, and a water off-take pipe threaded into said collar.

883,497. MANGLE. LEWIS H. SLAGHT, Toronto, Ontario, Canada. Filed Apr. 29, 1907. Serial No. 370,792.



1. In a mangle the combination of a steam chest and a coöperating roller; an apron adapted to take goods from the roller and draw them back to the feed end of the apparatus against the underside of the steam chest; an apron adapted to receive the goods from the aforesaid apron and carry them back to the delivery end of the apparatus out of contact with the aforesaid steam chest; a second steam chest and coöperating roller adapted to receive the goods from the last mentioned apron and deliver them at the feed end of the machine; and an apron adapted to take the goods from the roller and draw them back to the delivery end of the apparatus against the underside of the steam chest.

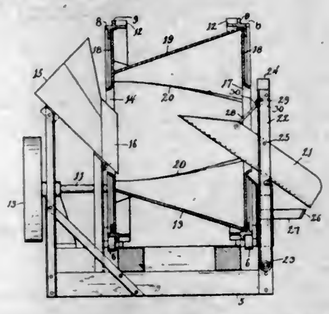
2. In a mangle two sets of heated mangling apparatus arranged the one over the other and through which the goods are moved in opposite directions in combination with means for carrying goods from one set to the other through the heated spaces between the two sets of apparatus.

3. In a mangle two sets of heated mangling apparatus arranged the one over the other and through which the goods are moved in opposite directions in combination with means for carrying goods from one set to the other through the heated space between the two sets of apparatus, one set being adapted to iron one side of the goods and the other set the other side of the goods.

4. In a mangle two sets of heated mangling apparatus arranged the one over the other and through which the goods are moved in opposite directions in combination with means for carrying goods from one set to the other through the heated space between the two sets of apparatus, one set being adapted to twice iron one side of the goods and the other to similarly treat the other side of the goods.

883,498. MACHINE FOR MIXING CONCRETE AND THE LIKE. THOMAS L. SMITH, Milwaukee, Wis., assignor to The T. L. Smith Company, Milwaukee, Wis., a Corporation of Wisconsin. Filed Feb. 24, 1905. Serial No. 247,080.

1. In a mixing machine, in combination with a mixing receptacle having head pieces and a portion between and connected to the head pieces and constituting a continuous rim, the said receptacle provided with a discharge opening, and the rim comprising a plurality of buckets or pockets extending from one head piece to the other and arranged about the receptacle axis, and alternately oppositely inclined with respect to each other from one head piece to the other, of means for charging the receptacle, and means for rotating said receptacle.



2. In a mixing machine, in combination with a mixing receptacle having head pieces and a portion between and connected to the head pieces, the said receptacle provided with a discharge opening, and the portion between the head pieces comprising a plurality of buckets or pockets extending from one head piece to the other and arranged about the receptacle axis and oppositely inclined with respect to each other from one head piece to the other, the said buckets or pockets being rounded, with the convex sides thereof outermost, of means for charging the receptacle, and means for rotating said receptacle.

3. In a mixing machine, in combination with a mixing receptacle having head pieces and a portion between and connected to said head pieces and constituting a continuous rim, the said receptacle provided with a discharge opening, and the rim comprising a plurality of converging buckets or pockets extending from one head piece to the other and arranged in reverse order about the receptacle axis, and alternately oppositely inclined with respect to each other from one head piece to the other, means for charging the receptacle, and means for rotating said receptacle.

4. In a mixing machine, in combination with a mixing receptacle having head pieces and a portion between and connected to said head pieces, the said receptacle provided with a discharge opening, and the portion between the head pieces comprising a plurality of converging buckets or pockets extending from one head piece to the other and arranged in reverse order about the receptacle axis, and alternately oppositely inclined with respect to each other from one head piece to the other, and the said buckets or pockets being rounded with the convex sides thereof outermost, of means for charging the receptacle, and means for rotating said receptacle.

5. In a mixing machine, in combination with a mixing receptacle having head pieces and a portion between and connected to said head pieces, the said receptacle provided with a discharge opening, and the portion between the head pieces comprising a plurality of buckets or pockets extending from one head piece to the other and arranged about the receptacle axis and alternately oppositely inclined with respect to each other from one head piece to the other, the meeting edges of said buckets or pockets being extended inwardly to form inwardly projecting walls, constituting interior agitating wings or blades, of means for charging the receptacle, and means for rotating said receptacle.

[Claims 6 to 18 not printed in the Gazette.]

883,499. COUPLING MEMBER FOR TOOL-HANDLES. WILLIAM E. SMITH, Pineville, Ky. Filed Apr. 17, 1906. Serial No. 312,219.

A coupler for sectional handles of shovels and the like comprising a tubular member of relatively short length

constructed of rigid unyielding material and having a central integral partition therein to provide two separate and independent sockets so as to permit each section of handle to be driven therein with their inner ends engaging with



the said partition, each of said sockets having openings therein and securing devices inserted through said openings and into the inclosed portions of the sections of handles, substantially as specified.

883,500. METHOD OF DETINNING. ELMER A. SPERRY, Brooklyn, N. Y. Original application filed Nov. 29, 1905, Serial No. 289,581. Divided and this application filed Jan. 9, 1907. Serial No. 351,403.



1. The method of preparing tin scrap, associated in part with foreign matter, for detinning which consists in classifying this scrap, subjecting one of the classes to a saponifying solution and to high temperature, bringing the classes together and introducing them jointly to the detinning process.

2. The method of preparing tin scrap, associated in part with foreign matter, for detinning which consists in classifying this scrap, subjecting one of the classes to a saponifying solution and to high temperature, bringing the classes together, heating same and introducing them jointly to the detinning process while still in a heated state.

3. The method of preparing tin scrap associated with foreign matter for anhydrous detinning which consists in cleaning and highly heating the scrap and then while hot subjecting it to the detinning process proper.

4. The method of preparing tin scrap associated with foreign matter, which consists in subjecting such scrap to treatment in a solution for cleansing same, the solution formed from a substance not removable by the subsequent heating step in the process, treating the scrap for removal of such substance and also to a high temperature preparatory to detinning.

5. The method of preparing tin scrap associated with foreign matter which consists in subjecting such scrap to treatment in a solution for cleansing same, the solution formed from a substance not removable by the subsequent heating step in the process, mechanically cooling or draining the substance from the scrap, then treating the scrap for removal of such substance and also to a high temperature preparatory to detinning.

[Claims 6 to 11 not printed in the Gazette.]

883,501. SEAL. JOSEPH G. SWALLOW, New York, N. Y. Filed Oct. 5, 1907. Serial No. 396,016.



1. A seal having a U-shaped frangible shackle and means for rigidly uniting the ends thereof.

2. A seal having a U-shaped frangible shackle and a cement block rigidly uniting the ends thereof.

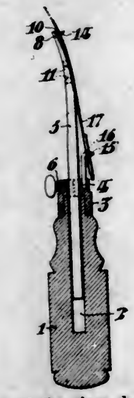
3. A seal having a frangible shackle, a filament within the same and means for rigidly uniting the opposite ends of both said shackle and filament.

4. A seal having a transparent hollow frangible shackle containing a liquid within the same.

5. A seal having a frangible shackle, a cement block rigidly uniting the ends thereof and a frangible containing-mold for said cement block.

[Claims 6 and 7 not printed in the Gazette.]

883,502. IMPLEMENT FOR REPLACING BRIDLE-TAPES IN PIANO-ACTIONS. GEORGE W. TILL, Philadelphia, Pa. Filed July 5, 1907. Serial No. 382,267.



1. An implement of the class described, comprising an adjustable tool arranged to determine the length of a bridle tape, and having means to connect said bridle tape to a piano action hammer, substantially as set forth.

2. In an implement of the class described, the combination with a handle; of a tool adjustably engaged in said handle; a spring claw arranged to hold a tack in operative relation with said tool; and, a hook carried by said handle, arranged to hold a bridle tape while being engaged with said tack, substantially as set forth.

3. In an implement of the class described, the combination with a handle; of a tool adjustably secured to said handle; a bifurcated spring claw arranged to hold a tack in operative relation with said tool; a hook on said handle arranged to hold a bridle tape while being engaged with said tack; and, a set screw arranged to detachably secure said tool in predetermined relation with said handle, substantially as set forth.

4. In an implement of the class described, the combination with a handle; of a tool arranged for longitudinal adjustment in said handle; a spring claw secured to said tool and comprising a bifurcated end arranged to embrace the stem of a tack and hold the head of said tack against said tool; a hook on said handle, arranged to hold a bridle tape while being engaged with said tack; and, a set screw arranged to variably secure said tool to said handle in position to determine the length of said bridle tape, substantially as set forth.

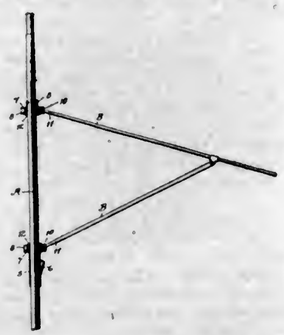
5. In an implement of the class described, the combination with a handle; of a tool fitted to reciprocate in said handle and having its outer end curved; a spring claw arranged to hold a tack local to the curved end of said tool, with the stem of said tack extending radially from said curved end; a hook on said handle arranged to hold the perforated end of said bridle tape while its other end is engaged with said tack; and, means arranged to secure said tool in adjusted position with respect to said handle, substantially as set forth.

[Claims 6 to 9 not printed in the Gazette.]

883,503. UMBRELLA CROWN AND RUNNER. HENRY C. WARFEL, Philipsburg, Pa., assignor of one-half to Thomas G. McCausland, Philipsburg, Pa. Filed Dec. 16, 1907. Serial No. 406,672.

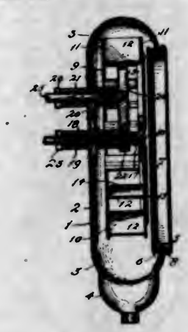
In a device of the character described, the combination of a tubular member forming the crowns and runners of

umbrellas, having a circular ridged outstanding flange adjacent one end thereof, and provided with slots extending longitudinally from its end adjacent said flange and toward the same, and a rib holding ring adapted for insertion upon said end having slots in the circular face



thereof provided with enlarged recesses at one end thereof for the reception of the head of an umbrella rib, said enlargements being next to said flange and said slotted ends of said tube being crimped upon the opposite face of said ring, substantially as described.

883,504. WATER-MOTOR. CHARLES WEBER, Columbus, Ohio. Filed Jan. 25, 1907. Serial No. 353,949.



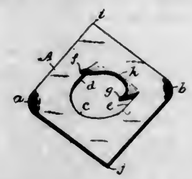
1. In a water motor, the combination with a casing open at one side, of a water wheel mounted in said casing, means for supplying water to said casing, and a cover plate adapted to be forced into the open side of the casing and to be frictionally held in position thereby.

2. In a water motor, the combination with a casing having an opening formed in one side thereof, of a flange surrounding said opening, and a cover plate adapted to be forced into engagement with said flange and to be frictionally held in position thereby.

3. In a water motor, the combination with a casing, of a shaft, a pinion mounted upon said shaft, a plurality of radial arms adapted to rotate with said shaft, a bucket carrying rim secured to said radial arms, said radial arms being located at one side of said rim, a gear wheel with which said pinion meshes, and a second shaft upon which said gear wheel is mounted, said pinion and said gear wheel lying within said rim.

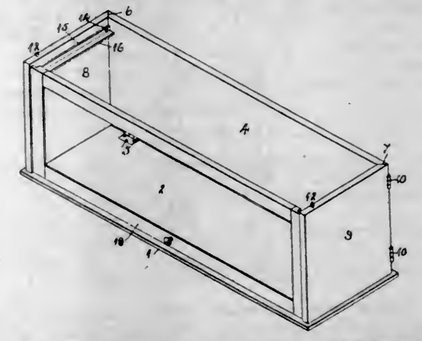
4. In a power wheel for water motors, the combination with a rim comprising a flat peripheral portion and upstanding flanges located upon each side of said peripheral portion, of rectangular pieces cut from the flat peripheral portion along three of their sides and being connected to said peripheral portion along the remaining side, said rectangular pieces being bent to form buckets, said pieces extending between said upstanding flanges.

883,505. NUT-LOCK WASHER. EDWARD Z. WENRICH, Washington township, Monroe county, Ind., assignor of one-half to William H. Corns, Baker township, Ind. Filed Sept 24, 1906. Serial No. 335,859.



The herein-described improved nut lock washer comprising a flat plate with a circular opening therein and with four corners, two of the corners at opposite sides of the opening being bent up and forming pointed lateral projections, the remaining two corners being flexible to be bent over for forming pointed projections, the plate having two separate parallel slits therein extending tangentially from opposite sides of the opening towards points between a corner projection and a corner that is adapted to be bent to form a projection, there being acute angled portions of the plate between the two slits adjacent thereto bent to form two projections, as shown.

883,506. SECTIONAL CASE. ALFRED C. ABRAMSON and WILLIAM PERSON, Rockford, Ill., assignors to Rockford Cabinet Company, Rockford, Ill., a Corporation of Illinois. Filed Apr. 8, 1907. Serial No. 367,115.



1. A case section comprising a bottom, a back hinged to the bottom, two ends hinged to the respective ends of the back, means connecting the ends and bottom, and a front supported by the ends in a manner to assume horizontal and vertical positions.

2. A case section comprising a bottom having a raised center portion, a back hinged to the bottom and adapted to rest against one edge of the raised portion, two ends hinged to the respective ends of the back, and adapted to rest against the ends of the said portion, and means connecting the ends and bottom.

3. A plurality of case sections each comprising a bottom, a back hinged to the bottom, two ends hinged to the respective ends of the back, means connecting the ends and bottom, a front supported by the ends in a manner to assume horizontal and vertical positions, and pins extending from the upper face of the ends and entering holes in the bottom of the section next above it.

4. A plurality of case sections, each comprising a bottom, a back hinged to the bottom, two ends hinged to the respective ends of the back, means connecting the ends and bottom, the bottom having a depending central portion fitted to enter within the back and ends of the section next below it, and pins connecting the bottom and the ends of the section next below it.

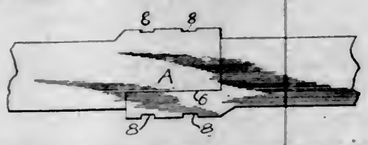
5. A case section comprising a bottom, back and ends,

a front for the section, each end supporting an angle-iron near its upper edge, a lateral projection extending from the angle-iron, a roller supported by the angle-iron, a bar connected to the inner face of the front near each end, a lateral projection extending from the bar, and a roller supported by the bar.

883,507. PROTECTING PILES AGAINST WORMS, &c. PHILIP F. APFEL, Seattle, Wash., and RALPH L. EARNEST, Portland, Oreg. Filed July 27, 1907. Serial No. 385,768.

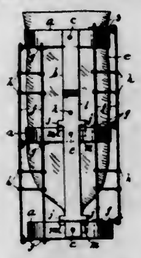
In the process of preserving wood used in contact with salt water, the improvement which consists in applying to the surface thereof a composition consisting of magnesium carbonate, magnesium oxid, an aqueous mixture of magnesium chlorid, and a suitable filler.

883,508. RAIL-JOINT. JOHN P. H. BAILEY, Burnet, Tex. Filed May 6, 1907. Serial No. 372,125.



A railway-rail joint comprising overlapping webs provided with matching ogee surfaces.

883,509. FOLDING CRATE. BENJAMIN BARKER, Ann Arbor, Mich. Filed Mar. 2, 1907. Serial No. 360,196.



A folding crate comprising a series of supporting bars, hoops arranged transversely to the supporting axis when in set up position jointly connected with said bars on opposite sides of the hoops, guards intermediate the supporting bars jointedly connected with the hoops, and a slide mounted upon one of said bars and movable longitudinally of the crate to engage a plurality of the hoops to support the hoops in set up position and hold the crate from collapsing, substantially as and for the purpose described.

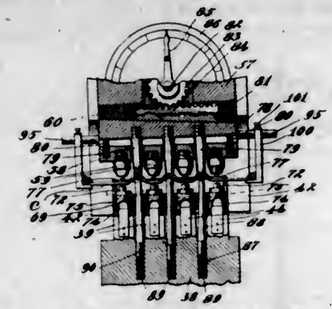
883,510. HOOK-SETTING MACHINE. JOSEPH W. BARNA and VALENTINE HOFFMAN, Chicago, Ill. Filed Apr. 23, 1906. Serial No. 313,142.

1. In a device of the class described, a plurality of punches, and means between the punches for bending the work to vary the spacing of the holes cut by the punches.

2. In a device of the class described, a series of punches in fixed lateral relation, a post for bending the work between the punches to determine the spacing of the holes cut by the punches, and means for moving the punches.

3. In a device of the class described, a plurality of punches in fixed lateral relation, a post for deflecting the work between the punches, and an adjustable abutment to determine the deflecting action of the post.

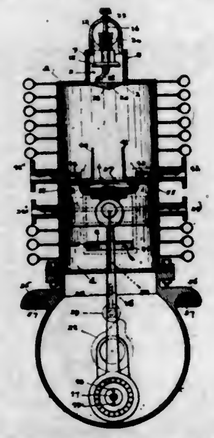
4. In a device of the class described, a plurality of punches, an anvil associated with each punch, a post for bending the work between the punches, an adjustable abutment to determine the deflecting action of the post, and means for moving the punches against the anvils.



5. In a device of the class described, a plurality of punches, an anvil for each punch, spring pressed work deflecting posts between the punches, and adjustable abutments in the line of the posts.

[Claims 6 to 40 not printed in the Gazette.]

883,511. GAS-ENGINE. GEORGE A. BEAUDET, San Francisco, Cal. Filed July 19, 1907. Serial No. 384,581.



1. In a gas engine, the combination of a cylinder having an exploding-chamber communicating with the cylinder-space through a valve-controlled opening, means operating to open the exploding chamber to the cylinder-space when the cylinder is taking in gas and to shut off communication of said chamber with the cylinder-space after the explosion of the charge, a valve-controlled exhaust-outlet leading from the exploding-chamber, means operating to open the said chamber to the exhaust when said chamber is closed to the cylinder-space, and to close it to the exhaust when the cylinder-space is in communication with the said chamber, and a supplemental exhaust-outlet leading from the lower part of the cylinder-space and arranged to open said space to the exhaust when the piston is at the end of its stroke after an explosion.

2. In a gas engine, an explosion-chamber in communication with the cylinder-space in front of the piston through a valve-controlled opening in the head of the cylinder, and having an exhaust-outlet; a controlling-valve to said outlet; means actuated from the engine-shaft operating said valves to simultaneously open one valve and close the other; and a supplemental exhaust leading out from the lower part of the cylinder-space, and so arranged with relation to the portion of the cylinder-space traversed by the piston as to be uncovered by the piston at the end of the stroke and to be closed in the upstroke of the piston before compression of the fresh charge of gas takes place.

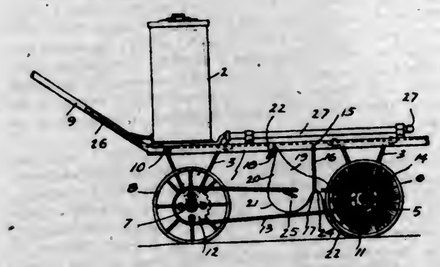
3. In a gas engine, the combination of a cylinder having an exploding-chamber in communication with the cylinder-space in front of the piston through a valve-controlled opening; a valve controlled exhaust-outlet leading out from said exploding-chamber; valve-operating means connected with said valves and adapted to simultaneously open one valve and close the other, whereby the exhaust-outlet is closed when communication is opened between the exploding-chamber and the cylinder-space, or the exploding-chamber is cut off from the cylinder-space when the said chamber is opened to the exhaust; a piston having deflecting-plates on the piston-head and gas-inlet apertures in the sides below the head, said apertures being arranged to deliver the gas for the charge within the space inclosed by the deflecting-plates.

4. In a gas engine, the combination of a cylinder having an exploding-chamber on the head in communication with the cylinder-space in front of the piston through a contracted opening of a length approximately equal to the diameter of the cylinder in one direction, but of relatively narrow width transversely; an exhaust-outlet in said exploding-chamber; a pivoted gate adapted to close or open communication between the exploding-chamber and the cylinder-space, according to the position given to the gate; a supplementary exhaust-outlet from the lower part of the cylinder-space adapted to be uncovered when the piston is at the lowest point of the stroke; gas-inlet ports in the sides of the cylinder so arranged as to be opened and closed to admit and cut off the gas at the end of the down-stroke and the beginning of the upstroke of the piston; and means actuated from the piston actuated shaft for simultaneously operating the gate and the exhaust-valve of the exploding-chamber.

5. In a gas engine, the combination, with the cylinder, of the exploding-chamber communicating with the cylinder-space above the piston through a relatively narrow opening; an exhaust-outlet from the exploding-chamber; a piston having gas-inlet ports through which gas is admitted from the cylinder-space below the piston into the cylinder-space above it; the deflecting plates on the piston-head adapted to confine the incoming gas and direct the bulk thereof into the exploding-chamber in the ascending stroke of the piston; and means operating the controlling-valves between the exploding-chamber and the cylinder-space and between the said chamber and the exhaust-outlet, whereby the said chamber constitutes a compressing and exploding-chamber when it is opened to the cylinder-space below, or an exhaust-chamber when it is opened to the exhaust outlet.

[Claims 6 to 10 not printed in the Gazette.]

883,512. SCRUBBING-MACHINE. FREDRICH BICKLEIN, Valmeyer, Ill. Filed Mar. 25, 1907. Serial No. 364,376.



A scrubbing machine comprising a wheeled frame, a horisontal shaft carried thereby forwardly thereof, a brush fixed on said shaft, driving means for said shaft, a transverse hanger rearwardly of said brush having a depending U-shaped portion, a transverse bar rearwardly of said hanger and a pan having a downwardly inclined rear extension engaging said bar, and a downwardly inclined forward scoop disposed beneath said brush and partially underlying the same, said scoop engaging said U-shaped portion as a hook.

883,513. PAINT COMPOUND. WILLIAM N. BLAKEMAN, Jr., New York, N. Y. Filed Jan. 24, 1905. Serial No. 242,504.

1. A compound or mixture of a pigment deficient in spreading power, and hydrated fatty oil.

2. A compound or mixture of a pigment deficient in spreading power, and a hydrated drying fatty oil.

3. A compound or mixture, of a pigment deficient in spreading power, and an oil oxidized and hydrated.

4. The process herein described which consists in first hydrating a fatty oil and then grinding therein a pigment deficient in spreading power.

883,514. PAINT COMPOUND AND PROCESS OF MAKING THE SAME. WILLIAM N. BLAKEMAN, Jr., New York, N. Y. Filed Feb. 17, 1906. Serial No. 301,568.

1. A compound or mixture of a fatty oil; a hydrated fatty agent; and a pigment which contains no hydroxyl and is deficient in spreading power.

2. A compound or mixture of a fatty oil; a hydrated oil; and a pigment which contains no hydroxyl and is deficient in spreading power.

3. A compound or mixture of an oil; hydrated tung oil; and a pigment which contains no hydroxyl and is deficient in spreading power.

4. A compound or mixture of linseed oil; hydrated tung oil; and a pigment which contains no hydroxyl and is deficient in spreading power.

5. The process herein described which consists in incorporating a hydrated fatty agent with a fatty oil, and then grinding therein a pigment which contains no hydroxyl and is deficient in spreading power.

883,515. OIL. WILLIAM N. BLAKEMAN, Jr., New York, N. Y. Filed Jan. 24, 1905. Serial No. 242,505.

1. A compound or mixture of a drying fatty oil and a hydrated fatty agent.

2. A compound or mixture of a drying fatty oil and a hydrated oil.

3. A compound or mixture of linseed oil and hydrated tung oil.

883,516. PIGMENT COMPOUND AND PROCESS OF MAKING THE SAME. WILLIAM N. BLAKEMAN, Jr., New York, N. Y. Filed Aug. 18, 1905. Serial No. 274,772.

1. A compound or mixture, in paste form, of a pigment deficient in spreading power, and a hydrated fatty liquid.

2. A compound or mixture, in paste form, of a pigment deficient in spreading power, and a hydrated oil.

3. A compound or mixture, in paste form, of a pigment deficient in spreading power, a hydrated fatty liquid, and an attenuating oil.

4. The process herein described which consists in first hydrating a fatty liquid and then grinding therein, to form a paste, a pigment deficient in spreading power.

883,517. PAINT COMPOUND. WILLIAM N. BLAKEMAN, Jr., New York, N. Y. Filed July 14, 1904. Serial No. 216,567.

1. A compound or mixture of a pigment deficient in spreading power, and a rancidified oil.

2. A compound or mixture of a pigment deficient in spreading power, and rancidified linseed oil.

3. The process herein described which consists in first rancidifying an oil, and then grinding therein a pigment deficient in spreading power.

883,518. PAINT COMPOUND AND PROCESS OF MAKING THE SAME. WILLIAM N. BLAKEMAN, Jr., New York, N. Y. Filed Feb. 17, 1906. Serial No. 301,569.

1. A compound or mixture of a fatty oil; a rancidified agent; and a pigment which contains no hydroxyl and is deficient in spreading power.

2. A compound or mixture of linseed oil; a rancidified agent; and a pigment which contains no hydroxyl and is deficient in spreading power.

3. A compound or mixture of a fatty oil; a rancidified oil; and a pigment which contains no hydroxyl and is deficient in spreading power.

4. A compound or mixture of linseed oil; a rancidified oil; and a pigment which contains no hydroxyl and is deficient in spreading power.

5. A compound or mixture of a fatty oil; an agent, hydrated and rancidified; and a pigment which contains no hydroxyl and is deficient in spreading power.

[Claim 6 not printed in the Gazette.]

883,519. OIL. WILLIAM N. BLAKEMAN, Jr., New York, N. Y. Filed July 14, 1904. Serial No. 216,568.

1. As a new composition of matter, a compound or mixture of a drying fatty oil, and a rancidified agent.

2. As a new composition of matter, a compound or mixture of a drying fatty oil, and a rancidified oil.

3. As a new composition of matter, a compound or mixture, of a drying fatty oil and rancidified linseed oil.

883,520. PAINT COMPOUND AND PROCESS OF MAKING THE SAME. WILLIAM N. BLAKEMAN, Jr., New York, N. Y. Filed Feb. 26, 1906. Serial No. 302,986.

1. A compound or mixture, in paste form, of a pigment which contains no hydroxyl; and is deficient in spreading power and a rancidified fatty substance.

2. A compound or mixture, in paste form, of a pigment which contains no hydroxyl; and is deficient in spreading power and a rancidified oil.

3. A compound or mixture, in paste form, of a pigment which contains no hydroxyl; and is deficient in spreading power, a rancidified fatty substance; and an attenuating oil.

4. A compound or mixture, in paste form, of a pigment which contains no hydroxyl and is deficient in spreading power, a rancidified fatty liquid; and an attenuating oil.

5. The process herein described, which consists in first rancidifying a liquid and then grinding therein, to form a paste, a pigment which contains no hydroxyl, and is deficient in spreading power.

[Claim 6 not printed in the Gazette.]

883,521. OIL. WILLIAM N. BLAKEMAN, Jr., New York, N. Y. Filed Mar. 2, 1907. Serial No. 360,154.

1. As a new composition of matter, tung oil having water chemically combined therewith.

2. A compound or mixture of hydrated tung oil, and another oil.

3. A compound or mixture of hydrated tung oil; and another oil, also hydrated.

4. A compound or mixture of hydrated tung oil; another oil; and a drier.

5. A compound or mixture of hydrated tung oil; another oil, also hydrated; and a drier.

883,522. OIL. WILLIAM N. BLAKEMAN, Jr., New York, N. Y. Filed Mar. 2, 1907. Serial No. 360,155.

1. As a new composition of matter, tung oil, hydrated and rancidified.

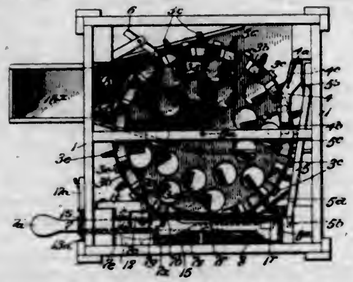
2. A compound or mixture of rancidified tung oil, and another oil.

3. A compound or mixture of rancidified tung oil, and a hydrated oil.

4. A compound or mixture of rancidified tung oil; another oil; and a drier.

5. A compound or mixture of rancidified tung oil; a hydrated oil; and a drier.

883,523. VENDING-MACHINE. EUGENE P. BRUTON, Rockingham, N. C. Filed Mar. 5, 1907. Serial No. 360,676.



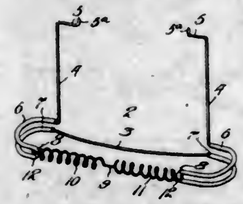
1. In a vending machine, a rotatable article carrier, combined with coin controlled mechanism for rotating the carrier, said coin controlled mechanism comprising a pusher, a pawl pivotally secured thereto, said article carrier having a rack for engagement with said pawl, said pusher having a hinged section to form with the pusher a coin receiving portion, means for normally retaining said hinged section against the pusher to hold the coin, coin released means for normally preventing movement of the pusher in one direction, means coöperatively connected with the pusher for forcing it in an opposite direction to return the same to its normal position and simultaneously operate the carrier, and means for engaging said hinged section of the pusher when moved in one direction to separate the same from engagement with the pusher to release the coin, substantially as shown and described.

2. A vending machine, an article carrier combined with coin controlled mechanism for operating the same, said coin controlled mechanism comprising a reciprocating pusher, a pawl pivotally secured thereto, said article carrier having a rack coöperating with said pawl, said pusher having a coin receiving portion, a hinge member secured to the pusher, and having a coöperating coin receiving portion and adapted to lie normally in contact with the pusher, a latch normally preventing the movement of said pusher in one direction and having a portion coöperable with the coin to release the latch from the pusher as the pusher is moved in one direction, means coöperatively connected with the pusher for forcing it in an opposite direction to return the same to its normal position and simultaneously operate the carrier, and means coöperating with said hinged section for releasing the coin at times, substantially as shown and described.

3. In a vending machine, an article carrier, a coin controlled mechanism therefor, comprising a pusher, an independently mounted pawl for actuating the pusher to hold it normally locked, a pawl carried by the pusher for directly engaging the article carrier to operate the same, a lever mechanism secured to the pawl having a fixed fulcrum, a spring secured to said lever and to a fixed portion of the machine for operating said lever to move the pusher in one direction, said pusher having a coin receiving portion, a coin slot coöperating therewith, a selecting member fulcrumed on said coin slot and projecting to the inside thereof, said member including an adjustable weight to cooperate therewith, all being arranged substantially as shown and described.

4. In a vending machine, an article carrier, a coin controlled mechanism comprising a pusher, an independently mounted pawl for engaging the pusher to hold it normally locked, a pawl carried by the pusher for directly engaging the article carrier to operate the same, a lever mechanism secured to the pawl and having a fixed fulcrum, a spring secured to said lever and to a fixed portion of the machine for operating the said lever to move the pusher in one direction, said pusher having a coin receiving portion, a coin slot coöperating therewith, a selecting member fulcrumed on said coin slot and projecting to the inside thereof, said member including an adjustable weight to cooperate therewith, said coin receiving portion of the pusher comprising a coin groove in the pusher, a hinge section having a coin groove secured to the pusher to lie adjacent thereto, and means for engaging said hinge section as the pusher reaches the limit of its stroke in one direction to separate the hinge section from the pusher to release the coin, substantially as shown and described.

883,524. BROOM-BRIDLE. ARTHUR T. CALLAHAN, Fairwood, Va., assignor of one-half to Harry L. Cohick, Slate Run, Pa. Filed Apr. 13, 1907. Serial No. 368,124.



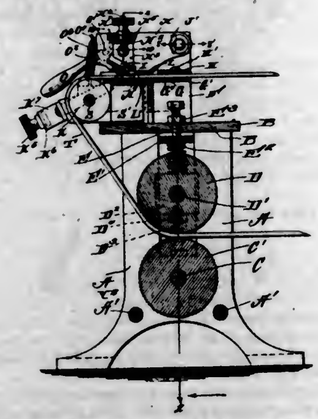
1. A brush bridle comprising end clasps, a bow uniting the clasps at one side of the bridle, a contractile spring uniting the clasps at the opposite side of the bridle, and means upon the clasps for attaching the device to a brush.

2. A broom bridle comprising a body formed of a single piece of wire forming a transverse bow, end clasps at the ends of the bow, and securing arms extending upwardly from the clasps, and a contractile spring connecting the clasps at the side of the bridle opposite the bow.

3. A broom or brush bridle comprising a body composed of a single piece of wire having its central portion arranged to form a cross bow, its ends bent upwardly to provide attaching arms and its intermediate portions bent to provide concavo-convex end clasps, and a contractile spring disposed opposite the bow and connecting the free ends of the clasps.

4. A broom or brush bridle comprising a body composed of a single piece of wire having its central portion arranged to form a cross bow, its ends bent upwardly to provide attaching arms and its intermediate portions doubled and bent to provide concavo-convex end clasps, and a contractile spring connecting the free ends of the clasps and having its end portions coiled in opposite directions.

883,525. WELT-DRESSING MACHINE. GEORGE R. CHEESMAN, Auburn, N. Y., assignor to Dunne and McCarthy, Auburn, N. Y., a Corporation. Filed May 28, 1907. Serial No. 376,056.



1. A welting machine comprising a frame provided with a grooved way, friction wheels between which a welt passes and whereby the latter may be fed through said grooved way, a knife holding shoe adjustably mounted upon the frame, a knife carried by said shoe, horizontal yielding gage mechanism designed to bear against the edge of the welt when in said grooved way, as set forth.

2. A welting machine comprising a frame having friction wheels between which the welt passes and whereby the latter may be fed through a grooved way upon the frame, a knife carrying shoe adjustably mounted upon the frame, a knife carried by said shoe, an apertured plate extending over the grooved way and through which the cutting edge of the knife is adapted to pass, horizontally yielding gage mechanism adapted to bear against the edge of the welt, and a roller over which the welt passes, as set forth.

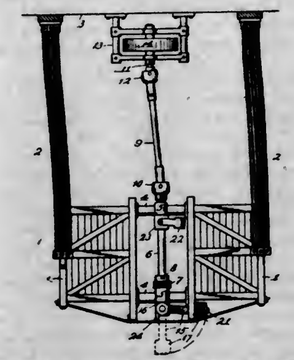
3. A welting machine comprising a frame having friction wheels between which the welt passes and whereby the latter may be fed through a grooved way upon the frame, a knife carrying shoe adjustably mounted upon the frame, a knife carried by said shoe, an apertured plate extending over the grooved way and through which the cutting edge of the knife is adapted to pass, and gage mechanism comprising two members which are pivotally connected together, one of said members being spring-actuated and adapted to hold the other against the marginal edge of a welt as it is drawn by the friction wheels through said grooved way, as set forth.

4. A welting machine comprising a frame having friction wheels between which the welt passes and whereby the latter may be fed through a grooved way upon the frame, a knife carrying shoe adjustably mounted upon the frame, a knife carried by said shoe, an apertured plate extending over the grooved way and through which the cutting edge of the knife is adapted to pass, gage mechanism comprising two members which are pivotally connected together, a spring-actuated stud fixed to one of said members and adapted to hold the other of the gage members against the edge of a welt positioned within said guideway, as set forth.

5. A welting machine comprising a frame, friction feed wheels mounted therein, a shelf projecting laterally from the frame and provided with a grooved way through which the welting is adapted to be passed, a roller at one end of the shelf, plates fixed to the shelf and projecting over said grooved way, a shoe pivotally mounted upon the frame above said shelf, a grooving knife adjustably mounted upon said shoe and having its cutting edge projecting through an aperture in one of said plates and in said grooved way, yielding gage mechanism mounted horizontally upon the shelf and adapted to bear against an edge of the welt in said grooved way, and a beveling knife positioned adjacent to the marginal edge of the grooved way as set forth.

[Claims 6 to 14 not printed in the Gazette.]

883,526. GYRATORY STRUCTURE. GEORGE W. COMBS, Leavenworth, Kans. Filed Mar. 22, 1907. Serial No. 363,948.



1. A gyratory structure consisting of a pair of oppositely-disposed sieve-boxes, a centrally-disposed vertical

shaft connected to said boxes for gyrating the same, and a centrifugally-controlled member pivoted to the lower end of the shaft so that it may hang in axial alinement therewith when at rest.

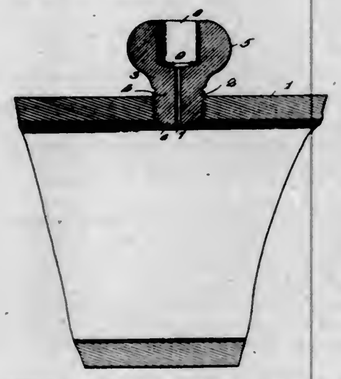
2. A gyratory structure including a vertical shaft, in combination with a centrifugally-controlled member pivoted to the lower end of said shaft so that it may hang in alinement therewith when at rest, substantially as described.

3. A gyratory structure including a vertical shaft, in combination with a centrifugally-controlled member pivoted to the upper portion of said shaft, a centrifugally-controlled member pivoted at the lower end of said shaft so that it may hang in alinement therewith when at rest, and means for preventing the lower member from swinging upwardly in a direction opposite to the upper member.

4. A gyratory structure including a suspended vertical shaft, yielding power transmission devices connected to said shaft for rotating the same, and a centrifugally-controlled member pivoted to the lower end of the shaft so that it may hang in alinement therewith when at rest.

5. A gyratory structure including a shaft, a yielding power transmission device connected to said shaft for rotating the same, a block secured to the lower end of said shaft, and a centrifugally-controlled member pivoted to said block so that it may hang in vertical alinement with the shaft.

883,527. NOZZLE FOR IRRIGATING SYSTEMS. ERNEST L. DE LONG, Clearwater, Fla. Filed July 6, 1907. Serial No. 382,499.

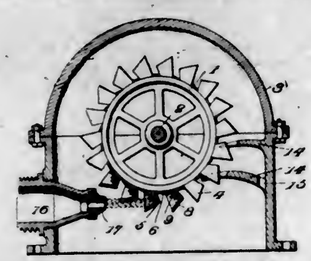


1. A nozzle for irrigating systems, comprising a body portion screw threaded on its exterior whereby it is adapted to be secured in a pipe line, said body portion having a convex inner end and provided with an opening therethrough, of a head provided with an opening in line with the opening in the body portion, the opening in the head being of relatively larger size than the opening in the body portion.

2. A nozzle for irrigating systems, comprising a body portion screw threaded on its exterior whereby it is adapted to be secured in a pipe line, said body portion having a convex inner end and provided with an opening therethrough, of a head provided with an opening in line with the opening in the body portion, the opening in the head being of relatively larger size than the opening in the body portion, the bottom of the opening in the head being concave.

883,528. WATER-WHEEL. JARED R. DE REMER, Glenwood Springs, Colo. Filed Dec. 26, 1905. Serial No. 293,348.

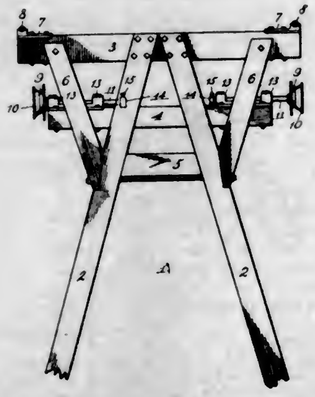
1. The combination with a wheel having a series of buckets on its periphery, of a casing, means for introducing water through one of the walls of the casing, and water breaks for deflecting the water downwardly into a tail race, said water breaks consisting of upper and lower arches extending from the other wall of said casing, both of said arches being located wholly above the plane of the lowermost buckets, the lower arch having an opening adjacent to the casing to permit of the passage of water, both arches being extended on opposite sides of the wheel.



2. The combination with a wheel, of a series of buckets mounted on the periphery thereof, having each an open end, said buckets having a series of horizontal splitters of varying lengths and depths, the shortest and narrowest splitter being nearest the outer end of each bucket, while the longest and widest splitter is nearest the inner end of the bucket, and vertical splitters at right angles to the planes of the horizontal splitters, located at the centers of the latter.

3. The combination with a wheel, of a series of buckets mounted on the periphery thereof, having each an open end, said bucket having a series of horizontal splitters of varying lengths and depths, the shortest and narrowest splitter being nearest the outer end of each bucket, while the longest and widest splitter is nearest the inner end of the buckets, and vertical splitters at right angles to the planes of the horizontal splitters, located at the centers of the latter, said vertical splitters extending but a short distance over the width of the horizontal splitters, short of the outer edges of the latter.

883,529. SELF-ADJUSTING SHEAVE FOR CABLE-TRAMWAYS. HIRAM G. FERRIS, Leavenworth, Kans. Filed July 26, 1907. Serial No. 385,609.



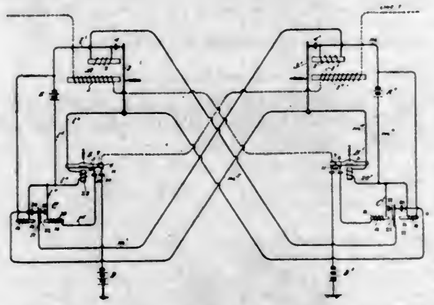
1. In a cable tramway, the combination with a pulling-cable, of a sheave upon which the cable travels, and a shaft rotatably and slidably mounted upon which said sheave is mounted.

2. In a cable tramway, the combination with a pulling-cable, of a sheave upon which the cable travels, a journal-box, and a shaft rotatably and slidably mounted in said box, the sheave being fixed upon one end of said shaft.

3. In a cable tramway, the combination with a pulling-cable, of a sheave upon which the cable travels, a journal box, a shaft rotatably and slidably mounted in said box, the sheave being fixed upon one end of said shaft, and means for limiting the sliding movement of the shaft.

4. In a cable tramway, the combination with a pulling-cable, of a sheave upon which the cable travels, a journal-box provided with an oil cellar, and a shaft slidably and rotatably mounted in said box and carrying the sheave at one end thereof, substantially as described.

883,530. TELEGRAPH-REPEATER. STEPHEN D. FIELD, Stockbridge, Mass. Filed June 20, 1907. Serial No. 379,827.



1. In a telegraph repeater, a plurality of lines, separate relays therefor, a plurality of repeating sounders respectively operated by said relays, and means for closing a local metallic circuit around each of said sounders when the armature thereof has been attracted.

2. In a telegraph repeater, a plurality of lines, separate relays therefor, a plurality of repeating sounders respectively operated by said relays, local metallic circuits including inductances for the respective sounders, and means for closing said local circuits around the sounders when the armatures thereof have been attracted.

3. In a telegraph repeater, a repeating sounder having an armature, an inductance, means for shunting said inductance around said repeating sounder when the armature thereof has been fully attracted, and means controlled by said shunt for maintaining the continuity of the line over which the signals are being received.

4. In a telegraph repeater, a repeating sounder having an armature, an inductance shunt, means for bridging said shunt across said sounder when the armature thereof has been fully attracted, and means actuated by said inductive shunt for maintaining the line continuity over which the signals are received.

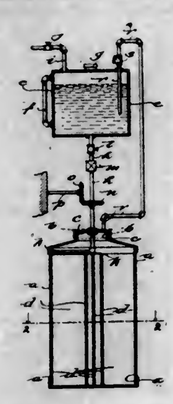
5. In a telegraph repeater, a plurality of lines, separate relays therefor, repeating sounders actuated by the respective relays and having armatures with a plurality of contacts, transmitting circuits for the respective lines including a contact of each sounder, and local metallic circuits for the respective sounders each including an inductance, and closed by the other contact of its respective sounder.

[Claims 6 to 16 not printed in the Gazette.]

883,531. PROCESS OF GENERATING HYDROGEN. HANS FORRSTERLING and HERBERT PHILIPP, Perth Amboy, N. J., assignors to The Roessler & Hasslacher Chemical Co., New York, N. Y., a Corporation of New York. Filed Apr. 16, 1907. Serial No. 368,474.

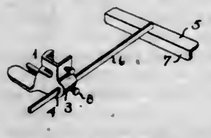
1. A process of generating hydrogen from sodium consisting in reacting the sodium with water in a finely divided state at such a rate that substantially no solution is formed.

2. A process of generating hydrogen from sodium consisting in serially reacting relatively small masses of sodium separated from each other in the same container, with water at such a rate that substantially no solution



is formed, the reactions being such that the supply of hydrogen is continuous.

883,532. SEWING-MACHINE GAGE. MINNIE FOSS, Manchester, Iowa. Filed May 10, 1906. Serial No. 316,197.



In combination with a detachable presser foot having an enlarged heel extending in approximately the same plane as the body of the foot with a slot extending transversely through said heel, of a gage member adjustably mounted in said slot and comprising an elongated head L-shaped in cross section, a bar secured at one end to said head midway its length to provide for the reversal of said gage to adapt it for use on either side of the foot, said bar being connected to support said head with one arm or flange thereof in vertical position, and its free edge adapted to rest on the machine top, and the outer face of the other arm arranged in a horizontal plane, and means for holding said bar in adjusted position in said slot.

883,533. BOTTLE-STOPPER. OLIVER FROCHEUR, Charleroi, Pa. Filed July 29, 1907. Serial No. 386,018.



In a bottle stopper, a tube provided with a peripheral flange and having a bushing mounted thereon and engaged by said flange, a valve shell formed integral with the upper end of said tube, a valve fitting said shell and provided with a transverse bore, a handle carried by the valve and projecting beyond the shell for operating the valve, shoulders provided on the shell and a stop carried by the valve and engaging said shoulders to limit the rotative movement of the valve in either direction, a spout formed integral with said valve shell, and a hinged lid for said spout.

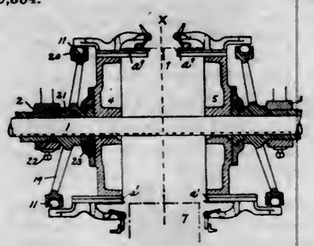
883,534. ROD-PACKING. OLIN J. GARLOCK, Palmyra, N. Y., assignor to The Garlock Packing Company, Palmyra, N. Y. Filed Dec. 4, 1907. Serial No. 404,997.



1. A rod packing comprising a plurality of independent members free for movement with relation to each other, one of which is of heavier material than the other of like nature throughout and divided diametrically with each section of a single integral piece, said heavier member being constructed to gravitate toward the piston rod which it surrounds, a braided absorbent member resting on the heavier member to receive the less heavy member of the next upper packing ring and a fibrous wrapping around said braided member.

2. A rod packing comprising a sectional ring of lead with an inclined face, a ring of alternate layers of cotton duck and rubber with an inclined face, said inclined faces being opposed to each other whereby the lead member will automatically gravitate toward the piston rod, said rings having enlarged bearings against the rod and a member of braided strands resting on said lead member to receive the cotton duck and rubber member next above adapted to absorb a lubricant said braided member having a wrapping of absorbent material.

883,535. TEXTILE-SPREADING DEVICE. ERNST GESSNER, Aue, Germany. Filed Dec. 5, 1905. Serial No. 290,354.



1. In a cloth spreading apparatus, in combination, cloth supporting devices and a series of cloth engaging devices rotating adjacent to the edge of the cloth so supported and means whereby the members of said series are moved transversely to the edge of the cloth into non-overlapping position, overlapping but nonclamping position and clamping position, respectively, during approximately each third of the cycle of rotation.

2. In a cloth spreading apparatus, in combination, a rotating series of cloth engaging devices, means whereby the members of said series are moved successively in non-overlapping position during a portion of the rotation, in overlapping position during another portion of the rotation and in clamping position during a portion of the rotation.

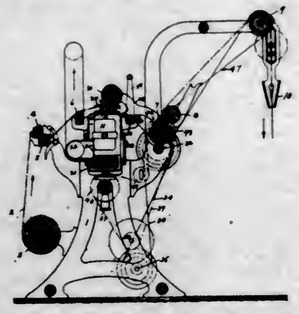
3. In a cloth spreading apparatus, in combination, a rotating head, a series of clamps adapted to overhang the edge of the cloth on the opposite side thereof from the head; said clamps moving with said head throughout its cycle of rotation and also transversely to its plane of rotation.

4. In a cloth spreading apparatus, in combination, a rotating head, a series of clamps adapted to overhang the edge of the cloth on the opposite side thereof from the head; said clamps being mounted on said head and free to move transversely to the plane of rotation thereof.

5. In a cloth spreading apparatus, in combination, a rotating head, a series of clamp supports mounted on said head and each adapted to extend around the edge of the cloth and free to move transversely to the plane of rotation of said head and a series of clamps mounted on said series of supports and engaging the cloth on the opposite side from said head.

[Claims 6 to 13 not printed in the Gazette.]

883,536. MACHINE FOR EXTRACTING LIQUID FROM CLOTH. ERNST GESSNER, Aue, Germany. Filed Feb. 28, 1906. Serial No. 303,358.



1. In a machine for extracting liquid from cloth, in combination, the slotted cloth holder, means for regulating the operative length of said slot, a vacuum chamber, an air exhaust port and a separate liquid exhaust port below the same in said chamber.

2. In a machine for extracting liquid from cloth, in combination, a slotted cloth holder, a vacuum chamber beneath the same, removable plates at the end of said chamber, an inclined bottom to said chamber, a liquid exhaust about the lower end of said incline and an elevated air exhaust port.

3. In a machine for extracting liquid from cloth, in combination, a cloth holder containing an exhaust passage and a cover overlying the same consisting of a sheet of material pressed upon the cloth by atmospheric pressure.

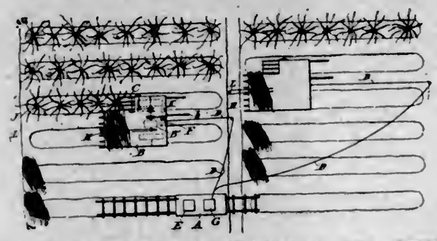
4. In a machine for extracting liquid from cloth, in combination, a cloth holder, an exhaust passage through the same, a flexible cover for said passage and means whereby the same is held free to be pressed by atmospheric pressure against the cloth.

5. In a machine for extracting liquid from cloth, in combination, a cloth support provided with an exhaust passage, a cover free to atmospheric pressure, a carrier for said cover, means whereby said carrier and the cloth are operated to move the cloth and cover at a related speed.

[Claims 6 to 31 not printed in the Gazette.]

883,537. HARVESTING SUGAR-CANE. HENRY G. GINACA, Honolulu, Hawaii, assignor, by direct and mesne assignments, of two-fifths to Abraham Gartenberg, Honolulu, Hawaii. Filed Sept. 16, 1905. Serial No. 278,771.

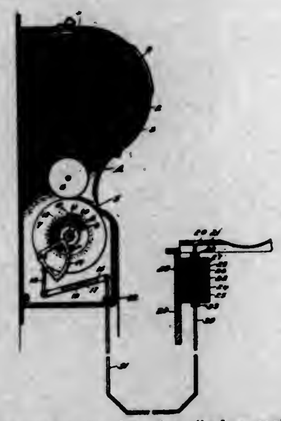
1. An apparatus for harvesting sugar cane, comprising a cane cutting and conveying machine provided with a motor driven machanism for propelling it over the surface of the field, a railway traversing the field, a power plant carried by said railway, a flexible insulated cable for transmitting the power from the plant to the motor of the propelling mechanism, and a winding drum on the machine to take up or pay out slack in the cable.



2. An apparatus for harvesting sugar cane, comprising a cane cutting and conveying machine provided with a motor driven mechanism for propelling it over the surface of the field, a railway traversing the field, a power plant carried by said railway, a flexible insulated cable for transmitting the power from the plant to the motor of the propelling mechanisms, a winding drum on the machine to take up or pay out slack in the cable, and means for unloading the cane.

3. An apparatus for harvesting sugar-cane, comprising a railway track, a car movable thereon, an engine and electric generator mounted on the car, a cane cutting and conveying machine provided with a motor-driven mechanism for propelling it over the surface of the field, the cutting mechanism being also operated by the motor on the machine, and a flexible insulated cable for transmitting power directly from the generator on the car to the motor on the machine.

883,538. TOILET-ROLL-PAPER HOLDER. THOMAS T. GRASER, Rochester, N. Y. Filed Aug. 27, 1907. Serial No. 390,353.



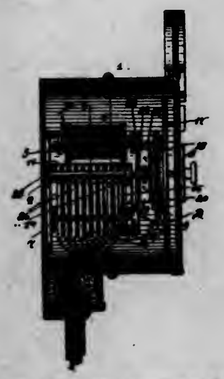
1. In a device of the class described, a casing having a discharge slot, a roll of paper supported for rotation in the casing, a pair of feed rollers, means for positively actuating one of the feed rollers, means for regulating the extent of movement of the positively operated feed roller at each operation and means for temporarily retaining the operating mechanism in inactive position.

2. In a device of the class described, a roll paper casing having a discharge slot, a pair of feed rollers loosely supported in peripheral contact with each other, means for positively actuating one of the feed rollers including a pinion, a segment rack, a lever, and a link connecting the lever with the segment rack, an adjustable fulcrum for the lever, and means for actuating the lever including a cylinder, a valve spring actuated piston operating therein and having a leakage port, liquid contained in the cylinder, a yoke connecting the piston with the lever, a rod extending upwardly from the piston, and a vertically movable seat supported upon the piston rod.

3. In a device of the class described, a roll paper casing having a discharge aperture, a pair of feed rollers supported loosely in peripheral contact with each other, means for positively actuating one of the feed rollers including a pinion, a rack segment, a slotted lever, and a link connecting the lever with the rack segment, an adjustable fulcrum consisting of a set screw adjustable in a slot in the wall of the casing and engaging the slotted lever, a vertically movable closet seat, and means for transmitting motion from the closet seat to the lever.

4. In a device of the class described, a roll paper casing having a discharge aperture, a pair of feed rollers supported loosely in peripheral contact with each other, means for positively actuating one of the feed rollers including a pinion, a rack segment, a slotted lever, and a link connecting the lever with the rack segment, an adjustable fulcrum consisting of a set screw adjustable in a slot in the wall of the casing and engaging the slotted lever, a vertically movable closet seat, and means for transmitting motion from the closet seat to the lever, said means including a cylinder containing liquid, a spring actuated piston operating in the cylinder and having a valved passage for the passage of the liquid and an auxiliary leakage port or bleed aperture, a yoke connecting the piston with the slotted lever, and a piston rod supporting the vertically movable seat.

883,539. ANNUNCIATOR. STEPHEN J. HEINRICH, Bellevue, Pa., assignor to American Electric Alarm Company, Pittsburg, Pa., a Corporation of New Jersey. Filed Mar. 14, 1906, Serial No. 306,020. Renewed Feb. 15, 1908. Serial No. 416,109.



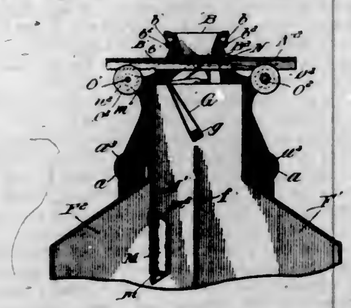
1. In an annunciator, an actuating shaft and a dial operated thereby, a stationary contact-bar, a plurality of contact-fingers and a supplemental contact-finger all normally engaging said contact-bar, a single magnet in circuit with the supplemental contact-finger, and a controller-drum mounted on the same shaft as the dial and having contact pins for each contact finger.

2. In an annunciator, an actuating train including a shaft, and a dial operated thereby, a weight, a cord connected to the weight and wound around the shaft, a stop-ratchet carried by the dial, a magnet, an armature having a stop-pin for engagement with the ratchet, a single stationary contact-bar, a plurality of contact-fingers, and a supplemental contact-finger, and a controller-drum having independent contact-pins for each contact-finger.

3. In an annunciator, a rotary shaft, means for rotating said shaft in one direction, a dial carried by said shaft, a ratchet wheel carried by the shaft, a notched-cam carried by said wheel, an electro-magnet, an armature,

adapted when the magnet is deënergized to engage the notches in said cam, said cam being so constructed and arranged, that when the armature is in engagement with any one of the notches, it will be out of range of operation by the magnet, and said cam adapted at one position to hold the armature within the range of operation by the magnet.

883,540. WEIGHING-MACHINE. GEORGE HOEPNER, Chicago, Ill. Filed Nov. 19, 1906. Serial No. 344,169.



1. In an automatic weighing machine, the combination with a weighing receptacle, of means for controlling the supply of material to said receptacle, mechanism for actuating said means to cut off the supply of material when a predetermined quantity has been delivered to the receptacle, means for discharging the material from said receptacle, and means carried by said receptacle for preventing the discharge of a quantity of material corresponding to the excess of material delivered to the receptacle over the predetermined weight.

2. In an automatic weighing machine, the combination with a weighing receptacle, of means for controlling the supply of material to said receptacle, mechanism for actuating said means to cut off the supply of material when a predetermined quantity has been received by said receptacle, means for discharging material from said receptacle, and means for preventing the discharge of a predetermined volume of said material from the receptacle.

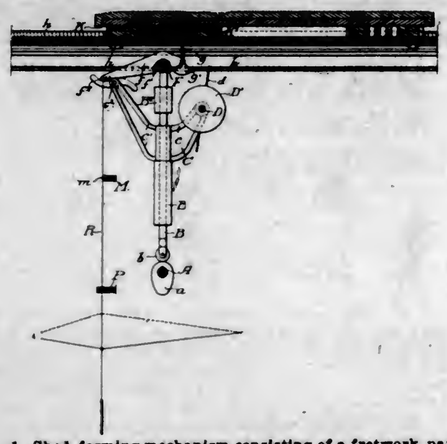
3. In an automatic weighing machine, the combination with a weighing receptacle, of a device for controlling the supply of material to said receptacle, mechanism for actuating said device to cut off the supply of material when a predetermined quantity has been received by said receptacle, means for discharging material from said receptacle, and means for preventing the discharge of a quantity of said material equal to the amount which enters the receptacle after said device has been actuated to cut off the supply.

4. In an automatic weighing machine the combination with a weighing receptacle, of means for controlling the supply of material to said receptacle, mechanism for actuating said means to cut off the supply of material when a predetermined quantity has been delivered to the receptacle, means for discharging the material from said receptacle, a pocket carried by said receptacle in the path of the material passing thereto, an adjustable bottom in said pocket for varying the capacity thereof, a supporting strap secured to said bottom, and means for adjustably securing said strap to said pocket.

5. In an automatic weighing machine, the combination with a weighing receptacle, of means for successively supplying a predetermined quantity of material to said receptacle, a discharge gate for successively discharging the weighed quantity of material, locking means for retaining said gate closed, a movable obstruction adapted to be engaged by said locking means upon the complete sinking of the receptacle to permit the discharge gate to open, and automatic controlling mechanism for removing said obstruction from the path of said locking mechanism after a predetermined number of operations of the machine.

[Claims 6 to 24 not printed in the Gazette.]

883,541. SHEDDING MECHANISM. WALTER W. HUBBARD, Philadelphia, Pa. Filed May 31, 1907. Serial No. 376,510.



1. Shed forming mechanism consisting of a fretwork pattern having a rigid supporting structure, a series of heddle threads and levers connected to said heddle threads, with a single structure mounted on each lever so as to be capable of directly operating on the platform to form a shed, substantially as described.

2. Shedding mechanism consisting of a pattern having its parts rigidly positioned, a series of heddle threads, a series of levers each having one arm connected to one of the threads, the second arm of each lever being provided with means whereby it may be actuated from the pattern, and means for periodically moving the levers, substantially as described.
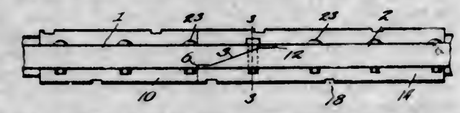
3. Shedding mechanism consisting of a series of heddle threads, a series of levers each having one of its arms connected to a heddle thread, means for periodically moving the levers, and a pattern having its parts rigidly positioned, and constructed to coöperate with the levers to prevent their movement from raising definite ones of the heddle threads, substantially as described.

4. Shedding mechanism consisting of a series of heddle threads, a series of levers, each of which has one of its arms connected to a heddle thread, means for periodically moving the levers, and a pattern having its parts rigidly positioned, and constructed to coöperate with one of the arms of each lever to cause movement of each lever to result in a raising of its heddle thread at predetermined times, substantially as described.

5. Shedding mechanism consisting of a series of heddle threads, a series of levers each having an arm connected to one of said threads, with two devices placed to operate on said levers to periodically cause definite ones of said threads to be raised while the others remain down, substantially as described.

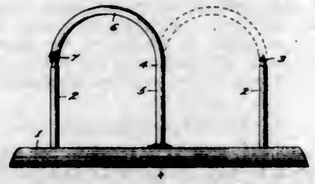
[Claims 6 to 33 not printed in the Gazette.]

883,542. RAIL-JOINT. ROBERT B. KENNINGTON, Fitzpatrick, Ga. Filed July 20, 1907. Serial No. 384,701.



The herein described rail joint comprising rails, the ends of which are provided with scarf portions, legs projecting from the scarf portions, webs each provided with a registering rectangular recess, one of said rail sections having the base flange cut away and the other member having the flange extended under the web portion of the meeting rail, a pair of fish plates secured to the web portions of the rail by bolts, said fish plates having a squared opening therein in line with rectangular recesses in the webs of the rails, a bolt having a squared body portion passed through the fish plates and through the registering recesses in the ends of the webs, said bolt being also provided with a reduced end, and a nut fitted to the reduced end of said bolt.

883,543. PAPER-FILE. CHARLES E. KING, Randolph, Kans. Filed June 26, 1907. Serial No. 380,888.



A filing device comprising a base, impaling pins projecting from the base, said base having an opening parallel with and midway between said impaling pins, a sleeve extending partially into said opening from the upper side thereof and having a flange at its upper end bearing on the base, a transfer pin to coact with the impaling pins and having an arm mounted for revoluble and longitudinal movement in the sleeve, said arm having a bearing shoulder to engage the flange head of the sleeve and having a stop device at its lower end; and a coiled spring in the opening of the base around the lower end of said arm and bearing between the said stop device and said sleeve, for the purpose set forth.

883,544. BOTTLE-STOPPER. GEORG KIRKEGAARD and FRIDTJOF JEBSEN, New York, N. Y. Filed Apr. 15, 1904. Serial No. 203,256.



1. A bottle or jar stopper comprising a metallic cap having a depending edge terminating in a curled tubular formation, an open clamping ring housed within said curled tubular formation and an eccentric wrench applied to the ends of said ring, for the purpose set forth.

2. The combination of a bottle or jar having an inwardly-inclined, annular, exterior shoulder below its mouth, a cap adapted to fit over the mouth of the bottle or jar and having a curled tubular edge opposed to said shoulder and also containing a packing material, an open clamping ring housed within said tubular edge and means for contracting said ring to force said edge against the annular shoulder and cause it to travel inwardly and downwardly along the same.

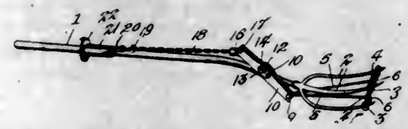
3. A bottle or jar stopper comprising a metallic cap having a flexible edge, a ring in two parts embracing said edge and a bail-shaped lever having two openings at each end, one of which is eccentric to the other, said openings respectively engaging the extremities of the parts of said ring, substantially as described.

4. A bottle or jar stopper comprising a metallic cap having a flexible edge terminating in a curled, tubular formation, a two-part clamping ring housed within said curled, tubular formation, the extremities of said ring projecting laterally from said formation and a bail-shaped lever engaging the projecting ends of the ring and having an eccentric formation by which said ends can be drawn together or separated.

5. A bottle or jar stopper comprising a cap in combination with a clamping ring surrounding said cap and inseparably secured thereto and a cam lever or wrench applied to the ends of said ring, for the purpose set forth.

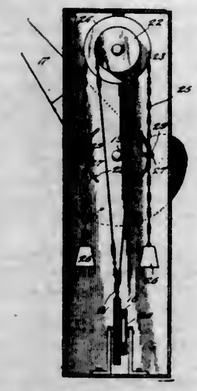
[Claims 6 to 26 not printed in the Gazette.]

883,545. PITCHFORK. ARTHUR H. KNOX, Alpena, S. D. Filed Sept. 4, 1907. Serial No. 391,300.



A pitchfork cleaner comprising a strand of wire bent to form loops to surround the tines of the fork, connecting rods connected to said cleaner, a double lever pivoted to the handle of the fork, said connecting rods being connected to one end of said lever, a chain connected to the opposite end of said lever and a sliding hand hold to which the opposite end of said chain is connected.

883,546. AUTOMATIC RAILROAD GATE AND SIGNAL. FREDERICK KROLL, Sebewaing, Mich. Filed Oct. 8, 1907. Serial No. 396,513.



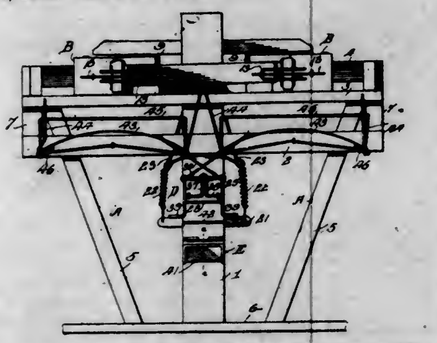
1. The combination with a railroad gate, of operating mechanism therefor embodying trip shafts arranged at opposite sides of the crossing, a master wheel, flexible connections between the trip shafts and master wheel, a gate operating wheel, flexible connections between the master wheel and gate operating wheel, a flexible connection between the gate operating wheel and the gate, and counter balance weights attached to the last named flexible connection and acting on the gate.

2. The combination with a railroad gate, of operating mechanism therefor embodying trip shafts arranged at opposite sides of the crossing, a master wheel, flexible connections between said trip shafts and the master wheel, a gate operating wheel, flexible connections between the master wheel and gate operating wheel, eyes on the gate, and a flexible connection between the gate operating wheel and the gate passing through said eyes on the gate and provided with stop shoulders which coöperate with the eyes.

3. The combination with oppositely arranged railroad gates, of trip shafts arranged at opposite sides of the crossing, a master wheel, flexible connections leading from the trip shafts to the master wheel, gate operating wheels, flexible connections leading from the master wheel to the gate operating wheels at opposite sides of the track, flexible connections interposed between the gate operating

wheels and the gates and passing through eyes on the gates, and stops on said connections coöperating with the eyes of the gate.

883,547. MAIL-BAG RECEIVER AND DELIVERER. LEOPOLD F. KURPGEWEIT, Greenmont, S. D. Filed May 18, 1907. Serial No. 374,459.



1. In an apparatus of the class described, the combination of a supporting structure, a mail bag holder thereon designed to suspend a bag from the top, oppositely disposed bag receivers or catchers, and a rest on the supporting structure disposed intermediate the holder and catchers for receiving the bottom of the bag.

2. In an apparatus of the class described, the combination of a supporting structure, a mail bag holder thereon, oppositely disposed bag catchers and receivers, a common means carried by the supporting structure and on which the catchers or receivers are yieldingly mounted to move in either direction, and stops on the supporting structure for limiting the movement of the said means.

3. In an apparatus of the class described, the combination of a supporting frame, oppositely disposed mail bag receivers, a common buffing and returning device for the receivers, and ratchet members disposed under the receiver and arranged to support the weight of the bags in the latter.

4. In an apparatus of the class described, the combination of oppositely disposed bag receiving hooks, spring keepers coöperating therewith, and a yieldingly mounted carriage for the hooks.

5. In an apparatus of the class described, the combination of a supporting structure, slidably mounted mail bag catchers thereon, bell crank levers mounted on the structure, links connecting the levers with the catchers, and springs connected with the levers for cushioning the catchers and maintaining them in normal position.

[Claims 6 to 16 not printed in the Gazette]

883,548. FLEXIBLE BRUSH. BENJAMIN G. A. LAITNER, Detroit, Mich. Filed Apr. 22, 1907. Serial No. 369,470.

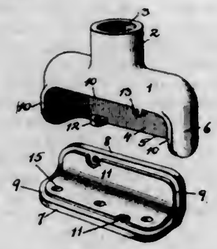


1. A flexible brush having in combination a plurality of individual brushes, and a plurality of flexible connectors passing through holes bored through the individual brush backs substantially parallel with one another, each of said connectors being crossed intermediate its ends with another connector, whereby the individual brushes are divided into groups and their movement along the connectors is limited, substantially as described.

2. In a flexible brush, in combination with a plurality of individual brushes, flexible connectors uniting the same, by engagement therethrough, said connectors being crossed intermediate their ends to effect the spacing of the brushes into groups on either side of such crossing and straps terminating the flexible connectors and adapted to draw the connectors through the individual brushes, substantially as described.

3. A flexible brush, having in combination a plurality of single brushes, and flexible connectors engaging through holes bored in the backs of each of said brushes substantially parallel with the engaging face of each, said connectors being adapted to be attached to a supporting loop handle at each end of the line of single brushes thus united, and having the portions intermediate the looped ends crossed to effect the spacing of the single brushes into groups along said connector, and a loop handle attached to said ends of the connector, substantially as described.

883,549. FITTING FOR ELECTRIC CONDUITS. ALLAN R. LAKIN, New York, N. Y. Filed June 29, 1907. Serial No. 381,394.



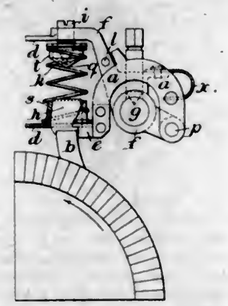
1. An outlet device for electric conduits comprising a shell or body provided with a nipple which serves as a wire-inlet and having two end-walls opposite each other and a side wall connecting the said end-walls and having two sides open; and a cover having two sides of the same size and which are at an angle with respect to each other and one of said sides only provided with wire-exits,—said cover being adapted to close the two open sides of the said shell or body and also adapted to be reversed in position with respect thereto, whereby the said wire-exits may be exposed in either of two directions.

2. An outlet device for electric conduits comprising a box or supporting member provided with a nipple which serves as an inlet for a conductor from the conduit, and said box member having two open sides one of which is opposite said inlet; a closure member provided with an outlet for the passage of said conductor, and means to secure said closure member in either one of two different positions over said two open sides of the supporting member, whereby to vary the relative position of the outlet of the said closure member with respect to the inlet of the supporting member.

3. An outlet device for electric conduits comprising a box member having means by which it may be attached in position and provided with an inlet to receive a conductor from the conduit and also having an opening; and a closure member having two sides which are at an angle with respect to each other and provided with an exit at one side only through which the said conductor may pass out, and said closure member capable of being secured in either of two positions to close the opening in the box member.

4. An outlet device for electric conduits comprising a shell or body provided at one side with a nipple which serves as a wire-inlet and said body having an opening; and a cover having two sides which are at an angle with respect to each other and provided with a rabbeted edge which extends continuously around it and having wire-exits in one side only,—said cover being adapted to fit over the opening in said shell or body in either of two positions.

883,550. BRUSH AND BRUSH-HOLDER FOR DYNAMO-ELECTRIC MACHINES. FREDERICK H. LORING, London, England. Filed Nov. 4, 1907. Serial No. 400,570.



1. A current collecting brush comprising a taper head of circular cross section shaped to fit a correspondingly tapered socket, and a contact portion of substantially rectangular cross section attached to said head.

2. A commutator brush comprising a taper head of circular cross section adapted to fit a correspondingly formed socket, and a contact portion attached to said head and curved on an axis transverse to the axis of said head.

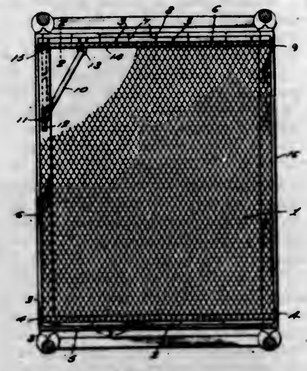
3. A brush holder of the class described, comprising a brush carrying arm provided with a taper socket, a brush having a correspondingly tapered head fitting said socket, and a device on said arm coöperating with a portion of the brush exteriorly of the socket to prevent rotation of the brush in said socket.

4. A brush holder comprising a fixture, a movable arm having a brush receiving socket therein, and an ejector arranged on said fixture in alinement with said socket.

5. A brush holder comprising a fixture adapted for attachment to a brush holder stud, an arm pivoted on the fixture and provided with a taper socket, a brush having a taper head fitting said socket, and an ejector arranged on the fixture and adapted to enter said socket and remove the brush therefrom.

[Claims 6 to 9 not printed in the Gazette.]

883,551. BED-SPRING. WALTER W. LYTLE, St. Louis, Mo. Filed Apr. 3, 1907. Serial No. 366,186.



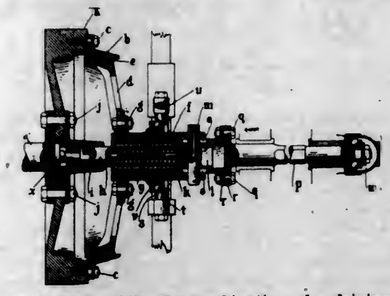
1. The combination of a bed having side bars, with a spring fabric, means for attaching one end of the spring fabric to corresponding ends of the side bars, a rigid member attached to the other end of the fabric, means for attaching one end of the member to one of the side bars, and a lever attached to the other side bar and engaging the opposite end of the member for stretching the fabric.

2. The combination of a bed including side bars, upwardly extending members adjacent the ends of one bar, an upwardly extending member adjacent one of the ends of the other bar, and an upright pivot intermediate the ends of the second bar, with a spring fabric, rigid members on the ends of the fabric adapted to engage said members for stretching the fabric, and a lever mounted on the pivot and arranged to engage one of the rigid members for drawing the fabric taut.

3. The combination of a bed, and fastening devices at three corners thereof, a spring bed bottom having three corners detachably secured to the fastening, and a lever fulcrumed on the bed and adapted to engage the fourth corner of the bottom for stretching the latter.

4. The combination of a bed, and fastenings at three corners thereof, with a spring fabric, stiffening strips at the ends thereof, end rails secured to the ends of the fabric, one rail having a longitudinal groove provided with a depression adjacent one end, a lever fulcrumed on the bed at a point directly in line with the depression of the groove and adapted normally to extend parallel with the line of draft of fabric when stretched, and a roller on the end of the lever adapted to run in the groove and enter the said depression.

883,552. CLUTCH MECHANISM. CARLTON R. MABLEY and GUSTAVE E. FRANQUIST, New York, N. Y.; said Franquist assignor to Smith & Mabley, Incorporated, New York, N. Y., a Corporation of New York. Filed Jan. 9, 1904. Serial No. 188,327.



1. In an automobile, the combination of a driving gear and a shaft comprised in part by a clutch member, a sleeve supporting said clutch member, a hollow shaft on which said sleeve is adapted to slide longitudinally, a spring device contained within the said hollow shaft for moving the clutch member in one direction, the said hollow shaft being connected at each end to other sections of shafting and in alinement therewith, the said hollow shaft and its supported parts being removably secured by such connections in such manner that the said hollow shaft and its supported parts may be uncoupled and removed from the machine without disturbing the alinement of the remaining portions of the shaft.

2. In an automobile, the combination of two sections of alined shafting with the following instrumentalities intervening between the same, namely, a clutch member, a sleeve upon which said clutch member is carried, a hollow shaft surrounded by said sleeve, a spring device contained within the hollow shaft, means connecting the said sleeve with said spring device whereby the sleeve is forced longitudinally in one direction, said instrumentalities as an organism being removably connected to the said sections of the alined shafting and alined therewith and the said removable connections permitting the said clutch mechanism to be removed from the machine without disturbing the relation or alinement of the sections of shafting.

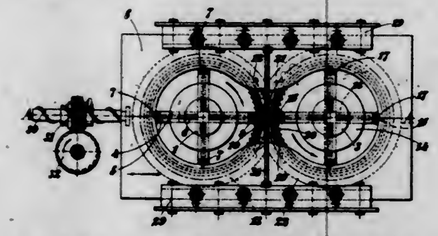
3. The combination of two sections of alined shafting, a removable section intervening between the two sections, a sleeve moving upon the said removable section and carrying the clutch member, and means for lubricating the section of shaft carrying the clutch member comprising a conduit contained within the said shaft, and a lubricant conducting pin passing into the said shaft, substantially as described.

4. The combination with two separated shafts, of an intermediate shaft coupled to one of said shafts and having movable devices for clutching the other shaft, said latter shaft having coöperating clutching devices separably secured thereto, whereby to permit removal of said clutch mechanism from between said shafts without disturbing their position, substantially as described.

5. The combination of two separated shafts, of an intermediate shaft coupled to one of said shafts and having movable devices for clutching the other shaft, said latter shaft having a flywheel carrying coöperating clutching devices separably secured thereto, whereby to permit removal of said clutch mechanism from between said shafts without disturbing their position, substantially as described.

[Claims 6 to 15 not printed in the Gazette.]

883,553. CHANGE-SPEED AND REVERSING-GEAR MECHANISM. LOUIS A. MAGOUT, Paris, France. Filed Feb. 25, 1907. Serial No. 359,160.



1. A change speed mechanism embodying driving and driven shafts, and coöperating revoluble elements shiftable transversely of the respective shafts, and operatively connected thereto by devices which effect differential speeds of the shafts according to the relative position occupied by the said elements.

2. A change speed gear embodying driving and driven shafts, a pair of coöperating gear elements, and means for proportioning the relative speeds of the shafts by variations of the eccentricity of the gear elements relatively to the respective shafts.

3. A change speed gear embodying driving and driven shafts, a pair of coöperating gear elements having relahaving ratchet and pawl connections with the respective shafts, and means for effecting simultaneous adjustments of both elements in directions transversely of the shafts.

4. A change speed gear embodying driving and driven shafts, a pair of coöperating gear elements having relatively fixed axes and adjustable transversely of the said shafts, and ratchet and pawl devices operatively connecting the gear elements and the respective shafts.

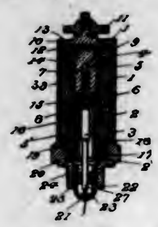
5. A change speed gear embodying driving and driven shafts, a pair of coöperating gear elements, ratchet and pawl devices for operatively connecting the said elements and the respective shafts, and devices for controlling the engagement of the said devices.

[Claims 6 to 17 not printed in the Gazette.]

883,554. SPARKING DEVICE. HENRI MAILLARD, Paris, France. Original application filed Jan. 30, 1905, Serial No. 243,371. Divided and this application filed Oct. 24, 1906. Serial No. 340,422.

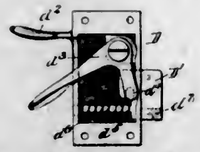
1. In an electromagnetic sparking device, a two-part iron core one of said parts being in yielding engagement with the other, said movable part supporting a rod of non-oxidizable metal centrally reinforced with a rod of heat-refractory metal, said second rod having a tip of non-oxidizable metal, a second terminal, and a support for the same out of metallic contact with said core.

2. In an electromagnetic sparking plug, a two-membered iron core one member being stationary and the other having a yielding connection with the first, a rod having an outer surface of non-oxidizable metal and a core of rigid heat-resisting metal carried by said movable member, and a cone-shaped tip of platinum terminating said rod.



3. In an electromagnetic sparking device, a nut having an externally threaded tubular projecting member for securing the same in a combustion engine, a spark-terminal supporting bridge member removably secured in the end of said projecting member, a spark-terminal guide of insulating material, and a retaining ring for securing said guide in place in said tubular member.

883,555. LOCK OR LATCH FOR WINDOWS. ERNEST A. MARSH, Chicago, Ill. Filed Feb. 20, 1907. Serial No. 358,354.



1. In a device of the class described the combination with a sliding bolt, of a catch therefor having an inclined face adapted to retract the bolt and an inclined face at one side thereof upon which the bolt rests when seated.

2. In a device of the class described the combination with a sliding bolt adapted to be engaged to a window sash, of a catch therefor adapted to be supported adjacent the sash and having a bearing face for said bolt inclined from the top of the catch downwardly and laterally of the longitudinal axis of the bolt and adapted to force the sash laterally of the catch.

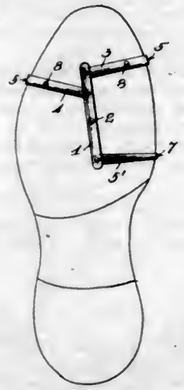
3. A window latch, comprising a casing adapted to be engaged to a window sash, a spring pressed bolt slidably engaged therein and having an inclined face on one side thereof extending from its bottom upwardly and lying in a plane parallel to the longitudinal axis of the bolt, and a catch adapted to be rigidly engaged to the window jamb and provided with a downwardly and laterally inclined face down which the inclined face of the bolt is adapted to slide in seating.

883,556. ICE-CREEPER. JOB MATTESON, South Hartford, N. Y. Filed Nov. 14, 1907. Serial No. 402,167.

1. A device of the character specified, embracing a central, longitudinally extending operating lever adapted to be arranged under the sole of a shoe or other like article, laterally and oppositely extending clamping members, pivotally connected with the front end of the operating lever, one at a point in advance of the other, said members being formed at their outer ends with inwardly extending sole-engaging teeth adapted to engage the edge of the sole, a laterally extending lever adjusting and locking member pivotally connected with the rear end of the operating lever, said member being formed at its outer or free end with an inwardly extending sole-engaging portion, and calks or teeth formed on the under face and faces of the operating lever and clamping members respectively.

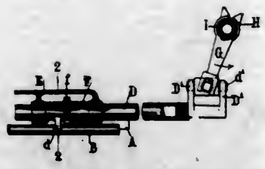
2. A device of the character specified, embracing a longitudinally extending operating lever adapted to be arranged in an approximately central position under the sole of a shoe or other like article, laterally and oppositely extending clamping members, pivotally connected with

the front end of the operating lever, one at a point in advance of the other, the outer ends of the clamping members being formed with sole-engaging teeth designed to engage the edge of the sole, a laterally extending lever adjusting and locking member, pivotally connected at its



inner end with the rear end of the operating lever, and having formed at its outer or free end an inwardly extending sole-engaging portion, which is caused to tightly bind against the edge of the sole by swinging the outer end of the lever adjusting and locking member forwardly.

883,557. LATCH FOR CHANGE-SPEED GEARS FOR AUTOMOBILES. EMILE L. P. MORS, Paris, France, assignor to The Société Anonyme d'Electricité et d'Automobiles Mors, Paris, France. Filed Aug. 21, 1906. Serial No. 331,474.



1. The combination in shifting mechanism of an operating spindle, and a plurality of shifting-rods parallel thereto and actuated thereby, and means for locking the remainder during the movement of one of the rods by said operating spindle.

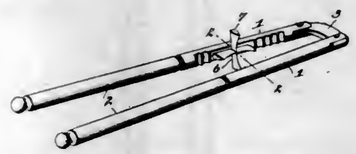
2. The combination in shifting mechanism of an operating spindle capable of angular and longitudinal motion, a plurality of shifting rods substantially parallel thereto and capable of individual longitudinal displacement thereby and means for locking the remainder during the movement of one of said shifting rods by said operating spindle.

3. The combination in shifting mechanism of an operating spindle, a plurality of shifting rods actuated by and concentrically arranged around the spindle, and means for locking the remainder during the movement of one of said shifting rods by the operating spindle, substantially as described.

4. The combination in shifting mechanism of an operating spindle provided with a tooth, a plurality of shifting rods arranged concentrically around said spindle and provided with transverse notches adapted to coöperate with said tooth, and means for locking the remainder during the movement of one of said rods by the spindle.

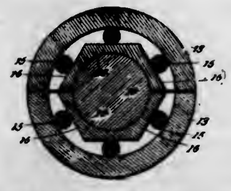
5. The combination in shifting mechanism of an operating spindle provided with a tooth and capable of angular and longitudinal motion, a sleeve on said spindle and secured thereto so as to permit of the free longitudinal movement of the spindle therethrough but locked so as to follow the angular motion thereof, there being a rib on said sleeve provided with a notch to permit the passage of the tooth on the spindle, and a plurality of shifting rods capable of longitudinal movement with the spindle and provided with notches adapted to be engaged by said rib and tooth, substantially as described.

883,558. ATTACHMENT FOR NUTCRACKERS. JIN FUEY MOY, Woodcliff, N. J. Filed July 18, 1906. Serial No. 326,734.



A nut cracker comprising a pair of jaws, one having a flat portion, and serrations adjacent the said portion, the flat portion being provided with a tapped opening, and a link to which the jaws are hingedly connected, with an attachment consisting of a plurality of radially and diametrically disposed blades each flat at the back to bear against the flat portion of the said jaw and each oppositely disposed pair forming a single concaved cutting edge, and a central threaded shank extending at right angles to the flat sides of the blades and having threaded engagement with the said opening.

883,559. PULLEY-CLUTCH BUSHING. JOHN W. MCGREGOR and LEONARD G. FERRIS, Tacoma, Wash. Filed Oct. 16, 1907. Serial No. 397,670.



1. A clutch bushing comprising split outer and inner rings with opposite surfaces inclined toward each other, and rollers located between the rings and bearing upon said surfaces.

2. The combination with a shaft and pulley, of a clutch bushing in the eye of the pulley, comprising inner and outer split rings bearing against the shaft and pulley hub respectively, said rings being spaced apart with surfaces inclined toward each other, and rollers in said space, between said surfaces.

3. A clutch bushing comprising an outer ring, an inner split ring spaced therefrom, the outer surface of the inner ring having faces inclined toward said outer ring, and rollers between said faces and the outer ring.

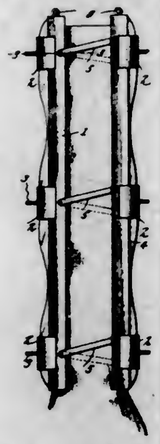
4. A clutch bushing comprising split outer and inner rings spaced apart, the surface of one ring having the form of a regular polygon, and rollers between the respective faces thereof and the opposite surface of the other ring.

5. A clutch bushing comprising split outer and inner rings, semi-circular end pieces secured to one of said rings and having a loose connection with the other, allowing them to expand or contract, said rings having opposite surfaces inclined toward each other, and rollers located between the end pieces and bearing between said surfaces.

883,560. PANTS-PRESSER. CLYDE A. NELSON, Cristobal, Panama. Filed Nov. 26, 1907. Serial No. 403,882.

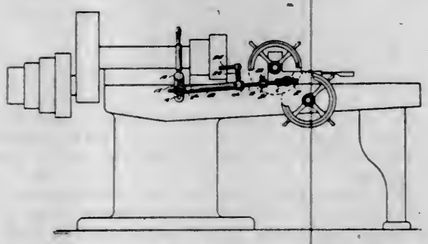
1. In a trouser stretcher, a pair of clamping members, each comprising a pair of clamping bars hingedly secured together by a series of spring clamps, a separating plate secured to each of the spring clamps and adapted to lie

normally between the clamping bars, and a series of pivoted stretcher bars upon one pair of the clamping bars.



2. In a trouser stretcher, a pair of clamping members, each comprising a pair of clamping bars hingedly secured together by a series of spring clamps, a separating plate secured to each of the spring clamps, a pair of handles upon the clamps and a series of pivoted stretcher bars upon one pair of the clamping bars.

883,561. TAPER CUTTING AND THREADING ATTACHMENT FOR BOLT-CUTTING MACHINES. HARRY NEVILLE, Los Angeles, Cal. Filed Sept. 12, 1907. Serial No. 392,549.

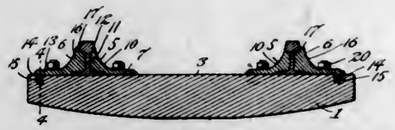


1. In a bolt cutting machine, a taper threading attachment comprising a connecting rod arranged for pivotal connection with the carriage of said machine, guiding means for the free end of the connecting rod, a frame comprising a horizontal member adapted to be fixed to the die controlling shaft of the machine, and an arm extending at right-angles to said member, means for maintaining the connecting rod in fixed position, relative to the guiding means, means for connecting the arm of the frame with the adjacent end of the guiding means, and means adjustably mounted on the end of the connecting rod for engaging the end of the guiding means.

2. In a bolt cutting machine, a taper threading attachment comprising a connecting rod arranged for pivotal connection with the carriage of the machine, longitudinally spaced tubular guide members, a tubular member arranged between said guide members, said tubular and guide members receiving the free end of the connecting rod, a frame comprising a horizontal member having a socket in one end to receive the die controlling shaft of the machine, and an arm extending at right-angles therefrom, means for connecting the front guide member with the arm of the frame, means for maintaining the connecting rod against relative movement with the guide members and means mounted on the end of the connecting rod for engaging the adjacent guide member.

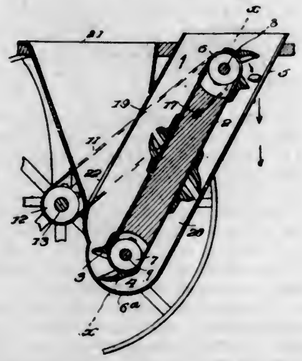
3. In a bolt cutting machine, a taper cutting and threading attachment comprising a frame having a laterally disposed body with a socket in one end to receive the die controlling shaft of the machine, and a longitudinally slotted arm extending at right-angles from said body, two longitudinally spaced tubular guide members, a connecting sleeve arranged between the members, means for connecting the front tubular member with the arm of the frame, a longitudinally disposed connecting rod working through the guide members and connecting sleeve, means for pivotally connecting the rear end of said rod with the carriage of the bolt cutting machine, and means mounted on the pivoted end of the connecting rod for engaging the adjacent guide member with means for holding the connecting rod against relative longitudinal movement.

883,562. RAIL-TIE. ROBERT C. NICHOLS, Everett, Wash. Filed Apr. 6, 1907. Serial No. 366,796.



A railroad tie comprising a solid metallic body of approximately triangular shape in transverse section, rail securing means arranged on the bearing surface of said tie, said securing means comprising inner and outer members formed to bear against the opposite sides of the rail webs and to embrace the rail flanges, one of said members being formed with a depending stud to enter an opening formed in the tie, and bolts passed through said members and tie, said bolts projecting through the inclined sides of the tie above the lower edge thereof.

883,563. SEED-DROPPER. WASHINGTON B. PARRISH, Kara, Va. Filed Oct. 18, 1907. Serial No. 397,992.

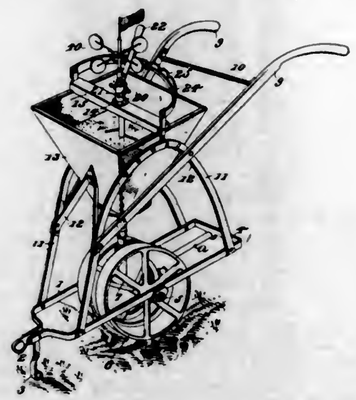


1. Seed dropping mechanism comprising an endless belt, sprocket wheels for said belt, and coöperating seed gripping jaws having independent connection with said belt and projected from the outer side thereof solely and opened by the action of the belt when passing around the said sprocket wheels.

2. Seed dropping mechanism comprising an endless belt, sprocket wheels therefor, seed gripping jaws applied to the outer side of the belt and projected outward therefrom, and means independently connecting the jaws with the belt and admitting of one of the jaws being adjusted towards and from the companion jaw to adapt the jaws to different sizes of seed.

3. In combination, a casing having a rounded bottom and inclined to the perpendicular, a hopper arranged upon the upper side of the casing and in communication therewith, sprocket wheels at opposite ends of the casing, an endless belt mounted upon said sprocket wheels, and cooperating jaws secured to the outer side of said belt and projected outward therefrom at an inclination and having their gripping faces made hollow, said jaws being opened by the action of the belt when passing around the aforesaid sprocket wheels.

883,564. FERTILIZER-DISTRIBUTER. WASHINGTON B. PARRISH, Kara, Va. Filed Jan. 28, 1908. Serial No. 413,078.



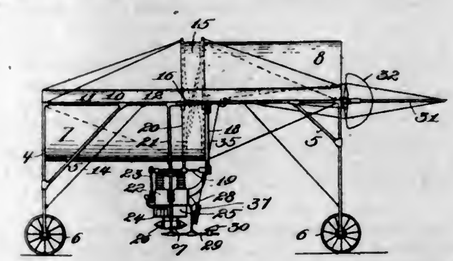
1. In an implement of the character set forth, the combination of a hopper having a discharge opening in its lower end, a cone having an annular groove in its side, and a sectional plate fitted in the groove of said cone.

2. In combination, a hopper having a discharge opening in its lower end, a vertical shaft passed through the hopper, actuating mechanism for imparting rotary movement to said shaft, a clutch between the shaft and actuating mechanism and comprising separable members, means for raising and lowering the shaft to throw it into and out of gear, and a distributer secured to said shaft and movable therewith, and adapted to open and close the lower end of the hopper, said distributer comprising a cone to enter the lower portion of the hopper, and a plate to throw the material outward.

3. In combination, a hopper having a discharge opening in its bottom, a shaft passed vertically through the hopper, a distributer secured to said shaft and adapted to close the lower end of the hopper, actuating means for imparting rotary movement to said shaft, coöperating cams to effect vertical movement of said shaft, an operating lever having connection with said shaft, a notched bar for securing the operating lever in an off-set position, and an adjustable stop adapted to be secured to said notched bar to hold the operating lever when moved to a position between fixed notches of the said notched bar.

4. In an implement of the character specified, the combination of a frame comprising longitudinal bars, wheels mounted in bearings of said frame, side arches projected upward, front and rear braces connecting the front and rear members of said arches, a hopper secured between the upper end of the arches and braces and having an opening in its bottom, a vertical shaft passed through the hopper, gearing connecting the lower end of said shaft with the aforesaid wheels for imparting motion to said shaft and embodying a clutch, a distributer connected to said shaft and adapted to close the lower end of the hopper, and adjusting means for moving said shaft vertically to throw it in or out of gear and to regulate the discharge opening according to the amount of material to be distributed over a given surface.

883,565. AERO-TUBE. WILTJE PARS, Seattle, Wash. Filed Oct. 29, 1907. Serial No. 399,698.



1. An aero-tube comprising two semi-tubes, one of which opens upward and the other of which opens downward, the two tubes overlapping for a portion of their lengths to form a cylinder, and propelling means in said cylinder.

2. An aero-tube comprising two semi-tubes, one of which opens upward and the other of which opens downward, the two tubes overlapping for a portion of their lengths to form a cylinder, screw-propelling means in the cylinder, and side planes connected with the semi-tubes and substantially co-extensive therewith.

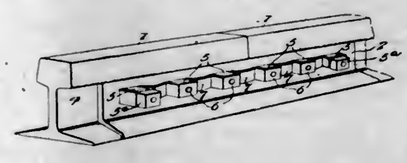
3. An aero-tube comprising two semi-tubes, one of which opens upward and the other of which opens downward, the two semi-tubes overlapping for a portion of their lengths to form a cylinder, screw-propelling means in the cylinder, and two side planes connected with and substantially coincident with the semi-tubes, the side planes being upwardly inclined from the semi-tubes and being downwardly bowed at their outer sides.

4. An aero-tube comprising two semi-tubes, one of which opens upward and the other of which opens downward, the two tubes overlapping for a portion of their lengths to provide a horizontally disposed cylinder, a horizontally rotative screw-propeller in said cylinder, two side planes extending from one end of one of the semi-tubes to the other end of the other semi-tube, and steering means for the aero-tube.

5. An aero-tube comprising two semi-tubes, one of which opens upward and the other of which opens downward, the two tubes overlapping for a portion of their lengths to provide a horizontally disposed cylinder, a horizontally rotative screw-propeller in said cylinder, two side planes extending from one end of one of the semi-tubes to the other end of the other semi-tube, and steering means for the aero-tube, involving a plurality of rudders movable about transversely disposed axes.

[Claims 6 to 10 not printed in the Gazette.]

883,566. NUT-LOCK. GEORGE A. PATTILLO, Cartersville, Ga. Filed May 3, 1907. Serial No. 371,639.



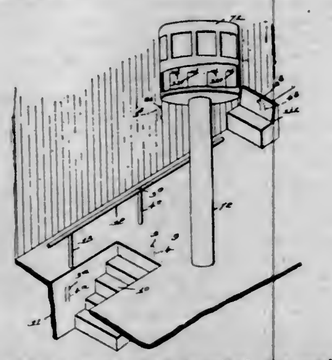
The herein described nut lock comprising a metal strip bent to form a series of nut pockets having connected integral portions between the pockets of greater length than the distance between the nuts to be bowed to press the sides of the pockets outwardly upon the sides of the nuts and frictionally engage the same, said pockets having bolt apertures therein through which the bolts project, the nuts of the bolts being confined within the pockets, and nuts fitted to the end bolts outside the pockets for holding the locking strip in place.

883,567. LOCK. WILLIAM PERSON, Rockford, Ill., assignor of one-half to Alfred C. Abramson, Rockford, Ill. Filed May 7, 1906. Serial No. 315,632.



A lock formed of a face plate and a casing connected to the face plate, the casing formed of a single piece of sheet material bent to form an end and two sides.

883,568. AMUSEMENT APPARATUS. HERBERT N. RIDGWAY, Boston, Mass. Filed Aug. 3, 1907. Serial No. 386,863.



1. In a device of the class described, the combination with a passageway or floor space where people may pass or congregate, of a plurality of concealed nozzles located in different positions, and means operable from a common point from which the location of all the nozzles may be seen to deliver at will air under pressure from any nozzle.

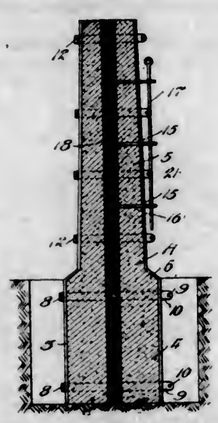
2. In a device of the class described, the combination with a passageway or floor space where people may pass or congregate, of a plurality of concealed nozzles situated in different locations, and concealed means operable from a common point from which the location of all the nozzles are visible to deliver at will air under pressure from any nozzle.

3. In a device of the class described, the combination with a passageway or floor space where people may pass or congregate, of a plurality of concealed nozzles situated in different locations, a pipe connecting each nozzle with a source of air supply under pressure, a valve for each pipe, an electrically-operated device for operating each valve, and means situated at a common point from which the location of all the nozzles may be seen to control said valve-operating devices.

4. A device for furnishing amusement comprising a passageway or floor space where people may pass or congregate, a plurality of concealed air jets nozzles located in different positions, an air supply tank, a pipe connecting said tank with each nozzle, a pump for maintaining a supply of compressed air in said tank, a valve in each tank, a magnet sustained by each pipe and adapted to open the valve therein, a spring for closing each valve, a circuit for each magnet, and a switch in each circuit, said switches being located at a common point from which the location of all the nozzles may be seen.

883,569. MOLD FOR FENCE-POSTS. HARVEY H. RODGERS, Good Hope, Ohio. Filed May 9, 1907. Serial No. 372,732.

1. A fence post mold comprising a pair of longitudinally divisible sections, reinforcing strips extending along the edges of the sections and adapted to abut, horizontal bands extending around the mold, and each composed of two parts hingedly connected at a point coinciding with the plane of division of the sections, certain of the bands having both parts rigidly attached to the mold sections and the remaining bands having only one part attached to one of the sections, and means for securing the free ends of each band together for holding the mold sections closed.



2. A post mold comprising a pair of longitudinally divisible sections, enlarged at their lower ends, hingedly connected bands on the enlarged lower ends forming the sole means for permanently connecting the sections, the free ends of the bands being arranged to overlap and provided with apertures, a device passing through the apertures of all the bands for holding the sections in locked position, and means on the upper ends of the sections coöperating with the said device for locking the sections in closed position.

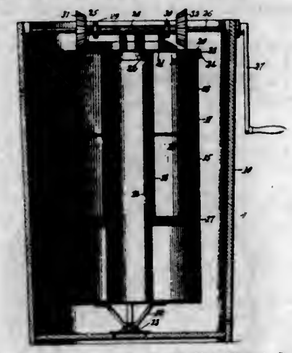
3. A mold for a concrete post comprising sections forming an enlarged base portion, and a column portion of less diameter than the base portion, bands encircling the base portion and secured thereto, hinges on the bands for connecting the sections together, clamping means for the bands, and reinforcing bands for encircling the column portion of the mold and each consisting of two parts hingedly connected at one end and removably connected at the other, one part of each band being secured to the adjacent mold section while the other part is detached from the other section.

4. A fence post mold comprising two sections shaped to form a post having an enlarged base portion and a tapering circular column portion of less diameter than the base portion, split bands secured to and encircling the base portion of the mold and hingedly connected for permitting the sections to swing open and closed, clamping means for connecting the free ends of the bands, bands encircling the column portion of the mold and composed of hingedly connected parts, one part only of each of said bands being secured to one of the sections, and means for clamping the free ends of the last-mentioned bands together.

883,570. ICE-CREAM FREEZER. MARY A. ROWE, West Hoboken, N. J. Filed May 6, 1907. Serial No. 372,243.

1. In an ice-cream freezer, the combination of a freezing can having concentric walls forming therebetween an annular chamber, one of said walls presenting an inwardly-directed projection intermediate the height thereof, a second annular can supported within the first-mentioned can and upon said projection, a cover common to both of said cans, and means in engagement with said cover for oscillating the cans.

2. In an ice cream freezer, the combination of a freezing can having a centrally disposed open-ended tube adapted to receive a freezing agent and forming with the walls thereof an annular chamber, an inwardly directed bead upon the wall of said can intermediate the height thereof, a second annular can supported within the first mentioned can and upon said bead, said last mentioned can having flanges adapted to engage with the outer wall



of said can and said tube, inwardly directed lugs within said second can and serving as handles to facilitate the removal therefrom, a common cover for said outer and inner cans, and means in engagement with said cover for oscillating said cans.

883,571. LOCK. NESTOR SAHLSTEN, Duluth, Minn. Filed Aug. 5, 1907. Serial No. 387,075.



1. In a lock, the combination of a first plate, a latch pivotally secured to said plate, a spring adapted to yieldingly hold said latch in operative position, a second plate secured to the said first plate and spaced apart therefrom and containing a keyhole, a third plate secured to, and adapted to oscillate upon said second plate, said third plate containing a keyhole adapted in operative position to register with the keyhole in said second plate, said third plate containing notches or equivalent passages adapted to receive reciprocatable pins or bolts, reciprocatable pins or bolts, adapted in operation to extend into the notches in said third plate to hold said plate in retracted position, pin-supporting springs secured to one of said plates for supporting said pins and for shooting them into operative position, means for retracting said springs, respectively, to withdraw said pins from said notches, rotatable eccentric fingers provided with thumb wheels or finger holds, said fingers being adapted in operative position to impinge upon said pin-supporting springs to prevent their retraction, a bolt adapted in operative position to engage the shank of one of said fingers to prevent the rotation of said finger and to prevent its disengagement from the spring held by said finger in operative position, a second bolt adapted in operative position to impinge upon the latter said spring to prevent the retraction of such spring when such spring is released by the one of said fingers which is adapted to hold said spring in operative position, means adapted when said pins are withdrawn from the notches in the third said plate, to swing said plate into operative position, a rim or frame to which the said first and second plates are secured, and a cover plate secured to the outer side of the said third plate and adapted to oscillate therewith and provided with a keyhole in registration with the keyhole in said third plate.

2. In a lock, the combination of a plate, a latch pivotally secured to said plate, a second plate secured to the said first plate and spaced apart therefrom and containing a key hole, a third plate secured to the said second plate and adapted to oscillate thereon, said third plate containing a key hole adapted in operative position to register with the key hole in the said second plate, said third plate containing notches or equivalent passages adapted to receive reciprocatable pins or bolts, reciprocatable pins or bolts adapted in operation to extend into the notches in said third plate to hold said plate in retracted position, pin supporting springs for supporting said pins and for shooting them into operative position and for retracting said pins, means for retracting said springs respectively to withdraw said pins from said notches, rotatable eccentric fingers provided with finger holds, said fingers being adapted in operative position to impinge upon said pin supporting springs to prevent their retraction, means adapted when said pins are withdrawn from said notches in the said third plate to swing said plate into operative position, a rim or frame extending from the said first plate to the said second plate.

883,572. PNEUMATIC-TIRE SHIELD. FREDERIC W. SAVAGE, Granville, N. Y. Filed Nov. 10, 1905. Serial No. 286,731.



1. A removable shield for pneumatic tires, composed of interjoined links formed of round wire and sufficiently twisted to form a substantially unbroken and comparatively flat surface, adapted to cover the tire.

2. A removable shield for pneumatic tires, composed of interjoined links formed of round wire and sufficiently twisted to form a substantially unbroken and comparatively flat surface, the size of said links gradually diminishing from the line at the longitudinal center thereof towards each edge.

3. A removable shield for pneumatic tires, composed of links formed of round wire and interjoined both longitudinally and transversely and sufficiently twisted to form a substantially unbroken and comparatively flat surface, the longitudinal lines of links gradually diminishing in size from the longitudinal center of the shield towards each edge thereof.

4. A removable shield for pneumatic tires, composed of interlinked twisted links having the inner surface thereof embedded in a coating of rubber.

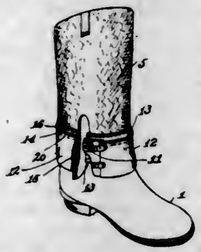
5. A removable shield for pneumatic tires, composed of interlinked twisted links adapted to completely surround the tire, and a supplemental portion composed of flattened links and attached to said shield and adapted to surround the wheel rim containing the tire.

883,573. FELT BOOT OR SOCK. FREDERIC W. SAVAGE, Granville, N. Y. Filed May 17, 1907. Serial No. 374,191.

1. A felt boot or sock embodying a depending flap attached to said boot or sock and forming a circular pocket around said boot or sock, said flap being split vertially at a plurality of points substantially opposite to each other, and means for adjustably drawing said split ends together.

2. A felt boot or sock embodying a broad strengthening band encircling said boot or sock at the ankle portion and connected thereto, a depending flap attached to said band and forming a circular pocket around said boot or sock, said flap being split vertically at a plurality of

points substantially opposite to each other, and means for adjustably drawing said split ends together.



3. A felt boot or sock embodying a broad strengthening band encircling said boot or sock at the ankle portion and extended downwardly at its rear to embrace the heel of said boot or sock and connected thereto, a depending flap attached to said band and forming a circular pocket around said boot or sock, said flap being split vertically at a plurality of points substantially opposite to each other, and means for adjustably drawing said split ends together.

883,574. SHADE-BRACKET. LEO SCHACHNER, St. Louis, Mo. Filed June 28, 1907. Serial No. 381,267.



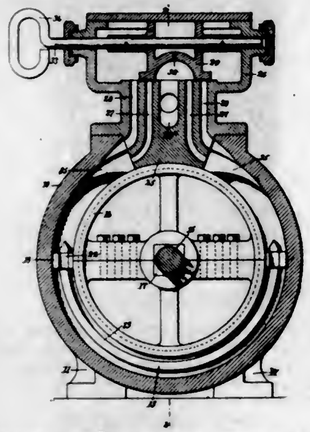
The combination of a bracket member comprising a rectangular strip of bendable metal having a flat body portion and its extremities bent forwardly to form parallel lugs, said lugs having slots flush with the front surface of the body portion, said body portion having a threaded opening and countersunk apertures disposed between the said lugs, with a shade-supporting element consisting of a strip of bendable metal formed with a shank extending slidably through the slots and arranged to bear flat against the body portion of the bracket member and having a longitudinally extending slot registering with the threaded opening of the said body portion, one end of the said element being bent into an arm projecting outwardly from the shank and provided with a pintle-receiving aperture, a clamping screw having a threaded shank of such length as to extend through the slot of the said supporting element to screw into the threaded opening of the bracket member without the rear end of the threaded shank projecting out of such threaded opening and arranged to frictionally clamp the shank of the supporting element against the body portion of the bracket member, fastenings arranged in the countersunk apertures for securing the bracket member to a support, said clamping screw serving to prevent the supporting element from becoming detached from the bracket member except by complete removal of the screw.

883,575. ROTARY ENGINE. HERBERT C. SCHAEFER, El Paso, Tex. Filed Aug. 6, 1907. Serial No. 387,316.

1. In a rotary engine, a cylinder having a head, a piston revolubly mounted in said cylinder having a slidable blade, a spring for forcing said blade outwardly from the piston, and means carried by said head for engaging said blade and relieving the cylinder of the pressure of the blade acting under the influence of the spring.

2. In a rotary engine, a cylinder having ring heads, a skeleton piston revolubly mounted in said heads, ribs formed on said heads, and a blade slidably mounted in the piston, having notches to engage said ribs for the purpose described.

3. In a rotary engine, a cylinder having a head, a piston revolubly mounted in said cylinder having a slidable blade, and means carried by said head for engaging the said blade and preventing the forcible bearing thereof on the cylinder during substantially the entire time the blade is subjected to the pressure of the actuating agent at each revolution.

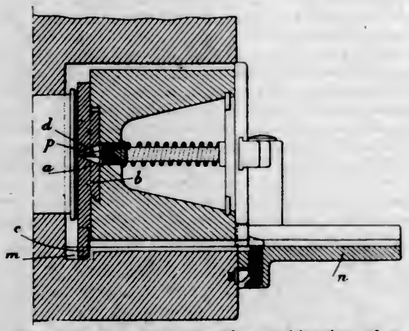


4. In a rotary engine, a cylinder having heads, a piston revolubly mounted in said cylinder having a slidable blade, and ribs formed on said heads adapted to be engaged by notches in said blade and prevent the forcible bearing of the blade on the cylinder during substantially the entire time the blade is subjected to the pressure of the actuating agent at each revolution.

5. In a rotary engine, a cylinder having rabbeted ring heads, a piston revolubly mounted in the rabbeted portions of said heads having circumferential annular grooves at its opposite ends, packing rings located in said grooves, ribs carried by said heads, and blades slidably mounted in the piston, having notches adapted to engage with said ribs during a part of the revolution of the piston for the purpose described.

[Claims 6 to 9 not printed in the Gazette.]

883,576. FIRING MECHANISM OF ORDNANCE. EUGENE SCHNEIDER, Le Creusot, France. Filed Feb. 2, 1907. Serial No. 355,473.



1. In a breech-loading gun, the combination of a removable breech-block, a shield eccentrically secured at the inner end of the breech-block, a firing pin, and means restraining said shield from participating in the unlocking movement of the breech-block to prevent said firing pin exploding the charge except when the breech-block is locked in the breech.

2. In a breech-loading gun, the combination of a rotatable breech-block, a plate or shield eccentrically mounted at the front of said breech-block and provided with an opening, a firing pin in alinement with said opening when the breech-block is locked in the breech, and means preventing said plate or shield participating in the rotation of the breech-block to remove said opening from alinement with the firing pin except when the breech-block is locked in the breech.

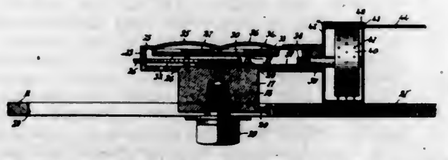
3. In a breech-loading gun, the combination of a rotatable breech-block, a plate or shield eccentrically mounted on the front of said breech-block, and means preventing said plate or shield participating in the rotation of the breech-block.

4. In a breech-loading gun, the combination of a breech-block rotatable concentrically in the gun-breech, a firing-pin, a shield for said firing-pin eccentrically mounted at the front of said breech-block and having an opening therethrough, and means preventing said shield participating in the rotating movement of the breech-block whereby said opening comes in line with said firing-pin only when the breech-block is in firing position in the breech.

5. In a breech-loading gun, the combination of a rotatable breech-block, a firing-pin, a shield therefor having a finger or projection engaging a fixed part of the gun mounted at the front of said breech-block, and having an opening therethrough which comes in line with said firing-pin only when the breech-block is in firing position in the breech.

[Claims 6 and 7 not printed in the Gazette.]

883,577. YARD-METER. WILLIAM B. SCHULTZ, Phillipsburg, N. J. Filed Dec. 7, 1907. Serial No. 405,529.



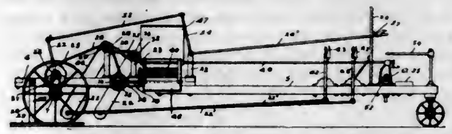
1. The combination of a framework, a member mounted thereupon and normally stationary, a carriage mounted upon said member and movable relatively thereto, a meter mounted upon said carriage, and means for forcing said carriage constantly against the edge of a piece of cloth or the like as the same travels along.

2. The combination of a normally fixed member, means for securing the same upon the framework of a loom or the like, a carriage mounted upon said fixed member and adapted to move freely along the same, said carriage being provided with a slot for receiving the edge of goods in motion, measuring apparatus mounted upon said carriage for indicating the length of cloth passing said measuring apparatus, and means for adjusting the tension of said carriage relatively to the edge of said cloth.

3. The combination of a shelf provided with a slot, a carriage mounted upon said shelf and movable relatively thereto, said carriage being provided with a portion projecting into said slot, a spring connected with said carriage, means for loosening or tightening said spring at will, meter mechanism mounted upon said carriage, gearing for actuating said meter mechanism, said gearing including a cloth wheel, and means mounted upon said carriage for maintaining said cloth wheel in engagement with the cloth to be measured.

4. The combination of a frame, a bracket mounted thereupon and adjustable vertically in relation thereto, said bracket being provided with a horizontal shelf having a longitudinal slot disposed centrally thereof, a carriage slidably mounted upon said shelf and provided with a portion projecting into said slot, said carriage being further provided with a surface to be engaged by the edge of the cloth to be measured, means for moving said carriage so as to compensate for variations in the width of said cloth, and measuring mechanism mounted upon said carriage and controllable by movements of said cloth.

883,578. HARVESTER. GEORGE E. SHAW, Sheldon, Cal. Filed July 19, 1906. Serial No. 326,918.



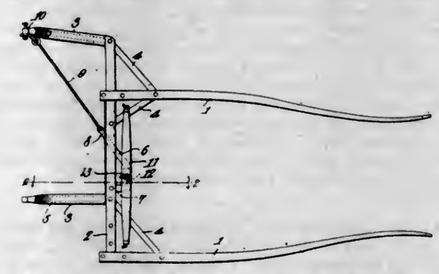
1. A machine of the class described comprising a pair of rearwardly converging horizontal knives, spaced elevators one behind the other inclined forwardly and downwardly and adapted to receive the matter therebetween from said knives, means for individually adjusting said elevators towards and from each other, means for retaining said elevators in adjusted position, and means for driving said elevators.

2. A machine of the class described comprising a frame, cutting mechanism carried thereby, spaced elevators one behind the other inclined forwardly and downwardly and connected at their upper ends with the frame for pivotal movements towards and away from each other, said elevators being adapted to receive matter from the cutting mechanism therebetween, means for driving the elevators, rods pivoted to the lower ends of the elevators, an operating lever connected with each rod, for moving the elevators pivotally, and means adapted for engagement with said levers, to hold the elevators in adjusted position.

3. A machine of the class described comprising a pair of rearwardly converging knives, spaced elevators one behind the other inclined forwardly and downwardly and adapted to receive matter therebetween from said knives, means for individually adjusting said elevators towards and away from each other, means for retaining said elevators in adjusted position, means for driving said elevators, a discharge conveyer disposed transversely of the frame adjacent the upper ends of said elevators and adapted to receive matter from said elevators, a downwardly inclined plate at the discharge end of the conveyer, a gate movable into and out of position to prevent the discharge of matter from said conveyer, means for operating said plate, and means for driving said conveyer.

4. A machine of the class described comprising a frame, cutting mechanism carried by the frame, coöperating elevators arranged to receive matter therebetween from the cutting mechanism, said elevators being pivoted at their upper ends for movement towards and away from each other, means for operating the elevators, and independent means for moving the elevators upon their pivots.

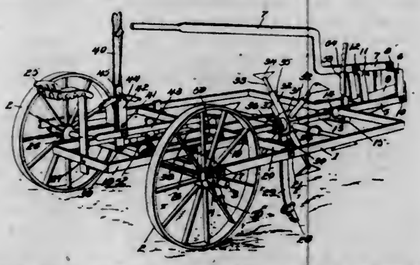
883,579. VEHICLE-SHAFT. GEORGE F. SKELTON, Wabasso, Minn. Filed Nov. 30, 1906. Serial No. 345,827.



The combination with the shafts and cross bar, one of said shafts being attached to one end of said bar and the other shaft secured to the bar at an intermediate point thereof, bow irons connected with said cross bar, one at a point between the shafts and the other at one end of the cross bar, a lever having its intermediate portion disposed parallel with and spaced from the cross bar and one end thereof provided with an angular extension having a pivotal connection with the cross bar at a point between the bow irons, the other end of the lever extending diagonally

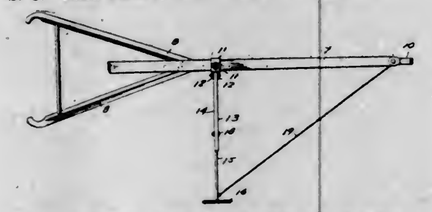
across and beyond said bar, there being a plurality of perforations formed in the intermediate portion of the lever, a link forming a pivotal connection between the free end of the lever and the end of one of the bow irons, a swingle tree pivotally mounted on the intermediate portion of the lever, and a bolt extending through the swingle tree and one of the perforations in the lever and forming the pivotal axis of said swingle tree.

883,580. COTTON-CHOPPER. CALVIN E. SMITH, Coleman, Tex. Filed Sept. 4, 1907. Serial No. 391,307.



In a cotton chopper, the combination of a frame mounted on wheels, a centrally disposed longitudinal shaft, a hub mounted on said shaft and provided with radial hoes or choppers, an extension on the hub provided with a groove, a forked connecting rod engaging said groove, a lever to which said connecting rod is pivoted, and a rack for said lever.

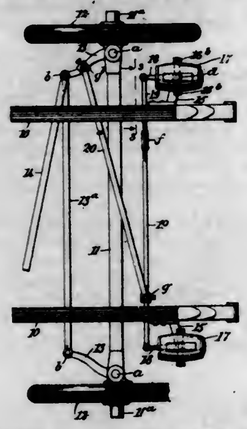
883,581. LAND-MARKER. DANIEL L. SMITH, Wellford, S. C. Filed June 8, 1907. Serial No. 377,955.



The combination, with a plow-beam and a share, of a pair of oppositely-disposed straps carried by the beam and bolted together at their ends, one of said straps having a pair of spaced ears projecting laterally from its side face; a marker pivoted at its upper end between said ears and movable towards and from the ground, said marker comprising a pair of overlapping members one of said members having a longitudinal channel formed in one face thereof in which the other member is slidably fitted, both members being provided with a series of transverse openings, and a bolt adapted for interchangeable engagement in said openings to vary the total length of the marker; a shoe secured to the outer end of the lower member of the marker; and means connecting said last-mentioned member with the forward end of the plow-beam.

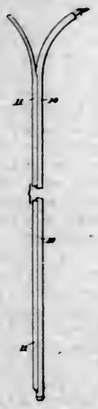
883,582. DEVICE FOR AUTOMATICALLY CONTROLLING LAMPS ON VEHICLES. JOHN W. P. SMITHWICK, La Grange, N. C. Filed Mar. 22, 1907. Serial No. 363,792.

1. The combination with a vehicle frame, a front axle, stub spindles pivoted to the ends of the axle, wheels on the spindles, rearwardly extending arms on the spindles, a rod connecting the arms, and means for manually controlling the pivotal movement of the spindles, of brackets secured to the frame in front of the axle and each having an upright member provided with a vertical opening, bifurcated standards mounted to turn in the openings of the brackets, lamps pivoted on horizontal pivots between the members of the standards, downwardly curved arms rigidly secured to the lower ends of said standards, a rod connecting the arms of the standards, said rod comprising two sections pivoted at one end to the arms and having their other ends screw threaded and a turn buckle on the screw threaded ends of the rods, adjustable boxes, one on the said rod and the other on an arm of one of the spindles, and a rod extending diagonally across the axle and having its ends pivoted to the said boxes.



2. In an automatic lamp controlling device for vehicles, the combination of a vehicle frame, a front axle, stub spindles pivoted to the ends of the axle, wheels on the spindles, rearwardly extending arms on the spindles, a rod connecting the arms, means for manually controlling the pivotal movement of the spindles, brackets secured to the frame in front of the axle and provided with vertical openings, bifurcated standards mounted to turn in the openings of the brackets and having their lower ends projecting through the same, lamps pivoted on horizontal pivots between the members of the standards, downwardly and rearwardly extending arms rigidly secured to the lower ends of the standards, a rod connecting the arms of the standards, adjustable boxes, one on the said rod and the other on an arm of one of the spindles, and a rod extending diagonally across the axle and having its ends pivoted to the said boxes.

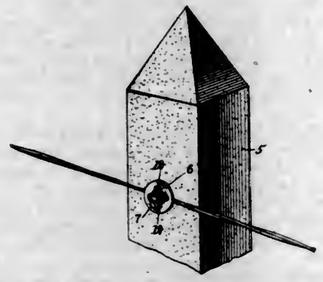
883,583. STOMACH-PUMP. JOSEPH F. STALLSMITH, Topeka, Kans. Filed Mar. 5, 1906. Serial No. 304,292.



A stomach pump approximately elliptical as a whole in cross section and comprising an eduction tube circular

in cross section and internally unobstructed from end to end, an induction tube crescentic in like section and secured to the eduction tube and also internally unobstructed from end to end, the passages through the tubes from end to end including the terminals being of like diameter throughout.

883,584. FENCE-WIRE FASTENER. WILLIAM H. SULLIVAN, Fort Shaw, Mont. Filed Nov. 19, 1907. Serial No. 402,832.



1. In a device of the character described, a member having means for receiving a wire and provided with a head, and a device adapted to be passed over said head and revolved thereunder to prevent the displacement of the wire from the member.

2. In a device of the character described, the combination of a key having an enlarged head provided with a wire-receiving notch, and a washer having an elongated opening adapted to be passed over said head and engaged thereunder to lock the wire in said notch.

3. In a fence wire fastener, the combination of a key, and a washer adapted to be detachably connected to the key, locking the wire therebetween, said washer being arranged in a plane at substantially-right angles to the length of the key.

4. In a fence wire fastener, the combination of a key having an enlarged head provided with a notch and adapted to be embedded in the fence post, and a washer having an elongated opening adapting it to be passed over said head and engaged thereunder to lock the wire in said notch.

5. A fastener for fence wires, comprising a key having an enlarged head provided with a V-shaped notch, the shank of said key being bifurcated to provide a plurality of fingers which are oppositely bent, and a washer adapted to pass over said head and engage thereunder to lock the fence wire in the notch of the key.

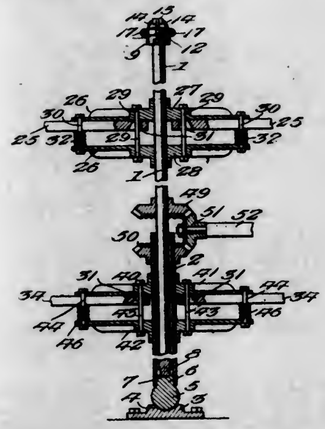
[Claims 6 to 8 not printed in the Gazette.]

883,585. MERRY-GO-ROUND. ADDISON M. SWEETWOOD, Bradner, Ohio. Filed June 26, 1907. Serial No. 380,986.

1. In a merry-go-round, the combination of a bottom bearing, a hollow shaft pivotally and rotatably mounted upon said bearing, a second shaft journaled for rotation in the hollow shaft, carriers supported by the respective shafts, the apparatus as a whole as thus constructed being adapted to have universal lateral vibration, gearing for driving the shafts, and means connected to the upper end of the internal shaft for limiting such vibration.

2. In a merry-go-round, a bottom bearing, a hollow shaft having a rounded journal turning in said bearing, a central shaft journaled at its lower end within the hollow shaft, carriers supported by the shafts gearing between said shafts to rotate them in reverse directions, and means connected with the upper end of the central shaft to support the apparatus in an upright position.

3. In a merry-go-round, the combination of a hollow driving shaft journaled for universal lateral oscillation, a center shaft journaled in said driving shaft, gearing between said shafts for rotating them in reverse directions, carriers upon the respective shafts, means connected with the central shaft for limiting the lateral vibratory motion of the apparatus, seat supports upon the respective carriers, and spring cushioning means associated with said support for permitting the same to vibrate vertically.

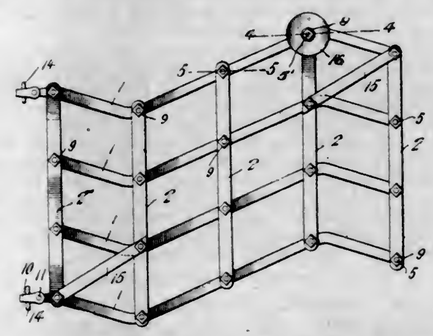


4. In a merry-go-round, a rotary shaft, arms pivotally mounted from the shaft and extending radially therefrom, cushioning springs associated with the pivotal connections to permit the arms to vibrate vertically, and an annular platform comprising a series of sections, each supported at one end by the frame structure of the apparatus and pivotally connected at its opposite end with one of the radial arms.

5. A merry-go-round comprising co-axially journaled shafts mounted for universal lateral vibration, means for limiting such vibration, upper and lower carriers supported by said shafts, means for imparting reverse rotation to the shafts, and means for permitting the seats of the respective carriers to have a yielding vertical vibratory motion.

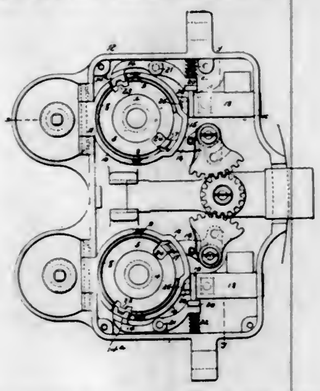
[Claims 6 and 7 not printed in the Gazette.]

883,586. HARROW. EDWIN SWOPE, Morgan Hill, Cal. Filed Aug. 29, 1906. Serial No. 332,523.



In a harrow of the class described a frame comprising longitudinal and transverse bars the longitudinal bars having oblong apertures, teeth secured at the intersections of the longitudinal and transverse bars and having oblong bosses engaging the apertures in the longitudinal bars and threaded stems extending through the transverse bars, a bearing sleeve upon one of the stems and a guard roller journaled upon said sleeve and projecting beyond the harrow frame.

883,587. CHANGEABLE COMBINATION-LOCK. WARREN H. TAYLOR, Stamford, Conn., assignor to The Yale & Towne Manufacturing Company, Stamford, Conn. Filed Jan. 3, 1907. Serial No. 350,615.



1. The combination with a series of disk tumblers, each composed of an outer section and an inner section, the two sections of each tumbler having intermeshing teeth, and means engaging the inner sections of said tumblers for rotating same, of a hinged sleeve embracing all of said tumblers and engaging the outer section of each and means for moving said sleeve and connected outer sections of said tumbler in a direction to disconnect the outer sections from the inner sections.

2. The combination with a series of disk tumblers, each composed of an outer section and an inner section, the two sections of each tumbler having intermeshing teeth, and means engaging the inner sections of said tumblers for rotating same, of a sleeve surrounding said tumblers and engaging the outer section of each, means for moving said sleeve and connected outer sections of said tumblers in a direction to disconnect the outer sections from the inner sections, and movable means independent of the sleeve and engaging said outer sections for preventing any rotary movement while thus disengaged from their inner sections.

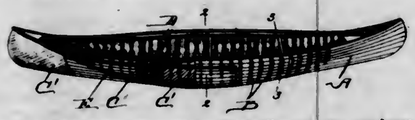
3. The combination with the sectional tumblers and means for rotating same, of a pivoted yoke, a sleeve pivoted to said yoke and surrounding the tumblers and connected to the outer sections thereof, and means for moving the yoke and sleeve carried thereby, for disconnecting the outer sections of the tumblers from the inner sections.

4. The combination with sectional disk tumblers and means for rotating same, of a lock and means actuated thereby for disconnecting the outer sections of the tumblers from the inner sections, thus leaving the latter free to be rotated independently of the outer sections.

5. The combination with sectional disk tumblers and means for rotating same, of a lock and means actuated thereby for disconnecting the outer sections from the inner sections, and means also actuated by said lock for preventing rotation of the outer sections of the tumbler when the latter are disengaged from the inner sections.

[Claims 6 to 10 not printed in the Gazette.]

883,588. INVISIBLE AIR-CHAMBER AND SPONSON FOR CANOES. CALEB B. THATCHER, Bangor, Me. Filed May 16, 1906. Serial No. 317,120.



A canoe having tapering curved ribs cut to conform to the curvature of the hull secured to the outside of the planking and extending from the gunwales to the water line, said ribs gradually decreasing in width and length from the center towards each end, planking secured on said ribs, end canvas secured over said hull and ribs having its side edges secured under the gunwales of the canoe forming an invisible air tight compartment.

883,589. ELECTROLYTIC PRODUCTION OF PURE TIN. ADOLPHE J. M. THIBOT, Bourges, France, assignor to himself, and Louis Auguste Mage, Avignon, France. Filed Mar. 22, 1907. Serial No. 363,960.

1. A method for producing pure tin, which consists in treating the tin compound with boiling caustic soda to form sodium stannate, purifying the sodium stannate by the addition of concentrated sodium sulfid, separating the precipitate from the solution and subjecting the solution to electrolysis.

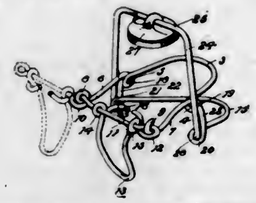
2. A method for producing pure tin from its compounds which consists in treating the tin compounds with boiling caustic soda, purifying the resulting sodium stannate and subjecting the solution to electrolysis.

3. A method for obtaining tin from its compounds which consists in treating the compounds with caustic soda, purifying the solution and subjecting the solution to electrolysis.

4. A method for obtaining tin from its compounds, which consists in treating the compounds with caustic soda to form sodium stannate, purifying the solution, and subjecting the solution to electrolysis while maintaining the electrolyte at at least 80° centigrade.

5. A method for obtaining tin from its compounds, which consists in treating the compounds with caustic soda, purifying the solution, and subjecting the solution to electrolysis, with a current of 300 to 400 amperes per square meter of anode surface.

883,590. DETACHABLE STOPPER-HOLDER FOR BOTTLES. BURCHARD D. THOMPSON, Mount Jewett, Pa., assignor of one-half to Charles G. Gustafson, Mount Jewett, Pa. Filed July 18, 1907. Serial No. 384,428.



1. A detachable stopper holder for bottles comprising a wire for surrounding the neck of a bottle, a lever secured to said wire for locking the same on the neck of the bottle, and a bottle stopper locking means carried by said wire.

2. A detachable stopper holder for bottles comprising a wire for surrounding the neck of a bottle, a horizontal wire having one end permanently secured to the wire and the other end detachably secured to the wire, a locking lever carried by said horizontal wire, and a bottle stopper locking means carried by the wire for surrounding the neck of the bottle.

3. The combination with the neck of a bottle having a beading surrounding the same, of a wire partially surrounding the neck below the beading, a rod connecting the ends of the wire, a pivoted locking lever carried by said rod and engaging the neck of the bottle below the beading, a locking lever carried by the wire, and a stopper-carrying means carried by the locking lever.

4. The combination with the neck of a bottle having a beading surrounding the same, of a semi-circular wire surrounding the neck of the bottle below the beading, and having eyes opposite the center of the neck of the bottle, and its ends extended outwardly in a horizontal position, a horizontal rod removably attached to one end of the said wire and permanently connected to the other end of the wire, a lever pivoted upon said horizontal rod and adapted to engage the neck of the bottle below the beading on the neck of the bottle, a lever having its ends pivoted in the eyes carried by the wire, and having eyes intermediate its ends, and a stopper-carrying bail having its ends entering the eyes in the last mentioned lever, whereby the stopper is locked upon the mouth of the bottle, and a stopper carried by said bail.

5. The combination with the neck of a bottle having a beading surrounding the same, of a semi-circular wire surrounding the neck of the bottle below the beading and having eyes formed therein opposite the center of the neck of the bottle, and its ends extended outwardly in a horizontal position, and one end formed with an eye and the other end with a hook, a transverse rod having eyes in its ends and interlocking with the hook and eye of the wire, a locking lever formed of a piece of wire and having eyes through which the transverse rod passes, and the inner ends of the lever adapted to engage the neck of the bottle below the beading and locking the semi-circular piece of wire around the neck of the bottle, a stopper lever having its ends entering the eyes in the semi-circular wire and formed with eyes therein, and a stopper bail having its ends entering the eyes in the stopper lever, a stopper carried by the bail whereby the stopper is drawn tightly down into the mouth of the bottle.

[Claims 6 and 7 not printed in the Gazette.]

883,591. STATION-INDICATOR. RICHARD TOENNES, Boonville, Mo. Filed Apr. 1, 1907. Serial No. 365,713.



1. The combination with the web and parallel reels 7 and 8 whereon the web is wound, one of said reels having a ratchet 4, of the rotatable ratchet 2 arranged intermediate of said reels, the pallet 2^a pivoted eccentrically on said ratchet, a spring holding the pallet engaged with the ratchet, the lever 1 pivoted adjacent to the ratchet 2 and having a spring-pressed pawl engaging the latter, a horizontal lever 11^c pivoted on a fixed support and its free end connected by a loose joint with the lever 1, the bellows arranged below the lever 11^c and its flexible cover connected therewith, and an air tube connected with the bellows as shown and described.

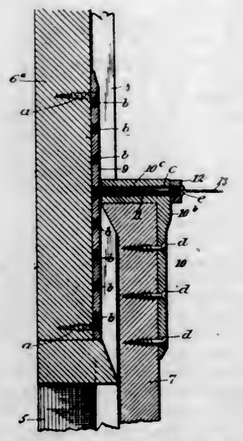
2. The combination with the casing, of a take-up reel having a ratchet and pawl 4^a engaging the same, a let-out reel and a web wound on the reels, a ratchet 2, a pallet 2^a pivoted thereon and engaging the reel ratchet and the pivoted elbow lever 5 projecting through the casing, and its lower end arranged for engaging the pawl for holding it out of engagement with the reel ratchet substantially as described.

883,592. DENTAL CAVITY-IMPRESSION TRAY. THEODORE C. TRIGGER, St. Thomas, Ontario, Canada. Filed Apr. 18, 1907. Serial No. 369,026.

In an instrument of the class described, the combination of a shank provided with a reduced threaded end, adapted for attachment to a suitable handle, and a wax-holding tray integrally mounted upon the other end of said shank, and provided with a continuous undercut ledge extending therearound, and openings arranged therethrough for the purpose specified.



883,593. SASH-FASTENER. JOHN M. URICK, Ironton, Ohio. Filed June 21, 1907. Serial No. 380,045.



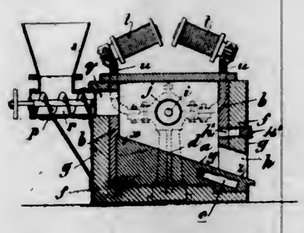
The combination with a frame, an upper sash, a lower sash, and parting strips on the sides of the casement between said sides, of a sash-fastener, comprising a flat, elongated keeper-plate having a plurality of spaced, threaded perforations therein and secured by screws on a side bar of the upper sash, an L-shaped bracket-piece perforated through its upper horizontal member and secured by screws on a corresponding side bar of the lower sash, a clamping screw having a transverse slot in its outer end, and a nut on the threaded outer end of said clamping screw, the threaded opposite end thereof being screwed into one of the threaded perforations in the keeper-plate that is alined with the clamping screw.

883,594. PROCESS OF OBTAINING METALS AND ALLOYS BY REDUCTION. EMILIEN VIEL, Rennes, France. Filed Oct. 31, 1906. Serial No. 341,494.

1. The process of reducing refractory metallic compounds consisting in subjecting a mixture of said compounds and a reducing agent in a continuous stream to the heat of an electric arc directed thereon within a furnace chamber to effect reduction of the compound to the metallic state, and then passing the metal so reduced immediately into a cooling zone before it leaves the furnace.

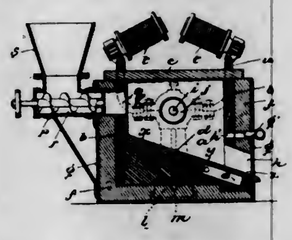
2. The process of reducing alumina to aluminium con-

sisting in subjecting a mixture of alumina and carbon in equivalent proportions in a continuous stream to the heat of an electric arc directed thereon within a furnace



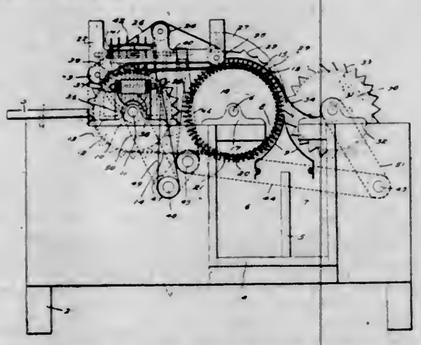
chamber to effect reduction of the alumina to aluminium, and then passing the metal so reduced into a cooling zone before it leaves the furnace.

883,595. APPARATUS FOR OBTAINING METALS AND ALLOYS. EMILIEN VIEL, Rennes, France. Original application filed Oct. 31, 1906, Serial No. 341,494. Divided and this application filed Oct. 29, 1907. Serial No. 399,696.



In a furnace of the character described, the combination of a crucible having a steeply inclined sole down which the ore charge moves by gravity, oppositely disposed and adjustable electrodes mounted above said sole and in line of the moving ore charge, hinge-supported electromagnets having the axes of their coils in planes at right angles to the vertical plane passing through said electrodes and adapted, when energized, to blow the arc towards the sole of the furnace, and means for cooling the sole beyond the heated zone.

883,596. MACHINE FOR TREATING BROOM-CORN. OTTO J. WAHLER, Leavenworth, Kans. Filed Dec. 12, 1906, Serial No. 347,539. Renewed Sept. 4, 1907. Serial No. 391,325.

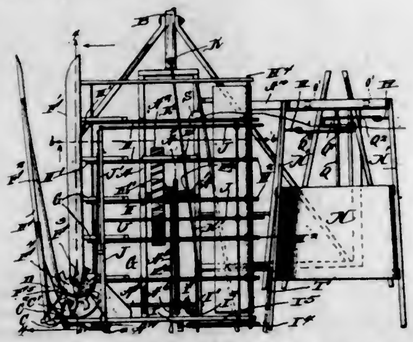


1. In a machine of the class described, a casing, a rear rotary feed drum sustained thereby, a rotary separator drum mounted in advance of the feed drum, a feed belt arranged for travel on said drums, a second feed belt mounted for travel above and to coöperate with the first named belt and terminated at its forward end at a point above the separated drum, separating teeth fixed to the latter and adapted to receive between them the finer grade of material and a pair of compartments into which the finer and coarser materials are delivered respectively.

2. In a machine of the class described, a casing, a pair of rotary drums sustained thereby, one in advance of the other, a main feed belt arranged for travel on said drums, an auxiliary feed belt lying above and adapted to coöperate with the main belt for feeding the material forward, a series of radially projecting separator teeth carried by the forward drum, a pair of compartments adapted to receive respectively the finer and coarser material as delivered from the separator drum and a deflecting shield centered above the compartments for directing the separated material thereinto.

3. In a machine of the class described, a casing, a pair of rotary drums sustained thereby, one in advance of the other, a main feed belt arranged for travel on said drums, an auxiliary feed belt sustained above and for coöperation with the main belt to feed the material forwardly, devices disposed respectively at opposite sides of the machine for severing the butt ends of the material and for scraping the same, means on the forward drum for grading the material, and a pair of compartments into which the graded material is delivered from the separating drum.

883,597. COMBINED CORN HARVESTER AND SHOCKER. GROVER E. WALLER, CHARLEY WALLER, and RUFUS J. WALLER, Halls Summit, Kans. Filed June 30, 1906. Serial No. 324,269.



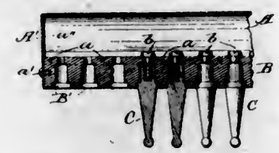
1. In combination with the frame of a corn harvester and shocker means for cutting and elevating the stalks, a laterally movable and tilting shock receptacle, links pivotally connected to the sides of said receptacle curved rods connected at their upper ends to the links upon the sides of the receptacle, and links upon the bottom of the receptacle to which the lower ends of the rods are connected, as set forth.

2. In combination with the frame of a corn harvester and shocker means for cutting and elevating the stalks, a laterally movable and tilting shock receptacle, links pivotally connected to the sides of said receptacle and other links connected to the bottom thereof, and curved arms each pivotally connecting the link upon the side and bottom of the receptacle at one side of the center thereof, as set forth.

883,598. TOILET-COMB. WILLIAM S. WARREN, Chicago, Ill., assignor of one-half to George A. Moore, Chicago, Ill. Filed Nov. 14, 1907. Serial No. 402,162.

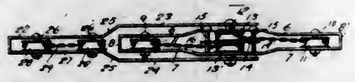
1. A toilet comb consisting of a rigid tooth-support to which is attached a plurality of revoluble teeth.

2. A toilet comb having conical teeth which are revolubly connected to the back of the comb.



3. A toilet comb provided with tapered teeth the ends thereof being rounded, and means for revolubly connecting the teeth to a back, substantially as shown.

883,599. DRAFT-EQUALIZER. WILLIAM M. WEDEKING and HENRY JACOBI, Abbotsford, Wis. Filed Mar. 4, 1907. Serial No. 360,377.



1. A draft equalizer comprising a casing formed of a single strip of metal bent upon itself to provide an upper and a lower member arranged in spaced relation to each other; means connecting the corresponding ends of said members; a pulley carried by each of said connecting means; means connecting said members with each other intermediate their ends; pulleys carried by said last-mentioned connecting means; draft chains connecting the several pulleys; and a trace secured to each end of each draft chain.

2. A draft equalizer comprising a casing formed of a single strip of metal bent upon itself to provide an upper and a lower member arranged in spaced relation to each other; bolts connecting the corresponding ends of said members; a pulley carried by each of said bolts; a sleeve connecting said members intermediate their ends; a pair of pulleys mounted on said sleeve in spaced relation to each other; a draft chain connecting each of said first-mentioned pulleys with one of the pulleys on said sleeve; and a trace secured to each end of each draft chain.

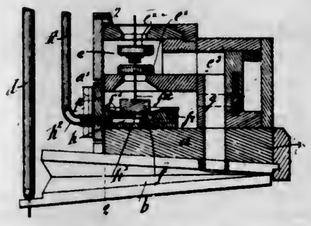
3. A draft equalizer comprising in combination a yoke; means connecting the members of said yoke at one end; pulleys carried by said connecting means; a draft chain connecting said pulleys; a casing pivotally mounted between said yoke members at the opposite ends thereof, said casing comprising a pair of members arranged in spaced relation to each other; means connecting the members of said casing; pulleys carried by said last-mentioned connecting means; draft chains connecting the several pulleys; and a trace secured to each end of each draft chain.

4. A draft equalizer comprising a yoke including a constricted neck portion; a pair of tie-bolts connecting the yoke members at said constricted portion; a pulley carried by each of said bolts; a draft chain connecting said pulleys; a casing pivotally mounted between the yoke members adjacent the free end thereof, said casing comprising a pair of members arranged in spaced relation to each other; means connecting the members of said casing; pulleys carried by said last-mentioned connecting means; draft chains connecting the several pulleys; and a trace secured to each end of each draft chain.

5. A draft equalizer comprising a yoke formed of a single strip of metal bent upon itself to provide an upper and a lower member arranged in spaced relation to each other, each of said members having a rearwardly extending tongue; means connecting the members of said yoke at one end; pulleys carried by said connecting means; a draft chain connecting said pulleys; a casing pivotally mounted between said yoke members at the opposite ends thereof, said casing comprising a pair of members arranged in spaced relation to each other; means connecting the members of said casing; pulleys carried by said last-mentioned connecting means; draft chains connecting the several pulleys; and a trace secured to each end of each draft chain.

[Claim 6 not printed in the Gazette.]

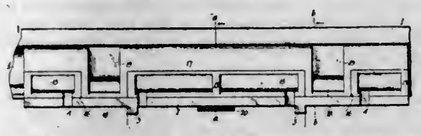
883,600. PNEUMATIC VALVE-ACTION. JOSEPH WIESER, New York, N. Y. Filed July 27, 1907. Serial No. 385,888.



1. In a pneumatic valve-action, the combination, with the diaphragm-block provided with an inlet-channel, of a diaphragm on the same, a diaphragm-chamber, a valve-chamber connected by an opening with the diaphragm-chamber, a double valve supported on the diaphragm, one valve being used for opening and closing the valve-chamber and the other for closing the air-opening of the latter, an auxiliary duct located in the diaphragm-block and provided with a centrally perforated diaphragm, and a lateral duct connecting said perforated diaphragm with the inlet-duct of the diaphragm-block.

2. In a pneumatic valve-action, the combination of a diaphragm, a diaphragm-chamber, a diaphragm-block in the same, an air-inlet channel in said block, valves operated by the diaphragm, a valve-chamber for said valves connected with the wind-chest, a bellows connected with said valve-chamber, a detachable front-wall for the diaphragm-chamber, an auxiliary duct arranged in the diaphragm-block, a recess or depression having a perforated diaphragm located at the front-end of the auxiliary duct, a closing-plate for said diaphragm-depression, and a lateral channel connecting the diaphragm-depression with the inlet-duct in the diaphragm-block for permitting the return of the diaphragm and valves into normal position as soon as the corresponding opening in the tracker is closed.

883,601. RAIL-JOINT. WILLIS D. WILLIAMS, Kirkland, Ariz. Filed July 31, 1907. Serial No. 386,428.

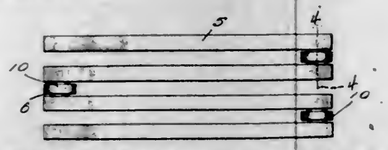


1. The combination with rail ends, of a base plate having a brace extending upwardly therefrom at one side of the rail ends, said brace being hollowed on its upper side to present oppositely inclined faces extending from its ends to its center and form a recess under the rail heads deepening toward the center of such brace, such base plate being further provided on its upper side with a corresponding hollow forming a recess under the bases of the rails deepening toward the center of such base plate, and further provided with a back stop on the side opposite the brace, and a presser block fitted between such back stop and the opposing sides of the rail ends.

2. The combination with rail ends, of a base plate having a brace on one side to bear against one side of the rails, a back stop flange on the opposite side bearing against the opposite side of the base flanges of the rails and having an inclined inner face converging downwardly to such base flange, said back stop being further provided in its upper side with upwardly opening openings, and a presser block

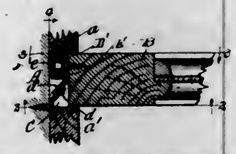
fitted between such back stop flange and the opposing sides of the rail, such presser block having its outer face inclined to correspond with the inclination of the inner face of the back stop flange and being further provided with outwardly extending arms disposed in the openings of the back stop flange and preventing longitudinal movement of such presser block.

883,602. FEED-WATER-HEATING GRATE. ELON C. WILLSON, Tillamook, Oreg. Filed Jan. 19, 1905. Serial No. 241,878.



A feed-water heating grate composed of a series of hollow bars connected alternately at their ends, said connections comprising tapered openings formed in the opposite sides of the end portions of a pair of bars; a hollow coupling having a central annular spacing rib and tapering nipples extending from opposite sides of the rib and adapted to fit in a steam-tight manner in said openings in the grate bars, said nipples having their inner extremities closed and being provided at the sides of inner end portions with holes opening within the hollow grate-bars.

883,603. WEATHER-STRIP. WELLINGTON W. WITHENBURY, Chicago, Ill. Filed May 27, 1907. Serial No. 375,814.



1. In a device of the class described the combination with an outer and an inner window stop, of a sash slidable therebetween, a diagonal plate between said stops, and a strip of flexible material engaging said plate and acting to throw the sash against one of said stops.

2. In a device of the class described the combination with the outer and inner window stops of a sash slidably engaged therebetween, a plate engaged beneath one stop and projecting at an angle between said stops, and a strip of flexible material engaged on the sash and lying flat against said sash and acting to force the sash against the other stop.

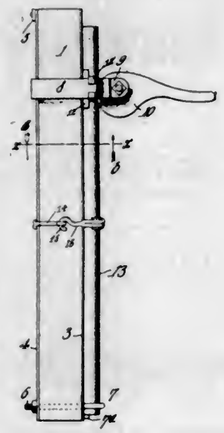
3. In a device of the class described the combination with the outer and inner stops, of a sash slidable therebetween, a plate extending diagonally between said stops and resilient means overlapping said plate and acting to force the sash against one of said stops.

4. In a device of the class described the combination with the outer and inner stops of a window, of a sash slidable therebetween, a plate engaged beneath the inner stop and extending diagonally between the stops, a strip, of rubber engaged on the edge of the sash and bent outwardly over said plate and acting to force the sash against the outer stop, and a binding piece engaging said strip to the sash.

5. In a device of the class described the combination with a window sash, of the post and stops affording a guideway therefor, an angle plate carried on the post and having its flange projecting into the guideway and towards the outer side of the window, and a strip of flexible material engaged to the edge of the sash and having its edge overlapping the rear face of the flange and acting both to center the sash between the posts and to force it against the outer stop.

[Claims 6 and 7 not printed in the Gazette.]

883,604. CLAMP. HARRY L. WYETH, Garrett, Ill. Filed Aug. 26, 1907. Serial No. 390,223.



1. A device of the character described comprising a longitudinally channeled body, a retaining device adjacent one end of the channel, a bar detachably mounted within the channel and retaining device, a slidable member upon the body, a clamping element carried by the slidable member and disposed to bind upon the bar, and means engaging the intermediate portions of the bar and body for binding them together, said clamping element being operated by gravity to automatically take up play between the bar and body.

2. In a device of the character described the combination with a channeled body, and a retaining eye adjacent one end of the channel; of a slidable yoke upon the body, a gravity operated cam carried thereby and a clamping bar removably mounted within the channel and insertible into the eye and yoke, said cam being disposed to automatically take up play between the bar and body.

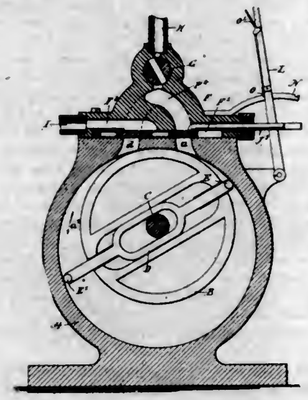
3. In a device of the character described the combination with a longitudinally channeled body, a retaining eye adjacent one end of the channel, and a stop device within the channel and below the eye; of a clamping bar removably mounted within the channel and eye and supported by the stop device, a yoke slidable upon the bar, a gravity operated clamping device bearing upon the bar and disposed to automatically take up play between the bar and body, and means intermediate the eye and yoke for binding the bar and body together.

4. In a device of the character described the combination with a longitudinally channeled body, a retaining eye adjacent one end of the channel, and a stop device within the channel and below the eye; of a clamping bar revolubly mounted within the channel and eye and supported by the stop device, a yoke slidable upon the bar, a gravity operated clamping device bearing upon the bar and disposed to automatically take up play between the bar and body, a draft device, and means connecting said device with an intermediate portion of the body and bar for binding the same together.

5. A device of the character described comprising a longitudinally channeled body, a clamping bar removably mounted within the channel, fixed means upon the body for engaging one end portion of the bar, gravity operated means movably connected to the body for engaging the other end portion of the bar, said means being movable automatically to take up play between the bar and body, a draft device, and means connecting said device with an intermediate portion of the bar and body for binding the same together.

[Claim 6 not printed in the Gazette.]

883,605. ROTARY ENGINE. AMBROSE E. ABBOTT, Rhyolite, Nev. Filed Oct. 3, 1907. Serial No. 395,664.



1. A rotary engine comprising a cylinder, a rotatable piston in the cylinder, a steam chest, reversible slide valves in the steam chest and controlling the inlet, and exhaust of the motive engine to and from the cylinder, a hand lever for engaging the valve stem of the said slide valves and a spring for connecting the said valve stems with each other.

2. A rotary engine comprising a cylinder having sets of admission ports and sets of exhaust ports, a rotatable piston in the cylinder, a steam chest having a live steam cross channel and an exhaust cross channel, and manually controlled slide valves in the said steam chest and controlling the said sets of ports and channels.

3. A rotary engine comprising a cylinder, a main shaft, a piston on the said shaft and eccentrically mounted in the said cylinder and in contact with the inner surface of the cylinder at one point, the said piston having a sliding piston head in contact at both ends with the interior of the cylinder at opposite points, a steam chest, reversible slide valves in the said steam chest and controlling the inlet and exhaust of the motive agent to and from the cylinder, means for shifting the slide valves, one for forward travel and the other for reversing, a rock valve for controlling the admission of the motive agent to the said steam chest, and means actuated from the said main shaft for rocking the said rock valve.

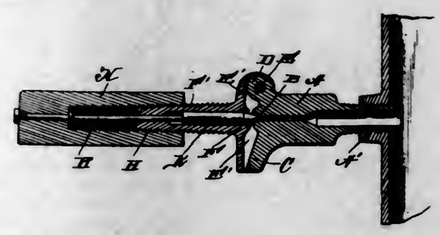
4. A rotary engine comprising a cylinder, a main shaft, a piston on the said shaft and eccentrically mounted in the said cylinder and in contact with the inner surface of the cylinder at one point, the said piston having a sliding piston head in contact at both ends with the interior of the cylinder at opposite points, a steam chest, reversible slide valves in the said steam chest and controlling the inlet and exhaust of the motive agent to and from the cylinder, a hand lever for engaging the valve stems of the said slide valves, and a spring for connecting the said valve stems with each other.

5. A rotary engine comprising a cylinder having sets of admission ports and sets of exhaust ports, a piston eccentrically mounted in the said cylinder and having a sliding piston head, the said piston being in contact with the inner surface of the cylinder at a point between the ports of the said sets of ports, a steam chest having a live steam cross channel and an exhaust cross channel, and manually controlled slide valves in the said steam chest and controlling the said sets of ports and channels.

[Claim 6 not printed in the Gazette.]

883,606. WATER-GAGE FOR STEAM-BOILERS. EDWARD F. ALEXANDER, Salem, W. Va. Filed Dec. 19, 1907. Serial No. 407,201.

1. A water gage for steam boilers comprising, in combination with a shell which is adapted to engage a boiler and communicate with the interior thereof, a pivotal valve shell mounted upon said boiler engaging shell, a movable packing strip mounted within the shank portion of said pivotal valve shell, a handle mounted upon the latter and adapted to move said packing strip longitudinally, as set forth.



2. A water gage for steam boilers comprising, in combination with a shell which is adapted to engage a boiler and communicate with the interior thereof, a pivotal valve shell mounted upon said boiler engaging shell, a movable packing strip mounted within the shank portion of said pivotal valve shell, a handle mounted upon the latter, a finger movable with the handle and adapted to engage and move said packing strip longitudinally as the handle is turned, as set forth.

3. A water gage for steam boilers comprising, in combination with a shell which is adapted to engage a boiler and communicate with the interior thereof, a pivotal valve shell mounted upon said boiler engaging shell, a movable packing strip mounted within the shank portion of said pivotal valve shell, a handle having a chambered portion to receive the shank portion of said pivotal valve shell, a finger fixed to the handle and adapted to contact with the strip of packing in said valve shell and move the latter longitudinally as the handle is rotated, as set forth.

4. A water gage for steam boilers comprising, in combination with a shell which is adapted to engage a boiler and communicate with the interior thereof, a pivotal valve shell mounted upon said boiler engaging shell, a movable packing strip mounted within the shank portion of said pivotal valve shell, a handle having a chambered portion to receive the shank portion of said pivotal valve shell, the end wall of said chamber having threads thereon adapted to engage threads upon the shank of the valve shell, a finger projecting from the end wall of the chamber of the handle and adapted to pass through an aperture in the shank portion of the valve and bear frictionally against said packing strip as the handle is rotated, as set forth.

883,607. PHOTOGRAPHIC CAMERA. FRANK S. ANDREWS, London, England, assignor to Elmer Francis Cassel, London, England. Filed Mar. 3, 1904. Serial No. 196,415.

1. The combination with a photographic shutter, of means for indicating the relative adjustment of the speed and aperture of said shutter with regard to the actinic values of light and subject.

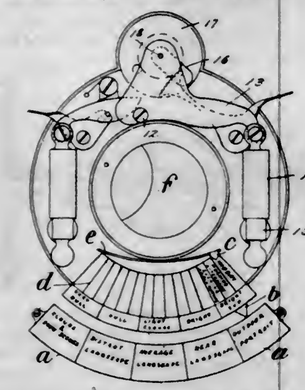
2. The combination with a photographic shutter, of means for indicating the relative adjustment of the speed and aperture of said shutter with regard to the actinic values of light and subject, and means for adjusting said shutter to conform to said indicating means.

3. The combination with a photographic shutter, of means for indicating the relative adjustment of the speed and aperture of said shutter with regard to inversely related classified gradations of light and gradations of subject.

4. The combination with a photographic shutter, of members for controlling the adjustment of the speed and aperture mechanism of said shutter, and means for indicating the relative positions of said members with regard to the actinic values of light and subject.

5. The combination with a photographic shutter, of a pointer for adjusting the speed mechanism of said shutter,

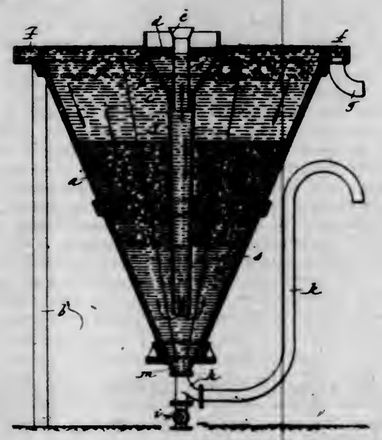
means for adjusting the aperture of said shutter, and means for indicating the relative adjustments of speed



and aperture of said shutter with regard to the actinic values of light and subject.

[Claims 6 to 11 not printed in the Gazette.]

883,608. APPARATUS FOR SEPARATING FOREIGN SUBSTANCES FROM WATER. VICTOR ANTOINE, Lambermont, Belgium. Filed Aug. 21, 1907. Serial No. 389,451.



1. In an apparatus for separating chemical products from water, a receptacle having a transverse area gradually increasing from the bottom to the top thereof, said receptacle having a level top edge, an overflow channel surrounding said edge, a funnel axially supported within the receptacle and having a perforated floor, said floor being slightly below the level of said top edge of the receptacle, a feeding pipe communicating with said funnel, and a normally open discharge pipe communicating with said receptacle at its lowermost point.

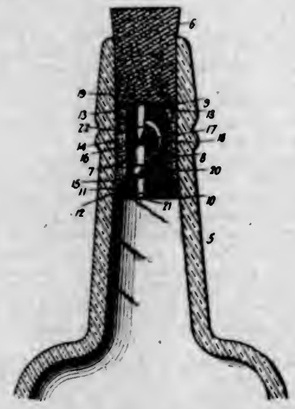
2. In an apparatus for separating chemical products from water, a receptacle having a transverse section gradually increasing from the bottom to the top thereof, a normally open discharge pipe, said receptacle narrowing down and merging into the bore of said pipe at its lowermost point, said receptacle being formed with a level overflow edge at its top portion, a supply pipe entering into said receptacle, and a perforated floor slightly below the overflow edge of said receptacle, and in communication with said supply pipe, whereby water entering said supply pipe may contact with the lower surface of the chemical supported by said floor.

3. In an apparatus for separating chemical products from water, a receptacle, a channel surrounding the said receptacle at the top thereof, a funnel supported in the axis of said receptacle, a perforated floor fixed in the said funnel slightly below the level of the top of the receptacle, a feeding pipe placed within the funnel and extending therethrough, the discharge orifice of the said feeding pipe being below the perforated floor, a tube extending from the funnel to the bottom of the receptacle and a discharge pipe at the lower part of the receptacle in the axis thereof.

4. In an apparatus for separating chemical products from water, a receptacle, the sectional area of which decreases gradually from top to bottom, a channel surrounding the said receptacle at the top thereof, a funnel supported axially of said receptacle, a perforated floor in the said funnel slightly below the level of the top of the receptacle, a feeding pipe placed within the funnel and extending therethrough, the discharge orifice of the said feeding pipe being below the perforated floor, a tube extending from the funnel to the bottom of the receptacle and a discharge pipe axially arranged at the bottom of the receptacle.

5. In an apparatus for separating chemical products from water, a receptacle, the sectional area of which decreases gradually from top to bottom, a channel surrounding the said receptacle at the top thereof, a funnel supported in the axis of said receptacle, a perforated floor in the said funnel slightly below the level of the top of the receptacle, a feeding pipe placed within the funnel and extending from the funnel to the bottom of the receptacle, and a discharge pipe axially arranged at the bottom of the receptacle, the said discharge pipe being in open communication with the receptacle for the direct discharge of a part of the descending water fed into the tube extending from the funnel to the bottom of the receptacle, substantially as described and for the purpose set forth.

883,609. NON-REFILLABLE BOTTLE. JEROME F. ARKENBERG, Fostoria, Ohio. Filed Oct. 12, 1907. Serial No. 397,189.



1. In a non-refillable bottle, a stopper having a reduced central portion and upper and lower annular flanges, the lower flange having in its annular surface an annular groove, the upper flange having openings between its upper and under faces, the said stopper having a passage extending therethrough and a displaceable valve arranged in said passage to normally close the same.

2. In a non-refillable bottle, a stopper having a continuous circuitous passage formed with a central bend, the lower part of said passage being tapered, a transverse web extending between the upper and lower parts of said passage adjacent said bend and forming one wall of said bend, the said web being shaped to afford a valve seat in the upper end of the lower portion of said passage and at one side of the lower end of said bend and a valve normally lodged in said tapered lower part and movable to and away from said seat.

883,610. COTTON-CHOPPER. DAVID S. BALLANCE, Wysocking, N. C., assignor of one-third to Marcus A. Ballance, Wysocking, N. C. Filed Sept. 23, 1907. Serial No. 394,126.



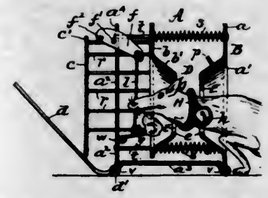
1. The cotton chopper herein described comprising the framing having the outer side bars, the back bar and rounded front bar and provided with the intermediate cross-bars and with a longitudinal bar between the front cross-bar and the rounded front bar of the frame, the axle, the wheels, and gear wheel mounted on the axle, the wheel shaft, bearings in which said wheel shaft may be moved longitudinally and rotarily, a lever for moving the shaft, a gear wheel on the wheel shaft and movable therewith whereby it may be set into and out of mesh with the gear wheel on the axle, a frame bar forming pivotal support for the lever and having a series of holes for the pivot thereof whereby the lever may be adjusted along the frame bar and the chopping wheel having a hub on the wheel shaft and provided with sockets, the spokes journaled at their inner ends in said sockets and provided at their outer ends with forwardly projecting portions inclined on their under faces, means for securing the spokes in any desired adjustment in the sockets of the hub, and the hoes pointed at their front ends, curved from end to end approximately in the arc of a circle and held to the inclined faces of the outer end portions of the spokes whereby the hoes are inclined forwardly toward their outer edges, all substantially as set forth.

2. In a cotton chopper a chopping wheel, comprising a hub provided with sockets, spokes journaled at their inner ends in said sockets and provided at their outer ends with forwardly projecting portions inclined on their under faces, means for securing the spokes in any desired adjustment in their sockets, and hoes pointed at their front ends, curved from end to end approximately in the arc of a circle and held to the inclined faces of the outer end portions of the spokes whereby the hoes are inclined forwardly toward their outer edges, all substantially as set forth.

3. The combination in a cotton chopper of the frame, the axle, the gear wheel mounted on the axle, the chopper wheel, the shaft geared with said wheel, bearings in which said shaft may be moved longitudinally and rotarily, the lever for moving the shaft, the gear wheel on the wheel shaft and movable therewith whereby it may be set into and out of mesh with the gear wheel on the axle, and the frame bar forming a pivotal support for the lever and having a series of holes for the lever pivot whereby the lever may be adjusted along the frame bar, substantially as set forth.

883,611. DEVICE EMPLOYED FOR EXTERMINATING RATS, MICE, AND OTHER ANIMALS. JOSEPH BARAD and EDWARD E. MARKOFF, Providence, R. I. Filed Dec. 16, 1907. Serial No. 406,810.

1. A device of the character described having a transversely separable normally closed spring-pressed frame provided with a longitudinally disposed opening arranged to freely receive therein the head and neck of an animal, an elastic collar exteriorly surrounded and being operatively supported by the walls of said opening, and tripping means, including a bait-carrying member, connected with the movable part of said frame adapted to be released by an animal.



2. In a device of the character described, the combination of a frame divided transversely into two parts, one of which is longitudinally movable, a central opening extending longitudinally through both said parts of the frame, holding means for normally maintaining said movable part in releasable contact with its fellow, an elastic collar supported in an expanded condition around the walls of the frame at said contact point, and a member operatively connected with and arranged to automatically release said holding means by the action of an animal in moving said member, substantially as hereinbefore described and for the purpose set forth.

3. In a device of the character described, the combination with a stationary front frame member having a central entrance opening, a spring-pressed endwise slidable fellow frame member located at the rear of said front member having a central opening therein registering with the first-named opening, and an endless elastic collar supported in the expanded operative position by the wall surrounding said central opening, of means for temporarily supporting the collar, and a tripping device adapted to be baited arranged when set to maintain the front edge of the opening of the slidable frame part in close proximity to the corresponding part of the other frame member, the said tripping device when sprung permitting the slidable frame to move away from its fellow and form an opening D, thereby releasing the said collar and allowing it to pass freely therethrough, substantially as described.

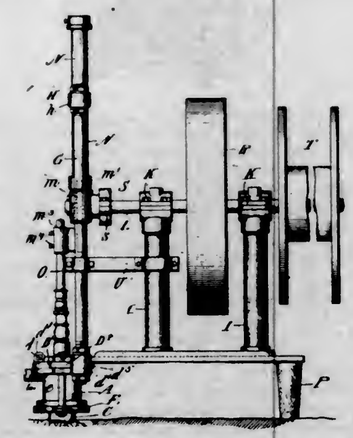
4. In a device of the character described, the combination of a stationary front frame member, a door hinged thereto having a central opening E extending longitudinally of the device, means carried by the door for temporarily supporting an elastic collar, a spring-pressed slidable rear frame member having a central opening therein normally registering with said door-opening, tripping means adapted to be released by an animal for maintaining the two frame members in the normal operative position, and an expanded elastic collar encircling and being normally supported by the walls surrounding said openings, substantially as described.

883,612. PUMPING APPARATUS FOR OIL-WELLS. HOMER G. BARCROFT and WILLIAM H. CRAWFORD, Bradford, Pa. Filed Apr. 19, 1907. Serial No. 369,109.

1. In a pumping apparatus, the combination with a base plate disposed perpendicularly to the well casing, and having one end provided with means for securing it to the well casing, and its other end supported independently of and at a distance from the casing, a vertically disposed frame, secured to said base plate adjacent to the well casing, a vertically movable cross-head mounted on said frame and having means for detachably engaging the pump rod, a horizontal shaft mounted on said base plate, and disposed perpendicularly to said frame, operative connections between said shaft and said cross head for reciprocating the latter and means for rotating said shaft, substantially as described.

2. In a pumping apparatus, the combination with a base plate disposed perpendicularly to the well casing, and having one end provided with means for securing it to the well casing and its other end supported independently of and at a distance from the casing, a stationary vertically disposed frame rigidly, but detachably secured to said base plate, adjacent to the well casing, a vertically disposed

cross head, mounted on said frame, and provided with means for detachably engaging the pump rod, a horizontal shaft mounted upon said base plate, and disposed in a radial line with respect to the casing, and perpendicular to the said vertically disposed frame, and a detachable eccentric part, on said shaft, operatively engaging the cross head, substantially as described.

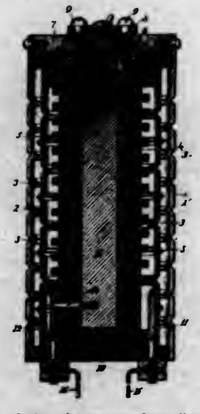


3. In a pumping apparatus for driven wells, the combination with a yoke formed in two parts and provided with a cap portion for fitting over the upper part of a casing head, and having laterally extending supporting arms, and means for securing said yoke rigidly to the casing head, of vertical guide rods secured to and supported by said lateral arms, a base plate having one end secured to and supported by said yoke, said plate extending perpendicularly from said guide rods, and having its other end supported at a distance from and independently of said casing head, a cross head mounted on said guide rods, and provided with a sleeve for engaging a pump rod, and a horizontally disposed slot, adjustable securing devices for connecting a pump rod to said sleeve, a horizontal shaft mounted on said base plate, and disposed in a radial line with respect to the casing head, a crank on one end of said shaft, detachably secured thereto, a crank pin on said shaft engaging the slot in said cross head, and means for driving said shaft, substantially as described.

4. In a pumping apparatus for driven wells, the combination with a yoke formed in two parts and provided with a cap portion for engaging the top portion of the casing head, and laterally extending arms, both of said arms having their outer ends lying on the same side of a line passing through the center of said cap portion, a clamping ring for engaging the lower end of said casing head, bolts connecting said ring to said yoke, vertical guide rods detachably secured to said lateral arms, a cross head engaging said guide rods and provided with means for attaching a pump rod, a horizontal base plate having one end rigidly connected to said yoke, and extending away from the yoke and having its other end supported at a distance from and independently of the yoke, a driving shaft mounted in bearings supported on said base plate, and connections between said shaft and said cross head, substantially as described.

5. In a pumping apparatus for driven wells, the combination with a base comprising a divided portion constructed to engage the top of a casing head, means for connecting the parts of said divided portion rigidly together, and a horizontal base plate having one end rigidly connected to said divided portion, said plate extending away from said yoke and having its other end supported at a distance from and independently of said yoke, a horizontal shaft mounted on said base, a vertical frame detachably mounted on said base, adjacent to the casing head, a cross head engaging said vertical frame, provided with a horizontal slot, and a device for engaging a pump rod, and a crank detachably secured to said horizontal shaft, and having a crank pin engaging said slot, substantially as described.

883,613. LIGHTNING-ARRESTER. HENLEY V. BASTIN, Lancaster, Ky. Filed Oct. 12, 1907. Serial No. 397,088.



1. In a device of the character described, a coil adapted to form a part of an electrical circuit, a ground cylinder surrounding said coil, and a line cylinder in connection with said circuit and surrounding the ground cylinder.

2. In a device of the character described, means adapted to form a part of an electrical circuit offering an impedance to nigh frequency currents, and a ground cylinder surrounding said means and provided with projecting points or edges, for the purpose described.

3. In a device of the character described, a coil adapted to form a part of an electrical circuit, a ground cylinder surrounding said coil provided with projecting edges, and a line cylinder in connection with said circuit and surrounding the ground cylinder, having projecting edges arranged at intervals of the said edges carried by the ground cylinder.

4. In a device of the character described, a coil adapted to form a part of an electrical circuit, a ground cylinder having V-shaped transverse corrugations providing internally and externally-projecting edges alternating with each other, and a line cylinder in connection with said circuit and surrounding the ground cylinder, having transverse V-shaped corrugations providing internally-projecting edges arranged in the intervals of the said edges carried by the ground cylinder.

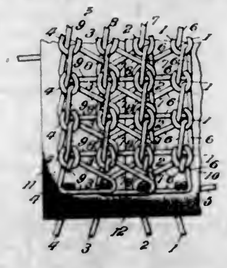
5. In a device of the character described, a coil of angular cross-section adapted to form a part of an electrical circuit, a ground cylinder surrounding said coil, having projecting points or edges internally and externally thereof, and a line cylinder in connection with said circuit and surrounding the ground cylinder, having internally-projecting points or edges.

[Claims 6 to 8 not printed in the Gazette.]

883,614. SEAM. STOCKTON BORTON, Providence, R. I., assignor to Willcox & Gibbs Sewing Machine Company, New York, N. Y., a Corporation of New York. Filed Mar. 9, 1906. Serial No. 305,140. Renewed July 10, 1907. Serial No. 383,114.

1. In a seam, the combination with fabric, of four approximately parallel lines of stitches, a plurality of the stitch forming threads crossing at intervals to adjacent lines of stitches and passing around the thread thereof in such manner as to interconnect at intervals all four lines of stitches.

2. In a seam, the combination with fabric, of four approximately parallel lines of stitches, a stitch forming thread of one outside line crossing at intervals to the adjacent inside line of stitches and passing around the thread thereof, another stitch forming thread of the other outside line crossing at intervals to the adjacent inside line of stitches and passing around the thread thereof, and a stitch forming thread of one inside line of stitches crossing at intervals to the other inside line of stitches and passing around the thread thereof, thereby interconnecting at intervals all four lines of stitches.



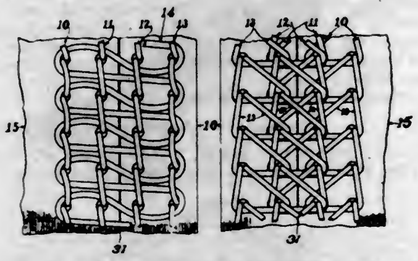
3. In a seam, the combination with fabric, of four approximately parallel lines of stitches, a plurality of the stitch forming threads crossing at intervals on one and the same side of the fabric to adjacent lines of stitches in such manner as to interconnect all four lines of stitches.

4. In a seam, the combination with fabric, of four approximately parallel lines of stitches, a plurality of the stitch forming threads crossing at each stitch to adjacent lines of stitches in such manner as to interconnect all four lines of stitches.

5. In a seam, the combination with fabric, of four approximately parallel lines of stitches, a plurality of the stitch forming threads crossing at each stitch on one and the same side of the fabric to adjacent lines of stitches in such manner as to interconnect all four lines of stitches.

[Claims 6 to 35 not printed in the Gazette.]

883,615. SEAM. STOCKTON BORTON and LLEWELLYN D. BIRGE, Providence, R. I., assignors, by direct and mesne assignments, to Willcox & Gibbs Sewing Machine Company, New York, N. Y., a Corporation of New York. Filed June 2, 1906. Serial No. 319,959. Renewed Nov. 23, 1907. Serial No. 403,540.



1. In a seam, the combination with fabric, of four approximately parallel lines of stitches, the stitches of one or more of said lines being formed of a single thread, a thread of some of the lines of stitches crossing at intervals to an adjacent line of stitches and passing around the thread thereof, thereby interconnecting on one side of the goods the two inside lines of stitches and each outside line of stitches with its adjacent inside line of stitches.

2. In a seam, the combination with fabric, of four approximately parallel lines of stitches the two outside lines thereof being single-thread chain stitches, some of the stitch forming threads crossing at intervals on one and the same side of the fabric each to an adjacent line of stitches and passing around the thread thereof, thereby interconnecting the two inside lines of stitches and each outside line of stitches with its adjacent line of stitches, all on the same side of the goods.

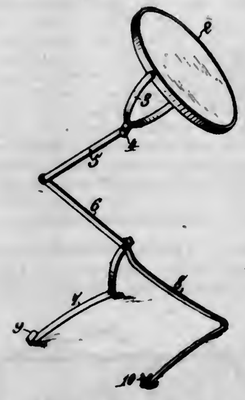
3. In a seam, the combination with fabric, of four approximately parallel lines of stitches, one or more lines thereof being single-thread chain-stitches, some of the threads at each stitch crossing to adjacent lines of stitches and passing around shanks of loops thereof, thereby interconnecting all four lines of stitches, said crossing of threads being all on the same side of the fabric.

4. In a seam, the combination with fabric, of four approximately parallel lines of stitches, the outside lines thereof being single-thread chain-stitches, the loops of the latter crossing to the adjacent inside line of stitches and passing around the shanks of loops thereof, and a thread of one inside line crossing at intervals to the other inside line and passing around the shanks of loops therein, said crossing of threads being all on the same side of the fabric.

5. In a seam, the combination with fabric, of four approximately parallel lines of stitches, the outside lines thereof being single-thread chain-stitches, the loops of the latter crossing at each stitch to the adjacent inside line of stitches and passing around the shanks of loops thereof, and a thread of one inside line crossing at each stitch to the other inside line and passing around the shanks of loops thereof, said crossing of threads being all on the same side of the fabric.

[Claims 6 to 8 not printed in the Gazette.]

883,616. MIRROR. FRANCIS E. BOSWORTH, San Francisco, Cal. Filed June 4, 1907. Serial No. 377,208.



1. The combination of a mirror, two jointed angular members, the free portions of which terminate in hooks, and means flexibly connecting said jointed members and mirror.

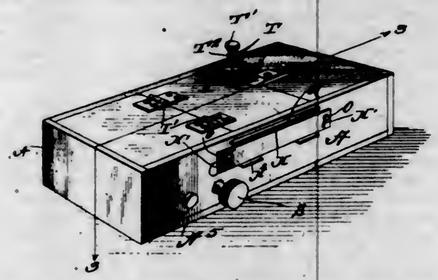
2. The combination of a mirror, two jointed substantially angular members, each terminating in a hook and one of the hooks being pronged, and flexible connecting means extending from the joint between said members to said mirror.

3. The combination of a mirror, two jointed angular members, and a linkage connection united with said members at their joint and also operatively connected with the mirror.

4. The combination of a mirror, a bail for supporting said mirror for swinging movement, a plurality of jointed links, one of which is connected with said bail, and a plurality of jointed members connected with another of said links, said jointed members being of angular form.

5. The combination of a mirror, a bail supporting said mirror for swinging movement and adapted to receive said mirror, a plurality of links jointed to each other and one connected with the bail, the two links being foldable against the back of the mirror, and two jointed members of angular form connected with the outermost end of the connected links and also foldable against said back.

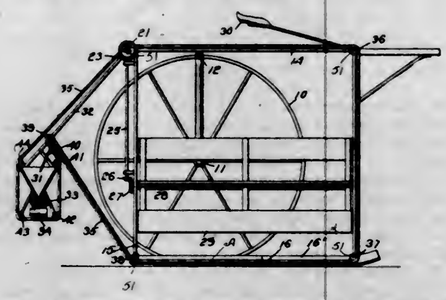
883,617. CONTINUOUS PHOTOGRAPHIC-PRINTING APPARATUS. BENJAMIN H. BRAGG, Whitman, Mass. Filed Oct. 11, 1907. Serial No. 397,000.



1. A printing apparatus comprising a casing having a reel therein upon which printing paper is adapted to be wound, means for feeding paper from one compartment into another, negative holding means adjacent to an opening in the casing, a spring-pressed member adapted to hold the printing paper against a negative over said opening, one of the sides of the casing having an elongated slot adapted to receive a slide, headed pins upon the side of the casing, a closure comprising a strip of metal having transverse slots through which said pins extend, said closure adapted to have a sliding movement over said slide, as set forth.

2. A printing apparatus comprising a casing having a reel therein upon which printing paper is adapted to be wound, means for feeding paper from one compartment into another, negative holding means adjacent to an opening in the casing, a spring-pressed member adapted to hold the printing paper against a negative over said opening, one of the sides of the casing having an elongated slot adapted to receive a slide, headed pins upon the side of the casing, a closure comprising a strip of metal having transverse slots through which said pins extend, lugs projecting from the slide adapted to cover said slot, as set forth.

883,618. MEANS FOR GATHERING AND DESTROYING POTATO-BUGS. ABRAHAM J. BUHLER, Harris, Minn. Filed Jan. 29, 1907. Serial No. 354,668.



1. An implement for gathering potato bugs, comprising ground wheels, their axle, and a frame supported therefrom, a pan carried between the wheels, an endless movable apron supported by the frame, means for operating it from the ground wheels, a hopper also supported by the frame, rollers for guiding the apron above the pan and to and in proximity with the hopper to deposit bugs on the belt into said hopper.

2. An implement for gathering potato bugs, comprising ground wheels, their axle and a frame supported therefrom, a pan carried between the wheels, an endless movable apron, supported by the frame, means for operating it from the ground wheels, a hopper also supported by the frame, rollers for guiding the apron above the pan and to and in proximity with the hopper to deposit bugs on the belt into said hopper, and means connected with the hopper to crush or kill the bugs and deposit the same after being killed on the ground.

883,619. CRUSHER PLATE, HEAD, AND THE LIKE. FERDINAND M. CANDA, New York, N. Y. Filed Mar. 26, 1906. Serial No. 307,996.



1. A wearing face or element for rock crushers and the like comprising a series of hard ribs forming a practically continuous crushing surface, each of said ribs being provided with a reduced lower portion of a shape adapted to interlock with a base and a softer and tougher cast metal base engaging, interlocked with and shrunk on said reduced lower portions and filling the space therebetween.

2. A wearing face or element for rock crushers and the like comprising a series of ribs of high carbon steel forming a practically continuous crushing face, each of said ribs being provided with a reduced lower portion of a shape adapted to interlock with a base, and a softer and tougher cast metal base engaging, interlocked with and shrunk on said reduced lower portions and filling the space therebetween.

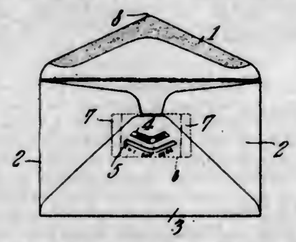
3. A wearing face or element for rock crushers and the like, comprising a series of angle-faced ribs of high carbon steel, each of said ribs being provided with a reduced lower portion of a shape adapted to interlock with a base, and a cast metal base of low carbon steel cast around, engaging, interlocked with and shrunk on said reduced lower portions and filling the space therebetween.

4. A wearing face or element for rock crushers and the like, comprising a series of ribs having heads and reduced lower portions, the latter being flanged, and a softer and tougher cast metal base enveloping said flanged lower portions, shrunk thereon and filling the spaces therebetween.

5. A wearing face or element for rock crushers and the like, comprising a series of ribs having heads and base portions, the latter being reduced and provided with perforations, and a softer and tougher cast metal base enveloping and shrunk on said reduced lower portions and entering the perforations.

[Claims 6 and 7 not printed in the Gazette.]

883,620. ENVELOP. JOHN W. CARRAWAY, St. James City, Fla. Filed Aug. 5, 1907. Serial No. 387,116.



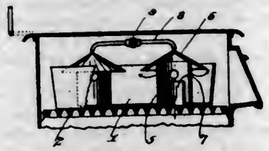
1. An envelop having one of its flaps provided with a plurality of slots and a detector arranged back of the slots and having its end portions only attached to the envelop.

2. An envelop having one of its flaps provided with a plurality of slots, and a detector arranged back of the slots, one of the slots being so positioned as that one wall thereof will conform to the line of the sealing flap.

3. An envelop having one of its flaps provided with a plurality of concentrically disposed slots, a detector of readily disruptible material secured at its end portions only back of the slots, that portion of the detector under one of the slots being provided with a legend.

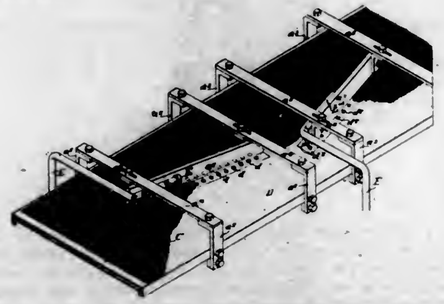
4. An envelop having one of its flaps provided with two slots, and a detector secured at its ends back of the slots, the intermediate portion of the detector being unattached to permit insertion of a pen knife blade for the purpose of separating those portions of the envelop to which the detector is attached for the purpose of permitting inspection of the detector.

883,621. CRUDE-OIL BURNER. JOHN N. CARTER, Wichita, Kans. Filed May 8, 1907. Serial No. 372,535.



A burner of the character described, comprising a trough adapted to rest within the fire pot of a stove, the bottom of the trough being formed with an opening extending therethrough and having an upwardly extending tube surrounding said opening, a nozzle adapted to discharge oil and mounted above the trough, and a sleeve encircling and spaced from said tube and provided at its upper end with a cone projecting downwardly below the upper edge of the trough and beyond the sleeve on all sides, the sleeve resting removably on the bottom of the trough and provided above the tube and below the plane of the lower edge of the cone with air orifices.

883,622. TOBACCO-STEMMING MACHINE. JOHN T. CARTER, Danville, Va. Filed July 22, 1907. Serial No. 384,981.



1. A stemming machine consisting of a foraminous conveying device, a stemming bar mounted adjacent to said device so as to permit the passage of the body of a leaf while engaging the stem thereof, and means for holding the leaf to the conveying device while it is being acted upon by the stemming bar, substantially as described.

2. The combination in a stemming machine, of a foraminous conveying structure, a stemming bar mounted adjacent thereto so as to permit the passage of the body of a leaf while intercepting the stem thereof, and means for causing the leaf to be held by air pressure to the conveying structure while it is being operated on by said stemming bar, substantially as described.

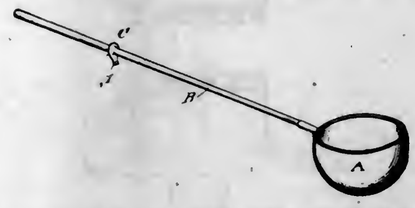
3. A leaf stemming machine consisting of a foraminous apron, means for moving said apron through the machine, a stemmer bar mounted adjacent to the apron so that its length is inclined to the general line thereof and its edge is at such a distance from the apron as to permit the passage of the body of a leaf while intercepting the stem thereof, and means for causing the leaf to be held to the apron by air pressure while it is being acted upon by the stemming bar, substantially as described.

4. The combination in a stemming machine of a foraminous conveying device, a pair of stemming bars mounted adjacent thereto and inclined at opposite angles to the general line of movement of said device, with means whereby said leaf is caused to be held by air pressure to the conveying device while being acted on by the stemming bars, substantially as described.

5. The combination in a machine for stemming tobacco, of a table having a series of openings connected to an air exhausting device, an apron having driving means and movable over said table, and a stemming bar mounted adjacent to the apron so as to intercept the stem of a leaf while permitting the body of the leaf to pass under it, the exhaust openings being so placed as to cause the leaf to be held to the apron while it is being acted on by the stemming bar, substantially as described.

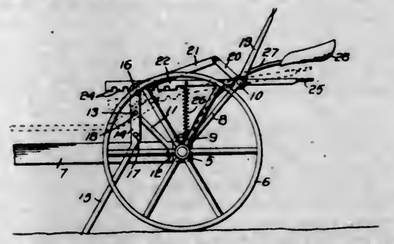
[Claims 6 to 16 not printed in the Gazette.]

883,623. DIPPER-HANDLE. ORVIN H. CHANDLER, Clinton, S. C., assignor of one-half to Thomas L. W. Bailey, Clinton, S. C. Filed June 5, 1907. Serial No. 377,373.



A utensil handle, an annular guard thereon having a trough on the side presented to the gripping portion of the handle, and a spout by which the liquid is discharged from the trough, said spout projecting outwardly from the handle to constitute means for holding the utensil in a vessel.

883,624. ROCK-DIGGER. WILLIAM L. COMBS, Bearcreek, Mont. Filed May 18, 1907. Serial No. 374,363.



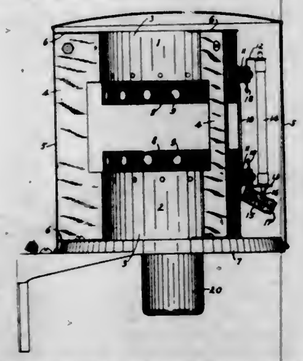
1. An implement of the class described comprising a frame supported for travel, a rock shaft mounted in the frame, a single transversely extending series of teeth fixed upon the rock shaft for rocking movement in unison therewith, a rod passed through the upper end of the teeth and in a plane above the rock shaft, means connected with the rod whereby the teeth and their supporting shaft may be rocked, and means mounted in the frame and engageable with the said rod to hold the series of teeth when rocked, said last mentioned means being operable independently of said rocking means to release the teeth.

2. An implement of the class described comprising a frame supported for travel, a rock shaft mounted in the frame, a single transversely extending series of teeth fixed upon said rock shaft for rocking movement therewith, a rod connecting the upper ends of the teeth in a series, means connected with the rod whereby the teeth and their

supporting shaft may be rocked, and a lever mounted for vertical swinging movement in the frame and provided with a series of rack teeth for engagement interchangeably with the rod subsequent to rocking of the teeth, said lever being adapted for movement to disengage from said rod.

3. An implement of the class described comprising a frame supported for travel, a rock shaft mounted transversely in the frame, a plurality of teeth fixed upon the rock shaft for rocking movement therewith, an angle lever mounted in the frame, a rod connecting the upper ends of the teeth in a series, connection between the rod and one arm of the angle lever whereby the teeth and their supporting shaft will be rocked upon movement of the lever, and a lever mounted for vertical swinging movement in the frame and provided with a plurality of teeth which are engageable interchangeably with the said rod for connecting the upper ends of the teeth, such engagement serving to hold the teeth in rocked position.

883,625. CABLE TERMINAL. FRANK B. COOK, Chicago, Ill. Filed July 12, 1907. Serial No. 383,419.



1. A cable terminal of the character described comprising a suitable base, protector mounting sections mounted vertically on the said base, each section comprising two curved portions and flanged portions at the ends of the curved portions, whereby two protector mounting rings and a plurality of radially-extending flange portions are provided when the said sections are suitably placed together, means for suitably securing the said sections together, means for accommodating electrical conductors leading to the interior of the said rings, and means for suitably mounting protective apparatus on the exterior of the said rings.

2. A cable terminal of the character described comprising a suitable base, protector mounting sections mounted vertically on the said base, each section comprising a plurality of curved portions and flanged portions at the ends of the curved portions, whereby a plurality of protector mounting rings and a plurality of radially-extending flange portions are provided when the said sections are suitably placed together, means for suitably securing the said sections together, means for accommodating electrical conductors leading to the interior of the said rings, means for suitably mounting protective apparatus on the exterior of the said rings, and a suitable cover placed over the terminal as a whole, the said flange portions forming guides for the cover.

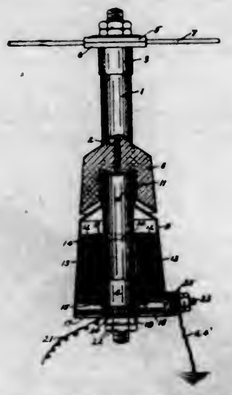
3. A cable terminal of the character described comprising a suitable base, protector mounting sections mounted vertically on the said base, each section comprising a curved portion and flanged portions at the ends of the curved portion, whereby a protector mounting ring and a plurality of radially-extending flange portions are provided when the said sections are suitably placed together, means for suitably securing the said sections together, means for accommodating electrical conductors leading to the interior of the said ring, and means for suitably mounting protective apparatus on the exterior of the said ring between the said radially-extending flange portions.

4. A cable terminal of the character described comprising a suitable base, protector mounting sections mounted vertically on the said base, each section comprising two curved portions and flanged portions at the ends of the curved portions, whereby two protector mounting rings and a plurality of radially-extending flange portions are provided when the said sections are suitably placed together, means for suitably securing the said sections together, means for accommodating electrical conductors leading to the interior of the said rings, protective devices mounted on the exterior of the said rings between the said flange portions, and insulating strips carried by the said rings, for carrying the conductors leading to the protective devices, whereby the said conductors are insulated from the said rings.

5. A cable terminal of the character described comprising a circular base, a plurality of protector mounting sections mounted vertically on the said base, each section being provided with protector mounting portions and flanged portions at the edges thereof, whereby a plurality of vertical guides are provided when the said flanged portions are suitably placed together, means for suitably securing the said flanged portions together, means for accommodating electrical conductors leading through the base portion of the terminal, and a cylindrical cover placed over the terminal as a whole and held in place by the said vertical guides.

[Claims 6 to 8 not printed in the Gazette.]

883,626. ELECTRICAL LINE-PROTECTOR. FRANK B. COOK, Chicago, Ill. Filed Sept. 26, 1907. Serial No. 394,694.



1. A protector device comprising a fuse adapted to be suspended from a line wire, an annular metallic casing inclosing the lower end of the fuse, a lightning arrester comprising annular electrodes inserted within the said casing around the fuse, an annular drip carried by the fuse above the annular metallic casing, and means for connecting the fuse and lightning arrester as protectors for the circuit.

2. A protector device comprising a fuse adapted to be suspended from a line wire, a bell-shaped metallic casing surrounding the lower portion of the fuse, a lightning arrester comprising annular electrodes carried within the bell-shaped casing and surrounding the fuse, an annular drip carried by the fuse above the bell-shaped casing, an insulating disk closing the lower end of the bell-shaped portion, and suitable means for connecting the fuse and lightning arrester as protectors.

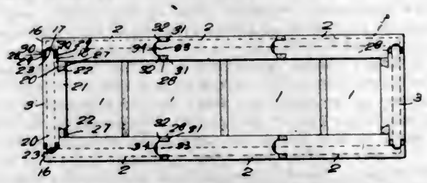
3. A protector device comprising a fuse adapted to be suspended from a line wire, a bell-shaped portion inclosing the lower end of the fuse, a lightning arrester comprising annular electrodes carried within the bell-shaped portion, an insulating disk closing the lower end of the bell-shaped portion, and a spring spider carried by the insulating disk and adapted to bear against one of the said electrodes to hold the lightning arrester in place in the bell-shaped portion.

4. A protector device of the character described comprising an inclosed fuse, a tapered metallic casing surrounding a portion of the fuse, a lightning arrester comprising tapered annular electrodes carried within the said tapered casing and surrounding the fuse, an insulating disk closing the open end of the said tapered casing, a spring spider carried by the said disk, and means for pressing the said spider against one of the said electrodes to wedge the electrodes in the tapered casing substantially as described.

5. A protector device of the character described comprising an inclosed fuse, annular electrodes of a lightning arrester surrounding a portion of the fuse and having their surfaces tapered to provide an annular air gap therebetween which increases in width toward the bottom of the arrester, a casing for the arrester surrounding the fuse, and means for suitably holding the electrodes in the casing and for connecting the arrester as a protector to the fuse circuit.

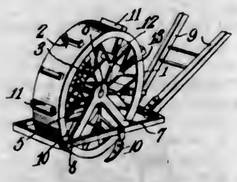
[Claims 6 to 15 not printed in the Gazette.]

883,627. GRAVE-VAULT. WILLIAM A. CREW, Salisbury, Md. Filed Mar. 25, 1907. Serial No. 364,466.



In a portable grave vault, the combination of base and cover blocks and side and end blocks, said blocks having their meeting edges respectively formed with grooves and ribs, said grooves affording a seat for said ribs and being respectively provided with confronting converging spaced beveled edges adjacent said respective grooves and ribs to afford a dove-tail seat for a sealing composition.

883,628. COTTON-CHOPPER. WILLIAM B. DAVIS, Popes Ferry, Ga., assignor of one-half to Frank M. Ewing, Bolingbroke, Ga. Filed Jan. 2, 1908. Serial No. 409,006.



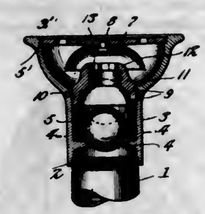
1. An implement of the character indicated comprising a wheel provided with openings in its periphery, spring actuated shields located in said openings and plows carried by the implement.

2. An implement as described comprising a wheel provided with openings in its periphery, spokes leading from the center of the wheel to the openings in the rim thereof, shields slidably mounted in the openings and being guided by the spokes, springs for operating the shields, and plows carried by the implement.

3. An implement as described comprising a wheel provided with openings in its periphery, slidable shields located in the openings, brackets depending from the center of the wheel, a frame supported by said brackets below the center of the wheel and plows carried by the frame.

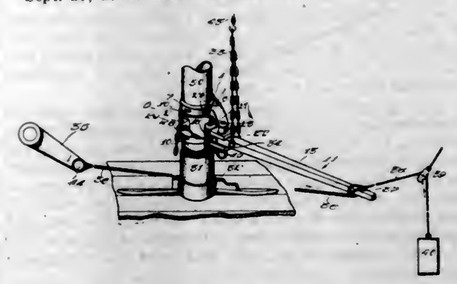
4. An implement as described comprising a polygonal wheel having openings at the apices of its angles shields slidably mounted in said openings and plows attached to the implement.

883,629. DRAIN. AUGUST F. DENLER, Buffalo, N. Y. Filed Dec. 6, 1907. Serial No. 405,412.



A drain for sewer pipe comprising a bowl-shaped member having a pipe extension, fingers upon the interior of the extension, a ball valve upon said fingers, a hollow bushing having a valve seat connecting the bowl-shaped member and the pipe extension, and a perforated cover having a deflector removably secured to the mouth of the member.

883,630. APPARATUS FOR SCREWING WELL-CASING. WILLIAM L. DUNN, Santa Barbara county, Cal. Filed Sept. 19, 1907. Serial No. 393,742.



1. A wrench provided with means for automatically opening and closing the gripping members thereof, means to suspend the wrench, a power crank, a jerk line connecting the crank with the wrench to close the gripping members and turn the wrench in one direction, and a take up connected with the wrench to open the wrench and turn it in the other direction.

2. A wrench comprising two gripping members hinged together, one of said members being provided with a nose, a lever pivoted to the other member and provided with means to engage the nose to open and close said members, and means to prevent the withdrawal of the nose from operative position.

3. A wrench comprising two gripping members hinged together, one of said members being provided with a nose and the other an extension, a lever pivoted to the extension and provided with a recess to receive the nose and adapted to operate upon the nose to force the gripping members toward each other.

4. A wrench comprising two gripping members hinged together, one of said members being provided with a nose and a lever pivoted to the other gripping member and provided with antifriction means to engage the nose to close the gripping members.

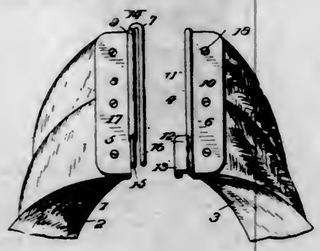
5. A wrench comprising two gripping members hinged together, one of said members being provided with a nose, a lever pivoted to the other of said members, and a roller on said lever to engage the nose.

[Claims 6 to 13 not printed in the Gazette.]

883,631. FASTENER FOR HORSE-COLLARS. WILLIAM B. ESTES, Atlanta, Ga., assignor to Universal Horse Collar Fastener Company, Atlanta, Ga., a Corporation of Georgia. Filed Apr. 25, 1907. Serial No. 370,300.

1. A collar fastener comprising two parts, each of which is formed with a spring bead, and a pintle formed

with two legs shaped to engage said beads, said pintle being open and free at one end to permit of the withdrawal of the pintle to separate the parts, and the legs being held in engagement with the beads by frictional contact therewith.

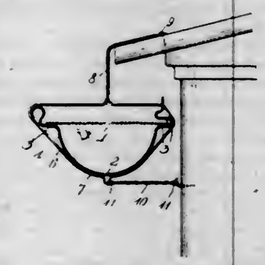


2. A collar fastener comprising two parts, one of which is provided with a bead which terminates short of the end of said member, the other member provided with a bead and an extension which is also provided with a bead and a pintle adapted to register with the beads of both members.

3. A collar fastener comprising a pair of members, each of which is provided with a bead having its inner side open and formed of spring metal, and a pintle having two legs which engage the beads, the spring of the beads fastening the members to the pintle legs.

4. A fastener for a horse collar comprising a pair of members, one of which is formed with a bead terminating short of the end of said member and being open on one side and formed of spring metal, the other said member having a bead formed of spring metal which is open on one side, and an extension from said member which is also formed with a bead which is open on one side, and formed of spring metal, and a U-shaped pintle, the legs of which engage all of said beads and are frictionally held therein.

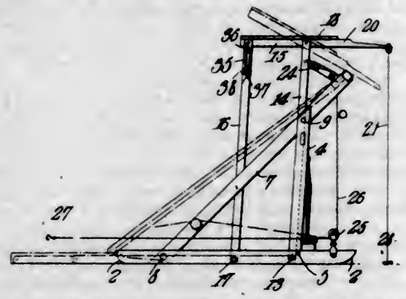
883,632. EAVES-TROUGH AND FASTENING THEREFOR. WILLIAM FEYLER, Sturgeon, Mo. Filed June 13, 1907. Serial No. 378,777.



1. An eaves trough of the character specified, embracing a body bent outwardly and thence inwardly at one of its side edges to form vertically spaced flanges and outwardly at its opposite side edge to form a horizontal outwardly extending flange, a screen arranged in the trough, one side edge of the screen being received by the vertically spaced flanges and the opposite side edge thereof being supported by the other side flange, the arrangement of the flanges being such as to permit of edgewise insertion or removal of the screen.

2. An eaves trough, comprising a body bent outwardly and thence inwardly at one of its side edges to form vertically spaced horizontal flanges, and outwardly at its opposite side edge to form a horizontal flange, and a wire screen arranged in the trough, one side edge of the screen being received by the vertically spaced flanges and the opposite side edge by the other flange.

883,633. HAY-STACKER. SHERIDAN E. FOWLER, Winslow, Ind., assignor of one-third to Clarence Abbott and one-third to Robert M. Gray, Otwell, Ind. Filed Sept. 25, 1907. Serial No. 394,545.



1. A hay stacker comprising a suitable base, two parallel frames pivoted thereto and movable in a vertical plane, and a platform carried by said frames and overbalanced to normally rest by gravity upon said frames.

2. A hay stacker comprising a suitable base, two parallel frames each pivoted at one end to the base, spacing links connecting the other ends of the frames, and a platform pivoted to said connected end of the frames and overbalanced to normally rest by gravity thereon.

3. A hay stacker comprising a suitable base, two parallel frames pivoted at one end to said base and connected together at the other end, and a pivoted platform carried by said other end of the frames, said frames being constructed to nest one in the other when brought together.

4. A hay stacker comprising a suitable base, two parallel frames pivoted to the base and movable in a vertical plane, said frames also being connected at the ends remote from the pivoted ends, a platform pivoted to one of the frames and overbalanced to normally rest by gravity upon the other frame, and means for moving the platform against the action of gravity to tilt the same.

5. In a hay stacker, a suitable base, a fixed support thereon comprising uprights and a diagonally disposed frame carried thereby, other parallel frames pivotally connected to the base at one end and at the other end connected together by spacing links, a platform pivoted to one of the parallel frames and overbalanced to be normally supported by said frames, means for tilting the platform, and means for moving the parallel frames in a vertical plane.

[Claims 6 and 7 not printed in the Gazette.]

883,634. CUFF-HOLDER. SAMUEL S. FOX, Marion, Ohio. Filed Apr. 3, 1907. Serial No. 366,209.



1. A cuff holder comprising a base, having a jaw at one end and a hook or bill at the opposite end, the jaw projecting from the opposite side of the base to the bill, a companion jaw slidable upon the base and coöperating with the fixed jaw, a pressure piece at the end of said base provided with the bill and projecting from the same side as the fixed jaw, a shank extended from the movable jaw and passed through an opening of the fixed jaw and terminating in a pressure piece, and a spring interposed between the fixed jaw and the pressure piece of the movable jaw.

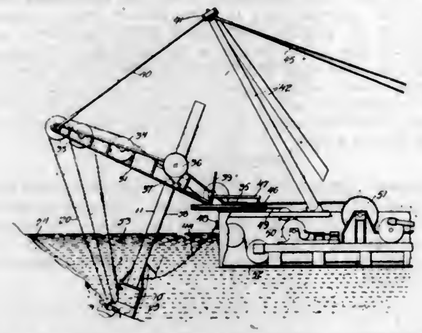
2. A cuff holder comprising a base, a clip carried by the base, a fixed jaw upon the base, a pressure piece projecting from the base, a movable jaw slidably mounted upon the base, and a second pressure piece carried by the movable jaw.

3. A cuff holder comprising a base, a fixed jaw carried by the base, a coöperating movable jaw, a shank carried by the movable jaw, the said shank being slidable upon the base and extending through the fixed jaw, and means holding the movable jaw in coöperative relation to the fixed jaw.

4. A cuff holder comprising a base, a fixed jaw upon the base, a movable jaw coöperating with the fixed jaw, a shank carried by the movable jaw, the said shank being slidably mounted upon the base and extending through the fixed jaw where it terminates in a pressure member, and a corresponding pressure member projecting from the base.

5. A cuff holder comprising a base, a clip carried by the base, a fixed jaw upon the base, a pressure member projecting from the base, a movable jaw coöperating with the fixed jaw, a shank carried by the movable jaw and extending through the fixed jaw where it terminates in a pressure member, and means for holding the jaws normally in a coöperative relation.

883,635. BUCKET FOR DREDGERS. GEORGE FRANCIS, Chelsea, Mass. Filed Sept. 13, 1906, Serial No. 334,474. Renewed Aug. 16, 1907. Serial No. 388,865.



1. A power-dredge or excavating bucket provided with means mounted thereon and movable independent of the bucket, and adapted to operate on the substance to be acted upon and disengage or loosen a portion of the said substance to enable it to be loaded into the bucket.

2. A power-dredge or excavating bucket provided with means mounted on its upper forward end and movable independent of the bucket and adapted to operate on the substance to be acted upon and disengage or loosen a portion of the said substance to enable it to be loaded into the bucket.

3. A power-dredge or excavating bucket provided with means mounted on its upper forward end and in advance of said end and movable independent of the bucket and adapted to operate on the substance to be acted upon and disengage or loosen a portion of the said substance to enable it to be loaded into the bucket.

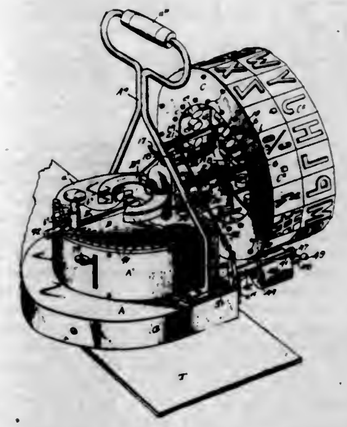
4. A power-dredge or excavating bucket provided with rotary means mounted on the bucket and in advance of the forward end of the same to act on the substance to be removed to enable it to be loaded into the bucket.

5. A power dredge or excavating bucket provided with rotary means mounted thereon and in advance of the bucket to act upon the substance to be removed and load it into the bucket.

[Claims 6 to 13 not printed in the Gazette.]

883,636. SHIPPER'S TYPE-WRITER. WILLIS W. FRANTZ, Waynesboro, Pa. Filed Oct. 14, 1905. Serial No. 282,778.

1. In a shipper's typewriter, the combination, of the base, a type-wheel mounted upon a horizontal shaft journaled in a bearing carried by said base, said type-wheel being composed of a series of parallel plates secured together proper distances apart and formed with radial ways containing spring-mounted type-blocks, and means for operating said type-wheel and type-blocks comprising a single push-key, substantially as set forth.



2. In a shipper's type-writer, the combination with the base, of the type-wheel mounted rigidly upon a shaft which extends parallel with the face of said wheel, said shaft journaled in a suitable bearing supported on said base and said type-wheel being composed of a series of parallel plates secured together by bolts and distance pieces between said plates, the sides of said securing devices forming radial ways for the type-blocks, said type-blocks mounted in said ways and held in normal position by means of springs, and mechanism for operating said type-blocks, substantially as set forth.

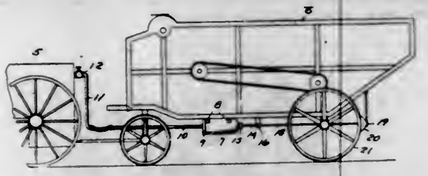
3. In a shipper's type-writer, the combination, of the base, the type-wheel supported on a horizontal shaft journaled in a suitable bearing on said base, said type-wheel being composed of a series of parallel plates secured together and having a plurality of rows of type-blocks mounted to slide in radial ways the sides of which are formed by the securing devices in said type-wheel, springs for holding said type-blocks in their normal position, and mechanism for operating said type-blocks, substantially as set forth.

4. In a shipper's type-writer, the combination, of the base, the type-wheel mounted upon a horizontal shaft, said shaft journaled in a suitable bearing supported by said base, said type-wheel being composed of a series of parallel plates bolted together by means of bolts and distance sleeves interposed between said plates, type-blocks mounted in radial ways formed between the sides of said bolts and distance sleeves around the circumference of said wheel, springs for holding said type-blocks in their normal position, means for rotating said type-wheel to bring the character desired into position for printing, and mechanism for operating said type-blocks, substantially as set forth.

5. In a shipper's type-writer, the combination, of the base, a type-wheel mounted upon a horizontal shaft and journaled in a suitable bearing on said base, means for holding said shaft in a fixed horizontal adjustment, means for adjusting said shaft horizontally from one position to another, a type-wheel mounted on said shaft having spring-mounted type-blocks mounted in radial ways therein and arranged in parallel rows around its periphery, a pivoted key-board carrying a gear which engages with a gear on said shaft, whereby said type-wheel may be rotated to bring the type desired into operative position, and mechanism for operating said type-blocks, substantially as set forth.

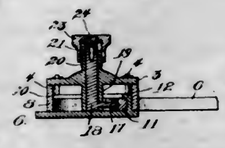
[Claims 6 to 33 not printed in the Gazette.]

883,637. AUTOMATIC BRAKE. JOSEPH E. FROST, Newman Grove, Nebr. Filed July 8, 1907. Serial No. 382,671.



The combination, with a traction engine and a wheeled machine propelled thereby, of a horizontally disposed cylinder supported upon a front and a rear pair of brackets disposed upon opposite sides thereof and, secured to the machine, the forward head of the cylinder having an inlet port and the rear head thereof a bearing formed therein; a hose section having one end fitted in said port, and its opposite end connected to a valved pipe carried by the engine and communicating with a source of fluid under pressure for admitting the fluid into the interior of the cylinder when the valve is in one position; a piston slidable within the cylinder and adapted to be forced rearward with respect to the machine, upon the admission of the fluid into the cylinder, the stem of the piston projecting through the bearing in the rear head of the cylinder; a horizontally-disposed lever pivoted intermediate its ends to the machine and towards its outer end to the projecting end of the piston stem; a link pivoted at its forward end to the inner end of said horizontal lever; a brake-beam secured to the rear end of the link and provided at each end with a brake-shoe adapted to be forced into engagement with the adjacent wheel of the machine when the piston is moved rearwardly in the cylinder; and a retractile coil-spring secured at one end to the outer end of said horizontal lever, and at the other end to the adjacent rear bracket, to force the piston forwardly of the machine when the valve is in its second position, to release the brake shoes from engagement with the wheel.

883,638. SEAL-LOCK. LEWIS I. HAMILTON, New Madrid, Mo. Filed Nov. 30, 1907. Serial No. 404,526.



1. A car door seal lock comprising a latch, a bolt movable into and out of engagement with the latch, a bolt throwing spindle, and a seal retaining cap engaging said spindle.

2. A car door seal lock comprising a latch, a spring pressed bolt movable into and out of engagement with the latch, a bolt throwing spindle, and a seal retaining cap for said spindle.

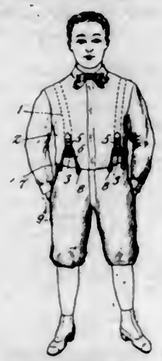
3. A car door seal lock comprising a latch, a bolt movable into and out of engagement with the latch, a bolt throwing spindle provided with a notch or slot in the end thereof, and a seal retaining cap inclosing said spindle.

4. A car door seal lock comprising a latch, a bolt movable into and out of engagement with the latch, a bolt throwing spindle, a compressible seal, and a screw cap for compressing the seal, substantially as described.

5. A car door seal lock comprising a latch, a bolt movable into and out of engagement with the latch, a lock case embodying a threaded boss, a bolt throwing spindle journaled in said boss, and a cap threaded on said boss and adapted to compress the seal against the boss.

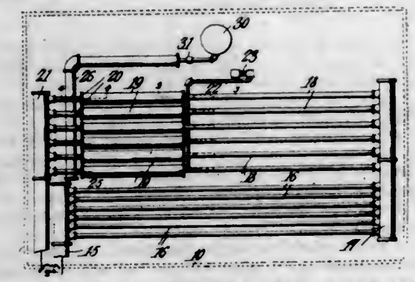
[Claims 6 to 8 not printed in the Gazette.]

883,639. ATTACHMENT FOR SHIRTS. VICTOR HANSEN, Sparks, Nev. Filed Jan. 9, 1907. Serial No. 351,546.



The herein described suspender attachment for shirts comprising a strap disposed on the inner face of the shirt and having its intermediate portion free from engagement with the garment, and portions of said strap extending through the garment to the outer face of the latter, said end portions being secured to the outer face of the garment at a plurality of points to form a vertical series of loops, runner members arranged in said loops and adapted for engagement with a lower garment, said loops serving as an adjusting means for holding the lower garment at the desired height.

883,640. METHOD OF COOLING GAS AND SEPARATING GASOLENE THEREFROM. DENNIS HASTINGS and ANDREW W. BRINK, Oklahoma, Okla. Original application filed Dec. 10, 1906, Serial No. 347,148. Divided and this application filed Apr. 6, 1907. Serial No. 366,788.

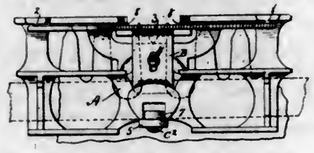


The herein described method of separating gasolene from a stream of flowing gas under pressure, said method consisting in spraying jets of water transversely across the path of the stream of gas while under pressure thereby forming a wall of water divided into a plurality of jets for contact with all portions of the gas stream, allowing the gas to expand immediately after its passage through the wall of water and conducting the expanding volume of gas in a horizontal path for a considerable distance to permit deposit of moisture and impurities without contact of such moisture and impurities with the body of gas preceding or following that from which it is deposited and at the same time subjecting the gas to the action of a cooling agent.

883,641. COMBINED SAW JOINTER AND GAGE. EDGAR J. HICKS, Indianapolis, Ind., assignor to Robert L. Hicks, Indianapolis, Ind. Filed Sept. 15, 1905. Serial No. 278,676.

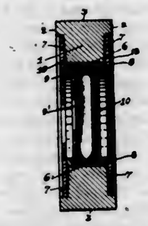
1. In a combined saw jointer and gage, the combination, of the frame formed with a recess in the top, a gage plate

comprising two parts, one of which parts is formed in piece with said frame and connects the two parts of its top on each side of said recess, and the other part of which is formed in piece with a sliding adjustable part, and means for adjusting and securing it, substantially as set forth.



2. In a combined saw jointer and gage, the combination of the frame having a recess in its top, a gage plate comprising two parts, one part of which is cast with said frame and joins the two sides of the top of said frame on each side of said recess, its top surface being in a plane to serve as a gage for the clearing teeth, and the other part of said gage plate being of hardened metal and formed on the top of a sliding clamp and adapted to be adjusted and secured with its surface in alinement with the said other part, and means for adjusting and securing said sliding clamp, substantially as set forth.

883,642. SPIRIT-LEVEL. ALBERT W. HIGHT, Ballard, Wash., assignor to Hugh G. Monen, Toledo, Ohio. Filed July 8, 1907. Serial No. 382,633.



1. In a level, the combination with a body having a plane base, and a counterbored transverse orifice parallel to the plane base, of a ring rotatably mounted in the orifice, an arched bubble sight tube secured diametrically of the ring, annular plates in the counterbores, and clamping screws extending through the annular plates and the body, adapted to press the plates oppositely on the body and the ring.

2. In a level, the combination with a body having a plane base, and a counterbored transverse orifice parallel to the plane base, of a ring rotatably mounted in the orifice, an arched guard tube secured diametrically through the ring, the tube being provided with a sight opening in the top of the arch, a closed sight tube partly filled with spirit and arched to conform to the guard tube and secured therein with the top of the arch of the sight tube opposite the opening of the guard tube, and provided with index lines, annular plates in the counterbores, and clamping screws extending through the annular plates and the body adapted to press the plates oppositely on the body and the ring.

883,643. MECHANICALLY-ACTUATED ACOUSTIC DIAPHRAGM. MILLER R. HUTCHISON, Summit, N. J. Original application filed May 16, 1907, Serial No. 373,946. Divided and this application filed Nov. 26, 1907. Serial No. 403,932.

1. An acoustic diaphragm, consisting of a sheet of rolled steel and an attached impact or wear piece for receiving and transmitting mechanically applied power to forcibly flex the diaphragm, such wear piece comprising clamping members on opposite sides of the diaphragm, secured in position by a tension member extending through a perforation in the diaphragm, one or more surfaces of engagement between the diaphragm and clamping members being relieved or cut away toward the periphery so as to have a decreased clamping engagement from the perforation outwardly when the diaphragm is in normal position, and to have an increased engagement with the concave surface of said diaphragm as it is flexed by application of power through said impact or wear piece, substantially as and for the purpose described.



2. An acoustic diaphragm and an attached impact or wear piece for receiving and transmitting mechanically applied power to forcibly flex the diaphragm, such wear piece comprising diaphragm engaging members on opposite sides of the diaphragm, secured in position by a tension member extending through a perforation in the diaphragm, one or more surfaces of engagement between the diaphragm and the engaging members being relieved or cut away toward the periphery so as to have a decreased engagement near the free edges when the diaphragm is in normal position, and to have an increased engagement with the concave surface of said diaphragm as it is flexed by application of power through said impact or wear piece, substantially as and for the purpose described.

3. An acoustic diaphragm and an attached impact or wear piece for receiving and transmitting mechanically applied power to forcibly flex the diaphragm, such wear piece comprising diaphragm engaging members on opposite sides of the diaphragm, secured in position by a tension member extending through a perforation in the diaphragm, the diaphragm engaging the face of the impact or wear piece being relieved or cut away toward the free edges so as to have an increased engagement with the concave surface of said diaphragm as it is flexed by application of power through said impact or wear piece, substantially as and for the purpose described.

4. An acoustic diaphragm, consisting of a sheet of rolled steel and an attached impact or wear piece for securing and transmitting mechanically applied power to forcibly flex the diaphragm, such wear piece comprising clamping members on opposite sides of the diaphragm, secured in position by a tension member extending through a perforation in the diaphragm, the edges of the diaphragm engaging face being rounded so as to prevent abrupt flexing or cutting action when the diaphragm is flexed by application of power through said impact or wear piece, substantially as and for the purpose described.

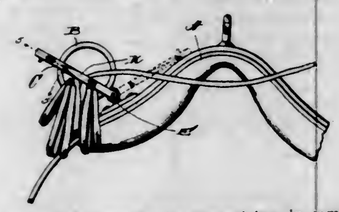
5. An acoustic diaphragm and an attached impact or wear piece for receiving and transmitting mechanically applied power to forcibly flex the diaphragm, such wear piece comprising diaphragm engaging members on opposite sides of the diaphragm, secured in position by a tension member extending through a perforation in the diaphragm, the edges of the diaphragm engaging face being rounded so as to prevent abrupt flexing or cutting action when the diaphragm is flexed by application of power through said impact or wear piece, substantially as and for the purpose described.

[Claims 6 to 29 not printed in the Gazette.]

883,644. LINE-HOLDER. FRANK S. JOLLY, McFall, Mo. Filed Dec. 11, 1907. Serial No. 406,111.

1. A device for holding reins comprising, in combination with a ring provided with indentations upon its outer cir-

cumference, a forked member pivotally mounted upon the ring, and means carried by the member for engagement with the indentations upon the ring, as set forth.



2. A device for holding reins comprising, in combination with a ring provided with indentations upon the outer circumference, a forked member pivotally mounted upon the ring, and a spring-actuated catch carried by said member and adapted to engage indentations in the ring, as set forth.

3. device for holding reins comprising, in combination with a ring provided with indentations upon the outer circumference, a forked member pivotally mounted upon the ring, a spring-actuated catch carried by said member and adapted to engage indentations in the ring, and said member having a laterally projecting hook, as set forth.

883,645. KEY-LOCK FOR KEY-OPERATED MACHINES. LOUIS G. JULIHN, Washington, D. C., assignor to Elliott-Fisher Company, New York, N. Y., a Corporation of Delaware. Filed Apr. 3, 1907. Serial No. 366,210.



1. The combination with two keys and mechanism operated thereby, of means preventing the simultaneous effective operation of said keys and permitting the normal effective operation of either key at any time during the retraction of the other key.

2. The combination with two keys, of mechanism operated thereby, each of said keys being capable of effective normal operation during the final portion of the effective stroke of the other key and also at any time during the retractile movement of said other key, and means preventing the simultaneous operation of said keys and permitting the normal effective operation of either key during the final portion of the effective stroke of the other key or at any time during the retraction of said other key.

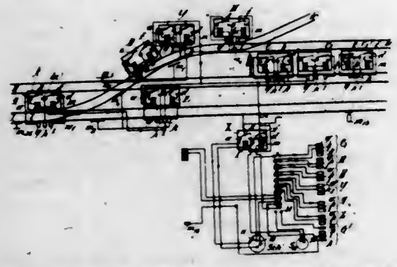
3. The combination with two keys, of mechanism operated thereby, each of said keys being capable of effective normal operation during the retraction of the other key, and a rotary detent coöperatively related to the keys and arranged to obstruct the simultaneous effective movement of the keys and to yield to permit the normal effective operation of either key prior to the operation of the other key or during any portion of the retractile movement of the latter.

4. The combination with two keys, of mechanism operated thereby, each key being capable of effective normal operation during the retraction of the other key, a rotary detent, devices movable with the respective keys and arranged to engage the detent at opposite sides of the axis thereof to obstruct the simultaneous effective movement of the keys and to rotate the detent upon the operation of either key alone.

5. The combination with two keys, of mechanism operated thereby, each of said keys being capable of effective normal operation at any time during the retraction of the other key, an interposed toothed wheel obstructing the simultaneous effective movement of both keys, but rotatable to permit the effective operation of either key alone, said toothed wheel opposing no substantial resistance to the operation of one key either prior to the operation of the other key or during the retraction of said other key and opposing no substantial resistance to the complete retraction of such other key.

[Claims 6 to 18 not printed in the Gazette.]

883,646. SAFETY DEVICE FOR ELECTRIC POINT SHIFTING, SIGNALING, LOCKING, AND SWITCHING APPARATUS. LORENZ KOTTMAIR, Munich, and RUDOLF ZWACK, Nordendorf, near Augsburg, Germany. Filed June 9, 1904. Serial No. 211,837.



1. In switch and signal operating apparatus, the combination of a shifting device to be secured in safety position, an electrical circuit having a contact which is closed by operation of such shifting device, and a safety switch device which is automatically operated by the closing of said contact, the circuit between such shifting device and safety switch being automatically broken when the latter is operated, substantially as shown and described.

2. In switch and signal operating apparatus, the combination of a point-shifting device, which is to be put in position to be secured, a safety switch device on which the shifting device acts, an electrical circuit including the said devices, the same having a contact which is closed automatically by the point-shifting device when operated, whereby the safety switch is in turn operated, the latter during the shifting movement breaking the circuit of the point-shifting device whereby the placing of same in a dangerous position is avoided, substantially as described.

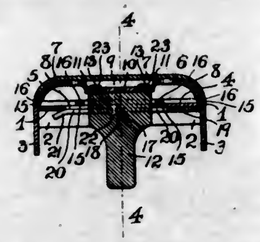
3. Means for securing electric shifting-devices for point shifting-switches and signals, the same consisting in electrically-connected shifting devices, and safety-switches, having contacts by which, when closed, the switches may be brought back into their initial position with the shifting-devices to be secured, the safety-switches, after the shifting-devices to be secured have been properly adjusted, being worked by the latter, whereby the circuit including the shifting-devices and by which a dangerous working might be effected, is broken, substantially as set forth.

4. Means for securing electric shifting devices for point-shifting switches and signals which include in an electric circuit the arrival-signal and the starting signal of a line having one safety-switch (Fig. 1) in common, which is so connected with the shifting devices for the signals that the shifting-device for the arrival signal, after this signal has been put into the "line clear" position, causes a shifting of the safety switch in one direction, and the shifting-device for the starting-signal, when this signal has been shifted from the "line clear" into the "stop" position, a shifting of the safety-device in the other direction, while the safety-switch always breaks that current of the shifting-device by which it has been shifted into the "line clear" position, whereby the arrival signal cannot be put back into the "line clear" position if the track is obstructed, substantially as set forth.

5. Means for securing electric shifting-devices for point-shifting switches and signals including in an electrical circuit two safety-switches (X^1 X^1, Fig. 2) for a line on which trains run in both directions, each one of the leads serving to shift the arrival into the "line clear" position being connected with the other safety-switch so that on shifting these safety-switches the current is broken, by which it results that both signals can never be shifted at the same time, substantially as set forth.

[Claims 6 to 14 not printed in the Gazette.]

883,647. FASTENER FOR BAG-FRAMES. ALBERT J. H. KUHSIEK, Jersey City, N. J., assignor to The R. Neuman Hardware Co., a Corporation of New Jersey. Filed Oct. 29, 1907. Serial No. 399,731.



1. In a fastening device for bag-frames and the like, a main support or base adapted to be secured upon a bag-frame section, an outer chambered shell slidably arranged upon said main support or base, and an inner shell within said outer shell, a post connected with said inner shell, said post being provided with a rivet-head and said inner shell being provided with a rivet-head receiving depression.

2. In a fastening device for bag-frames and the like, a main support or base adapted to be secured upon a bag-frame section, an outer chambered shell slidably arranged upon said main support or base, and an inner shell within said outer shell, a post connected with said inner shell, said post being provided with a rivet-head and said inner shell being provided with a rivet-head receiving depression, and fastening means extending from the marginal edge of said outer shell beneath and in engagement with the marginal edge of the inner shell.

3. In a fastening device for bag-frames and the like, a main support or base adapted to be secured upon a bag-frame section, an outer chambered shell slidably arranged upon said main support or base, and an inner shell within said outer shell, a post connected with said inner shell, said post being provided with a rivet-head and said inner shell being provided with a rivet-head receiving depression, said outer shell being provided at its marginal edge with retaining lugs forced directly out of said edge, said lugs extending inwardly directly beneath and in engagement with the marginal edge of the inner shell, substantially as and for the purposes set forth.

4. In a fastening device for bag-frames and the like, a main support or base adapted to be secured upon a bag-frame section, an outer chambered shell slidably arranged upon said main support or base, an inner shell within said outer shell, said inner shell being provided with a rivet-head receiving depression and rivet-lug receiving holes, and a retaining post extending downwardly from said inner shell, said posts having rivet-lugs extending through said lug-receiving holes and provided with rivet-heads arranged in said receiving depression of the inner shell.

5. In a fastening device for bag-frames and the like, a main support or base adapted to be secured upon a bag-frame section, an outer chambered shell slidably arranged upon said main support or base, an inner shell within said outer shell, said inner shell being provided with a rivet-head receiving depression and rivet-lug receiving holes, and a retaining post extending downwardly from said inner shell, said post having rivet-lugs extending through said lug-receiving holes and provided with rivet-heads arranged in said receiving depression of the inner shell, and fastening means extending from the marginal edge of said outer shell beneath and in engagement with the marginal edge of the inner shell.

[Claims 6 to 13 not printed in the Gazette.]

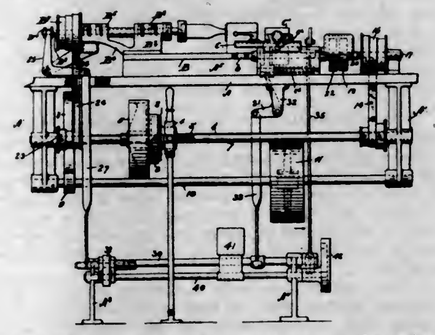
883,648. MINER'S KNIFE. GEORGE H. LANDERS, Boise, Idaho. Filed June 4, 1907. Serial No. 377,250.



1. A combination tool of the class described, comprising a handle having a channel, a back piece closing the rear side of said channel and having an extended portion closing one end of said channel and forming a hook or lip on the front side of said channel, a block in such channel partially closing the front side thereof, the opposite end of such channel being open, and pliers or like implements having arms for insertion respectively in such channel and to bear on the front side of such block and engage such hook or lip, for the purpose set forth.

2. A combination tool of the class described, comprising a handle having a channel, a back piece in such channel closing one end thereof and having a hook or lip on the front side thereof at such closed end, a block in such channel closing one end thereof and having a recess in the side opposite said back piece, a spring in such recess, a block element extending transversely through such recess, and a pair of pliers or the like implement having arms one of which is adapted to enter such recess and the other of the arms adapted to slide on the front side of the said block and engage such lip or hook for the purpose set forth.

883,649. GRINDING-MACHINE. ABRAHAM B. LANDIS, Waynesboro, Pa. Filed Dec. 23, 1905. Serial No. 293,137.



1. A machine for grinding stopper seats in the necks of bottles, comprising a frame, a bottle holding mechanism mounted upon a swiveled table, a reciprocating carriage carrying the grinding wheel, means for feeding said grinding wheel to the work, and suitable gearing for driving the several parts, substantially as set forth.

2. In a grinding machine for grinding internal tapers in cylindrical bodies, the combination, of the frame, the work holding carriage mounted on a pivot to permit the work to be held at different angles to the grinding wheel, the grinding wheel carriage mounted to reciprocate to traverse the grinding wheel over the work, means for feeding said grinding wheel to the work, and suitable gearing for driving the several parts, substantially as set forth.

3. In a machine for grinding tapered seats, the combination of the frame, the swiveled table for holding the work, the reciprocating carriage for supporting the grinding wheel, said grinding wheel mounted on a hollow spindle, a water supply connected with said hollow spindle, and suitable driving gear, substantially as set forth.

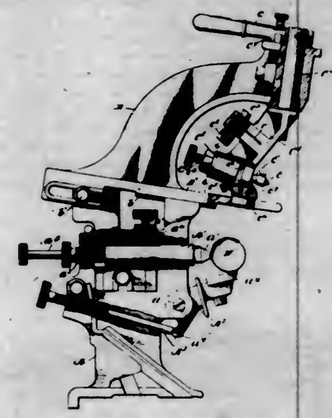
4. In a grinding machine for grinding stopper seats in bottle necks, the combination, of the frame, the bottle holding table swiveled on said frame, a fixed support for the neck of the bottle, a yielding support or clamp for the base of the bottle, said yielding support being connected to means for operating it to release the work and mounted

in a driven part, the grinding wheel carriage mounted to be reciprocated to traverse the work, and to be fed to said work, and suitable driving mechanism, substantially as set forth.

5. In a grinding machine for grinding tapered seats, the combination, of the frame, the work supporting table swiveled thereon, the work holding clamps on said table comprising a fixed support and a yielding clamp, means for operating said yielding clamp back and forth, means for driving the work, and a grinding wheel mounted and arranged to operate upon said work, substantially as set forth.

[Claims 6 to 17 not printed in the Gazette.]

883,650. GRINDING-WHEEL TRUER FOR GRINDING-MACHINES. ABRAHAM B. LANDIS, Waynesboro, Pa. Filed May 8, 1906. Serial No. 315,775.



1. The combination, with a grinding machine, of a tool for dressing the grinding wheel comprising a supporting frame, a pivoted frame mounted to swivel in said supporting frame, a diamond tool mounted in said pivoted frame in position to operate upon the face of the grinding wheel, the upper end of said frame being mounted in an overhanging support and its lower end supported by bearing upon a track behind the line of its axis, substantially as set forth.

2. The combination, with a grinding machine, of a work-rest mounted upon the work supporting table, a supporting frame mounted upon the top of said work rest formed with its upper end overhanging its lower portion, a frame journaled at its upper end in a bearing in said overhanging part and having its lower end formed to extend behind the axis of its journal and having a roller journaled on said lower end adapted to bear on a segmental track on said frame, and a diamond tool mounted in said frame, substantially as set forth.

3. In a machine for dressing the grinding surfaces of the grinding wheels of grinding machines, the combination of an overhanging frame or support suitably mounted adjacent to said grinding wheel, a frame carrying the diamond tool journaled at its upper end in said overhanging frame and supported at its lower end by a segmental track behind the axis of the journal, said diamond tool eccentrically mounted in a rotary sleeve or bushing and means for adjusting said sleeve or bushing circumferentially, and securing it as desired, substantially as set forth.

4. In a diamond tool for dressing the faces of grinding wheels, the combination of a supporting frame comprising at its upper end in a bearing in said overhanging part and its lower end supported by a segmental track behind the axis of said overhanging part, said frame being made of a somewhat flexible structure, and means for deflecting its alinement, substantially as set forth.

5. In a diamond tool, the combination of a supporting frame, comprising an overhanging part, a frame carrying a diamond tool journaled in said overhanging part, said diamond tool being mounted upon a suitable screw-threaded stem mounted eccentrically in a sleeve or bushing in the lower end of said frame and means for adjusting said sleeve or bushing circumferentially and securing it in adjusted position, substantially as set forth.

[Claims 6 and 7 not printed in the Gazette.]

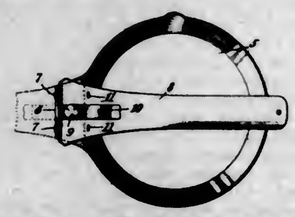
883,651. ELECTROLYTIC PRODUCTION OF CHROMIC ACID. MAX LE BLANC, Karlsruhe, Germany, assignor to Badische Anilin & Soda Fabrik, Ludwigshafen-on-the-Rhine, Germany, a Corpration. Filed Jan. 31, 1906. Serial No. 298,833.



1. The process of making chromic acid continuously by electrolytically oxidizing a chromium compound of a lower degree of oxidation by treating an acid solution of the said chromium compound with an electric current while continuously passing the said solution into an electric cell in such strength and quantity that the liquid treated at the cathode remains acid, all substantially as described.

2. The process of making chromic acid continuously by electrolytically oxidizing a chromium compound of a lower degree of oxidation by treating an acid solution of the said chromium compound with an electric current while continuously passing the said solution into an electric cell in such strength and quantity that the liquid treated at the cathode remains acid and approaches the anode at the points of greatest current density afterwards passing to points of lower current density, all substantially as described.

883,652. COOKING VESSEL. OLAF LENSCHOW and CHRISTIAN MATHIESON, Butte, Mont. Filed Sept. 18, 1907. Serial No. 393,457.



1. A pan having a handle pivoted thereto, whereby it is adapted to be turned across the pan, and means operating to automatically lock the handle to the pan when the handle is turned to operative position, including means to bindingly engage the outer end of the handle against the top edge of the pan when the said handle is turned across the pan.

2. A pan having a stub projecting outwardly from its upper edge provided with projections, a handle pivoted to bear flat against the stub having a turned-up inner end adapting it to override said projections when the handle is revolved, said handle having apertures, and a spring carried by the pivot of the handle operating to force it in firm contact with the stub and automatically engage the projections with said apertures when in register.

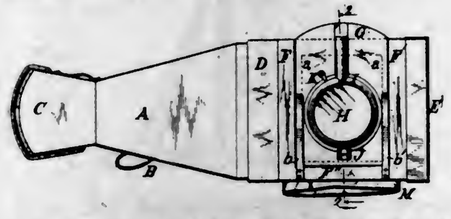
3. A pan having a handle pivoted to swing laterally thereover, a spring carried by the pivot of the handle operating to press the handle to the pan, and means locking the handle in an extended position arranged at both sides of the spring.

4. A cooking vessel having a handle pivoted thereto to swing laterally thereacross, and a spring made as a separate part and carried by the pivot of the handle for pressing the handle into firm engagement with the vessel.

5. A cooking vessel having a handle pivoted thereto adapted to swing laterally over the top of the vessel, and a bowed spring secured by the pivot of the handle operating to press the handle to the vessel.

[Claim 6 not printed in the Gazette.]

883,653. APPARATUS FOR EXHIBITING THE FLUORESCENCE OF FLUORESCENT SUBSTANCES. WALLACE G. LEVISON, New York, N. Y. Original application filed May 1, 1903, Serial No. 150,323. Divided and this application filed Nov. 29, 1905. Serial No. 289,698.

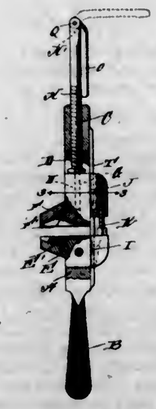


1. In an apparatus for examining fluorescent substances, the combination of a source of light, an inclosing box having a sleeved opening on one side and a removable cover for the introduction of the object to be examined, a ray filter upon another side to remove objectionable rays from the exciting light and an eye shield provided with an eye screen to arrest unused reflected rays of the incident rays substantially as described.

2. The apparatus described for facilitating the exhibition and examination of fluorescent substances by suitable wave frequencies consisting of a source of exciting rays, a container, to inclose the specimens under examination, provided with a ray filter to arrest undesirable rays from the source and an eye screen to arrest any unused incident rays reflected from the object under examination.

3. In an apparatus for examining fluorescent substances the combination of a source of light, an inclosing box having a sleeved opening on one side for the introduction of the object to be examined, a ray filter upon another side to remove objectionable rays from the exciting light, and an eye shield provided with an eye screen to arrest unused reflected rays of the incident rays substantially as described.

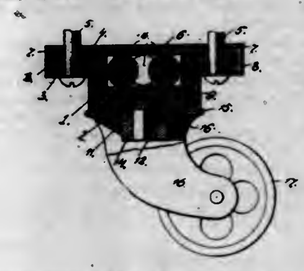
883,654. DEVICE FOR REMOVING CALKS FROM HORSESHOES. JOHN C. LILLY, Bedford, Pa. Filed Jan. 16, 1908. Serial No. 411,179.



1. A device for removing calks from horse shoes, comprising a stock having a rectangular outlined opening therein, one end of the stock provided with a threaded aperture leading into said opening, a fixed jaw mounted within said opening, a movable jaw also mounted within said opening, a screw for actuating the movable jaw, a set screw carried by the latter and adapted to bear against the fixed jaw, as set forth.

2. A device for removing calks from horse shoes comprising a stock having a rectangular outlined opening therein, one end of the stock provided with a threaded aperture leading into said opening, a fixed jaw mounted within said opening and having a projection extending outside the opening, a screw mounted in a threaded opening in the end of the movable jaw and adapted to bear against said extension of the fixed jaw, and a screw for moving the movable jaw, as set forth.

883,655. CASTER. EDWARD LOCKYER, McKeesport, Pa. Filed July 5, 1907. Serial No. 382,305.

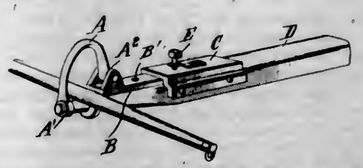


1. A caster embodying a cylindrical body or socket having a central cylindrical opening formed therein, a peripheral flange carried by said body, a cover plate fitting upon said flange and inclosing said body, a revoluble disk mounted in said body and having a depending shank protruding through said opening, a wheel-frame fixed upon the ends of said shank, a wheel journaled in said frame, ball bearings arranged between said disk and said cover plate, and means for securing said cover plate to the flange of said caster.

2. A caster embodying a body or socket, a cover plate secured upon said body, a revoluble disk mounted in said body and having a shank protruding through the bottom of said body, a wheel-frame fixed upon the end of said shank, a wheel journaled in said frame, and ball bearings arranged between said disks and said plate.

3. A caster embodying a body or socket, a revoluble disk mounted in said body or socket and having a depending stem protruding therefrom, a wheel-frame fixed upon said shank, a wheel journaled in said frame, ball bearings resting upon said disk, and means for retaining said ball bearings in said caster body.

883,656. NECK-YOKE FASTENING. WILLIAM W. LONG, Coulee City, Wash., assignor of three-fifths to Nulton E. Nuzum, Spokane, Wash. Filed Apr. 19, 1907. Serial No. 369,098.



1. A neck yoke holder, substantially as herein described, comprising a keeper for application to a pole, a sliding bar movable longitudinally in said keeper, means for securing the sliding bar in any desired adjustment within the keeper, a retaining bar deflected between its ends and having a hinge connected at its rear end with the front end of the slide bar, and a collar at the front end of the retaining bar and adapted to be adjusted to embrace the front end of a vehicle pole, substantially as set forth.

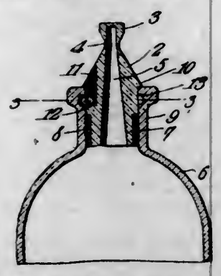
2. A pole, a retaining device to overlie a yoke, and provided with a collar to embrace the front end of the pole, and means for securing the opposite ends of the said device in connection with the pole, said means including a slide bar hinged at its front end to the rear end of the retaining device.

3. A pole, a yoke retaining device, means securing the rear end of the retaining device to the pole, and including a slide bar movable along the pole the retaining device being pivotally jointed to the slide bar, and means at the free front end of the retaining device for securing such end in connection with the pole, substantially as set forth.

4. A yoke holder for vehicle poles comprising a retaining device to overlie a yoke, a collar at the front end of said device for slidable connection with the vehicle pole, and means including a slide bar connected with said device for securing the rear end of the retaining device in any desired adjustment relative to the vehicle pole, substantially as set forth.

5. A yoke holder for vehicle poles, comprising a retaining bar free at its front end and deflected between its ends to overlie a yoke, means at the front end of said device for connection with a pole, a slide bar pivotally connected with the rear end of the retaining device, and a keeper for said slide bar, substantially as set forth.

883,657. BOTTLE-STOPPER. HENRY C. A. LÜTGE, Anderson, Ind. Filed Nov. 6, 1907. Serial No. 401,006.



1. The combination with a bottle having its neck provided with an internal circumferential seat, of a stopper having a channel and a groove intersecting the channel, means for causing the channel and the seat to register, and a cement seal filling the channel and a portion of the seat.

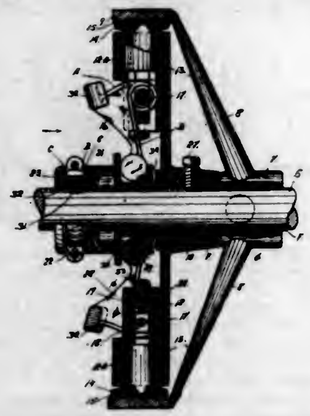
2. The combination with a bottle having its neck provided with an internal circumferential seat, of a bottle stopper constructed of frangible material, having a passage therethrough, the outer end of which is sealed, the intermediate portion of the stopper being provided with a channel and a groove intersecting the channel, means for causing the channel and seat to register, and a cement seal filling the channel and a portion of the seat.

883,658. FRICTION-CLUTCH. HENRY LUTZ, Denver, Colo. Filed Jan. 23, 1907. Serial No. 353,643.

1. The combination of a driving shaft, a clutch wheel mounted to rotate therewith and provided with open ended casings, plungers slidable in said casings and provided at their outer extremities with friction faces, a sleeve slidable on the shaft, and balance levers pivoted on the plungers, the said levers having approximately the shape of bell cranks, one arm of each bell crank engaging the sleeve, while the other arm is provided with a weight, substantially as described.

2. The combination with a shaft, of a hub mounted to rotate therewith, the said hub being provided with a web having a plurality of open ended casings at its outer edge, friction plungers slidable in said casings, a sleeve slidable on the shaft, and balance levers pivoted on the plungers and connected with the sleeve, each lever having a weighted arm, substantially as described.

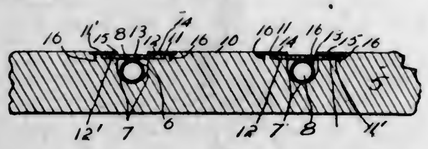
3. The combination with a shaft, of a hub mounted thereon to rotate therewith, open ended casings integral with the hub and formed of one piece and located at a suitable distance therefrom, friction plungers slidable in the casings, a sleeve slidable on the shaft, the opening in the sleeve being coned to permit a rocking or lateral movement of said sleeve, and a suitable connection between the plungers and the shaft, whereby the tendency of the plungers to move outwardly by the action of centrifugal force is neutralized or overcome, substantially as described.



4. The combination with a shaft, of a friction wheel mounted thereon, friction devices movable radially on the wheel, a sleeve slidable on the shaft having its inner surface coned in opposite direction from a given cross sectional plane whereby a rocking or lateral movement is obtained, and means for connecting friction devices with the sleeve to neutralize or balance the tendency of the centrifugal force to move the friction devices outwardly automatically, substantially as described.

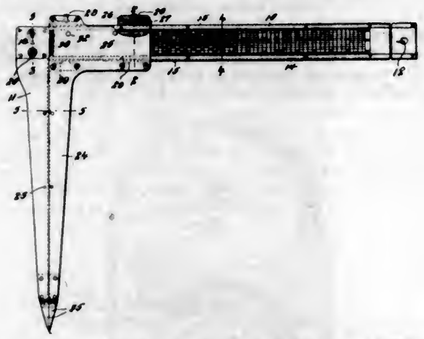
5. The combination with a shaft, of a hub mounted to turn therewith, a sleeve also mounted to turn therewith and slidable thereon, the opening of the said sleeve being formed somewhat larger than the shaft, in both directions from a given cross sectional plane, friction devices slidable in the hub and balance levers connecting the friction devices with the shaft, the said levers being pivoted on the friction devices, and means for adjusting the radial position of the fulcrums, substantially as described.

883,659. SPIRIT-LEVEL. THOMAS J. MAHONEY, Hot Springs, Ark., assignor of one-third to Thomas Bergman, Hot Springs, Ark. Filed July 11, 1907. Serial No. 383,205.



A device of the type set forth, comprising a stock formed with an annular recess defining a central raised portion having its edge portion formed with upper and lower steps, the face of the stock adjacent the outer edge of the recess being formed with upper and lower steps, an annular spirit tube disposed within the recess, an annular transparent plate imposed upon the lower steps and bridging the recess, and spaced concentric metallic rings imposed upon corresponding upper steps and secured to the stop, said rings partially overlying and confining the transparent plate, one of said rings being calibrated.

883,660. MEASURING-CALIPERS. JOHN W. MARR, Waterville, Me., assignor to Hollingsworth and Whitney Company, Boston, Mass., a Corporation of Massachusetts. Filed Nov. 7, 1907. Serial No. 401,093.



1. In a measuring caliper, a fixed jaw provided with an angularly disposed beam, a graduated strip upon said beam, a separate transparent covering strip removably disposed over the graduated strip, clips having flanges embracing the upper and lower edges of said beam and strips, securing devices extending through said clips and beam, and a movable jaw mounted to travel upon said clips.

2. In a measuring caliper, a beam provided with a fixed jaw, a movable jaw having a casing comprising opposite plates separated by a block having a socket at one edge of the beam and slidably mounted thereon, a bearing block mounted in said socketed block, and an adjusting screw mounted in said socketed block and contacting with the bearing block carried thereby.

3. In a measuring caliper, a beam provided with a fixed jaw, a movable jaw having a casing slidably mounted on said beam, bearing blocks mounted in said casing, an adjusting screw mounted in said casing and contacting with said bearing blocks, a protected graduated strip upon said beam, and retaining clips at the opposite edges of the beam embracing said strip and connecting with the blocks of said casing.

4. In a measuring caliper, a beam, fixed and movable jaws extending therefrom and composed of opposite plates with an interposed angle iron, a thimble within said iron, and securing means extending through said plates, angle iron and thimble.

883,661. PROCESS OF BLEACHING BEESWAX. ARMAND MÜLLER-JACOBS, Huntington, N. Y., assignor, by direct and mesne assignments, of one-half to Catharina Müller-Jacobs, Huntington, N. Y., and one-half to Edward Weingärtner, Englewood, N. J. Filed Jan. 2, 1906. Serial No. 294,244.

1. The process of bleaching beeswax, which consists in adding fullers' earth to the beeswax and heating the mixture between 130° and 170° C., substantially as described.

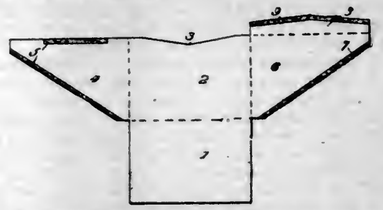
2. The process of bleaching beeswax, which consists in heating the beeswax to approximately 130° C., adding fullers' earth, and then still further raising the temperature toward 170° C., substantially as described.

3. The process of bleaching beeswax, which consists in heating the beeswax with fullers' earth considerably above 130°, substantially as described.

883,662. ENVELOP. VIOLA MCELREE, Pittsburg, Pa. Filed June 28, 1906. Serial No. 323,912.

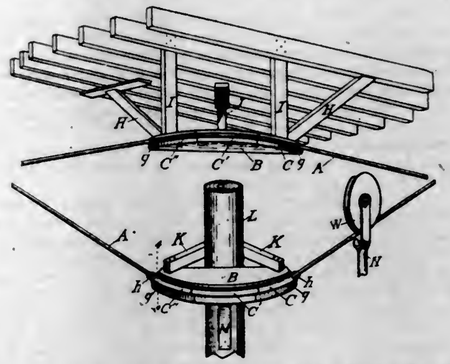
1. An envelop comprising a front section and a rear section, folded one upon the other and of substantially the same formation, opposite end sections designed to be folded one upon the other and both upon the outside of the rear section, and a sealing flap carried by one of said end sections for folding over the edge of the front section.

2. An envelop comprising a front section and a rear section, folded one upon the other and of substantially the same formation, end sections extending from the front section and designed to be folded one upon the other and both on the outside of the rear section to which they are secured, the outer of the two end sections having along its upper edge a sealing flap designed to be folded over the edge of the front section.



3. The herein described envelop comprising a front section and a rear section of substantially corresponding formation, the rear section being folded upon the front section, two end sections extending from the ends of the front section, said end sections having each a diagonal extended edge and designed to be secured, one to the outer face of the rear section and the other to the outer face of said rear section and to the first noted end section, and a sealing flap extended from the upper edge of the second noted end section designed to fold over the edge of the front section.

883,663. CURVE FOR OVERHEAD TRACKS. ALBERT H. NELLER, Fairfield, Iowa, assignor to Louden Machinery Company, Fairfield, Iowa, a Corporation of Iowa. Filed Nov. 29, 1907. Serial No. 404,435.



1. A continuous overhead tension track supporting device by means of which a curve may be constructed to enable an elevated carrier to run on the outside thereof, having a vertical flange on its outer side formed with a groove in its upper edge to hold or contain the track, and the said upper edge acting as a rail for the elevated carrier while the carrier is passing around the curve.

2. A continuous overhead tension track supporting device by means of which a curve may be constructed to enable an elevated carrier to run on the outside thereof along the line of the tension track, having a vertical flange on its outer side formed with a groove in its upper edge to hold or contain the track and the said upper edge acting as a rail for the elevated carrier while the carrier is passing around the curve.

3. A continuous overhead tension track supporting device by means of which a curve may be constructed to enable an elevated carrier to run on the outside thereof, comprising a segmental frame and a track supporting plate having a vertical flange on its outer side the flange being formed with a groove in its upper edge to hold or contain the track and the said upper edge acting as a

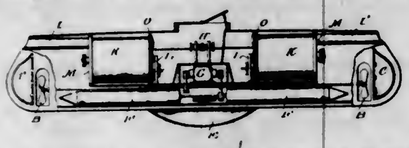
rail for the elevated carrier while the carrier is passing around the curve.

4. A continuous overhead tension track supporting device by means of which a curve may be constructed to enable an elevated carrier to run on the outside thereof, having a vertical flange on its outer side formed with a groove in its upper edge to hold or contain the track and the said upper edge acting as a rail for the elevated carrier while the carrier is passing around the curve, and bolts passing through the said vertical flange for securing the track in and releasing it from the said groove.

5. A continuous overhead tension track supporting device by means of which a curve may be constructed to enable an elevated carrier to run on the outside thereof, comprising a segmental frame and a track supporting plate having a vertical flange on its outer side, the flange being formed with a groove in its upper edge to hold or contain the track, and the said upper edge acting as a rail for the elevated carrier while the carrier is passing around the curve, and bolts passing through the said vertical flange for securing the track in and releasing it from the said groove.

[Claims 6 to 17 not printed in the Gazette.]

883,664. TORPEDO-BOAT. ERNST A. NILSEN, Christiania, Norway, assignor of one-half to Bernard Crafton, Chicago, Ill. Filed Sept. 28, 1905. Serial No. 280,521.



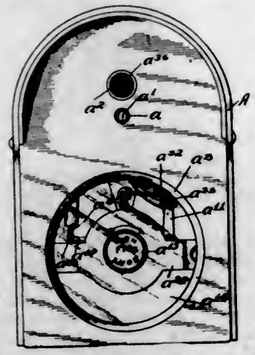
1. In a torpedo boat, the combination with a torpedo launching tube opening outward through the hull of the boat, of a rotary magazine drum provided with a plurality of torpedo tubes or chambers adapted to register *seriatim* with said launching tube, means for rotating said magazine drum, and a hand rod adjacent to each chamber provided with a fixed yoke and a pivoted yoke for clamping said torpedo in said chambers and for releasing the torpedo from said chamber when desired, substantially as described.

2. In a torpedo boat, the combination with a torpedo launching tube opening outwards through the hull of the boat, of a rotary magazine drum provided with a plurality of torpedo chambers adapted to register with said launching tube, hand operated means for rotating said drum, and hand operated means for releasing said torpedoes from said chambers when desired, comprising a hand rod with a yoke pivoted thereto and adapted to bind against said torpedo when in its forward position, and to engage the starting arm of the torpedo when drawn rearward, substantially as described.

3. In a torpedo boat, the combination with a torpedo launching tube opening outward through the hull of the boat, of a rotary magazine drum provided with a plurality of torpedo tubes or chambers adapted to register *seriatim* with said launching tube, means for rotating said magazine drum, and means for holding the torpedo in and releasing it from its magazine chamber, comprising a hand rod, a yoke fixed thereto and adapted to engage the rear body of the torpedo, and a yoke pivoted to said hand rod and adapted to engage the forebody of said torpedo, and to strike the starting arm of the torpedo when said hand rod is drawn rearward, substantially as described.

4. In a torpedo boat, the combination with a fixed torpedo launching tube opening outward through the hull of the boat, of a rotary magazine drum provided with a plurality of torpedo tubes or chambers adapted to register *seriatim* with said launching tube, worm gearing for rotating said magazine drum, and means for holding the torpedo in and releasing it from its magazine chamber, comprising a hand rod, a yoke fixed thereto and adapted to engage the rear body of the torpedo, and a yoke pivoted to said hand rod and adapted to engage the forebody of said torpedo, and to strike the striking arm of the torpedo when said hand rod is drawn rearward, substantially as described.

883,665. COMBINED POLICE-CALL, FIRE-ALARM, AND WATCHMAN'S BOX. JAMES G. NOLEN, Chicago, Ill., assignor of one-half to Frank B. Cook, Chicago, Ill. Filed Mar. 3, 1904. Serial No. 196,435.



1. A box for transmitting signals comprising normally wound-up clock work, and means for releasing said clock work comprising a rotary and axially movable part, operatively associated with the clock work to release said clock work by either rotary or axial movement.

2. A box for transmitting signals comprising a normally wound clock work and means for releasing said clock work comprising a rotary and axially movable handle adapted and arranged by axial movement to once release the clock work and by rotary movement to again release said clock work.

3. A box for transmitting signals comprising a normally wound clock work, locking means therefor, normally maintaining said clock work inactive, and adapted by movement of a part thereof to abnormal position to condition the clock work for activity, and a handle susceptible of successive automatic and manual actuation, arranged when automatically actuated to move the said part of the locking means to abnormal position and when manually actuated to again move the said part of the locking means to abnormal position.

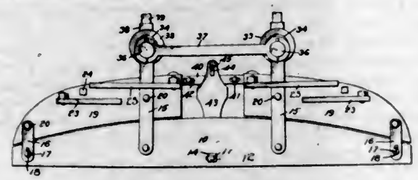
4. A box for transmitting signals comprising a clockwork normally wound, and adapted when fully released to transmit an alarm, a handle mounted for two distinct movements of different direction, and means for fully releasing said clockwork associated with the handle for control thereby, and functionally operable only by manipulation of the handle through both of its distinct movements.

5. A box for transmitting signals, comprising normally wound-up clockwork, a locking lever for locking the clockwork in its normally wound-up condition, a rotary and axially movable member provided with two depressions, said locking lever engaging one of said depressions, a glass plate engaging the end of said member, and spring means acting to shift said member axially upon the breaking of said glass, said member being provided also with an inclined surface intermediate of said depressions, whereby the axial movement of said member causes said locking lever to release the clockwork.

[Claims 6 to 12 not printed in the Gazette.]

883,666. TIRE-SETTER. CHARLES O. PEARCE, Cheneyville, La. Filed Jan. 29, 1907. Serial No. 354,657.

1. A tire setting machine comprising a pair of connected plates having curved upper edges, cheek pieces loosely supported above the curved upper edges of the plates, said cheek pieces being arranged for movement to and from each other, bolts engaged through the cheek pieces and connecting the same, cam levers pivoted one to one end of each of the bolts and adapted to have positive engagement at times with the adjacent cheek pieces, bolts engaged through the cheek pieces, springs engaged upon the bolts and bearing at their ends against the inner faces of the cheek pieces to exert a normal tendency upon the cheek pieces toward separation, recesses formed in the inner faces of the cheek pieces and widened each toward one end and opening through that end of the corresponding cheek piece which opposes the cheek piece at the corresponding side of the machine, the said recesses being provided with upwardly directed extensions, serrated plates seated in the recesses, each of said plates being widened toward one of its ends and having its widened end portions seated in the widened portion of the corresponding recess, an extension formed integral with each of the plates at the upper edge thereof and seated in the extended portion of the corresponding recess, and means whereby the cheek pieces may be moved toward each other in a longitudinal direction.



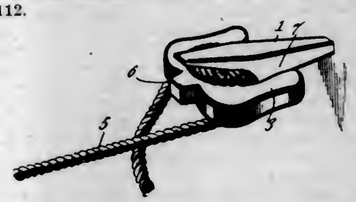
2. A tire setting machine comprising a pair of connected plates having curved upper edges, cheek pieces loosely supported above the curved upper edges of the plates, said cheek pieces being arranged for movement to and from each other, bolts engaged through the cheek pieces and connecting the same, cam levers pivoted one to one end of each of the bolts and adapted to have positive engagement at times with the adjacent cheek pieces, bolts engaged through the cheek pieces, springs engaged upon the bolts and bearing at their ends against the inner faces of the cheek pieces to exert a normal tendency upon the cheek pieces toward separation, recesses formed in the inner faces of the cheek pieces and widened each toward one end and opening through that end of the corresponding cheek piece which opposes the cheek piece at the corresponding side of the machine, the said recesses being provided with upwardly directed extensions, serrated plates seated in the recesses, each of said plates being widened toward one of its ends and having its widened end portions seated in the widened portion of the corresponding recess, an extension formed integral with each of the plates at the upper edge thereof and seated in the extended portion of the corresponding recess, and means whereby the cheek pieces may be moved toward each other in a longitudinal direction.

883,667. CLOTHES-PIN. FRANK F. PECOR, Oconto, Wis., assignor of one-half to Ernest Sauld, Mountain, Wis. Filed Aug. 16, 1907. Serial No. 388,835.



A clothes-pin or clamp formed from lengths of wire and comprising an open loop or ring formed from one of the ends of each wire; a neck composed of a portion of the wires twisted together and extending horizontally from the upper portion of the ring; pendent loops at the end of the neck opposite to the ring, the legs of said loops being flared outward at their upper and lower ends and extended or bent inward convergently at an intermediate point to form clamps; and a thumb-loop extended upward from a point above the clamp loops and formed by twisting the ends of the wires together and connecting the terminals with the outer end of the neck.

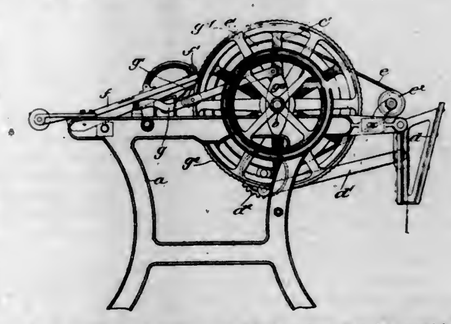
883,668. CLOTHES-LINE HOLDER. CHARLES W. RADOLL, Chicago, Ill. Filed Feb. 6, 1907. Serial No. 356,112.



1. A device of the class described comprising a shank which increases in width inwardly from both ends and is provided with a threaded extremity at its rear end, side arms extending laterally and rearwardly with respect to the shank and arranged with their extremities adjacent the point of greatest width of the shank to form side mouths each contracted at the entrance and widening inwardly, the front end of the shank being provided with a rearwardly extending V-shaped slot disposed above the plane of the arms, and a lug extending forwardly from between the arms to form a striking head to drive the said threaded portion into a support.

2. A device of the class described comprising a shank having a horizontal bottom surface and an inclined top surface and of greatest width at a point intermediate its ends, a screw on one end of the shank, a driving lug on the opposite end of the shank, rearwardly extending arms disposed at the sides of the shank and inclined upwardly and disposed with their extremities adjacent the widest point of the shank to form side mouths contracted at their entrance, the front end of the shank being provided with a V-shaped slot, the bottom of which is flush with the top sides of the arms at their inner ends.

883,669. CLOTH-MEASURING MACHINE. CHARLES G. RICHARDSON, Springfield, Vt., assignor to Parks & Woolson Machine Company, a Corporation of Vermont. Filed Aug. 20, 1901. Serial No. 72,653.



1. A cloth measuring machine embracing in combination a plurality of heads, a series of supporting springs arranged about the periphery of the heads, a flexible cloth supporting surface resting on said springs, means for varying the circumferential measure of the cloth supporting surface, substantially as described.

2. In a measuring machine, a measuring cylinder having a cylindrical surface for engaging the cloth to be measured, and means whereby all parts of the cylinder may be drawn equally on radial lines toward or away from the center in order to vary the circumferential measure of the cylinder without causing any eccentricity thereof, substantially as described.

3. A measuring cylinder for a cloth measuring machine embracing in its construction, a plurality of radially contractible and expansible heads or supports, a flexible sheet metal plate adapted to be supported about the periphery of said heads to form a substantially continuous

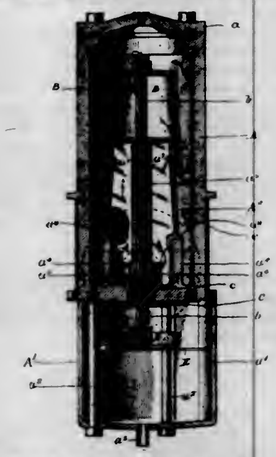
cylindrical surface, and means for contracting and expanding the peripheral measurement of said cylinder without impairing its cylindrical form, substantially as described.

4. A cloth measuring machine embracing in combination a rotatable measuring cylinder whose peripheral surface is adapted to frictionally engage and draw forward the cloth, a registering device operatively connected therewith to record the revolutions of said cylinder, a traveling carrier for automatically stripping the cloth from its frictional engagement with said measuring cylinder as the cloth passes over the surface of the cylinder, substantially as described.

5. A cloth measuring machine embracing in combination a rotatable measuring cylinder whose periphery is roughened to engage and carry forward the cloth, a folding device, and a conveyer for stripping the cloth from its frictional engagement with the measuring cylinder and conducting it to the folding device, substantially as described.

[Claims 6 to 12 not printed in the Gazette.]

883,670. STEAM-METER. CHARLES E. SARGENT, Chicago, Ill. Filed May 6, 1905. Serial No. 259,083.



1. The combination with a casing, of a frusto-conical partition within the same, a passage for the entrance vapor beneath said frusto-conical partition, a frusto-conical valve seating over said partition and inclosing perforations therein, a device capable of being effected by pressure carried by said valve and having communication with the space within said casing, and an indicator operated by said device.

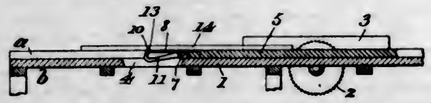
2. The combination with a casing having inlet and outlet openings, of a frusto-conical partition beneath which the inlet opening enters and between the same and the exhaust opening a frusto-conical valve seating over said frusto-conical partition and inclosing perforations therein, a hollow valve stem carried by said valve and communicating with the vapor in said casing and indicating mechanism communicating with the hollow in said valve stem and carried by said valve stem, said indicating mechanism being constructed and arranged to perform an indicating movement with certain of its parts under the influence of pressure, whereby said indicating mechanism is moved bodily as the valve rises and performs a second movement independent of its bodily movement as the pressure varies.

3. The combination with a frame having inlet and outlet openings, of a frusto-conical partition beneath which the inlet opening enters and between the same and the exhaust opening, a frusto-conical valve seating over said frusto-conical partition and inclosing perforations therein, said frusto-conical partition having an opening in its top whereby vapor reaches the lower surface of said frusto-conical valve, a pressure-actuated indicating device, operative connections between said indicating device and said valve whereby said indicating device moves bodily with the valve, said pressure-indicating device having communication through a perforation in said operative connections with the vapor within said casing.

4. The combination with a casing having an opening therethrough, of a valve controlling said opening and constructed and arranged to maintain a constant ratio between the pressures upon its two sides, said valve being also constructed and arranged to rise more rapidly than it increases any single dimension of said opening, a Bourdon spring carried by the valve, connections between the Bourdon spring and the interior of the casing, and a needle carried by the valve and actuated by the Bourdon spring.

5. In a device of the class described, the combination with a frame having induction and eduction ports, a valve arranged to control a passage-way through said frame and a valve stem, of a pressure-indicating device carried by the valve stem, a needle carried by the valve stem and actuated by the pressure-indicating device, a cup secured to the bottom of the frame and having a forward projection to receive the needle, two dials on opposite sides of the frame and means for securing the cup in two diametrically opposite positions and guiding the valve stem in positions diametrically opposite.

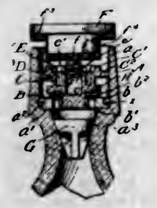
883,671. RIP-SAW. GEORGE J. SCHALLER, Covington, Ky., and VICTOR B. ADAMS, Cincinnati, Ohio. Filed July 13, 1907. Serial No. 383,697.



1. In a rip-sawing machine, a table, a saw, a shooting-board, a gravitating dog mounted in the fore end of said shooting-board and a longitudinal slot in the table, said dog being held up by contact with the table and adapted to drop into said slot at the fore end of the stroke of the shooting-board to automatically release the stuff or timber acted upon by the saw.

2. In a rip-sawing machine, a table having a race-way and a longitudinal slot in said race-way, a circular saw suitably journaled in the table in suitable relation to said race-way, a shooting-board on said race-way and having a shoulder or recess at its fore inner corner, a metal box or casing having an open bottom and secured in said recess at the fore end of the shooting-board and a gravitating dog mounted in said box or casing with its claw or tusk disposed upwardly and adapted to vertically engage the slot in the table.

883,672. INDICATING-BOTTLE. WILLIAM C. SCHMIDT, Richmond, Va. Original application filed July 13, 1905, Serial No. 269,518. Divided and application filed Dec. 20, 1906, Serial No. 348,746. Renewed Aug. 28, 1907. Serial No. 390,554.



1. An indicator of the kind described comprising a perishable substance adapted to be readily destroyed by liquid, substantially as described.

2. An indicator of the kind described, comprising a readily soluble substance, substantially as described.

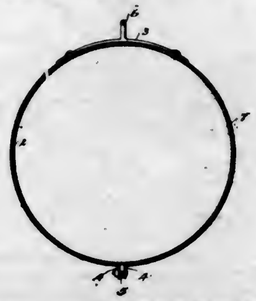
3. In a bottle of the kind described, the combination with an indicator comprising a perishable substance, of means whereby inflowing fluid will be forced into contact with said perishable indicator, substantially as and for the purpose described.

4. In a bottle of the kind described, the combination with an indicator comprising a soluble substance, of means whereby inflowing fluid will be forced into contact with said indicator substantially as and for the purpose described.

5. In a bottle of the kind described, the combination with an indicator comprising a perishable substance, of means for protecting said indicator during the outflow of the contents of the bottle and means whereby inflowing fluid will be forced into contact with said indicator, substantially as and for the purpose described.

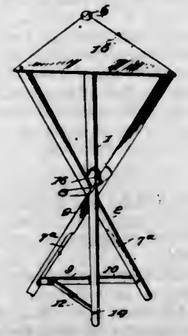
[Claims 6 to 9 not printed in the Gazette.]

883,673. STOVEPIPE-HANGER. COLA W. SHEPARD, Bellefourche, S. D. Filed Dec. 30, 1905, Serial No. 293,989. Renewed Aug. 27, 1907. Serial No. 390,381.



A pipe hanger comprising a band adapted to encircle the pipe section, means for clamping the band on the section, and a ring plate provided with a laterally projecting ring and adapted for movement longitudinally of the band, said plate being formed adjacent the respective ends with transversely disposed parallel openings through which the band is adapted to pass, the band passing from beneath the plate upward through the relatively outer opening, and downward through the relatively inner opening of each pair, whereby the plate is adapted to overlie the band throughout the greater portion of the length of said plate and longitudinal movement of the plate relative to the band is permitted.

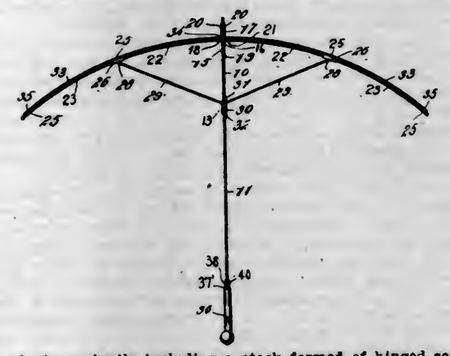
883,674. COMBINED CAMP-STOOL AND WALKING-STICK. GEORGE S. SHERWOOD, Shelbyville, Ky. Filed Feb. 21, 1907. Serial No. 358,745.



1. A combined camp stool and walking stick consisting of a staff constructed in sections one of said sections being provided with a screw threaded extension fitting in the end of the other section, one of said sections being designed to be spread out, and the other section being provided with a socket forming a seat and a cap closing said socket, means for holding said sections in a tripod arrangement, and a triangular seat, the corners of which are designed to be held in stretched condition by the parts of the threaded extension, the third corner of said seat being held in said socket by the said cap.

2. A combined camp stool and walking stick, comprising a staff constructed in two detachable sections one of which embodies two members pivotally connected together and each formed below the pivot with a pocket, and the other section being formed with means for detachably connecting it intermediate of its ends to the pivot of the latter, a seat adapted to be secured on the upper ends of said members and the other section, two braces connected at their ends to the said members respectively and jointed together at their adjoining ends with a vertically breaking joint and adapted to fold upwardly into the said pockets when the members are closed one upon the other, and a third brace having a laterally acting hinge connection at one end with one of the other braces, said third brace consisting of two members also having a vertically breaking jointed connection with each other and the outer one of which is formed with a hook, and the other section being provided at its lower end with a pin adapted for engagement by said hook.

883,675. FOLDING UMBRELLA. MARY B. SMITH, Gunnison, Colo. Filed Aug. 16, 1906. Serial No. 330,884.



1. An umbrella including a stock formed of hinged sections, a handle provided with a bore and a channel, one of the sections and its hinged joint with the adjacent section being received in the bore, a spring catch carried by the first-named hinged section and arranged to move in said channels and to seat in an opening formed through the handle and communicating with the channel, and a spring catch arranged to hold the stock at the inner limit of its movement into the handle.

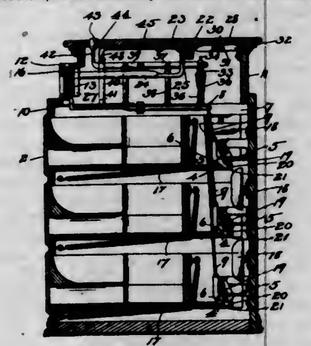
2. An umbrella comprising a stock formed in sections, ribs formed in sections, sleeves disposed upon the stock and upon the ribs, stay ribs connecting one of the sleeves upon the ribs and the sleeve upon the stock, the said sleeves upon the ribs being slotted, and a pin carried by one of the rib sections and projecting through the slot whereby the sleeve may have a limited movement in one direction to permit folding of the rib sections one upon the other.

883,676. MONEY-DRAWER. GEORGE THEBIEN, Oldtown, Me. Filed July 13, 1907. Serial No. 383,645.

1. In combination with a cabinet, and a plurality of drawers in said cabinet, check controlled operating devices for the individual drawers, and a collective operating device for simultaneously opening all of the drawers, substantially as shown and described.

2. In combination with a cabinet, and a plurality of drawers in said cabinet, spring catches for engaging the

drawers and holding them in a closed position, levers operatively connected with said spring catches to disengage them from the drawers, checks to engage said levers and operate them, a spring actuated bar operatively secured to said levers to simultaneously operate them to open all of the drawers, and means to hold the bar in an inoperative position, substantially as shown and described.



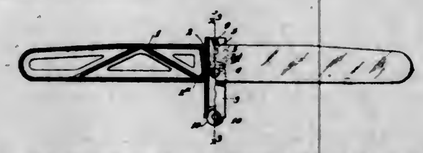
3. In combination with a cabinet, and a plurality of drawers in said cabinet, spring catches for engaging the drawers and holding them in a closed position, levers operatively connected with said spring catches to disengage them from the drawers, perforated checks to engage said levers and operate them, and rods to engage the holes in said checks, substantially as shown and described.

4. In combination with a cabinet, and a plurality of drawers in said cabinet, spring catches for engaging the drawers and holding them in a closed position, levers operatively connected with said spring catches to disengage them from the drawers, perforated checks to engage said levers and actuate them, a bar secured to the cabinet, and rods removably secured to said bar to receive said perforated checks, substantially as shown and described.

5. In combination with a cabinet, and a plurality of drawers in said cabinet, spring catches for engaging the drawers and holding them in a closed position, levers operatively connected with said spring catches to disengage them from the drawers, means to actuate the individual levers, a bar slidably mounted, flexible elements connecting said bar and the individual levers, springs engaging the bar to normally raise it and the levers to release the spring catches from engagement with the drawers, and means to hold the bar depressed against the action of the springs, substantially as shown and described.

[Claims 6 to 9 not printed in the Gazette.]

883,677. BUMPER-BEAM DRAFT-RIGGING. EDWIN C. WASHBURN, Minneapolis, Minn. Filed Aug. 12, 1907. Serial No. 388,105.



1. The combination with a bumper beam, of a draft bar connected thereto with freedom for endwise adjustments transversely of said beam.

2. The combination with a bumper beam, of a draft bar connected thereto with freedom for lateral oscillatory movements and for endwise adjustments, substantially as described.

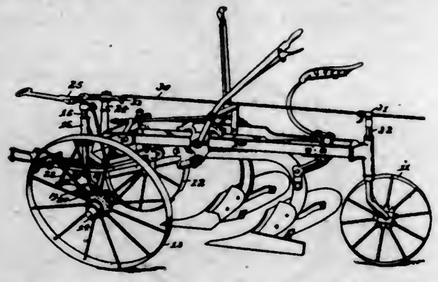
3. The combination with a bumper beam having at its central portion a seat that extends transversely therethrough, of a draft bar working in said seat, and means for adjustably securing said draft bar to said beam, substantially as described.

4. The combination with a bumper beam having at its central portion a transversely extended seat having diverging side walls, of a draft bar working in said seat, and means connecting said draft bar to said beam with freedom for longitudinal adjustments and for lateral oscillations, substantially as described.

5. The combination with a bumper beam having a transversely extended seat at its central portion, of a draft bar working in said seat, a roller or anti-friction device interposed between the bottom of said seat and the bottom of said draft bar, and means adjustably connecting said bar to said beam, substantially as described.

[Claim 6 not printed in the Gazette.]

883,678. WHEELED PLOW. IRA A. WEAVER, Springfield, Ill., assignor to Racine-Sattley Company, Springfield, Ill., a Corporation of Illinois. Original application filed Dec. 16, 1903, Serial No. 185,384. Divided and this application filed Dec. 21, 1907. Serial No. 407,493.



1. In a wheeled plow, the combination with a frame, of a front furrow wheel, a rear furrow or caster wheel, and a land wheel located toward the front of the frame, said land wheel being set in an oblique plane and with a forward inclination toward the land, substantially as described.

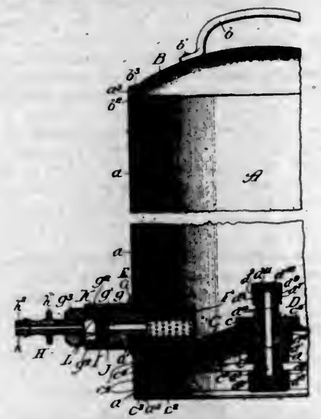
2. In a wheeled plow, the combination with a frame, of a front furrow wheel, a rear furrow or caster wheel, and a land wheel located toward the front of the frame and approximately opposite the front furrow wheel, and both of said forward wheels being set with an outward inclination at their upper sides and with an inclination toward the land at their forward sides, substantially as and for the purposes described.

3. In a wheeled plow, the combination with a frame, of a front furrow wheel, a caster wheel, and a land wheel, the latter being set substantially in transverse alinement with the front furrow wheel, and both of said wheels being forwardly of the plow point and having an outward inclination at their upper sides and an inclination toward the land at their forward sides, substantially as set forth.

4. In a wheeled plow, the combination with a frame, of a front furrow wheel, a rear furrow or caster wheel, a land wheel located at the front of the frame, said land wheel and said front furrow wheel being set with an outward inclination at their upper sides and with an inward inclination at their forward sides, a pole or tongue, and connections between said front furrow and land wheels whereby said wheels may be caused to swivel in turning the plow, substantially as described.

883,679. PORTABLE FIRE-EXTINGUISHER. JOHN A. E. ANDERSON, Chicago, Ill., assignor of one-half to Samuel A. Hitchcock, Chicago, Ill. Filed Apr. 5, 1906. Serial No. 310,053.

1. In a fire extinguisher of the kind described the combination comprising a tank having a cylindrical body flanged at top and bottom, a top flanged into the top of said body, a ring supported on the bottom flange inside of said body and affixed thereto; a conical bottom affixed on said ring and in said body; a combination water and air valve affixed in the apex of said bottom, said valve consisting of a bushing, a member insertible in said bushing, a compressible ring adapted to form a joint between said bushing and member, a movable valve on the end of said member in said tank, and a cap on the external end of said member; a discharge valve in the side of said main body, consisting of a bushing, a chamber supported thereon, a valve in said chamber, and a nozzle supported in said chamber adapted to close said valve.



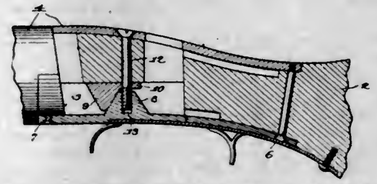
2. In a fire extinguisher of the kind described the combination with a sheet metal tank consisting of a flanged body and flanged top affixed in said main body of a conical shaped bottom extending upward in said tank, said bottom being joined to said main body and supported on a ring affixed inside said main body and bottom flange thereon; and a discharge valve affixed in said main body of said tank consisting of a fixed bushing, a cylindrical extension having an internal chamber and adapted to be supported on said bushing; a valve adjustable in said chamber and a nozzle supported in said extension and adapted to engage and close said valve substantially as described and for the purposes specified.

3. In a fire extinguisher of the kind described the combination with a sheet metal tank consisting of a flanged body, a flanged top joined thereto, a bottom affixed therein and conical in form; of a combined water and air valve affixed in said bottom, said valve consisting of a main body affixed in said bottom and having a central aperture extending into said tank, an external cap adapted to close the outer end of said body and aperture therein, and a valve adjustably supported on the internal end of said body adapted to close the inner end of said aperture; and a discharge valve affixed in said tank, and an adjustable nozzle supported in said valve adapted to open and close said discharge valve, substantially as described and for the purposes specified.

4. In a fire extinguisher of the kind described the combination of a tank having fixed top and bottom, said bottom being conical in form, and a combined water and air valve affixed in said bottom; with a discharge valve affixed in said tank, said valve consisting of a flanged bushing affixed in said tank, a chambered cylindrical extension attached to said bushing and having a threaded aperture adapted to support a nozzle, a valve movable in said chamber in said extension, and a threaded nozzle, supported in said extension, having a slotted end, said slotted end being adapted to engage and close said valve in said chamber, substantially as described and for the purposes specified.

5. The combination with the bottom of a fire extinguisher of the kind described; of a combined water and air valve, one of the members of said valve being affixed in said bottom, the face of said member having an inward bevel, the main body of said valve being insertible in said fixed member, and having a shoulder beveled inward and forming together with the beveled face of said fixed member an annular V shaped channel, the bottom of said channel forming the base of the angle; and a lead ring adapted to fit in said channel and to form a removable water and air tight joint, substantially as described and for the purposes specified.

883,680. MECHANISM FOR INTERLOCKING GUN PARTS. JOSEPH F. BECK, Sr., Germantown, Pa. Filed Oct. 29, 1906. Serial No. 341,119.



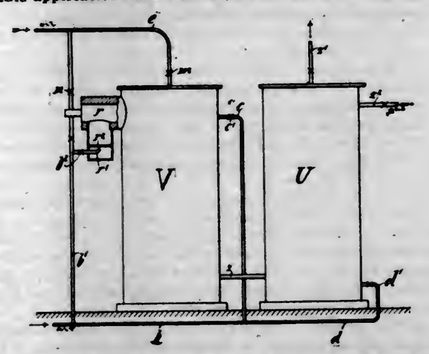
1. In combination with a gun-stock, a tang seated against the forward end of said gun-stock; a trigger-plate secured to said gun-stock and overlapping and secured to said tang, said trigger-plate being provided with a wedge-faced boss; a removable bolster having a wedge-face cooperating with the wedge-face of said boss; and means cooperating with said tang, whereby said boss may be adjusted in a manner to produce a binding effect on the wedge-face of said bolster, substantially as herein specified.

2. In combination with a gun-stock having a transverse bolt-opening, a trigger-plate secured along said stock, said trigger-plate having a wedge-faced boss projecting inwardly therefrom, a removable bolster having a wedge-face adapted to be engaged by the wedge-face of said boss, and having a foot provided with an opening; and a tie-bolt projecting through the opening in said stock, through the opening in said foot, and threaded at its inner end to accordingly engage said boss, substantially as herein specified.

3. In combination with a gun-stock, a trigger-plate having a wedge-faced boss projecting inwardly therefrom; a bolster removably situated at the inner side, and having a wedge-face engaged by the wedge-face, of said boss; and means for drawing said boss in the direction of said bolster, substantially as herein specified.

4. A bolster for mechanism for interlocking gun-parts, the same comprising a main portion having a wedge-face, and a foot projecting rearwardly from said main portion, said foot having an opening formed therein, substantially as herein specified.

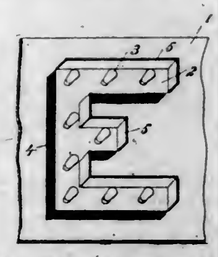
883,681. APPARATUS FOR MAKING OIL-GAS. HEINRICH GERDES, Berlin, Germany. Original application filed July 26, 1905, Serial No. 271,307. Divided and this application filed Mar. 20, 1907. Serial No. 363,509.



A plant for manufacturing oil gas comprising an oil gas generator, a superheater in open communication therewith, pipes for delivering air to said generator and superheater, valves in said pipe, an oil pipe for feeding oil to the generator, a valve in said pipe, a combustion chamber

formed by a projecting part on one side of the generator near the top thereof said chamber being in communication with said generator, a branch pipe leading from the oil pipe into said chamber, a valve in said branch pipe and means for feeding air to said chamber.

883,682. ILLUMINATED SIGN. JOSEPH HOTCHNER, San Francisco, Cal. Filed Nov. 5, 1907. Serial No. 400,850.



1. In an illuminated sign, the combination with a shaded letter or a reflector for said letter placed above and to one side of the elements of the letter, and means to illuminate the letter throughout its elements.

2. In an illuminated sign the combination with a light colored letter, a reflector for said letter placed above and to one side of the letter, and means to illuminate the letter throughout its elements.

3. In an illuminated sign, the combination of a letter having a light colored body and darker shading, a reflector for said letter placed above, and to one side of the elements of the letter, and means to illuminate the letter throughout its elements.

4. In an illuminated sign, the combination of a letter having a light colored body, a reflector for said letter placed above and to one side of the body elements of the letter, said reflector consisting of plates passing through slots in the material on which the letter is painted and being soldered on the opposite side thereof, and means to illuminate the letter throughout its elements.

5. In an illuminated sign, the combination of a letter having a light colored body, a reflector placed above and to one side of the body of the letter, the opposite side of the letter being plane and without a reflector, shading darker than the body of the letter placed on the side of the letter opposite from the reflector, and means to illuminate the elements of the letter.

[Claims 6 and 7 not printed in the Gazette.]

883,683. WATERPROOF PORTLAND-CEMENT MORTAR AND PROCESS OF MAKING THE SAME. RICHARD H. GAINES, New York, N. Y. Filed Oct. 26, 1907. Serial No. 399,386.

1. The process of making waterproof Portland cement mortar, which consists in first intimately mixing in a dry condition, ordinary Portland cement and an unburnt inorganic colloid, then mixing the same with sand in the presence of a dilute solution of a soluble salt of a sesquioxid-forming metal, and then permitting the mass to set, substantially as described.

2. The process of making waterproof Portland cement mortar, which consists in first intimately mixing in a dry condition, ordinary Portland cement and unburnt sedimentary colloidal clay, then mixing the same with sand in the presence of a dilute solution of a soluble salt of a sesqui-oxid-forming metal, and then permitting the mass to set, substantially as described.

3. The process of making waterproof Portland cement mortar, which consists in first intimately mixing in a dry condition, ordinary Portland cement and unburnt sedimentary colloidal clay, then mixing the same with sand in the presence of a dilute solution of a soluble aluminium salt, and then permitting the mass to set, substantially as described.

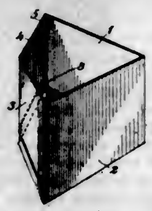
4. The process of making waterproof Portland cement mortar, which consists in first intimately mixing in a dry condition, ordinary Portland cement and unburnt sedimentary colloidal clay, then mixing the same with sand in the presence of a solution containing between 1% and 3% of aluminium sulfate, and then permitting the mass to set, substantially as described.

5. A waterproof Portland cement mortar, comprising sand, hydrolized ordinary Portland cement, and colloidal unburnt, highly plastic clay, all of the particles of said clay being homogeneously distributed throughout the particles of said cement, and said mortar being free from waterproofing organic compounds in sufficient amounts to impart waterproofing properties thereto, substantially as described.

[Claims 6 to 18 not printed in the Gazette.]

REISSUES.

12,770. COLLAPSIBLE BOX. HENRY T. BROWN, Moorestown, N. J., assignor to Brown & Bailey Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Feb. 26, 1908. Serial No. 418,085. Original No. 875,409, dated Dec. 31, 1907, Serial No. 291,989.



1. A collapsible box having four unbroken sides, a creased bottom part secured to two sides and a bottom part secured to a third side only and supported by said first part, said parts being joined by flexible connections permitting them to fold together in parallel relation substantially within the compass of a single side.

2. A collapsible box formed from a single blank with four unbroken sides, but two essential laps fixed to form joints, an unbroken bottom fixed to a single side and an infolding bottom section fixed to two sides to support said bottom, the parts of said box being joined in flexible relation permitting them to be folded together.

3. A collapsible box having a one piece folding bottom section fixed to two sides and an unbroken folding bottom fixed to an unbroken third side only, said bottom being supported by said bottom section when said box is expanded.

4. A collapsible four sided box having a broken folding bottom section fixed to two sides and an unbroken folding bottom fixed to a third side, said bottom having a part adapted for forming a lapping engagement with a fourth side of said box.

5. A collapsible box having four unbroken sides, a broken bottom section secured to two adjacent sides, and an unbroken bottom secured to a third side only and supported by said section.

12,771. EYEGLASS-HOLDER. MARY E. DRIPPS, Washington, D. C. Filed Nov. 14, 1907. Serial No. 402,223. Original No. 852,599, dated May 7, 1907, Serial No. 349,679.

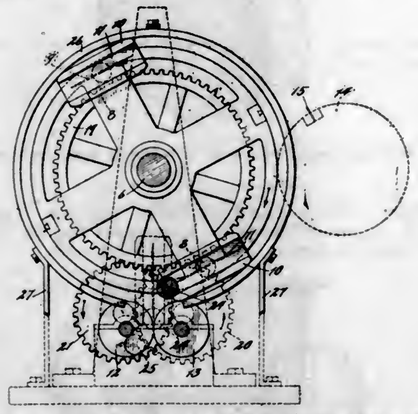
1. An eye-glass holder, comprising a body part adapted to be attached to the clothing a spring hook for supporting the eyeglass and attached to said body part the same having an irregular T-shape head arranged at an angle to the plane of the body part, the upper end of the head being tapered and turned outward and the inner end tapered and turned downward and outward from the shank of the hook, and the central portion of the head being in contact with a convexity at the lower portion of the casing, as shown and described.



2. An eye-glass holder, comprising a body part adapted to be attached to the clothing, a spring hook secured to said body part for supporting eye-glasses, the same consisting of a pendent shank which is attached to the body part, and its extended lower portion curved to form a loop whose free terminal is T-shaped and has the head of the T arranged at an angle to the shank and in contact with the lower portion of the body part, as shown and described.

3. An eye-glass holder comprising a body part adapted for attachment to the clothing, a spring hook secured to said body part and extended downward and then upward in a curve forming a loop 2, and its free end having an irregular T-shape and located just below the body part and arranged at an inclination to the latter and the shank of the hook, the ends of the head being tapered and turned outward and downward respectively, and the under side of the lower portion being undercut, as shown and described.

12,772. ROTARY FOLDING MECHANISM FOR PRINTING-PRESSES. HANS P. HUSBY, Chicago, Ill., assignor to The Goss Printing Press Company, Chicago, Ill., a Corporation of Illinois. Filed Feb. 25, 1908. Serial No. 417,683. Original No. 870,964, dated Nov. 12, 1907, Serial No. 376,513.



1. The combination with a folding cylinder, a shaft carried thereby, a folding blade mounted on said shaft, and a cross-head at each end of said shaft exterior to the folding cylinder and provided with a groove, of rotating members at each end of said cylinder, a stud carried by each of said rotating members and adapted to enter and engage the groove upon said cross-head to operate said folding blade as the cylinder rotates, and folding rollers coacting with said folding blade.

2. The combination with a folding cylinder, a shaft carried thereby, a folding blade mounted on said shaft, and a cross-head at each end of said shaft exterior to the folding cylinder and provided with a groove, of rotating members at each end of said cylinder, a stud carried by each of said rotating members and adapted to enter and engage the groove upon said cross-head to operate said folding blade as the cylinder rotates, a guide adapted to bear on the cross-head upon one side of said machine and hold said folding blade out of operative position when not engaged by said studs, and folding rollers coacting with said folding blade.

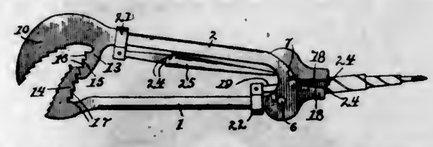
3. The combination with a folding cylinder, a folding blade carried thereby and folding rollers coacting with said folding blade, of a cross-head connected with said folding blade at one end of the cylinder and provided with a groove, a rotating member, a stud carried thereby and adapted to enter and engage said groove to rock said blade into operative position as the cylinder rotates, a cross-head connected with said folding blade upon the other side of said cylinder and provided with a groove, a rotating member, and a pin carried by said rotating member adapted to enter and engage the groove on said second-named cross-head and to rock the said folding blade out of operative position as the cylinder rotates.

4. The combination of a folding cylinder, a folding blade carried thereby, and a plurality of moving members adapted to successively act upon said folding blade only and while moving in the same direction therewith to move it into and out of folding position.

5. The combination of a folding cylinder, a folding blade carried thereby, and a plurality of rotating members adapted to successively act upon said folding blade only and while moving in the same direction therewith to move it into and out of folding position.

[Claims 6 to 10 not printed in the Gazette.]

12,773. COMPOUND TOOL. NORMAN MCASLAN, Yorkshire, Iowa. Filed Nov. 18, 1907. Serial No. 403,101. Original No. 858,618, dated July 2, 1907, Serial No. 364,441.



1. In a device of the character described, the combination of a plurality of pivotally connected handles, each of which is provided with oppositely positioned, integral jaws at its ends coöperating with oppositely positioned jaws integral with the other handle, and said handles and some of the jaws provided with integral, interlocking means for securing said handles and jaws together against pivotal movement.

2. A compound tool, comprising a pair of handles, each handle formed from a single piece and provided at one end with a plier-jaw and at its opposite end with a pipe-gripping jaw, one handle pivotally connected to and slidably mounted upon the other handle, and integral means extending from one of the pipe-gripping jaws and interlocking with integral means extending from the other pipe-gripping jaw for locking the handles together when the pipe-gripping jaws are in their closest position.

3. A tool, comprising a pair of handles provided at one end with coöperating gripping jaws, a loose pivotal connection between the handles adapting them for relative longitudinal movement, and overlapping toothed projections provided near the end opposite to that carrying the jaws and designed for interlocking engagement to fix the jaws in gripping position.

4. A tool, comprising a pair of handles provided at one end with a pair of jaws, a depending portion provided with a tooth or lug extending from one handle contiguous to the rear end of one of the jaws, the other jaw provided with a socket or notch and with a rearwardly-extending tooth or lug adapted to interlock with the tooth or lug of the depending portion, the tooth or lug of the depending portion adapted to be positioned in the socket or notch.

5. A tool, comprising a pair of handles provided near one end with plier jaws, a pin and a slot formed upon said plier jaws and pivotally and slidably connecting said handles, said handles provided at their opposite ends with gripping jaws, integral, interlocking lugs or teeth projecting inwardly and carried by the handles contiguous to the

last-mentioned jaws and adapted to prevent pivotal movement of said handles when said lugs and teeth are in engagement.

[Claims 6 to 8 not printed in the Gazette.]

DESIGNS.

39,227. BADGE. CHARLES A. WINSHIP, Chicago, Ill. Filed Jan. 16, 1908. Serial No. 411,184. Term of patent 7 years.



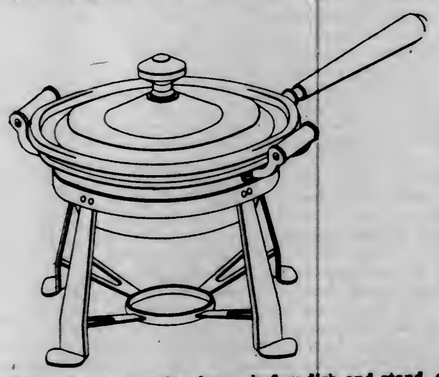
The ornamental design for a badge, as shown.

39,228. TRAY OR RECEPTACLE. FRANK ERNEST BARKER, Birmingham, England, assignor to Barker Bros. Silversmiths Ltd., Birmingham, England, a Company. Filed Dec. 23, 1907. Serial No. 407,851. Term of patent 7 years.



The ornamental design for a tray or receptacle, as shown.

39,229. CHAFING-DISH AND STAND. CHARLES NELSON, Brooklyn, N. Y., assignor to S. Sternau & Company, New York, N. Y., a Copartnership. Filed Feb. 8, 1908. Serial No. 414,987. Term of patent 7 years.



The ornamental design for a chafing dish and stand, as shown.

39,230. GLASS VESSEL. ORLANDO J. W. HIGBEE, Crafton, Pa., assignor to John B. Higbee Glass Company, Bridgeville, Pa., a Corporation of Pennsylvania. Filed Oct. 14, 1907. Serial No. 397,455. Term of patent 3½ years.



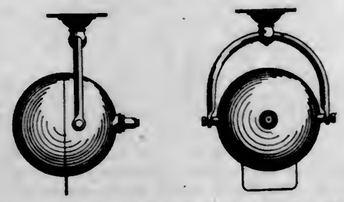
The ornamental design for a glass vessel as shown.

39,231. BOTTLE OR FLASK. DAVID WILSON GREIG, Milliken, N. Y. Filed Nov. 9, 1907. Serial No. 401,527. Term of patent 14 years.



The ornamental design for a bottle or flask, as shown.

39,232. VESSEL FOR DISPENSING LIQUIDS. LEWIS G. LANGSTAFF, New York, N. Y. Filed Jan. 29, 1906. Serial No. 298,544. Term of patent 7 years.



The ornamental design for a vessel for dispensing liquids, as shown.

39,233. BOX. GUSTAV A. KRUTTSCHNITT, Newark, N. J. Filed Jan. 20, 1908. Serial No. 411,824. Term of patent 7 years.



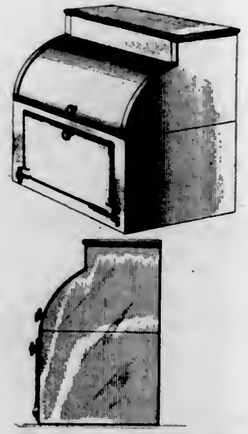
The ornamental design for a box, as shown.

39,234. LAMP. HERMAN SAXON, New York, N. Y. Filed Jan. 20, 1908. Serial No. 411,823. Term of patent 7 years.



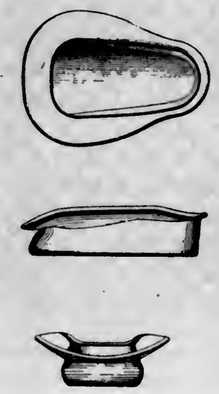
The ornamental design for a lamp as shown.

39,235. BAKING AND WARMING OVEN. LOUIS STOCKSTROM, St. Louis, Mo., assignor to American Stove Company, St. Louis, Mo., a Corporation of New Jersey. Filed Jan. 22, 1906. Serial No. 297,372. Term of patent 7 years.



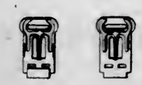
The ornamental design for a baking and warming oven, as shown.

39,236. BED-PAN. CHRISTIAN W. MEINECKE, Jersey City, and DANIEL HOGAN, Hoboken, N. J. Filed Jan. 10, 1908. Serial No. 410,273. Term of patent 14 years.



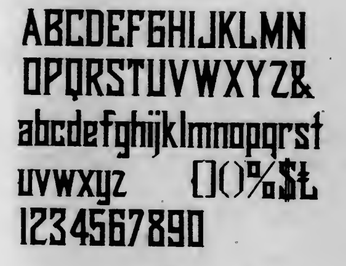
The ornamental design for a bed pan as shown.

39,237. BASE-PLATE FOR GARMENT-CLASPS. BENJAMIN T. WENDELL, Boston, Mass. Filed Dec. 6, 1907. Serial No. 405,452. Term of patent 14 years.



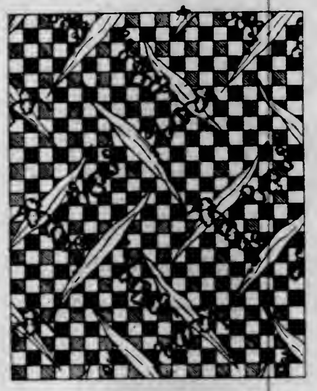
The ornamental design for a base plate for garment claspe as shown.

39,238. FONT OF TYPE. PARK TERRELL, Montclair, N. J., assignor to Columbia Trust Company, New York, N. Y., a Corporation of New York. Filed Dec. 24, 1907. Serial No. 407,967. Term of patent 14 years.



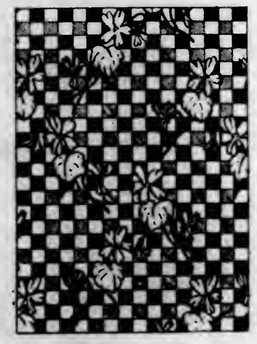
The ornamental design for a font of type, as shown and described.

39,239. TEXTILE FABRIC. HERMAN JACOBSON, Brooklyn, N. Y. Filed Feb. 6, 1908. Serial No. 414,656. Term of patent 3½ years.



The ornamental design for a textile fabric, as shown.

39,240. TEXTILE FABRIC. HERMAN JACOBSON, Brooklyn, N. Y. Filed Feb. 6, 1908. Serial No. 414,655. Term of patent 3½ years.



The ornamental design for a textile fabric, as shown.

TRADE-MARKS

PUBLISHED MARCH 31, 1908.

The following trade-marks have been adjudged entitled to registration under the act of February 20, 1905, and are published in compliance with section 6 of said act. Said section provides:

"Any person who believes he would be damaged by the registration of a mark may oppose the same by filing notice of opposition, stating the grounds therefor, in the Patent Office within thirty days after the publication of the mark sought to be registered, which said notice of opposition shall be verified by the person filing the same before one of the officers mentioned in section two of this act. If no notice of opposition is filed within said time the Commissioner shall issue a certificate of registration therefor, as hereinafter provided for."

Marks which are stated to have been "Used ten years" are registrable under the last proviso of section 5 of said act, which is as follows:

"And provided further, That nothing herein shall prevent the registration of any mark used by the applicant or his predecessors, or by those from whom title to the mark is derived, in commerce with foreign nations or among the several States, or with Indian tribes, which was in actual and exclusive use as a trade-mark of the applicant or his predecessors from whom he derived title for ten years next preceding the passage of this act."

Section 14 of said act provides for the following fee:

"On filing notice of opposition to the registration of a trade-mark, ten dollars."

Ser. No. 8,858. (CLASS 19. VEHICLES, NOT INCLUDING ENGINES.) THE LANSDEN COMPANY, Newark, N. J. Filed June 23, 1905.



Particular description of goods.—Automobile Vehicles.

Ser. No. 10,034. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) THE GINTER GROCERY COMPANY, Boston, Mass. Filed July 11, 1905.

Aquinas

Particular description of goods.—Whisky.

Ser. No. 13,429. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) CHARLES A. MARTIN, Buffalo, N. Y. Filed Oct. 9, 1905.

THE S. T. LEE



CANCER CURE.

Particular description of goods.—A Remedy for Cancer.

Ser. No. 14,197. (CLASS 46. GOODS AND INGREDIENTS OF FOODS.) NESTLÉ AND ANGLO-SWISS CONDENSED MILK CO., Cham, Switzerland. Filed Nov. 2, 1905.



Particular description of goods.—Milk Chocolate.

Ser. No. 14,198. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) NESTLÉ AND ANGLO-SWISS CONDENSED MILK CO., Cham, Switzerland. Filed Nov. 2, 1905.



Particular description of goods.—Condensed Milk.

Ser. No. 14,199. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) NESTLÉ AND ANGLO-SWISS CONDENSED MILK CO., Cham, Switzerland. Filed Nov. 2, 1905.



Particular description of goods.—Condensed Milk.

Ser. No. 14,200. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) NESTLÉ AND ANGLO-SWISS CONDENSED MILK CO., Cham, Switzerland. Filed Nov. 2, 1905.



Particular description of goods.—Condensed Milk.

Ser. No. 14,329. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) J. & J. CASH LIMITED, Coventry, England, and New York, N. Y. Filed Nov. 4, 1905.



Particular description of goods.—Ties for Wear.

Ser. No. 17,449. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ARMOUR PACKING COMPANY, Kansas City, Kans., and Kansas City, Mo. Filed Mar. 1, 1906. Used ten years.



Particular description of goods.—Hams, Bacon, Smoked Meats, Dry Salt Meats, Fresh Sausage, Dry Sausage, Mince-Meat, Beef Extract, Canned Meats, Barrel-Pork, Barrel-Beef, Lard, Lard Compound, Oleo-Oil, Butter, Butterin, and Oleomargarin.

Ser. No. 17,852. (CLASS 10. FERTILIZERS.) VIRGINIA-CAROLINA CHEMICAL COMPANY, Jersey City, N. J.; Richmond and Norfolk, Va.; Charleston, S. C.; Savannah and Atlanta, Ga.; Montgomery, Ala.; Durham, N. C., and Memphis, Tenn. Filed Mar. 15, 1906. Used ten years.

COLUMBIA PHOSPHATE CO.'S

Particular description of goods.—Fertilizers.

Ser. No. 19,990. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) CHEMISCHE FABRIK VON HEYDEN AKTIEN-GESELLSCHAFT, Radebeul, near Dresden, Germany. Filed June 2, 1906.

Salit

Particular description of goods.—Salicylic Esters of Phenols and of Alcohols.

Ser. No. 21,257. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) MONTEVIDEO ROLLER MILL COMPANY, Montevideo, Minn. Filed July 30, 1906.

CREAM OF WEST

Particular description of goods.—Wheat-Flour.

Ser. No. 22,610. (CLASS 7. CORDAGE.) RUDOLF KRON, Golzern, near Grimma, Germany. Filed Oct. 9, 1906.

Silvalin

Particular description of goods.—Cords or Twisted Strips Made of Paper or Paper Mixed with other Fibrous Materials.

Ser. No. 24,377. (CLASS 37. PAPER AND STATIONERY.) A. W. FABER, Stein, Germany. Filed Jan. 2, 1907.

JABOS

Particular description of goods.—Lead-Pencils and Colored Pencils.

Ser. No. 24,378. (CLASS 37. PAPER AND STATIONERY.) A. W. FABER, Stein, Germany. Filed Jan. 2, 1907.



Particular description of goods.—Lead-Pencils and Colored Pencils.

Ser. No. 24,460. (CLASS 9. EXPLOSIVES, FIREARMS, EQUIPMENTS, AND PROJECTILES.) COAST MANUFACTURING & SUPPLY CO., Berkeley, Cal. Filed Jan. 5, 1907.



The mark is blue.

Particular description of goods.—Fuses.

Ser. No. 25,923. (CLASS 39. CLOTHING.) SANDERSON & ROOSA, Lincoln, Nebr. Filed Mar. 12, 1907.



Particular description of goods.—Boots, Shoes, Oxfords, Slippers, and Leggings, All of Leather, Boots and Overshoes of Rubber, Gaiters and Leggings of Textile Material, and Insoles.

Ser. No. 25,924. (CLASS 39. CLOTHING.) SANDERSON & ROOSA, Lincoln, Nebr. Filed Mar. 12, 1907.



Particular description of goods.—Boots, Shoes, Oxfords, Slippers, and Leggings, All of Leather, Boots and Overshoes of Rubber, Gaiters and Leggings of Textile Material, and Insoles.

Ser. No. 26,873. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) NAPA CANNING CO., San Francisco, Cal. Filed Apr. 23, 1907.



Particular description of goods.—Canned Fruits and Vegetables.

Ser. No. 27,055. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) WOLVERINE BRASS WORKS, Grand Rapids, Mich. Filed Mar. 2, 1907.

WOLVERINE

Particular description of goods.—Standard and Convertible Traps, Adjustable and Universal Traps, Deep-Seal and Centrifugal Traps, Combined Waste and Overflow Traps, Bath and Basin Cocks, Basin Connections and Couplings, Waste and Vent Connections, Trap-Bushings, Slip Joint T's, Brass Fittings and Couplings, Brass Plugs and Collars, Elbows and Bends, Trap Screws and Covers, Reducing T's, Combined Elbows and T's, Joint Unions and Couplings, Reducing-Couplings, Floor-Flanges and Valve Parts, All of the Above-Mentioned Goods Being Nickel-Plated.

Ser. No. 27,057. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) WOLVERINE BRASS WORKS, Grand Rapids, Mich. Filed May 2, 1907.

WOLVERINE

Particular description of goods.—Rubber Closet Elbows, Connections, and Sleeves, Rubber Tank-Balls, Rubber Basin-Stoppers, Waste-Washers, and Fuller-Balls.

Ser. No. 27,423. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) MOUNTAIN CITY MILL CO., Chattanooga, Tenn. Filed May 16, 1907.



Particular description of goods.—Wheat-Flour.

Ser. No. 27,613. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) JOHN V. FARWELL COMPANY, Chicago, Ill. Filed May 23, 1907.



Particular description of goods.—Carpets, Rugs, Textile Mats, Portières, Lace Curtains, Bedspreads, Comfor-

ters, Silkoline, Textile Blankets, Batiste, Prints, Dotted Swiss, Towels, India Linon, Handkerchiefs, Table-Linen, Linings, Wool, Cotton, and Wash Dress Goods and Percale, Dress Fabric, Ticking, Cheviot, Muslin, Cotton Lining, Wool, Sateen, Gingham, and Silk Piece Goods.

Ser. No. 28,523. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) PETER MULLECKER, Brooklyn, N. Y. Filed July 1, 1907.

INIGIL

Particular description of goods.—A Remedy for Inflammatory Diseases of the Rectum.

Ser. No. 28,737. (CLASS 10. FERTILIZERS.) VIRGINIA-CAROLINA CHEMICAL COMPANY, Jersey City, N. J.; Richmond and Norfolk, Va.; Charleston, S. C.; Savannah and Atlanta, Ga.; Montgomery, Ala.; Durham, N. C., and Memphis, Tenn. Filed July 12, 1907.

HOPE

Particular description of goods.—Fertilizers.

Ser. No. 28,836. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) DRAKE & COMPANY, Easton, Pa. Filed July 17, 1907.

GOLDEN CROWN

Particular description of goods.—Rice and Wheat-Flour.

Ser. No. 29,304. (CLASS 39. CLOTHING.) SANDERSON & ROOSA, Lincoln, Nebr. Filed Aug. 8, 1907.

Y.W.C.A

Particular description of goods.—Boots, Shoes, Oxfords, Slippers, and Leggings, All of Leather, Boots and Overshoes of Rubber, Gaiters and Leggings of Textile Material, and Insoles.

Ser. No. 29,305. (CLASS 39. CLOTHING.) SANDERSON & ROOSA, Lincoln, Nebr. Filed Aug. 8, 1907.

Y.M.C.A

Particular description of goods.—Boots, Shoes, Oxfords, Slippers, and Leggings, All of Leather, Boots and Overshoes of Rubber, Gaiters and Leggings of Textile Material, and Insoles.

Ser. No. 30,484. (CLASS 38. PUBLICATIONS.) FELIX AGNUS, trustee, Baltimore, Md. Filed Oct. 8, 1907.

Baltimore American.

Particular description of goods.—A Newspaper.

Ser. No. 30,496. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ADDISON PERRY LOOMIS, West Shokan, N. Y. Filed Oct. 9, 1907.

"ANTI-PHLOGISTIC"

Particular description of goods.—A Pile Ointment and Salve.

Ser. No. 30,563. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) CLARENCE E. GATES, Waterbury, Conn. Filed Oct. 12, 1907.

IDL

Particular description of goods.—Investment Compounds.

Ser. No. 31,017. (CLASS 15. OILS AND GREASES NOT INTENDED FOR FOOD.) U. S. HAME COMPANY, Buffalo, N. Y. Filed Nov. 5, 1907.

NATURAL DAMASCUS FINISH

Particular description of goods.—A Finishing-Oil Preparation for Treating and Coating Wood and Steel.

Ser. No. 31,402. (CLASS 39. CLOTHING.) WALLERSTEIN BROTHERS, Paducah, Ky. Filed Nov. 27, 1907.

ROXBORO

WALLERSTEIN'S
PADUCAH.

The lion being yellow, except the lion's tongue, which is red.

Particular description of goods.—Men's, Boys', and Children's Outer Clothing, Comprising Suits, Overcoats, and Rain-Coats.

Ser. No. 31,403. (CLASS 39. CLOTHING.) WALLERSTEIN BROTHERS, Paducah, Ky. Filed Nov. 27, 1907.

Particular description of goods.—Men's and Boys' Stiff, Soft, and Straw Hats.

Ser. No. 31,439. (CLASS 28. JEWELRY AND PRECIOUS-METAL WARE.) AUSTIN AND STONE INCORPORATED, Attleboro, Mass. Filed Nov. 29, 1907.

Particular description of goods.—Plated Chains and Bracelets.

Ser. No. 31,576. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) JOHN BRAADLAND, Stavanger, Norway. Filed Dec. 5, 1907.

Sea King BRAND

Particular description of goods.—Smoked Sardines.

Ser. No. 31,578. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) JOHN BRAADLAND, Stavanger, Norway. Filed Dec. 5, 1907.

Sea King BRAND SMOKED

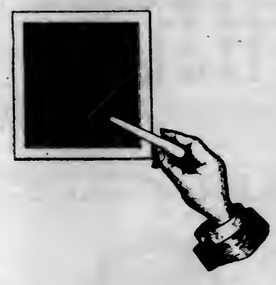
Particular description of goods.—Smoked Sardines.

Ser. No. 31,583. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS. E. MERCK, Darmstadt, Germany. Filed Dec. 5, 1907.

„PERHYDRIN"

Particular description of goods.—A Solution of Hydrogen Peroxid in Water.

Ser. No. 31,632. (CLASS 37. PAPER AND STATIONERY.) ELIZABETH B. BRADY, Lowell, Mass. Filed Dec. 9, 1907.



Particular description of goods.—Chalk Crayons.

Ser. No. 31,697. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) N. SAUER MILLING COMPANY, Cherryvale, Kans. Filed Dec. 13, 1907.

CHERRY BELL

Particular description of goods.—Wheat-Flour.

Ser. No. 31,809. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE J. H. FLICKINGER CO., San Jose, Cal. Filed Dec. 18, 1907. Used ten years.

JF

Particular description of goods.—Canned Fruits and Vegetables and Dried Fruits.

Ser. No. 31,897. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) NICOTINE GOLF BALL COMPANY, Chicago, Ill. Filed Dec. 23, 1907.

Particular description of goods.—Golf-Balls.

Ser. No. 31,965. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) HUNTER W. FINCH, Chicago, Ill. Filed Dec. 28, 1907.

PURITAN SOOTLESS

Particular description of goods.—Coal.

Ser. No. 32,041. (CLASS 39. CLOTHING.) F. W. BAKER, Georgetown, Mass. Filed Jan. 3, 1908.

Little Ripper

Particular description of goods.—Leather Boots and Shoes.

Ser. No. 32,096. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ELIE LACOTTE, Cherry Valley, Pa. Filed Jan. 6, 1908.



Particular description of goods.—Salves.

Ser. No. 32,126. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) CHARLES NIEDNER'S SONS CO., Malden, Mass. Filed Jan. 8, 1908.

CONGRESS

Particular description of goods.—Linen Hose.

Ser. No. 32,127. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) CHARLES NIEDNER'S SONS CO., Malden, Mass. Filed Jan. 8, 1908.

YANKEE

Particular description of goods.—Linen Hose

Ser. No. 32,129. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) JOHN D. NICKLAS, Chicago, Ill. Filed Jan. 8, 1908.

Unique

Particular description of goods.—Engine-Cords.

Ser. No. 32,140. (CLASS 39. CLOTHING.) THE SIMMONS BOOT AND SHOE CO., Toledo, Ohio. Filed Jan. 8, 1908.

CLEORA

Particular description of goods.—Women's Leather Shoes.

Ser. No. 32,141. (CLASS 39. CLOTHING.) THE SIMMONS BOOT AND SHOE CO., Toledo, Ohio. Filed Jan. 8, 1908.

Right O Way

Particular description of goods.—Men's Leather Boots and Shoes.

Ser. No. 32,150. (CLASS 19. VEHICLES, NOT INCLUDING ENGINES.) MCFARLAND FOUNDRY & MACHINE CO., Trenton, N. J. Filed Jan. 9, 1908. Used ten years.

HARTHAN

Particular description of goods.—Propellers for Boats.

Ser. No. 32,178. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE CRETE MILLS, Crete, Nebr. Filed Jan. 11, 1908.



Particular description of goods.—Flours Made From Wheat and Rye.

Ser. No. 32,182. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) CHEMISCHE WERKE REIHERSTIEG GESELLSCHAFT MIT BESCHRÄNKTER HAFTUNG, Hamburg, Germany. Filed Jan. 11, 1908.

Festoform

Particular description of goods.—Disinfectants and Antiseptics.

Ser. No. 32,205. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE SOYER COMPANY OF AMERICA, Meadville, Pa. Filed Jan. 13, 1908. Used ten years.



Particular description of goods.—Meat, Fish, and Game Sauces.

Ser. No. 32,293. (CLASS 39. CLOTHING.) H. F. C. DOVENMUEHLE & SON, Chicago, Ill. Filed Jan. 18, 1908.



Particular description of goods.—Leather Shoes and Boots.

Ser. No. 32,298. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) WENDT BROTHERS, New York, N. Y. Filed Jan. 18, 1908.



The band across the circle and the foliage represented being printed in yellow.

Particular description of goods.—Piece Goods Composed Wholly or in Part of Silk.

Ser. No. 32,351. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE B. F. COPELAND CO., Boston, Mass. Filed Jan. 21, 1908.

ALLEOTONE

Particular description of goods.—A Remedy for Infective Diseases.

Ser. No. 32,366. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) MULCONROY COMPANY, INC., Philadelphia, Pa. Filed Jan. 22, 1908.

Premier

Particular description of goods.—Piston-Rod and Machinery Packing.

Ser. No. 32,413. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) EDWARD CARTER LYTLE, Baltimore, Md. Filed Jan. 24, 1908.

SEDINE

Particular description of goods.—Headache-Wafers.

Ser. No. 32,438. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ROBERT A. SMITH, Pana, Ill. Filed Jan. 25, 1908.

ALL GOLD



Particular description of goods.—Remedy for Diseases of the Liver and Kidneys.

Ser. No. 32,466. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) T. W. WOOD & SONS, Richmond, Va. Filed Jan. 27, 1908. Used ten years.

WOOD'S

Particular description of goods.—Flower, Vegetable, Farm, and Field Seeds.

Ser. No. 32,470. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) POSTUM CEREAL CO. LIMITED, Battle Creek, Mich. Filed Jan. 28, 1908.

Post Toasties

Particular description of goods.—Cereal Breakfast Foods.

Ser. No. 32,476. (CLASS 36. MUSICAL INSTRUMENTS AND SUPPLIES.) JAMES BELLAK'S SONS, Philadelphia, Pa. Filed Jan. 28, 1908.

Marion.

Particular description of goods.—Pianos, Player-Pianos, Cabinet-Piano Players, Player-Piano Actions, Pipe-Organs, Reed-Organs, Talking-Machines, Talking-Machine Records, Talking-Machine Horns, Perforated Music-Rolls, Pneu-

matic Piano-Players, Mechanical Piano-Players, Electric Piano-Players, and All Parts of the Foregoing Musical Instruments; Also, Music-Roll Cabinets and Talking-Machine-Record Cabinets.

Ser. No. 32,477. (CLASS 36. MUSICAL INSTRUMENTS AND SUPPLIES.) JAMES BELLAK'S SONS, Philadelphia, Pa. Filed Jan. 28, 1908.

Colonnade
PHILA'A. PA.

Particular description of goods.—Pianos, Player-Pianos, Cabinet-Piano Players, Player-Piano Actions, Pipe-Organs, Reed-Organs, Talking-Machines, Talking-Machine Records, Talking-Machine Horns, Perforated Music-Rolls, Pneumatic Piano-Players, Mechanical Piano-Players, Electric Piano-Players, and All Parts of the Foregoing Musical Instruments; Also, Music-Roll Cabinets and Talking-Machine-Record Cabinets.

Ser. No. 32,510. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) DAVID C. DACK, Indianapolis, Ind. Filed Jan. 31, 1908.

"NO-DOC"

Particular description of goods.—Pile Remedy.

Ser. No. 32,522. (CLASS 48. MALT EXTRACTS AND LIQUORS.) A. SCHREIBER BREWING CO., Buffalo, N. Y. Filed Feb. 1, 1908.

A. SCHREIBER BREWING CO. BUFFALO, N.Y. U.S.A.

The inner octagonal-shaped figure being blue and the outer of the intermediate fields red.

Particular description of goods.—Beer.

Ser. No. 32,576. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE FRANK TEA & SPICE CO., Cincinnati, Ohio. Filed Feb. 4, 1908.

DOVE BRAND

Particular description of goods.—Spices, Celery-Seed, Flavoring Extracts, Corn-Starch, Shredded Cocoanut, and Tapioca.

Ser. No. 32,611. (CLASS 39. CLOTHING.) AURORA CORSET COMPANY, Aurora, Ill. Filed Feb. 6, 1908.

La Francez

Particular description of goods.—Corsets.

Ser. No. 32,613. (CLASS 31. FILTERS AND REFRIGERATORS.) HERRICK REFRIGERATOR & MFG. CO., Kansas City, Mo. Filed Feb. 6, 1908.

GERHANOID

Particular description of goods.—Refrigerator-Linings.

Ser. No. 32,616. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) SOC.TÀ PROD.TI CHIM.CO FARMAC.CI A. BERTELLI & C., Milan, Italy. Filed Feb. 6, 1908.

Venus

Particular description of goods.—Perfumes for Toilet Use.

Ser. No. 32,625. (CLASS 10. FERTILIZERS.) VIRGINIA-CAROLINA CHEMICAL COMPANY, Jersey City, N. J.; Richmond and Norfolk, Va.; Charleston, S. C.; Savannah and Atlanta, Ga.; Montgomery, Ala.; Durham, N. C., and Memphis, Tenn. Filed Feb. 7, 1908.

GAME COCK

Particular description of goods.—Fertilizers.

Ser. No. 32,645. (CLASS 11. INKS AND INKING MATERIALS.) KEE LOX MANUFACTURING COMPANY, Rochester, N. Y. Filed Feb. 7, 1908.

KEE LOX

Particular description of goods.—Type-Writer Ribbons and Carbon-Paper.

Ser. No. 32,652. (CLASS 37. PAPER AND STATIONERY.) EAGLE PENCIL COMPANY, New York, N. Y. Filed Feb. 7, 1908.

ARROW

Particular description of goods.—Lead-Pencils.

Ser. No. 32,659. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) COLIN S. MCKINNEY, New York, N. Y. Filed Feb. 8, 1908.

Trade Mark
COP'R-OIL

Particular description of goods.—An Antiseptic Preservative Compound, which is also a Germicide, Insecticide, and Disinfectant.

Ser. No. 32,663. (CLASS 37. PAPER AND STATIONERY.) FREDERICK O. HANSON, Holyoke, Mass. Filed Feb. 8, 1908. Used ten years.

Oxford Mills

Particular description of goods.—Writing-Paper.

Ser. No. 32,664. (CLASS 37. PAPER AND STATIONERY.) FREDERICK O. HANSON, Holyoke, Mass. Filed Feb. 8, 1908.

COUNTY BOND

Particular description of goods.—Writing-Paper.

Ser. No. 32,666. (CLASS 37. PAPER AND STATIONERY.) FREDERICK O. HANSON, Holyoke, Mass. Filed Feb. 8, 1908. Used ten years.

COMMONWEALTH BOND

Particular description of goods.—Writing-Paper.

Ser. No. 32,667. (CLASS 37. PAPER AND STATIONERY.) FREDERICK O. HANSON, Holyoke, Mass. Filed Feb. 8, 1908. Used ten years.

FALCON BOND

Particular description of goods.—Writing-Paper.

Ser. No. 32,680. (CLASS 16. PAINTS AND PAINTERS' MATERIALS, NOT INCLUDING OILS AND POLISHES.) BENJAMIN MOORE & COMPANY, Brooklyn, N. Y. Filed Feb. 10, 1908. Used ten years.

MURESCO

Particular description of goods.—A Dry Powder for Non-Washable Wall-Finish.

Ser. No. 32,681. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JAMES D. DE WITT, Easton, Pa. Filed Feb. 10, 1908.

DERMAPORE

Particular description of goods.—An Antiseptic Hygienic Powder for Beautifying the Complexion.

Ser. No. 32,748. (CLASS 27. HOROLOGICAL INSTRUMENTS.) SOLIDARITY WATCH CASE COMPANY, Brooklyn, N. Y. Filed Feb. 13, 1908. Used ten years.

SOLIDARITY

Particular description of goods.—Watchcases.

Ser. No. 32,749. (CLASS 27. HOROLOGICAL INSTRUMENTS.) SOLIDARITY WATCH CASE COMPANY, Brooklyn, N. Y. Filed Feb. 13, 1908.

Particular description of goods.—Watchcases.

Ser. No. 32,773. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) SOC.TÀ PROD.TI CHIM.CO FARMAC.CI A. BERTELLI & C., Milan, Italy. Filed Feb. 14, 1908.



Particular description of goods.—Cod-Liver Oil.

Ser. No. 32,777. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE SANITATION AND SUPPLY CO., Ballston Spa, N. Y. Filed Feb. 15, 1908.

"Public Health"

Particular description of goods.—Disinfectants and Deodorisers.

Ser. No. 32,782. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE SAWYER CRYSTAL BLUE COMPANY, Boston, Mass. Filed Feb. 15, 1908. Used ten years.

SAWYER'S CRYSTAL BLUE

Particular description of goods.—Washing-Blue.

Ser. No. 32,785. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS, NOT INCLUDING ELECTRICAL APPARATUS.) F. H. LOVELL & COMPANY, Arlington, N. J. Filed Feb. 15, 1908. Used ten years.

HITCHCOCK

Particular description of goods.—Oil-Lamps Having a Mechanical or Forced Draft.

Ser. No. 32,792. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) THE ROSENBLATT COMPANY, San Francisco, Cal. Filed Feb. 15, 1908.



Particular description of goods.—Whisky.

Ser. No. 32,799. (CLASS 37. PAPER AND STATIONERY.) HARVEY & OUTERBRIDGE, New York, N. Y. Filed Feb. 15, 1908.

AGOSOTE

Particular description of goods.—Millboard.

Ser. No. 32,841. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) WILLIAM A. HALL, New York, N. Y. Filed Feb. 18, 1908.

AVA

Particular description of goods.—Artificially-Colored Wood.

Ser. No. 32,846. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) THE STEWART CO., Moundsville, W. Va. Filed Feb. 18, 1908.



Particular description of goods.—Enameled Metal Ware.

Ser. No. 32,866. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) S. S. PIERCE CO., Boston, Mass. Filed Feb. 19, 1908.



Particular description of goods.—Whisky.

Ser. No. 32,880. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) HUGO GOLDSCHMIDT, Los Angeles, Cal. Filed Feb. 20, 1908.



Particular description of goods.—Brandy.

Ser. No. 32,885. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) RIDENOUR-BAKER GROCERY CO., Kansas City, Mo. Filed Feb. 20, 1908.



Particular description of goods.—Syrup.

Ser. No. 32,889. (CLASS 17. TOBACCO PRODUCTS.) THE J. F. ZAHM TOBACCO CO., Toledo, Ohio. Filed Feb. 20, 1908.

BIG

MITT

Particular description of goods.—Smoking and Chewing Tobacco.

Ser. No. 32,892. (CLASS 39. CLOTHING.) SWEET ORR & CO., New York, Newburgh, Wappingers Falls, and Brooklyn, N. Y., and Joliet, Ill. Filed Feb. 20, 1908.

999

Particular description of goods.—Overalls.

Ser. No. 32,922. (CLASS 39. CLOTHING.) THE CROWN CORSET COMPANY, New York, N. Y. Filed Feb. 21, 1908.

Merito

Particular description of goods.—Corsets.

Ser. No. 32,925. (CLASS 39. CLOTHING.) THE CROWN CORSET COMPANY, New York, N. Y. Filed Feb. 21, 1908.

RENGO

Particular description of goods.—Corsets.

Ser. No. 32,947. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) WAYNE COUNTY CONDENSED MILK CO., Rochester, N. Y. Filed Feb. 24, 1908.

NAVY

Particular description of goods.—Condensed Milk.

Ser. No. 32,955. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) THE GRATON AND KNIGHT MANUFACTURING COMPANY, Worcester, Mass. Filed Feb. 24, 1908.

GRAKNIGHT

Particular description of goods.—Leather Belting.

Ser. No. 32,979. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) WARFIELD PRATT HOWELL CO., Des Moines, Sioux City, and Cedar Rapids, Iowa. Filed Feb. 24, 1908.



Particular description of goods.—Cheese.

TRADE-MARKS

REGISTERED MARCH 31, 1908.

68,321. FERTILIZERS. VIRGINIA-CAROLINA CHEMICAL COMPANY, Jersey City, N. J.; Richmond and Norfolk, Va.; Charleston, S. C.; Savannah and Atlanta, Ga.; Montgomery, Ala.; Durham, N. C., and Memphis, Tenn.
Filed December 17, 1907. Serial No. 31,796. PUBLISHED JANUARY 28, 1908.

68,322. FERTILIZERS. VIRGINIA-CAROLINA CHEMICAL COMPANY, Jersey City, N. J.; Richmond and Norfolk, Va.; Charleston, S. C.; Savannah and Atlanta, Ga.; Montgomery, Ala.; Durham, N. C., and Memphis, Tenn.
Filed December 17, 1907. Serial No. 31,797. PUBLISHED JANUARY 28, 1908.

68,323. FERTILIZERS. VIRGINIA-CAROLINA CHEMICAL COMPANY, Jersey City, N. J.; Richmond and Norfolk, Va.; Charleston, S. C.; Savannah and Atlanta, Ga.; Montgomery, Ala.; Durham, N. C., and Memphis, Tenn.
Filed December 17, 1907. Serial No. 31,798. PUBLISHED JANUARY 28, 1908.

68,324. FERTILIZERS. VIRGINIA-CAROLINA CHEMICAL COMPANY, Jersey City, N. J.; Richmond and Norfolk, Va.; Charleston, S. C.; Savannah and Atlanta, Ga.; Montgomery, Ala.; Durham, N. C. and Memphis, Tenn.
Filed December 17, 1907. Serial No. 31,799. PUBLISHED JANUARY 28, 1908.

68,325. FERTILIZERS. VIRGINIA-CAROLINA CHEMICAL COMPANY, Jersey City, N. J.; Richmond and Norfolk, Va.; Charleston, S. C.; Savannah and Atlanta, Ga.; Montgomery, Ala.; Durham, N. C., and Memphis, Tenn.
Filed December 17, 1907. Serial No. 31,801. PUBLISHED JANUARY 28, 1908.

68,326. FERTILIZERS. VIRGINIA-CAROLINA CHEMICAL COMPANY, Jersey City, N. J.; Richmond and Norfolk, Va.; Charleston, S. C.; Savannah and Atlanta, Ga.; Montgomery, Ala.; Durham, N. C., and Memphis, Tenn.
Filed December 17, 1907. Serial No. 31,802. PUBLISHED JANUARY 28, 1908.

68,327. FERTILIZERS. VIRGINIA-CAROLINA CHEMICAL COMPANY, Jersey City, N. J.; Richmond and Norfolk, Va.; Charleston, S. C.; Savannah and Atlanta, Ga.; Montgomery, Ala.; Durham, N. C., and Memphis, Tenn.
Filed December 17, 1907. Serial No. 31,804. PUBLISHED JANUARY 28, 1908.

68,328. LEATHER SHOES. GEORGE BAKER AND SONS, New York, N. Y.
Filed November 25, 1907. Serial No. 31,360. PUBLISHED JANUARY 28, 1908.

68,329. TOILET-PAPER. CONTINENTAL PAPER BAG COMPANY, New York, N. Y.
Filed November 30, 1907. Serial No. 31,477. PUBLISHED JANUARY 28, 1908.

68,330. TOILET-PAPER. CONTINENTAL PAPER BAG COMPANY, New York, N. Y.
Filed November 30, 1907. Serial No. 31,478. PUBLISHED JANUARY 28, 1908.

68,331. DOUGH CUTTERS AND CRIMPERS. OTTO J. COPPINS, Hobart, Ind.
Filed November 27, 1907. Serial No. 31,395. PUBLISHED JANUARY 28, 1908.

68,332. PIPES. DUSEL, GOODLOE & CO., INCORPORATED Philadelphia, Pa.
Filed August 31, 1907. Serial No. 29,712. PUBLISHED JANUARY 28, 1908.

68,333. LUG-STRAPS. THE E. H. JACOBS MANUFACTURING COMPANY, Killingly, Conn.
Filed April 29, 1907. Serial No. 26,977. PUBLISHED JANUARY 28, 1908.

68,334. LEATHER BOOTS AND SHOES. GEO. D. WITT SHOE COMPANY, Lynchburg, Va.
Filed November 27, 1907. Serial No. 31,396. PUBLISHED JANUARY 28, 1908.

68,335. CALKING-TOOLS. H. MUELLER MANUFACTURING COMPANY, Decatur, Ill.
Filed August 1, 1907. Serial No. 29,172. PUBLISHED JANUARY 28, 1908.

68,336. TAPPING-MACHINES FOR WATER AND GAS MAINS. H. MUELLER MANUFACTURING COMPANY, Decatur, Ill.
Filed December 9, 1907. Serial No. 31,636. PUBLISHED JANUARY 28, 1908.

68,337. TAPPING-MACHINES FOR WATER AND GAS MAINS. H. MUELLER MANUFACTURING COMPANY, Decatur, Ill.
Filed December 9, 1907. Serial No. 31,637. PUBLISHED JANUARY 28, 1908.

68,338. LEATHER SHOES. H. JACOB & SONS, New York, N. Y.
Filed November 30, 1907. Serial No. 31,480. PUBLISHED JANUARY 28, 1908.

68,339. CHILDREN'S LEATHER AND CLOTH SHOES. FRANK A. MCGOWAN, Canton, Ohio.
Filed May 27, 1907. Serial No. 27,690. PUBLISHED JANUARY 28, 1908.

68,340. MANICURE IMPLEMENTS ADAPTED FOR ABRADING AND POLISHING THE NAILS. MILLER BROS., New York, N. Y.
Filed November 27, 1907. Serial No. 31,391. PUBLISHED JANUARY 28, 1908.

68,341. PRINTED BLANK FORMS. WILLIAM S. MITCHELL, Little Rock, Ark.
Filed September 25, 1905. Serial No. 13,021. PUBLISHED JANUARY 28, 1908.

68,342. FERTILIZERS. VIRGINIA-CAROLINA CHEMICAL COMPANY, Jersey City, N. J.; Richmond and Norfolk, Va.; Charleston, S. C.; Savannah and Atlanta, Ga.; Montgomery, Ala.; Durham, N. C., and Memphis, Tenn.
Filed December 17, 1907. Serial No. 31,803. PUBLISHED JANUARY 28, 1908.

68,343. CERTAIN MEDICINES. MARION J. BACON, Camden, N. J.
Filed December 13, 1907. Serial No. 31,712. PUBLISHED JANUARY 28, 1908.

68,344. OINTMENT FOR THE TREATMENT OF RECTAL DISEASES. STEPHEN J. BIRCKHEAD, Baltimore, Md.
Filed December 14, 1907. Serial No. 31,719. PUBLISHED JANUARY 28, 1908.

68,345. PREPARATION OF LEMONS. CHARLES M. BROOKE, Hoboken, N. J.
Filed November 30, 1907. Serial No. 31,483. PUBLISHED JANUARY 28, 1908.

68,346. CERTAIN MEDICINES. CURTISS MEDICINE COMPANY, Denver, Colo.
Filed December 2, 1907. Serial No. 31,493. PUBLISHED JANUARY 28, 1908.

68,347. SALVE OR OINTMENT. BERTHA FIEDLER, New York, N. Y.
Filed November 19, 1907. Serial No. 31,248. PUBLISHED JANUARY 28, 1908.

68,348. REMEDY FOR COUGHS AND COLDS. PAUL JACOB, St. Etienne, Loire, France.
Filed May 1, 1907. Serial No. 27,050. PUBLISHED JANUARY 28, 1908.

68,349. COATS, VESTS, TROUSERS, AND OVERCOATS. KUH, NATHAN AND FISCHER COMPANY, Chicago, Ill.
Filed June 18, 1906. Serial No. 20,399. PUBLISHED JANUARY 28, 1908.

68,350. DEMULCENT, TOILET CREAM, AND SKIN FOOD. F. AUGUST LUTTIES, St. Louis, Mo.
Filed December 9, 1907. Serial No. 31,622. PUBLISHED JANUARY 28, 1908.

68,351. DISINFECTANTS, DEODORIZERS, AND INSECTICIDES IN LIQUID FORM. ORIENT SPRAY COMPANY, New York, N. Y.
Filed March 17, 1906. Serial No. 17,977. PUBLISHED JANUARY 28, 1908.

68,352. TONIC AND REMEDY FOR INDIGESTION. LOUISE SCHOETTLER, ANNA HILLENBRAND, and LEO. A. SCHMITZ, San Francisco, Cal., executors of John Peter Schmitz, deceased.
Filed January 27, 1906. Serial No. 16,610. PUBLISHED JANUARY 28, 1908.

68,353. HAIR-RESTORER. MARY M. SNYDER, Washburn, W. Va.
Filed October 12, 1907. Serial No. 30,576. PUBLISHED JANUARY 28, 1908.

68,354. MINERAL WATER AND GINGER-ALE. THE WAUKESHA-ARCADIAN CO., Waukesha, Wis.
Filed November 22, 1907. Serial No. 31,302. PUBLISHED JANUARY 28, 1908.

68,355. FACE-POWDER, TOILET CREAM, AND ROUGE. WILLARD WHITE COMPANY, Chicago, Ill.
Filed November 20, 1907. Serial No. 31,267. PUBLISHED JANUARY 28, 1908.

68,356. TEMPORARY FILLING FOR TEETH. CHARLES A. BERTRAM, Chicago, Ill.
Filed October 28, 1907. Serial No. 30,834. PUBLISHED JANUARY 28, 1908.

68,357. GIN. EDWARD & JOHN BURKE, LIMITED, Dublin, Ireland, and New York, N. Y.
Filed December 10, 1907. Serial No. 31,643. PUBLISHED JANUARY 28, 1908.

68,358. CHILLI-SPICE PREPARATION. GEBHARDT CHILI POWDER CO., San Antonio, Tex.
Filed December 3, 1907. Serial No. 31,523. PUBLISHED JANUARY 28, 1908.

68,359. TENNIS-BALLS. GEO. BORGFELDT & CO., New York, N. Y.
Filed October 3, 1907. Serial No. 30,398. PUBLISHED JANUARY 28, 1908.

68,360. MINERAL PAINT AND TURPENTINE. THE LINO PAINT COMPANY, Collinwood, Ohio.
Filed April 8, 1907. Serial No. 26,560. PUBLISHED JANUARY 28, 1908.

68,361. CERTAIN JEWELRY. C. A. MARSH & CO., Attleboro, Mass.
Filed April 15, 1907. Serial No. 26,720. PUBLISHED JANUARY 28, 1908.

68,362. PATTERNS FOR GARMENTS AND WEARING-APPAREL. THE MORSE BROUGHTON COMPANY, New York, N. Y.
Filed November 30, 1907. Serial No. 31,484. PUBLISHED JANUARY 28, 1908.

68,363. INCUBATORS AND BROODERS. ANNA L. PINKERTON-GARDINER, Los Angeles, Cal.
Filed December 10, 1907. Serial No. 31,659. PUBLISHED JANUARY 28, 1908.

68,364. RICE. WILMOT D. PORCHER, Charleston, S. C.
Filed April 25, 1907. Serial No. 26,923. PUBLISHED JUNE 25, 1907.

68,365. CANNED TOMATOES. EVERETT ROBINSON, Baltimore and Hopewell, Md.
Filed January 16, 1907. Serial No. 24,692. PUBLISHED SEPTEMBER 17, 1907.

68,366. SOAP. SOUR LAKE CHEMICAL CO., Houston, Tex.
Filed May 3, 1907. Serial No. 27,089. PUBLISHED JANUARY 28, 1908.

68,367. JAMAICA RUM. TANQUERAY GORDON & CO. LIMITED, London, England.
Filed November [illegible] 1907. Serial No. 31,072. PUBLISHED JANUARY 28, 1908.

68,368. SLOE GIN. TANQUERAY GORDON & CO. LIMITED, London, England.
Filed November 8, 1907. Serial No. 31,073. PUBLISHED JANUARY 28, 1908.

68,369. SILVER-PLATED FLAT WARE, HOLLOW WARE, AND TABLEWARE. WM. A. ROGERS, LIMITED, Toronto, Ontario, Canada, and Niagara Falls, N. Y.
Filed May 25, 1905. Serial No. 6,565. PUBLISHED NOVEMBER 7, 1905.

68,370. RIBBONS. MARIE BALLY, St. Etienne, Loire, France.
Filed November 21, 1907. Serial No. 31,275. PUBLISHED JANUARY 28, 1908.

68,371. SILK, COTTON, AND FLAX THREAD. THE NONOTUCK SILK COMPANY, Northampton, Mass.
Filed November 23, 1907. Serial No. 31,314. PUBLISHED JANUARY 28, 1908.

68,372. RIBBONS. VALLAT & PERRONNET, St. Etienne, Loire, France.
Filed December 7, 1907. Serial No. 31,615. PUBLISHED JANUARY 28, 1908.

68,373. RIBBONS. VALLAT & PERRONNET, St. Etienne, Loire, France.
Filed December 7, 1907. Serial No. 31,617. PUBLISHED JANUARY 28, 1908.

68,374. RIBBONS. VALLAT & PERRONNET, St. Etienne, Loire, France.
Filed December 7, 1907. Serial No. 31,618. PUBLISHED JANUARY 28, 1908.

68,375. RIBBONS. VALLAT & PERRONNET, St. Etienne, Loire, France.
Filed December 7, 1907. Serial No. 31,619. PUBLISHED JANUARY 28, 1908.

68,376. RIBBONS. VALLAT & PERRONNET, St. Etienne, Loire, France.
Filed December 7, 1907. Serial No. 31,620. PUBLISHED JANUARY 28, 1908.

LABELS

REGISTERED MARCH 31, 1908.

14,114.—*Title:* "RARE PIECE." (For Cigars.) CLARK BROTHERS CO., Galesburg, Ill. Filed February 15, 1908.

14,115.—*Title:* "LITTLE WHISKEY." (For Whisky.) GUSTAV A. AUFRECHT, New York, N. Y. Filed March 2, 1908.

14,116.—*Title:* "ROYAL SHERBET." (For a Non-Intoxicating Drink.) SHAWAKER & LLOYD, Columbus, Ohio. Filed February 20, 1908.

14,117.—*Title:* "DURBER." (For a Carbonated Beverage.) THE DURBER BEVERAGE CO., East Liverpool, Ohio. Filed February 5, 1908.

14,118.—*Title:* "PAPAS' RHEUMATISM SPECIFIC." (For a Medicine.) PETER G. PAPAS, Reno, Nev. Filed February 17, 1908.

14,119.—*Title:* "SHELTON'S LAXATIVE HOARHOUND SYRUP COMPOUND." (For a Medicine for Coughs and Colds.) WALTER F. SHELTON, Harriman, Tenn. Filed February 28, 1908.

14,120.—*Title:* "LAKE FOOT REST." (For a Foot-Powder.) LAKE CHEMICAL COMPANY, New Brunswick, N. J. Filed February 29, 1908.

14,121.—*Title:* "NEW YANKEE CLEANSER." (For a Cleanser.) ASAHEL T. SMITH, Salt Lake City, Utah. Filed June 25, 1907.

14,122.—*Title:* "FRINGE POINT." (For Embroidered Lace.) THE KURSHEEDT MANUF'G CO., New York, N. Y. Filed December 14, 1907.

14,123.—*Title:* "'RUSSELL JENNINGS' EXTENSION LIP AUGER BITS." (For Extension-Lip Auger-Bits.) THE RUSSELL JENNINGS MFG. CO., Chester, Conn. Filed February 26, 1908.

PRINTS

REGISTERED MARCH 31, 1908.

2,247.—*Title:* "PRO-PHY-LAC-TIC." (For Tooth-Brushes.) FLORENCE MANUFACTURING CO., Florence, Mass. Filed January 18, 1908.

2,248.—*Title:* "UPRITE." (For a Shotilder-Brace.) EDWARD JOHNSON, Cincinnati, Ohio. Filed February 20, 1908.

2,249.—*Title:* "B. V. D. COAT CUT UNDERSHIRT AND KNEE LENGTH DRAWERS." (For Men's Underwear.) ERLANGER BROTHERS, New York, N. Y. Filed March 2, 1908.

2,250.—*Title:* "SPRING AND SUMMER STYLES 1908." (For Clothing.) GARSON MEYER & CO., Rochester, N. Y. Filed February 17, 1908.

2,251.—*Title:* "MEN'S AND BOYS' APPAREL." (For Men's and Boys' Apparel.) H. C. LYTTON, Chicago, Ill. Filed February 24, 1908.

2,252.—*Title:* "MEN'S AND BOYS' APPAREL." (For Men's and Boys' Apparel.) H. C. LYTTON, Chicago, Ill. Filed February 28, 1908.

2,253.—*Title:* "THE GENESIS AND EVOLUTION OF THE SAFETY DEPOSIT VAULT." (For the Boltwork for Vault-Doors.) BENJAMIN F. TRIPP, Boston, Mass. Filed March 2, 1908.

DECISIONS

OF THE

COMMISSIONER OF PATENTS

AND OF

UNITED STATES COURTS IN PATENT CASES.

COMMISSIONER'S DECISIONS.

GRAHAM PAPER CO. *v.* NATIONAL BLANK BOOK CO.

TRADE-MARK INTERFERENCE.

Decided February 5, 1908.

TRADE-MARK—INTERFERENCE—MOTION TO DISSOLVE—TRANSMISSION REFUSED.

The question of the right of an applicant for registration of a trade-mark to demand an interference with another party because of his failure for more than two years to file a notice of opposition to the registration of the mark of such party is a question for the determination of the Examiner of Interferences at final hearing after opportunity has been had for the presentation of testimony and is not a proper question for transmission to the Examiner of Trade-Marks on a motion to dissolve.

APPEAL on motion.

PRINTING AND WRITING PAPER.

Messrs. Dyrenforth, Lee, Chritton & Wiles for Graham Paper Co.

Mr. Nathan P. Avery and *Mr. Walter D. Groesbeck* for National Blank Book Co.

BILLINGS, *Assistant Commissioner:*

This is an appeal by the National Blank Book Company from a decision of the Examiner of Interferences refusing to transmit to the Examiner of Trade-Marks in part a motion for dissolution filed by said National Blank Book Co. The record shows that the Examiner of Interferences transmitted the motion as to the ground of non-interference in fact, but refused to transmit the same in so far as it related to the allegation of such laches on the part of the Graham Paper Co. as to establish an abandonment of his right to demand an interference because of its failure for more than two years to file a notice of opposition to the registration of the moving party. The question raised by the second ground of the motion which was refused transmission clearly relates to the right to registration to be determined by the Examiner of Interferences at the final hearing of the case after opportunity has been had for the presentation of the testimony, and it is not a matter which the Examiner of Trade-Marks has jurisdiction to decide.

The decision of the Examiner of Interferences is affirmed.

HAWKINS *v.* COLEMAN *v.* THULLEN.

PATENT INTERFERENCE.

Decided March 21, 1908.

INTERFERENCE—MOTION TO DISSOLVE—FAVORABLE DECISION NON-APPEALABLE.

A party to an interference has no right to a review by the Commissioner of a favorable decision by the Primary Examiner on a motion to dissolve alleging non-patentability of the issue either on direct appeal or upon petition for the exercise of his supervisory authority. While section 4904, Revised Statutes, gives the Commissioner the right to determine when an interference exists, this authority is delegable, and when it is delegated to the Primary Examiner and he makes a favorable decision thereon such decision will be reviewed only in an extraordinary case.

ON PETITION.

BLOCK-SIGNAL SYSTEM.

Mr. Albert G. Davis for Hawkins. (*Mr. Arthur A. Buck* of counsel.)

Mr. Henry D. Williams for Coleman.

Mr. George E. Cruse and *Messrs. Bakewell, Byrnes & Parmelee* for Thullen.

MOORE, *Commissioner:*

Hawkins has filed an appeal from the decision of the Primary Examiner refusing to grant his motion for dissolution of the interference, also a petition that the Commissioner take jurisdiction of the interference and dissolve it under the exercise of his supervisory authority.

The reason of appeal given by Hawkins is—

That there is no common patentable subject-matter between the application of Hawkins on the one hand and the applications of Coleman and Thullen on the other.

Hawkins admits that under Rule 124 there is no appeal from the decision of the Primary Examiner holding that there is common patentable subject-matter between the said applications; but he contends that he has a right to the personal opinion of the Commissioner upon the matter, under the provision of section 4904 of the Revised Statutes, which reads:

Whenever an application is made for a patent which, in the opinion of the Commissioner, would interfere with any pending application, or with any unexpired patent, he shall give notice thereof to the applicants, or applicant and patentee, as the case may be, and shall direct the Primary Examiner to proceed to determine the question of priority of invention.

A sufficient answer to this contention is found in the following excerpt from the decision of the Court of

Appeals of the District of Columbia in the case of *Allen* v. *United States, ex rel. Lowry*, (116 O. G., 2253,) affirmed by the United States Supreme Court in *United States, ex rel. Lowry*, v. *Allen*, (125 O. G., 2365:)

We cannot emphasize too strongly that, in our opinion, the statutes relating to interferences only provide that they shall be instituted for the sole purpose of determining priority of invention, and that it logically follows that appeals in such proceedings, so far as the statutes go, only provide for appeals from the decisions of priority. The Commissioner of Patents, under the authority given to regulate the proceedings in the Patent Office, is clothed with power to regulate all interlocutory proceedings in interference cases by rules not inconsistent with law. If he deems it wise to provide, after the interference has once been declared, for remanding the interference to the Primary Examiner for the purpose of an interlocutory hearing and determination of a motion to dissolve it for any reason which he considers may be in the interest of the public or the parties, we take it that he has full power to do so, and that he may also provide that such motions may or may not in some or all respects be reviewed by the appellate tribunals of the Patent Office, and, in so doing, he is not thereby depriving any party of any statutory right to have all questions passed upon at final hearing, and on appeals therefrom, which are necessary for a correct determination of the question of priority, which is the sole question for which interferences are declared.

The Court of Appeals of the District of Columbia also said in the recent case of *United States, ex rel. The Newcomb Motor Company*, v. *Moore*, (*Washington Law Reporter*, vol. 36, No. 10, p. 150:)

It is further contended that because section 4904, Revised Statutes, provides that whenever "in the opinion of the Commissioner" an interference exists, notice shall be given the parties, etc., a non-delegable duty is imposed upon the Commissioner. This question was considered in *Allen* v. *Lowry*, *supra*, and it was there held that the Commissioner "for any reason which he considers may be in the interest of the public or the parties" may delegate to the Primary Examiner the duty of determining primarily whether an interference in fact exists, and that "in so doing, he is not thereby depriving any party of any statutory right to have all questions passed upon at final hearing, and on appeals therefrom, which are necessary for a correct determination of the question of priority, which is the sole question for which interferences are declared." To adopt the view of the appellee would reverse a practice which has prevailed in the Patent Office since the statute was enacted in 1870, and would in effect render the statute nugatory since it would be a physical impossibility for the Commissioner personally to pass upon all these preliminary questions. He was given assistants for that purpose.

In view of Rule 124 and of the above decisions interpreting section 4904, Revised Statutes, it clearly follows that Hawkins is not entitled as a matter of right to the appeal prayed for.

Hawkins petitions that in case it is held an appeal will not lie that the matter be considered under the supervisory authority of the Commissioner.

Hawkins contends that there is no interference in fact, that the counts are unpatentable, and that Thullen's device is inoperative, and that he therefore cannot make the claims of the issue.

The Primary Examiner held counts 1 to 10 unpatentable to Thullen; but his decision was reversed on appeal to the Examiners-in-Chief, who held that the question of the operativeness of Thullen's device could be better determined at final hearing after the taking of testimony.

It is well settled that the supervisory authority of the Commissioner will be exercised only in case of manifest error. (*Sobey* v. *Holsclaw*, 119 O. G., 1922; *Locke* v. *Crebbin*, 124 O. G., 317; *Daggett* v. *Kaufmann*, 127 O. G., 3641; *Dixon and Marsh* v. *Graves* v. *Whittemore*, 130 O. G., 2374; *Hess* v. *Joerissen* v. *Felbel*, 131 O. G., 1419.)

In the present case I find no such extraordinary circumstances or manifest error as will warrant the exercise of supervisory authority.

The appeal is dismissed and the petition denied.

EX PARTE SAMSTAG.

APPLICATION FOR PATENT.

Decided March 18, 1908.

1. REJECTION—EXPLANATION OF REFERENCES.

The statement by the Examiner that the first three claims were clearly met in either one of three references cited and that the last three claims were met in the same in view of either of the last two references cited *Held* in view of the character of the invention to be a sufficient compliance with applicant's request for a specific application of the references.

2. SAME—RECONSIDERATION.

After the Examiner has properly applied the references the applicant is not entitled to further reconsideration unless he points out why the references did not meet the claims.

ON PETITION.

DOUBLE TOP FOR GAMES.

Mr. Joseph L. Levy for the applicant.

BILLINGS, *Assistant Commissioner:*

This is a petition that the Examiner "be advised that the claims be separately considered and acted upon in accordance with Rules 65, 66, and 67."

It appears that in the first Office action on November 1, 1907, certain formal objections were noted and the claims were rejected on five references. On December 5, 1907, an amendment was filed making the formal corrections and requesting that the Examiner apply the references to the claims, but no attempt was made to show why the references did not meet the claims. The Examiner replied to this amendment on January 15, 1908, and applied the references as follows:

The first three claims are clearly and obviously met in either one of the first three references; the last three claims are clearly met in the same in view of either one of the last two references, both of which show cones having heads and elastic buffers secured in a manner equivalent to applicant's, that is, by interlocking flanges and grooves—

and again rejected the claims. He also cited four more references, and with respect thereto made the following statement:

Any one of the first three of these meets claim 1. There is no invention in the washers of claims 2 and 3, but they are shown in substantially the same relation in Figure 2 of Hendrick, which with either of the others meets these claims.

The applicant responded to this letter on January 27, 1908, and again made no attempt to show why the references did not meet the claims, but insisted that the Examiner consider each claim separately, apply the references separately, and state the pertinency of the references fully.

The Examiner replied to this letter on February 4, 1908, stating that in view of the character of the invention and the references his statement that the claims were obviously met in the references was a sufficient application of them, and again rejected the claims. It is from this action that the present petition is taken.

In view of the character of the invention and the references the action of the Examiner of January 15, 1908, was a sufficient compliance with applicant's request for a specific application of the references. Thereafter it was incumbent upon the applicant to point out, as required by Rule 69, why the references did not meet the claims in order to be entitled to further reconsideration. As he made no effort to do this, the Examiner's action was clearly sufficient.

The petition is denied.

HERMSDORF v. DRIGGS v. SCHNEIDER.

PATENT INTERFERENCE.

Decided March 18, 1908.

INTERFERENCE—MOTION TO DISSOLVE—PARTY'S RIGHT TO QUESTION HIS OWN RIGHT TO MAKE CLAIMS.

Where an applicant adopted claims suggested under Rule 96 from another application, a motion to dissolve filed by him alleging that he has no right to make such claims is proper, and the same should be transmitted to the Primary Examiner. (*Miller* v. *Perham*, 121 O. G., 2667, and *Martin* v. *Mullin*, 127 O. G., 3216, modified; doctrine of *Eichelberger and Hibner* v. *Dillon*, 129 O. G., 3161, extended.)

APPEAL on motion.

BARREL RECOIL-GUN.

Messrs. Knight Bros. for Hermsdorf.

Messrs. Wilkinson & Fisher for Driggs.

Messrs. Mauro, Cameron, Lewis & Massie for Schneider.

BILLINGS, *Assistant Commissioner:*

This is an appeal by Hermsdorf from a decision of the Examiner of Interferences refusing to transmit his motion for dissolution so far as the same relates to the denial of his own right to make the claims in issue.

The Examiner of Interferences refused to transmit the motion on the authority of the decisions in the cases of *Miller* v. *Perham*, (121 O. G., 2667,) *Martin* v. *Mullin*, (127 O. G., 3216,) and *Eichelberger and Hibner* v. *Dillon*, (129 O. G., 3161.)

The record shows that claims in issue were suggested to Hermsdorf from the application of Driggs under the provisions of Rule 96. Hermsdorf filed an amendment incorporating these claims in his application, and an interference was thereupon declared. After the approval of the preliminary statements Hermsdorf moved for the dissolution of the interference upon the ground that he had no right to make the claims of the issue, alleging that they are not capable of the same meaning when read upon his application as when construed in the light of the specification of Driggs' application, in which they were originally presented.

In the decision of *Miller* v. *Perham*, *supra*, Commissioner Allen held that where claims were suggested to an applicant under the provisions of Rule 96 and he accepted such claims and included them in his application he laid claim to the invention which they defined, and if he wished to withdraw the claim to the possession of such invention he should do so by conceding priority or abandoning said invention. It was also pointed out that if he did not regard the invention as his own he need take no action whatever in the interference and permit judgment by default against him.

In the case of *Martin* v. *Mullin*, *supra*, it was urged that the concession of priority suggested in the earlier decision of *Miller* v. *Perham* threw a cloud upon the rights of the party making such concession. It was pointed out in the decision in that case that the concession of priority did not necessarily result in acquiescence in the finding of identity of invention, which is assumed as the basis of the declaration of interference. The Commissioner said:

The facts attending the adoption of claims by parties upon suggestion under Rule 96 and the practice in the Patent Office subsequent to the adoption of the suggested claims in the matter of the adopter's right to make the same being presented to the court, it is not to be presumed that the court will render an improper decision because of a concession of priority. Moreover the place to guard against decisions by the courts which are not warranted by the facts and circumstances would seem to be in the courts. The possibility that such a decision might by inadvertence be rendered affords no reason for conducting proceedings in the Patent Office merely to determine the right of a party to assert claims to a patent when no one but him denies that he has that right.

The conclusion in the case above referred to is believed to be correct in respect to cases in which claims of a patent are adopted by an applicant, since in such cases the applicant has an opportunity to inspect the patented file and obtain knowledge of the character of the invention disclosed therein as well as the scope of the claims relating to the same.

Where claims are suggested to an applicant from another application for patent, the same conditions do not obtain. Applications for patents are maintained in secrecy in the Office, and an applicant to whom claims are suggested has no knowledge of the invention upon which they are predicated other than that which is contained in the terms of the suggested claims themselves.

Rule 96, which provides for the suggestion of claims for the purpose of interference, also requires that the parties to whom the claims are suggested shall—

* * * make such claims and put the applications in condition for allowance within a specified time in order that an interference may be declared. Upon the failure of any applicant to make the claim suggested within the time specified, such failure or refusal shall be taken without further action as a disclaimer of the invention covered by the claim. * * *

Inasmuch as the applicant to whom the claims are suggested has had no opportunity to inspect his opponent's application and is therefore without knowledge of the character of the invention disclosed therein, and since by failure to make these claims a disclaimer of any invention which may be covered by the terms of the claim is entered against him, it is obvious that such an applicant will be placed in a position requiring him either to make claims which he may think are not readable upon his own structure or to disclaim the same by implication. If he refuses to make the suggested claims and it afterward appears that these claims are drawn upon substantially the same structure as that disclosed in his application, the disclaimer will nevertheless be effective against him, although his failure to make such claims resulted from his misunderstanding of their scope in the absence of the specification and drawing upon which they are based. If he makes the suggested claims and afterward concedes priority or permits judgment by default to be entered against him because of his belief that the suggested claims do not read upon his structure, a judgment of priority will stand against him as to these claims. It is apparent, therefore, that whether he permits either the implied disclaimer to be made of record or a judgment of priority to be entered against him his patent may be unduly restricted by virtue of such adverse action. The practice announced in *Miller* v. *Perham* was modified in the case of *Eichelberger and Hibner* v. *Dillon supra*, in which it was held that—

Where claims have been suggested to an applicant and he makes the same under protest, accompanying the protest with a statement that he does not believe he has a right to make them, giving his reasons for that statement, and where after inspecting the other party's application he still contends that he has no right to make these claims he should be permitted to argue the question before the Primary Examiner.

It is thought that this practice should be extended in view of the considerations above stated and that

where an applicant adopts claims suggested to him from another application pending at that time he should be permitted thereafter, if he so desires, to present a motion denying his own right to make those claims, whether such claims are made under protest or not. In such cases, however, the reasons upon which the motion is based must be explicitly stated.

The decisions in *Miller* v. *Perham* and *Martin* v. *Mullin*, *supra*, are modified to the extent indicated.

The decision of the Examiner of Interferences is reversed.

DECISIONS OF THE U. S. COURTS.

Court of Appeals of the District of Columbia.

IN RE EDISON.

Decided February 4, 1908.

PATENTABILITY—SECOND APPLICATION—RES ADJUDICATA.

Where an applicant after having been refused a patent by the Commissioner on appeal presented a new application containing claims differing from those of the earlier application in phraseology rather than in meaning, *Held* that such differences or any changes merely broadening claims that have been once determined do not affect the conclusiveness of the former adjudication and that the subject-matter was *res adjudicata*.

Mr. F. L. Dyer for the appellant.

Mr. F. A. Tennant for the Commissioner of Patents.

SHEPARD, *J.*:

This is an appeal from the Commissioner of Patents refusing an application, filed August 1, 1903, for a patent for an improvement in screening-plates, having the following claims:

1. As a new article of manufacture, a screen having openings formed in a plate of minimum thickness, less than the width of said openings and sufficient only to offer proper support to the material passed over the same, substantially as and for the purposes set forth.

2. As a new article of manufacture, a screen having slots formed in a plate of minimum thickness, less than the width of said slots, and sufficient only to offer proper support to the material passed over the same, substantially as and for the purposes set forth.

3. As a new article of manufacture, a screen having openings formed in a plate of minimum thickness, less in width than said openings, sufficient only to offer proper support to the material passed over the same, and having a case-hardened screening-surface and a malleable central portion, substantially as and for the purposes set forth.

The record shows that the same applicant had filed, on June 29, 1899, an application for the allowance of a patent for an improvement in screening-plates, containing the following claims:

1. As a new article of manufacture, a very thin metal plate having screening-orifices therein of greater width than the thickness of said plate, substantially as set forth.

2. As a new article of manufacture, a screening-plate made of hardened metal of extreme thinness and with orifices formed therein of a greater width than the thickness of said plate, substantially as set forth.

3. As a new article of manufacture, a metal plate having a hardened screening-surface but with a malleable central portion, said plate being of extreme thickness and having orifices formed therein of greater width than the thickness of said plate substantially as set forth.

4. As a new article of manufacture, a screening-plate having hardened surfaces and a malleable central portion, said plate having elongated screening-orifices formed therein, substantially as set forth.

5. As a new article of manufacture, a very thin metal plate having screening-slots therein of greater width than the thickness of said plate, substantially as set forth.

6. As a new article of manufacture, a screening-plate made of hardened metal of extreme thinness, and with slots formed therein of greater width than the thickness of said plate, substantially as set forth.

7. As a new article of manufacture, a metal plate having a hardened screening-surface but with a malleable central portion, said plate being of extreme thinness and having slots formed therein of greater width than the thickness of said plate, substantially as set forth.

8. As a new article of manufacture, a screening-plate having hardened surfaces and a malleable central portion, said plate having elongated screening-slots formed therein, substantially as set forth.

This earlier application was rejected by the Primary Examiner, on February 15, 1902, as unpatentable; reference being made to several former patents for screening-plates. This decision was affirmed by the Examiners-in-Chief, and on appeal therefrom to the Commissioner their decision was affirmed May 26, 1903. No appeal was prosecuted from that decision.

On September 19, 1905, the Primary Examiner rejected the present application on the ground that the subject-matter was the same as that of the former rejected application, the final determination of which was *res adjudicata*. His opinion was that the claims 1, 2 and 3 were substantially the same as claims 1, 5 and 3 of the former application. The Examiners-in-Chief affirmed this decision, but, in addition, held that the claims were unpatentable in view of the state of the prior art. The Commissioner affirmed their decision on February 28, 1907, and therefrom this appeal has been taken.

It is unimportant to consider the question of patentability, as we agree with the tribunals of the Patent Office in the opinion that the final decision in the first application is conclusive. (*In re Barratt's Appeal*, 14 App. D. C., 255.)

Nor do we consider it necessary or important to compare, and discuss the resemblance between the claims of the respective applications. This has been carefully done in the several decisions of record in the Patent Office. Referring thereto and to the respective claims heretofore set out, we think it sufficient to say that we adopt the statement in the Commissioner's decision that:

Claims 1, 2 and 3, which are now presented, differ from claims 1, 5 and 3, respectively, of the earlier application in phraseology rather than in meaning.

Such differences, or any changes merely broadening claims that have been once determined do not affect the conclusiveness of the former adjudication. (*Horine* v. *Wende*, 29 App. D. C., 415, 426; see also *Blackford* v. *Wilder*, 28 App. D. C., 535.)

The decision is right and will be affirmed. It is so ordered, and that the clerk certify this decision to the Commissioner of Patents in the manner required by the law. Affirmed.

Court of Appeals of the District of Columbia.

WORCESTER BREWING CORPORATION *v.* RUETER & COMPANY.

Decided February 18, 1908.

1. TRADE-MARK—DESCRIPTIVE—"STERLING."

The word "Sterling" as a trade-mark for ale or for any other kind of goods is descriptive of the quality of the articles on which it is used, as it denotes that the article is genuine, pure, and of superior quality, and it is therefore ineligible for registration as a technical mark.

2. SAME—NON-TECHNICAL MARKS—TEN-YEAR PROVISO—EXCLUSIVE USE.

A non-technical mark is not entitled to registration under the ten-year proviso of section 5 of the Trade-Mark Act of February 20, 1905, unless it is shown that the applicant possessed and enjoyed an actual use of the mark for the specified period to the sole exclusion of all others, and if it appears that during such period another was using the same word as a trade-mark upon the same character of goods the use cannot be considered "exclusive" within the meaning of the statute.

Mr. L. W. Southgate for the appellant.

Mr. G. H. Maxwell for the appellee.

VAN ORSDEL, *J.*:

In this case, the appellant, Worcester Brewing Corporation, filed its opposition to the registration in the Patent Office by the appellee, Rueter & Company, of the word "Sterling" as a trade-mark for ale. The opposition was dismissed by the Commissioner of Patents, and from that ruling appeal was taken to this court. The evidence in this case, we think, discloses that the appellee and its predecessors in business have used the word "Sterling" as a trade-mark for ale, manufactured and sold by it, since 1882. There is some evidence extending the use back to 1869, but, we think, the evidence conclusively shows a continuous use since 1882. The president of the appellant company, who owns about three-quarters of its capital stock, was, until 1899, agent for sale of the ale produced by appellee bearing the mark "Sterling." In that year he organized the appellant company and became its president, at the same time conducting the business of a wholesale liquor dealer. He ceased to handle the goods of appellee in the year 1900, since which time he has sold exclusively the goods of appellant. It further appears that about May 1, 1900, the appellant company began to use the word "Sterling" as a trade-mark for ale of its own production. The mark has been used by appellant since that time. The device used by appellant, in which the word "Sterling" appears, is "Worcester Sterling Ale."

It is contended by counsel for appellant that the word "Sterling" is a descriptive word, and is for that reason not entitled to registration. We are of the opinion that the word "Sterling," when applied to any kind of goods, is descriptive of the quality of the articles on which it is used. It denotes that the article on which it is used is genuine, pure, and of superior quality. These meanings are applied to the word by the dictionaries, and we think they express what the public generally understands by the use of the term. Certainly, when the word "Sterling" is used in connection with merchandise or beverages, it will at once be understood to denote quality. Being a descriptive word, it is ineligible for registration as a technical trade-mark.

There is but one way left in which appellee is entitled to have its application for registration considered in this case, and that is under the proviso to section 5 of the act of Congress of February 20, 1905, which is as follows:—

That nothing herein shall prevent the registration of any mark used by the applicant, or his predecessors, or by those from whom title to the mark is derived, in commerce with foreign nations, or among the several States, or with the Indian tribes, which was in actual and exclusive use as a trade-mark of the applicant, or his predecessors from whom he derived title, for ten years next preceding the passage of this act.

The record discloses an actual and continuous use by appellee of the word "Sterling" as a trade-mark for ale for more than ten years next preceding the passage of the act of Congress. If it appears, therefore, that this use has been exclusive, even though the word is descriptive and not susceptible of registration as a technical trade-mark, appellee would still, by reason of its actual and exclusive use for ten years next preceding the passage of the act, be entitled to the right to register it. In the case of *in re Cahn, Belt & Co.*, (27 App. D. C., 177,) this court said:

The last proviso of section 5, as amended and passed, was not intended to provide for the registration of technical trade-marks, for such marks had been cared for elsewhere in this act. The proviso admitted the registration of marks, not in either of the clauses prohibited by this section, if such marks were in actual and exclusive use as a trade-mark for ten years next preceding the passage of the act. In respect of technical trade-marks, this proviso is absolutely useless. It was intended to save the right of registration to the marks described in the proviso. * * * The last proviso of section 5 was intended to refer only to marks owned by the applicants, and in their actual and exclusive use of ten years.

It is clear that appellee, during the ten year period would have had no right to exclude appellant from the use of the word "Sterling" on the ground of its being a valid technical trade-mark. Not possessing this right, it is difficult to understand upon what theory its use can be said to be exclusive.

We think that the Commissioner of Patents erred in holding that the word "exclusive," as used in the proviso of section 5, means "the right to exclude," It has no reference to any right possessed by the user. Since the word did not constitute a technical trade-mark, no right to exclude could be asserted. Inasmuch as the word is used in the statute in connection with the words "actual use" and both expressions are used to qualify the special right conferred by this provision of the act, we hold that an actual use must be shown to have been possessed and enjoyed by the applicant to the sole exclusion of all others. The use could not be exclusive if, during the period, it appears that another was using the same word as a trade-mark upon the same character of goods. It is not denied that, during five years of this period prior to the act of 1905, appellant used continuously the word "Sterling" as a mark on the same kind of goods on which it was used by appellee. We are of the opinion that this is sufficient to prevent appellee from claiming such an exclusive use as would entitle it to register the word "Sterling" as a trade-mark.

It is unnecessary to consider the other questions raised in the record, and discussed in the briefs of counsel. The decision of the Commissioner of Patents is reversed and the clerk is instructed to certify this proceeding, as required by law. Reversed.

Disclaimers.

878,435.—*Richard Varley*, Englewood, N. J. INDUCTION-COIL. Patent dated February 4, 1908. Disclaimer filed March 19, 1908, by assignee.

Enters this disclaimer—

"To the following claims appearing in said Letters Patent, to wit:

"13. In a spark-coil for multiple-cylindered gas or vapor engines, an outer case containing separate insertible sparking elements, one for each cylinder, and each having a suitable vibrator upon one end, and the electrical connections at or near the other end, some of which connections protrude through the case and are provided for external connection thereon, substantially as shown and described.

"14. In combination with a spark-coil and electric circuit thereto, a primary switch which in a certain position connects one source of electric energy to the coil, and in a certain other position connects two sources of electrical energy, substantially as and for the purpose set forth.

"15. In combination with a sparking coil for gas-engine, the electric current thereof supplied by batteries, an electric switch, one position of which shall complete the electric circuit of one battery singly, and in one position shall complete the circuit for two batteries conjointly, substantially as shown and described.

"16. In combination with a sparking coil for gas-engine, the electric current thereof which is supplied by batteries, a plug-switch, one position of which shall complete the electric circuit of one battery singly, and in one position shall complete the circuit for two batteries conjointly, substantially as shown and described.

"17. In combination with a spark-coil and battery-circuit thereof, a plug switch containing tree or more plugging-holes, two each connecting a single circuit independently, and one connecting two circuits in multiple thereof, substantially as and for the purpose set forth."

750,317.—*William A. Suddard*, Providence, R. I. MOTOR-BICYCLE. Patent dated January 26, 1904. Disclaimer filed March 18, 1908, by patentee.

Enters his disclaimer—

"To claim 1 in said Letters Patent which is in the following words, to wit:

"1. In a motor-driven bicycle, the combination of a main frame for supporting the propelling mechanism, an independent spring-supported auxiliary frame for supporting the rider, substantially as described."

Interference Notices.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., March 25, 1908.

Ernest R. Schneider, his assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of The Union Distilling Company, of 1006 Richmond street, Cincinnati, Ohio, for registration of a trade-mark and a trade-mark registered to Ernest R. Schneider, of Augusta, Ga., of whom John R. Schneider claims to be successor, and the notice of said declaration sent by registered mail to the said Ernest R. Schneider having been returned undelivered, notice is hereby given to the said Ernest R. Schneider, his assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents in order that the notices of declaration heretofore sent by and returned to the Office may be forwarded to them.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will be proceeded with as in case of default.

E. B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., March 5, 1908.

William E. Woodyear, his assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of The Northwestern Elevator & Mill Company, of Mount Vernon, Ohio, for registration of a trade-mark and a trade-mark registered to William E. Woodyear, of 304 Spears Wharf, Baltimore, Md., and the notice of said declaration sent by the Patent Office by registered mail to the said William E. Woodyear and also the notice sent to his attorney of record in the usual manner having been returned undelivered, notice is hereby given to the said William E. Woodyear, his assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents in order that the notices of declaration heretofore sent by and returned to the Office may be forwarded to them.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will be proceeded with as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., March 4, 1908.

Frank Mellersh, his assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of William O. Frailey, of East King and Shippen streets, Lancaster, Pa., for registration of a trade-mark and a trade-mark registered to Frank Mellersh, of 130 West Thirty-fourth street, New York, N. Y., and the notice of said declaration sent by the Patent Office by registered mail to the said Frank Mellersh, as well as the copy mailed in the usual way to his attorney of record, having been returned undelivered, notice is hereby given to the said Frank Mellersh, his assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents in order that the notices of declaration heretofore sent by and returned to the Office may be forwarded to them.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will be proceeded with as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., February 24, 1908.

A. E. Jeaneret, his assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of The Matchless Metal Polish Company, of 65-69 Frankfort street, New York, N. Y., and 88 South Market street, Chicago, Ill., for registration of a trade-mark, a trade-mark registered to this company, and a trade-mark registered to A. E. Jeaneret, of Boston, Mass., and the notice of said declaration sent by the Patent Office by registered mail to the said A. E. Jeaneret having been returned undelivered, notice is hereby given to the said A. E. Jeaneret, his assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents in order that the notice of declaration heretofore sent by and returned to the Office may be forwarded to them.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will be proceeded with as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., February 17, 1908.

Jacob Baiz, his assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of The German-American Coffee Company, of 406 Greenwich street, New York, N. Y., for registration of a trade-mark and a trade-mark registered to Jacob Baiz, of 102 Front street, New York, N. Y., and the notice of said declaration sent by registered mail to the said Jacob Baiz having been returned undelivered, notice is hereby given to the said Jacob Baiz, his assigns or legal representatives, that if he or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents in order that the notices of declaration heretofore sent by and returned to the Office may be forwarded to them.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will be proceeded with as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., February 13, 1908.

Thomas W. Farnsworth, his assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of the Kahn Mfg. Company, of No. 416 Dauphin street, Mobile, Ala., for registration of a trade-mark and a trade-mark registered to Thomas W. Farnsworth, of 81 Summer street, Boston, Mass., and the notice of said declaration sent by registered mail to the said Thomas W. Farnsworth having been returned undelivered, notice is hereby given to the said Thomas W. Farnsworth, his assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents in order that the notices of declaration heretofore sent by and returned to the Office may be forwarded to them.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will be proceeded with as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., February 13, 1908.

George Riggs, his assigns or legal representatives, take notice:

An interference has been declared by this Office between an application of The Old Bleach Linen Company, Limited, of Randalstown, Ireland, for registration of a trade-mark and a trade-mark registered to George Riggs, of Newark, N. J., and the notice of said declaration sent by registered mail to the said George Riggs has been returned by the Post-Office Department undelivered.

Notice is therefore hereby given to George Riggs, his assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE *Commissioner.*

THE
OFFICIAL GAZETTE
OF THE
United States Patent Office.
[BY AUTHORITY OF CONGRESS.]

VOL. 133—No. 6. TUESDAY, APRIL 7, 1908. PRICE—$5 per year.

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Reissues	5	No. 12,774 to No. 12,778, inclusive.
Total	800	

TO CITIZENS OF THE UNITED STATES.

States.	Patents and Designs.	Trade-Marks, Labels, and Prints.	States.	Patents and Designs.	Trade-Marks, Labels, and Prints.
Alabama	1	.....	New Hampshire	2	1
Alaska, District of	.....	.....	New Jersey	24	4
Arizona Territory	1	.....	New Mexico Ter't'y	1	.....
Arkansas	5	.....	New York	96	28
California	22	4	North Carolina	5	.....
Colorado	9	2	North Dakota	1	.....
Connecticut	15	2	Ohio	46	5
Delaware	.....	.....	Oklahoma	5	.....
District of Columbia	6	.....	Oregon	7	.....
Florida	3	.....	Panama	.....	.....
Georgia	4	.....	Pennsylvania	48	6
Hawaii Territory	.....	.....	Philippine Islands	.....	.....
Idaho	2	.....	Rhode Island	7	3
Illinois	45	18	South Carolina	1	.....
Indiana	15	1	South Dakota	3	.....
Iowa	11	.....	Tennessee	8	2
Kansas	18	.....	Texas	9	1
Kentucky	10	.....	Utah	3	.....
Louisiana	4	.....	Vermont	3	.....
Maine	2	1	Virginia	3	1
Maryland	6	4	Washington	7	.....
Massachusetts	51	10	West Virginia	2	1
Michigan	15	1	Wisconsin	13	4
Minnesota	11	3	Wyoming	.....	.....
Mississippi	2	.....	U. S. Army	1	.....
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Montana	2	.....			
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TO CITIZENS OF FOREIGN COUNTRIES.

Countries.	Patents and Designs.	Trade-Marks and Prints.	Countries.	Patents and Designs.	Trade-Marks and Prints.
Argentina	1	.....	Natal	.....	.....
Austria-Hungary	2	.....	Netherlands	2	2
Belgium	2	.....	Newfoundland	.....	.....
Brazil	.....	.....	New South Wales	1	.....
British West Indies	.....	.....	New Zealand	.....	.....
Canada	15	.....	Norway	.....	.....
Cape Colony	.....	.....	Persia	.....	.....
Chile	.....	.....	Queensland	.....	.....
China	.....	.....	Roumania	.....	.....
Costa Rica	.....	.....	Russia	1	.....
Cuba	.....	.....	Scotland	1	1
Denmark	1	.....	South Australia	.....	.....
Ecuador	.....	.....	Spain	.....	.....
England	24	2	Sweden	1	.....
France	5	1	Switzerland	7	.....
Germany	31	2	Transvaal, South Africa	.....	.....
Haiti	.....	.....	Victoria	.....	.....
Ireland	1	.....	Western Australia	.....	.....
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Java	.....	.....			
Mexico	1	.....			

Change in Price of Copies of Patents—Amendment to Rule 203.

(ORDER No. 1,756.)

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., March 13, 1908.

Acting with the approval of the Secretary of the Interior, Rule 203 of the Rules of Practice of this Office is amended by canceling lines 3 and 4 of page 60, (edition of Rules of Practice dated July 17, 1907,) relating to class and subclass orders for copies of patents. The price of uncertified copies of specifications and drawings of patents, if in print, will be five cents each on and after April 1, 1908.

EDWARD B. MOORE,
Commissioner.

Notice.

The OFFICIAL GAZETTE of the United States Patent Office is now being mailed by the Superintendent of Documents from the Government Printing Office, the place of its production. All communications respecting the GAZETTE and all subscriptions should be addressed to the Superintendent of Documents.

EDWARD B. MOORE,
Commissioner.

Trade-Marks.

The publication of trade-marks under the act of February 20, 1905, in the OFFICIAL GAZETTE, commenced May 2, 1905, and will appear in each weekly number of the GAZETTE thereafter.

Extra copies of the trade-mark portion of the GAZETTE, which will be sold separately, may be obtained single or in quantities for five cents each. Coupons will be taken in payment therefor.

APPLICATIONS UNDER EXAMINATION.

Condition at Close of Business March 31, 1908.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action.		No. of applications awaiting action.
		Amended	New.	
244	XXXV. Buckles, Buttons, and Clasps; Card, Picture, and Sign Exhibiting; Garment-Supporters; Signals; Toilet.	Mar. 16	Jan. 20	640
303	XVII. Clutches; Linotyping; Matrix-Making; Nut and Bolt Locks; Printing.	Mar. 12	Mar. 2	181
804	XXXIV. Railways; Railway-Brakes; Railway Rolling-Stock.	Mar. 7	Jan. 27	420
172	XXXI. Alcohol; Ammonia, Water, and Wood Distillation; Charcoal and Coke; Gas, Heating and Illuminating; Hides, Skins, and Leather; Liquid Coating Compositions; Mineral Oils; Oils, Fats, and Glue; Water Purification.	Mar. 5	Feb. 3	232
312	VII. Games and Toys; Mechanical Motors; Optics; Paper Manufactures; Velocipedes.	Mar. 4	Feb. 1	265
167	V. Bookbinding; Harvesters; Jewelry; Music.	Mar. 3	Jan. 8	331
318	VI. Bleaching and Dyeing; Chemicals; Explosives; Fertilizers; Medicines; Preserving; Sugar and Salt.	Mar. 2	Feb. 6	291
232	IV. Bridges; Conveyers; Cranes and Derricks; Excavating; Hoisting; Hydraulic Engineering; Iron Structures; Loading and Unloading; Towers.	Feb. 26	Feb. 26	309
179	XX. Artificial Limbs; Builders' Hardware; Dentistry; Locks and Latches; Safes; Undertaking.	Feb. 27	Feb. 3	282
313	I. Fences; Harrows and Diggers; Plows; Seeders and Planters; Trees, Plants, and Flowers.	Feb. 26	Jan. 23	287
147	XXIX. Coopering; Fire-Escapes; Ladders; Roofs; Wheelwright-Machines; Wooden Buildings; Wood-Sawing; Wood-Turning; Woodworking; Woodworking-Tools.	Feb. 25	Dec. 7	428
264	XXXVI. Curtains, Shades, and Screens; Drafting; Driers; Engraving; Measuring Instruments; Wind-Wheels.	Feb. 24	Feb. 10	499
308	XV. Bread, Pastry, and Confection Making; Coating; Fuel; Glass; Hydraulic Lime and Cement; Laminated Sheets and Fabrics; Paper-Making; Paving; Photography; Plastic Block and Earthenware Apparatus; Plastic Compositions; Plastics.	Feb. 24	Jan. 29	697
379	XXIII. Acoustics; Coin-Handling; Horology; Recorders; Registers; Time-Controlling Mechanism.	Feb. 24	Jan. 10	246
135	VIII. Beds; Chairs; Furniture; Kitchen and Table Articles; Store Furniture.	Feb. 24	Dec 28	304
322	XII. Elevators; Journal-Boxes; Lubrication; Machine Elements; Pulleys and Shafting.	Feb. 21	Jan. 20	509
144	XXIV. Apparel; Apparel Apparatus; Sewing-Machines; Surgery.	Feb. 19	Feb. 18	346
378	XXXVIII. Artesian and Oil Wells; Bottles and Jars; Care of Live Stock; Educational Appliances; Fishing and Trapping; Stationery; Stone-Working.	Feb. 18	Feb. 24	344
278	XXXII. Carbonating Beverages; Dispensing Beverages; Dispensing-Cans; Metallic Shipping and Storing Vessels; Packaging Liquids; Refrigeration.	Feb. 15	Nov. 26	518
332	X. Carriages and Wagons	Feb. 14	Jan. 15	530
247	XXII. Air-Guns, Catapults, and Targets; Ammunition and Explosive Devices; Boats and Buoys; Firearms; Marine Propulsion; Ordnance; Railway-Rails and Joints; Railway-Ties and Fasteners; Ships.	Feb. 14	Jan. 2	609
327	XVIII. Injectors and Ejectors; Steam and Vacuum Pumps; Steam-Boilers; Steam-Engines; Steam-Engine Valves.	Feb. 12	Jan. 12	301

Applications Under Examination—Continued.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action.		No. of applications awaiting action.
		Amended	New.	
142	IX. Air and Gas Pumps; Fire-Extinguishers; Hydraulic Motors; Pumps; Sewerage.	Feb. 11	Feb. 10	225
280	XL. Baggage; Check Controlled Apparatus; Cloth, Leather, and Rubber Receptacles; Deposit and Collection Receptacles; Fine Arts; Lighting-Fixtures; Package and Article Carriers; Paper Receptacles; Special Receptacles and Packages; Wooden Receptacles.	Feb. 11	Jan. 10	650
164	XXXIII. Cutlery; Domestic Cooking Vessels; Electric Signaling; Electricity, Medical and Surgical; Fireproof Buildings; Masonry; Tents, Canopies, Umbrellas, and Canes.	Feb. 10	Feb. 5	299
375	XXVII. Brushing and Scrubbing; Grinding and Polishing; Laundry; Washing Apparatus.	Feb. 10	Jan. 18	474
154	XI. Boot and Shoe Making; Boots, Shoes, and Leggings; Button, Eyelet, and Rivet Setting; Harness; Leather Manufactures; Nailing and Stapling; Whips and Whip Apparatus.	Feb. 8	Jan. 16	370
105	XXVI. Electric Heating and Rheostats; Electric Railways; Electricity, Generation; Motive Power.	Feb. 8	Nov. 7	323
128	II. Bee Culture; Dairy; Label-Affixers; Paper Files and Binders; Pneumatics; Presses; Store-Service; Tobacco.	Feb. 5	Jan. 4	430
238	XIX. Furnaces; Heating and Cooking Stoves, Liquid and Gaseous Fuel; Stoves and Furnaces.	Jan. 27	Dec. 2	563
152	XXX. Fluid-Pressure Regulators; Lamps and Gas-Fittings; Liquid and Gaseous Fuel Burners; Type-Writing Machines.	Jan. 18	Jan. 18	335
315	XXV. Butchering; Mills; Threshing; Vegetable Cutters and Crushers.	Jan. 18	Jan. 13	455
382	XXVIII. Internal-Combustion Engines; Miscellaneous Heating Plants.	Jan. 12	Dec. 24	525
329	XIII. Arms, Projectiles, and Explosive Charges, Making; Metal-Working, etc.	Jan. 10	Jan. 2	615
307	XIV. Compound Tools; Cutting and Punching Sheets and Bars; Farriery; Metal-Bending; Metal-Ornamenting; Sheet-Metal Ware, Making; Tools; Wire-Working.	Jan. 8	Dec. 12	408
112	XXI. Brakes and Gins; Carding; Cloth-Finishing; Cordage; Felt and Fur; Knitting and Netting; Silk; Spinning; Weaving.	Dec. 26	Oct. 28	582
107	XXXVII. Electric Lighting; Electricity, Conductors; Electricity, General Applications.	Dec. 19	Oct. 15	705
352	XLI. Railway Draft Appliances; Resilient Tires and Wheels.	Dec. 16	Sept. 12	833
109	XVI. Telegraphy and Telephony	Dec. 13	Sept. 13	626
175	III. Annealing and Tempering; Coating with Metal; Electrochemistry; Metal-Founding; Metallurgy; Shaping Fluid Metal.	Dec. 11	Dec. 2	497
321	XXXIX. Baths and Closets; Water Distribution.	Dec. 11	Oct. 18	887

Total number of applications awaiting action 18,461

161	TRADE-MARKS, DESIGNS, LABELS, AND PRINTS.			
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	Designs	Mar. 20	Mar. 2	77
	Labels and Prints			

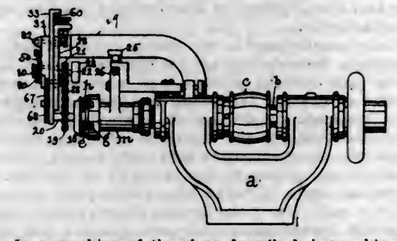
Notice.

Coupons unless properly filled out will not be accepted in payment for copies of publications.

PATENTS

GRANTED APRIL 7, 1908.

883,684. MACHINE FOR TRIMMING THE EDGES OF BOOTS AND SHOES. ALBERT E. AYER, Chelsea, Mass., assignor to Ruth L. Vose, Brookline, Mass. Filed May 6, 1907. Serial No. 372,001.



1. In a machine of the class described, in combination, a rotary cutter, a rotatable guard or rest coöperating therewith, a shaft on which said guard is mounted, means to rotate said shaft, a pattern, a movable support for said pattern, mechanism connecting said support with said guard shaft, and means coöperating with said pattern for moving said guard with relation to said rotary cutter, substantially as described.

2. In a machine of the class described, in combination, a rotary cutter, a rotatable guard or rest coöperating therewith, a support for said guard or rest, a pattern, a movable support for said pattern, and means coöperating with said pattern for effecting movement of said guard-support and said guard, substantially as described.

3. In a machine of the class described, in combination, a rotary cutter, a guard or rest for the work coöperating with said cutter to position the work with relation thereto, a pattern, a movable support therefor, and means coöperating with said pattern to effect bodily movement of said guard or rest with relation to said rotary cutter, substantially as described.

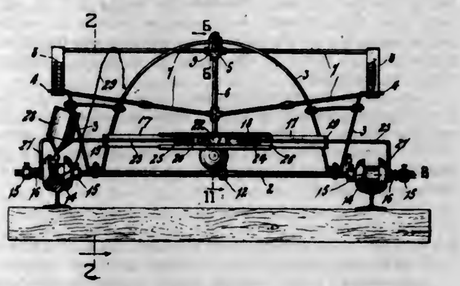
4. In a machine of the class described, in combination, a rotary cutter, a guard or rest for the work coöperating with said cutter to position the work with relation thereto, a pattern, and mechanism coöperating with said pattern to automatically vary the position of said guard or rest with relation to said rotary cutter according to said pattern, substantially as described.

5. In a machine of the class described, in combination, a rotary cutter, a guard or rest coöperating with said cutter to position the work with relation to said cutter, a movable pattern, and means coöperating with said pattern to automatically position said guard or rest with relation to said rotary cutter, substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

883,685. TRACK-GAGE. LOUIS BARCELOUX, St. Guillaume Station, Quebec, Canada. Filed Nov. 1, 1907. Serial No. 400,270.

1. In a gage for railway tracks or the like, an axle, guide rollers carried by said axle and adapted to travel on the rails of a track, and means carried by said axle for indicating the variations in the elevations of the rails, said means comprising a supporting member, a bracket carried thereby, a plumb carried by the bracket, a frame carried by the plumb, scale marks placed on the frame, indicating members connected to the supporting member and adapted to coöperate with the scale marks to indicate the deviation of the rails, and means for securing said gage to a hand car or other means for moving it over the tracks.



2. In a gage for railway tracks or the like, an axle, guide rollers carried by said axle and adapted to travel on the rails of a track, and means carried by said axle for indicating the variations in the elevations of the rails, said means comprising a supporting member, a bracket carried thereby, a plumb carried by the bracket, a frame carried by the plumb, scale marks placed on the frame, indicating members connected to the supporting member and adapted to coöperate with the scale marks to indicate the deviation of the rails, and means for adjusting said plumb.

3. In a gage for railway tracks or the like, an axle, guide rollers carried by said axle and adapted to travel on the rails of a track, and means carried by said axle for indicating the variations in the elevations of the rails, said means comprising a supporting member, a bracket carried thereby, a plumb carried by the bracket, a frame carried by the plumb, scale marks placed on the frame, indicating members connected to the supporting member and adapted to coöperate with the scale marks to indicate the deviation of the rails, and means for locking said plumb in inoperative position.

4. In a gage for railway tracks or the like, an axle, guide rollers carried by said axle and adapted to travel on the rails of a track, and means carried by said axle for indicating the variations in the elevations of the rails, said means comprising a supporting member, a bracket carried thereby, a plumb carried by the bracket, a frame carried by the plumb, scale marks placed on the frame, indicating members connected to the supporting member and adapted to coöperate with the scale marks to indicate the deviation of the rails, and means for adjusting said plumb, and means for locking said plumb in inoperative position.

5. In a gage for railway tracks or the like, an axle, guide rollers carried by said axle and adapted to travel on the rails of a track, and means carried by said axle for indicating the variations in the elevations of the rails, said means comprising a supporting member, a bracket carried thereby, a plumb carried by the bracket, a frame carried by the plumb, scale marks placed on the frame, indicating members connected to the supporting member and adapted to coöperate with the scale marks to indicate the deviation of the rails, means for adjusting said plumb, and means for locking said plumb in inoperative position.

883,686. SIDE-SPRING VEHICLE-GEAR. CHARLES A. BEHLEN, Durham, N. C., assignor to Durham Buggy Company, Durham, N. C., a Corporation of North Carolina. Filed Sept. 3, 1907. Serial No. 391,011.

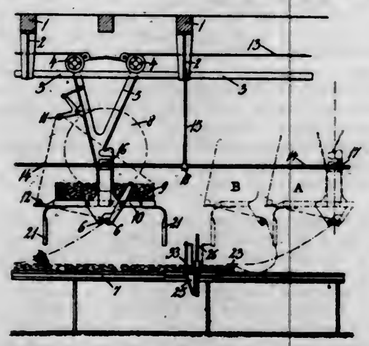


1. In a side spring vehicle gear, a side spring having a connecting arm at one of its ends rigidly connected thereto against movement in one direction, but free to move in the other direction, and journaled at its free end to the gear above one of the axles; substantially as described.

2. In a side spring vehicle gear, a side spring having one of its ends connected to the running gear at a point below the top of the central portion of the spring, and its other end connected to the running gear at a point substantially in the plane of the top of the central portion of the spring the connection between the spring and the running gear being formed by a member which is rigidly connected to the spring against movement in one direction, but is free to move in the opposite direction; substantially as described.

3. In a side spring vehicle gear, a side spring, a connecting arm attached to the forward end of said spring and free to move forwardly but rigid in so far as backward movement is concerned, and an elevator bar to which said arm is journaled at its upper end; substantially as described.

883,687. AUTOMATIC MACHINE FOR FOLDING CLOTH AND THE LIKE. ALBERT BENDIEN, Almelo, Netherlands. Filed June 14, 1907. Serial No. 379,105.



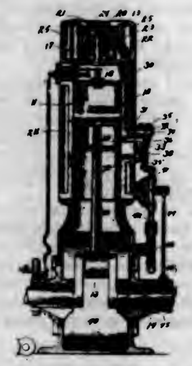
1. An automatic machine for folding cloth and the like comprising a movable carriage for said cloth or the like, rails for said carriage, a stationary work-table beneath said rails, gearing for reciprocating said carriage on said rails, guide-rolls for the cloth and the like on said carriage, a pair of cloth-folding-rod-supports arranged opposite to each other at each end of the work-table, cloth-folding rods movably arranged in said supports, arms fixed on said carriage, gearing actuated by said arms for reciprocating said cloth-folding rods substantially as the carriage approaches and recedes from each end of its travel, and means for intermittently raising said cloth-folding-rod supports.

2. An automatic machine for folding cloth and the like comprising a movable carriage for said cloth or the like, rails for said carriage, a stationary work-table beneath said rails, gearing for reciprocating said carriage on said rails, guide-rolls for the cloth and the like on said carriage, a pair of cloth-folding-rod-supports arranged opposite to each other at each end of the work-table, cloth-folding-rods movably mounted in said supports, bell-crank levers pivotally mounted on said supports, links coupling said bell-crank levers and said cloth-folding rods, elastically mounted arms on said bell-crank levers, arms on said carriage for engaging the elastically-mounted arms of said bell-crank levers, and means for intermittently raising said cloth-folding-rod supports.

3. An automatic machine for folding cloth and the like comprising a movable carriage for said cloth or the like, rails for said carriage, a stationary work-table beneath said rails, gearing for reciprocating said carriage on said rails, guide-rolls for the cloth and the like on said carriage, a pair of cloth-folding-rod-supports arranged opposite to each other at each end of the work-table, cloth-folding-rods movably mounted in said supports, bell-crank levers pivotally mounted on said supports, links coupling said bell-crank levers and said cloth-folding rods, elastically mounted arms on said bell-crank levers, arms on said carriage for engaging the elastically-mounted arms of said bell-crank levers, screw-threaded spindles and nuts connecting said cloth-folding-rod-supports and said work-table, ratchet-wheels combined with said nuts, pawls pivotally mounted on said bell-crank levers and coacting with said ratchet-wheels, and retaining pawls pivotally mounted on said cloth-folding-rod supports and coacting with said ratchet-wheels.

4. An automatic machine for folding cloth and the like comprising a movable carriage for said cloth or the like, rails for said carriage, a stationary work-table beneath said rails, rope-gearing for moving said carriage along said rails, a longitudinally-movable rod controlling the direction of motion of said gearing, cams adjustably mounted on said rod, an arm fixed on said carriage and coacting with said cams, guide-rolls for the cloth or the like, on said carriage, a pair of cloth-folding-rod-supports arranged opposite to each other at each end of the work-table, cloth-folding-rods movably mounted in said supports, bell-crank levers pivotally mounted on said supports, links coupling said bell-crank levers and said cloth-folding rods, elastically mounted arms on said bell-crank levers, arms on said carriage for engaging the elastically-mounted arms of said bell-crank levers, screw-threaded spindles and nuts connecting said cloth-folding-rod-supports and said work-table, ratchet-wheels combined with said nuts, pawls pivotally mounted on said bell-crank levers and coating with said ratchet-wheels, and retaining pawls pivotally mounted on said cloth-folding-rod supports and coacting with said ratchet-wheels.

883,688. GAS-ENGINE. JOHN HENRY BIRCH and JOHN HAYS BIRCH, Crawfordsville, Ind. Filed Oct. 4, 1907. Serial No. 395,886.



1. In an internal combustion engine, the combination, with a power cylinder and piston therein, of an exhaust valve controlling an exhaust passage leading from said cylinder, yielding means for normally holding said exhaust valve closed, a coöperating valve-piston and cylinder for said exhaust valve, a passage being provided between said cylinder and the power cylinder to admit pressure to the valve cylinder at the end of the power stroke of the power-piston, a valve in said passage arranged to retain pressures within the valve cylinder, and a means controlled by the power-piston for operating said last-mentioned valve.

2. In an internal combustion engine, the combination, with the power cylinder and the power piston, of an exhaust valve controlling an exhaust passage leading from said cylinder, a spring for normally closing said valve, a valve-piston and cylinder for actuating said exhaust valve in opposition to said spring, with a passage forming a communication between said valve cylinder and the power cylinder, the said passage being controlled at its power-cylinder end by the power piston, a check valve arranged in said last mentioned passage to control eduction from the valve cylinder, there being also a passage communicating with said check-valve passage beyond the check valve relative to the exhaust-valve cylinder and controlled at its other end by the power-piston, and means for intermittently opening said check-valve.

3. In an internal combustion engine, the combination, with the power cylinder and the power piston, of an exhaust valve controlling an exhaust passage leading from said cylinder, a spring for normally closing said valve, a valve-piston and cylinder for actuating said exhaust valve in opposition to said spring, with a passage forming a communication between said valve cylinder and the power cylinder, the said passage being controlled at its power-cylinder end by the power piston, a check valve arranged in said last mentioned passage to control eduction from the valve cylinder, there being also a passage communicating with said check-valve passage beyond the check-valve relative to the exhaust-valve cylinder and controlled at its other end by the power-piston, a spring for normally holding said check-valve closed, and means for intermittently opening said check-valve.

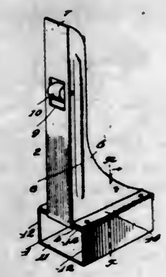
4. In an internal combustion engine, the combination, with the power cylinder and the power piston, of an exhaust valve controlling an exhaust passage leading from said cylinder, a spring for normally closing said valve, a valve-piston and cylinder for actuating said exhaust valve in opposition to said spring, with a passage forming a communication between said valve cylinder and the power cylinder, the said passage being controlled at its power-cylinder end by the power piston, a check valve arranged in said last mentioned passage to control eduction from the valve cylinder, there being also a passage communicating with said check-valve passage beyond the check-valve relative to the exhaust-valve cylinder and controlled at its other end by the power-piston, and a mechanical connection between said check valve and the power piston for intermittently opening said check valve.

5. In an internal combustion engine, the combination, with the power cylinder and the power piston, of an exhaust valve controlling an exhaust passage leading from said cylinder, a spring for normally closing said valve, a valve-piston and cylinder for actuating said exhaust valve in opposition to said spring, with a passage forming a communication between said valve cylinder and the power cylinder, the said passage being controlled at its power-cylinder end by the power piston, a check-valve arranged in said last mentioned passage to control eduction from the valve cylinder, there being also a passage communicating with said check-valve passage beyond the check-valve relative to the exhaust-valve cylinder and controlled at its other end by the power-piston, a spring for normally holding said check-valve closed, and a mechanical connection between said check-valve and the power piston for intermittently opening said check-valve.

883,689. VEHICLE-STANDARD. FREDERICK W. BLECKLEY, Hazleton, Pa. Filed May 29, 1907. Serial No. 376,342.

1. A vehicle standard comprising a socket, having horizontal flanges extended inward from the upper edges of its sides to overlap the top of the socket and spaced therefrom, and an upright placed upon the socket and having outer horizontal flanges confined between the top of the socket and the said horizontal flanges thereof, the top of the socket and the horizontal flanges of said upright and socket being connected by suitable fastening means.

2. A vehicle standard comprising a socket and an upright portion placed thereon, said upright portion having horizontal flanges secured to the top of the socket and having a lip bent around and underlapping said top of the socket and secured thereto.



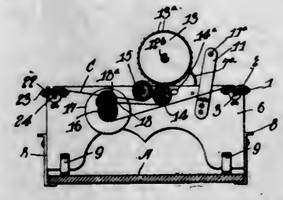
3. A vehicle standard comprising a socket having inner horizontal flanges at the upper edges of its side pieces overlapping the top and spaced therefrom, and an upright having outer horizontal flanges confined between the top and the inner horizontal flanges of said socket and secured thereto and having a lip bent around the edge of said top and underlapping the same and fastened thereto.

4. A vehicle standard comprising an upright portion and a socket, the latter formed from a blank bent into the shape substantially as set forth and comprising a bottom, top, end, sides and vertical and horizontal flanges, the vertical flanges connecting adjacent vertical edges of the end and sides and the horizontal flanges connecting adjacent edges of the top and sides.

5. A vehicle standard comprising an upright and a socket, the upright being formed of a sheet metal blank having spaced cuts extended inward from its base and having edge portions of the blank bent on lines corresponding with the said cuts to form a front and sides and having the base portion bent to provide horizontal flanges to rest upon the top of the socket and a lip to underlap the said top of the socket.

[Claim 6 not printed in the Gazette.]

883,690. CLOTH-WINDING MACHINE. EDWARD W. BLYTHE, Decatur, Tex. Filed Apr. 18, 1907. Serial No. 368,973.

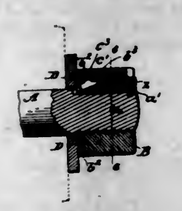


1. In a cloth winding machine, a bolt-carrying shaft having a stepped friction wheel thereon, and a spring-pressed lever bearing against the wheel and adapted to release the friction and accelerate the wheel as it passes off each step.

2. In a cloth winding machine, the combination with winding and unwinding bolt-holding shafts, of a roller between said shafts, having guide collars, and means to run the cloth around the roller and in opposite directions back and forth between the collars.

3. A guide roller for a cloth winding machine, comprising a roller and adjustable collars thereon, the collars having inner recesses, clutch blocks in the recesses, and springs behind the clutch blocks, causing same to engage the roller.

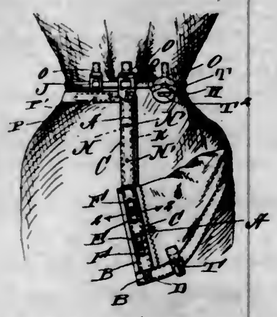
883,691. NUT-LOCK. ROBERT H. BOWMAN, Canon City, Colo. Filed Oct. 15, 1907. Serial No. 397,512.



1. The combination with the axle and the nut, each having longitudinal key seats adapted to be brought into alinement, the nut having radial recesses at the ends of its key seats and an annular recess on its inner face; of a locking detent adapted to be slid into the alining axle and nut key seats, said detent including a spring latch having a locking lug adapted to extend up into the radial recess at the ends of the nut key seats and a washer that seats in the annular recess on the nut for the purposes stated.

2. The combination of the axle and the nut, each having longitudinal key seats adapted to be brought into alinement, the nut having radial recesses at the inner ends of the seats and radial notches on its front face extending from the said seats, the nut having apertures that extend down to the radial recess; with the locking detent C having the inner end of its upper face downwardly beveled, a spring latch secured to its upper face having an upturned locking lug projected over the said beveled end, said lug having a beveled shoulder, and the detent having an aperture at its outer end, all being arranged substantially as shown and described.

883,692. PLACKET-CLOSER. JONATHAN L. BRASSINGTON, Mount Carmel, Pa. Filed July 25, 1907. Serial No. 385,566.

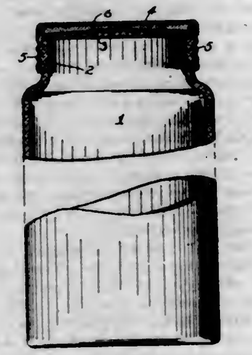


1. A placket closer comprising, in combination with a skirt, a slotted strip fastened to one of the meeting edges of the placket, a covering for said strip, a strip fastened to the other edge of the placket and headed studs projecting therefrom designed to engage said slots, a waist, a loop fixed thereto, a plate having a slot therein, a bar fixed to the skirt band, a lug projecting from said bar and adapted to engage a slot of said plate upon the waist, as set forth.

2. A placket closer comprising, in combination with a skirt, a slotted strip fastened to one of the meeting edges of the placket, a covering for said strip, a strip fastened to the other edge of the packet and headed studs projecting therefrom designed to engage said slots, a waist, a loop fixed to said waist, a plate supported by said loop and provided with a slot, a bar fastened to the waist band of the skirt, a lug projecting from said bar and adapted to pass through the slot in said loop supported plate, and means carried by the plate for holding the stud in the slot therein, as set forth.

3. A placket closer comprising, in combination with a skirt, a slotted strip fastened to one of the meeting edges of the placket, a covering for said strip, a strip fastened to the other edge of the placket, and headed studs projecting therefrom designed to engage said slots, a waist, a loop fixed to said waist, a plate supported by said loop and provided with a slot, a bar fastened to the waist band of the skirt, a lug projecting from said bar and adapted to pass through the slot in said loop supported plate, a resilient wire bent to form a loop and fastened to said loop supported plate, strands of said wire forming a throat through which the shank of the stud upon said bar is adapted to be passed, as set forth.

883,693. HERMETICALLY-CLOSED RECEPTACLE. WILLIAM M. BROWNLEE, Jefferson City, Tenn. Filed Apr. 4, 1907. Serial No. 366,380.



1. In a structure of the nature described, a receptacle body having an opening, a plate extending across the wall of said body and across said opening, a cap located above said plate and having a flange extending downward over said body, and a mass of fusible material located between said plate and said cap, substantially as described.

2. In a structure of the nature described, a receptacle body having an opening, a plate extending across the wall of said body and across said opening, a cap located above said plate and having a flange extending downward over said body, said body and said flange having means for effecting engagement between said members, and a mass of fusible material located between said plate and said cap, substantially as described.

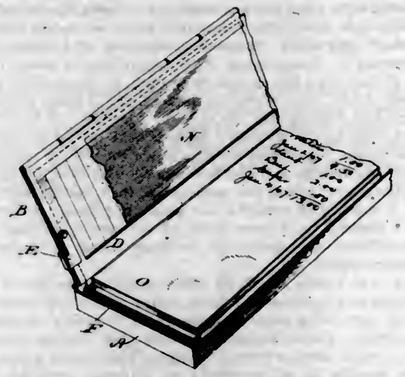
3. In a structure of the nature described, a receptacle body having an opening and being screw-threaded around said opening, a plate extending across the wall of said body and across said opening, a cap located above said plate and having a screw-threaded flange extending downward over said body, and a mass of fusible material located between said plate and said cap, substantially as described.

4. In a structure of the nature described, a receptacle body having an opening, a plate extending across the wall of said body and across said opening, a cap located above and bearing downward upon said plate and having a flange extending downward over said body, and a mass of fusible material located between said plate and said cap, substantially as described.

5. In a structure of the nature described, a receptacle body having an opening and being screw-threaded around said opening, a plate extending across the wall of said body and across said opening, a cap located above said plate and having a screw-threaded flange extending downward over said body, and a mass of fusible material located between said plate and said cap, substantially as described.

[Claims 6 to 10 not printed in the Gazette.]

883,694. MANIFOLDING APPARATUS. CHARLES W. BYHAM, Kane, Pa. Filed Dec. 7, 1907. Serial No. 405,567.

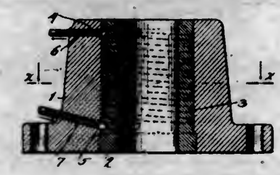


1. A manifolding apparatus comprising a casing, a frame hinged to the side of the casing and provided with an opening, a second frame hinged to the first mentioned frame and provided with an opening adapted to register with the opening in the other frame, as set forth.

2. A manifolding apparatus comprising a casing, a frame hinged to the side of the casing and provided with an opening, a second frame hinged to the first-mentioned frame and provided with an opening adapted to register with the opening in the other frame, and means carried by one of the frames for holding the two together, as set forth.

3. A manifolding apparatus comprising a casing, a frame hinged to the side of the casing and provided with an opening, a second frame hinged to the first mentioned frame and provided with an opening adapted to register with the opening in the other frame, a hook pivotally connected to the end of one of said frames and adapted to hold the two together, as set forth.

883,695. DIE. FERDINAND E. CANDA, New York, N. Y., assignor to Chrome Steel Works, Chrome, N. J., a Corporation of New Jersey. Filed Mar. 19, 1906. Serial No. 306,805.

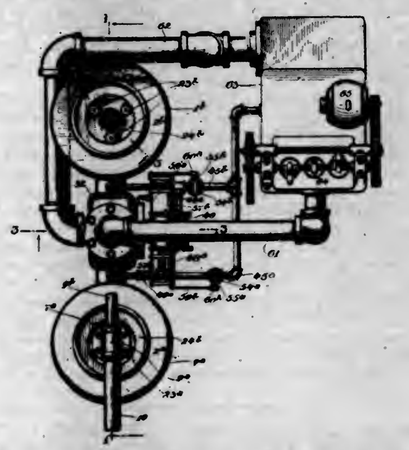


1. A die for forging presses and the like, comprising a die proper and a liner bushing fitting therein, said bushing having in the face adjacent to the die proper a channel for the circulation of cooling fluid, said die provided with means for supplying cooling fluid to said channel.

2. A die for forging presses and the like, comprising a die proper and a liner bushing therefor, said bushing provided in the face adjacent to the die proper with a spiral groove for the circulation of cooling fluid, said die provided with supply and discharge ducts communicating with said groove.

3. A die for forging presses and the like, comprising a die proper and a liner bushing therefor, said liner bushing having in its outer surface a spiral groove for the circulation of cooling fluid, the die proper having supply and discharge ducts and grooves connected therewith and extending around the inner surface of said die proper, said grooves adapted to register with the spiral groove of the bushing when said bushing is in place.

883,696. HYDRAULIC AIR AND GAS COMPRESSOR. GEORGE P. CARROLL, Bridgeport, Conn. Filed Nov. 1, 1907. Serial No. 400,154.



1. In combination a chamber having an outlet, a valve positionable either to admit liquid under pressure into said chamber so as to expel gas contained therein through said outlet or to emit liquid from said chamber, means for positioning said valve so as to admit such liquid into said chamber after liquid has been emitted therefrom, means automatically operative to close said outlet when said chamber has been substantially so filled with liquid, means actuated in opposition to a constant pressure by the increased pressure of the liquid caused by the closing of said outlet so as to shut off the further supply of liquid and to position said valve so as to emit liquid from said chamber, means for keeping said outlet closed while liquid is being so emitted, and means for admitting gas into said chamber during such emission.

2. In combination two chambers each having an outlet, a valve positionable to admit liquid under pressure into each chamber in alternation so as to expel gas contained therein through its outlet while emitting liquid from the other chamber, means automatically operative to close the outlet of the chamber that has been substantially so filled with liquid, means actuated in opposition to a constant pressure by the increased pressure of the liquid caused by the closing of such outlet so as to shut off the further supply of liquid and to position said valve so as to admit liquid under pressure into the other chamber, means for keeping the outlet of each chamber closed while liquid is being emitted therefrom, and means for admitting gas into that chamber during such emission.

3. In combination a chamber having an outlet, a valve positionable either to admit liquid under pressure into said chamber so as to expel gas contained therein through said outlet or to emit liquid from said chamber, means for positioning said valve so as to admit such liquid into said chamber after liquid has been emitted therefrom, means automatically operative to close said outlet when said chamber has been substantially so filled with liquid, means actuated in opposition to a constant pressure by the increased pressure of the liquid caused by the closing of said outlet so as to shut off the further supply of liquid and to position said valve so as to emit liquid from said chamber, a first check valve for preventing a back flow of gas through said outlet while liquid is being emitted from said chamber, and a second check valve opening into said chamber.

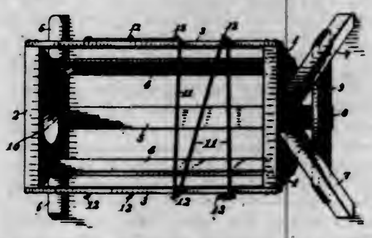
4. In combination two chambers each having an outlet, a valve positionable to admit liquid under pressure into each chamber in alternation so as to expel gas contained therein through its outlet while emitting liquid from the other chamber, means automatically operative to close the outlet of the chamber that has been substantially so filled

with liquid, means actuated in opposition to a constant pressure by the increased pressure of the liquid caused by the closing of such outlet so as to shut off the further supply of liquid and to position said valve so as to admit liquid under pressure into the other chamber, check valves for preventing a back flow of gas through the outlets of each chamber while liquid is being emitted therefrom, and other check valves opening into each chamber.

5. In combination a chamber having an outlet, a valve positionable either to admit liquid under pressure into said chamber so as to expel gas contained therein through said outlet or to emit liquid from said chamber, means for positioning said valve so as to admit such liquid into said chamber after liquid has been emitted therefrom, means automatically operative to close said outlet when said chamber has been substantially so filled with liquid, means actuated in opposition to an adjustable constant pressure by the increased pressure of the liquid caused by the closing of said outlet so as to shut off the further supply of liquid and to position said valve so as to emit liquid from said chamber, means for keeping said outlet closed while liquid is being so emitted, and means for admitting gas into said chamber during such emission.

[Claims 6 to 100 not printed in the Gazette.]

883,697. ANIMAL-HOLDER. FRANKLIN CHAPMAN, Vandalia, Mich. Filed Nov. 23, 1907. Serial No. 403,563.



1. An animal holder comprising semi-circular heads, one head having an opening to receive the nose of an animal, and thus adapted to operate as a muzzle, a series of slats connecting the heads and spaced apart, and means for supporting the described structure in an inclined position.

2. An animal holder comprising two heads of convex lower outline, one of said heads having a funnel shaped opening to receive the nose of an animal and hold the same, a series of slats connecting the heads, a cord attached to one of the upper slats, a series of hooks in the respective upper slats and adapted to engage and hold the cord and means for securing the free end of the cord.

3. An animal holder, comprising semi-circular heads, a series of slats connecting the heads, a sill supporting the lower head, legs supporting the upper head at an elevation above the lower head, a cord attached to one of the upper slats, hooks in the upper slats to engage the cord, and a cleat to secure the free end of the cord.

4. An animal holder, comprising two semi-circular heads, one of which heads is provided with a funnel-shaped opening, a series of slats connecting said heads and spaced apart at intervals, legs supporting the upper head at an elevation above the lower head, a cord attached at one end to one of the upper slats, hooks in the respective upper slats to engage the cord, and a cleat to secure the free end of the cord.

883,698. ART OF HARDENING AND TOUGHENING STEEL. JAMES CHURCHWARD, New York, N. Y. Filed Apr. 9, 1907. Serial No. 367,258.

1. The herein described improvement in the art of hardening and toughening metals, which consists in forming an alloyed steel which contains parts or percentages of nickel, chromium, tungsten, manganese and vanadium, melting the same together and carrying the temperature of the metal bath to about 1960° C. if pure metallic chromium is used or from 1600° to 1960° C. if ferro chromium is used, for about 35 minutes before tapping the furnace.

2. The herein described improvement in the art of hardening and toughening metals, which consists in forming an alloyed steel which contains parts or percentages of nickel, chromium, tungsten, vanadium and manganese, carrying the temperature of the metal bath to about 1960° C. if pure metallic chromium is used, or from 1600° C. to 1960° C. if ferro chromium is used, for a short period of time and then casting the same in a mold.

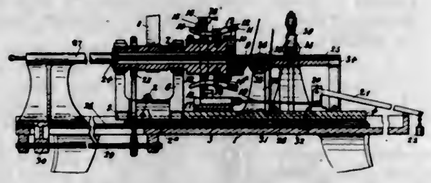
3. The herein described improvement in the art of hardening and toughening metals, which consists in forming a steel containing parts or percentages of nickel, chromium, tungsten, vanadium and manganese, then casting the same in a mold, then pressing the same, and finally subjecting the casting to a succession of alternate heatings and quenchings, the successive heatings being at graduated temperatures.

4. The herein described improvement in the art of hardening and toughening metals, which consists in forming a steel containing parts or percentages of nickel, chromium, tungsten, vanadium and manganese, then casting the same in a mold, then pressing the same, and finally subjecting the casting to a succession of alternate heatings and quenchings, the heating corresponding to the retardation points of the alloying metals, and being at temperatures a little below said retardation points.

5. The herein described improvement in the art of hardening and toughening metals, which consists in forming a steel containing parts or percentages of nickel, chromium, tungsten, vanadium and manganese, then casting the same in a mold, then pressing the same, and finally subjecting the casting to a succession of alternate heatings and quenchings, the successive heatings being graduated to temperatures a little below the retardation points of the several alloying metals, commencing with a temperature that reaches to within 50° C. of the retardation point of the alloying metal having the highest retardation point, and continuing down in succession each time within 50° C. of the retardation point of the respective alloying metals.

[Claims 6 to 10 not printed in the Gazette.]

883,699. LATHE FOR BILLIARD-CUES OR THE LIKE. MAX E. DANNENBERG, Berlin, Germany. Filed Apr. 16, 1906. Serial No. 312,059.

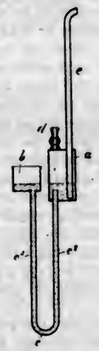


1. In a machine for manufacturing billiard-cues and smooth or shaped rods or bars of circular or similar section, the combination of a frame, models adapted to be attached to that frame, a chuck carried by said frame and adapted to receive one end of the work-piece, a tiltable plate, a guide-head arranged upon said plate a fixed support over which the work-piece is drawn by the chuck, a cutter journaled in a bearing attached to the table and located between the guide-head and said support and adjacent said support, and the arrangement being such as to tilt the tiltable plate by and according to said model, said chuck having a longitudinal movement relative to said guide-head, substantially and for the purpose as described.

2. In a machine for the manufacture of billiard-cues and smooth or shaped rods or bars of circular or similar section, the combination with a frame, models adapted to be attached to the frame, a chuck adapted to receive one end of the work-piece, a tiltable plate, a guide-head arranged upon said plate, a cutter located in front of the guide-head, means for moving the tiltable plate by and according to said model, said chuck being carried by said frame, the chuck and said guide-head having a relative longitudinal

movement, the said guide-head consisting of a sleeve rigidly attached to the shaft of the machine, levers 12 carried by the sleeve and operating slides 10 carrying rolls 9 a disk 14 and ring 16 governing the positions of said levers and a bell crank lever 21 having a weight 22 yieldably maintaining the position of said disk 14 and ring 16.

883,700. HYDRAULIC-SEAL SAFETY-VALVE. ALEXANDER B. DRÄGER, Lübeck, Germany, assignor of one-half to The Firm of Drägerwerk, Heinr. & Bernh. Dräger, Lübeck, Germany, and one-half to Ernst Wiss, Griesheim-on-the-Main, Germany. Filed Aug. 7, 1907. Serial No. 387,537.



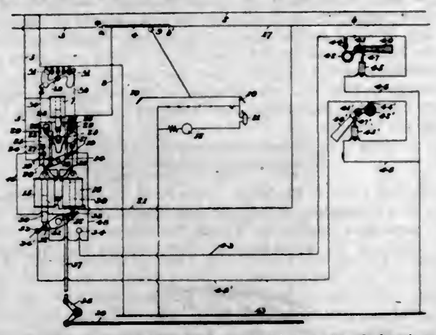
1. An hydraulic seal-safety valve having a closed tank and an open tank in fixed relation, and a U-shaped pipe connecting both tanks, gas-inlet pipe and an outlet-pipe for the closed tank.

2. An hydraulic seal-safety valve having a closed tank and an open tank, a U-shaped pipe connecting both tanks and projecting into the closed tank at some distance from its bottom, a gas feed pipe opening into the closed tank below the mouth of the U-shaped pipe.

3. An hydraulic seal comprising a closed tank, an open tank on substantially the same level, a gas-inlet pipe opening into the closed tank near the bottom thereof, a conduit connecting the tanks above the mouth of the gas-inlet pipe and an outlet pipe in the closed tank.

4. An hydraulic seal comprising a closed tank, an open tank, a U-shaped pipe opening into said tanks on the same level, a gas-inlet pipe opening into the closed tank below the level of the opening of the U-shaped pipe, and a gas outlet in the closed tank above the outlet of the U-shaped pipe.

883,701. SWITCHING DEVICE. JAMES A. DUFFY and OSCAR IRWIN, Pittsburg, Pa., assignors of six-tenths to Charles D. Armstrong, Pittsburg, Pa. Filed Jan. 19, 1904. Serial No. 189,672.



1. In an electric switching apparatus, a track having a switch and switch shifting mechanism and a trolley wire having two insulated sections, one of said sections having electrical connections arranged to actuate the switch shifting mechanism and the other section having electric connections arranged to control the action of the first-named section; substantially as described.

2. In an electric switching mechanism a trolley wire having an insulated feed section, a car having a traveling contact therefor, electric switch-point throwing means, a magnet receiving current through the insulated section, means controlled by said magnet for reversing the action of the switch-point throwing means, means for indicating the position of the switch and hand mechanism for controlling the energizing of the magnet; substantially as described.

3. In an electric switching device a switching mechanism having two electro-magnets arranged to throw the switch, means for indicating the position of the switch, an insulated section for the traveling contact and a current-changing device connected with the electric switch for the two magnets and arranged to change the current thereto when the changing device is actuated; substantially as described.

4. A switch having electro-mechanical means for operating it from a car and having signal mechanism arranged to indicate the position of the switch and electrical connections arranged to shift the signal device when the switch is shifted; substantially as described.

5. In switching mechanism, a pair of independent signals, each arranged to indicate a position of the switch and including an electric lamp and a semaphore arm, an electro-magnetic mechanism for shifting each semaphore when the switch is shifted and energize the respective lamps according to the position into which the switch is shifted, substantially as described.

[Claims 6 to 15 not printed in the Gazette.]

883,702. SHOVEL. JOHN W. ELLISON, Comstock, Tex. Filed Apr. 13, 1904. Serial No. 202,981.

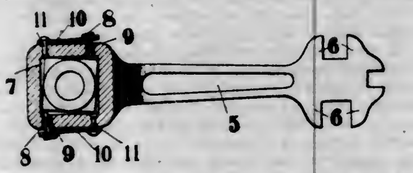


A shovel comprising a blade with a goose neck having a shoulder provided with a solid screw-threaded plug, a hollow standard having internal screw threads in its opposite ends, and screw-threaded openings in the sides of the standard which pass through said internal screw threads, a handle having a shoulder with a solid screw threaded plug, said screw threads of the neck and plug of the handle serving to be detachably secured respectively to said opposite and internal threads of the standard to permit of said shoulders of said neck and handle to engage with the opposite ends of the standard, and set screws inserted in said side screw threaded openings of the standard serving to impinge against the screw threads of said plugs of said goose neck and said handle, substantially as specified.

883,703. PROCESS OF MAKING DIBROMINDIGO. GADIENT ENGI, Basel, Switzerland, assignor to The Firm of Society of Chemical Industry in Basle, Basel, Switzerland. Filed Mar. 27, 1907. Serial No. 364,909.

The herein described process for the manufacture of a dibromoderivative of indigo by heating indigo with four atoms of bromin in presence of nitrobenzene.

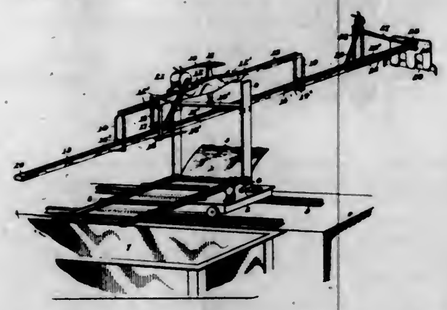
883,704. WRENCH. CHARLES O. EVERHART, Girard, Ohio. Filed July 18, 1907. Serial No. 384,428.



1. The combination with a wrench having a nut socket, of a holder comprising diagonally opposite pins loosely mounted in the walls of the socket and engageable at one end with a nut therein, and springs secured to the outside of the socket walls and connected to the other ends of the pins.

2. The combination with a wrench having a nut socket and diagonally opposite transverse openings in the walls of the socket, of a holder comprising pins extending through the openings into the socket and engageable with opposite sides of a nut therein adjacent diagonally opposite corners thereof, and springs secured to the outside of the socket walls and connected to the pins for pressing them into engagement with the nut.

883,705. COKE-DRAWER. DAVID FERGUSON, Pittsburg, Pa., assignor of one-fourth to Oliver G. Ferguson and one-fourth to William J. Ebken; Pittsburg, Pa. Filed Sept. 19, 1907. Serial No. 393,604.



1. In a coke drawer, the combination of a bar, a rake secured to the bar and movable vertically, a rake-moving lever carried by the bar, and lever-operating means.

2. In a coke drawer, the combination of a bar, a rake secured to the bar and movable vertically, a vertically swinging two-arm lever mounted on the bar with one arm engaging the rake, and lever-operating means engaging the other arm.

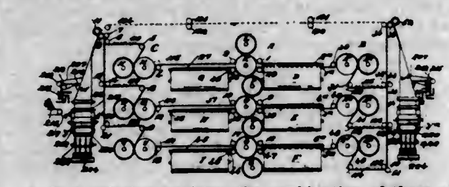
3. In a coke drawer, the combination of a bar, a rake secured to the bar and movable vertically, a lever-support raised from the bar, a vertically swinging two-arm lever fulcrumed in the support with one end in engagement with the rake, and a lever-operating device movable longitudinally of the bar and in engagement with the other arm of the lever.

4. In a coke drawer, the combination of a bar, a rake secured thereto and movable vertically, a vertically swinging two-arm lever carried by the bar with one arm in engagement with the rake, and a lever-actuating bar movable longitudinally of the first mentioned bar and in operative engagement with the other arm of said lever.

5. In a coke drawer, the combination of a channel bar, a rake secured thereto and movable vertically, a rack bar within and movable longitudinally of the channel with means for operating the rack bar, and an operative connection between the rack bar and rake for raising and lowering the latter.

[Claims 6 to 15 not printed in the Gazette.]

883,706. PRINTING-MACHINE. JOSEPH L. FIRM, Berwyn, Ill., assignor to The Goss Printing Press Company, Chicago, Ill. Filed Oct. 22, 1907. Serial No. 398,625.



1. In a printing machine, the combination of three sets of printing couples arranged in a row with their cylinders in parallelism, means to feed a plurality of webs to the intermediate set, there to be printed on one side, means to pass part of said webs to each of the end sets, there to be printed on the other side, and means to cross over the webs from the set at one end and associate the same with the webs of the set at the other end.

2. In a printing machine, the combination of three sets of printing mechanisms arranged side by side, with cylinders parallel, the intermediate set having a plurality of form and impression cylinders arranged one above the other with each impression cylinder coöperating with two form cylinders, to print one side of a plurality of webs, and each end set having means to print the other side of part of said webs, means to feed a plurality of webs to the intermediate set, and means to pass part thereof to each of the end sets.

3. In a printing machine, the combination of three sets of printing mechanisms arranged in a row with cylinders parallel, the intermediate set having an impression cylinder coöperating with two form cylinders to print one side of two webs, and the end sets each having a couple to print the other side of one web, means to feed webs into the intermediate set from the side, and means to turn said webs and to pass the same severally in a straight line through the intermediate and each of the end sets and deliver part of the webs at each end of the machine.

4. In a printing machine, the combination of an intermediate and two end sets of printing mechanisms arranged in a straight line with cylinders parallel, the intermediate set having a plurality of double couples arranged one above the other and comprising alternate form and impression cylinders, each impression cylinder coöperating with the two adjacent form cylinders to print one side of two webs, and the end sets being constructed to each print the other side of part of the webs, means to feed a plurality of webs to the intermediate set and to pass part of said webs to one end set and part to the other.

5. In a printing machine, the combination of an intermediate and two end sets of printing couples arranged in a straight line with cylinders parallel, the intermediate set comprising a plurality of double couples arranged one above the other and adapted to each print one side of two webs, and the end sets each comprising a plurality of single couples arranged one above the other and adapted to each print the other side of one web, means to feed two sets of webs to the couples of the intermediate set from the side, one set of webs being fed to said couples in one direction and the other set in the opposite direction, and means to pass said sets of webs to the end couples respectively and to deliver the same respectively at opposite ends of the machine.

[Claims 6 to 11 not printed in the Gazette.]

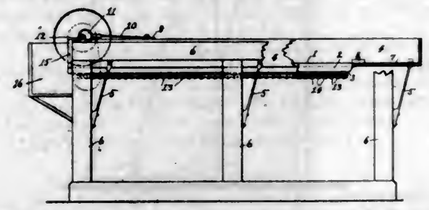
883,707. BELT-BUCKLE. HENRY W. FISHEL, New York, N. Y., assignor to himself and Theodore H. Fishel, Copartners, trading as Fishel, Nessler & Company, New York, N. Y. Filed May 29, 1907. Serial No. 376,245.



1. A belt-buckle having two members provided with means for detachably securing them together, one of the members being provided with means for adjustably securing the belt comprising two substantially unresilient parallel flat bars located normally in the same plane of which one is flexible so as to be bent to secure the belt after it is passed about the other bar.

2. A belt-buckle having two members provided with means for detachably securing them together, one of the members comprising an open body and two substantially parallel bars about which the belt is passed one of the bars being located behind the opening in the body to permit access from the front of the body so that the bar may be bent to secure or to release the belt.

883,708. CHERRY-STEMMER. RICHARD G. FONTANA, San Francisco, Cal. Filed July 9, 1907. Serial No. 382,912.



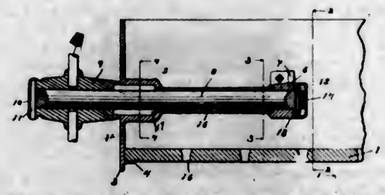
1. A cherry-stemmer comprising a trough having a slot too small for the passage of the cherry while permitting the protrusion through it of the stem, and rotatable rolls, exterior to the trough and disposed transversely to its slot, to grip the protruding stem and pull it from the cherry.

2. A cherry-stemmer comprising a trough having a slot in its bottom too small for the passage of the cherries while permitting the protrusion through it of the stems, means for advancing the cherries through the trough, and rotatable rolls below the trough disposed transversely to its slot, to grip the protruding stems and pull them from the cherries.

3. A cherry-stemmer comprising a shaking, trough-like table with a slot in its bottom too small for the passage of the cherries while permitting the protrusion through it of their stems, and rotatable rolls below the table disposed transversely to its slot, to grip the protruding stems and pull them from the cherries.

4. A cherry-stemmer comprising a reciprocating, trough-like table with a slot in its bottom too small for the passage of the cherries while permitting the protrusion through it of the stems, and rotatable rolls to grip the protruding stems and pull them from the cherries, said rotating rolls being arranged below the table transversely to the slot of the table and the direction of movement of the table.

883,709. AXLE AND BEARING FOR GRAIN-SEEDING MACHINES. CHARLES L. FOWLE, Dowagiac, Mich., assignor to The Dowagiac Manufacturing Company, Dowagiac, Mich. Filed Jan. 2, 1908. Serial No. 408,896.



1. The combination with a grain box, comprising a bottom, sides and an end; a bearing on said box end, projecting into said box clear of the bottom thereof; an inner bearing arranged in said box in alinement with said bearing on said end; a supporting bracket for said inner bearing secured to the side walls of said box whereby said bearing is supported clear of the bottom of the box; an axle having a transverse hole through each end thereof, whereby either end may be arranged in said bearings, with its end projecting through the inner bearing, its outer end being adapted to receive a wheel; a retaining pin arranged through the hole in the inner end of said axle; a dust cap for said inner bearing adapted to retain said pin; and a tubular housing for said axle arranged between said bearings and carried thereby.

2. The combination with a grain box, comprising a bottom, sides and an end, of a bearing on said box, projecting into said box clear of the bottom thereof; an inner bearing arranged in said box in alinement with said bearing on said end; a supporting bracket for said inner bearing secured to the side walls of said box whereby said bearing is supported clear of the bottom of the box; an axle having a transverse hole through each end thereof, whereby either end may be arranged in said bearings, with its end projecting through the inner bearing, its outer end being adapted to receive a wheel; and a retaining pin arranged through the hole in the inner end of said axle.

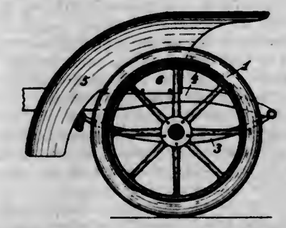
3. The combination with a grain box, comprising an end, of a bearing on said box end; an inner bearing arranged in said box in alinement with said bearing on said end; an axle, having a transverse hole through each end thereof, whereby either end may be arranged in said bearings, with its end projecting through the inner bearing, its outer end being adapted to receive a wheel, a retaining pin arranged through the hole in the inner end of said axle; a dust cap for said inner bearing adapted to retain said pin; and a tubular housing for said axle arranged between said bearings and carried thereby.

4. The combination with a grain box, comprising an end, of a bearing on said box end; an inner bearing arranged in said box in alinement with said bearing on said end; an axle having a transverse hole through each end thereof; whereby either end may be arranged in said bearings, with its end projecting through the inner bearing, its outer end being adapted to receive a wheel; a retaining pin arranged through the hole in the inner end of said axle; a dust cap for said inner bearing adapted to retain said pin; and a tubular housing for said axle arranged between said bearings and carried thereby.

5. The combination with a grain box, comprising an end; of a bearing on said box end; an inner bearing arranged in said box in alinement with said bearing on said end; an axle having a transverse hole through each end thereof, whereby either end may be arranged in said bearings, with its end projecting through the inner bearing, its outer end being adapted to receive a wheel; a retaining pin arranged through the hole in the inner end of said axle; and a tubular housing for said axle arranged between said bearings.

[Claims 6 to 15 not printed in the Gazette.]

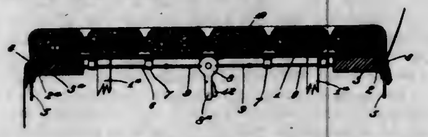
883,710. MUD-WING FOR MOTOR-VEHICLES. GEORG FRENTZEN, Aix-la-Chapelle, Germany. Filed Jan. 16, 1906. Serial No. 296,401.



1. A mud-wing for motor-vehicles consisting of a rigid body substantially inclosing with its longitudinally curved part the rearward upper quadrant of a front-wheel of a motor-vehicle, and transversely bent to terminate in an integral lateral member for securing said mud-wing to the vehicle-body and to admit of said front-wheel taking up any desirable angular positions within said body.

2. The combination with a motor-vehicle-frame and a wheel supporting it, of a mud-wing consisting of a rigid body substantially inclosing with its longitudinally curved part the rearward upper quadrant of a front-wheel of a motor-vehicle, and transversely bent to terminate in an integral lateral member for securing said mud-wing to said motor-vehicle-frame and to admit of said front-wheel taking up any desirable angular positions within said body.

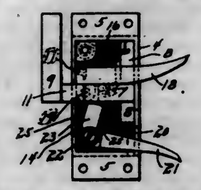
883,711. APPARATUS FOR MANUFACTURING UPHOLSTERY. ALFRED FRESCHL, Chicago, Ill. Filed Dec. 20, 1906. Serial No. 348,778.



1. In apparatus for the manufacture of upholstery, the combination of a support for the upholstery pad, and a holder at the edge of said support constructed to receive a strip of stiffening material to be added to the pad and through which strip tacks can be driven, said holder being adapted to clench the tacks when driven against it through the strip.

2. In apparatus for the manufacture of upholstery, the combination of a support for the upholstery pad, a holder to receive a strip to be added to the pad, and means movable with reference to the holder for temporarily retaining the strip in position in the holder.

883,712. WINDOW-SASH LOCK. MELVIN H. GABA, Dayton, Ohio. Filed Apr. 24, 1907. Serial No. 369,902.



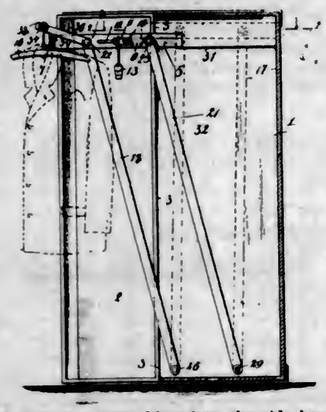
In a window sash lock, a rack attached to a sash strip, a toothed wedge adapted to engage said rack, a frame supporting said toothed rack and having a sliding and pivotal movement, an actuating finger lever above said frame, and a locking lever below said frame, said frame and levers being inclosed within a casing attached to the window sash, and an inclined guide inclosing the outer side of the toothed wedge, said inclined guide being mounted in the window sash, substantially as specified.

883,713. HANGER-RACK RECEPTACLE FOR CLOTHING. WINFIELD S. GILMORE, New York, N. Y. Filed Nov. 7, 1907. Serial No. 401,072.

1. In a receptacle for clothing in combination; a hanger rack in said receptacle; means to support said rack in the receptacle and to permit it to be extended therefrom; extension arms secured to said rack and capable of being extended outwardly beyond the front of the rack for supporting a removable display hanger rod across in front of said rack, said arms being capable of being retracted relatively to said rack so as to be out of the way when the rack is retracted.

2. In a receptacle for clothing in combination; a hanger rack in said receptacle; means to support said rack in the receptacle and to permit it to be extended therefrom; extension arms hinged to said rack and capable of being swung outwardly beyond the front of the rack for supporting a removable display hanger rod across in front of said rack, said arms normally occupying an infolded position on said rack out of the way when the rack is retracted.

3. In a receptacle for clothing in combination; a rectangular hanger rack in the upper part of said receptacle comprising rigidly connected side bars and front and back bars and one or more front to back extending hanger rods; means at the side of said rack for supporting said rack and to permit it to be extended out from the receptacle; rigid extension arms hinged to the side bars of said rack and normally folded in out of the way and capable of being swung out to extend beyond and rest upon the front bar of said rack and of being stopped in position for them to support a removable display hanger rod across in front of said rack.

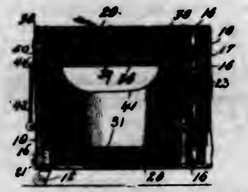


883,714. NUT-LOCK. JOHN R. GOODE, Washington, Pa. Filed Dec. 23, 1907. Serial No. 407,795.



In a nut-lock, the combination with a washer shell or casing having secured therein a semi-circular spring provided with an upwardly projecting tongue, of a cam carried by and journaled in said casing or shell, said tongue being adapted to engage circular depressions formed in the underside of the nut through the resiliency of the spring and withdrawn from engagement therewith by means of said cam for locking and unlocking the nut, all substantially as and for the purposes shown and described.

883,715. FIRELESS COOKER. ARTHUR T. HALLOCK, Grand Rapids, Mich., assignor to Hallock Fireless Cooker Company, Grand Rapids, Mich., a Corporation of Michigan. Filed Sept. 26, 1907. Serial No. 394,726.



1. In a fireless cooker, a casing provided with a pivotally mounted cover, packing material within said cover and casing, removable retaining frames inserted within the cover and casing, and a lining for the packing supported by said frames.

2. In a fireless cooker, a casing provided with a pivotally mounted cover, packing material within said casing and cover, removable retaining frames inserted within the cover and casing, a lining for the packing supported by said frames, and a series of securing devices extending inward from the outer face of the casing and cover to engage the lining supporting frames.

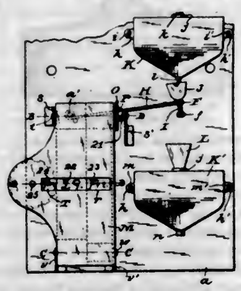
3. In a fireless cooker, a packed casing, a receptacle disposed therein, a downwardly projecting lid for said receptacle provided with a nonconducting packing therein, a cover plate for said packing having a strip inserted across the diameter thereof, and attaching pieces extending from said cover to said lid.

4. In a fireless cooker, a packed casing, a receptacle disposed therein, a downwardly projecting lid for said receptacle provided with a nonconducting packing therein, a cover plate for said packing having a strip inserted across the diameter thereof, and attaching pieces secured at one end to said strip and bent at their free ends to embrace the flange of said lid.

5. In a fireless cooker, a packed casing, a receptacle disposed therein, and a supporting rack within said receptacle comprising an annular band having transversely extending supporting wires disposed between the edges thereof and extended beyond the outer face of said band.

[Claims 6 and 7 not printed in the Gazette.]

883,716. AUTOMATIC CALENDAR AND ADVERTISER. WILLIAM L. IUPPENLATZ and ELMER R. MARTIN, Indianapolis, Ind., assignors of one-third to Otto N. Moore, Indianapolis, Ind. Filed Mar. 6, 1905. Serial No. 248,596.



1. Sign-displaying mechanism including a base, a stationary shaft mounted on the base, a sleeve mounted rotatively on the shaft, a pair of drive rollers mounted on the sleeve and adjustable rotatively thereon, means for binding the rollers together to the sleeve, a pair of guide rollers mounted on the base, a belt mounted on one of the drive rollers and on one of the guide rollers and having words thereon, a belt mounted on the other one of the drive rollers and on the other one of the guide rollers and having numbers thereon, and means for actuating the drive rollers.

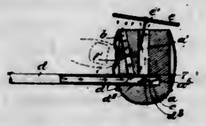
2. Sign-displaying mechanism including a base, a drive roller and a guide roller mounted on the base, a belt mounted on the rollers and provided with a projecting tooth, a disk mounted rotatively on the base and having teeth to be engaged by the tooth of the belt, and a slotted front attached to the base and extending over the fronts of the belt and the disk, and means for actuating the drive roller.

3. Sign-displaying mechanism including a base, a drive roller and a guide roller mounted on the base, a belt mounted on the rollers and provided with a projecting tooth, a disk mounted rotatively on the base and having teeth to be engaged by the tooth of the belt and having also a separate tooth thereon, a second disk mounted on the base and having teeth to be engaged by said separate tooth, means for actuating the drive roller, and a slotted front attached to the base and extending over the belt and the disks.

4. Sign-displaying mechanism including a base, a stationary shaft mounted on the base, a sleeve mounted rotatively on the shaft, a pair of drive rollers mounted on the sleeve and adjustable rotatively thereon, means for binding the rollers together on the sleeve, a ratchet wheel connected with one of the rollers, a vibrating arm mounted on the base and engaging the ratchet wheel, a pair of guide rollers mounted on the base, a pair of belts each one mounted on a drive roller and guide roller, a slotted front attached to the base and extending over the belts, and a table suitably supported under the slotted front beyond portions of the belts.

5. Sign-displaying mechanism including a base, a stationary shaft mounted on the base, a sleeve mounted rotatively on the shaft and having a ratchet wheel adjustable thereon, a pair of drive rollers mounted on the sleeve and adjustable rotatively thereon, means for binding the ratchet wheel and the rollers to the sleeve, a pair of guide rollers having different diameters and mounted on the base, a belt mounted on one of the drive rollers and on the smaller one of the guide rollers and having conventional characters thereon, a belt mounted on the other one of the drive rollers and on the larger one of the guide rollers and having conventional characters thereon and also provided with a lateral tooth, a disk mounted rotatively on the base and having conventional characters thereon and provided with teeth to be engaged by the tooth of the belt, a slotted front attached to the base and extending over the belts and the disk, an arm mounted on to the base and having a free end movable in operative engagement with the ratchet wheel, a table attached to the front, and means for operating the arm.

883,717. TRICK-PIPE. FRED I. JUDSON, Houston, Tex. Filed Nov. 15, 1907. Serial No. 402,308.



1. In a trick pipe, a body having two air passages combined with a lid loosely supported over said body to cooperate with the air passages thereof, together with an adjustable air blowing means for forcing air through one of said passages under one adjustment and through both of said passages under another adjustment.

2. A device of the character described, comprising a body having a main and a supplemental air passage that opens through the top, a lid supportable on the top over the air passages, an adjustable blowing stem having means under one adjustment for directing the air blast in a whirl through the main air passage against the under side of the lid and closing the supplemental passage and when under another adjustment to discharge the air current directly through the main and supplemental passage against the lid.

3. A device of the character described, that comprises a body having a central or main air passage and the supplemental air passage, and a transverse passage that communicates with the said air passages, a lid supportable on the body over the said air passages, and a blowing stem insertible in the transverse passage whereby to project the end of said stem below the lower end of the main passage, the said projected end of the stem having means for dividing the air current blown through the said main pipe, whereby to divide the air blast that passes up the main air passage, said stem having an outlet port adapted for registering with the supplemental air passage in the body, for the purposes specified.

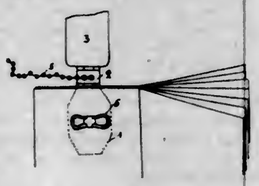
4. In combination with a pipe bowl having a central or main air passage and a supplemental passage, and having a transverse socket that extends inwardly from one side of the body, and communicating with said passages, a lid loosely supported over the air passages, said socket extending beyond the main passage, adjustable blowing means for directing air into the socket and through the main air passage only, under one adjustment and for directing air

through the supplemental and the main passages under another adjustment.

5. A trick device that comprises a body having a transversely disposed air inlet, a main air passage and a supplemental air passage that open through the top and communicate with the air inlet and a lid loosely supportable on said body, and a blowing tube for co-acting with the two air passages in the body, having an inlet for registering with the supplemental passage and a portion for partially closing off the main passage when the stem is turned to open the supplemental passage, said stem having means for deflecting the air current into two streams as they pass into the main passage.

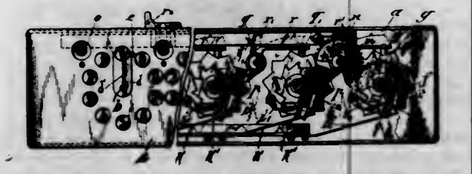
[Claims 6 to 10 not printed in the Gazette.]

883,718. CLASP WITH PENCIL-CHAIN FOR NOTE-BOOKS, DOCUMENTS, OR THE LIKE. EDUARD KAPUN, Szigetvár-Szentmihalyfa, Austria-Hungary. Filed Apr. 13, 1907. Serial No. 368,072.



In combination, a clasp comprising two plates, a link connecting said plates, a pencil chain connected to said link and loops carried by one plate and adapted to be passed through the article to which the clasp is to be applied and then bent aside.

883,719. ADDING-MACHINE. KARL KABASEK and JOHANNES AUMUND, Zurich, Switzerland. Filed Mar. 17, 1906. Serial No. 306,528.



1. In an adding machine, the combination of a series of shafts, a figure disk upon each shaft, a second series of shafts each of which is provided with gearing for operating its succeedingly adjacent figure disk, and a detent upon each shaft of said first series for engaging the gearing upon the preceding shaft, subetantially as described.

2. In an adding machine, the combination of a series of shafts, a peripherally toothed figure disk upon each shaft, a second series of shafts each of which is provided with gear wheels of which one is adapted to mesh with and rotate the next succeeding figure disk, and a detent upon each shaft of said first series for engaging the gearing upon the preceding shaft after the same has rotated one of said figure disks, substantially as described.

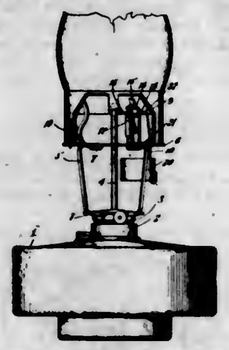
3. In an adding machine, the combination of a series of shafts, a figure disk upon each shaft, a second series of shafts each of which is provided with gearing for operating its succeedingly adjacent figure disk, a detent upon each shaft of said first series for engaging the gearing upon the preceding shaft after the same has rotated one of said figure disks, and means for tripping the said detents, substantially as described.

4. In an adding machine, the combination of a series of shafts, a figure disk upon each shaft, a second series of shafts arranged at a lower horisontal plane than said first series, gearing upon each shaft of said second series adapted to operate the figure disk upon the next succeeding shaft of said first series, and a detent upon each shaft of said first series adapted to engage the gearing upon the preceding shaft of said second series after the same has rotated one of said figure disks, substantially as described.

5. In an adding machine, the combination of a series of shafts upon each of which a peripherally toothed figure disk is mounted, a second series of shafts each of which carries a rigidly fixed star wheel, and a loosely mounted ratchet wheel and gear wheel, the latter being adapted to mesh with an adjacent figure disk, means for rotating said several gear wheels to impart rotary motion to said figure disks, a detent upon each shaft of said first series for engaging the preceding star wheel, and means for tripping said detents after the figure disks have been set, substantially as described.

[Claims 6 to 16 not printed in the Gazette.]

883,720. LAMP. FRANCIS W. KEARSEY, Montreal, Quebec, Canada. Filed Nov. 6, 1907. Serial No. 400,964.



1. An extinguisher for lamps comprising a spring-actuated pivotally mounted cap, a pintle for supporting said cap, an arm extending from said cap, a spring adapted to engage beneath said arm and to be retained by said pintle, a rod mounted to have universal movement and provided with a hook adapted to engage said arm to hold the cap elevated, and a weight mounted on said rod and adapted to actuate said rod to free the cap to the action of its spring whenever the lamp is moved in any direction from an upright position.

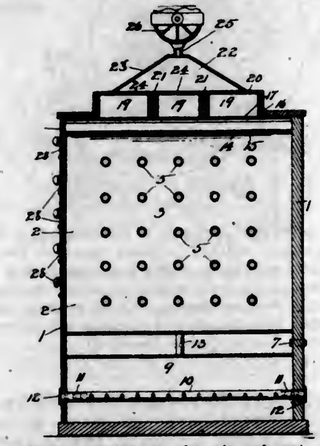
2. An extinguisher for lamps comprising a spring-actuated pivotally mounted cap, a pintle for supporting said cap, an arm extending from said cap, a spring adapted to engage beneath said arm and to be retained by said pintle, a rod mounted to have universal movement and provided with a hook adapted to engage said arm to hold the cap elevated, and a weight eccentrically mounted on said rod and adapted to actuate said rod to free the cap to the action of its spring whenever the lamp is moved in any direction from an upright position.

883,721. FRUIT AND VEGETABLE DRIER. FRANK D. KENDALL and THOMAS O. ROBINSON, Hanford, Cal. Filed Sept. 16, 1907. Serial No. 393,059.

1. In a drying apparatus, the combination of an air chamber, air inlet tubes connecting the opposite walls of said air chamber having their ends opening outside of the walls and the portion of the pipe inside of the chamber perforated, and perforated thimbles slidably mounted in the ends of the tubes to control the ingress of air to said tubes and chamber.

2. In a drying apparatus, a casing, a U-shaped steam chamber having upright portions extending up the two sides of said casing, pipes connecting the upright portions to hold the steam and form racks for the drying trays, an air chamber below said steam chamber, and pipes running through the lower part of the steam chamber to admit air to the drying trays, substantially as shown and described.

3. In a drying apparatus, a casing, a U-shaped steam chamber contained in said casing, the upright portions of said steam chamber extending up the sides of the casing, the space between said upright portions forming the drying chamber, pipes connecting said upright portions across said drying chamber to hold steam and form racks for the drying trays, air pipes running through the lower portion of the steam chamber, an air chamber in the lower portion of the casing and in communication with the air pipes aforesaid, and means to exhaust the air from the drying chamber, substantially as shown and described.

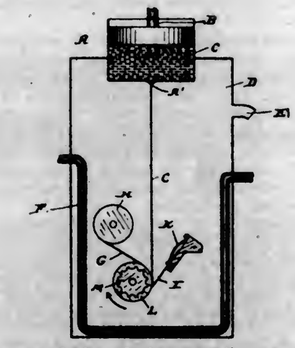


4. In a drying apparatus, the air exhaust comprising an exhaust chamber having perforated walls for the admission and discharge of air, a series of compartments in communication with said exhaust chamber, a single compartment in communication with said series of compartments, and an exhaust duct in communication with the last-mentioned compartment and having an exhaust fan therein, substantially as shown and described.

5. A drying apparatus comprising a casing, a U-shaped steam chamber in said casing, an air-chamber beneath said steam chamber, air-inlets comprising perforated tubes extending through said air-chamber and having their ends extending outside of the casing, perforated thimbles loosely mounted in said perforated tubes, air-pipes extending through the lower portion of said steam-chamber and connecting the air-chamber and drying chamber, and means to exhaust the air from the drying chamber, substantially as shown and described.

[Claim 6 not printed in the Gazette.]

883,722. MANUFACTURE OF GLUE. ISIDOR KITSEE, Philadelphia, Pa. Filed June 4, 1904. Serial No. 211,171.



1. The method of producing a continuous sheet of glue or gelatin, which consists in causing the glue in a liquid or semi-solid state to issue in a continuous thin stream from a receptacle, causing this stream to descend and during its descent the surplus moisture to be evaporated, and causing the so-formed thin sheet to be wound around a drum or reel, the surface of the different layers or convolutions provided with means to prevent the same from from adhering to each other.

2. In the production of glue or gelatin, the method which consists therein that said glue or gelatin, when still in a moist or pliable state, is caused to be wound as a continuous sheet on a support, the different layers or convolutions provided with means to prevent the same from adhering to each other.

3. In the production of glue or gelatin, the method which consists therein, that said glue or gelatin, when still in a moist or pliable state, is caused to be wound as a continuous sheet on a drum or sleeve, the different layers or convolutions separated by a continuous sheet of paper.

883,723. ELECTRIC TRANSMISSION OF INTELLIGENCE. ISIDOR KITSEE, Philadelphia, Pa. Filed July 12, 1907. Serial No. 383,541.

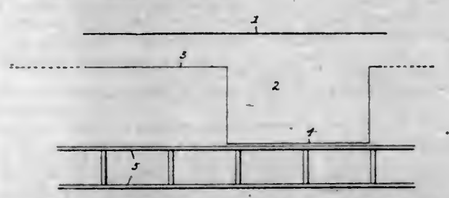


1. Means to neutralize impulses induced in lines of transmission from neighboring wires, said means comprising a conductor in inductive relation to the return of said wires and adjustable means to connect said conductor to two or more of said lines of transmission.

2. A series of lines of transmission, a common conductor for same, and means to connect said lines of transmission to said common conductor, the lines of transmission in the inducing field of a power wire and the common conductor in the inducing field of the return for said power wire.

3. In combination with one or more lines of transmission, positioned in the inducing region of a power wire, means to neutralise the inducing effect of said power wire, said means comprising a shunt for part of said lines of transmission, the shunt-wire in the inducing region of the return for said power wire.

883,724. ELECTRIC TRANSMISSION OF INTELLIGENCE. ISIDOR KITSEE, Philadelphia, Pa. Filed July 18, 1907. Serial No. 384,300.



1. A line of transmission positioned in part in the inducing region of a power wire and in part in the inducing region of the rails of travel, said rails of travel forming part of the return of said power wire.

2. A line of transmission positioned in part in the inducing region of a power wire and in part in the inducing region of the return of said power wire.

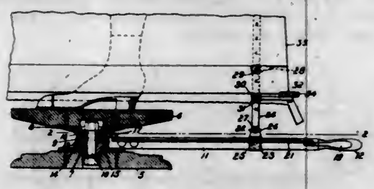
3. In a system of electric transmission wherein a power wire is carried over-head and the rails of travel are utilized as the return, a line useful for the electric transmission of intelligence, one part of said line in the inducing region of the power wire and one part of said line in the inducing region of the rails.

883,725. WORKING OF ELECTRIC VAPOR-LAMPS. RICHARD KÜCH, Hanau, Germany, assignor to The Firm of W. C. Heraeus, Hanau, Germany. Filed Dec. 7, 1905. Serial No. 290,799.

1. The method of working gas or vapor electric lamps having mercury electrodes to increase their efficiency which consists in applying to said electrodes an electric potential greater for unit length of column of light than that corresponding to the minimum point of its curve of efficiency, substantially as described.

2. The method of working gas or vapor electric lamps having mercury electrodes which consists in applying to said electrodes an electric potential of not less than twenty-five volts per centimeter of the length of column of light, substantially as described.

883,726. MACHINE FOR MEASURING AND CUTTING SKIRTS. CHARLES P. LEYNER, Boston, Mass. Filed June 21, 1907. Serial No. 380,059.



1. In a machine of the character described, a stationary base, a pedestal mounted on said base to rotate about a vertical axis, means to intermittently rotate said pedestal, said means comprising a horizontal arm, and a gage supported on said arm.

2. In a machine of the character described, a stationary base, a pedestal mounted on said base to rotate about a vertical axis, means to intermittently rotate said pedestal, said means comprising a horizontal arm, a support adjustably mounted on said arm to be moved toward and away from said axis, and a gage mounted on said support.

3. In a machine of the character described, a stationary base, a pedestal mounted on said base to rotate about a vertical axis, means to intermittently rotate said pedestal, said means comprising a horizontal arm, a support adjustably mounted on said arm to be moved toward and away from said axis, and a gage adjustably mounted on said support to be moved vertically.

4. In a machine of the character described, a stationary base, a pedestal mounted on said base to rotate about a vertical axis, means to intermittently rotate said pedestal, said means comprising a horizontal arm, and a pair of shears supported on said arm.

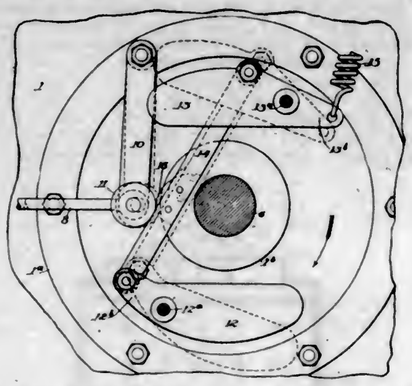
5. In a machine of the character described, a stationary base, a pedestal mounted on said base to rotate about a vertical axis, means to intermittently rotate said pedestal, said means comprising a horizontal arm, a support mounted on said arm, and a pair of shears adjustably mounted on said support to be moved vertically.

[Claims 6 to 12 not printed in the Gazette.]

883,727. SPEED-CONTROLLING DEVICE. CHARLES I. LONGENECKER, Milwaukee, Wis., assignor to International Harvester Company, a Corporation of New Jersey. Filed May 2, 1907. Serial No. 371,388.

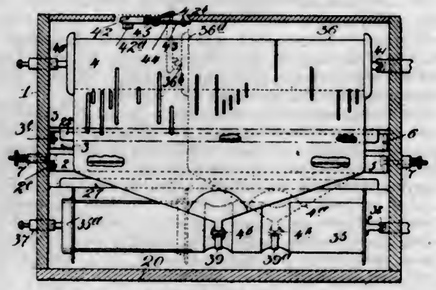
1. In a centrifugal governor, in combination, a rotating member, governor weights pivotally mounted thereon, a link connecting said weights, and a cam projection fixed to said link intermediate its length, substantially as described.

2. In a centrifugal governor, in combination, a rotating member, governor weights pivotally mounted thereon, a link connecting said weights, and a cam projection formed of a semi-circular disk, said disk fixed to said link at a position intermediate of its length, the arrangement being such that an outward movement of said weights will produce a movement inwardly of said cam projection, substantially as described.



3. In a centrifugal governor, in combination, a rotating member, governor weights pivotally mounted thereon, a link connecting said weights, and a cam projection formed of a semi-circular disk, the radius of curvature thereof being greater on its approaching than its receding side, the said disk being fixed to said link at a position intermediate of its length, substantially as described.

883,728. TRACKER OR BRIDGE FOR SELF-PLAYING MUSICAL INSTRUMENTS. LOUIS H. MAIER, New York, N. Y., assignor to John H. Ludwig, New York, N. Y. Filed Jan. 29, 1906. Serial No. 298,328.



1. The combination of a plurality of separate trackers adjustably supported so that either may co-act with a music sheet located in the same position at will, a plurality of series of pneumatics, and means for connecting the orifices of one of said trackers with one series of pneumatics and those of the other tracker with the other series of pneumatics.

2. The combination of a plurality of trackers having orifices, primary and secondary pneumatics, and means for separately connecting one series of tracker orifices with the primary pneumatics and the other series of tracker orifices with the secondary pneumatics.

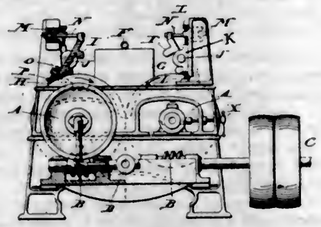
3. The combination of a plurality of trackers each provided with orifices, primary and secondary pneumatics, and means for connecting the orifices of one tracker with the primary pneumatics and the orifices of another tracker with the secondary pneumatics.

4. The combination of a plurality of trackers having orifices, primary and secondary pneumatics, means for connecting one series of orifices with the secondary pneumatics, means for connecting other series of orifices with the primary pneumatics, and means for causing the primary pneumatics to admit the atmosphere to the secondary pneumatics.

5. The combination of a plurality of trackers each provided with a series of orifices, primary and secondary pneumatics, means for connecting the orifices of said trackers separately, respectively, with said primary and secondary pneumatics, and means controlled by one of the pneumatics to admit atmosphere to the other of the pneumatics.

[Claims 6 to 17 not printed in the Gazette.]

883,729. CYLINDER DRYING-MACHINE. JOHN A. MEARETT, London, England, assignor to James Robinson Hatmaker, Paris, France. Filed Jan. 25, 1904. Serial No. 223,637.

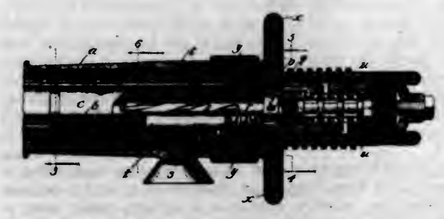


1. In a stripping device for cylinder machines, means for holding in working position the stripping-knife carried by a pivoted back-plate, the said means consisting of a rigid bar fixed parallel with the back-plate and above its axis and adjustable bolts connecting the upper arm of the said back-plate with the said bar, substantially as described.

2. In a stripping device for cylinder machines, an adjustable back-plate fitted with an elastic stripping-knife and with a cover-plate for the said knife furnished at short intervals with adjustable set-screws bearing upon the outer edge of the knife near its stripping edge to bring the said edge of the stripping-knife, throughout its entire length, in close contact with the cylinder, substantially as described.

3. A stripping device for cylinder drying machines, the said device consisting of a combination of an adjustable back-plate pivoted in end bearings and fitted at its lower edge with an elastic stripping-knife and with a cover plate for the said knife furnished at short intervals with adjustable set-screws bearing upon the outer surface of the knife near its stripping edge to bring the said edge of the stripping-knife throughout its entire length in close contact with the cylinder, and of a rigid bar fixed parallel with the back-plate and above its axis, and of adjustable bolts connecting the upper arm of the said back-plate with the said bar to hold the knife carried by the back-plate in working position, substantially as described.

883,730. DRILL. JOHN F. MITCHELL, Topeka, Kans. Filed Aug. 24, 1906. Serial No. 331,922.

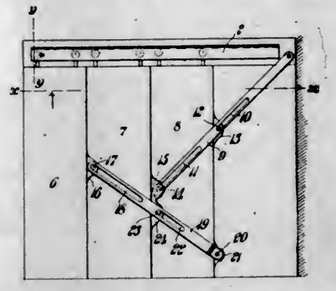


1. In a drill of the class described, the combination of an inclosing chamber, a hammer reciprocatingly and rotatively mounted therein, a rifled nut carried on such hammer, a rifled bar extending into the nut, ratchet teeth carried upon such bar, a ratchet ring adapted to be engaged by the ratchet teeth, a second ring rigidly secured within the inclosing chamber and having a toothed face against which a similarly toothed face of the ratchet ring engages, means for yieldingly holding such rings in engagement one with the other, whereby the ratchet ring is permitted to rotate within the inclosing chamber by overcoming such yielding means, and means whereby the bar is permitted to rotate in one direction within the ratchet ring and whereby it is prevented from rotating in the other direction within the ring.

2. In a drill of the class described, the combination of an inclosing chamber, a hammer reciprocatingly and rotatively mounted therein, a ratchet ring with its center on the axis of the chamber, a coacting pawl having a rifled connection with the hammer, and a fixed ring engaging the ratchet ring over an uneven surface.

3. In a drill of the class described, the combination of a frame, a hammer reciprocatingly and rotatively mounted in the frame, a ratchet and pawl mechanism having its center in the axis of the hammer, a rifled connection between the hammer and one member of the ratchet and pawl mechanism, and a connection through an uneven sliding contact surface between the other member of the ratchet and pawl mechanism and the frame.

883,731. SLIDING DOOR. WILLIAM H. MITCHELL, Cambridge, Mass., assignor of one-third to Asa H. Field and one-third to Samuel B. Field, Cambridge, Mass. Filed May 6, 1907. Serial No. 372,142.



1. The combination with lapping slidable panels and a housing disposed to receive the panels; of a bar pivoted within the housing and having spaced longitudinal slots therein, means upon certain of the panels for slidably engaging the respective slotted portions of the bar, a bar pivotally connected to one of said last mentioned panels, and means upon the remaining panels for slidably engaging said bar.

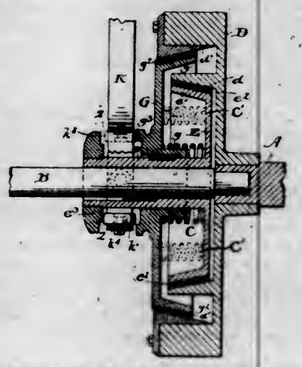
2. The combination with lapping slidable panels; of a bar pivotally connected to the rear edge of one of the panels and having longitudinal slots, and means upon the rear edge of the adjoining panels disposed to work within the slots.

3. A door having two lapping panels, supporting tracks for the panels, a longitudinally slotted pivotally mounted bar, means extending laterally from one of the panels for slidably engaging the bar, and means in rear of the other panel for slidably engaging the bar, said bar being disposed in the path of the last mentioned panel.

4. A door having two lapping slidable panels, a pivoted bar in the path of one of the panels and having alining longitudinal slots, laterally extending means upon one of the panels movably mounted in one of the slots, and means in rear of the other panel and movably mounted in the other slot, said last mentioned panel and the bar being disposed in the same plane.

5. A door having lapping slidable panels, a housing, a bar pivoted within the housing and disposed in the same plane with one of the panels and movable along one side of the adjoining panel, laterally extending means upon one of the panels for slidably engaging the bar, and means in rear of the other panel for slidably engaging the bar.

883,732. FRICTION-CLUTCH. VAN ZANDT M. MOORE, Cleveland, Ohio. Filed Jan. 15, 1906. Serial No. 296,017.



1. In a friction clutch, the combination of a pair of members having conical surfaces inclining in opposite directions, said members being rotatable together but movable toward and from each other, a spring tending to thrust said members into clutched position, a third member having two conical surfaces one of which encircles the other, rotatable together and adapted to be engaged by the respective members of the pair under the influence of the spring, and mechanism for moving the members of the pair in opposition to the spring to release the third member.

2. The combination of a member having an elongated hub, a second member surrounding said hub and slidable upon it, but compelled to rotate with it, spring means tending to change the proximity of said members to each other, a third member with which each of the members of the pair may coöperate, and lever mechanism having rollers, one of which is adapted to engage a shoulder carried by the hub and another of which is adapted to engage a surface movable with the other member to counteract the effect of the spring.

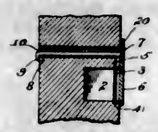
3. In a friction clutch, in combination, a pair of members rotatable together but movable toward and from each other, one of said members having an elongated hub projecting through the other member, a spring between said members tending to thrust them apart, a third member having surfaces, one of said surfaces being inside the other, adapted to be engaged by the respective members of the pair when so thrust apart, and mechanism acting on the hub and the member through which said hub projects and adapted to move such members in opposition to the spring to release the clutch.

4. The combination of a rotatable member having flanges, one of said flanges surrounding the other, the flanges having friction surfaces inclining oppositely, a shaft alined with the axis of said member, a conical member having an elongated hub loosely splined to said shaft, a second conical member loosely splined to said hub, said conical members last mentioned being both adapted to engage the two conical surfaces of the member first mentioned, a spring between the splined conical members tending to thrust them into clutched position, a shoulder on said elongated hub, and lever mechanism acting between said shoulder and the other conical member.

5. In a friction clutch, the combination of a rotatable wheel provided with two oppositely inclined conical friction surfaces, a shaft mounted in axial alinement with said wheel, a disk having a hub which embraces said shaft and has a tongue and groove connection therewith,—said disk being provided with a conical flange for engagement with one of the conical surfaces on said wheel, a second disk having a conical flange adapted for engagement with the other one of the conical friction surfaces on said wheel and provided with a hub which embraces the hub of the disk first named, and which has a tongue and groove connection therewith, a spring exerting its force to thrust said disks into clutched position, and a lever engaging, on opposite sides of its pivot, with surfaces rigidly fastened respectively to said disks.

[Claims 6 to 19 not printed in the Gazette.]

883,733. TOMBSTONE. EMERSON T. MORRIS, Derwent, Ohio. Filed Apr. 11, 1907. Serial No. 367,719.



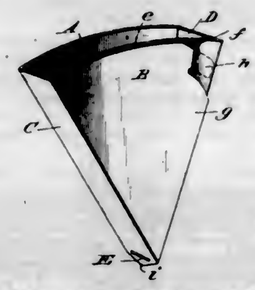
1. The combination of a tombstone having a chamber formed therein, the lower portion of the mouth of the chamber being provided with a groove, and the upper portion of the chamber being formed with a corresponding groove of greater depth, a transparent plate designed to be slipped in the upper groove and let fall into the lower groove, and a cover loosely mounted upon the tombstone and normally closing the mouth of the chamber.

2. The combination of a tombstone having a chamber formed therein and also formed with a transverse opening extending entirely through the tombstone, and a cover for closing the mouth of the chamber, the said cover carrying a shaft extending through the opening and the end of the shaft being provided with means for preventing its withdrawal from the opening.

3. The combination of a tombstone having a chamber formed therein and also provided with a transverse opening extending entirely through the tombstone immediately above the chamber, and a cover for the chamber carrying a shaft extending through the opening, the extremity of the shaft being formed with a laterally extending arm for preventing the withdrawal of the shaft from the opening.

4. The combination of a tombstone provided with a chamber and also having a lateral opening formed therein extending entirely through the tombstone, a cover carrying a shaft received by the opening, the end portion of the shaft being formed with a lateral arm, and a plug fitting within the opening and coöperating with the lateral arm to prevent the withdrawal of the shaft from the opening.

883,734. FOLDED-BLANK BOX. GEORGE L. MORRISON, Sampsel, Okla., assignor of one-half to Pearl M. Storrey, Sampsel, Okla. Filed Oct 1. 1907. Serial No. 395,349.



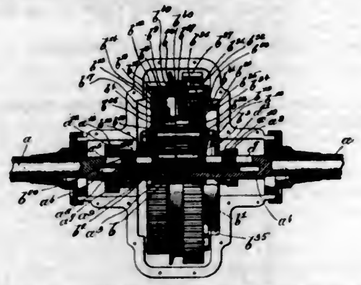
1. A folded-blank box of the sector type, comprising a side wall, a second side wall made up of lapped flaps, one of which is provided with a slot and the other with a tongue passed through said slot, end walls extending between the side walls and also extending below the apices of said side walls, and a fastener connecting those portions of the end walls that are disposed below the apices of the side walls.

2. In a box of the sector type, the combination with a blank shaped and folded to form a continuous sector-shaped side wall and a sector-shaped side wall made up of

an inner flap having a slot adjacent to its upper end and an outer flap having a tongue at the upper end of its free edge, passed through said slot and also shaped and folded to form end walls, disposed at right angles to the side walls and having their lower ends extended below the apices of the side walls and opposed to each other; of a through and through fastener connecting the said lower ends of the end walls directly together.

3. A folded-blank box of the sector type comprising sector-shaped side walls, one of which is formed of a single layer and the other of lapped flaps connected together, end walls connecting the side walls together and having lower end portions extending below the apices of the side walls and opposed to each other, and means directly connecting the said lower ends of the end walls.

883,735. DRIVING MECHANISM FOR MOTOR-CARRIAGES. ALFRED B. MORSE, South Easton, Mass. Filed Sept. 26, 1903. Serial No. 174,782.



1. Driving mechanism for a motor-vehicle, comprising an axle, a power transmitter mounted thereon, two gears carried by said axle for operating said transmitter, and clutching mechanism including two actuating means, located at the opposite sides of said transmitter and connected together at the axle for coupling one or the other of said gears and said transmitter as desired and a single operating device for said two connected actuating means.

2. Driving mechanism for a motor-vehicle, comprising an axle, a power transmitter mounted thereon, two gears carried by said axle for operating said transmitter, and clutching mechanism including actuating means movable longitudinally in contact with said axle for coupling one or the other of said gears to said transmitter as desired.

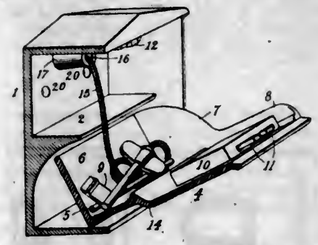
3. Driving mechanism for a motor vehicle, comprising an axle, a power transmitter, and two gears for driving the latter, both concentric of said axle, and clutching mechanism for coupling one or the other of said gears to said transmitter, and two connected actuating means located co-axially of the concentric mechanism for operating said clutching mechanism.

4. Driving mechanism for a motor vehicle, comprising an axle, a power transmitter, a high speed gear separate from said transmitter, at one side of the latter and concentric to said axle, a low speed gear also separate from said transmitter, at the other side of the latter and concentric to said axle, said power transmitter extending out radially between said two concentric gears and the latter having radially extending frictional driving surfaces, and frictional clutching mechanism movable longitudinally of the axle for laterally engaging each of said concentric gears.

5. Driving mechanism for a motor vehicle, comprising an axle, a power transmitter, a high speed gear at one side of said transmitter and concentric to said axle, a low speed gear at the other side of said transmitter and also concentric to said axle, said two concentric gears having radial friction surfaces, and said transmitter having coöperating radial friction surfaces, a brake operating on said transmitter between said two gears, and clutch mechanism for frictionally coupling at will either of said gears with said transmitter during the running of the axle.

[Claims 6 to 10 not printed in the Gazette.]

883,736. PATROL-BOX FOR WATCHMEN'S TIME-KEYS. ABRAHAM A. NEWMAN, Chicago, Ill., assignor to Newman Clock Company, Chicago, Ill., a Corporation of New York. Filed Jan. 9, 1907. Serial No. 351,463.



1. In a patrol-box for a watchman's time key, a body portion having a closed rear wall and an open front, a part projecting forwardly from said rear wall to a point within the body portion, a closure for the front of the body portion pivoted adjacent the bottom front portion of the latter, and having a transverse shelf projecting within the body portion said shelf being of depth but slightly less than the distance from the closure to the innermost portion of said projection.

2. In a patrol-box for a watchman's time key, a box having a closed rear wall and an open front, a part projecting forwardly from said rear wall and having a downwardly and rearwardly curved under surface, a closure for the front of the box pivoted adjacent the lower front portion of the latter, and having a transverse shelf projecting within the box to a point closely adjacent said curved surface and arranged to traverse the same during the opening and closing movement of the closure.

3. In a patrol-box for a watchman's time key, a box comprising a top, bottom, and rear walls cast integral, and having an open front, a part formed integral with the rear wall and projecting forwardly therefrom, said part having a downwardly and rearwardly curved under surface, a closure for the front of the box and pivoted transversely at the lower front portion of the latter, said closure having a transverse shelf which closely approaches and traverses said curved surface during the opening and closing movements of the closure.

4. In a patrol-box for a watchman's time key, a box comprising top, bottom and rear walls cast integral, and having an open front, a part formed integral with the rear wall and projecting forwardly therefrom, said part having a downwardly and rearwardly curved under surface, a closure for the front of the box and pivoted at the lower front portion of the latter, said closure having a transverse shelf cast integral therewith and joined at its end portions to said closure by flanges, said shelf being arranged to closely approach and traverse said curved under surface during the opening and closing movements of the closure.

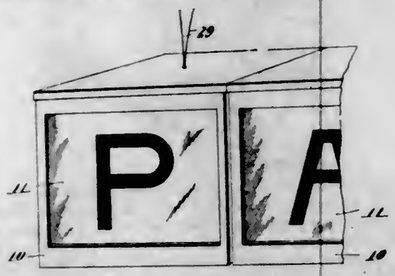
5. In a patrol-box for a watchman's time key, a box comprising top, bottom and rear walls, and having an open front, a part projecting forwardly from the rear wall and having a downwardly and rearwardly curved under face, a flexible key retainer within the box, and a closure for the front of the box pivoted at the lower front portion of the latter, said closure having a transverse shelf which closely approaches and traverses said curved under face during the opening and closing movements of the closure.

[Claims 6 and 7 not printed in the Gazette.]

883,737. TALKING-SIGN. LUCIUS R. PAIGE, Worcester, Mass. Filed Feb. 21, 1907. Serial No. 358,609.

1. In a sign, the combination of an electric lamp, a switch for the circuit thereof having means for holding it open, transparencies, and a movable member adapted to move upwardly to display a transparency, and to engage the switch directly when in its upward position so as to move the switch to close the circuit of the lamp.

2. In a sign, the combination of an electric lamp, a switch for the circuit thereof having a pivoted lever provided with a counter-balance, a movable member, and a sign supported by said movable member, said movable member being located below the lamp and switch and in such position as to engage the lever of the switch when moved upwardly to display the sign, whereby the lever will be raised to close the switch.



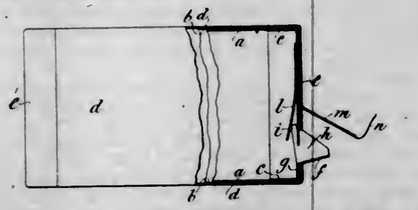
3. In a sign, the combination of movable members each adapted to display a transparency, an electric lamp, a switch having a tilting member for making and breaking the circuit to the lamp, and having counter-balancing means for normally keeping the switch open, said tilting member of the switch being located in position to be engaged by said movable members when they display their respective transparencies whereby the switch is closed.

4. In a sign, the combination of a substantially horizontal rod, two sets of arms pivotally mounted thereon, an arm of each set corresponding to an arm of the other set, a series of wires in trapezoidal form, the two ends of which are removably supported by two opposite arms, said arms having projections extending toward each other, and a wheel having means thereon for simultaneously engaging the two projections of the arms of one pair to tilt the same about the rod.

5. In a sign, the combination of a series of arms mounted to swing, said arms having rearwardly extending projections located at different distances from the center about which the arms swing, and a rotatable element having pins located at different distances from the center thereof and adapted to engage said projections successively during the rotation of said element.

[Claims 6 to 9 not printed in the Gazette.]

883,738. PACKAGE. GEORGE H. PATTERSON and ALAN WATSON, Newcastle-upon-Tyne, England. Filed Oct. 4, 1906. Serial No. 337,476.



1. The combination of a package having a discharge opening and a spout at the opening having a central portion connected with the package and folding wings on either side thereof and means for flattening out the wings against the rear wall of the front of the package when the spout is pushed back.

2. The combination of a package having a discharge opening, a spout at the opening having a central portion, a flange on the central portion attached to the package, folding wings on either side thereof, means for flattening out the wings against the rear wall of the front of the package when the spout is pushed back and projections on the wings for limiting the outward movement of the spout.

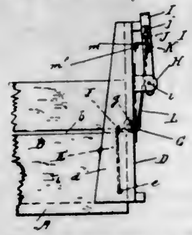
3. The combination of a package having a discharge opening, a spout at the opening having a central portion connected with the package and folding wings on either side thereof which are flattened out against the rear wall of the front of the package when the spout is pushed back, projections on the wings for limiting the outward movement of the spout and a tongue secured to the package and adapted to engage the wings to flatten them out.

4. The combination of a package having a discharge opening and a collapsible spout having a central portion, a flange thereon attached to the package, on which the spout hinges, folding wings on opposite sides of the central portion and means within the package for collapsing the wings.

5. The combination of a package having a discharge opening and slotted above the discharge opening and a spout hinged to the package at the opening having folding wings operating through the slots at the dicharge opening and provided with stops for limiting the outward movement of the spout and means for flattening out the spout against the rear wall of the front of the package when the spout is pushed back.

[Claims 6 to 8 not printed in the Gazette.]

883,739. END-GATE. CHARLES H. POLK, Kappa, Ind. Filed Jan. 7, 1908. Serial No. 409,604.



1. The combination, with a wagon-body, of an end-gate pivotally connected with the said wagon-body, guide-sheaves carried by the middle parts of the said end-gate, flexible connections secured to the said wagon-body and passing over the said sheaves, and locking-levers pivoted to the said end-gate and operatively connected with the said flexible connections.

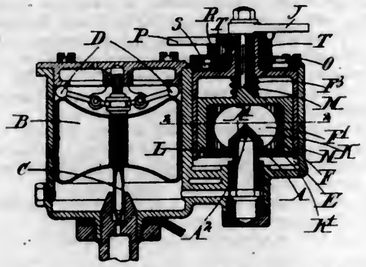
2. The combination, with a wagon-body, of an end-gate pivotally connected with the said wagon-body, guide-sheaves carried by the middle parts of the said end-gate, forked brackets projecting from the underside of the said end-gate, locking-levers pivoted to the said brackets, links pivoted to the free end portions of the said levers, and flexible connections passing over the said sheaves and connected with the said wagon-body and links.

3. The combination, with a wagon-body, and locking eye-bolts connected to the sides thereof; of an end-gate, guide-sheaves carried by the middle parts of the said end-gate, locking-levers pivoted to the said end-gate, and flexible connections secured at one end to the said end-gate, said connections being passed through the said locking eye-bolts, thence over the said sheaves, and having their other ends operatively connected with the said locking-levers.

883,740. SPRAY-CARBURETER. PETER A. POPPE, Coventry, England. Filed Jan. 15, 1907. Serial No. 352,358.

1. In combination, a jet nozzle, means for maintaining the fuel at a suitable height therein, a mixing chamber having an inlet thereto and an outlet therefrom, a rotatable plug cock arranged in said chamber and adapted to control said inlet and said outlet, a jet-nozzle controlling device connected thereto, and an adjustable cylinder arranged around said plug cock with holes in said cylinder corresponding with said inlet and to said outlet of the mixing chamber, substantially as set forth.

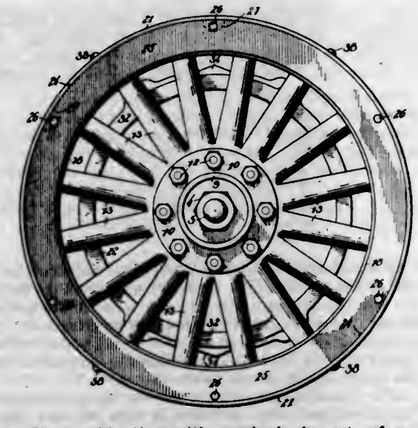
2. In combination, a jet nozzle, having an eccentric orifice, means for maintaining the fuel at a suitable height therein, a mixing chamber having an inlet thereto and an outlet therefrom, a plug cock rotatable in said chamber, a cap for the jet nozzle rotatable by said plug cock with a hole in said cap corresponding to said orifice in the jet nozzle, an adjustable cylinder arranged around said plug cock with holes corresponding with said inlet to and said outlet from the mixing chamber, substantially as set forth.



3. In combination, a jet nozzle having an eccentric orifice, means for maintaining the fuel at a suitable height therein a mixing chamber having an inlet thereto and an outlet therefrom, a plug cock rotatable in said chamber, a pin on said plug cock, a cap for the jet nozzle rotatable by said plug cock, with a hole in said cap corresponding with said orifice in the jet nozzle, a disk on said cap with a hole engaged by said pin on the plug cock, an adjustable cylinder arranged around said plug cock with holes in said cylinder corresponding with said inlet to and said outlet from the mixing chamber, substantially as set forth.

4. In combination, a jet nozzle having an eccentric orifice, means for maintaining the fuel at a suitable height therein, a jet chamber having an inlet thereto and an outlet therefrom, a plug cock rotatable in said chamber, a pin on said plug cock, a cap for the jet nozzle rotatable by said plug cock with a hole in said cap corresponding to said orifice in the jet nozzle, a disk on said cap with a hole in said disk engaged by said pin on the plug cock, an adjustable cylinder arranged around said plug cock with holes in said cylinder corresponding with said inlet to and said outlet from the jet chamber and a spring bearing on said plug cock, substantially as set forth.

883,741. YIELDABLE GEARING FOR TRACTION-WHEELS. LEVI RHODES, Spokane, Wash. Filed Mar. 14, 1906. Serial No. 306,000.

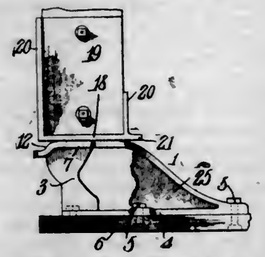


1. The combination with a wheel element, of a gear element rotatable relative thereto, sockets in opposed relation carried by one of the said elements, a spring within each socket, and a bearing cap for each spring working within a socket thereof, and adapted to cushion, on the air within said socket, said bearing cap being pivotally connected to the other element, substantially as and for the purpose set forth.

2. The combination with a wheel element, of a gear element rotatable relative thereto, one of the said elements provided with one or more sockets, and the other with plungers working within said sockets and having each a pivotal connection with the other element and adapted at its said connection to have movement transverse to its movement within its socket, substantially as and for the purpose set forth.

3. The combination with a wheel element, of a gear element rotatable relative thereto, one of said elements provided with dash-pots opposed one to the other, a plunger for each dash-pot pivotally connected to the other element and adapted to have movement at said connection transverse to the plunger movement, substantially as and for the purpose set forth.

883,742. BRACKET. ABRAHAM L. RICE, Wright, Iowa. Filed Sept. 28, 1907. Serial No. 394,230.



1. A bracket of the class described having a foot piece provided with a central vertical socket and a recess on one side thereof, and a rack member having a downwardly extending foot plate adapted to fit said socket and having a stud on one side to engage said recess.

2. A bracket of the class described comprising two interlocking members, the one forming a foot-piece having an elongated socket extending vertically through the body of said foot piece and an irregular shaped recess in the side of said socket at one end thereof, and the other member having a downwardly extending foot plate adapted to fit said socket when the members are assembled, a stud on one side at the bottom and a hook on one edge near the upper end of said foot plate.

3. A bracket of the class described comprising two interlocking members, the one having an elongated vertical socket with a tortuous recess in one side near one end, and the other member having a foot plate adapted to fit said socket and a stud on one side of said foot plate in position to enter said recess.

4. A bracket of the class described, comprising two separable members, one forming a fixed foot piece and the other a removable member, said foot piece having an elongated socket extending vertically therethrough with an irregular recess on one side, a shoulder at one end of said body and means for holding the member in a rigid position.

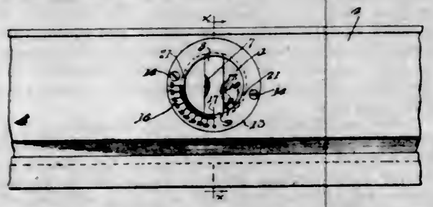
5. A bracket of the class described comprising two separable independent members, one forming a fixed foot piece and the other a removable member, the latter having a seat for a bar or beam, and a projecting foot plate on one edge of which is a hook and at its lower end on one side a stud.

[Claim 6 not printed in the Gazette.]

883,743. SPIRIT-LEVEL. CHARLES T. RIDGELY, Springfield, Ohio, assignor to The Standard Trimmer Company, Springfield, Ohio, a Corporation of Ohio. Filed July 16, 1906. Serial No. 326,377.

1. The combination, with a straight-edge, of a casing carried by said straight-edge and having a central aperture, an elongated block carrying a spirit-level, a pivot lug centrally arranged on said block and loosely mounted in

the aperture in said casing, a face plate for said casing extending over the ends of said block to retain said pivot lug within said aperture, and a scale on said face plate, substantially as described.



2. The combination, with a straight-edge, of a cylindrical casing, having a central bearing aperture in the bottom thereof, an elongated block carrying a spirit-level, a centrally arranged pivot lug on one side of said block and engaging said bearing aperture, the ends of said block being rounded to conform to the sides of said casing, said block having its face recessed at the ends thereof, and a face plate having a central opening of less diameter than said casing and adapted to be secured to said casing and to engage the recessed ends of said block, substantially as described.

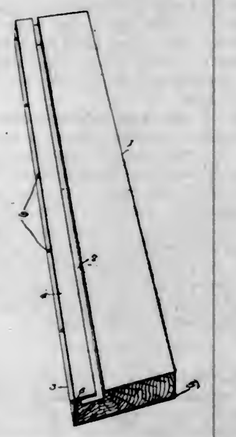
3. The combination, with a straight-edge, of a casing, a spirit-level pivotally mounted therein and adapted to move freely about its pivotal center, a lug formed on the inner wall of said casing, and adjustable means carried by said lug for limiting the movement of said spirit-level in either direction, substantially as described.

4. The combination, with a straight-edge, of a casing, a spirit-level pivotally mounted in said casing, a lug formed on the inner wall of said casing, apertures through said lug arranged at right angles to each other, and screws mounted in said apertures to limit the movement of said spirit-level, substantially as described.

5. The combination, with a straight-edge, a casing, and a spirit-level pivotally mounted within said casing of co-operating members carried by said straight-edge and said casing and adapted to engage one with the other to detachably connect the casing to the straight-edge.

[Claims 6 to 8 not printed in the Gazette.]

883,744. STRAIGHT-EDGE. CHARLES T. RIDGELY, Springfield, Ohio. Filed Mar. 20, 1907. Serial No. 363,345.



1. A straight-edge comprising a wooden body portion, and a metallic strengthening plate secured to the bottom thereof and extending substantially the full length and width of said body portion, said strengthening plate being provided with recesses lying wholly within the edges thereof and adapted to prevent the slipping of said straight-edge.

2. A straight-edge comprising a thin wooden body portion, and a metallic strengthening plate secured to the bottom thereof and extending substantially the full length and width of said body portion, said strengthening plate having apertures formed therein at intervals to provide gripping edges to prevent the slipping of said straight-edge.

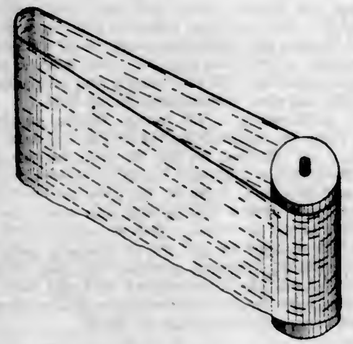
3. A straight-edge comprising a thin wooden body portion and a metallic strengthening plate secured to the bottom thereof and extending substantially the full length and width of said body portion and having a flange extending along the edge of said body portion.

4. A straight-edge comprising a body portion, a plate secured to the bottom thereof and having a flange extending along the front of said body portion, and a guide or track secured to said flange.

5. A straight-edge having a series of suction cups carried by the lower surface thereof.

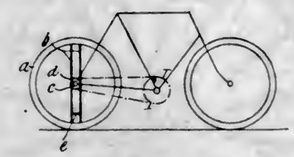
[Claims 6 to 8 not printed in the Gazette.]

883,745. NOTE-SHEET. PAUL RIESSNER, Wahren, near Leipzig, Germany. Filed May 6, 1907. Serial No. 372,265.



A note-sheet for mechanical musical instruments and the like, made of oil cloth, substantially as and for the purposes set forth.

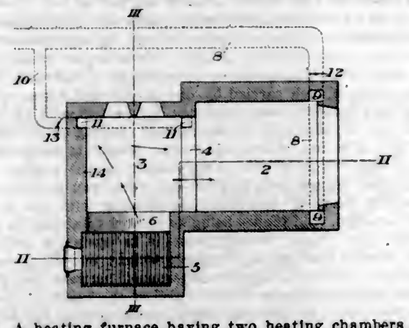
883,746. MEANS FOR MOUNTING A BICYCLE-WHEEL WHEREBY IT MAY BE PLACED CONCENTRIC OR ECCENTRIC WITH AXLE. ARTHUR D. ROBBINS, London, England. Filed July 19, 1907. Serial No. 384,607.



1. As a means for mounting a bicycle wheel whereby it may be placed concentric or eccentric with the axle thereof, the combination of a circular rim with guides placed across the diameter thereof; with a hub carrying a hollow axle, sliding therebetween, and with a spring bolt for locking and releasing said hub, substantially as herein described and operated in the manner set forth.

2. As a means for mounting a bicycle wheel whereby it may be placed concentric or eccentric with the axle thereof, the combination of transverse guides, sliding hub and spring locking bolt with a spring-controller set off having a cam surface and sliding upon a hollow axle, engaging with and releasing said spring locking bolt substantially as described.

883,747. HEATING-FURNACE. CECIL A. ROBINSON, Wheeling, W. Va., assignor to American Sheet & Tin Plate Company, Pittsburg, Pa., a Corporation of New Jersey. Filed Sept. 26, 1907. Serial No. 394,643.



1. A heating furnace having two heating chambers arranged in line with each other, with an intermediate bridge wall over which the gases pass from one chamber to the other, and a grate arranged at one side of one of the said chambers and opening thereto in a direction at substantially right angles to the longitudinal axis of the said chambers; substantially as described.

2. A heating furnace having two heating chambers arranged in line with each other, with an intervening bridge wall over which the gases pass from one chamber to the other, a grate arranged at one side of one of said chambers and opening into the same in a direction at substantially right angles to the longitudinal axis of the furnace, and a bridge wall over which the flames and products of combustion pass from the grate into the adjacent chamber; substantially as described.

3. A heating furnace having two heating chambers in line with each other, a grate arranged at one side of one of said chambers and communicating therewith, and a bridge wall having its upper edge over which the flames and gases of combustion pass from the grate into said chamber inclined in a vertical plane and having its lowest point at its end portion nearest the rear end wall of the adjacent chamber; substantially as described.

4. A heating furnace having two heating chambers in line, and communicating with each other, a grate arranged at one side of one of said chambers, a bridge wall over which the flames pass from the grate into the adjacent chamber said wall having its upper edge inclined to decrease its height from one end to the other, and having its lowest point at its end portion nearest the rear end wall of the adjacent chamber, and a stack flue communicating with said chamber at the side opposite the grate; substantially as described.

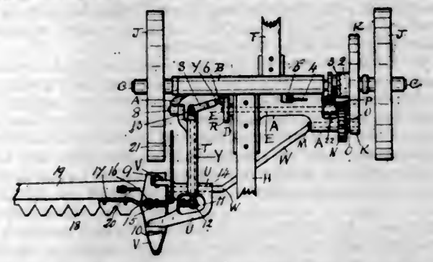
5. A heating furnace having two heating chambers in line with each other, a grate arranged at one side of one of said chambers and communicating therewith, and a bridge wall and flue connections arranged to deflect the flame towards the opposite rear outer corner portion of said chamber; substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

883,748. MOWING-MACHINE. CHARLES W. ROBINSON, Hamilton, Ontario, Canada. Filed June 7, 1907. Serial No. 377,691.

1. In a mowing machine, a frame, a main shaft mounted thereon, ground wheels on the shaft, a crank shaft mounted on the frame, a crank disk on the shaft, an inclined crank socket on the disk, a sleeve bearing pivotally connected to the frame, a shaft on the sleeve, a link loosely connected to the rear end part of the shaft and the opposite end of the link adapted to rotate in said socket at the rotation of the crank shaft and oscillate the shaft.

2. In a mower, a frame, a crank shaft mounted thereon, a pinion wheel on one end of the shaft, a disk on the opposite end thereof, an inclined crank bushing on the disk, a sleeve pivotally connected to the frame, a shaft in the sleeve, a T head on the shaft, a link loosely connected to the T head, a journal on the opposite end of the link adapted to fit loosely in said bushing and oscillate the shaft, on the rotation of the crank shaft.

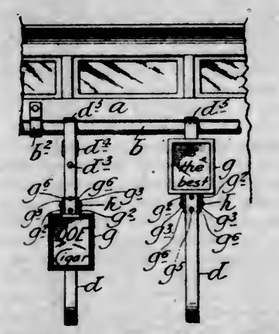


3. In a mower, a frame, a crank shaft mounted thereon, a pinion wheel on the shaft, a crank disk on the opposite end thereof, an inclined crank bushing on the disk, a sleeve pivotally connected to the frame, a pitman crank shaft in the sleeve, a link loosely connected to the rear end of the pitman shaft and the opposite end of the link adapted to rotate in said bushing to oscillate the pitman shaft by the rotation of the disk shaft, a pitman on the crank end of the pitman shaft and horizontally reciprocating knives connected to the outer end of the pitman.

4. In a mower, a frame, a shaft mounted thereon, a pinion on the shaft, a crank disk having an inclined crank bushing on the shaft, a sleeve pivotally connected to the frame, a shaft in the sleeve, a crank on the forward end of the shaft, a link loosely connected to the rear end of the shaft, a journal on the opposite end of the link adapted to rotate in said bushing, thereby oscillating the shaft together with its connecting crank.

5. In a mower, a frame, a shaft mounted thereon, a pinion on the shaft, a disk having an inclined crank socket on the opposite end of the shaft, a sleeve pivotally connected to the frame, a pitman crank shaft in the sleeve, means on the rear end of the pitman shaft to rotate with the crank disk to oscillate the pitman shaft, a shoe connection on the end of the sleeve, a drag-bar secured to the shoe connection, the opposite end of the drag bar having pivotal connection with the frame, a shoe pivotally connected to the shoe connection, and a pitman loosely connected to the crank end of the pitman shaft.

883,749. ADVERTISING DEVICE. GEORGE C. ROOT, New York, N. Y.; Sidney L. Root administrator of said George C. Root, deceased. Filed Dec. 6, 1907. Serial No. 405,373.

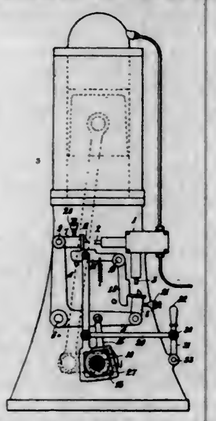


1. A hanger strap for cars adapted to be suspended from a suitable support overhead, said strap being formed into a loop, and an advertising device connected with said loop, and adapted to be thrown into different positions by a pull on the lower end of said loop so that either side of said device may be seen.

2. A hanger strap for tramway cars and other vehicles provided with two loops, one of which is within the other and shorter than the other, and an advertisement holder pivotally connected with one side of the longer loop and with which one side of the inner and shorter loop is also connected, said advertisement device being adapted to be thrown into different positions in the operation of taking hold of and releasing the inner loop.

3. A hanger strap for tramway cars and other vehicles, said strap being formed into a depending loop, a supplemental strap connected with the inner face or one side of said loop above the bottom thereof and formed into another loop within the first named loop and shorter than said first named loop, and an advertisement holder pivotally connected with one side of the outer and longer loop at a predetermined distance above the bottom thereof and provided with a member with which one side of the inner loop is connected, whereby in the operation of taking hold of and releasing said loop said advertisement holder is thrown into different positions so as to expose both sides thereof.

883,750. REVERSING DEVICE FOR INTERNAL-COMBUSTION ENGINES. ERIK A. RUNDLÖF, Stocksund, Sweden. Filed June 7, 1907. Serial No. 377,702.



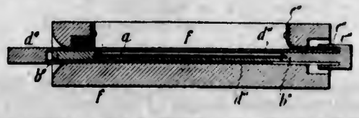
1. In an internal combustion engine the combination of a cylinder, a piston movable therein, an explosion chamber situated in the said cylinder, a feeding mechanism periodically effecting the fuel introductions during normal running of the engine in any direction, an auxiliary feeding mechanism adapted for reversing the direction of movement of the engine, said latter mechanism being so connected to the engine as to cause the feeding to take place at such a time that the explosion is effected, when the piston moves inwardly, toward the explosion chamber, and a connection between the two feeding mechanisms whereby the said mechanisms can be alternately thrown into or out of action, substantially as and for the purpose set forth.

2. In an internal combustion engine the combination of a cylinder, a piston movable therein, an explosion chamber situated in the said cylinder, a feeding mechanism periodically effecting the fuel introductions during normal running of the engine in any direction, an auxiliary feeding mechanism adapted for reversing the direction of movement of the engine, said latter mechanism being so connected to the engine as to cause the feeding to take place at such a time that the explosion is effected when the piston moves inwardly, toward the explosion chamber, a connection between the two feeding mechanisms whereby the said mechanisms can be alternately thrown into or out of action, and a connection interposed between the said combined feeding mechanisms and some movable part of the engine in such a manner that the said latter connection, when causing the feeding mechanism designed for reversal to operate, immediately after reversing the direction of movement of the engine automatically throws the said latter feeding mechanism out of action again, at the same time as the feeding mechanism designed for the normal forward or backward running is thrown into action, substantially as and for the purpose set forth.

3. In an internal combustion engine the combination of a cylinder, a piston movable therein, an explosion chamber situated in the said cylinder, two arms set at an angle to each other and mounted to swing on a common pivot, two weights each carried by one of the said arms, one of the said weights being designed for periodically effecting the fuel introductions during normal running of the engine in any direction, whereas the other weight is designed for reversing the direction of movement of the engine, two regulator planes connected to each other and pivoted on a common fulcrum, each plane coöperating with one of the two weights, said planes being so located relatively to each other that, when the one plane is in operative position, the other plane keeps the other weight out of operative position, and a connection interposed between the regulator planes and some movable part of the engine in such a manner that the said connection, when causing the weight designed for reversal to operate, immediately after reversing the direction of movement of the engine automatically throws the said latter weight out of action again, at the same time as the weight designed for the normal forward or backward running is thrown into action, substantially as and for the purpose set forth.

4. In an internal combustion engine the combination of a cylinder, a piston movable therein, an explosion chamber situated in the said cylinder, two arms set at an angle to each other and mounted to swing on a common pivot, two weights each carried by one of the said arms, one of the said weights being designed for periodically effecting the fuel introductions during normal running of the engine in any direction, whereas the other weight is designed for reversing the direction of movement of the engine, two regulator planes connected to each other and pivoted on a common fulcrum, each plane coöperating with one of the two weights, said planes being so located relatively to each other that, when the one plane is in operative position, the other plane keeps the other weight out of operative position, a frame connected to the said regulator planes, a friction disk fastened to a movable shaft of the engine, said disk being inclosed by the said frame, the latter having such a shape that it can be moved relatively to the said disk so that one or the other of the sides of the frame opposite each other can be pressed against the friction disk and, thereby, cause the frame to be moved in one or the other direction and, thereby, one or the other regulator plane to be brought into operative position, and a lever connected to the said frame for moving one or the other side thereof into contact with the said friction disk, substantially as and for the purpose set forth.

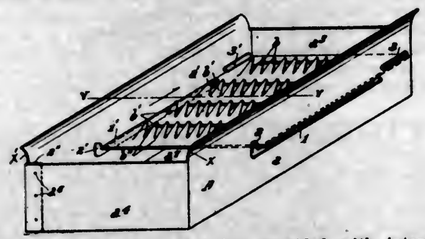
883,751. DEVICE FOR CLOSING PLATE OR FILM HOLDERS. RICHARD SCHÜTTAUF, Jena, Germany, assignor to The Firm of Carl Zeiss, Jena, Germany. Filed June 23, 1906. Serial No. 323,003.



1. A contrivance for facilitating the closing of plate or film holders which have a bag-like shutter and at one end of the plate or film carrier a collar for the reception of the open end of the shutter, consisting of an insertion piece with a thin tongue adapted to enter the collar with its outer surface in contact with the inner surface of the collar and to serve with its inner surface as an outer guide for the introduction of the shutter into the collar.

2. In an adapter for plate or film holders, which have a bag-like shutter and at one end of the plate or film carrier a collar for the reception of the open end of the shutter, the combination with the frame having an exposure aperture and at opposite ends two slits for receiving the holder, of an insertion piece comprising a thin tongue and fitted in one of the slits so as to enter the collar, when the holder is pushed into the adapter, with the said tongue between the inner surface of the collar and the outer surface of the shutter, the tongue being adapted to serve as an outer guide for the re-introduction of the shutter into the collar.

883,752. BRUSH-CLEANER. CHARLES R. SPICER, Springfield, Ill. Filed July 2, 1907. Serial No. 381,928.



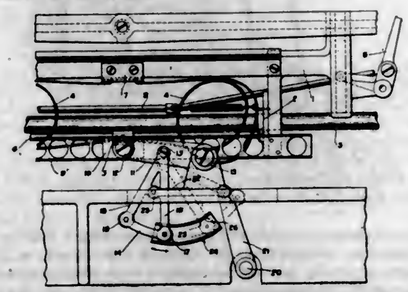
1. The combination of a box provided with internal ledges, stops and lugs; with a toothed plate fitted to rest upon the ledges of said box and to lie under the lugs and against the stops of said box.

2. A box formed from a blank as described and comprising side members having extensions and embossed ledges, stops and lugs; end members and flange members; and a bottom plate adapted to fit on said flange members.

3. A comb-plate comprising a series of slanting teeth the edges of which form acute angles between the teeth and plural series of slanting teeth the edges of which are separated by rounded spaces; in combination with a box adapted to receive combings falling through the spaces between the teeth of the comb-plate, and means for supporting said comb-plate within said box.

4. The combination of a box provided with internal ledges adapted to support a comb-plate within the box, stops limiting endwise movement of the comb-plate, lugs adapted to prevent lifting of the comb-plate and sides having curved extensions adapted to guide the brush into the box; with a toothed comb-plate fitted to rest upon the ledges of said box, under the lugs thereof, and against the stops thereof.

883,753. CARRIAGE-SHIFTING MECHANISM FOR TYPE-WRITERS. CHARLES W. SPONSEL, Hartford, Conn., assignor to Parker Machine Company, Buffalo, N. Y., a Corporation of New York. Filed Aug. 18, 1905. Serial No. 274,651.



1. In a typewriting machine, in combination, a carriage, a fixed cam, and means connected with the carriage and operating upon said cam adapted by a movement thereof relative to the carriage to shift said carriage from initial position to another position.

2. In a typewriting machine, in combination, a carriage, a fixed cam, means connected with the carriage and operating upon said cam adapted by a movement thereof relative to the carriage to shift the same from initial position to another position, and means for automatically determining such position.

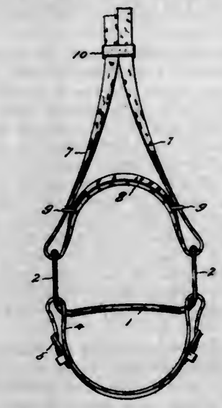
3. In a typewriting machine, in combination, a carriage, a fixed cam, a swinging lever, pivotally connected at one end with said carriage, the other end being adapted to operate upon said cam, said lever being adapted by a movement thereof relative to said carriage to shift the same from initial position to another position, and means for determining such position.

4. In a typewriting machine, in combination, a carriage, a cam, means connected with the carriage and operating upon said cam, and means for causing a relative movement of said first-mentioned means with respect to the carriage and simultaneously therewith a movement thereof with the carriage, such movement being compelled by an operation upon said cam.

5. In a typewriting machine, in combination, a carriage, a fixed cam, means connected with the carriage and operating upon said cam, and means for causing a relative movement of said first-mentioned means with respect to the carriage and simultaneously therewith a movement thereof with said carriage, such movement being compelled by an operation upon said cam.

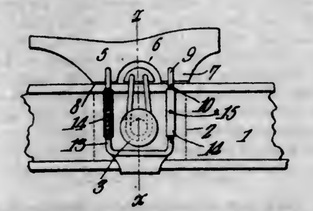
[Claims 6 to 40 not printed in the Gazette.]

883,754. HORSE-CHECK. NEIL STALKER, West Hartford, Conn. Filed June 15, 1906. Serial No. 321,894.



A horse check comprising a bit with a mouth piece, and integral cheek-pieces having chin-strap eyes and check-rein loops, a chin strap fastened into the chin-strap eyes, a strap extending loosely through the check-rein loops, so as to form a continuous nose-piece, and check-reins, and loops mounted on and fastened to the nose-piece loosely holding the check reins to the nose-piece, substantially as specified.

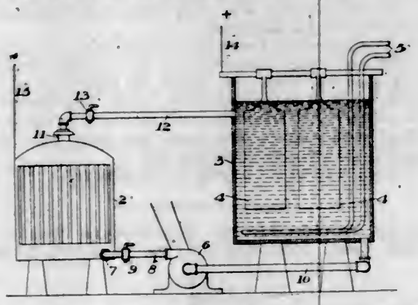
883,755. CHIN-REST FOR VIOLINS AND VIOLAS. CARL F. STECKELBERG, Lincoln, Nebr. Filed May 7, 1907. Serial No. 372,313.



The combination with a violin or the like; of a chin rest comprising a body shaped to substantially conform with the chin and cheek of the user, there being feet in-

tegral with the rest and straddling the tailpiece of the instrument, said feet resting upon the instrument and spaced from the tailpiece and constituting a jaw, a jaw having an integral upstanding flange, a U-shaped rod having its intermediate portion secured to and extending longitudinally of the flange, said rod having parallel threaded stems, stems connected to the feet of the chin rest, and means for adjusting the stems toward each other to bind the feet and the jaw upon opposite faces of the instrument.

883,756. HEAT-RADIATOR FOR HYDROCARBON AND OTHER HEAT-MOTORS. KLAUS J. STEINER, Pittsburg, Pa. Filed Dec. 28, 1906. Serial No. 349,752.



1. The herein described method for electroplating the interiors of metallic vessels of complex, multi-tubular, multi-jointed type, which consists in causing a current or stream of electrolyte to pass through said vessel in contact with the surfaces to be electroplated during the time of electro-deposition, the article being electroplated being placed exteriorly of the vessel containing the electrolyte and anode, and itself forming the cathode.

2. The herein described method of electroplating the interior surfaces of tubular objects, which consists in causing a continuous circulation of an electrolyte through the said object in contact with the surfaces to be electroplated during the time of electro-deposition the article being electroplated being placed exteriorly of the vessel containing the electrolyte and anode, and itself forming the cathode.

3. The herein described method of electroplating multi-tubular, multi-jointed articles, which consists in connecting the article to form a part of an electrolyte-containing and circulating system, the article forming the cathode therein, the article being placed exteriorly of the vessel containing the electrolyte and circulating the electrolyte through the article.

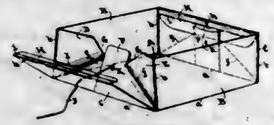
4. The herein described method of electroplating the interior surfaces of multi-tubular articles, which consists in circulating the electrolyte therethrough during the time of electro-deposition, and heating the electrolyte thus circulated; substantially as described the article being electroplated being placed exteriorly of the vessel containing the electrolyte and anode, and itself forming the cathode.

5. The method of electroplating the interior surfaces of multi-tubular articles, which consists in placing the article exteriorly to the vessel containing the electrolyte, and connecting the article with the vessel containing the electrolyte by hollow tubular connections, and causing a constant circulation of the electrolyte from the source through one of the connections to and through the article, and from the article back to the source, the article forming the cathode; substantially as described.

[Claims 6 to 10 not printed in the Gazette.]

883,757. BOX. WALTER STEWART, Elmira, N. Y. Filed Dec. 21, 1905. Serial No. 292,800.

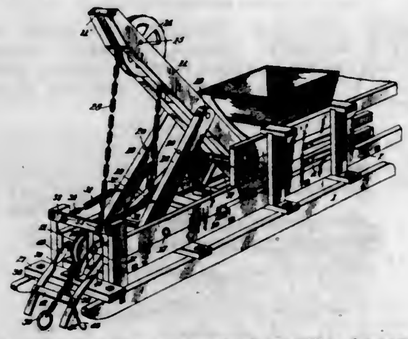
1. A box formed from a blank comprising a bottom with sides and ends hinged thereto, end folds on the sides adapted to project across the ends of the box when the box is erected, said end folds having notches cut at the top to form vertically disposed tongues on their outer ends, the side edges of said tongues being produced by vertical cuts, and flaps on the ends of the box adapted to fold over upon the end folds, each of said flaps being provided with a central horizontal slot and a transverse crease between the slot and the hinge of the flap, whereby the flaps may be entered into the notches and the tongues inserted in the slots while the end folds are being brought into position across the ends of the box.



2. A box comprising a bottom with sides and ends hinged thereto, end folds on the sides overlapping one another from opposite sides and permanently fastened together where they overlap, tongues formed at the top of the folds where they overlap, the folds being diagonally creased from the bottom corners of the box upward, whereby the sides may be folded down upon the bottom with the end folds interfolded therebetween, and flaps on the ends of the box adapted to fold over upon the end folds when erected, said flaps being provided with horizontal slots through which the overlapped tongues are passed during the erection of the end folds to fasten the box in erected position.

3. A box comprising a bottom with sides and ends hinged thereto, end folds on the sides overlapping one another from opposite sides and permanently fastened together where they overlap, said folds being diagonally creased from the bottom corners of the box upward, whereby the sides may be folded down upon the bottom with the end folds interfolded therebetween and the box ends folded down upon the sides, tapes or cords attached to the end folds where overlapped and fastened together, said cords passing out through holes provided therefor in the box ends, and means for fastening the end folds and box ends together when the box is erected.

883,758. BALING-PRESS. JOHN J. STOPPLE, Dallas, Tex. Filed Sept. 14, 1907. Serial No. 392,855.



1. In a baling press, the combination with a framework, a movable plunger carried by said framework, a lever, means pivotally connecting said lever to said plunger, of an eccentric-sheave rotatably mounted upon said lever, a link carried by said framework and connected to said lever, a sheave wheel rotatably mounted upon said framework, and flexible means secured near one end to a portion of said framework and passed around a portion of said eccentric sheave and around a portion of the sheave secured to said framework.

2. In a baling press, the combination with a framework, a movable plunger carried by said framework, a lever pivotally connected near its lower end to said plunger, a link carried by said framework and pivotally connected to said lever of an eccentric sheave rotatably mounted between portions of said lever, a sheave or pulley carried by said framework, a chain secured near one end to said framework and extending between portions of said lever and passed around a portion of said eccentric sheave and under and around a portion of said sheave or pulley carried by the framework.

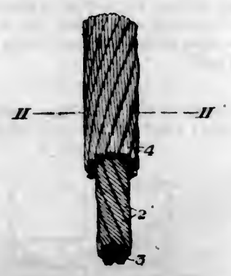
3. In a baling press, the combination with a framework and a plunger, a lever connected to said plunger, a link carried by said framework and pivotally connected to said lever of an eccentric sheave carried by said lever, a pulley carried by said framework, and flexible means connected to said framework and passed around said eccentric sheave and pulley, whereby when said flexible means is drawn outward at one of its ends, said lever and plunger will be actuated.

4. In a baling press, the combination with a framework, a movable plunger carried by said framework, of a lever, means pivotally connecting said lever to said plunger, a fulcrum for said lever formed upon said framework, an eccentric sheave rotatably mounted upon said lever, and a flexible member secured to a portion of the press and passed around a portion of said eccentric sheave or wheel.

5. In a baling press, the combination with a framework a plunger movably mounted upon said framework, a lever pivotally connected to said plunger, of an eccentric sheave carried by said lever, a sheave or pulley carried by said framework, a chain fixedly secured near one end and passed around portions of said eccentric sheave and pulley, and means secured to said chain and normally engaging said pulley for normally holding the chain taut.

[Claim 6 not printed in the Gazette.]

883,759. WIRE ROPE. OLOF TÄNGRING, Worcester, Mass., assignor to American Steel & Wire Company, Worcester, Mass., a Corporation of New Jersey. Filed Oct. 4, 1907. Serial No. 395,916.

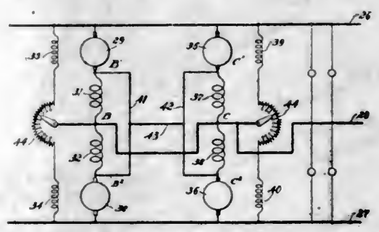


1. A wire rope having an inner series of strands wound in one direction, and an outer series of strands wound about the inner series as a core in the opposite direction, each of said strands being composed of a plurality of wires, the wires of the inner series being twisted or laid in the same direction as the lay of the strands in such series, and the wires of the outer series being laid in opposite directions to the lay of the strands in such series, substantially as described.

2. A wire rope having an inner series of strands wound about a core in one direction, an outer series of strands wound about the inner series as a core in the opposite direction, each of said strands being composed of a plurality of wires, the wires of the inner series being twisted or laid in the same direction as the lay of the strands in such series, and the wires of the outer series being laid in opposite directions to the lay of the strands in such series, substantially as described.

3. A wire rope composed of two layers of strands wound in opposite directions and having their individual wires laid in the same direction, substantially as described.

883,760. SYSTEM OF DISTRIBUTION. LEWIS L. TATUM, Norwood, Ohio, assignor to The Bullock Electric Manufacturing Company, a Corporation of Ohio. Filed Feb. 19, 1906. Serial No. 301,819.



1. In a multiple-voltage system of distribution, a balancer comprising dynamo-electric machines, the shunt field windings of which are connected across the main conductors in series relation, a rheostat in the shunt field circuit and between two shunt field windings, and a rheostat arm connected to a compensating conductor of said system.

2. A multiple-voltage system of distribution comprising a plurality of main and compensating conductors, a balancer comprising a plurality of dynamo-electric machines having armatures connected in series across said main conductors and to a compensating conductor and shunt field windings connected in series across said main conductors, and a rheostat comprising resistance elements in the shunt field circuit between two shunt field windings and a rheostat arm connected to said compensating conductor.

3. In a multiple-voltage system of distribution, a balancer consisting of compound-wound dynamo-electric machines the shunt field windings of which are connected in series relation across the main conductors, and a rheostat comprising resistance elements in the shunt field circuit and between two shunt field windings and a rheostat arm connected to a compensating conductor of said system.

4. In a multiple-voltage system of distribution, a balancer comprising a plurality of compound-wound machines having series and shunt field windings, the armature windings and series field windings being connected in series relation across the main conductors and to a compensating conductor, the shunt field windings being also connected in series relation across the main conductors, and a rheostat in the shunt circuit between two shunt windings, the arm of said rheostat being connected to a compensating conductor.

5. In a multiple-voltage system of distribution, a balancer comprising two compound-wound dynamo-electric machines connected across the main conductors and to the neutral or compensating conductor of the system, the series windings being connected directly to each other and to the neutral or compensating conductor, and a low resistance shunt around said series windings.

[Claims 6 to 22 not printed in the Gazette.]

883,761. GLOVE. JOHN W. TAYLOR and ROBERT F. TAYLOR, Burns, Tenn. Filed Jan. 3, 1908. Serial No. 409,128.

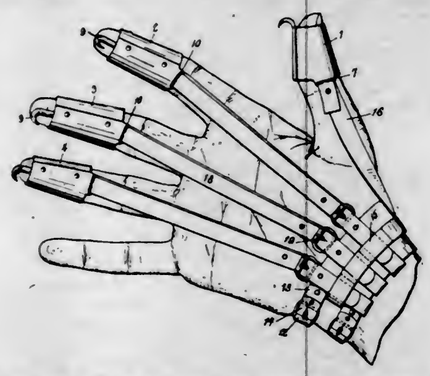
1. A hand covering of the character described, comprising a wrist band, spur carrying finger thimbles and flexible adjusting straps between the thimbles and wrist band.

2. A hand covering of the character described, comprising a wrist band, spur carrying finger thimbles and flexible straps connecting the thimbles and wrist band upon both the front and back of the hand.

3. A hand covering of the character described, comprising a wrist band, spur carrying finger thimbles and adjustable connections between said thimbles and said wrist band.

4. A hand covering of the character described, comprising a wrist band, spur carrying finger thimbles, connecting straps slidably engaged with the thimbles and wrist band, and adjusting buckles uniting the ends of said straps.

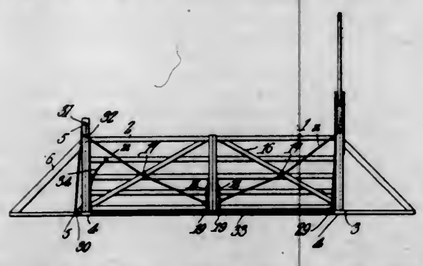
5. A hand covering of the character described, comprising a wrist band, spur carrying finger thimbles and a



single adjusting strap laced back and forth between the wrist band and said thimbles.

[Claims 6 to 15 not printed in the Gazette.]

883,762. FARM-GATE. JOHN J. THOMPSON, Springfield, Okla. Filed Sept. 18, 1907. Serial No. 393,524.



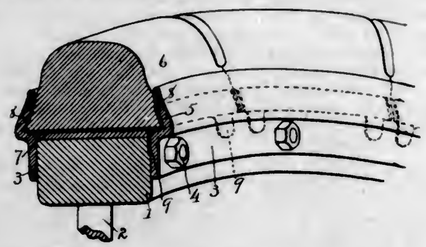
1. A gate comprising a frame having a sill and uprights located at the opposite end portions thereof, a gate member pivotally mounted between the uprights at one of the end portions of the sill, a lever fulcrumed at the uprights at the other end portion of the sill, a cable attached at one end to the lever and at its other end to the gate member and passing from the lever below the upper surface of the sill thence to the upright to which the gate member is pivoted thence over a pulley supported by the said uprights at a point above the gate member.

2. A gate comprising a frame, gate members pivoted thereto and adapted to swing in a vertical plane, pulleys journaled upon the frame, operating cables attached to the levers and gate members and engaging said pulleys, the pivotal connection from each gate member consisting of side strips, each of which is provided with a laterally disposed portion, one of which is longer than the other and both of which merge into vertically disposed extremities, pivot bolts passing through the frame and said extremities and a catch mechanism for the inner ends of the gate members.

883,763. TIRE FOR VEHICLE-WHEELS. JAMES E. TOURTELLOTTE, Hartford, Conn. Filed May 28, 1906. Serial No. 318,997.

1. A tire composed of elastic material and having sloping sides gradually tapering from the inner edge to a dimension of less width nearer the outer edge of the wheel, a reinforcing strip composed of practically unyielding material and having side parts conforming to and embracing the sides of said tire, the entire inner surface of said reinforcing strip being vulcanized to the tire, and means for securing said reinforcing strip to the rim of a wheel.

2. A tire composed of elastic material and having sloping sides gradually tapered from the inner edge to a dimension of less width nearer the outer edge thereof, a reinforcing member consisting of sections of non-elastic material and having side parts conforming to and embracing the side of said tire, and with a space between the ends of said strips, the entire inner surface of each of said strips being vulcanized to the tire, and means for securing said sections to a wheel rim.

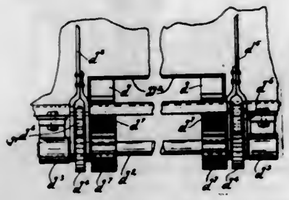


3. A tire composed of elastic material formed in sections with the ends tightly abutting when in place upon a wheel rim and having sloping sides gradually tapered from the inner edge to a dimension of less width nearer the outer edge thereof, a reinforcing strip of non-elastic material formed in sections and arranged with a slight space between the ends thereof, said strip having side parts embracing and fitting said tire, the entire inner surface of said strip being vulcanized to the tire, and means for securing the sections of said strip to a wheel rim.

4. A wheel rim including a tire of elastic material, a reinforcing strip of non-elastic material adapted to receive said tire, said strip having integrally formed clips located between the wheel rim and a clamping strip, and clamping strips secured to said wheel rim and against said clips.

5. A wheel rim including a tire composed of rubber or like material, a reinforcing strip composed of practically unyielding material vulcanized to the outer surface of the rubber tire and having out-turned recessed lips, a clamping rod to be located in said recess, and a clamping strip secured to the sides of the rim and having a lip overlying said clamping rod.

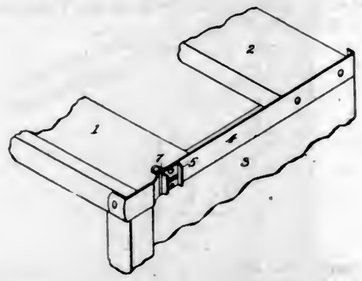
883,764. COAL-STORAGE PLANT. ELMER G. VOLANS, Cleveland, Ohio. Filed Jan. 29, 1903. Serial No. 298,323.



1. The combination with an overhead storage bin having a discharge opening on its under side, of a straight plate bounding each side of said opening, and a sheer plate fitted in each of its two forward corners, angle bars secured to the under side of said side plates and forming guideways, and a gate slidably mounted in said guideways and adapted to close said opening.

2. The combination with an overhead storage bin having a discharge opening on its under side, of a straight plate bounding each side of said opening, and a sheer plate fitted in each of its two forward corners, angle bars secured to the under side of said side plates and forming guideways, a gate slidably mounted in said guideways and bearing a rack, a pinion engaging said rack, and a ratchet connected to rotate said pinion.

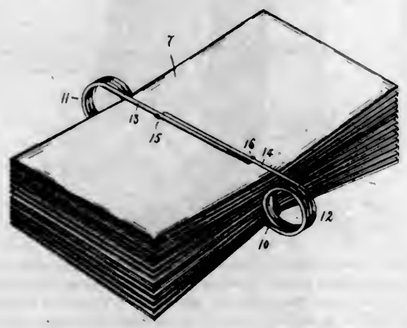
883,765. INTERLOCKING END IRON FOR SECTIONAL FURNITURE. GEORGE W. VOSMER, Covington, Ky., assignor to The Globe-Wernicke Company, Cincinnati, Ohio, a Corporation of Ohio. Filed Jan. 27, 1908. Serial No. 412,809.



1. In interlocking end irons for sectional furniture, the combination of a unit thereof, an end iron carrying an interlocking piece and secured to said unit, and a fastening piece passing through said end iron and interlocking piece and secured to said unit, substantially as described.

2. In interlocking end irons for sectional furniture, the combination of a unit thereof, an end iron carrying an interlocking piece and secured to said unit, and a metal fastening piece passing through a slot in said end iron and attached to said unit, said fastening piece being provided with means for preventing said end iron and interlocking piece from being withdrawn, substantially as described.

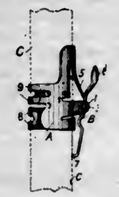
883,766. METAL FASTENING DEVICE. SAMUEL E. WARD, Allen, Nebr. Filed Oct. 8, 1907. Serial No. 396,471.



As a new article a device of the class described formed from a single piece of wire with spaced coils intermediate thereof and with the terminals of the wire bent into oppositely extending hooks, the portions between the coils and hooked terminals adapted to be overlapped with the hooks interlocking with said over-lapped portions.
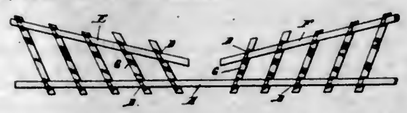
883,767. POCKET-CLIP FOR FOUNTAIN-PENS AND PENCILS. ALBERT K. WATTS, London, England. Filed May 15, 1907. Serial No. 373,750.

A pocket clip for pens and the like comprising a divided circular spring barrel part made from one sheet metal blank having tongues extending past and out of line with one another in opposite directions, said barrel part having



two side ears and a spring lever grip pivoted to said ears, substantially as described.

883,768. REINFORCING-FRAME AND CEMENTITIOUS CONSTRUCTION. ALEXANDER P. WHITE, Caldwell, N. J., assignor to The General Fireproofing Company, Youngstown, Ohio, a Corporation of Ohio. Filed Sept. 27, 1906. Serial No. 336,435.



1. A rigid reinforcing frame, comprising main members and flat connecting metal slats, the slats having near each end a slit, the metal on each side of the slit being pressed in opposite directions to form an eye through which the main members pass, the walls of the eyes closely embracing the main members.

2. A rigid reinforcing frame, comprising main members and twisted flat connecting metal slats, the slats having near each end a slit, the metal on each side of the slit being pressed in opposite directions to form an eye through which the main members pass, the walls of the eyes closely embracing the main members.

3. A rigid reinforcing frame, comprising a main base member, longitudinal members, each extending at an angle to said base member, and flat connecting metal slats, the slats having near each end a slit, the metal on each side of the slit being pressed in opposite directions to form an eye through which the main members pass, the walls of the eyes closely embracing the main members.

4. A rigid reinforcing frame, comprising two main members diverging from each other, and flat connecting metal slats, the slats having near each end a slit, the metal on each side of the slit being pressed in opposite directions to form an eye through which the main members pass, the walls of the eyes closely embracing the main members.

5. A rigid reinforcing frame, comprising two main members diverging from each other, and twisted flat connecting metal slats, the slats having near each end a slit, the metal on each side of the slit being pressed in opposite directions to form an eye through which the main members pass, the walls of the eyes closely embracing the main members.

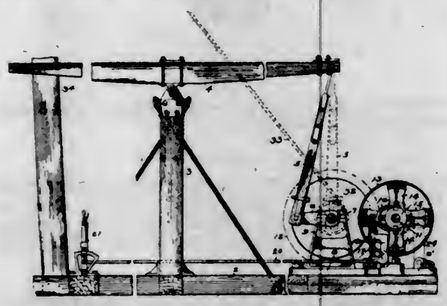
883,769. WELL-OPERATING APPARATUS. JAMES E. WISE, Butler, Pa. Filed July 3, 1907. Serial No. 382,067.

1. Well operating apparatus comprising a shaft provided with a crank, a spool mounted on and rotatable with the shaft, and means operating at different speeds for rotating the shaft in reverse directions.

2. Well operating apparatus comprising a shaft provided with a crank, a spool rotatable with the crank shaft, a driving shaft geared to the crank shaft, a driving pulley for the drive shaft, clutch mechanism for securing the pulley to said shaft, and means for rotating the drive shaft in direction reverse to that in which it is driven by the pulley.

3. Well operating apparatus comprising a shaft provided

with a crank, a spool rotatable with the crank shaft, a drive shaft geared to the crank shaft, a driving pulley for the drive shaft, clutch mechanism for securing the pulley to said shaft, reversing and speed-increasing gearing—operating alternately with the clutch mechanism—for connecting the drive shaft and driving pulley, and means for disengaging the clutch mechanism and simultaneously rendering operative the speed-increasing gearing.

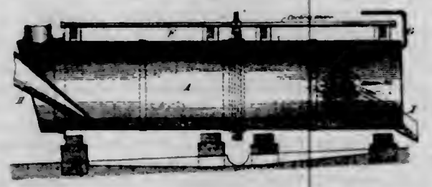


4. Well operating apparatus comprising a shaft provided with a crank, a spool rotatable with the crank shaft, a drive shaft geared to the crank shaft, a driving pulley for the drive shaft, clutch mechanism for securing the pulley to said shaft, a counter shaft geared to the drive shaft, and a wheel on the counter shaft adapted to be engaged with and disengaged from the driving pulley.

5. Well operating apparatus comprising a shaft provided with a crank, a spool rotatable with the crank shaft, a drive shaft geared to the crank shaft, a driving pulley for the drive shaft, clutch mechanism for connecting the pulley and said shaft, a counter shaft geared to the drive shaft, a friction wheel on the counter shaft adapted to be engaged with the driving pulley, and means connected to the clutch mechanism and also to the counter shaft for moving said parts simultaneously.

[Claims 6 to 10 not printed in the Gazette.]

883,770. METHOD OF TREATING BLAST-FURNACE SLAG. FREDERICK W. WOOD, Baltimore, Md. Filed Nov. 8, 1905. Serial No. 286,347.



1. The method of treating blast furnace slag consisting in subjecting the same to continuing agitation during its gradual change from a fluid to a solid state.

2. The method of treating blast furnace slag consisting in subjecting the same to agitation of the pasty nodules in contact with one another and to a progressive movement during its change from a fluid to a solid state.

3. The method of treating molten blast furnace slag consisting in delivering the same upon a cooling surface and tumbling the resulting pasty nodules over and over in contact with one another until they assume a solid condition.

4. The method of converting molten slag into solid nodules, consisting in flowing the material forward over a cooling surface and at the same time tumbling the mass over and over in a direction transverse to the flowing movement, to cause repeated contact of the nodules while changing from a pasty to a solid state.

5. The method of treating molten furnace slag consisting in flowing the same gradually downward over an inclined cooling surface, and at the same time lifting the surface transversely to the line of flow; whereby the advancing nodules are caused to repeatedly tumble back upon one another while passing from a fluid to a solid state.

[Claims 6 and 7 not printed in the Gazette.]

883,771. RUG-FASTENER. WILLIAM A. ALDEN and CHARLES M. ALDEN, Minneapolis, Minn. Filed July 18, 1907. Serial No. 384,315.



The combination with a rug or carpet 1, of a coupling plate 2 having barbs by means of which it is secured to a corner of said rug or carpet, and having an elongated slot 4 formed with a contracted and beveled outer end portion and a relatively wide inner end portion, and a screw 5 applied to a floor and having a tapered head insertible through the inner end portion of said slot 4, and engageable with the contracted and beveled outer end extremity of said slot the upper surface of said screw being flush with the upper surface of said plate, substantially as described.

883,772. ANIMAL-TRAP. WILLIAM D. ARMSTRONG, Abingdon, Ill. Filed Jan. 26, 1907. Serial No. 354,297.

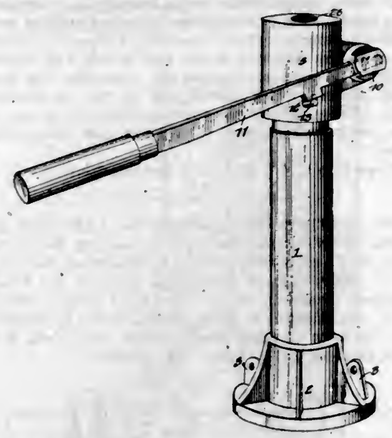


1. The combination with a pointed support engaging device; of jaws pivotally connected to and extending from said device and disposed to move in a plane extending transversely of said device, said device extending across and out of the path of the jaws.

2. In a trap the combination with crossed members rigidly connected, one of said members having a pointed support-engaging end; of jaws connected to said pointed member, and means upon the other member for locking the jaws when set, said jaws being movable in a plane extending transversely of the pointed member.

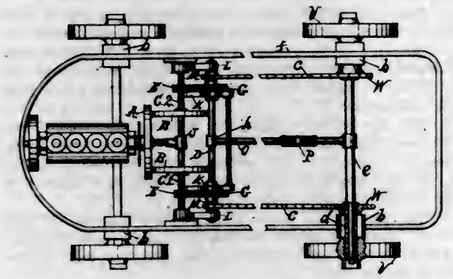
3. A trap comprising crossed members, one of said members being in the form of a spike and having a pointed support-engaging end, a bow spring upon one of the members, a yoke embracing said member and the spring and engaging the other member to bind said members and the spring together, jaws pivotally connected to the pointed member and disposed to be embraced and actuated by the ends of the spring, and a trigger upon one of the members for locking one of the jaws set, said jaws being movable in a plane extending transversely of the member.

883,773. HYDRAULIC JACK. FRANK F. ASHMORE, Ottawa, Kans. Filed July 24, 1907. Serial No. 385,341.



In a wagon or carriage jack, the combination of the inner and outer casings, one of which is adapted to abut the ends of the carriage axle, means for forcing said casings apart, connecting rods detachably carried by one of said casings and having a plurality of alined openings formed in its length, and wheel engaging elements adapted for connection within a selected one of said openings, substantially as described.

883,774. POWER-TRANSMISSION DEVICE FOR MOTOR-VEHICLES. FREDERICK C. AVERY, Harvey, Ill. Filed Mar. 9, 1904. Serial No. 197,289.



1. In a power transmission device, a friction disk, two wheels in friction contact with said disk and rotating in opposite directions, two shafts driven by said wheels, a gear attached to each of said shafts, two driven shafts, two driven gears mounted thereon, two swinging hangers mounted concentric with the two first mentioned shafts, said hangers supporting the driven shafts, two swinging brackets, a single intermediate gear attached to one bracket, two intermediate gears attached to the other bracket, and said brackets arranged to swing in order to move the intermediate gears in and out of contact with the driven gears as herein shown and described.

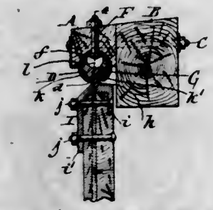
2. In a power transmission device, a power driven shaft, a friction disk mounted thereon, two friction wheels, a shaft mounted in each of said friction wheels and revolving with said wheels, said friction wheels being free to slide lengthwise on their mounted shafts, means for moving said disk in contact with said wheels in order to rotate said wheels in opposite directions to each other as herein shown and described.

3. In a power transmission device, a friction disk, two wheels rotated in opposite directions thereby, two shafts revolving with said wheels, two gear driven shafts revolving in the same direction, means connecting said gear driven shafts with the opposite rotating shafts, a driving sprocket attached to each of said gear driven shafts, two vehicle driving wheels, a driven sprocket rigidly attached to each of said vehicle driving wheels, chains connecting said driving and driven sprockets, and all in order to give motion to the vehicle wheels as herein shown and described.

4. In a power transmission device, a power driven shaft, a friction disk revolving with and free to slide lengthwise on said shaft, a pressure spring in contact with said disk, a stationary cam, a movable cam in working contact with said stationary cam in order to give a sliding movement to said disk lengthwise of said shaft as herein shown and described.

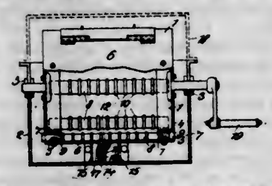
5. In a power transmission device, a power driven shaft, a friction disk revolving with and free to move lengthwise on said shaft, a pressure spring in contact with said disk, a stationary cam, a movable cam in working contact with said stationary cam, a gear operating said movable cam, a rack rod adapted to move said gear, and all in order to give a sliding movement to said disk on its driven shaft as herein shown and described.

883,775. DOOR-HANGER. SAMUEL W. BEESON, Buffalo, N. Y. Filed Mar. 4, 1907. Serial No. 360,344.



A door hanger having a longitudinal head which is adapted to slide in a tubular guide way, a flange adapted to be secured to a door and a reduced neck connecting said head and flange and adapted to move through a longitudinal slot in said guide way, said head being of crescent shape in cross section with its concave side facing upwardly and its convex side being provided with alternating longitudinal grooves and ribs, whereby the top of the head is prevented from striking the internal heads of bolts which support the guide way at the top, the contact between the head and track is reduced, dirt is worked off the guide way and the head can be reliably annealed, substantially as set forth.

883,776. WASHING-MACHINE. OTTO R. BEIER, Oelde, Germany. Filed May 7, 1907. Serial No. 372,305.



1. In a drum washing machine a rotatable washing drum for the reception of the laundry articles, a support for the drum, washing bars movably attached to the inner wall of said drum and provided with rubbing faces directed to the inside of the drum, a guide way provided on said support for the drum and forming a broken line, and projections formed on said bars and projecting to the outside of said drum into said guide way for the purpose of the reciprocation of the bars during rotation of the washing drum.

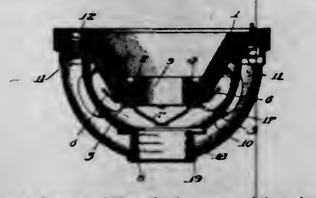
2. In a drum washing machine a rotatable washing drum for the reception of the laundry articles, a support for the drum, washing bars movably attached to the inner wall of said drum and having rubbing faces directed to the

inside of said drum, a guide way provided on said support and embracing the washing drum semi-circularly in a broken line, and projections on said bars and projecting to the outside of said drum into said guide way for the purpose of the reciprocation of the bars during rotation of the washing drum.

3. In a drum washing machine a rotatable washing drum for the reception of the laundry articles, a support for the drum washing bars movably attached to the inner wall of said drum and having rubbing faces directed to the inside of said drum, a guide way provided on said support and embracing the washing drum semi-circularly in a broken line and having widened ends, and projections on said bars projecting to the outside of said drum into said guide way for the purpose of the reciprocation of the bars during rotation of the drum.

4. In a drum washing machine a rotatable washing drum for the reception of the laundry articles, a support for the drum, washing bars movably attached to the inner wall of the drum and provided with rubbing faces directed to the inside of the drum, a guide way provided on said support and showing a broken line, projections screwed into said bars and projecting to the outside of said drum into said guide way, and nuts on the screw projections for securing the proper position of said bars.

883,777. CLUSTER-LAMP SOCKET. REUBEN B. BENJAMIN, Chicago, Ill., assignor to Benjamin Electric Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed Apr. 14, 1904. Serial No. 203,180.



1. A plural lamp-holding device comprising, in combination, a base, a lamp-receiving socket disposed to support a lamp in a line passing through the axis of said base, a center contact carried by said base for said socket, a series of sockets extending radially from said base and each disposed to sustain a lamp in an oblique position relatively to said base, a center contact carried by said base for each of said last-named sockets, and an outer casing provided with an opening opposite each of said sockets.

2. A plural lamp-holding device comprising, in combination, a base, a lamp-holding device disposed to support a lamp in axial relation to said base, contacts for said lamp-holding device, a series of lamp-holding devices extending radially from said base and each arranged to sustain a lamp in an oblique position relatively to said base, contacts carried by said base for each of said last-named sockets, and an inclosing casing provided with an opening opposite each of said sockets.

3. A plural lamp-holding device comprising, in combination, a base, a lamp-receiving socket disposed to support a lamp in axial relation to said base, a center contact carried by said base for said socket, a series of sockets extending radially from said base and each disposed to sustain a lamp in an oblique position relatively to said base, a center contact carried by said base for each of said last-named sockets, a binding-screw in permanent electrical connection with all of said sockets, a binding-screw in permanent electrical connection with all of said center contacts, and an outer casing inclosing said contacts and binding-screws, said casing being provided with an opening opposite each of said sockets.

4. A plural lamp-holding device comprising, in combination, a hemispherical casing having a central opening and a circularly arranged series of openings, a plurality of lamp-receiving sockets disposed within said casing and registering with said openings, means for sustaining the sockets which register with the circularly arranged openings in inclined position relatively to the axis of the casing and a center contact for each of said sockets.

5. A plural lamp-holding device comprising, in combination, a bowl-shaped casing having a central opening and a circularly-arranged series of openings, a plurality of lamp-holding devices disposed within said casing and registering with said openings, means for sustaining the lamp-holding devices which correspond to the circularly-arranged openings in inclined position relatively to the axis of the casing and contacts for each of said lamp-holding devices.

[Claims 6 to 17 not printed in the Gazette.]

883,778. METHOD OF IDENTIFYING ARTICLES AND SUCH IDENTIFIED ARTICLE. JAMES M. BOYLE, New York, N. Y., assignor to Edwin N. Sanderson, New York, N. Y.; Henry Hobart Porter, Lawrence, N. Y.; Francis Blossom, Montclair, N. J.; Richmond Talbot, Tuxedo, N. Y., and Richard S. Buck, Montclair, N. J., constituting The Firm of Sanderson & Porter, New York, N. Y. Filed Mar. 14, 1907. Serial No. 362,288.



1. The method of identifying railroad ties which consists in permanently embedding therein a metallic origin mark, in similarly embedding therein a primary mark located at such distance from said origin mark and in such position with relation to the line between said marks as to give a code indication, and in similarly embedding therein a secondary mark located at such distance from said origin mark and in such position with respect to the line between said secondary and origin marks as to give a code indication and in providing said marks with other code indications.

2. The method of identifying railroad ties which consists in permanently embedding therein metallic marks located at such distances apart as to form identifying lines of definite length to give code indications, said marks being in such position with respect to said lines as to give code indications.

3. The method of identifying railroad ties which consists in affixing marks thereto at such distance apart as to form an identifying line, giving a code indication by its length, said marks being in such position with respect to said line as to give a code indication.

4. The method of identifying railroad ties which consists in providing marks thereon located at such distances apart as to form an identifying line, giving a code indication by its length.

5. The method of identifying articles which consists in providing marks thereon located at such distances apart as to form identifying lines whose lengths give code indications, said marks being in such position with respect to such lines as to give code indications in connection therewith.

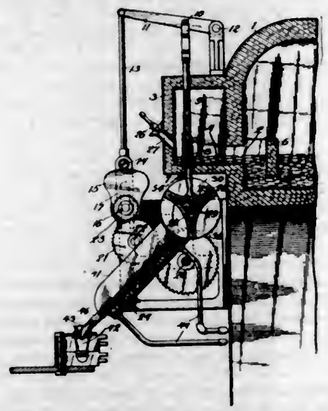
[Claims 6 to 16 not printed in the Gazette.]

883,779. GLASS-FURNACE AND APPURTENANCES THEREOF. HENRY M. BROOKFIELD, New York, N. Y., assignor to Brookfield Glass Company, a Corporation of New York. Original application filed Nov. 15, 1901, Serial No. 82,368. Divided and this application filed Dec. 28, 1903. Serial No. 186,768.

1. The combination of a furnace for molten glass provided with a discharge chamber having its floor raised above the level of the floor of the main part of the furnace, an orifice in one of the walls of the discharge chamber for the discharge of the glass, and a valve for said orifice to control the discharge of molten glass therefrom.

2. The combination of a furnace for molten glass provided with a discharge chamber having its floor raised above the level of the floor of the main part of the furnace.

an orifice in the floor of the discharge chamber for the discharge of the glass, a valve for said orifice to control the discharge of the molten glass therefrom, and a boot separating the discharge chamber from the main part of the furnace.



3. The combination with a furnace provided with an orifice for the discharge of molten glass, of a trough for conveying the molten glass to the point of delivery provided with a hollow space or chamber, and means for supplying a cooling medium to such space or chamber, whereby the sticking of the molten glass to the surface of the trough will be prevented.

4. In a machine for making glass insulators or other similar small glass articles the combination of a furnace for molten glass, devices for feeding the molten glass in a stream from the furnace means for heating the glass to keep it at the proper temperature at the point of discharge and for separating the stream of glass into masses of the desired amount.

5. In a machine for making glass insulators or other similar small glass articles the combination of a furnace for molten glass, devices for feeding the molten glass in a stream from the furnace means for heating the glass to keep it at the proper temperature at the point of discharge, and measuring devices, not in contact with the molten glass in the furnace, upon which the stream of glass is adapted to fall, for separating the glass into masses of the desired amount.

[Claims 6 to 17 not printed in the Gazette.]

883,780. CAR-WINDOW. EZRA S. BUCKNAM, Philadelphia, Pa., assignor to The J. G. Brill Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed June 29, 1907. Serial No. 381,484.

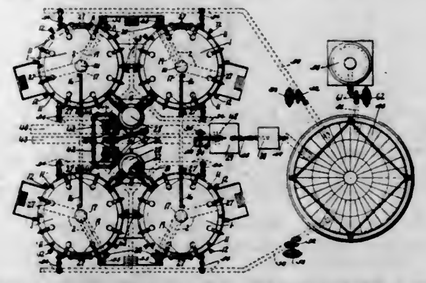
1. A railway car provided with stanchions having a groove formed between an inner and outer sash guiding strip, a sash movable in said grooves the faces of which engage the said guiding strips, said sash being provided with a recess extending inwardly from that part of the face of the sash which engages the guide strip, for a portion of the thickness of the sash, a projection in the sash groove adapted to engage in the sash recess and a spring adapted to force the sash toward the said projection, the sash grooves being wide enough to allow the sash to be moved free of the projection.

2. A railway car provided with stanchions having a groove formed between inner and outer sash guiding strips, a projection on the outer guide strip extending inwardly into the groove, a sash movable in the grooves and provided with recesses in its outer face to receive the said projection and a spring adapted to force the sash outwardly, the sash grooves being sufficiently wide to allow the sash to be moved inwardly and free of the said projection.

3. A railway car provided with stanchions having a groove, a sash movable in said grooves and provided with a recess extending inwardly from the outer face of the sash for a portion of the thickness of the sash, said recess having a slanting lower surface, a projection in said stanchion groove having a slanting surface and adapted to engage in the recess of said sash and a spring on the inner face of the sash adapted to force the latter outwardly to engagement with said projection in the stanchion groove.



883,781. APPARATUS FOR MANUFACTURING CHARCOAL. CHARLES J. T. BURCEY, Syracuse, N. Y., assignor of one-fourth to Frederick R. Hazard, Solvay, N. Y. Filed Mar. 21, 1904. Serial No. 199,118.



1. The combination of an oven for distilling wood, said oven having a heating-chamber, a receptacle for the wood, passages communicating with the heating chamber and with the receptacle and constituting the sole means of the communication between the heating chamber and the receptacle, means for opening and closing said passages and means for withdrawing the gases freed from the charring wood from the wood receptacle.

2. The combination of an oven for distilling wood, said oven having a heating chamber, a receptacle for the wood, passages communicating with the heating chamber and with the receptacle and constituting the sole means of communication between the heating chamber and the receptacle, means for opening and closing said passages, means for withdrawing the gases freed from the charring wood, a gasometer for receiving such gases, a conduit for the gases connected to the withdrawing means and the gasometer, a conduit for conducting gas from the gaometer to the receptacle, and valves for controlling the flow of gas through the said conduits.

3. An oven for distilling wood comprising a heating chamber, a series of passages extending outwardly from

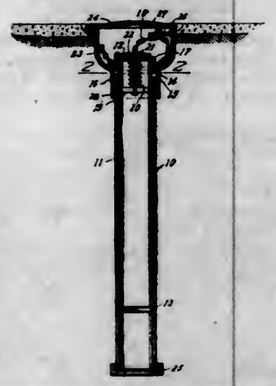
the heating chamber, a second series of passages alternating with the first passages and each communicating with one of the first passages, conduits or chimneys communicating with said first passages and being disconnected from the second series of passages, and a receptacle for the wood arranged above the heating chamber, and said passages, substantially as and for the purpose described.

4. An oven for distilling wood comprising a heating chamber, a series of passages extending outwardly from the heating chamber, a second series of passages alternating with the first series of passages and each communicating with one of the first series of passages, and a conduit or chimney communicating with the first series of passages and being disconnected from the second series, a receptacle for the wood arranged above the heating chamber and said passages and means for connecting and disconnecting the wood receptacle from the second series of passages, substantially as and for the purpose set forth.

5. An oven for distilling wood comprising a heating chamber, a series of passages extending outwardly from the heating chamber, a second series of passages alternating with the former passages and each communicating with one of the former passages, a receptacle for the wood arranged above the heating chamber and said passages and having its interior normally disconnected therefrom, and means for connecting a plurality of the passages to the interior of the receptacle and thereby accelerating the distillation of the wood, substantially as and for the purpose set forth.

[Claims 6 to 19 not printed in the Gazette.]

883,782. HITCHING-POST. CHARLES BUTCHER, Cambridge, Mass. Filed Apr. 22, 1907. Serial No. 369,495.

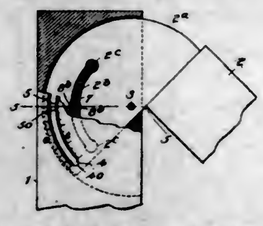


1. A disappearing post, comprising the combination of a casing and a post vertically extensible therefrom, with a latch held retracted in one of these parts by the other, there being an annular groove in that other, into which the latch may project when the post is raised; said groove having a locking notch, holding the post against rotation in the groove, and a releasing notch, letting the post drop into the casing.

2. A disappearing post, comprising the combination of a substantially cylindrical iron pipe, forming the post; another incasing it closely; a latch within the first, and a tubular extension, coupled to the casing pipe and having an annular groove for the latch; said extension being interiorly flush with said incasing pipe, and the groove therein of larger diameter than the interior of said casing pipe, with a beveled notch leading from the bottom of the groove to the surface of said interior.

883,783. FOLDING SQUARE. HENRY D. BUYS and JOSEPH M. LYON, Pearl, Idaho. Filed June 27, 1907. Serial No. 381,081.

1. In an instrument of the character described, the combination with the long arm having one end horizontally recessed, provided with a hinge bolt near its inner edge, and a segmental slot near its outer edge concentric with the bolt, the opposite faces of the said arm adjacent the slot having an indicating scale; of the short arm having a hinge portion movable within the recess in the long arm and fulcrumed on the hinge bolt, and an indicator projected from both faces of the hinge portion that plays in the slot in the long arm for the purposes specified.

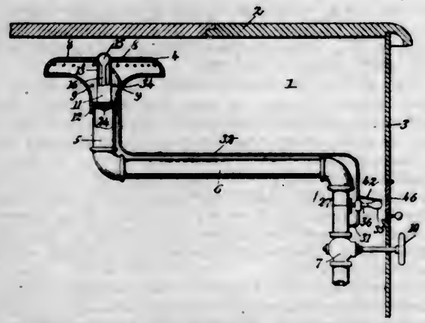


2. In an implement of the character described, the combination with the long arm having a recessed end, a pivot bolt in said end, and a segmental slot concentric with the pivot bolt having indicator scales along its edges; of the short arm having a hinge member fulcrumed on the pivot bolt and movable in the recess in the long arm, said hinge end having indicator studs projected from its opposite faces into the segmental slot and means for clamping the short arm to hold it to its adjusted positions, as set forth.

3. The combination with the long arm having a recessed end, a pivot bolt and a segmental slot having indicator scale edges, of the short arm having a hinge member fitting in the said recess and having an indicator projected into the segmental slot for coöperating with the indicator scales, a clamp screw that passes through the said long arm and the hinged part of the short arm, a clamping nut therefor, said hinged part having a segmental slot concentric with the pivot, the end of which is enlarged and the clamp bolt having opposite straight faces and shoulders for coöperating with the slot in the hinged portion.

4. In combination with the short arm having a hinge member provided with an indicator stud; of the long arm having a recess to receive the said hinge member and a fulcrum bolt for said member, said long arm having a slot concentric with the said fulcrum bolt, a metallic casing in said slot having its opposite edges lapped over the opposite faces of the long arm and carrying indicator scales and means for clamping the short arm to its set positions, as set forth.

883,784. SAFETY ATTACHMENT FOR BURNERS. WILLIAM A. CALDWELL, Jr., Roswell, N. Mex. Filed June 28, 1907. Serial No. 381,242.



1. In a device of the class described, a hollow body having at the end a chamber, said chamber containing a thermally sensitive substance, a movable member within said chamber and operable by the expansion and contraction of said substance, a fuel inlet, said member having a valve controlling said fuel inlet, said body having a partition adjacent to said chamber, and resilient means arranged between said member and said partition for resisting the movement of said member in a direction to open said fuel inlet.

2. In a device of the class described, a hollow, elongated body forming a cylinder and having at the end a laterally extended part forming a chamber, said chamber containing a thermally sensitive substance, a movable member within said cylinder and operable by the expansion and contraction of said substance, a fuel inlet, said member having a valve disk controlling said fuel inlet, said body having a partition adjacent to said chamber, and a spring arranged between said member and said partition and resisting the movement of said member in a direction to open said fuel inlet.

3. In a device of the class described, a burner, a fuel inlet pipe, a plug between said burner and said inlet pipe and having a sleeve presenting openings, a bulb within said sleeve and containing a thermally sensitive substance, said bulb having a casing, a movable member within said casing, a rod rigid with said movable member, openings through said plug effecting communication between said inlet and said sleeve, said rod having a valve disk for closing said openings of said plug, and a spring within said casing holding said member in a normal position to close said openings by means of said valve disk, said member being operable by the expansion and contraction of said substance.

4. In a device of the class described, a chamber containing a thermally sensitive substance and having a neck, a movable member in said neck controlled by the expansion and contraction of said substance, an ignition tube adjacent to said chamber, a flame-conveying tube communicating with said ignition tube, a fuel inlet valve to said ignition tube controlled by said member, and means for normally holding said fuel inlet valve closed.

5. In a device of the class described, a bulb having an elongated neck and containing a thermally sensitive substance, a movable member in said neck and controlled by the expansion and contraction of said substance, an ignition tube adjacent to said bulb, a flame-conveying tube communicating with said ignition tube, a fuel inlet valve communicating with said ignition tube through said flame-conveying tube, a plunger for closing said valve, said plunger being controlled by said member, and means for normally holding said plunger in position to close said valve.

[Claims 6 to 12 not printed in the Gazette.]

883,785. GARMENT-HANGER. MARION H. CAZIER, Chicago, Ill. Filed June 15, 1905. Serial No. 265,448.



1. In a garment hanger, a plurality of clamping jaws, a plurality of suspending members severally attached to said jaws and having a hinged connection with each other, a locking device attached to one suspending member and adapted to clamp the other, and a spring adapted to act independently of said hinged connection interposed between the locking device and one of the suspending members.

2. In a garment hanger, a plurality of rigid clamping jaws, a plurality of rigid suspending members severally attached to the jaws and having a hinged connection with each other, a locking device attached to one suspending member and adapted to clamp the other, and a spring adapted to act independently of said hinged connection interposed between the locking device and one of the suspending members.

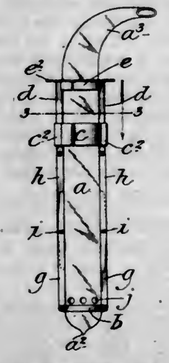
3. In a garment hanger, a plurality of clamping jaws, a plurality of rigid suspending members severally attached to the jaws and having a hinged connection with each other, a locking device attached to one suspending member and adapted to clamp the other, and a spring adapted to act independently of said hinged connection interposed between the locking device and one of the suspending members.

4. In a garment hanger, a plurality of rigid clamping jaws, a plurality of suspending members severally attached to the jaws and having a hinged connection with each other, a locking device attached to one suspending member and adapted to clamp the other, and a spring adapted to act independently of said hinged connection interposed between the locking device and one of the suspending members.

5. In a garment hanger having a plurality of rigid jaws, and a plurality of suspending members severally attached thereto, and having a hinged connection with each other, the combination of a locking link and a spring adapted to act independently of said hinged connection interposed between the link and the suspending members.

[Claims 6 to 14 not printed in the Gazette.]

883,786. FRUIT-CUTTER. EDMOND G. CHATAIN, Flushing, N. Y. Filed Oct. 29, 1907. Serial No. 399,723.



1. A device of the class described comprising a tube, closed and perforated at one end, expansible cutters or dividers mounted on said tube, and devices connected with said tube and with said cutters or dividers for expanding and contracting the latter substantially as shown and described.

2. A device of the class described comprising a tube adapted to be inserted into an orange or similar fruit, said tube being provided on one end portion thereof with expansible cutters or dividers adapted in one position to lie closely adjacent to said tube, and devices mounted on said tube for operating said cutters or dividers substantially as shown and described.

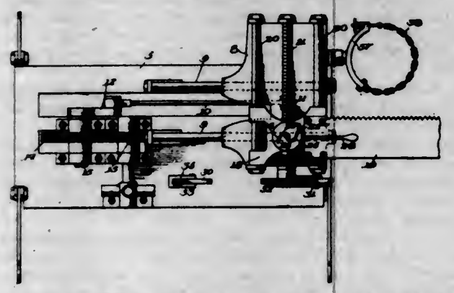
3. A device of the class described comprising a tube closed and perforated at one end, the other end being open and curved laterally, a band secured to the closed and perforated end of the tube, another band secured to said tube adjacent to the other end portion thereof, slides mounted in said last named band, cutters or dividers connected with the first named band and with said slides, and means for operating said slides.

883,787. TREE-SAWING MACHINE. WESLEY T. CHRISTINE, Chicago, and FRED H. BUDDE, Aurora, Ill. Filed Apr. 29, 1907. Serial No. 370,791.

1. A sawing machine comprising a reciprocating saw, and a platform carrying the same and pivotally mounted at points above the level of said platform.

2. A sawing machine, comprising a reciprocating saw, a platform on which the saw is mounted, and cross-pieces

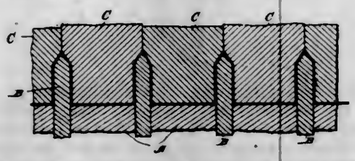
supporting said platform, said cross-pieces having portions extending upwardly above the platform with which pivotal connections are made.



3. A tree sawing machine comprising an angularly adjustable platform, a reciprocating carriage carried by said platform, a saw carrying carriage mounted for transverse movement upon said reciprocating carriage, a screw shaft carried by said reciprocating carriage and having a threaded engagement with said saw carrying carriage, and means for intermittently turning said screw shaft as the saw is reciprocated.

4. A tree sawing machine comprising an angularly adjustable platform, a reciprocating carriage mounted on said platform, means carried by the platform for reciprocating said carriage, a saw carrying carriage mounted for transverse movement upon said reciprocating carriage, a screw shaft carried by said reciprocating carriage, a movable threaded member carried by the saw carrying carriage and adapted to be moved into engagement with said screw shaft, and means for intermittently turning said screw shaft as the saw is reciprocated.

883,788. METHOD OF CORRUGATING SHEET METAL. HERBERT F. COBB, Cleveland, Ohio. Filed June 10, 1907. Serial No. 378,060.



1. The method of forming a corrugation in a sheet of material, which consists in moving a forming member against one side of the sheet; moving another member against the other side of the sheet to press a section of such sheet against the contiguous face of said first member, whereby a portion of a corrugation is formed; and then moving a third member from the first side of the sheet to similarly press such sheet against the contiguous face of said second member, whereby the remainder of such corrugation is formed.

2. The method of corrugating a sheet of material, which consists in repeating the following series of steps to form successive corrugations: moving a forming member against one side of the sheet; moving another member against the other side of the sheet to press a section of such sheet against the contiguous face of said first member, whereby a portion of a corrugation is formed; and then moving a third member from the first side of the sheet to similarly press such sheet against the contiguous face of said second member, whereby the remainder of such corrugation is formed.

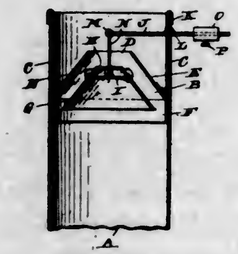
3. The method of corrugating a sheet of material, which consists in repeating the following series of steps to form successive corrugations: moving a forming member against one side of the sheet; moving another member against the other side of the sheet to press a section of such sheet against the contiguous face of said first member, whereby a portion of a corrugation is formed; and then moving a third member from the first side of the sheet to similarly press such sheet against the contiguous face of said second member, whereby the remainder of such corrugation is formed, the last step of one series and the first step of the next being performed simultaneously.

4. The method of corrugating a sheet of material, which consists in relatively approaching one forming member from one side and a pair of spaced members from the other side of the sheet to press corresponding sections of the latter against the respective lateral faces of said first member, whereby portions of two corrugations are formed; and then similarly moving a second pair of spaced members from the same side of the sheet as said first member, to press such sheet against the contiguous faces of said first pair of members, the remaining portions of the sheet being left free.

5. The method of forming corrugations in a sheet of material, which consists in approaching a forming member to one side of the sheet; moving a pair of relatively spaced members against the other side of the sheet to press corresponding sections of the latter against the respective contiguous faces of said first member, whereby portions of two corrugations are formed; and then moving the second pair of relatively spaced members from the first side of the sheet to similarly press the latter against the respective contiguous faces of said first pair of members, the remaining portions of the sheet being left free.

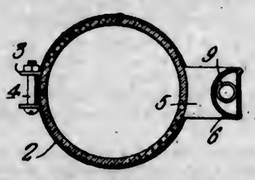
[Claims 6 to 16 not printed in the Gazette.]

883,789. SELF-REGULATING DAMPER. BENJAMIN V. CROY, Cunot, Ind. Filed Jan. 11, 1907. Serial No. 351,824.



In a damper, in combination with a stove pipe, a cone-shaped and perforated diaphragm contained in the pipe, said diaphragm being provided with a central opening, a lever fulcrumed on the pipe, and a cone shaped hollow damper provided with a central opening in alinement with the opening in the diaphragm, said damper being secured to said lever and adapted to reciprocate in the pipe into and out of engagement with said diaphragm to close and open the perforations therein, substantially as shown and described.

883,790. OIL-CAN. CLARENCE D. DAYMUDE, Wichita, Kans. Filed July 8, 1907. Serial No. 382,698.



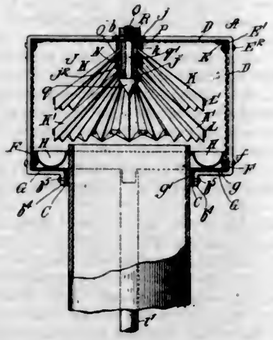
1. In an oil can the combination with a receptacle, a detachable closure, a spout extending therefrom, and a valve seat within the spout; of a depressible member slidably mounted within the receptacle and extending therefrom, a valve at one end of said member and disposed within the spout, a detachable handle, and means within the handle for bearing against the member to hold the valve normally against its seat.

2. In an oil can the combination with a receptacle, a spout extending therefrom, and a valve seat within the spout; of a rod slidably mounted within and extending from the receptacle, a valve at one end of the rod and within the spout, a hollow handle having an open end, a closure for the handle, and means supported by the closure within the handle and bearing against the rod to hold the valve against its seat.

3. In an oil can the combination with a receptacle, a removable closure therefor, a spout extending from the closure, and a valve seat within the spout; of a handle detachably connected to the receptacle, a slidable member extending through the closure, a valve upon one end of said member, and means within the handle and bearing against the other end of said member to hold the valve normally against its seat.

4. In an oil can the combination with a receptacle, a removable closure therefor, a spout extending from the closure, a valve seat within the spout, and a guide extending through the closure; of a handle, means extending therefrom and embracing the receptacle to secure the handle thereto, a rod slidably mounted within the guide, a valve at one end of the rod, and means within the handle and bearing against the other end of the rod to hold the valve against the seat.

883,791. SPARK-ARRESTER. JOHN E. DEMPSTER, Mayodan, N. C., assignor of one-half to Charles V. Pegram, Walkertown, N. C. Filed Nov. 21, 1907. Serial No. 403,196.



1. A spark-arrester comprising a reticulated hood, means for attaching it to a smoke-stack and a baffling-device suspended from the upper central part of the hood comprising a series of radially-arranged, downwardly-inclined troughs above the stack with intervening spaces for the passage upwardly between them of the products of combustion, having channels on their upper sides in which the sparks are conveyed beyond the top margin of the stack.

2. A spark-arrester comprising a reticulated hood, means for attaching it to a smoke-stack, a trough in the lower portion of the hood surrounding the upper end of the stack, a discharge-pipe connected with said trough and a baffling-device supported within the hood over the smoke-stack comprising a series of radially-arranged, downwardly-inclined troughs with intervening spaces for the passage upwardly between them of the products of combustion and having channels on their upper sides in which the sparks are conveyed beyond the top margin of the stack.

3. A spark-arrester comprising a reticulated hood and a baffling device supported therein comprising a series of radially-arranged, downwardly-inclined troughs, triangular in cross-section, with intervening spaces for the passage upwardly between them of the products of combustion and which have channels on their upper sides in which the sparks are conveyed beyond the top margin of the stack.

4. A spark-arrester comprising a reticulated hood adapted to be attached to a smoke-stack, a receiving-trough arranged in the lower part of the hood around the upper end of the smoke-stack and a baffling-device supported within the hood comprising a series of troughs, triangular in cross-section, extending downwardly and in an inclined direction outwards from the central portion of the hood beyond the top margin of the stack towards the receiving-trough and which have intervening spaces for the passage upwardly between them of the products of combustion.

5. A spark-arrester comprising a reticulated hood adapted to be secured to a smoke-stack, a receiving-trough arranged in the lower portion of the hood and a baffling-device comprising two series of troughs arranged one above the other over the smoke-stack, each of said trough-members having a channel on its upper side in which the sparks are conveyed beyond the top margin of the stack and each trough-member extending radially in an inclined direction downwards and outwards from the central portion of the hood.

[Claims 6 to 8 not printed in the Gazette.]

883,792. PROCESS OF PURIFYING PRECIPITATES. HERBERT H. DOW, Midland, Mich., and WALTER S. GATES, Worthington, Ontario, Canada, assignors to The Ontario Nickel Company, Limited, Worthington, Canada, a Corporation of Canada. Filed Nov. 6, 1907. Serial No. 401,003.

1. In a process of separating one metal from another, such metals being in the form of precipitates one of which slightly in their respective degrees of solubility, the steps which consist in adding to the precipitates a solution containing a soluble salt of the metal forming the less soluble precipitate in an amount greater than the chemical equivalent of the metal forming the more soluble precipitate; and then agitating the resulting mixture until such latter metal is substantially dissolved out.

2. In a process of separating one metal from another, such metals being in the form of precipitates one of which is relatively insoluble, the steps which consist in adding to the precipitates a solution containing a soluble salt of the metal forming such relatively insoluble precipitate in an amount greater than the chemical equivalent of the other metal; and then agitating the resulting mixture until such latter metal is substantially dissolved out.

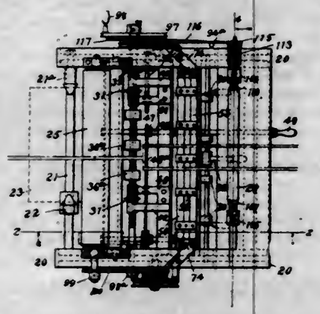
3. In a process of separating one metal from another, such metals being in the form of substantially insoluble precipitates, one precipitate, however, being slightly less soluble than the others, the steps which consist in adding to the precipitates a solution containing a soluble salt of the metal forming such less soluble precipitate in an amount sufficient to actually dissolve all of the metal forming the more soluble precipitate; and then agitating the resulting mixture until such latter metal is substantially dissolved out.

4. In a process of separating one metal from another, such metals being in the form of substantially insoluble precipitates, one precipitate, however, being slightly less soluble than the others, the steps which consist in adding to the precipitates a solution of the metal forming the less soluble precipitate in an amount sufficient to actually dissolve all of the metal forming the more soluble precipitate; and then agitating the resulting mixture until the latter metal is substantially dissolved out.

5. In a process of separating one metal substantially free from another, such metals being in the form of precipitates differing slightly in their respective degrees of solubility, the steps which consist in repeating the following cycle of operations until each metal has been successively separated out: adding to the precipitates a solution of a soluble salt of the metal forming the less soluble precipitate in an amount sufficient to actually dissolve all of the metal forming the more soluble precipitate; agitating the resulting mixture until such latter metal is dissolved out; and then separating the solution from the residual precipitate.

[Claims 6 to 16 not printed in the Gazette.]

883,793. MACHINE FOR MAKING WINDOW-SHADES. EPHRAIM O. ENGBERG, Salt Lake City, Utah, assignor to John Beecher Patton, Kent, Ohio. Filed Oct. 5, 1905. Serial No. 281,474.



1. In a machine for making window shades, the combination with means for holding a web of shade material, of shade-roller holding means, means for rotating the shade-roller holding means to wind the material on the roller, means for trimming the edges of the material lengthwise thereof, a movable knife for cutting the material transversely, mechanism for creasing the material transversely thereof for forming the loop for the shade-slat and arranged in advance of the trimming means, together with mechanism for automatically actuating the knife and forcing it across the machine during its operation.

2. In a machine for making window shades, the combination with a frame and means for holding shade material, of means for winding the material on a shade-roller, trimming devices for trimming the edges of the material, mechanism for folding and creasing the material transversely thereof to form the loop for the shade-slat having two bends and an inturned end, a cutting device movable transversely of the machine, together with mechanism automatically forcing the cutting device across the machine to cut the material transversely.

3. In a machine of the character described, the combination with means for holding shade material, of means for rotating a shade-roller to wind the material thereon, folding means acting on the material and forming the loop for the shade-slat, a transversely movable knife, together with means for automatically forcing the knife across machine.

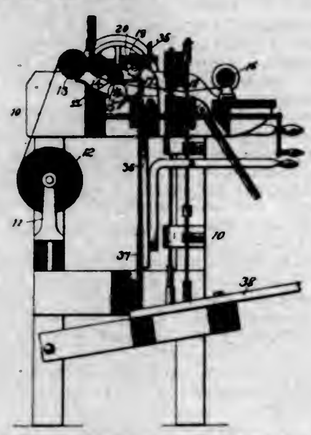
4. In a machine of the character described, the combination with means for holding the shade material, of folding and creasing means for folding and creasing the material transversely thereof and forming the loop for the shade-slat, a knife, and mechanism for automatically forcing the knife transversely of the machine to cut the material.

5. In a machine of the character described, the combination with a frame, of means for holding shade material on the frame, means for rotating a shade-roller for winding the material thereon, means having movable members clamping the material between them and forming a shade-slat loop or socket in which one end is bent inward within the loop, together with an automatically actuated device movable across the machine and cutting the material while clamped between the members.

[Claims 6 to 49 not printed in the Gazette.]

883,794. MEASURING DEVICE. EPHRAIM O. ENGBERG, Salt Lake City, Utah, assignor to John Beecher Patton, Kent, Ohio. Filed Aug. 16, 1907. Serial No. 388,867.

1. In a measuring device, the combination with a rotary shaft, of a gear fixed to said shaft, a second gear in mesh with the first-mentioned gear, a worm rotatable with the second gear, a worm gear engaged by the worm to rotate the former, a shaft to which the worm gear is secured ex-second gear, a worm gear engaged by the worm to rotate the former, a shaft to which the worm gear is secured, a sleeve rotatable on the worm gear shaft, a pointer carried by the sleeve, a register dial arranged adjacent to the pointer, and means for causing the pointer to move along the dial in both directions.



2. In a measuring device, the combination with a rotary shaft, of a gear fixed to said shaft, a second gear in mesh with the first-mentioned gear, a worm rotatable with the second gear, a worm gear engaged by the worm to rotate the former, a shaft to which the worm gear is secured, a sleeve rotatable on the worm gear shaft, a pointer carried by the sleeve, a register dial arranged adjacent to the pointer, and means for causing the pointer to move along the dial in both directions.

3. A measuring device, comprising a shaft, a worm gear secured to said shaft, a sleeve carrying a pulley rotatably held on the shaft, a friction disk carried by the pulley and arranged adjacent to the face of the worm gear, a stationary register dial arranged convenient to the sleeve, a pointer carried by the sleeve and adapted to move along the dial as the sleeve is rotated, and means for forcing the sleeve and friction disk into engagement with the worm gear.

4. A measuring device, comprising a shaft, a worm gear secured to said shaft, a sleeve carrying a pulley rotatably held on the shaft, means connected to the pulley for rotating the latter in one direction, a friction disk carried by the pulley and arranged adjacent to the face of the worm gear, a dial arranged adjacent to the sleeve, a pointer carried by the sleeve and adapted to move along the dial as the sleeve is rotated, and a spring for forcing the sleeve and friction disk into engagement with the worm gear.

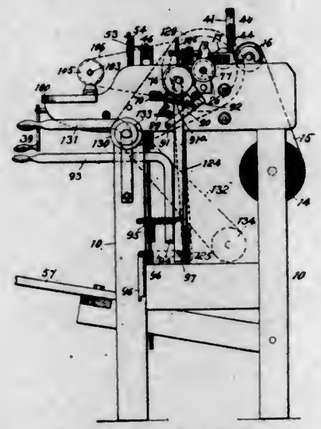
5. A measuring device, comprising a shaft, a worm gear secured to said shaft, a sleeve rotatably held on the shaft adjacent to the worm gear, a dial arranged adjacent to the sleeve, a pointer carried by the sleeve and adapted to move along the dial as the sleeve is rotated, and means for rotating the sleeve with, and independent of the worm gear.

[Claims 6 to 10 not printed in the Gazette.]

883,795. MACHINE FOR MAKING WINDOW-SHADES. EPHRAIM O. ENGBERG, Salt Lake City, Utah, assignor to John Beecher Patton, Kent, Ohio. Filed Aug. 16, 1907. Serial No. 388,868.

1. In a machine of the character described, the combination with means for holding shade material, of means for rotating a shade roller to wind the material thereon, folding means acting on the material and forming the loop for the shade-slat, a transversely movable knife, together with a cushioning device arranged in the path of the knife at one end of its travel.

2. In a machine of the character described, the combination with means for holding shade material, of means for rotating a shade roller to wind the material thereon, folding means acting on the material and forming the loop for the shade-slat, a transversely movable knife, a, spring-pressed cushioning bar or device arranged in the path of the knife, and means for forcing the knife across the machine.



3. In a machine of the character described, the combination with means for holding the shade material, of folding and creasing means for folding and creasing the material transversely thereof and forming the loop for the shade-slat, a knife adapted to move transversely of the machine, means for forcing the knife in one direction to cut the material, a friction wheel, a second friction wheel normally engaging the first-mentioned friction wheel, a drum movable with the latter wheel, means connecting the drum to the knife, a pivoted lever to which the second friction wheel is held, and means for normally keeping the friction wheels in engagement to force the knife across the machine to cutting position.

4. In a machine of the character described, the combination with means for holding the shade material, of means for forming the loop for the shade-slat, a knife adapted to move transversely of the machine, means for forcing the knife in one direction to cut the material, a friction wheel, a second friction wheel normally engaging the first-mentioned friction wheel, means connected to the second friction wheel and to the knife, a pivoted lever to which the second friction wheel is held, and a spring for normally keeping the friction wheels in engagement to force the knife across the machine to cutting position.

5. In a machine of the character described, the combination with means for holding the shade material, of means for forming the loop for the shade-slat, a knife adapted to move transversely of the machine, a two-part drum and a weight for forcing the knife in one direction to cut the material, a friction wheel, a second friction wheel normally engaging the first-mentioned friction wheel, and means for normally keeping the friction wheels in engagement to force the knife across the machine to cutting position.

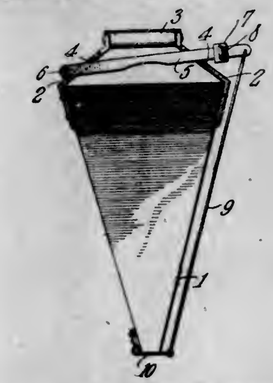
[Claims 6 to 25 not printed in the Gazette.]

883,796. HAND FERTILIZER-DROPPER. JOHN T. FLIPPEN, Greystone, Va. Filed Aug. 17, 1907. Serial No. 389,018.

1. A bucket open at its opposite ends, a valve located at the lower end of the bucket, a handle attached at the opposite end of the bucket, a lever fulcrumed upon the handle and being operatively connected with said valve.

2. A fertilizer distributer consisting of a bucket, a valve located at the lower end thereof, a handle attached at the opposite end, a lever fulcrumed at the handle end of the bucket being operatively connected to said valve.

3. A fertilizer dropper consisting of a bucket having opposite open ends, a valve located at the lower end of the bucket, a handle located at the opposite end thereof, a lever fulcrumed at the handle end of the bucket and being operatively connected with said valve and an adjustable means for regulating the swing of the lever.

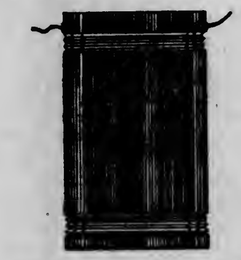


4. A fertilizer dropper comprising a bucket having open ends, a valve hinged at the lower end, a lever fulcrumed at the opposite end and a rod connecting the lever with the valve.

5. A fertilizer dropper comprising a bucket having open ends, a valve hinged to the lower end, a lever fulcrumed to the opposite end, and a rod connecting the lever with the valve.

[Claim 6 not printed in the Gazette.]

883,797. PAPER BAG. RUDOLF GELDMACHER, Cologne, Germany. Filed Nov. 8, 1907. Serial No. 401,258.



A sack, comprising in combination, a sack constructed of strong paper, plaits in the sack, bands for adjusting the height of the plaits, the ends of the bands adapted for closing the sack, substantially as described and shown and for the purpose set forth.

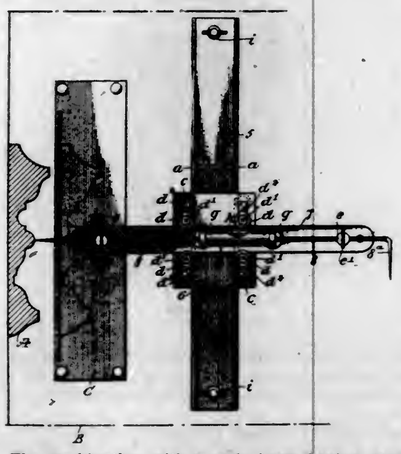
883,798. COMBINED PROTRACTOR AND LEVEL. HARVEY E. GREGORY, Fruitvale, Cal. Filed May 9, 1907. Serial No. 372,791.

1. The combination with a main beam, and a coupling box slidable longitudinally thereon, of a cross beam slidable on the coupling box at right-angles with the main beam, a guide rod longitudinally adjustable on the cross beam, and a tracing device carried by the cross beam near an end thereof.

2. The combination with a main beam having parallel side edges, a coupling box mounted on said beam, and means carried by said box that loosely engage said side edges, of a cross beam slidable longitudinally on the coupling box at right angles with the main beam, a guide rod on the cross beam, and tracing means carried by said beam near ends thereof.

3. The combination with a main beam having parallel side edges, a coupling box mounted on said beam, and means carried within the box having grooves that loosely

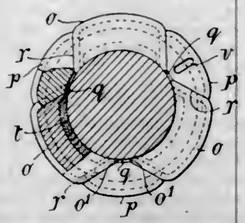
receive said side edges, of a cross beam disposed at right angles to the side edges on the main beam and adapted for longitudinal movement on the coupling-box, a guide rod longitudinally adjustable on the cross beam, and a leveling device mounted upon said cross beam.



4. The combination with a main beam having parallel side edges, a coupling box having grooved pulleys rotatable on said box and engaging the edges of the main beam, and set screws in the ends of the main beam, of a cross beam having parallel side edges, grooved pulleys mounted rotatably on the coupling box, and engaging the edges of the cross beam which is thus adapted for longitudinal movement at right angles with the main beam, a guide rod longitudinally adjustable on the cross beam, a marking device carried by the guide rod and depending therefrom, and a leveling device mounted on the cross beam.

5. In a device of the character described, the combination with a suitable adjustable support, of a guide rod straight in the body, tapered at one end, having a threaded socket in the opposite end, and a leg having a threaded end that screws into the socket, and a depending member thereon that is pointed at its free end.

883,799. METALLIC PACKING FOR PISTON-RODS, VALVE-RODS, AND THE LIKE. WALDEMAR HARBINGER, London, England. Filed Nov. 20, 1907. Serial No. 403,019.



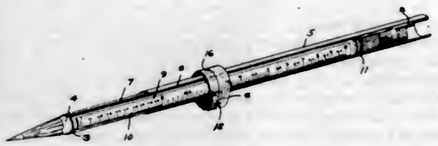
1. A metallic packing ring for piston and like rods, comprising a plurality of bearing blocks, a corresponding number of guide blocks and two encircling springs, the blocks being so formed and disposed as to leave a space such as *q* between the rod and the guide blocks and between the bearing blocks.

2. A metallic packing ring for piston and like rods comprising a plurality of bearing blocks, a corresponding number of guide blocks and two encircling springs, the bearing blocks and the guiding blocks being provided with coacting faces *r r* inclined to the face of the ring.

3. Metallic packing for piston and like rods comprising a stuffing box, a gland to said stuffing box, a ring held in place by said gland, said ring having a concave spherical face, a second ring having a convex spherical face and bearing on said first ring, sliding rings pressed apart by springs disposed within said stuffing box, three rings each composed of a plurality of bearing blocks, a corresponding number of guide blocks and two encircling springs, the blocks being so formed and disposed as to leave a space such as *q* between the rod and the guide blocks and between the bearing blocks, substantially as set forth.

4. Metallic packing for piston and like rods comprising a stuffing box, a gland to said stuffing box, a ring held in place by said gland, said ring having a concave spherical face, a second ring having a convex spherical face and bearing on said first ring, sliding rings pressed apart by springs disposed within said stuffing box, three rings each composed of a plurality of bearing blocks, a corresponding number of guide blocks and two encircling springs, the blocks being so formed and disposed as to leave a space such as *q* between the rod and the guide blocks and between the bearing blocks and said bearing blocks and guide blocks being provided with coacting faces *r r*, inclined to the face of the ring substantially as set forth.

883,800. CALCULATING-RULE. WILLIAM S. HARLOW, Swampscott, Mass. Filed Oct. 2, 1907. Serial No. 395,500.



1. A calculating rule comprising an open-ended slotted resilient tubular graduated member having an unobstructed bore of a size to fit over a pencil, a slide embracing and fitting said tubular member and slidable thereon, said slide having an open side through which the graduations on the tubular member are visible, and an indicator slidably embracing said slide and indicator.

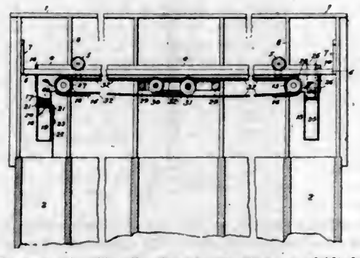
2. A calculating rule comprising a pencil-receiving tubular slotted member, a slide embracing said tubular member and having at one edge an inturned flange received in the slot of said tubular member, the exposed portion of the tubular member having a scale thereon and one edge of the slide having a coöperating scale, and an indicator embracing the slide and tubular member and slidable thereon.

3. A calculating rule comprising a slotted tubular graduated member having an unobstructed interior to adapt said member to be slipped over a pencil and held thereon by the resiliency of said member, a slide entirely exterior to said member and embracing and fitting the latter and slidable thereon, one edge of said slide being situated adjacent the graduations on the tubular member, and the other edge of said slide being bent to form an inturned flange which plays in the slot of the tubular member.

883,801. GRAIN-DISTRIBUTING APPARATUS. HENRY P. HARPSTRITE, Marcia, Ill. Filed July 6, 1906. Serial No. 325,006.

1. In a grain distributing apparatus, an elevator, a conveyer frame mounted for reciprocation beneath the discharge of the elevator, carrier rolls mounted for rotation in the ends of the conveyer frame, an endless carrier mounted in the conveyer frame and engaging the carrier rolls, and mechanism for driving the carrier including drive wheels on the carrier rolls, a driven wheel, and an idle wheel arranged in substantially horizontal alinement with the wheels on the carrier rolls and intermediate thereof, and a flexible transmission member passing around the drive wheels on the carrier rolls and over, under, and around the driven wheel and idle wheel, said idle wheel being arranged at a slight incline relative to the other wheels.

2. In a grain distributing apparatus, a shiftable conveyer frame, a carrier in said frame, pulleys arranged at opposite ends of the carrier and having a driving connection therewith, a driven pulley and an idle pulley supported intermediate the ends of the carrier, said idle pulley being arranged at an angle to the other pulleys, and a flexible transmission member operatively connecting the pulleys.



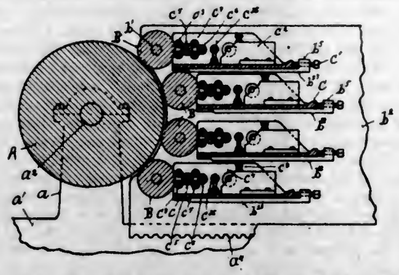
3. In a grain distributing apparatus, a shiftable conveyer frame, a carrier in said frame, pulleys arranged at opposite ends of the carrier and having a driving connection therewith, a driven pulley and idle pulley supported independently of the conveyer frame, one of said pulleys being arranged at an angle to the other pulleys, and a flexible transmission member operatively connecting the pulleys.

4. In a grain distributing apparatus, a conveyer frame, a support for said frame, said frame being shiftable independently of its support, a carrier in said frame, a rotary driven member mounted independently of the conveyer frame to drive the carrier, an idle wheel, pulleys supported by the conveyer frame and connected with the carrier, and a flexible transmission member passing around said pulley and over, under and around the rotary driven member and idle wheel.

5. In a grain distributing apparatus, a conveyer frame, a support for said frame, said frame being shiftable independently of its support, a carrier in said frame, a rotary driven member mounted independently of the conveyer frame to drive the carrier, an idle wheel, pulleys supported by the conveyer frame and connected with the carrier, a flexible transmission member passing around said pulley and over, under and around the rotary driven member and idle wheel, a gearing for imparting motion to the driven member, and means for reversing the direction of revolution of said gearing to reverse the direction of movement of the carrier.

[Claim 6 not printed in the Gazette.]

883,802. PRINTING-PRESS. GEORGE HARTMAN, Cincinnati, Ohio, assignor of two-fifths to Edward Wenning, Cincinnati, Ohio. Filed July 7, 1906. Serial No. 325,067.



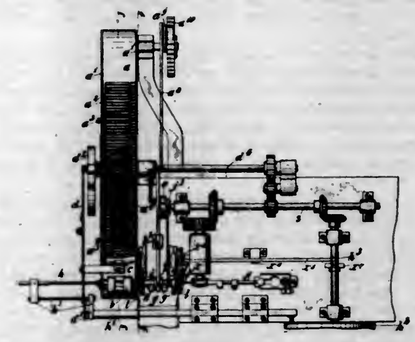
1. In a printing press the combination of an impression cylinder, a main frame mounted upon ways, means for moving the main frame towards and away from the impression cylinder, a series of printing rolls journaled in the main frame mounted so as to contact the impression cylinder when the main frame is brought adjacent thereto, horizontal ways in the main frame adjacent to each printing roll, a removable secondary frame mounted upon each of the ways in the main frame, and inking rolls journaled in the secondary frames.

2. In a printing press the combination of an impression cylinder, a main frame mounted adjacent to the impression cylinder, means for moving the main frame toward and away from the impression cylinder, a series of printing rolls mounted in the main frame, pinions upon the printing rolls, secondary removable frames mounted in the main frame, inking rolls whose shafts are mounted in the secondary frame and gear wheels mounted upon the shafts in the inking rolls and adapted to engage with the pinions upon the printing rolls.

3. In a printing press the combination of an impression cylinder, a main frame mounted reciprocally upon ways to be brought toward and away from the impression cylinder, printing rolls mounted in the main frame, secondary frames mounted removably in the main frame and inking apparatus mounted in the secondary frame.

4. In a printing press the combination of a main frame, printing rolls mounted in the frame, pinions upon each end of the printing rolls, secondary frames mounted removably in the main frame, a set of inking rolls mounted in the secondary frame consisting of rotating rolls and of rotating and reciprocating ink distributing rolls, a crank for reciprocating the said reciprocating rolls mounted in the secondary frame and gear wheels mounted upon said inking rolls and adapted to mesh with the pinions upon the printing rolls when the secondary frames are brought adjacent to the printing rolls.

883,803. APPARATUS FOR INCASING TOOTHPICKS AND THE LIKE. ALEXANDER HERZ, New York, N. Y. Filed June 12, 1907. Serial No. 378,577.



1. In an apparatus of the character described, the combination of a seat for the picks, means to deliver picks into the seat one by one, a guide for the ends of wrapping tubes at the delivery end of the seat, means to feed the tubes one at a time up to and against the guide, and means to eject the pick from the seat through the guide and into the tube.

2. In an apparatus of the character described, the combination of a seat for the picks, means to deliver picks into the seat one by one, a tubular guide for the ends of wrapping tubes at the delivery end of the seat, means to feed the tubes one at a time into the guide, and means to eject the picks from the seat through the guide and into the tubes.

3. In an apparatus of the character described, the combination of a seat for the picks, means to deliver picks into the seat one by one, means to hold a tube to be filled comprising a guide for the tube at one end and a stop for the pick at the other end, and means to eject the pick from the seat into the tube.

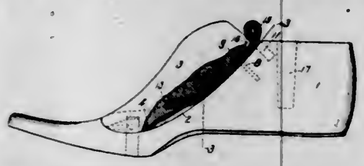
4. In an apparatus of the character described, the combination of a seat for the picks, means to deliver picks into the seat one by one, a tubular guide at the delivery

end of the seat, a stop piece pivoted above the tube to be filled so as to be brought down upon the tube to hold the same and act as a stop for the pick, and means to eject the pick from the seat into the tube.

5. In an apparatus of the character described, the combination of a seat for the picks, a feeding device, means to transfer picks one by one from the feeding device into the seat, means to hold a tube to be filled, a tubular guide at the delivery end of the seat to guide the tube into position and hold one end thereof while it is being filled, a pivoted stop piece to hold the other end of the tube and act as a stop for the pick, and means to slide a pick from the seat into the tube.

[Claims 6 to 23 not printed in the Gazette.]

883,804. LAST. WILLIAM H. HOOPER, Lynn, Mass., assignor, by mesne assignments, to Thomas G. Plant, Boston, Mass. Filed Oct. 9, 1906. Serial No. 338,106.



1. A last comprising separate parts and having a longitudinal groove between said parts and a flexible connection adapted to lie in said groove secured at its opposite ends to relatively opposite ends of said parts to secure maximum separation of said parts with minimum length of the flexible connection the length of said flexible connection between its points of attachment being greater than the distance between said points when the parts are in assembled relation.

2. A last comprising separate parts and having a longitudinal groove between said parts and a flexible connection adapted to lie in said groove and secured at its opposite ends to relatively opposite ends of said parts to secure maximum separation of said parts with minimum length of the flexible connection, said connection forming a loop projecting from between the parts of the last when said parts are in place.

3. A last comprising two parts, one of which is provided with a longitudinal groove and a flexible connection adapted to lie in said groove and secured at its opposite ends to relatively opposite portions of said parts to secure maximum separation of said parts with minimum length of the flexible connection, said flexible connection being longer than the distance between the points of attachment of said connection when the parts are assembled whereby a loop is presented above the juncture of said parts to facilitate manipulating the same.

4. A last comprising two separate parts having a longitudinal groove between them and a flexible connection adapted to lie in said groove and secured at its opposite ends to relatively opposite portions of said parts to secure maximum separation of said parts with minimum length of the flexible connection, said flexible connection being longer than the distance between the points of attachment of said connection when the parts are assembled whereby a loop is presented above the juncture of said parts to facilitate manipulating the same, one of said parts being cut away adjacent the line of separation to provide a loop seat.

5. A last comprising two separate parts, one of which is provided with a longitudinal groove in its seating face, and a flexible connection uniting said parts, said connection having one of its ends secured adjacent the end of the groove in one of said parts thereof, and the other of said ends secured to the other part adjacent the head of said last, said connection between its points of attachment being longer than the distance between said points when the parts are in assembled relation.

[Claims 6 to 13 not printed in the Gazette.]

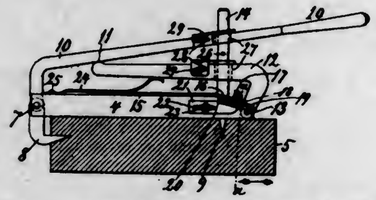
883,805. LIFTING DEVICE. WILLIAM F. HUTTINGER, Dunkirk, Ohio. Filed Oct. 2, 1907. Serial No. 395,572.



1. A lifting device comprising a single piece of wire brought together at its ends and extended in parallelism for a distance to form a shank, a pair of arms extending outwardly from the shank in opposite directions, and having downward and laterally curved portions at their extremities, which are parallel and form seats for a curtain-pole, a cross-bar connecting said curved portions, and a handle having in one end a socket to receive the aforesaid shank.

2. A lifting device comprising a handle, a pair of outwardly presented arms at one end thereof and having curtain-pole seats at their ends, a cross-bar connecting said seats, outwardly and oppositely presented arms projecting from the other end of the handle and having lateral bends at their extremities, and cord seats or supports at the ends of the lateral bends.

883,806. SAW-SET. ARVID JOHNSON, Duluth, Minn. Filed Nov. 4, 1907. Serial No. 400,442.



1. The combination with an elongated steel anvil having near one end of its upper side a beveled or inclined face on which to set the saw teeth, a setting punch arranged to slide vertically above said face, a spring arm fixed near the other end of the anvil and extending toward the end having the beveled face, said arm having its body offset from the anvil to permit the saw blade to pass below it, and its free end curved upward higher than the body, a lever pivoted at one end of the anvil and adapted to press upon the end of the spring arm and thus hold the saw firmly upon the anvil, a saw-setting punch slidingly inserted vertically in an aperture in the lever and having its lower end beveled parallel to the beveled face of the anvil, and means whereby the lever will engage the punch and elevate it.

2. The combination with an elongated steel anvil having near one end of its upper side a beveled or inclined face on which to set the saw teeth, a setting punch arranged to slide vertically above said face, a spring arm fixed near the other end of the anvil and extending toward the end having the beveled face, said arm having its body offset from the anvil to permit the saw blade to pass below it, and its free end curved upward higher than the body, a lever pivoted at one end of the anvil and adapted to press upon the end of the spring arm and thus hold the saw firmly upon the anvil, a saw-setting punch slidingly inserted vertically in an aperture in the lever and having its lower end beveled parallel to the beveled face of the anvil, and means whereby the lever will engage the punch and elevate it; a second lever pivoted to the other end of the anvil and adapted to press upon the first mentioned lever, said second lever also having an aperture for guiding the setting punch.

3. The combination with an elongated steel anvil having near one end of its upper side a beveled or inclined face on which to set the saw teeth, a setting punch arranged to slide vertically above said face, a spring arm fixed near the other end of the anvil and extending toward the end having the beveled face, said arm having its body offset from the anvil to permit the saw blade to pass below it, and its free end curved upward higher than the body, a lever pivoted at one end of the anvil and adapted to press upon the end of the spring arm and thus hold the saw firmly upon the anvil, a saw-setting punch slidingly inserted vertically in an aperture in the lever and having its lower end beveled parallel to the beveled face of the anvil, and means whereby the lever will engage the punch and elevate it; a second lever pivoted to the other end of the anvil and adapted to press upon the first mentioned lever, said second lever also having an aperture for guiding the setting punch, the apertures in said levers being elongated in longitudinal direction of the levers, a guiding plate adjustably secured on each lever and guidingly engaging the punch, for the purpose set forth.

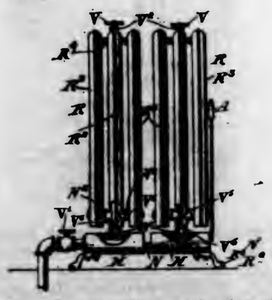
883,807. HARNESS-BUCKLE GUARD. EVARISTE JUTRAS, Fall River, Mass., assignor to Alfred Beauchemin, Fall River, Mass. Filed Aug. 13, 1906, Serial No. 330,419. Renewed Feb. 21, 1908. Serial No. 417,086.



1. A buckle guard consisting of a plate having a slot through one end and a recess in the other end, and a tongue one end of which is secured to the underside of said plate adjacent to said recess, the free end of said tongue extending toward the slot and containing a perforation.

2. A buckle guard consisting of an arched plate having a slot through one end and downwardly extending lugs at the other end, and a tongue having one end secured to the underside of the plate midway between said lugs, the free end of said tongue extending toward said slot and containing a perforation.

883,808. SECTIONAL RADIATOR. JOSEPH M. W. KITCHEN, East Orange, N. J. Filed Jan. 15, 1907. Serial No. 352,344.



1. In a radiator section, the combination of (1) a horizontally disposed chambered base-member forming a steam conduit, said base-member comprising means at both of its ends adapted for connection and communication with other horizontally disposed base-members and having means intermediate between said ends for connection and communication with a superimposed part, (2) said superimposed part, said superimposed part comprising a plurality of vertically disposed coils or loops, (3) means for connecting and disconnecting and for furnishing communication between said vertically disposed coils or loops near the lower ends of said coils or loops, and (4) a single connection furnishing communication between said coils or loops and said intermediate connecting means in said base-member.

2. In a radiator section, the combination of (1) a horizontally disposed chambered base-member forming a steam conduit, said base-member comprising means at both its ends for connection with and communicating with other horizontally disposed base-members and having means intermediate between said ends for connecting and communicating with a plurality of connected superimposed, vertically disposed radiating coils or loops, (2) said plurality of vertically disposed coils or loops, said coils and loops being superimposed above said base-member, (3) means for connecting and for communication between said vertically disposed coils or loops at near the lower ends of said coils or loops, (4) a single coupling for connection and means of communication between said coils or loops and said intermediate connecting and communicating means in said base-member, and (5) a closure-valve in said named single coupling for connection and means of communication for controlling the entrance of steam from said base-member to the said named vertically disposed coils or loops.

3. In a sectional radiator, the combination of (1) horizontally disposed steam conveying base-members, said base-members being axially on the same plane and connected and communicating so as to form a continuous steam conduit to sections of superimposed vertically disposed section-groups of radiating coils or loops connecting with said base-members, (2) said section-groups of superimposed vertically disposed coils or loops, (3) means for controlling the admission of steam from said base-members to each of the section-groups connected therewith, said last named means being actuated by hand manipulation from a level at or above the top of said radiator, and (4) a valve for the combined control of the admission of steam to all of said base-members and said sections, the length of each of said base-members corresponding substantially, in horizontal length with the horizontal extent of each of said section-groups of the said radiating vertically disposed coils or loops when such coils or loops are connected or assembled into sections.

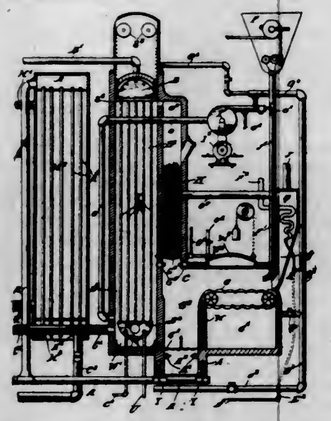
4. In a sectional radiator, the combination of (1) a horizontally disposed steam conduit or base-member, said member having means at both ends for connecting and communicating with other base-members and having between its ends and on its superior surface means for connection and communication with a vertically rising radiating section, (2) a group of vertically disposed coils comprising means near their lower ends for connection and communication between said lower ends of said coils and forming a horizontally disposed part for the travel of steam, but lying in a plane above the plane occupied by said base-member, (3) means for communication and connection between said base-member and said group of coils at a point between the ends of the said named base-member, (4) a valve in said means for connecting and communicating for controlling the entrance of steam from said named base-member to said vertically rising group of radiating coils or loops, (5) means at a high level of said radiator for controlling said valve, and (6) means for controlling the entrance of steam to said base-member.

5. In a sectional radiator, the combination of (1) a horizontally disposed steam conduit or base-member, said member having means at both ends for connection and communication with other base-members and having intermediate between its ends and on its upper surface means for connection and communication with a vertically rising radiating section, (2) a group of coils comprising a horizontally disposed steam conduit lying in a plane above the plane occupied by the first named conduit or base-member, said coils rising vertically above said horizontally disposed conduit, (3) means for connection and communication between the said two named conduits at an intermediary

point between the ends of the two said conduits, (4) a valve in said means for connection and communication for controlling the entrance of steam from said named base-member to said group of vertically rising radiating coils or loops, (5) means at a high level of said radiator for controlling said valve, and (6) means for controlling the entrance of steam to said base-member, said parts of said radiator being constructed to be assembled by screw-nipple connections, said base-member and said secondary conduit with its vertically rising coils or loops being of substantially the same horizontal extent to allow for the close approximation of a plurality of the sections of said radiator in assembling together the said named parts and in assembling the sections of said named radiator.

[Claims 6 to 14 not printed in the Gazette.]

883,809. POWER-GENERATING SYSTEM. JOSEPH M. W. KITCHEN, East Orange, N. J. Filed June 2, 1906. Serial No. 319,873.



1. In a power generating system, the combination of (1) means for generating steam, (2) means for generating power through explosion, (3) means for transferring the force of explosion to steam, (4) means for conveying the steam carrying the force of explosion to a motor, and (5) said motor.

2. In a power generating system, the combination of (1) means for generating steam, (2) means for generating power through explosion, (3) means for transferring the force of explosion and the heat of explosion to steam, (4) means for conveying the steam carrying the combined force and heat of explosion to a motor, and (5) said motor.

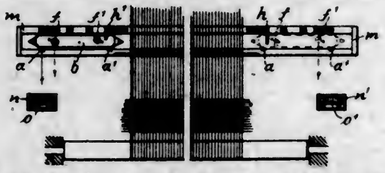
3. In a power generating system, the combination of (1) means for utilizing low degrees of heat to produce vapor or steam of low pressure, (2) means for compressing said vapor or steam when formed, (3) means for applying the force of explosion to actuate the compressing means, and (4) means for utilizing said compressed steam.

4. In a power generating system, the combination of (1) means for exploding gases, (2) means for compressing a heat absorbing power conveying fluid medium by the force of explosion, (3) means for transferring the heat of explosion to said medium, (4) means for conveying said compressed medium bearing the absorbed heat of explosion to a motor, (5) said motor, (6) an exhaust conduit for said medium leading to an exhaust pump, and (7) means comprising said pumps for the reintroduction of said medium to said compressing means for the travel of said medium in a circuitous round between said compressing means and said motor.

5. In a power generating system, the combination of (1) means for producing explosive gases, (2) means for producing motive power by the explosion of said gases, said second named means comprising an engine, (3) means for producing steam, including provision for its generation from the waste heat of said engine, (4) means for utilizing the force of the explosive gases to compress the steam, (5) a motor, and (6) means for conveying the compressed steam to the motor for utilizing the force of the compressed steam in the motor.

[Claims 6 to 17 not printed in the Gazette.]

883,810. HAIR-FABRIC LOOM. BRUNO KNITTEL, Dresden, Germany. Filed June 13, 1907. Serial No. 378,784.



1. In a hair fabric loom, a lay, a shuttle carried thereby, and nippers mounted transversely in the shuttle with their jaws projecting laterally beyond the sides of the shuttle, substantially as described.

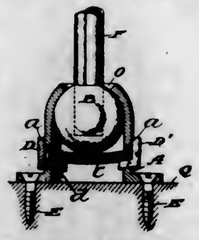
2. In a hair fabric loom shuttle, nippers having their jaws projecting transversely beyond the sides of the shuttle, said jaws being outwardly curved on their inner sides, and means for preventing the closing together of the jaws beyond the extreme inner ends thereof, substantially as described.

3. In a hair fabric loom, a shuttle provided with shanked nippers, a spring actuated sleeve whose inner edge is chamfered and yieldingly tends to slide over the nipper shanks, and means, automatically operated as the shuttle approaches the end of its race, for opening the nippers, substantially as described.

4. In a hair fabric loom, a lay, a stop thereon, a shuttle carried by the lay and provided with shanked nippers, a spring actuated sleeve whose inner edge is chamfered and bears over the ends of the nipper shanks with a tendency to close the nippers, a spring actuated stud projecting from the shuttle and depressible on passing below said lay stop, and means operated by the depression of the stud for opening the nippers, substantially as described.

5. In a hair fabric loom, a lay, a shuttle carried thereby, shanked nippers carried by the shuttle, a spring actuated sleeve operating upon the shanks to close the nippers, a pin arranged between the nipper shanks, and means for positively actuating the pin to open the nippers as the shuttle approaches the end of its race, substantially as described.

883,811. TELEPHONE-SUPPORT. OTTO KRAUS, New York, N. Y. Filed Sept. 1, 1906. Serial No. 333,031.



1. A telephone support comprising a housing containing an opening, a spherical member a portion of which frictionally bears within said housing contiguous to the opening thereof, an instrument-supporting part carried by said member, and a leaf spring comprising a plurality of leaf elements super-imposed on each other, the ends of said spring being free to move longitudinally, and removably supported within said housing and bearing against the spherical member to maintain the latter in its frictional engagement within the housing, and means located on the under side of one end of said spring for adjusting the degree of pressure of said spring against said spherical member.

2. A telephone support comprising a housing containing an opening, a member having a rounded portion frictionally bearing within said housing contiguous to the opening thereof, an instrument-supporting part carried by said member, a spring comprising a plurality of leaf elements super-imposed on each other, the ends of said spring being free to move longitudinally, and removably supported within said housing and bearing against the member to maintain the latter in its frictional engagement within the housing, and means for adjustably varying the pressure of the spring.

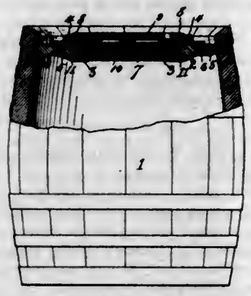
3. A telephone support comprising a housing containing an opening, a member having a rounded portion frictionally bearing within said housing contiguous to the opening thereof, an instrument supporting part carried by said member, a spring comprising a plurality of leaf elements super-imposed on each other, the ends of said spring being free to move longitudinally, within said housing and bearing against the member to maintain the latter in its frictional engagement within the housing, and means for detachably holding the spring in position.

4. A telephone support embodying a housing containing an opening, a member having a rounded portion frictionally bearing within said housing contiguous to the opening thereof, an instrument supporting part carried by said member, and a spring comprising an element in a single piece horizontally disposed, and continuously spanning the space within said housing, said element bearing against said member to maintain the latter in its frictional engagement within the housing, and means for detachably holding the spring element in position and for adjustably varying the pressure of said element.

5. A telephone support comprising a housing containing an opening and slots, the latter diametrically located with respect to each other, a member having a rounded portion frictionally bearing within said housing contiguous to the opening thereof, an instrument-supporting part carried by said member, detachable angle pieces masking the housing-slots, horizontal portions of said pieces extending within the housing, and a leaf spring the ends of which rest upon said portions, said spring bearing against the member to maintain the latter in its frictional engagement within the housing.

[Claims 6 to 11 not printed in the Gazette.]

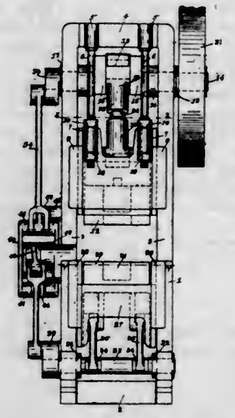
883,812. BARREL-HEAD. ALBERT LA MARCHE, Toledo, Ohio. Filed Mar. 29, 1906. Serial No. 308,700.



1. In a barrel, a head having a chamfered opening therethrough, a corresponding closure for said opening, an internally threaded ring surrounding the margin of said opening, an externally threaded member which fits said internally threaded ring, and bearing portions on said externally threaded member adapted to engage the outer surface of said closure.

2. In a barrel, a head having a chamfered opening therethrough, a corresponding closure for said opening, an internally threaded ring surrounding the margin of said opening, an externally threaded member which fits said internally threaded ring, and bearing portions on said externally threaded member adapted to engage the outer surface of said closure, combined with a packing interposed between the opposed faces of said opening and said closure.

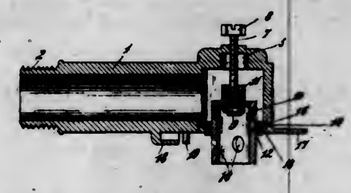
883,813. DRAWING-PRESS. PAUL M. H. LANGE, Toledo, Ohio. Filed Dec. 31, 1906. Serial No. 350,109.



1. In a drawing press, the combination with a stationary blank holder, of a die-bed below the blank holder, a plunger above the blank holder, and means to oppositely and differentially reciprocate the die-bed and plunger as set forth, comprising a driving shaft above the plunger, a single and a double crank on the driving shaft, a connection between the double crank and the plunger, a pair of rock shafts below the die-bed, a pair of rock arms on each rock shaft below the die-bed, toggle arms connecting the rock arms of each rock shaft with the die-bed, an outer rock arm for each rock shaft, and means connecting the single crank of the driving shaft with the outer rock arms of the rock shaft, comprising a reciprocating member, a pair of bell crank levers, a pair of links connecting corresponding arms of the bell crank levers with the reciprocating member, a pair of toggle arms connecting the other arms of the bell crank levers with the outer rock arms of the rock shafts, and a connecting rod directly connecting the reciprocating member to the single crank of the driving shaft.

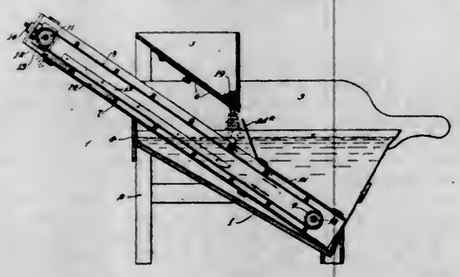
2. In a drawing press, the combination with a frame, a stationary blank holder adjustably supported in the frame, a plunger adapted to reciprocate in and through the blank holder, a driving shaft journaled in the frame above the plunger, and provided with a double and a single crank, a connecting rod adjustable in length, connecting the double crank with the plunger, and a die-bed reciprocable in the frame below the blank holder, to and from engagement with the blank holder, of means to reciprocate the die-bed oppositely and differentially from the reciprocation of the plunger, as set forth, comprising a pair of rock shafts journaled in the frame below the die-bed, a pair of rock arms on each rock shaft below the die-bed, toggle arms connecting each pair of rock arms to the die-bed, a rock arm at one end of each rock shaft adapted to rock the shaft, guides secured to the frame, a reciprocating member movable between the guides, a pair of bell crank levers reversely pivoted at their angles to the frame, link arms connecting corresponding arms of the bell crank levers with the reciprocating member, toggle arms connecting the other arms of the bell cranks with corresponding end rock arms of the rock shafts, and a connecting rod directly connecting the reciprocating member with the single crank of the driving shaft.

883,814. AIR-BRAKE HOSE-COUPLING. JOSEPH E. LA ROCQUE, Nominingue, Quebec, Canada. Filed July 24, 1907. Serial No. 385,302.



An air brake hose coupling comprising a hollow member having an enlarged chamber provided with a bore through one wall and a screwthreaded bore through its opposite wall, a screwthreaded stem disposed through said screwthreaded bore, a perforated cylindrical valve slidably mounted on said stem and adapted to be moved to establish communication between the air brake pipe and the outer atmosphere and a button on the inner end of said rod adapted to limit the movement of said valve to provide for a slow escape of air from the train pipe through said valve to thereby set the brakes.

883,815. SMUT-MACHINE. OLE L. LARSON, Minneapolis, Minn. Filed July 13, 1907. Serial No. 383,630.



1. In a machine of the class described, the combination with a suitable tank, for containing a germ destroying liquid, of a grain supplying device, an elevator partially submerged within the liquid in said tank, and a guard covering substantially the whole of the submerged part of said elevator but having an angular upward extension protruding beyond the liquid level, at a short distance from the adjacent face of the elevator, with the said parts so arranged that the grain from said supply device is dropped into the liquid between said guard extension and the adjacent downward moving elements of the elevator, whereby grain of less specific gravity will not be floated away by the liquid, but will be caught by the moving elements of the elevator, and be thereby forced under the guard and held subject to the liquid throughout the travel of the moving elements of the elevator therethrough, substantially as described.

2. In a machine of the class described, the combination with a tank for holding a germ destroying liquid, of a grain supplying device, a grain elevator composed of a suitable trunk having an endless conveyer, the upper fold of which runs downward, and the under fold of which runs upward, which elevator is partially submerged within the liquid in said tank, and the trunk of which elevator has grain-tight bottom and side walls and is provided with a grain-tight cover or guard composed of the parts 21 and 21^a arranged in respect to the grain supply device and the down running fold of the conveyer, as described, for cooperation therewith as set forth, whereby the said machine is adapted to the treatment of oats or other light grains of less specific gravity than the liquid.

883,816. ICE-CREEPER. PHILIPPE F. LEFEBVRE, Hartford, Conn. Filed July 11, 1906. Serial No. 325,625.



1. An ice creeper, comprising sections movably connected by a single eccentric pivot, a lever secured to the eccentric pivot and calks carried by the lever.

2. An ice creeper, comprising sections movably connected by a single eccentric pivot, a lever secured to the eccentric pivot, and calks carried by the lever and adapted to lock the latter with one of the sections.

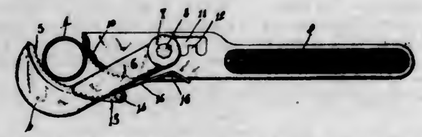
3. An ice-creeper comprising a front clamp section and a bifurcated rear clamp section joined by a rotatable eccentric pivot, a lever connected with said pivot whereby the same is turned, and heads on said lever and engageable with said rear clamp section between its bifurcations whereby said sections are held in locked position.

4. An ice creeper comprising a front member, a rear member, an operating lever to move them to clamping or releasing positions, and a single double eccentric pivot connecting all of said members.

5. An ice creeper comprising a front member, a rear member, an operating lever to move them to clamping or releasing positions, and a single double eccentric pivot connecting all of said members, said pivot having a flattened side to correspond with the opening in the lever into which it projects.

[Claims 6 and 7 not printed in the Gazette.]

883,817. PIPE-WRENCH. FRANK T. LESTAGE, New Haven, Conn. Filed Aug. 30, 1905. Serial No. 276,348.



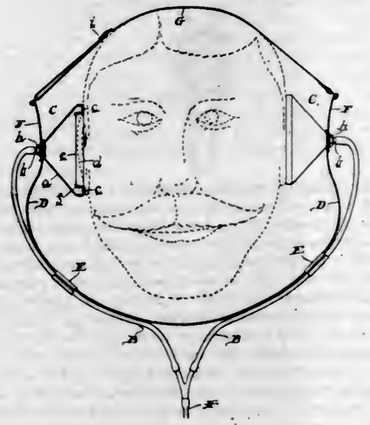
In a wrench, a handle, a plurality of notches therein, a jaw, a yoke connected thereto, a bolt passing through said yoke and adapted to selectively engage the aforesaid notches, lugs depending from said jaw, a rod passing through said lugs, a spring coiled about said rod and bearing at one end upon said jaw and terminating at its opposite end in two substantially parallel connected members and a concave plate supported between said parallel members and adapted to receive and support the underface of the aforesaid wrench handle.

883,818. HEARING-TUBE FOR SOUND-REPRODUCING MACHINES. GEORGE A. LEWIS, Detroit, Mich. Filed Dec. 24, 1906. Serial No. 349,241.

1. The combination with the ear pieces and their branch tubes of a bow-shaped spring bar on which the same are mounted, extensions on the ends of the spring bar beyond its points of connection with the ear pieces, and a tape connecting the spring bar at its ends.

2. The combination with the ear pieces and their branch tubes, of a bow-shaped spring bar on which the ear pieces are mounted in position to apply to the head with the bar passing below the chin and supporting the branch tubes, extensions on the ends of the spring bar beyond its points of connection with the ear pieces and an adjustable tape connecting the ends of the spring bar.

3. The combination with the ear pieces and their branch tubes, of a bow-shaped spring bar on which the ear pieces and branch tubes are mounted in position to apply to the head, the spring bar passing below the chin, extensions on the ends of the spring bar beyond its points of connection with the ear pieces and pivotally connected thereto, and a tape connecting the free ends of the spring bar.



4. The combination with the ear pieces formed with recesses adapted to encompass the ears, of a bow-shaped spring bar on which the ear pieces are mounted in position to engage with the ears, branch tubes supported on the spring bar, extensions at the ends of the spring bar, beyond their points of connections with the ear pieces and a tape connecting the free ends of the extensions.

5. The combination with the ear pieces formed with recesses adapted to encompass the ears, of a bow-shaped spring bar on which the ear pieces are mounted, branch tubes supported on the spring bar, extensions on the ends of the spring bar—said extensions and spring bar connected to the ear pieces relatively adjustable to each other—and an adjustable tape connecting the free ends of the extensions together and forming a support for the ear pieces on the head of the wearer.

[Claim 6 not printed in the Gazette.]

883,819. FLEXIBLE PHOTOGRAPHIC CARTRIDGE-FILM. FRANK W. LOVEJOY, Rochester, N. Y., assignor to The Eastman Kodak Company, Rochester, N. Y., a Corporation of New York. Filed Aug. 12, 1903, Serial No. 169,208. Renewed Oct. 5, 1907. Serial No. 396,023.



1. In a cartridge-film for photographic purposes the combination of a strip of flexible opaque material, a strip of sensitized film attached at one end to the opaque material, and another piece of material attached at one part to the film and at another part to the opaque material, the whole being wound upon a spool ready for insertion in a camera and adapted for exposure therein.

2. In a cartridge-film for photographic purposes the combination of a strip of flexible opaque material, a strip of sensitized film attached at one end to the opaque material, and another piece of material attached at one edge to the film and at the opposite edge to the opaque material and having a section between the two attached edges not attached to anything.

3. In a cartridge-film for photographic purposes the combination of a strip of flexible and opaque material and a strip of sensitized film attached at both ends to the opaque material, the length of the film between the points of attachment to the opaque material being less than that of the opaque material between the same points, so that when the film is stretched, the opaque material will be slack.

4. In a cartridge-film for photographic purposes the combination of a strip of flexible opaque material, a strip of sensitized film fixedly attached at one end to the opaque material, and another piece of material attached at one edge to the end of the film and at its other edge to the opaque material and having a section between the two attached edges not attached to anything, the arrangement of the film and its attaching means relative to the opaque material being such, that when the film and its attaching means are stretched, the opaque material opposite the film will be slack.

5. In a cartridge-film for photographic purposes the combination of a strip of flexible opaque material, a strip of sensitized film fixedly attached at one end to the opaque material and movably attached thereto at the other end by means adapted to be longitudinally pushed together or collapsed by movement of the film longitudinally of the opaque material during the winding operation.

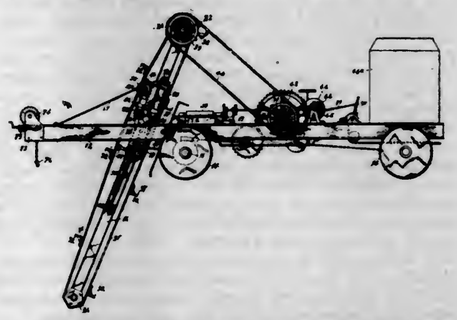
[Claims 6 and 7 not printed in the Gazette.]

883,820. CANT-HOOK. EDWARD S. MENERE, Germfask, Mich. Filed June 3, 1907. Serial No. 377,034.



In a cant hook, a lever, prongs extending at right angles from one end thereof, a clip intermediate the ends of the lever, lateral ears upon said clip, and a dog having one end of a straight shank journaled in between said ears, its other end terminating in a pair of integral diverging hook arms, together with engaging points on said arms extending toward the lever in a line substantially parallel with the shank.

883,821. EXCAVATING-MACHINE. FRANK J. MONAHAN, Joliet, Ill. Filed Oct. 1, 1906. Serial No. 336,822



1. In an excavating machine, the combination with a main frame, of an auxiliary frame, a slide box for said auxiliary frame pivotally supported upon said main frame, and excavating elements carried by said auxiliary frame.

2. In an excavating machine, the combination with a main frame, of an auxiliary frame, a slide-box for said

auxiliary frame, trunnions journaled upon the main frame for supporting said slide-box, means for adjusting said auxiliary frame longitudinally in said box, and excavating elements carried upon said auxiliary frame.

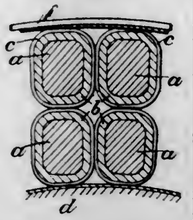
3. An excavating machine, including a main supporting frame, an auxiliary frame, a slide-box for the auxiliary frame, trunnions for said box supported upon the main frame, means for adjusting said frame in said box, excavating elements carried by said auxiliary frame, said elements adapted to elevate the excavated material, means for operating said excavating elements, means for depositing the excavated material at a predetermined point in the elevating movement and means for conveying the material out of the line of traction.

4. An excavating machine, including a main frame, an auxiliary frame, a slide-box supporting said auxiliary frame, trunnions attached to said box and journaled in the main frame, means for adjusting said auxiliary frame longitudinally in said slide-box, a sprocket-chain carried by said auxiliary frame, excavating and elevating elements attached to said chain, means for operating said chain and excavating elements.

5. An apparatus for the purpose specified including a main frame, traction wheels supporting said frame, steering means for the wheels, an auxiliary frame pivotally mounted upon said main frame and adapted to be longitudinally adjusted, movable excavating elements connected to said auxiliary frame and means for operating said elements.

[Claims 6 to 24 not printed in the Gazette.]

883,822. DYNAMO-ELECTRIC MACHINERY. CHARLES A. PARSONS, Newcastle-upon-Tyne, England. Filed Apr. 23, 1906. Serial No. 313,300.



1. In electrical appliances comprising a number of electric conductors in proximity to each other, means for cooling said conductors, consisting in metal strips lapped round said conductors, and so disposed as to form a heat conducting path from the interior of the body of conductors as and for the purposes described.

2. In electrical appliances comprising a body of electric conductors in proximity to each other means for cooling said conductors comprising discontinuous metal strips of high thermal conductivity lapped round said conductors and in thermal connection with heating dissipating means outside said body of conductors as and for the purposes described.

3. In electrical appliances comprising a number of electrical conductors in proximity to each other, means for cooling said conductors, consisting in metal strips of small section relatively to that of the conductors lapped round said conductors, and so disposed as to form a heat conducting path from the interior of the body of conductors, as and for the purposes described.

4. In electrical appliances, a tape consisting of metal strips of high thermal conductivity woven into a fabric said tape being of high thermal conductivity and electrically discontinuous, as and for the purposes described.

5. In electrical appliances comprising a number of electrical conductors in proximity to each other, a lapping of tape containing strips of metal of high thermal conductivity, interposed between said conductors, as and for the purposes described.

[Claims 6 to 11 not printed in the Gazette.]

883,823. INSULATOR-SUPPORT. CHARLES L. PEIRCE, Jr., Elkhart, Ind., assignor to Peirce Specialty Company, Chicago, Ill., a Corporation of Illinois. Filed Aug. 19, 1907. Serial No. 389,277.

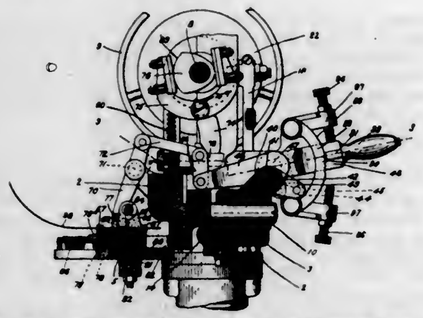


1. An insulator support comprising in combination a bracket, a narrow loop member secured to said bracket and having its closed end projecting above the latter, and a coil spring surrounding said loop member and having an end portion thereof bent transversely and inserted between the sides of said loop member, substantially as described.

2. An insulator support comprising in combination a post, a wrought metal strip bent double on itself at its longitudinal center and secured to said post with its closed end projecting above the top of the latter, and a coil spring surrounding the projecting end of said strip and having its end portions bent transversely and inserted between the sides of said strip, substantially as described.

3. An insulator support comprising in combination a post of curved form in cross-section, a wrought metal strip likewise of curved form in cross-section bent double on itself at its longitudinal center and embracing and secured to said post, the parallel sides of said bent strip being spaced and projecting beyond the upper end of said post, and a coil spring embracing the projecting end of said bent strip and having its end portions bent transversely and inserted between the sides of said projecting portion, said spring ends also engaging the upper end of said post and the transverse connecting portion of said bent strip whereby said spring is supported against longitudinal displacement, substantially as described.

883,824. STAPLE-TACKER. MERTON D. PHELAN, Lynn, Mass., assignor, by mesne assignments, to Thomas G. Plant, Boston, Mass. Filed July 16, 1906. Serial No. 326,370.



1. In a metallic fastener machine, the combination of a movable carrier 3, staple forming and driving means carried thereby, a wire feeding block 5, a lever 70 for reciprocating said block, a yoke 75 having a tail piece 74, a block 73 slidably mounted on said tail piece and operatively joined to said lever 70, an adjusting lever 46, and connections between the adjusting lever 46, the carrier 3, and block 73 for simultaneously adjusting said carrier and block.

2. In a machine of the type described, the combination of cutting mechanism, a head or carrier provided with staple forming mechanism and movable toward and from said cutting mechanism, with a lever and connections for adjusting said head or carrier, comprising a stud or bushing mounted in said head, a pin eccentrically mounted therein and provided with an arm, and means for connecting said arm with said lever whereby elevation or depression of the latter moves said carrier respectively from or toward said cutting mechanism.

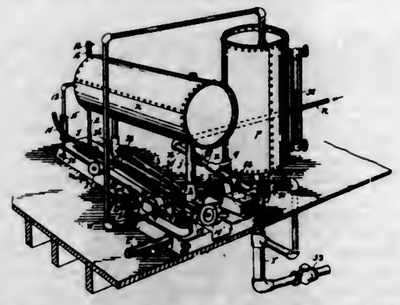
3. In a machine of the type described, the combination of cutting mechanism, a head adjustable toward and from said cutting mechanism having an adjusting lever and connections for moving the same, said connections comprising the bushing, 41; the lever 43, having a pin 43, eccentrically and pivotally mounted on said bushing, 41, said bushing being rotatably mounted in said head and adapted to be turned to vary the position of said pin relative to said head to adjust the latter independently of said adjusting lever.

4. In a machine of the type described, cutting mechanism, a carrier or head provided with staple forming mechanism adjustable toward and from said cutting mechanism, a lever and connections for adjusting the same, said connections comprising a crank arm pivotally mounted in said head, with means for connecting it with said lever and for clamping it in adjusted position, whereby the adjustment of said head may be effected independently of the adjustment of said lever.

5. In a machine of the type described, the combination of wire feeding means, cutting means, staple forming means, and lever means for simultaneously adjusting said staple forming means and varying the feed of said feeding means to produce staples of different lengths, and eccentric means for variably positioning said staple forming means to vary the length of the staple legs.

[Claims 6 to 9 not printed in the Gazette.]

883,825. CONDENSED-WATER AND STEAM SEPARATOR. JAMES E. PURSER, Windsor, Ontario, Canada, assignor to John Morehead, Detroit, Mich. Filed Mar. 8, 1906. Serial No. 304,981.



1. A separator for a steam system comprising a primary tilting receiving chamber and a stationary receiving chamber, each provided with a separate discharge outlet, means to separately lead condensation water into both of said chambers, means to separately lead steam into both of said chambers, and means to control the steam supply to said chambers, whereby the condensation water will be separately discharged from said chambers.

2. A separator for a steam system comprising a primary tilting receiving chamber and a stationary receiving chamber each provided with a separate discharge outlet, means to separately lead condensation water into both of said chambers, means to separately lead steam into both of said chambers, means to simultaneously control the steam supply to each of said chambers, whereby the condensation water may be separately and simultaneously discharged from said chambers.

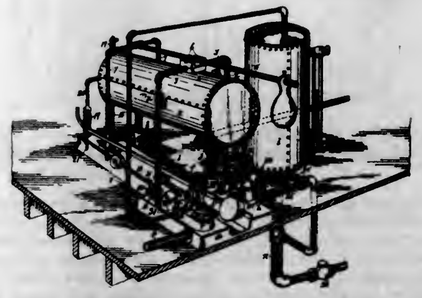
3. A separator for a steam system comprising a primary tilting receiving chamber and a stationary receiving chamber each provided with a separate discharge outlet, means to separately lead condensation water into both of said chambers, means to separately lead steam into both of said chambers, and means to simultaneously control the steam supply to both of said chambers, whereby water may be separately and simultaneously discharged from said chambers.

4. A separator for a steam system comprising a primary tilting receiving chamber and a stationary receiving chamber each provided with a separate discharge outlet, means to separately lead condensation water into both of said chambers, means to separately lead steam into both of said chambers, and a valve actuated by the tilting chamber to simultaneously control the supply of steam to both of said chambers.

5. A separator for a steam system comprising a primary tilting receiving chamber and a stationary receiving chamber each provided with a separate discharge outlet, means to separately lead condensation water into both of said chambers, means to separately lead steam into both of said chambers, the stationary receiving chamber having a larger outlet than the tilting receiving chamber, whereby a greater volume of condensation water may be discharged from the stationary receiving chamber than from the tilting receiving chamber.

[Claims 6 to 19 not printed in the Gazette.]

883,826. SEPARATOR. JAMES E. PURSER, Windsor, Ontario, Canada, assignor to John Morehead, Detroit, Mich. Filed Mar. 12, 1907. Serial No. 362,001.



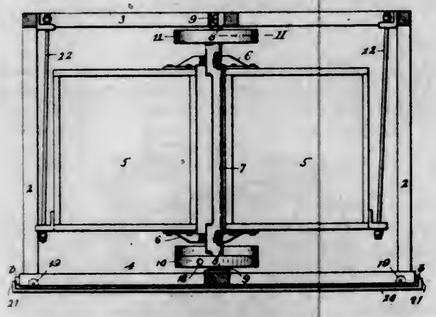
1. A separator for a steam system comprising a base constructed with upwardly extended chambered brackets on opposite sides thereof forming on one side a water chamber and on the other side a steam chamber, journal plates formed with outwardly projecting flanges engaged against the inside faces of said chambered brackets and with inwardly projecting tubular arms, hollow trunnions journaled in said tubular arms respectively, packing nuts engaged upon said trunnions and upon the inner extremities of the corresponding tubular arms, a tilting receiving chamber, a steam pipe supporting said receiving chamber communicating with one of said trunnions and with the receiving chamber, a water pipe communicating with the other of said trunnions and with the receiving chamber, said brackets each formed with an opening whereby the corresponding chamber communicates with the corresponding trunnion, and bolts passed through the flanges of the journal plates and through the bolt holes of the corresponding brackets outside the corresponding chambers.

2. A separator for a steam system comprising a support, a tilting receiving chamber, hollow trunnions supporting said chamber upon said base, a water pipe underneath the receiving chamber communicable with said chamber and movable therewith, whereby water is led from one of said trunnions into said chamber, a fixed yoke carried by the support on opposite sides of said chamber and provided with a cross arm extending over the receiving chamber, a tilting lever fulcrumed upon said cross arm above the receiving chamber, a weight upon the forward end of said lever, and a rocking yoke with which the rear end of the tilting lever is engaged, the lower ends of said rocking yoke journaled upon said water pipe and vertically movable therewith.

3. A steam separator for a steam system comprising a

support, trunnions mounted upon said support, a tilting receiving chamber mounted upon said trunnions, a water pipe underneath the receiving chamber movable with said chamber and connecting one of said trunnions with said chamber, a fixed yoke carried by the support and extended over said chamber, a lever mounted upon said yoke above the receiving chamber, a weight upon the forward end of said lever, and a rocking yoke journaled upon said water pipe and movable therewith, with which the rear end of said lever is engaged, said lever holding the receiving chamber in position to receive water of condensation until the weight of water in said chamber overcomes the action of the weighted lever, substantially as set forth.

883,827. MEANS FOR FACILITATING THE ADJUSTMENT OF BALANCE-WEIGHTS ON GYRATING MACHINES. LEWIS V. RATHBUN, Kansas City, Mo. Filed Mar. 9, 1906. Serial No. 305,148.



1. In a gyrating machine provided with a drive-shaft, a balance-wheel mounted upon said shaft, balance-weights carried by said wheel, and a frame in which the drive-shaft is mounted, in combination with means for movably supporting said frame temporarily so that it may be affected by the vibration of the machine, and means for raising and lowering said frame.

2. A gyrating machine provided with a drive-shaft, a balance-wheel mounted upon said shaft, balance-weights carried by said wheel, and a frame in which the drive-shaft is mounted, in combination with rollers for supporting said frame so that the latter will be caused to reciprocate by the vibration of the machine, and stops for limiting the reciprocating movements of the frame.

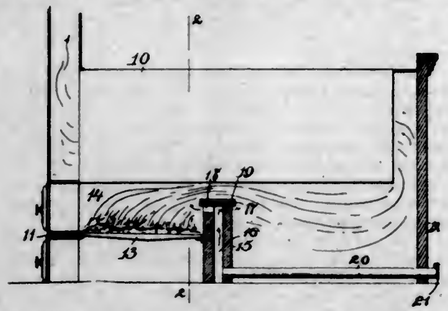
3. A gyrating machine provided with a drive-shaft, a balance-wheel mounted upon said shaft, balance-weights carried by said wheel, and a frame in which the drive-shaft is mounted, in combination with rollers for supporting said frame so that the latter will be caused to reciprocate by the vibration of the machine, resilient stops for limiting the reciprocating movements of the frame, and means for applying friction to the rollers to retard their movements.

4. A gyrating machine provided with a normally-stationary frame, a drive-shaft, a balance wheel mounted upon said shaft, and balance weights carried by said wheel, in combination with means for temporarily raising said frame, for the purpose described.

5. A gyrating machine provided with a normally-stationary frame, a drive-shaft, a balance wheel mounted upon said shaft, and balance weights carried by said wheel, in combination with means for temporarily raising said frame, and antifriction bearings for supporting said frame while in a raised position.

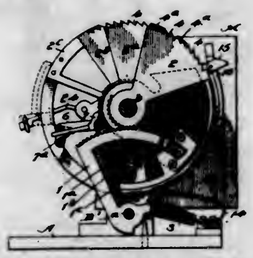
883,828. SMOKE-CONSUMING FURNACE. PATRICK RIELLY, Newark, N. J. Filed Jan. 25, 1907. Serial No. 353,942.

A furnace comprising inclosing walls, an element to be heated arranged therein, a bridge wall, a grate forming, with the bridge wall, a fire box on the front of the bridge wall, the bridge wall forming the combustion chamber with the rear walls of the inclosing walls, the bridge wall having a chamber therein and having perforations in its front wall above the grate and arranged to be above the fire, the perforations being of almost the capacity of the chamber in the bridge wall, whereby most of the air therefrom will pass into the fire box, the bridge wall also having a series of perforations much smaller than the perforations in the front thereof, the smaller perforations leading through the back of the bridge wall into the combus-



tion chamber, the perforations in the front and back of the bridge wall being arranged out of alinement so as to destroy any tendency of the draft from the fire to pass through the bridge wall, the current of air being thus induced from the chamber in the bridge wall through the front perforations by the draft of the fire alone, the chamber in the bridge wall having no other connection through the front of the bridge wall, and a pipe leading into the chamber of the bridge wall and passing through the combustion chamber, whereby it is heated.

883,829. AUTOMATIC SIGNALING MECHANISM. JOSEF REUTER, Rochester, N. Y. Filed Apr. 15, 1907. Serial No. 368,369.



1. In an automatic signaling mechanism, the combination of a plurality of relatively adjustable pivoted members, each provided with a plurality of notches adapted to actuate the same contact member, and a contact member, said adjustable members and contact member being relatively movable.

2. In an automatic signaling mechanism, the combination of a plurality of relatively adjustable pivoted members, each provided with a plurality of notches adapted to actuate the same contact member, a contact member, a motor adapted to create relative movement of the adjustable members and the contact member, and circuit terminals arranged to coact with the contact member.

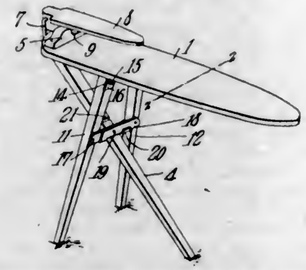
3. In an automatic signaling mechanism, the combination of a plurality of relatively adjustable pivoted members each provided with a plurality of notches adapted to actuate the same contact member and having a smooth section or space, and a contact member, said adjustable members and the contact member being relatively movable.

4. In an automatic signaling mechanism, the combination of a plurality of relatively adjustable pivoted members, each provided with a plurality of notches adapted to actuate the same contact member, clicks or pawls for the respective adjustable members, and a contact member, said adjustable members and the contact member being relatively movable.

5. In an automatic signaling mechanism, the combination of a plurality of relatively adjustable members, part of which are provided with a plurality of notches adapted to actuate a contact member, and one of which forms a guard or cover for the notched members, and a contact member, said adjustable members and the contact member being relatively movable.

[Claims 6 to 23 not printed in the Gazette.]

883,830. IRONING-BOARD. ELZIE L. RIDGWAY, Kansas City, Mo. Filed June 15, 1907. Serial No. 379,207.



1. An ironing board comprising an ironing board proper, legs hinged thereto intermediate the ends, each of which is arranged to swing longitudinally and transversely of said board, a locking bar pivoted to each leg and to each other for spreading said legs, and a leg pivoted to one end of said board adapted to lock with said locking bars.

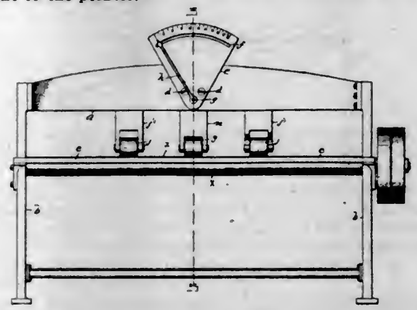
2. An ironing board comprising an ironing board proper, a pair of folding legs hinged thereto intermediate the ends, each of which is arranged to swing longitudinally and transversely of the board, a locking bar pivoted to each leg and to each other, each provided with a hook at its inner end to engage with the other and limit their upward movement, and a leg pivoted to the end of the board extending between said first mentioned legs and provided with means for engaging said locking bars to hold the legs firmly connected and spread apart.

3. An ironing board comprising an ironing board proper, a pair of legs intermediate the ends of the board, a hinge connecting each leg to the board of such type as to permit the leg to fold against the board and to swing transversely thereof, means pivoted to the legs to spread them apart or close them at will, and a leg attached to the end of the board extending between said first mentioned legs and means for removably securing it thereto.

883,831. INSTRUMENT FOR MEASURING THE THICKNESS OF LEATHER AND OTHER SHEET MATERIAL. JAMES ROBERTSON, Woburn, and JOHN S. DELANEY, Somerville, Mass., assignors of one-third to Albert W. Bliss, Brookline, Mass. Filed June 22, 1907. Serial No. 380,272.

1. In an instrument for measuring the thickness of sheet material, a frame, a driving roll supported by the frame, a bar above said roll, a dial supported by the bar, a vertical slideway supported by the bar, a slotted slide adapted to move in the slideway and provided with a roll adapted to rest on the sheet material as it moves over the driving roll, a spindle supported in the frame, a pointer rigid on the spindle, an arm rigid on the spindle, a spring intermediate of the arm and slide and holding the arm normally raised, and a spring intermediate of the slide and said bar for holding the slide normally down, whereby the vertical movement of the slide communicates movement to the pointer.

2. In an instrument for measuring the thickness of sheet material, a frame, a driving roll supported by the frame, a horizontal bar above said roll, a dial supported by the bar, a vertical slideway supported by the bar, a slotted slide adapted to move in the slideway and provided with a roll adapted to rest on the sheet material as it moves over the driving roll, idle rolls adapted to rest on the sheet material and yieldingly supported by the bar, a spindle supported in the frame, a pointer rigid on the spindle, an adjusting screw extending downward from the slide into the slot therein, an arm rigid on the spindle and extending into said slot under said adjusting screw, a spring intermediate of the arm and slide and holding the arm normally raised, and a spring intermediate of the slide and bar for holding the slide normally down, whereby the vertical movement of the slide communicates movement to the pointer.



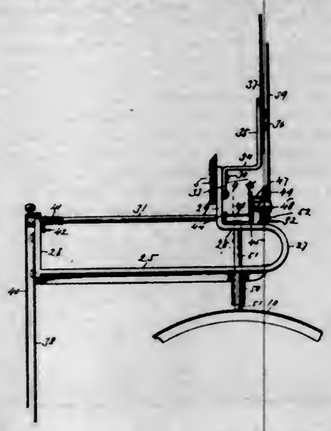
3. In an instrument for measuring the thickness of sheet material, a frame, a driving roll supported by the frame, a spindle supported in the frame, a dial supported by the frame and provided with a slot on an arc of a circle of which the spindle is the center, a vertical slideway intermediate of the driving roll and the dial, a slide in the slideway, a roll supported by the slideway and adapted to rest on the sheet material as it moves over the driving roll, a pointer rigid on the spindle and extending up on one side of the dial, a finger extending from said pointer through the slot in the dial and up on the opposite side thereof, and mechanism intermediate of the spindle and the slide for imparting rotation to the spindle as the slide is moved in the slideway.

883,832. THICKNESS-MEASURING ATTACHMENT FOR MACHINES FOR MEASURING THE AREAS OF SURFACES. JAMES ROBERTSON, Woburn, and JOHN S. DELANEY, Somerville, Mass., assignors of one-third to Albert W. Bliss, Brookline, Mass. Filed June 22, 1907. Serial No. 380,273.

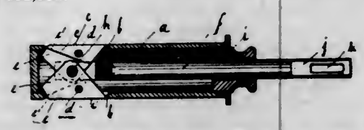
1. In a thickness-measuring attachment for machines for measuring the areas of surfaces, a horizontal frame adapted and constructed to be rigidly secured to an area-measuring machine above a wheel which bears on the surface to be measured, a rod or bolt set substantially vertically in the frame and adapted to rest with its lower end on the periphery of said wheel, a horizontal shaft supported by the frame, a dial on said frame, a pointer rigid on the shaft and extending over the face of the dial, a frame swinging vertically on said shaft and consisting of the main V-shaped portion 43 resting on the upper end of the rod or bolt and of the ear 45 and extension 46, and a suitable adjusting screw on the pointer by which frame the lifting of said wheel and rod or bolt by the piece of material to be measured in the area-measuring machine will move the pointer over the dial.

2. In a thickness-measuring attachment for machines for measuring the areas of surfaces and provided with wheels which are adapted to rest upon and to be rotated by the sheet of material which is being passed through the machine and measured, a frame, a pair of dials supported at opposite ends of said frame and extending upward and downward respectively, a shaft supported by the frame,

a pair of pointers rigid on opposite ends of the shaft and extending over the faces of the two dials, a rod or bolt sliding in the frame and adapted to be engaged and reciprocated by one of said wheels, and mechanism intermediate of the rod or bolt and the shaft for imparting rotation to the latter, for the purpose set forth.

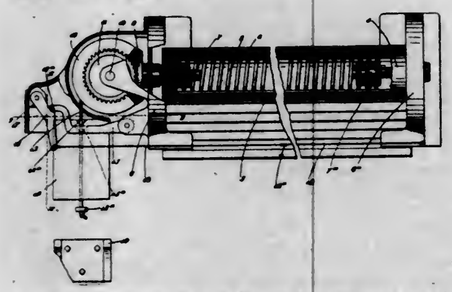


883,833. DETACHABLE FASTENING DEVICE. LUIGI ROSSI, New York, N. Y. Filed Nov. 13, 1907. Serial No. 401,952.



In a temporary fastening device, a tubular casing, having diametrically opposed longitudinal perforations, a pair of members pivoted in said casing to swing through said perforations, and formed with shoulders limiting their swinging movement, a longitudinally moving rod in said casing and pivotally connected with said members, and means on the free end of said rod for its connection with the article to be fastened, substantially as set forth.

883,834. FIRE-RESISTING SHUTTER OR CURTAIN. ALBERT RUSH, Columbus, Ohio. Filed May 31, 1907. Serial No. 376,503.



1. The combination with a flexible fire resisting curtain or shutter and roller therefor and means adapting the curtain to be raised and lowered, of means operated by a dangerous rise of temperature for automatically lowering the curtain if in elevated position, and means for arresting the operation of said automatically operated lowering means prior to the complete descent of the curtain, said means for raising and lowering the curtain being unaffected by the means for automatically lowering the curtain.

2. The combination with a flexible fire resisting curtain or shutter and roller therefor and means adapting the curtain to be raised and lowered, of means, for automatically lowering the curtain if in elevated position, said last mentioned means including a weight and means for supporting the weight in inoperative position, means operated by a dangerous rise of temperature for releasing the weight to operate on the curtain, and means for arresting the operation of the weight prior to the complete descent of the curtain.

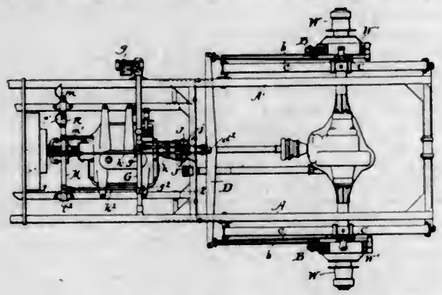
3. The combination with the roller of a flexible fire resisting curtain or shutter, of a sheave operative by said roller, a cord on said sheave, a weight, and means to release the weight to engage the cord and operate the curtain upon the occurrence of nearby fire, and means for arresting the operation of the weight on the cord prior to the complete descent of the curtain.

4. The combination with the roller of a flexible fire resisting curtain or shutter and means for counterbalancing the curtain or shutter as it is unrolled, of a sheave operative by said roller, a cord on said sheave, a weight, and means to release the weight to engage the cord and operate the curtain upon the occurrence of nearby fire, and means for arresting the operation of the weight on the cord prior to the complete descent of the curtain.

5. The combination with the roller of a flexible fire resisting curtain or shutter provided with a spring for counterbalancing the curtain or shutter as it is unrolled, of a sheave operative by said roller, a cord on said sheave, a weight, and means to release the weight to engage the cord and operate the curtain upon the occurrence of nearby fire.

[Claims 6 to 15 not printed in the Gazette.]

883,835. BRAKE AND CLUTCH OPERATING MECHANISM FOR AUTOMOBILES. CHARLES SCHMIDT, Cleveland, Ohio, assignor to The Peerless Motor Car Company, Cleveland, Ohio, a Corporation of West Virginia. Filed Mar. 29, 1906. Serial No. 308,759.



1. In an automobile, the combination of the two rear wheels having cylindrical braking surfaces and brakes, which engage with the braking surfaces on said rear wheels and are provided with operating levers, with an equalizing bar, supports secured to the automobile frame for sustaining said equalizing bar and permitting it to move forward and backward, links connecting the brake operating levers with said equalizing bar, a draft device connected with said equalizing bar, and mechanism for operating said draft device.

2. In an automobile, the combination of brakes acting on cylindrical braking surfaces secured to the rear wheels thereof, a transversely extended equalizing bar, longitudinally slotted blocks in which said equalizing bar is slidably supported, links connecting the ends of said equalizing bar with the operating mechanism of the brakes associated respectively with the two rear wheels, a draft rod pivotally connected with the equalizing bar near the middle thereof, and mechanism for operating said draft bar.

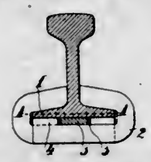
3. In an automobile, the combination of a brake, a rock shaft G, having two arms rigidly secured thereto, mechanism connecting one of said arms with the brake operating mechanism, a clutch, a rock shaft N, mechanism transmitting motion from said rock shaft to the clutch operating mechanism, an arm fixed to the rock shaft N, a pivoted lever having one arm adapted to engage the arm last referred to, and a link connecting the other arm of said lever with the second arm on rock shaft G.

4. In an automobile, the combination of the driven rear wheels, a cylindrical braking flange secured to each of said wheels, an inside and outside brake for each of said flanges, each of which is provided with an operating lever, two equalizing bars extending crosswise of the machine, supports therefor upon which said equalizing bars are movable, links which connect opposite ends of one equalizing bar with the two operating levers of the outside brakes, links connecting the opposite ends of the other equalizing bar with the operating levers of the inside brakes, and two independently operable draft devices for said equalizing bars.

5. In an automobile, the combination of the two driven wheels, each of which is provided with a cylindrical braking surface, brakes respectively engaging with said cylindrical surfaces, each having an operating lever, an equalizing bar extending crosswise of the automobile frame, supports upon said frame for said equalizing bar and upon which it is movable, links respectively connecting the said operating levers with opposite ends of said equalizing bar, a downwardly depending swinging lever hung from the automobile frame, a link connecting it with said equalizing bar, and a draft appliance connected with said swinging lever.

[Claims 6 to 8 not printed in the Gazette.]

883,836. DEVICE FOR PREVENTING THE CREEPING OF RAILWAY-RAILS. JOSEF SCHULLER, Gratz, Austria-Hungary. Filed June 10, 1907. Serial No. 378,275.



1. The combination with a railway rail, of a plurality of clamps extending beneath the rail and alternately engaging the base thereof from opposite sides, a stationary abutment, and means whereby any movement of the rail toward said abutment acts to force the clamps into closer engagement with the rail.

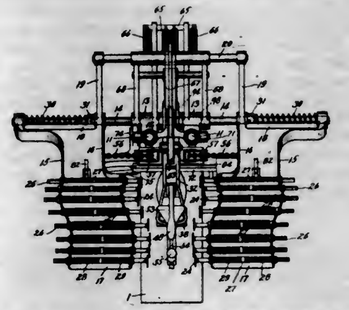
2. The combination with a railway rail, of a plurality of clamps extending beneath the rail and alternately engaging the base thereof from opposite sides, a stationary abutment, and a wedge engaging said clamps and bearing against the abutment, whereby as the rail moves longitudinally toward the abutment the clamps will be forced into closer engagement with the rail.

3. The combination with a railway rail, of a plurality of clamps extending beneath the rail and alternately engaging the base thereof from opposite sides, a stationary abutment, each of said clamps having an upward extending lug at its end beneath the rail, and a wedge extending between such lugs and bearing against said abutment, whereby any movement of the rail toward said abutment acts to force the clamps into closer engagement with the rail.

883,837. REINFORCED-INSOLE COVERING AND SHAPING MACHINE. WILLIAM C. STEWART, Lynn, Mass., assignor, by mesne assignments, to Thomas G. Plant, Boston, Mass. Filed Jan. 11, 1907. Serial No. 351,838.

1. A work support combined with a plurality of lip protectors, hinge supports therefor, means to turn said supports about their hinges, and means to spread said supports.

2. A work support combined with a plurality of lip protectors, hinged supporting-means therefor and in which they are yieldingly mounted, means to turn said supporting means upon its hinge, and means to spread said supporting means.



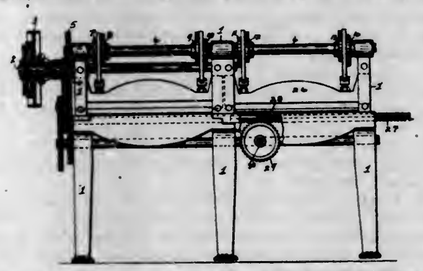
3. A work support combined with a plurality of lip protectors, carriers to which they are hinged, hinged supporting means for said carriers and with which the latter are yieldingly connected, and means to swing and also to spread said supporting means.

4. A work supporting form combined with a presser, means to cause relative approach of the same, and means to laterally deflect the alinement of an intermediate portion of said presser.

5. A work supporting form combined with a presser, means to cause relative approach of the same, means to laterally deflect the alinement of an intermediate portion of said presser, and limiting means to restrict the lateral deflection.

[Claims 6 to 37 not printed in the Gazette.]

883,838. MACHINE FOR CUTTING AND MOUNTING SHEET-METAL STRIPS. WILLIAM STUEBING, Cincinnati, Ohio. Filed Aug. 31, 1906. Serial No. 332,789.



1. In a machine of the class described, a cutter for severing sheet metal plates into narrow strips, a crimping bar for folding the strips lengthwise, and means for feeding the severed strips to the crimping bar at each alternate operation thereof, whereby the strips may be double folded with each complete operation of the machine.

2. In a machine of the class described, a cutter for severing sheet metal plates into narrow strips, a crimping bar for folding the strips lengthwise, with a clamp for pressing the strips together, and means for feeding the severed strips to the crimping bar at each alternate operation thereof, whereby the strips may be double folded and clamped with each complete operation of the machine.

3. In a machine of the class described, a crimping bar for folding narrow strips of sheet metal lengthwise, and means for feeding the narrow strips to the crimping bar at each alternate operation thereof, whereby the strips may be double folded with each complete operation of the machine.

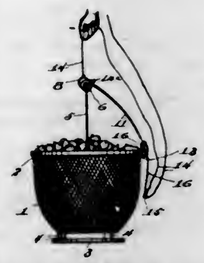
4. In a machine of the class described, a crimping bar for folding narrow strips of sheet metal lengthwise, and a

clamp coöperating therewith to press together the folded strip, and means for feeding the strips of metal to the crimping bar and clamp at each alternate operation thereof, whereby the strips may be double folded with each complete operation of the machine.

5. In a machine of the class described, a fixed and a movable plate forming a clamping member, and a crimping bar for folding lengthwise narrow strips of sheet metal acting at right angles to said clamping member, with mechanism for actuating said crimping bar and movable clamp member in such relation to each other that the strip will be folded between the clamp, and then clamped thereby, with means for feeding the narrow strips to the crimping bar and clamp at each alternate operation thereof, whereby the strips may be double folded and double clamped with each complete operation of the machine.

[Claims 6 to 10 not printed in the Gazette.]

883,839. FRUIT-PICKING BASKET. BENJAMIN A. SWASEY, West Peru, Me. Filed May 15, 1907. Serial No. 373,797.



1. A basket having a swinging bail, and a lever having one end pivotally connected to the bail and the other end provided with teeth to engage the basket for holding the bail in various positions.

2. A basket having a swinging bail, and a lever having one end pivotally connected to the bail and the other end provided with teeth to engage the basket for holding the bail in various positions, and a cord working through the lever and connecting it with the basket.

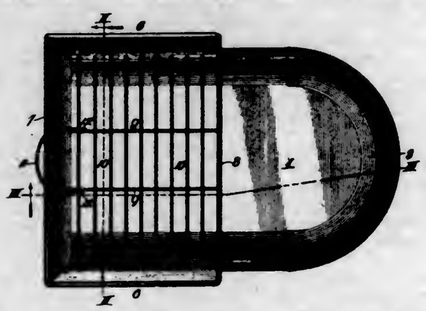
3. A basket having a swinging bail, and a lever having one end pivotally connected to the bail and the other end provided with teeth to engage the basket for holding the bail in various positions, a cord working through the lever and connecting it with the basket, and a hoisting and lowering cord connected with the bail and coöperating with said lever cord.

4. A basket-hanger comprising a basket-bail, a handle on the bail, a single piece of wire having a hook, the wire being coiled about the basket bail at each end of the basket handle and extended across said handle and secured to the bail adjacent said coils.

5. The combination, with a basket, a swinging bail thereon having a handle, a hook attached to the basket bail, and a lever pivoted to the handle under the hook and having its free end provided with teeth, of a cord working through the lever and attached to the basket, a hoisting and lowering cord anchored to the handle and working through the hook, and a ring on the said lever cord for the passage of the said hoisting cord.

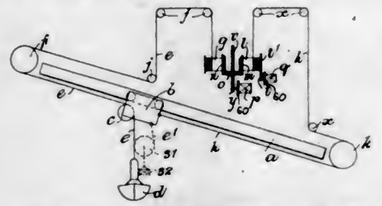
883,840. COMBINED DISH PAN AND DRAINER. MARTIN V. TAGGART, Grenola, Kans. Filed May 8, 1906. Serial No. 315,757.

The improved article herein described and shown consisting of a pan having parallel sides and one angular end, and provided on its sides below the upper edges thereof with longitudinal shoulders extending forward from said angular end, and a drainer having an open bottom and having its sides shaped to fit snugly within the angular end of the pan and rest on the shoulders on the sides thereof and project above said sides and end, longitudinal rods secured in and extending between the end walls of the drainer at the lower edges of the same, transverse rods secured to and extending between the sides of the



drainer at the lower edges of the same and resting upon the longitudinal rods, and a dish-supporting bail having its ends pivotally hung on the rearmost transverse rod and bearing laterally against the longitudinal rods.

883,841. TRANSPORTING APPLIANCE AND THE LIKE. JOHN R. TEMPERLEY, JOSEPH TEMPERLEY, and WILLIAM ALEXANDER, London, England. Filed Nov. 28, 1905. Serial No. 289,516.



1. In combination in a cable transporter; a trackway; a carriage supporting a sheave; a load-carrying element; a winding drum and a traversing drum; a hoisting cable which is attached to the load-carrying element and which passes over said sheave and engages the hoisting drum; a traversing cable attached to said carriage and engaging the traversing drum, an epicyclic gear two parts of which are connected to drums; two motors, one permanently geared to a third part of the epicyclic gear and one permanently geared to the traversing drum; and braking means.

2. In combination in a transporter; a trackway, and carriage thereon supporting a pair of sheaves; two winding drums; epicyclic gear connecting the two drums together, one member of the epicyclic gear being permanently connected to one drum and another member being permanently connected to the other drum; a double grab with closing means; a cable from one of said drums passing over one of said sheaves to carry the grab; a cable passing from the other of said drums over the other of said sheaves to the closing means of the grab; a motor permanently connected to the third member of said epicyclic gear; a traversing drum; a motor permanently connected therewith and cables of said traversing drum attached to both ends of the carriage.

3. In combination in a cable transporter; a trackway; a carriage supporting a sheave; a load-carrying element; a winding drum and a traversing drum; a hoisting cable which is attached to the load-carrying element and which passes over said sheaves and engages the hoisting drum; a traversing cable attached to said carriage and engaging the traversing drum, an epicyclic gear two parts of which are connected to drums; two motors, one permanently geared to a third part of the epicyclic gear and one permanently geared to the traversing drum; and braking means; means acting to restrain the swinging of the load,

said means including a spring drum on a carriage, a ratchet with friction member connected with the ratchet, a pawl on the drum acting to engage with the ratchet when the load swings in the other direction.

883,842. TREATMENT OF HARD AND SEMI HARD COPALS AND THE PREPARATION OF VARNISHES. HENRI TERRISSE, Vernier, near Geneva, Switzerland, assignor, by mesne assignments, to Fabrique de Vernis et Produits Chimiques (Société Anonyme), Vernier, Switzerland, a Corporation of Switzerland. Filed Oct. 29, 1907. Serial No. 399,764.

1. A step in the herein described process for the preparation of varnish consisting in heating a mixture of naphthalene, oil and a resin until the resin is dissolved; and then boiling the solution so produced to remove the naphthalene and oil.

2. A step in the herein described process for the preparation of varnish consisting in heating a mixture of naphthalene, oil and a resin until the resin is dissolved; boiling the solution so produced to remove the napththalene and oil; and adding linseed oil, while maintaining the mixture at a temperature of about 280° C.

3. The herein described process for the preparation of varnish consisting in heating a mixture of naphthalene, oil and a resin, until the resin is dissolved; boiling the solution so produced to remove the naphthalene and oil; adding linseed oil, while maintaining the mixture at a temperature of about 280° C; and, lastly, adding spirits of turpentine and a siccative.

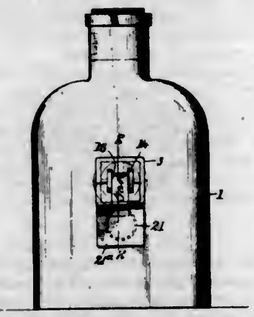
883,843. COMPOSITION OF MATTER. WILLIAM H. THRASH, Columbus, Ohio. Filed June 17, 1907. Serial No. 379,356.

1. A composition of matter comprising animal blood, Portland cement, asbestos, coal, and graphite.

2. A composition of matter comprising animal blood, Portland cement, asbestos, coal, graphite, and sugar.

3. A composition of matter comprising animal blood, Portland cement, asbestos, coal, graphite, sugar, gallotannic acid and carbolic acid.

883,844. FRAUD-DETECTING BOTTLE. FRANK H. WATERMAN, Norwell, Mass. Filed Jan. 5, 1907. Serial No. 350,895.



1. A bottle of the class described, having a pocket formed in the wall thereof, a cup received in said pocket, means for locking said cup against withdrawal when seated in said pocket, a tape carried in said cup adapted to have marks indicating the genuineness of the contents of the bottle and adapted to be withdrawn through the wall thereof, said tape being unattached within said cup whereby said tape cannot be replaced in its former condition after complete withdrawal.

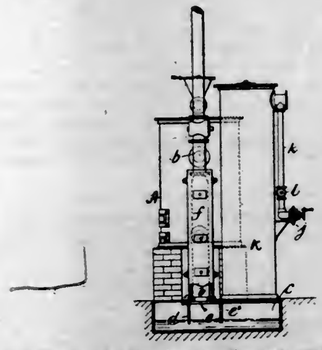
2. A bottle of the class described, having a pocket formed in the wall thereof, a cup received in said pocket, means for locking said cup in said pocket to prevent the removal thereof, a reel mounted in said cup, and a tape wound on said reel and passing to the exterior of said bottle, whereby said tape may be withdrawn.

3. A bottle of the class described, having a pocket formed in the wall thereof, a cup received in said pocket, means for locking said cup against removal from said pocket, a reel carried by said cup, and a tape wound upon said reel, the wall of said cup having an opening through which said tape passes to the exterior of said bottle, whereby said tape may be withdrawn from said reel.

4. A bottle of the class described, having a pocket formed in the wall thereof, a cup mounted in said pocket, a removable cap applied to the inner extremity of said cup, said pocket having a shoulder formed on the inner side of the wall thereof, means carried by said cap for engaging said shoulder and operating to lock said cup against withdrawal when seated, a reel mounted in said cup, and a tape carried upon said reel and passing to the exterior of said bottle.

5. A bottle of the class described, having a pocket formed in the wall thereof, a cup received in said pocket, means for locking said cup against withdrawal, a reel rotatably mounted in said cup, and a tape wound on said reel, the wall of said cup having an opening through which said tape passes, and the edge of said pocket having a notch therein through which said tape passes to the exterior of said bottle, whereby said tape may be withdrawn from said reel.

883,845. GAS-PRODUCER PLANT. CHARLES WHITFIELD, Kettering, England. Filed Apr. 24, 1905. Serial No. 257,124.



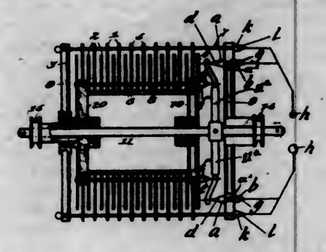
1. In combination in a suction gas producer, a producer, a pipe leading from the gas outlet of the producer, an open-ended sleeve forming an air shaft through which the air may circulate by natural draft, and a branch pipe leading from the said sleeve to the interior of the producer below the grate, substantially as set forth.

2. In combination in a suction gas producer, a producer, a pipe with a spiral groove on its exterior leading from the gas outlet of the producer, an open-ended sleeve forming an air shaft through which the air may circulate by natural draft, and a branch pipe leading from the said sleeve to the interior of the producer below the grate, substantially as set forth.

883,846. ELECTRICAL MULTIPLE INFLUENCE OR CONDENSER MACHINE. HEINRICH WOMMELSDORF, Charlottenburg, Germany. Filed Feb. 28, 1905. Serial No. 247,717.

1. In a multiple influence or condenser machine, two sets or systems of disks revolving in opposite direction and carried by an outer and inner frame work, a series of separate conductors on the frame of the outer system, and insulated from each other, and fixed conducting brushes or points within and without the outer system, which come temporarily in conducting connection with the separate conductors, for the conduction of the elec-

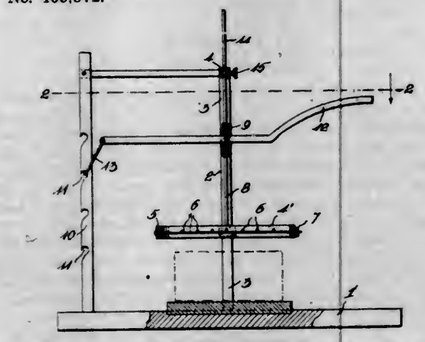
tricity from the inner system through the inner brushes or points and the separate conductors to the outer brushes or points serving for the collection of the electricity, and means for the conduction of the electricity of the inner system of disks to the inner brushes or points.



2. In an electrical multiple influence or condenser-machine having an inner and an outer system of operative disks revolving in opposite directions, insulated conducting studs arranged in a circle on the inner side of the frame of the said outer system, a second series of insulated conducting studs on the outer side of said frame, opposite to and in conducting connection with said inner studs, a third series of conducting studs in conducting connection with the inner system of disks, means for conveying the electricity from the third series of conducting studs to the first and second series of studs, electrodes and means for conveying the electricity from the second series of studs to the electrodes, substantially as described.

3. In an electric multiple influence or condenser-machine having an inner and an outer system of operative disks, insulated conducting studs on the framing of the outer system of disks in conducting connection with the conductors of said outer system, conducting studs in conducting connection with the inner system of disks, means for conveying the electricity from such last mentioned studs to the said conductors and to said first mentioned studs, electrodes and means for conveying the electricity from the first mentioned studs to the electrodes, substantially as described.

883,847. BUTTER-CUTTING MACHINE. FERDINAND J. ZIEGLER, Berryton, Kans. Filed Jan. 6, 1908. Serial No. 409,572.
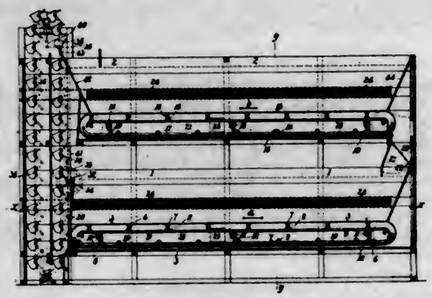


1. A device of the character described embracing a base, an upright guide frame fixedly mounted thereon, a standard formed in its rear side edge with a series of vertically spaced upwardly inclined notches fixedly mounted on the base in rear of the guide frame, a carriage mounted in the guide frame, a vertically adjustable operating lever pivoted to the carriage, the pivot end of the lever extending to a point adjacent to the standard, a connecting link pivoted to the pivot end of the lever, said link being adapted to engage with either of the notches of the standard when the pivot end of the lever is in a horizontal or upwardly inclined position and adapted to be disengaged from the adjacent notch to permit readjustment of the lever and carriage by slightly raising the free or handle end of the former.

2. A device of the character specified, embracing a base, an upright guide frame comprising an upper cross-piece, fixedly mounted thereon, a cutting member, a carriage connected with the cutting member, and carriage supporting means for supporting the carriage at any desired adjustment above the base, said means comprising an upright guide stem fixed to the carriage in position to pass through the upper cross-piece of the guide frame, and a set screw screwing through said cross-piece in position to engage the stem, with operating means for the carriage.

3. A butter cutting machine comprising a base, an upright guide frame consisting of side pieces connected by an upper cross-piece fixedly mounted thereon, a butter cutting member, a carriage comprising side pieces, the lower ends of the side pieces being formed with laterally extending guide loops to receive the side pieces of the guide frame, and supporting means for supporting the carriage at any desired adjustment above the base, said means embracing an upright guide stem fixed to the carriage in position to pass through the cross-piece of the guide frame, and a set screw screwing through the base in position to engage said stem.

883,848. APPARATUS FOR MALTING. EDWIN G. ADLAM, Bristol, England. Filed Aug. 23, 1907. Serial No. 389,922.



1. Malting apparatus comprising a series of box-like grain containers, each having screened openings in its sides, an endless conveyer in each container and an elevator arranged vertically and located adjacent to one end of each container, pivotally mounted buckets thereon and means for tripping said buckets to discharge into the upper container, substantially as described.

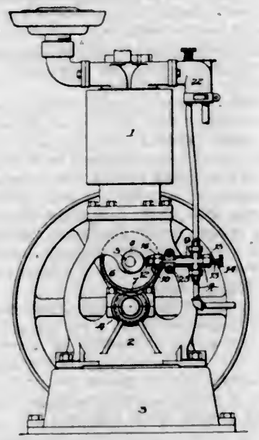
2. Malting apparatus comprising a vertically arranged series of box-like containers, open at each end and each provided with screened openings in its sides, an endless conveyer in each container, an elevator adjacent to one of the ends of each of said containers, buckets pivotally mounted on said elevator, means for tripping said buckets to discharge into the upper container, and a suction fan arranged to draw air through said container, substantially as described.

883,849. OIL-PUMP FOR EXPLOSIVE-ENGINES. WILLIAM K. ANDREW, Milwaukee, Wis., assignor to International Harvester Company, a Corporation of New Jersey. Filed Nov. 29, 1907. Serial No. 404,201.

1. In an oil supply pump for explosive engines, in combination, a pump cylinder, a mechanically operated plunger fitted in one end thereof, a manually operated plunger fitted in the other end thereof, and valve-controlled oil conduits leading to and from said pump cylinder.

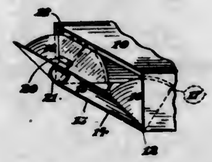
2. In an oil supply pump for explosive engines, in combination, a pump cylinder, a mechanically operated plunger fitted in one end thereof, a manually operated plunger fitted in the other end thereof, a single spring interposed between the plungers and operating to hold them in their outward position, and valve-controlled oil conduits leading to and from said pump cylinder.

3. In an oil supply pump for explosive engines, in combination, a pump cylinder, coaxially arranged plungers fitted in the ends thereof, one of said plungers being mechanically operated and one manually operated, inwardly projecting stems formed on the ends of said plungers, a spring interposed between the plungers and engaging the stems thereon, and valve-controlled oil conduits leading to and from said pump cylinder.



4. In combination with an explosive engine provided with a rotating cam, an oil supply pump comprising a pump cylinder, a plunger provided on its projecting end with an antifriction roller and adapted to be actuated by said rotating cam of the engine in one direction, means for preventing angular movement of said plunger, a second plunger fitted in the opposite end of said cylinder, arranged coaxially with respect to the first mentioned plunger and adapted to be manually operated, a single spring interposed between the two plungers and operating to hold them in their outward position, a valve-controlled oil conduit entering the pump cylinder between said plungers, and an alining valve-controlled oil conduit leading therefrom.

883,850. DISPLAY-RECEPTACLE. WILLIAM N. AUBUCHON, St. Louis, Mo. Filed Mar. 19, 1907. Serial No. 363,165.



1. In a combined shipping and display receptacle, the combination of a casing, a closure pivoted thereto, said closure comprising a back, wings projecting therefrom, and a shield attached to the side walls of the casing, said wings being normally contained within said shield.

2. In a display receptacle, the combination of a bottom, a vertical front projecting therefrom, a flange projecting from said front, flanges projecting from the sides, a strip connecting said side-flanges, all of said flanges being disposed in an oblique plane, ledges secured to the sides and parallel to the side-flanges, and a pane of glass supported upon said ledges and the inturned end of the top, said pane being retained in place by said flanges and said strip, and by the inturned edge of said strip.

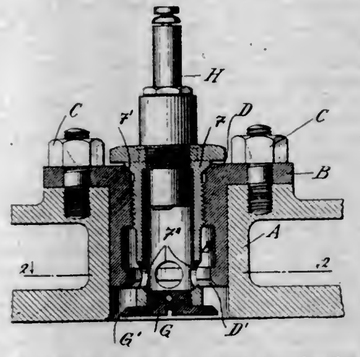
3. In a combined shipping and display receptacle, the combination of a casing, a closure pivoted thereto, said closure comprising a back, wings projecting therefrom, and pins secured to said wings, and a shield attached to the side walls and incasing said wings and said pins.

4. A shipping and display receptacle comprising a casing made of malleable material and having a top, bottom, and sides all fixedly united together, said casing having one of its shorter ends beveled, a transparent closure held fixedly in said beveled end by a member or members disposed at right angles to the walls of the casing, and a pivoted closure for the other end.

5. In a combined shipping and display receptacle, the combination of a casing, a closure pivoted thereto, said closure comprising a back, wings projecting therefrom, and pins secured to said wings, a spring-catch on said back, and a member projecting from the top of the casing and engaging said spring-catch and said pins.

[Claims 6 to 13 not printed in the Gazette.]

883,851. IGNITION MECHANISM FOR INTERNAL-COMBUSTION ENGINES. THEODORUS S. BAILEY and FRANK T. CABLE, Quincy, Mass., assignors to Electric Boat Company, New York, N. Y., a Corporation of New Jersey. Filed Mar. 7, 1907. Serial No. 361,063.



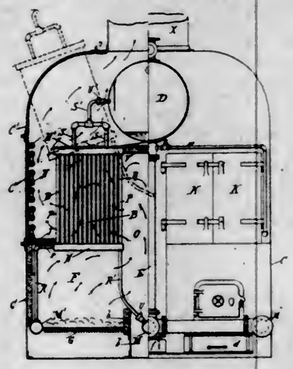
1. In an internal combustion engine, a combustion chamber, having an opening in the wall thereof a fitting secured in said opening and provided with a valve seat at either end, a hollow plug so mounted in said opening as to be capable of being advanced or withdrawn therein, and having a port adapted to communicate with the combustion chamber when the plug is advanced, a valve at each end of said plug adapted to engage the adjacent valve seat, and a removable igniter projecting into the interior of said plug, substantially as described.

2. In an internal combustion engine, a combustion chamber having an opening in the wall thereof, a fitting secured in said opening and provided with the valve seats D and D' and the chamber E, a hollow plug, having the ports F^2, so mounted in said fitting as to be capable of being advanced or withdrawn therein, and provided at each end with a valve adapted to engage the adjacent valve seat, and a removable ignition device projecting into said hollow plug, substantially as described.

3. In an internal combustion engine, a combustion chamber having an opening in the wall thereof, a fitting secured in said opening and provided with a valve seat at its inner end, a hollow plug having ported walls so mounted in said fitting as to be capable of being advanced or withdrawn therein, and provided with a valve adapted to engage with said valve seat, and a removable ignition device projecting into said hollow plug, substantially as described.

4. In an internal combustion engine, a combustion chamber having an opening in the wall thereof, a fitting secured in said opening and provided with a valve seat at its inner end, and a chamber E, a hollow plug, having ports F^2, so mounted in said fitting as to be capable of being advanced or withdrawn therein and provided with a valve adapted to engage the said valve seat, and a removable ignition device projecting into said hollow plug, substantially as described.

883,852. BOILER. FRED A. BALLIN, Portland, Oreg. Filed Apr. 16, 1906. Serial No. 311,921.



1. A boiler comprising a plurality of nests of vertical tube sections spaced apart to form a combustion chamber therebetween, running the full length of the boiler, a plurality of furnaces one beneath each nest of tube sections and in communication with the combustion chamber, substantially as shown and described.

2. A boiler, having its full length two nests of vertical tube sections, having between them a central combustion chamber, the full length of boiler, communicating with two furnaces, underneath each nest of sections, substantially as described.
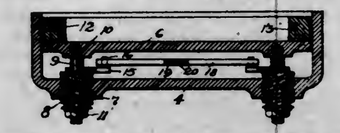
3. A boiler comprising a plurality of independent nests of tube sections, top and bottom headers therefor, said headers forming continuous crown sheets; furnaces beneath said headers, a combustion chamber located between the nests of tube sections and in communication with the furnaces substantially as shown and described.

4. A boiler comprising a plurality of nests of sections of vertical tubes, inclosing a central combustion chamber, bottom and top headers for said sections, the bottom headers having trapezoidal cross sections and the top headers having rectangular cross sections, removable plugs fitted into the top of the top headers, substantially as shown and described.

5. In a boiler of the class described, a plurality of nests of sections inclosing between them a common combustion chamber, each section including a plurality of rows of vertical staggered tubes, substantially as shown and described.

[Claims 6 to 13 not printed in the Gazette.]

883,853. MECHANISM FOR RAISING AND LOWERING PLATENS OF PRINTING-PRESSES. MORRISSON J. BARNETT, San Francisco, Cal., assignor, by mesne assignments, to Whitson Autopress Company, a Corporation of New York. Filed May 26, 1904. Serial No. 209,865. Renewed July 29, 1905. Serial No. 271,870.



1. In mechanism of the character described, in combination, a printing press frame, a bed reciprocating therein, a platen in said bed, and means for vertically reciprocating the platen with reference to the bed, comprising a screw for raising and lowering the platen upon the bed, and means operated by the reciprocation of the bed for turning said screw first in one direction and then in the other, substantially as described.

2. In mechanism of the character described, the combination of a printing press frame, a bed longitudinally reciprocating therein, a platen in said bed, a screw for raising and lowering the platen on the bed, an arm for turning said screw, and means for turning said arm comprising two cams arranged to operate near the limits of motion of the bed in opposite directions on said arm, substantially as described.

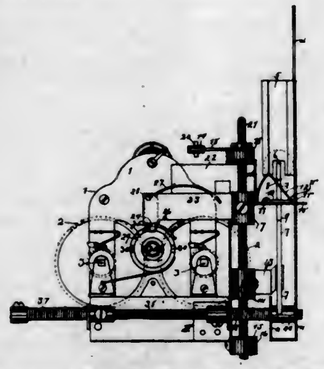
3. In mechanism of the character described, in combination a printing press frame, a reciprocating bed thereon, a platen in said bed, a plurality of screws for raising and lowering said platen on said bed, a frame connected with all of said screws and arranged by its reciprocating motion to move said screws in unison, and means for reciprocating said frame near the limits of motion of the bed, substantially as described.

4. In mechanism of the character described, in combination a printing press frame, a reciprocating bed thereon, a platen in said bed, a plurality of screws for raising and lowering said platen on said bed, a frame connected with all of said screws and arranged by its reciprocating motion to move said screws in unison, means for reciprocating said frame near the limits of motion of the bed, said means comprising cams secured upon the inner surfaces of the sides of the printing press frame, and the reciprocating frame having a stem engaging each cam, substantially as described.

5. In mechanism of the character described, in combination, a printing press frame, a bed reciprocating thereon, a platen in the bed, a plurality of screws in the bed, posts screwed into said screws and supporting the platen, and means operated in the motion of the bed for actuating the screws in unison, substantially as described.

[Claim 6 not printed in the Gazette.]

883,854. TIME-CONTROLLED, COIN-OPERATED LOCKING DEVICE FOR TYPE-WRITER MACHINES. HARRY BATES, Menands, N. Y. Filed May 25, 1906. Serial No. 318,642.



1. The combination of a typewriter mechanism, a lock therefor, and time-controlling mechanism for predetermining the moment of locking of said lock after the same has been unlocked.

2. The combination of a typewriter mechanism, a lock adapted to engage therewith, and time controlling mechanism for predetermining the moment of engagement of the lock with the typewriter mechanism after the lock has been unlocked.

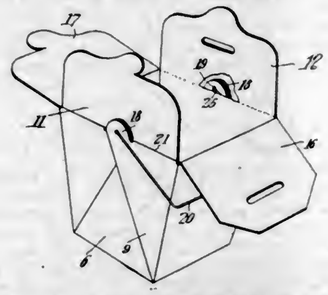
3. The combination of a typewriter mechanism, a lock therefor, means for releasing the lock, and time controlling mechanism whereby the lock is returned to locking position after a predetermined interval.

4. The combination of a typewriter mechanism, a lock adapted to arrest the writing movements thereof, operator-controlled means for releasing the lock, and time controlling mechanism whereby the lock is returned to locking position after a predetermined interval.

5. The combination of a time controlled mechanism, operating means for actuating the same out of normal position, automatic means for returning the same to normal position, a time controlling mechanism, and a rotatable member adapted to be coupled with said time controlling mechanism when the time controlled mechanism is actuated out of normal position and to be uncoupled after a predetermined interval, and while coupled to maintain said time controlled mechanism in actuated position.

[Claims 6 to 12 not printed in the Gazette.]

883,855. PAPER VESSEL. CHARLES T. BLOOMER, Newark, N. Y. Filed May 20, 1907. Serial No. 374,709.



1. A paper receptacle provided with a cover and having its side walls formed with reinforcing wings the ends of which are extended above the fold lines of the cover and over-lapped to form bail supporting ears having perforations formed therein and adapted to register with each other, a bail pivotally mounted in said perforations, and locking flaps formed integral with the wings and disposed on opposite sides of each bail supporting ear and adapted to be folded downwardly between said wings and the adjacent side walls of the receptacle.

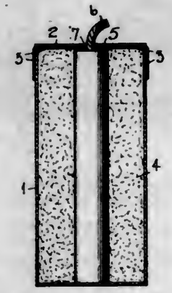
2. A paper receptacle having main and auxiliary covers and having its side walls provided with reinforcing wings, the upper ends of which are extended vertically above the fold lines of the cover and over-lapped to form pivoted bail supporting ears, and locking flaps formed integral with the wings and disposed one on each side of the ears, said flaps being foldable downwardly between said wings and the adjacent side walls of the receptacle.

3. A paper receptacle provided with a cover having its side walls reinforced by a plurality of pairs of reinforcing wings, the free ends of which are extended vertically above the cover to form perforated bail supporting ears, a locking flap formed on one of the wings of each pair at the adjacent bail supporting ear and adapted to be folded laterally and downwardly over the adjacent wing of said pair, and a bail having its opposite ends extended through the perforations in the ears, said cover forming a housing for the ears and adjacent ends of the supporting bail when said cover is moved to open position.

4. A blank for paper fasteners comprising a body portion provided with a plurality of fold lines defining a bottom section and radiating side and end sections, there being diagonally disposed fold lines disposed between the side and end sections of the blank and defining corner folds or wings some of which are provided with extensions constituting locking flaps, and perforated tabs extending laterally from the wings on each side of the diagonal fold lines of the blank and adapted to register with each other when the blank is folded to form bail supporting ears.

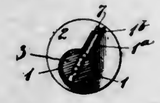
883,856. FIRE EXTINGUISHER AND ALARM. CHARLES M. BOWMAN, Lebanon, Pa. Filed June 17, 1907. Serial No. 379,443.

A fire extinguisher comprising a closed fragible box or casing, fire extinguishing powder filling said box or casing, an explosive cracker embedded in said extinguishing powder and extending from end to end of the casing, whereby the walls of said box are prevented from collapsing under external pressure and the powder scattered radially and uniformly throughout the length thereof on the explosion



of the cracker, said explosive cracker having a fuse projecting through one end of the box.

883,857. CYLINDER-LOCK. CHARLES J. CALEY and HENRY G. VOIGHT, New Britain, Conn., assignors to Russell & Erwin Manufacturing Company, New Britain, Conn., a Corporation of Connecticut. Filed Nov. 29, 1907. Serial No. 404,291.



1. In a pin-tumbler lock, a cylinder, a pin-tumbler casing projecting laterally therefrom, an integral lip at the free edge of said tumbler casing, a tumbler-bore extending into said casing adjacent to said lip to receive pin-tumbler sections, said lip being arranged to be folded down to retain said tumbler sections therein.

2. In a pin-tumbler lock, a cylinder, a tumbler casing extending laterally therefrom, a plurality of bores extending through said casing and into said cylinder to receive the pin-tumbler sections, a lip formed integrally with said casing at one side of said bores therein and arranged to be folded down to hold the tumblers in said bores.

3. In a pin-tumbler lock, a cylinder, a rotatable plug therein, a bar, a coupling arranged to connect said bar to the end of said plug, said bar passing through said coupling and being yieldingly mounted therein, and means for detachably connecting said coupling to said plug said connecting means including an integral interlocking projection on one of said parts arranged to enter a recess on the other part.

4. In a pin-tumbler lock, a cylinder, a rotatable plug therein, a bar projecting from the inner end of the plug, a coupling detachably secured to said plug, said bar being detachably secured to said coupling, means to prevent the rotation of the bar independently of the coupling said means being provided partly in the plug and partly in the coupling, and means to prevent the independent rotation of the coupling relatively to the plug.

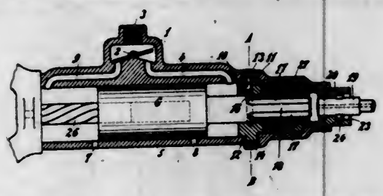
5. In a pin-tumbler lock, a cylinder, a key controlled rotatable plug having a key slot therein, a bar, a coupling, means for securing said bar to the inner end of said plug, said bar having a recess in its end in line with the point of a key adapted to said plug.

[Claim 6 not printed in the Gazette.]

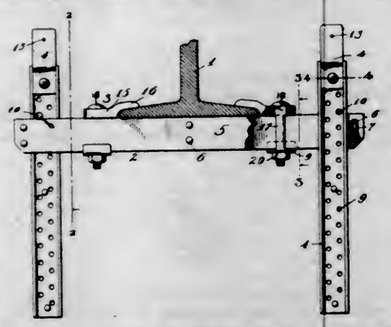
883,858. THRUST BORING-MACHINE. CHARLES CHRISTIANSEN, Gelsenkirchen, Germany. Filed Apr. 27, 1907. Serial No. 370,698.

A boring machine provided with a cylinder, an inclosed piston, a pair of compressed air inlet ducts communicating with opposite ends of the cylinder, a flap valve fulcrumed

at its center of gravity and controlling both of said ducts, a pair of exhaust ports in the cylinder adapted to be alternately uncovered by the piston, and a boring bit operable by said piston, substantially as specified.



883,859. FRAMING-SUPPORT FOR CONCRETE CONSTRUCTION. THOMAS CORRIS, Cleveland, Ohio. Filed Aug. 14, 1907. Serial No. 388,468.



1. In a device of the character set forth, the combination of a supporting member or base, means for securing said member or base to opposite sides of a beam, and a pair of vertically adjustable carriers supported from said member or base on opposite sides of said securing means, substantially as specified.

2. In a device of the character set forth, the combination of a base comprising a pair of spaced plates, a pair of clips adjustable along said plates and adapted to clamp opposite sides of a beam, a pair of carriers extending between said plates and vertically adjustable with relation thereto and located on opposite sides of the pair of clips, and means for supporting said carriers in adjusted position, substantially as specified.

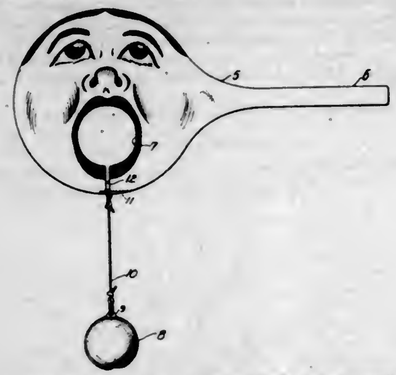
3. In a device of the character set forth, the combination of a pair of spaced plates forming a supporting member or base, a pair of clips mounted on said member or base and adjustable longitudinally thereof, each clip comprising a base and an inwardly projecting hook, a bolt extending through the base of each clip and extending between said plates, washers on said bolts having upturned flanges engaging said plates, nuts on said bolts, and vertically adjustable joist-carriers mounted between said plates on opposite sides of the pair of clips, substantially as specified.

4. In a device of the character set forth, the combination of a supporting member or base, a pair of vertically adjustable carriers supported thereby, each of said carriers having at its upper end a yoke and being provided in the body thereof with a plurality of apertures, a pin for each carrier adapted to be applied to the apertures thereof and to rest on top of said supporting member or base, and adjustable means for securing said supporting member or base to opposite sides of a beam, substantially as specified.

5. In a device of the character set forth, the combination of a supporting member or base, a pair of clips adjustable thereon, and a pair of carriers supported by said member or base on opposite sides of said pair of clips, substantially as specified.

[Claims 6 to 9 not printed in the Gazette.]

883,860. TOY. ALFRED CRAVEN, East Providence, R. I. Filed Aug. 5, 1907. Serial No. 387,050.

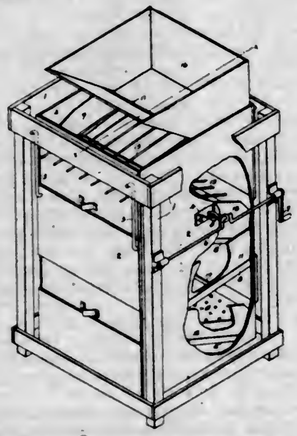


1. In a toy, a member provided with a hole therethrough and having a handle, a second member adapted to pass through said hole, and a flexible member connecting said first and second members, the distance from the point of connection of said flexible member with said first member to said second member being greater than the distance from said point of connection to said hole and less than the distance from said point of connection to the opposite edge of said first member.

2. In a toy, a member provided with a hole therethrough at one side of the center thereof and provided with a slot extending from said hole toward one edge of said member, a second member adapted to pass through said hole, and a flexible member fast at one end to said second member and at its other end to said first member adjacent to said slot, whereby when said second member passes through said hole, said flexible member is adapted to pass through said slot.

3. In a toy, a member provided with a hole therethrough, a ball, and a flexible member fast at one end to said first member and at its other end to said ball, the length of said flexible member being less than the distance from its point of connection with said first member to a point in the edge of said first member which is opposite to said point of connection.

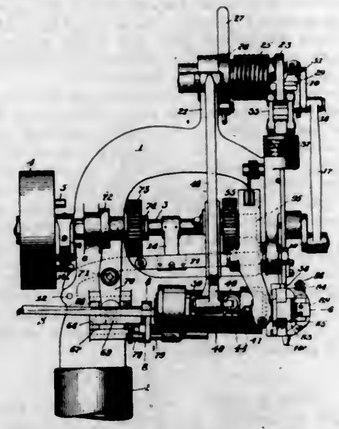
883,861. APPARATUS FOR SEPARATING GOLD. JOHN A. CREASY, Norborne, Mo. Filed Feb. 4, 1907. Serial No. 355,536.



1. In an apparatus for separating gold, the combination with a suitable frame of a casing suspended from and within said frame and provided with pan openings at the front and back, means in said casing for supporting pans, and pans adapted to seat on said supports and for insertion into and removal from said casing through said openings, the bottom edges of each of the upper pans being projected partially within the pan next there below substantially as set forth.

2. In an apparatus for separating gold, the combination with a suitable frame, of a casing arranged to reciprocate in said frame in substantially a horizontal plane and provided at opposite sides with horizontal pan openings, means in said casing for supporting pans, pans adapted to seat on said supports and for insertion into and removal from said casings through said openings, fingers extending longitudinally over one or more of the top pans, riffle plates extending horizontally across the bottom of the lower pans, and a screen supported in the bottom pan above the riffle bars therein, substantially as and for the purpose set forth.

883,862. NAIL FORMING AND DRIVING MACHINE. HENRY H. CUMMINGS, Newton, Mass., assignor, by mesne assignments, to Thomas G. Plant, Boston, Mass. Filed July 17, 1905. Serial No. 269,985.



1. A machine of the class described having, in combination, fastener inserting mechanism and positioning means to reverse a fastener strip about an axis spaced from the middle of the fastener strip.

2. A machine of the class described having, in combination, fastener inserting mechanism; strip positioning means to reverse the end of a strip about an axis spaced from the center of the strip at said end; and mechanism for separating a fastener from the strip and presenting it to the inserting mechanism.

3. A machine of the class described comprising, in combination, cutting and driving means, and means to support a nail strip and to reverse said strip about an axis at one edge of said strip.

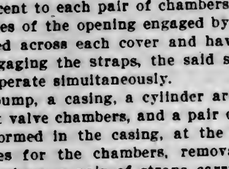
4. The combination with strip severing means, of strip carrying means and means to reverse said strip about an axis at one edge thereof.

5. A machine of the class described having, in combination, fastener inserting means; positioning means to reverse a fastener strip about an axis proximate one edge thereof; and mechanism for presenting the fastener to the inserting mechanism.

[Claims 6 to 43 not printed in the Gazette.]

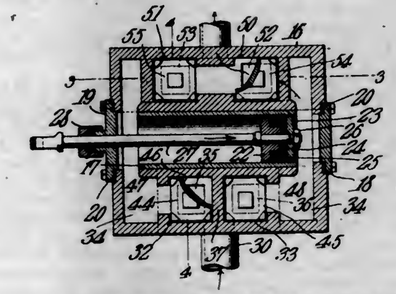
883,863. CAR-TRUCK. THEODORE H. CURTIS, Louisville, Ky. Filed June 10, 1907. Serial No. 378,325.

1. In a railway car-truck, the combination of the side-frame having bolster-openings therein to receive the ends of the truck-bolster, that portion of the said side-frame over said bolster-openings being provided with bolster-guide bearings and a truck-bolster having upstanding bolster-guides to coöperate with said bolster-guide bearings, the latter and said bolster-guides constituting the means for preventing endwise shifting of the truck-bolster, and journal-box-saddles at ends of each side-frame and removable oil-cellars attached to journal-box-saddles by bolts, said bolts being adjustable and so located that the tightening of the adjustable bolts will close the journal-box-saddles and oil-cellars together to exclude the dust from entering the joints between the journal-box-saddles and oil-cellars, substantially as described.



2. In a railway car-truck, the combination of the side-frame having bolster-openings therein to receive the ends of the truck-bolster, that portion of the said side-frames over said bolster-openings being provided with bolster-guide bearings and a truck-bolster having upstanding bolster-guides to coöperate with said bolster-guide bearings, the latter and said bolster-guides constituting the means for preventing endwise shifting of the truck-bolster, and journal-box-saddles at ends of each side-frame and removable oil-cellars attached to said side-frames by bolts, said bolts being adjustable and so located that the tightening of the adjustable bolts will close the journal-box-saddles and oil-cellars together to exclude the dust from entering the joints between the journal-box-saddles and oil-cellars, substantially as described.

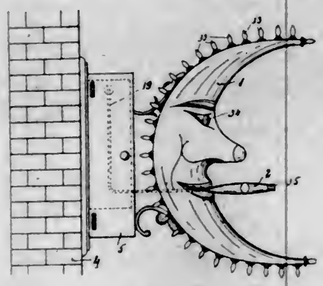
883,864. PUMP. GEORGE W. CURVIN, Viva, Ky. Filed July 27, 1907. Serial No. 385,834.



1. In a pump, a single piece casing, a cylinder arranged therein, a pair of inlet valve chambers and a pair of discharge valve chambers formed in the casing at the sides of the cylinder, valves for the chambers, removable cover plates for the chambers, a pair of straps carried by the casing adjacent to each pair of chambers and arranged on opposite sides of the opening engaged by the cover, and a bar arranged across each cover and having two wedging surfaces engaging the straps, the said surfaces being arranged to operate simultaneously.

2. In a pump, a casing, a cylinder arranged therein, a pair of inlet valve chambers, and a pair of discharge valve chambers formed in the casing, at the sides of the cylinder, valves for the chambers, removable cover plates for the chambers, a pair of straps carried by the casing adjacent to each pair of chambers, the under walls of the straps being beveled, and the passages through the straps being of different heights, and a bar arranged across each cover and having two wedging surfaces of different heights engaging the under walls of the straps, the said surfaces being arranged to operate simultaneously.

883,865. ADVERTISING APPARATUS. HENRY DAHN, Edgewater, N. J., and FREDERICK BECKER, New York, N. Y. Filed June 6, 1907. Serial No. 377,516.



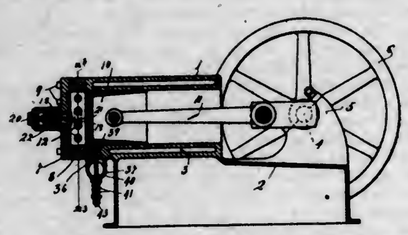
1. The improved advertising apparatus, comprising a hollow body representing a smoking image, means for producing smoke, a receptacle to receive the smoke, air pumps for raising the smoke into the said receptacle, an electro motor for driving said air pump, a valve and pipe connection of the said receptacle with the hollow body, a cam disk having cam projections of diverse lengths and driven from the electric motor, a bell crank lever operated by said cam disk and connected with the above named valve to periodically discharge the smoke from the receptacle into the hollow body and through the open mouth thereof, substantially as and for the purpose specified.

2. The improved advertising apparatus, comprising a hollow body representing a smoking image, a tobacco receptacle adapted to contain burning tobacco, air pumps for producing and raising the smoke from said tobacco receptacle, a receptacle to receive the smoke, an electro motor for driving said air pumps, a valve and pipe connection of the receptacle with the hollow body, a cam disk having cam projections of diverse lengths and operated from said electro motor, a bell crank lever operated by said cam disk and connected with the above named valve to periodically discharge longer or shorter puffs of smoke into the hollow body and through the open mouth thereof, substantially as and for the purpose specified.

3. In an improved advertising apparatus, the combination with a hollow body representing a smoking image holding a cigar, cigarette or pipe shaped piece in its mouth, of incandescent lights secured to said body, electric connections for said lights, a switchboard for controlling the electric circuit of the current feeding said lights, means for producing smoke, a receptacle to receive the smoke, means for raising the smoke into the receptacle, a valve and pipe connection of the latter with the hollow body, and means for simultaneously controlling the said valve and the switchboard to periodically discharge longer or shorter puffs of smoke from the receptacle into the hollow body and through the open mouth thereof, and to alternately close and open the circuits of the incandescent lights of the said hollow body, substantially as and for the purpose specified.

4. In an improved advertising apparatus, the combination with a hollow body representing a smoking image, of incandescent lights secured to said body, electric connections for said lights, a switchboard for controlling the electric circuit of the current feeding said lights, a frame or box carrying said hollow body, and containing the smoke producing and raising mechanism on the said switchboard, the mechanism consisting of means for producing smoke, a receptacle to receive the smoke, means for raising the smoke into the receptacle, a valve and pipe connection of the latter with the hollow body, and means for simultaneously controlling the said valve and the switchboard to periodically discharge longer or shorter puffs of smoke from the receptacle into the hollow body and through the open mouth thereof, and to alternately close and open the circuits of the incandescent lights of the said hollow body, substantially as and for the purpose specified.

883,866. STEAM-ENGINE. RICKARD E. DEAN, Mason City, Iowa. Filed Jan. 4, 1907. Serial No. 350,750.

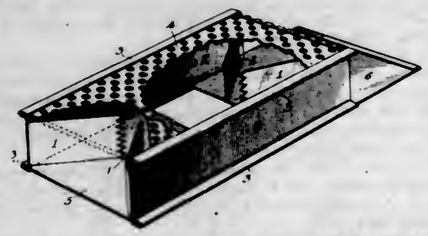


1. The combination with a steam engine, of a generating tube extending into the cylinder of said engine with its main body portion exposed for generating action, means for forcing a hot blast into said tube, and means for intermittently introducing water into said cylinder and onto said tube, substantially as described.

2. The combination with a steam engine, of a generating tube extending into the cylinder of said engine with its main body portion exposed for generating action and with its ends opening at the exterior of the cylinder, a burner positioned to direct a flame into one of the open ends of said generating tube, and means intermittently introducing water into said cylinder and onto said generating tube, substantially as described.

3. The combination with a steam engine having a generating tube within its cylinder and provided with a valve-equipped exhaust port and means for operating the valve of said exhaust port with a properly timed action, of means for intermittently introducing water into said cylinder and onto said generating tube, comprising a water supply conduit terminating in an admission port, a spring-pressed valve normally closing said admission port, a pump plunger working in a seat which forms part of said water conduit, an engine driven shaft, a tapered cam carried by but slidable on said shaft and operating on said pump plunger, and a centrifugal governor carried by said shaft and operative to slide said cam block, and thereby vary the action of the latter on said pump plunger, substantially as described.

883,867. ANIMAL-TRAP. GEORGE ELSEY and BENJAMIN J. WAYT, Chicago, Ill. Filed Dec. 7, 1907. Serial No. 405,592.



1. An animal trap, comprising a receptacle having walls and having an opening for admitting the animal, the walls at opposite sides of said opening being formed of sheet metal and each having an integral tongue extending into said opening, said tongues converging inwardly, being provided with prongs at their inner ends, and each being free to yield to admit the animal.

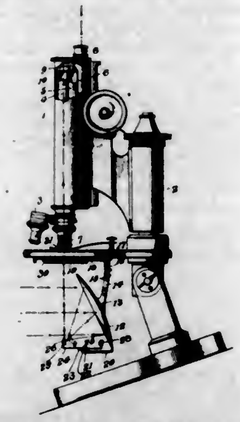
2. An animal trap, comprising a receptacle having walls and open at one end, opposite walls of said receptacle being bent upon themselves along corresponding edges for slidably engaging the edges of a third wall, and a spring tongue integral with one of said walls and extending inwardly of said open end, said tongue having prongs at its end and converging toward the opposite wall.

3. An animal trap, comprising a rectangular receptacle open at one end, the side walls being formed of sheet metal and each having an integral tongue bent inwardly at said open end, said tongues converging toward each other and being toothed at their inner ends, said side walls being flanged at their upper and lower edges and the flanges being bent upon themselves longitudinally to form horizontal grooves, and top and bottom walls having their edges seated in said grooves.

4. An animal trap, comprising a rectangular receptacle open at one end, the side walls being formed of sheet metal and each having an integral tongue bent inwardly at said open end, said tongues converging toward each other and being toothed at their inner ends, said side walls being flanged at their upper and lower edges and the flanges being bent upon themselves longitudinally to form horizontal grooves, and top and bottom walls having their edges seated in said grooves, one of said top and bottom walls being divided into two parts, one of which is slidable in the grooves of said side walls.

5. An animal trap, comprising a receptacle having walls and open at one end, opposite walls of said receptacle being bent upon themselves along corresponding edges for slidably engaging the edges of a third wall, and a spring tongue extending inwardly of said open end, said tongue having prongs at its end and converging toward the opposite wall.

883,868. MICROSCOPE. JOSEPH H. FORD, U. S. Army. Filed July 2, 1906. Serial No. 324,524.



1. In a microscope, in combination, a casing provided with an objective and eye-piece, means for bending the image-forming rays back and forth on themselves before emerging at the eye-piece, and successive image-magnifying lenses associated with said bending means.

2. In a microscope, in combination, a casing provided with an objective, an eye-piece, and a plurality of longitudinal compartments, a plurality of reflecting surfaces for directing the image-forming rays through said compartments, and successive image-magnifying lenses associated with said surfaces.

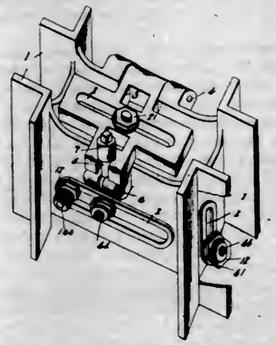
3. In a microscope, in combination, a casing provided with an objective, an eye-piece, a plurality of longitudinal compartments, a plurality of reflecting prisms for directing the image-forming rays through said compartments, and successive image magnifying lenses associated with said prisms.

4. In a microscope, in combination, a casing provided with an objective, an eye-piece and a plurality of compartments, a plurality of reflecting surfaces for directing the image-forming rays through said compartments, a diaphragm in the latter for cutting out errant rays, and successive magnifying lenses associated with said surfaces.

5. In a microscope, the combination of a casing provided with a plurality of longitudinal compartments, a plurality of reflecting surfaces within said casing for directing the image forming rays through said compartments, and a plurality of parabolic mirrors in operative relation to said surfaces and to each other to produce a condensed parallel pencil of light for illuminating the object.

[Claims 6 to 13 not printed in the Gazette.]

883,869. MACHINIST'S JIG. BENJAMIN P. FORTIN, Philadelphia, Pa. Filed June 12, 1905, Serial No. 264,800. Renewed Sept. 5, 1907. Serial No. 391,510.



1. In a jig, the combination of the slotted frame, a headed bushing having its head within and its body passing through one of the slots and means for adjusting and holding said bushing, and a clamp screw engaging a thread in said bushing.

2. In a clamping jig, the combination of the slotted frame, a headed bushing in a slot in the frame, and a spring-pressed bearing pin projecting from the bushing.

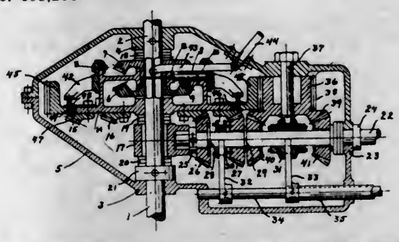
3. In a jig, the combination of the slotted frame, bushings adjustable in the slots in the frame, and a slotted hinged cover to the frame having an adjustable bearing pin in the slot in said cover.

4. In a jig, the combination of a slotted frame, a slotted cover hinged to said frame, means for securing said cover when closed, and means for guiding tools through the slots in the frame, to operate on work clamped in the frame.

5. In a clamping jig, the combination of slotted frame with adjustable bushing, and gage points in the slots for locating work therein.

[Claims 6 to 13 not printed in the Gazette.]

883,870. SPEED-CHANGING MECHANISM. WALTER O. Foss, Philadelphia, Pa., assignor to Direct Motor-Drive Mfg. Co., Philadelphia, Pa. Filed Dec. 5, 1907. Serial No. 405,188.



1. In combination, a power shaft, a driving disk, a pinion, an annular member mounted upon and rotatable about the periphery of said driving disk and geared to said pinion, a clutch adapted to lock said annular member to said driving disk, free gears mounted upon said power shaft and geared to said pinion, and a clutch mounted on and rotating with said power shaft and adapted to positively engage either of said free gears, substantially as described.

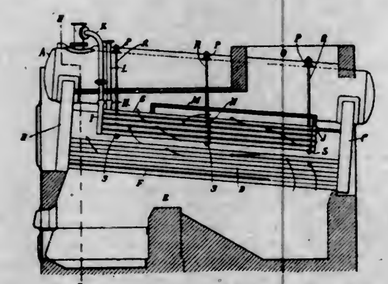
2. In combination, a power shaft, a driving disk, a pin-

ion, an annular member mounted upon and rotatable about the periphery of said driving disk, the periphery of said annular member being furnished with teeth engaging teeth upon said pinion and the base of said annular member being provided with clutch seats, an annular plate secured to and overlapping the periphery of said driving disk and provided with perforations coincident with said clutch seats, a clutch adapted to lock said annular member to said driving disk, free gears mounted upon said power shaft and geared to said pinion, and a clutch mounted on and rotating with said power shaft and adapted to positively engage either of said free gears, substantially as described.

3. In combination, a power shaft, a driving disk, a pinion the barrel and base of which are furnished with gears, an annular member mounted between the periphery of said driving disk and said pinion, the outer face of said annular member being furnished with teeth meshing with the teeth on the barrel of said pinion and the base of said annular member being furnished with a plurality of openings or clutch seats, an annular plate secured to and overlapping the periphery of said driving disk and furnished with a plurality of openings corresponding to said clutch seats in the annular member, a clutch the pins of which are adapted to lock said annular member to said driving disk by entering both the openings in said annular plate and those in said annular member, free gears mounted upon said power shaft and meshing with the gears on the base of said pinion, and a clutch rotating with and slidable on said power shaft and adapted to positively engage either of said free gears, substantially as described.

4. In combination, a power shaft, a driving disk furnished with a plurality of concentrically arranged gears, a plurality of free gears mounted upon said power shaft and meshing with the concentric gears on said driving disk, a double-faced clutch slidably mounted upon and rotating with said power shaft and adapted to positively engage either of said free gears, a pinion the barrel and base of which are furnished with gears, an annular member mounted between the periphery of said driving disk and said pinion, the outer face of said annular member being furnished with teeth meshing with the teeth on the barrel of said pinion and the base of said annular member being furnished with a plurality of openings or clutch seats, an annular plate secured to and over-lapping the periphery of said driving disk and furnished with a plurality of openings corresponding to said clutch seats in the annular member, a clutch the pins of which are adapted to lock said annular member to said driving disk by entering the openings in said annular plate and annular member, free gears mounted upon said power shaft and meshing with the gears on the base of said pinion, and a clutch rotating with and slidable upon said power shaft and adapted to positively engage either of said free gears, substantially as described.

883,871. SUPERHEATER. ERNEST H. FOSTER, New York, N. Y. Filed Dec. 6, 1904. Serial No. 235,670.



1. The combination with a water tube boiler comprising a steam drum, water legs depending therefrom and water tubes extending between the water legs, of a superheater between the water legs at substantially the level of the upper strata of water tubes in place of a part of said water tubes, and means for removably supporting the superheater in the position described and permitting removal of the superheater bodily from the setting, as set forth.

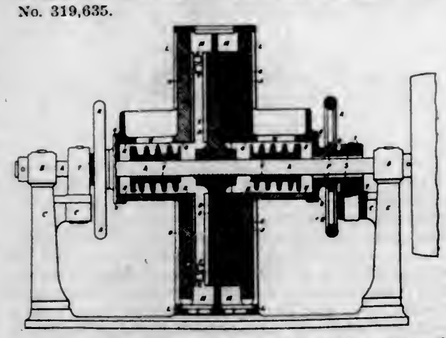
2. The combination of a steam drum, water legs depending therefrom, a plurality of water tubes extending between the water legs, a baffle plate arranged under the water tubes and open at the rear for the passage of furnace gases, a superheater located between the water legs to one side of the steam drum and substantially level with the upper strata of water tubes, a baffle plate over the water tubes and superheater and open at the front, and a vertical baffle plate located across the superheater, as set forth.

3. The combination with a steam drum, water legs depending therefrom, and a series of water tubes extending between the latter, of a superheater arranged between the water legs at an upper corner of the series of water tubes in place of a part of said tubes, and removable bodily from such position, as set forth.

4. The combination of a steam drum, water legs depending therefrom, a plurality of water tubes extending between the water legs, a superheater between the water tubes to one side of the steam drum and substantially at the level of the upper strata of water tubes, removable suspension rods carrying the superheater, inlet and outlet pipes for the superheater, and a removable baffle plate arranged horizontally above the superheater, as set forth.

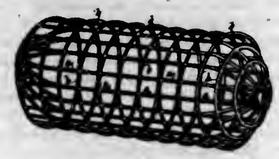
5. The combination of a steam drum, water legs depending therefrom, water tubes extending between the water legs, a superheater between the water legs at substantially the level of the upper strata of water tubes and removable vertically from the setting, inlet and outlet pipes for the superheater, a removable baffle plate arranged above the superheater and spaced therefrom and extending horizontally over the water tubes, and a vertical baffle plate across the supe-heater and spaced from the said horizontal baffle plate, as set forth.

883,872. GRINDING OR CRUSHING MILL. JAMES J. FRASER, Leith, Scotland. Filed May 31, 1906. Serial No. 319,635.



A grinding mill comprising a rotary shaft uprights for supporting the same, a rotary disk mounted on said shaft and having a grinding surface on one side and dove tailed projections on the other side, a non-rotating disk on each side of the rotary disk, one of said non-rotating disks having a grinding surface adapted to engage with the grinding surface on the rotary disk and the other disk having dove tailed projections thereon adapted to engage with the projections on the rotary disk, said non-rotating disks having hollow hubs, a casing surrounding the peripheries of said disks, said casing having outlets therefrom and two annular passages therein, one passage receiving the material passing from the projections and the other passage the material from the grinding surfaces, means for feeding the material through the hollow hubs of the non-rotating disks and means for moving said non-rotating disks towards and from the rotary disks.

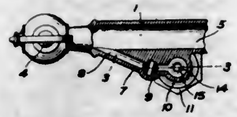
883,873. RETICULATED CURRYCOMB. EZRA C. GAGE, Shenandoah, Iowa, assignor of one-half to E. F. Clovis, Shenandoah, Iowa. Filed Apr. 26, 1907. Serial No. 370,696.



1. In a reticulated curry comb, a plurality of wires extended longitudinally, and curved inwards at their ends, wire coiled around and fixed to the longitudinal wires and the ends of the longitudinal wires fixed to the ends of the coiled wire to produce a body portion of uniform diameter with tapering ends as set forth.

2. A reticulated curry comb comprising coiled wire and a plurality of straight wires curved inwards at their ends and fixed to the end coils of the coiled wire, as set forth.

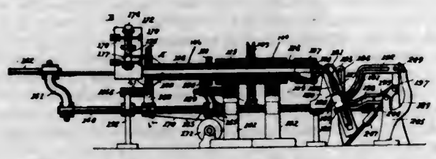
883,874. FLUID-MIXER. CHARLES GAMBEE, Rochester, N. Y. Filed Apr. 22, 1907. Serial No. 369,697.



1. In a fluid mixer, the combination with a faucet, of a passage controlled thereby that leads to a liquid supply; an auxiliary passage leading from the passage first named, at a point behind said faucet, to another liquid supply; a valve in the auxiliary passage; a spring adapted normally to close said valve against the flow of liquid to the faucet; and an adjustable cock in said auxiliary passage, between said valve and the point of conjunction of said passages; substantially as shown and described.

2. In a fluid mixer, the combination with a faucet, of a passage controlled thereby that leads to a liquid supply; an auxiliary passage leading from the passage first named, at a point behind said faucet, to another liquid supply; a valve in the auxiliary passage adapted normally to close it against the flow of liquid to the faucet; and an adjustable cock in said auxiliary passage between said valve and the point of conjunction of said passages; substantially as shown and described.

883,875. MACHINE FOR MANUFACTURING MOUNTTUBES. JOHN E. GRAYBILL, York, Pa., assignor to General Electric Company, a Corporation of New York. Filed Oct. 20, 1903. Serial No. 177,801.



1. In a tube-flanging machine, the combination with flanging mechanism and a chuck for holding a tube in flanging position, of a positive feed mechanism for forcing a tube into said chuck, and means for adjusting the travel of said feed mechanism to vary the extension of the tube beyond the chuck.

2. In a tube-flanging machine, the combination with flanging mechanism and a chuck for holding a tube in flanging position, of a positive feed mechanism comprising a reciprocating feed rod for forcing a tube longitudinally into the chuck, and means for varying the travel of said feed rod.

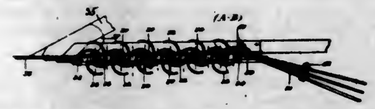
3. In a tube-flanging machine, the combination with flanging mechanism and a chuck for holding the tube in flanging position, of a positive feed mechanism comprising a reciprocating feed rod for forcing a tube longitudinally into the chuck, and an adjustable stop for limiting the travel of said feed rod.

4. In a machine for flanging tubes, the combination of a chuck for gripping the tubes, a means for flanging said tubes, a longitudinally movable shaft, a feed-rod carried by said shaft for feeding the tubes, an arm upon said shaft for controlling the gripping of the chuck and a member upon said shaft for operating said flanging means.

5. In a machine for flanging tubes, the combination of a revoluble shaft having threads thereon, means for revolving said shaft, a nut engaging with said threads, means for holding said nut against revolution and a longitudinally movable shaft connected to said nut.

[Claims 6 to 20 not printed in the Gazette.]

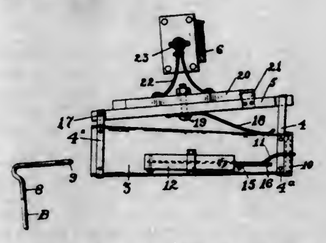
883,876. POTATO DIGGER AND SEPARATOR. JOSEPH HALBARDIER, Bar, Ethe, Belgium. Filed Sept. 23, 1904. Serial No. 225,688.



1. In a potato digger and separator, the combination with the perch, the digging share and means for controlling the position of said perch, of longitudinally arranged bearings secured to the perch and the share, a series of transversely arranged drums journaled in said bearings, radial arms on said drums, said arms being shaped to conform to the arc of a circle and each extending through a circular arc between 90° and 180°, and means for rotating said drums, substantially as described.

2. In a potato digger and separator, the combination with the perch, the digging share and means for controlling the position of said perch, of longitudinally arranged bearings secured to the perch, and the share, a series of transversely arranged drums journaled in said bearings, radial curved arms on said drums and each extending through a circular arc between 90° and 180°, said arms being so adjusted that the upwardly moving arms intersect the line of movement of the downwardly moving arms at a point above the horizontal axial plane of the drums and means for rotating said drums, substantially as described.

883,877. MAIL-BAG CATCHER AND DELIVERER. GEORGE W. HARRIS, Shelby, Ohio. Filed Oct. 1, 1907. Serial No. 395,450.



1. In an apparatus of the class described, the combination with a suitable catching device, of bag holding means comprising a bag carrying loop, a member having one end adapted to support said loop and having a passage to guide said catching device to the loop, retaining means for holding said loop upon the said member, and means located within the passage in the path of the catching device for automatically releasing the retaining means, substantially as described.

2. In combination with a suitable catching device, a

bag holding device comprising a bag carrying loop, a member having one end adapted to support said loop and having a passage to guide said catching device to the loop, upper and lower retaining devices carried by said member and adapted to engage opposite sides of the loop to hold it in place, springs tending to force said retaining device outwardly out of engagement with the loop, and catches for holding said retaining means in engagement with the loop against the tension of the springs, said catches having parts projecting into the guide in the path of the catching arm, substantially as described.

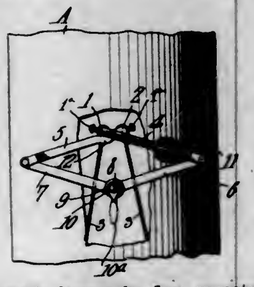
3. In combination with a suitable catching device, a bag carrying loop, a member having one end adapted to support said loop and having a passage to guide said catching device to the loop, retaining means for holding the loop upon said member, means projecting into the guide and adapted to be operated by the catching device to automatically release their retaining means, and means whereby the position of said member may be reversed, substantially as described.

4. In combination with a suitable catching device, bag holding means comprising a bag carrying loop, a bar pivoted upon a horizontal pivot, a member connected to said bar and having one end adapted to support said loop and having a passage to guide the catching device to the loop, and automatically releasable means for holding the loop upon said member, substantially as described.

5. In combination, a suitable catching device, a bag holding device comprising a bag carrying loop, a horizontal bar, a member having one end pivotally connected to the bar upon a vertical pivot, and its other end slidingly conected to the said bar, said other end being adapted to support the bag carrying loop and said member having a guide leading to the loop, and a spring interposed between the bar and the movable end of the member tending to force the latter outwardly away from the bar, substantially as described.

[Claim 6 not printed in the Gazette.]

883,878. FLUE-DAMPER. FRANK M. HEATH, Portland, Oreg. Filed Sept. 3, 1907. Serial No. 391,164.



1. An automatic damper for flues comprising a pair of plates or leaves adapted to swing on parallel horizontally disposed rods within the flue and extending across the center of the same, each of said rods having an arm on the same side of said flue, said arms crossing, and a link pivoted to each arm and the two to each other.

2. An automatic flue damper comprising a pair of plates or leaves fixed on parallel horizontal rods adjacent each other journaled in the walls of the flue and extending centrally across the same, an arm on each rod outside the flue, said arms being in different vertical planes and crossing each other, links pivoted to the arms and to each other to cause said leaves to vibrate in unison and close or open, more or less the passage through said flue.

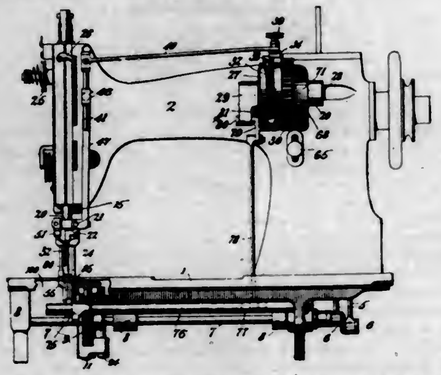
3. An automatic flue damper comprising two semi-circular plates or leaves within the flue attached to parallel horizontal rods adjacent each other and journaled in the walls of the flue, an arm on each rod at a right angle thereto, said arms crossing each other, flexible means connected to the ends of the arms to cause the damper plates or leaves to move in unison and preserve the ratio between the flue opening and the strength of the draft therethrough and means for positively changing said ratio.

4. An automatic flue damper comprising two semi-circular plates or leaves within the flue and adapted to close the same, said plates or leaves attached to parallel horizontal rods adjacent each other and journaled in the walls of the flue, an arm on each rod at a right angle thereto, said arms crossing each other, links connecting to said arms and to each other to cause the plates or leaves to move in unison and preserve the ratio between the flue opening and the strength of the draft therethrough, and a counterweight adjustably mounted on one of said arms for positively changing said ratio.

5. An automatic flue damper comprising two semi-circular plates attached by their straight edges to two adjacent parallel rods extending horizontally through the flue, an arm on the projecting end of each rod on the same side of the flue at a right angle thereto, links attached to said arms, and a clamping screw connecting said links to each other whereby the damper leaves may move automatically or be held in fixed position.

[Claims 6 and 7 not printed in the Gazette.]

883,879. HEMSTITCH SEWING-MACHINE. MARTIN HEMLEB, Elizabeth, N. J., assignor to The Singer Manufacturing Company, a Corporation of New Jersey. Filed Oct. 7, 1907. Serial No. 396,142.



1. A hemstitch sewing machine comprising a frame including a bed-plate and an overhanging bracket-arm, a main-shaft journaled in said bracket-arm, a rotating loop-taker shaft journaled beneath the bed-plate, a loop-taker mounted upon said loop-taker shaft, speed accelerating actuating mechanism connected with and driven by the main-shaft and adapted to impart to the loop-taker shaft a plurality of rotations for each rotation of the main-shaft, a reciprocating and laterally movable needle adapted to coöperate with said loop-taker in the production of stitches, feeding mechanism for shifting the work in relation to the stitch-forming mechanism, and connections intermediate the main-shaft and the needle and feed mechanisms whereby reciprocatory and lateral movements are imparted to the needle and operative movements are imparted to the feed mechanism, said connections being independent of the actuating mechanism for the loop-taker.

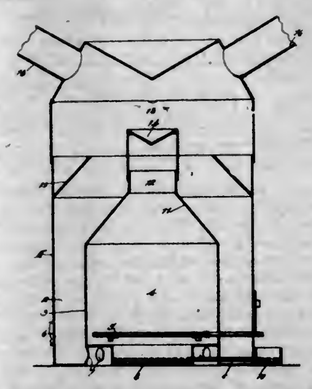
2. A hemstitch sewing machine, comprising a frame including a bed-plate and an overhanging bracket-arm, a main-shaft journaled in said bracket-arm, a loop-taker, a rotary shaft therefor mounted in fixed bearings beneath the bed-plate and secured from endwise movement, speed accelerating actuating mechanism connected with and driven by the main-shaft and adapted to impart to the loop-taker shaft a plurality of rotations for each rotation of the main-shaft, a needle-bar mounted in fixed bearings in said bracket-arm, means connected with said main-shaft for reciprocating said needle-bar, a needle-carrier movably mounted upon said needle-bar, a needle mounted in said needle-carrier and movable with the same laterally toward and away from the path of movement of the point of said loop-taker, an awl carried by said needle-bar and disposed rearward of said needle, feeding mechanism operative in a direction transverse to the plane of lateral movement of said needle, a cam mounted on the bracket-arm of the machine and operatively connected with said main-shaft, and connections from said cam to the needle-carrier and to the feeding mechanism for imparting lateral movements to the former and operative movements to the latter.

3. A hemstitch sewing machine, comprising a frame including a bed-plate and an overhanging bracket-arm, a main-shaft journaled in said bracket-arm, a loop-taker, a rotary shaft therefor mounted in fixed bearings beneath the bed-plate and secured from endwise movement, speed accelerating actuating mechanism connected with and driven by the main-shaft and adapted to impart to the loop-taker shaft a plurality of rotations for each rotation of the main-shaft, a needle-bar mounted in fixed bearings in said bracket-arm, means connected with said main-shaft for reciprocating said needle, a needle carrier movably mounted upon said needle-bar, a needle mounted in said needle-carrier and movable with the same laterally toward and away from the path of movement of the point of said loop-taker, an awl carried by said needle-bar and disposed rearward of said needle, feeding mechanism operative in a direction transverse to the plane of lateral movement of said needle, a cam mounted on the bracket-arm of the machine with its axis of motion parallel with the main-shaft, and connected with the latter by means of intermeshing spur gears to impart to said cam rotations at one-third the speed of the main-shaft, and connections from said cam to the needle-carrier and to the feeding mechanism for imparting lateral movements to the needle-carrier and operative movements to the feeding mechanism.

4. A hemstitch sewing machine, comprising a frame including a bed-plate and an overhanging bracket-arm, a main-shaft journaled in said bracket-arm, a loop-taker, a rotary shaft therefor mounted in fixed bearings beneath the bed-plate and secured from endwise movement, speed accelerating actuating mechanism connected with and driven by the main-shaft and adapted to impart to the loop-taker shaft a plurality of rotations for each rotation of the main-shaft, a needle-bar mounted in fixed bearings in said bracket-arm, means connected with said main-shaft for reciprocating said needle-bar, a needle-carrier pivotally mounted upon and movable with said needle-bar, a needle mounted in said carrier and movable with the same laterally toward and away from the path of movement of the point of said loop-taker, an awl carried by said needle-bar and disposed rearward of said needle, feeding mechanism operative in a direction transverse to the plane of lateral movement of said needle, a cam-carrying counter shaft mounted on the bracket arm, a cam upon said cam-shaft, gearing intermediate the main-shaft and said cam for producing the rotation of the latter at one-third the speed of the former, and connections from said cam to the needle-carrier and to the feeding mechanism for imparting operative movements to the same.

5. A hemstitch sewing machine, comprising a frame including a bed-plate and an overhanging bracket-arm, a main-shaft journaled in said bracket-arm, a loop-taker, a rotary shaft therefor mounted in fixed bearings beneath the bed-plate and secured from endwise movement, speed accelerating actuating mechanism connected with and driven by the main-shaft and adapted to impart to the loop-taker shaft a plurality of rotations for each rotation of the main shaft, a needle-bar mounted in fixed bearings in said bracket-arm, means connected with said main-shaft for reciprocating said needle-bar, a needle-carrier pivotally mounted upon and movable with said needle-bar, a needle mounted in said carrier and movable with the same laterally toward and away from the path of movement of the point of said loop-taker, an awl carried by said needle-bar and disposed rearward of said needle, feeding mechanism operative in a direction transverse to the plane of lateral movement of said needle, a cam mounted on the bracket-arm of the machine and operatively connected with said main-shaft, connections intermediate said cam and needle-carrier for imparting to the needle its lateral movements, and connections from said cam to the feeding mechanism for imparting to the latter both feeding and rising and falling movements.

883,880. GAS-FURNACE. CALVIN P. HENSLEY and FRANK H. BAYANT, San Francisco, Cal., assignors to National Furnace Company, San Francisco, Cal., a Corporation of California. Filed July 24, 1907. Serial No. 385,238.



1. In a gas furnace, the combination of an outside cylindrical shell, an inside shell concentric therewith and separated therefrom to inclose an air passageway, said inner shell inclosing a combustion chamber having draft inlets at the bottom opening into said passageway, and said combustion chamber having a contracted outlet opening into the top of the furnace, a deflector arranged above said inlet for radially distributing the heated particles rising from the combustion chamber, and a deflector in the form of a frustum of a cone secured to the outer casing, and having its top terminating above the outlet from the combustion chamber and arranged to direct the hot air rising in said passageway inwardly in counter-current to the heat passing through said outlet from the combustion chamber, and a burner in the combustion chamber.

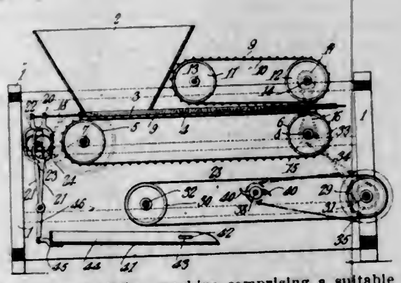
2. In a gas furnace, the combination of an outside cylindrical shell, an inside shell concentric therewith and separated therefrom to inclose an air passageway, said inner shell inclosing a combustion chamber having draft inlets at the bottom opening into said passageway, and said combustion chamber having a contracted outlet opening into the top of the furnace, a deflector arranged above said outlet for radially distributing the heated particles rising from the combustion chamber, and a deflector in the form of a frustum of a cone secured to the outer casing, and having its top terminating above the outlet from the combustion chamber and arranged to direct the hot air rising in said passageway inwardly in counter-current to the heat passing through said outlet from the combustion chamber, a burner in the combustion chamber, said combustion chamber having an open top reservoir in its bottom, and connections between said reservoir and the outside source of supply.

883,881. CHERRY-PITTING MACHINE. JOSEPH W. HERBERT, Los Gatos, Cal. Filed Apr. 15, 1907. Serial No. 368,239.

1. A cherry pitting machine comprising a suitable hopper, conveyers for carrying the cherries in longitudinal series, each cherry being individually grasped, reciprocating knives past which the conveyers carry the cherries and by which the pulp of the cherries is cut, and means for separating the cherry pits from the pulp.

2. A cherry pitting machine comprising a suitable hop-

per, a number of guideways extending from the delivery end of the hopper, conveyers movable on opposite sides of said guideways, knives working in the spaces between the guideways to engage and cut the pulp of the cherries, and means for separating the cherry pits from the cut pulp.
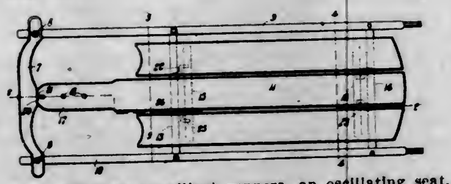


3. A cherry pitting machine comprising a suitable hopper, guideways extending from the delivery end thereof, a conveyer belt having slats suitably spaced to receive cherries separately between them and constituting the bottoms of said guideways, another conveyer belt engaging the cherries after they leave the hopper and constituting the top of the guideways, and reciprocating knives within said guideways for cutting the pulp of the cherries.

4. A cherry pitting machine comprising a suitable hopper, conveyer belts between which the cherries are each separately grasped, means for cutting the pulp of said cherries, a conveyer belt upon which the cut cherries are delivered, and means for delivering blows to the last-named belt to cause the separation of the pits from the cut pulp.

5. A cherry pitting machine comprising means for cutting the pulp of the cherries, a conveyer belt upon which the cut cherries are delivered, and means for agitating said belt to cause the dislodgment of the pits from the cut pulp.

[Claims 6 to 8 not printed in the Gazette.]

883,882. SLED. NORBEAT HIGHLAND, Lima, Ohio. Filed May 8, 1907. Serial No. 372,542.



1. A sled having resilient runners, an oscillating seat, and means forming a connection between the seat and runners for deflecting said runners laterally when the seat is tilted.

2. A sled having resilient runners, bridge pieces connecting the runners, and a seat operatively connected with the bridge pieces for deflecting the runners laterally when the weight of the rider is shifted to either side of the seat.

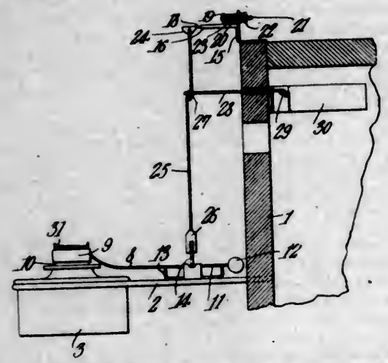
3. A sled having resilient runners, an oscillating seat, and means operatively connected with the runners and seat for deflecting said runners laterally when the weight of the rider is shifted to either side of the seat.

4. A sled having resilient runners, a cross bar connecting the forward ends of the runners, a seat, and means operatively connected with the seat and runners for deflecting the runners laterally when the weight of the rider is shifted to either side of the seat.

5. A sled including resilient runners connected by transverse bridge pieces, a seat, and means forming a pivotal connection between the seat and bridge pieces for deflecting the runners.

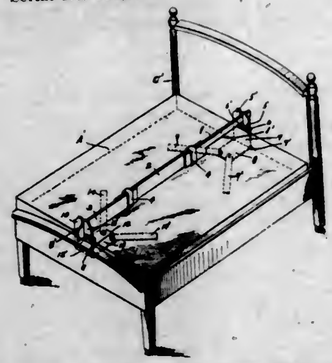
[Claims 6 to 8 not printed in the Gazette.]

883,883. CONTROLLING ATTACHMENT FOR HEATING-LAMPS. LEWIS W. HOLMES and CORNELIUS V. TRAUTMAN, Medora, Ind. Filed Apr. 24, 1907. Serial No. 370,055.



The combination with a supporting structure and a bracket extending therefrom for supporting a heater; of a cross strip connecting opposite portions of the bracket, upstanding bearing ears thereon between the ends thereof, upstanding retaining ears thereon adjacent the ends thereof, oppositely disposed stop lugs integral with the cross strip, a rod detachably mounted upon the bearing ears and held against longitudinal movement by the retaining ears, an arm extending perpendicularly from said rod, a sleeve carried by the free end of said arm, an arm extending in the opposite direction from the rod, a counterbalance thereon, an upstanding bail upon the rod, and a thermostatically controlled lever pivotally connected to the supporting structure and having a forked end engaging the bail.

883,884. PORTABLE PARTITION FOR BEDS. ELLWOOD E. HOPKINS, Philadelphia, Pa. Filed July 13, 1907. Serial No. 383,573.



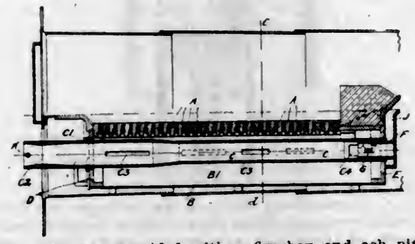
1. In a portable partition for beds, the combination with a bedstead and a mattress thereon, of a plurality of plates extending lengthwise over the mattress, upon their edges and in slidable connection one with another, horizontal arms below said mattress and vertically disposed arms pivotally connected thereto, at each end of said mattress, having means combined therewith adapted to maintain said plates in position.

2. In a portable partition for beds, the combination with a bedstead and mattress thereon, of a partition adapted to be positioned between longitudinal sections of the said mattress, extending above the surface of the same, said partitions comprising sections adapted to move longitudinally with reference to each other and connecting means combined therewith.

3. In a bed partition, the combination with a mattress, of a plate member disposed lengthwise thereon, upon its edge and having a portion turned re-entrantly, bent and adapted to embrace one end of said mattress, said portion of the plate being disposed below the vertical portion.

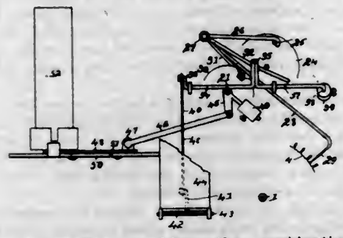
4. In a portable partition for beds, the combination with a bedstead and mattress, of a partition adapted to rest upon its edge, adjustable lengthwise of the said mattress and detachable means of maintenance at each end of said mattress, arrange transversely thereof, said means comprising members pivotally connected and adapted to be compactly folded when not in use.

883,885. SUPPLY AND CONTROL OF AIR FOR BOILER AND OTHER FURNACES. WILLIAM S. HUBBARD, Leicester, England. Filed June 2, 1906. Serial No. 319,905.



In a furnace provided with a fire box and ash pit, a bridge wall at the rear of the fire box and ash pit, a grate separating the fire box and ash pit, said bridge wall being provided with a flue leading from the ash pit through the bridge wall and being open at its rear, one or more conduits provided with perforations extending through the ash pit from front to rear and communicating with the flue in the bridge wall, a slidable tube within the rear end of each conduit adapted to seat within the said flue to form a valve and means extending to the front of the furnace connected to the slidable tubes to reciprocate them.

883,886. VENDING-MACHINE. JAMES G. HUFFMAN, Decatur, Ill. Filed May 7, 1906. Serial No. 315,680.



1. In a vending machine, the combination with spring-actuated delivery mechanism, of a shaft adapted to be turned by the spring, a toothed wheel journaled loosely on the shaft, means for driving the wheel at a speed different from that of the shaft, starting and stopping mechanism including a blade adapted to enter a space of the toothed wheel when a stop is made, and an arm carried by the shaft with its end occasionally presented to the blade to prevent the entrance of the blade into a space of the wheel and compel the repetition of a delivery action.

2. In a vending machine, the combination with a spring-actuated delivery mechanism, of a main shaft adapted to be turned by the spring, a toothed wheel journaled loosely on the main shaft, a counter-shaft driven from the main shaft, a pinion on the counter-shaft meshing with the toothed wheel on the main shaft and driving said wheel at a speed different from that of the main shaft, starting and stopping mechanism including a blade adapted to enter a space of the toothed wheel when a stop is made, and an arm carried by the main shaft and occasionally presenting its end to the blade as a barrier to the entrance of the blade into a space of the toothed wheel.

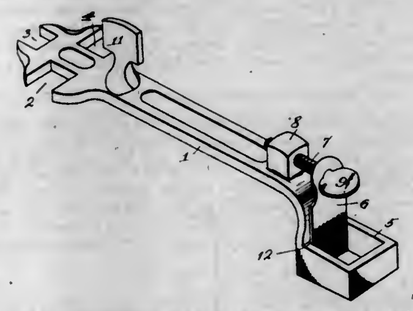
3. In a vending machine, the combination with spring-actuated delivery mechanism, of a main shaft adapted to be actuated by the spring, a toothed wheel journaled loosely on the main shaft, a counter-shaft driven from the main shaft, a pinion on the counter-shaft meshing with the toothed wheel on the main shaft and driving said wheel at a speed different from that of the main shaft, starting and stopping mechanism including a blade adapted to enter a space of the toothed wheel when a stop is made, an arm carried by the main shaft at one side of the toothed wheel, with its end adapted to occasionally bar the entrance of the blade to a space of the toothed wheel, a disk frictionally connected with the toothed wheel on the side opposite the arm, barrier extensions for the blade formed on the perimeter of the disk, and an irregular-shaped wheel on the counter-shaft adapted to give erratic motion to the disk.

4. In a vending machine, the combination with spring-actuated delivery mechanism, of a main shaft adapted to be actuated by the spring, a toothed wheel journaled loosely on the main shaft, a counter-shaft driven from the main shaft, a pinion on the counter-shaft meshing with the toothed wheel on the main shaft and driving said wheel at a speed different from that of the main shaft, starting and stopping mechanism including a blade adapted to enter a space of the toothed wheel when a stop is made, a disk frictionally connected with the toothed wheel, barrier extensions for the blade formed on the perimeter of the disk, and an irregular-shaped wheel on the counter shaft to give erratic motion to the disk.

5. In a vending machine, the combination with spring actuated delivery mechanism, of a shaft adapted to be turned by the spring, a toothed wheel journaled loosely on the shaft, starting and stopping mechanism including a blade adapted to enter a space of the toothed wheel when a stop is made, a disk frictionally connected with the toothed wheel, barrier extensions for the blade on the perimeter of the disk, and means actuated from the shaft for giving the disk an erratic or irregular motion.

[Claims 6 to 17 not printed in the Gazette.]

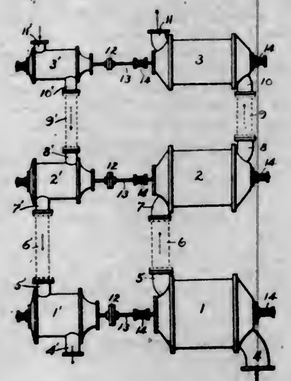
883,887. WRENCH. CHARLES P. JOHNSON, Eureka, Kans. Filed Dec. 2, 1907. Serial No. 404,817.



1. The combination with a wrench provided with a socket to receive a nut, of a member extending into said socket, and a thumb-screw supporting said member and adjustably engaging the wrench for the purpose of forcing the member into engagement with the nut.

2. The combination with a wrench provided with a socket to receive a nut, of a resilient member extending into said socket, and a thumb-screw adjustably engaging the wrench and supporting the member, said thumb-screw being provided with a head arranged at one side of the member and a fixed collar at the opposite side of said member, for the purpose described.

883,888. AIR OR GAS COMPRESSOR SYSTEM. HULDREICH KELLER, Berlin, Germany, assignor to General Electric Company, a Corporation of New York. Filed Apr. 10, 1907. Serial No. 367,339.



1. A system of air or gas compression comprising a connected series of rotary compressors or of groups of rotary compressors, each successive element of the series being smaller in diameter than the preceding element, in combination with a series of motors or engines, each element of the series driving faster than the preceding element and each connected with one element of the series of compressors, in such order that the compressors of larger diameter are driven at a proportionally smaller number of revolutions, substantially as described.

2. A system of air or gas compression consisting of a connected series of rotary compressors or of groups of rotary compressors of graduated diminishing diameter, in combination with a series of motors or engines driven at a correspondingly graduated increasing speed, and each connected to a compressor element in such order as to drive the smaller ones proportionally faster than the larger ones, substantially as described.

3. A system of air or gas compression consisting of a connected series of rotary compressors or of groups of rotary compressors of graduated diminishing diameter, in combination with a connected series of steam turbines each actuated by the exhaust from the preceding element of the series, the higher pressure elements driving the compressors of correspondingly diminished diameters, and the lower pressure elements driving the compressors of correspondingly increasing diameters, substantially as described.

883,889. TURBINE-BUCKET. WALTER KIESER, Berlin, Germany, assignor to General Electric Company, a Corporation of New York. Filed Oct. 10, 1906. Serial No. 338,207.

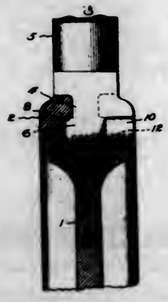


1. A turbine bucket of suitable cross-section having an upset base formed integral therewith, the shank at the point of minimum cross-section being thicker than the body of the bucket.

2. A turbine bucket cut from a suitably formed strip or bar of stock having the desired shape in cross-section, with an integral upset base therefor, the said base being provided with surfaces adapted to engage the bucket support and being thicker at the point of minimum cross-section than the body of the bucket.

3. A turbine bucket comprising a crescent-shaped strip or bar of stock with an upset base therefor, the said base forming a dove-tail, the surfaces of which form rectangles.

883,890. TURBINE-WHEEL AND BUCKET. WALTER KIESER, Berlin, Germany, assignor to General Electric Company, a Corporation of New York. Filed Oct. 15, 1906. Serial No. 338,894.



1. A turbine wheel having a rim with an inverted T-shaped groove and a filling recess opening laterally through the side of the rim, a plurality of buckets having bases fitted into the groove, a locking piece, axially extending shoulders between the locking piece and the rim which are situated below the peripheral face of the rim for restraining the said piece against centrifugal strains, and a means for preventing the locking piece from moving axially.

2. A turbine wheel having a rim with a groove therein and a side opening recess, a plurality of buckets mounted in the groove, a locking piece carrying a bucket and filling the recess, and shoulders between the locking piece and the walls of the recess and located above the bottom of the groove to hold said piece against centrifugal force.

3. A turbine wheel having a rim with a groove therein and a side opening recess, a plurality of buckets mounted in the groove, a locking piece carrying a bucket and filling the recess, shoulders between the locking piece and the walls of the recess to hold said piece against centrifugal force, and a screw which is threaded into the rim and said piece to prevent the latter from working axially out of the recess.

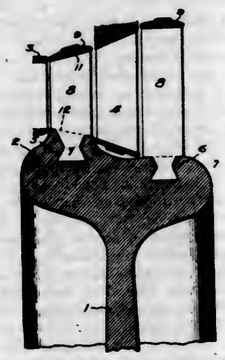
4. A turbine wheel having a bucket supporting portion which is provided with a groove having under cut walls and a side opening recess, buckets the bases of which are mounted in the said groove and retained by the walls thereof, and a locking piece which fills said recess and is supported by a three-point bearing.

5. A turbine wheel having a bucket supporting portion which is provided with an inverted T-shaped groove and a side opening filling recess, buckets having T-shaped bases fitted into the groove, a locking piece having a projection on the front which engages a wall of the bucket retaining groove, and means between the side of the locking piece and the walls of the said recess coöperating with the projection to hold said locking piece against centrifugal force.

[Claim 6 not printed in the Gazette.]

883,891. TURBINE-WHEEL AND BUCKET. WALTER KIESER, Berlin, Germany, assignor to General Electric Company, a Corporation of New York. Filed Oct. 15, 1906. Serial No. 338,895.

1. A turbine wheel having a rim comprising two portions one of which is larger in diameter than the other, bucket receiving and retaining grooves in both portions, two rows of buckets mounted in the grooves, space blocks between the buckets, a locking piece anchored in each groove for holding the buckets and blocks, one row of said buckets being mounted on the portion of larger diameter, the other on the portion of smaller diameter, the working passages between the buckets in each row diverging both at the top and the bottom to facilitate the action of the motive fluid on the buckets.



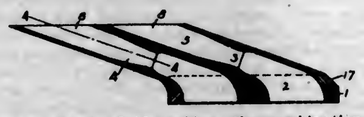
2. A turbine wheel having a rim comprising two portions one of which is larger in diameter than the other, bucket receiving and retaining grooves in both portions, two rows of buckets, one row being mounted in the grooves of the portion of larger diameter, and the second row in the other, space blocks between the buckets, a locking piece anchored in each groove for holding the buckets and blocks, and covers for the free ends of the buckets, the covers and wheel coöperating to form the walls of the working passages, the said covers and wheel portions diverging by equal amounts toward the exhaust to facilitate the action of the motive fluid on the working faces of the buckets.

3. A bucket structure having a groove therein the walls of which engage with and retain the bucket bases, buckets having bases which are mounted in the groove and are retained by the walls thereof, a recess through which the bucket bases are inserted into the groove, the said recess having an undercut wall, and a bucket-locking piece which is inserted in the recess and afterwards expanded to engage said undercut wall.

4. A bucket structure having a groove therein the walls of which engage with and retain the bucket bases, buckets having bases which are mounted in the groove and are retained by the walls thereof, a recess located in the plane of the buckets and communicating with said groove through which the buckets are inserted, and a locking piece which is inserted in the recess and is located between two adjacent buckets and is expanded after being inserted for the purpose of securing it and the buckets in place.

5. A bucket structure having a groove therein with a restricted opening and an enlargement through which buckets and space blocks are inserted, buckets whose ends are first inserted in the groove through the enlargement and then moved circumferentially to place, space blocks between the buckets which are similarly inserted and moved, and a locking piece which is located in the enlargement and is expanded to hold it in place.

883,892. NOZZLE FOR TURBINES. WALTER KIESER, Berlin, Germany, assignor to General Electric Company, a Corporation of New York. Filed Oct. 25, 1906. Serial No. 340,511.



1. In an elastic fluid turbine, the combination of a metal base having a well-rounded bowl formed therein, means for attaching the base to a part of the turbine, and a detachable portion for discharging the motive fluid to the buckets, which is pressed into shape and screw-threaded to the base.

2. A nozzle for elastic fluid turbines comprising a base having a screw-threaded opening therein and a tapering seat adjacent the screw thread, with a discharge member having a tapering projection and a screw thread adjacent the projection which engages the first mentioned screw thread to secure the member to the base and hold the projection in engagement with the seat.

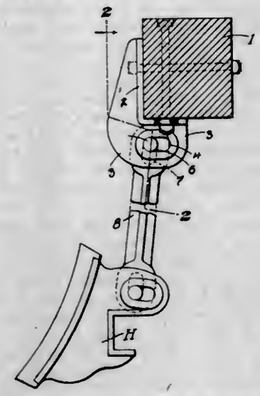
3. A nozzle for elastic fluid turbines, comprising a base, an expansion portion and a discharge portion of substantially rectangular cross-section forming an integral detachable member, and means for securing said member to the base.

4. In an elastic fluid turbine, a fluid discharging device comprising a plurality of parallel abutting and overlapping nozzles having their discharge orifices arranged to discharge fluid to the wheel buckets and having their abutting surfaces lying in a plane parallel to the axes of said orifice.

5. In an elastic fluid turbine, a group of nozzles having thin-walled discharging members delivering fluid to the wheel buckets arranged in parallel relation, with the adjacent walls of the members in abutting relation throughout their length, to form a compact structure delivering a substantially solid column of fluid to said buckets.

[Claims 6 and 7 not printed in the Gazette.]

883,893. HINGE-JOINT. ISAAC L. KISER, St. Charles, Mo. Filed May 22, 1907. Serial No. 375,049.

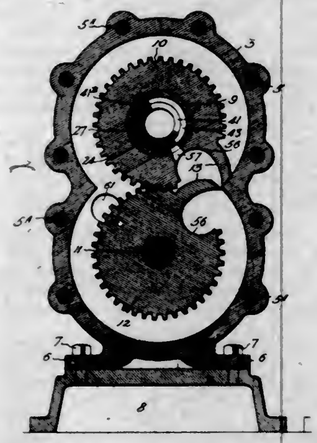


In combination with two members adapted to be disposed in hinged relation to one another, and having elongated slots of uniform dimension, a pin passing through said slots for coupling the members, when the slots are set into alinement, a lug carried by the wall of the pin and engaging the slot of one of the hinge-members, the lug being swung out of alinement with the slots of the adjacent hinge member for a normal position of the member engaged by the lug, substantially as set forth.

883,894. ROTARY ENGINE. JOHN KNOWLES, Denver, Colo. Filed Aug. 23, 1907. Serial No. 389,857.

1. A cut-off valved rotary engine, comprising operative cylinders and rotary pistons, a shaft extending through said cylinders and pistons, a tubular valve provided with ports leading to said cylinders, a sleeve surrounding said tubular valve and extending into said shaft, ports in said sleeve registering with the ports of said tubular valve, ports in the opposite sides of said shaft registering in alternate order with the ports of said sleeve, means for securing said pistons to said shaft, ports in said pistons connecting with the ports of said shaft, and means for

adjustably setting said tubular valve relative to the ports of said sleeve to cut-off the steam at any predetermined point of the said piston's operative stroke of revolution.



2. A cut-off valved rotary engine, comprising an operative cylinder and rotary piston, a shaft provided with an axial aperture at one end rotatably mounted in said cylinder and extending through and secured to said piston, a steam inlet port in said cylinder, a fixed sleeve extending into said cylinder into the axial aperture in said piston shaft, and provided with steam ports adapted to admit steam from said cylinder's inlet port into the interior of said sleeve, a port through the shell of the sleeve, a port through the shell of said shaft's apertured portion arranged to register with said sleeve port as said shaft rotates, a port in said piston communicating with said shaft port and with the cylinder of said piston, a tubular valve rotatably mounted in said sleeve provided with ports communicating with said sleeve's steam inlet ports, a port in said tubular valve registering with the port in said sleeve, a stem on said tubular valve, means for rotating said tubular valve to vary the steam inlet area of its port relative to said sleeve's port, and means for defining the rotary movement of said rotary valve in said sleeve.

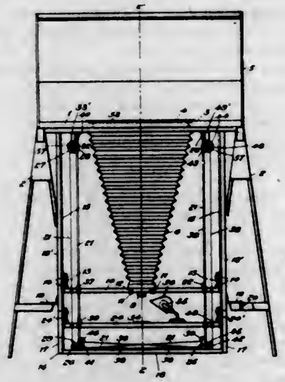
3. A cut-off valved rotary engine, consisting of the intersecting cylinders, the shafts rotatably journaled therein, and the intermeshing toothed disk pins mounted on said shafts in said intersecting cylinders, one of said shafts being provided with an axial aperture in one end, with a sleeve fixed in said cylinder and extending into said piston's axial aperture, and provided with steam inlet ports, a steam port in said cylinder registering with said sleeve's steam ports, a port in said sleeve into said piston's axial aperture, a port through said rotating shaft and pistons arranged to register with the port in said sleeve as said piston and shaft rotate, and communicating with the interior of said piston's cylinder, a rotary movement tubular valve in said sleeve provided with steam inlet aperture registering with the inlet ports of said sleeve, a port in said tubular valve registering with said sleeve's shaft port, and means including an index plate for rotatably moving said tubular valve to set its port at any desired degree of cut-off relative to said piston's operative rotative stroke.

4. In a cut-off valved rotary engine, the combination of the intersecting cylinders and pistons and the piston shafts, one of which is provided with an axial port, and with side ports extending from its axial port through its shell, a steam inlet into said cylinder, a sleeve fixed in said cylinders and provided with a steam inlet port connecting with said cylinder's steam inlet port and extending into the axial aperture of said piston's shaft, an inner tubular valve in said sleeve provided with ports connecting with said sleeve's steam inlet ports, and provided with cylinder ports in its periphery arranged in a straight line, and registering with said sleeve's piston's shaft ports, a stem on said tubular valve extending from said sleeve, means for packing said stem, a stop on said tubular valve for limiting the movement of its ports relative to said sleeve's piston's shaft ports, an index on said cylinder, an index connected with said tubular valve stem, and means including an adjustable pointer for setting said tubular valve at any predetermined point of cut-off relative to said sleeve's piston shaft's ports.

5. In a cut-off valved rotary engine, the combination with a pair of coöperating rotary engines, each engine comprising two intersecting piston cylinders, a separating partition between each engine, a shaft through each set of horizontally alined cylinders of the two engines, one of said shafts being provided with an axial steam inlet port and with oppositely arranged peripheral ports, disk-shaped intermeshing toothed pistons, each provided with a piston arm mounted on said shafts in the intersecting cylinders of each engine, a port in each piston registering at one end with its piston's cylinder and at its opposite end with the ports of said shaft, a fixed sleeve, in one of said engine cylinders extending into said piston's axial port, a steam inlet port in said sleeve, a steam inlet port through one of said engine cylinders into said sleeve, a pair of steam ports in the periphery of said sleeve in alinement with each other, arranged in alinement with the peripheral ports of said piston's shaft, a rotary tubular valve provided with a steam inlet port registering with said sleeve's steam port and provided with ports in alinement registering with said sleeve's ports, means for limiting the rotary movement of said tubular valve, and means including a stem on said tubular valve for automatically adjusting the position of said tubular valve's ports relative to said sleeve ports to obtain different predetermined degrees of steam cut-off relative to the rotary stroke of revolution of said pistons.

[Claims 6 to 14 not printed in the Gazette.]

883,895. APPARATUS FOR ENLARGING OR REDUCING DRAWINGS. ERNEST O. LIEGHLEY, Baltimore, Md. Filed Nov. 16, 1907. Serial No. 402,510.



1. In an apparatus for copying drawings, etc., the combination with a suitable table provided with a glass plate in its top, of a camera-bellows provided with a projecting-lens, said bellows being detachably-connected to the table below said plate, a source of light, and means for moving the lens-end of the bellows relatively to the glass plate.

2. In an apparatus for copying drawings, etc., the combination with a suitable table provided with a glass plate in its top, of a camera-bellows provided with a projecting-lens, said bellows being detachably-connected to the table below said plate, a cord or cable, pulleys over which the cord or cable is moved, a source of light, and means for operating the cord or cable to move the lens-end of the bellows relatively to the glass plate.

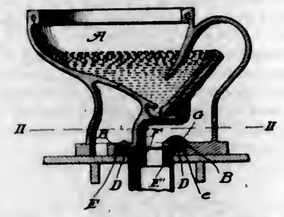
3. In an apparatus for copying drawings, etc., the combination with a suitable table provided with a glass plate in its top, of a camera-bellows provided with a projecting-lens, said bellows being detachably-connected to the table below said plate, an object-holding board, a source of light, and means for moving said board relatively to the glass plate.

4. In an apparatus for copying drawings, etc., the combination with a suitable table provided with a glass plate in its top, of a camera-bellows provided with a projecting-lens, said bellows being detachably-connected to the table below said plate, an object-holding board, a source of light, a cord or cable, pulleys over which the cord or cable is moved, and means for moving said cord or cable to raise or lower said board.

5. In an apparatus for copying drawings, etc., the combination with a suitable table provided with a glass plate in its top, of a camera-bellows provided with a projecting-lens, said bellows being attached to the table below said plate, an object-holding board, a source of light, means for moving said board relatively to the glass plate, and means for moving the lens-end of the bellows relatively to said plate.

[Claims 6 to 23 not printed in the Gazette.]

883,896. FLOOR CONNECTION FOR WATER-CLOSETS. JOHN W. LYONS, Trenton, N. J. Filed Aug. 30, 1907. Serial No. 390,737.



1. A floor-flange screw-connection for the attachment of the soil-pipe of an earthenware water closet bowl, comprising a bowl having an outlet opening in its base, and vertical apertures extending through said base adjacent to said opening, said apertures being constructed to permit the insertion upwardly therethrough of polygonal nuts, a metallic floor-flange having holes therein adapted to register with said apertures and a pendent screw-threaded projection for the attachment of a screw-threaded socket or end of a soil-pipe, together with means for forming a perfect seal, and threaded means entering said holes and apertures from below and engaging said nuts so as to bind the floor-flange and base flange of the bowl firmly together, the nuts and projecting ends of the threaded means being concealed within the base of the bowl.

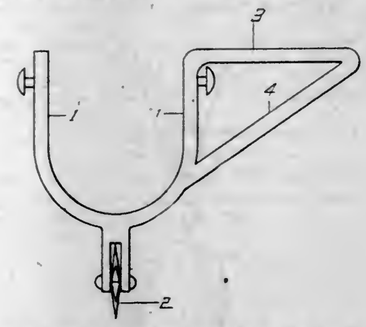
2. A floor-flange screw connection for the soil pipe of an earthenware water closet bowl, comprising a bowl having an outlet opening in its base and vertical apertures therein adjacent to said opening adapted to permit the insertion upwardly therethrough of polygonal nuts, suitable recesses being provided at the upper terminals of said apertures to receive said nuts when given a quarter turn and prevent rotation thereof when the bolts are being screwed therein, a metallic floor-flange having bolt holes therein adapted to register with said apertures and a pendent screw threaded projection for the attachment of a screw threaded end of a soil pipe, and threaded bolts entering said bolt holes and apertures and engaging the nuts so as to bind the floor-flange and base flange of the bowl firmly together with concealed fastenings.

3. A floor-flange screw connection for the soil-pipe of an earthenware water closet bowl, comprising a bowl having an outlet opening in its base and elongated apertures therein adjacent to said opening for the insertion upwardly therethrough of elongated nuts, suitable recesses being provided arranged at an angle to said apertures to receive the ends of the elongated nuts and prevent rotation thereof when the bolts are being screwed therein, a metallic floor-flange having bolt holes therein and a pendent screw threaded projection for the attachment of a screw threaded end of a soil pipe, and threaded bolts entering said bolt holes and apertures and engaging the nuts so as to bind the floor flange and base flange of the bowl firmly together with concealed fastenings.

4. A floor-flange screw-connection for water closet bowls, comprising a suitable bowl having a base-flange with apertures therethrough through which nuts may be inserted from below, a metallic floor-flange having a depending screw threaded tubular boss for connection with the soil pipe, and concealed nuts and bolts for securing said parts together by first inserting the nuts through said apertures and then engaging the bolts therewith.

5. A floor-flange screw-connection for water closet bowls, comprising a suitable bowl having a base-flange with apertures therethrough through which nuts may be inserted from below, a metallic floor-flange having a depending screw threaded tubular boss for connection with the soil pipe, and concealed nuts and bolts for securing said parts together by first inserting the nuts through said apertures and then engaging the bolts therewith, and a cap in the water passage of the bowl covering the heads of the bolts and nuts entered through the apertures therein.

883,897. RIDING-SPUR. WILLIAM D. MILLER, Saco, Mont. Filed May 18, 1907. Serial No. 374,438.



1. In a riding spur, the combination with the frame thereof of a lateral outwardly projecting bar 3 adapted to engage a stirrup, substantially as shown.

2. In a riding spur, the combination with the frame thereof of a stirrup engaging bar 3 projecting laterally and outwardly from the end of one arm of the spur frame 1 far enough to engage a stirrup; and a brace 4 supporting the outward end of bar 3 from a rearward portion of said spur frame 1, substantially as shown.

883,898. MEASURING-MOLD. ALEXANDER T. MOORE, New Orleans, La. Filed July 26, 1907. Serial No. 385,625.



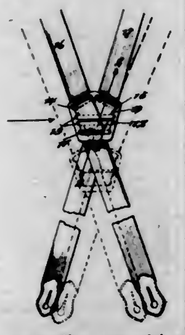
1. A measuring mold comprising a cutter body provided with a centrally disposed collar at its upper end, an adjustable plunger therein provided with a stem having a unitary operating handle for the mold body and plunger, a laterally disposed latch casing upon said collar, and a spring push latch within said casing having a head at one

end of the collar and a bolt at the opposite side thereof seated in the stem to hold it against movement in either direction.

2. A measuring mold comprising a cutter body provided with a collar at its upper end, an adjustable plunger therein provided with a stem having a unitary operating handle for the mold body and plunger, a laterally disposed latch casing upon said collar, a push latch within said casing having at one end a head and at its opposite end a parallel bolt extended through the collar and seated in said stem to hold it against movement in either direction, and a spring within the casing and bearing against said head.

3. A measuring mold comprising a cutter body provided with a collar at its upper end, an adjustable plunger therein having a stem with a unitary operating handle thereon for the mold body and plunger, an apertured graduated plate secured to said stem, a laterally disposed latch casing upon said collar, a bolt socket carried by one face of said collar, a push latch within said casing having a head at one end and a parallel bolt at its opposite end disposed in said socket to seat in an aperture of said plate, and a spring within the casing and bearing against said head.

883,899. ADJUSTABLE SUSPENDER-CONNECTOR. ALEXANDER T. MOORE, New Orleans, La. Filed Oct. 12, 1907. Serial No. 397,066.



1. A suspender connection comprising a plate disposed in a single plane and provided with three parallel slots at its lower portion extending across the plate and two guide slots at its upper portion extending from the outer ends of the upper parallel slot diagonally toward each other.

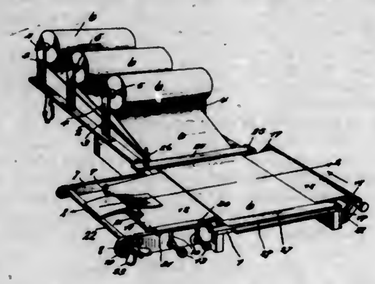
2. A suspender connection comprising a plate provided with three parallel slots at its lower portion and two slots at its upper portion disposed diagonally to the parallel slots, and oppositely inclined suspender straps extended through the diagonal slots and woven under and over the bars separating the parallel slots to retain said straps against movement relative thereto.

883,900. MANIFOLDING DEVICE. ALEXANDER T. MOORE, New Orleans, La. Filed Oct. 26, 1907. Serial No. 399,362.

1. In a manifolding device, a base having a plurality of paper rolls rotatably mounted thereon, lateral extensions at one side of said base provided with a plurality of bearings therein, carbon paper rolls in said bearings disposed at an angle to the paper rolls, and a tension device mounted in said brackets to act upon the carbon paper rolls.

2. In a manifolding device, a base having a plurality of paper rolls rotatably mounted thereon, lateral extensions at one side of said base provided with a plurality of bearings therein, carbon paper rolls in said bearings disposed at an angle to the paper rolls, and a single waste roll parallel with the carbon paper rolls and at the opposite side of said base therefrom to receive and simultaneously feed from the plurality of carbon paper rolls.

3. In a manifolding device, a base having a plurality of paper rolls rotatably mounted thereon, a lateral extension at one end of said base, a plurality of carbon paper rolls pivoted in said extension, a waste roll connected to the carbon webs at the opposite side of the base from said extension, a pivoted holding bar at one side of the carbon web, and a cutter bar pivoted at the opposite side thereof.

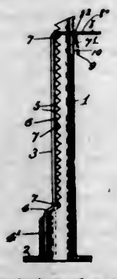


4. In a manifolding device, a base having a plurality of paper rolls rotatably mounted thereon, a lateral extension at one end of the base, a plurality of carbon paper rolls pivoted on said extension, a waste roll connected to the carbon webs at one side of the base, and a cutter pivoted to the base at one end and having a spring finger hold at its free end.

5. In a manifolding device, a base having a plurality of paper rolls rotatably mounted thereon, a lateral extension at one side of said base, a plurality of carbon paper rolls pivoted in said extension, and an adjustable rod pivoted upon the extension and having a plurality of springs to engage the carbon paper rolls.

[Claims 6 to 8 not printed in the Gazette.]

883,901. FENCE-POST. JESSE MCINNIS, Castor, La. Filed Aug. 10, 1907. Serial No. 387,987.

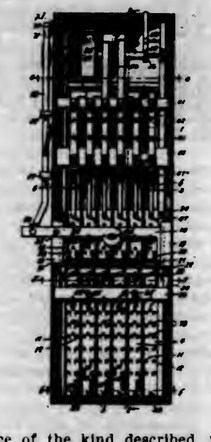


1. A fence post, consisting of a cylinder 1, provided at its bottom with a horizontal flange 2, one half of that portion of the cylinder above ground being cut away on a vertical line, the edges of the remaining half being formed into teeth 5, leaving recesses 6; a vertical slot 7^1, in the upper end of said cylinder, the outer edges of the slot provided with notches 10, in combination with a rod 3, its lower end passing down into the cylindrical part of said cylinder, and then upwardly along the line of said teeth, its upper end flattened out, forming a plate 8, said plate provided with notches 8^1 and 8^2, leaving shoulders 8^3 and 8^4, the upper end of said rod turned at right angles to its body, over the top strand of the fencing, with one pair of its shoulders catching in said notches 10, the vertical part of said rod resting against the strands of the said fencing, holding them in place, substantially as shown and described and for the purposes set forth.

2. A fence post, consisting of a cylinder 1, its upper part being cut away the depth of one half its diameter, the edges of said cut-away part provided with teeth, leaving recesses 6, a vertical slot 7^1, in the upper end of said cylinder; rod 3, its lower end passing down into the cylindrical part of said cylinder, and then upwardly along the line of said teeth, its extreme upper end turned back and down, holding the upper end of said rod securely in place, substantially as shown and described and for the purposes set forth.

3. A fence post, consisting of a cylinder 1, its upper part above ground cut-away, the edges of said cut-away part provided with teeth, leaving a recess between adjacent teeth; a vertical slot 7^1, in the upper end of said cylinder, and a rod 3, its lower end resting in the lower part of said cylinder, its upper part running upwardly on a line with the points of said teeth, its extreme upper end held to the upper end of said cylinder, substantially as shown and described and for the purposes set forth.

883,902. COMBINED INDICATOR AND ALARM. JOHN A. NOEL, Washington, D. C. Filed June 18, 1907. Serial No. 379,616.



1. In a device of the kind described, the combination with a casing having an aperture in a face thereof, of a plurality of computing slides arranged in said casing, each of said computing slides having a series of designations on a face thereof adapted to successively register with the aperture in said casing, means coöperating with said slides for adjustably determining the travel thereof, mechanism for operating one of said computing slides and mechanism whereby certain of said slides will advance their next adjacent slide at a predetermined point in their movement, substantially as described.

2. In a device of the kind described, the combination with a casing having an aperture in a face thereof, of a plurality of computing slides arranged in said casing, each of said computing slides having a series of designations on a face thereof adapted to successively register with the aperture in said casing, means coöperating with said slides for adjustably determining the travel thereof, mechanism for operating one of said computing slides, mechanism whereby certain of said slides will advance their next adjacent slide at a predetermined point in their movement and means controlled by the movement of said slides for actuating an alarm, substantially as described.

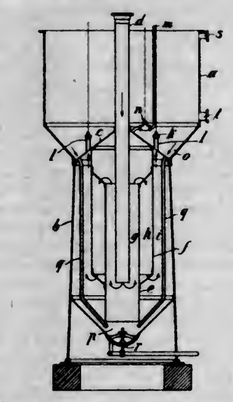
3. In a device of the kind described, the combination with a casing having an aperture in a face thereof, of a plurality of computing slides arranged in said casing, each of said computing slides having a series of designations on a face thereof adapted to successively register with the aperture in said casing, means coöperating with said slides for adjustably determining the travel thereof, mechanism for operating one of said computing slides, mechanism whereby certain of said slides will advance their adjacent slide at a predetermined point in their movement, means for normally preventing the rearward movement of said slides, and means for automatically releasing said slides to return to original position upon reaching the limit of their movement, substantially as described.

4. In a device of the kind described, the combination with a casing having an aperture in a face thereof, of a plurality of computing slides arranged in said casing, each of said computing slides having a series of designations on a face thereof adapted to successively register with the aperture in said casing, means coöperating with said slides for adjustably determining the travel thereof, mechanism for operating one of said computing slides, mechanism whereby certain of said slides will advance their next adjacent slides at a predetermined point in their movement, means for preventing movement of said slides in but one direction and means for automatically releasing and returning said slides to starting position when the same have reached the limit of their movement, substantially as described.

5. In a device of the kind described, the combination with a casing having an aperture in a face thereof, of a plurality of computing slides arranged in said casing, each of said computing slides having a series of designations on a face thereof adapted to successively register with the aperture in said casing, means coöperating with said slides for adjustably determining the travel thereof, mechanism for operating one of said computing slides, mechanism whereby certain of said slides will advance their next adjacent slides at a predetermined point in their movement, means for preventing the movement of said slides in but one direction, means for automatically releasing said slides at the limit of their movement to permit them to return to normal position, and means for simultaneously releasing all of said slides to return to normal position at any point in their movement, substantially as described.

[Claims 6 to 20 not printed in the Gazette.]

883,903. WATER-CISTERN WITH PURIFIER. WILHELM J. NUSS, Cologne-Lindenthal, Germany. Filed Nov. 5, 1907. Serial No. 400,886.



1. The combination with a water cistern, of a purifier which is located below the cistern and forms a support therefor, an admission pipe extending through the cistern into the purifier and of means of permitting communication between the cistern and the purifier, said means being capable of closure.

2. The combination with a water cistern, of a purifier which is located below the cistern and forms a support therefor, the top of the purifier extending into and forming a portion of the bottom of the cistern and pipes arranged in the bottom of the cistern so as to communicate with the upper part of the purifier said pipes being provided with valves and means for operating said valves.

3. In combination, a cistern, a purifier located below the cistern and forming a support therefor a water inlet pipe arranged in the bottom of the cistern and extending downwards into the purifier, a cylinder arranged con-
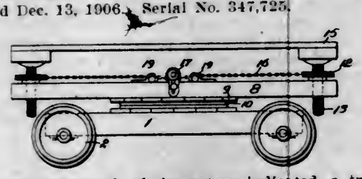
centrically outside said pipe and means capable of being closed for permitting communication between the purifier and the cistern.

4. In combination a cistern, a purifier located below the cistern and forming a support therefor, a water inlet pipe arranged in the bottom of the cistern and extending downwards into the purifier, a cylinder arranged concentrically outside said pipe, a second cylinder arranged concentrically outside the first cylinder pipes arranged in the bottom of the cistern and communicating with the purifier, means for closing said pipes and means for draining the mud and sediment from the cistern into the bottom of the purifier.

5. In combination a cistern, a purifier located below the cistern and forming a support therefor, a water inlet pipe arranged in the bottom of the cistern and extending downwards into the purifier, a cylinder arranged concentrically outside said pipe, means for establishing communication between the cistern and the purifier, valve for closing said means, pipes extending from the bottom of the cistern down to the bottom of the purifier and a valve at the bottom of said purifier.

[Claims 6 and 7 not printed in the Gazette.]

883,904. YARD-TRUCK. HANS PAULSON, Orting, Wash. Filed Dec. 13, 1906. Serial No. 347,725.



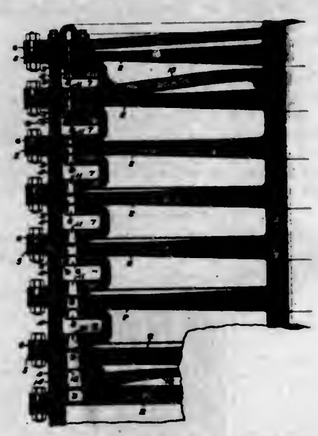
1. In a yard truck of the nature indicated, a truck or car having a frame work 1 provided with flanged wheels 2 the said frame work 1 adapted to support a bearing ring 3 and the king-pin 7 by means of decking 4, an elevating frame 8 provided with an underdecking 9 having a bearing-ring 10 and a bearing 11 adapted to fit the said king-pin 7, the said elevating frame 8 being provided with raising and lowering screws 13 adapted to support a platform 15 all substantially as shown and for the purpose set forth.

2. In a yard truck of the nature indicated, a truck or car having a frame work 1 provided with flanged wheels 2, the said frame work 1 adapted to support a bearing ring 3 and the king-pin 7 by means of decking 4, an elevating frame 8 provided with an underdecking 9 having a bearing-ring 10 and a bearing 11 adapted to fit the said king-pin 7, the said elevating frame 8 being provided with raising and lowering screws 13 adapted to support a platform 15 all substantially as shown and for the purpose set forth, means for operating the raising and lowering screws 13 simultaneously by sprocket nuts 12, means for tightening the chain traveling thereon and means for driving the said chain which is rigidly secured to the shaft 18.

3. In a lumber handling device, a truck or car having a frame work 1 provided with flanged wheels 2, the said frame work 1 adapted to support a bearing ring 3 and the king-pin 7, by means of decking 4, an elevating frame 8 provided with an underdecking 9 having a bearing-ring 10 and a bearing 11 adapted to fit the said king-pin 7, the said elevating frame 8 being provided with raising and lowering screws 13 adapted to support a platform 15, means for operating the raising and lowering screws 13 simultaneously by sprocket nuts 12, means for tightening the chain traveling thereon and means for driving the said chain which is rigidly secured to the shaft 18.

883,905. ELASTIC-FLUID TURBINE. MILLARD M. PEARSON, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Oct. 7, 1905. Serial No. 281,760.

1. In an elastic-fluid turbine, the combination with a casing, of a shaft, bucket-wheels mounted thereon, stationary elements between said wheels having passageways for the motive fluid, and a means having a contracted throat so that the said motive fluid flowing from said buckets into said passages will create a vacuum in said casing.



2. In an elastic-fluid turbine, the combination with a casing, of a shaft, bucket-wheels mounted thereon, and stationary elements between said wheels having ejector passages with contracted throats coöperating with the buckets on said wheels to create a vacuum in said casing.

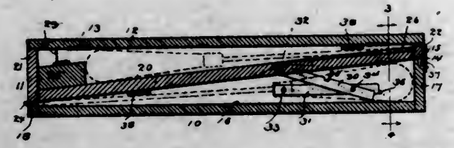
3. In an elastic-fluid turbine, the combination with the casing, of a shaft, bucket-wheels mounted thereon, receivers for the motive fluid leaving the wheels, and a passage having a contracted throat whereby said fluid flowing into said receivers will create a vacuum in said casing.

4. In an elastic-fluid turbine, the combination with a casing, of a shaft, bucket-wheels mounted thereon, and stationary elements with contracted throats between said wheels having passageways for the motive fluid, the inlet portion of said passageways showing convex sides when cut on radial lines.

5. In an elastic-fluid turbine, the combination with a casing, of a shaft, bucket-wheels mounted thereon, and stationary elements between said wheels having passageways for the motive fluid, the inlet portion of said passageways showing convex sides when cut on radial planes, and the outlet portion constituting nozzles to discharge the motive fluid against the next wheel.

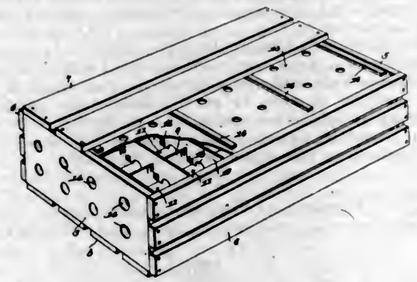
[Claims 6 to 13 not printed in the Gazette.]

883,906. TOOL-BOX. JAMES SWAN, Seymour, Conn. Filed Feb. 14, 1907. Serial No. 357,352.



A box to contain sets of tools consisting of upper and lower sections tapering from end to end and hinged together at one end, the hinges connecting the deeper end of the upper section to the shallower end of the lower section, the bottom of the upper section forming an inclined cover for the lower section and having longitudinal grooves formed in its upper surface at one end, a lid hinged to one side of the upper section, means for holding the upper section partly raised, means for holding the lid partly open, and means for securing the lid and upper section in closed position, whereby the box may be utilized open for retaining two sets of tools exposed for exhibition or access, or closed for transportation.

883,907. VENTILATED FRUIT-CRATE. OLIVER E. PERIGO, Oakland, Cal. Filed Mar. 6, 1906. Serial No. 304,573.



A ventilated crate having perforated end walls, outer perforated division plates disposed within the crate and bearing against the top and bottom walls of the latter, an intermediate division plate, and a plurality of collapsible cells formed of intersecting longitudinal and transverse partitions, some of said partitions being disposed in contact with the intermediate division plate and spaced from the outer plates to form upper and lower transverse air passages, the other partitions being arranged to bear against the outer division plates and having their inner longitudinal edges provided with semi-circular openings and spaced from the intermediate division plate to form longitudinal air passages disposed one on each side of the intermediate plate, said openings being disposed in alinement with the perforations in the end walls of the crate and forming a source of communication between the adjacent cells, there being vertical slits formed in the longitudinal edges of the several partitions whereby said partitions may be adjusted laterally to vary the size of the cells.

883,908. COMBINED BEVEL AND SQUARE. SIMON G. PETTERSON, Pine Bluff, Ark. Filed June 24, 1907. Serial No. 380,538.



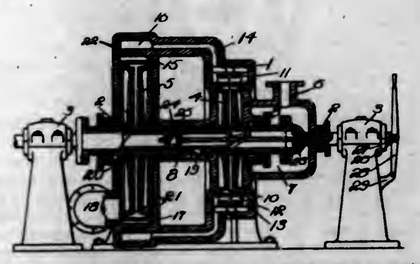
A tool of the class described comprising a handle provided with a slot opening through the sides and one end thereof and with a slot which opens through the sides only, a bevel blade pivoted in the first mentioned slot, a square blade pivoted in the second mentioned slot and adapted to abut with one of its longitudinal edges that wall of the said slot which is adjacent the pivot for the blade whereby the blade will be positioned at right angles with respect to the handle, and means whereby the blades may be held together in adjusted position.

883,909. PLATEN FOR TYPE-WRITING MACHINES. ELWOOD C. PHILLIPS, Chicago, Ill., assignor to Levi P. Thompson, Cincinnati, Ohio. Filed July 15, 1907. Serial No. 383,911.



A cylindrical platen for typewriting machines comprising counterpart heads each formed with an external journal bearing, an internal cylindrical supporting flange having radial fastening holes, and a marginal extension providing an annular recess around the supporting flange, an inner tubular member of fibrous material having its ends provided with radial fastening holes registering with the radial fastening holes of the supporting flanges and fitting over the latter within the annular recesses against the marginal extensions, fastenings located in the radial fastening holes for securing the inner tubular member to the flanges, an outer tubular member, spaced from the inner tubular member, and a filling of sound deadening adhesive material between the tubular members extending the whole length of, and securing the latter together, between the marginal extensions.

883,910. REVERSIBLE TURBINE-ENGINE. HARRY PIERCE, Seattle, Wash. Filed June 20, 1907. Serial No. 379,976.



1. In a turbine engine of the nature indicated, r casing, a high pressure rotor journaled therein and secured to a hollow hub supporting said rotor and adapted to receive steam in said hollow hub, high pressure nozzles provided in said rotor, vanes secured to said casing adapted to receive steam from said nozzles, double vanes discharging on either side and secured to said high pressure rotor and adapted to receive steam from said vanes secured to said casing.

2. In a turbine engine of the nature indicated, a casing, a high pressure rotor journaled therein and secured to a hollow hub supporting said rotor and adapted to receive steam in said hollow hub, means whereby the steam may be shut off of said high pressure rotor, high pressure nozzles provided in said rotor, vanes secured to said casing adapted to receive steam from said nozzles, double vanes secured to said high pressure rotor and adapted to receive steam from said vanes secured to said casing, side vanes adapted to receive steam from said double vanes.

3. In a turbine engine of the nature indicated, a casing, a high pressure rotor journaled therein and secured to a hollow hub supporting said rotor and adapted to receive steam in said hollow hub, means whereby the steam may be shut off of said high pressure rotor, high pressure nozzles provided in said rotor, vanes secured to said casing adapted to receive steam from said nozzles, double vanes secured to said high pressure rotor and adapted to receive steam from said vanes secured to said casing, side vanes adapted to receive steam from said double vanes, means whereby the steam from said side vanes may be delivered to low pressure nozzles.

4. In a turbine engine of the nature indicated, a casing,

a high pressure rotor journaled therein and secured to a hollow hub supporting said rotor and adapted to receive steam in said hollow hub, means whereby the steam may be shut-off of said high pressure rotor, high pressure nozzles provided in said rotor, vanes secured to said casing adapted to receive steam from said nozzles, double vanes secured to said high pressure rotor and adapted to receive steam from said vanes secured to said casing, side vanes adapted to receive steam from said double vanes, means whereby the steam from said side vanes may be delivered to low pressure nozzles, straight vanes adapted to receive steam from said low pressure nozzles, and adapted to discharge said steam through an exhaust pipe.

5. In a turbine engine of the nature indicated, a suitable casing, bearings secured thereto, high pressure and low pressure rotors journaled in said bearings, means whereby steam may be admitted into the central portion of said rotors, a piston valve adapted to shut the steam off of said high pressure rotor and to open the steam into said low pressure rotor to reverse the direction of travel of said engine.

[Claims 6 to 15 not printed in the Gazette.]

883,911. ROTARY ENGINE. HARRY PIERCE, Seattle, Wash. Filed July 9, 1907. Serial No. 382,959.



1. In a rotary engine of the nature indicated, a cylinder, a rotor concentrically mounted therein, a projection on said rotor, an intermittently operated abutment adapted to co-act with said rotor, said projection, and said cylinder to form an impelling chamber, an annular passage, apertures in said projection communicating with said annular passage, means whereby the other of said apertures may be placed in communication with the exhaust of said rotary engine, means whereby the exhaust from one cylinder may communicate with the admission on another cylinder to economically utilize the steam expansively, means whereby said annular passage may be intercepted to cut off the steam.

2. In a rotary engine of the nature indicated, a cylinder, a rotor concentrically mounted therein, a projection on said rotor, an intermittently operated abutment adapted to co-act with said rotor, said projection, and said cylinder to form an impelling chamber, an annular passage, apertures in said projection communicating with said annular passage, means whereby the other of said apertures may be placed in communication with the exhaust of said rotary engine, means whereby the exhaust from one cylinder may communicate with the admission on another cylinder to economically utilize the steam expansively, means whereby said annular passage may be intercepted, cut off stops adapted to intercept said annular passage.

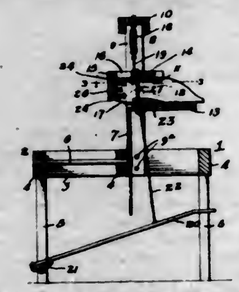
3. In a rotary engine of the nature indicated, a cylinder, a rotor concentrically mounted therein, a projection on said rotor, an intermittently operated abutment adapted to co-act with said rotor, said projection, and said cylinder to form an impelling chamber, an annular passage, apertures in said projection communicating with said annular passage, means whereby the other of said apertures may be placed in communication with the exhaust of said rotary engine, means whereby the exhaust from one cylinder may communicate with the admission on another cylinder to economically utilize the steam expansively, cut off stops adapted to intercept said annular passage, means for operating said cut off stops from the exterior of said rotary engine.

4. In a rotary engine of the nature indicated, a concentrically mounted rotor, a casing provided with bearings adapted to journal said rotor, abutments co-acting to form an impelling chamber, an annular member, an aperture provided in said annular member, yielding fingers adapted to engage said aperture to intermittently operate said abutments.

5. In a rotary engine of the nature indicated, a concentrically mounted rotor, a casing provided with bearings adapted to journal said rotor, abutments co-acting to form an impelling chamber, an annular member, an aperture provided in said annular member, a star wheel provided with yielding fingers adapted to engage said aperture.

[Claims 6 to 12 not printed in the Gazette.]

883,912. SHINGLE-SAWING MACHINE. JOHN G. PIKE, Siler City, N. C. Filed May 18, 1907. Serial No. 374,456.



1. In a shingle sawing machine, the combination of a main frame or support, a circular saw mounted thereon, upright guide bars upon said support, a cross piece connecting the upper ends of said bars, a vertically movable bolt carrier consisting of end members slidably mounted upon said upright bars, a back member connecting said end members and top and bottom members also connecting said end members and spaced from the back member to form vertical openings in the carrier for the reception of the saw, a spring arranged between the cross piece and the carrier for supporting the latter above the saw and a foot lever for moving the carrier downwardly toward the saw, substantially as described.

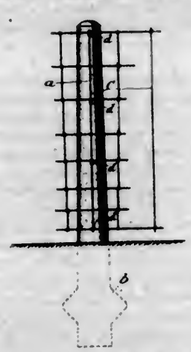
2. In a shingle sawing machine, the combination of a main frame or support, a circular saw mounted thereon, upright guide bars upon said support, a cross piece connecting the upper ends of said bars, a vertically movable bolt carrier consisting of end members slidably mounted upon said upright bars, a back member connecting said end members and top and bottom members also connecting said end members and spaced from the back member to form vertical openings in the carrier for the reception of the saw, a spring arranged between the cross piece and the carrier for supporting the latter above the saw, means for moving the carrier downwardly toward the saw, and a broad leaf spring arranged upon the bottom member and adapted to support a bolt in contact with the top member, said leaf spring being disposed forwardly and rearwardly of the carrier and having its front end set in the bottom member flush with the upper surface of the same, the rear end of said spring projecting upwardly to support the bolt, substantially as described.

3. In a shingle sawing machine, the combination of a main frame or support, a circular saw mounted thereon, upright guide bars upon said support, a cross piece connecting the upper ends of said bars, a vertically movable bolt carrier consisting of end members slidably mounted upon said upright bars, a back member connecting said end members and top and bottom members also connecting said end members and spaced from the back member to form vertical openings in the carrier for the reception of the saw, a spring arranged between the cross piece and the carrier for supporting the latter above the saw, means for moving the carrier downwardly toward the saw, the central and end stops upon the back member and the upright stop bolt 27 arranged in the top and bottom members of the carrier, substantially as described.

4. The combination with a table or support carrying a circular saw, of a shingle cutting attachment detachably mounted thereon and comprising connected upright guides, a bolt carrier vertically slidable upon said guides and having side members connected by top, bottom and back members, said carrier having vertical openings for the reception of the saw, stops upon said back member for limiting the movement of the bolt into said carrier and means for operating said carrier.

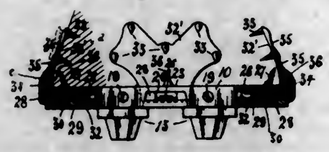
5. The combination with a table or support carrying a circular saw, of a shingle cutting attachment detachably mounted thereon and comprising connected upright guides, a bolt carrier vertically slidable upon said guides and having side members connected by top, bottom and back members, said carrier having vertical openings for the reception of the saw, stops upon said back member for limiting the movement of the bolt into said carrier, a spring connection between said carrier and its connected upright guides for holding said carrier normally above the saw, a treadle mounted upon said support and connected to said carrier for moving the same downwardly toward the saw.

883,913. FENCE-POST. GEORGE W. PYLE, Geneva, Ind. Filed Sept. 27, 1907. Serial No. 394,931.



A fence post substantially as herein described comprising a concrete body portion having a cylindrical lower end and formed just above its lower end with an integral annular V-shaped anchoring device, a metallic core embedded centrally within said body portion and extending substantially from the center of said anchoring device to the top of the post, spaced attachment loops secured to said core and projecting laterally therefrom, and a vertical rod having shoulders near its opposite ends spaced to correspond to the upper and lower of said loops and cooperating therewith to receive and secure the upper and lower horizontal strands of metallic fence for the post.

883,914. HORSESHOE. JOSEPH B. RABAN, Louisville, Ky. Filed Oct. 11, 1907. Serial No. 396,993.



1. A horse shoe having transverse sockets and with a catch lug in each socket, fastening devices each comprising a supporting portion fitting one of said sockets and also having a plate extended for bearing against the hoof, and a spring connected to each of said supporting portions for coöperation with the corresponding lug of each socket, whereby the fastening devices may be detachably secured to the shoe, each extended plate portion of each fastening device being decreased in thickness at points to render it bendable to conform to and closely engage the hoof.

2. A horse shoe having transverse sockets and with a catch lug in each socket, fastening devices each comprising a supporting portion fitting one of said sockets and with an integral plate extended for bearing against the hoof, and a spring connected to each of said supporting portions and provided with a slot adapted to detachably engage said catch lug.

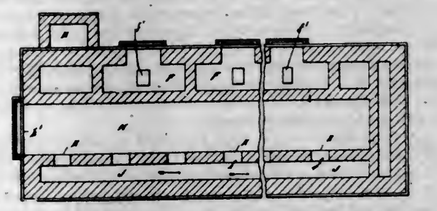
3. A horse shoe having transverse sockets and recesses in the shoe opposite said sockets, a catch lug in each socket, fastening devices each comprising a supporting portion conforming to and fitting the socket and with a longitudinal recess, and a bifurcated inner end and with an integral plate extending from the supporting portion and adapted to bear against the hoof and with a web engaging the recess of the shoe, and a spring connected into the recess of the supporting portion and extending between the bifurcation thereof and in advance of the body of the shoe and provided with a slot for engaging said stop lug.

883,915. TOY GUN. ELIAS F. SLEAR, Harrisburg, Pa. Filed Oct. 14, 1907. Serial No. 397,336.



An article of the character described comprising a body simulating a fire arm and having a recess, an elastic band secured to said body, a compressible projectile secured to the band, said projectile being in thickness greater than the width of said recess and a finger lever or trigger for forcing the projectile out of the recess.

883,916. FURNACE. ALFRED SMALLWOOD, London, England. Filed Sept. 10, 1906. Serial No. 333,909.



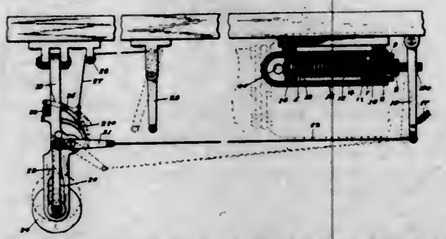
1. A smelting, crucible heating, and annealing furnace, comprising a fire grate, a horizontal combustion chamber in communication therewith, a heat chamber situated above the combustion chamber and communicating with the latter at the end remote from the fire grate, an annealing chamber situated adjacent the heat chamber and having a plurality of apertures through one of its walls, and means for selectively opening and closing the apertures of the annealing chamber.

2. A smelting, crucible heating, and annealing furnace comprising a fire grate, a horizontal combustion chamber communicating with the fire grate, a horizontal heat chamber in the same plane as the combustion chamber communicating with the latter at the end remote from the fire grate, a plurality of heating chambers separate from one another and situated above the heat chamber, apertures being formed in the floors of the heating chambers communicating with the heat chamber, means for closing the apertures of the heating chambers when desired, a second heat chamber situated in a plane above that of the combustion chamber, a passage connecting the second mentioned heat chamber with the combustion chamber, an an-

nealing chamber situated adjacent the second mentioned heat chamber having apertures in one of its sides communicating with the heat chamber, and means for selectively opening and closing the apertures of the annealing chamber.

3. A smelting, crucible heating, and annealing furnace comprising a fire grate, a horizontal combustion chamber communicating with the fire grate, a horizontal heat chamber in the same plane as the combustion chamber communicating with the latter at the end remote from the fire grate, a plurality of heating chambers separate from one another and situated above the heat chamber, apertures being formed in the floors of the heating chamber communicating with the heat chamber, means for closing the apertures of the heating chambers when desired, a second heat chamber situated in a plane above that of the combustion chamber, a passage connecting the second mentioned heat chamber with the combustion chamber, an annealing chamber situated adjacent the second mentioned heat chamber having apertures in one of its sides communicating with the heat chamber, means for selectively opening and closing the apertures of the annealing chamber, and a horizontal jacket flue situated in a plane above that of the annealing chamber and communicating with the annealing chamber at the fire grate end of the same.

883,917. AUTOMATIC AIR-BRAKE-PRESSURE ADJUSTER. ULYSSES S. SMITH, Sacramento, Cal. Filed Feb. 12, 1907. Serial No. 357,101.



1. The combination with the body of a car having an air brake cylinder depending therefrom, of an auxiliary cylinder, connecting means between the brake cylinder and the auxiliary cylinder, means for permitting the passage of air from said auxiliary cylinder, means operating in said auxiliary cylinder for controlling and regulating said passage of air, and means operated by the movement of the body of the car for automatically actuating said controlling and regulating means.

2. In a device of the kind described a cylinder connected with brake cylinder of an air brake, an elongated port in said cylinder, a piston arranged in said cylinder, adapted to open or close said port, a tension spring arranged between the rear of the piston and the rear of the cylinder, and means for automatically regulating the tension of said spring, as set forth.

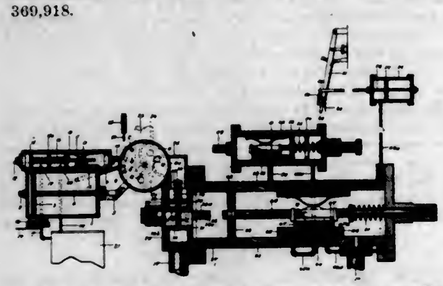
3. In a device of the kind described a cylinder connected to brake cylinder of an air brake, an elongated port arranged in said cylinder, a piston arranged in said cylinder and adapted to open and close said port, a spring regulating the position of the said piston by the weight of the vehicle to which the brake is attached, as specified.

4. In a device of the kind described, a vehicle, a cylinder connected to brake cylinder of the air brake thereof, an elongated port in said cylinder, a piston arranged in said cylinder, an adjustable plug in the rear of said cylinder, a rod extending through said plug and having a shoulder on its inner end, a spring bearing between said piston and said shoulder, a slot in the outer end of said rod, a lever pivoted to the underside of the said vehicle and extending through said slot, and means for operating said lever by the weight of the vehicle as set forth.

5. In a device of the character described, a depending arm pivotally mounted on the underside of a vehicle just above one axle thereof, a slot in the lower end of said arm, a wheel slidably journaled through said slot, an upward link secured to said wheel, a lever pivoted to said arm and secured at one end to said link, a lever pivoted to the under side of a car, a rod or cable connecting said levers, and means in connection with said last named lever for regulating the amount of air passing from the brake cylinder of an air brake, as described.

[Claim 6 not printed in the Gazette.]

883,918. AIR-BRAKE SYSTEM. ULYSSES S. SMITH, Sacramento, Cal. Filed Apr. 24, 1907. Serial No. 369,918.



1. In an air braking system a means on an intermediate car of a train line for automatically reinforcing the train line pipe pressure, and an automatic means in conjunction therewith for governing the pressure to the rear thereof, as specified.

2. In an air braking system a means on an intermediate car for reinforcing the train line pressure, means for opening said first named means by the exhaust from brake cylinder through triple valve on said car, and means for automatically shutting off said first named means when the functions thereof are performed, as specified.

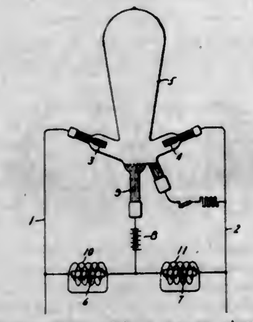
3. In an air braking system auxiliary reduction cylinders connected to the train line pipe at intermediate points, and automatic recharging mechanisms in operative connection with said reduction cylinders and with the head engine, as set forth.

4. In an air braking system auxiliary recharging cylinders attached to the train line pipe at intermediate points thereof, and auxiliary reduction mechanisms in operative connection therewith and with the head engine, as specified.

5. In an air braking system rotary recharging valves connected to intermediate points of the train line pipe, means for conveying main reservoir pressure to said valves, and means for automatically opening and closing said valves, as specified.

[Claims 6 to 13 not printed in the Gazette.]

883,919. REACTIVE COIL. CHARLES P. STEINMETZ, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed May 19, 1906. Serial No. 317,748.



1. The combination with a vapor electric device, of reactive means connected thereto, and means for retarding the drop of current in said reactive means.

2. The combination with a vapor electric device, of a reactive coil, and means for maintaining over a long period the inductive discharge of said reactive coil.

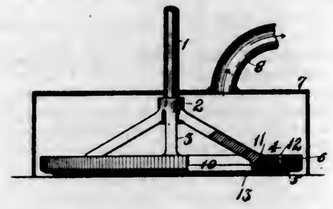
3. The combination with a vapor electric device, of a reactive coil, and means for equalizing the discharge of said coil.

4. The combination with a vapor electric device, of a reactive coil for maintaining said device active, and a secondary coil in inductive relation to said reactive coil.

5. The combination with a vapor electric device, of a reactive coil, and a closed secondary coil in inductive relation to said reactive coil.

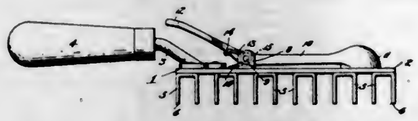
[Claims 6 and 7 not printed in the Gazette.]

883,920. HEAD FOR SURFACING-MACHINES. JOHN F. STOLL, Cuyahoga Falls, Ohio. Filed Oct. 23, 1907. Serial No. 398,782.



A head for surfacing machines comprising a rotatable shaft, a hub mounted thereon provided with a plurality of arms, an annular member on the end of said arms, said member being provided with a threaded periphery and a beveled portion extending from said threaded portion to the face of said member, a strip of heat-resisting material on the face of said member, a piece of abrasive material covering said heat-resisting material, and a clamping element for securing said heat-resisting and abrasive material to said annular member.

883,921. CURRYCOMB. CHARLES F. THOMPSON, Safford, Ariz. Filed Jan. 22, 1907. Serial No. 353,493.

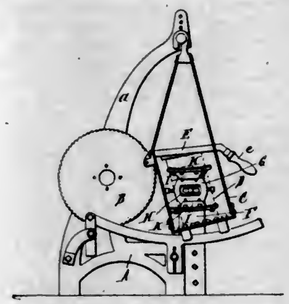


1. A self-cleaning curry comb comprising a comb back, a handle, and a lever pivoted intermediate its ends and having at one end a hammer head to strike said comb back and at its other end a finger piece arranged adjacent to said handle.

2. A self-cleaning curry comb comprising a comb back, a handle, a lever pivoted intermediate its ends and having at one end a hammer head to strike said comb back and at its other end a finger piece arranged adjacent to said handle, and a spring for actuating said lever in one direction and holding its hammer head normally in contact with the comb back.

3. A self-cleaning curry comb comprising a comb back, a handle projecting therefrom, a transverse pivot carried by said comb back, a lever mounted intermediate its ends upon said pivot and having at its other end a hammer head to strike said comb back and at its rear end a finger piece arranged adjacent to one side of said handle, and a coil spring surrounding said pivot and having one of its ends engaged with said lever, substantially as shown and for the purpose set forth.

883,922. SAWING-MACHINE. FRANCIS N. TREVOR, Lockport, N. Y., assignor to Trevor Manufacturing Company, Lockport, N. Y. Filed June 10, 1905. Serial No. 264,671.



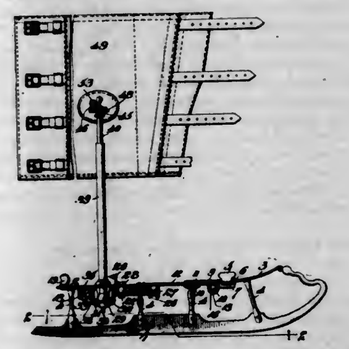
1. The combination of a frame, a circular saw, a pendulous bolt carriage, a bolt gage secured to said frame and having guides against which the bolt bears, said gage with said guides being adjustable vertically as a unit on the frame, and said guides being independently adjustable vertically on said gage, substantially as set forth.

2. The combination of a frame, a circular saw, a pendulous bolt carriage, a bolt gage secured to said frame and comprising a supporting plate adjustable vertically on said frame, and guides separately secured to said supporting plate and capable of separate adjustment vertically thereon toward and from each other independently of the adjustments of the gage plate, substantially as set forth.

3. The combination of a frame, a circular saw, a pendulous bolt carriage, a bolt gage consisting of a supporting plate secured to said frame, carrier plates secured to said supporting plate and capable of vertical movement thereon independently of the adjustment of the supporting plate, and guides carried by said carrier plates and adjustable laterally thereon toward and from the plane of the saw, substantially as set forth.

4. The combination of a frame, a circular saw, a pendulous bolt carriage, a bolt gage consisting of a supporting plate adjustably secured to said frame and having vertical slots in its upper and lower portions, carrier plates, bolts in said slots for adjustably securing said carrier plates on said supporting plate, and curved guides carried by said carrier plates and adjustable laterally thereon toward and from the plane of the saw, substantially as set forth.

883,923. SKATE. CALLE WALL, Philadelphia, Pa. Filed Sept. 13, 1907. Serial No. 392,673.



1. In a skate, the combination with the toe support and heel support thereof, of toe clamps carried by said toe support, toggles connected with said clamps, a connecting

arm having one end connected with said toggles, a movable heel clamp operatively connected with the other end of said connecting arm, fixed heel clamps, a rotatable rod having a lever loosely mounted thereon, said lever being operatively connected with said movable clamp, a pin carried at one end of said lever and a pin carried by said rod adapted to coact with said first mentioned pin.

2. In a skate, the combination with the toe support and heel support thereof, of toe clamps movably carried by said toe support, toggles pivoted to said clamps, a connecting arm secured to said toggles, a plate movably carried by said heel support and secured to said connecting arm, an adjustable screw carried by said movable plate, a heel clamp adjustable on said screw, a rotatable rod, a lever loosely mounted thereon, a pin carried by one end of said lever, a link to which the other end of said lever is pivoted, the opposite end of said link being pivoted to said plate, a pin carried by said rotatable rod adapted to coact with said pin to move said plate forwardly or rearwardly, and means for preventing movement of said movable plate when in its rearmost position.

3. In a skate, the combination with the toe support and heel support thereof, of toe clamps carried by said toe support, toggles pivoted to said clamps, a connecting arm secured to said toggles, a plate movably carried by said heel support and secured to said connecting arm, an adjustable screw carried by said movable plate, a heel clamp adjustable on said screw, a rotatable rod, a lever loosely mounted thereon, a pin carried by one end of said lever, a link to which the other end of said lever is pivoted, the opposite end of said link being pivoted to said movable plate, a pin carried by said rotatable rod adapted to coact with said lever pin to move said plate forwardly or rearwardly, and a stop carried by said heel support and coacting with said link to prevent movement of said plate when in its rearmost position.

4. In a skate, the combination with the toe support and heel support thereof, of toe clamps carried by said toe support, toggles pivoted to said clamps, a connecting arm secured to said toggles, a movable member carried by said heel support and secured to said connecting arm, an adjustable screw carried by said member, a heel clamp adjustable on said screw, a rotatable rod, a lever loosely mounted thereon, a pin carried by one end of said lever, a link to which the other end of said lever is pivoted, the opposite end of said link being pivoted to said toe support, a pin carried by said rotatable rod adapted to coact with said lever pin to move said member rearwardly or forwardly, a stop carried by said heel support, and coacting with said link to prevent movement of said member when in its rearmost position, and an actuating lever secured to said rotatable rod.

5. In a skate, the combination with the toe support and heel support thereof, of clamps carried by said toe support, toggles pivoted to said clamps, a connecting arm secured to said toggles, a movable member carried by said heel support and secured to said connecting arm, a screw carried by said member, a heel clamp adjustable on said screw, a rod rotatably mounted, a lever loosely mounted thereon, a pin carried by one end of said lever, a link to which the other end of said lever is pivoted, the opposite end of said link being pivoted to said member, a pin carried by said rotatable rod adapted to coact with said lever pin to lock or unlock said clamps, means for preventing movement of said member when the heel and toe clamps are locked, an actuating lever secured to said rotatable rod, and means for locking said actuating lever against accidental movement.

[Claims 6 to 11 not printed in the Gazette.]

883,924. ARC-LAMP ELECTRODE. WILLIAM S. WEEDON, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Apr. 21, 1903. Serial No. 153,621.

1. An electrode consisting of titanium carbid incased in a copper sheath.

2. An arc electrode consisting of a core or pencil formed of a material which crumbles when heated in air, and a casing therefor, which only vaporizes near the arc and thus protects the heated portion of the core or pencil back of the arc from access of air.



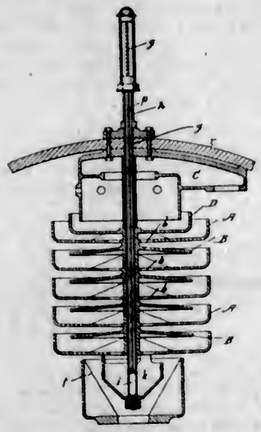
3. An electrode consisting of a core or pencil containing titanium carbid, and electro-plated to prevent crumbling when heated.

4. An electrode consisting of a core or pencil containing titanium carbid, and a casing therefor formed of some material which will prevent injurious oxidation of the titanium carbid when heated.

5. An electrode consisting of a core or pencil containing titanium carbid, and a casing or sheath therefor formed of some material the oxids of which are stable at comparatively high temperatures.

[Claims 6 to 8 not printed in the Gazette.]

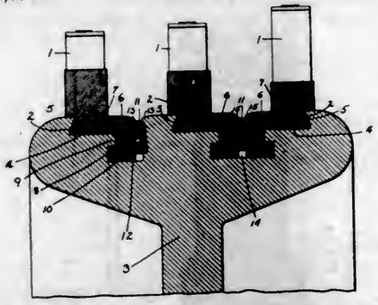
883,925. FEED-WATER HEATER. GEORGE WILKINSON, Beech Mount, Harrogate, England. Original application filed Dec. 11, 1906, Serial No. 347,300. Divided and this application filed May 24, 1907. Serial No. 375,449.



1. The combination, with a boiler shell, and a tube depending therein, of a series of heating dishes and plates for the feed water carried by the said tube and preventing it from having the temperature of steam, a chamber for the hottest feed water carried by the lower end of the said tube, and a thermometer inclosed in the said tube with its bulb arranged in the said chamber and its upper end portion projecting above the said tube and boiler shell.

2. The combination, with a boiler shell, and a tube depending therein, of a thermometer arranged in the said tube with its bulb in the lower part of the said tube and its upper end projecting from the said boiler shell, a chamber for the hottest feed water surrounding the lower part of the said tube and the said bulb, a series of heating plates and dishes encircling the middle portions of the said tube, and means for discharging the feed water onto the top of the said series, whereby the said feed water is heated and the stem of the said thermometer is prevented from becoming hotter than its bulb.

883,926. FASTENING FOR BUCKETS OF TURBINES. MAGNUS W. ALEXANDER and WERNER JOHNSON, Lynn, Mass., assignors to General Electric Company, a Corporation of New York. Filed Oct. 6, 1906. Serial No. 337,704.



1. The combination with a grooved bucket-carrier, of buckets mounted thereon, and means for fastening said buckets, comprising a flexible retainer wrapped around said carrier after the buckets are mounted in place.

2. The combination with a grooved bucket-carrier, of bucket-supports mounted thereon, a clamping ring engaging with said supports, and a flexible retainer wrapped around said carrier and engaging with said ring.

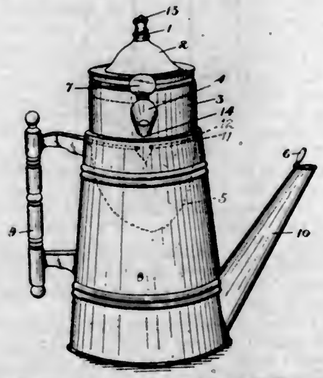
3. The combination with a grooved bucket-carrier, of bucket-supports engaging therewith, a clamping ring engaging with said supports, and a wire wound around said carrier and retaining said ring in place.

4. The combination with a grooved bucket-carrier having an under cut flange, of bucket-supports shaped to engage under said flange, a clamping ring having a flange to engage with said support, and a wire wrapped adjacent to and engaging with said ring.

5. The combination with a bucket-carrier having a flange and a groove provided with a shoulder, a bucket-support engaging under said flange, a clamping ring engaging with said support and having a rib taking under said shoulder, and a wire wound in the groove adjacent to said ring.

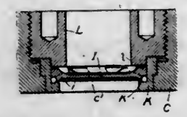
[Claims 6 to 10 not printed in the Gazette.]

883,927. COFFEE-POT. JOHN ARMSTRONG, Toronto, Ontario, Canada. Filed May 7, 1906. Serial No. 315,459.



A distillation coffee pot comprising a body portion having a pouring spout with a hinged lid, a hollow imperforate cover for the top of the body portion forming a condensing chamber, said cover being provided with a filling opening, a stopper to close the filling opening, a sack supporting means within the body portion below the cover, a filling tube extending from the side of the body portion between the cover and sack supporting means, and a hinged lid for the outer end of the filling tube.

883,928. VALVE FOR AIR-COMPRESSORS. ASA F. BATCHELDER, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Oct. 29, 1900. Serial No. 34,708.



1. A valve for air-compressors, consisting of a disk having countersunk upper and lower sides, a narrow annular face on one side, and radial wings on the other side, one edge of said wings being undercut and the other edge having a bevel.

2. A valve for air-compressors consisting of a disk having countersunk upper and lower sides, a narrow annular face on one side, and radial wings on the other side having their edges inclined to the axis of the disk, the edge of the disk between the wings being rounded.

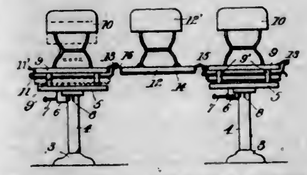
3. A valve-casing for air-compressors, containing a plurality of air passages, a valve-keeper secured upon said casing and having a corresponding number of passages forming with those of the casing a plurality of chambers, and a disk-valve in each chamber having a narrow annular face on one side and a series of radial wings on the other side provided with inclined edges.

4. A valve for air-compressors, consisting of an imperforate disk having a projecting annular face on one side, and radial wings projecting beyond the edge of the disk, one edge of each wing being undercut and the other edge beveled.

5. A valve casing for air-compressors, containing a plurality of air passages, a valve keeper secured upon said casing and having a plurality of passages registering with those in the casing, and a plurality of disk valves controlling said passages, each having an annular face on one side, and a series of radial wings with inclined edges.

[Claims 6 to 12 not printed in the Gazette.]

883,929. CAR-CHAIR. SEELEY J. BAXTER, Wamego, Kans. Filed Mar. 5, 1907. Serial No. 360,665.



1. In a device of the class described, standards spaced apart, a seat base mounted for rotation upon each of said standards, a main chair seat for each of said bases and spaced therefrom, means for connecting said main chair seats to said seat bases, guides spaced apart and supported between said base and main seat and extending outwardly and upwardly at one end, an emergency chair seat removably carried by said guides, and means whereby said emergency chair seat is supported in its withdrawn position by the extended portions of said guides.

2. Two chairs spaced apart, guide devices carried by one of said chairs and terminating in eyes, an emergency chair seat movably disposed beneath one of said chairs and having a member engaging said guide devices when the emergency chair is withdrawn and engaging said eyes when the emergency chair is projected, and means for detachably coupling the free end of said emergency chair to the other of said spaced chairs when projected.

3. In a device of the class described, chair structures including main chair seats spaced apart and provided with seat backs, guide devices carried by one of said main chair seats, an emergency seat movably disposed beneath one of said main chair seats and having a member engaging said guide devices when the emergency seat is with-

arm having one end connected with said toggles, a movable heel clamp operatively connected with the other end of said connecting arm, fixed heel clamps, a rotatable rod having a lever loosely mounted thereon, said lever being operatively connected with said movable clamp, a pin carried at one end of said lever and a pin carried by said rod adapted to coact with said first mentioned pin.

2. In a skate, the combination with the toe support and heel support thereof, of toe clamps movably carried by said toe support, toggles pivoted to said clamps, a connecting arm secured to said toggles, a plate movably carried by said heel support and secured to said connecting arm, an adjustable screw carried by said movable plate, a heel clamp adjustable on said screw, a rotatable rod, a lever loosely mounted thereon, a pin carried by one end of said lever, a link to which the other end of said lever is pivoted, the opposite end of said link being pivoted to said plate, a pin carried by said rotatable rod adapted to coact with said pin to move said plate forwardly or rearwardly, and means for preventing movement of said movable plate when in its rearmost position.

3. In a skate, the combination with the toe support and heel support thereof, of toe clamps carried by said toe support, toggles pivoted to said clamps, a connecting arm secured to said toggles, a plate movably carried by said heel support and secured to said connecting arm, an adjustable screw carried by said movable plate, a heel clamp adjustable on said screw, a rotatable rod, a lever loosely mounted thereon, a pin carried by one end of said lever, a link to which the other end of said lever is pivoted, the opposite end of said link being pivoted to said movable plate, a pin carried by said rotatable rod adapted to coact with said lever pin to move said plate forwardly or rearwardly, and a stop carried by said heel support and coacting with said link to prevent movement of said plate when in its rearmost position.

4. In a skate, the combination with the toe support and heel support thereof, of toe clamps carried by said toe support, toggles pivoted to said clamps, a connecting arm secured to said toggles, a movable member carried by said heel support and secured to said connecting arm, an adjustable screw carried by said member, a heel clamp adjustable on said screw, a rotatable rod, a lever loosely mounted thereon, a pin carried by one end of said lever, a link to which the other end of said lever is pivoted, the opposite end of said link being pivoted to said toe support, a pin carried by said rotatable rod adapted to coact with said lever pin to move said member rearwardly or forwardly, a stop carried by said heel support, and coacting with said link to prevent movement of said member when in its rearmost position, and an actuating lever secured to said rotatable rod.

5. In a skate, the combination with the toe support and heel support thereof, of clamps carried by said toe support, toggles pivoted to said clamps, a connecting arm secured to said toggles, a movable member carried by said heel support and secured to said connecting arm, a screw carried by said member, a heel clamp adjustable on said screw, a rod rotatably mounted, a lever loosely mounted thereon, a pin carried by one end of said lever, a link to which the other end of said lever is pivoted, the opposite end of said link being pivoted to said member, a pin carried by said rotatable rod adapted to coact with said lever pin to lock or unlock said clamps, means for preventing movement of said member when the heel and toe clamps are locked, an actuating lever secured to said rotatable rod, and means for locking said actuating lever against accidental movement.

[Claims 6 to 11 not printed in the Gazette.]

883,924. ARC-LAMP ELECTRODE. WILLIAM S. WEEDON, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Apr. 21, 1903. Serial No. 153,621.

1. An electrode consisting of titanium carbid incased in a copper sheath.

2. An arc electrode consisting of a core or pencil formed of a material which crumbles when heated in air, and a casing therefor, which only vaporizes near the arc and thus protects the heated portion of the core or pencil back of the arc from access of air.



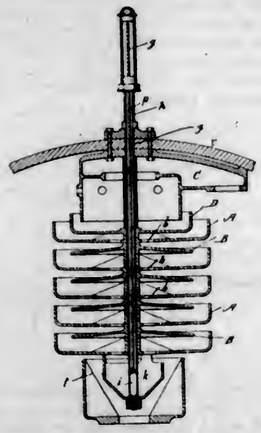
3. An electrode consisting of a core or pencil containing titanium carbid, and electro-plated to prevent crumbling when heated.

4. An electrode consisting of a core or pencil containing titanium carbid, and a casing therefor formed of some material which will prevent injurious oxidation of the titanium carbid when heated.

5. An electrode consisting of a core or pencil containing titanium carbid, and a casing or sheath therefor formed of some material the oxids of which are stable at comparatively high temperatures.

[Claims 6 to 8 not printed in the Gazette.]

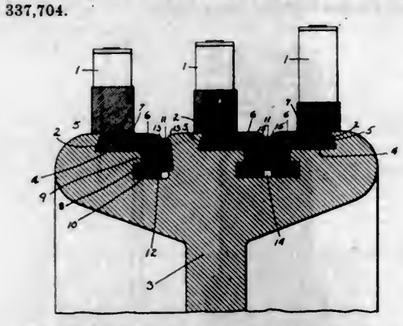
883,925. FEED-WATER HEATER. GEORGE WILKINSON, Beech Mount, Harrogate, England. Original application filed Dec. 11, 1906, Serial No. 347,300. Divided and this application filed May 24, 1907. Serial No. 375,449.



1. The combination, with a boiler shell, and a tube depending therein, of a series of heating dishes and plates for the feed water carried by the said tube and preventing it from having the temperature of steam, a chamber for the hottest feed water carried by the lower end of the said tube, and a thermometer inclosed in the said tube with its bulb arranged in the said chamber and its upper end portion projecting above the said tube and boiler shell.

2. The combination, with a boiler shell, and a tube depending therein, of a thermometer arranged in the said tube with its bulb in the lower part of the said tube and its upper end projecting from the said boiler shell, a chamber for the hottest feed water surrounding the lower part of the said tube and the said bulb, a series of heating plates and dishes encircling the middle portions of the said tube, and means for discharging the feed water onto the top of the said series, whereby the said feed water is heated and the stem of the said thermometer is prevented from becoming hotter than its bulb.

883,926. FASTENING FOR BUCKETS OF TURBINES. MAGNUS W. ALEXANDER and WERNER JOHNSON, Lynn, Mass., assignors to General Electric Company, a Corporation of New York. Filed Oct. 6, 1906. Serial No. 337,704.



1. The combination with a grooved bucket-carrier, of buckets mounted thereon, and means for fastening said buckets, comprising a flexible retainer wrapped around said carrier after the buckets are mounted in place.

2. The combination with a grooved bucket-carrier, of bucket-supports mounted thereon, a clamping ring engaging with said supports, and a flexible retainer wrapped around said carrier and engaging with said ring.

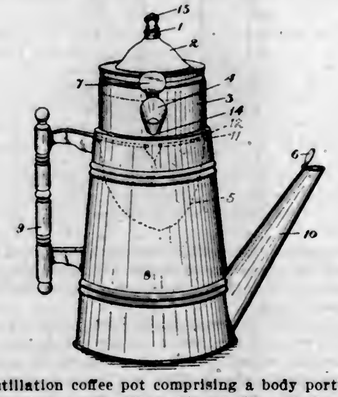
3. The combination with a grooved bucket-carrier, of bucket-supports engaging therewith, a clamping ring engaging with said supports, and a wire wound around said carrier and retaining said ring in place.

4. The combination with a grooved bucket-carrier having an under cut flange, of bucket-supports shaped to engage under said flange, a clamping ring having a flange to engage with said support, and a wire wrapped adjacent to and engaging with said ring.

5. The combination with a bucket-carrier having a flange and a groove provided with a shoulder, a bucket-support engaging under said flange, a clamping ring engaging with said support and having a rib taking under said shoulder, and a wire wound in the groove adjacent to said ring.

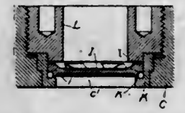
[Claims 6 to 10 not printed in the Gazette.]

883,927. COFFEE-POT. JOHN ARMSTRONG, Toronto, Ontario, Canada. Filed May 7, 1906. Serial No. 315,459.



A distillation coffee pot comprising a body portion having a pouring spout with a hinged lid, a hollow imperforate cover for the top of the body portion forming a condensing chamber, said cover being provided with a filling opening, a stopper to close the filling opening, a sack supporting means within the body portion below the cover, a filling tube extending from the side of the body portion between the cover and sack supporting means, and a hinged lid for the outer end of the filling tube.

883,928. VALVE FOR AIR-COMPRESSORS. ASA F. BATCHELDER, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Oct. 29, 1900. Serial No. 34,708.



1. A valve for air-compressors, consisting of a disk having countersunk upper and lower sides, a narrow annular face on one side, and radial wings on the other side, one edge of said wings being undercut and the other edge having a bevel.

2. A valve for air-compressors consisting of a disk having countersunk upper and lower sides, a narrow annular face on one side, and radial wings on the other side having their edges inclined to the axis of the disk, the edge of the disk between the wings being rounded.

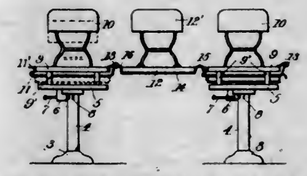
3. A valve-casing for air-compressors, containing a plurality of air passages, a valve-keeper secured upon said casing and having a corresponding number of passages forming with those of the casing a plurality of chambers, and a disk-valve in each chamber having a narrow annular face on one side and a series of radial wings on the other side provided with inclined edges.

4. A valve for air-compressors, consisting of an imperforate disk having a projecting annular face on one side, and radial wings projecting beyond the edge of the disk, one edge of each wing being undercut and the other edge beveled.

5. A valve casing for air-compressors, containing a plurality of air passages, a valve keeper secured upon said casing and having a plurality of passages registering with those in the casing, and a plurality of disk valves controlling said passages, each having an annular face on one side, and a series of radial wings with inclined edges.

[Claims 6 to 12 not printed in the Gazette.]

883,929. CAR-CHAIR. SEELEY J. BAXTER, Wamego, Kans. Filed Mar. 5, 1907. Serial No. 360,665.



1. In a device of the class described, standards spaced apart, a seat base mounted for rotation upon each of said standards, a main chair seat for each of said bases and spaced therefrom, means for connecting said main chair seats to said seat bases, guides spaced apart and supported between said base and main seat and extending outwardly and upwardly at one end, an emergency chair seat removably carried by said guides, and means whereby said emergency chair seat is supported in its withdrawn position by the extended portions of said guides.

2. Two chairs spaced apart, guide devices carried by one of said chairs and terminating in eyes, an emergency chair seat movably disposed beneath one of said chairs and having a member engaging said guide devices when the emergency chair is withdrawn and engaging said eyes when the emergency chair is projected, and means for detachably coupling the free end of said emergency chair to the other of said spaced chairs when projected.

3. In a device of the class described, chair structures including main chair seats spaced apart and provided with seat backs, guide devices carried by one of said main chair seats, an emergency seat movably disposed beneath one of said main chair seats and having a member engaging said guide devices when the emergency seat is with-

drawn, means for supporting said emergency seat upon said main chair seats when projected, a back to said emergency seat, and means for adjusting said emergency seat back to cause it to aline with or pass to the rear of the backs of the main chair seats.

883,930. FOOD PRODUCT AND METHOD OF MAKING THE SAME. JACOB E. BLOOM, New York, N. Y. Filed Aug. 1, 1904, Serial No. 219,106. Renewed Dec. 11, 1907. Serial No. 406,048.

1. The process of treating a food product comprising a triglycerid of fatty acid having a higher melting point than stearin, which consists in determining the fat content of the material employed, as regards its olein, palmitin and triglycerid having higher melting point than stearin and in addition to such material of fat of such composition as to bring the olein, palmitin and fat of higher melting point than stearin of the resulting product into approximately the proportions, respectively, in which olein, palmitin and stearin exist in human fat, substantially as described.

2. The process of preparing a food product having a material comprising olein, palmitin and a triglycerid of fatty acid having a higher melting point than stearin, which consists in determining the composition of the fat content of the material employed as regards olein, palmitin and triglycerids having higher melting point than stearin: adding to such material a fat of such composition as to bring the olein, palmitin and fat of higher melting point than stearin of the resulting product into approximately the proportions, respectively, in which olein, palmitin and stearin exist in human fat: and, finally, adding to such product a material containing olein, palmitin and stearin in the proportions in which these proximate principles exist in human fat.

3. The process of treating a food material containing olein, palmitin and a triglycerid of a fatty acid having a higher melting point than stearin, which consists in incorporating therewith a fat having a content of olein, palmitin and stearin such as to bring the olein and the palmitin in the resulting food product into the approximate ratio of twelve parts of the former to one of the latter, and the said olein and palmitin to comprise approximately ninety eight per cent. of the entire fat content of the resulting food material.

4. A food product containing olein, palmitin and a fat having a higher melting point than stearin, and in which the olein, palmitin and fat of higher melting point than the last named ingredient exist in approximately the proportions in which olein, palmitin and stearin are found in human fat.

5. A food product comprising an egg ingredient and a fat, and in which the fat content of the food product contains olein, palmitin and triglycerids of fatty acids having higher melting point than stearin in approximately the proportions in which olein, palmitin and stearin are found in human fat.

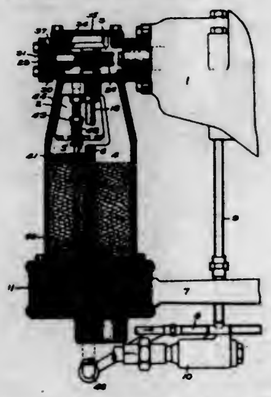
[Claims 6 and 7 not printed in the Gazette.]

883,931. GEAR-PUMP. JOHN G. CALLAN, Lynn, Mass., assignor to General Electric Company, a Corporation of New York. Filed Nov. 11, 1905. Serial No. 286,832.

1. In a pump, the combination of a casing containing a chamber which acts as a reservoir, a chambered plate attached to the casing, gears in the chamber in the plate that act as a pump, a port leading from the reservoir to the pump, a driving shaft passing through the reservoir, a second shaft for driving the first, and gearing between the shafts.

2. In a pump, the combination of a plate having a plurality of chambers, a set of gears arranged in each chamber to form an independent pump, parallel shafts for driving the pumps, driving gears on the shafts, and a common shaft which actuates the driving gears.

3. In a pump, the combination of a chambered plate, sets of gears arranged in the plate-chambers to form pumps, a casing containing a chamber, shafts extending from the pump into the casing chamber, gears on the shafts and located in the casing chamber, a driving shaft located at an angle to the pump shafts, and a worm mounted on the driving shaft which is common to and engages the gears on the pump shafts.

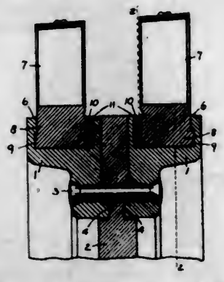


4. In a pump, the combination of a chambered plate, gears arranged in the chamber to form a pump, a casing, a pump shaft, a two part driving shaft geared to the pump shaft, and a slip joint between the parts of the driving shaft.

5. In a pump, the combination of a chambered plate, gears arranged in sets in the chambers in the plate, a head on one side of the plate, a casing containing a reservoir on the other, pump shafts extending through the casing, gears on the ends of the shafts, a worm located between and common to the gears, and a driving shaft for the worm.

[Claims 6 to 11 not printed in the Gazette.]

883,932. ELASTIC-FLUID TURBINE. JOHN G. CALLAN, Lynn, Mass., assignor to General Electric Company, a Corporation of New York. Filed Oct. 5, 1906. Serial No. 337,545.



1. In a turbine, the combination with a grooved bucket-carrier, of buckets mounted in but not filling the groove, and a retainer wound into said groove after the buckets are mounted in place.

2. In a turbine, the combination with a grooved carrier, of a bucket-support received in but not filling the groove, and a retainer wound into said groove in the space not occupied by said support after the latter is mounted in place.

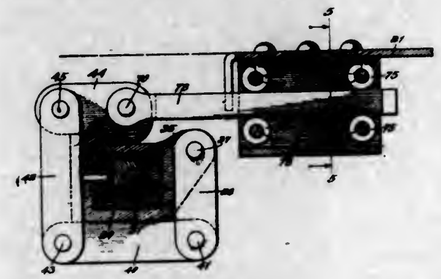
3. In a turbine, the combination with a grooved carrier, of a bucket support mounted in but not filling the groove, and a flat ribbon wound in the unoccupied space in said groove and of sufficient width to fill said space.

4. In a turbine, the combination with a carrier having a groove, of a bucket-support having a shoulder and received in said groove, and a ribbon wound into and filling the space between the bucket-support and one wall of said groove.

5. In a turbine, the combination with a carrier having a groove provided with an undercut part, of a bucket-support having a portion engaging with the undercut part of said groove, and a retainer wound into said groove.

[Claim 6 not printed in the Gazette.]

883,933. DOOR-OPERATING MECHANISM. ARGYLE CAMPBELL, Chicago, Ill., assignor to The Enterprise Railway Equipment Company, Chicago, Ill., a Corporation of Illinois. Filed Oct. 28, 1907. Serial No. 399,430.



1. In combination with a car having a load retaining door, a latch member movably mounted on the door and a door operating mechanism located on the same side of the door as the latch and adjacent thereto connected to and operating said latch member and comprising a shaft and a link connection between the shaft and latch member operating and adapted to move the latch member in both directions.

2. In combination with a car having a load retaining door, a latch member movably mounted on the door and a door operating mechanism located on the same side of the door as the latch and adjacent thereto connected to the door through said latch mechanism, adapted to operate said latch in both directions and comprising a shaft and a link connection between the shaft and latch member operating and adapted to move the latch member in both directions.

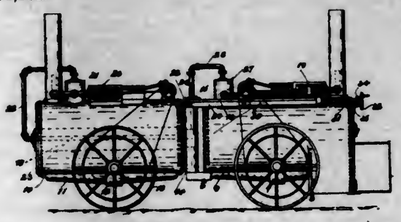
3. In combination with a car having a load retaining door a latch engaging the door at two points and an outside support at one point and a door opening and closing mechanism located on the same side of the door as the latch and adjacent thereto connected to the door through said latch mechanism adapted to positively operate said latch in both directions and comprising a shaft and a link connection between the shaft and latch member operating and adapted to move the latch member in both directions.

4. In combination with a car having a load retaining door, a latch member movably mounted on the door, a door opening and closing mechanism located on the same side of the door as the latch and adjacent thereto connected to the door through the latch mechanism so constructed as to operate the latch in both directions and to positively move the door in each direction during at least a portion of its path of travel and comprising a shaft and a link connection between the shaft and latch member operating and adapted to move the latch member in both directions.

5. In combination with a car having a load retaining door, operating mechanism for positively opening and closing said door and a latch member movable by said operating mechanism located on the same side of the door as the latch and adjacent thereto so mounted that when the door is closed it engages both the door and operating mechanism without exerting any force to start the operating mechanism and comprising a shaft and a link connection between the shaft and latch member operating and adapted to move the latch member in both directions.

[Claims 6 to 24 not printed in the Gazette.]

883,934. TRACTION-ENGINE. FREDERICK I. CASS, Clintonville, Wis. Filed July 17, 1907. Serial No. 384,181.



1. In a traction engine, the combination of front and rear trucks, flexibly connected together, a water tank upon one truck and a steam boiler upon the other, a driving engine mounted upon each truck to drive the same, and having connections to the boiler, and means to steer the trucks.

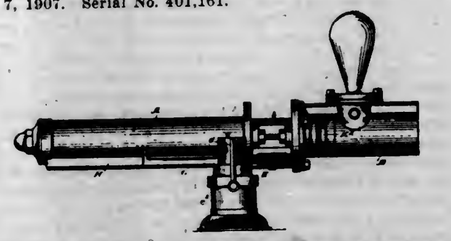
2. In a traction engine, the combination of two-wheeled front and rear trucks, a turning steering post at the front end of the rear truck and having a connection to the front truck arranged to turn the same when the post is turned, means to turn the post, and means carried by the trucks to drive the same.

3. In a traction engine, the combination of a two-wheeled front truck, a cylindrical water tank mounted thereon and having a central horizontal bearing tube, a rear truck, a steam boiler mounted thereon, a turning steering post mounted on the front end of the rear truck and having a rigid projecting tube extending forwardly into said bearing tube, whereby the tank may turn in a vertical plane with respect to the boiler, and said front truck swing in a horizontal plane to change the direction of travel, and steam engines mounted on and connected to the trucks to drive the same.

4. In a traction engine, the combination of a two-wheeled front truck, a cylindrical water tank mounted thereon and having a horizontal axial tube, a rear truck, a steam boiler mounted thereon, a hollow turning post on the rear truck and having a forwardly-projecting tube bearing in said tube, a steam engine mounted upon and having driving connections to the front truck, and a pipe extending from the boiler through said post and tubes and to the engine and having a flexible coupling, and means to turn the post to steer the trucks.

5. In a traction engine, the combination of a front truck, a rear truck, a turning post on the rear truck and connected to the front truck to turn the same, said post having a projecting arm, a threaded tube connected to said arm, and a steering screw extending into said tube, to move the same.

883,935. MOTOR. JOSEPH H. CHAMP, Cleveland, Ohio. Filed July 1, 1899. Serial No. 722,521. Renewed Nov. 7, 1907. Serial No. 401,161.



1. The combination of pistons K K' on rod k in cylinder A having clear space between pistons; primary valve cylinder C having three channels c c' c^2 connecting therewith at different sections of its length; primary valve mechanism D comprising rod d having two opposite end pistons d' d^2 and central piston valve d^3; main valve mechanism casing E having three differential cylindrical sections

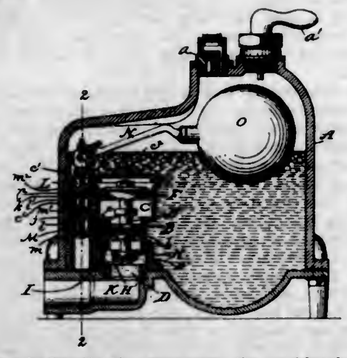
e e' e^2 located in vertical line, channel e^3 connecting with upper cylindrical section e, channel e^4 connecting with middle cylindrical section e'; main valve mechanism F comprising rod f having two differential piston valves f' f^2 and piston f^3; passage G connecting channel c' with cylindrical section e^2 at g always below piston f^3; passage H connecting one end of cylinder A with channel e^4; passage I connecting the other end of cylinder A with channel e^3; passage c^3 connecting channel c with cylindrical section e^2 at a point always above piston f^3; passage j connecting channel c^3 with outlet J; passage j' connecting outlet J with cylindrical section e'; passage L connecting cylinder A with outlet J; passages M and N respectively connecting opposite ends of cylinder C with cylinder A; inlet O connected with cylindrical sections e e^2 respectively by passages o o', substantially as set forth.

2. The combination of pistons K K' on rod k in cylinder A having a clear space between such two pistons; primary valve cylinder C having channels c c' c^2 respectively communicating therewith at different sections of its length; primary valve mechanism D consisting of rod d having opposite end pistons d' d^2 and intermediate piston valve d^3; passages M N respectively connecting opposite ends of cylinder C with cylinder A respectively at m n; passage L connecting with cylinder A at a central point l always between pistons K K' and in a diametrical section of cylinder A between said connections m n; main valve mechanism casing E having differential cylindrical sections e e' e^2, such section e communicating with channel e^3, such section e' communicating with channel e^4; main valve mechanism F consisting of rod f having piston valves f' f^2 and piston f^3; inlet O connecting with the upper portions of said sections e e^2; outlet J communicating with passage L, chamber e' and channel c^3; passage H connecting one end of cylinder A with channel e^4; passage I connecting the other end of cylinder A with channel e^3; passage G connecting channel c' with said section e^2 at a point always to one side of piston f^3; passage c^3 connecting channel c with section e^2 at a point always to the remaining side of piston f^3, substantially as set forth.

3. The combination of pistons K K' on rod k in cylinder A having a clear space between such two pistons; primary valve mechanism cylinder C having channels c c' c^2 and containing rod d having opposite end pistons d' d^2 and intermediate piston valve d^3; main valve mechanism cylinder E having the three differential cylindrical sections e e' e^2; main valve mechanism F comprising rod f having piston valve f' at its upper portion working in said section e, and having piston valve f^2 at its middle portion working in said section e', and having piston f^3 at its lower portion working in said section e^2; passage G having its lower portion in constant free communication with the lower portion of said piston section e^2,—the upper portion of said passage G having connection g' with annular channel c'; passage H having dependent branch h connecting with annular channel e^4,—the outer end of such passage H having connection h' with one end of cylinder A; passage I having its lower extremity connecting with annular channel e^3,—the upper portion of such passage I connecting with the other end of cylinder A; passage c^3 connecting said channel c with the top of said section e^2; passage j connecting channel c^3 with outlet J; passage L having one end l connecting with cylinder A and having its other end l' connecting by passage j' into outlet J; said connection l being located near the middle of cylinder A at a point always between pistons K K'; passage M having one end connecting with cylinder A at point m, and having its opposite end communicating with one end of cylinder C; passage N having one end connecting with cylinder A at point n, and having its opposite end communicating with the other end of cylinder C; inlet O connected by passage o with the upper portion of section e^2, and connected by passage o' with the upper portion of section e, substantially as set forth.

4. The combination of power pistons K K' secured on piston rod k at a distance apart in power cylinder A within which such two pistons together reciprocate with a clear space between them; primary valve cylinder C having the three annular channels c c' c^2 surrounding it and connecting with it at different cross sections of its length; primary valve mechanism D consisting of piston rod d having the central piston valve d^2 and the two opposite end pistons d' d^3; main valve mechanism casing E having the three differential cylindrical sections e e' e^2 located in vertical axial line with each other, the upper section e being of the smallest relative diameter, the middle section e' being of the next largest diameter, the bottom section e^2 being of the largest diameter; said upper section e having the annular channel e^3 surrounding it and connecting therewith, said middle section e' having the annular channel e^4 surrounding it and connecting therewith; main valve mechanism F consisting of rod f having at its upper portion piston valve f' working in said section e, and having at its middle portion piston valve f^2 working in said section e', and having at its lower portion piston f^3 working in said section e^2; passage G having its lower portion in constant free communication with the lower portion of said piston section e^2 by connection g which is always below said piston f^3,—such passage G having its upper portion g' connecting with said annular channel c'; passage H having depending branch h connecting with said annular channel e^4, and having its outer portion h' connecting with one end of cylinder A; passage I having its lower extremity connecting with annular channel e^3, and having its upper portion connecting with the other end of cylinder A; passage c^3 connecting said annular channel c with the top of said piston section e^2; passage j connecting said annular channel c^3 with outlet J; passage L having connection l with cylinder A and also connecting with passage l' which latter empties through passage j' into outlet J; passage M having connection m with cylinder A and communicating with one end of cylinder C; passage N having connection n with cylinder A and communicating with the other end of cylinder C; inlet O connecting by passage o with the upper portion of section e^2, and connecting by passage o' with the upper portion of section e, substantially as set forth.

883,936. HYDRAULIC AIR-COMPRESSOR. JOSEPH H. CHAMP, Cleveland, Ohio. Filed May 6, 1904. Serial No. 206,720.



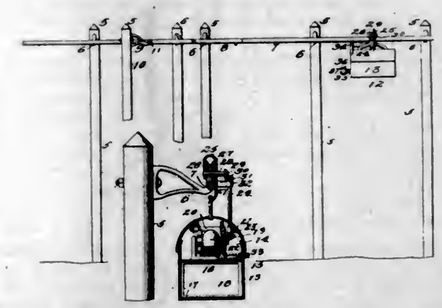
1. In a hydraulic air compressor, the combination of an air and water chamber; a piston chamber comprising two alined cylindrical portions of different diameters, the smaller of said portions being provided with an annular port communicating with said air and water chamber; a differential piston mounted in said piston chamber, the piston member in said smaller portion serving as a valve to control said port; a second chamber continuous with said smaller piston chamber portion, such second chamber communicating freely with said air and water chamber and having a cylindrical outlet passage in axial alinement with said piston chamber; a piston valve borne by said piston and spaced with respect to the smaller piston member so as to enter said outlet passage to close the same when said piston is at the end of one stroke and to entirely clear said passage when said piston is at the end of its other stroke; and means for supplying water to said piston chamber to reciprocate said differential piston.

2. In a hydraulic air compressor, the combination of an air and water chamber, a piston chamber comprising two alined cylindrical portions of different diameters, the smaller of said portions being provided with an annular port comprising a plurality of perforations and communicating directly with said air and water chamber; a differential piston mounted in said piston chamber, the piston member in said smaller portion serving as a valve to control said port; a second enlarged chamber continuous with said smaller piston chamber portion and opening laterally directly into said air and water chamber, whereby free communication is had therewith, such second chamber having a cylindrical outlet passage in axial alinement with said piston chamber; a piston valve borne by said piston and spaced with respect to the smaller piston member so as to enter said outlet passage to close the same, when said piston is at the end of one stroke and to entirely clear said passage when said piston is at the end of its other stroke; and means, controlled by the water level in said air and water chamber, for supplying water to said piston chamber to reciprocate said differential piston.

3. In a hydraulic air compressor, the combination of an air and water chamber; a piston chamber comprising two alined cylindrical portions of different diameters, the smaller of said portions being provided with an annular port communicating with said air and water chamber; a differential piston mounted in said piston chamber, the piston member in said smaller portion serving as a valve to control said port; a second chamber continuous with said smaller piston chamber portion, such second chamber communicating freely with said air and water chamber and having a cylindrical outlet passage in axial alinement with said piston chamber; a piston valve borne by said piston and spaced with respect to the smaller piston member so as to enter said outlet passage to close the same when said piston is at the end of one stroke and to entirely clear said passage when said piston is at the end of its other stroke; a valve chamber apart from said aforesaid chambers, such valve chamber having inlet and outlet ports and intermediate thereof a port having communication with the upper end of the larger portion of said piston chamber; a piston valve reciprocable in said valve chamber and adapted alternately to connect said intermediate port with said inlet and outlet ports, respectively; and means operable by the level of water in said air and water chamber for reciprocating said valve, the lower end of said larger piston chamber portion being connected with the water supply and the lower end of said valve chamber with said second, or outlet, chamber, substantially as set forth.

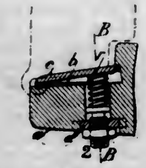
4. In a hydraulic air compressor, the combination of an air and water chamber comprising two alined cylindrical portions of different diameters, the smaller of said portions being provided with an annular port comprising a plurality of perforations and communicating directly with said air and water chamber; a differential piston mounted in said piston chamber, the piston member in said smaller portion serving as a valve to control said port; a second enlarged chamber continuous with said smaller piston chamber portion and opening laterally directly into said air and water chamber, whereby free communication is had therewith, such second chamber having a cylindrical outlet passage in axial alinement with said piston chamber; a piston valve borne by said piston and spaced with respect to the smaller piston member so as to enter said outlet passage to close the same when said piston is at the end of one stroke and to entirely clear said passage when said piston is at the end of its other stroke; a valve chamber apart from aforesaid chambers, such valve chamber having inlet and outlet ports and intermediate thereof a port having communication with the upper end of the larger portion of said piston chamber; a piston valve reciprocable in said valve chamber and adapted alternately to connect said intermediate port with said inlet and outlet ports, respectively; and means operable by the level of water in said air and water chamber for reciprocating said valve, the lower end of said larger piston chamber portion being connected with the water supply and the lower end of said valve chamber with said second, or outlet, chamber, substantially as set forth.

883,937. MAIL-CARRIER. RUSSELL CHAPMAN, Findlay, Ill. Filed Oct. 26, 1907. Serial No. 399,342.



The combination with a suspended rail including a main line and branch lines, switches arranged to connect the main line with said branch lines and spring means for holding said switches normally disengaged from the main line, of a carrier consisting of a receptacle having upper and lower compartments, a motor located in the lower compartment, a bracket carried by said carrier and having its upper end bent to form spaced portions, a rail-engaging wheel revolubly mounted between the spaced portions of said bracket, a gear carried by said rail-engaging wheel, a gear carried by the motor, a bracket carried by said first named bracket, a shaft carried by said last named bracket, a gear carried by the shaft at the upper end thereof and in mesh with the gear carried by said rail-engaging wheel, a second gear carried by said shaft at the lower end thereof and in mesh with the gear carried by said motor and switch closing means carried by said carrier.

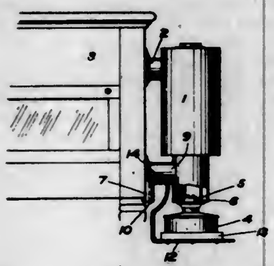
883,938. ELASTIC SECURING DEVICE FOR DOORS OF AUTOMOBILES AND OTHER VEHICLES. FERDINAND CHARRON, Puteaux, France. Filed Nov. 4, 1907. Serial No. 400,585.



1. An elastic securing device for doors of automobile and other vehicles comprising a metal plate fixed on the body of the car in the frame of the door and interrupted at its middle part, a movable plate pivoted to the fixed plate and arranged in the missing part of said fixed plate and moving in a plane at right angles to the fixed plate, and elastic means arranged in the thickness of the wood of the door frame opposite the movable plate, substantially as described and for the purpose set forth.

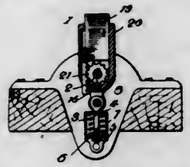
2. An elastic securing device for doors of automobile and other vehicles comprising a metal plate fixed on the body of the car in the frame of the door and interrupted at its middle part, a movable plate pivoted to the fixed plate and arranged in the missing part of said fixed plate, a second fixed plate secured in the thickness of the wood of the door frame opposite the first plate and parallel thereto, screw-threaded gudgeons engaging the second fixed plate, and elastic means arranged between the movable plate and the gudgeons, substantially as described and for the purpose set forth.

883,939. LAMP-SUPPORT FOR INCUBATOR-HEATERS. CLARENCE Z. DAVIS and JOHN H. BAER, Buffalo, N. Y., assignors to Cyphers Incubator Company, Buffalo, N. Y., a Corporation of New York. Filed Aug. 31, 1905. Serial No 276,512.



The combination of an incubator, an incubator heater having a heating tube open at its lower end, means for supporting said incubator heater on the incubator, vertically disposed sockets fastened on the incubator, a lamp adapted to fit the lower end of said heating tube, and a support for the lamp having vertically disposed and downwardly directed pins fitting in said sockets and extending from said pins upwardly, outwardly, downwardly, and horizontally, and composed at its curved portions of an elastic material, whereby the lamp is held in place against the lower end of the heating tube and is removable therefrom by bending said support.

883,940. RAILWAY-SIGNAL. CHARLES D. DEARDURFF and BERNARD L. MCDONOUGH, Newark, Ohio. Filed May 8, 1907. Serial No. 372,624.



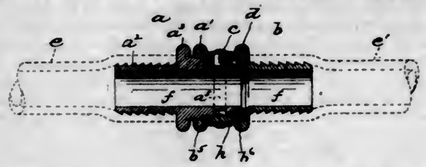
1. In combination, a trip mounted to receive an oscillatory movement, a pivoted frame, a connection slidable with reference to the said pivoted frame and having pivotal attachment with the said trip, and a spring interposed between the said connection and frame to hold the trip and parts in normal position.

2. In railway signaling means, the combination of a rock shaft provided with a trip, an eye-bolt having pivotal connection with a part projecting from said shaft, a housing and a spring mounted upon the eye-bolt and confined between a stop thereof and the said housing and normally exerting a pressure to hold the rock shaft and trip in given position.

3. In combination, a rock shaft, a frame mounted upon the rock shaft to have independent movement, a trip slidable with reference to said frame, means for imparting rotary movement to said rock shaft, connecting means between said rock shaft and trip to impart sliding movement to the latter, and a yielding connection between the aforesaid frame and a support to hold said frame in a given position.

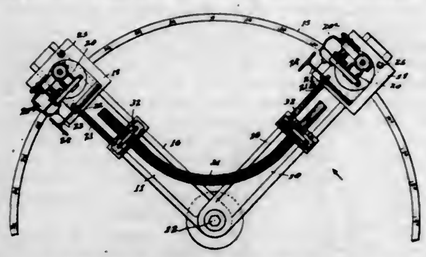
4. In combination, a rock shaft, a frame loose upon said rock shaft, a trip slidable in the frame, a rack and pinion connection between said trip and rock shaft, means for imparting a turning movement to the rock shaft either to project or withdraw the said trip, a pivoted frame, a bolt having slidable connection with the pivoted frame, and pivoted connection with the frame loose upon the rock shaft, and a spring interposed between the said pivoted frame and bolt and normally exerting a pressure to hold the parts in given position.

883,941. HOSE-COUPLING. MICHAEL P. EAGAN, Newport, R. I. Filed Feb. 23, 1907. Serial No. 358,998.



In a hose coupling, a male member having a central outwardly projecting annular flange to engage the hose end, an annular enlarged portion to the front of said flange, a second annular portion spaced from said first portion and of less diameter than the latter, a beveled annular connecting portion between said first named portions, a beveled outer end on said male member with a circumferential groove formed between said outer end and said second named annular portion, a female member having an interior opening shaped to receive said two annular portions, and said beveled portion of the male member, an annular exterior flange at the outer end of said female member, a second annular exterior flange spaced from the first and overlying the inner end of said interior opening of the female member, said female member having a circumferential recess which is formed in said second named exterior flange thereof, packing in said recess, a flat contractile spring in the form of the major part of a circle secured to said female member in the space between said flanges thereof, and an angularly disposed pin carried by said spring at a point diametrically opposite its point of securement, said female member having an opening formed therein and enlarged at its base to receive said pin.

883,942. MACHINE FOR FINISHING PIPE BENDS, FITTINGS, AND THE LIKE. HOWARD W. EVANS, Chicago, Ill. Filed Apr. 18, 1907. Serial No. 368,989.

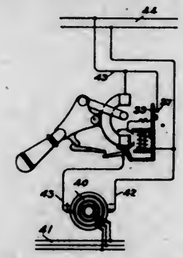


1. In a machine of the character described, the combination with means for supporting a pipe, pipe bend, or fitting in a position to be operated upon, of a machine bed pivoted for angular adjustment, and a finishing machine mounted on and adjustable longitudinally of said machine bed and also angularly adjustable on its own vertical axis and fitted with a tool spindle mounted on a horizontal axis for engaging the work, substantially as described.

2. In a machine of the character described, the combination with a pair of supporting-members capable of relative angular adjustment, of finishing machines mounted on and adjustable longitudinally of said supporting-members, respectively, said finishing machines being capable of angular adjustment on their own vertical axes and having tool spindles each mounted on a horizontal axis for engaging the work, and means for supporting a pipe, pipe bend, or fitting in a position to be operated upon, substantially as described.

3. In a machine of the character described, the combination with a pair of supporting-members pivotally connected at one end thereof, of finishing machines mounted on and adjustable longitudinally of said supporting-members, respectively, and work-supports disposed between said finishing machines and the pivotal axis of said supporting-members and adjustable longitudinally of the latter, substantially as described.

883,943. REVERSE-CURRENT CIRCUIT-BREAKER. CHARLES E. EVELETH, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed May 25, 1904. Serial No. 209,617.



1. The combination of a circuit-breaker, tripping means therefor, and controlling means for said tripping means mechanically connected thereto and comprising a polarized core located in the magnetic field adjacent to the breaker contacts, an armature, a shunt coil, and contacts operated by the closing of the armature to momentarily close the circuit through the shunt coil.

2. The combination of a circuit-breaker, mechanical tripping means therefor normally tending to trip the breaker, and means for controlling said tripping means located in the magnetic field adjacent to the breaker and comprising a polarized magnetic circuit including an armature, a shunt coil, and means for closing the circuit through said coil so as to repolarize the core independently of the magnetic field after the core has been demagnetized by a reversal in the direction of the flux in said field.

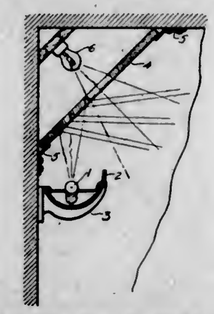
3. The combination with a dynamo-electric machine, of a circuit-breaker therefor, and means located in the magnetic field adjacent to the breaker contacts and comprising a polarized magnet for causing the circuit to open when the current in the dynamo-electric machine reverses, and means for giving an initial magnetomotive force to said magnet while the circuit-breaker is being reset.

4. The combination of a circuit breaker, tripping means therefor, and electromagnetic means for controlling said tripping means having its magnetic circuit within the magnetic field produced by the electric circuit through said breaker and eccentrically disposed with reference to said field.

5. The combination with a circuit breaker comprising fixed contact studs, a movable bridging contact and tripping means, of electromagnetic means for controlling said tripping means having its magnetic circuit within the magnetic field adjacent to one of the breaker contact studs and eccentrically disposed with reference to said field.

[Claims 6 and 7 not printed in the Gazette.]

883,944. ELECTRIC LIGHTING. WALTER C. FISH, Lynn, Mass., assignor to General Electric Company, a Corporation of New York. Filed Dec. 8, 1904. Serial No. 236,046.



1. The combination, with a source of illumination yielding light deficient in some of the solar colors, of means for shielding the area to be illuminated from the direct rays from said source, means for reflecting said light on said area, and means for combining with said reflected light the light from a source capable of supplying said deficient solar colors.

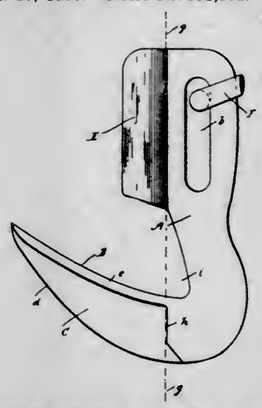
2. The combination, with a vapor electric lamp, of a light-transmitting reflector therefor, and means for projecting light through said reflector to combine with the reflected light from said vapor electric lamp.

3. The combination, with an electric lamp, of a light-transmitting reflector therefor, and a source of light having a color value different from that of said electric lamp and located back of said reflector, the light rays from said source passing through said reflector and mingling with the light from said electric lamp.

4. The combination, with a vapor electric lamp, of a light-transmitting reflector located in proximity thereto and at such an angle that light from said vapor electric lamp will be reflected by said reflector, and means for projecting light of a different color value through said reflector to combine with the reflected light from said vapor electric lamp.

5. The combination, with a tubular electric lamp, of an opal reflector arranged substantially parallel thereto and adapted to reflect light from said tubular lamp, and means for projecting light through said reflector to combine with the reflected light from said tubular lamp.

883,945. GRAB-HOOK. JOHN E. FLYNN, Austin, Pa. Filed Sept. 17, 1907. Serial No. 393,302.



1. A grab-hook provided with a shank having a hook at one end and a longitudinal slot in its other end portion, and having also a blade projecting from the said shank on one side of the said slot, in combination with a draft attachment which is slidable longitudinally in the said slot.

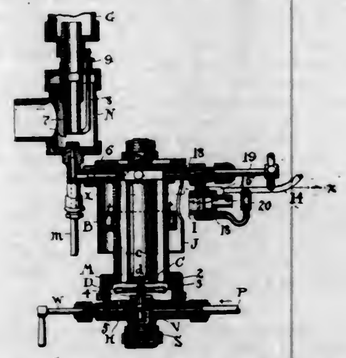
2. A grab-hook provided with a shank having a hook at one end and a longitudinal slot in its other end portion, said hook being provided with a sharp web at its lower part and flanges extending along its upper edge, and the said shank being also provided with a blade which projects from one side of it adjacent to its said slot, in combination with a draft attachment which is slidable longitudinally in the said slot.

3. A grab-hook provided with a shank having a hook at one end and a longitudinal slot which extends from its middle portion to its outer end portion, and having also a blade which projects from the middle and end portions of the said shank, in combination with a draft attachment which is slidable longitudinally in the said slot to vary the leverage on the hook according to the direction of draft.

883,946. GASOLENE HEATING AND LIGHTING APPARATUS. THOMAS J. FORDE, Geneva, Ohio. Filed June 5, 1907. Serial No. 377,288.

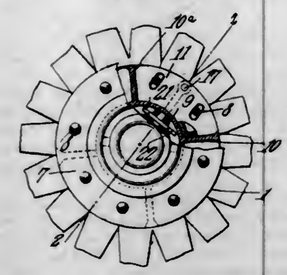
1. In a gasolene heating and lighting apparatus, a tubular vapor generator provided with an inlet chamber at

its bottom open alike to all the tubes thereof and an oil supply passage leading to said chamber, a spring pressed main valve adapted to open and close said passage to said chamber, having a projection at its top entering said chamber, an expansible valve controlling device seated centrally on said projection and having a point at its top and center resting against the wall of the generator, a by-pass to said chamber and a hand controlled valve therefor, and means to heat said generator and said expansible device.



2. A gasolene heating and lighting apparatus comprising a vapor generator consisting of a series of tubes, and initial heater at the top thereof, a primary burner to start said initial heater and a permanent heater for said generator about said tubes, in combination with a gasolene tank, a vapor conducting channel from the top of said tank to said primary burner and a gasolene conductor from the bottom of said tank to said generator, and vapor channels from said chamber to said initial heater and to said permanent burner, the channel to said permanent burner comprising a mixer and a valve controlled passage E outside said mixer to said permanent heater.

883,947. VEHICLE-WHEEL. OLIVER M. FRALEY, Victor, Oreg. Filed July 15, 1907. Serial No. 383,760.



1. In a vehicle wheel, the combination with the wheel spokes grouped in sets, of an individual actuating device for each group, and means extending between the ends of the spokes for successively adjusting the spoke actuating devices.

2. In a vehicle wheel, the combination with the wheel spokes, of a set of devices for adjusting the spokes radially of the wheel, and revoluble means extending between the ends of the spokes and coöperating with the said devices successively to operate them.

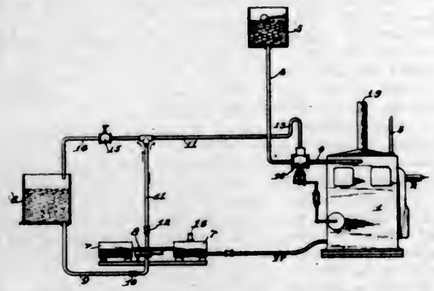
3. In a vehicle wheel, the combination with the wheel spokes, of a set of screws for adjusting them radially, nuts coöperating with the screws, and operating means arranged to coöperate with the said nuts to turn them and adjust the screws.

4. In a vehicle wheel, the combination with the wheel spokes, of a set of screws for adjusting them radially, nuts coöperating with the said screws and having actuating teeth thereon, and a part rotatable relatively to the spokes and having a projection thereon arranged to coöperate with the teeth of the nuts to turn them and adjust the screws.

5. In a vehicle wheel, the combination with the spokes movable radially of the wheel, of a set of screws for adjusting the spokes, and means for operating on the screws successively for adjusting them.

[Claims 6 to 14 not printed in the Gazette.]

883,948. FEED-WATER HEATING AND PURIFYING SYSTEM. JOSEPH W. GAMBLE, Philadelphia, Pa., assignor to Joseph S. Lovering Wharton, William S. Hallowell, and John C. Jones, doing business under the firm-name of Harrison Safety Boiler Works, Philadelphia, Pa. Filed July 8, 1907. Serial No. 382,612.



1. In a feed water heating system, the combination of a feed water heater; a chemical solution supply; an automatically regulated raw water supply; a chemical solution pump discharging into the raw water supply; a by-pass between the chemical pump and the chemical supply and a back pressure valve located in said by-pass.

2. In a feed water heating system, the combination of a feed water heater; a chemical solution supply placed below the raw water inlet to the heater; a raw water supply, and means for regulating the same according to the water level in the heater; a boiler feed pump; a chemical solution pump operating simultaneously with the boiler feed pump and discharging into the raw water supply; a by-pass between the chemical pump and the chemical supply; and a back pressure valve located in said by-pass.

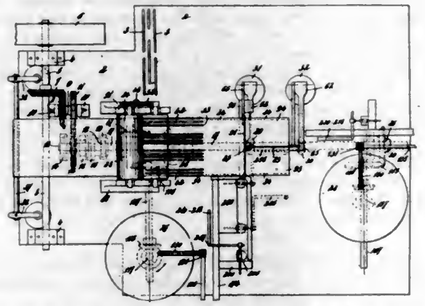
3. The combination of a feed water heater; a raw water supply, and means for regulating it according to the water level in the heater; a chemical solution supply placed below the raw water inlet of the heater; a pure water supply; means for removing the heated water; means operating simultaneously therewith for supplying the chemical solution to the raw water in quantity proportional to the raw water normally supplied; and means for automatically returning any excess of chemical solution to the supply.

4. The combination of a feed water heater; an automatically regulated raw water supply; a pure water supply; a chemical supply; means for introducing into the raw water a quantity of chemical proportional to the quantity of raw water normally supplied to the heater, said raw water and chemical supplies varying inversely to said pure water supply, and means for automatically diverting any excess of chemical back to the supply.

5. The combination of a feed water heater; a raw water supply; means for regulating the admission of raw water according to the water level in the heater; a pure water supply; a chemical supply; means for removing the heated water from the heater; means operating simultaneously therewith for supplying the chemical solution to the raw water in quantity porportional to the raw water normally supplied to the heater; means for automatically returning any excess of chemical solution to the supply.

[Claims 6 to 17 not printed in the Gazette.]

883,949. MACHINE FOR THE PRODUCTION OF PAPER TUBES. JEAN GOHY, Ensival, near Verviers, Belgium. Filed Aug. 5, 1905. Serial No. 272,910.



1. In a machine for producing tubes of various shapes, feed mechanism, cutting mechanism, tube-forming mechanism, and means whereby the relative positions of said tube-forming mechanism and the feed mechanism may be varied for the purpose of producing tubes of different shapes.

2. In a machine for the production of tubes, mechanism normally in a fixed predetermined position for feeding sheet material to a cutting mechanism, cutting mechanism adjacent to the path of said sheet material, tube-forming mechanism, and means for varying the relative positions of said tube-forming mechanism and the feed mechanism according to the shape of the tubes to be produced in the machine.

3. In a machine for the production of tubes, a feed mechanism, cutting mechanism, and a tube-forming mechanism, said tube-forming mechanism being mounted on a table which is movable on a vertical axis, and means whereby the tube-forming mechanism may be shifted to various positions relative to the feed mechanism according to the shape of the tubes to be produced.

4. In a machine for the production of tubes of various shapes, a feed mechanism, cutting mechanism, means for varying the position of said cutting mechanism relative to the feed mechanism, a tube-forming mechanism, and means for adjusting the tube-forming mechanism relative to said feed mechanism and the cutting mechanism.

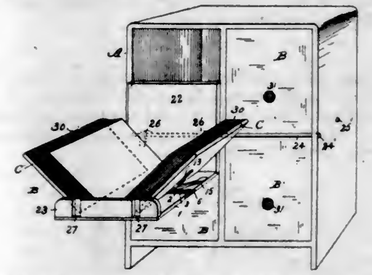
5. In a machine for the production of paper tubes, the combination of a supporting frame, a feed mechanism mounted on said frame, cutting devices adjustably mounted on said frame, forming mechanisms, a displaceable frame adapted to support said forming mechanisms and means for imparting rotation to said forming mechanisms on said displaceable frame, to cause them to occupy any desired angular position with regard to the feed mechanism.

[Claims 6 to 30 not printed in the Gazette.]

883,950. FILE AND INDEX. WILLIAM O. GOTTWALS, Washington, D. C. Filed Aug. 7, 1903. Serial No. 168,629.

1. In a file the combination of a base-board and two opposing tiltable file boards mounted on the base-board and within the side limits of the same, the said file boards being constructed to be outwardly inclined for the examination of papers and to be secured in vertical position for clamping the papers between them, and one of the file boards being movable along the base board substantially to or beyond the middle of the same to vary the capacity of the file, substantially as set forth.

2. In a file the combination of a base-board adapted to serve as either the bottom or front of the file, and two opposing tiltable file boards or followers mounted on the base-board within the side edges of the base-board, and constructed and arranged to be outwardly inclined for the examination of papers and to be secured in vertical position for clamping the papers between them, one of the said followers being movable along the base-board to a position in substantial contact with the other follower as and for the purposes described.



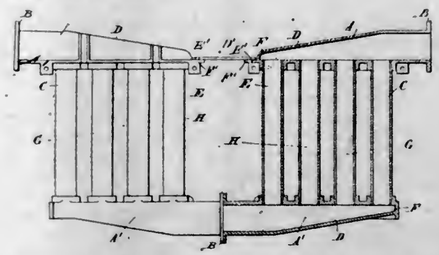
3. In a file the combination of a base-board, and two opposing followers mounted and tiltable on the base-board, one or both of said followers being slidable along the base-board to bring the followers into substantial contact, substantially as and for the purposes described.

4. In a file the combination of a base-board having rear and front boards, and two opposing tiltable followers mounted on the base-board within the side limits of the base-board, the whole forming a box-like receptacle, the said followers being constructed and arranged to be outwardly inclined for the examination of papers and to be secured in vertical position for clamping the papers between them, one or both of the followers being inwardly slidable on the base-board to bring the followers into substantial contact, substantially as and for the purposes described.

5. In a file the combination of a receptacle having a base adapted to serve as the front or bottom of the file, a high wall 22 adapted to serve as the bottom or back of the file, and a low wall 23 which serves as the front of the file when the file is in position for examination, and two opposing tiltable followers mounted on the base and arranged within the side edges of the base, one of the followers being slidable on the base to bring the followers into substantial contact when the file is empty or contains few papers, substantially as and for the purposes described.

[Claims 6 to 18 not printed in the Gazette.]

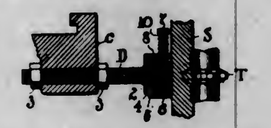
883,951. APPARATUS FOR HEATING AIR. FRANCIS W. GREEN, Wakefield, England. Filed July 13, 1904. Serial No. 216,330.



In an air-heating apparatus, a pair of inlet and outlet headers arranged in longitudinal alinement, each header consisting of a hollow body rectangular is cross section and having a straight wall formed with flue receiving openings, the wall of each header opposite to said straight wall being inclined from the open end of the header toward its closed end, the reduced ends of said headers being disposed adjacent each other, and each formed with a bracket, a plate secured to said brackets to rigidly connect said headers, a connecting header spaced apart from and parallel to said inlet and outlet headers, consisting of a hollow body having a straight side disposed parallel to the inlet and outlet headers and formed with flue receiving

openings alining with those in the other headers, said connecting header being formed with the wall opposite to its straight side, inclined from its central portion toward its opposite ends, and flues secured at their opposite ends in said flue receiving openings.

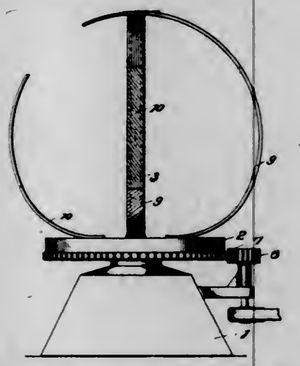
883,952. ATTACHMENT FOR GEAR-CUTTING, PLANING, AND MILLING MACHINES. SAMUEL A. HAND, Cleveland, Ohio, assignor to The Chandler & Price Company, Cleveland, Ohio, a Corporation. Filed Aug. 26, 1907. Serial No. 390,084.



1. A device to prevent chattering in gear cutting and other machines, comprising a supporting member provided with a screw threaded shank and nuts thereon to adjustably fix the same on a support and said device having an inclined outer face, a substantially wedge shaped block slidably engaged on the face of said device, a headed stem engaged in the narrower end of said block and supported from said device, and a spring about the outer portion of said stem beneath the head thereon to tighten the said block.

2. The combination of a gear cutting or other machine with an attachment adjustably fixed thereon and adapted to prevent chattering in the cutting operation, said attachment having a screw threaded shank adapted to fasten the same and a head with an outer transversely inclined face, a substantially wedge shaped block having dovetailed slidable engagement with said head, and means to normally draw said block into tightening position comprising a headed stem fixed in said block, a spring support fixed on said head and a spring engaged about said stem and resting on said support.

883,953. MEANS FOR PRODUCING THEATRICAL STAGE EFFECTS. GEORGE W. HANLON, New York, N. Y., assignor to Imperial Curtain Company, New York, N. Y., a Corporation of New Jersey. Filed June 14, 1907. Serial No. 378,977.



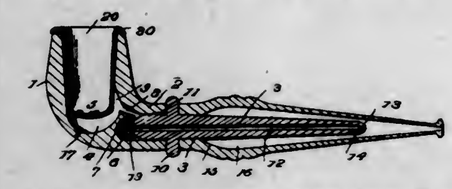
1. In a device for creating the illusion of a whirling kaleidoscopic sphere for theatrical stage effects, a rotary platform or support, a varicolored ring or hoop vertically mounted on and movable with said platform or support, and means for rotating said platform.

2. The herein described device for producing a theatrical stage effect, comprising a rotary platform or support, a plurality of hoops or rings mounted on and movable with said platform, said hoops or rings being each varicolored and relatively stationary, and means for rotating said platform.

3. The herein described device for producing a theatrical stage effect, comprising a rotary platform or support, two rings or hoops set at right angles to each other and mounted on and movable with said platform, and means for rotating said platform, each of said rings carrying a series of plates or vanes of various colors, for the purpose stated.

4. The herein described device for producing a theatrical stage effect, comprising a base or pedestal, a horizontally disposed platform or support mounted on said base, a shaft extending through said platform and mounted in said base, a plurality of hoops or rings secured to said platform and to said shaft, said hoops or rings carrying varicolored plates or vanes, and means for rotating said platform and hoops or rings.

883,954. TOBACCO-PIPE. WILLIAM H. HOOKER, Manchester, N. H. Filed Mar. 15, 1907. Serial No. 362,577.



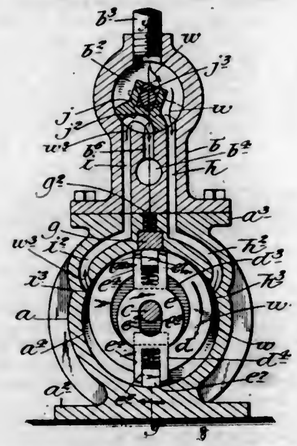
1. In a pipe, the combination of a bowl formed with a neck provided with a chamber, a supplemental bowl fitted within the main bowl and spaced from the bottom thereof whereby a second chamber is formed below the supplemental bowl, the chamber in the neck and the chamber below the supplemental bowl being separated by a partition having a communicating passage at one side thereof, a check valve received by the neck and having a longitudinal passage therethrough which is closed at the rear end of the check valve, and a hollow mouth-piece fitting over the rear portion of the check valve and spaced therefrom to form a trap.

2. In a pipe, the combination of a bowl having an air inlet in the bottom thereof and formed with a neck provided with a chamber, a supplemental bowl fitted within the main bowl and spaced from the bottom thereof whereby a second chamber is formed below the supplemental bowl, the chamber in the neck and the chamber below the supplemental bowl being separated by a partition having a communicating passage at one side thereof, a check valve received by the neck and having a longitudinal passage therethrough which is closed at the rear end of the check valve, and a hollow mouth-piece fitting over the rear portion of the check valve.

883,955. ROTARY ENGINE. GEORGE W. HOPKINS, Brooklyn, N. Y.; Martha Hopkins administratrix of said George W. Hopkins, deceased. Filed Aug. 19, 1907. Serial No. 389,105.

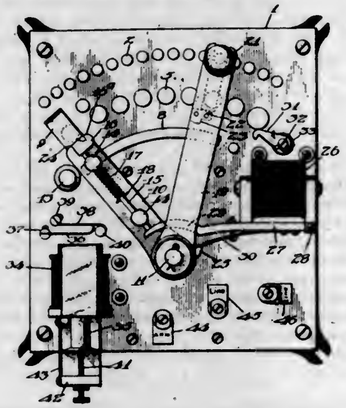
In a rotary engine, a casing provided with a cylindrical chamber, a shaft passing eccentrically and longitudinally therethrough, steam ports communicating with the opposite side portions of said chamber, one of which is adapted to serve as a supply and the other as an exhaust, and a piston connected with said shaft and composed of two parts, one of said parts being cylindrical in form and being keyed to said shaft and being provided in its opposite ends with diametrical recesses and in its opposite sides with longitudinal recesses, the other portion of said piston consisting of end parts adapted to fit in and movable in said diametrical recesses, and provided with elongated openings through which the shaft passes, and parallel side parts adapted to fit in and movable in said longitudinal recesses, said parallel side parts being provided in their outer surfaces with spring operated packings which extend longitudinally thereof, and the top wall of said chamber being also provided with a spring operated packing, the end walls

of said chamber being also provided with counter-sunk spring operated packing plates of the same diametrical



dimensions as said chamber and adapted to bear on the ends of the parts of the piston.

883,956. MOTOR-STARTER. ALBERT J. HORTON, White Plains, N. Y., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis., a Corporation of Wisconsin. Filed June 13, 1906. Serial No. 321,566.



1. The combination with a motor, of a starting resistance therefor, a movable member for removing said resistance from the circuit, means for moving said member to a predetermined position, means independent of said first-mentioned means for holding said member in said pre-determined position, and means to automatically return said member to its initial position in event said resistance is removed too rapidly from the motor circuit.

2. The combination with a motor, of a starting resistance therefor, a movable member for removing said resistance from circuit, means for removing said member to a predetermined position, means independent of said first-mentioned means for holding said member in said predetermined position, and means for automatically returning said member to its initial position in event an abnormal current flows through the motor.

3. The combination with a motor, of a resistance therefor, a movable member for controlling said resistance, means for moving said member to a predetermined position, means independent of said first-mentioned means for holding said member in said predetermined position, and means for automatically returning said member to its initial position independently of the movement given thereto by the operator, in event said resistance is removed too rapidly from the motor circuit.

4. The combination with a motor, of a resistance therefor, a movable member for controlling said resistance, means for moving said member to a predetermined position, means independent of said first-mentioned means for holding said member in a predetermined position, and means for removing said member from the control of the operator and automatically returning the same to its initial position, in event of an excessive flow of current through the motor.

5. The combination with a motor, of a resistance therefor, a movable member for controlling said resistance, means tending to keep said member in its initial position, a second movable member for operating said first member, means for operatively connecting said members, means for holding said first movable member in a predetermined position, and means for disconnecting said members to permit said first member to return to its initial position in event of an excessive flow of current through said motor.

[Claims 6 to 29 not printed in the Gazette.]

883,957. CURTAIN-FIXTURE. PAUL A. HOUGHTALING, Riverton, N. J., assignor to The Curtain Supply Company, Newark, N. J., a Corporation of New Jersey. Filed June 29, 1905. Serial No. 267,477.



1. A holding device for a curtain consisting of a curtain rod, spring actuated bars, and shoes carried by said bars, one of the members comprised by a bar and its shoe having a cam groove and the other having a pin operative in the groove for retaining the curtain rod in any desired position, substantially as described.

2. The combination with a window frame having curtain-guiding grooves, of a curtain holding device including a curtain rod, two spring actuated bars carried thereby, and a shoe for each bar, each bar and its shoe being connected by a pin operative in a groove inclined to the line of the window frame grooves, substantially as described.

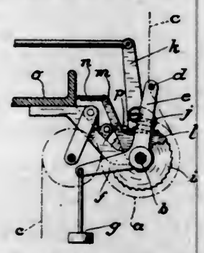
3. A curtain holding device consisting of a curtain rod having a shoe on each end, one of the members comprised by the rod and a shoe having a cam groove normally inclined to the line of movement of the curtain and the other having a pin operative in said groove, substantially as described.

4. The combination with a window frame having curtain guiding grooves, of a curtain holding device including a curtain bar, and a shoe connected directly thereto in engagement with the bottom of one of said grooves, said connection permitting the shoe to be bodily movable transversely and independent of the bar and the engaging face of the shoe being convex to the surface of its groove, with means for causing the convex surface of the shoe to frictionally hold upon the bottom of the groove when the curtain bar is moved upwardly.

5. The combination with a window frame having curtain-guiding grooves, of a curtain holding device including a curtain rod, and two shoes carried thereby in engagement with the bottoms of said grooves, the engaging faces of said shoes being convex to the surfaces of their respective grooves, one of the members comprised by a shoe and the curtain rod having a cam slot normally inclined to the line of the window-frame groove, and the other having a pin operative in said slot, substantially as described.

[Claims 6 to 12 not printed in the Gazette.]

883,958. TAKE-UP DEVICE FOR CIRCULAR-KNITTING MACHINES. HARRY A. HOUSEMAN, Philadelphia, Pa., assignor to Standard Machine Company, Philadelphia, Ps., a Corporation of Pennsylvania. Filed May 17, 1907. Serial No. 374,120.



1. In combination, a take-up roller, a ratchet and pawl for moving said roller, a tension device, adapted to rest against the fabric, a guard, connection between said guard and said tension device, whereby in one position of the tension device the guard renders the pawl inactive and the other position renders it active, and a pawl guard, independent of and in advance of the tension device guard.

2. In combination, a take-up roller, a ratchet and pawl for moving said roller, a tension device, adapted to rest against the fabric, a guard, connection between said guard and said tension device, whereby in one position of the tension device the guard renders the pawl inactive and the other position renders it active, a pawl guard, independent of and in advance of the tension device guard, the rear of said independent guard being normally in alinement with the ratchet tooth masked by the tension device guard and adapted to be struck by the pawl when the tension device guard is lowered.

3. In combination, a take-up roller, a ratchet and pawl for moving said roller, a tension device, adapted to rest against the fabric, a guard, connection between said guard and said tension device, whereby in one position of the tension device the guard renders the pawl inactive and the other position renders it active, a pawl guard, independent of and in advance of the tension device guard, the rear of said independent guard being normally in alinement with the ratchet tooth masked by the tension device guard and adapted to be struck by the pawl when the tension device guard is lowered, and means to return said independent guard, when released by said pawl.

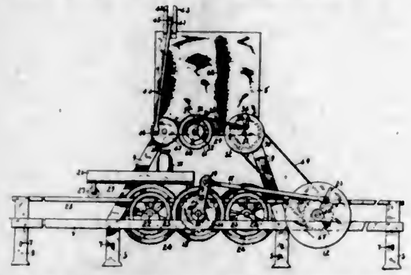
4. In combination, a take-up roller, a ratchet and pawl for moving said roller, a tension device, a guard, connection between said tension device and guard, whereby, in one position of the tension device the guard is elevated, and the pawl rendered inactive, and in another position the guard depressed and the pawl rendered active, and a pawl guard, independent of and in advance of the tension device guard.

5. In combination, a take-up roller, a ratchet and pawl for moving said roller, a tension device, a guard, connection between said tension device and guard, whereby, in one position of the tension device the guard is elevated and the pawl rendered inactive, and in another position the guard depressed and the pawl rendered active, a pawl guard, independent of and in advance of the tension device guard, the rear of said independent guard being normally in alinement with the ratchet tooth masked by the tension device guard and adapted to be struck by the pawl when the tension device guard is lowered.

[Claims 6 to 9 not printed in the Gazette.]

883,959. BOTTLING-MACHINE. LARS JENSEN, Chicago, Ill. Filed Jan. 2, 1907. Serial No. 350,468.

1. In a bottling machine, the combination with the frame, of a main operating shaft having a pulley mounted thereon, a suppy tank and filling tubes provided with suitable valves, a plurality of counter-shafts having geared connection with said main shaft, means for adjusting said connection to vary the speed of the counter-shafts, a bottle conveyer, gearing connecting said counter-shafts with the conveyer, and means connected with said main shaft for operating said valves of the filling tubes.



2. In a bottling machine, the combination with the frame, of a driving shaft, a supply tank, filling tubes, reciprocating sleeves yieldingly mounted upon said tubes, valves for said sleeves provided with tubular stems, means for reciprocating said sleeves, said means consisting of a cross-head adapted to move vertically, connection between the cross-head and said valve stems, and gearing connecting the cross-head with the said driving shaft.

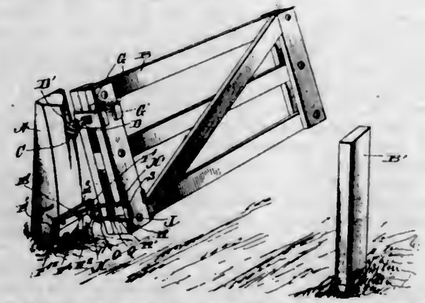
3. In a bottling machine, the combination with the frame, of a driving shaft, a supply tank, filling tubes opening into said tank, reciprocating sleeves slidably mounted upon said tubes, springs for said sleeves, valves situated in said sleeves and provided with tubular stems projecting axially through said tubes, a cross-head attached to said stems and adjustable means for reciprocating said cross-head.

4. In a bottling machine, the combination with the frame, of a driving shaft, a supply tank, filling tubes communicating with said tank, of spring held sleeves slidably mounted upon said tubes, valves arranged in said tubes and having tubular stems projecting through the tubes, a cross-head attached to said stems, and means for reciprocating said cross-head, said means consisting of pitman rods, crank gears for operating said rods, and operative means connecting said crank gears with the main driving shaft.

5. In a bottling machine, the combination with a frame, a driving shaft, a supply tank and filling tubes, of a carriage provided with wheels, gearing connection between said carriage and the driving shaft, means for varying the rate of movement of said carriage, slidable sleeves mounted upon said tubes and provided with gaskets, valves arranged in the sleeves and furnished with tubular stems projecting axially through said tubes, a movable cross-head attached to said stems and means for operating said cross-head.

[Claims 6 and 7 not printed in the Gazette.]

883,960. GATE-HINGE. CHARLEY A. JOHNSON, Noel, Mo. Filed Aug. 20, 1907. Serial No. 389,383.



A gate hinge comprising, in combination with a stationary post, a hinged plate fastened thereto and projecting beyond the opposite edges of the gate, the ends of said plate turned in eyes, a gate, a hinged plate fixed thereto of shorter length than the plate upon said post, rods having right angled ends, each rod engaging an eye in the plate upon the post, and the other upon said gate, nuts upon the angled ends of said rods, the angled ends of one rod projecting in the opposite direction from the angled ends of the other rod, said rods being so arranged that the hinged plate, upon the rear of the gate will be in alinement with the side face of the post, when the gate is open, as set forth.

883,961. ELECTROMETALLURGICAL PROCESS FOR EXTRACTING COPPER FROM ITS ORES. LUCIEN JUMAU, Paris, France. Filed Jan. 19, 1907. Serial No. 353,062.

1. The herein described electrolytic process for obtaining pure copper from its ores, which consists in lixiviating the ores with an ammoniacal solution, precipitating the copper from said solution in the form of a precipitate containing cuprous sulfite, dissolving said cuprous sulfite in an ammoniacal solution, and in subjecting said last solution to electrolytic action in the presence of carbonate of ammonia.

2. The herein described electrolytic process for obtaining pure copper from its ores, which consists in lixiviating the ores with an ammoniacal solution, precipitating the copper from said solution in the form of a precipitate containing cuprous sulfite, dissolving said cuprous sulfite in an ammoniacal solution, transforming said ammoniacal solution to a carbonate, and subjecting said solution to electrolytic action.

3. The herein described electrolytic process for obtaining pure copper from its ores, which consists in lixiviating the ores with an ammoniacal solution, precipitating the copper from said solution in the form of a precipitate containing cuprous sulfite, dissolving said cuprous sulfite in an ammoniacal solution, subjecting said solution to electrolytic action, and simultaneously passing a current of carbonic acid gas through said solution.

883,962. PROCESS FOR OBTAINING PURE COPPER FROM A SOLUTION OF COPPER. LUCIEN JUMAU, Paris, France. Filed Jan. 19, 1907. Serial No. 353,063.

1. The herein described process for obtaining pure copper from an ammoniacal solution containing salts of copper, which consists in treating said solution with a sulfite for precipitating copper compounds, and heating said precipitate under pressure in the presence of an aqueous substance.

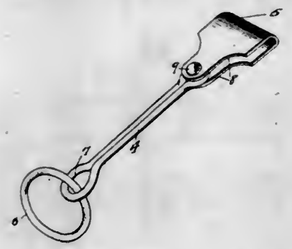
2. The herein described process for obtaining pure copper from an ammonical solution containing salts of copper, which consists in treating said solution with sulfite of hydrogen for precipitating copper compounds, and heating said precipitate under pressure in the presence of water.

3. The herein described process for obtaining pure copper from an ammoniacal solution containing salts of copper, which consists in treating said solution with a sulfite for precipitating copper compounds, and heating said precipitate below 180° C. under pressure in the presence of an aqueous substance.

4. The herein described process for obtaining pure copper from an ammoniacal solution containing salts of copper, which consists in treating said solution with a sulfite for precipitating copper compounds, and heating said precipitate to a temperature between 140° C. and 170° C. under pressure in the presence of an aqueous substance.

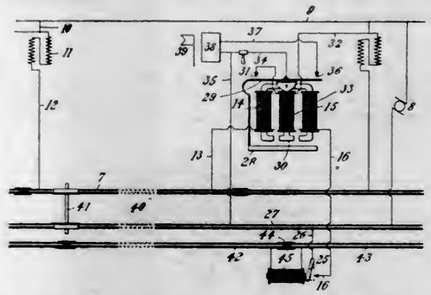
883,963. CHIN-TUG. WILLIE E. KNAPP, Norton, Kans. Filed June 4, 1907. Serial No. 377,228.

1. A chin tug for halters comprising a strap portion formed of two longitudinal sections diverged toward their ends to form eyes, a clip comprising spaced arms designed to embrace the throat latch, the said arms being connected by a pin passing loosely through the eye at one end of the strap portion of the chin tug, and a ring looped with the opposite eye and designed to engage the chin strap.



2. A chin tug for halters comprising a strap portion formed of two longitudinal sections diverged toward their ends to form eyes, a clip comprising arms designed to embrace the throat latch, the said arms being formed with extensions fitting against opposite sides of one of the before mentioned eyes, a pin connecting the extensions and passing loosely through the said eye, and a ring looped with the opposite eye and designed to engage the chin strap.

883,964. SIGNALING SYSTEM FOR ELECTRIC RAILWAYS. HARRY N. LATEY, New York, N. Y. Filed Jan. 19, 1904. Serial No. 189,685.

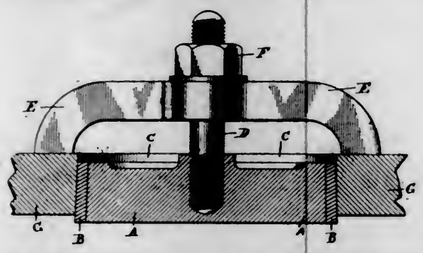


1. In a signaling system for electric railways, the combination with a conductor for delivering power to a vehicle, said conductor being composed of sections normally alive and at substantially the same potential; of a relay between conductor sections, dependent for operation upon a predetermined difference of potential between said sections, a circuit controlled by the relay, and signaling devices in said circuit, as set forth.

2. In a signaling system for electric railways, the combination with a conductor for delivering power to a vehicle, said conductor being composed of sections normally alive and at substantially the same potential; of a relay between conductor sections, dependent for operation upon a predetermined difference of potential between said sections, a normally closed circuit controlled by the relay, and signaling devices in the circuit adapted to be actuated to indicate danger when the relay is energized, as set forth.

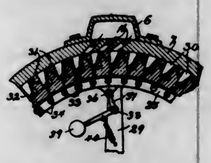
3. In a signaling system, for electric railways, the combination with a block signaling system, including a circuit and a feed wire for supplying current to energize the same; of a power conductor for supplying current to a vehicle, said conductor being composed of sections normally alive and at substantially the same potential, a relay magnet between conductor sections, dependent for energization upon a predetermined difference of potential between said sections, and an armature for the relay magnet, said armature forming a part of the said block signaling circuit, whereby the energization of the relay magnet will control the said circuit, as set forth.

883,965. MANHOLE-LID. HENRY A. E. LIEBEAT, Rochdale, England, assignor to E. Green and Son Limited, Wakefield, England, a Corporation of Great Britain. Filed Aug. 22, 1903. Serial No. 170,398.



In a steam boiler or the like, the combination with a wall thereof having a circular aperture, the edge surface of which flares toward the interior of the boiler; of a compound closure for the said aperture, consisting of a circular disk of metal having its edge inclined in correspondence with the surface of the aperture, the greatest diameter of the disk being less than the shortest diameter of the aperture, and a resilient ring of spring metal the inner and outer surfaces of which are inclined in correspondence with the contignous surfaces of the aperture and the disk respectively, said ring being supported on the inclined edge of the disk but independent of and freely separable from the latter, and means connected to the disk for drawing the disk and ring firmly into engagement with the edge wall of the aperture.

883,966. TURBINE. WILLIAM A. LOUDON, Chicago, Ill., assignor to General Electric Company, a Corporation of New York. Filed Dec. 28, 1905. Serial No. 293,700.



1. In a turbine, a wheel provided with pockets and means for simultaneously diminishing the capacity of said pockets.

2. In a turbine, a rotatable wheel provided with a plurality of pockets and means mounted to rotate with said wheel to simultaneously diminish the capacity of said pockets.

3. In a turbine, a wheel provided with numerous radial pockets and means for simultaneously diminishing the capacity of said pockets.

4. In a turbine, a rotatable wheel provided with a plurality of radial pockets and means mounted to rotate with said wheel to simultaneously diminish the capacity of said pockets.

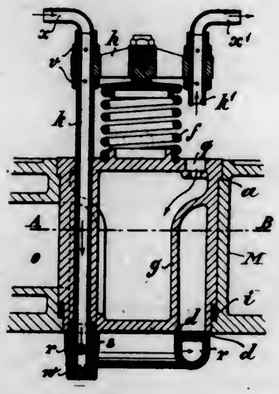
5. In a turbine, a wheel provided with pockets and means operated by centrifugal force for simultaneously diminishing the capacity of said pockets.

[Claims 6 to 24 not printed in the Gazette.]

883,967. WATER-COOLED VALVE FOR INTERNAL-COMBUSTION MOTORS. BORIS LOUTZKY, Berlin, Germany. Filed Nov. 20, 1907. Serial No. 403,067.

1. The combination of a valve seat body, an annular valve, two guide stems therefor passing through the seat body, a cross piece connecting the outer ends of the guide stems and a spring confined between the cross piece and the seat body.

2. The combination of a valve seat body, an annular valve, two guide stems therefor passing through the seat body, a cross piece connecting the outer ends of the guide stems and a spring detachably mounted between the cross piece and the seat body.



3. A valve comprising a hollow ring, and means for supplying a cooling fluid to the ring at one point and discharging it at another, said means comprising hollow guide spindles connected to the ring at different points, together with a hollow seat body for said valve provided with an opening for the admission of a cooling fluid.

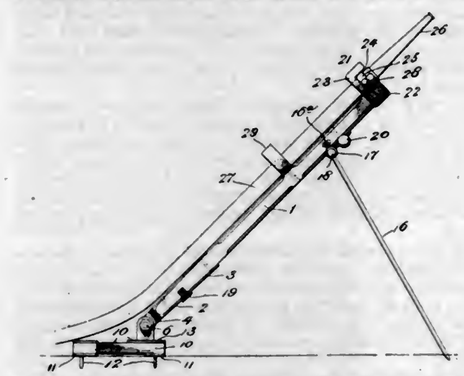
883,968. MILK-PAIL COVER. MALINDA C. MASON, Waukegan, Ill. Filed July 22, 1907. Serial No. 384,939.



A cover for milk pails, comprising a supporting flange and a body portion the latter being depressed to the central point gradually from all sides, and a hood secured to said body portion with its inner edge assuming a diametrical relation to the body portion, the said body portion being formed with a radially elongated opening extending from its outer edge to and past the center underneath the hood and formed with a bar extending across said opening whereby to reinforce the body portion, the said walls, of the opening diverging inwardly, and the opening extending at right angles to the inner edge of the hood, and a screen secured to the body portion and circumscribing said opening.

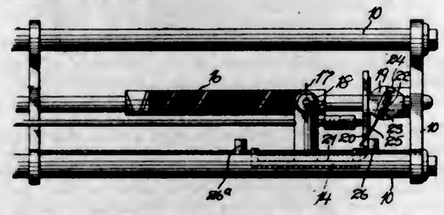
883,969. NOZZLE-HOLDER. JOHN J. MESKILL, Philadelphia, Pa., assignor to James F. Kelly, Washington, D. C. Filed Feb. 12, 1906. Serial No. 300,719.

In a nozzle-holder, the combination with a support or standard rotatably and hingedly supported on a base and having means for engaging the hose-nozzle and supporting the same in connection with the standard, of a prop pivotally connected to a headed stud projecting at one side of the standard, a thumb-screw adapted to hold the prop in an adjusted position, and a spring-clip at the lower end of



the standard adapted to receive the free end of the prop, as herein shown and described.

883,970. REGISTERING MECHANISM FOR MULTIPLE PHONOGRAPHS. JULIUS ROEVER, New York, N. Y., assignor to National Patent Company, New York, N. Y., a Corporation of New York. Filed May 29, 1907. Serial No. 376,267.



1. In a machine of the kind described having a reproducer arranged to move opposite a record, the combination with such reproducer of a register movable back and forth with the reproducer, abutments spaced apart, and a contact arm connected with the register to operate it and arranged to strike it.

2. In a machine of the kind described having a reciprocating reproducer, the combination with such reproducer, of a contact arm moving with the reproducer, abutments arranged in the path of the arm to operate it, and a register operatively connected with the contact arm.

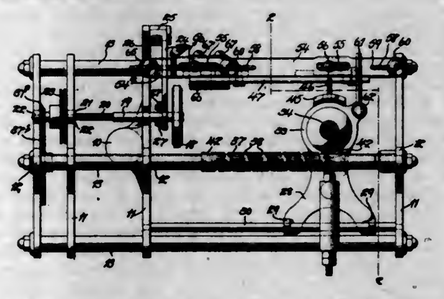
3. In a machine of the kind described having a reciprocating reproducer, the combination with such reproducer of the register having a fixed relation thereto and sliding therewith, a flexible contact arm to operate the reproducer, and abutments spaced apart to engage the contact arm near the ends of the reproducer stroke.

4. In a machine of the kind described having a reciprocating reproducer and carriage, the combination with the carriage of a register carried thereby, a contact arm connected with the register, and fixed abutments spaced apart so as to engage the contact arm near the ends of the carriage movement.

883,971. MULTIPLE PHONOGRAPH-MACHINE. JULIUS ROEVER, New York, N. Y., assignor to National Patent Company, New York, N. Y., a Corporation of New York. Filed May 29, 1907. Serial No. 376,270.

1. In a machine of the kind described, the combination with the record wheel and the records thereon, of a flexible shaft connected with a source of power and having an operative connection with each record, and means for breaking the driving connection between the shaft and the record by flexing the said flexible shaft.

2. A machine of the kind described, having a record wheel carrying a series of records, a reproducer arranged to travel opposite a record, a flexible driving shaft having an operative connection with the records, and automatic means for moving the shaft and breaking the driving connection by the movement of the reproducer.



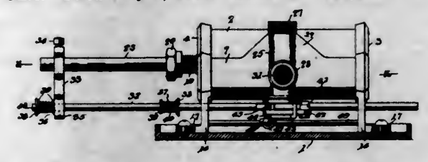
3. The combination with the record wheel and the records thereon, of a flexible driving shaft operatively connected with the records to drive them, a reproducer arranged to travel opposite a record, and a cam mechanism actuated by the movement of the reproducer to move the flexible shaft and break the driving connection.

4. The combination with the record wheel and the records thereon, of a flexible driving shaft operatively connected with the records, a movable arm supporting the free end of the shaft, a reproducer moving opposite the record, and means actuated by the movement of the reproducer to move the aforesaid arm and shaft, thereby breaking the driving connection.

5. The combination with the record wheel and the records thereon, of the flexible driving shaft operatively connected with the records to drive them, a swinging arm supporting the free end of the said shaft, a cam mechanism to engage and lift the arm, a reproducer movable along a record, and means for operating the cam mechanism by the movement of the reproducer.

[Claims 6 to 13 not printed in the Gazette.]

883,972. HYDRAULIC MOTOR. JOHN H. ROSE, Dayton Ohio. Filed July 9, 1906. Serial No. 325,258.



1. In a water motor of the character described, the combination, with a frame, a cylinder supported by said frame and a piston reciprocating within said cylinder, of inlet and outlet passages extending to the opposite ends of said cylinder, a valve controlling said passage, an arm connected to said valve and adapted to actuate the same, a part mounted on said frame and provided with a guideway, a lever extending loosely through said guideway, means carried by said lever for engaging said arm, and means connected to the piston for operating said lever, substantially as described.

2. In a water motor of the character described, the combination, with a frame, a cylinder supported thereby, and a piston within said cylinder, of inlet and outlet passages extending to the opposite ends of said cylinder, a valve controlling said passages, an arm connected to said valve and adapted to actuate the same, a part carried by said frame having an outwardly extending portion, a movable support, a lever pivotally connected thereto and adapted to be engaged by said outwardly extending portion intermediate the ends of said lever, means carried by said lever for engaging said arm, and means connected to the piston for moving said support to operate said lever.

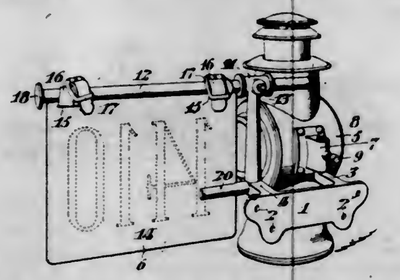
3. In a water motor of the character described, the combination, with a frame, a cylinder supported thereby and a piston within said cylinder, of inlet and outlet passages extending to the opposite ends of said cylinder, a valve controlling said passages, arms connected to said valve and adapted to actuate the same, a part carried by said frame and having projections extending therefrom, a lever fulcrumed between said projections, means carried by said lever for engaging said arms, and means connected to the piston for operating said lever, substantially as described.

4. In a water motor of the character described, the combination, with a frame, a cylinder supported thereby, and a piston mounted within said cylinder, of inlet and outlet passages extending to the opposite ends of said cylinder, a valve controlling said passages, arms connected to said valve and adapted to actuate the same, a red mounted to slide longitudinally of said cylinder, a part carried by said frame and provided with a guideway, a lever pivotally connected to said rod and extending loosely through said guideway, means carried by said lever for engaging said arms to actuate said valve, and means connected to said piston for operating said rod, substantially as described.

5. In a water motor of the character described, the combination, with a frame, a cylinder supported thereby, and a piston mounted within said cylinder, of inlet and outlet passages extending to the opposite ends of said cylinder, a valve controlling said passages, arms connected to said valve and adapted to actuate the same, a part carried by said frame and having projections extending therefrom, a rod mounted to slide longitudinally of said cylinder, a lever pivotally connected to said rod and fulcrumed between said projections, a pin carried by said lever and adapted to engage said arms, a spring connected to said lever and adapted to retain said pin normally in engagement with one of said arms, and means connected with said piston for operating said rod, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

883,973. LAMP-BRACKET. EDWIN M. ROSENBLUTH, Philadelphia, Pa. Filed June 21, 1906. Serial No. 322,666.



1. A lamp bracket comprising means arranged to detachably support a lamp; and means, comprising a rod, adjustable in the direction of its length toward and from said lamp, and arranged to detachably support a license panel, which is also adjustable with respect to said rod, said supporting means being so coöperatively connected that said panel is illuminated by said lamp, substantially as set forth.

2. In a lamp bracket, the combination with means arranged to support a lamp; of a rod adjustably supported by said bracket, in parallel relation with the focal axis of the light, and arranged to pivotally support a license panel in such relation to said lamp as to be illuminated thereby, said panel being also capable of adjustment toward and from said rod, substantially as set forth.

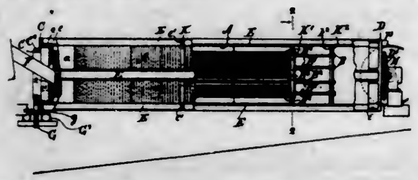
3. In a bracket comprising means arranged to detachably support a lamp, the combination with a rod, adjustably supported by said bracket in parallel relation with the focal axis of the light, and arranged to pivotally support a license panel in detachable relation therewith; of means arranged to secure said rod in adjusted position; said lamp supporting means and rod being so coöperatively connected that said panel is illuminated by said lamp; and means whereby said panel may be vertically and horizontally adjusted in the same plane substantially as set forth.

4. In a bracket comprising means arranged to detachably support a lamp, the combination with a rod adjustably supported in said bracket; of means comprising flexible straps arranged to pivotally support a license panel in detachable relation with said rod; and means integral with said bracket arranged to maintain said license panel in definite relation to said bracket, substantially as set forth.

5. In a bracket comprising means arranged to detachably support a lamp, the combination with a rod, adjustably secured in said bracket and arranged to pivotally support a license panel; of a bifurcated finger, extending from said bracket and arranged to maintain said license panel in vertical position on said bracket, substantially as set forth.

[Claims 6 to 13 not printed in the Gazette.]

883,974. GOLD-WASHING SCREEN. WILLIAM H. ROUGHSEDGE, Ottawa, Ontario, Canada. Filed Feb. 11, 1907. Serial No. 356,815.



1. In a screen, the combination with a head ring and a tail ring each having seats for longitudinal beams, longitudinal beams having their ends secured in said seats and connecting the said rings, a shoulder on said head ring to receive the end of the outer screening cylinder, a disk flange on said head ring to receive the ends of longitudinal screen bars forming the inner screening cylinder, a tread ring secured to said head ring, carrying rolls upon which the tread ring is supported, journal supports of said rolls, a bevel wheel on said tail ring with trunnion, a journal bearing for said trunnion suitably supported, a cross shaft suitably journaled, means for giving motion to said shaft, a bevel pinion on said shaft, gearing into said bevel wheel, a plate ring secured to the longitudinal beams some distance from the tail ring and having secured in it the ends of some of the longitudinal screen bars forming the inner screen, a pair of tire-rings placed some distance from said plate ring and between which the ends of the shorter longitudinal screen bars are placed, an outer tire-ring in the same plane as the other two tire rings secured to the longitudinal beams and supporting the outer screening cylinder and stay bolts passing from the said outer ring to the inner ring, substantially as set forth.

2. In a screen, the combination with a head ring, means of supporting the same rotatively, a disk flange forming part of said ring and having holes disposed in a circle, a tail ring with trunnion, a journal for said trunnion suitably supported, means for giving a rotary motion to said tail ring, longitudinal beams secured to and connecting said head ring and tail ring rigidly, a plate ring between said head and tail ring secured to said longitudinal beams and drilled with holes in a circle, a tire ring between the last named ring and the head ring and secured to the longitudinal connecting bars, a cylinder screen supported upon said tire ring at one end upon the head ring at the other, a pair of tire rings of smaller diameter in the same plane as the tire ring referred to and a series of longitudinal screen bars secured at one end in the flange of the head ring, some of them held between said two tire rings and some of them secured firmly in the plate ring

hereinbefore referred to and stay bolts or rods passing from the outer tire rings to the two inner tire rings, substantially as set forth.

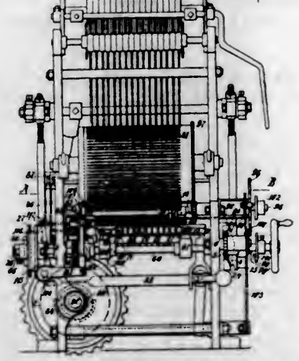
3. In a screen of the character described, the combination of three concentric rings, a series of radial stay bolts passing through and connecting the three rings, the difference between the outer diameter of the inner ring and the inner diameter of the middle ring being a little more than the diameter of the screen bars which are to be placed between them, a series of radial separator rods or bolts secured in the two inner rings and forming with the stay bolts alternately larger and smaller divisions for said screen bars, and a series of screen bars in the spaces formed by the inner rings and radial bolts and rods, substantially as set forth.

4. In a screen of the character described, the combination with an outer screening cylinder of perforated or meshed material, of an inner screening cylinder composed of longitudinal screen bars some of which are fixed and extend from head to tail, while intermediate ones are fixed and shorter and others of the same length as the latter and alternating with the fixed ones are free to rotate and having their tail ends free to move laterally, and means for supporting said cylinder, substantially as set forth.

5. In a screen of the character described, the combination with a head ring and a tail ring, of a series of longitudinal screen bars cylindrically disposed and held longitudinally immovable in the head ring and some held fixed at both ends but intermediate ones free to rotate and move laterally, means for supporting said rings and means for giving a rotary motion to said cylinder, substantially as set forth.

[Claim 6 not printed in the Gazette.]

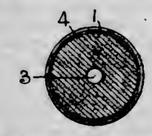
883,975. DOBBY FOR LOOMS FOR WEAVING. HEINRICH SCHWARZENBACH and GOTTLIEB LIER, Langnau, Switzerland; said Lier assignor to said Schwarzenbach. Filed Feb. 27, 1905. Serial No. 247,631.



1. In a loom dobby, comprising in combination a cylinder (81) rotatably mounted in the frame of the machine, and provided with parallel rows of holes for the reception of pegs, a toothed ring on said cylinder, an intermediate axle (98), a toothed gear (13) on said axle meshing with said toothed ring, a second axially movable toothed gear (96) on said axle (98), a disk (101 mounted on the driving axle (66) a second disk (100) mounted on a stud of the frame, the disks moving in opposite directions to each other, studs projecting from said disks adapted to engage with the toothed gear (96), a double armed shifting lever (93) engaging said toothed gear (96) on the one side and a cam (24) on the other side, a star wheel (27) axially movable on the shaft (26) carrying said cam (24) a fork (115) engaging the nave of said star wheel, a shaft (114) to which said fork is fixed, a lever arrangement (113, 112, 108, 109, 110) connected to said shaft (114), a pin (106) fixed to one of the levers adapted to act with a peg in the cylinder (81), a cam (119) fixed to the driving axle (66) adapted to raise the said lever arrangement, a cam (120) acting on said lever arrangement (113, 112, 108, 109, 110), a vertically and laterally movable frame, two one-armed levers (77) supporting said frame, cams fixed to the driving axle (66) adapted to raise the levers (77), a cross bar (75) fixed to said supporting levers (77), rollers mounted on said cross bar, a second cross bar (70) having inclined planes its lower side, levers (116, 117) connecting said cross bar (70) with axle (114), one armed frame levers (52, 53) movable in vertical and horizontal direction, a top cross bar (66) supporting said frame levers, a cross bar (90) fixed to said frame levers (52, 53) and connected with the double armed shifting lever (93), a second cross bar (55) fixed to said levers (52, 53), a set of levers (51) balancing on said cross bar (55), a pin at the upper end of each lever (51) adapted to act with the pegs in the cylinder and a hook (57) at the other end of each of the levers (51), rods one for each lever (51) each having a groove at its end for the reception of the hook of the respective lever (51), a spring (60) for each lever pressing said hook (57) into said groove, a spring (83) fixed to each of said rods (59), pins fixed on said rods (59) needles (61) located between the pins of said rods (59) adapted to swing in the way of the lifting knives, substantially as described and shown and for the purpose set forth.

2. In a loom dobby, the combination of a cylinder rotatably mounted in the frame of the machine and provided with parallel rows of holes for the reception of pegs, a toothed ring on said cylinder, an intermediate axle, a toothed gear on said axle meshing with the said toothed ring, a second toothed gear on said axle, a disk mounted on the driving axle, a second disk mounted on the frame, said disks moving in opposite directions one with relation to the other, studs projecting from said disks adapted to engage with the second toothed gear, a shifting lever engaging said gear on one side, a cam engaging gear on the opposite side, a star wheel movable on the axle, said cam being carried by said star wheel, a fork engaging the star wheel, a shaft to which said fork is fixed, a lever arrangement connected to said shaft, a pin fixed to one of the levers adapted to act with a peg in the cylinder, a cam fixed to the driving axle adapted to raise said lever arrangement, a cam acting on said lever arrangement, a movable frame, a series of levers supporting said frame, cams fixed to the driving axle adapted to raise said levers, a cross bar fixed to said supporting levers, rollers mounted on said cross bar, a second cross bar, levers connecting said second cross bar with the axle, movable frame levers, a top cross bar supporting said frame levers, a cross bar fixed to said frame levers and connected with the shifting lever, a second cross bar fixed to said frame levers, a set of levers balancing on said cross bar, a pin at the upper end of each lever adapted to act with the pegs in the cylinder, a hook at the opposite end of each of the levers, rods for each lever engaging the hook, pins fixed on said rods, and needles located between the pins of said rods.

883,976. SASH-WEIGHT. FERDINAND C. SCHWEDTMAN, St. Louis, Mo. Filed Jan. 7, 1907. Serial No. 351,164.



1. The herein described sash weight, the same being composed of granular material held together by a suitable binder and surrounded by a fibrous band; substantially as described.

2. As an article of manufacture, a sash weight composed of granular material of great specific gravity, held together by a binder and molded into the form of an elongated body, and a layer of fibrous material surround-

ing said body and provided with a coating of tar, paint or some similar substance which will preserve said fibrous material and impart a finished appearance to the weight; substantially as described.

3. As a new article of manufacture, a sash weight composed of small particles of barytes held together by a binder of silicate of soda and molded into the form of an elongated body provided at approximately its center with a longitudinally extending opening, and a flexible covering surrounding said elongated body; substantially as described.

883,977. SASH-WEIGHT. FERDINAND C. SCHWEDTMAN, St. Louis, Mo. Filed Oct. 26, 1907. Serial No. 399,351.



1. A sash weight having units formed from different kinds of materials of different specific gravity, and means for holding said units together; substantially as described.

2. A sash weight composed of units of the same size but different specific gravity, and means for holding said units together; substantially as described.

3. A sash weight composed of mixed units of iron and of pressed barytes, and means for holding said units together; substantially as described.

4. A sash weight provided with a number of units, one of which consists of a plurality of separate metal pieces permanently connected together; substantially as described.

5. A sash weight comprising units of materials having different specific gravity, and a shell or casing inclosing said units; substantially as described.

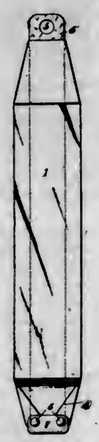
[Claims 6 to 9 not printed in the Gazette.]

883,978. SASH-WEIGHT. FERDINAND C. SCHWEDTMAN, St. Louis, Mo. Filed Oct. 26, 1907. Serial No. 399,352.

1. A sash weight comprising a body formed by a core and a metal shell incasing same and having its lower end portion folded or bent inwardly to produce a closure, and a metal member extending longitudinally through the core and having its lower end connected to the parts which form a closure for the lower end of said body; substantially as described.

2. A sash weight comprising a core, a cap piece arranged at the lower end of the core, a shell surrounding said core and bent into intimate engagement with said cap piece so as to completely incase same, a metallic cord-securing member extending longitudinally through said core, and means for securing said member in position; substantially as described.

3. A sash weight comprising an elongated body consisting of a core and a metal shell incasing same and having its lower end bent or folded inwardly to form a closure, and a flat metal bar extending longitudinally through said body and having portions of the shell bent into engagement with its side faces and secured thereto; substantially as described.



4. A sash weight comprising a core, cap pieces arranged at the upper and lower ends of said core, a metal shell incasing said core and having its ends bent or folded inwardly over said cap pieces, a cord-securing member extending longitudinally through said core and also passing through said cap pieces, and means for securing said member in position; substantially as described.

5. A sash weight comprising a core, cap pieces at the upper and lower ends of said core, a metal shell incasing said core and having its end portions bent or folded inwardly over said cap pieces, and a metal bar extending longitudinally through said core and cap pieces and secured at its lower ends to the folded-in portions of the shell; substantially as described.

[Claims 6 to 12 not printed in the Gazette.]

883,979. SASH-WEIGHT. FERDINAND C. SCHWEDTMAN, St. Louis, Mo. Filed Oct. 26, 1907. Serial No. 399,353.



1. A sash weight composed of a core, a shell incasing said core, and a cast member forming a closure for said shell and having the entire edge portion of the shell completely embedded therein; substantially as described.

2. A sash weight composed of a core, a shell incasing said core, a cast member forming a closure for the end of said shell and having the edge portion of the shell completely embedded therein, and means on said member to which a supporting cord can be attached; substantially as described.

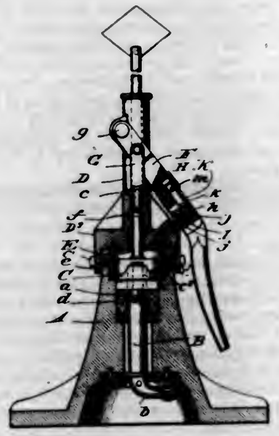
3. A sash weight composed of a core, a metal shell incasing said core, and a metal cast member forming a closure for said shell and having portions of the edge of the shell completely embedded therein; substantially as described.

4. A sash weight composed of a core, a metal shell incasing said core, a metal cast member forming a closure for said shell and having portions of the edge of the shell completely embedded therein, and means on said member to which a supporting cord can be connected; substantially as described.

5. A sash weight composed of a core, a metal shell incasing said core, and a metal member cast upon the end portion of said shell to form a closure for same and provided with an integral device to which a supporting cord can be attached, said metal member extending beyond the end of the shell; substantially as described.

[Claims 6 to 10 not printed in the Gazette.]

883,980. SWITCH-STAND. WALTER W. SCOTT, Fort Edward, N. Y. Filed Jan. 18, 1908. Serial No. 411,512.

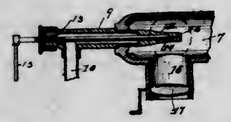


1. The combination of a switch stand, a rotary element mounted thereon, a vertically-movable shaft arranged in the stand and adapted to be connected with a switch, a keeper carried by and projecting from the said rotary element, a vertically-swinging, operating lever fulcrumed on the rotary element and connected with the shaft and arranged when depressed to receive the said keeper, a pivoted latch arranged in the lever in position to engage the keeper when the latter is received in the lever, a reciprocatory bolt also arranged in the lever and connected to the latch and having a portion arranged to be engaged and moved by a key, and a spring arranged to press the latch and bolt forward.

2. The combination of a switch stand, a rotary element mounted thereon, a vertically-movable shaft arranged in the stand and adapted to be connected with a switch, a keeper carried by and projecting from the said rotary element, a vertically-swinging, operating lever fulcrumed on the rotary element and connected with the shaft and arranged when depressed to receive the said keeper, a pivoted latch arranged in the lever in position to engage the keeper when the latter is received in the lever, a reciprocatory bolt also arranged in the lever and having side bars connected to the latch and also having a chambered head adapted to receive a key, and a portion in said head for the engagement of the key, and a coiled spring arranged between the side bars of the bolt and interposed between the latch and an abutment in the lever.

3. The combination of a switch stand, a rotary element mounted thereon, a vertically movable shaft arranged in the stand and rotary element and adapted to be connected with a switch, a keeper carried by and projecting from the rotary element, a vertically-swinging operating lever fulcrumed on the rotary element and connected with the shaft and having a chamber to receive the said keeper and also having a cover plate for the chamber, in which plate is a key-hole, a pivoted latch arranged in the lever-chamber in position to engage the keeper when the latter is received in the lever, a reciprocatory bolt also arranged in the lever-chamber and having side bars connected to the latch and also having a chambered head provided with a key-hole and an interior web for the engagement of a key bit, and a coiled spring arranged between the side bars of the bolt and interposed between the same and a fixed abutment in the lever-chamber.

883,981. GAS-GENERATOR FOR EXPLOSIVE-ENGINES. HENRY K. SHANCK, Cleveland, Ohio, assignor to The Euclid Motor Company, Cleveland, Ohio, a Corporation of South Dakota. Filed Jan. 23, 1906. Serial No. 297,423.

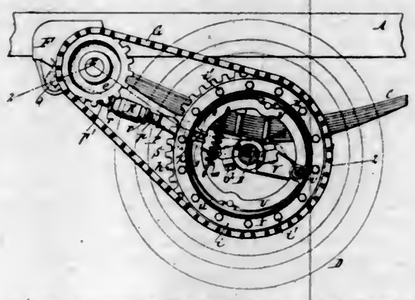


1. The combination in a quick speed explosion engine, of means for vaporizing the explosive fluid and for commingling the same with air to a predetermined degree, comprising an elongated tubular commingling chamber, a nozzle for the fluid at one end thereof arranged to discharge the fluid longitudinally of the chamber, a needle valve having a shoulder in said nozzle, means for obtaining a minute adjustment of said valve, a lateral air inlet in said chamber adjacent to said nozzle, a valve in said air inlet, a governor operatively connected with a rotating part of the engine, and coördinating instrumentalities for operating the valves of the fluid nozzle and air inlet whereby an unvarying proportion of air and fluid is obtained, said coördinating parts being operatively connected with and controlled by said governor, substantially as described.

2. In a fluid burning explosion engine, having a cylinder and inlet port and controlling valve therefor, in combination a commingling chamber having an inlet nozzle for the fluid arranged to discharge longitudinally of the chamber, a needle valve in said nozzle, an air inlet in said chamber arranged to permit air to intercept the stream of explosive fluid, a rotary valve therein, a governor operated by said engine, coördinating means for operating said fluid valve and air inlet valve conjointly to supply air and fluid in suitable proportion to the chamber and means for forcing fluid under pressure into said valve, comprising a fluid receptacle, a pump operatively connected with the engine, a pipe leading from said receptacle to said pump and thence to said nozzle, and an air chamber upon said pipe, substantially as described.

3. In an explosion engine employing an explosive fluid, a commingling chamber for air and gas, comprising, an elongated tube reduced in size at one end and having an air inlet, in combination with a fluid nozzle at the other end arranged to discharge into said chamber longitudinally of the latter, a needle valve located inside the chamber at the other end of the latter adapted to minute adjustment, said needle valve having a shoulder coöperative with the opening in the nozzle to close the latter, and instrumentalities for forcing fluid under pressure through the attenuated opening in said valve, substantially as described.

883,982. AUTOMOBILE. ALBERT B. SHULTZ, Buffalo, N. Y., assignor of one-half to Herbert H. Hewitt, Buffalo, N. Y. Filed Mar. 12, 1906. Serial No. 305,434.



1. In an automobile, the combination of a frame, an axle connected with the frame, a traction wheel mounted on the axle, a driving shaft, a sprocket pinion mounted on the driving shaft, a coupling ring having a channel shaped central part and external and internal flanges which are secured to said traction wheel, a drum having an internal flange which is detachably secured to the central part of said coupling ring and an external flange, a sprocket rim detachably secured to the external flange of the drum, and a chain belt passing around said pinion and rim, substantially as set forth.

2. In an automobile, the combination of a frame, an axle yieldingly connected with said frame and having a cylindrical part, a traction wheel journaled on said axle, a stay pivotally connected at one end with the frame, a divided cylindrical coupling sleeve journaled on said cylindrical part of the axle and having one of its sections formed integrally with the other end of said stay, and means for detachably connecting the sections of said sleeve, substantially as set forth.

3. In an automobile, the combination of a frame, an axle, a spring connecting the axle and frame, a traction wheel mounted on the axle, a stay movably connecting said axle and frame, a drum mounted on said traction wheel and provided externally with an annular row of ratchet teeth and an annular flange, a detent pawl mounted on said stay and engaging with said teeth, a sprocket rim secured to said flange, a driving shaft mounted on the frame, a sprocket pinion mounted on said shaft, and a chain belt passing around said pinion and rim, substantially as set forth.

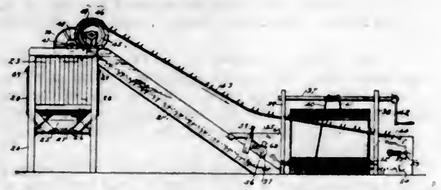
4. In an automobile, the combination of a frame, an axle, a spring connecting the axle and frame, a traction wheel mounted on the axle, a stay movably connecting the axle and frame, a brake drum mounted on the traction wheel, a pair of brake arms provided with shoes adapted to coöperate with the interior of the drum and pivoted at one of their ends on said stay, and means for spreading said arms into their operative position, substantially as set forth.

5. In an automobile, the combination of a frame, an axle, a spring connecting the axle and frame, a traction wheel mounted on the axle, a stay movably connecting the axle and frame, a brake drum mounted on the traction wheel, a pair of brake arms provided with shoes adapted to coöperate with the interior of the drum and pivoted at one of their ends on said stay, and means for spreading said arms into their operative position, consisting of a rotary cam pivoted on the stay and interposed between the opposite free ends of said arms, substantially as set forth.

[Claims 6 to 9 not printed in the Gazette.]

883,983. CONCRETE-MIXING MACHINE. RALPH T. SOLLITT, Chicago, Ill. Filed Nov. 28, 1903. Serial No. 183,079.

1. A concrete-mixing machine, comprising an inclined trough on which the materials to be mixed are supported during the elevating and mixing operation, means for elevating and mixing the materials in said trough, means at opposite sides of said elevating-means for supplying thereto materials to be mixed, and means for actuating said supplying means alternately.



2. A concrete-mixing machine, comprising a trough longitudinally inclined with reference to a horizontal plane, on which the materials to be mixed are supported during the elevating and mixing operation, a substantially horizontal trough adjacent to said inclined trough and connecting therewith, an endless conveyer adapted to move through said troughs and having means for elevating and mixing the materials, and swinging pans at opposite sides of said conveyer adapted to supply materials to be mixed to said horizontal trough.

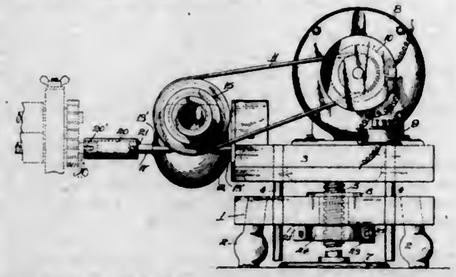
3. A concrete-mixing machine, comprising a trough longitudinally inclined with reference to a horizontal plane, on which the materials to be mixed are supported during the elevating and mixing operation, a substantially horizontal trough adjacent to said inclined trough and connecting therewith, an endless conveyer adapted to move through said troughs and having means for elevating and mixing the materials, swinging pans at opposite sides of said conveyer adapted to supply materials to be mixed to said horizontal trough, and means for actuating said pans alternately to discharge the contents thereof into said horizontal trough.

4. A concrete-mixing machine, comprising a carriage, a vertically-adjustable trough supported thereby, said trough being longitudinally inclined with reference to the horizontal, means for vertically adjusting said trough, and means operating in connection therewith for elevating and simultaneously mixing the materials to be mixed.

5. A concrete-mixing machine, comprising a carriage, a trough longitudinally inclined with reference to the horizontal, a horizontal trough communicating with the lower portion of said inclined trough, an endless traveling conveyer adapted to move through said troughs and having means for elevating and mixing materials supported in said troughs, and means carried by said carriage for operating said conveyer.

[Claims 6 to 20 not printed in the Gazette.]

883,984. PORTABLE SUPPORT AND POWER MECHANISM. JOSEPH C. STEINER, St. Louis, Mo. Filed Dec. 2, 1907. Serial No. 404,771.



1. In a portable device of the character described, the combination of a stand, a table supported by said stand, a motor mounted on said table, a bracket supported by said table, a drive shaft journaled in said bracket, a power connection member between said motor and said drive shaft, a driven shaft geared to said drive shaft, and a connection member carried by said driven shaft and adapted to be attached to an object to be driven thereby; said connection member being in the form of a sleeve having a universal joint connection with said driven shaft, substantially as set forth.

2. In a portable device of the character described, the combination of a stand, a table supported by said stand, a motor mounted on said table, a bracket supported by said table, a drive shaft journaled in said bracket, a power connection member between said motor and said drive shaft, a driven shaft geared to said drive shaft, and a connection member carried by said driven shaft and adapted to be attached to an object to be driven thereby; said connection member being in the form of a sleeve containing slots at its forward end, substantially as set forth.

3. In a portable device of the character described, the combination of a stand having a top, a feed screw mounted in said top, a table supported by said feed screw, power mechanism supported by said table, and a clamp device secured to the top of said stand and adapted to grip said feed screw, substantially as set forth.

4. In a portable device of the character described, the combination of a stand having a top, a feed screw mounted in said top, a table supported by said feed screw, power mechanism supported by said table, and a clamp device secured to the top of said stand and adapted to grip said feed screw; said clamp comprising a pair of clamp bars, one of which is yieldable, a yoke secured to one of said clamp bars, and a lever mounted in said yoke and adapted to move said yieldable clamp bar to said feed screw, substantially as set forth.

883,985. CLEANER-ROD FOR FIREARMS. HEMMING SUVA, Invermay, Saskatchewan, Canada. Filed May 8, 1907. Serial No. 372,473.



1. A cleaner rod for fire arms composed of a series of tubular sections, and a flexible core piece passed through the sections, and means for subjecting said core piece to linear tension and coöperating with the sections to hold them in place when fitted together.

2. A cleaner rod for fire arms composed of a series of tubular sections adapted to be connected by a slip joint, a flexible core piece passed through the sections and secured at one end to a terminal section, and tensioning means applied to the opposite end portion of the core piece to press the sections together and prevent separation thereof when assembled and fitted together.

3. A cleaner rod for fire arms composed of a plurality of tubular sections, a flexible core piece passed through the sections and secured at one end to a terminal section, a threaded stem at or near the opposite end portion of the core piece and projecting beyond the adjacent terminal section when said sections are properly assembled and fitted together, and a set nut threaded upon said stem and adapted to subject the core piece to tension and to press the said sections together.

4. A cleaner rod for fire arms composed of a plurality of tubular sections adapted to be connected by a slip joint, a flexible core piece passed through the sections and attached at one end to a terminal section and provided at its opposite end with a threaded stem, a set nut threaded upon said stem to hold the sections together, a flexible connection attached to the outer end of the threaded stem, and a button at the outer end of said flexible connection to prevent the several parts becoming detached when the sections are separated.

883,986. GUN-CLEANER. GEORGE A. SWAZEY, Milo, Me. Filed July 1, 1907. Serial No. 381,691.

1. A gun cleaner comprising an endless cord, designed to extend through the gun barrel, guide members for the endless cord, a frame mounted upon the gun, a roller journaled upon the frame and engaging the endless cord, and means for turning the roller to drive the cord.



2. A gun cleaner comprising an endless cord designed to extend through the gun barrel, a frame mounted upon the gun, a roller journaled upon the frame and engaging the endless cord, a guide member carried by the frame and engaging the cord, and means for turning the roller to drive the cord.

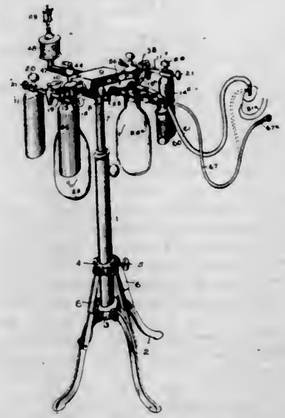
3. A gun cleaner comprising an endless cord designed to extend through the gun barrel, a frame mounted upon the gun, a roller journaled upon the frame and engaging the endless cord, arms projecting in opposite directions from the frame, and guide members carried by the arms for engaging the cord.

4. A gun cleaner comprising an endless cord designed to pass through the gun barrel, brackets applied to the gun, guide members mounted upon the brackets and engaging the endless cord, a frame mounted upon the gun, a roller carried by the frame and engaging the cord, and means for turning the roller.

5. A gun cleaner comprising brackets designed to be applied to a gun, said brackets being formed with lateral arms projecting over the muzzle and breech of the gun respectively, guide members carried by the brackets, a second set of guide members carried by the lateral arms, a frame mounted upon the gun, a roller journaled upon the frame, an endless cord designed to pass through the gun barrel and engage the guide members and roller, and means for turning the roller to drive the cord.

[Claims 6 to 8 not printed in the Gazette.]

883,987. APPARATUS FOR ADMINISTERING ANESTHETICS. CHARLES K. TETER, Cleveland, Ohio, assignor of one-half to Frank M. Casto, Cleveland, Ohio. Filed Dec. 10, 1906. Serial No. 347,027.



1. In an apparatus for administering anesthetics, the combination of a chamber, a tubular arm projecting from and communicating therewith, said arm having intermediate the ends thereof a downwardly projecting branch, a flexible bag or receptacle carried by said branch, a yoke or support for an anesthetic cylinder carried by the outer portion of said arm, a passageway extending from said yoke or support into the downward extension of said arm, a tube extending from said branch to the lower portion of the flexible bag, and an outlet from said chamber.

2. In an apparatus for administering anesthetics, the combination of a chamber, a tubular arm projecting from and communicating therewith, said arm having intermediate the ends thereof a downwardly projecting branch, a flexible bag or receptacle carried by said branch, a yoke or support for an anesthetic cylinder carried by the outer portion of said arm, a downwardly extending passageway leading from said yoke or support into the downward extension of said arm, a flexible tube extending from said branch to the lower portion of the flexible bag, and an outlet from said chamber.

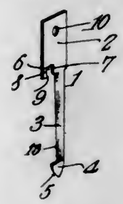
3. In an apparatus for administering anesthetics, the combination of a chamber, a cylinder or receptacle for anesthetics, a duct extending between said cylinder or receptacle and said chamber, a flexible bag interposed between said cylinder or receptacle and said chamber, means for admitting the anesthetic supplied from the cylinder or receptacle to the bottom of the bag, and an outlet from said chamber.

4. In an apparatus for administering anesthetics, the combination of a chamber, a cylinder or receptacle for anesthetics, a duct extending between said cylinder or receptacle and said chamber, a flexible bag interposed between said cylinder or receptacle and said chamber, means for causing the anesthetic supplied from the cylinder or receptacle to travel substantially the length of the bag in its passage to the chamber, and an outlet from said chamber.

5. In an apparatus for administering anesthetics, the combination of a chamber, a tubular arm projecting therefrom, said arm having a connection, a flexible bag or receptacle supported by said connection, a support or yoke for an anesthetic cylinder on said arm, a duct extending between said cylinder and said bag, means for causing the anesthetic supplied to said bag to travel substantially the length of the bag before entering the connection, and an outlet from said chamber.

[Claims 6 to 20 not printed in the Gazette.]

883,988. CORK-EXTRACTOR. WILLIAM T. VALLANDINGHAM, Oskaloosa, Iowa. Filed Mar. 29, 1907. Serial No. 365,405.

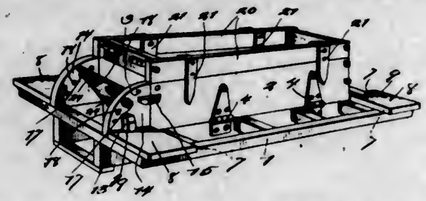


An article of manufacture comprising a plate of thin flat metal of approximately rectangular shape, an integral tapering finger in the plane of the plate projecting from one end thereof, said finger having one edge sharpened like a knife to form a cutting blade, and a hook on the end of the finger projecting laterally beyond the cutting edge only of the blade and shaped at its extreme end into a point with sharp edges, the base or inner edge of said hook being flat to bear against the bottom end of a cork or bottle stopper.

883,989. COMBINED WAGON-BED AND HAY-RACK. JOHNSON S. WALTON, Georgetown, Ky. Filed June 12, 1907. Serial No. 378,648.

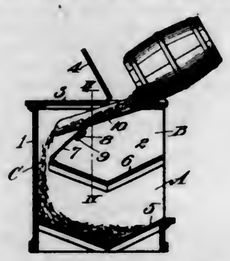
1. In a device of the class described, a rectangular body having pivoted sides and ends, said body having front and rear recesses, and a pair of racks adapted to engage said recesses.

2. In a combination wagon-bed and hay-rack, a rectangular body having pivoted sides and ends, rods to hold them together, said body having recesses, quarter sections forming extensions, said quarter sections having cleats to be received by said recesses, the rear end being



designed to be disposed at various inclinations between said quarter sections, and rods supporting the same.

883,990. MERCHANDISE-BIN. JOHN D. WARREN, Chicago, Ill. Filed Jan. 30, 1908. Serial No. 413,368.



1. A bin having independent lower and upper compartments and containing a passageway leading from behind said upper compartment to said lower compartment, and a movable wing forming the rear wall of said upper compartment and controlling said passageway, substantially as set forth.

2. A bin having a lower floor and an upper floor, the latter of which is separated at its rear end from the back of the bin to provide a passageway, and a movable wing forming the rear wall of said upper compartment and controlling said passageway, substantially as set forth.

3. A bin having a lower floor, an upper floor above said lower floor and separated at its rear end from the back of the bin to provide a passageway, and a wing forming the rear wall of said upper compartment and hinged to said upper floor and controlling said passageway, substantially as set forth.

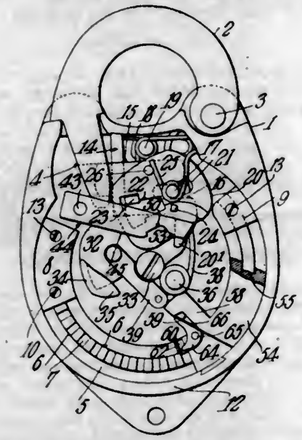
4. A bin having a lower floor, an upper floor surmounting said lower floor and separated from the back of the bin to provide a passageway, a wing hinged to said upper floor and adapted to be moved forwardly and rearwardly relative to the back of the bin to control said passageway, and stops at the sides of the bin against which said wing is adapted to rest when in a forward position, substantially as set forth.

883,991. INDICATOR-LOCK. ELISHA F. WELLS, Miami, Fla., assignor of one-half to John Newton Lummus, Miami, Fla. Filed Sept. 3, 1907. Serial No. 391,169.

1. In an indicator lock, indicator bars, each carrying a sliding lock-block, a guide plate for each bar having spaced notches to receive the block on the respective indicator bar, and a restoring plate for controlling the lock-blocks on the indicator bars and for moving said bars to a predetermined position.

2. In an indicator lock, arc-shaped indicator bars each having an arc-shaped groove and carrying a locking block, arc-shaped guide plates for the indicator bars each having a rib entering the groove in the respective indicator bar, said rib being provided with a number of spaced notches for receiving the block on the indicator bar, and means for moving the locking block out of engagement with the notches in the guide plate.

3. In an indicator lock, a movable indicator bar carrying a locking block movable at right angles to the path of said bar, a spring-actuated angle lever carried by the bar and engaging the locking block, a guiding plate for the bar having notches in the path of the locking block on the bar, and means for actuating the lever to withdraw the locking block from the notches in the guide plate.

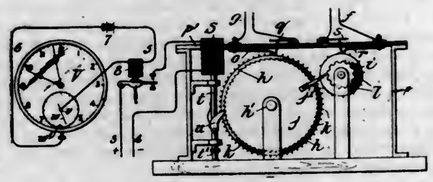


4. In an indicator lock, a number of arc-shaped indicator bars, each carrying a radially disposed locking block and a spring-actuated angle lever engaging said block and projecting to one side of said arc-shaped indicator bars, arc-shaped guiding plates for the indicator bars, each guiding plate having an arc-shaped rib provided with spaced notches in the path of the locking block of the respective indicator bar, and a pivoted spring-actuated restoring plate moving about the axis of the indicator bars and having an arm for engaging the levers controlling the locking blocks of the indicator bars.

5. In an indicator lock, a movable indicator having a radially inwardly extending arm, a spring-actuated lever carried thereby, a locking block also carried by the indicator and controlled by the spring-actuated lever, a spring-actuated restoring plate pivoted in the axis of movement of the indicator and having a projecting member arranged to engage the lever on the indicator, a detent for holding the restoring plate in an inactive position against the stress of its spring, and means engageable by an inserted key for moving the detent out of engagement with the restoring plate in advance of each registering operation.

[Claims 6 to 17 not printed in the Gazette.]

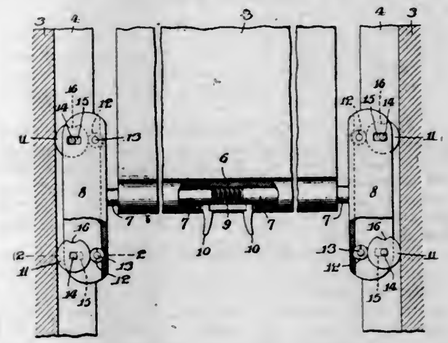
883,992. ELECTRIC TIME-INDICATING DEVICE. WILLIAM F. WENTZ, New York, N. Y. Filed Dec. 22, 1904. Serial No. 237,906.



1. In a time indicating device, a frame having a plate which is perforated, a drum horizontally journaled beneath said plate, said drum having pins upon its periphery, springs fixed to the under side of said upper portion of the frame and lying in the path of said pins, said springs being bent to project through said perforations in the plate, contacts on the outer side of said plate in the path of said springs whereby the terminals are exposed for the circuit connections, and means for intermittently imparting a movement of rotation to said drum.

2. In a time indicating device, a frame having a plate which is perforated and having a pair of drums journaled therebeneath, each of said drums having pins upon its periphery and being journaled to present its peripheral surface at a uniform distance from the under side of said plate, springs fixed to said plate and in the path of said pins, said springs projecting through the said plate, and terminals on the outside of the plate and engaged by said springs.

883,993. SHADE-FIXTURE. DALE WHINERY, Hoboken, N. J., assignor to The Curtain Supply Company, Newark, N. J., a Corporation of New Jersey. Filed July 16, 1906. Serial No. 326,387.



1. In a holding device for spring-actuated shades, the combination with a guideway adjacent to the shade, of a spring-pressed member carried by the shade, a roller mounted on said member and adapted to engage said guideway, a second roller mounted on said member and pressed into engagement with the first-named roller by the spring-pressure of said member.

2. In a holding device for spring-actuated shades, the combination with a guideway adjacent to the shade, of a spring-pressed member carried by the shade, a roller mounted on said member and adapted to engage said guideway, a second roller mounted on said member and pressed into engagement with the first-named roller by the spring pressure of said member, the first-named roller being mounted to move toward and from the second-named roller.

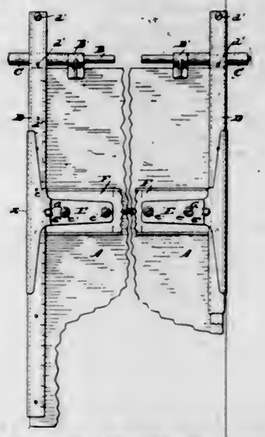
3. In a holding device for spring-actuated shades, the combination with a guideway adjacent to the shade, of a spring-pressed rod carried by the shade, a shoe carried by said rod provided with slots, a roller adapted to engage said guideway and having a pivot pin entering said slots, a second roller mounted on said shoe and pressed into engagement with the first-named roller by the spring pressure of said rod.

4. In a holding device for spring-actuated shades, the combination with a guideway adjacent to the shade, a spring-pressed member carried by the shade, a roller having a non-circular periphery mounted on said member and adapted to engage said guideway, and a second roller mounted on said member and pressed into engagement with the first-named roller by the spring pressure of said member.

5. In a holding device for spring-actuated shades, the combination with a guideway adjacent to the shade, of a spring-pressed member carried by the shade, a roller carried by said member and having a depression in its periphery, a second roller mounted on said member and pressed into engagement with the first-named roller by the spring pressure of said member.

[Claim 6 not printed in the Gazette.]

883,994. DRAWING-BOARD AND DRAFTING DEVICE. NELSON WHITE, Detroit, Mich. Filed June 17, 1907. Serial No. 379,320.



1. In a device of the class described, a drafting board, a rock shaft, clips spaced apart and connecting said shaft to said board at one end, sleeves rotative with said shaft and maintained in position by said clips, guide bars connected to said sleeves and extending adjacent the side edges of said board, and a straight edge slidably engaging said guide bars.

2. In a device of the class described, a drafting board, a rock shaft, clips spaced apart and connecting said shaft to said board at one end, sleeves upon said shaft and maintained in position by said clips, each sleeve having a laterally extending arm, guide bars pivoted upon said arms and extending adjacent the side edges of said board, means for adjusting said bars relative to said arms, and a straight edge engaging said guide bars.

3. In a device of the class described, a drafting board, a rock shaft coupled to one end of said board, guide bars disposed adjacent to the opposite sides of said board and connected to said shaft, a straight edge extending between said guide bars, brackets connected at one end to said straight edge and extending over said guide bars and with down turned outer edges engaging the outer edges of the same, said brackets having tongues extending beneath the guide bars, and clamp devices operating upon said tongues.

4. In a device of the class described, a drafting board, guide bars disposed on opposite sides of said board, a straight edge extending beneath said guide bars, and brackets secured to said straight edge and extending over said guide bars and with down turned outer edges embracing the outer edges of the guide bars.

5. In a device of the class described, a drafting board, guide bars disposed on opposite sides of said board, a straight edge extending between said guide bars, brackets secured to said straight edge and extending over said guide bars and with down turned outer edges embracing the outer edges of the guide bars, said brackets having tongues extending beneath the guide bars, and clamp devices operating upon said tongue.

883,995. METHOD OF TREATING VEGETABLE ALBUMIN FOR THE PRODUCTION OF AN ARTICLE OF MANUFACTURE USEFUL IN THE ARTS AND A PRODUCT. FERDINAND G. WIECHMANN, New York, N. Y. Filed Oct. 30, 1906. Serial No. 341,242.

1. A process of treating vegetable albumin, which consists in subjecting it to the action of animal casein.

2. A process of treating vegetable albumin, which consists in subjecting it to the action of a solution of animal casein.

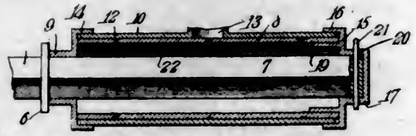
3. A process of treating vegetable albumin, which consists in reducing it to a divided condition, and then subjecting it to the action of a solution of animal casein.

4. A process of treating vegetable albumin, which consists in subjecting it to the action of a solvent of the character described, then introducing one or more bodies of the character described, then molding.

5. A process of treating vegetable albumin, which consists in subjecting it to the action of a solvent of the character described, then to the action of a body such as sulfur, then molding, and finally vulcanizing.

[Claims 6 to 13 not printed in the Gazette.]

883,996. WHEEL OF MINE-CARS. SAMUEL WILKINSON, Osceola Mills, Pa. Filed Jan. 3, 1908. Serial No. 409,131.



1. The combination with an axle having a spindle of angular cross section, a stationary bearing sleeve slidably mounted on and spaced from the spindle, a wheel having a hub journaled on the bearing sleeve, a flange carried by the bearing sleeve and engaging the exterior walls of the hub at one end thereof to form a dust guard, and a stationary cap engaging the free end of the spindle and provided with a similar flange adapted to bear against the exterior walls of the hub at the opposite end thereof.

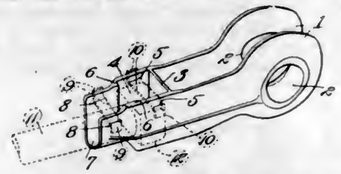
2. The combination with an axle having a spindle of angular crosa section, a stationary bearing sleeve slidably mounted on the axle and having one end thereof provided with a collar having angular interior walls for engagement with the spindle, a wheel having a hub journaled on the bearing sleeve, a stationary cap mounted on the free end of the spindle and provided with a collar engaging the interior walls of the bearing sleeve, said bearing sleeve and cap being provided with laterally extending flanges engaging the exterior walls of the hub, and a fastening device piercing the cap and the adjacent end of the spindle.

3. The combination with an axle having a spindle of angular cross section and provided with a laterally extending stop shoulder, a bearing sleeve slidably mounted on the spindle and having its intermediate portion spaced from the spindle and one end thereof provided with a collar adapted to bear agianst the stop shoulder, said collar being angular in cross section for engagement with the adjacent walls of the spindle, a flange extending laterally from the sleeve at said collar and constituting a dust guard, a cap engaging the free end of the spindle and provided with a similar flange, a wheel having a hub mounted for rotation on the bearing sleeve between the flanges of the sleeve and cap, respectively, there being a plurality of grooves formed in the exterior walls of the sleeve and adapted to receive a lubricant, and a fastening device piercing the cap and the adjacent end of the spindle.

4. The combination with an axle having a spindle of angular cross section, a stationary bearing sleeve mounted on the axle and having one end thereof provided with a laterally extending flange constituting a dust guard, a cap having an angular recess formed therein for the reception of the adjacent end of the spindle and provided with an inwardly extending collar adapted to bear against the interior walls of the sleeve, said cap being provided with an inwardly extending flange spaced from the collar, and a wheel having a hub mounted for rotation on the bearing sleeve between the flanges of the sleeve and cap, respectively, the length of the hub being less than that of the sleeve.

883,997. DETACHABLE JAW FOR CAR-BRAKE RODS. VICTOR WILLOUGHBY, Jeffersonville, Ind. Filed Apr. 18 1907. Serial No. 368,830.

1. A jaw for brake rods having a shank provided with a pocket to receive the head of a brake operating rod, and a socket adjacent to said pocket to receive the body of said rod adjacent to said head, and means for holding said jaw to said rod, substantially as set forth.

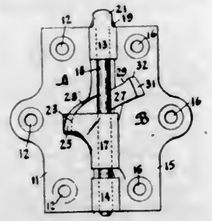


2. A jaw for brake rods having a shank provided with a pocket adapted to receive the head of a brake operating rod, and a socket adjacent to said pocket to receive the body of said rod adjacent to its head, and keys removably seated in the walls of said pocket and socket for holding the jaw to said rod, substantially as set forth.

3. A jaw for brake rods having a shank provided with a pocket, and a socket adapted to respectively receive the head and body of a brake operating rod; said pocket being closed at its forward end by a web extending transversely of said jaw, substantially as set forth.

4. A jaw for brake rods having a shank comprising side walls, and a web located at the forward end of the shank, and shoulders between said web and the rear end of the shank, and means for confining the head of a brake operating rod between said web and shoulders, substantially as set forth.

883,998. HINGE. RUDOLPH G. WINTER, Milwaukee, Wis. Filed June 9, 1905. Serial No. 264,396.



1. In a hinge, the combination of a pair of leaves, a pintle pivotally connecting them and having a head one side of which is cut away to form a flat side, and a projection on one of said leaves opposite said flat side, whereby the pintle is prevented from rotating with the opposite leaf.

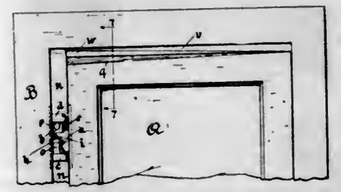
2. In a hinge, the combination of a pair of leaves, a pintle pivotally connecting them and having a head one side of which is cut away to form a flat side, and a projection having an overhanging surface on one hinge-leaf opposite said flat side, and adapted to prevent the other from rotating the pintle and to restrain it from rising vertically.

3. In a gravity-acting hinge, the combination of a pintle having a head and a flat side formed on one side thereof, a pintle-lug in which said pintle is mounted, and a projection on the outer side of said lug projecting against the flat side on said head.

4. A door-hinge comprising, in combination, a pair of leaves each having a flat portion provided with means for securing it to the flat side of the door or door-jamb, one of said leaves having on the upper and lower ends thereof pintle-lugs projecting outwardly at right angles to said flat portion and perforated to receive a pintle, the other leaf having on one edge in the center thereof a single pintle-lug projecting at right angles to said flat portion and also perforated to receive the pintle, a pintle passing through said lugs forming a pivot for the two leaves, a semicircularly curved cam-lug on said first named hinge-leaf between the two pintle-lugs thereof and substantially bisected by the plane thereof, said cam-lug having a continuous helicoidal cam-surface, the end portions of which are pitched more steeply than the intermediate portion, and a projection or lug on the pintle-lug of the other hinge-leaf substantially at right angles to said pintle-lug, whereby it rests on the lower portion of said cam-surface when the two hinge-leaves are closed together.

5. A door hinge comprising, in combination, a pair of leaves each having a flat portion provided with means for securing it to the flat side of the door or door-jamb, one of said leaves having on the upper and lower ends thereof pintle-lugs projecting outwardly at right angles to said flat portion and perforated to receive a pintle, the other leaf having on one edge in the center thereof a single pintle-lug projecting at right angles to said flat portion and also perforated to receive the pintle, a pintle passing through said lugs forming a pivot for the two leaves, a semicircularly curved cam-lug on said first named hinge-leaf between the two pintle-lugs thereof and substantially bisected by the plane thereof, said cam-lug having a continuous helicoidal cam-surface, the end portions of which are pitched more steeply than the intermediate portion, and a projection or lug on the pintle-lug of the other hinge leaf at right angles to said pintle-lug whereby it rests on the lower portion of said cam-surface when the two hinge leaves are closed together; the upper portion of said semicircular lug having at its free end a downwardly sloping surface in position for the other lug to rest thereon in the wide open position of the hinge.

883,999. HINGE. RUDOLPH G. WINTER, Milwaukee, Wis. Filed Mar. 20, 1906. Serial No. 306,952.



1. A gravity-acting hinge comprising a hinge-leaf having a pair of pintle-lugs at the ends thereof, a pintle mounted on said lugs, a second hinge-leaf having a central pintle-lug pivoted and longitudinally movable on said pintle, a helicoidal fin projecting radially around said central lug and having a cam-surface, and a cam-lug carried by said first-named leaf and coacting with said surface.

2. A gravity-acting hinge comprising a hinge-leaf having a pair of pintle-lugs at the ends thereof, a pintle mounted in said lugs, a second hinge-leaf having a central pintle-lug pivoted and longitudinally movable on said pintle, a helicoidal cam-lug projecting radially around the exterior of said central lug and having a cam-surface, a cam-lug carried by said first-named leaf and coacting with said surface, and an oppositely sloping cam-surface on the extremity of said helicoidal lug corresponding with the wide-open position of the door whereby to maintain the door in said open position.

3. A gravity-acting hinge, comprising a hinge-leaf having a pair of pintle-lugs at the ends thereof, a pintle mounted in said lugs, a second hinge-leaf having a central pintle lug of substantially cylindrical form centrally perforated to receive said pintle and pivoted and longitudinally movable thereon, a helicoidal fin projecting radially around said central lug and having a cam surface on its lower side, and a cam-lug carried by said first-named leaf and coacting with said cam-surface.

4. A gravity-acting hinge, comprising a hinge-leaf having a pair of pintle-lugs at the ends thereof, a pintle mounted in said lugs, a second hinge-leaf having a central cylindrical pintle-lug perforated to receive said pintle and pivoted and longitudinally movable thereon, a fin projecting radially from the cylindrical surface of said central lug and having its middle portion horizontal and its two end-portions helicoidal in opposite directions, the under side of said fin forming a cam-surface, and a hori-

zontally projecting lug extending from the approximate center of said first-named leaf and having its upper surface of reverse V-section and coacting with the cam-surface of said helicoidal fin.

884,000. BRAKE-BEAM. WILLIAM H. WOODCOCK, Buffalo, N. Y., assignor to Niagara Forged Steel Company, Buffalo, N. Y., a Corporation of New York. Filed June 24, 1907. Serial No. 380,435.



A brake beam comprising a web, a rib arranged lengthwise on the central part of one side of the web, flanges arranged lengthwise at opposite edges of the web and projecting in a direction opposite to the rib, and brake heads each having two lugs which are secured to opposite sides of said rib and bear against said web, substantially as set forth.

884,001. STONE-SAW. JAMES S. YOUNG, Bethel, Vt. Filed Mar. 15, 1907. Serial No. 362,531.



1. In a stone saw, the combination with the saw blade having tooth receiving portions and parallel recesses in its side faces merging with said tooth receiving portions, of teeth held in said tooth receiving portions, means cooperatively engaging the teeth and resting in said recesses for locking the teeth in the saw blade.

2. A saw blade having tooth receiving spaces and teeth adapted to be held in said spaces, said saw blade having recesses in its side faces merging with said tooth receiving spaces, combined with a locking clip removably held on the saw blade and adapted to embrace the sides thereof and engage a notch in the tooth to lock the teeth to the blade, substantially as shown and described.

3. A saw blade having tooth receiving cut-away portions whose side walls converge upwardly, saw teeth held in said cut-away portions, said teeth having notches and said saw blade having recesses in its side faces and U-shaped clips held over said blades in said recesses to lock in the notches of the teeth.

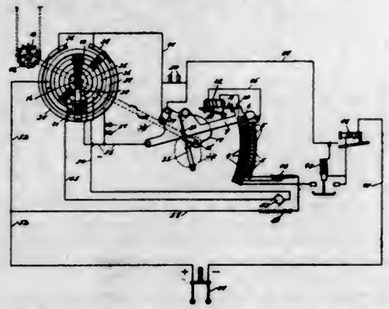
4. A saw blade having tooth receiving cut-away portions, saw teeth held in said cut-away portions, said saw teeth having notches, said blade having recesses in its cut-away edge and in its side faces adjacent said cut-away portions, and spring metal clips bent over said saw blade in said recesses to lock in the notches of the teeth.

5. A saw blade having tooth receiving cut-away portions, saw teeth held therein, said saw teeth having notches combined with U shaped spring metal clips held over said saw blades and embracing the sides thereof, and coöperatively locking in the notches of the teeth, substantially as shown and described.

[Claims 6 and 7 not printed in the Gazette.]

884,002. CONTROLLER FOR ELECTRIC MOTORS. THOMAS E. BARNUM and HENRY H. CUTLER, Milwaukee, Wis., assignors to The Cutler-Hammer Mfg. Co., Milwaukee, Wis., a Corporation of Wisconsin. Filed June 18, 1902. Serial No. 112,203.

1. In a controller, the combination with an electric motor of a resistance therefor, a device for automatically removing said resistance from the circuit of the motor, hand operated means for operating said device to insert the resistance in the motor circuit, and electrically controlled means for preventing the operation of said removing means until the hand operated means has been sufficiently operated to permit all of the resistance to be removed from the motor circuit.



2. In a controller, the combination with a motor, of an electrically operated switch for controlling the motor circuit, a resistance for said motor, a device for automatically removing said resistance from the motor circuit, hand operated means for operating said device to insert the resistance in the motor circuit, means to prevent the operation of said removing device until said hand operated means has been sufficiently operated to permit all of said resistance to be removed from the motor circuit, and means for operating said switch to close the motor circuit.

3. In a controller, the combination with an electric motor, of a resistance therefor, a device for automatically removing said resistance from the motor circuit, hand operated means for operating said device to insert the resistance in the motor circuit, electrically controlled means to prevent the operation of said removing device until said hand operated means has been operated to permit all of the resistance to be removed from the motor circuit, a switch for controlling the circuit through the motor and through said electrically controlled means, and suitable means for operating said switch.

4. In a controller, the combination with an electric motor, of a resistance therefor, a device for automatically removing said resistance from the motor circuit, hand operated means for operating said device to insert said resistance in the motor circuit, electrically controlled means to prevent the operation of said removing device until said hand operated means has been operated sufficiently to permit all of said resistance to be removed from the circuit, a switch for controlling the motor circuit and the circuit through said electrically controlled means, and means to prevent the starting of the motor except when all of the resistance is in circuit therewith.

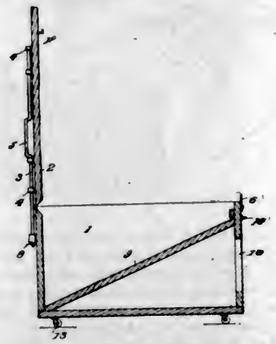
5. In a controller, the combination with an electric motor, of a resistance therefor, an automatically actuated movable element for removing said resistance from the motor circuit, hand operated means for operating said movable element to insert said resistance in the motor circuit, and an electrically controlled device for preventing the operation of said movable element until said hand operated means has been sufficiently operated to permit all of the resistance to be removed from the motor circuit.

[Claims 6 to 13 not printed in the Gazette.]

884,003. HANDLE AND FASTENER FOR FUEL AND OTHER BOXES. THOMAS E. BARTON, Washington, D. C. Filed Feb. 15, 1906. Serial No. 301,252.

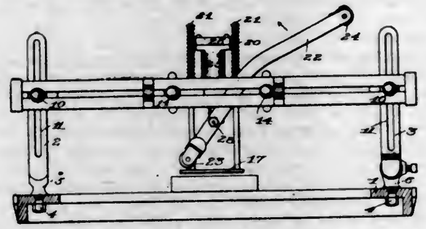
1. A portable box or receptacle having a hinged lid or cover, a handle for said box composed of a slidable member mounted wholly on the exterior of said cover, and means for coöperating with such member for holding the cover opened.

2. A portable box or receptacle having a hinged lid or cover, a handle for said box composed of a slidable member mounted on the exterior of the lid or cover, means adjacent to the hinged end of the cover for coöperating with such member for holding the cover opened, and means adjacent to the other end of the cover for coöperating with such member for holding it closed.



3. A portable box or receptacle having a hinged lid or cover, a rod mounted on the exterior of said lid or cover and having an outwardly bent portion forming a hand grip, bearings for such rod, a plate secured to the body of the box and having an opening to receive one end of such rod for holding the cover closed, and a second plate secured to the other end of such box for receiving the other end of the rod for holding the cover open.

884,004. WORK-CLAMP. WILLIAM H. BENNETT, Rochester, N. Y., assignor to Simeon Wile, Rochester, N. Y. Filed Aug. 9, 1907. Serial No. 387,779.



1. The combination with a pair of vertical guides, a horizontal guide vertically adjustable on the vertical guides, a clamp carrier horizontally adjustable on the horizontal guide, and a clamp movable thereon, of a lever-support yieldingly mounted on the carrier, and a lever pivoted on the support.

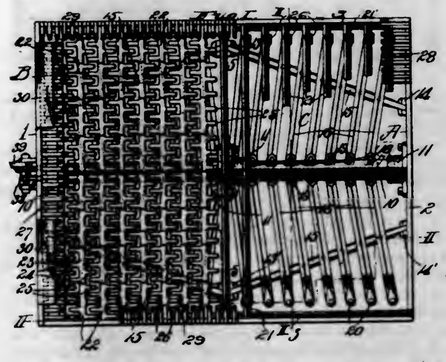
2. In a tenoning machine clamp, the combination with a suitable support, a pair of standards, means for securing the latter to the support, a horizontal guide vertically adjustable on the standards, a clamp carrier adjustable on the guide and a clamp movable on the carrier, of a spring casing on the carrier, a plunger movable in the casing, a spring in the casing acting to depress the plunger, and a lever for operating the clamp, pivoted on the plunger.

3. In a tenoning machine clamp, the combination with a pair of standards, and a horizontal guide vertically adjustable on the standards, of a clamp carrier adjustable on one face of the guide and having its proximate face provided with a depression, a clamp movable on the carrier, a spring pressed lever support movable on the carrier, and an operating lever for the clamp, movable in the depression in the carrier and pivotally connected to the spring pressed support.

4. In a tenoning machine clamp, the combination with a pair of standards, a horizontal guide vertically adjustable on the standards, a clamp carrier adjustable on the guide and a clamp movable on the carrier, of a yieldingly mounted lever support on the carrier, and an operating lever for the clamp pivotally connected to the support.

5. In a tenoning machine clamp, the combination with a suitable support, a pair of standards, means for securing the latter to the support, and a horizontal guide movable on the standards, of a clamp carrier adjustable on one face of the horizontal guide and having its proximate face provided with a depression, a clamp movable on the carrier, a tubular casing on the support having a removable cap plate, a headed plunger movable in the casing, a spring arranged between the plunger and the cap plate, and an operating lever pivoted to the plunger and carrying a roller engaging the clamp.

884,005. FURNACE-GRATE. JOHN M. BLADES, St. Louis, Mo., assignor, by direct and mesne assignments, of one-half to Bent Goodloe and one-half to Hart Goodloe, St. Louis, Mo. Filed Jan. 27, 1906. Serial No. 298,126.



1. A grate consisting of a frame, a plurality of grate bars, throw levers pivotally connected to said grate bars, a support for all of said throw levers, each of said throw levers being fulcrumed to said support at a distance from one of its ends different from the fulcrums of the other levers, and means for moving all of said throw levers, substantially as set forth.

2. A grate consisting of a frame, a plurality of movable grate bars, clips caried by said grate bars, throw levers pivotally connected to said grate bars, a support for all of said throw levers, each of said throw levers being fulcrumed to said support at a distance from one of its ends different from the fulcrums of the other levers, and means for moving all of said throw levers, substantially as set forth.

3. A grate consisting of a frame, grate bars slidably mounted on said frame, throw levers pivotally attached to said grate bars, a support for said throw levers and upon which they are fulcrumed, the fulcrum point of each throw lever being at a distance from one of its ends different from the fulcrums of the other levers, and means for moving all of said throw levers simultaneously to increase or diminish the interstices between said grate bars, substantially as set forth.

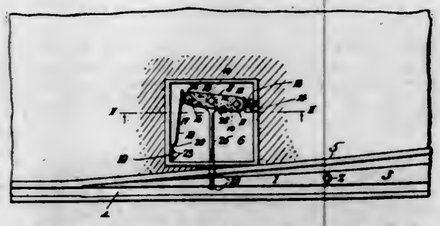
4. A grate consisting of a frame, grate bars slidably mounted thereon, clips mounted on said grate bars, throw levers pivotally attached to said grate bars, a support for said throw levers and to which they are fulcrumed, the fulcrum point of each throw lever being at a distance from one of its ends different from the fulcrums of the other levers, and means for moving all of said throw levers simultaneously to increase or diminish the interstices between said grate bars, substantially as set forth.

5. A grate consisting of a frame, a plurality of movable grate bars, clips carried by said grate bars, throw levers pivotally connected to said grate bars, a support for said

throw levers, each of said throw levers being fulcrumed in said support at a distance from one of its ends different from the fulcrums of the other levers, and a slidable bar mounted on said frame for coöperation with said levers for moving them simultaneously to increase or diminish the interstices between said grate bars, substantially as set forth.

[Claims 6 to 8 not printed in the Gazette.]

884,006. SWITCH-POINT LOCK. GEORGE B. BLEVINS, Little Rock, Ark. Filed Oct. 1, 1907. Serial No. 395,352.



1. In a switch point lock, a lever arm having a roller, a spring blade having a free end engaging said roller, and a link connecting said lever arm to the switch.

2. In a switch point lock, a lever arm having a grooved roller, a spring blade having a rounded protuberance at its free end engaging said roller, and a link connecting said lever arm to the switch point.

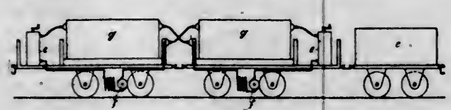
3. In a switch point, a lever having a roller, a spring blade bearing thereagainst and coöperating with the roller to prevent lateral movement thereof, and a link connecting said lever arm to the switch point.

4. In a switch point lock, a lever arm having a roller, a spring blade having a free end engaging said roller, means for adjusting said lever arm toward and from said blade, and a link connecting said lever arm to the switch point.

5. In a switch point lock, a lever arm comprising two blades held in predetermined spaced apart relation, a roller, bolts connecting said blades and serving as pivots for the arm and said rollers respectively, a spring blade having a free end engaging said roller, and a link connecting said lever arm to the switch point.

[Claims 6 to 10 not printed in the Gazette.]

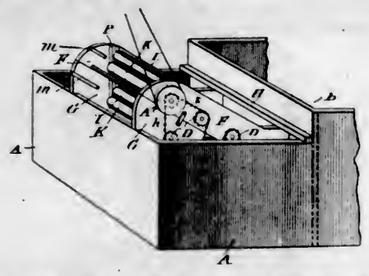
884,007. TRAIN CONTROL FOR ELECTRIC ACCUMULATOR-LOCOMOTIVES. OTTO BÖHM, Berlin, Germany. Filed Aug. 6, 1907. Serial No. 387,358.



1. In a train control for electric accumulator locomotives a plurality of locomotives, each having a controller, a battery and a motor, electric couplings between said locomotives, all the controllers, motors and batteries being connected in series, the arrangement being such that the motors are controlled by only one controller, while all other controllers are permanently fixed to full speed, substantially as described.

2. In a train control for electric accumulator locomotives a plurality of locomotives, each having a controller, a controller resistance, a battery and a motor, two fold electric couplings between said locomotives, all the controllers, motors and batteries being connected in series, the arrangement being such, that the motors are controlled by only one controller, while all other controllers are permanently fixed to full speed, substantially as described.

884,008. DEVICE FOR FEEDING TINNING-MACHINES. PAUL BOSTON, New Castle, Pa. Filed Apr. 22, 1907. Serial No. 369,651.



The cast metal box A in combination with the roll-cases F and G centrally located therein, and the dry box C; the said roll-case F being immediately over, and attached to roll-case G by the clamps *h h*, the tongue and groove *n* and *o*, and braced by the cross-bar projection H on the exterior wall of the tinning vat B; the bottom of F being perforated and that of G solid throughout, forming a suitable fluxing box; each of said roll-cases so situated having a feeding table M M at the upper and outer ends thereof adjusted and supported in grooves in the opposite sides thereof to facilitate the feeding of plates to be tinned, and each being provided with four sets of rolls placed transversely within them, the axles of said rolls resting in the dovetailed vertical grooves P P, in the side walls of said cases, said axles in roll-case F and the front and rear axles in roll-case G being held in said grooves by wedges *w w*, the axles of the two center rolls K K in the roll-case G supported from beneath by the blocks and spiral springs *s s* inserted in the base of said grooves; said rolls being operated, by means of sprocket wheels on the ends of the axles of rolls I I of roll-case F and of the two end rolls of roll-case G K K which are propelled by the chain E located in the dry box C, and protected thereby from smelted tin, fluxing fluid, or other foreign obstructing substances; the space between each set of rolls in said roll-cases being narrowed or contracted by the aprons *j j* extending from side to side of the cases and supported in place by the blocks *l l* on the inner sides thereof, the intervening spaces between said aprons forming guides for directing the plates from one set of rolls to the next, and preventing their curling in the roll-cases; the said several parts, in combination, forming a device for the rapid and continuous feeding of plate, by mechanical means into machines for tinning the same as substantially set forth.

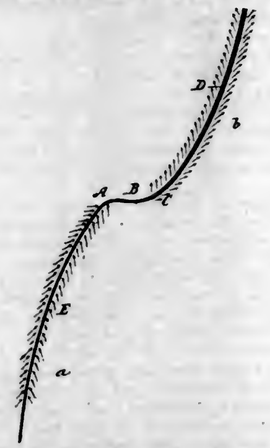
884,009. ART OF PRODUCING ALLOYED STEELS. JAMES CHURCHWARD, New York, N. Y. Filed Sept. 18, 1907. Serial No. 393,488.

1. The herein described process of producing alloyed steel which consists in melting the component metals at a temperature of from about 3100° F. to about 3600° F., and holding the metal bath at its maximum temperature for a period of from 15 to 60 minutes.

2. The herein described process of producing alloyed steel which consists in melting iron or steel with a non-refractory metal at a temperature of from about 3100° F. to about 3600° F., and holding the metal bath at its maximum temperature for from 15 to 60 minutes.

3. The herein described process of producing alloyed steel which consists in melting iron or steel with the alloying metals nickel and manganese at a temperature of from about 3100° F. to about 3600° F., holding the metal bath at its maximum temperature for from 15 to 60 minutes, then adding chromium, or chromium and tungsten then holding the metal bath for a period of from 15 to 40 minutes at not substantially less than 3000 F. then tapping the furnace and running the heat out into the ladle.
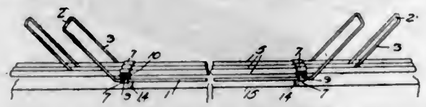
4. The herein described process of producing alloyed steel which consists in melting iron or steel with a non-refractory metal at a temperature of from about 3100° F. to about 3600° F., holding the metal bath at its maximum temperature for from 15 to 60 minutes, then holding the metal bath for a period of from 15 to 40 minutes at not substantially less than 3000 F., and then tapping the furnace.



5. The herein described process of producing alloyed steel which consists in melting iron or steel with a non-refractory metal at a temperature of from about 3100° F. to about 3600° F., holding the metal bath at its maximum temperature for from 15 to 60 minutes, then adding chromium and tungsten, then holding the metal bath for a period of from 15 to 40 minutes at not substantially less than 3000 F. and then tapping the furnace.

[Claims 6 and 7 not printed in the Gazette.]

884,010. UNIT REINFORCEMENT FOR CONCRETE CONSTRUCTION. ROBERT A. CUMMINGS, Beaver, Pa. Filed Dec. 27, 1906. Serial No. 349,732.



1. A reinforcement unit for concrete and like structures, comprising a plurality of longitudinal members arranged in different planes, and connecting members therefor comprising retaining or confining means for preventing movement of the longitudinal members relatively to each other, and means for forcing and holding said rods against said retaining or confining means, said connecting members including a yielding element.

2. A reinforcement unit for concrete or like structures, comprising a plurality of longitudinal members arranged in different planes, and connecting members therefor comprising retaining or confining means arranged to engage the longitudinal members externally and prevent them from spreading apart, and means between the rods for forcing and holding the same against the exterior restraining means, said connecting members including a yielding element.

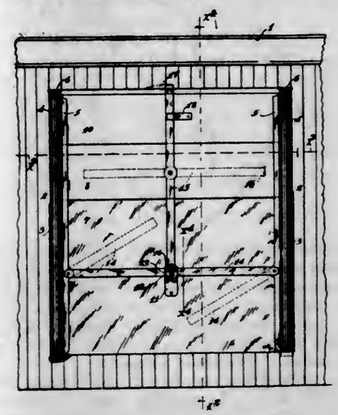
3. A reinforcement unit for concrete and like structures, comprising a plurality of longitudinal members, and connecting means therefor comprising clips, one such clip engaging each of said longitudinal members, and a transverse rod connecting said clips, said connecting means including a yielding element.

4. A reinforcement unit for concrete and like structures, comprising a plurality of longitudinal members, and connecting means therefor comprising a plurality of independent clips, each clip being U shaped and provided with alining openings in its legs, one such clip embracing each longitudinal member and having the holes in the legs spaced from the loop of the clip a distance less than the diameter of the longitudinal member embraced by such clip, said plurality of clips being placed with the legs substantially parallel, and a transverse rod extending through the openings in said clips and binding together the clips and longitudinal members.

5. A reinforcement unit for concrete and like structures, comprising a plurality of longitudinal members, and connecting means therefor comprising U-shaped clips provided with alining openings in their legs, one such clip embracing each of the longitudinal members, and a transverse rod extending through the openings in said clips, said connecting means including a yielding element.

[Claims 6 to 13 not printed in the Gazette.]

884,011. GRAIN-DOOR FOR CARS. JOHN EDMAN, Minneapolis, Minn. Filed Aug. 26, 1907. Serial No. 390,133.



1. The combination with a car body, of a grain door seated in the door opening thereof, a pair of oscillatory door locking blades mounted at the sides of the door opening, lock bars extending from said lock blades, and means for locking the ends of said lock bars to said grain door, substantially as described.

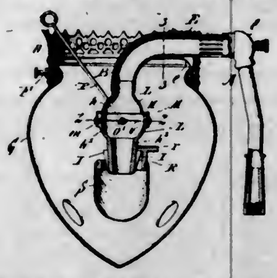
2. The combination with a car body having a door opening, of a grain door seated in said door opening, a pair of oscillatory lock blades mounted in said door opening at the opposite sides thereof for normally holding said grain door in working position, a lock bracket on the intermediate portion of said grain door, lock bars pivoted to said lock blades and engageable with said lock bracket at their free ends, and a lock lever pivoted to an upper portion of said grain door, the lower end thereof being movable into a position immediately above said lock bracket, and the upper end thereof being arranged for locking engagement with the upper portion of the door frame, substantially as described.

3. The combination with a car body having a door opening, of a grain door made up of upper and lower sections seated in said door opening, a lock bracket on the intermediate portion of the lower door section, oscillatory lock blades mounted in said door opening at the opposite sides thereof for normally holding said grain door in working position, a lock lever intermediately pivoted to the upper door section and its upper end arranged for interlocking engagement with the seat in the top of the door frame and having a flanged lower end, and a lock bolt or pin for locking the flanged lower end of said lock lever to the lock bracket on said lower door section, substantially as described.

4. The combination with a car body having a door opening, of a grain door made up of three sections, oscillatory lock blades mounted in said door opening at the opposite sides thereof for normally holding the sections of said

grain door in working position, a lock bracket applied to the intermediate portion of the lower door section, lock bars pivoted to said lock blades and engageable with said lock bracket, a lock lever intermediately pivoted to the intermediate door section and having a flanged lower end and with its upper end arranged for interlocking engagement with the top of the door frame, a lock pin or bolt for interlocking the flanged lower end of said lock lever to said lock bracket on said lower door section, and a lock bracket on the upper door section with which the upper end of said lock lever is engageable, substantially as described.

884,012. AUXILIARY PRESSURE-REGULATOR FOR GAS-BURNERS. HENRY FARNOFF, Buffalo, N. Y., assignor, by direct and mesne assignments, of one-half to Anthony Wind and one-half to Charles K. Ernst, Buffalo, N. Y. Filed Aug. 26, 1907. Serial No. 390,163.



1. In an incandescent gas-burner, the combination with a gas supply-pipe having a gas-regulator and a mantle, of an auxiliary-regulator between said first-mentioned regulator and said mantle, said auxiliary-regulator having an opening through which the gas may pass and being movable to allow part of the gas to pass directly to the mantle without passing through said regulator.

2. In an incandescent gas-burner, the combination with a supply-pipe having a regulator and a mantle, of an auxiliary-regulator comprising a foraminous screen movable into or out of the path of the gas passing to said mantle.

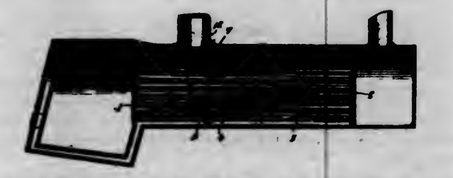
3. In an inverted incandescent gas-burner, the combination with a supply-pipe and a mantle, of an auxiliary-regulator between said supply-pipe and mantle having a screen movable to compel the supply of gas to pass therethrough or to permit the gas to pass directly to the mantle without passing through said screen.

4. In an inverted incandescent gas-burner, the combination with a supply-pipe and a mantle, of an auxiliary-regulator having a screen movable to allow part of the supply of gas to pass therethrough or movable out of the path of the gas.

5. An auxiliary-regulator for gas-burners comprising a casing and a rotatable foraminous screen movable into or out of the path of the gas passing through said casing.

[Claims 6 to 11 not printed in the Gazette.]

884,013. LOCOMOTIVE-BOILER. JOSEPH J. GAGE, Mansfield, Ohio. Filed Oct. 29, 1906, Serial No. 341,051. Renewed Jan. 28, 1908. Serial No. 412,992.



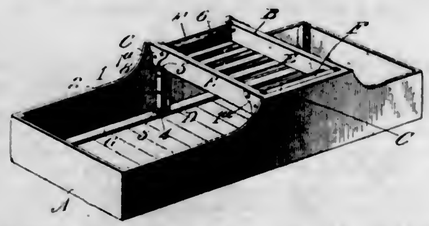
1. In a device of the type set forth, the combination with a boiler having front and rear heads or flue-sheets, of an intermediate vertical head or flue-sheet secured in front of the rear head or flue-sheet, with a series of horizontal flues passing through all of said heads or flue-sheets, the intermediate head or flue sheet supporting the weight of the flues between the front and rear heads or flue-sheets, and the said intermediate head or flue-sheet being a double plate which allows one of the plates to be drawn up or down and which securely fastens the flues in said intermediate head or flue-sheet.

2. In a device of the type set forth, the combination with a boiler, having front and rear flue-sheets, and horizontal flues supported in said sheets, of an intermediate supplemental flue-sheet comprising two plates one of which is stationary within the boiler, and the other of which is movable vertically, the said plates being provided with openings to receive said flues, and means for securing the movable plate in fixed position with relation to the stationary plate.

3. In a device of the type set forth, the combination with a boiler having front and rear flue-sheets, and flues supported in said sheets, of an intermediate supplemental flue-sheet comprising a stationary member, and a movable member both provided with openings to receive said flues, the openings in one member being so disposed with relation to the openings in the other member that opposite walls of said openings engage the flues.

4. In a device of the type described, the combination with a boiler having front and rear flue-sheets, and flues supported in said flue-sheets, of an intermediate supplemental flue support comprising a stationary plate secured in the boiler, and a vertically movable plate engaging the face of said stationary plate, both of said plates having flue-openings, means for securing the movable plate to the stationary plate, and means for securing the movable plate in adjusted position with relation to the stationary plate.

884,014. VEHICLE. MARTIN F. GESERICH, St. Louis, Mo. Filed July 13, 1907. Serial No. 383,553.

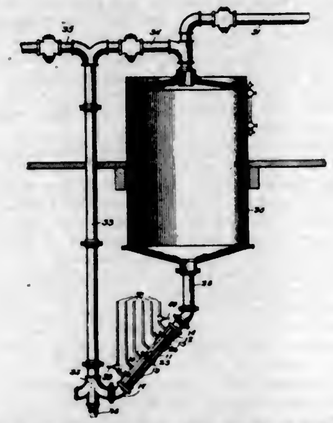


A vehicle comprising a body provided with outwardly curved risers, and side sills, a seat frame having stretcher rails, side rails, and supporting posts, brace members, each formed with an offset foot, having a projecting end, secured to a side sill, an upwardly flaring reinforced offset portion providing a shoulder for supporting a stretcher rail, and secured thereto, and bolts passed through the offset portions of the front and rear brace members and through the front and rear stretcher rails at the inner side of the side rails.

884,015. ELECTROLYTIC CELL. ALBERT S. GRAY, Chicago, Ill., assignor to Ross J. Beatty, trustee, Chicago, Ill. Filed Mar. 15, 1906. Serial No. 306,164.

1. An electrolytic cell provided with upper cathode and lower anode elements a diaphragm separating the same and inlet and outlet openings for the circulation of the charge under treatment through the cell between the anode and cathode elements, said cell having multiple vents for the escape of evolved gases leading from the under surface of the cathode element, substantially as described.

2. An electrolytic cell provided with upper cathode and lower anode elements a diaphragm separating the same and inlet and outlet openings for the circulation of the charge under treatment through the cell between the anode and cathode elements, said cell having multiple vents for the escape of evolved gases leading from the under surface of the cathode element and liquid holding means about the exits of said vents, substantially as described.



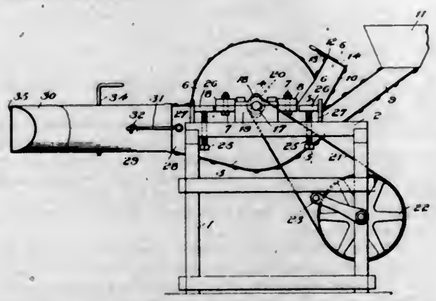
3. An electrolytic cell provided with a diaphragm dividing the same into cathode and anode chambers, cathode and anode elements in said chambers respectively, said cell having an inlet and an outlet for the circulation of the charge under treatment opening into the anode chamber, and multiple vents for the escape of evolved gases from said cathode chamber, substantially as described.

4. An electrolytic cell provided with a diaphragm dividing the same into cathode and anode chambers, cathode and anode elements in said chambers respectively, said cell having an inlet and an outlet for the circulation of the charge under treatment opening into the anode chamber, and multiple vents for the escape of evolved gases from said cathode chamber and means for maintaining said cathode element submerged, substantially as described.

5. An electrolytic cell provided with a diaphragm dividing the same into cathode and anode chambers, cathode and anode elements in said chambers respectively, said cell having an inlet and an outlet for the circulation of the charge under treatment opening into the anode chamber, and multiple vents for the escape of evolved gases from said cathode chamber and means for maintaining a separate circulation of liquid through said cathode chamber, substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

884,016. PNEUMATIC CONVEYER. CLARENCE L. GROVES, Hartford City, Ind. Filed Apr. 30, 1907. Serial No. 371,155.



1. A pneumatic conveyer comprising a fan, a cylindrical fan chamber having at substantially opposite points upon its circumference the tangential feed and outlet pipes 9, 28, and also having the air inlet pipe 10 arranged in its circumference immediately above the feed pipe 9 and a valve plate transversely slidable across said air inlet pipe, substantially as set forth.

2. A pneumatic conveyer comprising a fan, a fan chamber having tangential feed and outlet pipes, an air inlet pipe opening into the chamber adjacent to the feed pipe, guides upon said air inlet pipe and a valve plate slidably engaged with said guides and movable across said air inlet pipe, for the purpose set forth.

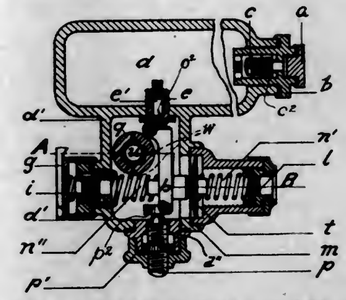
3. A pneumatic conveyer comprising a support, a fan casing arranged thereon and consisting of a base section having an open top, a discharge pipe at one end and a feed pipe and an air inlet pipe at its other end, a fan in said fan casing, a removable cover section secured upon the open top of said base section of the fan casing and means for controlling the passage of air through said air inlet pipe.

4. A pneumatic conveyer comprising a supporting frame, a fan, a shaft for the fan journaled in bearings upon said frame and a casing for the fan adjustable transversely with respect to its shaft to vary the space between the outer ends of the blades of the fan and the inner face of the casing, substantially as set forth.

5. A pneumatic conveyer comprising a supporting frame, a fan, a shaft for the fan journaled in bearings upon said frame, a casing for the fan carried by the frame and movable transversely with respect to the fan shaft to vary the space between the ends of the fan blades and the inner face of the wall of the casing, and set screws for adjusting said fan casing, substantially as and for the purpose set forth.

[Claims 6 to 9 not printed in the Gazette.]

884,017. CARBONIC-ACID APPARATUS FOR BEER-CASKS AND THE LIKE. BERNHARD HADANK, Buenos Ayres, Argentina. Filed Feb. 5, 1906. Serial No. 299,603.



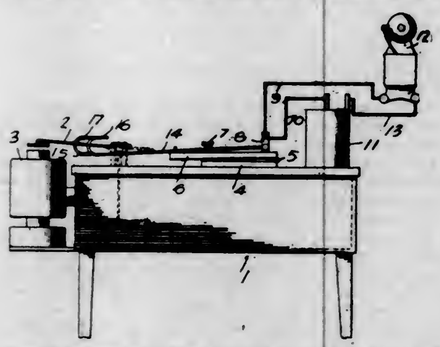
1. A device for drawing off fluids from fluid-containing casks by means of gas-pressure, comprising in one plane a gas-bottle and an intermediate holder, said bottle and holder adapted to lie snug against the head of the cask and not project beyond the cask ends; a reducing valve cutting off the intermediate holder from the gas-bottle, a hollow connecting piece fitted to the intermediate holder and perpendicular to the plane of the gas-bottle and holder and leading into the cask.

2. A device for drawing off fluids from fluid-containing casks by means of gas-pressure, comprising in one plane a gas-bottle having an opening for filling from other vessels, which opening is provided with a back-pressure valve, an intermediate holder and a reducing valve cutting off the intermediate holder from the gas-bottle, said bottle, holder and reducing valve adapted to lie snug against the head of the cask and not project beyond the cask ends; a hollow-connecting piece fitted to the intermediate holder perpendicular to the plane of the gas-bottle and intermediate holder and adapted to lead into the cask.

3. A device for drawing off fluids from fluid-containing casks by means of gas-pressure, comprising in one plane a gas-bottle, an intermediate holder, and a reducing valve cutting off the intermediate holder from the gas-bottle, said bottle, holder and valve adapted to lie snug against

the head of the cask and not project beyond the cask ends; a hollow connecting-piece fitted to the intermediate holder perpendicular to the plane of the gas-bottle and intermediate holder, the bore of the connecting-piece adapted to serve for the introduction of carbonic acid into the cask going through the device, so that it can be used for the introduction of a racking-pipe.

884,018. INCUBATOR-ALARM. FREMONT R. HARRIS, Kenmare, N. D. Filed May 22, 1907. Serial No. 375,154.

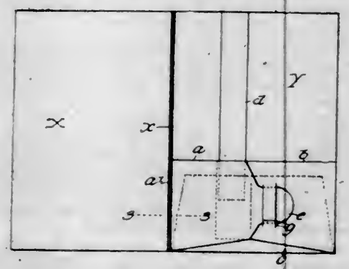


1. The combination with an incubator or brooder having a movable damper arm, of blocks hingedly connected at their rear ends, contact wires carried by the blocks and located in position for engagement by the damper arm, one of the blocks being movable with respect to the other to vary the position of the wires with respect to the arm, means for holding the movable block at different points of its movement, and a battery and bell in circuit with the wires.

2. The combination with an incubator or brooder having a movable damper arm of a lower stationary block, an upper block hinged at its rear end to the rear end of said stationary block, said upper block being adjustably movable with relation to the lower block, binding posts carried by the upper block and wires connected to said binding posts and formed at their ends for engagement with said damper arm upon movement of the latter in either direction.

3. The combination with an incubator and an electric alarm circuit including two spaced uninsulated contact wires, of a movable damper arm and a member on said damper arm arranged for simultaneous contact with said wires, said member comprising a body coiled about said damper arm and having its ends extended in parallelism to said body and in opposite directions, the said extended ends overlying the said coiled body.

884,019. PAPER-FILE. HERMANN HERDEGEN, Stuttgart, Germany. Filed May 16, 1907. Serial No. 373,958.



1. A paper file of the type described comprising a body portion provided with a pocket or holder reduced in depth with respect to said body portion and adapted to receive and hold one portion or end of the contents of the file, the remaining portion or end being exposed, said body portion being provided with a retainer flap for retaining the exposed end of said contents and engaging the pocket.

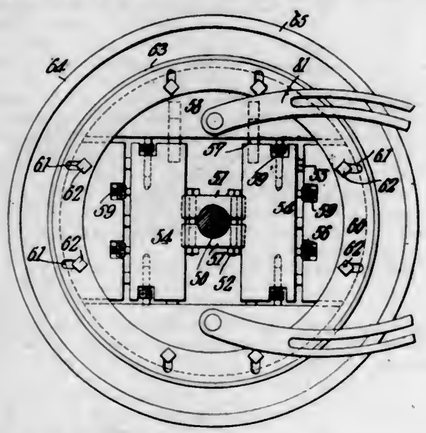
2. A paper file of the type described comprising a body portion provided with a pocket formed of a plurality of flaps and reduced in depth with respect to said body portion and adapted to receive or hold one portion or end of the contents of the file, the remaining portion or end being exposed, and a retainer flap for retaining the exposed end of the contents.

3. A paper file of the type described comprising a cover scored to form folding portions, one of said folding portions being provided on its inner face with a plurality of flaps adapted to form a pocket, said flaps being reduced with respect to the length of said folding portion and adapted to receive one end of the contents of the file, the remaining end of the contents being exposed.

4. A paper file of the type described comprising a cover scored to form folding portions, one of said folding portions being provided on its inner face with a plurality of flaps adapted to form a pocket, said flaps being reduced with respect to the length of said folding portion and adapted to receive one end of the contents of the file, said file being provided with a retaining flap engaging the exposed end of the contents and engaging said pocket.

5. A paper file of the type described comprising a cover scored to form two folding portions, one of said portions being provided on its inner face with a pocket reduced in depth with respect to the length of said portion, said pocket comprising lateral flaps and a bottom flap, said lateral flaps being provided with means whereby all of said flaps may be removably held in position to form said pocket.

884,020. SAWMILL. JOHN IHLE, Chippewa Falls, Wis. Filed Aug. 31, 1907. Serial No. 390,974.



1. In a machine of the character described, a band-saw wheel or drum comprising an annular rotatable member, a disk carrying said annular member and normally fixed against rotation, a shaft for said disk, means for permitting adjustment of the disk radially with reference to the shaft and for holding the disk in adjusted positions, and means for permitting adjustment of the disk rotatively with reference to said shaft and for holding it in such adjusted positions.

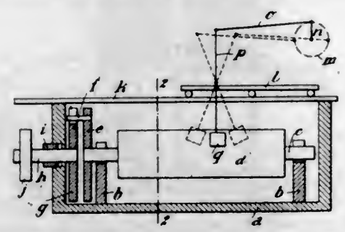
2. In a machine of the character described, a band-saw wheel or drum, comprising an annular rotative member, a disk carrying said annular member and fixed against rotation, a shaft for said disk, and means for adjusting the disk radially with reference to the shaft.

3. In a machine of the character described, a band-saw wheel or drum comprising an annular rotative member for carrying the saw, and a disk fixed against rotation and carrying the annular member, said disk being composed of parts positively adjustable radially to take up wear.

4. In a machine of the character described, a band-saw wheel or drum, comprising an annular rotative member, a disk fixed against rotation, a shaft upon which said disk is supported, means for permitting the radial adjustment of the disk with reference to the shaft, and means for positively increasing the effective diameter of the disk to take up wear between the disk and the annular member supported thereby.

5. In a machine of the character described, a band-saw wheel or support comprising a fixed shaft, a clamp thereon, blocks movable with relation to said clamp, other blocks radially adjustable with relation to the shaft carried by the first-named blocks, said last-named blocks having their outer edges curved on arcs struck from the axis of the shaft as the center, cheek plates carried by said last-named blocks and projecting beyond the same, and an annular rotatable member having its periphery formed to receive a band-saw and its inner edge formed to seat between the cheek plates.

884,021. APPARATUS FOR MAKING COPPER. MARCEL A. JULLIEN and EMILE L. DESSOLLE, Levallois-Perret, France. Filed Apr. 4, 1907. Serial No. 366,421.



1. An apparatus for polishing electrolytic copper comprising a vat provided with a spindle carrying the cylinder on which the metal is deposited, an outside shaft driving the spindle of the said cylinder by means of a wooden tappet, a carriage arranged above the said vat and moving longitudinally thereon, and carrying a motor operating, by means of a connecting rod and crank, an oscillating lever provided at its end with the polishing tool substantially as described.

2. An apparatus of the class described comprising in combination, a receptacle for the electrolytic bath, an actuated member on which the metal is deposited, a carriage movable with respect to said member, a polisher carried by said carriage and bodily movable abreast of said member, and means for moving said polisher with respect to said member independently of the bodily movement imparted to said polisher.

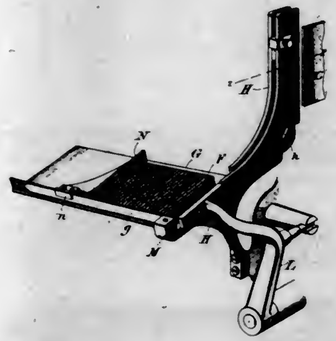
3. An apparatus of the class described comprising in combination, a receptacle for the electrolytic bath, an actuated member on which the metal is deposited, a carriage movable with respect to said member, a polisher carried by said carriage and bodily movable abreast of said member, and means mounted on said carriage for imparting movement to said polisher independently of said bodily movement.

4. An apparatus of the class described comprising in combination, a receptacle for the electrolytic bath, an actuated member on which the metal is deposited, a carriage movable with respect to said member, a polisher pivotally mounted on said carriage and bodily movable abreast of said member, and means mounted on said carriage for imparting movement to said polisher about its pivotal mounting.

5. An apparatus of the class described comprising in combination, a receptacle for the electrolytic bath, an actuated member on which said metal is deposited, a polisher engaging said member, and means for imparting movement to said polisher through a plurality of prescribed courses so that the path described by said polisher will intersect thereby effecting continuous engagement of said polisher with the peripheral surface of said member.

[Claim 6 not printed in the Gazette.]

884,022. GALLEY FOR LINE-CASTING MACHINES. DAVID S. KENNEDY, Brooklyn, N. Y., assignor to Mergenthaler Linotype Company, a Corporation of New York. Filed Jan. 16, 1908. Serial No. 411,109.



1. In a line-casting machine, the combination of an ejector-blade, an inclined surface upon which the lower end of the slug is delivered by the ejector, and a stationary stop in position to encounter the upper end of the slug after the latter is fully advanced by the ejector; whereby the tilting of the slug that it may ride upon its base is effected by the action of the inclined surface and without movement of the stop.

2. In a galley for a line-casting machine, the combination of the galley proper and the slug-guiding bracket having a closed bottom extended upward and rearward in position to receive the lower rear corner of the slug when delivered thereto by the ejector, having also the upright slotted portion open at the rear to receive the slug, with a rigid stop at the front to guide the upper end of the slug as it descends the inclined surface.

3. A receiving galley for a line-casting machine having a stationary inclined bottom to receive and guide the lower end of a slug, and a stationary stop to arrest the upper end of a slug; whereby the inclined bottom is enabled to effect the tilting movement of the slug.

4. In a receiving galley for a line-casting machine from which the slugs are delivered in a vertical position, a vertically slotted guide to receive the slugs, said guide having at the front a stop to arrest the upper ends of the slugs, and also having at the bottom an inclined slug-supporting surface extended rearward beyond the top guide a distance substantially equal to the width of the slug; whereby the slug is tilted and caused to advance endwise in an inclined position through the action of the inclined body.

5. In a slug-receiving galley, means for directing the slugs endwise into the galley, and a pointed stop to encounter the end of the slugs and prevent their rebound.

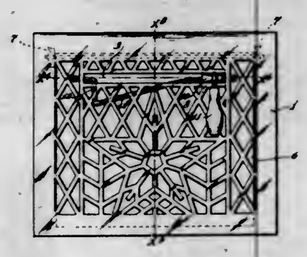
[Claims 6 and 7 not printed in the Gazette.]

884,023. HOT-AIR REGISTER. WILLIAM R. KNIGHTS, Minneapolis, Minn. Filed Aug. 28, 1907. Serial No. 390,461.

1. In a register of the kind described, the combination with a skeleton face plate and a gate hinged thereto, of a cam attached to said gate, and a head slidably mounted on said face plate and having a connection operating on the cam on said gate to open and close the same, under sliding movements of said head, substantially as described.

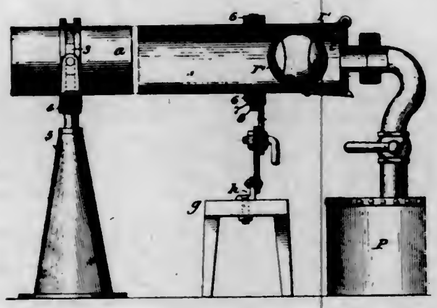
2. In a register of the kind described, the combination with a skeleton face plate and a gate hinged thereto, of a

cam rod connected to said gate with freedom for lateral swinging movements, and a cam head slidably mounted on



said face plate and having a cam acting connection with said cam rod, substantially as described.

884,024. MECHANICAL BALL-THROWER. ROBERT H. LAKE, Washington, D. C. Filed Dec. 18, 1902. Serial No. 135,719.



1. In a mechanical base ball thrower, the combination with a barrel, and a compressed air supply communicating therewith, of a strap to engage the ball while the latter is at rest, and to impart thereto to a twisting movement about an axis transverse to its line of flight as the result of the forward movement of the ball, substantially as described.

2. In a mechanical base ball pitcher, the combination with a barrel and an ejecting medium to act upon the ball, of a flexible strap engaging the ball while the latter is in a state of rest and coacting with the same to impart a twisting movement thereto as a result of the forward movement of the ball under the influence of said ejecting medium, substantially as described.

3. In a mechanical base ball thrower, the combination with a barrel, and a compressed air supply communicating therewith, of a flexible ball curving device independent of the wall of the bore of the gun, to coact with the ball in the initial forward movement thereof, substantially as described.

4. In a mechanical base ball curver and in combination, a barrel, a compressed air-supply therefor, and a curving mechanism including a strap having frictional contact with the ball, while at rest and in the initial forward movement thereof only, to impart thereto a twisting movement transverse to its line of flight as a result of said forward movement.

5. The combination with a barrel and a compressed air supply, of a displaceable breech closure and a device working within the bore of the gun carried thereby and engaging the ball to impart a twisting movement to the same, substantially as described.

[Claims 6 to 37 not printed in the Gazette.]

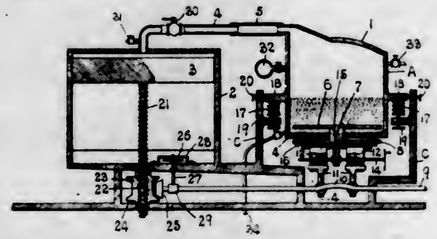
884,025. PROCESS OF MANUFACTURING BLOOD-ALBUMIN PREPARATIONS. ALFONS LANGER, Friedrichsberg, near Berlin, Germany, assignor to Karl August Lingner, Dresden, Germany. Filed Apr. 17, 1905. Serial No. 256,161.

A process for producing blood albumin preparations which consists in mixing defibrinized animal blood with organic calcium salts soluble in water, in the presence of inorganic calcium salts, permitting the whole to stand until it becomes a gelatinous mass, drying at a low temperature and reducing to a powder.

884,026. BLOOD COMPOUND OF GLYCEROPHOSPHATE OF LIME AND CALCIUM. ALFONS LANGER, Friedrichsberg, near Berlin, Germany. Filed Dec. 24, 1906. Serial No. 349,335.

A product, 30% of which is soluble and 70% insoluble in cold water, containing the constituent parts of ox-blood, with the exception of the fibrinogen, the said constituent parts being chemically bound up in part with glycerophosphate of lime and partly with calcium.

884,027. MASSAGING-MACHINE. CAREY A. MANKER, Pearl, Ill. Filed Dec. 14, 1906. Serial No. 347,771.



1. A machine of the character described, comprising a closed chamber, means for rarefying the air in said chamber, and means for imparting a vibratory action to a person located in said chamber.

2. A machine of the class described, comprising a closed chamber, means for supplying a fluid or vapor to said chamber, means for rarefying the air in said chamber, and means for imparting vibrations to the body of a person located in said chamber.

3. A machine of the character described, comprising a closed chamber, means for rarefying the air in said chamber, means for supplying oxygen to said chamber, and means for imparting vibrations to the body of a person located in said chamber.

4. In a massaging machine, an air-tight receptacle, pumping and air-modifying means to change the destiny and to relatively change the quantity of elements of the air or other medium within the receptacle, and means for agitating the contents of the receptacle.

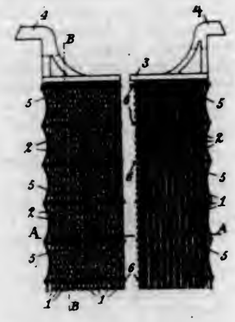
5. In a massaging machine, an air-tight receptacle, means for agitating its contents, and means for changing the density of the air within the receptacle.

[Claims 6 to 20 not printed in the Gazette.]

884,028. ACCUMULATOR-PLATE. MICHAIL MARGULIS, Odessa, Russia. Filed June 7, 1907. Serial No. 377,821.

1. An accumulator-plate consisting of a head-piece, a plurality of alternately straight and wavy lead strips suspended from the head-piece and provided with holes, a plurality of pressure strips suspended from the head-piece and adapted to yieldingly compress the straight and wavy lead strips in the horizontal direction, and a plurality of horizontal cross rods passing through the holes of the straight and wavy lead strips and adapted to connect together the pressure strips.

2. In an accumulator-plate, the combination with a head-piece, of a plurality of vertical alternately straight and wavy lead strips secured with their upper ends on said head-piece and provided with holes, a plurality of elastic pressure strips suspended from said head-piece and adapted to yieldingly compress said straight and wavy lead strips in the horizontal direction, and a plurality of cross rods passing through the holes of said straight and wavy lead strips and adapted to connect together said straight and wavy lead strips while being permitted to vertically move in the holes of the straight lead strips.



3. In an accumulator-plate, the combination with a leaden head-piece, of a plurality of vertical alternately straight and wavy lead strips secured with their upper ends on said leaden head-piece and provided with holes, a plurality of elastic supporting strips suspended from said leaden head-piece and adapted to yieldingly compress said straight and wavy lead strips in the horizontal direction, and a plurality of horizontal cross rods passing through the holes of said straight and wavy lead strips and adapted to connect together said supporting strips while being permitted to vertically move in the holes of the straight lead strips.

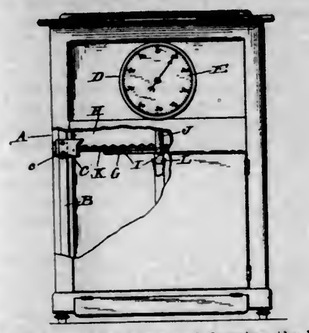
4. In an accumulator-plate, the combination with a head-piece, of a plurality of alternately straight and wavy lead strips suspended from the head-piece and provided with holes, the straight lead strips being longitudinally corrugated, a plurality of pressure strips suspended from the head-piece and adapted to yieldingly compress the straight and wavy lead strips in the horizontal direction, and a plurality of horizontal cross rods passing through the holes of the straight and wavy lead strips and adapted to connect together the pressure strips.

5. In an accumulator-plate, the combination with a head-piece, of a plurality of vertical alternately straight and wavy lead strips secured with their upper ends on said head-piece and provided with holes, the straight lead strips being longitudinally corrugated, a plurality of elastic pressure strips suspended from said head-piece and adapted to yieldingly compress said straight and wavy lead strips in the horizontal direction, and a plurality of cross rods passing through the holes of said straight and wavy lead strips and adapted to connect together said pressure strips while being permitted to vertically move in the holes of the straight lead strips.
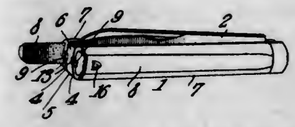
[Claim 6 not printed in the Gazette.]

884,029. REFRIGERATOR. THEODORE A. MAYER, Washington, D. C. Filed Sept. 13, 1907. Serial No. 392,688.

The combination with a refrigerator having a boxing in its front, of a scales structure secured in said boxing and having a dial presented to the exterior of the refrigerator, a bar operatively connected with said scales structure, horizontal arms formed integral with and extending from said bar, and a platform removably and replaceably supported on said horizontal arms and forming the bottom of the ice chamber, substantially as shown and described.



884,030. KNIFE-HANDLE. WILFORD I. MORTON, Berwick, Nova Scotia, Canada. Filed Nov. 15, 1907. Serial No. 402,324.



1. A knife handle having a longitudinal groove in one side open at one end, a slip of sharpening or abrading material shaped to fit said groove and removable therefrom at said open end, and means for fastening said slip in the groove.

2. A knife handle having its sides made of slips of sharpening or abrading material removable endwise therefrom, and means for positively locking said slips in the handle.

3. A knife handle having a dovetailed longitudinal-groove in one side, a removable sharpening or abrading slip shaped to fit said groove, and a spring catch at one end of said knife handle for retaining said slip in said groove.

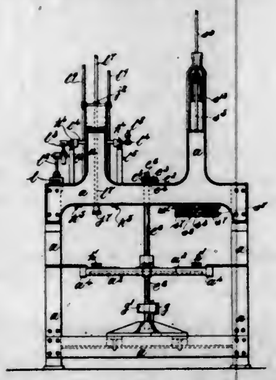
4. A knife handle having a dovetailed longitudinally grooved cheek-plate on each side, two slips of sharpening or abrading material of different qualities shaped to fit said dovetailed grooves, and a spring catch attached to each side of the knife handle having a lateral projection to engage the end of an abrading slip and hold the same in its groove.

884,031. APPARATUS FOR DECORATING POTTERY AND OTHER WARE. FREDERICK MOUNTFORD, Longton, England. Filed Feb. 1, 1907. Serial No. 355,238.

1. In a decorating machine for the purposes described an intermittently rotating table adapted to receive one or a plurality of chucks for holding the article to be decorated, a ratchet device for operating said table, a cam and slide device for operating the ratchet, a cam operated slide and lever mechanism for holding the table in a fixed position during decoration and a pivoted stop device arranged in conjunction with the table and with a brake mechanism for preventing overrunning of the table substantially as described.

2. In a decorating machine, a rotatable table, a plurality of chuck devices each adapted to receive the article to be decorated mounted in prearranged positions on the table, a spring catch device for holding the chucks in a fixed position when required, a device for releasing said spring catch and enabling the article to be rotated during exterior decoration and to afterwards again lock the chuck substantially as described.

3. In a decorating machine for the purposes described the means for transferring a pattern to the inside base of the article to be decorated consisting of a vertically reciprocable rod carrying at its lower end a resilient pattern pad, a cam and lever device for effecting reciprocation, a gold or color supplying device in conjunction with the reciprocating rod consisting of a drip bottle, a rotatable color disk, a ratchet and cam device for rotating the disk and a reciprocable frame carrying spring-controlled rollers for transferring the color or gold from the disk to the pattern surface substantially as described.

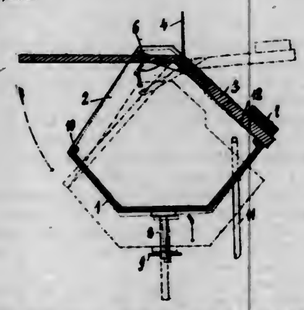


4. In a decorating machine for the purposes described the means for transferring a pattern to the handle of a receptacle, consisting of a reciprocable lever carrying at its free end a fixed and adjustable pattern pad, a rod and cam and rack and wheel device for moving the lever into position to receive color or gold and to a position for transferring said color or gold to the handle, a drip bottle or other supplying device for the color or gold, a distribution slab, a distribution roller and a rod, lever and cam device for operating the distribution roller so as to transfer the color or gold from the slab to the pattern pad substantially as described.

5. In a decorating machine the combination of a vertically reciprocal device for decorating the inside base of the article to be decorated with a simultaneously-operating gold or color transferring device for putting a pattern on the handle of the article to be decorated substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

884,032. NEST FOR HENS. JOACHIM MUHL, Strukkamp, Fehmarn, Germany. Filed Apr. 15, 1907. Serial No. 368,365.



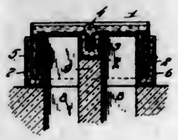
1. A nest for hens comprising a box having a bottom part and side walls, a double flap-door, means engaging with one flap of the door for suspending the door, means for suspending the box from the other flap and a weight on the opposite flap for counteracting the weight of the box.

2. A nest for hens comprising a box having a bottom part and side walls, a double flap door, means for eccentrically suspending the box from one flap of the door means for suspending the door from the other flap, a weight on said last mentioned flap for counterbalancing the weight of the box and means for preventing the lowering of the box before the hen reaches the bottom of the box.

3. A nest comprising a box having a bottom part and side walls, a double flap door to which the box is pivoted at one side of the center of said door, means for suspending the door from the other side of the center, a weight on the door for counterbalancing the weight of the box and means for holding the door closed on one side and the box lowered.

4. A nest comprising a box consisting of a bottom part and side walls, a double flap door arranged between the side walls of the box, means for suspending the box from one part of the door, a weight on the other part for counterbalancing the box and suspending means connected to the door between the weight and the box.

884,033. FURNACE-VALVE. JACOB B. MCKENNAN, Pueblo, Colo. Filed May 14, 1906. Serial No. 316,772.



1. A furnace valve structure comprising a plurality of coterminous vertical flues, a water-pan surrounding and separating said flues, and a lift-valve having a transverse partition, and an integral upturned flange deeper than the valve hood, to form a water-cooling chamber for the hood-top and rim; said valve being adapted, when seated, to seal from each other all flues controlled thereby; substantially as described.

2. A furnace valve structure comprising a pair of coterminous vertical flues, a water-pan surrounding and separating said flues, said separating portion being of less depth than the marginal portion, and an integral lift hood having an upturned flange extending above the hood-top and a water cooled partition of less depth than the hood and adapted to seat in the flue-separating portion of the water-pan; substantially as described.

3. In a furnace valve, in combination, a water-pan constituting the terminal of each of a plurality of parallel flues, said pan having peripheral and diametrical channels, and a valve hood having marginal flanges and an intermediate partition of less depth than said flanges, said valve being constructed and arranged to seal each of said flue-terminals when in closed position, and to be raised and rotated to permit and control the flow of fluid between said flues; substantially as described.

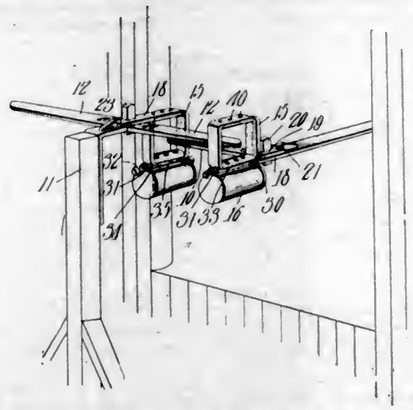
4. In a furnace valve, in combination, a water-pan constituting the terminal of each of a plurality of parallel flues, said pan having peripheral and diametrical channels, and a valve hood having water-cooled marginal flanges and an intermediate water-cooled partition of less depth than said flanges, said valve being constructed and arranged to seal each of said flue-terminals when in closed position, and to be raised and rotated to permit and control the flow of fluid between said flues; substantially as described.

884,034. MAIL-BAG CATCHING AND DELIVERING APPARATUS. NELS J. NELSON, Red Wing, Minn. Filed Aug. 27, 1907. Serial No. 390,348.

1. In a device of the class specified, a receptacle supporting ring, and a breakable fastener therefor.

2. In a device of the class specified, a receptacle support, a carrier therefor, and a breakable fastener between the support and the carrier.

3. In apparatus of the class described, a receptacle supporting ring, a carrier therefor, and a breakable pin connecting the ring and carrier.

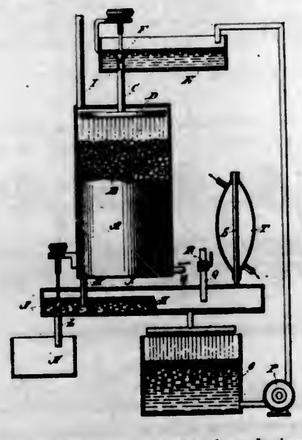


4. In apparatus of the class described, a receptacle supporting ring having a laterally extended perforated arm, a carrier having an opening therefor, and a breakable pin arranged to extend through said openings and connecting the ring to the carrier.

5. In apparatus of the class described, a receptacle carrying ring, a perforated arm projecting therefrom, a perforated support having a shoulder or bracket with which the end of the arm engages, and a breakable pin extending through the openings of the arm and carrier.

[Claims 6 to 9 not printed in the Gazette.]

884,035. PROCESS OF PRODUCING MIXTURES OF SULFURIC AND NITRIC ACIDS. JOHN H. NIELD, Hackensack, N. J., assignor to General Chemical Company, New York, N. Y., a Corporation of New York. Filed Apr. 5, 1905. Serial No. 253,918.



1. The herein described process of producing a mixture of sulfuric and nitric acids, which consists in causing gaseous sulfuric anhydrid and a distributed or spread-out mixture of sulfuric acid and weak nitric acid to travel in opposite directions in contact with each other, reserving a portion of the product as the final product, returning the remainder of the product to the first stage of the process to again absorb the anhydrid, and diluting such remainder on its return path with weak nitric acid.

2. The herein described process of producing a mixture of sulfuric and nitric acids, which consists in bringing gaseous sulfuric anhydrid in contact with a mixture of sulfuric acid and weak nitric acid, reserving a portion of the product as the final product, adding weak nitric acid to the remainder of the product to dilute it, cooling such diluted product, and returning the cooled diluted product to the first stage of the process to again absorb the anhydrid.

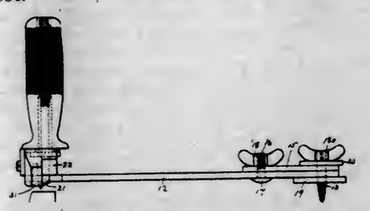
3. The herein described process of producing a mixture of sulfuric and nitric acids, which consists in bringing gaseous sulfuric anhydrid in contact with a mixture of sulfuric acid and weak nitric acid, reserving a portion of the product as the final product, adding weak nitric acid to the remainder of the product, condensing any nitric acid vapors which may form upon the addition of the weak nitric acid, and returning such condensed vapors together with the diluted portion of the product to the first stage of the process to again absorb the anhydrid.

4. The herein described process of producing a mixture of sulfuric and nitric acids, which consists in bringing gaseous sulfuric anhydrid in contact with a mixture of sulfuric acid and weak nitric acid, reserving a portion of the product as the final product, adding weak nitric acid to the remainder of the product to dilute the same, condensing any nitric acid vapors which may form upon the addition of the weak nitric acid, cooling the diluted product and the condensed vapors returned thereto, and conveying the cooled diluted product back to the first stage of the process to again absorb the anhydrid.

5. The herein described process of producing a mixture of sulfuric and nitric acids, which consists in bringing a sprayed downwardly traveling mixture of sulfuric acid and nitric acid into contact with an upward stream of gaseous sulfuric anhydrid, withdrawing a portion of the product at the bottom, returning the remainder to the first stage of the process, and diluting such remainder on its return path, with weak nitric acid.

[Claims 6 and 7 not printed in the Gazette.]

884,036. APPARATUS FOR CUTTING ENDLESS GROOVES OR SLOTS. HASWELL F. PACKARD, Wakefield, Mass., assignor of one-half to William A. Gardner, Wakefield, Mass. Filed Aug. 16, 1907. Serial No. 388,854.



1. An appliance of the character specified, adapted to form an endless groove in a flat body, and comprising a beam, a confining member adapted to engage the body to be cut, the outer end of the beam being revoluble about said member, a cutter mounted on the outer end portion of the beam, and movable vertically at right angles with the beam, said cutter being adapted to form an endless groove when the beam is revolved about the confining member, and means for feeding the cutter to progressively increase the depth of the groove, said means including a cutter-feeding hand-grip mounted on the beam, and connections between said grip and the cutter, whereby the latter is fed automatically when the grip is manipulated to revolve the beam and cutter.

2. An appliance of the character specified, adapted to form an endless groove in a flat body, and comprising a beam, a confining member adapted to engage the body to be cut, the outer end of the beam being revoluble about said member, a cutter mounted on the outer end portion of the beam, and movable vertically at right angles with the beam, said cutter being adapted to form an endless groove when the beam is revolved about the confining member, a screw-threaded shank projecting from the cutter

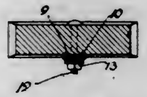
outwardly from the beam, and an elongated nut journaled on the beam and engaged with said shank, the nut being adapted to serve not only as a hand-grip by which the beam and cutter may be revolved, but also as a cutter-feeding member as set forth.

3. An appliance of the character specified, adapted to form an endless groove in a flat body, and comprising a beam, a confining member adapted to engage the body to be cut, the outer end of the beam being revoluble about said member, a cutter mounted on the outer end portion of the beam and movable vertically at right angles with the beam, said cutter being adapted to form an endless groove when the beam is revolved about the confining member, a head affixed to the outer end portion of the beam, said head having a guide, a shank affixed to the cutter and having a squared inner portion movable in and prevented from rotating by the guide, and a screw-threaded outer portion, and a hand-grip rotatively engaged with the head, and having an interval screw thread engaged with the screw-threaded portion of the shank, said nut serving as a handle and as a cutter feeding member, as set forth.

4. An appliance of the character specified, adapted to form an endless groove in a flat body, and comprising a center adapted to engage the body to be cut, a plate revoluble about said center, and having an orifice closely fitting the latter, a beam having a longitudinal slot, through which the center passes, the beam being adjustable endwise relatively to the plate and center, and revoluble with the plate about the center, means for rigidly securing the beam to the plate in the different positions to which the beam may be longitudinally adjusted, a cutter mounted on the outer end portion of the beam, and movable vertically at right angles with the beam, said cutter being adapted to form an endless groove when the beam is revolved about the center, a hand grip mounted on the beam, and connections between said grip and the cutter whereby the cutter is fed to progressively increase the depth of the groove, when the grip and beam are revolved about the center.

5. An appliance of the character specified, comprising a beam, a confining member adapted to engage the body to be cut, the outer end of the beam being revoluble about the said member, a head affixed to the outer end portion of the beam, said head having a guide, a cutter having a shank movable in said guide, said shank having a screw-threaded portion and a hand-grip rotatively engaged with the head, and having an internal thread engaged with the screw-threaded portion of the shank, whereby the manipulation of the hand-grip to revolve the beam about the confining member is caused to feed the cutter, and runners projecting from opposite sides of the head and from opposite edges of the beam, whereby the cutter and hand-grip are steadied and supported.

884,037. THREAD-GUIDE. ISAAC E. PALMER, Middletown, Conn. Filed Dec. 26, 1906. Serial No. 349,377.

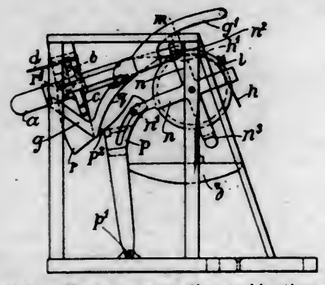


In combination, a finger-board, a thread guide, a bearing plate interposed between the shank of the thread guide and the finger-board, the said bearing plate being provided with sharp projections on its inner face and means for locking the shank to the bearing plate and forcing the sharp projections on the bearing plate into the face of the finger-board.

884,038. SEA-SOUNDING APPARATUS. MURRAY T. PARKS, Lydd, England. Filed June 5, 1907. Serial No. 377,413.

1. In sea sounding apparatus, the combination of a lead, a rotatable collar freely mounted about the center of the lead, and means carried by said collar by which the lead may be hung on a fixed inclined stretched wire.

2. In sea sounding apparatus, the combination of a lead, a rotatable collar freely mounted about the center of said lead, and hooks carried by the collar by means of which the lead may be hung on a fixed inclined stretched wire.



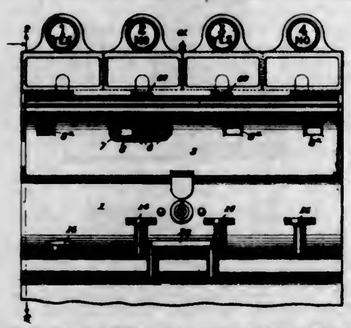
3. In sea sounding apparatus, the combination of a lead, a fixed inclined stretched wire, means carried by the lead by which it may be hung on to and slide down the said wire, a line attached to said lead, a drum on which said line is wound, and means for releasing the lead from the wire.

4. In sea sounding apparatus, the combination of a lead, hooks carried by said lead, a fixed inclined stretched wire, a line attached to said lead, an enlargement on said line, means operated by said enlargement for hanging the lead onto the wire, means for releasing the lead from said wire, a drum on which said line is wound, means for rapidly rewinding the drum and taking up any slack sounding line, and a pawl for preventing the drum unwinding after the apparatus has passed the point at which the lead has struck the bottom.

5. In sea sounding apparatus, the combination of a lead, hooks carried by said lead, a fixed inclined stretched wire, an enlargement on said line, means operated by said enlargement for hanging the lead on the wire, means for releasing the lead from said wire, a drum on which said line is wound, means for rapidly rewinding the drum and taking up any slack sounding line, a pawl for preventing the drum unwinding after the apparatus has passed the point at which the lead has struck the bottom, and suitable gearing operated by the winding drum to move a scale to indicate the depth of water where the lead strikes the bottom.

[Claims 6 to 10 not printed in the Gazette.]

884,039. VOTING-MACHINE. FRANS A. PETERSON, Syracuse, N. Y. Filed Apr. 20, 1905. Serial No. 256,571.



1. In a voting machine, the combination of an accumulating device, a vibrating visual signal mounted coaxially with and entirely at one side of the number wheels of said device, a key lever, and means connected with the key lever for operating said signal and accumulating device.

2. In a voting machine, the combination of an accumulating device, a vibrating visual signal mounted coaxially with and entirely at one side of the number wheels of said device, a key lever, and means for actuating the accumulating device and said signal at every operation of the key lever.

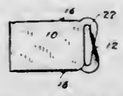
3. In a voting machine, the combination of a plurality of counting mechanisms, a series of voting keys each connected with a lever adapted to actuate one of the counting mechanisms, a housing inclosing said counting mechanisms, and having therein apertures opposite the counting mechanisms, a signal device arranged adjacent each of the counting mechanisms and movable across the said aperture in the housing, said signal devices being each connected with one of the voting key levers, whereby as the lever is operated to actuate the counting mechanism, said signal will be moved opposite said aperture in the housing to indicate the nature of the vote recorded, an audible signal device adapted to be operated by either of the voting key levers and means for moving the first said signal device to inoperative position as the voting key lever returns to normal position.

4. In a voting machine, the combination of a counting mechanism, a voting key connected with a lever adapted to operate said counting mechanism, a housing inclosing said counting mechanism and having therein a slot through which the counting mechanism is visible, a signal device arranged at one side of the counting device and adapted to move across the aforesaid slot in the housing, a removable cover adapted to partially close said slot in the housing, connections between said voting key lever and said signal device for imparting a plurality of movements to said signal device at each operation of said lever, and an audible signal device adapted to be operated at each actuation of the voting key lever.

5. In a voting machine, the combination of a plurality of counting mechanisms, and a plurality of voting keys each connected with a lever adapted to operate one of said counting mechanisms, an audible signal device, a trip mounted on each voting key lever and adapted to actuate said audible signal as the lever is depressed, latches each adapted to automatically lock one of the voting key levers in depressed position, a release key movable by the voter adapted to release and move said latches to inoperative position, and a second audible signal device adapted to be actuated by said release key.

[Claims 6 and 7 not printed in the Gazette.]

884,040. GARMENT-CLASP. JOSEPH H. PILKINGTON, Waterbury, Conn. Filed July 23, 1907. Serial No. 385,196.



1. A clasp comprising jaws and a spring connection attached to the jaws and given a half twist when the jaws are superposed.

2. A clasp comprising jaws and a spring connection attached to opposite sides of the rear ends of the jaws and given a half twist when the jaws are superposed.

3. A clasp comprising jaws and a spring connection formed integral, said spring connection being attached to the rear ends of the jaws and given a half twist when the jaws are superposed.

4. A clasp comprising jaws, a spring connection attached to the jaws and given a half twist when they are superposed and acting to retain the jaws in the open position and means for closing the jaws.

5. A clasp comprising jaws, a spring connection attached to the jaws and given a half twist when they are superposed, one of said jaws being provided with ears and a closing lever pivoted in said ears and comprising a bearing piece and a finger piece.

[Claims 6 and 7 not printed in the Gazette.]

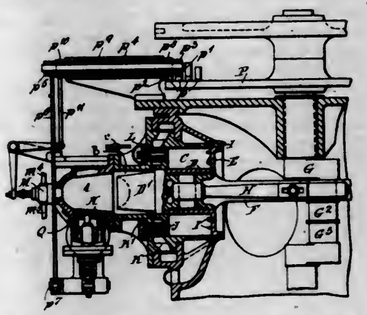
884,041. DETACHABLE HANDLE. CHARLES B. POST, New London, Ohio. Filed Aug. 17, 1906. Serial No. 330,996.

1. In a separable handle, a main tubular stick, a shorter tubular portion secured to the handle, a core secured to the shorter portion and projecting into the longer portion, a shoulder in the meeting ends of each of the tubular portions, each shoulder comprising one half of the said end, inclined edges for said shoulders, a spring keeper formed integrally in the projecting end of said core, and a corresponding recess in the stick.



2. In a separable umbrella handle, the combination with a tubular stick and short tubular stem of the same size to which the handle is secured, of diametrical shoulders on the adjacent ends of stick and stem, a core in the stem secured thereto and projecting into the stick, the said projecting portion of the core being longitudinally slotted to form a spring, a projecting keeper on the said spring and a corresponding slot in the stick tubing, substantially as described.

884,042. MEANS FOR PRODUCING MOTIVE FLUID FROM THE COMBUSTION OF FUEL. WILLIAM J. RENSHAW, Newcastle, England. Filed July 12, 1906. Serial No. 325,944.

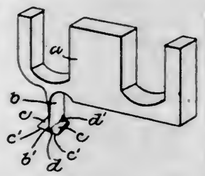


1. An apparatus for generating a motive fluid to be used expansively in a separate motor or motors consisting of a series of cylinders arranged around a common crank shaft in which cylinders moist air is compressed, a reservoir adapted to receive the compressed air from all the compression cylinders, a series of combustion cylinders also arranged around said crank shaft in which oil and air or other combustible is burned and into which the compressed air from said reservoir passes for the purpose of extracting therefrom the heat due to combustion, said cylinders being provided with pistons and inlets, outlets, passages and valves by means of which the oil and air or other combustible, the air to be compressed and the compressed air are admitted into the two series of cylinders and the compressed air conducted from the compression cylinders into the reservoir and from the reservoir into the combustion cylinders, mixed with the products of combustion and passed into a pipe or trunk common to all the combustion cylinders, from which the mixture may be drawn off as required substantially as described herein.

2. An apparatus for generating a motive fluid to be used expansively in a separate motor or motors consisting of a series of combustion chambers and cylinders and compression cylinders arranged end to end and disposed in sets and tiers around a common crank shaft, ports and non-return valves for admitting air into said compression cylinders, a reservoir or receptacle common to all the compression cylinders adapted to receive the compressed air from the compression cylinders, non-return valves between the compression cylinders and said common reservoir or receptacle, ports communicating between said reservoir and the combustion cylinders, fuel or combustible and exhaust valves opening into the combustion chambers,

a disk carried by said crank shaft and provided with two sets of cams or inclines, shafts corresponding in number to the combustion chambers and each provided at its inner end with a lever carrying a roller adapted to engage with one set of cams and provided at its outer end with a second lever connected to a link and lever adapted to open the exhaust valve, a sleeve surrounding each shaft and provided with a lever carrying roller, adapted to engage with the other set of cams and provided at its other end with a lever connected by means of a link to a bell-crank lever operating the fuel or combustible valve and bearings for supporting the sleeves and shafts, substantially as described.

884,043. CHANNELING-TOOL. HARRY L. RICE, Quincy, Mass., assignor to Rice & Hutchins, Incorporated, Boston, Mass., a Corporation of Maine. Filed July 20, 1906. Serial No. 327,075.

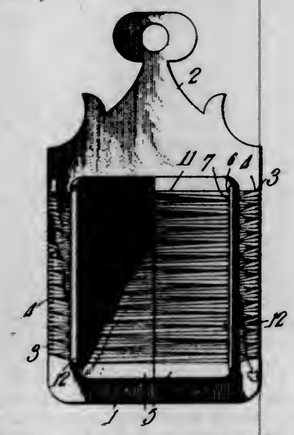


1. A channeling tool comprising a body, a straight projecting cutter, and two lateral cutters at the lower end of the straight cutter, said cutters having cutting edges meeting at a common point, said lateral cutters decreasing in width rearwardly.

2. A channeling tool comprising a body having at its front edge a straight projecting cutter, and two lateral cutters at the lower end of the straight cutter, said cutters all having sharp edges which form two right angles.

3. A channeling tool comprising a body, a straight projecting cutter, and two cutters at the lower end of the straight cutter projecting laterally and at right angles thereto, said cutters having sharp edges meeting at a common point, the angles formed by the lateral cutters with the straight cutter merging rearwardly into concave surfaces substantially as set forth.

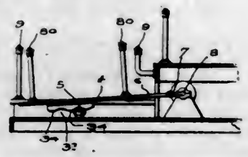
884,044. DEVICE FOR CLEANING COMBS. WILLIAM T. RICE, Gravette, Ark. Filed Aug. 16, 1907. Serial No. 388,873.



1. A device of the character described comprising a body having a trough thereon, a continuous flexible element wrapped transversely around the trough and body, those portions of the element extending across the trough constituting comb wiping means, and slidable means interposed between said element and the body for tensioning all portions of the element simultaneously.

2. The combination with a body having a trough thereon, the edge portions of the trough and body being slotted; of a continuous flexible element wrapped around the trough and body and seated within the slots, that portion of the element extending across the trough constituting comb wiping means, a finishing strip upon each slotted portion of the trough, and slidable means mounted between the body and the flexible element for simultaneously tensioning all portions of said element.

884,045. AMUSEMENT APPARATUS. HERBERT N. RIDGWAY, Boston, Mass. Filed July 29, 1907. Serial No. 385,969.



1. In an amusement apparatus, a runway having fixed floor portions and a movable platform or floor section, in combination with a fulcrum on which said movable platform rests, and means to rock said platform about the fulcrum and to slide said platform on the fulcrum in one direction when one end of the platform is in elevated position and in the other direction when said end of the platform is in lowered position.

2. In an amusement apparatus, the combination with a runway having fixed floor portions and a movable floor section intermediate of the fixed floor portions, of a fulcrum member on which the movable floor section freely rests, an arm rigid with said movable floor section, a crank shaft directly connected with said arm, and means to rotate the crank shaft.

3. In an amusement apparatus, the combination with a runway having fixed floor sections and a movable platform or floor section intermediate of the fixed floor sections, of two axially alined rolls mounted in fixed bearings on which said movable platform rests and fulcrums, an arm rigid with said movable platform, and a driven crank shaft connected to said arm.

4. In an amusement apparatus, the combination with a movable platform or floor section, of a fulcrum having a fixed position on which said platform rests for rocking and sliding movement, an arm rigid with the platform and extending in the general directon thereof, a crank shaft directly connected to said arm, and means to rotate the crank shaft whereby the platform is given both a rocking and a sliding movement on the fulcrum, the sliding movement in one direction occurring when one edge of the platform is in elevated position and the sliding movement in the other direction occurring when said edge of the platform is in lowered position.

5. An amusement apparatus comprising a movable floor section or platform having tracks on its under side provided with recesses and projections, axially-alined rolls on which said tracks rest, and means to rock said platform about said rolls and to vibrate the platform in a direction at right angles to the axis of the rolls.

884,046. BALL-BEARING. JAKOB SCHMID-ROOST, Oerlikon, near Zurich, Switzerland. Filed Oct. 11, 1906. Serial No. 338,508.

1. A ball bearing comprising two concentric bearing rings grooved to form a raceway, balls in the raceway a spacing device located between said rings comprising twin rings having notches formed therein and webs between the notches at right angles to the peripheries of the rings.

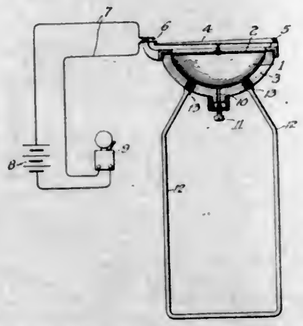
2. A ball bearing comprising two concentric bearing rings grooved to form a raceway, balls in the raceway a spacing device mounted between the rings comprising twin rings having notches formed in one edge thereof and webs having curved edges formed between the notches at right angles to the axis of the bearing.



3. A ball bearing comprising two concentric bearing rings having grooves formed in their opposing surfaces and a notch formed in one edge of each ring extending to but of less depth than the groove, balls between the rings a spacing-device mounted between the bearing rings comprising twin members having recesses formed in one edge and webs having edges conforming to the peripheries of the balls between the recesses at right angles to the axis of the bearing.

4. A spacing device for ball bearings comprising two rings of rectangular section detachably connected at their webs, said attached webs presenting recesses corresponding with recesses in the rings proper, the edges of the webs constituting portions of a cylindrical casing the axis of which passes through the center of a ball laid in the recess and lies parallel to the axis of the rings.

884,047. AUTOMATIC ALARM SYSTEM. JOHN E. SHEPHERD, Chicago, Ill. Filed Jan. 13, 1908. Serial No. 410,639.

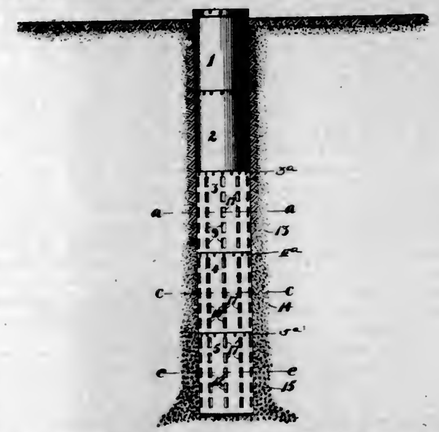


In a system of the character described, a pressure responsive means, signaling means controlled by the pressure responsive means, and detector piping of relatively small diameter extending throughout the area to be protected, and at both ends connected with the pressure responsive means for the purposes described.

884,048. WELL-TUBING. ANDREW SMITH, San Mateo, Cal. Filed Apr. 4, 1906. Serial No. 309,806.

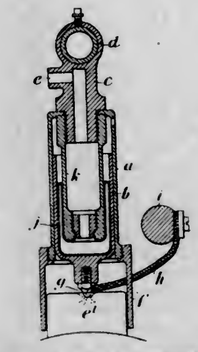
1. A casing for wells, comprising a plurality of apertured sections, each section being formed with apertures of different sizes from the apertures in the remaining sections, and each of said sections comprising a plurality of members having apertures therein so positioned as to have the apertures in said members register for forming said apertures in said sections, and means for rigidly securing said sections together, said means preventing longitudinal movement of the members of said sections.

2. A casing for wells, comprising an imperforate section, a plurality of sections formed with openings therein, each of said sections comprising a plurality of concentric drums, each of said drums formed with apertures therein, the registering of the apertures in said drums forming the apertures in said sections, and means for holding said drums in a predetermined relation to each other and for holding said sections in position.



3. A well tubing comprising an imperforate section provided near the surface of the earth, a plurality of apertured sections, each of said apertured sections comprising a plurality of apertured cylinders of the same length, one of said cylinders being positioned within the other, said cylinders contacting with each other their full length, the apertures in each of said cylinders being so placed as to form openings in said sections, each section being provided with different sized apertures for accommodating various strata, and means for securing said sections together.

884,049. PNEUMATIC HOLDER FOR COMMUTATOR-BRUSHES. CHARLES W. SPEIAS, Battersea, London, England, assignor to Morgan Crucible Company, Limited, London, England. Filed Feb. 23, 1907. Serial No. 358,985.



1. The combination with a commutator brush movable toward the commutator, of a flexible and extensible chamber, means for continuously supplying fluid under pressure to said chamber, said chamber being operatively connected with said commutator brush to maintain it in contact with the commutator and compensate for wear, whereby leakage of the pressure fluid is prevented, substantially as described.

2. The combination with a commutator brush movable toward the commutator, of a flexible and extensible chamber, means for continuously supplying fluid under pressure to said chamber, means for preventing lateral expansion of said chamber, said chamber having a part

operatively connected therewith engaging said commutator brush to compensate for the wear thereof and maintain it in contact with the commutator, whereby leakage of the pressure fluid is prevented, substantially as described.

3. The combination with a commutator brush movable toward the commutator, of a guiding member, a longitudinally movable member slidingly mounted in said guiding member, said sliding member having a part engaging said commutator brush, a flexible and extensible chamber having a part engaging said sliding member and means for continuously supplying fluid under pressure to said chamber, whereby said chamber forces said sliding member and said brush toward the commutator and maintains said brush in contact therewith, substantially as described.

4. The combination with a commutator brush movable toward the commutator, of a stationary guide for said brush, of a flexible and extensible chamber, means for continuously supplying fluid under pressure to said chamber, means for preventing lateral expansion of said chamber, said chamber having a part movable therewith engaging said brush to compensate for the wear thereof and maintain it in contact with the commutator, whereby leakage of the pressure fluid is prevented, substantially as described.

5. The combination with a commutator brush movable toward the commutator, of a pair of tubes one sliding within the other and one of said tubes being stationary, said sliding tube having a part engaging said brush, a flexible and extensible chamber within said tubes, and means for continuously supplying fluid under pressure to said chamber, whereby said chamber will compensate for the wear of said brush and maintain it in contact with the commutator, substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

884,050. JOURNAL-BEARING. ALFRED L. STREETER, Chicago, Ill. Filed Apr. 14, 1902. Serial No. 102,835.



1. A bearing brass for car journals consisting of two separate sections, a lower bearing section to receive the journal and an upper section to contact with the wedge, which said upper section overlies said lower section, said sections being provided one with a rounded boss and the other with a corresponding recess of less depth than the height of the boss, thereby providing clearance between the overlying surfaces of said sections outside of said boss and recess, the relation being such that relative movement of said sections will be limited by contact of the overlying surfaces thereof outside of said boss and recess, and said sections being also provided at their ends, one with flanges and the other with shoulders opposed thereto, the two sections constituting a unit conforming exteriorly to the Master Car Builders' standard bearing brass, substantially as described.

2. A journal bearing comprising members one of which overlies and is supported upon the other, there being a pivot bearing between said members and clearance spaces between the overlying projecting portions thereof outside of the pivot bearing, the relation being such that relative movement of said sections will be limited by contact of the overlying projecting portions thereof outside of said pivot bearing, substantially as described.

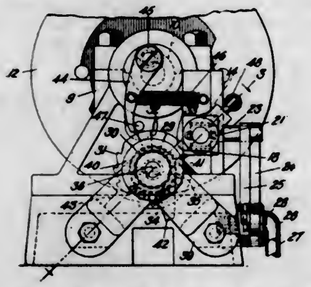
3. A journal bearing comprising members one of which overlies and is supported upon the other, there being a pivot bearing between said members and clearance spaces between the overlying projecting portions thereof in all directions outside of the pivot bearing, the relation being such that relative movement of said sections will be limited by contact of the overlying projecting portions thereof outside of said pivot bearing, substantially as described.

4. A journal bearing comprising members one of which overlies and is supported upon the other, said members being provided one with a rounded boss and the other with a corresponding recess of less depth than the height of the boss, thereby providing clearance between the overlying projecting portions of said members in all directions outside of said boss and recess, the relation being such that relative movement of said members will be limited by contact of the overlying projecting portions of said members outside of said boss and recess, substantially as described.

5. A journal bearing comprising members, one of which overlies and is supported upon the other, said members being provided one with a rounded boss and the other with a corresponding recess of less depth than the height of said boss, thereby providing clearance spaces between the surfaces of said members outside of said boss and recess, said boss being loosely fitted to said recess and the relation being such that relative movement of said members will be limited by contact of opposed surfaces of said members outside of said boss and recess.

[Claims 6 and 7 not printed in the Gazette.]

884,051. CLUTCH MECHANISM FOR LACING-HOOK-SETTING MACHINES. SYDNEY E. TAFT, South Framingham, Mass., assignor to American Lacing Hook Co., a Corporation of New Jersey. Filed Jan. 8, 1908. Serial No. 409,760.



1. In a clutch mechanism, a driving shaft, a member fast to said driving shaft, a member rotatable on said shaft, and means to lock said members together; in combination with a tripper slide adapted to engage said locking means and disconnect said clutch members from each other, means to move said tripper slide out of engagement with said locking means, a rotary holder adapted to hold said tripper slide out of engagement with said locking means, and instrumentalities adapted to rotate said member to release said tripper slide to engage said locking means and disconnect said clutch members at the end of a predetermined number of rotations of said shaft.

2. In a clutch mechanism, a driving shaft, a member fast to said driving shaft, a member rotatable on said shaft, and means to lock said members together; in combination with a tripper slide adapted to engage said locking means and disconnect said clutch members from each other, means to move said tripper slide out of engagement with said locking means, a rotary holder adapted to hold said tripper slide out of engagement with said locking means, instrumentalities adapted to rotate said rotary member to release said tripper slide to engage said locking means and disconnect said clutch members at the end of a predetermined number of rotations of said shaft, and an adjustable stop adapted to limit the rotation of said rotary member relatively to said tripper slide, whereby said predetermined number of rotations may be varied.

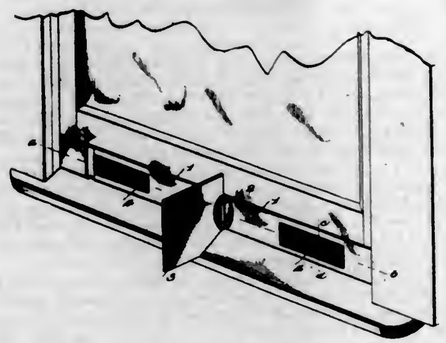
3. In a clutch mechanism, a driving shaft, a member fast to said driving shaft, a member rotatable on said shaft, and means to lock said members together; in combination with a tripper slide adapted to engage said locking means and disconnect said clutch members from each other, means to move said tripper slide out of engagement with said locking means, a rotary holder adapted to hold said tripper slide out of engagement with said locking means, instrumentalities adapted to rotate said holder to release said tripper slide to engage said locking means and disconnect said clutch members at the end of a predetermined number of rotations of said shaft, an arm adjustably mounted upon said rotary holder, a stop, and a spring acting to hold said arm against said stop, whereby the rotation of said holder in one direction is regulated.

4. In a clutch mechanism, a driving shaft, a member fast to said driving shaft, a member rotatable on said shaft, and means to lock said members together; in combination with a tripper slide adapted to engage said locking means and disconnect said clutch members from each other, means to move said tripper slide out of engagement with said locking means, a rotary holder adapted to hold said tripper slide out of engagement with said locking means, instrumentalities adapted to rotate said holder to release said tripper slide to engage said locking means and disconnect said clutch members at the end of a predetermined number of rotations of said shaft, and mechanism to impart an intermittent rotary motion to said holder.

5. In a clutch mechanism, a driving shaft, a member fast to said driving shaft, a member rotatable on said shaft, and means to lock said members together; in combination with a tripper slide adapted to engage said locking means and disconnect said clutch members from each other, means to move said tripper slide out of engagement with said locking means, a rotary holder adapted to hold said tripper slide out of engagement with said locking means, teeth on said rotary holder, and a pawl connected to said shaft adapted to engage said teeth and impart an intermittent rotary movement to said holder to release said tripper slide for the purpose specified.

[Claims 6 to 12 not printed in the Gazette.]

884,052. WINDOW-VENTILATOR. ROSS TAYLOR, New York, N. Y., assignor to Automatic Ventilator Company, New York, N. Y., a Corporation of New York. Filed Aug. 24, 1907. Serial No. 389,077.



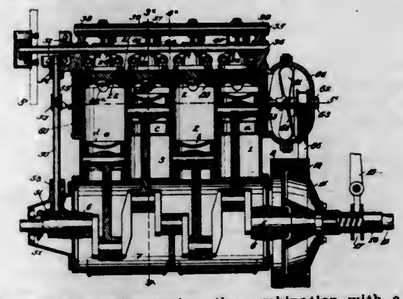
1. A panel ventilator adapted for location between the sill of a window and the lower rail of the sash, provided with an outwardly extending deflector plate located at the center thereof, and an opening each side of the deflector plate equipped with louvers, and having inside adjustable shields for directing and controlling incoming and outgoing air currents, substantially as hereinbefore set forth.

2. A panel ventilator for windows consisting of two sections each provided with an opening for the passage of air provided with louvers and inside adjustable shields for directing and controlling air currents, in combination with an exterior deflector plate hinged to the outer corner of one panel section and formed with an extension adapted to be confined between the adjacent ends of the two panel sections, substantially as and for the purpose set forth.

3. A panel ventilator for windows consisting of two sections each provided with air inlets and interior air current controllers said sections hinged together at their inner adjacent corners; an exterior deflecting plate hinged to the outer corner of the adjacent end of one of the panel sections and formed with an extension adapted to be confined between the adjacent ends of the panel sections; and means for locking the said sections in alined relation, substantially as and for the purpose set forth.

4. In a window ventilator composed of two panel sections provided with air inlets and interior air current adjustable controllers and an exterior deflector plate intermediate the air inlets; a longitudinally adjustable section connected with the outer end of one of the main panel sections, substantially as and for the purpose set forth.

884,053. EXPLOSIVE-ENGINE. HENRY L. F. TREBERT, Rochester, N. Y., assignor to Brownell-Trebert Company, Rochester, N. Y., a Corporation of New York. Filed Mar. 20, 1905. Serial No. 250,908.



1. In an explosive engine, the combination with a cylinder having a head provided with two apertures, and gas inlet and exhaust pipes leading over the head at opposite sides thereof in proximity thereto, and communicating with the apertures therein, of valves controlling said pipes, stems thereon extending upwardly through the pipes and mechanism located between said pipes and cooperating with the valve stems.

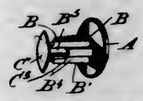
2. In a gas engine, the combination with a plurality of cylinders arranged one behind another, each having a head provided with two apertures, gas inlet and outlet pipes extending horizontally toward each other over the head of each cylinder having downwardly extending ends fitting the apertures and valves for controlling the pipes having upwardly extending stems, of a shaft extending longitudinally of the cylinders between the rows of valve stems, levers carried on the shaft each having one of its ends connected to a valve stem and the other end extending downwardly, a cam shaft located between the inlet and outlet pipes, cams on said shaft coöperating with the depending ends of the levers and means for rotating the cam shaft.

3. In a gas engine, the combination with a cylinder having a head, a piston and a driving shaft, gas inlet and outlet passages and valves for controlling them, having stems projecting above the cylinder head, of a removable bracket on the latter having a laterally projecting bearing, levers journaled on the bracket and engaging the stems and a shaft journaled on the bracket, cams on the shaft coöperating with the levers and a shaft composed of separable parts, one of which is supported in the bearing on the bracket and is operatively connected to the cam shaft and the other connected to the driving shaft and a detachable connection between the parts of said shaft.

884,054. COLLAR AND CUFF BUTTON. EDGAR C. TREES, Denver, Colo. Filed Mar. 16, 1907. Serial No. 362,736.

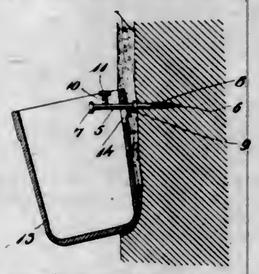
1. A button of the kind described comprising a base, a standard carried by said base, the standard having converging interlocking opposite sides crimped to form a

socket the sides being cut to form tongues, a shank extending into the socket and engaged by the tongues, and a head on the shank.



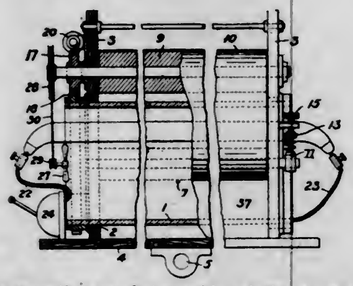
2. A collar and cuff button comprising a base, a standard formed of one piece of metal, having its end portions bent to form sides, the end edges of said portions meeting, corners of one end portion being removed and corners of the other end portion being bent over to engage the other portion, the said sides of the standard being crimped to form a socket, and being slotted to provide oppositely arranged tongues a shank loosely held in said socket, a head on the shaft, and a squared portion upon the inner end of the shank.

884,055. SAP-CUP SUPPORT. CHARLTON VARNADORE, Kinard, Fla. Filed Feb. 1, 1908. Serial No. 413,787.



A sap-cup support comprising a straight shank having at one end a driving point adapted to enter the tree, and a stem projecting laterally from the shank adjacent the other end thereof.

884,056. PHOTOGRAPHIC-PRINTING APPARATUS. JAMES W. VICKERS, London, England. Filed July 17, 1907. Serial No. 384,217.



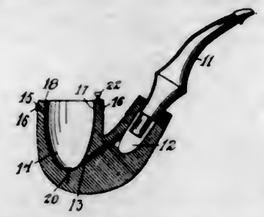
1. In a continuous photographic printing apparatus the combination of a revolving transparent roller, a plurality of band rollers disposed around said transparent roller and having an endless band passing over them, a base supporting said rollers and means connecting between said base and the main frame of the apparatus, and permitting movement of the frame with respect to the base substantially as specified.

2. In a continuous photographic printing apparatus the combination of a revolving glass roller, a plurality of band rollers disposed around said glass roller and having an endless band passing over them, a gear wheel mounted on the glass roller and a pinion meshing with such gear wheel and mounted on one of the band rollers, means for communicating motion to such pinion, electric mercury vacuum tubes arranged in the interior of the glass roller, a base and a frame supporting the whole of these parts, and movably mounted to the base, substantially as specified.

3. In a continuous photographic printing apparatus the combination of a revolving glass roller, a plurality of band rollers disposed around said glass roller and having an endless band passing over them, a gear wheel mounted on the glass roller and a pinion meshing with said gear wheel and mounted on one of said band rollers, means for communicating motion to said pinion, electric mercury vacuum tubes arranged in the interior of the glass roller, switches for controlling the supply of electric current to such tubes, a pivotal connection between the base plate on which these parts are mounted and the main frame of the apparatus, and automatic means operated by the tipping of the base plate on such pivotal connection for acting on the switches to control the supply of current to such tubes, substantially as specified.

4. In a continuous photographic printing apparatus the combination of a revolving glass roller, a plurality of band rollers disposed around said glass roller and having an endless band passing over them, a gear wheel mounted on the glass roller and a pinion meshing with such gear wheel and mounted on one of said band rollers, means for communicating motion to such pinion, electric mercury vacuum tubes arranged in the interior of the glass roller, a fan mounted at one end of the glass roller, means for actuating such fan, a base, and a pivotal connection uniting said base and the main frame of the apparatus, substantially as specified.

884,057. TOBACCO-PIPE CLEANER. ALFRED B. WALLEN, Falconer, N. Y., assignor of one-half to Joseph E. Anderson, Falconer, N. Y. Filed Jan. 20, 1908. Serial No. 411,650.



1. In a tobacco pipe, a pipe having a bowl with a suitable smoke hole therefrom, a ring rotatably mounted on the outer side of said bowl, a knife attached to said ring at one end and the other end pivotally attached to the bottom of the bowl, said knife sharpened on both edges and conforming to the inner side of the bowl.

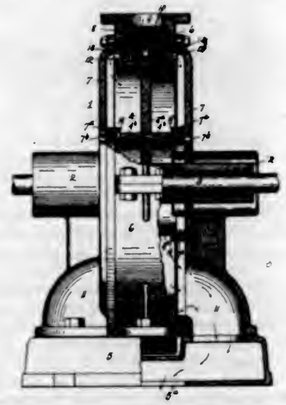
2. In a tobacco pipe cleaner, a pipe having a groove around the outer side of the bowl, a ring rotatably mounted in said groove, a knife attached to said ring at one end and pivotally attached within the bottom of the bowl and conforming to the side of the cavity in the bowl, substantially as and for the purpose specified.

3. In a tobacco pipe cleaner, a pipe having a groove around the outer side of the bowl, a ring rotatably mounted in said groove, a knife attached to said ring at one end and pivotally attached within the bottom of the bowl and conforming to the side of the cavity in the bowl, and a knob on said knife to indicate the position of the same.

4. In a tobacco pipe cleaner, a pipe having a groove around the outer side of the bowl, a ring rotatably mounted in said groove, a knife attached to said ring at one end and pivotally attached within the bottom of the bowl and conforming to the side of the cavity in the bowl, said ring roughened on its outer surface and carrying a knob on said knife, substantially as and for the purpose specified.

5. In a tobacco pipe cleaner, a pipe bowl 10 having the cavity 14 therein and the smoke hole 13, said bowl having a groove 15 on its outer side, a ring 16 rotatably mounted in said groove, a double edged knife 17 attached to said ring and conforming to the curve of said cavity, said knife pivotally attached to said bowl at the bottom of said cavity said knife of sufficient width adjacent said hole to cover the same, substantially as and for the purpose specified.

884,058. TURBINE. CALVIN W. WELLMAN, Toledo, Ohio, assignor to Hattie May Wellman, South Boardman, Mich. Filed May 14, 1906. Serial No. 316,725.



1. The combination with a blade receiving part of a turbine having a portion shaped to receive and interlock with a blade, of a plurality of blades each shaped to be inserted within said blade-receiving portion in one position relative thereto and to interlock therewith when turned into diagonal relation thereto, said blades when positioned all standing successively in the same relative order to the turbine part and their fluid contacting surfaces spaced from each other.

2. The combination with a blade-receiving part of a turbine having a portion shaped to receive and interlock with a blade, and a plurality of blades each shaped to be inserted within said blade-receiving portion in one position relative thereto and to interlock therewith to prevent withdrawal when turned into diagonal relation thereto, and a spacing member inserted between the base portions of each two blades, said members being of like construction to the blades and adapted to interlock with the turbine part in substantially the same manner.

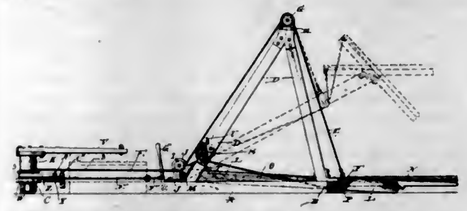
3. The combination with the housing and rotary-head of a turbine, of a row of blades secured to each in contiguous position, the fixed blades being substantially flat in cross-section and placed in contiguous consecutive order whereby to divide the operating fluid into a multiplicity of jets, and the movable blades being positioned in intersecting planes with the fixed blades and having their major portions substantially flat in cross-section and one of their edges formed with lips to receive the direct thrust of the fluid jets.

4. The combination with the housing and rotary-head of a turbine, of annular flanges formed on the head and housing concentrically with the head bearing and in contiguous position, and means carried by the flange of the head for creating a centrifugal draft between the contiguous edges of the flanges.

5. The combination with the housing and rotary-head having flanges disposed in contiguous position concentric with the head bearing, of fan blades positioned on the head flange within the space between the flanges for preventing an escape of fluid therethrough when the head is in motion.

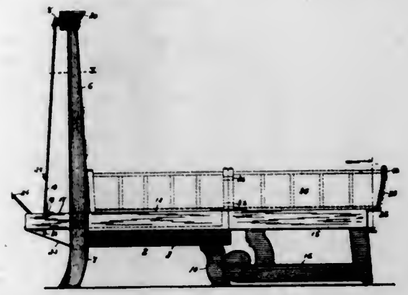
884,059. DIRT OR MANURE LOADER. JOHN H. ALBRECHT, Madison, Wis. Filed Jan. 23, 1908. Serial No. 412,307.

1. In an apparatus of the character specified, the combination of a base; a derrick mounted upon one end thereof; a swinging frame, the forward end of said frame extending outwardly from the base and derrick; a platform pivotally secured to the outer end of the frame; means for normally holding said platform in its horizontal position; a windlass; a cable passing from the windlass over the upper portion of the derrick and connected to the swinging frame; a pawl-and-ratchet device serving to hold the windlass against movement in one direction; a band-brake; and means for withdrawing the pawl from the ratchet and simultaneously applying the brake, whereby the cable may be paid off of the drum and the platform gradually lowered.



2. In an apparatus of the character specified, the combination of a base; a derrick mounted at one end thereof; a swinging frame, the forward end of which projects outwardly beyond the derrick and the base; a platform pivotally mounted in the outer end of the frame; a pulley carried by the lower portion of a cross-bar of the swinging frame; a drum mounted upon a fixed portion of the apparatus; means for actuating said drum and maintaining it in its desired position; a cable passing from the drum beneath the pulley and connected to the adjacent portion of the platform or table; a windlass; a pawl-and-ratchet mechanism for holding said windlass against motion in one direction; a band-brake passing about the windlass or a brake surface formed thereon; means for simultaneously withdrawing the pawl from the ratchet and applying the band-brake; and a cable passing from the windlass over the upper portion of the derrick and connected to the swinging frame.

884,060. CONVERTIBLE CHAIR. JACK ANDERSON, Westfield, and HERMAN TORJESEN, Garwood, N. J. Filed July 5, 1906. Serial No. 324,833.



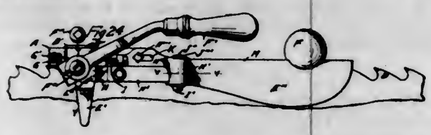
A convertible chair comprising a base portion, a back portion extending upward, a seat portion hinged to said base portion to fold forward into substantially the same plane therewith, a hinged foot guard at the end of said seat portion opposite its hinge, detachable side rails adapted to be connected to said back portion and stand at the opposite sides of the extended base portion and seat portion, and a foot rail detachably connecting said side rails and standing across the top of the foot guard.

884,061. DEVICE FOR SHAPING SWAGED SAW-TEETH. EDWARD P. ARMSTRONG, Portland, Oreg. Filed Apr. 2, 1906. Serial No. 309,570.

1. A device for shaping swaged saw teeth, comprising a body A having an opening A', a tooth-engaging hook B' and a back rest B", between which hook and rest the tooth point to be shaped is inserted, substantially as described.

2. A device for shaping swaged saw teeth, comprising a

body A having an opening A', a bushing B fitting within said opening and composed of separable sections having a securing screw G and a tooth-engaging hook B' carried by said bushing.



3. A device for shaping swaged saw teeth, comprising a body A having depending sides D' and centering guides E' secured to said depending sides, said centering guides being of less width than the distance between two adjoining saw tooth points, whereby the tool can be placed on the saw or removed without adjustment of the guides.

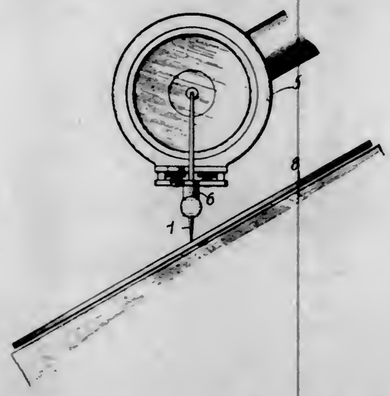
4. A device for shaping swaged saw teeth, comprising a body A having a rearwardly extending portion M provided with longitudinal slots, carriers H'' slidably arranged on each side of said rearwardly extending portion, a clamp bolt connecting said carriers through said slots across said rearwardly extending portion and permitting the adjustment of said carriers independently of one another, and means adjustably connecting each of said carriers with said body and pressure dies mounted in said carriers.

5. A device for shaping swaged saw teeth, comprising a body A having a rearwardly extending portion M, carriers provided on each side of said rearwardly extending portion and having slots K, a bolt H''' connecting said carriers with one another through said slots, and bolts I arranged substantially at right angles to said bolt H''' and adjustably connecting said carriers with said body.

[Claims 6 to 11 not printed in the Gazette.]

884,062. PHONOGRAPH-REPRODUCER. HIRAM BALDWIN, Chicago, Ill. Filed Dec. 6, 1907. Serial No. 405,312.

1. The combination in a phonograph, with a reproducer-head, of a needle having its attenuated record-engaging portion composed of ivory.

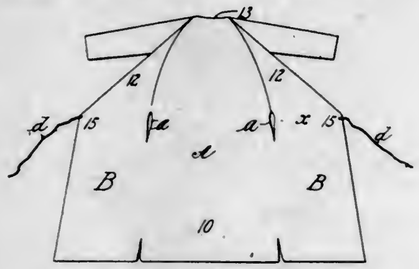


2. The combination in a phonograph, with a reproducer-head, of a needle having its attenuated record-engaging portion composed of artificially-hardened ivory.

3. The combination in a phonograph, with a reproducer-head, of a needle consisting of a stem-portion at which it is supported on said head, and an attenuated record-engaging portion, said needle being composed in its entirety of ivory.

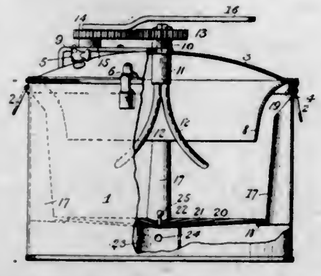
4. The combination in a phonograph, with a reproducer-head, of a needle consisting of a stem-portion at which it is supported on said head, and an attenuated record-engaging portion, said needle being composed in its entirety of artificially-hardened ivory.

884,063. COMBINED BUTCHER'S APRON AND FROCK. WILLIAM C. P. BALDWIN, Holyoke, Mass. Filed Nov. 20, 1907. Serial No. 402,991.



A combined frock and apron, comprising a back portion, the lower part of which constitutes a skirt, similar side portions or apron members continuous with the back and skirt thereof, adapted to completely overlap, either over the other, and to extend around to the sides of the person, said apron members having their edges from about the waist line convergently inclined to their junction with the collar edge of the garment, said garment having a hand-slit at each side at about the waist line and approximately at the regions where the apron members adjoin the back, and each apron member carrying a string at the apex of its angular portion, the points of attachment of said strings, and said hand-slits, being substantially in alinement, the string of the inner apron member passing through the hand-opening adjacent the outer apron member to the exterior of the garment.

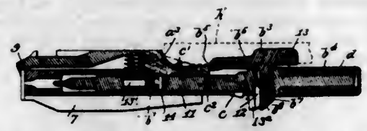
884,064. WASHING-MACHINE. CHARLES E. BEAN, Garnett, Kans. Filed May 17, 1907. Serial No. 374,233.



1. The combination with a boiler and a tight fitting cover therefor, of tubular open ended rubbers on the walls of the boiler, said rubbers having flanged bases, a perforated false bottom resting on the bottom flanges of the rubbers, an annular inwardly flaring rim depending from the cover forming an annular steam chamber around the head of the boiler, the tubular rubbers opening up into said steam chamber and a clothes agitator depending from the cover below the annular steam chamber.

2. In a washing machine, the combination with a boiler and a tight fitting cover thereto, of tubular open ended rubbers on the interior walls of the boiler having flanged lower ends, a perforated and corrugated conical false bottom resting on the base flanges of the rubbers, an annular inwardly flaring rim depending from the cover to provide an annular steam chamber in the head of the boiler, said rim being first curved inwardly and then directed downwardly at a slight incline the tubular rubbers having their upper open ends entered in said steam chamber, and a clothes agitator depending from the cover, said agitator having diverging arms projecting below the annular depending rim.

884,065. HAND-FIREARM. KARL A. BRÄUNING, Zaandam, Netherlands. Filed Apr. 27, 1907. Serial No. 370,578.



1. In a hand firearm, the combination with a bolt, a stationary rail and a spring-actuated firing-pin in the bolt; of a cocking lever pivoted in the bolt and actuated by engagement with the rail when the bolt is retracted, said lever engaging the firing-pin to move it into cocked position, and independent means passing through the firing-pin to hold the firing-pin in cocked position and simultaneously actuated by the cocking lever.

2. In a hand firearm, the combination with the bolt, a stationary rail and a spring-actuated firing-pin; of a cocking lever pivoted in the bolt, a spring-urged sear pivoted in the firing-pin, a lug on the bolt engaged by the sear, said cocking lever actuated by engagement with the rail when the bolt is retracted to permit the sear to engage the lug and hold the firing-pin in cocked position.

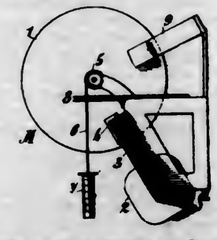
3. In a hand firearm, the combination with a bolt, a stationary cam rail and a spring-actuated firing-pin; of a lug on the bolt, an angle-lever mounted on the firing-pin, the nose of said lever held by said lug, a yoke pivoted in the bolt and moved by the rail to retract the firing pin and angle lever to lock the pin in retracted position.

4. In a hand firearm, the combination with a stationary cam rail, a recoil-operated, spring-propelled bolt and a spring-urged firing-pin in the bolt; of a lug on the bolt, an angle lever whose tail passes through a vertical slot in the firing-pin, a spring in the slot engaging the tail of said lever to normally hold its nose in the path of the lug, and a yoke pivoted in the bolt and cammed down when the bolt is propelled rearward by the explosion gases and its tail engaging the firing pin to move it and the angle lever rearward, whereby the nose of the angle lever will lie behind the lug to hold the pin retracted.

5. In a hand firearm, the combination with the bolt; of pivoted locking lugs mounted thereon having perforations in their ends, a firing-pin propelled between the ends, an exchangeable cam carried by the firing-pin to hold the locking lugs in locking position during firing, and an exchangeable forked member to be inserted in the place of said cam, the tines of which forked member enter said perforations to hold the lugs in unlocked position under all conditions of firing.

[Claim 6 not printed in the Gazette.]

884,066. AUTOMATIC ALTERNATING-CURRENT CONTACT APPARATUS. CHARLES E. L. BROWN, Baden, Switzerland, assignor to Actiengesellschaft Brown, Boveri & Co., Baden, Switzerland, a Firm. Filed Nov. 7, 1903. Serial No. 180,201.



1. In a circuit closer means to produce an alternating current field, an induction device movable in the field a weight lifted by a plurality of revolutions of said device and circuit terminals closed when the weight has reached its upper limit of movement.

2. In a circuit closer means to produce an alternating current field, an induction disk in said field, an adjustable weight lifted by a plurality of revolutions of said disk and circuit terminals closed by said weight when it has reached its limit of movement.

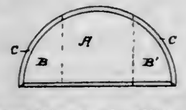
3. In a circuit closer means to produce an alternating current field, a disk rotatable in the field, an adjustable weight, a suspension therefor connected to said device and circuit closing terminals closed by the weight when lifted, the time of closure being controlled by the length of said suspension.

4. The combination with a main circuit; of a cut-out, a rotatable induction device responsive to variations of current in the main circuit and capable of making a number of revolutions to operate said cut-out, weights suspended from the induction device to adjust the operation of the induction device to currents of different intensity in the main circuit, and an adjustable suspension for the weights to vary the number of revolutions of the device and thereby the time of operating the cut-out after the current has reached the selected intensity, substantially as described.

5. The combination with a main circuit; of a cut-out, an induction device rotatable in a vertical plane and indirectly included in said circuit to operate the cut-out, an adjustable suspended weight to adjust the operation of the induction device to currents of different intensity and means to vary the distance traveled by said weight to vary the number of revolutions of the induction device and thereby the time of operating the switch after the current has reached the selected intensity, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

884,067. TABLE-PAD. FRED A. BRUNKE, Chicago, Ill. Filed May 27, 1907. Serial No. 375,942.



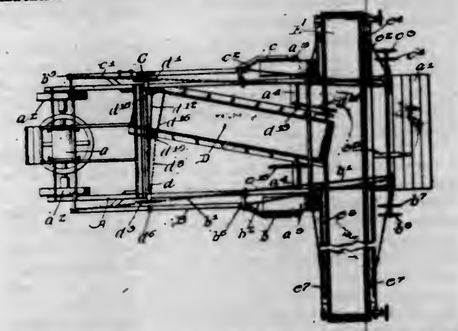
A table pad comprising a plurality of parts joined together at the meeting edges thereof, each of such parts consisting of a bottom layer of textile material, a layer of deadening felt thereon, a layer of water proof material on the deadening felt, an additional layer of deadening felt, a layer of heat resisting material extending over all the parts forming the pad and over the joints uniting such parts, with strips of textile material, one above and one below the layer of heat resisting material arranged to extend over the joints and on to the parts of the pad adjacent to the joints, all the said layers and strips secured together by adhesive material and arranged so that the bottom layer extends up and is secured by adhesive material to the edges of the layers of deadening felt and the layer of water proof material adjacent to the joints, and with such bottom layer, the strips of textile material and the heat resisting material secured together at the joints by stitching, and a binding to the pad; substantially as described.

884,068. DITCHING AND GRADING MACHINE. MORTON G. BUNNELL, Porter, Ind., assignor to Austin Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed Aug. 2, 1907. Serial No. 386,714.

1. In a ditching and grading machine, a plow for each side of the machine, an elevating and conveying apparatus adjustable to receive the soil from either plow and discharge the same from either side of the machine, means for adjusting said apparatus to receive the soil from either plow, and means for raising and lowering said plows independently of each other.

2. In a ditching and grading machine, a plow for each side of the machine, an elevator adapted to have its lower end swung from one plow to the other, means for swinging said elevator from one side to the other, and a reversible conveying apparatus for receiving the soil from the

elevator and discharge the same from either side of the machine.



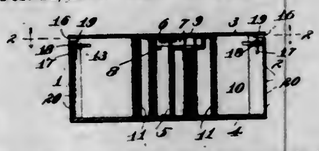
3. In a ditching and grading machine, a plow for each side of the machine, a longitudinally disposed elevator having its lower and forward end supported for movement from one plow to the other for the purpose set forth, and means for moving the lower and forward end of the elevator from one plow to the other.

4. In a ditching and grading machine, a plow for each side of the machine, and an elevator having its rear or upper end pivoted or swiveled to permit its lower and forward end to be swung from one plow to the other for the purpose set forth.

5. In a ditching and grading machine, a plow for each side of the machine, a longitudinally disposed elevator having its lower and forward end supported for movement from one plow to the other, and suitable instrumentalities for receiving the soil from the upper end of said elevator and discharging the same from either side of the machine, for the purpose set forth.

[Claims 6 to 34 not printed in the Gazette.]

884,069. SAVINGS-BANK. OWEN BURNS, Chicago, Ill. Filed Feb. 14, 1906. Serial No. 300,985.



1. In a savings bank, in combination, a body portion having cylindrical side walls; a ring secured to the inner face of said cylindrical side walls, said ring being notched; and partitions having notched portions adapted to extend into the notches of said ring.

2. In a savings bank, in combination, cylindrical side walls; an upper end wall fixed to said side walls; a lower end wall; means for detachably securing said lower end wall in place; an integral sheet metal partitioning member; and means for permanently securing said partitioning member to said side walls, comprising a ring secured to the inner face of said side walls and engaging said partitioning member.

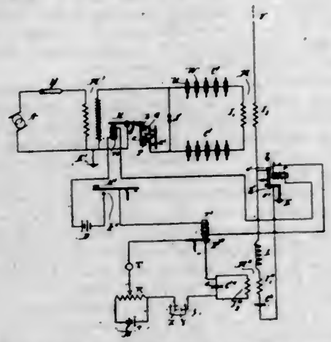
3. In a savings bank, in combination, a coin-receiving compartment having a coin slot in one side and at the upper end of said compartment; a member fixed upon the wall of said compartment adjacent to and below said coin slot; and a plurality of obstructing members slidably mounted in said member.

4. In a savings bank, in combination, a series of coin compartments having side walls provided with a coin slot in one side at the upper end of each compartment; a member extending around the side walls of said compartments; and a plurality of obstructing members movably supported in said first mentioned member, normally out of operative position, but arranged to obstruct said coin slot when the bank is inverted.

5. In a savings bank, in combination, a body portion having cylindrical side walls and coin slots in said side walls; an annular series of coin-receiving compartments in said body portion; a ring secured to the inner face of said cylindrical side walls adjacent to and below said coin slots; and obstructing members movably attached to said ring and adapted to obstruct said coin slots.

[Claim 6 not printed in the Gazette.]

884,070. SPACE TELEGRAPHY. SEWALL CABOT, Brookline, Mass., assignor to Stone Telegraph and Telephone Company, Boston, Mass., a Corporation of Maine. Filed Nov. 13, 1906. Serial No. 343,205.



1. In a space telegraph system, a normally closed power circuit including the primary winding of a transformer, a sonorous circuit, a normally open intermediate circuit connecting said sonorous circuit to the secondary of said transformer, and means operated by a sending key for controlling the current flow in said intermediate circuit.

2. In a space telegraph system, a normally closed power circuit including the primary winding of a transformer, a sonorous circuit, a normally open intermediate circuit connecting said sonorous circuit to the secondary of said transformer and a series contact switch operated by a sending key for controlling the current flow in said intermediate circuit.

3. In a space telegraph system, a normally closed power circuit including the primary winding of a transformer, a sonorous circuit, a normally open intermediate circuit connecting said sonorous circuit to the secondary of said transformer, means for controlling said intermediate circuit, a Morse key, and a magnet controlled thereby for operating said means.

4. In a space telegraph system, a sonorous circuit, a normally closed power circuit, a normally open intermediate circuit connecting said sonorous circuit with said power circuit, and means for controlling said normally open circuit, said means comprising a switch having a plurality of series-contacts.

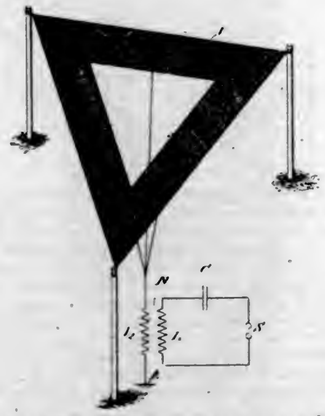
5. In a space telegraph system, a normally closed power circuit including the primary winding of a transformer, a sonorous circuit, a normally open intermediate circuit connecting said sonorous circuit to the secondary of said transformer, and means for controlling said normally open circuit, said means comprising a switch having a plurality of series-contacts.

[Claims 6 to 10 not printed in the Gazette.]

884,071. SPACE TELEGRAPHY. SEWALL CABOT, Brookline, Mass., assignor to Stone Telegraph and Telephone Company, Boston, Mass., a Corporation of Maine. Filed Dec. 31, 1906. Serial No. 350,257.

1. In a system of space telegraphy, an elevated conductor system comprising a laterally extending conducting surface having its inner portion cut away and its perimeter large compared with its distance above the earth.

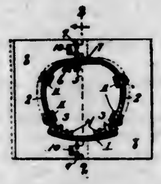
2. In a system of space telegraphy, an elevated conductor system comprising a laterally extending triangular-shaped conducting surface having its inner portion cut away and its perimeter large compared with its distance above the earth.



3. In a system of space telegraphy, an elevated conductor system comprising a laterally extending conducting surface having its inner portion cut away and its perimeter large compared with its distance above the earth, in combination with means for rendering the reactance of said elevated conductor system zero for electrical vibrations of definite frequency.

4. In a system of space telegraphy, an elevated conductor system comprising a laterally extending triangular-shaped conducting surface having its inner portion cut away and its perimeter large compared with its distance above the earth, in combination with means for rendering the reactance of said elevated conductor system zero for electrical vibrations of definite frequency.

884,072. ROAD-CULVERT. JAY CAREY, Vickeryville, Mich. Filed Apr. 20, 1907. Serial No. 369,205.



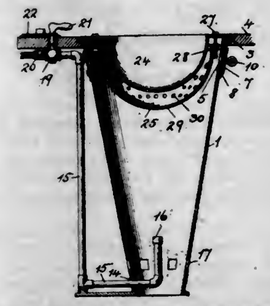
1. A culvert, comprising a bottom section, side and top sections resting at their lower edges upon the bottom section and slidably attached thereto, the meeting edges of the side and top sections at the top being detachably connected by an expansible joint to have a limited circumferential movement without disengagement, substantially as set forth.

2. A culvert, comprising a bottom section having stirrups along its margins, side sections forming the complementary portion of the culvert slidably attached at their upper edges, and having on their lower edges projecting members which pass freely through the stirrups on the bottom section.

3. A culvert, comprising a bottom piece concavo-convex in cross section, side pieces semicircular in cross section, the lower edges of the side pieces resting upon and slidably secured to the bottom piece, the upper edges of the side pieces lapping, one side piece having stirrups and the other piece projecting members which pass freely through said stirrups.

4. A culvert consisting of a curved bottom piece, semi-circular side pieces forming the complementary portion of the culvert resting upon and slidably secured to the bottom piece, the upper edges of said side pieces being slidably connected, and a sectional wing attached to the body of the culvert and embracing the end thereof, the sections of said wing being slidably connected.

884,073. HEATER FOR CONFECTIONERS' USE. TEOFIL CHRUL, Baltimore, Md. Filed Sept. 14, 1907. Serial No. 392,845.



1. A heater comprising an outer shell having an open upper end; a gas burner in the shell; a bowl receptacle at said open end of the shell and projecting down into the latter; a perforated supplemental bowl beneath the bowl receptacle, and means for vertically adjusting the position of the supplemental bowl with respect to the bowl receptacle.

2. A heater comprising an outer shell having an open upper end and a plurality of vent openings in its side wall; a gas burner in the shell; a flanged bowl receptacle supported at the upper end of the shell and projecting downwardly therein; a perforated band extending around the wall of the shell and coacting with the vent openings in the latter, and means for rotating said band with respect to said shell.

3. A heater comprising an outer shell having an open upper end with a plurality of vent openings in the side walls adjacent said upper end; a gas burner in said shell; a flanged bowl receptacle at the upper end of the shell and projecting downwardly therein; a perforated supplemental bowl adjustably sustained in the shell from said bowl receptacle; a perforated band extending around the wall of the shell over the vent openings therein and means for rotating said band with respect to the shell.

4. A heater comprising an inverted conical shell having vent openings in the wall adjacent the larger upper end; a burner in said shell; a flanged bowl receptacle sustained at the upper end of the shell and projecting downwardly therein; a perforated supplemental bowl adjustably sustained from the flange of the bowl receptacle, and a movable ring band extending around the upper larger end of the shell wall and having a plurality of perforations to register with the vent openings in the shell.

5. A heater for confectioners' use comprising a table having an opening therein, a shell provided with vent openings in its wall adjacent to its upper end and below the table; a bowl receptacle sustained in the upper end of the shell; a ring band extending around the shell adjacent the vent openings; means for operating said band to open and close the vent openings; a gas burner in the shell, and means on the table for regulating the gas.

884,074. ATTACHMENT FOR TROLLEY-POLE CLAMPS. CURTIS W. CLARK and CHARLES E. YINGLING, Eaton, Ind. Filed Jan. 13, 1906. Serial No. 295,986.

1. In a device of the character described, in combination, a pair of clamping plates adapted to surround a trolley pole, and a supplemental plate operatively connected to said clamping plates and provided with means for producing a clamping movement between said two plates.

2. In a device of the character described, in combination, a pair of clamping plates adapted to surround a trolley pole, and a supplemental plate operatively connected to said clamping plates and provided with lever operated means for producing a clamping movement between said two plates.



3. In a device of the character described, in combination, a pair of clamping plates adapted to surround a trolley pole, and a supplemental plate operatively connected to said clamping plates and provided with a lever operated cam for producing a clamping movement between said two plates.

4. In a device of the character described, in combination, a pair of clamping plates adapted to surround a trolley pole, and a supplemental plate operatively connected to said clamping plates, provided with means for producing a clamping movement between said two plates and means for locking said first-named means in clamping position.

5. In a device of the character described, in combination a pair of clamping plates adapted to surround a trolley pole, and a supplemental plate operatively connected to said clamping plates, provided with means for producing a clamping movement between said two plates, means for locking said first-named means in clamping position and means for releasing said lock.

884,075. ELECTRODEPOSITION OF IRON. SHERARD O. COWPER-COLES, London, England. Filed Sept. 16, 1907. Serial No. 393,243.

1. The process of obtaining the electro deposition of iron, which consists in forming an electrolyte from a substance containing iron and in maintaining the electrolyte charged with iron, substantially as described.

2. The process of obtaining the electro deposition of iron, which consists in forming an electrolyte from a substance containing iron, in charging the electrolyte with iron oxid and maintaining the same in suspension by agitation of the electrolyte, substantially as described.

3. The process of obtaining the electro deposition of iron, which consists in forming an electrolyte from iron ore, in circulating such solution through a tank containing insoluble anodes arranged around a mandrel forming the cathode, substantially as described.

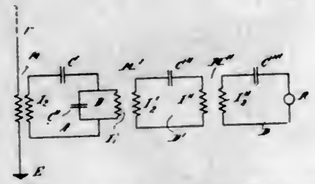
4. In the electro-deposition of iron from the ore, the process consisting in mixing the roasted ore with coke so as to form a filter-bed through which an iron oxid solvent is caused to pass, the solution, after its passage through the filter bed, being caused to circulate through a tank containing insoluble anodes arranged around a revolving cathode, substantially as described.

5. The process of electro deposition of iron, which consists in forming an electrolyte from sulfo-cresylic acid, and substances containing iron and depositing the iron upon a cathode in the usual manner, substantially as described.

[Claim 6 not printed in the Gazette.]

884,076. SPACE TELEGRAPHY. ERNEST R. CRAM, Cambridge, Mass., assignor to Stone Telegraph and Telephone Company, Boston, Mass. Filed May 7, 1906. Serial No. 315,519.

1. In a space telegraph receiving system, an elevated receiving conductor system; a resonant receiving circuit attuned to the frequency of the waves the energy of which is to be received; and a circuit tightly coupled to said elevated conductor system and interposed between said elevated conductor system and said resonant receiving circuit, said circuit having a pronounced natural rate of vibration different from that of said resonant receiving circuit.



2. In a space telegraph receiving system, an elevated receiving conductor system; a resonant receiving circuit attuned to the frequency of the waves the energy of which is to be received; and a circuit tightly coupled to said elevated conductor system and interposed between said elevated conductor system and said resonant receiving circuit, said circuit being provided with means whereby it is given a pronounced natural rate of vibration different from that of the resonant receiving circuit and whereby, for a persistent train of electrical oscillations of the frequency to which said resonant receiving circuit is attuned, the reactance of such interposed circuit is rendered zero.

3. In a space telegraph receiving system, an elevated receiving conductor system; a resonant receiving circuit attuned to the frequency of the waves the energy of which is to be received; and a series of circuits, interposed between said elevated receiving conductor system and said resonant receiving circuit and each having a pronounced natural rate of vibration different from that of said resonant receiving circuit, the first circuit of said series being tightly coupled to said elevated conductor system.

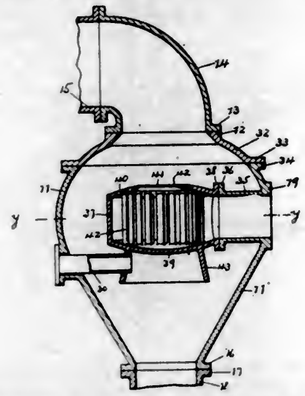
4. In a space telegraph receiving system, an elevated receiving conductor system; a resonant receiving circuit attuned to the frequency of the waves the energy of which is to be received; and a series of circuits, interposed between said elevated receiving conductor system and said resonant receiving circuit and each provided with means whereby it is given a pronounced natural rate of vibration different from that of the resonant receiving circuit and whereby, for a persistent train of electrical oscillations of the frequency to which said resonant receiving circuit is attuned, the reactance of each of such interposed circuits is rendered zero, the first circuit of said series being tightly coupled to said elevated conductor system.

5. In a space telegraph receiving system, an elevated receiving conductor system; a resonant receiving circuit attuned to the frequency of the waves the energy of which is to be received; a circuit tightly coupled to the said elevated conductor system and interposed between said elevated conductor system and said resonant receiving circuit; and means giving such interposed circuit a pronounced natural rate of vibration different from that of said resonant receiving circuit and making it highly responsive to persistent trains of electrical oscillations of the frequency to which said resonant receiving circuit is attuned.

884,077. CONDENSER. ANTHON W. P. CRAMER, Montclair, N. J., assignor to The Wheeler Condenser and Engineering Co., New York, N. Y., a Corporation of New Jersey. Filed Aug. 1, 1907. Serial No. 386,529.

1. A condenser comprising a body member, an internal nozzle connected therewith and a barrel connected to the said internal nozzle and so constructed as to positively control the volume of the injection water only by the discharge from the circulating pump and evenly distributing the same over the entire inner surface of the condenser body.

2. A condenser comprising a body member, an internal nozzle connected therewith and a barrel connected to the said internal nozzle and having an inlet from the same, said barrel having a closed bottom and a circular opening in the top thereof and a series of spaced apart circularly arranged bars adapted to cause the water to rotate within the said barrel and to be discharged therefrom through the said opening in the top thereof.



3. A valveless jet condenser comprising a hollow body receiving the vapor to be condensed, a tubular intake for the injection water under the regulated power of the circulating pump, a centrally located cylindrical vessel having a closed bottom and an opening in the top and means within said vessel for causing an agitation of said water and delivering the same from the said opening in the top of the said cylindrical vessel.

4. A valveless jet condenser comprising a hollow body receiving the vapor to be condensed, a tubular intake for the injection water under the regulated power of the circulating pump, a centrally located cylindrical vessel having a closed bottom and an opening in the top and a series of circularly arranged bars, forming a grating within the said cylindrical vessel adapted to cause an agitation of the said water and the delivery of the same through the said opening in the top of the vessel.

884,078. FRAME FOR MIRRORS, BRUSHES, AND THE LIKE. ROBERT R. DEBACHER, Hoboken, N. J. Filed Sept. 10, 1907. Serial No. 392,100.



1. An article, a hollow frame therefor having irregular side walls spaced from the edge of the article and a mat having its inner edge fitted to the edge of the article and its outer edge fitted to the side walls of the frame.

2. A back plate, a hollow frame therefor having irregular side walls spaced from the edge of the back plate and a mat having its inner edge fitted to the edge of the back plate and its outer edge fitted to the side walls of the frame.

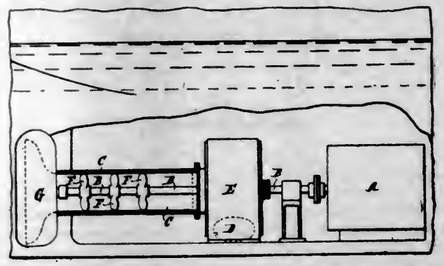
3. An article, a back plate, a hollow frame therefor having irregular side walls spaced from the edges of the article and back plate and mats having their inner edges fitted to the edges of the article and back plate and their outer edges fitted to the side walls of the frame.

4. An article, a hollow frame therefor having its inner edge overlapping the edge of the article and having irregular side walls spaced from the edge of the article and a mat having its inner edge fitted to the edge of the article and its outer edge fitted to the side walls of the frame.

5. A back plate, a hollow frame therefor having its inner edge overlapping the edge of the back plate and having irregular side walls spaced from the edge of the back plate and a mat having its inner edge fitted to the edge of the back plate and its outer edge fitted to the side walls of the frame.

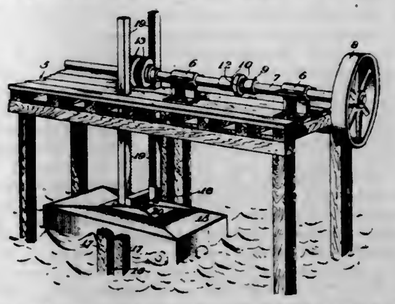
[Claims 6 and 7 not printed in the Gazette.]

884,079. PROPULSION OF SHIPS. EDWARD J. DUFF, Liverpool, England. Filed Oct. 3, 1906. Serial No. 337,193.



Means for propelling ships, comprising a prime mover, a centrifugal pump actuated thereby, a shaft therefor, a turbine mounted directly on said shaft and in the lower part of the boat, means connecting the turbine with the water outside the boat whereby the power which is in the head of water required to float the ship is utilized, said centrifugal pump adapted to eliminate the back pressure on the turbine and capable of removing more water than is admitted by the turbine.

884,080. WAVE-MOTOR. GEORGE T. FALLIS, Los Angeles, Cal. Filed Apr. 16, 1907. Serial No. 368,508.

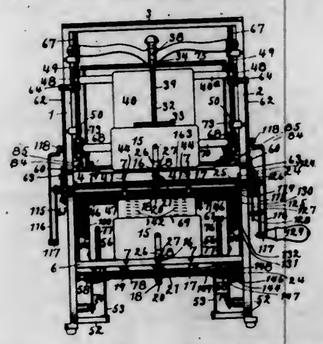


1. A wave motor having in combination with a main revolving shaft extending horizontally with the pier, cores keyed at intervals thereon, each core being the axis for two reciprocating cogged wheels, carrying pawls to engage the grooves therein and having in connection therewith two corresponding perpendicular cogged bars, one working in each wheel and on opposite sides of the shaft being joined at the lower ends by a pitman hinged to a float, all as substantially shown and described.

2. In a wave motor the combination with a main revolving shaft extending with the pier on which it is journaled, and having keyed thereto cores with pairs of reciprocating geared clutch wheels journaled thereon and operated by perpendicular rack bars connected to a pitman

hinged to a float, a float having a central horizontal transverse beam with projections beyond the sides of the float, adapted to glide between perpendicular guides, which prevent its lateral and guide its vertical movement.

884,081. ENVELOP-SEALING MACHINE. CHARLES J. FANCHER and HUBERT S. PARMELEE, West Granby, Conn., assignors to The Simplex Manufacturing Company, New York, N. Y., a Corporation of Connecticut. Filed Dec. 21, 1906. Serial No. 348,919.



1. The combination, in an envelop-sealing machine, with a supporting part of the frame of the machine, and a reservoir supported thereby, of a clip adapted to engage said reservoir at the back, and means to fasten said clip to said supporting part.

2. The combination, in an envelop-sealing machine, with the frame of the machine, and a plate supported by said frame and having its front edge turned up, of a reservoir adapted to be mounted on said plate and provided with projections to engage the upturned edge of the plate.

3. The combination, in an envelop-sealing machine, with a cross-piece of the frame of the machine, and a plate attached to said cross-piece and having its front edge turned up, of a reservoir adapted to be mounted on said plate and provided with projections to engage the up-turned edge of the plate, a clip adapted to engage said reservoir at the back, and means to fasten said clip to the cross-piece.

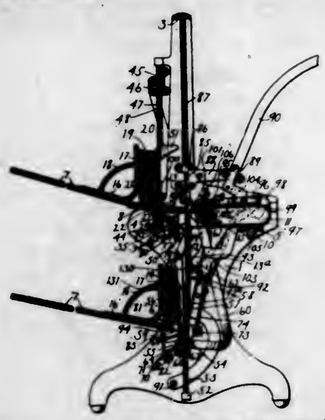
4. The combination, in an envelop-sealing machine, with the frame of the machine, envelop supporting rods on such frame, and an envelop follower comprising a plate and a supporting sleeve therefor, such sleeve being slidingly mounted on one of such rods, of a shaft journaled in said frame, a sheave on such shaft, a cord connecting said follower with said sheave, a winding spring attached to the shaft and sheave, and means to hold the shaft against rotation.

5. The combination, in an envelop-sealing machine, with the frame of the machine, envelop supporting rods on such frame, and an envelop follower comprising a plate and a supporting sleeve therefor, such plate being slidingly mounted on one of such rods, of a shaft journaled in said frame, a sheave mounted on said shaft, a cord connecting said follower with said sheave, a winding spring attached to the shaft and sheave, a ratchet-wheel on the shaft, and a detent for such ratchet-wheel.

[Claims 6 to 51 not printed in the Gazette.]

884,082. ENVELOP-SEALING MACHINE. CHARLES J. FANCHER and HUBERT S. PARMELEE, West Granby, Conn., assignors to The Simplex Manufacturing Company, New York, N. Y., a Corporation of Connecticut. Filed Feb. 23, 1907. Serial No. 358,861.

1. The combination, in an envelop-sealing machine, with a cross-piece of the frame of the machine, of an envelop support consisting of a plurality of slanting rods projecting from said cross-piece, and a horizontal plate over the junction of said rods with the cross-piece, said plate being slotted to receive the rods.



2. The combination, in an envelop-sealing machine, with the frame of the machine, of an envelop support comprising a plurality of slanting rods projecting from said frame, and a gravity follower for envelops on such support, said follower having grooves therein to receive the rods, whereby the follower is held to a straight course and prevented from either leaving the rods or moving laterally thereon out of such course.

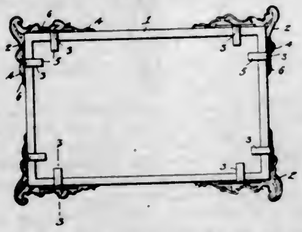
3. The combination with envelop supporting rods of an envelop-sealing machine, of a follower comprising two arms having longitudinal grooves in their outer faces, either of said arms being adapted to rest on said rods while the other bears against an envelop or envelops.

4. The combination, in an envelop-sealing machine, with an envelop support, of a finger pivotally mounted adjacent to such support and adapted when in one position to obstruct the passage of an envelop from said support and when in another position to cease from obstructing the passage of the same, resilient means to actuate such finger into one of such positions, and positive means to actuate said finger into the other of such positions.

5. The combination, in an envelop-sealing machine, with an envelop support, of a finger pivotally mounted adjacent to such support and adapted when in one position to obstruct the passage of an envelop from said support and when in another position to cease from obstructing the passage of the same, resilient means to actuate such finger into one of such positions, means to limit the movement of the finger when so actuated, and positive means to actuate said finger into the other of such positions.

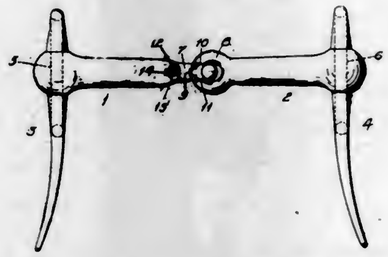
[Claims 6 to 39 not printed in the Gazette.]

884,083. CORNER-PIECE FOR PICTURE-FRAMES. CHARLES C. FAUCETTE, Searcy, Ark. Filed June 19, 1907. Serial No. 379,764.



A corner piece of the character described comprising a body having angularly projecting members and spring clips secured to the rear faces of said members, each of said clips being formed from a single piece of resilient sheet metal having an angular attaching and reinforcing portion and a resilient tongue, said attaching and reinforcing portion having its lower or inner flange secured to the body of the corner piece to reinforce the same and its other flange projecting outwardly to engage the edge of the picture or frame, said resilient tongue being formed upon the center of the outwardly projecting flange of said reinforcing and attaching portion, substantially as and for the purpose set forth.

884,084. HORSE-BIT. JOHN GAERTNER, Newark, N. J. Filed Aug. 27, 1907. Serial No. 390,287.



1. In a jointed bit, the combination with an eye member, of a hook member having a groove at the base of the hook with an undercut wall, and a dove-tail extremity adapted to enter said groove when the hook is closed.

2. In a jointed bit, the combination with an eye member, of a hook member having a groove at the base of the hook on the side toward which the hook bends, said groove being in the plane of the hook and opening at its end through the outer surface of the hook member, and a reduced tongue at the end of the hook flattened in the plane of the hook and adapted to enter said groove as the hook is closed.

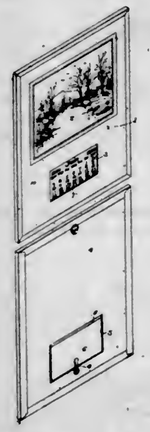
3. In a jointed bit, the combination with an eye member, of a hook member having lugs at the base of the hook on the side toward which the hook bends, said lugs forming between themselves a groove which lies in the plane of the hook and is open at both ends and having abrupt ends, and a reduced tongue at the end of the hook flattened in the plane of the hook and forming shoulders on both sides of its base, said tongue being adapted to enter said groove between said lugs as the hook is closed and said shoulders to engage the ends of the lugs.

884,085. EGG-WHIP. FELIX GENGE, Everett, Wash. Filed July 3, 1907. Serial No. 382,034.



An egg beater comprising a handle having shouldered and reduced end portions provided with grooves terminating in openings, spring wire loops having straight shanks engaged in the grooves in the handle, the shanks terminating in inturned ends engaged in the openings in the handle, and binding wires encircling the shanks of the loops to secure them to the handle the loops being of gradually increasing size from the center outward, the shorter loops being connected to the end of the handle and the ends of the outer larger loops being brought down over the ends of the shorter loops, there being an independent series of loops independently secured to each of the shouldered end portions of the handle.

884,086. CARD-MOUNT. JAMES N. C. GRAHAM, New York, N. Y. Filed June 16, 1906. Serial No. 321,994.



1. A picture and calendar card comprising a mount having an aperture therein, a backing for said mount, means for securing the mount and backing together, said backing having an aperture registering with the aperture of the mount, a freely movable hinged flap carried by the backing for closing its aperture, a tear-off calendar pad carried by said flap and disposed in the aperture of the backing and arranged to show through the aperture of the mount, and securing means carried by said backing for holding said flap and calendar in place.

2. A picture card mount having an aperture therein, a backing for said mount, means for securing said backing and mount together, said backing having an aperture registering with the aperture of the mount, a hinged flap carried by said backing and serving to close the aperture in the same, a calendar pad carried by said flap and disposed within the aperture of the backing and showing through the aperture of the mount, in combination with a plate of transparent material covering the face of said structure, said plate serving to protect the picture card mount and the calendar carried thereby, and the means confining the edges of said mount and backing securing the transparent plate to said structure.

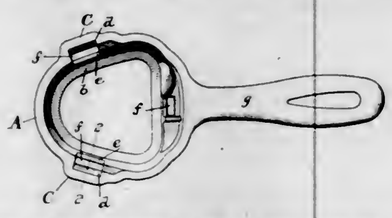
3. A picture card mount having an aperture therein, a backing for said mount, said backing having an aperture registering with the aperture of the mount, a hinged flap for closing the aperture of the backing, a tear-off calendar pad carried by said flap and disposed in the aperture of the backing and arranged to show through the aperture in the mount, means for securing said flap in the closed position, in combination with a plate of transparent material covering and protecting said picture card mount and the calendar carried thereby and through which said calendar may be viewed, and means for confining the edges of said mount and backing and securing said plate of transparent material to the mount.

884,087. HOLDER FOR DENTAL FLASKS. FERDINAND GROSHANS, Baltimore, Md. Filed Mar. 28, 1906. Serial No. 308,685.

1. A holder for dental flasks comprising an irregular-shaped ring larger at its top than at the bottom and having on its inner surface recesses which have an open bottom slot, and provided with a handle.

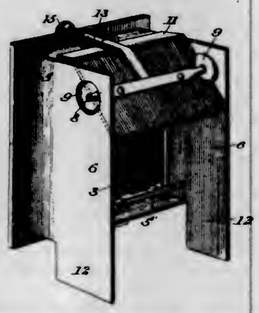
2. A holder for dental flasks comprising an irregular-shaped ring larger at its top than at the bottom and hav-

ing on its inner surface a plurality of recesses,—said ring also having a handle projecting therefrom and the recesses



in the ring being arranged to receive parts projecting from the outer side walls of a dental flask.

884,088. COMBINED REGISTER BACKING AND DAMPER. JOHN C. HENDRICKSON, Philadelphia, Pa. Filed Feb. 16, 1907. Serial No. 357,781.



1. In a device of the character described, a register frame, a backing mounted therein, having extended sides, said sides being of a width equal to the width of the flue in which the same is to be placed, and extensions on said sides below the bottom of said frame and bendable laterally to contact with the sides of the flue.

2. In a device of the character described, a register frame, a backing mounted therein, having extended sides, said sides being of a width equal to the width of the flue in which the same is to be placed, extensions on said sides below the bottom of said frame and bendable laterally to contact with the sides of the flue, and a damper pivotally mounted in and confined between said sides at the upper ends thereof.

3. In a device of the character described, a register frame, dampers therein, a backing mounted thereon and extended beyond said dampers and having portions at the bottom overlapped and connected together, and sides projecting from said backing beyond the same to extend into a flue and having provision whereby said backing and frame are frictionally held within the flue said sides having extensions bent to contact with the sides of the flue to prevent passage of the hot air.

4. In a device of the character described, a register frame, register dampers suitably mounted therein, a backing on said frame, sides extending therefrom beyond the bottom wall of the backing to fit the flue above and below said bottom wall, a flue damper pivotally mounted in said sides and means for operating said damper the sides of said backing having lateral extensions to contact with the sides of the flue to prevent passage of the hot air.

5. In a device of the character described, a register frame, register dampers suitably mounted therein, a backing on said frame, sides extending therefrom beyond the bottom wall of the backing to fit the flue above and below said bottom wall, a flue damper pivotally mounted in said sides and a rod pivotally connected with said damper and extending through the register face the sides of said backing having lateral extensions to contact with the sides of the flue to prevent passage of the hot air.

[Claims 6 and 7 not printed in the Gazette.]

884,089. PIANOFORTE-CASE. JOHN A. HUSSEY, Chicago, Ill. Filed Mar. 10, 1906. Serial No. 305,428.



1. In a case for an upright piano having an upright rectangular portion, a horizontally extending key-board frame secured to said upright portion, and a canopy secured to said upright portion extending above said frame and in front of said upright portion.

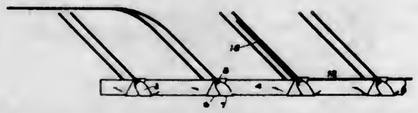
2. A case for an upright piano having an upright rectangular portion, a horizontally extending key-board frame secured to said upright portion, and a canopy secured to and in front of said upright portion comprising a curved panel.

3. A case for an upright piano having an upright portion, a horizontally extending frame secured to said upright portion, and a canopy secured to and in front of said upright portion comprising a plurality of panels.

4. A case for an upright piano having an upright portion, a horizontally extending frame secured to said upright portion, a shelf secured above said frame, and a canopy secured above and to said shelf and in front of and to said upright portion.

5. A case for an upright piano having an upright portion, a horizontally extending frame secured to said upright portion, and a removable canopy secured above said frame and to the front of said upright portion.

884,090. BAR FOR REINFORCING CONCRETE. CHARLES E. JOHNSON, Detroit, Mich. Filed Jan. 7, 1907. Serial No. 351,079.



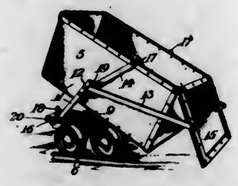
1. In combination with a longitudinal tie bar whose cross-sectional size is the same throughout its length, though arranged in alternating sections, each differently disposed as regards those adjacent on either side, and each end of each alternate section thus constituted being in the form of an angular shoulder, reinforcing strips having their center portions wound spirally about selected sections of the tie bar between said shoulders, being held from unintended movement therealong by engagement against the shoulder portions of the adjacent sections of the bar, the end portions of said straps extending angularly therefrom, said straps being distorted at the points of union of their spiral and end portions, substantially as described.

2. In combination with a bar of uniform cross-sectional size having distorted portions at intervals along its length the points of union of the normal and the distorted portions being made sharply angular, strap members adapted to be wrapped spirally about said distorted portions, being held in place by the angular terminal shoulders of the adjacent normally shaped portions of the bar, the end portions of said strap members being caused to branch from said bar angularly with respect thereto, each being twisted at its point of union with the spiral portion to bring its flat surface across the expected lines of strain thereon, substantially as described.

3. In combination with an enveloping cementitious mass, a longitudinally extending bar therein having regularly distorted portions of the same cross sectional area as the adjacent normally shaped portions, and reinforcing strap members engaging spirally about said distorted portions and extending therefrom into the cementitious mass at the angles desired, said straps being torsionally distorted at the point of union of their terminal portions with the bar-engaging portion to form a locking engagement thereabout and to present their greatest possible surface across the lines of expected strain upon the cementitious mass, substantially as described.

4. Concrete reinforcing means, comprising a main bar adapted to be inserted in the concrete mass while the same is still plastic, said bar being distorted at intervals for the engagement about such points of supplemental reinforcing members, reinforcing straps of metal wound spirally about said main bar at said distorted points along its length being held from slipping therealong by their engagement against the sharply defined ends of the adjacent undistorted portions, their end portions extending outwardly from the main bar, and each of said straps being twisted at the point of union of its end portions with its central bar-engaging portion, to lock the same in place firmly about the bar and to present the flat surfaces of the straps perpendicularly to the expected lines of strain at the point of location of each, and additional tie members extending from engagement with the bar-engaging portion of one reinforcing strap to the corresponding portion of another, the end portions of these last named members extending away from the bar similarly to the corresponding portions of the reinforcing straps, and the central portions of each of said additional tie members extending parallel with said main bar across a region of expected maximum strain, substantially as described.

884,091. DOOR-OPERATING MECHANISM FOR ORE-CARS. GEORGE C. JOHNSON, Los Angeles, Cal., assignor of one-half to Henry Lange, Los Angeles, Cal. Filed May 8, 1907. Serial No. 372,475.



1. A composite lever for operating swing doors at the end of the body of ore cars or the like, comprising three members, these members being pivotally secured to each other at one of their ends, the other ends of these members being pivoted as follows, one to the body of the truck, one to the body of the car and the other to the swinging door.

2. An operating lever to operate doors of ore cars, comprising three members, a top or body member, a bottom or truck member, a front or door member, these members being pivotally secured each to the other at one of their ends as follows, the door and body members being attached to the truck member, the door member being attached at a point on the truck member above the point where the top member is attached, the other ends of these members being pivotally attached as follows, the body member being attached to the body of the car, the truck member to the frame of the truck and the door member to the door of the car.

3. An ore car having a swinging door hinged on the top of the front end of the body, a companion pair of locking levers, one on each side of the body of the car, each of said levers being composed of three members pivotally secured to the other at one of their ends and pivotally secured at their other ends one to the body of the car, one to the frame of the truck and one to the swinging door, the door member being attached to the truck member at a point on the truck member above where the body member is attached to the truck member.

4. Means to automatically open and close a door swingingly secured to the front of an ore car or the like, comprising a companion pair of composite operating levers, one on each side of the body of the car, said composite lever having three members, a rear, a front and a top member, the rear member being pivotally secured at its lower end to the truck of the car, the upper end being pivoted to the rear end of the front member, the front end of the front member being pivoted to the door and the top member being pivoted to the body of the car at its upper end and the lower end being pivoted to the rear member below the point on the rear member where the front member is pivoted thereto.

5. In combination with a car body having a door pivoted thereon, a toggle one end being pivotally connected to the car truck and the other end being pivotally connected to the car body, and a reach bar pivotally connected to the toggle and to the door of the car.

884,092. COLLAR-BUTTON. CHARLES A. KIEFFER, Swampscott, Mass. Filed June 6, 1907. Serial No. 377,525.



1. The combination with a collar button having a pivoted head, of a member pivoted to the shank of the button, said member having a pivoted leaf connected to its free end and adapted to be retained closed by the head of the button.

2. The combination with a button having a pivoted head, of a leaf pivoted to the stem of the button, and an outer clamping leaf hinged to the free end of the pivoted leaf.

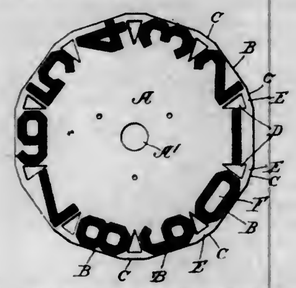
3. The combination with a collar button having a pivoted head, of a clasp pivoted to the shank of the button, said clasp comprising a pair of leaves jointed at their outer ends, the inner ends of the leaves being forked to embrace the shank, the forked ends of one of the leaves having pivotal engagement with the shank.

4. A collar button having a hinged head, a leaf having forked ends pivotally engaged on the shank of the button, an additional retaining leaf having hinge connection with the pivoted leaf, the head of the button serving as an abutment to limit the movement of the additional leaf.

5. The combination with a button, of a clasp pivoted to the shank thereof, the clasp having as one of its parts a clamping member pivoted to the free end of the other part, said clamping member adapted to engage the head of the button.

[Claim 6 not printed in the Gazette.]

884,093. WHEEL. WILLIAM G. KIRCHHOFF, Chicago, Ill., assignor to International Register Company, Chicago, Ill., a Corporation of Illinois. Filed Mar. 29, 1905. Serial No. 252,644.



1. A wheel consisting of a piece of sheet metal with an edge free from indentations, the outer portion being bent at right angles to the middle portion so as to form a series of faces.

2. A wheel made up of a sheet of metal having its outer edge bent at an angle to the central part so as to form a series of faces in a plane substantially at right angles to said central part, said faces connected together by the metal at both edges, the metal between the faces cut away between said edges.

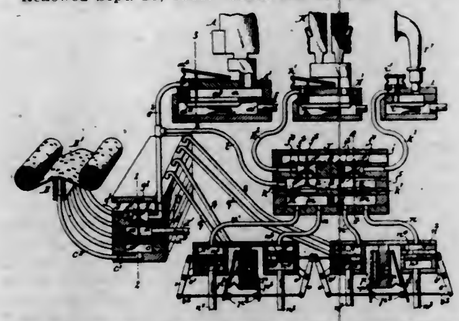
3. A wheel made from a sheet of metal having a continuous periphery, a portion of the metal between the periphery and the center removed at intervals so as to form openings, connecting pieces of metal between the openings and said periphery, the edge of said sheet of metal bent at an angle to the central part, said connecting pieces forming loops bent against the inner face of the bent over portion.

4. A wheel consisting of a piece of thin metal with an unbroken edge, the outer portion being bent at right angles to the middle portion so as to form a series of faces, said faces separated at their sides between their ends, both ends of each face being connected with the adjacent face.

5. A wheel consisting of a piece of sheet metal having a continuous periphery, a portion of the metal between the periphery and the center removed at intervals so as to form openings, connecting pieces of metal between the openings and the said periphery, the edge of said sheet of metal bent at an angle to the central part, said connecting pieces formed into inwardly projecting strengthening loops.

[Claim 6 not printed in the Gazette.]

884,094. ORGAN. EUGENE DE KLEIST, North Tonawanda, N. Y. Filed Dec. 9, 1904, Serial No. 236,150. Renewed Sept. 25, 1907. Serial No. 394,578.



1. In an organ, the combination with a pneumatic action, of a stop or group of pipes, valves controlling the passage of the air to said pipes, motor pneumatics for said valves controlled by said action, a stop wind-chest having passages leading to said motor pneumatics, individual stop-valves controlling said passages, pneumatics for operating said stop-valves, air inlet and exhaust chambers, and means for alternately connecting said chambers with the last-named pneumatics, substantially as set forth.

2. In an organ, the combination with a pneumatic action, of a stop or group of pipes, valves controlling the passage of the air to said pipes, motor pneumatics for said valves controlled by said action, a stop wind-chest having passages leading to said motor pneumatics, individual stop-valves controlling said passages, an air chamber adapted to be alternately exhausted and flushed and having air inlet and exhaust conduits, actuating pneumatics for said stop-valves connected with said chamber, and cut-off devices controlling said conduits, substantially as set forth.

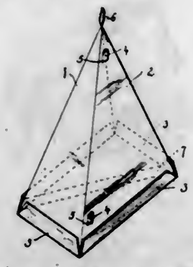
3. In an organ, the combination with a stop or group of pipes, valves controlling the passage of the air to said pipes and motor pneumatics for operating said valves, of a stop wind-chest having passages leading to said motor pneumatics, individual stop-valves controlling said passages, pneumatics, for operating said stop valves, air inlet and exhaust chambers both connected with said pneumatics, a cut-off valve arranged in each of said chambers, oppositely-acting motor pneumatics operating to open said cut-off valves alternately, and pneumatic operating means for alternately collapsing the last-mentioned motor pneumatics, substantially as set forth.

4. In an organ, the combination with a stop or group of pipes, valves controlling the passage of the air to said pipes and motor pneumatics for operating said valves, of a stop wind-chest having passages leading to said motor pneumatics, individual stop-valves controlling said passages, pneumatics for operating said stop-valves, air-inlet and exhaust chambers both connected with the last-mentioned pneumatics, a cut off valve arranged in each of said chambers, a connection between said cut-off valves for causing one of the same to open when the other closes and motor pneumatics arranged to shift said connection in opposite directions, substantially as set forth.

5. In an organ, the combination with a stop or group of pipes, valves controlling the passage of the air to said pipes and motor pneumatics for operating said valves, of a stop wind-chest having passages leading to said motor pneumatics, individual stop-valves controlling said passages, pneumatics for operating said stop-valves, air-inlet and exhaust chambers both connected with the last-mentioned pneumatics, a cut off valve arranged in each of said chambers, operating levers for said cut off valves, a connection between said levers, and oppositely-acting motor pneumatics engaging with said connection, substantially as set forth.

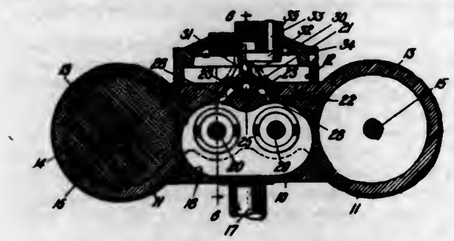
[Claims 6 to 9 not printed in the Gazette.]

884,095. INSECT-CATCHER. CHARLES W. KRONENBERG and HERMANN STRANZENBACH, New York, N. Y. Filed June 21, 1906. Serial No. 322,717.



A pack formed of collapsed pyramidic bodies, each of which is formed of a single blank comprising a number of triangular sides and a corresponding number of trapeziform extensions on the base of said sides and adapted to be turned upward so as to form a rim, one of said sides having a number of slots and another of said sides a number of tongues adapted to engage said slots and form thereby a pyramidic body collapsible along lines passing through the vertex of the pyramid, each body having an outer coating of adhesive material and adapted to adhere to the adjoining body, the rim on the base of each side of the pyramid not adhering, a loop on the vertex, and an elastic means secured to two opposite points of the base of the pyramids and adapted to open the same on removing it from its adjoining collapsed pyramid.

884,096. WATER RELIEF-VALVE FOR ENGINE-CYLINDERS. JOHN N. LEACH, Melrose, Mass., assignor to Judson L. Thomson M'f'g Company, a Corporation of Maine. Filed Aug. 24, 1907. Serial No. 390,036.



1. In a steam engine, a cylinder provided with a steam chest, a piston space, two steam ports leading from said steam chest to said piston space and an exhaust port; a relief valve adapted to be moved into position to open communication from said exhaust port to both of said steam ports simultaneously, and means for moving said valve to open and close connection from said exhaust port to said steam ports.

2. In a steam engine, a cylinder provided with a steam chest, a piston space, two steam ports leading from said steam chest to said piston space, and an exhaust port; a relief valve adapted to be moved into position to open communication from said exhaust port to both of said steam ports simultaneously, said valve being arranged to be held against its seat by the steam pressure, and means for moving said valve to open and close communication from said exhaust port to said steam ports.

3. In a steam engine, a cylinder provided with a steam chest, a piston space, two steam ports leading from said steam chest to said piston space, and an exhaust port; a relief valve adapted to be moved into position to open communication from said exhaust port to both of said steam ports simultaneously; and means for moving said valve into position to close communication from said exhaust port to said steam ports.

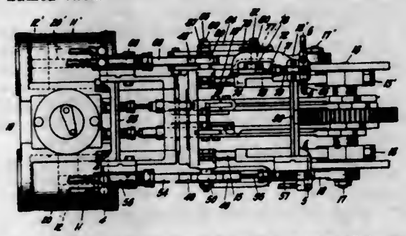
4. In a steam engine, a cylinder provided with a steam chest, a piston space, two steam ports leading from said steam chest to said piston space, and an exhaust port; a relief valve located in said steam chest and adapted to be moved into position to open communication from said exhaust port to both of said steam ports simultaneously, said valve being arranged to be held against its seat by the steam pressure, and means for moving said valve to open and close communication from said exhaust port to said steam ports.

5. In a steam engine, a cylinder provided with a steam chest, a piston space, two steam ports leading from said steam chest to said piston space, and an exhaust port; a slidable relief valve adapted to be moved into position to open communication from said exhaust port to both of said steam ports simultaneously; and means for sliding said valve into position to close communication from said exhaust port to said steam ports.

[Claims 6 to 21 not printed in the Gazette.]

884,097. STEAM-ENGINE. JOHN N. LEACH, Melrose, Mass., assignor to Judson L. Thomson M'f'g Company, a Corporation of Maine. Filed Sept. 6, 1907. Serial No. 391,547.

1. In an engine, a steam cylinder, a piston arranged to reciprocate within said cylinder, a crosshead, a piston rod connecting said crosshead to said piston, a crank, a connecting rod connecting said crosshead to said crank, a rack on said crosshead, a rocking member, a gear segment on said member meshing into said rack, two pump cylinders, a rod comprising two plungers located in said pump cylinders, respectively, a rack on said rod, and a gear segment on said rocking member meshing into said last named rack.



2. In an engine, a cylinder, a piston arranged to reciprocate within said cylinder, a crosshead, a piston rod connecting said piston to said crosshead, a frame, a roll arranged in rolling contact with said crosshead, and a stud on which said roll is mounted, said stud constituting an eccentric rotatably mounted on said frame, whereby said roll may be adjusted toward and away from said crosshead.

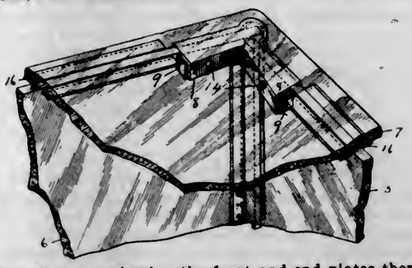
3. In an engine, a cylinder, a piston arranged to reciprocate within said cylinder, a crosshead, a piston rod connecting said piston to said crosshead, a frame, a roll arranged in rolling contact with said crosshead, a stud on which said roll is mounted said stud constituting an eccentric rotatably mounted on said frame, whereby said roll may be adjusted toward and away from said crosshead, and a series of balls interposed between said stud and said roll.

4. In an engine, a cylinder, a piston arranged to reciprocate within said cylinder, a crosshead, a piston rod connecting said piston to said crosshead, a frame, a roll arranged in rolling contact with said crosshead, a stud on which said roll is mounted, said stud having a stem eccentric with said roll, said stem being rotatably mounted on said frame, whereby said roll may be adjusted toward and away from said crosshead, and a nut having screw-threaded engagement with said stem, whereby said stud may be held against rotation.

5. In an engine, a cylinder, a piston arranged to reciprocate within said cylinder, a crosshead, a piston rod connecting said piston to said crosshead, a frame, a roll arranged in rolling contact with said crosshead, a stud mounted on said frame, said stud being provided with a ball race, a collar having screw-threaded engagement with said stud, said collar having a ball race, a series of balls arranged in rolling contact with said races and with the interior periphery of said roll, and means to lock said collar against rotation on said stud.

[Claims 6 to 15 not printed in the Gazette.]

884,098. SHOW-CASE. SEGFRID J. LINDSKOG, Los Angeles, Cal. Filed June 26, 1907. Serial No. 380,956.



1. A show case having the front and end plates thereof secured at their meeting points by brackets having wedge

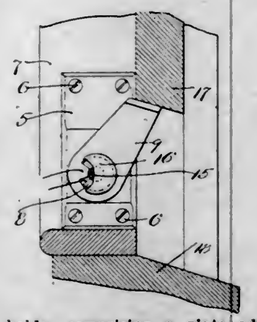
shaped channels, the edges of said front and end plates being received in said wedge shaped channels and wedges in said channels.

2. A show case having the front and end plates thereof secured at their meeting points by brackets having wedge shaped channels, said brackets being at the top and bottom of said plates; wedges in said channels and screws passing through the wall of said brackets into said wedges to hold the same in said channels.

3. A show case having the front and end plates thereof secured at their meeting points at the top and bottom by brackets having wedge shaped channels and wedges in said channels, the edges of said front and end plates being received in said wedge shaped channels and steadying strips secured to the front plate at each side of the end of the end plate.

4. A bracket having wedge shaped channels and having the outer walls on a line at right angles to each other, said channels being adapted to receive the edges of two plates whose surfaces are at right angles.

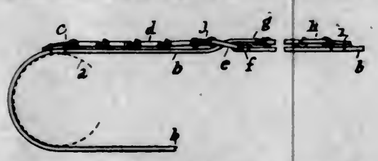
884,099. SASH-HOLDER. ALDIS H. MARDEN, North Cambridge, Mass. Filed Sept. 25, 1907. Serial No. 394,498.



1. A sash holder comprising a plate adapted to be fastened to a window casing and having a hub constituting a pivot extending therefrom parallel to the face of the sash, an arm mounted upon said hub and adapted to rock thereon, said arm having a projection thereon extending into a slot provided in said hub, whereby the angle through which said arm may be rocked in opposite directions is limited.

2. A sash holder comprising a plate adapted to be fastened to a window casing and having a hub constituting a pivot extending therefrom parallel to the face of the sash, an arm mounted upon said hub and adapted to rock thereon, said arm having a projection thereon extending into a slot provided in said hub, whereby the angle through which said arm may be rocked in opposite directions is limited, and a pin fast to said hub which projects over and covers said slot and projection.

884,100. POWER-TRANSMISSION BELT. GEORGE MEACHAM and JOHN G. SUNDBLOM, Longreach, Queensland, Australia. Filed Aug. 24, 1907. Serial No. 389,961.



1. A power transmission belt or band consisting of a length of flexible material, to form a circuit to pass round pulleys or the like, having in combination therewith on the outer side thereof, individually removable regulatable parts, portions of the said circuit being crossed to extend to the outer side as described.

2. A power transmission belt or band having a pulley circuit portion of material of sufficient flexibility, and two lengths of individually removable metal links, which at each end connect to the said circuit portion, the connections crossing one another as described.

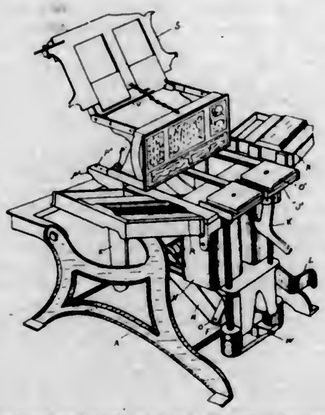
3. A power transmission belt or band having a pulley circuit portion of material of sufficient flexibility, and two lengths of individually removable metal links of less width than said belts which at each end connect to the said circuit portion, the connections crossing one another as described.

4. A power transmission belt having two portions crossing each other, each portion lying over the face of the body of the belt adjacent to the other portion, and means for adjusting such portions whereby to alter the length of the belt.

5. A power tranamission belt having two portions crossing each other, one portion having a part through which the other passes, and means for adjusting such portions to alter the length of the belt.

[Claim 6 not printed in the Gazette.]

884,101. CEMENT-BLOCK MACHINE. JOHN W. MILLER, Jackson, Mich., assignor of one-half to William F. Cowham, Jackson, Mich. Filed May 13, 1907. Serial No. 373,348.



1. In a block molding machine, the combination with a supporting frame, of a mold pivotally supported in said frame comprising two sides in fixed angular relation to each other, and a plurality of hinged sides for alternatively completing an open top mold with either of said fixed sides forming the bottom.

2. In a block molding machine, the combination with a frame, of a mold pivotally mounted in said frame and comprising two side members fixed in perpendicular relation to each other, and a plurality of hinged side members, said hinged side members being adapted to alternatively complete an open top mold with either of said perpendicular side members at the bottom.

3. In a block molding machine, the combination with a frame, of a mold pivotally mounted in said frame comprising two side members in fixed angular relation to each other, a core member movably mounted upon one of said side members to be projected or withdrawn through an aperture therein, and a plurality of side members adapted to alternatively complete an open top mold with said cores arranged in either vertical or a horizontal plane.

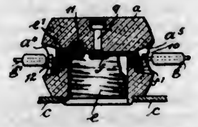
4. In a block molding machine, the combination with a frame, of a mold pivotally mounted in said frame comprising two side members in fixed angular relation to each other, a core member movable through an aperture in one of said side members, a guide on which said core is slidably mounted secured to said side member, a lever for moving said core, a member projecting from said side member to which said lever is fulcrumed, and hinged

side members for alternatively completing the open top mold, with said core arranged in either a vertical or horizontal plane.

5. The combination with a frame, of a mold rockable thereon to either side-facing or down-facing position, said mold being adapted for filling with plastic material in either position.

[Claims 6 to 12 not printed in the Gazette.]

884,102. ELECTRIC-LAMP SOCKET. MORTIMER NORDEN, New York, N. Y., assignor to Joseph Norden, New York, N. Y. Filed Mar. 4, 1907. Serial No. 360,349.



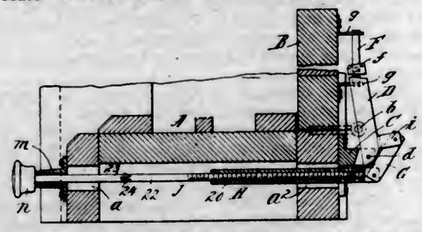
1. An electric lamp socket, provided at opposite sides with transverse openings therethrough for attaching screws and with intermediately placed nuts to be engaged by said screws in connecting said socket to a plate at either side thereof.

2. An electric lamp socket, provided at opposite sides with transversely placed openings therethrough near the edges and with centrally disposed recesses intersecting said openings, nuts placed in said recesses with the threaded opening thereof alining with the transverse openings, screws adapted to pass through corresponding openings from either side of the socket in connecting said socket to a plate or support.

3. A socket body of suitable insulating material for an electric lamp of circular form in plan and curved form in elevation, provided at opposite sides with shoulders producing the maximum diameter of the socket body at the faces, openings transversely placed in said body through the central portion of said shoulders, intersecting recesses in the sides of the socket body, nuts received in said recesses with their threaded openings alining with said transverse openings and screws passing through said openings from either side of the socket body to connection with said nuts in clamping the socket body to a plate or other foundation.

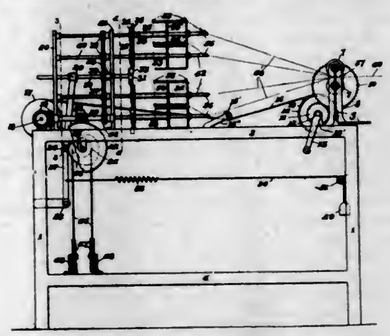
4. The combination with a socket body of suitable insulating material and a plate acting as a support therefor, of devices located at opposite sides of the socket body and screws co-acting therewith and adapted to connect the said socket body at either side to said plate, recesses formed in the surfaces of said socket body at opposite sides and in a line at right angles to the line of the said attaching screws, devices connected with the said socket body for receiving an incandescent electric lamp and electric terminals thereof extending into the said recesses and adapted for connection with the electric conductors.

884,103. SHUTTER-WORKER. JAMES NORTON, Springfield, Mass. Filed June 4, 1907. Serial No. 377,139.



In a shutter worker, the combination with a casing having a horizontal passage therethrough, and a shutter hinged to the casing and carrying a horizontal runner-bar, of a lever pivotally hung by one end thereof at the outer side of the casing, provided at its opposite end with a member having a sliding engagement with said runner bar and having near its pivoted end a right angularly extending member, an operating rod horizontally and endwise movable through the passage in the casing, having an operating handle at its inner end, and a link pivotally connected to the outer end of said rod and to said right angularly extending member of said lever.

884,104. WINDING-MACHINE. CARL E. OTTO, New York, N. Y. Filed Apr. 8, 1905. Serial No. 254,527.



1. In a winding machine, the combination with a frame of a pair of members secured thereon, a reciprocating shaft mounted in the center of said members, a lever pivotally secured to said shaft, a cam coöperating with said lever to reciprocate the same, a plurality of spindles journaled in said members parallel with the reciprocating shaft, gears secured to said spindles and means for operating said gears.

2. In a winding machine, the combination with a frame of a pair of members secured thereon, a reciprocating shaft mounted in the center of said members, a lever pivotally secured to said shaft, a cam coöperating with said lever to reciprocate the same, a plurality of spindles mounted in said members parallel with said shaft, gears secured to said spindles, a gear mounted on a hollow bearing on one end of one of said members and in operative contact with the gears on the spindles, and means for operating said gear.

3. In a winding machine, the combination with a frame of a pair of members secured thereon, a plurality of spindles mounted in said members, said spindles having apertures on one end for inserting the thread or ribbon preparatory to winding same, U shaped winding frames secured to said spindles and means for operating said spindles.

4. In a winding machine, the combination with a frame, a pair of members secured thereon, a reciprocating shaft mounted in the center of said members, a lever pivoted to said shaft, a cam-roller carried at an intermediate point of said lever, a cam engaging said roller to reciprocate said lever, and means including a worm and worm-wheel for operating said cam.

5. In a winding machine, the combination with a frame of a pair of members secured thereon, a reciprocating shaft journaled in the center of said members, a disk attached to said shaft, having tension springs assembled thereon, a plurality of spindles assembled in said members parallel with the reciprocating shaft, U-shaped winding frames attached to said spindles, spools mounted on the spindles, and held in restraint by means of said springs on the disk, and means for reciprocating the disk and shaft.

[Claims 6 to 11 not printed in the Gazette.]

884,105. RESILIENT ARM. EDWARD J. RYERSON and EDWARD J. SCHRETTER, Jackson, Mich. Filed Oct. 19, 1907. Serial No. 398,302.

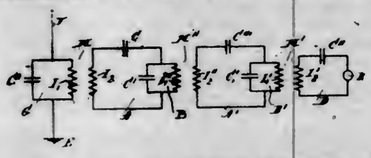
1. A resilient bracket, having in combination with a base adapted to be fixed to a table, an upper piece swiveled thereto, ball bearings interposed between said face and upper piece, whereby said upper piece is made easily rota-

table with respect thereto, an upright arm horizontally journaled in said upper piece, the upper end of said lower portion of said arm being provided with a stop to prevent its swinging away from the normal upright position in one direction, and a spring engaging said upper piece and said arm whereby it is yieldingly held against displacement from its normal upright position with respect to the base, substantially as described.



2. A resilient wire-supporting arm, having in combination with a base, a top piece swiveled thereto and rotatable thereupon, an arm horizontally journaled therein and rising thereabove, said arm being bent outwardly at its upper end, a supplemental bracing arm extending substantially parallel with said first named arm for a portion of its length, and a spring engaging said top piece and the lower end of said first mentioned arm whereby said arm is yieldingly held in a substantially upright position with respect to the base, substantially as described.

884,106. SPACE TELEGRAPHY. JOHN S. STONE, Cambridge, Mass., assignor to William W. Swan, trustee, Brookline, Mass. Filed May 7, 1906. Serial No. 315,520.



1. In a space telegraph receiving system, an elevated receiving conductor system; a resonant receiving circuit attuned to the frequency of the waves the energy of which is to be received; and a circuit, interposed between said elevated receiving conductor system and said resonant receiving circuit and including a parallel branch circuit, containing capacity in one branch and inductance in the other branch and adapted to balance by its reactance for a persistent train of electrical oscillations of the aforesaid frequency, the reactance of the rest of such interposed circuit.

2. In a space telegraph receiving system, an elevated receiving conductor system; a resonant receiving circuit attuned to the frequency of the waves the energy of which is to be received; and a circuit, interposed between said elevated receiving conductor system and said resonant receiving circuit and including a condenser and a parallel branch circuit, containing capacity in one branch and inductance in the other branch and adapted to present for a persistent train of electrical oscillations of the frequency to which said resonant receiving circuit is attuned, an inductance reactance equal to the capacity reactance of the rest of such interposed circuit.

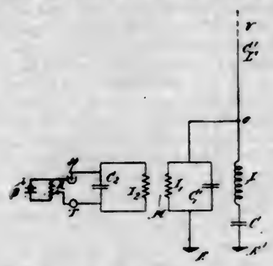
3. In a space telegraph receiving system, an elevated receiving conductor system; a resonant receiving circuit attuned to the frequency of the waves the energy of which is to be received; and a series of circuits, interposed between said elevated receiving conductor system and said resonant receiving circuit and each including a parallel branch circuit, containing capacity in one branch and inductance in the other branch and adapted to balance, each by its reactance for a persistent train of electrical oscillations of the aforesaid frequency, the reactance of the rest of such interposed circuit in which it is included.

4. In a space telegraph receiving system, an elevated receiving conductor system; a circuit associated therewith and including a parallel branch circuit, containing capacity in one branch and inductance in the other branch and adapted to balance by its reactance for a persistent train of electrical oscillations of definite frequency, the reactance of the rest of such associated circuit; and a resonant receiving circuit, attuned to said frequency and associated with the inductance branch of said parallel branch circuit.

5. In a space telegraph receiving system, an elevated receiving conductor system; a circuit associated therewith and including a parallel branch circuit, containing capacity in one branch and inductance in the other branch and adapted to balance by its reactance for a persistent train of electrical oscillations of frequency lower than that natural to it when isolated, the reactance of the rest of such associated circuit; and a resonant receiving circuit, attuned to said frequency and associated with the inductance branch of said parallel branch circuit.

[Claims 6 to 10 not printed in the Gazette.]

884,107. SPACE TELEGRAPHY. JOHN S. STONE, Cambridge, Mass., assignor to William W. Swan, trustee, Brookline, Mass. Filed Aug. 3, 1906. Serial No. 329,094.



1. In a space telegraph receiving system, an elevated conductor system comprising a parallel branch circuit including capacity in one branch and inductance in the other branch, an elevated conductor and an earth connector; said elevated conductor and earth connector being connected in parallel with respect to said parallel branch circuit.

2. In a space telegraph receiving system, an elevated conductor system comprising a parallel branch circuit including capacity in one branch and inductance in the other branch, an elevated conductor and an earth connector; said elevated conductor and earth connector being connected in parallel with respect to said parallel branch circuit and each, when isolated, having zero reactance for the same definite frequency.

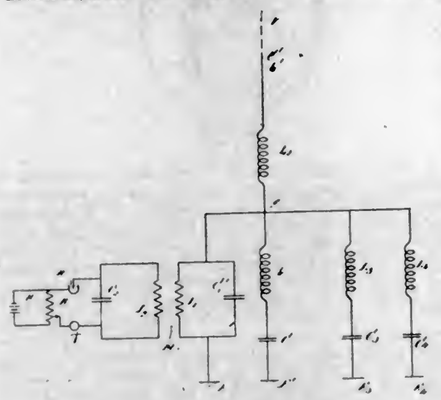
3. In a space telegraph receiving system, an elevated conductor system comprising a parallel branch circuit including capacity in one branch and inductance in the other branch, an elevated conductor and an earth connector; said elevated conductor and earth connector being connected in parallel with respect to said parallel branch circuit, and said parallel branch circuit having, for persistent electrical oscillations of the frequency of the waves the energy of which is to be received, a reactance equal and opposite to the resultant reactance of said elevated conductor and its earth connector.

4. In a space telegraph receiving system, an elevated conductor system comprising a parallel branch circuit including capacity in one branch and inductance in the other branch, an elevated conductor and an earth connector; said elevated conductor and earth connector being connected in parallel with respect to said parallel branch circuit and each, when isolated, having zero reactance for the same definite frequency; and said parallel branch circuit having, for persistent electrical oscillations of the frequency of the waves the energy of which is to be received, a reactance equal and opposite to the resultant reactance of said elevated conductor and its earth connector.

5. In a space telegraph receiving system, an elevated conductor system comprising a parallel branch circuit including capacity in one branch and inductance in the other branch, an elevated conductor and an earth connector including a serially connected inductance and capacity; said elevated conductor and earth connector being connected in parallel with respect to said parallel branch circuit.

[Claims 6 to 89 not printed in the Gazette.]

884,108. SPACE TELEGRAPHY. JOHN S. STONE, Cambridge, Mass., assignor to William W. Swan, trustee, Brookline, Mass. Filed Aug. 3, 1906. Serial No. 329,095.



1. In a space telegraph receiving system, an elevated conductor system comprising a parallel branch circuit including capacity in one branch and inductance in the other branch, an elevated conductor and an earth connector; said elevated conductor and earth connector being connected in parallel with respect to said parallel branch circuit; in combination with two circuits connected to the elevated conductor system in parallel with the aforesaid parallel branch circuit, one of said circuits having zero reactance for a frequency higher than that of the waves the energy of which is to be received, and the other having zero reactance for a frequency lower than that of said waves.

2. In a space telegraph receiving system, an elevated conductor system comprising a parallel branch circuit including capacity in one branch and inductance in the other branch, an elevated conductor and an earth connector, said elevated conductor and earth connector being connected in parallel with respect to said parallel branch circuit and each, when isolated, having zero reactance for the same definite frequency; in combination with two circuits connected to the elevated conductor system in parallel with the aforesaid parallel branch circuit, one of said circuits having zero reactance for a frequency higher than that of the waves the energy of which is to be received, and the other having zero reactance for a frequency lower than that of said waves.

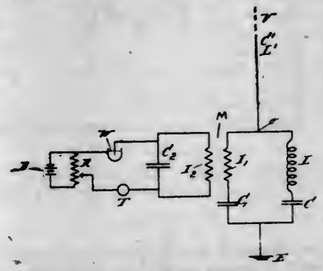
3. In a space telegraph receiving system, an elevated conductor system comprising a parallel branch circuit including capacity in one branch and inductance in the other branch, an elevated conductor and an earth connector; said elevated conductor and earth connector being connected in parallel with respect to said parallel branch circuit, and said parallel branch circuit having, for persistent electrical oscillations of the frequency of the waves the energy of which is to be received, a reactance equal and opposite to the resultant reactance of said elevated conductor and its earth connector; in combination with two circuits connected to the elevated conductor system in parallel with the aforesaid parallel branch circuit, one of said circuits having zero reactance for a frequency higher than that of the waves the energy of which is to be received, and the other having zero reactance for a frequency lower than that of said waves.

4. In a space telegraph receiving system, an elevated conductor system comprising a parallel branch circuit including capacity in one branch and inductance in the other branch, an elevated conductor and an earth connector; said elevated conductor and earth connector being connected in parallel with respect to said parallel branch circuit and each, when isolated, having zero reactance for the same definite frequency; and said parallel branch circuit having, for persistent electrical oscillations of the frequency of the waves the energy of which is to be received, a reactance equal and opposite to the resultant reactance of said elevated conductor and its earth connector; in combination with two circuits connected to the elevated conductor system in parallel with the aforesaid parallel branch circuit, one of said circuits having zero reactance for a frequency higher than that of the waves the energy of which is to be received, and the other having zero reactance for a frequency lower than that of said waves.

5. In a space telegraph receiving system, an elevated conductor system comprising a parallel branch circuit including capacity in one branch and inductance in the other branch, a circuit including inductance and capacity connected across the terminals of said parallel branch circuit, and two circuits connected to the elevated conductor system in parallel with the aforesaid parallel branch circuit, one of said circuits having zero reactance for a frequency higher than that of the waves the energy of which is to be received, and the other having zero reactance for a frequency lower than that of said waves.

[Claims 6 to 13 not printed in the Gazette.]

884,109. SPACE TELEGRAPHY. JOHN S. STONE, Cambridge, Mass., assignor to William W. Swan, trustee, Brookline, Mass. Filed Aug. 3, 1906. Serial No. 329,096.



1. In a space telegraph receiving system, an elevated conductor system comprising an elevated conductor and a parallel branch circuit having for persistent electrical oscillations of the frequency of the waves the energy of which is to be received, a reactance equal and opposite to the reactance of the rest of the elevated conductor system, and one branch of said parallel branch circuit having such capacity and inductance that said branch has zero reactance for the same frequency for which the reactance of the elevated conductor is zero.

2. In a space telegraph receiving system, an elevated conductor system comprising an elevated conductor and a parallel branch circuit having for persistent electrical oscillations of the frequency of the waves the energy of which is to be received, a reactance equal and opposite to the reactance of the rest of the elevated conductor system, and each branch of said parallel branch circuit including a serially connected coil and condenser.

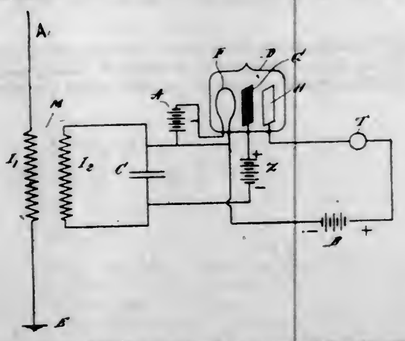
3. In a space telegraph receiving system, an elevated conductor system comprising an elevated conductor and a parallel branch circuit having for persistent electrical oscillations of the frequency of the waves the energy of which is to be received, a reactance equal and opposite to the reactance of the rest of the elevated conductor system, and a resonant circuit associated with one branch of said parallel branch circuit, the other branch of said parallel branch circuit having such capacity and inductance as to form a path to earth having practically zero impedance for natural electrical oscillations created in the elevated conductor.

4. In a space telegraph receiving system, an elevated conductor system comprising an elevated conductor and including a serially connected inductance, and a parallel branch circuit having for persistent electrical oscillations of the frequency of the waves the energy of which is to be received, a reactance equal and opposite to the reactance of the rest of the elevated conductor system, one branch of said parallel branch circuit having such capacity and inductance that said branch has zero reactance for the same frequency for which the reactance of the elevated conductor is zero.

5. In a space telegraph receiving system, an elevated conductor system comprising an elevated conductor including a serially connected inductance, and a parallel branch circuit having for persistent electrical oscillations of the frequency of the waves the energy of which is to be received, a reactance equal and opposite to the reactance of the rest of the elevated conductor system, and each branch of said parallel branch circuit including a serially connected coil and condenser.

[Claims 6 to 9 not printed in the Gazette.]

884,110. SPACE TELEGRAPHY. JOHN S. STONE, Boston, and SEWALL CABOT, Brookline, Mass., assignors, by direct and mesne assignments, to William W. Swan, trustee, Brookline, Mass. Filed Jan. 4, 1907. Serial No. 350,721.



1. A space telegraph receiving system having in combination a vessel, a heated member included therein, an electrode included in said vessel, a local circuit connecting said heated member and electrode, a source of electromotive force included in said local circuit and having its positive terminal connected to said electrode, a conducting member included in said vessel, connections from said heated member and conducting member to a closed oscillation circuit, and a source of electromotive force included in said connections and having its positive terminal connected to said conducting member.

2. A space telegraph receiving system having in combination a vessel, a heated member included therein, an electrode included in said vessel, a local circuit connecting said heated member and electrode, a source of electromotive force included in said local circuit and having its positive terminal connected to said electrode, a conducting member sealed within said vessel, connections from said heated member and conducting member to a closed oscillation circuit, and a source of electromotive force included in said connections and having its positive terminal connected to said conducting member, the electromotive force of the last mentioned source being adjusted with respect to that of the source included in said local circuit.

884,111. BORING-TOOL. OSCAR TACK, Newark, N. J., assignor to Tower & Lyon Company, New York, N. Y., a Corporation of New York. Filed Aug. 12, 1905. Serial No. 273,857.



1. In an expansion bit, in combination, a bit head, an adjustable cutter mounted thereon, and a plurality of edged spurs depending from said cutter, one of said spurs being located rearward of the other thereof, and of the main cutting edge of said cutter, and between the cutting extremity of said cutter and the periphery of said bit head.

2. In an expansion bit, in combination, a bit head, an adjustable cutter mounted thereon, and a plurality of edged spurs depending from said cutter, one of said spurs being located rearward of the other thereof and of the main cutting edge of said cutter and between the cutting extremity of said cutter and the periphery of said bit head, the main cutting edge of said cutter being located in a diametric plane of said bit head.

3. In an expansion bit, in combination, a bit head, an adjustable cutter mounted thereon, and a plurality of edged spurs depending from said cutter, one of said spurs being located rearward of the main cutting edge of said cutter and between the cutting extremity thereof and the periphery of said bit head, the main cutting edge of said cutter being located in an axial plane of said bit head, a portion of the periphery of the latter being cut away opposite said latter spur to form a channel for chips.

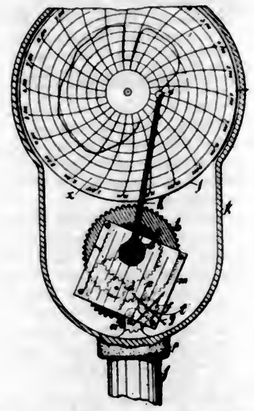
4. In an expansion bit, in combination, a bit head, an adjustable cutter mounted thereon, and a plurality of edged spurs depending from said cutter, one of said spurs being located rearward of the main cutting edge of said cutter and between the cutting extremity thereof and the periphery of said bit head, a portion of the periphery of the latter being cut away opposite said latter spur to form a channel for chips.

884,112. SPEED INDICATOR AND RECORDER. FRITZ F. UEHLING, Passaic, N. J. Filed Dec. 13, 1906. Serial No. 347,652.

1. In a speed indicator and recorder the combination with a frame pivoted on an axis eccentric to its center of gravity of a rotatable shaft co-axial with said axis, a rotary resistance producing member journaled in said frame and geared connections between said shaft and said rotary resistance producing member.

2. In a speed indicator and recorder the combination with a rotatable shaft of a swinging frame adapted to turn about the axis of said shaft and means mounted in said frame and connected with said shaft adapted to exert a turning moment upon said frame proportional to the speed of said shaft.

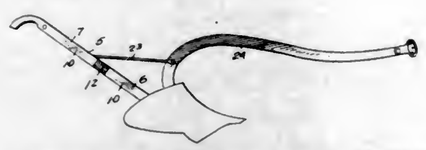
3. In a speed recorder the combination with a frame pivoted at a point normally above its center of gravity of a shaft whose axis passes through said point adapted to be connected with the element whose speed is to be recorded and means mounted in said frame and connected with said shaft adapted to oppose the turning moment produced by the action of gravity of said frame with a resistance varying with the variations in the rotative speed of said shaft.



4. In a speed indicating and recording device the combination with a revoluble shaft of a frame pivoted on said shaft, means mounted in said frame and connected with said shaft adapted to oppose the relative motion of said frame and shaft with a resistance proportionate to the speed of said shaft, an indicating arm connecting with said frame and a chart mechanism in operative relation with said indicating arm.

5. In a speed indicating device the combination with a revoluble shaft of a frame pivoted co-axially with said shaft and a fan revolubly in said frame in geared connection with said shaft and means for recording the position of said frame.

884,113. PLOW. HARRY W. VIA, South Boston, Va. Filed Aug. 13, 1907. Serial No. 388,399.



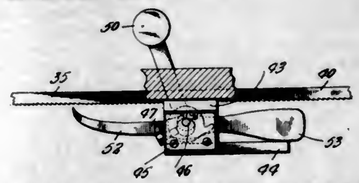
1. The combination with a plow beam, of a handle connected therewith and comprising a laterally movable rear end portion, and means for holding said laterally movable portion at different points of its movement.

2. In combination with a plow beam, a handle therefor, the upper portion of the handle being laterally movable with relation to the lower portion, and means for effecting such movement.

3. In combination with a plow beam, a handle therefor, the upper portion of the handle being laterally movable with relation to the lower portion, means for effecting such movement, and a brace engaging said means and the beam.

884,114. FEED MECHANISM FOR WOOD-TURNING LATHES. CHARLES H. WAYMOTH, Fitchburg, Mass. Filed Apr. 9, 1906. Serial No. 310,726.

1. In a feed mechanism, the combination of a feed rack, means for reciprocating said rack, a movable head-stock, a pawl pivotally supported by said head-stock and adapted to engage the teeth of said rack for transmitting motion therefrom to the head-stock, means for bodily moving said pawl toward and from the rack, and means for positively holding the pawl away from the rack when the pawl is so bodily moved from the rack.



2. In a feed mechanism, the combination of a feed rack having downwardly facing teeth, means for reciprocating said rack, a movable head-stock, a pawl pivotally supported by said head-stock and having a portion projecting upwardly to engage the teeth, means for lowering said pawl bodily from the rack, and means for positively holding said projecting portion of the pawl away from the rack when the pawl is lowered.

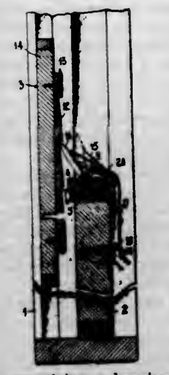
3. In a feed mechanism, the combination of a feed-rack, means for reciprocating said rack, a sliding member, a pawl pivotally supported by said sliding member and adapted to engage the rack, said pawl having a weight normally tending to hold the pawl against the rack, means for bodily moving the pawl toward and from the rack, and means for engaging said weight to positively hold the pawl from engagement with the rack when the pawl is moved bodily from the rack.

4. In a feed mechanism, the combination of a feed-rack having downwardly facing teeth, means for reciprocating said rack, a movable head-stock, a pawl pivotally supported by said head-stock and having a portion projecting upwardly to engage the teeth, means for lowering said pawl bodily from the rack, and means for positively holding said projecting portion of the pawl away from the rack when the pawl is lowered, said pawl having a weight normally tending to hold its opposite end against the rack, said means for positively holding the pawl comprising a cross-bar adapted to engage said weight.

5. In a feed mechanism, the combination of a feed-rack, means for reciprocating said rack, a sliding member, a shaft mounted in bearings supported by said sliding member, said shaft having an eccentric portion, a pawl pivotally supported by said eccentric portion, one end of said pawl being adapted to engage the rack, and the other comprising a counter-weight to normally hold the said end in engagement with the rack, and a cross-bar supported by said sliding member adapted to engage said weight when the shaft is turned to lower the pawl, whereby the pawl will be positively held from engagement with the rack.

[Claims 6 to 12 not printed in the Gazette.]

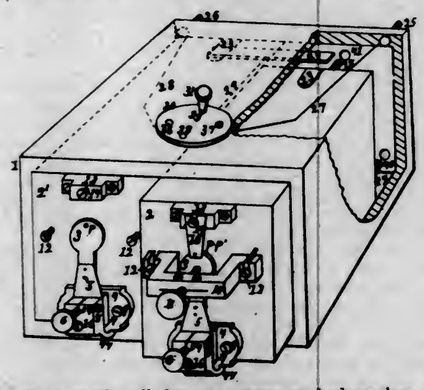
884,115. SASH-FASTENER. THOMAS WERTZ, St. Louis, Mo. Filed July 3, 1907. Serial No. 382,036.



A sash fastener comprising a bearing plate adapted to be fastened to the top rail of a lower window sash, a pintle

disposed transversely of the plate and mounted in its top, a pawl projecting laterally from the pintle, a retaining plate secured to the top of the bearing plate and arranged over the pintle to secure the latter in place, a rack bar secured to the upper sash, a spring carried by the bearing plate to normally engage said pawl with the teeth of said rack, and a finger pivoted to the bearing plate and coacting with the spring to normally hold the pawl in engagement with the teeth of said rack.

884,116. ELECTRICAL-IGNITION SPARK-COIL FOR GAS OR VAPOR ENGINES. EDWARD Q. WILLIAMS, Syracuse, N. Y., assignor to The Connecticut Telephone & Electric Company, Incorporated, Meriden, Conn., a Corporation of Connecticut. Filed Dec. 28, 1904. Serial No. 238,612.



1. In a spark coil for gas, vapor or hydrocarbon engines, an outer case containing separate insertible sparking elements, each having a suitable vibrator upon one end, and all electrical connections at, or near the other end, some of which connections protrude through the case and are provided for external connection thereon substantially as and for the purpose shown and described.

2. In a spark coil for multiple cylindered gas or vapor engines, an outer case containing separate insertible sparking elements, one for each cylinder, and each having a suitable vibrator upon one end, and the electrical connections at or near the other end, some of which connections protrude through the case and are provided for external connection thereon substantially as shown and described.

3. The combination with a multiple spark coil for multiple cylinder engine of a case, containing separate interchangeable removable elements, each element comprising a complete spark coil for a single cylinder, said elements being removable by detaching the exterior connection thereto as and for the purpose set forth.

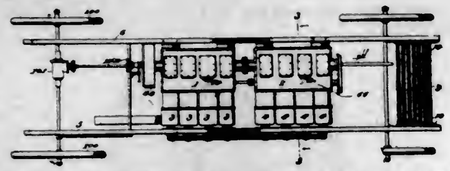
4. In a spark coil for gas or hydrocarbon engines, an outer case containing separate insertible sparking elements, each having a suitable vibrator upon one end, and all electrical connections at or near the other end, and as a common or ground connection, a metallic strip within the case and springs bearing thereon, said springs being electrically connected interiorly to the pole of the element, substantially as set forth.

5. In a multiple coil for gas engines, a case containing separate elements, each interchangeably removable, and connected with the primary and secondary circuits by binding posts extending longitudinally through the case and connected with the general return as ground circuit by means of a spring and bus-bar and switch, substantially as shown and described.

[Claims 6 to 57 not printed in the Gazette.]

884,117. MOTOR-VEHICLE. ALEXANDER WINTON, Cleveland, Ohio. Filed May 25, 1903, Serial No. 158,714. Renewed Oct. 1, 1907. Serial No. 395,869.

1. In a motor vehicle, the combination of a horizontally and transversely arranged engine frame, side sills longitudinally arranged and intermediately connected to opposite ends of the engine frame, a water cooler connecting and constituting a cross-beam or sill for the forward projecting ends of the side sills, and supporting driving and steering axles connected with the oppositely projecting ends of the said side sills.



2. In a motor vehicle, the combination of a transversely arranged engine located wholly at one side thereof, a longitudinally-arranged crank-shaft, driving wheels, and a driving mechanism connecting the end of the engine shaft with the said driving wheels.

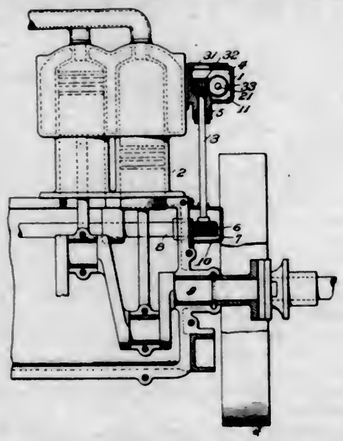
3. In a motor vehicle, the combination of a plurality of explosive engines transversely arranged, the power ends of the cylinders located at one side of the vehicle, and a longitudinally arranged crank-shaft located at the opposite side of the center of the vehicle from the said cylinders.

4. In a motor vehicle, the combination of a transversely arranged explosive engine frame, the said frame composed of a power cylinder, and a crank-case, and side sills connected respectively with the power end of the cylinder and the outer end of the crank case.

5. In a motor vehicle, the combination of a transversely arranged explosive engine frame, the frame consisting of a power cylinder and a crank case, the upper side of the crank case formed detachable and removable, and parallel longitudinally extending side sills, one of said sills connected to the power end of the cylinder and the other sill connected to the lower portion of the crank case.

[Claims 6 to 9 not printed in the Gazette.]

884,118. LUBRICATOR. ALEXANDER WINTON, Cleveland, Ohio. Filed Nov. 12, 1904. Serial No. 232,489.



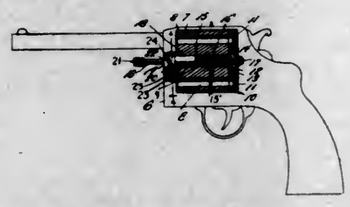
1. A lubricator including an oil chamber, a rotatable feed roll located therein, the oil chamber having an oil passage way extending thereinto, an oil gatherer adapted to gather the oil from the feed roll and deliver it to the oil passage, means for feeding oil to and maintaining it at a level within the chamber below the gatherer and the inlet end of the passage way, and an adjustable oil remover located adjacent the surface of the roll and at a point in advance of the said gatherer in respect to the direction of rotation of the feed roll.

2. A lubricator, comprising a casing having a plurality of oil feeding passage-ways with their inlet ends above the bottom of the casing, means for feeding oil to the casing, a rotatable roll in said casing, an oil gatherer consisting of an elongated plate extending longitudinal the roll and engaging the periphery thereof, and said plate having passage-ways converging towards and leading respectively to said oil passages.

3. A lubricator, comprising a casing having an enlarged oil containing compartment, a rotatable roll within said compartment, and a plurality of oil passages in communication with the compartment, and an oil feeding compartment at one end of the casing and communicating with the elongated compartment, means in the end compartment for containing oil therein at a predetermined level and thereby maintaining the same level in the elongated compartment.

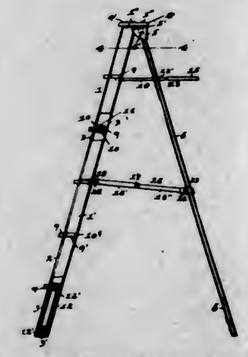
4. A lubricator comprising a casing having a central elongated compartment and two end compartments, one end compartment having communications with the elongated compartment, and provided with means for maintaining oil therein at a predetermined level, a rotatable roll having a driving shaft extending into the other end compartment, and gears in said last mentioned end compartment for rotating the roll.

884,119. REVOLVER. WALTER G. ZAISER, Solomon, Kans. Filed Aug. 10, 1906. Serial No. 330,095.



In a revolver, the combination, with the frame, of the cylinder arranged in the frame and having a central bore, an extractor having a sleeve portion extending into the bore and reduced externally at its rear portion forming a shoulder, a spring disposed between the shoulder of the sleeve portion and the wall of the bore, a pin engaged through the sleeve portion, which abuts the end of the sleeve portion, and having also a squared portion to the rear of the enlarged cylindrical portion, a squared opening in the frame in which said squared portion is seated, and means for latching the pin against longitudinal movement.

884,120. LADDER. HENRY ADLER, Pittsburg, Pa., assignor to H. Adler Company, Carnegie, Pa., a Corporation of Pennsylvania. Filed Aug. 12, 1905. Serial No. 273,872.



1. A ladder comprising sides or standards formed of sheet metal, steps, and means integral with and extending out from the body of said standards for supporting said steps by fitting over the same at their ends.

2. A ladder comprising sides or standards formed of sheet metal, steps, and flanges integral with and extending out from the body of said standards for supporting said steps by fitting over the same at their ends.

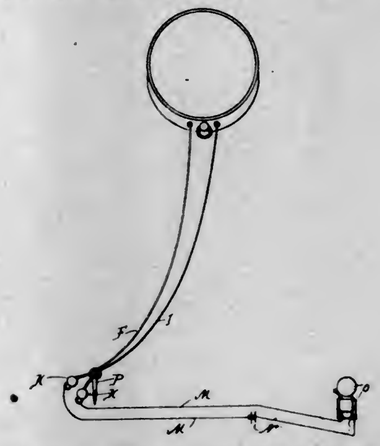
3. A ladder comprising sides or standards formed of sheet metal, steps, and means integral with and extending out from the body of said standards for fitting on the upper and lower faces of said steps for supporting the same.

4. A ladder comprising steps, sides or standards formed of sheet metal and having openings therein for the reception of the ends of said steps, and means integral with and extending out from the body of said standards for forming said openings and for supporting said steps.

5. A ladder comprising steps, sides or standards formed of sheet metal and having openings therein for the reception of the ends of said steps, and means integral with and extending out from the body of said standards for fitting on the upper and lower faces of said steps and for forming said openings to support said steps.

[Claims 6 to 17 not printed in the Gazette.]

884,121. AUTOMATIC ELECTRIC ALARM FOR BEDS TO BE OCCUPIED BY PATIENTS, SUCH AS HOSPITAL-BEDS. FRANK APOLD, Philadelphia, Pa. Filed Aug. 4, 1906. Serial No. 329,167.



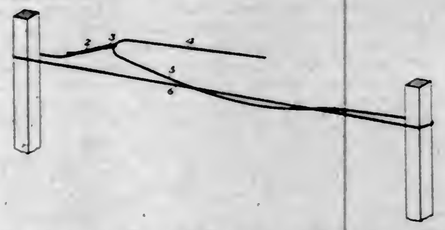
A vibrator consisting of a casing and a cover therefor, an insulating disk secured to the bottom of the casing, a coiled wire supported by said insulating disk, an insulated wire leading from said coiled wire for attachment to one side of an electric circuit, a spiral spring the outer end thereof being attached to the cover, a weight carried by the inner end of said spiral spring an adjustable contact screw an insulated wire leading from said spiral and an alarm included in the circuit with the vibrator, as and for the purpose set forth.

884,122. STAKE-TIE FOR RAILWAY-CARS. DANIEL N. BATES, SAMUEL E. CLAPP, and LOUIS E. BOOTH, Worcester, Mass., assignors to American Steel & Wire Company, Chicago, Ill., a Corporation of New Jersey. Filed Oct. 4, 1907. Serial No. 395,927.

1. A stake tie for railway cars, consisting of a piece of wire looped around opposite stakes and having one end portion passed once only through an eye on the opposite end portion and intertwisted with the main strand of the wire, substantially as described.

2. A stake tie consisting of a piece of wire looped around opposite stakes and having one end passed through a loop or eye on the other end and bent backwardly upon itself, the two branches of said end portion being intertwisted with the main strand of the tie, substantially as described.

3. A tie consisting of a piece of wire having a loop or eye at one end portion, and having its other end portion inserted through said loop or eye and intertwisted with itself and with the main strand of the tie, substantially as described.



4. A stake tie for railway cars, consisting of a single piece of wire passing around the stakes to be tied, the free ends of the wire being brought together between the stakes and at least one of them intertwisted with the main strand of the wire; substantially as described.

884,123. PRINTING-PRESS. HENRY F. BECHMAN, Battle Creek, Mich., assignor to Duplex Printing Press Company, Battle Creek, Mich., a Corporation of Michigan. Filed June 19, 1907. Serial No. 379,722.



1. In a perfecting printing press, the combination of a plurality of pairs of printing couples each comprising a flat stationary bed and reciprocating cylinder, means for feeding a web to one or more pairs of the printing couples at a speed varied according to the number of pairs of couples between which the web is led, and a compensating device adapted to act in conjunction with any selected number of the printing couples and feed of web.

2. In a perfecting printing press, the combination of a plurality of printing couples each comprising a flat stationary bed and a reciprocating cylinder, means for feeding a web to a selected number of couples, means for regulating the speed of the web feed according to the number of couples between which the web is led, and a compensating device adapted to act in conjunction with any selected feed of web and alternately stop the part of the web in the press during impressions and shift it forward after impressions.

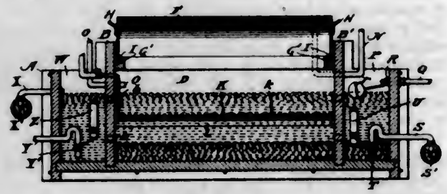
3. In a perfecting printing press having flat stationary beds and reciprocating cylinders, the combination of a plurality of printing couples, means for feeding a web to a selected number of the couples at a speed varied according to the number of pairs of couples between which the web is led, and a compensating device comprising means for forming a plurality of loops in the web, the number of loops being variable according to the number of couples in use and depending upoon the speed of the web feed and the method of threading the web through the compensating device.

4. In a perfecting printing press having flat stationary beds and reciprocating cylinders, the combination of a plurality of printing couples, means for feeding a web to a selected number of the couples at a speed varied according to the number of pairs of couples between which the web is led, and a compensating device adapted to act in conjunction with any selected number of the printing couples and in accordance with the speed of the web feed, and comprising a plurality of movable looping rollers and intermediate stationary rollers coöperating therewith.

5. In a perfecting printing press having flat stationary beds and reciprocating cylinders, the combination of a plurality of printing couples, means for feeding a web to a selected number of the couples, means for regulating the feed according to the number of couples in use, and a compensating device adapted to act in conjunction with any selected number of the couples and comprising a plurality of movable looping rollers and intermediate stationary rollers coöperating therewith, the number of loops formed being variable and depending upon the manner of threading the web through the compensating device.

[Claims 6 to 8 not printed in the Gazette.]

884,124. PROCESS FOR THE ELECTROLYSIS OF FLUID SALTS OR COMPOUNDS. HENRY S. BLACKMORE, Mount Vernon, N. Y. Filed Jan. 2, 1907. Serial No. 350,419.



1. The process for electrolysis of fluid salts or compounds, which consists in providing a body of electrolyte and an independent body of fluid, separating said fluids from each other by a fluid of greater density, capable of acting as a conveyer of ions, and a communicating or intervening septum or septi for preventing the diffusion of the fluids into each other, and passing a current of electricity from and to suitable electrodes, communicating with the electrolyte and the independent body of fluid, through portions of the electrolyte, the independent body of fluid, and the separating fluid of greater density and its intervening anti-diffusion septum or septi.

2. The process for electrolysis of fluid salts or compounds, which consists in providing a body of electrolyte and an independent body of fluid, separating said fluids from each other by a mixable fluid of greater density, capable of acting as a conveyer of ions, and a communicating or intervening septum or septi for preventing the diffusion of the fluids into each other, and passing a current of electricity from and to suitable electrodes, communicating with the electrolyte and the independent body of fluid, through portions of the electrolyte, the independent body of fluid, and the separating mixable fluid of greater density and its intervening anti-diffusion septum or septi.

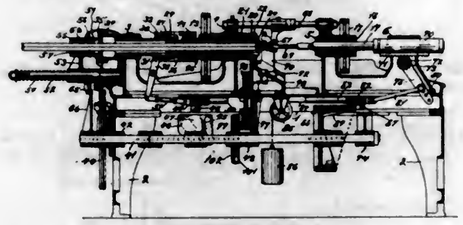
3. The process for electrolysis of fluid salts or compounds, which consists in providing a plurality of bodies of electrolyte and independent bodies of fluid, separating the bodies of fluid from each other by a body or bodies of fluid of greater density capable of acting as a conveyer of ions, and a communicating or intervening septum or septi for preventing the diffusion of the fluids into each other, and passing a current of electricity from and to suitable electrodes, communicating with the electrolyte and the independent bodies of fluid, through portions of the electrolyte, the independent body or bodies of fluid, and the separating fluid of greater density and its intervening anti-diffusion septum or septi.

4. The process for electrolysis of fluid salts or compounds, which consists in providing a plurality of bodies of electrolyte and independent bodies of fluid, separating the bodies of fluid from each other by a body or bodies of mixable fluid of greater density, capable of acting as a conveyer of ions, and a communicating or intervening septum or septi for preventing the diffusion of the fluids into each other, and passing a current of electricity from and to suitable electrodes, communicating with the electrolyte, and the independent bodies of fluid, through portions of the electrolyte, the independent body or bodies of fluid, and the separating mixable fluid of greater density and its intervening anti-diffusion septum or septi.

5. The process for electrolysis of fluid salts or compounds, which consists in providing a body of electrolyte and an independent body of fluid, separating said fluids from each other by a fluid of greater density, capable of acting as a conveyer of ions, and a communicating or intervening permeable septum or septi for preventing the diffusion of the fluids into each other, and passing a current of electricity from and to suitable electrodes, communicating with the electrolyte and the independent body of fluid, through portions of the electrolyte, the independent body of fluid, and the separating fluid of greater density and its intervening anti-diffusion septum or septi.

[Claims 6 to 81 not printed in the Gazette.]

884,125. AUTOMATIC TURNING AND BORING MACHINE. LATHAM H. BRIGHTMAN, Shelby, Ohio. Filed Nov. 27, 1905. Serial No. 289,210.



1. In an automatic turning and boring machine, the combination of a revolving mandrel having means for clamping a bar within it, an axially-alined boring-tool having means for revolving it in the opposite direction to the mandrel, and a jig at the end of the forward feed of the stock-bar and formed with a cylindrical bearing for the boring-tool, whereby the end of such tool is directly guided into the end of the stock-bar.

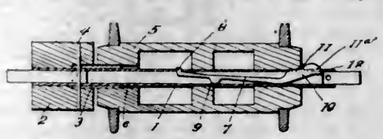
2. In an automatic turning and boring machine, the combination of a revolving mandrel having means for clamping a bar within it, an axially-alined boring-tool having means for revolving it in the opposite direction to the mandrel and having means for feeding it towards and from the mandrel, and a jig at the end of the forward feed of the stock-bar and formed with a cylindrical bearing for the boring-tool, whereby the end of such tool is directly guided into the end of the stock-bar.

3. In an automatic turning and boring machine, the combination of a revolving mandrel having means for clamping a bar within it, means for intermittently feeding such stock-bar forward, an axially-alined boring-tool having means for revolving it in the opposite direction to the mandrel, means for feeding such boring-tool towards and from the mandrel, and a jig at the end of the forward feed of the stock-bar and formed with a cylindrical bearing for the boring-tool, whereby the end of such tool is directly guided into the end of the stock-bar.

4. In an automatic turning and boring machine, the combination of a bearing, a bearing-sleeve sliding in said bearing and having a cogged rack, a boring-tool spindle journaled in said sleeve, a hollow shaft transversely journaled to the bearing sleeve and having a pinion upon its inner end engaging the rack and having that end of its bore flaring, an arm having means for rocking it and formed with a conical head fitting in the flaring bore of the rock shaft, and a bolt having one end journaled and passing through the conical head and the hollow shaft and provided with a clamp-nut at its end to bear against the end of the hollow shaft.

5. In an automatic turning and boring machine, the combination of a revolving mandrel having means for clamping a bar within it, means for intermittently feeding the stock longitudinally through such mandrel, an axially alined boring-tool having means for revolving it in the opposite direction to the mandrel, a jig at the end of the forward feed of the stock-bar and formed with a cylindrical bearing for the boring-tool whereby the end of such tool is directly guided into the end of the stock-bar, opposed cutting-tools arranged laterally to the mandrel and boring-tool to shape and sever a portion of the bar held in the mandrel, means for moving such tools towards and from the stock-bar, and means for feeding the boring-tool axially into the stock-bar to a depth greater than the thickness of the piece severed and for retracting the same before the cutting-tool has severed the portion of the bar operated upon.

884,126. SILK-THROWSTER SPINDLE. FRED BRYANT, Matteawan, N. Y. Filed June 3, 1907. Serial No. 377,016.

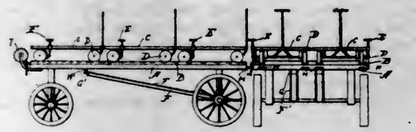


1. As a new article of manufacture, a spindle of the character described, provided near one end with a tapered bushing designed to fit in the bore of a bobbin and provided near its other end with a longitudinal slot, and a spring latch bar contained within the spindle and secured thereto at one end, said latch bar being provided at its other end with a shoulder and a bulged head beyond the shoulder, said shoulder and head normally springing out through the slot and adapted to engage the end of the bobbin bore and the end of the bobbin respectively.

2. As a new article of manufacture, the herein described spindle, provided near one end with a longitudinal slot, and a spring latch bar mounted within the spindle and secured thereto at one end, said latch bar being provided intermediate of its ends with a protuberance bearing against the spindle and serving as a fulcrum for the latch bar, and said latch bar being provided at its other end with a shoulder and a head beyond and projecting above the shoulder.

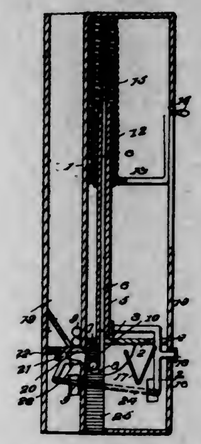
3. The combination of a bobbin, provided with a spindle bore which is tapered at one end, a spindle provided near one end with a tapered bushing adapted to fit in the tapered end of the bore and provided at its other end with a longitudinal slot, a spring latch bar mounted within the spindle and secured thereto at one end, said latch bar being provided intermediate of its ends with a protuberance adapted to bear against the spindle and constituting a fulcrum for the latch bar, said latch bar being provided at its opposite end with a shoulder and a bulged head beyond the shoulder, the shoulder and head being adapted to protrude through the said slot, with the shoulder bearing against the bobbin at one end of the bore and the head bearing against the extreme end of the bobbin.

884,127. COMBINED WAGON AND TRUCK. LAURENCE P. CARROLL, New York, N. Y. Filed Oct. 8, 1907. Serial No. 395,670.



In combination with the body of a wagon, a pair of tracks thereon, wheeled trucks engaging said tracks, a pair of staples secured to the rear end of said body and in alinement with said tracks, a second pair of staples on the under side of said body adjacent to the front thereof, a pair of separate and independent skids, tracks on said skids, and hooks on the front ends of said skids, said hooks when the skids are in operative position engaging said first named staples, and when in inoperative position engaging said second pair of staples and having their rear ends seated on the rear axle of the wagon.

884,128. LIGHTER. ALBERT E. CAUGHEY, Omaha, Nebr. Filed Apr. 6, 1907. Serial No. 366,843.



1. In a device of the character described, the combination of a casing, a charge holder mounted within the casing and comprising a pair of jaws slidable with respect to each other, means for feeding ignitible charges between the jaws, and means carried by the casing and coöperating with the jaws for igniting the charge.

2. In a device of the character described, the combination of a casing, a charge holder mounted within the casing and comprising a pair of relatively movable jaws, means for feeding an ignitible charge to the charge holder, an igniting surface carried by the casing, and means for causing the jaws to grip the charge and carry it over the igniting surface.

3. In a device of the character described, the combination of a casing, a charge holder mounted within the casing and comprising a pair of members slidable upon each other and carrying gripping jaws, means for delivering an ignitible charge to the charge holder, an igniting surface, and means for causing the jaws to grip the charge and carry it over the igniting surface.

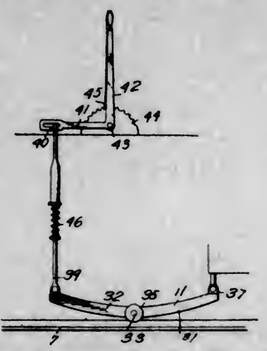
4. In a device of the character described, the combination of a casing, a charge gripper movably mounted within the casing, an igniting surface, means for moving the charge gripper over the igniting surface, a feeding mechanism for supplying ignitible charges to the charge gripper, a tripping mechanism for holding the charge gripper in a retracted position, and an operative connection between the feeding mechanism and the tripping mechanism.

5. In a device of the character described, the combination of a casing, a charge holder movably mounted within the casing and comprising a pair of movable jaws, an igniting surface, means for delivering a charge between the jaws, a tripping mechanism normally holding the charge holder in a retracted position, and means whereby the jaws of the charge holder automatically grip the charge and carry it over the igniting surface upon the release of the tripping mechanism.

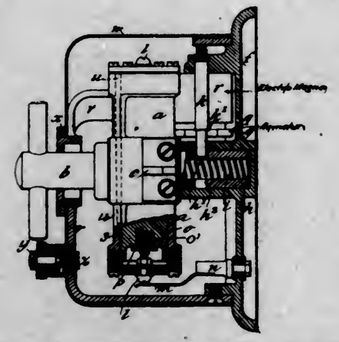
[Claims 6 to 8 not printed in the Gazette.]

884,129. ELECTRIC SIGNAL. ARTHUR J. CLEVELAND and FRANK S. BROWN, Minneapolis, Kans. Filed Mar. 18, 1907. Serial No. 363,142.

In an electric signaling system, the combination with an engine cab and rail conductors, of a circuit closing mechanism comprising a rectangular frame pivotally suspended at one end thereof beneath said engine, a transverse axle carried by said frame, contact trolleys provided on the ends of said axle for engagement with said rail conductors, and means for raising and lowering said frame comprising a lever pivoted in said cab and having an angular arm projecting beyond its pivot, and a link pivoted to the end of said arm and to the end of said frame opposite the pivotal suspension thereof, said link including resiliently connected sections.



884,130. ELECTRIC TIME-SWITCH. JAMES J. COACHMAN, London, England. Filed July 18, 1905. Serial No. 270,182.



1. A device for controlling an electric circuit comprising an electric circuit, a cylinder mounted to revolve with its axis in a plane perpendicular to the axis of rotation, a fluid therein, a detached body adapted to descend by its own weight in the cylinder and means whereby at the end of its descent the said body controls the said circuit.

2. A device for controlling an electric circuit comprising an electric circuit, a cylinder mounted to revolve with its axis in a plane perpendicular to the axis of rotation, a fluid therein, a detached piston adapted to descend by its own weight in the cylinder, means for timing the descent of the said piston and means whereby at the end of its descent the said piston controls the said circuit.

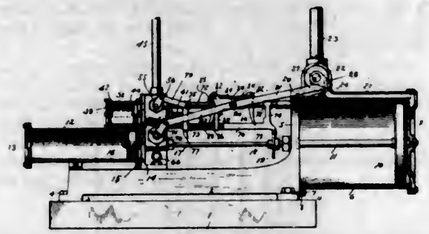
3. A device for controlling an electric circuit comprising an electric circuit, a cylinder mounted to revolve with its axis in a plane perpendicular to the axis of rotation, a fluid therein, a detached piston adapted to descend of its own weight in the cylinder, a by-pass to the said piston, terminals of the said circuit situated within the said cylinder, and a conductor carried by the said piston adapted to connect electrically the said terminals when the said piston arrives at the end of its descent.

4. In combination with an electric switch and a main circuit controlled thereby, a cylinder mounted to revolve with its axis in a plane perpendicular to the axis of rotation, a fluid in the said cylinder, a piston adapted to descend in the cylinder, electromagnetic means for retaining the said switch in the closed position, a circuit derived from the main circuit and adapted to energize the said electro-magnetic means, and means whereby the said piston when it arrives at the end of its descent controls the said derived circuit to open the switch.

5. In combination with an electric switch and a main circuit controlled thereby, a cylinder mounted to revolve with its axis in a plane perpendicular to the axis of rotation, a fluid in the said cylinder, a piston adapted to descend in the said cylinder, an adjustable by-pass to the said piston, electro-magnetic means for retaining the said switch in the closed position, a circuit derived from the main circuit and adapted to energize the said electromagnetic means terminals of the said derived circuit situated within the said cylinder at the end of the path of the said piston and a conductor carried by the said piston and adapted to connect electrically the said terminals.

[Claims 6 and 7 not printed in the Gazette.]

884,131. MOTOR-DRIVEN EXHAUSTER AND COMPRESSOR. MELVIN D. COMPTON, New York, N. Y., assignor to A. G. Wheeler, Jr., trustee. Filed Aug. 29, 1905. Serial No. 276,292.



1. The combination of motor and compression cylinders with valve devices for controlling the inlets and outlets to said cylinders, a fluid cylinder the piston of which is connected to the said valve devices to move the same, a valve device to control the flow of motive fluid to said fluid cylinder, and means whereby said last named valve device is operated by the pistons to the motor and compression cylinders.

2. The combination of motor and compression cylinders with valve devices for controlling the inlets and outlets to said cylinders, a fluid cylinder the piston of which is connected to the said valve devices to move the same, a valve device to control the flow of motive fluid to said fluid cylinder, means whereby said last named valve device is operated by the pistons to the motor and compression cylinders, and means to lock all of the valves in their position.

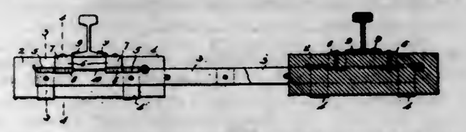
3. The combination of motor and compression cylinders with valve devices for controlling the inlets and outlets to said cylinders, a fluid cylinder the piston of which is connected to the said valve devices to move the same, a valve device to control the flow of motive agent to the fluid cylinder, means whereby said last named valve device is operated by the pistons to the motor and compression cylinders, means to lock all of the valves in position, and means operable by the pistons of said cylinders to release the valves.

4. The combination of motor and compression cylinders with valve devices for controlling the inlets and outlets of said cylinders, a shifting carriage, means connecting the carriage and the valve devices whereby the latter are operated simultaneously, and a fluid motor for shifting said carriage to operate the valves, the controlling devices for the latter being operated by the pistons of the motor and compression cylinders.

5. The combination of motor and compression cylinders with valve devices for controlling the inlets and outlets of said cylinders, a shifting carriage, means connecting the carriage and the valve devices whereby the latter are operated simultaneously, a fluid motor for shifting said carriage to operate the valves, the controlling devices for the latter being operated by the pistons of the motor and compression cylinders, and means to lock the carriage against movement after the valves have been shifted.

[Claims 6 to 10 not printed in the Gazette.]

884,132. COMBINED TIE AND RAIL-FASTENING. ROBERT T. CUMMINGS, Maysville, Ky. Filed Oct. 14, 1907. Serial No. 397,428.

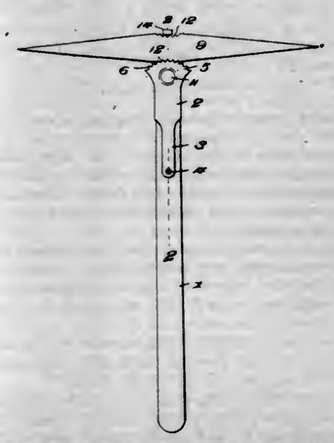


1. A combined tie and rail fastening, comprising two spaced tie sections, a frame, said frame comprising two side members arranged to embrace opposite sides of the tie sections and a plurality of longitudinally spaced connecting members, designed to fit under such sections, two longitudinally spaced fastening members positioned on each side of the rail, such members having inwardly projecting flanges adapted to embrace the base of a rail, means for maintaining the tie sections against relative displacement and means for retaining the fastening members in position.

2. In a device of the character specified, the combination of two spaced tie sections, and a frame for receiving and maintaining the tie sections in position, said frame comprising side members adapted to embrace opposite sides of the tie section and a plurality of longitudinally spaced U-shaped connecting members arranged to fit under the tie sections and connect the side members together.

3. A device of the character specified, comprising two spaced tie sections, two side members adapted to embrace opposite sides of the tie section, connecting members for the side members, said connecting members being designed to fit under the tie sections and the ends of the connecting members being bent or turned outwardly to form keepers, two longitudinally spaced fastening members positioned upon each of the tie sections, said fastening members having inwardly extending flanges for embracing the base of a rail and having their ends bent to form keepers for abutting against the inner ends of the keepers of the connecting members, fastening rods adapted to be inserted through the keepers of the connecting and fastening members, and means for maintaining tie sections against inward displacement.

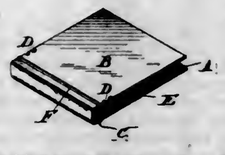
884,133. ADJUSTABLE TOOL-HANDLE. ALLAN S. CUNNINGHAM and EDWARD HENLEY, Oskaloosa, Iowa. Filed July 19, 1907. Serial No. 384,594.



The herein described adjusting means for tools comprising a socket, a head on said socket having a compensating slot therein, corrugations on said head, said head being provided with a transverse aperture, an axial bolt extending through said aperture, said bolt being provided with a threaded seat, a tool body provided with a corrugated seat adapted to coöperate with the corrugated head, said

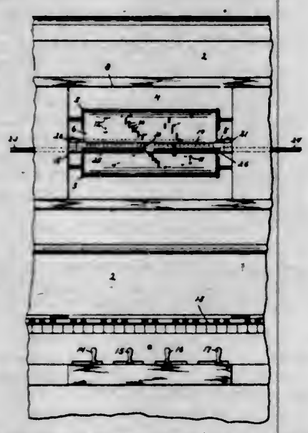
tool body having an aperture extending therethrough and means engaging said body and extending through the aperture and into the threaded seat in the axial bolt whereby the parts may be secured at any desired angle.

884,134. LOOSE-LEAF BINDER. FRANK A. DE GRAW, Clifton Springs, N. Y. Filed Aug. 31, 1907. Serial No. 390,921.



An extensible binder of the class described made from a single piece of material adapted to be folded at or near the center to form the two sides, one side being provided with a single notch on each edge and the other side having a plurality of notches on each edge, and means for engaging the notches for holding leaves in position between the sides.

884,135. MODULATION-INDICATOR FOR AUTOMATIC MUSIC-PLAYING MECHANISMS. WILLIAM S. DENTON, New York, N. Y. Filed Jan. 16, 1906. Serial No. 296,433.



1. In an automatic music-playing mechanism, a tracker-board with an edge over which a music sheet is adapted to travel, a scale having a graduated edge parallel and closely contiguous to said edge of the tracker board, a pointer upon said graduated edge, governing means for the playing mechanism, and connections between said pointer and governing means.

2. In an automatic music-playing mechanism, a tracker-board having an edge over which a music sheet is adapted to travel, a scale having a graduated edge parallel and closely contiguous to said edge of the tracker-board connections between the scale and the ends of said tracker-board, a pointer for said graduated edge of the scale, governing means for the playing mechanism, and connections between said pointer and governing means.

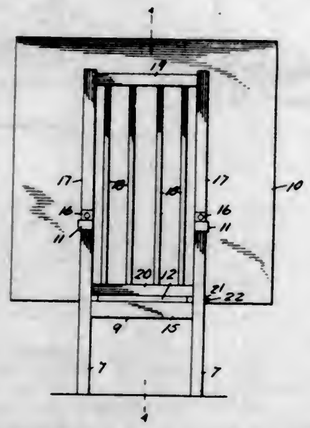
3. In an automatic music-playing mechanism, the combination of a music sheet a tracker-board, a scale arranged closely contiguous to said tracker-board, markings on the music sheet and a pointer whose index finger indicates on both said scale and said markings on the music sheet, simultaneously.

4. In an automatic music-playing mechanism, the combination of a music sheet, markings thereon a tracker-board, a scale closely contiguous to said tracker-board and having a graduated edge, and a pointer projecting onto the said graduated edge of the scale from the side of the tracker-board opposite that from which the note sheet approaches and indicating on both said graduated edge of the scale and the music sheet passing over the tracker-board, simultaneously.

5. In an automatic music-playing mechanism, the combination of a tracker-board, spools upon opposite sides of said tracker-board adapted to cause a music sheet to travel over the edge of the tracker-board, a scale mounted upon said edge of the tracker-board parallel thereto having one edge lying adjacent to the music sheet and in substantially the same horizontal plane with the edge of the tracker-board and the other edge providing a slideway, a support in said slideway a pointer mounted on said support with its free end overlying the other edge of the scale, governing mechanism and means connecting said pointer support with said governing mechanism.

[Claims 6 to 18 not printed in the Gazette.]

884,136. CONVERTIBLE CHAIR AND TABLE. CHARLES H. DIXON, Newark, N. J. Filed June 26, 1907. Serial No. 380,916.



A chair of the class described comprising in combination front and rear legs; a seat carried by said legs and disposed intermediate the ends thereof; arms mounted upon the upper ends of the said legs; a back adapted to be swung into vertical or horizontal position, and having a pair of beams secured to its under face in direct alinement with the rear legs of the chair, each beam being hinged at its lower end to the rear end of the adjacent arm; a series of ribs secured to the under face of said back in spaced relation to and parallel with each other and with themselves; beams connecting the opposite ends of said ribs, the upper beam fitting between said first-mentioned beams, and a lower beam fitting between the rear legs of the chair and resting upon the upper edge of the rear wall of the chair seat, when the back is in its vertical position; hooks secured to the said rear legs; and eyes secured to the under face of said back and adapted for engagement with said hooks, to retain the back in vertical position, said first-mentioned beams being adapted to contact directly with the upper face of said arms, when the back is in its horizontal position.

884,137. MANTLE-BURNER. ROBERT M. DIXON, East Orange, N. J., assignor to The Safety Car Heating & Lighting Company, a Corporation of New Jersey. Filed Sept. 20, 1906. Serial No. 335,502.

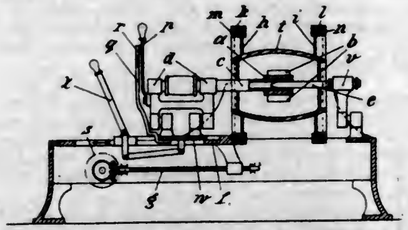
1. In a device of the class described, a mantle consisting of woven strands of readily incandescing material, the mesh of said strands throughout being fine and adapted to constitute a barrier to the progression through said mantle of the combustion of gases exteriorly enveloping said mantle whereby an ignition of the interior gases can take place only by contact with the mantle preliminarily heated to incandescence by the initial combustion of the exterior gases.



2. In a device of the class described, in combination, a burner tube and a mantle snugly mounted on the end thereof and arranged to receive in its interior gas delivered by said burner tube, said mantle being sufficiently pervious to allow such gas to freely flow therethrough and burn the exterior of said mantle, but unadapted throughout to permit the ignition of the interior gas by the progressive combustion of said exterior burning gas when said mantle is at a normal temperature.

3. In a device of the class described, in combination, a burner tube and a mantle closely interfitting with and carried by the end of said tube whereby combustion may not be directly communicated to the interior from the exterior gases and arranged to receive in its interior gas delivered by said tube, said mantle being composed of woven strands of readily incandescing material and having a mesh adapted to allow outflow of gas therethrough but unadapted throughout to allow externally burning gas to directly ignite the gas within said mantle.

884,138. CASK-PLANING MACHINE. LUDWIG DREXLER, Munich, Germany. Filed Oct. 15, 1906. Serial No. 339,096.



1. In a cask planing machine, the combination, with two cask holders relatively movable to and from each other, of a tool shaft comprising two parts, one associated with each of the holders and arranged to be coupled and uncoupled as the holders are moved to and fro from each other to grip and release the cask.

2. In a cask planing machine, the combination, with two cask holders relatively movable to and from each other, of a tool shaft comprising two parts having telescopic relation one to the other, one of the parts associated with each of the holders, and means to move the cask holders and shaft members to and from each other, coupling and uncoupling the shaft members.

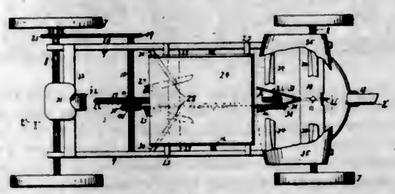
3. In a cask planing machine, the combination, with a frame, a cask end holder fixed thereon, and a stub shaft carried by the frame, of a carriage movable on the frame, a second cask end holder fixed on the carriage opposite the first holder, a tool shaft carried by the carriage in line with the stub shaft, and means to move the carriage longitudinally to cause the holders to grip a cask and to couple the shaft members.

4. In a cask planing machine, the combination, with a frame, a cask end holder fixed thereon, and a laterally adjustable stub shaft carried by the frame, of a carriage movable on the frame, a second cask end holder supported on the carriage opposite the first holder, a tubular laterally adjustable tool shaft carried by the carriage in line with the stub shaft, and means to move the carriage longitudinally to cause the holders to grip a cask and to bring the shaft members into telescopic relation.

5. In a cask planing machine, the combination, with a frame, a cask end holder fixed thereon, and a laterally adjustable stub shaft carried by the frame of a carriage movable on the frame, a second cask end holder supported on the carriage opposite the first holder, a slide longitudinally movable on the carriage, a laterally adjustable tool shaft mounted on the slide in line with the stub shaft, means to move the slide and tool shaft on the carriage, and means to move the carriage longitudinally to simultaneously cause the holder to grip a cask and to bring the shaft member into telescopic relation.

[Claims 6 to 12 not printed in the Gazette.]

884,139. TRANSPLANTING-MACHINE. CHARLES E. DYER and HERBERT N. DYER, Abilene, Kans. Filed June 13, 1907. Serial No. 378,681.



1. The combination with a frame and running-gear, of a sprocket-wheel operated by the running-gear, another wheel, a sprocket-chain passing over both said wheels and traveling from front to rear at the same speed as the running-gear travels forward, a clamping device on said sprocket-chain operated by the teeth in the sprocket-wheel.

2. The combination with a frame and running-gear, of a sprocket-wheel operated by the running-gear, another wheel, a sprocket-chain passing over both said wheels and traveling from front to rear at the same speed as the machine as a whole travels forward so as to be stationary with relation to the ground, a clamping device on said sprocket-chain, normally closed but opened by the teeth of the sprocket-wheel.

3. The combination with a frame and running-gear, of a sprocket-wheel operated by the running-gear, a sprocket-chain passing over said sprocket-wheel and adapted to travel from front to rear at the same speed as the machine as a whole travels forward so as to be stationary with relation to the ground, and a clamping device on said chain operated by the sprocket-wheel.

4. The combination with a frame and running-gear, of a sprocket-wheel operated by the running-gear, a sprocket-chain passing over the sprocket-wheel and adapted to travel from front to rear at the same speed as the machine as a whole travels forward so as to be stationary with relation to the ground, and a spring-pressed clamping device on said chain, normally closed, but opened by the teeth of the wheel.

5. The combination with a frame and running-gear, of a sprocket-wheel operated by the running-gear, a sprocket-chain passing over the sprocket-wheel and adapted to travel from front to rear at the same speed as the machine as a whole travels forward so as to be stationary with relation to the ground, a spring-pressed clamping device on said chain operable by the teeth of the sprocket-wheel, a divided shoe forward of the sprocket-wheel and chain, and presser-blades on each side of the sprocket-wheel and chain.

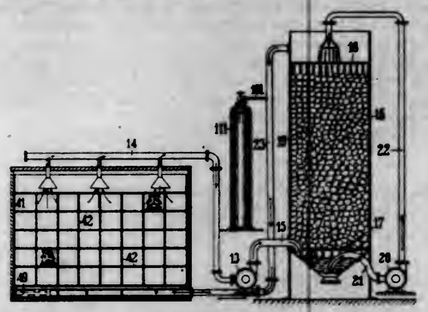
[Claims 6 to 9 not printed in the Gazette.]

884,140. PROCESS OF KEEPING AQUATIC ANIMALS ALIVE DURING TRANSPORTATION. GEORG ERLWEIN, Berlin, and ERNST MARQUARDT, Charlottenburg, Germany. Filed Nov. 6, 1906. Serial No. 342,310.

1. The method of keeping aquatic animals alive during transportation, which consists in surrounding them with a moisture-retaining packing and supplying a moisture laden oxygen-containing gas.

2. The method of keeping aquatic animals alive during transportation, which consists in surrounding them with

a moisture-retaining packing, supplying a moisture laden oxygen-containing gas, and removing the carbon-dioxid breathed out by the animals.



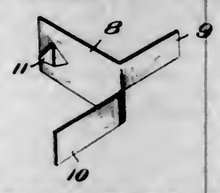
3. The method of keeping aquatic animals alive during transportation, which consists in surrounding them with a moisture-retaining packing, supplying a moisture laden oxygen-containing gas, and removing the carbon dioxid breathed out by the animals, by absorption of the same.

4. The method of keeping aquatic animals alive during transportation, which consists in surrounding them with a moisture-retaining packing, supplying a moisture laden oxygen-containing gas, removing the carbon dioxid breathed out by the animals, by absorption of the same, and resupplying the purified oxygen containing gas.

5. The method of keeping aquatic animals alive during transportation, which consists in surrounding them with a moisture retaining packing, supplying a moisture-laden oxygen containing gas, and sprinkling them with water.

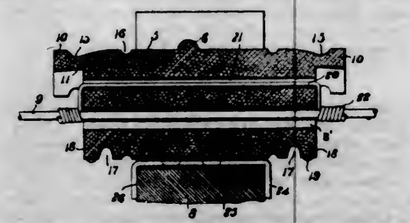
[Claims 6 to 8 not printed in the Gazette.]

884,141. DOOR OR DRAWER SECURER. HIRAM L. FAY, Herkimer, N. Y. Filed Apr. 17, 1907. Serial No. 368,724.



The herein described means for securing the movable parts of an article against casual movement, comprising a body portion, arms at one end of said body portion adapted to be bent in opposite directions and at an angle to the body portion after the body portion is placed in position between the stationary and movable portions and a prong struck from said body portion adapted to enter parts of the article.

884,142. INSULATOR. ERNEST J. FOREMAN, Trinidad, Colo. Filed Nov. 2, 1906. Serial No. 341,756.

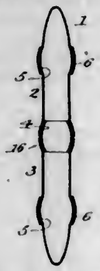


1. An insulator having a longitudinal wire-receiving slot and provided with oppositely disposed over-hanging hoods and circumferential draining grooves, there being depressions formed in the exterior walls of the insulator at the hoods and communicating with said grooves.

2. An insulator provided with a longitudinal wire-receiving slot, hoods extending laterally from the opposite ends of the insulator and having their free ends serrated, there being transverse grooves formed in the bottom of the insulator and intersecting the wire-receiving slot.

3. An insulator provided with a longitudinal slot adapted to receive a line wire and having its opposite ends extended longitudinally to form over-hanging hoods, there being spaced grooves formed in the exterior walls of the insulator, and troughs formed in the exterior walls of the over-hanging hoods and communicating with the adjacent grooves.

884,143. LIFE-PRESERVER. HERBERT W. FRASER, Port Clinton, Ohio. Filed July 30, 1907. Serial No. 386,268.



1. In a life preserver, a plurality of metal air receptacles formed of welded sections, rings bracing the receptacles at the junctions of their sections, means connecting said receptacles together to form a belt, means for connecting the ends of the belt together and means for suspending the belt from the shoulders of the wearer, substantially as described.

2. In a life preserver, a plurality of seamless metal air receptacles formed of welded sections, rings bracing the receptacles at the junctions of their sections, means connecting said receptacles together to form a belt, means for connecting the ends of the belt together and means for suspending the belt from the shoulders of the wearer, substantially as described.

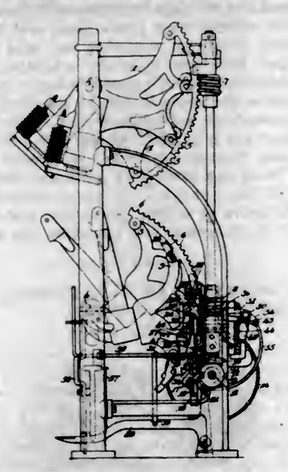
3. In a life preserver, the plurality of air receptacles having surrounding projections, curved metal bands engaged by said projections means connecting said bands together to form a belt, means for connecting the ends of the belt together and means for suspending the belt from the shoulders of the wearer, substantially as described.

4. In a life preserver, a plurality of air seamless receptacles having surrounding projections, curved metal bands engaged by said projections means connecting said bands together to form a belt, means for connecting the ends of the belt together and means for suspending the belt from the shoulders of the wearer, substantially as described.

5. In a life preserver, a plurality of metallic air receptacles having surrounding projections, curved metal bands engaged by said projections, eyes in the ends of said links, metal links engaging the adjacent eyes of said bands, and connecting them together to form a belt, metal chains connected to the eyes of the bands at one end of the belt, metal snap hooks connected to eyes of the bands at the other end of the belt, metal chains connected to an intermediate link of said belt and metal snap hooks connected to links adjacent the ends of said belt, substantially as described.

884,144. SOLE-PRESSING MACHINE. WARREN FRASIER, Lynn, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Mar. 2, 1904. Serial No. 196,180.

1. A sole pressing machine, having, in combination, a shoe supporting jack, a coöperating sole pressing form, mechanism acting continuously to move the jack and form to subject the sole of a shoe supported upon the jack to a plurality of rolling pressures, and means controlled by the operator acting whenever it is put into operation to stop the jack and form with the jack in a position of presentation, substantially as described.



2. A sole pressing machine, having, in combination, a shoe supporting jack, a sole pressing form, a driving shaft and suitable connections for actuating the jack and form to subject the sole of a shoe supported upon the jack to a rolling pressure, means for rotating the driving shaft in opposite directions, means acting automatically to produce a plurality of reversals in the direction of rotation of the driving shaft, and means controlled by the operator for preventing a reversal in the direction of rotation of the driving shaft to allow the jack to move to a position of presentation, substantially as described.

3. A sole pressing machine, having, in combination, a shoe supporting jack, a sole pressing form, a driving shaft and suitable connections for actuating the jack and form to subject the sole of a shoe supported upon the jack to a rolling pressure, means for rotating the driving shaft in opposite directions, means for reversing the direction of rotation of the driving shaft, means controlled by the operator for preventing a reversal in the direction of rotation of the driving shaft, and means actuated when a reversal in the direction of rotation of the driving shaft is prevented for disconnecting the jack from the driving shaft, substantially as described.

4. A sole pressing machine, having, in combination, two shoe supporting jacks, two coöperating sole pressing forms, means for actuating each jack and form to subject the sole of a shoe supported upon the jack to a rolling pressure, and means for preventing one jack and form from being thrown into operation while the other jack and form are in operation, substantially as described.

5. A sole pressing machine, having, in combination, two shoe supporting jacks, two coöperating sole pressing forms, means for actuating each jack and form to subject the sole of a shoe supported upon the jack to a rolling pressure, means for preventing one jack and form from being thrown into operation while the other jack and form are in operation, and means for causing the jacks and their coöperating forms to be thrown into operation alternately, substantially as described.

[Claims 6 to 12 not printed in the Gazette.]

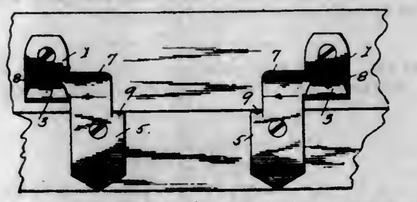
884,145. SCREEN. BENEDICT GOODMAN, Wallace, Kans. Filed Sept. 13, 1907. Serial No. 392,708.

A screen provided at its upper end and about centrally thereof with lines or rows of fly-exits and with offset guard-plates upon its outside and adapted to form outlet-chambers opposite said fly-exits, the upper end guard-plate formed chamber only opening downwardly and the central guard-plate formed chamber opening both upwardly and downwardly, said guard plates each having a line or row



of light-emitting openings arranged opposite the aforesaid lines of fly-exits.

884,146. SCREEN-HINGE. WILLIAM GOSSETT, Falls City, Nebr. Filed Jan. 14, 1907. Serial No. 352,183.



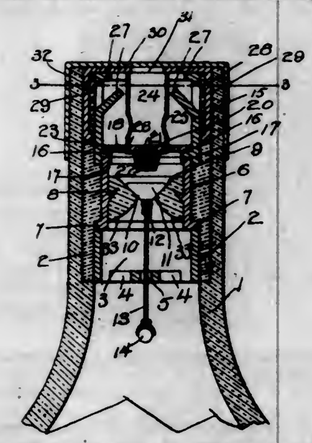
1. A screen hinge comprising a supporting plate having a securing opening therein, the upper end of the plate being pointed and bent angularly to form a barb, the lower end of the plate extending upwardly and outwardly in the form of a flaring curve to provide a supporting lip, a bracket plate having a pointed lower end and a pair of alined securing openings therein; a guiding tongue partially severed from one of the parallel side edges of the bracket plate and bent rearwardly at an angle to form a gage, the upper portion of the bracket plate being inclined outwardly from the body portion thereof and continued laterally beyond the edge of the plate to form a supporting wing for engagement with the supporting lip of the supporting plate.

2. The screen hinge herein shown and described consisting of the pair of plates having each a barb at their upper end to be driven into the lower rail of the sash, having each an intermediate opening to receive a fastening screw and having an outwardly curved lower portion to form the upper open leaves of the hinge, the pair of plates having the outer oppositely disposed inclined wing portions to form the lower leaf of the hinge, also having the lip at their inner edge to fit in recesses of the sash and having openings to receive fastening screws.

884,147. NON-REFILLABLE BOTTLE. AUGUST J. GRABEL, Jamestown, N. Y. Filed May 18, 1907. Serial No. 374,381.

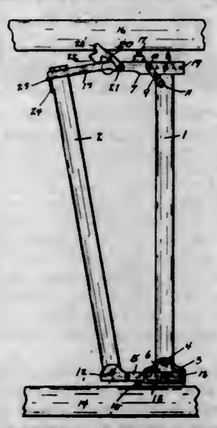
A bottle of the type set forth, comprising a lower member of tubular form and having a perforated bottom, a tubular member imposed on said lower member, a glass valve seat carried by said tubular member and having a central opening, a valve formed to rest on said seat, a wire having one end engaged through said valve, said wire being projected through said perforated bottom and carrying a pendent weight, a guard member of tubular form imposed on said last named tubular member, and constructed with an inwardly pointing flange, a perforated plate imposed on said flange, a glass member connected with said plate and formed to overlie said valve, a tubular member

connected with said plate and disposed within said guard member, said last named tubular member having openings



in the sides thereof, and a cap closing said guard member and having a central opening in its top.

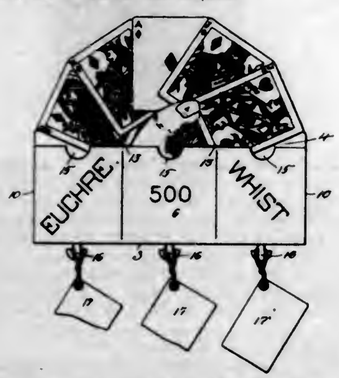
884,148. CATTLE-STANCHION. WILLIAM GUTENKUNST, Milwaukee, Wis. Filed Oct. 18, 1906. Serial No. 339,453.



1. In a cattle stanchion of the class described, the combination of a stanchion supporting frame, an upper and lower stanchion bracket pivotally connected with said frame, a pair of vertical stanchion bars, one rigidly connected at its respective ends with said upper and lower brackets and the other pivotally connected at its lower end with said lower bracket and slidably connected at its upper end with said upper bracket, a latch provided with a central lug having its contact bearing surface inclined inwardly and downwardly at an angle to the vertical and adapted to be raised by contact with and to engage the upper end of said pivotally supported stanchion bar a bar retaining loop pivotally connected to said bracket beneath said latch and adapted to guide and limit the outer movement of the stanchion bar when released from the latch and to serve as a lever for raising and disengaging said latch from the end of said stanchion bar when locked and a single bolt pivotally connecting said latch and loop to said upper bracket.

2. In a cattle stanchion of the class described, the combination of a stanchion supporting frame, an upper and lower stanchion bracket pivotally connected with said frame, a pair of vertical stanchion bars, one of said bars being adjustably secured at its respective ends to said brackets, the other stanchion bar being pivotally connected at its lower end with said lower bracket and slidably connected at its upper end with said upper bracket, a latch provided with a central lug having its contact bearing surface formed at an angle to the vertical and adapted to be raised by contact with and engage the upper end of said pivotally supported stanchion bar said latch being also provided with two upwardly extending lugs (20') adapted when said latch is raised to engage the respective vertical sides of the upper bar of the stanchion supporting frame to prevent the stanchion from turning as the pivotal stanchion bar is passing beneath said latch and a bar retaining loop pivotally connected with said bracket beneath said latch and adapted to guide and limit the outer movement of the stanchion bar when released from the latch and to serve as a lever for raising and disengaging said latch from the end of said stanchion bar when locked.

884,149. CARD-RACK. IDA HAHN, Pittsburg, Pa. Filed Dec. 10, 1907. Serial No. 405,868.



1. A card rack having a slitted back, end flaps, an integral bottom and front, fastening flaps carried by the front of said rack and adapted to overlap said end flaps, tongues carried by said fastening flaps and adapted to enter some of the slits of the back of said rack, tongues carried by the edge of the front of the rack and adapted to enter the other slit of the back of said rack, and tabs carried by the bottom of said rack, substantially as described.

2. A card rack having a slitted back, a bottom, a front, overlapping end flaps, tongues carried by said front and adapted to engage said slitted back, and tabs carried by the bottom of said rack.

3. A card rack comprising a back, a foldable bottom and front, end flaps, means for securing said end flaps together, and integral tabs carried by the bottom of said rack.

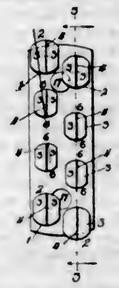
4. A card rack comprising a back, a bottom, a front, means to secure said front to the back of said rack, tongues carried by said front for partitioning said rack, and tabs carried by the bottom of said rack.

884,150. DRILL-HEAD AND BIT OR CUTTER. MARTIN HARDSOCG, Ottumwa, Iowa. Filed Mar. 7, 1907. Serial No. 361,053.

1. The combination of a head and a plurality of bits carried by and arranged in straight parallel rows longitudinally of the head, the end bits of the rows at each end of the head constituting a pair of bits and each end bit having its body and cutting edge overhanging from its stem on one side for the overhung side to project beyond the end face of the head, substantially as described.

2. The combination of a head and a plurality of bits arranged in two parallel rows longitudinally of the head with the bits of the rows in staggered relation for the cutting edges of the two rows of bits to constitute a single cutting edge extending the length of the body of the head, substantially as described.

3. The combination of a head and a plurality of bits arranged in parallel rows longitudinally of the head, with an end bit of each row having its body and cutting edge on one side overhanging from its stem for the overhung side of each end bit when outwardly turned to project beyond the end face of the head, substantially as described.



4. The combination of a head and a plurality of bits arranged in parallel rows longitudinally of the head, with the end bit at both ends of each row and each end bit having its body and cutting edge on one side overhanging from its stem for the overhung side of each end bit when outwardly turned to project beyond the end face of the head, substantially as described.

884,151. PNEUMATIC HAMMER. MARTIN HARDSOCG, Ottumwa, Iowa. Filed Mar. 8, 1907. Serial No. 361,295.



1. In a pneumatic hammer, a frame consisting of a straight central barrel, and spiral flanges encircling the barrel and running in opposite directions on the barrel, the barrel having a central chamber to receive the hammer and the spiral flanges having spiral passages for inducting and educting fluid with the spiral passages in communication with the chamber of the barrel, substantially as described.

2. In a pneumatic hammer, a frame consisting of a straight central barrel, and spiral flanges encircling the barrel and running in opposite directions on the barrel, the barrel having a central chamber divided into sections, one section to receive the driven stem and another section to receive the driving hammer, each spiral flange having a spiral induction passage and a spiral eduction passage for fluid, with the spiral induction passages in communication with the chamber of the barrel for admitting fluid to operate the hammer, and with the spiral eduction passages opening through the discharge end of the frame, substantially as described.

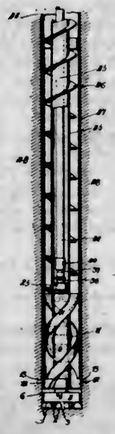
3. In a pneumatic hammer, a frame consisting of a straight central barrel, and spiral flanges encircling the barrel and running in opposite directions on the barrel and provided with induction and eduction passages for fluid, the barrel having a central chamber, with a fluid induction section in communication with the induction passages of the flanges, and a fluid eduction section in communication with the eduction passages of the flanges for fluid to act and recede and drive forward the hammer, substantially as described.

4. In a pneumatic hammer, a frame consisting of a straight central barrel, and spiral flanges encircling the barrel and running in opposite directions on the barrel, the barrel having a central chamber, with a fluid induction section and a fluid eduction section for fluid to act and recede and drive forward the hammer, and each spiral flange having a spiral induction pasage for fluid in communication with the fluid induction section of the barrel chamber, and a spiral eduction passage for fluid opening through the forward end of the flange and in communication with the fluid eduction section of the barrel chamber, substantially as described.

5. In a pneumatic hammer, a frame consisting of a straight central barrel having a central longitudinal chamber, and spiral flanges encircling the barrel and running in opposite directions on the barrel, and provided with induction and eduction passages for fluid, both passages in communication with the central chamber of the barrel, and a driving hammer entered into the chamber of the barrel and against which admitted fluid from the induction passages of the flanges acts to recede and drive forward the hammer, substantially as described.

[Claims 6 to 12 not printed in the Gazette.]

884,152. PNEUMATIC HAMMER. MARTIN HARDSOCG, Ottumwa, Iowa. Filed Mar. 11, 1907. Serial No. 361,705.



1. In a pneumatic hammer, a frame consisting of a straight central barrel and spiral flanges encircling the barrel and running in opposite directions on the barrel, the barrel having a central chamber to receive the hammer, and one spiral flange having a spiral passage for inducting fluid and the other spiral flange having a spiral passage for educting fluid, with the spiral passages in communication with the chamber of the barrel, substantially as described.

2. In a pneumatic hammer, a frame consisting of a straight central barrel and spiral flanges encircling the barrel and running in opposite directions on the barrel, the barrel having a central chamber divided into sections, one section to receive a driven stem and another section to receive a driving hammer, and one spiral flange having a spiral induction passage, and the other spiral flange having a spiral eduction passage for fluid, with the spiral passage of each flange in communication with the chamber of the barrel, for inducting fluid to operate the hammer and educting fluid from in front of the acting end of the hammer, substantially as described.

3. In a pneumatic hammer, a frame consisting of a straight central barrel and spiral flanges encircling the barrel and running in opposite directions on the barrel, the barrel having a central chamber provided with a fluid eduction section for discharging fluid and a fluid induction section within which inducted fluid may act to recede and drive forward the hammer, one spiral flange having a spiral passage for fluid in communication with the fluid induction section of the chamber of the barrel and the other spiral flange having a rearwardly extending spiral eduction passage for fluid in communication with the fluid eduction section of the chamber of the barrel, and a driving hammer operative in the chamber of the barrel and against which admitted fluid from the induc-

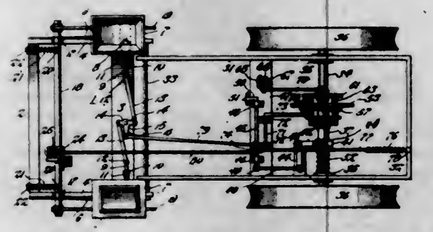
tion passage of the flange acts to recede and drive forward the hammer, substantially as described.

4. In a pneumatic hammer, a frame consisting of a straight central barrel and spiral flanges encircling the barrel and running in opposite directions on the barrel, the barrel having a central chamber and one spiral flange having a spiral induction passage for fluid in communication with the chamber of the barrel and the other spiral flange having a rearwardly extending spiral eduction passage for fluid in communication with the chamber of the barrel, a driving hammer operative in the chamber of the barrel and against which admitted fluid from the induction passage of the flange acts to recede and drive forward the hammer, and a driven stem operative in the chamber of the barrel in advance of the hammer, substantially as described.

5. In a pneumatic hammer, a frame consisting of a straight central barrel and spiral flanges encircling the barrel and running in opposite directions on the barrel, the barrel having a central chamber provided with a fluid eduction section for discharging fluid and a fluid induction section within which inducted fluid may act to recede and drive forward the hammer, one spiral flange having a spiral induction passage for fluid in communication with the fluid induction section of the chamber of the barrel and the other spiral flange having a rearwardly extending spiral eduction passage for fluid in communication with the fluid eduction section of the chamber of the barrel, a driving hammer operative in the chamber of the barrel and against which the admitted fluid from the induction passage of the flange acts to recede and drive forward the hammer, and a driven stem operative in the chamber of the barrel in advance of the hammer, substantially as described.

[Claims 6 to 14 not printed in the Gazette.]

884,153. CORN-PLANTER. WILLIAM S. HASLEU, Kiester, Minn. Filed Aug. 2, 1907. Serial No. 386,779.

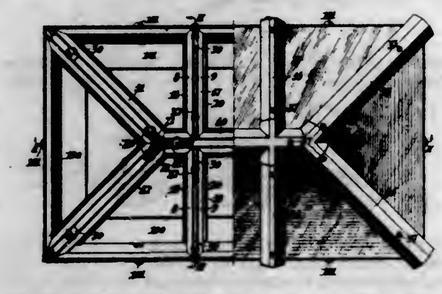


1. In a check row planter, the combination of a rocking marker shaft having a projection, a spring to normally support the markers in an elevated position, a rock arm, means to actuate the same, a trigger having a shoulder to engage the projection of the marker and move the latter and such rock arm in one direction against the tension of the spring, and means to trip such trigger and release the same from the said projection to cause the spring to impart a marking stroke to the marker.

2. In a check row planter having a front truck or runner frame and a rear truck or wheel frame flexibly connected to such front truck, a seed dropping mechanism on such front truck, a rocking marker shaft also on such front truck having a projection, springs to normally support the markers in an elevated position, a rock arm, means to actuate the same, a trigger having a shoulder to engage the projection of the marker shaft and move the latter and such rock arm in one direction against the tension of the springs, means to trip such trigger and release the same from the said projection to cause the springs to impart a marking stroke to the markers, an operating lever on the rear truck to which such seed dropping mechanism and such rock arm are connected, and means carried by such rear truck to operate such operating lever.

3. In a check row planter having a front truck or runner frame and a rear truck or wheel frame flexibly connected to such front truck, a seed dropping mechanism on such front truck, a rocking marker shaft also on such front truck having a projection, springs to normally support the markers in an elevated position, a rock arm, means to actuate the same, a trigger having a shoulder to engage the projection of the marker shaft and move the latter and such rock arm in one direction against the tension of the springs, means to trip such trigger and release the same from the said projection to cause the springs to impart a marking stroke to the markers, an operating lever on the rear truck to which such seed dropping mechanism and such rock arm are connected, a driving shaft for the rear truck, a cam loose thereon and engaged by such operating lever to actuate the planting and marking mechanisms, said cam having a ratchet gear, a spring coacting with said cam to operate said operating lever, a clutch for said cam to lock the same to said shaft, an arm loose on said shaft and having a spring pressed pawl engaging the ratchet gear and a lever connected to said arm to operate the same for setting the cam.

884,154. VENTILATING SKYLIGHT AND ITS SASH-BARS. HARVEY E. HERSH, Allentown, Pa., assignor to himself, James N. Hersh, G. Willis Hersh, and Edgar E. Hersh, trading as Hersh & Bro., Allentown, Pa. Filed June 12, 1907. Serial No. 378,644.



1. A ventilating sash bar composed of sheet metal parts, forming a body portion having walls for spacing the panes, and ledges for supporting them, said walls being separated throughout their entire width, and forming an unobstructed ventilating space therebetween.

2. A ventilating sash bar composed of sheet metal parts, forming a body portion having walls for spacing the panes, and ledges supporting them, said walls being separated throughout their entire width, and forming an unobstructed ventilating space therebetween; and a separable cap protecting the top of the ventilating space between the panes without obstructing the ventilation therethrough.

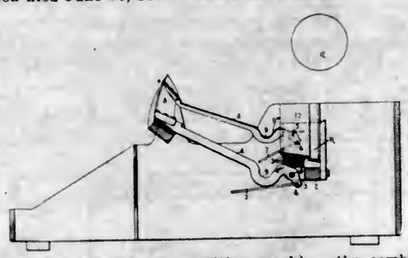
3. In a sash bar, the combination of a hollow body portion formed of two independent sheet metal sides separated by spacing members; a gutter below and a gutter above the panes upon each side of said body portion; and a cap removably secured in position above and out of contact with said sides, said cap extending beyond the sides of said upper gutters.

4. In a sash bar, the combination of a hollow sheet metal body portion; a lower gutter formed therewith; an upper gutter attached to said body portion; a cap removably secured in position above said upper gutter; and a flap valve within and extending substantially the entire length of said body portion.

5. In a sash bar, the combination of a hollow body portion formed of two independent sheet metal sides separated by spacing members; a lower gutter formed integrally with each of said sides; a gutter attached to the upper edge of each of said sides; and a cap removably secured in position above and out of contact with said sides, said cap extending beyond the sides of said upper gutters.

[Claims 6 to 9 not printed in the Gazette.]

884,155. TYPE-WRITING MACHINE. EDWARD B. HESS, New York, N. Y., assignor, by mesne assignments, to Union Typewriter Company, Jersey City, N. J., a Corporation of New Jersey. Original application filed Aug. 28, 1901, Serial No. 73,570. Divided and this application filed June 30, 1903. Serial No. 163,691.



1. In a front-strike typewriting machine, the combination of a platen, type bars pivoted to strike against the front of the platen, the pivotal bearings of said type bars being below the front of the platen where rubbings from the paper on the platen tend to fall into said bearings, and a dust guard arranged between the front of the platen and the pivotal bearings of the type bars to intercept said falling rubbings and prevent them from entering and clogging the type bar bearings.

2. In a front-strike typewriting machine, the combination of a platen, a series of rearwardly striking pivoted type bars having their bearings arranged in an upright arc below the platen, and a dust guard interposed between the printing line on the platen and the bearings of said type bars and preventing particles of dust or grit which fall from the front of the platen from entering said bearings, each of said type bars being shaped to clear the dust guard when the bar is at the printing position.

3. In a front-strike typewriting machine, the combination of a platen, a segmentally arranged series of front-strike pivoted type bars, and a dust guard arranged above and covering the bearings of the type bars, each of said type bars having the part thereof that stands in front of said dust guard when said type bar is in printing position forward of a line joining the pivotal center of the type bar and the printing point, whereby the type bar clears the dust guard.

4. In a typewriting machine, the combination of a platen, pivoted type bars arranged below the platen and adapted to strike rearwardly against the front face thereof, and means for intercepting particles of matter that fall from the platen, said means being located between the bearings of the type bars and the front face of the platen and extending both in front of and behind the pivots of the type bars.

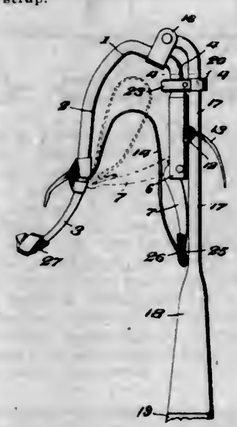
5. In a typewriting machine, the combination of a platen, pivoted type bars arranged below the platen and adapted to strike rearwardly against the front face thereof, and means for intercepting particles of matter that fall from the platen, said means being located between the bearings of the type bars and the front face of the platen and extending behind the pivots of the type bars.

[Claims 6 to 19 not printed in the Gazette.]

884,156. ANIMAL CATCHING AND HOLDING TOOL. ELLET L. HITT, Weiser, Idaho. Filed May 22, 1907. Serial No. 375,070.

1. In a device of the class described comprising a body having arms, one of said arms being longer than the other, a lever pivotally secured to the shorter arm and provided with a plurality of notches on the pivoted end of said lever, means on the shorter arm to engage one of the notches on said pivoted end and hold the lever in its inward position, a strap secured at one end to the free end of said lever and secured to the opposite arm whereby, when the strap is directed into engagement with an object, the lever will be rotated on its pivot point and a loop formed in the strap.

2. A device of the class described comprising a U-shaped body one arm being shorter than the other, a lever pivotally secured to the shorter of said arms and adapted to swing inwardly, the opposite arm having an opening therein a head on the pivoted end of said lever, said head having notches therein, means carried by the arm to engage said notches and hold the lever in its inward position, a strap secured at one end to the upper end of said lever, said strap being extended across the space between said arms and through the opening in the opposite arm and secured to said arm whereby when that portion of the strap between the arms is directed into engagement with an object, the lever will be drawn inwardly and a loop formed in the strap.



3. In a device of the class described, the combination with a U-shaped body one arm being shorter than the other, a lever pivotally secured to the shorter arm, means to hold said lever in its closed position, and a strap secured to said lever and extended across the space to the opposite arm, of a shank pivotally secured to said body, an operating handle secured to said shank and a keeper adapted to normally hold the body against movement.

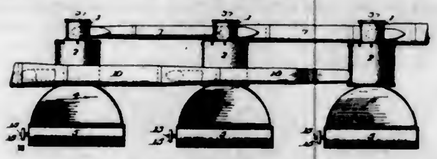
4. The herein described catching and holding tool, comprising a body having arms extended therefrom, a lever pivotally secured to one of said arms, the opposite arm having an opening therein a strap disposed through the opening in said arm, and secured over the upper end of said lever, means to hold said lever in its closed position, a supporting shank for said body, means to pivotally secure the body to the shank, whereby said body may be adjusted to different positions, a keeper rotatably and movably mounted on said shank and means at the free end of said keeper adapted to engage the body and hold the same in its adjusted position.

5. In a catching and holding device, the combination with a body and means thereon to engage and hold an animal; of a shank, means to pivotally secure the body to the free end of said shank, a keeper pivotally and movably mounted on the shank, and a spring finger secured to the keeper and extended over the free end thereof adapted to engage parts of the body and hold the same in adjusted position.

884,157. COTTON CLEANER AND DISTRIBUTER. ROBERT L. HOLLINGSWORTH, Decatur, Ga., assignor of one-half to Jacob R. Miller and one-fourth to Walter C. Hendrix, Fulton county, Ga. Filed June 17, 1907. Serial No. 379,373.

1. In a device of the class described, a plurality of air chambers, a cylindrical screen within each of the said air chambers, and adapted to direct incoming cotton through the air chamber, a conical baffle plate in each of said air chambers, having its smaller end disposed near one end thereof for diffusing the air current drawn through said screen, bonnets above the air chambers, each of said bon-

nets having therein an inwardly projecting spiral guide to direct incoming air downwardly, a chute below the air chamber, a horizontal shaft journaled longitudinally of the chute and provided with longitudinal radial vanes or wings arranged at angles of 90° with respect to each other, the side walls of the chute being curved concentric with the shaft, and adapted to be engaged by the free edges of the wings or vanes, an inlet pipe common to all of said bonnets, and an outlet common to all of said air chambers, the inlet and the outlet communicating with the bonnet and the air chamber tangentially.



2. In a device of the class described, a plurality of air chambers, a cylindrical screen within each of said air chambers, adapted to direct incoming material through the air chambers, a conical baffle plate in each of said chambers, having its small end disposed near one end thereof for diffusing the air current drawn through the said screen, a bonnet above each of said air chambers and communicating therewith, a chute below the air chamber, a horizontal shaft journaled longitudinally in the chute, and provided with longitudinally arranged radial vanes, the walls of the chute being curved concentric with the shaft, and adapted to be engaged by the free edges of the vanes, an inlet pipe communicating with each of the bonnets, and an outlet pipe communicating with each of the air chambers.

3. In a device of the class described, a plurality of air chambers, a cylindrical screen within each of said chambers, and adapted to direct incoming material through said chambers, a bonnet arranged above each of said chambers and communicating therewith, an inlet pipe communicating with all of said bonnets, an outlet communicating with all of said air chambers, means for diffusing the air current passing through the said screen, a chute below each of the said air chambers, a horizontal shaft journaled at the outlet end of each of said chutes, and provided with radial longitudinally arranged vanes, the walls of the chute being curved concentric with the shaft, and adapted for engagement by the vanes, for the purpose set forth.

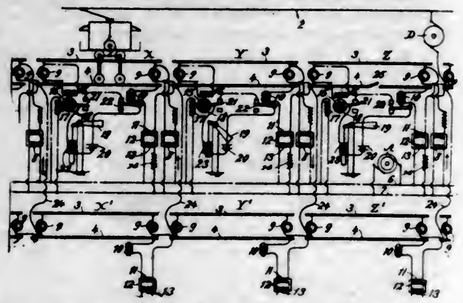
4. In a device of the class described, a plurality of cleaning devices, each comprising an air chamber, a cylindrical screen within the said air chamber and adapted to direct incoming material through the said chamber, means for diffusing the air current passing through the said screen, a bonnet arranged above the chamber and communicating therewith, an inlet pipe arranged on one side of the cleaning devices and communicating with each of the bonnets, an outlet pipe on the other side of the cleaning devices and communicating with each of the air chambers, said cleaning devices being arranged in parallel between said pipes.

884,158. SYSTEM OF AUTOMATIC BLOCK-SIGNALING FOR ELECTRIC RAILWAYS. WINTHROP K. HOWE, Buffalo, N. Y., assignor to General Railway Signal Company, a Corporation of New York. Filed Sept. 28, 1906. Serial No. 336,612.

1. A signaling system comprising an alternating generator, separate means connected therewith arranged to produce respectively a difference of potential across the rails and a continuity current along the rails of a block section.

2. A signaling system comprising a single alternating generator, separate means connected therewith arranged to produce respectively a difference of potential between the rails, and to send a continuity current through the rails, a relay connected with the rails to indicate the condition of the block as to occupancy, and a relay arranged to indicate the condition of the rails as to continuity.

3. A signaling system comprising an alternating generator, and means connected therewith arranged to create continuity currents in adjacent trackways.

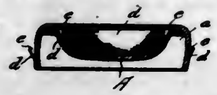


4. A signaling system comprising a signaling current arranged to control a track circuit and means in each block for applying a local continuity current.

5. A signaling system comprising means in each block for separately indicating the presence of a break in either track rail.

[Claims 6 to 13 not printed in the Gazette.]

884,159. DENTAL PLATE. EDWIN A. JACKMAN, Hartington, Nebr. Filed Aug. 9, 1907. Serial No. 387,914.



1. A set of teeth comprising a swaged plate having an integral welt extending around the plate, and a tooth-carrying rubber anchored on the plate by the welt and clamped between the plate and welt.

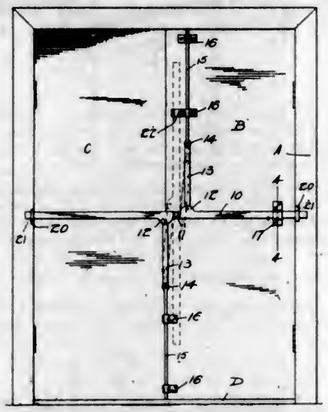
2. A dental plate comprising a swaged plate, one or more continuous and unbroken welts formed thereon and having the free edge or edges turned laterally to present a hook formation, and a body of suitable material anchored on the plate by the welt or welts and adapted to receive the teeth, the said material being clamped between the plate and welt or welts.

884,160. DEVICE FOR APPLYING COUNTER-IRRITANTS. EDWARD M. JEFFERSON, Philadelphia, Pa. Filed May 6, 1907. Serial No. 372,211.



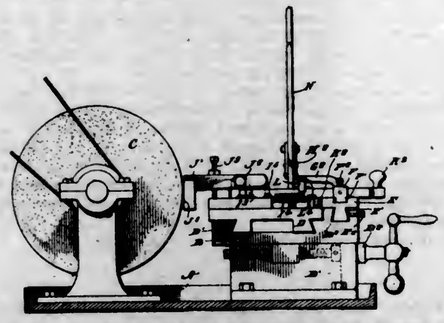
An instrument for applying counter-irritants to the skin of the human body, comprising a hollow cylinder capable of being opened, a sponge-containing cylinder having foraminous ends, loosely supported in said body, a compressible air-bulb, a flexible tube connecting the latter with one end of the cylindrical body, a bell-shaped applying device having its mouth covered with a sheet of fibrous material, and a relatively long flexible tube connecting the applying device with the other end of the body, permitting the applying device to be moved about without moving the said body or bulb, and applying the medicament at all times in a nebulous condition.

884,161. DOOR-FASTENER. LARS C. JENSEN, Oklahoma, Okla. Filed Aug. 13, 1907. Serial No. 388,397.



A door fastener of the type set forth, comprising the combination with a hinged door and its casing, of an operated bar pivoted upon said door, a keeper carried upon said casing to receive the end of said operating bar, a spring clip carried upon said door for engagement with said bar when the latter is engaged in said keeper, a sliding bolt carried by said door, a socket in the door frame to receive the end of said bolt, and a link pivoted to said bar and to said bolt.

884,162. MACHINE FOR GRINDING AND POLISHING. LAWRENCE A. JONES, Clyde, Ohio. Filed Oct. 1, 1907. Serial No. 395,324.



1. The combination in an apparatus substantially as described of a carriage, a carrier plate pivotally mounted thereon, a spring for actuating said plate in one direction, means whereby the carriage may be moved, a lock lever pivoted to the carrier plate, and a relatively fixed track facing the carrier plate and forming a bearing for the lever, substantially as set forth.

2. The combination with a carriage, of a carrier plate movable with the carriage and having a swinging movement independent thereof, a lock lever pivoted to the carrier plate, and means on the carriage for holding the lock lever in fixed relation to the carrier plate in certain positions of the parts, substantially as set forth.

3. The combination of a carriage and supports therefor, a work holder having a carrier plate pivotally mounted on the carriage and movable therewith and having a swinging movement independent of the carriage, a connecting or lock lever pivoted to the carrier plate and extending over the carriage, a track facing toward the carriage and forming a bearing for said lever, a stop on the carrier plate for engagement by the lever, a latch mounted on the carriage and engaging with the lever whereby to hold the latter against the carriage stop, means for moving the carriage, and devices for releasing the latch, substantially as set forth.

4. The combination in a machine for grinding or polishing, of a carriage, a work holder comprising a plate pivotally mounted on the carriage, a spring for actuating the carrier plate in one direction, a connecting or lock lever pivoted at one end to the carrier plate, a relatively fixed track with which said lever is movably engaged, a relatively fixed stop for engagement by said lever as the carriage is moved, means for moving the carriage, and latch devices between the carriage and the lever and engaging with the lever, substantially as set forth.

5. The combination with the carriage, a support on which the carriage is movable laterally, a carrier plate movable laterally with the carriage and also having a swinging movement independent of the carriage, a lock lever pivoted to the carrier plate and extending forwardly therefrom, a track on the support and facing toward the carrier plate, and a roller on the lock lever and bearing against said track, substantially as set forth.

[Claims 6 to 15 not printed in the Gazette.]

884,163. LADDER. WALTER JONES, Bowling Green, Ky., assignor of one-half to Lewis C. Henninger, Bowling Green, Ky. Filed June 11, 1907. Serial No. 378,385.



1. A ladder having slidable feet adapted for adjustment, to extend either side of the ladder and shorten the other, ropes connecting with said feet and passing through them and the ladder proper, and a means connecting the ropes and adapted for lateral adjustment to take up either rope and let out the other, as described.

2. The combination with the legs proper of a ladder, of slidable extension feet therefor, a cord connecting the two feet, a rod extending between the ladder legs, and a friction plate adapted to slide on the rod, the rope ends being connected with the same on opposite sides of the rope, substantially as described.

3. The combination with the legs proper of a ladder, of slidable extension feet, clevises pivoted to the feet and having their free ends contracted as described, a rope supported on the legs and provided with knots, the same passing through the clevises whose narrowed ends are adapted to engage the knots for holding and locking the feet in any required extension, substantially as described.

4. The combination with the legs proper of a ladder, and slidable extension feet applied thereto, of devices in

the form of clevises having narrowed free ends attached to said feet and embracing the ladder legs, ropes provided with knots and adapted to slide, through the body portion of the clevises and to engage the outer ends of the same, and a friction device applied to the lower portion of the ladder legs and with which the ropes are connected, substantially as described.

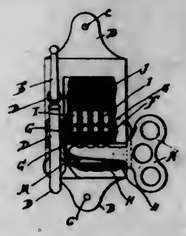
884,164. PLOW. MARK C. JORDAN, Ellisville, Miss. Filed Sept. 27, 1907. Serial No. 394,897.



1. The combination with a plow of a frame consisting of upper and lower front members, upper and lower rear members, clamping bolts connecting said upper and lower front members and upper and lower rear members, in pairs, adjacent to the sides of the beam, clamping bolts connecting the outer ends of the frame members, in pairs, and diagonal braces engaging the clamping bolts.

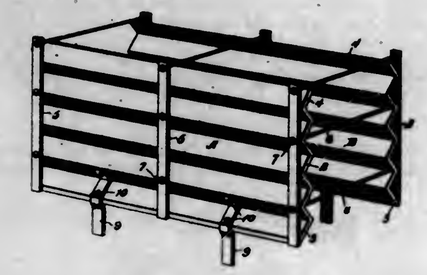
2. The combination with a plow of a frame consisting of upper and lower front members, upper and lower rear members, clamping bolts connecting said upper and lower front members and upper and lower rear members, in pairs, adjacent to the sides of the beam, clamping bolts connecting the outer ends of the frame members, in pairs, and diagonal braces engaging the clamping bolts; and an auxiliary plow beam supported between the upper and lower front members and the upper and lower rear members of the frame and the clamping bolts connecting said frame members.

884,165. CLOTHES-HOOK. LEOPOLD JULIG, San Francisco, Cal. Filed Feb. 15, 1907. Serial No. 357,459.



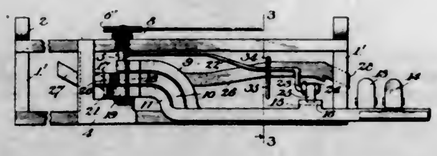
In a device of the character described, a stationary hook, a pivoted lever coöperating therewith, a lock casing having a transverse cylindrical bore, a barrel carrying the lever and journaled as a pivot in the bore, said casing having an extension below the bore and formed with a recess communicating with the bore, said casing also having a second extension at one side of the first extension, the second extension having a curved recess communicating with the bore, a plurality of parallel tumblers mounted transverse of the barrel, said tumblers having sliding movement in the direction of their axes and being each formed with an axially extended pin arranged to project into the straight recess, spring pressed bolts in the upper part of the casing arranged to project into the barrel and to engage the several tumblers as followers and a key insertible in the straight slot and formed with abutments to engage the several pins to move the same out of the straight recess, said pins as a series having movement into the curved recess during the rotation of the barrel.

884,166. MOLD-PLATE FOR CONCRETE CONSTRUCTION. ERNEST G. KEMPER, Dallas, Tex. Filed Feb. 14, 1907. Serial No. 357,311.



A pair of sheet metal mold plates for concrete construction provided throughout with longitudinal corrugations including divergent terminal flanges at the lower edges and convergent terminal flanges at the upper edges of said plates, and downward extending lugs at the lower edges of said plates, in combination with exteriorly disposed reinforcing strips, and binding rods extending transversely through the plates and the reinforcing strips.

884,167. MUSIC-SHEET TURNER. ROBERT L. KENNON, Jr., Atlanta, Ga. Filed May 22, 1907. Serial No. 375,111.



1. In a music leaf turner, a plurality of leaf holding bars pivoted on a common center, and an arm, concentrically mounted to swing about the same center, and adapted to engage said bars.

2. In a music leaf turner, a plurality of bars pivoted on a common shaft as a center, means carried by each bar for engaging a leaf, and an arm for actuating said bars fixed to the said shaft.

3. In a music leaf turner, a leaf holding bar, and an actuating arm adapted to engage the same, said arm and bar being pivoted on the same center, and adapted to swing in substantially parallel planes.

4. In a music leaf turner, a leaf holding bar and a swinging arm mounted on the same center, and a pivoted pawl carried by said arm and adapted to engage said bar.

5. In a music leaf turner, a plurality of leaf holding bars pivoted to swing about the same center, each bar being provided near its end with an upstanding lug each of said lugs differing in size and means for selectively engaging said lugs.

[Claims 6 to 12 not printed in the Gazette.]

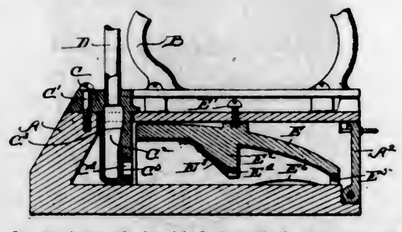
884,168. BOTTLE. ALBERT S. KIRK, Monett, Mo. Filed Nov. 24, 1906. Serial No. 344,909.

The herein-described bottle or the like receptacle having a filling or discharge neck externally enlarged or thickened at its upper end, a removable closure therefor, an external shield formed at its lower end with spaced V-shaped projections integral with the shoulder of the bottle body at the base of the neck, said shield extending above and being spaced wholly from the neck and of substantially uniform diameter throughout, and provided below and immediately adjacent to the thickened upper

end of said neck with an annular series of openings forming a weakened portion, whereby the shield may be fractured at distinct points for the removal of the whole or a portion thereof.



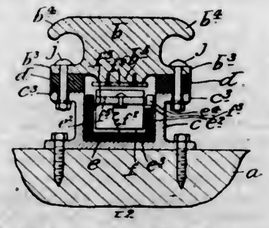
884,169. GAS AND AIR PRESSING-IRON. HARRY A. KOENIG, Philadelphia, Pa. Filed Jan. 2, 1906. Serial No. 294,139.



1. In an iron of the kind described, the combination with a chamber provided with a burner at one end, a flame distributer arranged in said chamber adjacent said burner, said distributer being inverted V-shaped in cross section and provided with a transverse partition having a beveled grooved side communicating with a notch in the partition, the beveled side of the partition being adjacent the burner, for the purpose described.

2. In an iron of the kind described, the combination with a chamber provided with an opening, of a burner arranged in said chamber projecting out through said opening, and a casing inverted V-shape in cross-section arranged adjacent the burner in the chamber, a transverse partition formed in said casing provided with a beveled grooved side, for the purpose described.

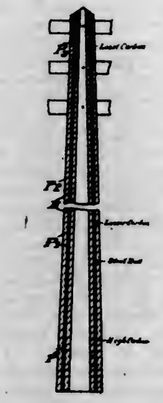
884,170. THIRD-RAIL ELECTRIC-RAILWAY SYSTEM. CHARLES KOZESNIK, New York, N. Y. Filed Dec. 17, 1907. Serial No. 406,828.



1. A third rail for electric railways consisting of separate hollow sections composed of top and bottom portions connected but insulated one from another, the ends of the top portions of said sections being also insulated, the bottom of the top portions of the said sections being longitudinally thickened or extended downwardly, and provided at intervals with contact devices, vertically movable armatures supported beneath said contact devices and composed of separate end members, and a central contact member secured thereto, and an electrical connection for said armatures.

2. A third rail for electric railways consisting of separate hollow sections composed of top and bottom portions connected but insulated one from another, the end of the top portions of said sections being also insulated, the bottom of the top parts of the sections being longitudinally thickened or extended downwardly, and provided at intervals with contact devices, vertically movable armatures supported beneath said contact devices and consisting of separate end members connected by a central contact device, and an electrical connection for said armatures, said armatures being oblong in form and ranging longitudinally of the rail sections, and being supported in transversely arranged uprights provided with notches or recesses in the tops thereof, and said armatures being provided with pins adapted to rest in said recesses.

884,171. POLE. DIEDRICH W. KRELLWITZ, St. Catharines, Ontario, Canada. Filed Nov. 19, 1906. Serial No. 343,985.



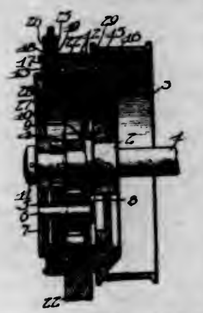
1. In poles the combination with the main body of concrete, of re-inforcing uprights of the same cross sectional area throughout the entire length of pole, each upright being made in portions of different grades of carbon steel and each successive portion from the bottom of the pole decreasing from a high carbon steel to the top of the pole as specified.

2. In a pole, the combination of a steel structure composed of sections arranged end to end and extending longitudinally of the pole, each section including longitudinal members of carbon steel of a different grade from those of an adjacent section, with a body of concrete in which the structure is embedded.

3. In a pole, the combination of a metal structure composed of spaced uprights of uniform cross section at all points and having portions of greater strength at the bottom and decreasing in strength upwardly, horizontal members extending around the spaced uprights engaging therewith, with a body of concrete in which the structure is embedded.

4. As an article of manufacture, a steel structure for a pole, said structure comprising a number of sections each consisting of a plurality of steel rods, and means for connecting the rods together in fixed relation, the rods of adjacent sections being of different grades of steel and having their ends rigidly secured to form continuous members extending longitudinally of the pole.

884,172. VARIABLE-SPEED GEARING. SHERMAN T. LEWIS, Milwaukee, Wis., assignor of two-thirds to Retta Pierce Davenport and Everett C. Rockwell, Chicago, Ill. Filed Apr. 13, 1907. Serial No. 367,911.



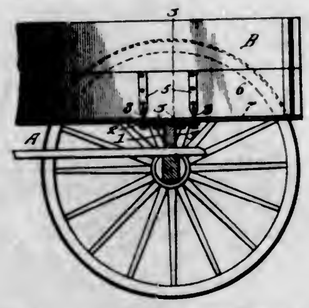
1. In transmission gearing, a driving member, a driven member, rotatable independently thereof, an intermediate member, gear connections between said driving and driven members, part of said gear connections being mounted on said intermediate member, a stationary member and a controlling member permanently connected to said intermediate member to thereby rotate therewith or prevent it from rotating, said controlling member being adapted to occupy a plurality of positions, in one position in engagement with said driven member to thereby cause it and the driving member to rotate at equal speeds, and in another position in engagement with said stationary member to thereby arrest said intermediate member and cause the motion of the driving member to be transmitted to the driven member by way of said gear connections, in combination with means for shifting said controlling member to its different positions, said shifting means comprising a hand operated member having beveled surfaces coöperating with beveled surfaces on said stationary member.

2. In transmission gearing, a driving member, a driven member rotatable independently thereof, an intermediate member, gear connections between said driving and driven members, part of said gear connections being mounted on said intermediate member, a stationary member and a controlling member permanently connected to said intermediate member to thereby rotate therewith or prevent it from rotating, said controlling member being adapted to occupy a plurality of positions, in one position in engagement with said driven member to thereby cause it and the driving member to rotate at equal speeds, and in another position in engagement with said stationary member to thereby arrest said intermediate member and cause the motion of the driving member to be transmitted to the driven member by way of said gear connections, in combination with a shifting member having beveled surfaces adapted to coöperate with beveled surfaces on said stationary member, said beveled surfaces being oblique to the axis of the device and said shifting member being rotatable through a limited arc for causing the inter action of said beveled surfaces.

3. In transmission gearing, a driving member, a driven member, rotatable independently thereof, an intermediate member, gear connections between said driving and driven members, part of said gear connections being mounted on said intermediate member, a stationary member and a controlling member permanently connected to said intermediate member to thereby rotate therewith or prevent it from rotating, said controlling member being adapted to occupy a plurality of positions, in one position in engagement with said driven member to thereby cause it and the driving member to rotate at equal speeds, and in another position in engagement with said stationary member to thereby arrest said intermediate member and cause the motion of the driving member to be transmitted to the driven member by way of said gear connections, and said controlling member being spring urged toward said driven member.

4. In transmission gearing, a driving member, a driven member rotatable independently thereof, an intermediate member, gear connections between said driving and driven members, part of said gear connections being mounted on said intermediate member, a stationary member and a controlling member permanently connected to said intermediate member to thereby rotate therewith or prevent it from rotating, said controlling member being adapted to occupy a plurality of positions, in one position in engagement with said driven member to thereby cause it and the driving member to rotate at equal speeds, and in another position in engagement with said stationary member to thereby arrest said intermediate member and cause the motion of the driving member to be transmitted to the driven member by way of said gear connections, and in an intermediate position out of contact with said intermediate and driven members to thereby permit said driven member to remain still in combination with a shifting member having beveled surfaces adapted to coöperate with beveled surfaces on said stationary member, said beveled surfaces being oblique to the axis of the device and said shifting member being rotatable through a limited arc for causing the inter action of said beveled surfaces.

884,173. ATTACHMENT FOR WAGONS. JOHN W. LILES, North Platte, Nebr. Filed June 21, 1907. Serial No. 380,134.

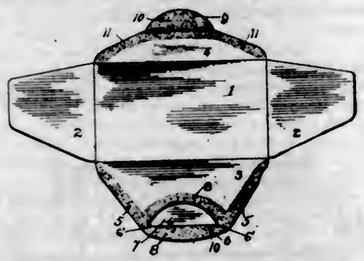


1. The combination of a wagon running gear including a bolster, with a body or box removably mounted on the gear, metal wearing plates on the under side of the bottom of the body and adjacent the side edges thereof, strap irons on the sides of the body and having bolt portions extending through the bottom of the body and through the said plates, nuts on the bolt portions bearing against the plates and holding the sides of the body in fixed position with respect to the bottom of the latter, spaced transverse bars adapted to engage on opposite sides of the bolster and spaced from the body bottom by the said plates, and bolts securing the ends of the bars to the plates.

2. The combination of a wagon body, wearing plates on the under side of the bottom thereof, spaced transverse bars disposed under and secured to the plates, strap irons on the sides of the body having bolt portions passing through the bottom of the body and through the wearing plates, and nuts on the bolt portions bearing against the wearing plates.

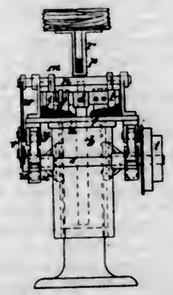
884,174. ENVELOP. WILLIAM W. L. LONGTOFT, Logootee, Ind. Filed Mar. 28, 1906. Serial No. 308,483.

An envelop comprising a body portion, end flaps, a rear flap, and a sealing flap, said rear flap slitted longitudinally near its free ends and with the end of the slit enlarged, said rear flap further formed with a depressed portion to constitute a pocket and which extends from one edge of the slit, said rear flap further having a strip of adhesive material throughout its free edge and a strip of adhesive material surrounding the pocket and merging into said first mentioned strip, said sealing flap having projecting therefrom approximately centrally thereof a tongue having one face provided with an adhesive material and further separated from the sealing flap by a line of perforation and said sealing flap further having a strip of adhesive material extending throughout its edge on one face, the said tongue adapted to be inserted through said slit into said pocket and be secured to the end flaps, said rear



flap adapted to be secured to the end flaps by the strip of adhesive material upon the rear flap and said sealing flap adapted to be secured by the strip of adhesive material thereon to the end flaps and rear flaps.

884,175. MACHINE FOR PRODUCING MOLDINGS. PETER LORENTZEN, Apenrade, Germany. Filed Aug. 1, 1907. Serial No. 386,656.



1. In a machine for producing moldings with arched decorations, a shaft with cutters revolving in a horizontal plane, carriers as a support for moldings, arranged at the sides of the shaft and under the cutting profile of the cutter blade, provided with means to raise them gradually against the cutters and periodically shift them lengthwise, substantially as described and for the purpose set forth.

2. In a machine for producing moldings with arched decorations, a shaft with cutters revolving in a horizontal plane, carriers as a support for moldings, arranged at the sides of the shaft and under the cutting profile of the cutting blade, a table supporting and guiding said carriers, a driving shaft with eccentrics connected to the table in order to raise or lower the same with the carriers for the molds, a crank on said driving shaft having its pin approximately opposite the lobe of the eccentrics, a rocking shaft above the table connected to the crank pin by a suitable rod and lever, pawls pivotally connected to suitable arms on the rock shaft and racks on the carriers for the moldings adapted to be engaged by the pawls substantially as described.

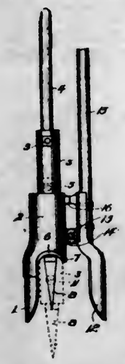
3. In a machine for producing moldings with arched decorations, a shaft with cutters revolving in a horizontal plane, carriers as a support for moldings, arranged at the sides of the shaft and under the cutting profile of the cutter blade, a table supporting and guiding said carriers, a driving shaft with eccentrics connected to the table in order to raise or lower the same with the carriers for the molds, a crank on said driving shaft having its pins approximately opposite the lobe of the eccentrics, a rocking shaft above the table connected to the crank pin by a suitable rod and lever, pawls pivotally connected to suitable arms on the rock shaft and racks on the carriers for the moldings adapted to be engaged by the pawls, cheeks adapted to press on the moldings, a weighted lever pivotally connected with said cheeks to press it down upon the moldings.

884,176. LEVEL. ALVA A. LOVELESS, Dacula, Ga. Filed May 16, 1907. Serial No. 374,024.



A level of the class described comprising a stock, a segmental block on one side thereof having a curved periphery provided with a groove, a longitudinally curved spirit tube in such groove of such block, and a curved plate on the periphery of the block, retaining the spirit tube in the groove thereof, having a slot disclosing such spirit tube and further provided on its outer side with a protractor scale at the side of the slot, said plate having its end portions out-turned and attached to the stock.

884,177. POST-HOLE DIGGER. JACOB H. LOWRY, Lenoir City, Tenn. Filed June 11, 1907. Serial No. 378,426.



1. A post hole digger having a shovel provided with a tubular head, a sleeve movable longitudinally in said head and providing for the attachment of the handle, and a point having a stem for insertion in the lower end of the bore of said sleeve.

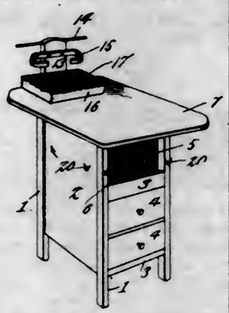
2. A post hole digger having a shovel and a digging point disposed concentrically with reference to the shovel and adapted for longitudinal movement with respect thereto so that either the shovel or the point may be projected at will.

884,178. CABINET. CHARLES L. LUTHARDT, Baltimore, Md. Filed Mar. 23, 1907. Serial No. 364,180.

1. A cabinet comprising a body open at its top and front, a cross piece at the top of the body and extending across the front thereof, rearwardly extending members on the back of the body, a cover normally resting on the top of the body and forming a table top, spaced lugs on the bottom side of the cover and engaging the said members for preventing lateral movement of the cover, said lugs being disposed inwardly from the rear end of the cover, means passing through the lugs and members for hingedly connecting the cover to the body, a locking device secured to the cover and depending therefrom for engaging the said cross piece to hold the cover in normal position, and an utensil support projecting upwardly from the rear portion of the cover and rigidly secured thereto.

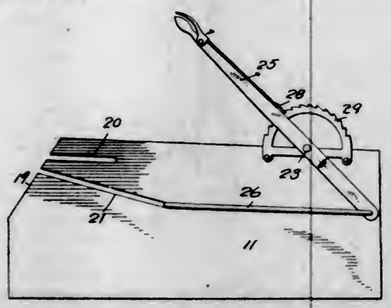
2. A cabinet comprising a body open at its top, a

cover normally resting on the top of the body to close the opening thereof and forming a table-top, lugs depending from the cover intermediate its ends, an utensil support projecting upwardly from the rear portion of the cover corner standards extending outwardly from the rear of the body and engaging between the lugs, a rod supported on



the standards and extending from one side of the body to the other and projecting through the lugs for hingedly connecting the cover to the body, a horizontal cross-piece on the body, and a spring catch depending from the bottom side of the cover and arranged to engage the cross-piece to lock the cover in normal position.

884,179. PEN FOR HOLDING SWINE. JOHN C. MABBOTT, Mount Vernon, S. D. Filed May 2, 1907. Serial No. 371,474.



1. A pen for holding swine, including a front wall and having an opening through its said wall for the passage of the snout of an animal, a throat board within the pen against which the throat of the animal is designed to rest, and means for engagement with the legs of the animal to hold him against movement.

2. A pen for holding swine, including a front wall and having an opening through its said wall for the passage of the snout of an animal, a concaved throat board within the pen against which the throat of the animal is designed to rest, and means for engagement with the legs of the animal to hold him against movement.

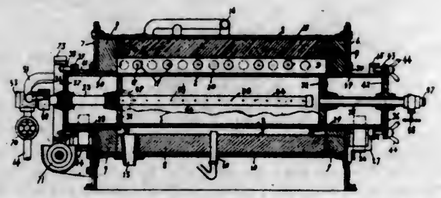
3. A pen for holding swine, including a front wall and having an opening through its said wall for the passage of the snout of an animal, a throat board within the pen against which the throat of the animal is designed to rest, and means for engagement with the legs of the animal to hold him against movement, said means being adjustable to suit swine of various sizes.

4. A pen for holding swine, including side walls and a front wall and having an opening through the front wall for the passage of the snout of the animal, the side walls of the pen being slotted, a holding yoke including a connecting portion engaged in the slots, and means for varying the position of the yoke and for holding the same at various adjustments.

5. A pen for holding swine, including side walls and a front wall and having an opening through the front wall for the passage of the snout of the animal, the side walls of the pen being slotted, a holding yoke including a connecting portion engaged in the slots, and a lever for varying the position of the yoke and for holding the same at various adjustments.

[Claim 6 not printed in the Gazette.]

884,180. CASE-HARDENING APPARATUS. ADOLPH W. MACHLET, Elizabeth, N. J. Filed Dec. 19, 1905. Serial No. 292,515.



1. A furnace containing a revoluble retort, said retort provided at its ends with covers, and partitions within said retort, one partition attached to each cover so as to be movable therewith, and means for passing iron-carburizing gas through said retort.

2. A furnace containing a revoluble retort, said retort closed at one end and provided at the other end with a movable cover, a partition within said retort and rigidly attached to said cover, and means for passing iron-carburizing gas through said retort during its rotation.

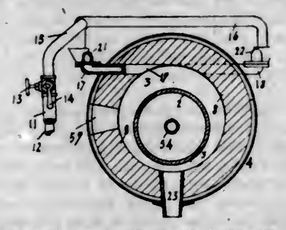
3. A furnace containing a revoluble retort, said retort closed at one end and provided at the other end with a movable cover, a partition within said retort and attached to said cover, and means for passing iron-carburizing gas through said retort during its rotation; means being provided for clamping said cover, and a packing being provided between said cover and the end of said retort.

4. A furnace containing a revoluble retort, said retort provided at its ends with covers, and partitions within said retort, one partition attached to each cover so as to be movable therewith, and means for passing iron-carburizing gas through said retort; means being provided for clamping each of said covers, and packings being provided between said covers and the ends of said retort.

5. A furnace containing a revoluble retort, the ends of said retort projecting from the furnace and being supported upon rolls, one end of said retort being closed, the other end having a movable cover provided with a packing; and partitions within said retort at such points that the space between the partitions is wholly within the flame chamber of the furnace; one of said partitions being connected to said cover so as to be movable therewith, and means for passing iron-carburizing gas through said retort.

[Claims 6 to 33 not printed in the Gazette.]

884,181. CASE-HARDENING. ADOLPH W. MACHLET, Elizabeth, N. J. Filed Dec. 20, 1905. Serial No. 292,626.



1. The process of case-hardening in bulk with uniformity low-carbon steel articles to form upon each thereof a thin shell of a uniform and exact predetermined thickness, consisting in placing the articles in a metal retort, closing the retort, supplying carburizing gas mixed with ammonia to the retort, applying heat uniformly to the exterior of the retort, maintaining the heat of the articles uniform while causing fresh carburizing gas mixed with ammonia to circulate constantly through the retort, and arresting the cementation at the expiration of a predetermined interval of such length that the articles are cemented to the predetermined depth; the proportion of ammonia being sufficient to prevent deposit of free carbon.

2. The process of case-hardening in bulk with uniformity low-carbon steel articles to form upon each thereof a thin shell of a uniform and exact predetermined thickness, consisting in confining the articles in a closed metal retort maintained at a uniform heat throughout during the carburizing operation, mixing carburizing gas with ammonia by passing one through the other and passing the mixture through the heated retort containing the articles to carburize the same, and arresting the cementation at the expiration of a predetermined interval of such length that the articles are carburized to the predetermined depth; the ammonia forming a sufficient proportion of the compound gas to prevent deposit of free carbon.

3. The process of case-hardening in bulk with uniformity low-carbon steel articles to form upon each thereof a thin shell of a uniform and exact predetermined thickness, consisting in confining the articles in a closed metal retort maintained at a uniform heat throughout during the carburizing operation, agitating them while so confined, passing carburizing gas first through ammonia water and then through the retort to carburize the articles therein, and arresting the cementation at the expiration of a predetermined interval of such length that the articles are carburized to the depth predetermined.

4. The process of case-hardening in bulk with uniformity low-carbon steel articles to form upon each thereof a thin shell of a uniform and exact predetermined thickness, consisting in passing carburizing gas mixed with a diluting gas over the articles while the latter are maintained at a uniform heat, and arresting the cementation at the expiration of a predetermined interval of such length that the articles are carburized to the depth predetermined; the proportion of diluting gas being sufficient to prevent the deposit of free carbon.

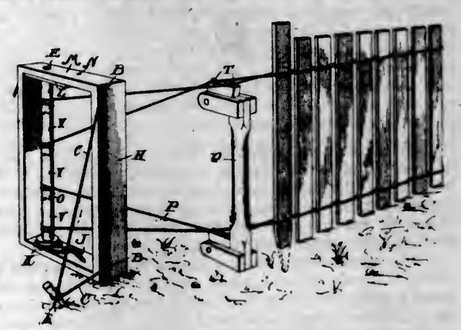
5. The process of case-hardening in bulk with uniformity low-carbon steel articles to form upon each thereof a thin shell of a uniform and exact predetermined thickness, consisting in confining the articles in a closed metal retort maintained at a uniform heat throughout during the carburizing operation, mixing carburizing gas with more than its own bulk of ammonia by passing one through the other and passing the mixture slowly through the heated retort containing the articles to carburize the same, and arresting the cementation at the expiration of a predetermined interval of such length that the articles are carburized to the predetermined depth.

[Claims 6 to 15 not printed in the Gazette.]

884,182. FENCE-MAKING MACHINE. DANIEL P. MALONE, Rockwood, Ala. Filed Sept. 17, 1907. Serial No. 393,368.

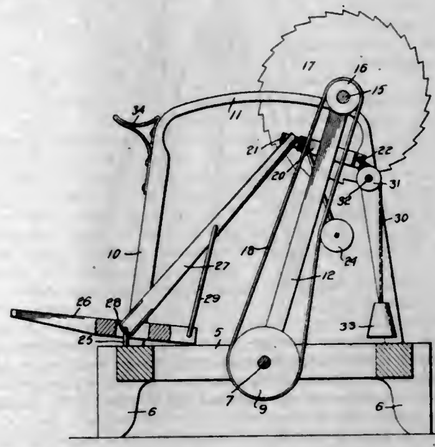
1. In a picket fence building machine, the combination of a suitable frame, means to secure the same in an upright position on the ground, said means including stays provided with loops at their outer ends, a shaft carried by said frame nearer one side of the same than to the other, sleeves provided with interengaging ratchet teeth on said shaft, staples on said sleeves by which the wires to be stretched may be secured to said sleeves, holes in said sleeves adapted to receive an instrument by which the said sleeves may be rotated to tighten the said wires, a pivoted cut away locking plate L secured to the upper portion of the said frame and adapted to hold the said ratchet sleeves in locked position, a ratchet on the lowermost of said sleeves, and a pawl on the lower portion of said frame engaging said ratchet, substantially as described.

2. In a picket fence building machine, the combination of a suitable frame, means to secure the same in an upright position on the ground, said means including stays secured to the top and bottom of said frame and provided with loops at their outer ends, a shaft carried by said frame nearer one side of the same than to the other, a plurality of sleeves provided with interengaging ratchet teeth on said shaft, the upper one of which is cut away, staples on said sleeves by which the wires to be stretched may be secured to said sleeves, holes in said sleeves adapted to receive an instrument by which the said sleeves may



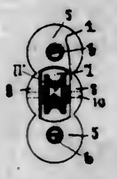
be rotated to tighten the said wires, a pivoted cut away locking plate L secured to the upper portion of the said frame and adapted to engage the cut away portion of the said upper sleeve and to hold the said ratchet sleeves in locked position, a ratchet on the lowermost of said sleeves, and a pawl on the lower portion of said frame engaging said ratchet, substantially as described.

884,183. TIMBER-SAWING MACHINE. JOHN M. MARTIN, Byrneville, Ind. Filed July 22, 1907. Serial No. 384,897.



In a device of the character described, the combination of a supporting frame, a shaft journaled therein, work supporting members carried by the frame, arms loosely engaging the shaft, a shaft mounted in the arms above the work holding members, a saw carried by said shaft, a gearing connecting the two shafts, straps connecting the arms, a foot lever pivoted to the supporting frame, a lever loosely engaging one of the straps of the arms and pivotally held by the pivot of the foot lever, said foot lever having an opening to permit such engagement, a link connecting the foot lever and the second named lever so that a movement of the foot lever will impart movement to the lever, and a weighted means engaging the remaining strap of the arms.

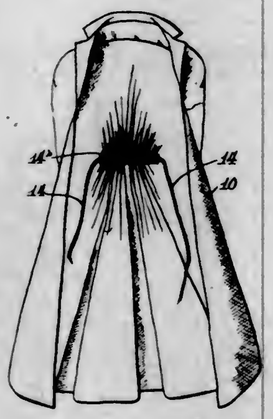
884,184. SASH-CORD GUIDE. JOHN M. MARTIN and ELISHA J. FAIRES, McKinney, Tex.; said Faires assignor to said Martin. Filed Aug. 19, 1907. Serial No. 389,207.



1. In combination, a tubular casing having a face plate thereon, said face plate having an opening registering with the bore of the casing and forming shoulders, reinforce sections within the casing abutting against the shoulders formed by the face plate, shafts mounted in the reinforce sections, and pulleys on the shafts.

2. In combination, a tubular casing having a face plate formed integral with the casing, said face plate having an opening registering with the bore of the casing and forming shoulders, reinforce sections within the casing abutting against the shoulders formed by the face plate, shafts mounted in the reinforce sections, and pulleys on the shafts.

884,185. GARMENT. HENRY M. MAYPER, New York, N. Y. Filed Dec. 10, 1907. Serial No. 405,932.



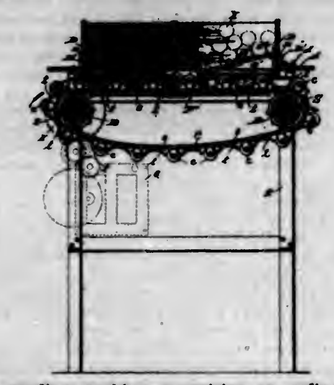
1. A garment having on its inner side oppositely arranged cords each connected with the garment at a plurality of points and in a generally transverse line, whereby the diameter of the garment can be reduced by pulling the cords.

2. A garment having on its inner side a series of eyelets in a line generally transverse of the garment and cords extending from and connected with the eyelets, said cords being oppositely arranged and attached to the garment at a plurality of points so that by pulling them the diameter of the garment is reduced.

3. A garment having on its inner side a strip with a transversely arranged line of eyelets or keepers thereon, oppositely arranged cords extended through and connected with said eyelets or keepers at various points, and a cover for the said cords and eyelets or keepers.

4. The combination with the garment of groups of cords attached at different points of the garment and each group extending through suitable guides in opposite directions, attachment being made at different points along a generally transverse line on the garment.

884,186. CIGAR-VENDING MACHINE. MILO R. MEREDITH, Wabash, Ind. Filed Oct. 8, 1907. Serial No. 396,873.



1. A vending machine, comprising an endless carrier belt with receiving cells, and one or more hinged wings arranged at an incline above the carrier belt and oscillated by the same to promote the transfer to the belt of the superposed articles to be vended.

2. A vending machine, comprising an endless carrier belt having transverse rollers forming cells between them and one or more hinged wings arranged at an incline above the carrier belt and oscillated by the passage of said rollers.

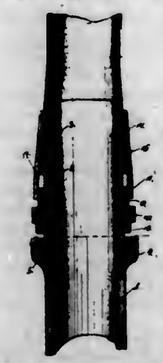
3. A vending machine, comprising an endless carrier belt with transverse receiving cells, and one or more oscillating wings hinged on an axis transverse to the belt above the same and having a roller along its free edge riding upon and agitated by the belt.

4. A vending machine, comprising an endless carrier belt having transverse rollers forming cells between them and one or more hinged wings arranged at an incline above the belt and riding upon the rollers and having underneath the same a stop to limit the downward movement of the hinged wings.

5. A vending machine, comprising an endless carrier belt having transverse cells and two superposed wings hinged at their outer edges transversely to the belt and converging downwardly toward each other in the middle and having beneath them stops resting upon the carrier to limit the downward movement of the wings.

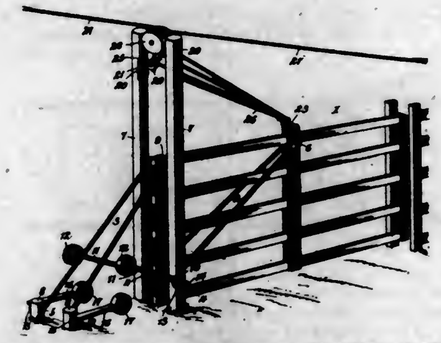
[Claims 6 to 11 not printed in the Gazette.]

884,187. HOSE-COUPLING. ALEXIS A. MINORSKY, Wilkinsburg, Pa. Filed June 11, 1907. Serial No. 378,413.



In a hose coupling, the combination with a hose having a flared end, of a pipe member having a tapering end adapted to fit in the flared end of said hose, a circumferentially-extending peripheral flange carried by said member and forming an annular socket, a circumferentially-extending resilient arm arranged in said socket and having an extension projecting through said flange, a collar threaded upon said pipe member and having a ratchet end adapted to enter said socket and engage said arms, and a tapering sleeve fitting over said hose and screwed upon said collar.

884,188. GATE. WILLIAM H. MITCHELL, Aurora, Nebr., assignor of one-half to Christian C. Grosshans, Aurora, Nebr. Filed Nov. 30, 1907. Serial No. 404,565.



1. The combination with a gate, of oscillatory gate-carrying members, and weighted oscillatory arms arranged to be alternately actuated by the said members.

2. The combination with a gate, of oscillatory gate-carrying members, oscillatory weighted arms, and means connected with the said members and arranged to alternately engage the arms during the opening and closing movements of the gate to assist the starting of the gate and to retard the same at the end of its movement.

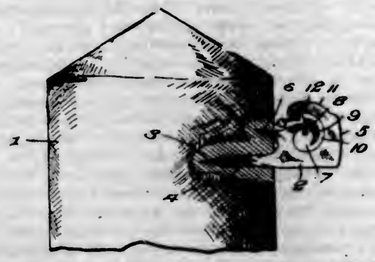
3. The combination with a gate, of oscillatory gate-carrying members, oscillatory weighted arms extending in opposite directions, and lugs or projections connected with the said members for alternately engaging the arms.

4. The combination of a gate, front and rear oscillatory gate-carrying members provided at their lower ends with laterally extending pivots, weighted arms mounted on the said pivots, and means connected with the pivots for alternately engaging the weighted arms.

5. The combination of a gate, front and rear oscillatory gate-carrying members provided at their lower ends with laterally extending pivots, weighted arms mounted on the said pivots, and lugs or projections extending from the pivots and arranged to engage the arms.

[Claims 6 to 8 not printed in the Gazette.]

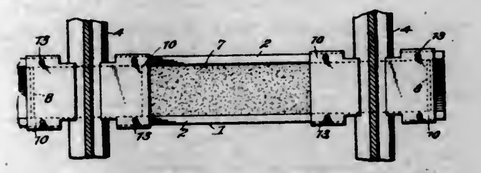
884,189. WIRE-FASTENER. JOHN R. MULLIN and WILLIAM B. WILLIAMS, Rome, N. Y. Filed Sept. 6, 1907. Serial No. 391,670.



1. An article of manufacture, comprising a fastener, having a prong extending from one end thereof, barbs on said prong, a spur above said prong, and at an angle thereto, said fastener having an opening extending inwardly from the upper edge thereof, a curved finger extending into said opening from one edge thereof, an auxiliary finger extending over the curved finger from the opposite side of the opening and at a distance from the curved finger to form a path, and shoulders on said curved and auxiliary fingers to form an offset in the path.

2. The combination with a post, of a fastener having an opening extended inwardly from the upper edge thereof; a shank extending from one end of said fastener, barbs on said shank, a spur extending from the same end of said fastener and above said shank, a curved finger extending into said opening, from one edge of the opening, an auxiliary finger extending over said curved finger from the opposite edge of the opening, coöperating shoulders on said curved and auxiliary fingers, said fingers being spaced apart to form a path.

884,190. RAIL-TIE. COLONEL A. MURPHY, Chatfield, Minn. Filed July 19, 1906, Serial No. 326,892. Renewed Nov. 25, 1907. Serial No. 403,696.



1. A tie of the class described comprising the combination with a tie proper having ledges at its upper edges and ways in said ledges, said ledges having a plurality of vertically disposed openings therethrough adjacent the ways and at each side thereof; of blocks in each end of said tie, a composition block between said end blocks, plates engaging said ledges and extending over the base of rails on the tie, said plates having a vertical opening in each edge thereof adapted to register with the vertically disposed openings in the ledges and a bolt adapted to extend through said openings and one of the openings in the ledges to lock the plates in position.

2. A tie of the class described comprising a trough-like tie proper having transverse ways in the upper edge thereof, outwardly directed ledges at the upper edge of said tie, a block disposed in each end of said tie, bolts disposed through the tie to retain said blocks in the tie, means in said tie to dispose said blocks apart, locking members having channels at their edges adapted to engage the ledges of said tie and lock rails in said ways, and means disposed through said members and ledges to secure said members in position.

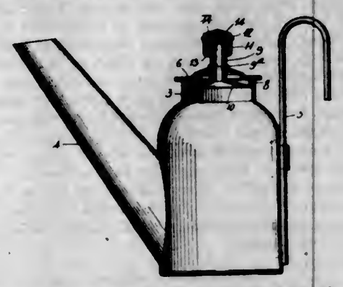
3. The combination with a tie, and ledges on said tie, of a locking member, channels on said locking member to engage said ledges, said locking member and ledges having openings therethrough, a bolt extending through said openings to adjustably secure said member upon said tie, and means on said locking member adapted to engage the base of a rail and lock the same on the tie.

4. The combination with a tie having blocks therein and ledges on said tie, of locking members, channels on said locking members, downwardly projecting terminals on said channels, said terminals being tapered at one end, and an insert plate adapted to be disposed between the inner ends of the locking members and the rail base.

884,191. MINER'S LAMP. CHARLES MURRAY, Trevorton, Pa., assignor of one-half to Charles O'Connor, Trevorton, Pa. Filed July 26, 1907. Serial No. 385,692.

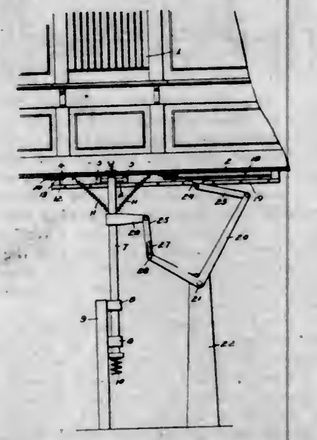
The combination with a miner's lamp including a reservoir provided with a filling opening, of a closure for the filling opening, said closure consisting of a top plate provided with a laterally flaring annular flange, the lower edge of which is adapted to frictionally engage the inner wall of the filling opening, a tubular member carried by

and projecting above and below the top plate, the passage of the tubular member communicating directly with the reservoir, a downwardly and laterally inclined plate



secured to the lower end of the tubular member and to the flange, said plate reinforcing the member and the flange, and a valve cap mounted on the tubular member.

884,192. TRAP-DOOR. WILLIAM O. MCCAIN, Mathiston, Miss., assignor of one-half to Joseph B. Atkins, Mathiston, Miss. Filed Nov. 6, 1907. Serial No. 400,979.



1. The combination with a sliding standard, of a trap door forming a movable section of a floor and having a jointed and folding connection with the said standard, supporting means for holding the trap door in line with the floor, and means for withdrawing the door support.

2. The combination with a trap door forming a section of a floor, and means for supporting said door in the same plane with the floor, of means for withdrawing the door support to release the door, and a movable standard for guiding the movement of the door away from the door opening, said door being hinged to the standard.

3. The combination with a movable trap door forming a section of a floor, of means for supporting said trap door in the plane of the floor, means for withdrawing the door support to release the door, a movable standard to which the trap door is hinged, guiding means for said standard, and a bumper or cushion for said standard.

4. The combination with a movable trap door forming a section of a floor, of means for supporting said trap door in the plane of the floor, means for withdrawing the door support to release said door, a sliding standard upon which the door is pivotally mounted and one or more springs interposed between the standard and door, operating to tilt the door on the standard as the door moves downward.

5. The combination with a movable trap door forming a section of a floor, a sliding standard on which the door is pivotally mounted and supporting means for said door, of means for withdrawing the door support to release the door, an auxiliary door, and lever connections between the standard and auxiliary door whereby as the trap door moves downward the auxiliary door is moved into position to close the opening occupied by the trap door.

884,193. VEHICLE STEERING MECHANISM. WILLIAM MCGLASHAN, Cleveland, Ohio, assignor to The Winton Motor Carriage Company, Cleveland, Ohio. Filed Nov. 12, 1904. Serial No. 232,455.



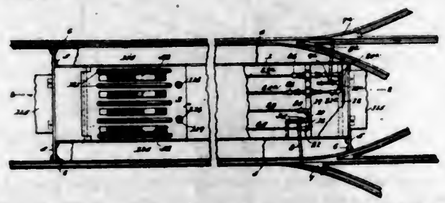
1. An improved vehicle steering mechanism, comprising a supporting casing, a rotatable steering post having a longitudinal bearing and also a transverse thrust-bearing in the casing, a longitudinally-movable sleeve located within the casing and having internal screw-threads, the steering post having external screw-threads engaging the threads of the sleeve, means for preventing the rotation of the sleeve, and a connection between the sleeve and the steering wheels of the vehicle.

2. An improved vehicle steering mechanism, comprising a supporting casing, a rotatable steering post journaled therein and having screw-threads at its lower end, a longitudinal sleeve slidably mounted in said casing and having an internally screw-threaded opening receiving the screw-threaded end of the post, the lower end of said sleeve having forked members, a transverse bolt rigidly supported between said members, a block loosely mounted upon said bolt and an intermediately pivoted lever having one end bifurcated and fitting closely over the block and its opposite end adapted to be connected with the vehicle steering wheels.

3. An improved vehicle steering mechanism, comprising a supported casing, having an enlarged upper end, a rotatable steering post journaled therein and having a rigid annular flange resting upon the shoulder formed by the enlarged upper end, means within said enlarged upper end of the casing to prevent the upward movement of the flange, the lower end of the steering post screw-threaded, a longitudinal sleeve slidably mounted in said casing and having an internally screw-threaded opening to receive the screw-threaded end of the post and an intermediately pivoted lever having one end pivotally connected to the lower end of said sleeve and its opposite end adapted to be connected with the vehicle steering wheels.

4. An improved vehicle steering mechanism, comprising a supported casing having an enlarged upper end internally screw-threaded adjacent its upper end, a rotatable steering post journaled therein and having a rigid annular flange intermediate its ends and within the enlarged upper end of the casing and upon the shoulder formed therein, a sleeve screwed within the said enlarged upper end of the casing and engaging the upper face of the flange carried by the post to prevent the upward movement of the post, the lower end of the post having a screw-threaded portion, a longitudinal sleeve slidably mounted in said casing and having an internally-screw-threaded opening receiving the screw-threaded end of the post, the lower end of said sleeve having forked members, a transverse bolt rigidly supported between said members, a block loosely mounted upon the bolt, and an intermediately pivoted lever having one end bifurcated and fitting closely over the block and its opposite end adapted to be connected with the vehicle steering wheels.

884,194. STREET-RAILWAY SWITCH. PETER MCGRATH, Denver, Colo. Filed July 11, 1907. Serial No. 383,264.



1. The combination with the switch point, of means for operating the same comprising a casing, a vertical shaft within the casing, said shaft being provided with a crank arm at its lower end, a connection between the crank arm and the switch point whereby the oscillation of the shaft will move the point, a lever connected by its center to the upper end of the shaft, a shaft arranged transversely of the casing, a plurality of disks journaled on the shaft, a link connecting each end of the lever with one of the disks, whereby the oscillation of the disks will oscillate the shaft, pins traversing the disk near the periphery thereof and projecting upon each side, swinging levers having one end forked to receive the disk, the lower edges of the forked portion being notched to engage the pins, said levers having cam-shaped surfaces projecting above the casing, springs for supporting said swinging levers, means on a moving car for engaging the cam-shaped surface of either of the levers to depress the same whereby to oscillate the corresponding disk, and yielding means in connection with the shaft for retaining the switch point in the position into which it is moved.

2. The combination with the switch point, of means for operating the same comprising a casing, a vertical shaft journaled in the casing and provided with a crank arm at its lower end, a connection between the crank arm and the point, a shaft arranged transversely of the casing, a pair of disks journaled on the shaft, a connection between the shaft and the disks, whereby the oscillation of one of the disks to move the shaft will oscillate the other disk in the opposite direction, pins traversing the disk near the periphery thereof and projecting upon each side, swinging levers having one end forked to receive the disk, the lower edges of the forked portion being notched to engage the pins, said levers having cam-shaped surfaces projecting above the casing, springs for supporting the levers, means on a moving car for engaging the cam-shaped surface of either of the levers to depress said lever, and means in connection with the shaft for retaining the switch point in the position into which it is moved.

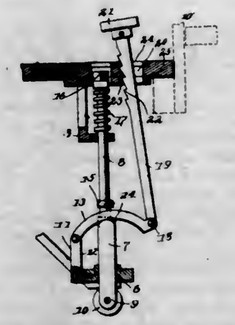
3. The combination with the switch point, of means for operating the same comprising a casing, a vertical shaft journaled within the casing, a connection between the shaft and the switch point whereby the oscillation of the shaft will move said point, a shaft journaled transversely of the casing, a plurality of disks journaled on the transverse shaft, a connection between the vertical shaft and the disks whereby the oscillation of one disk to move the shaft will oscillate the other disk in the opposite direction, pins traversing the disks near the periphery thereof and projecting upon each side, swinging levers for engaging the pins to oscillate the disks, springs for supporting the levers, said levers having cam-shaped surfaces projecting above the casing, means on a moving car for engaging the cam-shaped surface of either of the levers to depress said lever, and means in connection with the shaft for retaining the switch point in the position into which it is moved.

4. The combination with the switch point, of means for operating the same comprising a casing, a vertical shaft journaled within the casing, a connection between the shaft and the switch point whereby the oscillation of the shaft will move the point, a plurality of disks journaled in the casing on a horizontal axis, a connection between each of the disks and the shaft, whereby the oscillation of one disk to move the shaft will oscillate the other disk in the opposite direction, a swinging lever in connection with each disk, each provided with a cam-shaped surface projecting above the casing, means on a moving car for engaging the cam-shaped surface of either of the levers, whereby to depress the same, a connection between the levers and the respective disks whereby the depression of the lever will oscillate the disk, springs for supporting the levers and means in connection with the vertical shaft for retaining the switch point in the position into which it is moved.

5. The combination with the switch point, of means for operating the same comprising a vertical shaft, a connection between the shaft and the switch point whereby the oscillation of the shaft will move the point, a plurality of disks journaled on a horizontal axis, a connection between each of the disks and the shaft, whereby the oscillation of one disk to move the shaft will oscillate the other disk in the opposite direction, swinging levers each provided with a cam-shaped surface, means on a moving car for engaging the cam-shaped surface of either of the levers, whereby to depress the same, a connection between the levers and the respective disks whereby the depression of the lever will oscillate the disk, and means in connection with the vertical shaft for retaining the switch point in the position into which it is moved.

[Claims 6 to 24 not printed in the Gazette.]

884,195. STREET-RAILWAY SWITCH. PETER MCGRATH, Denver, Colo. Filed Dec. 5, 1907. Serial No. 405,181.



1. The combination with the car, of switch operating mechanism comprising a plate secured to the platform and provided with an integral bracket, a cross bar provided with a square opening supported by the plate and depending therebelow, a shaft having a square portion slidable through the opening and a round portion slidable in the bracket, said shaft having its upper end headed, a spring arranged between the head and the bracket, a roller journaled in the lower end of the shaft, a bracket secured to the cross bar, a pair of curved arms pivoted to the bracket, said arms being arranged on each side of the shaft, the shaft having shoulders for engagement by the lower edges of the arms, and a collar for engagement by the upper edges, a bar slidable through the platform and connected with the ends of the arms, said bar being provided with

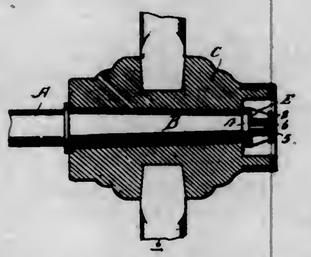
teeth on one edge thereof, the platform having a catch for engagement by the teeth, and a treadle on the upper end of the bar.

2. The combination with the car, of switch operating mechanism, comprising a spring supported shaft, a roller in the lower end of the shaft, and means for depressing the shaft, said means comprising a pair of curved arms mounted for swinging movement, the shaft being between the arms and having projections above and below the arms for engagement thereby, a bar slidable through the platform and provided with teeth on one edge thereof, the platform having a catch for engagement by the teeth, and a treadle on the bar.

3. The combination with the car, of switch operating mechanism comprising a spring supported shaft, a roller in the lower end of the shaft, means for depressing the shaft comprising swinging arms fixed at one end and engaging the shaft, a bar slidable through the platform and connected with the free ends of the arms for swinging the same, means for retaining the bar in its lowered position, and a treadle on the upper end of the bar.

4. The combination with the car, of switch operating mechanism comprising a spring supported shaft, a pair of swinging arms fixed at one end and engaging the shaft, a bar slidable through the platform and connected with the free ends of the arms for swinging the same, and a treadle on the upper end of the bar.

884,196. NUT-RETAINING DEVICE. PATRICK H. MCTIGUE, Chicago, Ill. Filed Oct. 11, 1907. Serial No. 397,026.



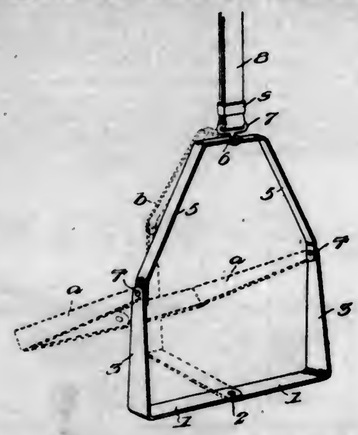
1. The combination of a member having radially extending projections, a nut applied to the member and having recesses for receiving the projections and locked in position by the latter when the nut is partially turned, and a retaining device applied to the nut and engaging both projections and having extremities disposed across the projections for preventing turning of the latter.

2. The combination of a member having outwardly extending projections, a nut having recesses for receiving the projections and intermediate tongues adapted to engage behind the projections, and a wire key applied to the nut and engaging the projections for preventing turning of the nut.

3. The combination of a nut comprising a disk having an aperture and recesses extending from the aperture, a second apertured disk, and connecting bars between the disks, with a member having projections adapted to enter the said recesses and adapted to engage the first-mentioned disk for holding the nut in position, and a locking key inserted between certain of the cross bars and projections of the member for preventing relative turning of the member and nut.

4. The combination of a nut comprising spaced disks having apertures, and cross bars connecting the disks, one of the disks having arcuate tongues at its aperture, with a member provided with projections adapted to engage the tongues for preventing the longitudinal movement of the nut and member, and a key inserted between the projections and certain of the cross bars for preventing relative turning of the nut and member, said key having arms disposed to prevent the insertion or removal of the key except when the latter is held in a definite position.

884,197. SAFETY-STIRRUP. STEPHEN P. MCTIGUE, Nemaha, Iowa. Filed Sept. 19, 1907. Serial No. 393,651.

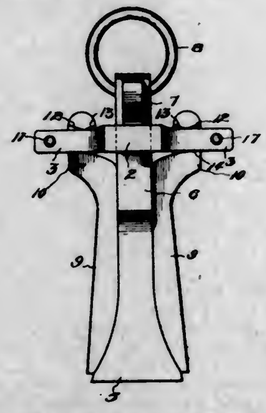


1. A safety stirrup comprising a sectional foot piece pivotally connected together and a sectional support pivoted to the foot pieces and pivotally connected to the supporting strap.

2. A safety stirrup comprising a foot piece made in two sections connected together by a central pivot, side bars formed on said foot piece, supporting bars pivotally connected to said side bars, and a supporting loop having a pivot connecting the upper ends of said supporting bars together.

3. A safety stirrup comprising a foot piece made in sections pivotally connected together, side bars formed on said foot piece, supporting bars pivotally connected to said side bars, a stirrup strap supporting loop, provided with a stud to which the upper ends of said supporting bars are pivoted and a stirrup strap passed through said loop.

884,198. LEWIS. PHILIP NEDDO, Barre, Vt. Filed July 23, 1907. Serial No. 385,145.



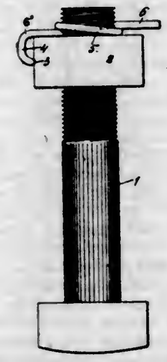
1. A lewis comprising a head provided with an opening and with oppositely projecting pairs of relatively spaced arms, a jaw provided with a head having a shank portion adapted to be received between each pair of arms, said head being provided with shoulders forming fulcrum points adapted to rest upon the arms, and a spreader provided with a shank portion adapted to project through the opening in the head.

2. A lewis comprising a head provided with an opening and with oppositely projecting pairs of relatively spaced arms, a jaw mounted upon and between each pair of arms, and a spreader provided with a shank portion adapted to project through the opening in the head.

3. A lewis comprising a head provided with an opening and with oppositely projecting arms, jaws mounted upon the arms and a spreader provided with a shank portion projecting through the opening in the head.

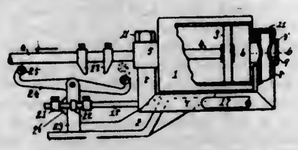
4. A lewis comprising a head provided with an opening and with oppositely projecting arms, jaws fulcrumed and slidably mounted upon the arms and a spreader provided with a shank portion projecting through the opening in the head.

884,199. NUT-LOCK. JAMES W. NORTH, Allegheny, Pa. Filed Dec. 5, 1907. Serial No. 405,174.



The combination with a bolt, and a nut thereon, of a lock for the nut, formed from a single piece of wire bent intermediate its ends to form a loop or coil to encircle the bolt, the remaining portions of said wire extending in opposite directions from the loop and forming arms of unequal length, the longer of which has its free end bent over the nut to engage with a recess provided in the latter, said longer arm lying in engagement with the nut, and the shorter arm being free from engagement with the nut, the said loop being provided on a portion of its inner face with teeth to engage the threads of the bolt, as and for the purpose described.

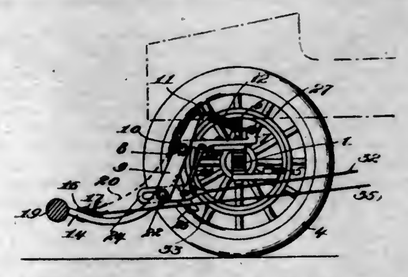
884,200. HYDRAULIC MOTOR. WILLIAM C. OBERNESSER, Newport, Ky., assignor to The Princess Manufacturing Company, Newport, Ky., a Corporation of Kentucky. Original application filed Sept. 10, 1906, Serial No. 333,937. Divided and this application filed June 8, 1907. Serial No. 377,843.



1. In a hydraulic motor, the combination of stems provided with valves, stops adjustably connecting the stems together, a rocker arm actuated by the piston into contact with the stops, and spring actuated mechanism arranged to complete the rocking movement of the arm for moving the stops with the valves simultaneously.

2. In a hydraulic motor, the combination of stems provided with valves, stops connecting the stems together, a piston, a rocker arm actuated thereby into contact with the stops alternately, and spring actuated mechanism released thereby for moving and yieldingly maintaining the arm with the stops and valves in predetermined positions.

884,201. FENDER AND BRAKE ATTACHMENT FOR AUTOMOBILES. JOHN O'LEARY, Cohoes, N. Y., assignor of one-half to Edward Penrose, Cohoes, N. Y. Filed Dec. 24, 1907. Serial No. 407,881.



1. In an automobile, car or the like, the combination with the front axle, front wheels, and movable connections carried by the axle and to which the wheels are attached, of a fender secured to the said movable connections and having its rear portions located wholly within the sides of the wheels.

2. In an automobile, or like vehicle, the combination with the front axle, front wheels having braking means, and movable connections carried by the axle and to which the wheels are attached, of a fender connected to the movable connections, and brake attachments coöperating with portions of the fender.

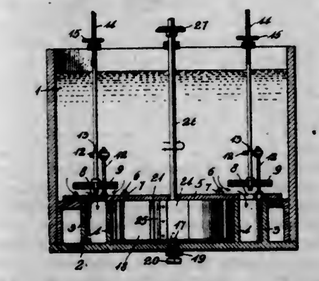
3. In an automobile, or like vehicle, the combination with the front axle, front wheels, and movable connections carried by the axle and to which the wheels are attached, of a fender attached to said connections and positioned in advance of the front wheels to turn in unison with the said wheels and having its attached extremity wholly within the inner sides of the wheels.

4. In an automobile, or like vehicle, the combination with the front axle, of a fender carried by and movable with portions of the axle and positioned in advance of the front wheels, and means for automatically elevating the fender after the latter has been depressed.

5. In an automobile, or like vehicle, the combination with the front axle and wheels on the latter, of a fender in advance of the wheels and operative to turn in unison with said wheels, and means for automatically elevating the fender after the latter has been depressed.

[Claims 6 to 17 not printed in the Gazette.]

884,202. WATER-WHEEL. WILLIAM J. PEARSON, Winchester, Oreg. Filed Sept. 9, 1907. Serial No. 392,022.



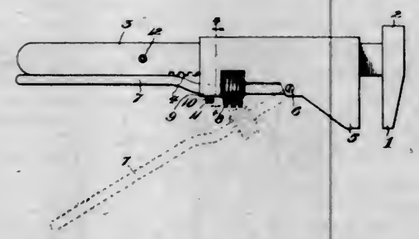
1. In a water wheel, the combination with a flume, of a casing arranged therein, said casing having water discharge passages formed in its lower side, a water wheel revolubly mounted in said casing, a removable cover arranged on the latter, said cover having formed therein water inlet passages, vertically adjustable gates adapted to open and close said passages, guide frames arranged on said cover to hold and guide said gates in their move-

ment, threaded operating rods secured to said gates and held in operative position by said guide frames, interiorly threaded hand wheels adapted to be engaged with the threaded upper ends of said rods whereby the latter are actuated to open and close said gates, substantially as described.

2. In a water wheel, the combination with a flume, of a wheel-casing arranged therein, said casing having inlet and discharge passages, beveled deflecting plates arranged in said casing, and forming therein oppositely disposed water-receiving pockets, an adjustable pivot pin arranged in the center of the bottom of said casing, a water wheel pivotally mounted on the inner ends of said pin, wings pivotally mounted on said wheel, a centrally disposed power-transmitting shaft secured to the wheel and projecting upwardly through said casing, a power-transmitting gear on the upper end of said shaft, vertically operating gates adapted to open and close the inlet passages of said casing, threaded operating rods connected to said gates, and threaded adjusting wheels on the upper ends of said flume, said wheels having a threaded engagement with said rods whereby the gates are opened and closed, substantially as described.

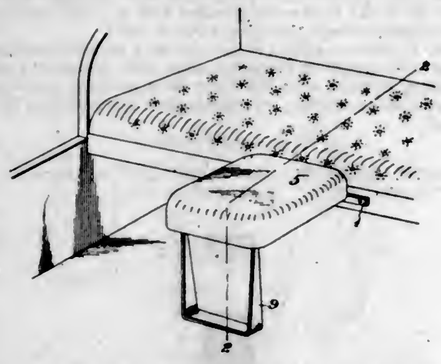
3. In a water wheel, the combination with a flume, of a casing arranged therein, said casing having inlet and discharge passages, obliquely disposed deflecting plates arranged in said casing, a water wheel revolubly mounted in the latter, said wheel having radially disposed recesses formed in its periphery, a series of radially disposed water-engaging wings carried by said wheel, said wings having a pivotal connection midway between their ends with the outer sides of the wheel, whereby one of said wings is adapted to engage with the recess in the wheel when in an open or operative position, a curved outer surface formed on one side of said wings, whereby when the latter are folded to an inoperative position, said curved outer surface will form a continuation of the outer surface of the wheel, vertically adjustable, horizontally-disposed closing plates adapted to open and close the inlet passages in the casing, guide frames to hold and guide said gates in their movement, threaded adjusting rods connected to the upper sides of the gates and adapted to extend to the upper end of said flume, and hand wheels screwed on said adjusting rods to open and close the gate, substantially as described.

884,203. WRENCH. CHARLES S. PEDERSON, Grantsburg, Wis. Filed July 9, 1907. Serial No. 382,882.



The herein described wrench comprising a rigid jaw member provided with a shank extending therefrom, said shank having teeth upon one edge thereof, a jaw mounted to slide on said shank, a lever pivoted to said sliding jaw and having an adjusting nut mounted to rotate thereon, said nut extending through an aperture in the sliding jaw to engage the teeth on the shank, said lever being adapted to be swung away from the shank to permit the sliding jaw member to be quickly adjusted, a spring button secured to said sliding jaw member for holding said lever in position for the adjusting nut to engage the teeth on the shank, said lever extending beyond the shank and lying flat against the shank when the nut is engaged to prevent said lever from swinging outward and releasing the nut.

884,204. FOLDING SEAT FOR VEHICLES. HERBERT H. PIPER, Jackson, Mo., assignor of thirteen-twentieths to R. T. Henderson, Jackson, Mo. Filed July 29, 1907. Serial No. 386,169.



1. The herein described folding seat for vehicles, comprising a body portion, a pair of straps secured to the under side thereof, the rear ends of which straps are bent downward, and the forward ends of which straps are bent downward, and bifurcated, and a U-shaped leg, the upper ends of which are pivotally connected to the bifurcated forward ends of the straps.

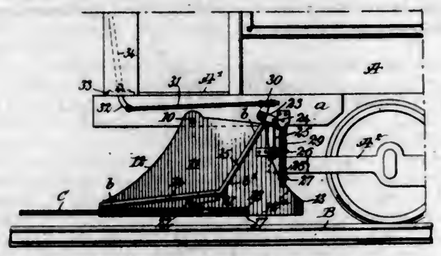
2. The combination with a vehicle and its seat, of a socket plate secured to the front face of the seat rail, an auxiliary seat, a pair of straps secured to the under side thereof, the rear ends of which straps are bent downward and adapted to engage the socket plate, the forward ends of which straps are bent downward and bifurcated, and a U-shaped leg, the upper ends of which are pivotally connected to the bifurcated forward ends of the straps.

884,205. BUTTON. WILLIAM RAUM, Etna, Pa. Filed June 5, 1906. Serial No. 320,245.



An article of the class described comprising a rectangular metallic body portion having each corner at one end terminating in a depending rounded portion which merges into an elongated prong, said prongs diverging with respect to each other, and said rounded portions constituting spring-hinged connections between the prongs and the body portion, said body portion at its other end terminating in a vertically-extending depending portion of greater height than the rounded portions at the other end of the body portion, said vertically-extending portion merging into a pair of transversely-extending wings at a point removed from the outer end of each of the wings, the outer free portion of each wing being of less width than the inner portion, said outer portion bent upwardly in a curvilinear manner and the inner free portion of said wings have a part thereof bent upwardly in a curvilinear manner, said curvilinear part of the inner portion of the wing terminating in a transversely-extending part, the curvilinear portions of each wing in connection with that portion which is formed integral with said vertically-extending portion forming sockets to receive the free end of the prongs, said transversely-extending portion of each of the wings arranged in transverse alinement and terminating at a point removed from each other, and a button secured to the body portion.

884,206. CAR-FENDER. CHARLES R. REEVES, Fairhaven, Mass. Filed Aug. 8, 1907. Serial No. 387,615.



1. In a car fender, pivotally mounted cheek pieces, a fixed bottom and back section connecting the cheek pieces, an auxiliary bottom mounted to slide on the cheek pieces, a locking device for the auxiliary bottom, and means for rocking the fender on its pivotal support.

2. In a car fender, pivotally mounted cheek pieces, a fixed bottom and back section connecting the cheek pieces, an auxiliary bottom mounted to slide on the cheek pieces, a locking device for the auxiliary bottom, and means for rocking the fender on its pivotal support, and a tensioning mechanism that retains the fender in normal position, being compressed when the fender is rocked.

3. In a car fender, the combination with pivotally mounted cheek pieces, a bottom and a back section secured to the said cheek pieces, slide-ways located at the bottom inner portion of the cheek pieces, an auxiliary bottom member fitted to the said slideways, and a locking device for the said auxiliary bottom member of a rock shaft, a lever connected with said shaft, crank arms extending from said rock shaft, members extending rearwardly from the cheek pieces, links, connecting the said members and the said crank arms, and springs having bearing upon the upper and the lower faces of the said rearwardly extending members.

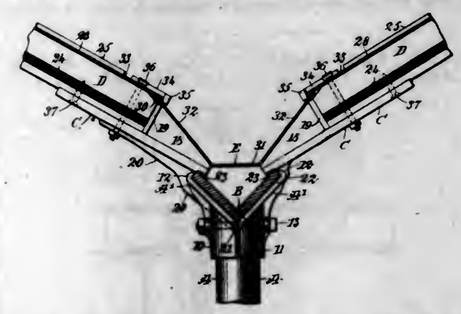
4. In a car fender, the combination with cheek pieces and a stationary bottom and back sections located between the cheek pieces, of an auxiliary sliding bottom, and a locking device therefor.

884,207. HARNESS-BUCKLE. JOHN REICHERT, Racine, Wis. Filed Mar. 8, 1905. Serial No. 249,084.



As an article of manufacture, a buckle consisting of the intermediate guard plate provided with a short straight stud projecting inwardly about from the central portion of its inner face, a lower loop extending downwardly and inwardly from said plate and at an angle thereto, and an upper loop projecting upwardly from and at an angle to said plate and having the outer longitudinal edges of its side bars curved upwardly and inwardly from said plate and having a top flat cross bar, with an inclined outer face arranged with respect to the upper edge of said plate to coöperate therewith in deflecting a strap passing through the buckle to hold said flat cross bar and the side bars of the buckle from engagement with the animal, substantially as described and shown.

884,208. GREENHOUSE CONSTRUCTION. JOSEPH H. RICE, Ashtabula, Ohio. Filed Jan. 10, 1907, Serial No. 351,633. Renewed Feb. 8, 1908. Serial No. 414,985.



1. In a greenhouse construction, a supporting girder shaped to constitute an inner or secondary gutter, an outer or roof gutter supported above and independent of said secondary gutter, sash bars supported by the said girder and serving as supports for the main or roof gutter, the said girder or secondary gutter being fully exposed to the heated air within the greenhouse, the said main or roof gutter being constructed of thin metal, and means for conducting the products of condensation from the glass of the greenhouse and the sash bars to the said girder or secondary gutter the side walls of the gutter being arranged beneath the glass, and clamps secured to the sash bars and having heads for engaging the side walls of the main gutter whereby to retain them in place.

2. In a greenhouse construction, a supporting girder, gutter shaped in cross section and adapted to constitute an inner or secondary gutter for the roof system, brackets extending from opposite sides of the girder, means for locking the brackets to the girder, sash bars the inner ends of which are supported by said brackets, panes of glass supported by the sash bars, and a main or outer gutter located over the girder or secondary gutter independent of the latter and supported by said brackets, the upper edges of the main gutter extending to an engagement with the under faces of the panes carried by the bracket-supported sash bars and clamps secured to the sash bars and having heads for engaging the edges of the main gutter whereby to retain them in place.

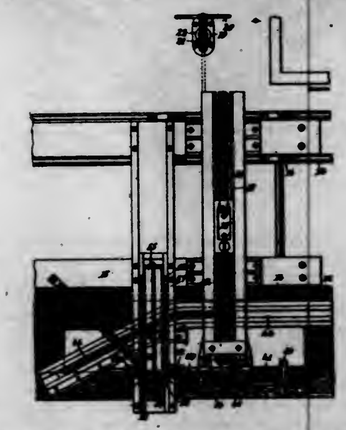
3. In a greenhouse construction, a supporting girder, brackets having locking engagement with the girder, which brackets extend over the said girder and are provided with side flanges and with transverse lugs separated from the flanges, an abutment formed upon each bracket, and a sash bar for each bracket engaging with the abutment thereof and resting upon the lugs of the bracket.

4. In a greenhouse construction, the combination with a V-shaped supporting girder and brackets having locking engagement with the girder, said brackets extending over the girder and being provided with side flanges, transverse lugs and angle webs at their inner ends, the lugs being spaced from the side flanges and the said girder being adapted as an inner or secondary gutter, of sash bars the inner ends of which engage with the angle webs of the brackets the bottom of their inner portions being made to rest on the lugs of the brackets, a roof gutter located above yet independent of the girder, the side portions of which roof gutter are supported by said angle webs, panes of glass fitted to the sash bars, extending over the upper edges of the roof gutter, clamps for the roof gutter carried by the sash bars and acting as stops for the lowermost panes of glass, and means for conducting products of condensation from the glass and the sash bars to the said girder or secondary gutter.

5. In a greenhouse construction, a gutter, a plurality of sash bars inclined toward the gutter and having their lower ends supported thereby, each of said sash bars being provided upon its upper face with a central longitudinal rib, said upper face being inclined downwardly and inwardly upon each side of the rib, said rib being cut away

at the lower end of the sash bar, an auxiliary gutter having its side resting against said lower end, and a clamp secured to the sash bar at the cut away portion, and engaging the side of said auxiliary gutter.

884,209. SAWMILL SET-WORKS. NORMAN E. RICE, Zenia, Cal. Filed Apr. 17, 1906. Serial No. 312,138.



1. A saw mill set works comprising a setting gear mounted on the saw mill carriage, a part adapted to be engaged by said gear to actuate the same, a set works carriage mounting the said part, gearing for adjusting the said part independently of the adjustment of the set works carriage, said gearing comprising an element moving with the set works carriage, and a relatively stationary drive shaft on which said element is splined.

2. A saw mill set works comprising a setting gear mounted on the saw mill carriage, a part adapted to be engaged by said gear to actuate the same, a set works carriage mounting the said part, gearing mounted on the carriage and in connection with said part, a relatively stationary shaft on which an element of said gearing is splined, and means for revolubly driving said shaft.

3. In a saw mill set works, a saw mill carriage, a knee mounted on the carriage, a shaft on the carriage, means for operating the knee from the shaft, gears loose on the shaft, means for alternately connecting the gears with the shaft, a yoke shaped-rack meshing with the gears, an adjustable bed at one side of the carriage, means on the bed for operating the rack, and gearing for operating the said rack operating means independently of the adjustment of the bed.

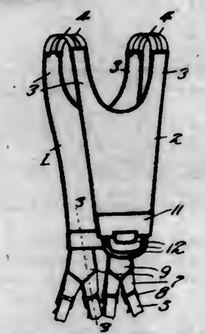
4. In a saw mill set works, a saw mill carriage, a knee on the carriage, a shaft on the carriage, means for operating the knee from the shaft, gears loose on the shaft, means for alternately connecting the gears with the shaft, a yoke shaped rack meshing with the gears, an adjustable bed at one side of the carriage, an adjustable track on the bed, and with which the said rack engages, and means for adjusting the track independently of the adjustment of the bed.

5. In a saw mill set works, the combination with a saw mill carriage, a knee thereon, and means for operating the knee, of a bed, an adjustable track on the bed for operating the knee operating means, a pinion carried by the bed and slidably mounted, means for operating the track from the pinion, and means for operating said pinion.

[Claim 6 not printed in the Gazette.]

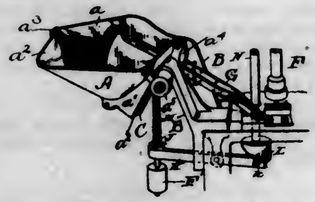
884,210. GARMENT-SUPPORTER. BESSIE M. RICHARDSON, Waxhaw, N. C. Filed Nov. 4, 1907. Serial No. 400,538.

1. The herein described garment supporter embodying front and back body portions connected by shoulder straps, a plurality of hose supporters connected to one of the body portions, and a plurality of flaps overlapping each other and secured to the other body portion of the device and adapted for the support of one or more garments, substantially as described.



2. The herein described garment supporter embodying front and rear body portions connected by shoulder straps, a plurality of overlapping flaps carried by one of the body portions and providing for the support of one or more garments, a yoke carried by the other body portion, a plurality of tabs extending downwardly from said yoke, a plurality of loops carried by each tab, and hose supporters suspended from said loops, substantially as described.

884,211. NUT-FEEDING MECHANISM. ROBERT J. RODD, Cuyahoga Falls, Ohio. Filed Oct. 14, 1905. Serial No. 282,695.



1. In a nut-blank feeding device, the combination of a hopper containing a substantially vertical plane wall, with a lifter movable in contact with said plane wall and pivoted on its axis at right angles thereto and having a rabbeted groove on its top edge and along the side thereof which is adjacent to said wall, and mechanism for oscillating the lifter upon its axis.

2. In a nut-blank feeding device, the combination of a hopper containing a substantially vertical plane wall, with a lifter movable in contact with said plane wall and pivoted on its axis at right angles thereto and having a rabbeted groove on its top edge and along the side thereof which is adjacent to said wall, and having its top edge remote from said wall inclined downwardly and outwardly from the edge of said rabbeted groove, and mechanism for oscillating the lifter upon its axis.

3. A hopper having a substantially vertical plane side, a rock shaft passing through said plane side and mounted at right angles thereto, a lifter secured to said rock shaft and projecting into the hopper in contact with said plane side, and having a rabbeted groove in its top edge adjacent to said plane side, and means for actuating said rock shaft, substantially as specified.

4. In a nut-blank feeding device, the combination of a hopper containing a substantially vertical plane wall, a rock shaft passing through said wall and mounted in bearings with its axis at right angles to said wall, a lifter secured to said rock shaft and projecting into the hopper in contact with said plane wall and having a rabbeted groove on its top surface adjacent to said plane wall, an arm secured to said rock shaft, a lever, its operating

mechanism, a spring interposed between said lever and arm for transmitting motion from the lever to the arm to rock said arm in the direction which swings said lifter upward, and a stop secured to the inner face of the vertical hopper-wall for limiting the upward movement of said lifter.

5. A hopper consisting of a substantially vertical plate a, a piece a^2 which is provided with three downwardly converging sides and has a downwardly extended flange a' which is parallel with said plate a, and two distance pieces a^3, a^4, of which the former is secured between the rear side of said parts a and a^2 and is extended down between the rear end of said plate a and the downwardly extended flange a', a rock shaft mounted in bearings on the front end of the two parts a, a^2, and crossing the space between them, a lifter secured to the rock shaft in said space and in contact with said plate a and having a rabbeted groove in its top edge adjacent to said plate,—and being of such dimensions that it will project into the well at all times and its free end will substantially contact with the lower end of said distance piece,—the distance piece a^4 being between the two parts a, a^2 above but close to the hub of said lifter, and having in its lower edge a groove a^7 which is alined with the groove in the lifter, and a downwardly inclined conveyer secured with its upper end in alinement with the groove in the lifter when the lifter is elevated, substantially as specified.

[Claim 6 not printed in the Gazette.]

884,212. FAN ATTACHMENT FOR ROCKING-CHAIRS. WILLIAM SCHEURER, West New York, N. J. Filed Nov. 20, 1907. Serial No. 402,993.



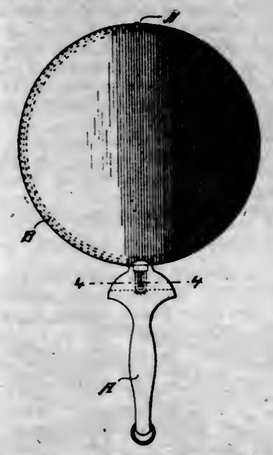
1. A rocking chair in combination with a weighted floor lever pivotally attached thereto and resting upon the floor, a frame bar attached to the chair, a driving shaft, means for rotating said driving shaft in either direction from said floor lever, one-way clutches on said driving shaft having pulleys driven respectively in opposite directions, a fan shaft, means for driving said fan shaft from both of said pulleys, and a fan carried by said fan shaft.

2. A rocking chair in combination with a weighted member resting upon the floor, a rack attached to said member and actuated thereby, means for guiding said rack, a driving shaft, a pinion carried thereby and meshing with said rack, one-way clutches carried by said driving shaft, a fan shaft, means for driving said fan shaft continuously in one direction from said clutches, and a fan on said fan shaft.

884,213. COMBINED FAN AND FLY-CATCHER. FRANK M. SCHMIDT, Jacksonville, Fla. Filed June 24, 1907. Serial No. 380,554.

1. A combined fan and fly trap, comprising a plurality of disks each having a surface of adhesive material, each of said disks having a shank portion adapted to interlock one with the other, and a handle engaged by said shank portion, as set forth.

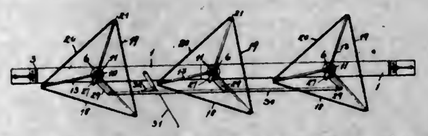
2. A combined fan and fly trap, comprising a plurality of disks each having a surface of adhesive material, each disk having a wire forming a marginal edge thereof, said wire being bent to form shank portions which are adapted to interlock, and a handle having a slotted end for the reception of said shank portion, as set forth.



3. A combined fan and fly trap, comprising a plurality of disks each having a surface of adhesive material, each disk having a wire forming the marginal edge thereof, one of said wires being bent to form a loop with a link connecting the same, the other disk having a shank portion adapted to rest within the said loop and a handle having a slotted end for the reception of said shanks, as set forth.

4. A combined fan and fly trap, comprising a plurality of disks each having a surface of adhesive material, each disk having a wire forming the marginal edge thereof, one of said wires being bent to form a loop with a link connecting the same, the other disk having a shank portion adapted to rest within the said loop, a handle having a slotted end for the reception of said shanks, and means for fastening the edges of the disks together, as set forth.

884,214. MECHANISM FOR SHIFTING STAGE-SCENERY IN THEATERS. GEORGE SCHNEIDER, Baltimore, Md., assignor of one-half to Leon A. Ferrandini, Baltimore, Md. Filed Dec. 19, 1906. Serial No. 348,592.



1. The combination with a portable platform, of a plurality of bases mounted on the platform and in line with each other; shafts sustained in each of said bases; scenery sections carried by said shafts; gears on said shafts; segment gears meshing with said shaft gears and provided with operating arms, and an operating bar connecting all of said arms.

2. The combination with a platform, of a plurality of bases on said platform; a shaft extending vertically from each base; a head on the lower end of each shaft,—said heads having a plurality of sockets; arms fitting into the sockets and radiating from said head; scene sections sustained by said arms, and means for revolving said head, arms and scene sections independently of the platform.

3. The combination with a platform, of a plurality of bases mounted on said platform; shafts mounted in said bases and projecting vertically therefrom; a head on each shaft and revolving therewith and each head having a plurality of radiating arms; a plurality of arms radiating from the shafts above said heads; scene sections sustained by said radiating arms; means for revolving said shafts,

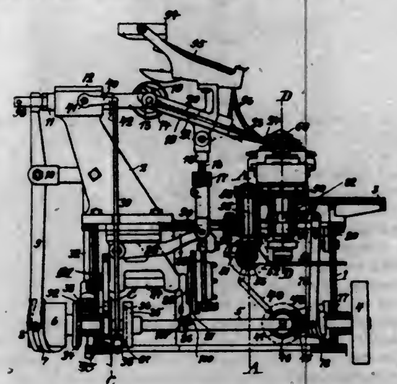
heads, radiating arms and scene sections independently of the platform, and means whereby all of said devices may be moved with the said platform.

4. The combination with a platform, of a base mounting on said platform; a pinion carried above said base; a head connected to and turning with said pinion; a plurality of arms detachably connected to said head; a shaft extending vertically above the arms; a plurality of scene sections connected at their lower ends to said arms; means connecting the upper ends of the scene sections and the shaft, and means for turning said pinion.

5. The combination with a folding portable platform of scene sections mounted on said folding platform and means for revolving the scene sections independently of the folding platform.

[Claims 6 and 7 not printed in the Gazette.]

884,215. MACHINE FOR PINNING LEATHER ON SOLES OF WOOD. WILLIAM SCHOU, Copenhagen, Denmark, and HERMANN BUSSE, Berlin, Germany. Filed July 2, 1904. Serial No. 215,201.



1. A machine for fastening leather on soles of wood or the like, comprising a sliding carriage provided with means for holding the work, a tacking device, means for imparting to the carriage an intermittent progressive movement whereby to bring each part of the periphery of the work in turn to the tacking device, means for moving the tacking device vertically to correspond with the height of that part of the work operated upon at the end of each progressive movement of the carriage, and means for clamping the carriage during each operation of the tacking device.

2. A machine for fastening leather on soles of wood or the like, comprising a table, a sliding carriage upon the table and provided with means for holding the work, a tacking device, means for imparting to the carriage an intermittent progressive movement whereby to bring each part of the periphery of the work in turn to the tacking device, means for moving the tacking device vertically to correspond with the height of that part of the work operated upon at the end of each progressive movement of the carriage, and means for adjusting the initial height of the tacking device with respect to the carriage.

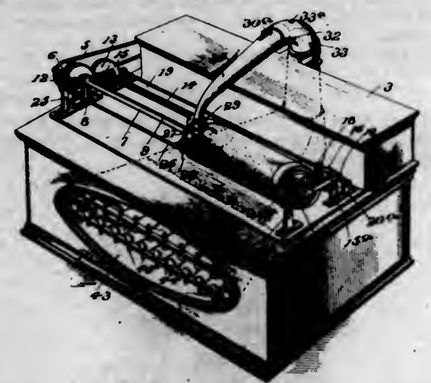
3. A machine for pinning leather on soles of wood or similar material, comprising a frame, a track upon the frame, a carriage movable upon the track and adapted to hold the work, a mechanism for driving pins into the work, means for traversing the carriage by regular intermittent movements longitudinally of the track a predetermined distance, and for reversing the carriage by regular intermittent movements at the ends of its traverse, means for actuating the pinning mechanism during each intermission, and means for clamping the carriage to the track during the operation of the pinning mechanism.

4. A machine for pinning leather on soles of wood or similar material, comprising a frame, a carriage movable longitudinally upon the frame and adapted to hold the work, a mechanism for driving pins into the work, means for traversing the carriage by regular intermittent movements longitudinally of the frame a predetermined distance, and for reversing the carriage by regular intermittent movements at the end of its traverse, means for actuating the pinning mechanism during each intermission, and means for clamping the carriage to the frame during the operation of the pinning mechanism.

5. A machine for pinning leather on soles of wood or similar material, comprising a frame, a carriage movable upon the frame and adapted to hold the work, mechanism for driving pins into the work, means for reciprocating the carriage by intermittent movements longitudinally of the frame, and for reversing the direction of length of the carriage by intermittent movements at the end of the longitudinal movement in each direction, means for actuating the pinning mechanism during each manipulation, and means for clamping the carriage to the frame during the operation of the pinning mechanism.

[Claim 6 not printed in the Gazette.]

884,216. PHONOGRAPH. HERMANN SCHRÖDER, New York, N. Y. Filed Mar. 2, 1907. Serial No. 360,158.



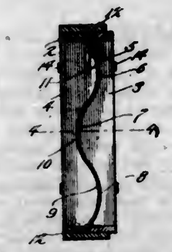
1. In a phonograph, the combination with a sound box, and its accessories, of a spindle extending across the sound box, a support on which said spindle is mounted to revolve, a cylinder holder slidable longitudinally on said spindle and revoluble therewith, a feed screw extending parallel to the spindle and mounted on said support, means for driving the spindle and feed screw, a guide rod extending parallel to the feed screw and in the rear of the latter, and a feed carriage embodying a clamping nut mounted on said screw and provided with a hinged section, and means for holding said section closed, spaced ears provided with apertures receiving said guide rod and slidable freely thereon, and a forwardly extending finger adapted to engage the rear end of the cylinder holder.

2. In a phonograph, the combination with a sound box, and its accessories, of a spindle extending across the sound box, a support on which said spindle is mounted to revolve, a cylinder holder slidable longitudinally on said spindle and revoluble therewith, a feed screw extending parallel to the spindle and mounted on said support, means for driving the spindle and feed screw, a guide rod extending parallel to the feed screw and in the rear of the latter, a carriage mounted on said screw and fed along the same by the revolution of the screw, said carriage being adapted to engage the rear end of the cylinder, a front guide rod mounted on said support, and extending parallel to the first named guide rod, and an arm projecting forwardly from the sound box and provided with a finger resting upon and movable freely along the front guide rod.

3. In a phonograph, the combination of sound reproducing means, including a tapered arm, of a casing adapted to support said means, a megaphone mounted within said casing and provided with an upwardly extending rear end, a pivot spindle extending vertically within the said end, and an extension for said megaphone, said extension being connected at its upper end with said tapered arm and provided at its lower end with a cross bar formed in its lower face with a socket engaged by the upper end of said pivot spindle.

4. In a phonograph, the combination with sound reproducing means, and a tapered arm, of a casing supporting said means, a megaphone mounted within said casing and extending from front to rear and provided with an upwardly extending rear end, an elbow with which the rear end of the tapered arm is pivotally connected, a rearwardly extending bracket projecting from the casing, the elbow extending through said bracket and having a revoluble movement therein in a horizontal plane, the lower end of said elbow extending into the upwardly extending rear end of the megaphone.

884,217. LAUGHING-MIRROR. HENRY SCHUESSLER, Peru, Ill. Filed July 10, 1907. Serial No. 383,113.

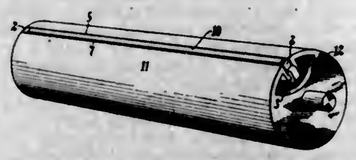


1. A laughing mirror comprising a sectional frame, the side bars of which are provided with curved inner edges, a mirror plate placed between said members and clamping devices for holding said mirror in place with its surface corrugated.

2. A laughing mirror comprising a flexible, metal mirror plate, and a frame for holding said mirror in place, said frame comprising two sections provided with counterpart curved inner edges, and clamps for clamping said two sections together with the mirror plate between them.

3. In a device of the character described, the combination of a frame made up of two sections having curved inner edges, a metal mirror clamped between said frame members and an outer frame surrounding both said members.

884,218. CUTTING-STICK. GEORGE SCHWARZ and RICHARD SCHWARZ, New York, N. Y. Filed May 22, 1907. Serial No. 375,040.



1. The combination of a cutting roller having a channel in its perimeter, of a cutting stick slidable to and from operative position in said channel and including a box holder having a side slidable from the stick on removing the stick from the roller, said side being maintained in assembled relation with the holder by the abutting wall of the channel.

2. The combination of a cutting roller having a channel in its perimeter, of a cutting stick movable to and from operative position within said channel and means arranged within the roller for locking the stick in place.

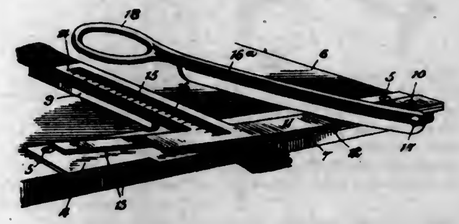
3. The combination of a cutting roller of a cutting stick adapted to be carried by the roller, and means substantially, wholly contained within the roller adapted to automatically lock the stick to the roller.

4. The combination of a cutting roller, of a cutting stick adapted to be carried by the roller, latching members operable to lock the stick to the roller, and a guard for one of said members operating to prevent its separation from the other member beyond a predetermined point.

5. The combination of a cutting roller, of a cutting stick adapted to be carried by the roller, and latching members, one of which is fixed within the roller, and the other carried by the stick, operable to automatically engage and lock the stick to the roller.

[Claims 6 to 11 not printed in the Gazette.]

884,219. BIAS-FOLD CUTTER. EMMA C. SCATES, Knoxville, Tenn. Filed Nov. 14, 1907. Serial No. 402,197.



1. In a cutter of the character described, the combination with a base, of a spring clamping blade having one end located flat upon and secured to the base and having its other end free, said base and arm having coacting edges located in the same vertical plane and both constituting a guide for a cutting device.

2. In a cutter of the character described, the combination with a base having a cutter guide edge and an angularly disposed guide flange, of a clamping device mounted on the base and having a portion that operates alongside the guide flange.

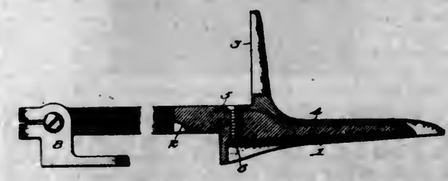
3. In a cutter of the character described, the combination with a base having a cutter guide edge and an angularly disposed guide flange, of a clamping device mounted on the base and having an angularly disposed arm that operates alongside the guide flange.

4. In a cutter of the character described, the combination with a base having a cutter guiding edge and an angularly disposed arm provided with an upstanding guide flange, of a clamping blade operating on the base between the guiding edge and said flange.

5. In a cutter of the character described, the combination with a base having a cutter guiding edge and an angularly disposed arm provided with an upstanding guide flange, of a clamping blade operating on the base between the guiding edge and said flange and having a rearwardly extending arm that operates alongside the guide flange, said arm being provided with a longitudinal slot, and a scale disposed alongside the slot.

[Claims 6 and 7 not printed in the Gazette.]

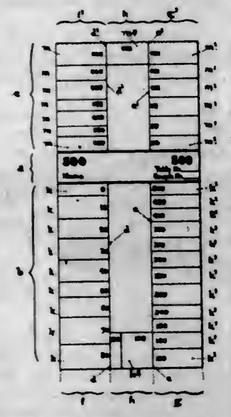
884,220. PIANO-PEDAL. EARL P. SEDGWICK, Highland Park, Ill., assignor to Chicago Hardware Foundry Company, North Chicago, Ill., a Corporation of Illinois. Filed June 27, 1907. Serial No. 381,006.



A piano pedal having its tread and shank portions integrally formed, the tread portion being reduced in size

and having a convex upper surface, a finishing member comprising a body portion having a concave-convex form adapted to fit the tread portion of the pedal, a vertical horn, and an attaching tongue to the rear of said horn, means for attaching said tongue to the tread portion of the pedal, and a rivet stud on the finish member engaging a hole in the tread portion of the pedal, substantially as set forth.

884,221. SCORE-CARD FOR GAMES. ELIZABETH M. SHEERAN, Alameda, Cal. Filed May 17, 1907. Serial No. 374,212.



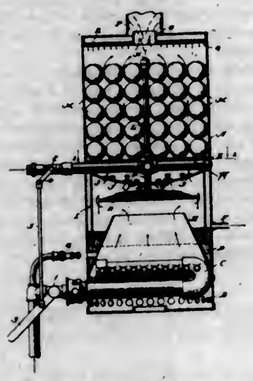
A score card having upon its face transverse lines dividing it into two sections, and having a transverse record space between said lines for the insertion of printed matter, each section being divided by longitudinal lines to form a central blank space and by transverse lines to form with said longitudinal lines record spaces, the record spaces in one section being used for the recording of gains and in the other section for the recording of losses.

884,222. SCREEN FOR OPEN FIREPLACES. HANNAH N. L. SHERMAN, Lawrence, and FRANK M. LAWRENCE, Mastic, N. Y. Filed Dec. 9, 1905. Serial No. 291,092.



A screen for open fireplaces or grates comprising a flexible screen body, rods secured to the upper and lower ends of said screen body, hooks for suspending said screen, said hooks having alined recesses for receiving the upper rod and also having alined recesses for receiving the lower rod, whereby to hold the screen in a doubled-up position.

884,223. INSTANTANEOUS WATER-HEATER. ALBERT E. SHIPLEY, Nelson, British Columbia, Canada. Filed May 31, 1907. Serial No. 376,632.

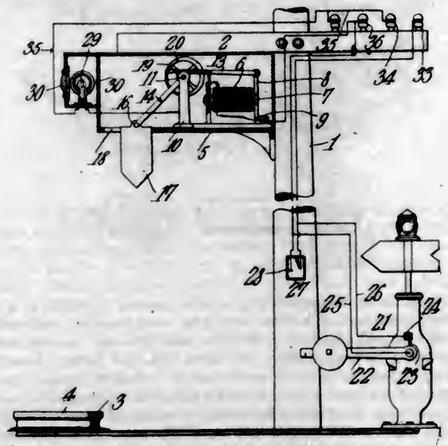


1. In a water heater, a vertical casing provided at its top with an outlet for the products of combustion, and at its bottom with a burner, a transverse grid at the center of the casing, a spray pipe extending upward from the grid at the center of the casing and arranged to deliver a spray into the outlet, a dished perforated cover for the casing, provided with an opening to permit the passage of the spray and with an annular flange around the opening, a plurality of non-absorbent balls supported by the grid, a convex transverse shield below the grid arranged with its concave face downward, a cone shaped hood above the burner, the edges of the shield projecting beyond the adjacent edge of the hood, the space between the outer face of the hood and the inner face of the casing being adapted to receive the water passing downward through the casing, said casing being provided with an overflow pipe to permit the passage of the water therefrom, and a downwardly cupped disk provided with perforations adjacent its center for permitting the passage of the water and with upwardly flanged perforations near its edges for permitting the passage of the products of combustion arranged above the hood.

2. In a water heater, a vertical casing provided at its top with an outlet for the products of combustion, and at its bottom with a burner, a transverse grid at the center of the casing, a spray pipe extending up from the grid and arranged to deliver a spray into the outlet, a dished perforated cover for the casing provided with an opening to permit the passage of the spray, and with an annular flange around the opening, a plurality of non-absorbent balls supported by the grid, a convex transverse shield below the grid arranged with its concave face downward, a cone shaped hood above the burner, the edge of the shield projecting beyond the adjacent edge of the hood, the space between the outer face of the hood and the inner face of the casing being adapted to receive the water passing downward through the casing, said casing being provided with an overflow pipe to permit the passage of the water therefrom.

3. In a water heater, a vertical casing provided at its top with an outlet for the products of combustion, and at its bottom with a burner, a transverse grid at the center of the casing, a spray pipe extending upwardly therefrom and arranged to deliver a spray in the outlet, a dished perforated cover for the casing provided with an opening to permit the passage of the spray, and with an annular flange around the opening, a plurality of non-absorbent balls supported by the grid, a cone shaped hood above the burner, the space between the outer face of the hood and the inner face of the casing being adapted to receive the water passing downward through the casing, said casing being provided with an overflow pipe to permit the passage of water therefrom, a downwardly cupped disk provided with perforations adjacent to its center for permitting the passage of the water, and with upwardly flanged perforations near its edges for permitting the passage of the products of combustion arranged above the hood, and means for deflecting the falling water to the space between the hood and the casing.

884,224. RAILWAY-SIGNAL. JOHN S. SIMS, Longbeach, Cal., assignor of one-half to Edward Richard Millar, Longbeach, Cal. Filed May 22, 1907. Serial No. 375,056.



1. A railway signal comprising an electro-magnet; a receptacle containing the same; a gravity member in the receptacle, moved against the action of gravity and by said magnet when energized; a pendent semaphore or target carried by the gravity member and overbalanced thereby, said target being moved out of the receptacle and into sight to indicate danger when the gravity member is moved against the action of gravity and moved into the receptacle out of sight when the magnet is deënergized and the gravity member becomes active; and an electric lamp and danger indicating means coöperating therewith adjacent to but independent of the semaphore or target and in series with the magnet, said lamp receiving current when the magnet is energized.

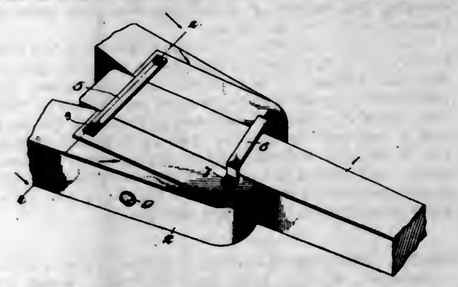
2. A railway signal comprising an electro-magnet; a gravity member movable against the action of gravity by said magnet when energized and consisting of a wheel with an eccentric rim, an arm actuated by said wheel, a pendent semaphore or target carried by said arm, and a receptacle for the magnet, gravity member and target in which receptacle the target is normally held by the action of the electro-magnet when energized.

3. A railway signal system comprising a source of current; a pair of open-circuit conductors leading therefrom along the line of way; a third conductor also leading along the line of way; electrically operated signal devices branched between one of the main conductors and the third conductor; railway switch operating devices along the line of way; circuit terminals branched between the third conductor and the other main conductor; means on the railway switch operating mechanism for closing the terminals there located when the said switch is manipulated to open the siding to traffic, and electric switches independent of the railway switches and branched between the third conductor and the said other main conductor.

884,225. WAGON-HOUND. GEORGE W. SIRRINE, Greenville, S. C. Filed Dec. 23, 1907. Serial No. 407,834.

1. The combination of hound ends, elongated metallic members therefor, each having one web engaging a lateral face of a hound end, and its other web engaging the inside vertical face of said hound end, and a tongue connected to said hound ends between the vertical webs of said metallic members, substantially as described.

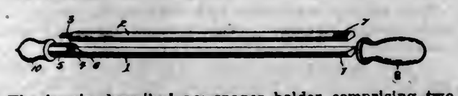
2. The combination of hound ends, elongated metallic members each having a lateral web engaging the top face of a hound member and with a vertical member engaging the inside face of said member, a tongue, and means for securing one end of said tongue between the vertical webs of said metallic members, substantially as described.



3. The combination of hound ends, elongated metallic members each having a lateral web engaging the top face of a hound member and with a vertical member engaging the inside face of said member, a tongue, means for securing one end of said tongue between the vertical webs of said metallic members, and rear and forward transverse tie members connecting the tie webs of said metallic members, substantially as described.

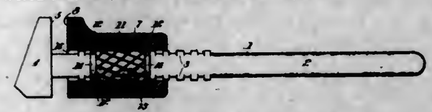
4. The combination of hounds, elongated metallic members therefor each member snugly fitting a hound, and having a vertical web resting against the inside face of said hound, and horizontal webs resting against the upper and lower faces of said hound, a tongue, and means for securing one end of said tongue to said hound between said vertical webs, substantially as described.

884,226. NEWSPAPER-HOLDER. KARL SJOBERG, West Lynn, Mass. Filed Aug. 7, 1907. Serial No. 387,474.



The herein described newspaper holder comprising two elongated members, one of which is provided with a terminal longitudinally extending tongue and the other with an undercut recess for engagement with said tongue and said members having terminal contact portions provided with a continuous external screw thread, a handle member having an interiorly threaded socket engaging the threaded ends of the two members, and a rigid handle at the opposite end of said members.

884,227. WRENCH. EDWARD H. SMITH, Aberdeen, Wash., assignor of one-half to John J. Gribbin, Aberdeen, Wash. Filed Dec. 14, 1907. Serial No. 406,563.

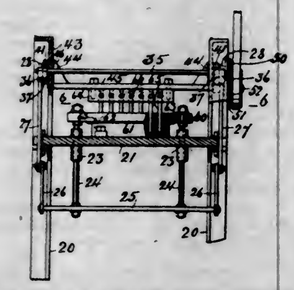


1. A wrench, comprising a shank, a stationary jaw fixed securely to one end of said shank; said shank provided near one end with a threaded portion contiguous to said jaw, a sliding jaw positioned upon said shank contiguous to said threaded portion, said sliding jaw provided with a central cut-out portion formed by straight, parallel, inner walls, said cut-out portion provided at each end with a pair of straight, transverse, shoulders, a cylindrical nut positioned within the cut-out portion of said sliding jaw and surrounding the threaded portion of said shank, said nut provided at its ends with means engaging all of the shoulders and entirely supporting said sliding jaw away from the threaded portion of the shank.

2. A wrench, comprising a threaded shank, a jaw engaging said shank at one end, a sliding-jaw mounted upon the threaded portion of said shank, a rotatable nut positioned within said sliding jaw and engaging said threaded portion of the shank, said nut provided with reduced, annular extensions at its ends, said annular extensions slidably engaging and supporting the sliding jaw away from the threaded portion of the shank.

3. A wrench, comprising a threaded shank, a jaw fixed to one end of said shank, a sliding-jaw mounted upon the threaded portion of said shank, said sliding-jaw provided with a cut-out portion, said cut-out portion provided with a pair of transverse shoulders at each end, the shoulders in each pair having their inner faces formed straight and in parallel position, and a nut rotatably mounted within said sliding-jaw and provided at both ends with means engaging all the shoulders of the sliding-jaw for entirely supporting said jaw upon said shank.

884,228. MOLDING-MACHINE. HERMANN SONNENBERG, Brooklyn, N. Y. Filed Oct. 31, 1907. Serial No. 400,122.



1. In a molding machine the combination of a stationary bottom mold, a reciprocating upper mold above the bottom mold, a separating plate between the molds, and reciprocating plungers passing through the upper mold, the separating plate, and into the lower mold.

2. In a molding machine the combination of a stationary bottom mold, a reciprocating upper mold above the bottom mold; pins extending from the bottom mold; a separating plate detachably connected with said pins; reciprocating plungers passing through openings in the upper mold, separating plate, and into cavities of the lower mold.

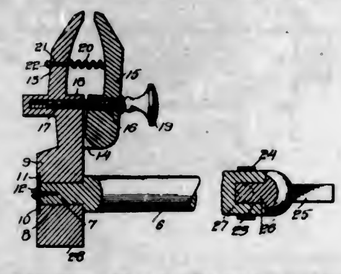
3. In a molding machine for forming pipes the combination of a stationary bottom mold having a plurality of cavities; a reciprocating upper mold having a plurality of openings therethrough above the lower mold; a separating plate having a plurality of openings matching with the cavities in the lower mold and the said plate detachably connected with the lower mold; reciprocating plungers passing through the openings in the upper mold, separating plate and into the cavities of the lower mold.

4. In a molding machine the combination of a stationary bottom mold having a plurality of cavities therein, a reciprocating upper mold having a plurality of openings matching with the cavities in the lower mold, a separating plate with a plurality of openings matching with the said cavities and said openings detachably connected with the bottom mold, the planes of connection between the plate and molds at right angles to the longitudinal axes of the objects to be formed, and reciprocating plungers passing through the openings of the upper mold and separating plate and passing into the cavities of the lower mold.

5. In a molding machine the combination of a pair of frames, a table connecting the frames, a bottom mold having a plurality of cavities supported on the table, a pair of guides formed with the table, sliding rods passing through the guides, an upper mold with a plurality of openings therethrough matching with the cavities in the lower mold supported on said rods over the bottom mold, means to reciprocate the said sliding rods, and thereby move the upper mold, a cross head engaging openings in the frames and above the upper mold, means to reciprocate said cross-head, separating plate having a plurality of openings between the molds, and plungers connected with the cross-head passing through the openings in the upper mold separating plate and into the cavities of the lower mold.

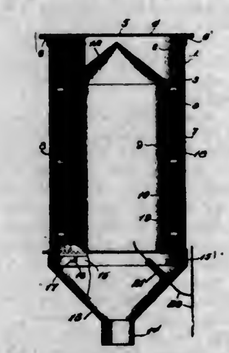
[Claim 6 not printed in the Gazette.]

884,229. COMBINATION-TOOL. JAMES E. SPARKS, Only, Tenn. Filed Dec. 14, 1906. Serial No. 347,800.



The combination with a handle, having a reduced end, of a head having a bore to receive said reduced end, said head extending beyond opposite sides of said handle, one end of said head ending in a fixed vise jaw having a stem perforation, a pair of ears, and a threaded boss, a jaw pivoted between said ears and having an opening in alinement with said threaded boss, a screw passing through said jaw perforation and screwing into said threaded boss, a spring secured to the upper inner face of said movable jaw having a threaded stem passing through an opening within said fixed paw and a nut threading upon said stem, all arranged as set forth.

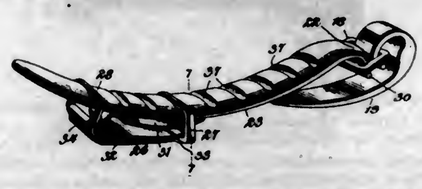
884,230. GRAIN-HEATER. FRANK A. SPIVAK, Sunrise, Minn. Filed Oct. 31, 1907. Serial No. 400,123.



1. A grain heater comprising inner and outer pairs of cylinders adapted to be arranged within each other to form between themselves a concentric heating space, a plurality of electric heating coils arranged between the cylinders of each of said pairs, whereby the grain passing through said space is heated, and means to determine the use of said coils, substantially as described.

2. A grain heater comprising an outer pair of cylinders, an inner pair of cylinders adapted to be arranged within said outer pair to form within themselves a concentric heating space, means to hold said pairs of cylinders spaced apart within concentric relation, an apertured cover plate on the upper end of said outer pair of cylinders, a deflecting cone secured to the upper ends of said inner pair of cylinders, a conically shaped hopper arranged below said cylinders, means to detachably secure said hopper to the outer pair of cylinders, a series of heating coils arranged between the cylinders of each of said pairs, an asbestos packing arranged around the wires of said coils, electric conducting wires and switches arranged in said conducting wires to control the current passing through said heating coils, whereby electricity is supplied to a part or all of the coils, substantially as described.

884,231. HAME-STRAP ATTACHMENT. HENRY G. SPRAKER, Rich Hill, Mo. Filed Mar. 20, 1907. Serial No. 363,433.



1. In a device of the class described, the combination with a pair of hames, of a link having straight sides and ends, connecting means extending from the link to one of the hames, a curved lever provided at an intermediate point with a thickened portion or enlargement and having a substantially semi-circular engaging portion or bill continuously curved from the said thickened portion or enlargement to its end and extending through the link and provided with terminal laterally projecting lugs engaging the link at the lower edges thereof, and a link carried by the other hame and engaged by the said lever, the free end of the lever fitting closely against the said connecting means when the lever is in its locked position.

2. In a device of the class described, the combination with a pair of hames, of a link, a connecting bar between one of the hames and the link and having one of its ends curved downwardly and passed through the said link and provided with terminal laterally-projecting engaging lugs engaging the link at the lower edges thereof, a lever having a curved engaging portion extending through the link and provided with terminal laterally projecting lugs engaging the link at the lower edges of the same, and a link carried by the other hame and engaged by the said lever.

3. A device of the class described comprising a bar provided at intervals with notches, means for detachably connecting one end of the bar with one of a pair of hames, a link slidable on the bar and engaging any one of the notches thereof, and a resilient connection between the other hame and the link to hold the latter in engagement with the bar, whereby the bar is prevented from sliding through the link when the hames are unfastened.

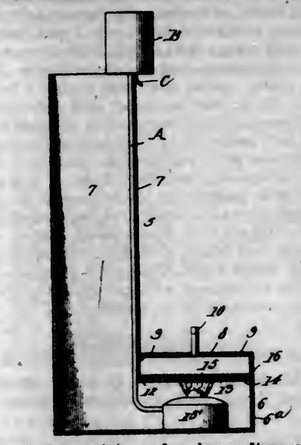
4. A device of the class described comprising a bar provided at intervals with notches, means for detachably connecting one end of the bar with one of a pair of hames, a link slidable on the bar and engaging any one of the notches thereof, and a resilient hook connected with the link and with the other hame bearing against the bar to maintain the said link in engagement with the same, whereby the bar is prevented from sliding through the link when the hames are unfastened.

5. A device of the class described comprising a bar provided at intervals with notches, a link slidable on the bar and engaging any one of the notches thereof, means for connecting one end of the bar with one of a pair of hames, and a resilient hook connected with the other hame and composed of a lower shank connected with the link at the bottom thereof, and an upper bill extending through the link and bearing against the bar to maintain the link in engagement with a notch of the bar.

[Claims 6 to 8 not printed in the Gazette.]

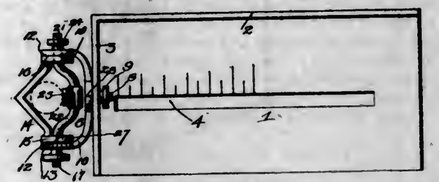
884,232. TANK-HEATER. HERMAN STAADT, Dola, Ohio. Filed Mar. 22, 1907. Serial No. 363,890.

A tank heater comprising a casing including a vertical portion and a horizontal portion at the lower end thereof, a lid for the horizontal portion said lid having openings therein, a plate removably disposed within the horizontal portion in spaced relation to the lid, means for preventing the passage of liquid between the plate and the adjacent



portions of the casing, and a lamp disposed within the horizontal portion of the casings in position to heat the plate.

884,233. GAGE FOR DRILLS AND AUGERS. GEORGE E. STANFORD, Chicago, Ill. Filed Apr. 29, 1907. Serial No. 371,004.



1. A drill and bit gage comprising a fastening plate, a guide frame pivotally mounted on said plate, a drill guide pivotally mounted in said frame and means to secure said frame and drill guide in their adjusted positions, substantially as described.

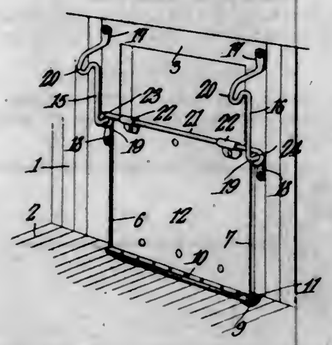
2. A drill and bit gage comprising a fastening plate, a guide frame pivotally mounted on said plate, a clamping nut to hold said drill guide in adjusted position, bearing disks arranged on said frame, a drill guide pivotally mounted on said disks, a guide shoe adapted to be engaged with the bit when arranged in said guide and means to hold said drill guide and shoe in their adjusted positions, substantially as described.

3. A drill and bit gage comprising a fastening plate having a side and end flange, a drill guide frame pivotally mounted on the end flange of said plate, a set screw to hold said frame in its adjusted position, bearing disks formed on the outer ends of said frame, a drill guide comprising right-angularly disposed plates having on their lower ends bearing disks, means to pivotally connect said disks with the bearing disks of said frame, a pivotally mounted guide shoe arm, a drill guide shoe on said arm adapted to be engaged with the drill or auger bit in said bit guide and clamping screws adapted to hold said guide and shoe in operative and adjusted positions, substantially as described.

4. A gage for drills and auger bits comprising a slotted fastening plate having a side and an end flange, the latter having a pivot hole, an annular degree scale arranged on said end flange, a drill guide frame comprising a circular head, a pivot bolt on said head adapted to be inserted in the pivot hole in said end flange of the fastening plate, a clamping nut adapted to be screwed on to said bolt to hold said frame in an adjusted position, an indicating mark on

the circular head of said frame adapted to coact with the scale of degrees on said flange to determine the position of said guide frame, bearing disks formed on the outer ends of said frame, said disks having centrally disposed bearing opening, a degree scale on one of said disks, a drill guide comprising right-angularly disposed plates having inclined or beveled lower ends, bearing disks on the lower ends of said plates, one of said disks having a bearing recess, a pivot bolt or stud on one of said disks adapted to be pivotally engaged with the bearing opening in one of the disks of said guide frame, a clamping nut adapted to be screwed on said pivot bolt, a guide shoe bar adapted to be pivotally mounted in the bearing recess in one of the disks of said drill guide, a pivot bolt formed on the opposite end of said bar and adapted to be inserted through the alined bearing openings of the opposite bearing disks of said drill guide and frame, a clamping nut on the end of said pivot bolt and a centrally disposed guide shoe on said bar adapted to be engaged with the drill or auger bit in said bit guide, substantially as described.

884,234. CAR-DOOR. SIMEON G. STAPP, Phillipsburg, Kans. Filed May 7, 1907. Serial No. 372,299.



1. The combination with a door frame, of a door mounted to operate vertically relatively to the door frame, a rod rotatably mounted on the upper end of the door and provided with eyes at its opposite ends, a pair of guiding rods secured to opposite sides of the door and having substantially horizontally-extending locking portions thereon arranged to coöperate with said eyes to lock the door in closed position, said guiding rods extending to the upper portion of the door frame and there formed into supporting loops, a sill plate for the door frame having a groove adapted to receive the lower end of the door, and vertical guides secured to the opposite side of the door frame and provided with flanges adapted to engage the sides of the door.

2. The combination with a door frame, and a door mounted to operate vertically relatively thereto and having a rod rotatably mounted thereon and provided with eyes at its opposite ends, of a pair of guiding rods secured to the upper portion of the door frame and having locking portions thereon arranged to coöperate with the said eyes to lock the door in closed position.

3. The combination with a door frame, and a pair of guiding rods secured to the opposite sides thereof and having substantially horizontally extending locking portions thereon, and supporting loops formed in the rods at points above and offset inwardly of the locking portions, of a door mounted to operate vertically relatively to the door frame, and a rod rotatably mounted on the upper portion of the door and having a pair of eyes arranged at opposite sides of the door and slidable on said guiding rods, the eyes coöperating with the locking portions and the supporting loops thereon for retaining the door in closed and open positions, respectively.

884,235. RECEIVER FOR TELEPHONES. LOUIS STEINBERGER, New York, N. Y. Filed Feb. 18, 1907. Serial No. 357,881.



1. A telephone receiver comprising a core provided with an annular threaded portion integral therewith, a diaphragm having an annular edge disposed adjacent to said annular threaded portion, a cap screwed upon said threaded portion and encircling said diaphragm, and a casing partially encircling said core and said cap for the purpose of preventing relative movement therebetween.

2. The combination with a core provided with a thread, a cap provided with a thread engaging said thread of said core, said cap being provided with a second thread having a pitch different from said first-mentioned thread of said cap, and a casing provided with a thread mating said second-mentioned thread of said cap.

3. A telephone receiver, comprising an outer casing of metal, a core of insulating material mounted within said casing, said core of insulating material being provided with a resonating chamber, said resonating chamber having a substantially cylindrical portion of larger diameter, and a substantially cylindrical portion of smaller diameter, said portions merging together, said smaller portion being provided with a concave end for the purpose of concentrating and reflecting sound waves, magnetic mechanism mounted within said portion of larger diameter, a diaphragm disposed adjacent to said magnetic mechanism, and means for holding said diaphragm in position.

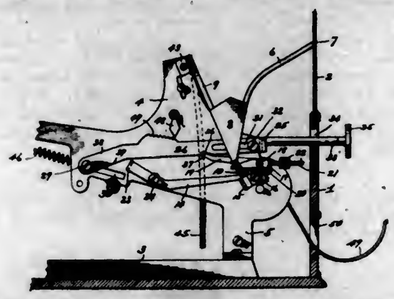
4. The combination of a hollow casing provided at one of its ends with a thread disposed internally thereof, a core of insulating material provided with a neck having a thread disposed externally thereof, said thread of said neck being of a different pitch from said thread of said casing, and a cap of insulating material provided internally with a thread mating said thread of said neck, and said cap being provided externally with a thread mating said thread of said casing.

5. In a telephone receiver, the combination of a metallic casing provided internally at one of its ends with a thread, a core of insulating material mounted within said metallic casing and provided with a neck, said neck having upon its exterior a thread, said neck being shorter than the threaded portion of said casing, a cap of insulating material provided externally with a thread mating said thread of said casing and provided internally with a thread mating said thread of said neck, and means coacting with said cap for preventing relative movement between said casing and said core.

884,236. COIN-CONTROLLED VENDING APPARATUS. WILLIAM B. SULLIVAN, St. Louis, Mo. Filed Nov. 7, 1907. Serial No. 401,053.

1. In a coin-controlled vending apparatus, in combination with a slidable actuating member, a coin chute, a locking member associated with said chute and normally in locking engagement with said slidable member and adapted to be released from such engagement by the impact of a coin deposited in said chute and to support said coin, and means operated by said slidable member for lifting the coin off of the locking member.

2. In a coin-controlled vending apparatus, in combination with a slidable actuating member, a coin chute, a pivoted locking member associated with said chute and normally in locking engagement with said slidable member and adapted to be released from such engagement by the impact of a coin deposited in said chute and to support said coin, and a pivoted throw-lever operated by said slidable member for lifting the coin off of the locking member.



3. In a coin-controlled vending apparatus, in combination with a slidable actuating member, a coin chute, a pivoted locking member having two arms, one of which is normally in locking engagement with said slidable member, and the other of which occupies a position relative to said coin chute in which it is adapted to receive the impact of and to support the coin inserted in said chute, and thereby to be depressed and carry the first-named arm out of engagement with said slidable member, and a pivoted throw-lever operated by said slidable member for lifting the coin off of the arm of said locking member.

4. In a coin-controlled vending apparatus, in combination with a slidable actuating member having an inclined portion, a coin chute, a pivoted locking member having two arms, one of which is normally in locking engagement with said slidable member, and the other of which is located in the path taken by a coin deposited in said chute and is adapted to receive the impact of and to support said coin and to be depressed thereby to carry the first-named arm out of engagement with said slidable member, and a throw-lever pivotally mounted intermediate its ends on the machine and adapted to be engaged at one end by the inclined portion of said slidable member to throw the opposite end upward, and thereby lift the deposited coin off of the arm of said locking member.

5. In a coin-controlled vending apparatus, in combination with a spring-controlled slidable actuating member, a coin chute, a locking member associated with said chute and normally in locking engagement with said slidable member and adapted to be released from such engagement by the impact of the coin deposited in said chute and to support said coin, means operated by said slidable member for lifting the coin off of the locking member, and means operating to prevent the return to its normal position of said slidable member under the influence of its spring in the event that said slidable member shall not have been moved the prescribed distance to operate the machine.

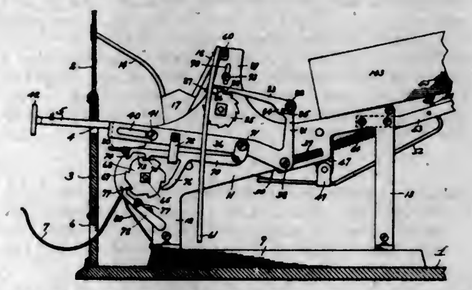
[Claims 6 to 8 not printed in the Gazette.]

884,237. COIN-CONTROLLED CIGAR-VENDING APPARATUS. WILLIAM B. SULLIVAN, St. Louis, Mo. Filed Nov. 7, 1907. Serial No. 401,054.

1. In a cigar vending apparatus, in combination with a grooved delivery roller, a slidable member, means carried by said slidable member for actuating the delivery roller in one direction only, means, also carried by said slidable member, for stopping the delivery roller at a given point in its rotation.

2. In a cigar vending apparatus, in combination with a grooved delivery roller having a ratchet wheel, a slidable member, means carried by said slidable member, and adapted to engage said ratchet wheel in the movement in one direction of said slidable member to partially rotate said roller, means, also carried by said slidable member, for engaging said ratchet wheel to stop the delivery roller at a given point in its rotation, and means for preventing the rotation of said roller in a direction reverse to that of its delivery movement.

3. In a cigar vending apparatus, in combination with a grooved delivery roller having a ratchet wheel, a slidable member, an actuating dog carried by said slidable member and adapted to engage said ratchet wheel in one movement of the slidable member to partially rotate said roller, and an arm carried by said dog and adapted to engage and lock the ratchet wheel against further movement.

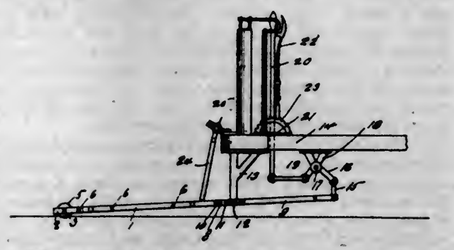


4. In a cigar vending apparatus, in combination with a grooved delivery roller having a ratchet wheel, a slidable member, an actuating dog pivotally mounted at one end on said slidable member and supported therefrom toward its opposite end, said opposite end having tongues for engaging the ratchet wheel to partially rotate the roller in the movement in one direction of said slidable member, and means carried by said dog for engaging and positively locking the ratchet wheel in a given position to which it has been turned by said actuating dog.

5. In a cigar vending apparatus, in combination with a grooved delivery roller, a slidable actuating member therefor, a pair of rollers mounted in the machine, and an endless apron mounted on said rollers and adapted to receive and deliver cigars to said roller, the said apron having its under side secured to said slidable member, whereby its upper side is moved in a direction away from the roller when the slidable member is moved to rotate the roller to deliver a cigar.

[Claims 6 and 7 not printed in the Gazette.]

884,238. CAR-FENDER. JOSEPH SWEENEY, Pittsburg, Pa. Filed Dec. 26, 1907. Serial No. 408,080.



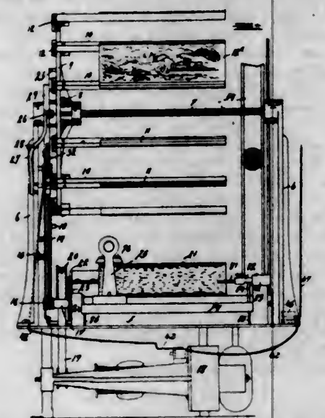
1. The combination with a car, of a fender, said fender comprising side frames having yoke-shaped ends, wheels journaled in said ends, a netting arranged between said side frames, a V-shaped frame detachably connected to the rear ends of said side frames, brackets carried by said car, and adapted to pivotally support said V-shaped frame, a bell crank lever journaled beneath said car and connecting with the rear end of said V-shaped frame, an operating lever fulcrumed upon said car and connecting with said bell shaped lever, a fender frame pivotally mounted upon said car and adapted to rest upon said side frames, and means for locking said operating lever in a fixed position.

2. The combination with a car, of a fender, said fender comprising side frames having yoke-shaped ends, wheels journaled in said ends, a netting arranged between said side frames, a V-shaped frame detachably connected to the rear ends of said side frames, brackets carried by said car, and adapted to pivotally support said V-shaped frame, a

bell crank lever journaled beneath said car and connecting with the rear end of said V-shaped frame, an operating lever fulcrumed upon said car and connecting with said bell shaped lever, and means for locking said operating lever in a fixed position.

3. The combination with a car, of a fender, said fender comprising side frames having yoke-shaped ends, wheels journaled in said ends, a netting arranged between said side frames, a V-shaped frame detachably connected to the rear ends of said side frames, brackets carried by said car, and adapted to pivotally support said V-shaped frame, a bell crank lever journaled beneath said car and connecting with the rear end of said V-shaped frame, and an operating lever fulcrumed upon said car and connecting with said bell shaped lever.

884,239. COMBINED GRAPHOPHONE AND PICTURE-EXHIBITOR. CHARLES W. TAYLOR, Detroit, Mich., assignor, by mesne assignments, to Eugene F. Glock, Detroit, Mich. Filed Jan. 25, 1904, Serial No. 190,479. Renewed Dec. 21, 1905. Serial No. 292,737.



1. The combination with a graphophone and its motor, of a movable carrier containing a series of pictures, a light and a circuit closer for said light in circuit with said motor, said carrier being operated from said motor in a manner to impart an intermittent movement thereto, means for locking the carrier against rotation at the completion of its movement, and means for unlocking said carrier operated simultaneously with the starting of the motor and the actuation of said circuit closer.

2. The combination with a graphophone, of a normally open electric circuit, including the motor of said graphophone, a lamp and a circuit opener and closer, a movable picture carrier adapted to contain a series of pictures, means for locking said carrier against movement, said locking means being connected with said circuit opener and closer, whereby by the closing of the circuit said carrier is unlocked simultaneously with the lighting of the lamp and the starting of the motor of the graphophone.

3. The combination with a graphophone, a movable carrier adapted to contain a series of pictures, a lamp for illuminating said pictures, a motor for driving the graphophone, means connected with the shaft of said motor for operating said carrier, a catch for locking said carrier against movement, a normally open electric circuit including said motor, light and a circuit opener and closer, means associated with said circuit opener and closer for unlocking the catch of said carrier, means for simultaneously operating the circuit closer, and placing the graphophone in operative position, whereby said carrier is unlocked, the graphophone is started and said lamp lighted, and means for automatically opening said circuit at the completion of the exhibition of the pictures.

4. The combination with a graphophone, of a movable carrier adapted to contain a series of pictures, means for imparting movement to said carrier simultaneously with the operation of the graphophone, an electric lamp for illuminating said pictures, a normally open electric circuit including said lamp, a source of energy, and a circuit opener and closer, a catch for locking and releasing said carrier connected with and operated by the movement of said circuit opener and closer, mechanism connected with said catch, whereby it may be actuated to release said carriage and simultaneously close the circuit, and means for automatically locking said carriage and opening said circuit.

884,240. MAIL-HANDLING APPARATUS. WILLIAM C. THORNTON, Jefferson City, Mo. Filed Jan. 14, 1908. Serial No. 410,723.



1. In combination, a receiver arranged to move continuously, means for actuating said receiver at different speeds and in different directions, and means for delivering objects to said receiver.

2. In combination, means for guiding and delivering objects, a receiver arranged to move continuously in the same direction as the object delivered to it, and means for mechanically actuating said receiver at different speeds.

3. In combination, a rotatable receiver, means for rotating said receiver in opposite directions, and a plurality of chutes adapted to deliver objects to said receiver from opposite directions.

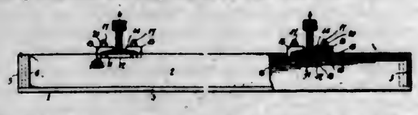
4. In apparatus of the class described, means for receiving objects in such manner that the momentum of the objects, due to the movement of the train, is gradually overcome and means for driving said first means whereby the momentum is gradually overcome.

5. In apparatus of the class described, receiving means arranged gradually to overcome the momentum of an object delivered from a train and means for operating said receiving means whereby the rate at which the momentum is overcome can be regulated.

[Claims 6 to 16 not printed in the Gazette.]

884,241. RAILROAD-TIE. ALFRED S. TOPPING, Grand Rapids, Mich. Filed Mar. 28, 1907. Serial No. 365,047.

1. A hollow metallic railroad tie, open at its ends and having closures slidably mounted on said ends.



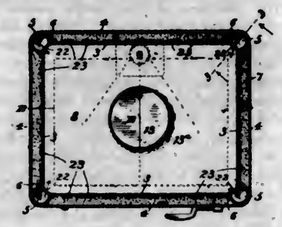
2. A hollow metallic railroad tie, open at its ends and having guides arranged thereon and closures for said ends slidable on said guides.

3. A hollow metallic railroad tie, open at its ends, having outwardly extending base flanges and provided at its ends with outwardly extending flanges, in combination with detachable plates forming closures for the ends of said tie, said plates bearing on the ends of the base flanges and against the ends of the tie, and having inwardly extending flanges and grooves co-acting with the end flanges of the tie to secure said plates in place.

884,242. REFRIGERATOR. JOEL C. TYLER, Knoxville, Tenn. Filed Nov. 6, 1905. Serial No. 286,036.

1. A refrigerator comprising upright cylindrical columns having outwardly-extending flanges, an inner casing attached to said flanges, and an outer casing disposed around said columns.

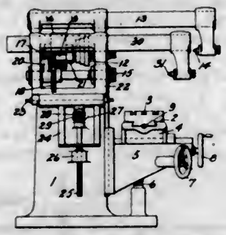
2. A refrigerator comprising upright cylindrical columns the material of which is cut and bent to form flanges, an inner casing attached to said flanges, and an outer casing disposed around said columns.



3. A refrigerator comprising upright cylindrical columns the material of which is cut longitudinally for part of the length and bent outwardly to form flanges and an opening, an inner casing attached to said flanges and forming a closure for said opening, and an outer casing disposed around said columns.

4. In a refrigerator, the combination with columns, a casing of sheet material associated therewith and having edges joining the top and bottom of the refrigerator, of strengthening-ribs associated with said casing and disposed obliquely with respect to the columns and attached to the columns and to the top and bottom.

884,243. MILLING-MACHINE. VERNER J. WAHLSTROM, Brooklyn, N. Y., assignor of one-half to Bernhard T. Burchardi, Brooklyn, N. Y. Filed Aug. 2, 1906. Serial No. 328,928.



1. In a milling machine, the combination with two tool-carrying spindles, of means for adjusting the relative longitudinal position of the spindles, means for producing a relative adjustment of the spindles in a direction at an angle to the axis of one of the spindles, and a work-table traveling in a direction at an angle to the axes of both spindles.

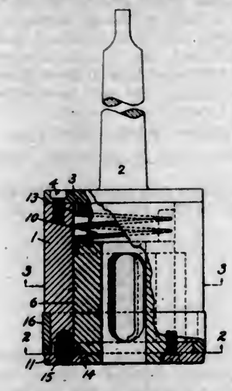
2. In a milling machine, the combination with two tool-carrying spindles, of means for adjusting one of the spindles longitudinally, means for adjusting the same spindle in a direction at an angle to its axis, and a work-table traveling in a direction at an angle to the axes of both spindles.

3. In a milling machine, the combination with two parallel tool-carrying spindles, of means for adjusting one of the spindles longitudinally, means for adjusting the same spindle in a direction at a right angle to its axis and in parallelism with the axis of the other spindle, and a work-table traveling in a direction at an angle with the axes of both spindles.

4. In a milling machine, the combination with two horizontal tool-carrying spindles, of means for adjusting the relative longitudinal position of the spindles, means for producing a relative adjustment of the spindles in vertical planes, and a work-table traveling in a direction at an angle to the axes of both spindles.

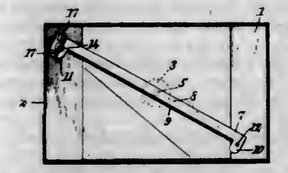
5. In a milling machine, the combination with a column, of a vertically adjustable knee mounted on one side of said column, a horisontally adjustable work-table mounted on said knee, a tool-carrying spindle mounted on said column, a second vertically adjustable knee mounted on an adjacent side of said column, a spindle-head mounted on said second knee and horizontally adjustable at right angles to the adjusting movement of the work-table, a second tool-carrying spindle mounted in said head, means for driving the spindle mounted in the column, and gearing transmitting motion to the second spindle, substantially as described.

884,244. CHUCK. VERNER J. WAHLSTROM, New York, N. Y., assignor of one-half to Bernard T. Burchardi, Brooklyn, N. Y. Filed July 17. 1907. Serial No. 384,251.



In a chuck, the combination with a chuck-body provided with a plurality of cam surfaces, a relatively rotatable jaw carrying member mounted therein, a segmental rack formed on said member, a pinion carried by the chuck-body and in mesh with said rack, and a sleeve rotatably mounted on the chuck-body and having a segmental rack in mesh with the pinion, substantially as described.

884,245. SURVEYING INSTRUMENT. FRANK A. WAUGH, Amherst, Mass. Filed June 15, 1907. Serial No. 379,153.



1. In a surveying instrument, an alidade having a blade member presenting an edge, and having at opposite ends sights adapted to co-act to permit the accurate sighting of the alidade, said sights being in alinement with said edge of said blade member, and near one end a pin adapted to be forced into a drawing board, said pin being loosely carried by said blade member.

2. In a surveying instrument, an alidade having a blade member presenting an edge, and having at opposite ends respectively a bead sight and a notch sight, said sights being in alinement with said edge of said blade member, and a pin near one end of said blade member and adapted to be forced into a drawing board, said pin being loosely carried by said blade member, and having a head serving to hold said pin in position.

3. In a surveying instrument, an alidade having a blade member presenting an edge and having at opposite ends respectively, a bead sight and a notch sight, said sights being in alinement with said edge of said blade member, and a pin near one end adapted to be forced into a drawing-board, said pin being loosely carried by said blade member.

4. In a surveying instrument, an alidade having a blade member presenting a fiducial edge and provided with

lateral extensions at the opposite ends, a sight carried by each of said extensions, said sights serving to permit the exact sighting of the alidade and being in alinement with said edge of said blade member, one of said extensions having an opening therethrough, and a pin having a head movably arranged in said opening and provided with a flange engaging at the edge of said opening, the sight of said extension carrying said pin extending across said head to hold said pin in position.

5. In a surveying instrument, an alidade having a blade-member presenting a fiducial edge and having extensions at the opposite ends, one of said extensions having a bead-sight, the other of said extensions having a sight-member presenting a notch, said bead-sight and said notch being in alinement with said edge of said blade-member, and a pin adapted to be forced into a drawing-board and presenting a head engaging said sight member, said pin being held in position by said sight member.

[Claim 6 not printed in the Gazette.]

884,246. FASTENING DEVICE FOR GARMENTS. FRANK WECKERLY, St. Davids, Pa. Filed May 21, 1907. Serial No. 374,947.



1. A hook member of a fastener, comprising two resilient points and a loop forming a bridge located therebeneath, supporting the points on the bridge.

2. A hook member of a fastener, comprising two resilient points extending in one direction and a bridge therebeneath extending in an opposite direction.

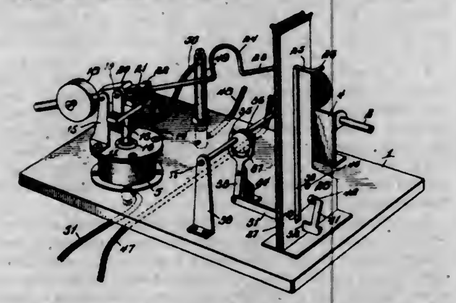
3. A hook or pin member of a fastener, comprising two resilient points, a bridge located underneath and in the rear of the points, and means for affixing the hook or pin member in its place; substantially as herein shown and described.

4. A hook or pin member of a fastener, comprising two points, a loop forming a bridge supporting the points, and means for affixing the hook or pin member in its place, substantially as herein shown and described.

5. A garment fastener, comprising an eye member and a hook or pin member, the eye member comprising a shank, a loop or eye on the shank; and a hook or pin member consisting of two points, a bridge located underneath and in the rear of the points; and each member having a loop for affixing it to the garment; substantially as herein shown and described.

[Claim 6 not printed in the Gazette.]

884,247. COIN-CONTROLLED APPARATUS. DAVID WEDGEWOOD, Peterboro, Ontario, Canada. Filed May 29, 1906. Serial No. 319,372.



1. The combination with an electric meter, of a coin controlled apparatus included in the service circuit from the meter, said apparatus comprising circuit terminals normally spaced to break the service circuit, and coin actuated means to close the service circuit, said means being initially operated by the weight of the coin, and means independently of the coin for locking the closing means in operative position, the locking means releasing the coin from operative relation to the closing means immediately succeeding its initial function as a locking means.

2. The combination with an electric meter, of a coin controlled apparatus included in the service circuit from the meter, said apparatus comprising circuit terminals normally spaced to break the service circuit, and coin actuated means to close the service circuit, said means being initially operated by the weight of the coin, and means independent of the coin for locking the closing means in operative position, the locking means including an element arranged for releasing the coin from operative relation to the closing means and preventing the operative influence of the succeeding coin.

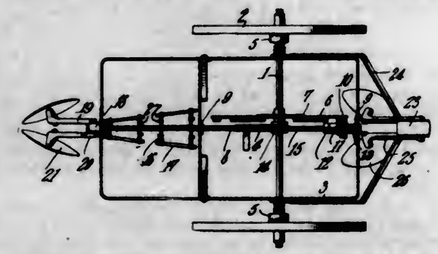
3. A coin controlled apparatus comprising a circuit closer, means to permit a coin to operate said closer, and means independent of the coin for automatically locking the circuit closer in the position resulting from the operation of the coin, said means normally holding the coin in position to maintain the circuit closer in operative position and securing the succeeding coins in a position to prevent their acting on the circuit closer.

4. A coin controlled apparatus for electric meters comprising means for closing the meter circuit by the deposit of a coin, and means independent of the coin to alternately and automatically release succeeding coins into closing position and locking the circuit closing means in coin operated position.

5. A coin controlled apparatus for electric meters comprising means for closing the circuit by the weight of one coin of a series, and means independent of the coin for discharging the coin and locking the circuit closing means in operative position, the operation of said latter means permitting a subsequent coin of the series to move into operative position.

[Claims 6 to 15 not printed in the Gazette.]

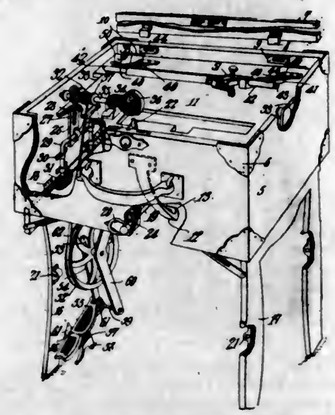
884,248. COTTON-CHOPPER. BENJAMIN P. WHITE, Stroud, Okla. Filed June 27, 1907. Serial No. 381,078.



A cotton chopper comprising a frame mounted upon a wheel supported axle, a disk attached to the axle and having spaced gear segments on one side, a shaft journaled for rotation on the frame, a gear wheel located on the shaft for engagement with the gear segments, chopping blades carried by the shaft, a block swiveled to the shaft, standards pivoted to said block, a lever mechanism for adjusting the angles of inclination of the standards, and disks journaled upon the standards.

884,249. PORTABLE-GRINDING-MACHINE CASE. GEORGE WIEBER, Pittsfield, Mass. Filed July 24, 1907. Serial No. 385,383.

1. A grinding machine including a case having one wall thereof formed with nested sections movable laterally to open position and constituting supporting legs, a platform disposed within the case, a grinding element mounted for rotation on the platform, means carried by one of the supporting legs for rotating the grinding element, bolts slidably mounted on one wall of the case and engaging sockets in the supporting legs for locking the latter in extended position, a longitudinally movable rod operatively connected with the legs for locking the latter in closed position, and means for locking the platform in raised and lowered position.



2. A grinding machine including a case having pivoted sections movable laterally to open position and constituting supporting legs, a platform disposed within the case and forming a support for the grinding mechanism, means for locking the legs in closed position, a cover, and auxiliary locking means coacting with the leg locking means and movable into engagement therewith when the cover is closed.

3. A grinding machine including a case having one wall thereof formed with nesting sections movable laterally to open position and constituting supporting legs, a platform disposed within the case and forming a support for the grinding mechanism, means for locking the legs in extended position, a rod for locking the legs in closed position, means carried by the case and adapted to engage the rod for locking the latter against longitudinal movement, and a cover associated with the case for moving the rod locking means to operative position.

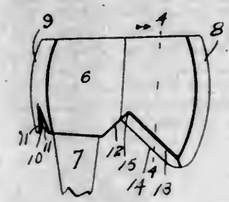
4. A grinding machine including a case having nested sections movable laterally to open position, means disposed within the case and forming a support for the grinding mechanism, loops secured to the legs, a rod carried by the case and adapted to engage the loop for locking the legs in closed position, and bolts slidably mounted on the case and adapted to engage sockets in the legs for locking said legs in extended position.

5. A grinding machine including a case having one wall thereof formed of nested sections movable laterally to open position and constituting supporting legs, means for locking the legs in extended position, a rod for locking the legs in closed position, a spring catch adapted to engage the rod for limiting the longitudinal movement of the latter, a cover adapted to engage the catch for moving the latter to operative position in engagement with the rod, said catch being movable automatically to released position when the cover is opened.

[Claims 6 and 7 not printed in the Gazette.]

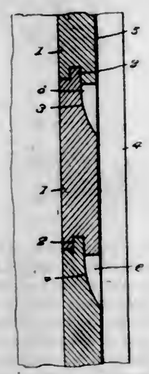
884,250. AX. CHARLES A. WILCOX, Valley, Wash. Filed July 27, 1907. Serial No. 385,868.

An ax comprising a handle and a head, the rear edge of the head below the plane of the handle being cut inwardly toward the forward edge thereof, the adjacent portion of the edge being abrupt and unsharpened and extended at an angle forwardly from the handle, the remainder of the said edge being sharpened by beveling one face of the head along the said edge, the latter portion of the rear edge of the head being extended rearwardly substantially at right angles from the abrupt portion of the edge and being of greater length than the said abrupt portion and disposed at an angle with respect to the handle but being extended in a direction opposite to the direction of extension of the



unsharpened portion substantially as described and for the purpose set forth.

884,251. WEATHER-STRIP. WILLIAM WOLFARTH, Mansfield, Ohio. Filed Sept. 6, 1907. Serial No. 391,628.



1. The combination with siding having channels therein and a facing board, adapted to fit over portions of said siding; of a strip of metal adapted to be disposed between said siding and facing board and means on the strip adapted to close said channels and prevent the passage of air, or the like, therethrough.

2. The combination with siding of the class described, having offsets, or channels therein and facing boards adapted to extend over portions of said siding; of a weather strip, disposed between said siding and facing boards and wings on said strip, adapted to close said channels, or space formed by the offset, whereby air, or the like, will be prevented from passing between the siding and facing board.

3. The combination with siding, having channels therein and facing boards adapted to extend over portions of said siding; of a metallic strip between said siding and facing board and wings formed by striking down portions of said strip and directing said wings at right angles to the strip, whereby said channels will be closed between the siding and facing boards.

884,252. BARBER'S POLE. JOHN R. WYGLE and ARCHIBALD R. WYGLE, Leavenworth, Kans. Filed May 29, 1907. Serial No. 376,250.

1. A barber's pole comprising a base, a rod threaded into the base, nuts threaded on to the rod at each end thereof, and provided on their inner ends with grooves, a nut threaded on the center of the rod and provided at each end with grooves, cylindrical bodies mounted on the rod on each side of the central nut, and provided at each end with grooves coacting with the grooves of the nuts to form ball races, balls in the races, a cylindrical casing provided on its outer surface with spiral stripes of different colors alternately arranged on each of the cylindrical bodies, the stripes on one casing running in the opposite direction to

the stripes on the other casing, and an operating device for each of the cylindrical bodies, comprising a ring on the outer end of each casing, each of said rings being provided with a plurality of annular series of blades, each blade being flared outwardly towards its open end, and the several blades of each series being arranged with its reduced end in the enlarged end of the succeeding blade, the series being arranged in close proximity, the blades on one ring being arranged oppositely to the blades on the other ring whereby to operate said casings in different directions.



2. A barber's pole, comprising a base, a rod extending from the base, a plurality of cylindrical sections rotatably mounted on the rod, each of said sections being provided on its outer face with spiral stripes of different colors alternately arranged, the stripes on one section running in the opposite direction to the stripes on the other section, and an operating device for the sections, comprising a ring arranged on the outer end of each section, and a plurality of series of blades in connection with the ring, each blade being flared outwardly toward its open end, and the several blades of each series being arranged with the reduced end of one blade in the enlarged end of the succeeding blade, the blades on one ring being arranged oppositely to the blades on the other ring, whereby to operate said sections in different directions.

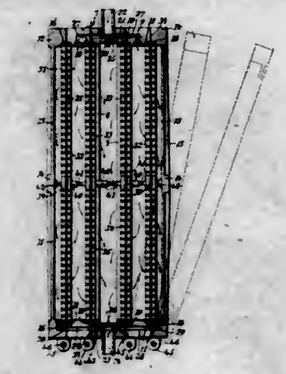
3. A barber's pole comprising a base, a rod extending from the base, a plurality of cylindrical sections rotatably mounted on the base, and an operating device for each of said sections, said device comprising a ring on the sections, each of the said rings being provided with a plurality of series of blades, each blade being flared outwardly toward its open end, and the several blades of each series being arranged with the reduced end of one blade in the enlarged end of the succeeding blade, the blades upon one ring being oppositely arranged to the blades on the other ring.

4. A barber's pole comprising a base, a rod extending from the base, a plurality of cylindrical sections rotatably mounted on the base, and an operating device for each of said sections, said device comprising a ring on the sections, each of the said rings being provided with a plurality of series of blades, each blade being flared outwardly toward its open end, and the several blades of each series being arranged with the reduced end of one blade in the enlarged end of the succeeding blade.

5. A barber's pole comprising a plurality of independently rotatable sections, and an operating device for each of the sections, comprising a plurality of annular series of blades on the periphery of the section, each blade being flared outwardly toward its open end, and the several blades of each series being arranged with the reduced end of one blade in the enlarged end of the succeeding blade, the blades on one section being arranged oppositely to the blades on the other section.

[Claim 6 not printed in the Gazette.]

884,253. FILTER. CHARLES A. YOUNGMAN, Louisville, Ky., assignor of one-half to Albert J. Pohlman, Louisville, Ky. Filed June 3, 1907. Serial No. 377,083.



1. In a filter, independent casing members, means for holding said members in position, filter supports arranged between adjacent casing members, and spacing means for said supports, and hinged joints connecting each adjacent pair of said casing members.

2. In a filter, independent casing members, means for removably holding said members in position, perforated filter supports arranged between adjacent casing members, adjustable spacing means for said supports, and hinged joints connecting said adjacent casing members.

3. A filter, comprising independent casing members, means for removably holding said members in position, said members having recesses at their inner edges, pairs of perforated filter supports arranged in said recesses between each adjacent pair of casing members, and a filter sheet arranged between the filter supports of each pair, and hinged joints connecting each adjacent pair of said casing members.

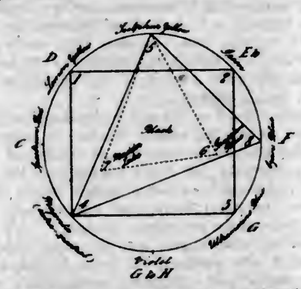
4. A filter, comprising independent casing members, means for removably holding said members in position, said members having recesses at the inner edges, pairs of perforated filter supports arranged in said recesses between each adjacent pair of casing members, a filter sheet arranged between the filter supports of each pair of supports, adjustable spacing means between the filter supports of adjacent pairs, said casing members being hinged together, the outer casing members having webs constituting the end walls of the filter.

5. A filter, comprising independent annular casing members, means for removably holding said members in position, said members having recesses at the inner edges, pairs of perforated filter supports arranged in said recesses between each adjacent pair of casing members and presenting knife edges at the inner sides, a filter sheet arranged between the filter supports of each adjacent pair, spacing means for said supports of adjacent pairs, and an inlet and an outlet at one of said casing members, the outer casing members having webs constituting the end walls of the filter, said casing members having ears, said ears adjacent casing members having hinged connection.

[Claims 6 to 16 not printed in the Gazette.]

884,254. PROCESS OF PHOTOMECHANICAL REPRODUCTION OF COLORS AND THE RESULTANT ARTICLE. CHARLES G. ZANDER, Finsbury Park, London, England. Filed Feb. 6, 1905. Serial No. 244,486.

1. A process for the photo-mechanical reproduction of colors which consists in producing photographic color records or negatives taken on four suitable color-sensitive plates or films, each of a character to be unacted on by a different one of a group of four fundamental or monochromatic colors constituting two pairs of complementary colors and in employing said records or negatives for producing printing positives for reproduction respectively in their proper color.

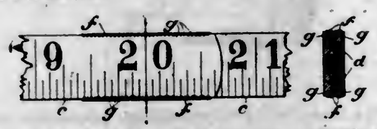


2. A process for photo-mechanical reproduction of colors in which the requisite photographic color records or negatives are taken on four suitable color-sensitive plates or films, constituting two pairs of complementary colors (blue and yellow and green and red) which are defined respectively as any hue of the continuous spectrum of white light between wave lengths 4200 and 4900 (10.7 m. m.), the hue complementary thereto, any hue between wave lengths 5000 and 5500 (10.7 m. m.) and the hue complementary to said last hue.

3. As an article of manufacture, a color reproduction from photographic negatives taken on four suitable color sensitive plates or films, each of a character to be unacted on by a different one of a group of four fundamental or monochromatic colors, which constitute two pairs of complementary colors (blue and yellow) and (green and red).

4. As an article of manufacture, a reproduction in colors produced by photo-mechanical processes in which the negatives are taken on suitable color-sensitive plates or films through selective color filters consisting of four fundamental or mono-chromatic colors constituting two pairs of complementary colors (blue and yellow and green and red) which are defined respectively as any hue of the continuous spectrum of white light between wave lengths 4200 and 4900 (10.7 m. m.) the hue complementary thereto, any hue between wave lengths 5000 and 5500 (10.7 m. m.) and the hue complementary to said last hue.

884,255. FOLDING RULE WITH SPRING-JOINTS. EDUARD ZWEIGLER, Eisenach, Germany, assignor to Hörselwerke, Eisenach, Germany. Filed Sept. 16, 1907. Serial No. 393,084.



1. A rule embodying foldable sections, and coöperating pivot plates for connecting the respective sections, the said plates being provided with flanges that coöperate with the longitudinal edges of the respective sections, and securing portions extending inwardly into the material composing the said edges of the sections.

2. A foldable rule embodying coöperating sections, and pivot plates for connecting the sections, each plate being provided with oppositely arranged flanges bent to engage flatwise the longitudinal edges of the respective section, and securing devices on said flanges projecting into the material composing the edges of the section in a plane parallel to the plane of movement of the sections.

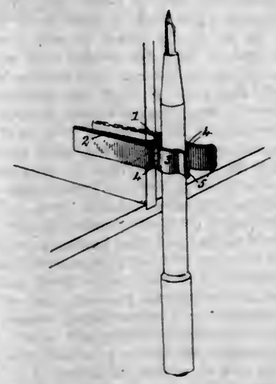
3. A rule comprising foldable sections, and coöperating pivot plates, each of the latter being provided with a pair of lateral flanges formed at the opposite longitudinal edges of the plate, and pointed securing devices formed integral with each flange, the securing devices on one flange being directed toward those on the opposite flange and engaging the material composing the longitudinal edges of the section.

4. A rule comprising flat foldable sections, and coöperating pivot plates arranged on the respective sections, each plate having a pair of parallel longitudinal flanges adapted to overlap and coöperate with the narrow longitudinal edges of its respective section, and the edge of each flange being turned inwardly and embedded in the material at the narrow edge of each section.

5. A rule comprising flat foldable sections, and coöperating pivot plates for connecting the respective sections, each plate having a pair of oppositely arranged flanges which overlap and coöperate with the corresponding longitudinal edges of its respective section, and the edge of each flange being turned inwardly in alinement with the edge of the flange at the opposite side of the respective plate and provided with a row of sharpened projections which engage in the material at the narrow edge of the section.

[Claim 6 not printed in the Gazette.]

884,256. CLIP. HERBERT G. ADDIE, Cresco, Iowa. Filed Jan. 25, 1907. Serial No. 354,038.



1. A clip for pencils, pens, and like articles, comprising a single piece of spring material bent upon itself at its center to form substantially a semicircle, with long, straight and converging portions extending therefrom providing clamping jaws, the material at the ends of said jaws being reversely folded to embrace the outside thereof and extend in the opposite direction, with the ends of the material projecting beyond said jaws and provided with opposed central expanded portions and opposed contracted portions at each side thereof.

2. A clip comprising a single piece of spring material bent to form two pairs of opposed clamping jaws arranged at opposite ends, the movement of both pairs of said jaws relative to each other being in the same direction, one pair of said jaws consisting of long straight and convergent portions, and the opposite pair of said jaws consisting of opposed portions transversely expanded for receiving a pen, pencil or the like at substantially right angles thereto.

3. A clip for pencils, pens and like articles, comprising a single piece of spring material bent to form a pair of opposed clamping jaws at each end, the jaws of one of said pairs being substantially straight and composed of a double thickness of material and converging toward each other in passing in the direction of their free ends when both pairs of said jaws are in normal relative positions, and with the outer layer of said double thickness of material forming each of a pair of said jaws being extended to form the other pair of jaws.

884,257. BOTTLE-CLOSURE. ALBERT ADELSON, Oakland, Cal. Filed June 13, 1907. Serial No. 378,820.

1. The combination with a bottle neck, of a closure therefor comprising a retaining member fixed to the neck, a stopper having an elastic gasket to seat upon the neck,

and a locking ring carried by the collar and movable thereon to engage and clamp the stopper in applied position.



2. The combination with a bottle neck, of a closure therefor comprising a retaining member fixed to the bottle neck, a stopper having an elastic gasket to seat upon the neck and formed with a seat rim having vertical slots and cam surfaces adjacent thereto, and a locking ring longitudinally and rotatably mounted upon the retaining member and provided with projections to coöperate with said slots and cam surfaces and engage the rim to clamp the stopper in applied position.

3. The combination with a bottle neck, of a closure therefor comprising a retaining element fixed to the neck, a stopper having an elastic gasket to seat upon the neck and provided with a seat rim having cam surfaces and vertical slots leading thereto and seat notches disposed at an angle to said slot, and a locking ring longitudinally and rotatably mounted upon the retaining element and provided with projections to coöperate with said slots and cam surfaces and engage the seat notches in the rim to hold the stopper in applied position, the ring being adapted to extend above the stopper to form a seal receptacle.

4. The combination with a bottle neck, of a closure therefor comprising a retaining member fixed to the bottle neck, a stopper comprising a disk having a conical portion to project into the neck and carrying a gasket to seat upon the rim edge thereof, a locking ring slidably and rotatably mounted upon the retaining element, said stopper and ring being provided with interlocking means connected and disconnected by reverse sliding and rotary movements of the ring to adapt the latter to clamp the stopper in applied position and to release the same.

5. The combination with a bottle neck, of a closure therefor comprising a collar fixed to the neck and having a stop flange provided with diametrically opposite slots, a stopper comprising a disk having a conical portion to fit within the neck and carrying a gasket to seat thereon, said disk being provided with diametrically opposite slots and a rim having cam surfaces adjacent thereto and seat notches, and a locking ring slidably and rotatably mounted upon the collar, said ring having a bottom stop flange and pins or projections to coöperate with the slots, cam surfaces and seats in the rim of the stopper to clamp the latter in applied position.

[Claims 6 and 7 not printed in the Gazette.]

884,258. WEED-CUTTER AND CULTIVATOR. FRANK BAKER, Sparta, Ky. Filed Sept. 5, 1907. Serial No. 391,458.



1. A combined weed cutter and cultivator comprising an oblong frame embodying spaced runners, a weight receptacle arranged at the front of the frame and connected with the front portions of the runners, and a blade pivoted between the rear portions of the runners and provided with rearwardly extending handle.

2. A combined weed cutter and cultivator comprising an oblong frame embodying spaced runners, a weight receptacle having supporting means connected to the front portions of the runners, a blade pivoted between the rear portions of the runners and provided with rearwardly extending handles, and means for adjustably connecting the handles with the rear portion of the frame for securing the blade in its adjustment.

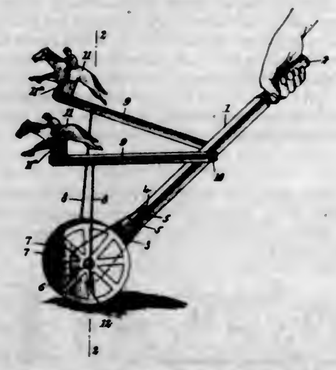
3. A combined weed cutter and cultivator comprising an oblong frame embodying spaced runners, a weight receptacle provided with supporting means consisting of transverse bars connecting the front portions of the runners, one of the transverse bars being arched, and a blade pivoted between the rear portions of the runners and provided with rearwardly extending handles.

4. A combined weed cutter and cultivator comprising a frame provided with runners, an inclined blade connected with the runners and extending downwardly and forwardly therefrom, said blade being arranged to sever a layer of the soil from the ground and adapted to cause the severed soil to be discharged at its upper rear edge, and handles connected with the frame.

5. A combined weed cutter and cultivator comprising a frame provided with runners, a weight receptacle arranged at the front of the frame, an inclined blade pivotally mounted between the runners at the rear portion of the frame and extending downwardly and forwardly therefrom, said blade being arranged to sever a layer of soil from the ground and adapted to cause the severed soil to be discharged at its upper edge, and handles connected with the blade.

[Claim 6 not printed in the Gazette.]

884,259. TOY. FREDERICK BEAUMONT, Jr., Argentine, Kans. Filed Jan. 16, 1908. Serial No. 411,153.



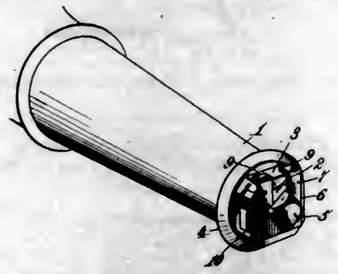
1. In a device of the class described, independent rotary and adjustable members adapted to be operated by a movement along a surface and figures, each operable by one of said members and connected thereto, said members being adapted to be adjusted relatively to one another, whereby the relative positions and movements of said figures can be altered.

2. In a device of the class described, independently movable wheels, movable figures, and means for operatively connecting said wheels and said figures, said wheels being adapted to be adjusted relatively to one another, whereby the relative positions and movements of said figures can be altered.

3. In a device of the class described, a handle, wheels revolubly carried by said handle, arms free to swing with respect to said handle, a link connecting each of said arms with one of said wheels, and figures carried by said arms, said wheels being arranged to rotate together and being relatively adjustable.

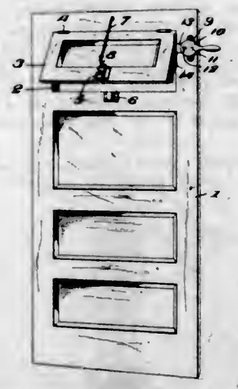
4. In a device of the class described, a handle having a wing, a pin loosely mounted thereupon, wheels carried by said pin at each side of said handle, said wheels fitting tightly upon said pin and being relatively adjustable, swinging arms pivoted to said handle, a link connecting each of said arms and one of said wheels, and figures mounted upon said arms.

884,260. LOCK-NUT. GEORGE W. BOYD, Nashville, Tenn., assignor to Mary F. Boyd, Nashville, Tenn. Filed June 6, 1907. Serial No. 377,630.



Means for locking nuts on axle skeins, axles and the like, comprising the combination with the nut, of a U shaped washer having its top formed with a pair of angularly-disposed integral ears extending over and engaging one side of the nut to prevent the dropping down of the washer when in position against the outer face of the nut, said washer further provided with an angular extension engaging another side of the nut to prevent transverse movement of the washer in one direction when in position against the outer face of the nut, a screw extending through the slot of the washer and engaging in the axle for retaining the washer against the nut, the inner face of the head of the screw bearing against the outer face of the washer, said washer when retained in position by said screw preventing the removal of the nut.

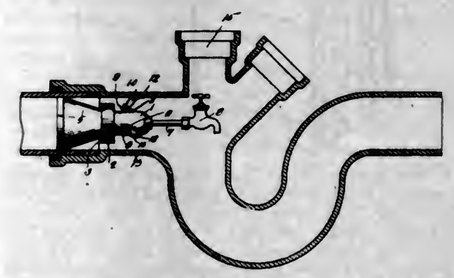
884,261. TRANSOM REGULATING AND SECURING MECHANISM. HENRY BRADLEY, Caney, Kans. Filed Feb. 21, 1907. Serial No. 358,705.



1. The combination with a door and a hinged panel hinged at its upper edge, of a spring actuated latch on the panel a keeper on the door, an arm on the housing of the latch, a spring in alinement with said latch and having one end secured to said arm and the other end to a relatively fixed part and arranged to exert tension on the panel to swing the same upward on its hinges, and means on the door engageable with the end of said panel and constructed to regulate the movement of said panel and having provision for engaging and locking said panel in its closed position.

2. The combination with a door and a hinged panel hinged at its upper edge and a latch therefor, of an arm attached to said panel, a spring in alinement with said latch and attached at one end to said arm and at its other end to said door to raise the panel when the latch is disengaged, and means fixed relatively to said panel and carrying a plate engageable with the end of the panel to hold the latter in its adjusted position and movable over the face of the panel to lock it in its closed position.

884,262. PLUMBER'S TESTING-PLUG. JOHN F. BRUNNER, Pittsburg, Pa. Filed Sept. 10, 1907. Serial No. 392,116.

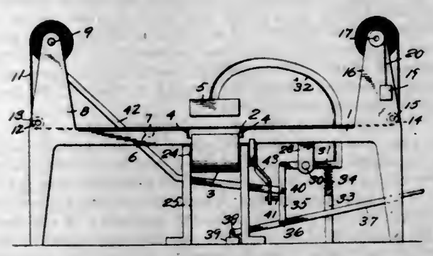


1. A testing plug, comprising a hollow body, a collapsible cone attached thereto, spring-pressed arms secured to the hollow body, and a faucet connected to said body.

2. A testing plug, comprising a cylindrical hollow body, a yielding cone attached thereto, a pipe and faucet projecting from said hollow body, and serrated spring-pressed arms secured to said body.

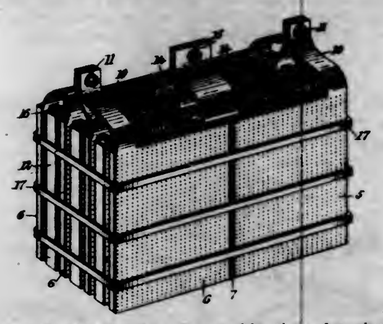
3. A testing plug, comprising a flanged cylindrical hollow body, a rubber cone attached thereto, a discharge pipe projecting from said hollow body, and means for clamping said body within a trap, consisting of a plurality of spring pressed arms formed with elongated slots and serrated at their free ends.

884,263. MACHINE FOR STAMPING ENVELOPS. HAROLD W. BUCHANAN, Minneapolis, Minn. Filed Apr. 11, 1907. Serial No. 367,571.



A machine of the type set forth comprising a table, a reel mounted thereon, cutting knives provided on said table, a foot lever, an operating lever, a connection between said foot lever and said operating lever, a plunger carried by said operating lever above said knives, a belt movable transversely of said table beneath said plunger, supporting pulleys beneath said belt, a connection between said first named connection and said reel for operating the latter upon operative movement of said plunger, a connection between said first named connection and said pulley for operating the latter upon operative movement of said plunger, and a spring engaging said operating lever to restore the parts to initial position after each operation thereof.

884,264. STORAGE BATTERY. GEORGIE A. CARPENTER, New York, N. Y., administratrix of Hiram Henry Carpenter, deceased, assignor, by mense assignments, to American Battery Company, Cedarhurst, N. Y., a Corporation of New York. Filed Feb. 1, 1906, Serial No. 298,957. Renewed Apr. 4, 1907. Serial No. 366,410.



1. In a storage battery, the combination of a plurality of negative plates arranged in pairs, the individual plates of each pair being insulated from each other, connections for joining together one plate of each pair, separate connections for joining together the other plate of each pair, a plurality of positive plates sandwiched intermediate of said negative plates, one positive plate having a surface substantially equal to that of one pair of said negative plates, and connections for joining together said positive plates.

2. In a storage battery, the combination of a plurality of negative plates arranged edge to edge in pairs, connections for joining together one plate of each pair, means for insulating from each other the plates of each pair, separate connections for joining together the several other plates of each pair, a plurality of positive plates sandwiched intermediate of successive pairs of said negative plates, spacing rods of insulating material disposed intermediate of said positive plates and said negative plates, connections for joining together said positive plates, and rubber bands encircling both said positive plates and said negative plates and holding the same firmly together.

3. In a storage battery, the combination of a plurality of plates of one sign arranged in pairs, the individual plates of each pair being insulated from each other, connections for joining together one plate of each pair, separate connections for joining together the other plate of each pair, and a plurality of plates of a different sign connected together and sandwiched intermediate of said first-mentioned plates, said plates of said different sign each having a surface substantially equal to that of one pair of said first-mentioned plates.

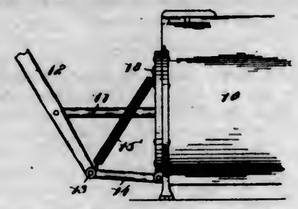
4. In a secondary battery, a cell comprising a plate of one sign, and a plurality of plates of the opposite sign, the aggregate of the areas of the plurality of plates being substantially equal to the areas of the first-mentioned plate.

5. In a secondary battery, a plate of one sign, a plurality of plates of the opposite sign, the aggregate of the area of the plurality of plates being substantially equal to the area of the single plate, means to connect the plurality of plates, and means to insulate the plates one from the other.

[Claim 6 not printed in the Gazette.]

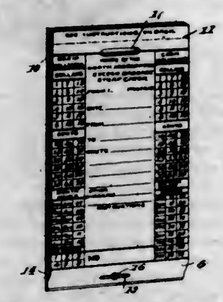
884,265. PUMP ATTACHMENT. JOSEPH CHAN, Lowry, Minn. Filed Sept. 13, 1906. Serial No. 334,449.

The combination with a stationary pump-cylinder and its reciprocatory piston-rod, of a lever for operating the piston-rod pivoted to the outer end of the latter above the lower end of the said lever, a link pivoted at its inner end to the pump-cylinder and at its outer end to the lower end of the lever, forming a toggle-joint between the two latter devices, and a spring arranged to operate on the toggle-joint with a tendency to straighten the same as the lever is operated to draw the piston-rod ontward whereby the movement of the piston and piston-rod are maintained in



a right line and undue wear on the piston-packing is avoided.

884,266. EXCESS-BAGGAGE COUPON-CHECK. FRANK H. CRUMP, Los Angeles, Cal. Filed June 18, 1907. Serial No. 379,579.



1. An excess baggage check tablet comprising a backing having a succession of superposed checks thereon, and fastened at one end thereto, with a strap-check upon the top of the checks, said checks having registering marks and spaces for punches and data, copying paper between the checks, and a fastening device between the other end of the backing and the strap check, said fastening device being detachable substantially as described.

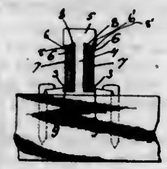
2. An excess baggage check tablet comprising a backing, a series of similarly printed checks thereon and a similarly printed strap-check upon the same, the checks being fastened to the backing at one end thereof, said backing and strap-check being of greater length than the other checks and projecting therebeyond at the free end, and a detachable fastening device in connection with the backing for engaging the free end of the strap-check.

884,267. DUSTER. JOHN F. DWYER, Jefferson City, Mo. Filed June 1, 1907. Serial No. 376,747.



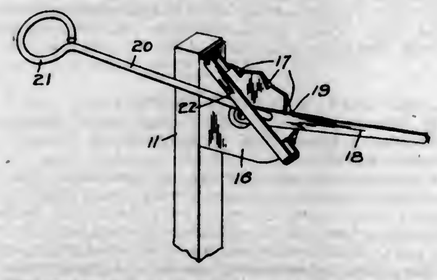
A duster comprising a handle having a chamber in one end thereof, a rod extending longitudinally through said handle and having a ring or eye at its lower end in said chamber, a brush having its filaments passed through said ring or eye, doubled thereon and having such doubled portion disposed in such chamber, and a nut screwed on the upper end of such rod and bearing on the upper end of such handle, said nut having a loop or eye for the purpose set forth.

884,268. RAIL-JOINT. STEFAN ENDERLE, Allegheny, Pa. Filed Aug. 31, 1907. Serial No. 390,898.



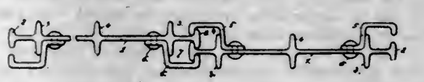
The combination with railway rails, having recesses formed in the base flange thereof at each side of the web, the inner wall of said recesses being flush with the side walls of the web of said rails, the bottom wall of said recesses being at direct right angles to the inner walls thereof, and the outer wall of said recesses inclining towards the web, the head member of said rails being provided with recesses of less width than the width of the head member on each side of the web, the said recesses in the underneath face of the head member having the inner wall thereof in line with the side walls of the rail web and the top wall inclining downwardly and terminating on the underneath face of the head member at a point removed from the side walls of said head member, and fish plates to engage in said recesses, the upper longitudinal edges of said fish plate having a flat face along the outer edge to engage the flat face on the underneath part of the rail head, and having an inclined face projecting above said flat face and fitting the inclined top wall of the recess in said head, the lower longitudinal edges of said fish plates fitting the base wall of the recesses in the rail flanges, and said fish plates having an inclined wall on their outer face adjacent the lower edge fitting with the inclined wall of said recesses in the base flange.

884,269. GATE-FASTENER. WALTER N. FAVERTY and VICTOR J. PETERSON, Tilford, S. D.; said Peterson assignor to Allen C. Faverty, Tilford, S. D. Filed June 5, 1907. Serial No. 377,409.



The combination, in a wire-fence, of a pair of gate posts; a wire gate movably connected to one of said posts and including a gate pole disposed at the free end thereof; a plate secured to the opposite post and provided with a toothed upper edge; a curved guide-strap secured to said plate; a lever pivoted at its upper end to said plate and extending beneath said guide-strap, said lever being adapted for interchangeable engagement with said teeth; and a rod pivoted to said lever and provided with a looped end for engagement with said pole, whereby said pole may be moved bodily towards the last-mentioned post when said lever is operated to stretch the fence wires.

884,270. INTERLOCKING SHEET-METAL PILING. SLATER T. FIERO, Pittsburg, Pa. Filed June 24, 1907. Serial No. 380,458.



1. Interlocking sheet metal piling comprising adjoining sheets of metal having T shaped edges, right angular disposed ribs carried by said sheets adjacent to said edges, right angular disposed intermediate ribs carried by said sheets, bracket bars secured to said sheets adjacent to the first mentioned ribs and bearing against said ribs, the edges of said bars alining with the T shaped edges of said sheets and having an interlocking engagement with the edges of the adjoining sheet.

2. Interlocking sheet metal piling comprising adjoining sheets of metal having T shaped edges, right angularly disposed ribs arranged upon both sides of said sheets, bracket bars secured to both sides of said sheets adjacent to some of said ribs, said bars having their edges alining with the T shaped edges of said sheets and interlocking with the T-shaped edges of the adjoining sheets.

3. Interlocking sheet metal piling comprising adjoining sheets of metal having overlapping T shaped edges, longitudinally disposed ribs carried by the sides of said sheets adjacent to said edges, longitudinally disposed intermediate ribs carried by the sides of said sheets, longitudinally disposed bracket bars secured to said sheets and having portions interlocking with the edges of the adjoining sheet.

4. Interlocking sheet metal piling comprising adjoining sheets of metal having overlapping T shaped edges, longitudinally disposed ribs carried by said sheets of metal, some of said ribs being located in close proximity to said overlapping edges, bracket bars secured to said sheets of metal and having edges alining with the T shaped overlapping edges of said sheets.

5. Sheet metal piling comprising adjoining sheets of metal having T shaped overlapping adjoining edges, longitudinally disposed ribs carried by the sides of said sheets of metal, bracket bars secured to the sides of said sheets of metal and engaging one of the sides of the T shaped overlapping edges of said sheets.

[Claims 6 to 28 not printed in the Gazette.]

884,271. ELECTRIC-LIGHT SOCKET. FRANZ FRANKOFSKI, North Braddock, Pa. Filed Sept. 12, 1907. Serial No. 392,444.



1. The combination with an incandescent lamp bulb, of a cap permanently secured thereto, and provided with diametrically opposite shoulders, and oppositely projecting lugs, a socket to receive said cap, means for preventing the turning of the cap within the socket, means within the cap for engaging said shoulders and means carried by said cap for disengaging said engaging means.

2. The combination with an incandescent lamp bulb, of a cap permanently secured thereto, and provided with dia-

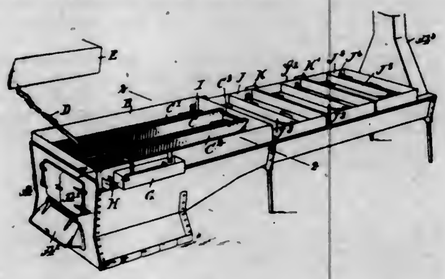
metrically opposite shoulders and oppositely projecting lugs, a socket to receive said cap, means for preventing the turning of the cap within the socket, means within the cap for engaging said shoulders and means carried by said cap for disengaging said engaging means, comprising oppositely disposed arms pivoted to said cap.

3. The combination with an incandescent lamp bulb, of a cap permanently secured thereto, and provided with oppositely-disposed lugs, and diametrically opposite shoulders, clamping arms pivotally secured to opposite sides of said cap, a socket formed with opposite grooves to receive said lugs, and spring fingers secured within said socket and having lugs to engage said shoulders.

4. The combination with an incandescent lamp bulb, of a cap permanently secured thereto, and provided with oppositely disposed lugs, and diametrically opposite shoulders, clamping arms pivotally secured to opposite sides of said cap, a socket formed with opposite grooves to receive said lugs, and spring fingers secured within said socket and having lugs to engage said shoulders, the lower ends of said clamping arms being adapted to be forced against said spring fingers when the bulb is broken to disengage said fingers from the shoulders of the cap.

5. The combination with an incandescent lamp bulb, of a cap permanently secured thereto and provided with oppositely disposed lugs, and diametrically opposite shoulders, clamping arms pivotally secured to opposite sides of said cap, a socket formed with opposite grooves to receive said lugs, and oppositely disposed housings, and spring fingers arranged within said housings, and having projecting lugs, said fingers being secured to the base of the socket.

884,272. EVAPORATOR. GUSTAV H. GRIMM, Rutland, Vt. Filed Dec. 8, 1906. Serial No. 346,876.



1. An evaporator having a pan, a preliminary heating receptacle in the form of a plurality of connected partitions arranged in the pan and extending into the sap contained in the pan, and a regulator for controlling the flow of the sap from the receptacle into the pan.

2. An evaporator having a pan, a preliminary heating receptacle in the form of a plurality of connected partitions arranged in the pan and extending into the sap contained in the pan, an overhead tank connected with the inlet end of the receptacle, and a regulator connected with the outlet end of the receptacle and with the said pan.

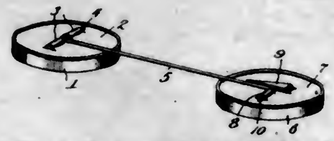
3. An evaporator provided with a preliminary heating receptacle approximately V-shaped in cross section, and a pan containing the said receptacle, the latter forming a partition in the pan.

4. An evaporator provided with a preliminary heating receptacle approximately V-shaped in cross section, and a pan containing the said receptacle, the latter forming a partition in the pan to provide separate compartments connected with each other at one end.

5. An evaporator provided with a preliminary heating receptacle approximately V-shaped in cross section, and a pan containing the said receptacle, the latter forming a partition in the pan, the bottom portion of the partition extending into the sap contained in the pan.

[Claims 6 to 11 not printed in the Gazette.]

884,273. TUFTING-BUTTON. JOSEPH W. GUNTHER, Portland, Oreg. Filed Apr. 17, 1907. Serial No. 368,707.



1. A tufting button comprising a pair of heads having metal back plates provided with pintle receiving sockets pressed out therefrom, a link having its extremities bent into pintles disposed at right angles to the length of the link for engagement with the sockets, and means on one of the back plates for detachably holding one of the pintles in its socket.

2. A tufting button comprising a pair of heads having metal back plates provided with pintle receiving sockets, a wire link having its ends bent into parallel pintles engaging in the sockets, and a keeper attached to one of the plates to hold the adjacent pintle in its socket.

3. A tufting button comprising a head having a back plate provided with a socket and a bendable keeper thereon, and a connecting link adapted to enter the socket and to be bent into a pintle, the said keeper adapted to be bent into engagement with the link thereof as formed.

884,274. WINDOW-SHADE BRACKET. FREDERICK HANNEMANN, Great Falls, Mont. Filed Nov. 21, 1906. Serial No. 344,494.

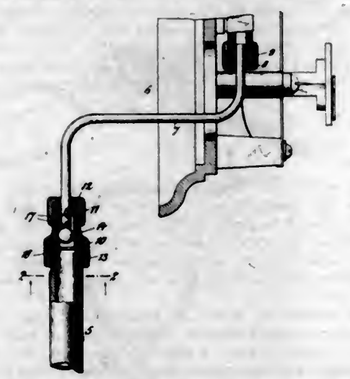


A window shade holder comprising base plates with opposite side edge guideways open at both ends, bracket plates with beveled opposite side edges movably mounted in said guideways, said bracket plates each having screw threaded openings near their opposite ends arranged in alinement with each other to permit of the bracket plates being reversed in either end of the base plates, binding screws for said openings to hold the bracket plates to their proper adjustment, said bracket plates having integral arms provided with enlarged approximately rounded heads, one of said heads having a circular opening and the other head having on opposite sides inclined squared notches, substantially as specified.

884,275. HEAT-REGULATING APPARATUS. DANIEL H. HAYWOOD, New York, N. Y., assignor to William B. Wadsworth, Plainfield, N. J. Filed July 28, 1906. Serial No. 328,221.

1. In heat regulating apparatus, the combination with a main pipe or conduit, a coupling member, a pipe adapted to connect said coupling member with a thermostat, means for securing said pipe to said coupler, comprising a screw cap and an elastic washer, and a ball contained within said coupling member arranged to engage said elastic washer when the said pipe is removed, but to be disengaged therefrom when the said pipe is in position, said pipe having openings adjacent the end, whereby the said ball will not prevent air from passing therethrough when the said pipe is in position, substantially as set forth.

2. In heat regulating apparatus, the combination with a main pipe or conduit and a pipe adapted to connect with a thermostat, of a coupling member having a screw-threaded connection with said main pipe or conduit, a washer having a reduced orifice arranged over the end of said pipe or conduit and held in place by the said coupling member, an elastic washer fitted around the second said pipe, a screw cap for clamping said elastic washer to the said coupling member and for pressing same around the pipe upon which it is arranged, a ball valve arranged in said coupling member and held away from the said elastic washer when the second said pipe is in place, said pipe having cut away portions whereby the said ball valve will not close the same, said ball valve adapted to engage the said elastic washer when the second said pipe is removed, said elastic washer then constituting a valve seat for the said ball, substantially as set forth.



884,276. BRUSH. ARTHUR HERSCHMANN, New York, N. Y. Filed Aug. 10, 1907. Serial No. 387,965.



1. In a brush the combination of a perforated body portion, bristles supported in the perforations in said body portion and longitudinally movable therein, a cover of sheet metal for limiting the longitudinal movement of said bristles, said cover comprising a plate spaced apart from said body portion and having flanges projecting angularly therefrom and embracing the sides of said body portion, and means for fastening said flanges to said body portion.

2. In a brush the combination of a perforated body portion, bristles supported in the perforations in said body portion and longitudinally movable therein, a cover of sheet metal adapted to limit the longitudinal movement of said bristles, said cover comprising a plate spaced apart from said body portion, means for retaining said cover in place, and a non-metallic lining for said cover.

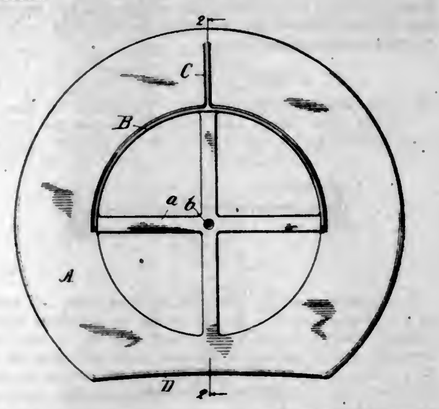
884,277. GAME APPARATUS. JAMES F. HUGHES, New York, N. Y. Filed Sept. 26, 1907. Serial No. 394,599.

1. Game apparatus comprising a plate having a circular opening therein and a wall extending upwardly from said plate and about a portion of said opening, substantially as set forth.

2. Game apparatus comprising a plate having a circular opening therein and a wall extending upwardly from said plate and about a portion of said opening, and means for rotatably mounting the plate, substantially as set forth.

3. Game apparatus comprising a plate having a circular opening therein and a wall extending upwardly from said plate and about a portion of said opening, said wall being of greatest height at the center and decreasing in height from the center toward the ends thereof, substantially as set forth.

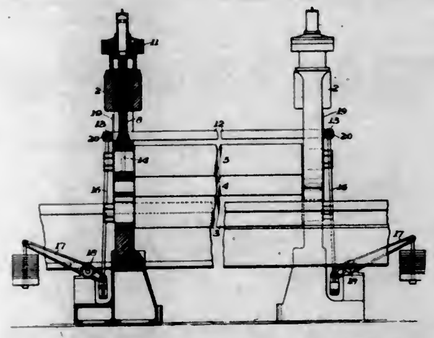
4. Game apparatus comprising an annular, metallic plate, integral arms extending across the opening therethrough, said arms having a hole therethrough at the center of the plate, and a wall extending upwardly from the plate and about a portion of said opening, said wall decreasing in height toward the ends thereof, substantially as set forth.



5. Game apparatus comprising a plate having a circular opening therein, a wall extending upwardly from said plate and about a portion of said opening, means for rotatably mounting the plate, and a bracket on the plate to facilitate turning the same, substantially as set forth.

[Claims 6 to 10 not printed in the Gazette.]

884,278. ROLLING-MILL. ALBERT T. KELLER, Pittsburg, Pa., assignor of one-half to Mesta Machine Company, Pittsburg, Pa., a Corporation of Pennsylvania. Filed Aug. 22, 1907. Serial No. 389,650.



1. In a rolling mill, roll housings, a top roll, vertically movable boxes or bearings therefor, rigid connections between said boxes or bearings extending through the housing windows to the outer side of the housings, and counterbalancing devices connected to the extending ends of the connections; substantially as described.

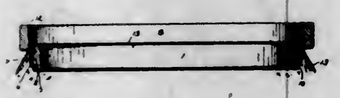
2. In a rolling mill, a housing, a top roll, vertically adjustable boxes or bearings therefor, a rigid connection between the same having its ends extending beyond the outer side of the roll housing, and counterbalances connected to the extended ends thereof; substantially as described.

3. In a rolling mill having a vertically adjustable top roll and holding-down screws therefor, bars extending parallel with the roll axes, said bars having their ends extended through the housing windows and exteriorly of the roll housings, rods or bolts connecting such extended ends at each side of the mill, lifting connections from the bars to the lower portions of the boxes or bearings for the top roll, and forming, with the bars, rigid connections between said boxes and bearings and counterweighted levers connected to said rods or bolts; substantially as described.

4. In a rolling mill having a vertically adjustable top roll and holding-down means therefor, rigid connections

for the boxes of the top roll extending through the windows of the roll housings, rods or bolts connecting such extensions and having bearings against the roll housings, and lifting connections connected to said rods or bolts; substantially as described.

884,279. EMBROIDERY-HOOP. FREDERICK E. KOHLER, Canton, Ohio. Filed Jan. 22, 1908. Serial No. 412,186.

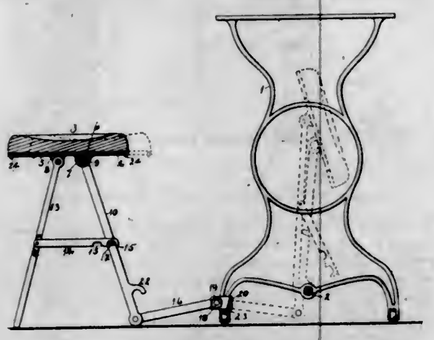


1. An embroidery hoop comprising two rings one adapted to telescope within the other, one of the rings having annular grooves in its holding face adjacent to the edges thereof, and a resilient frictional band attached on the face of the ring between the grooves and having its edges extended into the grooves and abutted against the outer sides thereof.

2. An embroidery hoop comprising two rings one adapted to telescope within the other, one of the rings having annular grooves in its holding face adjacent to the edges thereof and the face of the ring between the grooves being raised above the portions outside the grooves, and a resilient frictional band attached on the raised portion of the face and having its edges extended into the grooves.

3. An embroidery hoop comprising two rings one adapted to telescope within the other, one of the rings having annular grooves in its holding face adjacent to the edges thereof, and a resilient frictional band attached on the face of the ring between the grooves and having its edges extended into the grooves.

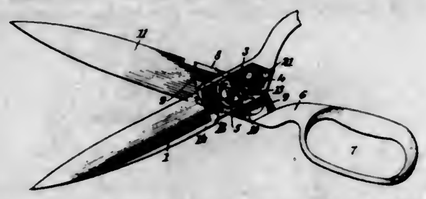
884,280. STOOL FOR SEWING-MACHINES. JOSEPH LIDEN, Rockford, Ill. Filed June 5, 1907. Serial No. 377,450.



1. A stool for sewing machines comprising a seat, two guide bars secured to the underface of the seat and forming an undercut channel, a guide fitted to the guide bars and located between them and provided with a depending grooved projection, two legs connected by a cross-bar and the cross-bar located in the grooved projection, and a third leg pivotally connected to the underface of the guide, the two first mentioned legs adapted to be pivotally connected to the legs of a sewing machine.

2. A stool for sewing machines comprising a seat, legs having a pivotal connection with the seat, clamps adapted to be connected with the legs of a sewing machine, links having a pivotal connection with the legs of the stool, and screws having a connection with the free ends of the links and a screw-thread connection with the clamps.

884,281. SCISSORS OR SHEARS. SVEN F. F. LINDAL, New York, N. Y., assignor of one-half to Alfred Peterson, Brooklyn, N. Y. Filed Dec. 24, 1907. Serial No. 407,875.



1. In scissors or shears, in combination, a pair of handles having shanks pivoted together, one of said shanks being extended to from a blade therebeyond, the other of said shanks having a guide formed therein, a second blade sliding in said guide, and means for sliding said blade in said guide when said handles are moved with respect to each other.

2. In scissors or shears, in combination, a pair of handles having shanks pivoted together, one of said shanks being extended to form a blade therebeyond, the other of said shanks having a guide formed therein, a second blade sliding in said guide, and a pin-and-slot connection between said second blade and the shank carrying said first blade whereby the closing of said shears or scissors will slide said second blade.

3. In scissors or shears, in combination, a pair of handles having shanks, a pivot bolt connecting said shanks, one of said shanks having a blade formed therebeyond, the other of said shanks having a guide channel formed therein, a second blade slidably mounted in said guide channel and having a pin, and an inclined slot in said first shank receiving said pin and affording means for sliding said second blade when the scissors or shears are opened or closed.

4. In scissors or shears, in combination, a pair of handles having shanks, a pivot bolt connecting said shanks, one of said shanks having a blade formed therebeyond, and having an inclined slot therein, the other of said shanks having a guide channel formed therein, a blade having a tang slidably mounted in said channel, and having a slot receiving said pivot bolt, said tang further having a pin projecting into said inclined slot.

5. In scissors or shears, in combination, a pair of handles having shanks pivoted together, one of said shanks being extended to form a blade, the other of said shanks having a guide formed therein, a second blade sliding in said guide, a pin-and-slot connection between said second blade and the shank carrying said first blade, whereby the opening or closing of said shears will slide said second blade, and a clamping plate affording means for adjusting the said blades with respect to each other and covering said pin and slot.

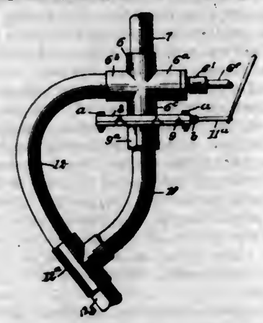
[Claim 6 not printed in the Gazette.]

884,282. SANDING APPARATUS FOR LOCOMOTIVES. ABRAM O. MARTIN and CARL A. HAHNEL, Denison, Tex. Filed Aug. 17, 1907. Serial No. 389,022.

1. In a sanding apparatus, the sand dispensing device, comprising a hollow body having four branches disposed oppositely in pairs, one horizontal branch having an air jet-nozzle plug therein, the plug having an air passage therethrough controlled by a resilient tongue plate, a sand conducting pipe extended from the opposite horizontal branch, a sand supplying pipe in an upright branch that feeds sand past the air jet nozzle plug, and another sand conducting pipe opposite the sand supplying pipe.

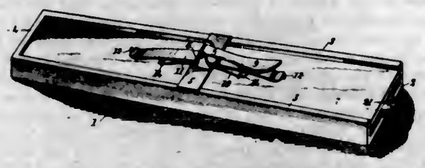
2. In a sanding apparatus, the sand dispensing device, comprising a hollow body having four branches disposed oppositely in pairs, the uppermost branch being connected to a sand supply pipe, a jet nozzle plug having an air passage therethrough, and a resilient tongue plate held to vibrate across said passage, means for supplying an air jet to said plug, a by-pass pipe extended from the branch that is opposite the air jet plug, and another sand conducting pipe in connection with the lowermost branch outlet.

3. In a sanding apparatus, the sand dispensing device, comprising a hollow body having inlet and outlet branches, a sand feeding pipe on one inlet branch, a sand conducting pipe on an outlet branch, an air jet nozzle plug on an inlet branch opposite the sand conducting pipe, said nozzle plug having an air passage therethrough, and a thin resilient tongue plate held at the discharge end of the nozzle plug diagonally across the air passage, and means for controlling the opening in the remaining branch.



4. In a sanding apparatus, the combination of a hollow body having four branches, a sand supply pipe on one branch, a by-pass pipe on a second branch, a jet nozzle plug adapted to blow an air jet across the sand fed into the hollow body and force the sand into the opposite by-pass pipe, means carried by the jet nozzle for controlling the flow of air therethrough, and a gate valve for controlling the downward passage in the remaining branch outlet.

884,283. PRESS FOR NECKTIES. SIMON MILLER, New York, N. Y. Filed Oct. 1, 1907. Serial No. 395,343.



1. A device of the class described, having an elongated body with upwardly projecting sides and open at the end, a cover fitting between said sides and guided in its downward movement thereby, means for depressing said cover to press the article received in said body, and elongated tie holders of stiff material adapted to be introduced under said cover from the open end of said body.

2. In a device of the class described, in combination, an elongated body having a cross bar at an intermediate point on the length thereof, a cover for said body under said cross bar, a handle mounted in said cross bar and adapted to depress said cover to clamp the same upon said body, and means for engaging said cover and tending to hold the same elevated.

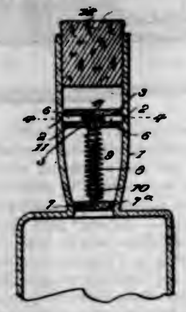
3. A device of the class described, having an elongated body with upwardly projecting sides, a cover fitting between said sides and guided in a vertical direction between said sides, means for depressing said cover to press an article received in said body, and resilient means normally tending to raise said cover.

4. A device of the class described having an elongated body and a cross bar, a lever mounted on said cross bar, and having a toe, a bow spring supported on said cross bar and extending longitudinally of said body, a cover adapted to be pressed by said spring when actuated by said toe, and means for raising said cover when said spring is released from said toe.

5. In a device of the class described, in combination, an elongated body having a cross bar, a lever pivotally mounted on said cross bar and having a toe, a main spring under said toe, a cover under said spring and adapted to be pressed by said spring when said spring is engaged by said toe, and a second spring supported from said cross bar and engaging with said cover to raise the same when the pressure of said main spring is relieved.

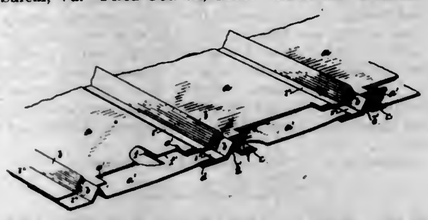
[Claim 6 not printed in the Gazette.]

884,284. BOTTLE. HILLARD S. MITCHELL, Wilton, Ark. Filed Feb. 9, 1907. Serial No. 356,582.



The combination with a bottle and its neck, of a seal adapted to be thrust into said neck and provided in its margin with a series of zig-zag grooves forming outlet passages and said seal being also provided with a depending nipple, means for locking said seal in the bottle neck, a valve mounted in said neck below the seal and provided with an upwardly facing nipple, said valve being adapted to seat against the lower part of the neck, and a coiled expansive spring interposed between the valve and seal with its ends encircling said nipples.

884,285. SHEET-METAL ROOFING. HENRY E. MOOMAW, Salem, Va. Filed Oct. 31, 1907. Serial No. 400,043.

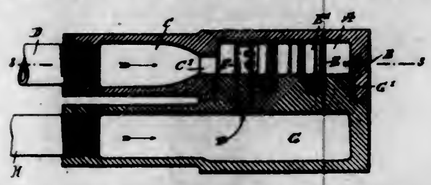


A sheet metal roofing plate having an inverted V-shaped ridge parallel with and a short distance from one edge and another similarly shaped and dimensioned ridge parallel with and a short distance from its other edge, the part of the plate outside of this latter ridge serving as a nailing flange, and a longitudinal pocket-like channel inside of and adjacent to this latter ridge and opening toward the same and being less in height than the same, whereby the longitudinal edges of a series of such plates are overlapped and interlocked and the ridges of each pair of adjacent plates fit closely one over the other their entire length and form a reinforced upstanding ridge.

884,286. BURNER. JACOB O. MORGAN, Oakland, Cal. Filed July 18, 1907. Serial No. 384,353.

1. A burner comprising an atomizing chamber having a removable bottom, spaced pins carried by said bottom and extending vertically in the said atomizing chamber when the bottom is in position, and means for forcing oil and steam into the said chamber against the said pins, to spray the oil and cause an intimate commingling of the oil and steam.

2. A burner comprising an atomizing chamber, a removable closure for said chamber, a series of spaced pins carried by said closure and extending across the said atomizing chamber when the closure is in position, the said pins having flattened portions facing the entrance of the said atomizing chamber, and means for passing oil and steam separately into the said atomizing chamber and directing the same against the flattened sides of the pins.



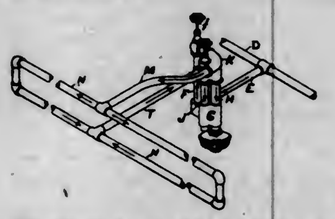
3. A burner comprising an atomizing chamber, an exit slot opposite the entrance of the atomizing chamber, a removable closure for the atomizing chamber, the closure being provided with spaced pins projecting from its inner face and extending across the atomizing chamber when the closure is in position, the said pins having flattened portions facing the entrance of the said atomizing chamber, the said pins having a staggered arrangement relative to the entrance and the exit slot of said chamber, and means for passing oil and steam separately into the said atomizing chamber and directing the same against the flattened sides of the pins.

4. A burner comprising an atomizing chamber having an exit slot opposite the entrance of the chamber, spaced pins extending in the said chamber and having flattened portions facing the entrance of the said atomizing chamber, a steam nozzle discharging into said entrance, an oil chamber connected with an oil supply, and a perforated pipe connected with the said oil chamber and extending into the said atomizing chamber at a point between the said pins and the said steam nozzle, the perforations of the said pipe, being opposite the flattened portions of said pins.

5. A burner comprising an atomizing chamber having an exit slot opposite the entrance of the chamber, spaced pins extending in the said chamber and having flattened portions facing the entrance of the said atomizing chamber, a steam nozzle discharging into the said entrance, an oil chamber connected with an oil supply, and a perforated pipe connected with the said oil chamber and extending into the said atomizing chamber at a point between the said pins and the said steam nozzle, the perforations in the said pipe being opposite the said flattened portions of the pins.

[Claims 6 to 10 not printed in the Gazette.]

884,287. REGULATING DEVICE FOR STEAM-HEATING SYSTEMS. JAMES F. MCELROY, Albany, N. Y., assignor to Consolidated Car-Heating Company, Albany, N. Y., a Corporation of West Virginia. Filed Aug. 31, 1901. Serial No. 73,981.



1. The combination with a heating system including a heater for the apartment, of a regulator comprising a casing formed with a supply chamber for said heater, a source of steam supply for the heater, an inlet valve in said casing controlling the connection between said source and the supply chamber, a discharge passage from the heater, a thermostat located in said passage so as to be affected by the temperature of the discharge from the heater and rigidly connected with the casing, and an operating connection between said thermostat and inlet valve.

2. The combination with a heating system including a heater for the apartment, of a regulator comprising a casing formed with a supply chamber for said heater, a source of steam supply for the heater, an inlet valve in said casing controlling the connection between said source and the supply chamber, a discharge passage from the heater including a terminal thermostat casing open on one side to the atmosphere outside of the apartment to be heated and rigidly connected with the inlet-valve casing, a thermostat supported in said thermostat chamber, and an operating connection between said thermostat and inlet valve.

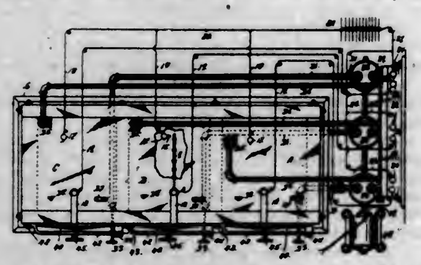
3. In a regulator for steam heaters, the combination with the heater and source of steam supply, of a casing having a supply-chamber connected with the inlet end of the heater and a discharge-chamber connected with the outlet end thereof, a discharge-conduit leading from the discharge-chamber to the atmosphere, a thermostat mounted in said discharge-conduit, and two valves in said casing operated by said thermostat and having concurrent closing movements, one being an inlet valve controlling the connection between the steam supply and said supply-chamber and the other being an outlet valve controlling the connection between said discharge-chamber and the discharge conduit.

4. A thermostatic regulator for steam heating systems comprising a casing having supply and discharge chambers separated by a partition, a discharge-conduit leading from said casing, a thermostat located in said conduit, a valve-stem having a sliding fit in said partition, and two valves mounted upon said stem and both closed by expansion of the thermostat, one being a valve controlling the inlet to said supply-chamber and the other a valve controlling the outlet from said discharge-chamber to the discharge-conduit.

5. In a steam heating system, the combination with the heater and source of steam supply, of a regulator having a casing at one end provided with supply and discharge chambers connected respectively with the inlet and outlet ends of the heater, a partition separating said chambers and having an opening, a thermostat at the opposite end of the regulator, a discharge conduit extending between the discharge chamber of the casing and the themostat, a valve in the casing smaller in diameter than said opening and controlling the passage of steam from the source of supply to the inlet end of the heater, and an operating connection passing from the thermostat through said opening to the valve, whereby the valve and its connection are made withdrawable through the thermostatic end of the regulator.

[Claims 6 to 13 not printed in the Gazette.]

884,288. COOKING APPARATUS. WILLIAM NASH, Denver, Colo. Filed Oct. 23, 1906. Serial No. 340,232.



1. In cooking apparatus, the combination with an oven, of means for supplying the same with hot air under pressure, comprising an air pump connected with the oven, a heater connected with the oven and with the pump, a check valve interposed between the oven and the heater whereby the air is maintained at a predetermined pressure in the oven, the oven, the heater and the pump being connected to cause the air to travel in an endless circuit through the said elements, and means located in the oven for maintaining the heat at a predetermined degree.

2. In cooking apparatus, the combination of an oven, an electrical heater, an air pump, a pipe system connecting all of the said elements whereby the air is circulated by the pump through the oven and heater in an endless circuit, and a check valve interposed between the oven and heater for maintaining the air within the oven at a predetermined pressure.

3. In cooking apparatus, the combination with an oven, of a heater, a pump, an air pipe leading from the heater to the pump, second air pipe leading from the pump to the oven, and a third air pipe leading from the oven to the heater, the last named pipe being provided with a check valve between the oven and the heater whereby the air within the oven is maintained at a predetermined pressure.

4. The combination with an oven, of a heater, a pump, a pipe system connecting the heater with the pump, the latter with the oven, and the oven with the heater whereby a circulation of hot air by the pump through the oven and heater in an endless circuit may be maintained, and the connection between the oven and the heater being provided with a check valve whereby the air within the oven is maintained at a predetermined pressure.

5. In cooking apparatus, the combination with an oven, an electric heater, an air pump, a pipe system connecting the heater with the pump, the latter with the oven and the oven with the heater, a thermostat connected with the oven and having its movable element located in the circuit of the heater whereby the temperature of the oven may be controlled, and a check valve located in the air pipe between the oven and the heater for regulating the pressure within the oven.

[Claims 6 to 9 not printed in the Gazette.]

884,289. GARMENT-SUPPORTER. BLANCHE NEWTON, Pardeeville, Wis. Filed June 1, 1907. Serial No. 376,761.



1. A garment supporter, comprising a band, a fastening device including two coacting members, and independent means for securing each of said members to said band adjacent each other and intermediate the ends thereof.

2. A garment supporter, comprising a band and a fastening device, including two coacting members, one of said members being secured to the band intermediate the side edges thereof and the other of said members being secured to the band adjacent the edge thereof.

3. A garment supporter, comprising a band adapted to encircle the limb and provided with an outwardly-projecting button, and a loop having flexible connections with said band and adapted to engage with said button.

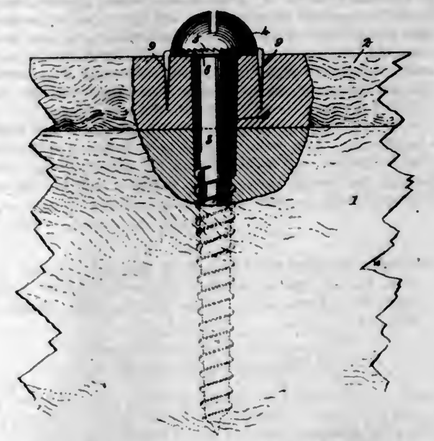
4. A garment supporter, comprising a band, and means for securing a garment thereto, said means comprising two coacting members secured to said band intermediate the ends thereof and independently of each other and adapted to hold the garment therebetween.

5. A garment supporter, comprising a band adapted to encircle the limb, a plurality of buttons carried thereby, and means for securing a garment to said buttons, said means including a plurality of loops adjacent said buttons.

[Claims 6 to 10 not printed in the Gazette.]

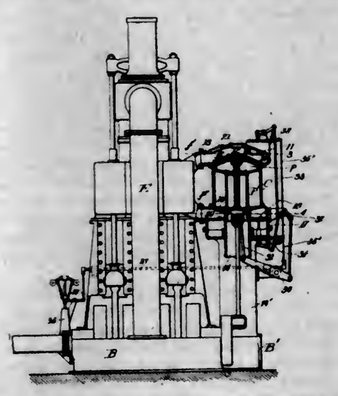
884,290. LOCKING DEVICE. AGUSTIN MONTES DE OCA, Mexico, Mexico. Filed Oct. 11, 1907. Serial No. 396,934.

1. A screw having a body and a head, an annular locking member adapted to be received under said head, said locking member having spurs on the under side thereof adapted to be driven inwardly in the direction in which the bolt or screw advances, and interlocking means between the under side of said head and said locking member, said spurs being offset beyond the periphery of said locking member to form a butt to receive hammer blows.



2. In combination, a screw having a head with a plurality of radially disposed ratchet teeth on the under side thereof, and a locking ring having a body with teeth on the upper face thereof adapted to engage said first teeth, and having spurs projecting in the direction of the body of the screw, said spurs being offset beyond the edge of said locking ring to form butts to receive hammer blows.

884,291. PUMP. WILHELM VON OECHELHAEUSER, Dessau, and CARL STEINBECKER, Langfuhr, near Danzig, Germany. Filed Jan. 31, 1907. Serial No. 355,132.



1. A pump of the character described having a cylinder, a differential piston therein, an extension from said cylinder, means forming a gas suction chamber around said extension, a valve communicating between said chamber and the cylinder, and means forming a gas discharge chamber in direct communication with a gas engine.

2. A pump of the character described having a supporting frame, a cylinder, a differential piston therein, means forming an air-receiving chamber in the upper part of said cylinder, a valve therein, and means forming a discharge chamber adapted to directly communicate with a gas engine.

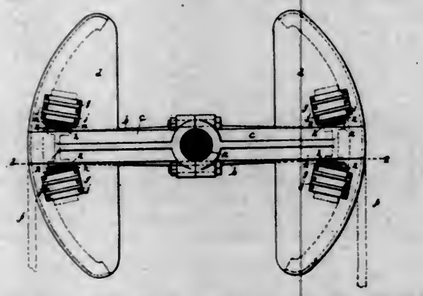
3. A pump of the character described having a supporting frame of two legs, a cylinder with a differential piston therein, means forming air and gas suction chambers in said cylinder, one of said legs having a conduit therein

communicating with the air suction chamber, and the other leg having a conduit communicating with the gas suction chamber.

4. A pump for supplying air and gas to a gas engine, a cylinder having a differential piston therein, means forming suction chambers for air and gas respectively, valves for opening and closing said chambers, and means connected with the cross head of said piston for operating said valves, and a governor connected therewith whereby the opening and closing of the said valves may be regulated.

5. A pump for supplying air and gas to a gas engine, comprising a supporting frame, a cylinder, a differential piston therein, and means forming a gas discharge chamber on the lower part of said cylinder adapted to communicate directly with the gas engine.

884,292. STEERING-GEAR FOR SHIPS. HENRY PENTON, Detroit, Mich., assignor of one-half to W. I. Babcock, New York, N. Y. Filed Feb. 7, 1907. Serial No. 356,141.



1. In a rudder steering gear for vessels, the combination with a rudder stock, of a tiller, a quadrant, separate cushioning devices carried by the quadrant intermediate its extremities and adjacent to the opposite sides of the tiller, said cushioning devices each comprising a spring case secured to the under side of the quadrant normally spaced from the tiller, and a spring within said case, said cases arranged to contact with the tiller should the springs therewithin become inoperative, and afford positive control.

2. In a rudder steering gear for vessels, the combination with a rudder stock, of a tiller, a quadrant, separate spring cases carried by the quadrant intermediate its extremities on opposite sides of the tiller and adjacent thereto and normally spaced therefrom, and springs in said cases, said cases arranged to contact with the tiller should the corresponding springs become inoperative and afford positive control, said tiller provided with contact devices adjacent to the springs.

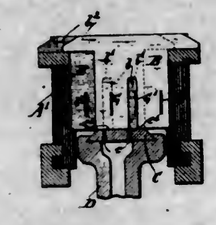
3. In a rudder steering gear for vessels the combination with a rudder stock, of a tiller, a quadrant, separate spring cases carried by the quadrant intermediate its extremities on the under side thereof and on opposite sides of the tiller and normally spaced therefrom, springs in said cases to contact with the tiller, and means for the adjustment of the springs, each of said cases arranged to contact with the tiller should the corresponding spring become inoperative, and by such contact afford positive control, said cases provided with outwardly projecting flanges, and said quadrant cut away to receive said cases.

4. In a rudder steering gear for vessels the combination with a rudder stock, of a tiller, a quadrant, contact devices carried by the tiller, spring cases carried by the quadrant intermediate the extremities on opposite sides of the tiller and normally spaced from the said contact devices, and springs within said cases to contact with the contact surfaces of the tiller, the spring cases arranged to contact with said contact surfaces of the tiller should the corresponding spring become inoperative, and thereby afford positive control, said quadrant swiveled upon the rudder stock.

5. In a rudder steering gear for vessels, the combination with a rudder stock, of a tiller, a quadrant, separate spring cases carried by the quadrant intermediate its extremities on the under side thereof and on opposite sides of the tiller and normally spaced therefrom, and plural springs within each of said cases to contact with the tiller, the spring cases arranged to contact with the tiller should the corresponding springs become inoperative and thereby afford positive control, said quadrants swiveled upon the rudder stock.

[Claims 6 and 7 not printed in the Gazette.]

884,293. METHOD FOR CASTING LINES OF SINGLE TYPE. DAVID PETRI-PALMEDO, Hoboken, N. J. Filed July 18, 1907. Serial No. 384,387.



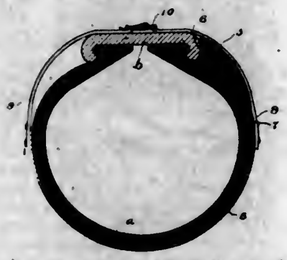
1. The method of casting lines of single type as they are to appear in print consisting in assembling mold matrices between fixed abutments so that each matrix forms a mold side wall for each neighboring one and leaving individual mold cavities between them, injecting molten metal simultaneously into all the individual mold cavities formed between the assembled mold matrices and subsequently removing the cast line of single type from the molds.

2. The method of casting lines of single type as they are to appear in print consisting in assembling slotted mold matrices between fixed abutments so that each mold matrix forms a mold side wall for each neighboring one and covers the mold slot of the neighboring matrix and leaving individual mold cavities between the assembled mold matrices, injecting molten metal simultaneously into all the individual mold cavities formed between the assembled mold matrices, withdrawing the type partly from the matrices in the direction of their height, shifting the matrices relatively to each other to make the mold slots register, and finally ejecting sidewise the line of single type.

3. The method of casting lines of single type as they are to appear in print consisting in assembling slotted mold matrices between fixed abutments so that each matrix forms a mold side wall for each neighboring one and covers the mold slot of the neighboring matrix and leaving individual mold cavities between the assembled matrices, inserting recess forming blades passing through the mold cells of the slots of the assembled matrices, injecting molten metal simultaneously into all the individual mold cells, allowing the metal to solidify, withdrawing the recess forming blades, shifting the matrices relatively to each other to make the mold slots register, reinserting one of the blades into the recesses of the cast type, withdrawing partly the type from the matrices in the direction of their height, and finally ejecting sidewise the whole line of single type.

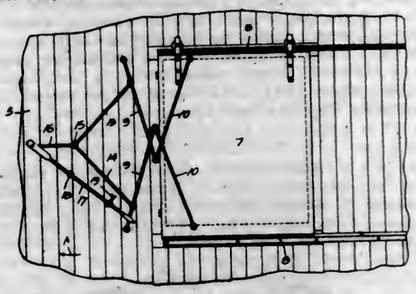
4. The method of casting justified lines of single type as they are to appear in print consisting in assembling slotted mold matrices between fixed abutments so that each matrix forms a mold side wall for each neighboring one covering the mold slot of the adjoining matrix and leaving individual mold cavities between the assembled matrices, inserting wedge shaped space matrices, justifying wedges and blades between the matrices, justifying the line of matrices by driving the wedges, inserting recess forming and cell forming bars, injecting then molten metal simultaneously into all the individual mold cells formed by the assembled letter matrices, space matrices, and justifying wedges and blades, allowing the metal to solidify, withdrawing the blades, shifting the matrices to make the mold slots register, inserting a blade into the recesses of the cast type, withdrawing the type partly from the matrices in the direction of their height, and finally ejecting sidewise the whole justified line of single type.

884,294. TIRE-SEALING DEVICE. GEORGE H. PHILLIPS, Plymouth, Mass., assignor of one-half to himself and one-half to George F. Soule, Plymouth, Mass. Filed Oct. 30, 1907. Serial No. 399,818.



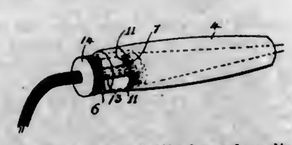
A sealing device for pneumatic tires comprising a sealing member having a shoulder, adapted to fit against the wheel rim, and a comparatively thin edge, and means adapted to embrace the tire and wheel rim for securing such sealing member in place.

884,295. CAR-DOOR OPERATOR. GEORGE W. RAKESTRAW, Hollysprings, Ga. Filed Sept. 10, 1907. Serial No. 392,183.



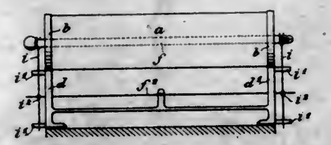
A mechanism of the class described, comprising in combination with a car and a sliding door mounted at one side thereof, of pivotally connected main toggle links arranged in upper and lower coöperating pairs, one of the links of each pair being pivoted to said car and the remaining link of each pair being pivoted to the door, said links having operative movement as pairs towards and away from one another, an auxiliary link pivoted to each of the car pivoted links of said pairs, said links being pivoted to one another, a rod pivoted to said links at their mutual pivotal connection, and an operating lever pivoted at its end to said rod.

884,296. ELECTRIC CURLING-IRON. CLARA A. RICKARDS, Portland, Oreg. Filed Oct. 15, 1907. Serial No. 397,588.



In combination, an electrically heated curling iron having two handles, one of said handles having a transverse open slot in its end, the inner end of said slot communicating with two radial grooves having short right angle portions extending therefrom parallel with the slot, a wire terminal in the end of each extended portion of the radial grooves, a key including a stem, and an angularly disposed cross-bar on the end of the stem, the cross-bar being of the same shape as the transverse open slot and adapted to operate therein, and wire terminals on the inner face of the cross-bar, the cross-bar being first forced into the transverse slot until opposite the radial grooves and then turned until the parallel right angle extensions are reached when the key is slightly withdrawn to move the ends of the bar into said right angle portions to cause the terminals in the handle and cross-bar to contact.

884,297. PHOTOGRAPHIC-PRINTING APPARATUS. THOMAS T. SABROE, Copenhagen, Denmark. Filed Apr. 3, 1907. Serial No. 366,081.



1. Photographic printing apparatus comprising a frame, a printing-cylinder firmly supported in said frame, a vacuum arc light source inside the said cylinder, an apron corresponding in length to the circumference of the said cylinder, and means for holding the apron against the cylinder.

2. Photographic-printing apparatus comprising a tilting frame, a printing-cylinder firmly lodged in said frame and a vacuum arc light source inside the said cylinder and firmly attached to the said frame.

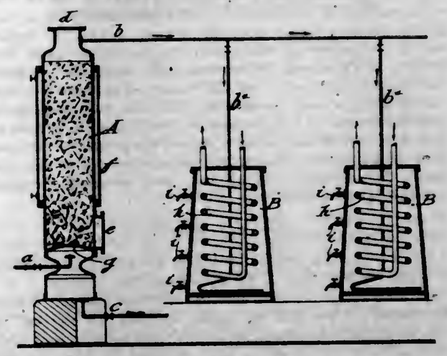
3. Photographic-printing apparatus comprising a frame, a printing cylinder firmly lodged in said frame, a vacuum arc light source inside the said cylinder, and a support for the light source, capable of tilting in the frame.

4. Photographic-printing apparatus comprising a frame, a printing-cylinder firmly lodged in said frame, a vacuum arc light source inside the said cylinder, an apron, a stretching-roller capable of turning in the frame and connected with the one edge of the said apron, and projections on the frame for fixing the other edge of the apron.

5. Photographic-printing apparatus comprising a frame, a printing cylinder firmly lodged in said frame, a vacuum arc light source and a screen both inside the said printing-cylinder, and means for stretching out and folding together the said screen.

[Claim 6 not printed in the Gazette.]

884,298. PROCESS OF PREPARING CUPRAMMONIA SOLUTION. GEORGE L. SCHAEFER, New York, N. Y., and AUGUST SCHAEFER, Basel, Switzerland. Filed June 5, 1907. Serial No. 377,478.

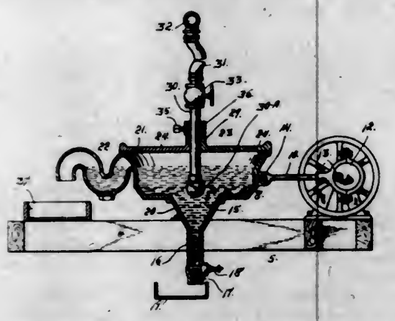


1. The process herein described of preparing an ammoniacal solution of cupric hydroxid, which consists in

subjecting copper-chips to the action of air and ammonia at a temperature changing alternately between −4° and +8° C.

2. The process herein described of preparing a concentrated ammoniacal solution of cupric hydroxid, which consists in subjecting copper-chips to the action of air and ammonia at an alternately changing low temperature, and mixing the ammoniacal solution of cupric sulfate and an alkali lye so that a proper molecular quantity of copper and ammonia is obtained in the solution.

884,299. AMALGAMATOR. HENRY I. SEEMANN, Denver, Colo. Filed June 5, 1907. Serial No. 377,340.



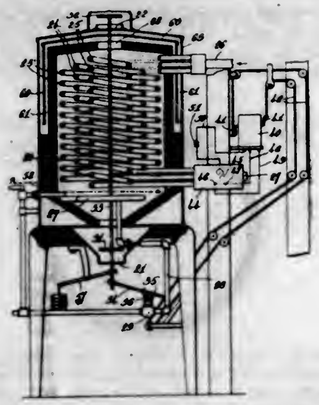
1. In an amalgamator, the combination with a tank adapted to contain a quantity of mercury, a cover composed of two pivoted members having centrally located recesses which when said members are brought together form an opening, means for locking the cover in the closed position, a feed conduit passing through said opening formed in the cover, its lower extremity being submerged in the mercury, the said feed conduit being vertically adjustable, the top of the tank being provided with a discharge opening, and a trap communicating with said opening for the discharge of the gangue from the tank, substantially as described.

2. An amalgamator, comprising a tank adapted to hold a quantity of liquid mercury, the said tank having a reduced bottom extension for the discharge of the amalgam, a valve located in this extension for controlling the escape of the amalgam therefrom, a trapped discharge of the gangue, connected with the top of the tank, and a cover composed of two pivoted members having centrally located recesses which when the said members are brought together form an opening through which the feed conduit passes, and means for locking the cover members, substantially as described.

3. An amalgamator, comprising a suitable frame, rollers mounted on the frame, a tank provided with boottm guides between which the rollers pass, means for imparting a reciprocating movement to the tank upon said rollers, a depending valve-controlled amalgam discharge nozzle, the upper part of the tank being provided with an opening, a trap communicating with said opening for the discharge of the gangue, a feed conduit projecting into the top of the tank, a cover composed of two pivoted members for closing the members at the top, and means for securely locking the cover members in place, substantially as described.

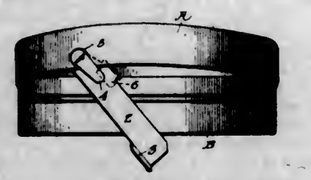
884,300. HEATER. WALTER K. STAFFORD, Newton, Mass. Filed Dec. 5, 1904. Serial No. 235,439.

1. A heating chamber having an inlet opening for the admission of air and an outlet opening for the exit of the products of combustion, a valve for each of said openings a burner for heating said chamber, a valve for controlling the fuel supply to said burner, means for operatively connecting said fuel supply valve and the valves controlling the aforesaid inlet and outlet openings whereby, when the fuel supply valve is closed or opened all valves connected therewith are simultaneously and automatically closed or opened, allowing the heating chamber to be completely closed automatically by the closing of the fuel supply valve.



2. A heating chamber having an inlet opening for the admission of air and an outlet opening for the exit of the products of combustion, a valve for each of said openings a burner for heating said chamber, a valve for controlling the fuel supply to said burner, means for operatively connecting said fuel supply valve and the valves controlling the aforesaid inlet and outlet openings whereby, when the fuel supply valve is closed or opened, all valves connected therewith are simultaneously and automatically closed or opened, allowing the heating chamber to be completely closed automatically by the closing of the fuel supply valve, and a thermostat for automatically controlling the fuel supply valve.

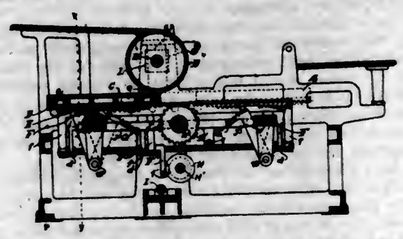
884,301. BOX-OPENER. SCOTT STEWART, Fairmont, W. Va., assignor to Ellis A. Billingslea, Scott Stewart, Ernest T. Crislip, Samuel E. James, and Morris J. Lantz, Fairmont, W. Va. Filed May 16, 1907. Serial No. 373,957.



1. The combination with a box body and its lid, of a lever adapted to be permanently carried therebetween, provided intermediate its ends with a portion extending downwardly over the edge of said box body forming a pivot with said lever, said lever being pivotally secured at one end upon the inner face of said lid, and having a suitable handle piece at its opposite end extending outwardly, beneath and beyond said lid, substantially as described.

2. The combination with a box body and its lid provided with an opening in the flange thereof, of a lever adapted to be permanently carried therebetween, provided intermediate its ends with a portion extending downwardly over the edge of said box body and forming a pivot for said lever, said lever being provided with an extending tongue at one end adapted to be bent rearwardly through said opening in the flange of the lid, and having a suitable handle at its opposite end extending outwardly, beneath and beyond the edge of said lid, substantially as described.

884,302. PRINTING-PRESS. JOHN H. STONEMETZ, Boston, Mass. Filed July 27, 1907. Serial No. 385,923.



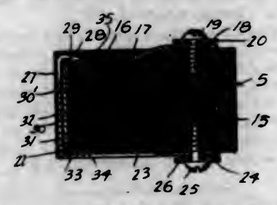
1. In combination with a printing press and a type bed, two driving gears revolving at uniform motion in opposite directions, a rack slidingly attached to the bed in position to be made to mesh with each of the gear wheels alternately, a lever pivoted near its longitudinal center to the frame and engaging the rack at one end and a cam wheel engaging the lever at the other end causing the lever to oscillate and move the rack alternately from one gear wheel to the other, racks secured to the bottom of the bed, and segments arranged to engage said racks and actuate the bed as it approaches and starts to return from the ends of its travel and alternately with the gear wheels.

2. In combination with a printing press, a reciprocating bed, a reciprocating rack movable laterally under the bed, a lever mounted on a shaft, a cam engaging one end of the lever and the other end of the lever engaging the reciprocating rack, two driving gear wheels revolving in opposite directions at uniform speed, and in position to alternately engage the reciprocating rack, a rack secured to the bed, segments in position to engage said rack and stop and reverse the motion of the bed alternately with the gear wheels, a cylinder, and means for raising and lowering the cylinder with the alternate movement of the bed.

3. In combination with a printing press, a reciprocating bed, a reciprocating rack under the bed, gear wheels revolving in opposite directions and in position to be engaged alternately by the reciprocating rack, means for stopping and reversing the bed independent of the gear wheels, a cylinder, a rack, a spring actuating said rack in one direction, a cam device actuating the rack in the opposite direction, a shaft, a gear wheel on said shaft in position to be actuated by the rack, an eccentric and eccentric rod connecting the shaft with the cylinder to raise and lower the cylinder with the alternate motions of the bed.

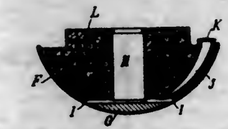
884,303. [WITHDRAWN.]

884,304. FIRE-ALARM. ALBERT S. TRASK, Concord, N. H. Filed May 14, 1907. Serial No. 373,643.



In a system of the class described, a thermostatic circuit closer, comprising a block of insulating material and formed with a recess, a spring contact finger overhanging said recess, a stationry contact member having an angular end overhanging said spring finger, and a stationary detent for said spring finger comprising members connected by fusible solder, one of said members being formed with an angular end for engagement with said finger.

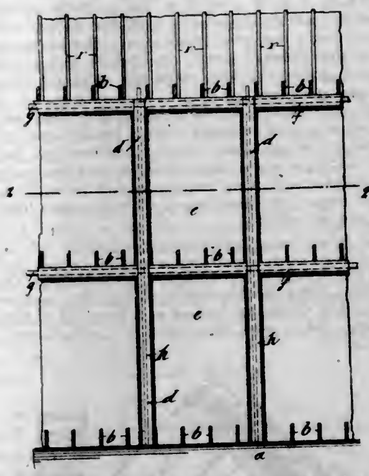
884,305. LAMP, LANTERN, AND HEATER. HANBURY A. WATKINS, New York, N. Y. Filed Feb. 24, 1906. Serial No. 302,683.



1. The combination of a font having a convex weighted bottom, an imperforate tube extending downward from the burner and constituting a chamber for the wick, said tube being open at the bottom, a plurality of supporting fingers extending radially from the lower end of the wick chamber, and a filling of non-inflammable absorbent material supported around the wick chamber by the said fingers, as set forth.

2. The combination of a font having a convex bottom, a weight at the lowest point of the bottom, an imperforate tube constituting a wick chamber, a plurality of supporting fingers extending from the lower end of the wick chamber, and a rope or strand of non-inflammable absorbent material wound around the wick chamber and substantially filling the space in the font above the supporting fingers, as set forth.

884,306. REINFORCED CONCRETE CONSTRUCTION FOR BUILDINGS. HARLAN H. WHEELER, Maywood, N. J., assignor to The Concrete Frame Company, New York, N. Y., a Corporation of New York. Filed Feb. 8, 1907. Serial No. 356,324.

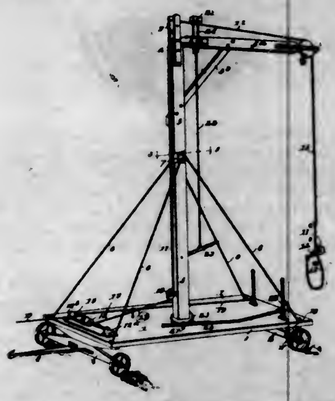


In a reinforced-concrete wall, the combination of uprights, a horizontal beam connecting said uprights, and a reinforced-concrete wall extending between said uprights and said beam, said wall having an inwardly-extending bearing-ledge of which said beam is the core, and upright, inwardly-extending stiffening ribs or members of which said uprights constitute the cores.

884,307. CORN-SHOCK LOADER. GEORGE WINEMILLER and GEORGE GENTSLINGER, Wapakoneta, Ohio. Filed Nov. 18, 1907. Serial No. 402,769.

1. The combination, with a wheeled platform and post supported thereon and provided with a lateral arm and pulleys suitably arranged, of a windlass journaled on the front of the platform and adapted to swing laterally at one end, a draft-rope applied to the swinging end of the windlass, and a hoisting-rope applied to the other end of the windlass and running on the aforesaid pulleys, and brake

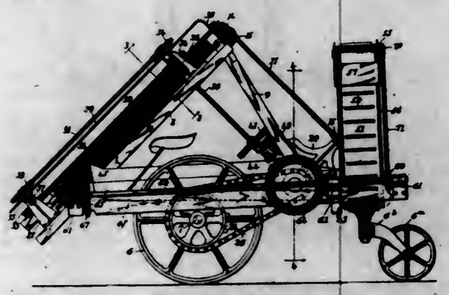
mechanism operatively connected with the swinging end of the windlass whereby it is automatically applied in the hoisting operation, substantially as described.



2. The combination, with a wheeled platform and a post pivoted thereon and provided with a lateral arm, pulleys journaled on the post and arm as described, a hoisting-rope running on said pulleys, a differential windlass journaled on the platform, one end thereof being movable laterally, a hoisting rope running on the said pulleys and attached to the smaller end of the windlass, a draft-rope wound in the opposite direction on the larger portion of the windlass, a lever pivoted to the platform in vertical position and one end connected with the shiftable end of the windlass, a swinging brake-shoe arranged under the platform contiguous to a rear wheel, and a rod operatively connecting such brake-shoe with the aforesaid lever, as shown and described.

3. The combination, with a platform, a vertical post supported thereon and provided with a lateral arm, pulleys journaled on the post and arm, a hoisting-rope running on said pulleys, a brake block arranged above the hoisting-rope for clamping it upon the post arm, a lever pivoted to the post, and a rod connecting it with the brake block, as shown and described.

884,308. CORN GATHERING AND HUSKING MACHINE. NELS M. ANDERSON, Galva, Ill., assignor of one-third to Sander M. Hokom and one-third to Peter A. Norborg, Galva, Ill. Filed Nov. 1, 1906. Serial No. 341,548.



1. In a machine of the character described, two coacting, forwardly and downwardly-inclined harvesting rolls positioned side by side and having their longitudinal axes arranged at a slight inclination to each other, whereby the lower end of one of said rolls is depressed below the other for the purpose described.

2. In a machine of the character described, two coacting, forwardly and downwardly-inclined, longitudinal, corrugated, harvesting rolls having their longitudinal axes arranged at a slight inclination to each other, whereby the lower end of one of said rolls is depressed below the other for the purpose described.

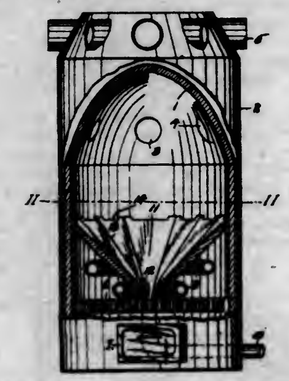
3. In a machine of the character described, a frame-work, two coacting, forwardly and downwardly-inclined corn-gathering rolls journaled at one side of the frame-work, the lower end of one of said rolls being depressed below the lower end of the other, and chains having fingers movably mounted over the lower ends of said rolls with the chain over the depressed roll arranged at a higher elevation than the chain over the opposite roll.

4. In a machine of the character described, means for gathering corn from the stalk, comprising two coacting forwardly and downwardly inclined, corrugated, tubular rolls the lower end of one of said rolls being depressed below the lower end of the other, and flexible members having fingers movable over the lower ends of said rolls and arranged at different elevations.

5. In a machine of the character described, a frame-work, two coacting, forwardly and downwardly-inclined harvesting rolls arranged at one side of the frame-work, two coacting, rearwardly and downwardly-inclined husking rolls supported by the frame-work at the side of the harvesting rolls, a cross-shaft journaled in bearings carried by the frame-work, a longitudinal shaft arranged at the opposite side of the machine from the harvesting rolls and driven by the cross-shaft, means for driving the harvesting rolls from the cross-shaft, and means for driving the husking rolls from the longitudinal shaft.

[Claims 6 to 8 not printed in the Gazette.]

884,309. HEAT-DEFLECTOR. FRANK R. BIGLER, Kansas City, Mo. Filed Nov. 9, 1907. Serial No. 401,409.



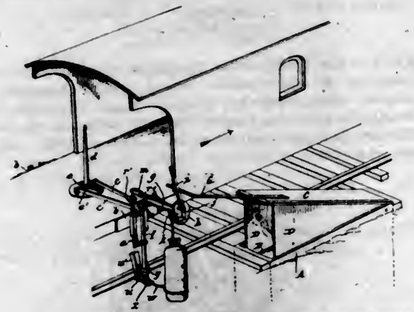
1. A deflector unit comprising a body member that is narrow at one end and flares toward the other end, the flared end of said member being provided with a recess and the narrow end with a curved leg portion, substantially as and for the purpose set forth.

2. The combination with a suitable fire pot and grate, of a burner located in said fire pot, and a deflector located in said fire pot over said burner, said deflector comprising individual units having flared outer ends resting against the fire pot and narrow inner ends terminating in downwardly curved legs which support said units at the center of said grate, the flared ends of said units being recessed, substantially as and for the purpose set forth.

884,310. MAIL-BAG DELIVERER. JOHN F. BLACK, Greensburg, Pa. Filed Oct. 23, 1907. Serial No. 398,840.

1. In an apparatus of the class set forth, a car, a lifting device mounted rotatably on a vertical pivot in the center of the floor thereof mid-way between the two side doors, and a mail-bag delivering apparatus carried by said lifting device and adapted to be projected out through either door of the car.

2. The combination with a car having opposite side doors, of a keeper at the sill of each door, a mail-bag delivering device adapted to slide upwardly or downwardly in either one of these keepers, and a shiftable lifting and lowering device connected to the delivering device and mounted on the floor of the car at a point between the two doors thereof.



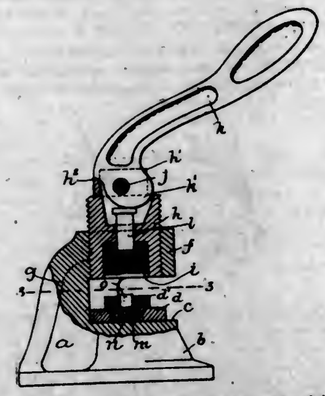
3. In combination with a car having a keeper secured to its door sill, a mail-bag delivering device adapted to be lowered into said keeper and to be raised out of the same, and means mounted on the floor of the car for raising and lowering said delivering device and drawing it back into the car.

4. The roadbed receiving-receptacle for mail-bags consisting of a box, a cover pivoted at its rear end and adapted to swing upwardly, a prop pivotally attached to the cover and depending into the box, a support for this prop at its lower end, this prop being located in the path of the delivered bag whereby the injection of the bag will dislodge the prop and permit the cover to close.

5. A mail-bag receiving receptacle comprising a box, a cover therefor, means for propping up the cover, said means being located within the box in the path of the incoming bag, whereby the movement of the delivered bag after it enters the receptacle will close the door thereof.

[Claims 6 to 10 not printed in the Gazette.]

884,311. PRESS FOR SWAGING SEAMLESS CROWNS. WALTER G. BRIDGE, Boston, Mass. Filed Mar. 6, 1907. Serial No. 360,938.



1. A press for swaging tooth crowns, comprising a rigid frame having a base for supporting a mold and an overhanging head provided with an internally-threaded bore; an externally-threaded holder contained in said head and adapted to be screwed toward and from the base, said holder having a cavity in its lower end adapted to contain a viscous semi-fluid substance; a plunger mounted in said holder and movable into the cavity; and a lever pivoted to the holder in such a way as to serve as a handle for screwing the holder toward and from the base, and having a cam portion arranged to bear on said plunger to force the same into the cavity and thereby press the semi-fluid material into a crown contained in a mold on the base.

2. A press for swaging tooth crowns, comprising the combination of a rigid frame having a base for supporting a mold and an overhanging head provided with an internally-threaded bore; an externally-threaded holder contained in said head and adapted to be screwed toward and from the base, said holder having a cavity in its lower end adapted to contain a viscous semi-fluid substance; a mold carrier supported on said base carrying a mold shaped internally conformably to a tooth and having its upper portion of a shape and size to enter and fit closely within said cavity, whereby the holder, when screwed downward, may surround such portion of the mold carrier and force some of the semi-fluid material into the mold; a plunger mounted in said holder and movable into the cavity; and a lever pivoted to the holder in such a way as to serve as a handle for screwing the holder toward and from the base, and having a cam portion arranged to bear on said plunger to force the same into the cavity and thereby press the semi-fluid material into a crown contained in said mold.

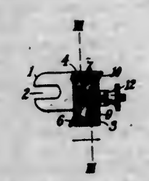
3. A press of the character described, comprising a rigid frame having a support for a mold or die, a holder having a socket in its end for containing viscous fluid material mounted in the frame so as to be movable bodily toward the mold and to be held against retraction by a direct thrust, a plunger mounted in the holder, and a device for pressing the plunger end into the socket and thereby forcing the viscous material into a crown held in the mold.

4. A press of the character described, comprising a rigid frame having a support for a mold or die, a holder having a socket in its end for containing viscous fluid material mounted in the frame so as to be movable bodily toward the mold and to be held against retraction by a direct thrust, a plunger mounted in the holder, and a cam lever pivoted to the holder in position to bear on one end of said plunger for pressing the other end into the socket and thereby expelling part of the viscous material.

5. A press of the character described, comprising a rigid frame having a support for a mold or die, a holder having a socket in its end for containing viscous fluid material and formed with an external screw-thread engaged with an internal thread in the frame, whereby it may be forced toward the die, a plunger contained in the holder so as to be capable of entering the socket therein, and a cam lever pivoted to the holder for pressing the plunger into the socket and forcing part of the viscous material into a crown placed in the die.

[Claim 6 not printed in the Gazette.]

883,312. ELECTRICAL CONNECTOR. JAMES L. CARNALL, New York, N. Y. Filed Dec. 14, 1907. Serial No. 406,409.



1. In an electrical tapping-in device, the combination of a supporting member adapted for connection with a binding post, an insulating block on said supporting member, a clip in electrical connection with the supporting member, a second clip pivoted on said insulating block, means for holding the clips in yielding contact with each other or with a terminal plug thrust between the two, and a binding post carried by the insulating block and electrically connected with the second-mentioned clip.

2. In a tapping-in device, the combination of a supporting member, a pair of clips in yielding contact with each other and adapted to receive a terminal-plug between them, one of said clips being electrically connected with the said supporting member, and a binding post in electrical connection with the other clip.

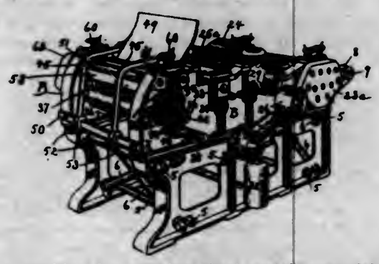
3. In a tapping-in device, the combination of a supporting member adapted for connection with a binding post, an insulating block carried by the supporting member, a pair of clips pivoted on the said block, one of said clips being electrically connected with said supporting member and the other insulated therefrom, springs arranged to press said clips toward each other, and a binding post carried by the insulating block and electrically connected with the said insulated clip.

4. In a tapping-in device, the combination of a supporting plate adapted for connection with a binding post, a spring-actuated clip electrically connected with said plate, a spring-actuated clip insulated from said plate and arranged to coöperate with the first clip, and a binding post insulated from the plate and electrically connected with the second clip.

5. In a tapping-in device, the combination of a supporting plate adapted for connection with a binding post, an insulating block mounted thereon, a binding post on the block, and a pair of spring-pressed clips mounted on the block, one clip being electrically connected with the supporting plate and the other with the binding post carried by the block.

[Claim 6 not printed in the Gazette.]

884,313. MACHINE FOR SCOURING SHEET METAL. WILLIAM H. CARPENTER, Bristol, Conn., assignor to Bristol Brass Company, Bristol, Conn., a Corporation. Filed Feb. 5, 1907. Serial No. 355,885.



1. A machine for scouring sheet metal, comprising the frame with a bracket 8 secured to one of the sides of the frame and projecting from one end thereof, a coil supporting bracket arm 9 secured to the said bracket and extending laterally at a distance from the end of the frame and parallel to the said end, and a pair of guide plates supported on the frame, the guide plate farthest from the bracket 8 being hinged to its support for being turned down upon the bracket arm or turned up out of the way.

2. A machine for scouring sheet metal, comprising a set of straightening rollers, with a roller brush and presser roller above the same, a second roller brush and presser roller below the same, and a pair of feed rollers for drawing the metal from the roller brush.

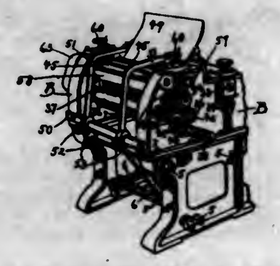
3. A machine for scouring sheet metal, comprising a set of straightening rollers, with a roller brush for acting upon one side of the metal, a second roller brush in a different vertical plane, for acting upon the other side of the metal, a pair of feed rollers for drawing the metal from the roller brushes, and a set of coiling rollers following the action of the feed rollers.

4. A machine for scouring sheet metal, comprising a set of straightening rollers, with a roller brush for acting upon one side of the metal, a second roller brush for acting upon the other side of the metal, a pair of feed rollers for drawing the metal from the roller brushes and upper and lower guides between the straightening rollers and first roller brush, between the first and second roller brushes and between the second roller brush and the feed rollers.

5. A machine for scouring sheet metal, comprising a roller brush for acting upon one side of the metal, a roller brush for acting upon the other side of the metal, a presser device in connection with each roller brush for holding the metal against the said brush, and upper and lower guides of a skeleton form fixed in front of the first roller brush and presser device and between the first and second roller brushes and presser devices.

[Claims 6 and 7 not printed in the Gazette.]

884,314. MACHINE FOR COILING SHEET METAL. WILLIAM H. CARPENTER, Bristol, Conn., assignor to Bristol Brass Company, Bristol, Conn., a Corporation. Original application filed Feb. 5, 1907, Serial No. 355,885. Divided and this application filed Sept. 9, 1907. Serial No. 391,941.

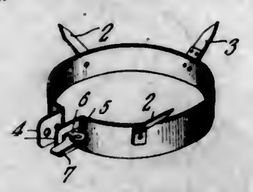


1. In a machine for coiling sheet metal, the combination of a set of coiling rollers with a pair of coil supporting rollers arranged parallel to the coiling rollers in a horizontal plane and separated or spaced apart from each other above the said coiling rollers on opposite sides of the central vertical plane thereof.

2. In a machine for coiling sheet metal, the combination of a set of coiling rollers with a pair of coil supporting rollers arranged above the said coiling rollers, and connecting gearing for driving the coiling rollers and coil supporting rollers in unison with each other.

3. In a machine for coiling sheet metal, the combination of a set of coiling rollers with a pair of coil supporting rollers arranged above the said coiling rollers on opposite sides of the central vertical plane thereof, and adjustable guides for the opposite edges of the metal, the said guides extending upwardly from the delivery side of the coiling rollers over the top of the coil supporting rollers.

884,315. ICE-CREAM-CAN ATTACHMENT. LINUS A. CARROLL, Unionville, Mo., assignor of one-half to Elmer B. Casady, Unionville, Mo. Filed June 20, 1907. Serial No. 379,981.



A can attachment comprising a flexible interrupted band having opposed end portions, one of said end portions having an elongated slot, a pin adjustably attached to the other end portion of the band, a lever having an eccentric end fulcrumed to said pin and adapted to pass through said slot, and prongs mounted upon said band.

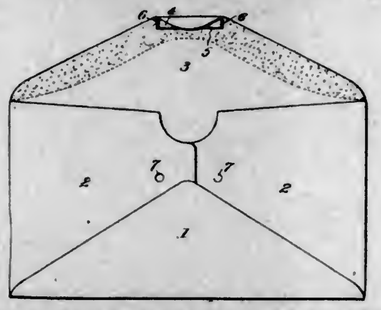
884,316. FASTENER. CHARLES A. CONRARD, Washington, D. C. Filed June 3, 1907. Serial No. 376,957.

1. A fastener including in combination, a lower plate having an opening therein, a cord or the like secured to said plate, an upper plate having an opening therein, and a rivet in said opening and passing through said plates for securing the same together securing means carried by the rivet and engaging the outer faces of said plates, said rivet being of less diameter than the opening in one of said plates, whereby the plates may be tilted relative to each other.



2. A fastener including in combination a lower plate having an opening therein, a cord or the like secured to said plate, an upper plate having an opening therein, a rivet passing through said openings for securing said plates together, said rivet being of less diameter than the opening in said plates, whereby one of said plates may be tilted relative to the other.

884,317. ENVELOP. ELLSWORTH COWEN, Barnesville, Ohio. Filed Mar. 14, 1907. Serial No. 362,394.

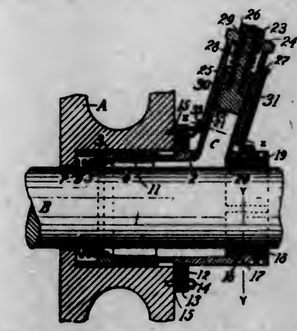


1. An envelop including a body, end flaps, a back flap and a closure flap, the closure flap having adhesive substance along its free edge to provide means for securing the closure flap against the back of the envelop and the end flaps having spaced perforations, and an auxiliary fastening means composed of a single piece of material and bent to form a U-shaped metal member having its legs disposed for insertion in the perforations in the end flaps and secured to the closure flap by folding the terminal of the closure flap over the body of the fastener between the legs of the latter and pasting the closure flap over the fastener by moistening the adhesive material with said legs projecting at right angles to the closure flap and adapted to enter the perforations in the end flaps when the envelop is closed and be turned aside by contact with the contents of the envelop upon pressure upon the fastening, the closure flap completely concealing the auxiliary fastener when closed.

2. An envelop including a body, end flaps, a back flap and a closure flap, the closure flap having adhesive substance along its free edge to provide means for securing the closure flap against the back of the envelop and the end flaps each having a perforation, said perforations being disposed in alinement when the end flaps are folded over the body of the envelop, and an auxiliary fastening means comprising a U-shaped metal member having its legs disposed for insertion in the perforations in the end flaps and secured to the closure flap by folding the terminal of the latter over the body of the fastener and pasting it thereto by moistening the adhesive material of the closure flap with said legs of the fastener projecting at right angles to the closure flap and adapted to enter the perforations in the end flaps when the envelop is closed, the legs of the fastener being slit, whereby portions of each leg may be turned aside in opposite directions by contact with the contents of the envelop upon pressure upon the closure flap, the closure flap completely concealing the auxiliary fastener when the envelop is sealed.

3. An envelop including a body, end flaps, a back flap, and a closure flap, the closure flap having its edges converging to substantially a point and also having its edges provided with an adhesive substance for securing the closure flap against the back of the envelop, said end flaps each having a perforation formed therein, said perforations being arranged in alinement when the end flaps are folded over the body of the envelop and so disposed as to be hidden from view when the closure flap is sealed to the back of the envelop to conceal the contents of the latter, and an auxiliary fastening means composed of a single piece of material adapted to be bent at its ends to provide spaced legs for insertion in the corresponding perforations of the end flaps and secured to the closure flap by folding the substantially pointed terminal of the closure flap over the auxiliary fastening means intermediate the ends of the latter and pasting it to the closure flap by moistening the adhesive material of the latter, said legs of the fastening means being clenched within the envelop by engagement with the contents of the latter when pressure is made upon the envelop to seal the same, the sealing of the envelop completely concealing the auxiliary fastening from view.

884,318. STUFFING-BOX. FRED A. DAILEY, St. Paul, and BARNEY LONG, Minneapolis, Minn. Filed Apr. 29, 1907. Serial No. 370,917.



1. The combination, with a stuffing box, of a chamber communicating with the interior of the box and extending outwardly therefrom, said chamber being adapted to hold a reserve supply of plastic packing, and a screw operated ram working within the chamber, and adapted, when screwed in, to force a supply of the stored packing from the storage chamber into the stuffing box.

2. The combination, with a stuffing box, of a packing chamber communicating therewith, a feed-nut having screw engagement with the chamber wall, a plunger working within the chamber and having sliding support in the feed-nut, and a spring interposed between the plunger and the feed-nut.

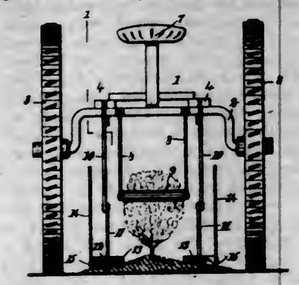
3. The combination, with a stuffing box, of a packing chamber communicating therewith, a feed-nut having screw engagement with the chamber wall, a plunger working within the chamber and having a rod extending slidably through the top of the feed-nut, a stop-nut upon the end of the rod, and a spring interposed between the plunger and the feed-nut.

884,319. INSECT-DESTROYER. GEORGE W. DARNELL, near Edna, Tex. Filed Dec. 18, 1907. Serial No. 407,004.

1. An insect destroyer, comprising a frame adapted to be propelled along the ground, means for agitating vegetation, and pans mounted under said means and arranged to slide upon the ground to crush insects, seed pods, bolls and the like, said pans having the bottoms inclined from one edge to the opposite edge, and being adapted to contain an insect destroying substance.

2. An insect destroyer, comprising a frame adapted to be propelled along the ground, means for agitating vegetation, and pans supported by said frame and having the forward ends outwardly tapered, said pans having the

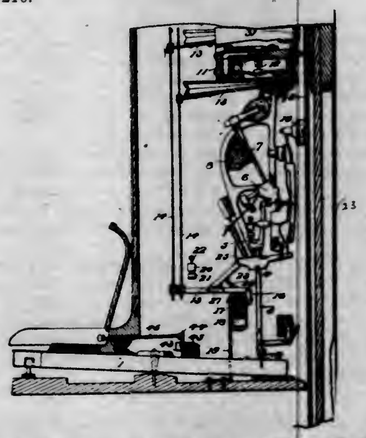
bottoms inclined upwardly toward the inner edges and being adapted to contain an insect destroying substance.



3. An insect destroyer, comprising a wheeled frame, hangers depending from said frame and having means for agitating vegetation, and pans carried by said hangers and adapted to contain an insect destroying substance, said pans being arranged to slide along the ground and having at the outer edges, walls extending upwardly to a point above said agitating means, said pans having the bottoms inclined upwardly toward the adjacent edges.

4. An insect destroyer, comprising a wheeled frame, members depending therefrom and serving to agitate vegetation, and pans supported by said frame and having the forward ends outwardly tapered, said pans being adapted to contain an insect-destroying substance and having the bottoms inclined upwardly toward the inner edges, said pans further having at the outer edges walls extending upwardly to a point higher than the agitating members.

884,320. MANUALLY AND PNEUMATICALLY OPERATED AUTOMATIC PIANO. JOHN W. DAVIS, Pulaski, Tenn., assignor, by mesne assignments, to The Davis Piano Player Company, Pulaski, Tenn., a Corporation of Tennessee. Filed Sept. 25, 1906. Serial No. 336,210.



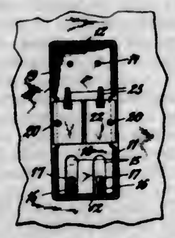
1. The combination with a piano action embodying a wippen, and a jack carried thereby, of an auxiliary wippen pivotally mounted adjacent one end of the main wippen, an auxiliary jack pivotally mounted on said auxiliary wippen and extending rearwardly and upwardly with its end normally in engagement with the front end of the main wippen, a spring connected to the auxiliary wippen and to said jack and tending to draw the auxiliary jack rearwardly and downwardly towards the auxiliary wippen, and a guide stem carried by the upper end of said auxiliary jack and extending upwardly and adapted to bear against the rear end of the main wippen, as and for the purpose set forth.

2. The combination with a piano action embodying a main wippen and a jack carried thereby, of an auxiliary wippen pivotally mounted adjacent one end of the main wippen, an auxiliary jack pivotally mounted on said auxiliary wippen and spring pressed towards the latter, one end of the auxiliary jack being designed to engage and lift the main wippen, and a guide stem carried by the said auxiliary jack and engaging an end of the main wippen, as and for the purpose set forth.

3. In combination with a piano action embodying a main wippen and a jack carried thereby, of an auxiliary wippen, a support on which said auxiliary wippen is pivoted at one end, means connected to the other end of the auxiliary wippen for automatically actuating the same, an auxiliary jack pivotally connected at one end to the auxiliary wippen and designed to engage the main wippen with its free end, a spring tending to draw said auxiliary jack towards the auxiliary wippen, a guide stem carried by the free end of the auxiliary jack and engaging the adjacent end of the main wippen, and a screw mounted in the auxiliary wippen and against which the auxiliary jack is adapted to abut to limit its independent movement in one direction on the auxiliary wippen.

4. In an instrument of the character described, the combination with its action, a wind chest, and means whereby the wind chest may automatically operate the action of a wind trunk secured to said wind chest, the wind trunk being constructed in sections of which one is relatively stationary and the other movable with the wind chest, said sections being adapted to abut against each other, means for clamping the abutting ends of said sections together, the said means being detachable, and means whereby the wind chest with the one section secured to it may be swung away from the other section.

884,321. HEAT-REGULATING APPARATUS. VERNER F. DAVIS, Orange, N. J., assignor to William B. Wadsworth, Plainfield, N. J. Filed July 5, 1906. Serial No. 324,754.



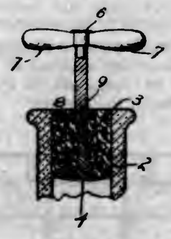
1. The combination with a thermostatic regulator, of a wall box arranged to be set into a wall with its outer edge substantially flush therewith, said box having an opening therein through which a pipe within the wall may freely protrude into the said box, means for removably securing the thermostatic regulator to the said wall box, and independent connecting means comprising removable couplings for connecting the thermostatic regulator with the said pipe.

2. A wall box arranged to be received within the wall of a building and having side walls, end walls and a back, the outer edges of the side and end walls arranged substantially in a plane, whereby the said box may be set within the said wall with its edges flush with the surface thereof, said box having a recessed or rabbeted portion for receiving a temporary flush cover, and also provided with means whereby a thermostatic regulator may be secured thereto.

3. The combination with a thermostatic regulator, of a wall box arranged to be received within the wall of a building and having side walls, end walls and a back, the outer edges of the side and end walls arranged substantially in a plane, whereby the said box may be set within the said wall with its edges flush with the surface thereof, said box having a recessed or rabbeted portion for receiving a temporary flush cover, and having an opening therein through which a pipe within the said wall may freely protrude to the interior of said box, means for securing the thermostatic regulator to the said wall box, and independent connecting means for connecting the thermostatic regulator with the said pipe.

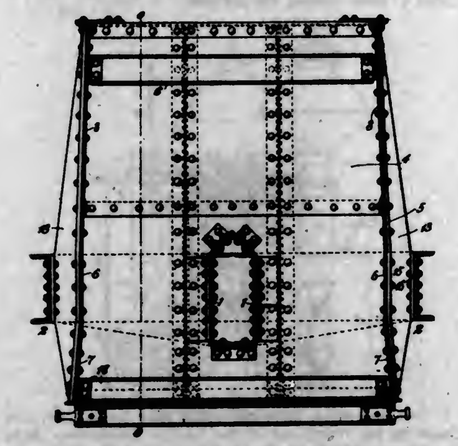
4. In a heat regulating apparatus, the combination with a wall box arranged to be received within the wall of a building and having openings 15 through which pipes within the wall may freely protrude and provided with a rabbeted or recessed portion 19 for receiving a temporary flush cover, of a bridge plate 22 adapted to be secured to the opposite side walls of the box, said plate provided with uprising lugs 23, a thermostatic device 26 provided with openings 24 arranged to register with the said lugs 23, whereby the said device may be removably attached to the wall box, and coupling elements 27 for coupling the thermostatic device directly to the said pipe independently of the connection of the thermostatic device with the wall box.

884,322. CORK-PULLER. CHARLES DEUSCH, Sterling, Ill. Filed July 6, 1907. Serial No. 382,435.



A cork for bottles having a flat top and a flat bottom, and a headed screw provided with a threaded shank extended longitudinally through the cork from top to bottom, the head of the screw being disposed at all times on the bottom of the cork and the free point projecting slightly above the plane of the upper end, and being closely hugged by the cork at its upper surface to prevent the collection of water and dirt.

884,323. STEEL-CAR CONSTRUCTION. ETHAN I. DODDS, Avalon, Pa., assignor to The Pullman Company, Chicago, Ill., a Corporation of Illinois. Filed July 6, 1904. Serial No. 215,492.



1. In a railway car, the combination of side sills, a car body having a bottom opening of greater area than its top opening, means to open and close said bottom opening, and side stakes interposed between said car body and side sills, substantially as described.

2. A car body whose sides for a portion of their depth are substantially vertical, said sides below said vertical portions diverging downwardly and above said vertical portions converging upwardly, substantially as described.

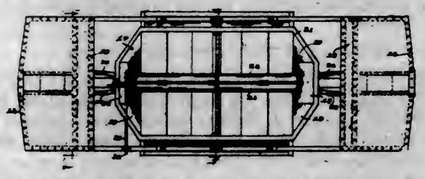
3. A car body whose end walls for a portion of their depth are substantially vertical, said end walls below said vertical portions diverging downwardly and above said vertical portions converging upwardly, substantially as described.

4. In a railway car the combination of side sills and a car body whose sides on a level with said sills are substantially vertical, said sides below said sills diverging downwardly and above said sills converging upwardly, substantially as described.

5. In a railway car, the combination of a car underframe having transverse sills or beams, and a car body whose end walls on a level with said sills are substantially vertical, said end walls below said sills diverging downwardly and above said sills converging upwardly, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

884,324. DROP-BOTTOM CAR. ETHAN I. DODDS, Pullman, Ill., assignor to the Pullman Company, Chicago, Ill., a Corporation of Illinois. Original application filed July 6, 1904, Serial No. 215,492. Divided and this application filed Dec. 5, 1906. Serial No. 346,438.



1. A car-body having side walls and end walls, the latter being in part inclined and internally concave, the concave portions being formed of a plurality of flat plates extended lengthwise the car-body, substantially as described.

2. A car-body having side walls and end walls, the latter being in part downwardly convergent and internally concave, the concave portion being formed of a plurality of flat plates extended lengthwise the car-body, substantially as described.

3. A car-body having side walls and end walls, the latter being in part inclined and internally concave and in part vertical at each side of said inclined concave portion, substantially as described.

4. A car-body having downwardly diverging side walls and end walls, the latter being in part downwardly convergent and internally concave, the concave portion being formed of a plurality of flat plates extended lengthwise the car-body, substantially as described.

5. A car-body having downwardly diverging side walls, and end walls, the latter being in part inclined and internally concave, the concave portion being formed of a plurality of flat plates substantially as described.

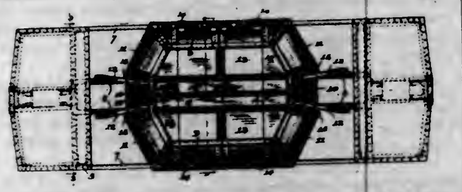
[Claims 6 to 9 not printed in the Gazette.]

884,325. STEEL-CAR CONSTRUCTION. ETHAN I. DODDS, Pullman, Ill., assignor to The Pullman Company, Chicago, Ill., a Corporation of Illinois. Original application filed July 6, 1904, Serial No. 215,492. Divided and this application filed Dec. 5, 1906. Serial No. 346,439.

1. In a steel car construction, a car-body having downwardly divergent straight side walls, downwardly divergent rounded end walls, and a hinged bottom, substantially as described.

2. In a steel car construction, a car-body having downwardly divergent side and rounded end walls, and a bottom comprised wholly of a plurality of hinged doors, substantially as described.

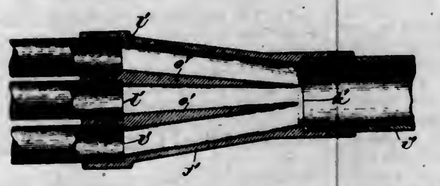
3. In a steel car construction, a car-body having downwardly divergent straight side walls, downwardly divergent rounded end walls, a pair of doors hinged to the lower edges of said side walls, and another pair of doors hinged to the lower edges of said end walls, said doors unitedly making up the bottom of the car-body, substantially as described.



4. In a steel car construction, a car-body having downwardly divergent straight side walls, and downwardly divergent rounded end walls, each of the latter comprising a plurality of tapered sections marginally united to each other and to the ends of said side walls, substantially as described.

5. In a steel car construction, a car-body comprising downwardly divergent straight side walls, downwardly divergent rounded end walls, each of the latter including an intermediate and end sections tapered and marginally united to each other and to the ends of said side walls, and a dumping bottom formed by doors hinged to the lower edges of said side walls and to the lower edges of the intermediate sections of said end walls, substantially as described.

884,326. MEANS FOR DISTRIBUTING WATER TO WATER-JACKETS OF MULTIPLE-CYLINDER ENGINES. VICTOR J. EMERY, Quincy, Mass., assignor of one-half to Mellen N. Bray, Boston, Mass. Filed June 17, 1907. Serial No. 379,371.



1. A multiple cylinder engine having in combination a plurality of water jackets, a common water circulating device for supplying water thereto, a distributing device provided at one end with an inlet communicating with the circulating device, and at the opposite end with a plurality of outlets communicating with the respective water jackets, and with a partition between the adjacent outlets extending from the outlet end towards and in line with the inlet and so arranged that the inlet area is subdivided thereby into equal areas corresponding in number to the number of outlet openings, substantially as described.

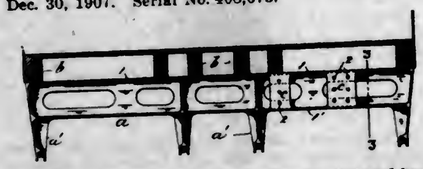
2. A multiple cylinder engine having in combination a plurality of water jackets, a common water circulating device for supplying water thereto, a distributing device provided at one end with an inlet communicating with the circulating device and at the opposite end with a plurality of outlets the combined area of which is substantially equal to the area of the inlet, a partition between adjacent outlets extending from the outlet end towards and in line with the inlet and arranged to subdivide the inlet area into areas each of which is substantially equal to the corresponding outlet area, substantially as described.

3. A device for distributing water to the water jackets of multiple cylinder engines comprising a casing having an inlet opening at one end, a plurality of outlet openings in the opposite end, a partition between adjacent outlet openings extending from the outlet end towards and in line with the inlet opening and arranged to subdivide the inlet area into areas corresponding in size and number to the outlet openings, substantially as described.

4. A device for distributing water to the water jackets of multiple cylinder engines comprising a casing having an inlet opening at one end, a plurality of similar outlet openings at the opposite end, the combined area of which is substantially equal to the area of the inlet, a partition between adjacent outlet openings extending from the outlet end towards and in line with the inlet opening and dividing the inlet area into substantially equal areas corresponding in number to the number of the outlet openings, substantially as described.

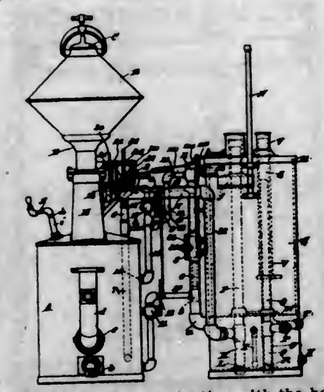
5. A device for distributing water to the water jackets of multiple cylinder engines comprising a casing, a circular inlet opening at one end, a plurality of circular outlet openings at the opposite end the combined areas of which are substantially equal to the area of the inlet opening, a partition between adjacent outlet openings extending from the outlet end towards and in line with the inlet opening and arranged to divide the inlet area into substantially equal areas corresponding to the number of outlet openings and to subdivide the interior of the casing into passages the cross sectional areas of which are substantially constant from end to end, substantially as described.

884,327. CAR-NEEDLE-BEAM ATTACHMENT. CHARLES F. FREDE, St. Louis, Mo., assignor to Cast Steel Needle Beam Company, St. Louis, Mo., a Corporation. Filed Dec. 30, 1907. Serial No. 408,673.



In a car needle-beam composed of cast metal and having a queen-post integral therewith, the combination of a bracket integral with the said beam, a member extending between the said bracket and a corresponding bracket on the succeeding needle-beam, and adapted to carry a receptacle, and means for fixing the said member to the said brackets, substantially as described.

884,328. ACETYLENE-GENERATOR. NELSON GOODYEAR, New York, N. Y., assignor to J. B. Colt Company, New York, N. Y., a Corporation of New Jersey. Filed May 4, 1905. Serial No. 258,750.



1. In a generator, the combination with the hopper, of a trough at the lower end of the hopper, an endless chain traveling therein for feeding the carbid, a feeding space at one end of the chain, and a protective casing open at the top underneath the chain and at the bottom, said casing extending down into the water and separating the feeding space from the chain and its operative devices, thereby preventing the gas from having access to the chain and its actuating devices and also permitting pieces of carbid carried inwardly past the edge of the casing by the chain to fall through the casing into the water.

2. In a generator, the combination with a hopper, of a feeding device, a generator tank beneath the feeding device, a feeding space through which the carbid is fed from the feeding device and a protective casing supported beneath said feeding device within the generator and open at the top and bottom, and separating the feeding device and its operative connections from the generator tank and from the feeding space, the top opening of the said casing being of sufficient size to substantially encircle the feeding device and its operative connections, thereby preventing gas from having access to said parts and permitting pieces of carbid carried inwardly past the edge of the casing by said parts to fall through the casing into the tank.

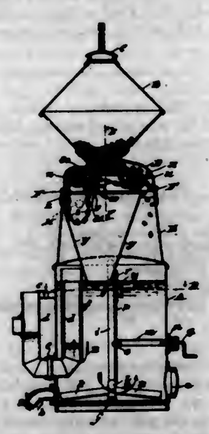
3. In a generator, the combination with the hopper and generator tank, of an endless traveling carbid-feeding conveyer, a high-speed impulse wheel suitably connected to actuate said conveyer, a toggle-acting gas-actuated valve adapted to snap open and closed for controlling the supply of water to said wheel, and means for supplying the tail-water from the impulse wheel to the generator tank.

4. In a generator, the combination with the hopper, of an endless traveling carbid-feeding conveyer, hydraulic means for actuating the conveyer, and a toggle-acting gas-actuated valve controlling said hydraulic actuating means, said valve being constructed to snap open quickly and supply the full amount of water immediately to said hydraulic means when needed.

5. In a generator, the combination with a hopper, of a feeding device, a generator tank beneath the feeding device, a feeding space through which the carbid is fed from the feeding device and a protective casing open at the top underneath the feeding device and at the bottom, said casing being within the generator tank separating the feeding device and its operative connections from the generator tank and from the feeding space, thereby preventing gas from having access to the feeding device and permitting pieces of carbid carried inwardly past the edge of the casing by said devices to fall through the casing into the tank.

[Claims 6 to 17 not printed in the Gazette.]

884,329. ACETYLENE-GENERATOR. NELSON GOODYEAR, New York, N. Y., assignor to J. B. Colt Company, New York, N. Y., a Corporation of New Jersey. Original application filed May 4, 1905, Serial No. 258,750. Divided and this application filed Dec. 17, 1906. Serial No. 348,109.



1. In a generator, the combination with the hopper and generator tank, of carbid feeding means, an hydraulic motor for actuating the same, means for supplying water from the motor to the tank, the residuum overflow having its opening within the tank substantially on a level with the water, and means for inducing within the tank a continuous circulation of the water and residuum in a closed circuit and then upwardly and into the overflow.

2. In a generator, the combination with the hopper and generator tank, of carbid feeding means, a motor for actuating the same, means for automatically supplying the water as needed, a residuum overflow having its opening within the tank substantially on a level with the water, and means within the tank for inducing a continuous circulation of the water and residuum from a given point back to substantially the same point and then upwardly and into the overflow.

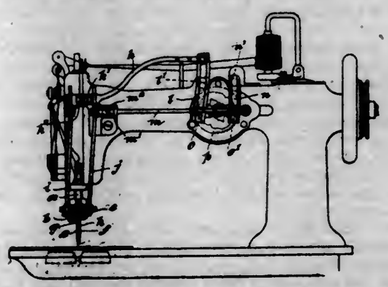
3. In a generator, the combination with the hopper and generator tank, of carbid feeding means, a motor for actuating the same, means for automatically controlling both the supply of carbid and water, a residuum overflow having its opening within the tank substantially on a level with the water, and means within the tank for inducing a continuous circulation of the water and residuum in a closed circuit in a vertical direction and then again upwardly into the overflow.

4. In a generator, the combination with the hopper and generator tank, of carbid feeding means, an hydraulic motor for actuating the same, means for supplying the water from the motor to the tank, means for controlling said feeding means and the supply of water by the gas generated, a residuum overflow having its opening within the tank substantially on a level with the water, and means within the tank for inducing a continuous circulation of the water and residuum in a closed circuit and then upwardly and into the overflow.

5. In a generator, the combination with the hopper and generator tank, of carbid feeding means, a motor for actuating the same, means controlled by the gas generated for controlling the supply of water as needed, a residuum overflow having its opening within the tank substantially on a level with the water, and means within the tank for inducing a continuous circulation of the water and residuum from a given point back to substantially said same point and then upwardly and into the overflow.

[Claims 6 to 8 not printed in the Gazette.]

884,330. MACHINE FOR DOING OPENWORK-STITCHING. MATTHEW GOULD, Belfast, Ireland, assignor to Charles McCloskey and Henry McCloskey, Belfast, Ireland. Filed Jan. 10, 1906. Serial No. 295,409.



1. A sewing machine having two needles arranged on the needle bar side by side transversely of the direction of feed, a punch arranged in rear of one needle, a punch arranged in advance of the other needle and means for laterally vibrating both needles simultaneously and in the same direction.

2. A sewing machine having two needles movably arranged on the needle bar side by side transversely of the direction of feed, two punches, one arranged in line with each needle, vibrating means for the needles, and a cam for operating said vibrating means so as to give the needles two consecutive movements in order that they may enter the cloth twice in line with their respective punches and

then a simultaneous lateral movement in the same direction to enter the cloth at one side of the punches.

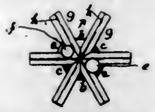
3. A sewing machine having two needles arranged on the needle bar side by side transversely of the direction of feed, a punch arranged in rear of one needle, a punch arranged in advance of the other needle and means for imparting to the needles a simultaneous lateral movement in the same direction at every third descent of the needle bar.

4. A sewing machine having two needles arranged side by side on the needle bar, a punch arranged in rear of one needle, a punch arranged in advance of the other needle and a cam for imparting to the needles a simultaneous lateral movement in the same direction at every third descent of the needle bar.

5. A sewing machine having two needles arranged side by side on the needle bar, a punch arranged in advance of the one needle, a punch arranged in rear of the other needle, and means for causing the needles, during the formation of the stitch, to enter the cloth twice in line with their respective punches and then once to move simultaneously in the same direction at the one side of the punches, and means for imparting to the cloth one backward movement followed by two consecutive forward movements.

[Claims 6 to 11 not printed in the Gazette.]

884,331. PNEUMATIC AND OTHER DRILLS. MARTIN HARDSOCG, Ottumwa, Iowa. Original application filed Feb. 20, 1906, Serial No. 302,049. Divided and this application filed Mar. 2, 1907. Serial No. 360,269.



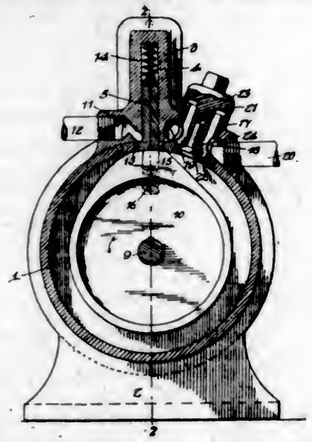
1. A drill for a pneumatic tool, having a shank of hexagonal shape in cross section, said shank having an exterior consisting of two curved opposite faces and four flat faces, with the flat faces arranged in diagonal opposing relation, the two curved and the four flat faces forming six corners, and the six corners of the shank upset at one end to produce six bits or blades, each with a cutting edge, one bit or blade in radial line with each corner, the shank having two longitudinal passages extending therethrough to the cutting end and parallel with the curved exterior faces, substantially as described.

2. A drill for a pneumatic tool, having a shank of hexagonal shape in cross section, said shank having an exterior consisting of two curved opposite faces and four flat faces, with the flat faces arranged in diagonal and opposing relation, the two curved and the four flat faces forming six corners, and the six corners of the shank upset at one end to produce six bits or blades each with a cutting edge, one bit or blade in radial line with each corner, the shank having two longitudinal passages extending therethrough to the cutting end and parallel with the curved exterior faces, each longitudinal passage opening between the two adjoining bits or blades, substantially as described.

3. A drill for a pneumatic tool, having a shank of a hexagonal shape in cross section, the shank having an exterior consisting of curved and flat faces arranged in pairs, the two curved faces forming one pair and the four flat faces forming two pairs, and the third pair of faces forming six corners to produce six bits or blades, one bit or blade in radial line with each corner and each bit or blade having a cutting edge, and the shank having two longitudinal passages extending therethrough to the cutting end, substantially as described.

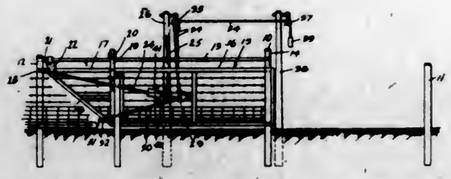
884,332. COMPRESSOR. BERT E. HILL, Pittsburg, Kans. Filed June 12, 1907. Serial No. 378,615.

1. In a compressor of the character described, the combination of a casing having a slotted extension and a recess thereon adjacent said extension, a driven shaft mounted centrally through said casing and provided with a cam rotor mounted thereon within said casing, a fluid inlet for said casing opening through said recess, a sliding gate arranged within said slotted extension of said casing and provided with a shoulder extending therefrom and fitting within said recess, said gate being spring pressed into engagement with the periphery of said rotor and being adapted with its shoulder to close said inlet when forced outwardly by the cam, and a pressure regulated outlet arranged through said casing adapted to receive the compressed charge, substantially as described.



2. In a compressor of the character described, the combination of a casing having a slotted extension and a recess adjacent said extension, a driven shaft mounted centrally through said casing and provided with a cam rotor mounted thereon within said casing, a fluid inlet for said casing opening through said recess, a sliding gate arranged within said slotted extension of said casing and provided with a shoulder extending therefrom and fitting within said recess, said gate being spring pressed into engagement with the periphery of said rotor and being adapted with its aforementioned shoulder to close said inlet when forced downwardly by said cam, an outlet for said casing forming a valve seat, a valve seated upon said seat with its cam projecting outwardly from said casing, a cap threadedly engaging within the walls of said casing and having a central socket portion forming a guide for said valve stem, and a spring interposed between said valve and said socket portion to allow said valve to open when upon a desired pressure, substantially as described.

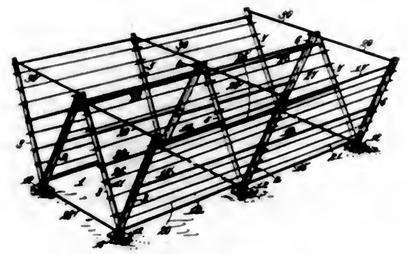
884,333. GATE. CLAUDE HILL, Ogden, Ill., assignor of one-half to G. H. Nieman, Fithian, Ill. Filed May 13, 1907. Serial No. 373,393.



1. The combination with a gate mounted for sliding movement, of an upright, a rod pivotally connected to the upright, a rod pivotally connected to the first mentioned rod and to the gate adjacent the lower end thereof, a weight adjustably supported upon the first mentioned rod, and a pull rope connected with the rods at their point of pivotal connection with each other whereby the rods may be moved to exert a pull upon the gate in the direction of the post, the weight serving to move the gate after the rods have been so moved that the second mentioned rod has past a perpendicular plane.

2. A device of the class described, comprising a track supported on one side of a roadway, a gate, wheels journaled upon the gate and adapted to travel one above the track and the other beneath the same whereby the gate will be supported from the track, a rod pivotally connected to one of the supports for the track, a rod pivotally connected to the first mentioned rod and to the gate adjacent the lower end thereof, a weight adjustably supported upon the first mentioned rod, and a pull rope connected with the rods at their point of pivotal connection with each other whereby the rods may be moved to exert a pull upon the gate in the direction of the post, the weight serving to move the gate after the rods have been so moved that the second mentioned rod has past a perpendicular plane.

884,334. HAY-RACK. PETER C. JACKSON, Lometa, Tex. Filed Aug. 22, 1907. Serial No. 389,714.



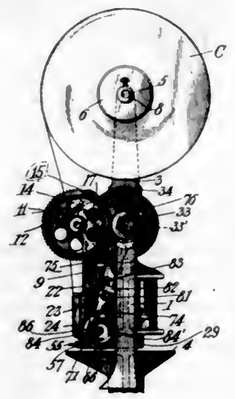
1. A hay rack comprising a pair of V-shaped sections connected together at their top, each of said sections consisting of a plurality of pairs of uprights, the uprights of each pair extending at an inclination with respect to each other, means for connecting the pairs of uprights together at their bottom, means for connecting the pairs of uprights together at their top, and rack bars supported by the uprights.

2. A hay rack comprising a pair of V-shaped sections connected together at the top thereof, each of said sections embodying a plurality of pairs of uprights, the uprights of each pair extending at an inclination with respect to each other, transversely extending tie rods for connecting the pairs of uprights of one section to the pairs of uprights of the other section at the bottom, longitudinally extending tie rods connecting the pairs of uprights of each section together at the bottom thereof, longitudinally extending tie rods for connecting the pairs of uprights of each section together at the top, and rack bars mounted in the uprights of each section.

3. A hay rack comprising a pair of V-shaped sections connected together at the top, each section comprising a plurality of pairs of uprights, the outer uprights of one section extending in parallelism with the inner uprights of the other section, the inner uprights of the first-mentioned section extending in parallelism with the outer uprights of the last mentioned section, longitudinally and transversely extending rods for connecting the uprights of each section together, and rack bars mounted in said uprights.

884,335. ENVELOP-MACHINE. THOMAS W. KIENAST, New York, N. Y., assignor to Samuel Cupples Envelope Company, St. Louis, Mo., a Corporation. Filed Dec. 27, 1906. Serial No. 349,618.

1. In an envelop machine of the character described, the combination of an envelop blank receiving table, means for supporting a web of transparent paper, means for feeding the web to a point above said table, means for receiving and supporting the web and carrying the paper strip, having a knife for cutting the web into strips, and means located within the receiving, supporting and carrying means whereby the strip is dislodged from its support and pressed to an envelop blank resting on said table, substantially as set forth.



2. In an envelop machine of the character described, the combination of an envelop blank receiving table, means for feeding a web of transparent paper into a position above said table, means for receiving and supporting the web and carrying the paper strip having a knife for cutting the web into strips, means located within the receiving, supporting and carrying means for pressing the strips to envelop blanks resting on said table, and means for restraining the envelop blanks from movement while said pressing means is moving away from the blank, substantially as set forth.

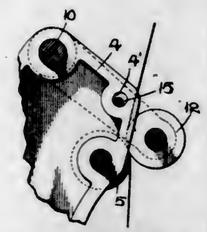
3. In an envelop machine of the character described the combination of an envelop blank receiving table, means for supporting a web of transparent paper, primary feed rollers between which said web also passes, secondary feed rollers between which said web also passes, means for receiving and supporting the web and carrying the paper strip having a knife for cutting said web into strips after it has passed said secondary feed rollers and means located within the receiving, supporting and carrying means for pressing the strips to an envelop blank resting on said table, substantially as set forth.

4. In an envelop machine of the character described, the combination of an envelop blank receiving table, means for supporting a web of transparent paper, primary feed rollers between which said web passes, secondary feed rollers between which said web also passes, means for receiving and supporting the web and carrying the paper strip having a knife for cutting said web into strips after it has passed said secondary feed rollers, means located within the receiving, supporting and carrying means for pressing the strips of paper to an envelop blank resting on said table, and take-up means for holding said web in a taut condition while it is passing from one set of said feed rollers to the other set of feed rollers, substantially as set forth.

5. In an envelop machine of the character described, the combination of an envelop blank receiving table, a knife carrying block, a knife carried by said knife carrying block, a spring pressed knife bar arranged obliquely to said knife and one end of the cutting edge of which knife bar is adapted to pass to a position beneath said knife, and recede from such position during the cutting action, means for feeding a web of paper to said knife bar and knife to cut it into strips, and means for pressing strips of paper to envelop blanks placed upon said table, substantially as set forth.

[Claims 6 and 7 not printed in the Gazette.]

884,336. FEEDING MECHANISM. THOMAS W. KIENAST, New York, N. Y., assignor to Samuel Cupples Envelope Company, St. Louis, Mo., a Corporation. Original application filed Dec. 27, 1906, Serial No. 349,618. Divided and this application filed July 22, 1907. Serial No. 384,899.



1. A feeding mechanism of the character described, comprising a pair of feed rollers, hanger arms by which one of said feed rollers is supported, and a lift pin for holding the feed roller supported by said hanger arms, separated from the other feed roller to provide a clearance between the feed rollers while the object to be fed is being passed between them, substantially as set forth.

2. A feeding mechanism of the character described, comprising supporting members, a pair of feed rollers supported by said supporting members, hanger arms in which one of said rollers is journaled, and a lift pin located in one of said hanger arms and adapted to be moved in the adjacent supporting member to move the hanger arm supported roller relative to the other roller, substantially as set forth.

3. A feeding mechanism of the character described, comprising supporting members, a pair of feed rollers, hanger arms in which one of said rollers is journaled, and a lift pin slidably fitted in one of said hanger arms and adapted to be moved in the adjacent supporting member to move the hanger arm supported roller relative to the other roller; said lift pin being provided with a conical portion, substantially as set forth.

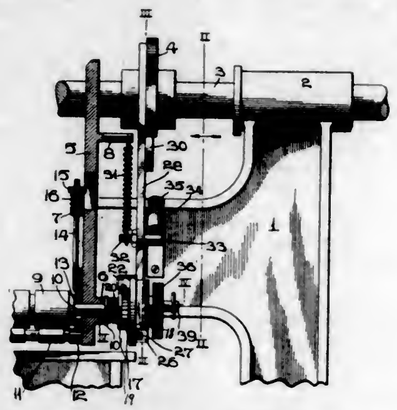
4. A feeding mechanism of the character described, comprising supporting members, a pair of feed rollers, hanger arms in which one of said rollers is journaled, and a lift pin slidably fitted in one of said hanger arms and adapted to be moved in the adjacent supporting member to move the hanger arm supported roller relative to the other roller; said lift pin having a shank provided with a conical portion intermediate of its ends and terminating at its inner end in a stop button, substantially as set forth.

884,337. FEEDING MECHANISM. THOMAS W. KIENAST, New York, N. Y., assignor to Samuel Cupples Envelope Company, St. Louis, Mo., a Corporation. Original application filed Dec. 27, 1906, Serial No. 349,618. Divided and this application filed July 22, 1907. Serial No. 384,900.

1. A feeding mechanism of the character described, comprising a pair of feed rollers having spindles, means for operating one of said rollers comprising a ratchet wheel fixed to a spindle of said roller, a pawl carrying member, a pawl carried by said member engaging said ratchet wheel, means for driving said pawl carrying member, and a spring pressed disk loosely fitted to said ratchet wheel and engaging said pawl, substantially as set forth.

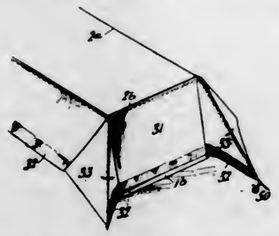
2. A feeding mechanism of the character described, comprising a pair of feed rollers having spindles, a ratchet mechanism carried by a spindle of one of said feed rollers and which includes a driving member, means for operating said ratchet mechanism driving member, an adjustable housing inclosing said last named means and means for adjusting said housing, substantially as set forth.

3. A feeding mechanism of the character described, comprising a pair of feed rollers having spindles, a ratchet mechanism carried by a spindle of one of said feed rollers and which includes a driving member, means for operating said ratchet mechanism driving member, a housing and means for adjusting said housing, comprising an adjustment collar, loosely fitted to said spindle and having an eccentric sleeve located within said housing, substantially as set forth.



4. A feeding mechanism of the character described, comprising a pair of feed rollers having spindles, a ratchet mechanism carried by a spindle of one of said feed rollers, and which includes a driving member, means for operating said ratchet mechanism driving member, a housing and means for adjusting said housing, comprising an adjustment collar loosely fitted to said spindle and having an eccentric sleeve located within said housing, and means for clamping said adjustment collar to said housing, substantially as set forth.

884,338. PACKAGE-BOX. IRA J. KUERT, San Diego, Cal. Original application filed July 25, 1907, Serial No. 385,505. Divided and this application filed Dec. 18, 1907. Serial No. 407,049.



1. A packing box consisting of a paste-board body, and a cover, said cover having the shape of the body and of a size so its edges lap over the body, a single paper strip glued to the top and having such shape whereby when folded to form pendent sides and ends for lapping over the cover, the ends being lapped and glued to each other, and a cord disposed around the box under the projecting edges of the top and having its ends glued between the lapped ends of the outer strip, substantially as shown and for the purposes described.

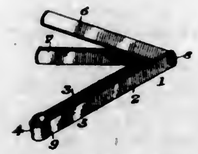
2. A packing box comprising a body portion, and a cover consisting of a paste-board top and paper sides and ends folded to shape to slip over the box body, the said sides and ends having their lower edges gummed on the inner side, the ends being lapped over to form triangular folds, as set forth.

3. A packing box, comprising a body portion and a cover consisting of a paste-board member of such size that its sides and ends overlap the top edges of the body portion, a single sheet of paper attached to the top and folded to shape to form pendent sides and ends, the said pendent sides and ends having their lower edges gummed whereby to adhere to the box portion when slipped thereover for the purposes specified.

4. A packing box, comprising a paste-board body, a cover of slightly greater width and length than the said body, a single paper strip glued to the said top and folded to form pendent sides and ends, the other edges of the said sides and ends being glued, the end portions being bent upon each other to form triangular folds or flaps, a cord that extends around the box under the over-lapping edges of the cover and whose ends are secured within the triangular end folds, substantially as shown.

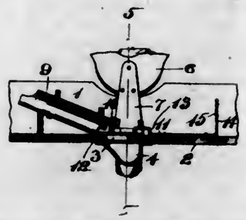
5. As a new article of manufacture, a paste-board box which comprises a rectangular body portion, a paste-board closure member for the said top, a single sheet of paper glued to said top whose outer portions are folded to form pendent ends and side members, the inner edges of the said pendent ends and side members being glued and gummed for sticking to the sides and ends of the box when slipped there-over, substantially as shown and described.

884,339. HAIR-CRIMPER. JAMES F. MARTIN, Philadelphia, Pa., assignor, by mesne assignments, to Magic Curler Company, a Corporation of New Jersey. Filed Aug. 17, 1906. Serial No. 331,032.



A hair crimper comprising a plurality of flattened strips, and a loop pivoted at one end of said strips, with the sides thereof normally substantially in contact with the strips and having a closed end enlarged and extending beyond the said strips, whereby when the hair is wound upon the inner member the sides of the loop are curved from a point adjacent the ends of said inner members to the pivotal point and the ends of said inner members are held together.

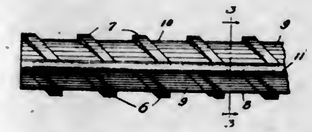
884,340. AMUSEMENT DEVICE. AMBRO J. NORTHCRAFT, St. Louis, Mo. Filed June 8, 1907. Serial No. 377,858.



1. In a device of the class described, a frame, a target hinged at its lower end to said frame and adapted to swing downward into a horizontal plane when struck, a magazine arranged in the frame adjacent the target for containing a series of objects, a spring actuated cut off arranged on the frame with one end adjacent the discharge end of the magazine, and a plate carried by the target and normally occupying a position in front of the discharge end of the magazine.

2. In a device of the class described, a frame, a target hinged at its lower end to said frame and adapted to swing downward into a horizontal plane when struck, a magazine arranged in the frame adjacent the target for containing a series of objects, a spring actuated cut off arranged on the frame with one end adjacent the discharge end of the magazine, a plate carried by the target and normally occupying a position in front of the discharge end of the magazine, and a chute leading from the frame below the mouth of the magazine for receiving the objects discharged therefrom.

884,341. METAL REINFORCE FOR CONCRETE. WILLIAM W. RAMSEY, Chicago, Ill. Filed July 31, 1907. Serial No. 386,436.



1. The concrete reinforcing bar, diamond shape in cross section, and having diagonal abutment ridges, meeting at and extending from the obtuse corners of the bar, said abutment ridges vanishing into the side faces of the bar at the acute angle corners thereof, substantially as specified.

2. The concrete reinforcing bar, diamond shaped in cross section, and having diagonal abutment ridges meeting each other at an angle in pairs at the obtuse angle corners of the diamond shaped bar, and extending to the acute angle corners thereof, said diagonal abutment ridges pointing or extending in opposite directions on the two opposite obtuse angle corners of the bar, said ridges vanishing into the flat sides of the bar at the acute angle corners thereof, substantially as specified.

3. The concrete reinforcing bar, rectangular in cross section, having diagonal abutment ridges meeting each other in pairs at two opposite corners of the bar and extending across the adjacent side faces of the bar, said bar having its other two corners smooth and free from projections, substantially as specified.

4. The concrete reinforcing bar, rectangular in cross section, having diagonal abutment ridges meeting each other in pairs at two opposite corners of the bar and extending across the adjacent side faces of the bar, said bar having its other two corners smooth and free from projections, said diagonal abutment ridges tapering in thickness from the corners of the bar where two side ridges meet towards the smooth corners of the bar, substantially as specified.

5. The concrete reinforcing bar, rectangular in cross section, having diagonal abutment ridges meeting each other in pairs at two opposite corners of the bar and extending across the adjacent side faces of the bar, said bar having its other two corners smooth and free from projections, said pairs of diagonal abutment ridges, which meet at one corner, pointing or extending in the opposite direction from those which meet at the opposite corner of the bar, substantially as specified.

[Claims 6 to 8 not printed in the Gazette.]

884,342. SMOKE-CONVEYER FOR RAILWAY-TRAINS. ROBERT L. RHODES, Kinston, N. C., assignor of one-half to George B. Webb, Kinston, N. C. Filed Apr. 23, 1907. Serial No. 369,815.



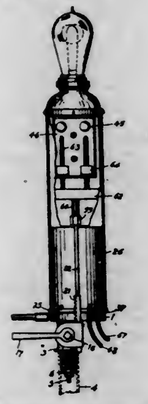
1. The combination, with the smoke stack of a locomotive, of a tubular conveyer arranged horizontally above said locomotive, branch pipes from the smoke stack to said conveyer, one branch pipe extending forward and the other rearward, and a valve arranged in said conveyer for the purpose specified.

2. The combination, with the smoke stack of a locomotive, of a tubular conveyer arranged horizontally above said locomotive, branch pipes from the smoke stack to said conveyer, one branch pipe extending forward and the other rearward, and a longitudinally movable tubular valve arranged in said conveyer for the purpose specified.

3. The combination, with the smoke stack of a locomo-

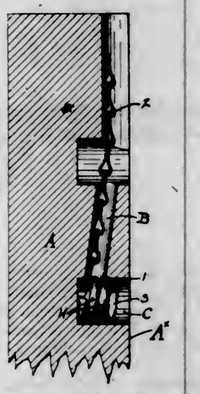
tive, of a tubular conveyer arranged horizontally above said locomotive, branch pipes from the smoke stack to said conveyer, one branch pipe extending forward and the other rearward, a valve arranged in said conveyer, and means of connection between said valve and the reversing lever of the locomotive for the purpose specified.

884,343. ELECTRIC WATER-HEATER. HERBERT N. ROCHE, San Francisco, Cal., assignor of one-half to Thomas B. Gray, San Francisco, Cal. Filed Mar. 28, 1907. Serial No. 365,192.



In an apparatus of the character described, the combination of a casing, a water conduit therein, an electric heating coil in said conduit, a valve for controlling the passage of water through said conduit, and means for connecting said heating coil with an electric circuit, comprising a stationary contact, a slidable rod contacting with a second contact and adapted to be moved into contact with the first contact and to be pressed thereon to provide a frictional resistance against the removal of said slidable rod from said contact, a stem for so moving said slidable rod, and a resilient connection between said stem and rod, substantially as described.

884,344. SASH-CHAIN FASTENER. JOHN H. SAYRES, Brooklyn, N. Y. Filed Nov. 20, 1907. Serial No. 403,009.



1. A fastener for sash chains comprising a coil having a spire flattened to receive a chain link, substantially as described.

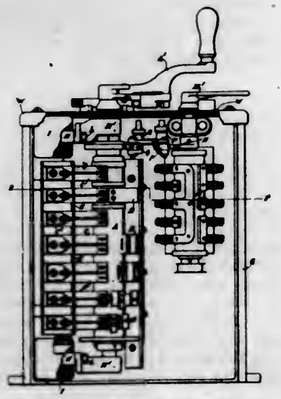
2. A fastener for sash chains comprising a coil having a terminal spire flattened to receive a chain link, substantially as described.

3. A fastener for sash chains comprising a coil having a portion intermediate its ends flattened to receive a chain link, substantially as described.

4. A sash chain fastener, comprising a coil in combination with a sash chain, one end of which extends into said coil lengthwise of its axis and is secured to a spire thereof as and for the purpose described.

5. A sash chain fastener comprising a coil having a flattened spire in combination with a sash chain passing through said coil and secured thereto by a link threaded on said flattened spire, substantially as described.

884,345. CONTROLLER. EMMETT W. STULL, Norwood, Ohio, assignor to Allis-Chalmers Company, a Corporation of New Jersey, and The Bullock Electric Manufacturing Company, a Corporation of Ohio. Original application filed Mar. 31, 1906, Serial No. 309,027. Divided and this application filed Oct. 26, 1907. Serial No. 399,346.



1. In a controller for electric motors, the combination of a controller drum, a shaft therefor, and two blow-out magnets, pole pieces of said magnets forming bearings for the controller shaft.

2. In a controller, the combination of a casing of magnetic material, extensions from said casing, blow-out coils on said extensions, and a controller drum the shaft of which is journaled in said extensions.

3. In a controller, the combination of a casing of magnetic material, extensions from said casing, blow-out coils on said extensions, and a controller drum the shaft of which is journaled in said extensions beyond said coils.

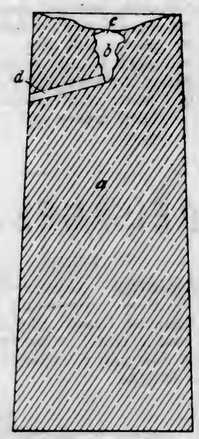
4. In a controller, the combination of a controller drum, a shaft of magnetic material therefor, and a plurality of blow-out magnets the like poles of which form journals for said shaft.

5. In a controller, the combination of a controller drum, a shaft of magnetic material therefor, a plurality of blow-out magnets the like poles of which form journals for said shaft, contact fingers coöperating with said drum, and extensions of magnetic material from the other poles of said magnets to the rear of said contact fingers.

[Claims 6 to 8 not printed in the Gazette.]

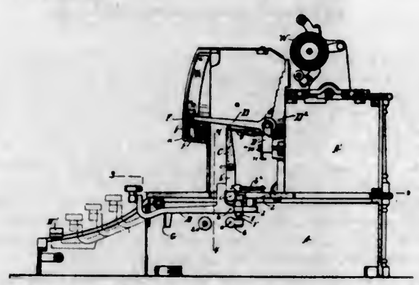
884,346. REMEDYING DEFECTS, SUCH AS BLOW-HOLES, IN METAL CASTINGS. ERNST WISS, Griesheim-on-the-Main, Germany, assignor to The Firm of Chemische Fabrik Griesheim-Elektron, Frankfort-on-the-Main, Germany. Filed July 11, 1907. Serial No. 383,341.

1. The herein described method of filling a blow hole or cavity in a steel casting which consists in first providing in the casting a passage open at both ends and including the hole or cavity to be filled, pouring molten metal through the passage until the walls thereof are heated to welding temperature, then closing the outlet from the passage and continuing the pouring until the entire passage and the blow hole or cavity are filled.



2. The herein described method of filling a blow hole or cavity in a steel casting which consists in forming in the casting a channel or passage leading from the lower end of the blow hole or cavity to an outer face of the casting, pouring molten metal into the blow hole and permitting it to escape through said channel until the walls of the cavity and channel are heated to welding temperature, then closing the outer end of the channel and continuing to pour molten metal into the blow hole or cavity until it is filled.

884,347. TYPE-WRITING MACHINE. CHARLES E. YETMAN, Oak Park, Ill., assignor, by mesne assignments, to Yetman Typewriter-Transmitter Company, New York, N. Y., a Corporation of New York. Filed Sept. 26, 1900. Serial No. 31,198.



1. In a typewriting machine, the combination with a series of key-levers and with type-bars operated thereby, of mechanism intermediate the key-levers and type-bars comprising a series of supplemental levers and suitable connections therefor with the key-levers and type-bars, and means common to separate companion parts of said intermediate mechanism to throw the same in unison, whereby the key-levers and type-bars are engaged or disengaged from action.

2. In a typewriting machine, the combination with a series of key-levers and with type-bars operated thereby, of a series of supplemental levers suitably connected with the key-levers and type-bars, and means common to said supplemental levers to throw the same in unison, whereby said key-levers and type-bars are engaged or disengaged from action.

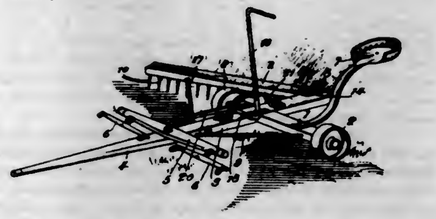
3. In a typewriting machine, the combination with a series of key-levers and with type-bars operated thereby, of mechanism intermediate the type-bars and key-levers comprising a series of supplemental levers and suitable connections therefor with the key-levers and type-bars, and means common to separate companion parts of said intermediate mechanism for throwing the same in unison, said means comprising toggle levers shiftable on either side of a central position, whereby the intermediate mechanism may be disengaged and locked in the disengaged position.

4. In a typewriting machine, the combination with a series of key-levers and with type-bars operated thereby, of mechanism intermediate the type-bars and key-levers, and means common to separate companion parts of said intermediate mechanism for throwing the same in unison, said means comprising toggle levers shiftable on either side of a central position, whereby the intermediate mechanism may be disengaged and locked in the disengaged position.

5. In typewriting machines, the combination with the type-bars and with their corresponding key-levers, of a series of pivoted supplemental levers provided with laterally projecting pins, notched off-sets on said key-levers engaging said pins, a movable support for the fulcra of said suplemental levers and suitable means for shifting said support for disengaging said pins from said notched off-sets.

[Claims 6 to 83 not printed in the Gazette.]

884,348. COMBINED HARROW AND PLOW. BENJAMIN F. APLIN, Texola, Okla., assignor of one-half to Hardy L. Cathey, Erick, Okla. Filed June 14, 1907. Serial No. 378,978.



1. In a device of the character described, the combination of a stock, a beam projecting laterally from the stock and loosely connected thereto, cultivating members carried by the beam, an arm connecting the beam to the stock, and means coöperating with the arm for elevating the beam.

2. In a device of the character described, the combination of a transverse bar, a stock mounted upon the bar, supporting wheels for the bar, a beam loosely connected to the stock, cultivating members carried by the beam, an arm connecting the beam to the stock, and means engaging the arm for swinging the beam to adjust the cultivating members.

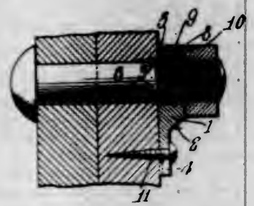
3. In a device of the character described, the combination of a stock, a beam projecting laterally from the stock and loosely connected thereto, cultivating members carried by the beam, an arm connecting the beam to the stock, a shaft journaled upon the stock, and a crank arm carried by the shaft and engaging the before mentioned arm for swinging the beam to adjust the cultivating members.

4. In a device of the character described, the combination of a stock, supporting means for the stock, an obliquely disposed beam having one end thereof loosely connected to the stock, cultivating members carried by the beam, an arm connecting the opposite end portion of the beam to the stock, a shaft journaled upon the stock and carrying a crank portion designed to engage the arm, and a lever for operating the shaft to raise and lower the beam.

5. In a device of the character described, the combination of a stock, supporting means for the stock, the said stock having a groove formed therein, a beam provided with an eye received within the groove, a pin extending within the groove and received by the eye, cultivating members carried by the beam, and means for swinging the beam to adjust the said cultivating members.

[Claim 6 not printed in the Gazette.]

884,349. NUT-LOCK. IRVING BARKER, Springfield, Ill., assignor of one-half to Alfred Booth, Springfield, Ill. Filed Nov. 2, 1907. Serial No. 400,389.



1. A nut lock comprising a washer having a slot in one face extending across the same between the bolt hole and its edge, the bottom of said slot being inclined, and a key longer than said slot having a sharp edge and a flat edge inclined to said sharp edge adapted to slide in said slot and cut a furrow in the nut bearing against said washer and extending over said slot.

2. A nut lock comprising a rectangular washer having one end thicker than the other, a bolt hole in the thick end, a slot in the face of said end extending in a straight line from one edge of said washer to another, and a thin key longer than the slot having a flat edge and a sharp edge adapted to slide in said slot and cut a furrow in the nut bearing against said washer and extending over the slot, the bottom of said slot and the key being inclined.

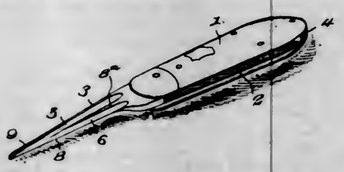
3. A washer for a nut of rectangular form, thicker at one end than at the other with a bolt hole through the thicker end, said thick end having an annular slot in the face thereof outside said bolt hole and extending from one edge of the washer to another, the bottom of said slot being inclined, and a flange on the lower end of the washer extending rearwardly.

4. A washer for a nut lock of rectangular form thicker at one end than at the other with a bolt hole through the thicker end, means at the thin end to prevent the washer rotating when in use, said thick end having an angular slot in the face thereof outside said bolt hole and extending from one edge of the washer to another, the bottom of said slot being inclined.

5. A washer for a nut lock having a slot in one face extending across the same between the central opening and the edge, the side walls of said slot being parallel to each other and the bottom slightly inclined throughout its entire length.

[Claim 6 not printed in the Gazette.]

884,350. PUNCH. WILLIAM CARMAN, Napanoch, N. Y., assignor to Susan Carman, Napanoch, N. Y. Filed Dec. 24, 1907. Serial No. 407,892.



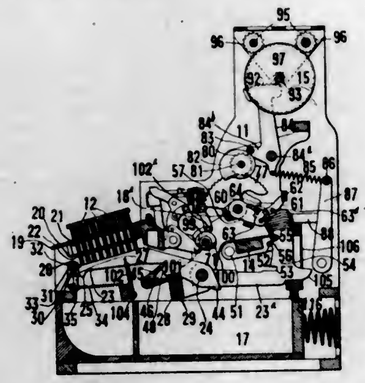
1. A punch of the class described, comprising a blade having one of its faces curved and the opposite face thereof provided with a main and auxiliary groove, a cutting edge for said blade and a handle, to which said blade is secured.

2. A punch of the class described, comprising a blade, a handle pivotally secured to said blade, said blade being tapered towards one end thereof, a main and auxiliary groove in one face of said blade and paralleling, respectively, the upper and lower edges of the blade and a reinforcing rib between the main and auxiliary grooves, adapted to strengthen the blade.

3. In a punch of the class described, the combination with a handle, having a cavity therein and a spring at the rear of said cavity; of a punch pivotally secured to one end of said handle and adapted to move into said cavity when in its closed position, said punch having one of its faces curved and the opposite face thereof provided with a main and auxiliary groove, said main groove extending substantially the full length of said punch, and the auxiliary groove intersecting the main groove at a point adjacent the longitudinal center of the punch, a cutting edge parallel with the auxiliary groove and a rib between the main and auxiliary grooves.

REISSUES.

12,774. CASH-REGISTER. THOMAS CARROLL, Dayton, Ohio, assignor, by mesne assignments, to The National Cash Register Company, Dayton, Ohio, a Corporation of Ohio, (incorporated in 1906.) Filed Dec. 11, 1907. Serial No. 406,119. Original No. 864,511, dated Aug. 27, 1907, Serial No. 130,766.



1. In a cash register, the combination with indicator operating mechanism arranged to remain in set position at the end of the operation of the machine, indicators connected to said mechanism, a series of graduated levers for operating said mechanism, means for setting said levers for operation, and devices for operating said levers.

2. In a cash register, the combination with a driving mechanism of a series of keys, of a series of key levers, means for operating the key levers when set by the keys, a series of graduated levers arranged to be set by the key levers but operating independently thereof, and a series of indicators controlled by the graduated levers.

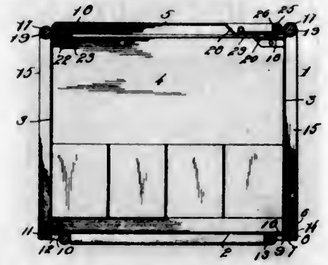
3. In a cash register, the combination with a series of keys, of a series of key levers set by said keys, a series of registering levers set by the key levers, means for operating the key levers when set, devices for operating the registering levers when set, and registering devices coöperating with the registering levers.

4. In a cash register, the combination with a driving mechanism of a series of keys, a series of key levers, means for moving the key levers when set by the keys, a series of registering levers set by the key levers but moving independently thereof, and a registering device controlled by the registering levers.

5. In a cash register, the combination with a series of key elements arranged to be set, means for operating said elements when so set, a series of register controlling devices independent of said key elements but set thereby, means for operating the register controlling devices after they are set, and a registering mechanism coöperating with said devices.

[Claims 6 to 43 not printed in the Gazette.]

12,775. METAL BOX. GOTTLIEB KLENK, Defiance, Ohio, assignor to The Clipper Plow Company, Defiance, Ohio, a Corporation of Ohio. Filed Oct. 16, 1907. Serial No. 397,761. Original No. 813,976, dated Feb. 27, 1906, Serial No. 255,425.



1. A metal box comprising ends, sides and bottom sections, means for fastening the ends and sides together, reinforcing-strips at the outer edges of the bottom, the reinforcing strips and the ends and sides of the box being crimped to form an outwardly-extending flange at the lower edges of the box, said strips extending inwardly against bottom of the box and beaded to form a projection horizontally spaced from the said flange.

2. A metal box comprising ends, sides and bottom sections, means for fastening the ends and sides together, a reinforcing outwardly-projecting flange at the lower edges of the box, and a projection next to and extending from the bottom of the box said projection being spaced horizontally from the outwardly-projecting flange.

3. A metal box comprising sides, ends and bottom sections, the sides and ends being crimped at the meeting edges to form outwardly-projecting flanges, a reinforcing-strip on the bottom, the sides, ends and bottom being crimped around the outer edge of the reinforcing-strip to form an outwardly-projecting flange at the lower edge of the box, and a depending projection on the inner edge of said reinforcing-strip, said projection being spaced from the outwardly-projecting flange formed at the lower edge of the box.

4. A metal box comprising side, end, and bottom sections, a reinforcing-strip at the outer edges of the bottom, said strip being parallel with and fitting against the under side of the bottom, the edges of the sides, ends, and bottom being crimped around the edge of the reinforcing-strip to form a reinforcing outwardly-projecting flange, the inner edge of the reinforcing-strip being bent to form a projecting head which is spaced from the outer edge of the reinforced flange.

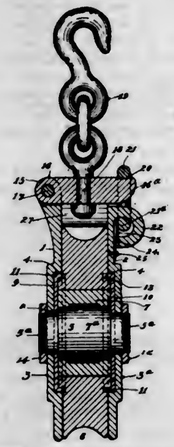
5. A metal box formed with a depressed flange near its upper edge, a metal cover supported by the depressed flange, said cover being reinforced by beading its edges around a strengthening-wire located on the under side of the cover to form a flat surface on top of the cover.

[Claims 6 to 15 not printed in the Gazette.]

12,776. PULLEY-BLOCK. ANDREW OPSAL, Portland, Oreg., assignor to Opsal Lubricating Company, Oakland, Cal., a Corporation of California. Filed Jan. 6, 1908. Serial No. 409,597. Original No. 845,041, dated Feb. 19, 1907, Serial No. 294,232.

1. In a pulley-block, the combination of a shell the interior faces of which are provided with chambers, an axle-pin secured in said sides, a sheave, mounted on said axle-pin, made with annular grooves in its side faces concentric with its eye, and caps mounted on the pin, in said chambers of the sides of the shell and having peripheral flanges extending into said grooves of the sheave.

2. In a pulley-block, the combination of a shell the interior faces of the sides of which are provided with chambers 4, a pin or axle having reduced ends journaled in said sides, a bushing mounted on said pin, a sheave, mounted on said bushing, made with annular grooves in its side faces concentric with its eye, and caps mounted on the pin, in said chambers 4 of the sides of the shell and having peripheral flanges extending into the grooves in the side faces of the sheave.



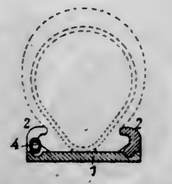
3. In a pulley-block, the combination of a shell the interior faces of the sides of which are provided with chambers 4, a pin or axle having reduced ends, a bushing mounted on the pin and made with an endless series of cavities 7^a for holding lubricant in the eye thereof, a sheave, mounted on said bushing, made with annular grooves in its side faces concentric with its eye, and caps mounted on the pin, in said chambers 4 of the sides of the shell and having peripheral flanges extending into the grooves in the side faces of the sheave.

4. In a pulley-block, the combination of a shell the interior faces of the sides of which are provided with chambers 4, a pin or axle having reduced ends journaled in said sides, a bushing mounted on said pin, a sheave, mounted on said bushing, made with bosses on its side faces encompassing the eye and provided with annular grooves encompassing said bosses, and caps mounted on the pin, in said chambers 4 of the sides of the shell and having peripheral flanges extending into the grooves in the side faces of the sheave.

5. In a pulley-block, the combination of a shell the interior faces of the sides of which are provided with chambers 4, a pin or axle having reduced ends journaled in said sides, a bushing mounted on said pin, a sheave, mounted on said bushing, made with annular grooves in its side faces concentric with its eye, and caps mounted on the pin, in said chambers 4 of the sides of the shell and having peripheral flanges extending into the grooves in the side faces of the sheave, the eyes of the caps and the bearing surfaces therefor on the periphery of the pin being made with threads.

[Claim 6 not printed in the Gazette.]

12,777. VEHICLE-WHEEL RIM. FRANK A. SEIBERLING, Akron, Ohio. Filed Mar. 3, 1908. Serial No. 419,056. Original No. 765,044, dated July 12, 1904, Serial No. 192,947.



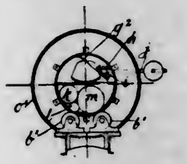
1. A vehicle-wheel rim of the class described, consisting of a base-rim and a band capable of contraction on and a reversal of position around said rim, one of the sides of said band being formed into a hook-shape and the other with an approximately vertical side and fashioned

to engage, in alternation, the clencher and inextensible-edge tires, substantially as and for the purpose described.

2. An improved rim for vehicle-wheels designed to receive an elastic tire thereon, consisting of a base-rim provided with parallel grooves in its periphery and two extensible rings capable of being contracted about said base-rim and seat in said grooves, having one of their sides made into a hook to engage one form of tire and with their other sides approximately vertical to form a holding means for a different shape tire when reversed in position on said base-rim.

3. A vehicle wheel rim of the class described, consisting of a base-rim and a band capable of contraction on and a reversal of position around said rim, one of the sides of said band being formed into a hook shape and the other with an approximately vertical side, in combination with a clencher tire shoe and an inextensible edge tire shoe respectively, substantially as and for the purpose described.

12,778. APPARATUS FOR GRINDING OR CRUSHING FOUNDRY-SAND, &c. PHILIBERT BONVILLAIN, Paris, France, assignor, by mesne assignments, to E. H. Mumford Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Dec. 27, 1907. Serial No. 408,321. Original No. 810,904, dated Jan. 30, 1906, Serial No. 210,748.



1. In a sand mill, the combination with a hollow rotatable cylinder having its axis inclined and provided on its interior with crushing means, of a longitudinally extending scraper engaging the upper interior surface of the cylinder.

2. In a sand mill, the combination with an inclined hollow rotatable cylinder provided at its interior lower portion with independent crushing rolls, of a longitudinally extending scraper engaging the interior upper surface of the cylinder in such position that the sand scraped from the cylinder will drop between the rolls.

3. In a sand mill the combination with a hollow rotatable cylinder, of a pair of crushing rolls in the lower portion thereof engaging each other and the wall of the cylinder, and a third roll engaging said rolls and the wall of the cylinder.

DESIGNS.

39,241. EMBLEM. RICHARD HOWLAND HUNT, Port Chester, N. Y. Filed Oct. 9, 1907. Serial No. 396,669. Term of patent 14 years.



The ornamental design for an emblem as shown.

39,242. EMBLEM. RICHARD HOWLAND HUNT, Port Chester, N. Y. Filed Feb. 25, 1908. Serial No. 417,749. Term of patent 14 years.



The ornamental design for an emblem as shown.

39,243. BROOCH, BUTTON, OR BUCKLE-PLATE. ARTHUR C. STONE, Providence, R. I. Filed Feb. 13, 1908. Serial No. 415,759. Term of patent 3½ years.



The ornamental design for a brooch, button, or buckle plate, as shown.

39,244. BROOCH, BUTTON, OR BUCKLE-PLATE. ARTHUR C. STONE, Providence, R. I. Filed Feb. 13, 1908. Serial No. 415,760. Term of patent 3½ years.



The ornamental design for a brooch, button, or buckle plate, as shown.

39,245. LOCKET. BENEDICT B. LEDERER, Providence, R. I., assignor to S. & B. Lederer Company, a Corporation of Rhode Island. Filed Jan. 25, 1908. Serial No. 412,677. Term of patent 3½ years.



The ornamental design for a locket, as shown.

39,246. LOCKET. ERNST H. LOHRMANN, Providence, R. I., assignor to Wightman & Hough Company, a Corporation of Rhode Island. Filed Jan. 25, 1908. Serial No. 412,678. Term of patent 3½ years.



The ornamental design for a locket as shown.

39,247. FINGER-RING OR SIMILAR ARTICLE. MEYER L. ROBBINS, New York, N. Y. Filed Jan. 30, 1908. Serial No. 413,492. Term of patent 7 years.



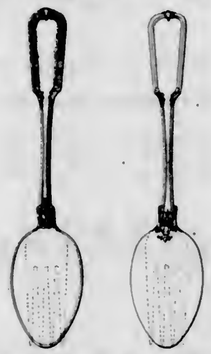
The ornamental design for a finger ring, or similar article, as shown.

39,248. BEAD FOR NECK-CHAINS OR SIMILAR ARTICLES. LOUIS E. F. WACHTER, Hartford, Conn. Filed Jan. 24, 1908. Serial No. 412,522. Term of patent 7 years.



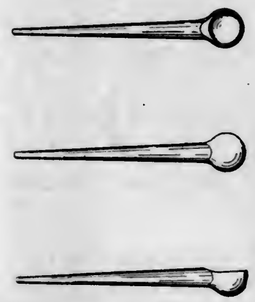
The ornamental design for a bead for a neck-chain, or similar article, as shown.

39,249. HANDLE FOR SPOONS, FORKS, OR SIMILAR ARTICLES. WILLIAM C. CODMAN, Providence, R. I., assignor to Gorham Manufacturing Company, Providence, R. I., a Corporation of Rhode Island. Filed Feb. 24, 1908. Serial No. 417,610. Term of patent 14 years.



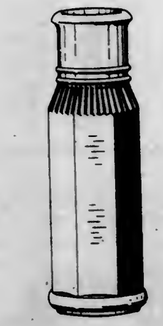
The ornamental design for the handle of a spoon, fork or similar article.

39,250. MUSTARD-SPOON. SIMON H. M. SEIB, Jersey City, N. J., assignor to Seib Bros., Jersey City, N. J., a Partnership. Filed Feb. 6, 1908. Serial No. 414,654. Term of patent 14 years.



The ornamental design for a mustard spoon as shown.

39,251. BOTTLE. GEORGE A. BALL, Muncie, Ind. Filed Jan. 17, 1908. Serial No. 411,374. Term of patent 7 years.



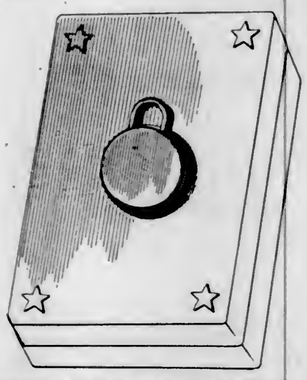
The ornamental design for a bottle as shown.

39,252. PHOTOGRAPH OR PICTURE HOLDER. GEORGE THOMPSON, Toronto, Ontario, Canada. Filed Jan. 2, 1908. Serial No. 409,102. Term of patent 3½ years.



The ornamental design for a photograph or picture holder as shown.

39,253. BOX. THOMAS E. MURRAY, New York, N. Y. Filed Feb. 5, 1908. Serial No. 414,451. Term of patent 7 years.



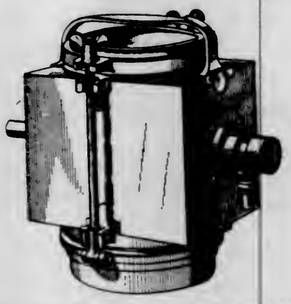
The ornamental design for a box, as shown.

39,254. REEL OR BOBBIN. MAURICE LUCIEN FRINGS, Paris, France, assignor to Société Maurice Frings et Cie, Paris, France, a Corporation of France. Filed Aug. 7, 1907. Serial No. 387,571. Term of patent 7 years.



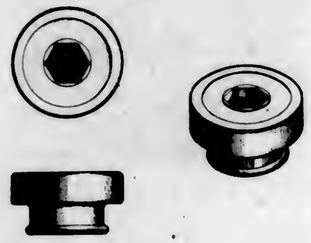
The ornamental design for a reel or bobbin, as shown.

39,255. ACETYLENE-GAS-GENERATOR BODY. EDWIN M. ROSENBLUTH, Philadelphia, Pa. Filed Jan. 17, 1907. Serial No. 352,834. Term of patent 14 years.



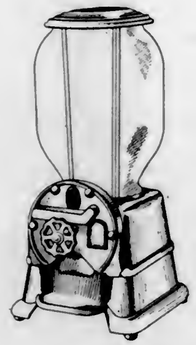
The ornamental design for an acetylene gas generator body as shown.

39,256. HUB-CAP FOR MOTOR-VEHICLES. RUSSELL HUFF, Detroit, Mich., assignor to Packard Motor Car Company, Detroit, Mich., a Corporation of West Virginia. Filed Mar. 4, 1907. Serial No. 360,621. Term of patent 14 years.



The ornamental design for a hub cap for motor vehicles as shown.

39,257. CASING FOR VENDING-MACHINES. BETHUEL M. DAVIS, Chicago, Ill., assignor, by mesne assignments, to Hilo Gum Company. Filed Dec. 13, 1907. Serial No. 406,279. Term of patent 3½ years.



The ornamental design for a casing for a vending machine.

TRADE-MARKS

PUBLISHED APRIL 7, 1908.

The following trade-marks have been adjudged entitled to registration under the act of February 20, 1905, and are published in compliance with section 6 of said act. Said section provides:

"Any person who believes he would be damaged by the registration of a mark may oppose the same by filing notice of opposition, stating the grounds therefor, in the Patent Office within thirty days after the publication of the mark sought to be registered, which said notice of opposition shall be verified by the person filing the same before one of the officers mentioned in section two of this act. If no notice of opposition is filed within said time the Commissioner shall issue a certificate of registration therefor, as hereinafter provided for."

Marks which are stated to have been "Used ten years" are registrable under the last proviso of section 5 of said act, which is as follows:

"And provided further, That nothing herein shall prevent the registration of any mark used by the applicant or his predecessors, or by those from whom title to the mark is derived, in commerce with foreign nations or among the several States, or with Indian tribes, which was in actual and exclusive use as a trade-mark of the applicant or his predecessors from whom he derived title for ten years next preceding the passage of this act."

Section 14 of said act provides for the following fee:

"On filing notice of opposition to the registration of a trade-mark, ten dollars."

Ser. No. 4,065. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) RICHARD MONARCH, Louisville, Ky. Filed May 3, 1905.

DOHERTY'S SHORTHORN

Particular description of goods.—Whisky.

Ser. No. 9,092. CLASS 15. OILS AND GREASES NOT INTENDED FOR FOOD.) J. W. HUNNEWELL & CO., INC., Boston, Mass. Filed June 26, 1905. Used ten years.

CRYSTALLINE

Particular description of goods.—Refined Petroleum for Illuminating Purposes.

Ser. No. 17,576. (CLASS 10. FERTILIZERS.) VIRGINIA-CAROLINA CHEMICAL COMPANY, Jersey City, N. J.; Richmond and Norfolk, Va.; Charleston, S. C.; Savannah and Atlanta, Ga.; Montgomery, Ala.; Durham, N. C., and Memphis, Tenn. Filed Mar. 6, 1906. Used ten years.

EAGLE ISLAND

Particular description of goods.—Fertilizers.

Ser. No. 18,316. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) DAVID MORTIMER, Boston, Mass. Filed Mar. 28, 1906.

VELOURS

Particular description of goods.—Pills.

Ser. No. 19,417. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) OLD SPRING DIS. CO., Cincinnati, Ohio. Filed May 10, 1906.



Particular description of goods.—Whisky.

Ser. No. 20,019. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) DULUTH-SUPERIOR MILLING CO., Duluth, Minn. Filed June 4, 1906.

DULUTH IMPERIAL

Particular description of goods.—Wheat-Flour.

Ser. No. 20,731. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) THE SUNBEAM INCANDESCENT LAMP COMPANY, New York, N. Y. Filed July 5, 1906.



Particular description of goods.—Incandescent Electric Lamps.

Ser. No. 21,109. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) PETER C. REILLY, Indianapolis, Ind. Filed July 24, 1906.

KREODONE.

Particular description of goods.—A Chemical Wood Strengthener and Preservative.

Ser. No. 24,235. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) GEO. W. TAYLOE, Basic City, Va. Filed Dec. 22, 1906.



Particular description of goods.—A Remedy for Disorders of the Nervous and Digestive Systems Produced by the Motion of Passenger Conveyances.

Ser. No. 25,194. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) PEPSOL CHEMICAL CO., Nashville, Tenn. Filed Feb. 7, 1907.

ZEN-ZIN

Particular description of goods.—A Blood and Nerve Tonic, a Liniment for Aches, Pains, and External Use, a Pill for Liver Troubles, Headache, Constipation, Coated Tongue, and Biliousness, a Balm Preparation for Rheumatism, Neuralgia, Sprains, Bruises, Cramps, and Cholera Morbus, a Remedy for Sore, Tender, Sweaty, or Offensive-Smelling Feet, Laxative Tablet for La Grippe, Colds in Chest, Head, and Aching Pains.

Ser. No. 26,011. (CLASS 38. PUBLICATIONS.) WILLIAM T. DOREMUS, Flanders, N. J. Filed Mar. 16, 1907.



The stripe being printed in red and centrally arranged.
Particular description of goods.—Calendars.

Ser. No. 26,079. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) DEUTSCHE WAFFEN- UND MUNITIONSFABRIKEN, Berlin, Germany. Filed Mar. 19, 1907.

Parabellum

Particular description of goods.—Ball-Bearings, and Balls, Cages, Rings, and Spacing Devices Therefor.

Ser. No. 26,842. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) MCKNIGHT & WORRELL, Dayton, Ohio. Filed Apr. 20, 1907.

"SMACKER"

Particular description of goods.—Candied Popcorn.

Ser. No. 27,560. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JOHN IGNACIUS VERBINA, Houston, Tex. Filed May 21, 1907.

WHITE EAGLE



Particular description of goods.—A Remedy for Chills and Fever, an Antiseptic Healing-Oil, a Healing-Ointment, Diuretic Drops, and Liver-Pills.

Ser. No. 27,614. (CLASS 39. CLOTHING.) JOHN V. FARWELL COMPANY, Chicago, Ill. Filed May 23, 1907.



Particular description of goods.—Knitted and Netted Underwear and Hosiery.

Ser. No. 29,047. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) WM. OPENHYM & SONS, New York, N. Y. Filed July 26, 1907.



Particular description of goods.—Velvet Ribbons.

Ser. No. 29,178. (CLASS 14. METALS AND METAL CASTINGS AND FORGINGS.) EDGAR F. PRICE, Chicago, Ill. Filed Aug. 2, 1907.

ELECTRO

Particular description of goods.—The Alloys and Alloying Metals Used in the Manufacture of Special Steels.

Ser. No. 29,392. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) SAMUEL HOWARTH, Florissant, Colo. Filed Aug. 14, 1907. Used ten years.

HOWARTH'S

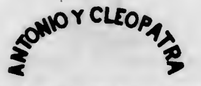
Particular description of goods.—Bait-Hooks, Gut Leaders, and Trout-Flies.

Ser. No. 29,470. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) SOCIÉTÉ GÉNÉRALE DES HUILES ET FOURNITURES INDUSTRIELLES L'OLÉO, Paris, France. Filed Aug. 19, 1907.



Particular description of goods.—Sparking Plugs, Sparking Apparatus, and Electric Igniting Apparatus for Explosion-Motors, Connecting-Plugs or Screw Terminals, Batteries, and Induction-Coils, Electric-Circuit Breakers for Igniting Apparatus, Controlling Hand-Levers for Electric Igniting Apparatus, Electrical Devices for Varying the Time of Ignition in Explosion-Motors, Electrical Governors, Electrical Controllers, Insulated Wire and Insulated Cables, and Electrical Alarms Intended for Use Upon Automobiles.

Ser. No. 30,006. (CLASS 17. TOBACCO PRODUCTS.) HAVANA-AMERICAN COMPANY, New York, N. Y. Filed Sept. 16, 1907.



Particular description of goods.—Cigars.

Ser. No. 30,099. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) SOCIÉTÉ ANONYME MONTBARBON, Paris, France. Filed Sept. 20, 1907.



Particular description of goods.—Electric Automobile Motors and Dynamos, Electric Igniting Apparatus, Sparking Apparatus, Spark-Plugs, Batteries and Storage Batteries, Electric-Circuit Breakers for Igniting Apparatus, Insulated Wire, Electric Brakes, Electric Headlights and Lanterns, and Electric Alarms, All Intended for Use Upon Automobiles.

Ser. No. 30,634. (CLASS 14. METALS AND METAL CASTINGS AND FORGINGS.) THE EYRE SMELTING CO. LTD., Tonbridge, England. Filed Oct. 17, 1907.

ARIEL

Particular description of goods.—Antifriction Metals.

Ser. No. 30,983. (CLASS 9. EXPLOSIVES, FIREARMS, EQUIPMENTS, AND PROJECTILES.) EDWARD H. WAGNER, New York, N. Y. Filed Nov. 4, 1907. Used ten years.

Bengal-Matches

Particular description of goods.—Hand-Stick Fireworks.

Ser. No. 30,984. (CLASS 9. EXPLOSIVES, FIREARMS, EQUIPMENTS, AND PROJECTILES.) EDWARD H. WAGNER, New York, N. Y. Filed Nov. 4, 1907. Used ten years.

The **BRILLIANT** Star Match

Particular description of goods.—Hand-Stick Fireworks.

Ser. No. 31,011. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) J. BASLER & CO., Paris, France. Filed Nov. 5, 1907.

BLANCOTINE

Particular description of goods.—Natural Silicates Used in Manufacture for Clarifying Oils.

Ser. No. 31,344. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ELIZABETH CHURCHWARD, Detroit, Mich. Filed Nov. 25, 1907.

RESTO

Particular description of goods.—A Remedy for Tired Feet, Corns, and Bunions.

Ser. No. 31,628. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) MARY E. THOMPSON, New York, N. Y. Filed Dec. 9, 1907.

Fluffy Ruffers

Particular description of goods.—A Contrivance of Human Hair for Giving to Ladies' Hair the Pompadour Effect.

Ser. No. 31,666. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) LOUIS SPIRO, New York, N. Y. Filed Dec. 11, 1907.

WYTANAIL

Particular description of goods.—A Toilet Powder for Cleansing and Beautifying the Nails.

Ser. No. 31,780. (CLASS 10. FERTILIZERS.) GEORGIA CHEMICAL WORKS, Augusta, Ga. Filed Dec. 17, 1907. Used ten years.

GEORGIA CHEMICAL WORKS

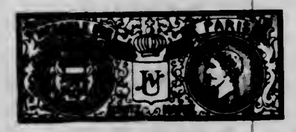
Particular description of goods.—Fertilizers.

Ser. No. 31,919. (CLASS 16. PAINTS AND PAINTERS' MATERIALS, NOT INCLUDING OILS AND POLISHES.) VEREINIGTE ULTRAMARINFABRIKEN AKTIEN-GESELLSCHAFT VORMALS LEVERKUS, ZELTNER & CONSORTEN, IN KÖLN AM RHEIN, Cologne, Germany. Filed Dec. 26, 1907. Used ten years.



Particular description of goods.—Ultramarine Blue.

Ser. No. 31,920. (CLASS 16. PAINTS AND PAINTERS' MATERIALS, NOT INCLUDING OILS AND POLISHES.) VEREINIGTE ULTRAMARINFABRIKEN AKTIEN-GESELLSCHAFT VORMALS LEVERKUS, ZELTNER & CONSORTEN, IN KÖLN AM RHEIN, Cologne, Germany. Filed Dec. 26, 1907. Used ten years.



Particular description of goods.—Ultramarine Blue.

Ser. No. 32,005. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) AIR LINE CARRIER CO., Chicago, Ill. Filed Jan. 2, 1908.

Air Line

Particular description of goods.—Cash-Carriers and Package-Carriers.

Ser. No. 32,095. (CLASS 37. PAPER AND STATIONERY.) HARPER PAPER COMPANY, Mineola, and New York, N. Y. Filed Jan. 6, 1908.

Genuine Hastings Bond

Particular description of goods.—Paper Useful for the Purposes of Correspondence, Type-Writing, and Printing.

Ser. No. 32,100. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE BLANTON MANUFACTURING COMPANY, St. Louis, Mo. Filed Jan. 6, 1908.

CREAMO

Particular description of goods.—Oleomargarin.

Ser. No. 32,133. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) LAMAR & RANKIN DRUG CO., Atlanta, Ga. Filed Jan. 8, 1908. Used ten years.

BORO-MENTHOL

Particular description of goods.—An Antiseptic and a Disinfectant.

Ser. No. 32,191. (CLASS 39. CLOTHING.) LOUIS P. HAIGHT, Muskegon, Mich. Filed Jan. 13, 1908.

Cast Iron

Particular description of goods.—Hosiery.

Ser. No. 32,307. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) THE DE LONG HOOK AND EYE COMPANY, Philadelphia, Pa. Filed Jan. 18, 1908.



The annular band centrally located on the package being white.

Particular description of goods.—Hair-Pins.

Ser. No. 32,321. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) DENTO CHEMICAL COMPANY, Stockton, Cal. Filed Jan. 20, 1908.

Dento-Salt

Particular description of goods.—A Table-Salt Consisting of Sodium Chlorid, Calcium Phosphate, Calcium Carbonate, and Magnesium Phosphate.

Ser. No. 32,415. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) CORAL M. EVANS, Nashville, Mich. Filed Jan. 24, 1908.



Particular description of goods.—A Remedy to be Used for Diseases in Turkeys.

Ser. No. 32,441. (CLASS 36. MUSICAL INSTRUMENTS AND SUPPLIES.) THE ECHO HORN CO., Cleveland, Ohio. Filed Jan. 27, 1908.

ECHO

Particular description of goods.—Exhaust-Blown Signal-Horns for Automobiles and Motor-Boats.

Ser. No. 32,443. (CLASS 3. BAGGAGE, HORSE EQUIPMENTS, PORTFOLIOS, and POCKET-BOOKS.) GAY BRADT, New York, N. Y. Filed Jan. 27, 1908.

SELF DENIAL

Particular description of goods.—Purses, Pocket-Books, and Hand-Bags.

Ser. No. 32,482. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) J. A. SPRAGUE & COMPANY, Columbus, Ohio. Filed Jan. 29, 1908.



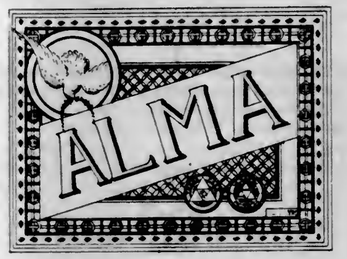
Particular description of goods.—Composition Tooth-Filling.

Ser. No. 32,543. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) CARSON, PIRIE, SCOTT & CO., Chicago, Ill. Filed Feb. 3, 1908.



Particular description of goods.—Ribbons.

Ser. No. 32,557. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) NEUSS, HESSLEIN & CO., New York, N. Y. Filed Feb. 4, 1908.



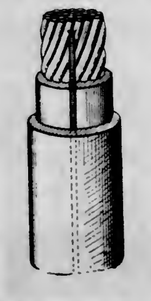
Particular description of goods.—Woven Cotton Plaids.

Ser. No. 32,588. (CLASS 38. PUBLICATIONS.) LOUIS S. DABO, Atlantic City, N. J. Filed Feb. 5, 1908.

Boardwalk Life

Particular description of goods.—A Weekly Magazine.

Ser. No. 32,592. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) NATIONAL INDIA RUBBER CO., Bristol, R. I. Filed Feb. 5, 1908.
The color of the thread being blue.



Particular description of goods.—National Electrical Code Standard Wire, (Insulated,) Electrical Lamp-Cords, Reinforced Portable Electrical Cords, Electrical Cable.

Ser. No. 32,605. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) C. A. MURDOCK MFG. CO., Kansas City, Mo. Filed Feb. 6, 1908. Used ten years.

Opt.

Particular description of goods.—Flavoring Extracts.

Ser. No. 32,650. (CLASS 36. MUSICAL INSTRUMENTS AND SUPPLIES.) THE A. B. CHASE COMPANY, Norwalk, Ohio. Filed Feb. 7, 1908. Used ten years.

A. B. Chase.

Particular description of goods.—Pianos, Organs, and Automatic Piano-Players.

Ser. No. 32,685. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS, NOT INCLUDING ELECTRICAL APPARATUS.) BUCKWALTER STOVE CO., Royersford, Pa. Filed Feb. 10, 1908.



Particular description of goods.—Stoves and Parts Thereof.

Ser. No. 32,710. (CLASS 39. CLOTHING.) SHEARER BROS. & FRANKLIN, Lynchburg, Va. Filed Feb. 11, 1908.

"THE GUDEKIND"

Particular description of goods.—Coats, Vests, Trousers, and Overcoats.

Ser. No. 32,713. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) GEORGE NASH COMPANY, New York, N. Y. Filed Feb. 11, 1908.

SOLAR HIGH DUTY

Particular description of goods.—Drills, Files, Rasps, Reamers, Milling and Gear Cutters, Taps, Knives, Dies, Saws, and Tool Parts.

Ser. No. 32,720. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) MONITOR MANUFACTURING COMPANY, OF BALTIMORE CITY, Baltimore, Md. Filed Feb. 12, 1908.



Particular description of goods.—Switching and Controlling Devices for Electric Circuits.

Ser. No. 32,728. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) VINALHAVEN FISH COMPANY, Vinalhaven, Me. Filed Feb. 12, 1908.



Particular description of goods.—Pickled, Cured, and Smoked Fish.

Ser. No. 32,739. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) BARCLAY & BARCLAY, New York, N. Y. Filed Feb. 13, 1908.

TRICOFÉRO

Particular description of goods.—A Medicated Preparation for the Hair, Scalp, and Skin.

Ser. No. 32,743. (CLASS 16. PAINTS AND PAINTERS' MATERIALS, NOT INCLUDING OILS AND POLISHES.) THE HOCKADAY PAINT CO., Wichita, Kans. Filed Feb. 13, 1908.

NO-LAP

Particular description of goods.—Stain and Paint.

Ser. No. 32,747. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) THE HARRAL SOAP CO., New York, N. Y. Filed Feb. 13, 1908. Used ten years.

Kleeneasy

Particular description of goods.—Soap.

Ser. No. 32,757. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) DAHNKE-WALKER MILLING CO., Union City, Tenn. Filed Feb. 14, 1908.



JERSEY CREAM

Particular description of goods.—Cornmeal.

Ser. No. 32,759. (CLASS 39. CLOTHING.) S. FEIN BROTHERS & COMPANY, Milwaukee, Wis. Filed Feb. 14, 1908.



Particular description of goods.—Clothing, Consisting of Boys' and Men's Coats, Overcoats, Pants, and Vests.

Ser. No. 32,779. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) BARNES & HILLE, Philadelphia, Pa. Filed Feb. 15, 1908.

ARGYROL

Particular description of goods.—Antiseptics.

Ser. No. 32,788. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) MAXIM CHEMICAL COMPANY, New York, N. Y. Filed Feb. 15, 1908.

Pipo
A Pipe Laxative

Particular description of goods.—A Chemical Preparation to be Used in the Cleaning of the Interior of Pipes and Plumbing Fixtures and Appurtenances.

Ser. No. 32,791. (CLASS 48. MALT EXTRACTS AND LIQUORS.) THE SAN FRANCISCO BREWERIES LTD., London, England, and San Francisco, Cal. Filed Feb. 15, 1908. Used ten years.

John Wielands

Particular description of goods.—Beer.

Ser. No. 32,796. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) JOHN M. CHAPMAN, New York, N. Y. Filed Feb. 15, 1908.

Silver Cord

Particular description of goods.—Canned Fruits and Canned Vegetables, Sea Foods, Olive-Oil.

Ser. No. 32,811. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) PACIFIC NOVELTY COMPANY, New York, N. Y. Filed Feb. 17, 1908.

MERRY WIDOW

Particular description of goods.—Ladies' Hair-Combs Made of Pyroxylin and Metal.

Ser. No. 32,818. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) BARNES & HILLE, Philadelphia, Pa. Filed Feb. 17, 1908.

OVOFERRIN

Particular description of goods.—Tonics.

Ser. No. 32,839. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) CHARLES E. DUPELL, New York, N. Y. Filed Feb. 18, 1908.

Aunt Dana's

Particular description of goods.—Liniments.

Ser. No. 32,845. (CLASS 16. PAINTS AND PAINTERS' MATERIALS, NOT INCLUDING OILS AND POLISHES.) OLIVER JOHNSON & CO., Providence, R. I. Filed Feb. 18, 1908.

OJACO

Particular description of goods.—Paints, Varnishes, Leads, Enamels, Stains, Burnt Umber, Liquid and Paste Fillers, for Wood and Metal.

Ser. No. 32,868. (CLASS 39. CLOTHING.) WILLIAMS-MARVIN COMPANY, San Francisco, Cal. Filed Feb. 19, 1908.

DAREDEVIL

Particular description of goods.—Leather Boots and Shoes.

Ser. No. 32,883. (CLASS 12. MASONRY MATERIALS.) J. L. LINDSAY, Richmond, Va. Filed Feb. 20, 1908.

Monarch



Particular description of goods.—Rubber Roofing.

Ser No. 32,895. (CLASS 16. PAINTS AND PAINTERS' MATERIALS, NOT INCLUDING OILS AND POLISHES.) TWIN CITY VARNISH COMPANY, St. Paul, Minn. Filed Feb. 20, 1908.

Wearette

Particular description of goods.—Varnishes.

Ser. No. 32,897. (CLASS 39. CLOTHING.) THE MEDLICOTT COMPANY, Windsor Locks, Conn. Filed Feb. 20, 1908. Used ten years.

SCOTCH WOOL WARRANTED NOT TO SHRINK

Particular description of goods.—Merino Underwear.

Ser. No. 32,901. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) HOWELL & BURSK, Philadelphia, Pa. Filed Feb. 20, 1908. Used ten years.

OAKDALE

Particular description of goods.—Canned Fruits and Canned Vegetables, Coffee, and Catsup.

Ser. No. 32,909. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) SABINA FLOUR MILL CO., Sabina, Ohio. Filed Feb. 20, 1908.

SABINA ROLLER MILLS BEST PATENT AMAZON



Particular description of goods.—Wheat-Flour.

Ser. No. 32,911. (CLASS 29. BROOMS, BRUSHES, AND DUSTERS.) THE JOSEPH LAY COMPANY, Ridgeville, Ind. Filed Feb. 21, 1908.

VICTOR.

Particular description of goods.—Brooms and Brushes.

Ser. No. 32,915. (CLASS 15. OILS AND GREASES NOT INTENDED FOR FOOD.) CORN PRODUCTS REFINING COMPANY, Jersey City, N. J., and New York, N. Y. Filed Feb. 21, 1908.

ROYAL

Particular description of goods.—Corn-Oil.

Ser. No. 32,920. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) RIO CHEMICAL CO., New York, N. Y. Filed Feb. 21, 1908.

DARPIN

Particular description of goods.—Medicines Used as Astringents for External and Internal Use.

Ser. No. 32,951. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) MANUFACTURERS SUPPLIES COMPANY, Philadelphia, Pa. Filed Feb. 24, 1908.

VELOX

Particular description of goods.—Rubber Tires.

Ser. No. 32,952. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) MANUFACTURERS SUPPLIES COMPANY, Philadelphia, Pa. Filed Feb. 24, 1908.

INDIAN

Particular description of goods.—Rubber Tires.

Ser. No. 32,959. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) MORGAN-GARDNER ELECTRIC COMPANY, Chicago, Ill. Filed Feb. 24, 1908.



Particular description of goods.—Bits, Links, Chains, Cutter-Heads, and Cutters for Coal-Cutting Machines or Mining-Machines.

Ser. No. 32,960. (CLASS 39. CLOTHING.) M. LEVY'S SONS, Shreveport, La. Filed Feb. 24, 1908.

Pelican



Particular description of goods.—Men's and Boys' Leather Boots and Shoes.

Ser. No. 32,963. (CLASS 48. MALT EXTRACTS AND LIQUORS.) THE F. W. COOK BREWING CO., Evansville, Ind. Filed Feb. 24, 1908.

Cook-Ola

Particular description of goods.—Beer.

Ser. No. 32,974. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) NATICK UNDERWEAR COMPANY, Springfield, Mass. Filed Feb. 24, 1908.

PHANTOM

Particular description of goods.—Foundations for Lace and Other Similar Collars for Ladies' Wear.

Ser. No. 32,990. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) DRAPER & HIRSCH, Milford, Del. Filed Feb. 25, 1908.

WIGWAM



Particular description of goods.—Canned Fruits and Vegetables.

Ser. No. 32,991. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) DRAPER & HIRSCH, Milford, Del. Filed Feb. 25, 1908. Used ten years.

MISPILLION BRAND

Particular description of goods.—Canned Fruits and Vegetables.

Ser. No. 32,994. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) BOMI-ANCA COMPANY, Lowell, Mass. Filed Feb. 25, 1908.

BOMI-ANCA

Particular description of goods.—Tonic Medicines.

Ser. No. 32,995. (CLASS 27. HOROLOGICAL INSTRUMENTS.) ELGIN NATIONAL WATCH COMPANY, Elgin and Chicago, Ill. Filed Feb. 25, 1908. Used ten years.

B.W.RAYMOND.

Particular description of goods.—Watch-Movements.

Ser. No. 33,014. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) WASHINGTON J. SMITH, Canfield, Ohio. Filed Feb. 26, 1908.

Altimo

Particular description of goods.—Seeds, Bulbs, and Plants.

Ser. No. 33,020. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) THE BAFCO LEATHER PASTE COMPANY, New York, N. Y. Filed Feb. 26, 1908.

BAFCO

Particular description of goods.—Leather-Dressing.

Ser. No. 33,031. (CLASS 9. EXPLOSIVES, FIREARMS, EQUIPMENTS, AND PROJECTILES.) LAFLIN & RAND POWDER COMPANY, New York, N. Y. Filed Feb. 27, 1908.

W-A. .30 CAL.

Particular description of goods.—Gunpowder for All Kinds of Shotguns, Rifles, and Revolvers.

Ser. No. 33,051. (CLASS 3. BAGGAGE, HORSE EQUIPMENTS, PORTFOLIOS, AND POCKET-BOOKS.) U. S. HAME COMPANY, Buffalo, N. Y. Filed Feb. 27, 1908.

"AA"

Particular description of goods.—Hames and Attachments Therefor.

Ser. No. 33,060. (CLASS 37. PAPER AND STATIONERY.) THE EAST HARTFORD MANUFACTURING COMPANY, Burnside, Conn. Filed Feb. 28, 1908. Used ten years.

CHARTER OAK

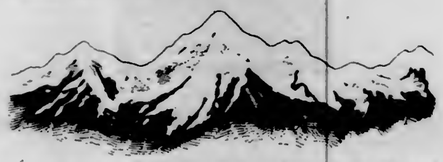
Particular description of goods.—Printing and Writing Paper, Tablets, Pads, and Envelops.

Ser. No. 33,065. (CLASS 37. PAPER AND STATIONERY.) LOUIS DEJONGE & Co., New York, N. Y. Filed Feb. 28, 1908.

PURITAN

Particular description of goods.—Surface-Coated Paper.

Ser. No. 33,070. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE N. K. FAIRBANK COMPANY, Chicago, Ill. Filed Feb. 21, 1908.



Particular description of goods.—Edible Fats and Oils.

Ser. No. 33,072. (CLASS 25. LOCKS AND SAFES.) THE CHAMPION SAFETY LOCK COMPANY, Geneva, Ohio. Filed Feb. 28, 1908.

CHAMPION

Particular description of goods.—Sash-Fasteners, Door-Bolts, Chain Fasteners, and Cupboard Turns and Catches.

Ser. No. 33,080. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) THE WOOD-HARE COMPANY, New York, N. Y. Filed Feb. 29, 1908.

KNICKERBOCKER

Particular description of goods.—Shoe-Laces.

Ser. No. 33,097. (CLASS 16. PAINTS AND PAINTERS' MATERIALS, NOT INCLUDING OILS AND POLISHES.) PRINCE'S METALLIC PAINT CO., Allentown, Pa. Filed Feb. 29, 1908.

PRINCE'S METALLIC PAINT

Particular description of goods.—Dry Metallic Paints.

Ser. No. 33,101. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ROMUALD A. OLESHAK, Uniontown, Pa. Filed Feb. 29, 1908.



Particular description of goods.—A Pomade.

Ser. No. 33,112. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) STROHMEYER & ARPE COMPANY, New York, N. Y. Filed Mar. 2, 1908.

MARIE ELISABETH

Particular description of goods.—Sardines and Canned Fish.

Ser. No. 33,120. (CLASS 15. OILS AND GREASES NOT INTENDED FOR FOOD.) AUGUSTUS CRANE BUZBY, Philadelphia, Pa. Filed Mar. 2, 1908.

KEYSTONE

Particular description of goods.—Lubricants Consisting of Oils and Greases.

Ser. No. 33,136. (CLASS 15. OILS AND GREASES NOT INTENDED FOR FOOD.) SIDNEY BANCROFT, New York, N. Y. Filed Mar. 3, 1908.

ZEROLINE

Particular description of goods.—Lubricating-Oils.

Ser. No. 33,154. (CLASS 17. TOBACCO PRODUCTS.) THE FROMHERZ-BERLIZHEIMER COMPANY, Chicago, Ill. Filed Mar. 4, 1908.

La Espera

Particular description of goods.—Cigars.

TRADE-MARKS

REGISTERED APRIL 7, 1908.

68,377. WATCHES, WATCHCASES, AND WATCH-MOVEMENTS. AMERICAN-SWISS WATCH CO., New York, N. Y.
Filed December 20, 1907. Serial No. 31,862. PUBLISHED FEBRUARY 4, 1908.

68,378. FONTS OF TYPE. AMERICAN TYPE FOUNDERS COMPANY, Jersey City, N. J.
Filed December 18, 1907. Serial No. 31,821. PUBLISHED FEBRUARY 4, 1908.

68,379. CERTAIN PLUMBING AND STEAM-FITTING SUPPLIES. THE ASHCROFT MANUFACTURING COMPANY, Bridgeport, Conn.
Filed October 26, 1907. Serial No. 30,793. PUBLISHED FEBRUARY 4, 1908.

68,380. CEMENT-BLOCK MACHINES. BURRELL MANUFACTURING COMPANY, Bradley, Ill.
Filed August 26, 1907. Serial No. 29,592. PUBLISHED FEBRUARY 4, 1908.

68,381. SHEEP-SHEARS AND SCYTHES. COLUMBIAN CUTLERY COMPANY, Reading, Pa.
Filed December 13, 1907. Serial No. 31,698. PUBLISHED FEBRUARY 4, 1908.

68,382. INK-RIBBONS AND CARBON-PAPER. F. S. WEBSTER COMPANY, Boston, Mass.
Filed December 2, 1907. Serial No. 31,501. PUBLISHED FEBRUARY 4, 1908.

68,383. DIES, DIE-STOCKS, AND SCREW-THREADING TOOLS. THE HART MANUFACTURING CO., Cleveland, Ohio.
Filed October 21, 1907. Serial No. 30,689. PUBLISHED FEBRUARY 4, 1908.

68,384. ROOFING-TIN. JOHN S. HOY, Albany, N. Y.
Filed December 19, 1907. Serial No. 31,844. PUBLISHED FEBRUARY 4, 1908.

68,385. RIFLES, SHOTGUNS, PISTOLS, AND REVOLVERS. MARY ELIZABETH JOHNSON, trustee, Fitchburg, Mass.
Filed November 15, 1905. Serial No. 14,654. PUBLISHED FEBRUARY 4, 1908.

68,386. RIFLES, SHOTGUNS, PISTOLS, AND REVOLVERS. MARY ELIZABETH JOHNSON, trustee, Fitchburg, Mass.
Filed November 15, 1905. Serial No. 14,655. PUBLISHED FEBRUARY 4, 1908.

68,387. RIFLES, SHOTGUNS, PISTOLS, AND REVOLVERS. MARY ELIZABETH JOHNSON, trustee, Fitchburg, Mass.
Filed November 15, 1905. Serial No. 14,656. PUBLISHED FEBRUARY 4, 1908.

68,388. RIFLES, SHOTGUNS, PISTOLS, AND REVOLVERS. MARY ELIZABETH JOHNSON, trustee, Fitchburg, Mass.
Filed November 18, 1905. Serial No. 14,788. PUBLISHED FEBRUARY 4, 1908.

68,389. RIFLES, SHOTGUNS, PISTOLS, AND REVOLVERS. MARY ELIZABETH JOHNSON, trustee, Fitchburg, Mass.
Filed November 20, 1905. Serial No. 14,861. PUBLISHED FEBRUARY 4, 1908.

68,390. GLASS SIPHONS. KOSCHERAK BROS., New York, N. Y.
Filed November 18, 1907. Serial No. 31,221. PUBLISHED FEBRUARY 4, 1908.

68,391. GLASS SIPHONS. KOSCHERAK BROS., New York, N. Y.
Filed November 18, 1907. Serial No. 31,222. PUBLISHED FEBRUARY 4, 1908.

68,392. TWINE AND CORD. THE LINEN THREAD COMPANY, New York, N. Y.
Filed December 23, 1907. Serial No. 31,893. PUBLISHED FEBRUARY 4, 1908.

68,393. BRUSHES. PETER MAENDLER, St. Paul, Minn.
Filed March 8, 1907. Serial No. 25,839. PUBLISHED FEBRUARY 4, 1908.

68,394. BRUSHES. PETER MAENDLER, St. Paul, Minn.
Filed March 8, 1907. Serial No. 25,840. PUBLISHED FEBRUARY 4, 1908.

68,395. PICTURE-FRAME MACHINES, VISES, AND MITER-BOXES. THE H. C. MARSH COMPANY, Rockford, Ill.
Filed November 29, 1907. Serial No. 31,458. PUBLISHED FEBRUARY 4, 1908.

68,396. CARPET-SWEEPERS. NATIONAL SWEEPER COMPANY, Newark, N. J.
Filed December 5, 1907. Serial No. 31,585. PUBLISHED FEBRUARY 4, 1908.

68,397. TIME-RECORDING CLOCKS AND DIALS THEREFOR. NEWMAN CLOCK COMPANY, Chicago, Ill.
Filed May 11, 1907. Serial No. 27,304. PUBLISHED FEBRUARY 4, 1908.

68,398. SOAP DRESSINGS FOR ALL BLACK SHOES. THE OVERBROOK COMPANY, Philadelphia, Pa.
Filed December, 27, 1907. Serial No. 31,941. PUBLISHED FEBRUARY 4, 1908.

68,399. WOOD-POLISH. PERZINAL-POLIERMITTEL GESELLSCHAFT MIT BESCHRÄNKTER HAFTUNG, Munich, Germany.
Filed March 1, 1907. Serial No. 25,681. PUBLISHED FEBRUARY 4, 1908.

68,400. FERTILIZERS. RASIN-MONUMENTAL COMPANY OF ANNE ARUNDEL COUNTY, Baltimore, Md.
Filed December 17, 1907. Serial No. 31,768. PUBLISHED FEBRUARY 4, 1908.

68,401. CERTAIN AGRICULTURAL MACHINERY. ROCK ISLAND PLOW CO., Rock Island, Ill.
Filed December 31, 1906. Serial No. 24,372, PUBLISHED FEBRUARY 4, 1908.

68,402. HATCHETS AND SAWS. RUSSELL & ERWIN MANUFACTURING COMPANY, New Britain, Conn.
Filed November 14, 1906. Serial No. 23,330. PUBLISHED FEBRUARY 4, 1908.

68,403. CERTAIN CLEANERS AND POLISHES. ALFRED JOHN WELCH, Chicago, Ill.
Filed December 9, 1907. Serial No. 31,640. PUBLISHED FEBRUARY 4, 1908.

68,404. CANNED FRUITS AND VEGETABLES. AUGHINBAUGH CANNING CO., Baltimore, Md.
Filed November 6, 1907. Serial No. 31,037. PUBLISHED DECEMBER 10, 1907.

68,405. CERTAIN FOODS AND RELISHES. EDWARD C. FLACCUS, Wheeling, W. Va.
Filed April 23, 1907. Serial No. 26,864. PUBLISHED FEBRUARY 4, 1908.

68,406. CANNED FRUITS AND VEGETABLES AND CANNED OYSTERS. H. J. MCGRATH COMPANY, Baltimore, Md.
Filed October 19, 1907. Serial No. 30,668. PUBLISHED FEBRUARY 4, 1908.

68,407. GELATIN FOR USE AS FOOD. J. & G. COX LIMITED, Edinburgh, Scotland.
Filed November 15, 1907. Serial No. 31,183. PUBLISHED FEBRUARY 4 1908.

68,408. CERTAIN DRIED FRUITS. THE J. K. ARMSBY COMPANY, Chicago, Ill., and San Francisco, Cal.
Filed September 25, 1907. Serial No. 30,206. PUBLISHED FEBRUARY 4, 1908.

68,409. CERTAIN DRIED FRUITS. THE J. K. ARMSBY COMPANY, Chicago, Ill., and San Francisco, Cal.
Filed September 25, 1907. Serial No. 30,207. PUBLISHED FEBRUARY 4, 1908.

68,410. LEATHER BOOTS AND SHOES. A. F. COX & SON, Portland, Me.
Filed November 16, 1907. Serial No. 31,213. PUBLISHED FEBRUARY 4, 1908.

68,411. MILK, CREAM, AND BUTTER. ALTA VISTA CREAMERY COMPANY, Fort Worth, Tex.
Filed November 30, 1907. Serial No. 31,481. PUBLISHED FEBRUARY 4, 1908.

68,412. TEA. ARBUCKLE BROTHERS, New York, N. Y.; Pittsburg, Pa., and Chicago, Ill.
Filed December 7, 1907. Serial No. 31,603. PUBLISHED FEBRUARY 4, 1908.

68,413. COFFEES, TEAS, AND SPICES. W. T. BASS & CO., Norfolk, Va.
Filed October 12, 1907. Serial No. 30,582. PUBLISHED FEBRUARY 4, 1908.

68,414. CERTAIN BEVERAGE. BLACK DRUG AND CHEMICAL COMPANY, Akron, Ohio.
Filed November 29, 1907. Serial No. 31,449. PUBLISHED FEBRUARY 4, 1908.

68,415. SOCKS AND STOCKINGS. JOSEPH H. CLARK, San Francisco, Cal.
Filed December 2, 1907. Serial No. 31,496. PUBLISHED FEBRUARY 4, 1908.

68,416. BUTTER. THE ELGIN BUTTER COMPANY, Elgin, Ill.
Filed September 9, 1907. Serial No. 29,806. PUBLISHED FEBRUARY 4, 1908.

68,417. BUTTER. THE ELGIN BUTTER COMPANY, Elgin, Ill.
Filed September 9, 1907. Serial No. 29,807. PUBLISHED FEBRUARY 4, 1908.

68,418. LAGER-BEER. ENTERPRISE BREWING CO., San Francisco, Cal.
Filed December 4, 1907. Serial No. 31,545. PUBLISHED FEBRUARY 4, 1908.

68,419. LAGER-BEER. ENTERPRISE BREWING CO., San Francisco, Cal.
Filed December 4, 1907. Serial No. 31,546. PUBLISHED FEBRUARY 4, 1908.

68,420. HOOKS AND EYES FOR GARMENTS. FRANCIS HOOK & EYE & FASTENER CO., Niagara Falls, N. Y.
Filed December 4, 1907. Serial No. 31,571. PUBLISHED FEBRUARY 4, 1908.

68,421. CERTAIN JEWELRY AND MINIATURE-PHOTO FRAMES. THE GOPHIR DIAMOND CO. LTD., London, England.
Filed August 15, 1905. Serial No. 11,671. PUBLISHED FEBRUARY 4, 1908.

68,422. CERTAIN CHEMICAL PREPARATIONS. EMMA HOMANN, Berlin, Germany.
Filed November 11, 1905. Serial No. 14,501. PUBLISHED FEBRUARY 4, 1908.

68,423. OSTRICH-FEATHERS AND GOODS MADE THEREFROM. KAFFIR PLUME COMPANY, Chicago, Ill.
Filed November 21, 1907. Serial No. 31,277. PUBLISHED FEBRUARY 4, 1908.

68,424. SOAP. MANHATTAN DRUG CO., New York, N. Y.
Filed December 19, 1907. Serial No. 31,846. PUBLISHED FEBRUARY 4, 1908.

68,425. RUBBER BOOTS AND SHOES AND RUBBER SOLES. NATIONAL INDIA RUBBER CO., Bristol, R. I.
Filed September 16, 1907. Serial No. 30,018. PUBLISHED FEBRUARY 4 1908.

68,426. TENNIS-SHOES HAVING RUBBER SOLES. NATIONAL INDIA RUBBER CO., Bristol, R. I.
Filed September 16, 1907. Serial No. 30,021. PUBLISHED FEBRUARY 4, 1908.

68,427. SILK, COTTON, AND FLAX THREAD. THE NONOTUCK SILK COMPANY, Northampton, Mass.
Filed November 23, 1907. Serial No. 31,315. PUBLISHED FEBRUARY 4, 1908.

68,428. BEER. THE PEOPLES BREWING CO., Terre Haute, Ind.
Filed December 16, 1907. Serial No. 31,746. PUBLISHED FEBRUARY 4, 1908.

68,429. COFFEE. SEVEN DAY COFFEE COMPANY, New York, N. Y.
Filed December 7, 1907. Serial No. 31,610. PUBLISHED FEBRUARY 4, 1908.

68,430. BUTTER. SWIFT & COMPANY, Chicago, Ill.
Filed November 20, 1907. Serial No. 31,441. PUBLISHED FEBRUARY 4, 1908.

68,431. HAND SEWING-NEEDLES AND KNITTING-NEEDLES. THOMAS HARPER & SONS LD., London, England.
Filed July 18, 1907. Serial No. 28,863. PUBLISHED FEBRUARY 4, 1908.

68,432. SOAP. WISDOM SOAP COMPANY, Chicago, Ill.
Filed December 28, 1907. Serial No. 31,961. PUBLISHED FEBRUARY 4, 1908.

68,433. BREAD. ALTON BAKING & CATERING CO., Alton, Ill.
Filed February 25, 1907. Serial No. 25,605. PUBLISHED FEBRUARY 4, 1908.

68,434. CHEWING-GUM. BALTIMORE CHEWING GUM CO., Baltimore, Md.
Filed October 17, 1907. Serial No. 30,639. PUBLISHED FEBRUARY 4, 1908.

68,435. CORN REMEDY. ABRAM R. CANTER, Wilkinsburg, Pa.
Filed December 10, 1907. Serial No. 31,649. PUBLISHED FEBRUARY 4, 1908.

68,436. REMEDY FOR CERTAIN DISEASES. WILLIS F. DARLING, West Derry, N. H.
Filed November 25, 1907. Serial No. 31,350. PUBLISHED FEBRUARY 4, 1908.

68,437. CLEANSING, STERILIZING, AND PURIFYING FLUID. DEHLS & STEIN, INCORPORATED, New York, N. Y.
Filed December 26, 1906. Serial No. 24,274. PUBLISHED FEBRUARY 4, 1908.

68,438. POPCORN, POPCORN CONFECTIONS, AND CANDY. EATON & HOBBS, Lynn, Mass.
Filed November 9, 1907. Serial No. 31,109. PUBLISHED FEBRUARY 4, 1908.

68,439. CERTAIN SALVES AND OINTMENTS. FOUQUET ET CIE., Paris, France.
Filed October 17, 1906. Serial No 22,739. PUBLISHED FEBRUARY 4, 1908.

68,440. PYROGRAPHICAL OR BURNING INSTRUMENTS OR TOOLS AND APPLIANCES THEREFOR. HERBERT HOLTON, New York, N. Y.
Filed December 5, 1907. Serial No. 31,579. PUBLISHED FEBRUARY 4, 1908.

68,441. LIQUID REMEDY FOR COUGHS, COLDS, AND CATARRH. THE MARKERT MEDICAL COMPANY, Brooklyn, N. Y.
Filed November 18, 1907. Serial No. 31,240. PUBLISHED FEBRUARY 4, 1908.

68,442. HAM, BACON, AND SAUSAGES. WILLIAM H. MINER, Chicago, Ill., and Chazy, N. Y.
Filed October 29, 1906. Serial No. 22,909. PUBLISHED FEBRUARY 4, 1908.

68,443. CERTAIN REMEDY. MYSTIC WINE OF LIFE CO., Bristol, Tenn.
Filed August 27, 1907. Serial No. 29,621. PUBLISHED FEBRUARY 4, 1908.

68,444. STOCK AND POULTRY TONIC. NETRO CHEMICAL CO., Johnstown, Pa.
Filed November 29, 1907. Serial No. 31,459. PUBLISHED FEBRUARY 4, 1908.

68,445. PLASTERS FOR MEDICAL AND SURGICAL PURPOSES. THE PHYSICIANS CHEMICAL AND DRUG COMPANY, Denver, Colo.
Filed November 16, 1907. Serial No. 31,218. PUBLISHED FEBRUARY 4, 1908.

68,446. REMEDY FOR CERTAIN DISEASES. LEA PIENAS, Rotterdam, Netherlands.
Filed November 26, 1907. Serial No. 31,364. PUBLISHED FEBRUARY 4, 1908.

68,447. MALT PREPARATION FOR MAKING A BEVERAGE. STROHMEYER & ARPE COMPANY, New York, N. Y.
Filed October 2, 1907. Serial No. 30,341. PUBLISHED FEBRUARY 4, 1908.

68,448. LARD, OLEOMARGARIN, AND CERTAIN MEATS. SWIFT AND COMPANY, Chicago, Ill.
Filed September 18, 1907. Serial No. 30,045. PUBLISHED FEBRUARY 4, 1908.

68,449. CERTAIN CEREAL AND STOCK FOODS AND BEANS. VALLEY CITY MILLING COMPANY, Grand Rapids, Mich.
Filed December 4, 1907. Serial No. 31,564. PUBLISHED FEBRUARY 4, 1908.

68,450. HERBAL TEA. EUGENIA F. WUJCIK, Boston, Mass.
Filed October 31, 1907. Serial No. 30,898. PUBLISHED FEBRUARY 4, 1908.

68,451. LETTER AND DOCUMENT FILES. CHARLES H. BESLY, Chicago, Ill.
Filed April 20, 1907. Serial No. 26,814. PUBLISHED FEBRUARY 4, 1908.

68,452. MACHINE-BELTING MADE OF COTTON. THE FRANKLIN COTTON MILL CO., Cincinnati, Ohio.
Filed November 11, 1907. Serial No. 31,115. PUBLISHED FEBRUARY 4, 1908.

68,453. HATS AND CAPS. HAWES HAT COMPANY, New York, N. Y.
Filed December 7, 1907. Serial No. 31,608. PUBLISHED FEBRUARY 4, 1908.

68,454. CORSETS. KOPS BROS., New York, N. Y.
Filed November 7, 1907. Serial No. 31,063. PUBLISHED FEBRUARY 4, 1908.

68,455. CORSETS. KOPS BROS., New York, N. Y.
Filed December 9, 1907. Serial No. 31,633. PUBLISHED FEBRUARY 4, 1908.

68,456. STOVES, RANGES, AND PARTS THEREOF. LINCOLN STOVE AND RANGE CO., Fremont, Ohio.
Filed November 23, 1907. Serial No. 31,319. PUBLISHED FEBRUARY 4, 1908.

68,457. CERTAIN PHOSPHATE FERTILIZER. READ PHOSPHATE COMPANY, Nashville, Tenn.
Filed July 10, 1905. Serial No. 9,992. PUBLISHED NOVEMBER 6, 1906.

68,458. LEATHER GLOVES. STRAWBRIDGE & CLOTHIER, Philadelphia, Pa.
Filed December 5, 1907. Serial No. 31,589. PUBLISHED FEBRUARY 4, 1908.

68,459. OVERALLS AND THE COATS TO MATCH THE SAME. SWEET, ORR & COMPANY, New York, Newburgh, Wappinger Falls and Brooklyn, New York, and Joliet, Ill.
Filed December 16, 1907. Serial No. 31,732. PUBLISHED FEBRUARY 4, 1908.

68,460. CERTAIN CLOTHING. UNITED SHIRT AND COLLAR COMPANY, Troy, N. Y.
Filed April 23, 1906. Serial No. 19,015. PUBLISHED FEBRUARY 4, 1908.

68,461. CORSETS. WEINGARTEN BROS. INC., New York, N. Y.
Filed December 12, 1907. Serial No. 31,681. PUBLISHED FEBRUARY 4, 1908.

68,462. INVERTED INCANDESCENT MANTLES, LAMPS, AND FITTINGS. WELSBACH COMPANY, Gloucester City, N. J.
Filed October 1, 1907. Serial No. 30,325. PUBLISHED FEBRUARY 4, 1908.

68,463. WHISKY. THE WOODFORD DISTILLING CO., Chicago, Ill.
Filed April 26, 1905. Serial No. 3,110. PUBLISHED JUNE 18, 1907.

68,464. WOVEN VEILINGS. L. ERSTEIN & BRO., New York, N. Y.
Filed October 9, 1907. Serial No. 30,505. PUBLISHED FEBRUARY 4, 1908.

68,465. CANNED VEGETABLES. HENRY VON GLAHN & SON, Brooklyn, N. Y.
Filed October 1, 1906. Serial No. 22,419. PUBLISHED NOVEMBER 26, 1907.

68,466. CERTAIN MEDICINE. WELLINGTON HARTMAN, Schuylkill Haven, Pa.
Filed December 17, 1907. Serial No. 31,778. PUBLISHED FEBRUARY 4, 1908.

68,467. DIAMOND-POLISHERS' IRON WHEELS. HENDRIK FREDERIK MAAS, Amsterdam, Netherlands.
Filed January 11, 1907 Serial No. 24,584. PUBLISHED JULY 9, 1907.

68,468. RUBBER BOOTS AND SHOES AND RUBBER SOLES. NATIONAL INDIA RUBBER CO., Bristol, R. I.
Filed September 16, 1907. Serial No. 30,017. PUBLISHED FEBRUARY 4, 1908.

68,469. DENIMS. BYRON E. NOBLE, New York, N. Y., assignor to Theodore H. Davies & Co., Limited, Honolulu, Territory of Hawaii.
Filed July 13, 1907. Serial No. 28,793. PUBLISHED FEBRUARY 4, 1908.

68,470. WOVEN PIECE GOODS OF SILK, WOOL, AND COTTON. WILLIAM E. PANTON New York, N. Y.
Filed November 9, 1907. Serial No. 31,100. PUBLISHED FEBRUARY 4, 1908.

TRADE-MARKS CANCELED

54,487. HYDRAULIC CEMENT. UTICA HYDRAULIC CEMENT CO., Utica, Ill. Registered June 26, 1906. Canceled March 16, 1908.

56,840. CANNED VEGETABLES. THE BRUNS BROS. GRO. CO., Cincinnati, Ohio. Registered October 23, 1906. Canceled March 19, 1908.

LABELS

REGISTERED APRIL 7, 1908

14,124.—*Title:* "RELIABLE." (For Cigars.) C. B. HENSCHEL MFG. CO., Milwaukee, Wis. Filed March 6, 1908.

14,125.—*Title:* "OVERLAND." (For Cigars.) C. B. HENSCHEL MFG. CO., Milwaukee, Wis. Filed March 6, 1908.

14,126.—*Title:* "THE BARKER." (For Cigars.) C. B. HENSCHEL MFG. CO., Milwaukee, Wis. Filed March 6, 1908.

14,127.—*Title:* "MALT ROSE." (For Beer.) RENO BREWING CO. INCORPORATED, Reno, Nev. Filed March 6, 1908.

14,128.—*Title:* "ENBÄRSDRICKA." (For a Tonic Beverage.) GODFREY T. LOVEGRAN, Rockford, Ill. Filed March 7, 1908.

14,129.—*Title:* "SCHILLING'S BEST." (For Flavoring Extracts.) A. SCHILLING & COMPANY, San Francisco, Cal. Filed February 10, 1908.

14,130.—*Title:* "[illegible]" (For [illegible]) THE ERICKA MFG. COMPANY, [illegible] Springfield, Mass. Filed February 27, 1908.

WITHDRAWN

14,131.—*Title:* "MOTHER JONES BUG POISON." (For a Disinfectant.) ABRAHAM WEINSTEIN, New York, N. Y. Filed March 6, 1908.

14,132.—*Title:* "EDEN GEM." (For Cantaloup-Seed.) DELAVAN V. BURRELL, Rocky Ford, Colo. Filed March 7, 1908.

14,133.—*Title:* "BIRCHFIELD MILLS." (For Muslin and Muslin Garments.) BIRKENFELD STRAUSS & Co., New York, N. Y. Filed March 3, 1908.

14,134.—*Title:* "SCOTT'S SPECIAL." (For Cotton Outer Garments, Including Overalls and Coats.) WILLIAM H. SCOTT, Chicago, Ill. Filed January 6, 1908.

14,135.—*Title:* "STANDARD CLOTHES OF DISTINCTIVE CHARACTER." (For Clothes.) ROSENTHAL MANUFACTURING COMPANY, New York, N. Y. Filed February 24, 1908.

PRINTS

REGISTERED APRIL 7, 1908.

2,254.—*Title:* "AGAIN, I SAY—DON'T BE ODD." (For Flour.) WASHBURN CROSBY COMPANY, Minneapolis, Minn. Filed March 9, 1908.

2,255.—*Title:* "OASIS, IROQUOIS AND BEACON LIGHT BACKS, CONGRESS PLAYING CARDS." (For Playing-Cards.) THE UNITED STATES PLAYING CARD COMPANY, Norwood, Ohio. Filed March 7, 1908.

2,256.—*Title:* "COLLEGE CUT TROUSERS." (For Trousers.) JEROME PEAVY, New York, N. Y. Filed February 20, 1908.

2,257.—*Title:* "THE BELL TAILORS OF NEW YORK." (For Clothing.) THE BELL TAILORS OF NEW YORK, New York, N. Y. Filed March 9, 1908.

2,258.—*Title:* "AN ADLER SPRING TOP COAT." (For Men's Spring Apparel for 1908.) DAVID ADLER & SONS CLOTHING CO., Milwaukee, Wis. Filed March 9, 1908.

DECISIONS

OF THE

COMMISSIONER OF PATENTS

AND OF

UNITED STATES COURTS IN PATENT CASES.

COMMISSIONER'S DECISIONS.

SMITH AND WICKES *v.* EMERSON *v.* SANDERS.

PATENT INTERFERENCE.

Decided March 28, 1908.

1. INTERFERENCE — PRELIMINARY STATEMENTS — MOTION TO AMEND.

The practice in permitting amendments to preliminary statements has been well defined in many consistent decisions, and the applicability of the principles announced therein to the facts in any particular case should ordinarily be left to the discretion of the Examiner of Interferences.

2. SAME—SAME—SAME—APPEALS

Since the granting of a motion to amend a preliminary statement will injure the opposing party only so far as his case will be prejudiced by evidence showing the true state of facts, a limit of appeal should be set by the Examiner of Interferences in his decision on such motions only when he denies the motion.

APPEAL from Examiner of Interferences.

GRAMOPHONE-RECORD TABLET.

Mr. Horace Pettit for Smith and Wickes.

Messrs. Mauro, Cameron, Lewis & Massie for Emerson.

Messrs. C. A. Snow & Company for Sanders.

MOORE, *Commissioner.*

This is an appeal by Emerson from the decision of the Examiner of Interferences granting Smith and Wickes leave to amend their preliminary statement. The amended preliminary statement of Smith and Wickes does not carry back the date of conception and reduction to practice to a time prior to Emerson's first alleged reduction to practice, and it does not appear that Sanders has opposed the motion to amend.

It is stated in the decision in *Karpenstein* v. *Hertzberg* (127 O. G., 2393) that—

> The question of amending a preliminary statement is a matter largely within the discretion of the Examiner of Interferences. Unless it be shown that such discretion has been abused his decision will not be disturbed.

The practice in permitting amendments to preliminary statements has been well defined in many consistent decisions, and the applicability of the principles announced therein to the facts in any particular case should ordinarily be left to the discretion of the Examiner of Interferences, as indicated in *Karpenstein* v. *Hertzberg, supra.*

A party should be permitted to amend his preliminary statement only when a motion for that purpose is brought in good faith and is accompanied by a sufficient excuse for his failure to allege the facts sought to be introduced thereby in his original preliminary statement. Under such circumstances the amendment of the preliminary statement will injure the opposing party only in so far as his case will be prejudiced by the admission of evidence showing the true facts concerning the development of the invention. On the other hand, the denial of such a motion may result in the grant of a patent on a technicality to a party who was not the first inventor. In view of these facts the Examiner of Interferences will not hereafter set a limit of appeal in decisions granting motions to amend preliminary statements. He will, however, set a limit of appeal in his decisions denying leave to amend preliminary statements.

In this case the Examiner not only carefully considered the affidavits presented in support of the motion to amend the preliminary statement in his original decision, but at the request of Emerson granted a rehearing of the case, and after considering the arguments presented therewith adhered to his former decision. I do not find upon reviewing the matters presented that the Examiner of Interferences has abused his discretion in this case.

The decision of the Examiner of Interferences is affirmed.

DECISIONS OF THE U. S. COURTS

Supreme Court of the United States.

AMERICAN TOBACCO COMPANY *v.* WERCKMEISTER.

Decided December 2, 1907.

1. COPYRIGHT—PROPERTY RIGHTS IN, CREATURE OF FEDERAL STATUTE.

Property in copyright is the creature of the Federal statute passed in the exercise of the power vested in Congress by the Federal Constitution in Article I, section 8, "to promote the progress of science and useful arts by securing for limited times to authors and inventors the exclusive right to their respective writings and discoveries." (See *Wheaton* v. *Peters*, 8 Pet., 591, 656; *Holmes* v. *Hurst*, 174 U. S., 82; *Banks* v. *Manchester*, 128 U. S., 244, 252; *Thompson* v. *Hubbard*, 131 U. S., 123, 151.)

2. SAME—SECTION 4962 OF THE REVISED STATUTES CONSTRUED—WHERE NOTICE SHOULD BE INSCRIBED.

Section 4962 of the Revised Statutes as amended by act of June 18, 1874, ch. 301, (18 Stat. L., 78; U. S. Comp. St., 1901, p. 3411,) providing "that no person shall maintain an action for the infringement of his copyright unless he shall give notice thereof by inserting in the several copies of every edition published * * * by inscribing upon some visible portion thereof, or of the substance on which the same shall be mounted," the

notice of copyright, has not for its object to require the inscription upon the original painting, map, &c., but only upon those published copies concerning which it is designed to convey information to the public which shall limit its use and circumscribe the rights of the purchaser.

3. SAME—CONSTRUCTION OF STATUTES.

In construing a statute the court is not always confined to a literal reading thereof, and may consider its object and purpose, the things with which it is dealing, and the conditions of affairs which led to its enactment so as to effectuate rather than destroy the spirit and force of the law which the legislature intended to enact.

4. SAME—ASSIGNMENT OF COPYRIGHTS.

An instrument providing that "I hereby transfer the copyright in my picture 'Chorus' to the Photographische Gesellschaft, Berlin (The Berlin Photographic Company) for the sum of £200, London, April 2, 1894," signed by the author of the painting, *Held* to constitute a complete transfer of the property right of copyright existing in the picture, there being no evidence of any intention on the part of the author to retain any further interest in the copyright.

5. SAME—SAME.

An author may, before publication, assign the right or privilege of taking a copyright independent of the transfer of the copyrightable thing itself.

6. SAME—SECTION 4952 AS AMENDED MARCH 3, 1891, CONSTRUED—MEANING OF "ASSIGNS."

The word "assigns" in section 4952, Rev. Stats., as amended March 3, 1891, (26 Stat. L., 1106, c. 565; U. S. Comp. St., 1901, p. 3406,) is not used as descriptive of the character of the estate which the "author, inventor, designer or proprietor" may acquire. The statute was intended to give to the assigns of the original owner of the right to copyright an article the right to take out the copyright secured by the statute independently of the ownership of the article itself.

7. SAME—PAINTING—LOSS OF RIGHTS BY PUBLIC EXHIBITION.

The exhibition of a painting at a public gallery by the author prior to copyrighting the same does not deprive him or his assigns from subsequently securing a valid copyright where the same was expressly entered at the gallery with copyright reserved.

8. APPEAL AND ERROR—OBJECTION TO FORM OF ACTION.

The objection to the form of an action embodied, after verdict, in a motion for a new trial, comes too late to be available in an appellate court.

9. CONSTITUTIONAL LAW—SEARCHES AND SEIZURES—DUE PROCESS OF LAW.

Constitutional rights of a corporate defendant in an action for the forfeiture of infringing copies of a painting protected by copyright are not violated by the admission in evidence of the replevin proceedings under which such infringing copies were seized over the objection that by such proceedings rights under the fourth and fifth amendments to the Federal Constitution were invaded.

Mr. William A. Jenner for plaintiff.
Mr. Antonio Knauth for defendant.

This is a writ of error to the Circuit Court of Appeals for the Second Circuit, seeking reversal of a judgment affirming the judgment of the United States Circuit Court for the Southern District of New York in favor of the defendant in error, adjudging him to be entitled to the possession of 1119 sheets, each containing a copy of a certain picture called "Chorus," the same representing a company of gentlemen with filled glasses, singing in chorus. The painting was the work of an English artist, W. Dendy Sadler. The defendant in error claimed to be the owner of a copyright taken out under the law of the United States.

The judgment was rendered under authority of section 4965, as amended March 2, 1905. (*U. S. Comp. Stat.*, v. 3, p. 3414.)

In January, 1894, by agreement between the artist and Werckmeister, the defendant in error, it was agreed that the painting should be finished by March 1, and then sent to Werckmeister to be photographed and returned to Sadler in time to exhibit at the Royal Academy in 1894. The painting was sent to Werckmeister at Berlin, where it was received on March 8, 1894, and was returned to Sadler in London on March 22, 1894. On April 2, 1894, the artist Sadler executed and delivered the following instrument:

I hereby transfer the copyright in my picture "Chorus" to the Photographische Gesellschaft, Berlin (The Berlin Photographic Company), for the sum of £200. London, April 2 1894.
(Signed) W. DENDY SADLER.

Werckmeister was a citizen of the German Empire, doing business in Berlin, Germany, under the trade name of "Photographische Gesellschaft," and did business in New York city under the name of the "Berlin Photographic Company."

The Photographische Gesellschaft of Berlin, by letter dated March 31, 1894, received on April 16, 1894, deposited the title and description of the painting and a photograph of the same in the office of the Librarian of Congress, the intention being to obtain a copyright under the act of Congress. (*U. S. Comp. Stat.*, v. 3, p. 3407.) After the painting was returned to London it was exhibited by Sadler at the exhibition of the Royal Academy at London, and was there on exhibition for about three months; the exhibition opening the first Monday of May and closing the first Monday of August, 1894. The exhibition was opened to the public on week days from eight a. m. to seven p. m. upon the payment of the admission fee of one shilling, and during the last week was open evenings, the entrance charge being six pence. There was a private view for the press on May 2, and on May 3 up to one o'clock, and the remainder of the day was for the Royal private view. There was also a general private view on May 4. The members and the associate members of the Royal Academy and the artists exhibiting at the exhibition and their families were entitled at all times to free admission, and they as well as the public visited the exhibition in large numbers.

During the time that the painting was shown at the exhibition it was not inscribed as a copyright, nor were any words thereon indicating a copyright, nor on the substance on which it was mounted, nor on the frame, as required by the copyright act (*U. S. Compiled Stat.*, v. 3, p. 3411), if the original painting is within the requirements of the law in this respect.

The painting while on exhibition was for sale at the Royal Academy, but with the copyright reserved, which reservation was entered in the gallery sale book. The by-laws of the Royal Academy provided "that no permission to copy works on exhibition shall on any account be granted." The reasons for the by-law, as it appears upon minutes of the Academy, are as follows:

That so much property in copyright being entrusted to the guardianship of the Royal Academy, the council feel themselves compelled to disallow, in future all copying within their walls from pictures sent for exhibition.

The photogravures of the painting were placed on sale in June, 1894, or in the autumn of 1894; those photogravures were inscribed with the notice of copyright.

Mr. Sadler, the artist, afterwards, in October, 1899, sold the painting to a Mr. Cotterel, residing in London, England, since which time, so far as has been shown, it has been hanging in the dining room of the house of that gentleman.

On June 20, 1902, Werckmeister commenced an action, by the service of a summons, against the American Tobacco Company, plaintiff in error, and on the same day a writ of replevin was issued out of the Circuit Court of the United States for the Southern District of New York, directed to the marshal of the same district, requiring him to replevin the chattels described in an annexed affidavit. Under the writ the marshal seized upon the premises of the American Tobacco Company 203 pictures. On July 23, 1902, Werckmeister caused another writ of replevin to issue out of the same court, directed to the marshal of the Western District of New York, under which writ the marshal seized 996 pictures.

An amendment to the complaint set forth the seizure

of the pictures. The copies seized were adjudged to be forfeited to the plaintiff Werckmeister and to be of the value of $1,010.

The judgment rendered in the circuit court was taken upon error to the United States Circuit Court of Appeals and there affirmed. (146 Fed., 375.) The present writ of error is prosecuted to reverse the judgment of the court of appeals.

Mr. Justice Day delivered the opinion of the Court.

This case involves important questions under the copyright laws of the United States, upon which there has been diversity of view in the Federal courts.

Before taking up the errors assigned it may aid in the elucidation of the questions involved to briefly consider the nature of the property in copyright which it is the object of the statutes of the United States to secure and protect. A copyright, as the term imports, involves the right of publication and reproduction of works of art or literature. A copyright, as defined by *Bouvier's Law Dictionary*, (Rawles' edition, vol. 1, p. 436,) is:

The exclusive privilege, secured according to certain legal forms, of printing, or otherwise multiplying, publishing, and vending copies of certain literary or artistic productions.

And further, says the same author,

the foundation of all rights of this description is the natural dominion which every one has over his own ideas, the enjoyment of which, although they are embodied in visible forms or characters, he may, if he chooses, confine to himself or impart to others.

That is, the law recognizes the artistic or literary productions of intellect or genius, not only to the extent which is involved in dominion over and ownership of the thing created, but also the intangible estate in such property which arises from the privilege of publishing and selling to others copies of the thing produced.

There was much contention in England as to whether the common law recognized this property in copyright before the Statute of Anne; the controversy resulting in the decision in the House of Lords in the case of *Donelson* v. *Beckett*, (4 Burr, 2408,) the result of the decision being that a majority of the judges, while in favor of the common law right, held the same had been taken away by the statute. (See *Wheaton* v. *Peters*, 8 Pet., 591–656; *Holmes* v. *Hurst*, 174 U. S., 82.)

In this country it is well settled that property in copyright is the creation of the Federal statute passed in the exercise of the power vested in Congress by the Federal Constitution in article I, section 8,

to promote the progress of science and useful arts by securing for limited times to authors and inventors the exclusive right to their respective writings and discoveries. (See 8 Pet., 591, *supra*; *Banks* v. *Manchester*, 128 U.S., 244, 252; *Thompson* v. *Hubbard*, 131 U. S., 123, 151.)

Under this grant of authority a series of statutes have been passed, having for their object the protection of the property which the author has in the right to publish his production, the purpose of the statute being to protect this right in such manner that the author may have the benefit of this property for a limited term of years. These statutes should be given a fair and reasonable construction with a view to effecting such purpose.

The first question presented in oral argument and upon the briefs involves the construction of section 4962 as amended, (U. S. Compiled Statutes, 1901, p. 3411,) which is as follows:

That no person shall maintain an action for the infringement of his copyright unless he shall give notice thereof by inserting in the several copies of every edition published, on the title page or the page immediately following, if it be a book; or if a map, chart, musical composition, print, cut, engraving, photograph, painting, drawing, chromo, statue, statuary, or model or design intended to be perfected and completed as a work of the fine arts, by inscribing upon some visible portion thereof, or of the substance on which the same shall be mounted, the following words, viz: "Entered according to act of Congress, in the year ——, by A. B. in the office of the Librarian of Congress, at Washington;" or, at his option, the word "copyright," together with the year the copyright was entered and the name of the party by whom it was taken out, thus: "Copyright 18—, by A. B."

It is the contention of the plaintiff in error that the original painting was not inscribed as required by the act, and therefore no action can be maintained, and it is insisted that the inscription upon the photogravures offered for sale is not sufficient.

It must be admitted that the language of the statute is not so clear as it might be, nor have the decisions of the courts been uniform upon the subject. In *Werckmeister* v. *Purse & Bushnell Manf. Co.*, (63 Fed., 445,) Judge Putnam held that the failure to inscribe the copyright notice upon the original painting did not affect the copyright. That judgment was reversed by the Circuit Court of Appeals for the First Circuit by a divided court. (72 Fed., 54.)

In the case of *Werckmeister* v. *American Lithographic Co.*, (142 Fed., 827,) Judge Holt reached the same conclusion as Judge Putnam, and in the case at bar the Circuit Court of Appeals for the Second Circuit approved of the reasoning of Judges Putnam and Holt and disagreed with the majority of the judges of the Circuit Court of Appeals for the First Circuit.

Looking to the statute, it is apparent that if read literally the words "inscribed on some visible portion thereof," etc., apply to the antecedent terms "maps, charts, musical composition, print, cut, engraving, photograph, painting," etc., and the words of the first part of the sentence requiring notice to be inserted in the several copies of every edition published apply literally to the title page or the page immediately following, if it be a book.

But in construing a statute we are not always confined to a literal reading, and may consider its object and purpose, the things with which it is dealing, and the condition of affairs which led to its enactment so as to effectuate rather than destroy the spirit and force of the law which the legislature intended to enact.

It is true, and the plaintiff in error cites authorities to the proposition, that where the words of an act are clear and unambiguous they will control. But while seeking to gain the legislative intent primarily from the language used we must remember the objects and purposes sought to be attained.

We think it was the object of the statute to require this inscription, not upon the original painting, map, photograph, drawing, etc., but upon those published copies concerning which it is designed to convey information to the public which shall limit the use and circumscribe the rights of the purchaser.

As we have seen, the purpose of the copyright law is not so much the protection of the possession and control of the visible thing, as to secure a monopoly having a limited time, of the right to publish the production which is the result of the inventor's thought.

We have been cited to no case, nor can we find any direct authority in this court upon the question. But the opinion of Mr. Justice Miller in *Lithographic Com-*

pany v. *Sarony* (111 U. S., 53,) is pertinent. The court there considered whether Congress had the constitutional right to protect photographs and negatives by copyright, and the second assignment of error relates to the sufficiency of the words "Copyrighted 1892 by N. Sarony," when the copyright was the property of Napoleon Sarony. In treating this question the learned judge used this very suggestive language (111 U. S., p. 55):

> With regard to this latter question, it is enough to say that the object of the statute is to give notice of the copyright to the public, by placing *upon each copy*, in some visible shape, the name of the author, the existence of the claim of exclusive right, and the date at which this right was obtained.

If the contention of the plaintiff in error be sustained the statute is satisfied only when the original map, chart, etc., or painting are inscribed with the notice, and this is requisite whether the original painting is ever published or not. We think this construction ignores the purpose and object of the act, which Mr. Justice Miller has said in the language just quoted, is to give notice of the copyright to the public—that is, to the persons who buy or deal with the published thing.

It is insisted that there is reason for the distinction in the statute between books, and maps, charts, paintings, etc., in that a book can only be published in print and becomes known by reading, while paintings, drawings, etc., are published by inspection and obeservation.

It may be true that paintings are published in this way, but they are often sold to private individuals and go into private collections, while the copies, photographs or photogravures, may have a wide and extended sale.

It would seem clear that the real object of the statute is not to give notice to the artist or proprietor of the painting or the person to whose collection it may go, who need no information, but to notify the public who purchase the circulated copies of the existing copyright in order that their ownership may be restricted.

There does not seem to be any purpose in requiring that an original map, chart or painting shall be thus inscribed, while there is every reason for requiring the copies of editions published to bear upon their face the notice of the limited property which a purchaser may acquire therein.

This construction of the statute which requires the inscription upon the published copies is much strengthened by the review of the history of copyright legislation which is contained in Judge Putnam's opinion in *Werckmeister* v. *Pierce & Bushnell Co.* (63 Fed., 445); that legislation before the statute of 1874, in which paintings were for the first time introduced, shows the uniform requirement of notice upon copies. The apparent incongruities in the statute, in the light of its history, have grown up from enlarging the scope of the law from time to time by the introduction of new subjects of copyright and engrafting them on the previous statutes. The same argument which requires original paintings to be inscribed would apply to all other articles in the same class in the present law, as maps, charts, etc., which were formerly classed with books, so far as requiring notice upon copies is concerned.

Such original maps and charts, etc., may and usually do remain in the possession of the original makers, and there is no necessity of any notice upon them, but the copyright is invalid, as the plaintiff in error insists, unless the original is itself inscribed with the notice of copyright.

For the learned counsel for plaintiff in error says:

> If the painting or like article is ripe for copyright, it is ripe for the inscription of the notice. The statute requires the inserting of notice in published things only in respect to published editions of books. The term "published" is not used in connection with paintings, statues and the like.

But the sense and purpose of the law was not changed by this lack of verbal accuracy, and we think while the construction contended for may adhere with literal accuracy and grammatical exactness to the language used, it does violence to the intent of Congress in passing the law, and that the requirement of "inscription upon some visible portion thereof" should be read in connection with the first part of the sentence, which requires notice to be inserted in the several copies of every edition published, on the title page if it be a book, upon some visible portion of the copy if it be a map, chart, painting, etc

As we have said in the beginning, the statute is not clear. But read in the light of the purpose intended to be effected by the legislation, we think its ambiguities are best solved by the constructions here given, and that the circuit court of appeals made no error in this respect.

Again, it is contended that under the facts stated Werckmeister was but the licensee of Sadler, and as such not within the terms of the statute (section 4952 as amended 1891, *U. S. Compiled Statutes*, vol. 3, p. 3460,) which is as follows:

> The author, inventor, designer or proprietor of any book, map, chart, dramatic or musical composition, engraving, cut, print or photograph or negative thereof, or of a painting, drawing, chromo, statue, statuary, and of models or designs intended to be perfected as works of the fine arts, and the executors, administrators or assigns of any such person shall, upon complying with the provisions of this chapter, have the sole liberty of printing, reprinting, publishing, completing, copying, executing, finishing and vending the same, and, in the case of dramatic composition, of public performing or representing it or causing it to be performed or represented by others, and authors or their assigns shall have the exclusive right to dramatize and translate any of their works for which copyright shall have been obtained under the laws of the United States.

But we think the transfer in this case accomplished what it was evidently intended to do, a complete transfer of the property right of copyright existing in the picture. There is no evidence of any intention on the part of Sadler to retain any interest in this copyright after the sale to Werckmeister; and when the painting was offered for sale at the Royal Academy it was with a reservation of the copyright.

It would be giving an entirely too narrow construction to this instrument to construe it to be a mere license or personal privilege, leaving all other rights in the assignor. That it was the purpose of the parties to make a complete transfer is shown by the instrument executed when read in the light of the attendant circumstances.

In this connection it is argued that under the statute above quoted (section 4952 as amended March 3, 1891) an author cannot, before publication, assign the right or privilege of taking a copyright independent of the transfer of the copyrightable thing itself, and it is contended that the terms author, inventor, designer, refer

to the originator of the book, map, chart, painting, etc., and that the term "proprietor" refers to the person who has a copyrightable thing made for him under such circumstances as to become the proprietor, as, for instance, one who causes a digest to be compiled or a picture to be painted.

But we think this statute must be construed in view of the character of the property intended to be protected. That it was intended to give the right of copyright to others than the author, inventor or designer is conclusively shown in the use of the terms "proprietor" and "assigns" in the statute.

It seems clear that the word "assigns" in this section is not used as descriptive of the character of the estate which the "author, inventor, designer or proprietor" may acquire under the statute, for the "assigns" of any such person, as well as the persons themselves, may, "upon complying with the provisions of this chapter," have the sole liberty of printing, publishing and vending the same. This would seem to demonstrate the intention of Congress to vest in "assigns," before copyright, the same privilege of subsequently acquiring complete statutory copyright as the original author, inventor, designer or proprietor has. Nor do we think this result is qualified because the statute gives to assigns, together with the right of publishing, vending, etc., the right of "completing, executing and finishing" the subject matter of copyright.

And a strong consideration in construing this statute has reference to the character of the property sought to be protected. It is not the physical thing created, but the right of printing, publishing, copying, etc., which is within the statutory protection. While not in all respects analogous this proposition finds illustration in *Stephens* v. *Cady* (14 How., 528), in which it was held, where the copyright or map had been taken out under the act of Congress, a sale upon execution of the copperplate engraving from which it was made did not pass the right to print and sell copies of the map. Mr. Justice Nelson, delivering the opinion of the court, said:

> But from the consideration we have given to the case, we are satisfied that the property acquired by the sale in the engraved plate, and the copyright of the map secured to the author under the act of Congress, are altogether different and independent of each other and have no necessary connection. The copyright is an exclusive right to the multiplication of the copies, for the benefit of the author or his assigns, disconnected from the plate, or any other physical existence. It is an incorporeal right to print and publish the map, or, as said by Lord Mansfield in *Millar* v. *Taylor* (4 Burr 2396,) "a property in notion, and has no corporeal tangible substance."

And the same doctrine was thus stated by Mr. Justice Curtis in *Stevens* v. *Gladding* (17 How., 447):

> And upon this question of the annexation of the copyright to the plate it is to be observed, first, that there is no necessary connection between them. They are distinct subjects of property, each capable of existing, and being owned and transferred, independent of the other.

While it is true that the property in copyright in this country is the creation of statute, the nature and character of the property grows out of the recognition of the separate ownership of the right of copying from that which inheres in the mere physical control of the thing itself, and the statute must be read in the light of the intention of Congress to protect this intangible right as a reward of the inventive genius that has produced the work. We think every consideration of the nature of the property and the things to be accomplished supports the conclusion that this statute means to give to the assigns of the original owner of the right to copyright an article the right to take out the copyright secured by the statute, independently of the ownership of the article itself.

It is further contended that the exhibition in the Royal Gallery was such a publication of the painting as prevents the defendant in error from having the benefit of the copyright act. This question has been dealt with in a number of cases, and the result of the authorities establishes, we think, that it is only in cases where what is known as a general publication is shown, as distinguished from a limited publication under conditions which exclude the presumption that it was intended to be dedicated to the public, that the owner of the right of copyright is deprived of the benefit of the statutory provision.

Considering this feature of the case, it is well to remember that the property of the author or painter in his intellectual creation is absolute until he voluntarily parts with the same. One or many persons may be permitted to an examination under circumstances which show no intention to part with the property right, and it will remain unimpaired.

The subject was considered and the cases reviewed in the analogous case of *Werckmeister* v. *The American Lithographic Company* (134 Fed., 321) in a full and comprehensive opinion by the late Circuit Judge Townsend, which leaves little to be added to the discussion.

The rule is thus stated in Slater on the Law of Copyright and Trade-Mark (p. 92):

> It is a fundamental rule that to constitute publication there must be such a dissemination of the work of art itself among the public as to justify the belief that it took place with the intention of rendering such work common property.

And that author instances as one of the occasions that does not amount to a general publication the exhibition of a work of art at a public exhibition where there are by-laws against copies, or where it is tacitly understood that no copying shall take place, and the public are admitted to view the painting on the implied understanding that no improper advantage will be taken of the privilege.

We think this doctrine is sound and the result of the best considered cases. In this case it appears that paintings are expressly entered at the gallery with copyrights reserved. There is no permission to copy; on the other hand, officers are present who rigidly enforce the requirements of the society that no copying shall take place.

Starting with the presumption that it is the author's right to withhold his property, or only yield to a qualified and special inspection which shall not permit the public to acquire rights in it, we think the circumstances of this exhibition conclusively show that it was the purpose of the owner, entirely consistent with the acts done, not to permit such an inspection of his picture as would throw its use open to the public. We do not mean to say that the public exhibition of a painting or statue, where all might see and freely copy it, might not amount to publication within the statute, regardless of the artist's purpose or notice of reservation of rights which he takes no measure to pro-

tect. But such is not the present case, where the greatest care was taken to prevent cop ying.

It is next objected that the form of action in this case was the ordinary action for replevin under the New York Code, and as the plaintiff did not have the right of property or possession before the beginning of this action, no such action would lie. Whether this action was the one in the nature of replevin for the seizures of the plates and copies indicated in the case of *Bolles* v. *Outing Company* (175 U. S., 266) we do not find it necessary to determine. After verdict, and upon motion for a new trial, plaintiff in error, defendant below, moved to set aside the verdict

on the ground that replevin under the statutes of the State of New York is not an appropriate remedy or a lawful and legal remedy for taking possession of the alleged incriminating sheets or pictures, and that the proceedings taken in that behalf by the plaintiff were illegal and invalid, and that the plaintiff cannot avail of any benefit of that proceeding, and the introduction in evidence of the replevin proceedings was an error.

The motion was denied and exception duly taken.

The learned counsel for the plaintiff in error admits that this question was not formally raised until the defendant's motion for a new trial, but maintains that the same question was raised by the objection to admission in evidence of the replevin proceedings by the marshal for the Western and Southern Districts of New York respectively.

Examining this record, it is perfectly apparent that no objection was made to the form of the action until it was embodied after verdict, in the motion for a new trial. Upon the admission of the writ of replevin, addressed to the marshal of the Western District of New York, and affidavit, the objection stated was

on the ground that the process of replevin that was executed by the marshal in Buffalo was an invasion of defendant's constitutional right, was an unwarrantable search, an illegal act, and nothing done under it, or information obtained by virtue of it, can be used in evidence against defendant under the Fourth and Fifth Amendments of the United States Constitution.

The same objection was made when the writs of replevin, affidavit and return were offered in evidence concerning the Southern District of New York, and it was said:

Defendant's counsel objects on the same grounds as stated to the introduction of the stipulation, namely, that the papers constitute an illegal proceeding, an invasion of the defendant's constitutional right, as provided by the Fourth and Fifth Amendments, and plaintiff cannot avail of them as evidence in this case, on account of their illegality.

The argument which followed, could it be assumed to broaden the objection, was far from complaining of the form of action as such, but rested upon the Constitution and the character of the seizure of the goods of which it was maintained the plaintiff was not entitled to possession until after a judgment of forfeiture.

The record shows that the objection to the form of the remedy was first taken in any adequate way upon the motion for a new trial when it was too late.

In conclusion, it was suggested rather than argued that the constitutional rights of the plaintiff in error were violated by the seizure of the goods, and reference was made to the Fourth and Fifth Amendments. We think we need only refer in this connection to *Adams* v. *New York* (192 U. S., 585–597) and *Hale* v. *Henkel* (201 U. S., 43).

Finding no error in the judgment of the Circuit Court of Appeals, the same is affirmed.

Interference Notices.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., March 26, 1908.

Ernest R. Schneider, his assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of The Union Distilling Company, of 1006 Richmond street, Cincinnati, Ohio, for registration of a trade-mark and a trade-mark registered to Ernest R. Schneider, of Augusta, Ga., of whom John R. Schneider claims to be successor, and the notice of said declaration sent by registered mail to the said Ernest R. Schneider having been returned undelivered, notice is hereby given to the said Ernest R. Schneider, his assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents in order that the notices of declaration heretofore sent by and returned to the Office may be forwarded to them.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will be proceeded with as in case of default.

E. B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., March 5, 1908.

William E. Woodyear, his assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of The Northwestern Elevator & Mill Company, of Mount Vernon, Ohio, for registration of a trade-mark and a trade-mark registered to William E. Woodyear, of 304 Spears Wharf, Baltimore, Md., and the notice of said declaration sent by the Patent Office by registered mail to the said William E. Woodyear and also the notice sent to his attorney of record in the usual manner having been returned undelivered, notice is hereby given to the said William E. Woodyear, his assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents in order that the notices of declaration heretofore sent by and returned to the Office may be forwarded to them.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will be proceeded with as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., March 4, 1908.

Frank Mellersh, his assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of William O. Frailey, of East King and Shippen streets, Lancaster, Pa., for registration of a trade-mark and a trade-mark registered to Frank Mellersh, of 130 West Thirty-fourth street, New York, N. Y., and the notice of said declaration sent by the Patent Office by registered mail to the said Frank Mellersh, as well as the copy mailed in the usual way to his attorney of record, having been returned undelivered, notice is hereby given to the said Frank Mellersh, his assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents in order that the notices of declaration heretofore sent by and returned to the Office may be forwarded to them.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will be proceeded with as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., February 24, 1908.

A. E. Jeanneret, his assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of The Matchless Metal Polish Company, of 65–69 Frankfort street, New York, N. Y., and 88 South Market street, Chicago, Ill., for registration of a trade-mark, a trade-mark registered to this company, and a trade-mark registered to A. E. Jeanneret, of Boston, Mass., and the notice of said declaration sent by the Patent Office by registered mail to the said A. E. Jeanneret having been returned undelivered, notice is hereby given to the said A. E. Jeanneret, his assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents in order that the notice of declaration heretofore sent by and returned to the Office may be forwarded to them.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will be proceeded with as in case of default.

EDWARD B. MOORE, *Commissioner.*

THE
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United States Patent Office.
[BY AUTHORITY OF CONGRESS.]

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Patents	655	No. 884,351 to No. 885,005, inclusive.
Designs	9	No. 39,258 to No. 39,266, inclusive.
Trade-Marks	110	No. 68,471 to No. 68,580, inclusive.
Labels	15	No. 14,136 to No. 14,150, inclusive.
Prints	3	No. 2,259 to No. 2,261, inclusive.
Reissues	1	No. 12,779.
Total	793	

TO CITIZENS OF THE UNITED STATES.

States.	Patents and Designs.	Trade-Marks, Labels, and Prints.	States.	Patents and Designs.	Trade-Marks, Labels, and Prints.
Alabama	2	1	New Hampshire	1	.....
Alaska, District of	.....	.....	New Jersey	19	7
Arizona Territory	2	.....	New Mexico Ter't'y	3	.....
Arkansas	3	.....	New York	91	27
California	24	4	North Carolina	5	.....
Colorado	12	2	North Dakota	.....	.....
Connecticut	9	1	Ohio	43	6
Delaware	.....	1	Oklahoma	5	1
District of Columbia	2	1	Oregon	2	.....
Florida	4	1	Panama	.....	.....
Georgia	7	2	Pennsylvania	65	9
Hawaii Territory	.....	.....	Philippine Islands	.....	.....
Idaho	.....	1	Rhode Island	6	1
Illinois	55	4	South Carolina	.....	.....
Indiana	18	2	South Dakota	1	.....
Iowa	17	1	Tennessee	8	.....
Kansas	10	.....	Texas	14	1
Kentucky	4	1	Utah	2	2
Louisiana	4	1	Vermont	.....	.....
Maine	4	5	Virginia	5	4
Maryland	5	1	Washington	9	.....
Massachusetts	41	6	West Virginia	7	.....
Michigan	27	1	Wisconsin	10	4
Minnesota	8	2	Wyoming	.....	.....
Mississippi	1	.....	U. S. Army	.....	.....
Missouri	19	1	U. S. Navy	.....	.....
Montana	2	1			
Nebraska	9	.....	Total to citizens of the United States	586	102
Nevada	1	.....			

TO CITIZENS OF FOREIGN COUNTRIES.

Countries.	Patents and Designs.	Trade-Marks and Prints.	Countries.	Patents and Designs.	Trade-Marks and Prints.
Argentina	.....	.....	Natal	.....	.....
Austria-Hungary	6	1	Netherlands	1	.....
Belgium	4	.....	Newfoundland	.....	.....
Brazil	.....	.....	New South Wales	3	.....
British West Indies	.....	.....	New Zealand	4	.....
Canada	12	1	Norway	.....	3
Cape Colony	.....	.....	Persia	.....	.....
Chile	.....	.....	Queensland	.....	.....
China	.....	.....	Roumania	.....	.....
Costa Rica	.....	.....	Russia	3	.....
Cuba	.....	.....	Scotland	1	.....
Denmark	.....	.....	South Australia	.....	.....
Ecuador	.....	.....	Spain	.....	1
England	16	8	Sweden	3	2
France	5	1	Switzerland	4	.....
Germany	16	9	Transvaal, South Africa	.....	.....
Haiti	.....	.....	Victoria	.....	.....
Ireland	.....	.....	Western Australia	.....	.....
Italy	.....	.....			
Japan	.....	.....	Total to citizens of foreign countries	78	26
Java	.....	.....			
Mexico	.....	.....			

Interference Notice.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., April 6, 1908.

Jacob Fussell Company, its assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of John Govatos, of Wilmington, Del., for registration of a trade-mark and a trade-mark registered to the Jacob Fussell Company, of 1427 New York avenue, NW., Washington, D. C., and the notice of said declaration sent by the Patent Office by registered mail to the said Jacob Fussell Company having been returned unopened by one M. T. Fussell with the information that the Jacob Fussell Company failed in 1904, notice is hereby given to the said Jacob Fussell Company, the assigns or legal representatives of said company, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents in order that the notices of declaration heretofore sent by and returned to the Office may be forwarded to them.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will be proceeded with as in case of default.

EDWARD B. MOORE. *Commissioner.*

Full Names of Applicants.

* * * All applications which disclose the full name of the applicant in the preamble of the specification will be received and considered as a sufficient compliance with Rule 40 of the Rules of Practice. (Order 521.)

When the full first name of the applicant does not appear either in his signature or in the preamble to the specification, the Examiner will, in his first official letter, require an amendment supplying the omission, and he will not pass the application to issue until the omission has been supplied, unless an affidavit shall have been filed setting forth that the full first name of the applicant is the one originally given by him. (Order 600.)

APPLICATIONS UNDER EXAMINATION.

Conditions at Close of Business April 7, 1908.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action. Amended	New.	No. of applications awaiting action.
303	XVII. Clutches; Linotyping; Matrix-Making; Nut and Bolt Locks; Printing.	Mar. 23	Mar. 9	231
244	XXXV. Buckles, Buttons, and Clasps; Card, Picture, and Sign Exhibiting; Garment-Supporters; Signals; Toilet.	Mar. 23	Jan. 29	624
378	XXXVIII. Artesian and Oil Wells; Bottles and Jars; Care of Live Stock; Educational Appliances; Fishing and Trapping; Stationery; Stone-Working.	Mar. 14	Feb. 24	318
304	XXXIV. Railways; Railway-Brakes; Railway Rolling-Stock.	Mar. 11	Jan. 31	437
179	XX. Artificial Limbs; Builders' Hardware; Dentistry; Locks and Latches; Safes; Undertaking.	Mar. 10	Feb. 24	290
312	VII. Games and Toys; Mechanical Motors; Optics; Paper Manufactures; Velocipedes.	Mar. 9	Feb. 3	277
172	XXXI. Alcohol; Ammonia, Water, and Wood Distillation; Charcoal and Coke; Gas, Heating and Illuminating; Hides, Skins, and Leather; Liquid Coating Compositions; Mineral Oils; Oils, Fats, and Glue; Water Purification.	Mar. 6	Feb. 12	228
142	IX. Air and Gas Pumps; Fire-Extinguishers; Hydraulic Motors; Pumps; Sewerage.	Mar. 5	Feb. 13	243
144	XXIV. Apparel; Apparel Apparatus; Sewing-Machines; Surgery.	Mar. 3	Feb. 27	354
379	XXIII. Acoustics; Coin-Handling; Horology; Recorders; Registers; Time-Controlling Mechanism.	Mar. 3	Jan. 25	254
167	V. Bookbinding; Harvesters; Jewelry; Music.	Mar. 3	Jan. 13	350
232	IV. Bridges; Conveyers; Cranes and Derricks; Excavating; Hoisting; Hydraulic Engineering; Iron Structures; Loading and Unloading; Towers.	Mar. 2	Mar. 6	301
135	VIII. Beds; Chairs; Furniture; Kitchen and Table Articles; Store Furniture.	Mar. 2	Jan. 2	404
318	VI. Bleaching and Dyeing; Chemicals; Explosives; Fertilizers; Medicines; Preserving; Sugar and Salt.	Mar. 2	Dec. 9	284
313	I. Fences; Harrows and Diggers; Plows; Seeders and Planters; Trees, Plants, and Flowers.	Feb. 29	Feb. 6	279
147	XXIX. Coopering; Fire-Escapes; Ladders; Roofs; Wheelwright-Machines; Wooden Buildings; Wood-Sawing; Wood-Turning; Woodworking; Woodworking-Tools.	Feb. 29	Dec. 17	444
322	XII. Elevators; Journal-Boxes; Lubrication; Machine Elements; Pulleys and Shafting.	Feb. 27	Jan. 27	513
264	XXXVI. Curtains, Shades, and Screens; Drafting; Driers; Engraving; Measuring Instruments; Wind-Wheels.	Feb. 26	Feb. 25	507
154	XI. Boot and Shoe Making; Boots, Shoes, and Leggings; Button, Eyelet, and Rivet Setting; Harness; Leather Manufactures; Nailing and Stapling; Whips and Whip Apparatus.	Feb. 25	Jan. 28	388
247	XXII. Air-Guns, Catapults, and Targets; Ammunition and Explosive Devices; Boats and Buoys; Firearms; Marine Propulsion; Ordnance; Railway-Rails and Joints; Railway-Ties and Fasteners; Ships.	Feb. 25	Jan. 15	613
278	XXXII. Carbonating Beverages; Dispensing Beverages; Dispensing-Cans; Metallic Shipping and Storing Vessels; Packaging Liquids; Refrigeration.	Feb. 25	Nov. 26	502

Applications Under Examination—Continued.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action. Amended	New.	No. of applications awaiting action.
308	XV. Bread, Pastry, and Confection Making; Coating; Fuel; Glass; Hydraulic Lime and Cement; Laminated Sheets and Fabrics; Paper-Making; Paving; Photography; Plastic Block and Earthenware Apparatus; Plastic Compositions; Plastics.	Feb. 24	Jan. 29	743
280	XL. Baggage; Check-Controlled Apparatus; Cloth, Leather, and Rubber Receptacles; Deposit and Collection Receptacles; Fine Arts; Lighting-Fixtures; Package and Article Carriers; Paper Receptacles; Special Receptacles and Packages; Wooden Receptacles.	Feb. 24	Jan. 14	641
105	XXVI. Electric Heating and Rheostats; Electric Railways; Electricity, Generation; Motive Power.	Feb. 21	Dec. 16	321
327	XVIII. Injectors and Ejectors; Steam and Vacuum Pumps; Steam-Boilers; Steam-Engines; Steam-Engine Valves.	Feb. 20	Jan. 22	315
332	X. Carriages and Wagons	Feb. 19	Jan. 20	543
164	XXXIII. Cutlery; Domestic Cooking Vessels; Electric Signaling; Electricity, Medical and Surgical; Fireproof Buildings; Masonry; Tents, Canopies, Umbrellas, and Canes.	Feb. 18	Feb. 6	294
375	XXVII. Brushing and Scrubbing; Grinding and Polishing; Laundry; Washing Apparatus.	Feb. 15	Feb. 6	471
128	II. Bee Culture; Dairy; Label-Affixers; Paper Files and Binders; Pneumatics; Presses; Store-Service; Tobacco.	Feb. 7	Jan. 4	427
238	XIX. Furnaces; Heating and Cooking Stoves, Liquid and Gaseous Fuel; Stoves and Furnaces.	Jan. 31	Dec. 5	533
152	XXX. Fluid-Pressure Regulators; Lamps and Gas-Fittings; Liquid and Gaseous Fuel Burners; Type-Writing Machines.	Feb. 21	Jan. 18	326
315	XXV. Butchering; Mills; Threshing; Vegetable Cutters and Crushers.	Jan. 18	Jan. 23	480
382	XXVIII. Internal-Combustion Engines; Miscellaneous Heating Plants.	Jan. 15	Dec. 26	523
329	XIII. Arms, Projectiles, and Explosive Charges, Making; Metal-Working, etc.	Jan. 10	Jan. 11	618
107	XXXVII. Electric Lighting; Electricity, Conductors; Electricity, General Applications.	Jan. 9	Oct. 18	609
307	XIV. Compound Tools; Cutting and Punching Sheets and Bars; Farriery; Metal-Bending; Metal-Ornamenting; Sheet-Metal Ware, Making; Tools; Wire-Working.	Jan. 8	Dec. 14	388
109	XVI. Telegraphy; Telephony	Dec. 31	Sept. 19	604
112	XXI. Brakes and Gins; Carding; Cloth-Finishing; Cordage; Felt and Fur; Knitting and Netting; Silk; Spinning; Weaving.	Dec. 30	Oct. 28	597
352	XLI. Railway Draft Appliances; Resilient Tires and Wheels.	Dec. 23	Sept. 12	843
321	XXXIX. Baths and Closets; Water Distribution.	Dec. 20	Oct. 29	860
175	III. Annealing and Tempering; Coating with Metal; Electrochemistry; Metal-Founding; Metallurgy; Shaping Fluid Metal.	Dec. 11	Dec. 5	460

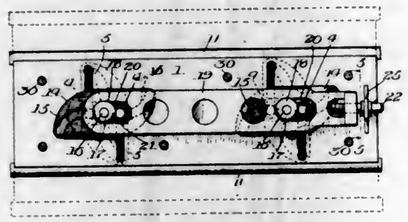
Total number of applications awaiting action 18,527

161	TRADE-MARKS, DESIGNS, LABELS, AND PRINTS.			
	Trade-Marks	Apr. 1	Mar. 5	334
	Designs	Apr. 2	Mar. 2	96
	Labels and Prints			

PATENTS

GRANTED APRIL 14, 1908.

884,351. TEMPORARY BINDER. JACOB AHLBERG, Chicago, Ill. Filed Feb. 20, 1907. Serial No. 358,343.



1. In a temporary binder, in combination, two back members; and means for moving said back members toward and away from each other comprising two pivotally mounted members, a pinion fixed to each of said last mentioned members at its pivotal center, each of said pinions having a blank portion, a rack bar having an elongated opening in each of its ends adapted to receive said pinions, one wall of each of said openings being plain to slide in contact with the blank portion of each of said pinions, and gear teeth formed in the opposite wall of each of said openings adapted to mesh with said pinions.

2. In a temporary binder, in combination a base plate having four elongated openings therein; two back members slidably mounted upon the upper side of said base plate; two studs fixed to each of said back members and extending through said elongated openings; and means for moving said back members comprising two cam plates pivotally mounted upon the rear side of said base plate, each of said cam plates having two cam slots therein into which extend the studs fixed to said back members.

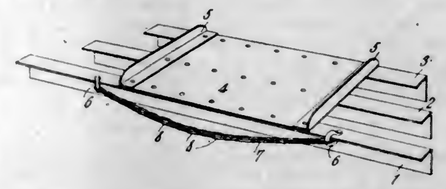
3. In a temporary binder, in combination, a base plate having two pairs of elongated openings therein, the openings of each pair being out of alinement with each other and extending substantially to the longitudinal center of said base plate, two back members slidably mounted upon the upper side of said base plate; two studs fixed to each of said back members and extending through said elongated openings; and means for moving said back members comprising two cam plates pivotally mounted upon the rear side of said base plate, each of said cam plates having two cam slots therein into which extend studs fixed to said back members.

4. In a temporary binder, in combination, a base plate having two pairs of elongated openings therein, the openings of each pair being out of alinement with each other and extending substantially to the longitudinal center of said base plate; two back members slidably mounted upon the upper side of said base plate; two studs fixed to each of said back members at its inner edge and extending through said elongated openings; and means for moving said back members comprising two cam plates pivotally mounted upon the rear side of said base plate, each cam plate being mounted at a point between the openings of each pair of elongated openings, each of said cams having two cam slots therein into which extend the studs fixed to said back members.

5. In a temporary binder, in combination, a base plate; two back members slidably mounted upon the upper side thereof; two cam plates pivotally mounted upon the under side of said base plate and operatively connected with said back members; a pinion fixed to the under side of each of said cam plates at its pivotal center; a rack bar meshing with both of said pinions; a screw engaging one end of said rack bar, and held against longitudinal movement; and a cover plate attached to said base plate and inclosing said cam plates, rack bar and screw.

[Claim 6 not printed in the Gazette.]

884,352. ROAD-DRAG. FITCH H. BEACH and FRED S. BEACH, Charlotte, Mich. Filed May 25, 1907. Serial No. 375,705.



1. A drag comprising blades having vertical parallel portions, a plate lying transversely over the blades and rigidly connecting the same together and means for connecting the drag with a propelling means.

2. A drag comprising blades which differ in length and which have vertical parallel portions, a plate lying transversely over the blades and connecting the same together and means for connecting the drag with a propelling means.

3. A drag comprising blades having vertical parallel portions, the forward blade being the longest and the blades gradually decreasing in length toward the rear of the implement, a plate lying over the blades and connecting the same together and means for connecting the drag with a propelling means.

4. A drag comprising blades formed of angular material having portions which lie in the same plane and portions which lie in parallel planes, a plate lying over the blades and being attached to those portions thereof which lie in the same plane and means for connecting the drag with a propelling means.

5. A drag comprising blades, a plate lying transversely over the blades and connecting the same together, angle strips located at the end of said plate and means for connecting the drag with a propelling means.

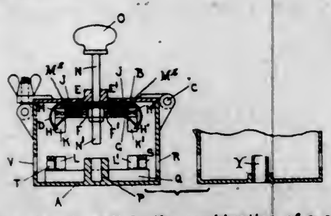
[Claim 6 not printed in the Gazette.]

884,353. ELECTRIC SWITCH. HERBERT H. BERRY, Enfield, England. Filed Dec. 16, 1905. Serial No. 292,094.

1. In an electric switch, the combination of a case having a hinged cover, a switch member arranged within the case, a switch member movable on the cover and adapted to contact with the switch member in the case when the cover is in the closed position, and means preventing the closing of the cover as long as the movable member is in the "on" position.

2. In an electric switch, the combination of a case having a hinged cover, a switch member arranged within the case, a switch member movable on the cover and adapted

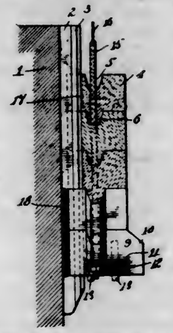
to contact with the switch member in the case when the cover is in the closed position, and means preventing the opening of the cover as long as the movable member is in the "on" position.



3. In an electric switch, the combination of a case having a hinged cover, a switch member arranged within the case, a sliding plunger movable in the cover, perpendicularly to the latter, a second switch member carried by the sliding plunger, and adapted to engage the switch member in the case, and means positioned to be engaged by the sliding plunger when the same is in the "on" position when the cover is closed.

4. In an electric switch, the combination of a case having a hinged cover, a switch member arranged within the case, a sliding plunger movable in the cover, perpendicularly to the latter, a second switch member carried by the plunger and adapted to engage the switch member in the case, and a projection extending upwardly from the bottom of the case and arranged to be engaged by the plunger when the latter is in the "on" position, and the cover is moved to open or close the case.

884,354. MARINE CONCRETE CONSTRUCTION. JOSEPH T. BERTRAND, Isle Verte, Quebec, Canada. Filed July 12, 1907. Serial No. 383,395.



1. In combination with a temporary marine structure a plurality of courses of interlocking blocks disposed parallel to the face of the structure, and means for guiding the blocks to their interlocked position.

2. In combination with a temporary marine structure, a plurality of courses of interlocking blocks disposed parallel to the face of the structure and removable means for guiding the blocks to their interlocked position.

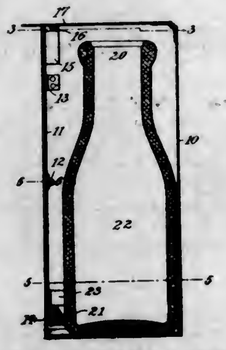
3. In combination with a temporary marine structure, a plurality of courses of interlocking blocks disposed parallel to the face of the structure, means for guiding the blocks to their interlocked position, and means for locking the courses to the temporary structure.

4. In combination with a temporary marine structure, a plurality of courses of interlocking blocks disposed parallel to the face of the structure, means for guiding the blocks to their interlocked position, and vertically disposed guide strips carried by the temporary structure and interlocked with the inner faces of the blocks.

5. In combination with a temporary marine structure, a plurality of courses of interlocking blocks disposed parallel to the face of the structure and having vertical mortises in their inner faces, means for guiding the blocks to their interlocking position, and vertically disposed guide strips carried by the temporary structure and provided with enlarged outer edges arranged in the mortises in the blocks.

[Claims 6 to 10 not printed in the Gazette.]

884,355. BOTTLE-HOLDER. KARL BODE, New York, N. Y., assignor of one-half to Thomas J. Buchanan, Yonkers, N. Y. Filed Jan. 30, 1908. Serial No. 413,379.

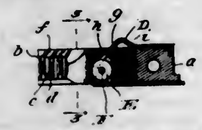


1. A bottle holder comprising a receptacle having a hinged top, a front pivoted between its upper and lower ends, and means for locking the top to the front without preventing a tilting of the front, substantially as specified.

2. A bottle holder comprising a receptacle having a hinged top, a front pivoted between its upper and lower ends, a recessed lock on one of said parts, and a catch on the other part adapted to engage said lock, substantially as specified.

3. A bottle holder comprising a receptacle having a hinged top, a front pivoted between its upper and lower ends, a shoulder on the front, and means for locking the top to the front without preventing a tilting of the front, substantially as specified.

884,356. BOBBIN-HOLDER. GIDEON BOISSONNEAULT and NAPOLEON BOISSONNEAULT, Manchester, N. H. Filed Nov. 16, 1907. Serial No. 402,364.



1. A bobbin holder for use in a shuttle body, comprising a body having open jaws in the inner sides of which are upright grooves and inclined grooves communicating with and extending at an angle from the upper ends of the upright grooves, and a roller mounted between the outer portions of the open jaws.

2. A bobbin holder for use in a shuttle body, comprising a body having open jaws in the inner sides of which are grooves, and a roller mounted between the outer portions of the open jaws.

3. A bobbin holder for use in a shuttle body, comprising a body having open jaws in the inner sides of which are upright grooves and inclined grooves communicating with and extending at an angle from the upper ends of the upright grooves, a device carried by the body and having an inner portion inclined parallel to the upper grooves and provided with an opening, and a roller mounted in the device and extending through the said opening in the inclined portion of the device.

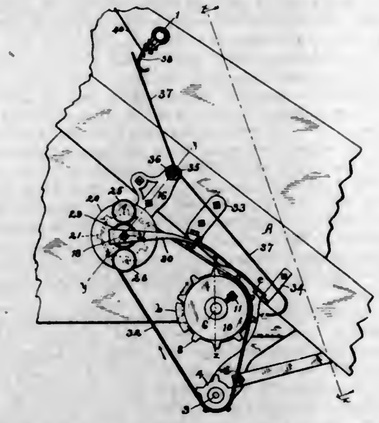
4. A bobbin holder for use in a shuttle body, comprising a body having open jaws in the inner sides of which

are upright grooves and inclined grooves communicating with and extending at an angle from the upper ends of the upright grooves; said body also having a shank, a spring straddling the shank of the body and having an inner portion inclined parallel to the upper grooves and provided with an opening, and also having a base and ears extending upward therefrom at opposite sides of the inclined portion, a transverse pin extending between and fixed to the said ears of the spring, and a roller mounted on said pin and extending through the opening in the inclined portion of the spring.

5. The combination of a device adapted for use in a bobbin holder and having a forward inclined portion, and a roller mounted in and carried by said device and projecting beyond the face of the inclined portion thereof.

[Claim 6 not printed in the Gazette.]

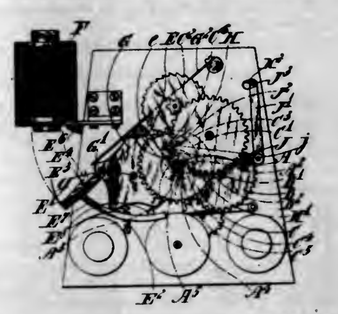
884,357. FEEDER-GOVERNOR. CHARLES T. H. BOND, Richmond, Ind Filed July 5, 1907. Serial No. 382,153.



1. In a governor for threshing machine feeders, the combination of a conveyer, a conveyer shaft, means for actuating the conveyer, a clutch device applied to said shaft and consisting of a disk secured thereto, a dog pivoted to said disk at a side thereof and formed at one end with a hook and at the other with an outwardly projecting lug, a drive sprocket mounted for free rotation on the conveyer shaft and having a cam arranged adjacent to the disk aforesaid, a spring applied to the disk and bearing against the hook end of the dog to normally hold the latter in interlocking engagement with the cam and cause simultaneous rotation of the sprocket and conveyer shaft, a shifting lever arranged to engage the lug of the dog to hold the dog out of engagement with the cam, and means for actuating the lever to throw the same into and out of engagement with the dog.

2. In a governor for threshing machine feeders, the combination of a conveyer, a conveyer shaft, means for actuating the conveyer, a clutch device applied to said shaft and consisting of a disk secured thereto, a dog pivoted to said disk at a side thereof and formed at one end with a hook and at the other with an outwardly projecting lug, a drive sprocket mounted for free rotation on the conveyer shaft and having a cam arranged adjacent to the disk aforesaid, a spring applied to the disk and bearing against the hook end of the dog to normally hold the latter in interlocking engagement with the cam and cause simultaneous rotation of the sprocket and conveyer shaft, a shifting lever arranged to engage the lug of the dog to hold the dog out of engagement with the cam, a supporting bracket, a hollow shaft extending therefrom, a sprocket 27 mounted on said shaft and connected for movement with the first mentioned sprocket, weighted levers pivotally attached to the sprocket 27, a sleeve mounted on the hollow shaft slidably longitudinally thereof and engaged at one end by adjacent ends of the weighted levers, a spring in the hollow shaft and a bolt connecting said spring with the shifting lever and holding the latter against the sleeve, whereby movement of the sleeve by the centrifugal action of the weighted levers will cause engagement and disengagement of the shifting lever with regard to the dog of the clutch.

884,358. ELECTRICALLY-SYNCHRONIZED TIME-MEASURING INSTRUMENT. BAHNE BONNIKSEN, Coventry, and FREDERICK A. CHANDLER, Leamington, England. Filed Aug. 9, 1904. Serial No. 220,114.



1. In electrically synchronized time measuring instruments, the combination with the clock-work mechinism, of a magnet, an armature, a stud G' adapted to move with the said armature, a part adapted to rotate quickly and a contracting radial guide adapted to rotate with such part and to be traversed by the said stud, substantially as and for the purpose set forth.

2. In electrically synchronized time measuring instruments, the combination with the clockwork mechanism, of a snail, means for rotating the said snail, a pivoted lever adapted to bear upon said snail, a magnet, an armature carried by the said lever, a switch adapted to be closed by the said lever, a series of studs G' adapted to be rotated by the said lever, a part adapted to rotate quickly, and a contracting radial guide adapted to rotate with such part and to be traversed by the said studs, substantially as and for the purpose set forth.

3. In electrically synchronized time measuring instruments the combination with the clockwork mechanism, of a snail, adapted to be rotated by the twenty four hour wheel of such clockwork mechanism, a spring adapted to rotate the said snail in advance of the said twenty four hour wheel, a pivoted lever, provided with a projection, a spring adapted to press the said lever upon the said snail, a magnet, an armature carried by the said lever, a switch adapted to be closed by the said lever, a plate provided with a series of studs G', and adapted to be rotated by the projection on the said lever, a contracting radial guide adapted to rotate with the minute hand of the said clockwork mechanism, and to be traversed by the said studs, substantially as and for the purpose set forth.

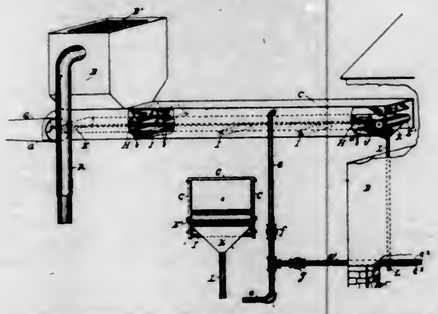
4. In electrically synchronized time-measuring instruments, the combination with the clockwork mechanism, of a snail adapted to be rotated by the 24 hour wheel of such clockwork mechanism, a spring adapted to rotate the said snail in advance of the said 24 hour wheel, means for retarding the snail so that its spring is placed under tension, a pivoted lever provided with a projection and engaging the snail, a magnet, an armature carried by the said lever, a switch adapted to be closed by the said lever, means for releasing the retarding device of the snail when the lever closes the switch, a plate provided with a series of studs (G') and adapted to be rotated by the projection on the said lever, and a contracting radial guide adapted to rotate with the minute hand of the said clockwork mechanism and to be traversed by the said studs, substantially as and for the purpose set forth.

5. In electrically synchronized time measuring instru-

ments the combination with the minute hand axle and the twenty four hour wheel of the clockwork mechanism, of a snail adapted to be rotated by the said twenty four hour wheel, a pivoted lever adapted to bear upon the said snail, a magnet, an armature carried by the said lever, a switch adapted to be closed by the said lever, a series of studs G' adapted to be rotated by the said lever, a contracting radial guide adapted to rotate with the minute hand axle and to be traversed by the said studs, a pivoted lever provided with two pins, a cam having two shoulders and adapted to rotate with the said minute hand axle, a collar having a notch and adapted to rotate with the said twenty four honr wheel, and a switch adapted to be operated by the said pin carrying lever, substantially as and for the purpose set forth.

[Claim 6 not printed in the Gazette.]

884,359. APPARATUS FOR BLEACHING SEED-COTTON. JOHN B. BRENNAN, Sherman, Tex. Filed Oct. 5, 1907. Serial No. 396,106.

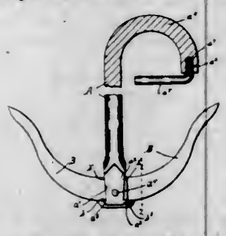


1. The combination with a cotton receiving receptacle, of a casing extending from such receptacle to a place of storage, an open-work conveyer in said casing to act as a sifter for the cotton during its travel thereon, means for conducting off the waste matter sifted from the cotton, flexibly arranged closures to partition off a portion of the conveyer, and means for supplying a bleaching agent to the portion of the conveyer so partitioned off.

2. A bleaching apparatus comprising a receptacle to receive the material, a casing leading from said receptacle, a conveyer in said receptacle, flexibly mounted closures in the casing to partition off a portion of the conveyer, and means for supplying a bleaching agent to the portion of the conveyer so partitioned off.

3. A bleaching apparatus comprising a receptacle, a casing leading from said receptacle, a conveyer in said casing, said conveyer adapted to sift the material in its passage thereover, means to convey off such siftings, means for supplying a bleaching agent to the conveyer, and means to prevent the free escape of the bleaching agent from the conveyer.

884,360. MEAT-HOOK. FRANKLIN D. BROGA, Oneida, N. Y. Filed Sept. 16, 1904. Serial No. 224,698.



1. A hook comprising two elements, one a shank, and the other hook-member pivoted to the shank and movable on its pivot relatively thereto, one of said elements being provided with a pivot, and the other with a slot for receiving the pivot, the element formed with the slot being provided with means coacting with the pivot of the other element for forcing the hook-member into and out of its normal or operative position, and for preventing the hook-member from assuming a position intermediate of its normal and extreme abnormal positions, substantially as and for the purpose described.

2. A hook comprising two elements, one a shank, and the other a hook-member, one of said elements having means for normally engaging the other for holding the hook-member in operative position and one of said elements being provided with a pivot fixed thereto, and the other being provided with a slot receiving the pivot, said slot having opposing bearing faces for respectively coacting with the pivot when the hook-member is in its operative and inoperative positions, and the element provided with the slot having a shoulder projecting into the slot between said bearing faces for engaging the pivot and forcing the hook-member into its operative and inoperative positions, substantially as and for the purpose described.

3. A hook comprising two elements, one a shank, and the other a hook-member, one of said elements having means for normally engaging the other for holding the hook-member in operative position and one of said elements being provided with a pivot fixed thereto, and the other being provided with a slot receiving the pivot, said slot having opposing bearing faces for respectively coacting with the pivot when the hook-member is in its operative and inoperative positions, and the element provided with the slot having a shoulder projecting into the slots between said bearing faces, opposite sides of the shoulders diverging from the free end thereof for engaging the pivot and forcing the hook-member into its operative and inoperative positions, substantially as and for the purpose set forth.

4. A nook comprising two elements, one a shank, and the other a hook-member, one of said elements having means for normally engaging the other for holding the hook-member in operative position and one of said elements being provided with a pivot fixed thereto, and the other being provided with a substantially kidney-shaped slot receiving the pivot, opposite ends of the slot forming bearings respectively for the pivot when said hook-member is in its operative and inoperative positions, substantially as and for the purpose specified.

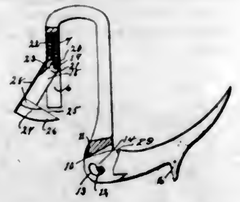
5. A hook comprising a shank, and a hook-member pivoted to the shank, one of said elements having means for normally engaging the other for holding the hook-member in operative position and said hook-member having a projecting free end movable downwardly as the hook-member swings on its pivot out of operative position, said hook-member being provided with a slot receiving the pivot therefor, said slot having its opposite ends formed with substantially semicircular bearing faces and its intermediate portion formed of a width greater than the diameter of the pivot and provided with a shoulder projecting inwardly from its upper wall and engaging the pivot for facilitating the movement of the hook-member from its operative position, substantially as and for the purpose set forth.

[Claims 6 to 10 not printed in the Gazette.]

884,361. MEAT-HOOK. FRANKLIN D. BROGA, Oneida, N. Y. Filed Sept. 17, 1904. Serial No. 224,804.

1. A hook comprising a shank, and a hook-member pivoted to the shank and having a projecting free end movable downwardly from its normal or operative position and movable upwardly slightly preliminary to its downward movement, said hook-member being provided with means for engaging the shank and normally preventing downward movement of the free end of the hook-member, and with a surface above and in advance of the pivot for engaging the front face of the shank at the end of the upward movement of the hook-member, and thereby effecting the disengagement of said means and the shank, said surface being normally spaced apart from the shank, substantially as and for the purpose described.

2. A hook comprising a shank, and a hook-member pivoted to the shank and having a projecting free end movable downwardly from its normal or operative position and being movable upwardly slightly preliminary to its downward movement, said hook-member being formed with a slot for receiving the pivot and with a shoulder having diverging sides projecting into the slot for engaging the pivot during the movement of the hook-member, and thereby automatically forcing said hook-member into and out of its normal or operative position for preventing the hook-member from assuming a position intermediate of its normal and extreme abnormal positions, said hook-member being also provided with means for engaging the shank and normally preventing downward movement of the free end of the hook-member, and with a surface above and in advance of the pivot for engaging the opposing surface of the shank at the end of the upward movement of the hook-member and thereby effecting the disengagement of said means and the shank, said surface being normally spaced apart from the shank, substantially as and for the purpose specified.



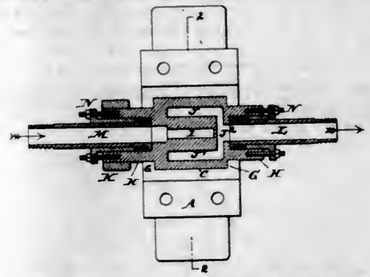
3. In a hook, the combination with a shank comprising a main body having a lateral extension formed with a depending end provided with a slot extending upwardly from the end face of said end and through the inner and outer sides thereof, and with a socket extending from said slot, and an engaging member pivoted to said depending end and movable in the slot therein; of a coiled spring arranged in the socket and having a spring arm disposed substantially parallel to said depending end and coacting with the engaging member, and a hook-member supported by the shank, substantially as and for the purpose described.

4. In a hook, the combination with a shank comprising a main body having a lateral extension formed with a depending end provided with a slot extending upwardly from the end face of said end and through the inner and outer sides thereof, and with a socket extending from said slot, and an engaging member having its upper end pivoted to said depending end and movable in the slot therein and provided with a slot extending downwardly from its upper face; of a coiled spring arranged in the socket and having a spring arm extending substantially lengthwise of the slot in the engaging member and coacting with said engaging member, and a hook-member supported by the shank, substantially as and for the purpose set forth.

5. In a hook, the combination with a shank comprising a main body having a lateral extension formed with a depending end provided with a slot extending upwardly from the end face of said end and through the inner and outer sides thereof, and with a socket extending upwardly from said slot, and an engaging member having its upper end pivoted to said depending end and movable in the slot therein; said engaging member being provided with a slot extending downwardly from its upper face below the pivot therefor, and with a bearing surface extending lengthwise of the slot, and being provided at its lower end with a lateral branch; of a coiled spring arranged in the socket and having a spring arm disposed substantially parallel to the depending end of the shank and arranged in the slot in the engaging member and coacting with the bearing surface thereof below the pivot for the engaging member, and a hook-member supported by the shank, substantially as and for the purpose described.

[Claim 6 not printed in the Gazette.]

884,362. OSCILLATING STEAM-BALANCED VALVE. JOHN H. BURNHAM, Uniontown, Pa. Filed May 17, 1907. Serial No. 374,165.



1. In an oscillating balanced valve, a casing having a transverse cylindrical aperture and two steam ports opening into the face of the said aperture for respectively supplying steam to the opposite sides of the piston of the engine, combined with an oscillating cylindrical valve body fitting said aperture and having a steam port extending transversely through it so as to open on diametrically opposite sides and provided with a steam inlet through the axis of the valve so that the steam or other medium may exert no material pressure upon opposite sides of the valve body and also having inclosed exhaust ports upon opposite sides of the steam port and opening through the face of the valve body closer to one of the steam port openings than to the other.

2. In an oscillating balanced valve, a casing having a transverse cylindrical aperture and two steam ports opening into the face of the said aperture for respectively supplying steam to the opposite sides of the piston of the engine, combined with an oscillating cylindrical valve body fitting said aperture and having a steam port extending transversely through it so as to open on diametrically opposite sides and provided with a steam inlet through the axis of the valve so that the steam or other medium may exert no material pressure upon opposite sides of the valve body and also having inclosed exhaust ports upon opposite sides of the steam port and opening through the face of the valve body closer to one of the steam port openings than to the other, stationary tubes arranged concentric with the axis of the valve for supplying the steam to the steam port and from the exhaust ports of the valve body in an axial direction with respect to the valve body, and means for forming a tight joint directly between said tubes and valve body.

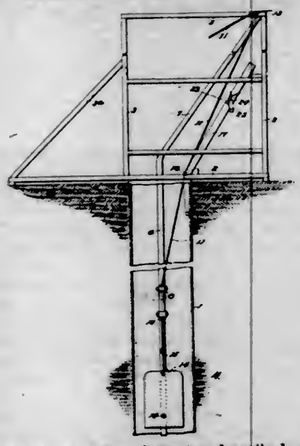
3. In an oscillating balanced valve, a casing having a transverse cylindrical aperture and two steam ports opening into the face of the said aperture for respectively supplying steam to opposite sides of the piston of the engine and formed of a base and cap detachably secured together on a plane through the axis of the valve, combined with an oscillating cylindrical valve body fitting said aperture and having a steam port in the form of a slot extending transversely entirely through it so as to open on diametrically opposite sides and provided with a steam inlet through the axis of the valve so that the steam or other medium may exert no material pressure upon opposite sides of the valve body and also having exhaust ports upon opposite sides of the steam port and opening through the face of the valve body.

4. An oscillating valve body formed of the cylindrical portion F having a neck H at each end provided with a stuffing box and also having a central steam port I extending entirely through the body and opening axially through one of the necks and two exhaust ports J J' connected by a passage J^2 opening axially through the other neck.

5. An oscillating valve body formed of the cylindrical portion F having a neck H at each end provided with a stuffing box and also having a central steam port I extending entirely through the body and opening axially through one of the necks and two exhaust ports J J' con-

nected by a passage J^2 opening axially through the other neck, combined with the flanged supply and exhaust tubes M L held by the stuffing boxes, and a casing in which the valve body is sleeved having ports E E' with which the ports I J J' of the valve are alternately brought into alinement.

884,363. MINE-BUCKET-DUMPING ATTACHMENT. MICHAEL M. CALLAGHAN, Columbia, Nev. Filed Sept. 19, 1907. Serial No. 393,676.



1. An apparatus of the character described, comprising a framework designed for location at the collar of a shaft, inclined rails supported in said framework, a cross head mounted to move along said rails, a bucket, and a hoisting cable secured to said bucket and adapted to be connected to the cross head whereby the bucket as it is hoisted from the shaft and carried upwardly in the framework, will be deflected to one side of the shaft opening.

2. An apparatus of the characted described, comprising a framework adapted to be located at the opening of a shaft, inclined rails mounted in the said framework, a cross head mounted to move along said rails, a bucket, a hoisting cable secured to said bucket and passing through said cross head, and inclined bucket supporting beams mounted in the framework underneath the said rails, the bucket being adapted to slide along said beams as it is carried upwardly, and the beams being provided with means for supporting the bucket in an elevated position within the framework.

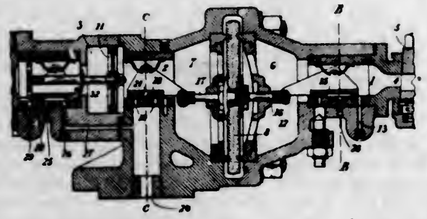
3. In an apparatus of the characted described, the combination with a shaft, of a framework mounted thereabove, inclined rails mounted in said framework and with their lower ends contiguous to the mouth of the opening of the shaft, a cross head mounted to move along said rails, a bucket, a hoisting cable adapted to raise the cross head and bucket, and inclined bucket supporting beams mounted in the framework and below the rails, said beams being provided at elevated points within the sockets, and the bucket being provided near its bottom with outstanding arms adapted to slide along the beams and lodge in said sockets, the beams being wide enough apart to permit the bucket to swing between them on the said arms.

4. In an apparatus of the character described, the combination of a shaft lining provided at opposite sides with rails, a framework mounted at the upper end of the lining, inclined rails mounted in said framework and forming a substantial continuation of the shaft rails, a cross head mounted to move along said rails, a bucket, a hoisting cable secured to the bucket and adapted to draw the cross head and bucket upwardly from the shaft and in the framework, the bucket being provided near its bottom with outstanding arms, inclined bucket supporting beams mounted in the framework underneath the inclined rails, said beams being provided near their lower ends with ledges adapted to support the body of the bucket, and being large enough above said ledges to permit the bucket to swing between them, the arms of the bucket being adapted to slide along said beams, and the beams being formed at elevated points with sockets adapted to receive said arms.

5. An apparatus of the characted described, comprising a framework adapted to be supported at the upper end of a shaft, inclined bucket supporting beams mounted in said framework with their lower ends contiguous to the shaft, deflectors extending downwardly from the lower end of said beams, said deflectors converging toward their lower ends, a bucket provided with outstanding arms, means for hoisting the bucket along the beams with the arms sliding on the upper surfaces of the beams, the deflectors being adapted to turn the bucket so as to insure the registry of the arms and the beams, and means for permitting the bucket to swing between said beams in an elevated position.

[Claims 6 to 9 not printed in the Gazette.]

884,364. COMPRESSED-AIR BRAKE. ALFRED CHANDESON, Jette St. Pierre, Belgium, assignor to Compagnie Internationale de Freinage (Systeme Luyers) Société Anonyme, Brussels, Belgium. Filed Nov. 26, 1907. Serial No. 403,903.



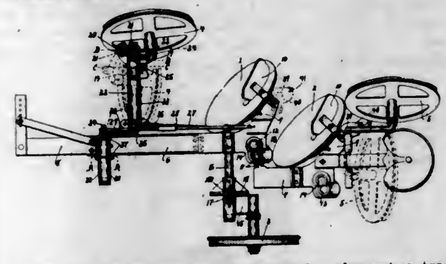
1. Apparatus for supplying compressed air to and emptying the brake cylinder of a compressed air brake and for accelerating the operation of said brake, comprising in combination a branch of the train pipe, an auxiliary reservoir for supplying compressed air to the brake cylinder, a flexible diaphragm separating said reservoir from said branch of the train pipe and a pipe connecting the same together, a small chamber contiguous to the auxiliary reservoir a movable piston pierced with a small hole separating said small chamber from said auxiliary reservoir, a pipe and a branch pipe both connecting said small chamber with the train pipe, a non return valve located in said branch pipe, connections between the brake-cylinder, the train pipe and the small chamber respectively and the atmosphere, means for simultaneously putting the train pipe into communication with the atmosphere, cutting off communication between said train pipe and the auxiliary reservoir, putting the latter into communication with the brake cylinder and cutting off communication between said cylinder and the atmosphere whenever the pressure in the train pipe is suddenly reduced and for simultaneously cutting off communication between the auxiliary reservoir and the brake cylinder and putting the said reservoir into communication with the train pipe as soon as equilibrium of pressure is reëstablished between the train pipe and said reservoir, and means for putting the brake cylinder into communication with the atmosphere only when the train pipe is recharged with compressed air.

2. Apparatus for supplying compressed air to and emptying the brake cylinder of a compressed air brake and for accelerating the operation of said brake comprising in combination a first chamber communicating freely with the train pipe, a second chamber communicating freely with the auxiliary reservoir that supplies compressed air to the brake cylinder, a flexible partition between said first and second chambers and a pipe connecting the same together, a third chamber of small capacity contiguous to said second chamber, a movable piston pierced with a small hole forming a partition between said second and third chambers, a pipe connecting said third chamber with the first chamber, a branch of said pipe connecting the same with the third chamber, a non return valve in said branch pipe, connections between the brake cylinder, the first chamber and the third chamber with the atmosphere respectively, means for simultaneously putting the first chamber into communication with the atmosphere, cutting off communication between the first and second chambers, putting the latter into communication with the brake cylinder and cutting off communication between said cylinder and the atmosphere when a sudden reduction of pressure occurs in the train pipe and for simultaneously cutting off communication between the second chamber and the brake cylinder and putting said second chamber into communication with the first chamber as soon as the pressure in the second chamber becomes again equal to the pressure in the first chamber and means for opening the brake cylinder to the atmosphere only when a rise of pressure occurs in the first chamber.

3. Apparatus for supplying compressed air to and emptying the brake cylinder of a compressed air brake and for accelerating the operation of said brake, comprising in combination a first chamber in free communication with the train pipe, a second chamber in free communication with the auxiliary reservoir of the brake cylinder, a flexible partition between said chambers and a pipe connecting the same together, a third chamber of small capacity contiguous to the second chamber a movable piston pierced with a small hole forming a partition between said second and third chambers, a pipe connecting the rear part of said third chamber with the first chamber, a by-pass between said pipe and the fore part of said third chamber, a non return valve in said by-pass, ducts connecting the brake cylinder, the first chamber and the third chamber respectively with the atmosphere, means for simultaneously opening the first chamber to the atmosphere, cutting off communication between the first and second chambers, putting the second chamber into communication with the brake cylinder and cutting off communication between the latter and the atmosphere when a sudden fall of pressure occurs in the train pipe and whenever a further sudden fall of pressure occurs therein without the same having been recharged with compressed air, and for simultaneously cutting off the brake cylinder from the auxiliary reservoir and putting the latter into communication with the train pipe as soon as and whenever the pressure becomes equal in said reservoir and said train pipe, and means for putting the brake cylinder into communication with the atmosphere only on the train pipe being recharged with compressed air.

4. Apparatus for supplying compressed air to and emptying the brake cylinder of a compressed air brake, comprising in combination a first chamber opening freely into the train-pipe, a second chamber opening freely into the auxiliary reservoir of the brake cylinder, a flexible partition between the said first and second chambers and a pipe connecting said chambers together, a third chamber of small capacity contiguous to the second chamber, a movable piston pierced with a small hole forming a partition between said second and third chambers, a double branched pipe connecting both the rear and front parts of said third chamber with the first chamber, a non-return valve in one branch of said pipe, a slide valve in the first chamber and a seat for the same formed with ports communicating with the said double branched pipe and capable of being connected with one of the ports opening to the atmosphere through a groove in said slide valve and a rigid connection between the latter and the middle of the flexible partition, a slide-valve in the second chamber and a seat for the same formed with ports communicating with the brake cylinder and with the pipe connecting the first and second chambers together respectively and a rigid connection between said slide-valve and the middle of the flexible partition, a slide-valve in the third chamber and a seat for the same formed with ports communicating with the valveless branch of the double branched pipe, with the atmosphere and with the brake cylinder respectively, the two latter ports being capable of connection together through a groove in the slide-valve, and a rigid connection between said slide-valve and the aforesaid movable piston.

884,365. PLOW. AUBIN M. CHASE, Syracuse, N. Y., assignor to Syracuse Chilled Plow Company, Syracuse, N. Y., a Corporation of New York. Filed Feb. 11, 1903. Serial No. 142,867.



1. In a plow, a frame, an earth-turning element, a trailing non-tongue-controlled caster-wheel arranged in advance, and to the furrow-side of the earth-turning element, the advance portion thereof extending in front of the pivot of the caster-wheel, said caster-wheel being staggered so that its lower portion, in contact with the ground, is located at the inner side of a vertical plane passing through the pivot of the caster-wheel parallel to the line of draft, and a fixed stop on the frame for limiting the outward swinging movement of the caster-wheel, and thereby holding said wheel substantially parallel to the line of draft in the normal use of the plow.

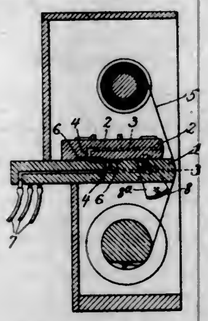
2. In a plow, a frame, an earth-turning element, a trailing non-tongue-controlled caster-wheel arranged in advance, and to the furrow-side of the earth-turning element, the advance portion thereof extending in front of the pivot of the caster-wheel, said caster-wheel being staggered so that its lower portion in contact with the ground, is located at the inner side of a vertical plane passing through the pivot of the caster-wheel parallel to the line of draft, a fixed stop on the frame for limiting the outward swinging movement of the caster-wheel, and thereby holding said wheel substantially parallel to the line of draft, and means for raising and lowering the frame relatively to the caster-wheel without materially affecting the relative position of the frame and said pivot of the caster-wheel, substantially as and for the purpose specified.

3. In a plow, a frame, an earth-turning element, a trailing non-tongue-controlled caster-wheel arranged in advance, and to the furrow-side of the earth-turning element, said caster-wheel being staggered so that its lower portion, in contact with the ground, is located at the inner side of a vertical plane passing through the pivot of the caster-wheel parallel to the line of draft, said caster-wheel being free to swing inwardly about the axis of its pivot relatively to the frame as the plow is turned to the right, a fixed stop on the frame for limiting the outward swinging of the caster-wheel relatively to the frame, and a rear trailing caster-wheel arranged at the rear of the earth-turning element and movable independently of the first-mentioned caster-wheel, substantially as and for the purpose set forth.

4. In a plow, a frame having a bearing, an earth-turning element, a support having a substantially upright pivot-bearing, a stop at the rear of the pivot-bearing, and a second pivot-bearing at the rear of the first-mentioned pivot-bearing, a shaft formed with a crank-arm and with front and rear substantially horizontal pivotal portions journaled, respectively, in the bearing of the frame and in the second-mentioned pivot-bearing of the support, a lever pivotally connected at one end to the frame in advance of the support and pivotally connected to said support, a trailing non-tongue-controlled caster-wheel arranged in advance, and to the furrow side of the earth-turning element, said caster-wheel being staggered so that its lower

portion, in contact with the ground, is located at the inner side of a vertical plane passing through the pivot of the caster-wheel parallel to the line of draft, an arm carrying the furrow-wheel at its rear end and having its front end provided with a substantially upright pivot journaled in the first-mentioned pivot-bearing of the support, said arm being movable about the axis of its pivot to permit the furrow-wheel to swing inwardly, and coacting with the fixed stop of the support to limit the outward swinging of said furrow-wheel, and a rear-trailing caster-wheel arranged at the rear of the earth-turning element and movable independently of the first-mentioned caster-wheel, substantially as and for the purpose specified.

884,366. DUPLEX TRACKER-BOARD FOR AUTOMATIC MUSICAL INSTRUMENTS. MELVILLE CLARK, Chicago, Ill. Filed Feb. 14, 1907. Serial No. 357,318.



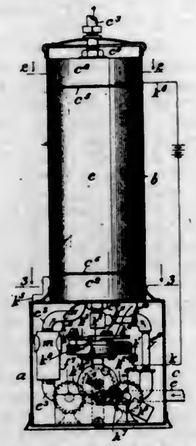
1. In an automatic musical instrument or player, in combination with a traveling controller, a tracker device having a plurality of sets of duct mouths differently spaced, the ducts of the closer spaced set being diverged from the mouths, and those of the wider spaced set being converged from the mouths; an element having ducts and flexible tubes connected therewith, the ducts in said element being adapted to register at one position with the said converged ducts and at another position with the diverged ducts of the tracker, and means for relatively adjusting said element and the tracker to effect either registration at will.

2. In an automatic musical instrument or player, in combination with a traveling controller, a tracker device consisting of two elements, one element having two sets of duct mouths and the other element having a single set of ducts branched to two sets of duct terminals corresponding to the ducts from the two sets of duct mouths of the first element, said sets of duct mouths and duct terminals being relatively disposed on said two elements so that only one set of terminals can register at a time with the ducts from the corresponding set of mouths, and means for relative movement of said two elements to shift the registration at will from one set to the other.

3. In an automatic musical instrument or player, in combination with a pneumatic action a traveling controller, a tracker device having two sets of duct mouths differently spaced; ducts extending from said two sets to a plane at which they are equally spaced, the element in which the ducts are contained being terminated at such plane; a second element of the tracker having ducts which terminate similarly spaced at the same plane, and adapted to be adjusted for registration of its duct mouths at will with the duct mouths of either set of ducts of the first element and a single set of tubes leading from the ducts of said second element to the pneumatic action.

4. In an automatic musical instrument or player, in combination with a pneumatic action a traveling controller, a tracker device comprising an outer or forward element having at the edge on which the controller travels two sets of duct mouths differently spaced, said ducts leading from said mouths through said element, and a second element having ducts extending therethrough constituting a single set at one side, and connections therefrom at that side to the pneumatic action, said ducts being branched toward the other side to form two sets of terminals spaced respectively to correspond with the spacing at the inner side of the two sets of ducts of the outer tracker element, said two sets of terminals being separated from each other a distance different from that which separates the two sets of ducts of the said outer element, said two elements of the tracker being relatively movable to register at will either set of ducts of one element with the corresponding set of the other element.

884,367. ELECTRICAL WATER-HEATER. EDWARD J. CONDON, New York, N. Y., assignor of one-third to Eleazer I. Rains and one-third to George W. Ruppert, New York, N. Y. Filed June 8, 1907. Serial No. 377,850.



1. An electrical water heater comprising a plurality of chambers having walls of insulating material and adapted to permit the passage of water therethrough, conducting and heating pipes within said chambers respectively and also adapted for the passage of water therethrough, and means to supply electrical current to said conducting and heating pipes.

2. An electrical water heater comprising a plurality of chambers having nonconducting walls and adapted for the passage of water therethrough and communicating one with another in series, conducting and heating pipes disposed within said chambers and also adapted for the passage of water therethrough and connected one with another in series, and means to supply electrical current to said conducting and heating pipes.

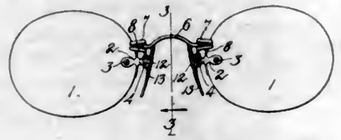
3. An electrical water heater comprising a body of insulating material having formed therein a plurality of chambers adapted for the passage of water therethrough, conducting and heating pipes centrally placed in said chambers respectively and also adapted for the passage of water therethrough, and means to supply electrical current to said conducting and heating pipes.

4. An electrical water heater comprising a body of insulating material having a plurality of chambers therein adapted for the passage of water therethrough communicating with another in series, conducting and heating pipes centrally placed in said chambers respectively and also adapted for the passage of water therethrough and connected one with another in series, and means to supply electrical current to said conducting and heating pipes.

5. An electrical water heater comprising a body of insulating material having a plurality of chambers adapted for the passage of water therethrough, conducting and heating pipes centrally placed in said chambers respectively and adapted for the passage of water therethrough, blocks or caps for the ends of said body of insulating material, couplings for connecting said conducting and heating tubes carried by said blocks or caps, means for securing said blocks or caps in position upon the ends of said body of insulating material and means to supply electrical current to said conducting and heating tubes.

[Claims 6 to 11 not printed in the Gazette.]

884,368. EYEGLASSES. HERBERT W. DERRICK, Boston, Mass. Filed Jan. 10, 1908. Serial No. 410,073



1. In an eye glass, a lens, a stud, and a bridge, the latter being connected to said stud by two spring loops extending horizontally approximately parallel, and branching independently from the bridge at one end, and each loop having its own opposite end connected to the stud.

2. In an eye glass, a lens, a stud, a bridge, and two loops forming two connecting means between the stud and adjacent end of the bridge, each loop having two ends, the adjacent two ends, one of each loop, being connected directly to the bridge, and the other two ends, one of each loop, being connected to said stud.

3. In an eye glass, a lens, a stud, and a bridge, the latter being connected to said stud by two spring loops extending horizontally approximately parallel, one of said loops passing transversely above the adjacent end of the bridge and thence to the stud, and the other of said loops passing transversely beneath the adjacent end of the bridge and thence to the stud.

4. In an eye glass, a lens, a stud, and a bridge, the latter being connected to said stud by two spring loops extending horizontally approximately parallel, one of said loops passing transversely above the adjacent end of the bridge and thence to the stud, and the other of said loops passing transversely beneath the adjacent end of the bridge and thence to the stud, the free ends of said two loops being arranged parallel to each other on the head of the stud, and securing means for clamping said free ends in said position.

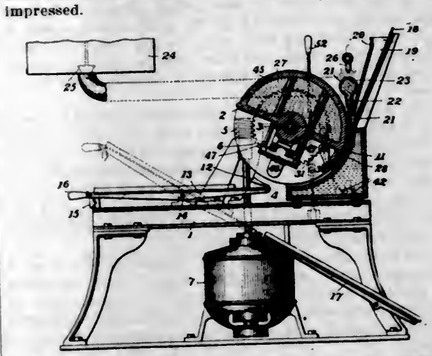
5. In an eye glass, a lens, a stud, and a bridge, the latter being connected to said stud by two spring loops extending horizontally approximately parallel, one of said loops passing transversely above the adjacent end of the bridge and thence to the stud, and the other of said loops passing transversely beneath the adjacent end of the bridge and thence to the stud, the free ends of said two loops extending substantially parallel in opposite directions, and entering the head of the stud from opposite directions, and securing means for clamping said free ends in said position.

[Claim 6 not printed in the Gazette.]

884,369. APPARATUS FOR MAKING PRINTING-PLATES. JOHN O. DE WOLF, Cambridge, Mass. Filed Feb. 10, 1908. Serial No. 415,123.

1. An apparatus for making printing plates, comprising mechanism for juxtaposing a matrix and plate material, means for rendering said plate material locally impressionable, means coöperating with said above means for progressively shifting said local condition over the required area of the plate material, and means for simultaneously and progressively pressing the matrix into said plate material at the region thus rendered locally impressionable.

2. An apparatus for making printing plates, comprising mechanism for juxtaposing a matrix and plate material, means for rendering said plate material locally impressionable, means coöperating with said above means for progressively shifting said local condition over the required area of the plate material, means for simultaneously and progressively pressing the matrix into said plate material at the region thus rendered locally impressionable, and means for progressively cooling the plate as it is impressed.



3. An apparatus for making printing plates, comprising mechanism for juxtaposing a matrix and plate material, means for rendering said plate material locally impressionable, means coöperating with said above means for progressively shifting said local condition over the required area of the plate material, means for simultaneously and progressively pressing the matrix into said plate material at the region thus rendered locally impressionable, means for progressively cooling the plate as it is impressed, and simultaneously operating means for progressively stripping the matrix from the plate as it is cooled.

4. In an apparatus for making printing plates, means for impressing the plate with the matrix at one portion thereof, and means for simultaneously stripping the matrix from the plate at another portion thereof.

5. In an apparatus for making printing plates, means for forming and impressing a plate with the matrix at one portion thereof, and simultaneously operating means for stripping the matrix from the plate at another portion thereof.

[Claims 6 to 19 not printed in the Gazette.]

884,370. LIQUID-DEPTH GAGE. HARRY E. DOBSON, New York, N. Y. Filed Oct. 11, 1907. Serial No. 396,990.



1. In a liquid depth gage, the combination of a float, a tubular guide incasing the float and having a float observing slit and a graduated scale, and a binder rod connected with the guide and passing through the float and adapted to bind the float against the wall of the guide, substantially as described.

2. In a liquid depth gage, the combination of a float having a hole through its axis, a tubular guide incasing the float and provided with a float observing slit and graduated scale, and a binder rod passing through the hole in the float and its ends crank shaped and trunnioned in the end members of the guide and one end of which rod is provided with an actuating lever and sleeve mechanism by which the float can be pressed fixedly against the inner wall of the guide, substantially as described.

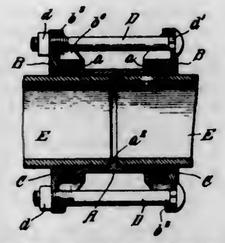
3. In a liquid depth gage, the combination of a cylindrical float having a hole through its axis, a tubular guide incasing the float and provided with a float observing slit and graduated scale a bottom member and detachable cap member, and a binder rod having its ends crank shaped and trunnioned in the bottom and cap members of the guide and its body portion extending through the hole in the float, substantially as described.

4. In a liquid depth gage, the combination of a float, a guide, and a binder rod connected with the float and guide and provided with a spring tension lever mechanism by which it can be actuated and the float can be held fixedly at different positions along the guide, substantially as described.

5. A float rod binder for a liquid depth gage, consisting of the body portion C, and crank end portions C', C², the slotted sleeve D, and actuating lever F', substantially as described.

[Claim 6 not printed in the Gazette.]

884,371. PIPE-COUPLING. SOLOMON R. DRESSER, Bradford, Pa., assignor to S. R. Dresser Manufacturing Company, Bradford, Pa. Filed July 9, 1906. Serial No. 325,377.



1. In a pipe coupling, the combination with clamping rings and packing rings, of an impervious middle ring composed of wrought metal and having its ends constructed to engage said packing rings, and clamping devices connecting said clamping rings substantially as described.

2. In a pipe coupling, the combination with clamping rings, and packing rings, of an impervious middle ring, composed of wrought metal, having the grain extending around the ring, and having its ends constructed to engage the packing rings, and clamping devices connecting said clamping rings, substantially as described.

3. In a pipe coupling, the combination with clamping rings, and packing rings, of an impervious middle ring composed of wrought metal, having the grain extending around the ring, and having an interior projecting stop, and end portions constructed to engage the packing rings, and bolts for connecting said clamping rings, substantially as described.

4. In a pipe coupling, the combination with clamping rings provided each with a packing recess, and packing rings located therein, of an impervious middle ring composed of wrough metal, having an internal projecting centering stop, and end portions extending outwardly at an angle to the main body, forming lips, the end faces of said lips being perpendicular to the axis of the middle ring, and clamping bolts connecting said clamping rings, substantially as described.

5. In a pipe coupling, the combination with the clamping rings provided each with a packing recess, packing rings located in said packing recesses, each provided with a shoulder perpendicular to the axis of said packing ring, and an inclined portion extending from said shoulder to the inner diameter of the ring, of a middle ring having an inclined outwardly extending surface at each end to engage the inclined portions of said packing rings, and end portions perpendicular to the axis of said ring to engage the perpendicular shoulders of the packing rings, and bolts connecting said clamping rings, substantially as described.

[Claim 6 not printed in the Gazette.]

884,372. VENTING-VALVE FOR RADIATORS. LEWIS W. EGGLESTON, Appleton, Wis. Filed July 22, 1907. Serial No. 384,930.

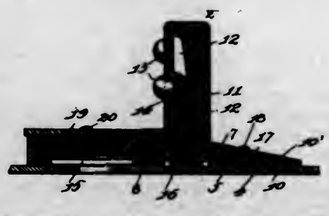


1. The combination with a casing provided with a chamber, and an inlet to the chamber, of a wick in the inlet, one end of such wick located in the chamber, and the other end extending beyond the inlet, such wick made of soft absorbing material combined with metal threads and arranged so that the end thereof beyond the inlet will fall below the level of the bottom of the chamber, substantially as described.

2. The combination with a casing provided with a chamber and an inlet to the chamber, of a wick made of strands of absorbent material capable of withstanding the heat in a steam radiator without charring, and strands of ductile metal combined therewith and such wick arranged so that one end thereof is adjacent to the bottom of the chamber and the other end extends beyond the inlet.

3. The combination with a casing provided with a chamber and an inlet to the chamber, of a wick consisting of strands of absorbent material and strands of metal joined together, a base provided with an aperture therethrough, such base attached to the casing within the chamber adjacent to the bottom thereof, such metal strands passing through and rotatable in the aperture and means to hold such strands in such aperture; substantially as described.

884,373. MUSICAL INSTRUMENT OF THE ACCORDION TYPE. AUGUST J. ENGELMANN, St. Louis, Mo. Filed June 18, 1907. Serial No. 379,652.

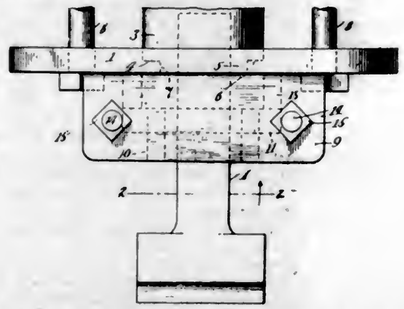


1. A musical instrument comprising a spring formed of a single sheet in combination with valve stems and valves, said spring having a plurality of integral prongs so bent and shaped as to contact with the projecting ends of the valve stems to retain the valves in closed position, and a strengthening rib on the spring, substantially as specified.

2. A musical instrument comprising an accordion provided with a casing, a spring in combination with valve stems and valves, said spring being formed of a single sheet, said spring having a plurality of projecting integral prongs contacting with the valve stems, means for retaining said spring in position upon the casing of the accordion, a strengthening rib on the spring, and a cover inclosing the spring, substantially as specified.

3. A musical instrument comprising an accordion provided with a casing, a spring having a plurality of integral projecting prongs, and a base portion, a strengthening rib on the spring, valves mounted in the casing of the accordion and valve stems whereby said valves are actuated, substantially as specified.

884,374. TOOL-GUIDING DEVICE. HUGH Y. EVERETT, Renous Bridge, New Brunswick, Canada, assignor to Martha A. Everett, Renous Bridge, Canada. Filed May 25, 1907. Serial No. 375,636.



1. A tool guide comprising a supporting plate having an opening therein and having guide slots in its edge, means for securing the plate, and a tool guiding plate provided with an opening therein of less dimension than the opening in the supporting plate and disposed in alinement therewith and means for securing said tool guiding plate.

2. A tool guide comprising a supporting plate having an opening therein and a projecting shoulder, means for securing the plate and a removable tool guiding plate carried by the supporting plate,

3. A tool guide comprising a plate having an opening and provided with depending flanges, a tool guiding plate disposed between the flanges and provided with an opening, and means for removably securing the tool guiding plate.

4. A tool guide comprising a supporting plate having an opening and provided with depending flanges having inwardly extending lugs, a tool guiding plate disposed between the flanges on the lugs and provided with an opening, and means for removably securing the tool guiding plate between the flanges.

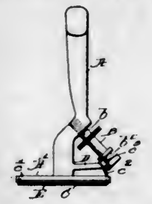
5. A tool guide comprising a supporting plate having an opening therein and provided with depending flanges connected by integral webs and provided with inwardly extended lugs, a tool guiding plate disposed between the flanges on the lugs and beneath the webs and provided with an opening, and means for removably securing the guiding plate between the lugs and the webs.

[Claims 6 to 8 not printed in the Gazette.]

884,375. SAFETY-RAZOR. JOHN A. EVERETT, Natick, Mass. Filed July 12, 1907. Serial No. 383,428.

1. A safety razor comprising a hand piece having a blade-sustaining portion and a projection, said blade-sustaining portion being notched at its ends, combined with a blade notched at its ends, a blade holder having at one end a hook and at its other end a leg provided with a heel, and clamping means engaging said heel and drawing upon the blade holder to clamp the blade upon the blade-sustaining portion of the hand piece.

2. A safety razor comprising a hand piece having a blade-sustaining portion, a blade adapted to rest against said blade-sustaining portion, means for positioning the blade thereon, a blade holder having at one end a hook and at its other end a leg provided with a heel, and clamping means engaging said heel and drawing upon the blade holder to clamp the blade upon the blade-sustaining portion of the hand piece.



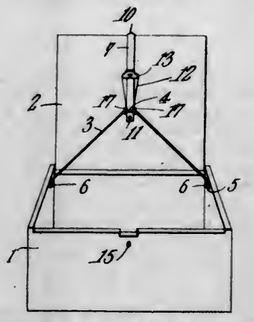
884,376. DEVICE FOR CURING INGROWING TOE-NAILS. CHARLES J. FOSTER, Van Wert, Ohio. Filed Sept. 19, 1907. Serial No. 393,664.



1. Means for relieving ingrowing nail, the same consisting of complemental clips each having integral hooks at opposite ends, the hooks at one end of the clips being adapted to engage and embrace edge portions of the nail, and a yielding connection fitted to the hooks at the opposite ends of the clips to constantly draw the clips together.

2. Means for relieving ingrowing nail, the same consisting of complemental clips, each clip formed of a strip of sheet metal having end portions rebent in opposite directions to form hooks, the hooks at one end of the clips being designed to engage beneath the nail and over the edges thereof, and the other hooks projecting outward, and an elastic connection fitted to the last mentioned hooks to draw the clips together and effect constriction of the nail.

884,377. COMBINED LOCK AND BRACE FOR BOXES. GEORGE S. FRANCIS, FRANK O. KASTE, and HENRY W. GROSS, Havre, Mont. Filed June 22, 1907. Serial No. 380,318.



1. An attachment of the class described comprising a brace having two arms the terminals of which are discon-

nected, a guide, and a member slidably mounted on the guide and connected with the brace.

2. An attachment of the class described comprising an armed brace, a guide, and a locking member slidably mounted on the guide and through which the brace extends.

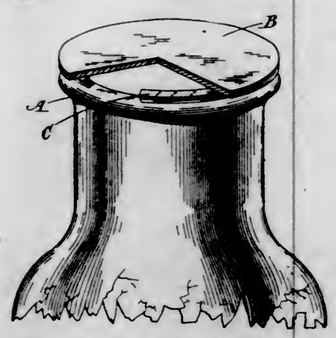
3. An attachment of the class described comprising an armed brace, a guide, and a locking member slidably mounted on the guide and having ears through which the brace extends.

4. An attachment of the class described comprising an armed brace, a guide, and a locking member slidably mounted on the guide and having combined guides and ears through which the brace extends.

5. An attachment of the class described comprising a brace embodying two arms the terminals of which are disconnected and provided with attaching means, a guide, and a locking member slidably mounted on the guide and connected with the brace.

[Claims 6 to 10 not printed in the Gazette.]

884,378. CLOSING DEVICE FOR AIR-TIGHT BOTTLES, JARS, AND OTHER RECEPTACLES. CHRISTIAN H. GRAY, Silverton, England. Filed May 7, 1907. Serial No. 372,395.



1. The combination of a vessel, a cover therefor and a ring of resilient or easily deformable elastic material between the vessel and the cover and presenting an attenuated edge to each surface with which it comes in contact.

2. The combination of a vessel having a mouth with a flat top edge, a flat lid therefor, and a ring of resilient or easily deformable elastic material which in cross section is wide in the middle and attenuated toward the points which contact with the flat surfaces.

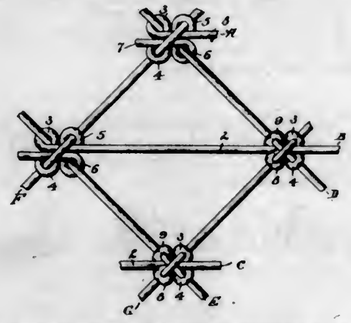
3. The combination of a vessel with a flat rim, a cover therefor with a flat rim, and an indiarubber ring between them which in cross section is wide in the middle and attenuated towards the contact points.

4. The combination of a vessel with a flat rim, a cover therefor with a flat rim and an india-rubber ring between them of triangular cross section presenting an attenuated edge to the surface of each rim.

884,379. WIRE FENCING. WILLIAM H. GRIFFITH, Omaha, Nebr. Filed Aug. 9, 1906. Serial No. 329,818.

1. In a wire fence or fabric, a longitudinal wire and two diagonal stay wires, said three wires crossing at intervals and forming joints, the stay wires crossing without being looped, the horizontal wire first forming a complete loop around one of the stay wires on one side of the joint, then crossing the knot and forming a convolution around the other stay wire, the knotted wire thence passing diagonally across the joint and being looped around the last mentioned stay wire, the wire being thence passed across the knot and around the opposite side of the stay wire first looped.

2. In a wire fence or fabric, a longitudinal wire and two diagonal stay wires, said three wires crossing at intervals and forming joints, the horizontal wire first forming a complete loop around one of the stay wires on one side of the joint, thence crossing the knot and forming a convolution around the other stay wire, the knotted wire thence passing diagonally across the joint and being looped around the last mentioned stay wire, the wire being thence passed across the knot and around the opposite side of the stray wire first looped.



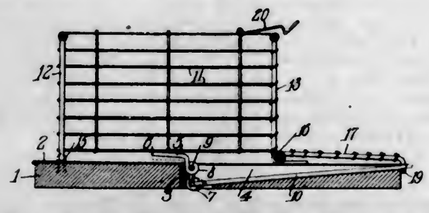
3. In a wire fence or fabric, a longitudinal wire and two diagonal stay wires, said three wires crossing at intervals and forming joints, the stay wires crossing without being looped, and on opposite sides of the knot, the horizontal wire first forming a complete loop around one of the stay wires on one side of the joint, thence crossing the knot and forming a convolution around the other stay wire, the knotted wire thence passing diagonally across the joint and being looped around the last mentioned stay wire, the wire being thence passed across the knot and around the opposite side of the stay wire first looped.

4. In a wire fence or fabric, a longitudinal wire and two diagonal stay wires, said three wires crossing at intervals and forming joints, the two stay wires crossing without being looped, the horizontal wire being bent to form four loops, one of the stay wires passing through two of the loops and the other stay wire passing through the other two loops.

5. In a wire fence or fabric, a joint formed of three wires, two of the wires crossing without being looped and the third wire being bent to form four loops, one of the wires passing through two diagonally situated loops, the other passing through the other two diagonally situated loops.

[Claims 6 and 7 not printed in the Gazette.]

884,380. TRAP. RICHARD F. HADLEY, Slicker, W. Va. Filed July 6, 1907. Serial No. 382,483.

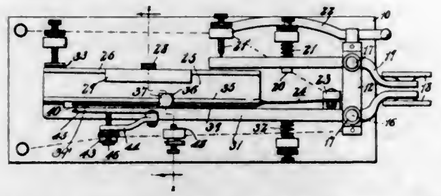


1. A trap comprising a base having a perforation and a groove leading from said perforation to its edge, a trigger pivoted in said perforation, a rod pivoted to said trigger and traversing the length of the groove of said base, a cage mounted upon the base and inclosing one end of said trigger and a spring actuated door adapted to close said cage and having an end adapted to be engaged by the rod for holding the door open against the tension of its spring.

2. A trap comprising a base, a trigger mechanism and retaining rod mounted thereon and operatively connected together, a cage mounted upon the base and having frame wires provided with shoulders, the ends of said wires being driven into the base and the shoulders bearing against the surface of the base, staples passing over said shoulders and entering the base and a spring actuated door pivotally connected with one of the frame wires and adapted to be engaged by the retainer rod whereby it is held open against the tension of the spring.

3. A trap comprising a base, a trigger pivotally mounted thereon, a retainer rod operatively connected with the trigger, a cage mounted upon the base, a spring actuated door adapted to close the cage and being hinged thereto, said door having at its free edge a bowed portion which, when the door is open lies beyond the edge of the base and which receives the retainer rod whereby the door is held open against the tension of its spring.

884,381. TELEGRAPH-TRANSMITTER. MARK S. HALING, Weaver, Minn. Filed May 22, 1906. Serial No. 318,220.



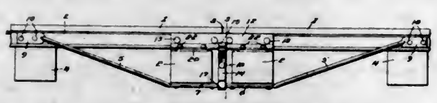
1. In a telegraph key, a spring actuated vibratory member, a bar carried thereby, a yieldable spring contact supported by the vibrator, and a block adjustable on the bar and having a notch or recess for the reception of the contact spring.

2. In a telegraph key, a spring mounted vibratory plate, a bar carried thereby, a contact spring, a block adjustable lengthwise of the bar and having a notch or recess for the reception of the contact spring, and means for locking said block in adjusted position.

3. In a telegraph key, a vibratory member, a yieldable contact carried thereby, means for adjusting the sensitiveness of said yieldable contact, a second yieldable contact with which the first yieldable cantact engages to make and break the circuit, an adjusting means for the second contact, and a manually operable lever normally holding the vibratory member from movement.

4. In a telegraph key, the combination with a base, of a bar carried thereby, a bridge piece mounted on the bar, bearings supported by the bar, and bridge piece, key levers having trunnions mounted on the bearings, contacts under the control of said key levers for the sending of dots and dashes, respectively, the outer ends of said key levers being arranged adjacent to each other, and being provided with finger pieces for engagement by the operator.

884,382. RAIL-JOINT TRUSS. ROBERT S. HANDFORD, Batesville, Ark. Filed June 13, 1907. Serial No. 378,721.

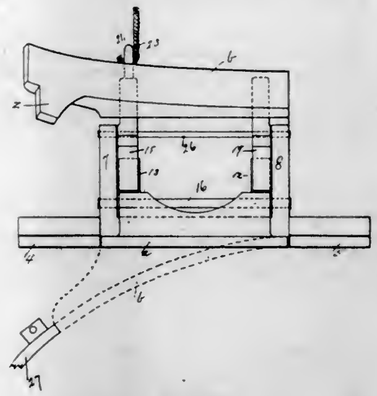


1. A rail joint truss comprising truss rods secured at their ends to the rails and provided with a central plate upon which the joint ties rest, a clamp secured to said plate and engaging the rails, and wedges adapted to be driven upon opposite sides of the rails and secured by spikes to the ties, substantially as described.

2. A rail joint truss comprising a truss frame, fish plates secured to the rails at the joints, a clamp connected to the truss frame and to the fish plates, and wedges for leveling the joint, said wedges being provided with spike holes for accommodating spikes to be driven into the ties.

3. A truss frame for rail joints comprising truss rods having flattened ends secured to the webs of the rails, a flattened central portion, a plate secured thereto, fish plates for connecting the rails at the joint, a clamp comprising two members engaging the plate and the fish plates, and oppositely disposed wedges.

884,383. SWITCH FOR OVERHEAD CARRIERS. GEORGE E. HAUPTMAN, Omaha, Nebr., assignor to J. Duncan & Company, Boston, Mass., a Corporation. Filed Jan. 15, 1906, Serial No. 296,176. Renewed Feb. 29, 1908. Serial No. 418,567.



1. In a switch for overhead carrier tracks, main and branch track sections, a web connecting the main track sections, arms connected to the web, main and branch switching sections pivotally mounted in said arms, one of the sections having an ear, and means connected to said ear whereby one of the switch sections may be thrown into engagement with said web while the other switch section is being taken from engagement therewith.

2. In a switch for overhead carrier tracks, main and branch track sections, a web connecting the main track sections, arms connected to the web, main and branch switching sections pivotally mounted in said arms, one of the sections having an ear, and means connected to said ear whereby one of the switch sections may be thrown into engagement with said web while the other switch section is being taken from engagement therewith, the switching sections being constructed and arranged to cooperate with each other to lock the main switching section against accidental displacement with respect to the connecting web.

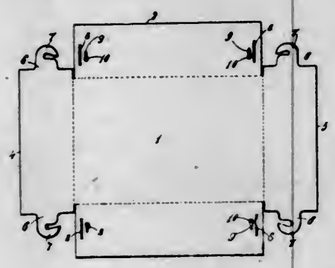
3. In a switch for overhead carrier tracks, main and branch switching track sections, one of the sections having ears, one of the switching track sections having interchangeable connection with the ears to operate the switching track section.

4. In a switch for overhead carrier tracks, main track sections, main and branch switching track sections, one of the switching sections having a pair of ears, and means having interchangeable engagement with the ears to throw them toward and away from each other for interchangeable coöperation with the main track sections.

5. In a switch for overhead carriers, main track sections, main and branch switching track sections, and means having connection with one of the switching sections to operate both of them, the section to which the said means is connected being constructed to receive the means at two different points interchangeably.

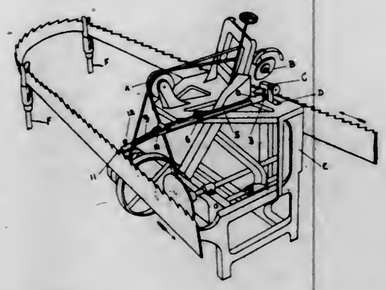
[Claim 6 not printed in the Gazette.]

884,384. MANUFACTURE OF CARDBOARD BOXES. RICHARD D. HAWORTH, Wellington, New Zealand. Filed Oct. 27, 1906. Serial No. 340,859.



A collapsible box comprising a bottom, foldable sides and ends integral with the bottom, slotted hooks integral with the extremities of the ends and adapted to pass through slots in the sides, and buttons pivoted to the sides and adapted to pass through the slots of, and retain the hooks, substantially as set forth.

884,385. SAW-SHARPENING MACHINE. JOHN P. HEDSTROM, Big Rapids, Mich., assignor to Hanchett Swage Works, Big Rapids, Mich., a Firm. Filed Jan. 22, 1907. Serial No. 353,508.



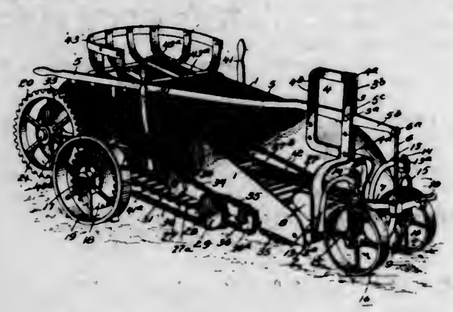
1. The combination with a band saw sharpening machine provided with an oscillatory feed member, of a lever pivotally supported midway of its length, the lever adapted to move in a horizontal plane, a suitable connection between one end of the lever and the feed member, and a saw tooth engaging pawl on the opposite end of said lever adapted to engage the return lead of the saw to assist the feed member in moving the saw step by step.

2. The combination with a band-saw sharpening machine provided with an oscillatory feed member, of a lever pivotally supported midway of its length, the lever adapted to move in a horizontal plane, a suitable connection between one end of the lever and the feed member, and a saw-tooth engaging the pawl on the opposite end of the lever, the pawl hinged to the lever to move vertically and laterally immovable relative to the lever.

3. A connection for two operative elements moving in planes transverse to each other comprising a telescoping pin hinge-secured to one of the levers, the remaining lever provided with a socket in which the pin is loosely received.

4. A connection for two movable elements comprising a hinge, one leaf of which is secured to one of the elements, a pin on the remaining leaf of the hinge, the remaining element having a socket for loosely receiving the pin.

884,386. POTATO-HARVESTER. HENRY C. HENDRICK, Lawrence, Mich. Filed Sept. 10, 1906. Serial No. 334,060.



1. An apparatus of the class described, comprising in combination with side-boards and a supporting frame therefor, an endless conveyer held between said side-boards, a cross bar at the front of said side-boards and having a U-shaped portion, a plow adjustably held within said U-shaped portion, a receptacle held behind the conveyer, a wheeled drive shaft, means for driving the conveyer therefrom, means for coöperatively connecting and disconnecting the conveyer drive means from the drive shaft, and supplemental conveyers at each side of the plow for coöperating with the first mentioned conveyer, substantially as shown and described.

2. An apparatus of the class described, comprising in combination with side-boards and a supporting frame therefor, an endless conveyer held between said side-boards, a cross bar at the front of said side-boards and having a U-shaped portion, a plow adjustably held within said U-shaped portion, a receptacle held behind the conveyer, a wheeled drive shaft, means for driving the conveyer therefrom, means for coöperatively connecting and disconnecting the conveyer drive means from the drive shaft, supplemental conveyers including drive shafts held at each side of the plow for coöperating with the first mentioned conveyer, and means coöperating with said supplemental conveyer drive shafts and with the first mentioned conveyer drive means for driving the supplemental conveyers, substantially as shown and described.

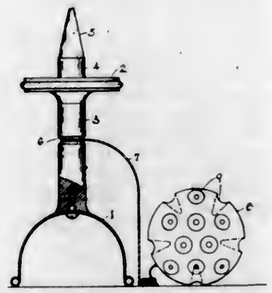
3. An apparatus of the class described, comprising in combination with side-boards and a supporting frame therefor, an endless conveyer held between said side-boards, a cross bar at the front of said side-boards and having a U-shaped portion, a plow held within said U-shaped portion, a wheeled drive shaft, means for driving the conveyer therefrom, and supplemental conveyers at each side of the plow for coöperating with the first mentioned conveyer, substantially as shown and described.

4. An apparatus of the class described, comprising a supporting frame including side-boards, an endless conveyer mounted therebetween and extending from the front to the rear thereof, a cross bar connecting the front ends of the side-boards, caster wheels connected with said cross bar, a plow mounted adjacent said cross bar, stay rods connecting said plow with the side-boards, said plow having a draft beam, a Y-frame secured to the cross bar, a plow adjusting lever connected with said Y-frame and with said plow beam, a wheeled drive shaft and means connecting said wheeled drive shaft with said conveyer to drive the same, substantially as shown and described.

5. An apparatus of the class described, comprising a supporting frame including side-boards, an endless conveyer mounted therebetween and extending from the front to the rear thereof, a cross bar connecting the front ends of the side-boards, caster wheels connected with said cross bar, a plow mounted adjacent said cross bar, stay rods connecting said plow with the side-boards, said plow having a draft beam, a Y-frame secured to the cross bar, a plow adjusting lever connected with said Y-frame and with said plow beam, a wheeled drive shaft means connecting said wheeled drive shaft with said conveyer to drive the same, and supplemental conveyers arranged at the side of said plow to coöperate with said first mentioned endless conveyer, and means for driving said supplemental conveyers, substantially as shown and described.

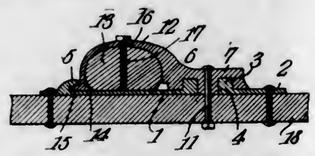
[Claims 6 to 9 not printed in the Gazette.]

884,387. TOY. JOHN H. HETTINGER, Bridgeton, N. J. Filed Oct. 15, 1907. Serial No. 397,479.



As a new article of manufacture, a toy comprising a hollow semi-spherical shape centrally apertured base, a pedestal having a concave lower end secured on the convex surface of said base over said aperture by a screw passing through said aperture from the inside into said pedestal, the upper end of said pedestal being pointed, a circular guard arranged on said pedestal adjacent its upper end, having a flat upper surface, said pedestal being provided with an annular groove between the base and guard, an elastic cord secured in said groove, and a ball carried by the free end of said cord and provided with a plurality of indentations corresponding in shape to the point of said pedestal.

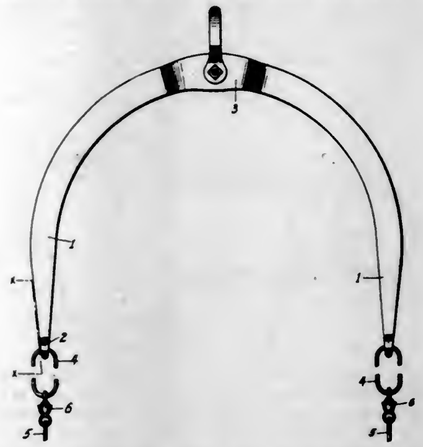
884,388. COUPLING FOR WHIFFLETREES. WILLIAM W. HILLS, Kalkaska, Mich. Filed Oct. 25, 1907. Serial No. 399,166.



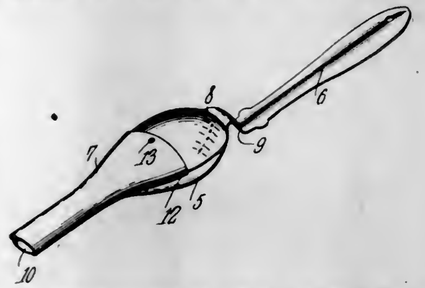
In a device of the character described the combination with a base plate having an upstanding boss provided with a central orifice, and a transversely extending arcuate retaining flange integral with the base and removed from the boss; of an arched top plate bearing at its ends upon the base plate, one of said ends having a socketed extension bearing upon and surrounding the boss, the other end of said top plate having an outstanding flange slidably engaging and overlapped by the retaining flange, and means for clamping a tree against the inner face of the top plate in position to bear upon the base plate.

884,389. SWINGLETREE. ALBERT J. JEFFERSON, Lodi, Cal. Filed May 6, 1907. Serial No. 372,267.

In a device of the character described a swingle tree formed of flat metal into a substantial U-shape, the outer ends of said swingle tree being turned gradually into vertical rings, the inner end of such swingle tree being swaged or swelled outward on all sides, forming an embossment, an orifice through such embossment, and tug connections in said rings, as described.



884,390. MEDICINE-SPOON. WILLIAM L. JERKINS, Moultrie, Ga. Filed June 28, 1907. Serial No. 381,370.



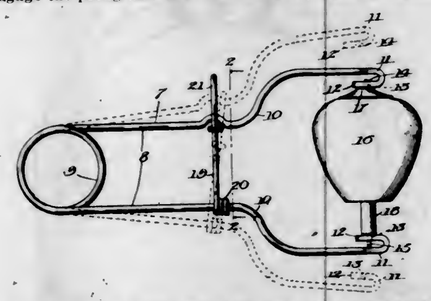
1. A spoon embodying an integral bowl and spout having smooth continuous exterior walls at the upper edge of the spoon, and a removable guard slidably mounted on the spoon and forming a closure for the spout and a portion of the bowl, said guard being provided with oppositely disposed inwardly extending flanges curved to conform to the curvature of the exterior walls of the spoon and adapted to frictionally engage the same at the upper edge thereof.

2. A spoon embodying an integral bowl and spout having smooth continuous walls at the upper edge of the spoon, and a removable guard slidably mounted on the spoon and forming a closure for the spout and a portion of the bowl, said guard being provided with oppositely disposed inwardly extending flanges curved to conform to the exterior walls of the spoon and adapted to frictionally engage the same at the upper edge thereof, there being an aperture formed in one end of the guard, and a roughened portion on the lower wall of the spout at the free end thereof.

884,391. SPINNING-HOLDER FOR TOPS. KARL E. JOHANSSON, Chicago, Ill. Filed Sept. 9, 1907. Serial No. 391,939.

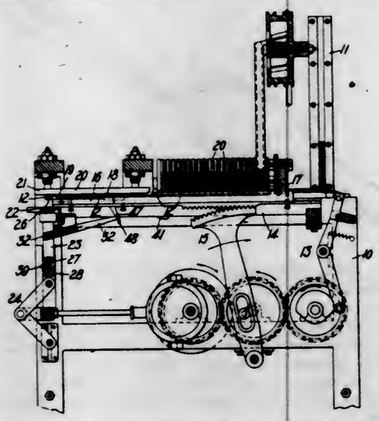
1. A spinning holder for tops consisting of a spring-pressed forked holder having at the free end of each of its prongs a bearing member for engagement with the spindles

of the top, and a guide member transversely located with respect to the prongs of the holder and secured at one of its ends to one of said prongs and having at its other end a loop through which the other prong is extended, said loop having in one of its members an offset or recess to engage the prong and to hold it in its depressed position.



2. A spinning holder for tops, consisting of a spring-pressed forked holder having at the free end of each of its prongs a bearing member for engagement with the spindles of the top, and a guide member transversely located with respect to the prongs of the holder and secured at one of its ends to one of said prongs and having at its other end a loop through which the other prong is extended.

884,392. MACHINE FOR TACKING SHOE-SHANKS. LOUIS A. JONES, Cambridge, Mass., assignor to The American Shoe Finding Company, a Corporation of Maine. Filed Nov. 29, 1907. Serial No. 404,226.



1. In a machine for fastening two pieces of material together by means of a tack or the like, means for introducing a tack into one of said places, mechanism for sequently driving said tack into the second of said pieces, and instrumentalities adapted to render said driving mechanism inoperative when said first piece fails to receive a tack.

2. In a machine for fastening two pieces of material together by means of a tack or the like, means for introducing a tack into one of said pieces, mechanism for subsequently driving said tack into the second of said pieces, and instrumentalities including a device adapted to engage said tack, said instrumentalities being adapted to render said driving mechanism inoperative when said first piece fails to receive a tack.

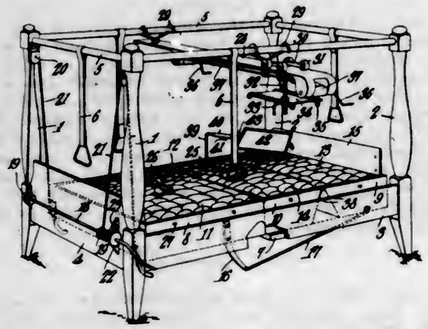
3. In a machine for fastening two pieces of material together by means of tacks or the like, means for introducing two tacks into one of said pieces, mechanism for subsequently driving said tacks into the second of said pieces, and instrumentalities including devices adapted to engage said tacks, respectively, said instrumentalities being adapted to render said driving mechanism inoperative when said first piece fails to receive two tacks.

4. In a machine for fastening two pieces of material together by means of a tack or the like, means for introducing a tack into one of said pieces, mechanism for subsequently driving said tack into the second of said pieces, means for moving said first piece from said tack introducing means toward said driving mechanism, and instrumentalities including a device adapted to engage said tack while said first piece is being moved, said instrumentalities being adapted to render said driving mechanism inoperative when said first piece fails to receive a tack.

5. In a machine for fastening two pieces of material together by means of tacks or the like, means for introducing two tacks into one of said pieces, mechanism for subsequently driving said tacks into the second of said pieces, means for moving said first piece from said tack introducing means toward said driving mechanism, and instrumentalities including devices adapted to engage said tacks, respectively, while said first piece is being moved, said instrumentalities being adapted to render said driving mechanism inoperative when said first piece fails to receive two tacks.

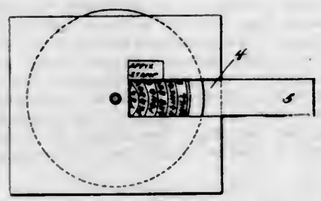
[Claims 6 to 19 not printed in the Gazette.]

884,393. INVALID-BED. ENOS A. KEASEY, Ligonier, Ind. Filed Mar. 15, 1907. Serial No. 362,547.



A bed comprising head and foot corner posts, overhead bars connecting all of the posts together, side rails connecting the head and foot posts together, hinged sections mounted upon the side rails, the lower portions of the foot posts being disconnected from each other whereby an unobstructed passage is provided between the foot posts to the area between the side rails.

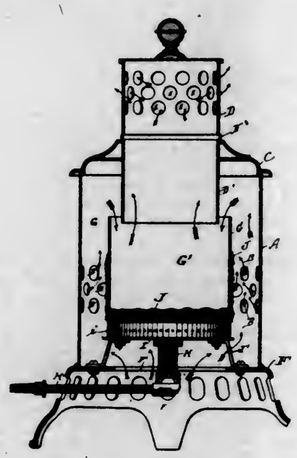
884,394. COMBINATION ENVELOP AND INCLOSURE. JAMES P. KEEGAN, Somers Center, N. Y. Filed Apr. 5, 1907. Serial No. 366,519.



1. In combination, an envelop provided with an opening in one side, and an inclosure rotatably mounted and provided with an inscription arranged spirally to encircle the axis of rotation a plurality of times, all so arranged that the inscription may be made to pass the opening in the side of the envelop by a repeated rotation of the inclosure.

2. In combination, an envelop provided with an opening in one side and a flap for covering the opening in position to be held by the stamp, and an inclosure rotatably mounted and provided with a spiral line for the inscription encircling the axis of rotation a plurality of times, and so arranged that the inscription may be made to pass the opening in the side of the envelop, by a repeated rotation of the inclosure.

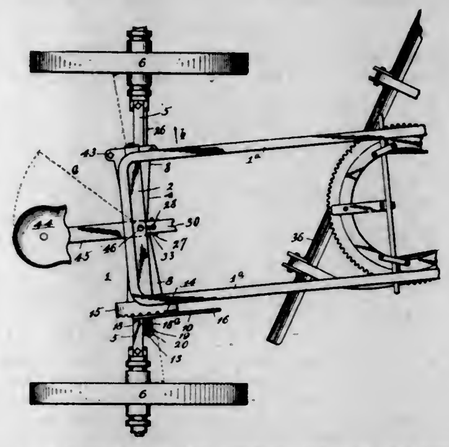
884,395. HEATER. LEONIDAS L. LAW, Dayton, Ohio, assignor of one-half to G. G. G. Peckham, Dayton, Ohio. Filed Oct. 17, 1906. Serial No. 339,286.



1. In a fuel gas heater, an outer cylindrical casing provided with air openings through its walls, a burner inclosed within the lower end of said outer cylindrical casing, an open base upon which said outer cylindrical casing and said burner are supported, and through which air is admitted to the burner and lower end of said outer cylindrical casing, a separating drum mounted upon the burner and having its upper end open, said separating drum being centrally-disposed within the outer cylindrical casing and providing an interior wall opposite the air openings in the outer cylindrical casing, an upper drum open at its lower end and projected into the upper end of the separating drum to provide an annular inlet to the separating drum from the surrounding chamber between the separating drum and the outer cylindrical casing, said upper drum extending beyond the top of the outer cylindrical casing and having a series of openings in its upper portion which provide an outlet for the products of combustion from the interior of the separating drum.

2. In a fuel gas heater, an open base, a burner supported on said base, an outer cylindrical casing provided with air openings through its walls, said outer casing being mounted upon said open base, a separating drum mounted upon the burner and providing a chamber on the interior of the outer casing into which air is admitted through the open base and the air openings in the outer casing, a cap supported upon the top of the outer casing and having an opening therein, an upper drum projected through the opening in said cap and supported upon said cap, said upper drum having its lower end open and projected into the upper end of the separating drum to provide an annular opening of reduced area and through which a communication is established between the chamber surrounding the separating drum and the interior of said drum, said upper drum having the portion thereof extending above the cap of the outer casing provided with a series of openings extending around the sides thereof and through which an outlet from the interior of the separating drum is established above the cap of the outer casing.

884,396. ROAD-GRADER. WINFIELD S. LIVENGOOD, Kansas City, Mo., assignor to Smith & Sons Mfg. Co., Kansas City, Mo. Filed Feb. 23, 1906. Serial No. 302,409.



1. In a machine of the character described, a frame, an axle adjustably mounted therein, a compound lever for adjusting said axle in a horizontal plane, consisting of a secondary member, pivoted to the frame, jaws on said secondary member engaging the axle, and a primary member fulcrumed upon the frame and arranged to operate the secondary member.

2. In a machine of the character described, a frame, a rear axle pivotally and slidably mounted therein, and a lever for controlling said pivotal movement, said lever slidably engaging the axle.

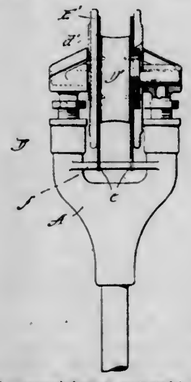
3. In a machine of the character described, a frame, a rear axle pivotally and slidably mounted therein, a lever slidably engaging said axle for controlling its pivotal movement and means for controlling said sliding movement.

4. In a machine of the character described, a frame, a bolster forming part thereof, and an axle pivotally and slidably mounted therein.

5. In a machine of the character described, a frame, a bolster forming part thereof, said bolster being contracted intermediate its ends, and an axle extending through said bolster and having pivotal movement on the contracted portion.

[Claims 6 and 7 not printed in the Gazette.]

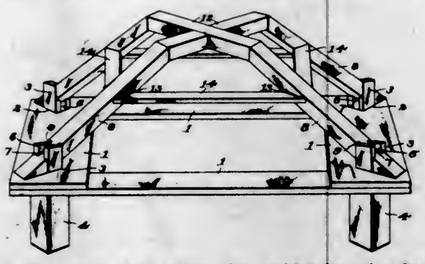
884,397. OVERHEAD TROLLEY. ALLEN P. LORD and NATHANIEL WILKINS, Bradford, Pa. Filed Jan. 11, 1907. Serial No. 351,896.



A trolley wheel comprising a rotatable center having a shallow groove, non-rotatable plates located on opposite

sides of said rotatable center and maintaining the wire in said shallow groove, and rotatable circular disks located on opposite side of said non-rotatable plates and having their edges projecting slightly beyond the non-rotatable plates, substantially as described.

884,398. POULTRY-PERCH. CAROLINE F. LUCAS, Mayhill, N. Mex. Filed Oct. 3, 1907. Serial No. 395,738.



1. In a perch for poultry, the combination of a frame having openings, posts having their upper ends reduced and shouldered at the base of the reduced ends and passed through the openings of the frame, and having the projecting ends vertically slotted, upwardly inclined bars having portions near their lower ends reduced to form webs to enter the slots of the posts, the shoulders at the ends of the said webs embracing opposite sides of the posts, and means connecting upper ends of the said bars and causing the shouldered portions at the ends of the webs of said bars to bind against opposite sides of the posts.

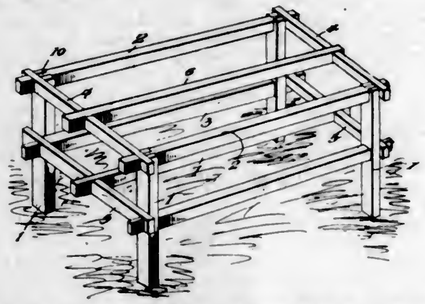
2. In a poultry perch or like structure, the combination of a frame having openings, posts having their upper ends reduced and slotted and having the reduced ends passed through openings of the frame, inclined bars having oppositely disposed notches near their lower ends forming webs which are fitted into the slotted ends of the posts, the shoulders at the ends of the said notches embracing opposite sides of the slotted ends of the posts, and bars fitted between upper ends of oppositely arranged inclined bars, the meeting ends of the horizontal and inclined bars being united by interlocking joints.

3. In a poultry perch or like structure, the combination of a frame, posts having their upper ends reduced and fitted in openings of the frame and having their projecting ends vertically slotted, inclined bars having web portions near their lower ends fitted in the slots of the posts and having inclined tongues at their upper ends, and crossed horizontal bars fitted between the upper ends of the said inclined bars and having notches in their lower corners to receive the said inclined tongues at the upper ends of the inclined bars.

4. A poultry perch or like structure comprising strips arranged to form a frame with their end portions overlapped and having angular openings in their overlapped ends, posts having their upper ends reduced and slotted and having the reduced ends passed through the angular openings of the overlapped ends of said strips, upwardly inclined bars having their lower ends beveled to rest squarely upon the frame and having notches in opposite sides near their lower ends to form webs which are fitted in the slots formed in the reduced ends of the posts, said inclined bars having tongues at their upper ends, and cross bars halved together and provided in their lower corners with notches to receive the inclined tongues at the upper ends of the inclined bars.

884,399. FRAME FOR HENS' NESTS. CAROLINE F. LUCAS, Mayhill, N. Mex. Filed Oct. 3, 1907. Serial No. 395,739.

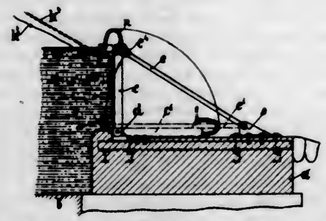
1. In a framework of the character specified, the combination of corner posts having open mortises, bars having reduced portions near their ends to snugly fit within said open mortises and having notches in their projecting ends, and other bars having notches near their extremities to receive the projecting ends of the first mentioned bars and in turn fitting in the notched portions of the projecting ends thereof.



2. In a framework of the character specified, the combination of corner posts provided with mortises, bars having their ends reduced and fitted in the said mortises and having notches in their projecting ends and other bars having notches near their extremities to receive the projecting ends of the reduced portions of the first mentioned bars and in turn fitted in the notches of said projecting portions.

3. The herein described framework comprising corner posts having upper and lower mortises, upper longitudinal bars having reduced portions near their ends to fit in the said upper mortises of the corner posts and having notches in their projecting ends, upper end bars having notches near their extremities fitted in the notched ends of the said upper longitudinal bars, an intermediate upper longitudinal bar having notches in its end portions fitted into notches of the said upper end bars, lower longitudinal bars having reduced end portions fitted into the lower mortises of the corner posts and having the projecting ends notched, lower end bars notched near their extremities to fit the notched ends of the reduced portions of the said lower longitudinal bars and a lower intermediate longitudinal bar having its end portions notched to fit into notches of the lower end bars.

884,400. WATER-LOCK GATE. GOTTLIEB LÜSCHER, Aarau, Switzerland. Filed Apr. 29, 1907. Serial No. 370,930.



1. Apparatus for raising and lowering separately the flaps of a water gate consisting of an aerial line over the gate, a wagon on the line, means for moving the wagon over any desired flap, raising and lowering mechanism on the wagon and detachable connections from the flap to the said mechanism.

2. In an apparatus for raising and lowering the flaps of a water gate, an aerial line, a traveling wagon on the line, raising and lowering mechanism on the wagon, connections attached at one end to the flaps and lifting means to which the connections are secured at their other ends.

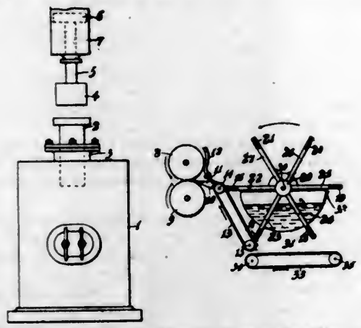
3. In apparatus for raising and lowering the flaps of a water gate, an aerial line, a traveling wagon on the line, raising and lowering mechanism on the wagon, connections attached at one end to the flaps, a line to which the connections are secured, lying when relaxed across the river bed, and extending mechanism at the end of the line to stretch it and raise the connections.

4. In apparatus for raising and lowering the flaps of a water gate, an aerial line, a traveling wagon on the line, raising and lowering mechanism on the wagon, detachable connections to the flaps, and struts in the river bed supporting the flaps and brought into and out of supporting position by the said connections.

5. In apparatus for raising and lowering the flaps of a water gate, an aerial line, a traveling wagon on the line, raising and lowering mechanism on the wagon, hinged struts supporting the flaps, levers on the flaps acting on the end of the struts to release them, and connections from the lever at each side of the fulcrum to the raising mechanism.

[Claims 6 and 7 not printed in the Gazette.]

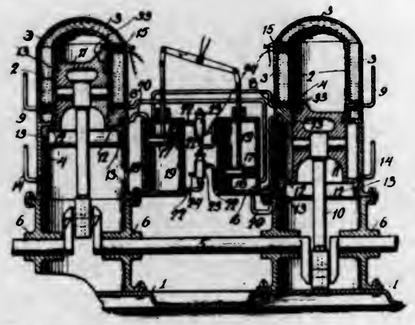
884,401. PROCESS OF PREPARING FIBERS. KEITH MATTHEWS, Auckland, New Zealand. Filed Mar. 26, 1906. Serial No. 308,169.



1. A process for the treatment of vegetable fiber consisting in, first bruising the vegetable matter of the plant blade, and secondly removing the said vegetable matter by subjecting the blade to the action of a jet of water at high pressure which is caused to impinge upon it for the purpose of removing the vegetable matter from the fiber, substantially as set forth.

2. In a process for the treatment of vegetable fiber, steps consisting of first subjecting the plant blade to hydraulic pressure for the purpose of bruising vegetable matter upon it and secondly in subjecting the blade to the action of a jet of water emitted, under high pressure, through a nozzle for the purpose of removing vegetable matter from the fiber substantially as specified.

884,402. INTERNAL-COMBUSTION ENGINE. FREDERICK F. MILLER, Napanee, Ontario, Canada. Filed Apr. 3, 1907. Serial No. 366,216.



1. In an internal combustion engine, the combination of a cylinder and piston operating therein, two storage chambers, an air pump supplying air thereto, and an independent manually-operated means to inversely vary the capacity thereof, pipe connections between the cylinder and one of the storage chambers a carbureting means connected to each of the storage chambers.

2. In an internal combustion engine, a combustion chamber, two storage chambers one of which is connected to the combustion chamber a carbureting means connected between the storage chambers, the said connection being the sole connection between the storage chambers, an air pump for supplying air to the storage chambers and manually-operated means, to inversely vary the capacity of aforesaid chambers, whereby the amount of perfect mixture flowing into the combustion chamber is regulated.

3. In an internal combustion engine, a means of regulation consisting in combination, a combustion chamber, two storage chambers connected together and to the combustion chamber, a carbureting means in the connection between the storage chambers, an air pump for supplying air thereto, and an independent manually-operated means to inversely vary the capacity thereof.

4. In a two-cycle engine, a combustion chamber, two storage chambers connected together by an equalizing pipe, a carbureting means connected in said equalizing pipe, an air pump for supplying air to the storage chamber, pipe connections between one storage chamber and the combustion chamber, means of regulating the volumes of the storage chambers, whereby the amount of a charge of carbureted air entering the combustion chamber is regulated.

5. In an internal combustion engine, a cylinder, a piston operating therein, mechanical inlet and exhaust valves, operated by the aforesaid piston, an ignition device in said cylinder, two storage chambers connected together by an equalizing pipe, a carbureting means connected in said equalizing pipe, pipe connections between the combustion chamber and one storage chamber, an air pump for supplying air to the storage chambers, an independent manually-operated means to inversely vary the capacities of the storage chambers whereby the amount of the charge of air, carbureted at its most efficient exploding point, admitted to the cylinder, is regulated.

884,403. INSECT-TRAP. NORMAN W. MILLS, Boulder, Colo., assignor to Mills Fly Catching Screen Company, Boulder, Colo., a Corporation of Colorado. Filed July 8, 1907. Serial No. 382,694.



1. In combination with a screen door or window, frames arranged on opposite sides thereof, strips of wire netting arranged over said frames, and extending from their lower ends to near their upper ends, strips of wire netting arranged over said frames and spaced above said first mentioned strips, leaving inlet passages therebetween, a chute arranged below said inlet passages, an insect receptacle arranged on said chute, and powder tubes arranged above said chute.

2. In combination with a screen door or window, two upright frames arranged on opposite sides thereof, strips of wire netting arranged over said frames and bent inwardly near the upper ends thereof to provide inlet passages, a V-shaped chute arranged in said frames and ex-

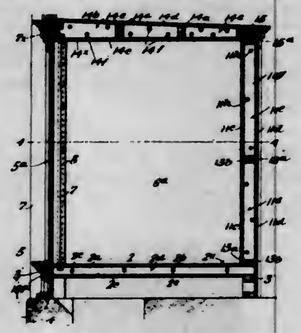
tending entirely across the width and thicknesses of the same, an insect receptacle arranged on said chute, and powder tubes extending through said frames, above and parallel with the ends of said chute.

3. In combination with a screen door or window, an upright open frame arranged on one side thereof, a strip of wire netting arranged over said frame and bent inwardly near the upper end thereof to form a downwardly extending apron, a strip of wire netting arranged above said first-mentioned strip and fastened over said frame leaving an inlet passage therebetween, a V-shaped chute arranged in the frame, an insect receptacle arranged on said chute, strips of wire netting arranged over said chute above the receptacle, and powder tubes extending through said frame above said chute.

4. In combination with a screen door or window, two upright frames arranged on opposite sides thereof, wire netting arranged over said frames and bent inwardly near the upper ends thereof to provide inlet passages, a chute arranged in said frame, an insect receptacle arranged at the end of the chute, and powder tubes extending through the frames above the chute.

5. In combination with a screen door or window, upright frames arranged on opposite sides thereof, strips of wire netting arranged over the frames and bent inwardly near the upper ends thereof to provide inlet passages, a chute arranged in the frames, an insect receptacle arranged in the frames at the lower end of the chute, powder tubes extending through the frames above the chute, and a strip of wire netting arranged over the chute.

884,404. STORE-WINDOW. PETER H. MORRIS, Newtown, Pa. Filed Dec. 12, 1907. Serial No. 406,228.



1. A window comprising a transparent front, a bottom, a top and back portions, said bottom, top and back portions composed of a framework and spaced linings on the sides of said framework, and means for maintaining an air circulation between said spaced linings.

2. A window comprising a framing of joists and studdings, a transparent front for said window, said window including a bottom, a back and top, of double walls having air spaces between and inclosing the framing and studding, said framing and studding being provided with a series of ventilating apertures whereby communication may be had between the spaces between the double walls, ventilating pipes communicating between the double walled bottom and top, and means for admitting air from the atmosphere into the double walls.

3. A store wondow comprising a bottom consisting of a framing having ventilating apertures and a double lining for said framing inclosing air chambers, said air chambers of the bottom being in communication with the atmosphere, a transparent front for said window and a back therefor, said back comprising a framing having an onter and inner lining to inclose air chambers, said framing having ventilating apertures whereby the air chambers are in communication with one another, means whereby the air chambers of the back are in communication with those of the bottom, a top comprising a framing, an outer and inner lining inclosing air chambers, said framing having ventilating apertures to open up communication between all of said top air chambers, means opening communication between the air chambers of the top and those of the back, said bottom having its inner lining provided with ventilating apertures to open up communication between the air chambers of the bottom and the interior of the window and said top having its inner lining provided with corresponding ventilating apertures.

4. A store window comprising a bottom consisting of a framing having ventilating apertures and a double lining for said framing inclosing air chambers, said air chambers of the bottom being in communication with the atmosphere, a transparent front for said window and a back therefor, said back comprising a framing having an outer and inner lining to inclose air chambers, said framing having ventilating apertures whereby the air chambers are in communication with one another, means whereby the air chambers of the back are in communication with those of the bottom, a top comprising a framing, an outer and inner lining inclosing air chambers, said framing having ventilating apertures to open up communication between all of said top air chambers, means for opening communication between the air chambers of the top and those of the back, said bottom having its inner lining provided with ventilating apertures to open up communication between the air chambers of the bottom and the interior of the window and said top having its inner lining provided with corresponding ventilating apertures, the apertures of the bottom lining and those of the top lining being diagonally opposite one another.

5. A store window comprising a bottom consisting of a framing having ventilating apertures and a double lining for said framing inclosing air chambers, said air chambers of the bottom being in communication with the atmosphere, a transparent front for said window and a back therefor, said back comprising a framing having an outer and inner lining to inclose air chambers, said framing having ventilating apertures whereby the air chambers are in communication with one another, means whereby the air chambers of the back are in communication with those of the bottom, a top comprising a framing, an outer and inner lining inclosing air chambers, said framing having ventilating apertures to open up communication between all of said top air chambers, means for opening up communication between the air chambers of the top and those of the back, said bottom having its inner lining provided with ventilating apertures to open up communication between the air chambers of the bottom and the interior of the window, and said top having its inner lining provided with corresponding ventilating apertures, the apertures of the bottom lining and those of the top lining being diagonal to one another, and circulating pipes in communication with the air chambers of the bottom and the top.

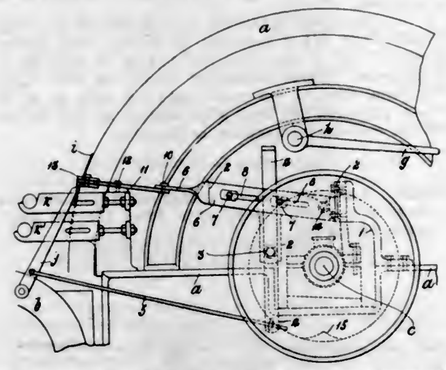
[Claims 6 to 8 not printed in the Gazette.]

884,405. LOCKING DEVICE FOR FRONT-PLATE STRIPPING-DOORS OF CARDING-ENGINES. JAMES MYERSCOUGH and JAMES GORNALL, Preston, England, assignors to Dobsom and Barlow Limited, Bolton, England. Filed Aug. 10, 1907. Serial No. 388,045.

1. In combination with a carding cylinder and its door, of operating means therefor, including the driving pulley and loose pulley, a belt shifter, a bar slidably supported, a finger 14 on said bar, cams on the driving pulley adapted to engage with said finger, a catch for the door carried by the bar, supporting arms carrying the door, a lever 4 having a foot thereon adapted to engage with the belt shifter to prevent movement thereof, and a connecting link between the supporting arms and said lever, substantially as described.

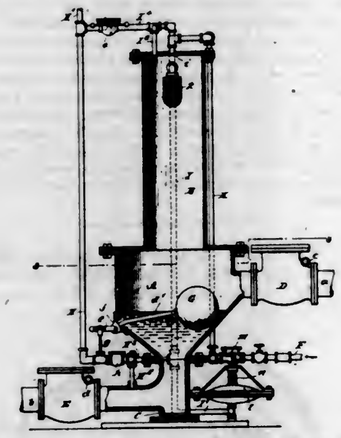
2. In combination with a carding cylinder and its door, operating means for said cylinder comprising the driving and loose pulleys, and a belt for driving the same, the belt shifter, a bar slidably supported, a finger 14 on said bar, said bar having a diagonal slot, a lever having a pin working in said slot, a catch carried by said lever and adapted

to engage with the door, cams on the driving pulley adapted to engage with the finger for holding the catch in engagement with the door, supporting arms for the door, a lever



4, a link connecting said lever to the supporting arms, and a foot on the lever 4 for preventing movement of the belt shifter when the door is open, substantially as described.

884,406. SEWAGE-EJECTOR. WILLIAM MCCLINTOCK, New York, N. Y. Filed May 11, 1907. Serial No. 373,161.



1. In a sewage ejector provided with means for automatically admitting fluid under pressure, said means being operated by liquid from the upper part of the tank, the tank being provided with an upper extension of smaller diameter than the lower portion and with inlet and outlet for sewage connected with the lower portion, the parts being combined and arranged substantially as set forth.

2. In a sewage ejector, the combination with the receiving tank and the inlet for fluid under pressure, of a controlling valve, a diaphragm connected therewith, and a pipe leading from the upper part of the tank and to one side of the diaphragm for conveying liquid from the tank to operate the diaphragm for the purposes set forth.

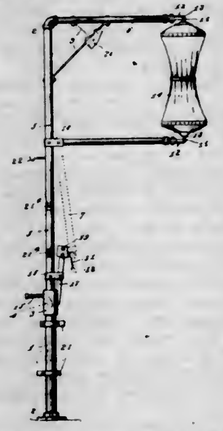
3. In a sewage ejector, the combination with the receiving tank and the inlet for fluid under pressure, of a valve for governing said fluid, a diaphragm connected with the valve, a pipe leading from the upper part of the tank and to one side of the diaphragm for conveying liquid from the tank to operate the diaphragm, and a spring for holding the valve normally to its seat, substantially as and for the purposes set forth.

4. In a sewage ejector, the combination with the receiving tank and means for automatically admitting fluid under pressure, of a ventilating pipe connected by branches with the top of the tank, with the discharge outlet at the bottom of the tank, and with a branch on the pressure pipe leading from the upper part of the tank, substantially as and for the purposes set forth.

5. In a sewage ejector having means for automatically admitting fluid under pressure, said means being operated by liquid from the upper part of the tank, the combination with the ventilating pipe communicating with both the upper and the lower portions of the tank, of a valve in the ventilating pipe, and a float within the tank for automatically opening said valve when the material has been sufficiently discharged from the tank, for the purposes set forth.

[Claim 6 not printed in the Gazette.]

884,407. MAIL-CRANE. ALVIN C. MCCORD, Chicago, Ill. Filed Oct. 31, 1907. Serial No. 400,007.

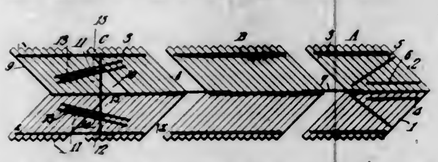


1. A swinging crane comprising a standard, a mast journaled to said standard and provided with a pair of bag-supporting arms, the lower of which is pivoted, a connection between said mast and standard causing said mast to turn when moved vertically, and a trigger-acting lock lever intermediately pivoted to said mast and engageable with said standard, to lock said mast in a raised position, and which lever is so located that it will be struck by said pivoted arm and released, when said lower arm is dropped, substantially as described.

2. A swinging crane comprising a tubular standard, a mast journaled to said standard and provided with a pair of bag-supporting arms, the lower of which is pivoted, a cam on said standard, a cam pin secured to said mast and coöperating with said cam to cause said mast to turn when moved vertically, and a trigger-acting lock lever intermediately pivoted to said mast engageable with a notch in the upper end of said standard, to lock said mast in a raised position and against rotation, and with its upper end so located that it will be struck by said pivoted arm, and said lever released, when said arm is dropped, substantially as described.

3. In a swinging crane, the combination with a tubular standard, having a spiral cam and a lock notch in its upper end portion, of a mast telescoped into said standard and provided with a pair of bag-supporting arms, the lower of which is pivoted, a pin carried by said mast and coöperating with said cam to cause said mast to turn when moved vertically, the said pin projecting and affording a handle by means of which said mast may be turned, and a trigger-acting lock lever intermediately pivoted to said mast, the lower end thereof being engageable with a lock notch in said standard, to lock said mast in a raised position and against rotation, and with its upper end so located that it will be struck by said pivoted arm, and said lever released, when said arm is dropped, substantially as described.

884,408. LUMBER-RAFT. NEAL MCLAUGHLIN, Jethro, Ark. Filed Oct. 18, 1907. Serial No. 398,093.



1. A lumber raft consisting of parallel series of timbers, the ends of the timbers being disposed in stepped relation and the two series being arranged obliquely to each other, the timbers of each series lapping and contacting with the timbers of the other series.

2. A lumber raft consisting of parallel series of timbers, the ends of the timbers being disposed in stepped relation and the two series being arranged obliquely to each other, tie devices connecting the timbers of each series, and a single combined spacing and tie device connected to all the timbers of both series.

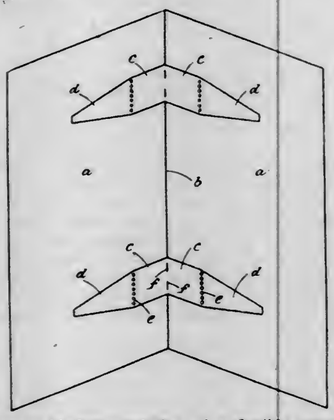
3. A raft comprising a plurality of sections, each comprising parallel series of timbers, the ends of the timbers being disposed in stepped relation and the two series being arranged obliquely to each other, and flexible combined spacing and tie devices connecting the sections.

4. A raft comprising a plurality of sections, each comprising parallel series of timbers, the ends of the timbers being disposed in stepped relation and the two series being arranged obliquely to each other, and flexible combined spacing and tie devices connecting the sections, said devices constituting spacing means.

5. A lumber raft comprising parallel series of timbers, the timbers of each series having their ends in stepped relation and lapped and contacted by the ends of the timbers of the other series, the timbers of the two series being disposed at angles to each other, and means for tying the timbers of the series together.

[Claims 6 to 9 not printed in the Gazette.]

884,409. PAPER-BINDER. CECIL C. NEWSON-SMITH, London, England. Filed July 19, 1907. Serial No. 384,657.

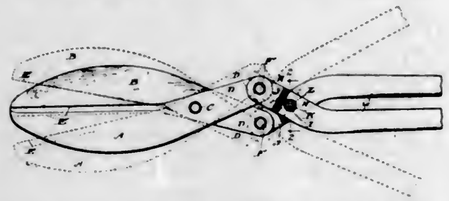


1. A paper binder consisting of a flexible cover folded in the middle and a flexible strip extending across the fold, the said strip being fixed to the cover along the fold only, so as to form a right and left hand wing adapted to turn on the fold independently of the cover, and the underside of the wings being coated with adhesive substance, substantially as described.

2. A paper binder consisting of a flexible cover folded in the middle and a flexible strip placed across the fold of the cover and having at each end a wedge-shaped tongue perforated at its base, the said strip being fixed to the cover along the fold so as to form a right and left hand wing adapted to turn on the fold, and the tongues of the two wings being gummed together, substantially as described.

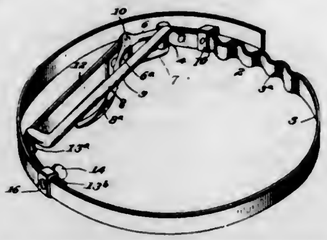
3. A paper binder consisting of a flexible cover folded in the middle and a plurality of flexible strips placed across the fold of the cover and having at each end a wedge-shaped tongue perforated across its base, each strip being fixed to the cover along the fold, so as to form a right and left hand wing adapted to turn on the fold like a hinge, substantially as described.

884,410. HAND-SHEARS. ALEXANDER NICHOLSON and INGWALD T. RUDE, Chicago, Ill. Filed July 20, 1907. Serial No. 384,772.



A pair of hand shears consisting of a pair of cutting members pivotally secured together, the rear ends of said members forming vertical angles with the cutting edges thereof, said ends crossing each other and having a pivot hole, and a pair of handles pivotally secured together near the ends thereof, said ends forming vertical angles to the parallel lines of said handles, said ends crossing each other and having pivot holes corresponding with said pivot holes in said cutting members and being shouldered to fit the outside of said members and thereby adapted to be pivotally connected thereto; and pivot bolts extending through said holes in said members and handles whereby said handles and members are pivotally secured together as described.

884,411. ICE-CREAM SCRAPER. RASMUS NIELSEN, Troy, N. Y., assignor to Catherine Nielsen and Henry S. Giles, Troy, N. Y. Filed Apr. 6, 1907. Serial No. 366,841.



1. An ice cream scraping attachment, comprising a band, a stop on the band at or near one end of the band, a scraper pivotally mounted on the band, and a toggle connection between the point of connection of the scraper to the band, and the stop to lock the attachment in position.

2. A scraping attachment comprising a scraper, means supporting the scraper, a stop, and a toggle connection between the supporting means and the stop to lock the attachment in position.

3. A scraping attachment, comprising a scraper, a pivoted frame supporting the scraper, a link pivoted to the frame, means supporting the frame, and a stop coöperating with the link to secure the attachment in position.

4. A scraping attachment, comprising a band, a frame pivotally mounted on the band, a link mounted on the frame, a stop operable on the band with which the link co-

operates to fix the attachment in position, and a scraper carried by the frame.

5. A scraping attachment comprising a yielding strip adapted to be bent into a continuous band, a stop mounted on the band, a scraper pivoted to the strip, and a scraper overhanging the continuous band, and locking means operable by the scraper for securing the attachment in position.

[Claims 6 to 19 not printed in the Gazette.]

884,412. FOUNTAIN-PEN. FRANK J. OBERDOERSTER and ADOLPH OBERDOERSTER, Akron, Ohio. Filed Nov. 27, 1907. Serial No. 404,108.

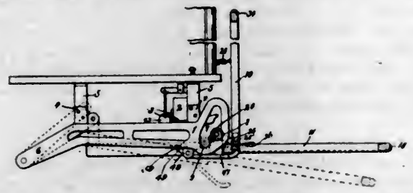


1. In a fountain pen, the combination of an outer casing, an ink tube slidably mounted within said casing and provided with a feeder and pen point upon its outer end, said ink tube having a valved inner end, and said outer casing having means whereby a vacuum may be formed therein when the same is drawn rearwardly upon said ink tube to draw the ink upwardly within said tube, substantially as described.

2. In a fountain pen, the combination with an outer casing, an ink tube slidably mounted therein, said ink tube having a valved inner end and being provided with a feeder and pen point upon its outer end, means for normally locking said ink tube and said outer casing together, and means whereby a vacuum may be formed within said outer casing when the same is drawn rearwardly upon said ink tube, to draw the ink upwardly in said tube, substantially as described.

3. In a fountain pen, the combination of an outer casing, an ink tube slidably telescopingly mounted therein and provided with an inner valved end, a pen point and ink conducting mechanism removably secured to the outer end of said ink tube, means for locking said ink tube and said casing together and means whereby a vacuum may be formed within said outer casing when the same is moved rearwardly upon said ink tube, to draw the ink within said tube, substantially as described.

884,413. AUTOMATIC FENDER. JOHN E. PALMER, Lynn, Mass. Filed Oct. 30, 1907. Serial No. 399,898.



1. In a fender, the combination of supporting members having slots formed with seats arranged at different elevations, a retractive fender having its middle portion provided with means to engage the seats in said slots and support the middle portion of the fender and to drop the same when the fender is struck by an object and moved rearwardly to its retracted position, and links for supporting the rear portion of the fender and elevating it when it is moved rearwardly.

2. In a fender, the combination of supporting members having slots provided with front and rear seats arranged at different elevations, the greatest length or height of said slots being arranged above the foremost seats, a retractive fender having its middle portion provided with means to engage the seats in said slots, and means for supporting the rear portion of the fender whereby said engaging means upon its middle portion may move upwardly in said slots to permit the fender to rise and pass over an object.

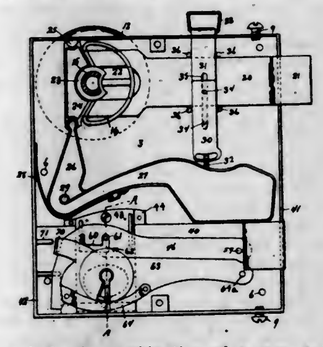
3. In a fender, the combination of supporting members having slots formed with seats arranged at different elevations, a retractive fender, rollers upon the forward portion of the fender and arranged in said slots for engagement with said seats, and links pivoted to said members and to the rear portion of said fender.

4. In a fender, the combination of supporting members having slots formed with seats arranged at different elevations, a retractive fender having side bars, seat engaging means upon said side bars to enter the slots in said members, links connecting said side bars and said members, and a fender section upon said side bars and movable to either a projected or retracted position thereon.

5. In a fender, the combination of supporting members having slots formed with seats arranged at different elevations, a retractive fender having side bars, seat engaging means upon said side bars to enter the slots in said members, links connecting said side bars and said members, a fender section slidably mounted upon said side bars and means for locking said fender section to said side bars.

[Claims 6 to 21 not printed in the Gazette.]

884,414. LOCK. JOSEPH PHILLIPS, Midland, Ontario, Canada. Filed July 1, 1907. Serial No. 381,726.

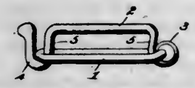


1. In a lock, the combination of a case, a latch bolt mounted therein and having an enlarged rear end provided with inclined cam faces and lateral depressions, a lever mounted in the case and having one end pivoted in one of the depressions, the other end of the lever being weighted, and tending to hold the latch in its outward position, and an independent connecting means secured to the lever and extending beyond the case for operating said bolt from without the case.

2. In a lock, the combination of a case, a bolt therein, a tube extending through said case, a knob on each end thereof, a double cam mounted on said tube and adapted to actuate the bolt, a lever mounted in the case and adapted to engage the bolt to actuate the same, and means to actuate the lever.

3. In a lock, the combination of a case, a bolt therein, a weighted lever, one arm of which engages the bolt, a link connected to the other arm of the lever, a spring to actuate said lever, and connecting means engaging said link whereby the lever and the bolt may be actuated.

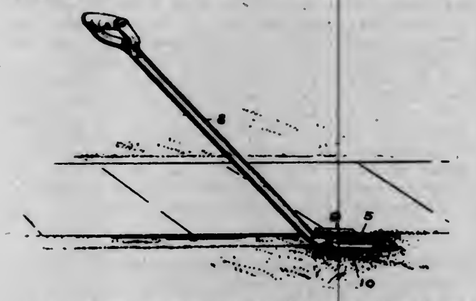
884,415. CHAIN-LINK. THOMAS J. PLUNKETT and WILLIAM SILVERS, Nashville, Tenn. Filed Mar. 3, 1906. Serial No. 304,149.



The herein described detachable chain link comprising a loop, and a tongue having the body portion thereof normally disposed in a plane spaced from and approximately parallel to that of the loop, offset portions being formed in

the tongue toward opposite ends thereof and one end of the tongue being provided with an eye loosely receiving the loop, while the opposite end is formed with a hook detachably engaging the loop, the offset at the swinging end of the tongue constituting one of the sides of the hook.

884,416. SOD-TRIMMER. ROBERT E. POINDEXTER, Indianapolis, Ind. Filed Nov. 7, 1907. Serial No. 401,090.

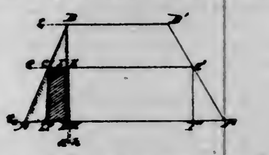


1. A tool for the purposes specified, comprising a concave metal blade sharpened to a point in front, wings projecting outwardly from the longitudinal edges of the blade the front ends of said wings being curved in a reverse direction to the curve of the blade-point, and a handle secured to the blade.

2. A tool for the purposes specified, comprising a concave metal blade pointed in front and sharpened by beveling the top face of said pointed end, gages formed by bending in an outward direction wings formed along the longitudinal edges of the blade, the front ends of said wings being sloped inwardly and forwardly and sharpened on their under sides, and a handle secured to the blade.

3. A tool for the purpose specified, comprising a metal plate bent longitudinally into a V-shape in cross section, the front end of said bent blade being tapered to a middle point and sharpened on the upper face of the plate, gages extending along each longitudinal edge of the blade thus formed and comprising integral wings which are bent outwardly into an approximately horizontal plane, the front ends of said wings being curved in a reverse direction from the curve of said point and being sharpened on their lower faces, and a bent handle secured to the rear of the blade.

884,417. PROCESS OF UTILIZING HOT LIQUIDS FOR POWER PURPOSES. AUGUSTE C. E. RATEAU, Paris, France. Filed Aug. 11, 1906. Serial No. 330,142.



1. The process of effecting the flow of hot liquid, which consists in confining the liquid in its flow to a suitable channel, effecting the separation of vapor from the liquid, permitting the expansion of the separated vapor, and causing the vapor in its expansion to act upon the liquid.

2. The process of effecting the flow of hot liquid, which consists in confining the liquid in its flow to a suitable channel, constricting the flow of the liquid, thereby to effect the separation of vapor therefrom, permitting the expansion of the separated vapor, and causing the vapor in its expansion to act upon the liquid.

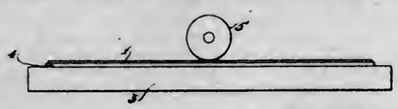
3. The process of effecting the flow of hot liquid, which consists in confining the liquid in its flow to a suitable channel, constricting the flow of liquid, thereby to effect the separation of vapor therefrom, thereafter enlarging the stream of liquid to permit the liberated vapor to expand, and causing the vapor in its expansion to act upon the liquid.

4. The process of effecting the flow of hot liquid, which consists in confining the liquid in its flow to a suitable channel, effecting the separation of vapor from the liquid, permitting the expansion of the separated vapor, causing the vapor in its expansion to act upon the liquid, and thereafter condensing the vapor.

5. The process of effecting the flow of hot liquid, which consists in confining the liquid in its flow to a suitable channel, constricting the flow of the liquid, thereby to effect the separation of vapor therefrom, permitting the expansion of the separated vapor, causing the vapor in its expansion to act upon the liquid, and thereafter condensing the vapor.

[Claims 6 to 12 not printed in the Gazette.]

884,418. PRINTING PROCESS. HENRY L. RECKARD, Peekskill, N. Y. Filed Oct. 30, 1907. Serial No. 399,864.



1. The process which consists in reproducing a desired design on a suitable thin flexible metallic plate, etching the plate thereby raising the design, laying said plate on a smooth and slightly resilient base, inking the raised surfaces of said plate, rolling a metal roller over said plate, thereby transferring the design to said roller, and etching said roller over the uninked surfaces.

2. The process which consists in reproducing a desired design on a suitable thin flexible zinc plate, etching the plate thereby raising the design, laying said plate on a smooth and slightly resilient base, inking the raised surfaces of said plate, rolling a copper roller over said plate, thereby transferring the design to said roller, and etching said roller over the uninked surfaces.

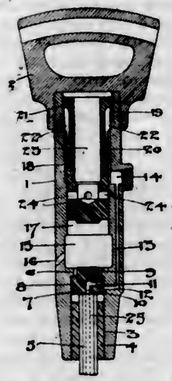
3. The process which consists in reproducing a desired design on a suitable thin flexible metallic plate, etching the plate thereby raising the design, laying said plate on a smooth and slightly resilient base of card board, inking the raised surfaces of said plate, rolling a metal roller over said plate, thereby transferring the design to said roller, and etching said roller over the uninked surfaces.

4. The process which consists in reproducing a desired design on a suitable thin, flexible, metallic plate, etching the plate thereby raising the design somewhat, laying said plate on a smooth and slightly resilient base of card board or its equivalent, inking the raised surfaces of said plate by a thick ink, rolling a metal roller over said plate, thereby transferring the design to said roller, and etching said roller over the uninked surfaces.

884,419. STONEWORKING-TOOL. CHARLES B. RICHARDS, Cleveland, Ohio, assignor to The Cleveland Pneumatic Tool Company, Cleveland, Ohio, a Corporation of Ohio. Filed May 29, 1907. Serial No. 376,304.

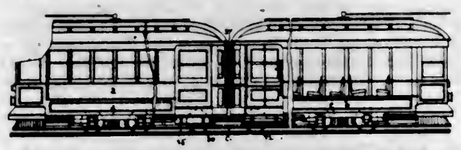
1. In a pneumatic stone working tool, the combination of a barrel or working-cylinder, a plunger reciprocating therein, a tool-socket at the lower end of the barrel, a working-tool in said socket having a longitudinal channel, a striker-chamber above the socket and at the lower end of the plunger-chamber in the cylinder and having an inlet passage through its side and connected to the live-air supply of the tool, and a striker having play in said striker-chamber and formed with a passage communicating with the inlet passage in the side of the striker-chamber and the channel in the working-tool.

2. In a pneumatic stone working tool, the combination of a barrel or working-cylinder, a plunger reciprocating therein, a tool-socket at the lower end of the barrel, a working-tool in said socket and formed with an axial channel, a striker-chamber in the lower end of the barrel between the tool-socket and the lower end of the plunger-chamber in the same and formed with an inlet passage in its side and connected to the live-air supply of the tool, and a striker having play within said striker chamber and formed with a circumferential groove communicating



with the lateral inlet in the chamber and having an axial and lateral passage communicating with the axial passage of the tool and the bottom of the circumferential groove.

884,420. ARTICULATED CAR. MYRON ROUNDS, Boston, Mass. Filed Jan. 18, 1907. Serial No. 352,916.



1. In a car of the class described, in combination, a plurality of car body members or sections, trucks to support the same at the remote ends of adjacent sections or members, and a single truck interposed between the end trucks and extended under the adjacent ends of said members or sections below the floors thereof, and means to pivotally secure the adjacent ends of said members or sections separately to said single truck, substantially as described.

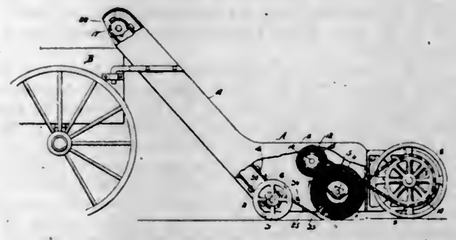
2. In a car of the class described, in combination, a plurality of car body members or sections provided with side steps at their adjacent ends, trucks to support the remote ends of said members, and a center truck interposed between the said end trucks and extended under the adjacent ends of said members below the floors thereof, said center truck being provided with axles having journal bearings between the wheels thereon, side bars supporting said journal bearings and a cross bar secured to said side bars between said wheels and substantially in line with the adjacent ends of said body members, and means to pivotally secure said adjacent ends to said cross bar, substantially as described.

3. In a car of the class described, in combination, two car body members, trucks to support the remote ends thereof, and a center truck extended under both body members below the level of the floors thereof and to which the adjacent ends of said members are separately pivoted, substantially as described.

4. In a car of the class described, in combination, two car body members, trucks to support the remote ends thereof, and a center truck extended under both body members below the level of the floors and having separate pivots for the adjacent ends of said members, substantially as described.

5. In a car of the class described, in combination, two car body members provided with doors in their sides at opposite ends thereof, trucks to support the same at the remote ends of said car body members, a single center truck interposed between the end trucks and extended under the adjacent ends of said members below the floors thereof, separate pivots on said center truck for the adjacent ends of said members, and bearings on said center truck at its opposite ends to form additional supports for the adjacent ends of said members, substantially as described.

884,421. STREET-SWEEPER. MATHEW V. RUFF, Smyrna, Ga. Filed June 28, 1906. Serial No. 323,757.



A street sweeper comprising a casing and a neck extending therefrom, sweeping mechanism housed by the casing and including a main and an auxiliary brush, a conveyer arranged within the neck and within the casing, a deflecting plate pivotally supported in an inclined position by the casing and extending from the main brush to a point adjacent to the conveyer, the lower edge of the plate being designed to contact with the surface over which the sweeper is moved, means for limiting the downward movement of the plate, extensions projecting from the casing, a shaft supported by the extensions, traction and sprocket wheels carried by the shaft and lying within the planes of the sides of the casing, and sprocket chain connections between the sprocket wheels and sweeping mechanism, said chain connections being so guided as to rotate the auxiliary brush in the same direction as the main brush.

884,422. WRENCH. WILLIAM SCHMITT, Baltimore, Md. Filed Aug. 6, 1907. Serial No. 387,337.



1. In a wrench, the combination, of the main bar or shank having a fixed jaw at its upper end and a handle at its lower end, a jaw slidable on the bar or shank to and from the fixed jaw and having a threaded recess at its lower end, an adjusting-screw threaded in said recess and provided with a head at its lower end, and a lever pivoted to the main bar or shank and having at its upper end a bifurcated upper jaw and a lower jaw which engage the upper and lower sides respectively of the head of the adjusting-screw, said lever having a handle at its lower

end movable to and from the handle of the main bar or shank, substantially as shown and described.

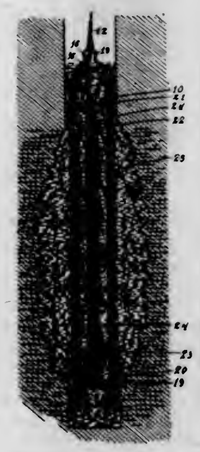
2. In a wrench, the combination, of the main bar or shank having a fixed jaw at its upper end and a handle at its lower end, a jaw slidable on the bar or shank to and from the fixed jaw and having a threaded recess in its lower end, an adjusting-screw threaded in said recess and provided with a head at its lower end, the latter having a recess in its underside, a lever pivoted to the main bar or shank and having at its upper end a bifurcated upper jaw and a solid lower jaw which engage the upper and lower sides respectively of the head of the adjusting-screw, and a retaining screw threaded through the solid lower jaw of the pivoted lever with its end loosely engaging the recess in the head of the adjusting-screw, as herein shown and described.

3. In a wrench, the combination, of the main bar or shank having a fixed jaw at its upper end and a handle at its lower end, a jaw slidable on the bar or shank to and from the fixed jaw and having a threaded recess in its lower end, an adjusting-screw threaded in said recess and provided with a head at its lower end, a pivoted lever engaging at its upper end the head of the adjusting-screw and at its lower end formed with a handle movable to and from the handle of the main bar or shank, a spring for normally separating the handles, a toothed latch-bar carried by one of said handles, a rotatable block pivoted in the other handle and having a curved portion and opposite shoulders, one of which latter serving as a catch-shoulder for the latch, and stops on said handle with which said shoulders engage respectively to position said block with either the curved surface or catch-shoulder opposed to the latch-bar, substantially as shown and for the purpose set forth.

884,423. METHOD OF PRODUCING AMMONIA. OTTOKAR SERPEK, Madulein, Switzerland. Filed May 24, 1907. Serial No. 375,451.

The method of producing ammonia which consists in boiling aluminum nitrid with water, at temperatures above 100° centigrade and below 200° centigrade under pressure, substantially as described.

884,424. ELECTRICAL FLUID-HEATER. MARK T. SEYMOUR, Bemus Point, and ALTON W. BALL, Stowe, N. Y. Filed Dec. 2, 1907. Serial No. 404,738.



1. An electrical heater for fluids consisting of an open-ended metal tube, spiders or racks carried by said tube within the same, said spiders insulated from said tube, a connecting rod for said spiders, tubular carbon over said metal connecting rod, separate electrical connection for said metal tube and for said connecting rod, said metal tube being sufficiently large to allow free flow of the fluid between said tube and said carbon and rod.

2. An electrical heater for fluids consisting of an open-ended metal tube of equal diameter throughout, spiders or racks of insulating material supported within said tube, a metal rod connecting said spiders, tubular carbon sections around said connecting rod, and separate wires connected to said metal tube and said connecting rod, substantially as and for the purpose specified.

3. An electrical heater for fluids consisting of an open-ended metal tube, spiders or racks of insulating material within said tube, said spiders having supports within said tube, a metal rod connecting said spiders, a tubular covering for said connecting rod consisting in part of electrical conducting material and in part of non-electrical conducting material, separate electrical wires connected to said metal tube and said connecting rod, said heater having space for the free flow of the fluid through said metal tube.

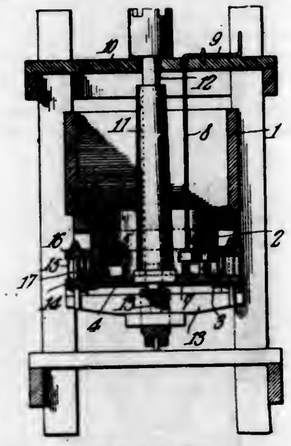
4. An electrical heater for fluids consisting of an open-ended metal tube, three spiders of insulating material having suitable supports at spaced distances within said metal tube, a metal rod connecting the central spider and a spider at or near one end of said tube, tubular carbon sections around said rod, a metal tube connecting said central spider and the spider at or near the other end of said metal tube, tubular carbon sections slipped on to said metal connecting tube, tubular insulation within said metal connecting tube, an electric wire extending down through said tubular insulation to said connecting rod, a second wire connected to said connecting tube, and a third wire connecting said open-ended metal tube, said open-ended metal tube having free space for the flow of the fluid between said carbon and said open-ended metal tube.

884,425. GARMENT-CLASP. JOHN M. SINER, Brooklyn, N. Y. Filed Sept. 28, 1907. Serial No. 394,977.



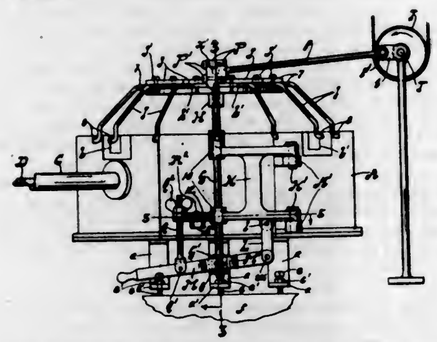
A garment clasp comprising a frame or plate having a button and offset rearwardly at the middle portion of its length, a loop or jaw member to receive said button, and a rigid sheet metal link folded over at one end to form an eye in substantially the plane of said link to embrace said loop or jaw member and pivoted to said frame at its other end at a point on the side of said offset portion of the frame towards said button and near the surface of said frame, said link being offset at its middle portion at a point corresponding to the offset portion of said frame whereby said link swings into a locking relation in use.

884,426. TURBINE WATER-WHEEL. JOHN A. SMITH, Combs, Ark. Filed Sept. 4, 1907. Serial No. 391,293.



A water wheel comprising a member mounted for rotation, rings supported upon said member, vanes interposed between the rings, bolts passing through the rings and clamping the vanes in position and a sump centrally located and having outlets disposed toward the vanes.

884,427. APPARATUS FOR CARRYING AND HEATING CHAIN-LINK BLANKS, &c. PHILANDER H. STANDISH, Cleveland, Ohio. Filed Apr. 24, 1907. Serial No. 370,085.



1. In combination, a vertically shiftable blank-carrier comprising blank-holders for receiving and carrying the blanks to be heated; blank-heating means arranged to heat the blanks carried by the blank-carrier in the normal and operative position of the blank-carrier; means for actuating the blank carrier; means for raising the blank-carrier out of its operative position, and a laterally movable support bearing the blank-carrier.

2. In combination, a blank-carrier shiftable up and down and comprising blank-holders for receiving and carrying the blanks to be heated; blank-heating means arranged to heat blanks carried by the blank-carrier in the operative position of the blank-carrier; means for raising the blank-carrier out of its operative position, and a laterally movable support bearing the blank-carrier.

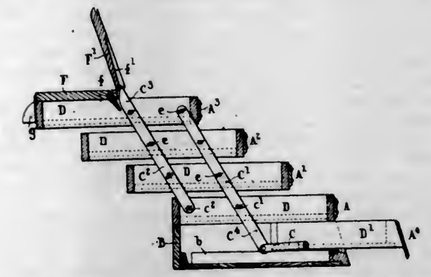
3. In combination, a blank-carrier shiftable up and down and comprising blank-holders for receiving and carrying the blanks to be heated; blank-heating means arranged to heat blanks carried by the blank-carrier in the operative position of the blank-carrier; means for raising the blank-carrier out of its operative position; a laterally movable support bearing the blank-carrier, and means for locking the blank-carrier against displacement laterally relative to the heating means in the operative position of the blank-carrier.

4. In combination, a vertically shiftable and laterally shiftable blank-carrier and comprising blank-holders for receiving and carrying the blanks to be heated; blank-heating means arranged to heat the blanks carried by the blank-carrier in the normal and operative position of the blank-carrier; means for actuating the blank-carrier, and means for locking the blank-carrier against displacement laterally relative to the blank-heating means in the normal and operative position of the blank-carrier.

5. In combination, a vertically shiftable and laterally shiftable rotary blank-carrier comprising blank-holders suitably spaced from and circumferentially of the axis of the blank-carrier; blank heating means arranged at one side of the axis of the carrier and in position to heat the blanks carrier by the blank-carrier; means for actuating the blank-carrier, and means for locking the blank-carrier against displacement laterally relative to the blank-heating means in the normal and operative position of the blank-carrier.

[Claims 6 to 30 not printed in the Gazette.]

884,428. CABINET OR NEST OF TRAYS. GEORGE STRONG, London, England. Filed July 9, 1907. Serial No. 382,927.



1. A cabinet comprising a stationary base, a series of movable trays having duplex lateral walls, and parallel levers fulcrumed on the base and pivotally connected with each of said trays between the lateral walls thereof.

2. A cabinet comprising a stationary base, a drawer slidably mounted on said base, a series of movable trays located above the base, and a lever fulcrumed on the base and pivotally connected with each of said trays and with said drawer.

3. A cabinet comprising a stationary base, a series of movable trays located above said base, a movable lid secured to the uppermost tray and a lever fulcrumed on the base and pivotally connected with each of said trays, and arranged to engage said lid to open it as the trays are moved from their normal position.

4. A cabinet comprising a stationary base, a series of movable trays located above said base, levers fulcrumed on the base at opposite sides thereof and pivotally connected with each of said trays at opposite sides thereof, a drawer slidably mounted on said base and links connecting said drawer with said levers.

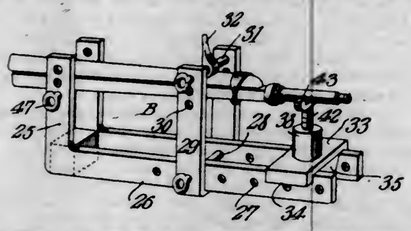
5. A cabinet comprising a stationary base, a series of movable trays located above said base, a movable lid secured to the uppermost tray, and levers fulcrumed on said base at opposite sides thereof and pivotally connected with each of said trays, said levers being provided with extensions arranged to engage said lid and open it as the trays are moved from their normal positions.

[Claim 6 not printed in the Gazette.]

884,429. AXLE-STRAIGHTENER. JOHN Q. TAYLOR, Cooper, Tex. Filed Sept. 27, 1907. Serial No. 394,920.

1. A device of the character described comprising spaced bars connected at one end and constituting the base of a

body, said bars having integral spaced arms extending from the connected ends thereof, a yoke embracing and slidable upon the base, means for securing the yoke in adjusted position, separate means upon the arms and yoke for engaging an object to be bent, and a jack slidably mounted upon and projecting between and embracing the bars of the base.



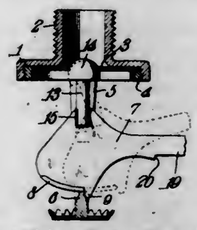
2. The combination with spaced parallel angular bars connected at their angle portions and forming a base and arms; of a yoke embracing the base and slidable thereon, means extending through the yoke and base for locking the parts together, adjustable retaining devices carried by the arms and yoke, a cam carried by one of said devices, and a jack adjustably mounted on the base.

3. In a device of the character described the combination with a body having spaced arms for the reception of an object to be bent, and means adjustably mounted within the arms for retaining an object therebetween; of a bed plate adjustably mounted upon the body, an object engaging jaw, and revoluble screw threaded means interposed between the jaw and bed plate for directing said jaw toward or away from said object.

4. In a device of the character described the combination with a body having parallel arms at the ends thereof; of retaining pins adjustably mounted within the arms, saddles coöperating therewith and interposed between the arms, and a jack upon the body and adjustable toward the ends thereof.

5. A device of the character described comprising a body, arms at one end thereof, a yoke adjustably mounted upon the body, separate means upon the arms and yoke for engaging an axle, a jack adjustably mounted upon the body, and means carried by one of the axle engaging devices for taking up play between the axle and said device.

884,430. DEVICE FOR PLUGGING SPRINKLER-HEADS. ALBERT Y. THORNTON and ARTHUR L. MUNROE, Johnston, R. I. Filed Nov. 21, 1907. Serial No. 403,218.

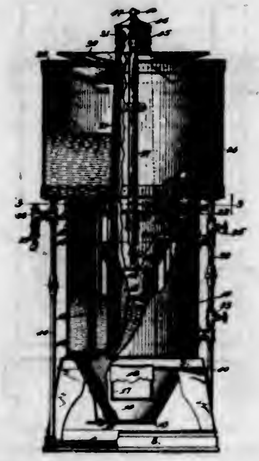


1. As a new article of manufacture, a closure for sprinkler-heads embodying a handle having a seat, the end wall of which is beveled transversely to the length of the handle, and a plug provided with a shank fusibly held within the seat and having its end beveled to engage the said wall.

2. As a new article of manufacture, a closure for sprinkler-heads embodying a handle having a cam on one side thereof and a seat opposite the cam, and a plug having a shank fusibly held within the seat.

3. As a new article of manufacture, a closure for sprinkler-heads embodying a handle having a cam on one side thereof that projects laterally beyond the handle and a seat opposite the cam and a plug having a shank fusibly held within the seat.

884,431. STEAM-BOILER. LAWRENCE J. TRACY, St. Louis, Mo. Filed Nov. 12, 1907. Serial No. 401,868.



1. A portable steam boiler comprising a boiler, a water receptacle, a continuous flue passing centrally through the boiler and water receptacle, a plurality of pipes passing through the boiler around the flue, a furnace communicating with the boiler, a heat chamber formed between the boiler and water receptacle, means for regulating the circulation of heat between the boiler and water receptacle and a damper for regulating the circulation of heat through the center flue, substantially as specified.

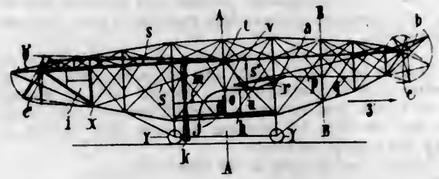
2. A device of the class described comprising a boiler, a water receptacle mounted upon the boiler, a furnace located beneath the boiler, a central flue located in the boiler, and in the water receptacle a plurality of pipes located in the boiler around the center flue, a heat chamber located between the top of the boiler and the water receptacle, a pipe connection for admitting water from the water receptacle to the boiler, a damper located in the top of the center flue of the water receptacle, means for regulating the circulation of hot gases in the heat chamber between the boiler and water receptacle, a steam supply pipe, a swivel joint connection mounted upon the steam pipe, a telescopic pipe connection, connected to the swivel-joint, and a steam distributing pan whereby steam is admitted to the article desired, substantially as specified.

3. A device of the class described, comprising a boiler, a water receptacle, a furnace, a supporting frame and a base all supported together, a central tapering flue located in the boiler, a plurality of pipes extending through the boiler, a central tapering flue located in the water receptacle, and communicating with the flue of the boiler, a perforated dished head located in the water receptacle through which water is admitted to the water receptacle, a shield located upon the dish to prevent foreign matter from passing through the perforation, and into the water receptacle, a damper cap slidably mounted in the top of the flue of the water receptacle, a pipe connection permitting the flow of water from the water receptacle to the boiler, a damper located on the upper edge of the boiler to permit the circulation of heat between the top of the boiler, and the water receptacle and a steam pipe for delivering the steam, substantially as specified.

4. A device of the class described comprising a boiler, a flue located centrally in the boiler, a cone located around the flue, into which water is admitted, and allowed to percolate downwardly against the flue, a water receptacle a furnace located beneath the boiler, a central flue located in the water receptacle, and communicating with the flue of the boiler, and a plurality of dampers for regulating the distribution of heat, substantially as specified.

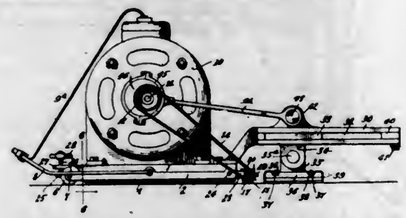
5. A boiler of the class described, comprising a boiler a water receptacle mounted upon the boiler, a furnace located beneath the boiler, a central flue located in the boiler and in the water receptacle, means for admitting water from the water receptacle to the boiler, and means for admitting a steady flow of water to contact with the central flue of the boiler, to keep said boiler supplied with the same amount of water, as is converted into steam, a plurality of flues for regulating the distribution of heat, a steam pipe and a means for conducting the steam to the wall or ceiling of a room, so that the wall paper can be readily and easily removed, substantially as specified.

884,432. AEROPLANE. MELVIN VANIMAN, Geneviliers, France. Filed Nov. 27, 1906. Serial No. 345,394.



In an aeroplane, an oblong horizontal plane having its side edges bent below the horizontal, a part *b b'* hinged to each end of the horizontal plane, a vertical plane below the horizontal plane and following the longitudinal axis thereof, said vertical plane having a portion extending above the horizontal plane, a rudder, screws and means for driving the screws.

884,433. FLOOR-DRESSING APPARATUS. LOUIS H. VERONNEAU, DIT VERNON, Vlauville, near Montreal, Quebec, Canada, assignor of one-half to Henry U. Beck, Montreal, Canada. Filed May 23, 1907. Serial No. 375,220.



1. A floor polishing apparatus comprising the combination of a base plate, skids on the base plate, a rotatable dressing tool adjustably supported from the base plate, and means for actuating the dressing tool.

2. A floor dressing apparatus comprising a base plate, supporting skids on said base plate, and mounted at the opposite sides thereof a dressing tool carried by said base plate, and means for operating said dressing tool.

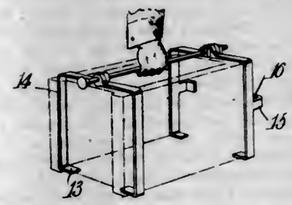
3. A floor dressing apparatus comprising the combination of a base plate, skids removably secured on the base plate, a rotatable dressing tool adjustably supported from the base plate, and means on the base plate for rotating the tool.

4. A floor dressing apparatus comprising the combination of a base plate provided with vertical flanges having channels therein, skids secured in the channels, a rotatable dressing tool adjustably supported from the base plate, and means for rotating the tool.

5. A floor dressing apparatus comprising the combination of a base plate provided with flanges having channels disposed therein, skids secured in the channels, rollers disposed in the channels at one end of the base plate, a dressing tool adjustably supported from the base plate, and means for rotating the tool.

[Claim 6 not printed in the Gazette.]

884,434. DEVICE FOR CARRYING AND SETTING CONCRETE BLOCKS. DANIEL S. WOLGAMOTT, Millersburg, Ohio. Filed Sept. 4, 1907. Serial No. 391,314.



1. A carrier for concrete blocks including a supporting member, and a plurality of sets of gripping jaws pivotally mounted for lateral movement on the supporting member and provided with fingers adapted to engage the base of the block, the gripping jaws of one set being provided with intermediate fingers for engagement with the adjacent end of the block.

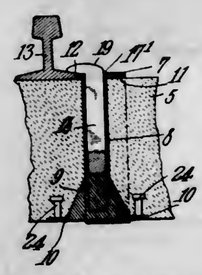
2. A carrier for concrete blocks including a supporting member, and a plurality of sets of relatively stationary and movable gripping jaws pivotally mounted for lateral movement on the supporting member and provided with fingers adapted to engage the base of the block, the intermediate portions of one set of gripping jaws being provided with similar fingers for engagement with the adjacent end of the block.

3. A carrier for concrete blocks including a rod having a threaded portion, a sleeve engaging the threaded portion of the rod, longitudinally adjustable gripping jaws slidably mounted on the rod and provided with fingers for engagement with the base of the block, relatively stationary gripping jaws engaging the sleeve and provided with similar fingers, and nuts engaging the threads on the rod and bearing against the stationary gripping jaws.

4. A carrier for concrete blocks including a supporting rod, and a plurality of relatively stationary and movable gripping jaws pivotally mounted for lateral movement on the rod and provided with terminal fingers adapted to grip the base of the block, the pivoted ends of the gripping jaws being provided with enlargements having perforations formed therein for the reception of the rod.

5. A carrier for concrete blocks including a supporting rod having one end thereof provided with a threaded portion and its opposite end provided with an enlarged head, a sleeve engaging the threaded portion of the rod, relatively stationary gripping jaws pivotally mounted for lateral movement on the sleeve, longitudinally adjustable gripping jaws slidably mounted on the rod in spaced relation to the stationary jaws, said gripping jaws being provided with terminal fingers adapted to engage the base of the block, and clamping nuts engaging the threads on the rod and bearing against the stationary gripping jaws.

884,435. RAILWAY-RAIL FASTENER. CHARLES WALTON, Woodbury, N. J. Filed Aug. 24, 1907. Serial No. 390,069.



1. A cross tie including a concrete body portion having its opposite ends provided with reinforcing bands, tubular members embedded in the concrete at said bands and

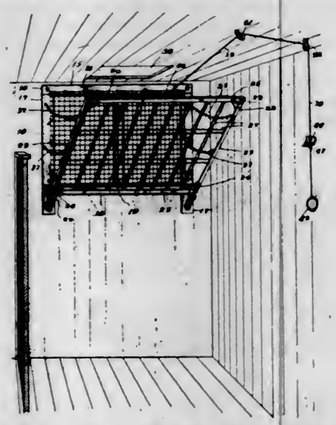
each provided with oppositely disposed flanges, a wedge disposed within each tubular member at the bottom thereof and spikes piercing the reinforcing bands and the adjacent flanges of the tubular members and having their lower ends bifurcated and adapted to engage the wedges for forcing the bifurcated ends of the spikes into engagement with the adjacent walls of the tubular members.

2. A cross tie including a concrete body portion, a tubular member embedded in the concrete and having its upper end provided with an anchoring flange and its lower end flared laterally and provided with a similar flange, a wedge disposed within the flared portion of the tubular member and spaced from the walls of said tubular member to form converging passages, reinforcing bands surrounding the cross tie at said flanges, and a spike piercing the reinforcing band and the adjacent flange and having its lower end bifurcated and adapted to engage the apex of the wedge for deflecting the bifurcated end of the spike into engagement with the walls of the converging passages.

3. A cross tie including a concrete body portion, spaced reinforcing bands secured to the opposite ends of the body portion, tubular members embedded in the body portion and each having one end thereof provided with a flange having one side thereof cut away to form a stop shoulder, the opposite end of the tubular member being flared laterally and provided with an annular flange engaging the cross tie beneath the adjacent reinforcing band, wedges disposed within the flared portions of the tubular members and forming converging passages, and spikes having their lower ends bifurcated and adapted to engage the wedges for directing the bifurcated ends of the spikes laterally into engagement with the walls of the converging passages.

4. A cross tie including a concrete body portion, a tubular member embedded in the body portion and having one end thereof provided with a flange engaging the upper surface of the cross tie, a flange formed on the lower end of the tubular member and engaging the base of the cross tie, the walls of the tubular member at the lower flange being flared laterally, a wedge disposed within the flared portion of the tubular member and forming converging passages, there being cleaning orifices formed in the base of the tubular member and communicating with said passages, and a spike having its lower end split longitudinally to form bendable arms, the terminals of which are inclined towards the split portion of the spike and adapted to engage the apex of the wedge for deflecting said arms in engagement with the walls of the converging passages.

884,436. FEEDER. GEORGE B. WARREN, Rockford, Ill. Filed Dec. 17, 1906. Serial No. 348,117.



1. In a feeder, the combination with a perforate back adapted to be secured to a wall, a rack pivotally connected to said back, and means operating automatically to move the rack towards said back to pack the material between the back and the rack.

2. In a feeder, the combination of a back adapted to be secured to a wall and formed of a frame and wire netting, a rack pivotally connected to the back, and means operating automatically to move the rack toward said back to pack the material between the back and the rack.

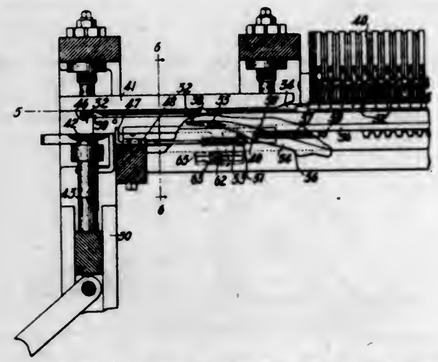
3. In a feeder, the combination of a perforate back adapted to be secured to a wall, a rack pivotally connected to said back, means for causing the rack to move towards the back to hold the feeding material therebetween, and means for temporarily holding the rack in position to receive a charge of material.

4. In a feeder, the combination of a rack, means for pivotally supporting said rack comprising a pair of brackets and springs interposed between said brackets and the rack, for pressing the rack into position to pack the feeding-material.

5. In a feeder, the combination of a back adapted to be secured to a wall, a rack, and means for pivotally supporting said rack comprising a pair of brackets secured to said back, and springs interposed between said brackets and the rack for pressing the rack into position to pack the feeding-material.

[Claim 6 not printed in the Gazette.]

884,437. MACHINE FOR TACKING SHOE-SHANKS. BRADFORD B. WATERMAN, East Bridgewater, Mass., assignor to The American Shoe Finding Company, a Corporation of Maine. Filed Sept. 26, 1907. Serial No. 394,686.



1. In a machine for fastening two pieces of material together by means of a tack or the like, means for introducing a tack into one piece, means for driving said tack into a second piece, and means to move said second piece out of operative relation with said driving means when said first piece fails to receive a tack.

2. In a machine for fastening two pieces of material together by means of tacks or the like, means for introducing two tacks into one piece, means for driving said tacks into a second piece, and means to move said second piece out of operative relation with said driving means when said first piece fails to receive two tacks.

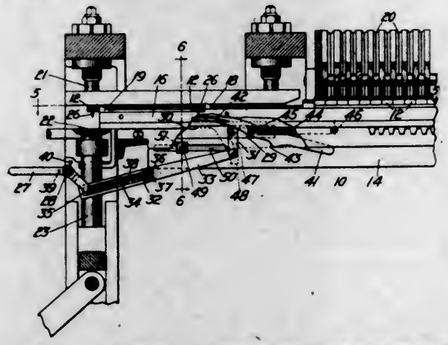
3. In a machine for fastening two pieces of material together by means of a tack or the like, means for introducing a tack into one piece, means for driving said tack into a second piece, and means to move said second piece out of operative relation with said driving means when said first piece fails to receive a tack, said last-named means being adapted to dwell for a period of time in position to prevent the introduction of said second piece into operative relation with said driving means.

4. In a machine for fastening two pieces of material together by means of tacks or the like, means for introducing two tacks into one piece, means for driving said tacks into a second piece, and means to move said second piece out of operative relation with said driving means when said first piece fails to receive two tacks, said last-named means being adapted to dwell for a period of time in position to prevent the introduction of said second piece into operative relation with said driving means.

5. In a machine for fastening two pieces of material together by means of a tack or the like, means for introducing a tack into one piece, means for driving said tack into a second piece, and means to move said second piece out of operative relation with said driving means when said first piece fails to receive two tacks, said last-named means being adapted to dwell for a period of time in position to prevent the introduction of said second piece into operative relation with said driving means.

[Claims 6 to 26 not printed in the Gazette.]

884,438. MACHINE FOR TACKING SHOE-SHANKS. BRADFORD B. WATERMAN, East Bridgewater, Mass., assignor to The American Shoe Finding Company, a Corporation of Maine. Filed Sept. 26, 1907. Serial No. 394,687.



1. In a machine for fastening two pieces of material together by means of a tack or the like, means for introducing a tack into one piece, means for driving said tack into a second piece, and means to prevent the introduction of said second piece into operative relation with said driving means, said last named means being adapted to be actuated by said tack to permit the introduction of said second piece.

2. In a machine for fastening two pieces of material together by means of tacks or the like, means for introducing two tacks into one piece, means for driving said tacks into a second piece, and means to prevent the introduction of said second piece into operative relation with said driving means, said last named means being adapted to be actuated by both of said tacks to permit the introduction of said second piece.

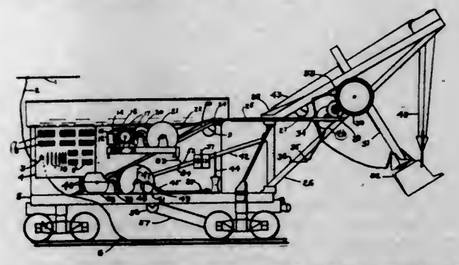
3. In a machine for fastening two pieces of material together by means of a tack or the like, means for introducing a tack into one piece, means for driving said tack into a second piece, means for feeding said first piece from said tack introducing means toward said driving means, and means to prevent the introduction of said second piece into operative relation with said driving means, said last named means being adapted to be actuated by said tack during said feeding movement to permit the introduction of said second piece.

4. In a machine for fastening two pieces of material together by means of tacks or the like, means for introducing two tacks into one piece, means for driving said tacks into a second piece, means for feeding said first piece from said tack introducing means toward said driving means, and means to prevent the introduction of said second piece into operative relation with said driving means, said last named means being adapted to be actuated by both of said tacks during said feeding movement to permit the introduction of said second piece.

5. In a machine for fastening two pieces of material together by means of a tack or the like, means for introducing a tack into one piece, means for driving said tack into a second piece, a raceway, means for feeding said first piece from said tack introducing means along said raceway toward said driving means, and means to prevent the introduction of said second piece into operative relation with said driving means, said last named means being adapted to be actuated by said tack during said feeding to permit the introduction of said second piece.

[Claims 6 to 24 not printed in the Gazette.]

884,439. POWER-EXCAVATOR. JOHN B. WEBBER, Jr., Toledo, Ohio, assignor to The Vulcan Iron Works Company, Toledo, Ohio, a Corporation of Ohio. Filed Jan. 15, 1908. Serial No. 410,891.



1. A power excavator comprising a digging member, a directing member therefor, rotatable means to actuate the directing member, a boom, and a dead-centerless prime mover on the boom to actuate the means.

2. A power excavator comprising a vehicle, a digging member carried thereby, a prime mover for thrusting the member, a prime mover for swinging the member, a power receiving and distributing board carried by the vehicle, and a starting device for each prime mover.

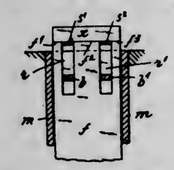
3. A power excavator comprising a vehicle, a digging member carried thereby, a prime mover for pulling the member, a prime mover for swinging the member, a prime mover for thrusting the member, and connecting means for conducting power to and from the vehicle.

4. A power excavator comprising a vehicle, a digging member, prime movers for operating the member, a power receiving and distributing board, and controllers for the prime movers by which the power is distributed.

5. A power shovel having a boom, a dipper or shovel provided with a handle mounted in the boom, a shaft geared to actuate the handle, a prime mover on the boom, and a second shaft between the prime mover and handle driving shaft.

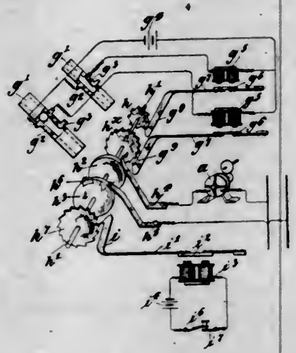
[Claims 6 to 12 not printed in the Gazette.]

884,440. BRICK-MOLDING APPARATUS. PAUL WERNICKE, Ellenburg, Germany, assignor to The Firm of Dr. Bernhardi Sohn G. E. Draenert, Ellenburg, Germany. Filed Dec. 27, 1906. Serial No. 349,740.



In a brick molding apparatus the combination with a mold of a follower, the bearing surface of which is provided with recesses, transverse bars in said recesses, said bars being fixed in the mold in such relation to the surface of the follower as to form therewith a continuous surface conforming to that of the underside of the brick when the follower is in its lowest position, and a forked support, movable above the mold and having its arms located to pass into the recesses of the follower for the purpose set forth.

884,441. COIN-CONTROLLED APPARATUS. JOHN A. WEBER, New York, N. Y. Filed June 23, 1906. Serial No. 322,998.



1. In a coin controlled apparatus, a delivery mechanism adapted to make a single delivery at each operation and to remain inactive after each operation until operated again; means to set the same forward from its normal position and by a single operation of the setting means through a plurality of steps to permit of a plurality of operations in succession; and means to operate said delivery mechanism successively in a series of step by step operations until it is returned to its normal position.

2. In a coin controlled apparatus, a delivery mechanism adapted to make a single delivery at each operation and to remain inactive after each operation until operated again; means to set the same forward from its normal position and by a single operation of the setting means through a plurality of steps to permit of a plurality of operations in succession; controlling devices to determine the extent of such forward setting of the delivery mechanism; and independently actuated means to operate said delivery mechanism successively in a series of step by step operations until it is turned to its normal position.

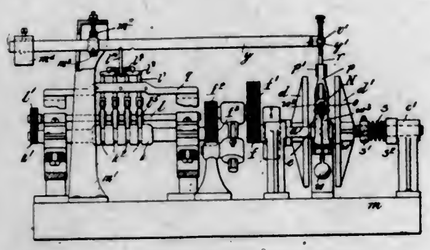
3. In a coin controlled apparatus, delivery devices adapted to make a single delivery at each operation and to remain inactive after each operation until operated again; controlling means therefor capable of being moved in one direction and at a single operation to set the same to permit of a plurality of operations in succession, and in the opposite direction to permit successive operations of the delivery devices; devices to move said controlling means forward in the first named direction and by a single operation of the moving means through a plurality of steps; and devices to move said controlling means successively in a series of step by step operations in the opposite direction until said controlling means are returned to normal position.

4. In a coin controlled apparatus, delivery devices adapted to make a single delivery at each operation and to remain inactive after each operation until operated again; a motor therefor; controlling devices for said motor movable in one direction to set the motor in operation and in the opposite direction to bring the motor to rest; actuating devices to advance said controlling means by a single operation through a plurality of steps; and independently operated devices to move said controlling means successively in the opposite direction in a series of step by step operations until said controlling means are returned to normal position.

5. In a coin controlled apparatus, delivery devices adapted to make a single delivery at each operation and to remain inactive after each operation until operated again; an electric motor therefor; traveling contacts included in the circuit of said motor; actuating means for moving said contacts in one direction and by a single operation through a plurality of steps to start and continue the operation of the motor; and independently actuated means for moving said contacts successively in the opposite direction in a series of step by step operations until the motor is brought to rest.

[Claims 6 to 12 not printed in the Gazette.]

884,442. SLIVER-EVENING MECHANISM FOR DRAWING-FRAMES. VALORUS S. WESTCOTT, Pawtucket, and FRANK W. POTTER, Central Falls, R. I. Filed July 10, 1906. Serial No. 325,446.



1. In a sliver evening mechanism the combination of an evener roll and means to rotate the same, a shaft geared to said roll, a detector roll coöperating with the evener roll and bearing directly upon the sliver, said detector roll being keyed on said shaft so as to be capable of an eccentric movement relatively thereto when moved upon any variation in the weight of the sliver, and means actuated by said detector to vary the rate of feed of the sliver.

2. In a sliver evening mechanism the combination of an evener roll and means to rotate the same, a shaft geared to said roll, a detector coöperating with the evener roll and bearing directly upon the sliver said detector comprising an inner roll keyed to said shaft, an outer roll surrounding and keyed to the inner roll, the internal diameters of said rolls being such as to permit of an eccentric movement relatively to each other and to the shaft upon a variation in the weight of the sliver, and means actuated by said detector to vary the rate of feed of the sliver.

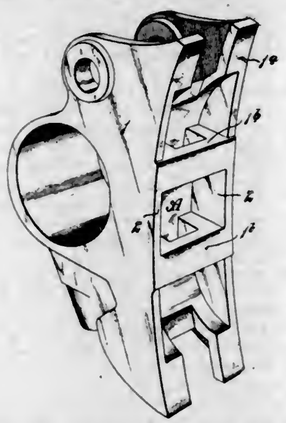
3. In a sliver evening mechanism the combination of an evener roll having a peripheral groove therein, a yielding detector seated within said groove and bearing directly upon the sliver thereby confining it on all sides, a shaft geared to the evener roll and upon which said detector is mounted, said detector consisting of an inner roll keyed to said shaft, an outer roll surrounding and keyed to the inner roll, the internal diameters of said rolls being such as to permit of an eccentric movement relatively to each other and to the shaft upon a variation in the weight of the sliver, and means actuated by said detector to vary the rate of feed of the sliver.

4. In a sliver evening mechanism the combination of an evener roll, means for rotating said roll, a detector adapted to be moved by variations in the weight of the sliver, mechanism to vary the speed of rotation of said roll comprising complemental wedge blocks so mounted as to move in directions at right angles to each other, and connections between said detector and one of said blocks whereby the movement of the detector controls the movements of said blocks to effect a variation in the rate of feed of the sliver.

5. In a sliver evening mechanism the combination of a detector adapted to be moved by variations in the weight of the sliver, and mechanism for varying the rate of feed of the sliver according to variations in its weight comprising driving and driven disks, a movable wheel in frictional engagement with said disks, a wedge-shaped member connected to said detector, and a complemental wedge-shaped member connected to said friction wheel, said members being movable one over the other by the movement of the detector to thereby vary the position of the friction wheel relatively to said disks.

[Claim 6 not printed in the Gazette.]

884,443. BRAKE-HEAD. CHARLES H. WILLIAMS, Jr., Chicago, Ill., assignor to Chicago Railway Equipment Company, Chicago, Ill., a Corporation of Illinois. Filed July 3, 1907. Serial No. 382,024.



1. A brake head provided on its front face with a pair of key lugs, and reinforcing webs connecting said lugs together; substantially as described.

2. A brake head provided adjacent its ends with jaws, key lugs located intermediate said jaws, and reinforcing webs connecting said key lugs together; substantially as described.

3. A brake head provided at its opposite ends with jaws, a pair of key lugs located intermediate said jaws, and reinforcing webs connecting the lugs together and also connecting the lugs and jaws together; substantially as described.

4. A cast metal brake head comprising a body portion provided adjacent its opposite ends with jaws, key lugs arranged intermediate said jaws, and reinforcing webs formed integral with the body portion and bridging the space between said lugs; substantially as described.

5. A cast metal brake head having a concaved front face provided with a pair of integral lugs of approximately inverted U-shape, said lugs being spaced away from each other, and reinforcing webs bridging the space between said lugs; substantially as described.

[Claim 6 not printed in the Gazette.]

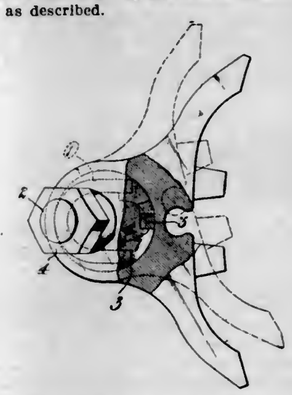
884,444. BRAKE-BEAM. CHARLES H. WILLIAMS, Jr., Chicago, Ill., assignor to Chicago Railway Equipment Company, Chicago, Ill., a Corporation of Illinois. Filed Nov. 15, 1907. Serial No. 402,312.

1. The combination of a brake beam, an end casting extending over the end of said beam and having a portion that is capable of being notched at different points so as to impart different throws to the brake head, and a brake head provided with a rigid lug or projection that enters the notch in said end casting; substantially as described.

2. The combination of a brake beam, an end casting mounted on said beam and having a circular head capable of being notched at different points around its periphery, and a brake head surrounding the circular head of said casting and having a lug designed to fit in the notch in said casting; substantially as described.

3. The combination with the compression member and tension member of a brake beam, of an end casting affording a seat for said compression member, said end casting having a notch, and a brake head having a lug fitting in said notch; substantially as described.

4. In a brake beam, the combination of a compression member and a tension member, an end casting affording a seat for said compression member and provided with an opening through which said tension member passes, said end casting having also a notch or recess, and a brake head having a socket provided with a lug fitting in said notch or recess, the end wall of the socket of the brake head being closed, and provided with an opening for the passage of the tension member, and a nut on the end of the tension member bearing against said brake head; substantially as described.



5. A casting adapted to be used on a brake beam and being so constructed that it will interlock with the compression member of said beam, said casting being provided with a notch for receiving a lug on the brake head; substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

884,445. TRUSSED BEAM. CHARLES H. WILLIAMS, Jr., Chicago, Ill., assignor to Chicago Railway Equipment Company, Chicago, Ill., a Corporation of Illinois. Filed Nov. 15, 1907. Serial No. 402,313.



1. In a trussed beam, a compression member, a tension member arranged with its end against the compression member, and a thrust member embracing said compression and tension members and provided with a shoulder that coöperates with a shoulder on the tension member; substantially as described.

2. In a trussed beam, the combination with a compression member, a tension member whose end engages the end of the compression member, said tension member having an enlargement at its end, and a thrust yoke engaging the compression member and having an enlargement for coöperating with the enlargement of the tension member; substantially as described.

3. In a trussed beam, the combination of a compression member, a tension member having an interlocking enlargement provided with a tongue, and a yoke secured to the compression member and provided with an interlocking enlargement in which a recess is formed for cooperating with the interlocking enlargement and tongue of the tension member; substantially as described.

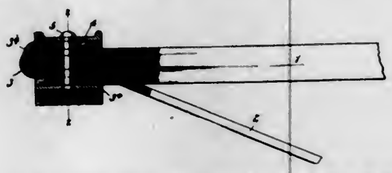
4. In a trussed beam, the combination of a compression member, a tension member having an enlarged end, a yoke having an enlarged end for coöperating with the enlarged end of the tension member, said yoke extending around the end of the compression member and along the rear face thereof; substantially as described.

5. In a trussed beam, the combination with a compression member, a tension member having an enlarged end,

a yoke having an enlargement engaging the enlarged end of the tension member, and a socket in which said parts are arranged; substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

884,446. TRUSSED BEAM. CHARLES H. WILLIAMS, Jr., Chicago, Ill., assignor to Chicago Railway Equipment Company, Chicago, Ill., a Corporation of Illinois. Filed Nov. 15, 1907. Serial No. 402,314.



1. In a trussed beam, the combination with a straight compression member, a tension member, and a block provided with an opening extending parallel to the compression member and through which said tension member passes, the end of the tension member being bent around the end of the compression member; substantially as described.

2. In a trussed beam, the combination with a compression member, of a tension member, a block provided with an opening through which said tension member passes, said block also having a lip or shoulder extending laterally beyond the end thereof and projecting over the end of the compression member, the tension member being bent around said lip and against the compression member; substantially as described.

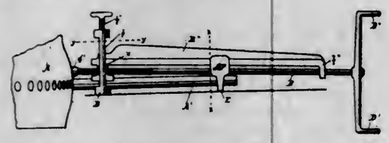
3. In a trussed beam, the combination with a compression member, a tension member, a block having an opening therein extending parallel to the compression member and through which opening said tension member passes, the end of the tension member being bent around the end of the compression member; substantially as described.

4. In a trussed beam, the combination with a compression member, a tension member, a block formed with an opening therein through which the tension member passes, said tension member being bent around the end of the compression member, and a member provided with a socket which fits over the end of the tension member and holds same in position; substantially as described.

5. In a trussed beam, the combination with a compression member, a tension member, a block formed with an opening for the tension member, which tension member is bent around the end of the compression member, a casting which embraces the end of the tension member, and a fastening means for holding said casting in position; substantially as described.

[Claim 6 not printed in the Gazette.]

884,447. SPOKE-EXTRACTOR. DAVID L. WILLIAMS, Trenton, N. Y., assignor of one-fourth to Glen P. Dodge and one-fourth to Roy L. Mealus, Utica, N. Y. Filed Apr. 30, 1906. Serial No. 314,557.



1. A spoke extractor comprising the following members in combination: a rigid support-arm having at one end an offset apertured to loosely support a power rod and at the other end having a block screw-threaded to receive the said rod, the face of such block being adapted to engage one face of a spoke, a yoke transverse the arm and having side-bars engaging the block and having the interior face of the yoke, opposite the said block, adapted to engage the other face of the spoke, a screw-bolt mounted in the yoke and adapted to fix the relative position of said engaging faces, and a power-rod screw-threaded at one end through said block and supported adjacent the other end in the said offset, one end of the rod having means bearing on the hub and the other having lever handles to turn the same.

2. In a spoke extractor, an arm having an offset at one end and a block at the other end, a power-rod supported loosely near one end in the said offset and screw-threaded near the other end through the said block, having at the former end handles and at the other end means to bear on the hub of a wheel, and a yoke mounted on the adjacent end of the arm having a spoke-engaging surface, the face of said block also having a spoke-engaging surface, and a bolt screw-mounted in the yoke adapted to clamp the spoke engaging faces against the spoke.

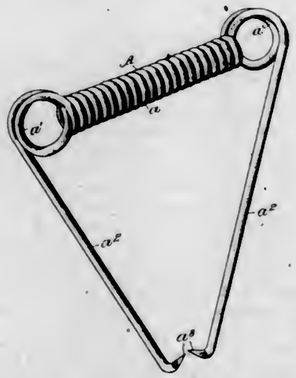
3. A spoke extractor comprising a power-rod bearing at one end on the hub adjacent the spoke and at the other end having handles and screw-threaded for a part of its length, a block adapted to engage a spoke and screw-bored to receive the said rod, a yoke having a face adapted to engage the spoke and mounted on the block adjustably transverse the line of the spoke.

4. A spoke extractor comprising a power-rod bearing at one end on the hub adjacent the spoke and at the other end having handles and screw-threaded for a part of its length, a block adapted to engage a spoke and screw-bored to receive the said rod, a yoke having a face adapted to engage the spoke and mounted on the block adjustably transverse the line of the spoke, and a bracket slidably mounted and engaging the power-rod and the spoke near its free end.

5. A spoke extractor comprising a power-rod having at one end a loose joint adapted for the bearing of the rod on the hub adjacent the spoke and at the other end having handles and being screw-threaded for a part of its length, a block adapted to engage a spoke and screw-bored to receive the said rod, an arm connected with the block and extending parallel with the power-rod and having an offset to support the power rod adjacent its outer end, and a yoke having a face adapted to engage the spoke and mounted on the block adjustably transverse the line of the spoke.

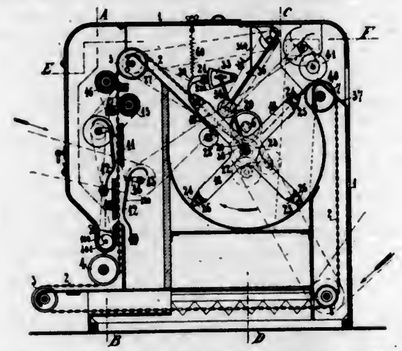
[Claims 6 and 7 not printed in the Gazette.]

884,448. ICE-TONGS. JOHN L. WILLIAMS, Philadelphia, Pa. Filed Dec. 14, 1907. Serial No. 406,473.



An ice tongs formed of a single length of wire and comprising a tightly coiled handle bar, coiled springs at the ends of the bar and at right angles thereto, and arms extending from said springs downwardly and inwardly below the handle bar and terminating in penetrating points.

884,449. SACK CLEANING AND TURNING APPARATUS. ANTON WILLIMANN and PETRUS HECHT, Gossau, Switzerland. Filed June 21, 1907. Serial No. 380,131.

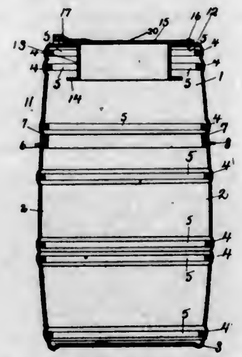


1. In a sack cleaning and turning apparatus, the combination of a spider, means for giving partial rotation thereto, sack carrying devices movable in a path substantially intersecting the axis of the spider, and means at the extremity of each spider arm for engaging a sack bottom when the sack is drawn onto the spider arm.

2. In a sack cleaning and turning apparatus the combination of a spider, means for giving partial rotation thereto, sack carrying devices movable in a path substantially intersecting the axis of the spider, and means at the extremity of each spider arm for engaging a sack bottom when the sack is drawn on to the spider arm, and a finger for thrusting the sack bottom into the engaging device.

3. In a sack cleaning and turning apparatus, the combination of a spider, means for giving partial rotation thereto, sack carrying devices movable in a path substantially intersecting the axis of the spider, and means at the extremity of each spider arm for engaging a sack bottom when the sack is drawn onto the spider arm, the sack carrying devices comprising engaging hooks, means for withdrawing the engaging hooks as the devices pass the axis of the spider, and teeth on the sack carrying devices adapted to strip the sack from the spider arm.

884,450. METALLIC BARREL. STEPHEN M. WRIGHT, Memphis, Tenn. Filed Apr. 23, 1907. Serial No. 369,827.



1. A metallic barrel having two separate cylindrical parts having their inner open ends detachably joined and forming a continuous barrel when placed together, and an annular band placed at the joint between the two parts, to close said joint, substantially as described.

2. A metallic barrel having two cylindrical parts, a shoulder and a vertical flange on one of said parts engaged by the other part, and an L-shaped semi-circular band loosely resting on said shoulder and against said vertical flange, substantially as described.

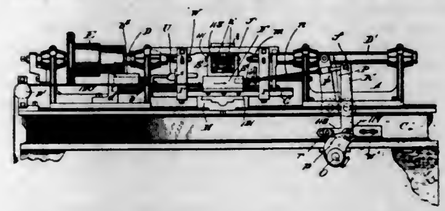
3. A metallic barrel having two cylindrical interfitting parts, two semi-circular bands L-shaped in cross-section loosely resting on one of said parts and serving to stiffen the barrel at the joint, substantially as described.

4. A metallic barrel provided with split spring rings or hoops bearing against the interior of the barrel, substantially as described.

5. A metallic barrel provided with interior annular grooves and split, spring hoops independent of the barrel and held in said grooves, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

884,451. TURNING-MACHINE. JAMES YOUNG, Woonsocket, R. I. Filed Oct. 14, 1907. Serial No. 397,279.



1. The combination in a turning machine, of spindles one of which is movable longitudinally toward and from the other, a vertically movable stock support arranged adjacent to the other spindle and connected and movable with the longitudinally movable spindle, means for depressing said support on inward movement of the longitudinally movable spindle, means for raising the support on outward movement of the said spindle, and a displacing device connected and movable with the longitudinally movable spindle and arranged adjacent and movable with respect to the other spindle.

2. The combination in a turning machine, of a live spindle, a spindle movable edgewise toward and from the live spindle, a stock support arranged adjacent to the endwise movable spindle, a fixed bar extending in the direction of movement of said spindle and having an inclined shoulder on its lower edge, a vertically movable stock support arranged adjacent to the live spindle and connected with the endwise movable spindle and having a portion arranged to be moved against the said inclined shoulder of the bar to effect downward movement of the support on inward movement of the endwise movable spindle, a spring for raising the support on outward movement of said spindle when the said portion of the support shall have moved outward beyond the said inclined shoulder of the fixed bar, and an upright connected and movable with the endwise movable spindle and having a portion loosely receiving the live spindle.

3. The combination in a turning machine, of spindles, one of which is movable endwise toward and from the other, a carriage movable in the direction of the length of the spindles, a second carriage movable at an angle to the direction of movement of the first mentioned carriage, cutting tools on the carriages, means for moving the endwise movable spindle inward, moving the carriages, and moving the endwise movable spindle outward, in the order named, a stock support arranged adjacent to the endwise movable spindle, a vertically movable stock support connected and movable with said spindle and arranged adjacent to the other spindle, means for depressing the latter support on inward movement of the endwise movable spindle, and means for raising said support to its normal position on outward movement of the endwise movable spinde.

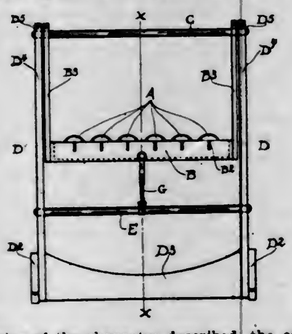
4. The combination in a turning machine, of a live spindle, a spindle movable endwise toward and from the live spindle, a carriage movable in the direction of the length of the spindles, a second carriage movable at an angle to the direction of movement of the first mentioned

carriage, cutting tools on the carriages, means for moving the endwise movable spindle inward, moving the carriages, and moving the endwise movable spindle outward, in the order named, a stock support arranged adjacent to the endwise movable spindle, a vertically movable stock support connected and movable with said spindle and arranged adjacent to the live spindle, means for depressing the latter support on inward movement of the endwise movable spindle, and means for raising said support to its normal position on outward movement of the endwise movable spindle.

5. The combination in a turning machine, of spindles, one of which is movable endwise toward and from the other, a carriage movable in the direction of the length of the spindles, a second carriage movable at an angle to the direction of movement of the first mentioned carriage, cutting tools carried by the carriages, means for moving the endwise movable spindle inward, moving the carriages, and moving the endwise movable spindle outward, in the order named, a vertically movable stock support connected and movable with the endwise movable spindle and arranged adjacent to the spindle opposed to the endwise movable spindle, means for depressing the said support on inward movement of the endwise movable spindle, and means for raising said support to its normal position on outward movement of the endwise movable spindle.

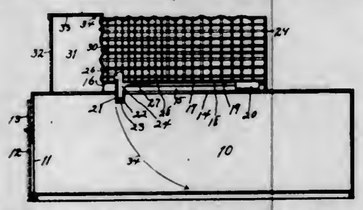
[Claims 6 to 15 not printed in the Gazette.]

884,452. CHURN. FRANK E. ANDREWS, Springfield, Mo., assignor of one-half to George Mutscheler, Springfield, Mo. Filed July 29, 1907. Serial No. 386,154.



In a device of the character described, the combination with a supporting frame, comprising base members and upright end members, of a bar connecting said end members at the upper ends thereof, a swinging frame supported from said bar, a plurality of receptacles, means for clamping said receptacles upon said swinging frame, a second bar extending between the end members of the frame below said swing frame, straps extending between each side of said swing frame and said bar, and springs interposed between the ends of said straps.

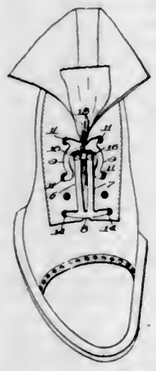
884,453. ANIMAL-TRAP. ANDREW ARNESEN, Des Moines, Iowa. Filed Apr. 25, 1907. Serial No. 370,693.



1. An animal trap, comprising a cage made of sheet metal and formed with an opening in its top, a door in one end of said cage, a trap section mounted on the top of the cage, a cross bar at one end of said trap section, a door pivoted intermediate of its ends in said trap section and formed with a slot, a bell crank on said door, a trigger in said door and fixed to said bell crank, a hook on said bell-crank extending through the slot in said door and normally engaging said cross bar, a screen having arched over said trap section, a screen wall at the forward end of said housing, and a bait box in front of said housing, said screen wall forming the rear wall of the bait-box.

2. In an animal trap, a trap section formed with a cross bar, a door pivoted intermediate of its ends and having one end adjacent said cross bar and formed with a slot, a flange on and extending downward from the end of said door adjacent said cross bar, a rod on said flange, a lever fulcrumed on said rod, a coil spring on said rod engaging said flange and lever, a trigger in said door and fixed to one end of said lever, and a hook on said lever extending through the slot in said door and adapted to engage said cross bar.

884,454. SHOE-FASTENER. JOSEPH W. BARNA, Chicago, Ill. Filed Apr. 19, 1907. Serial No. 369,048.



1. A metal shoe fastener comprising a pair of divergingly disposed resilient side members, a web connecting the side members at one end, a parallel wing connected to each side member at its free end, eyelet engaging hooks on the wings and the web, and a clip sliding on the said members.

2. A shoe-fastener comprising a pair of divergingly disposed spring side members, a web connecting the side members, a parallel wing connected to the free end of each side member and below the same, hooks on the web and wings, and a clip sliding on the side members.

3. A shoe-fastener made from a single blank of sheet metal comprising a pair of resilient side members, a web connecting the side members, wings on the free ends of the side members, the wings and web provided with eyelet hooks, a clip sliding on the side members and having a lug depending below the side members to engage the tongue of a shoe.

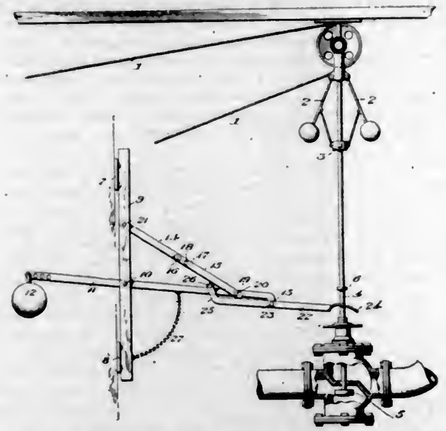
4. A fastener for shoe-uppers, consisting of a pair of connected side-members having eyelet-engaging means, means to retain the members in closed position, and means on the members to retain the tongue of the shoe.

5. A fastener for shoe-uppers consisting of a pair of connected side-members having eyelet-engaging means, means to retain the members in closed position, and coöperating parts on the members to retain the tongue of the shoe.

[Claim 6 not printed in the Gazette.]

884,455. ENGINE-STOP. HENRY BLANCK, Phœnix, Ariz., and LAWRENCE E. BECKERDITE, Marshfield, Mo. Filed Aug. 9, 1907. Serial No. 387,778.

1. In an engine stop, the combination with a toggle-lever, of a drop lever adapted to normally maintain the toggle-lever in extended arrangement, and a trip lever adapted to break the toggle-lever to thereby release the drop lever said drop lever being also adapted to keep the toggle lever broken after the latter is tripped.



2. In an engine stop, the combination with a toggle-lever, of a drop lever pivoted thereto, and a trip lever pivoted to the drop lever and adapted to break the toggle-lever, when actuated, to thereby release the drop lever.

884,456. INSULATING COMPOUND. NATHAN BOOTH, Alexandria, Ind., assignor to Banner Rock Products Company, Alexandria, Ind., a Corporation of Indiana. Filed Apr. 20, 1907. Serial No. 369,342.

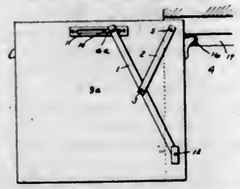
1. A composition of matter comprising mineral fibers, peat and grease.

2. A composition of matter comprising mineral fibers, peat, wood pulp, flour or other gluten and grease.

3. A composition of matter comprising mineral fibers, bound together with a binder comprising peat, wood pulp, grease and gluten.

4. A composition of matter comprising mineral fibers bound together with a binder comprising approximately 25 per cent. peat, 25 per cent. wood pulp, 37 per cent. grease and 13 per cent. flour or other gluten.

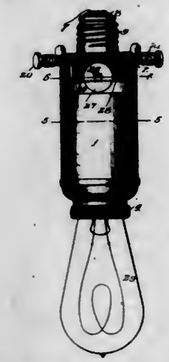
884,457. DRAWER-CARRIER. GEORGE BOYDELATOUR, Canton, Ohio. Filed Oct. 26, 1907. Serial No. 399,301.



A carrier for a drawer in a case comprising levers having horizontally-movable pivotal connections with the sides of the drawer and vertically-movable pivotal-connections at their lower ends with the walls of the case, and links having fixed pivotal connections at their upper ends with the walls of the case directly above the case-lever pivots and at their lower ends with the corresponding levers, the case-pivots being equidistant from the link-lever pivots.

884,458. ELECTRIC-CURRENT REGULATOR. ARTHUR W. BRICE, Rochester, N. Y., assignor to Rochester Surgical Appliance Company, Rochester, N. Y., a Corporation of New York. Filed Mar. 20, 1905. Serial No. 250,990.

1. In an electric current regulator, the combination with a drum or support having a coil of conducting material wound thereon, the latter being provided with a series of contact surfaces arranged on the periphery of the drum, of a pivoted member mounted to move circumferentially of the drum and a yieldingly-operated contact member on the pivoted member and arranged to coöperate with the contact surfaces of the coil.



2. In an electric current regulator, the combination with a drum or support having a coil of conducting material wound therein, the latter being provided with a series of contact surfaces arranged on the periphery of the drum, of a swinging member pivoted to the drum and arranged to move in a path circumferentially thereof, and a spring-operated contact member carried by the swinging member and adapted to coöperate with the contacts of the coil.

3. In an electric current regulator, the combination with a drum or support, and a coil of resistance wire wound thereon having a series of contact surfaces, of a swinging member capable of moving in a direction circumferentially of the drum, and a pivoted, yieldingly operated contact member carried by the swinging member and arranged to coöperate with the contacts of the coil.

4. In an electric current regulator, the combination with a drum or support and a coil of resistance wire wound thereon having a series of contact surfaces arranged across the periphery of the drum, of a swinging member capable of moving in a direction circumferentially of the drum, and a contact member pivoted on the swinging member and having a spring for causing it to coöperate with the contacts of the coil.

5. In an electric current regulator, the combination with a casing, and a drum or support inclosed therein and having a coil of resistance wire wound thereon, the latter being provided with a series of contacts, of a swinging arm capable of moving in a path circumferentially of the drum, a contact member carried thereby, and an operating member connected to the swinging member and having a pinion thereon coöperating with a relatively fixed rack on the casing to enable the swinging member to be operated by manipulation of the operating member.

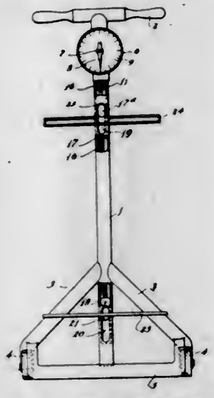
[Claims 6 to 12 not printed in the Gazette.]

884,459. COMBINED TRUCK, SCALE, AND BAG-HOLDER. EDWARD J. BRICKER, Minneapolis, Minn., assignor to American Implement Company, Minneapolis, Minn., a Corporation of Minnesota. Filed July 13, 1907. Serial No. 383,635.

1. The combination with a truck-frame having truck wheels at its lower end and a hand-piece at its upper end and provided with a tubular column, of a scale applied to the said tubular column and comprising a scale platform and yielding devices contained in said hollow column and supporting said platform, substantially as described.

2. The combination with a truck-frame having truck wheels at its lower end and a hand-piece at its upper end and provided with a tubular column, of a scale applied to the said tubular column and comprising a scale platform, yielding devices contained in said hollow column for sup-

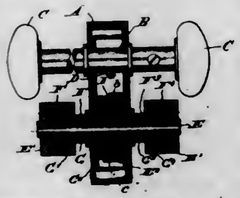
porting said platform, and a bag holder connected for movements with said scale platform, substantially as described.



3. The combination with a truck-frame comprising a hollow column with a hand-piece at its upper end and diverging legs at its lower portion, of truck wheels journaled to said legs, a scale platform and a bag holder, a yielding connection in said hollow column supporting said platform and bag holder, and a weight indicator subject to said yielding connection, substantially as described.

4. The combination with a hollow column 1 having a hand-piece 2 at its upper end and provided at its lower portion with diverging legs 3, of truck wheel 4 journaled to the ends of said legs 3, a yoke 5 connecting the ends of said legs 3 and coöperating with said wheels to support said column in an upright position, a spring supported scale connection working within said hollow column, and a scale platform pivotally supported by said spring supporting connection and movable to and from a position at an angle to said column, substantially as described.

884,460. COMBINED LOCK AND LATCH. WILLIAM C. BROWN, Terre Haute, Ind. Filed Dec. 6, 1907. Serial No. 405,394.



1. The combination in a lock, of a casing, a bolt, means for retracting the bolt, a spindle extending transversely through the casing and having dials disposed without the casing and a notched tumbler disposed within the casing, a tubular spindle section surrounding the first mentioned spindle and having a notched tumbler within the casing and a dial without said casing, and a second spindle section surrounding the first mentioned spindle section and having a dial without the casing and also having an arm within the casing, through the medium of which it is connected with the tumbler on the first mentioned spindle section.

2. In a combined permutation lock and latch, the combination of a casing, tumblers arranged in the casing and having notches adapted on movement of the tumblers to be moved into and out of register with each other, a bolt capable of being diminished and increased in length; the retraction of said bolt when the same is in its comparatively long state, being controlled by the tumblers, and means for moving the bolt.

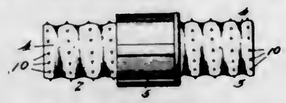
3. In a combined permutation lock and latch, the combination of a casing, tumblers arranged in the casing and having notches adapted on movement of the tumblers to be moved into and out of register with each other, a bolt having a forward member and a rear member, one of which is movable with respect to the other, and also having coöperating devices on said members for holding the forward member against forward movement with respect to the rear member; one of said devices being arranged to coöperate with one of the tumblers, and means for moving the bolt.

4. In a combined permutation lock and latch, the combination of a casing, tumblers arranged in the casing and having notches arranged on movement of the tumblers to be moved into and out of register with each other, a bolt comprising a rear member, a forward member movable fore and aft with respect to the rear members, a spring interposed between said members, and coöperating devices on the members for detachably holding the forward member against forward movement with respect to the rear member; one of said devices being arranged to coöperate with a tumbler, and means for moving the bolt.

5. In a combined permutation lock and latch, the combination of a casing, tumblers arranged in the casing and having notches arranged on movement of the tumblers to be moved into and out of register with each other, a bolt comprising a rear member having a spring keeper on which is a portion arranged to be moved outward on rearward movement of the bolt by one or more of the tumblers, and a forward member movable fore and aft with respect to the rear member and having a portion arranged on rearward movement of the forward member with respect to the rear member to assume a position in rear of and be detachably held by the keeper on the rear member, and means for moving the bolt.

[Claims 6 to 11 not printed in the Gazette.]

884,461. HOSE-COUPLING. CHARLES F. BROWNE, Washington, D. C. Filed Apr. 10, 1907. Serial No. 367,395.



1. In a hose coupling, a tubular coupling member having an externally threaded portion adapted for screw threaded engagement with a hose section, and spurs provided on said threaded portion and arranged in circumferential alinement and disposed for engagement with the section to prevent retrograde or unscrewing movement of the member.

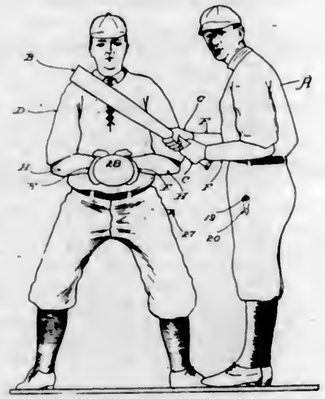
2. In a hose coupling, a tubular coupling member having an externally threaded neck adapted for screw threaded engagement with a hose section, and circumferentially disposed rearwardly pitched teeth in peripheral alinement provided on said threaded portion for engagement with the hose section to prevent retrograde or unscrewing movement of the member relative thereto.

884,462. AMUSEMENT APPARATUS. WILLIAM H. BRYANT, Boston, Mass., assignor to Freeman Hunt, trustee, Cambridge, Mass. Filed May 17, 1907, Serial No. 374,134. Renewed Feb. 19, 1908. Serial No. 416,778.

1. In an amusement apparatus, in combination, a mark for a missile, an interference in advance of the said mark, and means to produce relative reciprocation of the said parts in a direction intersecting the path of flight of the said missile to cause one thereof to pass into and out of line with the other with frequency.

2. In an amusement apparatus, in combination, the baseball catcher and its hands, the base-ball batter holding a bat adapted to constitute an interference in the path of flight of a base-ball thrown at such hands, and means to produce relative reciprocation of said hands and bat in a direction intersecting the said path to cause one thereof to pass into and out of line with the other thereof.

3. In an amusement apparatus, in combination, the baseball catcher having hands disposed to catch a ball, the baseball batter holding a bat adapted to constitute an interference in the path of a ball thrown toward the said catcher's hands, and means to reciprocate the said hands and the bat, respectively, in a direction intersecting the said path.



4. In an amusement apparatus, in combination, the baseball catcher having hands disposed in position to catch a ball, the base-ball batter holding a bat adapted to constitute an interference in the path of a ball thrown toward the said catcher's hands, and means for independently reciprocating the catcher's hands and the bat, respectively, with relation to the said path.

5. In an amusement apparatus, in combination, the baseball catcher having hands in position for catching a ball, the base-ball batter holding a bat adapted to constitute an interference in the path of a ball thrown toward the said hands, means to produce relative reciprocation of said hands and bat in a direction intersecting the said path, and a signal for announcing the striking of the said hands by a thrown ball.

[Claim 6 not printed in the Gazette.]

884,463. METHOD OF MAKING REFRACTORY ARTICLES. CHARLES F. BURGESS, Madison, Wis. Filed May 31, 1906. Serial No. 319,598.



1. The method of producing articles of refractory material, which consists in defining a surface of the article in a body of material of like character by means of a layer of material differing therefrom in character, and applying heat to produce the article, substantially as described.

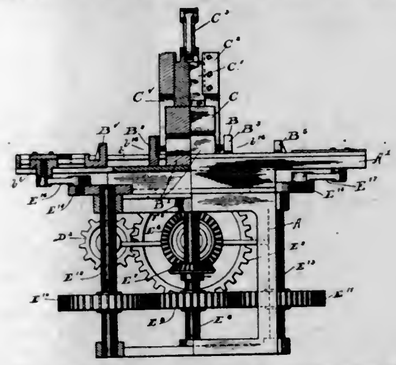
2. The method of producing articles of refractory material, which consists in defining a surface of the article in a body of material of like character by means of a layer of carbonizable material, and applying heat to produce the article, substantially as described.

3. The method of producing articles of refractory material, which consists in defining a surface of the article in a body of material of like character by means of a layer of paper, and applying heat to produce the article, substantially as described.

4. The method of producing articles of magnesia, which consists in first molding or otherwise forming the article and then applying sufficient heat to frit or fuse together the constitutent particles, substantially as described.

5. The method of forming articles of refractory material, which consists in first molding or otherwise forming the article, applying a layer of material differing therefrom in character to a surface thereof, and applying sufficient heat to frit or fuse together the constituent particles, substantially as described.

884,464. FORMING-MACHINE. WILLIAM C. BURRELL, Kankakee, Ill. Filed Mar. 14, 1904. Serial No. 198,004.



1. The combination of a vertically reciprocating male die, a female die having a fixed open-ended member and spring-retracted slidable end-members provided with surfaces for turning the end-forming portions of the blank during descent of the male die, and mechanism equipped with reciprocating presser-members serving to force the end-members of the female die towards each other after the male die has completely entered, for the purpose set forth.

2. The combination of a suitable driving mechanism, a reciprocable male die, a female die, presser-members movable longitudinally of the female die, gear mechanism serving to actuate the male die and the presser-members, and connecting mechanism between the driving mechanism and gear mechanism, comprising a cam-controlled clutch-member, whereby connection is maintained for a predetermined period, for the purpose set forth.

3. The combination of suitable driving mechanism, a reciprocable male die, a female die, presser-members, gear mechanism serving to actuate the male die and the presser-members, and connecting mechanism between the driving mechanism and gear mechanism, comprising a manually-shifted spring-retracted cam-controlled clutch-member serving to maintain connection during a cycle of operations upon the blank.

4. The combination of suitable die-members for operating upon a blank, gear mechanism through the medium whereof the die-members are actuated, driving mechanism, and connecting mechanism comprising a shiftable clutch-member, a stationary cam serving to maintain said clutch-member in operative engagement with its companion member during a predetermined period, and means for shifting said first-named clutch-member at proper intervals, for the purpose set forth.

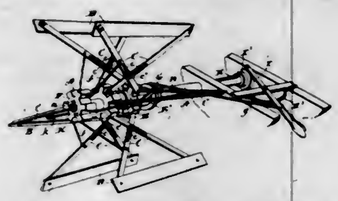
5. The combination of suitable die-members for operating upon a blank, gear mechanism through the medium whereof the die-members are actuated and including a normally inactive shaft, driving mechanism including an idly rotating gear journaled on said shaft, and connecting-mechanism comprising a stationary cam having a perforation receiving said shaft, a shiftable clutch-member provided with a shoulder for engaging said cam, and means for shifting said clutch-member at proper intervals, for the purpose set forth.

[Claims 6 to 11 not printed in the Gazette.]

884,465. HARVESTER-REEL. FRANK S. CHASE, Bloomington, Ind. Filed Aug. 5, 1907. Serial No. 387,101.

1. In a harvester reel, a shaft, a pair of collars mounted on said shaft and adjustable longitudinally thereof, a

plurality of blades, and a pair of crossed arms connecting each of said blades and said collars.



2. In a harvester reel, a shaft, a pair of collars slidably mounted on said shaft, a plurality of blades and a pair of crossed arms connecting each of said blades and said collars, said arms being provided with a loose connection at the crossing points thereof.

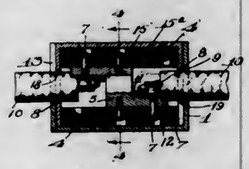
3. In a harvester reel, a shaft, a pair of collars slidably mounted on said shaft, a plurality of blades a pair of crossed arms connecting each of said blades and said collars, and means for simultaneously shifting said collars in opposite directions on said shaft.

4. In a harvester reel, a shaft, a pair of collars slidably mounted on said shaft, a plurality of blades, a pair of crossed arms connecting each of said blades and said collars, a lever for simultaneously shifting said collars in opposite directions on said shafts, and means for locking said lever in various positions of adjustment.

5. In a harvester reel, a shaft, a pair of collars splined on said shaft, a plurality of blades connecting said arms and said collars, said blades being provided with longitudinal slots adjacent the crossing points thereof bolts passing through the slots of each pair of said arms at the crossing point thereof, and means for adjusting said collars on said shaft.

[Claims 6 to 9 not printed in the Gazette.]

884,466. SWITCH-BOX. THOMAS J. CLELAND, Chicago, Ill. Filed June 3, 1905. Serial No. 263,577.



1. In a switch, the combination with a member carrying one switch terminal, of a second member carrying a second switch terminal, said terminals contacting by relative transverse movement of said members, and end walls for each of said members engaging to lock said members against longitudinal strain.

2. A switch comprising a casing formed of two sections, each section carrying switch terminals and one of the said sections being arranged to close the other transversely, the end walls of the casing sections engaging to lock the switch terminals against longitudinal strain.

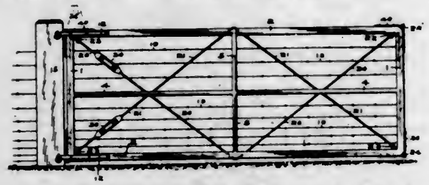
3. A switch comprising a casing formed of two sections, each section carrying a switch terminal, one of said sections being arranged to telescope within the other transversely to the direction in which the supply wires enter the casing to prevent longitudinal strain from opening the casing.

4. A switch comprising a casing formed of two sections, an insulating base arranged in each section and carrying a switch terminal, said sections having openings in the walls thereof, to accommodate conductors, and being arranged to telescope one within the other transversely to the direction in which the supply wires enter the casing.

5. In a switch, the combination with a box having a switch terminal arranged therein and a cover therefor having a switch terminal arranged therein, said cover arranged to close the box transversely, the end walls of said box and said cover engaging to lock the same against opening by longitudinal strain.

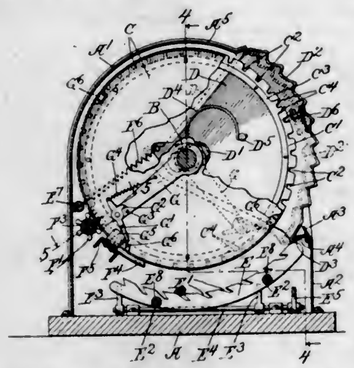
[Claim 6 not printed in the Gazette.]

884,467. GATE. CHARLES C. COHEE, Indianapolis, Ind. Filed Aug. 6, 1907. Serial No. 387,305.



A gate comprising a rectangularly formed frame including a centrally located horizontal and vertical rail, a stay-wire engaging both lower corners of the gate frame and extending across the upper end of the central vertical rail, a second stay-wire engaging both upper corners of the gate frame and extending across the lower end of the central vertical rail, and tension devices interposed in each of said stay-wires and arranged in the same end of the gate frame, whereby a tension may simultaneously be applied to both of said stay-wires.

884,468. ADDING-MACHINE. SAMUEL G. COOK, East St. Louis, Ill., assignor to himself, trustee. Filed May 22, 1905. Serial No. 261,541.



1. In an adding machine, the combination of a totalizer with an increment key to operate the same, a plurality of digits on the increment key, such key being movable so as to bring any one of the digits to a certain position, and an engaging device to hold the increment key in its position, comprising a hook on the end of the increment key and a movable rack.

2. In an adding machine, the combination of a totalizer disk having a plurality of complete sets of digits with a normally disengaged increment key movable coaxially therewith, and having a single set of digits.

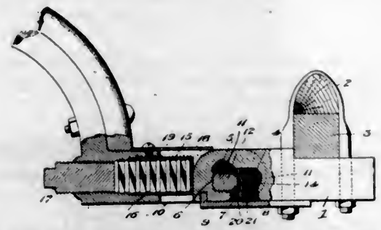
3. In an adding machine, the combination of a circular totalizer disk with a plurality of complete sets of digits on its periphery, a normally disengaged coaxially movable increment key comprising a member with a set of digits arranged thereon in an arc less than a complete circle.

4. In an adding machine, the combination of a plurality of increment keys having each a series of digits thereon, means for moving the increment keys so that digits of any combination are brought into alinement, means comprising hooks associated with such keys, movable racks for retaining the increment keys in said alined position, and a release key with associated mechanisms adapted to move the racks and free the keys.

5. In an adding machine, the combination of a plurality of increment keys comprising sectors with series of digits peripherally thereon, with means for rotating the sectors so as to bring any combination of digits into alinement, a device for holding the keys in such position, comprising hooks on such sectors, a plurality of racks movable simultaneously, and a release key with associated mechanism adapted to move such racks laterally out of engagement with the hooks.

[Claims 6 to 49 not printed in the Gazette.]

884,469. COMBINED ANTIRATTLER THILL COUPLING AND SUPPORT. WALTER COX, Provo, Utah. Filed Mar. 20, 1907. Serial No. 363,453.



1. In a thill coupling and support, the combination with a thill coupling member having a recess provided with a coupling-pin bearing and a locking notch, of a cushioned abutment located in said recess, another thill coupling member having a coupling-pin received in the recess and bearing against the abutment and normally received in the coupling-pin bearing aforesaid, said parts being so disposed that when the thill coupling member last-named is raised the coupling-pin is shifted into the locking notch, and spring means carried by the last-named thill coupling member and bearing against the first-named thill coupling member.

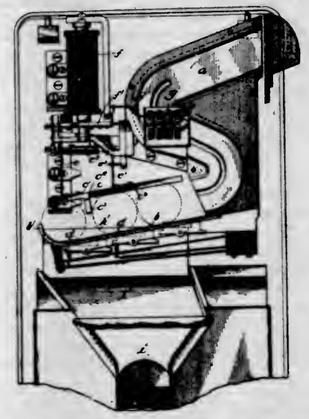
2. In a thill coupling and support, the combination with a hook-shaped thill coupling member having a coupling-pin bearing and a separate locking notch, of another thill coupling member composed of side pieces adapted to straddle the hook-shaped coupling member and having a coupling-pin connecting said side pieces and normally received in the coupling-pin bearing aforesaid, said parts being so disposed that when the thill coupling member last named is raised the coupling-pin is shifted into the locking notch and held thereby, and spring means for holding the coupling-pin in its bearing or locking notch.

884,470. COIN-COLLECTOR. EDWARD B. CRAFT, Chicago, Ill., assignor to Western Electric Company, Chicago, Ill., a Corporation of Illinois. Filed Feb. 13, 1906. Serial No. 300,882.

1. In a coin collector, the combination with a temporary receiver for a plurality of coins, deposit and refund chutes, electromagnetic mechanism for discharging said coins into said refund chute, said mechanism being also adapted to discharge said coins one at a time into said deposit chute, and a register operated each time a coin is thrown into said deposit chute.

2. In a coin collector, the combination with a coin chute, of deposit and refund chutes, a guide rail adapted to receive coins from said chute and simultaneously support a plurality thereof, supporting means for the tops of said coins, electromagnetic mechanism adapted to operate said supporting means to discharge said coins one at a time into said deposit chute, and a register operated by said mechanism as each coin is deposited, said mechanism being also adapted to discharge said coins into the refund chute without affecting said register.

3. In a coin collector, the combination with a coin chute, of deposit and refund chutes, a guide rail adapted to receive a plurality of coins from said chute, a movable support for the tops of said coins, an electromagnet adapted to operate said support to throw said coins one at a time into said deposit chute, and a register operated by said magnet each time a coin is deposited, said magnet being also adapted to operate said support to throw said coins simultaneously into the refund chute.

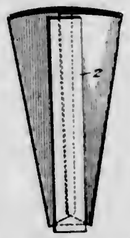


4. In a coin collector, the combination with a coin chute, of deposit and refund chutes, a guide rail adapted to receive and simultaneously support a plurality of coins from said chute, a two part movable guide adapted to engage the tops of said coins, electromagnetic mechanism for moving both parts to discharge said coins simultaneously from the rail into the refund chute, said mechanism being adapted to move one of said parts alone to deposit the single coin supported thereby, the remaining coins thereupon passing singly under the control of said part, and a register operated by said mechanism upon the deposit of each coin.

5. In a coin collector, the combination with a coin chute, of a downwardly inclined guide rail adapted to receive and simultaneously support a plurality of coins from said chute, a movable guide adapted to engage the tops of said coins, deposit and refund chutes on opposite sides of said rails, said guide being in two parts, electromagnetic mechanism for moving one of said parts which engages a single coin, said electromagnetically-operated part when moved in one direction engaging the other part to throw all said coins simultaneously into said refund chute, said first mentioned part when moved in the other direction depositing the coin supported thereby without disturbing said other part, the remaining coins rolling one at a time under the control of said depositing part, and a register operated by said electromagnetic mechanism only as each coin is deposited.

[Claims 6 and 7 not printed in the Gazette.]

884,471. FORMING SHOE-TONGUES. FRED W. CRAWFORD, North Adams, Mass. Filed Apr. 27, 1907. Serial No. 370,597.



1. That improvement in the art of forming shoe tongues, which consists in folding a blank so as to overlap its free

edges and secure a frictional engagement between them, and then subjecting the said blank to a shaping or crimping operation.

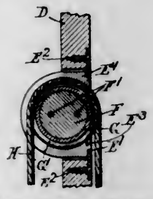
2. That improvement in the art of forming shoe tongues, which consists in folding a blank so as to bring its free edges into parallelism, lapping said parallel edges upon each other, confining said paralleled and lapped edges by a flexible keeper which covers said edges and extends over and in frictional contact with the folds or plies of the blank, and then subjecting said assembled blank and keeper to a shaping or crimping operation.

3. That improvement in the art of forming shoe tongues, which consists in folding a blank so as to bring its free edges into substantial parallelism, confining said edges by a keeper, and subjecting said assembled blank and keeper to a shaping or crimping operation.

4. That improvement in the art of forming or crimping flexible material, which consists in folding a blank, confining the free edges of the blank by a keeper, and then subjecting the assembled blank and keeper to a shaping or crimping operation.

5. That improvement in the art of forming shoe tongues, which consists in folding a plurality of blanks with their free edges overlapping, assembling said blanks with their overlapped edges facing each other, and then subjecting the assembled blanks to a shaping or crimping operation.

884,472. SASH-BALANCE. MICHAEL J. DALY and THOMAS S. LEAKE, Chicago, Ill. Filed Aug. 12, 1905. Serial No. 274,010.



1. In a sash balance, the combination of a window sash with a counterbalancing element, a cord and a pulley comprising a core and a sheave, said sheave having an extended bearing surface in contact with the core so as to develop braking friction between it and the core to brake the movement of the sash.

2. In a sash balance, the combination of a window sash with a counterbalancing element, a cord and a pulley comprising a core and a thin annular sheave, said sheave having an extended bearing surface in contact with the core so as to develop braking friction between it and the core to brake the movement of the sash.

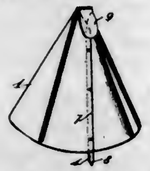
3. In a sash balance, the combination of a window sash, with a cord, two pulleys each comprising a core and a thin annular sheave mounted thereon as described, and a weight hung in the turn of the cord between the two pulleys.

4. In a sash balance, the combination of two window sashes, a single cord attached to each of the sashes, a counterbalancing element, said sheave having an extended bearing surface in contact with the core so as to develop braking friction between it and the core to brake the movement of the sash.

5. In a sash balance, the combination of two sashes, a single cord attached at each end to one of the sashes, two fixed pulleys over which the cord runs, a counterbalancing weight hung from the turn in the cord between the pulleys, said pulleys comprising each a core and a thin annular sheave mounted thereon as described.

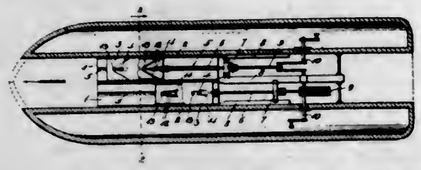
884,473. PLANT-PROTECTOR. EUGENE C. DAWSON, Jackson, Tenn. Filed Oct. 14, 1907. Serial No. 397,425.

A plant protector comprising a cone of waterproof paper, strips glued and tacked to the inside of said cone, said strips being sharpened and projecting below the lower edge of the cone, one of said strips being tacked to both the overlapping edges forming the cone seam, the material being cut to form an opening near the frustum thereof and extended to form a flap to cover said opening, said



opening and said flap cut to form a double thickness of the material at the ends of the line of meeting, the cone being adapted to be folded to form a flat package.

884,474. RECIPROCATING PROPELLER. WILLIAM DAWSON, Hawarden, Iowa. Filed Sept. 12, 1907. Serial No. 392,545.



1. A propeller of the character described, comprising a plurality of tubular outer casings, tubular inner casings adapted to fit and slide in said outer casings, means in the upper and lower sides of said outer casings and on the adjacent sides of said inner casings whereby the latter are guided and steadied in their movements, means to alternately reciprocate said inner casings in the said outer casings, and wings or blades pivotally mounted at their inner ends in said inner casings and adapted to assume an inoperative position on the forward stroke of said inner casings and an operative position on the return stroke of the same, substantially as described.

2. A propeller of the character described comprising a plurality of tubular outer casings having formed in their upper and lower sides longitudinally disposed guide channels, tubular inner casings adapted to fit and slide in said outer casings, guide studs arranged on said inner casings to engage the guide channels in said outer casings whereby said inner casings are guided and steadied in their movement in said outer casings, means to reciprocate said inner casings, pivot shafts arranged therein, wings or blades pivotally mounted on said shafts and adapted to swing inwardly and outwardly to open and close said inner casings when the same are reciprocated and means to prevent said wings from folding entirely together when swung inwardly to open said casings, substantially as described.

3. A propeller of the character described, comprising a plurality of longitudinally disposed tubular outer casings, a tubular inner casing slidably mounted in each of said outer casings, operating rods connected to the inner ends of said inner casings, cross-heads adapted to slidably support the outer ends of said operating rods, means whereby said operating rods and inner casings are alternately reciprocated in opposite directions, a series of vertically disposed shafts arranged in each of said inner casings, a series of wings or blades arranged in pairs and pivotally connected at their forward ends to said shafts whereby when the inner casings are moved outwardly on the forward stroke, said wings or blades will swing inwardly to a partially folded position, and when moved inwardly on the return stroke will open out against the sides of the inner casing, triangularly shaped stop plates arranged in said casing to prevent said wings folding entirely together, and means arranged on said inner casings, whereby the same are held true and steady in their movement through the outer casing, substantially as described.

884,475. MIXED PAINT AND METHOD OF MAKING SAME. WILLIAM F. DOERFLINGER, Niagara Falls, N. Y. Filed Sept. 14, 1906. Serial No. 334,677.

1. A ready mixed paint comprising a solution of cellulose acetate in a volatile solvent and a pigment containing metallic gold bronze powder, substantially as set forth.

2. A ready mixed paint comprising a pigment containing bronze powder, and a solution of organic acid colloid ester in a volatile solvent which does not react with the bronze powder, substantially as set forth.

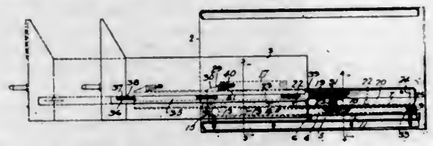
3. A ready mixed paint comprising a pigment containing metallic gold bronze powder, and a solution of cellulose acetate in acetone, substantially as set forth.

4. The method of preparing a ready mixed paint which consists in preparing a neutral solution, in a volatile solvent, of an organic acid ester which is solid at ordinary temperature and forms a cohesive film upon the evaporation of the solvent, and mixing with the solution a pigment containing bronze powder, substantially as set forth.

5. The method of preparing a ready mixed paint which consists in preparing a solution, in a volatile solvent, of an organic acid ester which is solid at ordinary temperature and forms a cohesive film upon the evaporation of the solvent, neutralizing the solution, and mixing therewith a pigment containing bronze powder, substantially as set forth.

[Claim 6 not printed in the Gazette.]

884,476. DRAWER FOR CABINETS, &c. ERIK A. EKEDAHL and EAICK G. SAMPSON, Jamestown, N. Y., assignors to Art Metal Construction Company, Jamestown, N. Y., a Corporation of New York. Filed Nov. 30, 1907. Serial No. 404,520.



1. In a suspension device for drawers, the combination with the case or cabinet, of guide-strips on the inner walls of same, said guide-strips having guide-ways therein, unattached rollers in said guide-ways, stops for said rollers therein, a suspension device, the side bars of said device having downwardly extending portions entering said guide-ways, and a drawer slidable in said suspension device.

2. In a suspension device for drawers, the combination with the case or cabinet of guide-strips having guide-ways therein, unattached rollers in said guide-ways, stops for said rollers therein, a suspension device, the side bars of said suspension device having downwardly extending portions entering said guide-ways, unattached rollers in said guide-strips on which said side bars rest, and a drawer slidable on said suspension device.

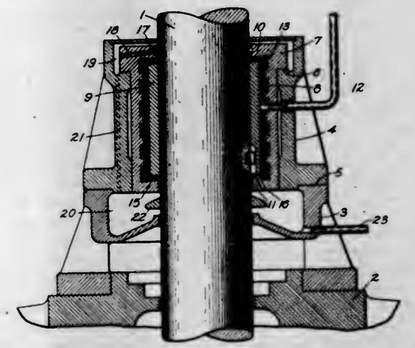
3. In a suspension device for drawers, the combination with the case or cabinet of guide-strips on the inner walls of same, said guide-strips having inwardly extending flanges along their upper edges for a portion of their length forming guide-ways, stops at each end of said guide-ways, rollers in said guide-ways, a suspension device, side bars, plates on said side bars having flanges entering said guide-ways, stops on said plates, unattached rollers in said guide-strips upon which said side bars rest, and a drawer slidable on said suspension device.

4. In a suspension device for drawers, the combination with the case or cabinet of guide-strips on the inner walls of same, a suspension device slidable in said guide-strips, stops at the outer ends of said suspension device, unattached rollers carried by said suspension device, a drawer, strips on said drawer engaging said suspension device and moving on said rollers, and stop blocks having inclined lower faces on said drawer.

5. In a suspension device for drawers, the combination with the case or cabinet, of guide-strips on the inner walls of the same, a suspension device slidable in said guide-strips, inclined stops at the outer ends of said suspension device, unattached rollers carried by said suspension device, a drawer, strips on said drawer engaging said suspension device and moving on said rollers, and stop blocks on said drawers having inclined lower faces.

[Claims 6 and 7 not printed in the Gazette.]

884,477. SHAFT-BEARING. WILLIAM L. R. EMMET and EDGAR D. DICKINSON, Schenectady, N. Y., assignors to General Electric Company, a Corporation of New York. Filed Aug. 23, 1905. Serial No. 275,396.



1. The combination of a bearing, a means for supplying lubricant thereto, a shaft and means carried by said shaft which means by its rotary motion creates a hydraulic pressure that continuously maintains an annular cushioning film of lubricant between it and the bearing.

2. The combination of a bearing, a means for supplying lubricant thereto, a shaft and means carried by said shaft which means by its rotary motion distributes the lubricant in a film over the entire annular surface of the bearing, and at the same time creates a hydraulic pressure at one or both ends of the bearing which continuously maintains the annular film intact.

3. The combination of a bearing, a means for supplying lubricant thereto, a shaft and means carried by said shaft which means by its rotary motion creates a hydraulic pressure that continuously maintains an annular cushioning film of lubricant between it and the bearing and in addition thereto opposes the tendency of the lubricant to leak out around the ends of the bearing.

4. The combination of a bearing, a means for supplying lubricant thereto, a shaft, and a sleeve rotated by the shaft, one end of which creates a hydraulic pressure and maintains a body of lubricant between the peripheral surface of the sleeve and the bearing to dampen the vibrations of the shaft.

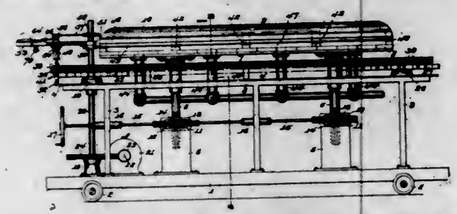
5. The combination of a bearing, a means for supplying lubricant thereto under a suitable head, a shaft, and a sleeve which is free to float longitudinally of the shaft and by its rotation to create a hydraulic pressure that constantly maintains an annular body of lubricant between the sleeve and bearing to dampen the vibrations of the shaft.

[Claims 6 to 12 not printed in the Gazette.]

884,478. APPARATUS FOR FIRE FINISHING AND POLISHING GLASSWARE. IRA H. FREESE, JOHN W. ROMIGH, and HARRY A. CAROTHERS, Clarksburg, W. Va. Filed Feb. 25, 1907. Serial No. 359,063.

1. In an apparatus for fire-finishing and polishing glassware, a frame, a table sustained by said frame, a longitudinal chambered furnace located over said table, separate gas-supply pipes leading to said chambers, brackets of cup-shape within which said pipes are loosely held, each bracket having a fire-clay lining, two oppositely-disposed horizontal sprocket-wheels arranged below the level

of said furnace, a sprocket chain bearing ware-carriers connecting said wheels, said ware-carriers being adapted for supporting articles of glassware in front of said furnace, and driving mechanism for said sprocket wheels.



2. In an apparatus for fire-finishing and polishing glassware, a frame, a furnace having a plurality of combustion chambers located over said frame, separate gas supply pipes for said chambers, brackets of cup-shape in which the ends of said pipes are loosely held, a lateral passage in said furnace through which the products of combustion are discharged, sprocket-wheels arranged below the level of said furnace, a sprocket-chain connecting said wheels, ware-carriers borne by said chain for supporting articles of glassware in front of said lateral passage, driving mechanism for said sprocket-wheels, and means for adjusting the position of said furnace with respect to said ware-carriers.

3. In a device of the character described, a support, vertically movable standards supported above said support, a tapered base sustained by said standards, a longitudinal furnace mounted upon said base and held thereby in an inclined position, said furnace having a lateral passage therein for the products of combustion, a rib-like deflector carried by said furnace for deflecting a part of said products downward, means associated with said standards whereby they may be raised and lowered to adjust the elevation of the furnace, and means whereby articles of ware are carried horizontally in front of said lateral passage.

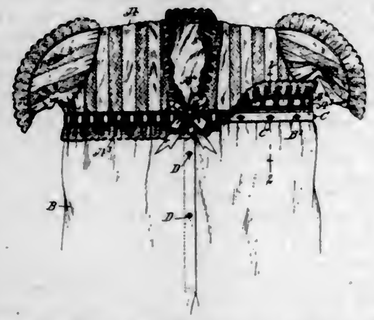
4. In an apparatus for fire-finishing and polishing glassware, a frame, a longitudinal inclined furnace located over the frame, a lateral passage in said furnace through which the products of combustion are directed, a rib-like deflector overlying said passage, a vertical drive-shaft bearing a sprocket-wheel below the level of said furnace at one end thereof, a horizontally-disposed sprocket-wheel at the opposite end of the furnace, said wheels being on the same horizontal plane, a sprocket-chain connecting said wheels, ware-carriers borne by said chain for supporting articles of glassware in front of said lateral passage, driving mechanism for said vertical drive-shaft, and means for adjusting the relative positions of said furnace and said ware-carriers.

5. In an apparatus for fire-finishing and polishing articles of glassware, a frame, a furnace adjustably mounted over said frame and having a plurality of combustion chambers therein, each of said chambers having a lateral discharge-opening therein, separate gas-supply pipes leading to said chambers, said pipes being loosely held in cup-shaped brackets carried on the under side of the furnace, an endless conveyer-chain mounted to travel in front of, and below the level of, said openings, driving mechanism for said chain, and rotary ware-holders carried by said chain.

[Claims 6 to 33 not printed in the Gazette.]

884,479. GARMENT. BERTHA GALLAND, New York, N. Y. Filed Mar. 23, 1907. Serial No. 364,079.

1. A night gown, wrapper, kimono or like garment, comprising a yoke open at the front, the yoke being provided at its lower end with a flap, the said flap having a lacing band for closing the front of the yoke, a body open at the upper portion of the front and closed at the lower portion thereof, closing means for closing the upper portion of the front of the body, and fastening means for removably securing the upper end of said body to the yoke, the said flap overlying the joint between the body and the yoke.



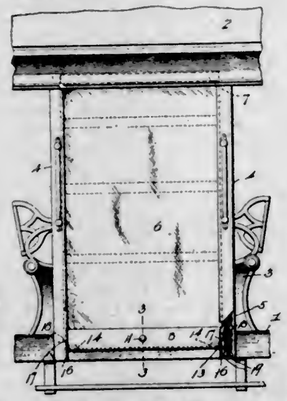
2. A night gown, wrapper, kimono or like garment, comprising a yoke having a band at its lower edge, a body, fastening means for removably securing the upper end of the body to the said band, the yoke having a covering flap at its lower edge overlying the said band and the upper end of the body and concealing the joint between the same, the said flap being provided with a lacing band.

3. A night gown, wrapper, kimono or like garment, comprising a yoke, a body for removable attachment to the yoke, the yoke being open at the front and having a covering flap depending from the lower end thereof for covering the upper part of the body, the said flap being provided at its upper portion with a lacing band, for closing the open front of the yoke.

4. A night gown, wrapper, kimono or like garment, comprising a yoke, a body detachably secured to said yoke, a covering flap depending from the lower end of the yoke and overlying the joint between the body and the yoke, the said flap being provided with a lacing band.

5. A night gown, wrapper, kimono or like garment, comprising a yoke open at the front, a depending band at the lower end of the yoke, a body, fastening means for removably securing the upper end of the body to the said band, and a covering flap also depending from the lower end of the yoke to cover the joint between the upper end of the body and the said band, the upper part of said flap being provided with spaced openings, and a lacing band engaging said openings to close the open front of the yoke.
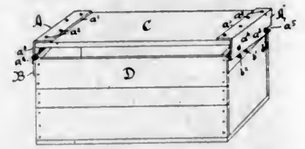
884,480. CURTAIN-FIXTURE FOR OPEN CARS. GEORGE E. GILMAN, West Newbury, Mass. Filed Oct. 29, 1907. Serial No. 399,710.



In a curtain fixture for cars, the car body having side posts provided with guiding grooves and corrugated keeper

bars therein, a flexible curtain carrying at its bottom edge a rigid base board, angle extension guide brackets having horizontal attaching arms disposed within the ends of the base board, and catch springs slidably interlocking with the corrugations of the keeper bars and secured to the base board by the fastenings for the attaching arms of said angle brackets.

884,481. BOX-COVER FASTENER. GOTTLIEB GLAUS, Milwaukee, Wis. Filed May 15, 1907. Serial No. 373,863.



1. In combination with a box having a removable lid, plates secured to opposite edges of said lid and overlapping opposite sides of the box, a fixed stud on each side of the box overlapped by said plates, each said stud detachably engaging in a short slot or notch in the corresponding plate, and a movable bolt engaging in holes in the sides of the box and plate respectively and holding them in fixed relative position.

2. In combination with a box and a removable lid, a plate secured to each end of the lid and overlapping the ends of the box, detachably interengaging means on the ends of said box and on said plates adapted to become engaged together when said lid is pushed sidewise over said box, and means for interengaging the ends of said box and said plates adapted to be set in position after said lid is in closed position whereby it is held in said position.

3. In combination with a box and a removable lid therefor, a plate secured to one end of said lid and overlapping the end of said box, means for detachably engaging said plate with the end of said box when the former is pushed sidewise of the box into place, and a spring-bolt mounted on one of the engaging elements and adapted to snap into a hole in the other when said lid is in closed position.

4. In combination with a box and a removable lid therefor, a plate mounted on the end of said box and having a headed stud near one end and a spring-bolt near the other, an angle-plate secured on the end of said lid and having one flange overhanging the same and overlapping the end of said box, said flange having a longitudinal slot adapted to engage with said headed stud and a hole adapted to become engaged with said spring-bolt.

5. A box-cover fastener comprising, in combination, a plate adapted to be secured to the end of a box and a second plate adapted to be secured to the end of the lid and to overlie said first plate; interlocking means on said plates adapted to become engaged when one of said plates is moved longitudinally on the other; and a spring-bolt mounted on one plate and adapted to engage in a hole in the other when they are in proper relative position for closure of the box.

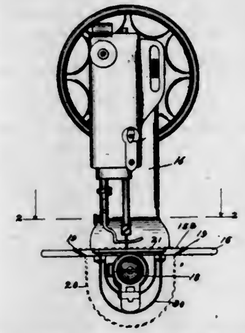
[Claims 6 to 11 not printed in the Gazette.]

884,482. SEWING-MACHINE BED-PLATE OR WORK-SUPPORT. CHARLES T. E. GOULD, Chicago, Ill., assignor of one-third to Edward Hilker, Chicago, Ill. Filed Apr. 3, 1905, Serial No. 253,430. Renewed July 17, 1907. Serial No. 384,273.

1. The bed-plate of a sewing-machine having on each side of the sewing and feeding mechanism a longitudinally extending way for the reception and passage of the article or garment to be sewed, each of said ways being inwardly and downwardly inclined, substantially as described.

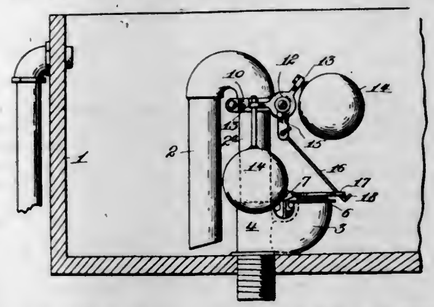
2. The bed-plate of a sewing-machine having on each side of the sewing and feeding mechanism a longitudinally extending way for the reception and passage of the garment or article to be sewed, and means to open and close said ways, substantially as described.

3. The bed-plate of a sewing-machine having on each side of the sewing and feeding mechanism a longitudinally extending slot contracted at its upper portion, a bar having its upper portion reduced and pivotally secured to the lower surface of the bed-plate at the inner end of each of said slots, and means near the front end of each of said bars to detachably secure it to the bed-plate, substantially as described.



4. A sewing-machine work support provided with a way extending longitudinally on each side of the feeding and sewing mechanism for the reception and passage of the article or garment to be sewed, and a removable protector encompassing said mechanism, substantially as described.

884,483. AUTOMATIC PERIODIC FLUSHING APPARATUS. JOHN W. GRANTLAND, Philadelphia, Pa., assignor to Haines, Jones & Cadbury Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Mar. 13, 1906. Serial No. 305,927.



1. In flushing mechanism, the combination of a siphon, a siphon starter associated therewith, a hinged valve combined with said siphon starter, a support connected with said siphon, float mechanism swiveled in said support and comprising a plurality of floats, a crank arm combined with said float mechanism, and a link connected with said crank arm, loosely connected with said valve and provided with means to engage said valve.

2. In a flushing mechanism, the combination of a siphon, a siphon starter associated therewith, a valve combined with said starter, a support clamped to said siphon, float mechanism having a swiveled connection with the support and comprising a plurality of floats, and a connection between said float member mechanism and valve.

3. In a flushing mechanism, the combination of a siphon, a siphon starter associated therewith, a valve combined with said starter, a support clamped to a leg on the siphon and provided with a pintle, float mechanism having a swiveled connection with said pintle and comprising a plurality of floats, and a lost motion connection between the float mechanism and valve.

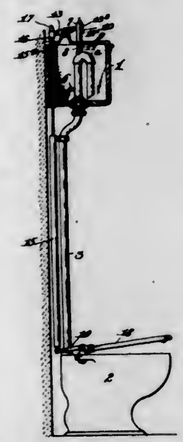
4. In a flushing mechanism, the combination of a si-

phon, a siphon starter associated therewith, a valve combined with said starter, float mechanism comprising a plurality of floats and a swiveled support upon which said floats are mounted, means for limiting the extent of movement of the float mechanism, and a lost motion connection between the latter and the said valve.

5. In a flushing mechanism, the combination of a siphon, a siphon starter associated therewith, a valve combined with said starter, and a float mechanism connected with said valve and composed of a plurality of float members, and a pivotal support upon which said float members are swiveled.

[Claims 6 to 9 not printed in the Gazette.]

884,484. MEANS FOR FLUSHING RECEPTACLES. JOHN W. GRANTLAND, Philadelphia, Pa., assignor to Haines, Jones & Cadbury Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Apr. 12, 1906. Serial No. 311,343.



1. In a flushing apparatus, the combination of a movable siphon having an arm rising therefrom, a gravity catch pivotally connected to said arm and provided with a nose normally projecting beyond an edge of the arm and with a trip, an operating lever having a portion extending across said arm normally below said nose, and a fixed element coöperating with the trip to release the nose from engagement with the lever when the siphon is lifted.

2. In a flushing apparatus, the combination with a vertically moving siphon tube, an arm rising therefrom and provided with a lever race, a gravity catch pivotally connected to said arm and provided with a nose normally extending across said lever race and with a trip, an operating lever having a portion disposed in said lever race normally below said nose, and a fixed element coöperating with the trip.

3. In a flushing apparatus, the combination with a vertically moving siphon tube, an arm rising therefrom and provided with a lever race, a gravity catch pivotally connected at one end to said arm and having a nose intermediate its ends and a trip at its free end, said nose normally extending across the lever race, an operating lever having a portion extending through the lever race and normally disposed beneath the nose on the catch, and a fixed element coöperating with the trip.

4. The combination with a movable siphon, a lever race connected therewith, a lever one end of which is disposed to work in said race, a catch having a nose operatively associated with said lever and said race, and provided with a trip, and means located to engage said trip to withdraw said catch from engagement with said lever.

5. In combination with a movable siphon, a lever race connected therewith, a gravity catch connected to said siphon, and provided with a trip and a nose, a stationary element to engage the trip, a lever one end of which is disposed to work in said race and coöperate with said nose, an operating rod connected with the other end of said lever, and means for actuating said rod.

[Claims 6 to 9 not printed in the Gazette.]

884,485. HANDLE FOR DIPPERS. MALCOLM E. GRAY and WILLIAM GRAY, Rochester, N. Y. Filed Nov. 13, 1905, Serial No. 286,986. Renewed Sept. 19, 1907. Serial No. 393,691.



1. In a handle for dippers, etc., a re-inforcement for the outer end of such handle comprising a cup-shaped member secured in the outer end of such handle, and an opening through the wall of such handle and also through the wall of such re-inforcement for hanging the dipper up by.

2. A handle for a dipper comprising a tube secured to the bowl of the dipper on the outside and a re-inforcing member therefor comprising a sheet of metal struck to the proper shape to form a cone-like re-inforcement when bent around the handle of the dipper with the small end uppermost and with its lower or larger end cut to fit the dipper bowl and provided with a lip extending over the roll of the dipper bowl at the top and partway down on the inside thereof, the larger end of such conically formed re-inforcement secured to the bowl of the dipper and the upper or smaller end secured to the tube comprising the handle proper.

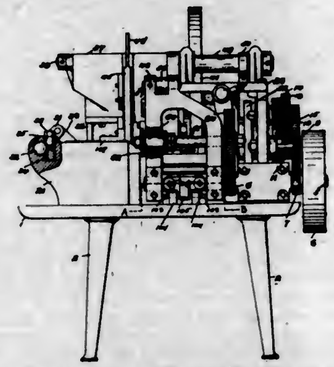
3. A handle for a dipper comprising a tube secured to the bowl of the dipper on the outside and a re-inforcing member therefor comprising a sheet of metal struck to the proper shape to form a cone-like re-inforcement when bent around the handle of the dipper with the small end uppermost and with its lower or larger end cut to fit the dipper bowl and provided with a lip extending over the roll of the dipper bowl at the top and partway down on the inside thereof, the larger end of such conically formed re-inforcement secured to the bowl of the dipper and the upper or smaller end secured to the tube comprising the handle proper, such conically-formed re-inforcing member having adjoining edges seamed together on the under side of the handle.

884,486. SLOTTING-MACHINE. DAVID C. GRIGGS and ROY H. SMITH, Waterbury, Conn., assignors to The Waterbury Farrel Foundry and Machine Company, Waterbury, Conn., a Corporation of Connecticut. Filed July 25, 1906. Serial No. 327,698.

1. In a machine of the character described, the combination with a vertically adjustable stationary block having an angular contact face; of a horizontally movable block; a rock sleeve; an operative connection between said movable block and rock sleeve; a rotary shaft; and a cam actuated connection between said rotary shaft and rock sleeve.

2. In a machine of the character described, the combination with an adjustable stationary block having an angular contact face; of a movable block; a rock sleeve; an eccentric shaft for said rock sleeve; a connection between said movable block and rock sleeve; and means for imparting movement to said rock sleeve at predetermined periods.

3. In a machine of the character described, the combination with an adjustable stationary block having an angular contact face; of a movable block; a rock sleeve; an eccentric shaft for said rock sleeve; means for adjusting the relative position of said eccentric shaft and said rock sleeve; a connection between said movable block and rock sleeve; and means for actuating said rock sleeve, whereby motion is imparted to said movable block.

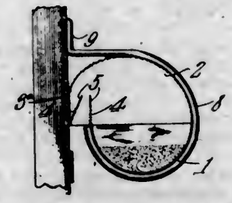


4. In a machine of the character described, the combination with the blank slotting means; of a reciprocating slide; a knife attached to said slide; and means for actuating said slide to move the knife across the head of a screw and thereby automatically remove the bur therefrom without shaving the head.

5. In a machine of the character described, the combination with the blank holding means having a reciprocable part; of a chute arranged so as to deliver blanks onto said reciprocable part; and means adjacent to said reciprocable part and arranged to engage the head of said blank for adjusting the position thereof on said reciprocable part during the first portion of the movement thereof and leaving the head thereof uncovered during the latter portion of said movement.

[Claims 6 to 18 not printed in the Gazette.]

884,487. FLY-TRAP. SUMNER A. HACKLEY, Victor, Colo. Filed Aug. 28, 1907. Serial No. 390,529.
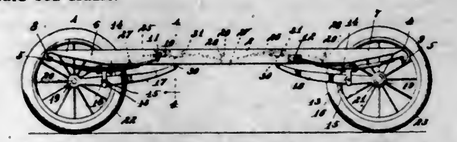


1. A trap comprising a receptacle, a foraminous hood located over the same and having an edge spaced from an adjacent edge of the receptacle, an opaque plate attached to the hood at the said edge thereof which is spaced from the edge of the receptacle and anticlinal strips attached to the edges of the hood and the receptacle.

2. A trap comprising a substantially semi-cylindrical receptacle and a substantially semi-cylindrical hood, said hood having an edge spaced from the edge of the receptacle, anticlinal strips located at the spaced edges of the hood and the receptacle, and helical hangers embracing the hood and receptacle and having end portions for attachment to a fixed object.

884,488. RUNNING-GEAR FOR VEHICLES. HARRY W. HANCOCK, Chicago, Ill. Filed Sept. 23, 1904. Serial No. 225,628.

1. In a running gear for vehicles, in combination, a bed frame; and means for supporting said bed frame comprising a spring at each end of said bed frame said spring being attached at each of its ends to said bed frame, a wheel-carrying arm pivotally connected intermediate its ends with each of said carrying springs and adapted to support an axle at one end, and means for yieldingly connecting the other end of each of said carrying-arms with said bed frame.



2. In a running gear for vehicles, in combination, a bed frame; a carrying spring connected at each of its ends with said bed frame; a wheel-carrying arm pivotally connected with said spring intermediate the ends of said spring; and a spring connected with said bed frame and said wheel-carrying arm and adapted to exert its force in opposition to said carrying-spring.

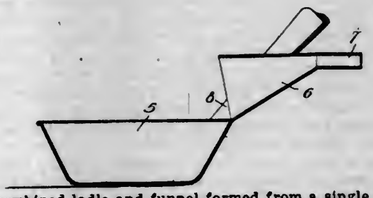
3. In a running gear for vehicles, in combination, a bed frame; a carrying spring pivotally connected at one of its ends with said bed frame and at its other end having a link connection with said frame; a wheel-carrying arm pivotally connected with said spring intermediate the ends of said spring; and means connected with said wheel-carrying arm and said bed frame for exerting a downward pull upon said bed frame to limit the movement of said carrying spring.

4. In a running gear for vehicles, in combination, a bed frame; a semielliptical carrying spring pivotally connected at one of its ends with said bed frame and at its other end having a link conection with said frame; a wheel-carrying arm pivotally connected with said spring; and means connected with said wheel-carrying arm and said bed frame for exerting a downward pull upon said bed frame to limit the movement of said carrying spring.

5. In a running gear for vehicles, in combination, a bed frame; a semielliptical carrying spring connected at each of its ends with said bed frame; a lever pivotally connected intermediate its ends with said carrying spring and adapted to rotatably support a wheel upon its shorter arm; and a spring connected with the longer arm of said lever and with said bed frame and adapted to exert its power in opposition to said carrying spring.

[Claims 6 to 9 not printed in the Gazette.]

884,489. COMBINED FUNNEL AND DIPPER. HENRY H. HANSON, Tyler, Tex. Filed Sept. 3, 1907. Serial No. 391,231.

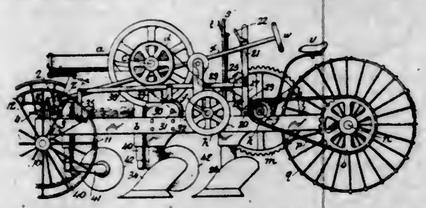


A combined ladle and funnel formed from a single blank comprising a circular portion pressed out to form the bowl of the ladle, a portion extending from and integral with one side of said circular portion and tapering outwardly, and a portion of uniform width integral with and extending from the smaller end of said tapering portion, the said three portions being partly divided from each other by two pairs of opposite slits which extend into the material from opposite sides along the lines where the said portions join each other, the opposite edges of said tapering portion and its said extension being bent over and joined to form a funnel and its discharge nozzle attached to one side of said bowl.

884,490. POWER-DRIVEN PLOW. ANDREW W. HARPSTRITE, Moweaqua, Ill. Filed Oct. 17, 1906. Serial No. 339,368.

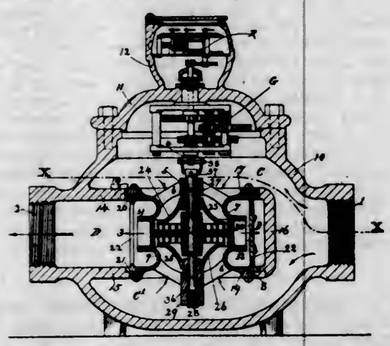
The combination in a plow, of a frame, soil-turning devices carried thereby, blocks pivoted to the frame and ar-

ranged to swing horizontally, vertically-disposed screws journaled and held against vertical movement in said blocks and equipped with handles fixed to the screws, axle members slidable vertically on said blocks and having portions engaging the said screws, wheels carried by the said axle members, bars fixed to and extending fore and aft



from the blocks, a rigid connection intermediate the forward portions of the said bars, a steering shaft mounted in the frame at a point between the said bars, and connections intermediate the rear portions of the bars and the steering shaft.

884,491. WATER-METER. OTTO HERSING, Worcester, Mass., assignor to Union Water Meter Company, Worcester, Mass., a Corporation of Massachusetts. Filed Oct. 2, 1907. Serial No. 395,557.



1. In a water-meter of the character described, the inner or wheel casing, consisting of two oppositely disposed bearing-heads each having an inwardly curved semicircular flange, a central bearing-boss and brace arms supporting said bearing boss; in combination with an intermediate frame consisting of upper and lower ring-members that afford annular seats for said bearing-heads, and a series of upright posts uniting said ring members, and having openings between said posts.

2. In a water-meter of the class described, a meter-wheel having a cylindrical rim comprising upper and lower ring members and an intervening body portion with a series of narrow inclined slots therethrough, said slots being of approximately uniform width at the inner and outer circles of the rim, an axis-shaft and hub within said wheel, and centrally disposed arms or web members connecting said rim concentrically with the hub and axis-shaft; in combination with oppositely arranged wheel-bearing-heads having means for supporting the wheel axis shaft, and means for delivering water currents from above and below the wheel, outward through said slotted rim.

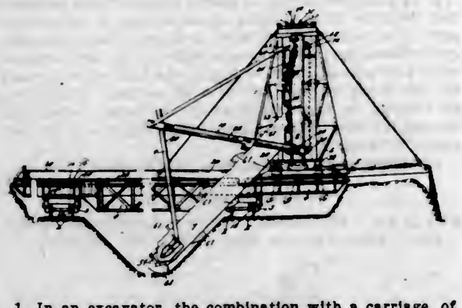
3. In a water-meter of the class described, a meter-wheel comprising a central hub, an axle-shaft, and a concentric cylinder rim with arms or web members connecting said hub and rim at mid-height thereof, said rim consisting of upper and lower annular face-portions with an intervening body-portion having a series of water-way slots disposed therethrough oblique to the radial planes at their positions; in combination with a wheel casing provided with means for directing an upward and a downward current to the interior of the wheel, and means for deflecting the respective currents outward to impinge on said slotted rim between the upper and lower annular face-portions, for centrifugal passage through the water-way slots.

4. In a water-meter of the class described, the combination, of a meter-wheel comprising a central hub with axle journals, and a concentric circular rim having obliquely disposed water-ways therethrough; an annular funnel-shaped bearing-supporting head having an inner-end flange that terminates within the interior of the wheel rim, an axial bearing-boss supported in said head, and a flaring deflector on the inner end of said bearing-boss, the adjacent faces of said flange and deflector embracing an annular outwardly delivering water-way discharging against the inner circular face of the wheel-rim.

5. In a water-meter, the combination, of a suitable casing, a centrifugally discharging meter-wheel, comprising an annular rim having a series of obliquely disposed passages therethrough, means for conducting the water to said wheel from above and below, and having current-directing surfaces that form annular peripheral discharging water-ways that deliver the currents in outwardly directed jets against the interior of the wheel rim.

[Claims 6 to 11 not printed in the Gazette.]

884,492. EXCAVATING-MACHINE. FRANCIS M. JOHNSON, Oregon, Ill., assignor of one-half to Alpheus Elton Holcomb, Chicago, Ill. Filed Mar. 21, 1907. Serial No. 363,726.



1. In an excavator, the combination with a carriage, of a bucket ladder supported thereby having the outer end thereof extending downwardly and arranged to have the buckets travel thereon so that the cut of each bucket extends across the entire face of the bank, and means for adjusting each end of the ladder independently of the other end.

2. In an excavator, the combination with a carriage, of a bucket ladder supported thereby having the outer end thereof extending downwardly and arranged to have the buckets travel thereon so that the cut of each bucket extends across the entire face of the bank, and means for adjusting the height of each end of the ladder independently of the other end.

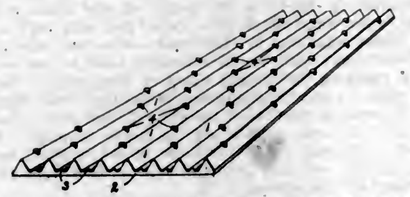
3. In an excavator, the combination with a carriage, of a bucket ladder supported thereby and arranged to have the buckets travel thereon so that the cut of each bucket extends across the entire face of the bank, means for adjusting each end of the ladder independently of the other end, and means for sluing the ladder.

4. In an excavator, the combination with a carriage, of a bucket ladder supported thereby and arranged to have the buckets travel thereon so that the cut of each bucket extends across the entire face of the bank, means for adjusting the height of each end of the ladder independently of the other end, and means for sluing the ladder.

5. In an excavator, the combination with a bridge, of a carriage movable thereon, a bucket ladder supported thereby having the outer end thereof extending downwardly and arranged to have the buckets travel thereon so that the cut of each bucket extends across the entire face of the bank, and means for adjusting both ends of said ladder to vary the slope of the back.

[Claims 6 to 77 not printed in the Gazette.]

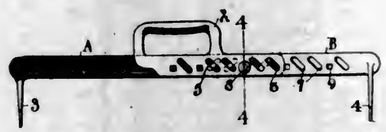
884,493. STAIR-TREAD. JULIUS KAHN, Detroit, Mich. Filed Sept. 3, 1907. Serial No. 391,014.



1. A rolled steel stair tread comprising a web and parallel ribs on the web, and buttons or knobs on the ribs.

2. A metal stair tread comprising a web and ribs of steel, the ribs having properly spaced holes, and soft metal plugs seated in said holes.

884,494. CLAMP FOR CARRYING BRICKS BY HAND. WILLIAM F. KERR, Cleveland, Ohio, assignor to Frederick H. Jackson, Cleveland, Ohio. Filed Dec. 21, 1907. Serial No. 407,526.



1. A device of the class described having two gripping members provided with transversely inclined slots at substantially right angles to each other in the respective members, and a plurality of engagements between said members working in said slots.

2. A brick carrying clamp consisting of two members having flat shanks side by side, reversely inclined slots in said shanks respectively, a connecting bolt in one shank and a lug on the extremity of the other shank adapted respectively to work in a slot in the opposite shank.

3. A device to carry bricks comprising two members having flat shanks provided each with substantially transverse slots oppositely disposed, and one of said shanks having bolt holes between slots at intervals, and a bolt connecting said shanks throught a hole in one shank and a slot in the other.

4. A clamp to carry bricks comprising two members having gripping jaws and flat shanks adapted to lie one against the other and having oppositely inclined transverse slots running in series to their inner ends, a fixed lateral projection on one of said shanks engaged in a slot in the opposite shank and a connecting bolt having a fixed seat in one of said shanks and engaged through a slot in the opposite shank, and a handle on one of said shanks to lift the clamp.

5. A brick clamp consisting of two members having transversely inclined slots and a projection in each member engaged in a slot in the opposite member, one of said projections removably connecting said parts.

[Claim 6 not printed in the Gazette.]

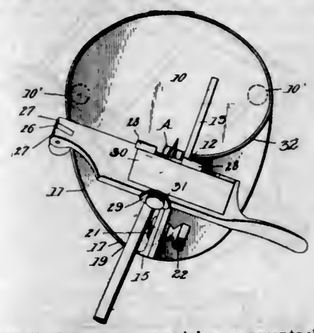
884,495. PENCIL-SHARPENER. NORTON T. KESLER, Zion City, Ill. Filed Apr. 30, 1907. Serial No. 371,163.

1. A pencil-sharpener comprising a receptacle base, a plate secured diagonally on said base and having an in- and a pencil support adjustable on said plate.

2. A pencil-sharpener comprising a receptacle base, a plate secured diagonally on said base and having an inclined edge, a knife mounted on said base for swinging movement on the inclined edge of said plate, and a pencil support comprising substantially right angular arms adjustable on said plate.

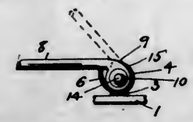
3. A pencil-sharpener comprising a receptacle base, a plate secured diagonally on said base and having a slot therein, and a pencil support adjustable in said slot.

4. A pencil sharpener comprising a base, a band extending partly around said base and turned inwardly toward the center thereof, a plate secured to said base and having an inclined edge, said plate having a slot therein, a set-screw disposed within the slot, and a pencil support comprising substantially right angular arms carried by said set-screw and adapted to be clamped to said plate.



5. A pencil sharpener comprising a receptacle base, a plate secured diagonally on said base and having a slot therein, said plate having a slanting blade-receiving edge, a blade mounted for movement upon said edge, a pencil support, and a screw disposed within the slot and engaged in the pencil support and arranged for operation to hold the pencil support against movement.

884,496. PIN AND PIN-JOINT. AXEL KILSTROM, Providence, R. I., assignor to David M. Watkins and Frederick H. Watkins, Providence, R. I., copartners as D. M. Watkins & Company. Filed Sept. 3, 1907. Serial No. 391,125.



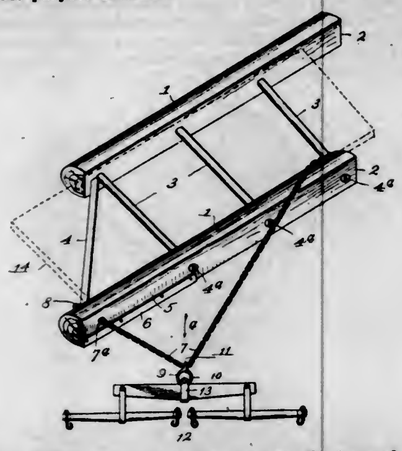
The improved pin and pin joint herein described, consisting of the combination of the pin stem 8, having the flattened head 9, and the cam edge 15; the two pivots 10 extending in alinement on the opposite sides of the head 9, respectively, each pivot having the truncated surface 14 and the spherical curvatures as shown: the two concavo-convex cups 4 and 5, approximately hemispherical in form with an intervening slot between them, in which slot the flattened head 9 of the pin tongue is capable of a limited oscillatory movement in contact with the edges of said slot; and a fulcrum edge 6 and a base or stop 7 connecting said cupped portions, said cups, fulcrum and stop portions being integral, and said fulcrum edge having a radius exceeding the radius of the ball.

884,497. ROAD-GRADER. DAVID W. KING, Maitland, Mo. Filed July 8, 1907. Serial No. 382,570.

1. A grader consisting of two parallel scrapers adapted to be adjusted to any desired angle with respect to the line of draft, a series of bars arranged at right angles to said scrapers and uniting the same, a brace uniting two ends of the scrapers, and a draft-chain having one end secured to the foremost scraper and its opposite end bearing upon said scraper and secured to one of the bars, substantially as described.

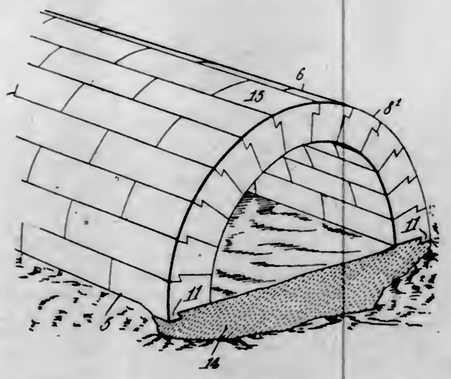
2. A grader consisting of two parallel scrapers adapted to be adjusted to any desired angle with respect to the line of draft, a series of bars arranged at right angles to said scrapers and uniting the same, a brace uniting two ends of the scrapers, a draft-chain having one end secured to the foremost scraper and its opposite end bearing upon

said scraper and secured to one of the bars, and a link having a reduced end adjustably engaging the draft-chain, for the purpose described.



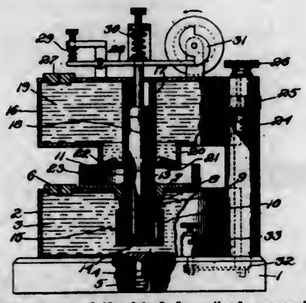
3. A grader consisting of two scrapers the forward one of which has a hole at one end, bars uniting said scrapers, a draft-chain having one end extending through said hole and its opposite end connected to one of the bars, and means adjustably engaging the end of the chain extending through the hole, for the purpose described.

884,498. CONCRETE BLOCK. JAMES R. KING, Petersburg, Ind., assignor of one-fourth to James P. Gladish and one-fourth to William Foust, Petersburg, Ind. Filed Jan. 25, 1907. Serial No. 354,026.



A semi-cylindrical culvert comprising a plurality of concrete arch forming blocks each consisting of an elongated substantially rectangular body portion having an upper exposed convex face and a flat lower face, the opposite side walls of said block being converged on like angles and one of said side walls provided with an integral overhanging hook extending the entire length of the block above the center thereof and depending from the convex face of the block a distance equal to approximately one-third the height of said block, said hook terminating flush with the opposite ends of the block and having its lower longitudinal edge under cut, the opposite side walls of each block being provided with a correspondingly shaped seating recess of the same length and height of the hook and opening through said convex face, and key blocks forming part of the arch and each having its side walls converged on the same angular lines as the arch forming blocks and provided with oppositely disposed over-hanging hooks also disposed above the center of the block and depending from the convex face thereof a distance equal to approximately one-third the height of said block, with their lower longitudinal edges under cut, said arch and key blocks being laid in superposed courses and arranged to break joint with the over-hanging hook of one arch block engaging the seating recess of the adjacent block and with the over-hanging hooks of the key blocks engaging the seating recesses of the two adjacent arch blocks, and with the side [illegible] of all the blocks converging towards a common c[illegible] the hooks of the terminal arch blocks being embedded in the ground to form anchoring members for the culvert.

884,499. ELECTRIC SPARK-GAP FOR INTERRUPTERS. THOMAS B. KINRAIDE, Jamaica Plain, Mass. Filed Apr. 24, 1906. Serial No. 313,452.



1. An apparatus of the kind described, comprising opposite discharge electrodes, and means for automatically providing a self-cleaning explosion between them at the moment of current discharge.

2. An apparatus of the kind described, comprising opposite discharge electrodes, and means for interposing a film of moisture between them at the moment of current discharge.

3. An apparatus of the kind described, comprising opposite discharge electrodes, and a supply of fluid adjacent one of said electrodes, said electrodes having capillary means for conveying said moisture to the discharge ends of the electrodes.

4. In an apparatus of the kind described, opposite discharge electrodes, and means for providing a film of moisture at their discharge area for keeping the electrodes clean.

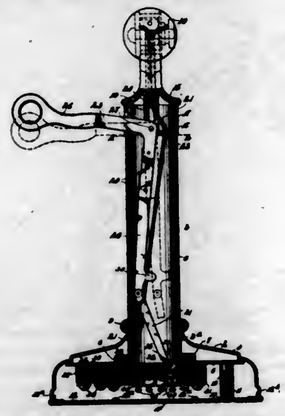
5. In an apparatus of the kind described, an electrode having a multitude of capillary ducts closely arranged therethrough from end to end, said electrodes consisting of a bundle of wires extending from one terminal of the electrode to the opposite terminal thereof, and means for binding said wires tightly together, the passages between said wires constituting said ducts.

[Claims 6 to 13 not printed in the Gazette.]

884,500. TELEPHONE DESK-STAND. ANTON M. KNUDSEN, Chicago, Ill., assignor to Kellogg Switchboard & Supply Company, Chicago, Ill., a Corporation of Illinois. Filed Sept. 2, 1904. Serial No. 228,111.

1. In a desk stand, the combination with hollow standards and a thin metal base, of a transmitter and switch-hook carried at the upper end of said standard, a metal plate secured horizontally within said base, switch springs carried by said plate and adapted to be actuated by a movable member within said hollow standard, terminal conductors leading downward from the transmitter, said plate having an aperture directly beneath the opening in the hollow standard through which said terminal conductors and movable member pass, substantially as described.

2. In a desk stand, the combination with a hollow standard and a thin metal base, of an interior reinforcing base secured in position by attachment to the lower end of the standard, substantially as described.



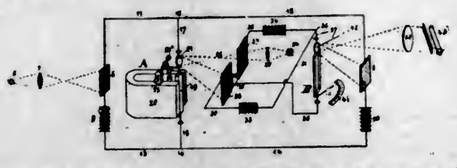
3. In a desk stand, the combination with a hollow standard and a thin metal supporting base, of an interior base having an aperture through which the lower end of said standard extends, said base providing means to secure apparatus within the base without marring the exterior surface of the outer base, substantially as described.

4. A desk stand, having a base and a standard mounted thereon, said base having an outer shell of comparatively thin metal, a plate or subbase within the shell extending across the same and bearing against the inside of the shell at its periphery, and means including the standard to clamp said plate within and to the shell, substantially as described.

5. A desk stand, having a base and a standard mounted on the base, said base comprising an outer shell of sheet metal spun or pressed to the desired form, a central aperture in said shell, a plate extending across the shell and having a central aperture, said plate bearing at its periphery against the inside of the shell, and means extending through said apertures to clamp said shell and plate together, substantially as described.

[Claims 6 to 16 not printed in the Gazette.]

884,501. MEANS FOR MEASURING THE DEGREE OF EXPOSURE OF A SELENIUM-CELL. ARTHUR KORN, Munich, Germany. Filed Aug. 1, 1906. Serial No. 328,813.

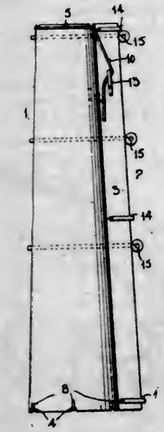


1. In a means for measuring the degree of exposure of a selenium cell, the combination with two selenium cells, of two sources of current separately connected with said two selenium cells, a line connecting said two selenium cells, a line connecting said two sources of current in series, a conductor connecting said two lines, means for exposing one of said two selenium cells to the light to be measured, and a galvanometer in said conductor and adapted to control the exposure of the other selenium cell to a constant source of light in accordance with that of the first selenium cell.

2. In a means for measuring the degree of exposure of a selenium cell, the combination with two selenium cells, of two sources of current separately connected with said two selenium cells, a line connecting said two selenium cells, a line connecting said two sources of current in series, a conductor connecting said two lines, means for exposing one of said two selenium cells to the light to be measured, a device adapted to deflect a graduated pencil of rays of light to the second selenium cell, and a galvanometer in said conductor and adapted to control said device so that the exposure of the second selenium cell may correspond to that of the first selenium cell.

3. In a means for measuring the degree of exposure of a selenium cell, the combination with two systems each comprising one selenium cell and one adjustable resistance connected in series, of two sources of current separately connected with said two systems between the selenium cell and the resistance, a line connecting said two systems between the selenium cell and the resistance on the opposite side, a line connecting said two sources of current in series, a conductor connecting said two lines, means for exposing one of said two selenium cells to the light to be measured, a device adapted to deflect a graduated pencil of rays of light to the second selenium cell, and a galvanometer in said conductor and adapted to control said device so that the exposure of the second selenium cell may correspond to that of the first selenium cell.

884,502. FENCE-POST MOLD. CHARLES F. KYSER, Saranac, Mich. Filed Jan. 17, 1907. Serial No. 352,753.



A mold of the type described, composed of spring sheet metal and open at one side, said mold being provided at its upper and lower ends with longitudinally disposed notches and having outwardly extending flanges at its open side, said flanges comprising relatively thick wooden bars provided on their inner faces with transverse registering grooves, and the wall of the mold having perforations respectively diametrically opposite said grooves, and U-shaped clamps removably applied to said flanges for securing them together and holding the open side of the mold closed.

884,503. BRACKET-SUPPORT. MAXIMILIAN E. LA BERGE, Los Angeles, Cal., assignor to Murray's Patent Fixture Company, Los Angeles, Cal., a Corporation of California. Filed May 31, 1907. Serial No. 376,733.



1. A bracket support comprising a post formed as a T-bar having its rib provided with a series of holes, a slide vertically movable on and embracing the T-bar, means for engaging in the holes in the said rib to fasten the slide to the T-bar, and a bracket carried by the slide.

2. A bracket support comprising a post formed as a T-bar having its rib provided with a series of holes, a slide vertically movable on and embracing the T-bar and provided with a hole on either side to register with any one of the holes in the post according to the vertical position of the slide on the post, a fastening pin adapted to pass through the said holes and having shoulder portions between which the parts of the slide and of the rib extend to interlock the slide and post, and bracket means carried by said slide.

3. In combination with a flanged post, of a recessed slide adjustable thereon to different vertical positions, and a bracket removably supported on said slide and adapted to engage with said post.

4. In combination with a post, of a slide adjustable thereon to different vertical positions, and provided with a projection and a bracket removably supported on said slide, said bracket being provided with a shoulder for engaging with the post and with a hook for engaging with said projection to hold the bracket arm to the slide by gravity.

5. In combination with a perforated, T-shaped post, of two oppositely disposed, recessed, perforated plates adapted to engage with said post, a pin through said perforations, a shouldered block between said plates, and a slotted bracket arm between the plates provided with a hook for engaging with the shoulder of the block and with a shoulder for engaging with the post.

[Claim 6 not printed in the Gazette.]

884,504. NON-SLIPPING HORSESHOE. ABRAM LANG, Eden Center, N. Y. Filed Sept. 6, 1906, Serial No. 333,461. Renewed Feb. 24, 1908. Serial No. 417,394.



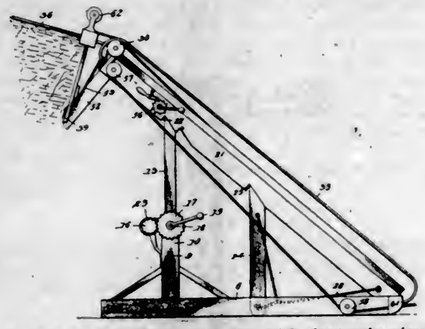
1. A non-slipping horseshoe adapted to be applied to an ordinary horseshoe and comprising a tread-plate, metallic plates secured to the upper side of the tread plate and provided on their heel-portions with rigid inner and outer stops arranged to abut against opposite sides of the heel-portions of the ordinary shoe, substantially as set forth.

2. A non-slipping horseshoe adapted to be applied to an ordinary horseshoe and comprising a tread-plate, metallic plates secured thereto along opposite sides thereof and each provided at its inner edge with a stop adapted to engage the ordinary horseshoe, and fastening means connected with said metallic plates, substantially as set forth.

3. A non-slipping horseshoe, adapted to be applied to an ordinary horseshoe and comprising a tread-plate, metallic plates secured thereto along opposite sides thereof and each provided at its outer edge with upwardly-projecting lugs or ears and at the inner edge of its heel-portion with a similar lug, and fastening straps connected with said outer lugs, substantially as set forth.

884,505. STACKER. CHARLIE E. LANG, Erskine, Minn. Filed Mar. 26, 1907. Serial No. 364,674.

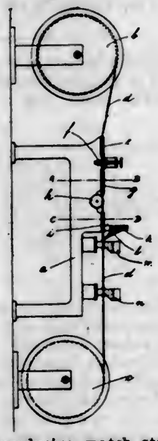
1. In a stacker, the combination with tracks of a carrier movable over the tracks, said carrier being arranged for tilting movement into discharge position at one end of the tracks, a bar extending transversely of the tracks, stops pivoted to the bar and arranged to receive portions of the carrier thereagainst to limit the movement thereof, a drum journaled between the tracks and a cable connected with the drum and with the stops for movement of the stop when the cables are wound upon the drum.



2. In a stacker, the combination with the tracks pivoted for vertical movement, of vertical guide frames located below the tracks, supporting members mounted in the guide frames for vertical movement and arranged to receive the tracks thereupon, supplemental supports pivoted to the frames, a flexible connection for the supplemental supports, and having one of its ends connected to the tracks and its other end connected to said supports, a drum journaled upon the guide frames and cables connected with the drum and with the first mentioned supporting members for upward movement thereof when the cables are wound upon the drum.

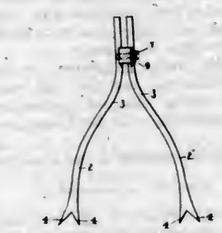
3. In a stacker, the combination with tracks of the carrier movable over the tracks and including a shaft having circumscribing grooves receiving portions of the tracks, guide rails connected with tracks and lying in spaced relation thereto, said rails being engaged in the grooves and rollers carried by the carrier and arranged to rest upon the ground when the carrier is at the downward limit of its movement, and for engagement with the guide rails when the carrier is moved upwardly.

884,506. METHOD OF MAKING BODIES FOR WAX MATCHES. TEODOR LJERN, Björneborg, Russia. Filed Apr. 13, 1907. Serial No. 368,129.



The process of producing match stems which consists in cutting a veneer of wood into a plurality of strips or slivers, then applying a thread or string of cotton or analogous material to each strip or sliver so that said threads or strings lie alongside and longitudinally of the strips or slivers, and then coating the strips or slivers and their complementary threads or strings with paraffin or equivalent substance, all in one continuous operation.

884,507. SHINGLING-BRACKET. JOHN LASLEY, Whiteville, Tenn. Filed June 18, 1907. Serial No. 379,644.

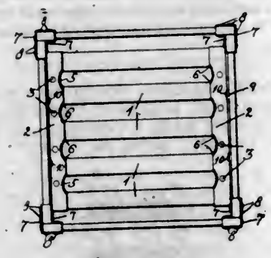


1. A shingling bracket having a horizontal pronged-leg and two separate upright legs extending from the horizontal leg, each of said upright legs being bent outwardly so as to space each leg from the other legs at the base, and adjustable means to secure the upright legs to the horizontal leg, and a head on the horizontal leg which serves as a stop to limit the movement of the other legs, substantially as described.

2. A shingling bracket having three adjustable legs, one of said legs adapted to be placed in a horizontal position on the roof to receive a board or plank, said other legs provided with a series of apertures and a thumb screw engaging said legs, substantially as described.

3. A shingling bracket having a horizontal adjustable leg across which a board or plank is adapted to be placed and two vertical adjustable legs provided with apertures, said horizontal leg also provided with an aperture, means to connect said legs together, said horizontal leg having a head bearing against the outer edges of the vertical legs to limit the movement of the horizontal leg, substantially as described.

884,508. CRATE. EMIL LEHMANN, Hammond, Ind., assignor of one-half to George P. Daily, Hammond, Ind. Filed Feb. 14, 1907. Serial No. 357,399.

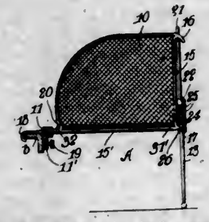


1. A crate composed of a plurality of invertible and reversible unitary sections, each comprising slats, metallic end members each having a channel to receive the ends of the slats, and means for spacing the slats.

2. A crate composed of a plurality of invertible and reversible unitary sections, each comprising spaced slats, and U-shaped end pieces secured over the ends of the slats, the edges of the sides of the pieces being bent inward between the slats to form shoulders, whereby the slats are spaced.

3. A crate composed of a plurality of invertible and reversible unitary sections, each formed from spaced slats and hollow metallic end pieces, substantially L-shaped strips of metal secured to each corner on the inside and outside, and fastening devices passing though the strips, the hollow metallic end pieces and the slats, said metallic end pieces being indented from each side on their inner edges to space the slats apart.

884,509. BABY-BED. WILLIAM S. LINDSEY, St. Petersburg, Fla., assignor of one-half to James S. Norton, St. Petersburg, Fla. Filed July 27, 1907. Serial No. 385,819.



1. The herein described baby bed comprising, in combination, end pieces for attachment to a bed rail, a back, legs bodily adjustable as to length relatively to the back, and means serving both to interlock the back to the end pieces and to hold the legs in any position of adjustment.

2. A baby bed comprising, in combination, end pieces including means to secure the same to a bed rail, a back including socket members at its lower corners, legs adjustably connected with the socket members, rigid means on the end pieces to engage the back and legs, and rods coöperating with the end pieces and socket members to secure the several parts together and the legs in adjusted position.

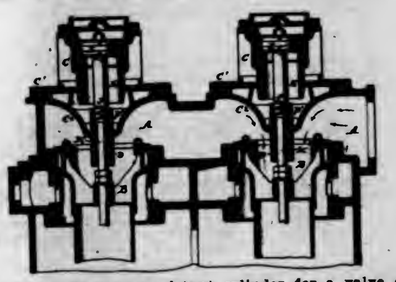
3. A baby bed comprising, in combination, end pieces having hooks at their upper outer corners and outwardly projecting points at their lower outer corners, a back having loops at its upper corners to receive said hooks and having socket members at its lower corners to receive said points, legs received in said socket members and entered by said points, and means coöperating with the end pieces and socket members to interlock all said parts in assembled position.

4. The combination of end pieces, a back, said end pieces and back having connecting means, and the back including socket members having engagement lugs, and a bed bottom comprising supporting rods to embrace the end pieces and lugs aforesaid.

5. The combination of end pieces, a back, adjustable legs, and a bed bottom comprising a fabric, supporting rods, and detachable connections between said fabric and rods, said rods constituting positive means whereby the back is secured to the end pieces and the legs are held in adjusted position.

[Claim 6 not printed in the Gazette.]

884,510. ASSISTANT CYLINDER FOR STEAM-ENGINES. LUTHER D. LOVEKIN, Philadelphia, Pa. Filed Nov. 16, 1906. Serial No. 343,712.



1. An auxiliary or assistant cylinder for a valve of a steam engine consisting of a cylinder E having annular ports H, H' and connecting ports h, a piston I working in the cylinder and controlling the ports, a cylinder and piston valve for controlling the direct supply of steam from the valve chest to the cylinder E, and a connection between the piston E and the valve of the steam engine.

2. An assistant cylinder for steam engine valve and

gear, consisting of a cylinder body having a bore of large diameter above and a bore of small diameter below the latter opening into the valve chest and said cylinder having a steam port through the wall of the bore of small diameter for supplying steam to the larger and upper part and a steam port or ports through the wall of the bore of large diameter for supplying steam from the lower part to the upper part of said bore of large diameter, combined with a differential piston structure connecting with the main valve of the steam engine having a large diameter adapted to the bore of large diameter and for controlling the port therein and a small diameter adapted to the bore of small diameter for controlling the port therein and said piston diameters being so formed that the port in the bore of small diameter remains open until after the port in the bore of large diameter is closed and is then closed.

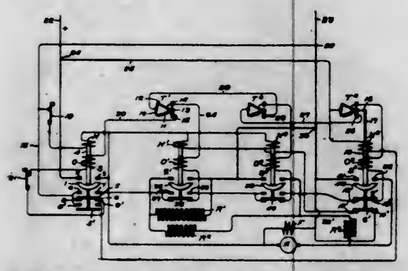
3. The combination with the valve chest of a steam engine of an assistant cylinder having a large diameter bore terminating at its lower part in a well and a small diameter bore the lower portions being arranged within the valve chest and provided with a steam port through its side wall, combined with pistons for said large and small bores of the cylinder connected together and to the main valve of the steam engine so as to move as a unit, said piston of small diameter controlling the steam from the valve chest to the large diameter bore and the piston of large diameter controlling the passage of steam from below to above it to regulate its action.

4. The combination with the valve chest of a steam engine, of an assistant cylinder having an upper cylinder part of large diameter above the valve chest and a lower cylinder part of small diameter extending down into the valve chest and having a length substantially equal to the valve stroke, said cylinder parts being supplied with steam from the valve chest and the large cylinder part receiving steam through the small cylinder part, and a differential piston structure connected with the main valve and adapted to the two cylinder parts, whereby steam enters the cylinders only through the cylinder part of small diameter.

5. The main valve and its valve chest, combined with an assistant cylinder comprising two bores of different diameter in which the larger is above the smaller and each are greater in length than the travel of the valve and a differential piston structure adapted to the two bores of the cylinder and connected to the main valve and in which the smaller piston and cylinder control the steam admitted to the large cylinder.

[Claims 6 to 12 not printed in the Gazette.]

884,511. SELF-STARTER. WALTER O. LUM, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Aug. 6, 1906. Serial No. 329,321.



1. An automatic circuit controller, comprising a plurality of switches and thermostatic means for successively controlling the same.

2. An automatic circuit controller, comprising a plurality of electro-magnetic switches and thermostatic means for successively controlling the same.

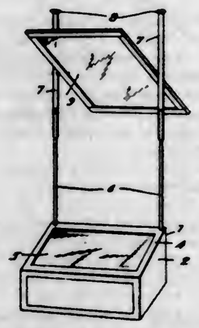
3. An automatic circuit controller, comprising a plurality of electro-magnetic switches and a plurality of thermostatic devices for successively controlling said switches.

4. An automatic circuit controller, comprising a plurality of electro-magnetic switches and thermostatic devices in series with the magnet coils of said switches for successively controlling the same.

5. An automatic circuit controller, comprising a plurality of electro-magnetic switches each having an operating coil and a holding coil, and thermostatic devices in circuit with the operating coils for successively controlling said switches.

[Claims 6 to 18 not printed in the Gazette.]

884,512. MIRROR. JULIUS C. MAY, Chicago, Ill. Filed May 23, 1907. Serial No. 375,267.



A device as described, embracing a desk-like base-member having its top surface inclined downwardly and forwardly toward the user, and provided therein with a mirror facing upwardly, said base-member having fixed thereon at its outer corners, opposite standards, and slidable tubular standard-members arranged adjustably upon the aforesaid standards, said slidable standard-members having hung between them a mirror, said slidable standard-members being adapted for frictional retention in adjusted elevated position and said latter mirror adapted to be angularly disposed to the aforesaid mirror, as when said tubular standard-member is adjusted in its elevated position.

884,513. HEEL-NAILING MACHINE. BENJAMIN F. MAYO, Salem, Mass., assignor to United Shoe Machinery Company, Boston, Mass., a Corporation of New Jersey. Filed Jan. 10, 1902. Serial No. 89,137.



1. In a machine of the class described, a horizontally movable nail-transferrer and a nail-sustainer, combined with a horizontally movable nail-guide held out of contact with said transferrer and having holes to receive and guide the nails after leaving said nail-sustainer.

2. In a machine of the class described, a transferrer, and a nail-guide, combined with a sustainer movable between said transferrer and guide.

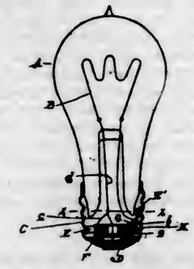
3. In a machine of the class described, a nail-block, a transferrer to present nails to the nail-block, and a nail-guide fixed in its position with relation to said transferrer and interposed between the nail-holes of the transferrer and the nail holes in said nail-block to guide the nails after leaving the transferrer on their way into the holes of the nail-block.

4. In a machine of the class described, a nail-transferrer, a nail-sustainer, means to hold said sustainer in its operative position while the transferrer is taking nails into position to be driven, and a nail-guide having a series of holes occupying a position in line with the nail holes of said transferrer, combined with means to release said sustainer that the nails supported thereby may leave the transferrer and pass through the holes in said nail-guide.

5. In a heel-nailing machine, the combination with nail-driving mechanism, of a nail-transferrer provided with means for sustaining the nails, a nail-guide, and means to actuate the sustaining means when the carrier is moved into nail-delivering position to permit the nails to pass from the nail-guide to the nail-driving mechanism.

[Claims 6 to 30 not printed in the Gazette.]

884,514. AUTOMATIC ELECTRIC SWITCH. ANDREW H. MILLER, Chesaning, Mich. Filed Mar. 30, 1903. Serial No. 150,213.



1. The combination with an electric lamp and a circuit therefor, of means for periodically flashing said lamp comprising an electric heater independent of the lamp filament and operated by said circuit, and a thermo-dynamic switch operated by said heater and controlling said circuit.

2. The combination with an electric lamp and a circuit therefor, of means for periodically flashing said lamp, comprising an electric heater independent of the lamp filament and operated by said circuit, a thermo dynamic switch operated by said heater and controlling said circuit, and means for inclosing and protecting said heater and switch from external influences.

3. The combination with an electric lamp and a circuit therefor, of means for periodically flashing said lamp, comprising an electric heater independent of the lamp filament and operated by said circuit, a thermo dynamic switch operated by said heater and controlling said circuit, and means associated with said lamp for protecting said heater and switch from external influences.

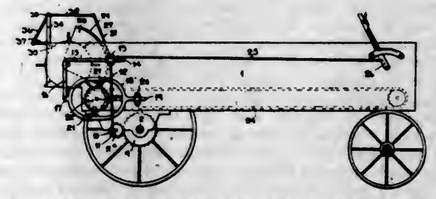
4. An electric lamp having a filament, a switch comprising coöperating contacts, an actuating device for one of said contacts and comprising a composite bar formed of a plurality of members having unequal co-efficient of expansion, an electric heater adjacent to said bar connected to the terminal of the lamp, means for inclosing said actuating device and heater, and electric connections whereby said heater is included in circuit when said contacts are closed and is cut out by the opening of said contacts.

5. The combination with an electric lamp having a filament, and its socket, of a thermo-dynamic switch, a coöperating electric heater arranged to close and open said lamp circuit to periodically cause a flash, and means for mounting the switch and heater within the socket whereby the same are inclosed and protected.

[Claims 6 to 8 not printed in the Gazette.]

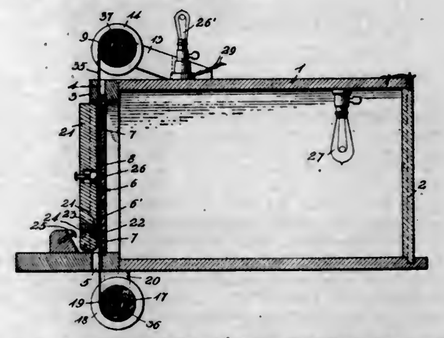
884,515. MANURE-SPREADER. BERTIE E. MILLER, Brandon, Iowa. Filed Jan. 14, 1907. Serial No. 352,156.

1. In a manure spreader, the combination with a body member mounted on ground wheels, an endless apron carried by said body, actuating mechanism for said apron, a spreading cylinder arranged adjacent to said apron and operated by means connected with the apron actuating mechanism, an end gate movable over said cylinder to open and close the manure supply, a rock shaft mounted in brackets carried by said body and having a crank arm, a lever carried by the rock shaft and connected with said end gate, an operating lever fulcrumed to said body, and spaced rods connected with said lever above said fulcrum, one of said rods being connected at its free end with the crank arm of said rock shaft and the other rod connected with the actuating mechanism for the apron, whereby said actuating mechanism and end gate are operated simultaneously on the throw of the lever in either direction.



2. In a manure spreader, the combination with a body member mounted on ground wheels and having a guide or keeper on one side thereof, a clutch mounted on one axle, a master gear carried by the movable clutch member, a shift lever connected with said movable clutch member, a shaft mounted adjacent to and parallel with said axle and having a pinion meshing with said master gear wheel, a disk fixed on said shaft, an endless apron carried by said body, a ratchet wheel carried by the apron shaft, a hollow approximately rectangular yoke having an extension at one end slidable in the keeper on said body, an L-shaped lever fulcrumed to said body and having one arm connected at its free end with the other arm of said yoke, oppositely disposed spring-pressed pawls carried by said yoke and engaging the ratchet on the apron shaft, a slide mounted on the free arm of said L-shaped lever, a pitman eccentrically connected at one end to said shaft-carried disks and at its other end to said slide, and means under the control of the driver for shifting said slide and varying the throw of the lever connected with the yoke and the feed of the manure.

884,516. MACHINE FOR PRINTING FROM FILMS OR PLATES. CLYDE G. MORGAN, Mount Vernon, Mo. Filed Aug. 8, 1907. Serial No. 387,659.



1. In a machine of the character described, the combination of a casing, a glass removably arranged at one end of the casing, a door hinged to the casing in front of the glass, a spring actuated button, arranged in the door and normally projecting beyond the inner face of the same, a transverse strip arranged at the hinged end of the door in position to engage the glass, and means for raising the strip when the door is swung open.

2. In a machine of the character described, the combination of the casing, a frame arranged at one end thereof,

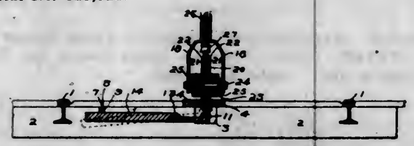
adapted to receive a glass or a plate holder, a door hinged to the casing in position to be received by the frame, a transversely disposed strip mortised in the inner face of the door at its hinged end, a spring actuated button arranged in the door above said strip to normally project beyond the inner face thereof, an electric light arranged in the casing, and means for establishing a circuit through the light, when the door is closed and breaking the circuit when the door is opened.

3. In a machine of the character described, the combination with a casing, of an upright frame arranged at one end thereof, a plate arranged in the frame, said plate having only a portion of its outside face exposed, means for leading a film in front of the glass, an upright door pivoted to the casing in position to swing in a vertical plane in front of the glass and to be pressed against the film, a transversely disposed strip mortised in the inner face of the door, means for raising said strip when the door is swung into open position, an electric light arranged within the casing and connections for establishing a circuit through said light when the door is closed and for breaking the circuit when the door is swung open.

4. A machine of the character specified, embracing a casing, a glass arranged at one end of the casing, an open frame arranged at said end of the casing, the end pieces of the frame being formed with longitudinal openings to receive the ends of the glass and to permit the passage of a film in front of and against the glass, a transversely disposed strip mortised in the inner face of the door, means for raising said strip when the door is swung into open position and means for leading a film in front of the glass.

5. A machine of the character specified, embracing a casing, a glass arranged at one end thereof, an open frame formed with openings in its end pieces to recive the glass and to permit of the passage of a film in front of the glass, flexible material arranged on the outer face of the glass, the former being formed with an opening to expose a corresponding portion of the latter means for leading a film in front of and against the glass, a transversely disposed strip mortised in the inner face of the door and means for raising said strip when the door is swung into open position.

884,517. CONDUIT ELECTRIC RAILWAY. LEWIS W. MUSICK, Crescent City, Cal. Filed Aug. 9, 1906. Serial No. 329,912.



An electric railway comprising a track, the ties being each recessed intermediate the rails, slot rails on the ties adjacent to said recesses and spaced apart, a conductor on the ties adjacent to one of the track rails, bearings under one of the slot rails, a plurality of rock shafts journaled therein, each having its ends bent laterally to form rock arms and extended underneath the space between the slot rails, a conducting bar secured to said arms, and having its ends bent downward, and a conducting rock arm secured at one end to the central portion of said shaft and bar and having its free end extended under said conductor, and means for engaging with and depressing the bars, so as to place the free end of each rock arm into electrical contact with the conductor.

884,518. CONTINUOUS RAIL-JOINT. ROBERT C. MCCLURE, Lethbridge, Alberta, Canada. Filed June 24, 1907. Serial No. 380,616.

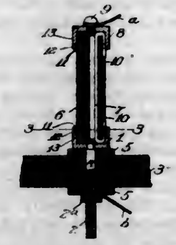
1. In a rail joint, the combination with the two rails, of short extension members attached to the end of each, a tongue formed on the end of one of the extension members having the top surface thereof narrower in width than the tread, and continuous with the top of the extension member, the other extension member being provided with a slot into which the tongue fits and forms a tongue and groove joint, and a chair supporting both extension members with freedom to slide longitudinally, as and for the purpose specified.



2. In a rail joint, the combination with the two rails, of short extension members attached to the end of each, a tongue integral with the end of one extension member, the top face of which is narrower than the tread and continuous with the upper surface of the extension member, the opposite member having a slot cut therein into which the tongue is adapted to fit, and a chair supporting the extension members with freedom to slide longitudinally, as and for the purpose specified.

3. In a rail joint, the combination with the two rails, of short extension members attached to each, having rounded inner vertical edges and webs thickened towards their extremities, a tongue formed integral with the end of one extension member, having the top surface narrower than the tread, and continuous with the upper surface of the extension member, the opposite extension member having a slot cut therein into which the tongue is adapted to fit, and a chair supporting both the extension members with freedom to slide longitudinally.

884,519. FUSE-HOLDER FOR ELECTRIC-CIRCUIT CONDUCTORS. PATRICK MCDONALD, Rochester, N. Y., assignor of one-half to George Herbert Smith, Rochester, N. Y. Filed Oct. 2, 1905. Serial No. 280,977.

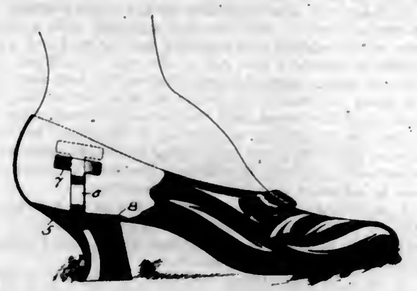


In a device of the character described, the combination with a seat piece provided with a recess, a cap piece having a similar recess and an insulating shell having ends adapted to fit said recesses and provided with notches, of spring fingers on the seat and cap pieces coöperating with the notches to detachably secure the parts together, a fuse wire contacting with the seat and cap and binding devices on the latter parts.

884,520. ATTACHMENT FOR SLIPPERS. KATHARINE A. MCINTIRE, Richmond, Va. Filed Jan. 27, 1908. Serial No. 412,910.

1. An attachment for slippers or shoes, comprising a heel-shaped attaching plate and upwardly-projecting spring members of different lengths located at the opposite edges thereof and curved to conform to the heel of the foot, said upwardly-projecting members terminating in heel engaging portions, substantially as shown and described.

2. An attachment for slippers or shoes, comprising an attaching plate adapted to fit within and substantially conform to the heel portion of the slipper or shoe, spring members of different lengths projecting upwardly from the side edges of the attaching plate and curved to conform to the lower portion of the heel of the foot, and laterally projecting fingers at the opposite sides of the upper ends of the spring members, said fingers being inclined and adapted to engage the heel below the ankle-bone, substantially as herein shown and described.



3. In combination with a slipper or shoe, an attachment therefor comprising an attaching plate of the same size as the heel portion of the inner sole and provided with holes for the attaching means, spring members projecting upwardly at the opposite side edges of the attaching plate and curved to conform to the lower portion of the heel of the foot, and laterally projecting curved portion or fingers at the upper ends of said spring members and adapted to engage the sides of the foot below the ankle, the attaching plate of the device being disposed under the inner sole.

4. In combination with a slipper or shoe including the inner sole thereof, of an attachment comprising an attaching plate of the same size as the heel portion of the inner sole and provided with holes for the attaching means, spring members of different lengths projecting upwardly at the opposite side edges of the attaching plate and each curved to correspond to the opposite sides of the heel of the foot and to extend to a point below the ankle bone, respectively, and laterally projecting curved portions or fingers at the upper ends of the spring members adapted to engage the sides of the foot immediately below the ankle, the attaching plate being disposed under the inner sole of the shoe, as herein shown and for the purpose set forth.

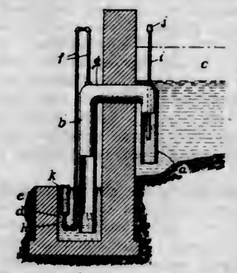
884,521. ROPE-GRIP. RAYMOND E. PATTERSON, Rochester, N. Y. Filed Dec. 22, 1906. Serial No. 349,159.



1. A rope grip comprising a pair of end loops located in parallel planes, one loop being shorter than the other and each loop having a closed end and an open end, and obliquely-arranged arms connecting the open ends of the loops, the latter extending in the same direction from said arms.

2. A rope grip comprising loops of unequal length, the ends of the loops being connected by obliquely arranged arms, a ring or link slidably engaging said arms, and a connecting member attached to said ring or loop.

884,522. APPARATUS FOR AUTOMATICALLY DISCHARGING LIQUIDS. ALBERT PRIESTMAN, Philadelphia, Pa. Filed Mar. 31, 1906. Serial No. 309,070.



1. In apparatus for automatically discharging liquids, the combination of a siphon pipe, and an air discharge pipe leading from the crown of said siphon pipe and extending up above the normal level at which the liquid is to be discharged and having a liquid seal on its discharge end.

2. In apparatus for automatically discharging liquids, the combination of a siphon pipe, and an air discharge pipe leading from the crown of said siphon pipe and extending up above the normal level at which the liquid is to be discharged and having a liquid seal on its discharge end controlled by the liquid discharged through said siphon.

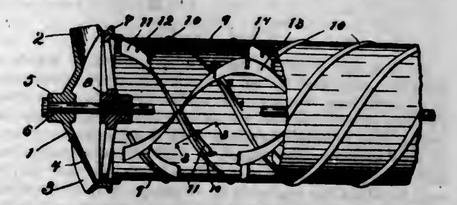
3. In apparatus for automatically discharging liquids, the combination of a siphon pipe having its discharge end submerged in a well, and an air pipe leading from the crown of said siphon pipe and extending up above the normal level at which the liquid is to be discharged and terminating in a U shaped liquid seal in said well.

4. In apparatus for automatically discharging liquids, the combination of a siphon pipe having its discharge end submerged in a well, and an air discharge pipe leading from the crown of said siphon pipe above the level of the liquid on the supply side at which level said siphon is set to operate, and thence down into said well and terminating in a U shaped bend therein to form a liquid seal for said pipe controlled by the liquid discharged through said well.

5. In apparatus for automatically discharging liquids, the combination of a siphon pipe, and an air discharge pipe leading from the longer leg of said siphon pipe and extending up above the normal level at which the liquid is to be discharged and having a liquid seal on its discharge end of a length proportional to the hydrostatic head to be attained in the tank controlled by said siphon before its operation.

[Claims 6 to 8 not printed in the Gazette.]

884,523. ROASTER. JOSEF C. PRIMS, Battle Creek, Mich., assignor to J. C. Prims Machinery Company, Battle Creek, Mich. Filed Sept. 23, 1907. Serial No. 394,171.



1. In a structure of the class described, the combination of a cylinder formed of sheet metal, said cylinder being provided with spiral corrugations forming internal spiral grooves therein; outer conveyer-blades arranged in overlapping series, secured along the edges of said corrugations; continuous spiral inner conveyer-blades, arranged within said outer blades, at the forward ends thereof, the

outer edges of said inner blades being in substantially the same plane as the inner edges of said outer blades; and means for revolubly supporting said cylinder.

2. In a structure of the class described, the combination of a cylinder formed of sheet metal, said cylinder being provided with spiral corrugations; outer conveyer-blades arranged in overlapping series, secured along the edges of said corrugations; continuous spiral inner conveyer-blades, arranged within said outer blades at the forward ends thereof, the outer edges of said inner blades being in substantially the same plane as the inner edges of said outer blades; and means for revolubly supporting said cylinder.

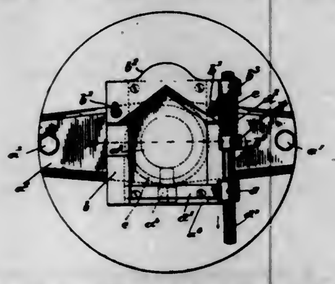
3. In a structure of the class described, the combination of a cylinder formed of sheet metal, said cylinder being provided with spiral corrugations forming internal spiral grooves therein; outer conveyer-blades arranged in overlapping series, secured along the edges of said corrugations; continuous spiral inner conveyer-blades, arranged within said outer blades, the outer edges of said inner blades being in substantially the same plane as the inner edges of said outer blades; and means for revolubly supporting said cylinder.

4. In a structure of the class described, the combination of a cylinder formed of sheet metal, said cylinder being provided with spiral corrugations; outer conveyer-blades arranged in overlapping series, secured along the edges of said corrugations; continuous spiral inner conveyer-blades, arranged within said outer blades, the outer edges of said inner blades being in substantially the same plane as the inner edges of said outer blades; and means for revolubly supporting said cylinder.

5. In a structure of the class described, the combination of a cylinder formed of sheet metal, said cylinder being provided with spiral corrugations forming internal spiral grooves therein; outer conveyer-blades arranged in overlapping series, secured along the edges of said corrugations; continuous spiral inner conveyer-blades, arranged within said outer blades at the forward ends thereof; and means for revolubly supporting said cylinder.

[Claims 6 to 10 not printed in the Gazette.]

884,524. HEEL-ATTACHING MACHINE. JOSEPH H. POPE, Brockton, Mass., assignor, by mesne assignments, to United Shoe Machinery Company, a Corporation of New Jersey. Filed May 24, 1898. Serial No. 681,610.



1. In a heel-attaching machine, a heel-box, a device to position a rear part of the heel, an adjustable breast-gage, and mechanism including a spring whereby a uniform yielding pressure is exerted on said breast-gage in its different adjustments, combined with a driver-plate located in said heel-box, and means to actuate said driver-plate and heel-box, to force the heel against the sole of the shoe to which the heel is to be attached, further movement of the driver-plate while the heel-box is at rest causing the nails to be driven through the heel into the sole of the shoe.

2. A heel-box having unyielding means to position the rear part of a heel, a breast-gage, and means to adjust said breast-gage to adapt the heel-box to the size of the heel used, and a spring to hold said breast-gage yieldingly in position, combined with a driver-plate, and means to actuate it to drive nails through said heel into the sole of a shoe, substantially as described.

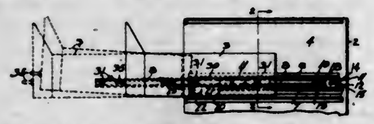
3. A heel-box having guiding ears, a screw threaded rod mounted loosely in said ears and provided with a breast-gage, a nut applied to a threaded part of said rod, and a spring surrounding said rod at one end of said nut, said nut and spring being located between the said ears, said rod being adjustable by means of said nut to vary the position of the breast-gage for heels of different sizes, but without at all affecting the tension of the spring, the latter always permitting the breast-gage to yield uniformly to pressure on the heel in whatever position the breast-gage may be adjusted, substantially as described.

4. A heel-box having unyielding means to position the rear part of a heel, a breast-gage, means to adjust it longitudinally of the heel, and means to hold said adjusted breast-gage yieldingly in position.

5. In a heel-attaching machine, a heel-box, a driver plate vertically movable in said heel-box, having an acting flat face arranged to form the bottom of the heel-box cavity, and gages for the rear and breast of a heel, respectively, carried by the heel-box, and arranged in a plane vertically removed from the normal position of said acting face, said gages being mounted to be relatively adjustable to adapt the heel-box to heels of different sizes.

[Claims 6 to 15 not printed in the Gazette.]

884,525. SUPPORT FOR DRAWERS OF CABINETS, &c. JOHN D. RIPSON, Rochester, and ERICK G. SAMPSON, Jamestown, N. Y., assignors to Art Metal Construction Company, Jamestown, N. Y., a Corporation of New York. Filed Oct. 26, 1907. Serial No. 399,287.



1. In a device of the character described, the combination of a cabinet, filing case or the like, guides on the walls of same, a drawer, slidable channel bars moving in said guides, wheels carried by said channel bars moving in said guides, plates removably secured to the walls of said cabinet near the outer portion thereof, said plates having stops in the path of said channel bars, and slidable connections between said drawer and said channel bars.

2. In a device of the character described, the combination of a cabinet, filing case or the like, guides on the inner walls of same, a drawer, slidable channel bars moving in said guides, and stops in the path of said channel bars, projections on the outer walls of said drawer slidably engaging said channel bars, stops at the outer ends of said channel bars, said channel bars having cut-away portions in their flanges to admit of the passage of said projections therethrough to remove the drawer.

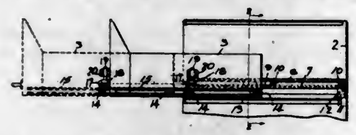
3. In a device of the character described, the combination of a cabinet, filing case or the like, guides on the inner walls of same, a drawer, slidable channel bars movable in said guides, stops in the path of said channel bars, wheels carried by said drawer engaging said channel bars, and stops on said channel bars in the path of said wheels.

4. In a device of the character described, the combination of a cabinet, filing case or the like, guides on the inner walls of same, a drawer, slidable channel bars movable in said guides, stops in the path of said channel bars, strips on the outer walls of said drawer, wheels carried by said strips engaging said channel bars, and stops on said channel bars in the path of said wheels.

5. In a device of the character described, the combination of a cabinet, filing case or the like, guides on the inner walls of same, a drawer, slidable channel bars moving in said guides, stops in the path of said channel bars, wheels carried on the outer walls of said drawer, said channel bars having their flanges cut-away to release said wheels therefrom, and stops in the path of said wheels.

[Claims 6 and 7 not printed in the Gazette.]

884,526. SUSPENSION FOR DRAWERS FOR CABINETS, &c. JOHN D. RIPSON, Rochester, and ERICK G. SAMPSON, Jamestown, N. Y., assignors to Art Metal Construction Company, Jamestown, N. Y., a Corporation of New York. Filed Oct. 26, 1907. Serial No. 399,288.



1. In a device of the character described, the combination of a suitable cabinet, filing case or the like, guides on the inner walls of the same, a drawer, Z-bars slidable in said guides, wheels on said Z-bars, channel bars on said drawer with which said wheels engage, stops in the path of said Z-bars, and stops on said Z-bars with which said drawer comes in contact.

2. In a device of the character described, the combination of a cabinet, filing case or the like, guides on the inner walls of the same, a drawer, Z-bars, wheels on said Z-bars movable in said guides, stops in the path of said Z-bars, channel bars on said drawer, wheels on said Z-bars engaging said channel bars, stops on said Z-bars with which said drawer comes in contact.

3. In a device of the character described, the combination of a cabinet, filing case or the like, guides on the inner walls of the same, a drawer, Z-bars with their forward portions cut away, wheels on the rear portion of said Z-bars movable in said guides, stops for said Z-bars, wheels on the forward portion of said Z-bars, channel bars on said drawers with which said last named wheels engage, and stops on said Z-bars with which said drawer comes in contact.

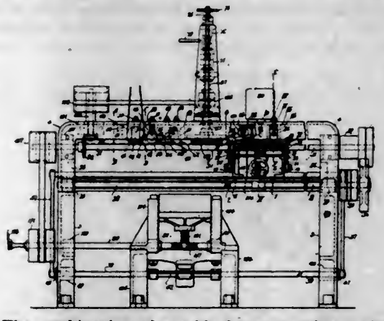
884,527. HORSE-COLLAR PAD. WILLIAM F. SACHSE, Sheboygan, Wis. Filed Nov. 23, 1907. Serial No. 403,558.



1. A horse collar pad comprising pivotally connected inner and outer saddle portions, said outer saddle portion having a longitudinal opening extending thereinto from one end, the inner portion being pivotally mounted within the outer portion and extending transversely of the opening, a yoke connected to the sides of the outer portion and extending over the opening and the inner saddle portion, a screen secured to the walls of the opening and extending over the inner saddle portion and spaced therefrom, a brace strip connecting the yoke and outer saddle portion and extending longitudinally above the opening, a bowed collar-supporting plate upon said strip, and tapered spacing means interposed between the strip and plate and forming a strap receiving opening therebetween.

2. A horse collar pad comprising pivotally connected inner and outer saddle portions, said outer saddle portion having a longitudinal opening extending thereinto from one end, the inner portion being pivotally mounted within the outer portion and extending transversely of the opening, a screen secured to the walls of the opening and extending over the inner saddle portion, and means for supporting a collar above and out of contact with the screen.

884,528. MANUFACTURE OF LEATHER BELTING AND MACHINERY THEREFOR. EDWARD F. SARGEANT, Stroud, England. Filed Aug. 3, 1906. Serial No. 329,131.



1. The combination of a table for supporting a strip of leather while being scarfed, clamps carried by the table for holding the leather at opposite ends to the portion to be scarfed, a cutter operating between the clamps for forming a scarf or bevel in the leather and means for causing the cutter to operate upon the strip crosswise to form the scarf therein.

2. The combination of a table for supporting a strip of leather, a revolving cutter above it, means for traversing one past the other, two clamp bars above the table one on one side of the revolving cutter and the other on the opposite side and both bars parallel with the line of traverse and adapted to hold the strip of leather against the table so that the leather is held on both sides of the revolving cutter while it is being cut.

3. The combination of a table for supporting a strip of leather free to turn on a hinge at one end, a revolving cutter above the table, means for traversing one past the other, two horizontal clamp bars above the table, one lying across the table near to the hinge joint and drawn downwards, while the other bar is fixed and lies across the table at a distance from the hinge and means for pressing the free end of the table upwards whereby the upper surface of the portion of leather below the fixed bar is kept by this bar at one fixed level while the underside of the leather below the other bar is also held at one fixed level by being held down on to the table close to the hinge.

4. The combination of a table for supporting a strip of leather free to turn on a hinge at one end, a revolving cutter above the table, means for traversing one past the other, two horizontal clamp bars above the table, one lying across the table near to the hinge joint, while the other is fixed and lies across the table at a distance from the hinge, levers carried by the ends of the first clamp bar, means for drawing downwards one end of these levers, connections from the other ends of the levers to the free end of the table tending to lift this free end, a treadle and rods operated by it for lifting the ends of the levers which are drawn downwards whereby when the treadle is operated, the leather on the table is simultaneously freed from both clamp bars, the table dropping away from one clamp bar and the other clamp bar being lifted away from the table.

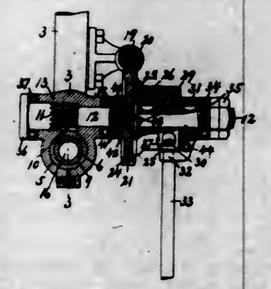
5. The combination of a table for supporting a strip of leather, a revolving vertical or approximately vertical shaft above it, means for traversing one past the other and two cutter blades carried by the vertical shaft, one at right angles to the shaft for cutting the upper surface of the leather to an incline or bevel and the other parallel with the axis and scoring or cutting shallow grooves in the bevel surface.

[Claims 6 to 10 not printed in the Gazette.]

884,529. DRILLING-MACHINE. GEORGE A. SEIB and IRVING A. WESTON, Syracuse, N. Y. Filed Nov. 17, 1905. Serial No. 287,883.

1. In a drilling machine, a rotary axially movable drill spindle, a shaft and pinion for moving the said spindle

axially, a slip feed for rotating the shaft, a hand-piece for controlling the slip feed mechanism, a second hand-piece and connections for rotating the shaft independently of the slip feeding mechanism, and connections between said hand-pieces whereby the return of the second hand-piece automatically throws the slip feed mechanism out of action.



2. In combination with a rotary axially movable drill spindle and means for rotating said spindle, a rack and pinion for moving the spindle axially, a rotary shaft to which the pinion is secured, a clutch composed of two members, one being loose on the shaft and the other keyed to it and slidable endwise thereon into and out of frictional engagement with the loose clutch element, means to rotate the loose element, a rocking member loose on the shaft and provided with means for forcing the keyed clutch element into engagement with the loose clutch element for rotating the shaft under a slip feed, a second rocking member keyed to the shaft and provided with a handle whereby the shaft may be rocked independently of the slip feed, and connections between said rocking members whereby the movement of one rocking member in one direction operates the other rocking member in the same direction.

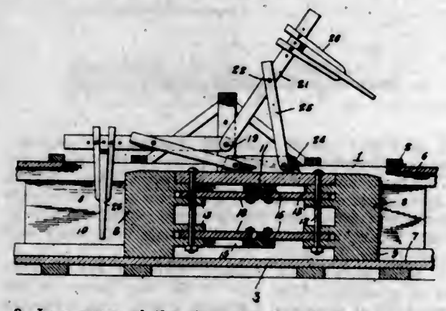
3. In combination with a rotary axially movable drill spindle and means to rotate the same, a rack and pinion for moving the spindle axially, a shaft secured to the pinion, a worm gear and rocking member both loose on the shaft, a worm to rotate the gear, a slip feed connection between the rocking member and the gear whereby rotary motion is imparted from said gear to the shaft for moving the spindle axially, separate means operated by hand for rotating the shaft independently of the first named rocking means, and connections between the rocking members whereby when the last named rocking member is operated to elevate the drill spindle the first named rocking member is operated to throw the slip feed connection between the gear and shaft out of action.

4. The combination with a drill spindle, a rack and pinion for moving said spindle axially, a driving shaft for the pinion, a worm gear loose on the shaft, a driving worm for the worm gear, a clutch member feathered on the shaft and movable into frictional engagement with the gear to transmit rotary motion to the shaft, hand operated means for moving said clutch member axially and additional hand operated means for rotating the shaft independently of the said friction clutch, and means brought into action by the return of the last named means for throwing the clutch out of action.

884,530. BALING-PRESS. GEORGE W. SHEPARD, Tecumseh, Okla. Filed Oct. 14, 1907. Serial No. 397,393.

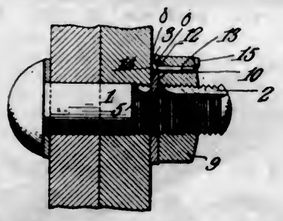
1. In a baling press of the character specified, a frame, plungers movable in the frame, a transverse pivot bar sustained above the frame, two oppositely extending feed levers pivotally connected at their inner ends to the pivot bar, feed forks adjustably connected with the outer ends of the feed levers, and connecting means for connecting the feed levers with the plungers whereby the former will be caused to oscillate by movement being imparted to the latter.

2. A baling press of the character specified embracing a frame, plungers movable in the frame, opposite movable feed levers pivotally connected at adjacent points above the frame, feed forks adjustably connected to the outer ends of the feed levers and connecting bars loosely connected at their outer ends to the feed levers at points between the ends thereof and loosely connected at their inner or opposite ends with the plungers.



3. In a press of the character described, the combination of a frame, plungers movable in the frame, a laterally disposed operating lever pivoted to the frame and connected with the plungers, a pivot member sustained immediately above the pivot point of the operating lever, two oppositely movable feed levers pivoted to said pivot member, feed forks adjustably secured to the free ends of the feed levers, and means for connecting the feed levers with the plungers, whereby one of said levers will be thrown off "dead center" and begin its downward stroke before the other lever has completed its upward stroke.

884,531. NUT-LOCK. HARRY E. SHROCK, Kokomo, Ind. Filed Dec. 31, 1907. Serial No. 408,728.



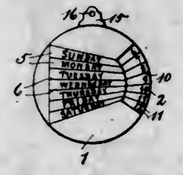
1. A nut lock comprising a bolt with a longitudinal groove, a washer having a lug to engage said groove and provided with a plurality of circular openings each opening connected with a slot on one side, and a nut having a slidable pin extending therethrough and headed on the under side adapted to engage one of the holes in said washer and be locked thereto by a backward turn of the nut.

2. A nut lock comprising a bolt having a longitudinal groove, a washer having a lug to engage said groove and provided with a plurality of concentrically disposed holes, each hole having a slot on one side narrower than the diameter of said hole said slots being countersunk, and a nut having a slidable pin passing therethrough and headed on the under side and adapted to pass through said hole and be carried into said slot by a reverse turn of the nut, said head entering the countersunk portion of the slot.

3. In a lock nut, a bolt, a non-rotatable washer having a plurality of spaced holes therethrough concentrically disposed and with concentric slots narrower than the diameter of said holes leading from corresponding sides thereof, said slots being countersunk on one side of said washer, a nut, and a pin passing loosely through a hole in said nut and slidable therein, said pin having a head on its under side adapted to enter one of said holes in the washer and be locked thereto by a reverse turn of the nut carrying the pin into the slot leading from said hole.

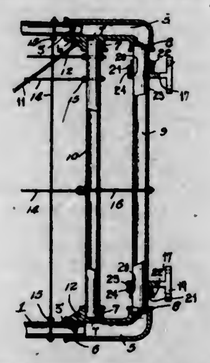
4. A lock nut comprising a bolt, a non-rotatable washer having a plurality of spaced holes therethrough concentrically disposed and with a short curved slot leading from the corresponding side of each hole, and a nut with a slidably head pin adapted to enter one of said holes and be locked to said washer by a backward turn of said nut.

884,532. PERPETUAL CALENDAR. SOL SIPSER, New York, N. Y. Filed Sept. 30, 1907. Serial No. 395,221.



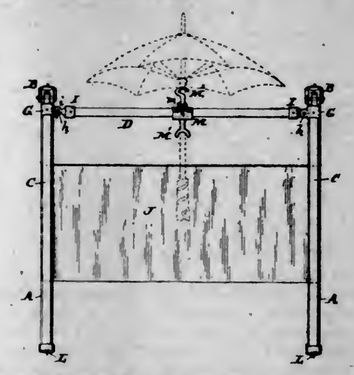
In a device of the character described, the combination of three concentrically pivoted disks 1, 2 and 3, adapted for rotation independently of each other, the upper disk 1 having a tapering peripheral recess and divided on its upper face into spaces containing the names of the days of the week across its upper face, the intermediate disk 2 on its upper face adjacent to its periphery being divided into spaces containing numerals indicating days of the month, the spaces containing the names of the days of the week on the upper disk being adapted to coincide with the spaces on the intermediate disk, and the length of the recess in the upper disk being such that it will expose seven of the spaces on the intermediate disk, and said latter disk being divided on its lower face into spaces containing the names of the months and the number of days in the respective months, and the lower disk 3 being provided with a recess adapted to coincide with each of the spaces on the lower face of the intermediate disk and expose the names of the months and number of days therein appearing in said spaces.

884,533. GATE. DANIEL E. STETLER, Medford, Okla. Filed May 29, 1907. Serial No. 376,326.



In a gate, a frame comprising upper and lower rails and a front end member, coupling elbows connecting the end member to the forward ends of the rails and provided with perforations, connectors provided on the rear ends of the rails and each having a pair of vertically disposed sockets and a perforated web, the inner and outer sockets of the members being opposed respectively to each other and the inner sockets being plain and the outer sockets screw-threaded in relatively reverse directions, a rear end piece having its ends loosely seated in the inner sockets, a hinge piece having its ends threaded into the outer sockets, said hinge piece being operable for drawing the connectors toward each other to clamp the rear end member in place within the inner sockets, wire engaging members passing through the frame-pieces of the gate, one of said engaging members being extended through the rear end piece and hinge piece for holding the latter against rotation, lattice wires terminally engaged with said engaging members, and diagonal braces passed at one end through the perforated elbows and having their other ends engaged with the perforated webs of the connectors.

884,534. BACK AND HEAD REST. CHARLES H. SPOTZ and GEORGE A. SPENCER, Philadelphia, Pa. Filed Feb. 12, 1907. Serial No. 356,942.



1. A back and head rest consisting of two posts connected by a flexible support for the back and head of the occupant and freely adjustable to and from each other, combined with struts for holding the posts in upright position, and a transverse tie bar having its ends connected with the tops of the posts by universal joints.

2. In a head rest, a metallic connection for the several hinged parts consisting of a socket post cap combined with a metallic socket piece G hinged to the post cap on an axis at right angles to the socket of the post cap, and a second socket part I hinged to the socket piece G on an axis at substantially right angles to the hinge of the said socket piece G and post cap.

3. A back and head rest consisting of two posts connected by a flexible support for the back and head of the occupant, and freely adjustable to and from each other combined with struts for holding the posts in upright position respectively hinged at their ends to the tops of the posts, a transverse tie bar for holding the upper ends of the struts at a fixed distance apart, connecting parts for adjustably uniting the posts, struts and tie bar consisting of a metallic part secured to the top of each post, a socket part secured to the top of each strut and hinged to the metallic part on the top of the post, and metallic parts connected to the ends of the tie bar and having a jointed connection with the metallic parts on top of the struts to enable it to fold down parallel to the struts.

4. In a back and head rest, the combination of the posts A A, flexible band J connecting them, metal heads B B for the tops of the posts consisting of parts E E' hinged together and clamped on the posts by bolts F F, socket pieces G G hinged upon the bolts F F, struts C C secured to the socket pieces G G, and a tie bar for holding the posts apart.

5. In a back and head rest, the combination of the posts A A, flexible bands J connecting them, metal heads B B for the tops of the posts consisting of parts E E' hinged together and clamped on the posts by bolts F F, socket pieces G G hinged upon the bolts F F, struts C C secured to the socket pieces G G, and a tie bar for holding the posts apart detachably jointed to the socket pieces G G.

[Claim 6 not printed in the Gazette.]

884,535. RETOUCHING-CABINET. JOHN M. STONESTREET, Marshalltown, Iowa. Filed July 15, 1907. Serial No. 383,746.

1. In apparatus of the class described, the combination of a supporting-frame comprising a pair of standards, a

cross-connection near the top thereof, a cross-bar for the lower portion of and adjustably connected to the standards so it may be raised or lowered to connect the standards at different elevations, a retouching-cabinet between the standards and a pivotal connection for the cabinet supported by said frame.



2. In apparatus of the class described, the combination of a supporting-frame comprising a pair of standards, legs for said standards, a cross-connection near the top thereof, a cross-bar for the lower portion of and adjustably connected to the standards so it may be raised or lowered to connect the standards at different elevations, a retouching-cabinet between the standards and a pivotal connection for the cabinet supported by said frame.

3. In apparatus of the class described, the combination of a supporting-frame comprising standards, a retouching-cabinet between the standards, a vertically adjustable cabinet-supporting frame sustained by said standards, and a pivotal connection between said cabinet-supporting-frame and the cabinet.

4. In apparatus of the class described, the combination of a supporting-frame comprising standards, a retouching-cabinet between the standards, a vertically adjustable cabinet-supporting-frame slidably connected to the standards, means for locking the frame to the standards, and a pivotal connection between said adjustable frame and the cabinet.

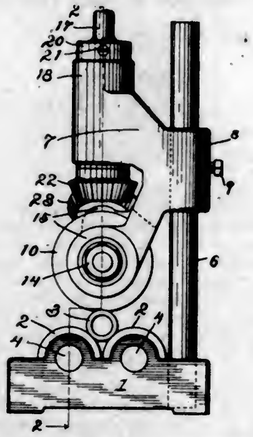
5. In apparatus of the character described, the combination of a supporting-frame comprising a pair of standards, a cabinet-supporting frame comprising a lower-cross-bar, an upper cross-bar, and stiles connecting said cross-bars, said frame being vertically adjustable along the standards, and a retouching-cabinet pivotally connected at its lower end to said vertically adjustable frame and disposed between said side bars.

[Claims 6 to 18 not printed in the Gazette.]

884,536. PIPE-CUTTER. ALBERT STRONG, Muskegon, Mich. Filed July 29, 1907. Serial No. 386,013.

1. In a pipe cutter, the combination with the base adapted to be placed on the table of a drill press, of a pair of pipes supporting rollers arranged in a horizontal position on said base, said rollers being provided with circumferential grooves; a vertically-arranged standard carried by said base; a frame slidably mounted on said standard; a set screw for securing said frame to said standard; a horizontally-arranged cutter shaft on said frame; a disk cutter on said shaft arranged centrally above said rollers and in alinement with the grooves therein; a vertically-arranged driving shaft adapted to be attached to the spindle of a drill press carried by said frame and adapted to feed the same; and gear connections for said driving shaft to said cutter shaft.

2. In a pipe cutter, the combination with the base adapted to be placed on the table of a drill press, of a pair of pipe supporting rollers arranged in a horizontal position on said base, said rollers being provided with circumferential grooves; a vertically-arranged standard carried by said base; a frame slidably mounted on said standard; a horizontally-arranged cutter shaft on said frame; a disk cutter on said shaft arranged centrally above said rollers and in alinement with the said grooves therein; a vertically-arranged driving shaft adapted to be attached to the spindle of a drill press carried by said frame and adapted to feed the same; and gear connections for said driving shaft to said cutter shaft.



3. In a pipe cutter, the combination with the base adapted to be placed on the table of a drill press, of a pair of pipe supporting rollers arranged in a horizontal position; a vertically-arranged standard carried by said base; a frame slidably mounted on said standard; a set screw for securing said frame to said standard; a horizontally-arranged cutter shaft on said frame; a disk cutter on said shaft arranged centrally above said rollers; a vertically-arranged driving shaft adapted to be attached to the spindle of a drill press carried by said frame and adapted to feed the same; and gear connections for said driving shaft to said cutter shaft.

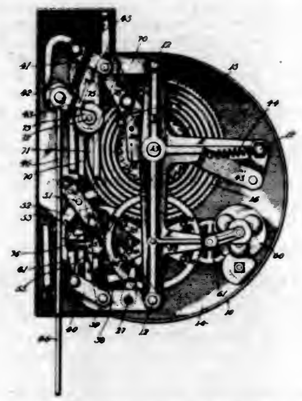
4. In a pipe cutter, the combination with the base adapted to be placed on the table of a drill press, of a pair of pipe supporting rollers arranged in a horizontal position on said base; a vertically-arranged standard carried by said base; a frame slidably mounted on said standard; a horizontally-arranged cutter shaft on said frame; a disk cutter on said shaft arranged centrally above said rollers and in alinement with the said grooves therein; a vertically-arranged driving shaft adapted to be attached to the spindle of a drill press carried by said frame and adapted to feed the same; and grear connections for said driving shaft to said cutter shaft.

5. In a pipe cutter, the combination with the base, of a pair of pipe supporting rollers arranged on said base, said rollers being provided with circumferential grooves; a standard carried by said base; a frame slidably mounted on said standard; a set screw for securing said frame to said standard; a cutter shaft on said frame; a disk cutter on said shaft arranged centrally above said rollers and in alinement with the said grooves therein; a driving shaft carried by said frame and adapted to feed the same; and gear connections for said driving shaft to said cutter shaft.

[Claims 6 to 8 not printed in the Gazette.]

884,537. RAILROAD-CROSSING ALARM. DANIEL W. THOMAS, Monrovia, Cal., assignor of one-fourth to James F. Miller, one-fourth to Clarence F. Miller, and one-fourth to John H. Thomas, Monrovia, Cal. Filed May 13, 1907. Serial No. 373,238.

1. In a railroad crossing alarm, an audible signal, motor means to sound said signal, locking means for said motor means, and means operable by an oncoming train adapted to remove said locking means from locked engagement with said motor means.



2. In a railroad crossing alarm, an audible signal, motor means to sound said signal, a lock for said motor means, and means operable by an oncoming train whereby said motor means is energized and said lock removed from said motor means.

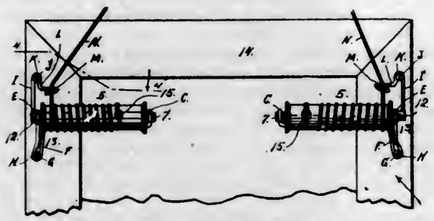
3 In a railroad crossing alarm, an audible signal, spring motor means to sound said signal, locking means adapted to normally lock said motor means from rotation, winding means for said spring motor means, and means operable by an oncoming train to operate said winding means and also to remove said locking means from locked engagement with said motor.

4. In a railroad crossing alarm, an audible signal, a spring motor adapted to sound said signal, winding means for said spring motor, and means operable by an oncoming train to operate said winding means.

5. In a railroad crossing alarm, an audible signal, a spring motor adapted to sound said signal, a lock adapted to normally lock said spring motor from rotation, and means operable by an oncoming train whereby said lock is removed from locked engagement with said spring motor.

[Claims 6 to 9 not printed in the Gazette.]

884,538. PICTURE-HANGER. LEMIEL THOMAS, Denver, Colo., assignor of one-third to Alonzo B. Boylan, Victor, Colo., and one-third to Frank Addis, Denver, Colo. Filed Dec. 21, 1906. Serial No. 348,881.



1. A picture hanger composed of two coöperating spring rollers to which the opposite extremities of the suspension device are attached, brackets for supporting the said rollers, the said brackets being adapted to be secured to the picture frame, each bracket having a rearwardly projecting wedge-shaped part through which the suspension device passes and in which it is wedged, substantially as described.

2. A picture hanger composed of two coöperating spring rollers, brackets adapted to be secured to the picture and forming a support for the rollers, a suspension device whose opposite extremities are connected with the spring rollers, each bracket being provided with a main part, parts projecting rearwardly from the extremities of the main part, and forming supports for the opposite extremities of the roller, the bracket having upwardly and downwardly projecting parts, fastening devices engaging said last named parts, and a rearwardly projecting wedge-shaped part adapted to receive the suspension device, substantially as described.

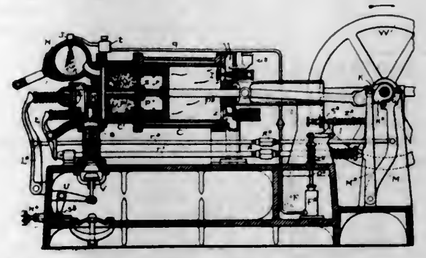
3. In a picture hanger, the combination with a suspension device, of a spring roller, a bracket for supporting the roller and adapted to be attached to the picture, the said bracket being provided with a rearwardly projecting wedge-shaped guide through which the suspension device passes.

4. In a picture hanger, the combination with two supports adapted to be secured to the picture frame, each support having a rearwardly extending arm provided with a slot converging rearwardly, of two rods mounted one in each of said supports below the rearwardly extending arm, two spools rotatively mounted on said rods respectively, a suspension cord extending through said slots in said arms and adapted when properly positioned therein to be locked against movement lengthwise therein and having its ends secured to and adapted to be wound on said spools respectively, and two coil springs encircling said rods respectively, each spring having its ends secured respectively to the adjacent rod and spool.

5. In a picture hanger, the combination with a suspension cord, of a spring-actuated, taking-up mechanism provided with means for being secured to a picture frame and secured to and provided with means for taking up the end of the suspension cord when the weight of the picture is removed from said cord, and releasable means for engaging said cord and locking it against movement lengthwise in either direction.

[Claim 6 not printed in the Gazette.]

884,539. MOTIVE-POWER ENGINE. ELIHU THOMSON, Swampscott, Mass., assignor to General Electric Company, a Corporation of New York. Filed Jan. 19, 1901. Serial No. 43,948.



1. In an internal combustion engine, the combination of a cylinder, a hot receptacle in open communication with the cylinder, a fuel supply conduit for admitting oil to the receptacle while the pressure in the cylinder is a minimum due to the action of the exhaust valve, means for supplying compressed air at approximately constant pressure to the cylinder after the admission of oil to the receptacle, whereby oil vaporized in the receptacle is brought into contact with air from the compressed air supply, the combination of the two filling the working space in the cylinder with the products of combustion under pressure, an exhaust valve for said products, and means for keeping the exhaust valve open while the piston travels from its outer position to a point near its inner position and then closing said valve.

2. In an internal combustion engine, the combination of a cylinder, a piston reciprocating therein, a valve controlling the admission of air into the working space in the cylinder, an exhaust valve, means for keeping the exhaust valve open while the piston travels from its outer position to a point near its inner position and then closing the valve, a hot receptacle connected to the cylinder

space, means for supplying fuel to said receptacle immediately after the closing of the exhaust valve to form a body of combustible separate from the cylinder, and means for opening the air admission valve after the closing of the exhaust valve and closing it after a portion of the following out-stroke of the piston has been made.

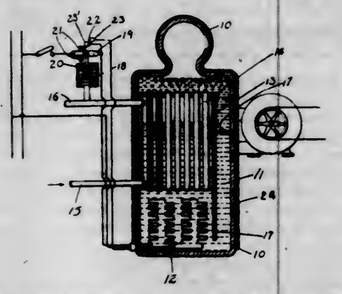
3. In an internal combustion engine, the combination of a cylinder, a regenerator in the passage leading to the exhaust from the working space within the cylinder and also leading to an inlet for compressed air from a storage tank, a hot receptacle having a port connecting it with the working space of the cylinder, means for injecting oil into the receptacle before the admission of air to the cylinder to form a body of combustible separate from the cylinder, an exhaust valve, and means for opening said valve when the piston is adjacent the outer limit of its travel, keeping it open until near the inner limit of its travel and closing it at substantially the same time that the fuel admission occurs.

4. In an internal combustion engine, the combination of an air pump, a tank for receiving the air, a piston, a cylinder having a connection with the tank, said connection being controlled by a valve moving at intervals in synchronism with the rotation of the engine, an exhaust valve to control the outlet of gases from the cylinder, a hot receptacle communicating by an open passage with the working space of the cylinder, an oil supply, means for delivering oil from the supply to the receptacle before the air valve is opened to form a body of combustible separate from the cylinder, and means for opening the exhaust valve when the piston is near the outer limit of its stroke, keeping it open until near the inner limit of its stroke and closing it at substantially the same time that the oil is admitted to the cylinder.

5. In an internal combustion engine, the combination of a power cylinder, a piston reciprocating therein, a valve controlling the admission of air into the working space of said cylinder, an exhaust valve, means for keeping said exhaust valve open while the piston travels from its outer position to a point near its inner position and then closing said valve, means for supplying fuel to the cylinder immediately after the closing of the exhaust valve, and means for opening the air admission valve after the closing of the exhaust valve and closing it after a portion of the following out-stroke of the piston has been made.

[Claims 6 to 9 not printed in the Gazette.]

884,540. ELECTRIC HEATER. ELIHU THOMSON, Swampscott, Mass., assignor to General Electric Company, a Corporation of New York. Filed Oct. 13, 1906. Serial No. 338,711.



1. An electric heater comprising a fluid container and means for circulating the fluid, a resistance conductor immersed in the fluid, and a heat distributing system receiving its heat from the fluid.

2. An electric heater comprising a fluid container and means whereby the fluid is caused to circulate, a resistance conductor immersed in the fluid, and a tubular heating device within the container and heated by the fluid.

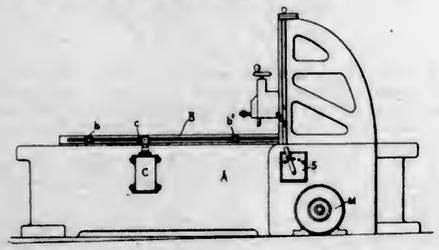
3. An electric heater comprising a receptacle containing an insulating fluid and means for circulating the fluid, a resistance conductor immersed in the fluid, and a heat distributing system arranged to receive its heat from the circulating fluid.

4. An electric heater comprising a receptacle containing an insulating fluid and means for circulating the same, a resistance conductor immersed in the fluid, and a tubular heating device within the container adapted to be heated by the circulation of the fluid.

5. An electric heater comprising a receptacle, containing oil having a high flashing point and means for circulating the same, a resistance conductor immersed in the oil and adapted to heat the same, and a heating system partially within the container and arranged to receive its heat from the circulating oil.

[Claims 6 to 9 not printed in the Gazette.]

884,541. SYSTEM OF CONTROL FOR ELECTRIC MOTORS. LEONARD A. TIBBILL, Lynn, Mass., assignor to General Electric Company, a Corporation of New York. Filed Feb. 8, 1906. Serial No. 300,059.



1. The method of operating a compound-wound motor, which consists in running the motor on full field, reversing the connections of the motor armature while on full field, and then decreasing the excitation produced by the shunt field winding and running the motor as a series motor.

2. The method of operating a reciprocating motor-driven member adapted to move at different speeds in the several directions of its travel, which consists in connecting the motor for operation as a compound-wound motor on full field, reversing the connections of the armature while on full field, and then decreasing the excitation produced by the shunt field winding and running the motor as a series motor.

3. The method of operating a compound-wound motor, which consists in supplying current to the armature and field windings, cutting out the armature and connecting the series field winding to the source of current supply, connecting the armature in reverse relation to the series field winding, and decreasing the excitation produced by the shunt winding to a small proportion of its whole value.

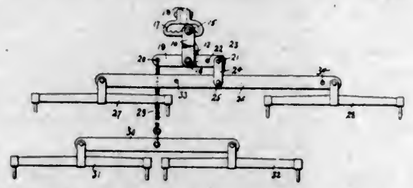
4. The method of operating a compound-wound motor, which consists in supplying current to the armature and field windings, cutting out the armature and connecting the series field winding to the source of current supply, connecting the armature in reverse relation to the series field winding, and then inserting a high resistance in series with the shunt field winding.

5. The method of operating a reciprocating motor-driven member adapted to move at different speeds in the several directions of its travels, which consists in connecting the operating motor as a compound wound motor and then reversing the relative connections of the armature and series field windings and operating the motor as a series motor.

[Claims 6 to 12 not printed in the Gazette.]

884,542. DRAFT-EQUALIZER. CHARLES J. TOBIN, Stuart, Iowa. Filed Dec. 24, 1907. Serial No. 407,962.

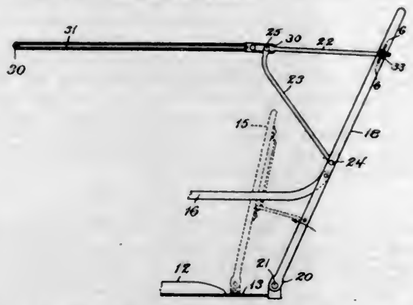
1. In a draft equalizer, a clip having a horizontal slot in one end and an oblique slot in the other end, a draft bar pivoted in said oblique slot and supported thereby at an angle to the horizontal, an evener beam swinging from the higher end of the bar and provided with spaced draft appliances, a connecting element coupled to the lower end of the inclined bar and extending beneath the evener, and adapted to receive draft appliances at its forward end.



2. In a draft equalizer, a clip having coupling means at one end and with an obliquely disposed slot in the other end, a draft bar pivoted in said oblique slot and maintained thereby in an inclined position and provided with a plurality of spaced apertures, a rear evener beam provided with a plurality of spaced apertures and with draft appliances adjustably connected thereto, means for coupling said evener beam by its apertures to the higher portion of the draft bar by the apertures thereof, a forward evener beam having draft appliances connected thereto, and means for coupling said forward evener beam to the lower portion of said draft bar.

3. In a draft equalizer, a clip having coupling means at one end and with an oblique slot in the other end, a draft bar pivotally connected in said oblique slot and provided with a plurality of spaced apertures, and draft appliances adapted to be connected to said bar at opposite sides of said clip.

884,543. CANOPY-TOP ATTACHMENT FOR PERAMBULATORS. ORA N. TURNER, Templeton, Mass., assignor to Bay State Metal Wheel Company, East Templeton, Mass., a Corporation of Massachusetts. Filed Oct. 4, 1907. Serial No. 395,911.



1. In a perambulator, the combination of a seat frame, a handle mounted thereon, and comprising side bars and a connecting cross bar, foldable brackets mounted on said side bars, and adapted to be folded between and projected from the side bars, and a canopy top slidably engaged with said brackets, and adapted to be retracted between the side bars by the folding of the brackets, and projected from the side bars over the seat frame when the brackets are projected.

2. In a perambulator, the combination of a seat frame, a handle mounted thereon, and comprising side bars and a connecting cross bar, guide eyes pivoted on the upper portions of the side bars, foldable brackets composed of guide members slidable in said eyes, and brace members pivoted at their ends to said guide members and side bars, respectively, and a canopy top, slidably engaged with the guide members, and adapted to swing therewith from a retracted position between the side bars to a projected position above the seat frame.

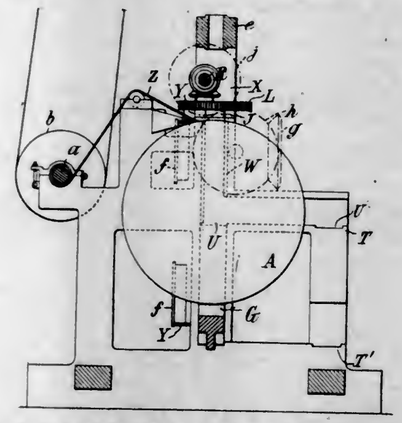
3. In a perambulator, the combination of a seat frame, a handle mounted thereon, and comprising side bars and a connecting cross bar, foldable brackets mounted on said side bars, and adapted to be folded between and projected from the side bars, a canopy top slidably engaged with said brackets and adapted to be retracted between the side bars by the folding of the brackets, and projected from the side bars over the seat frame when the brackets are projected, and means for locking the brackets in their projected position.

4. In a perambulator, the combination of a seat frame, a handle mounted thereon and comprising side bars and a connection cross bar, foldable brackets mounted on said side bars, and adapted to be folded between and projected from the side bars, a canopy top slidably engaged with said brackets and adapted to be retracted between the side bars by the folding of the brackets, and projected from the side bars over the seat frame when the brackets are projected, and means for locking the brackets in their folded position.

5. In a perambulator, the combination of a seat frame, a handle mounted thereon, and comprising side bars and a connecting cross bar, guide eyes pivoted on the upper portions of the side bars, foldable brackets composed of guide members slidable in said eyes, and brace members pivoted at their ends to said guide members and side bars, respectively, a canopy top slidably engaged with the guide members and adapted to swing therewith from a retracted position between the side bars to a projected position above the seat frame, and means for adjusting said guide eyes to lock the brackets.

[Claims 6 and 7 not printed in the Gazette.]

884,544. MACHINE FOR MAKING BELTS. EDMUND A. USINA, East Orange, N. J., assignor to New York Leather Belting Company, New York, N. Y., a Corporation of New York. Filed May 3, 1907. Serial No. 371,706.



1. A belt making machine, including in combination a traveling splitting knife, and means for presenting to said knife the edge of a block built up of a number of hides laid face to face upon one another, to cut therefrom a composite belt made up of a number of strips with their cut edges forming the face of the belt.

2. A belt making machine, including in combination a traveling splitting knife, and means for supporting a block built up of a number of hides laid face to face upon one another, said supporting means permitting rotation and bodily movement of the block toward the knife to cut therefrom a composite belt made up of a number of strips, and means for pulling the composite belt as it is cut so as to move the block spirally against the knife.

3. A belt making machine, including in combination a cutter, and means for presenting to said cutter the edge of a block built up of a number of hides, and means for counterbalancing said block.

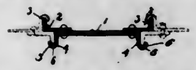
4. A belt making machine, including in combination a cutter, and means for presenting to said cutter the edge of

a block built up of a number of hides, and springs adapted to counterbalance said block with a variable force as the cutting proceeds.

5. A belt making machine, including in combination a traveling splitting knife, a holder comprising a pair of members between which may be clamped a block built up of a number of hides, said holder being movable toward said knife to present the edge of the block thereto, and guides l' for preventing lateral movement of the edges of the hides.

[Claims 6 to 10 not printed in the Gazette.]

884,545. PILING. MATHIAS R. VANDERKLOOT, Chicago, Ill., assignor, by mesne assignments, to Lackawanna Steel Company, New York, N. Y., a Corporation of New York. Filed Dec. 9, 1904. Serial No. 236,153.



1. A piling comprising a single web provided with hooked flanges upon one side and straight flanges on its opposite side surface substantially as described.

2. A sheet metal piling comprising a single unit having a web portion provided with hooked flanges near the edges upon one face, and plane flanges on the edges of its opposite face.

3. A piling consisting of a single web portion having two pair of flanges projecting from its side surfaces, one pair of said flanges being provided with hooked shaped ends and the other pair being plane or straight, the hooked flanges adapted to interlock with the straight edge flanges of the adjacent piling as and for the purpose described.

4. A pile consisting of a single web portion, provided with two pair of flanges projecting in opposite directions from the side surface of the single web portion, the opposite flanges having plane and hooked edges, respectively, each flange occupying a separate plane.

5. A series of interlocking piles provided with pairs of complementary flanges projecting from both sides thereof and means for interlocking said flanges substantially as described.

[Claim 6 not printed in the Gazette.]

884,546. TROLLEY-WHEEL. FREDERICK G. WALKER, Cleveland, Ohio. Filed May 18, 1906. Serial No. 317,524.



1. In a trolley wheel, the combination of a trolley harp; a pin mounted in said harp; a bushing fitted around said pin; a wheel member mounted upon said bushing, said wheel member being formed with an annular oil-cell, having a continuous internal opening and an external opening for receiving an oil supply, and said bushing being provided with apertures adapted to communicate with said oil-cell opening; a washer of larger diameter than said bushing at one end of the same; and a spring bearing inwardly against said washer, the upper end of said contact spring being U-shaped whereby the same may be removed without dismounting the wheel, substantially as described.

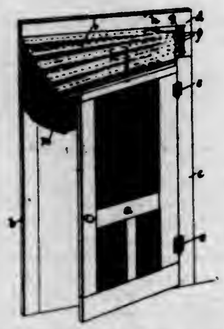
2. In a trolley-wheel, the combination of a trolley harp; a pin secured in said harp; two contiguous bushings fitted around said pin; a washer of larger diameter than said bushings at the respective outer ends of the same; springs respectively bearing inwardly against said washers; and two complementary wheel parts corresponding with said bushings, each of said wheel parts being formed with an annular oil cell having a substantially continuous internal opening, and each of said bushings being provided with apertures adapted to register with such continuous opening of the corresponding wheel part.

3. In a trolley-wheel, the combination of a support; a pin secured therein; two independent complementary wheel-parts mounted upon said pin and arranged to form a pocket for the trolley-wire; bushings within said wheel-parts forming a bearing for said pin, said wheel-parts being formed with an inclosed oil-cell; and contact-springs engaging with said bushings, respectively, and secured to said support.

4. In a trolley wheel, the combination of a trolley-harp having an apertured arm; a pin secured in said trolley-harp; a bushing fitted around said pin; a wheel member mounted upon said bushing, said wheel member being formed with an annular oil-cell having a continuous internal opening and an external opening for receiving an oil supply, and said bushing being provided with apertures adapted to communicate with said oil-cell opening; a washer of larger diameter than said bushing at one end of the same; and a contact spring attached at its lower extremity exteriorly of said apertured arm and extending upwardly through the aperture in the same to laterally engage said washer, the upper end of said contact spring being U-shaped whereby the same may be removed without dismounting the wheel, substantially as described.

5. In a trolley-wheel, the combination of a trolley harp having apertured arms; a pin secured in said trolley harp; two contiguous bushings fitted around said pin; a washer of larger diameter than said bushings at the respective outer ends of the same; two contact springs attached at their lower extremities exteriorly of said arms, respectively, and extending upwardly through the apertures in the same to laterally engage said washers; and two complementary wheel parts corresponding with said bushings, each of said wheel parts being formed with an annular oil cell having a substantially continuous internal opening, and each of said bushings being provided with apertures adapted to register with such continuous opening of the corresponding wheel part.

884,547. FLY-PROTECTOR FOR SCREEN-DOORS. ANTON WALTERBACH, South Milwaukee, and LOUIS HEIL, Marshfield, Wis. Filed Oct. 11, 1907. Serial No. 396,883.



1. A fly-protector for doors, comprising a plurality of over-lapping ribs pivoted on a single axis and adapted to be set over the door with said axis in line with the axis of the door-hinges, means for attaching the lowermost rib to the door and the uppermost to the door-frame and a fringe of pendent objects loosely depending from the outer ends of said ribs.

2. A fly-protector for doors comprising, in combination with the door and frame, a plurality of ribs pivoted on a single axis in line with the pivotal axis of the door, and a flexible fabric mounted thereover and connected at one side with the door and at the other with the frame.

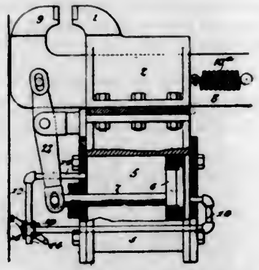
3. A fly-protector for doors comprising, in combination with the door and frame, a plurality of ribs pivoted on a single axis in line with the pivotal axis of the door, a flexible fabric mounted thereover and connected at one side with the door and at the other with the frame, and a fringe of objects loosely depending from the outer edge of said fabric to a certain distance above the floor.

4. A fly-protector comprising, in combination with a door and frame, a folding fan shaped arrangement consisting of ribs pivoted on a vertical axis at one side of the door and having fabric covering them and connected at one side to the door and at the other to the frame, and an upright bar projecting above the door and acting as an abutment for said ribs.

5. A fly-protector for doors consisting of a plurality of folding members one over the other pivoted on a single axis on the hinged side of the door and above the latter and so connected to the door and frame and to each other as to move equally upon each other in opening of the door forming a protective covering for the opening above the door; and an upright bar on the door above and outside the door acting as an abutment for said folding members.

[Claim 6 not printed in the Gazette.]

884,548. FLUID-ACTUATED VISE. THOMAS F. WARWICK, Metter, Ga. Filed Mar. 1, 1904. Serial No. 196,102.



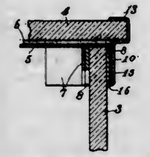
1. The combination of the fixed jaw structure of the vise, a movable jaw structure having a stem or shank horizontally slidable through the fixed jaw structure and guided so as to be incapable of turning therein, and a power cylinder connected to the fixed jaw structure and located directly beneath the same with its axis substantially parallel to the line of movement of the slidable jaw, said cylinder having a piston and a piston rod operatively connected to said stem or shank of the movable jaw, substantially as specified.

2. The combination of the fixed jaw structure of the vise, a movable jaw structure having a non-rotatable stem or shank horizontally slidable through an opening in the fixed jaw structure, a power cylinder located directly beneath the fixed jaw of the vise and having a piston and piston rod, with a lever connected to transmit the movement of the said piston rod to the rigidly guided stem of the movable jaw of the vise, and a spring attached to the rear part of the fixed jaw structure and to that part of the stem or shank which projects to the rear of said fixed jaw structure so as to tend to open the vise, substantially as specified.

3. The combination of the fixed and movable jaws of the vise, a power cylinder having a piston with a rod operatively connected to the movable jaw; means for admitting fluid under pressure to one end of the cylinder and for cutting it off from the source of supply while placing the two ends of the cylinder in connection with each other, a fluid pressure escape from one end of the cylinder, and resilient means for moving the piston in the cylinder when its two ends are in connection with each other, substantially as specified.

4. The combination of the fixed and movable jaws of the vise, a power cylinder having a piston with rod for acting upon said movable jaw, a fluid pressure pipe having branches communicating both with the front and rear ends of the cylinder, a valve whereby pressure may be directed to one end of the cylinder and cut off from the opposite end, or the ends of the cylinder may be put in communication with each other and cut off from the pressure pipe, and means for moving the jaw of the vise under the latter conditions, substantially as specified.

884,549. SHOW-CASE. WILLIAM K. WILLIAMS, Grand Rapids, Mich., assignor to Grand Rapids Show Case Company, Grand Rapids, Mich., a Corporation of Michigan. Filed July 8, 1907. Serial No. 382,618.



1. In a show case, in combination with a back, a front plate, and an end plate; a clip attached to the corner of the front plate, and a strap secured to the back at one end and having a hook on the other end extending over the front of the clip and engaging the lower edge of the same.

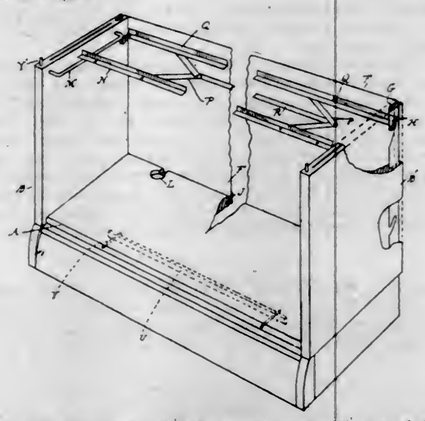
2. In a show case, in combination with a back, a front plate and an end plate; clips secured to the adjacent corners of the plates, a strap having a hook at one end engaging the clip on the front plate and secured to the back at the other end, and a clamp embracing the clips and hook.

3. In a show case, in combination with a back, an end plate, a front plate, and a top plate; clips attached to the adjacent corners of the end and front plate, a strap having a hook at one end engaging the clip on the front plate, said straps extending along the upper edge of the end plate and secured to the back at the other end, a clamp embracing the clips and hook and having inwardly turned ends engaging the ends of the outer members of the clips, and upwardly projecting hooks on the clamp to engage the edge and top of the top plate.

4. In a show case, in combination with a back, an end plate, a front plate and a top plate; clips secured to the respective adjacent corners of the end plate and front plate, a strap having a hook at one end engaging the front and bottom of the clip on the front plate, said strap also extending along the upper edge of the end plate and attached to the back at the other end, a clamp embracing the clips and hook and having inwardly turned ends engaging the ends of the outer members of the clips, upwardly projecting hooks on the clamp to engage the front and end edges of the top plate, one of said hooks also being extended inward above the top plate.

5. In a show case, the combination of a back frame having a groove, an end plate inserted in the groove, a clip attached to the end plate and having a projection secured to the frame, a front plate and a top plate, clips attached to the front upper corners of the respective end and front plates, a strip having a hook at one end engaging the clip on the front plate and extending along the upper edge of the end plate and secured to the back at the other end, a clamp embracing the clips on the end and front plate and having inwardly turned ends forming grooves to receive the ends of the outer members of the said clips, lugs on the clamp and engaging the under edges of the clips, and hooks on the clamp, said hooks engaging the edge of the top plate.

884,550. SECTIONAL KNOCKDOWN CABINET. JOHN F. WILMOT, Detroit, Mich. Filed May 24, 1907. Serial No. 375,496.



1. In a sectional cabinet, a unit comprising a shelf, vertical sides connected at their lower ends to the opposite ends of said shelf, means of engagement between said sides and the sides of an adjacent section or unit, a back detachably engaging the rear edges of said sides, and means for detachably clamping the backs of adjacent sections to the rear edge of the intermediate shelf and intermediate the ends thereof.

2. In a knock-down sectional cabinet, the combination with a shelf and a vertical side, of a tongue engaging a kerf in said side and projecting for engagement with a registering kerf of the side of an adjacent section, a stud anchored in the side by a threaded engagement with said tongue and projecting inward therefrom into a socket in the end of said shelf, and a nut for engaging a threaded portion of said stud located in a recess in the under side of said shelf.

3. In a sectional cabinet, a section comprising a shelf, vertical sides and a back secured to said shelf, a flat metallic bar arranged on edge and secured in a recess in the under side of said shelf adjacent to the front edge thereof, and anchors for securing the ends of said bar to the shelf located at a point intermediate the center of the shelf and the ends thereof.

4. In a sectional cabinet, a section comprising a shelf, vertical sides attached thereto, a back, and connecting means for said back engaging kerfs in said sides and shelf.

5. In a sectional cabinet, a section comprising a shelf and sides, a back provided with inturned flanges at its opposite ends engaging kerfs in the rear edges of said sides, and means for locking said flanges in said kerfs.

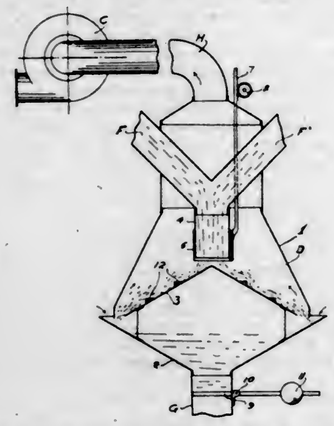
[Claims 6 to 21 not printed in the Gazette.]

884,551. GRAIN-CLEANER. CHARLES A. WRIGHT, Chicago, Ill. Filed July 16, 1906. Serial No. 326,353.

1. In combination, a clipper, a grain separator located therebelow and having a pipe connection with the clipper whereby the heavy portions of the grain are fed by gravity to the separator, a fan, a suction pipe connection from the fan to the clipper for removing the lighter parts of the grain, and a second suction pipe connection from the fan to the separator for removing the lighter parts of the grain from the separator.

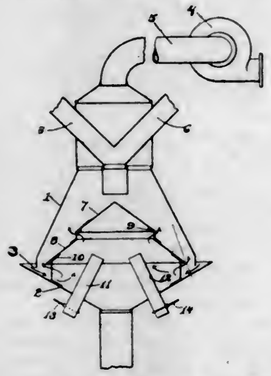
2. In combination, a clipper, a grain separator located therebelow and having a pipe connection with the clipper whereby the heavy portions of the grain are fed by gravity to the separator, a fan, a suction pipe connection from the fan to the clipper for removing the lighter parts of the grain, a second suction pipe connection from the fan to the separator for removing the lighter parts of the grain from the separator, and an expansion chamber having a trap connected to the suction pipe.

3. In combination, a clipper, a grain separator located therebelow and having a pipe connection with the clipper whereby the heavy portions of the grain are fed by gravity to the separator, a fan, a suction pipe connection from the fan to the clipper for removing the lighter parts of the grain, a second suction pipe connection from the fan to the separator for removing the lighter parts of the grain from the separator, and expansion chambers having traps connected to each of the suction pipes.



4. In combination, a spreader comprising upwardly converging inclined surfaces provided with projections for agitating the grain as it flows thereover, a casing thereabove a distance sufficient to provide space for a sheet of grain and an air passage over the grain, means for supplying grain to the top of the spreader, and means for passing a current of air between the surface of the grain and the casing.

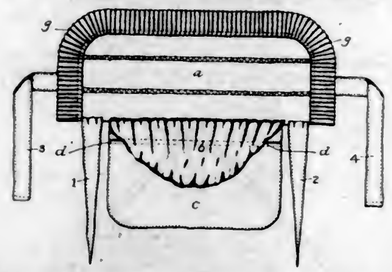
884,552. GRAIN-CLEANER. CHARLES A. WRIGHT, Chicago, Ill. Filed May 4, 1907. Serial No. 371,781.



1. In combination, in a grain cleaner, a casing having an opening for the admission of air intermediate its ends, a secondary spreader in the form of a hollow truncated cone with its lower edge adjacent the opening, a primary conical spreader with its lower edge in position to discharge grain upon the surface of the secondary spreader and spaced thereabove for the passage of air, an auxiliary air tube leading through the casing and beneath the spreaders for augmenting the draft between the spreaders, means for admitting grain upon the primary spreader and means for drawing air from the upper part of the casing.

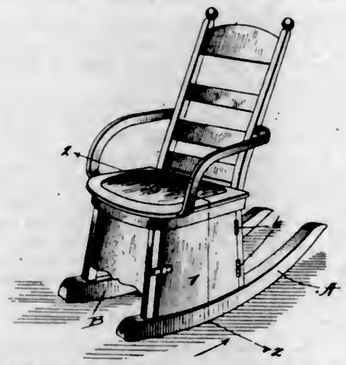
2. In combination, in a grain cleaner, a casing having an opening for the admission of air, intermediate its ends, a secondary spreader with its edge adjacent the opening, a primary spreader with its outer edge in position to discharge grain upon the surface of the secondary spreader, and spaced thereabove for the passage of air, an auxiliary air tube leading to the casing and beneath the spreaders for augmenting the draft between the spreaders, means for admitting grain upon the primary spreader, and means for drawing air from the upper part of the casing.

884,553. SUNBONNET. CHARLES E. YOUNT, Sr., Harrisburg, Pa. Filed Dec. 16, 1907. Serial No. 406,677.



A flattenable sunbonnet including a puff portion of soft fabric permanently gathered at its upper edge to give it the required fullness and provided at a lower point with a transverse draw-string pocket and with a draw string within said pocket for gathering the puff portion more or less at will at that point, a relatively stiff crown portion to the rear edge of which said gathered upper edge of the puff portion is stitched fast in a central position and which projects laterally at both sides beyond said puff portion when the bonnet is flattened, strings tieable behind the puff portion to adjust the bonnet to the head attached to the rear edge of the laterally projecting ends of the crown portion, and means for fastening the bonnet beneath the chin attached to the lateral extremities of said crown portion, substantially as hereinbefore specified.

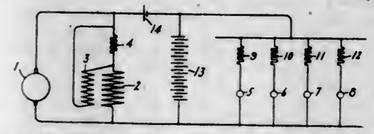
884,554. SEWING-CHAIR. EVA BAILEY, Leiters Ford, Ind. Filed Apr. 26, 1907. Serial No. 370,405.



1. A sewing chair, having pivoted sides, an arm pivoted to the outer end of one side, a basket mounted on said arm, a second basket mounted on said side and arranged beneath said first-named basket, and means mounted on one basket for engagement with the other, substantially as described.

2. In a sewing chair, the combination of pivoted sides of an arm pivoted to the outer end of one side and provided with an annular band, a basket supported therein, said side having a fixed annular band, a second basket mounted therein, which will register with the first-named basket, when the said arm is swung parallel with said side, and a lug carried by one basket adapted to engage the other, as and for the purpose specified.

884,555. REGULATION OF DYNAMO-ELECTRIC MACHINES. CHARLES E. BARRY, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Sept. 20, 1905. Serial No. 279,277.



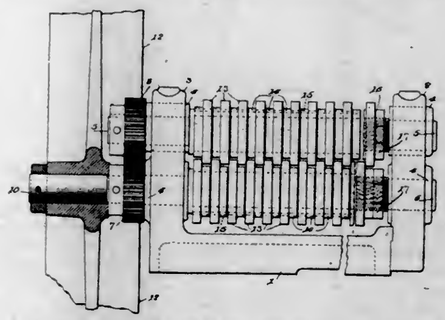
1. In a self exciting dynamo electric machine, a main field winding, an opposing field winding, and means responsive to increase in voltage of said machine for causing a more than proportional increase in current in said opposing winding.

2. The combination in a dynamo-electric machine, of an armature, a main field winding supplied with current from said armature, a resistance in series therewith having a high positive temperature-resistance coefficient, and an opposing winding in shunt to said resistance.

3. The combination of a dynamo electric machine, a main field winding, an iron resistance in series therewith, and an opposing field winding in shunt to said resistance.

4. In a dynamo-electric machine, the combination of an armature, two field windings therefor, and means for causing current in one winding to vary in proportion greater and in the other winding in a proportion less than the variation of voltage of the generator.

884,556. ROTARY CUTTER. GUSTAV A. BAUER, Springfield, Ohio. Filed Apr. 9, 1907. Serial No 367,172.



1. A device of the character described comprising a pair of parallel rotary shafts, a plurality of cutter disks mounted on each of said shafts, the disks on one shaft extending between the adjacent disks on the other shaft, and each of said disks coming in contact with both of said adjacent disks, hubs carried by said disks for maintaining the same in proper position upon their respective shafts, said disks being adjustable on their shafts to maintain the disks on one shaft in proper cutting relation to the disks on the other shaft, and means for adjusting said disks.

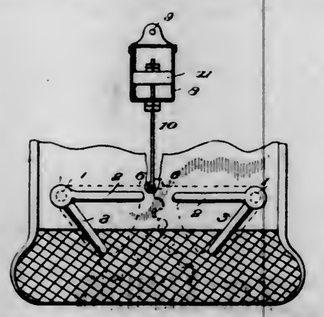
2. A device of the character described comprising a pair of parallel rotary shafts, a plurality of cutter disks mounted on each of said shafts and adapted to slide longitudinally thereof and to rotate in unison therewith, the disks on one shaft extending between the adjacent disks on the other shaft, hub portions formed integral with said cutter disks, said hub portions being of less width than said cutter disks, and means for adjusting said cutter disks longitudinally of said shafts.

3. A device of the character described comprising a pair of parallel rotary shafts each having a screw-threaded portion, a plurality of cutter disks mounted on each of said shafts and adapted to be adjusted longitudinally thereof and to rotate in unison therewith, the disks on one shaft extending between the adjacent disks on the other shaft, one of said disks being screw-threaded to engage with the screw-threaded end of said shaft to lock said other disks in their adjusted position.

4. A device of the character described comprising a pair of parallel rotary shafts each having a groove formed therein and extending longitudinally thereof, a plurality of cutter disks mounted on each of said shafts and each provided with a groove adapted to register with the groove in their respective shafts, a single key for each of said shafts adapted to engage the groove therein and the grooves of the several cutter disks mounted thereon, a single cutter disk mounted on each of said shafts beyond the end of said key and means carried by said single cutter disk for locking said cutter disks in their adjusted positions on said shaft.

5. A device of the character described comprising a pair of parallel rotary shafts, a plurality of cutter disks mounted on each of said shafts and having their peripheries rough to form a rough cutting edge on each side of said disks, the disks on one shaft extending between the adjacent disks on the other shaft, and means for adjusting the disks on one shaft relatively one to the other to maintain the same in proper relation with the disks on the other shaft.

884,557. PASSENGER-REGISTER FOR STREET-CARS. ELMER M. BEARD and GEORGE A. BEARD, Baltimore, Md. Filed Apr. 13, 1907. Serial No. 367,935.



In a device for registering the persons passing through an opening, the combination of a pair of arms connected together so as to move together, located upon each side of the opening, one of them protruding across the opening and closing it, the other located at an acute angle with the first and protruding outward in the direction of the approach to the gate and at such an angle with the gate arm as to permit a person to pass it and contact with the gate arm, but which when the gate arm is pressed inward will follow the person and close the gate behind it, with means for adjusting the relation of these arms, means to recoil the arms when displaced, means to check and regulate the return of the arms to their primary position, and means to record the motion of the arms.

884,558. DUST-ABSORBING COMPOUND AND PROCESS OF MAKING SAME. HENRY C. BEMAN, Meadville, Pa. Filed May 27, 1907. Serial No. 375,902.

1. A process of making dust absorbing compounds, consisting in mixing a disinfectant with dust absorbing oils, water and a carrying medium, drying said carrying medium to evaporate the water and form crystalline substances on the carrying medium, substantially as specified.

2. A compound consisting of a carrying medium, dust absorbing oils carried thereby, together with sulfate of iron, mineral oil, oil of sassafras and color crystals with water of crystallization, substantially as specified.

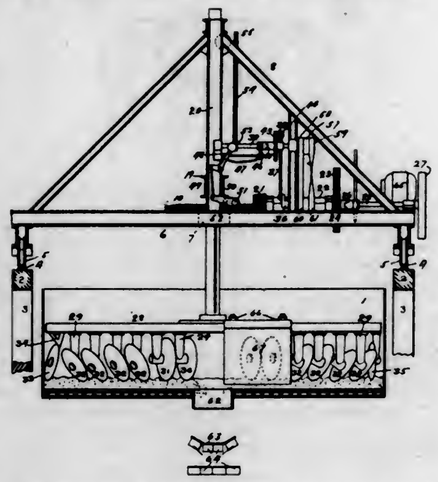
3. A process consisting in forming an aqueous solution of sulfate of iron, dust absorbing oils and coloring crystals, and then depositing the matter in solution on a carrying medium, substantially as specified.

4. A compound containing granulated wood, sulfate of iron, aniiin color crystals, dust absorbing oils and water.

5. A process of forming a dust absorbing compound, consisting in saturating a carrier with an aqueous solution of sulfate of iron, dust absorbing oils and aniiin color solution, and then drying the same to evaporate the water, substantially as specified.

[Claims 6 to 9 not printed in the Gazette.]

884,559. EXCAVATOR. HIRAM W. BLAISDELL, Los Angeles, Cal. Filed May 31, 1906. Serial No. 319,637.



1. A plurality of rotating cutters revoluble around a common center and placed at an angle to their direction of travel and also at an angle to the vertical and means for operating said cutters.

2. A plurality of concavo-convex cutters revoluble around a common center and placed at an angle to their direction of travel and also at an angle to the vertical and means for operating said cutters.

3. A plurality of cutters revoluble around a common center and placed at an angle to their direction of travel and at an angle to the vertical, said latter angle being greatest in the cutters remote from said center.

4. A plurality of rotating cutters revoluble around a common center and placed at an angle to their direction of travel, certain of said cutters being at an angle to the vertical also, and means for operating said cutters.

5. A plurality of rotating cutters revoluble around a common center and placed at an angle to their direction of travel, certain of said cutters being flat and others being concavo-convex and set at an angle to the vertical.

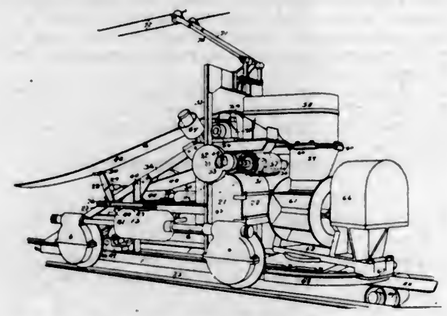
[Claims 6 to 16 not printed in the Gazette.]

884,560. STACKER. HIRAM W. BLAISDELL, Los Angeles, Cal. Filed June 22, 1906. Serial No. 322,868.

1. In a traveling apparatus for discharging material from a conveyer belt, means independent of said belt for propelling the apparatus and a distributer mounted on said apparatus.

2. An apparatus for discharging material from a conveyer belt, means independent of said belt for propelling the apparatus and devices for reversing the direction of travel.

3. An apparatus for discharging material from a conveyer belt, means independent of said belt for propelling the apparatus and devices for automatically reversing the direction of travel.

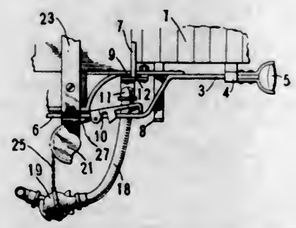


4. An apparatus for discharging material from a conveyer belt and a motor on said apparatus for propelling the same.

5. An apparatus for discharging material from a conveyer belt, an electric motor on said apparatus for propelling the same and means for supplying current to said motor.

[Claims 6 to 23 not printed in the Gazette.]

884,561. AUTOMATIC HOSE-UNCOUPLING. WALTER S. BOWNESS, Moncton, New Brunswick, Canada. Filed June 3, 1907. Serial No. 376,940.



1. A device of the class described comprising in combination a car body, a member reciprocatorily mounted thereon, an air hose depending from said body, a flexible connection interposed between the free end of said hose and said member adapted to be engaged by the latter during a predetermined reciprocation thereof and adapted to be automatically disengaged therefrom at the end of said reciprocation.

2. A device of the class described comprising in combination a car body, an air hose extending therefrom, and means mounted on said car body adapted to be manually operated to elevate the free end of said hose for the purpose of disconnecting it from its companion and then automatically drop said hose.

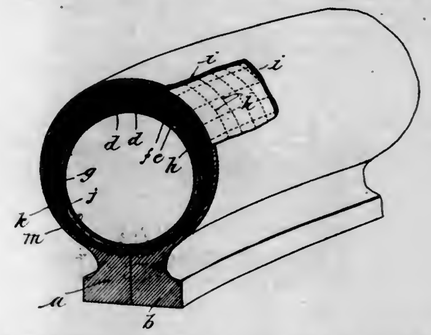
3. A device of the class described comprising in combination a car body, an air hose depending therefrom, a valve controlling the flow of air through said hose, and means carried by said car body flexibly connected to said air hose adapted to elevate the free end of said hose under a predetermined movement, said means being linked to said valve to simultaneously close the same.

4. A device of the class described comprising in combination a car-body, an air hose having an automatic coupling at its free end depending therefrom, and manually operable means flexibly connected to said air hose adapted to elevate the free end of said hose to uncouple it from its companion under a predetermined movement and adapted by a continued movement to permit the return of said end to its normal position for the purpose of enabling it to be again coupled.

5. A device of the class described comprising in combination a car body, an air hose depending therefrom, a flexible connection secured to the free end of said hose, and means comprising a reciprocatory member and a shoe adapted to be engaged thereby for elevating the free end of said hose through the instrumentality of said connection.

[Claims 6 to 10 not printed in the Gazette.]

884,562. TIRE CONSTRUCTION. FREDERICK A. BRAGG, Springfield, Mass., assignor, by direct and mesne assignments, of one-half to Daniel J. Brown, Springfield, Mass. Filed Sept. 10, 1906. Serial No. 333,975.



1. In a tire construction, a series of layers composing the tread portion, said layers including a rubber core and quilted by threads saturated with a rubber solution.

2. A tire comprising a series of layers for the tread portion, said layers having a rubber core, the layers being secured together by quilting, as described.

3. A tire comprising a thickened tread portion composed of layers of rubber and fabric secured to each other by stitching, the stitching thread being chemically and permanently united to the layers after vulcanization of the same.

4. A tire having the tread portion thereof composed of a series of superposed elements, said elements having a rubber core and a canvas backing on each side of the core, the superposed elements being united to each other by quilting, the threads for the same having been saturated with a rubber solution or the like, an outer casing, whereby when the whole is vulcanized, the threads are chemically united to the core of the series of elements composing the tread portion.

5. A resilient tire consisting of superposed layers of flexible material and rubber stitched together by stitching material impregnated with a rubber solution.

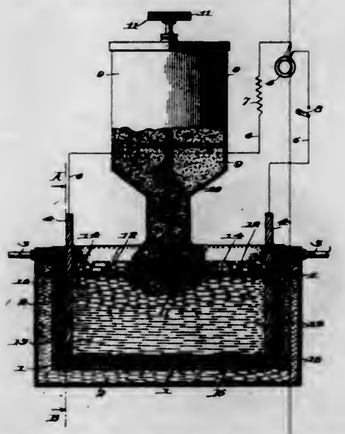
[Claims 6 to 11 not printed in the Gazette.]

884,563. PROCESS OF FUSING MATERIALS. GEORGE F. BRINDLEY, Niagara Falls, Ontario, Canada, assignor to The Roessler & Hasslacher Chemical Company, New York, N. Y., a Corporation of New York. Filed Mar. 13, 1906. Serial No. 305,800.

1. A process of fusing corrosive material consisting in fusing without decomposing the same in the presence of air by passing an electric current between the electrodes in such manner that said current is of low density in the fused material adjacent to the electrodes and of high density adjacent to the material to be fused and forming and maintaining a layer of unfused material on the inner walls of the vessel containing the fused material between the electrodes and said walls.

2. A process of fusing corrosive material consisting in fusing without decomposing the same in the presence of air by the maintaining of an alternating current of low density in the fused material in contact with the electrodes and of a high density in that part of the bath where the unfused material is added to the mass.

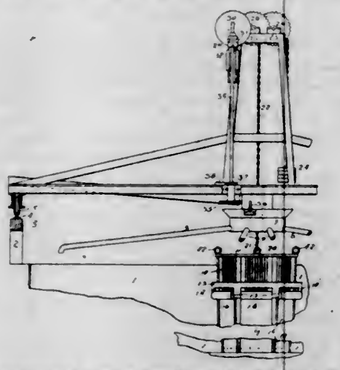
3. A process of fusing corrosive material consisting in fusing without decomposing the same in the presence of air, forming and maintaining an insulating layer of unfused material between the electrodes and the containing vessel and passing an alternating current through the fused material from one electrode to the other in such manner that said current is of low density in the fused material adjacent to the electrodes and of high density adjacent to the material to be fused.



4. In a process of fusing alkali peroxids without decomposing the same the formation and maintaining of an insulating layer of unfused alkali peroxid between the electrodes and the containing vessel and the passing of an electric current through the fused alkali peroxid from one electrode to the other in such a manner that said current is of low density in the fused alkali peroxid adjacent to the electrodes and of high density adjacent to the alkali peroxid to be fused.

5. In a process of fusing sodium peroxid without decomposing the same the formation and maintaining of an insulating layer of unfused sodium peroxid between the electrodes and the containing vessel and the passing of an alternating current through the fused sodium peroxid from one electrode to the other in such a manner that said current is of low density in the fused sodium peroxid adjacent to the electrodes and of high density adjacent to the sodium peroxid to be fused.

884,564. AUTOMATIC OVERFLOW-GATE. HARRY A. BROOKS, Los Angeles, Cal., assignor to Blaisdell Company, Los Angeles, Cal., a Corporation of California. Filed July 25, 1906. Serial No. 327,781.



1. A perforated plug, a curtain thereon having its upper end rolled and means to unroll said upper end.

2. A perforated plug, a curtain thereon having its upper end rolled and counterbalanced means to unroll said end.

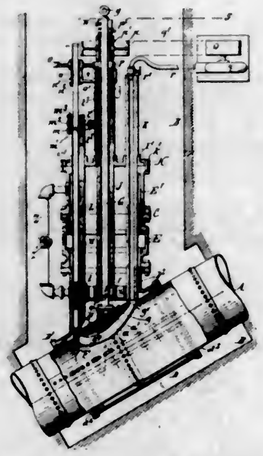
3. A perforated plug, curtains thereon having their upper ends rolled and automatic means to unroll the same.

4. A polygonal perforated plug, a plurality of curtains mounted against its sides, a ring having bearings carrying rollers fixed to the tops of the curtains and means for raising the ring, thereby unrolling the curtains and closing the perforations in the plug.

5. A polygonal perforated plug, a plurality of curtains mounted against its sides, a ring carrying rollers fixed to the tops of the curtains, and automatic means for raising the ring.

[Claims 6 to 16 not printed in the Gazette.]

884,565. PIPE-TAPPING DEVICE. JOHN H. B. BRYAN, Buffalo, N. Y., assignor, by direct and mesne assignments, of one-third to Nicholas J. Kelly and one-third to Nora Kelly, Buffalo, N. Y. Filed Jan. 11, 1906. Serial No. 295,527.



1. A device for producing an opening in a main pipe which connects the same with a branch pipe, comprising a carrier adapted to rotate in the branch pipe, and a tool shaft journaled on said carrier at a distance from the center thereof, and adapted to receive a cutter, substantially as set forth.

2. A device for producing an opening in a main pipe which connects the same with a branch pipe, comprising a carrier adapted to rotate in the branch pipe, and a tool shaft rotatably mounted on said carrier at a distance from its center and also capable of axial movement thereon, substantially as set forth.

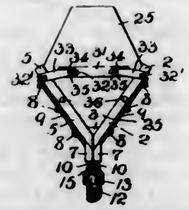
3. A device for producing an opening in a main pipe which connects the same with a branch pipe, comprising a carrier adapted to be rotated in said branch pipe, a supporting bar arranged on the carrier at a distance from its center and capable of longitudinal movement thereon, and a tool shaft rotatable on said bar but held against axial movement thereon, and adapted to receive a cutter, substantially as set forth.

4. A device for producing an opening in a main pipe which connects the same with a branch pipe, comprising a carrier adapted to be rotated in said branch pipe, a supporting bar arranged on the carrier at a distance from its center and capable of longitudinal movement on the same, a tool shaft rotatabe in said bar but held against axial movement therein, and adapted to receive a cutter, and means for effecting the longitudinal movement of said supporting bar consisting of a gear rack arranged on said frame, and a gear pinion mounted on said supporting bar and meshing with said gear rack, substantially as set forth.

5. A device for producing an opening in a main pipe which connects the same with a branch pipe, comprising a carrier adapted to be rotated in said branch pipe, a supporting bar arranged on said carrier at a distance from its center and capable of longitudinal movement thereon a tool shank or shaft rotatable in said bar but held against axial movement therein, and adapted to receive a cutter, and means for rotating said shank consisting of a sleeve which is splined on said shank for compelling the latter to turn with the sleeve but enabling the same to move lengthwise independent thereof, a bearing arranged on said carrier in which said sleeve turns but is held against axial movement, a gear wheel connected with said sleeve, and a pinion journaled concentrically relatively to said carrier and meshing with said gear wheel, substantially as set forth.

[Claims 6 to 19 not printed in the Gazette.]

884,566. HOD. BERNARD M. BURDETT, Roselle, N. J. Filed Oct. 1, 1907. Serial No. 395,368.



1. A foldable or knock-down hod comprising a main body-portion consisting of a pair of angularly disposed and foldably connected side-members, a transverse end-member detachably connected with said side-members, means connected with said side-members and said transverse member for retaining said members in their opened relation to provide a receiving compartment, consisting of a catch pivoted to each side-member, and fastening buttons on said transverse member with which said catches are adapted to be brought in holding engagement, and a detachable carrier-rod.

2. A foldable or knock-down hod comprising a main body-portion consisting of a pair of angularly disposed and foldably connected side-members, a transverse end-member detachably connected with said side-members, means connected with said side-members and said transverse member for retaining said members in their opened relation to provide a receiving compartment, consisting of a catch pivoted to each side-member, and fastening buttons on said transverse member with which said catches are adapted to be brought in holding engagement, and a detachable carrier-rod, said rod comprising separably connected handle-portions.

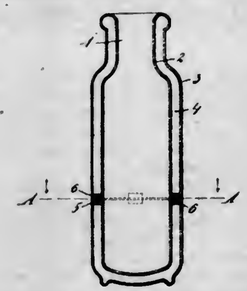
3. A foldable or knock-down hod comprising a main body-portion consisting of a pair of angularly disposed side-members, hinges secured to and connected with the lower marginal edges of said side-members, a transverse end-member detachably connected with said side-members, means connected with said side-members and said transverse member for retaining said members in their opened relation to provide a receiving compartment, consisting of a catch pivoted to each side-member, and fastening buttons on said transverse member with which said catches are adapted to be brought in holding engagement, and a detachable carrier-rod.

4. A foldable or knock-down hod comprising a main body-portion consisting of a pair of angularly disposed side-members, hinges secured to and connected with the lower marginal edges of said side-members, a transverse end-member detachably connected with said side-members, means connected with said side-members and said transverse member for retaining said members in their opened relation to provide a receiving compartment, consisting of a catch pivoted to each side-member, and fastening buttons on said transverse member with which said catches are adapted to be brought in holding engagement, and a detachable carrier-rod, said rod comprising separably connected handle-portions.

5. A foldable or knock-down hod comprising a main body-portion consisting of an angularly disposed side-member, said member having its lower marginal edge chamfered, a triangularly shaped lip located near the lower edge-portion of said side-member, a second side-member having its lower marginal edge chamfered, said second side-member being movably connected with said lip, a transverse end-member detachably connected with said side-members, packing-strips located at or near the joints formed by the various parts, means connected with said side-members, and said transverse member for retaining said members in their opened relation to provide a receiving compartment, consisting of catches pivoted to each side-member, and fastening buttons on said transverse member with which said catches are adapted to be brought in holding engagement, and a detachable carrier-rod.

[Claims 6 to 8 not printed in the Gazette.]

884,567. DOUBLE-WALLED VESSEL. REINHOLD BURGER, Berlin, Germany, assignor to American Thermos Bottle Company, New York, N. Y., a Corporation of Maine. Filed Oct. 4, 1907. Serial No. 395,834.



1. A vacuum insulated vessel having its inner and outer portions connected at the mouth of the vessel, and a stiffening device interposed between the vertical walls of the inner and outer portions of the vessel for spacing them apart at a distance from the mouth of the vessel, said device being supported in position wholly by its frictional contact with the walls of the vessel.

2. A vacuum insulated vessel having its inner and outer portions connected at the mouth of the vessel and a stiffening device interposed between the vertical walls of the inner and outer portions of the vessel for spacing them apart at a distance from the mouth of the vessel, said device comprising a plurality of yielding spacing blocks compressed between and supported wholly by their frictional contact with the walls of the said vessel.

3. A vacuum insulated vessel having its inner and outer portions connected at the mouth of the vessel and a stiffening device interposed between the vertical walls of the inner and outer portions of the vessel for spacing them apart at a distance from the mouth of the vessel, said device comprising a ring and a plurality of yielding spacing blocks thereon compressed between and supported wholly by their frictional contact with the walls of the vessel.

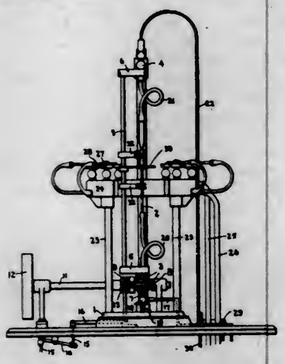
884,568. MACHINE FOR MAKING INCANDESCENT LAMPS. WILLIAM R. BURROWS, Newark, N. J., assignor to General Electric Company, a Corporation of New York. Filed Nov. 25, 1903. Serial No. 182,642.

1. In a sealing-in machine, supports for holding the bulb and stem in alinement with each other and permitting relative adjustment thereof, means to heat the glass, and separate connections for admitting gaseous pressure to the bulb and stem respectively in any adjusted position.

2. In a sealing-in machine, supports for holding the bulb and stem in alinement with each other and permitting relative adjustment thereof, means to heat the glass, and

means for regulating the pressure within the bulb and stem independently of each other in any adjusted position.

3. In a sealing-in machine, a rotatable frame, means carried thereby for supporting the bulb and stem and permitting relative adjustment thereof, burners for heating the glass, and means for admitting gaseous pressure to the bulb and stem independently of each other while rotating in any adjusted position.

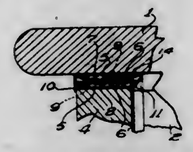


4. In a sealing-in machine, a rotatable frame, means carried thereby for supporting the bulb and stem and permitting relative adjustment thereof, burners for heating the glass, and means for regulating the pressure within the bulb and stem independently of each other while rotating in any adjusted position.

5. In a glass-working machine, a frame, a tube-holder carried thereby arranged to permit adjustment of a tube held therein, a plurality of burners, connections for carrying gaseous pressure to the frame, and flexible tubes secured at one end to the frame in communication with said connections and adapted to have their other ends fitted over tubes held in said holder.

[Claims 6 to 14 not printed in the Gazette.]

884,569. DUST-PROOF KNOCKDOWN SHOW-CASE. NILS H. CEDERQUIST, Los Angeles, Cal. Filed May 20, 1907. Serial No. 374,760.



1. A glazier's joint comprising two structural bodies, two interlocking metal bodies, two yielding tough bodies fastened directly to said metal bodies respectively and two tough yielding bodies cemented to said yielding tough bodies and to the structural bodies respectively.

2. A glazier's joint comprising two structural bodies one having a flat side and the other an edge to be fastened thereto, a metal strip fastened to said flat side and formed as a trough having two walls, the intermediate portion between said walls being dished or bent longitudinally to form a cavity along and in which a strip may be embedded to effect such fastening.

3. A glazier's joint comprising two sheets of glass, two metal strips of different widths, one being constructed to form a socket in which the other shall seat and said other strip being of a width slightly greater than the thickness of the edge of the plate of glass to which such other strip is to be secured; the latter strip being the one permanently secured to the edge of its plate as distinguished from the flat face of the plate to which the first mentioned strip is to be secured.

884,570. ENAMEL SIGN. ARTHUR P. CLARIDGE, Baltimore, Md. Filed Nov. 25, 1907. Serial No. 403,729.



1. The combination of a support, a metal plate coated with enamel and having a suitable opening, a sleeve of length greater than the combined thickness of the plate and enamel, in the opening and fastening means extending through the sleeve and engaging the support.

2. The combination of a support, a metal plate coated with enamel, and having suitable openings, a sleeve of length greater than the combined thickness of the plate and enamel, in each opening and fastening means extending through the sleeve and engaging the support, a head on the fastening means engaging one end of the sleeve and pressing the other end of the sleeve against the support.

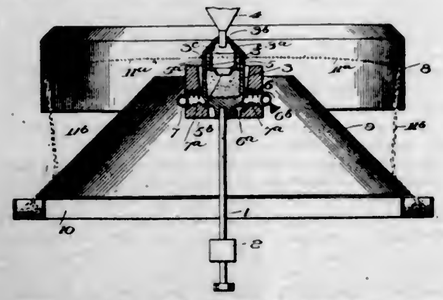
3. The combination of a support, a plate coated with enamel and having suitable openings, a flanged sleeve of length greater than the combined thickness of the plate and enamel, in each opening and fastening means extending through the sleeve and engaging the support.

4. The combination of a support, a plate having suitable openings and coated with enamel, a flanged sleeve of length greater than the combined thickness of the plate and enamel extending through each opening, and fastening means in the sleeve engaging one flange and pressing the other flange against the support.

5. The combination of a support, a metal plate having suitable openings and coated with enamel, in each opening a sleeve having at each end a flange, the two flanges being spaced by a distance greater than the combined thickness of the plate and enamel, and fastening means extending through the sleeves and engaging the support.

[Claims 6 and 7 not printed in the Gazette.]

884,571. PROCESS FOR FORMING METAL INTO FLAKES. PERCY F. COWING, New York, N. Y. Filed Apr. 5, 1906. Serial No. 310,062.



1. The process which consists in forcibly projecting molten metal through apertures adapted to emit only small particles of the metal, and suddenly arresting the movement of the particles before they become chilled or solidified.

2. The process which consists in first separating molten metal from its dross, second dividing the metal freed from dross into small particles by forcibly projecting the same through passages adapted to emit only small particles, and finally suddenly arresting the movement of the particles while in their molten condition.

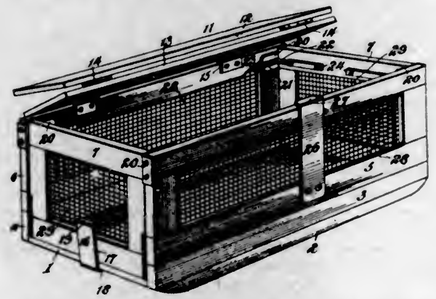
3. The process which consists in forcibly expelling from a mass of metal small particles thereof taken from below the top of the mass, and suddenly arresting the movement of the particles before they become chilled or solidified.

4. The process which consists in forcibly expelling from a mass of metal having considerable depth as compared with its diameter, small particles thereof taken from a place at a distance from the bottom of the mass, and suddenly arresting the movement of the particles before they become chilled or solidified.

5. The process which consists in forcibly expelling from a mass of metal having considerable depth as compared with its diameter, small particles thereof taken from a place at a distance from the bottom and below the top of the mass, and suddenly arresting the movement of the particles before they become chilled or solidified.

[Claims 6 to 9 not printed in the Gazette.]

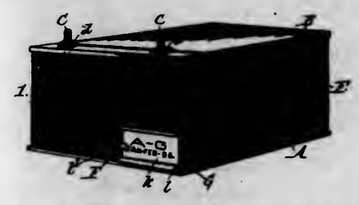
884,572. SHIPPING-BOX. WILLIAM E. DEPP, Brookville, Pa., assignor of one-half to George W. Stewart, Brookville, Pa. Filed Apr. 3, 1906. Serial No. 309,643.



A folding box or crate comprising a bottom, sides and ends hinged to the bottom and foldable inwardly thereon and composed of frames and woven wire fabrics secured to the inner faces of the frames and forming exterior recesses, a cover hinged to one of the sides and foldable on the same, an end catch located at one end of the box or crate and constructed of a single piece of resilient sheet metal and consisting of a vertical body portion, an integral attachment arm formed by bending the lower end of the body portion inwardly beneath the bottom of the box or crate and secured to the lower face of the said bottom, and an integral lip formed by bending the upper end of the body portion inwardly and extending into the recess of the adjacent end of the crate when the latter is arranged for use, said body portion being of a length to permit the lip to engage the upper face of the cover when the box or crate is folded, whereby the parts are retained in their folded position, and a vertical side catch consisting of a single piece of resilient sheet metal connected at its lower end with a bottom and having its upper end bent inwardly and arranged to engage the cover of the box or crate when the latter is arranged for use.

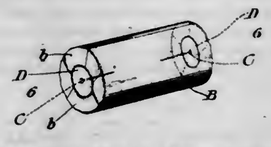
884,573. LABELING DEVICE. SIDNEY DETMERS, Buffalo, N. Y., assignor to The Republic Metalware Company, Buffalo, N. Y., a Corporation of New York. Filed Nov. 9, 1906. Serial No. 342,694.

1. A labeling device constructed of a sheet of metal which is bent to form a front inscription plate, a rear attaching plate or flange arranged at an angle to the inscription plate, a double fold connecting one edge of the inscription plate with the front edge of the attaching plate and forming a guide-way for one edge of a label, and a single fold arranged at the opposite edge of the inscription plate and forming a guide-way for the other edge of a label, substantially as set forth.



2. A labeling device constructed from a single sheet of metal and composed of a front plate, an attaching flange arranged at an angle to the front plate, a guide formed adjacent to the corner between the front plate and attaching flange by double folding this portion of the sheet, a guide formed on the opposite edge of the front plate by folding this portion of the front plate once and a stop or lid folded from one end of the front plate against the outer side of the same, substantially as set forth.

884,574. PACKAGE FOR COTTON-BATTING. DEL ROY F. FOWLER, Melrose, Pa. Filed July 20, 1905. Serial No. 270,472.



1. A package comprising a layer of cotton batting, compactly folded and afterwards rolled into a compact mass, a wrapping sheet surrounding the same and being of sufficient width to allow the ends thereof to be turned in to form overlapping folds against the ends of the package, fastening pins adapted to pass through the overlapping folds and to be embedded in and held by the contents of the package and seals inclosing the fastening pins for the purpose specified.

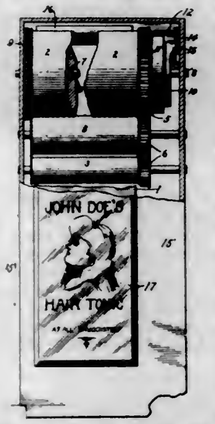
2. A package, comprising a sheet of carded cotton batting having the sides compactly folded toward the center and afterwards tightly rolled into a compact mass, a wrapping sheet of greater width than the batting tucked in at the ends to form overlapping folds, pins engaging these folds and extending some distance into the mass of batting and held in place by engagement with the contents of the package and seals laid over the pins and secured by pasting to the ends of the wrapper substantially as described.

884,575. DISPLAY APPARATUS. JOSEPH C. FOX, Seattle, Wash. Filed Dec. 4, 1906. Serial No. 346,336.

1. An apparatus of the character described comprising a drive roller, driven and idler rollers, an endless apron passing about all of said rollers, gears on said driven rollers, a hollow shaft projecting through said drive roller, a gear fixed to said hollow shaft and meshing with said first named gears, a second shaft extending through said first shaft, a member fixed on the last named shaft and provided with a cam, a coil spring having its ends secured to the gear on said drive roller and to said member respectively, a pin fixed to the gear on said drive roller and projecting beyond said member, and a relatively fixed stop normally engaged by said pin, said stop being disposed to be moved by said cam to release said pin, as specified.

2. An apparatus of the character described comprising

a casing, a drive roller, driven and idler rollers supported for rotation, an endless belt passing over all of said rollers, a hollow shaft projecting through said drive roller, a gear fixed to the projecting end portion of said shaft, gears fixed to said driven rollers in mesh with said first named gear, a shaft extending through said hollow shaft, a disk fixed to said last named shaft at the side of said drive gear and provided with a cam on its outer face, a



coil spring arranged between said disk and said first named gear and having its ends secured thereto, a pin fixed to said first gear and projecting outwardly beyond said disk, and a stop fixed to said casing normally engaged by said pin, said stop being formed of spring metal and being disposed to be engaged by the cam on said disk and moved outwardly to release said pin.

884,576. PROCESS FOR THE MANUFACTURE OF SPIRITS. GUSTAV FRITSCHE, Strzebowitz, near Schönbrunn, Austria-Hungary, assignor to The Roessler & Hasslacher Chemical Company, New York, N. Y., a Corporation of New York. Filed June 28, 1907. Serial No. 381,334.

1. In a process for the manufacture of spirits the adding of a mixture containing formaldehyde and a vegetable proteid.

2. In a process for the manufacture of spirits the adding of a mixture containing formaldehyde and a vegetable proteid substance to both the yeast and the mash.

3. In a process for the manufacture of spirits the adding to the amylaceous substance of a mixture containing formaldehyde, milk and a vegetable proteid.

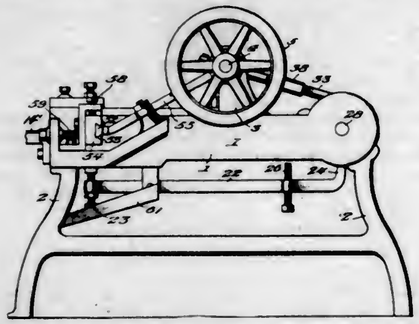
4. In a process for the manufacture of spirits the adding of a mixture containing formaldehyde, milk and a vegetable proteid to both the yeast and the mash.

884,577. NAIL-MAKING MACHINE. GEORGE GIESLER and TRUMAN J. ALEXANDER, Madison, Ind. Filed Feb. 17, 1906. Serial No. 301,616.

1. In a nail making machine, a frame, a drive shaft journaled therein, a carriage movably sustained in the frame and having a tubular shaping die, operative connections between the shaft and carriage for operating the latter, an upsetting member movably arranged in the carriage to operate through said die, and connections between the shaft and member for operating the latter.

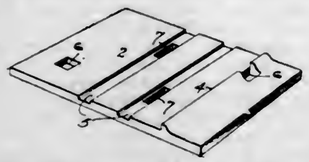
2. In a nail making machine, a frame, a drive shaft journaled therein, a carriage movably sustained in the frame and having a tubular shaping die, operative connections between the shaft and carriage for moving the carriage, a plunger movably sustained in the carriage, and carrying an upsetting member adapted for movement through said die, coöperating links connected respectively with the plunger and carriage and operative connections between said links and drive shaft.

3. In a nail making machine, the combination of a frame, a carriage slidable thereon, clamping jaws mounted on the frame for holding the stock of which the nail is formed, a die in the carriage and coöperating with the jaws to form the head of the nail, an upsetting member associated with the die, a plunger head reciprocating in the carriage for actuating the upsetting member, a driving shaft supported transversely of the carriage at a point intermediate its ends, a mechanism between the shaft and carriage for reciprocating the latter, and a toggle mechanism connected with the carriage and plunger head and with the shaft to be operated by the latter.



4. In a nail making machine, the combination of a supporting frame, a carriage slidably mounted thereon and having its center portion open, a die in one end of the carriage, clamping jaws arranged in coöperative relation with the die, an upsetting member coöperating with the die, a plunger head arranged within the carriage and resting slidably on the frame for actuating the said member, a transversely extending shaft disposed over the carriage, a pair of toggle links connected with the plunger head and carriage for moving the former independently of the latter, a connection between the shaft and links for straightening and collapsing the latter, a rocking device mounted on the frame at one end of the carriage, a connection between the shaft and device for actuating the latter, and means connecting the device with the carriage for reciprocating the latter.

884,578. SPIKE AND TIE-PLATE. WILLIAM GOLDIE, Jr., Bay City, Mich. Filed May 6, 1907. Serial No. 372,116.

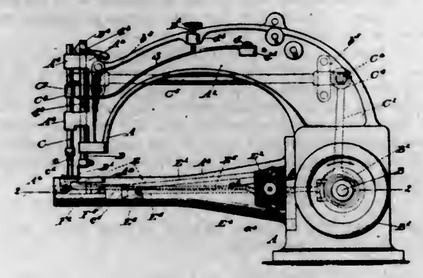


1. In combination with the rail and tie, a tie plate having a groove extending across its upper face and within the bearing surface covered by the rail, a slot extending down from the groove through the plate, and a tie pin adapted to be driven through the slot into the tie and having its head seated in the groove in the plate.

2. In combination with the rail and tie, a tie plate having a groove extending across its upper face, a slot extending down from the groove through the plate, and a tie pin adapted to be driven through the slot into the tie and having its head seated in the groove in the tie plate.

3. The combination with a rail and tie, a tie plate having a groove extending across its upper face, a slot extending down from the groove through the plate, and a tie pin adapted to be driven through the slot into the tie and having its head corresponding in size to the groove in the tie and filling the same.

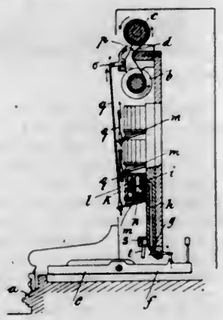
884,579. SEWING-MACHINE. JULIUS C. GOODWIN, Philadelphia, Pa. Filed Sept. 14, 1905. Serial No. 278,428.



1. A sewing machine comprising a main shaft, a feed bar, a segment fulcrumed at one end to the machine frame and connected at its other end to the feed bar, an eccentric, an eccentric rod adjustably secured to the segment intermediate its connections with the feed bar and the machine frame for varying the stroke of the feed bar, a bell crank lever having one of its arms connected to the feed bar, and a horizontally reciprocating rod connected to the other arm of the bell crank lever, whereby motion is imparted to the bell crank lever for raising and lowering the feed bar.

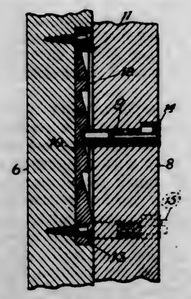
2. A sewing machine comprising a main shaft, a horizontally reciprocating feed bar, a segment fulcrumed at one end to the machine frame and connected at its other end to the feed bar, an eccentric, an eccentric rod adjustably secured to the segment intermediate its connections with the feed bar and the machine frame for varying the stroke of the feed bar, a bell crank lever having one of its arms connected to the feed bar, a horizontally reciprocating rod connected to the other arm of the bell crank lever, whereby motion is imparted to the bell crank lever for raising and lowering the feed bar, and a casing for all of said parts having an opening therein through which access may be had for adjusting the eccentric rod.

884,580. MUSIC-RECORDER. WOLF HEILBRUNN, SIMON BLÜTH, and WILHELM PAPE, Berlin, Germany. Filed May 19, 1905. Serial No. 261,214.



A music recorder comprising in combination for each key, a low pressure chamber having an atmospheric air inlet at one side, a valve for closing said inlet, a diaphragm in the said chamber, a bellows communicating with the chamber at the other side of the diaphragm, a valve controlling the communication of the chamber with the bellows and actuated by the diaphragm, a point adapted to mark the traveling record sheet, a bell crank lever connected to said point and a single rod connected at one end to the bellows and at the other to the bell crank lever, substantially as described.

884,581. SASH-LOCK. ROBERT HEINLE, Allegheny, Pa. Filed July 17, 1907. Serial No. 384,211.



1. A sash lock comprising a movable member and a catch, the movable member being entirely within the sash except when the sash is in closed position, whereby it cannot be rendered inoperative except the sash be closed.

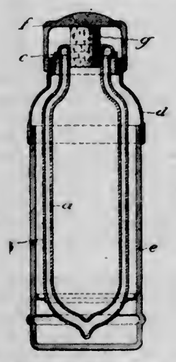
2. A safety sash lock comprising a bolt in the sash entirely inclosed and out of reach except when the sash is closed, and means to protrude the bolt for manipulation when the sash is closed.

3. The combination with a sash and its casing, of a bolt inclosed in the side of the sash out of reach, a catch on the casing engaged by the bolt to hold the sash in place, means on the casing to protrude the bolt from the sash when the latter is lowered and means on the bolt and sash to hold the bolt out of engagement, operable only when the sash is closed down.

4. A sash lock comprising a bar embedded in the casing and having catches below the surface of the sash and one end raised flush with the sash, a spring pressed bolt mounted in the sash to engage said catch, said bolt being entirely inclosed except when it engages the raised end of the catch bar, substantially as described.

5. In a sash lock the combination with a catch in the casing, of a sliding bolt in the sash having a laterally projecting head, and a sleeve entirely inclosing and engaging said head while the bolt engages the catch, to prevent turning and allowing the bolt to be turned and supported on the sleeve when the head is projected therefrom, substantially as described.

884,582. VESSEL WITH DOUBLE WALLS AND PROTECTIVE CASE. HUBERT HENN, Berlin, Germany, assignor, by mesne assignments, to American Thermos Bottle Company, Brooklyn, N. Y., a Corporation of Maine. Filed Oct. 18, 1907. Serial No. 398,049.



1. The combination with a jacket composed of separable members, of a cup and a vacuum insulated bottle, both removably secured to one of said jacket members.

2. The combination with a jacket having an upper member and a body member having a screw threaded engage-

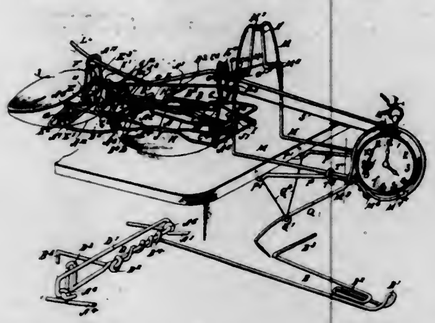
ment therewith, of a vacuum insulated bottle also having a screw-threaded engagement with said upper jacket member.

3. The combination with a jacket having an upper member and a body member having a screw-threaded engagement therewith, of a cup and a vacuum insulated bottle, both having screw-threaded engagements with said upper jacket member.

4. The combination with a jacket having an upper member and a body member having a screw-threaded engagement therewith, of a vacuum insulated bottle having a collar at its neck provided with a screw-threaded portion arranged to engage the upper jacket member.

5. In combination, a vacuum insulated bottle, a cup and a jacket comprising an upper member and a body member removably secured thereto, said upper member having a screw-threaded portion, the inner wall of which is arranged to be engaged by the vacuum insulated bottle and the outer wall of which is arranged to be engaged by the cup.

884,583. FIRE-STARTER. LEO C. HERMANN, Evansville, Ind. Filed June 21, 1907. Serial No. 380,169.



1. The combination of a frame comprising relatively vertical and horizontal extensions at opposite sides, a match strike pivoted at one end to the said vertical extension and having its opposite end movable on said horizontal extension and guided thereby, a spring mounted on the horizontal extension of the frame and exerting a pressure against the free end of the match strike, a spring actuated arm provided with a match holder to receive a match and carry the same across the match strike, a catch to hold the said arm in restraint, means to trip the catch and release the arm, and a time controlled mechanism for actuating the said trip means.

2. The combination of a frame comprising relatively vertical and horizontal extensions at opposite sides, a match strike having an eye at one end sleeved upon the said vertical extension at one side of the frame, and having its opposite end slotted to receive the said horizontal extension at the opposite side of the frame, the edges of the match strike being crimped to receive an abrasive strip, a spring sleeved upon the horizontal strip of the frame and exerting a pressure upon the free end of the match strike, a spring actuated arm provided with a match holder to receive a match and carry the same across the match strike, a catch to hold the said arm in restraint, means to trip the catch and release the arm, and a time controlled mechanism for actuating the said trip means.

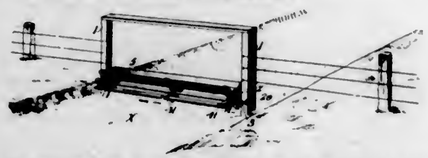
3. In a fire kindler, the combination of a frame, a match strike, a longitudinal spring actuated match holder, a trip lever paralleling the match strike and having a stop and a catch, the latter adapted to engage with the match holder and hold it in restraint against its actuating spring, a draw-bar having a portion to engage with said trip lever and supported upon the stop thereof, and a clock movement having connection with said draw-bar to operate the same and effect release of the match holder.

4. In means for lighting a fire, the combination of a frame, a match strike, a spring actuated match holder, a catch for said match holder to hold the same in restraint, a draw-bar, a clock movement for operating said draw-bar at the predetermined time to effect release of the match holder, and a safety hook for preventing premature operation of the aforesaid draw-bar.

5. In means for lighting a fire, the combination of a frame having an inclined portion for supporting a cover of the stove in elevated position, igniting mechanism carried by said frame, engaging means for normally holding said frame in operative position with the inclined portion beneath the stove cover, a trip for the igniting and engaging devices, and a clock movement for actuating said trip.

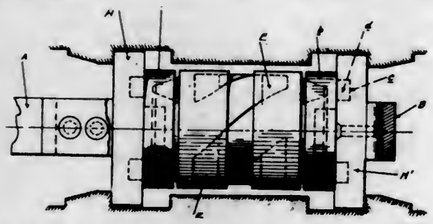
[Claims 6 to 11 not printed in the Gazette.]

884,584. GATE. ANDREW HESSEL, Golden, Colo. Filed Jan. 24, 1908. Serial No. 412,468.



In combination with the oppositely disposed end posts, and the brackets projected at right angles therefrom, said brackets having diagonally inclined slots; of the cross rod having journals for extending into the said slots, and a gate revolubly mounted on the said rod, said gate consisting of a plurality of half hub section castings, each having radial arms and clamping lugs whereby to be loosely fitted upon the rod and panels secured to the coincident arms of the several castings, all being arranged substantially as shown and for the purposes described.

884,585. DRAFT-RIGGING. DWIGHT A. HITCHCOCK, Detroit, Mich., assignor to The Monarch Coupler Company, Ltd., Detroit, Mich. Filed July 30, 1904. Serial No. 218,827.



1. In a draft rigging, the combination with a yoke, followers composed of a non-rotating and a rotating member, sleeves on the non-rotating members projecting through apetures in the rotating members and springs between the followers about the sleeves.

2. In a draft rigging, a follower composed of a rotary member and a non-rotary member, a V-shaped rib on one member and a complementary V-shaped groove on the other, for the purpose described.

3. A strain-resisting mechanism, comprising a conical wedge member, a relatively rotatable member coöperating therewith, and an elastic resistance medium, substantially as described.

4. A strain-resisting mechanism, comprising a pair of relatively rotatable members adapted during the action of the mechanism to have wedge engagement with each other, one of said members being of conical form, whereby friction is produced to resist strains applied to the mechanism, substantiallily as described.

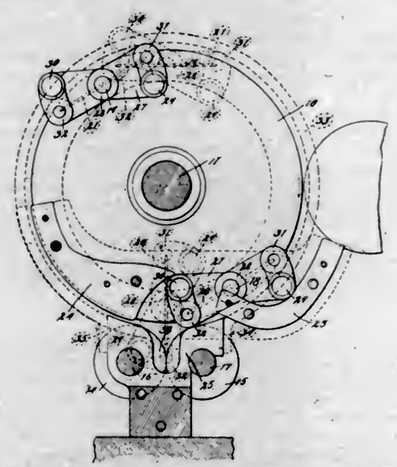
5. A strain-resisting mechanism, comprising a rotatable conical wedge member and a coöperating member frictionally engaged thereby, said wedge member being rotatable in a direction at right angles to its axis, substantially as described.

884,586. LOCK. ADOLF HUBER, Hartford, Conn., assignor of one-third to Anthony M. Jacobs, Hartford, Conn. Filed Aug. 30, 1907. Serial No. 390,755.



A lock having a bolt with a shoulder adapted to be engaged by the bit of the key for moving the bolt one step, a locking tumbler adapted to engage the bolt and to be disengaged from the bolt by the bit of the key, a tumbler mounted on the bolt and having a shoulder adapted to be engaged by the key for moving the bolt one step and a part adapted to be engaged by the bit of the key and so lifted that the shoulder on the tumbler will be out of the path of the bit of the key, a catch adapted to engage and temporarily hold the bolt tumbler out of the path of the key when the bolt tumbler is lifted by the bit of the key, a movable key pintle and a connection between the pintle and the catch whereby the movement of the pintle disengages the catch from the bolt tumbler and allows that tumbler to be dropped so that its shoulder lies in the path of the bit of the key, substantially as specified.

884,587. FOLDING APPARATUS FOR PRINTING-PRESSES. HANS P. HUSBY, Chicago, Ill., assignor to The Goss Printing Press Company, Chicago, Ill., a Corporation of Illinois. Filed Mar. 29, 1907. Serial No. 365,303.



1. In a folding apparatus for printing presses, a folding cylinder, a folding-blade carried by said cylinder, folding rollers coacting therewith, guide rollers connected with the folding-blade and arranged in a plane which intersects the plane of said folding blade, and stationary cams adapted to engage the latter rollers for actuating said folding-blade.

2. In a folding apparatus for printing presses, the combination of a cylinder, a folding-blade carried thereby, folding rollers coöperating therewith, a pair of guide rollers in the plane of said folding-blade, a pair of guide rollers in a plane intersecting the plane of the folding-blade, and stationary cams adapted to be engaged by said rollers and operating to actuate said folding-blade.

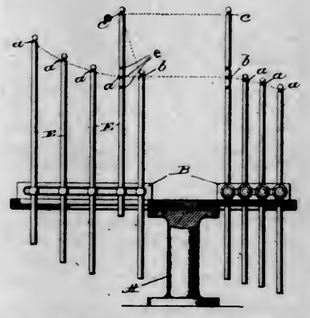
3. In a folding apparatus for printing presses, the combination of a folding cylinder, a shaft carried thereby, a folding-blade carried by said shaft, folding rollers coöperating with said folding-blade, a cross-head carried by said shaft, guide rollers carried by said cross-head in a plane which intersects the plane of said folding-blade, and stationary cams adapted to be engaged by said guide rollers for actuating said folding-blade.

4. In a folding apparatus for printing presses, the combination of a folding cylinder, a shaft carried thereby, a folding-blade carried by said shaft, folding rollers coöperating with said folding-blade, a cross-head carried by said shaft, a pair of guide rollers carried by said cross-head in the plane of said folding-blade, a pair of guide rollers carried by said cross-head in a plane which intersects the plane of said folding-blade, and stationary cams adapted to be engaged by said guide rollers for actuating said folding-blade.

5. In a folding-apparatus for printing presses, a rotary carrier, a folding-blade carried thereby, folding rollers coacting therewith, guide rollers connected with the folding-blade and arranged in a plane which intersects the plane of said folding-blade, and stationary means adapted to engage said guide rollers for actuating the folding-blade.

[Claims 6 and 7 not printed in the Gazette.]

884,588. DEVICE FOR FORMING WIRE HAT-FRAMES. WINTHROP M. JAMESON, Cambridge, Mass. Filed Mar. 17, 1906. Serial No. 306,496.



1. A device for forming wire hat frames, comprising a support or standard, radially arranged, longitudinally slotted guides supported thereby, a series of wire supporting members for each guide, individual clamping means for attaching each member to its slotted guide permitting vertical and lateral adjustment of each member on its guide, means permitting the figure formed by the ends of said members to be contracted without disturbing their adjusted relations to their respective guides.

2. A device for forming wire hat frames, comprising a support or standard, radially arranged, longitudinally slotted guides supported thereby, a series of wire supporting members for each guide, individual clamping means for attaching each member to its slotted guide, permitting vertical, angular and lateral adjustment of each member on its guide, means permitting the figure formed by the ends of said members to be contracted without disturbing their adjusted relations to their respective guides.

3. A device for forming wire hat frames, comprising a support or standard, radially arranged longitudinally slotted guides supported thereby, a series of wire supporting members for each guide, individual clamping means for attaching each member to its slotted guide, permitting a vertical and lateral adjustment of each member on its guide, means permitting the position of a plurality of the guides relatively to their support to be changed to allow the removal of the completed frame without disturbing the adjusted position of the members on their respective guides.

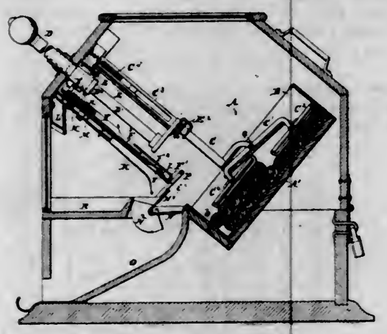
4. A device for forming wire hat frames, comprising a support or standard, radially arranged longitudinally slotted guides supported thereby, a series of wire supporting members for each guide, individual clamping means for attaching each member to its slotted guide, permitting

a vertical, angular and lateral adjustment of each member on its guide, means permitting the position of a plurality of the guides relatively to their support to be changed to allow the removal of the completed frame without disturbing the adjusted position of the members on their respective guides.

5. In a device for forming wire hat frames, radially arranged, vertically faced guides, a series of wire supporting members for each guide, individual means for clamping each member against the vertical face of its guide.

[Claims 6 to 8 not printed in the Gazette.]

884,589. VENDING-MACHINE. SYLVESTER JENKINS, Lansdale, Pa. Filed Dec. 29, 1904. Serial No. 238,750.



1. In a vending machine a case and a reciprocating plunger, combined with automatic spearing mechanism carried by the plunger and located wholly within the case whereby the pressure of the plunger against the article will cause the spearing mechanism to penetrate and hold it.

2. In a vending machine a case and a reciprocating plunger, combined with automatic spearing mechanism carried by the plunger and located wholly within the case whereby the pressure of the plunger against the article will cause the spearing mechanism to penetrate and hold it, a stripper device in the path of the article when the plunger is withdrawn, and means independent of the plunger for withdrawing and resetting the spearing mechanism.

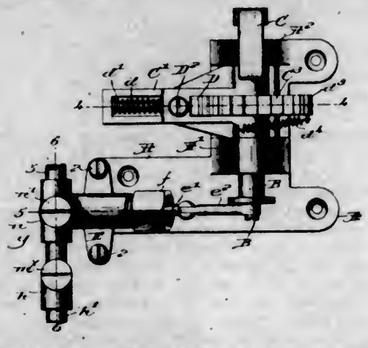
3. In a vending machine, a case, in combination with a reciprocatable frame extending through the walls and into the interior space of the case, movable means upon the end of the frame within the case for penetrating an article for lifting it, and operating devices wholly within the case for automatically causing a movement of the penetrating means relatively to the reciprocatable frame.

4. In a vending machine, a case, in combination with a reciprocatable frame extending through the walls and into the interior space of the case, movable means upon the end of the frame within the case for penetrating an article for lifting it, operating devices wholly within the case for automatically causing a movement of the penetrating means relatively to the reciprocatable frame, and means for automatically discharging the article from the penetrating means by the art of withdrawing the reciprocatable frame.

5. In a vending machine, the combination of a support for a receptacle of vendible articles, clamping devices for holding the articles with an intermittent pressure to liberate the articles successively, a hand operated reciprocatable frame, lifting means on the frame independent of the clamping device to penetrate the article to lift it, and means to discharge the article from the lifting means.

[Claims 6 to 15 not printed in the Gazette.]

884,590. MECHANICAL MOVEMENT. CHARLES F. JONES, Newton Highlands, Mass. Filed Oct. 20, 1906. Serial No. 339,797.
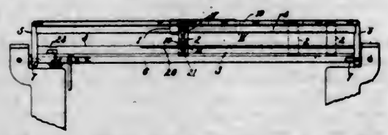


1. In a device of the class described, the combination with an element to be reciprocated, of a shaft connected therewith, a ratchet-wheel on the shaft, a double yoke loosely sustained by the shaft, a pawl carried by one portion of the yoke and engaging said ratchet wheel, and an actuating link connected with the other portion of said yoke.

2. In a device of the class described, the combination with an element to be reciprocated, of a shaft connected therewith, two bearings A', A^2 for the shaft, a ratchet wheel supported on said shaft between said bearings, a double yoke loosely sustained on said shaft, one portion of the yoke embracing said wheel and the other portion embracing the bearing A^2, a pawl carried by the first-named portion of the yoke, and an actuating link connected to the last-named portion of the yoke outside of the bearing.

3. In a device of the class described, the combination with an element to be reciprocated, of a shaft operatively connected to the piston, two bearings A', A^2, for said shaft, said shaft projecting beyond the bearing A^2, a ratchet wheel fast on said shaft, a double yoke loosely sustained by said shaft, one portion of the yoke received between the bearings and embracing the ratchet wheel, and the other portion of said yoke embracing the bearing A^2, a spring-pressed pawl carried by the first-named portion of the yoke, an actuating member connected to the last named portion of the yoke.

884,591. TYPE-WRITING MACHINE. CHARLES E. KELLEY, New York, N. Y., assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of New Jersey. Filed Dec. 21, 1907. Serial No. 407,456.



1. In a typewriting and tabulating mechanism, the combination with a rack and a cylindrical rod extending along the rack, of a column stop having an open eye to engage said rod and both turn and slide upon the latter, the rod being at one end reduced or cut away sufficiently to permit the column stop to be drawn off from the rod; said column stop having a tooth to engage the rack.

2. In a typewriting and tabulating mechanism, the combination with a rack, of a cylindrical rod supported at its ends and extending along the rack, a column stop having a tooth to engage the rack and formed with an open eye to fit upon said rod to permit rotation of the stop to disengage the tooth from the rack and also to permit the stop to slide along the rod, the latter being at one end reduced or cut away to permit the column stop to be drawn off from the rod.

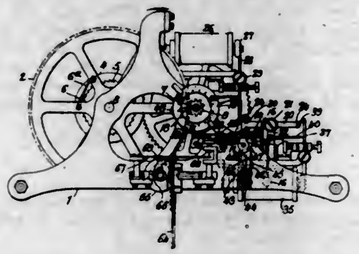
3. In a typewriting and tabulating mechanism, the combination with a rack, of a column stop adjustable along the rack and movable into and out of engagement therewith, and means to support the column stop in engagement with a rack; said supporting means extending the entire length of the rack and provided only at its end with a cut away portion to permit detachment of the column stop.

4. In a typewriting and tabulating mechanism, the combination with a rack, of a rod extending along the rack, a column stop having a tooth to engage the rack and mounted to turn upon said rod to disengage the tooth from the rack and to slide along said rod to engage different rack teeth, and means extending along the rod to hold the column stop in engagement with the rack; said column stop having an open eye to engage said rod, and the latter being at one end reduced or cut away sufficiently to permit the column stop to be drawn off from the rod.

5. In a typewriting and tabulating mechanism, the combination with a rack, of a cylindrical rod extending along the rack, a column stop having a tooth to engage the rack and mounted to turn upon said rod to disengage the tooth from the rack and to slide along said rod to engage different rack teeth, a groove extending along the rod to be engaged by a detent upon the column stop to hold the latter in engagement with the rack; said column stop having an open eye to engage said rod; and the latter being at one end reduced or cut away sufficiently to permit the column stop to be drawn off from the rod.

[Claims 6 to 10 not printed in the Gazette.]

884,592. PRESSURE-GAGE. JAMES S. KENNEDY, New York, N. Y. Filed May 4, 1906. Serial No. 315,256.



1. In a gage or indicator, the combination of a single electrical circuit, normally closed during the interval between changes or variations of the thing to be indicated, and having an impressed electromotive force of unchanging polarity, said electromotive force and the resistance being normally constant and invariable, a transmitting means operated by changes in the thing to be indicated, a receiving means operated by impulses from the transmitter and synchronously therewith, said receiving means having visual indicating means, together with means whereby the indicating means has a verification pause.

2. In a gage or indicator for indicating pressures at a distance, the combination of a single electrical circuit, normally closed and having a current of unchanging polarity, a transmitting device wherein the circuit is opened and closed by pressure fluctuations, a receiving device operated by impulses from the transmitter and synchronously therewith, said receiving device being provided with indicating means, together with means whereby the indicating means has a verification pause.

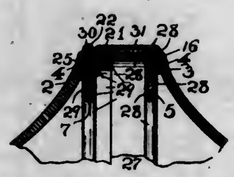
3. In a gage or indicator for indicating pressures, the combination of an electrical circuit, a transmitting device wherein the circuit is opened and closed by pressure fluctuations, a receiving device provided with indicating means and operating synchronously with the transmitter, together with means whereby the indicator has a verification pause.

4. In a gage or indicator, the combination of an electrical circuit, a transmitting device in said circuit actuated by pressure fluctuations to open and close the latter, a receiver device having means for indicating these changes of pressure and operating synchronously with the transmitter, together with means whereby the indicator delays its movement at a certain point to provide an accuracy test.

5. In a gage or indicator, the combination of a single electrical circuit normally closed and having a current of unchanging polarity, a transmitter operated by changes in the thing to be indicated, a receiver operated by impulses from the transmitter, and means whereby the position of one impulse in a series of impulses is made variable with respect to the others.

[Claims 6 to 25 not printed in the Gazette.]

884,593. BAG-FRAME. JOSEPH F. KITCHELL, Newark, N. J., assignor to The R. Neumann Hardware Co., a Corporation of New Jersey. Filed Mar. 5, 1907. Serial No. 360,734.



1. A bag-frame comprising a pair of frame-sections, each frame-section having leg-portions, and one of said frame-sections being adapted to move into the other frame-section, so as to be inclosed by the latter, a means of pivotal connection between each pair of leg-portions of the frame-sections, and means upon the smaller frame-section constructed and arranged to extend over a portion of the larger frame-section so as to cover or hide the space or gap between the two frame-sections when closed.

2. A bag-frame comprising a pair of frame-sections, each frame-section having leg-portions, and one of said frame-sections being adapted to move into the other frame-section so as to be inclosed by the latter, a means of pivotal connection between each pair of leg-portions of the frame-sections, and an L-shaped space or gap-hiding means upon the smaller frame-section, the upwardly extending leg of said L-shaped space or gap-hiding means extending over a portion of the larger frame-section so as to cover or hide the space or gap between the two frame-sections when closed.

3. A bag-frame comprising a pair of pivotally connected frame-sections, one of said frame-sections being provided with a forwardly extending body-portion and downwardly extending leg-portions, the other frame-section being provided with an inwardly extending body-portion and downwardly extending leg-portions the frame-section with the inwardly extending portions being made smaller than the frame-section with the outwardly extending portions, so that the smaller frame-section will move into the larger frame section, and a space or gap-hiding means on said smaller frame-section, and arranged to extend over a portion of the larger frame-section so as to cover or hide the space or gap between the two frame-sections when closed, substantially as and for the purposes set forth.

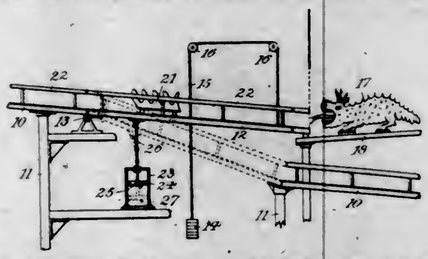
4. A bag-frame comprising a pair of pivotally connected frame-sections, one of said frame-sections being provided with forwardly extending body-portion and downwardly extending leg-portions, the other frame-section being provided with an inwardly extending body-portion and downwardly extending leg-portions, the frame-section with the inwardly extending portions being made smaller than the frame-section with the outwardly extending portions, so that the smaller frame-section will move into the larger frame section, and an L-shaped space or gap-hiding means mounted and secured upon the faces of the inwardly extending body-portions and leg-portions of said smaller frame-section, and arranged to extend over a portion of

the larger frame-section so as to cover or hide the space or gap between the two frame-sections when closed, substantially as and for the purposes set forth.

5. A bag-frame comprising an outer and an inner frame-section, each frame-section comprising a main body and leg-portions at its ends, all arranged that the inner frame-section may be inclosed by the outer frame-section, and a space or gap-hiding device mounted upon the body and leg-portions of the inner frame-section, said device having upwardly and outwardly extending portions corresponding to and terminating at the marginal edge-portions of the main body and leg-portions of the outer frame-section to hide the space or gap between the closed frame-sections, substantially as and for the purposes set forth.

[Claims 6 to 13 not printed in the Gazette.]

884,594. SCENIC RAILWAY. GASTON LACOMME, New York, N. Y., assignor of one-half to Edgar Joseph, New York, N. Y. Filed Feb. 7, 1908. Serial No. 414,676.



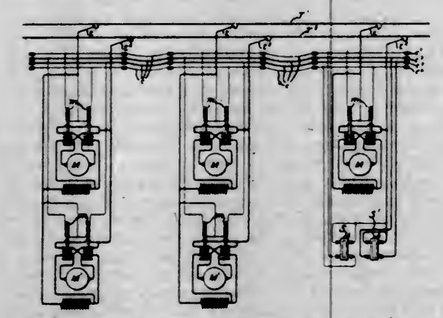
1. A scenic railway, comprising a series of spaced sections arranged at different levels, drops adapted to connect succeeding sections, and scenic effects extending across the sections, substantially as specified.

2. A scenic railway, comprising a series of spaced inclined sections arranged at different levels, hinged drops adapted to connect succeeding sections, and scenic effects opposite the sections and separated therefrom by the drops, substantially as specified.

3. A scenic railway, comprising a pair of spaced inclined sections, a connecting drop, and a scenic effect arranged opposite the rear end of the first section and above the front end of the second section, substantially as specified.

4. A scenic railway, comprising a series of spaced inclined sections, connecting counter-balanced drops, scenic effects opposite the drops, pistons connected to the drops, and cylinders engaged by said pistons, substantially as specified.

884,595. CARRIER SYSTEM. SAM H. LIBBY, East Orange, N. J., assignor to Sprague Electric Company, a Corporation of New Jersey. Filed June 17, 1905. Serial No. 265,702.



1. In a carrier system, a supporting rail, a train of carriers suspended from said rail and adapted to travel thereon, load carrying devices suspended from said carriers, independent motors on the several carriers for driving them along said rail and for hoisting said devices, a source of current for said motors, an operator's carrier, and means on the operator's carrier controlling all of said motors.

2. In a carrier system, a supporting rail, a train of carriers suspended from said rail and adapted to travel thereon, load carrying devices suspended from said carriers, independent motors for the several carriers for driving them along said rail and for hoisting said devices, a source of current for said motors, controlling devices for said motors carried by the several carriers, an operator's carrier, control wires extending through the train and connected to said controlling devices, and means on the operator's carrier controlling the connections from said control wires to the source of current.

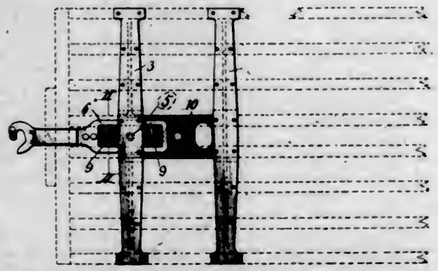
3. In a carrier system, a supporting rail, a train of carriers suspended from said rail and adapted to travel thereon, load carrying devices suspended from said carriers independent motors for the several carriers for driving them along said rail and for hoisting said devices, a source of current for said motors, magnetically-actuated reversing switches for said motors on the several carriers, an operator's carrier, control wires extending through the train and connected to the actuating magnets of said switches, and means on the operator's carrier controlling the connections from said control wires to the source of current.

4. In a carrier system, a supporting rail, a train of carriers suspended from said rail and adapted to travel thereon, receptacles suspended from said carriers, motors on the several carriers for driving them along said rail, a second set of motors on the several carriers for hoisting said receptacles, a source of current for the motors, an operator's carrier, and means on the operator's carrier for controlling all of said motors.

5. In a carrier system, a supporting rail, a train of carriers suspended from said rail and adapted to travel thereon, receptacles suspended from said carriers, motors on the several carriers for driving them along said rail, a second set of motors on the several carriers for hoisting said receptacles, a source of current for the motors, an operator's carrier, control wires for both sets of motors extending through the train, and means on the operator's carrier for controlling the connections from said control wires to the source of current.

[Claims 6 and 7 not printed in the Gazette.]

884,596. CAR-BOLSTER AND DRAFT-RIGGING. WILLIAM D. LOWRY, St. Louis, Mo. Filed Dec. 19, 1906. Serial No. 348,597.



1. The combination of a plurality of body bolsters having a king-bolt bearing plate whereby they are connected with each other and one of which has a recess extending transversely thereof and open at the bottom of the bolster, and a draft rigging mounted in said recess, substantially as set forth.

2. The combination of a plurality of body bolsters one of which has a recess extending transversely thereof and open at the bottom of the bolster, a draft rigging mounted in said recess, and a king-bolt bearing plate uniting said bolsters and seated in said recess, substantially as set forth.

3. The combination of a plurality of body bolsters, one of which is provided with a recess for the reception of a draft rigging, a draft rigging in said recess, and a king-bolt bearing plate uniting said bolsters and detachably fitted to the bolster in which said draft rigging is located for the purpose of closing the bottom of the recess therein, substantially as set forth.

4. The combination of a plurality of body bolsters, one of which is provided with a recess for the reception of a draft rigging, a draft rigging positioned in said recess, and a king-bolt bearing plate detachably fitted to said bolsters and serving to close the bottom of the recess in which said draft rigging is located, substantially as set forth.

5. The combination of a plurality of bolsters one of which has a recess extending transversely thereof and open at the bottom of the bolster, a draft rigging mounted in said recess, and a connecting plate uniting said bolsters and seated in said recess; and said connecting plate being provided with a center bearing located intermediate of said bolsters, substantially as set forth.

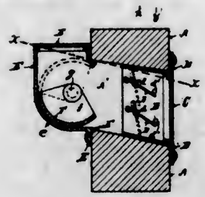
[Claims 6 to 9 not printed in the Gazette.]

884,597. PROCESS OF MAKING FELT FOR PIANO-HAMMERS. JOHN MARSON, Rahway, N. J., assignor to Herbert W. Taylor, Montclair, N. J. Filed May 1, 1906. Serial No. 314,641.



The process herein described of making felt for piano-hammers, which consists in first making a layer of felt of uniform thickness having the fibers crossed to strengthen the texture; second, hardening the web or layer; third, dividing the layer transversely to its width diagonally or obliquely into two sections having their adjacent faces suitably inclined, fourth, fulling the sections for finishing the same; and, fifth, cutting the sections into trapeziform strips.

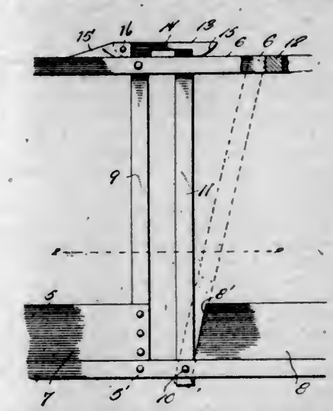
884,598. WINDOW-VENTILATOR. LOUIS S. MARTIN, Erie, Pa. Filed May 31, 1907. Serial No. 376,665.



The combination in a window-sash ventilator, of a case covering a rectangular opening through a sash, mechanism in said case for partially or wholly closing said opening, vanes longitudinally pivoted in the sash opening at one side of the center of said vanes, and stops engaging said vanes and normally retaining them at such an angle that they offer substantially no obstruction to the passage of air, and so that a blast of air through said opening will close them, substantially as set forth.

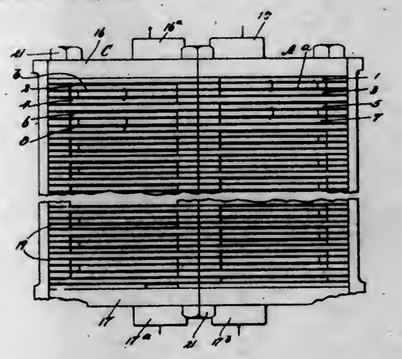
884,599. CATTLE-STANCHION. DAVID E. MILES, Reece, Kans. Filed July 12, 1906. Serial No. 325,955.

In a cattle stanchion the combination with a pair of lower spaced parallel beams, of a second pair of spaced parallel beams directly above said first mentioned set and extending parallel therewith, a trough section having a vertical end edge, a second trough section having an opposed inclined end edge, said trough sections being secured to one of said lower beams, a fixed stanchion bar secured to the rear face of said first mentioned trough section, one of its vertical edges being flush with the end edge of said trough section, said stanchion at its lower end being secured between said first mentioned set of beams and at its upper end between said second pair of beams, a bolt passing horizontally through said lower spaced beams and located near the lower edge of said trough section having an inclined end edge, a swinging stanchion pivotally held upon said bolt and between said lower pair of beams, the



upper end of said stanchion swinging between said upper parallel beams, a stop block positioned between said upper beams, a bracket secured to one of said upper beams, a pin carried by said bracket, and a gravity latch carried by said pin and adapted to hook over the upper end of said swinging stanchion in the manner shown.

884,600. TEMPERATURE-EXCHANGING APPARATUS. EUGÈNE MOREAU, New York, N. Y., assignor to Calor Sterilizer Co., New York, N. Y. Filed Dec. 31, 1904. Serial No. 239,063.



1. A temperature exchanging device consisting of a self-sustaining structure having a series of unobstructed openings each extending through it from one side to the other so as to be accessible and said openings successively ranging crosswise to each other in the series, in combination with covers consisting of separate plates, the device being provided with ports between the structure and covers which connect said openings and form in conjunction therewith two crosswise ranging continuous circuitous channels, and means for detachably clamping the covers to the structure, substantially as described.

2. A temperature exchanging device consisting of a generally rectangular structure comprising a series of plates and marginal strips arranged in pairs and in crosswise relation to each other in the successive spaces between the plates, cover plates, the devices being provided with ports between the structure and cover plates at the

lateral sides of the structure and whereof those at one pair of opposite sides connect alternate spaces and whereof those at the other pair of sides similarly connect the intermediate spaces, and inlet and outlet connections, substantially as described.

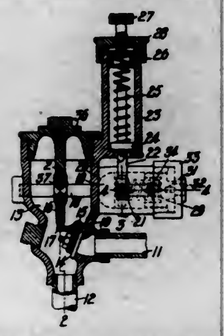
3. A temperature exchanging device consisting of a generally rectangular structure, comprising a series of plates each having its adjacent sides recessed and pairs of marginal strips whereof one strip in each pair is recessed interposed between the successive plates in crosswise relation to each other and said recesses constituting ports at the lateral sides of the structure of which ports those at one pair of opposite sides of the structure connect alternate spaces between the plates and those at the other pair of opposite sides of the structure similarly connect the intermediate spaces between the plates, cover plates, and inlet and outlet connections, substantially as described.

4. In a temperature exchanging device the combination of a series of plates having a pair of marginal strips coextensive in length with the edges of the plates and interposed between each plate and the succeeding plate and said pairs being aranged in crosswise relation in respect to each other between the successive plates, and bolts for binding said parts into a self-sustaining structure, and the device having removable means at the lateral sides of the structure for connecting the spaces between the plates into two separate crosswise ranging circuitous passages, for the purposes set forth.

5. In a temperature exchanging device the combination of a self-sustaining structure comprising marginally notched plates and pairs of strips co-extensive in length with the edges of the plates and whereof one strip of each pair is notched and said pairs of strips arranged in crosswise relation in respect to each other between the plates with the notches of the plates and of the strips in alinement to constitute spaces and the device having detachable means for connecting the spaces into two separate crosswise ranging circuitous passages, substantially as described.

[Claim 6 not printed in the Gazette.]

884,601. RADIATOR-VALVE. JOHN B. MORGAN, Schenectady, N. Y. Filed Nov. 29, 1907. Serial No. 404,339.



1. In combination, a valve casing adapted to be connected to a radiator, a pivoted check valve located in said casing and adapted to permit the flow of water outwardly from said radiator into said valve casing, a rock shaft, an arm fast to said rock shaft and adapted to actuate said valve, and a spring operatively connected to said rock shaft and arranged to normally hold said valve closed.

2. In combination, a valve casing adapted to be connected to a radiator, a check valve located in said casing and adapted to permit the flow of water outwardly from said radiator into said valve casing, a second casing connected to said valve casing, a rock shaft journaled in said second casing, an annular flange on said rock shaft, an annular seat in said second casing against which said flange bears, a spring arranged to hold said flange in contact with said seat, an arm fast to said rock shaft and arranged in contact with said check valve, a second arm fast to said rock shaft, a spring operatively connected to said second arm and arranged to normally hold said valve closed, and means for adjusting the tension of said second spring.

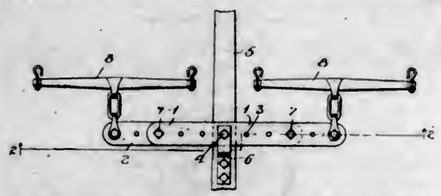
3. In combination, a valve casing adapted to be connected to a radiator, a check valve located in said casing and adapted to permit the flow of water outwardly from said radiator into said valve casing, an arm fast to said rock shaft and adapted to actuate said valve, an annular flange on said rock shaft, an annular seat in said casing against which said flange bears, and a spring arranged to hold said flange in contact with said seat, said spring also acting to hold said valve normally closed.

4. In combination, a valve casing adapted to be connected to a radiator, a check valve located in said casing and adapted to permit the flow of water outwardly from said radiator into said valve casing, an arm fast to said rock shaft and adapted to actuate said valve, an annular flange on said rock shaft, an annular seat in said casing against which said flange bears, a spring arranged to hold said flange in contact with said seat, said spring also acting to hold said valve normally closed, a second arm fast to said rock shaft, and a supplemental spring operatively connected to said second arm and tending to hold said valve normally closed.

5. In combination, a valve casing adapted to be connected to a radiator, a check valve located in said casing and adapted to permit the flow of water outwardly from said radiator into said valve casing, a rock shaft, an annular flange on said rock shaft, an annular seat in said casing against which said flange bears, a spring arranged to hold said flange in contact with said seat, an arm fast to said rock shaft and arranged to contact with said seat, and a spring connected to said rock shaft, and arranged to normally hold said valve closed.

[Claim 6 not printed in the Gazette.]

884,602. DRAFT-EQUALIZER. GEORGE MOSMEIER, Apache, Okla. Filed Aug. 3, 1907. Serial No. 386,909.



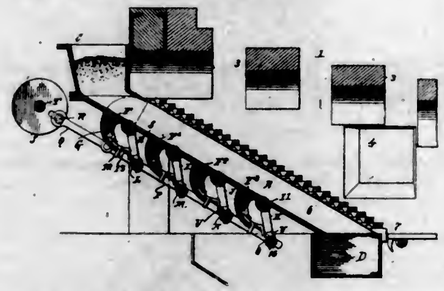
1. The combination with a tongue and its draw-bolt, of an equalizer tree comprising two parallel overlapping bars of equal transverse strength, each having therein a series of holes for receiving said draw-bolt, said bars being adjustable longitudinally of each other to bring different holes in each into registry with different holes in the other, said draw-bolt being adapted to be passed through registering holes in the two bars for attaching the tree to the tongue, and clamping means securing the inner, overlapping end of each bar to the adjacent part of the other bar for preventing said bars from swinging on said bolt independently of each other.

2. The combination with a tongue and draw-bolt, of an equalizer tree, comprising a pair of bars overlapping each other and each having therein a series of equally spaced bolt holes, the holes of each bar being spaced to register with those of the other, to permit the length of said tree to be adjusted and to permit the draw-bolt to be shifted to different holes for the purpose of equalizing the pull of draft animals of unequal power, and a second bolt extending through registering holes at a distance from the draw-bolt to prevent swinging of one bar relatively of the other.

3. The combination of a tongue, a tree for connecting a plurality of draft animals to said tongue and comprising a pair of bars overlapping each other and each provided with a series of equally spaced holes adapted to register with the holes in the other bar and permit of longitudinal adjustment of said bars upon each other, and a draw-bolt for pivotally connecting said tree and tongue, said bolt being shiftable to different holes for equalizing the draft of the animals at different sides of the tongue, and clamping means for securing the inner end of each bar to the adjacent part of the other to prevent relative movement of said bars with respect to each other.

4. In a draft equalizer, a tree for connecting a plurality of draft animals to a wagon tongue, comprising a pair of overlapping bars having therein a series of equally spaced bolt holes, all of said holes being of the same size and the holes in the adjacent parts of said bars being adapted to register with each other when said bars are adjusted longitudinally of each other to a plurality of different relative positions, a draw-bolt adapted to pass through any pair of such registering holes for connecting the tree to the tongue, and a pair of bolts adapted to be passed through other pairs of such registering holes for preventing said bars from swinging independently of each other on said draw-bolt, substantially as described.

884,603. AUTOMATIC STOKING DEVICE FOR FURNACES. THOMAS E. MURRAY, New York, N. Y. Filed Aug. 28, 1907. Serial No. 390,423.



1. In a furnace, an inclined fuel supporting platform, an inclined grate parallel and in proximity thereto and receiving fuel therefrom, means for supplying fuel to the upper part of said platform and means disposed in the plane of said platform for engaging the fuel thereon and moving it down said incline.

2. In a furnace, an inclined fuel supporting platform, an inclined grate parallel and in proximity thereto and receiving fuel therefrom, means for supplying fuel to the upper part of said platform and means disposed in the plane of said platform and supported thereon for engaging the fuel on said platform and moving it down said incline.

3. In a furnace, two inclined parallel grates, an inclined platform disposed between said grates and below the surface thereof, means for supplying fuel to the upper part of said platform and means disposed in the plane of said platform for engaging the fuel thereon and moving it down said incline.

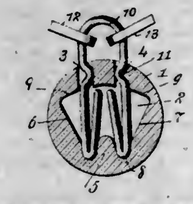
4. An inclined grate, an inclined fuel supporting platform in juxtaposition thereto and having an opening, and an upwardly swinging plate disposed in said opening and constructed to engage the fuel on said platform and move it down the incline.

5. An inclined grate, an inclined fuel supporting platform in juxtaposition thereto and having an opening, an upwardly swinging plate disposed in said opening and constructed to engage the fuel on said platform and move it down the incline and means for varying the throw of the plate.

[Claims 6 to 19 not printed in the Gazette.]

884,604. SEAL-FASTENING. THOMAS E. MURRAY, New York, N. Y. Filed Oct. 8, 1907. Serial No. 396,464.

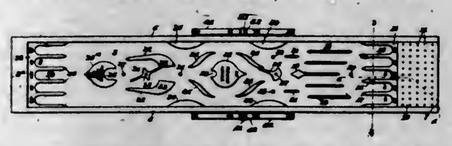
1. In a seal fastening and in combination with a wire loop having, at its ends, portions turned upward in V shape, and a holding block having a single enlarged inner cavity and two contracted entrances in the wall thereof disposed side by side and substantially parallel; the said turned up portions and the standing parts of the loop adjacent thereto being received in said cavity after passing through the entrances and being locked in said cavity by abutment of the upper extremities of said turned up portions against said cavity wall.



2. In a seal fastening and in combination with a wire loop having, at its ends, portions turned upward in V shape, and a holding block having a single enlarged inner cavity and two contracted entrances in the wall thereof; the said turned up portions and the standing parts of the loop adjacent thereto being received in said cavity after passing through said entrances and being locked in said cavity by abutment of the upper extremities of said turned up portions against the part of said cavity wall lying between said entrances.

3. In combination with a wire loop having its end portions turned backward in substantially V shape, a holding block having a single recess and two contracted entrances thereto disposed side by side and substantially parallel and the said recess being constructed internally to form seats for the apexes of said V shaped parts and to form an abutment for the extremities of said parts.

884,605. GAME APPARATUS. GEORGE N. MCEVOY, New York, N. Y. Filed Mar. 6, 1905. Serial No. 248,406.



1. The combination with a support, of a game board mounted to rock thereon, said board having a deflecting switch member pivoted thereto, a station or pocket for the reception of the game piece or ball arranged at each end of the board, and a plurality of blocks having cut away portions therein arranged on the board between the stations or pockets.

2. A game-board comprising a body portion mounted to rock upon a support having a pocket or station formed at each end thereof for the reception of a ball or similar game piece, a block mounted on said board and having an opening therein to receive the ball or game-piece, and a pivoted switch member arranged adjacent to said block.

3. A game board comprising a body portion having a station or pocket at each end thereof, a block arranged at approximately the center of said board and formed with a cut away portion, inclined deflecting strips secured to the board adjacent to the block, and a pivoted switch member arranged adjacent to certain of the inclined strips.

4. A game-board having a plurality of pockets or stations, a plurality of deflecting switch members, and a deflecting strip having an enlarged end portion secured to the board adjacent to one of said switch members.

5. A game-board comprising a body portion having stations or pockets for the reception of a game piece, such as a ball, and means for deflecting the course of the game piece when the latter is traveling, such means including run-ways, a plurality of pegs secured to the surface of the board, a plurality of inclined strips arranged intermediate the stations, a block having an opening therein for the reception of the game piece, a deflecting strip having a widened end portion and a pivoted switch member.

884,606. FOOD COMPOUND. ROBERT H. MCFARLAND, Grand Rapids, Mich. Filed Apr. 1, 1907. Serial No. 365,866.

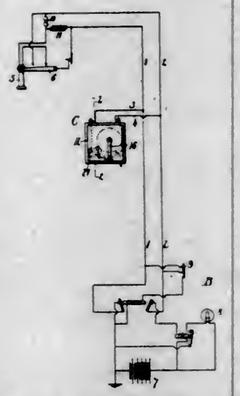
1. A compound for making pastry, consisting of a dry mixture of finely comminuted stearin, substantially such as described, together with flour, baking powder and salt in about the proportions specified.

2. A compound for making pastry consisting of a mixture in substantially the following proportions: of commercial stearin, (substantially such as described) twelve per cent.; baking powder, ten per cent.; wheat flour, seventy-six per cent.; and salt, two per cent.

3. A compound for making pastry, comprising finely comminuted stearin (substantially such as described) combined with flour, in suitable proportion for use in making pastry, together with gas producing materials and seasoning substantially as described.

4. The combination of a shortening for pastry consisting of the residue of a hard fat after the oil or oily matter normally therein has been substantially removed therefrom, in combination with flour, baking powder and seasoning material in about the proportions specified.

884,607. TELEPHONE FIRE-ALARM SYSTEM. WILLIAM S. MCLEWEE, Yardley, Pa. Filed Apr. 9, 1906. Serial No. 310,594.

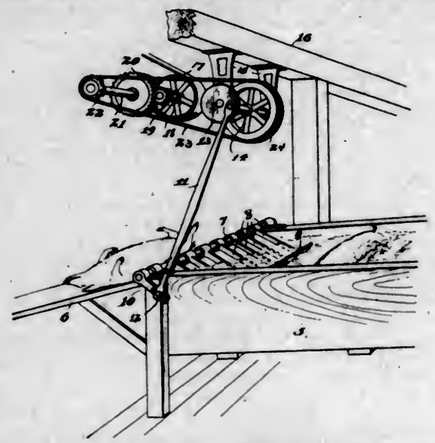


The combination of a telephone circuit, a source of current, a signal located at the telephone exchange controlled by said telephone circuit, a lever pivotally mounted at one end, said lever connected with one of the wires forming the telephone circuit, a terminal connected with the opposite wire forming said telephone circuit, said lever adapted to contact with said terminal and complete said telephone circuit, a spring to act upon said lever, a cam to actuate said lever against the action of said spring, a shaft on which said cam is mounted, a gear-wheel on said cam shaft, a driving shaft having a gear-wheel meshing with the said gear-wheel upon said cam shaft, a crank upon said driving shaft and a weighted handle on said crank to normally stop said cam in a position in which said lever will be out of action.

884,608. DEVICE FOR EJECTING HOGS FROM SCALDING-VATS. WILLIAM R. PERRIN, Chicago, Ill. Filed Nov. 2, 1903. Serial No. 179,520.

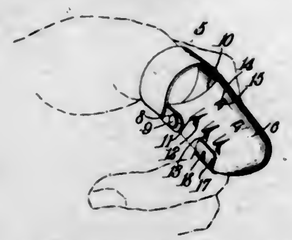
1. The combination with a scalding tank, of a continuously operating hog ejector comprising a skeleton scoop or pan pivotally mounted across one end of said tank, a power driven shaft, and continuous driving connections between said shaft and ejector serving to actuate the latter positively in both directions of its movement, substantially as described.

2. The combination with a scalding tank, of a hog ejector comprising a skeleton scoop pivotally mounted across one end of said tank, a continuously rotating power-driven shaft mounted above said scoop, a rotary crank member on said shaft, an oscillatory crank-arm on



the pivot-shaft of the scoop, and a pitman connection between said rotary crank member and oscillatory crank-arm, substantially as described.

884,609. HUSKER. JOSEPH A. RAMSEY, Beatrice, Nebr. Filed Oct. 7, 1907. Serial No. 396,288.



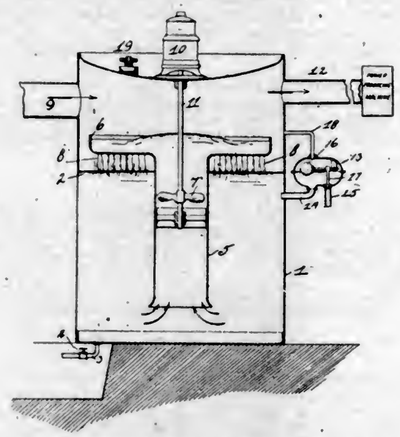
1. A corn husker comprising a thumb stall formed of a plurality of pivotally united sections one of which is provided with a plurality of up struck laterally extending shredding fingers, there being one or more openings formed in said section adjacent the shredding fingers and having their interior walls pressed laterally to form cutting edges, and means for retaining the husker in position on the thumb.

2. A corn husker comprising a thumb stall formed of a plurality of sections one of which is provided with laterally extending ears each having a pivotal connection with the mating section, said mating section being formed with a longitudinal row of laterally extending up-struck shredding fingers, hooks struck up from the body of one of the sections, and means extending transversely across said section and engaging the bills of the hooks.

884,610. STEAM-REGENERATOR. AUGUSTE C. E. RATEAU, Paris, France. Filed Dec. 31, 1904. Serial No. 239,165.

1. A steam regenerative accumulator in which liquid is employed as a heat retainer, in combination with pumping mechanism for effecting circulation of the liquid, and a motor for operating said mechanism and itself operated from a source of power other than the steam to be regenerated.

2. A steam regenerative accumulator in which liquid is employed as a heat retainer, in combination with mechanism for agitating said liquid, and a motor for operating said mechanism and itself operated from a source of power other than the steam to be regenerated.



3. A steam regenerative accumulator in which liquid is employed as a heat retainer, in combination with mechanism for circulating said liquid, and a motor for operating said mechanism and itself operated from a source of power other than the steam to be regenerated.

4. A steam regenerative accumulator in which liquid is employed as a heat retainer, in combination with pumping mechanism for effecting circulation of the liquid, and a motor for operating said mechanism.

5. A steam regenerative accumulator in which liquid is employed as a heat retainer, in combination with mechanism for agitating said liquid, and a motor for operating said mechanism.

[Claim 6 not printed in the Gazette.]

884,611. PIN-FASTENER. ISABELLE REDLES, (now by marriage ISABELLE R. SHILL,) Swarthmore, Pa. Filed May 16, 1904. Serial No. 208,230.



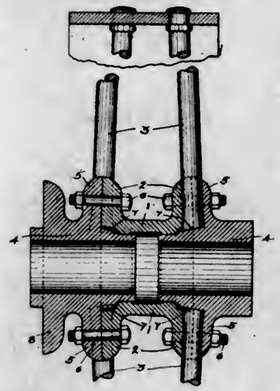
1. In a duplex pin fastener, the combination of a pair of independent safety pins each having a broad flat back, and means passing through said backs for securing them together with their broadest area in contact, the back of one pin being shouldered for engagement with the back of the other pin.

2. In a duplex pin fastener, the combination of a pair of independent safety pins each having a broad flat back, means passing through said backs for securing them together with their broadest area in contact, and means carried by one pin and independent of the securing means for retaining said pins in planes transverse to each other, said retaining means serving also to prevent the movement of either pin with respect to the other.

3. In a duplex pin fastener, the combination of a pair of independent safety pins each having a substantially broad, flat back, and means for securing said backs together with their broadest area in contact, the back of one pin being recessed to provide shoulders for engagement with the back of the other pin to prevent turning movement of one pin with respect to the other.

4. In a duplex pin fastener, the combination of a pair of independent safety pins each having a substantially broad, flat back, and means for securing said backs together with their broadest area in contact, the back of one pin being shouldered for engagement with the back of the other pin, said pins being disposed in planes transverse to one another.

884,612. METALLIC VEHICLE-HUB. PETER REINHARDT, Omaha, Nebr. Filed June 10, 1907. Serial No. 378,292.



1. A metallic hub for vehicle wheels, comprising axially-alined sleeves forming the hub box, an annular body inclosing the adjoining ends of the sleeves, flanges on the ends of the annular body and on the sleeves, said flanges having radially-extending recesses formed in the adjoining faces thereof to receive the inner ends of the wheel spokes, and bolts for removably connecting the sleeve-flanges and the flanges of the annular body.

2. A metallic hub for vehicle wheels, comprising two axially-alined sleeves forming the hub box, an annular body inclosing the adjoining ends of the sleeves, flanges on the ends of the annular body and on the sleeves, said flanges having radially-extending recesses in the adjoining faces thereof to receive the inner ends of the wheel spokes, the ends of said spokes being upset or expanded, there being conical surfaces on the sleeves adapted to engage the ends of the spokes, and bolts for removably connecting the sleeve-flanges with the flanges of the annular body.

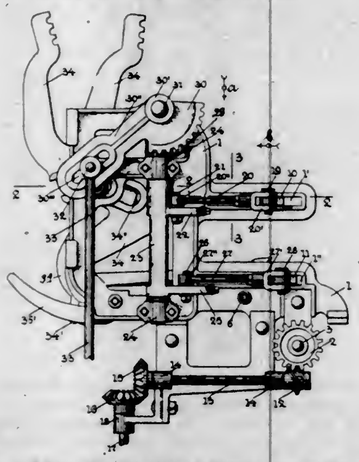
884,613. SHEDDING MECHANISM FOR LOOMS. EPPA H. RYON, Worcester, Mass., assignor to Crompton & Knowles Loom Works, a Corporation of Massachusetts. Filed Dec. 29, 1905. Serial No. 293,708.

1. In a dobby, the combination with the upper and lower lifter bars, for actuating the hooks connected with the harness jacks and said hooks and harness jacks, of means for moving said lifter bars simultaneously, said means comprising vertically extending rock shafts having two crank arms thereon, and a connection from each crank arm to one end of a lifter bar.

2. In a dobby, the combination with the upper and lower lifter bars, for actuating the hooks connected with the harness jacks and said hooks and harness jacks, of means for moving said lifter bars simultaneously, in the same direction, said means comprising a vertically extending rock shaft having two crank arms thereon, and a connection from each crank arm to one end of a lifter bar.

3. In a dobby, the combination with the upper and lower lifter bars for actuating the hooks connected with the harness jacks and said hooks and harness jacks, of means for moving said lifter bar simultaneously in the same direction, said means consisting of a vertically extending rock shaft having two crank arms thereon, and a connection from each crank arm to one end of a lifter bar, and means for communicating an intermittent rocking motion to said rock shaft.

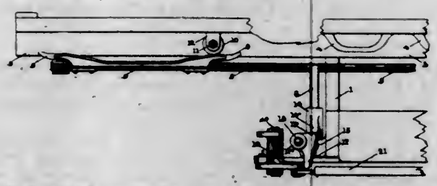
4. In a dobby, the combination with the upper and lower lifter bars for actuating the hooks connected with the harness jacks and said hooks and harness jacks, of means for moving said lifter bars simultaneously in the same direction, said means comprising a vertically extending rock shaft having two crank arms thereon, and a connection from each crank arm to one end of a lifter bar, and means for communicating an intermittent rocking motion to said rock shaft, through a bevel gear on said rock shaft, and a bevel gear segment meshing with said gear, and means for operating said segment.



5. In a dobby, a vertically extending rock shaft having two crank arms thereon, each crank arm connected with one end of a lifter bar and said lifter bar, to communicate a simultaneous movement to the two lifter bars, through the rocking movement of said shaft.

[Claims 6 to 13 not printed in the Gazette.]

884,614. NARROW-WARE LOOM. EPPA H. RYON, Worcester, Mass., assignor to Crompton & Knowles Loom Works, a Corporation of Massachusetts. Filed Oct. 1, 1906. Serial No. 336,826.



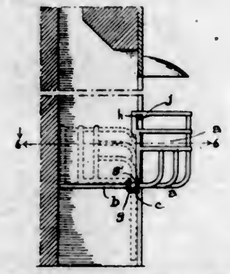
1. A smash preventer for a narrow ware loom, comprising a bar or plate on the protector rod, means connected with the rack bars for the shuttles for engaging and moving said bar or plate, to rock the protector rod and move the dagger on said rod into an operative position, to engage a bunter and operate the shipping mechanism to stop the loom, in case the shuttles remain in the shed.

2. In a smash preventer for a narrow ware loom, the combination with a rack bar for the shuttles, and a bunter to operate the shipping mechanism and stop the loom in case the shuttles remain in the shed, of intermediate connections, comprising the protector rod, a curved or cam-shaped bar or plate connected therewith and extending in a plane parallel to the lay-beam, and a roll to engage said bar or plate, and a dagger on the protector rod to engage said bunter.

3. In a smash preventer for a narrow ware loom, the combination with a rack bar for the shuttles, a roll connected with said rack bar, a curved or cam-shaped bar or plate to be engaged by said roll, and connected with the protector rod to control the rocking motion of the protector rod and the dagger thereon, relatively to the bunter, and said dagger, of a bunter loosely supported and having its inner edge provided with a series of notches, and a lever intermediate said bunter and a second lever connected with the shipper bar, and said second lever and shipper bar.

4. In a smash preventer for a narrow ware loom, the combination with a rack bar for the shuttles, connections from said bar to a lever, and said lever having a series of notches thereon, of a bunter, and a lever intermediate said bunter and the shipper bar.

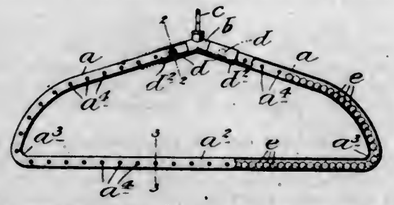
884,615. GRATE FOR OPEN FIREPLACES. CHARLES F. SALTER, Knoxville, Tenn., assignor of one-half to H. C. Helm, Harriman, Tenn. Filed Nov. 26, 1907. Serial No. 403,906.



1. The combination with a fireplace having bearings at each side and a lateral projection above said bearings, of a grate provided with pivots engaging said bearings, and an upward extending front guard portion having detachable locking engagement with said lateral projection, said grate being adapted to be lifted from said bearings to disengage it from said lateral projection.

2. The combination with a fireplace having bearings at each side and a lateral projection above said bearings, of a grate provided with pivots engaging said bearings, and an upward extending front guard portion having detachrecess open at its bottom and adapted to detachably engage said lateral projection to lock the grate in position, said grate being adapted to be lifted from said bearings to disengage it from said lateral projection.

884,616. GARMENT-HANGER. AARON SCHLANG, Brooklyn, N. Y. Filed Nov. 13, 1907. Serial No. 401,909.

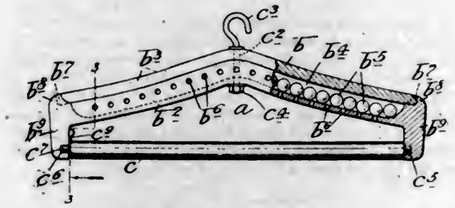


1. A bow-shaped garment hanger composed of a tube, the walls of which are perforated, said garment hanger being provided centrally with a suspending hook, and said tube forming a chamber adapted to receive moth balls or other insect destroying material and being provided adjacent to said hook with an aperture through which said balls or other material may be passed, and means for closing said aperture.

2. A bow-shaped garment hanger composed of a perforated tube provided centrally with a suspending hook and adjacent to said hook with an aperture through which moth balls or other insect destroying material may be passed and a sleeve movable thereon for closing said aperture.

3. A garment hanger comprising a bow-shaped top portion and a horizontal bottom portion, said hanger being composed of a continuous tube the walls of which are perforated, and the bow-shaped top portion being provided centrally with a suspending hook and adjacent thereto with apertures through which moth balls or similar material may be passed, and sliding sleeves for closing said apertures.

884,617. GARMENT-HANGER. AARON SCHLANG, Brooklyn, N. Y. Filed Dec. 21, 1907. Serial No. 407,472.



1. A garment hanger of the usual form comprising top and bottom parts, the bottom part being provided with a longitudinal channel or chamber in the top thereof which is closed by the top part, the walls of said channel or chamber being perforated.

2. A garment hanger of the usual form comprising top and bottom parts, the bottom part being provided with a longitudinal channel or chamber in the top thereof which is closed by the top part, the walls of said channel or chamber being perforated, and said parts being held together by a bolt passed centrally through the same and provided at its upper end with a hook.

3. A garment hanger of the usual form comprising top and bottom parts, the bottom part being provided with a longitudinal channel or chamber in the top thereof which is closed by the top part, the walls of said channel or chamber being perforated, and said parts being held together by a bolt passed centrally through the same and provided at its upper end with a hook and at its lower end with a nut, the ends of the top part being also provided with tongues which fit in corresponding recesses in the ends of the bottom part.

884,618. CONVEYER. GEORGE SCHUBERT, Fort Worth, Tex. Filed Sept. 13, 1906. Serial No. 334,385.



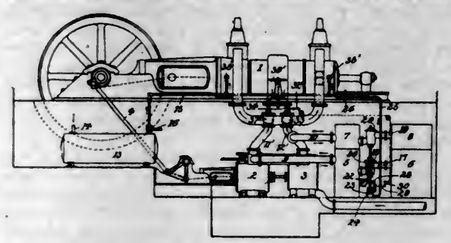
1. In a conveyer, of the kind described trucks rigid on their axles, links connecting said axles, lugs on the rear end of said trucks resting on said links, in the carrying position of its trucks for the purpose described.

2. In a conveyer, of the kind described, trucks rigid on their axles, links connecting said axles, downward and forward projecting lugs on said trucks, rods projecting from the track to be engaged by said lugs, for the purpose described.

884,619. STARTING MECHANISM FOR GAS-ENGINES. PETER SCHWEHM, Hanover, Germany. Filed Mar. 1, 1906. Serial No. 303,581.

1. In a device of the character described, a reciprocating gas engine, and a pump, combined with first and second charge tanks, a pipe connecting the pump with the first tank, means for connecting said first tank to the engine, a pipe connecting the first and second tanks, a spring-closed valve controlling said pipe, and means for maintaining the valve open during the normal run of the engine against the action of the spring, substantially as specified.

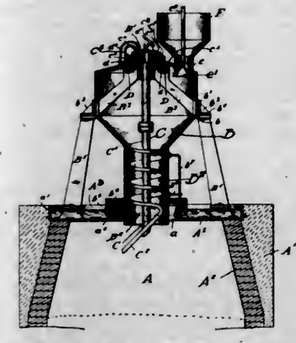
2. In a device of the character described, a pair of charge tanks, means for establishing communication between said tanks, a check-valve controlling such communication, a second valve controlling the discharge of one of said tanks, and means for operatively connecting the second valve with the check-valve, substantially as specified.



3. In a device of the character described, a pair of charge tanks, means for establishing communication between said tanks, a check-valve controlling such communication, a third tank having a discharge pipe, a valve controlling said pipe, and means controlled by said valve for opening the check-valve, substantially as specified.

4. In a device of the character described, a pair of charge tanks, means for establishing communication between said tanks, a check-valve controlling such communication, and means for maintaining the check-valve in its open position during the operation of the engine, substantially as specified.

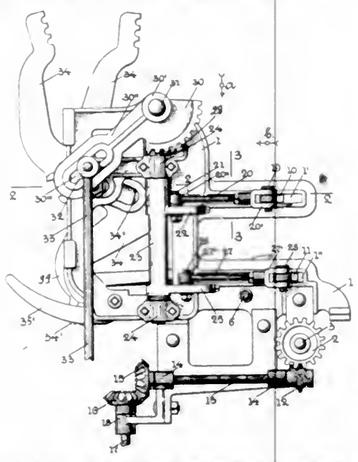
884,620. FUEL-FEEDING DEVICE FOR GAS-PRODUCING FURNACES. SAMUEL B. SHELDON, Buffalo, N. Y. Filed July 25, 1907. Serial No. 385,530.



1. The combination with a fire chamber provided with a metal cover plate having an opening through which fuel is fed to said chamber, of a fuel hopper closed at its top by a top wall, means for introducing fuel into said fuel hopper without opening the same to permit the escape of gas therefrom, fuel feeding mechanism, comprising two members, one of which consists of an upright cylindric casing and the other of an upright shaft within said casing, one of said members having rotative movement relatively to the other and one of said members being provided with a spiral rib or worm, a water seal between the rotative member and the fuel hopper and a water seal between the said casing and the cover plate.

2. The combination with a fire chamber, provided with a metal cover plate, said cover plate having a central opening through which the fuel is fed to said chamber, of a fuel hopper closed at its top by a top wall, means for introducing fuel into the fuel hopper without permitting the escape of gas therefrom, fuel feeding means comprising two members, to wit, an upright cylindric casing and an upright rotative shaft within said casing, one of said members being provided with a spiral flange or worm, a water seal between the lower end of said casing and the cover

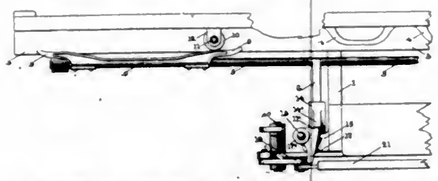
4. In a dobby, the combination with the upper and lower lifter bars for actuating the hooks connected with the harness jacks and said hooks and harness jacks, of means for moving said lifter bars simultaneously in the same direction, said means comprising a vertically extending rock shaft having two crank arms thereon, and a connection from each crank arm to one end of a lifter bar, and means for communicating an intermittent rocking motion to said rock shaft, through a bevel gear on said rock shaft, and a bevel gear segment meshing with said gear, and means for operating said segment.



5. In a dobby, a vertically extending rock shaft having two crank arms thereon, each crank arm connected with one end of a lifter bar and said lifter bar, to communicate a simultaneous movement to the two lifter bars, through the rocking movement of said shaft.

[Claims 6 to 13 not printed in the Gazette.]

884,614. NARROW-WARE LOOM. EPPA H. RYON, Worcester, Mass., assignor to Crompton & Knowles Loom Works, a Corporation of Massachusetts. Filed Oct. 1, 1906. Serial No. 336,826.



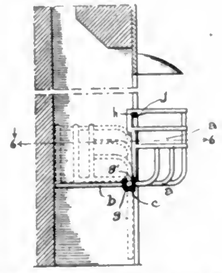
1. A smash preventer for a narrow ware loom, comprising a bar or plate on the protector rod, means connected with the rack bars for the shuttles for engaging and moving said bar or plate, to rock the protector rod and move the dagger on said rod into an operative position, to engage a bunter and operate the shipping mechanism to stop the loom, in case the shuttles remain in the shed.

2. In a smash preventer for a narrow ware loom, the combination with a rack bar for the shuttles, and a bunter to operate the shipping mechanism and stop the loom in case the shuttles remain in the shed, of intermediate connections, comprising the protector rod, a curved or cam-shaped bar or plate connected therewith and extending in a plane parallel to the lay-beam, and a roll to engage said bar or plate, and a dagger on the protector rod to engage said bunter.

3. In a smash preventer for a narrow ware loom, the combination with a rack bar for the shuttles, a roll connected with said rack bar, a curved or cam-shaped bar or plate to be engaged by said roll, and connected with the protector rod to control the rocking motion of the protector rod and the dagger thereon, relatively to the bunter, and said dagger, of a bunter loosely supported and having its inner edge provided with a series of notches, and a lever intermediate said bunter and a second lever connected with the shipper bar, and said second lever and shipper bar.

4. In a smash preventer for a narrow ware loom, the combination with a rack bar for the shuttles, connections from said bar to a lever, and said lever having a series of notches thereon, of a bunter, and a lever intermediate said bunter and the shipper bar.

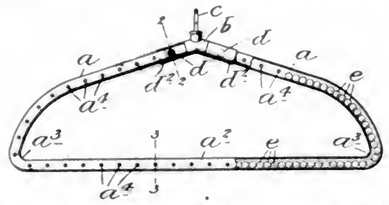
884,615. GRATE FOR OPEN FIREPLACES. CHARLES F. SALTER, Knoxville, Tenn., assignor of one-half to H. C. Helm, Harriman, Tenn. Filed Nov. 26, 1907. Serial No. 403,906.



1. The combination with a fireplace having bearings at each side and a lateral projection above said bearings, of a grate provided with pivots engaging said bearings, and an upward extending front guard portion having detachable locking engagement with said lateral projection, said grate being adapted to be lifted from said bearings to disengage it from said lateral projection.

2. The combination with a fireplace having bearings at each side and a lateral projection above said bearings, of a grate provided with pivots engaging said bearings, and an upward extending front guard portion having detachrecess open at its bottom and adapted to detachably engage said lateral projection to lock the grate in position, said grate being adapted to be lifted from said bearings to disengage it from said lateral projection.

884,616. GARMENT-HANGER. AARON SCHLANG, Brooklyn, N. Y. Filed Nov. 13, 1907. Serial No. 401,909.

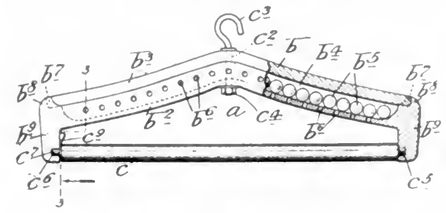


1. A bow-shaped garment hanger composed of a tube, the walls of which are perforated, said garment hanger being provided centrally with a suspending hook, and said tube forming a chamber adapted to receive moth balls or other insect destroying material and being provided adjacent to said hook with an aperture through which said balls or other material may be passed, and means for closing said aperture.

2. A bow-shaped garment hanger composed of a perforated tube provided centrally with a suspending hook and adjacent to said hook with an aperture through which moth balls or other insect destroying material may be passed and a sleeve movable thereon for closing said aperture.

3. A garment hanger comprising a bow-shaped top portion and a horizontal bottom portion, said hanger being composed of a continuous tube the walls of which are perforated, and the bow-shaped top portion being provided centrally with a suspending hook and adjacent thereto with apertures through which moth balls or similar material may be passed, and sliding sleeves for closing said apertures.

884,617. GARMENT-HANGER. AARON SCHLANG, Brooklyn, N. Y. Filed Dec. 21, 1907. Serial No. 407,472.

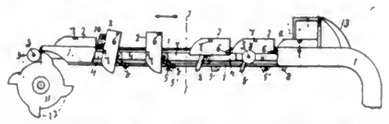


1. A garment hanger of the usual form comprising top and bottom parts, the bottom part being provided with a longitudinal channel or chamber in the top thereof which is closed by the top part, the walls of said channel or chamber being perforated.

2. A garment hanger of the usual form comprising top and bottom parts, the bottom part being provided with a longitudinal channel or chamber in the top thereof which is closed by the top part, the walls of said channel or chamber being perforated, and said parts being held together by a bolt passed centrally through the same and provided at its upper end with a hook.

3. A garment hanger of the usual form comprising top and bottom parts, the bottom part being provided with a longitudinal channel or chamber in the top thereof which is closed by the top part, the walls of said channel or chamber being perforated, and said parts being held together by a bolt passed centrally through the same and provided at its upper end with a hook and at its lower end with a nut, the ends of the top part being also provided with tongues which fit in corresponding recesses in the ends of the bottom part.

884,618. CONVEYER. GEORGE SCHUBERT, Fort Worth, Tex. Filed Sept. 13, 1906. Serial No. 334,385.



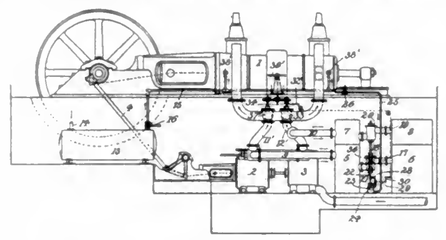
1. In a conveyer, of the kind described trucks rigid on their axles, links connecting said axles, lugs on the rear end of said trucks resting on said links, in the carrying position of its trucks for the purpose described.

2. In a conveyer, of the kind described, trucks rigid on their axles, links connecting said axles, downward and forward projecting lugs on said trucks, rods projecting from the track to be engaged by said lugs, for the purpose described.

884,619. STARTING MECHANISM FOR GAS-ENGINES. PETER SCHWEHM, Hanover, Germany. Filed Mar. 1, 1906. Serial No. 303,581.

1. In a device of the character described, a reciprocating gas engine, and a pump, combined with first and second charge tanks, a pipe connecting the pump with the first tank, means for connecting said first tank to the engine, a pipe connecting the first and second tanks, a spring-closed valve controlling said pipe, and means for maintaining the valve open during the normal run of the engine against the action of the spring, substantially as specified.

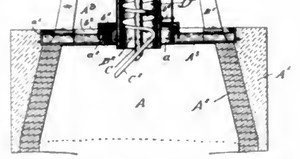
2. In a device of the character described, a pair of charge tanks, means for establishing communication between said tanks, a check-valve controlling such communication, a second valve controlling the discharge of one of said tanks, and means for operatively connecting the second valve with the check-valve, substantially as specified.



3. In a device of the character described, a pair of charge tanks, means for establishing communication between said tanks, a check-valve controlling such communication, a third tank having a discharge pipe, a valve controlling said pipe, and means controlled by said valve for opening the check-valve, substantially as specified.

4. In a device of the character described, a pair of charge tanks, means for establishing communication between said tanks, a check-valve controlling such communication, and means for maintaining the check-valve in its open position during the operation of the engine, substantially as specified.

884,620. FUEL-FEEDING DEVICE FOR GAS-PRODUCING FURNACES. SAMUEL B. SHELDON, Buffalo, N. Y. Filed July 25, 1907. Serial No. 385,530.



1. The combination with a fire chamber provided with a metal cover plate having an opening through which fuel is fed to said chamber, of a fuel hopper closed at its top by a top wall, means for introducing fuel into said fuel hopper without opening the same to permit the escape of gas therefrom, fuel feeding mechanism, comprising two members, one of which consists of an upright cylindric casing and the other of an upright shaft within said casing, one of said members having rotative movement relatively to the other and one of said members being provided with a spiral rib or worm, a water seal between the rotative member and the fuel hopper and a water seal between the said casing and the cover plate.

2. The combination with a fire chamber, provided with a metal cover plate, said cover plate having a central opening through which the fuel is fed to said chamber, of a fuel hopper closed at its top by a top wall, means for introducing fuel into the fuel hopper without permitting the escape of gas therefrom, fuel feeding means comprising two members, to wit, an upright cylindric casing and an upright rotative shaft within said casing, one of said members being provided with a spiral flange or worm, a water seal between the lower end of said casing and the cover

plate and a water seal between the rotative shaft and the said hopper.

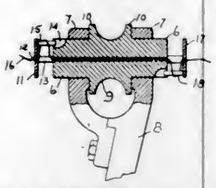
3. The combination with a fire chamber, of a fuel hopper closed at its top by a top wall, means for introducing fuel into the said fuel hopper without permitting the escape of gas therefrom, fuel feeding means comprising two members, to-wit, an upright cylindric casing communicating at its upper end with said hopper, and an upright rotative shaft located in said casing and extending at its upper end through the said top wall of the fuel hopper, one of said members being provided with a spiral flange or worm, a water seal between the shaft and said top wall of the fuel hopper, and a water seal between the said casing and cover plate.

4. The combination with a fire chamber, of a fuel hopper closed at its top by a top wall, means for introducing fuel into the fuel hopper while maintaining the same closed to prevent escape of gas, feeding mechanism comprising two members, to wit, an upright cylindric casing communicating at its upper end with the bottom of the hopper, and a rotative shaft located in the casing and extending through the top wall of the hopper, one of said members being provided with a spiral flange or worm, a fixed bearing ring surrounding the upper end of the shaft, and connected with said top wall of the hopper, a horizontal bearing plate attached to the upper end of the shaft and having bearing engagement with said ring, a water seal between said bearing plate and ring, and a water seal between the said casing and cover plate.

5. The combination with a fire chamber provided with a metal cover plate, said cover plate having an opening through which the fuel is fed to said chamber, of a fuel hopper closed at its top by a top wall, fuel feeding means comprising two members, to-wit, an upright cylindric casing communicating at its upper end with the said hopper and an upright shaft extending through said casing, one of said members having rotative movement with respect to the other and one of said members being provided with a spiral flange or worm, a feed hopper having an opening in its bottom which extends through the top of the fuel hopper, a valve closing the bottom of said feed hopper, a water seal between the rotative member and the hopper, and a water seal between the lower end of said casing and the cover plate.

[Claims 6 to 9 not printed in the Gazette.]

884,621. SPINNING AND TWISTING MACHINE. THOMAS D. SINGLETON and WILLIAM GLEASON, Providence, R. I. Filed Aug. 16, 1907. Serial No. 388,916.



In a spinning and twisting machine, a twister head comprising a short tubular body portion, a plate or outer head supported on said body a short distance therefrom providing a space between them, a pin at one side of the center set substantially parallel with the axis of said body portion and adapted to extend across said space, said pin having one free end over which the bite of said thread is adapted to be passed.

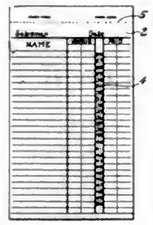
884,622. ELECTRIC RAILWAY-SIGNAL. GEORGE A. STAFFORD, Belcherville, IRA P. WHITAKER, Alvord, and JOHN L. LOPP, Greenwood, Tex. Filed July 26, 1907. Serial No. 385,652.

1. A receptacle for holding an incandescent lamp, said receptacle formed in two sections a lamp located in the receptacle, a tube detachably secured to the upper section and the lower section forming a reflector and means for reflecting the light vertically and in front and rear of a locomotive, substantially as and for the purposes set forth.



2. The combination with a receptacle formed in two sections a lamp located in the receptacle, a tube detachably secured to the said receptacle, the lower section forming a reflector; of a horizontal stationary tube having a bend in the body thereof, a yoke lossely secured to the ends of said tube by means of short sleeves, a pull rod having one of its ends secured to the yoke, and its opposite end secured to a hand lever for adjusting the receptacle to control the rays of light substantially as described.

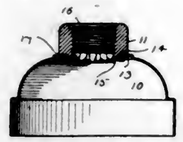
884,623. SALES-BOOK. ALBERT F. STAPLES, Alliance, Ohio. Filed Oct. 28, 1907. Serial No. 399,509.



1. A sales book comprising a body of leaves printed for use as charge slips, and a back of sheet material secured to the leaves at one edge and having a weakened portion near such edge to facilitate its removal, the back being printed for use as a score sheet, so that when removed it may be used in connection with another similar sales book.

2. A sales book comprising a body of leaves printed for use as charge slips and consecutively numbered, and a cardboard back secured to the leaves at one edge and perforated near such edge to facilitate its removal, the back being printed with spaces numbered to correspond with the numbers on the leaves, so that the back, when removed, may be used as a score sheet in connection with another similar sales book.

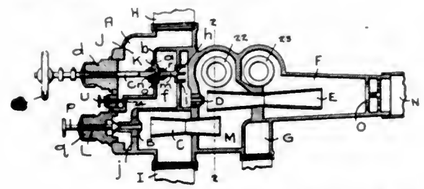
884,624. SOCKET-CAP. WILLIAM S. STAPLEY, Bridgeport, Conn., assignor to Bridgeport Brass Company, Bridgeport, Conn., a Corporation of Connecticut. Filed Oct. 22, 1907. Serial No. 398,608.



1. A socket cap comprising a body having a central opening and surrounding said opening an inwardly turned flange and a hub having a flange adapted to pass within the flange on the body and a shoulder against which the top of the body rests, the parts being locked together by spreading the flange on the hub and clamping the edge of the body surrounding the opening and also the flange on the body between the flange on the hub and the shoulder.

2. A socket cap comprising a body having a central polygonal opening and surrounding said opening an inwardly turned polygonal flange and a hub having a flange adapted to pass within the flange on the body and beveled at its lower end and a shoulder against which the top of the body rests, the parts being locked against rotation by spreading the flange on the hub and clamping the edge of the body surrounding the opening and also the flange on the body between the flange on the hub and the shoulder and forming grooves in the upset hub flange corresponding with the planes of the flange on the body.

884,625. INJECTOR. WILLIAM H. STIRLING, St. John, New Brunswick, Canada, assignor to Harry Richards McLellan, St. John, New Brunswick, Canada. Filed June 3, 1907. Serial No. 377,025.



1. In an injector, the combination with the working chamber having separate forcing and lifting overflow discharge ports, of an auxiliary waste chamber having communication with the working chamber only through the said ports, valves for the ports and an operating mechanism for the valves located outside the working chamber in the waste chamber and having the operating stem thereof extending through the walls of the waste chamber, whereby the said stem and operating mechanism are entirely free from steam and water pressure when the valves are closed.

2. In an injector, the combination with the working chamber having separate forcing and lifting overflow discharge ports, of an auxiliary waste chamber having communication with the working chamber only through the said ports, valves for the ports, an operating stem outside the working chamber extending in the waste chamber and through the wall thereof, whereby it may be free from steam or water pressure when the valves are closed, and positive connecting means between the stem and the valves, whereby a longitudinal movement of the same actuates the valves.

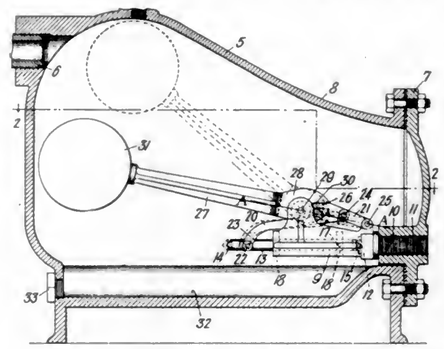
3. In an injector, the combination with the inlet chamber having a main port therein, through which the steam passes, to both the lifting and forcing nozzles, and also having a smaller auxiliary port through the said walls thereof, and the valve for the main port, of an intermediate chamber separate from the inlet chamber and into which both of the ports communicate, means for placing said chamber in communication with the feed water and a separate auxiliary valve operable from the exterior of the casing adapted to open and close the auxiliary port in the inlet chamber and permit the steam to pass through the port and through the intermediate chamber into the feed water.

4. In an injector, the combination with the casing having lifting and forcing overflow ports, of disk valves closing the same, a common chamber into which said ports are adapted to open, a valve stem journaled in said casing and having inclined portions formed thereon, connecting members hinged to the valve disks and having inclined slots through which the valve stem extends, whereby longitudinal movement of the valve stem will operate the valves, as and for the purpose specified.

5. In an injector, the combination with the main operating spindle, and the lifting and forcing overflow discharge valves, of a single stem, operatively connected to both valves, an arm pivoted to the end of the same having a bifurcated end adapted to extend around the main spindle, and adjustable rings for holding said bifurcated end in position on the spindle, as and for the purpose specified.

[Claim 6 not printed in the Gazette.]

884,626. STEAM-TRAP. JOSEPH E. SWENDEMAN, Boston, Mass. Filed Apr. 15, 1907. Serial No. 368,225.



1. In a steam trap a reservoir having an inlet and an outlet orifice, an outlet valve seat, an outlet valve movable toward and away from said seat, a pivoted float lever provided with a slot, a float connected to said float lever, and a toggle having one member connected to said valve and the other to a fixed support, one of said members being provided with a projection located in said slot.

2. In a steam trap a reservoir having an inlet and an outlet orifice, an outlet valve seat, a fixed support, an outlet valve having a stem slidably arranged in said support to move toward and away from said seat, a float lever pivotally mounted on said support, an arm connected at one end to said float lever, and at its other end pivotally connected to said support, and a link pivotally connected at one end to said stem and at its other end pivotally connected to said arm between the ends of said arm.

3. In a steam trap a reservoir having an inlet and an outlet orifice, an outlet valve seat, a fixed support, an outlet valve having a stem slidably arranged in said support to move toward and away from said seat, a float lever pivotally mounted on said support, said lever provided with a slot, an arm provided at one end with a projection located in said slot, the other end of said arm being pivotally connected to said support, and a link pivotally connected at one end to said stem and at its other end pivotally connected to said arm.

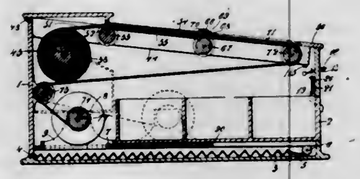
4. In a steam trap a reservoir having an inlet and an outlet orifice, an outlet valve seat, a fixed support, an outlet valve having a stem slidably arranged in said support to move toward and away from said seat, a float lever pivotally mounted on said support, said lever provided with a slot, an arm provided at one end with a projection located in said slot, the other end of said arm being pivotally connected to said support, and a link pivotally connected at one end to said stem and at its other end pivotally connected to said arm between the ends of said arm.

5. In a steam trap a reservoir having an inlet and an outlet orifice, an outlet valve seat, a fixed support, an outlet valve having a stem slidably arranged in said support to move toward and away from said seat, a float lever having a forked end pivotally mounted on said support, said end being provided with slots, an arm which said forked end straddles, one end of said arm being provided with projections located in said slots, the other end of said arm being pivotally connected to said support, and a link pivotally connected at one end to said stem and at its other end pivotally connected to said arm.

884,627. CASH-REGISTER. FREDERIC H. TREVELLIAN, Wellington, New Zealand. Filed Dec. 29, 1906. Serial No. 350,063.

1. Apparatus for the purpose indicated comprising in combination a casing, a carriage and drawer slidable in the lower part of the casing, frames supported in the

casing, means for attaching the frames to the top of the casing, a drum having upper and lower bands of paper coiled thereon, pivot pins pivoting the drum, in the frames, a ratchet wheel fixed to a pivot pin of the drum, a pawl normally engaging the ratchet wheel, means for operating the pawl when the drawer is opened, guide rollers around which the paper bands travel, a support for the bands beneath an aperture provided in the top of the casing, a strip of carbon prepared material interposed between the bands of paper, a hood having a knife edge immediately above a slot provided in the top of the casing and through which the upper band passes, a sheet of glass in the top of the casing, spring means for forcing the carriage and drawer towards the front of the casing, a stop for arresting the travel of the carriage, means for locking the drawer in its closed position, a roller pivoted in the carriage the end of the lower paper band being secured to the said roller, and means whereby the roller is revolved during the inward travel only of the carriage substantially as described.



2. Apparatus for the purpose indicated, comprising in combination a casing, a carriage and drawer slidable in the lower part of the casing, frames supported in the casing, means for attaching the frames to the top of the casing, a drum having upper and lower bands of paper coiled thereon, pivot pins pivoting the drum, in the frames, a ratchet wheel fixed to a pivot pin of the drum, a pawl normally engaging the ratchet wheel, means for operating the pawl when the drawer is opened, guide rollers around which the paper bands travel, a support for the bands beneath an aperture provided in the top of the casing, a strip of carbon prepared material interposed between the bands of paper, a hood having a knife edge immediately above a slot provided in the top of the casing and through which the upper band passes, a sheet of glass in the top of the casing, spring means for forcing the carriage and drawer towards the front of the casing, a stop for arresting the travel of the carriage, means for locking the drawer in its closed position, a roller pivoted in the carriage, the end of the lower paper band being secured to the said roller, a toothed wheel secured to a pivot pin of the roller, a rack fixed to the side of the casing and with which the toothed wheel meshes, a disk secured to the toothed wheel, a spring operated pawl pivoted to the disk, a sleeve upon the pivot pin, a ratchet wheel integral with the sleeve, a friction spring secured to the sleeve and in compression between the roller and the cheek of the carriage, substantially as described.

3. Apparatus for the purpose indicated comprising in combination a casing, a carriage and drawer slidable in the lower part of the casing, frames pivoted in the casing means for attaching the frame to the top of the casing, a drum having upper and lower bands of paper coiled thereon, pivot pins pivoting the drum, in the frames, a ratchet wheel fixed to a pivot pin of the drum, a pawl normally engaging the ratchet wheel, means for operating the pawl when the drawer is opened, guide rollers around which the paper bands travel, a support for the bands beneath an aperture provided in the top of the casing, a strip of carbon material interposed between the bands of paper, a hood having a knife edge immediately above a slot provided in the top of the casing and through which the upper band passes, a sheet of glass in the top of the casing, and means for forcing the carriage and drawer towards the front of the casing comprising a spiral spring secured at one end to the back of the casing a cord secured to the other end of the spring, a grooved pulley pivoted near the front of the casing and around which the cord passes, a stud secured to the cheeks of the carriage and to which the cord is attached, substantially as described.

4. In an apparatus for the purpose indicated in combination with a casing and a drum pivoted in the casing and having upper and lower bands of paper coiled thereon, and a drawer in the lower part of the casing, and a drum pivoted in the lower part of the casing and to which the lower band of paper is attached, of means for locking the drawer in its closed position, comprising a plurality of keys passing through slots in the front of the casing and pivoted to the said front, shouldered bolts having necks of narrow section and stems provided with slots through which the inner ends of the keys pass, upper and lower brackets secured to the inside of the casing and supporting the said bolt, a spiral spring located upon the said stem and in compression between the shoulder of the bolt and the upper bracket, a plate attached to the front of the drawer and provided with holes and slots through its front edge into the said holes, bosses upon the top of the plate and surrounding some of the holes, and bosses on the bottom of the plate surrounding some other of the holes, substantially as described.

5. In apparatus for the purpose indicated in combination with a casing, and a drum pivoted in the casing and having upper and lower bands of paper coiled thereon and a drum pivoted in the lower part of the casing and to which the lower band of paper is attached of a strip of carbon material passed between upper and lower bands of paper, rollers to which the carbon material is fastened, brackets secured to the frame of the apparatus and in which the rollers are journaled, milled heads for operating the rollers, springs located upon the rollers and in compression between the milled head thereof and the adjacent brackets and a plate secured to the top of the apparatus and passed below the paper bands for supporting said bands while being written upon substantially as described.

[Claims 6 to 10 not printed in the Gazette.]

884,628. SHOE-FASTENER. JOHN P. WAKEFIELD, Winthrop, Mass., assignor of one-half to George B. Lombard, Boston, Mass. Filed July 13, 1904. Serial No. 216,313.



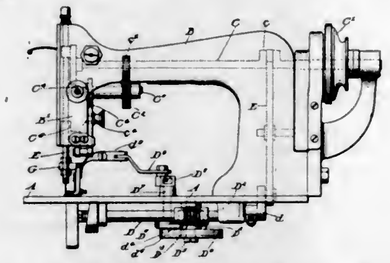
1. The shoe fastener above described comprising a flexible metallic strip having teeth projecting therefrom and integral therewith and constructed from the edge thereof, the line of connection between each tooth and said strip being at substantially right angles to the length of the strip whereby a light flexible fastener is formed comprised of teeth arranged to yield as the sole bends upon lines at right angles to the junction between said strip and said teeth, as described.

2. The shoe fastener above described comprising a flexible, metallic strip having a plurality of teeth cut from the edge thereof and projecting from said edge at right angles to the surface of the strip, the line of junction between each tooth and said strip being substantially at right angles to the edge of the strip, and certain of said teeth projecting from the upper surface of the said strip, the rest of the teeth projecting from the under surface as set forth.

3. The shoe fastener above described comprising a flexible strip of metal having a plurality of teeth projecting from its edge at right angles to its surface, the line of junction between each tooth and said strip being substantially at right angles to the length of the strip.

884,629. SEWING-MACHINE. LAFAYETTE A. WILKINSON and JULIUS C. GOODWIN, Philadelphia, Pa. Filed Aug. 13, 1906. Serial No. 330,300.

1. A hook sewing attachment for sewing machines, comprising a supporting plate fashioned to receive a hook, a lever adapted to hold the hook in position, a mechanism for reciprocating the supporting plate to direct the stitching from one to the other of the loops of the hook, a mechanism for changing the position of the supporting plate to direct the stitching from the loops of the hook to the shank of the same and a cast off finger carried by the supporting plate and located in such a position with respect to the upturned end of the hook as to deflect the thread around the same when forming stitches upon the shank.



2. A hook sewing attachment for sewing machines, comprising a supporting plate the bottom of which is recessed to receive a hook, a lever fulcrumed to the supporting plate and adapted to hold the hook in position, means for reciprocating the supporting plate while forming stitches between the eyes of the hook, means for changing the position of the supporting plate to direct the stitching from the loops of the hook to the shank of the same and a second lever fulcrumed to the supporting plate and provided with a cast off finger adapted to rest upon the upturned end of the hook and to guide the thread around the same when forming stitches upon the shank.

3. A hook sewing attachment for sewing machines, comprising a supporting-plate formed to receive a hook, a lever fulcrumed to the supporting plate and adapted to clamp the hook against side displacement and a second lever fulcrumed to the supporting-plate and provided with a finger adapted to rest upon the upturned end of the hook and to guide the thread around the same when forming stitches upon the shank of the hook.

4. A hook sewing attachment for sewing machines, comprising a supporting plate having a foot fashioned to receive a hook, a spring-pressed lever fulcrumed to the supporting-plate and having at its lower most end a projection adapted to clamp the side of the hook and a second spring pressed lever fulcrumed to the supporting plate and having a finger adapted to rest upon the upturned end of the hook for the purpose specified.

5. A device of the character specified comprising a supporting-plate, a mechanism for operating the same, a foot formed upon the lower most part of the supporting plate to receive a hook, a lug formed upon the back of the supporting plate provided with a screw forming an adjustable back stop for the hook, a lever fulcrumed to the supporting frame and having a depending portion forming a side clamp for the hook and a second lever fulcrumed to the supporting-plate and provided with a cast off finger adapted to rest upon the upturned end of the hook for the purpose specified.

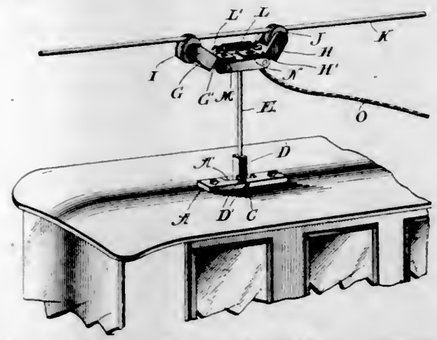
[Claims 6 to 11 not printed in the Gazette.]

884,630. TROLLEY POLE AND HEAD. AUGUST F. BAUER, Philadelphia, Pa. Filed Nov. 27, 1907. Serial No. 404,012.

1. A trolley head provided with pivoted spring actuated harps carrying wheels and means for adjusting said harps independently.

2. A trolley head provided with spring actuated harps carrying wheels and members adjustably mounted on said head adapted to engage said harps.

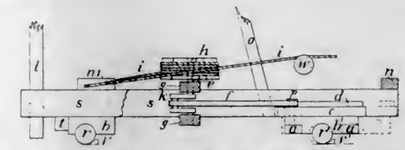
3. A trolley head provided with bifurcated ends, harps pivotally mounted between said ends provided with trolley wheels, a coil spring connecting said harps and plates adjustably mounted on said head adapted to engage said harps.



4. In a device of the class described, the combination with a plate adapted to be secured to the top of a car, of a block pivotally connected to said plate provided with beveled bearing surfaces adapted to engage said plate, a pole carried by said block, a head pivotally mounted on said pole, harps pivotally mounted on said head connected together by a spring and plates mounted on said head adapted to engage said harps.

5. In a device of the class described, the combination with a pivotally mounted head, of harps pivotally mounted on said head carrying wheels, hooks secured to said harps coil springs connecting said hooks, screws mounted in the top of said head and slotted plates arranged on said screws adapted to engage said harps whereby the upward movement of said harps can be regulated.

884,631. PILE-DRIVING MACHINE. RAYMOND F. BENNETT, Portland, Me. Filed Dec. 13, 1906. Serial No. 347,590.



1. In a pile driver or other like machine, the combination of a pair of supporting rollers journaled to the machine and means for reciprocating one of said rollers from and toward the other.

2. In a pile driver or other like machine, the combination of a horizontally reciprocating cross head frame, a pair of supporting rollers journaled in the machine, one of said rollers being journaled in said cross head frame.

3. A pile-driver having a pair of supporting rollers on which the pile-driver rests, the pile-driver being journaled to said rollers and adapted to slide longitudinally thereon and means for reciprocating one of said rollers from and toward the other.

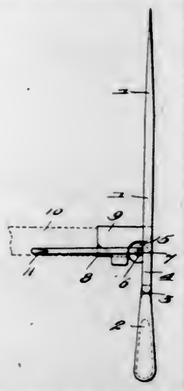
4. In a pile driver or other like machine, the combination of a horizontally reciprocating cross head frame, a pair of supporting rollers journaled in the machine, one of said rollers being journaled in said cross head frame, a crank shaft and connecting rod for reciprocating said cross head frame and a reel fixed to said shaft.

5. In a pile driver or other like machine, the combination of a horizontally reciprocating cross head frame, a pair of supporting rollers one of which is journaled in said cross head frame, a crank shaft and connecting rod for reciprocating said cross head frame and means for revolving said shaft.

884,632. MINER'S CANDLESTICK. JAMES R. BLAKE, Bisbee, Ariz. Filed Dec. 13, 1907. Serial No. 406,264.

1. A candlestick comprising an impaling iron, a handle and spring integral therewith, a bearing in said spring, a

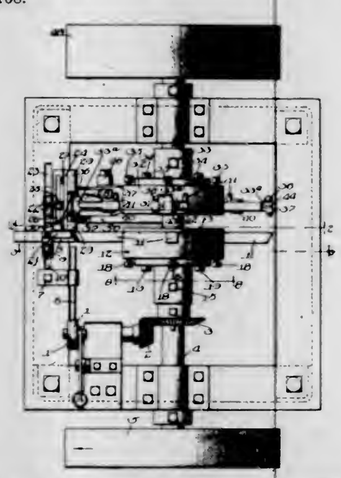
suspending hook, a candle-holder and a shank connecting said hook and holder and rotatable in said bearing.



2. A candlestick comprising an impaling iron, a handle, a spring, a suspending hook, a candle-holder, a shank connecting said hook and holder and inclined towards each of them and having a bearing in said spring to permit said hook to be folded into said handle.

3. A candlestick comprising an impaling iron, a handle integral therewith and turned up thereunder so that its end is adapted to form a spring, a suspending hook, a candle-holder, a shank connecting said hook and holder, a bearing in said spring for said shank and means permitting said shank to turn in said bearing whereby the hook may be folded into the handle and the holder substantially parallel therewith.

884,633. WIRE SHAPING AND FORMING MACHINE. HERBERT J. BRAGDON, Chicago, Ill., assignor to George Heinlein, Chicago, Ill. Filed June 21, 1907. Serial No. 380,168.



1. In a machine for shaping wire, the combination of mechanism for feeding the wire, mechanism for cutting the wire, and mechanism for shaping the wire consisting of one or more rotating forming plungers and a forming die through which said plunger carries or said plungers carry the wire, substantially as described.

2. In a machine for shaping wire, the combination of mechanism for feeding the wire, mechanism for cutting the wire, and mechanism for shaping the wire consisting of one or more rotating forming plungers, a forming die through which said plunger carries or said plungers carry the wire, and mechanism for ejecting the completed article, substantially as described.

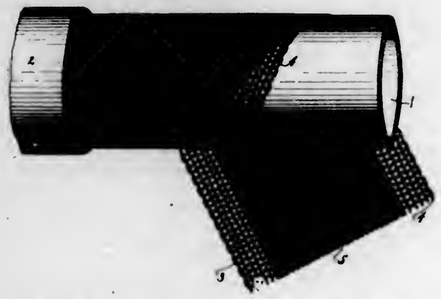
3. In a machine for shaping wire, the combination of mechanism for feeding the wire, mechanism for cutting the wire and mechanism for shaping the wire consisting of one or more rotating forming plungers, adjustable vertically, and a forming die through which said plunger carries or said plungers carry the wire, substantially as described.

4. In a machine for shaping wire, the combination of mechanism for feeding the wire, mechanism for cutting the wire, mechanism for shaping the wire consisting of one or more rotating forming plungers, adjustable vertically, and a forming die through which said plunger carries or said plungers carry the wire, and mechanism for rejecting the completed article, substantially as described.

5. In a machine for shaping wire, the combination of mechanism for feeding the wire, mechanism for cutting the wire, and mechanism for shaping the wire consisting of one or more rotating forming plungers which are adapted for both vertical and rotary adjustment, and a forming die through which said plunger carries or said plungers carry the wire, substantially as described.

[Claims 6 to 30 not printed in the Gazette.]

884,634. HOSE. HENRY T. BRAGG, Yonkers, N. Y. Filed Feb. 15, 1906. Serial No. 301,143.



1. A hose having a wrapping strip composed entirely of fabric incorporated therein comprising a thicker intermediate portion and thinner side portions, the side portions being overlapped to conform in thickness to the thicker intermediate portion, thereby forming a continuous wrapper of substantially the same thickness throughout.

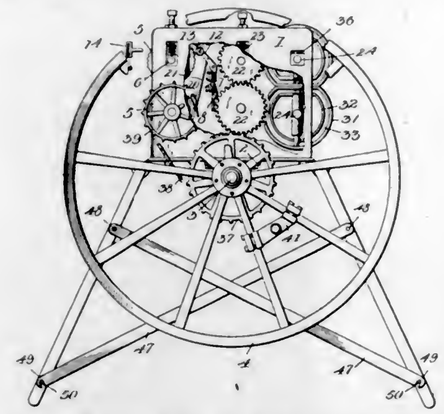
2. A hose having a wrapping strip of knitted fabric incorporated therein comprising a closely knitted intermediate portion and loosely knitted side portions, the side portions being overlapped to conform in thickness to the thicker intermediate portion thereby forming a continuous wrapper of substantially the same thickness throughout.

3. A hose having a wrapping strip of flat knitted fabric comprising a closely knitted intermediate portion and loosely knitted side portions, the side portions being overlapped to conform in thickness to the thicker intermediate portion thereby forming a continuous wrapper of substantially the same thickness throughout.

884,635. FIBER-SEPARATING MACHINE. HENRY E. BRYANT, Pawtucket, R. I. Filed Jan. 14, 1907. Serial No. 352,237.

1. A machine of the type set forth comprising crushing rollers, a scraping mechanism including a stationary knife carrying beam and a pivotally mounted knife carrying beam arranged in parallelism to said first named beam, a pivoted shelf interposed between said rollers and said scraping mechanism, a connection between said shelf and said pivoted beam, and means for moving said pivoted beam.

2. In a fiber separating machine, a frame, fiber separating apparatus carried thereby, traction wheels carried by said frame, gearing interposed between one of said wheels and said apparatus, pivoted legs at the ends of said frame, brace rods pivoted to said legs and designed in one position thereof to engage the adjacent leg, and brackets carried by said frame, said brace rods being designed in another position to support said legs from the ground and engage said brackets.



3. A machine of the type set forth comprising crushing rollers, a scraping mechanism embodying a stationary knife carrying beam and a pivotally mounted knife carrying beam, means for raising and lowering said pivoted beam with respect to said stationary beam, and means relatively fixed at one end to aline with the crushing rollers and at their free ends being movable to be raised during the raising of said pivoted beam to guide the material being treated to said scraping mechanism and lowered during the lowering of said pivoted beam.

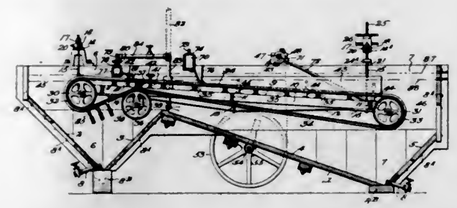
4. In a fiber separating machine, the combination with crushing rollers, of scraping mechanism disposed in juxtaposition thereto and embodying a part capable of raising and lowering movement, and means to bridge the space between said rollers and scraping mechanism to guide the material treated from said crushing rollers to said scraping rollers, said guiding means being raised during the raising of said movable part and when raised alining with the space between said rollers and that between the knives of the scraping mechanism and being lowered during the lowering of said movable part.

5. In a fiber treating machine, the combination with the crushing rollers, of scraping mechanism disposed adjacent thereto and embodying co-acting parts one of which is movable towards and away from the other to thereby occupy operative and inoperative positions respectively, and means to guide the material being treated from said crushing rollers to said scraping mechanism, said guiding means being in inoperative position when said scraping mechanism is in inoperative position, and being in operative position, when the scraping mechanism is in operative position and when in operative position alining with the space between said rollers and that between the knives of the scraping mechanism.

[Claims 6 to 11 not printed in the Gazette.]

884,636. SUBMERGED ORE-CONCENTRATOR. CHARLES L. BUCKINGHAM, Denver, Colo., assignor of one-half to Robert B. McCouney, Denver, Colo. Filed Feb. 25, 1907. Serial No. 359,209.

1. A submerged concentrator, comprising a tank adapted to contain a body of water, an inclined endless traveling belt concentrator suspended in said tank, means for adjustably raising and lowering said belt, an adjustable speed driving mechanism operatively connected to said endless belt concentrator and arranged to feed it continuously towards its highest or head end in said tank, a reciprocating movement mechanism connected to said concentrator and arranged to impart a rapid reciprocative vibratory movement to said concentrator, means for feeding ore pulp to said concentrator, splash boards on opposite sides of said belt adapted to confine the feeding ore to said belt, means for feeding clean water to said concentrator, and means for regulating the height of said body of water to wholly or partially cover said concentrator.



2. In a submerged concentrator the combination of the tank adapted to contain a body of water, standards pivotally connected at their lower ends to the opposite sides of said tank, having slots extending transversely of their length and positioned intermediate of their ends, hand operating screws arranged to extend through said slots and adjustably clamp said standards to the sides of said tank, and means including threaded rods connected to said standards for supporting an operative ore treating concentrator in said tank.

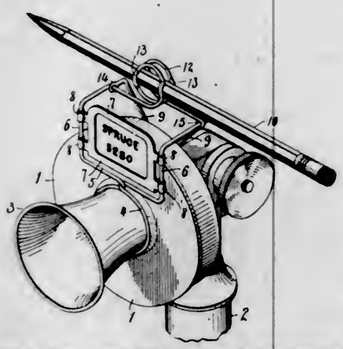
3. In a submerged concentrator the combination with the tank adapted to contain a body of water, an operative ore treating concentrator submerged in the water of said tank, the side standards arranged to be pivotally moved to adjust said concentrator and provided with the threaded rods, the hand wheel nuts on said rods, with the beams extending across said tank adjacent to its opposite ends, one of which is slidably supported on said threaded rods by said hand wheel nuts, and provided with guides connected with said standards, rods depending from said beams into said tank and connected to the ends of said concentrator.

4. In a submerged concentrator the combination of the tank adapted to contain a body of water and with vertically arranged pivotally adjustable standards having vertically projecting threaded rods provided with hand wheel nuts, of beams extending across the end portions of said tank above it one of which is slidably supported on said threaded rods between said hand wheel nuts, a pair of rods depending from the opposite side portions of said beams into said tank, an operative endless traveling belt concentrator connected to the lower ends of said rods to swing reciprocally thereon, and immersed either wholly or partially in said body of water in said tank, and means connected to said tank for feeding said belt and for imparting a reciprocative vibratory motion to said concentrator.

5. In a submerged concentrator, the combination of a tank adapted to contain a body of water or watery fluid, a suitable concentrating surface suspended in said tank, means including a hopper for feeding ore pulp under the surface of the fluid and directly onto the concentrating surface, splash boards to confine the ore pulp to the concentrating surface, means for reciprocating the concentrating surface and stratifying the pulp, two separated hoppers arranged in said tank below said concentrating surface, means for conducting the mineral portion of the pulp to one hopper and the waste portion to the other hopper, means for drawing the concentrated mineral particles from one hopper, means for drawing the waste pulp from the other hopper, and means for producing a flow of water under pressure in the main body of water away from the concentrates hopper towards the waste pulp hopper, for moving the material in suspension in the water in said tank.

[Claims 6 to 9 not printed in the Gazette.]

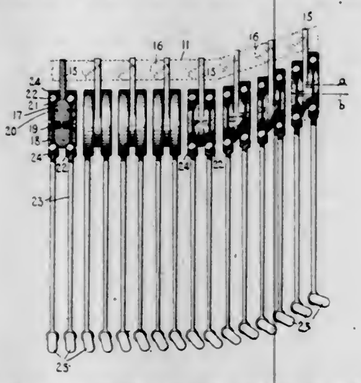
884,637. TELEPHONE ATTACHMENT. WILLIAM W. BYTHINER, Philadelphia, Pa. Filed Sept. 5, 1907. Serial No. 391,433.



1. In an attachment for telephones, the combination of a wire having a circular portion adapted to encircle the transmitter of a telephone, a spring portion formed of said wire to engage the back of the telephone instrument to hold said attachment in place, vertical members formed in said wire above said eye, a number plate and means for attaching said number plate to said vertical members.

2. In an attachment for telephones, the combination of a wire having a circular portion adapted to encircle the transmitter of a telephone, a spring portion formed of said wire to engage the back of the telephone instrument, a double coil formed in said wire adapted to hold a pencil or the like, vertical members formed in said wire and a number plate adapted to be secured between said vertical members.

884,638. TYPE-WRITING MACHINE. HERBERT A. CARHART, Syracuse, N. Y., assignor to Alexander T. Brown, Syracuse, N. Y. Filed Aug. 29, 1907. Serial No. 390,601.



1. In a typewriting machine, the combination of a type bar hanger and two type bars one pivoted on each side of said hanger, the pivot for one type bar being off-set with relation to the pivot of the other type bar.

2. In a typewriting machine, the combination of a type bar hanger having on each side thereof a boss which constitutes one part of a ball bearing, and two type bars, one pivoted to each side of said hanger by said ball bearing, the pivotal center of one of said bearings being off-set with relation to that of the other.

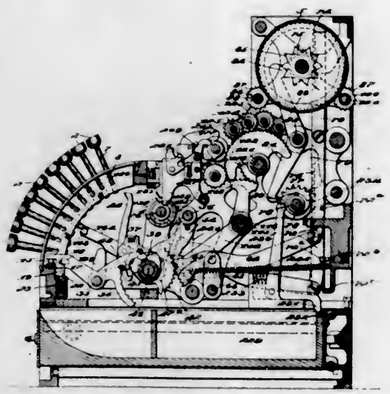
3. In a front strike typewriting machine, the combination of a type bar segment, a series of type bar hangers mounted on said segment, and a series of type bars pivoted to said hangers, the type bars near the ends of the segment being pivoted progressively nearer to the rear of the machine, each of said hangers having a plurality of type bars pivoted thereto, and each of the hangers near the ends of the segment having the type bars pivoted thereto at different distances from the rear of the machine.

4. In a front strike typewriting machine, the combination of a series of front strike pivoted type bars, a segment in front of the pivots of said type bars and having a type rest on its upper edge, sub-levers pivoted to the front of said segment, links connecting said sub-levers with said type bars and passing through said segment, and keys for actuating said sub-levers.

5. In a typewriting machine, the combination of a series of segmentally arranged type bars, a series of individual hangers, a plurality of type bars being mounted on each hanger, the construction and arrangement of the parts and the connection of type bars to the hangers being such that the types are arranged in a skewed arc when in normal position.

[Claims 6 to 9 not printed in the Gazette.]

884,639. CASH-REGISTER. THOMAS CARNEY, Dayton, Ohio, assignor, by mesne assignments, to The National Cash Register Company, Dayton, Ohio, a Corporation of Ohio, (incorporated in 1906.) Filed Apr. 17, 1899. Serial No. 713,340.



1. In a cash register, the combination with a series of keys of a driving member arranged to make a definite and constant excursion at each operation of the machine, a driven member arranged to be immediately coupled to the said driving member upon the operation of any one of said keys, counter operating devices arranged to be actuated from the driven member, a counter alternately connected with and disconnected from said operating devices, and means, when the machine is operated, for moving the driven member forward during the first half of the stroke of the driving member and until it is uncoupled from the driving member by the operated key.

2. In a cash register, the combination with a crank or other actuating means, of a driving member which is given a constant excursion at each operation of the machine; a driven member normally uncoupled from the driving member; manipulative means for coupling the driving and driven members together so that the driven member will first move with the driving member during the initial movement of the latter, said manipulative means then effecting the uncoupling of the driving and driven members at different points in their forward stroke; and means for again coupling the driving and driven members during the same operation of the machine and whereby the driven member is returned to normal position.

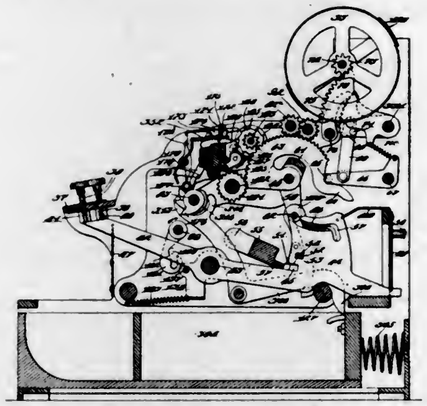
3. In a cash register, the combination with the counter, an indicator and a crank, of a driving member arranged to be given a constant and definite excursion by the actuating means at each operation of the machine, a driven member, a series of keys arranged to uncouple said members operating means for the indicator and means for connecting said indicator operating means with and disconnecting it from the driven member.

4. In a cash register, the combination with a counter, of a series of keys, an indicator, a driving member, a driven member arranged to be coupled with and uncoupled from the driving member, indicator operating mechanism arranged to be coupled to the driven member and means for disconnecting said mechanism from the driven member to allow the indicator to move independently of the same.

5. In a cash register, the combination with the counter, the indicator, a series of keys and an actuating means, of a driving member, a driven member arranged to be moved by the driving member, indicator operating means arranged to be engaged with the driven member after the indicator has been returned to zero position, means for turning the indicator to zero counter actuating means in constant engagement with the driven member, and means for alternately establishing and disconnecting an operative relation between the counter and the said counter operating means.

[Claims 6 to 116 not printed in the Gazette.]

884,640. CASH-REGISTER. THOMAS CARNEY, Dayton, Ohio, assignor, by mesne assignments, to The National Cash Register Company, Dayton, Ohio, a Corporation of Ohio, (incorporated in 1906.) Filed July 6, 1901. Serial No. 67,306.



1. In a cash register, the combination with a series of counter operating racks, of a counter coöperating therewith, cams carried by the racks, indicators and connecting mechanism operated by said cams, and means operating independently of the racks for preventing retrograde movement of the indicators at all times after their initial movements and irrespective of the return of the racks.

2. In a cash register, the combination with a series of operating racks formed with cam extensions, of a counter coöperating with said racks, a series of rotary indicators, means operated by the cam extensions for setting the indicators, and devices operating independently of the cam extensions for preventing retrograde movement of the indicators at all times after their initial movements and irrespective of the return of the cam extensions.

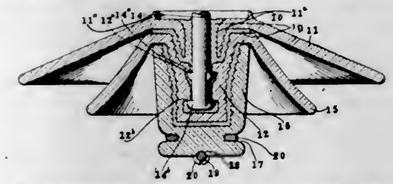
3. In a cash register, the combination with a series of operating racks, of a counter coöperating therewith, a series of rotary indicators, a series of spring-drawn elements for operating said indicators, means connecting the racks and the spring-drawn elements for imparting movement to the latter, means operating independently of the racks for preventing retrograde movement of the indicators at all times after their initial movements and irrespective of the return of the racks.

4. In a cash register the combination with a series of operating racks of a counter coöperating therewith, a series of rotary indicators, spring-drawn operating members for said indicators, means connecting the racks and spring-drawn members for moving the latter according to the movements of the racks and at the same time increasing the tensions of the springs by both the movements of the members and the connecting means.

5. In a cash register the combination with suitable operating mechanism of a series of rotary indicators, arranged to be moved according to the movements of the operating mechanism, spring devices for retarding the movements of the indicators under the influence of the operating devices, and means for increasing the tensions of the springs at a ratio greater than that determined by the movement of the indicators alone.

[Claims 6 to 65 not printed in the Gazette.]

884,641. HANGING INSULATOR. WALTER G. CLARK, New York, N. Y. Filed Oct. 6, 1906. Serial No. 337,816.



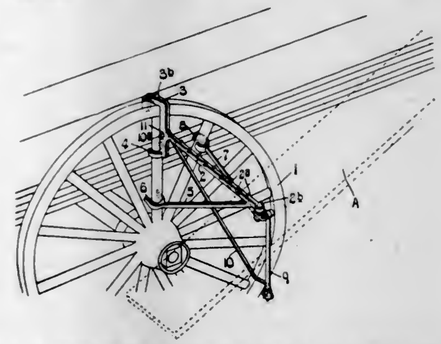
1. A hanging insulator comprising an inner shell adapted to receive a hanger and merging into an outer spreading petticoat, a second shell receiving the lower end of the hanger and fitting over the inner shell, the second shell merging into a second inner petticoat, and a body portion fitting on over the second shell and having a wire receiving means at its lower end.

2. A hanging insulator comprising an inner shell adapted to receive a hanger, said shell merging into an outer spreading petticoat, a second shell fitting on over the inner shell and merging into a second petticoat lying inside the first one at a different angle, and a central body portion fitting on over the second shell and having means at its lower end to support a wire.

3. A hanging insulator comprising a series of shells nesting one within the other and adapted to be supported on a hanger, the shells being separated from each other by cement and merging at their upper parts into downwardly spreading petticoats, and an inner body portion secured to the inner shell and adapted to carry a wire at its lower end.

4. A hanging insulator comprising spreading petticoats of different pitch arranged one within the other, said petticoats merging into central shell or hub portions, a hanger to support said shell or hub portions, an inner body portion having means for supporting a wire at its lower end, and layers of cement separating the several aforesaid parts.

884,642. LUMBER-LOADING DEVICE. RAYMOND E. COAD, Omaha, Nebr. Filed Oct. 2, 1907. Serial No. 395,640.



1. A device of the character described, comprising a fulcrum member provided with means for engaging the rim

and a spoke of a vehicle wheel, and a part connected to said member and provided with a jaw for engaging a different spoke of said wheel to retain said member in position; substantially as described.

2. A device of the character described, comprising a fulcrum member provided at its inner end with a hook for engaging the rim of a wheel, a jaw for engaging one of the spokes of said wheel, an inclined brace provided at its inner end with a jaw for engaging said spoke, and a guide rod pivotally connected to the outer end of said member and provided at its inner end with a jaw which engages a different spoke of said wheel; substantially as described.

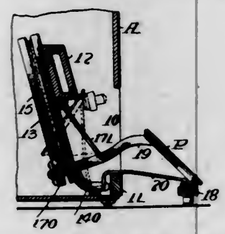
3. A device of the character described, comprising a bar having a serrated edge and provided at its inner end with a hook which passes over the rim of a wheel and also a jaw arranged in alinement with said hook for engaging one of the spokes of said wheel, an inclined brace connected to said bar and provided with means for engaging said spoke, and means for preventing said bar from moving sidewise; substantially as described.

4. A device of the character described, comprising a fulcrum member provided at its inner end with means for engaging the rim, and one of the spokes of a vehicle wheel, and a guide rod pivotally connected to said member and provided at its inner end with a swiveled jaw for engaging a different spoke of said wheel; substantially as described.

5. A device of the character described, comprising a fulcrum member which is adapted to be detachably connected to a vehicle wheel, a standard pivotally connected to the outer end of said member to form an auxiliary fulcrum member, and means for holding said standard in operative position; substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

884,643. FOLDING PEDAL. THOMAS DANQUARD, New York, N. Y., assignor to Autopiano Company, New York, N. Y., a Corporation of New York. Continuation of application Serial No. 274,920, filed Aug. 19, 1905. This application filed Apr. 22, 1907. Serial No. 369,517.



1. The combination of a case for a music playing device having a lower rail, a support, pedals connected with said support, pitmen pivoted to the pedals to operate connections inside the case, and braces connected with said support and pivoted inside the case at points below the pivots of the pitmen and below the top of the lower rail, said braces being so formed as to extend partly around the lower rail when the pedals are in operative position.

2. The combination with a case for a musical instrument having a lower rail, of a support, pedals pivoted to the support, pitmen pivoted to said pedals, operating connections inside the case to which said pitmen are pivoted, braces connected to said support and pivoted inside the case, said braces being bent so as to extend partly around the lower rail when the pedals are in operative position and to fold into the case when the pedals are folded into inoperative position.

3. The combination with a case having a lower rail a wind box arranged therein, bellows secured to said wind box, a support, pedals pivoted to the support; pitmen pivoted to said pedals, operating connections extending from said bellows and pivoted to the pitmen, and braces connected with said support and pivoted inside the case behind said lower rail and near the bottom thereof.

4. The combination with a case for a musical instrument having a lower rail, of brackets at the bottom of the case and extending substantially to the rear of the rail and below its top, a movable member connected with said brackets, links connected with the movable member, pedals connected with the links, and braces pivoted to the forward ends of the brackets and pivotally connected with the pedals, said braces extending over the lower rail.

5. The combination with a case having a lower rail, of a wind box arranged therein, bellows secured to said wind box, a support, pedals pivoted thereto, pitmen pivoted to said pedals, operating connections extending from said bellows and pivoted to the pitmen, and braces connected to said support and pivoted inside the case behind said lower rail and near the bottom thereof, said operating connections comprising links pivoted to the movable leaves of the bellows and swinging links for supporting the fore ends of the first named links and having inwardly turned ends to which said links are pivoted.

[Claim 6 not printed in the Gazette.]

884,644. SYSTEM FOR ELECTRIC RAILWAYS. ARTHUR C. EASTWOOD, Cleveland, Ohio. Filed Oct. 25, 1906, Serial No. 340,469. Renewed Sept. 16, 1907. Serial No. 393,118.



1. In an electrically operated railway the combination of a train of cars, propelling motors and controlling devices therefor on certain of the cars of said train, a controlling switch on one of said cars, a stationary conductor along the roadway and contacts whereby said controlling devices may be operatively connected to said controlling switch through said stationary conductor.

2. In an electric railway the combination of a plurality of cars, a motor and controller therefor on one of said cars, a switch on another of said cars, and means for causing said controller to operate in response to the operation of said switch, said means including a stationary conductor and contacts carried by said cars and coöperating with said conductor.

3. In an electric railway the combination of a train of cars, certain of said cars having propelling motors and means for varying the speed, power and direction of rotation of said motors in unison from a single point on said train, said means including a controlling switch, a stationary conductor, and contacts carried by said train and adapted to connect said switch to the motor controlling means through said stationary conductor.

4. In an electric railway the combination of a train of cars, motors and controlling devices therefor on certain cars of said train, a control conductor along said railway and in connection with the said controlling devices and means for altering the difference of potential between said control conductor and the rails of said railway to cause operation of said controlling devices.

5. A system of control for traveling motors comprising controlling means for varying the speed, power and direction of rotation of said motors, a master switch for actuating said controlling means, and connected thereto through two stationary conductors, one of said stationary conductors being the rails upon which the motors travel.

[Claims 6 to 14 not printed in the Gazette.]

884,645. SYSTEM FOR ELECTRIC RAILWAYS. ARTHUR C. EASTWOOD, Cleveland, Ohio. Filed Feb. 2, 1907. Serial No. 355,396.



1. In a railway system, a train of cars, a source of electric current on one of said cars, electric translating devices on certain of said cars, and a stationary conductor along said railway for connecting said translating devices with said source of current.

2. In a railway system, a source of electric current traveling on said railway, a train of cars, electric translating devices on certain of said cars, a stationary conductor along said railway and connected by a traveling connection with said source of current and with the translating devices on said cars.

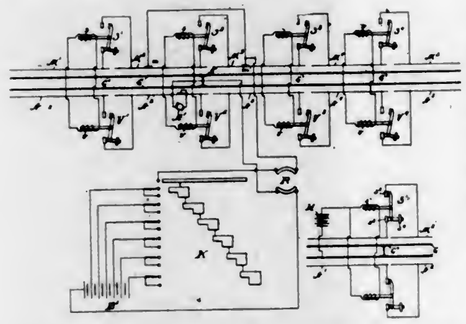
3. In a railway system, a train of cars, a source of electric current on one of said cars, electric translating devices on certain of said cars, and a stationary sectional conductor along said railway for connecting said translating devices with said source of current.

4. In a railway system, a source of electric current traveling on said railway, a train of cars, electric translating devices on certain of said cars, a stationary sectional conductor along said railway and connected by a traveling connection with said source of current and with the translating devices on said cars.

5. In a railway system, a train of cars, a source of electric power on said train, electric driving motors on certain of said cars, and a stationary power conductor along said railway, adapted to connect said electric driving motors with said traveling source of power.

[Claims 6 to 20 not printed in the Gazette.]

884,646. ELECTRIC RAILWAY. ARTHUR C. EASTWOOD, Cleveland, Ohio. Filed Feb. 23, 1907. Serial No. 358,779.



1. In an electric railway, a motor-propulsion circuit, a stationary control conductor along said railway, said control conductor being divided into insulated sections, and independent of said motor-propulsion circuit, normally open switches for connecting one section to the next, a train, and means controlled by the train while passing from one section to the next, for closing said switches.

2. In an electric railway, a motor-propulsion circuit, a stationary control conductor along said railway, said control conductor being divided into insulated sections, and independent of said motor-propulsion circuit, normally open switches for connecting one section to the next, a train, means controlled by the train while passing from one section to the next, for closing said switches, and means for automatically disconnecting said sections when the train has passed from one section to the next.

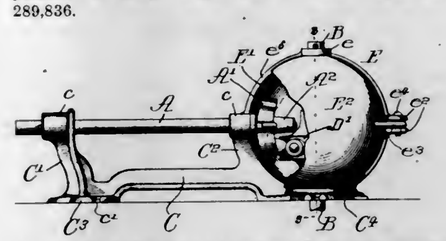
3. In an electric railway, a stationary power conductor along said railway, said power conductor being divided into insulated sections, normally open switches for connecting one section to the next, a train, and means including an electric circuit controlled by the train while passing from one section to the next, for closing said switches.

4. In an electric railway, a stationary power conductor along said railway, said power conductor being divided into insulated sections, normally open switches for connecting one section to the next, a train, means including an electric circuit controlled by the train while passing from one section to the next, for closing said switches, and means for automatically disconnecting said sections when the train has passed from one section to the next.

5. In an electric railway, a stationary control conductor and a stationary power conductor along said railway, each conductor being independent of the other and divided into insulated sections, normally open switches for connecting the sections of the respective conductors, a train, electro-motive means carried by said train and electrically connected to said power conductor, and means actuated by the train while passing from one section to the next, for closing said switches.

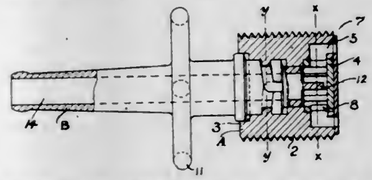
[Claims 6 to 10 not printed in the Gazette.]

884,647. CASING FOR MECHANICAL MOVEMENTS. JOHN EDENS, Davenport, Iowa, assignor to H. F. Brammer Manufacturing Company, Davenport, Iowa, a Corporation of Iowa. Filed Dec. 1, 1905. Serial No. 289,836.



A combined bearing frame and gear casing comprising a bearing frame provided with a horizontal bearing and provided at its inner end with vertically alined bearings, said inner end of the frame being formed to provide one member of the casing and arranged at its lower side for fixed connection with a part upon which the bearing frame and casing are supported, the other member of the casing comprising a swinging part which is hinged to the frame and meets the casing member integral with the frame in the approximate plane of the axes of the horizontal and vertical bearings, and means for locking the swinging member in its closed position.

884,648. FAUCET. MAGNUS P. ELGIN, St. Paul, Minn., assignor of one-half to Knudt Amundsen and one-fourth to John P. Nelson, St. Paul, Minn. Filed Apr. 16, 1906. Serial No. 311,929.

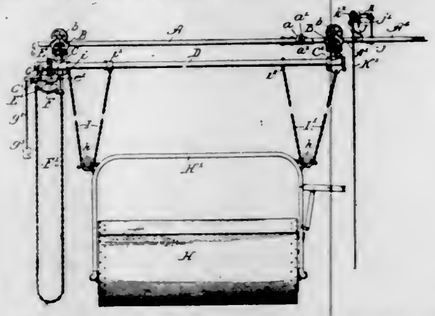


A faucet of the class described comprising a plug provided with a central passage, a cup valve rotatably supported in the inner end of said passage, said cup valve being formed with side ports connecting with ports extending through the adjacent end of said plug, a spout member removably threaded in said passage, and a rib upon the inner end of said spout member extending centrally into said cup valve and having play therein, for the purpose set forth.

884,649. FEED AND LITTER CARRIER. HENRY L. FERRIS, Harvard, Ill., assignor to Hunt, Helm, Ferris & Company, a Corporation of Illinois. Filed Mar. 18, 1907. Serial No. 362,990.

1. The combination with a main track, hangers running upon said track and a container carried by said hangers, of a pivoted switch track, cord guides adjacent to the free ends of such switch track, a cord passing over said cord guides and having engagement with the free

end of said switch track and engaging means on the switch-track to coöperate with the terminal tracks to aline the switch-track therewith.



2. The combination with a main track, hangers running upon said main track and a container carried by said hangers, of terminal tracks, a switch track pivoted to the end of said main track, and capable of a limited vertical movement about its pivot, cord guides adjacent to the free end of such switch track and above the same, cords passing over said guides and having engagement with said switch track below said guides, and engaging means on said switch track to coöperate with said terminal tracks.

3. The combination with a main track, hangers running thereon and a container carried by said hangers, of terminal tracks, a pivoted switch track secured to the end of said main track and capable of a slight vertical oscillation about its pivot in addition to a horizontal movement, a latch on the end of said switch track having a point adapted to engage the terminal tracks, cord guides adjacent to and above the end of said switch track, and cords passing over said guides and engaging said switch track below said guides.

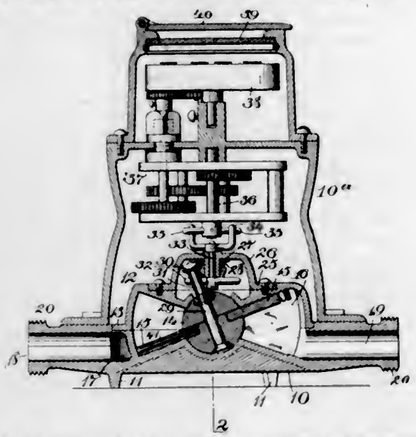
4. The combination with a main track, hangers running upon said main track and a container carried by said hangers, of terminal tracks, a switch track pivoted to the end of said main track and capable of horizontal oscillation about its pivot and a limited vertical oscillation, a latch on the end of said switch track, a hook on said latch, a segment having notches for engagement with said hook, cord guides adjacent to the free end of said switch and above the same, and cords passing through said cord guides and having engagement with said latch below said guides.

5. The combination with a main track, hangers running upon said track and a container carried by said hangers, of terminal tracks, a switch track pivoted to the end of the main track and capable of horizontal oscillation about its pivot and a limited vertical oscillation, a latch on the end of said switch track having a point to engage with the terminal tracks, a hook on said latch, a segment having notches to engage with said hook, cord guides adjacent to the end of said switch track and above the same and cords passing over said cord guides and having engagement with said latch below the level of said guides.

884,650. DISK WATER-METER. HENRY FREDAICK, Newark, N. J. Filed Dec. 22, 1906. Serial No. 349,015.

1. An improved water meter comprising a base portion having a cover thereon to form a disk chamber, the base portion being made of one piece and having an inlet port and an outlet port, one of the ports opening directly into the disk chamber, the base portion having a passage to conduct water from the other port to the disk chamber at a point adjacent to the first port, a partition in the disk chamber, a disk and its ball in the disk chamber, a casing on the top of the base portion, a registering mechanism therein, and an operative connection between the disk and the registering mechanism.

2. In an improved water meter, a base portion made of one piece and being formed in its center to receive a disk and its ball and thereby form the bottom portion of a disk chamber, the base portion having a port on one side leading directly to the disk chamber, and having a second port on the opposite side, the base portion having a passage arranged to connect the second port with the disk chamber at a point adjacent to the first port.



3. An improved water meter comprising a base portion having a central recess to receive a disk and its ball, the base portion having diametrically arranged inlet and outlet ports, the base portion also having a passage concentric to the recess connecting one of the ports to the disk chamber at a point adjacent to the other port, a cover on the base portion forming a disk chamber with the recess, a partition between the connections of the ports with the disk chamber, a disk and its ball in the disk chamber, a web projecting from the wall of the disk chamber at a point approximately opposite the partition, rollers secured to the disk, one riding against one side of the partition and the other on the opposite side of the web, a casing on the base portion, and a registering mechanism in the casing.

4. In a water meter, a base portion having a central recess, a cover to form a disk chamber with the recess, a disk in the chamber, a partition in the disk chamber, a web in the disk chamber opposite the partition, and rollers on the disk, one bearing on the partition and one on the web, on the side from which the current comes.

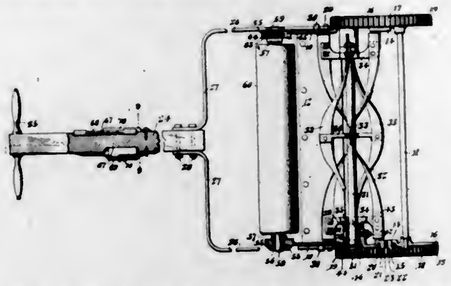
5. In a water meter, a base portion made of one piece and having a central recess to form a portion of a disk chamber, the base portion having a port passing from the exterior to the recess, the base portion also having a port diametrically opposite the first port and having a passage to connect the second port with the recess at a point adjacent to the first port, and a partition in the recess.

[Claim 6 not printed in the Gazette.]

884,651. LAWN-MOWER. JAMES H. FREY, Vincennes, Ind., assignor of one-half to Frank C. Hardacre, Vincennes, Ind. Filed Jan 10, 1907. Serial No. 351,659.

1. In a lawn mower, the combination with a frame having spaced side members, of wheels journaled on the outer sides of the side members, a handle having a pivotal connection with the outer sides of the side members in rear of the wheels and below their axis of rotation, and a revoluble cutter driven by the wheels and having its ends operating directly adjacent to the inner sides of said side members.

2. In a lawn mower, the combination with a frame having spaced side members, of narrow peripherally toothed driving wheels journaled on the outer sides of the side members, said wheels having their outer corners rounded and having peripheral teeth terminating short of the outer faces of said wheels, a handle including a bail having parallel side arms hinged at their lower ends to the outer sides of the frame members in rear of the wheels and below their axis of rotation, and a revoluble cutter located between the side members and driven by the wheels, said cutter having its ends operating directly adjacent to the inner sides of the side members.



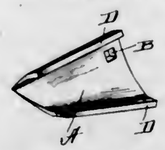
3. In a lawn mower, the combination with a frame having a boss and a notch in the inner end of said boss, of a driving wheel journaled on the frame, a split bushing located in the boss and having a flange at its inner end, said flange having a lug engaged in the notch of the boss, a set screw threaded through the boss and engaging the bushing, a rotatable cutter having a shaft journaled in the bushing and a hub that operates alongside the flange, and means mounted on the shaft outside the bushing and driven by the wheel for rotating the shaft.

4. In a lawn mower, the combination with a frame, of a driving wheel journaled on the frame, a shaft journaled in the frame, rotary cutter blades, means connecting the blades to the shaft, and a guard sleeve surrounding the shaft and being interposed between said blade connecting means and the inner sides of the frame, and extending across the space therebetween to prevent grass wrapping about the shaft, said sleeve being free from the shaft.

5. In a lawn mower, the combination with a frame having an inwardly extending boss, of a driving wheel journaled on the outer side of the frame, a bushing located in the boss and held against rotation, said bushing having a flange located at the inner end of the boss, a rotary cutter including a shaft journaled in the bushing, cutter blades surrounding the shaft, and a spider bracket securing the blades to the shaft and having a boss directly associated with the flange of the bushing, driving means connecting the driving wheel and the shaft, and a guard sleeve interposed between the boss, and spider bracket and surrounding the hub of said bracket and the flange of the bushing.

[Claims 6 and 7 not printed in the Gazette.]

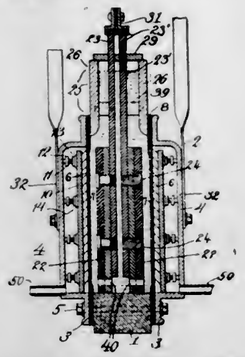
884,652. PLOW. THOMAS H. FULLER, Lafayette, Ala. Filed July 12, 1907. Serial No. 383,470.



A plow having converging wings upon the opposite longitudinal edges thereof, the surface of the plow intermediate said wings being concaved and its opposite face convexed, the forward end of the plow tapering to a point which is at one side of the longitudinal center of the plow, as set forth.

884,653. ELECTROLYTIC CELL. GEORGE A. GABRIEL, New York, N. Y., assignor to Bleach & Caustic Process Company, New York, N. Y., a Corporation of New York. Filed Nov. 23, 1906. Serial No. 344,674.

1. In an electrolytic cell, metallic plates forming the sides of said cell, said plates having offset or outwardly extending portions forming closed cathode chambers, the cathodes being situated over the recesses formed by said formed by said offset portions.



2. In an electrolytic cell, metallic plates forming the sides of said cell, said plates comprising rectangular marginal portions and offset central portions forming closed cathode chambers, the cathode and diaphragm of the cell being held by said rectangular portions over the recesses formed by said offset portions.

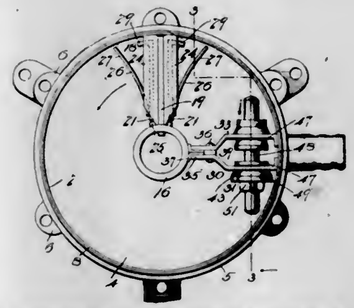
3. In an electrolytic cell, a U-shaped body forming the ends and bottom of the anode chamber, metallic plates forming the sides of said cell, said plates having offset or outwardly extending central portions forming the cathode chambers, and walls presenting inner faces of non-conducting material forming an upward extension of the sides of said anode chamber above said plates for increasing the hydrostatic pressure of the anolyte.

4. In an electrolytic cell, a U-shaped body forming the ends and bottom of the anode chamber, metallic plates forming the sides of said cell, said plates having offset or outwardly extending central portions forming the cathode chambers, walls presenting inner faces of non-conducting material forming an upward extension of the sides of said anode chamber above said plates for increasing the hydrostatic pressure of the anolyte, and ties or braces between the sides of said upward extension.

5. In an electrolytic cell, a U-shaped body forming the ends and bottom of the anode chamber, metallic plates forming the sides of such cell and the cathode chamber, slabs of a material inert to the electrolyte and forming an upward extension of the sides of the anode chamber above said plates, for increasing the hydrostatic pressure of the electrolyte.

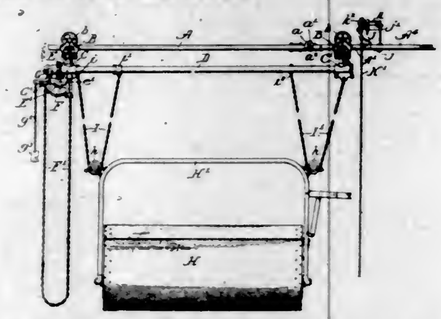
[Claims 6 to 20 not printed in the Gazette.]

884,654. HYDRAULIC MOTOR. RALPH B. GOODRICH, Cincinnati, Ohio. Filed Oct. 18, 1907. Serial No. 398,077.



1. An oscillating motor comprising a cylinder, a radially arranged interior valve cage, separate double acting inlet and outlet valves having stems projecting beyond both sides of the cage, an oscillating piston, and a valve actu-

end of said switch track and engaging means on the switch-track to coöperate with the terminal tracks to aline the switch-track therewith.



2. The combination with a main track, hangers running upon said main track and a container carried by said hangers, of terminal tracks, a switch track pivoted to the end of said main track, and capable of a limited vertical movement about its pivot, cord guides adjacent to the free end of such switch track and above the same, cords passing over said guides and having engagement with said switch track below said guides, and engaging means on said switch track to coöperate with said terminal tracks.

3. The combination with a main track, hangers running thereon and a container carried by said hangers, of terminal tracks, a pivoted switch track secured to the end of said main track and capable of a slight vertical oscillation about its pivot in addition to a horizontal movement, a latch on the end of said switch track having a point adapted to engage the terminal tracks, cord guides adjacent to and above the end of said switch track, and cords passing over said guides and engaging said switch track below said guides.

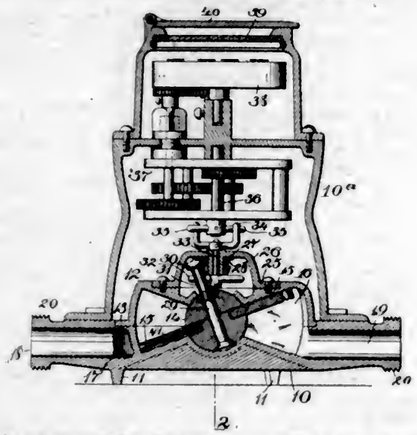
4. The combination with a main track, hangers running upon said main track and a container carried by said hangers, of terminal tracks, a switch track pivoted to the end of said main track and capable of horizontal oscillation about its pivot and a limited vertical oscillation, a latch on the end of said switch track, a hook on said latch, a segment having notches for engagement with said hook, cord guides adjacent to the free end of said switch and above the same, and cords passing through said cord guides and having engagement with said latch below said guides.

5. The combination with a main track, hangers running upon said track and a container carried by said hangers, of terminal tracks, a switch track pivoted to the end of the main track and capable of horizontal oscillation about its pivot and a limited vertical oscillation, a latch on the end of said switch track having a point to engage with the terminal tracks, a hook on said latch, a segment having notches to engage with said hook, cord guides adjacent to the end of said switch track and above the same and cords passing over said cord guides and having engagement with said latch below the level of said guides.

884,650. DISK WATER-METER. HENRY FREDRICK, Newark, N. J. Filed Dec. 22, 1906. Serial No. 349,015.

1. An improved water meter comprising a base portion having a cover thereon to form a disk chamber, the base portion being made of one piece and having an inlet port and an outlet port, one of the ports opening directly into the disk chamber, the base portion having a passage to conduct water from the other port to the disk chamber at a point adjacent to the first port, a partition in the disk chamber, a disk and its ball in the disk chamber, a casing on the top of the base portion, a registering mechanism therein, and an operative connection between the disk and the registering mechanism.

2. In an improved water meter, a base portion made of one piece and being formed in its center to receive a disk and its ball and thereby form the bottom portion of a disk chamber, the base portion having a port on one side leading directly to the disk chamber, and having a second port on the opposite side, the base portion having a passage arranged to connect the second port with the disk chamber at a point adjacent to the first port.



3. An improved water meter comprising a base portion having a central recess to receive a disk and its ball, the base portion having diametrically arranged inlet and outlet ports, the base portion also having a passage concentric to the recess connecting one of the ports to the disk chamber at a point adjacent to the other port, a cover on the base portion forming a disk chamber with the recess, a partition between the connections of the ports with the disk chamber, a disk and its ball in the disk chamber, a web projecting from the wall of the disk chamber at a point approximately opposite the partition, rollers secured to the disk, one riding against one side of the partition and the other on the opposite side of the web, a casing on the base portion, and a registering mechanism in the casing.

4. In a water meter, a base portion having a central recess, a cover to form a disk chamber with the recess, a disk in the chamber, a partition in the disk chamber, a web in the disk chamber opposite the partition, and rollers on the disk, one bearing on the partition and one on the web, on the side from which the current comes.

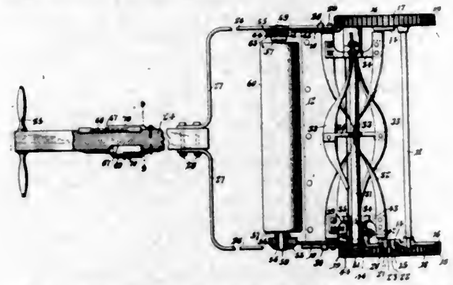
5. In a water meter, a base portion made of one piece and having a central recess to form a portion of a disk chamber, the base portion having a port passing from the exterior to the recess, the base portion also having a port diametrically opposite the first port and having a passage to connect the second port with the recess at a point adjacent to the first port, and a partition in the recess.

[Claim 6 not printed in the Gazette.]

884,651. LAWN-MOWER. JAMES H. FREY, Vincennes, Ind., assignor of one-half to Frank C. Hardacre, Vincennes, Ind. Filed Jan 10, 1907. Serial No. 351,659.

1. In a lawn mower, the combination with a frame having spaced side members, of wheels journaled on the outer sides of the side members, a handle having a pivotal connection with the outer sides of the side members in rear of the wheels and below their axis of rotation, and a revoluble cutter driven by the wheels and having its ends operating directly adjacent to the inner sides of said side members.

2. In a lawn mower, the combination with a frame having spaced side members, of narrow peripherally toothed driving wheels journaled on the outer sides of the side members, said wheels having their outer corners rounded and having peripheral teeth terminating short of the outer faces of said wheels, a handle including a bail having parallel side arms hinged at their lower ends to the outer sides of the frame members in rear of the wheels and below their axis of rotation, and a revoluble cutter located between the side members and driven by the wheels, said cutter having its ends operating directly adjacent to the inner sides of the side members.



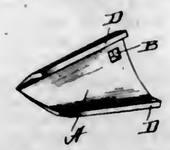
3. In a lawn mower, the combination with a frame having a boss and a notch in the inner end of said boss, of a driving wheel journaled on the frame, a split bushing located in the boss and having a flange at its inner end, said flange having a lug engaged in the notch of the boss, a set screw threaded through the boss and engaging the bushing, a rotatable cutter having a shaft journaled in the bushing and a hub that operates alongside the flange, and means mounted on the shaft outside the bushing and driven by the wheel for rotating the shaft.

4. In a lawn mower, the combination with a frame, of a driving wheel journaled on the frame, a shaft journaled in the frame, rotary cutter blades, means connecting the blades to the shaft, and a guard sleeve surrounding the shaft and being interposed between said blade connecting means and the inner sides of the frame, and extending across the space therebetween to prevent grass wrapping about the shaft, said sleeve being free from the shaft.

5. In a lawn mower, the combination with a frame having an inwardly extending boss, of a driving wheel journaled on the outer side of the frame, a bushing located in the boss and held against rotation, said bushing having a flange located at the inner end of the boss, a rotary cutter including a shaft journaled in the bushing, cutter blades surrounding the shaft, and a spider bracket securing the blades to the shaft and having a boss directly associated with the flange of the bushing, driving means connecting the driving wheel and the shaft, and a guard sleeve interposed between the boss, and spider bracket and surrounding the hub of said bracket and the flange of the bushing.

[Claims 6 and 7 not printed in the Gazette.]

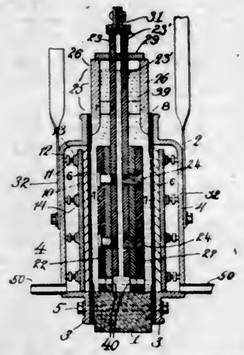
884,652. PLOW. THOMAS H. FULLER, Lafayette, Ala. Filed July 12, 1907. Serial No. 383,470.



A plow having converging wings upon the opposite longitudinal edges thereof, the surface of the plow intermediate said wings being concaved and its opposite face convexed, the forward end of the plow tapering to a point which is at one side of the longitudinal center of the plow, as set forth.

884,653. ELECTROLYTIC CELL. GEORGE A. GABRIEL, New York, N. Y., assignor to Bleach & Caustic Process Company, New York, N. Y., a Corporation of New York. Filed Nov. 23, 1906. Serial No. 344,674.

1. In an electrolytic cell, metallic plates forming the sides of said cell, said plates having offset or outwardly extending portions forming closed cathode chambers, the cathodes being situated over the recesses formed by said formed by said offset portions.



2. In an electrolytic cell, metallic plates forming the sides of said cell, said plates comprising rectangular marginal portions and offset central portions forming closed cathode chambers, the cathode and diaphragm of the cell being held by said rectangular portions over the recesses formed by said offset portions.

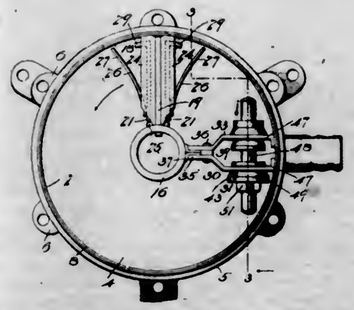
3. In an electrolytic cell, a U-shaped body forming the ends and bottom of the anode chamber, metallic plates forming the sides of said cell, said plates having offset or outwardly extending central portions forming the cathode chambers, and walls presenting inner faces of non-conducting material forming an upward extension of the sides of said anode chamber above said plates for increasing the hydrostatic pressure of the anolyte.

4. In an electrolytic cell, a U-shaped body forming the ends and bottom of the anode chamber, metallic plates forming the sides of said cell, said plates having offset or outwardly extending central portions forming the cathode chambers, walls presenting inner faces of non-conducting material forming an upward extension of the sides of said anode chamber above said plates for increasing the hydrostatic pressure of the anolyte, and ties or braces between the sides of said upward extension.

5. In an electrolytic cell, a U-shaped body forming the ends and bottom of the anode chamber, metallic plates forming the sides of such cell and the cathode chamber, slabs of a material inert to the electrolyte and forming an upward extension of the sides of the anode chamber above said plates, for increasing the hydrostatic pressure of the electrolyte.

[Claims 6 to 20 not printed in the Gazette.]

884,654. HYDRAULIC MOTOR. RALPH B. GOODRICH, Cincinnati, Ohio. Filed Oct. 18, 1907. Serial No. 398,077.



1. An oscillating motor comprising a cylinder, a radially arranged interior valve cage, separate double acting inlet and outlet valves having stems projecting beyond both sides of the cage, an oscillating piston, and a valve actu-

ator fitted to each side of the piston and consisting of a spring body plate provided at opposite edge portions with normally offstanding spring valve operating arms, and a rigid valve releasing abutment arranged behind and in the path of the free end of the spring arms coöperating with the stem of the double acting inlet valve.

2. An oscillating motor comprising a cylinder, an interior valve cage struck up from sheet metal, inlet and outlet valves, and an oscillating piston.

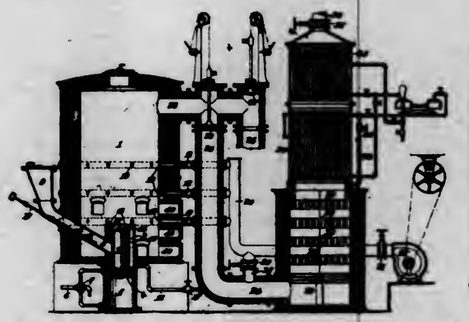
3. An oscillating motor comprising a cylinder, an interior valve cage consisting of duplicate casing plates having struck up valve seats, the inlet and outlet valves, and the piston.

4. An oscillating motor comprising a cylinder, an interior valve cage consisting of a pair of duplicate complemental casing plates arranged in spaced relation and provided with paired sets of struck up valve seats, double acting valves coöperating with the valve seats of the cage, and the piston.

5. An oscillating motor comprising a cylinder, an interior valve cage consisting of a pair of duplicate complemental casing plates secured together in spaced relation and formed with paired sets of struck up valve seats, certain of said valve seats being outwardly facing and the others being inwardly facing, a double acting inlet valve consisting of a stem and a pair of reversely arranged valve heads coöperating with one pair of said valve seats, an outlet valve consisting of a valve stem and a pair of valve heads coöperating with the other of said valve seats, and the oscillating piston.

[Claim 6 not printed in the Gazette.]

884,655. PROCESS OF MAKING GAS. ALEXANDER M. GOW, Edgewood Park, Pa., assignor, by mesne assignments, to The Westinghouse Machine Company, a Corporation of Pennsylvania. Filed Nov. 11, 1903, Serial No. 180,652. Renewed Sept. 16, 1907. Serial No. 393,114.



1. The process of making gas which consists in blowing to incandescence the exterior portion of a body of fuel, forcing fresh fuel into the interior of the body, utilizing the sensible heat of the incandescent fuel in the destructive distillation of the fresh fuel, introducing steam into the interior portion of the body of fuel and causing it to pass, first through the fresh fuel and then through the heated exterior portion of the fuel bed.

2. The process of making gas which consists in successively blowing to incandescence the exterior portion of a body of fuel, utilizing the hot products of combustion so obtained for generating steam, forcing fresh fuel into the interior portion of the body of fuel, utilizing the sensible heat of the surrounding incandescent fuel in the destructive distillation of the fresh fuel, introducing steam into the interior portion of the body of fuel and causing it to pass first through the fresh fuel and then through the heated exterior portion of the fuel bed.

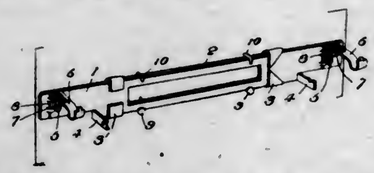
3. The process of making gas, which consists in successively blowing to incandescence the exterior portion of a bed of fuel and absorbing the sensible heat of the products of combustion so obtained in a regenerative chamber, forcing fresh fuel into the interior portion of the body of fuel, utilizing the sensible heat of the surrounding incandescent fuel in the destructive distillation of the fresh fuel, introducing superheated steam into the interior portion of the fuel and causing it to pass first through fresh fuel and then through the heated exterior portion of the fuel bed.

4. The process of making gas which consists in maintaining a body of fuel at a higher temperature in its exterior portion than in its interior portion by delivering to the exterior portion a blast of air and introducing fresh fuel and steam into the interior portion, utilizing the sensible heat of the exterior portion in the destructive distillation of the fresh fuel, causing the steam and the volatile constituents of the fresh fuel to pass from the relatively cold interior portion of the fuel bed through the relatively hot exterior portion.

5. The process of making gas, which consists in blowing air into a body of fuel from a plurality of points located around it in order to heat the body of fuel at its circumference only, forcing fuel into the interior of the heated body of fuel, utilizing the sensible heat of the heated fuel in the destructive distillation of the fresh fuel causing steam to enter the body of fuel near the center thereof to pass through the fresh fuel and then through the heated fuel.

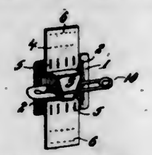
[Claims 6 to 13 not printed in the Gazette.]

884,656. WINDOW-SHADE AND CURTAIN-POLE HOLDER. JAMES H. GREEN, Freeport, Pa. Filed Apr. 30, 1907. Serial No. 371,079.



A curtain pole bracket provided with a pole receiving socket, with an angularly disposed rear end, and with a brace secured integrally to the socket of the bracket and extending downwardly therefrom and attached to the angularly disposed rear end at the lower extremity of the latter, said brace resulting from a longitudinal slot formed in the bracket, the material bounded by said slot being bent downwardly, substantially as shown and described.

884,657. GARMENT-HOLDER. AGNES HAVILAND, New Orleans, La. Filed Oct. 2, 1907. Serial No. 395,616.

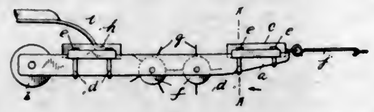


1. A garment holder comprising a plate having parallel slots therein, an intermediate loop extended from one face of the plate and between said slots, and an elastic attaching strip extended through said slots and having free ends adapted for attachment to a garment.

2. A garment holder comprising a plate provided with parallel slots and an intermediate loop extended from one face of said plate transversely to said slots and between the same, and a strip extended through and attached at said slots and having free ends adapted to be secured at the waist line of a nether garment.

884,658. COMBINED HARROW AND ROLLER. ALVIN HAYES, Medina, Ohio. Filed Dec. 17, 1907. Serial No. 406,847.

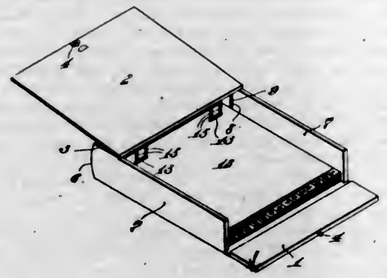
1. A combined harrow and roller consisting of a pair of side-bars; a roller journaled in said side-bars at one end thereof; a load-support adapted to carry rocks, stone and the like and attached at each of its ends to one of said side-bars at the other end thereof; a second load-support attached to said side-bars in front of said roller; and a pair of harrows journaled in said side-bars between said load-supports.



2. A combined harrow and roller consisting of a pair of side-bars; a roller journaled in said side-bars at one end thereof; a load-support adapted to carry rocks, stone and the like and attached at each of its ends adjustably to one of said side-bars at the other end thereof; draft devices attached to said load support; a second load support adjustably attached to said side-bars in front of said roller; and harrow devices journaled in said side-bars between said load-supports.

3. A combined harrow and roller consisting of a pair of side-bars; a load-support adapted to carry rocks, stone and the like and attached to said side bars; a roller journaled in said side-bars; a second load-support attached to said side-bars between said roller and the first-named load-support and free to be shifted along said side-bars; and harrow devices between said load-supports, said devices being journaled in said side-bars.

884,659. FILING-CASE. WILLIAM K. HOLMAN, Philadelphia, Pa., assignor to A. J. Holman & Company, Philadelphia, Pa., a Firm. Filed Sept. 27, 1907. Serial No. 394,796.

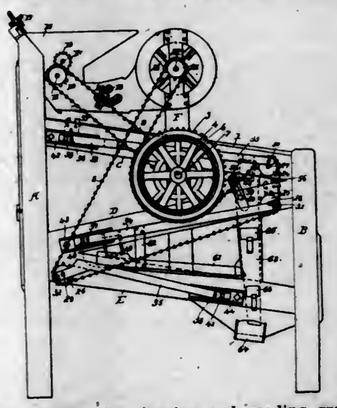


1. A filing case comprising a containing box having oppositely-disposed vertical walls provided with open vertical grooves, in combination with a filing rod provided intermediate its ends with a filing device and having each of said ends bent upward to form spring catches adapted to spring automatically into the vertical grooves in the filing case when said parts are operatively assembled.

2. A filing case comprising a containing box having oppositely-disposed vertical walls provided with open vertical grooves, in combination with a filing rod having each of its opposite ends bent upward to form a pair of oppositely-acting spring catches adapted to coincide removably with said vertical grooves in the casing, said rod being provided with a pair of integrally-formed filing hooks, each consisting of two separated vertical bends connected by a short horizontal bend, the body of the rod between said hooks being bent to lie in a rearwardly parallel plane.

3. A filing case comprising a shallow containing box of substantially rectangular outline, having a front wall hinged to its basal wall, a narrow and fixed top wall over its rearward portion, and a lid hinged thereto and a pair of oppositely-disposed vertical walls provided near the rearward end and beneath said fixed top with open vertical grooves, in combination with a filing rod adapted to be disposed horizontally in said casing, said rod having integrally formed therein a pair of filing hooks and having spring ends adapted to removably coincide with said grooves in the casing when the file and casing are operatively assembled.

884,660. MACHINE FOR CLEANING AND GRADING GRAIN AND SEED. JAMES H. HOOVER, Decatur, Ill. Filed Oct. 23, 1905. Serial No. 284,081.



1. In a machine for cleaning and grading grain and seed, the combination of three grain shoes disposed in a zigzag, each shoe being provided with a screen surface and a solid bottom, and placed so that grain will travel from the screen surface of one shoe to the screen surface of the next lower shoe in its downward passage, a trough under the discharge end of each solid bottom, means for reciprocating the shoes and the troughs, a down spout to which the grain from the solid bottoms is carried, and intercepting tilt-boards in the down spout adapted to throw out of said spout grain from either the upper or the intermediate solid bottom.

2. In a machine of the character described, the combination with shoes and screens, troughs leading therefrom, and a down spout into which the latter deliver the screenings at various heights; of tilt-boards mounted in said spout under certain of the troughs, guideways fixed in the troughs and directing the screenings toward said tilt-boards, notched pivot bearings for said tilt-boards, and spring actuated dogs adapted to engage said notches.

3. In a machine of the character described, the combination with shoes and screens, troughs leading therefrom, and a down spout into which the latter deliver the screenings at various heights; of tilt-boards mounted in said spout under certain of the troughs, notched pivot bearings for said tilt-boards, and spring-actuated dogs adapted to engage said notches.

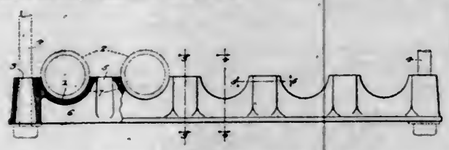
4. In a machine of the character described, the combination with a shoe and screen, a shake rod, and its boxing; of a trough under the shoe, a bar attached thereto, a screw threaded at one end into said boxing having its other end passing through said bar, and means for holding the last-mentioned end detachably in place.

5. In a machine of the character described, the combination with a shoe and screen, a shake rod, and its boxing; of a trough under the shoe, a bar attached thereto, an L-shaped screw threaded at one end into the boxing and having its other end passing through a hole in said bar, and a cotter pin taking through the last-mentioned end beyond the bar.

884,661. PIPE BRACKET OR SUPPORT. EUGENE L. HOWE, Muskegon, Mich., assignor to Standard Malleable Iron Company, Muskegon, Mich., a Corporation. Filed Feb. 6, 1908. Serial No. 414,492.

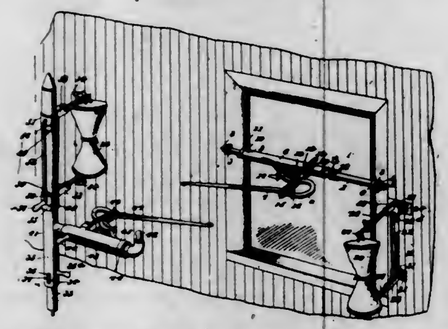
1. A pipe support comprising a casting of malleable metal, the upper part whereof is formed with a plurality of hollow extensions and with intermediate concave seats

to receive the pipes to be supported, said casing being chambered beneath said seats so that its walls are of approximately uniform thickness.



2. A pipe support comprising a malleable casting, the upper part whereof is formed with a plurality of hollow extensions and with intermediate concave seats to receive the pipes to be supported, said casting being provided at its ends with vertical openings to admit retaining bolts and having a chamber extending beneath said seats, the walls of said casing being of approximately uniform thickness.

884,662. MAIL-BAG CATCHING AND DELIVERING APPARATUS. ENNIS F. HULL, Surveyor, W. Va. Filed Jan. 17, 1908. Serial No. 411,370.



1. In an apparatus of the character described, the combination with a bag catching hook provided with a pocket, of a detent fulcrumed intermediate of its ends on said hook and adapted to swing thereon so as to project either end across the pocket, a support for said hook, and a compression spring secured to the support and to the detent eccentric of the fulcrm point thereof, as and for the purpose set forth.

2. In an apparatus of the character described, the combination with a bag catching hook provided with a pocket, of a detent comprising an integral strip bent intermediate of its ends to form spaced members pivoted to one arm of the hook and designed to embrace said arm and the opposite arm of the hook, the extremities of said strip being curved to form a hook portion, and means for holding said hook under tension with one end across the pocket and arranged to snap the opposite and hooked portion of the detent across the pocket upon the impact of a mail bag against the first named end of the detent.

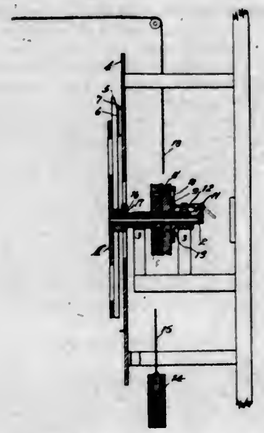
3. In an apparatus of the character described, a bag holding device, comprising lower and upper collars formed with brackets, bag holding arms carried by said brackets, a support upon which said collars are mounted to rise and turn whereby the bag holding arms may be reversed in position, and means for locking said collars on their support.

4. In an apparatus of the character described, a bag holding device, comprising lower and upper collars, a brace connecting said collars together, bag holding arms supported by said collars, the collars being arranged to be moved up and down and turned around on their support, a support for said collars, the collars being provided with downwardly facing recesses and the support being formed with locking lugs designed for engagement in said recesses.

5. In an apparatus of the character described, a bag catching hook, a sleeve supporting said hook, a rod on which said sleeve is mounted to turn whereby to project the hook from one side or the other of the rod, means for securing the sleeve on the rod, a vertically disposed sleeve to which said rod is secured, a post upon which said sleeve is mounted to turn, and means for holding said sleeve rigidly on the post.

[Claims 6 to 8 not printed in the Gazette.]

884,663. ROTARY TARGET. FRANK J. JOHNSTON, Sacramento, Cal. Filed Oct. 2, 1907. Serial No. 395,560.



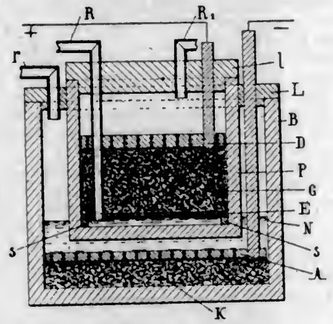
1. The combination with a fixed sub-divided disk, a rotary target and a hollow spindle upon which the same is loosely mounted, of a drum loose on said spindle, a ratchet member fixed to the spindle, and provided with a gear on its side, a gear journaled at right angles to the axis of the first-named gear, and the bell-crank lever having one arm to engage the teeth of the second named gear and having another arm normally disposed proximate to the inner end of said spindle and in the range of action of a projectile passing through said spindle whereby the lever is actuated to release the second-named gear from its locked position, means for rotating the drum, means for communicating the rotation of said drum to the first-named gear, and means connecting the traget with the hollow spindle, said last-named means allowing the target to rotate relative to said fixed disk.

2. The combination with a rotary target, a hollow spindle upon which the same is loosely mounted, and a fixed disk, said disk and target having a movement one relative to the other, of mechanism for spinning the target, said mechanism being actuated by a projectile passing through the spindle, and comprising a bell-crank lever having one arm arranged close to the inner end of said spindle and in the path of said projectile, a counterweighted member loose on the spindle, a member fixed to said spindle and interengaging connections between said fixed member and loose member, a gear wheel mounted on a vertical axis and a gear member on said fixed member and in mesh with said gear wheel, said bell-crank lever having a second arm which is designed to engage said gear wheel to hold the members locked, and to release said wheel when the lever is tripped by the impact of the projectile, and engageable connections between the target and the hollow spindle.

3. The combination with a rotary target, a hollow spindle on which the same is loosely mounted, and a fixed disk past which the target is adapted to rotate, of means for spinning the target operated by a bullet passing through said spindle, said means including a bell-crank lever pivotally mounted near the inner end of the spindle and having one arm normally disposed in the range of action of the bullet, a gear wheel normally engaged with

the other arm of said lever, a ratchet member fixed to the spindle and having a gear with which said gear wheel is in mesh, a drum loosely mounted on the spindle and a pawl carried by said drum and adapted to engage said ratchet member, a pawl on the hub of the target, a ratchet fixed to said spindle and engaged by said pawl, and means for retarding the rotation of the target.

884,664. DEPOLARIZER FOR GALVANIC BATTERIES. ERNST W. JUNGNER, Kneippbaden, Norrköping, Sweden. Filed May 14, 1907. Serial No. 373,575.



1. A depolarizer for galvanic elements comprising nitrosyl-sulfuric acid dissolved in concentrated sulfuric acid.

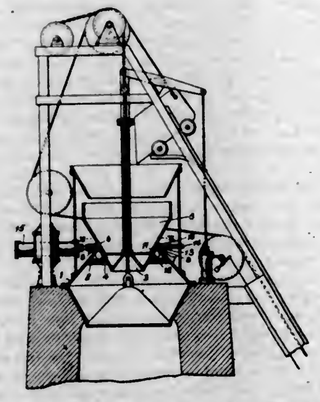
2. A depolarizer for galvanic elements comprising nitrosyl-sulfuric acid dissolved in concentrated sulfuric acid and oxygen.

3. A depolarizer for galvanic elements comprising nitrosyl-sulfuric acid dissolved in concentrated sulfuric acid and air supplied to said nitrosyl-sulfuric acid.

4. A galvanic element comprising two electrodes of carbon, an electrolyte of sulfuric acid covering one of the electrodes and containing nitrosyl-sulfuric acid, and air supplied to the other electrode.

5. In a galvanic element having two carbon electrodes of different forms of carbon, an electrolyte of sulfuric acid covering one of the electrodes and containing nitrosyl-sulfuric acid, and means to supply air to the other electrode.

884,665. BLAST-FURNACE APPARATUS. WALTER KENNEDY, Bellevue, Pa. Filed May 24, 1907. Serial No. 375,546.



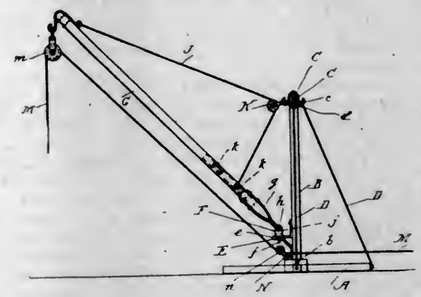
1. A blast furnace charging apparatus having in combination a main hopper and bell, main and auxiliary distributing hoppers in driving engagement with each other, the auxiliary hopper having a gas-tight seat on the main hopper, means for rotating the main distributing hopper, and means for closing the auxiliary hopper.

2. A blast furnace charging apparatus having in combination a main hopper and bell, main distributing and auxiliary distributing hoppers in driving engagement with each other, the auxiliary hopper having a gas-tight seat on the main hopper, means for closing the auxiliary hopper, means for reducing the friction between the main hopper and the auxiliary hopper, and means for rotating the main distributing hopper.

3. A blast furnace charging apparatus having in combination a main hopper and bell, a distributing hopper seated on the main hopper, a ring concentric with the axis of the hoppers, means for shifting said ring around its axis, pawls interposed between the ring and distributing hopper whereby said hopper may be shifted by the ring, and means for closing said hopper.

4. A blast furnace charging apparatus having in combination a main hopper, a distributing hopper seated on the main hopper, a toothed ring concentric with the axis of the hoppers, pawls depening at an angle from the distributing hopper into engagement with said ring, means for reciprocating said ring, and means for closing the hoppers.

884,666. DERRICK. WILLIAM KIRTLAND, Safford, Ariz. Filed Nov. 8, 1907. Serial No. 401,263.



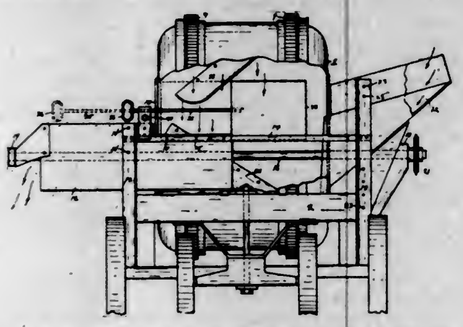
1. In a derrick, the combination, with a mast, and means for securing it in position; of a bracket formed of a single plate of metal having its middle part bent double to form a projecting lug and having its end portions secured to the said mast, a forked bracket provided with a vertical pin which is pivoted in a hole in the said lug, a jib, a socket secured to the lower end of the said jib and formed of a single plate of metal bent double and forming an eye which is pivoted in the said forked bracket, a stay rope connected to the said jib and mast, and lifting tackle carried by the said jib.

2. In a derrick, the combination, with a mast, and means for securing it in position; of a bracket formed of a single plate having its middle part bent double to form a projecting lug and having its end portions secured to the said mast, a bracket provided with a vertical pin which is pivoted in the said lug, a jib pivoted to the last said bracket, a stay-rope connected to the said mast and jib for supporting the jib and adjusting it in a vertical plane, and lifting-tackle carried by the said jib.

884,667. CONCRETE-MIXER. PHILIP A. KOEHRING, Milwaukee, Wis. Filed June 27, 1907. Serial No. 381,008.

1. In a concrete mixer of the class described, the combination of a revoluble drum provided on its inner walls with an annular series of elevating and mixing buckets, means for delivering the ingredients into said drum, a discharge trough having a receiving end extended within said drum, a slidable hood adapted to cover the receiving end of said trough, means for shifting said hood into and out of covering position whereby the contents of said drum may at the will of the operator be caused to fall into the

receiving end of said trough or back into the lower portion of the drum.



2. In a concrete mixer of the class described, the combination of a revoluble drum provided on its inner walls with an annular series of elevating and mixing buckets, means for delivering the ingredients into said drum, a discharge trough having a receiving end extended within said drum, a slidable hood adapted to cover the receiving end of said trough, means for shifting said hood into and out of covering position whereby the contents of said drum may at the will of the operator be caused to fall into the receiving end of said trough or back into the lower portion of the drum, and a conveyer for discharging the concrete from said trough.

3. In a concrete mixer of the class described, the combination of a revoluble drum provided on its inner walls with an annular series of elevating and mixing buckets, means for delivering the ingredients into said drum, a discharge trough having a receiving end extended within said drum, a slidable hood adapted to cover the receiving end of said trough, means for shifting said hood into and out of covering position whereby the contents of said drum may at the will of the operator be caused to fall into the receiving end of said trough or back into the lower portion of the drum, and a conveyer for discharging the concrete from said trough consisting of a centrally disposed rotary shaft suitably journaled in bearings and having a spiral series of propeller blades radially mounted thereon.

4. In a concrete mixer of the class described, the combination of a revoluble mixing and elevating device, a receiver for the elevated material and an adjustable hood therefor adapted to be moved to cover or uncover the receiver, said hood being arranged to return the material falling thereon into the lower portion of the mixing device.

5. In a concrete mixer of the class described, the combination of a revoluble mixing and elevating device, a receiver for the elevated material and an adjustable hood therefor adapted to be moved to cover or uncover the receiver, said hood being arranged to return the material falling thereon into the lower portion of the mixing device, together with means for delivering water into the material during its delivery from the mixing device.

884,668. CONCRETE PILE-COVERING. FREDERICK A. KOETITZ, San Francisco, Cal. Filed Dec. 9, 1907. Serial No. 405,798.



1. The combination with a pile, of a hollow concrete casing made in segments hinged together along one of their longitudinal edges, and means for detachably securing the opposite edges of said segments.

2. An independent hollow casing formed of longitudinally divided segments, the adjacent edges of the segments being hinged together at one side of the casing, and detachable connections for uniting the meeting edges of the sections at the opposite side of the casing, said casing adapted to inclose a pile and to provide space for an intermediate filling of concrete.

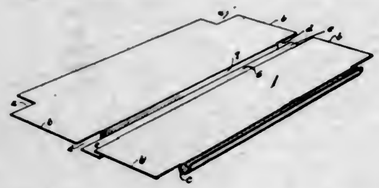
3. An independent hollow concrete casing consisting of semi-cylindrical segments, said segments having hinging eyes embedded in the meeting edges on the side, and hinge pins connecting said eyes, or angular plates embedded in the opposite edges of the segments, and angularly bent plates interlocking therewith to secure the segments in the cylindrical structure.

4. A hollow concrete casing formed of semi-circular segments, means forming a hinged connection along the meeting edges of the segments at one side of the casing, projections on the adjacent edges of the segments at the other side of the casing, and means detachably engaging said projections to lock the segments together.

5. A pile-protecting device consisting of semi-cylindrical segments having suitable locking devices upon their opposite edges whereby they may be fitted around a pile to form an annular channel, means by which the ends of said casings are fitted in line with each other, and a shoe or guide maintaining an even channel around the pile while the casing is being sunk to position.

[Claim 6 not printed in the Gazette.]

884,669. SHEET-METAL PACKING-CASE. ALFRED T. KRUSE, Defiance, Ohio, assignor to The American Steel Package Company, Defiance, Ohio, a Corporation of Ohio. Filed Sept. 20, 1905. Serial No. 279,263.



1. In a sheet-metal packing-case, the combination with sides and ends secured at the corners of the case and provided with a beading inclosing a wire around the lower edges thereof; of a bottom secured thereto and provided with a downwardly-extending supporting-panel extending lengthwise thereof, and sides formed with said panel and having the ends thereof abutting against said beading.

2. In a sheet-metal packing-case, a case consisting of side and end walls provided with a beading at their lower edges, a bottom secured thereto by having its marginal sides and ends bent over and about said beading to form a second beading, and a supporting-panel formed therein and having its sides abutting against said first mentioned beading.

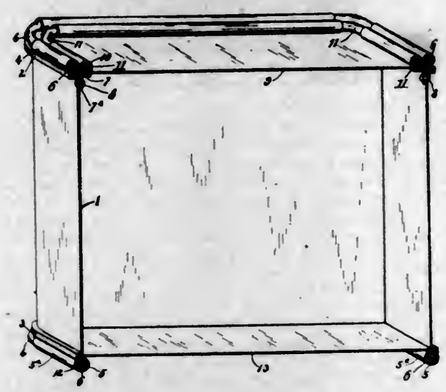
3. In a sheet-metal packing case provided with a beading about the lower edges thereof, a bottom secured thereto, a supporting-panel formed in said bottom, and sides formed with said panel and having the ends thereof abutting against said beading.

4. A sheet-metal packing-case, consisting of side and end walls having a beading about the bottom edges, a bottom secured thereto by having its edges bent about said beading on the side and end walls so as to form a double beading, a supporting-panel formed therein and having its bottom or friction-bearing surface in alinement with said double beading, and sides formed with said supporting-panel and having the ends thereof abutting against said first mentioned beading.

5. A bottom for sheet-metal packing-cases, consisting of a single blank of sheet metal having notched corners, a pair of notches formed therein in alinement with said notched corners, and a tongue intermediate said pair of notches and of less length than said notches.

[Claims 6 to 15 not printed in the Gazette.]

884,670. SHEET-METAL PACKING-CASE. ALFRED T. KRUSE, Defiance, Ohio, assignor to The American Steel Package Company, Defiance, Ohio, a Corporation of Ohio. Filed Sept. 20, 1906. Serial No. 335,377.



1. A packing-case, consisting of suitable walls crimped to form upper and lower outwardly-extending supporting-flanges forming interior recesses and beadings abutting against said supporting-flanges, a strengthening-bar mounted in the recess formed by the upper supporting-flange, and a bottom having its marginal edges taking into the recess formed by said lower supporting-flange and bent about the lower beading forming a second or double beading about the lower edges of the case.

2. In a packing-case, the combination with suitable walls crimped near the upper edges thereof to form an outwardly-extending supporting-flange providing a recess, and a beading formed above and resting on said supporting-flange; of a strengthening-bar mounted in said recess and projecting inwardly to form a lid-supporting-flange.

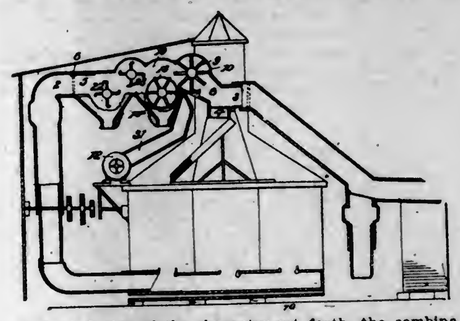
3. A packing-case, comprising suitable walls crimped near the upper and lower edges forming outwardly-extending supporting-flanges forming recesses and having the edges thereof bent over forming a beading resting against said supporting-flanges, a strengthening-bar mounted in the recess formed by the upper supporting flange and extending inwardly to form a lid-supporting-flange, a bottom taking into the recess formed by the lower supporting-flange, and a beaded lid or cover mounted on said lid-supporting-flange and resting within and flush with the upper beading of the case.

4. In a packing-case, the combination with suitable walls crimped to form an outwardly-extending supporting-flange providing a recess, and a beading formed above said supporting-flange; of a strengthening-bar mounted in said recess and projecting inwardly to form a lid-supporting-flange, and a beaded lid or cover mounted on said lid-supporting-flange and resting within and flush with said beading formed about the upper edges of the case.

5. In a packing-case, the combination with suitable walls crimped near the lower edges thereof to form an outwardly-extending supporting-flange providing an inner recess, and a friction-bearing beading formed below said supporting-flange; of a bottom bent over near its edges forming a marginal fold taking into said recess and having its edges bent over the outside of said beading forming a double friction-bearing beading about the lower edges of the case.

[Claims 6 to 11 not printed in the Gazette.]

884,671. BUR-COTTON THRESHER, CLEANER, AND STORAGE UNLOADER. WILLIAM R. LAMB, Bowie, Tex. Filed June 5, 1907. Serial No. 377,451.



1. In a device of the character set forth, the combination of a casing having an inlet and an outlet at opposite ends and having a passage between said inlet and outlet, a threshing mechanism located near one end of the casing and a beater near the opposite end, and a second beater arranged between the threshing mechanism and the first-mentioned beater, the axis of the first mentioned beater and the threshing mechanism being about in a plane of the bottom of the passage and the axis of the intermediate beater being about in the plane of the top of said passage.

2. In a device of the character specified, the combination of a casing having an inlet and an outlet at opposite ends, cleaning and threshing mechanism intermediate of the ends of the casing, an overflow pipe in connection with the receiving end of said casing, and a valve for controlling the inlet and the communication between said overflow pipe and the receiving portion of the casing.

3. In a device of the character specified, the combination of a casing provided with two outlets, the one adapted to be connected with a pneumatic distributer and the other with a belt distributer, or cotton storage house, cleaning and threshing mechanisms arranged within the casing, and a valve for controlling one or the other of said outlets.

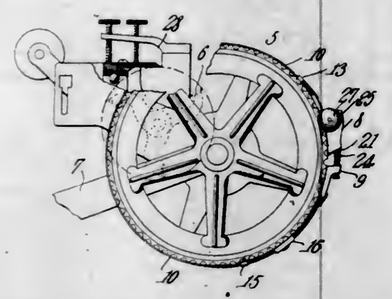
4. In mechanism of the character set forth, the combination of a casing having an inlet at one end and a double outlet at the opposite end, one outlet adapted to be connnected with a pneumatic distributer and the other outlet with a belt distributer, feeding and threshing mechanisms arranged in the length of the casing between the inlet and the double outlet thereof, and a suction mechanism having connection with the casing near the double outlet and between the said outlet and the threshing mechanism.

5. The herein described mechanism comprising a casing having an inlet and outlets and having a passage, an overflow pipe in connection with the inlet end of the casing, a valve for controlling the inlet or the opening establishing communication between the overflow pipe and the casing, a valve for controlling the outlets, rotary beaters located at different points in the length of the casing, the one having its axis about in the plane of the bottom of the passage and the other having its axis about in line with the top of said passage, a threshing mechanism having its axis about in line with the bottom of the passage, valve boxes arranged below the threshing mechanism and the first beater, a suction fan having communication with the casing between the threshing mechanism and outlets, and a rotary valve arranged in the length of the casing between the threshing mechanism and the aforesaid outlets.

884,672. APPARATUS FOR SHARPENING LAWN-MOWERS. HENDERSON E. W. LOOMIS, Dumont, Iowa. Filed Oct. 24, 1907. Serial No. 398,985.

1. An attachment for lawn-mowers comprising spaced brackets one of which is provided with a perforated lug and the other with an enlargement forming a shoulder,

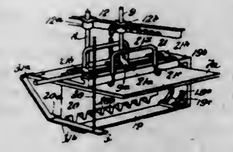
there being a longitudinal bore formed in the enlargement and piercing the stop shoulder, a clamping band engaging the brackets and adapted to engage the traction wheel of the lawn mower, a bolt extended through the perforation in the lug and the bore of the enlargement and provided with terminal threads, a nut threaded on the bolt and bearing against the shoulder, a spring surrounding the bolt and interposed between the lug and enlargement, and an operating handle extending laterally from one of the brackets.



2. An attachment for lawn-mowers comprising spaced brackets having their lower faces formed with seating recesses, an adjustable clamping band engaging the opposite ends of the brackets and seated in said recesses, said band being adapted to engage the traction wheel of the lawn-mower, a buckle carried by the band and provided with seating recesses for the reception of the band, and means connecting the brackets for clamping the band in engagement with the traction wheel.

3. An attachment for lawn-mowers comprising spaced brackets, an adjustable clamping band having one end thereof secured to the adjacent bracket and its terminal portion provided with laterally extending ears folded laterally on said band, the opposite end of the band being secured to the mating bracket and provided with similar ears, a buckle carried by the band for locking the latter in adjusted position, means connecting the brackets for clamping the band in position on the traction wheel of the mower, and a handle extending laterally from one of said brackets.

884,673. BEET TOPPING AND HARVESTING MACHINE. FRANK LOTTER, Elkton, Mich. Filed Feb. 16, 1907. Serial No. 357,686.



1. A beet topping machine comprising a supporting frame, a cutting mechanism mounted thereon, said cutting mechanism comprising a top plate, a shoe secured to the underside thereof, a cutting knife slidably held on said plate, means for reciprocating said cutting knife, and a supplemental shoe coöperatively secured adjacent the first mentioned shoe, substantially as shown and described.

2. A beet topping machine comprising a supporting frame, a cutting mechanism mounted thereon, said cutting mechanism comprising a top plate, a shoe secured to the underside thereof, a cutting knife slidably held on said plate, means for reciprocating said cutting knife, and a supplemental shoe coöperatively secured adjacent the first mentioned shoe, and means for adjusting said shoes, substantially as shown and described.

884,674. GAME APPARATUS. ELIZABETH B. MASON, Elmsford, N. Y. Filed Nov. 5, 1907. Serial No. 400,868.



1. A game apparatus comprising a game-board, a rim projected upward from the board and separating the central portion thereof from the remaining portion, said board having its central portion raised to form a table and having the table and the portion between the table and the said rim subdivided by circles and radial lines into arc and sector shaped spaces of contrasting color, said board having approximately triangular spaces exterior of and adjacent to the said rim forming the corners of a square circumscribing said rim and having parallel stripes exterior to said square and parallel with the sides of the board, and corner spaces in the angles formed between adjacent ends of the stripes, the several stripes and spaces being of contrasting color and provided with a plurality of series of spots provided with distinguishing designating matter.

2. The herein described game apparatus, comprising a square board, a circular rim projecting upward from the board and inclosing a space, said board having the center portion of said space raised to provide a table, and having the space within the said rim subdivided by circles and radial lines into arc and sector shaped spaces of contrasting color, said board having spaces of approximately triangular form exterior to the said rim and opposite the four corners of the board, the latter having parallel stripes exterior to the aforesaid triangular spaces and rim and parallel with the four edges of the board, and having the spaces at the four corners of the board and between the ends of adjacent stripes subdivided into four squares, the several squares, triangular spaces and stripes being of contrasting color and provided with spots differently designated and forming four series.

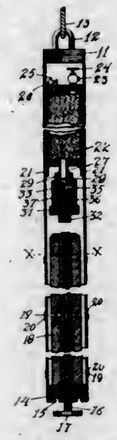
884,675. DEVICE FOR CLEANING OIL-WELLS. FRANK A. MONROE, Bemus Point, and BURTON W. SEYMOUR, Falconer, N. Y. Filed Sept. 26, 1907. Serial No. 394,618.

1. In a device for cleaning oil wells, a tubular casing, a removable metal billet in the lower part of said casing, a reservoir for fluid in the upper part of said casing, means for starting the slow passage of said fluid from said reservoir on said billet, said casing having a series of minute openings for the egress of said fluid.

2. In a device for cleaning oil wells, a tubular casing, removable tubular metal billets in the lower part of said casing, a reservoir for fluid in the upper part of said casing, means for producing the slow passage of said fluid from said reservoir on said billets, said casing having a series of openings for the outlet of said fluid.

3. In a device for cleaning oil wells, a tubular casing, a plurality of hollow metal billets in the lower part of said casing, a reservoir for fluid in the upper part of said casing, a soft metal disk at the lower end of said reservoir, and means for perforating said soft metal to allow the passage of said fluid from said reservoir on to said billets, said casing having openings for the egress of said fluid.

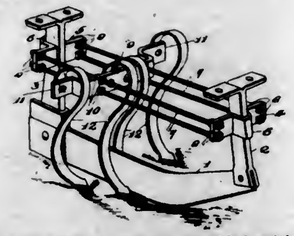
4. In a device for cleaning oil wells, a tubular casing, hollow metal billets in the lower part of said casing, a reservoir for fluid in the upper part of said casing, means for filling the same, a removable soft metal disk closing the lower end of said reservoir, a perforating bolt suspended below the said disk, a bolt slidably mounted in and extending up through said casing and hollow billets to actuate said perforating bolt, substantially as and for the purpose specified.



5. In a device for cleaning oil wells, a tubular casing, metal billets in the lower part of said casing, a reservoir for fluid in the upper end of said casing having suitable means for filling the same, a removable soft metal disk closing the lower end of said reservoir, a perforating bolt below said disk having a grooved point, and means of actuation for said bolt to cause it to perforate said disk, substantially as and for the purpose specified.

[Claims 6 and 7 not printed in the Gazette.]

884,676. CULTIVATOR ATTACHMENT. MARSHAL L. MCCLURE, Republic, Mo. Filed Nov. 13, 1907. Serial No. 401,992.

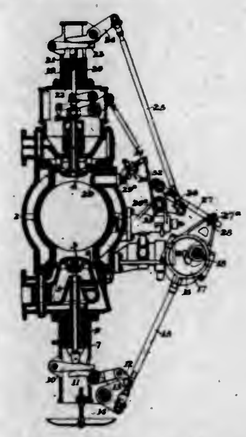


1. In combination, a runner provided with front and rear uprights, cross bars fitted to said uprights and having their end portions projected from opposite sides thereof, tie rods connecting the end portions of said cross bars, a bar adjustable upon the tie rods and projecting beyond the same upon opposite sides of the runner and having off-sets in its length, and cultivator teeth secured to said bar and arranged upon opposite sides of the runner in progressive formation.

2. In combination, a runner provided with front and rear uprights, cross bars having loops intermediate of their ends to embrace opposite sides of the respective uprights, tie rods connecting end portions of the cross bars and serving to contract the open sides of the loops to cause them to grip the said uprights, and a bar mounted upon the tie rods and provided with cultivator teeth.

884,677. VALVE-GEAR FOR GAS-ENGINES. FRED E. NORTON, Youngstown, Ohio. Filed Apr. 11, 1906. Serial No. 311,032.

1. In valve gear for four-cycle gas engines, the combination of a shaft, an eccentric thereon, rod and lever connections from the eccentric for operating the exhaust valve, a disengaging pin in the strap of the eccentric, and rod and lever connections from said pin for operating the inlet valve, said pin being detachable from the connections; substantially as described.



2. In a four-cycle gas engine, an eccentric for one set of inlet and outlet valves, one of said valves being driven directly from a rod of said eccentric, and means for operating the other valve from a disengaging pin in the eccentric strap; substantially as described.

3. In a four-cycle gas engine, a single eccentric for one set of inlet and outlet valves, connections for driving one valve directly from a rod of said eccentric, connections for operating the other valve from the strap of the eccentric, an igniter, and connections for operating the igniter from the eccentric; substantially as described.

4. In a four-cycle gas engine, the combination of an inlet valve, an outlet valve, a single eccentric for said valves, connections for operating one valve directly from a rod of said eccentric, detaching connections for operating the other valve from a point in the strap of the eccentric, an igniter, and means for operating the igniter, so connected to a part of the mechanism for operating the inlet valve, that its motion is disengaged simultaneously with the disengagement of the inlet valve motion; substantially as described.

884,678. WALL-REGISTER. WILLIAM J. OWENS, Utica, N. Y. Filed Feb. 26, 1906. Serial No. 302,857.



1. In a wall register, the combination of a frame, a grille fixed therein, a shutter and a hood loosely mounted in the frame, the shutter being hung within the grille and the hood above the register, the register projecting from the wall providing thereby a recess for the hood and the hood being provided with a notched portion engaging by gravity an edge of the register frame, said notches being

so formed as to hold the shutter and the hood in a given position and releasable by lifting the hood.

2. In a wall register, the combination of a frame, a grille fixed therein, a shutter pivotally hung within the grille, a bracket mounted on the shutter and passing through the grille, a hood loosely supported on the bracket and swingable with the shutter and means mounted on the hood engaging the frame to hold the hood and shutter in given adjustable position the said hood in its outer position extending from a point within the register frame outwardly and downwardly in front of the upper part of the grille.

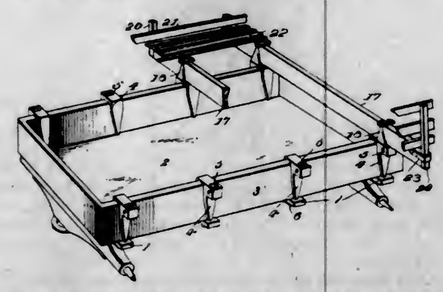
3. In combination with a furnace pipe a wall register having a frame whose face portion extends outwardly from the wall surface, the walls of the furnace pipe being brought forwardly to connect with the register outlet, the frame having a top and side walls retreating to surround the furnace pipe outlet and contact with the wall of the room, the top of said frame being above the top of the pipe outlet and providing thereby a space, a hood and a shutter mounted together the former to swing in and out of said space and the latter to swing in and out from the register face to the back wall of the furnace pipe.

4. In combination with a furnace pipe a wall register having a frame whose face portion extends outwardly from the wall surface, the walls of the furnace pipe being brought forwardly to connect with the register outlet, the frame having a top and side walls retreating to surround the furnace pipe outlet and contact with the wall of the room, the top of said frame being above the top of the pipe outlet and providing thereby a space, a hood and a shutter mounted together the former to swing in and out of said space and the latter to swing in and out from the register face to the back wall of the furnace pipe, the shutter and hood being mounted to permit slight lifting of the same, the hood having notches engaging by the weight of the hood and the shutter an adjacent edge of the frame.

5. In combination with a furnace pipe a wall register having a frame whose face portion extends outwardly from the wall surface, the walls of the furnace pipe being brought forwardly to connect with the register outlet, the frame having a top and side walls retreating to surround the furnace-pipe outlet and connecting with the wall of the room, the top of the said frame being above the top of the pipe outlet and providing thereby a space, a hood and a shutter mounted together, the former to swing in and out of the said space, and the latter to swing in and out from the register face to the back wall of the furnace pipe, the frame being pierced for air inlets and outlets below and above the pipe outlet, respectively.

[Claim 6 not printed in the Gazette.]

884,679. RACK FOR FARM-WAGONS. JOSEPH F. POKORNEY, Hutchinson, Minn. Filed Mar. 5, 1907. Serial No. 360,724.



1. A bed for vehicle running gear, the same comprising a bottom and sides and irons connecting the sides to the bottom, each iron consisting of a clip of U-form having its members extended along and embracing opposite faces of the said sides, and having the lower ends of the said members reduced and threaded and passed through openings in the aforesaid bottom, a yoke and clamp members fitted to the threaded ends of the members, and a vertical socket integral with and arranged at the upper end of the clip to receive a stake.

2. In combination, a vehicle bed comprising a bottom and sides, U-clips 4 embracing opposite faces of the sides and secured at their lower ends to the bottom and having integral vertical sockets at their upper ends, bars resting upon the upper edges of said sides and having their end portions projecting beyond the same, clips embracing opposite sides of said bars and connected thereto and having projecting portions to enter the sockets of the clips 4, other clips 23 attached to the ends of the said bars, stakes inserted in said clips 23, and strips connecting the stakes.

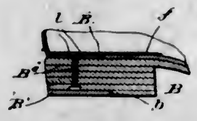
884,680. CLOTHES-PIN. FRANK V. POLAKOSKEY, Peekskill, N. Y. Filed Mar. 21, 1906. Serial No. 307,162.



1. In combination with a spring clothes pin spring plates attached to the sides thereof and extending above the pin, crossing each other and interlocking one with the other, and having curved terminals that close with the closing of the pin and open with the opening of the pin.

2. In combination with a clothes pin comprised of two parts held together by a circular spring, spring plates on the sides of the pin, the spring passing through holes in the plates to secure them in place on the pin, the plates extending above the pin, crossing each other and interlocking one with the other, and provided with curved terminals for closing over a line.

884,681. SHOE. ADAM REED and DAVID A. REED, Los Angeles, Cal. Filed June 29, 1907. Serial No. 381,480.



1. The combination of a pair of shoe bottoms, a conductor comprising an electric element, connecting the upper and lower sides of one bottom and arranged to contact at its lower end with an electrolyte, and a conductor comprising an opposite electric element, connecting the upper and lower sides of the other bottom and arranged to contact at its lower end with an electrolyte.

2. The combination of a pair of shoe bottoms, a conductor comprising an electric element, extending from the upper side of one bottom to the lower side thereof and terminating at the latter side in a plate arranged to contact with an electrolyte, and a conductor comprising an opposite electric element, extending from the upper side of the other bottom to the lower side thereof and terminating at the latter side in a plate arranged to contact with an electrolyte.

3. The combination of a pair of shoe bottoms, an electric element arranged on one bottom and electrically connected with the underside thereof and arranged to make contact at the lower end of said connection with an electrolyte, an opposite electric element arranged on the other bottom and electrically connected with the underside thereof and arranged to make contact at the lower end of said connection with an electrolyte, an electric element opposite to the first mentioned element arranged on the same bottom as said first mentioned element but electrically isolated therefrom, and an electric element opposite to the second mentioned element arranged on the same bottom as said second mentioned element but electrically isolated therefrom.

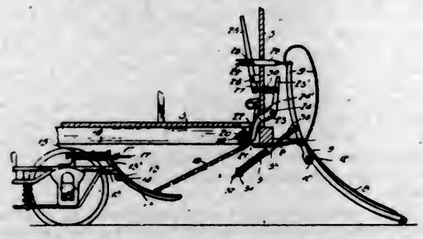
884,682. LACING-HOOK. WILLIAM T. RICHARDS, Quincy, Mass. Filed May 11, 1907. Serial No. 373,063.



1. A lacing-hook comprising a base having means for attachment to a support, a hook integral with the base and having a neck portion rising from one end of the base, and a terminal portion overhanging the base, and guards also integral with the base and projecting outwardly therefrom at opposite edges of the hook, the terminal portion of the hook projecting between the guards, whereby the hook is protected or guarded by the upper and outer edges of the guards, while the inner edges of the guards form stops which face toward the neck portion of the hook and are adapted to prevent outward movement of a lacing from said neck portion to the outer end of the terminal portion of the hook.

2. A lacing-hook comprising a base having means for attachment to a support, a hook integral with the base and having a neck portion rising from one end of the base and a terminal portion overhanging the base to form a hook, and integral upright guards rising from the base at opposite edges of the hook portion, the upper edges of said guards being in a plane at a height to protect the hook portion from being bent downward.

884,683. CAR-FENDER. JOHN F. RISDON, Seattle, Wash. Filed Nov. 1, 1907. Serial No. 400,187.



1. In an apparatus of the class described, the combination with a fender having two hinged parts, locking devices to secure said parts together, of a tiltable wheel-guard, supports for said guard; a spring acting to urge the guard into operative position, means acting against said spring to hold the same under compression and the wheel-guard normally elevated and comprising a chain connected at one end to the wheel-guard, a shaft carrying a sprocket wheel to receive said chain and a detent engaging said sprocket wheel, an actuating lever, connections between said actuating lever and said detent, and connections between said lever and the said fender.

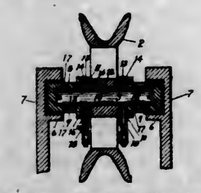
2. In an apparatus of the class described, the combination with a car, a fender, a support carried by the car and to which the fender is hinged, a spring acting to yieldingly retain the fender so as to be at some distance above the track bed, and a lever, of a wheel-guard, a support for said guard, means for holding the said wheel guard normally suspended above the track bed and comprising a shaft, a sprocket wheel thereon, a chain connected to the wheel-guard and engaging the sprocket wheel and a pivotally mounted detent engaging the sprocket wheel, an actuating lever pivotally attached to the car, connections between said lever and the detent, and a spring acting to tilt the guard into juxtaposition with the track bed when the lever is actuated.

3. In apparatus of the class described, the combination with a fender formed with two hinged parts, and locking devices to secure said parts together, of a tiltable wheel-guard, supports for the guard, a spring acting to urge the guard into operative position, a shaft upon the car and provided with a sprocket-wheel and a ratchet-wheel mounted thereon, said wheels, a chain engaging with said sprocket-wheel and connected to said guard, a lever provided with a detent for engagement with said ratchet-wheel, and a spring acting to retain such lever in engaged condition with respect to the wheel and also in position to be tripped therefrom through impingement by said fender.

4. In apparatus of the class described, the combination with a car, a fender, a support carried by the car and to which the fender is hinged, a spring acting to yieldingly retain the fender so as to be at some distance above the track-bed, a lever, and the connection between the lever and the fender, of a wheel-guard, a support for carrying said guard, a spring acting to tilt the guard into juxtaposition with the track-bed, a shaft upon the car and provided with a sprocket-wheel and a ratchet-wheel mounted thereon, said wheels, a chain engaging with said sprocket-wheel and connected to said guard, a lever provided with a detent for engagement with said ratchet-wheel, and a spring acting to retain such lever in engaged condition with respect to the wheel and also in position to be tripped therefrom through impingement by said fender.

5. In apparatus of the class described, the combination with a car, a fender, a support carried by the car and to which the fender is hinged, a spring acting to yieldingly retain the fender so as to be at some distance above the track-bed, a lever, and the connection between the lever and the fender, of a wheel-guard, a support for carrying said guard, a spring acting to tilt the guard into juxtaposition with the track-bed, a shaft upon the car and provided with a sprocket-wheel and a ratchet-wheel mounted thereon, said wheels, a chain engaging with said sprocket-wheel and connected to said guard, a lever provided with a detent for engagement with said ratchet-wheel, a spring acting to retain such lever in engaged condition with respect to the wheel and also in position to be tripped therefrom through impingement by said fender, and connection between the two aforesaid levers whereby the wheel-guard may be released independently of the fender.

884,684. TROLLEY HARP AND WHEEL. EDWARD D. ROCKWELL, Bristol, Conn., assignor, by mesne assignments, to The New Departure Manufacturing Company, Bristol, Conn., a Corporation of Connecticut. Filed June 1, 1906. Serial No. 319,686.

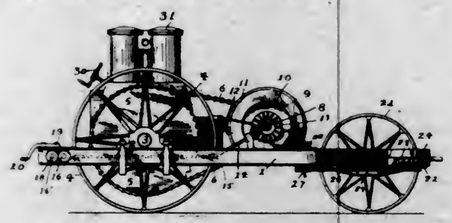


1. The combination with a trolley harp having guides therein, of journal blocks slidable in said guides and provided with holes or recesses, a collector wheel having a fixed journal whose ends project beyond the hub of said wheel and whose ends engage the holes or recesses in the said blocks, the length of said journal being the same as the distance between the outer ends of said recesses whereby said journal is prevented from having longitudinal movement in said recesses, so that permanent spaces are provided between the hub and the ends of the bearing blocks, and contacts interposed between the ends of the hub and the ends of the bearing blocks.

2. The combination with a trolley harp having guides therein, of journal blocks slidable in said guides and provided with holes or recesses, a collector wheel having a fixed journal whose ends project beyond the hub of said wheel and whose ends engage the holes or recesses in the said blocks, the length of said journal being the same as the distance between the outer ends of said recesses whereby said journal is prevented from having longitudinal movement in said recesses, so that permanent spaces are provided between the hub and the ends of the bearing blocks, and spring contacts interposed between the ends of the hub and the ends of the bearing blocks.

3. The combination with a trolley harp having guides therein, of journal blocks slidable in said guides and provided with holes or recesses, a collector wheel having a fixed journal whose ends project beyond the hub of said wheel and whose ends engage holes or recesses in the said blocks, the length of said journal being the same as the distance between the outer ends of said recesses whereby said journal is prevented from having longitudinal movement in said recesses, so that permanent spaces are provided between the hub and the ends of the bearing blocks, and spring contacts interposed between the ends of the hub and the ends of the bearing blocks, said spring contacts comprising flat members secured together.

884,685. TRACTION-ENGINE. SAMUEL S. ROSE, Amador City, Cal., assignor to Rose Manufacturing Company, San Jose, Cal., a Corporation of Arizona. Filed Aug. 24, 1905. Serial No. 275,686.



1. In a traction engine the combination of a supporting frame, side carrying wheels and driving sprocket-wheels mounted on journaled axles; chains and sprocket-wheels mounted on the central transverse shaft for the revolution of said driving sprocket-wheels; a bevel wheel centrally positioned on said shaft engaging a counter-bevel wheel mounted at one end of a central longitudinal shaft, clutches upon said transverse shaft for connecting and disconnecting the sprocket-wheels with the power mechanism, rods and levers for the movement of said clutches, a front steering wheel mounted in a circular band, ball bearings in said band, an annular flange on said band a drum in said band, a sprocket chain engaging the teeth of said drum, a sprocket-wheel for turning said drum, rods connected by a joint, and a worm gear for turning said sprocket wheel, bevel wheels loosely mounted at one end of said central transverse shaft, a clutch slidable on said last named shaft between said bevel wheels and having teeth arranged for engagement with teeth upon said wheels, a shaft having a counter-bevel wheel for alternately engaging said last-named bevel wheels and having a joint connected to a rod running longitudinally, a gear secured to said rod, a transverse worm having a gear engaging the gear so secured and a block and link movable by said worm, substantially as described.

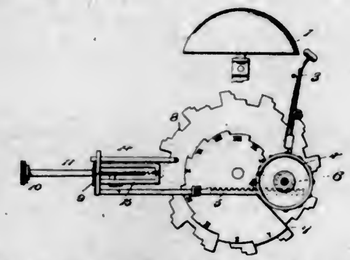
2. In a traction engine in combination with a gasolene power generator, a supporting frame sustaining side carrying wheels, driving sprocket-wheels, means for the revolution of said driving sprocket wheels; a bevel wheel centrally positioned on a shaft engaging a counter-bevel wheel mounted at one end of a central longitudinal shaft, clutches upon said transverse shaft for connecting and disconnecting the sprocket-wheels with the power mechanism, rods and levers for the movement of said clutches, a circular flanged band containing ball bearings, a drum with annular teeth in said band, a sprocket wheel for turning the said drum, means engaging the teeth of said drum and said sprocket wheel, rods connected by a joint, and worm gear for turning said sprocket-wheel, substantially as described.

3. In a traction engine, a mechanism for changing the place of atttachment of the vehicle or object to be drawn, comprising bevel wheels loosely mounted on one end of a central transverse shaft, a clutch slidably mounted between said bevels arranged to mesh with said wheels, a shaft supporting a bevel positioned to engage either of said bevel wheels, a longitudinal shaft joined to the shaft so mounted; a gear secured to said longitudinal shaft, a transverse worm supporting a gear engaging the gear so secured, and a block and link movable by said worm substantially as described.

4. In a traction engine a mechanism for changing the place of attachment of the vehicle or object to be drawn, comprising bevel wheels loosely mounted on one end of a central transverse shaft, means for preventing the outward lateral movement of said wheels, a clutch slidably mounted between said bevel wheels arranged to mesh with said wheels, means for shifting said clutch, a shaft supporting a bevel positioned to engage either of said bevel wheels, a longitudinal shaft joined to the shaft so mounted; a gear secured to said longitudinal shaft, a transverse worm supporting a gear engaging the gear so secured, and a block secured to said longitudinal shaft, a transverse worm sup-

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884,686. TIME-STRIKE FOR WATCH AND CLOCK MOVEMENTS. CARL H. J. STRICKER and EDWARD MEYER, San Antonio, Tex. Filed Apr. 23, 1907. Serial No. 369,802.



1. In a device of the character described, the combination of a snail, a slidably mounted bar, a sound producing device operated by the slidable bar, a rod journaled upon the bar, and a tappet for engaging the snail to limit the movement of the bar, said tappet being controlled by the rod.

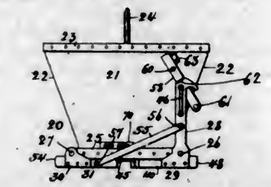
2. In a device of the character described, the combination of a pair of snails, a slidably mounted bar, a sound producing device operated by the slidable bar, a rod journaled upon the bar, and a pair of tappets for engaging the respective snails to limit the movement of the bar, said tappets being controlled by the before mentioned rod.

3. In a device of the character described, the combination of a snail, a sound producing member, a hammer cooperating with the sound producing member, an escape wheel for engaging the hammer, a pinion for rotating the escape wheel, a slidably mounted rack bar engaging the pinion for actuating the hammer, a rod journaled upon the bar, and a tappet carried by the rod for engaging the snail to limit the movement of the bar.

4. In a device of the character described, the combination of a snail, a sound producing device, a slidable bar for actuating the sound producing device, a pair of spaced bars carried by the slidable bar, a rod journaled between the spaced bars, and a tappet carried by the rod and limited in its swinging movement by the spaced bars, the said tappet serving to engage the snail to limit the movement of the slidable bar.

5. In a device of the character described, the combination of a pair of snails, a sound producing device, a slidably mounted bar for actuating the sound producing device, a pair of spaced bars carried by the slidable bar, a rod journaled between the spaced bar, and a pair of tappets carried by the rod and arranged at angles to each other, either one of the tappets being designed to engage one of the bars to hold the other tappet in an operative position for engaging one of the snails to limit the sliding movement of the bar.

884,687. SELF-CLOSING DUMPING-BUCKET. GUSTAVUS L. STUEBNER, Flushing, N. Y. Filed Oct. 15, 1906. Serial No. 338,911.



1. In a bucket the combination of a body, a swinging bottom fulcrumed thereto, a counter weight on the bottom, a latch arm extending from said bottom, a latch lever fulcrumed to said body in the path of the latch arm, a stop in the path of the upper swinging end of the latch lever to control the amount of downward swing of the lower end thereof, the latch lever and latch arm engaging with each other when the bottom is closed against said body, and tightening against each other with any increase of load in said bucket.

2. In a self closing bucket the combination of a body, swinging bottoms fulcrumed thereto, a connection between the swinging bottoms to cause them to swing in unison, latch arms extending from one of said bottoms, latch levers fulcrumed to said body, the two latter elements engaging with each other when the bottoms are closed against said body and tightening against each other with any tendency of the bottoms to swing open, and means to unlock the two latter elements to lower the bottoms.

3. In a self closing dumping bucket the combination of a body, stiffening side plates extending from the sides of the body, journal bars fulcrumed in said side plates, a swinging bottom attached to one of the journal bars, latch arms extending from the said swinging bottom, latch levers fulcrumed to the sides of the bucket and arranged to engage with the latch arms, a swinging bottom attached to the other journal bar, links connecting the latter swinging bottom and the said latch arms.

4. In a self closing dumping bucket the combination of a body, stiffening side plates extending from the sides of the body, journal bars fulcrumed in said side plates, a swinging bottom attached to one of the journal bars, latch arms extending from the said swinging bottom, pins on the sides of the bucket, latch levers fulcrumed on said pins, lugs extending from the latch levers with their contours formed to arcs of circles struck from the centers of said pins, the contours of the latch levers arranged to engage with the ends of the latch arms, a swinging bottom attached to the other journal bar, links connecting the latter swinging bottom with the said latch arms.

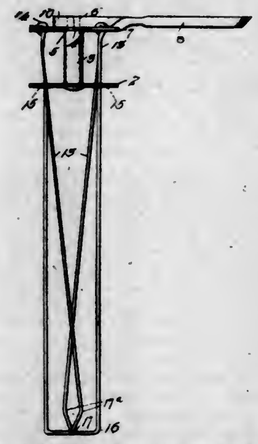
5. In a self closing bucket the combination of a body, journal bars fulcrumed with said body, a swinging bottom connected up with one of said bars, latch arms extending from said swinging bottom, latch levers fulcrumed to the bucket and located to engage with said latch arms, a swinging bottom connected up with the other journal bar, and a link connecting the latter swinging bottom and one of said latch arms.

[Claims 6 to 13 not printed in the Gazette.]

884,688. CULINARY DEVICE. WILLIAM H. TERRY, Fall River, Mass. Filed Mar. 8, 1907. Serial No. 361,231.

1. A pair of separated disk elements, and gripping arms carried by one of the disk elements and guided by the other disk elements, one of said disk elements being rotative with respect to the companion disk element to open and close the arms.

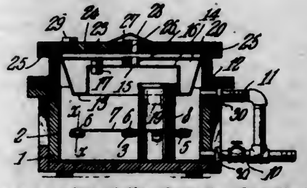
2. A device of the class described, including oppositely rotatable disks, pivotally connected with and spaced a distance from each other, handle members rigidly associated with each of the disks and extending laterally therefrom, a plurality of arms flexibly connected to one of the disks and slidably connected with the remaining disk, and each having a bent terminal at the free end forming a hook and adjacent thereto a curved offset.



3. A device of the class described including a disk having an upwardly extending stem, the latter provided with a reduced portion terminating in a squared end, a rotatable disk mounted on the reduced portion, handle members connected with the rotatable disk and with the squared end of the stem, and yieldable members flexibly connected to the rotatable disk and in slidable engagement with the remaining disk, said members having bent terminals forming hooks.

4. A device of the class described comprising a disk having a handle, a plurality of arms flexibly connected with said disk and terminating in hook extremities, a member mounted to rotate with respect to said disk, and connections between said member and said arms whereby the arms are closed together or opened out as the disk is rotated in one direction or the other.

884,689. APPARATUS FOR COOLING MILK. JAMES TILLOTSON, Hebron, Nebr. Filed July 2, 1907. Serial No. 381,840.

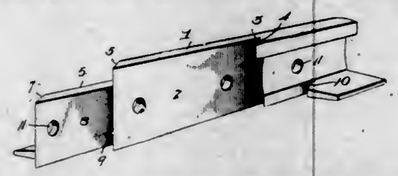


1. In an apparatus of the character described the combination with a tank having communicating drain and overflow outlets, and holding means within the tank; of a frame movably connected to the tank, a tray supported therein and having an air chamber in the bottom thereof, said tray being disposed to hold a cooling medium and to discharge it into the tank, a longitudinally disposed guard strip within the tray, a closure connected to the tray, said closure and the tray having registering ventilating openings, a guard located above said openings, and means for directing a cooling medium through the closure.

2. In an apparatus of the character described the combination with a tank, a tray therein and a closure; of means for holding receptacles within the tank and below

the tray, said means comprising oppositely disposed angular sleeves, each sleeve having a folded portion constituting a retaining ear, cross bars having their ends seated in the sleeves, and retaining wires disposed perpendicularly to the cross bars and engaged and held by the ears.

884,690. RAILROAD-RAIL. HENRY B. UNRUH, Great Bend, Kans. Filed Apr. 12, 1907. Serial No. 367,725.



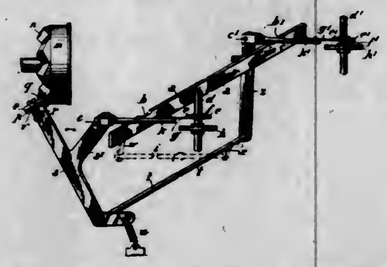
1. A rail member having a recess extending vertically though the head, web and base thereof, a second recess in advance of the first extending through the web and base of the rail member, and a third recess to the rear of the first extending through the base of the rail only.

2. A rail member having a recess extending vertically through the head, web and base thereof, a second recess in advance of the first extending through the web and base of the rail member, a third recess to the rear of the first extending through the base of the rail only, and interlocking projections on the rail member adapted to fit within corresponding recesses in a co-acting rail member.

3. A rail member, having an extension at the end thereof having a flat perpendicular face located substantially in the vertical plane of the center of the rail, and a substantially V-shape nose at its forward end, said rail member having a recess at the rear end of said extension of the full height of the rail, a tongue extending forwardly from the end of the extension below the head of the rail terminating in a substantially V-shape nose and having a flat side in substantially the vertical plane of the outer side of the rail web and forming with the nose of the extension a substantially V-shape recess, one of the flanges of the rail terminating at the base of said nose of the tongue and the other of the rail flanges extending from the web a distance to the rear of the first named recess and being provided with a recess adjacent the rail web.

4. In a rail joint, two rail members, each having two corresponding bevel surfaces, one located in advance of the other on the rail head co-acting with like surfaces on the other rail member, two corresponding bevel surfaces, one located in advance of the other on the web co-acting with like surfaces on the other rail member, and a reëntrant and salient bevel surface on the base co-acting with complemental surfaces on the other rail member, substantially as described.

884,691. RIBBON-FEED MECHANISM FOR TYPEWRITERS. JEAN VÖLKER, Neu Isenburg, Germany, assignor to The Firm of Peter Weil & Co., Rodelheim, near Frankfort-on-the-Main, Germany. Filed Feb. 12, 1906. Serial No. 300,675.



1. In a typewriter the combination with the spring barrel of inverted V-shaped teeth formed with a broad base and a rounded ridge and arranged on the back side of the barrel, of a spring controlled lever keyed upon a shaft pivotally secured to the machine frame work, the said lever coöperating with the teeth of the spring barrel with the intermediary of an antifriction roller, means for preventing the lever from being operated when the spring barrel rotates backward and means for converting the oscillatory motion of the said lever into a rotary motion and transmitting the latter to the ribbon spool spindles substantially as and for the purpose described.

2. In a typewriter the combination with the spring barrel of teeth arranged on the back side of the latter, of a spring controlled lever keyed upon an oscillating shaft, of a bent part arranged on the upper end of the lever, a spring controlled pawl pivotally connected to the said bent part, an antifriction roller, carried on one end of the pawl and coöperating with the teeth of the said spring barrel, a stop on the opposite end of the said pawl which normally rests against the said bent part and is adapted to cause the said lever to oscillate during the forward travel only of the barrel, means for transmitting the oscillating motion of the said lever to the ribbon spool spindles in the form of a rotary motion, substantially as and for the purpose described.

3. In a typewriter the combination with a spring barrel of teeth arranged on the rear side of the latter, of a spring controlled lever oscillated by the said teeth, an oscillating shaft carrying the said lever, arms secured one to the said lever and the other to the said shaft on the opposite side of the machine, horizontal push rods articulated to the said arms and carrying at their free ends slotted plates engaging the vertical ribbon spool spindles, oppositely arranged clawkers coöperating with horizontal ratchet-wheels keyed upon the ribbon spool spindles, means for alternately throwing one of the said pushing rods in and out of gear, substantially as and for the purpose set forth.

4. In a typewriter the combination with a spring barrel of teeth arranged on the rear side of the latter, of a spring controlled lever oscillated by the said teeth, an oscillating shaft carrying the said lever, arms secured one to the said lever and the other to the said shaft on the opposite side of the machine, horizontal push rods articulated to the said arms and carrying at their free ends slotted plates engaging the vertical ribbon spool spindles, clawkers oppositely arranged on the said plates and adapted to rotate at each motion of the push rods, horizontal ratchet wheels keyed upon the ribbon spool spindles, rests for the clawkers when inoperative, and means for raising or lowering alternately one of the said push-rods, substantially as and for the purpose set forth.

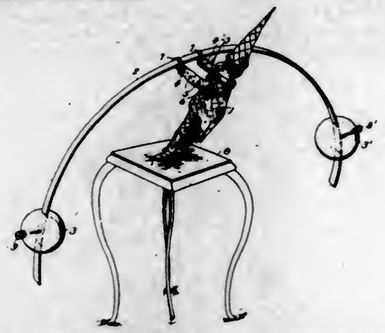
5. In a typewriter the combination with a spring barrel of teeth arranged on the rear side of the latter, of a spring controlled lever oscillated by the said teeth, an oscillating shaft carrying the said lever, arms secured one to the said lever and the other to the said shaft on the opposite side of the machine, horizontal push rods articulated to the said arms and carrying at their free ends slotted plates engaging the vertical ribbon spool spindles, clawkers oppositely arranged on the said plates and adapted to rotate at each motion of the push rods, horizontal ratchet wheels keyed upon the ribbon spool spindles, rests for the clawkers when inoperative, a hand operated slide bar guided on the machine transversely to the said push-rods and adapted to support the latter on its upper edge, shallow recesses arranged in the said upper edge of the bar and so distributed as to cause one of the push rods to be in its recess while the other push rod rests on the plain edge of the bar, substantially as and for the purpose described.

[Claims 6 to 8 not printed in the Gazette.]

884,692. TOY. HENRY E. WAGGAMAN, Annapolis, Md., assignor to Conrad Hoffman, Elyria, Ohio. Filed Dec. 3, 1904. Serial No. 235,364.

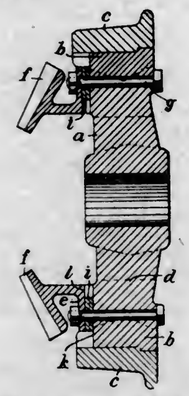
1. In a toy, a figure, arms attached to said figure, means for adjusting the arms to said figure, a weight-supporting

member fast to said arms, and adjustable balancing weights on said member.



2. In a toy, a figure, a curved bail provided with adjustable balancing weights, parallel arms fast to said bail and provided each with a series of openings, and means engaging said openings for fastening said figure in any desired position on said arms.

884,693. DRIVING-WHEEL AND GEAR-RIM CONNECTION. GEORGE L. WALL, Lima, Ohio, assignor to The Lima Locomotive and Machine Company, Lima, Ohio, a Corporation of Ohio. Filed Aug. 23, 1907. Serial No. 389,764.



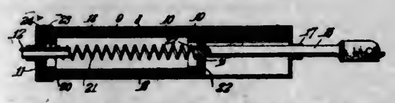
1. The combination, with a driving-wheel, of a gear-rim having a flat circular flange fitted thereto, bolts connecting the flange and wheel, the wheel and the gear-rim having opposed radial recesses in their contiguous surfaces intersecting one of the bolt-holes, and a key fitted to the opposed recesses and perforated for the passage of a bolt.

2. The combination, with a driving-wheel, of a gear-rim having a flat circular flange fitted to the wheel with bolt-holes extended through the flange and the wheel, the wheel and the gear-rim both having opposed radial recesses in their contiguous surfaces intersecting one of the bolt-holes, a key fitted to the opposed recesses and perforated for the passage of a bolt, and a bolt extended through the flange, key and wheel, with nut to lock it in place, substantially as set forth.

884,694. AIR-BRAKE. WILLIAM A. WEANT, Mocksville, N. C. Filed Jan. 28, 1908. Serial No. 413,050.

1. A brake cylinder including telescopic sections, an elastic member connecting said sections, and a brake actuating member carried by and movable with one of the sections.

2. A brake cylinder including telescopic sections, an elastic sleeve connecting said sections and normally housed within the same, a brake actuating member carried by and movable with one of the sections, and means for supplying fluid to the interior of the sleeve.



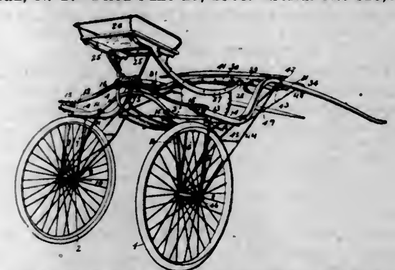
3. A brake cylinder including relatively stationary and movable telescopic sections, an elastic sleeve connecting said sections, a brake actuating member carried by the movable section, and a conductor projecting within the elastic sleeve for supplying fluid to the latter.

4. A brake cylinder including telescopic sections, a flexible member connecting said sections, a conductor for supplying fluid to the interior of the sleeve to move one of the sections to extended position, a brake actuating member carried by the movable section, and means disposed within the sleeve for returning the movable section to retracted position when the fluid is exhausted from the sleeve.

5. A brake cylinder including relatively stationary and movable telescopic sections, an elastic sleeve connecting said sections, a conductor for supplying fluid under pressure to the interior of the sleeve, a brake actuating member carried by the movable section, and a casing forming a housing for said sections.

[Claims 6 to 8 not printed in the Gazette.]

884,695. TWO-WHEELED CART. JAMES WHITE, Penn Yan, N. Y. Filed June 23, 1906. Serial No. 323,078.



1. In a two wheeled cart, the combination of the axle 4 having the standards 6, 6' and 7, 7'; the shafts 14, 14 secured to the axle 4; the cross-bars 29 and 33 secured to the shafts 14, 14; the brace 35 secured on the cross-bars 29 and 33; with the braces 44, 44 secured to the shafts near the ends of the cross-bar 29 and at the lower ends of the standards 6, 6' and 7, 7'; and the braces 47, 47 secured to the shafts 14, 14 near the ends of the cross-bar 33 and to the axle 4.

2. The combination of the two shaft cross-bars of a vehicle with an integral brace consisting of one member secured to one cross-bar and two members secured to the other cross-bar.

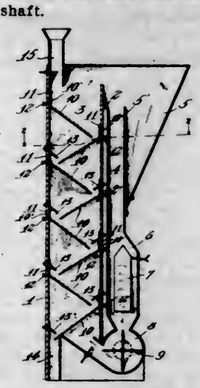
3. The combination of the cross-bars 29 and 33 secured together with the integral brace 35 consisting of the members 36 and 37, 37, and the connections 39, 39 between the member 36 and members 37, 37.

4. The combination of the cross-bars 29 and 33 secured together at their middles, and the integral brace 35 consisting of the members 36 and 37, 37, and the connections 39, 39 with the brace rods 40, 40, the brace 35 being fastened to the cross-bars 29 and 33 and the rods extending from one cross-bar to the other.

884,696. GRAIN-DRIER. WILLIAM WILSON, Seattle, Wash., assignor of one-half to Thomas G. H. Grant, Wenatchee, Wash. Filed Dec. 24, 1907. Serial No. 407,979.

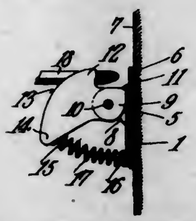
1. A grain drier comprising a casing provided with a shaft in which is arranged a plurality of inclined aprons to provide a tortuous passage for the grain, said casing being provided with a dust chamber open to communica-

tion with said shaft, a heating means, a conduit through which air from the upper portion of said shaft travels to said heating means, and a fan arranged to draw air heated by said heating means and force the same into the lower portion of said shaft.



2. A grain drier comprising a casing provided with a shaft and a conduit, a partition separating said shaft and conduit, said partition being hollow and being open at each side, inclined aprons pivoted to said partition and to the opposite wall of said shaft, means for adjusting said aprons to vary their inclination, the means for adjusting those aprons pivoted to said partition projecting into said partition, and means for forcing heated air into said shaft.

884,697. AUTOMATIC DOOR-CHECK. JAMES WIRGMAN, Cumberland, Md., asignor of one-half to W. O. Hoffman and George E. Deneen, Cumberland, Md. Filed May 27, 1907. Serial No. 375,981.

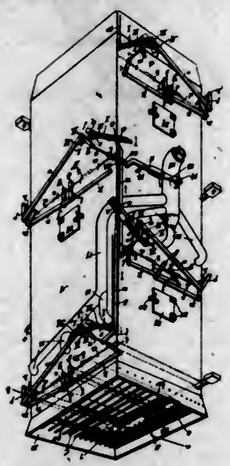


In an automatic door check, the combination with a locking member adapted to be secured to one of the parts, of a catch member embodying an attaching plate adapted to be secured to the other part and provided with a recess in its rear surface, a strip of yielding material inserted in said recess and adapted to be clamped between the attaching plate and the object to which it is secured, a catch pivotally mounted on the attaching plate and having a locking shoulder substantially in alinement with a portion of the said strip, and a spring for retaining the shoulder on the latch in coöperative relation with the said locking member.

884,698. APPARATUS FOR MIXING CONCRETE. JOHN F. D. WITHROW, Ottawa, Ontario, Canada. Filed Aug. 3, 1905. Serial No. 272,494.

1. An apparatus of the class described, comprising a rigid non-moving supporting structure, a first trap therein; a second trap therebelow, said traps being a fixed distance apart; a non-moving receptacle above each trap; means normally holding said traps closed; means controlled by the opening of said first trap adapted to lock said second trap in its normal closed position.

2. An apparatus of the class described, comprising a rigid non-moving supporting structure; a first trap therein; a second trap therebelow, said traps being a fixed distance apart; a non-moving receptacle above each trap; means normally holding said traps closed; means controlled by the opening of said first trap adapted to lock said second trap in its normal closed position, and means controlled by said second trap whereby water is introduced into the material undergoing mixing.



3. An apparatus of the class described, comprising a suitable receptacle; a first trap therein adapted to control passage of material therethrough; a second trap therein and below said first trap also adapted to control passage of material therethrough; means adapted to lock said second trap in its closed position and to unlock same when said first trap opens and closes; means counterbalancing said traps adapted to return same to normal position after dumping; means, controlled by said second trap, adapted to introduce a fluid into said receptacle.

4. An apparatus of the class described, comprising a rigid non-moving supporting structure; a first trap therein; a second trap therebelow; said traps being a fixed distance apart and opening crosswise one to the other; a non-moving receptacle above each trap; means normally holding said traps closed; means controlled by the opening of said first trap adapted to lock said second trap in its normal closed position, and means controlled by said second trap whereby water is introduced into the material undergoing mixing.

5. An apparatus of the class described, comprising in combination a suitable receptacle; a first trap; a second trap below said first trap and opening crosswise thereto; means adapted to lock and unlock said second trap in its closed position, said means being controlled by the operation of said first trap; means adapted to supply fluid to said receptacle, said fluid supply being started and cut off by said second trap.

[Claims 6 to 37 not printed in the Gazette.]

884,699. POOL-BALL RACK. HORACE O. YEWELL, Glenwood Springs, Colo. Filed June 10, 1907. Serial No. 378,173.

1. A pool-ball rack having a series of inclined shelves and discharge openings at one end thereof, a vertically movable stop extended over the discharge side of the rack for normally blocking the passage from said shelves, a chute normally occupying an upright position, and means for causing said stop to be moved vertically out of its blocking position when the chute is moved in one direction.

2. A pool-ball rack having a series of inclined shelves and discharge openings at one end thereof, a stop mounted over said discharge openings, a chute mounted near the lower end of said stop and normally occupying an upright position, and an extension carried by said chute for engaging said stop to move it out of its blocking position.

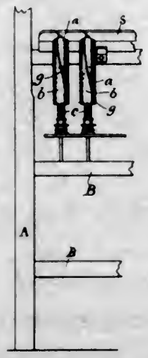
3. A pool-ball rack having a series of inclined shelves and discharge openings at one end thereof, a stop-board extended over said discharge openings, a chambered extension wherein said stop-board is located, guides for said stop-board, a chute hinged to the lower end of said extension, and means actuated by said chute for moving said stop-board.



4. A pool-ball rack having inclined shelves and discharge openings at one end thereof, a stop-board fitted against the discharge side of the rack having openings corresponding to said discharge openings, a chute, spring-impelled means for normally holding said chute in an upright position, and means carried by said chute for moving said stop-board.

5. A pool-ball rack having inclined shelves and discharge openings at one end thereof, a stop-board fitted against the discharge side of the rack having openings corresponding to said discharge openings, a chute hinged at one end and having an extension at such end, an adjustable screw carried by said stop-board with which said extension is designed to engage, and means for holding said chute in its normal position.

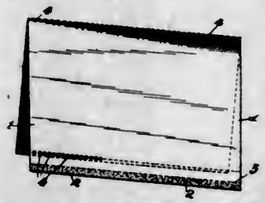
884,700. THREAD-GUIDE FOR SPINNING-MACHINES. FRED AMBLER, Bradford, and HARRY WALLACE, Queensbury, near Bradford, England. Filed Apr. 28, 1906. Serial No. 314,277.



1. In a cap spinning machine, a shield for surrounding the upper part of the spindle and having its upper and lower ends of substantially the same diameter, said shield having a spiral slit or opening in its wall, means for supporting said shield concentrically with said spindle, the inner surface of said shield being made smooth and even throughout to avoid presenting any obstacles to the movements of the thread as the latter rubs against and is guided by it substantially as herein specified.

2. In a cap spinning machine, a shield for surrounding the upper part of the spindle and having its upper and lower ends of substantially the same diameter, said shield having a spiral slit or opening in its wall, the said slit or opening being wider at the exterior of the shield than at the interior thereof, means for supporting said shield concentrically with said spindle, the inner surface of said shield being made smooth and even throughout to avoid presenting any obstacles to the movements of the thread as the latter rubs against and is guided by it substantially as herein specified.

884,701. POST-CARD SHIELD. PHILIP H. BORDEN, Portland, Me. Filed Feb. 11, 1907. Serial No. 356,702.



1. A shield for a picture post card, comprising a body portion adapted to protect the picture side of the card and having securing flaps adapted to be folded over the edges of the card and having means for attachment opposite the address side thereof entirely below the edges whereby when the shield is removed by tearing adjacent the attached portion, the attached remnants will be concealed from the picture side of the card.

2. A shield for a picture post card, comprising a body portion adapted to protect the picture side of the card, and having lines of weakness whereby the edges of the shield may be accurately folded over the edges of card, and means for securing said edges opposite the address side of the card entirely below the edges whereby when the shield is removed by tearing adjacent the attached portions, the attached remnants will be concealed from the picture side of the card.

3. A shield for a picture post card, comprising a body portion adapted to protect the picture side of the card, and having securing flaps adapted to be folded over the edges, and secured opposite the address side, of the card, said flaps having lines of weakness near their edges arranged to lie below the edges of the card, whereby when the shield is removed by tearing along said lines of weakness the remnants thereof will be concealed from the picture side of the card.

4. A shield for a picture post card comprising a body portion adapted to protect the picture side of the card, and having lines of weakness to facilitate folding the edges thereof over the edges of the card for attachment to the card, the parts so folded also having lines of weakness arranged to lie below the edges of the card whereby when the shield is removed by tearing along said second lines of weakness, the remnants of the shield will be concealed from the picture side of the card.

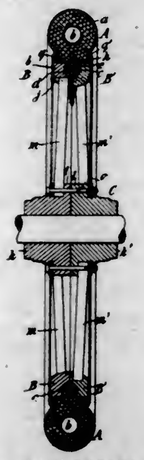
5. A shield for picture post cards, comprising a body portion adapted to protect the picture side thereof, and having flaps adapted to be folded over the edges of the cards, said flaps having gummed surfaces for attachment to the address side of the card, and having lines of weakness adjacent said surfaces and arranged to lie below the edges of the card, whereby when the shield is removed by tearing along said lines of weakness the attached remnants will be concealed from the picture side of the card.

[Claims 6 and 7 not printed in the Gazette.]

884,702. TIRE AND WHEEL THEREFOR. WALTER BOWDEN, New York, N. Y. Filed July 17, 1906. Serial No. 326,540.

1. A wheel having a wooden rim made in two sections having opposing recesses adapted to receive the flange of a tire, and a divided metal rim, each half of which is fixed to one of the rim sections.

2. A wheel having a rim made in two sections having opposing recesses adapted to receive the flange of a tire, and a divided metal rim, each half of which is fixed to one of the rim sections and is formed with a channel adapted to receive a side flange of a tire.

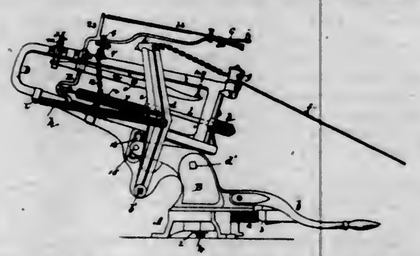


3. The combination of a tire having a central flange extending inwardly from its inner side, such flange having an enlarged inner portion and a reduced outer portion or neck connecting the enlarged portion with the tire, and a wheel having a rim made in two sections and having opposing recesses adapted to receive such flange, said rim having walls conforming to the shape of said flange, and a divided metal rim, each half of which is fixed to one of the rim sections.

4. The combination of a tire having a central flange extending inwardly from its inner side, such flange having an enlarged inner portion and a reduced outer portion for neck connecting the enlarged portion with the tire, and said tire having two side flanges formed thereon, and a wheel having a rim made in two sections and having opposing recesses adapted to receive such flange, said rim having walls conforming to the shape of said flange, and a divided metal rim, each half of which is fixed to one of the rim sections and is formed with a channel adapted to receive one of said side flanges.

5. A wheel having a wooden hub formed in two sections, a wooden rim formed in two sections, and two series of spokes, each series mortised in a section of the hub and a section of the rim, and means for drawing such hub and rim sections so that the respective sections of the hub and rim are in close contact whereby the wheel is in effect an undivided wheel when the sections are joined, and a metal rim formed in two sections, each of which is fixed to a section of the wooden rim.

884,703. TARGET-TRAP. JOHN BOWRON, Hamilton, Ontario, Canada. Filed Mar. 19, 1907. Serial No. 363,230.



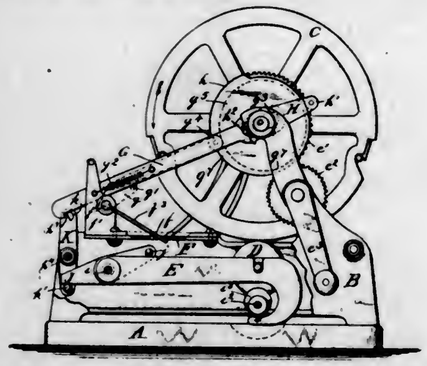
1. In a target trap, a rectangular shaped frame (carrying a target rod) adjustably and pivotally secured to a swinging plate pivotally secured to a base plate, two levers pivoted together to the lower side of the said frame, a power actuating spring secured to the crank portion of the target rod and to one of the said levers, a rod made to pass from said lever to one end of the rectangular frame, and a coiled spring surrounding it outside of the frame, a hook attached to one lever to catch on the top of the other lever in front of it to draw it back, a chain or rope attached to the catch lever and made to pass between two rollers for setting off the trap, substantially as specified.

2. In a target trap, of the class specified, in combination with the main frame and double levers and their catch hook, a pin with a cam at its top, and a spiral spring under it, made to pass through the main frame and connect with a pivoted lever, the opposite end of the said lever made to come in contact with a loose pin in the main frame above the rear end of the said lever, by which the said pin is pushed up thereby to release the catch hook on the top of the pivoted double levers when they are drawn backwards to throw the target, substantially as specified.

3. In a target trap of the class specified, in combination with the target holder, a triangular open frame pivoted to the inner end base plate of the target holder, the latter made to pass through the said frame and a spiral spring attached to said triangular shaped frame and to a lug on the target rod for the purpose specified.

4. In a target holder of the class specified, a main rectangular shaped frame, two levers pivoted together at their lower ends to the main frame, a catch hook on the rear lever to catch on the front lever, a crank throwing arm pivoted to the main frame, a power spring connecting the crank arm to the front lever, a spring connecting the main frame to the rear lever, a movable hook, pivoted to the top of the main frame, a chain or rope connecting said hook to the rear lever, to pull the hook down when desired, a rod secured to the front lever, through the rear lever and through the rear end of the main frame, and a spring on the outer end of said rod and devices for releasing the catch from the front lever, for the purpose specified.

884,704. DUPLICATING APPARATUS. ERNEST J. BRASSEUR, Chicago, Ill., assignor to A. B. Dick Company, Chicago, Ill., a Corporation of Illinois. Filed July 25, 1907. Serial No. 385,433.



1. In a duplicating machine, the combination of a drum, means for securing a stencil-sheet thereon, means for rotating the drum, a pressure-roller, movable arms in which said roller is rotatably mounted, said arms being movable in correspondence with the rotation of the drum to carry the pressure-roller to operative and inoperative positions relatively to the drum, a feed-board over which impression-sheets are fed between the drum and roller, and means controlled by an impression-sheet on said feed-board for operating said arms to position the pressure-roller, substantially as set forth.

2. In a duplicating machine, the combination of a drum, means for securing a stencil-sheet thereon, means for rotating the drum, a pressure-roller underlying the drum, pivoted arms in which said roller is rotatably mounted, said arms being movable about their pivots to carry the roller toward and away from the drum, a feed-board over which impression-sheets are fed between the drum and roller, and means controlled by an impression-sheet on said feed-board for operating said arms to position the pressure-roller, substantially as set forth.

3. In a duplicating machine, the combination of a drum, means for securing a stencil-sheet thereon, means for rotating the drum, a pressure-roller underlying the drum, pivoted arms in which said roller is rotatably mounted, said arms being movable about their pivots to carry the roller toward and away from the drum, a feed-board over which impression-sheets are fed between the drum and roller, an arm movable to coact with an impression-sheet and adapted to have its movement arrested thereby, and means controlled by the arresting of the movement of said arm by the impression-sheet for operating said pivoted arms to position the pressure-roller, substantially as set forth.

4. In a duplicating machine, the combination of a drum, means for securing a stencil-sheet thereon, means for rotating the drum, a pressure roller, arms in which said roller is rotatably mounted, said arms being movable to carry the roller to operative and inoperative positions relatively to the drum, means for guiding an impression-sheet between the drum and roller, an arm movable to coact with an impression-sheet when in position for coaction with the drum and roller and adapted to have its movement arrested thereby, and means controlled by the coaction of said arm with an impression-sheet for positioning the pressure-roller relatively to the drum, substantially as set forth.

5. In a duplicating machine, the combination of a drum, means for securing a stencil-sheet thereon, means for rotating the drum, a pressure-roller, arms in which said roller is rotatably mounted, said arms being movable to carry the roller to operative and inoperative positions relatively to the drum, a feed-board over which impression-sheets are fed between said drum and roller, said board having an opening therein, an arm mounted adjacent to the feed-board and adapted to be moved as the drum is rotated to carry its end into said opening or into coaction with an impression-sheet, and means operated when said arm enters said opening for holding the pressure-roller in inoperative position, substantially as set forth.

[Claims 6 to 8 not printed in the Gazette.]

884,705. SOLVENT FOR METALS. EDWARD C. BROADWELL, Chicago, Ill., assignor to J. W. Meaker, Jr., Chicago, Ill. Filed Feb. 28, 1906. Serial No. 303,516.

A metal solvent comprising a mono-nitrosulfonic acid and a suitable haloid salt.

884,706. CUSHION. EDWARD G. BUDD, Philadelphia, Pa., assignor to Hale-Kilburn Metal Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Apr. 7, 1906. Serial No. 310,459.

1. In a cushion, the combination of a frame formed of sheet metal frame sections secured together, said sections having inwardly extending flanges at the sides thereof, flat springs at both sides of said cushion secured at their ends to said flanges, covering material overlying said springs and yieldingly positioned thereby, and means for securing the edges of said material to said metallic frame, substantially as described.

2. In a cushion, the combination of a frame formed of sheet metal frame sections secured together, said sections having inwardly extending flanges at the sides thereof, a brace extending across said frame and secured at its ends to said flanges, flat springs at both sides of said cushion secured at their ends to said flanges, covering material overlying said springs and yieldingly positioned thereby, and means for securing the edges of said material to said metallic frame, substantially as described.



3. In a cushion, the combination of a frame formed of sheet metal frame sections secured together, each of said sections having inwardly turned flanges at the sides thereof and a groove intermediate said flanges, springs supported on said frame, covering material extending over both sides of said frame and yieldingly positioned on both sides of the frame by said springs, and means coacting with said groove for securing the edges of said covering material to said metallic frame, substantially as described.

4. In a cushion, the combination of a frame formed of pressed sheet metal frame sections secured together, each of said sections having inwardly turned flanges at the sides thereof and a groove intermediate said flanges, a metallic brace extending across said frame and secured at its ends to said flanges, springs supported on said frame, covering material extending over both sides of said frame and yieldingly positioned by said springs, and means coacting with said grooves for securing the edges of said covering material to said metallic frame, substantially as described.

5. In a cushion, the combination of a metallic frame formed of frame sections secured together at their ends, each of said sections consisting of a single piece of sheet-metal pressed to provide flanges at the lateral edges extending inwardly of the frame and a groove on the outer side of the section intermediate and parallel to the lateral edges, and certain of said flanges being curved lengthwise thereof strips located in the grooves in said sections, springs supported on the frame, and a covering extending over both sides of said frame and yieldingly sustained on both sides by said springs, said covering overlying and being shaped by said flanges and being secured at its edges to said strips, substantially as described.

[Claims 6 to 19 not printed in the Gazette.]

884,707. CUSHION. EDWARD G. BUDD, Philadelphia, Pa., assignor to Hale-Kilburn Metal Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Apr. 7, 1906. Serial No. 310,461.

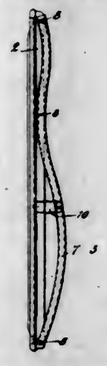
1. In a cushion, a frame comprising metallic frame sections secured together at their ends, and metallic end-form pieces curved in the direction of their length secured to the ends of said frame, substantially as set forth.

2. In a cushion, a frame comprising metallic frame sections secured together at their ends, and end-form pieces formed of metal strips of uniform cross-section, each of said strips being curved in the direction of its length to form a body portion and a head-roll and each secured to said frame along one end thereof, substantially as set forth.

3. In a cushion, a rectangular frame comprising two metallic frame sections secured together at their ends, one forming the bottom of the frame and the other bent to form the top and ends and having rounded corners, and metallic end-form pieces curved in the direction of their length secured to the ends of said frame, each of said

pieces being bent laterally at its upper end to conform to the rounded corner of the frame, substantially as set forth.

4. In a cushion, a rectangular metallic frame and form-pieces of sheet-metal secured to the ends of the frame and shaped to provide surfaces thereon curved in the direction of the length of the pieces to form a body portion and a head-roll, substantially as set forth.



5. In a cushion, a rectangular metallic frame and form-pieces of sheet-metal secured to the ends of the frame, said pieces being flanged inwardly of the frame at their edges and shaped to provide surfaces thereon curved in the direction of the length of the pieces to form a body portion and a head-roll, substantially as set forth.

[Claims 6 to 14 not printed in the Gazette.]

884,708. CUSHION. EDWARD G. BUDD and JOSEPH A. WOLLÉ, Philadelphia, Pa., assignors to Hale-Kilburn Metal Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Apr. 24, 1906. Serial No. 313,405.



1. A rectangular metallic frame consisting of four frame-sections secured together at their ends and each consisting of a plurality of sheet-metal strips secured together at their edges and bent longitudinally to provide open space between the sides of the section and a flange running lengthwise of the section, said flanges each having a series of openings therethrough, slats extending across the frame, spiral springs mounted on the frame, flat springs supported by said spiral springs, a covering overlying said flat springs and a sewing interlaced through the covering and the openings in said flanges to secure the covering to the frame, substantially as set forth.

2. In a cushion, a rectangular metallic frame having a flange at the outer edge thereof substantially perpendicular to the plane of the frame and openings through said flange, springs supported on said frame, a covering overlying said springs, and a sewing interlaced through said covering and the openings in the flange of said frame for holding the edges of the covering firmly thereto, substantially as set forth.

3. In a cushion, a rectangular metallic frame comprising frame-sections secured together at their ends, each of said sections consisting of two sheet-metal strips secured together at their edges by flanges on one strip and coacting folds on the other and formed to provide an open space between them intermediate their edges, one of said flanges and its coacting fold having a line of holes therein, springs secured upon said frame, a covering overlying said springs, and a sewing interlaced between said covering and said openings to hold the covering in position, substantially as set forth.

4. In a cushion, a metallic frame having openings therein, spiral springs supported upon said frame, flat springs extending across said frame and supported by said spiral springs, an inner covering overlying said flat springs, an outer covering overlying said inner covering, and a sewing and tacks coacting with said openings for securing the edges of said coverings to said frame, one independently of the other, substantially as set forth.

5. In a cushion, a metallic frame having openings therein and slats extending across the frame and secured at their ends thereto, spiral springs supported on said frame, flat springs supported on said spiral springs, an inner and an outer covering overlying said flat springs, a sewing interlaced between one of said coverings and openings in said frame, and tacks coacting with openings in said frame for securing the other of said coverings to said frame, substantially as set forth.

[Claims 6 and 7 not printed in the Gazette.]

884,709. CUSHION. EDWARD G. BUDD, Philadelphia, Pa., assignor to Hale-Kilburn Metal Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed May 1, 1906. Serial No. 314,658.



1. In a cushion, a rectangular metallic frame having end-members each provided with flanges at its edges turned inwardly of the frame and one on either side thereof, the connections between said flanges and the body portions of said end-members being rounding ones and the exterior surfaces of said flanges being curved in the direction of the length of the end-members, and a covering extending over said frame and secured at its edges thereto, said covering overlying said flanges and being shaped thereby, substantially as described.

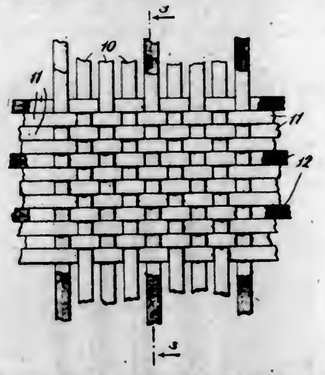
2. In a cushion, a rectangular metallic frame having end-members, metallic form-pieces secured to said members and each provided with a flange turned inwardly of the frame, the connections of said flanges with the body portions of the form-pieces being rounding ones and the exterior surfaces of the flanges being curved in the direction of the length of the form-pieces, and a covering extending over said frame and secured at its edges thereto, said covering overlying said flanges and being shaped thereby, substantially as described.

3. In a cushion, a rectangular metallic frame having end-members, metallic form-pieces secured to said members, each of said form-pieces being provided with flanges at its edges turned inwardly of the frame and one on either side thereof and said flanges being curved in the direction of the length of the form-pieces, and a covering extending over said frame and secured at its edges thereto, said covering overlying said flanges and being shaped thereby, substantially as described.

4. In a cushion, a rectangular metallic frame consisting of frame-members secured together at their ends, each of said members being a sheet-metal strip pressed into form to provide a groove on the outer side thereof extending lengthwise of the member, a tacking-strip secured in the groove in each of said members, a metallic form-piece secured to the tacking-strip on each of the end-members of the frame, each of said pieces having a flange at one of its lateral edges turned inwardly of the frame and curved in the direction of its length, a covering extending over said frame and overlying and shaped by said flanges, and tacks securing the edges of said covering to said tacking-strips, substantially as described.

5. In a cushion, a rectangular metallic frame consisting of frame-members secured together at their ends, each of said frame-members being a sheet-metal strip pressed to provide a groove on the outer side thereof extending lengthwise of the member, a tacking-strip in the groove in each of said members, a metallic form-piece secured to the tacking-strip in each of the end-members of the frame, said form-pieces having flanges at their lateral edges turned inwardly of the frame, one on either side thereof and curved in the direction of their length, a covering extending over both sides of the frame and overlying and shaped by said flanges, and tacks securing the edges of the covering to said strips, substantially as described.

884,710. SEATING. EDWARD G. BUDD, Philadelphia, Pa., assignor to Hale-Kilburn Metal Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Feb. 15, 1907. Serial No. 357,476.



1. The combination of a metallic frame, slats extending across the same, spiral springs mounted upon the frame, flat metallic springs supported upon the upper ends of said spiral springs, a covering consisting of flattened, pliable, metallic strands closely interwoven extending over said frame and secured at its edges thereto, said covering forming the surface material of the cushion and being yieldingly sustained by said springs, and a plurality of strips of spring-metal interposed between said flat springs and said covering, substantially as set forth.

2. The combination of a metallic frame, metallic slats extending across the same, spiral springs mounted on said slats, flat metallic openings supported upon the upper ends of said spiral springs, a covering consisting of flattened, pliable, metallic strands closely interwoven extending over said frame and secured at its edges thereto, said covering forming the surface material of the cushion and being yieldingly sustained by said springs, and a network of spring-metal strips between said flat springs and said covering, substantially as set forth.

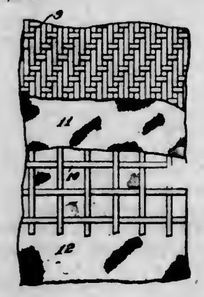
3. The combination of a metallic frame, slats extending across the same, spiral springs mounted upon the frame, flat metallic springs supported upon the upper ends of said spiral springs, a covering consisting of flattened, pliable, metallic strands closely interwoven extending over said frame and secured at its edges thereto, said covering forming the surface material of the cushion and being yieldingly sustained by said springs, and a plurality of strips of spring-metal interwoven with said strands, substantially as set forth.

4. In seating, a frame, a covering secured over the frame formed of flattened, pliable, metallic strands closely interwoven, said covering forming the surface material of the seating, and means interwoven with said strands for making the central portion of the covering resilient, substantially as set forth.

5. In seating, the combination of a metallic frame, a covering formed of flattened, pliable, metallic strands closely interwoven extending over said frame and folded about the edges thereof, said covering forming the surface material of the seating, and flat metallic strips interwoven with said strands for stiffening the portion of the covering lying between the members of the frame, substantially as set forth.

[Claims 6 to 15 not printed in the Gazette.]

884,711. SEATING. EDWARD G. BUDD, Philadelphia, Pa., assignor to Hale-Kilburn Metal Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Mar. 23, 1907. Serial No. 364,195.



1. In seating, the combination of a covering formed of flattened metallic strands closely interwoven forming the surface material of the seating and a fabric of flat spring-metal strips separate from said covering and underlying the same, substantially as described.

2. In seating, the combination of a covering formed of flattened metallic strands closely interwoven forming the surface of the seating and a fabric of flat spring-metal strips separately formed and underlying the same, the strips crossing each other being secured together, substantially as described.

3. In seating, the combination of a metallic frame consisting of sheet-metal frame-sections secured together at their ends, a covering extending over and secured at its edges to said frame consisting of flattened metallic strands closely interwoven said covering forming the surface material of the seating, and a fabric of flat spring-metal strips formed separate from said covering and underlying the same, substantially as described.

4. In seating, a covering formed of flat metallic strands closely interwoven and a textile fabric and a fabric of flat spring-metal strips underlying the same, substantially as described.

5. In seating, a covering formed of flattened metallic strands closely interwoven, and a fabric of flat spring-metal strips inclosed between layers of textile fabric underlying said covering, substantially as described.

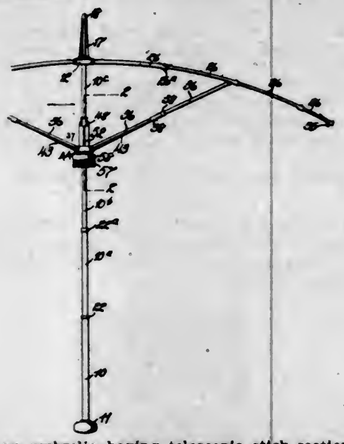
[Claims 6 to 12 not printed in the Gazette.]

884,712. FOLDING UMBRELLA. JOSEPH CASALE, New York, N. Y. Filed May 20, 1907. Serial No. 374,555.

1. A folding umbrella having a stick formed of telescoping parts, the sections of the parts having annular ribs thereon which have recesses on their inner sides, and some of which serve on their outer sides as catches for the umbrella runner, in combination with spring catches on the inner sides of the stick sections, adapted to enter the aforesaid recesses, and a runner having a latch to engage some of the aforesaid ribs.

2. A folding umbrella having a telescopic stick, a stiffening rod held in the upper section of the stick and extending through the umbrella crown, a crown, means for fastening the top of the stiffening rod in extended position,

and a flexible hood having one part secured to the rod and another to the crown whereby the crown and rod are loosely connected.



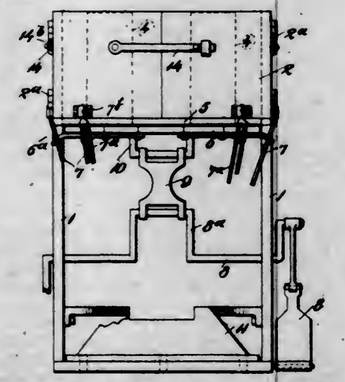
3. In an umbrella having telescopic stick sections, the combination with the said sections having adjacent parts recessed, of U shaped springs held within the sections and provided with catches to engage the recesses of the sections and hold them in open position, said catches having prolonged free ends and means for engaging said ends and releasing the catches.

4. In an umbrella of the kind described, the combination with the telescoping stick sections, of the bow shaped spring catches pivoted through their centers and adapted to project through holes in the inner sections and enter recesses in the outer sections, said catches having prolonged free ends, and sliding means for pressing the free ends of the catches together to release them.

5. The combination with the umbrella stick, the runner thereon and the telescoping rib sections, of the telescopic braces connecting the runner with the sections, and catch rods pivoted to the runner below the pivots of the inner brace sections, said catch rods lying within the inner brace sections and having their outer ends shaped to project through holes in adjacent inner and outer brace sections.

[Claims 6 and 7 not printed in the Gazette.]

884,713. MACHINE FOR MOLDING CEMENT BLOCKS. FRANK CHERNY, Cleveland, Ohio. Filed Dec. 3, 1907. Serial No. 404,962.



1. The combination of a mold having side walls formed in sections hinged together at the corners of the mold, and means to swing the various corner sections toward or from each other, to close or open the mold.

2. The combination of a mold having side walls each of which consists of two separable sections, the sections of one wall being hinged at the corners of the mold to the sections of the adjoining walls, and means to move the pairs of sections so hinged toward or from each other, to close or open the mold.

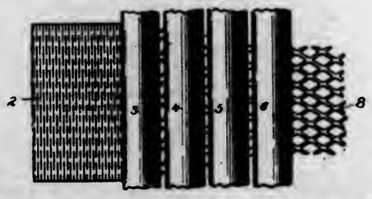
3. The combination of a mold having separable side walls and a base plate, a frame under the base plate, arms hinged at their lower ends to the frame and connected at their upper ends to the side walls to support the same, a plate movable up and down in the frame and having projections connected to the arms to swing the same in or out, and means to raise or lower the plate.

4. The combination of a mold having separable corner sections each of which includes parts of two adjoining side walls, a base plate and a frame thereunder, arms hinged to the frame and supporting said corner sections and arranged to swing in or out to close or open the walls of the mold, and means to operate said arms.

5. The combination of a mold having separable corner sections each of which comprises parts of two adjoining side walls hinged together at the corner, a base plate and a frame thereunder, a pair of arms at each corner hinged at their lower ends to the frame and connected at their upper ends to said parts, and arranged to swing out or in to open or close the mold, a plate slidable up and down in the frame and between said pairs of arms and having projections connected thereto, means to raise or lower the plate.

[Claim 6 not printed in the Gazette.]

884,714. MANUFACTURE OF EXPANDED METAL. NORRIS E. CLARK, Plainville, Conn., assignor to The National Metal Fabric Company, New York, N. Y., a Corporation of New York. Original application filed Jan. 12, 1906, Serial No. 295,810. Divided and this application filed Apr. 7, 1906. Serial No. 310,522.



1. The new and improved method of manufacturing expanded metal which comprises first, slitting the metal to form strands and then frictionally engaging the outer surfaces of the strands to open the slits and maintain the strands in a single plane.

2. The method of manufacturing expanded metal sheets which comprises slitting the metal sheet and then continuously feeding and expanding the slitted metal in the plane of the original sheet to form a flat sheet with alternately arranged openings.

3. The method of manufacturing expanded metal which comprises feeding a slitted sheet continuously at right angles to the direction of the slits, opening the slits in the direction of the line of feed and preserving the strands in a single plane.

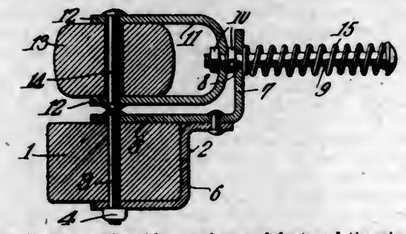
4. The method of manufacturing expanded metal which includes the continuous frictional engagement of the surfaces of a slitted sheet along the lines of the bonds and entirely across the sheet for opening the slits.

5. The method of manufacturing expanded metal which includes the continuous frictional engagement of the surfaces of a slitted sheet along the lines of the bonds and straight across the sheet for opening the slits.

[Claims 6 to 20 not printed in the Gazette.]

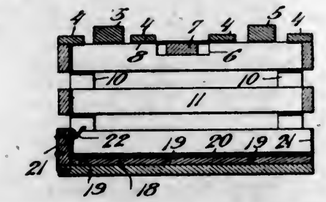
884,715. WHIFFLETREE ATTACHMENT. EDWARD C. COFFIN, Coffinton, Ga. Filed Oct. 10, 1907. Serial No. 396,818.

A whiffletree attachment comprising a bracket for attachment to the cross bar of a pair of vehicle shafts, said bracket formed of an L-shaped strip of metal the horizontal member of which lies on the upper side of said cross bar and the vertical member extending upwardly, and a second bent strip having an intermediate vertical member bearing on the rear of said cross bar and two horizontal end members extending in opposite directions, the upper of said end members being riveted to the horizontal member of the L-shaped strip and the lower horizontal member



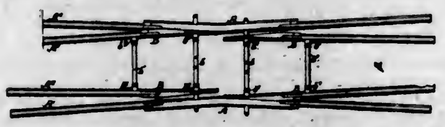
extending beneath said cross bar and fastened thereto by a bolt or rivet passing through the cross bar and the L-shaped strip, a yoke pivoted to the whiffletree by a bolt or rivet in vertical line with the fastening bolt for the bracket, a bolt passing horizontally through a hole in the vertical member of the L-shaped strip and adjustably connected to said yoke, and a compression spring surrounding said bolt between its head and said upright member.

884,716. WATER-TROUGH FOR POULTRY CRATES OR COOPS. GEORGE J. COOK, Port Huron, Mich. Filed Mar. 27, 1906. Serial No. 308,308.



The combination with a coop or crate for poultry and the like having an opening in one side of a semi-cylindrical trough holder with open ends secured transversely across the bottom of the coop, a water trough also constructed semi-cylindrical and provided with opposite end walls, said trough being slidably mounted in the holder and through the opening in the side of the crate, and a spring secured to the lower portion of the crate and having a bent V-shaped terminal which serves to be sprung over one of the end walls of the water trough, substantially as specified.

884,717. MOVABLE-POINT CROSSING. WARNER B. COOKE, Jenkintown, Pa., assignor to William Wharton, Jr., & Company, Incorporated, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Apr. 26, 1907. Serial No. 370,518.

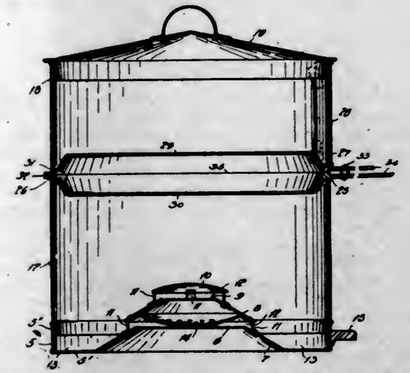


1. In a movable point crossing, the combination, with the knuckle-forming track rail, of the movable point rails, terminating some distance on each side of the "knuckle", the hard metal point-forming piece, whose upper surface is in the same plane as the said point rail, said point-forming piece having the rearward extension adjacent the outer edge of the head of the point rail, together with means for securing said point rail and hard metal point-forming piece together, substantially as described.

2. In a movable point crossing, the combination, with the knuckle-forming track rail, of the movable point-rails terminating some distance on each side of the "knuckle", the hard metal point-forming piece whose upper surface is in the same plane as the said point rail, said point-forming piece having the rearward extension adjacent the outer edge of the head of the point rail, and whose free rear end is downwardly beveled, together with means for securing said point rail and hard metal point-forming piece together, substantially as described.

3. In a movable point crossing, the combination, with the knuckle-forming track rail, of the movable point rails, terminating some distance on each side of the "knuckle", the hard metal point-forming piece, whose upper surface is in the same plane as the said point rail, said point-forming piece having the rearward extension adjacent the outer edge of the head of the point rail, and having also a web portion, together with the strap piece extending the length of the point-forming piece, its forward portion lying against the web of the latter, and its rear portion against the web of the point rail, together with the bolts securing said point-forming piece, point rails, and strap, together, substantially as described.

884,718. COOKING UTENSIL. JEREMIAH H. COWHIG, Bremerton, Wash. Filed Aug. 7, 1907. Serial No. 387,462.



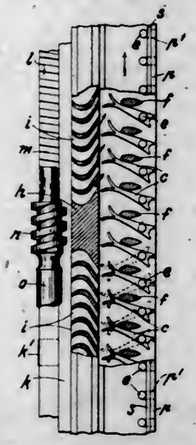
1. A cooking utensil, comprising a base section having its bottom formed with a conical shaped central portion, a similar shaped member secured to said bottom and a hood secured to said member, said hood and member being positioned so as to furnish interstices therebetween and also between said bottom and the member, a perforated diaphragm connected to said member, a section adapted to interfit with said base section, said second named section being provided with a slot in its peripheral wall and an aperture diametrically opposite from said slot, a device for holding the article being cooked and provided with a handle and a tang which are respectively adapted to be seated in said slot and the aperture, and a cover adapted to interfit with the second named section.

2. A cooking utensil comprising a casing provided in its wall with a slot and opposite said slot with an aperture, a pan provided with a tang and a handle adapted to be respectively seated in said aperture and slot, and a heat distributer comprising a plurality of superposed spaced members, the lower of which embodies an annular base having an upwardly extending flange receiving said casing, said lower member having a centrally truncated cone-shaped portion open at both ends, a second similarly shaped portion mounted thereon, and a hood mounted on said second named member.

3. A cooking utensil comprising a casing having a slot, a pan provided with a handle and a tang which are respectively adapted to be seated in said slot and in an aperture provided in said wall, and a heat distributer comprising a series of spaced members superposed in stepped

relation and rigidly secured together, the lower of said members curved to form a gutter-like receptacle for the drippings, the intermediate member being provided with a perforated bottom, and the upper member being in the form of a hood.

884,719. TURBINE. RICHARD CRAMP, London, England. Filed Jan. 22, 1908. Serial No. 412,099.



1. In a reversible turbine; the combination with a cylindrical casing, a revoluble shaft passing axially therethrough, end covers to the casing and bearings in the end covers to carry said shaft, blade-carrying rotor disks keyed at a distance apart on said revoluble shaft, a stationary guide ring located within the casing in front of and adjacent to each rotor disk, said guide ring having an annular series of guide vanes arranged alternately in groups of forwardly directed vanes and groups of backwardly directed vanes, and means for opening or closing one or other or both groups of said guide vanes, the casing having a steam inlet at one end to admit steam to the first stationary guide ring and an outlet at the other end of the casing; of blades carried by the rotor disks, a pivot at the rear end of each rotor blade, bearings in the revoluble disks to carry said pivots radially to the revoluble shaft to permit said blades to freely swing about said pivots, stop-pieces on said revoluble disks between said pivoted blades to limit the angular motion of said blades, and a bifurcation on the radial free edges of said rotor blades facing the steam inlet to provide surfaces for the jets of steam to act upon to rock said blades into an opposite position upon change of direction of the incoming steam jets substantially as set forth.

2. In a reversible turbine; the combination with a cylindrical casing, a revoluble shaft passing axially therethrough, end covers to the casing and bearings in the end covers to carry said shaft, blade-carrying rotor disks keyed at a distance apart on said revoluble shaft, a stationary guide ring located within the casing in front of and adjacent to each rotor disk, said guide ring having an annular series of guide vanes arranged alternately in groups of forwardly directed vanes and groups of backwardly directed vanes, and means for opening or closing one or other of both groups of said guide vanes, the casing having a steam inlet at one end to admit steam to the first stationary guide ring and an outlet at the other end of the casing; of blades carried by the rotor disks, each blade having its forward radial edge divided lengthwise of said edge and curved in opposite directions to provide surfaces for the jets of steam to act upon to rock said blades into an opposite position upon change of direction of the incoming steam jets, a pivot at the rear end of each rotor blade, bearings carried by the revoluble disks to carry said pivots, and stop-pieces on said revoluble disks located between said pivoted blades to limit the angular motion thereof, substantially as set forth.

3. In a reversible turbine; the combination with a cylindrical casing, a revoluble shaft passing axially therethrough, end covers to the casing, bearings in said end covers to carry said shaft, stationary guide rings located within said casing at a distance apart, each guide ring having an annular series of guide vanes arranged in groups of forwardly directed and groups of backwardly directed vanes, and means for opening or closing one or other or both groups of said guide vanes, the casing having a steam inlet at one end to admit steam to the first stationary guide ring and an outlet at the other end; of rotor disks keyed to said revoluble shaft and located one adjacent to each stationary guide ring, each rotor disk having an outer annular ring and radial connecting stop pieces extending between the periphery of each rotor disk to its outer ring to support the latter, blades carried by each rotor disk, a bifurcation on the radial free edges of said blades facing the steam inlet, radial pivots at the rear end of each rotor blade, said outer annular ring having holes to receive the outer pivot of each rotor blade, and said rotor disk having semi-circular radial recesses in its face to receive the inner pivots of said rotor blades, a cover ring having radial semi-circular recesses and fixed to the face of each rotor disk to receive and complete the bearings of the inner pivots of said rotor blades, said pivoted rotor blades being located between said stop pieces on said rotor disks, substantially as set forth.

4. In a reversible turbine; the combination with a cylindrical casing, a revoluble shaft passing axially therethrough, end covers to the casing, bearings in said end covers to carry said shaft, rotor disks keyed at a distance apart on said revoluble shaft, rotor blades carried by said disks, the casing having a steam inlet at one end and a steam outlet at the other end; of stationary guide rings within the casing one located adjacent to and in front of each rotor disk, each guide ring having an annular series of guide vanes arranged in groups of forwardly directed and groups of backwardly directed vanes, said vanes in said guide rings being located opposite to said rotor blades, valves in contact with the surface of each guide ring for opening or closing one or other or both groups of said guide vanes in said guide rings, and means for moving the valves of each guide ring, substantially as set forth.

5. In a reversible turbine; the combination with a cylindrical casing, a revoluble shaft passing axially therethrough, end covers to the casing, bearings in said end covers to carry said shaft, rotor disks keyed at a distance apart on said revoluble shaft, rotor blades carried by said disks, the casing having a steam inlet at one end and a steam outlet at the other end; of stationary guide rings within the casing one located adjacent to and in front of each rotor disk, each guide ring having an annular series of guide vanes arranged in groups of forwardly directed and groups of backwardly directed vanes, said vanes in said guide rings being located opposite to said rotor blades, valves in contact with the surface of each guide ring for opening or closing one or the other or both groups of said guide vanes in said guide rings, and means for moving the valves of one guide ring simultaneously and proportionally to the valves of all the other stationary guide rings, substantially as set forth.

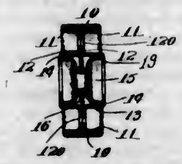
[Claims 6 to 9 not printed in the Gazette.]

884,720. ROLLER OR WHEEL. WALTER L. CURTIS, Worcester, Mass. Filed Jan. 3, 1908. Serial No. 409,171.

1. A wheel having a two-part central hub, double flanges or spokes, and a double rim or tread all formed from one piece of metal, each edge of the tread being integrally connected with one of the flanges whereby pressure imparted to either outer edge of the tread will be transmitted to both flanges.

2. A wheel having an annular one-piece double ball rest having an annular central depression.

3. A wheel having a two-part central hub, flanges or spokes, and a rim or tread, all formed of one piece of metal, and a ball-rest held in place in said two-part central hub by inwardly turned flanges on the edges of said hub.

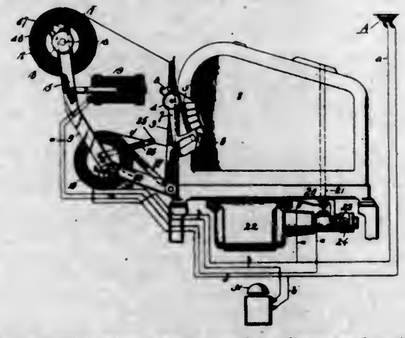


4. A wheel having a two-part central hub, flanges or spokes, and a double rim or tread, all formed from one piece of metal, and a double ball-rest formed of one piece and having a center inwardly projecting, said ball-rest being held in place in said two-part central hub by flanges inwardly turned on the edges of said hub.

5. A wheel having a two-part central hub, flanges or spokes, and a rim or tread formed of sheet metal, and a ball-rest, the outer annular edges of the hub projecting over upon the outer faces of the ball-rest all around to form therewith an annular ledge outside of the ball-rest for receiving a dust cap.

[Claims 6 and 7 not printed in the Gazette.]

884,721. PAPER-REWIND MECHANISM FOR ADDING-MACHINES. SHELBY J. DAVIDSON, Lexington, Ky. Filed Mar. 13, 1906. Serial No. 305,830.



1. In combination, an impression platen and pull-off mechanism past which a record strip travels, a supporting frame, a freely rotatable strip supply roll mounted in said frame, a normally idle rewind roll mounted in said frame to which said strip is delivered, and intermittently operated roll-driving means acting on said rewind roll to effect an automatic step-by-step rotation of said rewind roll to take up the slack of the strip as it comes from the impression platen and pull-off mechanism and store it in roll form.

2. An adding machine having an impression platen and pull-off mechanism past which a record strip travels, a supporting frame, a freely-rotatable strip supply roll mounted in said frame, a strip rewind roll mounted in said frame to which the strip is delivered from said platen and pull-off mechanism, and means operated from a moving part of the adding machine to automatically impart a step-by-step rotation to said rewind roll to take up the slack of the strip as it comes from the impression platen and store it in roll form.

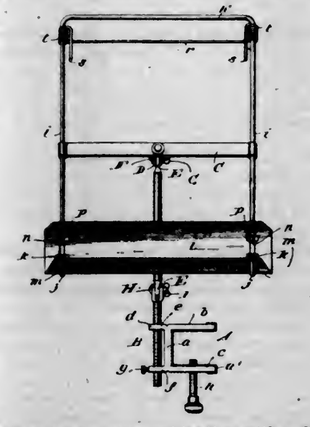
3. An adding machine having an impression platen and pull-off mechanism past which a record strip travels, a supporting frame, a freely rotatable strip supply roll mounted in said frame, a strip rewind roll mounted in said frame to which the strip is delivered from said platen and pull-off mechanism, and electromechanical means energizable from a moving part of the adding machine to automatically impart a step-by-step rotation to said rewind roll to take up the slack of the strip as it comes from the impression platen and store it in roll form.

4. An adding machine having an impression platen and pull-off mechanism past which a record strip travels, a supporting frame, a freely-rotatable strip supply roll mounted in said frame, a strip rewind roll mounted in said frame to which the strip is delivered from said platen and pull-off mechanism, mechanism for rotating said rewind roll, a thrust-rod to actuate said roll-rotating mechanism, and means operated from a moving part of the adding machine to intermittently move said thrust-rod.

5. An adding machine having an impression platen and pull-off mechanism past which a record strip travels, a supporting frame, a freely-rotatable strip supply roll mounted in said frame, a spring-rotated rewind roll to take up the slack of the strip as it comes from said platen and pull-off mechanism and store it in roll form, pawl-and-ratchet mechanism to set the roll-spring and drive the rewind roll, a thrust-rod to intermittently actuate said pawl-and-ratchet mechanism, and means operated from a moving part of the adding machine to move said thrust-rod.

[Claims 6 to 14 not printed in the Gazette.]

884,722. BOOK-HOLDER. NEWTON S. DAVIS, Montrose, Colo. Filed Jan. 2, 1908. Serial No. 409,066.



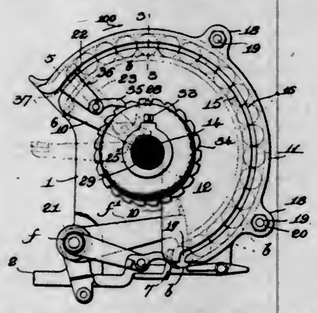
1. In a book holder, the combination with a frame having side bars, of a cross-bar extending between the side bars, leaf-holding clips, and coils surrounding and frictionally engaging the side bars of the frame; the said coils being arranged between and formed integral with the cross-bar and the clips.

2. In a book holder, the combination with a frame having an upper cross-bar and depending side bars which are integral with said cross-bar and terminate at their lower ends in forwardly reaching arms having upwardly extending portions at their forward ends; of a book-rest formed of a single piece of sheet-metal and having a base portion resting on and supported by the said arms of the frame bars and also having an upwardly extending portion provided with loops which receive said frame bars.

3. A book holder comprising a clamp, an upright rod adjustably fixed against vertical movement with respect to said clamp, a link adjustably fixed to the upright and arranged to be swung vertically, a member adjustably connected to the link, a frame having an upper cross-bar and depending side bars which are integral with said cross-bar and terminate at their lower ends in forwardly reaching arms having upwardly extending portions at their forward ends and also having a cross-bar swiveled on the said member, an upper cross-bar *r* extending between the side bars of the frame, leaf-holding clips, coils

surrounding and frictionally engaging the side bars of the frame and arranged between and formed integral with the cross-bar *r* and the clips, and a book-rest formed of a single piece of sheet-metal and having a base portion resting on and supported by the said arms of the frame bars and also having an upwardly extending portion provided with loops which receive said frame bars.

884,723. FILLING-REPLENISHING MECHANISM FOR LOOMS. GEORGE O. DRAPER, Hopedale, Mass., assignor to Draper Company, Hopedale, Mass., a Corporation of Maine. Filed Oct. 28, 1907. Serial No. 399,488.



1. A filling-feeder comprising two opposite and separate chutes to receive the butts and tips, respectively, of a series of filling-carriers, the tip-receiving chute having a continuous passage in its outer end for the filling-ends, and a spring-actuated follower movable in the chutes, to assist in feeding them forward into position to be transferred.

2. A filling-feeder comprising a circularly-curved chute to receive a series of filling-carriers, a follower to engage the rearmost one of the series, means to move the follower forward in a circular path, and a filling-end guide movable in unison with the follower.

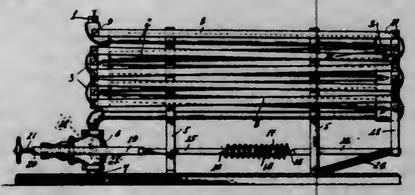
3. A circularly-curved chute to contain a series of filling-carriers, combined with a circularly-movable follower to act upon the rearmost filling-carrier in the chute and assist in moving the series forward.

4. The combination, with a stationary, circularly-curved chute to receive the butts and tips of a series of filling-carriers, of a spring-actuated follower to engage the rearmost carrier and fulcrumed co-axially with the chute.

5. A circularly-curved chute to contain a series of filling-carriers, combined with a circularly-movable follower to act upon the rearmost filling-carrier in the chute and assist in moving the series forward, and a spring operatively connected with and to effect the movement of said follower and maintain it in engagement with the rearmost filling-carrier.

[Claims 6 to 13 not printed in the Gazette.]

884,724. STEAM-TRAP. FRANCIS DUFFY, Kingston, Ontario, Canada. Filed July 27, 1907. Serial No. 385,904.



1. A steam trap comprising a pipe coil, a valve controlling the outlet from the steam coil, resiliently connected means for opening and closing the valve by the contraction and expansion of the pipes of the coil, and resilient means for maintaining the valve open when steam is shut off from the coil.

2. A steam trap comprising a plurality of inclined pipes, elbows connecting the adjacent ends of the pipes provided with projecting bosses, levers pivoted on the bosses a link having one end fixed and its opposite end connected to one of the levers, a plurality of links connecting the other levers in series, an outlet valve in one of the pipes, and means for connecting the end of one of the levers with the valve to open and close the same.

3. A steam trap comprising a steam coil, a lever projecting from the steam coil, means for rocking the lever by the expansion and contraction of the steam coil, a pair of resiliently connected links connected to the lever, a valve casing connected to the coil, a valve disposed in the casing, and a yoke arranged to actuate the valve and having one end connected to one of said links.

4. A steam trap comprising a coil, an outlet valve for the coil, a screwthreaded valve stem on the valve, a yoke having a screwthreaded opening therein through which the stem is disposed, a link carried by the yoke, a second link resiliently connected with said link, and means for moving the latter link by the contraction and expansion of the coil.

5. A steam trap comprising a coil, a lever pivoted to the coil, means for moving the lever, links resiliently connected together and connected with the lever, an outlet valve for the coil, means for moving the valve from the link, and a spring having one end secured to said lever and its opposite end secured to a fixed support.

[Claims 6 and 7 not printed in the Gazette.]

884,725. PROCESS OF PREPARING MALT BY MEANS OF CHLORID OF LIME OR OTHER HYPOCHLORITE SALTS. JEAN EFFRONT, Brussels, Belgium. Filed Feb. 8, 1906. Serial No. 300,187.

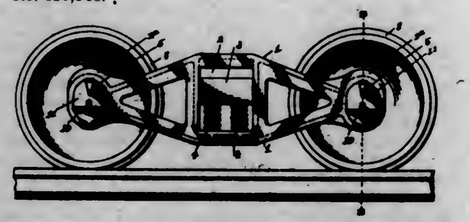
1. The process of preparing grain in the preparation of malt which consists in steeping the grain in the presence of a neutralized hypochlorite salt, substantially as described.

2. The process of treating grain in the preparation of malt which consists in steeping the grain in water and adding to the steeping water a neutralized hypochlorite salt substantially as described.

3. The process of treating grain in the preparation of malt which consists in steeping the grain in water and adding to the steeping water from time to time sufficient neutralized hypochlorite salt to maintain the yield of available chlorin at substantially 0.5 to 0.7 grams per liter of the water, substantially as described.

4. The process of treating grain in the preparation of malt which consists in steeping the grain in the presence of a neutralized hypochlorite salt, terminating the steeping step before the grain is completely steeped, and then effecting the germination of the grain in the presence of a neutralized hypochlorite salt, substantially as described.

884,726. TRUCK SIDE FRAME. CHARLES B. GOODSPEED, Columbus, Ohio. Filed Jan. 11, 1908. Serial No. 410,348.



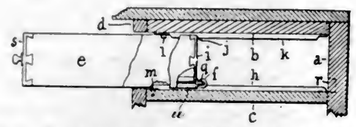
1. The combination with an integrally formed truck side frame having openings through each end at right angles with the direction of the length of said frame, and journal boxes adapted to be received and rigidly supported in said openings.

2. The combination with an integrally formed truck side frame having openings through each end thereof extending at right angles to the direction of the length of the frame, and means for detachably locking said journal boxes into rigid engagement with said frames.

3. The combination with an integrally formed truck side frame having openings through each end thereof extending at right angles with the direction of the length of the frame, of journal boxes, and means formed integral with said journal boxes for engaging said truck frame and holding said boxes rigidly in connection therewith.

4. The combination with a truck side frame having openings through the integrally formed end portions thereof, said openings extending at right angles with the direction of the length of the frame, and journal boxes adapted to be received by and rigidly held in said openings.

884,727. FURNITURE-DRAWER. WILLIAM GRATTAN, Dookie, Victoria, Australia. Filed Aug. 8, 1907. Serial No. 387,590.



1. A furniture fitting comprising a rail having means for mounting it in position over a drawer, said rail having a movable stop adapted in one position to prevent withdrawal of the drawer and in another position to form a continuation of the rail and permit withdrawal of the drawer.

2. The combination with a drawer having the top of its back recessed approximately at its middle and a rail fixed to the drawer casing and fitting in said recess whereby said rail forms a guide for the drawer and said rail having one or more pivoted stops.

3. The combination of a casing having a guide rail and a drawer having a recess extending substantially throughout its length and a metal channel located within said recess and fitting said guide rail, and a grooved wheel carried by said drawer at its rear and running on said rail.

4. The combination of a casing having a guide rail and a drawer having a metal channel extending substantially throughout its length and fitting said guide rail, and a grooved wheel carried by said drawer at its rear and running on said rail.

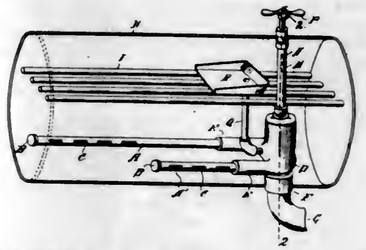
5. The combination of a casing having rails fixed thereto, a drawer having grooves along substantially its entire length, metal channels in said grooves sliding on said rails, a rail fitted to the casing at the top of said drawer and having a stop, said drawer having a groove fitting said rail and adapted to be held in said casing by said stop.

[Claim 6 not printed in the Gazette.]

884,728. CLEANER FOR STEAM-BOILERS. ISAAC C. GRAY, Logansport, Ind., assignor to Automatic Boiler Cleaner Company, Logansport, Ind., a Corporation. Filed Dec. 13, 1907. Serial No. 406,274.

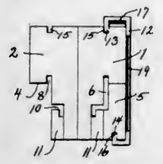
1. In a steam boiler, the combination of a casting secured to an outlet in the bottom of the boiler, said casting having two branches; a short and a long blow-off pipe lying near the bottom of the boiler secured to said branches; a pipe connected to said casting leading to a surface skimmer, a hollow rotary valve located in said casting and provided with a single port adapted to communicate successively with each of said pipes, and steam jet pipe entering said valve and secured thereto, and means exterior of the boiler for turning said pipe and valve.

2. In a steam boiler, the combination of a bottom blow-off connection, cleaner pipes located in the bottom of the boiler; a valve casting to which said pipes are connected; a pipe and surface skimmer also connected to said casting; a valve in said casting adapted to open communication with each of said pipes; a steam jet pipe leading to said valve, and means exterior to the boiler for operating said valve.



3. In a steam boiler, the combination of a blow-off pipe located in the bottom of the boiler, a pipe and connected skimmer located on the surface of the water in the boiler, a single valve casting to which said pipes connect, a valve in said casting for successively effecting communication between said pipes and the exterior of the boiler; a steam jet pipe communicating with said valve, and means for operating said valve.

884,729. COMPUTING SLIDE-RULE. HENRIK GRÖNDAHL, Chicago, Ill., assignor to Burgess & Sauerberg, Grand Rapids, Mich., a Copartnership. Filed Aug. 14, 1905. Serial No. 274,036.



1. In a slide rule comprising a main body provided with a guide way extending throughout its principal length, a scale laid off upon said main body in uniform-length unit divisions and one or more series of uniform-length fractional divisions of each unit division, a slide mounted upon said guide way and provided with a scale essentially a duplicate as to divisions of a corresponding part of the main body scale, said main body being of two-part construction and the members thereof united by a rule joint arranged to bring the respective portions of the guide way into register and alinement when the main members are in alinement.

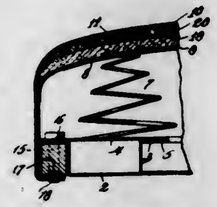
2. In a slide rule the combination of a main body provided with a longitudinally extending guide way formed therein, a slide fitting said guide way and means holding the slide against lateral displacement from the way, comprising an angle plate rigidly secured to the slide and projecting at its edge from the latter and an undercut groove formed longitudinally in said way and receiving the edge of said angle plate.

3. In a slide rule the combination of a main body provided with a longitudinally extending guide way formed therein, a slide fitting said guideway and means holding the slide against lateral displacement from the way comprising a right angled approximately Z-shaped plate secured to the slide having both of its edges projecting therefrom, and undercut grooves formed in said main body, corresponding to and receiving the projecting edges of said confining plate.

884,730. CUSHION. HENRY S. HALE, Philadelphia, Pa., assignor to The Hale and Kilburn Manufacturing Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Sept. 12, 1906. Serial No. 334,294.

1. In a cushion, the combination of a metallic frame consisting of sheet-metal frame-sections united at their ends, each of said sections having a flange extending outwardly

of the frame from the upper edge of the section, a strip secured to each frame-section with two of its faces against the outer side of the section and the under side of the flange thereon, a metallic casing secured to each strip and protecting the other faces thereof, springs supported on the frame, a covering yieldingly positioned by said springs, its edges being carried under said strips, and tacks extending through the edges of the covering and openings in said casings and into the under sides of said strips to secure the covering to the frame, substantially as described.



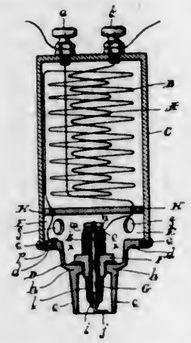
2. In a cushion, the combination of a metallic frame consisting of sheet-metal frame-sections united at their ends, each of said sections having a flange extending outwardly of the frame from the upper edge of the section, tacking strips, bolts securing each of said strips to the flange on a frame-section with one face against the under side of the flange and another against the outer side of the frame-section, a metallic casing secured to each strip and protecting the other faces thereof, springs supported on the frame, a covering yieldingly supported by said springs, its edges being carried under said strips, and tacks extending through the edges of the covering and openings in said casings and into the under side of said strips to secure the covering to the frame, substantially as described.

3. In a cushion, the combination of a metallic frame consisting of sheet-metal frame-sections united at their ends, each of said sections having a flange extending outwardly of the frame from the upper edge of the section, a strip secured to each frame-section with two of its faces against the outer side of the section and the under side of the flange thereon, a metallic casing secured to each strip and protecting the other faces thereof, springs supported on the frame, two coverings yieldingly supported by said springs, tacks securing the edges of the inner covering to the outer faces of said strips and tacks securing the edges of the outer covering to the under side of the strips, said tacks extending through openings in said casings, substantially as described.

4. In a cushion, the combination of a metallic frame consisting of sheet-metal frame-sections united at their ends, each of said sections having a flange extending outwardly of the frame from the upper edge of the section, a strip secured to each frame-section with two of its faces against the outer side of the section and the under side of the flange thereon, a metallic casing secured to each strip and protecting the other faces thereof, springs supported on the frame, a covering yieldingly positioned by said springs, and tacks extending through the edges of the covering and openings in said casings and into said strips to secure the covering to the frame, substantially as described.

5. In a cushion, the combination of a metallic frame consisting of sheet-metal frame-sections united at their ends, each of said sections consisting of two sheet-metal strips, one bent longitudinally to form three sides of a rectangle in cross-section and to provide flanges at the lateral edges, and the other bent to form folds at the lateral edges inclosing said flanges, one of said flanges and its inclosing fold forming a flange extending outwardly of the frame, a strip secured to each frame-section with two of its faces against the outer side of the section and the under side of the flange thereon, springs supported on the frame, a covering yieldingly positioned by said springs and tacks extending through the edges of the covering and openings in said casings and into said strips to secure the covering to the frame, substantially as described.

884,731. ELECTRIC IGNITING DEVICE. ROY E. HARDY, New York, N. Y. Filed Dec. 18, 1905. Serial No. 292,178.



1. In an electric igniting device the combination of an induction coil, a casing of non-conducting material inclosing said coil and projecting at one end beyond the same, exterior binding screws carried by the casing in electrical connection with the terminals of the primary of the coil, a sparking plug having an exterior metallic shell forming one electrode, a second electrode insulated therein, a flanged head integral with the shell detachably engaging and closing the projecting end of the casing and forming an air space between it and the induction coil, and electrical connections connecting the exterior shell and the insulated electrode with the terminals of the secondary within the air space in the casing.

2. In an electric igniting device, the combination of an induction coil, a perforated tubular casing of non-conducting material inclosing the same and projecting at one end beyond the same, a sparking plug having one electrode in the form of an exterior metallic shell secured in the projecting end of the casing, and an insulated metallic conductor secured within the shell forming the other electrode, the exterior shell forming an air space between it and the induction coil and provided with an annular recess in the adjacent end of the shell around the inner electrode.

3. In an electric igniting device, a tubular casing of insulating and non-conducting material closed at the outer end, a transverse wall of insulating and non-conducting material an induction coil secured in the casing between the outer end and said transverse wall, binding screws on the outer end of the casing connected to the primary terminals of the coil, a spark plug consisting of a hollow shell provided at its inner end with a circular integral flange detachably secured in the open end of the casing and with a central dividing wall in which an insulated electrode is secured in axial coincidence with the shell, a binding post on the axial electrode securing a terminal of the secondary part of the coil extending through an aperture in the transverse wall, and a binding post in the shell securing the other terminal of the secondary post likewise passing through an aperture in the transverse wall, said shell and casing being disposed to form an air chamber around the electrode and between it and the coil in communication with the outer air through apertures in the casing.

884,732. INLAID LINOLEUM. THOMAS T. HOLLINGER, Detroit, Mich. Filed Feb. 15, 1906. Serial No. 301,286.

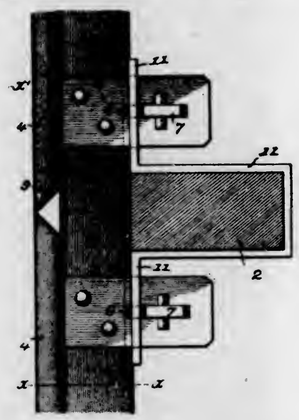
1. A covering material having in combination a fabric base, a plastic coating laid directly thereon, said coating having a plurality of small lines deeply indented in its exposed surface, and material homogeneous with said coating but of different color, inlaid in said small lines, substantially as described.

2. As a new article of manufacture, in combination with a flexible backing, a homogeneous covering of various colors, the material of one color being spread completely over one side of the backing and having its exposed surface deeply indented with cuts imitating in the aggregate the grain of wood, the material of different color being run



thereinto and allowed to harden and become physically integral therewith, substantially as described.

884,733. MOLD FOR CONCRETE WALLS. JOHN HORSFIELD, Chicago, Ill., assignor of one-half to Frank M Stresenrenter, Chicago, Ill. Filed Aug. 22, 1907. Serial No. 389,647.



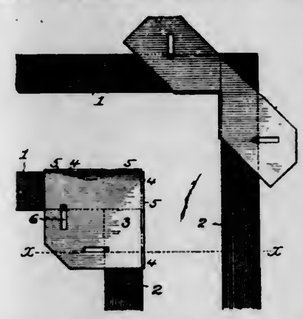
1. A tie for mold planks comprising a main plate having right angle flanges at one end extending the width of the tie plate and adapted to form a continuous projection within the mold cavity, and elongated slots at the other end, and tapering keys engaging said slots, substantially as set forth.

2. A tie for mold planks comprising a main plate having right angle flanges at one end extending the width of the tie plate and adapted to form a continuous projection within the mold cavity, and elongated slots at the other end, tapering keys engaging said slots, and a keeper piece having a hasp form and provided with orifices for the passage of the outer ends of the main plate, substantially as set forth.

3. A tie for mold planks comprising a main plate having right angle flanges at one end extending the width of the tie plate and adapted to form a continuous projection within the mold cavity, and elongated slots at the other end, tapering keys engaging said slots, and vertical strips having end extensions adapted for engagement behind said flanges, substantially as set forth.

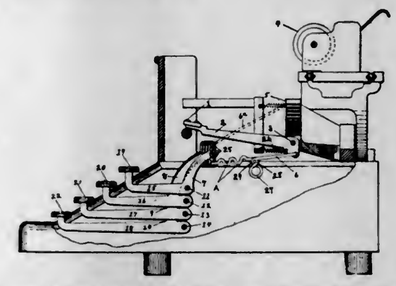
884,734. CONCRETE-WALL MOLD. JOHN HORSFIELD, Chicago, Ill., assignor of one-half to Frank M. Stresenrenter, Chicago, Ill. Filed Aug. 22, 1907. Serial No. 389,648.

A tie plate for mold planks, comprising a main plate, having pairs of right angle flanges arranged in angular relation at one side of said main plate, and a pair of elongated slots in like angular relation at the other side of



said main plate, and tapering keys engaging said slots, substantially as set forth.

884,735. TYPE-WRITING MACHINE. CHARLES W. HOWELL, Newark, N. J., assignor to Sun Typewriter Company, a Corporation of New Jersey. Filed Oct. 20, 1906. Serial No. 339,782.



1. In a typewriting machine, the combination with a type-bar and a key, of an intervening link formed of springy metal having a loop between its ends to permit lengthening of the link when the key is struck sharply; means being provided for mechanically limiting the extent of longitudinal yielding action of the link.

2. In a typewriting machine, the combination with a type-bar and a key, of an intervening link formed of springy metal having a loop between its ends to permit lengthening of the link when the key is struck sharply; means being formed upon the link for mechanically limiting the extent of longitudinal yielding action of the link.

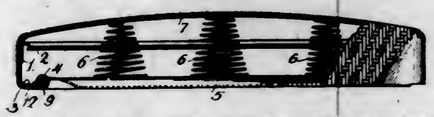
3. In a typewriting machine, the combination with a type-bar and a key, of an intervening link in the form of a wire which between its ends is formed into a spring to permit longitudinal extension of the link; two parts being formed upon the link one of which is movable into engagement with the other during the lengthening of the link to prevent further lengthening of the latter.

4. In a typewriting machine, the combination with a type-bar and a key, of an intervening link in the form of a wire which between its ends is formed into a loop to permit longitudinal extension of the link; the loop being twisted so that one leg thereof hooks into the other; said legs being slightly separated but engageable with each other during the lengthening of the link to prevent further lengthening of the latter.

5. In a typewriting machine, the combination with a type-bar and a key, of an intervening link of springy metal, said link formed between its ends into a loop to permit longitudinal extension of the link, an obstruction being formed upon said link in the path of one leg of said loop, to permit the link when tensioned to lengthen only until said leg engages said obstruction.

[Claims 6 to 8 not printed in the Gazette.]

884,736. SEATING. JOHN B. KILBURN and EDWARD G. BUDD, Philadelphia, Pa., assignors to Hale-Kilburn Metal Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Jan. 21, 1907. Serial No. 353,192.



1. In seating, the combination of a metallic frame and a flexible, incombustible covering secured thereon, consisting of metallic strands closely interwoven, and a plurality of bodies of metal distributed over said covering, each securing a plurality of strands running in one direction together and to one or more strands crossing the same, substantially as set forth.

2. In seating, the combination of a metallic frame and a flexible, incombustible covering secured thereon, consisting of metallic strands closely interwoven and a plurality of bodies of metal distributed over the under side of said covering, each securing a plurality of strands together and to a plurality of strands crossing the same, substantially as set forth.

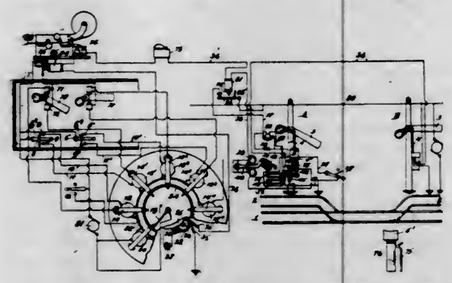
3. In seating, the combination of a metallic frame and a flexible, incombustible covering secured thereon, consisting of metallic strands closely interwoven and a plurality of drops of a soldering compound distributed over the under side of the covering, each securing a plurality of strands together and to a plurality of strands crossing the same, substantially as set forth.

4. In seating, the combination of a metallic frame, a flexible incombustible covering consisting of woven metallic strands extending over said frame and covering the sides thereof, said covering being secured at its edges to the frame, and a filling of metal applied to the covering while reduced by heat for providing a smooth surface at the corners of the frame, substantially as set forth.

5. In seating, the combination of a metallic frame and a flexible incombustible covering consisting of woven metallic strands extending over said frame and along the sides thereof and secured at its edges to the frame, said covering having a fold therein at the corner of the frame, and a filling of metal applied to the covering while reduced by heat for providing a smooth surface over said fold, substantially as set forth.

[Claims 6 to 10 not printed in the Gazette.]

884,737. SIGNALING SYSTEM. EDWARD E. KLEINSCHMIDT, New York, N. Y., assignor to George M. Seeley, New York, N. Y. Filed Mar. 7, 1906. Serial No. 304,610.



1. In a selective signaling system, a plurality of signal stations, signal devices adapted when released to move automatically to stop position, a wire connecting said stations and normally carrying current, electromagnets at the several stations connected to said wire and normally holding the signal devices at clear position, and electrically actuated step-by-step devices adapted to release said signals selectively.

2. In a selective signaling system, a sending station, a plurality of receiving stations, signal devices at the receiving stations adapted to move to stop position when released, a wire connecting said stations, means at the sending station for normally maintaining a voltage on said wire, electromagnets at the receiving stations connected to said wire and normally holding said signal devices in clear position, and means whereby said devices may be selectively released from the sending station.

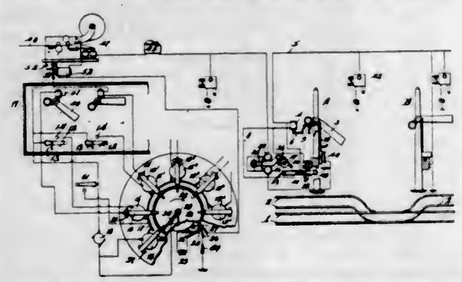
3. In a system of the character described, a switch-board, a controller having a series of adjustable stops, a plurality of track signals, switches for operating said signals, and means for setting any one of said stops from the switch-board to operate the corresponding signal switch.

4. In a system of the character described, a track signal, a normally energized solenoid for maintaining said signal in safety position, a shunt for said solenoid, a normally closed line circuit, a switch for closing said shunt included in said line circuit, and a controller for sending alternating impulses over the line circuit for operating said switch to close the shunt when the signal is to be set at danger.

5. In a system of the character described, a controller comprising a commutator and means to rotate the same, a plurality of magnets and stops controlled thereby, means for energizing a given controller magnet to set its stop so as to arrest the commutator, means for releasing the commutator and for rotating the same when released and until brought to rest by one of the stops, a line circuit including said commutator, track signals, and means governed by the alternating current impressed on the line circuit to set said signals according to the arrangement of the stops.

[Claims 6 to 17 not printed in the Gazette.]

884,738. SIGNALING SYSTEM. EDWARD E. KLEINSCHMIDT, New York, N. Y., assignor to George M. Seeley, New York, N. Y. Filed Sept. 1, 1906. Serial No. 332,972.



1. In a system of the character described, a plurality of signals normally held at safety and adapted when released to automatically move to danger position, electromagnets adapted to hold the signals at normal position, a single line circuit in which said magnets are included, and means for deënergizing a given magnet to set the corresponding signal.

2. In a system of the character described, a plurality of signals, normally energized electromagnets adapted to hold said signals at safety position, said magnets being connected in series in a single line circuit, and means for deënergizing a given magnet to permit the corresponding signal to move to danger position.

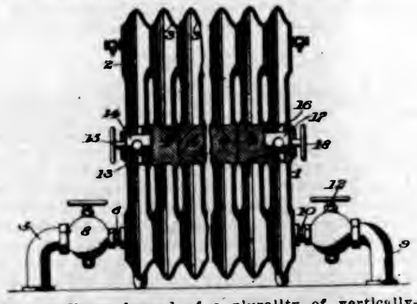
3. In a system of the character described, a plurality of signals, normally energized electromagnets adapted to hold said signals at safety position, a single line circuit in which said magnets are included, selective signal switches, and means for actuating said switches to deënergize a given holding magnet to thereby set the corresponding signal.

4. In a system of the character described, a plurality of signals, normally energized electromagnets adapted to hold said signals at safety position, selective signal switches, a single line circuit in which said magnets and switches are included, and means for actuating a given switch to effect the setting of the corresponding signal.

5. In a system of the character described, a plurality of track signals, normally energized electromagnets adapted to hold said signals at safety position, selective signal switches adapted when operated by an alternating current to set the signals, a single line circuit in which said magnets and switches are included, and means for impressing upon said circuit a current of a predetermined number of alternations.

[Claims 6 to 19 not printed in the Gazette.]

884,739. RADIATOR. CHARLES R. KLINE, Beechwood, Pa. Filed Feb. 4, 1907. Serial No. 355,569.



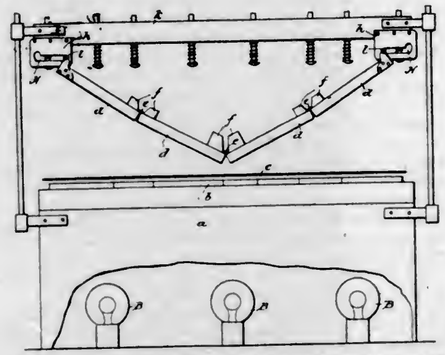
1. A radiator formed of a plurality of vertically-disposed sections or columns each partitioned, forming upper and lower compartments, combined with means for independently governing the flow of heating agent to said upper and lower compartments respectively.

2. A radiator formed of a plurality of vertically-disposed inter-communicating radiator sections or columns each partitioned, forming upper and lower compartments, combined with means disposed in said partitions for controlling communication between the upper and lower compartments.

3. A radiator formed of a plurality of vertically-disposed inter-communicating radiator sections or columns each partitioned, forming upper and lower compartments, a supply pipe connected with the lower section, means disposed in said partitions for controlling the flow of the heating agent to the upper compartments, and a discharge pipe connected with the radiator.

4. A radiator formed of a plurality of vertically-disposed inter-communicating sections or columns, each partitioned, forming a plurality of compartments, combined with means for independently governing the flow of the heating agent to said plurality of compartments respectively.

884,740. PHOTOGRAPHIC-PRINTING APPARATUS. PAUL LATTA, Chicago, Ill. Filed Oct. 7, 1907. Serial No. 396,255.

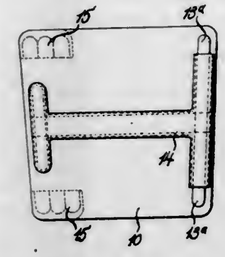


1. In a photographic-printing apparatus, a negative holder, a frame movable toward and from the negative holder, and a jointed platen loosely supported at its ends on the frame and slidable endwise thereon, and depending in a bend therefrom.

2. In a photographic-printing apparatus, a negative holder, a frame movable toward and from the negative holder, and having guide slots, a platen comprising hinged sections, and rollers carried by the outer platen sections and mounted in the aforesaid guide slots.

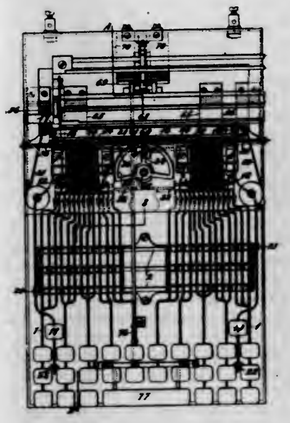
3. In a photographic-printing apparatus, a negative holder, a frame movable toward and from the negative holder and having guide-slots, and a jointed platen supported at its ends in the guide-slots and depending in a bend therefrom.

884,741. LEGGING. EUGÈNE LE BOSSÉ, New York, N. Y. Filed Feb. 8, 1907. Serial No. 356,396.



The combination with a legging, of a single light resilient spring arranged transversely of the legging at a point near the middle thereof, a shaping bar fastened near its mid-section to one end of the spring and extending along one edge of the legging, a spring bar secured near its mid-section to the opposite end of the spring and extending along the second edge of the legging, and fastening devices to secure the ends of the spring bar to the opposite part of the legging.

884,742. ELECTRIC TYPE-WRITER. JOSEPH LEMBLÉ, Sennheim, Germany. Filed May 25, 1907. Serial No. 375,625.



1. In an electric typewriting machine, the combination with a group of key-levers, a common rocking shaft arranged to be operated by the key-levers, a movable type-carrier, an electromagnetic adjusting device for this latter, an electromagnetic paper-carriage controlling device and an electromagnetic device for the return of the type-carrier into its initial position, of one and the same mov-

able contact wheel connected to the said rocking shaft and adapted to control three contacts in such a manner that on striking and releasing one or the other of the key-levers the said contact wheel is displaced so as to directly control a first contact for the said type-carrier adjusting device, a second contact for the said paper-carriage controlling device and a third contact for the type-carrier return device, substantially as described.

2. In an electric typewriting machine, the combination with a group of key-levers, a common rocking shaft arranged to be operated by the key-levers, a movable type-carrier, an electromagnetic adjusting device for this latter, an electromagnetic paper carriage controlling device, an electromagnetic device for the return of the type-carrier into its initial position and a locking device for the type-carrier in the said position, of one and the same movable contact wheel connected to the said rocking shaft and adapted to control three contacts in such a manner that on striking and releasing one or other of the key-levers the said contact wheel is displaced so as to directly control a first contact for the said type-carrier adjusting device, a second contact for the said paper carriage controlling device and a third contact for the type-carrier return and locking devices, substantially as described.

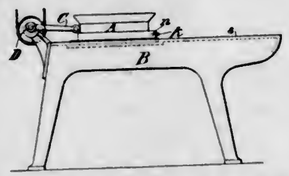
3. In an electric typewriting machine, the combination with a group of key levers, a common rocking shaft arranged to be operated by the key-levers, a movable type-carrier, an electromagnetic adjusting device for this latter, an electromagnetic paper carriage controlling device, an electromagnetic device for the return of the type-carrier into its initial position, a locking device for the type-carrier in said position and a current cut off device, of one and the same movable contact wheel connected to the said rocking shaft and adapted to control three contacts in such a manner that on striking and releasing one or other of the key levers the said contact wheel is displaced so as to directly control a first contact for the said type-carrier adjusting device, a second contact for the said paper carriage controlling device and a third contact for the type-carrier return and locking devices, and also for the current cut off device, substantially as described.

4. In an electric typewriting machine, the combination with a group of key-levers, a common rocking shaft arranged to be operated by the key-levers, a movable type-carrier, an electromagnetic adjusting device for this latter, an electromagnetic paper carriage controlling device, an electromagnetic device for the return of the type-carrier into its initial position and a current make and break main contact device, of one and the same movable contact wheel connected to the said rocking shaft and having three arms adapted to frictionally coöperate with three contact springs connected in electric circuit with the said electromagnetic devices, and a secondary shaft arranged dependently upon the said rocking shaft and adapted to control the said main contact device in such a manner that when a key-lever is struck, the said secondary shaft is turned somewhat so as to effect the closure of the main contact device and the complete closing of the circuit through the said electromagnetic devices, substantially as described.

5. In an electric typewriting machine, the combination with a group of key-levers, a common rocking shaft arranged to be operated by the key-levers, a movable type-carrier, an adjusting electromagnet for this latter, a paper carriage controlling electromagnet, a type-carrier return electromagnet and a locking device for the type-carrier in its initial position, of one and the same movable contact wheel connected to the said rocking shaft and adapted to control three contacts for the circuits of the said electromagnets, an armature lever common to the said type-carrier adjusting and return electromagnets, and a shifting member connected to the said armature lever and adapted to control the aforesaid locking device in such a manner that on the attraction of the said armature lever by the action of the type-carrier return electromagnet in circuit, the locking device, is caused to lock the type-carrier in its initial position, after the return of such carrier, substantially as described.

[Claims 6 to 10 not printed in the Gazette.]

884,743. APPARATUS FOR FILLING PACKING-DRAWERS WITH PINE, NAILS, AND THE LIKE. CARL A. LEUENBERGER, Bözingen, near Bienne, Switzerland, assignors to The Firm of Aktiengesellschaft vormals Bloesch, Schwab & Cie., Bözingen, Switzerland. Filed Mar. 9, 1907. Serial No. 361,564.



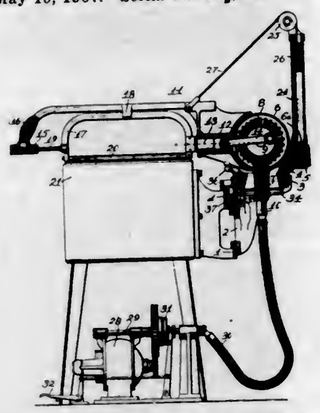
1. In an apparatus for laying parallel pins, nails and the like in drawers for the purpose of facilitating the packing thereof, the combination with a shaking box, means for imparting to such box a to-and-fro motion, a shaking grid within said box, having a set of bars in a plane perpendicular to the direction of motion of the shaking box, and a second set of bars parallel to the said direction and spaced apart a less distance than the first set, of separate or individual drawers open at one end and arranged with their bottoms beneath the bars of the said first set so as to close each the under side of the space between two adjacent bars of the said first set, the entire arrangement for the purpose that the nails, pins or the like falling through the shaking grid may be arranged parallel in the different drawers, in order that the same may be able to be simply emptied in the parallel position into the corresponding packages, substantially as hereinbefore described.

2. In an apparatus for laying parallel pins, nails and the like in drawers for the purpose of facilitating the packing thereof, the combination with a shaking box, means for imparting to such box a to-and-fro motion, a removable shaking grid within said box, having a set of bars in a plane perpendicular to the direction of motion of the shaking box, and a second set of bars parallel to the said direction and spaced apart a less distance than the first set, separate or individual drawers open at one end and arranged with their bottoms beneath the bars of the said first set so as to close each the under side of the space between two adjacent bars of the said first set, said drawers being simultaneously held in such positions, the entire arrangement for the purpose that the nails, pins or the like falling through the shaking grid may be arranged parallel in the different drawers, in order that the same may be able to be simply emptied in the parallel position into the corresponding packages, substantially as hereinbefore described.

3. An apparatus for laying parallel pins, nails and the like in drawers for the purpose of facilitating the packing thereof, comprising a shaking box with an opening at one of its ends, means for imparting to this box a to-and-fro motion, a removable shaking grid within said box, having on the one hand a set of bars in a plane perpendicular to the direction of motion of the shaking box and the inner ones of which are hollow and open underneath, and on the other hand a second set of bars parallel to said direction, which latter bars are less far apart than the former bars, and separate or individual drawers open at one end and placed underneath the shaking grid so as to fit into the hollow bars of the first set of grid bars, this arrangement of the shaking grid allowing the latter together with the drawers to be removed from the shaking box through the end opening thereof and to be lifted off from the drawers, whereupon the shaking grid can be pushed over another set of empty drawers in order to be introduced together with the latter into the shaking box, substantially as hereinbefore described.

4. An apparatus for laying parallel pins, nails and the like in drawers for the purpose of facilitating the packing thereof, comprising a shaking box, means for imparting to this box a to and fro-motion, a removable shaking grid within said box, having a set of bars in a plane perpendicular to the direction of motion of the shaking box, and a second set of bars parallel to said direction, which latter bars are less far apart than the former, a locking device for connecting the shaking grid to the shaking box and for disconnecting it during the to- and fro-motion of the shaking box, and separate or individual drawers open at one end and engaged underneath with the bars of the said first set of the shaking grid so as to close each other under side of the space between two adjacent bars of this set of grid bars, the entire arrangement for the purpose that the nails, pins or the like falling through the shaking grid may be arranged parallel in the different drawers, in order that the same may be able to be simply emptied in the parallel position into the corresponding packages, substantially as hereinbefore described.

884,744. SAWING-MACHINE. CHARLES L. LIBBY, Indianapolis, Ind., and PETER J. CONNOR, Madison, Wis. Filed May 15, 1907. Serial No. 373,742.



1. A sawing machine comprising a turn-table, a horizontal pivot supported by the turn-table, a crank with its axis coinciding with the axis of said pivot, a saw-housing mounted on said pivot, a guideway carried by the heel of the housing at right angles to said pivot, a crosshead reciprocating in said guideway, a connecting rod uniting the crank and crosshead, a saw-frame mounted for reciprocation in the housing and connected with the crosshead, a bevel gear on said crank, a shaft supported by the turn-table at right angles to the axis of the crank, a bevel pinion on said shaft and engaging the bevel gear, and means for imparting motion to said shaft, combined substantially as set forth.

2. A sawing machine comprising a saw-housing, a cylindrical guideway in the heel thereof, a slotted head for said guideway, a crosshead having a cylindrical portion fitting said guideway and having a flattened portion fitting the slot in said head, a crank, a connecting rod connected to the crank and to the cross-head within its cylindrical part, a saw-frame mounted for reciprocation in the housing and connected with the crosshead, and means for turning the crank, combined substantially as set forth.

3. A sawing machine comprising a turn-table having a vertical axis, a saw-housing connected with the turn-table by a pivot having a horizontal axis, a saw-frame mounted for reciprocation in the housing, mechanism supported by the turn-table for reciprocating the saw-frame, a power device for actuating said mechanism, and a device carried by the turn-table for severing the power connection when the saw-housing is turned to a given position, combined substantially as set forth.

4. A sawing machine comprising a turn-table having a vertical axis, a saw-housing connecting with the turn-table by a pivot having a horizontal axis, a saw-frame mounted for reciprocation in the housing, mechanism supported by the turn-table for reciprocating the saw-frame, an electric motor, operative connections between the motor and said mechanism, separated contact devices in the motor circuit, and a contact device carried by the turn-table and normally connecting the first-mentioned contact devices and having a gap for leaving them disconnected when the turn-table is in a given position, combined substantially as set forth.

5. A sawing machine comprising a pivoted saw-housing, a saw-frame reciprocating therein, mechanism at the heel of the housing for reciprocating the saw-frame, an electric motor, a shaft connecting the motor and said mechanism, a clutch connected with said shaft and serving to engage it with and disengage it from the motor, a treadle for controlling said clutch, and a motor-controlling device at the heel of the saw-housing and arranged to open the motor circuit when the saw-housing is turned to a given position, combined substantially as set forth.

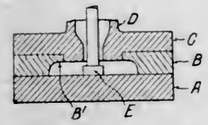
[Claims 6 to 9 not printed in the Gazette.]

884,745. LEUCO DERIVATIVE OF THE GALLOCYANIN SERIES. WILHELM LOMMEL, Elberfeld, Germany, assignor to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany, a Corporation of Germany. Filed Jan. 6, 1908. Serial No. 409,534.

1. The herein-described new leuco-compounds of the gallocyanin series obtainable by heating with diluents above 100° centigrade dyes of the gallocyanin series, which new leuco-compounds are in the shape of the hydrochlorids dark powders soluble in water, the free bases being separated by adding sodium carbonate to the aqueous solutions; and producing in dyeing or printing considerably bluer or greener shades than the known leuco compounds of the dyes from which they are prepared, substantially as described.

2. The herein-described new leuco-compound of the gallocyanin series obtainable by heating celestine blue with glycerin above 100° C. which new leuco-compound is in the shape of its hydrochlorid a dark powder which is soluble in water and is soluble in concentrated sulfuric acid with a yellowish-brown color turning blue by the addition of an oxidizing agent; and producing when printed with chromium compounds on cotton indigo-blue shades, substantially as described.

884,746. MEANS FOR MOLDING BISCUITS. HUGH W. MACKENZIE, Edinburgh, Scotland. Filed Dec. 29, 1906. Serial No. 349,938.



1. A mold of compound formation, having a supply aperture fitted with a controlling valve adapted when closed to complete the contour of the molding area while cutting off the supply passage from the mold, substantially as described.

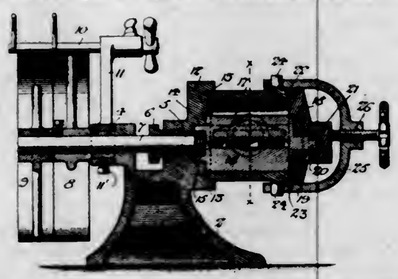
2. A mold of compound formation, consisting of a base plate, an open frame, and a cover, and having a supply aperture fitted with a controlling valve arranged perpendicularly to the cover and set at the side thereof, substantially as and for the purposes set forth.

3. A mold of compound formation, consisting of a base plate, an open frame, and a cover provided with pins, and having a supply aperture fitted with a controlling valve, substantially as and for the purposes set forth.

884,747. ROTARY PUMP. FREDERICK J. MACNISH, Oak Park, Ill., assignor to The Creamery Package Mfg. Company, Chicago, Ill., a Corporation of Illinois. Filed Dec. 2, 1904. Serial No. 235,224.

1. A rotary pump comprising a base, in combination with a horizontal shaft mounted in said base, a cylinder

head and cylinder integral with said base and eccentric to said shaft, inlet and outlet connections communicating with the cylinder through ports in opposite sides thereof, a detachable cylinder head concentric with said cylinder, a rotary piston having its ends rotatably held in said heads, means loosely connecting said piston to said shaft for rotation thereby and means for securing said detachable head in place upon the cylinder, substantially as described.

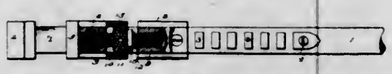


2. A rotary pump comprising a base, in combination with a horizontal shaft mounted in said base, a cylinder head and a cylinder integral with said base, inlet and outlet connections communicating with the cylinder through ports in opposite sides thereof, a detachable cylinder head, a swinging bail and screw holding said detachable head in place, said cylinder heads having recesses which are concentric with said shaft, a rotary piston arranged within the cylinder and having its ends within said recesses, suitable center bearings upon the ends of said rotary piston, the inner end of said piston being provided with a polygonal recess, the end of said shaft being threaded and shouldered and a polygonal nut thereon forming a loose connection between said shaft and said piston, substantially as described.

3. A rotary pump comprising a base, 2, an integral cylinder head, 12, an integral cylinder, 17, integral bearings, 4 and 5, and integral inlet and outlet connections, 33 and 34, in opposite sides of the cylinder, in combination with a shaft, 7, held in said bearings, a detachable cylinder head, 18, a swinging bail and screw securing said head in place, said cylinder being eccentric with respect to said shaft, said cylinder heads containing recesses which are coaxial with said shaft, a rotary piston having suitable vanes and held in said recesses and means forming a loose connection between the abutting ends of said shaft and piston, as and for the purpose specified.

4. A rotary pump comprising a suitably supported cylinder having integral inlet and outlet connections upon its sides and integral trunnions or lugs upon its top and bottom, in combination with heads for said cylinder, the head adjacent to said trunnions being detachable, a malleable bail pivoted on said trunnions, a screw in said bail for fastening the detachable head, a rotary piston eccentrically arranged within the cylinder and held by the heads thereof and a shaft having its end loosely connected with said rotary piston, substantially as described.

884,748. WRENCH. GEORGE W. MASON, Sharon, Pa. Filed Dec. 27, 1906. Serial No. 349,741.

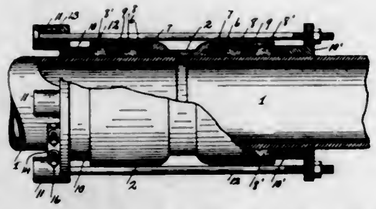


1. In combination, a bar provided with a fixed jaw, a head movable on the jaw, a supplemental head movable on the jaw, said first named head having an extension formed therewith passing between one side of the bar and the inner wall of the supplemental head, means for moving said heads toward or away from each other, and means carried by the supplemental head engaging the bar to hold the supplemental head against movement on the bar.

2. In combination, a bar provided with a fixed jaw, a head movable on the jaw, a supplemental head movable on the jaw, said first named head having an extension formed therewith passing between one side of the bar and the inner wall of the supplemental head, means for moving said heads toward or away from each other, and means for holding the supplemental head against movement on the bar.

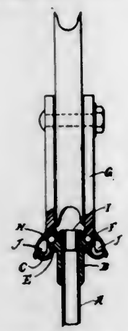
3. In combination a bar provided with a fixed jaw, a head movable on the jaw, a supplemental head movable on the jaw, said first named head having an extension formed therewith passing between one side of the bar and the inner wall of the supplemental head, screw means for moving said heads toward or away from each other, and means for holding the supplemental head against movement on the bar.

884,749. PIPE-COUPLING. GEORGE W. MASON, Sharon, Pa. Filed May 1, 1907. Serial No. 371,241.



In combination with the meeting ends of pipe sections, a coupling therefor comprising a body portion arranged over the adjoining ends of the pipes, said portion having large and small bores to form inner shoulders, spring actuated wings arranged in said body adjacent the shoulders, glands fitting in the ends of the body portion and provided with flanges, wings interposed between the spring actuated means and the glands, bolts secured to the flange at one of the glands and extending loosely through the flange of the second gland, the ends of the portions passing loosely through the flange being provided with heads, springs interposed between the flange and the heads of the bolts and protecting hoods for the springs carried by the flange.

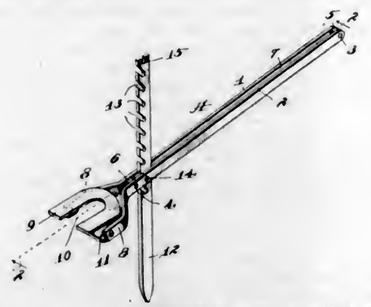
884,750. TROLLEY. LOUIS C. W. MITCHELL and JOHN A. FRETZ, Philadelphia, Pa., assignors of one-third to Edward J. Mitchell, Philadelphia, Pa. Filed Mar. 27, 1906. Serial No. 308,213.



In combination, a trolley pole, an annular base member secured to the upper end thereof and formed with an annularly grooved projecting portion having webs at opposite points in the groove, a trolley harp formed at its lower end with a cap having a projecting portion formed with an annular groove registering with the first named groove, lugs formed at opposite points in the second groove, expansive coil springs confined between the lugs and the webs, the annular projecting portion of the cap terminating in an annular depending rim portion surrounding the

annular edge portion of the base member and serving as a dust guard, and means for connecting the base member and the harp to allow of axial pivoted movement of the latter.

884,751. REPAIR-TOOL. GEORGE B. MCBEAN and CHARLES W. BIRCHWOOD, Chicago, Ill., assignors to Mechanical & Electrical Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed Dec. 2, 1907. Serial No. 404,797.



1. A repair tool comprising a lever provided with a longitudinal slot, a fulcrum bar and a fulcrum pin for operatively engaging said fulcrum bar with said lever, the slot in said lever being adapted to receive said fulcrum bar lengthwise, and means for removably securing said bar in said slot.

2. A repair tool comprising a lever provided with a longitudinal slot, a fulcrum pin secured in said lever which extends across the slot therein, and a fulcrum bar adapted to be inserted through said slot in said lever provided with a notch or notches adapted to engage said fulcrum pin, the slot in said lever being adapted to receive said fulcrum bar lengthwise, and means for removably securing said bar in said slot.

3. A repair tool comprising a lever provided with a longitudinal slot, a fulcrum pin secured in said lever which extends across the slot therein, and a fulcrum bar adapted to be inserted through the slot in said lever provided with a notch or notches adapted to engage said fulcrum pin, the slot in said lever being adapted to receive said fulcrum bar lengthwise, the relation being such that the sides of said slot will frictionally engage the sides of said fulcrum bar when inserted therein.

4. A repair tool comprising a lever provided with a longitudinal slot, a fulcrum pin secured in said lever which extends across the slot therein, and a fulcrum bar adapted to be inserted through the slot in said lever provided with a notch or notches adapted to engage said fulcrum pin, the slot in said lever being adapted to receive said fulcrum bar lengthwise, said fulcrum being provided with a notch in one end adapted to engage the fulcrum pin and the relation being such that the sides of said slot will frictionally engage the sides of said fulcrum bar when inserted therein lengthwise.

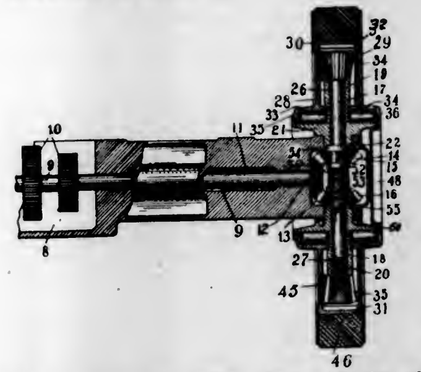
5. A repair tool comprising a lever, said lever comprising rigidly connected, spaced members forming a slot extending lengthwise of said lever, a fulcrum pin secured in said lever which extends across the slot therein, a fulcrum bar adapted to be inserted through said slot and provided with a notch or notches adapted to engage said fulcrum pin, the slot in said lever being adapted to receive said fulcrum bar lengthwise and means for removably securing said fulcrum bar in said slot.

[Claims 6 to 8 not printed in the Gazette.]

884,752. CENTER-DRIVE AXLE AND WHEEL. JOHN MCGEORGE and HAROLD MCGEORGE, Cleveland, Ohio. Filed Mar. 5, 1907. Serial No. 360,703.

1. In a driving mechanism for vehicles, the combination of a pair of wheels, a shaft for each wheel, a driving shaft, and clutch mechanism interposed between the driving shaft and each wheel shaft, substantially as specified.

2. In a driving mechanism for self-propelled vehicles, the combination of a pair of wheels, each having a shaft for driving the same, a driving shaft common to the wheel shafts and a roller clutch interposed between each of the latter shafts and the common driving shaft therefor, substantially as specified.



3. In a self-propelled vehicle, the combination of a wheel having a circular rack, a shaft having thereon a driving gear, a pair of shafts extending in opposite directions and having gears driven by the former gear, and a pinion on the outer end of each of the latter shafts meshing with said rack, substantially as specified.

4. In a self-propelled vehicle, the combination of an axle having a longitudinal recess, a shaft mounted in said recess and having its outer end provided with a driving gear, a pair of shafts extending in opposite directions and having gears driven by the former gear, a pinion on the outer end of each of the latter shafts, and a wheel having a circular rack meshing with the pinions on the outer ends of said shafts, substantially as specified.

5. In a self-propelled vehicle, the combination of an axle having a longitudinal recess constituting a bearing for a shaft, a shaft in said recess, a driving pinion on the end of said shaft, a wheel supported on said axle, shafts extending in diametrically opposite directions from said axle, each of said last-mentioned shafts having a gear on its inner end meshing with said driving pinion and each having its outer end provided with a gear, a circular rack carried by the wheel and meshing with the last-mentioned gears, and means for rotatably supporting said wheel on said axle, substantially as specified.

[Claims 6 to 38 not printed in the Gazette.]

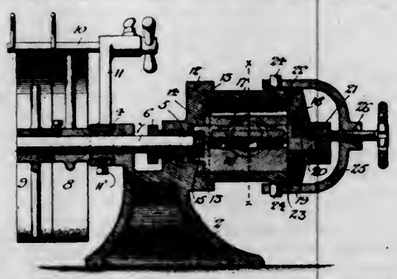
884,753. BUNDLE-CONVEYING ATTACHMENT FOR THRESHING-MACHINES. WILLIAM C. NIEBUHR, St. James, Minn. Filed Dec. 21, 1907. Serial No. 407,520.

1. The combination with a threshing machine, of an upright tubular standard supported in the vicinity of the receiving end of said threshing machine with freedom for oscillatory movements, a conveyer frame connected to said oscillatory tubular standard with freedom for vertical oscillatory movements, an endless conveyer mounted to run over said frame, a shaft extending through said tubular standard, a pair of bevel gears connecting the upper end of said shaft to said conveyer, a pulley on the lower end of said shaft, and a belt driven from one of the running parts of said threshing machine and running over said pulley, substantially as described.

2. The combination with a threshing machine, of an extended conveyer frame provided at one side of its inner extremity with a curved plate, an endless conveyer mounted to run over said frame, and means for driving said conveyer, substantially as described.

3. The combination with a threshing machine, of a conveyer frame, the inner end of which is arranged to de-

head and cylinder integral with said base and eccentric to said shaft, inlet and outlet connections communicating with the cylinder through ports in opposite sides thereof, a detachable cylinder head concentric with said cylinder, a rotary piston having its ends rotatably held in said heads, means loosely connecting said piston to said shaft for rotation thereby and means for securing said detachable head in place upon the cylinder, substantially as described.

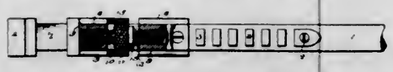


2. A rotary pump comprising a base, in combination with a horizontal shaft mounted in said base, a cylinder head and a cylinder integral with said base, inlet and outlet connections communicating with the cylinder through ports in opposite sides thereof, a detachable cylinder head, a swinging bail and screw holding said detachable head in place, said cylinder heads having recesses which are concentric with said shaft, a rotary piston arranged within the cylinder and having its ends within said recesses, suitable center bearings upon the ends of said rotary piston, the inner end of said piston being provided with a polygonal recess, the end of said shaft being threaded and shouldered and a polygonal nut thereon forming a loose connection between said shaft and said piston, substantially as described.

3. A rotary pump comprising a base, 2, an integral cylinder head, 12, an integral cylinder, 17, integral bearings, 4 and 5, and integral inlet and outlet connections, 33 and 34, in opposite sides of the cylinder, in combination with a shaft, 7, held in said bearings, a detachable cylinder head, 18, a swinging bail and screw securing said head in place, said cylinder being eccentric with respect to said shaft, said cylinder heads containing recesses which are coaxial with said shaft, a rotary piston having suitable vanes and held in said recesses and means forming a loose connection between the abutting ends of said shaft and piston, as and for the purpose specified.

4. A rotary pump comprising a suitably supported cylinder having integral inlet and outlet connections upon its sides and integral trunnions or lugs upon its top and bottom, in combination with heads for said cylinder, the head adjacent to said trunnions being detachable, a malleable bail pivoted on said trunnions, a screw in said bail for fastening the detachable head, a rotary piston eccentrically arranged within the cylinder and held by the heads thereof and a shaft having its end loosely connected with said rotary piston, substantially as described.

884,748. WRENCH. GEORGE W. MASON, Sharon, Pa. Filed Dec. 27, 1906. Serial No. 349,741.

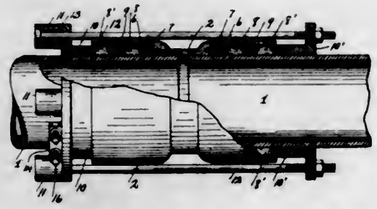


1. In combination, a bar provided with a fixed jaw, a head movable on the jaw, a supplemental head movable on the jaw, said first named head having an extension formed therewith passing between one side of the bar and the inner wall of the supplemental head, means for moving said heads toward or away from each other, and means carried by the supplemental head engaging the bar to hold the supplemental head against movement on the bar.

2. In combination, a bar provided with a fixed jaw, a head movable on the jaw, a supplemental head movable on the jaw, said first named head having an extension formed therewith passing between one side of the bar and the inner wall of the supplemental head, means for moving said heads toward or away from each other, and means for holding the supplemental head against movement on the bar.

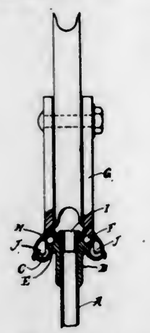
3. In combination a bar provided with a fixed jaw, a head movable on the jaw, a supplemental head movable on the jaw, said first named head having an extension formed therewith passing between one side of the bar and the inner wall of the supplemental head, screw means for moving said heads toward or away from each other, and means for holding the supplemental head against movement on the bar.

884,749. PIPE-COUPLING. GEORGE W. MASON, Sharon, Pa. Filed May 1, 1907. Serial No. 371,241.



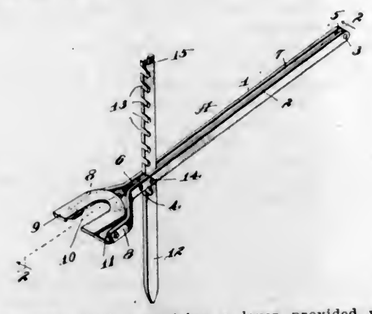
In combination with the meeting ends of pipe sections, a coupling therefor comprising a body portion arranged over the adjoining ends of the pipes, said portion having large and small bores to form inner shoulders, spring actuated wings arranged in said body adjacent the shoulders, glands fitting in the ends of the body portion and provided with flanges, wings interposed between the spring actuated means and the glands, bolts secured to the flange at one of the glands and extending loosely through the flange of the second gland, the ends of the portions passing loosely through the flange being provided with heads, springs interposed between the flange and the heads of the bolts and protecting hoods for the springs carried by the flange.

884,750. TROLLEY. LOUIS C. W. MITCHELL and JOHN A. FRETZ, Philadelphia, Pa., assignors of one-third to Edward J. Mitchell, Philadelphia, Pa. Filed Mar. 27, 1906. Serial No. 308,213.



In combination, a trolley pole, an annular base member secured to the upper end thereof and formed with an annularly grooved projecting portion having webs at opposite points in the groove, a trolley harp formed at its lower end with a cap having a projecting portion formed with an annular groove registering with the first named groove, lugs formed at opposite points in the second groove, expansive coil springs confined between the lugs and the webs, the annular projecting portion of the cap terminating in an annular depending rim portion surrounding the annular edge portion of the base member and serving as a dust guard, and means for connecting the base member and the harp to allow of axial pivoted movement of the latter.

884,751. REPAIR-TOOL. GEORGE B. MCBEAN and CHARLES W. BIRCHWOOD, Chicago, Ill., assignors to Mechanical & Electrical Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed Dec. 2, 1907. Serial No. 404,797.



1. A repair tool comprising a lever provided with a longitudinal slot, a fulcrum bar and a fulcrum pin for operatively engaging said fulcrum bar with said lever, the slot in said lever being adapted to receive said fulcrum bar lengthwise, and means for removably securing said bar in said slot.

2. A repair tool comprising a lever provided with a longitudinal slot, a fulcrum pin secured in said lever which extends across the slot therein, and a fulcrum bar adapted to be inserted through said slot in said lever provided with a notch or notches adapted to engage said fulcrum pin, the slot in said lever being adapted to receive said fulcrum bar lengthwise, and means for removably securing said bar in said slot.

3. A repair tool comprising a lever provided with a longitudinal slot, a fulcrum pin secured in said lever which extends across the slot therein, and a fulcrum bar adapted to be inserted through the slot in said lever provided with a notch or notches adapted to engage said fulcrum pin, the slot in said lever being adapted to receive said fulcrum bar lengthwise, the relation being such that the sides of said slot will frictionally engage the sides of said fulcrum bar when inserted therein.

4. A repair tool comprising a lever provided with a longitudinal slot, a fulcrum pin secured in said lever which extends across the slot therein, and a fulcrum bar adapted to be inserted through the slot in said lever provided with a notch or notches adapted to engage said fulcrum pin, the slot in said lever being adapted to receive said fulcrum bar lengthwise, said fulcrum being provided with a notch in one end adapted to engage the fulcrum pin and the relation being such that the sides of said slot will frictionally engage the sides of said fulcrum bar when inserted therein lengthwise.

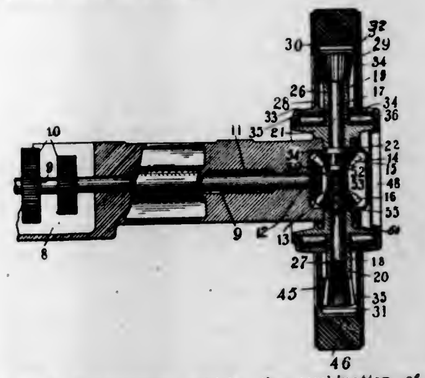
5. A repair tool comprising a lever, said lever comprising rigidly connected, spaced members forming a slot extending lengthwise of said lever, a fulcrum pin secured in said lever which extends across the slot therein, a fulcrum bar adapted to be inserted through said slot and provided with a notch or notches adapted to engage said fulcrum pin, the slot in said lever being adapted to receive said fulcrum bar lengthwise and means for removably securing said fulcrum bar in said slot.

[Claims 6 to 8 not printed in the Gazette.]

884,752. CENTER-DRIVE AXLE AND WHEEL. JOHN MCGEORGE and HAROLD MCGEORGE, Cleveland, Ohio. Filed Mar. 5, 1907. Serial No. 360,703.

1. In a driving mechanism for vehicles, the combination of a pair of wheels, a shaft for each wheel, a driving shaft, and clutch mechanism interposed between the driving shaft and each wheel shaft, substantially as specified.

2. In a driving mechanism for self-propelled vehicles, the combination of a pair of wheels, each having a shaft for driving the same, a driving shaft common to the wheel shafts and a roller clutch interposed between each of the latter shafts and the common driving shaft therefor, substantially as specified.



3. In a self-propelled vehicle, the combination of a wheel having a circular rack, a shaft having thereon a driving gear, a pair of shafts extending in opposite directions and having gears driven by the former gear, and a pinion on the outer end of each of the latter shafts meshing with said rack, substantially as specified.

4. In a self-propelled vehicle, the combination of an axle having a longitudinal recess, a shaft mounted in said recess and having its outer end provided with a driving gear, a pair of shafts extending in opposite directions and having gears driven by the former gear, a pinion on the outer end of each of the latter shafts, and a wheel having a circular rack meshing with the pinions on the outer ends of said shafts, substantially as specified.

5. In a self-propelled vehicle, the combination of an axle having a longitudinal recess constituting a bearing for a shaft, a shaft in said recess, a driving pinion on the end of said shaft, a wheel supported on said axle, shafts extending in diametrically opposite directions from said axle, each of said last-mentioned shafts having a gear on its inner end meshing with said driving pinion and each having its outer end provided with a gear, a circular rack carried by the wheel and meshing with the last-mentioned gears, and means for rotatably supporting said wheel on said axle, substantially as specified.

[Claims 6 to 38 not printed in the Gazette.]

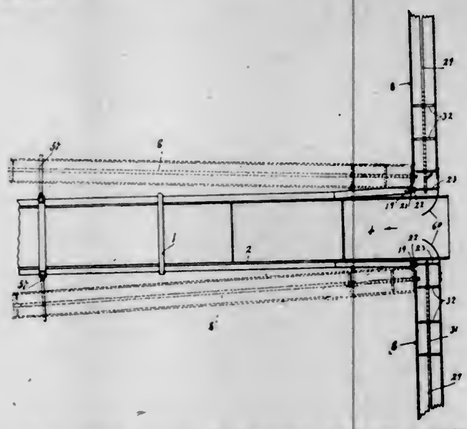
884,753. BUNDLE-CONVEYING ATTACHMENT FOR THRESHING-MACHINES. WILLIAM C. NIEBUHR, St. James, Minn. Filed Dec. 21, 1907. Serial No. 407,520.

1. The combination with a threshing machine, of an upright tubular standard supported in the vicinity of the receiving end of said threshing machine with freedom for oscillatory movements, a conveyer frame connected to said oscillatory tubular standard with freedom for vertical oscillatory movements, an endless conveyer mounted to run over said frame, a shaft extending through said tubular standard, a pair of bevel gears connecting the upper end of said shaft to said conveyer, a pulley on the lower end of said shaft, and a belt driven from one of the running parts of said threshing machine and running over said pulley, substantially as described.

2. The combination with a threshing machine, of an extended conveyer frame provided at one side of its inner extremity with a curved plate, an endless conveyer mounted to run over said frame, and means for driving said conveyer, substantially as described.

3. The combination with a threshing machine, of a conveyer frame, the inner end of which is arranged to de-

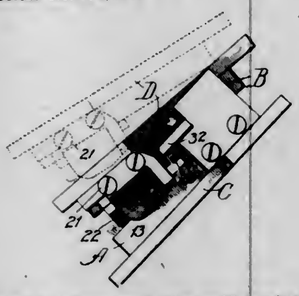
liver to the receiving end of said threshing machine, an endless conveyer arranged to run over said frame, means for driving said conveyer, and means for imparting vertical oscillatory movements to said frame, comprising a supporting frame and a windlass, substantially as described.



4. A bundle conveyer for threshing machines comprising a conveyer frame mounted for vertical and lateral oscillatory movements, an endless conveyer running over said frame, means for driving said conveyer, a truck located at the free end of said conveyer frame and having posts embracing the sides thereof, supporting frames mounted for vertical movements on said posts and slidably engaging and supporting the free end of said conveyer frame, and means for imparting simultaneous vertical movements to said supporting frames and for securing the same in different vertical adjustments, substantially as described.

5. A bundle conveyer for threshing machines comprising a conveyer frame mounted for vertical and lateral oscillatory movements, an endless conveyer running over said frame, means for driving said conveyer, a truck located at the free end portion of said conveyer frame and having posts embracing the sides thereof, supporting frames slidably mounted on said posts and having wheels engaging and supporting the free end portion of said conveyer frame, and a windlass mounted on said truck and having cables extending over guides on the upper ends of said posts and attached to said supporting frames, substantially as described.

884,754. TYPE-CASTING MOLD. PHILIP G. NUERNBERGER and GEORGE RETTIG, Jr., Chicago, Ill., assignors to Universal Automatic Typecasting Machine Company, Chicago, Ill., a Corporation of Illinois. Filed Dec. 30, 1905. Serial No. 294,016.



1. In a type casting-mold, the mold-members, the jet-parts having their inner edges in different planes, and means inserted between the upper jet-part and mold to prevent leakage in the operation of casting.

2. In a type casting-mold, the jet-parts having their inner edges in different planes, one of the said jet-parts being provided with a beveled corner edge and the other part with an inclined lip-edge adapted to overlap said beveled corner edge when the mold is closed, and a plate inserted between the upper jet-part and the carriage part of the mold having its lower edge beveled, and means for retaining said plate in its proper working position.

3. In a type casting-mold, the lower jet-part having its inner wall edge extending above that of the adjacent carriage-part, the upper jet-part having the vertical line of its inner edge back of the inner edge of the lower jet-part, and means inserted between the upper jet-part and the corresponding carriage-part in compensating for the relative different widths of the jet-parts.

4. In a type casting-mold, a lower jet-part an upper jet-part having its inner wall edge on a line back of the corresponding wall of the lower jet-part, a division plate inserted between the upper jet-part and the adjacent carriage-part and means for retaining said plate in its working position.

884,755. FLUE-CLEANER. CHARLES NUHRING, Cincinnati, Ohio. Filed Dec. 8, 1906. Serial No. 346,868.



A flue cleaner, comprising a frusto-conical cleaner head the exterior of which is provided with an inclined shoulder, a nozzle arranged in said head and having one of its ends projecting beyond the head and forming a polygonal projection, spiders supporting said nozzle within said head to provide an air space between the head and the nozzle, a pipe for fluid under pressure connected to said polygonal projection, a coupling head connected to said pipe and means for manipulating the cleaner.

884,756. CHEMICAL PROCESS. CHARLES E. PELLEW and DORRIS W. WHIPPLE, New York, N. Y., assignors to Columbia Process Company, a Corporation of New York. Filed Apr. 16, 1907. Serial No. 368,593.

1. The art of promoting a chemical reaction consisting in treating a metal or salt thereof with a reactive substance in the presence of a mercurial catalytic agent.

2. The art of promoting a chemical reaction consisting in treating a metal or salt thereof with an acid-forming element or compound thereof in the presence of a mercurial catalytic agent.

3. The art of promoting a chemical reaction consisting in treating a metal or salt thereof with a halogen or compound thereof in the presence of a mercurial catalytic agent.

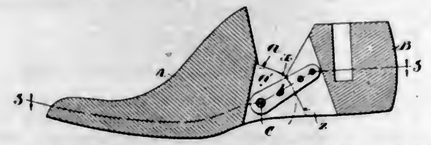
4. The art of promoting a chemical reaction consisting in treating a metal or salt thereof with chlorin or a compound thereof in the presence of a mercurial catalytic agent.

5. The art of promoting a chemical reaction consisting in treating a metal or salt thereof with chlorin gas in the presence of a mercurial catalytic agent.

[Claims 6 to 43 not printed in the Gazette.]

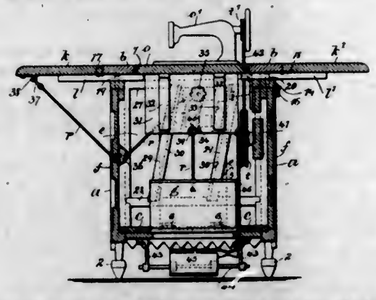
884,757. DIVIDED LAST. WALTER C. PORTER, Worcester, Mass., assignor, by mesne assignments, to Krentler-Arnold Hinge Last Company, Detroit, Mich., a Corporation of Michigan. Filed Feb. 3, 1902. Serial No. 92,336.

1. A last comprising a forepart and a heel-part, separated by a transverse cut extending diagonally upward and forward for a limited distance from the bottom of the last for giving an extended horizontal overlap to the contacting surfaces fitting each other tightly when the last is extended, and by surfaces diverging from the upper end of said cut and providing a recess below the top of the last when the latter is in extended position, in combination with a central vertical hinge-plate rigidly connected to the heel-part and pivotally connected to the forepart more than half-way from the bottom of said recess to the bottom of the last, said hinge-plate and its pivotal connection being constructed and arranged with relation to the secant surfaces of the adjacent ends of the forepart and heelpart to permit the heel-part to move upwardly and to shorten instantly at the beginning of its upward swing, and to separate said overlapping surfaces angularly from each other, swinging the upper diverging surface of the heel-part forward for closing said recess.



2. A hinged last, having its parts separated by a wide gap formed by an approximately vertical wall at the upper rear end of the forepart and an oblique wall at the upper forward end of the heel-part, said wall of the forepart extending approximately midway to the bottom of the last, said forepart having an extension, shallow in vertical depth, projecting from the lower end of said forepart wall and having its top sectant surface extending in a rearward direction to its extreme end at the bottom of the last, the entire contacting surface therewith of said heelpart extending forward at all points from the point of intersection of said extreme end with the bottom of the last, for giving a maximum horizontal overlap to said contacting surfaces, and a central vertical hinge-plate rigidly connected to the heel-part and pivoted to the forepart low down in said extension more than half way from the top of the latter to the bottom and in approximately vertical alinement with said rear vertical wall of the forepart to shorten the last rapidly and immediately when the heel-part is turned upward upon its pivot, said hinge-plate and its pivotal connection being constructed and arranged with relation to the secant surfaces of the adjacent ends of the forepart and heel-part to permit the heel-part to move upwardly and to separate said overlapping surfaces angularly from each other, swinging the upper diverging surface of the heel part forward for closing said recess.

884,758. CABINET. GUSTAV RANGE, New York, N. Y. Filed Oct. 30, 1906. Serial No. 341,333.



1. In a cabinet adapted to contain a sewing machine or other device and in combination, a casing, a top provided with an opening, a movable platform adapted when raised to fit within the said opening and upon which the sewing machine or other device is supported, a drop-leaf hinged to the said top, a door in the bottom of the casing closing access to the treadle, and means actuated by raising and lowering the drop leaf for simultaneously raising and lowering the said platform and door.

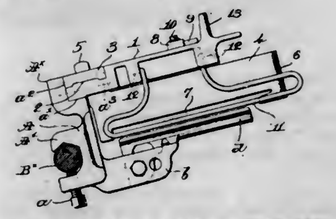
2. In a cabinet adapted to contain a sewing machine or other device and in combination, a casing, a top provided with an opening, a movable platform adapted when raised to fit within the said opening and upon which the sewing machine or other device is supported, a drop-leaf hinged to the said top, a door in the bottom of the casing closing access to the treadle, and means connected to the platform and detachably connected to the said drop-leaf and door and actuated by raising and lowering the drop-leaf for simultaneously raising and lowering the said platform with the machine and said door.

3. In a cabinet adapted to contain a sewing machine or other device and in combination, a casing, a top provided with an opening, a movable platform adapted when raised to fit within the said opening and upon which the sewing machine or other device is supported, a drop-leaf hinged to the said top, a door in the bottom of the casing closing access to the treadle, means actuated by raising and lowering the drop-leaf for simultaneously raising and lowering the said platform and door and means for supporting the said drop-leaf in its raised position to maintain the said movable platform and door in their raised positions.

4. In a cabinet adapted to contain a sewing machine or other device and in combination, a casing, a top provided with an opening, a platform movably mounted within said casing and adapted when raised to fit within the said opening and upon which the sewing machine or other device is supported, a drop-leaf hinged to the said top, upper and lower rollers mounted in the said casing, a cord connected at one end to the said movable platform, passed over and under the said rollers respectively, out through an opening in the side of the casing and adapted at its other end to be detachably connected to the under side of the said drop-leaf, said cord being of such length that when the drop leaf is raised the platform will be simultaneously raised to fill the top opening a support pivotally connected in the said casing and adapted to maintain the said drop-leaf and movable platform in their raised positions.

5. In a cabinet adapted to contain a sewing machine or other device and in combination, a casing, a top provided with an opening, a movable platform adapted when raised to fit within the said opening and upon which the sewing machine or other device is supported, a drop-leaf hinged to the said top, a door in the bottom of the casing covering access to the treadle, guide-ways for the said movable platform, rollers mounted in the said casing, a cord connected at one end to the said movable platform, passed over and under the said rollers respectively, out through an opening in the side of the casing and adapted at its other end to be detachably connected to the under side of the said drop-leaf, a cord also connected at one end to the said movable platform and at the other end to the free edge of the said door in the bottom of the casing, a support pivotally connected in the said casing and adapted to maintain the said drop-leaf and movable platform and door in their raised positions.

884,759. BOBBIN-HOLDER. ALONZO E. RHOADES, Hopedale, Mass., assignor to Draper Company, Hopedale, Mass., a Corporation of Maine. Filed Oct. 19, 1907. Serial No. 398,251.



1. A bobbin-holder having a rest for the bobbin, a carrier mounted above the rest, a side guard for the bobbin

pivotally mounted on and depending from the carrier at one side thereof, and a side guard fixedly mounted on the carrier at its opposite side and having its lower edge recessed to form a yarn guide.

2. A bobbin-holder having a rest for the bobbin, a carrier extended longitudinally above the rest, side guards for the bobbin, depending from the carrier, one of said guards being pivotally connected therewith and the other guard being rigidly connected with and laterally offset from the carrier, to leave a clearance through which the yarn may be led from the bobbin, a yarn-guide at the lower edge of the fixed guard, and a device on the carrier to cross the clearance when the yarn is governed by the yarn-guide.

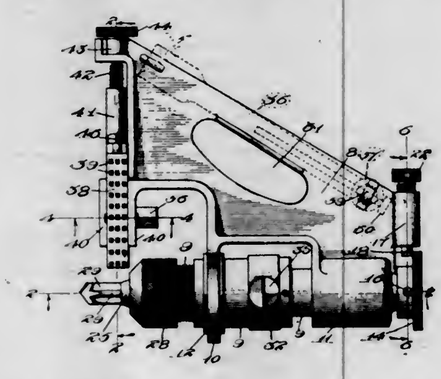
3. A bobbin-holder having a rest for the bobbin, a carrier extended longitudinally above the rest, side guards for the bobbin, fixedly and pivotally connected, respectively, with the carrier, the fixedly connected guard being laterally offset to leave a yarn delivery passage, and means to cross said passage when the yarn is led from the bobbin around the lower edge of the fixed guard.

4. A bobbin-holder having a rest for the bobbin, a carrier extended longitudinally above the rest, a pivotally mounted side guard depending from the carrier at one side, a fixed guard at the opposite side, rigidly connected at its rear end with the carrier to leave a longitudinal clearance through which the yarn may be delivered, a yarn guide at the lower edge of the fixed guard, and a manually adjustable finger on the carrier adapted to be positioned across the clearance, to prevent delivery of the yarn therethrough.

5. A bobbin-holder having a rest for the bobbin, a carrier fulcrumed above the rest to tilt on an axis parallel thereto, depending side guards pivotally and fixedly connected, respectively, with the carrier, the fixed guard being offset laterally to leave a clearance for delivery of the yarn, and means to cross the clearance when the yarn is to be delivered under the fixed guard, tilting of the carrier effecting ejectment of the spent bobbin by the fixed guard.

[Claims 6 to 8 not printed in the Gazette.]

884,760. DRILLING APPARATUS. GEORGE R. RICH, Buchanan, Mich., assignor, by mesne assignments, to Ceifor Tool Company, a Corporation of Illinois. Filed June 17, 1905. Serial No. 265,679.



1. A track-drill, comprising drilling mechanism, wedge-shaped clamping means adapted to engage the flanges at one side of the rail for securing the drilling mechanism in position, and cam mechanism for tightening said clamping means.

2. A track-drill, comprising drilling mechanism, a longitudinally-movable clamping jaw adapted to engage the rail at one side thereof, means for forcing said jaw against the rail when moved longitudinally in one direction and means for tightening the engagement of said jaw with the rail.

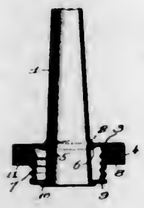
3. A drilling-apparatus, comprising drilling mechanism, longitudinally-movable clamping means, means for causing said clamping means to engage the object to be clamped when moved longitudinally in one direction and means for tightening the grip of said clamping means.

4. A tool, comprising a frame, expanding clamping mechanism along one margin of said frame, and drilling mechanism carried by said frame and disposed perpendicularly to said clamping mechanism, and in a plane perpendicular to the plane in which said clamping mechanism expands.

5. A drilling-apparatus, comprising a substantially triangular frame, clamping mechanism along one margin of said frame, and drilling mechanism at another margin of said frame and disposed perpendicularly to said clamping mechanism, and in a plane perpendicular to the plane in which said clamping mechanism expands.

[Claims 6 to 9 not printed in the Gazette.]

884,761. CAN-SPOUT. GEORGE J. RICHARD, Waterbury, Conn., assignor to Noera Manufacturing Company, Waterbury, Conn., a Corporation of Connecticut. Filed Sept. 23, 1907. Serial No. 394,045.



1. The combination with a tapered spout, of a two-part base comprising a cap surrounding and fixed upon the spout and having a depending lip, and an externally threaded sleeve seated at its upper end upon the cap within the lip and having an inturned flange at its lower end to embrace the exterior of the spout adjacent its end, the projecting part of the spout below the flange being turned over upon the flange to clamp the cap and sleeve together and retain them on the spout.

2. The combination with a tapered spout having an external enlargement, of a cap apertured to receive the spout and bearing against said enlargement, a depending annular lip on the cap, and an externally threaded sleeve seated at its upper end on the cap within the lip, the spout passing through the sleeve and being turned over upon its lower end, to clamp the sleeve and cap together and fixedly hold them on the spout.

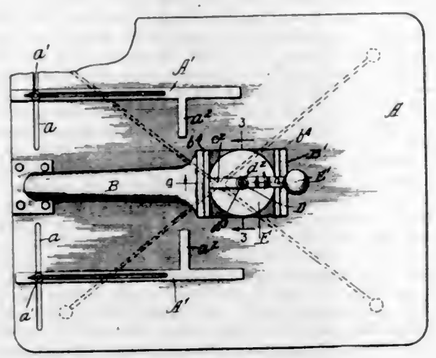
3. The combination with a tapered spout, of an annularly lipped, centrally apertured cap and an externally threaded sleeve seated upon the cap within the lip thereof, the spout passing through the cap and sleeve, and annular enlargements on the spout engaging and clamping between them the cap and sleeve.

4. A centrally apertured cap, an elongated, externally threaded sleeve seated thereon, a tapered spout extended through the cap and sleeve and laterally supported at separated points by the lower end of the sleeve and the cap, and means on and integral with the spout to overlap the cap and the lower end of said sleeve to clamp them together and fixedly connect them with the spout.

5. The combination with a tapered spout, of a cap fixed thereon and having a depending, annular lip, and an elongated externally threaded sleeve seated at its upper end upon the cap and at its lower end having an inturned flange to embrace the spout, the adjacent end of the latter below the flange being turned over outwardly upon said flange to rigidly hold the sleeve upon the cap and spout.

[Claims 6 and 7 not printed in the Gazette.]

884,762. CUTTING AND MARKING MACHINE. ERLING RISTING and FRANK KABATCHNICK, Chicago, Ill.; said Kabatchnick assignor to said Risting. Filed May 7, 1906. Serial No. 315,685.



1. The combination with a table of a guide table supported on the same having a recess on its under side and upturned integral flanges, a vertically movable guide plate revoluble between said flanges, a slide bar movable in said recess in the guide table, a shaft extending through the same and guide table and plate and a removable bracket carried on the end of said shaft provided with an aperture therethrough.

2. The combination with a support of a table carried thereon having integral upturned flanges and provided with a recess or chamber, a slide bar movable in said recess in the table, a guide plate carried on said table, a rotatable shaft extending through said table, plate, slide and support, a crank secured to the top of said shaft, an arm rigidly engaged thereto adapted to rotate said guide plate when the shaft rotates and a removable bracket on the end of said shaft provided with an aperture therethrough to adjustably engage a tool.

3. The combination with a table of a guide plate supported above the same, a depressible shaft rotatively engaged in the guide plate, an arm carried by said shaft adapted to simultaneously depress the guide plate as the shaft is depressed and to rotate the same, collars engaged on said shaft and one movable longitudinally thereof, means bearing on said collars normally holding the shaft at its upper limit of movement, and an adjustable and removable tool carrier on the lower end of said shaft.

4. In a device of the class described the combination with a work table, of a slotted guide table supported above the same provided with a recess, a slotted circular guide plate carried thereon and provided with a groove, a slide bar movable in the recess in the guide table, an elongated bearing sleeve integral therewith, a shaft extending through the guide table, guide plate and sleeve, an arm carried thereon and engaging the groove in said guide plate to rotate the same when the shaft is actuated, a bracket engaged to the lower end of the shaft and an adjustable bar carried on said bracket.

5. In a device of the class described the combination with a work table of a slotted guide table supported above the same and provided with parallel flanges, said guide table having a recess therein adjacent the slot, a slide bar movable in the recess in said table, a downwardly directed bearing sleeve engaged thereto, a vertically and horizontally movable shaft extending through the slot in said table and the sleeve, a guide plate adapted when the shaft is rotated to move said shaft from one flange toward the other and a spring automatically retracting the tool after each cut.

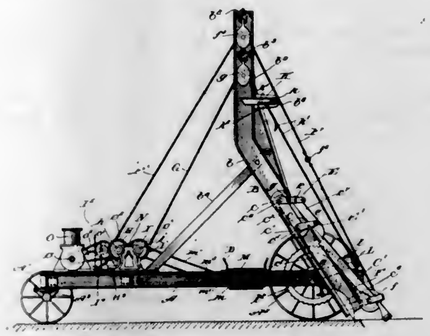
[Claims 6 to 11 not printed in the Gazette.]

884,763. ELECTROLYTIC REDUCTION OF METALLIC COMPOUNDS. HUGH RODMAN, Philadelphia, Pa., assignor to The Electric Storage Battery Company, Philadelphia, Pa., a Corporation of New Jersey. Filed May 17, 1902. Serial No. 107,793.

1. The process of reducing iron oxid which consists in subjecting the same to electrolysis as a cathode in an electrolyte containing a soluble sulfid, substantially as described.

2. The process of reducing iron oxid which consists in subjecting the same to electrolysis as a cathode in an electrolyte containing an alkali and a soluble sulfid, substantially as described.

884,764. EXCAVATING-MACHINE. EDWIN O. ROOD, Britt, Iowa, assignor to The Interstate Drainage & Investment Company, Britt, Iowa, a Corporation of Iowa. Filed June 12, 1907. Serial No. 378,527.



1. In an excavating apparatus, a frame, a spade guided by said frame, means for forcing said spade into the material to be excavated, and means for retaining on the spade the material sheared off thereby.

2. In an excavating apparatus, a frame, a spade slidably supported on said frame, means for reciprocating said spade, and means for retaining on the spade the material sheared off thereby.

3. In an excavating apparatus, a frame, downwardly inclined guides on said frame, a spade arranged to travel along said guides, means for reciprocating said spade, and means for retaining on the spade the material sheared off thereby.

4. In an excavating apparatus, a frame, a spade movably mounted on said frame, a guard, and means for moving said guard into position to hold the excavated material upon the spade.

5. In an excavating apparatus, a frame, a spade slidably mounted on said frame, means for forcing said spade into the material to be excavated, and means for retaining on the spade the material sheared off thereby during the withdrawal of the spade.

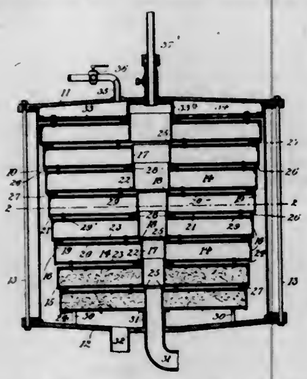
[Claims 6 to 22 not printed in the Gazette.]

884,765. FILTER. GEORGE SCHLEMMER, New York, N. Y. Filed Jan. 29, 1908. Serial No. 413,149.

1. A filter provided with a plunger, a shell, a battery of inclosed filter cells, each composed of an outer rim, an inner eye, a perforated top plate, and a perforated bottom plate, the top plate being movable relatively to the bottom plate, substantially as specified.

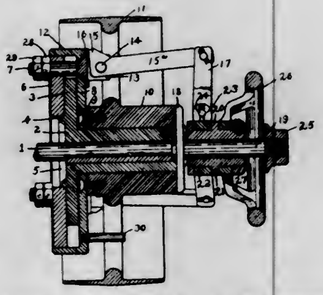
2. A filter provided with a plunger, a shell, a battery of inclosed filter cells, each composed of an outer rim, an inner eye, a perforated top plate, and a perforated bottom

plate, the top plate being connected to the rim and disconnected from the eye, and the bottom plate being connected



to the eye and disconnected from the rim, substantially as specified.

884,766. FRICTION-CLUTCH. ALBERT SCHWEHR and GEORGE A. SCHWEHR, Sandusky, Ohio. Filed Nov. 4, 1907. Serial No. 400,659.



1. In a friction clutch, a drive shaft, a driving clutch member secured to said shaft, said member having a sleeve and a disk extension, a ledge on one face of said disk extension, a driven clutch member journaled upon the sleeve of the driving clutch member, said driven member having a flange that is adapted to fit one face of the driving clutch member, a friction ring surrounding the said ledge and fitting the other face of said extension, bolts connecting said ring with the disk of the driven clutch member, nuts on said bolts for adjusting the ring and the disk of the driven member with respect to each other, said bolts having bifurcated heads, rings surrounding said heads and engaging with the said disk extension of the driven member, bell crank levers pivoted in said bifurcated heads, the shorter arms of said levers being adapted to engage with the said rings, a shifting collar, links connecting said shifting collar with the longer arms of said bell cranks, and means for shifting said collar, whereby, when the collar is moved in one direction, said links will cause said bell cranks to rock and the shorter arms of said bell cranks to bear against said rings and thereby exert a pull upon the said bolts for drawing the friction ring and the disk of the driven clutch member into frictional engagement with the disk of the driving clutch member.

2. In a friction clutch, a drive shaft, a driving clutch member secured to said shaft, said member having a sleeve and a disk extension, a ledge on one face of said disk extension, a driven clutch member journaled upon the sleeve of the driving clutch member, said driven member having a disk that is adapted to fit one face of the driving clutch member, a friction ring surrounding the said ledge and fitting the other face of the said disk extension, bolts connecting said ring with the disk of the driven clutch member, nuts on said bolts for adjusting the ring and the disk of the driven member with respect to each other, said bolts having bifurcated heads, rings surrounding said heads and engaging with the said disk extension of the driven member, bell crank levers pivoted in said bifurcated heads, the shorter arms of said levers being adapted to engage with the said rings, a stub shaft in axial alinement with the drive shaft, a shifting collar on said stub shaft, links connecting said shifting collar with the longer arms of said bell cranks, and means for shifting said collar, whereby, when the collar is moved in one direction, said links will cause said bell cranks to rock and the shorter arms of said bell cranks will bear against said rings and thereby exert a pull upon the said bolts for drawing the friction ring and the disk of the driven clutch member into frictional engagement with the disk of the driving clutch member.

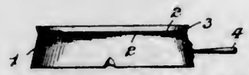
3. In a friction clutch, the combination of a clutch member having a sleeve and a disk extension, a second clutch member having a disk and a cylindrical flange at the end of the disk, said second clutch member having also a loose ring engaging the inner periphery of said flange, bolts passing through the two parts of the second clutch member and surrounded by said flange, bell crank levers for operating said bolts, and a pulley connected with the second clutch member, said levers extending through said pulley.

4. In a friction clutch, the combination of a clutch member having a disk, a second clutch member having two parts lying on opposite sides of said disk, bolts connecting said parts, bell crank levers mounted on the heads of said bolts for drawing them, and loose rings surrounding the heads of said bolts and forming bearings for the levers, the looseness of said rings allowing them to turn to present a fresh face to the levers.

5. In a friction clutch, the combination of a clutch member having a radially extending disk, a second clutch member having a disk portion extending beyond the disk first mentioned and provided with an overhanging flange, a clamping ring seating within such flange on the other side of said first-mentioned disk, bolts passing through said ring and through the disk portion of the second member beyond the periphery of said first-mentioned disk, said bolts having bifurcated heads, and bell crank levers pivoted in such bifurcations and having short arms adapted to bear against the clutch member carrying the bolts.

[Claims 6 to 12 not printed in the Gazette.]

884,767. COOKING UTENSIL. FANNIE B. SENSENEY, Chambersburg, Pa. Filed Jan. 30, 1908. Serial No. 413,339.

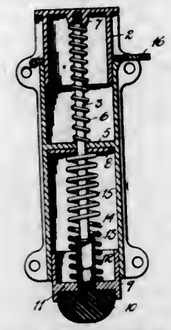


1. A cooking utensil consisting of walls of different heights, each surrounding the opposite face of a common bottom and adapted to be used as a fry pan or a griddle, according as the higher or lower surrounding wall is uppermost.

2. A cooking utensil consisting of walls of different heights, each surrounding the opposite face of a common bottom and adapted to be used as a fry pan or a griddle, according as the higher or lower surrounding wall is uppermost, and a handle located approximately mid-way between the upper and lower edges of said walls and adapted for use with either end of the device uppermost.

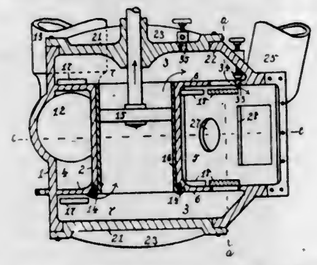
884,768. FOOT-BOLT FOR HOLDING DOORS. HOMER R. SHAFER, Detroit, Mich. Filed June 5, 1907. Serial No. 377,358.

In combination with a main casing provided with a fixed abutment intermediate its ends, a bolt engaging slidably through said abutment lengthwise of said casing, telescoping casings slidably engaging in each end of said main casing, one of said casings being fixed to its end of the bolt, and the other having a sliding connection therewith, compression springs engaging between each side of said abutment and the inner face of the telescoping casing opposite the same, and a clamping ring engaging about the



upper one of said telescoping casings with a sliding connection, whereby the same may be held in depressed condition against the force of its spring, substantially as described.

884,769. FORCE-PUMP. WILLIAM H. SHAFER, Cincinnati, Ohio. Filed June 13, 1906. Serial No. 321,438.



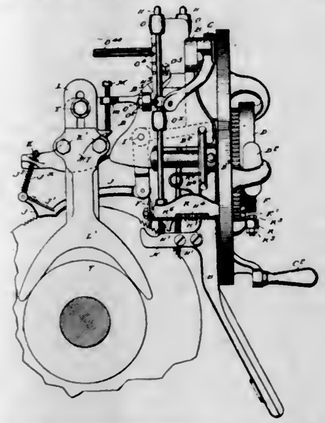
1. In a vertical double acting pump, a body having in combination an upper and a lower valved deck, said decks being emplaced in respective horizontal planes, said upper deck being provided with a valve controlled priming passage, a barrel extending between the decks and terminating its ends flush with the surface of the decks, and a partition extending between the decks from the barrel to opposite sides of the body.

2. In a duplex double acting pump, a body consisting of a single casting provided with suction and discharge openings, with upper and lower plane decks each having a series of suction and a series of discharge valve openings, with partitions between the respective said decks and the ends of the body, with barrels communicating between the decks on opposite sides of the said partitions and terminating flush with the surface of the decks, with a partition extending between the decks and connecting the barrels together and to the sides of the body.

3. A pump body consisting of a single casting and formed with transverse upper and lower decks in respective parallel planes for separating the end pulsation chambers from the intermediate suction and force chambers, with a barrel communicating between the pulsation chambers and terminating its ends flush with the opposite surface of the decks, with a partition provided with a bypass opening and extending between the decks from the barrel to the sides of the body for separating the suction from the force chamber, said decks each being formed with a series of valve openings between the corresponding pulsation chamber and the respective suction and force chambers, said upper deck being also formed with a priming passage between the force chamber and the upper pulsation chamber for the purpose specified.

4. In a vertical double acting pump, the combination with a body of a suction, a pulsation and a discharge chamber therein, a horizontal partition former integral with the body and separating the pulsation chamber from the suction and the discharge chambers, said partition being provided with a series of valved passages between the suction and the pulsation chambers, and also with a series of valved passages between the said pulsation and the discharge chamber, said partition being also provided with a valve controlled priming passage between the said pulsation and discharge chambers, for the purpose specified.

884,770. GIN-SAW-FILING MACHINE. FRANCIS M. SISK, Atlanta, Ga., assignor, by direct and mesne assignments, to J. L. De Give, Atlanta, Ga. Filed Jan. 6, 1906. Serial No. 294,940.



1. In a saw filing machine, the combination with the frame, a saw feed of bearing blocks pivotally mounted on said frame, file rods mounted for reciprocation and rotation upon said bearing blocks, a rock lever pivoted between the file rods, means for automatically spreading the file rods during the inoperative movement of said file rods, means for regulating said movements of the bearing blocks, and a universal joint connection between the file rods and the adjacent ends of the rock lever, whereby the rocking of the lever will reciprocate and partially rotate the file rods.

2. In a saw filing machine of the class described, the combination with the frame provided with an extension on the front thereof, of forks connected with the rear of the frame and adapted to rest upon the space blocks of the saws, a leg comprising a foot piece and grooved bar, said foot piece and the extension of the frame being provided with tongues engaging the groove of the bar whereby to adjust the length of the leg, means for securing the parts in their adjusted position, and filing mechanism in connection with the frame.

3. In a saw filing machine, the combination with the frame, of a sharpening means in the frame, a clamp comprising a plurality of plates connected with the frame directly below said sharpening means and adapted to engage opposite sides of the saw, one of said plates offsetting its adjacent plate for receiving and deflecting the periphery of the saw in front of and behind the file whereby said saw may be held for said sharpening means.

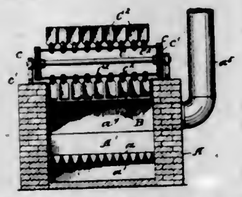
4. In a saw filing machine, the combination with the frame, of a sharpening means in the frame, plates connected with the frame and engaging opposite sides of the saw, said plates having uneven clamping faces whereby to engage and deflect the periphery of the saw in advance of the file.

5. In a saw filing machine, the combination with the frame, of saw sharpening means in connection therewith, and a clamp comprising jaws for engaging the op-

posite sides of the saw, the engaging face of one of said jaws being concave and the other convex whereby to tension the periphery of the saw.

[Claim 6 not printed in the Gazette.]

884,771. DRIER. KARL F. SNOW, Cleveland, Ohio, assignor to The C. O. Bartlett & Snow Co., Cleveland, Ohio, a Corporation of Ohio. Filed Apr. 15, 1907. Serial No. 368,214.



1. In a drier, the combination of a trough, means for heating the same and an endless conveyer disposed to advance material along said trough, said conveyer comprising two endless cables arranged one along each side of said trough, transverse bars connecting said cables at intervals, and spaced flights mounted upon said bars, said bars being provided on their under faces with means adapted to variously engage said flights to non-rotatably hold the same and said flights being provided with means for securing the same to said bars irrespective of the axial position thus assumed.

2. In a drier, the combination of a trough, means for heating the same, and an endless conveyer disposed to advance material along said trough, said conveyer comprising two endless cables arranged one along each side of said trough, transverse bars connecting said cables at intervals, and spaced flights mounted upon said bars, each of said flights comprising a base member non-rotatably secured to the bar and having its lower face formed with projections, and a scraper member having a stem adapted to extend through said base member and the bar and be secured to the latter and a face formed with projections variously complementary to those of said base member.

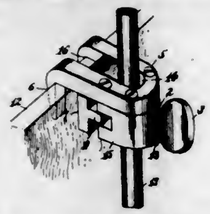
3. In a drier, the combination of a trough, means for heating the same, and a conveyer disposed to advance material along said trough, said conveyer comprising two endless cables respectively arranged along each side of said trough, transverse bars connecting said cables at intervals, and spaced flights mounted upon said bars, each of said flights comprising a base member adapted non-rotatably to engage the bar and having its lower face serrated, and a scraper member having a stem adapted to extend through said base member and the bar and be secured to the latter and a serrated face complementary to that of said base member.

4. In a drier, the combination of a trough, means for heating the same, and a conveyer disposed to advance material along said trough, said conveyer comprising two endless cables respectively arranged along each side of said trough, transverse bars connecting said cables at intervals, and spaced flights mounted upon said bars, each of said flights comprising a base member having a flanged upper face adapted to non-rotatably engage the bar and a radially serrated lower face, a scraper member having a threaded stem adapted to extend through said base member and the bar and a serrated face complementary to that of said base member, and a nut on said threaded stem adapted to draw said members and the bar together.

5. A conveyer comprising two parallel endless cables, transverse bars connecting said cables at intervals, and spaced flights mounted upon said bars, each of said flights comprising a base member adapted non-rotatably to engage the bar and having its lower face serrated, and a scraper member having a stem adapted to extend through said base member and the bar and be secured to the latter and a serrated face complementary to that of said base member.

[Claims 6 to 8 not printed in the Gazette.]

884,772. CLAMP. CHARLES M. SORENSEN, Greenpoint, N. Y. Filed June 13, 1907. Serial No. 378,716.



1. A clamp comprising a U-shaped body having a downwardly extending end to assist in holding said body to a support, a single movable clamping member engaging with said body, and means for simultaneously clamping said body to a support and an article in said body, substantially as described.

2. A clamp comprising a body provided with forwardly extending arms, support engaging means extending at an angle from the ends of said arms, a single movable clamp engaging with said body, and means for simultaneously clamping said body to a support and an article in said body, substantially as described.

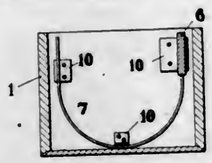
3. A clamp comprising a body provided with forwardly extending arms, support engaging means extending at an angle from the ends of said arms, a single movable clamping member engaging with said body, and a clamping screw threaded in said body for simultaneously clamping said body to a support and an article in said body, substantially as described.

4. A clamp comprising a body provided with a bent end to assist in holding said body to a support, recesses formed in said body, a clamping plate provided with guide lugs engaging said recesses, and means for simultaneously clamping said body to a support and an article in said body, substantially as described.

5. A clamp comprising a body with a bent clamping end whereby to assist in securing said body to a support, recesses formed in said body, a clamping plate provided with guide lugs engaging in said recesses, and a screw passing through said body whereby to simultaneously clamp said body to a support and an article in said body, substantially as described.

[Claims 6 to 10 not printed in the Gazette.]

884,773. SQUARE. CHARLES H. STARK, Chicago, Ill. Filed June 15, 1907. Serial No. 379,198.

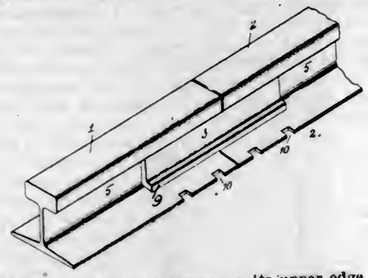


1. A square having two arms of different degrees of flexibility, the more flexible arm being sufficiently flexible to permit of its bending to semi-circular shape, and a rigid sheath closed at its sides and edges and slidable on and off the last mentioned arm.

2. A metallic square one arm of which is reduced in thickness and flexible, and a rigid sheath slidable on or off the arm, and having a surface flush with the surface of the other arm when in place on said flexible arm.

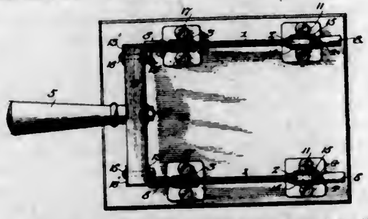
884,774. RAIL-JOINT. JOHN D. STITZELL, Allegheny, Pa. Filed Sept. 24, 1907. Serial No. 394,351.

The combination with the rails having the webs thereof cut away at the ends of the rails and having their base flanges cut away centrally for a length equal to the distance of the cut-away portion of the web, the treads of said rails being provided on the underneath face with a groove equal in length to the cut away portion of the web and base flange, of a connecting member having its base portion fitting in the cut away portion of the rail



base flanges and having a tongue on its upper edge fitting in the groove in the underneath face of the rail treads, and longitudinally-extending side ribs on said connecting member resting upon the base flanges of said rails.

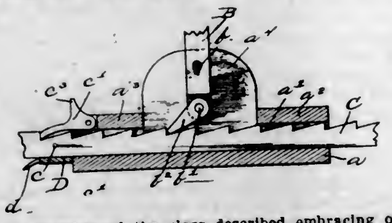
884,775. ELECTRIC SWITCH. ADOLPH R. SWOBODA, Louisville, Ky. Filed Mar. 8, 1905. Serial No. 249,004.



1. A multipolar switch of the character described including oppositely disposed double contacting blades, each of said blades consisting of a strip of metal bent longitudinally to form substantially U-shaped members, the inner arms of said U-shaped members being laterally offset and engaging the inner surface of a connecting bar extending between the blades, and the outer arms extending over the end of said bar and offset to engage the outer surface of the said bar, and means for connecting the offset portions of the arms of the U-shaped members to the bar.

2. A multipolar switch of the character described including oppositely disposed double contacting blades, each of said blades consisting of a strip of metal bent longitudinally to form substantially U-shaped members, the arms of said U-shaped members having lateral offset portions arranged to engage respectively opposite surfaces of a connecting bar extending between the blades in combination with the said bar and means for connecting said offset portions thereto.

884,776. CARPET-STRETCHER. RICHARD J. TANNER, Lincoln, Nebr. Filed May 20, 1907. Serial No. 374,685.



1. A stretcher of the class described embracing oppositely disposed ratchet bars, gripping jaws equal in number to the bars and a single lever for engaging either bar to independently actuate the jaws to independently stretch different lengths of a strip.

2. A stretcher of the class described comprising bars, gripping jaws equal in number to the number of bars, and means for forcing said jaws independently of each other in the same direction in stretching.

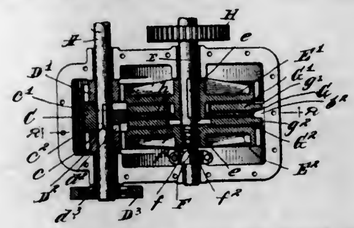
3. A stretcher embracing a housing, bars slidable therein each having teeth and means adapted to engage said teeth for forcing one of the bars and the housing in the same direction in stretching.

4. In a stretcher of the class described the combination with bars having oppositely directed teeth thereon, a casing securing said bars in operative relation, actuating means pivoted to the casing adapted to engage the teeth of one bar to adjust the casing longitudinally of said bar, in stretching and to engage the teeth of the other bar to adjust the same in stretching, a jaw removably secured to the housing, a jaw secured to one of the bars and means automatically locking the jaws in any adjustment.

5. A stretcher embracing a housing, bars having oppositely directed teeth slidable therein, a lever, a reversible pawl on the end thereof for actuating either bar in stretching and gravity acting pawls, one for each bar adapted to prevent movement in one direction thereof.

[Claims 6 to 20 not printed in the Gazette.]

884,777. TRANSMISSION-GEARING FOR HOISTS. ARTHUR J. THOMAS, Harvey, Ill. Filed Mar. 1, 1907. Serial No. 359,987.



1. In a transmission mechanism for hoists, the combination with a rotary power shaft, of a hoisting shaft, gearing interposed between said shafts for rotating said hoisting shaft in a direction to raise a load, gearing interposed between said shafts for rotating said hoisting shaft in an opposite direction, and means actuated by an initial rotation of said hoisting shaft in a direction to lower the load for locking said shaft against further rotation.

2. In a transmission mechanism for hoists, the combination with a rotary power shaft, of a hoisting shaft, gearing interposed between said shafts for rotating said hoisting shaft in a direction to raise a load, gearing interposed between said shafts for rotating said hoisting shaft in an opposite direction, means actuated by an initial rotation of said hoisting shaft in a direction to lower the load for locking said shaft against further rotation, and means for releasing said locking means actuated by an initial rotation of said power shaft in a direction to lower the load.

3. In a transmission mechanism for hoists, the combination with a rotary power shaft, of a pair of pinions loosely surrounding said shaft, means for clutching one or the other of said pinions to said shaft according to its direction of rotation, a rotary hoisting shaft, a gear fixed upon said hoisting shaft in mesh with one of said pinions, a second gear wheel meshing with said second pinion and axially movable upon said hoisting shaft, a brake for preventing the rotation of the hoisting shaft in a direction to lower a load, means for actuating said brake by an axial movement of said second gear wheel, and means for locking said second gear wheel to said hoisting shaft after a sufficient axial movement thereof to release said brake.

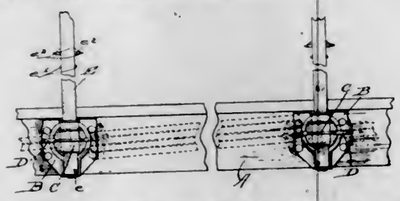
4. In a transmission mechanism for hoists, the combination with a rotary power shaft, of a pair of pinions loosely surrounding said shaft, means for clutching one or the other of said pinions to said shaft according to its

direction of rotation, a rotary hoisting shaft, a gear fixed upon said hoisting shaft in mesh with one of said pinions, a second gear wheel meshing with said second pinion and having an internally screw-threaded hub engaging a screw-thread on said hoisting shaft, a brake for controlling the rotation of said hoisting shaft, means for actuating said brake by the axial movement of said second gear wheel, and means for locking said second gear wheel to said hoisting shaft after a sufficient axial movement thereof to release said brake.

5. In a transmission mechanism for hoists, the combination with a rotary power shaft, of a pair of pinions loosely surrounding said shaft, means for clutching one or the other of said pinions to said shaft according to its direction of rotation, a rotary hoisting shaft, a gear fixed upon said hoisting shaft in mesh with one of said pinions, a second gear wheel meshing with said second pinion and axially movable upon said hoisting shaft, friction disks surrounding and rotating with said hoisting shaft, a relatively stationary coöperating friction disk, said friction disks being interposed between said first and second gear wheels and relatively moved axially by the axial movement of said second gear wheel.

[Claims 6 to 10 not printed in the Gazette.]

884,778. CAR-STAKE AND ATTACHING MEANS THEREFOR. JOHN A. TOOMEY, Chicago, Ill. Filed May 20, 1907. Serial No. 374,683.



1. A car stake and means for attaching the same having interlocking parts distributing outward pressure thereagainst over a large area and a rigid pocket secured to the car adapted to receive the end of the stake when in vertical position and to lock the stake in said position.

2. A car stake slidable relatively of the car and adjustable to vertical and horizontal position, attaching means therefor resisting outward pressure thereagainst at points around the stake, a rigid pocket secured to the car into which the lower end of the stake engages in vertical position and means rigidly secured to each stake for locking the outer end of an adjacent stake thereto in horizontal position.

3. A stake adjustable to a vertical and a horizontal position and means locking adjacent stakes together when in horizontal adjustment.

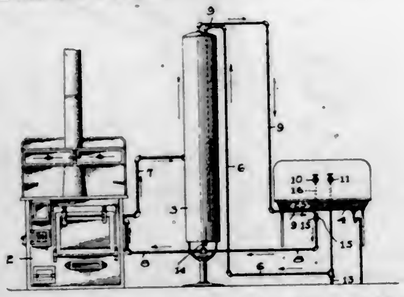
4. In a device of the class described the combination with a stake of attaching means therefor having interlocking parts affording great rigidity against outward pressure on the stake and means for inclining the stake inwardly in vertical position.

5. In a device of the class described the combination with a vertically and horizontally adjustable stake of attaching means therefor part of which is rotatable, adapted to interlock with another part and acting equally against pressure exerted on the stake for any adjustment of the stake, means for engaging the stake to lock the same in vertical adjustment and means for adjusting the outer end of the stake inwardly in said adjustment.

[Claims 6 to 36 not printed in the Gazette.]

884,779. HOT-WATER-CIRCULATING SYSTEM. GEORGE A. TRIGGS, Lake Park, Iowa. Filed Mar. 23, 1906. Serial No. 307,620.

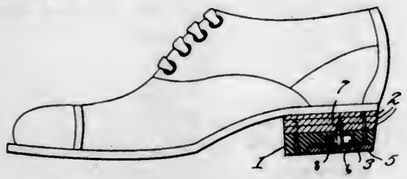
1. The combination, with a heater and boiler, of a pipe leading from the heater to the boiler, a pipe 9 leading from the top of the boiler, a pipe 8 leading into the heater, a pipe 15 having one end connected to said pipe 8 and connected at a point intermediate to its ends to said pipe 9 a pipe 16 connected to the other end of said pipe 15 and a faucet provided in said pipe 16, a valve located in said pipe 15 between its points of connection with said pipes 8 and 9 and a piston connected with said valve and located between said pipe 9 and said faucet and said piston normally allowing said valve to remain open by gravity and permit circulation through said pipe 15 and adapted to close said valve and shut off said circulation when said faucet is open.



2. The combination, with a heater and boiler, of a pipe leading from the top of said boiler, a pipe leading from said heater into said boiler, a pipe leading from said heater and communicating with the pipe leading from the top of said boiler, a faucet connected with said pipes, a valve interposed between the pipe leading from said heater and the pipe leading from the top of the boiler and normally opened by gravity, a faucet having a pipe connection with the pipes leading from said heater and from the top of said boiler, and a piston located between said faucet and the pipe leading from the top of said boiler and connected with said valve and adapted to automatically close said valve when said faucet is opened.

3. The combination, with a heater and boiler, of the pipe leading from the heater to the boiler, a pipe 9 leading from the top of the boiler, a pipe 8, a pipe 15 connected with said pipes 8 and 9, a faucet connected with said pipe 15, a valve 17 located in said pipe 15 on one side of said pipe 9, a piston located on the other side of said pipe 9, and connected with said valve and comprising a disk and a cylinder and having a series of holes therein, said valve 17 being normally open by gravity and the holes in said cylinder being normally closed to prevent passage of the water therethrough and said disk and cylinder being raised to expose the holes in said cylinder and open them to the passage of the water and close said valve when the faucet is open, substantially as described.

884,780. HEEL FOR BOOTS AND SHOES. WALTER C. TURPEL, New Orleans, La. Filed Sept. 21, 1907. Serial No. 393,954.



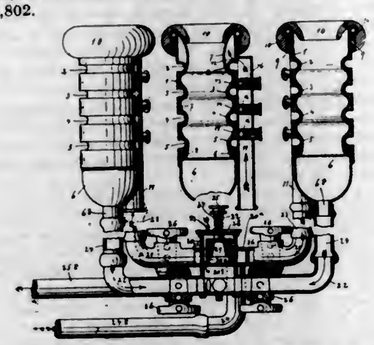
1. In a heel, a resilient or compressible member having a recess constituting an air chamber, and a top lift supported for rotation adjacent to said air chamber and constituting a closure therefor.

2. In a heel, a resilient or compressible member having a recess constituting an air chamber, and a shallower recess adjacent to and concentric therewith, in combination with a top lift seated revolubly in the shallower recess and constituting a closure for the air chamber.

3. A heel comprising a foundation, a rubber cushion secured upon the foundation and having a recess constituting an air chamber, a top lift supported for rotation adjacent to the air chamber and constituting a closure therefor and a fastening member for said top lift having a head countersunk therein and a shank extending through the cushion member into the foundation of the heel.

4. In a heel, a foundation, a cushion secured upon the foundation and having a recess constituting an air chamber, and a shallower recess concentric therewith, a leather top lift seated in the shallower recess and having a central aperture, a metal washer secured upon the underside of the top lift, and a headed fastening member extending through the washer, the air chamber and the cushion into the foundation of the heel, the head of said fastening member being accommodated in the central aperture of the top lift.

884,781. MILKING-MACHINE. WILLIAM J. UEBLER, Schuyler, N. Y. Filed Mar. 18, 1907. Serial No. 362,802.



1. The combination in a teat cup for milking machines of a generally cylindrical casing or shell having internal spaced encircling ribs, a flexible tubular lining attached to the casing at each end, an inlet port above the upper rib and outlet ports between the several ribs and means for supplying fluid to and withdrawing it through said ports, substantially as set forth.

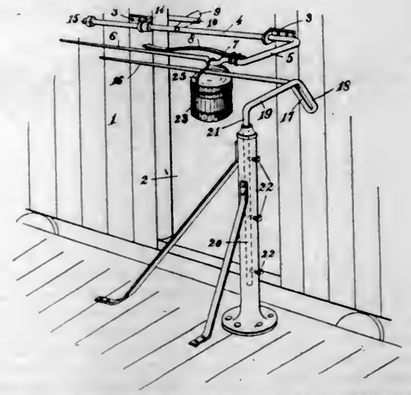
2. The combination in a teat cup for a milking machine of a generally cylindrical casing or shell having internal spaced encircling ribs, a cap closing the lower end of the casing or shell, a flexible tubular lining attached to the casing at each end, an inlet port above the upper rib and outlet ports between the several ribs, and means for supplying fluid to and withdrawing it through said ports, and means for applying a suction at the lower end of the teat cup to the space within the lining, substantially as set forth.

3. The combination in a teat cup for a milking machine of a generally cylindrical casing or shell having internal spaced encircling ribs and a cap closing the lower end of the shell, a flexible tubular lining attached to the casing at each end, an inlet port above the upper rib and outlet ports between the several ribs, a flexible mouthpiece provided at the upper end of the casing, means for supplying fluid to and withdrawing it through said ports, and means for applying a suction to the lower end of the teat cup within said lining, substantially as set forth.

4. A pulsator for milking machines, consisting of a cylinder having longitudinally movable valves 42, having chambers *d*, *e*, *f*, *g* and *h*, ports 44, 48, 49 and 50 controlled by and operating in connection with said valve, and means for causing the reciprocation of said valve, substantially as set forth.

5. A pulsator for milking machines, consisting of a cylinder having a longitudinally movable valve 42, having chambers *d*, *e*, *f*, *g* and *h*, ports 44, 48, 49 and 50 controlled by and operating in connection with said valve, and ports for supplying fluid under pressure to the ends of the cylinder for reciprocating said valve, substantially as set forth.

884,782. MAIL-POUCH-DELIVERY DEVICE. WILLIAM A. VIRGILS, Chicago, Ill., assignor of one-half to Carl A. Kreeger, Chicago, Ill. Filed Dec. 2, 1907. Serial No. 404,800.



1. In a device of the class described, a delivery crane mounted upon the side of a car and comprising a horizontal bar portion rotatably and slidably mounted in suitable brackets, an offset portion and a delivery arm substantially parallel with said bar portion, and a handle on said bar portion for raising said delivery arm into operative position, substantially as described.

2. In a device of the class described, a delivery crane mounted upon the side of a car and having a delivery arm extending parallel with the side of a car, said arm having a notch therein and a spring overhanging said notch, in combination with a mail pouch having a suspending member adapted to rest within said notch, and a receiving crane adapted to engage said suspending member, as and for the purpose specified.

3. In a device of the class described, a receiving crane comprising a stand-post and a receiving arm vertically adjustable thereon, said arm consisting of a horizontal portion arranged parallel with the track a forwardly inclined portion, a return portion parallel therewith and an offset portion by which the device is secured to the post, substantially as described.

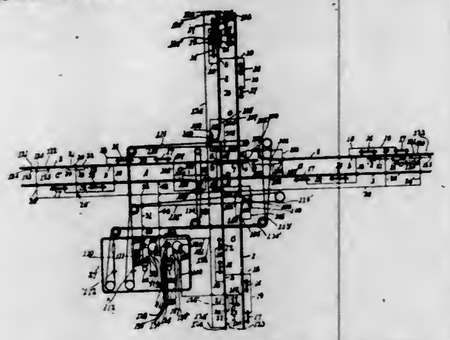
4. In a device of the class described, a delivery crane rotatably mounted upon the side of a car, a handle thereon for raising said crane into operative position, a sliding bar arranged upon the inner wall of the car for engaging said handle, a handle on said bar for reciprocating the same and means for preventing said bar from turning, substantially as described.

884,783. SIGNAL SYSTEM FOR RAILWAYS. MAXIMILLIAN G. VOIGTLANDER, Harrison, Ohio, assignor of one-half to James A. Graft, Harrison, Ohio. Filed Aug. 9, 1906. Serial No. 329,827.

1. In a signal system for railways, the combination of a track divided into blocks comprising a given block, a local contact for said given block in advance thereof, a traveling recorder having electric connection for said local-contact, a local recorder, local-contacts at both ends of said given block for the latter, the last-named local contacts having electric connection with said local recorder for indicating the passage into and out of said block of a vehicle.

2. In a signal system for railways, the combination of a track divided into blocks, local-contacts for the respective blocks, a traveling signal, a traveling contact for said local

contacts having electric connection with said traveling signal, local signal-contacts at the respective ends of the respective blocks, and a local signal having electric connection with said local signal-contacts for indicating the passage of a vehicle into and out of said respective blocks, substantially as described.



3. In a signal system for railways, the combination of a track divided into blocks comprising a given block, said given block having a plurality of local traveling-recorder contacts in advance thereof and electrically connected therewith, a plurality of local-recorder contacts respectively in advance of said respective traveling recorder-contacts, a traveling recorder having electric connection acting with said local traveling-recorder contacts for actuating said traveling recorder, and a local recorder having electric connection acting in conjunction with said local recorder-contacts.

4. In a signal system for railways, the combination of a track divided into blocks comprising a given block, a local contact in advance of said given block having electric connection therewith, a traveling recorder arranged to make electric connection with said local contact, a local-recorder contact for said given block distanced from said first-named local contact, and a local recorder in electric circuit with said local-recorder contact.

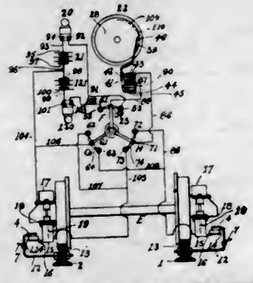
5. In a signal system for railways, the combination of tracks divided into blocks including a crossing-block, said crossing-block having a derail therein, a tower, means in said tower for operating said derail, a local contact having electric connection with said crossing-block, a tower-recorder, said track in advance of said crossing-block having contact-parts in electric connection with said tower-recorder, a traveling vehicle having contact-parts thereon for the electric circuit in said last-named connections, and a traveling recorder on said vehicle having electric connection including a traveling contact-part for making contact with said first-named local contact.

[Claims 6 to 19 not printed in the Gazette.]

884,784. SIGNAL SYSTEM FOR RAILWAYS. MAXIMILLIAN G. VOIGTLANDER, Harrison, Ohio, assignor of one-half to James A. Graft, Harrison, Ohio. Filed Aug. 9, 1906. Serial No. 329,828.

1. In a signal system for railways, the combination of a track comprising an electrically continuous rail and a mating rail divided into blocks, local contacts at both sides of said track, a vehicle, traveling contacts thereon arranged to make contact with said local contacts, a plurality of traveling signals, a recorder, said plurality of signals and recorder having electric connection with said traveling contacts and an axle and wheels of said vehicle, and an electric switch in said connection for operatively electrically connecting either of said signals with said recorder.

2. In a signal system for railways, the combination of a track comprising an electrically continuous rail and a mating rail insulated into blocks, local contacts at both sides of said track, a vehicle, traveling contacts on said vehicle for said local contacts, a traveling signal and traveling recorder on said vehicle having electric connection with either of said traveling contacts, and an electric switch on said vehicle for operatively electrically connecting said signal and recorder with either of said traveling contacts.



3. In a signal system for railways, the combination of a track insulated into blocks, local contacts at either side thereof, a vehicle therefor, contacts thereon for said local contacts, a plurality of traveling signals and a traveling recorder on said vehicle, said respective signals having electric connection with said recorder comprising an electric switch for operatively electrically connecting either of said signals with said recorder, said signals having electric connection with said traveling contacts comprising an electric switch operatively electrically connecting either of said traveling contacts with either of said signals, substantially as described.

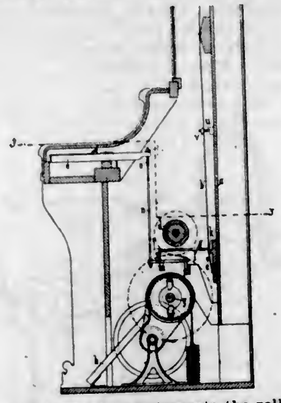
4. In a signal system for railways, the combination of a track insulated into blocks, local contacts at either side thereof, a vehicle therefor, contacts thereon for said local contacts, a plurality of traveling signals and a traveling recorder on said vehicle, said respective signals having electric connection with said recorder comprising an electric switch for operatively electrically connecting either of said signals with said recorder, said signals having electric connection with said traveling contacts comprising an electric switch operatively electrically connecting either of said traveling contacts with said signals, a source of electric energy, short-circuiting connections on said vehicle from said source to said signals and recorder, and a switch in said short-circuiting connections through either of said signals and said recorder.

5. In a signal system for railways, the combination of a track divided into blocks, a vehicle, local contacts for forward travel and local contacts for rearward travel of said vehicle electrically connected with said blocks, a traveling contact on said vehicle for forward travel and a traveling contact on said vehicle for rearward travel of said vehicle respectively arranged for making contact with said respective local contacts, a plurality of signals and recorder on said vehicle having electric connections with said respective traveling contacts and an axle and wheels of said vehicle, and a plurality of electric switches in said last-named electric connections for electrically connecting either of said traveling contacts with either of said signals and recorder, substantially as described.

[Claim 6 not printed in the Gazette.]

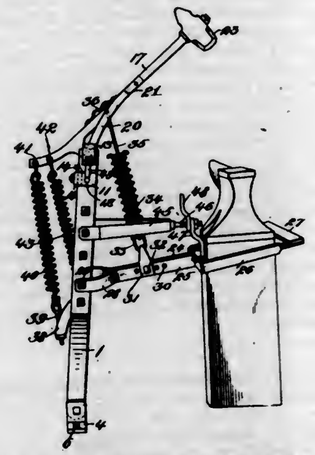
884,785. PIANO-VIOLIN. GUSTAV WALCH, Leipzig, Germany. Filed Sept. 12, 1906. Serial No. 334,315.

A keyed musical-instrument comprising a keyboard, a sounding board, vertical strings fastened to the sounding board; bridges on which the strings bear respectively; the screw bolts and nuts with which the strings are prevented from shifting sidewise, and for obtaining a soft tone from the respective strings; the strip for keeping the strings in position, and holding them against shifting to either side; the hardened non-elastic metal clamps, which hold the respective strings, adapted to transmit vibration to the strings; the bars each of which is firmly attached to one of the said clamps and the bristles on it which are adapted to create vibrations and transmit the same to the strings; the fork which holds the bar in position; the regulatable screw rod which holds the said fork operatively in connection with the respective keys on the keyboard; the rotatable roller adapted to rotate against the bristles which are attached on the bars fastened to the



said clamps; the means to reciprocate the roller longitudinally to avoid the formation of grooves in the same; the means to revolve the rotating roller, and the means to regulate the revolution of the roller, substantially as shown and described.

884,786. FOOT-POWER HAMMER. AUGUST H. WERTZ, Kansas City, Kans. Filed Sept. 26, 1906. Serial No. 336,318.

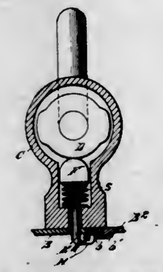


1. A foot power hammer comprising a frame having each of the side members thereof formed with a bifurcated upper end, a vertically-adjustable slide mounted in and straddling the bifurcated upper end of each of said side members, a hammer arm pivotally connected to said slides and provided with a hammer head, a removable means extending through the bifurcated upper ends of the said side members for retaining the slides in their adjusted positions, and an operating lever connected with the hammer arm and to the frame.

2. A foot power hammer comprising a frame, vertically adjustable slides carried thereby, a hammer arm pivotally connected to the slides and provided with a hammer head, a removable means extending through the frame for retaining the slides in their adjusted position, an operating lever connected to the frame and to the hammer, and means attached to the frame and to the hammer arm for automatically returning the hammer arm to normal position.

3. A foot power hammer comprising a frame, vertically adjustable slides carried by the top of the frame, a hammer arm pivotally connected to said slides and provided with a hammer head, removable means extending through the top of the frame for retaining the slides in their adjusted position, and an operating lever connected with the hammer arm and to the frame.

884,787. HAND-BAG LOCK. JOHN J. WOOLFENDEN, Detroit, Mich. Filed Mar. 7, 1907. Serial No. 361,034.



1. In a locking device for hand-bags, the combination of a handle adapted to be swung from a substantially horizontal to a vertical position, studs upon one of the closing frames of the bag forming hinges for said handle, vertically movable bolts actuated by the movement of the handle to a vertical position to engage both frames, and means adapted to yieldingly hold the bolts against the actuating pressure of the handle and to force the same from engagement with one of said frames when the handle is moved to horizontal position, substantially as described.

2. In a bag, frames adapted to be brought into proximity upon the closing of the bag, locking means adapted to engage the same, a handle whereby said locking means is operated, and a plate adapted to engage the locking means and prevent its withdrawal from the locked position during the downward movement of the handle, substantially as described.

3. In a traveling bag, the combination of frames hinged together and adapted to close the bag, studs carried on one of said frames, a handle supported by said studs, bolts engaging downwardly from each of said studs and through the supporting frame, and adapted, by engagement through a complementarily apertured portion of the other frame, to lock the frames together, means adapted to yieldingly hold the bolts from engagement with the second frame, and means actuated by the movement of the handle from a horizontal to a vertical position whereby the bolts are forced from their normal position through the apertured portions of the second frame, substantially as described.

884,788. SEMICONVERTIBLE CAR. WILLIAM S. WRIGHT, Newark, Ohio. Filed Nov. 7, 1906. Serial No. 342,433.

1. A car comprising in its construction a sill, side-bars overhanging said sill, an inner wall, an outer wall spaced away from said sill and from said inner wall and extending to the lower edge of said sill, forming pockets which terminate at the lower edge of the sill, a removable plate mounted to close the lower ends of said pockets, a longitudinal rib carried by said plate and constituting a seat, hinged means for closing the upper ends of said pockets, and sashes slidably mounted between said side-bars, said sashes being designed to rest against said hinged means when upraised, preventing movement of the latter, and to be lowered within said pockets to rest upon said seat.

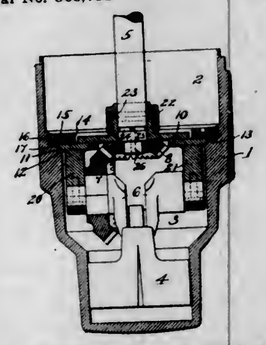
2. A car comprising in its construction a sill, side-bars

overhanging said sill, an inner wall, an outer wall spaced away from said sill and from said inner wall and extending to the lower edge of the sill, forming pockets which terminate at the lower edge of said sill, a removable plate mounted to close the lower ends of said pockets, a longitudinal rib having an inclined face carried by said plate, a hinged lid for closing the upper ends of said pockets, and sashes slidably mounted between said side-bars, said sashes being designed to rest against the hinged edges of said lids when upraised and to be lowered within said pockets upon the inclined face of said rib.



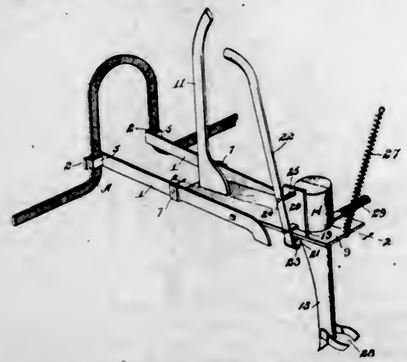
3. A car comprising in its construction a sill, side-bars overhanging said sill, an inner wall, an outer wall spaced away from said sill and extending to a point in a horizontal plane with the lower edge of the sill; said side-bars, inner wall, sill and outer wall together constituting the side walls of a pocket; a removable closure for the bottom of said pocket, said closure having a longitudinal laterally inclined seat, and a slidable sash adapted to be lowered within said pocket to rest upon said seat.

884,789. DOOR-CHECK. WILLIAM T. ADAMS, Reading, Pa., assignor to Reading Hardware Company, Reading, Pa., a Corporation of Pennsylvania. Filed Apr. 17, 1907. Serial No. 368,751.



A door check comprising a cylindrical casing formed with a lower piston chamber, an intermediate communicating fluid chamber adapted to contain the piston-reciprocating mechanism and counterbored at its upper end to form an annular shoulder, and an upper spring chamber of enlarged diameter the lower portion of the wall of which is internally screw-threaded, a partition plate seated in said counterbore with its upper surface above the offset at the junction with the upper chamber and provided with depending bearings for the piston-reciprocating mechanism, and a screw-ring in said upper chamber adapted to clamp and seal said partition plate, substantially as set forth.

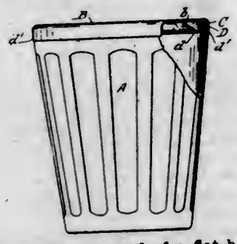
884,790. PLANTER. JOHN C. ATTEBURY and CHARLES LA PLANT, Madison, Mo.; said La Plant assignor of one-fourth to Joseph W. Baker, Monroe county, Mo. Filed July 26, 1907. Serial No. 385,650.



1. A replanting attachment for cultivators comprising supporting bars having means whereby they may be attached to a cultivator element and a cross-bar connecting said supporting bars; a body pivotally mounted between said supporting bars, a spring to normally raise the rear end of the body and normally maintain the front portion thereof on said cross bar, means to enable the rear end of said body to be depressed against the tension of said spring, a seed spout and furrow opener depending from and a seed-dropping mechanism on the rear portion of said body, said seed-dropping mechanism having a longitudinally movable element, a vertical arm extending upwardly from and attached to one side of the rear portion of said body, and forming a guide for said movable element, an operating lever for said element, pivotally connected to said body, and a spring to move said lever and movable element in one direction and bearing between the said arm and the said lever.

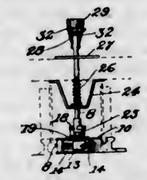
2. A replanting attachment for cultivators comprising a pivotally mounted body, a seed-dropping mechanism thereon, a lever carried by and extending upwardly from the body, to operate the seed-dropping mechanism, a furrow opener and seed spout depending from the body, and means whereby said pivotally mounted body may be raised and lowered to raise and lower the seed-dropping mechanism and seed spout.

884,791. JAR-COVER. EDWARD F. BAXTER, Seattle, Wash. Filed Dec. 13, 1906. Serial No. 347,578.



A cover for vessels composed of a flat horizontal circular portion of metal provided with a comparatively short annular downwardly inclined portion which extends at an obtuse angle to said circular portion, an annular upwardly extending portion vertically straight and integral with said inclined portion and disposed at an acute angle thereto, a second annular vertically straight portion of slightly greater length than said first named vertically straight portion spaced from the latter and having its lower end extending but slightly below the juncture of said inclined portion and said first named vertically straight portion, a semicircular portion integral with said vertically straight portions and connecting the same, the highest point of said semicircular portion being in the same plane as said flat horizontal circular portion, and a rigidly secured washer circular in cross section sealing directly in and impinging against said semicircular portion and the uppermost portions of said vertically straight portions.

884,792. RAILROAD-SWITCH. THOMAS J. BURKE, New Orleans, La. Filed Aug. 5, 1907. Serial No. 387,082.



1. In a mechanism of the class specified, the combination with a track having a switch tongue, of a rod connected to said tongue, a block movable on the rod and having a projection for shifting the same in opposite directions, the rod passing centrally through the block, a base and top covering means between which the block is confined, the sides of the block being unengaged, and means carried by a car for engaging the said projection.

2. In a mechanism of the class specified, the combination with a track having a switch tongue, of a transversely movable rod connected to the switch tongue, a block slidably disposed on the rod and provided with a projection, yielding devices interposed between opposite portions of the block and the rod, the rod extending centrally through the block, a base and top covering means between which the block is confined, the sides of the block being unengaged, and means carried by a car for engaging the said projection.

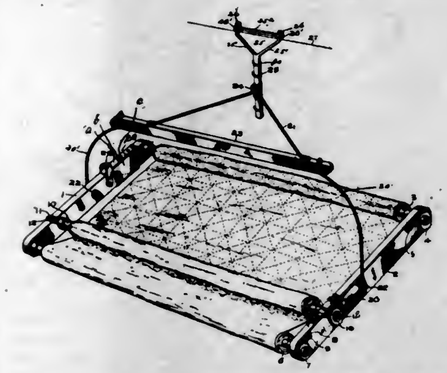
3. In a mechanism of the class specified, the combination with a track having a switch tongue, of a rod connected to the said tongue, a block slidably mounted on the rod and shiftable in opposite directions to open and close the said tongue, a plate over the block and rod and having a slot through which a part of the block extends, the rod extending centrally through the block, a bearing means engaging the underside of the block the sides of the block being unengaged, and means carried by a car for contacting with the portion of the block projecting through the slot.

4. In a mechanism of the class specified, the combination with main rails, switch rails, and a switch point or tongue, of a horizontal rod connected to the point or tongue and working in suitable guides, a sliding block loosely mounted on the rod, the latter extending centrally through the block, springs applied to the rod on opposite sides of the block, a vertically adjustable device carried by a car platform and having a foot member adapted to engage a portion of the said block, and means for positively locking said device in its adjusted and raised and lowered positions.

5. In a mechanism of the class specified, the combination with main track rails, switch rails, and a switch point or tongue, of a horizontal rod connected with the said point or tongue, guides for the rod, a block applied centrally to the rod and loose on the latter, the rod extending centrally through the block, the latter having upper and lower confining devices and unengaged at its opposite sides, and springs arranged on the rod on opposite sides of said block, the latter having an upward projection adapted for operative engagement with a manually controlled mechanism on a car.

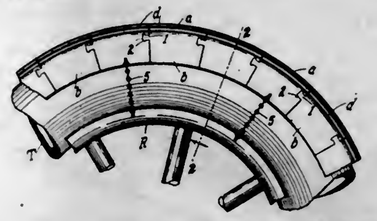
[Claims 6 to 9 not printed in the Gazette.]

884,793. QUILTING-FRAME. WILLIAM F. CASH, Hiawatha, Kans. Filed Dec. 15, 1906. Serial No. 347,958.



A quilting frame comprising side rails with rollers pivoted to each of their opposite ends, an intermediate detachable roller, curved arms each having an end pivoted to the side rails, a spreader bar arranged above the center of the frame and having the opposite ends of the arms secured thereto, a bail secured to the spreader bar and having its central portion bent to form a loop, a carriage provided with V-shaped arms having a bar depending therefrom, a cross-bar secured to the upper ends of the arms and provided with bearings in which are mounted rollers serving to travel on a suitably arranged wire, said depending bar being provided with a series of hooks arranged one above the other, and said loop serving to engage the hook to permit of the quilting frame being vertically adjustable, substantially as specified.

884,794. PROTECTING-CASING FOR TIRES. LORWIN N. CATES, St. Louis, Mo. Filed June 15, 1907. Serial No. 379,188.



A tire-casing composed of series of pairs of sections hinged together along the outer edge or tread of the wheel, tongues projecting from the sections on opposite sides of the hinge-line, and sockets formed in the contiguous sections for receiving said tongues and thus interlocking with the sections carrying said tongues, substantially as set forth.

884,795. HORSE-DETACHER. ROBERT COATES, Washington, D. C. Filed May 21, 1907. Serial No. 374,866.

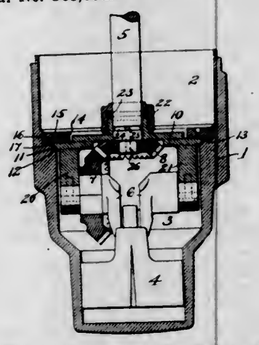
1. The combination with a vehicle, of brake sleeves mounted on the front axle thereof and extending over the hubs of the front carrying wheels, said axle having openings therein, thills, bolts pivotally secured thereto and fitted in said openings, studs projecting from said sleeves

overhanging said sill, an inner wall, an outer wall spaced away from said sill and from said inner wall and extending to the lower edge of the sill, forming pockets which terminate at the lower edge of said sill, a removable plate mounted to close the lower ends of said pockets, a longitudinal rib having an inclined face carried by said plate, a hinged lid for closing the upper ends of said pockets, and sashes slidably mounted between said side-bars, said sashes being designed to rest against the hinged edges of said lids when upraised and to be lowered within said pockets upon the inclined face of said rib.



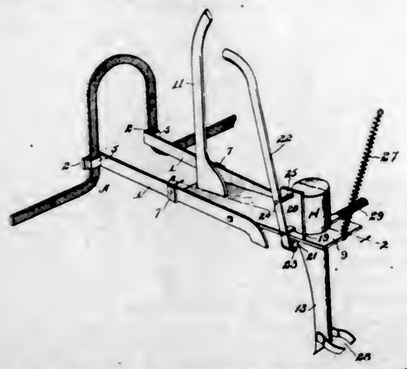
3. A car comprising in its construction a sill, side-bars overhanging said sill, an inner wall, an outer wall spaced away from said sill and extending to a point in a horizontal plane with the lower edge of the sill; said side-bars, inner wall, sill and outer wall together constituting the side walls of a pocket; a removable closure for the bottom of said pocket, said closure having a longitudinal laterally inclined seat, and a slidable sash adapted to be lowered within said pocket to rest upon said seat.

884,789. DOOR-CHECK. WILLIAM T. ADAMS, Reading, Pa., assignor to Reading Hardware Company, Reading, Pa., a Corporation of Pennsylvania. Filed Apr. 17, 1907. Serial No. 368,751.



A door check comprising a cylindrical casing formed with a lower piston chamber, an intermediate communicating fluid chamber adapted to contain the piston-reciprocating mechanism and counterbored at its upper end to form an annular shoulder, and an upper spring chamber of enlarged diameter the lower portion of the wall of which is internally screw-threaded, a partition plate seated in said counterbore with its upper surface above the offset at the junction with the upper chamber and provided with depending bearings for the piston-reciprocating mechanism, and a screw-ring in said upper chamber adapted to clamp and seal said partition plate, substantially as set forth.

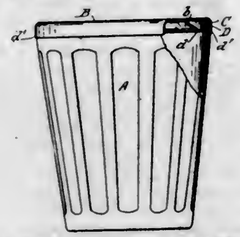
884,790. PLANTER. JOHN C. ATTEBURY and CHARLES LA PLANT, Madison, Mo.; said La Plant assignor of one-fourth to Joseph W. Baker, Monroe county, Mo. Filed July 26, 1907. Serial No. 385,650.



1. A replanting attachment for cultivators comprising supporting bars having means whereby they may be attached to a cultivator element and a cross-bar connecting said supporting bars; a body pivotally mounted between said supporting bars, a spring to normally raise the rear end of the body and normally maintain the front portion thereof on said cross bar, means to enable the rear end of said body to be depressed against the tension of said spring, a seed spout and furrow opener depending from and a seed-dropping mechanism on the rear portion of said body, said seed-dropping mechanism having a longitudinally movable element, a vertical arm extending upwardly from and attached to one side of the rear portion of said body, and forming a guide for said movable element, an operating lever for said element, pivotally connected to said body, and a spring to move said lever and movable element in one direction and bearing between the said arm and the said lever.

2. A replanting attachment for cultivators comprising a pivotally mounted body, a seed-dropping mechanism thereon, a lever carried by and extending upwardly from the body, to operate the seed-dropping mechanism, a furrow opener and seed spout depending from the body, and means whereby said pivotally mounted body may be raised and lowered to raise and lower the seed-dropping mechanism and seed spout.

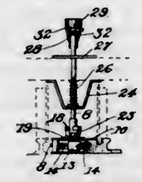
884,791. JAR-COVER. EDWARD F. BAXTER, Seattle, Wash. Filed Dec. 13, 1906. Serial No. 347,578.



A cover for vessels composed of a flat horizontal circular portion of metal provided with a comparatively short annular downwardly inclined portion which extends at an obtuse angle to said circular portion, an annular upwardly

extending portion vertically straight and integral with said inclined portion and disposed at an acute angle thereto, a second annular vertically straight portion of slightly greater length than said first named vertically straight portion spaced from the latter and having its lower end extending but slightly below the juncture of said inclined portion and said first named vertically straight portion, a semicircular portion integral with said vertically straight portions and connecting the same, the highest point of said semicircular portion being in the same plane as said flat horizontal circular portion, and a rigidly secured washer circular in cross section sealing directly in and impinging against said semicircular portion and the uppermost portions of said vertically straight portions.

884,792. RAILROAD-SWITCH. THOMAS J. BURKE, New Orleans, La. Filed Aug. 5, 1907. Serial No. 387,082.



1. In a mechanism of the class specified, the combination with a track having a switch tongue, of a rod connected to said tongue, a block movable on the rod and having a projection for shifting the same in opposite directions, the rod passing centrally through the block, a base and top covering means between which the block is confined, the sides of the block being unengaged, and means carried by a car for engaging the said projection.

2. In a mechanism of the class specified, the combination with a track having a switch tongue, of a transversely movable rod connected to the switch tongue, a block slidably disposed on the rod and provided with a projection, yielding devices interposed between opposite portions of the block and the rod, the rod extending centrally through the block, a base and top covering means between which the block is confined, the sides of the block being unengaged, and means carried by a car for engaging the said projection.

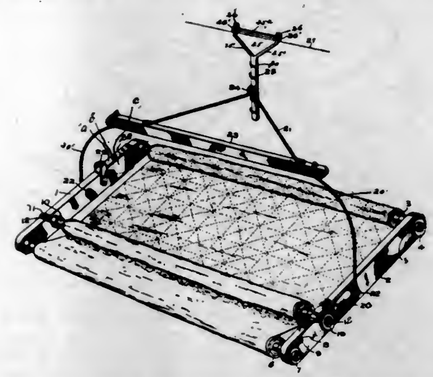
3. In a mechanism of the class specified, the combination with a track having a switch tongue, of a rod connected to the said tongue, a block slidably mounted on the rod and shiftable in opposite directions to open and close the said tongue, a plate over the block and rod and having a slot through which a part of the block extends, the rod extending centrally through the block, a bearing means engaging the underside of the block the sides of the block being unengaged, and means carried by a car for contacting with the portion of the block projecting through the slot.

4. In a mechanism of the class specified, the combination with main rails, switch rails, and a switch point or tongue, of a horizontal rod connected to the point or tongue and working in suitable guides, a sliding block loosely mounted on the rod, the latter extending centrally through the block, springs applied to the rod on opposite sides of the block, a vertically adjustable device carried by a car platform and having a foot member adapted to engage a portion of the said block, and means for positively locking said device in its adjusted and raised and lowered positions.

5. In a mechanism of the class specified, the combination with main track rails, switch rails, and a switch point or tongue, of a horizontal rod connected with the said point or tongue, guides for the rod, a block applied centrally to the rod and loose on the latter, the rod extending centrally through the block, the latter having upper and lower confining devices and unengaged at its opposite sides, and springs arranged on the rod on opposite sides of said block, the latter having an upward projection adapted for operative engagement with a manually controlled mechanism on a car.

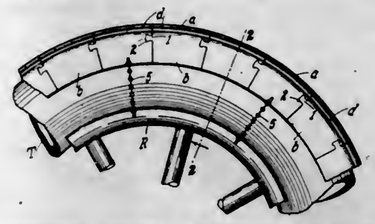
[Claims 6 to 9 not printed in the Gazette.]

884,793. QUILTING-FRAME. WILLIAM F. CASH, Hiawatha, Kans. Filed Dec. 15, 1906. Serial No. 347,958.



A quilting frame comprising side rails with rollers pivoted to each of their opposite ends, an intermediate detachable roller, curved arms each having an end pivoted to the side rails, a spreader bar arranged above the center of the frame and having the opposite ends of the arms secured thereto, a bail secured to the spreader bar and having its central portion bent to form a loop, a carriage provided with V-shaped arms having a bar depending therefrom, a cross-bar secured to the upper ends of the arms and provided with bearings in which are mounted rollers serving to travel on a suitably arranged wire, said depending bar being provided with a series of hooks arranged one above the other, and said loop serving to engage the hook to permit of the quilting frame being vertically adjustable, substantially as specified.

884,794. PROTECTING-CASING FOR TIRES. LORWIN N. CATES, St. Louis, Mo. Filed June 15, 1907. Serial No. 379,188.

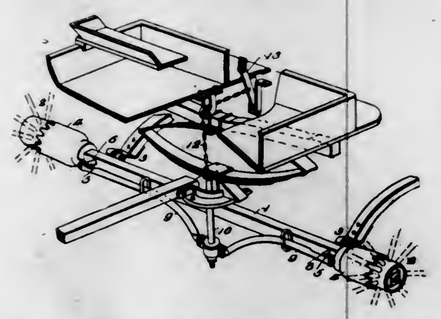


A tire-casing composed of series of pairs of sections hinged together along the outer edge or tread of the wheel, tongues projecting from the sections on opposite sides of the hinge-line, and sockets formed in the contiguous sections for receiving said tongues and thus interlocking with the sections carrying said tongues, substantially as set forth.

884,795. HORSE-DETACHER. ROBERT COATES, Washington, D. C. Filed May 21, 1907. Serial No. 374,866.

1. The combination with a vehicle, of brake sleeves mounted on the front axle thereof and extending over the hubs of the front carrying wheels, said axle having openings therein, thills, bolts pivotally secured thereto and fitted in said openings, studs projecting from said sleeves

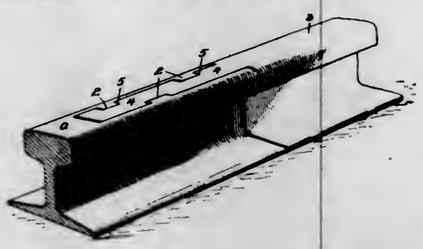
for engaging said bolts, springs located within said sleeves for normally holding said studs in engagement with said bolts and also holding the sleeves out of engagement with the wheel spokes, and means connected to said sleeves for moving the latter into engagement with the wheel spokes and disengaging the studs from said bolts.



2. The combination with a vehicle, of two brake-sleeves encompassing the hubs of two of the carrying wheels and formed with notches for taking in the wheel spokes at the inner ends thereof, thills, thill-locking studs carried by said sleeves normally engaging and holding said thills, springs normally holding said sleeves out of engagement with the wheel-spokes and holding said studs in engagement with the thills, two rods connected to said sleeves, a vertically-disposed rod to which the former rods are secured, and an operation lever connected to said vertically-disposed rod.

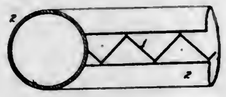
3. The combination with a vehicle having its front axle formed with openings, of two brake sleeves mounted on said axle and having notches in their free ends for taking in the spokes of the front carrying wheels, springs normally holding said sleeves out of engagement with the wheel spokes, thills having bolts pivotally secured thereto and fitted in said openings, studs carried by said sleeves normally engaging said bolts, actuating rod pivotally connected to said brake sleeves, a vertically disposed rod to which the inner ends of said actuating rods are secured, and a foot lever connected to said vertically disposed rod.

884,796. RAIL-JOINT. ORA G. COSNER, Kents Store, Va. Filed June 1, 1907. Serial No. 376,748.



In combination with a rail having a longitudinal recess in its head at one end and shoulders extending laterally into said recess from opposite sides thereof and out of line with one another, the inner end wall of such recess and the ends of said shoulders being vertical, a rail having a rabbet in its under side at one end providing a longitudinal projecting arm to enter such recess and overlap the joint between such rails and such arm having notches in its sides to receive the said shoulders for the first mentioned rail, the end of said arm and the sides of such notches being also vertical.

884,797. SECTIONAL FILTER FOR EXHAUST FILTRATION. HUGO P. CRUSH, Charlton, England, assignor to Alfred James, London, England. Filed Dec. 17, 1906. Serial No. 348,324.



1. A filter section comprising a light rigid filter frame composed of a thin ridged metal plate and a marginal frame consisting of a top bar and a tube adapted for connection with a vacuum apparatus, said tube extending along the ends and bottom of said plate and being provided with an exhaust opening, and a filter bag disposed on said frame and calked into the top bar thereof.

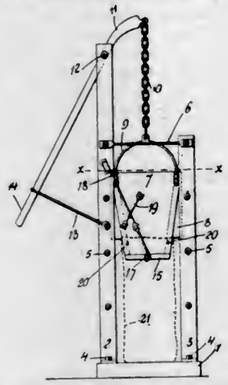
2. A filter section comprising a light rigid filter frame composed of a thin ridged metal plate and a marginal frame consisting of a top bar and a tube adapted for connection with a vacuum apparatus, said tube extending along the ends and bottom of said plate and being provided with an exhaust opening, and a filter bag disposed on said frame and inclined spreaders dependent from said top bar on opposite side of said plate to facilitate on the stoppage of the exhaust automatic breaking away of the cake formed on the filter fabric during the application of a vacuum.

3. A filter frame adapted for carrying a filtering fabric on opposite sides for exhaust filtration, comprising a sheet metal plate having angular ridges, a marginal frame therefor and spreaders extending downward from the top bar of said frame on opposite sides of said plate for spreading the filter fabric near the top.

4. A filter frame adapted to carry a filtering fabric on opposite sides for exhaust filtration, comprising a corrugated sheet metal plate and a marginal frame therefor, the bottom of said frame being a slotted exhaust pipe and said corrugated plate extending into the slot thereof.

5. A filter frame adapted to carry a filtering fabric on its opposite sides for exhaust filtration, comprising a sheet metal plate having angular corrugations and a marginal frame therefor, the bottom of said frame being a slotted exhaust pipe and said corrugated plate extending into the slot thereof.

884,798. BAG-HOLDING DEVICE. JOSIAH B. CUSICK, Wellsburg, W. Va., and WILLIAM I. SCOTT, Mingo Junction, Ohio. Filed Nov. 26, 1907. Serial No. 403,912.

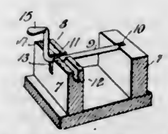


1. A device of the type described comprising a platform, sets of standards carried thereby, a hopper slidably mounted between said standards, a lever fulcrumed upon one set of standards and connected to said hopper, a drop bottom or gate hinged to said hopper, bag holding hooks carried by said hopper adjacent the lower end thereof, a pivoted lever carried by said hopper for retaining said hopper bottom or gate in a closed position, and means carried by one set of standards for retaining said hopper in an elevated position.

2. A device of the type described, comprising sets of standards, a hopper slidably mounted upon said standards and guided thereby, a fulcrumed lever carried by one set of standards for elevating said hopper, a drop bottom carried by said hopper, bag retaining hooks carried by said hopper, means for retaining said drop bottom in a closed position, and means for retaining said hopper in an elevated position between said standards.

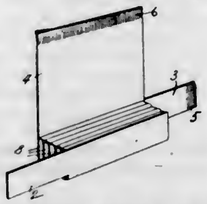
3. A bag holding device, comprising two sets of standards of unequal length, the standards of each set being spaced apart to form a guide-way, a hopper mounted between the sets of standards and provided at opposite sides with fins engaging in said guide ways, a bail carried by said hopper, a lever mounted in the longer set of standards, a flexible connection between said lever and said bail, a hook carried by the longer set of standards for engagement with said lever to hold the hopper in an elevated position, a drop bottom carried by said hopper, means carried by the hopper for holding said drop bottom normally in the closed position, and means carried by the hopper for connecting the mouth of a bag therewith.

884,799. TWINE-HOLDER. EDWARD P. DANDRIDGE, Philadelphia, Pa. Filed Oct. 10, 1907. Serial No. 396,773.



In a device of the character described, a series of spools for carrying twine, said spools each being mounted upon a spindle supported at one end in a bar secured to the frame, a flattened portion having a hole therein, a rod extending through said hole and supported in a groove in one of the frame bars, and a thumb piece for tipping said spindle to remove the spool therefrom.

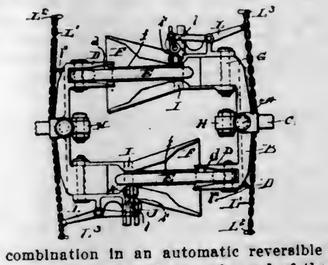
884,800. CHEWING-GUM WRAPPER. CLAUDE B. DAVIS, Chase City, Va., assignor of one-eighth to James H. Burroughs, Asheville, N. C., one-eighth to Thomas E. Parnell, Chattanooga, Tenn., and one-eighth to Adam Tyree Finch, Chase City, Va. Filed Oct. 16, 1907. Serial No. 397,690.



1. A wrapper of sheet material for the purpose described comprising an oblong body creased on parallel lines to form compartments when folded, an end flap projecting laterally from one end of the body, another end flap projecting laterally from the opposite side of the body between the ends of the body, and a sealing flap forming an end extension of the body.

2. A wrapper of sheet material for the purpose described comprising an oblong body creased reversely on parallel lines to form bellows-like compartments when folded, end flap projecting laterally from one side of one end of the body, another end flap projecting laterally from the opposite side of the body between the ends of the body, and a sealing flap forming an end extension of the body.

884,801. AUTOMATIC COUPLING. EDOUARD DE VLIEGER, Brussels, Belgium. Filed June 27, 1907. Serial No. 381,174.



1. In combination in an automatic reversible coupling gear, a coupling bar pivoted upon the end of the traction rod so as to swing in a horizontal plane, a coupling cup fixed at the one side of the said bar and a coupling hook fixed at the other end of the bar by a horizontal pivot so as to allow the said hook to travel in a vertical plane.

2. In combination in an automatic reversible coupling gear, a coupling bar adapted to have a horizontal movement, a coupling cup fixed at one side of the said bar, a central slot in the said cup, fixed inclines on either side of the said slot, turned over edges to prevent the hook from jerking out, when the carriages jolt and a coupling hook fixed at the end of the bar, a horizontal pivot for attachment of the said hook permitting the said hook to travel in a vertical plane and a twisted end to the said hook to permit it to travel on the inclined faces of the coupling cup.

3. In combination in an automatic reversible coupling gear a coupling bar adapted to have a horizontal movement, a coupling cup fixed at one side of the bar, a coupling hook fixed at the other end of the bar by a horizontal pivot so as to allow the said hook to travel in a vertical plane, and a connecting chain between the pivot frame and the hook.

4. In combination in an automatic reversible coupling gear a coupling bar adapted to have a horizontal movement, a coupling cup fixed at one side of the said bar, a recess made where the end of the hook falls down to couple, hollows on either side of the said recess, to permit the hook to move horizontally and a coupling hook fixed by a horizontal pivot at the other end of the bar.

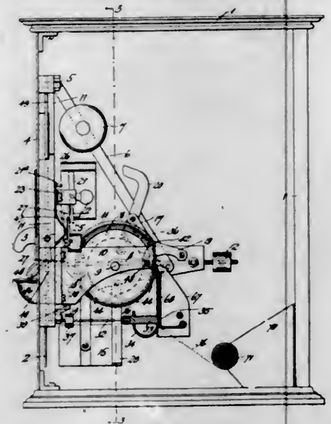
5. In combination in an automatic reversible coupling gear, a coupling bar adapted to have a horizontal movement, a coupling cup fixed at one side of the said bar, a slot running the whole length of the coupling cup, a coupling bolt fitting across the top part of the slot therein, a lever connected to the said bolt, loaded with a counter weight and the engagement of the lever in a slot in the said bolt, so that the lever is shot when the counter weighted lever is down, and drawn back when it is lifted, and a coupling hook upon the other end of the bar.

884,802. STAMP OR TICKET VENDING MACHINE. ROBERT J. DICKIE and JOHN H. BROWN, Wellington, New Zealand, assignors, by mesne assignments, to United States Automatic Vending Company, New York, N. Y., a Corporation of Maine. Filed Feb. 6, 1907. Serial No. 356,113.

1. In a vending machine the combination of an intermittingly rotatable feed wheel adapted to support a strip of vendible articles a hand operated lifting slide coin-controlled means for releasing said slide two loaded driving mechanisms interposed between said slide and feed wheel, the first of said mechanisms being adapted to energize the second and the second being adapted to actuate the feed wheel, and coin-actuated means for releasing said loaded driving mechanism.

2. In a vending machine the combination of an intermittingly rotatable feed wheel adapted to support a strip of vendible articles, a hand operated vertically movable slide, coin-controlled means for releasing said slide a

loaded rocker, a releasable connection between said feed wheel and rocker, and coin-operated means for controlling the operation of the rocker, two loaded driving mechanisms interposed between said slide and feed wheel the first of said mechanisms being adapted on downward movement of the slide to energize the rocker, and the second being adapted to actuate the feed wheel through the rocker and aforesaid releasable connection.



3. In a vending machine the combination of an intermittingly rotatable feed wheel adapted to support a strip of vendible articles a loaded rocker, a releasable connection between said rocker and feed wheel, a vertically movable hand operated slide, normally locked coin-controlled means for releasing said slide when it is desired to operate the machine, means co-acting with said slide for setting the rocker against the action of its load, coin-controlled means for releasing the rocker and permitting the same to impart motion to the feed wheel and additional means for locking said slide when the supply of vendible articles is practically exhausted.

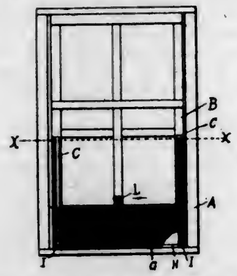
4. In a vending machine the combination of a casing having an aperture therein, an intermittingly rotatable feed wheel adapted to support a strip of articles to be vended, a loaded rocker, a releasable connection between said rocker and feed wheel a vertically movable hand operated slide connected with the loaded rocker to set the rocker against the action of its load normally locked, coin-controlled means for releasing said slide when it is desired to operate the machine, a coin-controlled escapement mechanism for releasing said rocker and permitting the same to impart motion to the feed wheel to project a portion of the aforesaid strip through the aperture in the casing, and means for preventing retrograde movement of the feed wheel.

5. In a vending machine the combination of a device for intermittingly feeding the articles to be vended in a strip, a vertically movable hand operated actuating slide coin-controlled means for releasing said slide releasable means set by said slide for operating the feed device, coin-actuated means for releasing said releasable means, a handle for said slide and means for releasing said handle from the slide when the latter has reached a certain position.

[Claims 6 to 9 not printed in the Gazette.]

884,803. WINDOW AND SCREEN THEREFOR. MATTHIAS A. DIETRICK, Six Mile Run, Pa. Filed June 18, 1907. Serial No. 378,694.

1. In combination with a window frame, two shield strips secured to the sides of said frame, said strips having slots lengthwise thereof, two brackets secured to the window sash and projecting through said slots, a spring roller mounted upon said brackets, a flexible screen secured to said roller and adapted to be wound thereon, a rod secured to the lower edge of the screen, and hooks carried by the shield strips with which said rod is adapted to engage, as and for the purpose set forth.



2. In combination with a window frame, two shield strips secured to the sides of said frame, said strips having slots lengthwise thereof, two brackets secured to the window sash and projecting through said slots, a spring roller mounted upon said brackets, a flexible screen secured to said roller and adapted to be wound thereon, a rod secured to the lower edge of the screen, hooks carried by the shield strips with which said rod is adapted to engage, a spring rod loosely secured to the sash, its ends adapted to travel upon the edges of the shield strips, and means for springing said rod out of a straight line, as and for the purpose set forth.

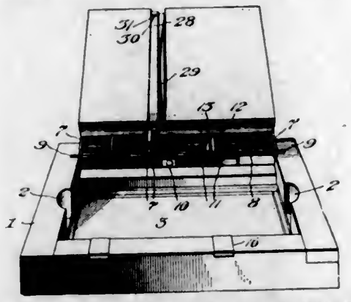
3. In combination with a window frame, two shield strips secured to the sides of said frame, said strips having slots lengthwise thereof, two brackets secured to the window sash and projecting through said slots, a spring roller mounted upon said brackets, a flexible screen secured to said roller and adapted to be wound thereon, a rod secured to the lower edge of the screen, hooks carried by the shield strips with which said rod is adapted to engage, a spring rod loosely secured to the sash, its ends adapted to travel upon the edges of the shield strips, and a thumb piece secured to the center of the spring rod for bowing the rod, as and for the purpose set forth.

4. In combination with a window frame, two shield strips secured to the sides of said frame, said strips having slots lengthwise thereof, two brackets secured to the window sash and projecting through said slots, a spring roller mounted upon said brackets, a flexible screen secured to said roller and adapted to be wound thereon, a rod secured to the lower edge of the screen, hooks carried by the shield strips with which said rod is adapted to engage, a spring rod loosely secured to the sash, its ends adapted to travel upon the edges of the shield strips, a thumb piece secured to the center of the spring rod for bowing the rod, and a latch pivoted to the sash and adapted to lock the spring rod so as to prevent it from being sprung out of a straight line, as specified.

884,804. PHOTOGRAPH-PRINTING FRAME. ROBERT DU PERREX, St. Louis, Mo. Filed May 23, 1907. Serial No. 375,317.

1. A photographic printing frame comprising a frame proper, a sectional back hinged thereto, means for locking the back in closed position, automatic means for opening the back, follower-sections, guide pins slidably connecting said follower-sections with the back-sections, and looped springs of wire terminally fixed upon each back-section, said springs having their return portions free and bent outward to bear against the associated follower-section adjacent the pins, whereby said springs engage said follower-section in proximity to its guided points to yieldingly force the same away from said back section.

2. A photographic printing frame comprising a frame proper provided in one of its sides with recesses, each having a vertical portion on the inner face and a horizontal portion across the rear face of the side, a sectional back hinged to the opposite side of the frame, spring means to force the back sections open, beveled locking pins upon the free edges of the back sections, latches upon the frame fitted in said recesses, each latch having a vertical and a horizontal portion occupying the corresponding portions of its recess, the vertical portion being pivoted and provided with an opening to receive the coacting locking pin, and a spring in the horizontal portion of each recess to hold the horizontal portions of the latches pressed outward and to maintain the latches normally in locking position.



3. A photographic printing frame comprising a frame proper, back sections hinged to one side of the frame, locking pins upon the swinging edges of the back sections, L-shaped latches upon the opposite side of the frame, each having one of its arms pivoted to the frame and adapted to receive and engage the coacting locking pin, and a spring acting on the other arm to hold the latch normally in locking position.

4. A photographic printing frame comprising a frame proper, a sectional back hinged thereto, means for locking the back in closed position, automatic means for opening the back, yieldingly mounted follower sections on the back, and a spring-pressed closure strip upon one section adapted to close the space between the same and the other section.

884,805. RAZOR-BLADE HOLDER. PATRICK J. ENRIGHT, Lowell, Mass. Filed July 31, 1907. Serial No. 386,377.

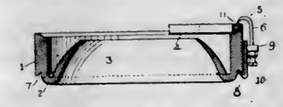


1. A razor holder, comprising a pair of arms, concavo-convex in cross section to present a pair of parallel clamping edges, means for pivoting the outer ends of the arms together to permit separation and closure of the arms in a direction parallel with the plane of their clamping surfaces, and means for interlocking the free ends of the arms.

2. A razor holder, comprising a pair of arms pivoted together at their outer ends, one of said arms having an integral handle member and the other being initially curved or sprung to present a concavo-convex surface to the blade to form parallel clamping edges, a tongue carried by the free end of the movable arm, and a locking shoulder carried by the handle member and with which said tongue engages.

3. In a razor holder, a clamping arm formed of sheet metal, and concavo-convex in cross section to present a pair of parallel clamping edges, a sleeve or ferrule formed integral with said arm and provided with an inclined tongue-receiving slot and a shoulder, the outer end of said arm being flattened, a second movable clamping arm also concavo-convex in cross section, and having a flattened outer end that is pivoted to the outer end of the stationary arm, the movable arm being sprung or curved in the direction of its length to present a convex surface to the blade, a tongue projecting from the free end of the movable arm, the end of the tongue being inclined to correspond to the inclination of the wall of the slot, and a pair of razor blade engaging studs projecting from the stationary arm.

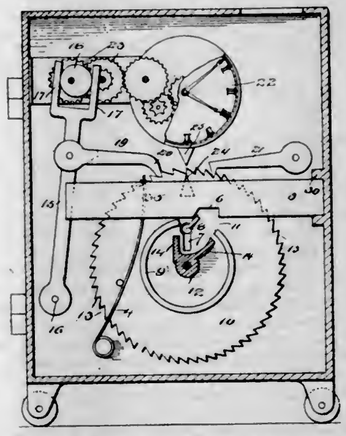
884,806. MUSICAL INSTRUMENT. WILLIAM F. FLETCHER, Beaver Falls, Pa. Filed June 5, 1907. Serial No. 377,376.



1. In a musical instrument of the type described, a rim provided at its lower edge with an inwardly-extending upwardly-inclined flange and having an annular groove in said lower edge above the lower edge of said flange, a sounding board resting on the upper edge of said rim, and clamping means for securing the sounding board to the rim comprising two hook members detachably-connected together, one of which engages the sounding board and the other of which engages in the groove in said rim.

2. In a musical instrument of the type described, the combination of a rim provided in one edge with an annular groove, and a sounding board resting on its other edge, of means for securing the sounding board in position, said means comprising a two-part hook clamp, the parts of which clamp are adjustably-connected together, one part having a hook end engaging in the groove in said rim, and the other part having a hook engaging the sounding board.

884,807. TIME-LOCK. JOHN FLINDALL, Chicago, Ill. Filed Nov. 30, 1906. Serial No. 345,765.



1. In a time lock, the combination of a locking mechanism, a key therefor, a toothed wheel, a laterally projecting annular wall carried by the toothed wheel and normally interposed between the key and the locking mechanism, said wall being provided with a cut-away portion to enable the key to operate therethrough, a pivoted member carrying a pawl engaging the toothed wheel, and means for operating said member.

2. In a time lock, the combination of a locking mechanism, a key therefor, a wheel, a laterally projecting wall carried by the wheel and normally interposed between the key and the locking mechanism, said wall being provided with a cut-away portion to enable the key to operate therethrough, a pivotally mounted arm provided with means for turning the wheel, and means for operating said arm.

3. In a time lock, the combination of a locking mechanism, a key therefor, a wheel carrying an annular wall which normally prevents the use of the key, the said annular wall provided with a cut-away portion, and means for turning the wheel to enable the key to operate through the cut-away portion in the annular flange at a predetermined time.

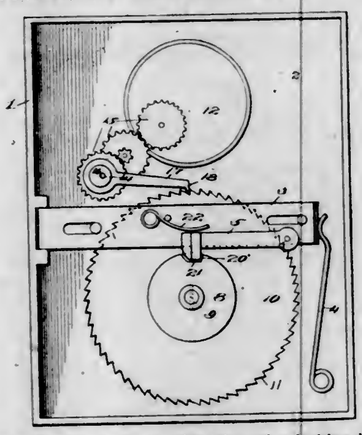
4. In a time lock, the combination of a locking mechan-

ism, a key therefor, a toothed wheel, an annular wall carried by the toothed wheel, and normally preventing the use of the key, the said annular wall having a cut-away portion, a pawl engaging the toothed wheel and turning the same to enable the key to operate through the cut-away portion of the annular flange at a predetermined time and a member carrying the pawl and imparting motion to the same.

5. In a time lock, the combination of a locking mechanism, a key therefor, a toothed wheel, an annular wall carried by the toothed wheel and having a cut-away portion, the said annular wall normally preventing the use of the key, a pivotally mounted arm, and a pawl carried by said arm and engaging the toothed wheel to turn the same to enable the key to operate through the above-mentioned cut-away portion of the annular flange at a predetermined time and means for imparting motion to the pivotally mounted arm for rotating said toothed wheel.

[Claims 6 to 9 not printed in the Gazette.]

884,808. TIME-LOCK. JOHN FLINDALL, Chicago, Ill. Filed Dec. 29, 1906. Serial No. 350,082.



1. In a time lock, the combination of a locking bolt, a shaft, a wheel mounted upon the shaft, a tumbler controlled by the wheel, a tumbler controlled by the shaft, means carried by the locking bolt for engaging the tumblers, and an auxiliary mechanism for operating the wheel.

2. In a lock, the combination of a locking bolt, a manually operated shaft, a wheel mounted upon the shaft, a tumbler mounted upon the shaft and controlled by the wheel, a tumbler controlled by the shaft, means carried by the locking bolt for engaging the tumblers and producing an operative connection between the shaft and the locking bolt, and an auxiliary mechanism controlling the wheel.

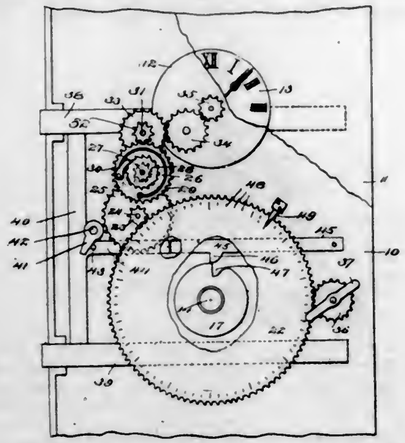
3. In a lock, the combination of a locking bolt, a manually operated shaft, a wheel mounted upon the shaft, and having teeth formed upon its periphery, a tumbler controlled by the wheel, a tumbler controlled by the shaft, means carried by the locking bolt for engaging the tumblers and producing an operative connection between the locking bolt and the shaft, a pawl controlling the movement of the toothed wheel, and an auxiliary mechanism for operating the pawl.

4. In a lock, the combination of a locking bolt, a shaft, a toothed wheel mounted upon the shaft, a pawl for operating the toothed wheel, a tumbler controlled by the toothed wheel, and a pawl carried by the locking bolt and serving the double function of preventing any backward movement of the wheel, and engaging with the tumbler to produce an operative connection between the shaft and the locking bolt.

5. In a lock, the combination of a locking bolt, a manually operated shaft, a wheel mounted upon the shaft, a tumbler controlled by the wheel, a pawl carried by the locking bolt, and engaging the tumbler to produce an operative connection between the locking bolt and the shaft, a second pawl controlling the movements of the wheel, and a clock mechanism operating the second pawl.

[Claims 6 to 8 not printed in the Gazette.]

884,809. TIME-LOCK. JOHN FLINDALL, Chicago, Ill. Filed May 31, 1907. Serial No. 376,535.



1. In a lock, a plurality of tumblers independently operatable, means to operate some of said tumblers manually, means to operate another of said tumblers mechanically, and means to move the mechanically operated tumbler relative to the operating means.

2. In a lock, a plurality of tumblers, some of said tumblers being operatable manually, a clock, means connecting the clock with another of said tumblers, and means to move the tumbler operated by said clock independently of the clock.

3. In a lock, a sliding bolt, an extension carried by said bolt, a lever adapted to abut the extension and hold the bolt extended, a plurality of tumblers provided with recesses proportioned to permit the lever to drop out of engagement with the extension, means to operate some of said tumblers manually, and means to operate one of said tumblers mechanically.

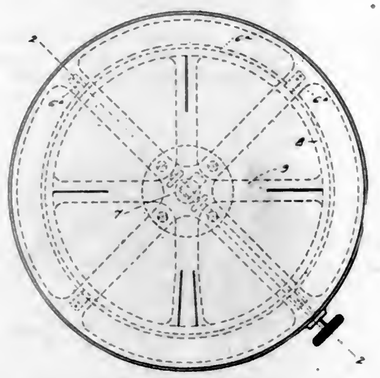
4. In a lock, a sliding bolt, an extension carried by said bolt, a lever adapted to abut the extension and hold the bolt in extended position, a nose formed upon the lever, a plurality of independently rotatable tumblers provided with recesses proportioned to receive the nose, means to rotate some of said tumblers manually, and means to rotate one of said tumblers mechanically.

5. In a lock, a sliding bolt, an extension carried by said bolt, a pivoted lever proportioned to abut the extension and hold the bolt in extended position, a nose formed upon the lever, a plurality of independently rotatable tumblers each provided with a recess proportioned to receive the nose, means to rotate some of said tumblers manually, a clock, means connected with the clock for rotating one of said tumblers therefrom, and means to rotate said tumbler independently of the clock.

[Claim 6 not printed in the Gazette.]

884,810. TABLE FOR CHEESE-CUTTERS. THOMAS V. GARLOCK, Custer, S. D. Filed July 16, 1907. Serial No. 384,085.

1. A device of the character described comprising a base, a table mounted to rotate upon the base and provided with slots, a holder comprising a plate disposed directly between the table and base and provided with cheese holding blades extending upwardly through said slots, said holder being formed with a peripheral rim having a depending portion resting upon the base and provided with an outwardly extending flange, guiding and retaining clips comprising strips fixed at one end to the base and having their free ends bent upwardly over said flange, and means for raising and lowering the table.



2. A device of the character described comprising a base having a central opening therein, a table arranged to rotate upon the base and provided with slots, a holder comprising a plate disposed directly between the base and table, said plate being formed with a central opening and a rim having upwardly and downwardly extending surfaces supporting the table and bearing against the base, the downwardly extending portion of the rim being formed with an outwardly extending flange, retaining and guiding clips comprising strips fixed at one end to the base and having their free ends bent upwardly over such flange, cheese holding blades carried by the plate and extending upwardly through the slots in the table, a post carried by the table and projecting downwardly through openings in the holder and base, and means upon the under side of the base to engage the post for raising and lowering the table.

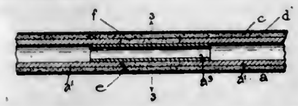
3. A device of the character described comprising a base, a table disposed above the same, a holder arranged between the table and base, a post or stud secured to the table and extending downwardly loosely through the holder and base, retaining knives upon the holder projecting upwardly through slots in the table, and a rotary cam carried by the base and adapted to coöperate with the post to elevate the table.

4. A device of the character described, comprising a base having a central opening therein, a rotary table arranged above the base and provided with slots, a rotary holder arranged directly between the base and table, said holder comprising a spider having a central hub registering with the opening in the base, a series of radial arms, and a peripheral rim formed with a depending portion resting on the base and provided with an outwardly extending flange, holding blades carried by the arms and projecting upwardly through the slots in the table, clips comprising strips fixed at one end to the base and having their free ends bent over said flange to retain the holder in guided connection with the base, a post connected with the table and passing downward through the opening in the base and the hub of the holder, and means upon the base and coöperating with said post for raising and lowering the table.

5. A device of the class described comprising a base, a rotary table arranged above the base, a rotary holder arranged between the base and table, said holder being provided with retaining blades extending upwardly through slots in the table, a post extending downwardly from the table and journaled in the base and holder, and a rotary cam supported by the base and acting upon the post to raise and lower the table, said cam having means to secure it from rotation and hold the post in an elevated position.

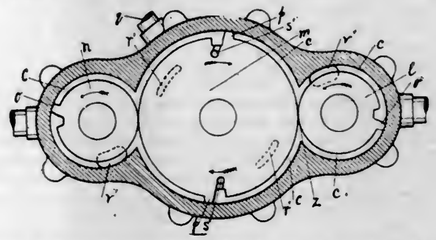
[Claims 6 to 8 not printed in the Gazette.]

884,811. IRONING-MACHINE FOR LAUNDRY-WORK. NEWTON GARST, Wichita, Kans. Filed Aug. 20, 1907. Serial No. 389,405.



A laundry mangle having a hollow ironing roll formed of metal and composed of two hollow cylindrical sections separated by an interval, and a short hollow cylinder fitting within said sections and connecting the same, whereby an annular groove is provided, a yielding hollow cylindrical cushion located within such groove and having its outer convex surface even with the outer convex surface of the roll, a yielding covering for the entire roll overlying such groove and cushion, and a protective covering for the entire roll.

884,812. ROTARY MOTOR. HORATIO G. GILLMOR, Bath, and ARTHUR W. SWEET, Durham, Me.; said Sweet assignor to said Gillmor. Filed Feb. 27, 1907. Serial No. 359,674.



1. A motor comprising a casing having intersecting cylindrical bores; gear wheels, constructed with teeth of uniform pitch meshing with and rolling upon one another at points of contact, adapted to move within the said cylindrical bores upon axes coinciding with the axes of the several bores, a tooth at even multiples of the uniform pitch of said teeth, being formed upon each gear to move in contact with the cylindrical bore of that portion of the casing within which the said gear wheel moves and all other teeth being shortened to prevent contact with said cylindrical bore; and means whereby the admission of working fluid to and exhaust of the same from the said motor are suitably controlled; for substantially the purposes set forth.

2. A motor comprising a casing having intersecting cylindrical bores; gear wheels meshing with one another constructed to move within the said cylindrical bores upon axes coinciding with the axes of the several bores, one or more of the teeth upon each gear wheel being formed to move in contact with the cylindrical bore of that portion of the casing within which the said gear wheel moves; and means for suitably controlling the admission of working fluid to and the exhaust of the same from the said motor comprising a suitable admission port in the said casing; a passage constructed in one of the said gear wheels so arranged as to overtravel the said port to admit working fluid to and cut off the same from the said motor in proper sequence and an exhaust port communicating freely between a portion of the interior of the said casing and the exhaust passages from the said motor; for substantially the purposes set forth.

3. A motor comprising a casing having intersecting cylindrical bores; gear wheels meshing with one another constructed to move within the said cylindrical bores upon axes coinciding with the axes of the said bores, one or more of the teeth upon each of the said gear wheels being formed to move in contact with the cylindrical bore of that portion of the casing within which the said gear wheel moves; and means for suitably controlling the admission of working fluid to and the exhaust of working

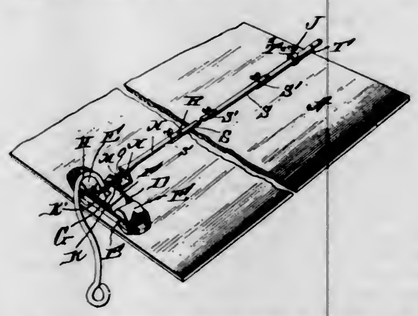
fluid from the said motor comprising suitable admission ports in the said casing, passages constructed in one of the said gear wheels so arranged as to overtravel the said ports to admit and cut off the working fluid in proper sequence, and exhaust ports communicating freely between a part of the interior of the said casing and the exhaust passages from the motor; for substantially the purposes set forth.

4. A motor comprising a casing having three intersecting cylindrical bores; three gear wheels constructed with teeth of uniform pitch meshing with and rolling upon one another at points of contact, adapted to move within said cylindrical bores upon axes coinciding with the axes of the several bores, teeth at even multiples of uniform pitch of said teeth being formed upon each gear to move in contact with the cylindrical bore of that portion of the casing within which said gear wheel moves and all other teeth being shortened to prevent contact with said cylindrical bore; and means whereby the admission of working fluid to an exhaust of the same from said motor are suitably controlled for substantially the purposes set forth.

5. A motor comprising a casing having three cylindrical bores; three gear wheels meshing with one another constructed to move within the said cylindrical bores upon axes coinciding with the axes of the several bores, one or more of the teeth upon each gear wheel being formed to move in contact with the cylindrical bore of that portion of the casing within which the said gear wheel moves; means for suitably controlling the admission of working fluid to and exhaust of working fluid from the said motor comprising suitable admission ports in the said casing, passages constructed in one of the said gears so arranged as to over-travel the said ports to admit and cut off the working fluid in proper sequence and exhaust ports communicating freely between a portion of the interior of the said casing and the exhaust passages of the motor; for substantially the purposes described.

[Claims 6 to 18 not printed in the Gazette.]

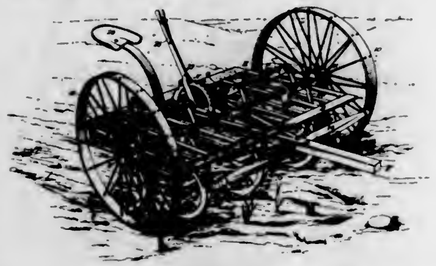
884,813. SCAFFOLD APPARATUS. FLOYD E. GORDNIER, Oakdale, Pa., assignor of one-half to Louis Feick, Noblestown, Pa. Filed Dec. 10, 1907. Serial No. 405,929.



1. A scaffold apparatus comprising a carriage having rollers thereon, a U-shaped plate upon said carriage, a block with an indenture mounted upon said plate, an angled arm upon said carriage provided with an aperture in registration with said indenture; a bar having a U-shaped offset near one end, a screw passing through the ways of the offset portion of said bar and said arm, a nut upon said screw, and means for connecting said bar with the ridge of a roof, as set forth.

2. A scaffold apparatus comprising a carriage having rollers thereon, a U-shaped plate upon said carriage, a block with an indenture mounted upon said plate, an angled arm upon said carriage provided with an aperture in registration with said indenture, a bar having a U-shaped offset near one end, a screw passing through the ways of the offset portion of said bar and said arm, a nut upon said screw, an angled member having lateral projections at its ends and adapted to engage over the ridge of a roof, one end of said member having a jaw for the reception of the bars, and a tightening screw carried by said jaw, as set forth.

884,814. COMBINED WEEDER AND CULTIVATOR. EDSIL R. GORDON and DELWIN L. WOLFE, Harrington, Wash. Filed May 18, 1907. Serial No. 374,396.



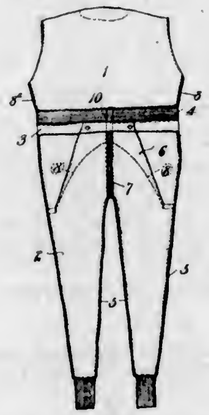
1. In a machine of the character described; the combination with a transportable or main frame; of a supplemental rearwardly curved frame pivotally supported from the main frame, a cutter mounted on the lower end of the supplemental frame and disposed in a horizontal plane relatively to the said frame, and means for swinging the frame backward and locking it to such position and for fixedly holding the said frame when it is swung down to its vertical or operative position, as set forth.

2. In a machine of the character described, the combination with the transportable frame, said frame including a longitudinal cross beam; of a cutter carrying frame comprising a horizontal head member, pivotally connected at one end to the cross beam, its other end merging with a pendent portion, the latter having a rearwardly projected heel like extension, a cutter secured to said extension and disposed in a plane parallel with the horizontal head portion of the frame, means adapted under one adjustment for holding the head portion in a fixed abutment with the cross beam, and under another adjustment for swinging the said cutter carrying frame rearwardly and for locking it to its elevated position, as set forth.

3. In a machine of the character stated, in combination with a transportable frame; of a cutter carrying frame pivotally suspended on the transportable frame and comprising a horizontal head portion that terminates with a vertical pendent portion, the latter merging with a rearwardly curved portion, the end of the curved portion terminating in a heel adapted to pass over the ground, a horizontally disposed cutter secured to said heel, a rack on the transportable frame, a bell crank lever having a pawl for engaging said rack, and a link connection connecting said bell crank lever with the front or angle end of the head portion of the cutter carrying frame, as set forth.

4. In combination with a transportable frame which includes longitudinal cross bars E; of a cutter carrying frame comprising a head portion having a horizontally disposed member, the front end of which merges with a vertical pendent portion, the latter merging with a rearwardly curved extension the lower end of which terminates in a heel, the cutter mounted on the said heel and disposed in the horizontal plane relatively thereto, the head portion of the frame being pivotally mounted at the rear end in bearings on the under side of the cross beam, a crank lever and rack mechanism and link connections joining the said crank lever and rack mechanism with the front or angle end of the cutter carrying frame, all being arranged substantially as shown, whereby the cutter carrying frame when swung to its operative position can be rigidly held to bear with its head portion against the cross members of the transportable frame and when swung back out of the operative position it can be held locked to said position, as set forth.

884,815. UNDERWEAR-GARMENT. CHARLES A. GOULD, St. Louis, Mo. Filed Aug. 21, 1907. Serial No. 389,536.



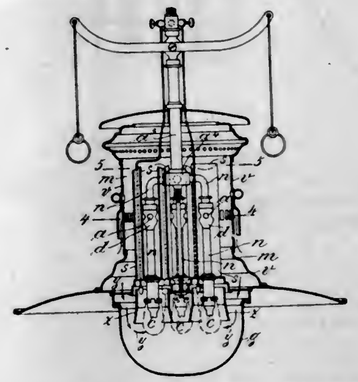
1. A one-piece underwear garment, consisting of a shirt portion and drawers portion made of non-elastic material and connected together by a strip or band of elastic knitted material, a flap covering an opening in the seat of the drawers portion, and a gusset of elastic knitted material inserted in the drawers portion above the opening in the seat thereof so as to permit the seat opening to expand and contract; substantially as described.

2. A one-piece underwear garment comprising a shirt portion and drawers portion made of non-elastic material, facing pieces of non-elastic material extending down each side of the front opening of the shirt portion and drawers portion, a band or strip of elastic knitted material secured to the lower edge of the shirt portion and to the upper edge of the drawers portion to connect them together and extending completely around the body of the garment, the non-elastic facing pieces terminating respectively above and below said elastic knitted waistband and the drawers portion being provided with a horizontal seat opening, a flap or drop seat covering said opening, and one or more gussets of elastic knitted material inserted in the upper back sections of the drawers portion above and around the said horizontal opening to permit said opening to expand and contract, said gussets extending upwardly to the elastic knitted waistband; substantially as described.

3. A one-piece underwear garment comprising a shirt portion and drawers portion made of non-elastic material, facing pieces of non-elastic material extending down each side of the front opening of the shirt portion and drawers portion, a band or strip of elastic knitted material connecting the shirt portion and drawers portion together and extending completely around the body of the garment, said non-elastic facing pieces terminating respectively above and below said elastic knitted waistband or strip and the drawers portion being provided with a horizontal seat opening, a flap or drop seat covering said opening, and one or more gussets of elastic knitted material inserted in the upper back sections of the drawers portion above and around the horizontal opening in the seat, said gusset or gussets extending upwardly to the elastic knitted waistband or strip and passing across same and terminating at the lower edge of the shirt portion to which it is fastened, the portion of the gusset which crosses said elastic knitted strip or waistband being arranged on the inside of same and secured only at the upper and lower edges of said waistband; substantially as described.

4. A one-piece underwear garment, comprising a shirt and drawers made of non-elastic material, a band or strip of elastic knitted material connecting the shirt and drawers together, a flap covering an opening in the seat of the drawers, and a gusset of elastic knitted material inserted in the drawers adjacent the upper edge thereof to form an elastic opening for the seat, the material which forms said gusset extending upwardly across said strip or band and being secured to the lower edge of the shirt; substantially as described.

884,816. LAMP WITH INVERTED INCANDESCENT GAS-BURNERS. MAX GRAETZ, Berlin, Germany. Filed Feb. 28, 1906. Serial No. 303,519.



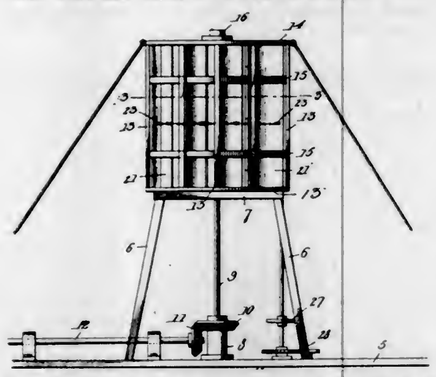
1. A lamp arrangement for inverted incandescent gas light, comprising in combination a plurality of Bunsen-burners and several chimneys provided with special exhaust channels and adapted to receive the Bunsen-burners, incandescent mantles secured to the lower end of the Bunsen-burner, a transparent glass cylinder surrounding the incandescent mantles, and carried by the lower end of the chimneys, a casing provided with inlet openings for the combustion- and mixing-air, and open at its top end, and a globe closing air-tightly the bottom-end of the casing.

2. A lamp arrangement for inverted incandescent gas light, comprising in combination three Bunsen-burners circularly arranged, three chimneys provided with special segmentally shaped exhaust channels, leaving an interstice for locating therein the Bunsen burners, incandescent mantles and mouth-pieces (c) both secured to the bottom end of the Bunsen-burner, a transparent glass-cylinder secured to the bottom-end of the chimneys and surrounding the incandescent mantles, a casing provided with air inlets in its middle part and in communication with the top end of the chimneys, and a globe closing air-tightly the lower end of the casing.

3. A lamp arrangement for inverted incandescent gas light, comprising in combination a plurality of burner tubes, a supply-receptacle for the gas arranged in the axis of the lamp and in communication with the Bunsen-burners, a plurality of chimneys provided with special exhaust channels and adapted to receive the Bunsen-burners, incandescent mantles secured to the lower end of the Bunsen-burners, a transparent glass cylinder surrounding the incandescent mantles and carried by the lower end of the chimneys, a casing provided with inlet openings for the combustion- and mixing-air, and open at its top end, and a globe closing air-tightly the bottom end of the casing.

4. A lamp arrangement for inverted incandescent gas light, comprising in combination three Bunsen-burners, circularly arranged, a supply receptacle for the gas arranged in the axis of the lamp and in communication with the Bunsen-burner, three chimneys provided with special segmentally shaped exhaust channels leaving an interstice for locating therein the Bunsen-burners, incandescent mantles and mouth-pieces (c) both secured to the bottom end of the Bunsen-burners, a transparent glass-cylinder secured to the bottom end of the chimneys and surrounding the incandescent mantles, a casing provided with inlet openings in its middle part and in communication with the top end of the chimneys, and a globe closing air-tightly the lower end of the casing.

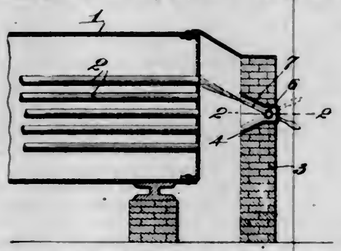
884,817. WIND-TURBINE. CLAES V. GUSTAFSON, Austin, Tex. Filed Mar. 11, 1907. Serial No. 361,768.



1. A mechanism of the class described comprising a base platform, a platform mounted above said base platform, a bottom member carried by the second named platform, uprights carried by said bottom member, a top secured to said uprights, a revoluble vertical shaft seated at its lower end upon the base platform and engaged through the second platform and bottom member, a turbine mounted upon the shaft above the bottom member, a plurality of current regulating doors arranged for movement toward and away from the turbine, a flexible member connected with the doors for simultaneous movement thereof, circular bands carried by the uprights and arranged to limit the movement of the doors, helical spring means arranged to hold the doors at the outward limit of their movement, and a winding drum carried by the base platform and adjacent the doors and having secured thereto, one end of the flexible member.

2. A mechanism of the class described comprising a base platform, a platform mounted above said base platform, a bottom member carried by the second named platform, uprights carried by said bottom member, a top connecting the uprights, a revoluble vertical shaft seated at its lower end upon the base platform and engaged through the second platform and bottom member, a current receiving wheel carried by the vertical shaft, upper and lower heads connecting the blades of the wheel, bars connecting the heads, a current regulating door hinged to each bar for movement into and out of position to close the space between the bars to which it is hinged and the adjacent bar at one side thereof, a chain engaged around the doors and movably connected with the bars, and a winding drum, the chain being engaged with the drum.

884,818. BOILER-FLUE CLEANER. RICHARD W. HAMANN, St. Louis, Mo., assignor to Eugene J. Feiner, St. Louis, Mo. Filed July 13, 1907. Serial No. 383,655.



1. The combination with a boiler, of a transversely disposed supply pipe arranged at the rear of the boiler, and a series of jet tubes leading from said supply pipe toward the flues of the boiler.

2. The combination with a boiler, of a transversely disposed pipe located immediately to the rear of the boiler and arranged to rock, and a series of jet tubes leading from said pipe and toward the flues of the boiler.

3. The combination with a boiler, of a transversely disposed pipe located immediately to the rear of the boiler and arranged to rock, a series of jet tubes leading from said pipe toward the flues of the boiler, and means whereby said pipe is rocked.

4. The combination with a boiler, of a transversely disposed pipe located immediately to the rear of the boiler and arranged to rock, a series of jet tubes leading from said pipe toward the flues of the boiler, and means whereby the said pipe is supplied with fluid pressure.

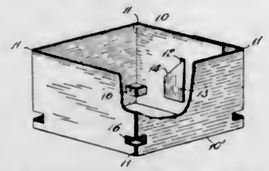
5. The combination with a boiler, of a transversely disposed pipe located immediately to the rear of the boiler and arranged to rock, a series of jet tubes leading from said pipe toward the flues of the boiler, means whereby the said pipe is supplied with fluid pressure, and means whereby said pipe is rocked.

[Claims 6 and 7 not printed in the Gazette.]

884,819. GAS-BURNER. THOMAS B. HARRISON, Philadelphia, Pa. Filed Sept. 20, 1907. Serial No. 393,844.

A gas burner comprising a tube, a hollow tapering thimble provided with a perforated top secured to said burner tube and provided with an open lower end, a fitting provided with a perforated top secured in the lower end of said burner tube, an upwardly projecting spindle secured to said perforated top and extending into the open lower end of said thimble, and an aluminium valve disk having a downturned peripheral edge mounted to slide upon said shaft or spindle.

884,820. BERRY-BOX. PETER HENRICH, Hoquiam, Wash., assignor of one-half to Alexander Polson, Hoquiam, Wash. Filed June 24, 1907. Serial No. 380,459.



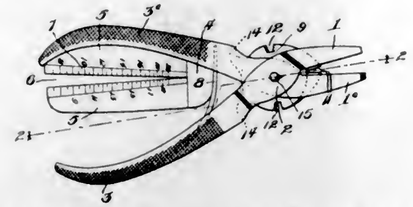
1. A berry box consisting of a shell provided with interlocking devices and with the sides thereof slitted with the portions between the slits bent in an angular manner to provide inwardly-extending supports integrally with and disposed at the corners of the shell, and a removable bottom mounted upon said supports and provided with upwardly-extending flaps adapted to contact with the shell.

2. A berry box consisting of a shell provided with interlocking devices and with the sides thereof slitted with the portions between the slits bent in an angular manner to provide inwardly-extending supports integral with and disposed at the corners of the shell, and a bottom mounted upon said supports.

3. As a new article of manufacture, a blank for berry boxes consisting of an elongated flat strip of material embodied by a plurality of transversely-extending scores into a plurality of sections, said strip further provided with pairs of incisions, the incisions of each pair being of equal length and extending in parallelism with respect to each other and arranged at a point slightly removed from one longitudinal edge of the strip, the incisions of each pair projecting from each side of a score.

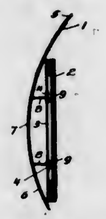
4. As a new article of manufacture, a blank for berry boxes consisting of an elongated flat strip of material embodied by a plurality of transversely-extending scores into a plurality of sections, said strip further provided with pairs of incisions, the incisions of each pair being of equal length and extending in parallelism with respect to each other and arranged at a point slightly removed from one longitudinal edge of the strip, the incisions of each pair projecting from each side of a score, one of said sections having a transverse slot and the other of said sections formed with a tongue extending in a direction of the length of the strip.

884,821. WIRE-WORKING TOOL. JOHN HUHTA and FRANK LAURELL, De Kalb, Ill. Filed Apr. 24, 1907. Serial No. 370,071.



A wire working tool, comprising handles with jaws, each of the handles being made hollow on its inner face, a spring secured within the hollow of one of the handles, the opposite end of said spring being curved and lying within the hollow of the other handle, a plurality of cutting members having notches therein and also provided with cutting blades projecting outwardly therefrom, the cutting members being arranged between the handles, a pintle inserted through the cutting members and the handles, said cutting members being further provided with lugs having toes which are secured to the handles, substantially as specified.

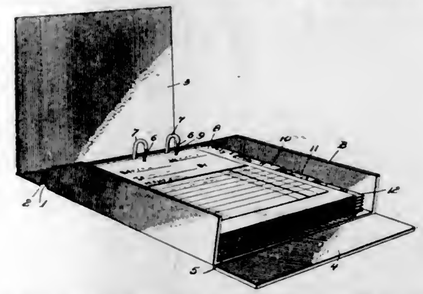
884,822. ADVERTISING NOVELTY. ARTHUR G. HUME, Hobart, N. Y. Filed May 6, 1907. Serial No. 372,129.



A device of the class described comprising a mirror having a frame provided with slots in the back portion thereof and a thin metal holder having inwardly extending fingers to engage the slots in said frame, substantially as described.

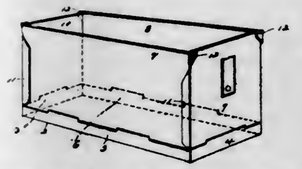
884,823. FILE AND INDEX. HARRY H. KNAPP, Franklin, Ky. Filed Aug. 30, 1907. Serial No. 390,792.

In a filing device a case having impalement posts and pivoted card hooks in combination with leaves engaging the posts in stacks of four; the three upper sheets of each stack each having a side portion of each side edge cut away, the cut away portion of the sheet next to the last sheet of the stack extending substantially one-fourth of the length of the sheet, the cut away portion of the sheet above extending one-half of the length of the sheet, and the cut away portion of the top sheet extending three-fourths of the length of the sheet, so that when such sheets are assembled in a pile one-fourth of each side edge of the



top and one-fourth of each side edge of each of the lower sheets is exposed, and such exposed portions having printed thereon dates corresponding respectively to quarterly parts of a calendar month, each sheet having printed a particular date on such exposed portion on one side and on the other side on the other portion a date of substantially six months difference.

884,824. FOLDING LUNCH-BOX. EDOUARD LAPOINTE, New Haven, Conn. Filed May 27, 1907. Serial No. 376,010.

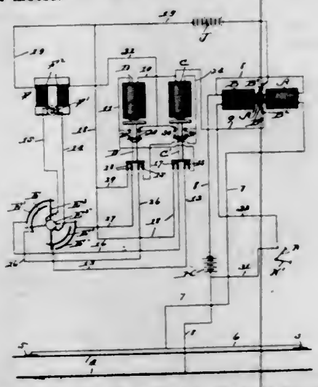


In a folding lunch box, the combination with a shallow tray having a front flange, a back flange and two end flanges, of a front-piece, a back-piece and two end-pieces respectively hinged to the said front and back and end flanges of the said tray which is adapted in depth to receive the said front and back pieces when the box is "broken down"; and a cover adapted to fit the box when "set up", and to fit the tray when the box is "broken down", the said end-pieces being provided on their side edges with setting-up fins standing at a right angle to them, and located in planes parallel with the said front and back pieces when the box is "set up", and the said front and back pieces being provided at their upper corners with setting-up ears standing at a right angle to them and located in planes parallel with the planes of the said end-pieces when the box is "set up", and the said fins and ears being located at right angles to each other, and the said ears being sprung from the inner to the outer faces of the said end-pieces in "setting-up" the box, and from the outer to the inner faces of the said end-pieces in "breaking down" the box.

884,825. AUTOMATIC ELECTRIC CROSSING-GATE. FRANK G. LAYHER, Jackson, Mich. Filed Nov. 27, 1905. Serial No. 289,278.

1. A device of the kind described comprising a vertically movable gate, a motor to operate the gate, contact plates in the path of an engine on opposite sides of the gate, relays, a double armature between poles of adjacent relays, a base, curved contact strips on said base, concentrically arranged contact strips overlapping the first mentioned strips, a shaft, switch arms carried by the shaft

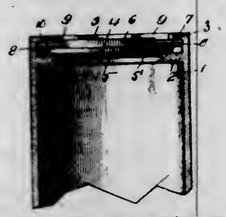
oppositely arranged and movable on the contact strips, means for rotating the shaft in unison with the gate, and electrical circuits including the relays, switches, contact plates and motor.



2. In a device of the kind described, the combination with a relay, of an electrical circuit including said relay, a base, an arm carried by the base, a spring carried by the arm, there being contact points on the base and spring, a rotatable shaft, radial arms carried by the shaft, and curved arms at the ends of the radial arms, said curved arms respectively forcing the contact points of the base and spring into and out of contact with each other.

3. In a system for electrically operating crossing gates a track portion forming a portion of a circuit, said circuit being completed by entrance of a train on said track portion, a relay in said circuit, an armature co-acting with said relay and adapted when attracted to close a second circuit, a second relay, a motor, a reversing switch, said relay, motor and switch being in the second circuit, a field coil circuit closed by the energizing of the second relay, means for automatically breaking the said circuits, and means for completing a third circuit and passing the current through the motor in the opposite direction as the train leaves the track portion.

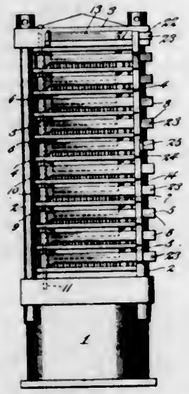
884,826. JAR-CLOSURE. PETER J. LAYMAN, Akron, Ohio, assignor to Frank X. Adams, Akron, Ohio. Filed Nov. 1, 1906, Serial No. 341,597. Renewed Oct. 30, 1907. Serial No. 399,787.



1. In combination with a jar having an interior annular shoulder, and inwardly-projecting lugs carried by said jar above said shoulder, a closure-disk adapted to rest on the shoulder and having a circular depending portion fitting with the circular inner wall of said shoulder, and a washer engaging the closure-disk having a plurality of radially-disposed peripheral-lugs adapted to take under and engage with the lugs of the jar.

2. In combination with a jar having an interior annular shoulder, and inwardly-projecting lugs on the inner face of the jar above said shoulder, a closure-disk resting on the said shoulder and having a depending circular portion fitting with the inner wall of the shoulder, a washer engaging the closure-disk and having diametrically-opposed wrench-receiving openings, and peripheral-lugs carried by said washer to take under and engage with the lugs in the jar, each lug on the washer having a beveled end, as and for the purpose described.

884,827. END GATE FOR PRESS-BOXES. WILLIAM C. LE GALLAIS, Pensacola, Fla. Filed July 13, 1907. Serial No. 383,586.



1. The combination of a press comprising a plurality of press boxes, gates for the open ends of the boxes, and means for actuating the gates together.

2. The combination of a press comprising a plurality of press boxes, gates for the open ends of the boxes, means for opening and closing the gates simultaneously, and a common locking means for the gates.

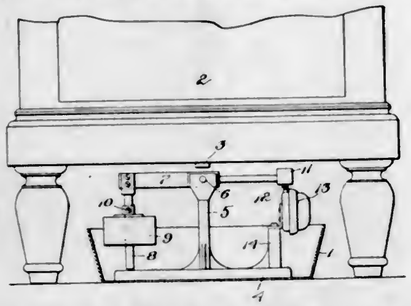
3. The combination of a press, with a plurality of end gates, a common pintle on which the gates swing, and a device for opening and closing the gates simultaneously.

4. The combination of a press, with a plurality of end gates, a common pintle on which the gates swing, a device for opening and closing the gates simultaneously, and a common locking device for the gates.

5. The combination of a press provided with a plurality of press plates having apertures, a rod extending through the apertures, a plurality of gates mounted to swing on the rod, and a keeper attached to the gates for swinging the latter together.

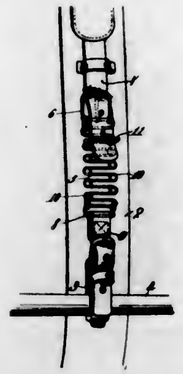
[Claims 6 to 11 not printed in the Gazette.]

884,828. AUTOMATIC ALARM FOR DRIP-PANS OF REFRIGERATORS. ABRAHAM H. LEONDAR, Roxbury, Mass. Filed Sept. 18, 1907. Serial No. 393,476.



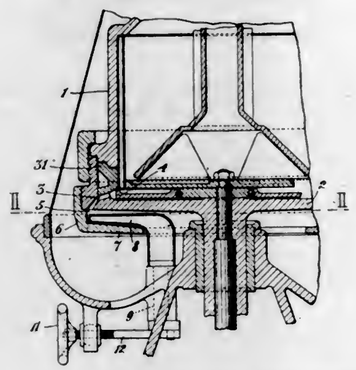
As an article of manufacture, an automatic alarm for the drip pans of refrigerators, consisting of a portable weighted horizontal base capable of maintaining the entire apparatus in stable upright position by simply resting unattached on the bottom of the pan, an upright mounted on said base, an arm carried by said upright, a float carried by said arm for raising the latter when the water rises in the pan, and an alarm bell also carried by the base in position to be engaged and sounded by said arm when the float is raised.

884,829. ATTACHMENT FOR HARNESS. ANDREW L. LEWIS, Petersburg, Va. Filed July 30, 1907. Serial No. 386,303.



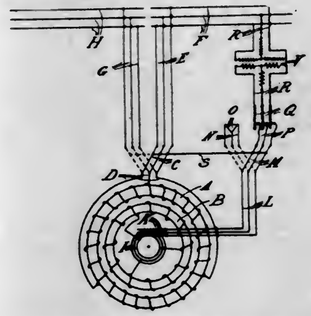
An attachment for harness comprising a substantially flat serpentine spring provided with attaching means at opposite ends, said spring being also provided with coils at its bends.

884,830. CENTRIFUGAL SLIME-SEPARATOR. JOHN T. LINDAHL, Stockholm, Sweden, assignor of one-half to Carl Axel Halling, Stockholm, Sweden. Filed June 20, 1906. Serial No. 322,535.



The combination with a centrifugal slime separator, of a bottom forming an upwardly projecting annular flange and having a series of holes extending through the said bottom, a ring placed upon the said bottom and fitting tightly against the inner side of the flange thereon, said ring being formed, at its lower side, with recesses corresponding to the holes of the bottom, and a ring attached to the outer side of the said flange and extending inwardly beneath the bottom of the drum so as to form, together with the underside of the said bottom, an inward extension of the passages leading from the circumference of the lower part of the interior of the drum, substantially as and for the purpose set forth.

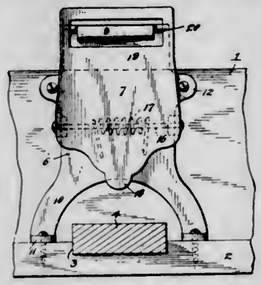
884,831. ALTERNATING-CURRENT GENERATOR. CARL A. LOHR, Wilkinsburg, Pa. Filed Feb. 2, 1906. Serial No. 299,115.



1. In combination, with two alternating-current lines of different frequency and an alternating-current generator having alternating-current windings on both of its members, means for alternately connecting at will the windings of both members of said generator to one of said alternating-current lines, or the winding of one member of said generator to the other of said alternating-current lines, having the winding of the other member of said generator closed upon itself.

2. In combination, with two alternating-current lines of different frequency and an alternating-current generator having alternating-current windings on both of its members, means for connecting one member of said generator directly and the other member of said generator over a transformer with the one of said alternating-current lines, means for connecting said one member of said alternating-current generator with the other of said alternating-current lines and closing said other member upon itself, the secondary winding of said transformer and the winding of said other member being designed so as to produce with the same generator-speed the same or approximately the same amount of electrical energy, when said generator is switched over from one line to the other, all substantially as described.

884,832. BEDCLOTHES-CLAMP. DELIA MARTIN, Forney, Tex. Filed July 19, 1907. Serial No. 384,621.

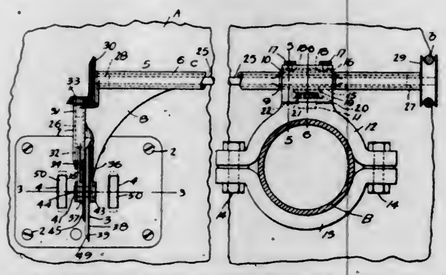


1. A bed-clothes clamp comprising an attaching member in the form of a flat metal plate having its upper end bent at right angles and reduced at the extremity of its bent portion, said reduced portion being rolled to provide a bead or rib to serve as a stationary jaw for the clamp, and a spring actuated movable member pivotally mounted upon the attaching member or plate and consisting of a metal plate having in its upper portion a slot or opening of greater size than said bead or rib, said slotted portion of the pivoted plate being adapted to serve as the movable jaw of the clamp and to hold the bed-clothes in engagement with said bead or rib, substantially as set forth.

2. The combination with the side rail of a bed having

the slat supporting ledge and a slat upon the latter, of a clothes clamp having a flat attaching plate adapted to lie flat against the inner face of the bed rail, said plate being formed intermediate its end with apertured attaching ears to engage said bed rail and at its lower end with diverging legs to span the slat, the lower ends of the legs being formed with right angularly projecting apertured attaching ears to engage the slat supporting ledge, fastenings passed through said apertured ears and into the bed rail and its ledge, a stationary clamp jaw upon the upper end of said plate and a spring actuated member pivoted upon said plate and having at its upper end a movable clamp jaw to co-act with the stationary one, substantially as set forth.

884,833. SEWING-MACHINE ATTACHMENT. GEORGE B. MEEKER, Sapulpa, Okla. Filed June 12, 1907. Serial No. 378,610.



1. An attachment of the class described, comprising a bracket mounted for swinging movement, a rotary cutter carried thereby, gearing carried thereby for operating said cutter, and resilient displaceable means for holding said bracket in lowered or raised position on its pivot.

2. An attachment of the class described, comprising a bracket, a boxing surrounding a portion thereof, a rotary cutter carried by said bracket, gearing for rotating said cutter, a stationary support, a bolt carried by said support and engaged loosely through said boxing as a pivot, an inclined rib formed on said boxing, said support being formed with diagonal intersecting grooves and a spring for holding said boxing to engage its rib in either of said grooves.

3. An attachment of the class described, comprising a bracket mounted for swinging movement and formed with angularly disposed sleeves, intergeared shafts mounted in said sleeves, a driving element carried by one of said shafts, a rotary cutter carried by said bracket and gearing between the other of said shafts and said cutter.

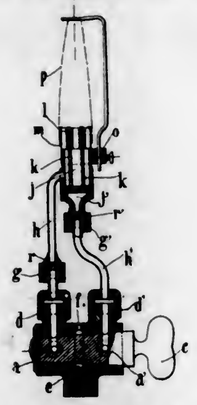
4. An attachment of the class described, comprising a bracket, a rotary cutter carried thereby, gearing for rotating said cutter, a plate formed with a slot to receive said cutter, said cutter being formed with a beveled face, bracket bearings carried by said plate, said plate being formed with a second slot, a shaft journaled in said bracket bearings, a friction wheel carried by said shaft and engaged with said beveled face and a brush carried by said shaft and projected through said slot.

5. An attachment of the class described, comprising a bracket, a rotary cutter carried thereby, gearing for rotating said cutter, a cloth feeding mechanism and gearing for operating said cloth feeding mechanism from said cutter, said gearing including a rotatable element contacting with said cutter as a driving gear.

[Claims 6 to 9 not printed in the Gazette.]

884,834. INCANDESCENT GAS-BURNER. ANTONY G. MÉKER, Asnières, France, assignor to La Société pour l'Utilisation de l'Air et de ses Dérivés, Paris, France. Filed Nov. 4, 1907. Serial No. 400,584.

1. In an incandescent gas-burner, the combination of a casing divided into chambers arranged one above the other, means to conduct gas to one of said chambers, means to conduct oxygen to the other chamber, tubes leading upwardly through the upper chamber from the lower chamber to the top of the casing, and a plurality of strips or partitions arranged in the form of a honeycomb extending about said tubes at the upper end of the casing and forming discharge orifices for the upper chamber.



2. In an incandescent gas-burner, the combination of a casing divided into upper and lower chambers, means for supplying oxygen to the lower chamber, means for supplying gas to the upper chamber, a series of tubes leading from the lower chamber through the upper and extending above the casing, and a plurality of metal strips superposed on the casing and extending about the upper ends of said tubes, said strips being arranged to form a plurality of discharge orifices for the gas.

884,835. PHOTOMETER. JOSEPH P. MEYER, Rochester, N. Y. Filed May 31, 1907. Serial No. 376,561.



1. In a device for determining photographic exposures, the combination of a tube or casing, a transparent diaphragm at the sighting end thereof, a shutter at the light inlet end thereof, means for operating the shutter, and a translucent diaphragm intermediate the ends of the casing and having a mark thereon, for the purpose set forth.

2. In a device for determining photographic exposures, a tube or casing having a transparent colored diaphragm at its sighting end, a shutter, and an intermediate translucent diaphragm having an opaque mark thereon.

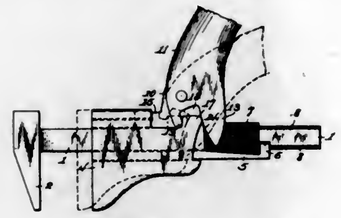
3. In a device for determining photographic exposures, a tube or casing having a transparent colored diaphragm, a shutter at its light inlet end, means for opening and closing the shutter to any desired extent, and a translucent diaphragm having an opaque mark between said transparent diaphragm and the shutter.

4. In a device for determining photographic exposures, a tube or casing having a transparent colored diaphragm at its sighting end, a shutter at its light inlet end, a translucent diaphragm intermediate the ends of the casing, and means for opening and closing the shutter, the said translucent diaphragm having an opaque mark thereon.

5. In a device for determining photographic exposures, a tube or casing having a transparent colored diaphragm at its sighting end, a shutter at the other end, a translucent diaphragm intermediate the ends of the casing, and means for opening and closing the shutter, the said translucent diaphragm having an opaque diametrical line thereon.

[Claim 6 not printed in the Gazette.]

884,836. WRENCH. CALVIN MILLER, Wheeling, W. Va. Filed Jan. 9, 1908. Serial No. 409,896.



1. In a wrench, a stem having a fixed jaw, an angular longitudinally-movable sleeve adjustably mounted upon said stem, a movable jaw loosely embracing said sleeve, a lever-like handle pivotally mounted upon said sleeve, and arms carried by said handle whereby downwardly-directed force applied to said handle thrusts said movable jaw forward.

2. In a wrench, a stem having a fixed jaw, an angular longitudinally-movable sleeve adjustably mounted upon said stem, a movable jaw loosely embracing said sleeve, a lever-like handle pivotally mounted upon said sleeve, arms carried by said handle whereby downwardly-directed force applied to said handle thrusts said movable jaw forward, and means whereby said jaw is retracted upon raising said handle.

3. In a wrench, a stem having a fixed jaw, a sleeve adjustably mounted upon said stem, a movable jaw for coacting with said fixed jaw, said movable jaw being carried by said sleeve and having a certain range of movement independent of said sleeve, a handle pivotally mounted upon said sleeve, arms carried by said handle in engagement with said movable jaw whereby the latter is forced forward along said sleeve when the handle is depressed, and means carried by said handle whereby said jaw is retracted when said handle is elevated.

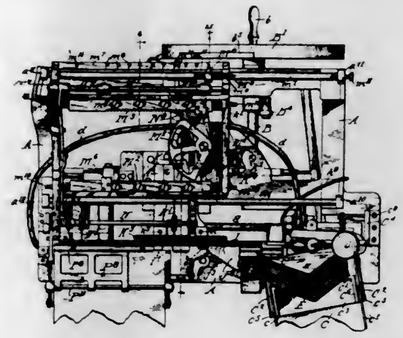
4. In a wrench, a stem, rectangular in cross section, having a fixed jaw, a sleeve slidable upon said stem, means for adjusting said sleeve upon said stem, a movable jaw for coacting with said fixed jaw, said movable jaw being slidably mounted upon said sleeve, a handle pivotally mounted upon said sleeve, said handle constituting a lever of the first class having its point in operative engagement with said movable jaw whereby downwardly-directed force applied thereto effects a forward movement of said jaw.

5. In a wrench, a stem, rectangular in cross section, having a fixed jaw, a sleeve slidable upon said stem, a tail-piece carried by said sleeve, a guard terminating said tail-piece, an adjusting nut on said stem, said adjusting nut being held between the rear end of said sleeve and said guard, a movable jaw for coacting with said fixed jaw, said movable jaw being slidably mounted upon said sleeve, a handle pivotally mounted upon said sleeve, said handle constituting a lever of the first class having its point in operative engagement with said movable jaw whereby downwardly-directed force applied thereto effects the thrusting forward of said jaw, and means carried by said handle whereby the raising of the latter effects the retraction of said jaw.

[Claims 6 to 8 not printed in the Gazette.]

884,837. MACHINE FOR STAMPING AND SEALING MAIL-MATTER. EDWARD C. MORRIS and LOUIS J. HALL, Chicago, Ill.; said Hall assignor to said Morris. Filed Sept. 19, 1898, Serial No. 691,321. Renewed Jan. 16, 1903. Serial No. 139,353.

1. A feed mechanism for envelops and the like comprising an envelop magazine, a presser for forcing the envelops forward in the magazine, and means for actuating the presser so as to automatically compensate for different thicknesses of envelops, a stop between which and the presser the envelops are positively compressed at one end, a device for temporarily checking the advance of the other end of the envelops, a separator for advancing this end of the foremost envelop separately past said checking device, and a carrier for pulling the advanced envelop from behind the stop and removing it from the magazine.



2. A feed mechanism for envelops and the like comprising an envelop magazine arranged transversely to a path of carrier movement, a presser for forcing the envelops in the magazine toward said path of movement, a stop approximately in line with said path of movement and between which and the presser the envelops are positively compressed at one end, a device back from said path of movement for temporarily checking the advance of the other end of the envelops, a separator for advancing this end of the foremost envelop separately past said checking device, and a carrier for pulling the advanced envelop from behind the stop and removing it from the magazine along said path of movement.

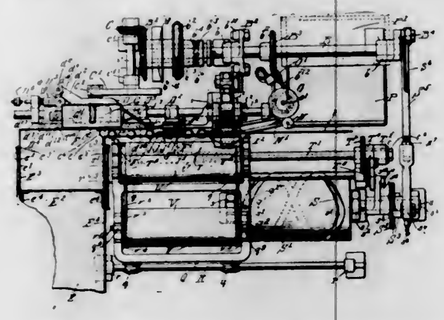
3. A feed mechanism for envelops and the like comprising an envelop magazine, a presser for forcing the envelops forward in the magazine, a stop between which and the presser the envelops are positively compressed at one end, a device for temporarily checking the advance of the other end of the envelops, a vibratory vacuum separator engaging the foremost envelop at this end to draw it separately past said checking means, and a carrier for pulling the advanced envelop from behind the positive stop and removing it from the magazine.

4. A feed mechanism for envelops and the like comprising an envelop magazine, a presser for forcing the envelops forward in the magazine, a stop between which and the presser the envelops are positively compressed at one end, a device for temporarily checking the advance of the envelops at the other end, a separator provided with a vacuum tip, means for positively pressing said tip against the exposed face of the foremost envelop, means for exhausting the air from the interior of the tip while in contact with the envelop, means for withdrawing the tip to swing the foremost envelop separately past said checking device and about the stop as an approximate axis, and a carrier for pulling the advanced envelop from behind said stop and removing it from the magazine.

5. In a machine of the class described, an envelop feed mechanism comprising a reciprocating carrier provided with envelop engaging jaws, a magazine extending transversely and at an angle to the path of movement of said carrier, a positive stop for the envelops located in line with said path of movement, a stop located on the opposite side of the magazine from the positive stop and at a distance from said path of movement for temporarily checking the advance of the envelops, and a separator mounted at the free end of the swinging arm pivoted in proximity to said positive stop and adapted to engage and swing each foremost envelop in turn about the positive stop as a center until in line with the carrier mechanism and in position to be engaged by the carrier jaws, substantially as described.

[Claims 6 to 60 not printed in the Gazette.]

884,838. MACHINE FOR STAMPING AND SEALING MAIL-MATTER. EDWARD C. MORRIS and LOUIS J. HALL, Chicago, Ill.; said Hall assignor to said Morris. Filed Oct. 2, 1897. Serial No. 653,832. Renewed June 8, 1900. Serial No. 19,626.



1. The combination with a stamp affixing mechanism and with means for feeding matter to be stamped to the affixing mechanism to receive the stamp, of a stamp carriage, means for moving the carriage past the affixing mechanism step by step and for returning it step by step, means for advancing the stamps at each end of the carriage movement, and for supplying succeeding sheets to be in turn advanced on the carriage row by row to the affixing mechanism as each preceding sheet is exhausted.

2. The combination with a stamp affixing mechanism including a plunger and opposing platen between which the matter to be stamped is introduced, of a stamp carriage, means for moving the carriage past the plunger step by step with each reciprocation of the plunger and for returning it by similar reverse steps, means for advancing the stamps at each end of the carriage movement, and for supplying succeeding sheets of stamps to be in turn advanced on the carriage row by row to the affixing mechanism as each preceding sheet is exhausted.

3. The combination with a stamp affixing mechanism including a plunger and opposing platen, of a carrier for moving matter piece by piece between the plunger and platen with each reciprocation of the plunger, a stamp carriage, means for moving the carriage past the plunger step by step with each reciprocation of the plunger and for returning it by similar reverse steps, means for advancing the stamps at each end of the carriage movement, and for supplying succeeding sheets of stamps to be in turn advanced on the carriage row by row to the affixing mechanism as each preceding sheet is exhausted.

4. The combination with a stamp affixing mechanism, of means for moving matter to be stamped into stationary position before the affixing mechanism and for removing it therefrom by a succeeding movement, a stamp carriage, means for moving the carriage past the affixing mechanism step by step and for returning it step by step, means for advancing the stamps at each end of the carriage movement, and for supplying succeeding sheets of stamps to be in turn advanced on the carriage row by row to the affixing mechanism as each preceding sheet is exhausted.

5. The combination with a stamp affixing mechanism including a plunger and opposing platen, of a carrier for moving matter to be stamped piece by piece between the plunger and platen with each reciprocation of the plunger and for removing each piece with the succeeding reciprocation, a stamp carriage, means for moving the carriage past the plunger step by step with each reciprocation of the plunger and for returning it by similar reverse steps, means for advancing the stamps at each end of the carriage movement, and for supplying succeeding sheets of stamps to be in turn advanced on the carriage row by row to the affixing mechanism as each preceding sheet is exhausted.

[Claims 6 to 50 not printed in the Gazette.]

884,839. FRUIT-PICKER'S PLATFORM. CHARLES A. MCDERMOTT, Sultana, Cal. Filed June 26, 1907. Serial No. 380,901.



1. A portable platform for the use of orchardists, comprising a curved running board, supporting legs for the same, inclined braces connecting the running board to the legs and curved braces arranged inside of and following approximately the curve of the running board to leave a free open central space.

2. A portable platform for the use of orchardists, comprising a curved running board, supporting legs for the same, inclined braces connecting the running board to the legs and curved braces arranged inside of and following approximately the curve of the running board to leave a free open central space, said curved braces crossing each other and extending from the bottom of one end leg to the top of the other end leg and forming a tension member.

3. A platform for the use of orchardists, comprising a curved running board, two end legs with inclined braces lying within the vertical plane of the running board and a middle leg having its lower end outside the vertical plane of the running board and inclined braces connecting said middle leg to the running board.

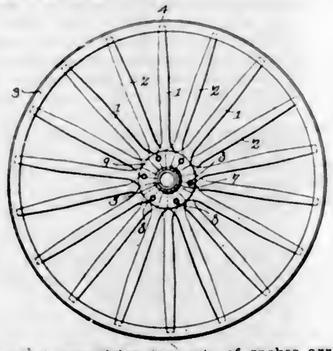
4. A platform for the use of orchardists, comprising a curved running board, two end legs with inclined braces connecting them to the running board, a middle leg having its lower end outside of the vertical plane of the running board and formed with a series of foot-holds on the outside and inclined braces for said legs connecting it with the running board.

5. A platform for the use of orchardists, comprising a curved running board, supporting legs for the ends of the running board inclined inwardly at the top and connecting with the running board at a distance from its ends, an outside brace for each end leg connecting the same to the end of the running board, inclined braces for the end legs extended toward the middle part of the running board, a middle leg having its lower end extended outside the curve of the running board and inclined braces for the same extending to the running board.

[Claims 6 and 7 not printed in the Gazette.]

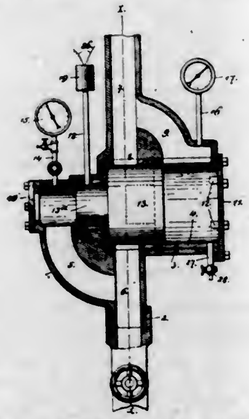
884,840. VEHICLE-WHEEL. JOHN B. MCDONALD, Jacksonville, Fla., assignor of one-half to Hugh Partridge, Duval county, Fla. Filed June 9, 1906. Serial No. 321,058.

1. A wheel comprising two sets of spokes arranged in staggered relation, the inner ends of the spokes in each set being in contact, hub parts between which said spokes are held, and fastening bolts extending through said hub parts and through or engaging said spokes, said bolts being so disposed that each alternate bolt passes through the center of a spoke in one set and between two contacting spokes in the other set, and each of the other bolts passes between two contacting spokes in the first mentioned set and through a spoke in the other set.



2. A wheel comprising two sets of spokes arranged in staggered relation the spokes of each set having their inner ends in contact, a metal washer disposed between the two sets of spokes at their inner ends and having smooth surfaces against which the spokes rest and a central opening, clamping collars having smooth inner faces arranged to bear on the outer sides of the sets of spokes for holding them in contact with said washer, an axle box extending through the collars and washer and fitting tightly therein, and bolts extending through said collars and washer near their peripheries, said bolts being so disposed that each alternate bolt passes through the center of a spoke in one set and between two contacting spokes in the other set, and each of the other bolts passes between two contacting spokes in the first mentioned set and through a spoke in the other set.

884,841. VALVE FOR FIRE-SPRINKLER SYSTEMS. JAMES B. MCGINLEY, Allegheny, Pa., assignor to Crown Fire Extinguisher Company, Pittsburg, Pa., a Copartnership. Filed June 29, 1907. Serial No. 381,434.



1. A device of the character described comprising a valve chamber having one portion of greater diameter than the other, vertically alined air and water passages communicating with that portion of greater diameter of the valve chamber, a branch passage extending from said air passage to that portion of the valve chamber of greater diameter, a branch passage extending from said water passage to that portion of the valve chamber of smaller diameter, and a valvular member conforming in contour to the shape of said valve chamber and normally closing said vertical passages under an excess of air pressure against that portion of larger diameter of the valvular member, the said member adapted to be shifted by water pressure when the air pressure is reduced, thereby establishing communication between said vertically alined passages.

2. A device of the character described comprising a valve chamber having one portion of greater diameter than the other, vertically alined air and water passages communicating with that portion of greater diameter of the valve chamber, a branch passage extending from said air passage to that portion of the valve chamber of greater diameter, a branch passage extending from said water passage to that portion of the valve chamber of smaller diameter, a valvular member conforming in contour to the shape of said valve chamber and normally closing said vertical passages under an excess of air pressure against that portion of larger diameter of the valvular member, the said member adapted to be shifted by water pressure when the air pressure is reduced thereby establishing communication between said vertically alined passages, and a fluid pressure operated alarm device communicating with that portion of the valve chamber of reduced diameter.

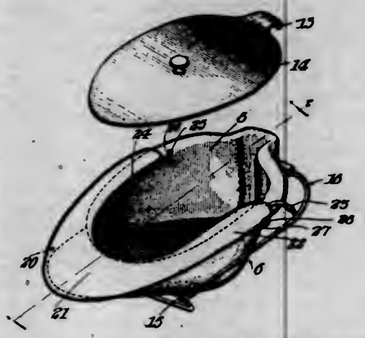
3. A device of the character described comprising a valve chamber having one portion of greater diameter than the other, vertically-alined air and water passages communicating with that portion of greater diameter of the valve chamber, a branch passage extending from said air passage to that portion of the valve chamber of greater diameter, a branch passage extending from said water passage to that portion of the valve chamber of smaller diameter, and a valvular member conforming in contour to the shape of said valve chamber and normally closing said vertical passages under an excess of air pressure against that portion of larger diameter of the valvular member, the said member adapted to be shifted by water pressure when the air pressure is reduced, thereby establishing communication between said vertically alined passages, a water pipe communicating with that portion of smaller diameter of the valve chamber and normally closed by that portion of smaller diameter of the valvular member, a receptacle constituting a water chamber mounted upon said water pipe, a pair of electrical contacts depending within said receptacle, and a fluid operated piston aranged within the receptacle and adapted to engage said contacts, thereby closing an electrical circuit.

4. A device of the character described comprising a valve chamber having one portion of greater diameter than the other, vertically alined air and water passages communicating with that portion of greater diameter from the valve chamber, a branch passage extending from said air passage to that portion of the valve chamber of greater diameter, a branch passage extending from said water passage to that portion of the valve chamber of smaller diameter, and a valvular member conforming in contour to the shape of said valve chamber and normally closing said vertical passages under an excess of air pressure against that portion of larger diameter of the valvular member, the said member adapted to be shifted by water pressure when the air pressure is reduced, thereby establishing communication between said vertically alined passages, and means arranged in that portion of larger diameter of the valve chamber for limiting the movement in one direction of said valve member.

5. A device of the character described comprising a valve chamber having one portion of greater diameter than the other, vertically alined air and water passages communicating with that portion of greater diameter from the valve chamber, a branch passage extending from said air passage to that portion of the valve chamber of greater diameter, a branch passage extending from said water passage to that portion of the valve chamber of smaller diameter, and a valvular member conforming in contour to the shape of said valve chamber and normally closing said vertical passages under an excess of air pressure against that portion of larger diameter of the valvular member, the said member adapted to be shifted by water pressure when the air pressure is reduced, thereby alined passages,

and a plurality of lugs extending in that portion of larger diameter of the valve chamber at one end thereof and adapted to limit the movement of the valvular member in one direction.

884,842. BED-PAN. EMMA NELSON, Longbeach, Cal. Filed May 9, 1907. Serial No. 372,694.



1. In a device of the class described, an open vessel, and combined transporting and tilting means secured to said vessel, said tilting means adapted to support one end of said vessel above the surface on which said vessel stands.

2. A device of the class described, comprising a rectangular vessel having an opening in its top, of a pneumatic cushion detachably secured to the top thereof, and combined transporting and tilting means pivotally secured to said vessel, said tilting means adapted to support one end of said vessel above the surface on which said vessel stands.

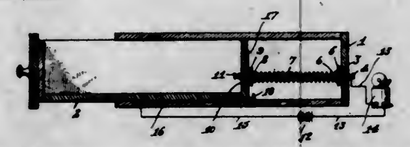
3. A bed pan, comprising a rectangular vessel having an opening in its top and provided in its rear wall with a discharge spout, said discharge spout being provided with a downwardly turned lip adapted to be engaged by a corresponding lip on the cover, a cover for said vessel, and combined transporting and tilting means pivotally secured to said vessel.

4. A bed pan, comprising a rectangular vessel having an opening in its top portion, a wire bail pivotally secured to the sides of said vessel, the lower portion of the wire of said bail being formed with an offset and extending transversely the bottom of said vessel, whereby the vessel is supported and held from tipping when being transported and tilted when the vessel is in its operative position.

5. A bed pan, comprising a rectangular vessel having an opening in its top portion, of a cover for said opening, a pneumatic cushion detachably secured to the rim of said opening, and combined transporting and tilting means pivotally secured to said vessel, said tilting means adapted to support one end of said vessel above the surface on which said vessel stands.

[Claim 6 not printed in the Gazette.]

884,843. MONEY-DRAWER ALARM. SILLUS DA COSTA NEWMAN, Jellico, Tenn. Filed June 3, 1907. Serial No. 377,085.

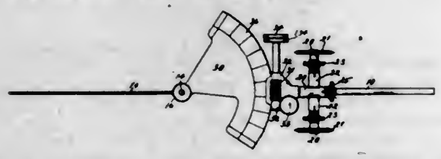


1. In an electric drawer alarm, a drawer, a drawer support, an electric circuit, an alarm in said circuit, a plate fixed in the support and connected with one pole of said circuit, a contact plate fixed to said drawer and connected with the other pole of said circuit, and a spring permanently connecting said drawer and support and forming part of said circuit.

2. In an electric drawer alarm, a drawer, a drawer support, an electric circuit, an alarm in said circuit, and a series of independent contacts in said circuit between said drawer and support each forming part of said circuit and adapted to be successively closed as said drawer is opened.

3. In an electric drawer alarm, a drawer, a drawer support, an electric-circuit, an alarm in said circuit, a series of contacts in said support each forming part of said circuit, a contact plate on said drawer, and a retracting spring connecting said drawer and support and forming part of the electric circuit and in electrical contact with said drawer contact plate.

884,844. CIRCLE-DRAFTING INSTRUMENT. CHARLES L. NICHOLS and RALEIGH HOGAN, Franklin, Ind. Filed Aug. 29, 1907. Serial No. 390,621.



1. A drawing instrument including a rod, a wheel mounted caster-like for supporting one end of said rod, means for clamping it at any desired angle with reference to the rod, a pair of wheels and means carried by said pair of wheels for supporting the other end of the rod, the distance between said front and rear wheels being adjustable longitudinally of the rod; substantially as and for the purpose set forth.

2. A drawing instrument including a rod, a bracket secured to one end of said rod and caster-frame mounted vertically in said bracket, a wheel mounted in the lower end of said frame, means for clamping said caster-frame in said bracket so as to hold the said wheel at any desired angle with relation to the rod, wheels for supporting the rear end of said rod, an axle on which said wheels are mounted, a sleeve-like bearing in which said axle is mounted that is longitudinally slidable on said rod with one end thereof threaded and split, and a nut for clamping said sleeve in any desired position on said rod.

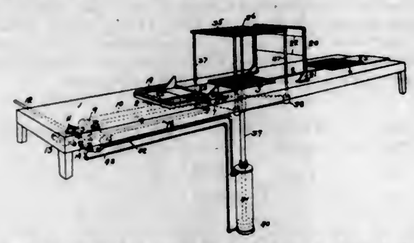
3. A drawing instrument including a rod, a bracket secured to one end of said rod and caster-frame mounted vertically in said bracket, a wheel mounted in the lower end of said frame, means for clamping said caster-frame in said bracket so as to hold the said wheel at any desired angle with relation to the rod, wheels for supporting the rear end of said rod, an axle on which said wheels are mounted, a sleeve-like bearing in which said axle is mounted that is longitudinally slidable on said rod with one end thereof threaded and split, a nut for clamping said sleeve in any desired position on said rod, and a lead pencil holder extending down centrally from the bearing for said axle.

4. A drawing instrument including a rod, a pair of wheels for supporting one end of said rod, a single wheel mounted caster-like on the other end of said rod for supporting the same, said wheels being adjustable on said rod with relation to each other a scale marked segment for adjusting the angle of said single wheel with relation to said rod, means for clamping said single wheel in position when adjusted, and means mounted on said rod for engaging the periphery of said segment and actuating the same.

5. A drawing instrument including a rod, a pair of wheels for supporting one end of said rod, a single wheel mounted caster-like on the other end of said rod for supporting the same, a scale marked segment for adjusting the angle of said single wheel with relation to said rod, means for clamping said single wheel in position when adjusted, means mounted on said rod for engaging the periphery of said segment and actuating the same, and a finger projecting forward from the means in which said front wheel is mounted that indicates the angle at which said wheel is set.

[Claim 6 not printed in the Gazette.]

884,845. COMMODITY-DIVIDING APPARATUS. ELLIS T. NICKLIN and MELVIN CAMPAU, Los Angeles, Cal. Filed Oct. 22, 1907. Serial No. 398,680.



1. In a commodity dividing apparatus, a table, a dividing frame, dividing frames carried on said table at the sides of and at right angles to said first mentioned dividing frame and devices to carry the commodity past said last mentioned frames to a position under said first mentioned frame.

2. In a commodity dividing apparatus, primary dividing frames, devices to carry the commodity past said frames, means to operate said devices, a secondary dividing frame positioned intermediate of said primary frames, and means to operate said secondary dividing frame.

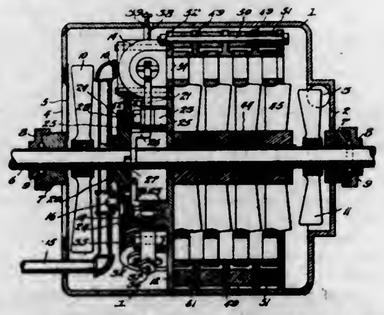
3. In a commodity dividing apparatus, a table, a reciprocating member therein, a platform attached to each end thereof, means to reciprocate said member, and stationary dividing appliances attached to said table.

4. In a commodity dividing apparatus, a table, a reciprocating member therein, platforms carried by said member, dividing frames opposite each of said platforms, and means to reciprocate said member, and dividing appliances attached to said table.

5. In a commodity dividing apparatus, a table, a reciprocating member therein, a platform attached to each end of said member, a fluid actuated press to reciprocate said member, and dividing appliances attached to said table.

[Claims 6 to 15 not printed in the Gazette.]

884,846. GASOLENE TURBINE-MOTOR. JAMES F. OREBAUGH and CHARLES W. CONNETT, Madison, Ind.; said Connett assignor to said Orebaugh. Filed May 25, 1907. Serial No. 375,675.



1. In a motor, the combination of a casing, a partition secured to said casing, a series of explosion chambers fixed to said casing, compressing plungers mounted to reciprocate in the explosion chambers, a spring seated piston head mounted in the explosion chambers, means for moving the plungers inward to compress the charge, a shaft mounted in the casing, and a series of bucketed rotors keyed to the shaft.

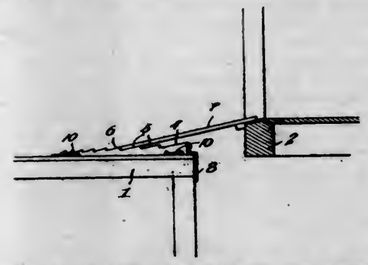
2. In a motor, the combination of a casing, a partition secured in the casing, a series of explosion chambers secured to the partition, a plunger adapted to reciprocate in one end of said explosion chamber, a lever connected to each of said plungers, a cam for moving said levers and plungers, a spring seated piston mounted in the opposite end of each of said explosion chambers, an adjustable buffer for said pistons, means for igniting the charge, a shaft extending centrally through the casing, a series of bucketed rotors keyed to the shaft, and intermediate stationary flanges between each pair of rotors.

3. In a motor, the combination of a casing, a shaft mounted in the casing, a fan carried by the shaft and disposed at opposite ends of the casing, a partition in the casing, explosion chambers secured to the partition, a plunger mounted to reciprocate in each chamber for compressing the charge, means for reciprocating the plungers, a spring seated piston in the opposite end of the chambers, means for igniting the charge, means for admitting air to the chambers, a series of rotors keyed to the shaft, and means for admitting the exploded charge to the rotors.

4. In a machine of the character described, the combination of a casing, explosion chambers in said casing, a plunger mounted to reciprocate in one end of each of said explosion chambers, means for reciprocating said plungers, a spring seated piston mounted in the opposite ends of said explosion chambers, an adjustable buffer for regulating the tension of the springs, a shaft journaled in the casing, a series of bucketed rotors fixed to said shaft, igniting devices, and means for admitting air to said explosion chambers.

5. In a motor, the combination of a casing, a partition secured in the casing, a series of explosion chambers connected to the partition, a reciprocating plunger for each explosion chamber, a spring seated piston for each explosion chamber, igniting devices, an air inlet valve for each of said explosion chambers, a roller connected to the stem of said valve, a cam provided with a groove for said roller, a shaft mounted in the casing, a series of bucketed rotors connected to the shaft, and fans connected to said shaft.

884,847. SKID-HOLDER. ROBERT E. OSLIN, Washington, Ga. Filed Dec. 20, 1907. Serial No. 407,338.



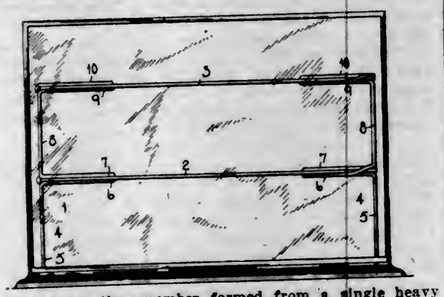
A portable skid holder adapted to rest on a horizontal platform and comprising a substantially rectangular body having a shouldered upper surface, and a stop projecting below one end of the body and adapted to overhang the edge of the platform to retain the skid holder adjacent to the edge of the platform.

884,848. KNOCKDOWN DISPLAY STAND OR RACK. GEORGE L. PAGE, Fayetteville, N. C. Filed Aug. 12, 1907. Serial No. 388,252.

1. A supporting member formed from a single heavy wire or rod bent at right angles to form a loop having a member extending transversely thereof approximately in the same plane to form a spring clamp.

2. A shelf-supporting member composed of heavy spring wire bent to form an approximately circular laterally extending shelf-engaging loop and then bent upon itself and extended to form a spring tongue extending transversely thereof in approximately the same plane as the loop and

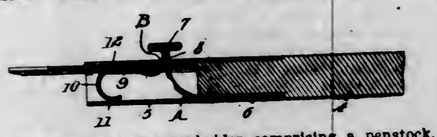
then extended upwardly to form a vertical support and again bent to form another laterally extending loop provided with a spring tongue.



3. A supporting member formed from a single heavy wire or rod bent outwardly at right angles to form a shelf-engaging loop with one end extended transversely of said loop and bent upon itself to form a spring tongue.

4. A supporting member formed from a single heavy wire or rod bent outwardly at right angles to form a shelf-engaging loop with one end extended transversely of said loop and bent upon itself to form a spring tongue, and then extended upwardly to form a spacing member and bent to form a laterally extending shelf clamp.

884,849. PENHOLDER. ROBERT E. PEICKERT, Dumont, Minn. Filed June 27, 1907. Serial No. 381,098.



A penpoint-releasing penholder comprising a penstock, a cylindrical sleeve on the forward end of the penstock having a hole in its upper side, a resilient strip of metal having its inner portion formed as a shank engaged between the penstock and the portion of the sleeve surrounding the same, the intermediate portion doubled upon itself forming a shank extended through the hole in the sleeve, the outer part of the doubled portion being flattened to form a head, and the forward portion of said strip being extended outward in the plane of the upper inner side of the sleeve to receive and hold the shank of the penpoint.

884,850. SNOW GUARD OR FENDER FOR ROOFS. FRANCIS A. PETER, Newside, Pa. Filed Dec. 6, 1907. Serial No. 405,320.



1. A detachable snow-guard for roofs comprising a clamping-member and a holding-member, said clamping-member being fastened to the roof and having adjacent recesses in its opposite sides provided with inclined bottoms, and a holding-member having a notch adapted to straddle the clamping-member and engage the recesses thereof, the inclined sides of the notch engaging the inclined bottoms of the recesses in the clamping-member, substantially as described.

2. In a snow-guard, the combination of a clamping-member composed of opposite plates adapted to engage opposite sides of a roof seam or flange and clamp it, and formed with adjacent recesses in their outer faces; with a holding-member arranged transversely of the clamping-member and having a notch in its lower edge adapted to engage the recesses in the clamping-member, substantially as set forth.

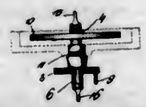
3. The herein described snow-guard for roofs having standing seams or flanges, and the like, consisting of a two-piece clamping-member composed of similar opposite plates located on opposite sides of the seam, and having clamping ridges on their lower edges and adjacent recesses in their outer faces; and a holding-member straddling the clamping-member and having a tapered notch engaging the recesses in the plate, substantially as described.

884,851. WRENCH. DAVID C. PIERCE, Nowrytown, Pa. Filed Nov. 6, 1907. Serial No. 400,925.



The wrench herein described, comprising a wrench bar having ratchet teeth, a jaw sliding thereon and having a laterally opening recess and a stud projecting from the base wall of said recess and having a threaded socket in its free end, the upper end of said recess being curved on the arc of a circle, a dog pivoted between its ends concentrically with the curved surface and engaging at one end with the ratchet teeth of the wrench bar and moving at its other end along the said curved surface and practically in contact therewith, a spring actuating said dog, a cover plate for the outer end of the laterally opening recesses, and a screw securing said cover plate and threaded in the socket in the free end of the stud, all substantially as and for the purpose set forth.

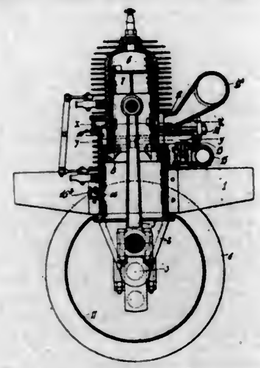
884,852. BALANCE-WHEEL FOR WATCHES. JOHN PORČBA, Allegheny, Pa. Filed Sept. 16, 1907. Serial No. 393,083.



A balance wheel embodying a spider frame having a centrally arranged opening and a depending hollow boss, the inner face of the boss forming a continuation of the wall of said opening, the inner face of the boss being screw-threaded and the wall of said opening being uninterrupted, a spindle having a hub portion of two different diameters thereby forming a shoulder, said shoulder constituting the seat for the lower edge of the boss, that part of the hub portion of smaller diameter and in close proximity to the shoulder being provided with threads, the remainder of that part of the hub of smaller diameter having its periphery uninterrupted, said spindle further embodying a pair of shanks, the diameter of said shanks being the same and the diameter of each of the shanks being the same throughout, each of said shanks having a screw threaded socket, and detachable bearings engaging in said sockets.

884,853. INTERNAL-COMBUSTION ENGINE. CARLTON R. RADCLIFFE, New York, N. Y., assignor to International Patent Corporation, Jersey City, N. J., a Corporation of South Dakota. Filed July 26, 1906. Serial No. 327,808.

1. In an internal combustion engine, the combination with a plurality of cylinders, of a gas-receiving and compressing space in each cylinder and having an inlet and a port near the lower end thereof to allow exhaust of the products of combustion in case of back fire, a combustion chamber in each cylinder and having an exhaust, and a communicating passage between the gas-receiving space of one cylinder and the combustion chamber of another cylinder.

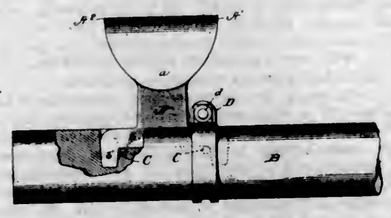


2. In an internal combustion engine, the combination with a plurality of cylinders, of a gas-receiving and compressing space in each of the cylinders and having an inlet and a port near the lower end thereof to allow exhaust of the products of combustion in case of back fire, a combustion chamber in each cylinder and having an exhaust, and a communicating passage between the gas-receiving space of one cylinder and the combustion chamber of another cylinder and independent of the inlet and port in the former.

3. In an internal combustion engine, the combination with a plurality of cylinders, of a gas-receiving and compressing space in each of the cylinders and having an inlet and a port near the lower end thereof to allow exhaust of the products of combustion in case of back fire, a check valve in said port, a combustion chamber in each cylinder having an exhaust, a communicating passage between the gas-receiving space of one cylinder and the combustion chamber of another cylinder.

4. In an internal combustion engine, the combination with a plurality of cylinders, of pistons operating therein, a gas-receiving and compressing space in each of the cylinders having an inlet and a port to allow exhaust of the products of combustion in case of a back fire, a combustion chamber in each cylinder having an exhaust, a communicating passage between the gas-receiving space of one cylinder and the combustion chamber of another cylinder, said inlets, ports and communicating passages being piston controlled.

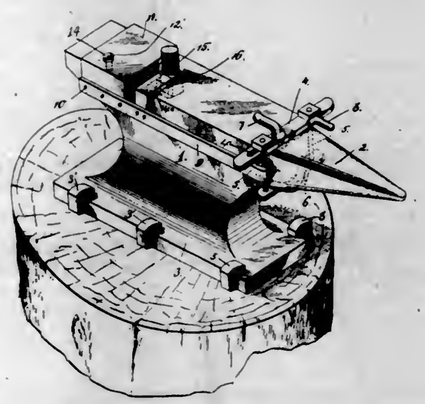
884,854. TURPENTINE-HACK. CLYDE E. RAYFORD, St. Elmo, Ala. Filed Oct. 21, 1907. Serial No. 398,344.



1. A hack blade having two opposite hook-shaped cutting edges and two oppositely projecting shank arms with two offsetting lugs.

2. A hack consisting of a handle having a groove cut longitudinally in its side at a distance from the end and a double hook-shaped blade having shanks and lugs entering said groove, a transverse bolt intersecting the groove near each end, and a clamp collar embracing the shank of the blade and the handle.

884,855. MEANS FOR MAKING HORSESHOES. MARTIN S. REIGH, Pittsburg, Pa. Filed Mar. 1, 1907. Serial No. 360,080.



1. An anvil provided with a main horn at one end, a plate disposed transversely of said anvil and extending beyond the same at the ends and provided with oppositely-extending supplementary horns, one of said supplementary horns extending over the main face of the anvil and the other supplementary horn extending alongside the anvil horn, and means for securing said plate upon said anvil.

2. The combination with an anvil having a horn, of a plate mounted upon said horn and having two supplemental horns projecting therefrom in opposite directions, and means for securing said plate upon said horn.

3. The combination with an anvil having a horn, of a plate disposed transversely of the anvil and extending beyond the same at the ends, a supplemental horn carried by said plate and extending over the main face of the anvil, and means for securing said plate upon said anvil.

4. In an attachment for making horse shoes, the combination with an anvil having a main horn at one end, and having a recess in its upper face near the other end, of clamp members secured to the main horn, a bracket carrying a pin engaging in said recess in the anvil, a punch bed engaging the upper face of the anvil, and a strap connecting the said punch bed and the bracket to said clamp members.

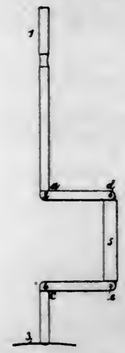
5. The combination with an anvil having a horn, of a plate disposed transversely of the anvil and extending beyond the same at the ends, a supplemental horn carried by said plate and extending along the anvil horn, and means for securing said plate upon said anvil.

[Claim 6 not printed in the Gazette.]

884,856. FOLDING BIT-STOCK. EDOUARD REQUILLART, Levallois-Perret, France. Filed Nov. 15, 1906. Serial No. 343,639.

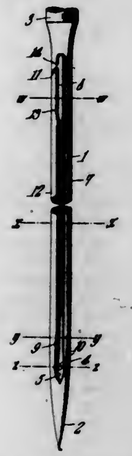
A drill brace comprising a middle rod, two end bell-cranks pivoted to the middle rod and adapted to swing in a plane passing through said middle rod, said rods

being adapted to impinge or contact with one another when in position for work and a tubular handle adapted



to slide on the middle rod and on an adjacent part of one of the bell-cranks when said rods are in folded position.

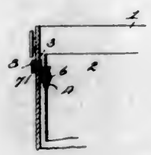
884,857. SEWING-MACHINE NEEDLE. JAMES E. RIDGWAY, Atchison, Kans. Filed Aug. 1, 1907. Serial No. 386,638.



1. A sewing machine needle comprising a stem having a longitudinal groove formed in one side and merging into the eye of the needle, and a slit coincident with the groove to the greater portion of its length and extending diametrically through the needle stem throughout the coincidence of the slit with the groove, said slit diverging from its diametric course near the eye end of the stem and entering the eye below the center of the latter and also having its upper end formed with an enlargement located at one side only of the diametric plane of the slit and provided with a diagonal passageway leading to the exterior of the stem on the same side of the slit as is the divergent end entering the eye of the needle.

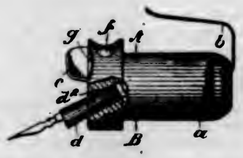
2. A sewing machine needle comprising a stem having at the point end a circular eye with diamond cuts or recesses on each side, a longitudinal groove formed on one side and merging into the corresponding diamond cut, and a slit coincident with the groove through the greater portion of its length and extending diametrically through the needle stem throughout the coincidence of the slit with the groove, said slit diverging from its diametric course near the eye end of the stem and entering the eye below its center, and also having its upper end formed with an enlargement located at one side of the diametric plane of the slit and provided with a diagonal passageway leading to the exterior of the stem.

884,858. GARMENT-SUPPORTER. CHARLES RINGWALD, Owego, N. Y. Filed Aug. 29, 1906. Serial No. 332,507.



The combination with a pair of trousers and a nether garment, of a garment supporter comprising an eyelet secured upon the waistband of the trousers, an eyelet secured upon the waistband of the nether garment below the eyelet on the trousers, said eyelets being relatively arranged for coöperation in pairs, a connecting member for coupling the respective pairs of eyelets, said member comprising a strand of wire bent to form a straight unobstructed stem having a screw threaded end to extend through the eyelet of the trousers and also bent downwardly and upwardly to provide a hook with a curved upper end which serves to permit the hook to engage the coöperating eyelet on the nether garment, said hook having its shank extending vertically between the garments and bearing against the inner flange of the trousers eyelet for engagement with said eyelet, and a button removably engaging the projecting screw threaded end of the stem and serving to rest against the outer flange of the trousers eyelet, substantially as specified.

884,859. PENHOLDER. WILHELM RITTWEGER, Gross Breitenbach, Germany. Filed Oct. 31, 1907. Serial No. 400,046.



1. A device of the class described comprising a holder of a length and diameter to fit transversely in the writer's hand and having its ends arranged to be engaged by the thumb and little finger, a pen receiving socket being formed in one end of the holder, and means on the holder arranged to coöperate with the intermediate fingers of the hand to retain the latter in proper relation to the holder.

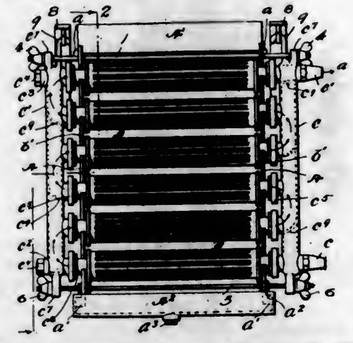
2. A device of the class described comprising a holder adapted to be grasped in the hand of the writer one end of the holder being provided with a pen receiving socket, a thumb support arranged on one end of the holder above said socket, and a clamp on the holder arranged to cooperate with the intermediate fingers on the hand to retain the latter in proper relation to the holder.

3. A device of the class described comprising a holder composed of a head and a reduced portion, the head having a peripheral depression to receive the index finger, and having a thumb receiving depression in the adjacent end of the holder, a pen receiving socket being formed in the said head, a clamp attached to the holder and arranged to coöperate with the intermediate fingers of the hand, and a thumb support arranged on one end of the holder above the pen socket and in proximity to the thumb receiving depression.

4. A device of the class described comprising a holder

adapted to be grasped in the hand of the writer, the holder being provided with a socket, and a crank shaped pen clamp interchangeably and rotatably mounted in said socket.

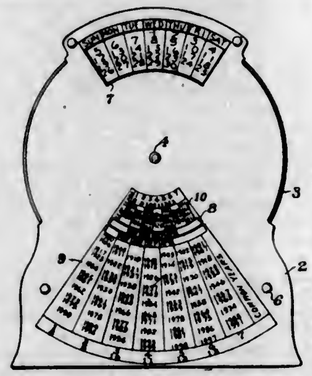
884,860. MILK-COOLER. HENRY C. ROOT, Westgrove, Pa., assignor to The Root Dairy Supply Company, Westgrove, Pa., a Corporation. Filed Feb. 7, 1908. Serial No. 414,733.



1. In a milk-cooler, the combination, of the frame or racks containing open-sided bearings for the cylinders, the hollow cylinders mounted in said bearings, the water columns connected with the ends of said cylinders, means for feeding the milk to said cooler, means for supplying the cooling agent, and means for clamping the several parts of the structure together, substantially as set forth.

2. A milk cooler comprising water columns and rotatable cylinders with their ends engaging said columns, suitable supporting racks adjacent to said columns having open-sided rests in which the ends of said cylinders are mounted, substantially as set forth.

884,861. CALENDAR. CHARLES E. ROWE, Austin, Tex. Filed June 7, 1907. Serial No. 377,809.



1. A calendar having a sheet and a member movably connected therewith, said sheet having separate columns of leap and common years respectively, and the movable member having month-day numerals arranged in columns and also having month symbols, the latter being for leap and common years respectively, and said sheet being in front of said member and slotted to exhibit the month symbols and month-day numerals on said member, said sheet having symbols indicating the days of the week and coöperative with the month-day numerals.

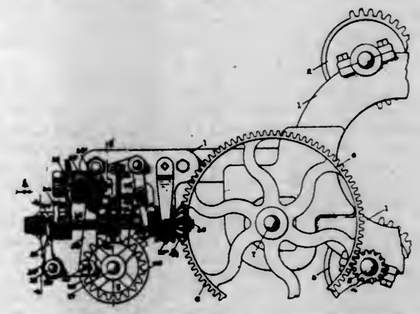
2. A calendar having a sheet and a disk disposed behind said sheet, the two parts being movably connected together, said sheet having separate columns of leap and common years, and the disk having month-day numerals arranged in radial columns, and also having month symbols arranged in annular rows, said sheet being slotted to exhibit the month symbols and simultaneously the month-day numerals, and said sheet having symbols indicating the days of the week and arranged to register with the respective month-day columns.

3. A calendar having a front sheet and a disk located behind and movably connected together, the front sheet having separate columns of leap and common years, and the disk bearing columns of numerals and also having angularly-arranged month symbols, the month symbols for leap and common years being separate and distinct, and the front being slotted to simultaneously exhibit the month symbols and the month-day numerals, and the slotted portion having associated therewith symbols to indicate the days of the week.

4. A calendar having a slotted sheet and a member movably connected therewith, the sheet having separate columns for leap and common years respectively, the columns of the common years being out of alinement with the columns of the leap years, and the movable member having month indications to register with the respective year columns.

5. A calendar having a slotted sheet provided with common and leap year designations arranged in alternating columns, and a movable member disposed behind and connected with said sheet, said movable member bearing month symbols adapted to register with the respective common and leap year columns for showing monthly calendars and being provided with month-day numerals and said sheet having symbols for the days of the week cooperative with said month-day numerals.

884,862. LOOM MULTIPLIER MECHANISM. EPPA H. RYON, Worcester, Mass., assignor to Crompton & Knowles Loom Works, a Corporation of Massachusetts. Filed Dec. 18, 1905. Serial No. 292,145.



1. In a multiplier mechanism, a multiplier cylinder having two rows of pattern surfaces arranged in parallel helical curves around the periphery thereof, an arm adapted to bear against said pattern surfaces, means to rotate said cylinder, and means to shift said cylinder longitudinally to change the operating rows of pattern surfaces relative to said arm.

2. In a loom pattern mechanism, a multiplier mechanism, a pattern chain cylinder, a wheel connected therewith, and means controlled by the multiplier mechanism, to rotate said wheel in a forward or backward direction a predetermined number of picks or caused to remain in a locked position.

3. In a loom pattern mechanism, a pattern chain cylinder, a multiplier mechanism, means operative to rotate said cylinder in a forward or backward direction, means to lock said cylinder in a position at rest, said locking means comprising a sliding and rotatable pin wheel controlled by said multiplier mechanism.

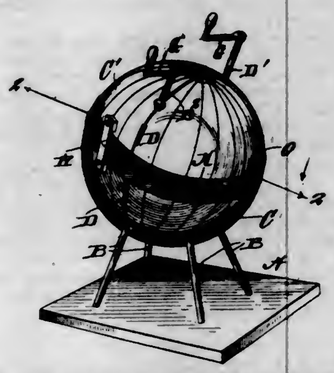
4. In a loom pattern mechanism, a pattern chain cylinder, a multiplier mechanism, means operated to rotate said cylinder in a forward or backward direction, and

means to lock said cylinder in a position of rest, said means consisting of a sliding and a rotatable double pin wheel controlled by said multiplier mechanism.

5. In a loom pattern mechanism, a rotatable cylinder, a plurality of pattern surfaces on the periphery thereof, a support for one end of said cylinder having a screw-thread thereon, a rotatable shaft extending through said cylinder, connection between said shaft and said cylinder, and means to impart to said shaft a step by step rotation.

[Claims 6 to 10 not printed in the Gazette.]

884,863. EDUCATIONAL APPLIANCE. GERALD N. SABIN, Fordland, Mo. Filed Nov. 7, 1907. Serial No. 401,129.



1. An educational appliance for indicating the succession of the civil days comprising a stationary globe, a band passing circumferentially about the globe and divided into sections identified by numerals, and mechanism for causing the band to travel about the circumference of the globe to bring successively the sub-divisions of the band about the globe, as set forth.

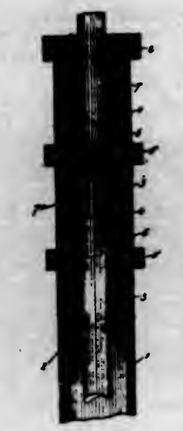
2. An educational appliance for indicating the succession of the civil days comprising a stationary globe, a band passing circumferentially about the globe and divided into sections identified by numerals, reels mounted within the globe and upon which the band is adapted to wind, and means for rotating said reels whereby the band may be successively drawn about the globe and rewound within the latter, as set forth.

3. An educational appliance for indicating the succession of the civil days comprising a stationary globe, a band passing circumferentially about the globe and divided into sections identified by numerals, reels mounted within the globe and upon which the band is adapted to wind, and means projecting outside the globe for rotating said reels whereby the band may be successively drawn about the circumference of the globe, as set forth.

4. An educational appliance for indicating the succession of the civil days comprising a stationary globe, a band passing circumferentially about the globe and divided into sections identified by numerals, said globe being hollow and provided with a slot through which said band passes, shafts mounted within the globe, a reel fixed to each shaft and upon which said band is adapted to be alternately wound and rewound, an end of each shaft projecting through the globe adapted to receive a crank for turning the same as set forth.

5. An educational appliance comprising a stationary, sectional globe having a slot therein, shafts mounted within the globe, a reel fixed to each shaft, a band winding about said reel and having sub-divisions which are identified by numerals, said band adapted to pass about the globe parallel to the equator and extending through said slot at right angles to the equator and winding about said reels, and means for winding the band from one reel to another whereby the band may be drawn circumferentially about the globe, as set forth.

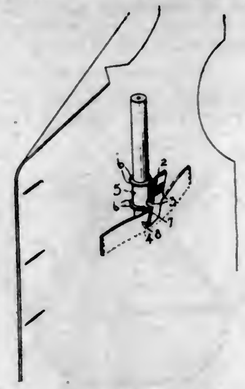
884,864. STUFFING-BOX. ERNEST J. SALT, Darlington, and CHARLES L. HERR, Millvale, Pa. Filed Jan. 18, 1908. Serial No. 411,488.



The combination with a well provided with interior threads tubing and a pump rod, of a casing detachably mounted upon the upper end of said tubing, surrounding said rod and formed of two different diameters, that portion of smaller diameter extending in and formed with peripheral threads engaging the threads of the tubing and surrounding the rod and that portion of larger diameter constituting a chamber, that portion of smaller diameter having its lower end beveled a packing located in said chamber, the wall of said chamber being screw threaded, an upper casing mounted upon and extending in said first-mentioned casing, said upper casing formed of two different diameters, that portion of smaller diameter surrounding said pump rod and that portion of larger diameter constituting a chamber, a packing mounted in the chamber formed in the upper casing, the wall of said chamber in the upper face being screw threaded, that portion of smaller diameter provided with peripheral threads engaging with the threads formed on the inner face of said first mentioned chamber and further having its lower end beveled and a packing gland extending within the chamber of the upper casing and secured to said casing, said packing gland at its top and each of said casings provided with an annular shoulder intermediate its ends whereby the lower casing will engage the top edge of the tubing, the upper casing engaging the top edge of the lower casing and the packing gland the top edge of the upper casing.

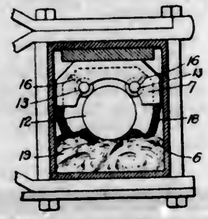
884,865. PEN AND PENCIL HOLDER. EDWARD L. SANDS, Webb City, Mo. Filed June 27, 1907. Serial No. 381,173.

A holder of the class specified, made from flat spring metal and comprising pencil and garment clasping members, respectively, the latter being extended for a portion of its length at an angle to the former and then bent back upon itself and extended beyond the inner end of the same, the outer portion of the garment clamping member being formed at opposite side edges and at a point adjacent to the inner end of the inner portion of said member with engaging means for rigidly and detachably connecting said portions, the outer or projecting end of the outer portion of the garment clamping member being adapted to engage a garment, that portion of said last mentioned member extending outwardly beyond the inner end of the pencil clamping member constituting a finger-piece adapted to be depressed to disengage the garment clamping member from the garment, and the extreme inner end of said last mentioned member acting as a spring



pivot and exerting pressure upon the fingerpiece to normally maintain it in engagement with the garment.

884,866. JOURNAL-BEARING. AMBROSE H. SASSAMAN, New York, N. Y., assignor of one-fourth to Adolph O. Meyer, one-fourth to George W. Koerner, and one-fourth to William F. Koerner, New York, N. Y. Filed Dec. 12, 1906. Serial No. 347,532.

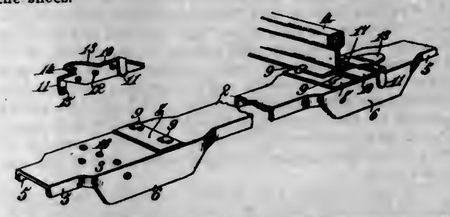


In combination with a journal-box and an axle-journal extending thereinto, a bearing piece disposed opposite one side of the axle-journal and having an inner concaved face provided with alternating ribs and recesses, the ribs dividing said recesses and being formed with open bearing sockets, the outer face of said bearing piece having shallow transverse grooves at points opposite the respective ribs and communicating vertical grooves extending down upon the sides and through the edges of the bearing face of the bearing piece, and channels leading at an angle from the points of intersection of said transverse and vertical grooves to the said open bearing sockets, lubricant conducting wicks disposed in such grooves and extending into the journal-box, and antifriction rollers interposed between the bearing piece and axle-journal, and having reduced journals mounted in the open bearing sockets of the bearing piece, said journals being retained in said sockets against displacement in the axle-journal by the pressure of the latter, whereby the rollers are free for removal from the bearing sockets when the bearing piece is removed from the journal-box.

884,867. RAIL-TIE AND FASTENING MEANS. ROBERT S. SCOTT, Kansas City, Mo. Filed May 13, 1907. Serial No. 373,467.

1. The combination of a tie, rail-supporting ribs on the tie, rail-holding spikes connected with the ribs, and rail-supporting resilient shoes provided with rail-engaging means, said shoes being resilient and being provided with pins, the tie having seats into which said pins can be sprung to hold the shoes to the tie.

2. The combination of a tie, rail-holding shoes provided with downwardly-extending arms to fit the opposite sides of the tie, said shoes having rail-engaging hooks and also having pins on the under side thereof, said arms having pins on the inner side thereof, and the tie having seats into which the pins can be sprung by the resiliency of the shoes.



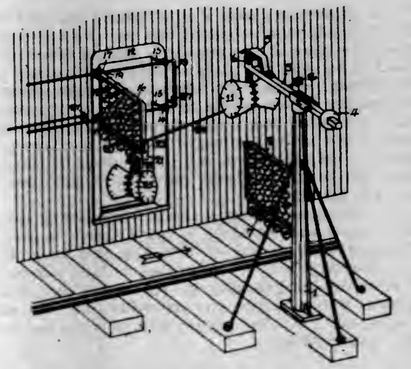
3. The combination of a tie having rail-supporting plates, rail-engaging rivets for holding the plates in place, and shoes of the same depth as the plates to fit under the rails and provided with hooks to engage the rails, said shoes being resilient and having depending arms to fit the sides of the tie, the shoes and arms being provided with pins, and the tie having seats into which said pins can be sprung by the resiliency of the shoes.

4. A metal tie having flanges along its opposite sides, said flanges being provided with depending wings, and webs uniting the flanges and connected with the body of the tie.

5. The combination of a tie and resilient rail-holding means, the latter having means to hold the same in interlocking connection with said tie and against movement longitudinally thereof.

[Claim 6 not printed in the Gazette.]

884,868. RAILWAY MAIL CATCHER AND DELIVERER. WYATT T. SEBREE, Carrollton, Ky., assignor of two-thirds to J. Francis Jett, Henry Smith, Lewis Thoma, and David M. Bridges, Carrollton, Ky. Filed Feb. 4, 1908. Serial No. 414,221.



1. A mail catcher and delivery apparatus for railway mail service comprising a frame pivotally mounted upon a car, a netting fixed to said frame, a laterally projecting arm upon said frame, a trigger provided with a bi-parted end pivotally mounted upon said arm and having its end curved to retain a mail bag upon the arm, a stationary post, a weighted cross-piece pivotally mounted thereon, means for holding a mail bag-carrying ring upon said weighted cross-piece, a hinged frame and netting upon said post and positioned in the path of said trigger and bag carried by the moving car, as set forth.

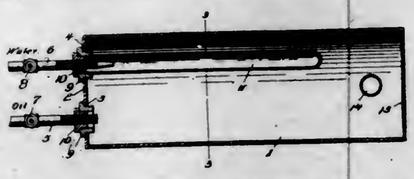
2. A mail catcher and delivery apparatus for railway mail service, comprising a frame pivotally mounted upon a car, a netting fixed to said frame, a laterally projecting arm upon said frame, a trigger having a biparted end pivotally mounted upon said arm and having its end curved to retain a mail bag upon the arm, a stationary post, a weighted cross piece pivotally mounted thereon, the end of said cross piece being slotted and adapted to hold a mail bag carrying ring, a hinged frame and netting mount-

ed upon said post and positioned in the path of said trigger and bag carried by the moving car, as set forth.

3. A mail catcher and delivery apparatus for railway mail service, comprising a frame pivotally mounted upon a car, a netting fixed to said frame, a laterally projecting arm upon said frame, a trigger having a biparted end pivotally mounted upon said arm and having its end curved to retain a mail bag upon the arm, a stationary post, the upper end of said post having a slot, a weighted delivery arm pivotally mounted in said slot, one end of said arm having a recess for the reception of a ring carrying a mail bag, a hinged frame and netting mounted upon said post and in the path of said trigger and mail bag carried by the car, as set forth.

4. A mail catcher and delivery apparatus for railway mail service, comprising, in combination with a car, a U-shaped rod mounted thereon, blocks pivotally mounted upon said rod, a frame hinged to said block, a netting mounted upon said frame, a mail bag supported by said frame, a trigger for holding said bag upon the frame, a stationary post, a pivotal delivery arm mounted upon said post and designed to hold a mail bag in the path of said netting upon the moving car, a hinged frame and netting upon said post positioned in the path of said trigger and the bag carried by the car, as set forth.

884,869. BURNER. GEORGE R. SHANKLIN, Portland, Oreg. Filed May 9, 1907. Serial No. 372,757.



1. A burner comprising a retort having openings, liquid and oil supply pipes extending into the openings, bushings around the pipes at the openings, a straight generator tube closed at one end and provided with a jet opening at an intermediate portion and having threaded engagement with the bushing for the liquid supply pipe, a tube disposed under the retort and having threaded engagement therewith at one end and arranged to cause the flame of the burner to heat the retort, and porous plugs in the supply pipes adjacent the discharge ends thereof, and controlling valves in the pipes.

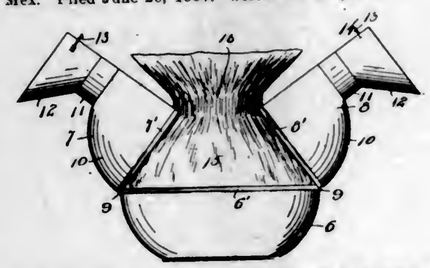
2. A burner comprising a closed retort having openings of the same size, bushings in the openings, a generator supported solely on one of the bushings, a water supply pipe extending into the outer end of the generator, a coupling member connecting the said supply pipe with the bushing, a fuel supply pipe extending into the second bushing, and a coupling member secured in the fuel supply pipe to the bushing.

884,870. BUCKET. SIMEAN J. SIKES, Gainesville, Fla. Filed Feb. 5, 1907. Serial No. 355,913.



A turpentine bucket having a pivoted bail or handle and provided at its upper edge with an upwardly projecting inwardly inclined guard flange adjacent to one side of the bail and an upwardly projecting lip adjacent to the other side of the bail, in combination with a cut-off blade extending across the mouth of the bucket and attached to the latter adjacent to the ends of the bail.

884,871. CUSPIDOR. ANNA E. SIMPSON, Corona, N. Mex. Filed June 20, 1907. Serial No. 379,954.



In a cuspidor, the combination of a bowl-like base having an annular bead adjacent its free edge, cover sections hinged to the base at opposed points, said cover section having beads formed around the lower free edges, the beads of the cover sections fitting within the bead of the base when in closed position, means carried by the cover sections for holding said cover sections in closed position and an impervious flexible receptacle fitting within the base and inclosed by the cover sections when said cover sections are in closed position.

884,872. MEANS FOR INKING PRINTING-ROLLS. FREDRICK C. SIXT and WILLIAM M. REICHART, Cleveland, Ohio, assignors to The Chandler & Price Co., Cleveland, Ohio, a Corporation of Ohio. Filed Mar. 26, 1906. Serial No. 307,975.



1. The ink distributing roll having differential bearings in its ends, a non-rotatable shaft adapted to one of said bearings and a sleeve fixed on said shaft adapted to the other bearing, and a cam channel in said sleeve operatively engaged with the corresponding head of said roll by means of a rolling connecting member, in combination with an inking roll in operating contact with said ink distributing roll.

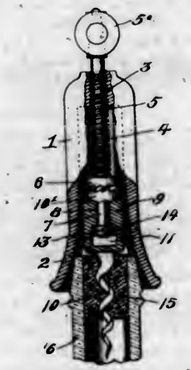
2. In an ink distributing mechanism, a roll provided on its interior with means for moving said roll longitudinally, comprising a stationary collar provided with a cam groove semi-circular in cross section and a ball mounted on the inner surface of said roll and extending the distance of half its diameter into said cam groove.

3. In an ink distributing mechanism, a hollow roll provided on its interior with means for moving said roll longitudinally, comprising a non-rotatable collar provided with a cam groove semi-circular in cross section, a semi-spherical notch in the inner surface of said roll and a ball extending the distance of half its diameter into said cam groove and the distance of half its diameter into said semi-spherical notch.

884,873. CORKSCREW. WILLIAM J. STANTON, Bayonne, N. J. Filed Mar. 12, 1907. Serial No. 362,013.

A cork extracting device comprising a frame or casing having a threaded opening at the upper end thereof, a cork-screw provided at its upper end with a head, said head being formed at its upper end with clutch teeth and at its lower end with a transverse slot, and having a

bearing opening communicating at its lower end with the slot, the upper wall of which forms a bearing shoulder, a screw spindle engaging the threaded opening in the casing, and provided with a smooth surfaced lower end journaled in said bearing opening and extending into the slot, a clutch member on the screw adapted to engage the clutch member on the head, whereby the screw may be coupled to the head to rotate the screw in one direction for projection into the cork, and a contact member on the lower end



of the spindle vertically movable and revoluble in the slot in the head and adapted to contact with said bearing shoulder, whereby the spindle may be rotated reversely to draw the clutch member thereof out of engagement with the clutch member on the head and to bring said contact member into engagement with the shoulder, by which on the continuous reverse revolution of the spindle the cork-screw may be withdrawn without rotation.

884,874. ZINC-SULFID PIGMENT AND PROCESS OF PRODUCING THE SAME. HENRY W. DE STUCKLÉ, Dieuze, Germany. Filed Feb. 1, 1908. Serial No. 413,764.

1. A light-proof and weather-proof pigment comprising a hydrated zinc sulfid wherein the molecular ratio of ZnS to H_2O is not less than 5 to 1.

2. The process of preparing pigments which comprises the formation of a precipitated hydrated sulfid of zinc and its partial dehydration to form hydrate wherein the ratio of ZnS to H_2O is not less than 5 to 1.

3. The process of preparing pigments which comprises the formation of a precipitate comprising a hydrated sulfid of zinc and dehydrating said precipitate until the said sulfid forms a hydrate wherein the ratio of ZnS to H_2O is not less than 5 to 1.

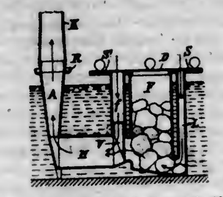
4. The process of preparing pigments which comprises the formation of a precipitate comprising a hydrated sulfid of zinc, heating said precipitate at a temperature of about 300° C. until said sulfid forms a hydrate wherein the ratio of ZnS to H_2O is not less than 5 to 1 and discontinuing the heating.

5. The process of preparing pigments which comprises the formation of a precipitate comprising a hydrated sulfid of zinc from an alkaline solution containing zinc and dehydrating said precipitate until said sulfid of zinc forms a hydrate wherein the ratio of ZnS to H_2O is not less than 5 to 1.

884,875. PLUNGING FURNACE. ZDZISLAW SZPOR, Stanislawow, Austria-Hungary. Filed Apr. 19, 1907. Serial No. 369,132.

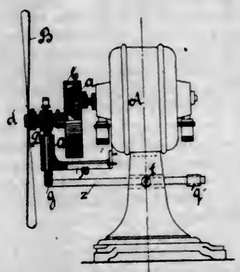
1. A plunging furnace comprising a fire shaft, a smoke discharge pipe, means for connecting the lower ends of said shaft and pipe, a primary air supply pipe, a secondary air supply pipe and an air distributer at the lower end of the secondary air supply pipe.

2. A plunging furnace comprising a fire shaft, a smoke discharge pipe, means for connecting the lower ends of said shaft and pipe, a primary air supply pipe a secondary



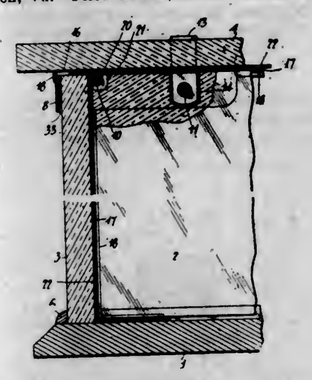
supply pipe and an air distributer at the lower end of the secondary air supply pipe, said distributer being composed of air tubes spaced apart to form a grate.

884,876. FAN OR VENTILATOR. SERGIUS TIMOKHOVITCH, Moscow, Russia. Filed Mar. 8, 1906. Serial No. 304,960.



A ventilator or fan comprising a motor, and its shaft, a fan wheel, means for actuating the wheel from the motor shaft, said means being controlled by the weight of the wheel, and counter-balancing means for the wheel.

884,877. SHOW-CASE CLAMP. FRANK TYNIS, Glenallen, Va., assignor of one-half to Joseph Omelka, Glenallen, Va. Filed Dec. 9, 1907. Serial No. 405,824.



1. A show-case including glass front, side, and top plates, clamps located at the meeting corners of the front and side plates for connecting the same together, each clamp including a pair of spaced angular members and a fastening bolt, metal strips secured to the forward edges of the side plates and having their upper ends engaged with said bolts, and cords carried by said strips, to prevent the entry of dust between the front and side plates.

2. A show-case including glass front, side, and top plates, clamps located at the meeting corners of the front and side plates for connecting the same together, each

clamp including a pair of spaced angular members and a fastening bolt, channeled metal strips secured to the forward edges of the side plates and having their upper ends engaged with said bolts, and cords carried by said strips and fitted in the channels therein, to prevent the entry of dust between the front and side plates.

3. A show-case including glass front, side, and top plates, clamps located at the meeting corners of the front and side plates for connecting the same together, each clamp including a pair of spaced angular members and a fastening bolt, channeled metal strips secured to the forward edges of the side plates, said strips having their upper ends bent around said bolts and their lower ends extending beneath the lower edges of the side plates, and cords carried by said strips, to prevent the entry of dust between the front and side plates.

4. The combination, in a show-case, of glass side, front, and top plates, and clamps carried by the side and front plates and including each a pair of flat metal members fitting against the opposite faces of said plates, a threaded rotatable bolt connecting said members, and a hook carried by said bolt and adapted for engagement with the adjacent edge of the top plate.

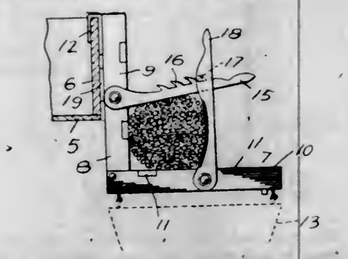
5. The combination, in a show-case, of glass side, front, and top plates, the side and front plates having seats formed in the upper edges thereof, and clamps carried by the last-mentioned plates, each clamp comprising a pair of flat metal members fitting against the opposite faces of the corresponding plate, a threaded rotatable bolt connecting said members and disposed in the seat in said plate, and a hook carried by said bolt and adapted for engagement with the adjacent edge of the top plate, the shank portion of each hook terminating in a depending lip provided with a threaded opening through which the corresponding bolt passes.

884,878. PROCESS FOR THE MANUFACTURE OF EMULSIONS. JARIG P. VAN DER FLOEG, Amsterdam, Netherlands. Filed Apr. 27, 1905. Serial No. 257,672.

1. A process of manufacturing emulsions of heavy hydrocarbons and the like which consists in mixing the oil with an alkaloidal substance and then adding a diluted alkaline substance to maintain the alkaline re-action in the mixture.

2. A process of manufacturing emulsions of heavy hydrocarbons and the like which consists in mixing the oil with an alkaloidal substance and then adding diluted ammonia to maintain the alkaline re-action in the mixture.

884,879. COMBINED SHUCKING-RACK AND FODDER-BINDER. KELLY R. VAN WINKLE, Hillsboro, Iowa. Filed Apr. 13, 1907. Serial No. 367,980.



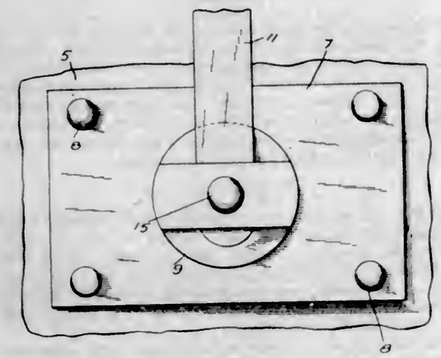
The combination of a rack comprising a pair of spaced L-shaped members each having vertical and horizontal arms and arranged in parallel planes, and horizontal beams connecting the corresponding arms of said members, each of the vertical arms of said members having a hooked plate secured to its rear face at the upper end thereof for engagement with a support, a downwardly-movable lever pivoted at its rear end to the vertical arm of one of said members and provided upon its upper face with a toothed rack, and an upwardly movable lever pivoted to the horizontal arm of said member and provided with a laterally projecting finger adapted for reëngagement with said toothed rack when said levers are moved towards each other, to compress the fodder therebetween.

884,880. BOOT AND SHOE. CHARLES J. WALKER, North Fitzroy, near Melbourne, Victoria, Australia. Filed Apr. 24, 1907. Serial No. 370,044.



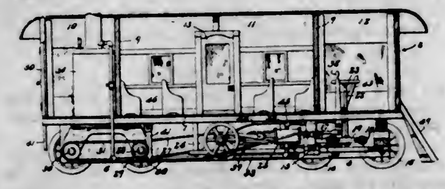
A welted boot or shoe comprising a flexible rand embodying a flat base and a pair of lips angularly disposed with respect to the base, a welt surrounding said lips, an upper extending between the welt and one of said lips, and means for securing the welt, upper and lips together, said flexible rand constituting the sole support for the upper and welt whereby an inner sole is dispensed with.

884,881. BRAKE-LEVER HANGER. WILLIAM T. WALTON, Orlando, Okla. Filed Mar. 4, 1907. Serial No. 360,405.



The combination with the side board of a wagon body, of a plate disposed upon each side of the board, bolts engaged through the plates and through the side board, a block formed integrally with one of the plates, said block being provided with a socket opening through its upper and lower ends and having parallel side walls and upwardly diverging end walls, a lever seated at its lower end in the socket, and a bolt engaged through the side walls of the socket, the lever, the plates, and the side board.

884,882. OVERLAND STEAM-COACH. ROBERT L. WOODS, Nashville, Tenn., assignor of one-third to Solomon P. Harris, Nashville, Tenn. Filed Mar. 1, 1906, Serial No. 303,712. Renewed Feb. 13, 1908. Serial No. 415,764.



1. The combination with a vehicle body, of the front and rear trucks, a plurality of sets of wheels pivotally mounted for rotation on the forward truck, and means connecting said wheels whereby the movement of one set of wheels will effect the movement of the other.

2. The combination with a vehicle body, of the front and rear trucks, a plurality of sets of wheels pivotally mounted for rotation on the forward trusk, a link connecting each set of wheels, a bar connecting said links, and a steering head secured to the bar whereby the movement of one set of wheels will effect the movement of the other.

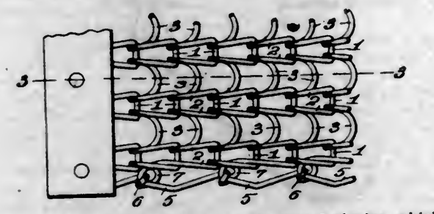
3. The combination with a vehicle body, of the front and rear trucks, stub axles pivoted to the forward truck, a plurality of sets of wheels mounted for rotation on the stub axles, links connecting the stub axles, a bar connecting the links, and a steering head operatively connected with the bar whereby the movement of one set of wheels will effect the movement of the other.

4. The combination with a vehicle body, of the front and rear trucks, stub axles pivotally mounted on the forward truck, wheels mounted for rotation on the stub axles, links connecting said stub axles and provided with pins or projections, a bar having its opposite ends bifurcated for the reception of said pins, and a steering head connected to the bar whereby the movement of one set of wheels will effect the movement of the other.

5. The combination with a vehicle body, of the front and rear trucks, a plurality of sets of wheels pivotally mounted on the rear truck and provided with traction wheels, a motor, means connecting the motor and the rear truck for propelling the latter, and means connecting the wheels of the forward truck whereby the movement of one set of wheels will effect the movement of the other.

[Claim 6 not printed in the Gazette.]

884,883. WOVEN-WIRE FABRIC. IRA J. YOUNG, St. Louis, Mo. Filed Feb. 5, 1907. Serial No. 355,968.

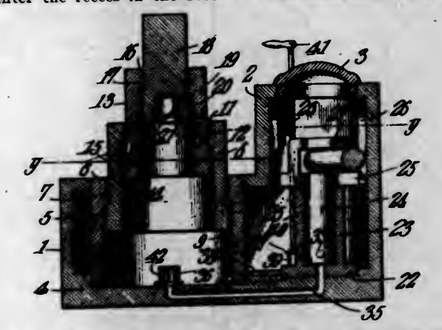


A wire fabric, woven from a single strand of wire, which wire is formed into a series of rows of angular horizontally disposed loops, the ends of the loops of one row being looped through the ends of the next adjacent row, and the portions of the wire between all of the loops being bent to form resilient legs which are curved downwardly and laterally, and all of said legs being bent in the same direction, and the edges of the fabric being finished by the formation of a series of horizontal loops occupying the same plane with the horizontally disposed angular loops, and the end of each horizontal loop being bent or looped around the end of the next adjacent edge horizontal loop.

884,884. HYDRAULIC JACK. GEORGE APGAR, White House Station, N. J. Filed Aug. 23, 1907. Serial No. 389,903.

1. A hydraulic jack composed of a casing, a power cylinder entering the casing through the upper side thereof, and seated in the bottom of the casing, a pump also seated in the bottom of the casing adjacent to the power cylinder, connections between the pump and power cylinder and formed in the bottom of the casing, a removable valve seated in the bottom of the casing and removable therefrom through the top of the casing, said valve being within and central to the power cylinder and projecting into said power cylinder, and a telescoping series of plungers adapted to the power cylinder said series of plungers having the innermost one solid and provided with a central recess at the lower end to receive said valve, all the plungers when retracted resting directly on the bottom of the casing.

2. A hydraulic jack composed of a suitable casing having the bottom and side walls all formed in one piece, a power cylinder removably secured in said casing and extending from the bottom of the casing to and through the top wall thereof, a series of telescoping plungers in the casing, the innermost one being solid and being provided with a central recess at its lower end and all the plungers resting on the bottom of the casing when retracted, a valve removably secured on the upper face of the bottom of the casing concentric with the power cylinder and adapted to enter the recess in the bottom of the innermost plunger

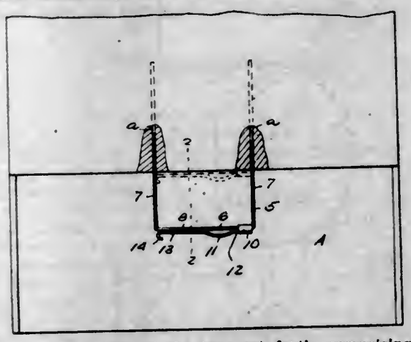


when the plungers are retracted, a pump cylinder removably secured within the casing to the bottom thereof, opposing guides formed inside the casing on the walls thereof and spaced apart a distance greater than the width of the pump cylinder, a pump plunger having integral laterally-extending wings engaging said guides and also provided with an integral yoke, a rock-shaft extending through and journaled in the casing and provided with a crank end extending through and engaging the yoke, a removable cover on the casing in line with the pump cylinder, and a relief valve for the power cylinder.

884,885. COMPOSITION FOR MATCHES AND STOPPERS. CHARLES H. BACH, Brooks, Minn. Filed June 5, 1906. Serial No. 320,338.

A composition of matter for the manufacture of slow-burning match bodies consisting of pulverized hard-wood charcoal, and pulped fibrous material, in the proportions substantially as specified, completely intermixed, and combined with a resinous binder.

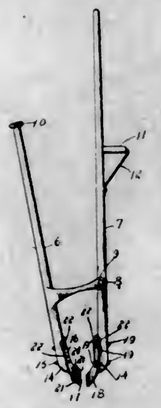
884,886. COPY-HOLDER. JOSEPH M. BAINER, Marysville, Ohio. Filed July 25, 1907. Serial No. 385,493.



1. A copy holder of the type set forth, comprising a frame, including a cross bar and a resilient arm having one end secured to one end of said cross bar, said arm having its intermediate portion bent into bow-shape and having straight gripping portions on each side of said bow-shaped portion.

2. A copy holder of the type set forth, comprising a frame including a cross bar and a resilient arm secured to one end of said cross bar and terminating at its free end in an outward recurvate portion.

884,887. BEAN-PULLER. REDELL H. BECKWITH, Sparta, Mich. Filed Oct. 12, 1907. Serial No. 397,174.

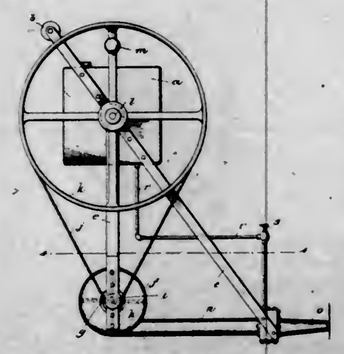


1. A device of the class described comprising a pair of pivoted handle members, and blades carried at the lower ends of the members, the blade upon one member having a straight cutting edge and the other blade being provided with two parallel spaced toothed edges.

2. A device of the class described comprising a pair of pivoted handle members, and blades carried at the lower ends of the members, the blade upon one member having a straight cutting edge and the other blade being formed with a toothed edge, and a smaller supplemental blade secured to the last mentioned blade and formed also with a toothed edge.

3. A device of the class described comprising a pair of pivoted handle members, and blades carried at the lower ends of the members, the blade upon one member having a straight cutting edge and the other blade being formed with a toothed edge, and a smaller supplemental blade secured to the last mentioned blade and formed also with a toothed edge, the two toothed edges of the last mentioned blades being parallel and spaced.

884,888. SQUIRREL-EXTERMINATOR. ALBERT P. BELLOWS, Portersville, Cal. Filed July 23, 1907. Serial No. 385,103.

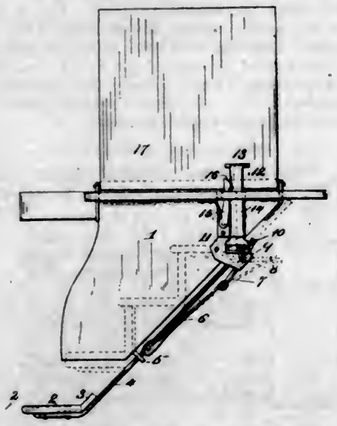


1. A portable squirrel exterminator, comprising a supporting frame provided with a handle, a tank and blower carried by said frame, means for operating said blower by hand, a delivery pipe provided with a chamber, said pipe leading from the blower casing and a valved connecting pipe leading from said tank into said chamber, substantially as described.

2. A portable squirrel exterminator, including a tank provided with a handle, a fan blower provided with a delivery pipe, a mixing chamber connected with said delivery pipe, a valved pipe connecting said tank and said mixing chamber, means carried by said tank for operating said fan blower, and braces for securing the structure together, substantially as described.

3. A portable squirrel exterminator, comprising a tank adapted to carry a poisonous mixture, a fan blower provided with a delivery pipe, a hand-wheel supported on said tank, means operated by said hand-wheel for operating said fan blower, a mixing chamber provided with a damper located in said delivery pipe, a valved pipe connecting said tank and said mixing chamber, and braces for securing the whole structure together, said braces extending upwardly and terminating in a handle, substantially as described.

884,889. CAR-STEP. ERICK P. BERGMAN, Concordia, Kans. Filed Sept. 14, 1907. Serial No. 392,926.



1. In a railway car-step, the combination with the usual steps of a drop-step, a pair of bars connected therewith, a crank-shaft, a pair of links connecting the bars and the crank-shaft, the outer extremity of the shaft being provided with a crank, a push-rod provided with a slot through which the crank extends, and a dog having a hook to engage with the push-rod to hold the same normally depressed.

2. In a railway car-step, the combination with the usual steps, of a drop-step, a vertically disposed push-rod provided with an abutment, a crank-shaft with which the push-rod coacts, a connection between the drop-step and the crank-shaft, a spring-pressed dog arranged in the path of movement of the abutment, and a platform adapted to contact with the abutment to maintain the push-rod normally in depressed position.

884,890. SHIPPING-CASE-COVER FASTENER. JOHN BRAUER, Menasha, Wis. Filed Nov. 25, 1907. Serial No. 403,614.

1. A fastener for a pail or other shipping case cover, comprising a shipping case provided with a plurality of bores through the same near its upper end, a plurality of wires passing outward from the inner side of said bores, means for preventing the pulling through said bores of the inner ends of said wires, said wires extending upward outside of the shipping case and over its cover to near its center, where all of the wires are twisted together until tightened sufficiently for holding the cover in position thereon.

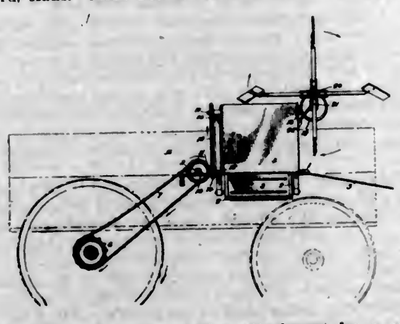
2. A fastener for a pail or other shipping case cover, comprising a shipping case provided with a plurality of bores through the same near its upper end, a plurality of wires passing outward from the inner side of said bores, means for preventing the pulling through said bores of the inner ends of said wires, said wires extending upward outside of the shipping case and over its cover to near its center, where all of the wires are twisted together until tightened sufficiently for holding the cover in position thereon, and solder applied over the central portion of said twist.



3. A fastener for a pail or other shipping case cover, comprising a shipping case provided with a plurality of bores through the same near its upper end, a plurality of wires passing outward from the inner side of said bores, means for preventing the pulling through said bores of the inner ends of said wires, said wires extending upward outside of the shipping case and over its cover to near its center, where all of the wires are twisted together until tightened sufficiently for holding the cover in position thereon, solder applied over the central portion of said twist, and a seal impressed upon said solder consisting of a letter or a suitable character.

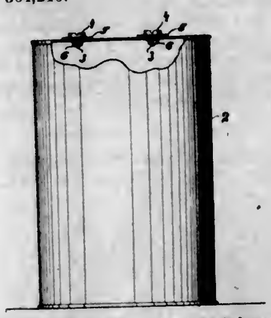
4. A fastener for a pail or other shipping case cover, comprising a shipping case provided with a plurality of bores through the same near its upper end, two wires each formed into a loop and each end of the wire of the loop passed through one of said bores, a suitable head formed on the end of each wire inside of its bore for preventing said end from being pulled through said bore, the outer loops of said two wires being bent upward, over the edge of the cover and toward its central portion and twisted together until sufficiently tightened for holding the cover in position upon the case.

884,891. CORN-HARVESTER. ROBERT B. BREWER, Oxford, Kans. Filed Oct. 8, 1907. Serial No. 396,375.



The improved corn-harvesting attachment for a wagon body, comprising a main frame and shields secured thereto, a conveyer 3 and conveyer frame 2 supported in said main frame in an inclined position, the upper shaft 17 of the conveyer being extended on each side of frame 2, a reel-driving shaft 20 geared with one end of the conveyer shaft and supported in an inclined position, the short primary driving shaft 9, and a supplemental driving shaft 12, geared therewith and extending transversely of the conveyer 3, a sprocket-and-chain mechanism connecting such supplemental driving shaft with the upper conveyer shaft, and mechanism arranged on the front of the attachment and operatively connected with the adjacent end of the supplemental driving shaft, as shown and described.

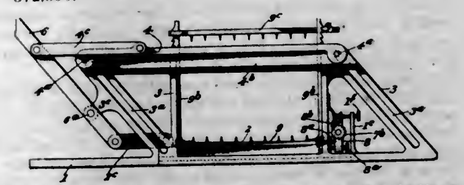
884,892. RECEPTACLE FOR PRESERVING FISH AND OTHER ALIMENTARY SUBSTANCES. FRIEDRICH BRINCK, Geestemünde, Germany. Filed Mar. 25, 1907. Serial No. 364,210.



1. The combination, with a sheet metal receptacle having a small opening punched therein from without, leaving a tapering tubular inward projection around said opening, of a screw closing said opening with its threaded portion engaging said tubular projection, said screw provided with an india rubber washer coated with glue which is impervious to water and steam.

2. The combination, with a sheet metal receptacle having a small opening punched therein from without, leaving a tapering tubular inward projection around said opening, of a tapered screw closing said opening with its threaded portion engaging said tapering tubular projection, said screw provided with an india rubber washer coated with glue which is impervious to water and steam.

884,893. MACHINE FOR SLICING MEATS. HENRY BROOME, Springfield, Ohio, assignor of one-third to William Dennick, Dayton, Ohio, and one-third to Claude W. Flick, Springfield, Ohio. Filed May 8, 1907. Serial No. 372,500.



1. In a slicing machine, the combination of a knife, a table and means for reciprocating the knife and table simultaneously in opposite directions; with means for moving the material on the table toward the knife after each cutting operation.

2. In a slicing machine, the combination of a knife, a table, means for reciprocating the table and knife simultaneously in opposite directions, and means for raising and lowering the knife as it reciprocates; with means for feeding the material on the table toward the knife after each cutting operation.

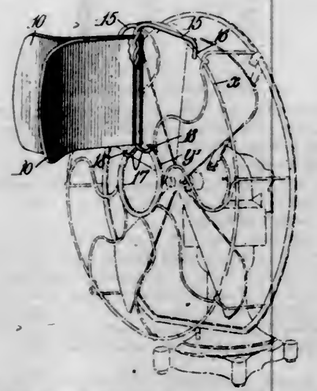
3. In a slicing machine, the combination of a reciprocating knife, inclined guides for said knife, a reciprocating table, and means for reciprocating the knife and table simultaneously in opposite directions; with a movable platform on said table, and means for moving the platform toward the knife after each cutting operation.

4. In a slicing machine, the combination of a knife, a

table, means for reciprocating the table and knife simultaneously in opposite directions, and means for raising and lowering the knife as it reciprocates; with a movable platform on said table, a worm and clutch for moving said platform, a ratchet on the worm shaft, a lever pivoted on the worm shaft beside the ratchet, a pawl on the lever engaging said ratchet, and a relatively stationary stop for arresting the movement of said lever.

5. In a slicing machine, the combination of a base, a guide frame attached thereto, a knife bar mounted on said frame, a table supported on the base, a lever pivoted to the frame, and connections between said lever and knife and table for reciprocating them in opposite directions; with a platform on the table, a worm and connections for moving the platform, a lever pivoted on the worm shaft, a ratchet on the shaft beside the lever, a pawl on said lever engaging the ratchet, and means for oscillating said lever when the knife is retracted.

884,894. FAN-DEFLECTOR. HOUSTON M. CARROLL, San Antonio, Tex. Filed Oct. 19, 1907. Serial No. 398,208.



1. In a device of the character described, a centrally bent body portion, deflector blades extending therefrom, said blades being of corresponding area and curvature, and an arm secured to said body portion arranged to connect the same to the guard of a fan.

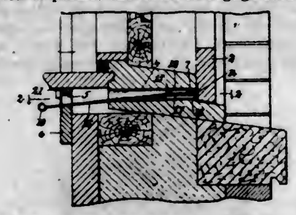
2. In a device of the character described, a tubular formed body portion, a pair of blades oppositely curved and held on said body portion, and an attaching arm carried by said blades.

3. In a deflector of the class described, a sheet of metal centrally bent and having its ends curved outwardly to form a pair of deflecting blades of corresponding area and curvature, and an attaching device extending through the centrally bent portion and composed of a pair of intertwisted wires, the ends of which are bent outwardly to form arms that terminate in attaching hooks.

884,895. SHUTTER-FASTENER. HILLIARD F. CHREITZBERG, Winston Salem, N. C., assignor of one-half to Edward C. Bowman, Winston Salem, N. C. Filed Nov. 5, 1907. Serial No. 400,792.

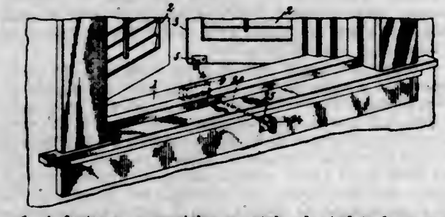
1. A fastener, comprising a catch adapted to be mounted upon a shutter, and a pivoted member adapted to be arranged in an opening of a window-frame and presenting means for directly engaging said catch to lock the shutter in a closed position, said member being gravitationally held in an operative position, and extending through said opening to the side of the window-frame remote from the shutter.

2. A fastener, comprising a catch adapted to be mounted upon a shutter, and a pivoted member adapted to be arranged in an opening of a window-frame and presenting an edge for directly engaging said catch to lock the shutter in a closed position, said pivoted member being gravitationally held in an operative position and extending through said opening to the side of the window-frame remote from the shutter and being arranged to be displaced by said catch to permit the same to engage said edge.



3. A fastener, comprising a catch adapted to be mounted upon a shutter and having a rounded edge, and a lever adapted to be arranged in an opening of a window-frame and having a head, said lever being pivoted in said opening in such a manner that said head is normally held in an elevated position by gravitation, said head having a slot adapted operatively to be engaged by said catch, said head having a beveled edge adapted to be engaged by said rounded edge of said catch, whereby said lever is displaced when the shutter is being closed, to permit said head to be operatively engaged by said catch.

884,896. SHUTTER-FASTENER. HILLIARD F. CHREITZBERG, Winston Salem, N. C., assignor of one-half to Edward C. Bowman, Winston Salem, N. C. Filed Dec. 3, 1907. Serial No. 404,914.



1. A fastener, comprising a catch adapted to be mounted upon a shutter, a holding member adapted to be arranged upon a window frame and formed to engage said catch to lock the shutter in a closed position, said member being gravitationally held in an operative position, and rotatable means having a cam-like action and adapted to displace said member to release said catch.

2. A fastener comprising a catch adapted to be mounted upon a shutter, a movable holding member adapted to be arranged upon a window frame and formed to engage said catch to lock the shutter in a closed position, said member being gravitationally held in a normal operative position, and rotatable means for displacing said member to release said catch, said means being independent of said member and being adapted to be actuated to engage the same.

3. A fastener comprising a catch adapted to be mounted upon a shutter, a pivoted member adapted to be arranged in an opening of a window frame and presenting an edge for engaging said catch to lock the shutter in a closed position, said pivoted member being gravitationally held in an operative position and being arranged to be displaced by said catch to permit the same to engage said edge, and rotatable means operable from the inner side of the window frame for engaging said member to displace the same into an inoperative position.

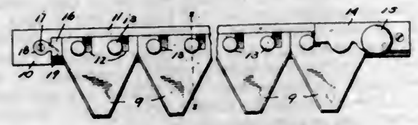
4. A fastener comprising a catch adapted to be mounted upon a shutter, a swinging member adapted to be arranged in an opening of the window frame and formed to engage said catch to lock the shutter in a closed position, said swinging member being gravitationally held in a normal operative position, said catch and said member being

formed to permit the former to displace said member when said catch is moved into a locking position, a cam arranged to displace said member into an operative position, and means for operating said cam from one side of the window frame.

5. A fastener, comprising a catch adapted to be mounted upon a shutter, a holding member adapted to be mounted upon a window frame and formed to engage said catch to lock the shutter in a closed position, said member being arranged to swing transversely of said catch, and means for displacing said member to release said catch.

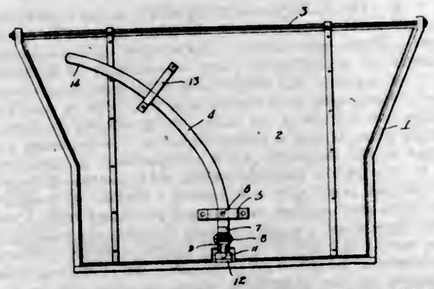
[Claim 6 not printed in the Gazette.]

884,897. COMBINED SICKLE-BAR AND CUTTER. LEE R. CLIFTON, Lawrenceburg, Tenn., assignor of one-half to James Clifton, Lawrenceburg, Tenn. Filed Aug. 13, 1907. Serial No. 388,359.



The combination, with the cutter-bar having a rib at its rearward side and provided at intervals with headed-bolts secured in the bar, of cutters having angular notches in their rear margins, formed to receive the shanks of the bolts therein, with the heads of the bolts bearing on the upper sides of the knives, the rear edges of the knives bearing against said rib and a removable key inset in the upper side of the bar and abutting against the side of the knife last placed in position on the bar.

884,898. LOCKING MECHANISM FOR END-GATES. ALBERT T. CORRELL, Bradenville, Pa. Filed June 20, 1907. Serial No. 379,918.



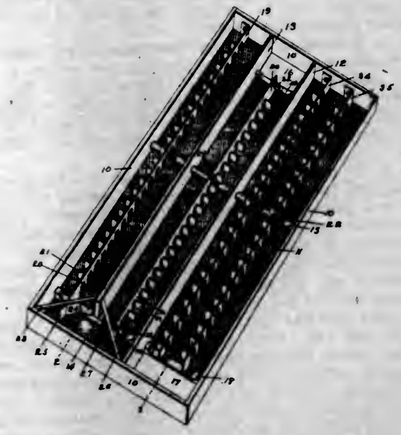
1. The combination with a vehicle body having a hinged gate, of a lever pivoted near one end to the gate and arranged to be swung in a plane parallel therewith, a locking member hinged to the pivot end of the lever to swing in a plane at right-angles to the gate and a catch secured to the vehicle body under the pivot point of the lever, said catch having a vertical portion adapted to be engaged by the free end of the locking member.

2. The combination with a vehicle having a hinged end gate, of a lever pivoted to the gate, and arranged to be swung in a plane parallel therewith, the pivot end of the lever being bent back on itself to form a hinge member, a locking member having an eye to receive the hinge member of the lever, and a shank portion, and a catch attached to the vehicle body, said catch having a vertical portion adapted to be engaged by the shank portion of the locking member.

3. In combination with a vehicle having a hinged end gate with a recess in its bottom edge, of a catch fixed to the body of the vehicle under said recess, a lever pivoted to the gate at a point immediately above the recess thereof and arranged to swing in a plane parallel thereof, a locking member hinged to the pivot end of the lever, the free end of said member projecting below the inner wall of the recess and adapted to engage the catch.

4. The combination with a vehicle body having a hinged end gate, with a recess in its bottom edge, a catch fixed to the vehicle body, under the recess of the end gate, a lever pivoted to the gate and arranged to swing in a plane parallel therewith, the pivot end of the lever being bent back on itself to form a hinge member, a locking member having an eye to receive said hinge member and a shank portion projecting below inner wall of the recess, and adapted for engagement with the catch.

884,899. SIFTER-SIEVE. JOHN S. COVENTRY, Des Moines, Iowa. Filed Aug. 31, 1907. Serial No. 390,891.

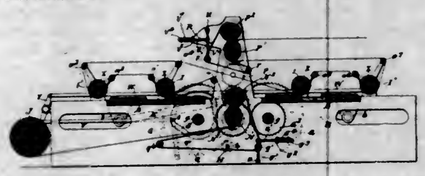


1. In a device of the class described, the combination with a sieve frame and a sieve thereon, of a bar supported by the sieve frame above the sieve, with its top arranged below the top of the sieve frame, and a series of blades connected with the said bar, each blade being shaped to form a pocket having sides arranged at substantially right angles to each other, said blades also being spaced apart from each other to permit material to freely pass through them under the bar.

2. In a device of the class described, the combination of a sieve frame having a sieve thereon, a bar supported above the sieve, spaced apart from the sides of the sieve frame, and also arranged below the top of the sieve frame, and a series of blades attached to the bar, each blade comprising a part extended substantially at right angles to the bar, and a part substantially in line with the bar, said bar formed with spaces between the blades adjacent to the sieve.

3. In a device of the class described, the combination of a sieve frame, and a sieve thereon, said sieve being formed with a discharge opening near one end, a partition in the sieve frame above the sieve, extending from a point adjacent to the discharge opening to a point near the opposite end of the sieve to thereby form a continuous chamber extending along both sides of the partition, and around one end of it, to the discharge opening, stock advancing bars arranged in the spaces between the partition and the adjacent sides of the sieve frame, each stock advancing bar having thereon a series of blades, the parts of each blade being arranged substantially at right angles to each other, and a stock deflecting and advancing device arranged at the end of the bar adjacent to the point where the partition is spaced from the end of the frame for the purposes stated.

884,900. WEB-FEEDING DEVICE FOR PRINTING-PRESSES. PAUL F. COX, Jackson, Mich., assignor to The Jackson Printing Press Company, Jackson, Mich., a Corporation of Michigan. Filed Oct. 10, 1907. Serial No. 396,842.



1. In a printing press, the combination of a printing couple operating at variable speed during the printing, web guiding means, and an irregular feed roll adapted to feed a web at varying speed during its rotation; with a web delivery mechanism adapted to deliver the web fed by the feed roll, and to maintain the tension of the intermediate portion of the web.

2. In a printing press, an impression couple operating at variable speed during the printing, web guides, a web feed roll of irregular outline adapted to feed the web forward at variable speed during its rotation as required by the impression couple, a delivery roll adapted to deliver the web, and gearing between the feed and delivery rolls.

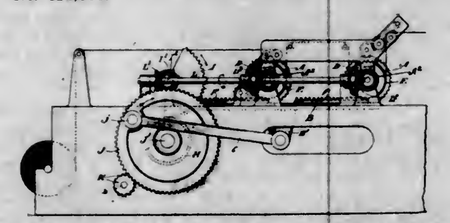
3. In a printing press, the combination of printing mechanism operating at variable speed during the printing, web guides and a web feed roll of irregular outline adapted to feed the web forward at variable speed during its rotation as required by the printing mechanism; with means for rotating the feed roll, a delivery roll adapted to deliver the web fed in by the feed roll, and gearing between the feed and delivery rolls.

4. In a printing press, the combination of a printing couple and web guides, a feed roll having an irregular outline, tapes co-acting with said roll, means for automatically maintaining the tension of said tapes, and means for rotating the roll, said feed roll being eccentric to its axis of rotation whereby the web is fed forward at irregular speed during the rotation of the roll; with a delivery roll adapted to deliver the web as fast as fed in by the feed roll, and gearing between the feed and delivery rolls.

5. In a printing press, the combination of a reciprocating type bed, a cylinder, and means for directing a web between the bed and cylinder, and an irregular feed roll adapted to feed the web forward during impression at a speed conformable to the movement of the bed.

[Claims 6 to 21 not printed in the Gazette.]

884,901. WEB-PRINTING PRESS. PAUL F. COX, Jackson, Mich., assignor to Jackson Printing Press Company, a Corporation of Michigan. Filed Feb. 3, 1908. Serial No. 414,008.



1. In combination, a reciprocating type bed, a cylinder co-acting therewith, a segmental cylinder gear, a bed rack engaging therewith for driving the cylinder in one direction; a lay-shaft, gearing between said lay-shaft and the cylinder, and segmental gears for actuating the lay-shaft when the bed rack and cylinder gear are out of mesh.

2. In a printing press, the combination of a reciprocating type bed, a cylinder co-acting therewith, a bed rack and a segmental cylinder gear engaging therewith for rotating the cylinder during impression, a lay-shaft and gearing between said shaft and said cylinder, and means for driving the lay-shaft to cause the cylinder to complete its rotation when the impression is thrown off.

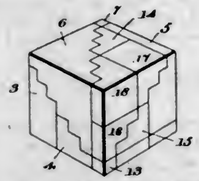
3. In a printing press, the combination of a reciprocating type bed, an impression cylinder co-acting therewith, a crank shaft and pitman for operating the bed, a segmental gear on the cylinder, a co-acting bed rack on the bed, for rotating the cylinder during impression; segmental gears driven by the crank shaft, and gearing operated by said segmental gears for completing the rotation of the cylinder after impression.

4. In a printing press, the combination of a reciprocating type bed, an impression cylinder co-acting therewith, a segmental gear on the cylinder, a bed rack on the bed adapted to engage said segmental gear and rotate the cylinder during impression, a crank shaft and pitman for reciprocating the type bed, a lay-shaft geared to the cylinder; and segmental gearing for operating said lay-shaft to continue the forward rotation of the cylinders while the cylinder gear and bed rack are out of mesh.

5. In combination, a reciprocating type bed, a cylinder co-acting therewith, a bed rack, and a segmental cylinder gear for driving the cylinder during impression, a lay-shaft, bevel gearing between said cylinder and said shaft, and segmental gears for driving said lay-shaft when the bed-rack and cylinder-gear are out of mesh.

[Claims 6 to 10 not printed in the Gazette.]

884,902. PUZZLE. JAMES C. CAITCHETT, El Paso, Tex. Filed Nov. 19, 1907. Serial No. 402,855.



1. In a puzzle, the combination with a series of irregular shaped parts and a series of six cubes, adapted to constitute a larger cube having a volume equal to the combined volumes of the individual parts, substantially as described.

2. In a puzzle, the combination with a series of irregular shaped parts, each composed of a number of unit volumes, and a series of six cubical parts, adapted to form a single cube having a volume equal to the combined volumes of the individual parts, substantially as described.

3. In a puzzle, the combination with a series of irregular shaped parts, each composed of a number of rectangular solid portions and each of said portions having a volume made up of a number of unit volumes, and a series of six regular cubes, each of a unit volume, adapted to form a symmetrical solid having a volume equal to the combined volumes of the individual parts, substantially as described.

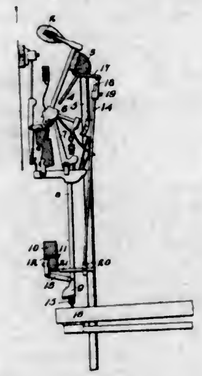
4. In a puzzle, the combination with a series of irregular shaped pyramidal parts, and a series of six cubes adapted to fit between said pyramidal parts, to form a single cube having a volume equal to the combined volume of all of said parts, substantially as described.

5. In a puzzle, the combination with a series of irregular shaped pyramidal parts, and a series of irregular and differently shaped other parts, each of said parts composed of smaller parts, and each of said smaller parts having a volume equal to a number of unit cubes, and a series of six unit cubes, the whole adapted to form a single larger cube, substantially as described.

[Claim 6 not printed in the Gazette.]

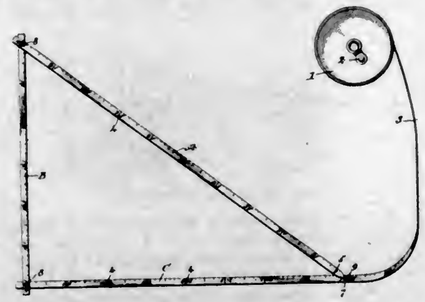
884,903. PIANISSIMO DEVICE. HERMAN L. DECKER, El Paso, Tex. Filed May 18, 1907. Serial No. 374,328.

In a pianissimo device, the combination of a key provided with a capstan screw, a sticker having an enlarged foot provided with a lower inclined face engaging said capstan screw, a two-part extension rail, the parts of which are united by hinges on the front thereof, a link pivotally connected to said sticker and the lower part of said extension rail, a hammer rest rail, and adjustable connections between said hammer rest rail and the lower part of said extension rail, said connections including an arm rigidly



attached to said extension rail, an arm rigidly attached to said hammer rest rail, a lug pivotally connected to said second named arm, said lug being perforated, a wire connected to said first named arm and passing through said lug, and a set screw for adjustably holding said wire, substantially as described.

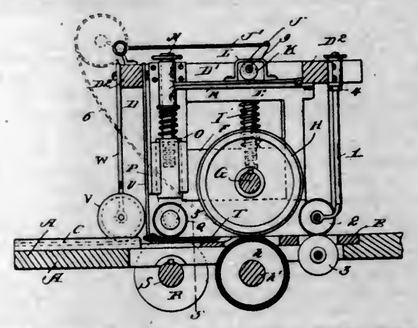
884,904. RULE. WILLIAM J. DE LASHMUTT, Astoria, Oreg. Filed Oct. 28, 1907. Serial No. 399,559.



A rule comprising a flexible band divided adjacent to one end into a plurality of sections, eye-rivets connecting the sections, the free end of the outermost section being provided with a hook for engaging the eye-rivet connecting the innermost section with the band, said sections being proportioned to form a predetermined triangle when the said sections are arranged each in a straight line and the end of the outermost section connected with the eye-rivet connecting the innermost section with the band.

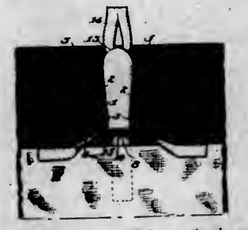
884,905. PROCESS FOR GLUING VENEERS. ALFRED A. DENNIS, Grand Rapids, Mich., assignor to Veneer Machinery Company, Grand Rapids, Mich., a Corporation. Filed Dec. 10, 1906. Serial No. 347,182.

The herein described process of attaching pieces of veneer consisting in feeding pieces of veneer in oblique relation to each other to a pressure device and exerting lateral pressure to hold the adjacent edges in close union, applying to the adjacent edges strips of adhesive material and subjecting the strips to pressure to cause the adhesive material to become firmly attached and applying



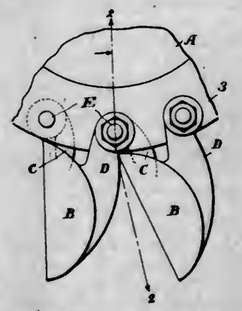
heat at the point of attachment of the adhesive material to secure the adhesive material to the strips.

884,906. SUSPENDER-HOOK AND DRAWERS-SUPPORT. CORNELIUS B. DICKERSON, Powhatan, W. Va. Filed Aug. 21, 1907. Serial No. 389,594.



A garment supporter formed in a single piece of spring metal and comprising a base having laterally extending ears for the reception of securing means, said base having parallel slots forming a transverse bar, a hook at one end of the base and lapping the same, said hook being concavo-convex in transverse section, a tongue extending through one end of the base and lapping the hook, said lapping portion of the tongue having a circular concavity, and an elastic strip extending through the slots and looped around the bar, the terminals of said strip being disposed to be fastened to a garment.

884,907. IMPACT WATER-WHEEL. WILLIAM A. DOBLE and FREDERICK GFELLER, San Francisco, Cal., assignors, by mesne assignments, to May E. Doble, Alameda, Cal. Filed Nov. 21, 1907. Serial No. 403,207.



1. In an impact wheel the combination of the wheel body and a series of buckets each with a plurality of ears, and bolts arranged each to engage coinciding ears of two contiguous buckets.

2. The combination with the body and cross-bolts of an impact wheel, of buckets each provided with forward and rear ears, the forward and rear ears of contiguous buckets connected by the same bolt.

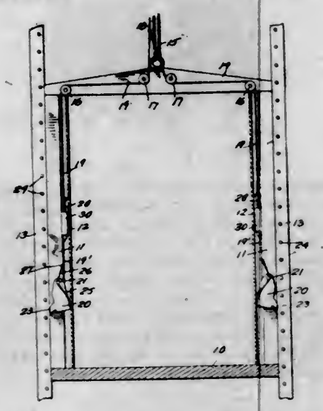
3. The combination with the body of an impact wheel, of buckets each provided with forward and rear perforated ears, the perforations of the rear ears of the buckets axially in line with those of the forward ears of the contiguous buckets, and cross-bolts connecting the buckets to the body.

4. The combination with the body of an impact wheel, of buckets each having at separated points, one in advance of the other, a central and two parallel perforated ears, the perforations of the central ear of each bucket axially in line with those of the parallel ears of the contiguous bucket, and bolts passing transversely through said perforations and through the body.

5. The combination in an impact wheel of a body, buckets each having a central ear, and two separated parallel ears, the central ear of each bucket extending between and transversely in line with the parallel ears of the contiguous bucket, and cross-bolts passing through the ears and body.

[Claims 6 to 10 not printed in the Gazette.]

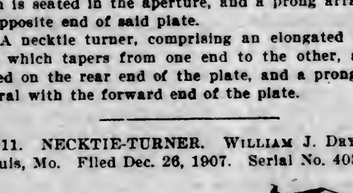
884,908. SAFETY-CATCH FOR ELEVATORS. WALTER A. DORSEY, Liberty, W. Va. Filed Mar. 28, 1907. Serial No. 365,112.



1. In a safety device for elevators, the combination with the slides of an elevator car and the rack guides therefor, of detents carried by the slides, said detents comprising each a body portion formed with spaced side portions extending one upon each side of said slide a spring-controlled latch carried by each of said slides and normally engaged with the upper end of the body of the respective detent, the said side portions of each detent being formed with fingers adapted for engagement with the rack guides, the said latches serving to hold the detents normally out of such engagement, and a slack rope having branches connected to the latches.

2. In a safety device for elevators, the combination with the slides of the elevator car and the rack guides therefor, of detents comprising each a body portion and spaced side portions which extend upon opposite sides of the slides, a pivot bolt passed through the said side portions and through the slides, said detents being designed to rock upon the slides and having the vertical edges of their spaced portions formed with fingers which are extended from the said edges and are curved laterally in a direction from the corresponding sides of the slide, a spring tending to force said detents into engagement with said rack guides, latches normally engaged with said detents for holding the same out of such engagement with the rack guides, and a slack rope having branches connected with said latches whereby a pull upon said rope will move said latches from such engagement with said detents.

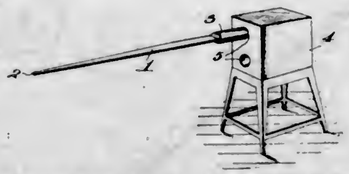
884,909. SAW-SETTING TOOL. CLAYTON A. DREW, Eureka, Cal. Filed Mar. 6, 1907. Serial No. 360,012.



1. A saw setting tool comprising complemental members connected by a pivot pin and forming handles and jaws, one of said jaws being formed with a flat face coöperating with the opposite jaw and also with an extension disposed at an angle to the said flat face, and a gage arm provided with a slot adjustably receiving the pivot pin, the said gage arm extending forwardly from its slotted portion and terminating in a downwardly projecting finger for engaging the saw to hold it in position.

2. A saw setting tool comprising complemental members connected by a pivot pin and forming handles and jaws, one of said jaws being formed with a flat face coöperating with the opposite jaw and also with an extension disposed at an angle to the said flat face, the said jaw being also provided at its pivot portion with a dove-tail groove, and a gage arm fitting adjustably within the said dove-tail groove and formed with a slot receiving the pivot pin, the said gage arm extending forwardly from its slotted portion and terminating in a downwardly projecting finger for engaging the saw to hold it in position.

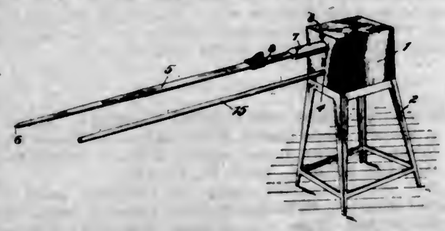
884,910. NECKTIE-TURNER. WILLIAM J. DRYDEN, St. Louis, Mo. Filed Oct. 8, 1907. Serial No. 396,506.



1. The combination with a base in which is formed a horizontally arranged aperture, of a plate, one end of which is seated in the aperture, and a prong arranged on the opposite end of said plate.

2. A necktie turner, comprising an elongated thin flat plate which tapers from one end to the other, a handle formed on the rear end of the plate, and a prong formed integral with the forward end of the plate.

884,911. NECKTIE-TURNER. WILLIAM J. DRYDEN, St. Louis, Mo. Filed Dec. 26, 1907. Serial No. 408,138.



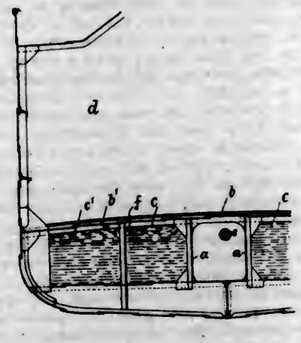
1. In a necktie turner the combination with a base in which is formed an aperture, of a plate, one end of which is seated in the aperture, a prong integral with the opposite end of the plate, and a clamp adjustably arranged on that portion of the plate adjacent the end which is seated in the base.

2. In a necktie turner, the combination with a base in which is formed an aperture, of a plate, a handle formed on one end of the plate, which handle is detachably arranged in the aperture in the base, a prong integral with the opposite end of the plate, and a clamp adjustably arranged on the plate adjacent the handle.

3. In a necktie turner, the combination with a base in which is formed an aperture, of a plate, a handle formed on one end of the plate, which handle is detachably arranged in the aperture in the base, a prong integral with the opposite end of the plate, a clamp adjustably arranged on the plate adjacent the handle, and a rod having one end seated in the base adjacent the handle of the plate.

4. In a necktie turner, the combination with a base in which is formed an aperture, an elongated plate tapering from one end to the other, a handle formed on the wide end of the plate and which handle is seated in the base, a prong on the opposite end of the plate, an adjustable clamp arranged on the plate adjacent the handle, and a supporting rod seated in the base and lying parallel with the plate.

884,912. CONSTRUCTION OF SCREW-PROPELLED SHIPS. JOHN T. DUNCAN, Cardiff, England. Filed June 22, 1907. Serial No. 380,334.



1. In a screw-propelled ship, a shaft tunnel, a roof to said tunnel extending to the sides of the ship, and permanent water ballast tanks on each side of said tunnel located beneath the extended roof thereof.

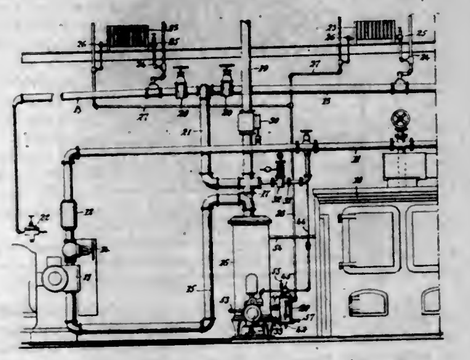
2. In a screw-propelled ship, a shaft tunnel, a roof to said tunnel extending to the sides of the ship, and permanent water ballast tanks on each side of said tunnel located beneath the extended roof thereof and between the after engine-room bulkhead and the stern bulkhead of the ship.

3. In a screw-propelled ship, a shaft tunnel, a roof to said tunnel extending to the sides of the ship, permanent waterballast tanks on each side of said tunnel located beneath the extended roof thereof and water-tight partitions in said tanks.

4. In a screw-propelled ship, a shaft tunnel, a roof to said tunnel extending to the sides of the ship, permanent water ballast tanks on each side of said tunnel located beneath the extended roof thereof and between the after engine-room bulkhead and the stern bulkhead and water-tight partitions in said tanks.

5. In a screw-propelled ship, a shaft tunnel, a roof to said tunnel extending to the sides of the ship, and, in the after portion of the ship, a quarter deck situated above the level of the upper deck of the vessel.

884,913. FEED-WATER REGULATOR. CLAYTON A. DUNHAM, Marshalltown, Iowa. Filed Jan. 30, 1907. Serial No. 354,824.



1. A device of the class described, comprising a receiver having an inlet and an outlet, a diaphragm within said receiver and having one surface thereof exposed to the fluid within the receiver and the other surface exposed to atmospheric pressure, means operatively connected to said diaphragm for controlling the withdrawal of liquid from said outlet, and means for shutting off communication between said receiver and the surface of said diaphragm.

2. A device of the class described, comprising a receiver having an inlet and an outlet and having an inner and an outer bottom forming a chamber therebetween, a diaphragm within said chamber, a conduit leading from said chamber at one side of the diaphragm to the outside atmosphere, a conduit leading from said chamber at the other side of the diaphragm and communicating with the interior of the receiver, and means operatively connected to said diaphragm for controlling the withdrawal of fluid from said receiver.

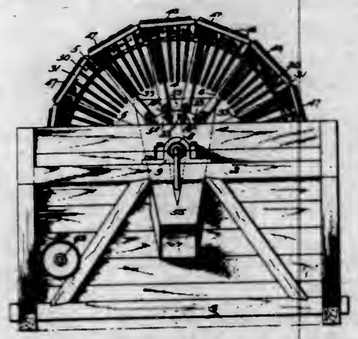
3. A device of the class described, comprising a receiver having an inlet and an outlet and having an inner and an outer bottom forming a chamber therebetween, a diaphragm within said chamber, a conduit leading from said chamber at one side of the diaphragm to the outside atmosphere, a conduit leading from said chamber at the other side of the diaphragm and communicating with the interior of the receiver, means for controlling said last mentioned conduit, and means operatively connected to said diaphragm for controlling the withdrawal of fluid from said receiver.

4. A device of the class described, comprising a receiver having a partition wall subdividing the receiver into two chambers, an inlet and an outlet for one of said chambers, a diaphragm within the other chamber and having one surface exposed to atmospheric pressure, a conduit leading from the first mentioned chamber to the last mentioned chamber at the other side of the diaphragm, a valve controlled by the movement of said diaphragm, and means for controlling said conduit.

5. A controller for feed pumps, comprising a receiver through which the liquid flows to the inlet of the pump a conduit for supplying a motive fluid for operating said pump, a valve in said conduit, a diaphragm within said receiver and having one surface thereof exposed to the fluid within the receiver and the other surface exposed to atmospheric pressure, means connecting said diaphragm to said valve for operating the latter, and means for shutting off communication between said receiver and the surface of said diaphragm.

[Claims 6 to 8 not printed in the Gazette.]

884,914. AUTOMATICALLY-OPERATED FILTER. OSCAR H. FAIRCHILD, Denver, Colo., assignor of two-thirds to William Archer Diboll, Denever, Colo. Filed Aug. 13, 1907. Serial No. 388,375.



1. A revoluble filter, comprising a tank; a wheel mounted in said tank having passages which connect on one side with a vacuum tank, and on the other side with a source of fluid under pressure; filters on said wheel communicating with said passages; and means for controlling said passages.

2. A revoluble filter, comprising a solution tank; a wheel mounted in said tank having a wide felly rim, said wheel and rim being arranged so as to be partially submerged and having passages which connect on one side with a vacuum tank and on the other side with a source of fluid under pressure, filters connected to the under side of said rim portion communicating with said passages, and valves for controlling said passages.

3. A revoluble filter, comprising a semi-circular solution tank; a wheel mounted in said tank so as to be partially submerged, and having passages which connect on one side with a vacuum tank and on the other side with a source of fluid under pressure; a circumferential row of groups of filters on said wheel communicating with said passages, and automatically operated valves for controlling said passages.

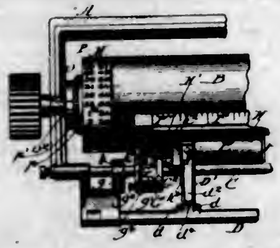
4. A revoluble filter, comprising a solution tank; a wheel mounted in said tank so as to be partially submerged, and having hollow spokes communicating with passages in the shaft of said wheel; a laterally projecting rim on said wheel communicating with said hollow spokes; a group of filters radiating from said rim connected to each hollow spoke, the filters of each group being connected to a common pipe that leads to a hollow spoke; a pipe in one end of said shaft leading to a vacuum tank; a pipe in the other end of said shaft leading to a source of fluid under pressure; and automatically operated valves for controlling communication between said spokes and shaft.

5. In a revoluble filter, the combination with a solution tank, of a wheel mounted therein so as to be partially submerged, having a hollow shaft, and hollow spokes communicating therewith, one end of said shaft being connected with a vacuum tank, while the other end is connected with a source of fluid under pressure; filter bags on said wheel communicating with said hollow spokes, and valves which are automatically operated as the wheel revolves, to open or close communication between the hollow spokes and shaft at any predetermined point in the travel of the wheel.

[Claims 6 to 15 not printed in the Gazette.]

884,915. TYPE-WRITING MACHINE. STEPHEN H. FARNHAM, Chicago, Ill., assignor to Wyckoff, Seamans & Benedict, Ilion, N. Y., a Corporation of New York. Filed Dec. 20, 1901. Serial No. 86,659.

1. In a typewriting machine, the combination with the cylinder or platen of the machine and a horizontal scale or paper retainer of an up and down adjustable gage or stop located and operating rearwardly of the horizontal scale or paper retainer for obtaining a regular line space from an irregular line space on the paper and entering the paper into the machine and positively horizontally positioning the paper in the machine, substantially as described.



2. In a typewriting machine, the combination with the cylinder or roller platen of the machine and the scale plate, of an up and down adjustable gage or stop located and operating rearwardly of the scale plate and adapted for projection through the scale plate against the face of the cylinder or roller platen for obtaining a regular line space from an irregular line space on the paper and entering the paper into the machine and positively horizontally positioning the paper in the machine, substantially as described.

3. In a typewriting machine, the combination with the cylinder or roller platen of the machine and the scale plate thereof and the feed rolls for the paper, of an up and down adjustable gage or stop adapted to be projected through the scale plate against the face of the cylinder or roller platen coincidingly and simultaneously with the recession of the feed rolls, for obtaining a regular line space from an irregular line space on the paper and entering the paper into the machine and positively horizontally positioning the paper in the machine, and means for advancing and receding the feed rolls, substantially as described.

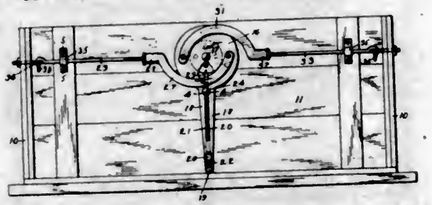
4. In a typewriting machine, the combination with the cylinder or roller platen of the machine and the scale plate thereof and the feed rolls for the paper, of an up and down adjustable and suspended carrying bar located and operating between the scale plate and feed rolls and having thereon gage or stop pins adapted to be advanced and receded and when advanced engaging the face of the cylinder or roller platen, for obtaining a regular line space from an irregular line space on the paper and entering the paper into the machine and positively horizontally positioning the paper in the machine, substantially as described.

5. In a typewriting machine, the combination with the cylinder or roller platen of the machine and the scale plate thereof and the feed rolls for the paper, of a suspended carrying bar located and operating between the scale plate and feed rolls and having adjustable gage or stop pins thereon adapted to be advanced and receded and when advanced engage the face of the cylinder or roller platen, for obtaining a regular line space from an irregular line space on the paper and entering the paper into the machine and positively horizontally positioning the paper in the machine, substantially as described.

[Claims 6 to 132 not printed in the Gazette.]

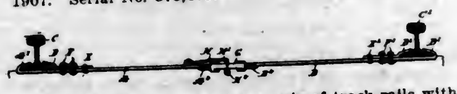
884,916. END-GATE. JOSEPH W. FISHER, Brunswick, Nebr. Filed July 23, 1907. Serial No. 385,171.

1. In a device of the class described, the combination of a notched plate designed to be secured to an end gate, a plate pivotally connected with the notched plate and having a downwardly projecting lever thereon, a spring actuated slide bolt carried by said lever and designed to automatically enter the notch in the notched plate when the lever is at its downward limit, a handle connected with the slide bolt for releasing it from the notched plate, two curved arms pivoted to the plate and extended across it in opposite directions, hooks at the outer ends of said arms designed to engage the sides of a wagon, and brackets for supporting the outer ends of said arms.



2. In an end gate fastener, the combination of eye bolts designed to be secured to a wagon, a notched plate designed to be secured to an end gate, a circular plate pivotally connected with the notched plate and having a downwardly projecting lever thereon, a handle at the lower end of said lever extending rearwardly, two curved arms pivoted to the circular plate and extended across the plate in opposite directions, and having hooks at their outer ends designed to enter said eye bolts, brackets for supporting said arms, a slide bolt connected with the lever, a handle on the lower end of the slide bolt adjacent to the handle of the lever, and designed to be grasped by the operator's hand, together with the handle on the lever, and a spring for normally holding the slide bolt with its upper end in the notch on the notched plate.

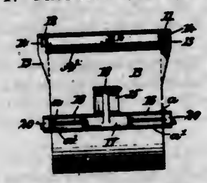
884,917. RAIL-BRACE. BENJAMIN A. FLESHMAN and JOHN M. KOONTZ, Fayetteville, W. Va. Filed June 12, 1907. Serial No. 378,475.



1. A rail brace for connecting a pair of track rails with each other, comprising plates terminating at their outer ends in heads engaging the bases of the rails, the inner ends of the plates being threaded, a turn buckle connecting the inner threaded ends with each other, a locking arm fulcrumed on one of the said plates and having an angular flange terminating in an eye, the flange and eye being adapted to pass through the opening in the turn buckle, and a key engaging the said eye to lock the arm in place to hold the turn buckle against turning.

2. A rail brace for connecting a pair of track rails with each other, comprising plates terminating at their outer end in an upturned flange for engaging the outer edge of the base of the rail, and a retaining flange for engaging the inner edge of the base of the rail fulcrumed to the said plate, bolts for securing the retaining flange in place on the plate, the inner ends of the plates being threaded, a turnbuckle connecting the inner ends of the plates with each other, a locking arm fulcrumed on one of the said plates and having an angular flange terminating in an eye, the flange and eye being adapted to pass through the turnbuckle, and a key engaging the eye to lock the arm in place to hold the turnbuckle against turning.

884,918. JOURNAL-BOX AND LID. JOHN GOETTEL, Boston, Mass., assignor of one-half to Clarence E. Rood, New York, N. Y. Filed Mar. 6, 1907. Serial No. 360,823.



1. A journal box, comprising a box provided with spindles, a lid having bearings at its upper and lower portions, and an approximately central recess, the upper bearings receiving the spindles of the box, and a latch mounted in the lower bearings of the lid and provided with a handle adapted to enter the recess of the lid.

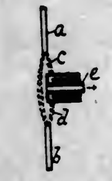
2. A journal box comprising a box provided with projections at its sides, a lid pivoted to the box and provided with a recess, and a latch pivoted to the lower portion of the lid, said latch comprising hooks for engaging the projections of the box, and a member connecting the hooks, the said connecting member being enlarged at its center and provided with a handle adapted to enter the recess of the lid and with a projection for limiting the downward swinging movement of the latch.

3. A lid for journal boxes constructed of malleable iron, said lid being provided at its upper edge with upwardly and outwardly inclined bearings adapted to be bent toward each other, and at its lower portion with spaced bearings, each formed of two sections adapted to be brought together.

4. A lid for journal boxes constructed of malleable iron, the said lid being provided with bearings at the end portions of its upper edge, the said bearings being inclined upwardly and outwardly and adapted to be bent toward each other.

5. A lid for journal boxes constructed of malleable iron, having upper and lower integral and shapable bearings.

884,919. PROCESS FOR MAKING NITROGEN OXIDS FROM AIR. AUGUST GRAU and FRANZ RUSS, Vienna, Austria-Hungary. Filed Oct. 8, 1907. Serial No. 396,436.



The process of making nitrogen oxids from the air by passing air into an electric arc flame and withdrawing the treated gases directly from the central zone of the electric flame substantially to the exclusion of gases from the outer zones and immediately cooling the said gases substantially as described.

884,920. APPARATUS FOR MAKING NITROGEN OXIDS FROM THE AIR. AUGUST GRAU and FRANZ RUSS, Vienna, Austria-Hungary. Filed Oct. 8, 1907. Serial No. 396,437.



1. In apparatus for the manufacure of nitrogen oxids from the air in combination with an electric furnace for producing the arc flame, an exit tube for the treated gases of substantially the same diameter as the inner zone of the flame projecting into the said inner zone of the flame substantially as described.

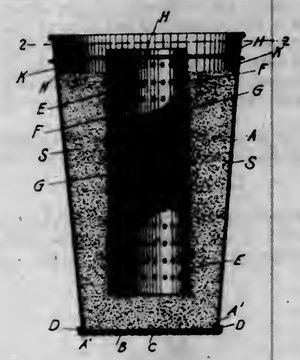
2. In apparatus for the manufacture of nitrogen oxids from the air in combination with the rest of an electric furnace for producing the arc flame a tubular electrode and exit tube for the treated gases of substantially the same diameter as the inner zone of the arc flame substantially as described.

3. In apparatus for the manufacture of nitrogen oxids from the air in combination with an electric furnace for producing the arc flame an exit tube for the treated gases

of substantially the same diameter as the inner zone of the flame and projecting into the said inner zone of the flame and means for cooling the said exit tube substantially as described.

4. In apparatus for the manufacture of nitrogen oxids from the air in combination with the rest of an electric furnace for producing the arc flame a tubular electrode and exit tube for the treated gases of substantially the same diameter as the inner zone of the flame and means for cooling the said exit tube electrode substantially as described.

884,921. SIMPLE-SYRUP PERCOLATOR. JAMES C. HARDESTY, Denver, Colo. Filed June 20, 1904. Serial No. 213,430.



1. In a percolator, the combination of an imperforate walled vessel A having a removable perforate bottom B and a covering of textile material C, an open-ended perforate cylinder E, a cover of textile material G therefor, and rods H for supporting said cylinder E centrally within said vessel with its lower edge at a distance above the bottom of said vessel.

2. In a percolator, the combination of a containing vessel having imperforate sides and a pervious bottom and a pervious receptacle supported centrally within the vessel so that its lower edge is at a distance above the bottom of said vessel.

3. In a percolator, the combination of a containing vessel having imperforate sides and a foraminous bottom, an open-ended perforated receptacle supported centrally within the vessel so that its lower edge is at a distance above the bottom of said vessel and a covering of textile material over the perforated portion of said receptacle.

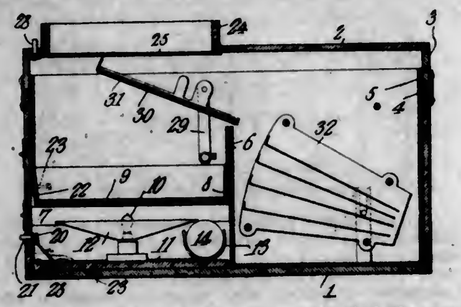
4. In a percolator, the combination of an imperforate walled vessel having a foraminous bottom, a laterally perforate open-ended receptacle, a textile covering for the perforate portion of said receptacle and supporting means for holding said receptacle centrally positioned in said vessel so that its lower edge is at a distance from the bottom of said vessel.

884,922. DEVELOPING APPARATUS. ARTHUR C. HAYDEN, Brockton, Mass. Filed Mar. 15, 1907. Serial No. 362,548.

1. In an apparatus of the character described the combination with a casing having a developing bath therein, and a plate inlet opening; of a plate deflector, yieldable means for holding said deflector normally in position to close the inlet opening, and means extending from said deflector for actuating the same to open the inlet.

2. In an apparatus of the character described, the combination with a casing having an inlet opening and a lining within the casing; of a removable receptacle insertible into the casing and below the lining.

3. In an apparatus of the character described, the combination with a casing having an inlet opening and a lining within the casing; of a receptacle removably mounted within the casing and having its walls disposed below and flush with the inner surface of the lining.

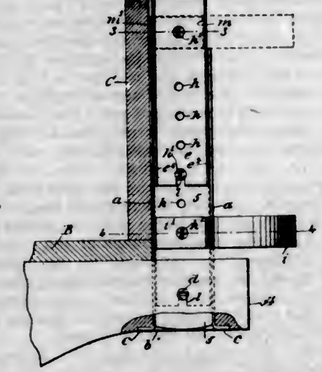


4. In an apparatus of the character described, the combination with a casing having an inlet opening and a lining within the casing; of a receptacle removably mounted within the casing and having its walls disposed below and flush with the inner surface of the lining, said receptacle having a translucent bottom, and a lamp removably mounted within the casing and below the receptacle.

5. In an apparatus of the character described, the combination with a casing having a plate inlet, and an end closure on the casing; of a receptacle removably mounted within the casing and below the inlet, said receptacle having a translucent bottom, a removable slide within the casing and below the receptacle, and a lamp carried by said slide.

[Claims 6 to 8 not printed in the Gazette.]

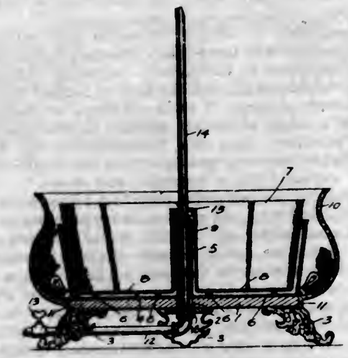
884,923. BOLSTER-STAKE. JACOB HEIMLICHER, Defiance, Ohio. Filed Nov. 18, 1907. Serial No. 402,642.



1. A wagon bolster stake, comprising a fixed section in the form of an I-bar, an adjustable section formed of two channel bars spaced apart at their upper ends by the insertion therebetween of means consisting of an open ring having flanged ends that are secured between said channel bars, the two channel bars being slidable upon the fixed section between flanges thereon, both sections having transverse spaced perforations therein that register with each other, and bolts and nuts for clamping the sections together after the bolts are inserted through opposite perforations.

2. In a wagon bolster stake of the character described, the combination with a fixed section having the form of an I-bar, and an adjustable section slidable and securable on the fixed section, comprising two channel bars spaced apart at their upper ends, of a filling block having a flat body and a transversely flanged head on one end, said body being secured between the channel bars in contact with the upper end of the I-bar or fixed section.

884,924. ILLUMINATED FLOWER-POT. CARL V. HELMSCHMIED, Meriden, Conn. Filed May 2, 1907, Serial No. 371,480. Renewed Feb. 20, 1908. Serial No. 416,929.

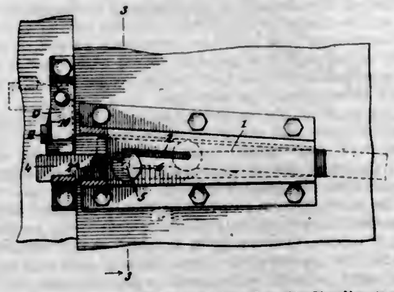


1. A flower pot of the type set forth comprising a supporting plate having a central opening, a water receptacle imposed upon said plate and having a central tubular portion communicating with said opening, a flower pot imposed upon said water receptacle with its walls spaced therefrom and having openings in its bottom and a conductor projected through said opening and through said tubular portion.

2. A flower pot of the type set forth comprising a supporting plate having a central opening, a receptacle imposed upon said plate and having a central open ended tubular portion concentric to said opening, a conductor projected through said opening and said tubular portion, a lamp carried upon the upper end of said conductor and means for holding said conductor with relation to said tubular portion.

3. A flower pot of the type set forth, comprising a supporting plate having a central opening, a receptacle imposed upon said plate, and having a central open ended tubular portion concentric to said opening, a conductor projecting through said opening and through said tubular portion, said conductor being designed for use as a conduit for electric wires, or as a conductor for gas or as a conductor for oil, and an electric gas or oil lamp carried upon the upper end of said conductor.

884,925. LATCH. IGNATIUS W. HERMAN, Cotesfield, Nebr. Filed June 19, 1907. Serial No. 379,736.

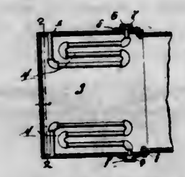


1. A latch comprising a casing longitudinally tapered and U-shaped in cross section, having a longitudinal slot formed in the face thereof substantially parallel to the top edge of the casing and provided with a projection leading downwardly from the inward end of said slot, a latching bar within the casing, having a notch formed in its forward end, a keeper, a dog pivoted above the latching-bar within the keeper, having a finger at one side, and means connected with the latching-bar and passing through said slot for shifting the latching bar into and out of engagement with said keeper.

2. A latch, comprising a longitudinally tapered casing having a slot in its front face substantially parallel to its top edge with a downwardly directed notch at the forward end of the slot, a keeper, a latching-bar fitting the small end of the casing, and a handle connected with the latching-bar through said slot for shifting it to and from the keeper.

3. A latch comprising a casing having a slot in its front face inclined upwardly in a forward direction, and a bolt slidable in said casing having an operating device passing through said slot, whereby the bolt under the influence of gravity tends to remain in a retracted position.

884,926. ATTACHMENT FOR PROMOTING FUEL COMBUSTION IN LOCOMOTIVE FIRE-BOXES. FRANK L. HOLCOMB, Kingston, N. Y. Filed July 23, 1906. Serial No. 327,426.



1. The combination with the smoke box of a locomotive boiler, of channeled members or passages applied to the outside of said box, a series of air supply pipes arranged interiorly of said smoke box and embracing a plurality of horizontal tortuous pipe sections, each of the latter communicating at one end with the atmosphere and at the other end with said passages, and a second series of pipes, communicating with said passages and extending alongside of said boiler, the rear ends of said last referred to pipes extending into the fire box of said boiler below the grate.

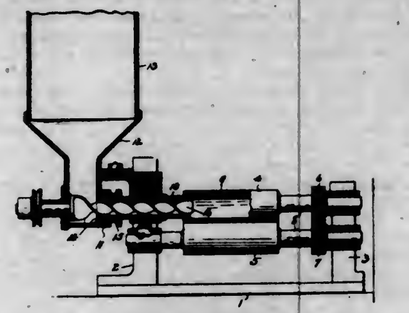
2. The combination with a smoke box of a locomotive boiler of channeled members or passages applied to the outside of said smoke box, a series of air supply pipes arranged interiorly of said smoke box and embracing a plurality of horizontal tortuous pipe sections, each of the latter communicating at one end with the atmosphere and at the other end with said passages, and a second series of pipes communicating with said passages and extending alongside of said boiler, the rear end of said last referred to pipes extending into the fire box of said boiler below the grate, said channel members or passages having lower offset portions at their points of connection with said last referred to pipes.

884,927. PASTING-MACHINE. JOSHUA R. HOUCHIN, Atlanta, Ga., assignor to Houchin Manufacturing Company, Atlanta, Ga., a Corporation of Georgia. Filed Feb. 15, 1907. Serial No. 357,516.

1. A pasting machine comprising two complementary rolls provided with means to actuate them, one of said rolls being hollow and provided with perforations, said hollow roll having a tubular neck, a hopper suitably secured and provided with an opening to receive the free end of said tubular neck, and a worm mounted in said neck and hopper, substantially as shown and described.

2. A pasting machine comprising suitable standards, a roll journaled in said standards, another roll journaled in boxes mounted in said standards, the last mentioned roll being hollow and provided with perforations, a tubular neck extending from said roll and forming one of the trunnions of the roll, a hopper secured to the

journal box in which is mounted said tubular neck, said hopper being provided with an opening to receive the free end of said tubular neck, a worm mounted in said



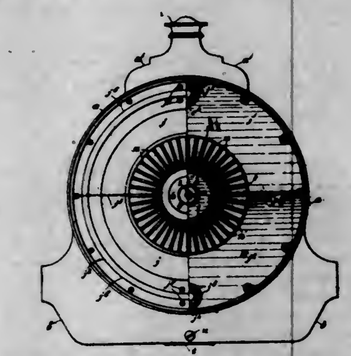
tubular neck and said hopper, and a stud-shaft extending from said worm, and a power-pulley keyed to said shaft, substantially as shown and described.

884,928. ANT-TRAP. MARTIN T. HOWARD, Clarendon, Tex. Filed Dec. 9, 1907. Serial No. 405,811.



As disclosed, an ant trap comprising the combination with a centrally perforated plate, of an inverted sheet metal frusto-conical member having its reduced end secured to said plate proximal to said perforation, and a sheet metal frusto-conical casing having a peripheral cylindrical knife edged flange and an upper horizontally disposed flange, said plate being secured within said frusto-conical casing at the point forming the union of said peripheral flange and conical portion, the upper end of said inverted frusto-conical member terminating in a plane coincident with the plane of said horizontal flange as described.

884,929. RADIATOR OR COOLER FOR MOTOR ROAD-VEHICLES. FRIEDRICH J. D. HÜLLINGHORST, London, England. Filed June 24, 1907. Serial No. 380,579.



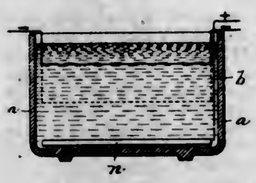
1. In radiators or coolers, for motor-road vehicles having an air propelling fan said radiator being provided with an axis and a main annular chamber, in combination with means providing additional small and large annular chambers concentric with the axis of said fan, and disposed at the back and front of the radiators, with a series of tubes radiating from said small chambers, and connected at their outer ends with said large chambers, partitions dividing said large chambers into two compartments and communicating pipes or passages from the said main annular chamber, so that the water to be cooled is caused to flow from the upper compartments of said larger concentric chambers through the upper half of the series of radial tubes to the inner annular chambers, and thence through the lower half of the series of radial tubes into the lower compartments from which it flows into the base of the radiator and circulates about the main annular chamber, as set forth.

2. In radiators or coolers for motor road vehicles of the kind hereinbefore described, a detachable end plate or cover for the front of the radiator consisting of an annular chamber concentric with the axis of the fan and from which radiates a series of tubes connected at their outer ends with a larger concentric chamber divided diametrically by partitions into two compartments and having communicating pipes or passages from the main annular chamber, substantially as described and shown.

3. A radiator or cooler for motor-road vehicles having an air propelling fan, said radiator being provided with an axis, and a main annular chamber, and at the back of the radiator with two other annular chambers, concentric with the said axis of the fan, and provided with a series of pipes connected at their inner ends with one of said concentric chambers and at their outer ends with an other concentric chamber, the latter being formed integrally with the said main annular chamber, and provided with partitions dividing said chamber into two compartments and having communicating passages, substantially as described.

4. A radiator or cooler for motor road vehicles, provided with a main annular chamber having a corrugated inner surface, combined with a plurality of short pipes for the escape of air from said chamber, and a removable cap *i* provided with a vent *h*, substantially as described and shown.

884,930. ELECTRODE FOR REVERSIBLE GALVANIC BATTERIES. ERNST W. JUNGNER, Kneippbaden, Norrköping, Sweden, assignor to Nya Ackumulator-Aktiebolaget Jungner, Stockholm, Sweden, a Company. Filed Sept. 20, 1904. Serial No. 225,235.



1. An electrode for secondary batteries having an alkaline electrolyte, said electrode containing an active mass mixed with small particles of carbon having a thin coating of a metal that does not occlude oxygen and that is insoluble in the electrolyte, substantially as described.

2. An electrode for secondary batteries having an alkaline electrolyte, said electrode containing an active mass mixed with particles of graphite coated with a metal that does not occlude oxygen and that is insoluble in the electrolyte, substantially as described.

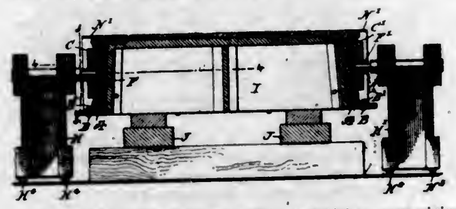
3. An electrode for secondary batteries having an alkaline electrolyte, said electrode containing an active mass mixed with flake graphite having a thin coating of a metal that does not occlude oxygen and that is insoluble in the electrolyte, substantially as described.

4. An electrode for reversible secondary batteries having an alkaline electrolyte, said electrode containing an active mass of oxygen compounds of a metal mixed with flake graphite, the particles of which have a thin coating of nickel, said coating and active mass insoluble in the electrolyte, substantially as described.

5. An electrode for reversible secondary batteries having an alkaline electrolyte, said electrode containing a suitable active mass mixed with particles of carbon having a coating of a metal that does not occlude oxygen and that is insoluble in the electrolyte under all conditions of working, substantially as described.

[Claims 6 to 13 not printed in the Gazette.]

884,931. MOLD FOR MAKING CEMENTITIOUS ARTICLES. DANIEL A. KEOGAN, White Haven, Pa. Filed Nov. 18, 1907. Serial No. 402,616.



1. A mold for making cementitious articles, comprising a sectional casing, a core extending into the casing and closing the same at the bottom thereof, means for supporting the casing and on which the latter is mounted to turn, and means for supporting the said core independently of the said supporting means for the casing.

2. A mold for making cementitious articles, comprising a sectional casing, a core extending into the casing and closing the same at the bottom thereof, and movable trunnions for supporting the said casing and allowing the latter to be inverted.

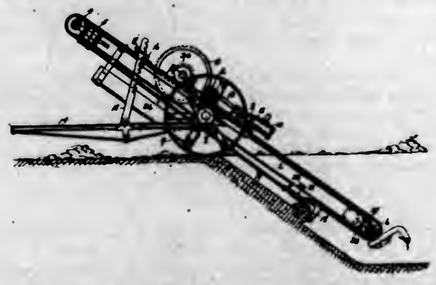
3. A mold for making cementitious articles, comprising a sectional casing, a core extending into the casing and closing the same at the bottom thereof, movable trunnions for supporting the said casing and allowing the latter to be inverted, and a support for the said core independent of the said trunnions.

4. A mold for making cementitious articles, comprising a sectional casing, a core extending into the casing and closing the same at the bottom thereof, bearings on the ends of the said casing, and movable standards having trunnions for engagement with the said bearings.

5. A mold for making cementitions articles, comprising a casing, and standards movable toward and from the casing and provided with means for engaging and supporting the casing and allowing the latter to be inverted.

[Claims 6 to 8 not printed in the Gazette.]

884,932. EXCAVATOR. JOHN KERWIN, Detroit, Mich. Filed Aug. 16, 1907. Serial No. 388,828.



1. An excavator, having in combination a single supporting axle and truck wheels carrying the same, a beam balanced on said axle transversely thereof, earth-removing means supported by said beam and adapted to travel therealong, a draft rigger adapted to be held in substantially horizontal position with respect to the surface of the ground, and adjustable means whereby the degree of angularity of the beam with respect to the draft rigging and thereby to the surface of the ground may be regulated, substantially as described.

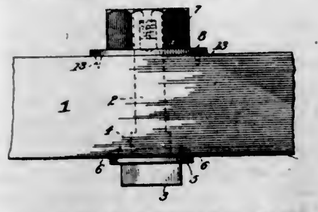
2. An excavator, having in combination a truck and axle, a draft attachment adapted to be maintained in uniformly horizontal position, a beam balanced on said axle, scraping means carried on said beam, actuating means therefor supported on said truck, and means supported by said draft attachment whereby the angularity of said beam with respect thereto and to the surface of the ground may be controlled, substantially as described.

3. In an excavating device, in combination with a truck, an axle, a balanced beam carried thereby, a scraping appliance connected with said balanced beam, a balanced motor adapted to swing with said beam and to actuate the scraping appliance, substantially as described.

4. In an excavator, in combination with a truck, an axle, means for drawing said truck, a balanced scraper guiding beam, a scraper carried by said balanced beam, a motor also carried by said balanced beam, and means connected with said motor for actuating said scraper, and means for holding the balanced beam in an assumed position, substantially as described.

5. In an excavator, in combination with a truck and axle, a beam balanced thereon provided with guiding flanges, a scraper carriage running on a flange of said beam, means for actuating said scraper carriage, said actuating means being in balanced relation with said beam, substantially as described.

884,933. NUT-LOCK. CHARLES KESLER, Marion, Ohio. Filed Jan. 4, 1908. Serial No. 409,333.



1. In a nut lock, the combination with a bolt, a washer provided with a ratchet, carried by said bolt, of a nut threaded upon said bolt, and normally in engagement with said washer, a pawl-member provided with a threaded stem, carried by said nut and normally engaging the ratchet portion of said washer, and a rotatable member carried by said nut and threaded upon said stem and being capable of adjusting the pawl-member relative to said washer.

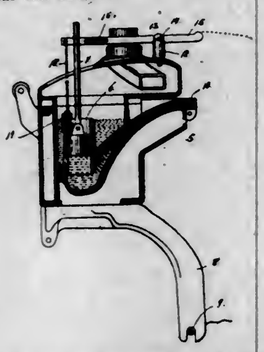
2. In a nut lock, the combination with a bolt, a washer provided with a stop or roughened portion, carried by said bolt, a nut threaded upon said bolt, of a bodily movable locking device carried by said nut and adapted to engage said stop or roughened portion, said device comprising a pair of members capable of adjustment one threaded upon the other, and one of said members provided with a pawl or dog and adapted to engage the stop or roughened portion of the washer for holding the nut against independent rotary movement therewith.

3. In a nut lock, the combination with a bolt, a washer provided with a ratchet face, upon said bolt, a nut threaded upon said bolt in engagement with said washer, of a pawl-member provided with a threaded stem and engaging the ratchet face of the washer, said pawl-member carried by said nut, a rotatable member provided with a hollow body open at its upper and lower ends, said member threaded upon said stem, said member provided with a head having notches, the notches opening at their inner ends upon the upper open end of the body, and means for normally exerting a downward pull or inward pressure upon said pawl-member.

4. In a nut lock, the combination with a support, a bolt extending through said support, of a washer positioned upon said bolt and provided with depending prongs, the prongs extending into said support, said washer provided with a central aperture and with an annular flange, said

washer provided with an outer flange, said washer provided with a continuous, uninterrupted circular line of ratchet-teeth between said inner and outer flanges, each tooth integral at its ends with two contiguous teeth, a nut threaded upon said bolt, and means carried by said nut and engaging said ratchet-teeth for normally holding the bolt against independent rotary movement upon said washer.

884,934. SIGNAL ATTACHMENT FOR LINOTYPE-MACHINES. DANA S. KNOX, Denver, Colo. Filed May 14, 1906. Serial No. 316,675.



In a signal device for linotype machines, the combination with a receptacle for molten metal, of an alarm device independently mounted, a lever fulcrumed on the receptacle, a carbon float protruding into the molten metal of the receptacle and pivotally connected with one extremity of the lever to operate the same, the other extremity of the lever having an inclined contacting face which passes back and forth under the alarm when the receptacle has reached a predetermined point in its operating travel, said contacting face actuating the alarm in both directions of travel, substantially as described.

884,935. BROODER. JULES LARDINOIS-PIGEON, Daverdisse, near Wellin, Belgium. Filed Jan. 11, 1907. Serial No. 351,855.

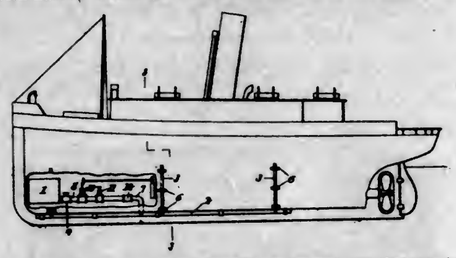


In a brooder, the combination of a water-boiler, a flat horizontally arranged pipe communicating with the boiler at one end, a flat vertically arranged pipe communicating at one end with the other end of said horizontal pipe and at its other end with the boiler, said vertical pipe being arranged under the horizontal pipe, and a roof, extending over said pipes and having a depending curtain on each side of said pipes, substantially as described.

884,936. APPLIANCE FOR ADDING TO THE RECORD SPEED OF VESSELS. WILLIAM LAUDAHN, Los Angeles, Cal. Filed Aug. 21, 1907. Serial No. 389,489.

1. In combination with a vessel, a pipe system comprising transversely arranged branch pipes conforming to the exterior of the hull thereof at the opposite sides of the keel, and provided with discharge openings, perforated pipes for supplying the branch pipes, longitudinally arranged contiguous to and at the opposite sides of the keel, and means for supplying the perforated pipes with an oily fluid.

2. In combination with a vessel, transversely arranged branch pipes conforming to and carried upon the outside of the hull at the opposite sides of the keel, and provided with narrow discharge slots, perforated pipes for supplying



the branch pipes, longitudinally arranged contiguous to and at the opposite sides of the keel, and means for supplying the perforated pipes with an oily fluid.

884,937. FIRE-DOOR FASTENER. RUSSELL B. LAWRENCE, New York, N. Y. Filed Aug. 8, 1907. Serial No. 387,633.



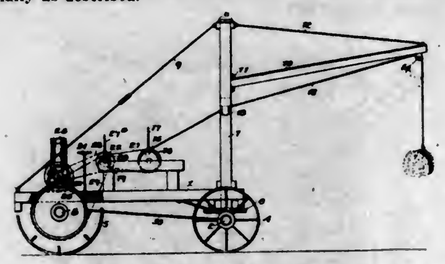
1. The combination with a fire door, of an astragal, a carrying bar having a sliding engagement with said door, latches mounted on said bar, and keepers comprising a base plate and an off-set recessed lip adapted to engage and hold said latches against a strain transversely of said door.

2. The combination with a fire door, of an astragal, a carrying bar having a sliding engagement with said door, a latch mounted on said door and adapted to operate said bar, and keepers comprising a base plate and an off-set recessed lip adapted to engage and hold said latch against a strain transversely of said door.

884,938. CANE-LOADER. WILLIAM W. LEMMON, Junior, La. Filed Sept. 26, 1907. Serial No. 394,751.

1. The combination with a vehicle, of laterally swinging booms supported thereon and adapted to normally extend laterally on opposite sides of the vehicle, means for swinging said booms inwardly towards each other for elevating the load and means for automatically returning said booms to their normal position upon the release of the load, substantially as described.

2. The combination with a vehicle, of a pair of laterally swinging booms supported thereon and adapted to normally extend on opposite sides of the vehicle, means for simultaneously swinging said booms inwardly for elevating the load, and means for automatically returning said booms to their normal position upon the release of the load, substantially as described.



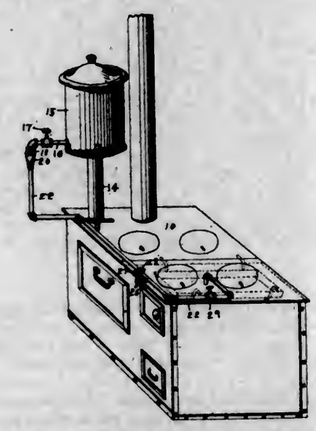
3. The combination with a self-propelled vehicle, of a pair of laterally swinging booms supported thereon and adapted to normally extend laterally on opposite sides of the vehicle, means for simultaneously swinging said booms inwardly towards each other and elevating bundles of cut cane, and means for automatically returning said booms to their normal position upon the release of the load, substantially as described.

4. The combination with a vehicle, of a pair of pivoted booms mounted on outwardly diverging upright axes and adapted to swing laterally beyond each side of said vehicle, elevating cables for the load carried by said booms, means for operating said cables and swinging said booms inwardly toward the center, and means for lowering the load when so swung, substantially as described.

5. The combination with a vehicle, of a pair of pivoted booms mounted on outwardly diverging upright axes and adapted to swing laterally beyond each side of said vehicle, elevating cables for the load carried by said booms, means for operating said cables and simultaneously swinging said booms inwardly towards each other, and means for lowering the load when so swung, substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

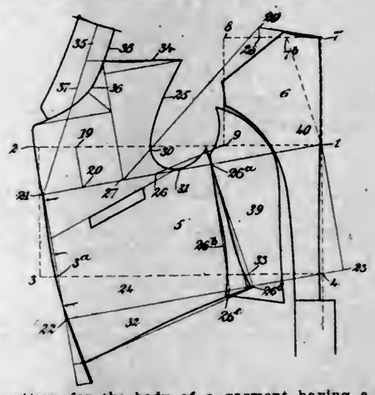
884,939. CRUDE-OIL BURNER FOR STOVES. GEORGE MADDEN and LUTHER MADDEN, Kent, Iowa. Filed Feb. 25, 1907. Serial No. 359,078.



1. In a device of the class described, the combination of a receptacle, a discharge pipe for the receptacle having a screw-threaded end, a fuel feed pipe having a screw-threaded end and a funnel having a plug provided with a screw-threaded opening designed to receive both of said screw-threaded pipes and when turned in one direction to release the discharge pipe of the receptacle and permit the pipe to drain into the funnel.

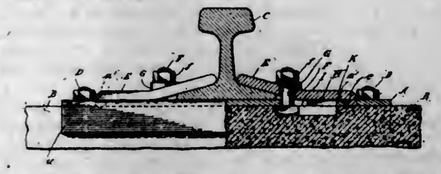
2. In a device of the class described, the combination of a standard, a supply tank detachably mounted on the standard, a discharge pipe for the supply tank having a screw-threaded downwardly projected end, a valve in the pipe, a fuel feed pipe having its upper end screw-threaded, a funnel, a plug in the funnel having a screw-threaded opening, said plug having both of said screw-threaded pipes admitted into it, said parts so arranged that by turning the funnel in one direction, the upper pipe may be removed from the plug and be permitted to drain into the funnel.

884,940. TAILOR'S PATTERN. GIACINTO MADEO, New York, N. Y. Filed Oct. 9, 1905, Serial No. 282,001. Renewed Feb. 10, 1908. Serial No. 415,165.



A pattern for the body of a garment having a collar pattern formed adjacent to the breast pattern of said body and separated therefrom by the curved collar line, said collar pattern having a folding line drawn substantially parallel to an extension of the curved collar line.

884,941. FASTENING FOR RAILWAY-TIES. CHARLES M. MAPES, New York, N. Y. Filed Apr. 11, 1907. Serial No. 367,552.

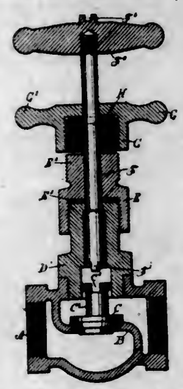


A fastening for railway ties, comprising a plate adapted to be secured to the upper surface of the tie, and having flanges adapted to over-lie the upper edges of the tie, clips adapted to bear upon the rail-base flanges, said clips having at their outer ends downwardly bent extensions, slots formed in said plate and adapted to receive said downwardly bent extensions, slots formed in said plate beneath an intermediate portion of said clips, said slots comprising a larger portion that is adapted to receive the head of a bolt, and a smaller extension that is adapted to receive only the shank of the bolt, said plate having a connecting piece interposed between said slots to strengthen the walls of the latter slot, and of the extension.

884,942. GRINDING ATTACHMENT FOR CHECK-VALVES. MILTON P. MAXWELL, Halsey, Oreg. Filed Sept. 26, 1907. Serial No. 394,661.

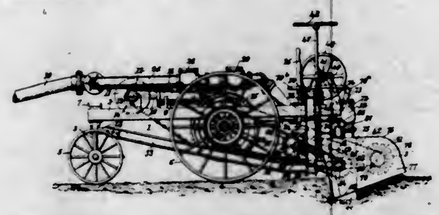
1. The combination with a check valve body, of a stem, means in connection with the stem for locking the valve thereto, a pin arranged transversely of the stem, a feed nut on the body engaging the pin, and a packing for frictionally retaining the stem out of engagement with the valve.

2. The combination with a check valve body, of a stem, means in connection with the stem for locking the stem in the valve, a pin arranged transversely of the stem, a feed



nut on the body engaging the pin, a packing for frictionally retaining the stem out of engagement with the valve, and a packing nut for expanding the packing.

884,943. OIL-SPREADER. WILLIAM M. MURRAY, Sawtelle, Cal. Filed Nov. 5, 1907. Serial No. 400,803.



1. In an oil spreader, a frame adapted to be drawn upon a road, a plow mounted upon said frame and adapted to be forced longitudinally along the surface of the road, means for discharging atomized oil from said plow, and means for working the material of the road.

2. In an oil spreader, a frame adapted to be drawn upon a road, a plow mounted upon said frame and adapted to be forced longitudinally under the surface of the road, means for discharging oil from said plow, and means for atomizing said oil at the point of discharge from said plow.

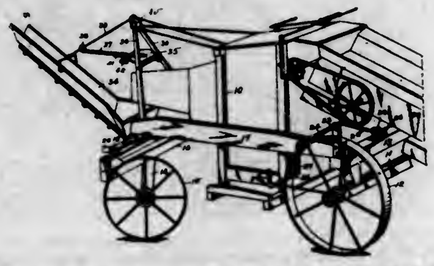
3. In an oil spreader, a frame adapted to be drawn upon a road, a plow mounted upon said frame and adapted to be forced longitudinally under the surface of the road, means for discharging atomized oil from said plow, and means for controlling the movement of the road material over said plow, thereby regulating the admixture of the oil with the road material.

4. In an oil spreader, a frame adapted to be drawn upon a road, a plow mounted upon said frame and adapted to be forced longitudinally under the surface of the road, means for discharging oil from said plow, means for atomizing said oil near the point of discharge from said plow, means for regulating the admixture of the oil with the material of the road, and means for working the material of the road at the rear of said plow.

5. In an oil spreader, a frame adapted to be drawn upon a road, a plow mounted upon said frame and adapted to be forced horizontally along the surface of the road, means for discharging oil from said plow, means for atomizing said oil near the point of discharge from said plow, and means mounted behind said plow for working the material of the road.

[Claims 6 to 35 not printed in the Gazette.]

884,944. ATTACHMENT FOR CORN-SHELLERS. GEORGE B. NELSON, Redfield, Iowa. Filed Dec. 23, 1907. Serial No. 407,660.



1. In a machine of the class described, an adjustable support capable in one position of supporting a conveyer frame at one side of the machine frame, and also capable of being withdrawn from its projected position, and a second support connected with the machine frame to co-act with the aforesaid support in holding the conveyer frame.

2. In a machine of the class described, a support slidingly connected with the machine frame, and capable of being extended outwardly from the side of the machine frame, and firmly held in position to support a conveyer frame arranged along side of the machine frame, and a second support connected with the machine frame to co-act with the aforesaid support in holding the conveyer frame.

3. In a device of the class described, the combination with a machine frame, of a guide extended across the machine frame, and a support slidingly mounted on the guide and capable in its extended position of supporting the conveyer frame at one side of the machine frame, and a second support connected with the machine frame to co-act with the aforesaid support in holding the conveyer frame.

4. In a device of the class described, a support detachably mounted on the machine frame and extended outwardly therefrom and having its outer end shaped to receive a conveyer frame and support it along side of the machine frame, and a second support on the machine frame to co-act with the first in supporting a conveyer frame.

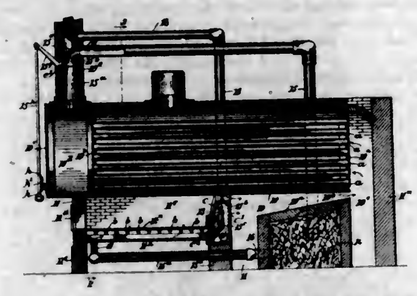
5. In a device of the class described, the combination of an upright fixed to the rear of the machine frame and having a forked upper end, a lug having an opening therein fixed to the machine frame adjacent to the upright, a support comprising a body portion resting in said forked upright having its inner end extended through the opening in the bracket, the outer end of said support being shaped to receive a conveyer frame, and a second support attached to the machine frame to co-act with the first in supporting the conveyer frame.

[Claims 6 to 8 not printed in the Gazette.]

884,945. SMOKE-CONSUMER FOR BOILER-FURNACES. JOHN D. NIX, Natchez, Miss., assignor of one-third to Lewis M. Dalgron, Natchez, Miss. Filed July 20, 1905, Serial No. 270,512. Renewed Aug. 30, 1907. Serial No. 390,824.

1. A smoke consumer for furnaces, comprising a hollow bridge wall provided with perforations at the rear of the fire chamber, a hollow grate communicating with the bridge wall, and means for passing the gaseous products of combustion from the fire chamber through the grate into the bridge wall and thence through jet perforations in said bridge wall, for combustion while hot.

2. A smoke consumer for furnaces, comprising a hollow bridge wall provided with perforations at the rear of the fire chamber, a plurality of hollow grate bars in the fire chamber and joining the bridge wall at their rear ends, and means for passing the gaseous products of combustion from the fire chamber through the grate bars into the bridge wall and thence out of jet perforations in said bridge wall, for combustion while hot.



3. A smoke consumer for furnaces, comprising a hollow bridge wall having jet perforations in its rear and top wall, said bridge wall being positioned at the rear end of the fire chamber, a plurality of hollow grate bars in open communication with the bridge wall at their rear ends, and means for receiving waste products of combustion from the draft passage of the furnace and passing said waste products through the hollow grate bars while they are hot, and thence through the hollow bridge wall to escape from the jet perforations for complete combustion.

4. A smoke consumer for furnaces, comprising a hollow bridge wall at the rear end of the furnace fire chamber, a plurality of hollow grate bars communicating at their rear ends with the front of the hollow bridge wall, said grate bars having perforations in their upper sides, and the bridge wall having perforations in its top wall and rear side, and means for receiving the waste products of combustion from the draft passage of the furnace and for mixing said waste products with air, and passing the mixed air and waste products through the grate bars, part of the gaseous fuel passing out of the perforations in the bars and the maximum portion into the bridge wall and thence through the perforations therein for complete combustion.

5. A smoke consumer for furnaces, comprising a hollow bridge wall at the rear end of the furnace fire chamber, said bridge wall having a series of perforations in its top wall and a series of perforations in its rear wall, and an upwardly disposed baffle plate therein, a series of hollow perforated grate bars communicating at their rear ends with the front of the bridge wall, and means for receiving the waste products of combustion from the draft passage of the furnace and for mixing said waste products with air, and passing the mixed air and waste carbonaceous vapor through the grate bars, part of the gaseous fuel passing out of the perforations in said bars and the maximum portion into the bridge wall and thence through the perforations therein for complete combustion.

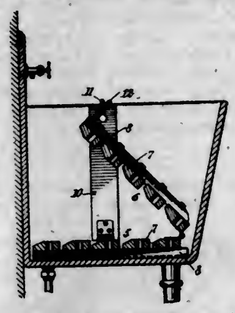
[Claims 6 to 10 not printed in the Gazette.]

884,946. WASHING-MACHINE. SARAH F. O'CONNOR, New York, N. Y. Filed Nov. 14, 1907. Serial No. 402,116.

1. A washing attachment for wash tubs, comprising two leaves hinged together at one end, each leaf comprising a series of spaced and transversely-arranged slats having perforations, and beveled on their inner faces on the edges adjacent or nearest to the free end of the leaves.

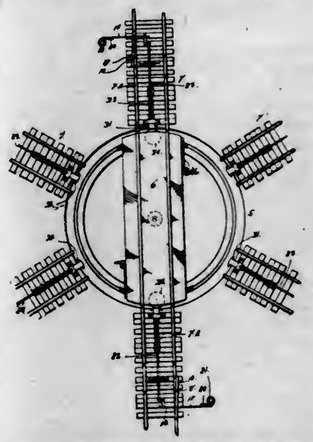
2. A washing attachment for wash tubs, comprising two leaves hinged together at one side, and freely movable to and from each other at the opposite side, each leaf being composed of a series of transversely-arranged slats, and side bars hinged to and foldable upon one of said leaves for stationarily securing it in the bottom of the tub.

3. A washing attachment for wash tubs, comprising two leaves hinged together at one end and freely movable to and from each other at the opposite end, each leaf being composed of a series of transversely-arranged slats beveled on their edges adjacent or nearest to the free end of the leaves, means for stationarily holding one of said leaves



in the bottom of the tub, and means carried by the other leaf for swinging it to and from the stationary leaf.

884,947. TURN-TABLE DERAILER. ROBERT OGLE, Pueblo, Colo. Filed Mar. 11, 1907. Serial No. 361,839.



1. The combination with a turntable, and a track leading thereto, of a switch tongue, a danger signal connected therewith, mechanism connected with the switch tongue for normally maintaining the latter in the derailing position and the signal in the danger position, the said mechanism having a spring actuated plate part projecting into the path of the turntable, whereby when the latter is in line with the track, it acts on the mechanism to maintain the switch tongue in the non-derailing position, and the signal light in the condition indicating safety or a clear track, substantially as described.

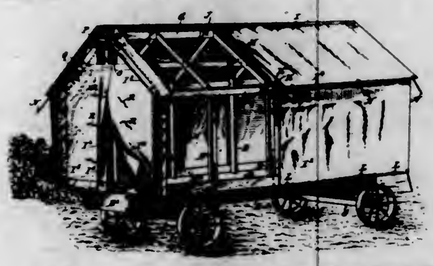
2. The combination with a turntable and a track, of an automatic derailing mechanism comprising the derailer proper, and means for normally holding the derailing device in the derailing position, the said mechanism having a reciprocating plate projecting into the path of the turntable and adapted to be acted on by the latter to maintain the derailer in the non-derailing position, substantially as described.

3. The combination with a turntable and a track leading thereto, of a derailing switch tongue connected with the track, a lever connected with the switch tongue, a spring actuated rod connected with the lever and normally maintaining the switch tongue in the open or derailing position, and a plate connected with the rod and actuated thereby, the said plate projecting into the path of the turntable and adapted to be acted on thereby, to shift the rod and lever into position to maintain the switch tongue

in the non-derailing or clear track position, substantially as described.

4. The combination with a turntable and a track, of a switch tongue, mechanism connected with the switch tongue for normally holding the latter in the derailing position, said mechanism having a buffer plate projecting into the path of the turntable, whereby the latter acts on the mechanism to maintain the switch tongue in the non-derailing position when the turntable is in line with the track, substantially as described.

884,948. TENT. ROBERT P. ORR, New York, N. Y. Filed Nov. 2, 1907. Serial No. 400,374.



1. A tent comprising a peaked tent frame, an inner canvas cover for the peak of the said frame and terminating at the eaves of the frame, and an outer canvas cover inclosing the sides of the tent frame and having its peak portion spaced from the said inner canvas cover.

2. A tent comprising a peaked tent frame, an inner canvas cover for the peak of the said frame and terminating at the eaves of the frame, and an outer canvas cover inclosing the sides and ends of the tent frame and having its peak portion spaced from the said inner canvas cover, the ends of the said outer cover having apertures in its peak portions of its ends for the entrance of air to the space between the covers.

3. A tent comprising a peaked tent frame, an inner canvas cover for the peak of the said frame, an outer canvas cover inclosing the inner cover and the sides of the tent frame, and supporting bars exterior of the said inner canvas cover and attached to the tent frame at the peak and eaves thereof, for supporting the peak portion of the outer canvas cover and holding it spaced from the said inner canvas.

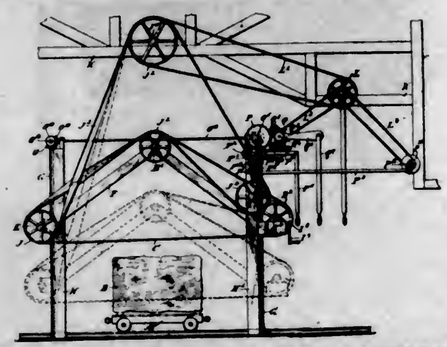
4. A tent comprising a peaked tent frame, an inner canvas cover extending over the peak of the said frame and having its sides extending to the outer faces of the eave rails of the said frame, supports attached to the peak and at the eaves of the said tent frame exteriorly of the said inner canvas cover, and an exterior main canvas cover stretched over the said support and inclosing the peak ends and sides of the tent frame, the said outer canvas having projecting eave-edges to which guy ropes are adapted to be attached.

5. A tent comprising a peaked frame having a ridge pole and eave rails, an inner canvas cover extending over the ridge pole of the frame and terminating at the eave-rails, a supplemental ridge pole spaced from and supported above the main ridge pole, rods or bars spaced from and supported above the eave-rails, and an outer canvas cover extending over the supplemental ridge pole, the rods or bars at the eaves and down the sides of the frame and secured to the lower portion thereof.

[Claims 6 and 7 not printed in the Gazette.]

884,949. STONE-SAWING MACHINE. JOHN M. OWENS, Oolitic, Ind., assignor to John M. Owens, Oolitic, Ind., and John A. Rowe, Bedford, Ind., jointly. Filed Mar. 7, 1907. Serial No. 361,021.

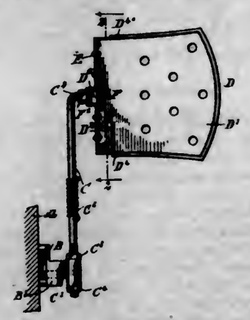
1. A sawing machine, comprising a supporting frame, a triangular carriage mounted to slide vertically in the frame, three horizontal shafts mounted in the carriage, one at the apex of the carriage and the other two at the base, one of the shafts at the base being adjustable, pulleys on the shafts, an endless wire passing over the pulleys, belt pulleys on two of the shafts, an idler belt pulley on the frame, an overhead driven pulley, a belt passing around said pulleys, mechanism for feeding the carriage slowly downward, and mechanism for imparting a quick movement to the carriage in either direction.



2. A sawing machine provided with grooved pulleys arranged one relative to the other to form a triangle, an endless cutting wire passing over the said pulleys, the portion of the wire between the adjacent base pulleys being the cutting portion and for engagement with the material to be cut, a carriage mounted to travel up and down and on which the shafts of the said grooved pulleys are journaled, belt pulleys secured on two of the said shafts, an idler belt pulley journaled adjacent to the third grooved pulley shaft, an overhead driven pulley, and a belt passing over the said belt pulleys.

3. A sawing machine provided with grooved pulleys arranged one relative to the other to form a triangle, an endless cutting wire passing over the said pulleys, the portion of the wire between the adjacent base pulleys being the cutting portion and for engagement with the material to be cut, a carriage mounted to travel up and down and on which the shafts of the said grooved pulleys are journaled, belt pulleys secured on two of the said shafts, an idler belt pulley journaled adjacent to the third grooved pulley shaft, an overhead driven pulley, a belt passing over the said belt pulleys, and means for feeding the said carriage in a downward direction.

884,950. TRAIN-SIGNAL. FRANK P. PAGE, Syracuse, N. Y. Filed May 29, 1907. Serial No. 376,234.



1. A train signal for attachment to a car of a train, comprising a keeper on the car having an outwardly extending member forming a bearing surface, a staff, a foot in which the lower end of the staff is held, the said foot comprising a tubular socket member, a horizontal arm extending from the side of said socket member and engaging the said bearing surface, the said arm terminating in a T-block for removable engagement with said keeper, the lower end of the staff extending through the socket member, means for adjustably securing the staff in said socket member, and a flag of rigid material secured to the upper end of the staff.

2. A train signal for attachment to a car of a train, comprising a staff adapted to be removably secured at its lower end to a keeper on the car, the upper end of the staff extending outwardly and being threaded and provided with nuts, a flag having a body of rigid material and a frame to which the flag body is secured, the frame being provided with a socket into which extends the threaded end of the staff, one of said nuts being within the socket and the other nut screwing against the outside of said socket.

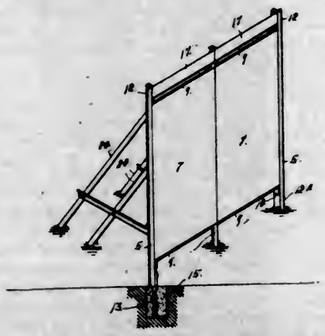
3. A train signal for attachment to the caboose of a freight train, comprising a keeper on the side of the caboose, a staff having its lower end adapted for engagement with said keeper, the staff having an onwardly extending upper end, threaded and provided with nuts, and a flag having a body of a rigid material and a U-shaped frame to which the inner end and part of the top and bottom of the said flag body are secured, the middle portion of the frame being secured to the said upper end of the staff by the said nuts.

4. A train signal for attachment to a car, comprising a staff made in sections connected with each other by a spring, means for removably securing the lower section of the staff to a car, the upper section of the staff having an angular upper end threaded and provided with nuts, a flag having a body of rigid material, and a frame to which the flag body is secured, the said angular threaded end of the staff engaging the frame and secured thereto by the said nuts.

5. A train signal for attachment to the caboose of a freight train, provided with a flag having a body made of sheet metal, the top and bottom at the rear end of the body having cut out portions and the rear end terminating in an angular flange, and a U-shaped frame having its terminals slotted for the reception of the top and bottom of the body adjacent to the cut out portion, and means for fastening the said body flange to the middle bar of the said frame.

[Claims 6 and 7 not printed in the Gazette.]

884,951. METAL SIGN. FRANK W. PERRY, Denver, Colo. Filed July 15, 1907. Serial No. 383,770.



1. A metal sign consisting of a frame composed of angle bars, and advertising panels provided with flanges secured between the angle bars by the use of suitable fastening devices whereby the said panels are readily attachable and detachable, substantially as described.

2. A metal sign comprising a frame whose body portion is rectangular in shape and composed of pairs of angle bars, and an advertising panel having flanges formed thereon and clamped between the adjacent flanges of the angle bars composing the frame, substantially as described.

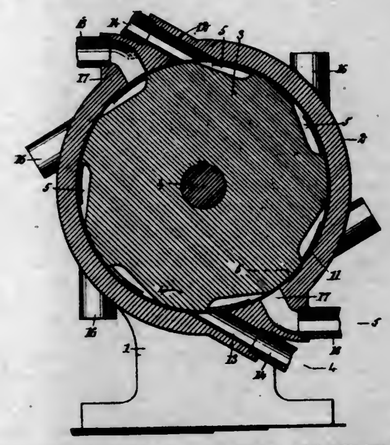
3. A metal sign composed of a frame formed of pairs of angle bars, one angle bar of each pair having bottom extensions for anchoring purposes, and an advertising panel having flanges clamped between the adjacent flanges of the frame angle bars, substantially as described.

4. A metal sign consisting of a frame composed of bars, and advertising panels provided with flanges secured to the bars by the use of suitable fastening devices, whereby the said panels are readily attachable and detachable, substantially as described.

5. A metal sign having a frame work whose body portion is rectangular in shape and composed of horizontally and vertically disposed pairs of angle bars, panels provided with flanges passed between the angle bars of the frame, suitable means for clamping the bars together upon the flanges of the panels, one bar of each vertically disposed pair being provided with anchoring extensions, and suitable means for bracing and supporting the sign from the rear, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

884,952. ROTARY ENGINE. PAUL O. POULSON, Brigham, Utah. Filed Sept. 21, 1907. Serial No. 393,999.



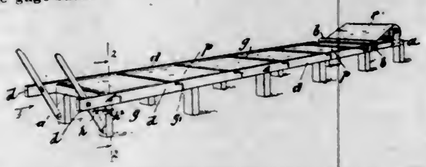
1. A rotary engine having a cylinder with alining inlet ports formed in the wall thereof, a drum rotatably mounted in said cylinder and having buckets formed near the surface thereof, said buckets having ports alining with said inlet ports, and laterally disposed passages with side ports opening upon the surface of said drum, and a plurality of steam pockets formed around the wall of said cylinder in alinement with said last ports, and adapted to receive steam or give steam to said buckets.

2. A rotary engine having a cylinder with diametrically oppositely disposed inlet ports inclined toward a tangential line, a drum rotatably mounted in said cylinder and having buckets in the outer wall thereof, said buckets having central passages disposed in alinement with said inlet ports, and side passages descending laterally and rearwardly, said side passages having ports coming out upon the surface of said drum, said cylinder having a plurality of inclined pockets in alinement with said last ports and adapted to receive steam or give steam thereto.

884,953. MOLDING-TABLE FOR MAKING PLASTER-BOARDS. GUSTAVE RADER, Montclair, N. J. Filed Dec. 26, 1907. Serial No. 408,016.

1. A molding table for making plaster-boards, consisting of a table of sufficient length for making a plurality of plaster-boards, gage-bars at opposite sides of the table, means for adjusting the gage-bars to project to the re-

quired degree above the surface of the table, means for supplying a surface-layer of paper over the full length of the table, and transverse separating rods inserted at uniform distances from each other into the upper portions of the gage-bars.



2. A molding table for making plaster-boards, consisting of a table of sufficient length for making a plurality of plaster-boards, gage-bars located at opposite sides of the table, means for guiding the gage-bars along the sides of the table, means connected with the gage-bars for adjusting the gage-bars lower or higher relatively to the surface of the table, and transverse separating rods passing through holes in the upper portions of the gage-bars.

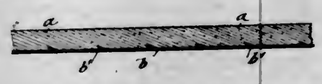
3. A molding table for making plaster-boards, consisting of a table of sufficient length for making a plurality of plaster-boards, gage-bars located at the sides of the table, means for raising or lowering the gage-bars along the sides of the table relatively to the surface of the same, means for locking the gage-bars after adjustment, and transverse separating rods supported by said gage-bars.

4. The combination, with a table of sufficient length for making a plurality of plaster-boards, of gage-bars provided with inclined slots, headed studs attached to the upper side-portions of the table for guiding the gage-bars, levers pivoted to the projecting ends of the gage-bars and the front-legs of the table, means for supplying a sheet of paper over the full length of the table, and transverse separating rods passing through holes in the upper portions of the gage-bars.

5. The combination, with a table of sufficient length for making a plurality of plaster-boards thereon, of a paper roll supported in bearings at the rear-end of the table for supplying a layer of paper or fabric over the full length of the table, gage-bars along the sides of the table, means for guiding the gage-bars along the sides of the table, means applied to the front-end of the table and the projecting ends of the gage-bars for adjusting them higher or lower along the guiding means to project a certain distance above the table, means for locking the gage-bars after adjustment, and transverse separating rods inserted at certain distances from each other in holes in the upper portions of the gage-bars.

[Claims 6 to 15 not printed in the Gazette.]

884,954. PLASTER OR COMPOSITION BOARD. GUSTAVE RADER, Montclair, N. J. Filed Feb. 21, 1908. Serial No. 416,996.



1. A plaster-board consisting of a layer of plaster of paris, and a face-layer of paper united with the same by projections or anchors formed on the rear-side of the paper.

2. A plaster or composition board consisting of a layer of plastic material or composition and a face-layer of suitable fabric united with the same by specially made integral projections or anchors formed on the rear side of the fabric.

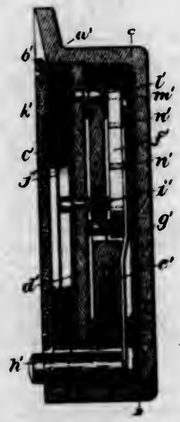
3. A plaster or composition board consisting of a layer of plaster of paris and fiber, and a face-layer of suitable fabric united with the same by specially made integral projections or anchors formed on the rear side of the fabric.

4. A plaster-board composed of a layer of plastic material, and a face-layer of paper united by projections or anchors at its rear-side with the layer of plastic material.

5. A plastic-board consisting of a rear-layer of plaster of paris, and a face-layer of paper united with the same by projections or anchors formed on the rear-surface of the paper.

[Claim 6 not printed in the Gazette.]

884,955. TELEMETER FOR THE USE OF PHOTOGRAPHERS. FRANK W. RICHES, St. Petersburg, Russia. Filed June 9, 1906. Serial No. 321,077.



1. In a telemeter, the combination of a circular casing, having an entablature plate; a sighting tube; a pendulous weight curved to conform to the interior of said casing, and having an offset body portion; rack teeth rigid with said weight; a back plate; a spindle pivoted in said entablature plate and in said back plate, on which said pendulum and rack teeth are mounted; a pointer; a pinion on the same with which said rack teeth engage; a suitable dial over which said pointer plays; a resilient brake normally in contact with said weight; and a push piece for controlling said brake, substantially as described.

2. In a telemeter, the combination of an inclosing casing, a dial, a pointer, a shaft on which said pointer is mounted, a pinion on said shaft, and a plumb weight pivotally mounted in said casing and having its interior cut away and provided with teeth engaging said pinion, substantially as described.

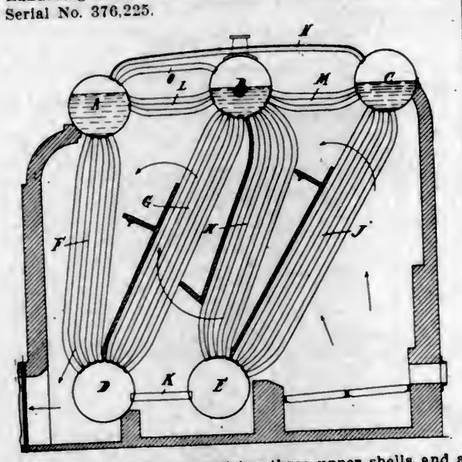
3. In a telemeter, the combination of an inclosing casing, a dial carried thereby, a pointer, a shaft on which said pointer is mounted, a pinion on said shaft, a plumb weight pivoted in said casing and having its interior cut away and provided with teeth arranged in a curve and engaging said pinion, resilient means for preventing the movement of said weight, and a push button extending through said casing, whereby the user may disengage said means from said weight, substantially as described.

4. In a telemeter, the combination of an inclosing casing, a dial, a pointer, a shaft carrying said pointer, a pinion on said shaft, a plumb weight pivotally mounted in said casing and having its interior cut away, said weight surrounding said pinion, and provided with teeth arranged in a curve, said teeth engaging said pinion, a spring engaging said weight, and a push button connected to said spring and extending outwards through said casing, substantially as described.

5. In a telemeter, the combination of an inclosing casing; a sighting tube; a dial; a pointer; a shaft on which said pointer is mounted; a pinion on said shaft; and a plumb weight pivotally mounted in said casing and having its interior cut away and provided with teeth engaging said pinion, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

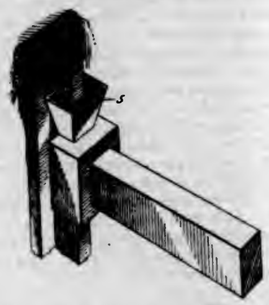
884,956. TUBULAR STEAM-BOILER. CARL RÖHRS, Landsberg-on-the-Warthe, Germany. Filed May 29, 1907. Serial No. 376,225.



1. A tubular boiler comprising three upper shells and a plurality of lower shells connected with each other and with the upper shells, a steam pipe connecting the outer upper shells with each other, and a steam pipe connecting one of said outer shells with the intermediate shell for the purpose set forth.

2. The combination with the grate, of a water shell arranged thereabove, a plurality of other water shells arranged behind the first shell and spaced apart therefrom, a water connection between the shells, a steam connection between the foremost shell and the rearmost shell, and a steam connection between the rearmost and the intermediate shells.

884,957. GUIDE-LUBRICATOR. JAMES H. RUSH, Boston, Mass. Filed Sept. 21, 1907. Serial No. 393,946.



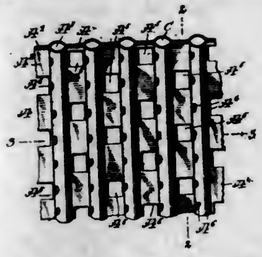
1. A guide lubricator comprising a hopper-shaped receptacle for holding the lubricant, having a slot in one side thereof for receiving the guide of the elevator, whereby said guide passes into the receptacle in contact with the lubricant.

2. A guide lubricator comprising a receptacle for holding the lubricant, having the bottom thereof open and provided with a vertical slotted side for receiving and substantially fitting the guide, whereby said guide is adapted to project into the receptacle in contact with the lubricant.

3. A guide lubricator comprising a receptacle of substantially rectangular cross-section for holding the lubricant, having the bottom thereof open and with three adjacent sides inclining inwardly and downwardly, the other side of the receptacle being substantially vertically slotted for permitting said guide to project within the receptacle in contact with the lubricant.

884,958. [WITHDRAWN.]

884,959. BUILDING MATERIAL. JAMES STANLEY, New York, N. Y. Filed Dec. 19, 1906, Serial No. 348,525. Renewed Mar. 18, 1908. Serial No. 421,764.

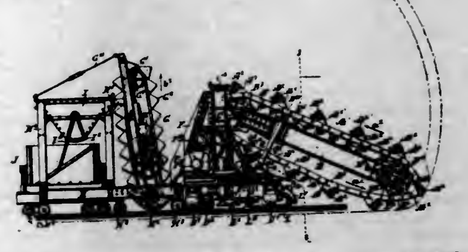


1. A paper matrix or core for building purposes comprising sheets of paper fastened together and forming spaced tubular portions having perforated walls, and a plastic filling material in the tubular portions.

2. A paper matrix or core for building purposes, comprising sheets of paper fastened together and forming spaced tubular portions having perforated walls, and intervening web portions having apertures, and a plastic material in the said tubular portions.

3. A building block, slab or board comprising a body of plastic material, a paper matrix embedded in the same and formed of sheets of paper fastened together and forming spaced tubular portions, and intervening web portions, the latter portions being perforated.

884,960. EXCAVATOR. CHARLES SUITER, Billings, Mont. Filed June 5, 1906. Serial No. 320,271.



1. An excavator, comprising an excavator car, an endless traveling bucket line on the car, an elevator car in rear of the excavator car and an elevator on the elevator car and conveying the material delivered by the buckets to the rear of the excavator.

2. An excavator, comprising an excavator car, an endless traveling bucket line mounted on the car to swing up and down and transversely, an elevator car in the rear of the excavator car, and an elevator on the car and conveying the material delivered by the buckets to the rear of the excavator.

3. An excavator, comprising an excavator car, an endless bucket line on the car, a chute carried by the car and receiving the material from the buckets, an elevator car in rear of the excavator car, a receptacle carried by the car and into which the chute discharges, and an elevator also carried by the car for elevating the material from the receptacle and delivering it at the rear of the excavator.

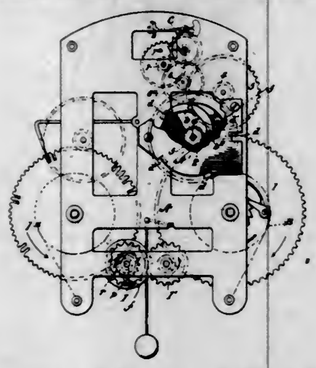
4. An excavator, comprising an excavator car, an endless traveling bucket line mounted on the car, an elevator car in the rear of the excavator car, an elevator on the excavator car for conveying away the material delivered by the buckets, a hopper into which the elevator discharges, and a carrying-off car adapted to pass under the hopper.

5. An excavator, comprising an excavator car, a turn-

table mounted to turn thereon, an endless bucket line having a supporting arm mounted to swing up and down on the said turn-table, a chute fixed on the turn-table and into which discharges the said bucket line, an elevator car following the said excavator car, and an elevator on the said elevator car and receiving the material from the said chute to elevate the material in the rear of the excavator.

[Claims 6 to 33 not printed in the Gazette.]

884,961. CLOCK-MOVEMENT. GUSTAF SYLVAN, JOHANNES B. SYLVAN, and EMIL W. SYLVAN, Columbia, S. C. Filed Sept. 13, 1907. Serial No. 392,727.



1. A movement for clocks and watches, comprising a striking mechanism, a main spring, an escapement and a train of gears connecting the same, said train having interposed in it an intermediate coil spring arranged to be automatically wound at intervals by the main spring to actuate the escapement, a stopping mechanism for the automatic winding mechanism and a releasing mechanism connected to and controlled by the striking mechanism.

2. A movement for clocks and watches, comprising a striking mechanism, a main spring, an escapement and a train of time gears connecting the same, said train having interposed in it an intermediate coil spring arranged to be automatically wound at intervals by the main spring to actuate the escapement, a stopping mechanism for the automatic winding mechanism and a releasing mechanism for the main spring connected to and controlled by the striking mechanism, and consisting of gears with ratchet and pawl connecting the time gears and striking gears, said stopping mechanism being arranged to arrest the time gears when the intermediate spring is wound up and allow the striking gears to independently continue their action.

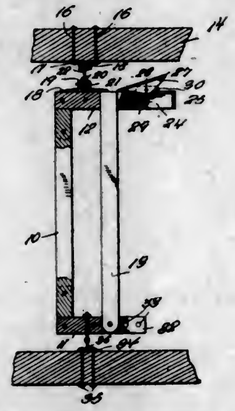
3. A movement for clocks and watches, comprising a striking mechanism, a main spring, an escapement and a train of time gears connecting the same, said train having interposed in it an intermediate coil spring arranged to be automatically wound at intervals by the main spring to actuate the escapement, a stopping mechanism for the automatic winding mechanism consisting of a lever having a pin at one end controlled by the expansion and contraction of the intermediate spring, and a stationary set of circumferential stops arranged to be engaged by the outer end of said lever when its inner end is drawn toward the center by the winding up of the intermediate spring, and a releasing mechanism for the main spring.

4. A movement for clocks and watches comprising a time winding shaft with main spring and driving gear, a strike winding shaft with main spring and driving gear, intermediate gears connecting the main time gear with the main strike gear, said intermediate gears being arranged to rotate together in one direction and independently in the other direction, and an intermediate time spring arranged to be wound by the main time spring and to actuate the escapement and an automatic stop device for the time gears arranged to come into effect when the intermediate spring is wound up.

5. A clock movement having a main spring, an intermediate secondary winding spring, stop devices for the same and a releasing mechanism controlled by the striking mechanism.

[Claim 6 not printed in the Gazette.]

884,962. STANCHION. AL TORHORST, Waukesha, Wis. Filed June 2, 1906. Serial No. 319,926.



1. A stanchion comprising building timbers a base bar, a vertical bar, an overhead bar, and a vertical swinging bar, combined with a plate above the overhead bar secured to the building timbers and having a pendent offset provided with a slot, a block pivoted on the overhead bar and provided with a pivot pin extended into the said slot of the said pendent, a base and a swivel joint connecting the base-bar therewith.

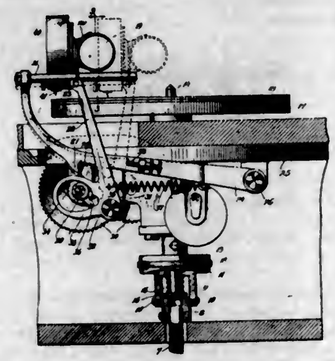
2. A stanchion, comprising a base bar, a base, and a swivel joint connecting the base therewith, a vertical bar, an overhead bar, and a vertical swinging bar, combined with a plate having elongated slots at its opposite sides, bolts engaged with said plate through said slots to adjustably secure the said plate to its supporting means, the said plate having a pendent offset provided with an elongated slot, intermediate of the slotted sides, a pivoted block on the overhead bar, having a vertical pivot-pin extended into the said slot of the said pendent offset, and provided on its upper end with a washer.

3. The combination, with a stanchion, including its overhead bar, vertical bar, vertical swinging bar, a base bar, a base-timber of a base plate provided with slots extending parallel with and adjacent to two opposite edges, bolts engaged with said plate through the said slots to adjustably connect the said base plate with a base timber, and means for swivelly connecting the said base bar with the said adjustable base plate.

884,963. FEEDING APPARATUS FOR TALKING-MACHINES. LOUIS P. VALIQUET, Newark, N. J., assignor by mesne assignments, to Hawthorne & Sheble Manufacturing Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Apr. 13, 1906. Serial No. 311,597.

1. In a talking machine, the combination with a motor, of a reproducer mounted upon a swinging bearing, a carrier for said reproducer, mechanism positively connecting the motor to the carrier and acting to retract the reproducer, and mechanism operated by a yielding connection independent of the motor for propelling said reproducer across the record.

2. In a talking machine having a motor for rotating the record, the combination of a reproducer mounted on a universal joint, a carrier therefor, positively operated cam mechanism connected to said carrier which retracts said reproducer, and a spring independent of the motor for propelling said carrier in a direction to feed said reproducer across the record.



3. In a talking machine, the combination of a reproducer mounted upon a swinging bearing, a carrier therefor, positively operated mechanism connected to said carrier which retracts the reproducer, and mechanism operated by a yielding force connected to said carrier and operating to feed said reproducer across the record, said mechanism comprising a swinging arm having a lug in which a continuous cam race is cut, and a cam carried by a shaft journaled in fixed bearings and engaging said cam race.

4. A feeding and resetting mechanism for talking machines having loosely mounted reproducers comprising in combination a horizontally extending vertically movable supporting bar, means for raising and lowering said bar, a traversing arm adapted to engage the reproducer both when the supporting bar is raised and lowered, and means for reciprocating said arm synchronously with respect to the movements of the supporting bar, said last-named means including a spring independent of the motor of the machine for propelling the reproducer across the record.

5. A feeding and resetting mechanism for talking machines having loosely mounted reproducers comprising in combination a horizontally extending vertically movable supporting bar, means for raising and lowering said bar, a traversing arm adapted to engage the reproducer both when the supporting bar is raised and lowered, and means for reciprocating said arm synchronously with respect to the movements of the supporting bar, said means comprising quick action cams which rapidly retract the traversing arm while the supporting bar is elevated, and a spring independent of the motor of the machine for propelling the reproducer across the record when the supporting bar is lowered.

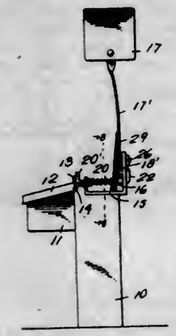
[Claims 6 to 14 not printed in the Gazette.]

884,964. MAIL-BOX SIGNAL. WILLIAM H. VOSS, Poynette, Wis. Filed Mar. 25, 1907. Serial No. 364,367.

1. A mail-box comprising two signal devices, a spring connected with one signal to raise it and a spring connected with the other signal to lower it, combined with the box-lid and means intermediate of the same and the signals to hold them in raised position and to release them upon the opening of the lid to allow the springs to act thereon.

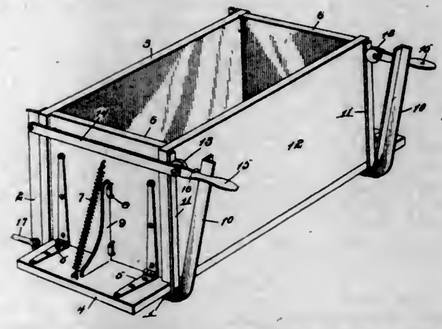
2. A mail-box comprising two signaling devices, a standard for each signal, an upright upon which the staffs are pivoted, a trip-rod having a pin, each staff being provided with a hole to be engaged by said pin and a spring engaging each upright and acting to depress one and lower the other, combined with the box-lid adapted when opened to engage the trip-rod to release the staffs.

3. A mail-box comprising two signaling devices, a spring connected with each and acting to raise one and lower the other, a trip-rod adapted to engage the signals to hold them in raised position, and to be moved to release them



to allow one to be automatically lowered and the other remain in position, or to allow both to be lowered.

884,965. MOLD. ELIAS M. WALKER, Wichita, Kans. Filed Sept. 12, 1905. Serial No. 278,149. Renewed Dec. 13, 1907. Serial No. 406,325.



1. The combination with a mold comprising a base, a side and end walls; of a removable pallet constituting one side of the mold, and rockers extending from the base and overlapping and adapted to support said side.

2. The combination with a mold comprising a base, a side and end walls; of a removable pallet constituting one side of the mold, and rockers extending from the base and overlapping said side, and means interposed between the rockers and side for locking said side to the mold.

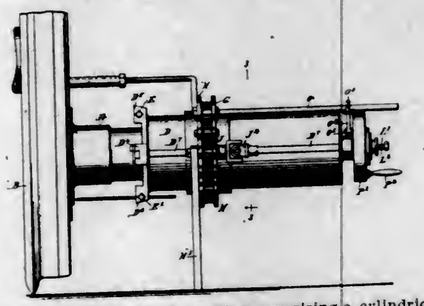
3. The combination with a mold comprising a base, a side and end walls; of rockers extending at angles from the base, a pallet interposed between the rockers and the end walls and constituting a side of the mold, and means for clamping the pallet upon the mold.

4. In a mold the combination with a base, a side and end walls; of rockers extending at angles from the base, clamping strips movably connected to the base and adapted to be supported by the rockers, a detachable pallet interposed between the strips and end walls and adapted to form a side of the mold, and means for clamping the pallet between the end walls and the strips.

5. The combination with a mold comprising a base, a side and end walls; of rockers permanently connected to the mold and extending at angles to the base thereof, a pallet interposed between the rockers and the end walls and constituting a side of the mold, and means for securing the pallet upon the mold, and a supporting rod pivoted to the mold and adapted to hold it with its rockers downward.

[Claims 6 to 15 not printed in the Gazette.]

884,966. CRANK-PIN-TURNING MACHINE. MOSES H. WESTBROOK, Port Huron, Mich. Filed Mar. 12, 1907. Serial No. 361,928.



1. A crank pin turning machine comprising a cylindrical bed for attachment to the outer end of the crank pin, a cylindrical tool carriage mounted to turn on and to slide axially on the said bed, gearing for turning the said tool carriage, the carriage having guided movement in the hub of one of the gears, and a means for feeding the said tool carriage in the direction of its axis.

2. A crank pin turning machine comprising a cylindrical bed for attachment to a crank pin, a cylindrical tool carriage mounted to turn and slide on the bed, said carriage having keys on its periphery, gearing for rotating the carriage, one of the gears surrounding the carriage and having key-ways receiving the keys of the said carriage, a frame in which the gearing is mounted, and means for feeding the carriage in the direction of its axis.

3. A crank pin turning machine, comprising a cylindrical bed for attachment to the outer end of a crank pin, a cylindrical tool carriage mounted to turn and slide on the bed, means for turning the carriage, a feed screw mounted in the carriage and screwing into the bed, a handled member mounted to slide on and to turn with the screw, and gearing for operating the member from the carriage when the said member is in one position on the screw, whereby provision is made for operating the screw either by hand or power.

4. In a crank pin turning machine, a cylindrical bed having means at one end for attachment to the end of a crank pin, a cylindrical tool carriage mounted to turn and slide on the bed, a gear wheel in the hub of which the carriage has sliding and guided movement, a frame in which the gear wheel is mounted having a lateral extension provided at its end with a leg, a driven shaft mounted in the extension of the frame, a pinion on the shaft, and an intermediate gear wheel meshing with the pinion and the first named gear wheel.

5. In a crank pin turning machine, a cylindrical bed having means at one end for attachment to a crank pin, a cylindrical tool carriage mounted to slide and turn on the bed, means for turning the carriage, a screw mounted on one end of the carriage and screwing into the bed, the outer end of the screw projecting beyond the end of the carriage, an internal gear wheel mounted on the projecting end of the screw, a pinion on the carriage and an intermediate gear wheel between the pinion and internal gear wheel.

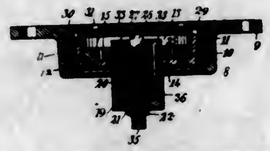
[Claims 6 to 8 not printed in the Gazette.]

884,967. SHOCK-ABSORBER FOR VEHICLES. WILLIAM C. WILLIAMSON, New York, N. Y. Filed May 10, 1907. Serial No. 372,890.

1. In a shock-absorber, in combination, a case, a spring barrel, a spring plate, the edges whereof are supported in said case, and a member held against the body of said plate and transmitting the pressure thereof to said barrel.

2. In a shock absorber, in combination, a case, a friction barrel, means for exerting pressure on said barrel at a point on the axis thereof, and a rocker for moving said barrel.

3. In a shock absorber, in combination, a case, a friction barrel therein, a rocker adapted to move said barrel, a rotatable adjusting device on the axis of said barrel, and means for exerting pressure on said barrel at a point on the axis thereof.



4. In a shock absorber, in combination, a case, a friction barrel therein, an adjusting stud mounted coaxially with said barrel, means for exerting pressure on said barrel at a point on the axis thereof, and a rocker for moving said barrel.

5. In a shock absorber, in combination, a case, a barrel therein, an adjusting device rotatably mounted coaxially within said barrel and including a stud, means for permitting a step-by-step adjustment of said stud, and means for exerting pressure on said barrel at a point on the axis of said barrel.

[Claims 6 to 11 not printed in the Gazette.]

884,968. DISPLAY-HOLDER FOR GEMS. RAWSON L. WOOD, New York, N. Y., assignor to J. R. Wood & Sons, New York, N. Y., a Copartnership. Filed Jan. 15, 1908. Serial No. 419,993.



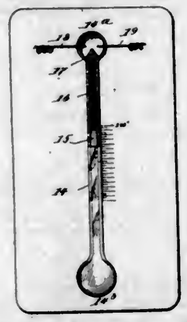
1. A display holder for gems comprising two half sections of a ring, a half setting upon one end of each of said ring sections, a handle upon the opposite end of each of said ring sections and means for drawing said handles together.

2. A display holder for gems comprising two half setions of a ring, a half setting upon one end of each of said ring sections, and a handle upon the opposite end of each of said ring sections, said handles being hinged together at their lower ends, and having means for drawing them together.

3. A display holder for gems comprising two half sections of a ring, a half setting upon one end of each of said ring sections, and a handle upon the opposite end of each of said ring sections, said handles being hinged together at their lower ends, and having means for drawing them together, said means comprising a hand adapted to be slipped up and down said handles.

884,969. THERMOSTATIC CIRCUIT-CLOSER. JAY O. WOODS, Riverside, Wash., assignor of one-half to Joseph W. Graham, Riverside, Wash. Original application filed Oct. 5, 1906, Serial No. 337,585. Divided and this application filed May 10, 1907. Serial No. 372,932.

1. A thermostatic circuit closer consisting of a thermometer tube hermetically sealed at its upper and lower ends and containing a mercurial column, two wires forming the terminal contacts of an open circuit and entering the thermometer above the mercury column, a rod of insulating material adapted to be lifted by said mercurial column the upper end of said float provided with conducting material, whereby expansion of the mercury above a predetermined degree will cause the rod to bridge the ends of the terminal wires of the open circuit and close the circuit.



2. A thermostatic circuit closer comprising a tube hermetically sealed at its upper and lower ends and having a central bore terminating at its lower end in a mercury bulb and at its upper end in an enlarged chamber in which are arranged out of contact with each other the terminals of an open electric circuit, a rod of insulating material adapted to be lifted by the column of mercury in the tube, said rod having at its upper end conducting material to bridge the space between the ends of the terminal wires and close the circuit.

3. A thermostatic circuit closer comprising a tube hermetically sealed at its upper and lower ends and having a central bore terminating at its lower end in a mercury bulb and having a space above the mercury column, a pair of terminal wires forming part of an open circuit and projecting into the space above the mercury, a slidable rod of insulating material adapted to be lifted by said column of mercury, said rod having its upper end pointed and covered with a conducting material to bridge the space between the ends of the terminal wires and close the circuit.

4. A thermostatic circuit closer consisting of a tube hermetically sealed at its upper and lower ends and having enlarged bulbs at said upper and lower ends, and a reduced central bore, a pair of terminal wires forming part of an open electric circuit and projecting into the upper bulb, the ends of said terminals being spaced apart, a slidable rod of insulating material having a body portion adapted to fit loosely in the bore of said tube and an enlarged head projecting into the upper bulb, said head being of greater diameter than that of the central bore of the tube, said head portion having beveled sides covered with a conducting material, whereby when the rod of insulating material is lifted by the expansion of the column of mercury within the tube, the space between the ends of the terminal wires will be bridged and the open circuit closed.

884,970. PROCESS OF UTILIZING FLUE-DUST. EZRA F. WOOD, New York, N. Y., assignor to International Nickel Company, New York, N. Y., a Corporation of New Jersey. Filed Oct. 20, 1906. Serial No. 339,741.

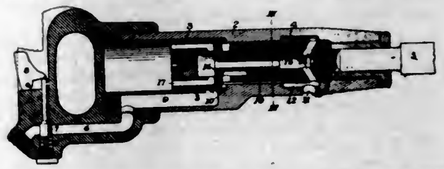
1. The method herein described of utilizing flue dust of sulfur-bearing ores, which consists in mixing such flue dust with ore richer in sulfur than the flue dust, igniting the mass, blowing air therethrough, and causing thereby a sintering of the mixture.

2. The method herein described of utilizing flue dust of sulfur-bearing ores, which consists in mixing such flue dust with green ore richer in sulfur than the flue dust, igniting the mass, blowing air therethrough, and causing thereby a sintering of the mixture.

3. The method herein described of utilizing flue-dust of sulfur-bearing ores, which consists in mixing such flue-dust with ore richer in sulfur than flue-dust, without admixture of carbon or flux, igniting the mass, blowing air therethrough, and causing a sintering of the mixture.

4. The method herein described of utilizing flue dust of sulfur-bearing copper and nickel ores, which consists in mixing such flue dust with ore richer in sulfur than the flue dust, igniting the mass, blowing air therethrough, and causing thereby a sintering of the mixture.

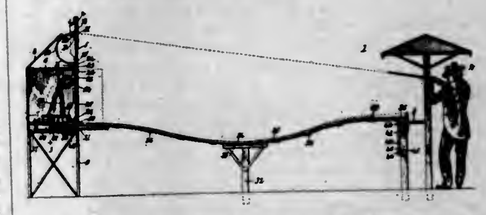
884,971. PNEUMATIC TOOL. CHESTER B. ALBREE, Allegheny, Pa., assignor to The Chester B. Albree Iron Works, Company, Allegheny, Pa., a Corporation of Pennsylvania. Filed Dec. 20, 1906. Serial No. 348,772.



1. A reciprocating percussive engine of the fluid pressure type, having supply and exhaust ports controlling normal action of the piston, and provided with an additional exhaust passage controlled by the position of the piston, and always in communication with the space in front of the piston, said passage being open to the atmosphere only when the piston is at the extreme end of its forward stroke and closed by the piston in the other portions of its stroke; substantially as described.

2. A reciprocating percussive engine of the fluid pressure type, having inlet and exhaust ports controlling the normal action of the piston, the inlet port being near the forward end of the cylinder and closed by the piston when at the extreme forward end of its stroke, said engine having a supplemental exhaust port controlled by the piston and always in communication with the space in front of the piston, said exhaust port being open to the atmosphere only when the piston is at the extreme end of its forward stroke and closing the inlet port; substantially as described.

884,972. TARGET. JOSÉ ARBAT, New York, N. Y. Filed Oct. 29, 1907. Serial No. 399,632.



1. A target, comprising an object arranged to move under impact, a house, a figure adapted to be normally arranged within said house and on being released to advance to a point remote from said house, means for concealing said figure within said house, and means operable by a movement of said object for releasing said first means.

2. A target, comprising an object arranged to move under impact, a house, a figure adapted to be normally arranged within said house and on being released to advance to a point remote from said house, means for concealing said figure within said house, means permitting the movement of said figure from said house, means operable by a movement of said object for releasing said first means, and means for returning said figure to said house.

3. A target, comprising an object having a movable portion, a house having a closure, means operable by said movable portion of said object for releasing said closure, a

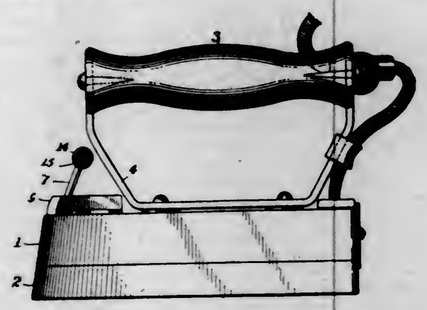
track, and a figure arranged to travel upon said track and normally concealed within said house.

4. A target, comprising an object having a movable portion, a house having a closure, means for normally locking said closure, means operable by said movable portion for releasing said closure, a track, and a figure arranged to travel upon said track and normally concealed within said house and held in position therewithin by said closure.

5. A target, comprising an object having a movable bull's-eye, a house having a resiliently controlled door, means for holding said door closed, means operable by said bull's-eye for releasing said door, a track, and a figure arranged to travel upon said track and normally concealed within said house.

[Claims 6 to 20 not printed in the Gazette.]

884,973. AUTOMATIC INDICATOR OR THERMOSCOPIC SIGNAL FOR HEATED TOOLS AND VESSELS. JAMES I. AYER, Cambridge, Mass., assignor to Simplex Electric Heating Company, Boston, Mass., a Corporation of Massachusetts. Filed May 16, 1907. Serial No. 374,067.

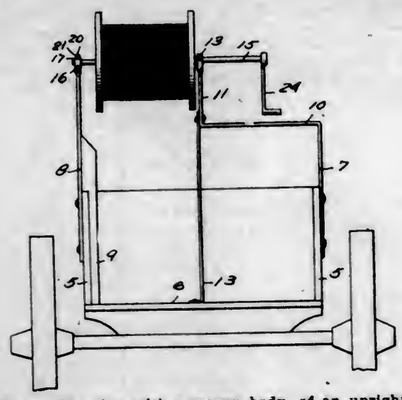


1. The combination with an article of the kind described, having a portion to be heated, of a thermal lifter fast at one end and expansible under the influence of the heat of said article, and a signal lever pivoted close to the free end of said lifter and normally lying lengthwise over the same when the latter is cold, extending from one end at said pivot to the opposite free swinging end adjacent the fast end of the lifter, the free end of the lifter engaging said lever close to the pivot, to swing the lever from said overlying horizontal position to a raised vertical position.

2. The combination with an article of the kind described, having a portion to be heated, of a laminated member fast at one end and arranged to move upwardly at its other end when heated, and a signal lever pivoted close to said movable end and normally lying lengthwise over said laminated member when the latter is cold, said lever being provided adjacent its pivot with a lifting boss projecting against the laminated member, the extreme end of the laminated member extending when cold between the pivot of the lever and said boss.

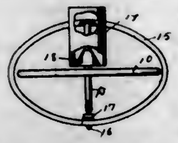
3. The combination with an article of the kind described, having a portion to be heated, of a laminated member fast at one end and arranged to curve upwardly at its other end when heated, a signal lever pivoted close to the latter end and overlying said member lengthwise, the free moving end of the signal lever normally resting over the fixed end of the laminated member and the movable end of the laminated member normally resting close to the pivot of the signal lever, a fixed stop against which the signal lever is moved when indicating maximum heat, said signal lever having a boss close to its pivot facing toward the laminated member, and the latter having such a length that when extended and curved by the action of the heat its end will engage against said boss and hold the lever against said stop.

884,974. WIRE-REEL. WILLIAM O. BACKES, Independence, Kans. Filed July 31, 1907. Serial No. 386,386.



The combination with a wagon body, of an upright secured to one side of the body and extending upwardly therebeyond, an upright secured to the other side of the body and bent at right angles to extend inwardly and thence bent upwardly in a vertical plane, the upper end of the last-mentioned portion and the upper end of the first-mentioned upright being of yoke formation, a bearing mounted for rocking movement in the yoke upon the said upwardly-extending portion of the last-mentioned upright, a shaft journaled in the bearing and adapted to be rocked therewith, the other end of the shaft being journaled in the yoke at the upper end of the first-mentioned upright, a cap plate swiveled to the upper end of one of the arms of the last-mentioned yoke, means for holding the cap plate in a position to close the yoke and retain the shaft therewithin, and a crank handle secured at the inner end of the shaft.

884,975. GYROSCOPIC TOP. ALBERT B. BLY, Des Moines, Iowa. Filed May 21, 1907. Serial No. 374,931.



1. In a device of the class described, the combination of a rotatable wheel, and a series of yielding blades connected with the wheel, normally standing in the same plane as the wheel, and capable of having their free edges inclined to position for serving as propeller blades when currents of air are directed upon them.

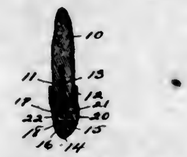
2. In a device of the class described, the combination of a rotatable wheel, comprising a rim and spokes, and a series of yielding blades, each having one edge fixed to a spoke, and the other edge free, each blade normally lying parallel with the rim of the wheel, and capable of being inclined to position for propelling the wheel when currents of air are applied to them.

3. The combination with a gyrating top having a rotatable wheel comprising a rim and spokes, an axle on which the wheel is mounted, and a frame in which the axle is mounted, of a series of yielding propeller blades fixed to the spokes of the wheel, and normally lying in the same plane as the wheel, and capable of having their free edges inclined in the direction required for propelling the wheel when currents of air are applied to them, and a tube supported by the frame, with one end adjacent to the propeller blades.

4. The combination with a gyrating top having a rotatable wheel comprising a rim and spokes, an axle on which the wheel is mounted, and a frame in which the axle is mounted, of a series of yielding propeller blades fixed to the spokes of the wheel, and normally lying in the same plane as the wheel, and capable of having their free edges inclined in the direction required for propelling the wheel when currents of air are applied to them, and a tube supported by the frame, with one end adjacent to the propeller blades, and a cone shaped deflector fixed to the axle of the rotatable wheel, and contained within the end of said tube adjacent to the propeller blades.

884,976. [WITHDRAWN.]

884,977. CROWN AND BRIDGE WORK. CASPER M. B. BOOS, Muscatine, Iowa. Filed Oct. 17, 1904. Serial No. 228,697.

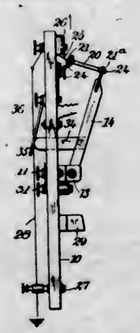


1. A tooth crown, comprising a backing having slots therein, a body, pins in the body extending through the slots and engaging the rear surface of the backing, and a pin guard firmly attached to the backing, having two depressions therein immediately at the rear of the slots in the backing.

2. A capping having a pin extending outwardly from its central portion and substantially parallel with its sides, a backing designed to be securely fixed to the root of a tooth, a backing integral with the capping having slots extending through it, a pin guard secured to the backing over the pins, having depressions therein immediately at the rear of the slots in the backing, a body portion having pins extending rearwardly from it, an angular head thereon designed to pass through said slots and rest in the depressions between the protector and the backing.

3. A tooth crown, comprising a backing and slots therein, a body, pins in the body extending through the slots, an extension of the pin designed to engage the rear surface of the backing, and a pin guard attached to the rear surface of the backing.

884,978. CUT-OUT. JOHN H. BOOTH, FRANK E. BLAUSEY, and ARTHUR M. SMITH, San Pedro, Cal. Filed Jan. 19, 1906. Serial No. 296,796.



1. A cut out comprising a base having line terminals and instrument terminals, said line terminals being below the instrument terminals and comprising lugs, drop levers pivoted to the lugs, said levers having their free ends provided with forks, brackets to which the instrument terminals are connected, said brackets being also provided with forks, fuses resting in the forks and connecting the drop levers with the brackets, carbon blocks having a ground connection connected with the base adjacent to the ends of the fuses resting in the forks of the brackets, a circuit including a signal having its terminals on the base, and arms connected with the drop levers and normally retaining said terminals out of contact with each other.

2. A cut out comprising a base having a line terminal and an instrument terminal, said line terminal being below the instrument terminal and comprising a lug, a drop lever pivoted to the lug, a bracket to which the instrument terminal is connected, a fuse connecting the bracket and the drop lever, a carbon block having a ground connection connecting with the base adjacent to that end of the fuse connected with the bracket, a circuit including a signal having its terminals on the base, and an arm connected with the drop lever and normally retaining said terminals out of contact with each other.

3. A cut-out comprising a base having a line terminal and an instrument terminal, said line terminal being below the instrument terminal and comprising a lug, a drop lever pivoted to the lug, a fuse connecting the instrument terminal with the free end of the drop lever, a circuit including a signal having its terminals on the base, and an arm connected to the drop lever anad normally retaining said terminals out of contact with each other.

4. A cut-out comprising a base having a plurality of line and instrument terminals, drop levers pivoted to the base said line terminals being connected to the drop levers, fuses connecting the instrument terminals and the drop levers, whereby to normally support said drop levers, a circuit including a signal having its terminals on the base, and arms connected with the drop levers and normally retaining said terminals out of contact with each other, said drop levers having a spark gap between them.

5. A cut-out comprising a base having a line terminal and an instrument terminal, a drop lever pivotally mounted on the base said line terminal being connected with the pivotally mounted drop lever, said lever having its free end provided with a fork, a bracket to which the instrument terminal is connected, said bracket being also provided with a fork, a fuse resting in the forks and supporting the drop lever, and a carbon block having a ground connection connected with the cut out adjacent to the end of the fuse which rests in the fork of the bracket.

884,979. JEWEL-BAR. HENRY W. FISHEL, New York, N. Y., assignor to himself and Theodore H. Fishel, New York, N. Y., Copartners, trading as Fishel, Nessler & Company, New York, N. Y. Filed July 12, 1907. Serial No. 383,440.



1. A jewel setting provided with a jewel socket and with projections located adjacent to the socket, the projection being short and thick and of greatest thickness at the base so that they may be upset to form beads overlapping and securing a jewel in the socket.

2. A jewel setting provided with a jewel socket and with upset beads substantially hemispherical in form and overlapping the socket so as to secure the jewel therein.

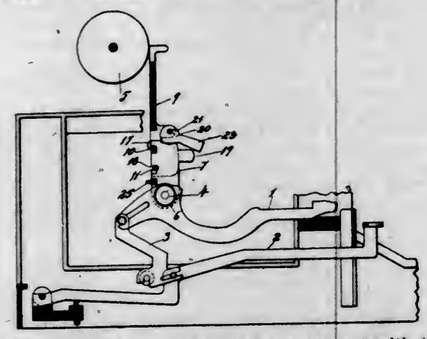
3. A jewel setting provided with a plurality of adjacent jewel sockets and with projections located in the angles between the sockets, the projections being short and thick and of greatest thickness at the base so that they may be upset to form beads overlapping and securing the jewels in the sockets.

4. A jewel setting comprising a body portion provided with a jewel socket in its face, and upset beads integral with the body portion and projecting above the face thereof and overlapping the socket so as to secure the jewel therein, the beads being of a diameter greater than the amount of their projection from the body portion.

5. A jewel setting provided with a plurality of adjacent jewel sockets, curved walls partly surrounding the sockets and having thin edges bent inward against or over the edges of the jewels in the sockets, and projections located in the angles between the sockets and upset to form beads overlapping and securing the jewels in the sockets.

[Claims 6 to 8 not printed in the Gazette.]

884,980. TYPE-WRITING MACHINE. CHARLES GIBBS, New York, N. Y., assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of New Jersey. Filed Jan. 21, 1908. Serial No. 411,879.



1. A typewriting machine having a segment with two seats, a type-bar hanger with two hooks to engage the seats, and means to hold the hooks against said seats.

2. A typewriting machine having a segment, a type-bar hanger to engage it, and means to press the hanger home, said means being releasable and lying when released clear of the horizontal line of the hanger to allow removal of the hanger horizontally.

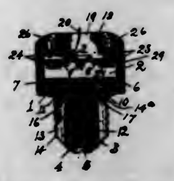
3. A typewriting machine having a segment, a type-bar hanger to engage it, and means to press the hanger home, said means being releasable and lying when released clear of the horizontal line of the hanger and above the same to allow removal of the hanger horizontally.

4. A typewriting machine having a segment, a type-bar hanger to engage it, and a releasable means above the hanger and engaging its upper edge to press the hanger home, said means lying when released clear above the upper edge of the hanger to allow removal of the hanger horizontally.

5. A type-bar hanger having two hooks to engage supporting points, and a substantially straight upper edge to be engaged by a clamping device.

[Claims 6 and 7 not printed in the Gazette.]

884,981. SEPARABLE ATTACHMENT-PLUG. OWEN E. KENNEY, Toledo, Ohio, assignor to The Yost Electric Manufacturing Company, Toledo, Ohio, a Corporation of Ohio. Filed Mar. 16, 1906. Serial No. 306,352.



1. A separable attachment-plug, comprising a base of insulating material having a recessed end and provided therein with oppositely-disposed contact terminals having inwardly-projecting spring-arms, a cap of insulating material having a recessed end and a passage for lead-wires and having spring-contact arms adapted to interlock with the terminals of the base, and an insulating shield or member disposed transversely of the recessed portion of the base and over the terminals therein with its ends bent and inserted between the outer ends of said terminals and the wall of the recess, substantially as described and for the purpose specified.

2. A separable attachment-plug comprising a base of insulating material having a recessed end and provided with a central aperture and side apertures, screws passed through each of said apertures, oppositely-disposed U-shaped contact terminals secured within the recess by the screws passing through said side apertures, said terminals having their arms disposed inwardly and one having its inner arm prolonged and engaged by the screw in the central aperture, an insulating shield disposed over the contact terminals, a cap of insulating material having a central lead-wire passage and a recessed end provided in its bottom with opposite segmental recesses, binding-post plates secured within said segmental recesses by screws and each having an end turned back to form a contact terminal for passing to the rear of and locking with the free arm of one of the base terminals whereby to retain the base and cap together and form a circuit, said insulating shield being prevented from removal by the clamping together of the cap and base, substantially as and for the purpose described.

884,982. MANUFACTURE OF CIGARS. JOSEPH B. DE LÉRY, New York, N. Y., assignor to Nora B de Lery, New York, N. Y. Filed May 16, 1907. Serial No. 373,964.



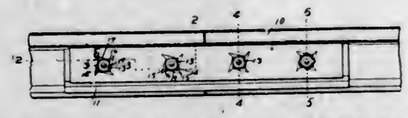
1. The herein described improvement in the manufacture of cigars which consists in placing in the tobacco of the cigar before the cigar is rolled a fibrous cord or strip saturated with a liquid germicide and disinfectant, and then rolling the cigar and applying the wrapper thereto.

2. The herein described improvement in the manufacture of cigars which consists in placing in the tobacco of the cigar before the cigar is rolled a fibrous cord or strip saturated with a liquid germicide and disinfectant, and a liquid flavoring substance, and then rolling the cigar and applying the wrapper thereto.

3. A cigar containing a cord or strip of fibrous substance saturated with a liquid germicide and disinfectant.

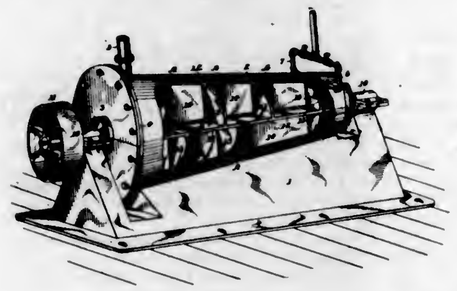
4. A cigar containing a cord or strip of fibrous substance saturated with a liquid germicide and disinfectant and with a flavoring substance.

884,983. NUT-LOCK. LEROY J. LINDSAY, Seymour, Iowa, assignor of one-third to James T. Phillips and one-third to John C. Phillips, Seymour, Iowa. Filed Jan. 14, 1907. Serial No. 352,206.



An improved nut locking washer comprising a flat body portion, a flat nut bearing face offset from the body portion and of a size and shape to conform to the nut being used, and capable of having a nut seated wholly against said face, the material between the flat body portion and the flat face being formed of beveled portions having a minimum degree of inclination at one end and a substantially right angled shoulder at the other end, one of said beveled portions being arranged at each side of the nut bearing face, the entire washer being formed of a single piece of resilient sheet metal, the beveled portions thereof being capable of yielding and flattening out when engaged by the corners of a nut, and also capable of returning to normal position when the nut rests upon the nut bearing face, the said nut bearing face also being provided with a bolt opening at its center, and the entire washer being uncut except at said bolt opening.

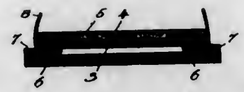
884,984. ROTARY ENGINE. THOMAS H. LUKENS, Rochester, Pa., assignor of one-half to John M. Grim, Rochester, Pa. Filed July 10, 1907. Serial No. 383,040.



1. A rotary engine having a cone shaped cylinder suitably supported, with admission and exhaust ports arranged therethrough; a cone shaped turbine wheel operatively arranged inside of said cylinder and provided with a series of propeller blades extending longitudinally throughout the length of the turbine; a series of partition walls arranged between the blades, thus forming a plurality of compartments, said partition walls being so placed, with respect to the blades, that the motive agency in passing from the admission to the exhaust end of the cylinder will take a spiral course through said compartments; and a discharge port arranged through the propelling blade in each compartment.

2. A rotary engine having a cone shaped cylinder suitably supported, with admission and exhaust ports arranged therethrough, the admission port being provided with a nozzle shaped supply pipe; a cone shaped turbine wheel operatively arranged inside of said cylinder on which, at the narrowest end of the cylinder, is an admission chamber consisting of a plurality of communicating compartments, and having a single exhaust port arranged therein; a series of propeller blades arranged on said turbine wheel and extending longitudinally throughout the length thereof; a series of partition walls arranged between the blades, thus forming a plurality of exhaust compartments, increasing in size and capacity as they approach the discharge end of the cylinder, and so placed, with respect to each other, that the motive agency, in passing from the admission chamber, will take a spiral course to the exhaust port; and a discharge port arranged through the propeller blade in each compartment.

884,985. INSOLE. GEORGE E. MANN, Randolph, Mass., assignor of one-half to James A. Brennan, Randolph, Mass. Filed Jan. 18, 1908. Serial No. 411,385.

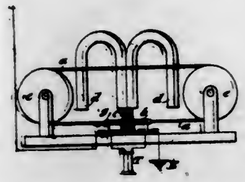


1. An insole of a shoe comprising a body member, a cover or lining and an intermediate layer of cushion material, said body member, cushion material and lining being secured together along the shank of the insole but left free from and unattached to each other around the toe of the insole.

2. A shoe comprising an insole and an upper sewed thereto, said insole being formed with a body portion having a shoulder to which the upper is sewed, a layer of cushion material superimposed on the body portion and a cover for the cushion material, said cover and cushion material being sewed to the body of the insole along the shank of the shoe but left free from and unattached thereto around the toe of the shoe.

3. An insole for a shoe comprising a body member, a cover or lining and an intermediate layer of cushion material, said body member, cushion material and lining being secured together along the shank of the insole, and the lining being left free from and unattached to the cushion material around the toe of the insole.

884,986. WIRELESS TELEGRAPHY. GUGLIELMO MARCONI, London, England, assignor to Marconi Wireless Telegraph Company of America, a Corporation of New Jersey. Filed Nov. 28, 1902. Serial No. 132,974.



1. At a receiving-station in a wireless telegraph system, the combination of a core of magnetic material, means for producing a varying magnetic field in said core, and means inductively affected by the core for receiving oscillations, substantially as described.

2. At a receiving-station in a wireless telegraph system, the combination of a core of magnetic material, means for producing a varying magnetic field, a coil surrounding the core, and means for causing the received oscillations to pass through the coil, substantially as described.

3. At a receiving-station in a wireless telegraph system, the combination of a core of magnetic material, means for producing a varying magnetic field, a coil surrounding the core, means for causing the received oscillations to pass through the coil, a receiving instrument and a secondary coil likewise surrounding the core and having its ends connected to the receiving instrument, substantially as described.

4. At a receiving-station in a wireless telegraph system, the combination of a core of magnetic material, means for producing a varying magnetic field, a coil surrounding the core, an oscillation-receiving conductor connected to one end of the coil, and a capacity connected to the other end of the coil, substantially as described.

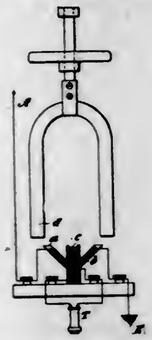
5. At a receiving-station in a wireless telegraph system, the combination of a core of magnetic material, means for producing a varying magnetic field, a coil surrounding the core, an oscillation-receiving conductor connected to one end of the coil, a capacity connected to the other end of the coil, a receiving-instrument and a second coil likewise surrounding the core and having its ends connected to the receiving instrument, substantially as described.

[Claims 6 to 31 not printed in the Gazette.]

884,987. WIRELESS TELEGRAPHY. GUGLIELMO MARCONI, London, England, assignor to Marconi Wireless Telegraph Company of America, a Corporation of New Jersey. Original application filed Nov. 28, 1902, Serial No. 132,974. Divided and this application filed Feb. 2, 1903. Serial No. 141,398.

1. At a receiving-station in a wireless telegraph system, an oscillation-receiving conductor, a magnet for creating

a magnetic field, a magnetizable member located in said magnetic field and connected to said conductor, means for moving the magnet to and from the magnetizable member, and a receiving-instrument affected by the changes in magnetism of the magnetizable member, whereby oscillations received from a distant transmitting station are rendered intelligible as signals, substantially as described.



2. At a receiving-station in a wireless telegraph system, an oscillation-receiving conductor, a magnet for creating a magnetic field, a magnetizable member connected to said conductor and located in said magnetic field, means for rotating the magnet above the magnetizable member, and a receiving-instrument affected by the changes in magnetism of said magnetizable member, whereby oscillations received from a distant transmitting station are rendered intelligible as signals, substantially as described.

3. At a receiving-station in a wireless telegraph system, an oscillation-receiving conductor, a magnet, a magnetizable member connected to said conductor and located in the field created by said magnet, means for moving the magnet to vary the magnetic field, and a receiving-instrument affected by the changes in magnetism of said magnetizable member, whereby oscillations received from a distant transmitting station are rendered intelligible as signals, substantially as described.

4. At a receiving-station in a wireless telegraph system, an oscillation-receiving conductor, a movable magnet, a magnetizable member located in the field created by said magnet, a coil for said magnetizable member connected to the receiving-conductor, and a receiving-instrument affected by the changes in magnetism of said magnetizable member, whereby oscillations received from a distant transmitting station are rendered intelligible as signals, substantially as described.

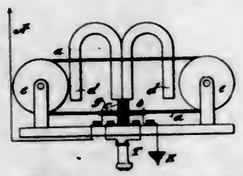
5. At a receiving-station in a wireless telegraph system, an oscillation-receiving conductor, a magnet, a stationary magnetizable member located in the field created by said magnet and connected to said conductor, means for creating alternations or reversals of magnetism in the field, and a receiving-instrument affected by the changes in magnetism of said member, whereby oscillations received from a distant transmitting station are rendered intelligible as signals, substantially as described.

[Claims 6 to 15 not printed in the Gazette.]

884,988. DETECTING ELECTRICAL OSCILLATIONS. GUGLIELMO MARCONI, London, England, assignor to Marconi Wireless Telegraph Company of America, a Corporation of New Jersey. Original application filed Nov. 28, 1902, Serial No. 132,974. Divided and this application filed Feb. 2, 1903. Serial No. 141,399.

1. The method of detecting electrical oscillations which consists in receiving said oscillations by means of a coil maintained in a magnetic field, which field is created independently of received oscillations and of the apparatus which renders received oscillations intelligible, substantially as described.

2. The method of detecting electrical oscillations which consists in receiving said oscillations by means of a coil maintained in a magnetic field, which field is continually varied independently of the oscillations, substantially as described.



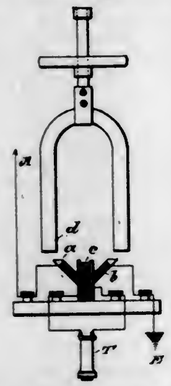
3. The method of detecting electrical oscillations which consists in receiving said oscillations by means of a coil maintained in a magnetic field, which field is periodically reversed, substantially as described.

4. The method of detecting electrical oscillations which consists in receiving said oscillations by means of a coil maintained in a magnetic field, which field is continually varied during the receipt of the oscillations, substantially as described.

5. The method of detecting electrical oscillations which consists in creating a magnetic field at a receiving station independently of received oscillations, inductively connecting with said field an instrument adapted to render the received oscillations intelligible, and utilizing the received oscillations to vary the current of the circuit of said instrument, substantially as described.

[Claims 6 to 18 not printed in the Gazette.]

884,989. WIRELESS TELEGRAPHY. GUGLIELMO MARCONI, London, England, assignor to Marconi Wireless Telegraph Company of America, a Corporation of New Jersey. Original application filed Nov. 28, 1902, Serial No. 132,974. Divided and application filed Feb. 2, 1903, Serial No. 141,399. Again divided and this application filed Feb. 9, 1904. Serial No. 192,739.



1. In a wireless telegraph system, the method of detecting electrical oscillations of high frequency, which consists in creating a rotating magnetic field at a receiving station, abruptly varying said field by the received oscillations, and utilizing the variations in said field to create intelligible signals.

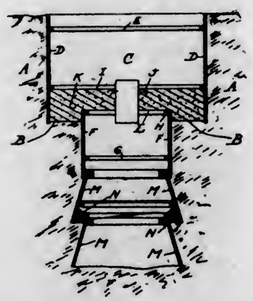
2. In a wireless telegraph system, the method of detecting electrical oscillations of high frequency, which consists in creating a rotating magnetic field at a receiving station, partially localizing said field at a point within the same, varying the magnetism of the localized portion of the field by the received oscillations, and utilizing such variations to create intelligible signals.

3. In a wireless telegraph system, the method of detecting electrical oscillations of high frequency, which consists in creating a magnetic field at a receiving station, localizing said field by a stationary member having a magnetic permeability greater than that of air, varying the flux through said stationary member by the movement of a magnetic body, modifying said flux by the received oscillations and utilizing such modifications to create intelligible signals, substantially as described.

4. In a wireless telegraph system, the method of detecting electrical oscillations of high frequency, which consists in creating a magnetic field at a receiving station, localizing said field by a stationary member having a magnetic permeability greater than that of air, varying the flux through said stationary member by the movement of a magnetic body in proximity thereto, abruptly modifying said flux by the received oscillations and utilizing said abrupt modifications to actuate a telephone, substantially as described.

5. In a wireless telegraph system, the method of detecting electrical oscillations of high frequency, which consists in creating a magnetic field at a receiving station, localizing said field by a stationary member having a magnetic permeability greater than that of air, varying the flux through said stationary member by the movement of a magnetic body in proximity thereto, abruptly modifying said flux by the received oscillations, and utilizing such abrupt modifications to induce current pulsations in a telephone circuit, substantially as described.

884,990. METHOD OF CONSTRUCTION. JAMES C. MEEM, Brooklyn, N. Y., assignor of one-third to Frederick L. Cranford and one-third to Walter V. Cranford, Brooklyn, N. Y. Filed Sept. 6, 1907. Serial No. 391,577.



1. A method of building a pneumatic caisson for excavation, which consists in driving side walls from above below the level of the water, building a fixed roof thereon, and extending the sides from the forward end as the excavation proceeds.

2. The method of building a pneumatic caisson consisting in building a fixed air proof top section extending from below the water level upward, and extending the caisson from the water level downward by inclined sections in advance of the excavation.

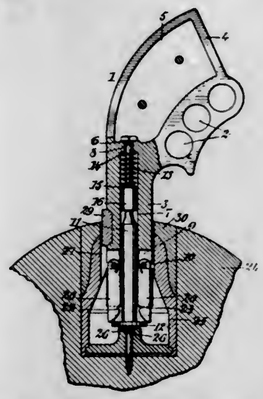
3. A method of making a sub-aqueous excavation which consists in building a fixed air proof caisson extending from below the water level upwards, preventing rise of water within the caisson, and extending the caisson forwardly by additional sections in the direction of and in advance of the excavation.

4. A method of building a pneumatic caisson consisting in forming a caisson of driven sheeting or piling to a penetration below the level of the water, attaching a fixed roof thereto above the water level, providing a shaft therein, and sheeting at the forward end in advance of the excavation.

5. A method of building a pneumatic caisson consisting in forming a caisson of driven sheeting or piling to a penetration below the level of the water, attaching a fixed roof thereto above the water level, providing a shaft for the caisson, sheeting at the forward end in advance of the excavation, and applying air pressure.

[Claims 6 and 7 not printed in the Gazette.]

884,991. BOWLING-BALL AND HANDLE. FELIX J. MCGUANE, Chicago, Ill. Filed Jan. 26, 1907. Serial No. 354,199.



1. An article of manufacture, consisting of a bowling ball having a hole therein, a grip device provided with a rigid stem adapted to be inserted in the hole, a key for locking the stem in the hole, and means in connection with the stem and the hole for moving the key into locking position.

2. An article of manufacture, consisting of a bowling ball having a hole therein, said hole increasing in diameter towards its bottom, a grip device having a rigid stem adapted to be inserted into the hole, a key for locking the stem in the hole, and means in connection with the stem and the hole for moving the key into locking position.

3. An article of manufacture, consisting of a bowling ball having a hole therein, said hole increasing in diameter toward its bottom, a grip device provided with a rigid stem adapted to be inserted into the hole, a key pivoted to the stem, a spring for normally holding the key against the stem, and means in connection with the stem and the hole for moving the key outwardly to lock the stem in the hole.

4. An article of manufacture, consisting of a bowling ball having a hole therein, a grip device having a rigid stem adapted to be inserted into the hole, a longitudinal slot in the stem extending a distance from its inner terminal, a key pivoted in the slot for locking the stem in the hole, and means in connection with the stem and the hole for moving the key into locking position.

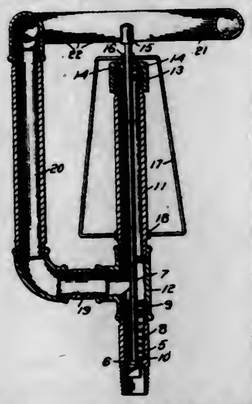
5. An article of manufacture consisting of a bowling ball having a hole therein, a grip device with a stem adapted to fit the said hole in the ball, a longitudinal slot in the stem extending a distance from its inner terminal, an annular groove on the periphery of the stem which cuts the said slot, a key fitting the said slot, which is pivoted by a ring passing around the said groove, means to hold the said key normally within the perpendicular plane of the said slot and means to extend it outwardly.

[Claims 6 to 24 not printed in the Gazette.]

884,992. TUMBLER-WASHER. EDWARD J. RABIDEAU, Inglewood, Wash. Filed Dec. 7, 1906, Serial No. 346,726. Renewed Feb. 28, 1908. Serial No. 418,288.

A tumbler washer of the type set forth comprising the combination with a main conductor having a valve seat, of an alined conductor, and an angularly extending conductor communicating therewith above said valve seat, an annu-

lar perforated tube secured to the upper end of said angularly extending conductor and having its center coincident with said alined conductor, a cap having perforations in its top and a threaded portion engaged with the upper end of said alined conductor, a depressible valve stem disposed axially said alined conductor and provided with a valve below said valve seat, a spring for raising said stem to position to close said valve, the upper end of said stem projecting through and beyond said cap, and a skeleton frame of frusto-pyramidal form comprising a collar surrounding said stem, a collar surrounding said conductor, and wire bars comprising upper and lower horizontal arms



secured to said respective collars and extending radially therefrom and inclined vertical portions connecting the outer ends of said arms, said inclined portions being disposed in upwardly converging relation.

884,993. METHOD OF PROVIDING CASKS WITH A COATING. REINHOLD ROSTOCK, Klosterneuburg, Austria-Hungary. Filed Mar. 11, 1907. Serial No. 361,812.

1. A method for providing cement or concrete casks or the like with a protective coating, consisting in first lining the same with a plaster mixed with fibers, then impregnating the lining with a very fluid substance—such as asphalt, tar, and the like, and causing it to penetrate said lining and thus contact with the surface of the cask and finally applying the protective coating—such as resin, varnish, and the like.

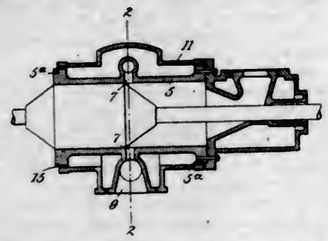
2. A method of coating cement or concrete casks or the like which consists in first lining the cask with a plaster, then impregnating the lining with a very fluid substance adapted to unite with the protective coating and the plaster, and causing it to penetrate said lining and thus contact with the surface of the cask, and finally applying the protective coating, substantially as described.

884,994. METHOD FOR PROVIDING CEMENT OR CONCRETE CASKS WITH A PROTECTIVE COATING. REINHOLD ROSTOCK, Klosterneuburg, Austria-Hungary. Original application filed Mar. 11, 1907, Serial No. 361,812. Divided and this application filed July 27, 1907. Serial No. 385,894.

The method of lining concrete casks with a protective coating whereby to produce an intimate adhesion between the cask and the coating which consists in applying to the surface of the cask a coating of plaster impregnated with ozocerite or ceresin, substantially as described.

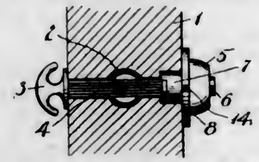
884,995. CYLINDER FOR GAS-ENGINES. PETER SCHWERM, Hanover, Germany. Original application filed Mar. 1, 1906, Serial No. 303,581. Divided and this application filed Feb. 23, 1907. Serial No. 358,786.

A gas engine cylinder provided with an annular exhaust chamber, a series of curved exhaust ports connecting the cylinder with the chamber, a cooling jacket surrounding the cylinder, a cooling channel adjoining the ports and



a perforated partition intermediate jacket and channel, substantially as specified.

884,996. INDICATOR FOR DOOR-LOCKS. HENRY G. VOIGHT and CHARLES J. CALEY, New Britain, Conn., assignors to Russell & Erwin Manufacturing Company, New Britain, Conn., a Corporation of Connecticut. Filed Nov. 29, 1907. Serial No. 404,292.



1. In an indicator for door locks, a frame having a central tubular aperture, a push button therein, a sleeve carried at the inner end of the push button, said sleeve having an angular slot and a pin carried by said frame entering said slot, and means for connecting said push button with a door locking device.

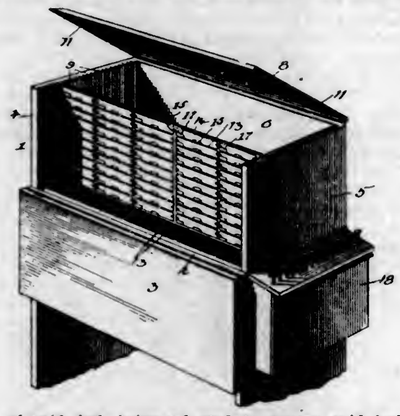
2. An indicating mechanism for a door locking device, comprising a case having a central tubular aperture, a push button slidable therein and guided thereby, a spring space between said parts, a spring therein, a sleeve carried by said push button, and having an angular groove therein, a pin carried by said frame and entering said groove, and means for connecting said sleeve and push button to said door locking mechanism.

3. An indicating mechanism for a door locking device, comprising an operating rotatable spindle, a sleeve slidable thereon but rotatable therewith, a push button carried by said sleeve, a frame or case surrounding said push button, means for normally pressing said push button outwardly, an extension from said sleeve having a groove therein, a portion of said groove being in the line of longitudinal movement of the button, another portion of said groove being in the line of rotary movement of said sleeve, and a pin carried by the frame entering said groove.

4. In an indicator for door locks, one part including a frame having a guide-way therein, another part including a push button adapted to said guide-way, said parts being movable relatively to each other, one of said parts having an angular locking slot or passage, the other part having a projection or pin entering said slot, and means for connecting said push button part with a door-locking device.

884,997. FILE. LORENZ F. BOEDECKER, Chicago, Ill., assignor to Paul O. Stensland, Chicago, Ill. Filed Jan. 5, 1906. Serial No. 294,810.

In a file, in combination, a casing having vertical guide grooves in two of its opposite walls; card-supporting plates in said casing with their ends lying in said guide grooves; a pivoted lever having a link connection with each of said card-supporting plates; a vertically extending key rod for each of said levers, said key rod having a locking projection thereon; a coiled spring surrounding each key rod for counterbalancing said card-supporting plates; and a slidable detent fork, the closed



end of said fork being adapted to engage said locking projection.

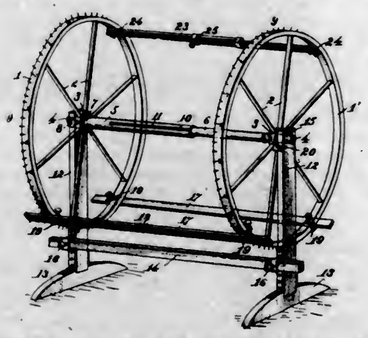
884,998. ORNAMENTAL ARTICLE. RALPH W. BOOTH, New York, N. Y., assignor to Ralph W. Booth, Jr., Brooklyn, N. Y. Filed May 6, 1907. Serial No. 372,252.



1. An article of manufacture for the purpose described, comprising a base bearing on its face a picture, advertising matter, directions, or other matter to be displayed, a layer of transparent binding material arranged on the face of the base and over the matter thereon, and a layer of commingled bronze and transparent sand arranged on and held by the layer of binding material.

2. An article of manufacture for the purpose described, comprising a base of glass bearing a picture, advertising matter, directions, or other matter to be displayed, a layer of transparent binding material arranged on the face of the base, and a layer of commingled bronze and transparent sand arranged on and held by the layer of binding material.

884,999. CURTAIN-STRETCHER. JOHN L. BRAGDON, Chicago, Ill. Filed June 22, 1907. Serial No. 380,237.



1. In a device of the class described a shaft, a rotary drum mounted upon said shaft and comprising end members longitudinally adjustable and rotatably fixed in relation to each other, a plurality of pins in the peripheries of said members, and a plurality of longitudinal bars adjustably secured to said end members, and a suitable support, substantially as described.

2. In a device of the class described, a shaft, a rotary drum mounted upon said shaft and comprising end members longitudinally adjustable and rotatably fixed in relation to each other, a plurality of pins in the peripheries of said members, a pair of longitudinal bars adapted to be secured to said end members, a plurality of pins on said bars, a longitudinally adjustable bar detachably secured to said members, and a suitable support, substantially as described.

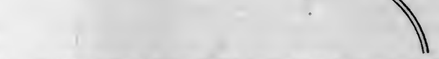
3. In a device of the class described, a supporting frame in combination with a two part telescoping shaft mounted in said frame, and a drum mounted on said shaft, said drum comprising a pair of end members having a plurality of pins in their peripheries, substantially as described.

4. In a device of the class described, a supporting frame and a two part telescoping shaft, in combination with a drum, said drum comprising end members fixed upon respective parts of said shaft and having pins in their peripheries, and means for rigidly holding said end members against relative movement, substantially as described.

5. In a device of the class described, a supporting frame and a two part telescoping shaft, in combination with a drum, said drum comprising end members fixed upon respective parts of said shaft and having pins in their peripheries, and a plurality of bars detachably fixed to said end members and adapted to prevent relative longitudinal movement thereof, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

885,000. SWITCH FOR TROLLEYS. EWAN CAMERON, Brooklyn, N. Y., assignor to Alan J. Cameron, Brooklyn, N. Y. Filed Apr. 25, 1907. Serial No. 370,152.



1. A switch for an overhead trolley, which comprises a section of track, the free end of which is mounted upon a slide and supported thereby, and an intermediate pivotal support which allows the track when flexed to pivot upon the support.

2. A switch for an overhead trolley, which comprises a section of track, the free end of which is mounted upon a support, and an intermediate pivotal support which allows the track when flexed to pivot upon the support.

3. A switch for overhead trolleys having a depending support for the rails, a moving member and a screw for moving such member there being a nut on the moving member, with which the screw directly engages.

4. A switch for overhead trolleys having in combination, a plurality of fixed rails and a moving rail, with means for moving the rail across the ends of the fixed rails, and a bar mounted upon and carried by the moving rail and extending across the ends of the fixed rails to provide a means for closing the ends of such rails.

5. A switch for an overhead trolley, which comprises the moving member and fixed members, throwing mechanism and a plate, the moving member having a shoe and the fixed members being connected together by the plate upon which the shoe slides, the said plate supporting the throwing mechanism.

[Claims 6 and 7 not printed in the Gazette.]

885,001. TRACK-SUPPORT FOR OVERHEAD TROLLEYS. EWAN CAMERON, Brooklyn, N. Y., assignor to Alan J. Cameron, Brooklyn, N. Y. Filed Apr. 25, 1907. Serial No. 370,153.

1. A support for an overhead track having a bracket with means for direct engagement with the track, the said

bracket being pivotally connected to its support through a vertical pivot.

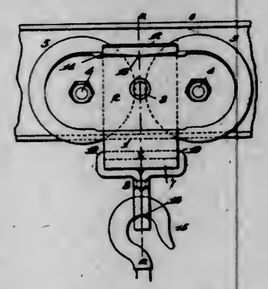


2. A support for an overhead track which comprises a bracket having fingers adapted to engage with the lower faces of the upper flange of the track and a bolt engaging with the upper face of the upper flange, the said bracket being pivoted to a hanger, which is provided with fingers adapted to engage with a supporting I beam.

3. A support for an overhead track which comprises a bracket having fingers adapted to engage with the lower faces of the upper flange of the track and a bolt engaging with the upper face of the upper flange, for holding the fingers in engagement with the track.

4. A support for an overhead track which comprises a bracket having fingers adapted to engage with the lower face of the upper flange of the track, the said bracket being pivoted to a hanger, which is provided with fingers adapted to engage with a supporting I beam.

885,002. TROLLEY. EWAN CAMERON, Brooklyn, N. Y., assignor to Alan J. Cameron, Brooklyn, N. Y. Filed Apr. 25, 1907. Serial No. 370,154.



1. A trolley for overhead rails, having a U-shaped yoke, the limbs of which carry the wheels, the body of the yoke being sharply bent to form the limbs, and the portion between the limbs being uncurved, the distance between the limbs being greater than the distance between the flanges of the wheels, and having means for reinforcing the yoke between the limbs, whereby any flexing of the yoke by overload will be confined to the bent portions and will cause a more perfect bearing of the wheels upon the rail.

2. A trolley for overhead rails having a yoke, and cross pieces carrying the wheels, the limbs of the yoke overhanging the cross pieces, and being beveled at that point to form blunt knife-edges.

3. A trolley for overhead rails having a support for the hook, the support being fixed in relation to the trolley, there being a single point of contact between the hook and support irrespective of the relative position of the hook and support, the support holding the hook parallel with the rail.

4. A trolley for overhead rails having a support, a beveled hole in the support, the said hole being for engagement of the hook, the said hole extending in the same direction as the rail and the apex of the bevel lying at right angles to the rail.

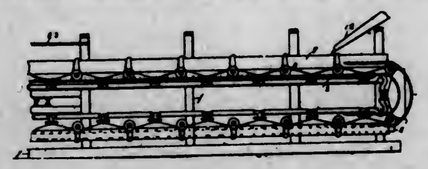
5. A trolley for overhead rails, which has a yoke and a link engaging with the yoke, the said link being made in two pieces with hooks engaging with the yoke, the two pieces being secured together.

885,003. WRENCH. CHARLES E. HAWKINS, Braddock, Pa., assignor of one-half to Alfred T. Thompson, Braddock, Pa. Filed May 17, 1907. Serial No. 374,232.



A wrench comprising a shank having a toothed portion and fixed jaw carried by one end of the shank, a handle fixed to the opposite end of the shank, a movable jaw slidably mounted upon said shank, said movable jaw at its upper end formed with a laterally-extending strap surrounding and projecting from the shank, said strap having its inner end beveled, said movable jaw provided at its lower end with a recess in the forward face thereof, and further having a laterally-extending strap adapted to surround said shank, said lower strap of greater length than said upper strap and so that the inner face of the lower strap will extend in a plane in which extends the outer face of the upper strap, a spring having its lower end fixed rigidly to the inner face of the lower strap, said spring having its lower edge flush with the lower edge of the lower strap and said spring having its upper end bowed and the remaining portion straight, said spring of a length as to terminate at a point removed from the upper strap, a vertically-extending pin detachably-carried by said movable jaw and extending across the recess, a worm journaled upon said pin engaging the toothed edge of the shank, and means extending in the lower portion of the movable jaw and through said pin for detachably connecting it in position.

885,004. PROCESS FOR SEPARATNG THE LIQUID FROM THE SOLID PORTIONS OF TREATED ORES. EDWARD P. LYNCH, Mill Valley, Cal. Original application filed Oct. 23, 1905, Serial No. 284,076. Divided and this application filed Oct. 15, 1906. Serial No. 339,102.



1. The herein described process of separating the liquid from the solid portions of treated ores and other substances, which consists in simultaneously subjecting a substantially thin body of the same, while in an extended form, to the action of suction from the bottom and decantation from the top.

2. The herein described process of separating the liquid from the solid portions of treated ores and other substances, which consists in automatically and simultaneously subjecting a forwardly moving stratum of the same to the action of suction from the bottom and decantation from the top.

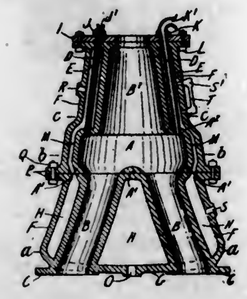
3. The herein described process of separating the liquid from the solid portions of treated ores and other substances, which consists in removing the free liquid by suction and decantation and then removing the absorbed portion by introducing other liquid at the top of the mass of the solid portion and simultaneously therewith removing the absorbed portion by suction.

4. The herein described process of separating the liquid from the solid portions of treated ores and other substances, which consists in subjecting a forwardly moving, substantially thin stratum of the same to the action of suction from the bottom and successively removing the clarified top portion of the liquid by decantation and removing the absorbed portion by introducing wash water to the top of the solid mass while the action of suction still continues.

5. The herein described process of separating the liquid from the solid portions of treated ores and other substances, which consists in removing the same by suction, decantation and replacement, and then removing the waste in an automatic and continuous manner.

[Claims 6 to 8 not printed in the Gazette.]

885,005. FEED-WATER HEATER. GRANVILLE W. J. WHITE, Ryde, New South Wales, Australia. Filed Nov. 20, 1905, Serial No. 288,265. Renewed Aug. 7, 1907. Serial No. 387,507.



1. In a feed-water heater, the combination of an expanded steam diffusion chamber with an exhaust pipe in which it is located and means for the passage of feed water in proximity to said chamber though exterior thereto and separated from the steam which flows through the said chamber substantially as set forth.

2. In a feed-water heater, the combination of an exhaust pipe and a diffusion chamber arranged therein with an outer casing forming a water circulating chamber between it and the shell of said chamber and an inlet and outlet for permitting the flow of water through said space substantially as set forth.

3. In a feed-water heater, the combination of an exhaust pipe and a steam diffusion chamber arranged between sections of the same, with a casing surrounding said chamber and leaving between it and the wall of the latter a water circulating chamber and sediment chamber substantially as set forth.

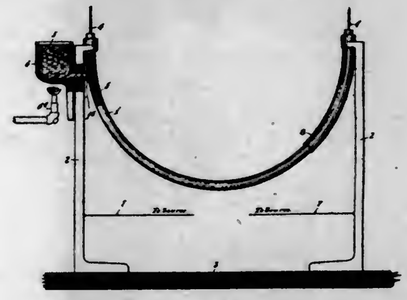
4. In a feed-water heater, the combination of an exhaust pipe and a steam diffusion chamber located between sections of the same with a casing surrounding said chamber and a base plate A^1 and crown pipe A^2 connecting said parts as explained, to leave a water circulating chamber and sediment chamber exterior to said diffusion chamber substantially as set forth.

5. In a feed-water heater, the combination of a steam diffusion chamber with an exhaust pipe in which it is located, a casing surrounding said chamber and leaving a water circulating chamber exterior thereto and supplementary steam pipes which extend from said steam diffusion chamber up through said water circulating chamber substantially as set forth.

[Claims 6 and 7 not printed in the Gazette.]

REISSUES.

12,779. PROCESS OF PLATING METALLIC BODIES. GEORGE A. GOODSON, Minneapolis, Minn., assignor to Goodson Electric Galvanizing Company, Minneapolis, Minn., a Corporation of Minnesota. Filed Nov. 24, 1905. Serial No. 288,981. Original application filed Mar. 31, 1904, Serial No. 200,913. Divided and application filed June 9, 1904, Serial No. 211,745. Original Patent No. 789,690, dated May 9, 1905. (Specimens.)



1. The process of plating wire or other metal, which consists in bringing the same into contact with molten plating metal, and in electrically exciting contacting surfaces of the molten plating metal and the metal to be plated.

2. The process of plating wire or other metallic bodies, which consists in submerging the same in a bath of molten plating metal, and in passing a current of electricity through the plating metal and the metal to be plated.

3. The process of plating wire or other metallic bodies, which consists in maintaining an attenuated body of plating metal around a portion of the metal to be plated, and in passing an electric current through said attenuated body of plating metal and the submerged portion of the metal to be plated, substantially as described.

4. The process of plating wire or other metallic bodies, which consists in drawing the same, under a continuous movement, through an attenuated body of plating metal, and in passing an electric current simultaneously through the plating metal and the metal to be plated, substantially as described.

5. The process of electroplating, which consists in submerging the metal to be plated in a bath of molten plating metal, and subjecting both to an electric current, with the metal to be plated, and the molten plating metal, connected up in multiple, in a common electric circuit.

[Claims 6 to 9 not printed in the Gazette.]

DESIGNS.

39,258. EMBLEM. ZOETH S. ELDREDGE, San Francisco, Cal. Filed Oct. 25, 1907. Serial No. 399,227. Term of patent 7 years.



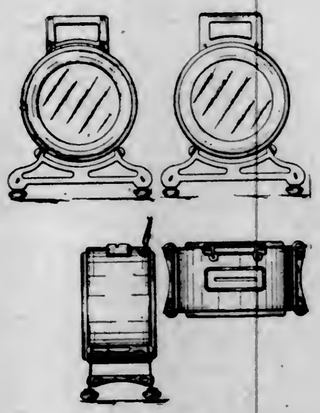
The ornamental design for an emblem as shown.

39,259. HEAD FOR FOBS, BROOCHES, PINS, OR SIMILAR ARTICLES. HERMAN KOLLMAR, Newark, N. J., assignor to Burstow, Kollmar & Co., Newark, N. J., a Firm. Filed Feb. 6, 1908. Serial No. 414,659. Term of patent 3½ years.



The ornamental design for a head for fobs, brooches, pins or similar articles, as shown.

39,260. MONEY-BOX. BENNO VOM EIGEN, Newark, N. J., assignor to Aug. Goertz & Co., a Corporation of New Jersey. Filed Feb. 8, 1908. Serial No. 414,989. Term of patent 7 years.



The ornamental design for a money-box, as shown.

39,261. CIGAR-BAND. FREDERICK A. C. KAISER, Hoboken, N. J. Filed Feb. 6, 1908. Serial No. 414,657. Term of patent 7 years.



The ornamental design for a cigar band as shown.

39,262. COLOR-CARD. THOMAS R. MANLEY, Montclair, N. J., assignor to William Openhym & Sons, New York, N. Y. Filed Dec. 17, 1907. Serial No. 406,942. Term of patent 3½ years.



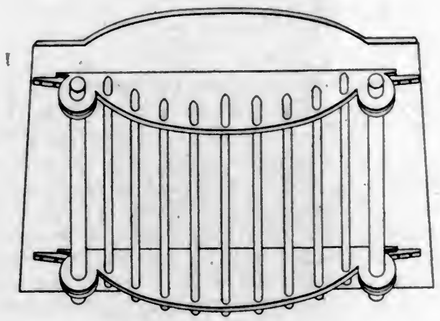
The ornamental design for a color card, as shown.

39,263. STICKY FLY-PAPER. CHARLES SCHEDELL, Philadelphia, Pa. Filed Feb. 17, 1908. Serial No. 416,432. Term of patent 7 years.



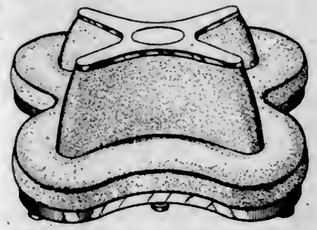
The ornamental design for a sticky fly plate, as shown.

39,264. WALL-CAGE. HARRY L. JONES, Philadelphia, Pa. Filed Jan. 3, 1908. Serial No. 409,245. Term of patent 14 years.



The ornamental design for a wall cage, as shown.

39,265. PILLAR-SEAT. JOHN B. HOLTZCLAW, Los Angeles, Cal. Filed Jan. 15, 1908. Serial No. 411,026. Term of patent 14 years.



The ornamental design for a pillar seat, as shown.

39,266. VEHICLE-BODY. JOHN C. KAISER, Kenton, Ohio. Filed Feb. 8, 1908. Serial No. 414,988. Term of patent 3½ years.



The ornamental design for a vehicle body, as shown.

TRADE-MARKS

PUBLISHED APRIL 14, 1908.

The following trade-marks have been adjudged entitled to registration under the act of February 20, 1905, and are published in compliance with section 6 of said act. Said section provides:

"Any person who believes he would be damaged by the registration of a mark may oppose the same by filing notice of opposition, stating the grounds therefor, in the Patent Office within thirty days after the publication of the mark sought to be registered, which said notice of opposition shall be verified by the person filing the same before one of the officers mentioned in section two of this act. If no notice of opposition is filed within said time the Commissioner shall issue a certificate of registration therefor, as hereinafter provided for."

Marks which are stated to have been "Used ten years" are registrable under the last proviso of section 5 of said act, which is as follows:

"And provided further, That nothing herein shall prevent the registration of any mark used by the applicant or his predecessors, or by those from whom title to the mark is derived, in commerce with foreign nations or among the several States, or with Indian tribes, which was in actual and exclusive use as a trade-mark of the applicant or his predecessors from whom he derived title for ten years next preceding the passage of this act."

Section 14 of said act provides for the following fee:

"On filing notice of opposition to the registration of a trade-mark, ten dollars."

Ser. No. 12,067. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) PRIESTLEYS LIMITED, Bradford, England. Filed Aug. 29, 1905. Used ten years.



Particular description of goods.—Worsted, Woolen, and Silk Piece Goods and Dress Goods.

Ser. No. 15,490. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) HARRY LA MOTT SANFORD, Syracuse, N. Y. Filed Dec. 18, 1905.

MAXIL-VEOLAR

Particular description of goods.—Artificial Teeth, Platework, Bridgework, Dental Fillings, Dental Tools, and Dental Appliances Used in Making Artificial Teeth, Platework, Bridgework, and in Placing Fillings in Teeth.

Ser. No. 16,158. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) KOEHLER & HINRICHS, St. Paul, Minn. Filed Jan 12, 1906.



The star and the tail of the comet being red.
Particular description of goods.—Cheese.

Ser. No. 17,712. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) THE ALBERT DICKINSON COMPANY, Chicago, Ill. Filed Mar. 10, 1906.



Particular description of goods.—Timothy-Seed.

Ser. No. 18,133. (CLASS 10. FERTILIZERS.) AMERICAN FERTILIZING COMPANY, Norfolk, Va. Filed Mar. 22, 1906.

AMERICAN EAGLE

Particular description of goods.—Fertilizers.

Ser. No. 20,628. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) IDA M. BRAUN, Tacoma, Wash. Filed June 28, 1906.

NATURES MEDICINES

Particular description of goods.—Medicines Prepared From Roots, Barks, Flowers, and Fruits Used as Medicines for Nervous Troubles and Diseases of the Stomach, Liver, and Kidneys.

Ser. No. 21,713. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) KOEHLER & HINRICHS, St. Paul, Minn. Filed Aug. 20, 1906.

RedStar

The mark is printed in red.
Particular description of goods.—Stomach-Bitters.

Ser. No. 24,550. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) CHARLES ZOLLER CO., New York, N. Y. Filed Jan. 10, 1907.

FURCHTLOS UND TREW

Particular description of goods.—Beer-Racking Apparatus Comprising Racking Valves and Faucets, Sliding Valves, Cask-Bushings, and Trial-Cocks.

Ser. No. 25,152. (CLASS 39. CLOTHING.) J. MARSHALL & BALL, INCORPORATED, Newark, N. J. Filed Feb. 5, 1907.

TRU-TRED

Particular description of goods.—Shoes Made of Leather.

Ser. No. 25,221. (CLASS 18. AGRICULTURAL AND DAIRY MACHINERY AND PARTS THEREOF.) EMPIRE CREAM SEPARATOR CO., Bloomfield, N. J. Filed Feb. 9, 1907.

FARMER'S FRIEND

Particular description of goods.—Centrifugal Cream-Separators.

Ser. No. 25,691. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) THE GREAT ATLANTIC & PACIFIC TEA COMPANY, New York, N. Y. Filed Mar. 2, 1907.

ATLANTIC

Particular description of goods.—Soaps in Powdered and Cake Forms.

Ser. No. 25,902. (CLASS 38. PUBLICATIONS.) JOHN ROBERT CROUSE, Cleveland, Ohio. Filed Mar. 11, 1907.

"ALL TOGETHER - ALL THE TIME FOR EVERYTHING ELECTRICAL"

COOPERATION

Particular description of goods.—Pamphlets, Leaflets, Circulars, Books, and Periodicals Devoted to Electrical Subjects.

Ser. No. 26,278. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ELECTRIC HOOF OIL COMPANY, Allentown, Pa. Filed Mar. 27, 1907.

Particular description of goods.—Veterinary Ointments.

Ser. No. 27,342. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) VITTUCI-MAGNANO INC., Seattle, Wash. Filed Mar. 13, 1907.

Particular description of goods.—Cheese, Canned Peas, Tomatoes, Beans, and Mushrooms and Canned and Bottled Olives and Olive-Oil.

Ser. No. 27,880. (CLASS 12. MASONRY MATERIALS.) THE HEPPES COMPANY, Chicago, Ill. Filed June 4, 1907.

RFlexG

Particular description of goods.—Roofing-Paper and Fireproof and Saturated Building-Paper.

Ser. No. 28,843. (CLASS 41. CANES, PARASOLS, AND UMBRELLAS.) THE CRAVENETTE COMPANY LIMITED, Bradford, England. Filed July 17, 1907. Used ten years.

CRAVENETTE

Particular description of goods.—Cotton, Woolen, Worsted, Silk and Hair Covered Parasols and Umbrellas.

Ser. No. 28,920. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) McDERMOTT DAIRY COMPANY, New York, N. Y. Filed July 20, 1907.

McDERMOTT DAIRY COMPANY

Particular description of goods.—Milk, Condensed Milk, Cream, Condensed Cream, Casein, and Butter of All Kinds.

Ser. No. 29,038. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) N. NIGRO, Dallas, Tex. Filed July 25, 1907.

SCAREUPTRADE

Particular description of goods.—Fresh, Dried, and Canned Fruits and Vegetables, Nuts, Chilli-Pepper, Oreganos, Cominos, Garlic, Jap Chilli Petin, Pickles, Gelatin, and Ice-Cream Powder Used in the Manufacture of Ice-Cream.

Ser. No. 29,062. (CLASS 35. BELTING, HOSE, MACHINERY PACKING AND NON-METALLIC TIRES.) THE FAIRBANKS CO., New York, N. Y. Filed July 27, 1907.

The disk being red.
Particular description of goods.—Rubber Belting.

Ser. No. 29,187. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) JOHN V. FARWELL COMPANY, Chicago, Ill. Filed Aug. 3, 1907.

GREENFIELD BLEACHING & FINISHING CO.

Particular description of goods.—Ribbons.

Ser. No. 29,608. (CLASS 12. MASONRY MATERIALS.) NORTH AMERICAN CONSTRUCTION COMPANY, Kansas City, Mo. Filed Aug. 26, 1907.

Particular description of goods.—Portland Cement.

Ser. No. 30,183. (CLASS 17. TOBACCO PRODUCTS.) THE KENTUCKY TOBACCO PRODUCT CO., Louisville, Ky. Filed Sept. 24, 1907.

RED CIRCLE BRAND
PRIME
TOBACCO STEMS
TRADE MARK

The color of the circle being red.
Particular description of goods.—Tobacco-Stems.

Ser. No. 30,395. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) BERNHARD ULMANN & Co., New York, N. Y. Filed Oct. 3, 1907.



Particular description of goods.—Braids, Lace Ornaments, and Stamped Patterns.

Ser. No. 30,737. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) KANE AND BELL, Chicago, Ill. Filed Oct. 23, 1907.



Particular description of goods.—Liniments for Rheumatism.

Ser. No. 30,774. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) NORTHWESTERN YEAST COMPANY, Chicago, Ill. Filed Oct. 24, 1907.

ROYAL

Particular description of goods.—Yeast-Cakes.

Ser. No. 30,958. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) JOSEPH F. GROSSWILLER, Toledo, Ohio. Filed Nov. 2, 1907.

NOXALL

Particular description of goods.—Rubber, Duck, Metal, and Flax Joint-Packings and Joint-Packings Composed of Any or All of Said Materials, for Rubber, Cotton, and Rubber-Lined Hose and for Leather, Rubber, and Cotton-Stitched Belting.

Ser. No. 31,238. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) PARISIAN INSTITUTE OF HAIR CULTURE & FACIAL TREATMENTS, Stockton, Cal. Filed Nov. 18, 1907.



Particular description of goods.—Emollients, Tonics, Creams, Lotions, Washes, Bleaches, Ointments, and Foods for the Hair, Scalp, and Skin.

Ser. No. 31,265. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) HOWARD E. NICHOLS, St. Louis, Mo. Filed Nov. 20, 1907.



Particular description of goods.—Hair-Tonics, Stains, Removers, Eyebrow-Pencils, and Dandruff-Reliefs.

Ser. No. 31,272. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) STROHMEYER & ARPE COMPANY, New York, N. Y. Filed Nov. 21, 1907. Used ten years.

Carlshamns Punsch

Particular description of goods.—An Alcoholic Punch.

Ser. No. 31,373. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE EARL'S BEST PHARMACAL COMPANY, Tarrytown, N. Y. Filed Nov. 26, 1907. Used ten years.

EARL'S
CASCARILLA.

Particular description of goods.—Remedies for Diseases of the Blood, Liver, Stomach, and Kidney Troubles, Constipation, Indigestion, Biliousness, Dissiness, Dyspepsia, Eruptions and All Diseases of the Skin, Boils, Pimples, Blotches, Tetter, Gout, Syphilis, Emaciation, and General Debility.

Ser. No. 31,634. (CLASS 17. TOBACCO PRODUCTS.) C. C. A. CIGAR COMPANY, Boston, Mass. Filed Dec. 9, 1907. Used ten years.



Particular description of goods.—Cigars.

Ser. No. 31,639. (CLASS 12. MASONRY MATERIALS.) HEADSON AND OVERESCH, La Fayette, Ind. Filed Dec. 9, 1907.



Particular description of goods.—Pipe-Joint Cement.

Ser. No. 31,694. (CLASS 43. THREAD AND YARN.) NORDDEUTSCHE WOLLKÄMMEREI & KAMMGARNSPINNEREI, Bremen and Delmenhorst, Germany. Filed Dec. 13, 1907.



Particular description of goods.—Yarns.

Ser. No. 31,787. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ROANOKE COFFEE & SPICE CO., Roanoke, Va. Filed Dec. 17, 1907.

TABLE D'HÔTE

Particular description of goods.—Coffee.

Ser. No. 31,828. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) GEO. W. LOWDEN, Savannah, Ga. Filed Dec. 18, 1907.



Particular description of goods.—Canned Oysters.

Ser. No. 31,859. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) WELKER & HANCOCK OPTICAL COMPANY, Kansas City, Mo. Filed Dec. 20, 1907.



Particular description of goods.—Spectacles and Nose-Glasses.

Ser. No. 31,883. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) L. T. PIVER ET CIE., Paris, France. Filed Dec. 20, 1907.

FLORAMYE

Particular description of goods.—Soaps.

Ser. No. 31,922. (CLASS 39. CLOTHING.) THE FRENCH NOVELTY CO. LTD., New Orleans, La. Filed Dec. 26, 1907. Used ten years.



Particular description of goods.—Underwear, Shirt-Waists, Ladies' Dresses and Coats and Outer and Under Skirts, and Infants' Outer and Under Clothes.

Ser. No. 31,950. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) GERMAN ARTISTIC WEAVING CO., New York, N. Y. Filed Dec. 27, 1907.

"DAMACINE"

Particular description of goods.—Shoe-Laces.

Ser. No. 32,081. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) COVENTRY COMPANY, Providence, R. I. Filed Jan. 6, 1908.

ORCHID

Particular description of goods.—Cotton Textile Fabrics.

Ser. No. 32,082. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) COVENTRY COMPANY, Providence, R. I. Filed Jan. 6, 1908.



Particular description of goods.—Cotton Textile Fabrics.

Ser. No. 32,083. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) COVENTRY COMPANY, Providence, R. I. Filed Jan. 6, 1908.



Particular description of goods.—Cotton Textile Fabrics.

Ser. No. 32,084. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) COVENTRY COMPANY, Providence, R. I. Filed Jan. 6, 1908.



Particular description of goods.—Cotton Textile Fabrics.

Ser. No. 32,085. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) COVENTRY COMPANY, Providence, R. I. Filed Jan. 6, 1908.



Particular description of goods.—Cotton Textile Fabrics.

Ser. No. 32,086. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) COVENTRY COMPANY, Providence, R. I. Filed Jan. 6, 1908.



Particular description of goods.—Cotton Textile Fabrics.

Ser. No. 32,087. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) COVENTRY COMPANY, Providence, R. I. Filed Jan. 6, 1908.

CATTLE

Particular description of goods.—Cotton Textile Fabrics.

Ser. No. 32,088. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) COVENTRY COMPANY, Providence, R. I. Filed Jan. 6, 1908.

FARMERS CHOICE

Particular description of goods.—Cotton Textile Fabrics.

Ser. No. 32,089. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) COVENTRY COMPANY, Providence, R. I. Filed Jan. 6, 1908.



Particular description of goods.—Cotton Textile Fabrics.

Ser. No. 32,098. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) GEORGE H. SMITH, Fresno, Cal. Filed Jan. 6, 1908.

K. B. R.

Particular description of goods.—A Remedy for Diseases of the Kidneys and Bladder and for Rheumatism.

Ser. No. 32,142. (CLASS 39. CLOTHING.) THE SIMMONS BOOT & SHOE CO., Toledo, Ohio. Filed Jan. 8, 1908.

ARGO

Particular description of goods.—Men's Leather Boots and Shoes.

Ser. No. 32,192. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) WILLIAM SHAKESPEARE JR. COMPANY, Kalamazoo, Mich. Filed Jan. 13, 1908.



Particular description of goods.—Fishing-Lines.

Ser. No. 32,224. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) GEO. A. ELDRIDGE & CO., New Brunswick, N. J. Filed Jan. 15, 1908.



Particular description of goods.—A Proprietary Herb Medicine for Rheumatism, Weak Lungs, Weak Heart, Salt-Rheum, Boils, Dyspepsia, Eczema, Pimples, Erysipelas, Scrofula, Female Weakness, General Debility, and All Diseases Arising from Impure Blood.

Ser. No. 32,240. (CLASS 32. FURNITURE AND UPHOLSTERY.) ELI E. DAYDEN, Los Angeles, Cal. Filed Jan. 16, 1908.

REEDCRAFT

Particular description of goods.—Chairs, Settees, Rockers, Tables, Couches, Bassinets, (Cradles,) Cribs, Sewing-Stands, and Tea-Tables.

Ser. No. 32,320. (CLASS 39. CLOTHING.) L. JACOBSON'S SONS, New York, N. Y. Filed Jan. 20, 1908.

"CHARACTER CLOTHES"

Particular description of goods.—Women's, Misses', and Children's Outer Suits and Coats.

Ser. No. 32,338. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) HOLLIS H. MORSE, Atlanta, Ga. Filed Jan. 20, 1908.

Smile!

Particular description of goods.—A Carbonated Non-Alcoholic Beverage.

Ser. No. 32,356. (CLASS 43. THREAD AND YARN.) DOLLFUS-MIEG & CIE., SOCIÉTÉ ANONYME, Mulhouse, (Alsace,) Germany. Filed Jan. 20, 1908.

ALSA

Particular description of goods.—Cotton, Linen, Silk, Wool, Worsted, Hemp, Hair, and Jute Yarns, Sewing-Cotton, Thread, and Silk, (Spun, Thrown, or Sewing.)

Ser. No. 32,365. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) MARY PHILLIPS, Detroit, Mich. Filed Jan. 22, 1908.

Herbotanicol

NATURE'S GREAT



REMEDY

Particular description of goods.—A Medical Compound for Use as a Remedy for Rheumatism, Gout, Piles, Eczema, Liver and Kidney Trouble, and All Diseases of the Blood.

Ser. No. 32,412. (CLASS 37. PAPER AND STATIONERY.) GERMANIA IMPORTING CO., New York, N. Y. Filed Jan. 24, 1908.

GIC

Particular description of goods.—Wrapping-Papers, Type-Writing Papers, Printing-Papers, and Manifold-Papers.

Ser. No. 32,420. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE FRANK L. SANFORD TEA & COFFEE COMPANY, Denver, Colo. Filed Jan. 24, 1908.

GOLDEN CUP

Particular description of goods.—Coffee.

Ser. No. 32,428. (CLASS 9. EXPLOSIVES, FIREARMS, EQUIPMENTS, AND PROJECTILES.) E. I. DU PONT DE NEMOURS POWDER COMPANY, Hoboken, N. J. Filed Jan. 25, 1908.

CARBONITE

Particular description of goods.—High Explosives.

Ser. No. 32,431. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) DAVID J. WOODWARD, San Antonio, Tex. Filed Jan. 25, 1908.



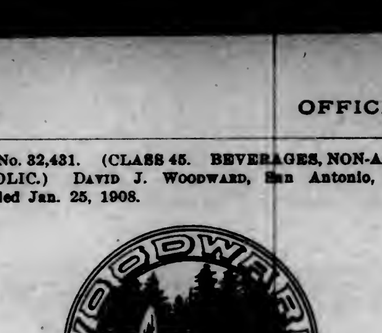
Particular description of goods.—Mineral Water.

Ser. No. 32,526. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) G. RIESMEYER DISTILLING COMPANY, St. Louis, Mo. Filed Feb. 3, 1908.

Old Canteen

Particular description of goods.—Whisky.

Ser. No. 32,577. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) GREEN BAY CANNING COMPANY, Green Bay, Wis. Filed Feb. 4, 1908.



Particular description of goods.—Canned Vegetables.

Ser. No. 32,591. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) BLISS SYRUP REFINING CO., Kansas City, Mo. Filed Feb. 5, 1908.

BEAR BRAND



Particular description of goods.—Jellies and Substitutes Therefor, Preserves and Substitutes Therefor, Fruit-Butter and Substitutes Therefor, Maple-Syrup and Substitutes Therefor, and Sorghum.

Ser. No. 32,598. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) NEIL C. POLSON, Kingston, Ontario, Canada, and Hartford, Conn. Filed Feb. 5, 1908.

PAINOZONE

Particular description of goods.—Remedy for Neuralgia, Toothache, Rheumatism, Colds, Headache, Cholera, Dysentery, Chilblains, Bites of Insects, Strains, Sore Throat, Frost-Bites, Cramps, Dyspepsia, and Spasms.

Ser. No. 32,599. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) NEIL C. POLSON, Kingston, Ontario, Canada, and Hartford, Conn. Filed Feb. 5, 1908.

FERROZONE

Particular description of goods.—Remedy for all Disorders of the Blood, Brain, and Nerves, Anemia, Chlorosis, Poor Appetite, Insomnia, Rheumatism, Heart Disease, Female Complaints, Loss of Vigor, Nervous Prostration, Bright's Disease, Kidney, Liver, and Catarrhal Troubles.

Ser. No. 32,603. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) THE AMERICAN PULLEY COMPANY, Philadelphia, Pa. Filed Feb. 6, 1908.

EAGLE

Particular description of goods.—Sash-Pulleys.

Ser. No. 32,604. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) THE AMERICAN PULLEY COMPANY, Philadelphia, Pa. Filed Feb. 6, 1908.



Particular description of goods.—Sash-Pulleys.

Ser. No. 32,606. (CLASS 39. CLOTHING.) A. E. LITTLE & COMPANY, Lynn, Mass. Filed Feb. 6, 1908.



Particular description of goods.—Heel-Cushions for Boots and Shoes.

Ser. No. 32,646. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) YOUNG, SMYTH, FIELD COMPANY, Philadelphia, Pa. Filed Feb. 7, 1908.



Particular description of goods.—Suspenders, Embroideries, Toilet and Safety Pins, and Hand and Crochet Needles, Hooks and Eyes, Garters, and Necktles.

Ser. No. 32,651. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) SOC.TÀ PROD.TI CHIM.CO FARMAC.CI A. BERTELLI & C., Milan, Italy. Filed Feb. 7, 1908.

CEROTTO BERTELLI



Particular description of goods.—Medicated Plasters.

Ser. No. 32,654. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE BIOPLASM COMPANY, New York, N. Y. Filed Feb. 8, 1908.

OXYNOL

Particular description of goods.—An Antiseptic Preparation Used as a Surgical Dressing and as a Remedy for Piles.

Ser. No. 32,678. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) MILLER BROS., New York, N. Y. Filed Feb. 10, 1908.

Ambergloss



Particular description of goods.—A Nail-Polish.

Ser. No. 32,684. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS, NOT INCLUDING ELECTRICAL APPARATUS.) BUCKWALTER STOVE CO., Royersford, Pa. Filed Feb. 10, 1908. Used ten years.



Particular description of goods.—Stoves and Parts Thereof.

Ser. No. 32,699. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) KNUDSEN VON KOTHEN MFG. CO., Dolton, Ill. Filed Feb. 10, 1908.

KvK

Particular description of goods.—Valves.

Ser. No. 32,701. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) SACKMAN BROTHERS CO. INC., Jamaica, N. Y. Filed Feb. 10, 1908.



Particular description of goods.—Toy Figures.

Ser. No. 32,715. (CLASS 39. CLOTHING.) J. H. RICE & FRIEDMANN CO., Milwaukee, Wis. Filed Feb. 12, 1908.

W

Particular description of goods.—Woolen Shirts, Coats, Pants, and Vests.

Ser. No. 32,717. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) D. R. BRADLEY & SON, Pleasantville and New York, N. Y. Filed Feb. 12, 1908. Used ten years.

BRADLEY'S

Particular description of goods.—Perfumes, Toilet Waters, Bay-Rum, Witch-Hasel, Sachet-Powders, Toilet Powders, Talcum Powders, Tooth-Powders and Preparations for the Teeth, Perfumed Ammonia, Perfumed Sea Salt, Bath-Powders, Perfumed Almond-Meal, Cold-Cream, and Facial Preparations.

Ser. No. 32,721. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) SCHLESINGER-MEYER BAKING CO., Atlanta, Ga. Filed Feb. 12, 1908.

UNCLE SAM

Particular description of goods.—Bread.

Ser. No. 32,722. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) SCHLESINGER-MEYER BAKING CO., Atlanta, Ga. Filed Feb. 12, 1908.



The hat-band and trousers are red and the coat blue.
Particular description of goods.—Bread.

Ser. No. 32,730. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) PICKENS MILL, Pickens, S. C. Filed Feb. 12, 1908.



Particular description of goods.—Sheetings and Drillings.

Ser. No. 32,731. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) FARBENFABRIKEN OF ELBERFELD CO., New York, N. Y. Filed Feb. 12, 1908. Used ten years.

BAYER

Particular description of goods.—Synthetic Coal-Tar Remedies.

Ser. No. 32,734. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) INTERNATIONAL RIBBON WORKS, New York, N. Y. Filed Feb. 12, 1908.

SAMSONEDGE

Particular description of goods.—Ribbons and Handkerchiefs.

Ser. No. 32,737. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) BARCLAY & BARCLAY, New York, N. Y. Filed Feb. 13, 1908. Used ten years.

REUTER

Particular description of goods.—Pills for the Relief of Constipation, Dyspepsia, Headache, Biliousness, Flatulency, Liver Disease, Dizziness, Nausea, and Distress.

Ser. No. 32,742. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) APPLETON ELECTRIC COMPANY, Chicago, Ill. Filed Feb. 13, 1908.

UNILETS

Particular description of goods.—Electric Outlet-Boxes.

Ser. No. 32,760. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE WOOLLEY SALVE COMPANY, Lancaster, Pa. Filed Feb. 14, 1908.



Particular description of goods.—A Salve, the Same Being an External Remedy for Lame Back, Backache, Lumbago, Rheumatism, Pains in the Sides and Breast, Scalds, Burns, Frozen Feet, Wounds, Bruises, Sprains, Body Sores and Ulcers, Cracked and Chapped Hands, Corns, Bunions, Boils, Carbuncles, Felons, and Chilblains.

Ser. No. 32,774. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) GEORGE W. L. EDWARDS, Philadelphia, Pa. Filed Feb. 14, 1908.

Azee

Particular description of goods.—A Game Played with Cards.

Ser. No. 32,776. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) OSCAR & CO. INCORPORATED, Jersey City, N. J. Filed Feb. 15, 1908.



Oscar

Particular description of goods.—Sauces.

Ser. No. 32,784. (CLASS 39. CLOTHING.) TUFTS & FRIEDMAN, Lynn, Mass. Filed Feb. 15, 1908.



Particular description of goods.—Leather and Canvas Boots and Shoes.

Ser. No. 32,786. (CLASS 39. CLOTHING.) ELITE GLOVE CO., Gloversville, N. Y. Filed Feb. 15, 1908.

Elite

Particular description of goods.—Men's and Ladies' Gloves of All Kinds.

Ser. No. 32,806. (CLASS 17. TOBACCO PRODUCTS.) RODRIGUEZ Y HERMANO, Habana, Cuba. Filed Feb. 17, 1908.



Particular description of goods.—Cigars.

Ser. No. 32,807. (CLASS 17. TOBACCO PRODUCTS.) RODRIGUEZ Y HERMANO, Habana, Cuba. Filed Feb. 17, 1908.



Particular description of goods.—Cigars.

Ser. No. 32,840. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) LOCKHART-MACBEAN COMPANY, Philadelphia, Pa. Filed Feb. 18, 1908.



Particular description of goods.—Suspenders, Garters, Belts, and Arm-Bands.

Ser. No. 32,847. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE HOLBROOK GROCERY CO., Keene and Woodsville, N. H. Filed Feb. 18, 1908.

Monadnock

Particular description of goods.—Wheat-Flour, Bread-Flour, Pancake-Flour, Buckwheat-Flour, Popcorn, Clams, Chowder, Shrimp, Salmon, Fish-Cake, Coffee, and Tea.

Ser. No. 32,848. (CLASS 15. OILS AND GREASES NOT INTENDED FOR FOOD.) CRESCENT OIL COMPANY, Indianapolis, Ind. Filed Feb. 18, 1908.

AUTOLENE

Particular description of goods.—Lubricating-Oils.

Ser. No. 32,865. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) DOCK & COAL CO., Plattsburg, N. Y. Filed Feb. 19, 1908.

TIP-TOP

Particular description of goods.—Stock Feed.

Ser. No. 32,878. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) SAN ANTONIO OIL WORKS, San Antonio, Tex. Filed Feb. 19, 1908.

ALAMO

Particular description of goods.—Cotton-Seed Meal.

Ser. No. 32,881. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ROSALIND R. NESBITT, Pennington Gap, Va. Filed Feb. 20, 1908.



Particular description of goods.—An Ointment.

Ser. No. 32,953. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) MORRIS, MANN & REILLY, Chicago, Ill. Filed Feb. 24, 1908.

THE MERRY WIDOW

Particular description of goods.—Ladies' Belts.

Ser. No. 32,954. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) MORRIS, MANN & REILLY, Chicago, Ill. Filed Feb. 24, 1908.

The Bachelor Girl.

Particular description of goods.—Ladies' Belts.

Ser. No. 32,969. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) NEW ENGLAND BISCUIT CO., Worcester, Mass. Filed Feb. 24, 1908.

SCOTCH HIGH

Particular description of goods.—Cookies.

Ser. No. 32,989. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) S. S. PIERCE COMPANY, Boston, Mass. Filed Feb. 25, 1908.



Particular description of goods.—Tea.

Ser. No. 32,992. (CLASS 37. PAPER AND STATIONERY.) JAMES W. LAUGHLIN, Detroit, Mich. Filed Feb. 25, 1908.

RED GEM

Particular description of goods.—Stylographic pens or Ink-Writing Pencils.

Ser. No. 33,005. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) THE RUSSELL JENNINGS MFG. CO., Chester, Conn. Filed Feb. 26, 1908. Used ten years.

RUSSELL JENNINGS

Particular description of goods.—Augers and Bits.

Ser. No. 33,030. (CLASS 12. MASONRY MATERIALS.) WELT & SONS PAPER CO., Detroit, Mich. Filed Feb. 27, 1908.

AMAFIBRE

Particular description of goods.—Fiber Building and Sheathing Paper.

Ser. No. 33,034. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) LEVY AND SULLIVAN, New York, N. Y. Filed Feb. 27, 1908.

The "Merry Widow"

Particular description of goods.—Candies.

Ser. No. 33,039. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) NATIONAL INDIA RUBBER CO., Bristol, R. I. Filed Feb. 27, 1908. Used ten years.

COLONIAL

Particular description of goods.—Rubber Water-Bottles and Rubber Syringe-Bags.

Ser. No. 33,059. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE MARJENHOFF CO., Charleston, S. C. Filed Feb. 28, 1908.



Particular description of goods.—Cakes and biscuit.

Ser. No. 33,066. (CLASS 15. OILS AND GREASES NOT INTENDED FOR FOOD.) L. SONNEBORN SONS, INC., New York, N. Y. Filed Feb. 28, 1908.

OSSAG

Particular description of goods.—Lubricating-Oils and Lubricating-Greases and Lubricating-Pastes.

Ser. No. 33,076. (CLASS 39. CLOTHING.) GORHAM RUBBER COMPANY, San Francisco, Cal. Filed Feb. 29, 1908.

FEARLESS

Particular description of goods.—Rubber Boots.

Ser. No. 33,087. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) WILL H. FOX, Graysville, Tenn. Filed Feb. 29, 1908.



Particular description of goods.—Canned Fruits and Vegetables.

Ser. No. 33,091. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE FARMERS' MILLING & MERCANTILE COMPANY, Berthoud, Colo. Filed Feb. 29, 1908.

VELVET

Particular description of goods.—Wheat-Flour.

Ser. No. 33,092. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) WESTERN FLOUR MILL COMPANY, Davenport, Iowa. Filed Feb. 29, 1908.

WESTERN QUEEN

Particular description of goods.—Flours Made from Wheat.

Ser. No. 33,106. (CLASS 17. TOBACCO PRODUCTS.) PHILIP MORRIS & CO., LTD., New York, N. Y. Filed Feb. 29, 1908.

[illegible]

Particular description of goods.—Cigarettes.

Ser. No. 33,109. (CLASS 39. CLOTHING.) FRED M. HODGDON, Haverhill, Mass. Filed Mar. 2, 1908.

FIRSTAID

Particular description of goods.—Leather and Canvas Shoes.

Ser. No. 33,115. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) OSCAR BARNETT FOUNDRY COMPANY, Newark, N. J. Filed Mar. 2, 1908.

TRADE HHH MARK

Particular description of goods.—Clasp-Knives.

Ser. No. 33,116. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) IRON-OLA COMPANY, Chicago, Ill. Filed Mar. 2, 1908.



Particular description of goods.—Ironing-Wax.

Ser. No. 33,118. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) LOANE-HILTZ ENGINEERING COMPANY OF BALTIMORE CITY, Baltimore, Md. Filed Mar. 2, 1908.



Particular description of goods.—Internal-Combustion Engines and Parts Thereof.

Ser. No. 33,121. (CLASS 16. PAINTS AND PAINTERS' MATERIALS, NOT INCLUDING OILS AND POLISHES.) GEO. H. BAKER, New York, N. Y. Filed Mar. 2, 1908.



Particular description of goods.—An Enamel for Coating Metal, Wood, and other Materials.

Ser. No. 33,129. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) EMIL GRADINGER, Pittsburg, Kans. Filed Mar. 2, 1908.



Particular description of goods.—Polish and Cleaning Material for Furniture, Pianos, Sewing-Machines, Carriages, Mirrors, Window-Glass, and Similar Articles.

Ser. No. 33,156. (CLASS 17. TOBACCO PRODUCTS.) JOHN MELACHRINO, London, England. Filed Mar. 4, 1908.

Particular description of goods.—Cigarettes.

Ser. No. 33,159. (CLASS 2. RECEPTACLES.) THE UNION BAG & PAPER COMPANY, New York, N. Y. Filed Mar. 4, 1908.



Particular description of goods.—Paper Bags.

Ser. No. 33,168. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) WALTER K. FREEMAN, Oscawana, N. Y. Filed Mar. 4, 1908.

OKALAX

Particular description of goods.—Soap.

Ser. No. 33,177. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) BUSE & CALDWELL, Pittsburg, Pa. Filed Mar. 5, 1908.



Particular description of goods.—Evaporated Milk.

Ser. No. 33,183. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) PACIFIC COAST SYRUP CO., San Francisco, Cal. Filed Mar. 5, 1908. Used ten years.

Wild Rose

Particular description of goods.—Honey.

Ser. No. 33,189. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) THE GARDNER GOVERNOR COMPANY, Quincy, Ill. Filed Mar. 5, 1908.



Particular description of goods.—Centrifugal Governors and Steam-Pumps.

Ser. No. 33,190. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) SCHOELLKOPF, HARTFORD & HANNA COMPANY, Buffalo, N. Y. Filed Mar. 5, 1908.

SARENA

Particular description of goods.—A Disinfectant, Antiseptic, and Deodorizing Preparation.

Ser. No. 33,193. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) FRANK WEDEHASE, Sebastopol, Cal. Filed Mar. 5, 1908. Used ten years.

FIG BREAD

Particular description of goods.—Bread.

Ser. No. 33,205. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) INDIA REFINING COMPANY, Philadelphia, Pa. Filed Mar. 6, 1908.

INRECO

Particular description of goods.—A Vegetable Fat or Oil Compound.

Ser. No. 33,206. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) INDIA REFINING COMPANY, Philadelphia, Pa. Filed Mar. 6, 1908.

PARASUB

Particular description of goods.—A Vegetable Fat or Oil Compound Artificially Colored and Flavored.

Ser. No. 33,208. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) INDIA REFINING COMPANY, Philadelphia, Pa. Filed Mar. 6, 1908.

KO-NUT

Particular description of goods.—A Vegetable Fat or Oil Adapted to be Used for Shortening and Frying Purposes.

Ser. No. 33,241. (CLASS 33. GLASSWARE.) GILL BROTHERS COMPANY, Steubenville, Ohio. Filed Mar. 7, 1908.

LUCKY CROSS

Particular description of goods.—Glass Chimneys, Lantern-Globes, and Reflectors, Electric-Arc-Light Globes, Globes for Incandescent Electric Lamps, and Glass Bulbs for Incandescent Electric Lamps.

Ser. No. 33,242. (CLASS 33. GLASSWARE.) GILL BROTHERS COMPANY, Steubenville, Ohio. Filed Mar. 7, 1908.



Particular description of goods.—Glass Chimneys, Lantern-Globes, and Reflectors, Electric-Arc-Light Globes, Globes for Incandescent Electric Lamps, and Glass Bulbs for Incandescent Electric Lamps.

Ser. No. 33,258. (CLASS 32. FURNITURE AND UPHOLSTERY.) FOST PITT BEDDING COMPANY, Pittsburg, Pa. Filed Mar. 9, 1908.

"REX"

Particular description of goods.—Bed-Springs.

Ser. No. 33,287. (CLASS 4. ABRASIVE DETERGENT, AND POLISHING MATERIALS.) JAS. S. MASON CO., Philadelphia, Pa. Filed Mar. 10, 1908. Used ten years.

MASON'S

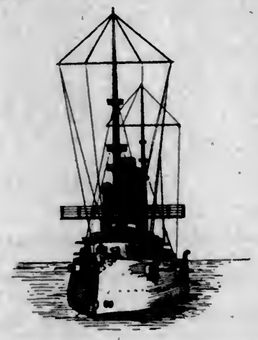
Particular description of goods.—Shoe, Boot, and Stove Blackings and Polishes.

Ser. No. 33,288. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) JAS. S. MASON CO., Philadelphia, Pa. Filed Mar. 10, 1908.



Particular description of goods.—Shoe, Boot, and Stove Blackings and Polishes.

Ser. No. 33,333. (CLASS 9. EXPLOSIVES, FIREARMS, EQUIPMENTS, AND PROJECTILES.) E. I. DU PONT DE NEMOURS POWDER COMPANY, Wilmington, Del. Filed Mar. 12, 1908.



Particular description of goods.—Gunpowder for Propelling Charges in Ordnance and Small-Arms, and Bursting Charges for Projectiles and Torpedoes.

Ser. No. 33,339. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JAMES PYLE & SONS, Edgewater, N. J. Filed Mar. 12, 1908.

O. K.

Particular description of goods.—Lye, Potash, and Caustic Soda.

Ser. No. 33,344. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) RUDOLF SAENGER & CO., New York, N. Y. Filed Mar. 12, 1908.

VOILINETTE THE ANTI-WET

Particular description of goods.—Chiffon Cloth.

Ser. No. 33,418. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) GOMILA-DEMACK LUMBER COMPANY, New Orleans, La. Filed May 16, 1908.



Particular description of goods.—Logs, Timber, and Lumber.

TRADE-MARKS

REGISTERED APRIL 14, 1908.

68,471. LUBRICANTS. JOSEPH NEWCOMB BLACKMAN, East Orange N. J.
Filed September 28, 1907. Serial No. 30,274. PUBLISHED FEBRUARY 11, 1908.

68,472. STEEL. CAMMELL LAIRD & CO. LIMITED, Sheffield, England.
Filed May 25, 1907. Serial No. 27,640. PUBLISHED FEBRUARY 11, 1908.

68,473. SUBSTITUTES FOR SPIRITS OF TURPENTINE. THE CHAS. H. MOORE OIL COMPANY, Cincinnati, Ohio.
Filed May 22, 1907. Serial No. 27,568. PUBLISHED FEBRUARY 11, 1908.

68,474. CIGARS, CHEROOTS, AND LITTLE CIGARS. ARTHUR J. FORMAN, Fremont, Nebr.
Filed December 7, 1907. Serial No. 31,606. PUBLISHED FEBRUARY 11, 1908.

68,475. CERTAIN TOOLS. THE GEO. F. EBERHARD COMPANY, San Francisco, Cal.
Filed July 6, 1905. Serial No. 9,856. PUBLISHED FEBRUARY 11, 1908.

68,476. PAINT AND VARNISH CLEANER AND SOLVENT. HAZARD PAINT AND CHEMICAL COMPANY, Providence, R. I.
Filed October 3, 1907. Serial No. 30,393. PUBLISHED FEBRUARY 11, 1908.

68,477. TIN ROOFING. JOHN S. HOY, Albany, N. X.
Filed December 4, 1907. Serial No. 31,547. PUBLISHED FEBRUARY 11, 1908.

68,478. TIN ROOFING. JOHN S. HOY, Albany, N. Y.
Filed December 4, 1907. Serial No. 31,548. PUBLISHED FEBRUARY 11, 1908.

68,479. STEEL. JONAS & COLVER, LIMITED, Sheffield, England.
Filed January 4, 1907. Serial No. 24,439. PUBLISHED FEBRUARY 11, 1908.

68,480. CERTAIN TOOLS. JULIAN LOPEZ Y ARECHAVALA, Bilbao, Spain.
Filed January 30, 1907. Serial No. 25,012. PUBLISHED FEBRUARY 11, 1908.

68,481. SHEETS OF COPPER OR BRASS AND WIRE OF COPPER OR BRASS. THE MICHIGAN COPPER AND BRASS Co., Detroit, Mich.
Filed December 5, 1907. Serial No. 31,584. PUBLISHED FEBRUARY 11, 1908.

68,482. STEEL AND PARTLY-WROUGHT CASTINGS. SAML. OSBORN & CO., Sheffield, England, assignors to Samuel Osborn & Co., Limited, Sheffield, England, a Corporation of Great Britain.
Filed September 14, 1905. Serial No. 12,582. PUBLISHED FEBRUARY 11, 1908.

68,483. [WITHDRAWN.]

68,484. CERTAIN PAINTERS' MATERIALS. THE THOMSON WOOD FINISHING CO., Philadelphia, Pa.
Filed June 7, 1905. Serial No. 7,589 PUBLISHED FEBRUARY 11, 1908.

68,485. CIGARETTES. WARE-KRAMER TOBACCO COMPANY, Norfolk, Va.
Filed December 16, 1907. Serial No. 31,761. PUBLISHED FEBRUARY 11, 1908.

68,486. CIGARETTES. WARE-KRAMER TOBACCO COMPANY Norfolk, Va.
Filed December 16, 1907. Serial No. 31,762. PUBLISHED FEBRUARY 11, 1908.

68,487. AXES. WARREN AXE AND TOOL COMPANY, Warren, Pa.
Filed December 19, 1907. Serial No. 31,837. PUBLISHED FEBRUARY 11, 1908.

68,488. COFFEE. ARNOLD & ADORN, New York, N. Y.
Filed December 4, 1907. Serial No. 31,563. PUBLISHED FEBRUARY 11, 1908.

68,489. PRINTING-INK. THE AULT & WIBORG COMPANY, Cincinnati, Ohio.
Filed November 25, 1907. Serial No. 31,359. PUBLISHED FEBRUARY 11, 1908.

68,490. TEA. THE C. S. MOREY MERCANTILE COMPANY, Denver, Colo.
Filed December 10, 1907. Serial No. 31,743. PUBLISHED FEBRUARY 11, 1908.

68,491. CERTAIN MACHINE-TOOLS. CAMMELL, LAIRD & Co. LIMITED, Sheffield, England.
Filed May 25, 1907. Serial No. 27,637. PUBLISHED FEBRUARY 11, 1908.

68,492. CERTAIN MACHINE-TOOLS. CAMMELL LAIRD & Co. LIMITED, Sheffield, England.
Filed May 25, 1907. Serial No. 27,638. PUBLISHED FEBRUARY 11, 1908.

68,493. CONCRETE FLOORING. CAVATORTA CLEMENTE, Cleveland, Ohio.
Filed November 29, 1907. Serial No. 31,467. PUBLISHED FEBRUARY 11, 1908.

68,494. CALCINED GYPSUM. EMPIRE GYPSUM COMPANY, Garbutt, N. Y.
Filed September 16, 1907. Serial No. 29,978. PUBLISHED FEBRUARY 11, 1908.

68,495. TEAS. HARRY W. DE FOREST, St. John, New Brunswick, Canada, and St. John's, Newfoundland.
Filed May 10, 1907. Serial No. 27,276. PUBLISHED FEBRUARY 11, 1908.

68,496. FELT AND PAPER ROOFING. H. W. JOHNS-MANVILLE COMPANY, New York, N. Y.
Filed December 5, 1907. Serial No. 31,580. PUBLISHED FEBRUARY 11, 1908.

68,497. CERTAIN PLUMBERS' SUPPLIES. L. WOLFF MFG. Co., Chicago, Ill.
Filed May 11, 1905. Serial No. 5,061. PUBLISHED FEBRUARY 11, 1908.

68,498. CERTAIN CEREAL FOODS. MONTEVIDEO ROLLER MILL COMPANY, Montevideo, Minn.
Filed August 23, 1906. Serial No. 21,725. PUBLISHED NOVEMBER 6, 1906.

68,499. CERTAIN PLASTER AND LIME. OHIO BUILDERS' SUPPLY COMPANY, Toledo, Ohio.
Filed December 18, 1907. Serial No. 31,815 PUBLISHED FEBRUARY 11, 1908.

68,500. MINERAL WATER. WILLIAM J. PERDUE, Claremore, Okla.
Filed September 6, 1907. Serial No. 29,777. PUBLISHED FEBRUARY 11, 1908.

68,501. CIGARETTES. PHILIP MORRIS & CO., STD., New York, N. Y.
Filed October 17, 1907. Serial No. 30,644. PUBLISHED FEBRUARY 11, 1908.

68,502. CIGARETTES. PHILIP MORRIS & CO., LTD., New York, N. Y.
Filed October 17, 1207. Serial No. 30,646. PUBLISHED FEBRUARY 11, 1908.

68,503. CIGARETTES. PHILIP MORRIS & CO., LTD., New York, N. Y.
Filed October 17, 1907. Serial No. 30,649. PUBLISHED FEBRUARY 11, 1908.

68,504. CIGARETTES. PHILIP MORRIS & CO., LTD., New York, N. Y.
Filed October 17, 1907. Serial No. 30,651. PUBLISHED FEBRUARY 11, 1908.

68,505. PAINT AND VARNISH BRUSHES. RENNOUS KLEINLE & CO. OF BALTIMORE CITY, Baltimore, Md.
Filed June 24, 1905. Serial No. 8,968. PUBLISHED FEBRUARY 11, 1908.

68,506. MISSION FURNITURE OF ALL KINDS. LOUIS B. RIDENOUR, Washington, D. C.
Filed December 11, 1907. Serial No. 31,669. PUBLISHED FEBRUARY 11, 1908.

68,507. FLOUR MADE FROM WHEAT. SHEFFIELD-KING MILLING CO., Minneapolis, Minn.
Filed July 5, 1906. Serial No. 20,745. PUBLISHED OCTOBER 30, 1906.

68,508. CARBONATED NON-ALCOHOLIC BEVERAGE AND SYRUP FOR MAKING THE SAME. BENNETT F. SMITH, Temple, Tex.
Filed August 28, 1907. Serial No. 29,633. PUBLISHED FEBRUARY 11, 1908.

68,509. CIGARS. SIDNEY S. SPEIER, Louisville, Ky.
Filed November 27, 1907. Serial No. 31,410. PUBLISHED FEBRUARY 11, 1908.

68,510. GINGER-ALE AND MINERAL WATER. THE WAUKESHA ARCADIAN CO., Waukesha, Wis.
Filed November 22, 1907. Serial No. 31,301. PUBLISHED FEBRUARY 11, 1908.

68,511. SARDINES. JOHN BRAADLAND, Stavanger, Norway.
Filed December 5, 1907. Serial No. 31,575. PUBLISHED FEBRUARY 11, 1908.

68,512. SARDINES. JOHN BRAADLAND, Stavanger, Norway.
Filed December 5, 1907. Serial No. 31,577. PUBLISHED FEBRUARY 11, 1908.

68,513. DISINFECTANT, SHEEP-DIP, AND CATTLE-WASH. WILLIAM COOPER & NEPHEWS, Berkhamsted, England.
Filed August 26, 1907. Serial No. 29,605. PUBLISHED FEBRUARY 11, 1908.

68,514. HAIR-TONIC. KATHERINE CULVER, West Jordan, Utah.
Filed December 10, 1907. Serial No. 31,653. PUBLISHED FEBRUARY 11, 1908.

68,515. CERTAIN CHEMICAL SOLUTIONS, COMPOUNDS, AND PREPARATIONS. EASTMAN KODAK CO., Rochester, N. Y.
Filed September 19, 1907. Serial No. 30,087. PUBLISHED FEBRUARY 11, 1908.

68,516. MEDICINAL TONIC IN TABLET FORM. F. G. STEWART & COMPANY, Chicago, Ill.
Filed November 18, 1907. Serial No. 31,247. PUBLISHED FEBRUARY 11, 1908.

68,517. COMBS AND HAIR ORNAMENTS. HANNOVERSCHE GUMMI-KAMM-COMPAGNIE ACTIEN-GESELLSCHAFT, Hanover-Limmer, Germany.
Filed August 3, 1907. Serial No. 29,191. PUBLISHED FEBRUARY 11, 1908.

68,518. INSECT-POWDER. J. L. HOPKINS & COMPANY, New York, N. Y.
Filed December 12, 1907. Serial No. 31,679. PUBLISHED FEBRUARY 11, 1908.

68,519. PIANOS, PLAYER-PIANOS, AND PLAYER-PIANO ACTIONS. LAUTER CO., Newark, N. J.
Filed August 10, 1907. Serial No. 29,330. PUBLISHED FEBRUARY 11, 1908.

68,520. REMEDY FOR DISEASES PECULIAR TO WOMEN. SYDNEY B. LEONARDI, Tampa, Fla.
Filed May 13, 1907. Serial No 27,322. PUBLISHED FEBRUARY 11 1908.

68,521. LINEN THREAD AND FLAX YARN. THE LINEN THREAD CO., New York, N. Y.
Filed November 29, 1907. Serial No. 31,443. PUBLISHED FEBRUARY 11, 1908.

68,522. DISINFECTANT AND DEODORIZER. JOSEPH F. C. LUHAN, New York, N. Y.
Filed December 14, 1907. Serial No. 31,722. PUBLISHED FEBRUARY 11, 1908.

68,523. LAUNDRY STARCH. NATIONAL STARCH COMPANY, Jersey City, N. J., and New York, N. Y.
Filed December 12, 1907. Serial No. 31,683. PUBLISHED FEBRUARY 11, 1208.

68,524. CERTAIN CHEMICALS. PACIFIC COAST BORAX CO., Oakland, Cal.; New York, N. Y., and Chicago, Ill.
Filed May 31, 1907. Serial No. 27,780. PUBLISHED FEBRUARY 11, 1908.

68,525. CERTAIN CHEMICALS. PACIFIC COAST BORAX CO., Oakland, Cal.; New York, N. Y., and Chicago, Ill.
Filed May 31, 1907. Serial No. 27,781. PUBLISHED FEBRUARY 11, 1908.

68,526. PIANOS. THE PALMER PIANO COMPANY, White Plains and New York, N. Y.
Filed December 15, 1906. Serial No. 24,074. PUBLISHED FEBRUARY 11, 1908.

68,527. HAIR-TONICS. SAGE BRUSH TONIC CO. LTD. Shoshone, Idaho.
Filed November 19, 1907. Serial No. 31,251. PUBLISHED FEBRUARY 11, 1908.

68,528. LAUNDRY STARCH. UNION STARCH CO., Edinburg, Ind.
Filed July 18, 1905. Serial No. 10,526. PUBLISHED FEBRUARY 11, 1908.

68,529. CONDENSED MILK. WAYNE COUNTY CONDENSED MILK CO., Ontario Center, N. Y.
Filed December 2, 1907. Serial No. 31,509. PUBLISHED FEBRUARY 11, 1908.

68,530. CONDENSED MILK. WAYNE COUNTY CONDENSED MILK CO., Ontario Center, N. Y.
Filed December 2, 1907. Serial No. 31,510. PUBLISHED FEBRUARY 11, 1908.

68,531. PRESERVED FISH. AKTIEBOLAGET SVERIGES FÖRENADE KONSERVFABRIKER, Gottenborg, Sweden.
Filed November 12, 1907. Serial No. 31,136. PUBLISHED FEBRUARY 11, 1908

68,532. ANCHOVIES AND FISH PRESERVES. AKTIEBOLAGET SVERIGES FÖRENADE KONSERVFABRIKER, Gottenborg, Sweden.
Filed November 12, 1907. Serial No. 31 138. PUBLISHED FEBRUARY 11, 1908.

68,533. SARDINES. JOHN BRAADLAND, Stavanger, Norway.
Filed August 14, 1907. Serial No. 29,390. PUBLISHED FEBRUARY 11, 1908.

68,534. REMEDIES FOR FEMALE USE. THE BRADFIELD REGULATOR CO., Atlanta, Ga.
Filed September 12, 1907. Serial No. 29,907. PUBLISHED FEBRUARY 11 1908.

68,535. REMEDY FOR FEVER AND AGUE AND MALARIAL AFFECTIONS. JOSEPH B. DAVENPORT, Augusta, Ga.
Filed December 23, 1907. Serial No. 31,888. PUBLISHED FEBRUARY 11, 1908.

68,536. TOOTH-POWDER. TOMPKINS C. DELAVAN, New York, N. Y.
Filed November 19, 1907. Serial No. 31,257. PUBLISHED FEBRUARY 11, 1908.

68,537. CERTAIN MEDICINES. ECSO PHARMACAL CO., Mobile, Ala.
Filed December 31, 1907. Serial No. 31,987. PUBLISHED FEBRUARY 11, 1908.

68,538. FLAVORING EXTRACTS. MARDEN & BULL, Leominster, Mass.
Filed November 25, 1907. Serial No. 31,351 PUBLISHED FEBRUARY 11 1908

68,539. LAXATIVE COMPOUNDS. THE MOTHER SEIGEL'S SYRUP COMPANY, New York, N. Y.
Filed April 17, 1906. Serial No. 18,871. PUBLISHED DECEMBER 17, 1907.

68,540. TONIC REMEDY. THE ROCKY MOUNTAIN SAGE TONIC COMPANY, Denver, Colo.
Filed December 19, 1907. Serial No. 31,849. PUBLISHED FEBRUARY 11, 1908.

68,541. REMEDY FOR ROUP AND OTHER POULTRY DISEASES. MAGGIE C. SIEBOLD, Keokuk, Iowa.
Filed December 23, 1907. Serial No. 31,890. PUBLISHED FEBRUARY 11, 1908.

68,542. REMEDIES FOR CERTAIN DISEASES. VAN RIPER & CO., INCORPORATED, Passaic, N. J.
Filed December 17, 1907. Serial No. 31,784. PUBLISHED FEBRUARY 11, 1908.

68,543. SOLES FOR FOOTWEAR. ACTUAL KNITTING MILLS, Philadelphia, Pa.
Filed December 10, 1907. Serial No. 31,652. PUBLISHED FEBRUARY 11, 1908.

68,544. CLOTHES-WRINGERS. THE AMERICAN WRINGER COMPANY, New York, N. Y.
Filed December 15, 1906. Serial No. 24,055. PUBLISHED FEBRUARY 11 1908.

68,545. FINE WRITING-PAPER AND ENVELOPS. CAREW MANUFACTURING COMPANY, South Hadley Falls, Mass.
Filed January 2, 1908. Serial No. 32,010. PUBLISHED FEBRUARY 11, 1908.

68,546. DISINFECTANTS. CHEMISCHE FABRIKS WERKE GESELLSCHAFT MIT BESCHRÄNKTER HAFTUNG, Vienna, Austria-Hungary.
Filed December 17, 1907. Serial No. 31,776. PUBLISHED FEBRUARY 11, 1908.

68,547. ACETYLENE-GAS GENERATORS. RICHARD P. ELLIOTT, Boston, Mass.
Filed January 10, 1907. Serial No. 24,557. PUBLISHED FEBRUARY 11, 1908.

68,548. MAGAZINE. FLORENCE PUBLISHING COMPANY, Northampton, Mass.
Filed June 16, 1906. Serial No. 20,358. PUBLISHED FEBRUARY 11, 1908.

68,549. RUBBER BOOTS AND SHOES. THE GOODYEAR'S METALLIC RUBBER SHOE CO., Naugatuck, Conn.
Filed July 27, 1907. Serial No. 29,097. PUBLISHED FEBRUARY 11, 1908.

68,550. RUBBER TIRES FOR VEHICLES OF ALL KINDS. HANNOVERSCHE GUMMI-KAMM-COMPAGNIE ACTIEN-GESELLSCHAFT, Hanover-Limmer, Germany.
Filed August 3, 1907. Serial No. 29,189. PUBLISHED FEBRUARY 11, 1908.

68,551. RUBBER TIRES FOR VEHICLES OF ALL KINDS. HANNOVERSCHE GUMMI-KAMM-COMPAGNIE ACTIEN-GESELLSCHAFT, Hanover-Limmer, Germany.
Filed August 6, 1907. Serial No. 29,261. PUBLISHED FEBRUARY 11, 1908.

68,552. CORSETS AND CORSELETS. JEANNE VICTORINE MAROAINE-LACROIX, Paris, France.
Filed May 29, 1906. Serial No. 19,938. PUBLISHED FEBRUARY 11, 1908.

68,553. MECHANICAL VIBRATORS. FRANK R. MUENZENBERGER, New York, N. Y.
Filed December 21, 1907. Serial No. 31,865. PUBLISHED FEBRUARY 11, 1908.

68,554. ABSORBENT LINEN AND GAUZE. OXFORD LINEN MILLS, Boston, Mass.
Filed November 8, 1907. Serial No. 31,078. PUBLISHED FEBRUARY 11, 1908.

68,555. BABY-COMFORTERS IN THE FORM OF RUBBER NIPPLES. THE PAX MANUFACTURING COMPANY, Boston, Mass.
Filed November 11, 1907. Serial No. 31,121. PUBLISHED FEBRUARY 11, 1908.

68,556. GELATIN DYNAMITE. THE POTTS POWDER COMPANY, Reynolds, Pa., and New York, N. Y.
Filed December 17, 1907. Serial No. 31,769. PUBLISHED FEBRUARY 11, 1908.

68,557. NITROGLYCERIN DYNAMITE. THE POTTS POWDER COMPANY, Reynolds, Pa., and New York, N. Y.
Filed December 17, 1907. Serial No. 31,770. PUBLISHED FEBRUARY 11, 1908.

68,558. CERTAIN ARTICLES OF STATIONERY. J. J. REHBACH, Regensburg, Germany.
Filed August 13, 1907. Serial No. 29,371. PUBLISHED FEBRUARY 11, 1908.

68,559. CERTAIN FURNACES AND BURNERS. WILLIAM SCRIMGEOUR, Jr., Norfolk, Va., assignor to Mirco Fuel-Oil Equipment Company, Norfolk, Va.
Filed May 21, 1906. Serial No. 19,740. PUBLISHED FEBRUARY 11, 1908.

68,560. CERTAIN CLOTHING. SAMUEL STERNBERGER & CO., Philadelphia, Pa.
Filed December 13, 1907. Serial No. 31,702. PUBLISHED FEBRUARY 11, 1908.

68,561. CERTAIN CLOTHING. SAMUEL STERNBERGER & CO., Philadelphia, Pa.
Filed December 13, 1907. Serial No. 31,703. PUBLISHED FEBRUARY 11, 1908.

68,562. BOOKS RELATING TO STENOGRAPHY. SIR ISAAC PITMAN & SONS LTD., Bath, England.
Filed August 25, 1905. Serial No. 11,989. PUBLISHED FEBRUARY 11, 1908.

68,563. CIGARS. WALTER S. BARE, Lititz, Pa.
Filed May 8, 1907. Serial No. 27,231. PUBLISHED JUNE 18, 1907.

68,564. BRANDY. THE BARTON VINEYARD COMPANY, LIMITED, Fresno, Cal.
Filed December 1, 1906. Serial No. 23,703. PUBLISHED OCTOBER 15, 1907.

68,565. INCANDESCENT ELECTRIC LAMPS. BOSTON INCANDESCENT LAMP COMPANY, Danvers, Mass.
Filed December 14, 1906. Serial No. 24,019. PUBLISHED FEBRUARY 11, 1908.

68,566. LEATHER BOOTS AND LEATHER SHOES. CARL BREIDING & SOHN, Soltau, Germany, and Newark, N. J.
Filed September 25, 1905. Serial No. 12,441. PUBLISHED FEBRUARY 11, 1908.

68,567. LOOSE-LEAF BINDERS. JAMES F. FITZPATRICK, New York, N. Y.
Filed January 14, 1907. Serial No. 24,618. PUBLISHED FEBRUARY 11, 1908.

68,568. DOLLS AND STUFFED TOY FIGURES. MARGARETE STEIFF, Gesellschaft mit beschränkter Haftung Giengen, Germany.
Filed June 22, 1907. Serial No. 28,316. PUBLISHED DECEMBER 17, 1907.

68,569. CHINESE AND JAPANESE BRONZES, IVORY, AND CARVED OBJECTS OF ART AND ORNAMENT. SING FAT CO. INC., San Francisco, Cal.
Filed November 26, 1907. Serial No. 31,382. PUBLISHED FEBRUARY 11, 1908.

68,570. OPTICAL INSTRUMENTS AND PARTS THEREOF. CARL ZEISS, Jena, Germany.
Filed September 14, 1906. Serial No. 22,105. PUBLISHED FEBRUARY 11, 1908.

68,571. OPTICAL INSTRUMENTS AND PARTS THEREOF. CARL ZEISS, Jena, Germany.
Filed September 14, 1906. Serial No. 22,106. PUBLISHED FEBRUARY 11, 1908.

68,572. OPTICAL INSTRUMENTS AND PARTS THEREOF. CARL ZEISS, Jena, Germany.
Filed September 14, 1906. Serial No. 22,108. PUBLISHED FEBRUARY 11, 1908.

68,573. OPTICAL INSTRUMENTS AND PARTS THEREOF. CARL ZEISS, Jena, Germany.
Filed September 14, 1906. Serial No. 22,109. PUBLISHED FEBRUARY 11, 1908.

68,574. TOILET POWDER. GERHARD MENNEN CHEMICAL CO., Newark, N. J.
Filed December 10, 1907. Serial No. 31,648. PUBLISHED FEBRUARY 11, 1908.

68,575. COTTON DUCK. MOUNT VERNON-WOODBERRY COTTON DUCK COMPANY, Baltimore, Md.
Filed July 18, 1905. Serial No. 10,500. PUBLISHED FEBRUARY 11, 1908.

68,576. BLEACHED AND UNBLEACHED COTTON PIECE GOODS. PEPPERELL MANUFACTURING CO., Biddeford, Me.
Filed December 16, 1907. Serial No. 31,751. PUBLISHED FEBRUARY 11, 1908.

68,577. BLEACHED AND UNBLEACHED COTTON PIECE GOODS. PEPPERELL MANUFACTURING CO., Biddeford, Me.
Filed December 16, 1907. Serial No. 31,754. PUBLISHED FEBRUARY 11, 1908.

68,578. BLEACHED AND UNBLEACHED COTTON PIECE GOODS. PEPPERELL MANUFACTURING CO., Biddeford, Me.
Filed December 16, 1907. Serial No. 31,755. PUBLISHED FEBRUARY 11, 1908.

68,579. BLEACHED AND UNBLEACHED COTTON PIECE GOODS. PEPPERELL MANUFACTURING CO., Biddeford, Me.
Filed December 21, 1907. Serial No. 31,864. PUBLISHED FEBRUARY 11, 1908.

68,580. CERTAIN TEXTILE AND LACE FABRICS. UNITED PAPER CO., Atlanta, Ga.
Filed September 28, 1907. Serial No. 30,282. PUBLISHED FEBRUARY 11, 1908.

LABELS

REGISTERED APRIL 14, 1908.

14,136.—*Title:* "PRIMEROS." (For Cigars.) SCHMIDT & CO., New York, N. Y. Filed March 11, 1908.

14,137.—*Title:* "JACOB RUPPERT EXTRA BEER." (For Lager-Beer.) JACOB RUPPERT, New York, N. Y. Filed March 11, 1908.

14,138.—*Title:* "JACOB RUPPERT RUPPINER BEER." (For Lager-Beer.) JACOB RUPPERT, New York, N. Y. Filed March 11, 1908.

14,139.—*Title:* "JACOB RUPPERT KNICKERBOCKER BEER." (For Lager-Beer.) JACOB RUPPERT, New York, N. Y. Filed March 11, 1908.

14,140.—*Title:* "MELLOW BRÄU." (For Beer.) APPLETON BREWING & MALTING CO., Appleton, Wis. Filed March 16, 1908

14,141.—*Title:* "ADLER-BRÄU." (For Beer.) GEO. WALTER BREWING CO., Appleton, Wis. Filed March 16, 1908.

14,142.—*Title:* "K AND S." (For Beer.) THE KAMM & SCHELLINGER BREWING CO., Mishawaka, Ind. Filed March 16, 1908.

14,143.—*Title:* "INDEPENDENT LIQUOR CO.," (For Liquors.) INDEPENDENT LIQUOR CO., St. Joseph, Mo. Filed March 2, 1908.

14,144.—*Title:* "LEBENSGOLD." (For a Non-Alcoholic Beverage.) C. H. SOMMER & COMPANY, Milwaukee, Wis. Filed March 14, 1908.

14,145.—*Title:* "OLD TIME RIO COFFEE." (For Coffee.) CLIFTON FORGE GROCERY COMPANY, INCORPORATED, Clifton Forge, Va. Filed March 12, 1908.

14,146.—*Title:* "GOLD'S ZIZEL BREAD MADE OF PURE RYE FLOUR." (For Bread.) SAMUEL GOLD, Chicago, Ill. Filed March 2, 1908.

14,147.—*Title:* "SWEETHEART." (For Canned Syrup.) LOUISIANA MOLASSES CO. LTD., New Orleans, La. Filed March 4, 1908.

14,148. [WITHDRAWN.]

14,149.—*Title:* "AUNT SALL'S SODA." (For Soda.) SAMUEL J. BRAUN, Syracuse, N. Y. Filed February 1, 1908.

14,150.—*Title:* "MORRIS'S ANTI-RUST." (For a Dressing or Polish for Gas and Coal Ranges and other Metal Articles.) WILLIAM C. MORRIS, Salt Lake City, Utah. Filed March 14, 1908.

PRINTS

REGISTERED APRIL 14, 1908.

2,259.—*Title:* "COLUMBIA RECORDS." (For Sound-Records.) COLUMBIA PHONOGRAPH CO. GENL., New York, N. Y. Filed March 11, 1908.

2,260.—*Title:* "THE RELIANCE TAILORING CO." (For Men's Clothing.) THE RELIANCE TAILORING CO., Philadelphia, Pa. Filed February 29, 1908.

2,261.—*Title:* "MEN'S |AND |BOYS' |APPAREL." (For Men's and Boys' Apparel.) H. C. LYTTON, Chicago, Ill. Filed March 13, 1908.

DECISIONS

OF THE

COMMISSIONER OF PATENTS

AND OF

UNITED STATES COURTS IN PATENT CASES.

COMMISSIONER'S DECISIONS.

DYSON *v.* LAND *v.* DUNBAR *v.* BROWNE.

PATENT INTERFERENCE.

Decided March 26, 1908.

1. INTERFERENCE—MOTION TO SUPPRESS TESTIMONY—APPEAL FROM DECISION OF THE EXAMINER OF INTERFERENCES.

Where the Examiner of Interferences in his decision on priority decided a motion to suppress testimony, *Held* that an appeal from that decision will not be considered until the case comes before the Commissioner on appeal on priority.

2. SAME—SAME—SAME—JURISDICTION OF THE EXAMINERS-IN-CHIEF.

The Examiners-in-Chief have jurisdiction to pass upon the correctness of the action of the Examiner of Interferences in suppressing testimony and to consider the same if in their opinion it should not have been suppressed.

3. SAME—MOTION TO AMEND PRELIMINARY STATEMENT—RECONSIDERATION AFTER DECISION BY THE COMMISSIONER.

Where a motion to amend a preliminary statement has been denied by the Examiner of Interferences and his decision affirmed on appeal, it should not be reconsidered in the absence of any additional showing as to the grounds on which it was denied.

4. SAME—RENEWAL OF MOTION—NOTICE.

Rule 153 provides that reasonable notice of all motions must be given and that a motion will not be entertained in the absence of proof of service of such notice. The same reason exists for requiring notice of the renewal of a motion as of the motion itself, and the mere request at the final hearing and in a brief filed at final hearing is not such notice.

ON MOTION.

TELEPHONE SYSTEM.

Mr. Geo. L. Cragg for Dyson.

Mr. Thos. H. Ferguson for Land.

Messrs. Bacon and Milans for Dunbar.

Mr. Chas. Neave and *Messrs. Mauro, Cameron, Lewis & Massie* for Browne.

MOORE, *Commissioner:*

This case comes up on a motion by Browne to dismiss an appeal by Dyson from the decision of the Examiner of Interferences suppressing certain testimony taken on behalf of Dyson and to dismiss an appeal by Land from a decision of the Examiner of Interferences refusing to allow Land to amend his preliminary statement.

It appears that Browne filed a motion to strike out the testimony above referred to on June 26, 1907. The Examiner of Interferences refused to consider the motion prior to final hearing and dismissed it without prejudice to Browne's right to renew at that time. On appeal this decision was affirmed. Browne gave notice prior to final hearing that he would renew his motion, and it was heard at that time and decided in his favor at the same time that the decision was rendered on priority.

Land contends that the appeal should not be dismissed, for the reason that if it is not decided now the Examiners-in-Chief will be bound by the decision of the Examiner of Interferences and cannot consider the testimony which he has decided should be suppressed, whereas on appeal from their decision it may be decided that this testimony should not have been suppressed, and therefore the record before the Commissioner may be different from that considered by the Examiners-in-Chief.

The contention is thought to be not well taken. The Examiners-in-Chief can pass upon the correctness of the action of the Examiner of Interferences in suppressing the testimony and consider the same if in their opinion it should not have been suppressed. The Examiners-in-Chief considered such a motion in the case of *Royce* v. *Kempshall*, as appears from the following statement in the decision of Commissioner Allen on priority in that case (125 O. G.. 1347):

> Following the decision of the Examiner of Interferences on priority, in which he held that it would be improper to give Royce the benefit of the letters as evidence, but denied Kempshall's motion to strike them from the record, Kempshall filed an appeal and petition that such correspondence be stricken from the record. In my decision dated May 16, 1906, it was held that in view of the decision of the Examiners-in-Chief rendered in the meantime, to the effect that the motion to strike out was without merit, the testimony would not be stricken out without consideration of the merits of the motion, and such consideration was postponed until final hearing upon the appeal on priority. This motion is therefore given consideration at this time.

The reason which induced the Examiner of Interferences to postpone consideration of the motion to final hearing—viz., that it would involve a consideration of the record which must necessarily be given at final hearing—applies equally as well to the present appeal. If the case comes before me on appeal, the propriety of suppressing this testimony can be considered and decided in connection with the question of priority.

As to Land's appeal, it appears that on January 18, 1907, Land brought a motion to amend his preliminary statement which was denied by the Examiner of Interferences in a decision rendered January 28, 1907. On appeal the decision was affirmed by Commissioner Allen.

Land filed no other motion to amend his preliminary statement, and the record does not show that any notice was given by Land that he would ask for reconsideration of his motion which had been denied, although his

brief at final hearing contains a request for such reconsideration.

Apparently Land at the final hearing asked for such reconsideration, for the decision of the Examiner of Interferences contains the following statement:

With respect to Land's motion to amend his statement, the record shows that the same is a renewal of a motion previously presented and decided adversely to the moving party. Land urges a reconsideration of the former decision.

Rule 153 provides that reasonable notice of all motions must be given and that a motion will not be entertained in the absence of proof of service of such notice. The same reason exists for requiring notice of the renewal of a motion as of the motion itself, and the mere request at the final hearing and in the brief filed at final hearing is not such notice. The motion should, therefore, have been dismissed by the Examiner of Interferences. As the motion should have been dismissed, it follows that the appeal from the decision must be dismissed.

Furthermore, Land's motion to amend his preliminary statement was denied by the Examiner of Interferences and on appeal by the Commissioner, because he did not exercise proper care and diligence in the preparation of his preliminary statement, his mistake being one of law and not of fact, and because he offered no excuse for his long delay in bringing his motion. Whether the allegations of the proposed amended statement were true, was not considered. The only showing, therefore, that would have justified a reconsideration of the motion, was a showing with respect to the grounds on which the motion was denied. It appears both from the decision of the Examiner of Interferences and from Land's brief at final hearing that no such showing was made, nor is it now alleged that it was made. The alleged new showing consisted of testimony tending to establish the truth of the allegations of the proposed statement, but, as pointed out, this could not affect the granting of the motion, and was clearly insufficient to have warranted a reconsideration thereof. For this further reason the appeal must be dismissed.

The motion is granted and the appeals of Dyson and Land are dismissed.

McBRIDE *v.* KRODER.

Decided March 27, 1908.

INTERFERENCE—MOTION TO DISSOLVE—IRREGULARITY IN DECLARATION.

The Examiner suggested to M. two claims which were the same as two of K.'s claims, except that the term "supporting member" was substituted for "attaching-bracket," but did not suggest them to K. After M. made the claims the interference was declared with these claims as two counts of the issue. *Held* that this was an irregularity in the declaration of the interference, as Rule 96 clearly contemplates that the issue shall be in terms of the claims actually made by both parties or which they have had an opportunity to make.

APPEAL on motion.

CURTAIN-FIXTURE.

Mr. John W. Loveland and *Mr. Walter Allen* for McBride.

Messrs. Munn & Co. for Kroder.

BILLINGS, *Assistant Commissioner:*

This is an appeal by Kroder from the decision of the Examiner refusing to dissolve an interference on the ground of irregularity in the declaration thereof.

It appears that the Examiner suggested to McBride two claims which were the same as Kroder's counts 2 and 3, except that the term "supporting member" was substituted for the term "attaching-bracket," but did not suggest these claims to Kroder. McBride having made the claims, they were made counts 2 and 3 of the issue of the interference, these counts being stated to be Kroder's claims 2 and 3.

Rule 96 clearly contemplates that the issue shall be in the terms of the claims actually made by both parties, or at least that both parties should have had an opportunity to make such claims. If neither party has made a claim which can be made by the other by reason of the inclusion of elements which are not of the essence of the invention, then, as pointed out in *ex parte Thompson*, (98 O. G., 227,) the Examiner should suggest a claim to each which will cover the real invention common to the two cases, omitting such limitation.

If one of the parties refuses to make such a claim, it may be necessary to make the claim of one party the issue, holding that it is substantially the same as the claim of the other; but this should not be done until the parties have had the opportunity to make the identical claims.

The decision of the Examiner is reversed.

DECISIONS OF THE U. S. COURTS.

Court of Appeals of the District of Columbia.

UNITED STATES OF AMERICA, EX REL. THE NEWCOMB MOTOR COMPANY, *v.* MOORE, COMMISSIONER OF PATENTS.

Decided March 5, 1908.

1. INTERFERENCE—RIGHT TO MAKE CLAIMS A QUESTION OF PRIORITY—APPEAL TO COURT.

The right of a party to make a claim goes to the foundation of an interference, and a judgment of a Primary Examiner denying that right may be appealed to the Court of Appeals of the District of Columbia and that court will take jurisdiction to determine that question "as an ancillary question to be considered in awarding priority of invention."

2. SAME—SECTION 4904, REVISED STATUTES—COMMISSIONER MAY DELEGATE AUTHORITY.

Although section 4904, Revised Statutes, provides that whenever "in the opinion of the Commissioner" an interference exists notice shall be given to the parties, etc., the Commissioner is not obliged personally to determine in the first instance whether an interference in fact exists, but may delegate this duty to the Primary Examiner. The demands of the statute are fully met when it is provided that at some stage in the proceedings the personal opinion of the Commissioner may be invoked by either party.

3. SAME—RIGHT TO HAVE CLAIMS TWICE REJECTED—INTER PARTES CASE.

The provisions of the statutes giving an applicant the right to have his claim twice rejected (secs. 4903 and 4909, R. S.) does not apply in *inter partes* cases.

4. SAME—MOTION TO DISSOLVE—EXAMINER'S DECISION FINAL UNLESS APPEAL PROSECUTED.

Where a Primary Examiner on a motion to dissolve decides that one of the parties has no right to make the claims of an interference issue and such party, after filing an appeal from such decision, fails to prosecute the same and abandons it, such decision becomes final and binding upon the parties and precludes the subsequent *ex parte* consideration of the same question.

5. SAME—SAME—SAME—SUPERVISORY AUTHORITY OF COMMISSIONER.

Upon a motion to dissolve it was held that one of the parties had no right to make the claims in issue and the appeal from that decision was abandoned; but subsequently in the *ex parte* prosecution of that party's case it was held by the Examiners-in-Chief that said party had a right to make the identical claims and the interference was redeclared. The Commissioner thereupon set aside the *ex parte* decisions and directed a rehearing of the case before the Examiners-in-Chief *inter partes*. *Held* that the decision in the interference was *res adjudicata* and that the Commissioner was without authority to direct the readjudication in such *ex parte* application of the question whether said party had a right to make the identical claims of the issue of the interference.

6. MANDAMUS—PROPERLY INVOKED FOR ENFORCEMENT OF DECISION OF PRIMARY EXAMINER.

Where a Primary Examiner on a motion to dissolve decides that one of the parties has no right to make the claims of an interference issue and such party, after filing an appeal from such decision, fails to prosecute the same and abandons it, such judgment becomes final and binding upon the parties, and mandamus is the proper proceeding to secure the enforcement of such judgment and a vacation of any subsequent *ex parte* or *inter partes* proceedings adjudicating the same question or based upon such an adjudication.

Mr. C. H. Duell, *Mr. R. N. Kenyon*, and *Mr. W. F. Rogers* for the appellant.

Mr. Melville Church and *Mr. F. A. Tennant* for the appellee.

ROBB, *J.:*

This is an appeal from an order of the Supreme Court of the District of Columbia dismissing a petition for a writ of mandamus to compel the Commissioner of Patents to enforce a former decision made in the Patent Office and to vacate certain proceedings thereafter had involving what is claimed to be the same subject-matter.

The facts, about which there is no controversy, are these: On July 15, 1902, two patents were regularly issued to E. C. Newcomb—one for an apparatus for generating steam and the other for the method of generating steam. Both were subsequently assigned to the relator, The Newcomb Motor Company. Newcomb's original application was filed June 7, 1901, and subsequently divided. Prior to this, on August 2, 1897, Elihu Thomson had filed an application for an apparatus for regulating and controlling steam production. No interference was declared between this and Newcomb's applications. After the issue of Newcomb's patents Thomson inserted in his application forty-seven claims copied from Newcomb's method patent and demanded an interference. Thereafter, on November 17, 1902, Thomson filed a divisional application setting up the same method claims and at the same time canceled said claims in his original application. February 28, 1900, Herman Lemp filed an application for automatic regulation of steam-propelled vehicles, and on November 3, 1902, another for the method of producing steam. Both of these have been assigned to the General Electric Company. December 30, 1902, an interference was declared between Lemp's last application and the Newcomb patent, No. 704,908, (method,) involving an issue of fifteen counts. These counts consisted of fifteen claims of the Newcomb patent that were not claimed in Lemp's application as filed, but were added thereto after Newcomb's patent had issued. A second interference was declared January 13, 1903, between Lemp's first application and Newcomb's patent, No. 704,907. The twenty-one counts of this issue were claims of the Newcomb patent not claimed by Lemp until after the issue of the Newcomb patent. January 13, 1903, an interference was declared between Thomson's divisional application and Newcomb's patent, the forty-seven counts of the issue constituting the claims taken from Newcomb's patent. Another was declared January 27, 1903, between Thomson's original application and Newcomb's patent, No. 704,907. The issue in this contained forty-eight counts embracing forty-eight claims of the Newcomb patent not in Thomson's original application but inserted by him after the issue of the Newcomb patent aforesaid. Thereafter Newcomb filed in each case a motion, under Rule 122, to dissolve the interferences. Several grounds were assigned, the substantial one in each case being that the opposing party had no right under his application to make the claims in interference. The Primary Examiner, to whom the motions were referred under the rule, on January 11, 1904, made a decision in each case that the applicants had no right to make the claims, and thereafter dissolved the interferences. The limit of appeal from each decision was ordered to expire February 4, 1904. Lemp and Thomson filed motions before the Primary Examiner asking him to cancel the limit of appeal as contrary to law, because they were entitled to a second rejection of their claims, that after-proceedings in the interferences be suspended pending the motions, and that they be given thirty days within which to file affidavits regarding the right to make the claims. By stipulation the limit of appeal had been extended sixteen days, namely, to February 20, 1904. On that date the Examiner denied the motions. On the same day Lemp and Thomson entered appeals to the Examiners-in-Chief from the decisions dissolving the interferences, asking that hearings thereof be postponed until a decision by the Commissioner on appeals taken directly to the Commissioner from the decisions of the Examiner refusing to extend the limit of appeal. On March 11, 1904, the Commissioner affirmed the decisions denying the motions to extend the limit of appeal. September 28, 1904, the Commissioner denied motions for rehearing. Pending the above proceedings, on June 3 and 7, 1904, Thomson and Lemp petitioned the Commissioner to remand their applications to the Primary Examiner with instructions to reject or allow the same. This petition was denied. On October 5 and 6, 1904, Thomson and Lemp "in view of the Commissioner's decision" of September 28, 1904, withdrew their several appeals to the Examiners-in-Chief from the decisions of the Primary Examiner dissolving the interferences. After the withdrawal of these appeals, Thomson and Lemp proceeded *ex parte* before the Primary Examiner (Newcomb having no knowledge thereof) and demanded action on the same claims, their right to make which had been denied on the motions to dissolve. November 3, 1904, the claims were rejected. Both parties thereafter asked the reconsideration of their several demands and filed affidavits relating

the construction of the applications and claims. Thomson's application was a second time rejected on May 10, 1905, and he appealed in each case to the Examiners-in-Chief. Lemp pursued the same course, and was a second time rejected, on November 20, 1905, and likewise appealed to the Examiners-in-Chief. On July 13, 1905, on Thomson's *ex parte* appeal the Examiners-in-Chief reversed the Primary Examiner as to all but two of the claims involved. On Lemp's *ex parte* appeal they, on January 25, 1906, reversed the Primary Examiner as to all of the claims involved. After these last two decisions the Examiner of Interferences reinstated the former interferences, redeclaring them as before with the exception of the two counts which the Examiners-in-Chief had held were rightly denied. Before noticing this second declaration Newcomb moved to dissolve on the ground that the subject-matter was *res adjudicata*. The Examiner denied the motions and Newcomb appealed to the Commissioner. On this appeal the Commissioner, on April 24, 1906, reversed the decision reinstating the interferences and directing it to be vacated; but also ordered that the Primary Examiner's decision rejecting the claims be considered in full force and effect until the Examiner should be convinced that the same was an error or until the same was overruled by an *inter partes* appeal, and further ordered that the Primary Examiner should fix a date for reconsideration of the rejection *inter partes*, and, if still convinced that the rejection was sound to make the same final and fix a limit of appeal. On May 23, 1906, Thomson and Lemp each asked that a day be set for the rehearing provided in said decision. Hearing was set for July 9, 1906, and notices were sent to Newcomb, but the same was postponed to September 26, 1906. Meantime the Examiner of Interferences had on June 11, 1906, set aside the declarations of interferences in obedience to the opinion of the decision of the Commissioner. On August 15, 1906, The Newcomb Motor Company filed the petition setting up the proceedings in the Patent Office before stated and averring that the only remedy which Thomson and Lemp had in relation to the decisions of the Primary Examiner dissolving the interferences was by appeal to the Examiners-in-Chief pursuant to the provisions of sections 4909 and 483, Revised Statutes, and the rules of the Patent Office established in accordance therewith, that having taken and then abandoned appeals therefrom the said decisions of the Primary Examiner had become final and the issues therein are *res adjudicata* between the parties, and that by the refusal of the Commissioner to vacate all of the proceedings connected with and leading to a redeclaration of the interferences, and particularly the *ex parte* actions of the said Thomson and Lemp subsequent to the dissolution of the said interferences and any and all appeals therein, petitioner had been deprived of the legal rights vested in him by the laws relating to the granting of patents and will be without redress unless the writ of mandamus prayed for be granted.

It is conceded in the brief of counsel for appellee that—

> the judgments of the Primary Examiner, unappealed from, were as final as would have been the judgments of the Examiners-in-Chief, on appeal, or of the Commissioner, on appeal, had appeals been taken to those tribunals—

but, it is contended, that the judgment of the Primary Examiner dissolving the interferences on the ground that neither Thomson nor Lemp had the right to make the claims was an interlocutory and not a final judgment, because it did not decide the question of priority. It is true, as contended by appellee, that in several cases decided by this court prior to *Podlesak* v. *McInnerney*, (26 App. D. C., 299,) it was in effect held that in interference cases the right of either party to make the claims of the issue, except under extraordinary circumstances, would not be considered. In the Podlesak case, however, upon careful consideration we modified our earlier views and ruled that inasmuch as the right of a party to make a claim goes to the foundation of an interference, a judgment of the Primary Examiner denying that right might be appealed to this court, and that we would take jurisdiction to determine that question "as an ancillary question to be considered in awarding priority of invention." The opinion states:

> If it be incorrectly held that such party has a right to make the claim, priority may be awarded to him, and his adversary be deprived of a substantial right in that he is not given a claim where he necessarily is the prior inventor, his adversary never having made the invention.

Allen v. *U. S., ex rel. Lowry*, (26 App. D. C., 8,) relied upon by appellee, in no way conflicts with the decision in the Podlesak case. Lowry, one of the parties to the interference, was granted a patent and an interference was subsequently declared between his patent and the application of one Spoon. Lowry moved to dissolve the interference upon the ground that Spoon's press was inoperative, and, therefore, that Spoon had no right to make the claims in issue. The Primary Examiner granted the motion, and an appeal was prosecuted to the Examiners-in-Chief who affirmed the decision. Spoon thereupon petitioned the Commissioner of Patents, who remanded the case to the Primary Examiner for further consideration, and that officer upon the filing of additional affidavits decided that Spoon had a right to make the claims in issue. An appeal was taken to the Board of Examiners-in-Chief, which was dismissed by that Board for the want of jurisdiction. Lowry then petitioned the Commissioner to take jurisdiction of the appeal, which petition was denied. The Supreme Court of the District of Columbia was then petitioned to issue a writ of mandamus commanding the Commissioner of Patents to direct the Examiners-in-Chief to reinstate and take jurisdiction of the appeal, and the petition was granted. This court, on appeal, reversed the lower court, and our ruling was affirmed by the Supreme Court of the United States, (203 U. S., 476,) the ground of both decisions being that appeals are only allowed to the Examiners-in-Chief, and from them to the Commissioner, from "final decisions and not such as are made in interlocutory matters." The Supreme Court quoted with approval the following from the decision of the Acting Commissioner:

> It is to be particularly noted that there has been no decision as to the rival claims of the parties to this interference. It has not been decided which party is entitled to the patent. If it should at any time be decided that Spoon is entitled to the patent, Lowry will have the right of appeal, but until such final decision is rendered the statute gives him no right of appeal. It would seem upon general principles of law that Lowry could then present for determination by his appeal any question which in his opinion vitally affects the question which party is entitled to the patent. The only ground upon which he can reasonably claim the right of

> appeal on this motion is that the question vitally affects his claimed right to a patent, and, if it does that, he can raise it at final hearing and contest it before the various appellate tribunals, including the court of appeals.

It is obvious that the decision of the Primary Examiner in the Lowry case was purely interlocutory, for it eliminated neither party to the interference and deferred final judgment on the question of priority until each party had taken testimony. It was still possible, therefore, for Lowry to prevail on the merits and receive the award of priority. Neither does the case of *Distilling Co.* v. *Schneider* (29 App. D. C., 1) conflict with *Podlesak* v. *McInnerney*, for the reason that the appeal in that case was taken to this court before the subject-matter in dispute had been awarded to either party.

It is further contended that because section 4904, Revised Statutes, provides that whenever "in the opinion of the Commissioner" an interference exists, notice shall be given the parties, etc., a non-delegable duty is imposed upon the Commissioner. This question was considered in *Allen* v. *Lowry*, *supra*, and it was there held that the Commissioner "for any reason which he considers may be in the interest of the public or the parties" may delegate to the Primary Examiner the duty of determining primarily whether an interference in fact exists, and that—

> in so doing, he is not thereby depriving any party of any statutory right to have all questions passed upon at final hearing, and on appeals therefrom, which are necessary for a correct determination of the question of priority, which is the sole question for which interferences are declared.

To adopt the view of the appellee would reverse a practice which has prevailed in the Patent Office since the statute was enacted in 1870, and would in effect render the statute nugatory since it would be a physical impossibility for the Commissioner personally to pass upon all these preliminary questions. He was given assistants for that purpose. Moreover, the Primary Examiner is skilled in the particular art, and, therefore, peculiarly qualified to pass upon a question involving the right of either party to make the claims of the issue. We think the demands of the statute fully met when it is provided that at some stage in the proceedings the personal opinion of the Commissioner may be invoked by either party.

It is next contended by the appellee that the judgment of the Primary Examiner was not a final judgment because, under the provisions of sections 4909, 4910, and 4911, Revised Statutes, the applicant is entitled to a reconsideration and second rejection of his claims by the Primary Examiner. These sections read as follows:

> Sec. 4909. Every applicant for a patent or for the reissue of a patent, any of the claims of which have been twice rejected, and every party to an interference, may appeal from the decision of the Primary Examiner, or of the Examiner in charge of interferences in such case, to the Board of Examiners-in-Chief: having once paid the fee for such appeal.
>
> Sec. 4910. If such party is dissatisfied with the decision of the Examiners-in-Chief, he may, on payment of the fee prescribed, appeal to the Commissioner in person.
>
> Sec. 4911. If such party, except a party to an interference, is dissatisfied with the decision of the Commissioner, he may appeal to the Supreme Court of the District of Columbia, sitting in banc.

It will be necessary to examine sections 4903 and 4904, Revised Statutes, in discussing the merits of this contention. These sections read as follows:

> Sec. 4903. Whenever, on examination, any claim for a patent is rejected, the Commissioner shall notify the applicant thereof, giving him briefly the reasons for such rejection, together with such information and references as may be useful in judging of the propriety of renewing his application or of altering his specification; and if, after receiving such notice, the applicant persists in his claim for a patent, with or without altering his specifications, the Commissioner shall order a reëxamination of the case.
>
> Sec. 4904. Whenever an application is made for a patent which, in the opinion of the Commissioner, would interfere with any pending application, or with any unexpired patent, he shall give notice thereof to the applicants, or applicant and patentee, as the case may be, and shall direct the Primary Examiner to proceed to determine the question of priority of invention. And the Commissioner may issue a patent to the party who is adjudged the prior inventor, unless the adverse party appeals from the decision of the Primary Examiner, or of the Board of Examiners-in-Chief, as the case may be, within such time, not less than twenty days, as the Commissioner shall prescribe.

In *Allen* v. *Lowry*, *supra*, section 4909 was construed—

> as though it read, every applicant for a patent, or for the reissue of a patent, any of the claims of which have been twice rejected, may appeal from the decision of the Primary Examiner, and every party to an interference may appeal from the decision of the Examiner in charge of interferences in such case, to the Board of Examiners-in-Chief. In other words, to abbreviate and make the sections more succinct, the words "may appeal from the decision" were used but once, but we think that thereby clearness was sacrificed for brevity.

This interpretation negatives the contention of appellee that the provision giving an applicant the right to have his claim twice rejected applies in *inter partes* cases. In an *ex parte* case arising under section 4903 the applicant in the first instance has no knowledge as to the references and reasons of the rejection by the Primary Examiner of his claim, and has no opportunity to be heard before action has been taken by that official. The notice of rejection contains his first information of what has taken place in the Patent Office. The statute, therefore, very properly provides in effect that upon the receipt of such notice the applicant may have an opportunity to meet the objections raised by the Primary Examiner. Under section 4904, however, it is made the duty of the Commissioner to give notice to parties thought to be in interference, and to "direct the Primary Examiner to proceed to determine the question of priority of invention." The statute, therefore, imposes upon the Commissioner the duty of notifying the parties prior to the first hearing before the Primary Examiner so that, when the hearing is had, both parties have a right to be present, and, in the event a motion for dissolution is made, the applicant affected has knowledge of the grounds for the motion and ample opportunity for hearing and argument. No more reason exists for a second hearing than exists for a second hearing in any other case between two parties litigant where due notice has been given and all the forms and requirements of the law have been complied with. The Commissioner in his opinion said:

> I am of the opinion that the proceedings in the Thomson application since the withdrawal of the appeal to the Examiners-in-Chief in the interference were contrary to the evident spirit of the rules, and that to sustain such proceedings would be in opposition to the requirements of good practice and to the interests of applicants generally. If parties can waive their rights of *inter partes* appeal in the interference and then proceed by *ex parte* appeals to try the same questions which they could have tried by the *inter partes* appeals, the provision of Rule 124, that appeals shall be heard *inter partes* is rendered ineffective. If the *inter partes* hearing upon appeal is to be escaped, the usefulness of motions for dissolution will be slight except in those cases where parties voluntarily take the *inter partes* appeal. Why should motions be brought or even permitted if decisions granting them can be set aside upon appeal without opportunity for the moving parties to be heard and presumably to a large extent without consideration of the arguments upon which the conclusions appealed from are based? It is no sufficient answer to say that if the decision of the Primary Examiner is reversed, the motion may be brought again when the interference is reinstated or redeclared; if reinstated, a new motion brought and granted would presumably be followed by another *ex parte* appeal and another reversal of the decision. There would be no logical conclusion to such proceedings and to permit them would be absurd. The practice of permitting motions for dissolution to be brought is believed to be good. If appeals upon these motions are to be permitted, the prosecution thereof must be *inter partes* to save the whole proceedings upon the motion from becoming farcical. The rules at present do provide for appeals

and it is not deemed expedient to change them in this respect at the present time.

We conclude, therefore, that the provisions relating to *ex parte* applications do not apply to *inter partes* actions, and that, when the appeal from the decision of the Primary Examiner was abandoned, his decision became final and binding upon the parties.

But, it is insisted, that mandamus is not the proper remedy. When the decision of the Primary Examiner that Thomson and Lemp had no right to make the claims in issue became final and *res adjudicata*, those parties were eliminated from the case, and appellant was entitled to go hence in the full and uninterrupted enjoyment of the patent. Under the statute the jurisdiction of the Commissioner attaches when he directs the declaration of an interference, and he still retains jurisdiction to award priority to the successful party after his adversary has been eliminated. It would indeed be an anomalous situation, if his determination that one party to an interference has no right to make the claims in issue, and, therefore, is not entitled to a judgment of priority, operates to deprive him of jurisdiction to award priority to the other party who has the right to make the claims in issue and who is entitled to an award of priority. The remedy of the defeated party is by way of appeal. He has no right whatever thereafter to prosecute the claims of the issue in an *ex parte* case. It follows, therefore, that when Thomson and Lemp abandoned their appeals from the decision of the Primary Examiner denying their right to make the claims in issue, that decision became final and *res adjudicata* as between the parties to the interference, and that thereafter the Commissioner was without authority to direct the Primary Examiner to readjudicate in Thomson's and Lemp's *ex parte* applications, the question whether they had the right to make the identical claims of the issue in the interference proceeding. If this remedy is denied it appellant will be again compelled to litigate with Thomson and Lemp in the Patent Office the same question which we have held has already been finally determined in its favor. All this will involve expense, delay and loss. The Commissioner, being without authority to direct a readjudication of the question involved in the former interference, has no discretion in the premises, for—

whether the former decision was right or wrong, or was induced by the want of the particular evidence that was offered in the present case, is not the question. However that might be, it was final and put an end to the litigation in the first interference. (*Blackford* v. *Wilder*, 28 App. D. C., 551.)

It is no answer to the petition of appellant that the Commissioner deemed himself possessed of the authority he exercised, if no discretion in the premises was committed to him and he was in fact acting beyond his authority and without warrant of law. (*Garfield* v. *U. S. ex rel. Frost*, 35 W. L. R., 771; 30 App. D. C.; *U. S., ex rel. Daly*, v. *Macfarland*, 28 App. D. C., 552.)

Seymour v. *Brodie*, (10 App. D. C. 567,) confidently relied upon by appellee to defeat appellant's right to the writ, is not in point. That case like this involved an interference between an application and unexpired patent, but in that case the decision dissolving the interference had been acquiesced in by the junior party, leaving the senior party in full possession and enjoyment of his patent. This court very naturally held that the patentee was not entitled to a writ of mandamus to compel the Commissioner of Patents to reinstate the interference proceeding because he had suffered no legal injury whatever and because he remained "in full possession of all his legal rights to the same extent as before he was summoned to defend those rights."

In the instant case a second attack not authorized by law has been instituted against appellant's patent, and necessarily has impaired that patent. There being no other adequate and speedy remedy, we think appellant entitled to the relief sought.

The judgment of the court below must be reversed with costs, and the cause remanded to that court with directions to issue the writ as prayed.

Interference Notices.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., March 16, 1908.

Ernest R. Schneider, his assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of The Union Distilling Company, of 1006 Richmond street, Cincinnati, Ohio, for registration of a trade-mark and a trade-mark registered to Ernest R. Schneider, of Augusta, Ga., of whom John R. Schneider claims to be successor, and the notice of said declaration sent by registered mail to the said Ernest R. Schneider having been returned undelivered, notice is hereby given to the said Ernest R. Schneider, his assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents in order that the notices of declaration heretofore sent by and returned to the Office may be forwarded to them.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will be proceeded with as in case of default.

E. B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., March 5, 1908.

William E. Woodyear, his assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of The Northwestern Elevator & Mill Company, of Mount Vernon, Ohio, for registration of a trade-mark and a trade-mark registered to William E. Woodyear, of 304 Spears Wharf, Baltimore, Md., and the notice of said declaration sent by the Patent Office by registered mail to the said William E. Woodyear and also the notice sent to his attorney of record in the usual manner having been returned undelivered, notice is hereby given to the said William E. Woodyear, his assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents in order that the notices of declaration heretofore sent by and returned to the Office may be forwarded to them.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will be proceeded with as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., March 4, 1908.

Frank Mellersh, his assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of William O. Frailey, of East King and Shippen streets, Lancaster, Pa., for registration of a trade-mark and a trade-mark registered to Frank Mellersh, of 130 West Thirty-fourth street, New York, N. Y., and the notice of said declaration sent by the Patent Office by registered mail to the said Frank Mellersh, as well as the copy mailed in the usual way to his attorney of record, having been returned undelivered, notice is hereby given to the said Frank Mellersh, his assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents in order that the notices of declaration heretofore sent by and returned to the Office may be forwarded to them.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will be proceeded with as in case of default.

EDWARD B. MOORE, *Commissioner.*

THE
OFFICIAL GAZETTE
OF THE
United States Patent Office.

[BY AUTHORITY OF CONGRESS.]

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Designs	11	No. 39,267 to No. 39,277,	inclusive.
Trade-Marks	124	No. 68,581 to No. 68,704,	inclusive.
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Prints	4	No. 2,262 to No. 2,265,	inclusive.
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Total	857		

TO CITIZENS OF THE UNITED STATES.

States.	Patents and Designs.	Trade-Marks, Labels, and Prints.	States.	Patents and Designs.	Trade-Marks, Labels, and Prints.
Alabama	4	.....	New Hampshire	3	.....
Alaska, District of	.....	.....	New Jersey	20	10
Arizona Territory	.....	.....	New Mexico Ter't'y	.....	.....
Arkansas	5	1	New York	110	30
California	28	10	North Carolina	4	.....
Colorado	8	3	North Dakota	6	.....
Connecticut	15	.....	Ohio	50	10
Delaware	.....	.....	Oklahoma	4	1
District of Columbia	5	1	Oregon	9	.....
Florida	3	.....	Panama	.....	.....
Georgia	5	.....	Pennsylvania	55	7
Hawaii Territory	.....	.....	Philippine Islands	.....	.....
Idaho	.....	.....	Rhode Island	4	.....
Illinois	62	10	South Carolina	2	5
Indiana	20	1	South Dakota	3	.....
Iowa	9	.....	Tennessee	7	.....
Kansas	8	.....	Texas	17	.....
Kentucky	7	3	Utah	4	.....
Louisiana	3	.....	Vermont	1	1
Maine	1	6	Virginia	12	2
Maryland	6	3	Washington	7	.....
Massachusetts	37	10	West Virginia	5	.....
Michigan	22	1	Wisconsin	15	1
Minnesota	13	1	Wyoming	1	.....
Mississippi	1	1	U. S. Army	.....	.....
Missouri	24	2	U. S. Navy	.....	.....
Montana	2	.....			
Nebraska	10	3	Total to citizens of the United States	638	123
Nevada	1	.....			

TO CITIZENS OF FOREIGN COUNTRIES.

Countries.	Patents and Designs.	Trade-Marks and Prints.	Countries.	Patents and Designs.	Trade-Marks and Prints.
Argentina	.....	.....	Natal	1	.....
Austria-Hungary	4	.....	Netherlands	.....	.....
Belgium	1	.....	Newfoundland	.....	.....
Brazil	.....	.....	New South Wales	2	.....
British West Indies	.....	.....	New Zealand	1	.....
Canada	9	.....	Norway	.....	1
Cape Colony	.....	.....	Persia	.....	.....
Chile	.....	.....	Queensland	.....	.....
China	.....	.....	Roumania	.....	.....
Costa Rica	.....	.....	Russia	1	.....
Cuba	.....	.....	Scotland	1	.....
Denmark	1	.....	South Australia	.....	.....
Ecuador	.....	.....	Spain	.....	.....
England	18	4	Sweden	2	.....
France	7	1	Switzerland	2	1
Germany	22	7	Transvaal, South Africa	1	.....
Haiti	.....	.....	Victoria	.....	.....
Ireland	.....	1	Western Australia	.....	.....
Italy	2	.....			
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Mexico	.....	1			

Interference Notice.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., April 13, 1908.

Klen-So Pharmacal Company, its assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of the F. E. Johnson Company, of 55 Haverhill street, Boston, Mass., for registration of a trade-mark and a trade-mark registered to the Klen-So Pharmacal Company, of 2104 Reed street, Philadelphia, Pa., and the notice of said declaration sent by registered mail to the said Klen-So Pharmacal Company having been returned undelivered, notice is hereby given to the said Klen-So Pharmacal Company, its assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents in order that the notices of declaration heretofore sent by and returned to the Office may be forwarded to them.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will be proceeded with as in case of default.

EDWARD B. MOORE, *Commissioner.*

Full Names of Applicants.

* * * All applications which disclose the full name of the applicant in the preamble of the specification will be received and considered as a sufficient compliance with Rule 40 of the Rules of Practice. (Order 521.)

When the full first name of the applicant does not appear either in his signature or in the preamble to the specification, the Examiner will, in his first official letter, require an amendment supplying the omission, and he will not pass the application to issue until the omission has been supplied, unless an affidavit shall have been filed setting forth that the full first name of the applicant is the one originally given by him. (Order 600.)

APPLICATIONS UNDER EXAMINATION.

Condition at Close of Business April 14, 1908.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action. Amended	New.	No. of applications awaiting action.
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244	XXXV. Buckles, Buttons, and Clasps; Card, Picture, and Sign Exhibiting; Garment-Supporters; Signals; Toilet.	Mar. 30	Jan. 31	651
179	XX. Artificial Limbs; Builders' Hardware; Dentistry; Locks and Latches; Safes; Undertaking.	Mar. 23	Mar. 4	277
378	XXXVIII. Artesian and Oil Wells; Bottles and Jars; Care of Live Stock; Educational Appliances; Fishing and Trapping; Stationery; Stone-Working.	Mar. 18	Mar. 6	368
304	XXXIV. Railways; Railway-Brakes; Railway Rolling-Stock.	Mar. 18	Jan. 31	444
172	XXXI. Alcohol; Ammonia, Water, and Wood Distillation; Charcoal and Coke; Gas, Heating and Illuminating; Hides, Skins, and Leather; Liquid Coating Compositions; Mineral Oils; Oils, Fats, and Glue; Water Purification.	Mar. 14	Feb. 21	231
147	XXIX. Coopering; Fire-Escapes; Ladders; Roofs; Wheelwright-Machines; Wooden Buildings; Wood-Sawing; Wood-Turning; Woodworking; Woodworking-Tools.	Mar. 14	Dec. 24	490
312	VII. Games and Toys; Mechanical Motors; Optics; Paper Manufactures; Velocipedes.	Mar. 12	Feb. 21	285
379	XXIII. Acoustics; Coin-Handling; Horology; Recorders; Registers; Time-Controlling Mechanism.	Mar. 11	Feb. 11	263
135	VIII. Beds; Chairs; Furniture; Kitchen and Table Articles; Store Furniture.	Mar. 11	Jan. 6	387
322	XII. Elevators; Journal-Boxes; Lubrication; Machine Elements; Pulleys and Shafting.	Mar. 9	Feb. 3	553
167	V. Bookbinding; Harvesters; Jewelry; Music.	Mar. 9	Jan. 23	377
232	IV. Bridges; Conveyers; Cranes and Derricks; Excavating; Hoisting; Hydraulic Engineering; Iron Structures; Loading and Unloading; Towers.	Mar. 7	Mar. 12	328
144	XXIV. Apparel; Apparel Apparatus; Sewing-Machines; Surgery.	Mar. 6	Mar. 4	384
264	XXXVI. Curtains, Shades, and Screens; Drafting; Driers; Engraving; Measuring Instruments; Wind-Wheels.	Mar. 6	Feb. 28	501
313	I. Fences; Harrows and Diggers; Plows; Seeders and Planters; Trees, Plants, and Flowers.	Mar. 5	Feb. 14	289
278	XXXII. Carbonating Beverages; Dispensing Beverages; Dispensing-Cans; Metallic Shipping and Storing Vessels; Packaging Liquids; Refrigeration.	Mar. 5	Nov. 26	487
318	VI. Bleaching and Dyeing; Chemicals; Explosives; Fertilizers; Medicines; Preserving; Sugar and Salt.	Mar. 2	Mar. 2	289
327	XVIII. Injectors and Ejectors; Steam and Vacuum Pumps; Steam-Boilers; Steam-Engines; Steam-Engine Valves.	Mar. 2	Jan. 28	302
247	XXII. Air-Guns, Catapults, and Targets; Ammunition and Explosive Devices; Boats and Buoys; Firearms; Marine Propulsion; Ordnance; Railway-Rails and Joints; Railway-Ties and Fasteners; Ships.	Mar. 2	Jan. 24	610
308	XV. Bread, Pastry, and Confection Making; Coating; Fuel; Glass; Hydraulic Lime and Cement; Laminated Sheets and Fabrics; Paper-Making; Paving; Photography; Plastic Block and Earthenware Apparatus; Plastic Compositions; Plastics.	Feb. 28	Feb. 8	737
105	XXVI. Electric Heating and Rheostats; Electric Railways; Electricity, Generation; Motive Power.	Feb. 28	Feb. 6	357
154	XI. Boot and Shoe Making; Boots, Shoes, and Leggings; Button, Eyelet, and Rivet Setting; Harness; Leather Manufactures; Nailing and Stapling; Whips and Whip Apparatus.	Feb. 28	Jan. 28	395
164	XXXIII. Cutlery; Domestic Cooking Vessels; Electric Signaling; Electricity, Medical and Surgical; Fireproof Buildings; Masonry; Tents, Canopies, Umbrellas, and Canes.	Feb. 26	Feb. 17	293
280	XL. Baggage; Check-Controlled Apparatus; Cloth, Leather, and Rubber Receptacles; Deposit and Collection Receptacles; Fine Arts; Lighting-Fixtures; Package and Article Carriers; Paper Receptacles; Special Receptacles and Packages; Wooden Receptacles.	Feb. 26	Jan. 16	637
332	X. Carriages and Wagons	Feb. 20	Jan. 30	508
142	IX. Air and Gas Pumps; Fire-Extinguishers; Hydraulic Motors; Pumps; Sewerage.	Feb. 19	Feb. 24	240
375	XXVII. Brushing and Scrubbing; Grinding and Polishing; Laundry; Washing Apparatus.	Feb. 17	Feb. 6	473
175	III. Annealing and Tempering; Coating with Metal; Electrochemistry; Metal-Founding; Metallurgy; Shaping Fluid Metal.	Feb. 14	Dec. 5	448
128	II. Bee Culture; Dairy; Label-Affixers; Paper Files and Binders; Pneumatics; Presses; Store-Service; Tobacco.	Feb. 13	Jan. 4	452
382	XXVIII. Internal-Combustion Engines; Miscellaneous Heating Plants.	Feb. 6	Jan. 6	530
152	XXX. Fluid-Pressure Regulators; Lamps and Gas-Fittings; Liquid and Gaseous Fuel Burners; Type-Writing Machines.	Feb. 4	Jan. 18	321
238	XIX. Furnaces; Heating and Cooking Stoves, Liquid and Gaseous Fuel; Stoves and Furnaces.	Feb. 3	Dec. 26	506
307	XIV. Compound Tools; Cutting and Punching Sheets and Bars; Farriery; Metal-Bending; Metal-Ornamenting; Sheet-Metal Ware, Making; Tools; Wire-Working.	Jan. 25	Dec. 14	386
107	XXXVII. Electric Lighting; Electricity, Conductors; Electricity, General Applications.	Jan. 21	Oct. 23	688
315	XXV. Butchering; Mills; Threshing; Vegetable Cutters and Crushers.	Jan. 18	Jan. 25	444
329	XIII. Arms, Projectiles, and Explosive Charges, Making; Metal-Working, etc.	Jan. 11	Jan. 11	604
109	XVI. Telegraphy; Telephony	Jan. 9	Oct. 7	598
321	XXXIX. Baths and Closets; Water Distribution.	Jan. 8	Nov. 7	861
352	XLI. Railway Draft Appliances; Resilient Tires and Wheels.	Jan. 2	Sept. 12	863
112	XXI. Brakes and Gins; Carding; Cloth-Finishing; Cordage; Felt and Fur; Knitting and Netting; Silk; Spinning; Weaving.	Dec. 30	Nov. 9	606
	Total number of applications awaiting action			18,717
161	TRADE-MARKS, DESIGNS, LABELS, AND PRINTS.			
	Trade-Marks	Apr. 10	Mar. 5	427
	Designs	Apr. 3	Mar. 2	109
	Labels and Prints			

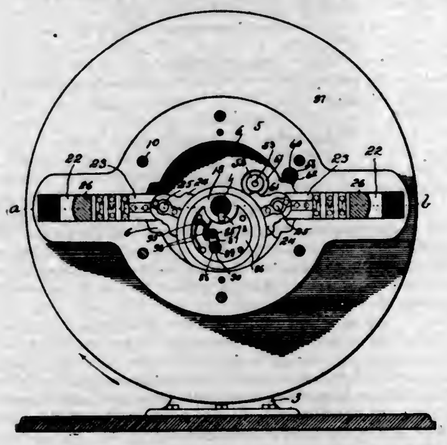
Money by Mail.

Money sent by mail to the Patent Office will be at the risk of the sender. Letters containing money should be registered.

PATENTS

GRANTED APRIL 21, 1908.

885,006. ROTARY EXPLOSIVE-ENGINE. EVERETT E. BARNES, Kansas City, Mo. Filed Oct. 9, 1906. Serial No. 338,142.



1. In a rotary explosive engine, the combination with a stationary support, of a cylinder rotatively mounted on the support provided with an explosion chamber of circular form disposed concentrically with the axis of the cylinder, the explosion chamber having inlet and exhaust passages located respectively upon opposite sides of a longitudinal plane in which is located the axis of the cylinder, valves controlling the said passages, means actuated by the rotation of the cylinder for opening the exhaust valve, a stationary cylindrical abutment longitudinally and eccentrically mounted in the said explosion chamber on said support, and having a portion of its periphery in contact with the periphery of said chamber, and having a compression chamber and two passages communicating with the compression chamber and communicating with the explosion chamber respectively at opposite sides of the place of two valves controlling respectively the passages communicating with the compression chamber, and two radially movable pistons disposed diametrically opposite in the explosion chamber and located in said plane and with their inner ends bearing upon the periphery of said abutment.

2. In a rotary explosive engine, the combination with a support, of a cylinder rotatively mounted on said support and having an explosion chamber with a circular periphery disposed concentrically with the axis of the cylinder, a cylindrical abutment fixed eccentrically on said support in said chamber and having its periphery touching the periphery of the chamber, two pistons radially slidable in the cylinder in a plane in which is located the axis of the cylinder, the pistons being disposed on opposite sides of said axis and provided each with a longitudinal shoe pivoted on the piston and adapted to bear against the periphery of the abutment, means connected with the support by which the pistons are retained against said abutment when the cylinder is rotating, the cylinder having inlet and outlet passages disposed respectively on opposite sides of the plane in which are located the pistons, the abutment having a compression chamber and inlet and outlet passages communicating with the compression chamber and communicating respectively with the explosion chamber at opposite sides of the place of peripheral contact between the abutment and cylinder, valves controlling the inlet passages and the outlet passages, and means atuated by the rotation of the cylinder for controlling the opening of the valves in said outlet passages.

3. In a rotary explosive engine, the combination with the rotary cylinder having a circular explosion chamber, of a shaft disposed concentrically in said chamber and supporting said cylinder, a longitudinal cylindrical abutment eccentrically on said shaft in said chamber and touching at its periphery the periphery of the chamber, the abutment having a compression chamber and two passages communicating with said compression chamber and with the explosion chamber at opposite sides of the place of peripheral contact between the abutment and cylinder, a valve in one of said passages, means for normally holding said valve closed, a rock valve in the other passage, means for normally rocking said rock valve to the closed position, means actuated by the rotation of the cylinder for rocking the rock valve to the open position, two pistons disposed at opposite sides of said shaft and radially movable in the explosion chamber in guides provided in the cylinder, the pistons being adapted to bear against the periphery of the abutment, and means for retaining the pistons against the abutment when the cylinder is rotating.

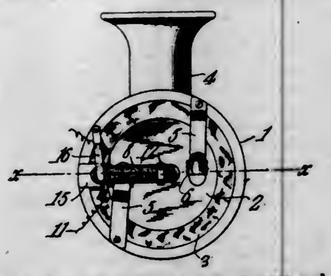
4. In a rotary explosive engine, the combination with the supporting shaft, of the cylinder rotatively mounted on said shaft and having a circular chamber disposed concentrically with the shaft, an abutment of cylindrical shape disposed longitudinally and eccentrically on said shaft and touching at one place lengthwise along its periphery against the periphery of the chamber, the abutment having a compression chamber having communicating with it two passages which communicate respectively with the explosion chamber at opposite sides of the place of peripheral contact between the cylinder and abutment, two valves located in said passages, means for normally holding both of said valves closed, and means actuated by the rotation of the cylinder for opening the other valve.

5. In a rotary explosive engine, the combination with the supporting shaft, of a cylinder rotatively mounted on said shaft and having a circular cylinder concentrically disposed relative to the shaft, an abutment of cylindrical form mounted eccentrically longitudinally on said shaft in said chamber and having its periphery touching the periphery of the cylinder, the abutment having a compression chamber and two passages ommunicating with said compression chamber and with the explosion chamber at opposite sides of the place of peripheral contact between the cylinder and the abutment, two valves located respectively in said passages, means for normally holding said valves closed, means actuated by the rotation of the cylinder for opening once during each revolution one of said valves, two diametrically opposite pistons radially movable in the same plane in said cylinder and in the explosion chamber, and having pivoted shoes adapted to bear lengthwise on opposite sides of said abutment, the cylinder having inlet and outlet passages disposed respectively at opposite sides of the plane in which are located the pistons, valves in said inlet and outlet passages, means for normally holding the latter named valves closed, means actuated by the rotation of the cylinder for opening the

valve in the outlet passage, a supporting means for said shaft having cylindrical guides disposed eccentrically with said shaft, and means coöperating with said guides for retaining the shoes of said pistons in contact with the said abutment.

[Claims 6 to 12 not printed in the Gazette.]

885,007. TELEPHONE-TRANSMITTER. ALBERTA E. BEACHUM, Polkton, N. C. Filed Aug. 7, 1907. Serial No. 387,525.



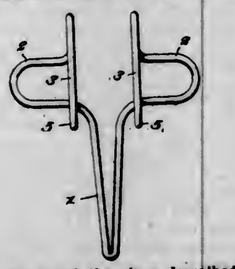
1. In a telephonic transmitter, a diaphragm and a microphonic element consisting of a vacuum tube parallel to and connected to the diaphragm, carbon terminal plates within and extending longitudinally of the tube and in close relation to but insulated one from the other, and carbon granules also within the tube for bridging said terminal plates.

2. A telephonic transmitter including a diaphragm and a microphonic element comprising a vacuum tube connected to the diaphragm and extending parallel therefrom, said tube inclosing circuit terminals and a mass of conducting granules for bridging said terminals.

3. A telephonic transmitter including a diaphragm, and a microphonic element composed of a vacuum tube connected near one end to the center of the diaphragm and supported at the other end to lie parallel with the diaphragm, said vacuum tube containing circuit terminals, and a mass of conducting granules for bridging said circuit terminals.

4. A telephonic transmitter comprising a suitable receptacle, a diaphragm carried thereby, and a vacuum tube connected at one end to the center of the diaphragm and having the other end supported by the receptacle, said vacuum tube containing a plurality of separated insulated carbon plates each with one edge adjacent to but out of contact with the like edge of the next plate, and a mass of carbon granules for bridging said plates across the adjacent edges.

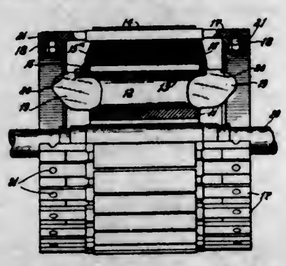
885,008. SECURING DEVICE. FORREST L. BEARD, Mingo, W. Va. Filed Oct. 26, 1907. Serial No. 399,315.



1. A securing device of the class described, comprising a substantially V-shaped body portion, U-shaped extensions adjacent the upper end of said body portion and fingers formed by bending the extreme upper ends of the body portion downwardly and inwardly to engage the lower arms of the U-shaped extensions, whereby a pocket is formed between said fingers and the upper part of the body portion.

2. An article of manufacture comprising a securing device formed by bending a single section of wire to form a V-shaped body, portions of said wire being bent outwardly to form extensions and spring fingers formed by bending downwardly the free ends of the wire, directing the same into engagement with the lower arms of said extensions and outwardly curving the extremities thereof.

885,009. INDUCTION-MOTOR. BERNARD A. BEHREND, Norwood, Ohio, assignor to Allis-Chalmers Company, a Corporation of New Jersey, and The Bullock Electric Manufacturing Company, a Corporation of Ohio. Filed Nov. 29, 1905. Serial No. 289,551.



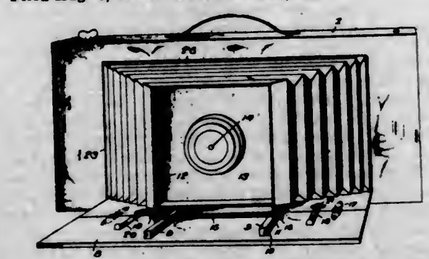
1. In a rotor for induction motors, a spider, radial fan-blades integral with said spider, a slotted core mounted on the rim of the spider, conductors mounted in the slots of the core, and short-circuiting rings for said conductors mounted on said fan-blades.

2. In an induction motor, a shaft, a spider comprising a hub, radial arms and a rim, a slotted core mounted on said rim, conductors located in the slots of the core and extending beyond each side thereof, fan-blades integral with the arms of the spider and extending from each side thereof, and short-circuiting rings for the conductors resting on the outer surface of the fan-blades.

3. A rotor for alternating current dynamo-electric machines, comprising a core supporting member, a laminated core on said supporting member, fan-blades on said supporting member, conductors carried by said core and having their ends extending beyond the sides of said core, and short-circuiting rings for said conductors mounted upon said fan-blades and spaced from said core so as to permit free radial movement of air between the core and short-circuiting rings.

4. In an induction motor, a rotor spider, a slotted core, conductors located in the slots of the core and extending beyond each side thereof, fan-blades integral with the arms of the spider and extending from each side thereof, and short-circuiting rings for the conductors mounted on the fan-blades, each of said rings having a vertical portion parallel to the core and spaced therefrom to form a ventilating passageway between the rings and core, said portion engaging the fan-blades.

885,010. CAMERA. ISAAC A. BELL, Cedar Rapids, Iowa. Filed Aug. 6, 1906. Serial No. 329,501.



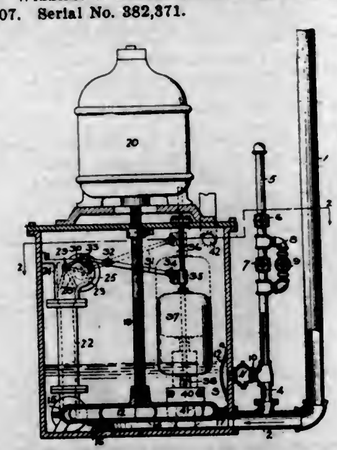
1. A camera of the class described comprising a body, said body having an enlarged opening in one side thereof,

an extension-bed adapted to fit into said opening and formed in hinged sections, means for holding said sections rigid in their distended position, guides on said extension-bed, a frame adapted to be adjustably held on said guides, partition walls in each end of said body, said walls being disposed at an angle and extending from the ends of said opening to the rear corners of the body, off sets in said walls, said off sets forming recesses, a bellows disposed between said partition walls and said frame, a lens mounted on said frame, a film disposed from end to end of said body in the rear of said lens and spools disposed in said body between the partition walls and end walls of the body, and near the front face thereof, upon which said film is disposed.

2. A camera of the class described comprising a body portion having partition walls in each end thereof, a roller mounted in each partition wall at the corner, said partition walls being disposed at an angle to the end walls of the body and extending from the ends of an opening in said body to the rear corners thereof, off sets in said partition walls to form recesses, spools disposed in said recesses, a film engaging said spools and adapted to be disposed thereon, a bellows secured at one end to said partition walls, a lens frame secured to the opposite end of said bellows, a lens in said frame and secured to the rear edge thereof, whereby the light rays through said lens will be out of line with the bellows and means to support said lens frame when an exposure is being made.

3. A camera of the class described comprising a body having an opening in one side thereof, a roller mounted in each partition wall at the corner, partition walls at each end of said body at an angle to the end walls of the body and extending from the ends of said opening to the rear corners of said body, a shoulder on the inner face of each of said partition walls, a bellows secured to said shoulders and adapted to extend through said opening, a lens at the outer end of said bellows, an extension bed in hinged sections secured to said body and adapted to close said opening, when the camera is not in use and to form a support for the lens when the camera is in use, and means to dispose a portion of said extension-bed out of line of the rays of the lens.

885,011. AUTOMATIC VACUUM CLEANING APPARATUS. WILLIAM J. BERGENS, Pittsburg, Pa. Filed July 5, 1907. Serial No. 382,371.



1. In vacuum cleaning apparatus, the combination of a suction pipe, a chamber into which it discharges, a connection for supplying water continuously to said chamber, and automatic mechanism for periodically flushing said chamber.

2. In vacuum cleaning apparatus, the combination of a suction pipe, a chamber into which it discharges, a connection for supplying a stream of water to said chamber, and mechanism controlled by the height of the water in said chamber for periodically flushing the same.

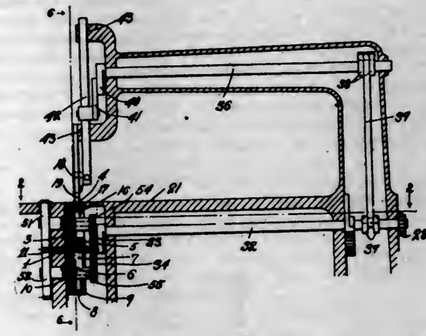
3. In vacuum cleaning apparatus, the combination of a suction pipe, a chamber into which it discharges, a connection for supplying a stream of water to said chamber, a flushing valve for said chamber, and a float in the chamber arranged to be actuated by the water and controlling said valve.

4. In vacuum cleaning apparatus, the combination of a chamber, a suction pipe, a pump connected to said pipe and discharging in the said chamber, a water supply connected to the inlet of the pump, and mechanism controlled by the height of the water in said chamber for periodically flushing the same.

5. In vacuum cleaning apparatus, the combination of a suction pipe, a chamber, a pump connected to the suction pipe and discharging into the chamber, and a water supply connected to the inlet of the pump.

[Claims 6 to 14 not printed in the Gazette.]

885,012. SPANGLE-MACHINE. GEORGE W. BINGHAM, New York, N. Y. Filed Sept. 14, 1906. Serial No. 334,586.



1. In a machine of the character set forth, the combination of a fixed die, open at both ends, a drawing up die, a movable member carrying said drawing up die and adapted to cause it to register with one of the open ends of the first mentioned die, a double punch member, means for alternately presenting the opposite ends of the double punch member in register with the other of the open ends of the fixed die, and means for actuating said punch member thereby cutting a blank by the action of one end of the double punch member, and moving the blank into the drawing up die by the action of the other end of the punch member.

2. In a machine of the character set forth, the combination of a fixed die, open at both ends, a drawing up die, a rotatable member carrying said drawing up die and adapted to cause it to register with one of the open ends of the first mentioned die, a double punch member, means for alternately presenting the opposite ends of the double punch member in register with the other of the open ends of the fixed die, and means for actuating said punch member thereby cutting a blank by the action of one end of the double punch member, and moving the blank into the drawing up die by the action of the other end of the punch member.

3. In a machine of the character set forth, the combination of a fixed die, open at both ends, a drawing up die, a movable member carrying said drawing up die and adapted to cause it to register with one of the open ends of the first mentioned die, a double punch member, a rotatable member carrying the said punch member, means for rotating the said member to alternately present opposite ends of the double punch member in register with the other open end of the fixed die, and means for reciprocating the said double punch member thereby cutting a blank by the action of one end of the double punch member, and moving the

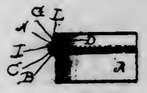
blank into the drawing up die by the action of the other end of the punch member.

4. In a machine of the character set forth, the combination of a fixed die, open at both ends, a drawing up die, a rotatable member carrying said drawing up die and adapted to cause it to register with one of the open ends of the first mentioned die, a double punch member, a rotatable member carrying the said punch member, means for rotating the said member to alternately present opposite ends of the double punch member in register with the other open ends of the fixed die, and means for reciprocating the said double punch member thereby cutting a blank by the action of one end of the double punch member, and moving the blank into the drawing up die by the action of the other end of the punch member.

5. In a machine of the character set forth, the combination of a fixed die, open at both ends, a drawing up die, a movable member carrying said drawing up die and adapted to cause it to register with one of the open ends of the first mentioned die, a double punch member, means for alternately presenting the opposite ends of the double punch member in register with the other of the open ends of the fixed die, and means for actuating said punch member thereby cutting a blank with prongs, by the action of one end of the double punch member, and moving the blank into the drawing up die by the action of the other end of the punch member, thereby drawing up the prongs, and means for actuating the said movable member so as to cause the blank to be presented with its prongs against the material to which it is to be attached, means for driving the prongs through the material, and means for flattening down the prongs against the material.

[Claims 6 to 17 not printed in the Gazette.]

885,013. SHEET-METAL BOX. PETER A. BLICHERT, Chicago, Ill. Filed Jan. 21, 1907. Serial No. 353,177.

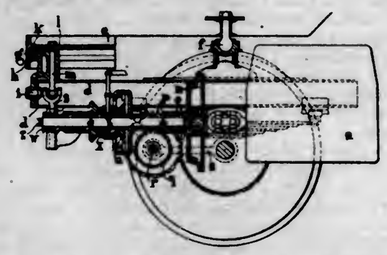


1. A box comprising a body portion having an annular bead struck out therefrom below the upper edge of the body, combined with a cover having a rim to fit over and inclose that portion of the body above the bead with its lower edge resting on the upper face of the bead, the said cover rim having a part thereof extended outwardly to form a lip, the said portion forming the lip being curved outwardly and downwardly, and then outwardly, whereby the free edge of the lip lies above and free from contact with the upper face of the bead, the outward curving of the lip forming a space between the lip and the adjacent portion of the box body and the curved underneath face of the lip acting as a guide when placing the cover in position.

2. A box comprising a body portion having an annular bead struck out therefrom below the upper edge of the body, the said bead having a flat upper face, combined with a cover having a rim to fit over and inclose that portion of the body above the bead with its lower edge resting on the flat upper face of the bead, the said cover rim having a part thereof extended outwardly to form a lip, the said portion forming the lip being curved outwardly and downwardly, and then outwardly, whereby the free edge of the lip lies above and free from contact with the flat face of the bead, the outward curving of the lip forming a space between the lip and the adjacent portion of the box body and the curved underneath face of the lip acting as a guide when placing the cover in position.

885,014. FRONT-DRIVEN MOTOR-VEHICLE. ARTHUR W. BRIGHTMORE, Burford, Egham, England. Filed Sept. 27, 1906. Serial No. 336,458.

1. In a motor propelled vehicle of the type referred to, a segmental race and rack on the vehicle under-frame, a slider engaging said race and pivoted on the forecarriage at the "neutral" position, a pinion meshing with the rack and fixed on a spindle carried by the slider, a second spindle connected to the former by a universal joint, a worm wheel on the second spindle, a worm meshing therewith and means for driving the same, substantially as hereinbefore set forth.

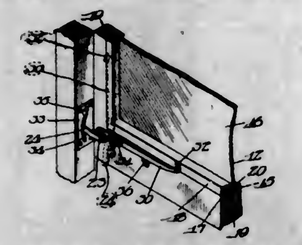


2. In a motor propelled vehicle of the type referred to, a segmental race and rack on the vehicle under-frame, a slider engaging said race and pivoted on the forecarriage at the "neutral" position, a pinion meshing with the rack, a spindle for said pinion carried by the slider, a worm wheel on said spindle, and a worm meshing therewith and means for connecting the same with the motor mounted on the forecarriage substantially as hereinbefore set forth.

3. In a motor propelled vehicle of the type referred to, a segmental race and rack on the vehicle under-frame, a slider engaging said race and pivoted on the forecarriage at the "neutral" position, a pinion meshing with the rack and fixed on a spindle carried by the slider, a second spindle connected to the former by a universal joint, a worm wheel on the second spindle, a worm meshing therewith and means for connecting the same with the motor mounted on the forecarriage, said connecting means comprising a clutch and reversing gear substantially as hereinbefore set forth.

4. In a motor propelled vehicle of the type referred to, a segmental race and rack on the vehicle under-frame, a slider engaging said race and pivoted on the fore-carriage at the "neutral" position, a pinion meshing with the rack and fixed on a spindle carried by the slider, worm gear for driving said spindle, means for connecting said worm gear with the motor mounted on the fore-carriage and comprising a clutch and reversing gear, and change speed mechanism mounted on the fore-carriage and adapted to transmit motion from the motor to balance gear on the front road axle, substantially as hereinbefore set forth.

885,015. HOLDER AND FASTENER FOR STORM-SASHES AND THE LIKE. FRANK BURSIK, Chicago, Ill. Filed Apr. 24, 1907. Serial No. 369,974.



1. The combination of a window casing, a sash movably supported adjacent the casing, a locking member pivotally mounted intermediate its ends on the sash, one end of said member on one side of the pivot being bent back and forth upon itself to form a yielding extremity, and a handle operatively related to the other end of the member, said casing being provided with an apertured portion adapted to receive and exert a tension on the yielding extremity of the said locking member.

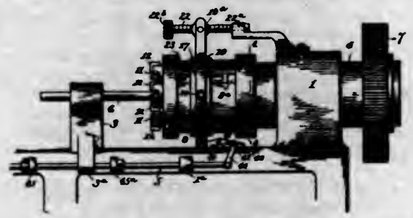
2. The combination of a window casing, a sash pivotally supported adjacent the casing, a locking member mounted on the sash for pivotal movement in a plane parallel with the face of the sash, said member being provided with a yielding extremity and said casing being provided with an aperture adapted to receive the extremity and exert a tension thereon when the member is in an operative position and a handle pivoted to said member, said handle being movable in the same plane with the body portion and adapted for independent movement in a plane transverse to the plane of movement of the said member.

3. The combination of a casing, a sash pivotally supported adjacent the casing, a member mounted on the sash for pivotal movement in a plane parallel with the face of the sash, said member being provided with a projecting extremity, and said casing being provided with an apertured portion adapted to receive the said extremity of the member to lock the sash closed, and a handle pivoted to the member, said handle being adapted to be moved independently in a plane transverse to the plane of movement of the member, and means operatively related to the handle and adapted to enter the said aperture when the handle is moved and when the said member is in an inoperative position for holding the sash away from the casing.

4. The combination of a casing, a sash pivotally supported adjacent the casing, a member mounted on the sash for pivotal movement in a plane parallel with the face of the sash, said member being provided with a projecting extremity, a plate secured to the casing, said plate being provided with a slot having an enlargement, said slot being adapted to receive the projecting extremity of the member to lock the sash closed, and a handle pivoted to the member and adapted to be independently moved in a plane transverse to the plane of movement of the said member, said handle being provided with a headed projection, said projection being adapted to enter the said enlargement and pass behind the plate to hold the sash away from the casing.

5. The combination of a window casing, a sash movably supported adjacent the casing, a locking member pivotally mounted intermediate its ends on the sash, one end of said member on one side of the pivot being bent back and forth upon itself to form a yielding extremity, a handle operatively related to the other end of the member, and a member secured to the casing, said member being provided with a portion disposed on a curve and said curved portion being adapted to be engaged by the yielding extremity of the locking member to draw the sash against the casing.

885,016. SCREW-THREADING MACHINE. VIRGINIUS Z. CARACRISTI, Granite, and GEORGE W. TROXLER, Richmond, Va. Filed Apr. 19, 1907. Serial No. 369,144.



1. In a screw threading machine, the combination with the die-head, of a rock-shaft journaled therein at one side of the work opening, a head rotatably mounted on the forward end of the rock-shaft with its axis at one side of the axis of said rock-shaft, said rotatable head carrying a plurality of cutting-dies, means engaging the rotatable head to locate any one of the cutting-dies in operative position with respect to the work opening of the die-head, and means for rocking the shaft, whereby the cutting-die is movable radially in the die-head.

2. In a screw threading machine, the combination with the die-head, of a rock-shaft journaled therein and having a cam-slot, a rotatable spindle projecting from the forward end of the rock-shaft with its axis at one side of the axis of said rock-shaft, a cutting die attached to the outer end of the spindle and movable radially with respect to the die-head, and a stop on the die-head engaging the cutting die to prevent rotation of the latter while it is moved radially; together with a ring encircling the die-head and having a pin operatively engaging the cam-slot, and means for shifting the ring.

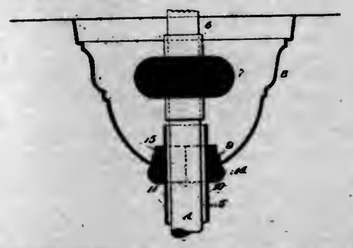
3. In a screw-threading machine, the combination with the die-head, of a rock-shaft journaled therein at one side of the work-opening, a spindle projecting from the forward end of the rock-shaft at one side of the axis thereof, a head on said spindle carrying a plurality of cutting dies, and means for adjusting the spindle to bring any one of the cutting dies into operative position with respect to the work opening of the die head; together with means for rocking the shaft, whereby the cutting die is movable radially in the die-head.

4. In a screw-threading machine, the combination with the driving spindle, of a gear-ring secured thereto, a die-head loosely mounted on the spindle, rock-shafts journaled in the die-head, spindles extending longitudinally through the rock-shafts, each spindle being located at one side of the axis of its shaft and carrying a plurality of cutting dies at its forward end, pinions on the rear ends of said spindles and in mesh with the aforesaid gear-ring, means for securing the spindles to the die-head, and means for turning the rock-shafts, substantially as shown and described.

5. In a screw-threading machine, the combination with the driving spindle, of a gear-ring secured thereto, a die-head loosely mounted on the spindle, rock-shafts journaled in the die-head, spindles extending longitudinally through the rock-shafts, each spindle being located at one side of the axis of its shaft and carrying a plurality of cutting dies at its forward end and having recesses with relation to the cutting dies, pinions on the rear ends of the spindles and in mesh with the gear-ring, catches on the die-head adapted to engage any one of the recesses in its companion spindle, and means for operating the rock-shafts and catches.

[Claims 6 to 10 not printed in the Gazette.]

885,017. CANOPY ATTACHMENT FOR LIGHTING-FIXTURES. GEORGE W. CASSIDY, East Orange, N. J. Filed June 19, 1907. Serial No. 379,740.



1. A canopy support for lighting fixtures, comprising a split ring adapted to embrace the tubular covering of the fixture and having a tapering screw thread adapted to engage with the canopy, substantially as set forth.

2. A canopy support for lighting fixtures, comprising a split ring adapted to embrace the tubular covering of the fixture having interlocking parts to prevent independent longitudinal movement, and having a tapering screw thread adapted to engage with the canopy, substantially as set forth.

3. In lighting fixtures, the combination with the tubular covering of the fixture and the canopy having a screw threaded opening in its smaller end, of a split ring adapted to embrace the tubular covering, having interlocking parts to prevent independent longitudinal movement, and provided with a tapering screw thread engaging the screw threaded opening of the canopy, substantially as set forth.

4. A canopy support and insulator for lighting fixtures,

comprising a sectional ring made of insulating material adapted to embrace the tubular covering of the fixture and provided with a tapering screw thread adapted to engage the screw threaded opening of the canopy and to be thereby compressed and clamped upon the tubular covering, substantially as set forth.

885,018. ARTIFICIAL TOOTH. HERMAN E. S. CHAYES, New York, N. Y. Filed Mar. 11, 1907. Serial No. 361,663.



1. In an artificial tooth device, the combination of a backing having a lug adapted to be received into a cavity in a facing and to hook around a pin across the cavity; said facing; and said pin.

2. In an artificial tooth device, the combination of a backing formed with a lug of springy material; a facing having a cavity adapted to receive said lug; and a pin across said cavity adapted to be received and held by spring action under said lug.

3. In an artificial tooth device, the combination of a backing formed with a lug of springy material; a facing having a cavity adapted to receive said lug; a pin across said cavity adapted to be received and held by spring action under said lug; and a part on the facing adapted to contact with the lug and press the same against the pin.

4. In an artificial tooth device, the combination of a backing having a lug; a facing having a cavity adapted to receive said lug; a pin across said cavity, adapted to be received between the lug and the backing when the facing is slid longitudinally in contact with the backing; and a part on the facing adapted to contact with the lug and press the same against the pin.

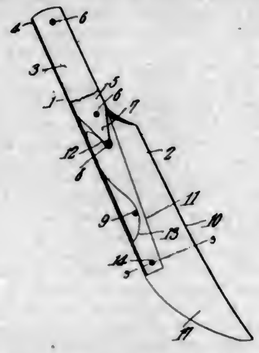
5. In an artificial tooth device, the combination of a backing having a lug; a facing having a cavity adapted to receive said lug; a pin across said cavity, adapted to be received between the lug and the backing when the facing is slid longitudinally in contact with the backing; a part on the facing adapted to contact with the lug and press the same against the pin; a second lug on the backing adapted to be received in a cavity in the facing and to extend under and contact with an under-cut portion of said facing; and said under-cut portion.

[Claims 6 to 8 not printed in the Gazette.]

885,019. COLTER. GEORGE CONLEY, Caseville, Mich. Filed Aug. 28, 1907. Serial No. 390,530.

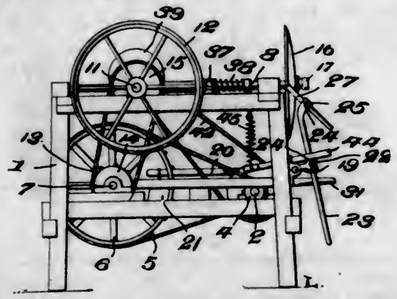
1. A colter comprising a shank formed of a strip of metal bent upon itself longitudinally and having spaced side portions, a strip interposed in the space between the upper ends of the side portions of the shank and having a pointed lower end, a blade having undercut shoulders which abut against the forward lower edges of the side portions of the shank, said blade having at its upper end a notch for receiving the pointed end of the last said strip, and a bolt passing transversely through the blade and the lower portions of the side portions of the shank.

2. A colter comprising a shank formed from a strip of metal bent upon itself longitudinally and having spaced side portions, a strip secured between the side portions of the shank at the upper end thereof and having a pointed lower end, a rivet passing transversely through the side portions of the shank at the apex of the point of the last said strip, a blade having longitudinally disposed undercut shoulders which abut against the forward lower edges of the side portion of the shank, said blade having at its upper end a notch for the reception of said rivet and the pointed end of the last said strip and a bolt passing transversely through the blade and the lower side portions of the shank.



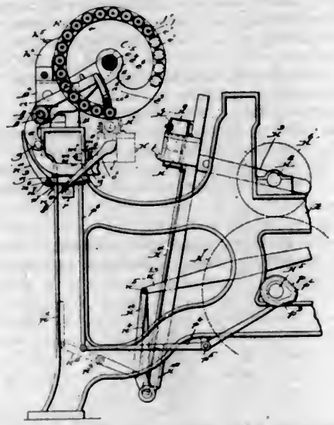
3. A colter comprising a shank formed from a strip of metal bent longitudinally upon itself and having spaced side portions, a strip secured between the side portions of the shank at the upper end thereof, said strip having a pointed lower end, a rivet passing transversely through the side portions of the shank at the apex of the point of the strip, a second rivet passing through the side portions of the shank at a point between the first said rivet and the lower end of the shank, a blade having at its opposite sides longitudinally disposed undercut shoulders which abut against the lower forward edges of the side portions of the shank, said blade having at its upper end a notch for the reception of the first said rivet and the pointed end of the last said strip, said blade also having at its rear edge a recess for the reception of the last said rivet, said blade having one of its sides lying in the same plane with the plane of one of the sides of the shank and having its opposite side lying in a plane which intersects the plane of the first said blade side at an angle, a bolt passing transversely through the blade and the lower end portions of the side portions of the shank, and a bolt-securing means located upon the same side of the colter as the angularly disposed side of the colter blade and behind the said side of the said blade.

885,020. SHARPENING OR CUTTING MACHINE. LORENS CORY, Gilman City, Mo. Filed May 22, 1907. Serial No. 375,084.



A machine of the character described, comprising a rock-shaft provided with a socket-equipped arm and means for the retention therein of a tool-carrying member, a fulcrumed member or lever adapted to engage the socket of said arm from above, laterally of the tool-carrying member, said rock-shaft having extending therefrom a downwardly pressed arm, and a recilient member connected to, and adapted to pull upwardly upon said fulcrumed member or lever for causing the latter to press downwardly upon said socket.

885,021. WEFT-REPLENISHING LOOM. RANDOLPH CROMPTON, Worcester, Mass., assignor to Crompton & Knowles Loom Works, Worcester, Mass., a Corporation of Massachusetts. Filed Jan. 18, 1907. Serial No. 352,911.



1. In a filling-changing loom, a manually-controlled magazine to sustain filling-carriers, the same comprising a centrally-supported ring, checking means to hold said ring in various positions in which it may be left after manual movement thereof, and filling transferring means, the latter also limiting the extent of movement of said ring in both directions of its movement.

2. In a filling-changing loom, a manually-controlled magazine comprising a centrally supported butt-sustaining ring provided with clamps to embrace and hold the butts only of filling-carriers, combined with filling-transferring means entering said ring, the latter being manually rotated in either direction to bring any one of the series of filling-carriers in the magazine in position to be acted upon by the filling-transferring means.

3. In a filling-changing loom, a manually-controlling filling carrier magazine, checking means to maintain said magazine in any position where it may be placed by the operator, and filling-carrier transferring means to transfer a filling-carrier from said magazine into a shuttle, actuating means for moving said transferring means, and a manually-controlled device to make effective the movement of said actuating means when it is desired to transfer a filling-carrier from said magazine into a shuttle.

4. In a filling-changing loom, a manually-controlled centrally-supported filling-carrier magazine, combined with filling-carrier transferring means, and a manually-controlled device to effect the operation of said filling-carrier transferring means.

5. In a filling-changing loom, a magazine comprising a centrally-sustained ring having an arc-shaped space, and a stud constituting the axis for said magazine, the ends of said space limiting the movement of the magazine in one or the other direction.

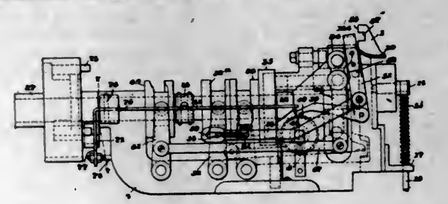
[Claims 6 to 22 not printed in the Gazette.]

885,022. STITCH SEPARATING AND INDENTING MACHINE. HENRY H. CUMMINGS, Malden, Mass., assignor by mesne assignments, to Manufacturers Machine Company, Montclair, N. J., a Corporation of New Jersey. Filed Jan. 18, 1905. Serial No. 241,631.

1. In a stitch separating and indenting machine, the combination of a plurality of separating and indenting tools each capable of lateral movement with means for operating said tools singly.

2. In a stitch separating and indenting machine, the combination of a plurality of separating and indenting tools with means controlled by the stitch error for shifting the operation from one to another of said tools.

3. In a stitch separating and indenting machine, the combination of a plurality of separating and indenting tools with operating means controlled by said tools to determine the particular tool to be operated.

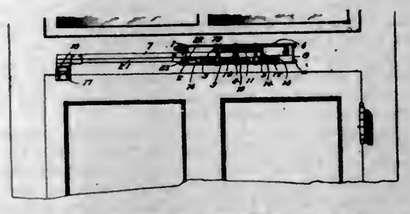


4. In a stitch separating and indenting machine, the combination of a plurality of separating and indenting tools and operating means therefor, with stitch controlled selecting means to determine which of said tools shall be operated.

5. In a stitch separating and indenting machine, the combination of a plurality of tools for separating and indenting stitches with means controlled by said tools to select the tool to be operated.

[Claims 6 to 18 not printed in the Gazette.]

885,023. DOOR-CHECK. EDWARD G. DELOE, Roaring Spring, Pa. Filed June 17, 1907. Serial No. 379,469.



1. In a door check, the combination of a casing, a fly wheel mounted in the casing, gearing adapted to impart motion to the fly wheel, a lever controlling the gearing, and a pawl carried by the lever and engaging one of the gear wheels whereby the lever moves freely in one direction but is locked to the gear wheel when moving in the opposite direction.

2. In a door check, the combination of a casing, a fly wheel mounted in the casing, a train of gearing adapted to impart motion to the fly wheel, yielding means operatively connecting a pair of the gear wheels, the said yielding means being of sufficient reactive power to positively move the gear wheels connected by the same, and a lever controlling the train of gearing.

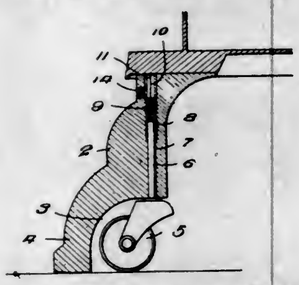
3. In a door check, the combination of a casing, a fly wheel mounted upon the casing, a train of gearing adapted to impart motion to the fly wheel, a spiral spring operatively connecting a pair of the gear wheels and serving as a cushioning means, and a lever for controlling the train of gearing.

4. In a door check, the combination of a casing, a fly wheel mounted upon the casing, a train of gearing adapted to impart motion to the fly wheel, yielding means operatively connecting a pair of gear wheels, the said yielding means being of sufficient reactive power to positively move the gear wheels connected by the same, an operating lever, and a pawl carried by the operating lever and engaging one of the gear wheels whereby the lever moves freely in one direction but is locked to the gear wheel when moving in the opposite direction.

5. In a door check, the combination of an operating lever, a swinging clip mounted upon the lever for engaging the door, and means for holding the clip in engagement with the door until the operating lever is moved into a predetermined position.

[Claims 6 to 13 not printed in the Gazette.]

885,024. ADJUSTABLE CASTER. ERNEST DEVINE, Chicago, Ill. Filed Nov. 30, 1907. Serial No. 404,508.



1. The herein described means for adjustably attaching a caster to an object, comprising the combination with a supporting leg having a vertically disposed socket therein, of a caster, a stem on said caster adapted to enter said socket and adjustable means above the end of said stem engaging the wall of said socket and resting on the end of said stem adapted to elevate the supporting leg and dispose the weight on the caster.

2. The herein described means for adjustably securing a caster to an object, comprising the combination with a supporting leg having a vertically disposed socket therethrough, threads adjacent the upper end of said pocket, said supporting leg also having a slot intersecting said socket adjacent its upper end, said slot being flared, of a caster, a stem on said caster adapted to enter said socket, a bolt in the upper end of said socket and above the stem adapted to direct pressure on the upper end of said stem, threads on said bolt adapted to engage the threads in the socket and means to rotate said bolt whereby the supporting leg will be raised or lowered.

3. The herein described means for adjustably attaching a caster to an object, comprising the combination with a supporting leg having a socket extending vertically therethrough and a slot extending inwardly from one face of the supporting leg and intersecting said socket and threads adjacent the upper end of the socket; of a caster, a stem on the caster adapted to enter said socket, a bolt in the upper end of said socket, threads on the lower portion of said bolt adapted to engage the threads in the socket, the remaining portion of said bolt being squared and a wrench adapted to extend through the slot and engage the squared portion of the bolt, whereby, when the wrench is swung laterally, the bolt will be turned and the supporting leg raised or lowered on said stem.

885,025. HOISTING AND CONVEYING APPARATUS. JOSEPH H. DICKINSON, Montclair, N. J. Filed June 27, 1905. Serial No. 267,194.



1. The combination of a cableway, a carriage traveling thereon, a traction rope for said carriage, a skidding rope, a drum for said traction rope, a drum for the skidding rope, and means carried adjacent to one end of the skidding rope and engaging with another portion of said rope on the opposite side of the carriage for maintaining slack in the skidding rope during the hauling of the carriage by the traction rope.

2. The combination of a cableway, a carriage thereon, a skidding rope connected to said carriage, and means for maintaining a slack loop in the skidding rope, such means comprising a pulley block secured to the end of the skidding rope and connecting such end with the main portion of the rope, and means for locking the pulley of the block against movement relative to the rope.

3. The combination with a trackway, a carriage traveling thereon, an outhaul rope for the carriage, a rope support on the carriage, a skidding rope extending through the rope support on the carriage, log-engaging means carried by the free end of the rope beyond the carriage, and means for connecting such free end of the rope back to the main portion of the rope.

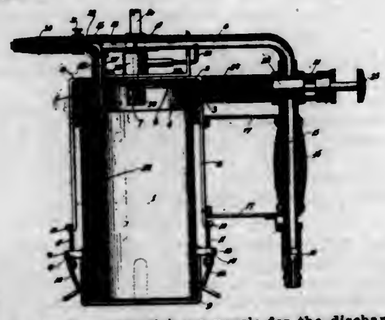
4. The combination with a trackway, a carriage thereon, a traction rope for the carriage, a skidding rope forming a combined carriage inhaul and load-carrying rope, a drum for the outhaul rope, a drum for the inhaul rope, and means for forming a slack loop in the skidding rope.

885,026. HAT HANGER AND MARKER. SIDNEY P. DODGE, West Unity, Ohio. Filed Mar. 18, 1907. Serial No. 363,032.



A hanger and marker of the character described comprising a ring adapted to be engaged with a suspending device, a spring clasp pivoted upon said ring and an identifying button adapted to be engaged with the button hole of a garment to suspend the device and the object engaged by the clasp, said button having an apertured shank to loosely receive said ring thus allowing the button to be swung about the ring and also to be moved circumferentially to use either the ring or the button as the supporting means.

885,027. ATOMIZER. WILHELM VON DÖHN, Berlin-Schöneberg, Germany, assignor to Henning G. Taube, Montclair, N. J. Filed July 26, 1906. Serial No. 327,813.



1. An atomizer comprising a nozzle for the discharge of the material to be atomized, a passage way connected with the interior of said nozzle for said material, a nozzle for the discharge of the atomizing agent under pressure, a passage way for said agent connected with the interior of said nozzle, means for admitting an agent under pressure to the receptacle containing the material, and means for regulating the admission and outflow of said agent to and from said receptacle.

2. An atomizer comprising a nozzle for the discharge of the material to be atomized, a passage way connected with the interior of said nozzle for said material, a nozzle for the discharge of the atomizing agent under pressure, a passage way for said agent connected with the interior of said nozzle, means for admitting an agent under pressure to the receptacle containing the material, and means for regulating at will the outflow from said agent to said receptacle.

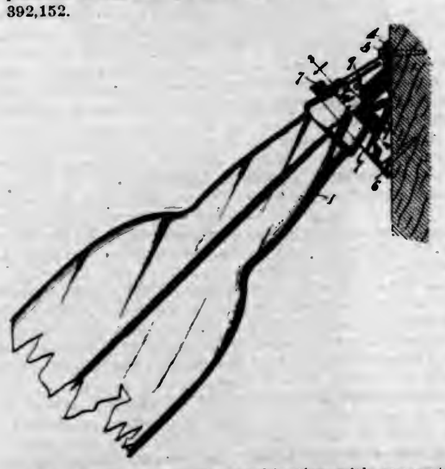
3. An atomizer comprising a nozzle for the discharge of the material to be atomized, a passage way connected with the interior of said nozzle for said material, a nozzle for the discharge of the atomizing agent under pressure, a passage way for said agent connected with the interior of said nozzle, means for admitting an agent under pressure to the receptacle containing the material, and said means having a controlling outlet valve outside of said receptacle for the discharge of said agent from the receptacle, whereby the pressure of the same in said receptacle is regulated.

4. An atomizer comprising a nozzle for the discharge of the material to be atomized, a passageway connected with the interior of said nozzle for said material, a nozzle for the discharge of the atomizing agent under pressure, a passageway for said agent connected with the interior of said nozzle, means for admitting an agent under pressure to the receptacle containing the material, and provided with a valve controlled inlet to said receptacle and a valve controlled outlet for said agent.

5. An atomizer comprising a nozzle for the discharge of the material to be atomized, a passage way connected with the interior of said nozzle for said material, a nozzle for the discharge of the atomizing agent under pressure, a passage way for said agent connected with the interior of said nozzle, means for admitting an agent under pressure to the receptacle containing the material, and provided with a valve controlled inlet to said receptacle, and a valve controlled outlet for the said agent outside of said receptacle.

[Claims 6 to 24 not printed in the Gazette.]

885,028. BOTTLE-OPENER. FRANK C. EMRICK and JACQUES K. BAER, St. Louis, Mo., assignors to Busch-Freund Brewers Supply Company, St. Louis, Mo., a Corporation of Missouri. Filed Sept. 10, 1907. Serial No. 392,152.

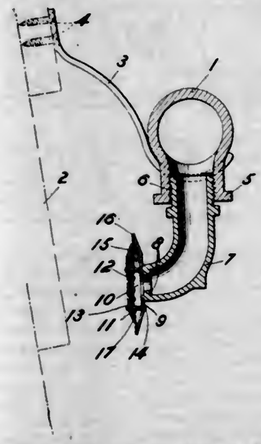


1. In a bottle opener, the combination with segmental side walls, inwardly extending lips arranged between said side walls, and a post centrally located between said lips; substantially as described.

2. In a bottle opener, tapering segmental side walls, inwardly extending concentric lips arranged between said side walls and designed to have an extended bearing contact with the bottle closure operated upon, and a post arranged between said lips and designed to coöperate with the bottle closure at some point not in line with the glass constituting the mouth of the bottle; substantially as described.

3. In a bottle opener, tapering segmental side walls having guiding ribs along their edges, inwardly extending concentric lips between said side walls, and a post arranged between said lips; substantially as described.

885,029. OPEN SPRINKLER. WILLIAM ESTY, Laconia, N. H., assignor to Esty Sprinkler Company, Laconia, N. H., a Corporation of New Hampshire. Filed Mar. 26, 1906. Serial No. 307,999.



1. A sprinkler having in combination a discharge piece or piping to engage a feeder, said piping having at the discharge end thereof an internal ring or projection to choke and spread the stream, an external shoulder, a distributing plate mounted on said piping against said shoulder, said plate having an outwardly inclined serrated flange or edge, a deflecting plate concentrically mounted on said distributing plate, said latter plate having an inwardly inclined serrated flange or edge to direct the water upon the incline of the distributing plate, and spaced from the latter to provide passage between the two for the water.

2. A sprinkler having in combination a discharge piece or piping to engage a feeder, said piping having at the discharge end thereof an internal ring or projection to choke and spread the stream, an external shoulder thereon, a distributing plate mounted on said piping against said shoulder, said plate having an outwardly inclined flange or edge, a deflecting plate concentrically opposed to said distributing plate, said latter plate having an inwardly inclined flange or edge to direct the water upon the incline of the distributing plate, the edge of one of said plates being serrated, and said plates being spaced to provide passage between the two for the water.

3. A sprinkler having in combination a discharge piece or piping to engage a feeder, said piece having at the discharge end thereof an internal ring or projection to choke and spread the stream, an outwardly inclined serrated distributing plate mounted on said piping, an inwardly inclined serrated deflecting plate concentrically opposed to said distributing plate but spaced therefrom to provide passage between the two for the water.

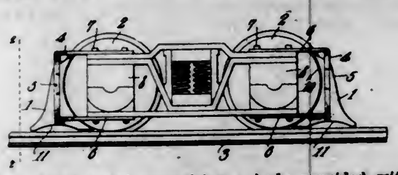
4. A sprinkler having in combination a discharge piece or piping to engage a feeder, a serrated deflecting plate having a deflecting surface mounted opposite the discharge opening, a serrated distributing plate opposed to said deflecting plate and having a reversely inclined surface to receive the water therefrom and to distribute the same upon the surface to be wetted.

5. A sprinkler having in combination a discharge piece or piping to engage a feeder, said piping having at its dis-

charge end an internal ring or projection to choke and spread the stream, a serrated deflecting plate having an inclined deflecting surface mounted opposite the discharge opening, a serrated distributing plate opposed to said deflecting plate and having a reversely inclined surface to receive the water therefrom and to distribute the same upon the surface to be wetted.

[Claims 6 to 13 not printed in the Gazette.]

885,030. WHEEL-GUARD. WILLIAM R. EVANS, Youngstown, Ohio. Filed Feb. 25, 1908. Serial No. 417,735.



1. A wheel guard comprising a body provided with a longitudinal groove, inclined front and rear faces, and a curved lower face, the front end of which adjoining the front face of the guard is rounded, and a means fitted in the groove for supporting said guard adjacent to a wheel and rail.

2. A wheel guard provided with front, rear and lower faces, a bracket secured to a truck having parallel arms and adapted to support the guard adjacent to a wheel and rail.

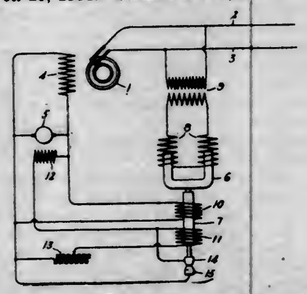
3. A wheel guard provided with front, rear and lower faces, a bracket having parallel arms secured to a truck on the outer side of a wheel, and adapted to support the guard adjacent to a wheel and rail.

4. A wheel guard provided with front, rear and lower faces, a bracket having parallel arms secured to the upper and lower side of the truck on the outer face of a wheel, and adapted to support a guard adjacent to a wheel and rail.

5. A wheel guard provided with inclined front and rear faces, a curved lower face, a bracket having parallel arms secured to the upper and lower sides of the truck on the outer face of the wheel and adapted to support the guard adjacent to a wheel and rail.

[Claim 6 not printed in the Gazette.]

885,031. REGULATOR FOR DYNAMO-ELECTRIC MACHINES. RICHARD FLEMING, Lynn, Mass., assignor to General Electric Company, a Corporation of New York. Filed Oct. 20, 1904. Serial No. 229,238.



1. In a regulator for dynamo-electric machines having field and armature circuits, the combination of a vibratory member, a plurality of coils influencing said member, one of said coils being responsive in strength to the voltage to be regulated and another responsive to the voltage in the field circuit of said machine, and contacts controlled by said vibratory member operative to vary the voltage in said field circuit.

2. In a regulator, the combination of a single continuously vibrating member, a coil acting thereon and responsive to the voltage to be regulated, and another coil acting in opposition to the first and short-circuited by the vibration of said member.

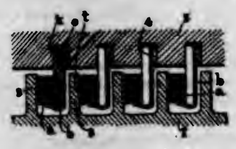
3. The combination with a dynamo machine having field and armature circuits, of a vibratory member, and differential coils in operative relation thereto, one of said coils being responsive in strength to the voltage of said dynamo-electric machine, and the other to the field current.

4. In a regulator, the combination of a vibratory member, differential coils operatively related thereto, and an additional coil for said member alternately energized and deënergized through the vibration of said member.

5. The combination of a generator, an exciter therefor, a vibratory device for varying the resistance of the field circuit of said exciter, and coils for operating said vibratory device, one of said coils being excited by current derived from said generator, and another of said coils being excited by current from said exciter.

[Claim 6 not printed in the Gazette.]

885,032. FLUID PACKING. SEBASTIAN Z. DE FERRANTI, Grindleford, England. Filed June 24, 1907. Serial No. 380,591.



1. The combination of a machine member; a second member movable relatively thereto; a plurality of filamentous elements on one of said members and in juxtaposition to the other of said members so as to act as a labyrinth fluid packing.

2. The combination of a machine member, a second member movable relatively thereto; a plurality of filamentous elements associated together so as to form a brush-like structure, and means for retaining said brush-like structure on one of said members and in juxtaposition to the other of said members so as to act as a fluid packing.

3. The combination of a machine member, a second member movable relatively thereto; a plurality of filamentous elements forming a labyrinth fluid packing; means for retaining said filamentous elements on one of said members, together with a plurality of grooves in the other of said members in juxtaposition to said filamentous elements and co-acting therewith to increase the baffling effect.

4. The combination of a machine member, a second member movable relatively thereto; a plurality of filamentous elements associated together so as to form a brush like structure, means for retaining said brush like structure on one of said members together with a plurality of grooves on the other of said members in juxtaposition to said filamentous elements and co-acting therewith to increase the baffling effect.

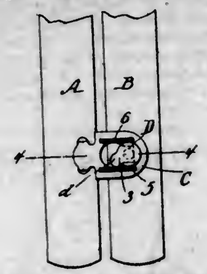
5. The combination of a machine member; a second member movable relatively thereto; a plurality of filamentous elements bundled together, means for retaining said bundled filamentous elements on one of said members and in juxtaposition to the other of said members so as to form a labyrinth fluid packing.

[Claims 6 to 37 not printed in the Gazette.]

885,033. CORSET-CLASP. VIRGINIA K. FORSE, Los Angeles, Cal. Filed Jan. 18, 1906. Serial No. 296,727.

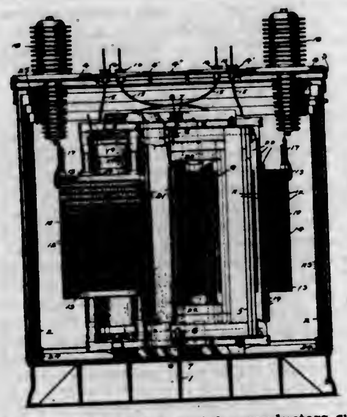
1. A corset clasp comprising a plate having an elongated opening contracted at one end, a flange on one side of said opening and a lug on the other side of said opening, and a revoluble shank having an elongated head which is contracted at one end and arranged to engage said opening, and means comprising steels for carrying the said parts, substantially as shown and described.

2. In combination with two adjacent corset-steels the plate C, rigidly secured to one of said steels and the shank D, pivoted to the other, said plate having a flange, and a lug, and an elongated opening which is contracted at one



end between said flange and lug and said shank having an elongated head which is contracted at one end and arranged to engage the said opening, substantially as shown and described.

885,034. TRANSFORMER. JOHN J. FRANK, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Sept. 26, 1907. Serial No. 394,658.



1. In an electric device containing conductors subject to a high voltage and adjacent to other conductors or conducting material, means for insulating the high-voltage conductors by interposing between them and the low-voltage conductor or the low-voltage conducting material adjacent to them parallel layers of an insulating and an insulated conducting substance.

2. In an electric device containing conductors subject to a high voltage and adjacent to other conductors or conducting material, means for insulating them from the low-voltage conductors or conducting material by surrounding them with insulated layers of conducting material, the layers being successively greater in area as they are successively spaced further from the high-voltage conductors to decrease and equalize the high potential stresses over a large area of the insulation.

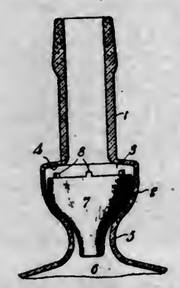
3. The combination with an electric device containing conductors subject to a high voltage and adjacent to other conductors or conducting material of an insulation surrounding the high-voltage conductors composed of a plurality of parallel sheets composed of layers of an insulating material and an insulated conducting material, the sheets being successively greater in area as they are successively spaced further from the high-voltage conductors and spaces between the sheets containing insulating fluid.

4. In a transformer composed of a primary and a secondary winding, means for decreasing and equalizing the potential stresses due to one of the windings over a large area of the insulation between the windings.

5. In a transformer composed of a primary and a secondary winding, one winding having high potential in certain portions, a laminated core and an inclosing casing, means for decreasing and equalizing the potential stresses due to a portion of one of the windings over a large area of the insulation between said winding, the core and the casing.

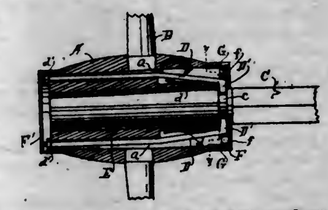
[Claims 6 to 18 not printed in the Gazette.]

885,035. NON-REFILLABLE BOTTLE. LORENZO C. FURCOLO, New Haven, Conn. Filed Feb. 5, 1907. Serial No. 355,882.



A containing vessel having a neck the exterior walls of which are bulged laterally to produce an enlargement defining an annular interior stop shoulder disposed at substantially right angles to the longitudinal plane of the neck, the side walls of the neck at said enlargement being curved downwardly and inwardly to produce a contracted portion at the juncture of the neck with the body of the vessel, and an expansible inverted frusto conical stopper having smooth continuous side walls curved to conform to the curvature of the interior walls of the enlargement, said stopper having one end thereof provided with a reduced portion the terminal of which extends within the contracted portion of the neck of the vessel and is spaced from the adjacent interior walls thereof, the opposite end of the stopper being formed with a cavity opening through the top of said stopper and having a plurality of spaced lugs extending vertically from the upper end thereof and disposed flush with the interior and exterior walls of the stopper at said cavity for engagement with the stop shoulder when the bottle is inverted.

885,036. WHEEL-LOCK. WARREN H. GIBSON, Grand Rapids, Mich. Filed Apr. 29, 1907. Serial No. 371,014.



1. In combination with a wheel hub, and an axletree having an annular groove around it near the inner end of the hub, latches secured in the hub in position to engage the groove in the axletree, a ferrule around one end of the hub, a sand guard revolubly mounted over said ferrule, bearings inside said sand guard in position to be made to actuate the latches when the sand guard is revolved, and means for locking the sand guard in place on the ferrule.

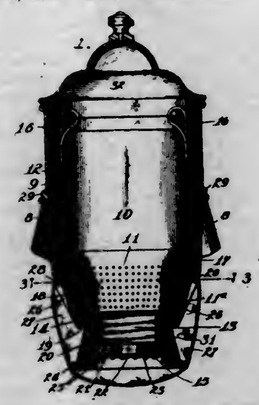
2. In combination with a wheel hub, and an axletree having an annular groove in it near the end of the hub, latches secured in the hub, a ferrule around the end of the

hub, a sand guard revolubly mounted on the ferrule, bearings in the sand guard in position to actuate the latches in one direction when the sand guard is revolved, means for locking the sand guard firmly in place, and springs on the latches for actuating them one way.

3. In combination with a wheel hub, and an axletree having an annular groove near the inner end of the hub, latches secured in the hub in position to engage the groove in the axletree, nuts securing said latches in place, at one end of the hub, and nut locks to prevent said nuts from turning off of the ends of the latches; a ferrule secured around the other end of the hub, a sand guard revolubly secured around the ferrule, bearings in the sand guard in position to actuate the latches to force them into the groove in the axletree, means for locking the sand guard securely to the ferrule, and springs for forcing the latches out of the groove in the axletree.

4. In combination with a wheel hub, and an axletree having an annular groove in its surface, an arm passing longitudinally through the hub, a nut securing said arm in place, a latch pivoted to one end of said arm in position to be made to enter the groove in the axletree, and means for forcing said latch into or out of said groove, substantially as and for the purpose set forth.

885,037. PERCOLATOR. ELI S. GLOVER, Chicago, Ill. Filed July 9, 1907. Serial No. 382,893.



1. A percolator comprising a filter holder having a screw threaded extension on the bottom thereof with a port therein, a perforated filter cup disposed above the bottom of the holder and having a threaded collar on the bottom thereof, the bottom of the cup being imperforate within the threaded portion, said collar being adapted to engage the extension to control the outflow of fluid from the percolator.

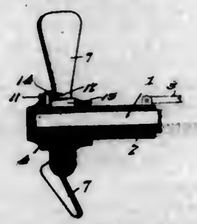
2. A percolator comprising a filter holder having a screw threaded extension with a port therein, an apertured disk normally seated on the bottom of the extension, a perforated filter cup of less cross section than the holder and being imperforate within the threaded portion and having a threaded collar adapted to seat on the disk to prevent the out flow of fluid.

3. A percolator comprising a filter holder having a threaded extension of the bottom thereof with a recess and a port to permit the out flow of fluid, a non-metallic apertured disk, a filter cup with its upper portion imperforate and its lower portion perforated and carrying a threaded collar the bottom of the filter cup being imperforate within the threaded portion and adapted to engage said extension to time and control the flow of an infusion from the percolator.

4. A percolator comprising a filter holder having a threaded extension of the bottom thereof and a recess in the extension to permit the out flow of fluid, a perforated filter cup having a threaded collar on the bottom thereof with an internal annular flange, the bottom of the filter cup being imperforate within the threaded portion and a non-metallic apertured disk.

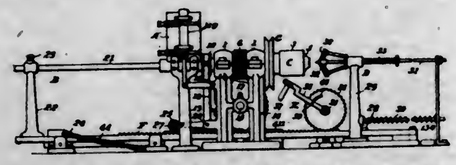
5. A percolator comprising a filter holder having a threaded extension with a port and a plurality of recesses to permit out flow of fluid, a non-metallic apertured disk, a perforated filter cup having a threaded collar on the bottom thereof, the bottom of the filter cup being imperforate within the threaded portion, and adapted to engage said extension to control the out flow of fluid from the percolator.

885,038. PROPELLER. ALBERT GNAEGY, Chester, Ill. Filed Nov. 20, 1906. Serial No. 344,311.



The combination with a shaft, of a hub rigidly connected to one end thereof and extending over the shaft, and of such diameter as to form a recess between the hub and the shaft and provided with a plurality of longitudinally-extending slots, a shiftable sleeve extending in said recess, a plurality of arms formed integral with the hub and extending tangentially with respect to the axis of the shaft, each of said arms provided with a flat face and with an opening, a propeller blade mounted upon each of said arms and formed with an extension having a flat face to bear upon the like face of the arm with a slot extending in the direction of the length thereof, the slots in said extensions being arranged at an angle with respect to the slots in the hub, a stud projecting from each of the blades and extending in the opening of the arm and formed with a screw-threaded opening, a washer mounted against the lower face of each of the arms, a screw extending through said washer and engaging in said screw-threaded opening for loosely connecting the blade to the arm, and a plurality of pins carried by the outer end of the sleeve and adapted to extend through the slots in the hub and engage in the slots of the extensions for adjusting the blades to various angles when the sleeve is shifted.

885,039. MACHINE FOR FORMING MOUNT-TUBES. JOHN E. GRAYBILL, York, Pa., assignor to General Electric Company, a Corporation of New York. Filed May 17, 1904. Serial No. 208,488.



1. In a machine for flanging glass tubes, the combination with bearings, of a tube rotatably mounted therein, a chuck jaw guide mounted on one end of said tube, a second tube slidably mounted within the first, chuck jaws secured to said second tube by a pin and slot connection, and means for rotating said tubes, substantially as described.

2. In a machine for flanging glass tubes, the combination with bearings, of a tube rotatably mounted therein, a chuck jaw guide mounted on one end of said tube, a second tube slidably mounted within the first, chuck jaws secured to said second tube, means for rotating said tubes, and

means constantly tending to draw said jaws inwardly in said jaw guide, substantially as described.

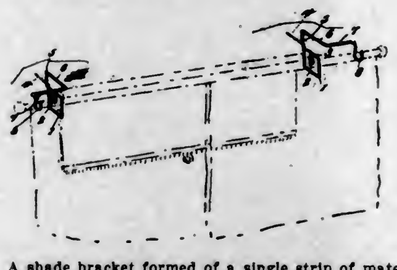
3. In a machine for flanging glass tubes, the combination with dbearings, of a tube rotatably mounted therein, a chuck jaw guide mounted on one end of said tube, a second tube slidably mounted within the first, chuck jaws secured to said second tube, means for rotating said tubes, means constantly tending to draw said jaws inwardly in said jaw guide, and means for moving said jaws outwardly in said jaw guide, substantially as described.

4. In a machine for flanging glass tubes, the combination with bearings, of a tube rotatably mounted therein, a chuck jaw guide mounted upon one end of said tube, a second tube slidably mounted within the first, chuck jaws mounted within said guides, lugs fixed to said jaws and extending into recesses between said tubes, pins fixed to said second tube and extending into holes in said lugs, the said recesses being of such width that said lugs may have sufficient movement upon said pins to permit said jaws to open, and means for rotating said tubes, chuck jaws and guide, substantially as set forth.

5. In a machine for flanging glass tubes, the combination with a rotatable tube-holding chuck, of means for rotating said chuck, means for controlling the opening and closing of said chuck, a movable rack operatively connected to said controlling means, and means for moving said rack, substantially as described.

[Claims 6 to 26 not printed in the Gazette.]

885,040. WINDOW SHADE AND CURTAIN HANGER. EMILY G. L. GAEGSON, Fort Worth, Tex. Filed June 4, 1907. Serial No. 377,218.



1. A shade bracket formed of a single strip of material and comprising a looped portion having a side thereof crimped to form a socket, one end of the strip projecting laterally and constituting a fastening means while the opposite end is extended upwardly and carries means for supporting a curtain pole.

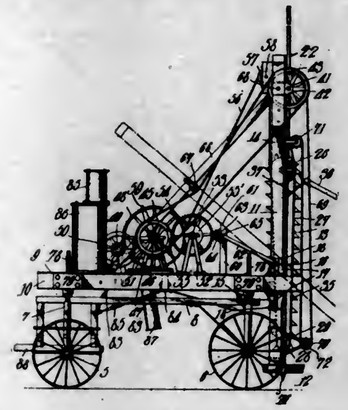
2. A shade bracket formed of a single strip of material and comprising a looped portion having a side thereof crimped to form a socket, one end of the strip projecting laterally and constituting a fastening means while the opposite end is formed with a laterally projecting arm carrying means for supporting a curtain pole.

3. A shade bracket formed of a single strip of material and comprising a looped portion having a side thereof crimped to form a socket, one end of the strip projecting from the loop and constituting a fastening means while the opposite end is extended upwardly and forwardly, the forwardly extending portion carrying a lateral arm provided at its extremity with means for supporting a curtain pole.

885,041. MACHINE FOR BORING POST-HOLES. ROBERT GUTHRIE, Lincoln, Nebr. Filed Aug. 24, 1907. Serial No. 390,066.

1. A machine of the class described including a truck, a derrick pivotally mounted on the truck and adapted to be swung downwardly to inoperative position, a carriage slidably mounted on the derrick, a vertically adjustable auger movable with the carriage, a conveyer coöperating with the auger, and means for supporting the derrick in operative position.

2. A machine of the class described including a truck, a derrick secured to one end of the truck, a carriage slidably mounted on the derrick, an auger journaled on the carriage and movable with the latter, a conveyer suspended from the carriage, and means for simultaneously rotating the conveyer and auger.



3. A machine of the class described including a truck, a derrick secured to one end of the truck, a carriage slidably mounted on the derrick, an auger mounted for rotation on the carriage, an endless conveyer carried by said carriage, means for raising and lowering said carriage, and means for rotating the auger and conveyer, respectively.

4. A machine of the class described including a truck, a derrick secured to one end of the truck, a carriage mounted for vertical movement on the derrick, an auger journaled on and movable with the carriage, a discharge chute carried by the carriage, an endless conveyer for delivering earth to the chute, means for raising and lowering the carriage, and means for operating the auger and conveyer, respectively.

5. A machine of the class described including a truck, a derrick pivotally mounted on the truck and adapted to be swung downwardly to inoperative position, an auger carried by the derrick, an endless conveyer mounted for rotation on said derrick, and an inclined support secured to the truck and forming a rest for the derrick when the latter is in inoperative position.

[Claims 6 to 19 not printed in the Gazette.]

885,042. MACHINE FOR ERECTING POSTS AND POLES. ROBERT GUTHRIE, Lincoln, Nebr. Filed Aug. 28, 1907. Serial No. 390,522.

1. A machine of the class described including a truck having means for supporting a pole, a tamping device, and a motor carried by the truck for actuating the tamping device.

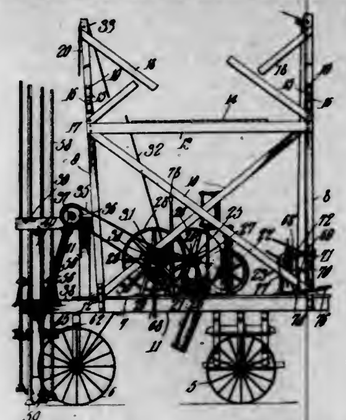
2. A machine of the class described including a truck having means for supporting a pole, a plurality of tamping members surrounding the pole, and means for actuating the tamping members.

3. A machine of the class described including a truck having alined frames at one end thereof for the reception of a pole, a tamping device disposed within the frames and adapted to embrace the pole, and means for actuating the tamping device.

4. A machine of the class described including a truck having means for supporting a pole, a tamping device surrounding the pole, a crank shaft, a pitman connecting the crank shaft and tamping device, and means for rotating the shaft thereby to actuate said tamping device.

5. A machine of the class described including a truck, spaced tamping plates disposed at one end of the truck

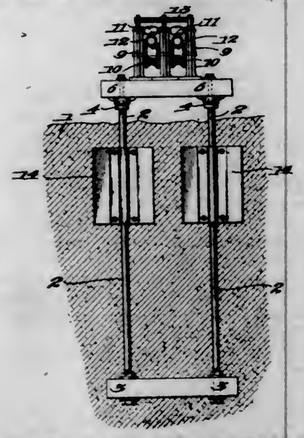
and adapted to receive a pole, said plates being provided with pivoted sections movable laterally to open position,



tamping members extending through the plates, and means for operating the tamping members.

[Claims 6 to 21 not printed in the Gazette.]

885,043. FOUNDATION. JAMES T. HAMBAY, New York, N. Y. Filed Apr. 12, 1907. Serial No. 367,853.



1. In a foundation, a supporting member and an anchor adapted to be adjustably secured thereto, said anchor comprising vertically extending plates provided with means for preventing horizontal displacement thereof.

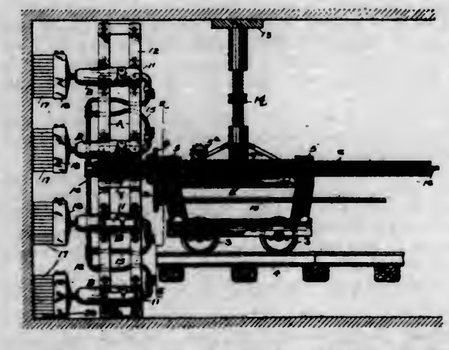
2. In a foundation, supporting members substantially parallel with each other, means connecting said members together and anchors adapted to be adjustably secured to said supporting members.

3. In a foundation, supporting members, means connecting said members together and anchors adapted to be adjustably secured to said supporting members said anchors comprising vertically extending plates provided with means for preventing horizontal displacement thereof.

4. In a foundation, supporting members arranged substantially parallel with each other, means connecting the top and bottom portions of said members to hold them in fixed relation to each other and anchors adapted to be adjustably secured to said supporting members intermediate said connecting means.

5. In a foundation, supporting members substantially parallel with each other, means connecting the bottom portions of said members to hold them in fixed relation to each other, flanged heads adapted to be secured adjacent to the tops of said supporting members, means connecting the top portions of said members resting on said flanged heads and anchors adapted to be adjustably secured to said supporting members.

885,044. TUNNELING-MACHINE. WILLIAM J. HAMMOND, Jr., Pittsburg, Pa. Filed Nov. 15, 1906, Serial No. 343,536. Renewed Sept. 25, 1907. Serial No. 394,580.



1. In a tunneling machine, a rotatory head having a series of diametrically arranged reciprocating hammers and separated from each other by distances slightly less than the length of the hammers, whereby the entire breast of the tunnel may be disintegrated by the rotation of the head and the reciprocation of the hammers.

2. In a tunneling machine, a rotatory head having a series of diametrically arranged reciprocating hammers and separated from each other by distances slightly less than the length of the hammers, these hammers having separable teeth arranged side by side to form a cutting surface greater in length than in breadth, the greater length extending radially on the rotatory head whereby the entire breast of the tunnel may be disintegrated by the rotation of the head and the reciprocation of the hammers.

3. In a tunneling machine, a rotatory head having a series of diametrically arranged reciprocating hammers and separated from each other by distances slightly less than the length of the hammers, the outer hammers being provided with a flaring tooth, whereby a disintegrating action beyond the end of the head is produced to allow for the clearance of the same.

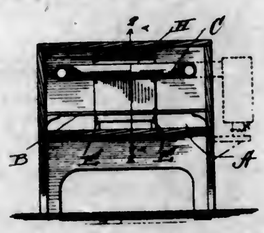
4. In a tunneling machine, a rotary head having a series of reciprocating hammers arranged in radial lines and separated from each other by distances slightly less than the length of the hammers, these hammers having separable teeth arranged side by side to form a cutting surface greater in length than in breadth, the greater length extending radially on the rotatory head, and the width of the hammers increasing successively with the distance from the center of the head.

4. In a tunneling machine, a rotatory head having a seor more radial arms, and having hammers thereon separated from each other by distances slightly less than the length of the hammers.

885,045. INCUBATOR. JOSEPH H. HAUGHAWOUT, Fairmont, Nebr. Filed Aug. 31, 1907. Serial No. 390,931.

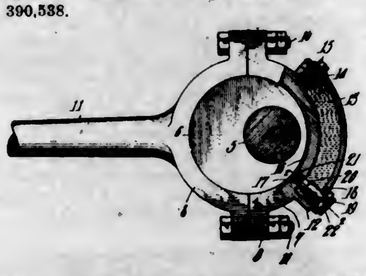
1. A heat deflecting apparatus for incubators comprising a casing with side and end walls, a heating pipe positioned adjacent to the side wall of the casing, a deflecting plate positioned with its upper end against the lower portion of said pipe and terminating a short distance above the bottom of the incubator, laterally projecting walls at the ends of said plate and adapted to be positioned against the inner surface of the side wall of said casing, as set forth.

2. A heat deflecting apparatus for incubators comprising a casing with side and end walls, a heating pipe positioned adjacent to one of the side walls of the casing, an upright heat deflecting plate in contact with the under portion of said pipe and terminating a slight distance above the bottom of the incubator, end walls projecting from said plate and adapted to be positioned against the side wall of the casing, forming a flue intermediate said plate and wall of the incubator, a curved deflecting plate fastened to said end walls and overhanging said pipe and spaced apart therefrom, as set forth.



3. A heat deflecting apparatus for incubators comprising a casing with side and end walls, a heating pipe positioned adjacent to one of the side walls of the casing, an upright heat deflecting plate in contact with the under portion of said pipe and terminating a slight distance above the bottom of the incubator, end walls projecting from said plate and adapted to be positioned against the side wall of the casing, forming a flue intermediate said plate and wall of the casing, the outer edges of said end walls having shoulders formed therein, the inner edges of said end walls, above the shoulders, being convexed, a heat deflecting plate resting upon said shoulders and overhanging said pipe and spaced apart therefrom, as set forth.

885,046. LUBRICATOR FOR ECCENTRICS. CLYVE D. HELM, Fort Worth, Tex. Filed Aug. 28, 1907. Serial No. 390,538.



1. The combination with an eccentric, of a strap surrounding the eccentric and provided with a reservoir adapted to contain a lubricant, an open ended feed tube extending transversely through the reservoir, and having its inner end arranged to discharge the lubricant on the eccentric and means operating within the feed tube and coacting with the latter for regulating the discharge of lubricant from said reservoir said regulating means forming a closure for the outer end of the feed tube.

2. The combination with an eccentric, of a strap surrounding the eccentric and provided with a lateral enlargement having a reservoir formed therein and adapted to contain a lubricant, an open ended feed tube extending transversely through the reservoir and having its inner end disposed at the periphery of the eccentric, said feed tube being provided with a plurality of apertures communicating with the interior of the reservoir and a cap operating within the feed tube and provided with corresponding apertures adapted to register with the apertures in the tube for regulating the discharge of lubricant from the reservoir said cap forming a closure for the open end of the feed tube.

3. The combination with an eccentric, of a strap surrounding the eccentric and provided with a lateral enlargement having a reservoir formed therein and adapted to receive a lubricant, one wall of said enlargment being provided with a threaded opening, an open ended feed tube extending transversely through the reservoir and having its inner end disposed at the periphery of the eccentric and its exterior walls threaded for engagement with the walls of the opening, there being feed apertures formed in the tube and communicating with the interior of the reservoir, and a cap working within the tube and provided with corresponding apertures adapted to register with the apertures in the tube for regulating the flow of lubricant from the reservoir, said cap forming a closure for the outer end of the feed tube.

4. The combination with an eccentric, of a strap surrounding the eccentric and provided with a lateral enlargement having a reservoir formed therein and adapted to contain a lubricant, an open ended feed tube extending transversely through the reservoir and having its inner end disposed at said eccentric and its interior walls threaded and provided with a plurality of feed apertures, absorbent material disposed within the tube, and a cap forming a closure for the outer end of the tube and having its exterior walls threaded for engagement with the interior threaded walls of the tube, said cap being provided with apertures adapted to register with the apertures in the tube for regulating the discharge of lubricant from the reservoir.

5. The combination with an eccentric, of a strap surrounding the eccentric and provided with a circumferential groove, said strap being formed in sections one of which is provided with a lateral enlargement having a reservoir formed therein and adapted to contain a lubricant, the walls of said reservoir being provided with alined openings one of which is threaded and the other provided with a smooth bore, a feed tube having one end thereof reduced and threaded for engagement with the threaded walls of an adjacent opening and its opposite end extending through the other opening and provided with an angular head, the interior walls of said tube being threaded and having feed apertures formed therein and communicating with the reservoir, a cap having an angular head and provided with exterior threads adapted to engage the interior threads of the feed tube, said cap being formed with apertures adapted to register with the apertures in the tube for regulating the discharge of fluid from the reservoir, and absorbent material arranged within the tube and cap respectively, and bearing against the eccentric at the circumferential groove.

885,047. FILTERING APPARATUS. WILBUR A. HENDRYX, Denver, Colo., assignor of one-half to Charles Butters, Berkeley and San Francisco, Cal. Filed Aug. 9, 1906. Serial No. 329,811.

1. A filter cell comprising an open frame, a filtering medium thereon, an outlet, and a non-metallic pervious filling adapted to support said filtering medium while providing a free passage for filtered liquid, substantially as described.

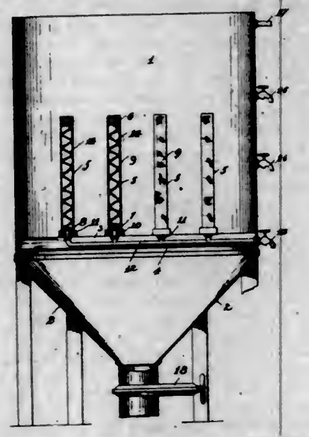
2. A filter cell comprising an open frame, a filtering medium thereon, an outlet, and a non-metallic pervious filling of woven or plaited fabric adapted to support said filtering medium while providing a free passage for filtered liquid, substantially as described.

3. A filter cell comprising an open frame, a filtering medium thereon, an outlet, and a pervious filling of cocoa matting adapted to support said filtering medium while providing a free passage for filtered liquid, substantially as described.

4. In combination, a tank and a filter cell therein, said filter cell comprising an open frame, a filtering medium thereon, an outlet, and a non-metallic pervious filling adapted to support said filtering medium while providing a free passage for filtered liquid, substantially as described.

5. In combination, a tank and a filter cell therein, said filter cell comprising an open frame, a filtering medium

thereon, an outlet, and a non-metallic pervious filling of woven or plaited fabric adapted to support said filtering



medium while providing a free passage for filtered liquid, substantially as described.

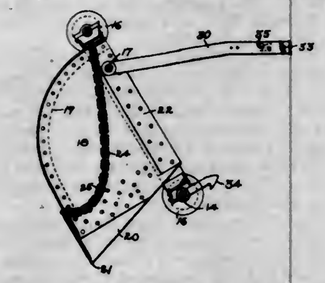
[Claim 6 not printed in the Gazette.]

885,048. BOX OR HOLDER FOR STICKING-PLASTER. CURT HOFFMAN-PINTHER, Hameln-on-the-Weser, Germany. Filed Aug. 3, 1906. Serial No. 329,010.



The combination with a box a having a slot b in the wall a^1 thereof, and a lid f the flange f^1 of which engages over the edge of wall a^1 and an annular belt surrounding the wall a^1 and a flange f^1 and rotatable thereon, said belt having a slot b^1 adapted to be brought into and out of coincidence with the slot b, together with a knife on said belt adjacent the slot b^1, for the purpose set forth.

885,049. EXCAVATOR-BUCKET. ALPHEUS E. HOLCOMB, Chicago, Ill., assignor to F. C. Austin Drainage Excavator Company, Chicago, Ill., a Corporation of Illinois. Filed Aug. 3, 1907. Serial No. 386,966.



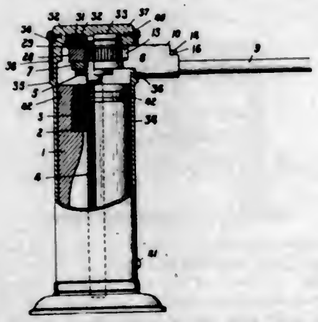
1. An excavator bucket having a bottom composed of transverse slats or bars mounted on flexible members supported at their ends, substantially as described.

2. An excavator bucket having a bottom composed of transverse slats or bars mounted on a pair of chains attached to and supported by the bucket at their opposite ends, substantially as described.

3. An excavator bucket having a bottom composed of transverse slats or bars mounted on a pair of chains attached to the bucket at their opposite ends, said chains being of a length greater than the right line distance between their points of support, substantially as described.

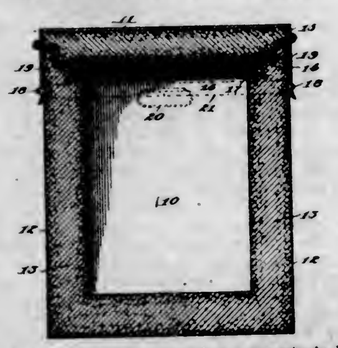
4. An excavator bucket having a bottom composed of slats or bars mounted on flexible members supported at their ends, substantially as described.

885,050. LIFTING-JACK. RICHARD O. HOPKINSON and ROBERT L. EDGCOMBE, Waterville, Quebec, Canada. Filed Sept. 6, 1907. Serial No. 391,680.



In a lifting jack, the combination with the standard and the main screw turning therein, of a lever socket piece having an inner ring extension therefrom suitably supported on said screw, a socket and a pawl orifice having an inwardly extending flange at its outer end forming a stop, a toothed wheel fixedly mounted on said screw above said inner ring extension, a plurality of thrust plates loosely mounted on said screw above said toothed wheel, a shell inclosing said standard, said screw and said mechanism, and having a circumferential opening through which said lever socket piece extends, a pawl having a reduced outer portion and a cross head at its outer extremity and a beveled tooth at its inner extremity and extending inwardly through said pawl orifice, a spiral spring encircling the reduced portion of said pawl between the flanged wall of said orifice and shoulder formed at the shell with the horizontal movement of said socket piece and securely locked thereon by a fixed ring, substantially as described.

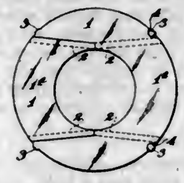
885,051. COOKING APPARATUS. DANIEL W. HOWLAND, Brookline, Mass., assignor to United States Fireless Cooker Company, Sanford, Me., a Corporation of Maine. Filed Nov. 8, 1906. Serial No. 342,510.



1. Cooking apparatus, comprising a receptacle having a wall of fibrous material, the wall being of porous structure interiorly and being gradually denser toward its surface.

2. Cooking apparatus, comprising a receptacle having a wall of fibrous material, the wall being of porous structure interiorly and being gradually denser toward its surface, combined with a superficial coating of enamel.

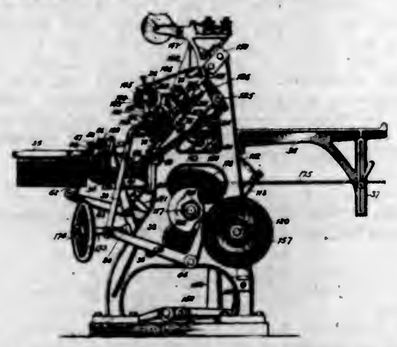
885,052. SPLIT WASHER. JENS J. JENSEN, Portland, N. D. Filed May 22, 1907. Serial No. 375,037.



1. A washer composed of two duplicate interlocking sections, each section consisting of two prongs united by a body portion forming an open sided recess, the body portion being thicker than the prongs and having undercut edges, and the prongs having beveled edges adapted to interlock with the undercut edges of the body portion, substantially as described.

2. A washer composed of two duplicate interlocking sections, each section consisting of two prongs united by a body portion forming an open sided recess, the body portion being thicker than the prongs and having undercut edges, and the prongs having beveled edges adapted to interlock with the undercut edges of the body portion, and a flexible lip on the marginal portions of each section for interlocking with the marginal portion of the other duplicate section, substantially as described.

885,053. BOOK-SEWING MACHINE. CONRADIN JOOS, Frauenfeld, Switzerland, assignor to Actiengesellschaft vormals F. Martini & Cie., Frauenfeld, Switzerland. Filed May 19, 1903. Serial No. 157,817.



1. In a book sewing machine the combination with several relatively movable sets of vertically reciprocating needles, of a reciprocating supporting saddle for the signatures, several coöperating sets of loopers mounted upon the saddle and each looper adapted to carry the thread from one of said needles to the next succeeding one in the set, means for rotating the needles, means for oscillating the loopers vertically and means for reciprocating them longitudinally, and means for laterally shifting the separate sets of needles on their support in opposite directions with each alternate movement of the saddle and signatures, whereby a loop of thread is carried from one signature in a diagonal direction to the next, and there interlooped with another loop of thread.

2. In a book sewing machine the combination with several relatively movable sets of vertically reciprocating needles, a reciprocating supporting saddle for the signatures, a looper carrier bar thereon having means for laterally shifting it and the looper adapted to carry a loop from one needle to another in the set, means for vertically lifting the loopers to avoid the needle in passing, and means for laterally shifting the set and for revolving each of the needles.

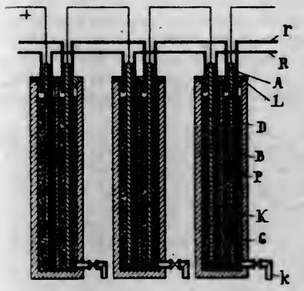
3. In a book sewing machine, the combination with several sets of needles, a support for said sets, means to vertically reciprocate said support, a reciprocating signature supporting saddle, a looper carrier bar mounted in the said saddle and longitudinally shiftable therein, loopers individually vertically oscillating to avoid the needles, and adapted to carry a loop of thread in both directions, to enchain it alternately with one of the needles on each side of the looper and means for moving said loopers and saddle support.

4. In a book sewing machine, a vertically reciprocating carrier bar, a series of needle frames with gangs of needle bars carrying needles thereon, gearing for rotating all of the needle bars on their longitudinal axes carried on and moving with said carrier bar, a presser bar provided with guides for the ends of said needles and a reciprocating saddle carrying therein and movable therewith, a series of gangs of reciprocating loopers to coöperate with said needles and means to operate them, substantially as described.

5. In a book sewing machine in combination with two sets of needles, a signature supporting saddle and a looper mechanism thereon, comprising a bar and two reciprocating frames, a series of loopers on said frames, each of said loopers having a double inturned hooked end, means for laterally shifting the looper carriers in opposite directions and means for raising the loopers vertically off their seats as they pass the needles, substantially as described.

[Claims 6 to 16 not printed in the Gazette.]

885,054. GAS ELEMENT FOR CONVERTING THE ENERGY OF COMBUSTIBLE OR OTHER SUITABLE REDUCING SUBSTANCES TO ELECTRIC CURRENT. ERNST W. JUNGNER, Kneippbaden, Norrköping, Sweden. Filed May 15, 1907. Serial No. 373,799.



1. A galvanic gas element producing sulfuric acid comprising sulfurous acid, a suitable reducing substance and oxygen as a generating medium, and an electrolyte of sulfuric acid of such concentration as to be capable of reduction to sulfurous acid by reducing agents.

2. A galvanic gas element producing sulfuric acid, comprising sulfurous acid produced from sulfuric acid, carbon as a reducing substance, oxygen as a generating medium and an electrolyte consisting of sulfuric acid of such concentration capable of being reduced to sulfurous acid by reducing substances.

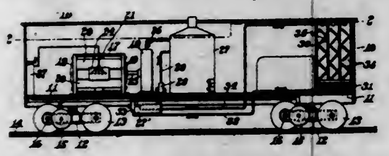
3. A galvanic gas element producing sulfuric acid, comprising sulfurous acid, carbon as a reducing substance, and oxygen as a generating medium, and a sulfuric acid electrolyte of such concentration as to be capable of reduction to sulfurous acid by carbonaceous substances, said sulfurous acid to be returned to the battery.

4. A galvanic gas element, an oxygen depolarizer, a generator comprising a reducing gas, nitrosyl-sulfuric acid dissolved in sulfuric acid and an electrolyte of sulfuric acid of high concentration.

885,055. LOCOMOTIVE. ERNEST C. KETCHUM, Boston, Mass. Filed July 3, 1907. Serial No. 331,967.

1. The combination of a car platform; trucks therefor; an electric motor for driving said trucks; a dynamo on said platform; a steam turbine on said platform for driv-

ing said dynamo; means for creating a continuous circulation of steam in said boiler and turbine; a water-cooled condenser into which the exhaust from the turbine passes; a connecting pipe between said condenser and said boiler; means for operating said motor by said dynamo; and means for regulating the electric current to said motor.



2. The combination of a car platform; trucks therefor; an electric motor for driving said trucks; a dynamo on said platform; a steam turbine on said platform for driving said dynamo; means for creating a continuous circulation in said boiler and turbine; a water-cooled condenser into which the exhaust from the turbine passes; a connecting pipe between said condenser and boiler; a cooling tower on said platform; a tank therefor; means for pumping the contents of said tank from said condenser into said cooling tower; means for operating said motor by said dynamo; and means for regulating the electric current to said motor.

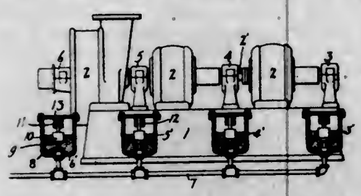
3. The combination of a car platform; trucks therefor; an electric motor for driving said trucks; a dynamo on said car platform provided with a plurality of revoluble disks united in series; means carried by said platform for driving said dynamo; means for cutting out a portion of said disks; and means for operating said motor by said dynamo.

4. The combination of a car platform; a steam generator carried thereby; a generator of electricity driven by said steam generator; a motor in circuit with said generator of electricity for moving said platform; a water-cooled condenser; and a cooling device connected to said condenser.

5. The combination of a car platform; a steam generator carried thereby; a generator of electricity driven by said steam generator; a motor in circuit with said generator of electricity; a water-cooled condenser; a cooling device connected to said condenser; and wings extending from said cooling device adapted to provide a current of air through said cooling device by the movement of the car.

[Claim 6 not printed in the Gazette.]

885,056. MEANS FOR COLLECTING LUBRICATING-OIL FROM SHIP-TURBINE SHAFT-BEARINGS. WALTER KIESER, Berlin, Germany, assignor to General Electric Company, a Corporation of New York. Filed May 11, 1907. Serial No. 373,050.

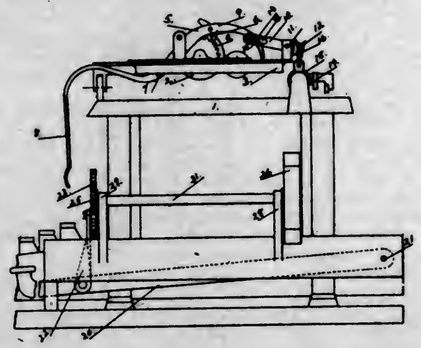


1. In a system of collection of overflow lubricating oil from the bearing of ship turbines, the combination of such bearings with a series of oil collecting pots, one under each bearing and each connected to a common return pipe, substantially as described.

2. In a system of collection of overflow lubricating oil from the bearings of ship turbines, the combination of such bearings with a series of oil collecting vessels, one under each bearing and each connected with a common return pipe, and a float valve for each vessel controlling the communication thereof with the return pipe, substantially as described.

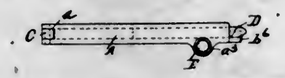
3. The combination of lubricated bearings of the common driving shaft of a ship turbine system, with a series of oil collecting pots, one for each bearing, and all at the same distance below the shaft, a common oil return pipe tapping the bottom of each oil pot, and a float valve in each pot controlling the communication thereof with the common oil return pipe, substantially as described.

885,057. TYPE-WRITING MACHINE. WILLIAM KRAFT, Baltimore, Md. Filed Aug. 6, 1907. Serial No. 387,258.



In a typewriting machine, the combination of a carriage, a key, connections from said key to said carriage by which the carriage is given a return movement upon depression of the key, a platen carried by said carriage, a ratchet upon said platen, a line spacing lever engaging said ratchet, mechanism operatively connected with said line spacing lever, and an inclined member adjustably mounted upon the machine frame which engages said mechanism near the end of the return movement of the carriage to rotate the platen, substantially as described.

885,058. TOOL-HOLDER. GEORGE R. LANG, Meadville, Pa. Filed Apr. 18, 1906. Serial No. 312,329.

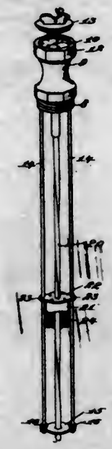


1. In a tool holder the combination of the upper and lower sections adapted when together to be inserted in the ordinary tool post of a lathe and to be clamped thereby and having longitudinal grooves in their opposing faces adapted to receive a tool and each provided with a laterally protruding lug near its front end with a projection from one of the opposing faces of the lugs on the side of the lug more remote from the groove for engaging the opposing face of the opposing lug with the opposing faces of the lugs out of contact on the side nearer the groove when in parallel relation for the purpose described; and a clamping screw arranged in said lugs.

2. In a tool holder the combination of the upper and lower sections, having the longitudinal grooves in their opposing faces; a clamp at the front ends of said sections; and a hinge joint at the rear end of said sections comprising the tongue C arranged in the slots in the ends of the sections, the ends of the groove forming parts of the slots.

3. In a tool holder the combination of the upper and lower sections, having longitudinal grooves in their opposing faces; the lower section having the projecting lips b' and b' for supporting the side and bottom of an inserted tool at points opposite the cutting edge of the tool; and means for clamping the sections together.

885,059. INDICATOR FOR TANKS. JULIUS B. LAURSEN, Sorkness, N. D. Filed Apr. 11, 1907. Serial No. 367,539.

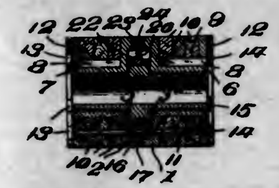


1. In a device of the class described, a dial receiving member having a central bore terminating at one end in a recess, a rod having threaded extremities rotatably mounted in the bore, a pointer engaging one of the threaded ends of the rod and adapted to rotate in the recess of the member, a float, means coöperative with the latter and the opposite end of the rod to actuate the same to move the pointer, a crystal mounted on said member above the recess therein, a detachable cap for securing the crystal in position on the member, and a removable stopper carried by the cap.

2. In a tank having a threaded opening, a removable cup shaped collar in threaded engagement with the threaded opening, a detachable dial receiving member mounted in said collar and having a central bore terminating in a recess at one end of the member, a dial having notations secured in the recess, a rod having opposite threaded ends rotatively mounted in the bore, a pointer in threaded engagement with one threaded end of the rod and adapted to rotate in the recess above the dial, a float member, means associated with the latter and having threaded connection with the opposite threaded end of the rod for rotating the same to cause the movement of the pointer when said float is caused to be lowered or elevated, said dial receiving member having in its outer face screw threads at one end thereof, a screw threaded cap in engagement with the threaded end of the member, and a crystal secured in position on the member above the recess by the collar.

3. In a tank having an opening, a dial receiving member mounted in the opening and having a central bore terminating at one end in a recess in said member, guide rods depending in parallelism from said member, a perforated plate mounted on the free terminals of said guide rods, nuts for locking the plate in position, a rod having oppositely threaded ends rotatively mounted in the bore of the member, a pointer movable in the recess and in threaded engagement with one end of the rod, a spiral member intermediate the guide rods, a threaded sleeve in engagement with the spiral member and the remaining threaded end of the rotatable rod for connecting said spiral member thereto, a float slidable on the spiral member, a plate having opposite extensions provided with openings secured to said float, the guide rods passing through the openings in the extensions for holding the float in position and to guide the same during its movement, a depending sleeve extending from said latter plate intermediate the spiral member and the float, a crystal mounted on the dial receiving member above the recess, and a detachable cap for holding the crystal in position on the member.

885,060. RATCHET-CYLINDER PULLEY. ALFRED LEATHERMAN, Butte, Nebr. Filed Apr. 13, 1907. Serial No. 367,984.

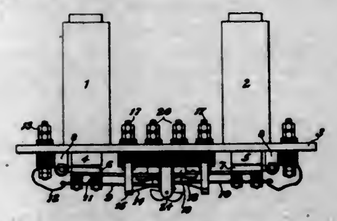


1. The herein described pulley comprising a tubular body formed of a pair of tubular sections, said sections having flanges on their meeting faces, one of said flanges having notches therein adapted to receive lugs on the opposite flange, said flanges forming a cavity between said sections, a plurality of bolts extending through said sections and the cavity, a tubular shaft extending through said body, said shaft having a ratchet wheel thereon adapted to extend into said cavity, a plurality of pawls pivotally mounted on said bolts and in said cavity, the inner surfaces of the flanges having depending shoulders thereon against which the pivoted ends of the pawls are adapted to rest and springs between the free ends of said pawls and the surrounding wall of the cavity, whereby said pawls will be held into engagement with the teeth on the ratchet wheel.

2. In a pulley the combination with a tubular body formed in two sections and having cavity forming flanges at the meeting faces said flanges having depending shoulders on their inner surface; of a tubular shaft seated in said tubular body, said shaft having a ratchet wheel thereon extending into said cavity, bolts extending longitudinally of said body a plurality of pawls pivotally mounted on said bolts the pivoted ends of which are adapted to rest against said flanges and springs between the free ends of said pawls and the surrounding wall of the cavity, said springs engaging studs on said pawls and seated in bores in said body, whereby said ratchet wheel and parts secured thereto will be driven in one direction.

3. A pulley of the class described comprising a tubular body, said body having an annular cavity central of its inner surface, one wall of said cavity having alternately arranged bores and depending shoulders thereon, a plurality of bolts extending longitudinally through said body and the cavity, a plurality of pawls pivotally mounted in said cavity by means of said bolts, said pawls having studs thereon, springs between the pawls and the surrounding wall of the cavity, said springs being seated in said bores and engaging said studs on the pawls and a tubular shaft for said body, said shaft having a ratchet wheel thereon, said ratchet wheel being disposed in said cavity and adapted to be engaged by said pawls whereby said ratchet wheel and parts secured thereto will be driven in one direction.

885,061. INTERLOCKING RELAY. THOMAS L. LEE, Westfield, N. J., assignor to The Hall Signal Company, a Corporation of Maine. Filed June 6, 1907. Serial No. 377,552.



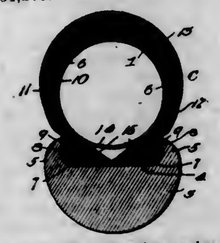
1. An interlocking relay having, in combination, two magnets, two armatures controlled thereby and operating to control electric circuits, and two movably-mounted detents each of which is arranged to be thrown into oper-

ative position by movement of one armature and to operate, when in such position, to restrict the movement of the other armature.

2. An interlocking relay having, in combination, two magnets, two armatures controlled thereby and operating to control electric circuits, a pivotally-mounted detent provided with an upwardly-extending arm and an inclined cam surface thereon, a roll carried by one armature and engaging the cam surface so as to swing the detent arm laterally into operative position when said armature is moved in one direction, and means carried by the other armature and arranged to engage the upper end of the detent arm in such operative position to restrict the downward movement of said means.

3. An interlocking relay having, in combination, two magnets, two armatures controlled thereby, contact fingers mounted on but insulated from the armatures, fixed contacts coöperating with the fingers, a locking arm mounted on each armature, and two detents each of which is arranged to be engaged and actuated by one locking arm and to engage and lock the other locking arm to prevent contemporaneous operation of the armatures and their contact fingers.

885,062. REINFORCED PNEUMATIC TIRE. HENRY D. B. LEFFERTS, Orange, N. J., assignor of one-half to Elphalet De Camp, Newark, N. J. Filed Mar. 8, 1907. Serial No. 361,279.



1. In a pneumatic tire, the tire casing provided within its rim engaging portions with circumferential base rings, and an inside steel shell extending entirely about the casing body within the same and having its terminals seated directly on one side of said base rings to provide a solid bearing for said terminals.

2. In a tire of the class described, the outer tire casing provided at its rim engaging edges with circumferential base rings having bearing seats, and with holding hooks for engagement with the wheel rim, and a steel shell extending entirely about the casing body within the same and having curled reinforcing beads resting on said bearing seats and disposed within the projections forming said holding hooks.

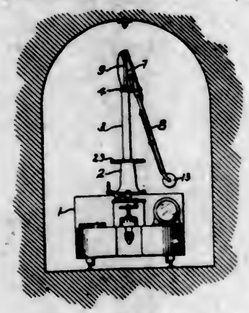
3. In a tire of the class described, the tire casing consisting of a laminated body provided at its outer corners with rim engaging holding hooks and having base rings incased in its edges, and an imperforate cross sectionally cylindrical steel shell embedded within the laminated casing body and provided with curled reinforcing beads at its terminal edges, said reinforcing beads being seated against the base rings, and having their edge portions disposed within the projections forming the holding hooks.

885,063. TROLLEY-STAND. WILLIAM A. LOUDON, Chicago, Ill., assignor to General Electric Company, a Corporation of New York. Filed Aug. 9, 1905. Serial No. 273,373.

1. The combination with an electric vehicle, of a standard mounted thereon, a spring plunger in said standard, a trolley pole hinged to said plunger, and a link hinged to said standard and pole.

2. The combination with an electric vehicle, of a pedestal mounted thereon, a standard rotatable in said pedestal, a spring plunger in said standard, a trolley pole hinged to said plunger, and a link connecting said standard and pole.

3. The combination with an electric vehicle, of a rotatable tubular standard mounted thereon, a tubular spring plunger in said standard, a trolley pole hinged to said plunger, a link connecting said standard and pole, whereby the latter may be folded down alongside of the standard, and an insulated conductor secured to said pole and passing down through said tubular plunger.



4. The combination with an electric vehicle, of a rotatable tubular standard mounted thereon, a tubular spring plunger in said standard provided with a longitudinal slot, a trolley pole hinged to said plunger, a link hinged to said pole and standard whereby the pole may be folded down alongside of the standard, an insulated conductor secured to said pole and passing through the slot in said plunger, and a sheath surrounding said conductor inside of said plunger.

5. The combination with a standard, of a spring pressed plunger in said standard, guides for said plunger, a trolley pole hinged to said plunger, and a fulcrum support for the trolley pole flexibly connected to said standard whereby the pole may be folded down alongside of the standard.

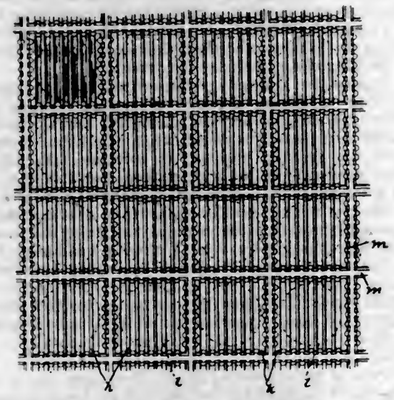
885,064. BUCKLE. HENRY W. LUHMANN, San Francisco, Cal. Filed Apr. 13, 1907. Serial No. 368,125.



1. A buckle including a frame having spaced side bars the ends of which are deflected laterally and connected by transverse end bars, an eccentric pivotally mounted between the side bars and disposed at the angle of deflection of said bars at one end of the frame, and an intermediate transverse bar connecting the side bars and disposed at the angle of deflection of said side bars at the opposite end of the frame.

2. A buckle including a frame having spaced side bars the ends of which are deflected laterally and connected by transverse end bars, there being transversely alined perforations formed in the side bars at one end of the frame and disposed at the adjacent angle of deflection of said bars, the walls of one of the perforations being threaded, an intermediate transverse bar connecting the side bars and disposed at the angle of deflection of said bars at the opposite end of the frame, a pivot pin extending through one of the perforations and provided with terminal threads adapted to engage the threaded walls of the opposite perforation, an eccentric pivotally mounted on the pin and provided with circumferential projections, and a roller journaled on one of the end bars in advance of and coacting with the eccentric.

885,065. REFRACTORY BLOCK FOR BUILDING PURPOSES. FREDERICK B. MARVIN, Paterson, N. J. Filed Jan. 30, 1905. Serial No. 243,259.



As an article of manufacture for incorporation in concrete and other plastic artificial stone substances, a body formed of refractory material and comprising two layers cemented together, each layer having semi-spherical recesses on its inside face registering with corresponding semi-spherical recesses of the other layer, and said body being weakened on its outside surfaces along intersecting sets of lines disposed relatively between said recesses, substantially as described.

885,066. PROCESS FOR PRODUCTION OF COLORED PHOTOGRAPHS. WALDEMAR MERCKENS, Mülhausen, Germany, and JOHN H. SMITH, Zurich, Switzerland. Filed Mar. 23, 1907. Serial No. 364,118.

1. Process for the production of colored prints upon a base consisting of a cellulose derivative of acid character, in which imbibed basic dye solutions are transferred from a temporary picture support having less affinity for the dye.

2. Process for the production of colored prints upon a base consisting of collodion, in which imbibed basic dye solutions are transferred from a temporary picture support having less affinity for the dye.

3. Process for the production of colored prints upon a base consisting of a cellulose derivative of acid character, in which imbibed basic solutions are transferred from a temporary moist gelatin relief picture support.

885,067. VIOLIN-MUTE. JOHN MITCHELL, Auckland, New Zealand. Filed June 20, 1907. Serial No. 379,958.

1. The combination with a musical instrument embodying strings and a bridge, of a mute comprising a broad body portion having a central part slightly arched to rest upon the intermediate strings and lateral lobes slightly concaved to engage with and beneath the other strings, rigid means integral with said body portion and projecting therefrom parallel with the strings and in alinement with the upper edge of the bridge when the mute is in position, and means to slide the device along the strings to bring the aforesaid rigid means into or out of engagement with the bridge, substantially as described.

2. The combination with a musical instrument embodying strings and a bridge, of a mute comprising a broad rigid body portion adapted to interengage with all the strings, means integral with said body portion and projecting therefrom to engage the upper edge of the bridge in muting, when the mute is in position, and a rigid thumb piece projecting upwardly and rearwardly from the said body portion whereby the device may be manipulated, as set forth.



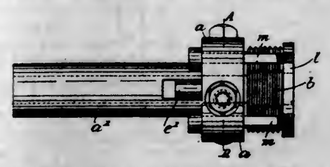
3. The herein described violin mute consisting of a broad body portion slightly arched at the center and having a slightly concaved lobe on each side, a rigid bridge-engaging finger integral with each lobe and projecting therefrom, and a rigid thumb piece intermediate of the said fingers and projecting upwardly from the arched part of the said body portion at the forward edge thereof.

4. As a new article of manufacture, a violin mute comprising a broad integral body formed at an edge with spaced bridge-engaging fingers extending substantially in the plane of said body and an intermediate thumb piece extending laterally of said plane.

5. As a new article of manufacture, a violin mute composed of a body provided at its side edges with integral string-engaging lobes, and at an end with integral rigid bridge-engaging fingers in spaced relation, the portion of the body between the said fingers being bent outwardly with respect to said fingers to provide a thumb piece.

[Claim 6 not printed in the Gazette.]

885,068. APPARATUS FOR FORMING SCREW-THREADS. ERNEST F. MOY and PERCY H. BASTIE, London, England. Filed Apr. 13, 1907. Serial No. 367,971.



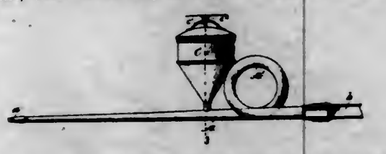
1. Mechanism for forming screw-threads by a rolling process, comprising a plurality of grooved rollers mounted in a holder parallel to the axis of the same, each roller adapted to turn on its axis and having on its circumference a series of equidistant ridges and grooves at right angles to the axis of the roller, the portions of the ridges which are nearest to the axis of the holder arranged in a helical path around the axis of the holder.

2. Mechanism for forming screw-threads by a rolling process, comprising three grooved rollers mounted in a holder parallel to the axis of the same, each roller adapted to turn on its axis and having in its circumference a series of equidistant ridges and grooves at right angles to the axis of the roller, the portions of the ridges which are nearest to the axis of the holder arranged in a helical path around the axis of the holder, substantially as described.

3. Mechanism for forming screw-threads by a rolling process, comprising a plurality of grooved rollers of equal

diameters mounted in a holder parallel to the axis of the same at equal distances from the said axis, each roller adapted to turn on its axis and having on its circumference a series of equidistant ridges and grooves at right angles to the axis of the roller, the portions of the ridges which are nearest to the axis of the holder arranged in a helical path around the axis of the holder.

885,069. SANDING-MACHINE. ELLIE H. MULLIKIN, Dallas, Tex. Filed July 5, 1907. Serial No. 382,279.



1. In a sanding machine, a distributing tube having a coil or wrap therein, a sand box communicating with said tube in advance of the coil therein, and an air-forcing device communicating with said tube in rear of the coil therein.

2. In a sanding machine, a distributing tube, and a sand box carried by said distributing tube and communicating therewith, said distributing tube being provided with an offset portion in rear of the said box constituting a handle.

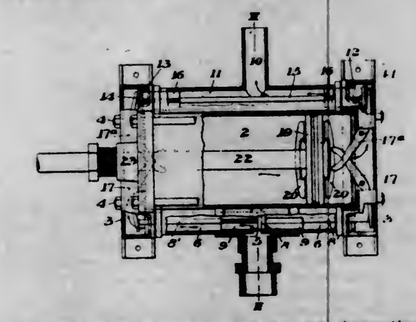
3. In a sanding machine, a distributing pipe provided at its outlet end with a nozzle, and a sand box carried by said pipe and communicating therewith, said pipe being provided with an offset portion in rear of said sand box.

4. In a sanding machine, a distributing pipe provided with a nozzle at the outlet end thereof, and a sand box carried by said pipe and communicating therewith, said pipe being provided with a coil therein in rear of said sand box.

5. In a sanding machine, a rigid distributing tube provided with a coil intermediate the ends thereof, a sand box carried by said tube and communicating therewith in advance of said coil, said coil being rigidly secured to said sand box to constitute a brace therefor.

[Claim 6 not printed in the Gazette.]

885,070. HYDRAULIC MOTOR. JOHN G. MCDOWELL, Pittsburg, Pa. Filed Aug. 18, 1906, Serial No. 331,197. Renewed Sept. 6, 1907. Serial No. 391,701.



1. In a hydraulic motor, a cylinder, a reciprocating piston, valves mounted in a stationary part of the motor, levers arranged to actuate the valves, and leaf springs secured to opposite sides of the piston and arranged to contact with the levers near the end of the stroke; substantially as described.

2. In a hydraulic motor, a cylinder, a reciprocating piston, a pair of curved leaf springs secured to the opposite faces of the piston, inlet and outlet valves, and levers arranged to actuate said valves, said levers contacting with the piston springs near the end of its stroke; substantially as described.

885,071. PROCESS FOR TREATING ORES CONTAINING ARSENIC. THOMAS B. MCGHIE, London, England, assignor of one-half to Thomas Barton, London, England. Filed Sept. 9, 1907. Serial No. 392,049.

1. Process for recovering arsenic from ores and speiss, consisting in mixing material containing alkaline carbonate with the material containing the arsenic, roasting the mixture in the presence of air, and dissolving out from the product the resulting salt consisting of the alkaline arseniate.

2. Process for recovering arsenic from ores and speiss, consisting in reducing the material containing the arsenic to the form of a powder, mixing material containing alkaline carbonate with the material containing the arsenic, roasting the mixture, and dissolving out from the product, the resulting salt containing the arsenic.

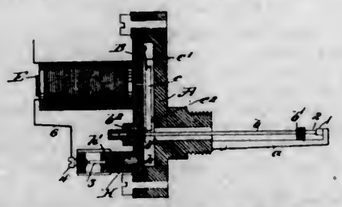
3. Process for recovering arsenic from ores and speiss, consisting in mixing material containing alkaline carbonate with the material containing the arsenic in such quantity that there is a slight excess of alkaline material beyond the quantity required to combine with all the arsenic present, roasting the mixture, and dissolving out from the product the resulting salt containing the arsenic.

4. Process for recovering arsenic from ores and speiss, consisting in reducing the material containing the arsenic to the form of a powder, mixing material containing alkaline carbonate with the material containing the arsenic in such quantity that there is a slight excess of alkaline material beyond the quantity required to combine with all the arsenic present, roasting the mixture, and dissolving out from the product the resulting salt containing the arsenic.

5. Process for recovering arsenic from ores and speiss, consisting in mixing material containing sodium carbonate with the material containing the arsenic, roasting the mixture, and leaching the product whereby the resulting arseniate of soda is dissolved out.

[Claims 6 to 9 not printed in the Gazette.]

885,072. ELECTRIC IGNITER FOR GAS OR VAPOR ENGINES. LEON O. MCPHERSON, Highland Park, Ill. Filed Mar. 25, 1897. Serial No. 629,181.



1. The combination with a gas engine cylinder, a casting adapted to be applied thereto and carrying a fixed electrode, a movable electrode projecting only on the cylinder face of the casting, a chamber in the casting open only to the cylinder, means arranged in the chamber for operating the movable electrode, and a magnet for actuating said means, as and for the purpose set forth.

2. The combination with a gas engine cylinder, an electrode arranged therein, a casting applied to said cylinder and carrying on its cylinder face a coöperating electrode, one of said electrodes being movable, a lever arranged on the cylinder side of said casting for moving said movable electrode, and an electro-magnet arranged on the outside of said casting for actuating said lever, as and for the purpose set forth.

3. The combination with a gas engine cylinder, of a casting adapted to be applied thereto and carrying a fixed electrode, a movable electrode extending only on the cylinder face of the casting, said casting being provided with a chamber open only to the cylinder, a lever arranged in said chamber adjacent to said movable electrode for operating the latter, and an electro-magnet for actuating said lever, as and for the purpose set forth.

4. The combination with a gas engine cylinder, of a pair

of contacts arranged therein and in series in an electric circuit, means for closing said circuit, a casting adapted to be applied to said cylinder and provided with a chamber open only to the cylinder, means arranged within said chamber for relatively moving said electrodes, and a magnet for operating said means, as and for the purpose set forth.

5. The combination with a gas engine cylinder, of a pair of relatively movable contacts arranged to extend into said cylinder and arranged in series in an electric circuit, a timing apparatus for automatically closing said circuit, and a magnet located outside of said cylinder and adapted when energized to relatively move said electrodes to break said circuit, as and for the purpose set forth.

[Claims 6 to 12 not printed in the Gazette.]

885,073. HAIR-TONIC. ANNIE NEWCOM and JENNIE NEWCOM, Terrell, Tex. Filed Aug. 19, 1907. Serial No. 389,263.

The herein described hair tonic, consisting of mucilage of quince seed, citric acid, sodium borate, bichlorid of mercury, glycerin, oil of citronella, oil of rose geranium, carmine and water in the proportions specified.

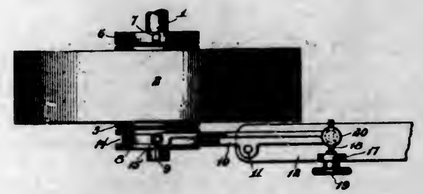
885,074. EXERCISER. HENRY B. NIDEVER, Monterey, Cal. Filed Nov. 30, 1907. Serial No. 404,571.



1. In an exerciser of the character described, the combination of a casing, a shaft mounted therethrough, a reel loosely mounted upon said shaft, and carrying a suitable cord or rope thereon leading outwardly through said casing, a handle carried upon the outer end of said cord, a spring arranged within said casing having one end attached to said reel and its other end attached to said shaft, said shaft having enlarged knobs secured on the ends thereof outside, and abutting said casing, and means for causing said knobs to securely engage with and bind against said casing to hold the said shaft stationary, substantially as described.

2. In an exerciser of the character described, the combination of a casing, a shaft mounted therethrough, a reel loosely mounted upon said shaft and carrying a suitable cord or rope thereon leading outwardly from said casing, a handle carried upon the outer end of said cord, springs arranged within said casing at the sides of said reel and having one of their ends attached thereto, and their other ends attached to said shaft, said shaft being rotatable within said casing to tighten or loosen the tension of said springs and having enlarged knobs secured on the ends thereof, outside, and abutting said casing, and releasable means for causing said knobs to securely engage with and bind against said casing, to hold the said shaft stationary, substantially as described.

885,075. CLUTCH. DAVID S. OAKLEY, Parkersburg, W. Va. Filed June 1, 1907. Serial No. 376,773.



1. The combination of a clutch, with a mechanism for throwing the clutch into or out of operation, said mechanism comprising a lever provided with a head having slots, a support on which the lever is fulcrumed, an operating screw journaled on the support and loosely extending through the slots of the head and disposed with its axis at right angles to the axis on which the lever moves, and a block mounted for relative turning movement in the head and having a tapped opening for receiving the screw.

2. A device of the class described comprising clutching members one having a peripheral groove, a semi-annulus disposed in the groove, a bifurcated lever, bolts for detachably and hingedly connecting the lever and annulus at diametrically opposite points and at the ends of the annulus, and means for operating the lever.

3. In a device of the class described, the combination of clutching members, an operating lever, means for connecting the lever with one of the members, a hollow cylindrical head on the lever having diametrical slots, a block loosely mounted in the head, and an adjusting screw threaded in the block and extending through the slots of the head.

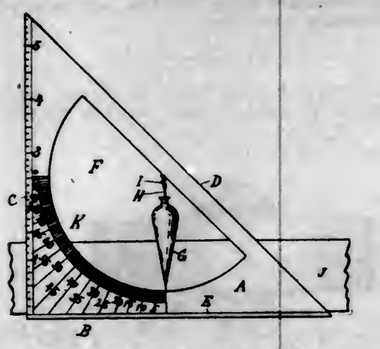
4. In a device of the class described, the combination of clutching elements, one having an annular groove, an approximately semi-circular member in the groove, a lever having a bifurcated end spanning the said member, a hinged connection between the extremity of each bifurcation and adajcent end of the member, a support for the lever, an operating screw on the support, a head on the lever, and a block mounted on the head in which the screw has a threaded engagement.

5. In a device of the class described, the combination of a wheel having a hub provided with oppositely disposed hollow cones, a shaft passing through the hub, a cone clamped to the shaft to engage one of the hollow cones, a sliding cone rotatable with the shaft and arranged to engage the other hollow cone and having a peripheral groove, a semi-annular member engaging in the groove, a lever hingedly connected at diametrically opposite points with the member, a support for the lever, a screw mounted on the support, a hollow head on the lever having diametrically arranged slots, and a block loosely mounted in the head with which the screw has a threaded engagement.

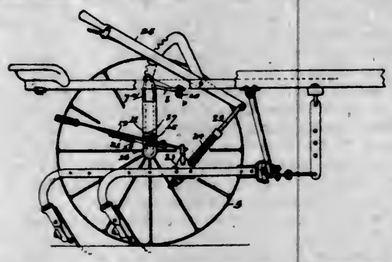
885,076. COMBINATION-TOOL. AXEL OLSON, Stockett, Mont. Filed Dec. 17, 1906. Serial No. 348,330.

A tool of the class described, comprising a metal plate having three corners and three straight edges forming one rectangle and two miter angles, said plate having a semi-circular aperture with the middle of the half circle toward the rectangular corner of the plate, and a scale of ninety degrees of a circle marked along the curved edge of the

aperture, the middle numeral of the scale indicating 45 degrees being toward the rectangular corner of the plate; a plumb bob suspended from the center of the semicircular space and pointing to the degrees on the scale.



885,077. PIVOTED-AXLE CULTIVATOR. WILLIAM L. PAUL, Peru, Ill., assignor to Peru Plow & Wheel Company, Peru, Ill., a Corporation of Illinois. Filed May 10, 1906. Serial No. 316,169.



1. In a pivoted axle cultivator, the combination with axles having journaled portions, of an operating lever having a fixed pivot and also a direct pivotal connection with a part turning with the journaled portion of the axle, the pivots being so arranged that the turning movement of the axle is less than the swinging movement of its controlling lever, substantially as described.

2. In a pivoted axle cultivator, the combination with axles having journaled portions and socket bearings in which said journaled portions turn, a bracket member turning with the axle, and an actuating lever pivoted between its ends to the said bracket member and having also a pivotal connection with the stationary member or socket bearing between the journal axis and the pivot of the actuating lever, substantially as described.

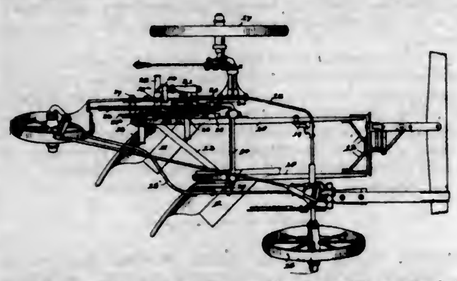
3. In a pivoted axle cultivator, the combination with an axle having an upright journaled portion, a socketed bearing in which said portion turns, said socketed bearing having a bracket member rigid therewith, a bracket member turning with the axle and having an arm rigid therewith and an operating lever pivoted between its ends to the axle bracket, and at its extremity to the bracket arm of the bearing member, substantially as described.

4. In a cultivator of the class described, the combination with wheel axles having journaled portions, compound levers for controlling said journals, and connections between said journaled portions whereby the wheels may be turned in unison, substantially as described.

5. In a cultivator of the class described, the combination with pivoted axles of a foot controlled lever for turning said axles and a hand-operated lever adjustably connected with the axle and turning therewith, the hand-operated levers being also connected with the shovel beams, substantially as described.

[Claims 6 to 10 not printed in the Gazette.]

885,078. WHEEL-PLOW. WILLIAM L. PAUL, Peru, Ill., assignor to Peru Plow & Wheel Company, Peru, Ill., a Corporation of Illinois. Filed June 13, 1906. Serial No. 321,561.



1. In a wheeled plow, the combination with a wheeled frame and a plow beam, of a pivoted bail connecting the beam and frame, and a swinging link pivotally connected to the forward end of the beam and to the frame above the beam, substantially as described.

2. In a wheeled plow, the combination with a wheeled frame and beam, of a bail pivotally connected to the beam and a link pivotally connected to the beam forwardly of the bail pivot and to the frame above the beam, substantially as described.

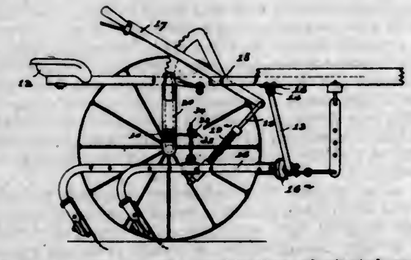
3. In a wheeled plow, the combination with a wheeled frame and plow beam, of a bail pivotally connecting the plow beam and frame, a swinging link pivotally connecting the forward end of the beam with the frame, and means for rocking the bail and raising and lowering the beam, substantially as described.

4. In a wheeled plow, the combination with a wheeled frame and beam of a bail pivotally connecting the frame and beam and on which the plow may be rocked, a link pivotally connected to the beam forwardly of the bail and to the frame above the beam, means for controlling the rocking of the bail and separate means for moving the beam on its pivots whereby to raise or lower it, substantially as described.

5. In a wheeled plow, the combination with a wheeled frame and plow beam, of a bail pivotally connecting the beam and frame, a swinging link pivoted to the beam in front of the bail and to the frame above the beam, a lever for rocking the bail and a lever for controlling the beam, said beam-controlling lever being pivoted on the frame, substantially as described.

[Claims 6 to 15 not printed in the Gazette.]

885,079. PIVOTED-AXLE CULTIVATOR. WILLIAM L. PAUL, Peru, Ill., assignor to Peru Plow & Wheel Company, Peru, Ill., a Corporation of Illinois. Filed Mar. 25, 1907. Serial No. 364,257.



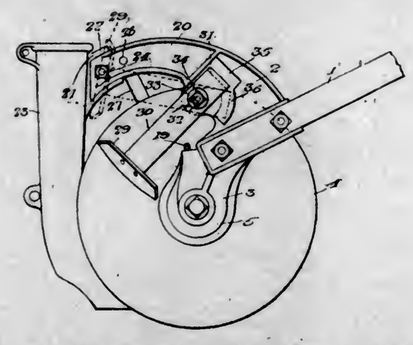
1. In a cultivator, the combination of pivoted gangs, means connecting said gangs together to compel them to turn in unison, carrying wheels, pivoted axles for said wheels, means connecting said axles to cause them to turn together, compound levers for turning said axles and wheels, and means connecting said levers with said gangs whereby the latter are shifted at the same time that the wheels and axles are turned, substantially as described.

2. In a pivoted-axle cultivator, the combination of pivoted gangs, means connecting said gangs together to compel them to turn in unison, carrying wheels, pivoted axles for said wheels, means connecting said axles to cause them to turn together, a pair of operating levers each having a fixed pivot and also a pivotal connection with a part turning with one of said axles, and means connecting said operating levers to said gangs whereby said axles and gangs are shifted simultaneously, substantially as described.

3. In a pivoted-axle cultivator, the combination of pivoted gangs connected together to move in unison, carrying wheels, pivoted axles for said wheels connected together to turn simultaneously, bearings for said axles each having a lug rigid therewith, bracket members turning with each of said axles, an operating lever pivoted to each of said lugs and to one of said bracket members, and means connecting said operating levers with said gangs, substantially as described.

4. In a pivoted-axle cultivator, the combination of pivoted gangs connected together to move in unison, carrying wheels, pivoted right-angle axles for said wheels connected together to turn simultaneously, bearings for the vertical portions of said axles each having a lug rigid therewith, a bracket member turning with each of said axles, an operating lever having a pin and slot connection with each of said lugs and pivoted to one of said bracket members, and means connecting said operating levers with said gangs, substantially as described.

885,080. DISK DRILL. CHARLES H. PELTON, Springfield, Ohio, assignor to The Thomas Manufacturing Company, Springfield, Ohio, a Corporation of Ohio. Filed Mar. 4, 1907. Serial No. 360,459.



1. In a disk drill, the combination, with a dragbar, a bracket rigidly secured to said dragbar comprising a plurality of arms, one of said arms extending downwardly and rearwardly, a disk rotatably mounted on said downwardly and rearwardly extending arm, a second arm extending upwardly to a point above said disk, thence rearwardly, a boot carried by said second arm, a resilient scraper carried by said boot, and a second scraper secured to said second arm at a point between said boot and said dragbar, said scrapers being adapted to engage different portions of the same side of said disk.

2. In a disk drill, the combination, with a dragbar, a bracket rigidly secured to said dragbar comprising a plurality of arms, one of said arms extending downwardly and rearwardly, a disk rotatably mounted on said downwardly and rearwardly extending arm, a second arm extending upwardly to a point above said disk, thence rearwardly, a boot carried by said second arm, a resilient scraper carried by said boot and adapted to engage the convex side of said disk, and a second scraper carried by said second arm and adapted to engage a portion of the convex side of said disk different from that engaged by the first-mentioned scraper.

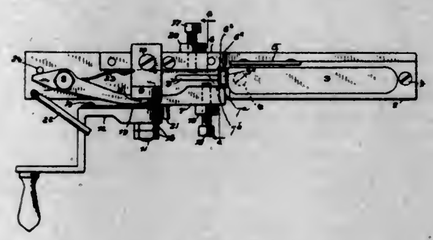
3. In a disk drill, the combination, with a dragbar, a bracket secured thereto and having an arm, and a disk carried by said bracket, of a boot carried by said arm, a resilient scraper carried by said boot and adapted to engage a portion of the convex side of said disk, and a second scraper connected at one end of said bracket and supported at its other end near the center of the convex side of said disk and adapted to engage that portion of the convex side of said disk not engaged by the first-mentioned scraper.

4. In a disk drill, the combination, with a dragbar, a bracket secured thereto and having an arm, and a disk carried by said bracket, of a boot carried by said arm, a resilient scraper carried by said boot and adapted to engage a portion of the convex side of said disk, a second resilient scraper connected at one end to said bracket and supported on said disk at its other end and adapted to engage that portion of the convex side of said disk not engaged by the first-mentioned scraper, and means for adjusting the engagement of said last-mentioned scraper with said disk.

5. In a disk drill, the combination with the dragbar, of a bracket rigidly secured to said dragbar comprising a plurality of arms, one of said arms extending rearwardly, a disk rotatably mounted on said rearwardly-extending arm, a second arm extending upwardly and rearwardly, a boot secured to said second arm, a resilient scraper carried by said boot and adapted to engage a portion of the convex side of said disk, a second scraper secured at one end to said arm and supported at its other end near the center of said disk and adapted to engage that portion of the convex side of said disk not engaged by the first-mentioned scraper, and means for adjusting the engagement of said last mentioned scraper with said disk.

[Claims 6 to 13 not printed in the Gazette.]

885,081. CUTLERY KNIFE-HOLDER. ERNEST POTTER, South Meriden, Conn., assignor to Hemming Brothers, New Haven, Conn. Filed Jan. 10, 1907. Serial No. 351,713.

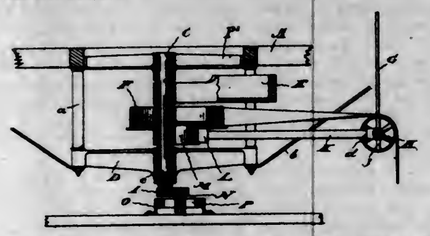


1. In a knife holder of the character described, a support for the blade, jaws adapted to grip the neck of the knife, one of said jaws stationary and the other movable, adjustable set screws adapted to engage the tang of the knife, means for operating the movable jaw, for the purpose set forth.

2. In a knife holder of the character described, a support for the blade, jaws adapted to grip the neck of the knife, one of said jaws movable and the other stationary, adjustable means for engaging the tang of the blade, a handle lever, a support therefor, a spring cam adapted to contact with the movable jaw, for the purpose set forth.

3. In a knife holder of the character described, a support for the blade, jaws adapted to grip the neck of the knife, adjustable means on said jaws for gripping the tang of the knife, one of said jaws stationary and the other movable, a handle lever, a bearing on which the handle lever is journaled, a support for said bearing, a spring cam secured to said handle lever and adapted to engage with the movable jaw when the handle lever is rotated to close said jaw, for the purpose set forth.

885,082. GYRATORY SIFTER. WILLIAM PRESTON, Stratford, Ontario, Canada. Filed Sept. 17, 1906. Serial No. 334,878.



1. The combination of a sifter structure; means for yieldingly suspending the same; a shaft vertically journaled on said structure; a weight secured to the shaft to one side of the same; an eccentric pulley secured to the shaft; a frame yieldingly connected to a stationary extraneous part; idlers journaled thereon; a brace yieldingly connected to said frame; an eccentric on the shaft similar to the eccentric pulley; and an eccentric strap on the brace engaging the said eccentric, substantially as described.

2. The combination of a sifter structure; means for yieldingly suspending the same; a shaft vertically journaled on said structure; a weight secured to the shaft to one side of the same; an eccentric pulley secured to the shaft; a frame yieldingly connected to a stationary extraneous part; idlers journaled thereon; a brace yieldingly connected to said frame; an eccentric on the shaft similar to the eccentric pulley; a strap on the brace engaging the said eccentric; a crank secured to the lower end of the shaft; a vertical pin secured to the crank; and means carried by an extraneous stationary part limiting the horizontal movements of the pin, substantially as described.

3. The combination of a sifter structure; means for yieldingly suspending the same; a bridge tree rigidly secured to and below said structure; a vertical shaft journaled at its lower end in the bridge tree, and at its upper end on the under side of the structure whereby the shaft is firmly carried at each end entirely below the sifter structure; and means whereby the said shaft may be caused to gyrate the said sifter structure, substantially as described.

4. The combination of a sifter structure; means for yieldingly suspending the same; a spider secured to the under side of the sifter structure; a shaft vertically journaled at its upper end in said spider; a bridge tree rigidly secured to and below the said spider, and provided with a step bearing for the shaft whereby the shaft is firmly carried at each end entirely below the sifter structure; and means whereby the said shaft may be caused to gyrate the said sifter structure, substantially as described.

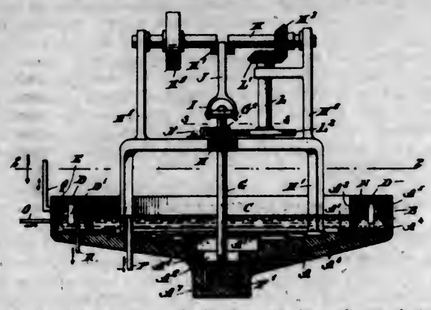
5. The combination of a sifter structure; means for yieldingly suspending the same; a shaft vertically journaled at its upper end in said structure; a bridge tree rigidly secured to and below the said structure, and provided with a step bearing for the shaft; a weight secured to the shaft to one side of the same; an eccentric pulley secured to the shaft; a shaft yieldingly connected to a stationary extraneous part; idlers journaled thereon; a brace yieldingly connected to said idler shaft; an eccentric on the vertical shaft similar to the eccentric pulley; and a strap on the brace engaging the said eccentric, substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

885,083. ELECTROLYTIC APPARATUS. BRODDE E. F. RHODIN, Sault Ste. Marie, Ontario, Canada. Filed Oct. 30, 1906. Serial No. 341,273.

1. A cell for electrolytic processes, having a series of concentric retaining ridges arranged stepwise each of said ridges being separate from the others.

2. An electrolytic cell having a series of retaining ridges arranged one within the other and step-wise, each ridge being continuous and separate from the others.



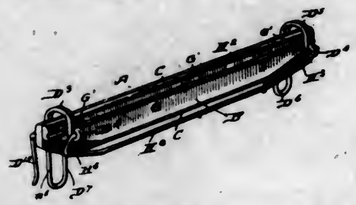
3. An electrolytic cell having an imperforate bottom with entirely separate retaining ridges projecting therefrom step-wise.

4. An electrolytic cell having a series of endless retaining ridges arranged one within the other and step-wise, said cell being provided with a collecting chamber, a return channel leading from said chamber to another portion of the cell, and means for propelling mercury through said channel.

5. An electrolytic cell having a series of retaining ridges arranged one within the other and step-wise, the outer ridges being higher than the inner ones, said cell being provided with a central collecting chamber, a return channel leading from said chamber to the peripheral portion of the cell, and means for propelling mercury through said channel.

[Claims 6 to 24 not printed in the Gazette.]

885,084. SAW-CLAMP. GEORGE W. RUSH, New York, N. Y. Filed Jan. 10, 1906. Serial No. 295,457.



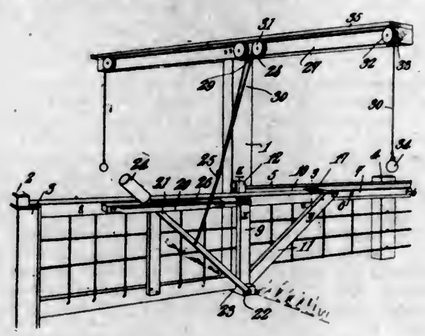
1. A saw clamp comprising a stationary and a movable member, said stationary member consisting of a panel, a supporting bracket secured to said panel and supporting the entire clamp, said bracket having arching members terminating in eyes, a second movable panel adapted to work beneath said arches, and having a longitudinal groove, and an operating lever, said lever being journaled in the eyes of the bracket, and having a member in engagement with the groove of the second mentioned panel.

2. A device of the kind described comprising a stationary section which is constructed of a single strand of spring wire bent intermediate its ends to provide a straight section which terminates at each end in arches, the ends of which are bent into eyes to form journal bearings, the extreme ends being bent to provide U-shape supporting members, and a panel connected to the straight section, and an operating lever section also constructed of a single piece of wire and bent to provide a longitudinal section, the ends of which terminate in crank arms, and shaft portions, said shaft portions being journaled in the bearings of the stationary section, and a panel connected to the longitudinal section.

3. A device of the kind described comprising a stationary section having yielding journal bearings, a panel carried by the section, and a clamping section or jaw journaled in the bearings of the stationary section, said clamping section or jaw being constructed of a single piece of wire bent to form crank arms, shaft portions, and a handle section, the said shaft portions being held in the yielding bearings of the stationary section, and a panel carried by the said section or jaw.

4. A device of the kind described comprising a stationary section, and a clamping section or jaw pivotally connected to the stationary section, said stationary section being formed of a single strand of spring wire which is bent at its ends to provide arch portions, the extreme ends of which are bent into journal bearings which provide supports for the clamping section or jaw and having each end bent to provide substantially inverted U-shape supporting members.

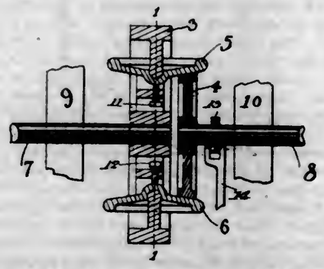
885,085. SLIDING GATE. ANDREW J. RUSSELL and WILLARD B. TERRY, Sturgis, Mich. Filed Jan. 11, 1908. Serial No. 410,393.



1. The combination with a standard and a rail extending beyond it; of a sliding gate supported by the rail, a weighted actuating lever having a fixed pivot, a link pivotally connected at its ends to the lever and gate respectively, a beam supported by the standard and at right angles to the gate, sheaves thereon, flexible means supported by the sheaves and connected to the lever for shifting said lever past its center of gravity to move the gate into open or closed position, and a shield upon the beam and overhanging the sheaves and the flexible means thereon.

2. The combination with a standard and a rail extending therebeyond; of a sliding gate supported by the rail, a longitudinal retaining device upon the gate, an actuating lever having affixed pivot, said lever extending loosely between the gate and the retaining device, a weight at the free end of said lever, a link pivotally connected at its ends to the lever and gate respectively, and means carried by the standard for actuating the lever to swing the weight past its center of gravity to move the gate into open or closed position.

885,086. CLUTCH. HENRY M. RUSSELL, Jr., Wheeling, W. Va. Filed Nov. 23, 1907. Serial No. 403,543.



1. In a clutch the combination of a driving member, a member to be driven alined therewith and a plurality of small flywheels attached to the driving member so as to be revoluble about axes perpendicular to the axis of the driving and driven members, and means for bringing the periphery of the said driven member into contact with the faces of the said small flywheels nearest the axis of the said driving and driven members.

2. In a clutch the combination of a driving member, a member to be driven alined therewith, a plurality of small flywheels and ball and socket joints connecting the said small flywheels to the said driving member in such positions that their inner faces shall come in contact with the periphery of the said member to be driven.

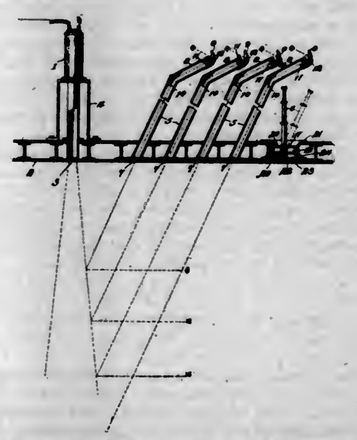
3. In a clutch the combination of a driving member, a driven member and a plurality of small flywheels revolubly attached to the driving member and adapted to be rotated about axes at right angles to the axis of the said driving member by contact with the rim of the said driven member and to vary the torque on the said driven member in accordance with the gyroscopic forces developed in the said small flywheels.

4. In a clutch the combination of a large flywheel having studs projecting within its rim, small flywheels adapted to turn loosely upon said studs and a drum so located as to have its rim in contact with the inner faces of said small flywheels, substantially as described.

5. In a clutch the combination of a driving member, a spindle projecting at right angles therefrom, a fly-wheel revolubly mounted on said spindle and a driven member, the said fly-wheel and the said driven member being in contact in such a manner that the friction at such contact shall tend to make the said fly-wheel rotated about the said spindle with an angular velocity proportional to the difference between the angular velocities of the driving and driven members respectively, substantially as described.

[Claim 6 not printed in the Gazette.]

885,087. SUBMARINE VIEWING APPARATUS. MANSOUR SAMAHA, Washington, D. C. Filed May 11, 1907. Serial No. 373,092.



1. The combination with a hull, of a submarine viewing apparatus comprising a single search light, and a plurality of fixed optical tubes arranged at different distances from the axis of the search light, each having its axis arranged to intercept the axis of the search light at a predetermined distance from the hull.

2. The combination with a hull, of a submarine viewing apparatus comprising a single search light, and a plurality of optical tubes arranged at different distances from the axis of the search light, each having its axis arranged to intersect the axis of the search light at a predetermined distance from the hull and provided at the observation end with a receiving mirror.

3. The combination with a hull, of a submarine viewing apparatus including a search light, and a pivotally mount-

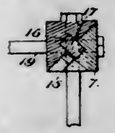
ed optical tube having its axis intersecting the axis of the search light and adapted to swing on its pivot to change the angle or inclination so as to intersect the axis of the search light at different distances below the hull.

4. In a submarine viewing apparatus, the combination of a hull provided with apertures located below the surface of the water, a single search light mounted within the hull at one of the apertures, and a plurality of optical tubes mounted within the hull at the other apertures and located at different distances from the search light and each being arranged at an angle to the search light with its axis intersecting the axis of the search light at a predetermined distance from the hull, said optical tubes being provided with receiving mirrors arranged in a series.

5. In a submarine viewing apparatus, the combination of a hull provided with apertures located below the surface of the water, a single search light mounted within the hull at one of the apertures, and a plurality of optical tubes mounted within the hull at the other apertures and located at different distances from the axis of the search light and each being arranged at an angle to the search light with the axis intersecting the axis of the search light at a predetermined distance, from the hull, said optical tubes being provided with concave receiving mirrors arranged in a substantially horizontal series.

[Claims 6 to 14 not printed in the Gazette.]

885,088. BUILDING. ELBRIDGE C. SARGENT, Fargo, N. D. Filed Feb. 28, 1907. Serial No. 359,820.



1. A building comprising side and end walls, a roof and floor, said walls, roof and floor being formed of a plurality of sections end members formed with longitudinal grooves, the sections of the side and end walls adjacent to the corners being provided with beveled uprights grooved on their beveled sides, tongues located in the grooved members for holding the sections together, and tie rods connecting the sections and passing through the tongues connecting said beveled members.

2. A building comprising side and end walls, formed of a plurality of sections, tongues for holding the corners of said building in position, tie rods passing entirely through the corners of the building and the said tongues and through one of said wall sections and into the adjoining section for tying the sections together and auxiliary means for tying and holding in position said sections.

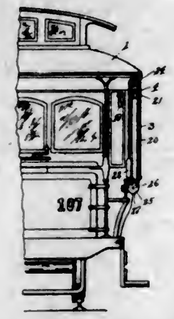
885,089. GUARD-RAIL FOR STREET-CARS. GEORGE D. SECOR, South Bend, Ind. Filed Sept. 16, 1907. Serial No. 393,157.

1. The combination with a car including side posts and hand holds with passenger exits between the post and a guard rail movable between the posts and hand-holds; of means for holding the guard rail in operative position; and a rock shaft for operation to release said holding means to permit of a lowering of the guard rail.

2. The combination with a street car including side posts and a guard rail movable vertically adjacent said posts; means for holding the guard rail in elevated position; and a rock shaft operable to release the guard rail from said holding means to permit of a lowering of the guard rail.

3. The combination with a street car including side posts and a guard rail movable vertically adjacent said posts; of spring controlled means for holding the guard rail in elevated position; and a rock shaft having operative connection with said spring controlled means to operate the latter to permit of a lowering of the rail.

4. In a street car including side posts and a guard rail movable vertically adjacent said posts; of means for holding the guard rail in elevated position; a rock shaft having operative connection with said holding means to operate the latter to permit of a lowering of the guard rail; and a chain and sprocket connection mounted upon the car and connected to the guard rail to effect a gradual lowering of the rail.



5. In a street car including side posts and a guard rail movable vertically adjacent said posts; of means for holding the guard rail in elevated position; a rock shaft having operative connection with said holding means to operate the latter to permit of a lowering of the guard rail; a chain and sprocket connection mounted upon the car connected to the guard rail to effect a gradual lowering of the rail; and a counter-balancing weight secured to the sprocket chain to hold the guard rail in its lowered position.

[Claims 6 to 11 not printed in the Gazette.]

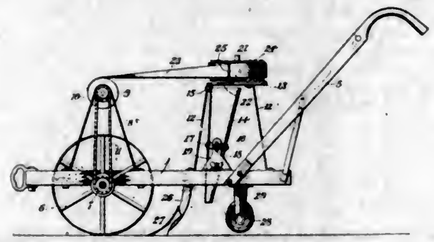
885,090. HORSESHOE. JOHN N. SHIPPEN, Buffalo, Wyo. Filed Feb. 3, 1908. Serial No. 414,009.



1. The combination with a shoe having pendent enlargements formed with recesses that extend their full length, said recesses being of uniform width throughout, screw bolts adjustably mounted in one flange of the said enlargement, said bolts having studs for projecting in the recesses; of calks having shanks of uniform width throughout their length for closely fitting the recesses in the shoe enlargements, said calks having cavities in one edge for receiving the stud ends of the screw bolts, that portion of the cavities next the body of the shoe inclined to the plane thereof, whereby in the act of tightening the screw bolts their sides will engage said inclined portions and cause the calks to tightly bind against the shoe body.

2. In a horseshoe of the character described, the combination with the heel member having a pendent enlargement, said enlargement being formed with a recess its full length, said recess being dovetailed in cross section; of a calk having a shank dove-tailed in cross section for fitting the recess in the shoe, said shank having a cavity in one side, the adjacent flange of the pendent enlargement of the shoe having an aperture threaded a part of its length, a bolt projected through the said aperture having a threaded portion for engaging the threaded portion of the aperture in the pendent enlargement and having a reduced portion between its head and the said threaded portion, its outer end forming a stud to enter the cavity in the calk shank, that portion of the cavity next the body of the shoe being inclined to the plane thereof, whereby in the act of tightening the screw bolt, its sides will engage the said inclined portion and cause the calk to tightly bind against the body of the shoe, and a lock pin mounted in the shoe that projects in the reduced portion of the bolt, said bolt having endwise movement with respect to the lock pin, the latter forming a stop for limiting the outward adjustment of the screw bolt, as set forth.

885,091. SETTING PLANTS. JOHN L. SINCLAIR, San Antonio, Tex. Filed July 12, 1907. Serial No. 383,502.



1. A plant setting machine comprising a plant retaining band, a hopper, and means whereby the plants are deposited in the hopper as the band is moved thereover.

2. A plant setting machine comprising a coiled band designed to retain plants between its convolutions, and means for unwinding the coil to drop the plants.

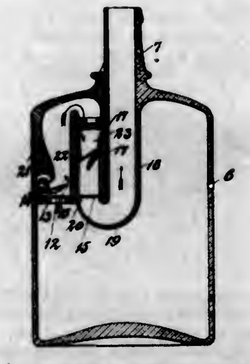
3. A plant setting machine comprising a coiled band designed to retain plants between its convolutions, means for preventing the interior of the coil from becoming loose, and means for unwinding the coil to drop the plants.

4. A plant setting machine comprising a coiled band designed to retain plants between its convolutions, means for unwinding the coil to drop the plants, and a spring-arm bearing against the coil to prevent the interior thereof from becoming loose.

5. A plant setting machine comprising a plate having a feed opening therein, a plant retaining band, means for moving the band over the plate, and means whereby the plants are dropped through the feed opening as the band is moved over the plate.

[Claims 6 to 15 not printed in the Gazette.]

885,092. BOTTLE-VALVE. JULIAN M. SKELTON, Chicago, Ill. Filed Aug. 29, 1907. Serial No. 390,610.



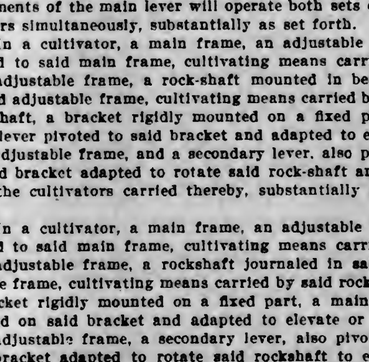
1. A bottle having a recess in the side thereof and a tube leading to the mouth, and a valve casing set in the recess and having a valved passage communicating at one end with the interior of the bottle and at the other end with said tube.

2. A bottle having a recess in the side thereof and a tube extending downwardly from the neck, and a valve casing set in the recess and having a valved passage opening at one end into the interior of the bottle and at the other end into the tube.

3. A bottle having a recess in the side, with an opening in the bottom of the recess to the interior of the bottle and another opening connected to the mouth of the bottle, and a valve casing set in the recess and having a tortuous valved passage connecting at opposite ends with said openings respectively.

4. A bottle having a recess in the shoulder thereof and a tube extending downwardly from the neck and opening upwardly through the bottom of the recess, said bottom also having an opening into the interior of the bottle and a valve casing fitted in the recess and having a passage with up and down parts connected at opposite ends with said openings and a valve in each part of the passage.

885,093. CULTIVATOR. JAMES A. SMETHERS and WILLIAM ELLIOTT, Beatrice, Nebr., assignors to Dempster Mill Manufacturing Company, Beatrice, Nebr. Filed Jan. 19, 1907. Serial No. 353,128.



1. In a cultivator, the combination of the main frame, an adjustable frame hinged to the main frame, cultivating means carried by said adjustable frame, a rockshaft journaled on the adjustable frame, cultivating means carried by said rockshaft, a main lever pivotally mounted on a fixed part and adapted to elevate the adjustable frame, with the cultivating means carried thereby, a secondary lever having a common pivotal point with said main lever and adapted to rotate said rockshaft and elevate the cultivators carried thereby relatively to the adjustable frame, and means for locking said levers together, so that the movements of the main lever will operate both sets of cultivators simultaneously, substantially as set forth.

2. In a cultivator, a main frame, an adjustable frame hinged to said main frame, cultivating means carried by said adjustable frame, a rock-shaft mounted in bearings in said adjustable frame, cultivating means carried by said rock-shaft, a bracket rigidly mounted on a fixed part, a main lever pivoted to said bracket and adapted to elevate said adjustable frame, and a secondary lever, also pivoted to said bracket adapted to rotate said rock-shaft and elevate the cultivators carried thereby, substantially as set forth.

3. In a cultivator, a main frame, an adjustable frame hinged to said main frame, cultivating means carried by said adjustable frame, a rockshaft journaled in said adjutable frame, cultivating means carried by said rockshaft, a bracket rigidly mounted on a fixed part, a main lever pivoted on said bracket and adapted to elevate or lower said adjustable frame, a secondary lever, also pivoted to said bracket adapted to rotate said rockshaft to elevate or lower the cultivators carried thereby, and means for locking said levers together so that the movement of the main lever shall operate both said sets of cultivators simultaneously, substantially as set forth.

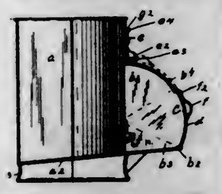
4. In a cultivator-section, a main frame, an adjustable frame hinged to said main frame, guide-plates mounted on said hinged frame and adapted to bear against fixed parts of the main frame when the hinged frame is elevated, cultivating devices carried by said hinged frame, a transverse rock-shaft journaled on said hinged frame, cultivating devices carried by said rock-shaft, a main lever fulcrumed on a fixed part for elevating said hinged frame, and a second-

ary lever for rotating said rock-shaft, substantially as set forth.

5. In a cultivator comprising two sections or gangs adjustably connected by a seat-plank, the combination of the main frames, the plank, cross-bars elevated above said frames and transversely to the plank, to support said plank, intermediate guide-bars connecting said cross-bars and parallel with the plank, bolts passing loosely through said plank and having recessed heads beneath the plank adapted to engage said guide-bars to hold the plank thereto while permitting longitudinal movement of said plank, substantially as set forth.

[Claims 6 to 10 not printed in the Gazette.]

885,094. COAL-SCUTTLE. HENRY G. SODERBLOM, Brooklyn, N. Y. Filed Mar. 25, 1907. Serial No. 364,217.



1. A coal scuttle provided at the bottom front portion thereof with a discharge spout having a bottom in line with the bottom of the scuttle, parallel side walls, and a front wall segmental in vertical section and provided in the bottom portion thereof with an opening; and a door which is also segmental in vertical section and adapted to close said opening, said door being provided with parallel side members pivoted to the sides of the discharge spout adjacent to the scuttle, and said door being also provided with a spring handle adapted to engage a pivoted catch at the top of the discharge spout.

2. A coal scuttle provided at the bottom front portion thereof with a discharge spout composed of a bottom in line with the bottom of the scuttle, parallel side walls and a front wall segmental in vertical section and provided in the bottom thereof with an opening; and a door which is segmental in vertical section and adapted to close said opening and provided with side members which overlap the side walls of the spout and which are pivoted to the spout adjacent to the scuttle, and means for holding said door in a raised position.

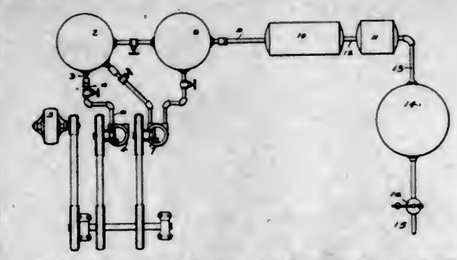
3. A coal scuttle provided at the bottom front portion thereof with a discharge spout composed of a bottom in line with the bottom of the scuttle, parallel side walls and a front wall segmental in vertical section and provided in the bottom thereof with an opening; and a door which is segmental in vertical section and adapted to close said opening and provided with side members which overlap the side walls of the spout and which are pivoted to the spout adjacent to the scuttle, and means for holding said door in a raised position, consisting of a spring handle secured to the door by which it may be raised and provided with a knob or head, and a catch pivoted to the scuttle above the front wall of the discharge spout and adapted to engage said knob or head.

885,095. METHOD OF PRODUCING GAS FROM ALCOHOL. WILLIAM T. SOLOMON, Pittsburg, Pa., assignor to Robert C. Hall, Pittsburg, Pa. Filed Jan. 30, 1907. Serial No. 354,914.

1. The method of forming gas from alcohol consisting in mingling air and alcoholic vapor and then passing the mingled air and vapor over or through an oxidizing agent to produce an ether; substantially as specified.

2. The method of forming gas from alcohol, consisting in agitating alcohol in the presence of air to produce mingled air and alcoholic vapor, drawing off the mingled air and alcoholic vapor and then passing them over or through an oxidizing agent; substantially as specified.

3. The method of producing gas consisting in mingling air and alcoholic vapor and causing the mingled air and alcoholic vapor to pass over or through an oxidizing agent compounded of sulfuric acid, nitric acid, benzene, and alcohol, whereby a fixed gas is produced; substantially as specified.



4. The method of producing gas consisting in mingling air and alcoholic vapor, and causing the mingled air and alcoholic vapor to pass over or through an oxidizing agent compounded of nitric acid, benzene and alcohol, whereby a fixed gas is produced, substantially as specified.

885,096. COMPOUND TO BE USED IN THE MANUFACTURE OF GAS. WILLIAM T. SOLOMON, Pittsburg, Pa., assignor to Robert C. Hall, Pittsburg, Pa. Filed Jan. 30, 1907. Serial No. 354,915.

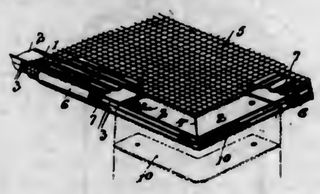
1. As a new article of manufacture to be used in the manufacture of gas, a composition composed of sulfethylic acid, nitrobenzol, and allied ether and nitro compounds, substantially as specified.

2. As a new article of manufacture, a composition composed of sulfethylic acid, nitrobenzol, and allied ether and nitro compounds, dissolved in alcohol and adapted to be employed in the manufacture of a gas therefrom.

3. In the manufacture of gas from alcohol, subjecting the alcohol to the action of a composition formed from alcohol, sulfuric acid, nitric acid and benzene.

4. In the manufacture of gas from alcohol, subjecting the alcohol to the action of a composition formed from alcohol, sulfuric acid, and nitric acid.

885,097. WINDOW-SCREEN. HARRY G. STEELY, Washington, D. C., assignor to The Higgin Manufacturing Company, Newport, Ky., a Corporation of West Virginia. Filed Aug. 7, 1907. Serial No. 387,518.



1. A screen, comprising a screen cloth and frame therefor, the frame embodying a stretching and holding element over both sides of which the edges of the screen cloth are lapped, said element being provided along its outermost edge with longitudinally extending and outstanding flanges, and binding or clip members embracing and inclosing said stretching element, and gripping the screen cloth against the edges of the flanges.

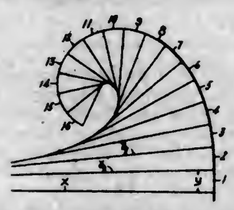
2. A screen, comprising a screen cloth and frame therefor, the latter embodying a stretching and holding element consisting of a sheet doubled upon itself longitudinally and provided at its edges with outstanding flanges, the edges of the screen-cloth overlapping the said element and extending around the flanges thereof, and binding or clip members embracing the said element and gripping the screen-cloth thereto.

3. A screen comprising a screen-cloth and frame therefor, the latter embodying a stretching and holding element consisting of a strip doubled longitudinally upon itself and provided at its edges with outstanding flanges, the edges of the screen-cloth extending around said element and forming shoulders at the flanges thereof, and binding or clip members embracing the said element and formed continuous to and on the inner sides of the flanges with crimps designed to grip the screen-cloth around the flanges.

4. A screen, comprising a screen-cloth and frame therefor, the latter embodying a stretching and holding element consisting of an integral strip doubled upon itself and provided at its outer edges with outstanding flanges, said strip being provided at intervals with slits adapted to form miter joints at the corners, the slits extending from the inner edge of the strip and terminating at, but short of, the flanges, whereby the flanges extend continuously around the frame, the screen-cloth having its edges overlapping said element, and binding or clip members embracing the said element and gripping the screen-cloth thereto.

5. A screen, comprising a screen-cloth and frame therefor, the latter embodying a stretching and holding element consisting of a strip doubled longitudinally upon itself and provided at the corners with slits forming mitered joints, the free edges of the said element being disposed outermost, the screen-cloth overlapping at its edges the said element, binding or clip members embracing said element and gripping the screen-cloth thereto, corner pieces embracing the binding members at the corners of the frame, corner braces adapted to be slipped inwardly between the two portions or plies of the stretching element at the corners, and fastening devices securing the said corner brace at its ends to the said element at opposite sides of the joint.

885,098. BUCKET FOR TURBINES. CHARLES P. STEINMETZ, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Nov. 21, 1905. Serial No. 288,389.



1. An elastic fluid turbine bucket having a curved surface developed by radii which vary in a harmonic progression.

2. In an elastic fluid turbine bucket having a curved surface developed by a radius which shortens up to the middle point of the bucket and then lengthens.

3. A U-shaped elastic fluid turbine bucket having a surface composed of two spiral curves.

4. An elastic fluid turbine bucket having a surface composed of two spiral curves, one the reverse of the other.

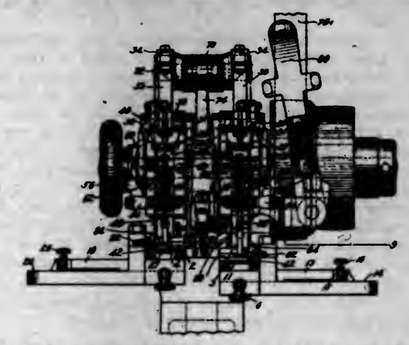
5. An elastic fluid turbine bucket having means for gradually varying the centrifugal force of the steam flowing through it to obviate shock.

[Claims 6 to 11 not printed in the Gazette.]

885,099. WELT-MARKING MACHINE. GEORGE F. STEWART, Lynn, Mass., assignor, by mesne assignments, to Thomas G. Plant, Boston, Mass. Filed Mar. 12, 1907. Serial No. 361,926.

1. In a machine for marking the extension edge of a shoe, the combination of a marking tool, an edge gage for determining the position of the mark to be made thereby with reference to the shoe contour, a second gage for determining the position of the work with respect to the edge gage, and means rendered operative by movement of one of said gages to cause the tool to act.

2. In a machine for marking the projecting edge of a shoe to determine the position of the outsole, the combination of a marking tool, an edge gage for determining the position of the mark with respect to the shoe contour, a second gage for determining the position of the shoe with respect to the edge gage, and means rendered operative by movement of said second gage to cause the tool to act.



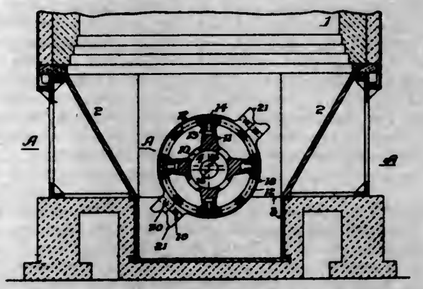
3. In a machine of the class described, the combination of a marking knife for cutting a notch in the extension edge of a shoe, an adjustable edge gage for determining the location of a wall of said notch with respect to the shoe contour, a second gage acting upon the surface of the work to position the shoe with respect to the edge gage, and means rendered operative for giving movement to the knife upon movement of said second gage.

4. In a machine of the class described, the combination of a knife substantially U-shaped in cross-section for making a notch in the extension edge of a shoe, an edge gage for determining the position of said notch with respect to the shoe contour, and means independent of said edge gage for rendering the knife operative as the shoe is put in position.

5. In a machine for notching the extension edge of a shoe, the combination of a plunger carrying a notching tool, means for operating the plunger, a marking bed, an edge gage constructed and arranged with respect to the marking bed to engage and position a shoe for determining the location of the notch with respect to the shoe contour, and means for adjusting the edge gage toward and from the marking bed and holding the same in adjusted position.

[Claims 6 to 16 not printed in the Gazette.]

885,100. FIRE-GRATE. JOHN STEWART, Codnor Park, England. Filed July 2, 1907. Serial No. 381,941.



1. In a furnace, the combination of the revolving drum, and a series of curved grids surrounding the revolving drum and means between the drum and grids for supporting the latter, the said grids being arranged eccentric to the axis of rotation of the drum.

2. In a furnace, the combination of a revolving drum, a series of curved grids surrounding the drum, and a plurality of ribs extending outward from the drum arranged

to support the grids at their free ends, the ribs being of unequal length, whereby the grids are supported eccentrically to the axis of rotation of the drum.

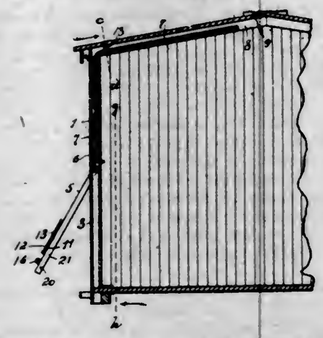
3. In a furnace, the combination of a revolving drum, a series of longitudinal ribs on its outer surface, the said ribs extending outward on lines radiating from an axis eccentric to the axis of rotation of the drum and parallel therewith, and curved grids supported by the free ends of the ribs.

4. In a furnace, the combination of a revolving drum, curved grids surrounding the drum, a series of ribs between the drum and the grids arranged to support the latter eccentrically to the axis of rotation of the drum, and bands provided with claws, surrounding the grids.

5. In a furnace, the combination of a revolving drum, curved grids surrounding the drum, a series of ribs between the drum and the grids arranged to support the latter eccentrically to the axis of rotation of the drum, and means between the adjoining ends of the grids for securing them to the edges of the ribs.

[Claims 6 to 10 not printed in the Gazette.]

885,101. CAR-DOOR. MARION H. STICKNEY, Kansas City, Mo. Filed Dec. 7, 1905. Serial No. 290,808.

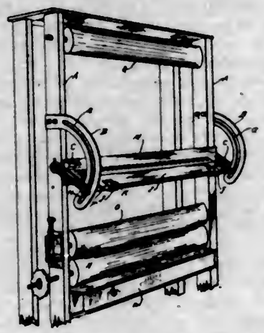


The combination with the car body having a side door opening and two vertical posts at opposite sides of said opening, of two angle irons secured respectively to said posts and having outwardly extending flanges, two channel bars having vertical portions secured respectively to said posts and having their upper ends extending inwardly and upwardly, the channel sides of the bars being the sides distant from said opening, a door for closing said opening, a horizontal bar secured to the upper end of said door and having return bends at its ends slidably and pivotally mounted in the channels of said channel bars respectively, vertical angle bars secured respectively to opposite vertical edges of said door and having inwardly extending flanges disposed respectively between said posts and said outwardly extending flanges, said inwardly extending flanges having notches adjacent their lower ends, hooks pivoted to the roof of the car body and adapted when the door is raised to enter said notches to retain the door in the open position, and releasable means for locking the door in a position closing said opening.

885,102. GRAINING CARD-PAINTING MACHINE. JOHN W. STOCKER and OTTO STOCKER, Chicago, Ill. Filed Oct. 5, 1907. Serial No. 396,058.

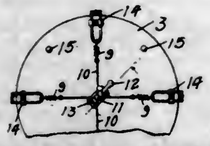
1. A graining card-painting machine consisting of the disks, B, B, secured opposite to each other on the uprights, A, A, and having the circular slots, *a*, *a*, made therein; the arms C, C; the rod, D, passing through the inner ends of the arms and through the uprights; the rod, F, extending through the outer ends of the arms and through the slots; the brush or comb, I, rigidly secured upon the rod, F, all in combination substantially as above set forth, as and for the purpose above set forth.

2. In a graining card-painting machine, the combination of the disks, B, B, secured opposite to each other on the uprights, A, A, and having the circular slots, *a*, *a*, made therein; the arms, C, C; the rod, D, passing through the inner ends of the arms and through the uprights, the rod, F, extending through the outer ends of the arms and through the slots; the brush or comb, I, rigidly secured upon the rod, F; and the back-board M, rigidly secured on the front of the uprights, A, A, between the disks; substantially as and for the purpose above set forth.



3. A graining card-painting machine consisting of the disks, B, B, secured opposite to each other on the uprights, A, A, and having the circular slots, *a*, *a*, made therein; the arms, C, C; the rod, D, passing through the inner ends of the arms and through the uprights; the rod, F, extending through the outer ends of the arms and through the slots; the brush or comb, I, and the roller, R, secured in the uprights opposite the disks; rigidly secured upon the rod, F; all in combination with the uprights, A, A, the paint-trough, P, the rollers, N, and O; and the revolving shaft, Q; the last four being parts of said above named card-painting machine; substantially as and for the purpose stated.

885,103. JAR-COVER. WILLIAM STRACHAN, St. Thomas, N. D., assignor of one-half to Neil H. Campbell, St. Thomas, N. D. Filed July 26, 1907. Serial No. 385,714.



1. The combination, with the jar provided with a rib extending around the mouth thereof, of a cover adapted to fit in the mouth of said jar, radially sliding clamps provided with depending hooked ends arranged upon said cover, means for securing said clamps in position, and spring tension devices connected with said clamps, substantially as described.

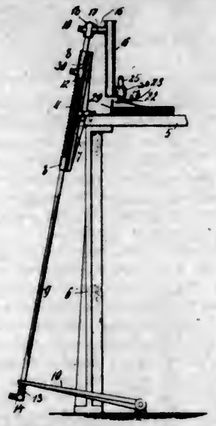
2. The combination, with the jar provided with a rib extending around the mouth thereof, of a cover adapted to fit on the mouth of said jar, radially sliding clamps provided with depending hooked ends arranged upon said cover, means for securing said clamps in position, spring tension devices connected with said clamps, and means for increasing the tension of said devices, substantially as described.

3. The combination, with the jar provided with a rib extending around the mouth thereof, of a cover adapted to fit on the mouth of said jar, radially sliding clamps provided with depending hooked ends arranged upon said cover, means for securing said clamps in position and spring tension devices, substantially as described.

4. The combination, with a jar provided with a rib extending around the mouth thereof, of a cover adapted to fit on the mouth of said jar, radially sliding clamps arranged upon said cover and provided with means for engaging the outer surface of said jar below the mouth thereof, means for securing said clamps in position, and spring tension devices connected with said clamps, substantially as described.

5. The combination, with a jar having an open top or mouth, of a cover adapted to fit on the mouth of said jar, radially sliding clamps arranged in said cover and provided with means for engaging the outer surface of said jar below the mouth thereof, means for securing said clamps in position and spring tension devices connecting said clamps, substantially as described.

885,104. PASTING AND FEEDING MACHINE. JAMES J. SULLIVAN, Long-Island City, N. Y. Filed May 1, 1907. Serial No. 371,296.

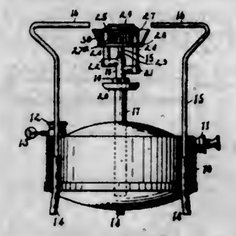


1. Apparatus of the class described comprising a table, a bracket supported thereby having bearings arranged at an angle oblique to the table, an operating rod mounted to slide in said bearings, a spring for opposing downward movement of the said rod, a treadle for operating said rod, an overthrow spring between said treadle and said rod, a paste reservoir carried by the upper end of said rod, said paste reservoir provided with a head, and a valve mounted in said head having a stem which projects downwardly therethrough.

2. Apparatus of the class described comprising a reciprocating paste reservoir, said reservoir provided with a laterally projecting head having a chamber in communication therewith, said head having a transverse opening therethrough from side to side and a vertical opening therethrough from top to bottom, a valve fitted to the opening in the bottom of said head, said valve provided with a downwardly projecting stem which penetrates said opening to the exterior thereof, and having an upper stem, a bonnet fitted to the upper opening in said head and provided with a guide-way for said upper stem, a spring within said bonnet, bearing with yielding pressure upon the upper end of said valve, a plurality of similar heads arranged to be secured side by side to the first said head and to each other, said heads having openings therethrough which register with the side to side opening in the first said head, and caps or closures arranged to be secured to the open sides of the first and the last said heads.

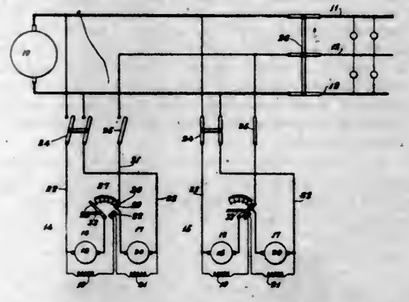
885,105. HYDROCARBON-BURNER. ROBERT J. SUNDBERG and JOHN NELSON, Aurora, Ill. Filed July 22, 1907. Serial No. 385,008.

A hydrocarbon burner, including a hollow stem, a partition in the bore of said stem, two branches communicating with the bore of the stem upon opposite sides of said partition and extending vertically above the stem, said branches lying in the same vertical plane, an annular generating chamber supported upon said branches and connected therewith, a perforated shell located beneath said generating chamber and concentric therewith, a vertical flue passing through an opening in the floor of said shell and supported thereby, the upper end of said flue



extending approximately to the level of the upper margin of the said annular chamber, a removable cap supported upon said chamber, a removable nozzle in the upper end of said stem, and a deflector surrounding the said shell.

885,106. SYSTEM FOR DISTRIBUTION. LEWIS L. TATUM, Norwood, Ohio, assignor to Allis-Chalmers Company, a Corporation of New Jersey, and The Bullock Electric Manufacturing Company, a Corporation of Ohio. Filed Apr. 16, 1906. Serial No. 311,842.



1. In a multiple-voltage system of distribution, a plurality of main and compensating conductors, a balancer comprising two armature windings connected to the main conductors, and a starting device connected to the armature windings and to a neutral or compensating conductor.

2. In a multiple-voltage system of distribution, a plurality of main and compensating conductors, a balancer comprising two armature windings connected to the main conductors, and a starting-device between the two armature windings of the balancer and connected to a neutral or compensating conductor.

3. In a multiple-voltage system of distribution, a plurality of main and compensating conductors, a balancer comprising two armature windings, one side of the armature winding of each machine being connected to a main conductor, and a starting-rheostat for connecting two armature windings together and to the neutral or compensating conductor.

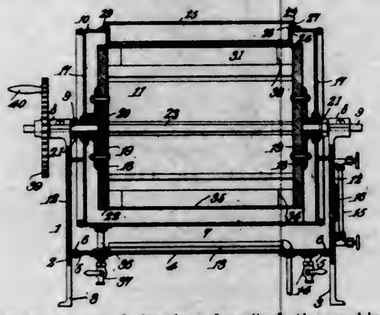
4. In a multiple-voltage system of distribution, a plurality of conductors, comprising main conductors and a neutral or compensating conductor, a balancer comprising two dynamo-electric machines having their armatures connected respectively to the main conductors, and a starting-rheostat adapted to connect the armatures to each other and to the neutral or compensating conductor.

5. In a multiple-voltage system of distribution, a plurality of conductors, comprising main conductors and a neutral or compensating conductor, a balancer comprising two dynamo-electric machines adapted to be connected to the conductors of said system, and a starting-rheostat connected between the armatures of said machines and

adapted to connect said armatures to the compensating conductor when the arm of the rheostat is in one position only.

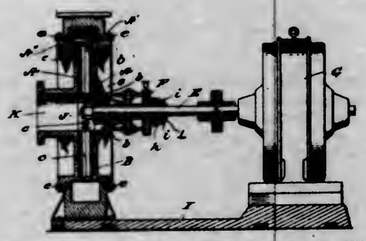
[Claims 6 to 35 not printed in the Gazette.]

885,107. CLEANING-MACHINE. JOSEPH TOLSON, Kankakee, Ill. Filed Oct. 31, 1906. Serial No. 341,436.



In an apparatus of the class described, the combination of spaced side frames each side frame having a semi-circular flange on its inner face, a curved plate extending between said side frames and fastened fluid tight to said flanges, a non-rotatable cylindrical casing arranged between the side frames and spaced therefrom and from the curved plate except at the ends of the latter which are inturned and contact with said casing, and flat plates between the casing heads and the side frames, the several parts forming a closed heating compartment around the lower part of the cylindrical casing, means for continuously supplying a heating medium to said compartment, means for draining the same, and other means for draining the cylindrical casing.

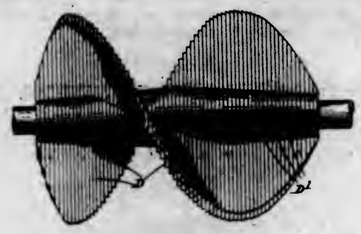
885,108. CENTRIFUGAL PUMP. SIMEON V. TRENT, Salt Lake City, Utah. Filed Jan. 21, 1907. Serial No. 353,379.



1. A centrifugal pump comprising a rotary impeller having a central suction recess and discharge passages leading therefrom to its periphery, a volute, and a casing inclosing the impeller and provided with an annular discharge throat extending from the outer ends of the discharge passages of the impeller to the interior of the volute, said throat being of a width at its inner end equal to that of the outer ends of the discharge passages and thence contracting toward its outer end so as to be less in width than the outer ends of the said passages.

2. In a centrifugal pump, the combination of a casing comprising heads, one head having a central suction chamber and both heads having at the outer portions outwardly extending flanges, a volute secured to said flanges, an impeller having a suction recess in one side and located between the heads of the cylinder and made in sections having contacting sides in which are formed a plurality of discharge passages leading from the suction recess to the periphery of the impeller, the heads of the casing also having inwardly extending flanges between the periphery of the impeller and the volute chamber and said flanges being spaced apart to provide an annular discharge throat, the said throat being of a width at its inner end equal to that of the outer ends of the discharge passages aforesaid and thence contracting to a lesser width toward a point of communication thereof with the interior of the volute as described.

885,109. SCREW-PROPELLER. THOMAS F. J. TRUSS, London, England. Filed Nov. 2, 1905. Serial No. 285,571.



1. In a screw propeller the combination of an elongated boss tapered at the ends and screw blades thereon of such a length that there is no complete interval between the turns in end view, such boss and blades comprising a series of laminæ each having arms and central shaft-receiving boss portions secured together in such relation to one another as to form helicoidal blades, each lamina being tapped from the tip toward the boss.

2. In a screw propeller the combination of an elongated boss tapered at the ends and a plurality of screw blades thereon of such a length that there is no complete interval between the blades in end view, such boss and blades comprising a series of laminæ each having as many arms as there are blades to the propeller and central shaft-receiving boss portions of varying diameter secured together to form the tapering boss, each lamina being tapered from the tip toward the boss.

3. In a screw propeller the combination of an elongated boss tapered at the ends and screw blades thereon that are varied in pitch towards the end and are of such a length that there is no complete interval between the turns in end view, such boss and blades comprising a series of laminæ each having arms and central shaft-receiving boss portions secured together in such relation to one another as to form a helicoidal blade, each lamina being tapered from the tip toward the boss.

4. In a screw propeller the combination of an elongated boss tapered at the ends and a plurality of screw blades thereon that are varied in pitch towards the end and are of such a length that there is no complete interval between the blades in end view, such boss and blades comprising a series of laminæ each having as many arms as there are blades to the propeller and central shaft-receiving boss portions of varying diameter secured together to form the tapering boss, each lamina being tapered from the tip toward the boss portion.

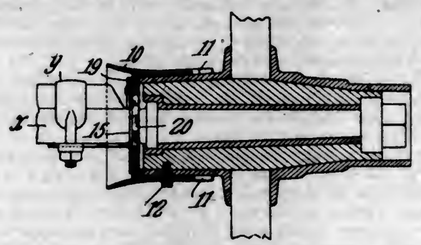
5. In a screw propeller the combination of an elongated boss tapered at the ends and screw blades thereon that are varied in pitch towards the end and inclined to the axis of the propeller at the end and are of such a length that there is no complete interval between the turns in end view, such boss and blades comprising a series of laminæ each having arms and central shaft-receiving boss portions secured together in such relation to one another as to form a helicoidal blade, each lamina being tapered from the tip toward the boss.

[Claim 6 not printed in the Gazette.]

885,110. SAND-BOX. THOMAS M. UNDERWOOD, May, Tex. Filed Aug. 3, 1907. Serial No. 386,929.

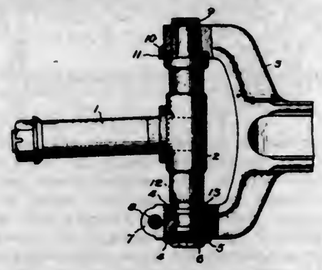
1. In a sand guard, a bell mouth sleeve arranged to fit on the inner end of the vehicle wheel and provided with slits to permit adaptation to hubs of different diameter, and an axle carried member fitting within said sleeve.

2. In a sand guard, a hub carried tube or sleeve, an axle carried disk having an open endless recess, and a washer of flexible material carried by the disk and having a free end tongue arranged to extend across said recess.



3. In a sand guard, a hub carried sleeve, a disk, the central portion of which is cut away to form an open ended recess, the metal being bent down to form a tongue, the sides of the tongue being recessed to receive an axle clip, a pivoted metallic tongue for closing the open end of the recess, and a slit washer of flexible material secured to the disk and having a free tongue extending across the recess.

885,111. STEERING-WHEEL PIVOT AND PIVOT-BEARING FOR AUTOMOBILES. JOSEF VOLLMER, Berlin, Germany, assignor to General Electric Company, a Corporation of New York. Filed June 20, 1906. Serial No. 322,592.



1. The combination with a steering wheel pivot, of an axle fork having an upper bearing for the pivot, a removable lower bearing therefor which is divided to permit the removal of the pivot, and means for adjusting one of said bearings to secure a uniform distribution of the weight upon the bearings.

2. The combination with a steering wheel pivot, of an axle fork having upper and lower bearings for the pivot, the lower bearing being grooved, thrust collars on the pivot engaging the grooves and preventing the pivot from falling out, and means for adjusting one of said bearings to secure uniform distribution of the weight upon the bearings.

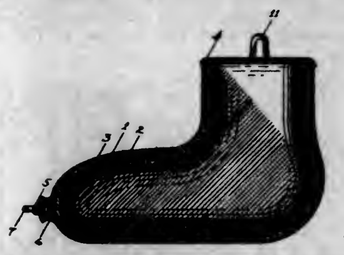
3. The combination with an axle fork, of a steering wheel pivot, thrust collars on the pivot, a bearing in the fork for the upper end of the pivot, a longitudinally divided, separable bearing for the lower end of the pivot mounted in the fork and having grooves to receive the thrust collars, and means for adjusting the lower bearing to secure a uniform distribution of the weight upon said bearings.

4. The combination with an axle fork, of a steering wheel pivot, thrust collars on the pivot, a bearing in the fork for the upper end of the pivot, a longitudinally divided, separable bearing for the lower end of the pivot mounted in the fork and having grooves to receive the thrust collars, means for adjusting the lower bearing to secure a uniform distribution of the weight upon the bearings, and a device for securing the lower bearing in its adjusted position.

5. The combination of a steering wheel pivot, a thrust bearing for the lower end of said pivot provided with grooves, thrust collars on the pivot engaging the grooves, a thrust bearing for the upper end of said pivot, and an oil reservoir surrounding the last named bearing to maintain a constant lubrication of said bearing.

[Claims 6 to 8 not printed in the Gazette.]

885,112. FOOT-WARMER. MARY E. WALLER, Bethel, Vt. Filed Apr. 19, 1907. Serial No. 369,165.



1. As a new article of manufacture, a shoe consisting of an inner and outer layer of material having a space between said layers, the inner layer being suspended at its top from the outer layer to allow relative motion between said layers.

2. As a new article of manufacture, a shoe consisting of an inner and outer layer having a space between said layers the inner layer being suspended at its top from the outer layer to allow relative motion between said layers and means by which a substance may be placed between said layers.

3. As a new article of manufacture, a shoe consisting of an inner and outer layer having a space between said layers the inner layer being suspended at its top from the outer layer to allow relative motion between said layers, and one of said layers being provided with a controlled opening leading to the space between said layers.

4. As a new article of manufacture, a shoe consisting of an inner and outer layer of flexible material, said inner layer being suspended at its top from the outer layer to allow relative motion between said layers, and means for retaining the form of said inner layer.

5. As a new article of manufacture, a shoe consisting of an inner and outer layer of flexible material, said inner layer being suspended at its top from the outer layer to allow relative motion between said layers, and a supporting layer within said inner layer.

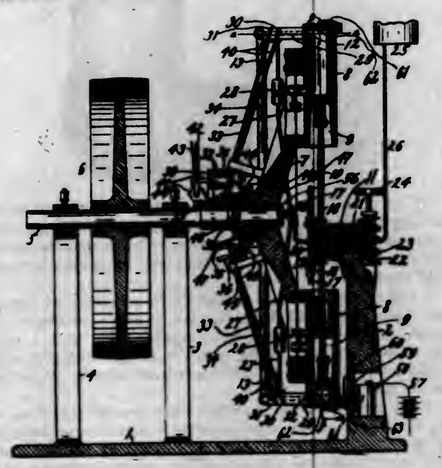
[Claims 6 to 8 not printed in the Gazette.]

885,113. ROTARY EXPLOSIVE-ENGINE. JOHN P. WALSH, St. Paul, Minn. Filed Aug. 30, 1907. Serial No. 390,739.

1. In an explosive engine and mounted in a suitable frame, the combination with a main shaft journaled in the frame, a wheel fixed on one end of the shaft, a series of cylinders radially secured upon the wheel, pistons in the cylinders, piston rods pivotally secured to the piston and projecting out of the inner ends of the cylinders, a revoluble hollow shaft journaled in the frame near the wheel in an eccentric position to the axis of the shaft and being pivotally secured to the inner ends of the piston rods, and means for introducing and for igniting explosives in the outer ends of said cylinders when each piston rod is in position to impart rotary motion to the wheel.

2. In an explosive engine, the combination with a suitable frame, of a main shaft journaled therein, a wheel fixed on one end of the shaft, a series of explosion chambers or cylinders fixed radially upon the wheel, pistons in the cylinders, piston rods or link rods pivotally secured to the pistons and projecting out of the inner ends of the cylinders, a revoluble hollow shaft 11 journaled in the frame near the wheel in an eccentric position to the axis of the shaft and being pivotally secured to the inner ends of the piston rods, an air reservoir fixed upon the wheel

and having abutments communicating with all the explosion chambers, a plurality of air pumps fixed upon the wheel and adapted to compress air in the reservoir, the sleeve 21 journaled within the hollow shaft 11, the eccentric 20 at one end and the worm wheel 22 at the other end thereof, the eccentric yoke 19 revolving on said eccentric, double acting pistons in the pump cylinders, guided piston rods moving the pistons, link-rods connecting the piston rods with the yoke on the eccentric, and a hand-operated worm-screw engaging said worm wheel and automatically operated valves controlling the passing of the compressed air from the reservoir to the explosion chambers.

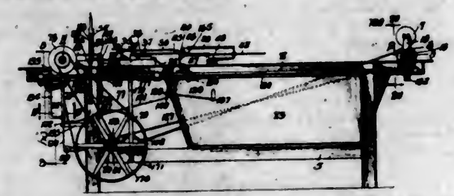


3. In an explosive engine, the combination with a suitable frame, of a main shaft journaled therein, a wheel fixed on one end of the shaft, a series of explosion chambers or cylinders fixed radially upon the wheel pistons in the cylinders, piston rods or link rods pivotally secured to the pistons and projecting out of the inner ends of the cylinders a revoluble hollow shaft 11 journaled in the frame near the wheel, in an eccentric position to the axis of the shaft and being pivotally secured to the inner ends of the piston rods, an air reservoir fixed upon the wheel and having abutments communicating with all the explosion chambers, a plurality of air pumps fixed upon the wheel and adapted to compress air in the reservoir, the sleeve 21 journaled within the hollow shaft 11, the eccentric 20 at one end and the worm wheel 22 at the other end thereof, the eccentric yoke 19 revolving on said eccentric, double acting pistons in the pump cylinders, guided piston rods moving the pistons, link-rods connecting the piston rods with the yoke on the eccentric and a hand-operated worm-screw engaging said worm wheel, and automatically operated valves controlling the passing of compressed air from the reservoir to the explosion chambers, an elevated reservoir for gasolene or other explosive oil, a pipe extending therefrom and through the sleeve 21 and branch tubes extending therefrom to the abutments conducting air to the explosion chambers, a valve at the inner ends of the branch tubes, a governor carried by the wheel and operatively connected with said valve, automatically operated valves controlling the inlet of the oil into the air passing to the explosion chamber; said inlet valves for air and oil or gas or the like being operatively connected with said governor and the mixers or heaters 28 on the branch tubes near the exhaust of the explosion cylinders, whereby the gas or oil is prepared for mixing with the air.

4. In an explosive engine of the type set forth and mounted in a suitable frame, the combination with a revoluble main shaft and a wheel secured on one end thereof, and air pumps and explosion cylinders secured on the wheel and operated as described, of a ball governor mounted on the wheel, a yoke actuated by the governor, a sleeve slidable on the shaft and engaged by the yoke, spring-held valves carried by the wheel for admitting explosives into the explosion cylinders and having stems with rocker arms thereon, cams pivotally mounted on the sleeve and adapted to operate the valves as the rocker arms pass the cams and means for adjusting said cams into more or less contact or no contact with the rocker arms.

5. In an explosive engine of the type set forth and mounted in a suitable frame, the combination with a revoluble main shaft and a wheel secured on one end thereof and air-pumps and explosion cylinders secured on the wheel and operated as described, of a ball governor mounted on the wheel, a yoke actuated by the governor, a sleeve slidable on the shaft and engaged by the yoke, spring-held valves carried by the wheel for admittting explosives into the explosion cylinders and having stems with rocker arms thereon, cams pivotally mounted on the sleeve and adapted to operate the valves as the rocker arms pass the cams and means for adjusting said cams into more or less contact or no contact with the rocker arms; the lever 52 pivoted to the frame of the engine, a link-rod connecting it with the sleeve, and means for holding said lever in various positions for the purposes set forth.

885,114. PAPER MEASURING AND ROLLING MACHINE. STEWART WARING, Evanston, Ill. Filed Aug. 26, 1907. Serial No. 390,192.



1. A machine for the purpose set forth comprising continuously rotating feed rolls adapted to feed a web of paper continuously to the machine, means for severing lengths of paper from said web and means for winding said lengths of paper to form separate rolls, comprising an intermittingly rotating mandrel which, during its turning movements, winds the paper more rapidly than the web is delivered to the machine by the feed rolls, and thereby takes up the slack which accumulates in the intervals between such turning movements of said mandrel.

2. A machine for the purpose set forth comprising continuously rotating feed rolls adapted to feed a web of paper continuously to the machine, means for severing lengths of paper from the web, means for gripping the severed end of the web, and means for winding the severed lengths of paper to form separate rolls comprising an intermittingly rotating mandrel which, in its turning movements, winds the paper faster than the web is fed to the machine by the feed rolls.

3. A machine for the purpose set forth comprising continuously rotating feed rolls adapted to feed a web of paper continuously to the machine, means for severing lengths of paper from the web, an intermittingly rotating mandrel which, in its turning movements winds the paper more rapidly than the web is fed to the machine by said feed rolls, means separate from the feed rolls for advancing the severed end of the web in position to be clamped upon the mandrel, and means for clamping the end of the web to the mandrel.

4. A machine for the purpose set forth comprising continuously rotating feed rolls adapted to feed a web of paper continuously to the machine, means for severing lengths of paper from said web, means for gripping the severed end of the web, an intermittingly rotating mandrel which, in its turning movements, winds the paper more rapidly than it is fed to the machine by the said feed rolls, means for clamping the end of the web to the mandrel, and means separate from the feed rolls for advancing the severed end of the web in position to be clamped upon the mandrel.

5. A machine for the purpose set forth comprising continuously rotating feed rolls adapted to feed a web of paper continuously to the machine, means for severing lengths of paper from the said web, means for winding the severed lengths of paper to form separate rolls embracing an intermittingly rotating mandrel, and a continuously rotating shaft through which the turning movements of the mandrel are controlled, said shaft having positive geared connection with the feed rolls.

[Claims 6 to 68 not printed in the Gazette.]

885,115. REEL-HOLDER. JOHN P. WEAVER, Terre Haute, Ind. Filed Oct. 8, 1907. Serial No. 396,379.



1. A reel holder comprising a casing, a reel journaled within the casing, a spring adapted to rotate the reel in one direction, a cord adapted to be wound up on the reel and means for holding the reel, said means being adapted to be drawn into and out of engagement with the reel by the cord.

2. A reel holder comprising a casing, a reel journaled within the casing and provided with a stop, a spring adapted to rotate the reel in one direction, a cord adapted to be wound upon the reel and a pawl pivoted to the casing and adapted for engagement with the stop, said pawl being adapted to be drawn into and out of engagement with the stop by the cord.

3. A reel holder comprising a casing, a reel journaled within the casing and provided with a stop, a spring adapted to rotate the reel in one direction, a cord adapted to be wound on the reel, a pawl pivoted to the casing and adapted for engagement with the stop, said pawl being provided with a notch in its outer end, the pawl being positioned and arranged so that the cord will pass through the notch thereof and the movement of the cord will throw the pawl into and out of engagement with the stop.

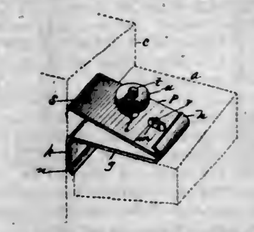
4. A reel holder comprising a casing, a reel journaled within the casing and provided with a notch in its periphery, a spring adapted to rotate the reel in one direction, a cord adapted to be wound on the reel, and a pawl pivoted to the casing and adapted for engagement with the notch, said pawl being adapted to be drawn into and out of engagement with the notch by the cord.

5. A reel holder comprising a casing, a reel journaled in the casing and provided with a notch in its periphery, a spring adapted to rotate the reel in one direction, a cord adapted to be wound on the reel, a pawl provided with a notch in its outer end pivoted to the casing and arranged for engagement with the stop, said pawl being positioned and arranged so that the cord will pass through the notch in the pawl and the pawl be thrown into and out of engagement with the notch in the reel by the movement of the cord.

[Claims 6 and 7 not printed in the Gazette.]

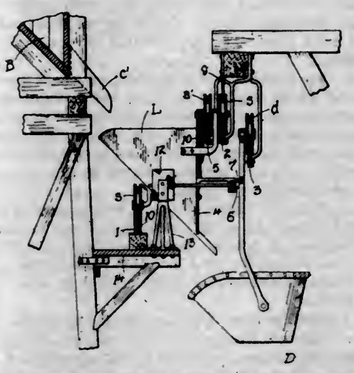
885,116. SASH-FASTENER. CHARLES S. WHIPPLE, Boston, Mass., assignor of one-half to Horace C. Nichols, Brookline, Mass. Filed June 20, 1907. Serial No. 379,838.

1. The hereindescribed improved sash-fastener, consisting of a lower stationary plate or member comprising a flat portion adapted to rest on the upper surface of the lower sash, an upwardly and inwardly bent lip at its rear or outer end, and a downwardly extending portion at its inner end adapted to extend down at the rear of the lower sash and provided with a rearwardly extending lip at its extreme end for engaging said sash; a swinging upper plate or member the rear or outer end of which extends under the lip at the corresponding end of the lower plate, and the front end of which has an edge adapted to engage with the stile, and the main portion of said upper plate being provided with a slot; and a screw extending from the lower plate through said slot and provided with a suitable thumb-nut, for the purpose set forth.



2. The hereindescribed improved sash-fastener, consisting of a lower stationary plate or member comprising a flat portion adapted to rest on the upper surface of the lower sash, an upwardly and inwardly bent lip at its rear or outer end, and a downwardly extending portion at its inner end adapted to extend down at the rear of the lower sash and provided with a rearwardly extending lip at its extreme end for engaging said sash; a swinging upper plate or member the rear or outer end of which extends under the lip at the corresponding end of the lower plate, and the front end of which has a chisel-shaped edge, and the main portion of said upper plate being provided with two elongated slots; a screw extending from the lower plate through one of the elongated slots in the upper plate and provided with a suitable thumb-nut; and a pin extending from the lower plate up through the other slot in the upper plate, for the purpose set forth.

885,117. BUCKET-LOADER FOR WIRE-ROPE TRAMWAYS. FREDERICK B. WHITMORE, Alta, Utah. Filed July 15, 1907. Serial No. 383,914.



1. In combination with a series of chutes, a movable loader operating in conjunction therewith, a traveling bucket moving conjointly with the loader upon the filling of the latter, and suitable devices for effecting a discharge of the loader contents into the bucket, and a release of the loader from the bucket during such conjoint movement, said devices being adjustable relatively to the several chutes to permit the filling of the loader from any given chute, substantially as set forth.

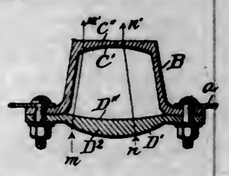
2. In combination with a series of chutes, a movable loader operating in conjunction therewith, a discharge-door for the loader, a traveling bucket moving conjointly

with the loader upon the filling of the latter, a trip-rail for releasing the door of the loader, releasing rails for releasing the loader from the bucket upon the completion of the discharge of the contents of the loader into the bucket, said releasing rails and trip-rail being adjustable relatively to the several chutes to permit the filling of the loader from any given chute, substantially as set forth.

3. In combination with a rail, a loader or hopper traveling back and forth on said rail, a traveling bucket operating in conjunction with the loader, means for coupling the bucket to the loader for a movement of the latter in one direction, a door for the loader, a trip-rail for releasing the door and allowing the contents of the loader to discharge into the bucket, and releasing rails adjustable as to position for effecting a release of the loader from the bucket at any predetermined point of travel of said loader, substantially as set forth.

4. In combination with a rail, a loader traveling back and forth on said rail, a traveling bucket operating in conjunction with the loader, means for coupling the bucket to the loader for a movement of the latter in one direction, a door for the loader, a trip-rail for releasing the door, the trip-rail being adjustable as to position whereby the point of release of said door may be varied at the will of the operator, substantially as set forth.

885,118. ILLUMINATED SIGN. ROY R. WILEY, St. Catherines, Ontario, Canada. Filed Oct. 23, 1906. Serial No. 340,189.



1. A sign letter having a convex back portion and a concave front portion of smaller area the said portions being adapted to refract the light rays and emit said rays perpendicularly to the sign and concentrated with respect to the entering rays substantially as described.

2. A sign letter having a front and a back portion separated from each other and having curved surfaces adapted to refract the light rays and cause them to emerge perpendicular to the letter surface and concentrated with respect to the entering rays substantially as described.

3. A sign letter comprising front and back portions the latter of which is of larger area and spacing means separating the said portions which portions are provided with curved surfaces adapted to receive the light rays at the back perpendicularly, refract them and emit them in concentrated form and perpendicularly to the surface of the sign substantially as described.

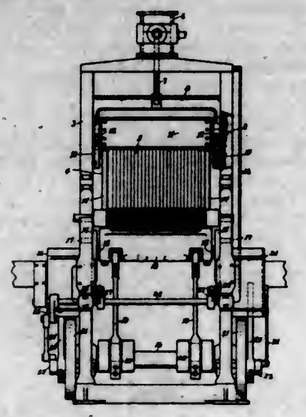
4. A sign character having a convex back surface for incident light rays, a first concave surface in front of the back surface, a second concave surface in front of said first concave surface, and having a plane surface in front of the second concave surface, smaller in area than said back surface.

5. A sign character of glass, having a convex back surface for incident light rays, a first concave surface in front of the back surface, a second concave surface in front of said first concave surface, and having a plane surface in front of the second concave surface, smaller in area than said back surface, said surfaces being curved for first concentrating the incident light rays, and finally emitting the same in parallel lines whose cross section is a letter.

[Claim 6 not printed in the Gazette.]

885,119. GANG-SAW MILL. THEODORE S. WILKINS, Milwaukee, Wis. Filed June 4, 1906. Serial No. 319,983.

1. In a gang saw mill, the combination of a gang frame, a motor arranged on top of said frame, a pivotally hung gang sash, a connection between the reciprocating portion of the motor and the pivotal end of the gang sash and adapted to reciprocate said sash in the frame, and means for giving to the sash a swinging or oscillating movement on its pivot.



2. In a gang saw mill, the combination of a gang frame, a motor arranged on top of said frame, a yoke reciprocable in the frame, a connection between the reciprocating portion of the motor and the top of the yoke, and a gang sash pivotally secured at its upper end to the arms of the yoke near the motor connection thereto.

3. In a gang saw mill, the combination of a gang frame, a motor arranged on top of said frame, a yoke reciprocable in the frame, a connection between the reciprocating portion of the motor and the top of the yoke, a gang sash pivotally secured at its upper end to the arms of the yoke, and means for giving to the sash a swinging or oscillating movement on its pivot.

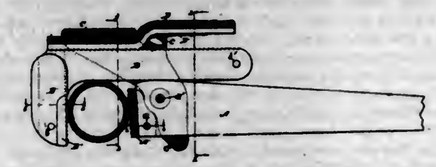
4. In a gang saw mill, the combination of a gang frame, a motor arranged on top of said frame, a gang sash pivoted at its top within the frame, a connection between the reciprocating portion of the motor and the top of the gang sash and adapted to reciprocate said sash in the frame, a crank shaft below the gang sash, a connection between the gang sash and the crank of the crank shaft, whereby the reciprocating movement of the gang sash imparts a rotary movement to the crank shaft, swinging bearings to which the lower end of the gang sash is connected, and a connection between the crank shaft and the swinging bearings, and adapted to impart an oscillating movement to said bearings as the crank shaft is rotated.

5. In a gang saw mill, the combination of a gang frame, a motor arranged on top of said frame, a yoke reciprocable in the frame, a connection between the reciprocating portion of the motor and the top of the yoke, a gang sash pivotally secured at its upper end to the arms of the yoke, a crank shaft below the gang sash, a connection between the gang sash and the crank of the crank shaft, whereby the reciprocating movement of the sash imparts a rotary movement to the crank shaft, and means for giving to the sash a swinging or oscillating movement on its pivot.

[Claims 6 to 9 not printed in the Gazette.]

885,120. PIPE-WRENCH. GEORGE C. WINSLOW, Kalamazoo, Mich. Filed June 12, 1905. Serial No. 264,823.

1. The combination of a handle; a relatively fixed jaw on the inner end thereof; a forwardly projecting loop-shaped link pivoted on said handle at its inner end; a movable jaw; a shank therefor having serrations or teeth on its outer edge, said jaw and shank being formed of a piece of plate metal folded upon itself, arranged through said link to be engaged by the inner end of said handle, the engaging portion of the said handle with said shank being curved; a gripping face for said movable jaw inserted in the fold of said plate; a bearing block, provided with teeth or serrations corresponding to those of said shank and having a rearwardly projecting finger piece, arranged in the outer end of said link; and a spring arranged to hold said bearing block normally in engagement with said shank, for the purpose specified.



2. The combination of a handle; a relatively fixed jaw on the inner end thereof; a forwardly projecting loop-shaped link pivoted on said handle at its inner end; a movable jaw; a shank therefor having serrations or teeth on its outer edge, said jaw and shank being formed of a piece of plate metal folded upon itself, arranged through said link to be engaged by the inner end of said handle, the engaging portion of the said handle with said shank being curved; a gripping face for said movable jaw inserted in the fold of said plate; a bearing block, provided with teeth or serrations corresponding to those of said shank and having a rearwardly projecting finger piece, arranged in the outer end of said link; and a spring arranged to hold said bearing block normally in engagement with said shank, for the purpose specified.

3. The combination of a handle; a relatively fixed jaw on the inner end thereof; a forwardly projecting loop-shaped link pivoted on said handle at its inner end arranged to swing forwardly over the said fixed jaw; a movable jaw; a shank therefor having serrations or teeth on its outer edge, said jaw and shank being formed of a piece of plate metal folded upon itself, arranged through said link to be engaged by the inner end of said handle, the engaging portion of the said handle with said shank being curved; a gripping face for said movable jaw inserted in the fold of said plate; and a bearing block provided with teeth or serrations corresponding to those of said shank and having a rearwardly projecting finger piece arranged in the outer end of said link; for the purpose specified.

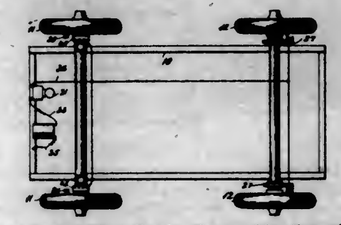
4. The combination of a handle; a relatively fixed jaw on the inner end thereof; a forwardly projecting loop-shaped link pivoted on said handle at its inner end; a movable jaw; a shank therefor having serrations or teeth on its outer edge, said jaw and shank being formed of a piece of plate metal folded upon itself, arranged through said link; a gripping face for said movable jaw inserted in the fold of said plate; a bearing block provided with teeth or serrations corresponding to those of said shank and having a rearwardly projecting finger piece, arranged in the outer end of said link; a cross-bar on said loop adapted to serve as a fulcrum for said bearing block; and a spring carried by said bearing block, arranged to engage said cross-piece, for the purpose specified.

5. The combination of a handle; a relatively fixed jaw on the inner end thereof; a forwardly projecting loop-shaped link pivoted on said handle at its inner end; a movable jaw; a shank therefor having serrations or teeth on its outer edge, said jaw and shank being formed of a piece of plate metal folded upon itself, arranged through said link; a gripping face for said movable jaw inserted in the fold of said plate; a bearing block, provided with teeth or serrations corresponding to those of said shank and having a rearwardly projecting finger piece, arranged in the outer end of said link; a cross-bar on said loop adapted to serve as a fulcrum for said bearing block; and a spring arranged to engage said cross-piece, for the purpose specified.

[Claims 6 to 9 not printed in the Gazette.]

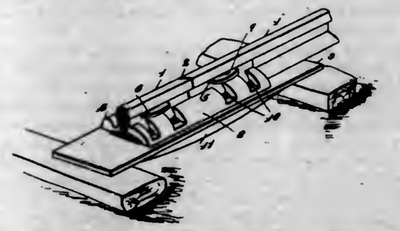
885,121. PUNCTURE-TELLTALE. CHARLES A. WINTER, New York, N. Y. Filed Aug. 14, 1906. Serial No. 330,592.

1. In a puncture telltale, the combination of a pneumatic wheel tire, an electric circuit, and a circuit closing device comprising a contact carried by the wheel, a part connected with said contact and engaged by the tire, a contact mounted on a part stationary with reference to the wheel in the path of the wheel-carried contact, the tire when inflated acting on the part engaged thereby to keep the wheel-carried contact from touching the stationary contact, and means that moves the wheel-carried contact to cause its engagement with the stationaary contact when the tire is deflated.



2. In a pneumatic tell-tale, the combination of a pneumatic wheel tire, an electric circuit, and a circuit-closing device comprising a contact carried by the wheel, a part connected with said contact and engaged by the tire, a contact mounted on the wheel axle in the path of said wheel-carried contact, the tire, when inflated, acting on the part engaged thereby to keep the wheel-carried contact from touching the stationary contact, and a spring acting on the wheel-carried contact to move it when the tire is deflated, to cause the closing of the circuit.

885,122. RAIL-JOINT. ROMAN F. WOLYNEC, McKeesport, Pa., assignor of one-half to James Kret, Homestead, Pa. Filed July 15, 1907. Serial No. 383,847.



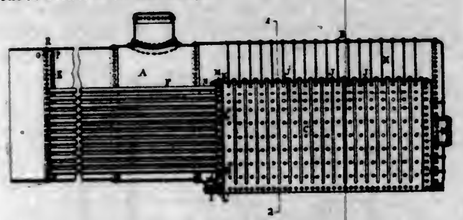
In a rail joint, the combination of a pair of abutting rail ends having openings formed in the web portions thereof, a wing fitting against one side of the joint, the said wing being provided with lateral extensions received within the before mentioned openings in the rail ends and projecting upon the opposite side of the rail, the projecting ends of the extensions being perforated, and a second wing applied to the opposite sides of the joint, the upper edge of the second wing being provided with a pair of notches for each of the lateral extensions, each pair of the notches forming a tongue designed to engage the perforation in the corresponding extension.

885,123. STEAM-BOILER. WILLIAM H. WOOD, Media, Pa. Filed May 15, 1907. Serial No. 373,707.

1. In a steam boiler the fire-box made with a flue-sheet having its top and side edges provided with a flange riveted to the sides and crown of the fire-box and having the metal between the tubes and flange pressed into grooved form in which the direction of the depth of the groove is substantially at right angles to the general surface of the tube-sheet, whereby the tube area of the sheet may yield under the expansive influence of the tubes relatively to the flange.

2. In a steam boiler the fire-box made with a flue-sheet having its top and side edges provided with a flange riveted to the sides and crown of the fire-box and having the metal between the tubes and flange pressed into grooved

form in which the direction of the depth of the groove is substantially at right angles to the general surface of the tube-sheet and having its surface near its lower edge also similarly pressed into grooved form, whereby the tube area of the sheet may yield under the expansive influence of the tubes relative to the flange.



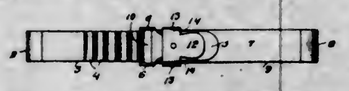
3. In a steam boiler the fire-box made with a flue-sheet having its top and side edges provided with a flange riveted to the sides and crown of the fire-box and having the metal between the tubes and flange pressed into grooved form in which the direction of the depth of the groove is substantially at right angles to the general surface of the tube-sheet combined with a back-head provided with a flange and a groove pressed into the body of the head between the flange and tubes in which the direction of the depth of the groove is substantially at right angles to the general surface of the back-head, and tubes rigidly secured at one end to the back-head and at the other end to the tube-sheet, whereby the tube area of the back-head and tube-sheet may yield under the expansive influence of the tubes relatively to the flange.

4. A steam boiler provided with a back-head having its perimeter flanged and riveted to the shell of the boiler and also having an annular grooved portion pressed into the sheet between its flange and tube area and having the direction of its depth at right angles to the general surface of the back-head sheet.

5. In a steam boiler, a fire-box having the lower edges of its sides made straight and riveted to the leg of the boiler and its sides and crown provided with a series of parallel outwardly grooved portions pressed therein and extending continuously over the crown and down the sides and terminating at some distance from the bottom, combined with stay bolts secured at one end to the sides and crown of the fire-box between the grooved portions and at the other end to the boiler-shell.

[Claims 6 to 8 not printed in the Gazette.]

885,124. HAME-CLASP. ANDERSON WOODWARD, Leeper, Mo., assignor of one-half to William S. Bailey, Leeper, Mo. Filed July 18, 1907. Serial No. 384,362.



1. A clasp, composed of two co-acting members, one of which is narrower than the other and is provided with a series of engaging surfaces, means carried by the other member for engaging said surfaces one at a time to lock the members together, and means carried by said means for straddling the narrower member and engaging the other member to form an auxiliary lock for said locking means.

2. A clasp, composed of two co-acting members, one of which overlaps and is narrower than the other and is further provided with a series of corrugations, means carried by the other member for engaging one depression at a time to lock the members together, and an auxiliary lock carried by said means and projecting beyond the sides of the narrow member to engage the wider member and lock said locking means.

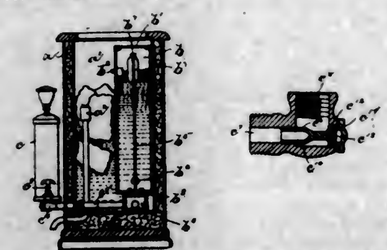
3. A clasp, composed of two co-acting members, one of which overlaps and is narrower than the other member and is further provided with a series of engaging surfaces, a pivoted cam or eccentric carried by the other member and adapted to engage one engaging surface at a time to force the members together and lock the same, and an auxiliary catch or lock carried by said cam or eccentric and projecting beyond the sides of the narrower member to engage the wider member and lock said cam.

4. A clasp, composed of two co-acting members, one of which is provided with a series of engaging surfaces, a pivoted cam or eccentric lock having a handle carried by the other member and adapted to engage one surface at a time to lock the members together, and an auxiliary lock for said cam carried by the handle and adapted to straddle the member having the engaging surfaces and engage the other member.

5. A clasp, composed of two co-acting members, one of which is provided with a series of engaging surfaces and the other of which is provided with opposed inclined edges near one end, a pivoted handled cam carried by the last mentioned member and adapted to engage one surface of the other member to lock the members together, and an auxiliary lock adapted to engage the inclined edges to hold the cam locked.

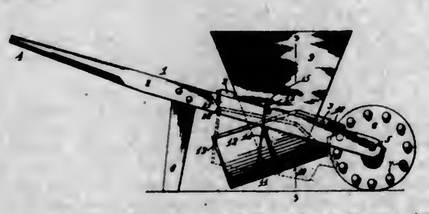
[Claim 6 not printed in the Gazette.]

885,125. COOLER. WALTER G. WUICHET, Dayton, Ohio, assignor to The Pasteur-Chamberland Filter Company, Dayton, Ohio, a Corporation of Ohio. Filed July 12, 1902. Serial No. 115,373.



In a cooler, a supply pipe having a reduced inlet, said reduced inlet consisting of a body having supply and discharge orifices, a hollow perforated plug screwthreaded in said body between said supply and discharge orifices, and a closed opening in said body in proximity to said plug, substantially as and for the purpose specified.

885,126. FERTILIZER-DISTRIBUTER. EBIN N. YARBROUGH, Okolona, Ark. Filed Nov. 5, 1907. Serial No. 400,869.



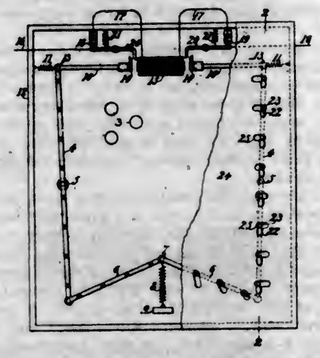
1. A fertilizer distributer of the wheel barrow type comprising side bars having handles at their rear ends, spaced cross bars connecting said side bars, supporting legs depending from the side bars, a supporting and tappet wheel having its axle journaled in the forward ends of said side bars, said wheel having an annular series of tappet pins projecting from one of its faces, a hopper supported between said cross bars and having a tapered lower end, an oscillatory bottom or shoe arranged beneath the hopper, chains for loosely suspending said shoe from said side bars, spaced arms upon the front end of the shoe to receive said wheel, one of said arms projecting normally into the path of the tappet pins, an apertured end piece upon said shoe, guides upon said end piece, and an apertured controlling plate removably engaged with said guides and adapted to have its aperture or opening register with the one in said end piece, substantially as described.

2. In a fertilizer distributer, a frame having side bars, a tappet wheel arranged therein and having projecting from one of its faces an annular series of tappet pins, a hopper supported in the frame and having an open tapered lower end, a rocking bottom or shoe arranged beneath the open lower end of the hopper and loosely suspended from the side bars of the frame for oscillatory movement said bottom or shoe consisting of two angularly disposed side pieces united at their bottom edges and an end piece connecting said side pieces at their rear ends, said end piece being formed with a discharge opening, the forward end of the side pieces being notched and beveled to provide the spaced arms 16, one of the latter being adapted to engage the tappets on said wheel, a guide arranged upon said end piece of the bottom or shoe and a regulating plate or slide adapted to engage said guide and formed with an opening to register with the opening in said end piece.

3. In a fertilizer distributer, a frame having side bars and connecting cross bars, a hopper supported upon the cross bars and having an open tapered lower end, a tappet wheel arranged between the side bars, a rocking bottom or shoe arranged beneath the hopper and having an arm to engage the tappets on said wheel, screw studs projecting upwardly from said side bars, suspending chains attached to the bottom or shoe and having their links engaged with said screw studs, and nuts upon the latter for retaining the links thereon.

4. In a fertilizer distributer, a frame having side bars and connecting cross bars, a hopper supported upon the cross bars and having an open tapered lower end, a tappet wheel arranged between the side bars, a rocking bottom or shoe arranged beneath the hopper and having an arm to engage the tappets on said wheel, said bottom or hopper having an end piece formed with a discharge opening and with an aperture, and a hook loosely suspended from the rear cross bar and adapted to engage the aperture in the end piece of the bottom or shoe to support the latter in an inoperative position with its arm out of the path of the tappets on said wheel.

885,127. ELECTRIC DISPLAY APPARATUS. EDMUND L. ZALINSKI, New York, N. Y. Filed Oct. 6, 1904. Serial No. 227,360.



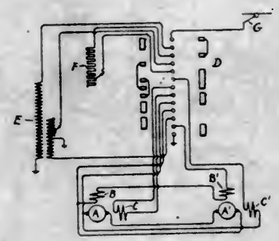
1. In an electric display apparatus the combination with electric lamps, of reflectors disposed at different angles to the lamps and arranged at the sides thereof, and means for moving the reflectors to and fro in the plane of said lamps and approaching and receding therefrom.

2. In electric display apparatus the combination with electric lamps, of a frame composed of movable bars, an electromagnet, automatic means for intermittently energizing said magnet, an armature carried by said bars by means of which they are moved, and reflectors mounted on said bars.

3. In electric display apparatus the combination with electric lamps, of a frame composed of movable bars, an electromagnet, automatic means for intermittently energizing said magnet, an armature carried by said bars by means of which they are moved, projections from said bars, a cover provided with slots in the line of motion of said projections, and reflectors mounted on said projections.

4. In electric display apparatus, the combination with electric lamps, of a frame composed of movable bars, an electromagnet, automatic means for intermittently energizing said magnet, an armature carried by said bars by means of which they are moved, projections from said bars, a cover provided with slots in the line of motion of said projections, and reflectors loosely mounted on said projections.

885,128. MOTOR CONTROL. ERNST F. W. ALEXANDERSON, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Jan. 26, 1907. Serial No. 354,259.



1. In combination with a commutator motor, means for connecting said motor as a series motor for operation on direct-current, means for connecting said motor as a repulsion motor for operation on alternating current, a transformer winding adapted to supply alternating-current to said motor having a point between its terminals grounded, and means for establishing connections from the motor circuit to points on said winding on opposite sides of the grounded point.

2. In combination with a commutator motor, means for connecting the armature in series with the field windings for operation on direct-current, means for short-circuiting the armature for operation on alternating-current, a transformer winding having a point between its terminals grounded, and means for establishing connections from the motor circuit to points on said winding on opposite sides of the grounded point.

3. In combination with a commutator motor having an exciting winding and a compensating or inducing winding on its field structure, means for connecting said windings in series with the armature for direct-current operation, and means for short-circuiting the armature for alternating-current operation without breaking said series connection, whereby the short-circuit connection carries only the difference of the armature current and the current in other windings.

4. In combination with a commutator motor having an exciting winding and a compensating or inducing winding on its field structure, means for connecting said windings in series with the armature for direct-current operation, and means for short-circuiting the armature for alternating-current operation and increasing the effective ampere turns of the inducing winding relatively to the exciting winding.

5. In combination with a commutator motor having an exciting winding and a compensating or inducing winding on its field structure, means for connecting said windings in series with the armature for direct-current operation, and means for short-circuiting the armature for alternating-current operation and increasing the effective ampere turns of the inducing winding relatively to the exciting winding and to the armature.

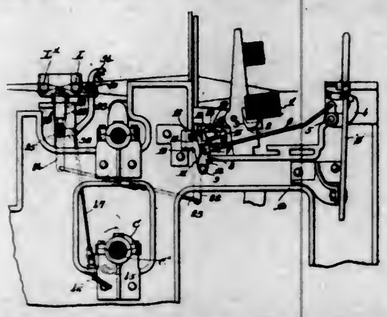
[Claims 6 to 9 not printed in the Gazette.]

885,129. NECKTIE-SHIELD FOR COLLARS. CHARLES C. ALLEN, Kansas City, Mo. Filed Aug. 30, 1907. Serial No. 390,800.



A necktie shield for turned down collars comprising a longitudinal flexible strip having a polished outer surface and a longitudinally extended bead upon said surface and the upper portion of said strip.

885,130. WARP STOP-MOTION FOR LOOMS. GEORGE B. AMBLER, South Framingham, Mass., assignor to Draper Company, Hopedale, Mass., a Corporation of Maine. Filed Aug. 13, 1907. Serial No. 388,319.



1. The combination, in a loom of two detector-supports arranged in parallelism, a feeler normally vibratable beneath and adjacent the supports, a series of detectors vertically movable on each support, said detectors being longitudinally slotted from their lower ends, and each suspended from a single warp-thread, manually controlled means to centrally position the feeler below and to limit descent of the detectors, to prevent catching of the warp-threads between the upper ends of the detector-slots and the upper edges of their supports, and a locking device for said means.

2. The combination, in a loom, of two detector-supports arranged in parallelism, a feeler normally vibratable beneath and adjacent the supports, a series of detectors vertically movable on each support, said detectors being longitudinally slotted from their lower ends and each suspended from a single warp-thread, manually controlled means to centrally position the feeler below and to limit descent of the detectors, to prevent catching of the warp-threads between the upper ends of the detector-slots and the upper edges of their supports, and a spring-controlled latch to lock said means and retain the feeler in central position.

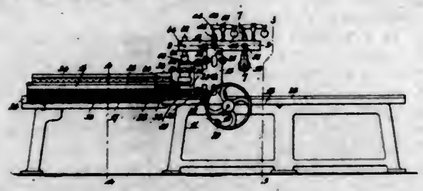
3. The combination, in a loom, of two detector-supports arranged in parallelism, a feeler normally vibratable beneath and adjacent the supports, a series of detectors vertically movable on each support, and each suspended from a single warp-thread, each detector having a single slot through which its thread and the support is extended, the feeler engaging the edge of and being arrested by a released detector, and manually controlled means to centralize the feeler and also to retract it from engagement with a released detector in either series, centralization of the feeler causing it to serve as a stop to prevent the descent of the detectors upon the upper edges of their supports.

4. The combination, in a loom, of two detector-supports arranged in parallelism, a feeler normally vibratable beneath and adjacent the supports, a series of detectors vertically movable on each support, and each suspended from a single warp-thread, each detector having a single slot through which its thread and the support is extended, the feeler engaging the edge of and being arrested by a released detector, manually controlled means to centralize the feeler and also to retract it from engagement with a released detector in either series, and a locking device for said means, to maintain the feeler in any of the three positions specified.

5. The combination, in a loom, of two detector-supports arranged in parallelism, a feeler normally vibratable beneath and adjacent the supports, a series of detectors vertically movable on each support, and each suspended from a single warp-thread, each detector having a single slot through which its thread and the support is extended, the feeler engaging the edge of and being arrested by a released detector, a manually controlled arm connected with the feeler and having three notches, movement of the arm centralizing the feeler or retracting it from engagement with a released detector of either series, a stop pin to enter anyone of the notches and thereby hold the arm and feeler in a corresponding position, and a spring latch coöperating with the arm to retain it in engagement with the stop pin.

[Claims 6 to 8 not printed in the Gazette.]

885,131. MACHINE FOR FORMING FIBER ARTICLES. WILLIAM H. BAKER, Lockport, N. Y., assignor of three-fifths to Jesse Peterson, Lockport, N. Y. Filed Oct. 18, 1906. Serial No. 339,526.



1. In a machine for forming articles from fiber sheets, the combination with a form over which a sheet of fiber is to be shaped, and yieldingly-mounted pressure-rollers adapted to press the fiber sheet against the form.

2. In a machine for forming fiber articles from fiber sheets, the combination of a traveling element adapted to carry a form over which a sheet of fiber is to be shaped, pressure-rollers having a fixed position and adapted to press the sheet against said form, and yieldingly-mounted pressure-rollers also adapted to press said sheet against the form.

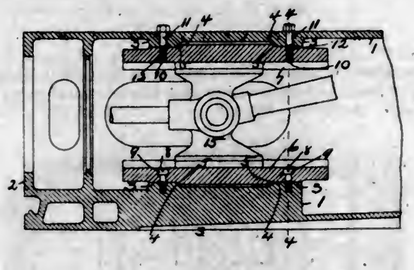
3. In a machine for forming articles from fiber sheets, the combination with a frame, of a traveling element having a gear-rack and adapted to carry a form over which a sheet of fiber is to be shaped, an operating shaft having a gear in mesh with said gear-rack, and pressure-rollers above and on opposite sides of said traveling element to press the sheet of fiber against the form carried by said traveling-element.

4. In a machine for forming articles from fiber sheets, the combination with a frame, of a traveling element having a gear-rack and adapted to carry a form over which a sheet of fiber is to be shaped, an operating shaft having a gear in mesh with said gear-rack, pressure-rollers above and on opposite sides of said traveling element to press the sheet of fiber against the form carried by said traveling element, and a pressure-roller above the traveling element on a plane above the first mentioned pressure-rollers.

5. In a machine for forming articles from fiber sheets, the combination of a traveling element having opposite gear-racks and adapted to carry a form over which a sheet of fiber is to be shaped, of revoluble pressure-devices between which said form is to be passed on movement of said traveling element, said pressure-devices including gear-wheels adapted to mesh with said gear-racks to cause said pressure-devices to rotate when in contact with the fiber sheet on said form.

[Claims 6 to 17 not printed in the Gazette.]

885,132. ENGINE. FREDERICK O. BALL, North Plainfield, N. J. Filed July 15, 1907. Serial No. 383,916.



1. In an engine the combination with the frame of the cross head guides having opposed cylindrical guide surfaces, said guides being detachably secured to the frame and having their guide surfaces coincident with the same circle.

2. In an engine the combination with the frame having guide shoulders thereon transversely of the frame; of a cross head guide having a cylindrical guide surface provided with the shoulders adapted to engage the shoulders on the frame to prevent a movement of the guide axially with relation to the frame, said guide being detachably secured to the frame.

3. In an engine the combination with the frame having opposing guide supports thereon, said cross head guides having cylindrical guide surfaces said surfaces being coincident with the same circle, said guides being detachably secured to said supports and provided with means to lock the guides against longitudinal movement on the supports.

4. In an engine the combination of the engine frame having holes 11 and screw threaded holes 13 therein; a cross head guide arranged on the frame adjacent to said opening; the bolt 12 extending through the opening 11 securing the guide in place; and the screws 14 in the holes 13 for the purpose described.

5. In an engine the combination of the frame having guide supports 3 and provided with the shoulders 4; the guide 7 arranged on said supports and having the shoulders 5 abutting against the shoulders 4, the supports being provided with the holes 11 and screw threaded holes 13; the bolt 12 arranged in the holes 11 and screwed into the guides; and the screws 14 arranged in the holes 13 against the guides.

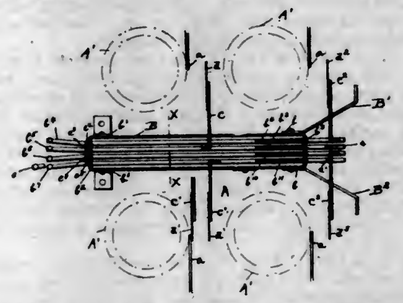
[Claim 6 not printed in the Gazette.]

885,133. ROLLER-BEARING CENTER-PLATE. JOHN C. BARBER, Chicago, Ill. Filed Apr. 19, 1907. Serial No. 369,061.



A center bearing comprising upper and lower plates having interlocking hubs and outer flanges, and interposed conical rollers supporting the upper from the lower plate with clearance below the outer flange of the upper plate, the outer flange of the lower plate being provided with dust escape passages, one of which plates has lateral flanges formed integral therewith, which flanges lap the ends of the rollers for locking the rollers to the plate with freedom for rotary motion, and one of which lateral flanges is provided with a roller entrance gap and gap closure, all substantially as described.

885,134. ELECTRIC GAS-LIGHTING MACHINE. DAVID A. BARLOW, Orange, Conn. Filed Feb. 21, 1907. Serial No. 358,660.



1. In a device of the class described, a stove provided with a series of openings in the top thereof, contact points adjacent to the openings, a supporting frame, a base plate provided with upwardly extending ears, said ears secured to the frame and said base plate adapted to be secured to the stove top, having openings in the ends thereof, independently reciprocating rods having their bearings in said openings, arms secured to certain of said rods outside of the supporting frame, said arms acting as stops to limit the movement of the rods to which they are attached, contact points carried by the arms, and arms secured to the remaining reciprocating rods at a distance from their ends, said arms also carrying contact points, the operative ends of the reciprocating rods adjoining each other alternating rods operating contact points on opposite sides of the frame.

2. In a device of the class described, a stove provided with a series of openings in the top thereof, contact points adjacent to the openings, a supporting frame, having openings in the ends thereof, independently reciprocating rods having their bearing in said openings, arms secured to certain of said rods outside of the supporting frame, said arms acting as stops to limit the movement of the rods to which they are attached, contact points carried by the arms, arms secured to the remaining reciprocating rods at a distance from their ends, said arms also carrying contact points, the operative ends of the reciprocating rods adjoining each other, alternating rods operating contact points on opposite sides of the frame and springs for automatically returning the rods to their normal position when operated.

885,135. SEPARABLE CUFF LINK-BUTTON. FRANK P. BARNEY, Chartley, Mass., assignor of one-half to Charles D. Lyons, Mansfield, Mass. Filed July 25, 1907. Serial No. 385,405.



1. As an improved article of manufacture a separable cuff-link button, the same comprising a pair of independent button members each provided with a fixed shank terminating in a lateral flange or enlargement adapted to pass through a buttonhole of the cuff and retain said member therein, a swinging coupling member or link mounted in one of the button members and extending longitudinally beyond its flange, and having the free end of said link constructed to engage with the fellow button member for detachably securing them together.

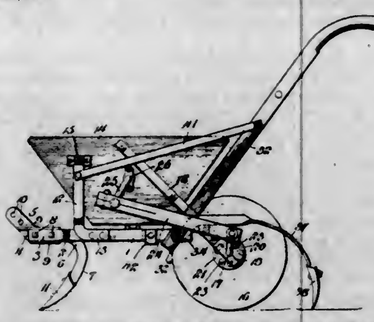
2. In an article of the character described, the combination of a pair of main button members, each having a bifurcated laterally yielding shank terminating in a suitably

capped and apertured flange, a spring-pressed tongue or link revolubly mounted in one of said buttons and extending outwardly therefrom through its shank, and having the free end of the link enlarged and adapted to pass freely through the flange of the shank of the other button and hook thereunder, substantially as described.

3. In an article of the character described, the combination with a pair of oppositely disposed main button members, each provided with a fixed comparatively short shank or post terminating in a centrally apertured flanged part, of a spring-pressed connecting link or tongue movably mounted and supported in one of said button members and projecting outwardly beyond its shank and interlocking with the shank of the other button member, and an arm or analogous device secured to the link whereby the latter may be manipulated axially for detachably connecting the two buttons together.

4. In an article of the character described, the combination with the buttons B B^1 having flat resilient shanks provided with apertured capped ends, of a spring-pressed rotatable link mounted in one of said buttons and extending through its shank and arranged to be detachably connected with the shank of the other button, means for holding the link in the normally locked position, and having the opening in said shanks elongated in the plane of its width, corresponding when in use with the plane of the buttonholes of the cuff, whereby the link is adapted to swing a limited distance therein, substantially as described and for the purpose set forth.

885,136. PLANTER. ABBA BENTON and CHARLES D. JORDAN, Monticello, Ga. Filed Sept. 10, 1907. Serial No. 392,165.

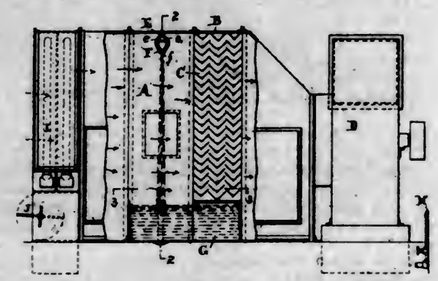


1. A planter comprising a frame having spaced side bars, L-shaped arms extending vertically from the side bars of the frame and having horizontal portions secured to the same, a seed box pivoted at its front portion to the arms at the upper ends thereof, inclined bars secured to the sides of the seed box and extending downwardly and rearwardly therefrom and forming projecting arms having terminal bearings, and a wheel journaled in the said bearings and supporting the rear portion of the seed box.

2. A planter comprising a frame composed of side bars or pieces bent inwardly at the front of the frame and connected together, a cross bar connecting the rear portions of the side bars, inclined handles secured to the sides of the frame at the rear ends thereof, a seed box pivotally connected at the front with the frame and having an agitator, a wheel supporting the rear portion of the seed box and provided in rear of the side bars of the frame with a crank axle for operating the agitator, and standards secured to and extending rearwardly from the sides of the frame and arched at an intermediate point to clear the crank axle and carrying covering blades.

3. A planter comprising a frame provided with side bars or members having spaced portions, a clevis provided with a shank arranged between the spaced portions of the frame and having upper and lower longitudinal flanges forming longitudinal recesses to receive the said spaced portions of the frame, a plow standard provided with sides having terminal portions extending longitudinally of the clevis and also arranged in the recesses of the shank and interposed between the same and the sides of the frame, and fastening means piercing the spaced portions of the frame, the shank of the clevis and the sides of the plow standard.

885,137. AIR-PURIFYING APPARATUS. WILLIAM G. R. BRAEMER, Buffalo, N. Y., assignor to Warren Webster & Company, a Corporation of New Jersey. Filed Sept. 11, 1907. Serial No. 392,251.



1. In an air purifying apparatus, an air washer, combined with a water eliminating apparatus consisting of a series of transverse trough-shaped bars one above the other and each having a downwardly inclined front under surface directed toward the air washer and also having their lower parts provided with an obstructing shoulder and gutter adjacent thereto for arresting the water at a position immediately above the trough portion of the bar next below.

2. In an air purifying apparatus, an air washer, combined with a water eliminating apparatus consisting of a series of transverse trough-shaped bars one above the other and each having a downwardly inclined front under surface directed toward the air washer and also having their lower parts provided with an obstructing shoulder and gutter adjacent thereto for arresting the water at a position immediately above the trough portion of the bar next below and in which the said shoulder and gutter is arranged above a plane through the oblique front under surface of the bar whereby the water may be collected but the air is permitted to pass freely under the bar.

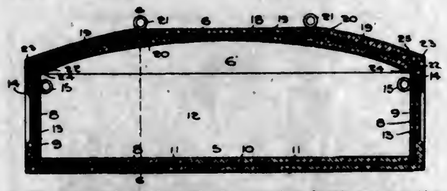
3. In an air purifying apparatus, an air washer, combined with a water eliminating apparatus consisting of a series of transverse trough-shaped bars provided with an opening at one end and arranged one above the other and each having a downwardly inclined front under surface directed toward the air washer and also having their lower parts provided with an obstructing shoulder and gutter adjacent thereto for arresting the water at a position immediately above the trough portion of the bar next below, and a chamber at one end of the said bars to which they are secured having openings in its wall in line with the openings from the trough portion of the respective bars whereby the water from the interior of the bars may freely pass into the chamber and away from the current of air.

4. In an air purifying apparatus, an air washer combined with means for eliminating or removing the water which consists of a series of trough-shaped transverse bars arranged in vertical rows, the bars of each row being arranged one above the other, the bars of adjacent rows being staggered with respect to each other, and the several bars being each further provided with a shouldered portion C^s and an adjacent gutter at its lowest part.

5. In an air purifying apparatus, an air washer combined with means for eliminating or removing the water which consists of a series of trough-shaped transverse bars arranged in vertical rows, the bars of each row being arranged one above the other, the bars of adjacent rows being staggered with respect to each other, and all of the bars being arranged on an incline, and a chamber at the lowest end of the bars provided with apertures opening into the lowest portions of the trough parts of the respective bars whereby the water collected by the bars may be drained off and conveyed away out of contact with the current of air.

[Claims 6 to 13 not printed in tne Gazette.]

885,138. BURIAL-VAULT. MARION L. BREWER and LLOYD B. MILLER, Denver, Colo. Filed July 30, 1907. Serial No. 386,300.

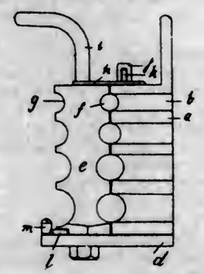


1. In a burial vault, a body member having a continuous angularly disposed channel formed in its upper edge and a cover having an angular ridge adapted to occupy the upper part of the said channel, the angles of the said channel and the said ridge being of dissimilar magnitudes.

2. In a burial vault, a body member having a continuous channel extending downwardly and angularly from the inner verge of its upper edge, and a cover having a surrounding flange adapted to engage the said edge, a depending flange engaging the inner surface of the said member below the said channel and an intermediate projection of less magnitude than the said channel adapted to occupy a part thereof.

3. In a burial vault, the combination with the body member, of a cover formed of molded plastic substance embedded therein and a net work composed of a plurality of interconnected metallic frames arranged in spaced relation one within the other and a tortuously bent rod connected therewith.

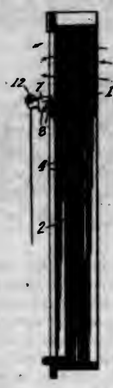
885,139. PIPE-BENDER. ERNEST A. BROWN, Wealdstone, England. Filed Sept. 6, 1907. Serial No. 391,669.



In a pipe-bender of the class which comprises a grooved semi-cylinder between which and a grooved pillar the pipe is placed during the act of bending, a semi-cylinder having two sets of grooves for pipes of various gages, a reversible pillar with two sets of grooves corresponding to those in the semi-cylinder, and means for adjusting the distance between the semi-cylinder and the pillar, substantially as hereinbefore described.

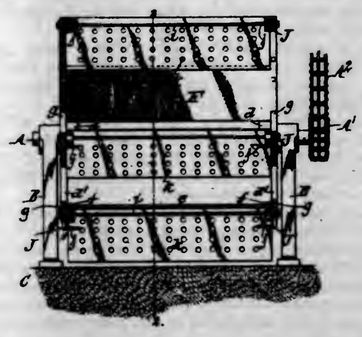
885,140. WINDOW-VENTILATOR AND CURTAIN FIXTURE. OLIVER E. BROWN, Washington, Iowa. Filed July 9, 1907. Serial No. 382,866.

In combination, a window-frame with a vertically-movable sash therein, a block slidable on each front face of the frame, a cushion on each rear face of the block, and curtain fixtures on each front face thereof, spring arms each having a bracket at their upper ends provided with a plurality of parallel, elongated, transverse slots, secured to the blocks, said arms being also provided at their lower ends with brackets having a plurality of parallel, elongated, vertical slots, said arms being adjustable on the blocks



and sash to permit vertical and lateral adjustment of the brackets, substantially as described.

885,141. WATER-MOTOR. OSCAR E. BROWN, Buffalo, N. Y., assignor of one-fourth to Lemuel Vasbinder, Buffalo, N. Y. Filed Aug. 23, 1907. Serial No. 389,809.



1. A water motor comprising a frame, main paddles pivoted to the frame and provided with openings or passages, and auxiliary paddles normally closing said openings and pivoted to the main paddles, substantially as set forth.

2. A water motor comprising a frame, main paddles pivoted thereto between their inner and outer edges and having openings in the portions thereof on the outer sides of their pivots, and auxiliary paddles normally closing said openings and hinged to the main paddles, substantially as set forth.

3. A water motor comprising a frame, main paddles pivoted thereto between their inner and outer edges and having openings in the portions thereof on the outer sides of their pivots, and perforated auxiliary paddles normally closing said openings and hinged to the main paddles, substantially as set forth.

4. A water motor comprising a frame, main paddles pivoted thereto and provided in their outer portions with openings, auxiliary paddles hinged at their outer edges to the main paddles and normally closing said openings, and means for limiting the rearward movement of the auxiliary paddles on the main paddles, substantially as set forth.

5. A water motor comprising a frame, main paddles pivoted thereto and provided in their outer portions with openings, auxiliary paddles hinged at their outer edges to the main paddles and normally closing said openings, and stops for limiting the forward movement of the auxiliary paddles, substantially as set forth.

[Claims 6 and 7 not printed in the Gazette.]

885,142. PHOTOGRAPHIC-CAMERA SHUTTER. FRANK A. BROWNELL, Rochester, N. Y., assignor to Eastman Kodak Company, Rochester, N. Y., a Corporation of New York. Filed Aug. 3, 1904. Serial No. 219,287.



1. In a shutter, the combination with a casing, pivoted blades therein and a controller for operating them, of a master member for operating said controller, a stop adapted to coöperate with the master member and adjustable in a plane extending transversely of the path of said member, an actuating device coöperating with the master member and stop for setting the former in engagement with the controller and adjusting the stop into and out of coöperative relationship with the master member.

2. In a shutter, the combination with a casing, pivoted blades therein and a controller for operating them, of a master member for operating said controller, an actuating device for setting the master member in engagement with the controller and a stop reciprocated across the path of the master member by the actuating device and means for adjusting the stop laterally relatively to the plane of the movement of the master member.

3. In a shutter, the combination with a casing, pivoted blades therein and a controller for operating them, of a master member for operating said controller, an actuating device for moving the master member into engagement with the controller and a reciprocating stop adjustable into operative alinement with the master member and connections between the actuating device and said stop for projecting and retracting the latter into and out of engagement with the master member.

4. In a shutter, the combination with a casing, pivoted blades therein and means for operating them, of a master member controlling said means, a movable stop coöperating with the master member, means for adjusting said stop into operative alinement therewith and a setting device for said master member connected to the stop and actuating it into and out of engagement with the master member.

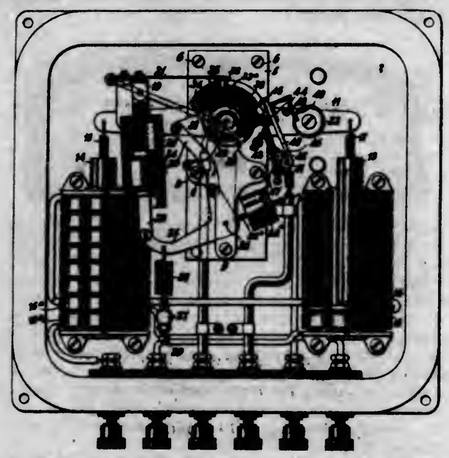
5. In a shutter, the combination with a casing, pivoted blades therein and means for operating them, of a master member controlling said means, an actuating device for the master member and a stop reciprocated thereby, a movable guide for the stop and means for adjusting it to move the stop into operative position relative the master member.

[Claims 6 to 37 not printed in the Gazette.]

885,143. AUTOMATIC SYNCHRONIZER. FRANK CONRAD, Swissvale, Pa., assignor to Westinghouse Electric & Manufacturing Company, a Corporation of Pennsylvania. Filed Feb. 2, 1907. Serial No. 355,501.

1. The combination with a pivotally mounted switch member having a conducting and a non-conducting portion, a pivoted bar having a contact member that coöperates with the switch member, and means for operatively connecting the pivoted bar to the switch member, of another contact member that normally engages the conducting portion of the switch member but becomes disengaged therefrom upon movement of the switch member to an extreme position, means for thereafter maintaining the said contact member out of engagement with the conducting portion of the switch member, and means operated by the pivoted bar to cause them to reëngage.

2. The combination with a pivotally mounted switch member having a conducting and a non-conducting portion, a pivoted bar having a contact member that coöperates with the switch member, and means for operatively connecting the pivoted bar to the switch member, of another contact member that normally engages the conducting portion of the switch member but becomes disengaged therefrom upon movement of the switch member to an extreme position, and means for preventing reëngagement of the said parts until the pivoted bar occupies a predetermined position.



3. The combination with a pivotally mounted switch member having a conducting and a non-conducting portion, a pivoted bar having a contact member that coöperates with the switch member, and means for operatively connecting the pivoted bar to the switch member, of another contact member that normally engages the conducting portion of the switch member but becomes disengaged therefrom upon movement of the switch member to an extreme position, and means for preventing reëngagement of the said parts while the brush that is carried by the pivoted bar engages the conducting portion of the switch member.

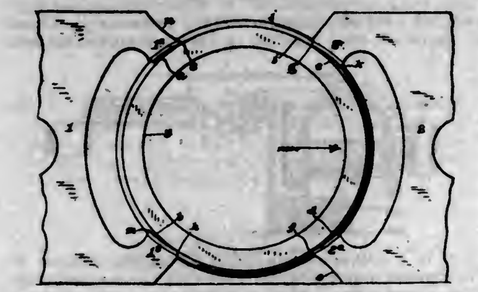
4. The combination with a pivotally mounted switch member having a conducting and a non-conducting portion, a stop carried thereby, a pivoted bar having a contact member that coöperates with the switch member, and means for operatively connecting the pivoted bar to the switch member, of another contact member that normally engages the conducting portion of the switch member but becomes disengaged therefrom upon movement of the switch member to an extreme position, a catch carried thereby that thereupon engages the stop on the switch member, and means for causing release of the catch from the stop when the pivoted bar occupies a predetermined position.

5. The combination with two sources of alternating current, and a part that reciprocates in response to the variations in the phase relations of the currents, of a switch comprising three coöperating members one of which is operated directly by the reciprocating part, another of which is operatively connected to the reciprocating part, and the third of which engages the second member except when the latter is moved to an extreme position, means for maintaining the second and third members out of engagement, and means actuated by the reciprocating part for causing reëngagement of said members only when predetermined phase relations exist between the currents.

[Claim 6 not printed in the Gazette.]

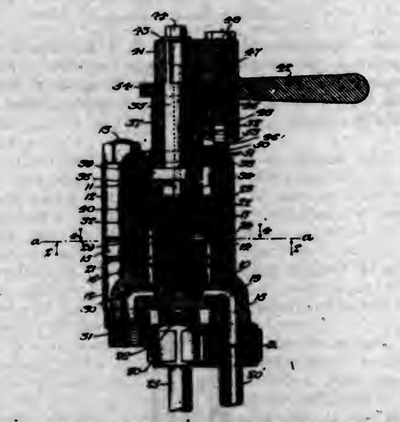
885,144. PIPE-THREADING DIE. JAMES F. CAUDGIN TON, Bridgeport, Conn. Filed Nov. 4, 1907. Serial No. 400,490.

Thread cutting dies comprising the sections 1 and 2, each section having a screw threaded cutting bit and a screw threaded trailing bit, the bits of each section having oppositely projecting clearance curves, said curves projecting away from the center of the working circle when the sections are in operative position so that one edge of the teeth of the trailing bits will be the same distance



from the center of the working circle as the cutting edges of the teeth of the cutting bits, each bit having a taper mouth with the clearance curves projecting in the same direction so that all of the bits will cut at their mouths, for the purpose set forth.

885,145. FLUID-PRESSURE VALVE. WILLIAM F. DAVIS, Kansas City, Kans., assignor of one-half to Hugh Mathews, Kansas City, Mo. Filed Feb. 23, 1906. Serial No. 302,428.



1. A valve comprising a casing having a valve seat with an exhaust passage and a series of service ports opening through said seat, and a rotary disk-valve on said seat having a segmental exhaust channel on its face and an inlet port extending therethrough, said seat having a supply passage opening into the casing above the valve, substantially as described.

2. A valve comprising a casing with a valve seat having an exhaust passage and a series of service ports, a rotary disk-valve on said seat having a segmental exhaust channel on its face and an inlet port extending therethrough said seat having a supply passage opening into said casing above said valve seat, a valve stem extending through said casing and having a collar on its inner end engaging a seat on the inner face of said casing, said stem being connected to said valve but free to move longitudinally independently thereof and a spring in a central opening of said valve for holding said valve stem in position, substantially as described.

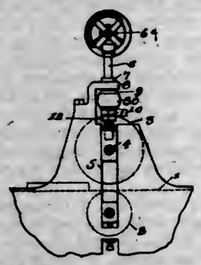
3. A valve comprising a casing with a valve seat therein having ports, a rotary disk-valve on said seat for controlling the flow through said ports, a valve stem extending through said casing, connected to said valve but movable longitudinally independently thereof, said stem having a collar on its inner end engaging a seat on the inner face of said casing, a handle on said stem and a springheld dog on said handle arranged parallel to said stem and arranged to engage a series of notches on said valve casing, substantially as described.

4. A valve comprising a casing with a valve seat therein having ports, a rotary disk-valve on said seat for controlling the flow through said ports, a valve stem extending through said casing, connected to said valve but movable longitudinally independently thereof, said stem having a collar on its inner end engaging a seat on the inner face of said casing, a handle on said stem and a springheld dog on said handle arranged parallel to said stem and arranged to engage a series of notches on said valve casing, said dog having means for holding it against twisting in said handle, substantially as described.

5. A valve comprising a casing having a supply port opening into its upper portion and a valve seat therein having ports, a rotary disk-valve on said seat for controlling the flow through said ports and a valve stem extending through the upper portion of said casing and engaging a central opening in said valve, a transverse connecting key engaging slots in said stem and said valve, said stem having a collar or shoulder engaging a seat on the inner face of said casing, substantially as described.

[Claims 6 to 18 not printed in the Gazette.]

885,146. ROLLER-SUPPORT. HENRY J. DENGLER, Rochester, N. Y. Filed Aug. 12, 1907. Serial No. 388,132.



1. The combination with a roller and an adjustable bearing therefor, of an axially movable rotary shaft for adjusting said bearing, a fixed abutment, and a yielding device carried by the shaft, and normally out of engagement with the fixed abutment but adapted to contact therewith when the shaft is moved axially.

2. The combination with a roller and an adjustable bearing therefor, of an axially movable rotary shaft for adjusting said bearing, a fixed abutment, a yielding device carried by the shaft, and a stop movable with the shaft and arranged to prevent the yielding device engaging the abutment except upon the axial movement of the shaft to carry the device to the abutment.

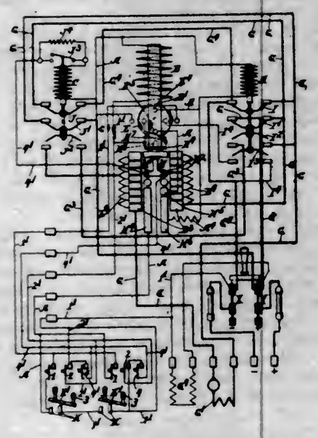
3. The combination with a roller and an adjustable bearing therefor, of a rotary shaft for adjusting said bearing, a bearing for the shaft in which the latter is movable axially and a yielding device normally out of engagement with the bearing but adapted to coöperate therewith when the shaft is moved axially.

4. The combination with a roller and an adjustable bearing therefor, of a rotary shaft for adjusting said bearing, a bearing for the shaft in which the latter is movable axially, a yielding device normally out of engagement with the bearing but adapted to coöperate therewith when the shaft is moved axially, and means for varying the compressing of the yielding device.

5. In a roller support, the combination with a roller and an adjustable bearing therefor, of an axially movable rotary shaft for adjusting said bearing, a fixed abutment, a yielding device carried by the shaft, and normally out of engagement with the fixed abutment but adapted to contact therewith when the shaft is moved axially, and means for varying the compression of the yielding device.

[Claims 6 to 9 not printed in the Gazette.]

885,147. CONTROLLING DEVICE FOR ELECTRIC MOTORS. CHARLES A. DRESSER, Chicago, Ill., assignor to G. A. Edward Kohler and Franklin W. Kohler, Chicago, Ill. Filed Oct. 24, 1903. Serial No. 178,368.



1. A controlling device for motors comprising a series of resistance contacts with resistance coils associated therewith, a movable device adapted to move therealong, a lock for said movable device having an electro magnetic control, an electro magnetic controlling device for said movable device, adapted when energized to move said movable device to cut resistance into the motor circuit, a controlling switch at a distant point for controlling said electro magnetic device, and means for reversing the motor so that the current passes through the same resistance contacts and resistances used when the motor is running forward.

2. A controlling device for motors comprising a series of resistance contacts with resistance coils associated therewith, a movable device adapted to move therealong, an electrically operated switch device in the motor circuit means for controlling said switch device from a distant point, said switch device having a controlling circuit completed by said movable device when in its maximum up position, and comprising two switches insulated from each other and adapted to be moved simultaneously, said switches adapted to make and break the motor circuit at two different points.

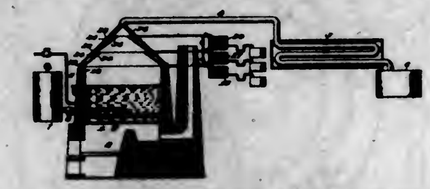
3. A controlling device for motors comprising an electrically controlled resistance in the motor circuit, controlled from a distant point, an electrically controlled switch device in the motor circuit comprising two switches insulated from each other, and adapted to be moved simultaneously, said switches adapted to make and break the motor circuit at two different points, a second electrically controlled switch device having two switches adapted to coöperate to close the motor circuit when the switches of the first switch device are open the controlling circuits for said electrically controlled switches being independent of the position of said switches.

4. A controlling device for motors comprising a series of resistance contacts with resistances associated therewith, a contact device adapted to move therealong, a controlling solenoid for said contact device, two solenoids each operating switches associated with the motor circuit, two switch devices associated with said contact device and adapted to control the circuits through both of said solenoids said switch devices adapted to be operated by means of said contact device when intermediate its maximum up and down positions.

5. A controlling device for motors comprising a series of resistance contacts with resistances associated therewith, a contact device adapted to move therealong, a controlling solenoid for said contact device, an electrically controlled switch for reversing the direction of the current through the motor armature and means for preventing this reversal except when the contact device is in its maximum up position.

[Claims 6 to 10 not printed in the Gazette.]

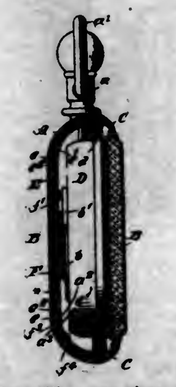
885,148. HYDROCARBON-STILL. THEODORE H. ELLIS, Baltimore, Md. Filed Dec. 4, 1906. Serial No. 346,848.



1. In a still, a receptacle for holding the material to be distilled, a gutter on the interior wall of the receptacle, and a condensing surface composed of a series of plates of different diameters mounted one over the other within the still, the lower edge of the top plate lying outside of the top edge of the next plate, and the lower edge of the bottom plate over the gutter.

2. In a still, a receptacle for holding the material to be distilled; a condensing surface composed of a series of plates mounted one above the other within the still, the lower edge of each plate lying outside of the top edge of the plate next below, so that the inside of each plate drains onto the outside of that next below it; and means for draining the lower plate of the series.

885,149. WATCHCASE. WALTER H. FITZ GERALD, New York, N. Y., assignor of one-fourth to Benjamin A. Bloch, Brooklyn, N. Y., and one-fourth to Emanuel M. Bloch, Sag Harbor, N. Y. Filed Sept. 18, 1907. Serial No. 393,428.



1. The combination with a one-piece, cup-shaped, back portion, of a screw-bezel watch-case having a closed back, of a movable cover attached to said cup-shaped back portion and between which cover and the back wall of said back portion is formed a chamber or compartment, normally closed by said cover, for holding a photograph or other thin article which may be exposed to view, by opening said cover, wthout impairing the dust-proof qualities of said case, the exterior of said cover forming the rear surface of the case and being so shaped that its contour does not project beyond the natural contour of the said backpiece, so that the thickness of the watch case is not increased by the said exposable compartment.

2. The combination with a one-piece, cup-shaped, back portion, of a screw-bezel watch-case having a closed back, of a cover hinged to said cup-shaped back portion and between which cover and the back wall of said back portion is formed a chamber or compartment, normally closed by said cover, for holding a photograph or other thin article which may be exposed to view, by opening said cover, without impairing the dust-proof qualities of said case, the exterior of said cover forming the rear surface of the case and being so shaped that its contour does not project beyond the natural contour of the said back-piece, so that the thickness of the watch-case is not increased by the said exposable compartment.

885,150. TRANSFERRING DEVICE FOR KNITTING-MACHINES. ALBERT FOSTER, Philadelphia, Pa., assignor of one-half to Powell Knitting Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Feb. 24, 1906. Serial No. 302,774.



1. In a circular knitting machine, containing both dial plate and needle cylinder, the combination of a needle groove with its walls prolonged without interruption to the knitting edge; a needle received therein having a depth greater than that of the needle groove; and a loop opener attached to and partially parallel to the side of that part of the shank of the needle which projects from the needle groove.

2. In a circular knitting machine containing both dial plate and needle cylinder, the combination of a needle groove; and a knitting needle received therein having a depth greater than that of the needle groove and having a rear portion bent upon itself and returned substantially parallel to the side of the shank of the needle to form a loop opener; such return portion being coincident with only the part of the shank of the needle which projects from the needle groove so as to leave the remainder of the needle free to be received within and supported by the needle groove.

3. In a circular knitting machine containing both dial plate and needle cylinder, the combination of a needle groove; and a dial needle attached in angular relation to the end of a pivoted jack, said dial needle having a depth greater than that of the needle groove, a portion of the end of the jack being bent forward parallel to and coincident with only the part of the side of the shank of the needle which projects from the needle groove, leaving all the remainder of the needle free to be received within and supported by its needle groove in the dial plate.

4. In a circular knitting machine containing both dial plate and needle cylinder, the combination of a needle groove; a needle received therein having a depth greater than the needle groove; a loop opener attached to and partially parallel to the side of that part of the shank of needle which projects above its needle groove, and which when the needle is received within its groove overhangs the walls thereof; in combination with a projection upon the upper side of the wall of the groove, which when the needle is thrust forward, coöperates with the side of the loop opener and holds it pressed against the side of the needle as it performs its function of opening the loop.

885,151. PAINT-REMOVER AND PROCESS OF MAKING THE SAME. FRANCIS X. GOVERS, Owego, N. Y. Filed Oct. 28, 1907. Serial No. 399,551.

1. A paint and varnish remover comprising a phenol ester, a mineral salt, a volatile solvent, a proteid and wax.

2. A paint and varnish remover comprising the products resulting from the action of a strong mineral acid upon a mixture of a phenol and a salt of an organic acid.

3. A paint and varnish remover comprising the products resulting from the action of a strong mineral acid upon a mixture of a phenol and a salt of a fatty acid.

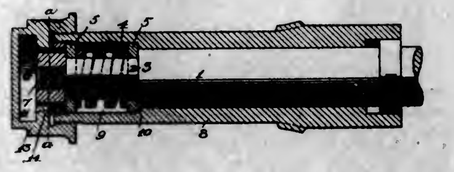
4. A paint and varnish remover comprising the products resulting from the action of a strong mineral acid upon a mixture of a phenol and an alkaline earth salt of an organic acid.

5. A paint and varnish remover comprising the products resulting from the action of a strong mineral acid upon a mixture of a phenol and an alkaline earth salt of a fatty acid.

[Claims 6 to 31 not printed in the Gazette.]

885,152. [WITHDRAWN.]

885,153. DEVICE FOR SECURING AXLE-BOXES TO AXLES. CLARENCE E. HECKMAN, Rochester, N. Y., assignor to James Cunningham, Son & Co., Rochester, N. Y., a Corporation of New York. Filed Dec. 6, 1907. Serial No. 405,302.



1. The combination with an axle and a yielding device surrounding the same, of an axle box having an internal abutment arranged to engage one end of the yielding device, and an adjustable abutment arranged within the box to engage the other end of the yielding device and movable to compensate for wear on both abutments.

2. The combination with an axle and a yielding device surrounding the same, of an axle box having an internal abutment arranged to engage one end of the yielding device and internal threads, and an adjustable abutment movable on the internal threads to compensate for wear on both abutments and arranged to engage the other end of the yielding device.

3. The combination with an axle having a reduced end, a yielding device surrounding the reduced end, and a nut securing the device in place, of an axle box surrounding the axle having an internal abutment arranged to engage one end of the yielding device, and an adjustable abutment arranged within the box to engage the other end of the yielding device and movable to compensate for wear on both abutments.

4. The combination with an axle and a yielding device surrounding the same, of an axle box having an internal abutment arranged to engage one end of the yielding device, an adjustable abutment arranged within the box to engage the other end of the yielding device, and a cap for the axle box having a portion arranged to engage the adjustable abutment to lock it in its adjusted position.

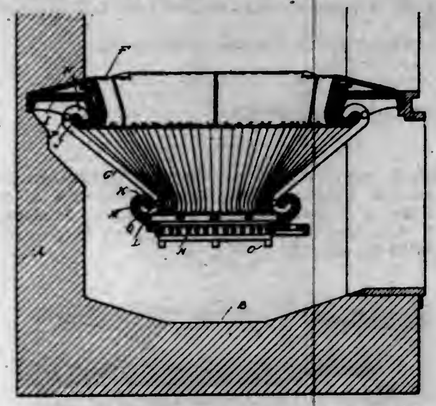
5. The combination with an axle and a yielding device surrounding the same, of an axle box having internal threads and an internal abutment arranged to engage one end of the yielding device, an adjustable abutment engaging the internal threads and arranged to engage the other end of the yielding device, and a cap for the axle box having threaded engagement with the latter, the threads being disposed in a direction opposite to the direction of the threads on the adjustable abutment, and said cap having a portion to engage the adjustable abutment to lock the latter in its adjusted position.

[Claim 6 not printed in the Gazette.]

885,154. LOTION AND TOILET WASH. JUSTIN L. HILL, Williamsport, Pa. Filed Oct. 30, 1907. Serial No. 399,802. (Specimens.)

A toilet lotion consisting of the distilled aqueous extract of hemlock four parts and sweet fern three parts, combined with twenty per cent. of alcohol substantially as described and for the purposes specified.

885,155. GRATE FOR GAS-PRODUCERS. ROBERT HILPRECHT, Lansing, Mich., assignor to Olds Gas Power Company, Lansing, Mich., a Corporation of Michigan. Filed Dec. 1, 1906. Serial No. 345,861.



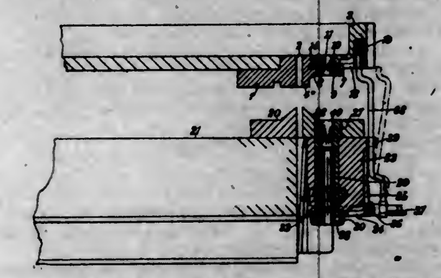
1. In a gas producer, the combination with a casing, of an annular bearing therein, a series of grate sections having a hooked engagement with said annular bearing, a ring carried by and surrounding the lower ends of said grate sections to hold them together, and a flat grate supported by said ring.

2. In a gas producer, the combination with a casing and a refractory lining therein, of an annular plate supporting said refractory lining and provided with a depending annular bearing, a series of grate sections having hooked engagement with said annular bearing, a ring carried by said grate sections for holding said grate sections together at their lower ends, and a flat grate supported by said ring.

3. In a gas producer, the combination with a casing, of a refractory lining therefor, an annular plate supporting said lining, an annular bearing depending from said plate, a series of grate bars having reversely bent hooks at their opposite ends, the upper hooks being engaged with said annular bearing, spacing means between said grate bars and an annular member carried by the lower hooks, and holding said bars together.

4. In a gas producer, the combination with a casing, of an annular bearing within said casing, a series of longitudinally S-shaped grate bars having their upper ends engaging said annular bearing, and an annular member carried by and engaging the lower ends of said bars, having a hooked engagement therewith.

885,156. LINOTYPE-MACHINE. JOHN G. HOLBOURN and HENRY A. LONGHURST, London, England, assignors to Linotype and Machinery Limited, London, England, a Company. Filed Apr. 1, 1907. Serial No. 365,665.



1. In a linotype machine, the combination of a mold and trimming knives both adapted to be adjusted for obtaining linotypes of different body dimensions, and eccentrics operatively-connected with the mold and one of the knives for effecting the said adjustments these eccentrics being in alinement with each other when the mold is in the ejecting position, and adapted to be rotated simultaneously about a common axis.

2. In a linotype machine, the combination with a mold body, a mold cap slidable on the body for varying the body dimension of the linotypes to be cast, a fixed knife adapted to trim one side of the linotypes, and a knife adjustable relatively to the fixed knife adapted to trim the other side of the linotypes, of an eccentric rotatable in the mold cap, and another eccentric rotatable in the adjustable knife, adapted to adjust these two parts, the two eccentrics being in alinement with each other when the mold is in the ejecting position, and adapted to be rotated simultaneously about a common axis.

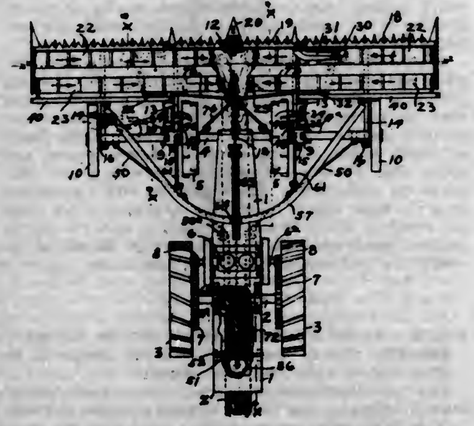
3. In a linotype machine, the combination of a mold and trimming knives both adapted to be adjusted for obtaining linotypes of different body dimensions, alined eccentrics operatively-connected with the mold and one of the knives respectively, for effecting the said adjustments, and devices operatively connected with the eccentrics adapted to lock them in their adjusted positions.

4. In a linotype machine, the combination of a mold and trimming knives both adapted to be adjusted for obtaining linotypes of different body dimensions, alined eccentrics operatively connected with the mold and one of the knives respectively, for effecting the said adjustments, notched collars fast to the eccentrics, and detents adapted to engage with and be disengaged from the notches of the collars.

5. In a linotype machine, the combination of a mold and trimming knives both adapted to be adjusted for obtaining linotypes of different body dimensions, alined eccentrics operatively connected with the mold and one of the knives respectively, for effecting the said adjustments, notched collars fast to the eccentrics, detents adapted to engage the notches of the collars, springs adapted to effect such engagement, and a device operatively connected with one of the detents and adapted to transmit motion to the other detent.

[Claims 6 and 7 not printed in the Gazette.]

885,157. CENTRAL-DELIVERY REAPER. AUGUST HOVLAND, Waubay, S. D. Filed Feb. 25, 1907. Serial No. 359,095.



1. In a central delivery reaper, the combination with cutting mechanism, of means for conveying the cut grain to the central portion of the machine, the said conveying means being spaced apart to afford a discharge passage through which the grain may be delivered in a windrow upon the ground.

2. In a central delivery reaper, the combination with cutting mechanism, of reversely and inwardly driven conveyers located back of said cutting mechanism spaced apart at their inner delivery ends to afford a discharge passage, and arranged to deliver the cut grain through said discharge passage in a windrow upon the ground, substantially as described.

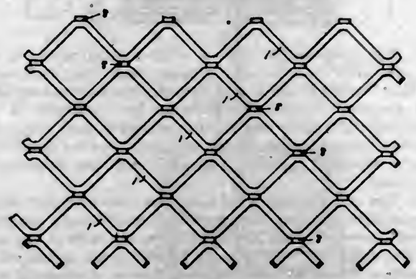
3. In a machine of the kind described, the combination with a truck, of transversely spaced platforms carried at the front portion of said truck, cutting mechanism applied to the forward portions of said platforms, and reversely and inwardly driven conveyers mounted on said platforms and arranged to deliver the cut grain in a windrow upon the ground, through passages left between the inner ends of said platform, substantially as described.

4. In a machine of the kind described, the combination with a truck, of a pair of transversely spaced platforms adjustably supported by and in front of said truck, cutting mechanism applied to the front portions of said platforms, and reversely and inwardly driven endless conveyers on said platforms, arranged to deliver the cut grain through the discharge passage formed between the inner ends of said platforms, whereby said grain is deposited in a windrow upon the ground, substantially as described.

5. In a machine of the kind described, the combination with a truck having a pivoted front axle, of a pair of transversely spaced platforms carried by the front portion of said truck and connected to said pivoted front axle for horizontal oscillatory movements therewith, cutting mechanism on the front portion of said platforms, and reversely and inwardly driven conveyers on said platforms arranged to deliver the cut grain upon the ground between the inner ends of said platforms, substantially as described.

[Claims 6 to 11 not printed in the Gazette.]

885,158. EXPANDED METAL. JULIUS KAHN, Detroit, Mich., assignor to Trussed Concrete Steel Company, Detroit, Mich., a Corporation of Michigan. Filed Oct. 24, 1907. Serial No. 398,865.



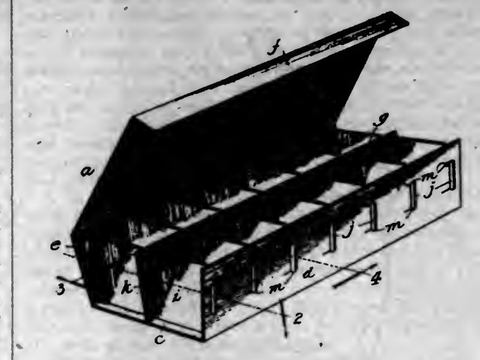
1. A sheet of expanded metal consisting of a series of longitudinally extending rods, all in the same plane, each rod being bent to zigzag between adjacent rods to which it is connected.

2. An expanded metal sheet comprising a series of rods and tongues connecting the same, the rods being so bent that a portion of each rod with its adjoining tongue will form a part of a practically continuous diagonal line across the sheet of expanded metal.

3. An expanded metal sheet, formed from a flat rolled section comprising rods and connecting webs, the webs being slotted to leave tongues connecting the rods, the tongues on one side of each rod being opposite the middle portion of the slot on the other, the sheet comprising a series of four sided meshes, all the parts of which are in one plane.

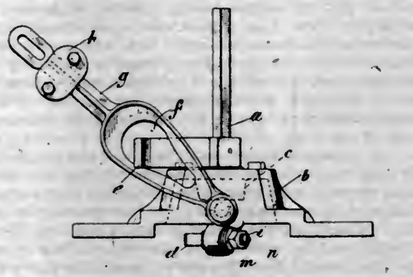
885,159. CARTON. BENJAMIN KEYS, Chicago, Ill. Filed Oct. 18, 1905. Serial No. 282,548.

1. A compartment carton comprising a rectangular sheet bent to form the bottom and side walls, end walls having tongues, said tongues being locked in slits in both side walls, and transverse partitions having tongues at one end only locked into slits in one of the side walls, the other end of each of said transverse partitions abutting against the other side wall.



2. A compartment carton comprising a rectangular sheet bent to form the bottom and side walls, end walls having tongues, said tongues being locked in slits in both side walls, and transverse partitions having tongues at one end only locked into slits in one of the side walls, the other end of each of said transverse partitions being free.

885,160. SWITCH-STAND. WILLIAM C. KIDD, Suffern, N. Y., assignor to Standard Equipment Company, Mahwah, N. J., a Corporation of New Jersey. Filed Dec. 20, 1907. Serial No. 407,386.



1. In a switch stand, the combination of a vertical shaft adapted to be operatively connected with a switch, an arm projecting therefrom, and an operating lever having a slot through which the arm extends.

2. In a switch stand, the combination of a vertical shaft adapted to be operatively connected with a switch, an arm rigidly secured to the shaft and projecting therefrom, and an operating lever having a weighted arm and a slot through which the arm upon the shaft extends.

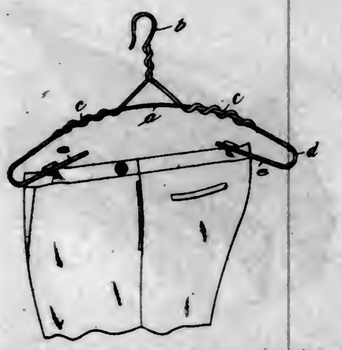
3. In a switch stand, the combination of a vertical shaft, means upon the bottom of the shaft for operative connection with a switch, an arm projecting from the shaft above said means, and an operating lever having a slot through which said arm extends.

4. In a switch stand, the combination of a vertical shaft, a base through which said shaft extends, an arm projecting from the shaft above the base, and an operating lever pivoted to the lower part of the base and having a slot through which said arm extends.

5. In a switch stand, the combination of a vertical shaft, a base in which said shaft is journaled, means upon the shaft and below the base for operative connection with a switch, an arm projecting from the shaft above the base, and an operating lever having a slot through which the arm extends.

[Claims 6 to 16 not printed in the Gazette.]

885,161. GARMENT-HANGER. CHARLES H. KINGSBURY, Danielson, Conn., assignor, by mesne assignments, to Harriette L. Kingsbury, Danielson, Conn. Filed Dec. 14, 1907. Serial No. 406,471.



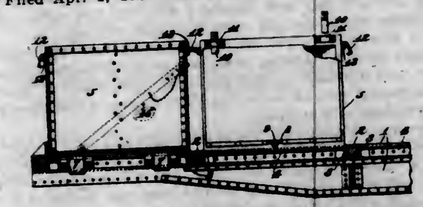
1. A garment hanger having an upper portion adapted to support coats and the like and having loops connected with the outer ends of said upper portion and extending inwardly and upwardly from below said ends, said loops being adapted to support a garment at all points along them whereby a garment supported by the two sets of loops may be adjusted to different heights on said loops.

2. A garment hanger comprising an upper portion having outwardly extending shoulder pieces, and a set of loops integrally connected with the outer end of each of said shoulder pieces and extending upwardly and inwardly therefrom, said loops of each series being in an inclined plane.

3. A garment hanger having a series of loops located below the under side thereof and spaced from the main portion of the garment hanger, said loops being continuous with each other and being located in a plane, whereby buttons, loops or bindings of garments may be inserted in said loops either from the inside or outside of the garment hanger and may be held at any point between the ends of the loops.

4. A garment hanger consisting of a single integral piece of wire comprising an upper portion having a supporting hook thereon and a main frame extending outwardly from said hook in two directions so as to constitute two arms, each of said arms comprising two strands of the wire twisted together, each of said strands extending outwardly and downwardly from the end of the arm to form a shoulder piece and then extending inwardly therefrom and meeting in a series of inclined loops.

885,162. FREIGHT-CAR. HENRY W. KIRCHNER, St. Louis, Mo., assignor to River & Rail Transportation Company, Guthrie, Okla., a Corporation of Oklahoma. Filed Apr. 1, 1907. Serial No. 365,793.



1. A freight car comprising a body having a plurality of seats for boxes and a plurality of boxes removably mounted on said seats, said car having a skeleton body comprising longitudinal and transverse members arranged to inclose the lower portion of said boxes and constitute lateral supports therefor.

2. A freight car comprising a body having a plurality of seats for boxes and a plurality of boxes removably mounted on said seats, said car having a skeleton body comprising longitudinal and transverse members arranged to inclose the lower portion of said boxes and to constitute lateral supports therefor, and means for anchoring said boxes in position.

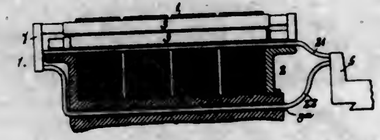
3. A freight car comprising a body portion having pockets therein, a plurality of removable boxes adapted to fit in said pockets and means for anchoring said boxes in position, said means comprising fastening devices for fastening the boxes to each other and inclined links for securing the upper portion of the end boxes to the end portion of the body of the car.

4. A freight car comprising a body having a plurality of seats for boxes and a plurality of boxes removably mounted on said seats, said car having a skeleton body comprising longitudinal and transverse members arranged to inclose the lower portions of said boxes and to constitute lateral supports therefor, said boxes being secured together by detachable fastening devices.

5. A freight car comprising a body having a series of box retaining seats, and a plurality of interchangeable boxes removably mounted on said seats, said boxes having fastening devices on two opposite sides arranged to coöperate with similarly arranged fastening devices upon adjacent boxes.

[Claims 6 to 15 not printed in the Gazette.]

885,163. ARMATURE-WINDING FOR HIGH-SPEED DYNAMO-ELECTRIC MACHINES. BENJAMIN G. LAMME, Pittsburg, Pa., assignor to Westinghouse Electric & Manufacturing Company, a Corporation of Pennsylvania. Filed June 2, 1905. Serial No. 263,479.



1. The combination with a slotted armature core and a commutator cylinder, of a winding comprising a plurality of coils located in the armature slots, conductors located in the armature slots for connecting the terminals of the coils with alternate commutator segments, and other conductors located outside of the armature core for connecting the terminals of the coils with the remaining commutator segments.

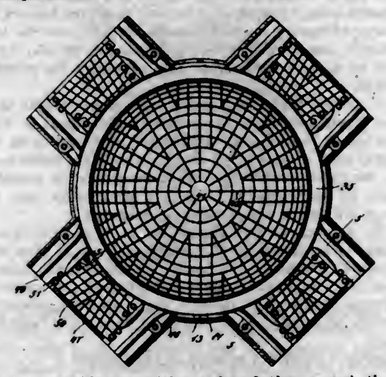
2. The combination with a slotted armature core and a commutator cylinder, of a winding comprising a plurality of coils located in the armature slots, the ends of the coils remote from the commutator cylinder being connected to alternate commutator segments by means of conductors located in the armature slots and also by means of conductors located outside of the magnetizable portion of the armature core.

3. The combination with a slotted armature core and a commutator cylinder, of a winding comprising a plurality of coils located in the armature slots, the ends of the coils remote from the commutator cylinder being connected to commutator segments by means of comparatively high resistance conductors located in the armature slots and by comparatively low resistance conductors located outside of the magnetizable portion of the armature core.

885,164. TURN-TABLE. WILLIAM MAGNUSON, Michigan City, Ind. Filed Dec. 2, 1907. Serial No. 404,753.

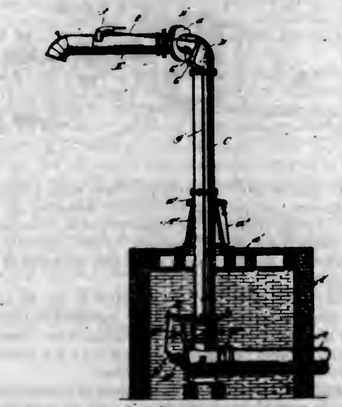
1. A turn-table comprising a circular track, a bearing, a frame rotatably mounted on said bearing, rollers carried by the frame and traveling on the track, a pivot-bearing on the frame, and a platform rotatably mounted on the pivot and engageable with the rollers.

2. A turn-table comprising a circular track, a bearing inside the same, a frame rotatably mounted on said bearing, rollers carried by the frame and traveling on the track, a pivot-bearing on the frame and having an oil-hole communicating with the aforesaid bearing, a platform rotatably mounted on the pivot and engageable with rollers, said platform having an oil-hole communicating with the oil-hole of the pivot-bearing, and a closure for the oil-hole of the platform.



3. A turn-table comprising a foundation, a curb thereon having at the bottom an outwardly presented flange, approach-rails, means for adjustably fastening the rails to the flange, and a platform rotatably mounted on the curb.

885,165. WATER-COLUMN. ALBERT K. MANSFIELD, Batavia, Ill. Filed July 21, 1906. Serial No. 327,134.



1. In a water column, the combination with a vertical stand pipe, of an elbow secured to and forming part of said stand-pipe, a laterally projecting delivery pipe pivotally connected to said elbow by a joint, said joint comprising members relatively rotatable in a plane intersecting and inclined to the axial line of the delivery pipe and approximately parallel to the axis of the stand pipe.

2. In a water column, the combination with a vertical stand pipe, of a laterally projecting delivery pipe, relatively rotatable coöperating flanges formed on the adjoining ends of said pipes, the engaged surfaces of said flanges being in a plane which intersects and is inclined to the axial line of one of said pipes and is approximately parallel to the axis of the vertical pipe, and means for uniting said flanges to permit relative rotary movement.

3. In a water column, the combination with a vertical stand pipe, of a laterally projecting delivery pipe pivotally connected to the stand pipe by a joint, said joint comprising members relatively rotatable in a plane intersecting and inclined to the axial line of said delivery pipe, and approximately parallel to the axis of the vertical pipe, means for limiting the movement of said delivery pipe relatively to said stand pipe, and means for balancing the weight of said delivery pipe.

4. In a water-column, the combination with a vertical stand-pipe, of a laterally projecting delivery-pipe, relatively rotatable coöperating flanges on the adjoining ends of said pipes, the engaged surfaces of which are in a plane which intersects and is inclined to the axial line of said delivery-pipe, means for uniting said flanges to permit relative rotary movement, a bracket secured to the flange on said delivery pipe, and means connected to said bracket to counter-balance the weight of said delivery-pipe, a lug on said bracket, and stops on the flange of said stand-pipe located in the path of said lug to limit the movement of said delivery pipe.

5. In a water-column, the combination with a vertical stand-pipe, of a laterally projecting delivery-pipe, relatively rotatable coöperating flanges on the adjoining ends of said pipes, the engaged surfaces of which are in a plane which intersects and is inclined to the axial line of said delivery pipe and parallel to the axis of the vertical pipe, a ring on the periphery of one of said flanges, surrounding the other flange, and plates secured to said ring overlying the outer surface of the inclosed flange.

[Claims 6 to 11 not printed in the Gazette.]

885,166. GAS-OPERATED GUN. WILLIAM MASON, New Haven, Conn., assignor to Winchester Repeating Arms Co., New Haven, Conn., a Corporation. Filed Sept. 11, 1905. Serial No. 277,927.



1. In a gas-operated gun, the combination with the barrel and the breech-mechanism thereof, of a cleaning-sleeve mounted upon the said barrel, a guide-sleeve concentric with the said cleaning-sleeve and movable longitudinally over the same, a gas-chamber carried by the said guide-sleeve at the forward end thereof and formed at its forward end with a bullet-opening, and connection between the guide-sleeve and breech-mechanism.

2. In a gas-operated gun, the combination with the barrel and the breech-mechanism thereof, of a longitudinally movable sleeve-like gas-chamber located at the muzzle end of the barrel and having a bullet-opening, a gas-check located within the forward end of the said chamber and coacting with the muzzle end of the barrel to confine the gases of explosion and to center the said chamber and connection between the said chamber and breech-mechanism.

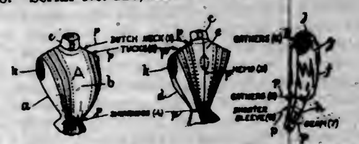
3. In a gas-operated gun, the combination with the barrel and the breech-mechanism thereof, of a cleaning-sleeve mounted upon the said barrel and having an external spiral rib forming a spiral gas-escape channel, a guide-sleeve concentric with the said cleaning-sleeve and longitudinally movable over the same, a gas-chamber carried by the guide-sleeve at the forward end thereof, and connection between the guide-sleeve and breech-mechanism, whereby a portion of the gas entering the gas-chamber is allowed to escape rearward through the said spiral gas-escape channel.

4. In a gas-operated gun, the combination with the barrel and the breech-mechanism thereof, of a sleeve-like gas-chamber located at the muzzle end of the barrel and formed at its forward end with gas-escape openings and at its rear end with cleaning openings through which the powder residues are forced by the escaping gas, and means connecting the said gas-chamber with the breech-mechanism of the gun.

5. In a gas-operated gun, the combination with the barrel and the breech-mechanism thereof, of a sleeve-like gas-chamber located at the muzzle end of the barrel, and means located upon the exterior surface of the said end of the barrel for removing the powder residues from the walls of the said chamber, and connection between the said chamber and the breech-mechanism.

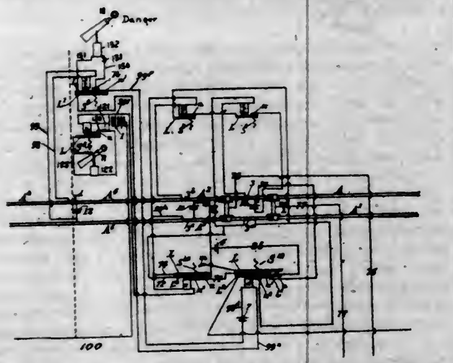
[Claims 6 to 19 not printed in the Gazette.]

885,167. GUIDE-CHART FOR GARMENT-PATTERNS. ALICE A. MAXWELL, New York, N. Y. Filed Jan. 11, 1908. Serial No. 410,342.



A guide chart for garment patterns, provided with perspective views of garment sections as they would appear when completed and having conventional signs and titles applied to said views indicating the location of the details on said garment sections, said chart also being provided with paragraphs of directions bearing conventional signs and titles corresponding to those on the views, whereby a direct comparison may be made between the views and directions in making the garment.

885,168. AUTOMATIC SIGNALING DEVICE. GUY MILBURN, Baltimore, Md., assignor of one-half to Willard G. Milburn, Baltimore, Md. Filed May 11, 1906. Serial No. 316,380.



1. A signaling system in which the track sections are divided into insulated blocks, and electro-magnetically operated means under the control of an engine in one block for effecting the display of a danger signal in the next adjacent block, and a caution signal in the second block, a signal on each engine, the last said signal being continuously connected with the block conductors, and a source of energy normally disconnected from the block conductors and arranged to be connected thereto by an engine in a block other than that through which the signal is to be operated.

2. A signaling system divided into insulated blocks, caution and danger semaphores in each block, electro magnets normally holding the semaphores in non-signaling positions, and circuits in which said electro-magnets are disposed, the circuits being controlled by an engine to effect the display of a danger signal in the block next adjacent to that in which the engine is located, and a caution signal in the second block, a signal means on each engine, said signal means being continuously connected with the block conductors and a source of energy normally disconnected from the block conductors and arranged to be connected thereto by an engine in a block other than that through which the signal is operated.

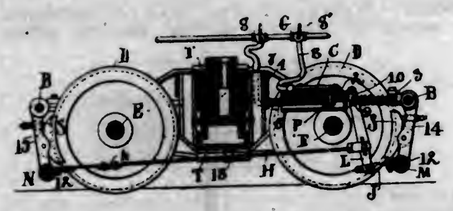
3. In train signaling rails divided into insulated blocks, electro-magnets arranged in each block and under the control of trains which have passed beyond the block in which they are located, a source of energy arranged in each block and arranged to be connected to one of the block conductors, a signal means on each engine, said signal means being continuously connected with the block conductors, and a source of energy normally disconnected from the block conductor and arranged to be connected thereto by an engine in a block other than that to which the signal is operated.

4. A railway signaling system divided into blocks, a signal or alarm means on each engine, said signal or alarm means being continuously connected with the block conductors, and a source of energy normally disconnected from the block conductors and arranged to be connected thereto, by an engine or train in a block other than that through which the signal is to be operated.

5. In railway signaling systems, rails divided into insulated blocks, a source of energy arranged in each block and normally disconnected from the rails, means under the control of an engine through a distant block for connecting the source of energy to the rail, and a signaling circuit on the train arranged to be energised from such source of energy.

[Claims 6 to 11 not printed in the Gazette.]

885,169. PNEUMATIC BRAKE. WILLIAM H. MILLER, Cleveland, Ohio. Filed Sept. 19, 1907. Serial No. 393,596.



1. In car brakes, the car truck provided with a complete brake equipment comprising a cylinder mounted to slide lengthwise within limits, a stationary piston therein and means to supply air under pressure to the cylinder, and brake mechanism having initial actuating connection with said cylinder.

2. A brake equipment for cars adapted to use an expansive fluid and comprising a slidably mounted cylinder, a stationary piston therein, and an actuating lever connected with one end of said cylinder and draw-bars for the brake engaged with the other end of said lever.

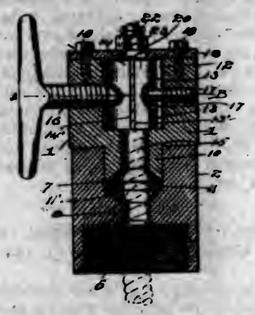
3. A brake equipment for cars adapted to employ an expansive fluid, comprising a cylinder, a pair of parallel supports for the said cylinder at the sides thereof and springs on said supports pressing against the front end of said cylinder to hold the same in open relations, and a stationary piston projected into said cylinder.

4. In car brakes, a cylinder adapted to employ an expansive fluid and parallel supports upon which said cylinder is mounted, springs upon said supports to hold said cylinder in open relation, a fixed piston working in said cylinder, an actuating lever operatively connected with said cylinder at one end and draw-bars connected with the other end of said lever at different distances from the end thereof.

5. In brake mechanism for cars, a car truck, a brake equipment for said truck comprising a brake beam for each set of wheels, brake-bars connected with said beams at one end and an operating lever to which said bars are connected at their outer ends, in combination with a sliding cylinder having said lever engaged therewith, a stationary piston operating said cylinder and a pressure fluid connection for said cylinder.

[Claims 6 to 9 not printed in the Gazette.]

885,170. WELL-DRILLING APPARATUS. CHARLES MILLIRON, Bartlesville, Okla., assignor of one-half to American Well & Prospecting Company, Corsicana, Tex., a Corporation of Texas. Filed Nov. 23, 1906. Serial No. 344,768.



1. A device of the character described comprising a casing formed with a hollowed out portion, clamping means conforming to the contour of the hollowed out portion of said casing positioned in said casing, and a plurality of set screws for operating said clamping means.

2. A drilling head comprising a casing, a plurality of loosely arranged clamping members formed with gripping faces positioned therein, and a plurality of set screws for adjusting and clamping said clamping means.

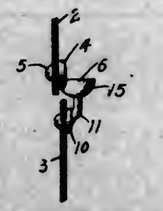
3. A drilling head comprising a casing, means for securing same in position, a pair of clamping members loosely mounted in said casing, means for adjusting the position of one of said clamping members and holding the same in its adjusted position, and a thumb screw for forcing the other of said clamping members toward the first mentioned clamping member.

4. A drilling head comprising a casing, means for securing the same in position, a plurality of clamping members mounted in said casing, one of said members being provided with an elongated depression, means passing through said casing and engaging said depression for guiding and adjusting said member, and means for forcing the other of said clamping members toward said member formed with said depression.

5. A drilling head comprising a casing, a plurality of clamping members loosely positioned in said casing, means for regulating the position of one of said members for grasping various size cables, and a set screw for forcing the other of said clamping members toward the one held in a set position.

[Claim 6 not printed in the Gazette.]

885,171. FASTENING DEVICE. JOHN J. O'CONNELL, Lima, N. Y. Filed Sept. 27, 1907. Serial No. 394,809.

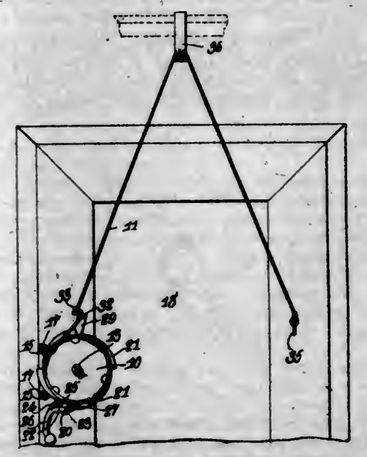


1. A fastening device comprising a plate having an outwardly projecting lug provided with a socket having its axis parallel with said plate and said socket tapering from one end towards the other end, and said lug having a hole extending through it from said latter end of the socket and its wall having a longitudinal slot extending from end to end thereof, a second plate having a shank terminating in a head that is adapted to enter the larger end of said socket but is too large to pass entirely therethrough, and said shank being adapted to swing outwardly and upwardly through said slot on said head as a pivot to separate one plate from the other, and said shank having a sufficient longitudinal movement in said socket to permit said outward and upward swinging movement.

2. A fastening device comprising a plate having an outwardly projecting lug provided with a vertical socket, said socket having an opening on one side extending through the wall of said lug, a second plate having a shank that is adapted to enter said opening and fit within said socket and a spring arranged within said socket and having spring ends that project into said passage and into the path of said shank, substantially as described.

3. A fastening device comprising a plate having an outwardly projecting lug provided with a socket having an annular groove in its inner surface and an opening extending through the wall of said lug, and the walls of said lug having recesses on each side of said opening, a spring adapted to fit within the groove in said socket and having curved ends to enter said recesses, and a second plate having a shank to pass through said opening and engage and compress said spring ends, and said shank having also a head to fit within said socket.

885,172. PICTURE-HANGER. HOMER N. PATRICK, Sheffield, Ala. Filed Apr. 19, 1907. Serial No. 369,108.



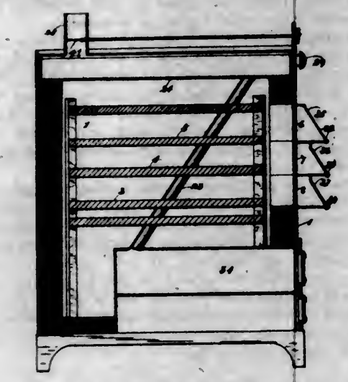
1. A picture-hanger comprising a base, a spring-actuated drum mounted thereon and having a ratchet, a pivoted dog on the base engageable with the ratchet, and a cord-guide pivoted to the base to swing with the cord, the pivot of the cord-guide being parallel to the axis of the drum.

2. A picture-hanger comprising a base, a spring-actuated drum thereon having a ratchet, an arm projecting from the base, and a pawl engageable with the ratchet, said pawl comprising a head which is pivoted to the arm and has an offset portion provided with an opening through which the arm passes, and an operating lever projecting from the head on one side of its pivot.

885,173. BAKING-OVEN. IGNAZ H. PAWLICK, San Francisco, Cal. Filed Jan. 14, 1907. Serial No. 352,070.

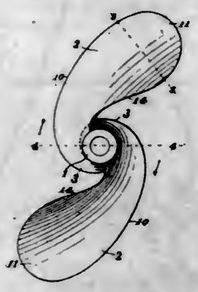
In a baking oven, the combination of a casing having doors at the front thereof and an open top, a furnace inside the casing and projecting above the bottom thereof, a flue extending from each side of the furnace to a flue at each side of the casing said latter flues extending upwardly and forwardly and spaced from the casing and shelves, a hollow cover into which the inclined flues extend, an angle iron rack of less superficial area than the

inside of the casing, said rack being free from the casing and provided with a series of shelves and without sides whereby the free circulation of the air from the flues and



furnace across the shelves is not impeded, and heat deflecting shelves above and below the baking shelves respectively and carried by the rack.

885,174. PROPELLER-WHEEL. HARRY J. PERKINS, Grand Rapids, Mich., assignor of one-third to Frederick L. Perkins and one-third to Charles E. Perkins, Grand Rapids, Mich. Filed Sept. 22, 1906. Serial No. 335,727.



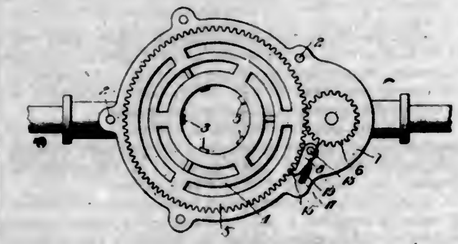
1. A propeller wheel, comprising a hub, and a blade whose forward edge when projected on a plane perpendicular to the axis commences at a tangent to the surface of the hub, and extends outward therefrom in a substantially harmonic curve for 180 degrees, and thence is prolonged outward in an arc having a radius substantially the same as the radius of the entire wheel and with its center on a line struck from the outer end of said curve and perpendicular to a line tangential to said curve at its outer end.

2. A propeller wheel, comprising a hub, and a blade whose forward edge when projected on a plane perpendicular to the axis, commences tangential to the hub, thence extends spirally around the hub in a harmonic curve for 180 degrees, and thence is prolonged in a curve having a radius equal to the radius of the entire wheel and with its center on a line struck from the outer end of said curve and perpendicular to a line tangential to said curve at its outer end, said edge being curved rearward in substantially a cycloidal curve when projected on a plane parallel to the axis.

3. In a propeller wheel, a hub, and a blade whose forward edge when projected on a plane at right angles to the axis begins tangential to the surface of the hub and thence extends spirally around the same in substantially a harmonic curve to a point distant from the center one-third the radius of the entire wheel, and thence is prolonged in an arc having a radius substantially equal to the radius of the entire wheel and with its center on a line struck from the outer end of said curve and perpendicular to a line tangential to said curve at its outer end.

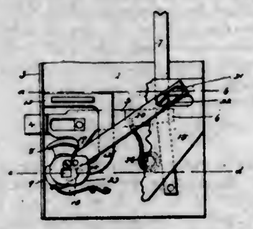
4. In a propeller wheel, a hub, and a blade whose forward edge when projected on a plane at right angles to the axis commences tangential to the surface of the hub, thence extends spirally outward in a harmonic curve to a point distant from the center one-third of the radius of the wheel, and from thence is prolonged outward in an arc of substantially the same radius as the entire wheel and with its center on a line struck from the outer end of said curve and perpendicular to a line tangential to said curve at its outer end, the end of said blade being prolonged in a semicircular outline having a radius of substantially one-fourth of the entire wheel, and the rear edge of said blade being of a reverse curved form and joining tangentially the end curve and the hub.

885,175. PIPE-THREADING MACHINE. HERMAN L. E. PETERSON, Elgin, Ill. Filed June 17, 1907. Serial No. 379,460.



A die-stock having a rotary die-carrier, gear teeth on said die-carrier, a pinion having teeth in engagement with the gear teeth on the carrier, means whereby the pinion may be rotated, and a locking device adapted to lock the rotary carrier or unlock the same, substantially as specified.

885,176. COMBINED LOCK AND LATCH FOR VEHICLE-DOORS. FRANK P. PFLEGHAR, New Haven, Conn., assignor to The English & Mersick Co., New Haven, Conn., a Corporation. Filed Dec. 23, 1907. Serial No. 407,719.

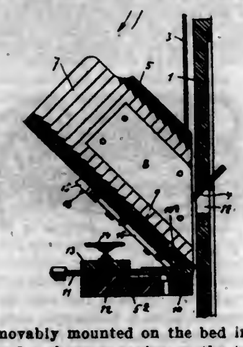


1. In a combined lock and latch for vehicle doors, the combination with the locking bolt and a latch, an operating lever in engagement with said latch, and connections between the locking bolt and the operating lever, substantially as described.

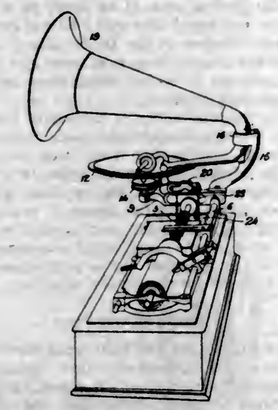
2. In a combined lock and latch for vehicle doors, the combination with the latch bolt and locking bolt, of an operating lever in engagement with said latch, and a link pivotally connected with said locking bolt and connected with said operating lever, substantially as described.

885,177. WOOD-CHIPPER. ALBERT M. POWELL, Carthage, N. Y., assignor to Carthage Machine Company, Carthage, N. Y. Filed July 25, 1907. Serial No. 385,471.

The combination in a chipping machine of a revoluble disk presenting a plain circular face, a cutter projecting from the face, a fixed feed spout arranged on an incline and opening against the disk face, a slotted bed at the lower delivery end of the spout, a cutter plate mounted on the bed in the slot, a cutter plate adjusting device detachably and removably mounted on the bed in the outer end of the slot, and a clamp engaging on the top of the cutter plate and holding it to the bed, substantially as set forth.



885,178. ATTACHMENT FOR TALKING-MACHINES. EMIL PRAZAK, Elizabeth, N. J. Filed May 10, 1907. Serial No. 372,865.



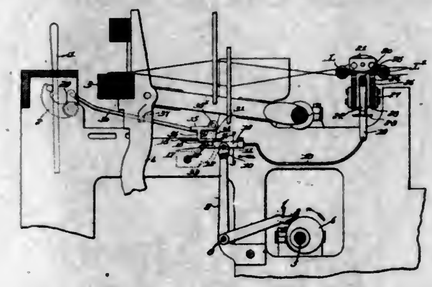
1. In an attachment for talking machines, the combination with the arbor center and guide rod of a phonograph, of a frame with perforations adapted to fit the ends of the said arbor and guide rod, a rotating disk, a pulley on the shaft of the disk and means connected with the motor of the phonograph for driving the pulley.

2. In an attachment for talking machines, the combination with a phonograph, of an arbor center, a guide rod, extensions on the arbor and guide rod, a frame adapted to be secured to said extension and braced against the adjacent side of the phonograph, a rotating plate adapted to carry disk records, a reproducer and an amplifying horn carried by the frame, and means for conveying motion from the motor of the phonograph to the rotating plate.

3. In an attachment for talking machines, the combination with a phonograph having an arbor and a guide rod, of extensions to the arbor and the guide rod, a frame adapted to be carried by the extensions, a rotating plate for the record, a reproducer, an amplifying horn, a pulley on the shaft of the plate, a belt connecting the pulley of the motor of the phonograph, and idlers directing the passage of the belt.

4. In an attachment for talking machines, the combination with a phonograph having an arbor and guide rod, of a frame adapted to be carried by the arbor and guide rod, a rotating plate for a disk record, a ball bearing support on the frame for the plate, a reproducer, an amplifying horn pivoted in the frame, rotating means on the shaft of the plate, and means connecting the rotating means with the motor of the phonograph so that the record of the same may be operated simultaneously with the disk record.

885,179. WARP STOP-MOTION FOR LOOMS. ALONZO E. RHOADES, Hopedale, Mass., assignor to Draper Company, Hopedale, Mass., a Corporation of Maine. Filed Aug. 24, 1907. Serial No. 389,928.



1. In a loom having a lay, and a bunter movable therewith, a shipper, and a releasing device therefor, in combination, stop-motion detectors normally suspended from intact warp-threads, a normally quiescent dog operatively connected with the releasing device, to actuate the same when engaged by the bunter, a normally moving controller in sliding engagement with the dog, and means to effect a change in the position of the controller when a detector is released by its warp-thread, to thereby move the dog into the path of the bunter.

2. In a loom having a shipper, in combination, shipper-releasing means including a normally quiescent and inoperative member, a vibrating member to at times cooperate therewith and effect the release of the shipper, a normally moving controller in sliding engagement with and supporting the quiescent member, and means to effect a change in the position of the controller and thereby cause the coöperation of the vibrating member and the normally quiescent member by or through failure of a warp-thread.

3. In a loom, in combination, stop-motion controlling detectors suspended from intact warp-threads, a shipper, releasing means therefor including a normally quiescent and inoperative dog, a vibrating bunter to coöperate with the dog when operatively positioned and effect the actuation of the shipper-releasing means, a normally moving controller in sliding engagement with the dog, and means to effect a change in the position of the controller and thereby operatively position the dog with respect to the bunter when a detector is released by its warp-thread.

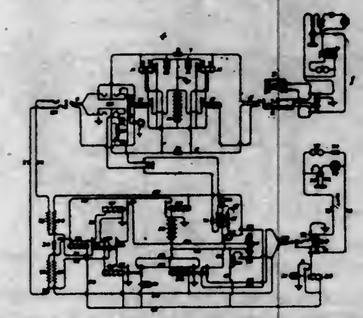
4. In a loom, in combination, stop-motion controlling-detectors suspended from intact warp-threads, a shipper, releasing means therefor including a normally quiescent and inoperative dog, and a rocking carrier upon which it is pivoted, a vibrating bunter to engage the dog when operatively positioned and rock the carrier to effect release of the shipper, a normally reciprocating controller in sliding engagement with and supporting the dog in inoperative position, and means acting through the controller to lift the dog into the bunter path when a detector is released by its warp-thread.

5. In a loom, in combination, stop-motion detectors suspended by intact warp-threads, a vibrating feeler to engage and be arrested by a released detector, a controller connected with and reciprocating in unison with the movement of the feeler, a shipper, releasing means therefor including a normally quiescent and inoperative dog supported by and in sliding engagement with the controller, a bunter on a moving part of the loom, an actuator, a slip connection between it and the controller, to effect reciprocation of the controller and vibration of the feeler, arrest

of the latter stopping reciprocation of the controller and disconnecting it from the actuator, continued movement of the latter lifting the controller to thereby move the dog into the path of the bunter.

[Claims 6 to 11 not printed in the Gazette.]

885,180. TELEPHONE TRUNKING SYSTEM. EDWIN H. RUPE, Chicago, Ill., assignor to Kellogg Switchboard & Supply Company, Chicago, Ill., a Corporation of Illinois. Filed Nov. 15, 1906. Serial No. 343,540.



1. In a telephone system, the combination with a cord circuit, of a ringing key associated with the cord circuit, a plurality of jacks of different character with which the cord may be connected, and means depending upon the character of the jack with which the cord circuit is connected for governing the connection with said key, substantially as described.

2. In a telephone system, the combination with a cord circuit, of a source of ringing current, a ringing key, a plurality of jacks of different character with which the cord may be connected, and means depending upon the character of the jack with which the cord circuit is connected for governing the connection of the ringing current source with the ringing key, substantially as described.

3. In a telephone system, the combination with a cord circuit, of a ringing key, and a relay, the actuation of which depends upon the character of the jack with which the cord is connected, for governing the connection with said key, and jacks of different character with which the cord may be connected substantially as described.

4. In a telephone system, the combination with a cord circuit, adapted to connect either with a subscriber's line or a trunk line, of a source of ringing current, a ringing key, and a relay controlling the connection of said source with said key, the actuation of said relay depending upon the character of line with which the cord is connected, substantially as described.

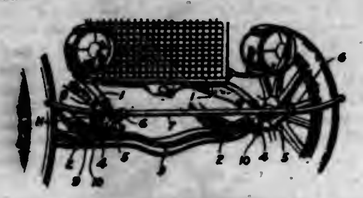
5. In a telephone system, the combination with a cord circuit, of jacks of different character with which the cord may be connected, a source of ringing current, a ringing key, a relay for controlling the connection of the ringing current with the key, and means depending upon the character of the jack with which the cord circuit is connected for controlling said relay, substantially as described.

[Claims 6 to 17 not printed in the Gazette.]

885,181. AUTOMOBILE-BUFFER. JAMES H. SAGER, Rochester, N. Y. Filed Feb. 21, 1908. Serial No. 417,190.

1. In an automobile buffer, a horizontal buffer rod, lever means attached to said rod and pivoted to the frame of the automobile on an axis in a substantially vertical plane and projecting at an angle to said plane from the pivotal axis to the attachment thereof to said rod, a spring put under stress by movement of the lever around its pivot, and a spring support attached to said automobile and in convenient proximity to said lever.

2. In an automobile buffer, a horizontal buffer rod, a pair of levers attached to said rod and pivoted to the frame of the automobile on a horizontal axis and projecting at an angle to a horizontal plane from the pivotal axis to the attachment of said lever to said rod, a spring supporting bar and guide for each lever attached to the frame of the automobile, and a spring carried by each supporting bar and put under stress by movement of the lever around its pivot.



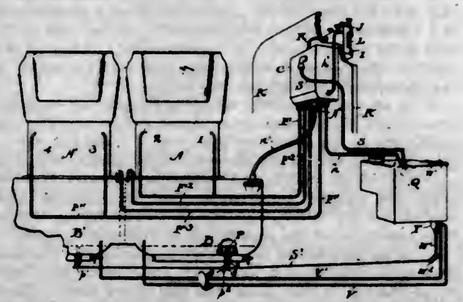
3. In an automobile buffer, a horizontal buffer rod, a pair of levers attached to said rod and pivoted to the frame of the automobile on a horizontal axis and projecting at an angle to a horizontal plane from the pivotal axis to the attachment of said lever to said rod, a spring supporting bar attached to the frame of the automobile, and a spring coiled around said bar and pressing at one end on said lever and at the other end on said bar.

4. In an automobile buffer, a horizontal buffer rod, a pair of elbow levers pivoted to the front extremity of an automobile frame and having front arms projecting upward from the pivotal axis at an angle to a horizontal plane and carrying said buffer rod on their front ends, a spring support attached to the frame of said automobile and in convenient proximity to said lever, and a spring on said support adapted to be put under stress by movement of the lever around its pivot.

5. In an automobile buffer, a horizontal buffer rod, a pair of elbow levers pivoted to the front extremity of the automobile frame and having front arms projecting upward from the pivotal axis at an angle to a horizontal plane and carrying said buffer rod on their front ends, a spring support attached to the frame of said automobile and passing through the rear arm of said lever, and a spring coiled around said support and pressing at one end on said lever and at the other end on said support.

[Claims 6 to 8 not printed in the Gazette.]

885,182. LUBRICATING SYSTEM FOR MOTOR-CARS. CHARLES SCHMIDT, Cleveland, Ohio, assignor to The Peerless Motor Car Company, Cleveland, Ohio, a Corporation of West Virginia. Filed Dec. 30, 1907. Serial No. 408,452.



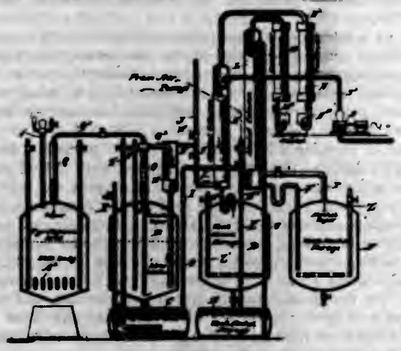
1. In a lubricating system for motor cars, the combination with an engine and its crank case, a mechanical oiler which includes a main suction pump and several oil forcing pumps, operating mechanism for said pumps, an oil chamber above said oil forcing pumps, means for delivering regulated quantities of oil from said chamber to the inlet side of said pumps, pipes connecting the outlet side of said pumps with the engine cylinder and bearings in the crank case, an oil storage tank located above the required level of the oil in said crank case, a valve controlled pipe connecting said storage tank with the crank case, a pipe connecting said storage tank with the inlet side of the main pump, a duct connecting the outlet side of said pump with said oil chamber, and means for conducting the overflow from said chamber back into said storage tank.

2. In a lubricating system for motor cars, the combination of the engines and crank cases, a tank containing a main pump and several oil forcing pumps and operating mechanism therefor, an oil chamber located above said tank, means for delivering regulated quantities of oil from said chamber to the inlet side of said oil forcing pumps, pipes connecting the outlet sides of said oil forcing pumps with the engine cylinders and with bearings in the crank cases, an overflow pipe leading from said chamber to said tank, an oil storage tank located in a plane above the required level of oil in said crank cases, two pipes connecting said storage tank with the two crank cases, a two-way valve for controlling the flow of oil through said pipes, a pipe connecting said storage tank with the inlet side of the main pump, a duct connecting the outlet side of said pump with said oil chamber, and an overflow pipe connecting the oil tank first mentioned with the oil storage tank.

3. In an automobile, the combination of an oil storage tank, a crank case, a pipe connecting the tank and crank case, a valve controlling the flow of oil from the tank into said pipe, an overflow pipe for said crank case, a valve for said pipe, and connections between said valves to compel them to operate in unison, substantially as specified.

4. In an automobile, the combination of an oil storage tank, two crank cases, a valve casing connected with said tank, two pipes connecting said tank with the two crank cases, a valve controlling the flow of oil into said pipes, an overflow pipe in each crank case, a valve in each overflow pipe, and mechanism connecting the tank valve with both of the other valves, substantially as specified.

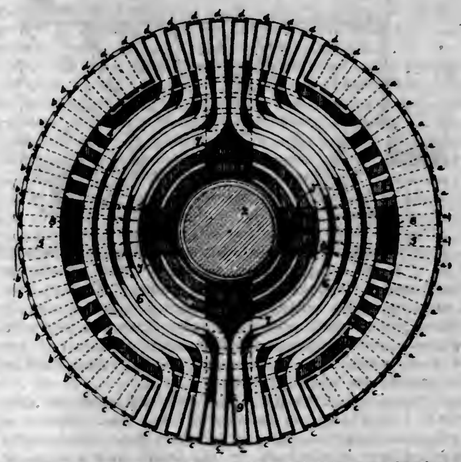
885,183. PROCESS FOR THE MANUFACTURE OF GRAY ACETATE OF LIME AND WOOD-ALCOHOL. HERMAN B. SCHMIDT, Cincinnati, Ohio, assignor to Joslin, Schmidt & Co., Cincinnati, Ohio, a Firm. Filed Feb. 12, 1902. Serial No. 93,699.



1. A process of manufacturing alcohol, consisting in converting crude pyroligneous liquor into vapors, extracting or eliminating the acid vapors resulting from such treatment and subjecting the resulting vapors of water and alcohol to the action of weak alcoholic solutions and thereby obtaining an alcoholic solution of any desired higher proof.

2. A process of manufacturing alcohol, consisting in boiling or evaporating crude pyroligneous liquor, passing the vapors produced by such treatment through a lime solution to absorb the acid vapors, and evaporating the alcohol from weak alcoholic solutions by bringing the same into the presence of the alcoholic and water vapors remaining at the elimination of the acid vapors by the lime solution and thereby obtaining an alcoholic solution of any desired higher proof without further use of the steam.

885,184. WINDING FOR DYNAMO-ELECTRIC MACHINES. WALTER SCHMIDT, Pittsburg, Pa., assignor to Westinghouse Electric & Manufacturing Company, a Corporation of Pennsylvania. Filed July 17, 1905. Serial No. 270,158.



1. The combination with a magnetizable core having a plurality of longitudinal slots, of a winding therefor comprising two groups of coils, one of which has flat end connectors disposed in edgewise relation substantially parallel to the ends of the core and the other of which has two sets of flat end connectors that are respectively disposed in sidewise and edgewise relation to the ends of the core.

2. The combination with a magnetizable core having a plurality of longitudinal slots, of a winding therefor comprising two groups of coils of oblong cross-section the ends of some of which are disposed edgewise and the ends of others of which are disposed sidewise in planes substantially parallel to the ends of the core.

3. The combination with a magnetizable core having a plurality of longitudinal slots, of a winding therefor comprising two approximately similar groups of coils at substantially right angles to each other, the end connectors of one group being disposed edgewise while the end connectors of one portion of the other group are disposed sidewise in planes parallel to the ends of said core and the end connectors of the other portion are disposed edgewise in planes outside of and parallel to those of the first group.

4. The combination with a magnetizable core having a plurality of longitudinal slots, of a winding therefor comprising two groups of coils at right angles to each other, the end connectors of which are disposed in two substantially parallel planes the end connectors in one group being disposed in edgewise relation and some of those in the other group being disposed in edgewise and some in sidewise relation to the core ends.

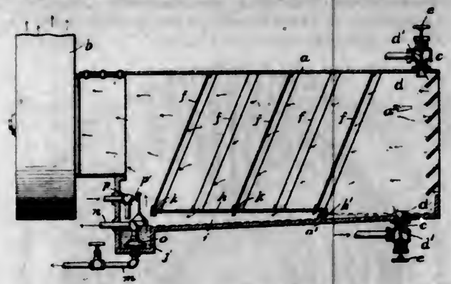
5. The combination with a magnetizable core having a plurality of longitudinal slots, of two windings the coils of which are at right angles to each other and the end connectors of which, at each end of the core, are arranged in three sets located in two parallel planes, the connectors of one set being disposed sidewise and those of the other two sets being disposed edgewise with reference to the ends of the core.

[Claims 6 to 8 not printed in the Gazette.]

885,185. APPARATUS FOR PURIFYING VAPORS AND GASES. JOHN A. SERRELL, Bayonne, N. J., assignor to Warren Webster and Company, a Corporation of New Jersey. Filed June 22, 1906. Serial No. 322,808.

1. In apparatus of the character described, the combination of a purifying chamber having a liquid shower or spray, and a moisture eliminating chamber provided with

a series of baffles arranged in an upright position and inclining forwardly from the bottom toward the air inlet.



2. In apparatus of the character described, the combination of a purifying chamber having a liquid shower or spray, and a moisture eliminating chamber provided with a series of baffles arranged in an upright position and inclining downwardly and backwardly from the top with reference to the direction of movement of the air or gas to be cleansed, the adjacent baffles being separated from one another by vertical spaces.

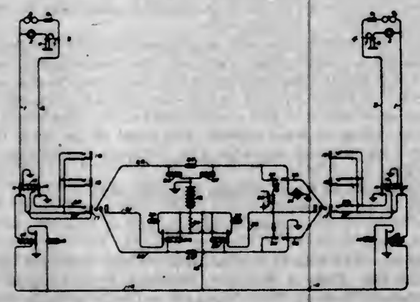
3. In an apparatus of the character described, the combination of a purifying chamber having a liquid shower or spray, an eliminating chamber having a base provided with openings for the discharge of the liquid, and a series of baffles in said eliminating chamber arranged in an upright position and inclining forwardly from said base toward the purifying chamber.

4. In apparatus of the character described, the combination of a purifying chamber having a liquid shower or spray, an eliminating chamber having a perforated base, a chamber for the collection of liquid below said base, and a series of baffles in said eliminating chamber extending from said base and arranged in an upright position inclining forwardly toward the purifying chamber.

5. In apparatus of the character described, the combination of a purifying chamber having a liquid shower or spray, an eliminating chamber communicating with said purifying chamber and having a base, a chamber for the collection of liquid below said base, a well communicating with said chamber and a series of baffles extending upwardly from said base, said base being provided with discharge openings into said liquid chamber in front of the lower ends of said baffles.

[Claims 6 to 18 not printed in the Gazette.]

885,186. THREE-WIRE CENTRAL-ENERGY TELEPHONE SYSTEM. CHARLES A. SIMPSON, Chicago, Ill., assignor to Kellogg Switchboard & Supply Company, Chicago, Ill., a Corporation of Illinois. Filed Feb. 26, 1906. Serial No. 302,867.



1. In a telephone system, the combination with a pair of telephone lines, of a cord circuit for making connection therewith for conversation, a pair of terminals in the talking circuit of the line normally disconnected therefrom, a signaling apparatus normally connected therewith, a third conductor isolated from the talking circuit, a supervisory signal in said third conductor, and means associated with said third conductor for disconnecting said signaling apparatus from the line, and connecting said terminals with the talking circuit, and further means for opening the circuit of said supervisory signal, substantially as described.

2. In a telephone system, the combination with a pair of telephone lines, of a cord circuit for making connection therewith for conversation, a third conductor at the central office isolated from the talking circuit, a cut-off relay in said conductor, a pair of terminals in talking circuit normally disconnected from the line at the front contacts of said relay, a signaling apparatus for the line normally connected therewith at the back contacts of said relay, a supervisory signal and a source of current associated with the cord circuit, said signal being adapted to be actuated in series with said relay when the cord is connected with the line, a single supervisory relay for controlling the circuit of said signal, connected between said source and one strand of the cord circuit, and means operative in making a connection with the line for completing the talking circuit through said terminals, the circuit of said supervisory signal being controlled through the contacts of said supervisory relay, substantially as described.

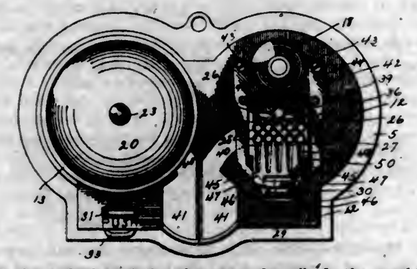
3. In a telephone system, the combination with a pair of telephone lines, of a cord circuit for making connection therewith for conversation, a third conductor at the central office isolated from the talking circuit, a cut-off relay in said conductor associated with the line, a supervisory signal in a normally-closed branch of said third conductor associated with the cord circuit, a central source of current, a supervisory relay connected between said source and one strand of the cord circuit, a low resistance branch from said battery about said signal, adapted to be controlled by the contacts of said supervisory relay, a pair of terminals in the talking circuit normally disconnected from the line at the contacts of said cut-off relay, means operative in making connection with the line for completing the talking circuit through said terminals at the contacts of said cut-off relay, and opening the circuit of said signal at the contacts of said supervisory relay when the subscriber's telephone is off its hook, substantially as described.

4. In a telephone system, the combination with a pair of telephone lines, of a cord circuit for making connection therewitn for conversation, a third conductor at the central office isolated from the talking circuit, a cut-off relay in said conductor associated with the line, a supervisory signal in said conductor associated with the cord circuit, a pair of terminals in the talking circuit normally disconnected from the line at the contacts of said cut-off relay, an impedance coil, a central source of current and a supervisory relay in a bridge of the cord circuit, a normally-open low resistance branch circuit about said signal, and means operative in making connection with the line for completing the talking circuit through said terminals at the contacts of said cut-off relay, said supervisory relay being energized over the telephone line and said impedance coil, and being adapted to open the circuit of said signal and close said low resistance branch when the subscriber's telephone is in use, substantially as described.

5. In a telephone system, the combination with a pair of telephone lines, of a cord circuit for making connection therewith for conversation, a third conductor at the central office isolated from the talking circuit, a cut-off relay in said conductor associated with the line, a supervisory signal in said conductor associated with the cord circuit, a normally-open low resistance branch circuit about said signal, a pair of terminals in the talking circuit normally disconnected from the line at the contacts of said cut-off relay, an impedance coil, a central source of current and a supervisory relay in a bridge of the cord circuit, means operative in making connection with the line for completing the talking circuit through said terminals at the contacts of said cut-off relay, said supervisory relay being energized over the telephone line and said impedance coil, and being adapted to open the circuit of said signal and close said low resistance shunt when the subscriber's telephone is in use, a second impedance coil, and a second supervisory relay, said impedance coil and said supervisory relay being individual to the opposite side of the cord circuit and being in the bridge with said source, and a condenser in each strand of the cord circuit disposed between said impedance coils and said relays, substantially as described.

[Claims 6 to 11 not printed in the Gazette.]

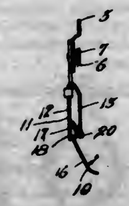
885,187. COIN-CONTROLLED VENDING-MACHINE. ROBERT D. SIMPSON, Columbus, Ohio, assignor to J. W. Seeds and F. R. Ritter, Columbus, Ohio. Filed Aug. 24, 1907. Serial No. 390,062.



1. In a device of the character described, the combination with a slidable member, of a base upon which said member is mounted, a lever pivoted upon each side of said member, a spring connecting said levers to draw them together, inwardly inclined legs formed upon said levers and outwardly inclined feet in which said levers terminate, the inwardly inclined surfaces of said legs and feet engaging said slidable member to throw it to its limit of movement in either direction.

2. In a device of the character described, the combination with a slidable member, of a base upon which said member is mounted, a lever pivoted upon each side of said member, a spring connecting said levers to draw them together, inwardly inclined legs formed upon said levers and outwardly inclined feet in which said levers terminate, the inwardly inclined surfaces of said legs and feet engaging said slidable member to throw it to its limit of movement in either direction, there being an inclined surface formed upon said slidable member which co-acts with the inclined surface of said legs.

885,188. CLASP FOR GARMENT-SUPPORTERS. JOHN M. SINER, New York, N. Y., assignor, by direct and mesne assignments, of one-half to Albert Herbert, New York, N. Y., and one-half to The Venus Manufacturing Company, New York, N. Y., a Corporation of New York. Filed Dec. 11, 1906. Serial No. 347,327.



1. A garment clasp comprising primary and secondary spring jaws having juxtaposed relatively fixed and movable ends, said jaws being approximately of equal length, and means carried by the secondary jaw and adapted for coöperation with the primary jaw, said means serving in operation to force the movable end of the secondary jaw through and beyond the movable end of the primary jaw, the approximately equal lengths of said jaws serving to hold the jaws in such operative positions.

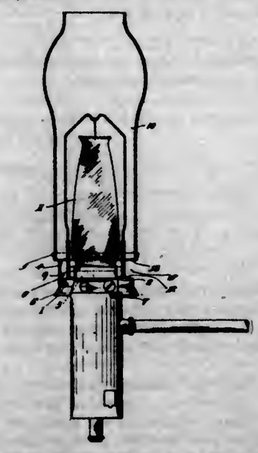
2. A garment clasp comprising primary and secondary jaws, a lever carried by the secondary jaw and having a portion arranged to engage the primary jaw, said lever in operation serving to force one end of the secondary jaw through and beyond the proximate end of the primary jaw, the respective jaws being approximately of equal lengths so that in operative position the proximate ends of the respective jaws are held against return movement.

3. A garment clasp comprising a primary and a secondary jaw having relatively movable proximate ends, the movable end of each jaw including a transversely disposed bar, and a lever movably connected with the bar of the secondary jaw and formed with an offset portion to engage the bar of the primary jaw, said lever in operation serving to force the bar of the secondary jaw through the primary jaw and beyond the bar thereof, the respective lengths of the primary and secondary jaws being approximately equal, whereby in operative position the bar of the secondary jaw is prevented from return movement through the primary jaw.

4. A garment clasp comprising primary and secondary spring jaws having relatively movable proximate ends, and cam means carried by one jaw and operative on the other jaw for forcing the movable end of the secondary jaw through and beyond the movable end of the primary jaw, the jaws being of approximately equal length, whereby in operative position the secondary jaw is retained from return movement through the primary jaw.

5. A garment clasp comprising primary and secondary spring jaws having relatively movable proximate ends, said jaws being of approximately equal lengths, the movable end of the secondary jaw being normally arranged on one side of the primary jaw and adapted to be passed through said primary jaw to lie upon the opposite side thereof, whereby through the approximately equal length of the jaws the ends of the jaws will be retained in such positions, and operating means carried by the movable end of one jaw and adapted to engage the coacting end of the other jaw for relatively adjusting said jaws.

885,189. HYDROCARBON INCANDESCENT LIGHT. VICTOR H. SLINACK, Philadelphia, Pa., assignor to Pennsylvania Globe Gas Light Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Apr. 5, 1906. Serial No. 310,036.



1. A fitting for hydrocarbon incandescent lights comprising a spider having at its center a ring and an upturned cylindrical flange, and a peripherally slotted cylinder carried by the arms of the spider and having at its top rim a chimney carrier and at its bottom rim an imperforate sub-jet guard, substantially as described.

2. A fitting for hydrocarbon incandescent lights comprising a cylinder having a slotted surface and having at

its top rim a chimney carrier and at its bottom rim an imperforate sub-jet guard, and a crosswise ranging plate intermediate of said rims and having a central opening and other openings arranged around it, substantially as described.

885,190. PENCIL. CHARLES A. SMITH, Philadelphia, Pa., assignor to Blaisdell Paper Pencil Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Oct. 26, 1907. Serial No. 399,247.



1. A pencil having a hollow body, a hollow helix revoluble within said body, a marking rod within said hollow helix, and a device fixed on said rod and extending outwardly beyond said helix so as to frictionally engage the interior surface of said body and be engaged by the coils of said helix.

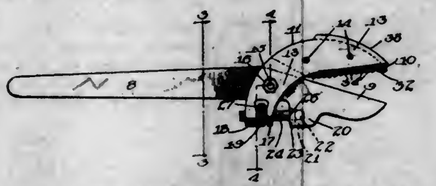
2. A pencil having a hollow body, a hollow helix revoluble within said body, a marking rod within said hollow helix, and a coil fixed to said rod so as to be engaged by said helix, said coil having an expanded part which engages the interior surface of said body.

3. A pencil having a hollow body formed by winding sheet material, a hollow helix revoluble within said body, a top fixed to said helix and coupled in revoluble relation to said body, a lead rod movable within said helix, and a coil fixed to said rod and extending outwardly beyond said helix, said coil engaging the coils of said helix and the interior of said body.

4. A pencil having a hollow body formed by winding sheet material, a hollow cylindrical guard set in the point of said body, a hollow helix within said body, a lead rod within said helix, and a resilient device fixed on said rod, said device projecting through said helix and frictionally engaging said body, and means whereby said device and helix are caused to propel said rod.

5. A pencil having a hollow body formed by winding sheet material, a hollow helix revoluble within said body, a finger piece having an enlarged part fixed to said helix, a band fixed to said body and having a flange engaging the enlarged part of said finger piece, a marking rod movable within said helix, and a coil fixed to said rod, said coil positively engaging the coils of said helix and frictionally engaging the interior of said body.

885,191. WRENCH. HENRY A. SMITH, Elgin, Ill. Filed May 17, 1907. Serial No. 374,258.



1. In a wrench, the combination with a fixed jaw, a movable jaw support, of a movable jaw seated therein, and means carried by said fixed jaw for varying the angular position of said jaws, but always forming a V-shaped opening.

2. In a wrench, the combination with a fixed jaw, a movable jaw support, of a movable jaw seated therein, operative mechanism located on the underside of said fixed jaw and engaging said movable jaw for varying the angular position of said jaws, but always forming a V-shaped opening.
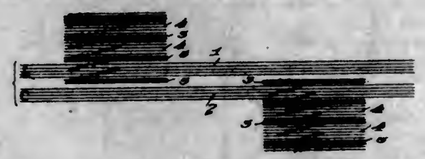
3. In a wrench, the combination with a fixed jaw, of a movable jaw support, a movable jaw seated therein, operative mechanism located on the underside of said fixed jaw and engaging said movable jaw support for varying the angle of inclination between said jaws, but always forming a V-shaped opening.

4. In a wrench, the combination with a fixed jaw, of a radially movable jaw support, a movable jaw seated therein, operative mechanism located on the underside of said fixed jaw and engaging said movable jaw support for varying the angle of inclination between said jaws.

5. In a wrench, the combination with a fixed jaw, of a radially movable jaw support, a movable jaw seated therein, operative mechanism located on the underside of said fixed jaw and engaging said movable jaw support for varying the angle of inclination between said jaws, said operative mechanism comprising a knuckle or loosely fitting socket joint seated in a recess in said fixed jaw, and a screw-threaded bolt in engagement therewith and with said movable jaw support.

[Claims 6 to 16 not printed in the Gazette.]

885,192. SHEET-MUSIC. WILLARD C. SMITH, Campbell, Cal. Filed Oct. 27, 1905. Serial No. 284,722.



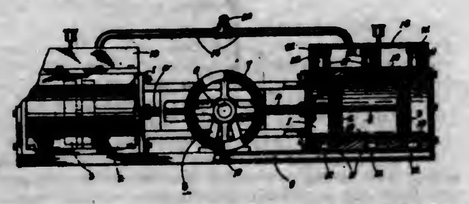
1. The combination with an ordinary musical staff of five lines, of permanent leger lines located outside of the said ordinary staff lines and having distinguishing characteristics, and other permanent leger lines similar to the staff lines disposed between the said leger lines, the leger lines having distinguishing characteristics being spaced to represent certain musical intervals.

2. The combination with a musical staff involving five lines, of differentiating permanent leger lines arranged above and below the staff and spaced to represent musical intervals, the said leger lines having other permanent leger lines therebetween similar to the lines of the staff.

3. The combination with a musical staff of five lines, of pairs of permanent leger lines disposed outside of the said musical staff of five lines and having distinguishing characteristics, and other permanent leger lines arranged between the said pairs of leger lines and similar to the staff lines, the pairs of leger lines being spaced to designate musical intervals.

4. The combination with an ordinary musical staff of five relatively light lines, of relatively heavy permanent leger lines located outside of the ordinary staff lines, the two sets of lines being indicated by the letters of the gamut, and other relatively heavy permanent leger lines disposed between the ordinary leger lines and having letters of the gamut, the leger lines bearing the letters of the gamut being spaced to represent certain musical intervals.

885,193. VALVE MECHANISM FOR PUMPS. CHARLES O. SOBINSKI, St. Louis, Mo. Original application filed Dec. 19, 1904, Serial No. 237,538. Divided and this application filed Aug. 3, 1906. Serial No. 329,088.



1. In a pump, a cylinder, a piston therefor, valve-controlled induction ports for the cylinder, a compressed-air chamber, valve-casings in said chamber, eduction ports leading from the cylinder into said casings, a series of passages formed in the walls of each casing, a primary check-valve having longitudinal movement in said casing, a seat at the bottom of the valve normally closing the eduction port, a reduced annular neck connecting the seat to the body of the valve, an enlarged chamber formed in the casing and surrounding the neck, a central longitudinal passage formed in the valve and terminating at its upper end in an enlarged cavity, a series of passages formed in the neck and in communication with the central valve passage and the surrounding chamber of the casing, an annular peripheral groove formed on the valve in a plane relatively below the inner ends of the passages formed in the walls of the casing, covers for the valve and casing respectively, a secondary spherical valve in the enlarged cavity normally closing the bottom of the latter, a passage formed in the casing and communicating with the space above the primary valve, a port leading to the base of said passage, said port being adapted to receive a portion of the air operating to unseat the primary valve of an adjacent valve-casing, substantially as set forth.

2. In a pump, a cylinder, a piston therefor, valve-controlled induction ports for the cylinder, a compressed-air chamber, valve casings in said chamber, eduction ports leading from the cylinder into said casings, a series of passages formed in the walls of the casing, a hollow primary check-valve having longitudinal movement in the casing and seating over the eduction port, means for permitting influx of air into the valve upon an unseating thereof, passages for establishing intercommunication between the interior of the primary valve and the passages formed in the casing walls, upon an unseating of the valve, and a secondary check valve within the primary valve for controlling the communication between the cylinder and the compressed-air chamber, substantially as set forth.

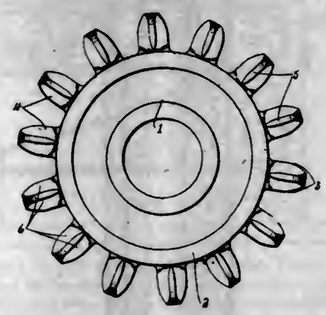
3. In a pump, a cylinder, a piston therefor, valve-controlled induction ports for the cylinder, a compressed-air chamber, valve-casings in said chamber, eduction ports leading from the cylinder into the casings, a series of passages formed in the walls of the casing, a longitudinally movable hollow primary check-valve in the valve-casing seating over the eduction port, a passage or port formed in the primary valve for conducting air from the cylinder into the chamber of the valve upon unseating of the valve, a gravity secondary check-valve in the primary valve adapted to be unseated by the influx of the air, and ports formed in the walls of the primary valve and discharging into the passages of the valve-casing and into the compressed-air chamber upon the unseating of the respective check-valves, substantially as set forth.

4. In a pump, a cylinder, a piston therefor, valve-controlled induction ports for the cylinder, a compressed-air chamber, valve-casings in said chamber, eduction ports leading from the cylinder into the casings, a series of passages formed in the walls of the casing, a longitudinally movable hollow primary check-valve in the valve-casing normally seating over the eduction port, a passage or port formed in the primary valve for conducting air from the cylinder into the chamber of the valve upon unseating of the valve, a ball-valve in the primary valve adapted to be unseated by the influx of air into the primary check-valve with the unseating of the latter, ports formed in the walls of the primary valve and discharging through the passages of the valve-casing into the compressed-air chamber upon the unseating of the valves, and means for forcing the ball-valve to its seat in advance of the primary valve at the end of the piston stroke, substantially as set forth.

5. In a pump, a cylinder, a piston therefor, a compressed-air chamber, and primary and secondary check-valves controlling the passage of the air from the cylinder into the chamber, the secondary check-valve closing in advance of the primary valve at the conclusion of a piston stroke, substantially as set forth.

885,194. GEAR. GEORGE W. SPONABLE, Syracuse, N. Y., assignor to The Brown-Lipe Gear Company, Syracuse, N. Y., a Corporation of New York. Filed Apr. 2, 1906. Serial No. 309,246.

1. A gear having teeth formed with convex end surfaces extending substantially in a radial direction and the axis of said surfaces extending at an inclined angle to the axis of the gear so that the end surfaces of each tooth diverge toward the front and rear sides of the tooth, and also converge toward each other as they approach the apex of the tooth, substantially as and for the purpose set forth.



2. A gear having teeth formed with substantially flat, and convex end surfaces, the flat end surface of each tooth receding toward the apex of the tooth and the convex end surfaces extending substantially in a radial direction, the convex end surfaces of each tooth diverging toward the end and rear sides of the tooth and converging toward each other as they approach the apex of the tooth, substantially as and for the purpose described.

3. A gear having teeth formed with substantially flat, and convex end surfaces, the flat end surface of each tooth receding toward the apex of the tooth and the convex end surfaces extending substantially in a radial direction, the convex end surfaces of each tooth diverging toward the end and rear sides of the tooth and converging toward each other as they approach the apex of the tooth, and also as they approach the base of the tooth, substantially as and for the purpose specified.

4. A gear having teeth formed with convex end surfaces extending substantially in a radial direction and diverging towards the front and rear sides of the teeth, the convex surfaces of each tooth also converging toward each other as they approach the base of the tooth, substantially as and for the purpose described.

5. A gear having teeth formed with convex end surfaces extending substantially in a radial direction and diverging towards the front and rear sides of the teeth, the convex surfaces of each tooth also converging toward each other as they approach the apex of the tooth, and also as they approach the base of the tooth, substantially as and for the purpose set forth.

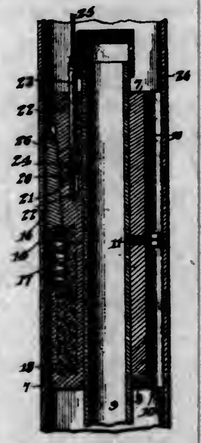
885,195. TUBE CATCHER AND SUPPORT. HENRY W. STALEY, Knapp Creek, N. Y., assignor of one-fourth to Carley Heater Company, Olean, N. Y., a Copartnership. Filed May 5, 1906. Serial No. 315,398.

1. In a device of the class described, the combination with a tube holding body, of means carried by the body for securing it to a tube, a casing clamp movably mounted on the body, means carried by the body for effecting an automatic movement of the clamp thereon, and manually actuated holding means movably mounted on the body and movably associated with the clamp to hold it against said automatic movement.

2. In a device of the class described, the combination with a tube holding body having a tube receiving bore therethrough, of means carried by the body for securing it to a tube, a casing clamp movably mounted on the body and having a casing engaging portion that projects therefrom, and manually operated means separate from the tube held in the body for controlling the movement of the clamp.

3. In a device of the class described, the combination with a tube holding body, of a casing clamp movably mounted thereon and having a casing engaging portion

that projects therefrom, and means controlling the movement of the clamp, said means being movably mounted in the body in rear of said clamp.

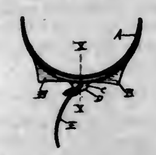


4. In a device of the class described, the combination with a tube holding body having a tube receiving bore, of a casing clamp movably mounted on the body and having a casing engaging portion that projects therefrom, and means for controlling the movement of the clamp, said means being movably mounted on the body between the clamp and bore.

5. In a device of the class described, the combination with a tube holding body having a longitudinally inclined guide-way, of a casing clamp movably mounted on the guide-way and having an outer casing engaging portion, and means controlling the movement of the clamp, said means being longitudinally slidable in the body in rear of the guide-way.

[Claims 6 to 13 not printed in the Gazette.]

885,196. ANTISNORING-SHIELD. CHARLES P. STEIL, Milwaukee, Wis., assignor to Henry Steil, Milwaukee, Wis. Filed Oct. 8, 1906. Serial No. 337,898.

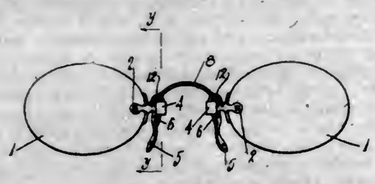


In a device of the class described, an arched plate of a generally oval contour, provided with flattened tapered prongs projecting radially from the outer surface of the plate, and adapted to extend between the lips near the corners of the mouth of the user; said prongs being in the form of flattened cones adapted for contact with the lips only at the points where they pass between them and having their extremities substantially in a radial plane extending through the opening between the lips of the user and terminating in rounded points substantially at the outer surface of the lips.

885,197. EYEGLASSES. FREDERICK A. STEVENS, Providence, R. I. Filed Apr. 26, 1907. Serial No. 370,866.

1. In eyeglasses, the combination with the lenses and the attaching devices for the bridge spring, of a bridge spring connecting the lenses and extending rearwardly and downwardly and thence upwardly and forwardly to form bends wholly in the rear of the lenses, and intermediate loops with the terminals of the spring substantially in the plane of the lenses the intermediate loops being inclined downwardly with relation to the lenses.

2. In eyeglasses, the combination with the lenses and the attaching devices for the bridge spring, of a bridge spring connecting the lenses and extending rearwardly and downwardly and thence upwardly and forwardly to form bends wholly in the rear of the lenses, and intermediate hooks with the terminals of the spring substantially in the plane of the lenses, the arched portion of said spring being inclined downwardly and rearwardly the intermediate loops being inclined downwardly with relation to the lenses.



3. In eyeglasses, the combination with the lenses and boxes, of a bridge spring comprising an inclined intermediate portion extending downwardly and upwardly to form bends at the rear of and above the boxes, and intermediate loops inclined downwardly with relation to the lenses and wholly in the rear thereof.

4. In eyeglasses, the combination with the lenses and boxes, of a bridge spring comprising an inclined intermediate portion extending downwardly and upwardly to form bends at the rear of and above the boxes, and intermediate loops inclined downwardly with relation to the lenses and wholly in the rear thereof, the said bends lying in the plane of the lenses.

5. In eyeglasses, the combination with the lenses and boxes and attaching devices for the bridge spring, of a bridge spring provided with an inclined intermediate portion extended downwardly and upwardly to form bends in the rear of the boxes and the rearward bends upon each end terminating substantially in the plane of the attaching devices and continued to form inwardly directed bends lying substantially in the plane of the lenses.

[Claims 6 to 9 not printed in the Gazette.]

885,198. EYEGLASSES. FREDERICK A. STEVENS, Providence, R. I. Filed May 1, 1907. Serial No. 371,297.



1. The combination with the lenses and boxes of eyeglasses, of a bridge spring comprising an arched portion inclined downwardly from above said boxes to a point in the rear thereof and end portions bent to form vertical spirals with their coils side by side, the ends of said spirals extending forwardly and forming horizontal supporting arms with vertical portions and right angled terminal fingers, said arms abutting against the bottoms of the boxes and the free ends of the fingers abutting against the inner sides of said boxes.

2. The combination with the lenses and boxes of eyeglasses, of a bridge spring comprising an arched portion inclined downwardly from above said boxes to a point in the rear thereof and end portions bent to form vertical spirals with their coils side by side, the ends of said spirals extending forwardly and forming horizontal supporting arms with vertical portions and right angled terminal fingers, said arms abutting against the bottoms of the boxes and the free ends of the fingers abutting against the inner sides of said boxes, said vertical portions being provided with cavities, and attaching screws engaging in said cavities and held in said boxes.

885,199. EYEGLASSES. FREDERICK A. STEVENS, Providence, R. I. Filed May 31, 1907. Serial No. 376,467.



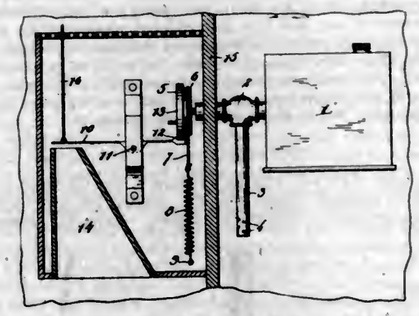
1. In a pair of eyeglasses the combination with the lenses and boxes, of a bridge spring connecting the boxes, a loop upon each end of the bridge portion, rectilinear portions extending from the loops, and fingers upon the ends of the rectilinear portions.

2. In a pair of eyeglasses the combination with the lenses and boxes, of a bridge spring having a curved portion, a vertical loop at each end of the curved portion, and above the boxes, rectilinear portions extending from the loops, and fingers upon the ends of the rectilinear portions.

3. A bridge spring for eyeglasses comprising a reduced central portion, a loop upon each end of the reduced portion, rectilinear portions extending from the loops, and fingers upon the ends of the rectilinear portions.

4. A bridge spring for eyeglasses comprising a curved central portion, a loop upon each end of the central portion, rectilinear portions projecting from the loops, and fingers upon the rectilinear portions in alinement with the loops.

885,200. BURGLARY-PREVENTING APPARATUS. DAVID STEWART, Chehalis, Wash. Filed Jan. 28, 1907. Serial No. 354,595.



1. The combination of a fuming fluid containing chamber, an automatically operated valve controlling the discharge from the chamber, and an explosion operated means controlling the valve.

2. The combination of a fuming fluid containing chamber, a valve controlling the discharge from said chamber, means tending to open the valve, and means for releasing the valve to permit it to open automatically.

3. The combination of a fuming fluid containing chamber, a valve controlling the discharge from the chamber, a spring acting to open the valve, and means for releasing the valve to permit it to open under the action of the spring.

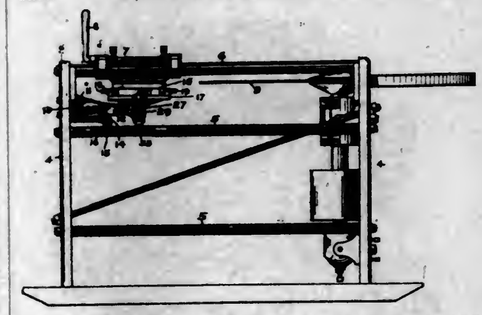
4. The combination of a fuming fluid containing chamber, a valve controlling the discharge from the chamber, a spring acting to open the valve, and a lever to hold the valve closed.

5. The combination of a fuming fluid containing chamber, a valve controlling the discharge from the chamber, a spring acting to open the valve, and a lever to hold the valve closed, said lever being constructed to move by vibrations produced by an explosion.

[Claims 6 and 7 not printed in the Gazette.]

885,201. SHINGLE AND HEADING MACHINE. JOSEPH STREET and JOSHUA H. STREET, Chattanooga, Tenn. Filed Sept. 23, 1907. Serial No. 394,195.

1. In a shingle and heading machine, a saw, a carriage carrying the material to be sawed having a reciprocating travel to and from the saw, a vertically adjustable horizontal arm, a cradle-base adjustable vertically on said arm, and a cradle pivotally mounted on the said cradle-base.



2. In a shingle and heading machine, a saw, a carriage carrying the material to be sawed having a reciprocating travel to and from the saw, a stationary bracket having a vertically adjustable extension, a cradle-base adjustable vertically on said bracket extension and a cradle pivotally mounted on said cradle-base whereby it may be tilted.

3. In a shingle and heading machine, a saw, a carriage carrying the material to be sawed having a reciprocating travel to and from the saw, a stationary bracket having a vertically adjustable extension, a cradle-base adjustable vertically on said bracket extension, a cradle pivotally mounted on said cradle-base whereby it may be tilted and means for determining the tilt movement of said cradle.

4. In a shingle and heading machine, a saw, a carriage carrying the material to be sawed, having a reciprocating travel to and from the saw, a stationary bracket, an arm extension pivotally secured to the bracket, a set screw carried by the bracket upon which the arm rests and by which it is adjusted vertically, a cradle-base adjustable vertically on said arm and a cradle pivotally mounted on said cradle-base.

5. In a shingle and heading machine, a saw, a carriage carrying the material to be sawed having a reciprocating travel to and from the saw, a stationary bracket having a vertically adjustable arm extension said arm having its outer end expanded to form a head and said head having a lateral and vertically extended rib, a cradle-base having a downwardly extended plate to contact with the ribbed side of said arm-head, said plate having a channel to receive the rib, means for clamping the plate and head together, means for adjusting the plate longitudinally of the rib, and a cradle pivotally mounted on said cradle-base whereby it may be tilted.

[Claims 6 and 7 not printed in the Gazette.]

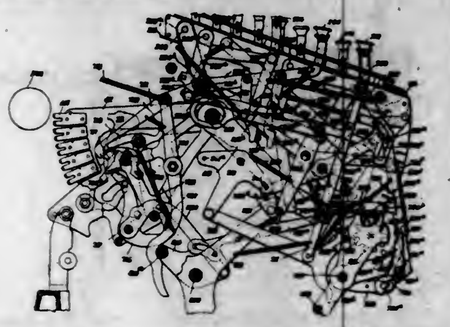
885,202. ADDING AND LISTING MACHINE. WILLIAM E. SWALM, Los Angeles, Cal., assignor to Burroughs Adding Machine Company, Detroit, Mich., a Corporation of Michigan. Filed Oct. 24, 1907. Serial No. 399,024.

1. In a machine of the character described, the combination of a set of actuators and two sets of accumulator wheels, motion being transmitted between the actuators and the wheels of one set through the medium of the wheels of the other set in either direction.

2. In a machine of the character described, the combination of a set of actuators and two sets of accumulator wheels geared together, motion being transmitted between the actuators and the wheels of one set through the medium of the wheels of the other set in either direction.

3. In a machine of the character described, the combination of a set of actuators and two sets of accumulator wheels, upon one of which sets of wheels successive items or amounts can be accumulated by repeated operation of said actuators and upon the other of which sets of wheels successive accumulations of the first set of

wheels can themselves be accumulated, motion being transmitted to the last mentioned set of wheels through the medium of the first mentioned set of wheels.

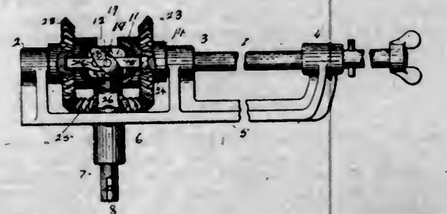


4. In a machine of the character described, the combination of a set of actuators and two sets of accumulator wheels, upon one of which sets of wheels successive items or amounts can be accumulated by repeated operation of said actuators and upon the other of which sets of wheels successive accumulations of the first set of wheels can themselves be accumulated, motion being transmitted to the last mentioned set of wheels through the medium of the first mentioned set of wheels and the latter capable of being reset to zero without affecting the accumulation on the former.

5. In a machine of the character described, the combination of a set of actuators and two sets of accumulator wheels, upon one of which sets of wheels successive items or amounts can be accumulated by repeated operation of said actuators and upon the other of which sets of wheels successive accumulations of the first set of wheels can themselves be accumulated, motion being transmitted to the last mentioned set of wheels through the medium of the first mentioned set of wheels and the latter capable of being reset to zero without affecting the accumulation on the former which is itself capable of being reset to zero.

[Claims 6 to 69 not printed in the Gazette.]

885,203. MECHANICAL MOVEMENT. WARREN SWEET, Fort Wayne, Ind. Filed Apr. 25, 1907. Serial No. 370,239.



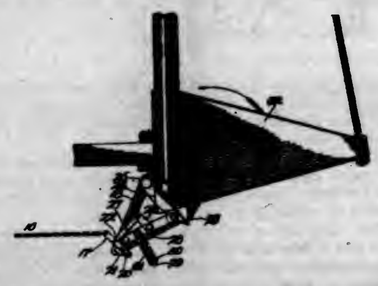
1. In a mechanical movement, a driving shaft; a sleeve fixed on the shaft, and provided midway of its ends with a circumferential recess having a materially widened portion, the sleeve having a longitudinal slot throughout its length in the widened portion of said recess; a pair of bevel gears loosely mounted on the shaft; a driven shaft provided upon one end thereof with a fixed bevel-gear adapted for a meshing engagement with the said gears on the driving shaft; and means for alternately locking one or the other of the loose gears on the driving-shaft consisting of a locking plate slidably mounted in the said slot, and adapted for a locked engagement with the loose gears one at a time, a pivoted lever arranged in said recess and having an actuating engagement with the said plate, and a pivoted arm whose extended inner end is arranged in said recess and is adapted for an actuating engagement with the said lever, substantially as described.

2. A mechanical movement comprising the following elements: a driving shaft; a driven shaft; a pair of bevel gears loosely mounted on the driving shaft; a bevel gear fixed on one end of the driven shaft and adapted for a meshing engagement with the said loose gears; a fixed sleeve on the driving shaft between the loose gears, and provided with a circumferential recess having a widened portion provided with a transverse slot therein; a plate slidably mounted in the said slot and adapted for a locked engagement with the said loose gears alternately; and means under the guidance of the widened portion of said recess for automatically shifting the said plate into its engagement at each revolution of the driving shaft.

3. In a mechanism of the class specified a driving member; a fixed sleeve on the driving member circumferentially recessed and longitudinally slotted; bevel gears in coöperative relation with the sleeve and loosely mounted on the driving member; a driven member provided upon one end with a fixed bevel gear in mesh with the above named gears; an automatic locking means adapted to secure the alternate reversal of the driven member, consisting of a sliding plate arranged in the slotted sleeve and adapted to engage the lose gears one at a time, a pivoted lever having an actuating engagement with the plate, and means for actuating the said lever under the guidance of the said circumferential recess.

4. In a mechanical movement a driving member provided with a fixed sleeve and loose bevel gears in coöperative relation therewith, the said sleeve having a circumferential recess and a longitudinal radial slot; a driven member having a fixed bevel gear adapted for a meshing engagement with the said loose gears; a plate slidably mounted in the said slot and adapted to alternately engage the loose gears; and means for shifting the said plate in opposite directions alternately consisting of a pivoted lever operatively connected with the said plate, and a pivoted arm whose inner end is adapted to actuate the said lever under the guidance of the said recess.

885,204. BALING-PRESS. JOSIAH S. TUTTLE, Bellevue, Ohio, assignor to Geo. Ertel Co., Quincy, Ill., a Corporation of Illinois. Filed Nov. 25, 1907. Serial No. 403,659.



1. In a baling press, a swing frame, a movable trigger carried thereby, a fulcrum bar pivoted to the swing frame, a lever fulcrumed on the fulcrum bar and pivoted to the trigger and constituting with the fulcrum bar a toggle between the swing frame and the trigger, yielding means for expanding the toggle, an arm projecting from one member of the toggle, a feeder, connections between the feeder and the said arm of the toggle member, and yielding means for holding the feeder and swing frame at one limit of their movements.

2. In a baling press, a swing frame, a movable trigger carried thereby, a fulcrum bar pivoted to the swing frame, a lever fulcrumed on the fulcrum bar and pivoted to the trigger and constituting with the fulcrum bar a toggle between the swing frame and the trigger, yielding means for expanding the toggle, an arm projecting from one member of the toggle, a feeder, connections between the feeder and the said arm of the toggle member, yielding means for holding the feeder and swing frame at one limit of their movements, and a rotatable device for engaging the trigger and imparting simultaneous movement to the swing frame and the feeder in opposition to the last-named yielding means.

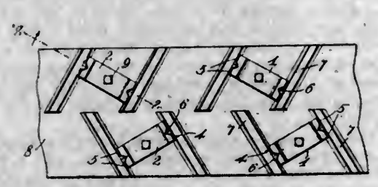
3. In a baling press, a swing frame, a movable trigger carried thereby, a fulcrum bar pivoted to the swing frame, a lever fulcrumed on the fulcrum bar and pivoted to the trigger and constituting with the fulcrum bar a toggle between the swing frame and the trigger, yielding means for expanding the toggle, an arm projecting from one member of the toggle, a feeder, connections between the feeder and the said arm of the toggle member, yielding means for holding the feeder and swing frame at one limit of their movements, a rotatable device for engaging the trigger and imparting simultaneous movement to the swing frame and the feeder in opposition to the last-named yielding means, and means to effect prematute contraction of the toggle in the event that the feeder movement produced by the engagement of the rotatable device with the trigger is prematurely ended.

4. In a baling press, a swing frame, a trigger pivoted thereto and having its inner end disposed nearer than its outer end to the axis of movement of the swing frame, a bar pivoted to the swing frame and projecting toward the trigger, a lever pivotally connecting said bar and the trigger and forming a toggle in conjunction with said bar, a spring tending to hold the swing bar and the lever in alinement to prevent outward movement of the trigger, an arm projecting laterally from the toggle, a swing arm pivoted to the swing frame, a swing bar pivoted thereto, a link pivotally connecting the swing bar with the arm, and a stop lug on the swing frame to prevent the swing bar linked to the arm of the toggle from swinging outwardly beyond a predetermined position.

5. In a baling press, a swing frame, a trigger pivoted thereto and having its inner end disposed nearer than its outer end to the axis of movement of the swing frame, a bar pivoted to the swing frame and projecting toward the trigger, a lever pivotally connecting said bar and the trigger and forming a toggle in conjunction with said bar, a spring tending to hold the swing bar and the lever in alinement to prevent outward movement of the trigger, an arm projecting laterally from the toggle, a swing arm pivoted to the swing frame, a swing bar pivoted thereto, a link pivotally connecting the swing bar with the arm, a stop lug on the swing frame to prevent the swing bar linked to the arm of the toggle from swinging outwardly beyond a predetermined position, and a rotatable device to engage the inner end of the trigger for the purpose of swinging the swing arm forwardly.

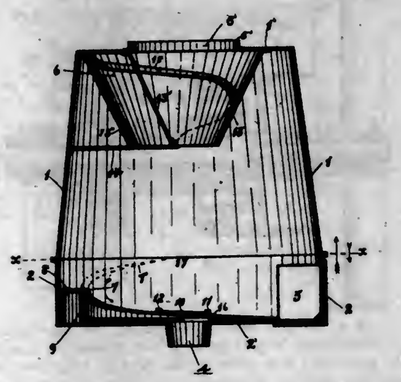
[Claims 6 to 10 not printed in the Gazette.]

885,205. ICE-CLEAT FOR TRACTION-WHEELS. TOMEY D. ULRICH, Marion, Ohio. Filed Feb. 21, 1907. Serial No. 358,747.



An ice and snow cleat for traction wheels comprising a flat rectangular base portion, and outwardly-projecting inclined, beveled ends adapted to fit between and to be held in position by the traction cleats of said wheel, the inclined beveled ends of said cleats having therein a V-shaped notch to form ice and snow engaging spurs and a fastening bolt and nut adapted to be applied to said cleats to removably secure the same to the rim of the wheel, substantially as described.

885,206. DUST-COLLECTOR. CHARLES F. VERRELL, Grand Rapids, Mich. Filed Apr. 8, 1907. Serial No. 366,929.



1. In a dust-collector, the combination of a separating-chamber having a peripheral tangential inlet and a dust-outlet concentric with the periphery of said chamber; a vertical deflector-wall in said chamber, having one end secured to the casing of said chamber and then curving spirally until the inner end becomes tangent to the dust-outlet, the upper edge of said deflector-wall curving downwardly from the point of contact with the casing-wall towards the periphery of the outlet; a cover between said deflector-wall and the casing of said chamber and projecting inwardly beyond said deflector-wall; and a regulator arranged to slide over said dust-outlet; substantially as described.

2. In a dust-collector, the combination of a separating-chamber having an inlet and a dust-outlet; a deflector-wall in said chamber, having one end secured to the casing of said chamber and then curving spirally until the inner end becomes tangent to the dust-outlet, the upper edge of said deflector-wall curving downwardly from the point of contact with the casing-wall towards the periphery of the outlet; a cover between said deflector-wall and the casing of said chamber and projecting inwardly beyond said deflector-wall; and a regulator arranged to slide over said dust-outlet; substantially as described.

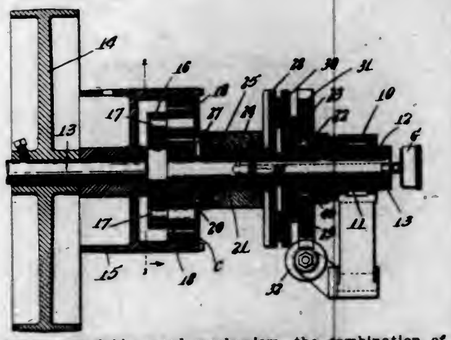
3. In a dust-collector, the combination of a separating-chamber having an inlet and a dust-outlet; a curved deflecting-member, having an inwardly-projecting cap along its upper edge, in said chamber to guide the dust inwardly and downwardly to the said dust-outlet; and a regulator arranged to coöperate with said dust-outlet whereby the air-pressure in said dust-outlet can be varied at will without obstructing the stream of material discharged.

4. In a dust-collector, the combination of an air-chamber having an air-outlet concentric with the periphery of the top of said chamber; an inverted-conical spirally-arranged deflector-wall in said chamber secured along its upper edge to the top of said chamber, one end of its upper edge being contiguous to the periphery of the top of said chamber, the other end being tangent to the periphery of the air-outlet; and an inwardly-projecting flange on the inside of said deflector-wall, the said flange running spirally from the upper outer edge to the inner lower edge of said deflector-wall; substantially as described.

5. In a dust-collector, the combination of an air-chamber having an air-outlet concentric with the periphery of the top of said chamber; and an inverted-conical spirally-arranged deflector-wall in said chamber secured along its upper edge to the top of said chamber, one end of its upper edge being contiguous to the periphery of the top of said chamber, the other end being tangent to the periphery of the air-outlet; substantially as described.

[Claims 6 to 17 not printed in the Gazette.]

885,207. VARIABLE-SPEED DRIVING MECHANISM. ALONZO W. WHITCOMB, Worcester, Mass. Filed May 22, 1905. Serial No. 261,521.



1. In a variable speed mechanism, the combination of a driving shaft, a part to be driven, means for automatically governing the speed of the part to be driven, and a planetary system of gearing comprising a primary gear turning with the governing means, a gear connected with the part to be driven, and an intermediate gear revolving with the driving shaft and meshing with both of the other two gears.

2. In a variable speed mechanism, the combination of a part to be driven, a driving part, planetary gearing connecting them comprising a gear, a sleeve rotatable with respect to both the driving and driven parts on which said gear is fixed, a sleeve slidable on the first named sleeve, a governor having means for moving said slidable sleeve longitudinally in accordance with the speed of rotation, a friction member fixed with respect to said slidable sleeve, and a stationary friction member adapted to engage said friction member on the sleeve.

3. In a variable speed mechanism, the combination of a shaft, a pulley loosely mounted thereon, a sleeve loosely mounted on the shaft, a governor mechanism comprising a stationary friction member, a rotary friction member on the sleeve, and an automatic governor tending to press the rotary friction member into engagement with the fixed friction member, a gear connected with the pulley, a gear connected with the sleeve, and an intermediate gear revolved by the shaft and meshing with both of the other gears.

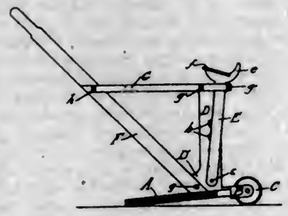
4. In a variable speed mechanism, the combination of a shaft, a pulley loosely mounted thereon, a sleeve loosely mounted thereon, a governor mechanism comprising a stationary friction-disk, a rotating friction disk on the sleeve, and spring-retracted governor weights tending to press the rotating friction-disk into engagement with the fixed friction-disk, an internal gear in the pulley, an external gear upon the sleeve, and an intermediate gear revolved by the shaft and meshing with both the internal gear and the external gear.

5. In a variable speed mechanism, the combination of a shaft, a pulley loose on the shaft, a sleeve loose on the shaft, an adjustable governor mechanism controlling the speed of rotation of the sleeve comprising a stationary friction-disk, means for adjusting the stationary friction disk laterally, a friction-disk turning with the sleeve, and spring-retracted governor weights for pressing the friction-disks together, an internal gear in the pulley, an external gear on the sleeve, and an intermediate gear revolving with the shaft and meshing with both the internal and external gears.

[Claims 6 to 10 not printed in the Gazette.]

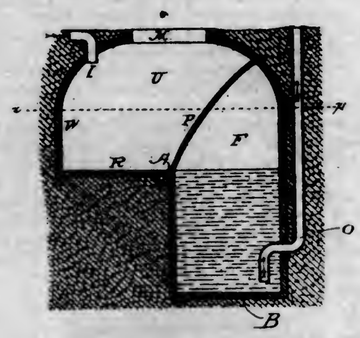
885,208. JACK FOR RAISING VEHICLES. JOHN S. WILLIAMS, Hurley, S. D. Filed July 26, 1907. Serial No. 385,715.

1. A jack consisting, in combination, of a runner, a wheel pivoted to one end thereof, an upright standard on said runner having slots therein one above the other, a handle bar projecting outward and upward from said standard, a forked bar for adjustment in said slots and a brace for supporting the forked bar against said standard, as set forth.



2. In a lifting jack, the combination with a runner, a wheel pivotally secured to one end thereof, an upright standard thereto having slots therein one above the other, and projecting lugs at the top thereof, a handle bar secured to said standard and projecting outward and upward therefrom, a brace secured to said handle bar and to the face of said projecting lugs, of a bar adapted for adjustment to and support in said slots, the upper end thereof being freely supported by said standard between said lugs, substantially as described.

885,209. CISTERN. HIRAM H. WISE, Decatur, Ill. Filed Jan. 9, 1908. Serial No. 410,056.



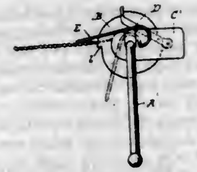
1. A cistern having a portion of its bottom raised, combined with an inlet directed onto said portion, and an outlet taken from the depressed portion near its bottom, and a nearly upright porous filter wall between said portions.

2. A cistern having its bottom raised at one side and substantially flat, its wall and mouth being within reach of an operator standing on said raised bottom, and a filter wall extending from the corner of said raised portion to the wall of the cistern; combined with inlet and outlet communicating with the spaces at opposite sides of said filter wall.

3. The combination with a cistern having a surrounding wall and mouth, a true depressed bottom, and a raised and substantially flat bottom, the two portions of the bottom occupying about equal parts of the area of the cistern; of a porous filter wall extending from the corner between said portions of the bottom obliquely upward to the wall of the cistern and dividing its interior into spaces for unfiltered and filtered water, an inlet into the space for the unfiltered water, and an outlet from the opposite space.

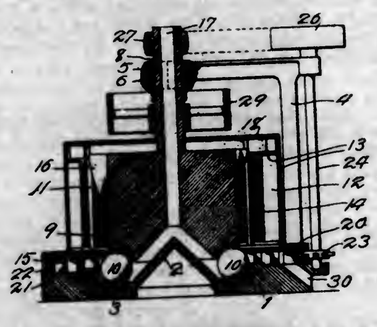
4. The combination with a cistern having a surrounding wall and a contracted mouth, a true depressed bottom, and a raised and substantially flat bottom, the two portions of the bottom occupying about equal parts of the area of the cistern; of a filter wall extending from the raised portion of the bottom obliquely to the wall of the cistern near its mouth, an inlet directed downward onto the raised portion, and an outlet taken from a point near the bottom of the depressed portion.

885,210. CLOTHES-LINE REEL. EDWARD F. WRENCH, Whitesboro, N. Y., assignor of one-fourth to Addison M. Wrench, Telluride, Colo., one-fourth to Bernard P Wrench, Yorkville, N. Y., and one-sixth to William T. Welden and one-sixth to Willard G. Bullion, Richfield Springs, N. Y. Filed Sept. 29, 1905. Serial No. 280,589.



In a device of the character described, a bracket, a reel removably mounted therein and having disks thereon notched each in opposite direction from the other, a dog engaging one of the disks to hold the reel from turning, by which combination the reel can be placed in the bracket for righthand or lefthand winding and held from unwinding, a member pivoted at each end in the bracket adjacent the journals of the reel therein and adapted to be swung over the reel journals to confine the reel in said bracket.

885,211. PULVERIZING-MILL. LEVI D. YORK, Portsmouth, Ohio. Filed May 13, 1907. Serial No. 373,328.



1. In a pulverising mill, the combination of a driver, a shaft therefor, an annular chamber into which pulverized material falls, an annular conveyer in the chamber, a pinion engaging the conveyer, a pinion shaft, pulleys on the driver and pinion shafts, and a belt connecting the pulleys.

2. In a pulverising mill, a cylindrical driver, a shaft extending from the top thereof, the driver and shaft having a cylindrical bore, a base, pulverizing rings carried by the base and driver, balls running between the rings and carrying the driver, spiral vanes running from top to bottom of the cylindrical surface of the driver and screens surrounding the driver.

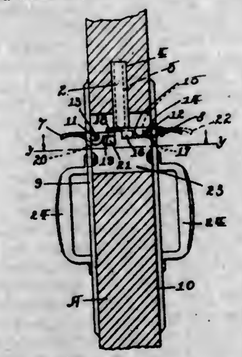
3. In a pulverising mill, a cylindrical driver, a shaft extending from the top thereof, the driver and shaft having a cylindrical bore, a base, pulverizing rings carried by the base and driver, balls running between the rings and carrying the driver, spiral vanes running from top to bottom of the cylindrical surface of the driver, screens surrounding the driver, a sleeve on the shaft forming a sliding fit and having a spherical member, and a stationary support having an internal spherical surface engaging the spherical member.

885,212. LIFE-PRESERVER AND SWIMMING-MACHINE. WILLIAM H. YOUNG and OSCAR B. LYON, Modesto, Cal. Filed Nov. 9, 1907. Serial No. 401,380.



An air tight receptacle, a narrow downwardly depending keel thereon, a shaft disposed in said keel, a propeller secured on said shaft and spaced apart from said receptacle below the same, as shown and described.

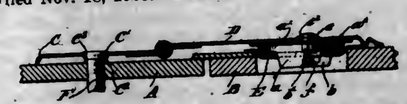
885,213. DOOR-CATCH. ANDREW AHLBERG, St. Paul, Minn. Filed June 27, 1907. Serial No. 381,169.



1. In combination with a door, a spring latch bolt provided with a substantially vertical plunger for operating the same, a tilting inner latch movably coupled with its thumb piece projecting from one side of said door and permitting its inner end to be withdrawn below said plunger and an outer latch pivoted with its thumb piece projecting from the other side of said door, the inner end thereof adapted to be pressed upward against the inner end of the inner latch when in inner position and to sweep past said end when said inner latch is in outer position.

2. In combination with a door, a spring latch bolt having its operating plunger arranged substantially vertical, an inner latch separatively pivoted upon said door with its inner end adapted to press upward in inner and outer position below said plunger, and a second latch pivoted upon said door with its inner end adapted to impinge against the inner end of the inner latch and to escape said inner end when said inner end latch is in outer position, said outer latch having a weight on its inner end drawing it down into normal position below the inner end of the inner latch when the latter is thrust inward, for the purposes specified.

885,214. LOCK. FRANK S. ALIANO, New York, N. Y. Filed Nov. 18, 1905. Serial No. 287,918.



1. In a lock, the combination of a lock cup comprising an upper or tumbler chamber, and a lower or bolt chamber of smaller dimensions than said tumbler chamber having an opening through the side thereof, a pivotal or swinging bolt mounted in said bolt chamber having its head normally projected through said opening, a spring acting on

said bolt to normally project it from the bolt chamber, key controlled means whereby said bolt may be swung to withdraw said head within said bolt chamber and said bolt may rotate independently of said means, means supporting said cup, and a coöperating lock or socket plate having an opening adapted to receive the portion of said cup carrying said bolt, whereby said bolt may pass through said plate and engage the under side thereof.

2. In a lock, the combination of a lock cup comprising an upper or tumbler chamber, and a lower or bolt chamber of smaller dimensions than said tumbler chamber having an opening through the side thereof, a pivotal or swinging bolt comprising a central portion adapted to engage the wall of said bolt chamber and having a rounded corner to permit the rotation of said bolt, mounted in said bolt chamber, and a bolt head projected through said opening, a spring acting on said bolt to normally project it from the bolt chamber, key controlled means whereby said bolt may be swung to withdraw said head within said bolt chamber and said bolt may rotate independently of said means, means supporting said cup, and a coöperating lock or socket plate having an opening adapted to receive the portion of said cup carrying said bolt, whereby said bolt may pass through said plate and engage the under side thereof.

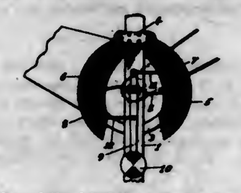
3. In a lock, the combination of a lock cup comprising an upper or tumbler chamber, and a lower or bolt chamber of smaller dimensions than said tumbler chamber having an opening through the side thereof, a pivotal or swinging bolt comprising a central portion adapted to engage the wall of said bolt chamber and having a rounded corner to permit the rotation of said bolt, mounted in said bolt chamber, and a bolt head projected through said opening, said bolt having a spring seat back of said head, a spring in said seat and acting against the wall of said bolt chamber, key controlled means whereby said bolt may be swung to withdraw said head within said bolt chamber and said bolt may rotate independently of said means, means supporting said cup, and a coöperating lock or socket plate having an opening adapted to receive the portion of said cup carrying said bolt, whereby said bolt may pass through said plate and engage the under side thereof.

4. In a lock, the combination of a lock cup comprising an upper or tumbler chamber, and a lower or bolt chamber of smaller dimensions than said tumbler chamber having an opening through the side thereof, a pivotal or swinging bolt mounted in said bolt chamber having its head normally projected through said opening, a spring acting on said bolt, an abutment on said bolt head within said chamber, a rotary plate having an abutment thereon opposed to said abutment on said bolt head mounted within said tumbler chamber, key controlled means whereby said plate may be rotated to force said head within said bolt chamber and said bolt may rotate independently of said plate, means supporting said cup, and a coöperating lock or socket plate having an opening adapted to receive the portion of said cup carrying said bolt, whereby said bolt may pass through said plate and engage the under side thereof.

5. In a lock, the combination of a lock cup comprising an upper or tumbler chamber, and a lower or bolt chamber of smaller dimensions than said tumbler chamber having an opening through the side thereof, a pivotal or swinging bolt mounted in said bolt chamber having its head normally projected through said opening, a spring acting on said bolt, an abutment on said bolt head within said chamber, a rotary plate comprising an upper plate seated in said tumbler chamber and a lower plate projected into said bolt chamber into close juxtaposition to said bolt, said lower plate converging on the sides from a substantially central point thereof, said plates having an abutment thereon opposed to said abutment on said bolt head, key controlled means whereby said plate may be rotated to force said head within said bolt chamber, and said bolt may be rotated independently of said plate, means supporting said cup, and a coöperating lock or socket plate having an opening adapted to receive the portion of said cup carrying said bolt, whereby said bolt may pass through said plate and engage the under side thereof.

[Claims 6 to 8 not printed in the Gazette.]

885,215. AUTOMATIC ADJUSTER FOR FAN-BOXES OF COMBINED HARVESTERS. WILLIAM M. AMER, Madera, Cal. Filed Apr. 15, 1907. Serial No. 368,208.

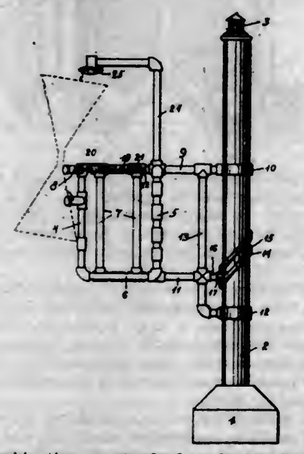


1. In a device of the kind described a fan box, end doors therefor consisting of two pivoted members, holes disposed in the right hand members near the tops thereof, and the left hand members near the bottoms thereof, levers pivotally mounted on each end of said fan box, weights at the lower ends of said levers, links connecting the upper end of each of said levers with one of said right hand holes, and similar links connecting the lower end of each of said levers with one of said left hand holes, as set forth.

2. In a device of the character described, a supporting beam, a fan journaled therein, a fan box inclosing said fan, a hanger secured to the beam, a pair of doors pivotally suspended from said hanger, a weighted lever pivotally suspended from the beam, and connections between said lever and the doors at opposite sides of the pivotal point of the lever whereby the space between the doors is varied according to the position of the weighted lever.

3. In a device of the kind described, a fan, a fan box, a supporting beam therefor, a pair of doors pivotally supported at their upper ends and suspended from said beam, a weighted lever pivotally supported from the beam, and adjustable connections between the weighted lever and the doors, the connection between one door and the lever being on one side of the pivotal point of said lever and the connection between the other door and said lever being on the opposite side of the pivotal point of said lever whereby the space between the doors is varied according to the position of said weighted lever.

885,216. MAIL-BAG CATCHER AND DELIVERER. JOHN ANDERSON, Cleburne, Tex. Filed Nov. 7, 1907. Serial No. 401,187.



1. In combination, a standard, a basket held by the standard, said basket being opened at its ends, and spring pressed forks acting in conjunction with a face of the basket for the reception of a pouch.

2. In combination, a standard, a basket held by the standard, said basket being opened at its ends, and forks pivotally carried by the basket acting in conjunction with the face of the basket for the reception of a pouch.

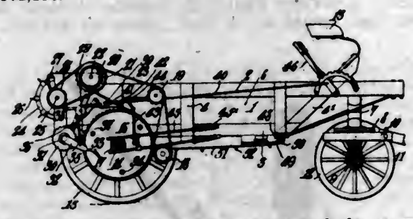
3. In combination, a standard, a basket held by the standard, said basket being opened at its ends, forks pivotally carried by the basket acting in conjunction with the face of the basket for the reception of a pouch, and means for imparting movement to the forks in one direction on their pivots.

4. In combination, a standard, a basket held by the standard, said basket being opened at its ends, forks pivotally carried by the basket acting in conjunction with the face of the basket for the reception of a pouch, means for imparting movement to the forks in one direction on their pivots and means for limiting the movement imparted to the forks.

5. In combination, a standard, a basket, rings carried by the basket loosely embracing the standard, a ring fixedly embracing the standard, said ring being provided with an annular inclined groove, and an extension carried by the basket projecting within the groove of the fixed ring.

[Claims 6 to 10 not printed in the Gazette.]

885,217. COMPOST-SPREADER. HENRY A. ARNOLD, Lake Geneva, Wis. Filed May 6, 1907. Serial No. 372,156.



1. A compost spreader comprising a body, a wheel mounted axle supporting the same, a conveyer mounted for movement at the bottom of the body, a spreader located at the end of the boly, a sprocket wheel journaled for rotation upon the axle and being operatively connected with the spreader and having spaced projections, a lever operatively connected with the conveyer and having an end lying in the path of said projections.

2. A compost spreader comprising a wheel mounted body, a spreader mounted at the end of the body, means operatively connecting said spreader with the wheel of the body, a wheel journaled for rotation with the body supporting wheel and having lateral projections, a conveyer mounted for movement at the bottom of the body, and a lever operatively connected with said conveyer and having an end lying in the path of said projections, and means for adjusting the extent to which said levers may traverse the path of the projection.

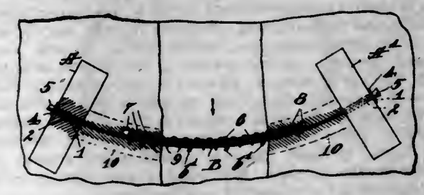
3. A compost spreader comprising a body, a conveyer mounted for movement at the bottom thereof, a spreader mounted at the ends thereof, said conveyer having cross slats and said spreader having pins, a comb attached to the bottom of the body and being made up of spring teeth which are disposed toward the spreader and over which said cross slats pass.

4. A compost spreader comprising a body, a conveyer having cross slats mounted for movement at the bottom thereof, a spreader journaled for rotation at the end of the body, a comb attached to the bottom of the body and being made up of spring teeth disposed toward the spreader and a similar comb attached to the bottom of the body under the first said comb.

5. A compost spreader comprising a body, a conveyer having cross slats mounted for movement longitudinally of the body, a spreader journaled for rotation at the end of the body, a spring comb attached to the bottom of the body and being disposed toward the spreader, a similar comb attached to the bottom of the body and being located under the first said comb and means for adjusting the angle of inclination of the last said comb with relation to the bottom of the body.

[Claim 6 not printed in the Gazette.]

885,218. DAM. EDWIN M. BASSLER, Chicago, Ill. Filed Mar. 12, 1907. Serial No. 361,972.



1. A dam comprising cables, supports for the same and a dam proper supported by said cables, consisting of sheet piling which rests in contact with the up-river side of said cables.

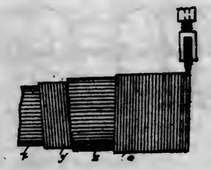
2. A dam comprising cables, supports for the same and a dam proper supported by said cables consisting of sheet piling which rests against the up-river side of said cables, and means for connecting members of said sheet piling to a cable.

3. A dam comprising cables connected between their ends, supports for the same and a dam proper supported by said cables consisting of sheet piling which rests against the up-river side of said cables, and means for connecting members of said sheet piling to a cable, whereby said dam will form a substantially unitary structure.

4. The process of constructing a dam which consists in first suspending cables across a waterway and then applying a facing to the up-river side thereof by constructing said facing in sections beginning at opposite sides of the waterway, building on to the shore ends thereof and drawing said sections towards each other.

5. The process of constructing a dam which consists in first suspending cables across a waterway and then applying a facing to the up-river side thereof by constructing said facing in sections beginning at opposite sides of the waterway, building on to the shore ends thereof, drawing said sections towards each other and in then connecting the adjacent edges of said sections.

885,219. FABRIC. EUGENE D. C. BAYNE and LAWRENCE A. SUBERS, Cleveland, Ohio. Filed Apr. 25, 1907. Serial No. 370,139.



1. A fabric made of a layer of parallel threads, and a superimposed layer of parallel transversely arranged threads, the threads of each layer being composed of united fibrous strands, each strand having a coating thereon of elastic non-fibrous material before uniting the strands together and each thread having compressed thereon a cylindrical coating of elastic non-fibrous material, said coatings being adhesive to join the strands together, and to join the threads together at the time the fabric is made, and of sufficient thickness to maintain them out of contact with each other.

2. A fabric made of alternating layers of parallel twisted threads, each thread comprising a group of united strands and arranged longitudinally and transversely therein, the threads in one transverse layer crossing the threads of the alternating transverse layers at an angle, each strand being coated with a flexible non-fibrous material and each thread having compressed thereon a cylindrical coating of compressible non-fibrous material, said coating being adhesive to join the strands to one another and to join the threads and layers together and of sufficient thickness

to maintain them out of contact with each other at the time the fabric is made.

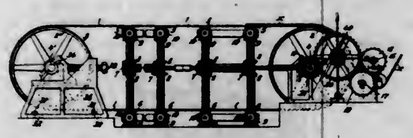
3. A fabric made of a layer of longitudinally extending threads, and superimposed layers of alternately transversely and longitudinally extending threads, the threads of each layer comprising united fibrous strands, each strand having a coating thereon of non-fibrous material, and the united strands forming a thread having compressed thereon a cylindrical coating of non-fibrous material, said coating being adhesive to join the said strands together and to join the threads together at the time the fabric is made, the said threads being applied together under pressure, said strands and threads being maintained out of contact by said coatings.

4. A cylindrical fabric, comprising a layer made of a series of spirally disposed threads, and a layer of longitudinally disposed threads, the alternate spiral layers crossing each other at an angle, the threads of each layer comprising strands of fibrous material united together, each strand having a coating of non-fibrous material thereon, and each thread having compressed thereon a cylindrical coating of compressible non-fibrous material, said coatings being adhesive to join the strands together and to join the threads together at the time the fabric is made, the said coatings being of sufficient thickness to isolate said strands, threads and layers.

5. A fabric comprising fibrous strands grouped together to form threads, said threads being grouped together in parallel rows to form layers, and said layers of threads arranged longitudinally and transversely in said fabric, each fibrous strand being coated with a flexible non-fibrous and vulcanizable and adhesive material prior to uniting in groups, and said threads coated with a similar material before being united to form layers, and each layer adhering to the adjacent layer without contact of strands or threads in the completed fabric.

[Claim 6 not printed in the Gazette.]

885,220. MACHINE FOR WINDING AND PLACING UNDER PRESSURE A THREAD COATED WITH NON-FIBROUS AND ADHESIVE MATERIAL. EUGENE D. C. BAYNE and LAWRENCE A. SUDERS, Cleveland, Ohio. Filed May 10, 1907. Serial No. 373,001.



1. In a device for the purpose set forth, a longitudinally movable table comprising an endless metal band having a polished surface, band wheels upon which said band is mounted, a transversely movable carriage and director and guide wheels therein, and means for rotating said band wheels and for feeding said carriage transversely to said endless metal band, substantially as described.

2. In a machine for the purpose described, in combination an endless band having a polished surface, rotatable shafts and drums upon which the band is supported, a carriage transversely movable thereto, director and guide wheels therein, a swiveled and spring pressed support for said director wheel in said carriage, a pair of right and left feed screws in said carriage, gearing operatively connecting one of said drum shafts with said feed screws, and supports for said drums, gears and feed screws, substantially as described.

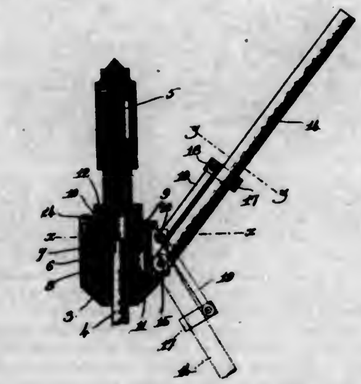
3. In a machine for the purpose described, an endless horizontal band having a polished surface, rotatable drums supporting said band, shafts therefor, intermediate sets of rollers supporting said band, one set supporting the upper side of the band and the lower set supporting the lower side thereof, gearing operatively connecting one of the drum shafts and supporting rollers, a carriage transversely movable relative to said band, a director wheel swiveled therein, a feed screw passing through said carriage, and gearing operatively connecting said feed screws with one of said drum shafts, substantially as described.

4. The combination with a pair of right and left feed screws, of a carriage mounted thereon, a director wheel and a swiveled support therefor in said carriage, a screw threaded swivel rod on said support, a spring connection between said rod and support, and an adjusting nut therefor on said screw threaded rod, substantially as described.

5. In a machine for the purpose described, an endless metal band having a polished surface, rotatable drums supporting said band, a carriage movable transversely to said band, a spring pressed and swiveled director wheel and a guide wheel in said carriage, a feed screw therefor, gearing operatively connecting the movements of said drums and feed screw and means for adjusting the tension upon the spring pressed director wheel, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

885,221. RATCHET-DRILL. FREDERICK C. BOHM, Boston, Mass. Filed May 8, 1907. Serial No. 372,587.



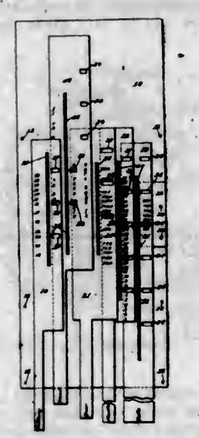
1. In a ratchet drill, the combination with a drill-receiving member, of a shell or casing having a ratchet engagement therewith, a handle pivoted to said shell, a link also pivoted to the shell, and a clamping collar adjustably mounted on the handle and having pivotal connection with the link.

2. In a ratchet drill, the combination with a drill-receiving member, of a shell or casing having a ratchet engagement therewith, a handle pivoted to said shell, a link also pivoted to the shell and extending parallel to the handle, and a clamping collar adjustably mounted on the handle and pivoted to the link.

3. In a ratchet drill, the combination with a drill-receiving member 3 having a head and a stem with a non-circular portion 6, of a casing 8 surrounding said stem and having rigid therewith a cap 9 through which the stem projects, said cap having ratchet-teeth on its under surface, a ratchet-ring 7 confined on the non-circular portion of the stem, and a spring confined between the head and the ratchet ring to maintain the latter in operative engagement with the ratchet teeth on the cap.

885,222. CALENDAR. BRUCE BORLAND, Chicago, Ill. Filed May 13, 1905. Serial No. 260,226.

1. In a perpetual calendar, a series of movable slides, a stationary slip, all provided with indicia and arranged in successive order, each movable slide overlapping the succeeding slide and slip respectively and provided with openings through which the succeeding indicia is adapted to be exposed.



2. A perpetual calendar, comprising a stationary slip a series of movable indicia carrying slides, such indicia designating the year, month, and day of the month, each of such movable slides being provided with openings through which the characters of an adjacent slide are exposable, and a column of characters on the stationary slip indicating the days of the week and which characters are adapted to be exposed through the openings in the day of the month slide.

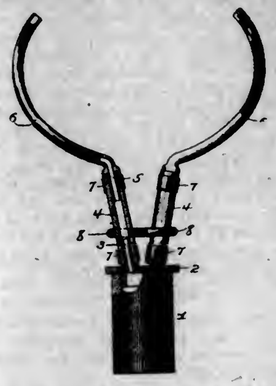
3. In a perpetual calendar, a series of movable slides comprising a century indicating slide, a decade indicating slide, a year indicating slide, month and day of the month slides; a stationary slip, all arranged in the order mentioned, the said movable slides having openings through which the characters of the succeeding slide are exposable, and a column of characters on the stationary slip indicating the days of the week and which characters are adapted to be exposed through the openings in the day of the month slide.

4. In a perpetual calendar, a series of movable slides provided with indicia designating the year, month, and day of the month, a stationary slip, all arranged in the order mentioned and each movable slide overlapping the succeeding slide and having openings through which the indicia on the succeeding slide is adapted to be exposed, and a column of characters on the stationary slip indicating the days of the week adapted to be exposed through the openings of the day of the month slide.

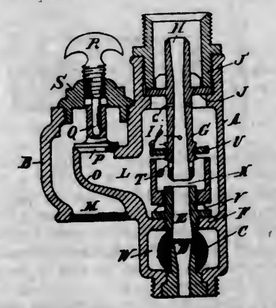
5. In a perpetual calendar, a case provided with a front having a series of apertures, a century indicating slide, a slide carrying characters indicating decades, a year indicating slide, month, and day of the month slides, all of said slides being movable, a stationary slip, all arranged in the order mentioned and each movable slide overlapping the succeeding slide and provided with openings adapted to register with the apertures in the front and through which the characters on the succeeding slide are adapted to be exposed, the said movable slides being provided with elongated slots, guide pins fastened to the case and passing through the slots, and a column of characters on the stationary slip indicating the days of the week and adapted to be exposed through the openings in the day of the month slide.

885,223. RECEIVER. WILEY T. BOYD, Ellenton, Fla. Filed Feb. 12, 1907. Serial No. 357,000.

The combination with a receiver provided with a removable cap, of divergent nipples projecting from said cap and communicating with the interior of the receiver, flexible tubes secured at one end to said nipples, rigid ear tubes secured to the other ends of said flexible tubes, and a ring embracing and movable on the flexible tubes and coöperating therewith to form flexible adjustable clamping means for the rigid ear tubes.



885,224. AUTOMATIC INJECTOR. LOUIS BUEHLER, Detroit, Mich. Filed July 17, 1903, Serial No. 165,902. Renewed July 11, 1907. Serial No. 383,318.



1. In an automatic injector, the combination with the casing and overflow chamber formed therein, of lifting and combining tubes arranged in alinement with each other in said chamber and forming an overflow opening between the same, a cup valve sliding on the lifting tube and extending beyond and inclosing the mouth of the combining tube, a disk loose on the combining tube adapted to form a seat for the cup valve and an overflow outlet from the overflow chamber arranged at a point above the cup valve.

2. In an automatic injector the combination with the casing and overflow chamber formed therein, of the lifting tube entering one side of the overflow chamber and the combining tube entering the opposite side in alinement with each other, an overflow opening between said tubes, spill openings in the combining tube at different points beyond its mouth, lugs on the lifting tube, a cup valve sliding on the lifting tube adapted to engage said lugs, a disk on the combining tube adapted to form a seat for said cup valve and a valve controlled overflow outlet from the overflow chamber located above the bottom of said chamber and adapted to form a water seal in said chamber for the overflow from the lifting and combining tubes.

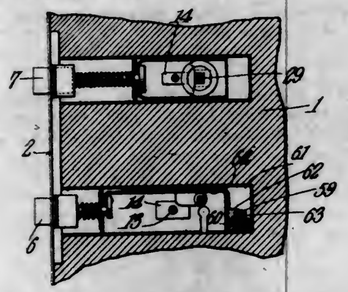
3. In an automatic injector, the combination with the casing and overflow chamber formed therein, of lifting and combining tubes arranged in alinement with each other in said chamber and forming an overflow opening between the same, a cup valve sliding on the lifting tube and extending beyond and inclosing the mouth of the combining tube, a disk loose on the combining tube adapted to form a tilting seat for the cup valve and an overflow out-

let from the overflow chamber at a point above the mouth of the combining tube.

4. In an automatic injector, the combination with the casing and overflow chamber formed therein, of lifting and combining tubes in said chamber and forming an overflow opening between them, an automatic overflow valve having a tilting seat controlling said overflow opening and a valve controlled overflow outlet from the chamber at a point above the mouth of the combining tube.

5. In an automatic injector, the combination with the casing and overflow chamber formed therein of lifting and combining tubes projecting into said chamber from opposite sides and forming an overflow opening between them, a cup valve sliding on the lifting tube and inclosing the mouth of the combining tube, a disk loose on the combining tube adapted to form a tilting seat for the cup valve and a valve controlled overflow outlet from the overflow chamber at a point above the cup valve.

885,225. LOCK AND LATCH. DONALDSON H. BURTCH, Morgan City, La., assignor of one-third to Marville Thomas Gautreaux, Morgan City, La. Filed July 10, 1907. Serial No. 383,053.



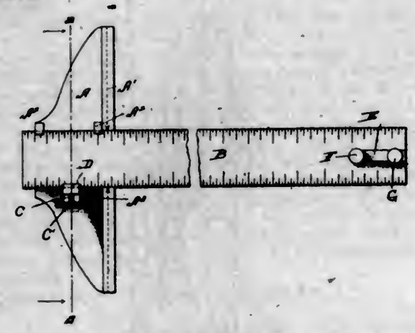
1. In a latch, a cylindrical casing, a roll-back formed of a substantial globular block having a passage for a knob spindle, and a slot extending through the block at right angles to the passage for the knob spindle, a latch-bolt provided with a saddle strap, and a plate secured to the yoke end of the saddle strap and centrally slotted to form two spaced legs entering the slot in the roll-back and straddling the knob spindle.

2. A latch, composed of a cylindrical casing, a face-plate having the central strengthening rib provided with guiding sleeves entering the cylindrical casing and to which the latter is anchored, a latch-bolt having its head guided by the sleeve, a stem extending from the latch-bolt head, a saddle strap fast on the stem, a washer on the stem, a spring on the stem between the washer and the head of the latch, a radially slotted plate fast in the cylindrical casing and receiving the latch stem between the washer and the strap, and a globular roll-back extending through the saddle-strap and engaging the same to cause longitudinal movement of the latch-bolt when the roll-back is rotated.

3. In a latch, a roll-back formed of a block having a passage for a knob spindle and a slot extending through the block at right angles to and intersecting the passage for the knob spindle from one side of the block to a point beyond the passage for the knob spindle, and a latch-bolt having projecting parts straddling the knob spindle and engaging the end wall of the slot formed in the roll-back.

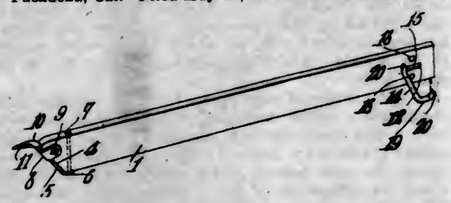
885,226. COMBINED SQUARE, GAGE, AND RULE. ALBERT C. COWLES, Auburn, N. Y. Filed June 21, 1907. Serial No. 380,080.

1. The combination with a head provided with flanged squaring edge having a central notch formed therein, spaced flanged lugs formed on said head in alinement with one side of said notch, a blade arranged in said notch under said lug, a screw mounted in bearings formed at each end of a slot formed in said head, a flanged clamping block mounted on said screw adapted to fit over the edge of said blade, a thumb-wheel carried by said screw for operating the same, and an adjustable marking point mounted on the end of said blade, for the purpose described.



2. The combination with a head, of a blade adjustably mounted in said head, provided with a notched end, a plate secured on said blade provided with a marking point extending into said notch, and means for adjusting said point.

885,227. SCAFFOLD-BRACKET. ALBERT V. DAVIS, Pasadena, Cal. Filed May 17, 1907. Serial No. 374,199.



1. A scaffold bracket comprising a supporting bar, a screw attachment at one end thereof in line with the upper surface of said bar and a swinging hook arm bent to partly embrace a vertical supporter, hinged to one side of said bar near its other end.

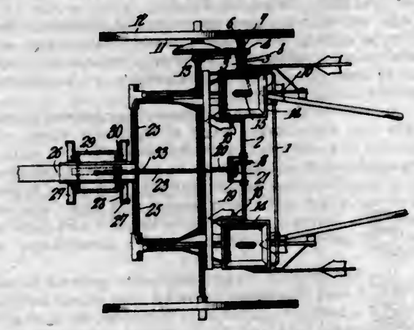
2. A scaffold bracket comprising a supporting bar, a screw attachment at one end thereof formed of a metal bar or rod seated in a groove in the end of said supporting bar and having its upper end bent into line with the top surface of said supporting bar and threaded, and its lower end extending beneath the supporting bar and bolted thereto, a fastening for the upper part of said screw attachment and means for securing the other end of the supporting bar.

3. A scaffold bracket comprising a supporting bar, a screw attachment at one end thereof in line with the upper surface of said bar and a swinging hook arm on one side of said supporting bar near its other end hinged in a slot in said bar on a longitudinal axis and bent at its free end and finished with a point to partly embrace a vertical support and engage therewith.

4. A scaffold bracket comprising a supporting bar having a slot in one end, a screw attachment at the other end in line with the upper surface of said bar, a hinge member fastened to one side of said bar with its bearing extending into said slot and longitudinally disposed with respect to said bar, and a swinging hook arm extending into said slot from the opposite side of said bar and turning in said hinge bearing.

885,228. CULTIVATOR ATTACHMENT. HENRY A. DAVIS, Murfreesboro, Ark. Filed Sept. 16, 1907. Serial No. 393,155.

1. A cultivator attachment comprising a frame, a shaft journaled for rotation upon the frame, a plurality of hoppers mounted upon the frame, two of which are in fixed position while the third is adjustable, each of the said hoppers having dropping mechanism operatively connected with the shaft.

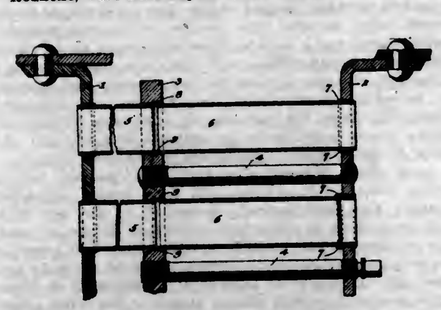


2. A cultivator attachment comprising a frame, a shaft journaled for rotation on the frame, a plurality of hoppers mounted upon the frame, two of which are in elevated fixed positions at the sides of the frame while the third is adjustably located at the middle of the frame, each of said hoppers having a dropping mechanism which is operatively connected with the shaft.

3. A cultivator attachment comprising a frame, a shaft journaled for rotation on the frame and adapted to receive its rotary movement from the wheel of the cultivator, a clutch mechanism and clutch lever for throwing said shaft in and out of gear with the wheel of the cultivator, the end of the clutch lever being hooked and adapted to support one of the beams of the cultivator whereby, the said shaft is thrown out of gear with the wheel of the cultivator, a plurality of hoppers mounted upon the frame, each said hopper having a dropping mechanism which is operatively connected with the shaft.

4. A cultivator attachment comprising a frame, a shaft journaled for rotation on the frame, a plurality of hoppers mounted upon the frame and each having a dropping mechanism which is operatively connected with the shaft, one of said hoppers being vertically and transversely adjustable with relation to the line of draft of the cultivator.

885,229. STEAM-BOILER. JOHN A. DOARNBERGER, Roanoke, Va. Filed Apr. 19, 1907. Serial No. 369,125.

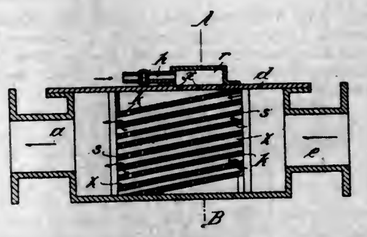


1. In a steam boiler provided with a reinforcing auxiliary flue sheet located intermediate the front and back main sheets and secured in fixed relation therewith; two part tubes each having one end fixed in a main flue sheet and the opposite ends fixed in the reinforcing auxiliary sheet, substantially as hereinbefore set forth.

2. In a steam boiler having a reinforcing auxiliary flue sheet intermediate the front and back main sheets and secured in fixed relation to the back main flue sheet; tubes formed of two sections secured at their outer ends within the main front and back sheets respectively, and their opposite adjacent ends secured within the reinforcing auxiliary sheet formed with an annular recess, and an adjacent annular shoulder constituting an intermediate abutment for the adjacent ends of the tube sections, substantially as hereinbefore set forth.

3. In a steam boiler provided with a reinforcing, auxiliary flue sheet intermediate the front and back main flue sheets; two-part tubes each having one end secured in a main flue sheet and its opposite end secured in the reinforcing auxiliary flue sheet and constituting a continuous flue, substantially as hereinbefore set forth.

885,230. APPARATUS FOR THE PRODUCTION OF GASES FROM HYDROCARBON. WILLY VON DULONG, Witaschütz, Germany. Filed Nov. 5, 1906. Serial No. 342,300.



1. A carbureter for hydrocarbon, comprising in combination: a vessel having inlet and outlet openings for admitting air and carbureting liquid to the vessel, and discharging them therefrom, solid and thick plates or disks of metal having an inclined position towards the direction of the air draft and straight and fine passages or perforations, the disks being arranged in a small distance from each other.

2. A carbureter for hydrocarbon comprising in combination: a vessel having inlet and outlet openings for admitting air and carbureting liquid to the vessel, and discharging them therefrom, and solid and thick plates or disks having an inclined position towards the direction of the air draft, and straight and fine passages or perforations, the disks being arranged in a small distance from each other as to form slots, the total of the cross-sections of the slots (z) being about equal to the cross-section of the sucking conduit of the motor.

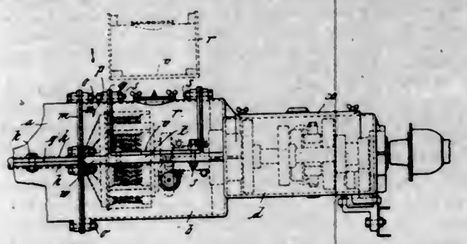
3. A carbureter for hydrocarbon comprising in combination: a vessel having inlet and outlet openings for admitting air and carbureting liquid to the vessel, and discharging them therefrom, solid and thick plates or disks having a zigzag shape and straight and fine perforations or passages, the disks being inclined towards the direction of the air-draft and being arranged in a small distance from each other.

4. A carbureter for hydrocarbon, comprising in combination: a vessel having inlet and outlet openings for admitting air and carbureting liquid to the vessel, and discharging them therefrom, solid and thick plates or disks having a zigzag shape and straight and fine perforations or passages, the plates or disks being inclined towards the direction of the air-draft and being arranged in a small distance from each other, as to form slots, the total of the cross-section of the latter being about equal to the cross-section of the sucking conduit of the motor.

885,231. TUBULAR BASE FOR MOTORS. JAMES F. DURYEA and WILLIAM M. REMINGTON, Springfield, Mass. Filed July 15, 1907. Serial No. 383,774.

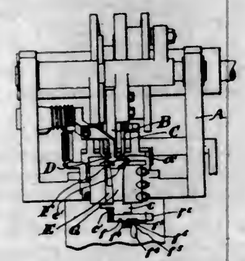
A base-piece for the power plant of a self-propelled vehicle consisting of tubular sections secured together end to end, a portion of the wall of each section being re-

movably secured thereto: that part of the wall of the base-piece lying between two of said removable wall por-



tions being of continuous tubular form in cross section and integral with the section in which it is located.

885,232. CHANNELING AND GROOVING MACHINE. CLARENCE L. EATON, Binghamton, N. Y., assignor to The United Shoe Machinery Company, Boston, Mass., a Corporation of New Jersey. Filed Aug. 1, 1902. Serial No. 117,955.



1. A rough rounding and channeling machine, having, in combination, a channeling knife, a grooving knife, a single support for both knives, and means for moving the support to throw one knife into, and the other knife out of, operation during the continued operation of the machine, said knives being so located on said support with relation to each other that the operation of one knife commences immediately upon the interruption of the operation of the other knife, substantially as described.

2. A rough rounding and channeling machine, having, in combination, a channeling knife, a grooving knife, a single rotatable support for both knives, and means for rotating the support to throw one knife into, and the other out of, operation during the continued operation of the machine, said knives being so located on said support with relation to each other that the operation of one knife commences immediately upon the interruption of the operation of the other knife, substantially as described.

3. A rough rounding and channeling machine, having, in combination, a channeling knife, a grooving knife, a rotatable sole support, and a rotatable spindle for carrying said sole support, said knives being supported on said spindle and adapted to be thrown, the one, into, and the other, out of, operation, by turning said spindle, substantially as described.

4. A rough rounding and channeling machine having, in combination, a knife support having provision for a limited oscillation about a center close to the surface of the work, a channeling knife and a rounding knife mounted upon the knife support in close proximity to each other, and means for swinging the knife carrier in one direction to throw the channeling knife into operation and in the opposite direction to throw the grooving knife into operation during the continued operation of the machine, the operation of one knife commencing immediately upon the interruption of the operation of the other knife owing to the relative positions of the knives, substantially as described.

885,233. COMPOSITION FOR GENERATING FORMALDEHYDE. ARTHUR EICHENGRÜN, Dusseldorf, Germany, assignor to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany, a Corporation of Germany. Filed Oct. 15, 1907. Serial No. 397,515.

1. A composition of matter generating gaseous formaldehyde and water vapor when treated with water, and consisting of a mixture of polymeric formaldehyde with salts of permanganic acid, substantially as hereinbefore described.

2. A composition of matter generating gaseous formaldehyde and water vapor when treated with water, and consisting of a mixture of para-formaldehyde with salts of permanganic acid, substantially as hereinbefore described.

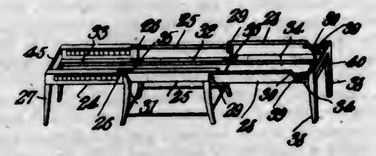
3. A composition of matter generating gaseous formaldehyde and water vapor when treated with water, and consisting of a mixture of para-formaldehyde with permanganate of potassium, substantially as hereinbefore described.

4. A composition of matter generating gaseous formaldehyde and water vapor when treated with water, and consisting of a mixture of polymeric formaldehyde with salts of permanganic acid and fixed alkaline compounds, substantially as hereinbefore described.

5. A composition of matter generating gaseous formaldehyde and water vapor when treated with water, and consisting of a mixture of para-formaldehyde with salts of permanganic acid and fixed alkaline compounds, substantially as hereinbefore described.

[Claim 6 not printed in the Gazette.]

885,234. HOUSEHOLD FURNITURE. BENGT G. ERIKSSON, Christinehamn, Sweden. Filed Feb. 12, 1906. Serial No. 300,724.

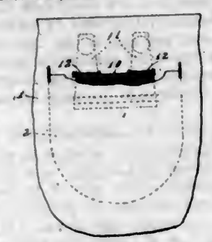


1. A chair comprising a main body section having rail members and frame pieces rigidly connected thereto, rail members hinged to one end of the first-mentioned rail members and constituting arm rests, said hinged rail members being movable into position upon one end of and in alinement with the rail members of the body section, frame pieces hinged to the frame pieces of the body section and carrying the seat of the chair, said hinged frame pieces being movable into position within the extended rail sections, and a main back section hinged to the frame pieces of the body section, and laterally movable side rails hinged to the side rails of the body section and adapted to be seated therein, said hinged side rails extending longitudinally of the back section, said back section and frame pieces constituting a mattress support, and the rails of the sections constituting a retaining ledge.

2. A chair comprising a main body section having frame pieces and recessed side rails rigidly connected thereto, arm rests movably connected to the side rails and adapted to be supported in position thereon or upon one end thereof and in alinement therewith, seat carrying frame pieces hinged to the frame pieces of the body section and adapted to be supported thereupon or in alinement therewith, a back section hinged to the frame pieces of the body section, and laterally movable side rails hinged to and adapted to be folded into the recesses within the side rails of the body section.

3. A chair comprising a main body section having rail members and frame pieces rigidly connected thereto, rail members hinged to one end of the first mentioned rail members and constituting arm rests, said hinged rail members being movable into position upon one end of and in alinement with the rail members of the body section, frame pieces hinged to the frame pieces of the body section and carrying the seat of the chair, said hinged frame pieces being movable into position within the extended rail sections, and a main back section hinged to the frame pieces of the body section, and laterally movable side rails hinged to the side rails of the body section and adapted to be seated therein, said hinged side rails extending longitudinally of the back section, said back section and frame pieces constituting a mattress support, and the rails of the sections constituting a retaining ledge.

885,235. SAFETY ATTACHMENT FOR POCKETS. JACOB FELSENSTEIN, New York, N. Y. Filed Aug. 21, 1907. Serial No. 389,430.



1. In a garment provided with a pocket, the combination of a strap of flexible material secured at one end to the interior of said pocket at a distance from the edge of the latter, a plurality of extensions carried by the free end of said strap for extending through openings in the garment, and means for detachably securing said extensions to the inside of the garment, substantially as described.

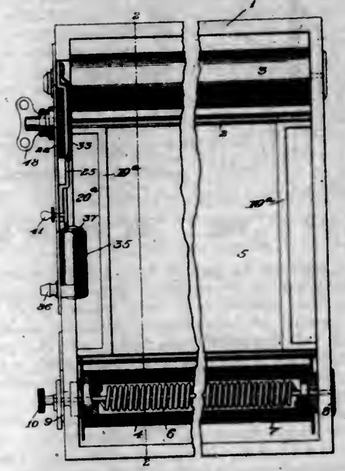
2. In a garment provided with a pocket, the combination of a strap of flexible material secured at one end to the interior of said pocket at a distance from the edge of the latter, the free end of said strap extending substantially to the edge of said pocket, a flexible extension carried by the free end of said strap for extending through an opening in the garment, and means for detachably securing said extensions to the inside of the garment, substantially as described.

885,236. ROLLER-BLIND SHUTTER. WILLIAM F. FOLMER, Rochester, N. Y., assignor, by mesne assignments, to Eastman Kodak Company, Rochester, N. Y., a Corporation of New York. Filed Jan. 24, 1907. Serial No. 353,778.

1. In a photographic shutter, the combination with a suitable casing, a curtain or blind therein provided with an exposure opening, and suitable curtain operating means, of a member arranged to operate with the curtain, a controlling device mounted to coöperate with said member, for controlling the movements of the curtain, and a check coöperating with said member and controlling device for preventing retrograde movement of the curtain after an exposure.

2. In a photographic shutter, the combination with a suitable casing, curtain rollers mounted therein, a curtain arranged to be operated by said rollers and having a suitable exposure aperture, and a curtain actuating spring operating on one of said rollers, of a member operatively connected to one of said rollers, an escapement arranged to coöperate with said member for arresting the movement of the curtain, and a check coöperating with the said member to prevent retrograde movement of the curtain after an exposure.

3. In a photographic shutter, the combination with a suitable casing, curtain rollers mounted therein, a curtain arranged to be operated by said rollers and having a suitable exposure aperture, and a curtain actuating spring operatively connected to one of the rollers, of a member operatively connected to one of said rollers, an escapement arranged to coöperate with said member to arrest the movement of the curtain, and a latch on one of the parts arranged to automatically engage the other part to prevent retrograde movement of the curtain after an exposure.



4. In a photographic shutter, the combination with a suitable casing, curtain rollers mounted therein, a curtain passing over said rollers and having an exposure aperture therein, and a curtain actuating spring operating on one of said rollers, of a gear operatively connected to the roller opposite to the one provided with said actuating spring, and having projections thereon, an escapement having a shoulder thereon arranged to coöperate with the projections of said gear to arrest the movement of the curtain, and a latch on the escapement arranged to coöperate with said projections to retain them in coöperative relation with the shoulder of the escapement to prevent retrograde movement of the curtain.

5. In a photographic shutter, the combination with a suitable casing, curtain rollers mounted therein, a curtain arranged to be operated by the said rollers and having a suitable exposure aperture, and a curtain actuating spring adapted to operate one of said rollers, of curtain controlling mechanism embodying a rotatable member operatively connected to the curtain roller opposite to that operated on by said spring, and provided with a projection, an escapement having a shoulder thereon adapted to coöperate with said projection to arrest the movement of the curtain, and a latch arranged to coöperate with said projection to retain it in coöperative relation with said shoulder and prevent retrograde movement of the curtain.

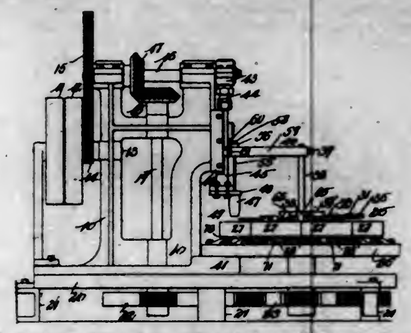
[Claims 6 to 10 not printed in the Gazette.]

885,237. MACHINE FOR CUTTING AND PUNCHING SHEET MATERIAL. DANIEL D. FROTHINGHAM, Salem, Mass. Filed Feb. 16, 1907. Serial No. 357,617.

1. In a machine for cutting and punching sheet material, a die, mechanism to impart a reciprocatory motion thereto, a cutting table, mechanism to impart an intermittent rotary motion to said cutting table, a series of levers pivoted to said table adapted to hold a piece of sheet material in contact with said table, and means to rock said levers to release said sheet material.

2. In a machine for cutting and punching sheet material, a die, mechanism to impart a reciprocatory motion thereto, a cutting table, mechanism to impart an intermittent rotary motion to said cutting table, a series of levers pivoted to said table adapted to hold a piece of sheet material in contact with said table, and a stationary cam adapted to engage said levers during the rotation of said table and to operate them to alternately clamp and

release said sheet material to and from said table, respectively.



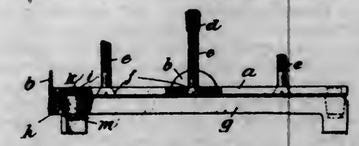
3. In a machine for cutting and punching sheet material, a cutting table, mechanism to impart an intermittent rotary motion thereto, said table consisting of a disk with a plurality of concentrically arranged wooden cutting blocks fast thereto, a plate fast to said disk and concentric therewith, a plurality of levers pivotally supported on said plate, a vertical stationary shaft concentric with said plate, the lower end of said shaft projecting into said plate, and a cam fast to said shaft and adapted to engage said levers during the rotation of said table and to operate them to alternately clamp and release said sheet material to and from said blocks, respectively.

4. In a machine for cutting sheet material, a die, a hollow punch inclosed within said die, a resilient cushion extending around the inner edge of said die, and a stationary ejector extending through said punch.

5. In a machine for cutting sheet material, a hollow die having a cutting edge a resilient cushion extending around the interior of said die adjacent to said cutting edge, and a stationary ejector extending through said die.

[Claims 6 to 17 not printed in the Gazette.]

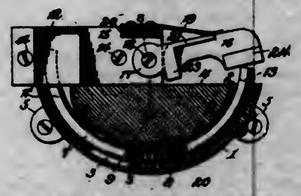
885,238. HORSESHOE. GEORGE L. GILLER, New York, N. Y. Filed Aug. 6, 1907. Serial No. 387,261.



1. A horse-shoe comprising a plate or member adapted to be secured to the hoof, tapered studs secured to such member, and a wear plate or member having tapered holes to engage said studs with a tight fit and to be secured thereby to the first member.

2. The combination with a horse-shoe, of split tapered nuts adapted to be seated in the hoof, and screw-bolts adapted to pass from the shoe through the hoof into said nuts.

885,239. SELF-LOCKING SASH-LOCK. ARTHUR GORMAN, St. Louis, Mo. Filed Oct. 31, 1907. Serial No. 400,060.



1. In a lock, the combination with a keeper, of a casing, a bolt movably mounted within the casing to project either end from the same, a spring for carrying one end of the bolt into engagement with the keeper, means for setting the bolt with its other end extended from the casing, and a tripping device arranged in the path of the extended end of the bolt when the latter is set and adapted to release the same for automatically engaging the keeper.

2. In a sash lock, the combination with a keeper designed to be mounted on the upper sash of a window, of a casing for attachment to the lower sash, an arcuate bolt slidable in the casing to project either end of it from the same, a spring for carrying one end of the bolt into engagement with the keeper, means for setting the bolt in an extended position, and means for automatically tripping the bolt when the sashes are closed.

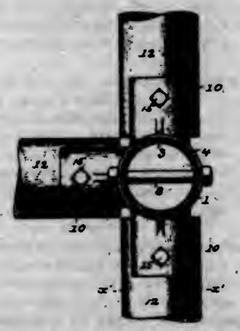
3. In a sash lock, the combination with a keeper designed to be mounted on the upper sash of a window, of a casing for attachment to the lower sash, a bolt slidable in the casing to project either end of it from the same, a spring for carrying one end of the bolt into engagement with the keeper, the other end of the bolt being provided with means for engaging the casing to set the bolt, and a tripping device arranged in the path of the bolt when the latter is set.

4. In a sash lock, the combination with a keeper designed to be mounted on the upper sash of a window, of a casing for attachment to the lower sash, a bolt slidable in the casing to project either end of it from the same, a spring for carrying one end of the bolt into engagement with the keeper, the other end of the bolt being provided with a depending lug for engaging the casing to set the bolt, and a tripping device arranged in the path of the lug when the bolt is set and movable to and from such position to permit the bolt to be unfastened and set while the sashes are closed.

5. In a sash lock, the combination with a keeper, of a casing, a slidable bolt arranged to project either of its ends from the casing, one end of the bolt being provided with means for setting it, a spring for moving the other end of the bolt into engagement with the keeper, a movably mounted tripping device for releasing the bolt, and a spring for holding the tripping device normally in the path of the extended end of the bolt when the latter is set.

[Claims 6 to 8 not printed in the Gazette.]

885,240. FITTING FOR REINFORCED CONCRETE STRUCTURES. GEORGE M. GRAHAM, Chicago, Ill., assignor to G. A. Edward Kohler, Chicago, Ill. Filed Dec. 10, 1907. Serial No. 405,892.



1. A fitting for connecting together the tubular members of a reinforcing frame for concrete structures, comprising a pair of counterpart members, each member comprising a tubular shell having at one end a pair of semi-flexible tongues in opposed relation, and laterally disposed branches at the other end of a segmental form, means for drawing said tongues together, and means for drawing said branches together, substantially as set forth.

2. A fitting for connecting together the cylindrical members of a reinforcing frame for concrete structures, comprising a pair of counterpart members, each member comprising a cylindrical shell having at one end a pair of segmental tongues in opposed relation, and laterally disposed branches at the other end of a segmental form, means for drawing said tongues together, and means for drawing said branches together, substantially as set forth.

3. The combination with the vertical column and horizontal girders of a reinforcing frame for concrete structures of a pair of counterpart members, each member comprising a tubular shell having at one end a pair of semi-flexible tongues in opposed relation, and laterally disposed branches at the other end of a segmental form, and bolts passing through said tongues and column and through said branches and girders to secure the parts in position, substantially as set forth.

4. The combination with the cylindrical column and girders of a reinforcing frame for concrete structures, of a pair of counterpart members, each member comprising a cylindrical shell having at one end a pair of semi-flexible tongues in opposed relation, and laterally disposed branches at the other end of a segmental form, and bolts passing through said tongues and column and through said branches and girders to secure the parts in position, substantially as set forth.

885,241. ADJUSTABLE BLACKBOARD. AARON G. GRANT, Downey, Cal. Filed June 21, 1907. Serial No. 380,021.



1. In a black-board, stationary and movable frames, rollers on the stationary frame, a writing surface supported by the outer end of the movable frame and having its ends wound around the rollers, and means for moving the movable frame whereby the area of the writing surface is increased or decreased.

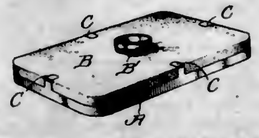
2. In a blackboard a frame, a backing board mounted on said frame and adapted to support a movable writing surface, a shaft mounted in said frame from which the writing surface is adapted to unroll, a second shaft mounted in said frame on which the writing surface is adapted to be rolled up, a vertically adjustable supplementary frame slidably mounted in said first named frame, and a roller rotatively mounted in the upper end of said supplementary frame over which the writing surface is adapted to pass on its passage from one of said shafts to the other.

3. In a blackboard a frame, a backing board mounted on said frame and adapted to support a writing surface movably mounted on said frame, a shaft rotatively mounted on said frame from which the writing surface is adapted to be unrolled, a second shaft rotatively mounted in said frame upon which the writing surface is adapted to be rolled up, a vertically adjustable supplementary frame slidably mounted in said first named frame, a roller revolubly mounted on the upper end of said supplementary frame and over which the writing surface is adapted to pass on its passage from one of said shafts to the other, means to hold the writing surface in engagement with said backing board, and means to raise and lower said supplementary frame.

4. A blackboard having a movable writing surface, means for moving the surface, a backing board provided with a resilient surface possessing sufficient friction to hold the writing material to the backing board under pressure of a crayon, but having slight friction under mere contact the writing surface being movable over said board.

5. A blackboard having a movable writing surface, a backing board adapted to support said writing surface, said board being provided with a resilient surface possessing sufficient friction to hold the writing material to said backing board under pressure of a crayon and having but slight friction under mere contact, and a frame adapted to press said writing surface into engagement with the resilient surface on said writing board, said frame being provided with a surface of resilient material adapted to engage said writing surface.

885,242. NEEDLE-PAD. HEINRICH GRESSNER, Berlin, Germany. Filed Jan. 22, 1907. Serial No. 353,480.

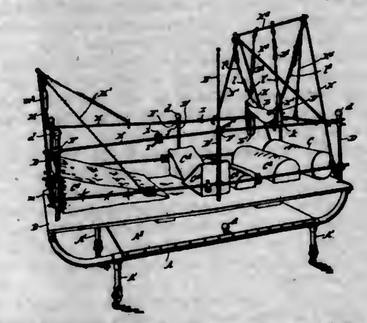


1. A needle pad comprising a rectangular metal frame having an elastic felt pad arranged therein and provided with a central thimble-receiving opening whereby the thimble will be held therein by frictional contact with the felt, and means carried by said frame for locking said pad therein.

2. A needle pad comprising a metal rectangular frame having a wool-felt pad arranged therein, and being provided with an opening and tongues formed on said frame for holding said pad therein.

3. A needle pad comprising a rectangular metal frame, a wool-felt pad arranged in said frame and provided with an opening adapted to receive a thimble and intermediate tongue formed on the side of the frame bent down on the pad and securing it in place.

885,243. ORTHOPEDIC OPERATING-TABLE. GUSTAVE W. HAAS, Los Angeles, Cal., assignor of one-half to Margaret B. Fowler, Pasadena, Cal. Filed Dec. 27, 1907. Serial No. 408,264.



1. A table for orthopedic treatment, comprising a table proper and a superstructure for the attachment of tractor devices, embodying posts and vertically adjustable top and bottom rails carried by said posts; substantially as described.

2. A table for orthopedic treatment, comprising a table proper and a superstructure for the attachment of traction devices, embodying upwardly extending posts, rail clamps

vertically adjustable on the posts, rails horizontally adjustable and removably held in the clamps and clamps for tractor connections adjustably mounted on the rails between the posts; substantially as described.

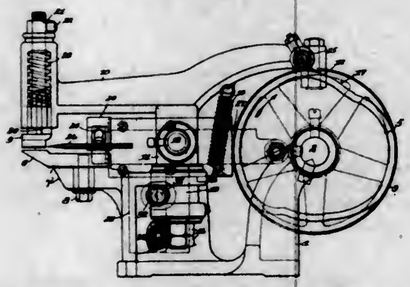
3. A table for orthopedic treatment, comprising a table proper and a superstructure for the attachment of traction devices, embodying posts, horizontal rails adjustable on the posts, verticals adjustably mounted on the rails and means for the attachment of tractor devices carried by the verticals.

4. A table for orthopedic treatment, comprising a table proper and a superstructure for the attachment of traction devices, embodying posts, horizontal rails adjustable on the posts, verticals adjustably mounted on lower rails and resting against upper rails to limit their inward movement and means for the attachment of tractor devices carried by the verticals; substantially as described.

5. A table for orthopedic treatment, comprising a table proper and a superstructure for the attachment of traction devices embodying posts, horizontal rails adjustable on the posts, clamps for the verticals mounted on the rails, verticals and hinge connections between the verticals and clamps whereby the verticals may be projected at any angle and means carried by the verticals for the attachment of tractor devices.

[Claim 6 not printed in the Gazette.]

885,244. MACHINE FOR OPERATING UPON WELTS OF BOOTS AND SHOES. JOHN B. HADAWAY, Brockton, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed May 26, 1902. Serial No. 109,018.



1. A machine for operating upon welts, having, in combination, a welt beating hammer, means for actuating the same to beat out and feed the welt, a work support shaped to support the welt of a welted shoe, a welt slitting knife arranged to reciprocate transversely across the welt in substantially the plane of the welt provided with a cutting edge shaped to cut a slit extending partially therethrough and obliquely disposed to the surface of the welt, and means for actuating the knife to slit the welt while the welt is clamped between the hammer and work support, substantially as described.

2. A machine for operating upon welts, having, in combination, a welt slitting knife arranged to reciprocate transversely across the welt in substantially the plane of the welt and cut a slit in the welt extending partially through the thickness of the same, means for actuating the knife, means for feeding the welt, and means for supporting the welt against the thrust of the knife, substantially as described.

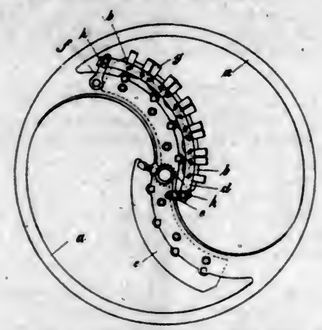
3. A machine for operating upon welts, having, in combination, a welt beating hammer, a work support shaped to support the welt after attachment to the shoe, a welt slitting knife arranged to cut a slit in the welt extending partially through the thickness of the same, and mechanism acting to actuate the hammer and knife and to feed the welt, substantially as described.

4. A machine for operating upon welts, having, in combination, a work support shaped to support the welt after attachment to the shoe, a welt slitting knife arranged to reciprocate transversely across the welt provided with a cutting edge shaped to cut a slit in the welt extending partially therethrough and obliquely disposed to the surface of the welt, means for actuating the knife, and means for feeding the shoe to space the slits made by the knife, substantially as described.

5. A machine for operating upon welts, having, in combination, means for supporting and feeding the welt, and means for forming in the welt a series of slits extending partially across the welt and partially through the thickness of the same and obliquely disposed to the surface of the welt, substantially as described.

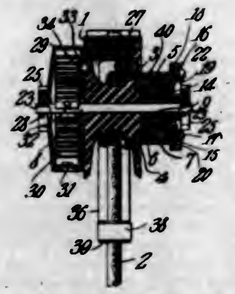
[Claims 6 to 19 not printed in the Gazette.]

885,245. DEVICE FOR SEPARATING IRON PARTICLES FROM CHAFF AND THE LIKE BY MEANS OF MAGNETS. JOSEPH HAGMÜLLER, Allensbach, Germany. Filed Jan. 2, 1908. Serial No. 409,050.



A device for separating iron particles from chaff, comprising in combination, a spoked fly wheel, knives attached to the spokes, fittings provided with slots fixed to the spokes, scythe like iron bars adjustably mounted in the slots, magnets fixed on the inner side of the iron bars, said magnets being bent away from and projecting beyond the knives, substantially as described and shown and for the purpose set forth.

885,246. ELECTRIC FIXTURE. HARRY T. HALL, Greenville, Ohio. Filed Aug. 19, 1907. Serial No. 389,227.



1. In an electric fixture, a reel for the reception of a flexible conductor, terminal rings carried by said reel and provided with rabbeted edges, other terminal rings also provided with rabbeted edges intermeshing with the rabbeted edges of the terminal rings on the reel, means for coupling the flexible conductor to one set of terminal rings, and other means for connecting the other set of terminal rings to an exterior circuit.

2. In an electric fixture, a rotatable reel for the reception of a flexible conductor, concentric rings with rabbeted edges and insulated one from another and mounted upon the reel for rotation therewith, means for coupling the flexible conductor to the insulated ring mounted on the reel, and other insulated concentric rings having rabbeted edges intermeshing with the rabbeted edges of the first-named rings, said second-named concentric rings being held against rotation and having means for coupling them to the terminals of a power circuit.

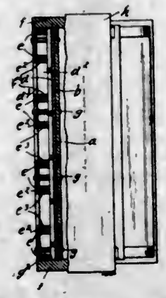
3. An electric fixture comprising a fixed shaft, means for supporting said shaft and holding the same against rotation, a reel mounted for rotation upon the fixed shaft and adapted to receive a flexible conductor, current collecting devices for connecting the flexible conductor to an external circuit, a spring case carried by the shaft and confined between one of the arms and the contiguous face of the reel, and a pin connection between the reel and the spring case, the said spring case being held elastically against the reel to maintain engagement with the pin thereon.

4. In an electric fixture, a reel for carrying a flexible conductor, an actuating spring therefor, a case for the spring held in contact with the reel elastically, and a connection between the reel and the spring case maintained by the elastic tendency of the spring case.

5. In an electric fixture, a reel having a pin projecting from one face thereof, a spring tending to rotate the reel, and an elastic case interposed between the reel and spring and provided with a perforation in which the pin engages, the said case being movable against the tendency of its elasticity to disengage it from the pin.

[Claims 6 and 7 not printed in the Gazette.]

885,247. PIANO-FRAME. GEORGE G. HASBROUCK, Nyack, N. Y. Filed May 8, 1907. Serial No. 372,481.



1. A back frame for pianos composed of transversely arranged top plates and transversely arranged bottom plates, said top and bottom plates being separated by equal spaces, and vertically arranged studdings placed between said top plates and bottom plates.

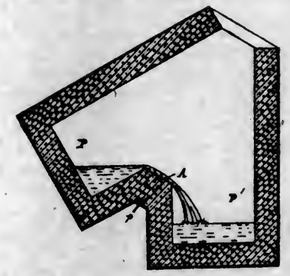
2. A back frame for pianos composed of transversely arranged top plates and transversely arranged bottom plates, said top and bottom plates being separated by equal spaces, and vertically arranged studdings placed between said top plates and bottom plates, said studdings extending from the top to the bottom of the frame.

3. A back frame for pianos composed of transversely arranged top plates and transversely arranged bottom plates, said top and bottom plates being separated by equal spaces, and vertically arranged studdings placed between said top plates and bottom plates, said studdings extending from the top to the bottom of the frame and said studdings between the transversely arranged top plates and bottom plates being covered by vertically arranged plates secured thereto.

4. A back frame for pianos composed of transversely arranged top plates and transversely arranged bottom plates, said top and bottom plates being separated by equal spaces, and vertically arranged studdings placed between said top plates and bottom plates, said studdings extending from the top to the bottom of the frame and said studdings between the transversely arranged top plates and bottom plates being covered by vertically arranged plates secured thereto, and the said studdings being provided with metal plates which are secured to the side or sides thereof.

5. A back frame for pianos composed of transversely arranged top plates and transversely arranged bottom plates, said top and bottom plates being separated by equal spaces, and vertically arranged studdings placed between said top plates and bottom plates, said studdings extending from the top to the bottom of the frame, said studdings between the transversely-arranged top plates and bottom plates being covered by vertically arranged plates secured thereto, and a sounding board connected with said back frame, the said studdings being provided with metal plates which are secured to the side or sides thereof and separated from the sounding board.

885,248. PROCESS OF UTILIZING THE METALLOIDS IN CRUDE IRON FOR REDUCING METALLIC IRON. HENRY D. HIBBARD, Plainfield, N. J. Filed Mar. 23, 1905. Serial No. 251,677.



1. The mode herein described of utilizing the calorific power of the metalloids in crude iron in its reduction of iron from the oxid to the metallic state, said mode consisting in charging a vessel with a quantity of molten crude iron and adding thereto a quantity of oxid of iron, and mechanically agitating the mixture, the quantity of oxid of iron being so proportioned to the quantity of crude iron that the charge is maintained in molten condition by the oxidation of the metalloids in the crude iron without substantially affecting the carbon.

2. The mode herein described of utilizing the calorific power of the metalloids in crude iron in its reduction of iron from the oxid to the metallic state, said mode consisting in heating the interior of a vessel, then charging this preheated vessel with a quantity of molten crude iron and adding thereto a quantity of oxid of iron, and mechanically agitating the mixture, the quantity of oxid of iron being so proportioned to the quantity of crude iron that the charge is maintained in molten condition by the oxidation of the metalloids in the crude iron without substantially affecting the carbon.

3. The mode herein described of utilizing the calorific power of the metalloids in crude iron in its reduction of iron from the oxid to the metallic state, said mode consisting in charging a vessel with a quantity of molten crude iron and adding thereto, part at a time, a quantity of oxid of iron, and mechanically agitating the mixture, the quantity of oxid of iron being so proportioned to the quantity of crude iron that the charge is maintained in molten condition by the oxidation of the metalloids in the crude iron without substantially affecting the carbon.

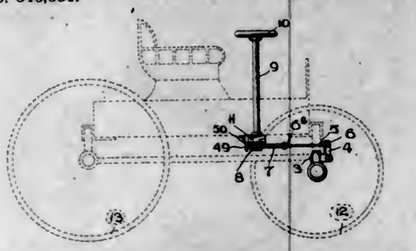
4. The mode herein described of utilizing the calorific power of the metalloids in crude iron in its reduction of iron from the oxid to the metallic state, said mode consisting in charging a vessel with a quantity of molten crude iron and adding thereto a quantity of oxid of iron, and mechanically agitating the mixture in the vessel while it is substantially closed, the quantity of oxid of iron being so proportioned to the quantity of crude iron that the charge is maintained in molten condition by the oxidation of the metalloids in the crude iron without substantially affecting the carbon.

5. The mode herein described of utilizing the calorific power of the metalloids in crude iron in its reduction of iron from the oxid to the metallic state, said mode con-

sisting in charging a vessel with a quantity of molten crude iron and adding thereto a quantity of oxid of iron, and mechanically agitating the mixture and repeatedly pouring the molten crude iron through the body of oxid of iron, the quantity of oxid of iron being so proportioned to the quantity of crude iron that the charge is maintained in molten condition by the oxidation of the metalloids in the crude iron without substantially affecting the carbon.

[Claim 6 not printed in the Gazette.]

885,249. STEERING-GEAR FOR AUTOMOBILES. JOHN C. HIGDON, St. Louis, Mo. Filed Dec. 4, 1906. Serial No. 346,331.



1. A steering gear for motor vehicles, the front axles of which swivel horizontally, comprising a steering post, arranged for operation in the body of the vehicle, a pinion fixed on the lower end of the steering post, a chain engaging the teeth of the pinion, connections between the ends of the chain and the outer portions of the swiveled axles, and a chain retainer fixed to the vehicle frame and adapted to hold said chain on said pinion.

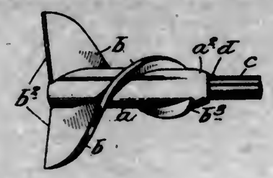
2. The combination with a motor vehicle, the front axle of which is arranged to swing in a horizontal plane, of a steering post arranged for operation in the vehicle body, a pinion fixed on the lower end of the post, a chain engaging the teeth of the pinion, a resilient friction member fixed to the body of the vehicle and engaging the face of the chain directly opposite the pinion, clips fixed on the front axle adjacent the ends thereof, and rods connected to the ends of the chain and to the clips.

3. The combination with a motor vehicle, the front axle of which is arranged to swing in a horizontal plane, of a steering post arranged for rotation in the vehicle body, a handle fixed on the post, a pinion fixed on the lower end of the post, a chain engaging the teeth of the pinion, a resilient friction member fixed to the vehicle body and engaging the face of the chain adjacent the pinion, clips fixed on the front axle adjacent its ends, stubs detachably seated in the clips, rods adjustably connected at their outer ends to the stubs, and the inner ends of which rods are connected to the outer ends of the chain.

4. The combination with a motor vehicle, the front axle of which is arranged to swing in a horizontal plane, of a pinion arranged for rotation on the under side of the vehicle body at the approximate center thereof, a chain engaging the teeth of said pinion, connections between the ends of the chain and the front axle, a resilient friction member fixed at one end to the vehicle body, and its free end bearing against the face of the chain directly opposite the face engaged by the pinion, and means whereby the pinion is rotated.

885,250. PROPELLER. GEORGE W. HOPKINS, Brooklyn, N. Y.; Martha Hopkins administratrix of said George W. Hopkins, deceased. Filed Aug. 19, 1907. Serial No. 389,104.

A propeller comprising a central hub which is cylindrical in form in cross section and provided with two spiral blades which do not extend entirely around the hub, and the width of which increases rapidly from the front end thereof to the rear end thereof and the radial width of which is greatest at the rear where they terminate in



straight lines which are oblique to the axis of the hub and approximately tangential to the periphery thereof.

885,251. SUPPORT FOR FLASH-LIGHT LAMPS OR THE LIKE. FERDINAND HRDLIČZKA-CSISZÁR, Vienna, Austria-Hungary. Filed July 30, 1906. Serial No. 328,367.



1. In an extensible support for flash-light lamps, a floor-part, a ceiling-part, means to keep the outer ends of the said parts at a suitable distance with respect to each other, and foldable cross-arms on the top of the ceiling part, substantially as described.

2. In an extensible support for flash-light lamps, two parts, adjustable the one with respect to the other and bearing respectively against the ceiling and the floor, two central tubes, each part connected with one of the said central tubes by a number of tubes telescopically sliding into each other and into one of the said central tubes, a slitted end to each tube, wedge-shaped projections mounted on the said slitted end, a bow attached to said projections, and a piece mounted to slide within said bow, having inclined surfaces adapted to slide on said wedge-shaped projections and force said piece against said projections, as set forth.

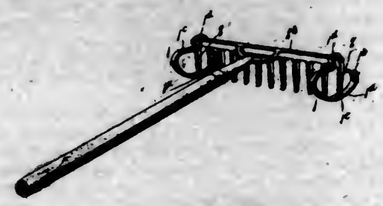
3. In an extensible support for flash-light lamps, a ceiling-part and a floor-part, adjustable the one with respect to the other, two central tubes, each part connected with one of the said central tubes by a number of tubes telescopically sliding into each other and into one of said central tubes, a slitted end to each tube, a ring fixed to said slitted end, wedge-shaped projections on said ring, a bow attached to the said projections, and a piece mounted to slide within the said bow, having inclined surfaces adapted to slide on the said wedge-shaped projections and force the said piece against the said projections, as set forth.

4. In an extensible support for flash-light lamps, a ceiling part and a floor part, adjustable the one with respect to the other, two central tubes, each part connected with one of the said central tubes by a number of tubes telescopically sliding into each other and into one of said central tubes, a slitted end to each tube, a ring adapted to be placed in position on the said slitted end, wedge-shaped projections on the said ring, a bow attached to the said projections, and a piece mounted to slide within the said bow, having inclined surfaces adapted to slide on the said wedge-shaped projections and force the said piece against the said projections, as set forth.

5. In an extensible support for flash-light lamps, a ceiling part and a floor part, adjustable the one with respect to the other, means to keep the said two parts in their relative position, and cross arms, adapted to be folded, mounted on the top of the upper part, as set forth.

[Claims 6 and 7 not printed in the Gazette.]

885,252. SHOE FOR RAKES. NELSON HUGHES, Portland, Oreg., assignor to Hughes Manufacturing Company, Portland, Oreg., a Corporation. Filed Aug. 28, 1907. Serial No. 390,546.



1. A runner for rakes comprising a ground engaging portion having a tooth receiving recess and a portion bent back and terminating in a rake bar engaging clip.

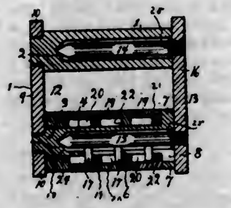
2. The combination with a rake, of a runner detachably secured to the back bar thereof and under the point of the rake tooth, substantially as shown and described.

3. A runner comprising a ground engaging portion 1^a, a curved end 1^b, a curved back portion 1^c terminating in a U-shaped rake engaging clip, substantially as shown and described.

4. A runner comprising a ground engaging portion 1^a, a curved end 1^b, a curved back portion 1^c terminating in a U-shaped rake engaging clip, said ground engaging portion having a tooth point receiving recess substantially as shown and described.

5. As a new article of manufacture, a runner for rakes composed of a single piece of spring metal bent into curved form and including a ground engaging portion having a rake tooth receiving recess, a curved up and back portion terminating in a U-shaped rake bar engaging clip, substantially as shown and described.

885,253. PADLOCK. OSCAR HUMMEL, South Omaha, Nebr. Filed Nov. 9, 1907. Serial No. 401,419.

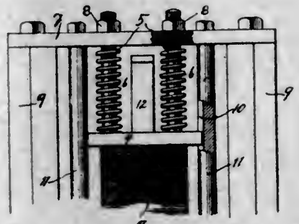


1. In a device of the character described the combination with an end member of two longitudinally recessed members rigidly secured to said end member, a second end member, rigid bars secured to said second end member, tangs carried by one of said bars, locking devices carried by one of the longitudinally recessed members adapted to engage said tangs, both of said bars being adapted to enter the longitudinally recessed members and being of such smaller diameter than said recesses as to lie out of contact with the side walls thereof said bars having pointed ends and the end walls of the recesses having concave centrally disposed recesses adapted to receive the pointed ends of the bars to thereby center said bars in said recesses.

2. In a device of the character described the combination with an end member of two longitudinally recessed members rigidly secured to said end member, a second end member, rigid bars secured to said second end member, tangs carried by one of said bars, locking devices carried by one of the longitudinally recessed members adapted to engage said tangs, both of said bars being adapted to enter the longitudinally recessed members and being of such smaller diameter than said recesses as to lie out of contact with the side walls thereof, said bars having pointed ends, the end walls of the recesses having concave centrally disposed recesses adapted to receive the pointed ends of the bars to thereby center said bars in said recesses, and collars carried by said bars adjacent the second end member said collar being substantially of the same diameter as said recesses to thereby prevent lateral movement of the bars when the parts are locked together.

3. In a device of the character described the combination with an end member of two longitudinally recessed members rigidly secured to said end member, a second end member, rigid bars secured to said second end member, tangs carried by one of said bars, locking devices carried by one of the longitudinally recessed members adapted to engage said tangs, both of said bars being adapted to enter the longitudinally recessed members and being of such smaller diameter than said recesses as to lie out of contact with the side walls thereof and means for centering said bars in said recesses.

885,254. MACHINE FOR CUTTING FORMS FROM SHEET STOCK. WILLIAM F. HUTCHINSON, Nyack, N. Y. Filed Nov. 28, 1906. Serial No. 345,572.



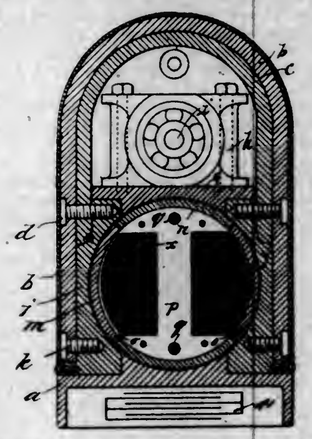
A machine of the character described comprising a stock feed, posts carried by the machine arranged on opposite sides of the stock feed, said posts having slots, a spring pressed foot movable in the slots of the posts and extending transversely of the stock feed, and a reciprocating cross head carrying knives to sever the stock, and an angular arm carried by the foot, said cross head being arranged to strike the arm to elevate the same.

885,255. MAGNETO-ELECTRIC MACHINE. EDWARD B. JACOBSON, Pittsfield, Mass., assignor to Pittsfield Spark Coil Company, Pittsfield, Mass., a Corporation. Filed July 13, 1906. Serial No. 326,048.

1. In a magneto-electrical machine, the combination with a plurality of sets of permanent magnets, having pole pieces an armature having primary and secondary windings thereon, a shell having a cylindrical unbroken outer surface from end to end thereof and composed of magnetic and non-magnetic material, the magnetic material being set into the non-magnetic material and arranged opposite, and in close proximity to, the pole pieces, the major portion of the shell being of non-magnetic material whereby upon rotation of the shell the flow of the lines of force through the armature may be controlled, as described.

2. In an electric ignition system, a permanent magnet, pole-pieces secured thereto, a second permanent magnet the limbs of which are shorter than the other permanent magnets and secured thereto, a shell, the outer cylindrical surface of which is unbroken, for screening a portion of the lines of force passing from one pole-piece to the other, and an armature having primary and secondary windings

thereon, the shell being composed of magnetic and non-magnetic material, the non-magnetic material constituting practically one-half the circumference of the shell.



3. In an electric ignition system, a permanent magnet, pole-pieces secured thereto, a second permanent magnet the limbs of which are shorter than the other permanent magnets and secured thereto, a rotatable shell for screening a portion of the lines of force passing from one pole-piece to the other, and an armature having primary and secondary windings thereon, the shell being composed of magnetic and non-magnetic material, the non-magnetic material constituting practically one-half the circumference of the shell, the outer curved surface of the shell being continuous throughout, as described.

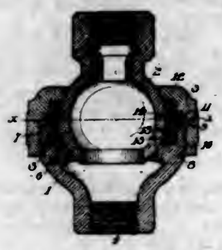
4. In an ignition system, sets of permanent magnets, an armature having primary and secondary windings thereon, a rotatable screen for the armature and having an unbroken periphery, the armature being provided with a make and break device for the primary windings, a distributer, a wire connected thereto and with one terminal of the secondary winding on the armature, a collector-point adjacent the distributer, a spark-plug, a wire connecting the two, and a wire leading from the other terminal of the spark-plug to the other terminal of the secondary of the armature windings, as described.

5. In a magneto electrical machine, in combination, an armature having primary and secondary windings, a secondary shaft, gearing connecting the two, a distributer carried by the gear on the secondary, said gear being twice the diameter of the gear on the armature, a spring-arm carried by the distributer, a second spring arm mounted in the casing and engaging the first arm the second spring-arm being connected to the secondary, a make and break device on the armature, a series of spark-plugs, connections between the spark-plugs and the distributer, connections between the make and break device and the primary, and connections between the secondary and the spark-plugs, a condenser connected across the terminals of the make and break device, whereby when the armature is so disposed as to include the greatest possible number of lines of force, the make and break device will be opened and current in the same direction induced in the secondary through the distributer and spark-plugs as described.

[Claim 6 not printed in the Gazette.]

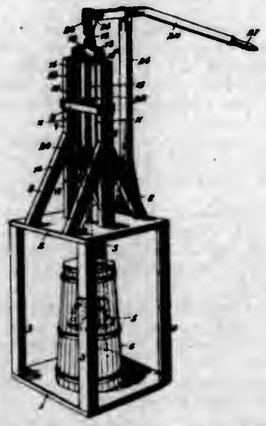
885,256. FLEXIBLE PIPE-UNION. DAVID G. JONES, Pittsburg, Pa., assignor to Best Manufacturing Company, Pittsburg, Pa., a Corporation of Pennsylvania. Filed Feb. 15, 1906. Serial No. 301,210.

1. A flexible pipe-union comprising a ball-member, a socket-member formed with an interior angular recess, a cap-member formed with an interior annular recess varying in diameter, and a reversible flanged bearing-ring having its flanged portion located in the recess of the cap-member.



2. A flexible pipe-union comprising a ball-member, a socket-member formed with an interior annular recess, a cap-member formed with an interior annular recess varying in diameter, and a reversible flanged bearing-ring having its flanged portion located in the widest portion of the recess of the cap-member.

885,257. LEVER-POWER CHURN. WILLIAM J. JONES, Martinsville, Va. Filed Apr. 4, 1907. Serial No. 366,264.

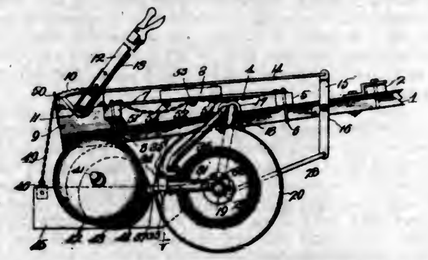


In a churn, the combination of vertical guides, a horizontally disposed fixed nut arranged between the guides at a point intermediate of the ends thereof and supported by the same, an upper yoke, slidable parallel bars secured at their upper ends to the sides of the yoke and movable in the guides, a lower bearing secured to the lower ends of the bars and spacing the same, a screw swiveled at its upper end in the yoke and journaled at its lower end in the said bearing and passing through the intermediate nut; a hand lever connected with the yoke, and a dasher connected with the lower end of the screw.

885,258. LISTER-CULTIVATOR. WILLIAM A. KENNEDY, Kansas City, Mo. Filed June 29, 1907. Serial No. 381,534.

1. A lister cultivator comprising a tongue, an arched axle journaled thereon and equipped with ground wheels, laterally adjustable arms projecting rearward from said axle, disks suitably journaled and movable with said arms, an arched brace journaled on the tongue and extending divergently downward with respect to the axle, and links pivotally connecting the arched brace and said arms; said links being pivoted for movement at right angles to the pivotal movement of the arched brace on the tongue, to accommodate lateral adjustment of said arms toward or from each other.

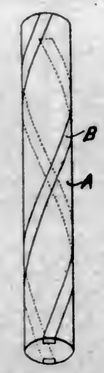
2. A lister cultivator, comprising a tongue, an arched axle journaled thereon and equipped with ground wheels, arms projecting rearward from the axle, disks suitably journaled and movable with said arms, an arched brace between the tongue and said arms and extending divergently downward with respect to the axle, a rock frame mounted on the tongue and linked to the axle, a lever linked to said frame, a toothed sector, and catch mechanism carried by the lever for engagement with the sector.



3. A lister cultivator, comprising a tongue, an arched axle journaled thereon and equipped with ground wheels, arms projecting rearward from the axle, disks suitably journaled and movable with said arms, an arched brace between the tongue and said arms and extending divergently downward with respect to the axle, a rock frame mounted on the tongue and linked to the axle, a lever linked to said frame, a toothed sector, catch mechanism carried by the lever for engagement with the sector, a fender between the disks and linked to the axle, and a suitably guided flexible connection between the lever and the rear end of the fender.

4. A lister cultivator comprising a suitable frame, an arched axle journaled thereon and equipped with ground wheels, arms projecting rearward from said axle, cultivating appliances supported at the rearward ends of said arms, an arched brace journaled at its arched point on the frame to swing in a vertical plane and extending downwardly and rearwardly with respect to the axle, and links for operation in a plane substantially horizontal and pivotally connected at their opposite ends to the lower ends of the arched brace and the rear ends of said arms.

885,259. STAMP-MILL SHAFTING. FRANK S. KIRKLAND, Milwaukee, Wis. Filed Nov. 1, 1906. Serial No. 341,541.

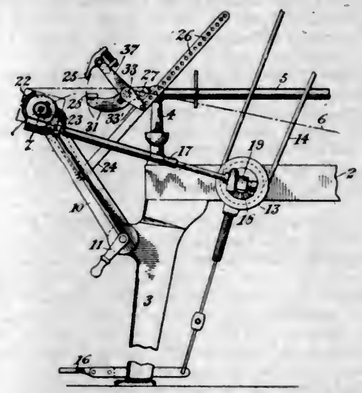


1. A metallic shaft having an exterior groove therein and a strip of copper electrically welded in such groove, for the purpose specified.

2. A metallic shaft having an exterior groove therein and a strip of nonmagnetic material welded in such groove, for the purpose described.

3. A spirally grooved metallic shaft having a strip of copper electrically welded in such groove for the purpose specified.

885,260. BOX-COVERING MACHINE. ANNIE D. KNOWLTON and FREDERIC K. KNOWLTON, Rochester, N. Y., administrators of Mark D. Knowlton, deceased. Filed June 25, 1907. Serial No. 381,497.



1. In a box-covering machine, the combination with an adjustable form-block support, of a rotary form-block carrier mounted on said support and having a let-off cam, a let-off lever pivoted on said support and in engagement with said cam, a fixed cutter, a swinging cutter, and an adjustable link connecting said let-off lever and the swinging cutter.

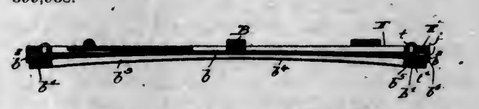
2. In a box-covering machine, the combination with an adjustable form-block support, of a rotary form-block carrier mounted on said support and having a let-off cam, a let-off lever pivoted on said support and in engagement with said cam, a fixed cutter, a gravitating swinging cutter having a downward working stroke, and an adjustable link connecting said let-off lever and the swinging cutter.

3. In a box-covering machine, the combination with an adjustable form-block support, of a rotary form-block carrier mounted on said support and having a let-off cam, a let-off lever pivoted on said support and in engagement with said cam, a fixed cutter, a swinging cutter, and an adustable link connecting said let-off lever and the swinging cutter at such points as to multiply the movement of said cutter.

4. In a box-covering machine, the combination with an adjustable form-block support, of a rotary form-block carrier mounted on said support and having a let-off cam, a fixed cutter, a movable cutter controlled by said let-off cam, a main driver on the frame of the machine, and adjustable driving connections between said driver and the rotary form-block carrier.

5. In a box-covering machine, the combination with a fixed cutter, of a movable gravitating cutter having a downward working stroke, a power-operated let-off mechanism for regulating the action of the movable cutter, and an auxiliary cutter-actuating device for imparting an initial impulse to the downward working stroke of the movable cutter.

885,261. PIANO SOUNDING-BOARD. ANTON KRIEGHOFF, Concord, N. H. Filed Oct. 30, 1907. Serial No. 399,938.



1. In piano construction, a metallic string-plate, a sounding-board, a bearing rib on one to contact with the adjacent face of the other, and adjustable tension members connecting the sounding-board with the plate and located at the inner side of the rib, tightening of the tension members springing the sounding board toward the plate, and

thereby imparting the requisite convexity to the sounding-board.

2. In piano construction, a metallic plate having a rib adjacent its edge, a sounding-board supported on the rib, and tension screws connecting the sounding-board with the plate and located inside the rib thereon, tightening of the screws springing the sounding-board and imparting thereto the requisite convexity.

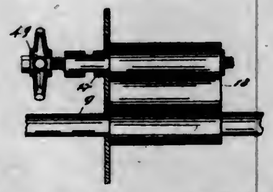
3. In piano construction, a metallic string-plate having a bearing rib thereon corresponding to the contour of the sounding-board, a sounding-board having a reinforced edge and resting upon the rib, and adjusting means connecting the sounding board with the string-plate and acting upon the sounding-board inside of the rib on the plate to flex and impart the desired convexity to the sounding-board.

4. In piano construction, a sounding-board, a reinforce applied to the back thereof adjacent its edge, a metallic string-plate having thereon a bearing rib corresponding to the contour of the sounding-board and engaging the face thereof outside the reinforce, and adjustable tension members connecting the plate and sounding-board, said members being rotatably mounted in the plate within the flange and being screwed into the reinforce, whereby tightening of the tension members will bend the sounding-board and impart the requisite convexity thereto.

5. In piano construction, a sounding-board, a metallic plate, a rib on one to engage the other, headed tension screws rotatably mounted in the plate and screwed into the sounding-board within the rib, to flex the sounding-board, and springs interposed between the heads of the tension screws and the face of the plate, to increase the vibrational action of the sounding-board.

[Claims 6 and 7 not printed in the Gazette.]

885,262. NUT-CRACKING MACHINE. FRANK B. LANTERY, Fort Worth, Tex. Filed Nov. 1, 1906. Serial No. 341,632.



1. A nut-cracking machine comprising an upright frame, two revolving disks journaled in said frame and carrying axially thrustable plungers, means for feeding nuts to said plungers, yielding means for pressing said plungers towards each other during a portion of their revolution by said disks, and means for causing a rigid thrust of said plungers for a portion of their revolution.

2. In a nut-cracking machine comprising an upright frame, revolving disks journaled in said frame and carrying axially thrustable plungers, means for feeding nuts to said plungers, springs for pressing said plungers towards each other during a portion of their revolution by said disks, and means for causing a rigid thrust of said plungers towards each other during a portion of their revolution consisting of a stationary sloping block on one of the upright portions of said frame and a movable rack reciprocating in the other upright portion of said frame, the plunger to be operated by said rack having transverse grooves therein to be engaged by said rack.

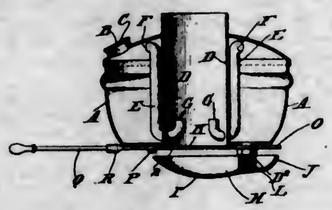
3. A nut cracking machine comprising an upright frame having front extensions, revolving disks carrying plungers axially thrustable towards each other, means for periodically actuating said plungers consisting of means mounted on said frame for causing a rigid thrust of said plungers towards each other and springs attached to said frame and thrusting said plungers yieldingly towards each other until said plungers are engaged by said rigid thrusting means, and means for feeding nuts to said plungers consisting of a wheel journaled in said extensions and provided with yielding arms, a nut holder in the path of said plungers, nut movers carried by said arms, and a track for nuts while being moved by said nut movers to said holder.

4. A nut-cracking machine comprising an upright frame having front extensions, revolving disks carrying axially thrustable plungers, means for feeding nuts to said plungers consisting of a wheel journaled in said extensions and carrying a plurality of yielding and contractible arms, nut movers carried by said arms, a track for the nuts while being moved by said nut movers, and means for shifting the nuts transverse said track.

5. A nut-cracking machine comprising an upright frame having front extensions, revolving disks carrying axially thrustable plungers, means for feeding nuts to said plungers consisting of nut holders, a wheel journaled in said extensions and carrying a plurality of yielding and contractible arms, nut movers carried by said arms, a track for the nuts while being moved by said nut movers, and means for shifting the nuts transverse said track to be delivered to said holders.

[Claims 6 and 7 not printed in the Gazette.]

885,263. ALCOHOL-GAS LAMP. HENRY G. LAYNG, New York, N. Y., assignor to John Treadwell, San Francisco, Cal. Filed Feb. 9, 1907. Serial No. 356,542.



1. A gas lamp having a liquid reservoir, a vertically extending combustion chamber communicating with the reservoir and open at both ends, means for continuously gasifying the liquid in the reservoir by heat generated throughout the entire height of the combustion chamber, and an independent starting receptacle located below the lower open end of the combustion chamber for initially heating the walls of the combustion chamber to start the operation of the lamp.

2. A gas lamp having a liquid reservoir, a combustion chamber inclosed by the reservoir and extending vertically throughout the height of the body of the lamp, said combustion chamber communicating with the reservoir, a starting receptacle located beneath the combustion chamber, and means for opening and closing the same adapted to prevent the filling and igniting of the starting receptacle unless said receptacle is open.

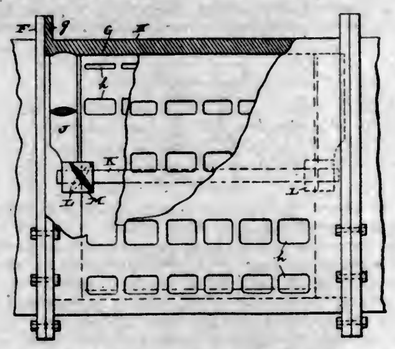
3. A gas lamp having a liquid reservoir, a combustion chamber inclosed by the reservoir and extending vertically throughout the height of the body of the lamp, said combustion chamber communicating with the reservoir, a starting receptacle located beneath the combustion chamber, and means for automatically supplying substantially fixed charges of combustible to said starting receptacle.

4. A gas lamp having a liquid reservoir, a combustion chamber communicating therewith, a starting receptacle located beneath the combustion chamber, means for supplying substantially fixed charges of combustible to said charging receptacle, and means for adjusting the starting receptacle to control the amount of air supplied to said combustion chamber.

5. A gas lamp having a liquid reservoir, a combustion chamber communicating with the reservoir, a starting receptacle located beneath the combustion chamber and means for raising and lowering said receptacle to control the amount of air supplied to the combustion chamber.

[Claims 6 and 7 not printed in the Gazette.]

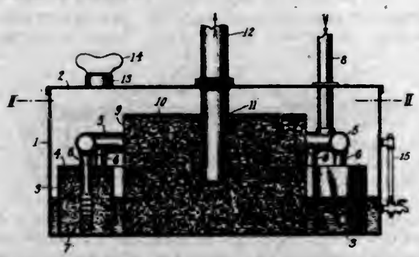
885,264. RAM. GEORGE L. LE VESCONTE, St. Cloud, Minn. Filed June 8, 1907. Serial No. 377,969.



1. A hydraulic ram comprising the combination of an air chamber, drive pipes connected therewith, a waste valve in each drive pipe consisting of a casing having longitudinal slots and a transverse slot therein, a sleeve having longitudinal slots therein to register at times with the longitudinal slots in the casing and a weighted arm extending laterally therefrom through the transverse slot, and propeller blades secured to the sleeve, substantially as shown and described.

2. A hydraulic ram comprising the combination of an air chamber, drive pipes, and a delivery pipe made of cement compound, a waste valve in each drive pipe made of metal and consisting of a casing having longitudinal slots and a transverse slot therein, a sleeve revolubly mounted in said casing having longitudinal slots therein to register at times with the longitudinal slots in the casing, a weighted arm extending laterally therefrom through the transverse slot, and propeller blades secured to the sleeve, substantially as shown and described.

885,265. CARBURETER. MAXMILIAN LOEWENSTEIN, New York, N. Y., assignor of one-third to Maurice Kind, New York, N. Y., and one-third to Jonas Stork, Brussels, Belgium; Simon Loewenstein administrator of said Maxmilian Loewenstein, deceased. Filed Nov. 24, 1906. Serial No. 344,959.



1. In a carbureter, the combination of an outer casing, a series of carbureting chambers having porous walls, arranged around the periphery of the casing inside of the same, an air distributing pipe extending around the series of carbureting chambers above the same, discharge pipes extending downward from the distributing pipe into the carbureting chambers and provided with air outlet apertures, a collecting chamber having foraminous walls inside the series of carbureting chambers, an outlet pipe for carbureted air extending from the said collecting chamber, and fillings of absorbent material in the carbureting chambers and collecting chamber, as set forth.

2. In a carbureter, the combination of an outer casing, a series of carbureting chambers inside the casing around the periphery of the same, said chambers having porous walls and fillings of absorbent material, an air-distributing pipe extending around the series of carbureting chambers above the same, discharge pipes extending downwardly from the distributing pipe into the carbureting chambers so as to be embedded in the absorbent fillings therein, said discharge pipes being provided with lateral apertures for the escape of air, and an outlet pipe for carbureted air extending out of the casing from the space inside the series of carbureting chambers, as set forth.

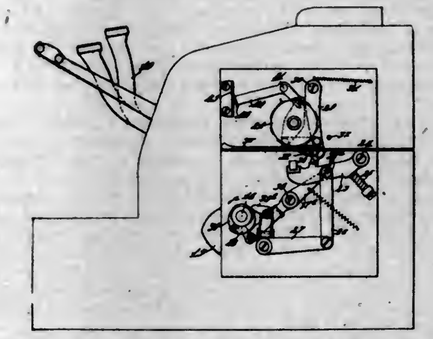
3. In a carbureter, the combination of an outer casing, a series of carbureting chambers having porous walls arranged inside the casing around the periphery of the same and having fillings of absorbent material, an air-distributing pipe extending around the series of carbureting chambers above the same, discharge pipes extending downwardly from the distributing pipe into the carbureting chambers so as to be embedded in the absorbent material therein and provided with lateral apertures for the escape of air, said apertures successively increasing in size downward, and an outlet pipe for conducting the carbureted air out of the casing, as set forth.

4. In a carbureter, the combination of an outer casing, a carbureting chamber having porous walls inside the casing and having a filling of absorbent material, an air-discharge pipe extending downwardly into the carbureting chamber so as to be embedded in the absorbent material therein and provided with lateral apertures for the escape of air, said apertures being of successively larger size from the uppermost to the lowermost, and an outlet pipe for carbureted air connected with the casing, as set forth.

5. In a carbureter, the combination of a carbureting chamber, a filling of absorbent material in the chamber, an air-discharge pipe extending downwardly into the absorbent material in the chamber and provided with a vertically extending series of apertures for the escape of air, the lower apertures being larger than the upper apertures, and means for conducting off the carbureted air, as set forth.

[Claims 6 and 7 not printed in the Gazette.]

885,266. CASH-REGISTER. CHARLES A. LUNDGREN, Dayton, Ohio, assignor, by mesne assignments, to The National Cash Register Company, Dayton, Ohio, a Corporation of Ohio, incorporated in 1906. Filed Mar. 5, 1906. Serial No. 304,302.



1. In a cash register the combination with printing devices of a platen for taking impressions from said devices, and means for preventing movement of said platen, said means having a lug against which a check may strike to disable said means.

2. In a cash register, the combination with printing devices of a platen for taking impressions from said devices, movable means for preventing printing movement of said platen, and mechanism for indicating the position of said movable means.

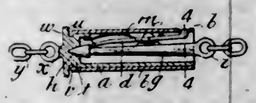
3. In a cash register, the combination with a platen of means normally preventing movement of said platen but movable on the insertion of a check, and means for restoring the preventing means to normal position.

4. In a cash register, the combination with manipulative amount determining devices and printing devices arranged to be set therethrough, of a platen for taking impressions from said devices, means arranged to be disabled by a check for preventing said platen from taking impressions, and a common member for operating the amount determining devices and platen.

5. In an accounting machine the combination with printing devices and means for taking impressions therefrom, of a lever for normally preventing an impression being taken, an indicating device movable with said lever, and a lug on said lever against which a check may abut.

[Claims 6 to 24 not printed in the Gazette.]

885,267. CLASP. EDGAR J. MARTEL, Ware, Mass., assignor of one-half to Zephir Potvin, Webster, Mass. Filed Sept. 14, 1907. Serial No. 392,825.



1. In a locking device for neck-chains comprising an outer and an inner shell rotatably secured together, the inner shell carrying a locking lever pivotally secured to the same, a spear having an enlarged head for receiving the end of the locking lever, whereby the spear and shells are locked together.

2. In a clasp for neck-chains comprising an inner shell and an outer shell, the inner shell being provided with inwardly extending ears, a locking lever mounted in the ears and having its locking end extending towards the closed end of the inner shell and the operating end extending toward the open end of the said shell, the outer shell having an opening for receiving the operable end of the locking lever, a spear having a shoulder against which the locking end of the lever rests when in locking position, and means carried by the lever for normally holding the locking end of said lever toward the axis of the shell.

3. In a locking device for chains comprising an inner and outer shell rotatably mounted one on the other, a locking lever carried by the inner shell and having its operable end provided with a locking lip for engaging a portion of the outer shell when the outer shell is rotated in one direction, and a projection on the outer shell for engaging the locking lip when rotated in the opposite direction, whereby in one position said lever is rendered operative and in another position inoperative, and a spear provided with a shoulder for receiving the locking end of said lever.

4. In a clasp for neck-chains comprising an inner and an outer shell rotatably secured together, the inner shell having an over-hanging lip as 3, a locking lever pivotally mounted on the inner shell, a spring carried by the locking lever and having one end located under the over-hanging lip, whereby the locking lever is normally held toward the axis of the shell, a spear element for engaging a socket in the head end of the inner shell and provided with a shoulder for receiving the locking end of the lever, and means on the outer shell for placing the lever in a locked and unlocked condition, depending upon the direction of rotation of the outer shell.

5. As an article of manufacture a clasp comprising an inner and outer shell, the outer shell having a locking lip, an opening, and a projection, a locking lever carried by the inner shell and having its outer end projecting through the opening and also provided with a locking lip for engaging with either the locking lip of the outer shell or the projection on said shell, as described.

885,268. HORN. ALBERT S. MARTEN, East Orange, N. J., assignor to The Tea Tray Company of Newark, N. J., a Corporation of New Jersey. Filed Nov. 17, 1906. Serial No. 343,786.

1. In a horn, the combination of a flaring body having a reduced integral ferrule portion forming with said body an annular shoulder and having a longitudinal joint, an exterior annular enlargement at the extremity of the ferrule, and a seamless sleeve upon the outside of said ferrule portion between said shoulder and annular enlargement.



2. In a horn, the combination of a flaring body having a reduced integral ferrule portion forming with said body an annular shoulder and having a longitudinal joint, an exterior annular enlargement at the extremity of the ferrule, and a seamless sleeve upon the outside of said ferrule portion between said shoulder and annular enlargement having its end next said shoulder fitted thereagainst with the edges rolled outwardly and returned against itself.

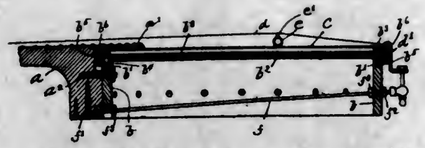
3. In a horn, the combination of a flaring body having a reduced integral ferrule portion forming with said body an annular shoulder and having a longitudinal joint, an outward roll at the extremity of said ferrule portion returned against the said ferrule, and a sleeve upon the outside of said ferrule portion between said shoulder and roll having its end edges next the said roll abutting thereagainst.

4. In a horn, the combination of a flaring body having a reduced integral ferrule portion forming with said body an annular shoulder and having a longitudinal joint, a tubular lining inside said ferrule portion having one end curled outwardly over the end edges of the ferrule portion and its other end expanded into the flaring part of the horn, and an outer sleeve upon the said ferrule portion between the said shoulder and curled end of the said lining.

5. In a horn, the combination of a flaring body having a reduced integral ferrule portion forming with said body an annular shoulder and having a longitudinal joint, a tubular lining inside said ferrule portion having one end rolled up over the end edges of the ferrule portion and its other end expanded into the flaring part of the horn, and an outer sleeve upon the said ferrule portion between the said shoulder and said outward roll of the lining having its end next said shoulder fitted thereagainst with the edges rolled outwardly and returned upon itself.

[Claims 6 to 9 not printed in the Gazette.]

885,269. STRINGED INSTRUMENT. ALCIDE E. MATHEY, Boston, Mass. Filed May 27, 1907. Serial No. 375,807.



1. In a stringed instrument, the combination of a circular rim, a head, means for securing the head to the rim, a circular tube and yielding support therefor interposed between the head and rim, substantially as described.

2. In a stringed instrument, the combination of a circular rim, a head, means for securing the head to the rim, two circular tubes arranged one above the other and interposed between the head and rim, one of said tubes being composed of spirally wound wire, substantially as described.

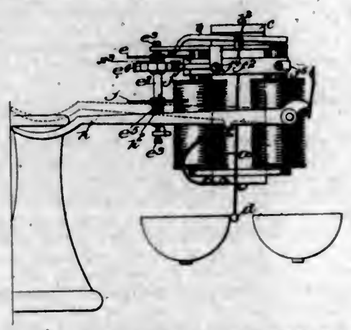
3. In a stringed instrument, the combination of a circular rim, a head, means for securing the head to the rim, and a circular tube of spirally wound wire interposed between the head and rim, substantially as described.

4. In a stringed instrument, the combination of a circular rim, a head, means for securing the head to the rim, a plurality of circular tubes arranged vertically between said head and rim, substantially as described.

5. In a stringed instrument, the combination of a circular rim, a head, means for securing the head to the rim, and three circular tubes arranged vertically between said head and rim, the middle tube being composed of spirally wound wire, substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

885,270. TELEPHONE SYSTEM. FRANK E. MAYBERRY, West Medford, and NEWMAN H. HOLLAND, Brookline, Mass., assignors to Boston Telephone Selector Company, Boston, Mass., a Corporation of Maine. Filed Apr. 12, 1902. Serial No. 102,561.



1. In a signaling system, an electro-magnet provided with a polarized armature and a signaling device operated by the vibration of said armature; means for preventing the vibration of said armature; a second armature in the field of said electro-magnet adapted by its movement to operate the means for preventing the vibration of the polarized armature; a third armature to control the restoring of the preventing means to normal; and means for energizing said electro-magnet by direct currents and by alternating currents, substantially as described.

2. In a signaling system, the combination with an electro-magnet provided with a polarized armature adapted to operate a signaling device; of a non-polarized armature adapted to respond only to the action of a direct current through said electro-magnet; a locking device for controlling the polarized armature adapted to be operated by the movement of said non-polarized armature; a second polarized armature; a restoring device controlled by said second polarized armature; means for preventing the said second polarized armature from responding to an alternating current; and means for energizing said electro-magnet by current in either direction or by an alternating current, substantially as and for the purpose described.

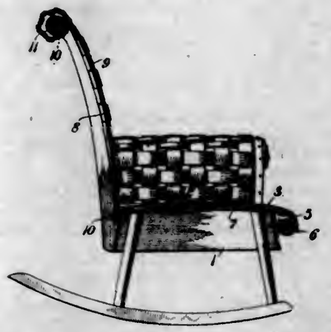
3. In a party line telephone system, an electro-magnet bridged across the line at each station thereon; means located at central office for energizing said electro-magnet by impulses of direct current in either direction; a controlling device adapted to be operated by the magnetic influence of said electro-magnet in response to impulses of current in one direction; a restoring device for the same operating in response to an impulse of current in the other direction; a vibrating armature controlled by said controlling device and adapted when not prevented by said controlling device to be vibrated by an alternating current passing through said electro-magnet; and means located at central office for sending an alternating current over the line, as set forth.

4. In a party line telephone system, a telephone circuit including a number of stations; a signaling device at each station; a locking device to prevent the closure of the said circuit at a station; a locking device to prevent the operation of the signaling device at a station; a single electro-magnet bridged across the line and provided with an armature for operating said locking devices and an armature for operating said signaling device; means for sending impulses of direct current through said electro-magnet from the central office to cause the operation of said locking devices; and means for sending an alternating current through said electro-magnet from central office to operate the signaling device, as set forth.

5. In a party line telephone system, the combination with an electro-magnet bridged across the line at each station; of a source of direct current located at central office; means for connecting the said source of direct current with the line conductors whereby the several electro-magnets are energized; means for reversing the direction of the current from said source; a source of alternating current; means for connecting the line conductors with said source of alternating current; armatures in the field of said electro-magnet and arranged respectively to respond to currents sent over the line of different direction; and a separate armature responsive to alternating currents for signaling, as described.

[Claims 6 to 24 not printed in the Gazette.]

885,271. FURNITURE. EDGAR MAYETTE, Canisteo, N. Y., assignor of one-half to Henry F. Granger and one-half to Frank J. Nelson, Hornell, N. Y. Filed Mar. 1, 1907. Serial No. 359,965.



1. An article of furniture comprising a rigid frame, interwoven splints resting at their ends upon the frame, reinforcing straps disposed longitudinally upon and contacting throughout their lengths with certain of the splints, a member secured to the frame, said splints and straps being wrapped about and secured to said member, and means extending through the splints and straps for securing them upon the frame, said splints being of greater width than and disposed to conceal the strap.

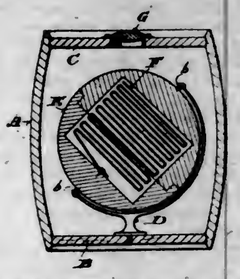
2. An article of furniture comprising a frame, a core extending transversely thereof, interwoven splints secured at their ends upon the frame and extending around and secured to the core, reinforcing straps disposed longitudinally upon and contacting throughout their lengths with certain of the splints, the ends of said splints being secured upon the frame and core, said splints being of greater width than and disposed to conceal the straps, and means for securing the core to the frame to bind upon the splints therebetween.

3. An article of furniture comprising a frame, a core, interwoven splints secured at their ends upon the frame, said splints being bent around the core and terminating between the core and frame, means extending through the core and the adjoining ends of the splints for securing the core and said ends to the frame, means for securing to the frame those ends of the splints removed from the core, and metallic reinforcing straps extending longitudinally upon and contacting throughout their lengths with certain of the splints, said straps being secured at their ends to the frame and core.

885,272. EDUCATIONAL APPLIANCE. FRANCIS B. MELVILLE, Milwaukee, Wis., assignor of one-half to Louis Draile, Milwaukee, Wis. Filed July 8, 1907. Serial No. 382,815.

1. An educational appliance comprising a receptacle having a removable closure, a stand for which the closure

constitutes a base, and a globe in conjunction with the stand.



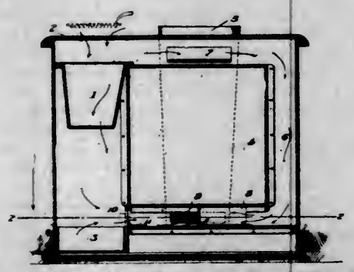
2. An educational appliance comprising a receptacle having a removable closure, a stand for which the closure constitutes a base, and a hollow separable globe in conjunction with the stand.

3. An educational appliance comprising a receptacle having a removable closure, a stand for which the closure constitutes a base, a hollow separable globe in conjunction with the stand, and a folding album for which said globe constitutes a casing.

4. An educational appliance comprising a receptacle having an aperture at one end, a magnifying lens closing the aperture, a removable closure opposite the lens, a stand for which the closure constitutes a base, and a globe in conjunction with the stand.

5. An educational appliance comprising a receptacle having opposite detachable closures, a magnifying lens set in connection with one of the closures, a stand for which the other closure constitutes a base, and a globe in conjunction with the stand.

885,273. COOKING-STOVE. WILLIAM R. MERRICK, Evansville, Ind. Filed Sept. 10, 1907. Serial No. 392,172.

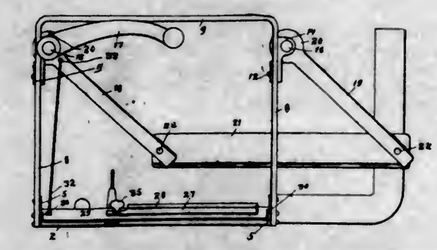


1. In a cooking stove, the combination with a fire-box and an ash pit below the fire-box and having means for access thereto, of an oven, a flue around the oven and in communication with the fire-box, a take-off flue in communication with the flue aforesaid below the oven, said oven heating flue opening into the ash pit below the oven, and a damper controlling the opening into the ash pit.

2. In a cooking stove, the combination with an oven having a flue therearound, and a fire-box in communication with said flue, of an ash pit into which said flue opens below the oven, means for controlling the opening of said flue into the ash pit, a take-off flue in communication with the flue aforesaid both above and below the oven, and a damper controlling the opening into the take-off flue above the oven.

885,274. BREAD AND MEAT SLICER. DOSITHE H. MOSTELLER, Chicago, Ill., assignor to The Mosteller Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed Feb. 5, 1906. Serial No. 299,541.

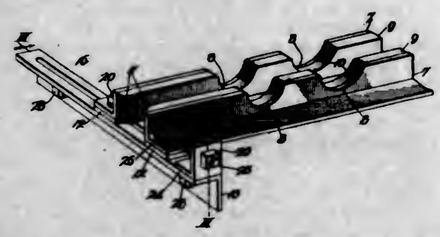
1. In a slicer of the class described, the combination of a knife, a tilting plate hinged to one side of the plane of movement of the knife, a stop on the tilting plate for limiting the projection under the knife of the material to be cut, means for actuating the knife, and a connection between the tilting plate and the actuating means for lowering the tilting plate simultaneously with the descent of the knife, substantially as described.



2. In a slicer of the class described, the combination of a knife, means for pivoting the knife in position to give a shearing action, means for actuating the knife, a board or table adjacent to the edge of the knife when lowered, a tilting plate hinged adjacent to the plane of movement of the knife on the side opposite the board, a stop on the tilting plate, and a connection between the knife actuating means and the tilting plate, for lowering the latter simultaneously with the descent of the former, substantially as described.

3. In a slicer of the class described, the combination of supporting yokes, depending arms journaled to the yokes, a knife pivoted to the free ends of the arms and adapted to swing between the yokes, a handle connected with one of the arms, a board or table adjacent to the knife when lowered, a tilting plate journaled adjacent to the plane of movement of the knife on the side opposite the table, a stop on the tilting plate, and a rod connecting the tilting plate with one of the knife actuating arms for lowering the tilting plate and stop simultaneously with the descent of the knife, substantially as described.

885,275. ATTACHMENT FOR SANDING-MACHINES. WALTER MUNCH, Kansas City, Mo. Filed Aug. 13, 1907. Serial No. 388,413.



1. A sanding machine attachment, comprising transverse bars, spacing-plates mounted thereon, longitudinal bars mounted on the spacing-plates and bridging the space between the first-named bars, and means for holding one of said longitudinal bars pressed yieldingly toward the other.

2. A sanding machine attachment, comprising transverse bars, spacing-plates mounted thereon, longitudinal bars mounted on the spacing-plates and bridging the space between the first-named bars, and provided in their upper edges with recesses to receive the upper rolls of the sanding machine, and means for holding one of said longitudinal bars pressed yieldingly toward the other.

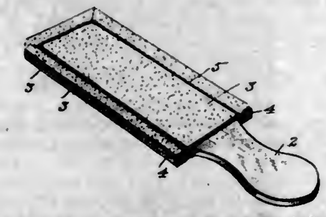
3. A sanding machine attachment, comprising transverse bars, spacing-plates mounted thereon, longitudinal bars mounted on the spacing-plates and bridging the space between the first-named bars, and provided in their upper edges with recesses to receive the upper rolls of the sanding machine, means for holding one of said longitudinal bars pressed yieldingly toward the other, and means for guiding said yieldingly-pressed bar to insure its parallelism with the companion longitudinal bar.

4. A sanding machine attachment, comprising a pair of parallel bars, a pair of spacing-plates mounted on each of said bars with one of said spacing-plates of each bar adjustable toward the other spacing-plate on the same bar, means to clamp said adjustable spacing-plates rigidly at the desired points, a longitudinal bar connecting the adjustable spacing-plates, a companion longitudinal bar connecting the other pair of spacing-plates and extending parallel with the first-named longitudinal bar, and means for pressing the second longitudinal bar yieldingly toward the first.

5. A sanding machine attachment, comprising a pair of parallel bars, a pair of spacing-plates mounted on each of said bars with one of said spacing-plates of each bar adjustable toward the other spacing-plate on the same bar, means to clamp said adjustable spacing-plates rigidly at the desired points, a longitudinal bar connecting the adjustable spacing-plates, a companion longitudinal bar connecting the other pair of spacing-plates and extending parallel with the first-named longitudinal bar, expansive springs pressing the last-named longitudinal bar toward the companion longitudinal bar and means to tension said spring.

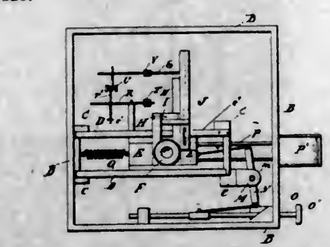
[Claims 6 to 9 not printed in the Gazette.]

885,276. SHOE-POLISHER. JOHN T. MCDONALD, Geneva, N. Y. Filed Oct. 27, 1906. Serial No. 340,842.



A shoe polisher, comprising a broad flat inflexible base, a handle projecting from one end thereof, flexible polishing surfaces united to and covering said base and forming flat polishing surfaces and projecting in unbroken lines beyond the sides and one end thereof thus forming flexible cleaning surfaces, and a layer of flexible material interposed between the projecting portions of said polishing surfaces and united thereto by a line of stitching adjacent to the base.

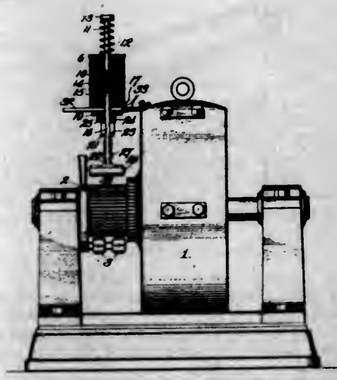
885,277. COIN-CONTROLLED APPARATUS. IVAR NELSON, Chicago, Ill. Filed July 31, 1907. Serial No. 386,325.



1. In a check-controlled apparatus, the combination of a delivery slide having a laterally-extending arm, a coin chute, a detent lever one arm of which is located under the chute in position to be depressed by the weight of a coin or the like and the other arm of which engages the slide except when the other arm is so depressed, a bent lever connected at one end to said laterally extending arm, a stop projecting across the outlet end of the coin chute, to hold the coin on the detent lever, and connections between the bent lever and the stop, the bent lever being actuated by advance of the slide to release the coin.

2. In a check-controlled apparatus, the combination of a delivery slide, having a laterally extending arm, a coin chute, a detent lever one arm of which projects under the discharge end of the chute in position to receive a coin and the other arm of which is normally engaged with the slide, a stop lever extending laterally and movable up and down across the discharge end of the chute, and in position normally to stop and hold a coin upon said lever, and connections between the arm laterally extending and the stop lever, adapted to lift the latter and allow the coin to fall when the slide is advanced.

885,278. COMMUTATOR WIPER AND OILER. DANIEL D. NEVILLE, GEORGE H. CLAY, and JOHN H. CLEWER, Kansas City, Mo.; said Clewer assignor to C. M. Hanks, Kansas City, Mo. Filed Nov. 16, 1905. Serial No. 287,588.



1. The combination with a dynamo, of a solenoid having a reciprocatory plunger comprising magnetic and non-magnetic portions united together at their ends and having such union point normally within the field of attraction of the solenoid; said portions projecting at their opposite ends beyond the corresponding ends of the solenoid wiping and oiling means carried by the non-magnetic portion of the plunger, engaging the commutator periodically, a head on the projecting magnetic portion of the plunger, and a spring interposed between said head and solenoid to hold said head yieldingly away from the solenoid.

2. The combination with a dynamo, of a solenoid arranged radially with respect to the commutator of the dynamo and adjustable in a direction substantially parallel with the axis of the commutator, a plunger partly within the solenoid and held yieldingly at one limit of its movement, a non-magnetic rod attached to the plunger within the solenoid and movable with the former, and an oiler and wiper proper detachably carried by said rod and adapted when the solenoid is energized and attracts said plunger to be pressed yieldingly against the commutator.

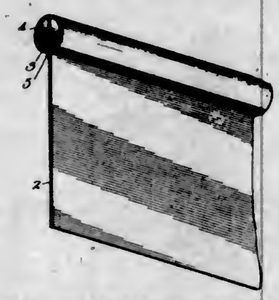
3. The combination with a dynamo, of a solenoid arranged radially with respect to the commutator of the dynamo and adjustable in a direction substantially parallel with the axis of the commutator, a plunger partly within the solenoid and held yieldingly at one limit of its movement, a non-magnetic rod attached to the plunger within the solenoid and movable with the former, and terminating at its opposite end in a jaw, a companion jaw pivoted thereto, a spring holding said jaws yieldingly together, and a substance for wiping and oiling the commutator clamped between and depending below said jaws.

4. The combination with a dynamo, of a bifurcated bracket secured to and insulated from the dynamo, a solenoid mounted and adjustable upon said bracket and provided with a magnetic plunger, a spring holding said plunger partly withdrawn from the solenoid, a non-magnetic rod extending through said bifurcated bracket and

into the solenoid and attached to said plunger, a guide bracket for said rod carried by the first-named bracket, and a substance for oiling and wiping the commutator, detachably secured at the lower end of said rod.

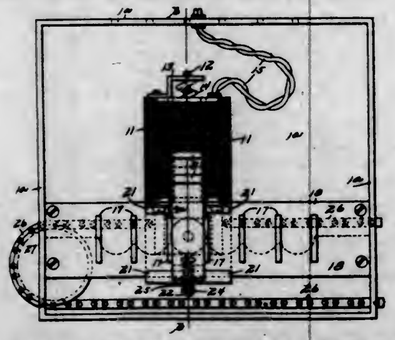
5. The combination with a dynamo, of a bifurcated bracket secured to and insulated from the dynamo, a solenoid mounted and adjustable upon said bracket and provided with a magnetic plunger, a spring holding said plunger partly withdrawn from the solenoid, a non-magnetic rod extending through said bifurcated bracket and into the solenoid and attached to said plunger, a guide bracket for said rod carried by the first-named bracket, a substance for oiling and wiping the commutator, detachably secured at the lower end of said rod, and means for positively limiting the movement of the plunger.

885,279. METAL TANK. EMANUEL E. NORQUIST, Kansas City, Mo. Filed Apr. 17, 1906. Serial No. 312,085.



A tank wall comprising a rim consisting of a slotted tube and a wall projecting into the tube through its slot, and cross pins 3 secured to said wall and bridging said slot and bearing against the inner side of the tube contiguous to the slot.

885,280. ACTUATING MECHANISM FOR FARE-REGISTERS. JOHN F. OHMER, Dayton, Ohio, assignor to Ohmer Fare Register Company, Rochester, N. Y. Filed June 13, 1907. Serial No. 378,734.



1. In an actuating mechanism for fare registers, a series of banks of counters, an actuating member for each bank of counters, a movable solenoid including a core having an extension adapted to be brought into operative relation with each of said individual actuating members, and means for energizing said solenoid to actuate the core and the core extension therewith to move the individual actuating member.

2. In an actuating mechanism for fare registers, a series of banks of counters, an actuating member for each bank of counters, a solenoid including a core having an extension adapted to engage each of said actuating members to operate the same, means for moving the solenoid to a position to effect an engagement between the core extension and a predetermined counter-actuating member, and means for energizing the solenoid to actuate the core and its extension.

3. In an actuating mechanism for fare registers, a series of banks of counters, an actuating member for each bank, a solenoid including a movable core having an extension adapted to engage any predetermined actuating member of the counters, a carriage supporting the solenoid, means for moving said carriage to set the solenoid in an operative position with the actuating member of the counter to be operated, an electric circuit in which the solenoid is placed, and a circuit closer controlling the current and the closing of which energizes the magnet and actuates the core and the extension thereof, substantially as specified.

4. In an actuating mechanism for fare registers, a series of banks of counters, an actuating member for each bank of counters, a movable solenoid including a core with an extension adapted to be brought into operative relation with each of said individual actuating members, means for energizing the solenoid to actuate the core and its extension to move the individual actuating member, and means for returning the core and its extension to normal position.

5. In an actuating mechanism for fare registers, a plurality of fare counters, an individual actuating member for each counter, a solenoid including a core with an extension thereon adapted to engage each of said individual actuating members, a carriage upon which said solenoid is mounted, an auxiliary counter-selecting indicator, and setting mechanism connected with the solenoid carriage and whereby the fare of the counter to be selected for operation is simultaneously indicated on the auxiliary indicator and the solenoid is moved to a position to effect an engagement between its core extension and the individual actuating member of the selected counter.

[Claims 6 to 13 not printed in the Gazette.]

885,281. LANDMARKING-MONUMENT. ROBERT L. PACKARD, Tuckahoe, N. Y. Filed Aug. 22, 1907. Serial No. 389,609.



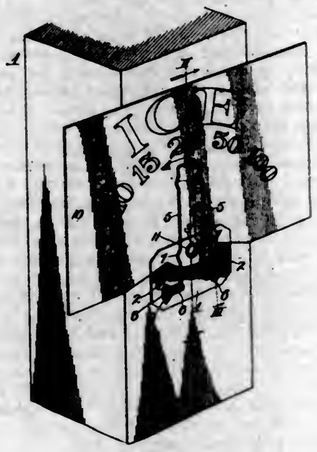
1. The herein-described monument for marking boundaries consisting of a concrete body with a white cement face molded to body, the said body and face being cast around a metallic portion provided with a face flush with the top of monument, and a center mark within its limit.

2. The herein-described monument for marking boundaries consisting of a concrete body with a white cement and marble dust face, the said body and face being molded around a metallic portion whereby the face and body portions are reinforced and bound together.

885,282. ICE-CARD HOLDER. ANNA D. PEEPLES, Kansas City, Mo. Filed Oct. 1, 1907. Serial No. 395,398.

1. An ice card holder comprising a plate and a spring frame projecting beyond one edge or side of the plate and

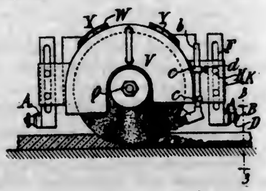
embodying a wire bent to form a pair of arms having bent portions 6^a, a finger 4 at one end of said arms and coil springs at the opposite ends of the arms; the spring-equipped ends of the arms being secured to the plate.



2. An ice card holder, comprising a plate having an outwardly projecting boss, a spring frame secured to the plate at one side of the boss and projecting beyond the edge of the plate at the opposite side of the boss and adapted at its end beyond the plate to press against a card when the latter is pivoted on the boss.

3. The combination with a suitable support, of a plate secured thereto, and provided with an outwardly projecting boss near its upper edge, a spring frame comprising a pair of arms at opposite sides of the boss connected at their outer or free ends and terminating at the opposite ends in coils attached at such ends to the plate, and a card having a hole to fit upon the boss between the plate and the spring frame and provided with numbers arranged concentrically with respect to said hole and adapted to register with the outer or free end of the spring frame.

885,283. MACHINE FOR WORKING MARBLE OR THE LIKE. JOHN R. PEIRCE, New York, N. Y., assignor to Royden Marble Machinery Company, New York, N. Y., a Corporation of New Jersey. Filed Apr. 25, 1906. Serial No. 313,584.

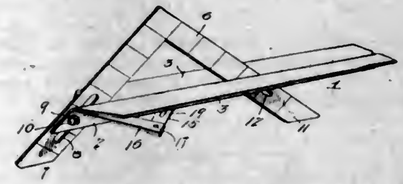


1. An attachment for marble working machines having a rotating wheel of agglomerated material, said attachment comprising a member L carrying a gage at a point in line with and in advance of the wheel, and a member V constituting the front portion of a hood and attachable to said member L.

2. A hood for marble working machines having a rotating wheel of agglomerated material, said hood comprising a back L adapted for attachment to the frame of a machine and having an overhanging lip W and teeth Y, and a member V constituting the front of the hood and having a rim X adapted to be engaged under and held by said lip W, and apertured to engage said teeth Y so that the front may not be withdrawn except by tilting it upward and disengaging it from the teeth Y.

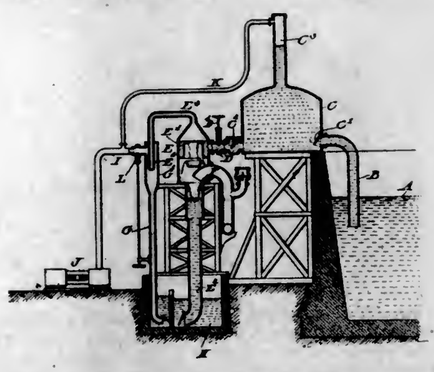
3. An attachment for marble working machines having a rotating wheel of agglomerated material, said attachment comprising a gage and a hood forming a single unitary apparatus adapted for attachment to and detachment from the machine, with the hood in position over the wheel, and the gage in line with and in advance of the wheel.

885,284. FRAMING OR MEASURING INSTRUMENT. JOHN T. PENTECOST, Ensley, Ala. Filed June 15, 1907. Serial No. 379,262.



An instrument of the type described, comprising a body having a central longitudinal web, and opposite longitudinal side flanges, said web being slotted at a pair of spaced intervals, a right angular gage member having its arms disposed respectively in said slots and in turn provided with longitudinal slots, clamping bolts extended through said web respectively within the slots in the arms, and a pair of gage members pivoted respectively to the said side flanges and each comprising a pair of arms pivotally connected and having slot and bolt connection with the flanges.

885,285. CONDENSER. GUSTAV B. PETSCHE, Philadelphia, Pa., assignor to Southwark Foundry and Machine Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed June 6, 1906. Serial No. 320,396.



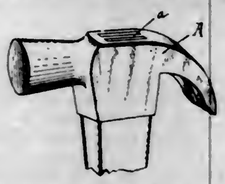
1. In combination with a condenser having an air pump connected to the head of the condenser body and a water supply situated at a lower level than the condenser intake, a water supply tank situated above the water intake of the condenser and connected thereto and to the water supply, a non-return valve located in the connection from the tank to the intake, said valve being arranged to close when the vacuum in the condenser body is broken and a conduit leading from the air pump connection to the top of the tank.

2. In combination with a condenser having an air pump connected to the head of the condenser body and a water supply situated at a lower level than the condenser intake, a water supply tank situated above the water intake of the condenser and connected thereto and to the water supply, a non-return valve located in the connection from the tank to the intake, said valve being arranged to close when the vacuum in the condenser body is broken, a conduit leading from the air pump connection to the top of the tank

and a normally open valve whereby the connection between the condenser body and air pump can be closed at will.

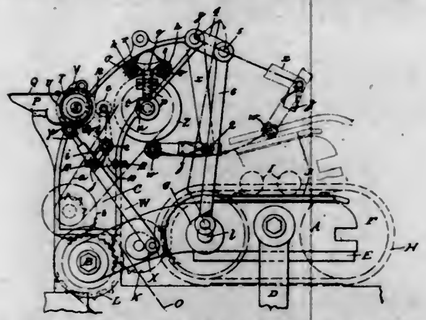
3. In combination with a condenser having an air pump connected to the head of the condenser body and a water supply situated at a lower level than the condenser intake, a water supply tank situated above the water intake of the condenser and connected thereto and to the water supply, a non-return valve located in the connection from the tank to the intake, said valve being arranged to close when the vacuum in the condenser body is broken, a conduit leading from the air pump connection to the top of the tank and a non-return valve in the intake of the tank.

885,286. HANDLE-FASTENING. AVERY E. PHILLIS, Wrightsville, Pa., assignor to Wrightsville Hardware Company, Wrightsville, Pa., a Corporation of Pennsylvania. Filed May 21, 1907. Serial No. 374,897.



A hammer head or the like, having an eye extending entirely therethrough, a wedge located in said eye and formed integral with said head, said wedge having its outer end flush with the outer surface of the hammer head, substantially as described.

885,287. INKING DEVICE. CASIMIR VON PHILP, New York, N. Y. Filed July 22, 1907. Serial No. 384,880.



1. In an inking device, the combination of a vibrating form carrier, an inking plate, inking rollers adapted to travel around the form carrier, an ink fountain and the fountain roll, a metallic ink distribution roll, a vibrating ductor roll between the fountain roll and the distribution roll, and a brayer roll adapted to convey ink from the distribution roll to the inking plate and connected to be actuated by the form carrier.

2. In an inking device, the combination of a pivoted vibrating form carrier and inking plate, inking rollers adapted to travel around the form carrier, and means for driving the same, an ink fountain, a fountain roll and means for rotating the same connected to be actuated by the form carrier, a metallic ink distribution roll and means for driving same, a vibrating ductor roll between the fountain roll and distribution roll, a brayer roll adapted to convey ink from the distribution roll to the inking plate, and means connected to be actuated from the form carrier for operating said brayer roll.

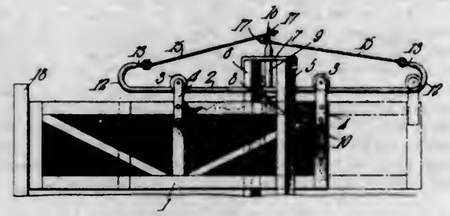
3. In an inking device, the combination of a vibrating form carrier and inking plate, an ink fountain and fountain roll, a ratchet and pawl device for rotating said roll, a connecting link between said ratchet and pawl device and the form carrier, an adjustable connection between said link and the ratchet and pawl device, a metallic ink distribution roll, a vibrating lever and ductor roll carried thereby, and frictional means for vibrating said lever connected to be operated by the said link.

4. In an inking device, the combination of a vibrating form carrier and inking plate, an ink fountain and fountain roll, a ratchet and pawl device for rotating said roll, a connecting link between said ratchet and pawl device and the form carrier, an adjustable connection between said link and the ratchet and pawl device, a metallic ink distribution roll, a vibrating lever and ductor roll carried thereby, frictional means for vibrating said lever connected to be operated by the said link, and means for adjusting the stroke of said vibrating lever carrying the ductor roll.

5. In a printing press, the combination of a vibrating form carrier, an inking plate carried thereby, inking rollers adapted to travel around the form carrier and means for operating said rollers, an ink fountain and fountain roll, a connecting link connected to be actuated by the form carrier for rotating said fountain roll, an ink distribution roll and means for continuously driving the same, a vibrating lever between the fountain roll and distribution roll, a ductor roll carried by said lever, means actuated by the said connecting link for vibrating the ductor roll, a brayer roll adapted to convey ink from the distribution roll to the inking plate, and means connected to be actuated from the form carrier for operating said brayer roll.

[Claim 6 not printed in the Gazette.]

885,288. GATE. ROBERT G. PING, Audubon, Iowa, assignor of one-half to Stephen A. McHargue, Audubon, Iowa. Filed May 15, 1907. Serial No. 373,744.

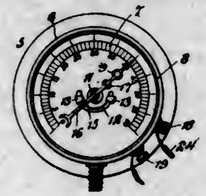


1. In combination, a gate, roller brackets fastened to the top of said gate, a swinging track comprising a horizontal bar on which the roller brackets are slidably carried provided with a return bend on each end which serve as stops for the bracket rollers, a pivot rod extending vertically through the center of said horizontal bar, and a brace rod connecting each end of said bar to the upper end of said pivot, and bearings for said pivot rod, the entire mechanism being disposed above the top of the gate.

2. In combination, a gate, posts angularly disposed with relation to said gate and connected together at their top ends, a step plate between said posts, a track adapted to swing in a horizontal plane comprising a horizontal bar with upturned ends, a central vertical pivot rod secured to said bar and having a bearing in said step plate and in the connection between said posts, and a brace rod fastened to each upwardly curved end of said horizontal bar and adjustably attached to the upper end of said pivot rod, and roller brackets fixed to said gate and slidably mounted on said track.

885,289. ALARM-GAGE. HARRY B. PRESSER, Memphis, Tenn. Filed Feb. 19, 1907. Serial No. 358,316.

In alarm mechanism of the character set forth, a gage comprising a casing, a dial carried by the casing, insulation separating the dial and casing, a rotary pointer operating over the dial and having a shaft extending therethrough and separated therefrom, said shaft being grounded in the casing, a contact head mounted on the outer face of the dial, a contact spring comprising a leaf secured at one end to the pointer and having its other end located beneath the same and coöperating with the head, binding posts secured to the casing, one of the posts being grounded thereon, the other being insulated therefrom, and electrical connections between the insulated binding post and the dial.



885,290. GARTER-CLASP. ANTON REZNIČEK, Jersey City, N. J., assignor to Casper Bloomberg, New York, N. Y. Filed Mar. 15, 1907. Serial No. 362,504.

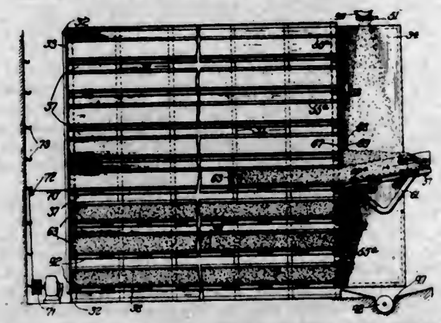


1. A garter clasp comprising a frame, a divided button secured to one end of the frame, and a locking tongue provided with an elastic cushion secured to the other end in position to have its free end enter the division in the button for the purpose set forth.

2. A garter clasp comprising a substantially pear shaped loop of wire, two integral, parallel, upstanding rings on the narrow end thereof a slight distance apart, a single locking tongue hinged to the broad end of the frame in position to have its free end enter the space between the rings for the purpose set forth.

3. A garter clasp comprising a substantially pear shaped frame of wire, two integral, parallel, upstanding rings on the narrow end thereof a slight distance apart; a single locking tongue, having a sharp downward curve therein between its ends, hinged to the broad end of the frame in position to have its free end enter the space between the rings for the purpose set forth; and a knob on the end of said tongue.

885,291. MALTING APPARATUS. WILLIAM P. RICE, Chicago, Ill. Filed July 7, 1906. Serial No. 325,083.



1. In a malting apparatus, two malting units arranged end to end with a space between them, malt shelves supported in said units, means whereby said shelves may be moved each out of its unit across said space into the adjacent unit and means for dumping the contents thereof between said units.

2. In a malting apparatus, two malting units arranged end to end with a space between them, malt shelves supported in said units, means for moving each shelf out of its unit across said space into the adjacent unit, means for dumping the contents thereof between said units, and conveying apparatus constructed and arranged to receive the malt dumped from the shelves and to redeposit the same thereon.

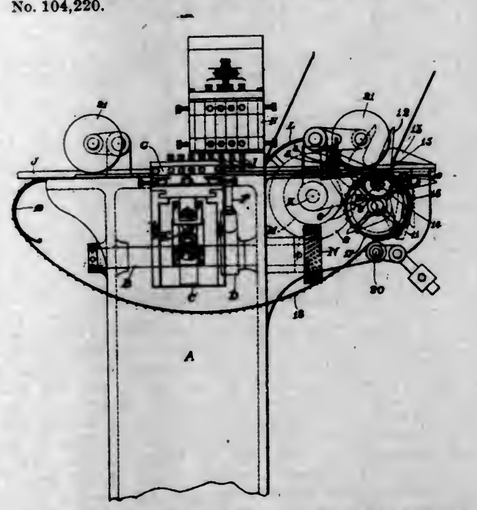
3. In a malting apparatus, two malting units arranged end to end with space between them, malt shelves supported in said units, means for moving each shelf out of its unit across said space into the adjacent unit, means for dumping the contents thereof between said units, and means for loading malt on said shelves as they are moved backwardly into their units.

4. In a malting apparatus, two malting units arranged end to end with a space between them, malt shelves supported in said units, means arranged to move each shelf out of its unit across said space into the adjacent unit, means for dumping the contents thereof between said units, means for loading malt on said shelves as they are moved backwardly into their units, and a leveling board located at the entrance of the unit for leveling the malt on the shelf as it is moved into its unit.

5. In a malting apparatus, two malting units arranged end to end with a space between them, rails arranged to bridge said space, malt shelves supported in said units, each adapted to be moved out of its unit, over the bridge rails and into the adjacent unit, said shelves each embracing a plurality of flexibly joined sections, and said bridge rails being arranged to permit said shelf sections to tilt to dumping position.

[Claims 6 to 19 not printed in the Gazette.]

885,292. INTERMITTENT-FEED DEVICE. FRANCIS H. RICHARDS, Hartford, Conn. Filed Apr. 22, 1902. Serial No. 104,220.



1. In a carving machine, the combination of a group of coöperative carving tools, a star wheel, a restrainer wheel, a crank between said star and restrainer wheels having oppositely disposed wrists engageable with said star and restrainer wheels respectively, the bearing surfaces upon said star and restrainer wheels being substantially tangential to the path of said crank wrist at the points of initial and final engagement of the latter, stock-feeding means connected to said star wheel, and a pressure roll for coöperating with said stock-feeding means.

2. In a carving machine, the combination with a series

of tools so organized that one will supplement the cut of another upon the shifting of the stock, of an endless slack feed belt for carrying the stock, a pulley engaging one end of said feed belt for driving the same, an idler for deflecting said feed belt against the pulley, means for rotating said pulley with an intermittent motion, and means for guiding the other end of said feed belt.

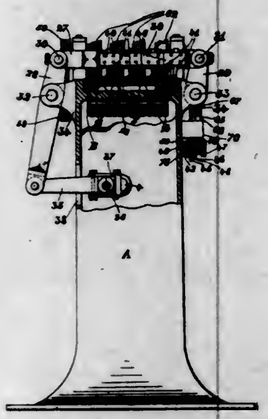
3. In a carving machine, the combination with a set of tools for commencing the cut of a chip and a set of tools for supplementing the cutting of said chip upon the movement of the stock and the next tool movement, and means for actuating the same, of an endless belt for feeding the stock, a stationary guide for one end of said belt, and an intermittently driven pulley for advancing said belt step by step, and means for controlling said pulley in sequential timing with said cutting tools.

4. In a carving machine, the combination with two sets of coöperative carving tools, a feed belt, stationary means for guiding one end of said belt, and an intermittently driven pulley for advancing said belt.

5. In a carving machine, the combination with two sets of tools organized one for supplementing the chip action of the other, a platen for sustaining the working thrust from said tools, a belt passing over said platen and having a slack portion below the same, said platen having a curved guide at one end for said belt, and an intermittently driven pulley for drawing the belt across said platen, the drive of the pulley and the tools being organized for proper sequential timing.

[Claims 6 to 8 not printed in the Gazette.]

885,293. CARVING-MACHINE. FRANCIS H. RICHARDS, Hartford, Conn. Filed June 2, 1902. Serial No. 109,904.



1. In a carving machine, the combination with a box-like frame, of a plurality of parallel stock-guides on said frame adapted to bear stock members, an oscillatable multiple cutter mounted to oscillate toward and away from said stock-guides, the plane of oscillation of said multiple cutter being parallel to the length of said stock-guides, an articulated parallelogram transverse of said stock-guides the lower side of which parallelogram is formed by said frame, a second multiple cutter forming a movable upper side of said parallelogram, and power-driven mechanism adapted to oscillate said cutters to incise the contradistinctive incisions of separate repeats of a pattern upon said stock members.

2. In a carving machine, the combination of a plurality of parallel stock-guides lying in the same plane, a multiple cutter registering with all of said stock-guides and oscillatable in a plane perpendicular to the plane of mounting of said stock-guides and parallel to the length of said stock-guides, and a second multiple cutter registering with all of said stock-guides and oscillatable in a plane perpendicular to the plane of mounting of said stock-guides and transverse of said stock-guides, said cutters patterned and arranged to incise the contradistinctive incisions of separate repeats of a pattern on stock lying in said stock-guides.

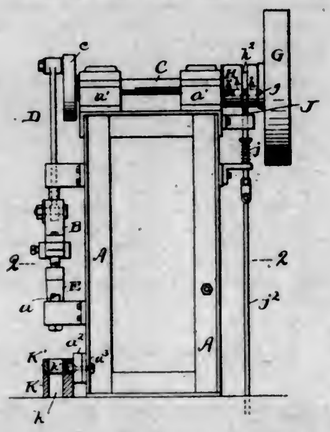
3. In a carving machine, the combination with stock feeding means, of a plurality of stock guides the floors whereof are substantially parallel, a beam substantially parallel with said floors and extending transversely of said stock guides, incising tools mounted upon said beam, one for each stock guide, and means for reciprocating said beam endwise in a direction about parallel with said floors.

4. In a carving machine, the combination with stock feeding means, of a plurality of stock guides the floors whereof are substantially parallel, a beam substantially parallel with said floors and extending transversely of said stock guides, incising tools mounted upon said beam, one for each stock guide, means for reciprocating said beam endwise in a direction about parallel with said floors, a second beam provided with incising tools and extending across said stock guides, and means for reciprocating said second beam vertically to the stock guides.

5. In a carving machine, the combination with feeding means, of a plurality of independent stock guides whose floors lie in substantially the same plane, a plurality of sets of carving tools, one tool in each set for each of said guides, and the tools in each set being mounted to incise the stock in different directions, and means for operating said tools so that the tools in one set may supplement the cuts made by the tools in the other set.

[Claims 6 to 11 not printed in the Gazette.]

885,294. BATTERY-FILLING MACHINE. CHARLES T. RICHMOND, Cleveland, Ohio, assignor to The National Carbon Company, Trenton, N. J., a Corporation of New Jersey. Filed Sept. 14, 1905. Serial No. 278,387.



1. In a battery filling machine, the combination of a holder for the cup, a surmounting shoulder for a substance to enter the cup, a plunger to force the substance into the cup said holder for the substance being positioned relative to the holder for the cup so that the substance forced into the cup is guided by the holder therefor until it enters the cup.

2. In a battery filling machine, the combination of a holder for the cup, a surmounting holder for a substance to enter the cup, a plunger to force the substance into the cup, mechanism for causing the plunger to reciprocate, and a guide for the holder said holder for the substance being positioned relative to the holder for the cup so that the substance forced into the cup is guided by the holder therefor until it enters the cup.

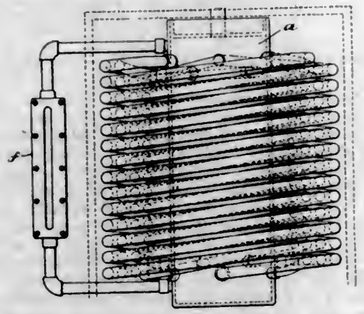
3. In a battery filling machine, the combination with a holder adapted to hold a plurality of battery cups, a member having tubular nipples adapted to hold carbons within the bores of said nipples, and means for holding the nipples in alinement with the cups.

4. In a battery filling machine, the combination with a holder adapted to hold a plurality of battery cups, a member having tubular nipples adapted to hold carbons within the bores of the nipples, a plunger adapted to force the carbons from the nipples into the material in the cups, and a guide for the holder in coöperative relation with the plunger.

5. In a battery filling machine, the combination of a member having a series of openings each adapted to receive a battery cup, a surmounting member having registering openings through which the cups may be filled, a member having tubular nipples adapted to enter the last mentioned openings, the bore of the nipples being adapted to carry carbons, a reciprocating plunger, and means for guiding the holder and members mentioned in relation to the plunger, to successively force the carbons through the nipples into the material in the cups.

[Claims 6 to 11 not printed in the Gazette.]

885,295. WATER-TUBE BOILER. ANDREW L. RIKER, Bridgeport, Conn., assignor, by mesne assignments, to The White Company, Cleveland, Ohio. Filed June 15, 1903. Serial No. 161,414.



1. A boiler comprising a central column and a plurality of concentrically arranged groups of coils encircling said column and entering the same at varying heights at both their ends, said coils being of unequal inclination, and the tubes thereof increasing in diameter inversely as the inclination.

2. A boiler comprising a central column and a plurality of concentrically arranged groups of coils, said coils at their ends entering said column at varying levels, the inclination of the coils and the diameter of the tubes varying inversely from the inner to the outer coils.

885,296. SPEED-CHANGING MECHANISM. EDWARD RIVETT, Boston, Mass. Filed Aug. 26, 1904. Serial No. 222,225.



1. In mechanism of the class described, the combination, with a machine frame, a shaft therein, a plurality of loose gears thereon, and co-acting clutches, of a draw-bar rotatable therewith and provided at its opposite ends with inclined surfaces, and a forked link jointed to and embracing one end of said draw-bar and extended through the frame, and means connected with said link to move said draw-bar in one or the opposite direction to clutch one or the other of said gears to the shaft which they surround.

2. In mechanism of the class described, the combination, with a machine frame, a hollow-shaft, a plurality of gears loose thereon, and co-acting clutches, of a draw-bar provided with a plurality of inclines, a two-part link having its inner end forked and occupying at all times a position within one end of said hollow shaft and jointed to said draw-bar near one end, the outer end of said link being jointed to the forked end thereof, the outer end of said link being extended outside the frame, and means connected with said link to move said draw-bar in one or the opposite direction to clutch one or the other of said gears to the shaft which they surround.

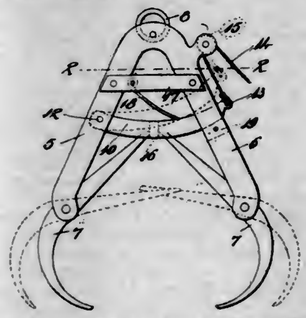
3. In mechanism of the class described, the combination, with a machine frame, a hollow shaft, a plurality of gears loose thereon, and co-acting clutches, of a draw-bar provided with a plurality of inclines, a link jointed to one end of said draw-bar within one end of said hollow shaft, said link being extended through the frame, and a horizontally-arranged lever, and a vertical shaft, and means carried thereby to move said horizontal lever.

4. In apparatus of the class described, two parallel shafts gears fast thereon, a plurality of hubs on each shaft, gears surrounding loosely the hubs of both said shafts, clutching means carried by each hub, a draw-bar in each shaft, each draw-bar having a plurality of inclines oppositely directed, and means to move said draw-bars in one or the other direction to couple one or the other of said gears to one or the other of said shafts.

5. In apparatus of the class described, a rigid frame work, a wheel-shaft sustained therein, a sprocket-wheel thereon, a driven shaft, a sprocket-wheel thereon, a chain connecting said sprocket-wheels, a driving shaft and a driven shaft gears fast thereon, each of said shafts having hubs and loose gears surrounding said hubs, and clutching means between said hubs and gears, combined with two draw-bars provided with inclines for effecting the clutching of said loose gears to said hubs to rotate said driven shaft and revolve the wheel-carrying shaft.

[Claims 6 and 7 not printed in the Gazette.]

885,297. GRAPPLE. OTTO RODMAN, Maxwell, Cal. Filed Nov. 16, 1907. Serial No. 402,464.
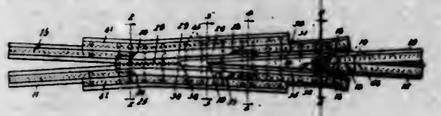


1. A grapple comprising a furcate frame, tines pivoted to the branches of said frame, a lever pivoted to the frame, and a stop-block carried by the lever in the path of the inner ends of the tines.

2. A grapple comprising a furcate frame, tines pivoted to the branches of said frame, a lever pivoted to said frame and having a slot to receive the inner ends of the tines, and a stop-block in said slot in the path of the tines.

885,298. RAILWAY-FROG. OTTO F. ROST, Chicago, Ill. Filed Sept. 14, 1907. Serial No. 392,874.

1. In a railway frog, in combination, the point rails separable from and engaging a frog-point member, and wing treads laterally engaging said point member and separable therefrom, substantially as specified.

2. In a railway frog, in combination, the point rails separable from and engaging a frog-point member, and wing members laterally engaging said point member and separable therefrom, substantially as specified.



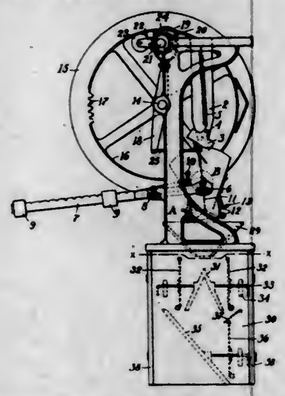
3. In a railway frog, in combination, the point rails separable from and engaging a frog-point member, and wing treads separable from said point member and in interlocking engagement therewith, substantially as specified.

4. In a railway frog, in combination, the point rails separable from and engaging a frog-point member, and wing members separable from said point member and in interlocking engagement therewith, substantially as specified.

5. In a railway frog, in combination, a frog point member and wing treads separable therefrom and in interlocking engagement therewith, substantially as specified.

[Claims 6 to 20 not printed in the Gazette.]

885,299. GRAIN FEEDING AND WEIGHING APPARATUS. WILHELM SCHWEDE, Sanborn, Minn., assignor of one-half to Henry Schwerdtfeger, Sanborn, Minn. Filed July 21, 1906. Serial No. 327,149.



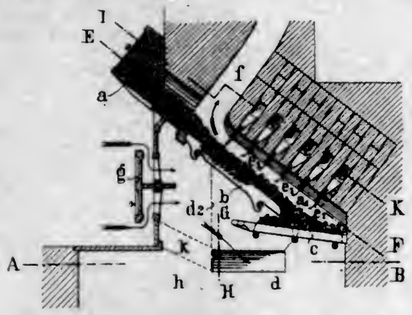
1. In an apparatus of the class described, the combination of a fulcrumed scale arm, a magazine pivotally supported upon the inner end of said arm, a partition wall in the magazine, a pair of gravity outlet doors upon opposite sides of the lower end of said magazine, and means for tilting the magazine upon its pivotal support when in lowered position to cause the contained grain in the lower side of the magazine to force open the adjacent discharge door.

2. In an apparatus of the class described, the combination of a fulcrumed scale-arm, a magazine pivotally supported upon the inner end thereof, a feed conduit supported above the magazine, a spring restrained closing valve for said conduit, a partition wall and outlet doors for the magazine and means for tilting the magazine when lowered, to discharge its contents.

3. In an apparatus of the class described, the combination of a fulcrumed scale-arm, a magazine pivotally supported upon the inner end thereof, a feed conduit supported above the magazine, a spring restrained closing valve for said conduit arranged to be opened by the magazine when the magazine is raised, a partition wall in the magazine, an outlet door on either side of said wall and means for tilting the magazine when lowered to discharge its contents.

4. In an apparatus of the class described, the combination of a fulcrumed scale arm, a magazine pivotally supported upon the inner end of said arm, a feed conduit above the magazine, a closing valve for said conduit constructed and arranged to be opened by the magazine when the magazine is lowered, and means for tilting the magazine upon its pivotal support when lowered, comprising a drive wheel formed with a series of teeth upon one side, a pinion arranged in position to be actuated by said teeth once during each revolution of said drive wheel, and a connection between said pinion and magazine.

885,300. SMOKE-CONSUMING FURNACE. ALOIS SICHERT, Carlsbad, Austria-Hungary. Filed July 25, 1906. Serial No. 327,602.



1. In a smoke consuming furnace, in combination, a fuel-supply box, an inclined grate, a substantially horizontal grate below said inclined grate, an ash-pit having a controllable air inlet, an integral arch extending entirely across the upper part of the combustion chamber, out of contact with the fuel, and having downwardly opening orifices adapted to discharge air upon the upper surface of the fuel, lateral air-passages connecting the ash-pit with the arch orifices, independent means for supplying air to said lateral air-passages, and a discharge flue at the upper end of said arch, whereby the air and heated gases are passed over the entering fuel to burn the volatile elements thereof.

2. In a smoke consuming furnace, in combination a fuel-supply box, an inclined grate, a substantially horizontal grate below said inclined grate, an ash-pit having a controllable air inlet, an integral arch extending entirely across the upper part of the combustion chamber, out of contact with the fuel, and having downwardly opening orifices adapted to discharge air upon the upper surface of the fuel, lateral air-passages connecting the ash-pit with the arch orifices, supplemental controllable inlets for admitting external air to said lateral passages, and a discharge flue at the upper end of said arch, whereby the air and heated gases are passed over the entering fuel to burn the volatile elements thereof.

885,301. AIR-PUMP. JOHANN W. SIEPERMANN and EMIL FUDICKAR, Elberfeld, Germany. Filed Aug. 27, 1904. Serial No. 222,400.

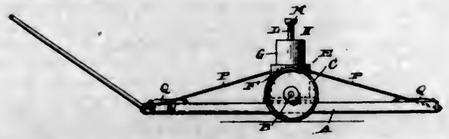
1. A pump comprising an elevated receptacle, means for supplying regulated quantities of liquid to said receptacle, a vertical pipe of relatively small diameter extending upwardly through the bottom of said receptacle and terminating within it, a closed vessel surrounding the lower end of said pipe; said receptacle, pipe and vessel being constructed and arranged to form descending alternate pistons of liquid and gas in the pipe when the liquid is supplied to the receptacle; and means for intermittently discharging the liquid from said closed vessel; substantially as described.

2. A pump comprising an elevated receptacle, means for supplying regulated quantities of liquid to said receptacle, a vertical pipe of relatively small diameter extending upwardly through the bottom of said receptacle and terminating within it, a closed vessel surrounding the lower end of said pipe, said receptacle, pipe and vessel being constructed and arranged to form descending alternate pistons of liquid and gas in the pipe when liquid is supplied to the receptacle, means for discharging the compressed gas from said closed vessel, and a balanced valve for intermittently discharging the liquid therefrom; substantially as described.



3. A pump comprising an elevated receptacle, means for admitting liquid thereto, a vertical pipe of relatively small diameter extending upwardly through the bottom of said receptacle and terminating within it, a closed vessel surrounding the lower end of said pipe, means for discharging compressed gas and a portion of the accumulated liquid from said closed vessel, and means for returning the remainder of said liquid to the elevated receptacle; substantially as described.

885,302. COMBINED TRUCK AND JACK. JOHN M. SMITH, Waite Park, Minn., assignor of one-half to Fred C. Lindt, St. Cloud, Minn. Filed July 19, 1907. Serial No. 384,598.



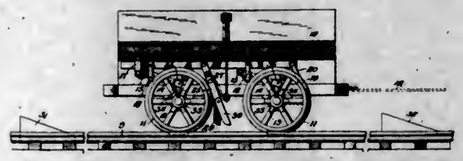
1. A combination truck and jack comprising an elongated wheeled platform, a jack mounted on said platform and centrally thereof, the stem of the jack having a curved yoke on its upper end, substantially as shown and described.

2. A combination truck and jack comprising an elongated platform having wheels journaled centrally of its long sides, a jack mounted on the platform between the wheels, a curved yoke secured to the upper end of the stem of the jack, and cleats secured at the end of the truck and longitudinally thereof, substantially as shown and described.

3. A combined truck and jack comprising an elongated platform, a handle secured to one end thereof, cleats secured to the ends of the platform, a U-shaped axle secured under the middle of the platform, wheels journaled on said axle, a telescoping compressed-air jack secured to the platform between the wheels, and braces consisting of rods secured to the jack and the ends of the platform, substantially as shown and described.

885,303. SAFETY-CATCH FOR CABLE-RAILROADS. MAX SNYDER, Beatty, and ANTON ZUZAK, Baggaley, Pa. Filed Dec. 4, 1907. Serial No. 405,067.

1. The combination with a vehicle, of a wheel therefor, a device carried by the vehicle and movable into coaction with the wheel to prevent its rotation in one direction while permitting its rotation in the opposite direction, said device being movable out of coaction with the wheel to permit its free rotation in opposite directions, and automatic means for moving the holding device.



2. The combination with a vehicle, of a wheel therefor, a device carried by the vehicle and movable into coaction with the wheel to prevent its rotation in one direction while permitting its rotation in the opposite direction, said device being movable out of coaction with the wheel to permit its free rotation in opposite directions, an actuating member for the device, said member being carried by the vehicle, and means located in the path of movement of the member for effecting its movement.

3. The combination with a vehicle, of a wheel therefor, a device carried by the vehicle and movable into coaction with the wheel to prevent its rotation in one direction while permitting its rotation in the opposite direction, said device being movable out of coaction with the wheel to permit its free rotation in opposite directions, a lever for actuating the device, and a trip located in the path of movement of the lever for effecting its movement.

4. The combination with a vehicle, of a wheel therefor, a device carried by the vehicle and movable into coaction with the wheel to prevent its rotation in one direction, while permitting its rotation in the opposite direction, said device being movable out of coaction with the wheel to permit its free rotation in opposite directions, actuating means for the device including an element having a free movement in one direction and a limited movement in an opposite direction, and a trip located in the path of movement of said element.

5. The combination with a vehicle, of a wheel therefor, a device carried by the vehicle and movable into coaction with the wheel to prevent its rotation in one direction while permitting its rotation in the opposite direction, said device being movable out of coaction with the wheel to permit its free rotation in opposite directions, a lever mounted on the vehicle, a dog movably mounted on the vehicle, and a trip disposed in the path of movement of the dog, said dog moving over the trip in one direction without operating the lever and effecting the operation of the lever when moving in an opposite direction.

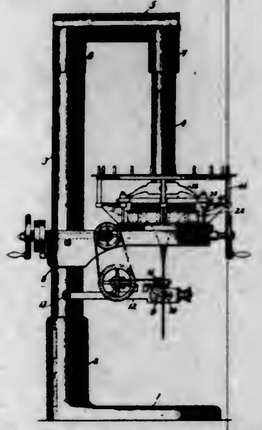
[Claims 6 to 26 not printed in the Gazette.]

885,304. DIAL KNITTING-MACHINE. BERNARD T. STEBER, Utica, N. Y., assignor to The Steber Machine Company, Utica, N. Y., a Corporation. Filed Oct. 2, 1906. Serial No. 337,043.

1. A knitting machine comprising a stationary needle cylinder, a rotatable cam cylinder, a needle dial, an overhead support whereto said needle dial is secured and by which it is wholly supported and positioned, a dial cam disk sleeved upon said overhead support, a gear ring to which said cam cylinder is secured and by which the same is rotated, upright posts secured to said gear ring, bobbin frame supporting brackets mounted upon said posts, a yarn feeding device mounted upon said posts, and a spider connecting said posts and said dial cam disk, whereby the cam cylinder, bobbins, yarn supplying devices and dial cam disks are synchronously rotated.

2. A knitting machine comprising a stationary needle cylinder, a rotatable cam cylinder, a gear ring to which said cam cylinder is detachably secured, a needle dial, an overhead support to which said needle dial is secured and by which it is supported and positioned, a dial cam disk upon said overhead support and upright posts detachably secured to said gear ring, a spider mounted upon said

posts and supporting said dial cam disk and a yarn feeding device also mounted upon said posts in operative proximity to the needles.



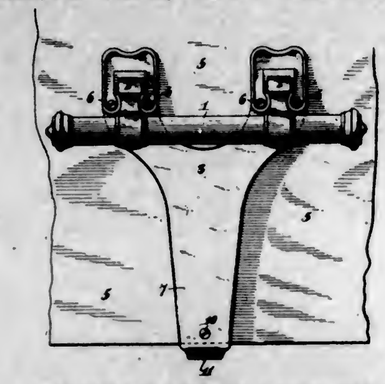
3. A knitting machine comprising a stationary needle cylinder, a rotatable cam cylinder, a gear ring to which said cam cylinder is detachably secured and having a flush upper face, a needle dial, an overhead support to which said needle dial is secured and by which it is supported and positioned, a dial cam disk upon said overhead support, upright posts connected to said gear ring and operatively connected to and supporting said dial cam disk, said cam cylinder comprising a plurality of segments entirely encircling said needle cylinder, said segments being directly mounted upon the flush upper surface of the gear ring, said flush upper surface extending beyond and circumferentially of said segments, and means to secure said segments to said flush upper surface of said gear ring, whereby each of said segments may be withdrawn from the needle cylinder by direct radial movement thereof without movement of the said upright posts.

4. A knitting machine comprising a stationary needle cylinder, a rotatable cam cylinder, a gear ring to which said cam cylinder is detachably secured and having a flush upper face, a needle dial, an overhead support to which said needle dial is secured and by which it is supported and positioned, a dial cam disk upon said overhead support, upright posts connected to said gear ring and operatively connected to and supporting said dial cam disk, said cam cylinder comprising a plurality of segments entirely encircling said needle cylinder, said segments being directly mounted upon the flush upper surface of the gear ring and each being radially movable thereon, said flush upper surface extending beyond and circumferentially of said segments, and means passing vertically through the main web of said segments and into said gear ring, whereby said segments are secured in position.

5. A knitting machine comprising a stationary needle cylinder, a rotatable cam cylinder, a gear ring to which said cam cylinder is detachably secured and having a flush upper face, a needle dial, an overhead support to which said needle dial is secured and by which it is supported and positioned, a dial cam disk upon said overhead support, upright posts connected to said gear ring and operatively connected to and supporting said dial cam disk, said cam cylinder comprising a plurality of segments entirely encircling said needle cylinder, said segments being directly mounted upon the flush upper surface of the gear ring, said flush upper surface extending beyond and circumferentially of said segments, said segments being devoid of a base supporting flange, thus permitting an extended radial movement of each of said segments upon the flush upper face of the gear ring, and screws passing vertically through the main web of said segments and into engagement with said gear ring.

[Claims 6 and 7 not printed in the Gazette.]

885,305. HANDLE FOR COFFINS, &c. JACOB M. TRUBY, Starke, Fla. Filed Sept. 11, 1907. Serial No. 392,295.



1. A coffin handle provided with a handle plate having a lower coffin supporting portion provided with an inwardly extending ledge or flange arranged to project inwardly beyond the side of a coffin for supporting the bottom thereof and for taking the weight off the fastening devices of the handle to prevent the latter from pulling off, said ledge or flange being provided with a depending lug arranged to support a coffin in spaced relation with the bottom of the rough box so as to allow the straps to be removed after the coffin has been lowered into the grave.

2. A coffin handle provided with a handle plate having a lower coffin supporting portion provided with an inwardly extending ledge or flange, said ledge or flange having a flat upper face and provided with a depending tapering lug arranged to support a coffin in spaced relation with the bottom of a rough box and adapted to embed itself in the said bottom to prevent the coffin from slipping during transit.

885,306. DITCHING APPARATUS. MATHIAS WESTENHAVER and MARSHALL WESTENHAVER, Sterling, Kans. Filed Aug. 19, 1907. Serial No. 389,266.



1. A ditching apparatus comprising a drum platform, a motor and drum thereon, means for anchoring the platform, means for connecting the motor to the drum, a primary ditching device, a cable adapted to be wound on the drum, means connecting said cable to the primary ditching device, means carried by the primary ditching device for cutting a shallow ditch and depositing the earth at one side of said ditch, a ditch finishing device adapted to be moved longitudinally in the ditch cut by the first device and carrying means to deepen the ditch and to compact the sides thereof, means carried by said finishing device to discharge the earth at one side of the ditch, means for attaching the cable to the ditch finishing device, and means carried by the primary ditching device to support the cable when the ditch finishing device is in operation.

2. In a machine of the class set forth, a portable frame carrying a motor and a drum and means for operating this drum, and an anchoring means, said means consisting of a pair of inclined beams on the frame notched at their rear edges, a loop engaging each one of these beams, a sharpened stake pivotally connected at its upper end to each one of these loops, and a removable cross-bar connecting said stakes.

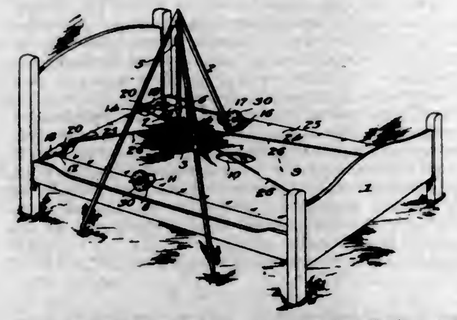
3. In an apparatus of the class set forth, the combination of a portable frame, a motor, a drum and means for operating it from the motor, and an anchoring means consisting of a pair of stakes sharpened at their lower ends and having a loop connected to its upper end, said loop adjustably engaging one of the uprights of the frame, for the purpose set forth.

4. A ditching apparatus comprising a drum platform, a drum thereon, a motor connected to said drum, a primary ditching device, a cable adapted to be wound on the drum, means to connect said cable to the ditching device, a ditch finishing device adapted to be moved longitudinally in the ditch cut by the first device, means whereby the cable may be attached to the said finishing device.

5. A ditching apparatus comprising a frame, a drum thereon and a motor to drive said drum, an anchoring means for the frame, a cable adapted to be wound on said drum, and two independent ditching devices adapted to be independently attached to said cable and be independently drawn in succession by the cable toward the frame, the second one being drawn in the ditch cut by the first one.

[Claims 6 to 16 not printed in the Gazette.]

885,307. INVALID APPLIANCE. GEORGE H. WHALEY, Maysville, Ky., assignor of one-half to George H. Traxel, Mason county, Ky. Filed Mar. 30, 1907. Serial No. 365,461.



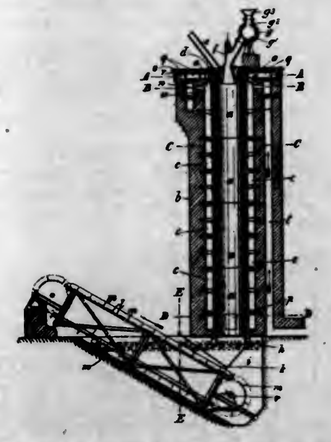
1. In an apparatus of the character described, a supporting frame composed of side and end members, the side members being each provided with apertured disks that are pivoted together to form relatively adjustable head and body sections, a locking pin having a pivotal connection with the pivot of said disks and adapted to be engaged with the apertures in said disks to lock the head and body sections in the desired adjusted position, means for adjusting said side members laterally, and means for raising and lowering said supporting frame in its entirety, or the head section only.

2. In an apparatus of the character described, a supporting frame provided with a flexible cover and consisting of side and end members forming head and body sections, apertured disks carried by the ends of the head and body members and having a pivotal connection whereby the head section may be adjusted relatively to the body section, a locking pin pivotally attached to the pivotal connection between said disks and serving to retain said sections in their adjusted positions, means carried by the end members of the supporting frame for adjusting the side members laterally, and means for raising and lowering said supporting frame in its entirety or the head section thereof only.

3. In an apparatus for lifting invalids, an invalid-support having a flexible portion, and a frame carrying the flexible portion and made up of a body portion, a head portion, and connections intermediate the side bars of the body and head portions; the said connections respectively comprising a disk having a circular series of transverse apertures, a disk arranged against one side of the first mentioned disk and having a transverse aperture with which the apertures of said first mentioned disk are adapted to be registered, a central bolt connecting the disks, a lever pivoted to lugs on the bolt and arranged to swing outward and inward thereon, and a fastening pin pivoted to and movable with the lever and arranged to be placed in registered apertures of the disks.

4. In an apparatus for lifting invalids, an invalid-support having a flexible portion, and a frame detachably connected to and carrying the flexible portion and made up of a side bar, end bars fixed to and extending at right angles from the side bar and having threaded portions, a side bar adjustable laterally on the end bars, and nuts mounted on and engaging the threads of the end bars and connected to and movable with the laterally adjustable side bar.

885,308. APPARATUS FOR THE MANUFACTURE OF GAS. HAROLD W. WOODALL, Wimborne, and ARTHUR M. DUCKHAM, Upper Parkstone, England, assignors to Isbell-Porter Company, a Corporation of New York. Filed July 1, 1904. Serial No. 214,995.



A device for continuously distilling coal consisting of a vertical retort, a water sump into which the lower end of the retort dips, a conveyer adapted to partly support the weight of the charge in the retort and to remove the coke from the bottom of the same, a gas tight feeding device adapted to keep the retort full by being capable of delivering relatively more coal to the retort than the coke removing conveyer removes coke and so formed that this excess of coal is maintained in the feeding device and exerts no undue pressure in the coal in the retort, and means for heating the retort consisting of a combustion chamber surrounding the top of the retort and flues through which the products of combustion pass downwards towards the bottom of the retort.

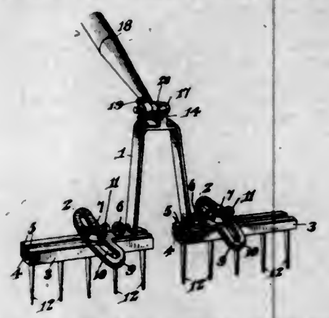
885,309. RAKE. GIDEON S. ADAMS, Seaville, N. J. Filed Jan. 22, 1908. Serial No. 412,185.

1. A rake comprising an arch provided at opposite sides with arms having slots, pivots mounted on the arms, a pair of rake heads provided with teeth and having longitudinal ways receiving the pivots of the arms, whereby the rake heads are slidably and pivotally connected with the arms, and fastening means operating in the slots of the arms and slidable in the ways of the rake heads for securing the same in their adjustment.

2. A rake comprising an arch having horizontal arms provided with heads having arcuate slots, pivots depending from the arms at points intermediate of the ends thereof and provided with heads, rake heads provided with teeth and having longitudinal ways receiving the heads of the pivots, and set screws mounted in the said arcuate slots and having heads slidable in the ways of the rake heads.

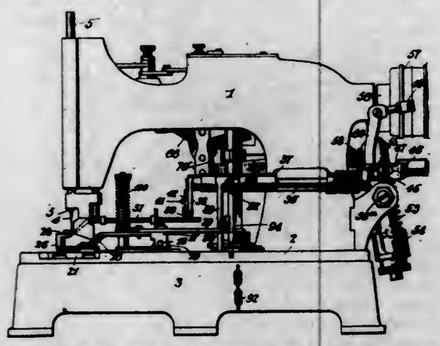
3. A rake comprising an arch provided at opposite sides with horizontal arms having slots, pivots depending from

the arms and having lower heads, rake heads provided with teeth and having ways consisting of longitudinal grooves provided with over-hanging top walls or flanges said ways receiving the heads of the pivots, set screws



mounted in the slots of the arms and having pivots slidable in the said ways, and stops located at the ends of the ways for limiting the sliding movement of the rake heads.

885,310. THREAD-CUTTING MECHANISM FOR SEWING-MACHINES. EDWARD B. ALLEN, Elizabeth, N. J., assignor to The Singer Manufacturing Company, a Corporation of New Jersey. Filed Nov. 23, 1905. Serial No. 288,647.



1. In a sewing machine comprising sewing instrumentalities, needle and looper thread severing devices located respectively on opposite sides of the work, means for operating said severing devices whereby one of the threads may be severed before the other while the work is in its normal position to be stitched in the machine, and whereby in the interval between the severing operations the unsevered thread may operate to draw the end of the severed thread through the face of the work upon the side on which it was severed.

2. In a sewing machine for forming groups of stitches, the combination with stitch-forming devices comprising upper thread mechanism and under thread mechanism, a stop-motion device for controlling the operation of said stitch-forming devices and a cycle cam for controlling the operation of said stop-motion device, of independent upper and lower thread severing devices having their thread-engaging members spaced to admit the work between them and thus disposed at opposite sides of the work, automatically-acting means for actuating the upper thread severing device at the end of a stitching operation, and manually-operated means whereby the lower thread severing device may be actuated after the stitch-forming mechanism comes to rest and after the upper thread is severed.

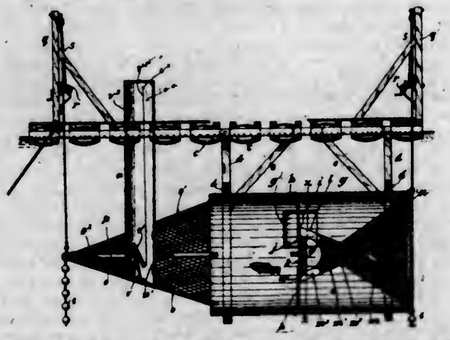
3. In a sewing machine for forming groups of stitches, the combination with stitch-forming devices comprising upper thread mechanism and under thread mechanism, a self-closing work-clamp and manually-controlled means for opening the same, a stop-motion device for controlling the operation of said stitch-forming devices and a cycle cam for controlling the operation of said stop motion device, of independent upper and lower thread severing devices, automatically-acting means for actuating the upper thread severing device at the end of a stitching operation, and a connection between said work-clamp and said lower-thread severing device whereby a single manual actuation of the same effects the opening of said clamp and the operation of the lower-thread severing device to sever the lower thread, and the release of the same permits said parts to automatically return to initial position.

4. In a sewing machine for forming groups of stitches, the combination with stitch-forming devices comprising upper thread mechanism and under thread mechanism, a stop-motion device for controlling the operation of said stitch-forming devices and a cycle cam for controlling the operation of said stop-motion device, of independent upper and lower thread severing devices having their thread-engaging members spaced to admit the work between them and thus disposed at opposite sides of the work, a connection between said upper thread severing device and the stop-motion device whereby the operation of the latter in arresting the stitch-forming devices causes the operation of said upper thread severing device to sever the upper thread, and mahually-operated means whereby the lower thread severing device may be actuated after the stitch-forming mechanism comes to rest.

5. In a sewing machine for forming groups of stitches, the combination with stitch-forming devices comprising upper thread mechanism and under thread mechanism, a stop-motion device for controlling the operation of said stitch-forming devices and a cycle-cam for controlling the operation of said stop-motion devices, of independent upper and lower thread severing devices, a lower thread pull-off, automatically-acting means for actuating the upper thread severing device at the end of a stitching operation, and manually-operated means whereby said pull-off and lower thread severing devices may be actuated after the severing of the upper thread to successively pull off and sever the lower thread.

[Claims 6 to 15 not printed in the Gazette.]

885,311. FISH-TRAP. NILS A. AKERMAN, Astoria, Oreg. Filed July 27, 1907. Serial No. 385,932.



1. A fish-trap comprising a support, a tubular casing horizontally suspended therefrom, means by which to raise and lower the casing, a net-inclosed extension projecting from the inner end of the casing, a net-closure at the inlet end of the casing, said net having a central opening constituting the entrance into the body of the trap, a mirror supported transversely in front of said central opening, a net fender or screen arranged in front of said mirror to protect the same from injury, an inspector-tube extending from the support down into said net-inclosed extension, the bottom end of the inspector-tube being closed, a glass-covered window in the lower end of the inspector-tube facing the inner end of the casing, a mirror pivotally supported within the bottom end of said inspector-tube in line with the window thereof, and means operable from the support to adjust the mirror as desired.

2. In a fish-trap, the combination of a float and a tubular horizontally supported trap-body suspended therefrom, an inspector-tube extending from the support down in front of the inner end of the trap-body, the bottom end of said inspector-tube being closed, a glass-covered window in the lower end of the inspector-tube facing the inner end of the trap, a mirror pivotally supported within said inspector-tube in line with the window thereof, and means operable from the support to adjust the mirror as desired.

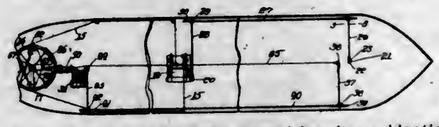
3. In a fish-trap, the combination of a float and a tubular horizontally supported trap-body suspended therefrom, an inspector-tube extending from the support down in front of the inner end of the trap-body, the bottom end of said inspector-tube being closed, a glass-covered window in the lower end of the inspector-tube facing the inner end of the trap, a mirror pivotally supported within said inspector-tube in line with the window thereof, cords fastened to the upper and lower ends of the mirror apertures therefor provided in the upper end of said inspector-tube, and retaining bars secured to the ends of said cords.

4. In a fish-trap, the combination of a horizontal tubular trap-body, transverse radial arms affixed interiorly thereof, a funnel-shaped net fastened to the inlet end of said trap-body, and having a small opening constituting the entrance into the trap, a mirror supported to face the entrance.

5. In a fish-trap, the combination of a horizontal tubular trap-body, transverse radial arms affixed interiorly thereof, a funnel-shaped net fastened to the inlet end of said trap-body, and having a small opening constituting the entrance into the trap, flaring annular net portions encompassing and extending inward from said opening, strands connecting said inner flaring net portion to said radial arms leaving spaces between the strands, a mirror supported to face the entrance.

[Claims 6 to 10 not printed in the Gazette.]

885,312. STEERING-GEAR FOR BOATS. EARL C. AKERS, Port Huron, Mich. Filed Oct. 2, 1905. Serial No. 280,994.



1. A steering gear for boats comprising, in combination with the rudder and a rudder actuating mechanism located abaft midships and provided with a controlling device, a steering wheel located at the forward part of the boat and a rigid inextensible connection between said wheel and the controlling device of the rudder actuating mechanism, arranged to operate the latter in both directions of movement of said connection, said connection serving to promptly transmit to the rudder the steering movements of the wheel and operating to maintain the relation of the steering wheel to the rudder for the purpose set forth.

2. A steering gear for boats comprising, in combination with the rudder and a rudder actuating mechanism, located abaft midships and provided with a controlling device, a steering wheel located at the forward part of the boat and a rigid inextensible rod extending fore and aft, the boat, connected at its forward end with said steering wheel and at its rear end with the controlling device for the rudder actuating mechanism, the parts being so arranged as to prevent lost motion between the same whereby the steering movements of the wheel are promptly transmitted to the rudder and the relation of the steering wheel and the rudder is accurately maintained.

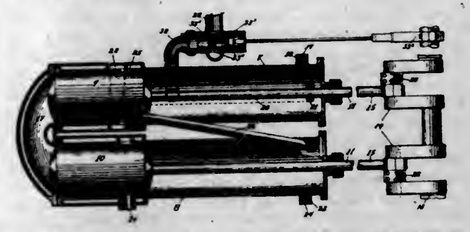
3. A steering gear for boats comprising, in combination with the rudder and a steering engine located abaft midships for operating the rudder, of a valve controlling device located at the forward part of the boat, and operative connections between said controlling device and the engine valve mechanism, including a rigid connecting rod operatively connected at its ends, respectively, with the said controlling device and valve mechanism and operating positively to transmit motion in both directions of its longitudinal movement to control said valve mechanism.

4. A steering gear for boats comprising, in combination with the rudder and a steering engine located abaft midships for operating the rudder, of a valve controlling device located at the forward part of the boat, and operative connections between said controlling device and the engine valve mechanism including a rigid connecting rod operating positively to transmit motion in both directions of its longitudinal movement to control the valve mechanism and rack and pinion mechanism connecting the ends of said rod, respectively, with the said controlling device and valve mechanism.

5. A steering device for boats comprising, in combination with the rudder and a steering engine for operating the rudder, of a valve controlling device located in the forward part of the boat, operative connections between said valve controlling device and the engine valve mechanism, including a rigid connecting rod operatively connected at its ends, respectively, with said controlling device and valve mechanism, guide sheaves on which said rods are supported and other sheaves located above and bearing downwardly on said rods.

[Claims 6 to 22 not printed in the Gazette.]

885,313. TWO-CYCLE EXPLOSION-MOTOR. BAXTER M. ASLAKSON, Salem, Ohio. Filed Dec. 9, 1905. Serial No. 291,053.



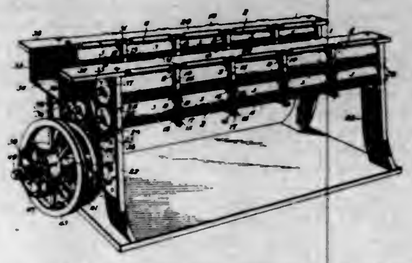
1. In combination, a pair of cylinders, one of which has a gas compression chamber at its forward end, and the other an air compression chamber at its forward end, admission means therefor, a port connection from each chamber to the intermediate part of one of the cylinders, additional means for supplying compressed air to the port for compressed air, an exhaust port at the intermediate part of the other cylinder, an ignition chamber connecting the rear ends of the cylinders, pistons in the cylinders connected for synchronous movement and adapted on the forward stroke to uncover the air, gas and exhaust ports, and at other times to keep such ports covered.

2. In combination, a pair of cylinders, one of which has a gas compression chamber at its forward end, and the other an air compression chamber at its forward end, admission means therefor, a port connection from each chamber to the intermediate part of one of the cylinders, additional means for supplying compressed air into the port for compressed air comprising a connection to a source of supply provided with an automatically operated valve, an exhaust port at the intermediate part of the other cylinder, an ignition chamber connecting the rear ends of the cylinders, pistons in the cylinders connected for synchronous movement and adapted on the forward stroke to uncover the air, gas and exhaust ports, and at other times to keep such ports covered.

885,314. SORGHUM-STRIPPER. CURREN M. BAREKMAN, Vincennes, Ind. Filed Aug. 7, 1906. Serial No. 329,527.

1. A cane stripping machine composed of a horizontal series of rolls, and a vertically alined side roll at each end of the series, said rolls defining a trough or receptacle, the side walls and bottom of which are formed by said rolls

and all of the rolls being in rolling contact, the top of the receptacle being open to allow for feeding the cane to the machine.



2. A cane stripping machine composed of a horizontal series of rolls, and a vertically alined side roll at each end of the series, said rolls defining an open top trough or receptacle, the side and bottom walls of which are formed by the said rolls and the latter being of greater diameter than the stalks.

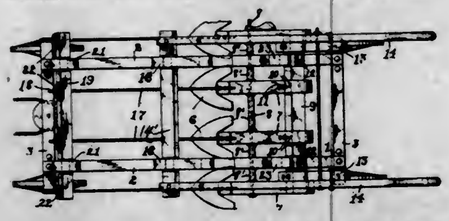
3. A cane stripping machine provided with a trough or receptacle composed of stripping rolls, and cane-supporting means arranged at intervals throughout the trough beyond the peripheries of the rolls to prevent the cane from being crushed by the rolls, said cane-supporting means also serving to support the stripping rolls.

4. A cane stripping machine composed of a horizontal series of rolls, and a vertically alined side roll at each end of the series, said rolls defining an open top trough, the side walls and bottom of which are formed by the said rolls, and intermediate transverse supports located at intervals throughout the trough and connecting the side and bottom rolls and arranged to prevent the cane from being crushed by the said rolls.

5. A cane stripping machine provided with a cane-receiving trough or receptacle composed of stripping rolls, and transverse supports arranged at intervals throughout the trough and projecting beyond the peripheries of the rolls and adapted to prevent the cane from being crushed by the rolls, and provided with rings forming bearings for the rolls.

[Claims 6 to 16 not printed in the Gazette.]

885,315. COTTON-CHOPPER. JAMES S. BARNETT, Dallas, Tex. Filed Aug. 27, 1907. Serial No. 390,404.



1. In combination in a cotton chopper, a frame having front and rear trucks, a handle pivotally mounted on the main frame, a stock beam, stocks depending therefrom, and carrying the tools and hangers connecting the stock beam with the handle, substantially as described.

2. In combination, a main frame, a handle pivotally connected thereto, a stock beam, stocks depending therefrom and carrying the tools, hangers connecting the stock beam with the handle, a pivotally mounted cross bar at the front of the machine and rods connecting the stocks with the said cross bar and adjustably connected to said cross bar, substantially as described.

3. In combination with a main frame, a handle pivotally mounted thereon, a stock beam, stocks depending therefrom and carrying the tools, hangers connecting the stock beam with the handle, catches to limit the upward movements of the stock beam, and front and rear trucks upon which the main frame is supported, substantially as described.

4. In combination, a main frame, a stock beam, stocks depending therefrom and carrying the tools, handles, a cross bar connecting the handles and passing through slots in the main frame and hangers connecting the stock beam with the handles, substantially as described.

5. A cotton chopper comprising a main frame, a cross rod having sliding movement therein handles connected to said rod, a stock beam movable in said frame, hangers connecting said beam to the handles, stocks adjustably carried by the beam, a rod passing through the stocks beneath the frame and interchangeable sleeves on said rod for separating the stocks.

885,316. COMBINED SHIPPING-TAG AND STAMP-PROTECTOR. ELBRIDGE P. BERNHEIM, Louisville, Ky. Filed May 20, 1907. Serial No. 374,693.



The combination with an article of merchandise and a revenue stamp thereon, of a tag covering such revenue stamp, said revenue stamp having a serial number, said tag having an elongated aperture exposing said serial number, and means for securing said tag to the article of merchandise.

885,317. QUILL PEN. EDWARD W. BODMER, Harrisburg, Pa. Filed June 14, 1907. Serial No. 379,076.



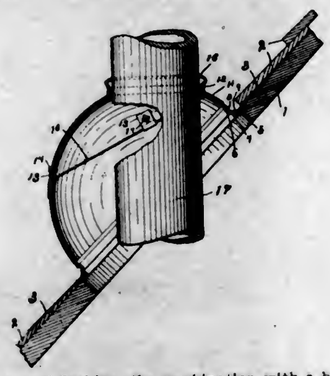
1. As a new article of manufacture, a fountain pen comprising a hollow body, a flexible tubing exterior of the body extending within the body terminating adjacent the writing end thereof, said tubing acting as a reservoir.

2. As a new article of manufacture, a fountain pen comprising a hollow body having a perforation and a flexible tubing exterior of the body extending within the hollow body through the perforation thereof and terminating adjacent the writing end of the hollow body, said tubing acting as a reservoir.

3. As a new article of manufacture, a fountain pen comprising a hollow body, a flexible tubing exterior of the body extending within the body terminating adjacent the writing end thereof, said tubing acting as a reservoir, and a writing member held between the flexible tubing and the inner wall of the hollow body.

4. As a new article of manufacture, a fountain pen comprising a hollow body, a flexible tubing exterior of the body extending within the body terminating adjacent the writing end thereof, said tubing acting as a reservoir, and a closure for the exterior or free end of the tubing.

885,318. ROOF-FLASHING. LEWIS H. BULLARD, Kalamazoo, Mich., assignor to Oscar Gumbinsky, Kalamazoo, Mich. Filed Sept. 9, 1907. Serial No. 392,023.



1. In a roof flashing, the combination with a base plate having a pipe opening therethrough, of an upwardly-projecting annular flange about said opening, said flange having a peripheral groove therein; a spherical base segment arranged upon said flange and having an inwardly-projecting annular bead adapted to engage the said groove therein, whereby said base segment is adjustably secured thereon, said base segment having an inwardly-projecting flange at its upper edge, the lower edge of said base segment being turned outwardly and resting upon said base plate; a spherical cap segment arranged upon said base segment, said cap segment having a pipe opening therethrough provided with an upwardly-projecting flange; clips secured to said cap segment adapted to engage said flange on said base segment; and a packing ring arranged on said flange of said cap segment.

2. In a roof flashing, the combination with a base plate having a pipe opening therethrough, of an upwardly-projecting annular flange about said opening, said flange having a peripheral groove therein; a spherical base segment arranged upon said flange and having an inwardly-projecting annular bead adapted to engage the said groove therein, whereby said base segment is adjustably secured thereon, said base segment having an inwardly-projecting flange at its upper edge, the lower edge of said base segment being turned outwardly and resting upon said base plate; a spherical cap segment arranged upon said base segment said cap segment having a pipe opening therethrough; and clips secured to said cap segment adapted to engage said flange on said base segment.

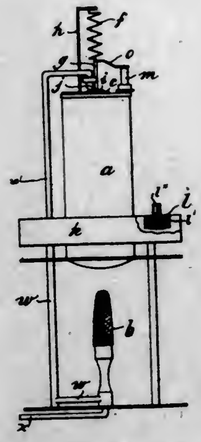
3. In a roof flashing, the combination with a base plate having a pipe opening therethrough, of an upwardly-projecting annular flange about said opening; a spherical base segment adjustably arranged upon said flange, said base segment having an inwardly-projecting flange at its upper edge; a spherical cap segment arranged upon said base segment, said cap segment having a pipe opening therethrough provided with an upwardly-projecting flange; clips secured to said cap segment adapted to engage said flange on said base segment; and a packing ring arranged on said flange of said cap segment.

4. In a roof flashing, the combination with a base plate having a pipe opening therethrough, of an upwardly-projecting annular flange about said opening; a spherical base segment adjustably arranged upon said flange, said base segment having an inwardly-projecting flange at its upper edge; a spherical cap segment arranged upon said base segment, said cap segment having a pipe opening therethrough; and clips secured to said cap segment adapted to engage said flange on said base segment.

5. In a roof flashing, the combination with a base plate having a pipe opening therethrough, of an upwardly-projecting annular flange about said opening; a spherical base segment arranged upon said flange, said base segment having an inwardly-projecting flange at its upper edge; a spherical cap segment arranged upon said base segment, said cap segment having a pipe opening therethrough provided with an upwardly-projecting flange; clips secured to said cap segment adapted to engage said flange on said base segment; and a packing ring arranged on said flange on said cap segment.

[Claims 6 to 9 not printed in the Gazette.]

885,319. APPARATUS FOR THE COMPRESSION OF GAS OR AIR FOR LAMPS. WILLIAM H. CHIPPERFIELD, London, England. Filed Feb. 16, 1907. Serial No. 357,773.



1. In apparatus for the compression of gas, or air, for lamps the combination of a burner a vessel or chamber of metal arranged above the burner and having an opening formed in its upper end, an inner hollow body free to move within the outer vessel or chamber; and a hollow flexible, extensible, and compressible metallic body one end of which is attached to the boundary of said opening and the other to the inner hollow body.

2. In apparatus for the compression of gas, or air, for lamps the combination with a burner, a vessel or chamber of metal arranged above the burner and having an opening formed in its upper end, of an inner hollow body constructed in two parts free to move within the outer vessel.

3. In apparatus for the compression of gas, or air, for lamps the combination with a burner, a vessel or chamber of metal, arranged above the burner and having an opening formed in its upper end, an inner hollow body free to move within the outer vessel, and a hollow flexible, extensible, and compressible metallic body attached to the boundary of said opening and to the inner hollow movable body; of a cover for closing the said opening, a connection from the vessel to the burner, an outlet in said

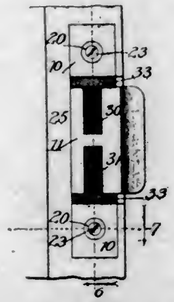
connection an inlet valve in the cover and a fluid supply connected with said inlet valve.

4. In apparatus for the compression of gas, or air, for lamps the combination with a burner, a vessel, or chamber, of metal arranged above the burner, and having an opening formed in its upper end, an inner hollow body free to move within the outer vessel, and a hollow flexible extensible and compressible metallic body attached to the boundary of said opening and to the inner hollow movable body; of a cover for closing the opening a connection from the interior of the flexible metallic body to the burner, an outlet valve in said connection, an inlet valve in the cover and a fluid supply connected with the said inlet valve; substantially as and for the purpose specified.

5. In apparatus for the compression of gas or air for lamps, the combination with a burner, a vessel or chamber of metal, arranged above the burner and having an opening formed in its upper end, an inner hollow body free to move within the outer vessel, and a hollow flexible extensible and compressible metallic body attached to the boundary of said opening and to the inner hollow movable body, of a cover for closing the opening, inlet and outlet valves connected to said cover and to the burner, a rod attached to the top of the inner chamber capable of reciprocating movement through the cover, a spring having one end connected to said rod and a supporting rod connected to the other end thereof, substantially as and for the purpose specified.

[Claims 6 and 7 not printed in the Gazette.]

885,320. KEEPER FOR LOCK-BOLTS. JAMES CHRISTY, Chicago, Ill. Filed Apr. 15, 1907. Serial No. 368,420.



1. A keeper comprising, in combination, an inner member adapted to be secured to a door-jamb, or the like, and provided with recessed ends and an intermediate struck-up portion, an outer member telescopically confined at its ends in said recesses to be adjustable with relation to said inner member and provided with a struck-up portion registering with the struck-up portion of said inner member and of a length affording spaces between its opposed ends and the respective ends of the struck-up portion of said inner member and means for securing said members in relatively adjusted positions.

2. A keeper comprising, in combination, an inner member adapted to be secured to a door-jamb, or the like, and having its ends formed of outer and inner walls and forming laterally-opening recesses therein and with an intermediate struck-up portion, an outer member telescopically confined at its ends in said recesses to be adjustable with relation to said inner member and provided with a struck-up portion registering with the struck-up portion of said inner member and of a length affording spaces between its opposed ends and the respective ends of the struck-up portion of said inner member, and means for securing said members together in relative adjusted positions.

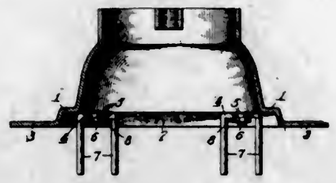
3. A keeper comprising, in combination, an inner member adapted to be secured to a door-jamb, or the like, and having its ends formed of outer and inner walls provided with roughened surfaces and forming laterally-opening recesses therein and with an intermediate struck-up portion, an outer member telescopically confined at its ends in said recesses to be adjustable with relation to said inner member and provided with a struck-up portion registering with the struck-up portion of said inner member and of a length affording spaces between its opposed ends and the respective ends of the struck-up portion of said inner member, and means for securing said members together in relative adjusted positions, the surfaces of said outer-member ends being roughened, for the purpose set forth.

4. A keeper comprising, in combination, an inner member adapted to be secured to a door-jamb, or the like, and provided with recessed ends, an outer member telescopically confined at its ends in said recesses to be adjustable with relation to said inner member and provided with slots near its ends, and locking devices extending into said slots in engagement with their side-walls for securing said members in relative adjusted positions.

5. A keeper comprising, in combination, an inner member adapted to be secured to a door-jamb, or the like, and provided with recessed ends, an outer member telescopically confined at its ends in said recesses to be adjustable with relation to said inner member and provided with slots near its ends, locking devices constructed and arranged to extend into and engage the walls of said slots for securing said members in relative adjusted positions, and clamping means coöperating with said devices to clamp the ends of the outer member between the walls of the recesses.

[Claims 6 to 8 not printed in the Gazette.]

885,321. CHIMNEY-CAP FASTENING. EDWIN J. COCHRAN, Sterling, Ill. Filed Mar. 31, 1906. Serial No. 309,125.



1. A cap or coping attachment comprising a base adapted to rest on the top of a chimney, formed with a shallow recess in its underside and attaching means located against the underside of the base within said shallow recess at each corner of said base, each attaching means comprising a horizontal arm having a pivot eye at one end and a depending prong at the other end, and a bolt passing through said eye and through the base to secure the parts in place and located in such a position to permit the horizontal arms to be adjusted in said recess radially outwardly as well as inwardly so as to afford a maximum degree of application to chimneys of different sizes.

2. A cap or coping attachment comprising a base adapted to rest upon the top of a chimney, and attaching means at each corner of the base, each attaching means comprising a horizontal arm having a pivot eye at one end and a depending prong at the other end and a bolt passing through said pivot eye in the horizontal arm and through said base so as to secure the attaching parts in place.

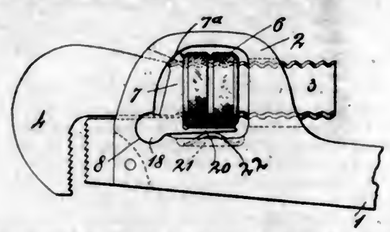
3. A cap or coping attachment comprising a base formed with a shallow recess in its underside and adapted to rest upon the top of a chimney, and attaching means at each corner of the base, each attaching means comprising a horizontal arm having a pivot eye at one end and located within the shallow recess and a depending prong at the other end, and a bolt passing through said pivot eye in the horizontal arm and through said base so as to secure the attaching parts in place.

4. A cap or coping attachment comprising a base adapted to rest upon the top of a chimney, and attaching means at each corner of said base, each attaching means comprising a pair of horizontal arms, having pivot eyes at one end and depending prongs at the other end, and a bolt passing through said eyes and through the base to secure the parts in place.

5. A cap or coping attachment comprising a base adapted to rest upon the top of a chimney, and attaching means at each corner of said base, each attaching means comprising a pair of horizontal arms, one of which has an offset, said arms having pivot eyes at one end and depending prongs at the other end, and a bolt passing through said eyes and through the base to secure the parts in place.

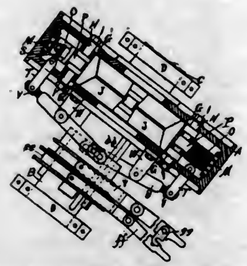
[Claims 6 and 7 not printed in the Gazette.]

885,322. PIPE-WRENCH. JAMES M. COCHRAN, Paducah, Ky. Filed Sept. 12, 1907. Serial No. 392,507.



The combination with a fixed jaw and handle, having a recessed eye in the back, of an L-shaped rocker in the eye, the outer jaw having a threaded shank extending through one branch of the rocker, a nut on the shank behind said branch, the rocker being pivoted at its outside angle or corner in the front corner of the eye and having one of its branches extending under the nut which rests upon said branch and fits in the inside angle of the rocker, and a spring between the fixed jaw and said branch.

885,323. FRICTION-CLUTCH. WALTER COMMON, Germiston, Transvaal. Filed June 5, 1907. Serial No. 377,327.



1. A driving member and a driven member, one of said parts including a drum secured thereto and the other having shoes carried thereby to grip said drum, a threaded member borne by each shoe and a threaded member located off the shoe, said threaded members having a connecting threaded member movable to cause the shoes to grip the drum, means for adjusting said threaded members one with respect to another, and means for operating said connecting threaded member.

2. A driving member and a driven member, one of said parts including a drum secured thereto and the other including a pulley having arms that include separated members in a single arm, shoes extending from one to another of said arms and linked together and arranged to grip said drum, and means for exerting force radially upon the shoes to crowd them against the drum.

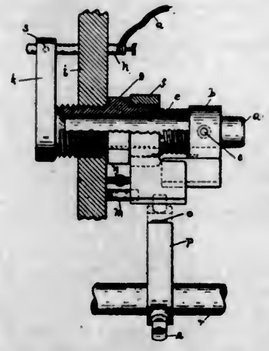
3. A driving member and a driven member, one of said parts including a drum secured thereto and the other of said parts including a pulley with arms that include separated members in a single arm, shoes each extending from one to another of said arms and each having its ends located between the members of said arms and guided thereby, and means for forcing the shoes to grip said drum.

4. A driving member and a driven member, one of said parts including a shaft with a drum secured thereto and the other of said parts including a pulley with arms that include separated members in a single arm having guide slots, a line of shoes extending around the drum, the ends of the shoes meeting and being joined between the members of said arms, means extending from the shoes into the slots to guide the shoes in their radial movement, and means for forcing the shoes to bind the drum.

5. A driving member and a driven member, one of said parts including a drum secured thereto and the other including a pulley having arms that include separated members in a single arm, shoes extending circumferentially from one to another of said arms and with their ends located between the members of the arms, loose connections between the ends of said shoes uniting the same between the members of the arms, a threaded part connected with the meeting ends of said shoes between the members of each arm, connecting threaded parts located off the shoes between the members of each of the arms, connecting threaded parts appurtenant to the meeting ends of the shoes, and means for operating the connecting threaded parts.

[Claims 6 to 28 not printed in the Gazette.]

885,324. SPARKING MECHANISM. HARRY G. COULSON and CHARLES C. COULSON, Jay county, Ind. Filed June 24, 1907. Serial No. 380,391.



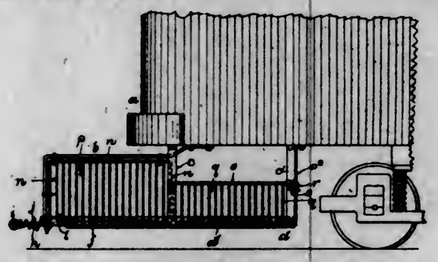
1. Sparker mechanism for gas engines, comprising a bushing, a sparker shaft therein, an arm fixed on said shaft beyond the outer end of the bushing, a striker arm rotatably mounted on the bushing at a distance from said other arm but having a portion adapted to contact therewith, a spring coiled about the bushing between said arms and operatively connected therewith at its ends, and means for actuating said striker arm.

2. Sparker mechanism for gas engines, comprising a bushing, having its outer end portion reduced, a sparker shaft within said bushing, an arm fixed on said shaft beyond the outer end of the bushing, a striker arm rotatably mounted on the bushing immediately in rear of the reduced portion thereof, being adapted to contact with the other arm, a spring coiled about said reduced portion of the bushing with its ends operatively connected with said arm, and means for actuating the striker arm.

885,325. CAR-FENDER. LONG DAN, Portland, Oreg. Filed Aug. 3, 1907. Serial No. 387,003.

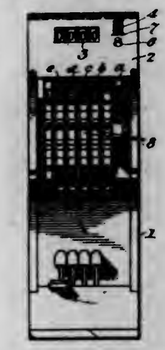
1. The combination with a car, of a rectangular frame supported under and projecting from the front end of the car, comprising side members and a closure for the bottom thereof, bars affixed transversely, spaced apart, at the front end of the frame, an axle affixed transversely between said bars, a plurality of rollers mounted on such axle, horizontally projecting rods arranged in pairs and slidable in said bars at the front end of the frame, means limiting the outward movement of said slidable rods, trans-

verse buffer-bars affixed to the outer ends of said rods, and coil-springs on the rods arranged to normally hold the said buffer-bars projected.



2. A fender, comprising in combination with a car, a basket-like frame supported under and projecting from the front end of a car, bars affixed transversely, spaced apart, at the front end of the frame, an axle affixed transversely between said bars, a plurality of rollers mounted on such axle, horizontal projecting rods arranged in pairs and longitudinally slidable in said bars at the front end of the frame, means limiting the outward movement of said slidable rods, transverse buffer-bars affixed to the outer ends of said rods, and coil-springs on the said rods arranged to normally hold the buffer-bars projected.

885,326. REGISTER FOR ADDING-MACHINES. WILLIAM L. DENCH, Pelham, N. Y., assignor to Elliott-Fisher Company, New York, N. Y., a Corporation of Delaware. Filed Nov. 27, 1907. Serial No. 404,056.



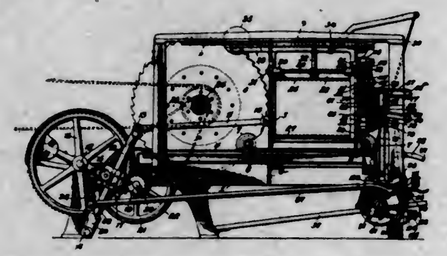
1. In a register of the character described, the combination with means for registering a variable whole number, of means for registering a variable fractional value with the numerator displayed in an elevated position relative to the whole number.

2. A register having a series of number wheels exhibiting an alined series of digits representing a whole number, an additional wheel exhibiting a numerator in a relatively elevated position, and a denominator exhibited below the numerator.

3. In a register of the character described, the combination with a casing having sight openings in different horizontal and vertical planes, of a series of denominational members exhibiting an alined series of digits at one opening, a member exhibiting a digit at the other opening, and a denominator exhibited on the casing below the opening last named.

4. In a register, the combination with a casing having a whole number sight opening and a relatively elevated numerator sight opening beyond one end of the opening first named, of a shaft, a series of wheels mounted on said shaft and bearing digits arranged to be exhibited at the respective sight openings, and a denominator exhibited on the casing below the numerator sight opening and occupying a depressed position relative to the whole number sight opening.

885,327. SHINGLE-MACHINE. GEORGE W. DORMAN, Everett, Wash., assignor to The Sumner Iron Works, Everett, Wash., a Corporation of Washington. Filed Oct. 13, 1906. Serial No. 338,793.



1. The combination with a saw, of a carriage, feed rolls mounted on the carriage, an oscillatory lever, means for connecting the lever with the carriage, means for operating the feed rolls embodying a push bar connected with and actuated by the said lever, devices carried by the lever for adjusting the push bar toward and from the pivotal point of the lever, and means for oscillating the lever.

2. The combination with a reciprocatory carriage, of feed rolls mounted on the carriage for feeding a shingle block, mechanisms connected with the rolls for rotating the same, independently movable relatively fixed devices arranged in the path of the said mechanisms for imparting motion to the same when the carriage is reciprocated, and means for alternately operating the said relatively fixed devices for moving one of the feed rolls in excess of the other.

3. The combination with a reciprocatory carriage, of feed rolls mounted on the carriage for feeding a shingle block, mechanisms connected with the rolls for rotating the same, independently movable relatively fixed devices arranged in the path of the said mechanisms for imparting motion to the same when the carriage is reciprocated, means for alternately operating the said relatively fixed devices for moving one of the feed rolls in excess of the other, and mechanism for throwing the said means out of operation, whereby the tips of the shingles will be continuously cut from the same portion of the block.

4. The combination with a reciprocatory carriage, of feed rolls mounted on the carriage for feeding a shingle block, mechanism connected with the rolls for rotating the same, independently movable relatively fixed devices arranged in the path of the said mechanism for imparting motion to the same when the carriage is reciprocated, and means for differentially adjusting the said relatively fixed devices for moving one of the feed rolls in excess of the other.

5. The combination with a reciprocatory carriage, of feed rolls mounted thereon, spaced mechanism connected with the rolls for rotating the same and provided with levers, independently movable pivoted arms having inclined faces for engaging the levers, and means for alternately adjusting the arms for moving one lever in excess of the other.

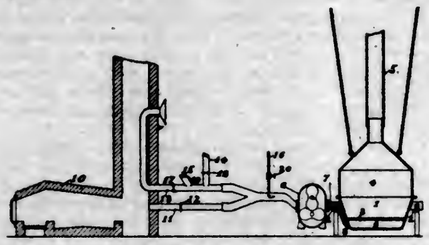
[Claims 6 to 22 not printed in the Gazette.]

885,328. PROCESS OF OXIDIZING ORES. BYRON E. ELDRED, Bronxville, N. Y., assignor to Combustion Utilities Company, New York, N. Y. Filed Feb. 8, 1906. Serial No. 300,128.

1. The process of oxidizing sulfid ores which consists in blowing through an ignited mass of such ore a draft current of diluted air, said air containing controlled proportions of a non-oxidizing diluent.

2. The process of oxidizing sulfid ores which consists in blowing through an ignited mass of such ore a draft current of air diluted with products of complete combustion in controlled proportions.

3. The process of oxidizing sulfid ores which consists in blowing through an ignited mass of such ore a draft current of air diluted with carbon dioxid in controlled proportions.

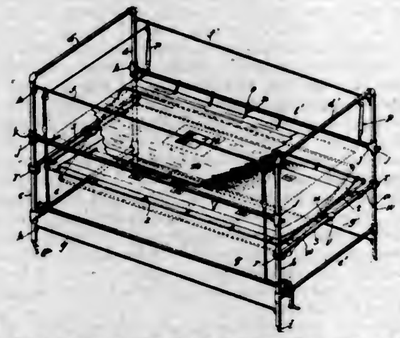


4. The process of oxidizing sulfid ores which consists in blowing through an ignited mass of such ore a draft current of air diluted with controlled proportions of products of complete combustion and a modicum of water vapor.

5. The process of oxidizing sulfid ores which consists in blowing through an ignited mass of such ore a draft current of air diluted with controlled proportions of carbon dioxid and with a modicum of water vapor.

[Claims 6 to 18 not printed in the Gazette.]

885,329. INVALID HAMMOCK LIFT AND TURNER. JAMES J. ELLIS, Portland, Oreg. Filed June 15, 1907. Serial No. 379,279.



1. In a device of the character described, the combination of a supporting-frame adapted to be placed over a cot, and comprising upright posts, a hammock-holding frame, vertically movable on said posts, means by which the hammock-holding frame may be raised and lowered, transverse members on said posts, a removable revoluble blanket-holding frame pivoted by its ends between said transverse frame members.

2. In a device of the character described, the combination of a supporting-frame adapted to be placed over a cot, and comprising upright posts, a hammock-holding frame, vertically movable on said posts, means by which the hammock-holding frame may be raised and lowered, transverse members on said posts, a removable revoluble blanket-holding frame pivoted by its ends between said transverse frame-members, and means for holding the revoluble frame against rotation.

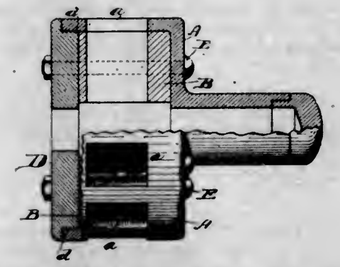
3. In a device of the character described, the combination of a supporting-frame adapted to be placed over a cot, and comprising upright posts, a hammock-holding frame, vertically movable on said posts, means by which the hammock-holding frame may be raised and lowered, transverse members on said posts, sockets centrally positioned on said transverse frame-members, a blanket-holding frame, and trunnions at its ends by which it is removably supported in said sockets.

4. In a device of the character described, the combination of a supporting-frame adapted to be placed over a cot, and comprising upright posts, a hammock-holding frame, vertically movable on said posts, means by which the hammock-holding frame may be raised and lowered, transverse members on said posts, sockets centrally positioned on said transverse frame-members, a blanket-holding frame, trunnions at its ends by which it is removably supported in said sockets, and means for holding the revoluble frame against rotation.

5. In a device of the character described, the combination of a supporting-frame adapted to be placed over a cot, and comprising upright posts, a hammock-holding frame, vertically movable on said posts, means by which the hammock-holding frame may be raised and lowered, transverse members on said posts, a removable revoluble blanket-holding frame pivoted by its ends between said transverse frame-members, an under blanket and an over blanket, respectively removably fastened to said revoluble frame.

[Claims 6 to 12 not printed in the Gazette.]

885,330. AUTOMOBILE-HUB. JOHN E. FOLEY, Pontiac, Mich. Filed May 22, 1907. Serial No. 374,982.



1. A hub consisting of a shell adapted to receive a block in which the spokes are held, said shell being perforated to accommodate the projecting spokes, the block mortised to receive the spokes, an end plate having a shoulder projecting into the shell, and having a screw-threaded connection therewith and a series of bolts engaging the shell, block and end plate, substantially as described.

2. A hub consisting of a shell adapted to receive a wooden block in which the spokes are held, said shell perforated to accommodate the projecting spokes, the wooden block mortised to receive the spokes, an end plate having a screw-threaded projection adapted to enter and engage the shell and bear against the wooden block, and a plurality of bolts engaging the shell, wooden block and end plate, substantially as described.

3. A hub consisting of a shell adapted to receive a block in which the spokes are held, said shell being perforated to accommodate the projecting spokes, the block mortised to receive the spoke tenons, an end plate having a screw-threaded projection adapted to enter the shell and bear against the block, the spokes the tenons of which entering the aforesaid block are notched to permit the passage of a series of bolts, and a plurality of bolts engaging the shell, the block, the spokes and the end plate, substantially as described.

885,331. NAPKIN-HOLDER. CHARLES H. FORD and EUGENE H. BOSTON, Richmond, Ind. Filed Mar. 28, 1907. Serial No. 365,203.

1. In a napkin holder, the combination with an elongated cylindrical member, said member having transverse grooves adjacent to its ends, of clips pivoted upon the member one adjacent to each end, said clips having their outer end portions crimped to present inwardly directed ribs, said ribs being located for engagement in the grooves of the elongated member, and springs arranged to hold the clips yieldably with their ribs in the grooves of the member.

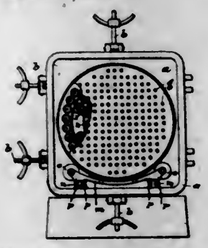
2. As an article of manufacture, a napkin holder comprising a cylindrical member having a transverse groove therein, a clip formed of a piece of metal curved trans-

versely to present a concavity for the reception of the cylindrical member, said clip having tabs disposed opposite to each other and located at opposite sides of the member, pivot pins engaged in the member and in the tabs, said



clip having one end crimped to present an inwardly directed rib for engagement in the groove of the member, and a spring arranged to hold the clip yieldably with its rib in the groove.

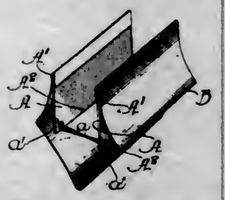
885,332. REVOLVER FOR PROCESSING CANNED GOODS. HENRY L. FORHAN, Portland, Me. Filed Feb. 13, 1907. Serial No. 357,178.



1. The combination of a retort, a cylinder adapted to revolve therein, means for revolving said cylinder, a series of pans provided with circular partitions which in turn are provided with a transverse partition, all substantially as described.

2. In an apparatus for processing canned goods, a cylinder or container a retort, a truck adapted to be received therein and having rollers on each side of said truck adapted to receive and support said cylinder or container, a series of pans within said cylinder adapted to receive the cans and means whereby said cylinder may be rotated within said retort. substantially as described.

885,333. ADVERTISING DEVICE. LANSFORD FOSTER, New York, N. Y. Filed Mar. 29, 1907. Serial No. 365,366.



1. The combination with two card members placed flatwise together, of a resilient means connecting two margins of said members and a flexible strip attached to said members and adapted to lie against their outer faces and to extend around the said margins.

2. The combination with two card members, of resilient means connecting two margins of said members, and a flexible strip connecting the opposite two margins of said members and adapted to lie against the outer faces of said members.

3. The combination with two card members placed flatwise together, of a resilient, flexible connecting device attached to two adjacent margins of said members and trained under tension about the opposite two margins of said members, and a flexible strip attached to said members and lying against their outer faces and extending around said latter margins.

4. The combination with two card members adapted to be placed with two of their margins together, of a flexible strip secured at its ends to said margins and adapted to extend around the opposite margins of said card members and yielding means tending to draw said latter margins toward each other.

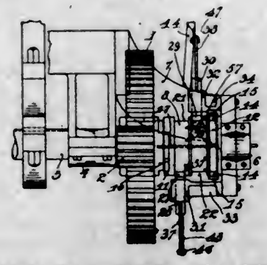
885,334. PIN. CONSTANCE M. FOX, New York, N. Y. Filed Apr. 13, 1905. Serial No. 255,426.



1. The herein described pin consisting of a stem smooth throughout its extent and provided at one end with a penetrating point and at its other end with an ordinary pinhead, said stem comprising three divisions, namely, a pointed end section and a headed end section offset from each other, and a bridge section interposed between the pointed end section and the headed end section, said bridge serving to maintain said sections offset from each other and to constitute an obstruction, for the purpose set forth.

2. A pin composed of inner, outer and an intermediate section, the inner section being pointed, the outer section being headed, and the intermediate section connecting the inner and outer sections, being joined with the outer section with a relatively abrupt bend, with the inner or pointed section on a curved line and extending diagonally from said inner section to said outer section, said inner and outer sections being laterally offset, or in parallelism with each other.

885,335. CLUTCH. CLARENCE N. FREY, Cincinnati, Ohio, assignor to The J. M. Robinson Manufacturing Company, Cincinnati, Ohio, a Corporation of Ohio. Filed July 23, 1906. Serial No. 327,333.



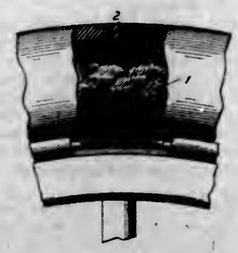
1. In a clutch, the combination of a driving member and a driven member having clutch-faces therebetween, means for moving one of said members axially, said last-named member having a plurality of annular grooves, a bolt taking into each of said grooves, a shoe in each of said grooves, the bolt and shoe in each of said grooves having an inclined engaging face between them, and means for retracting said bolts, said bolts being equidistantly arranged about the periphery of said last-named member and simultaneously and collectively acting on said shoes, substantially as described.

2. In a clutch, the combination of a driven shaft, a driving member rotatable about said shaft, a sleeve rotatably secured to and longitudinally movable with relation to said shaft, said driving member and sleeve having engaging clutch-faces and said sleeve having a plurality of annular grooves, a moving member for normally causing engagement of said clutch-faces taking into one of said grooves, a plurality of bolts taking into others of said grooves and arranged equidistantly about the rotary axis thereof, shoes having inclined engaging faces secured equidistantly about the rotary axis of said sleeve in said other grooves making engagement with the sides of said bolts simultaneously from a plurality of equidistantly arranged points, and means for moving said bolts longitudinally out of range of said shoes for causing engagement of said clutch-faces, substantially as described.

3. In a clutch, the combination with a driven shaft, a power member rotating about said shaft, a sleeve rotatively secured to and longitudinally slidable with relation to said shaft, said sleeve and power-member having engaging clutch-faces, said sleeve having three annular grooves, a moving member for moving said sleeve endwise taking into one of said grooves, an endwise movable bolt taking into each of the others of said grooves, said bolts arranged equidistantly about the rotary axis of said sleeve, a shoe in each of said last-named grooves, said shoes arranged equidistantly about the rotary axis of said sleeve, the shoe and bolt in each of said grooves having an inclined engaging face between them, and constructed for moving said sleeve longitudinally simultaneously from a plurality of points about its rotary axis, means for normally holding said bolts in said grooves, and means for retracting said bolts simultaneously, substantially as described.

4. In a clutch, the combination of a driven shaft, a driving member rotatable about said shaft, a sleeve rotatably secured to and longitudinally movable with relation to said shaft, said driving member and sleeve having engaging clutch-faces, and said sleeve having a plurality of annular grooves, shoes in said grooves, means for securing said shoes in said grooves at different positions about the periphery of said sleeve, bolts taking into said grooves, said bolts and shoes arranged equidistantly about the rotary axis of said sleeve and respectively having an engaging inclined face between them, means for normally pressing said sleeve toward said driving member, means for normally forcing said bolts simultaneously into said grooves, for simultaneously moving said sleeve longitudinally from a plurality of points equidistantly located about its rotary axis and means for retracting said bolts, substantially as described.

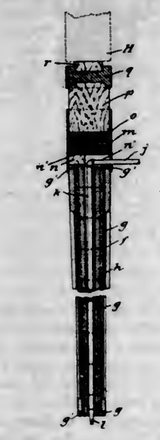
885,336. TIRE-CUSHION FOR VEHICLES. WILLIAM E. GARVEY, Cleveland, Ohio. Filed June 4, 1907. Serial No. 377,136.



1. A vehicle tire consisting of a rubber casing, a core of rope, and a winding thereon of a strand of yarn fitting and filling the rubber casing and forming a cushioning support therefor upon the rope-core.

2. A vehicle tire consisting of a casing, and a filling of separate and distinct fibrous bodies—an inner one of compactly twisted strands forming a rope-core, the outer winding being a strand wound of alternate layers in diagonal directions upon the core and having the greater resilient function, filling the casing and supporting it.

885,337. CONCRETE PILE. FRANK B. GILBRETH, New York, N. Y., assignor to Corrugated Concrete Pile Company of America, New York, N. Y., a Corporation of Maine. Filed Mar. 1, 1906. Serial No. 303,703.



1. A concrete pile having the cross-section of a regular polygon, an interior water induction passage and a plurality of exterior water eduction passages affording substantially equal resistance to the passage of water.

2. A concrete pile having a hexagonal cross-section, an interior central jetting passage and a plurality of exterior grooves in the pile sides symmetrically arranged with reference to the jetting passage.

3. A tapered concrete pile having the cross-section of a regular polygon, an interior induction jetting passage and eduction grooves in the sides of the pile symmetrically arranged with reference to the outlet and the jetting passage.

4. A concrete pile having an interior downwardly directed jetting passage and corrugated or grooved sides, the corrugations or grooves terminating short of the leading end.

5. A concrete pile having a substantially similar cross-section from end to end and provided with grooved sides, the corrugations or grooves extending a portion of the pile length only.

[Claims 6 to 31 not printed in the Gazette.]

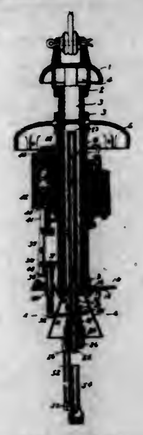
885,338. ARC-LAMP. JOHANNES HÄRDÉN, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Dec. 12, 1903. Serial No. 184,876.

1. In an arc lamp, a tube or casing in which the upper electrode of the lamp is located, said tube or casing being formed in detachable sections, a coupling for the sections the section adjacent the arc being formed of some good conducting metal, and a guard or shield of refractory nonconducting material which surrounds said section.

2. In an arc lamp, an upper electrode, means for locking it in place, a stop, a lower electrode and means for moving it against the stop, and means for causing the locking means to release the upper electrode as the lower electrode strikes the stop.

3. In an arc lamp, a tubular member, an upper electrode located therein, means for locking the upper electrode in fixed relation to said member, a lower electrode, means for moving said electrode against the member, said means releasing the upper electrode, and means for causing said locking means to engage the upper electrode again only

after the lower electrode has separated a predetermined distance from said member.

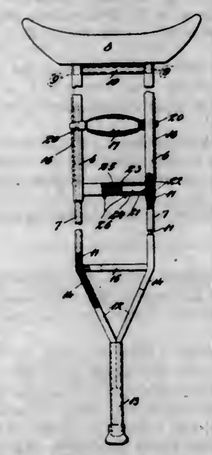


4. In an arc lamp, a pair of electrodes, a solenoid and means actuated thereby for positively feeding the lower electrode when energized and releasing the upper electrode to feed by gravity, a switch controlling the energization of said solenoid, a series coil opening said switch, and a shunt coil for closing said switch.

5. In an arc lamp, a central chimney member for carrying off arc products forming the backbone of the lamp, a casing centrally located in said chimney, and an electrode movably located in said casing.

[Claims 6 to 9 not printed in the Gazette.]

885,339. ADJUSTABLE CRUTCH. ALBERT S. HARGROVE, Memphis, Tenn., assignor of one-half to Ludwell H. Estes, Memphis, Tenn. Filed Dec. 24, 1907. Serial No. 407,951.



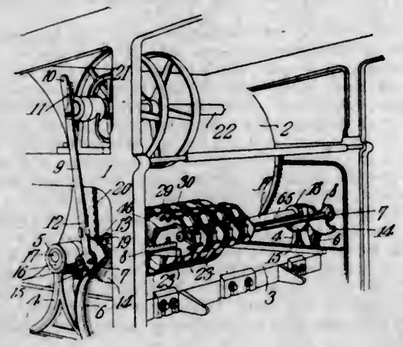
1. An adjustable crutch having legs with upper and lower sections which telescope, and a spring catch engageable between the sections to hold the same as set.

2. An adjustable crutch having legs with upper and lower sections slidable one within the other, a cross piece extending between the outer sections, and sliding bolts mounted upon the cross piece and engageable with the respective sections of the legs to hold the same as set.

3. An adjustable crutch having legs with upper and lower sections slidable one within the other, a cross tube extending between the outer sections, said sections having openings at the ends of the tube and the inner sections having a series of openings which may be registered with said tube, and bolts mounted in the tube and slidable into and out of said openings, for the purpose stated.

4. An adjustable crutch having legs each of which has a hollow metal section, a wooden bar within the section and projecting below the lower end thereof, and a foot piece into which the lower ends of said bars project.

885,340. COLOR-PRINTING ATTACHMENT FOR PRINTING-PRESSES. ALLEN P. HARLAND, Dyersburg, Tenn. Filed Sept. 12, 1907. Serial No. 392,587.



1. In a printing press, a shaft, type form carrying drums mounted for longitudinal and circumferential adjustment thereon, another shaft adjacent to the first-named shaft, interchangeable inking mechanism, one for each drum and supported by the shafts, eccentric journal bearings for the first-named shaft, and means carried by the second shaft for rotating said bearings to shift the first-named shaft toward or from the second-named shaft.

2. A printing press attachment, comprising a shaft capable of rotative movement, type form carrying drums mounted thereon for longitudinal and circumferential adjustment, another shaft adjacent to the first shaft, rack segments upon the second shaft, other rack segments upon the first shaft in mesh with the first-named rack segments, and eccentric bearings for the first-named shaft formed in the second-named rack segments whereby the first-named shaft may be adjusted toward or from the second-named shaft.

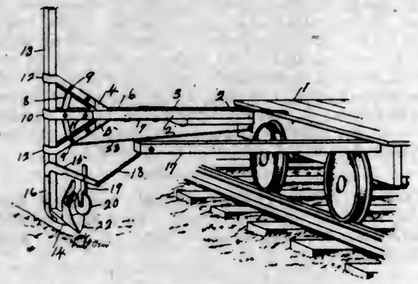
3. In a printing press, an attachment therefor comprising a shaft carrying printing drums and movable to and from the surface to be printed, and removable and interchangeable inking mechanisms also mounted on said shaft and participating in the movement of the latter to and from the surface to be printed.

4. In a printing press, a color printing attachment therefor comprising a drum or cylinder for carrying a printing form, said drum or cylinder having an unbroken cylindrical periphery provided with series of equally spaced means extending entirely around the periphery for the attachment thereto of the printing or type form, and also provided with a split hub and clamping means therefor whereby the drum may be secured to the shaft and may be adjusted longitudinally and circumferentially with relation to the shaft.

5. An attachment for printing presses consisting of a rotatable drum adapted to receive type or printing forms and to be secured upon a shaft, and an ink frame carrying an ink reservoir and ink rollers for transferring ink from the reservoir to the type form on the drum, said ink frame having two members one carrying the reservoir and ink rollers, and the other being hinged to the first-named member and adapted to embrace the shaft carrying the rotatable drum, and a latch for coupling the two members of the frame together.

[Claims 6 to 11 not printed in the Gazette.]

885,341. SOD-LINE PLOW. JOHN L. HART, Valentine, Ind. Filed Aug. 15, 1907. Serial No. 388,595.

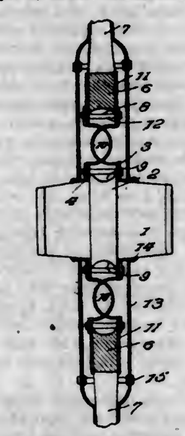


1. A sod-line plow consisting of a supporting frame provided upon its outer end with a pair of guide arms and having its inner end mounted in a moving support; a vertical standard loosely mounted in the said guide-arms; a plow fixed upon the lower end of the said standard; a draft-bar mounted at its inner end in the said support and having a suitable draft connection with the said plow.

2. A sod-line plow consisting of a horizontal frame provided at its outer end with alined vertical guides for the plow standard; a vertical standard loosely mounted in the said guides and provided upon its lower end with a fixed plow beam and share; a draft-bar in substantially parallel relation with the said frame and having a draft connection with the said bar.

3. The combination with a rolling support of a sod-line plow consisting of a horizontal frame mounted at its inner end on said support; and provided at its outer end with vertical guides; a plow carrying standard loosely mounted in the said guides and provided upon its lower end with a suitable plow; a draft-bar in coöperative relation with the said frame; and means for connecting the draft-bar to the plow.

885,342. SPRING-WHEEL. HENRY E. HEATON, Oroville, Cal. Filed Apr. 9, 1907. Serial No. 367,137.



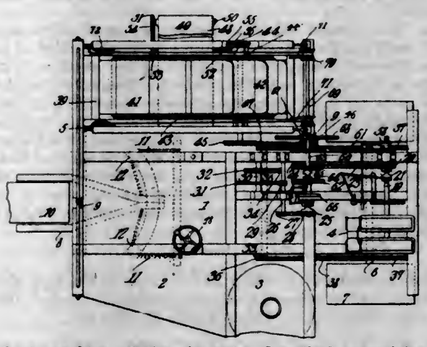
1. In a wheel, the combination of a hub formed with an annular rim having the periphery thereof depressed, a body portion comprising a rim spaced from the said annular rim of the hub and having the inner face thereof depressed, and spring members connecting the rim of the hub and the rim of the body portion of the wheel and designed to be received within the clearance space formed by the before mentioned depressions.

2. In a wheel, the combination of a hub formed with an annular rim having the periphery thereof depressed, a body portion comprising an inner rim having the inner face thereof depressed, and spring strips arranged alternately upon opposite sides of the wheel and having their respective ends connected to the annular rim of the hub and the inner rim of the body of the wheel, the middle portions of the springs being bowed inwardly and operating within the clearance space formed by the before mentioned depressions in the rims.

3. In a wheel, the combination of a hub formed with the annular rim, rings fitting against the opposite sides of the annular rim, a body portion comprising a rim receiving the annular rim of the hub and spaced therefrom, reinforcing plates secured to the opposite sides of the said rim of the body portion, and spring strips having their ends attached respectively to the said reinforcing plates and rings, intermediate portions of the spring strips being bowed outwardly and given an approximately U shaped formation.

4. In a wheel, the combination of a hub formed with an annular rim, rings fitting against the opposite sides of the annular rim and projecting outwardly beyond the same, a body portion comprising an inner rim spaced from the annular rim of the hub, reinforcing plates secured to opposite sides of the inner rim and extending inwardly beyond the same, and spring strips having their respective ends secured to the inwardly projecting portions of the reinforcing plates and the outwardly projecting edges of the rings, the said spring strips having the intermediate portions thereof bowed inwardly and extending between the before mentioned rims.

885,343. DIGGING-MACHINE. JAMES B. HILL, Findlay, Ohio. Filed Sept. 4, 1907. Serial No. 391,288.



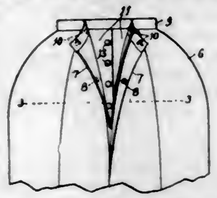
1. A machine of the character described comprising a platform, wheels supporting the same, an engine mounted on the platform, a digger located at one of the lateral sides of the platform and a boiler located at the opposite lateral side of the platform, said boiler and digger counterbalancing the platform upon the supporting wheels.

2. A machine of the character described comprising a platform, a pair of traction wheels supporting the forward end thereof, a single dirigible wheel supporting the rear end thereof, a digger located at one of the lateral sides of the platform, a boiler located at the opposite side of the platform, an engine mounted upon the platform, and means for operatively connecting the engine with the traction wheels and digger, which means is located between the boiler and digger.

885,344. PLACKET-CLOSURE FOR SKIRTS. FLORA HOFMEISTER, Racine, Wis. Filed Feb. 23, 1904. Serial No. 194,682.

1. A skirt formed in its rear with outside placket members and auxiliary inside placket members both located below and adjacent to the waist line, the outside placket members adapted to fit over the inside placket members and the inside members being narrower than the outside members so as to take the lateral strain at the rear on the skirt and prevent gapping of the outside placket, substantially as described.

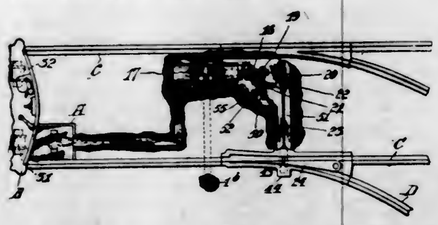
2. A skirt formed at the rear with outside placket members and with laterally adjustable inside placket members, both placket members being located below and adjacent to the waist line, the outside placket members being adapted to fit over the inside placket members and the latter being narrower than the outer placket members so as to take the lateral strain at the rear on the skirt and prevent gapping of the outer placket, substantially as described.



3. In a placket closure for skirts the combination with the main placket members forming parts of a skirt at the rear thereof, permanently joined together at their lower ends and provided with fastenings for detachably connecting them and closing the placket, of a supplementary closure consisting of flaps attached to the inside of the skirt on opposite sides of and at a distance from the opening between said main members and provided with fastenings for detachably connecting them, the combined width of said flaps being enough less than the combined width of the main members to take the strain off from said main members and their fastenings at the rear of the skirt and to prevent gapping between them, substantially as described.

4. In a placket closure for skirts the combination with the main placket members forming parts of a skirt at the rear thereof, permanently joined together at their lower ends and provided with fastenings for detachably connecting them, of a supplementary closure consisting of flaps adjustably attached to the inside of the skirt on opposite sides of and at a distance from the opening between said main members and provided with fastenings adapted to detachably connect them and to take the strain off from the main members and their fastenings at the rear of the skirt and prevent gapping between them, substantially as described.

885,345. ELECTRIC SWITCH. BENJAMIN HUGHES, Montreal, and HERBERT N. YOUNG, Rockfield, Quebec, Canada. Filed Oct. 1, 1904. Serial No. 226,782.



1. In an electrically operable switch, a rotatably mounted polarized circuit-closing member, and a terminal in the line of movement of said polarized member in combination with means for holding the same in position to normally break circuit, and a magnet adapted to move said polarized member.

2. In an electrically operable switch, a polarized circuit closing member, terminals, and a magnet adapted to normally hold said polarized member away from one of said terminals, in combination with a second magnet adapted to move said polarized member to contact with said terminal to close circuit.

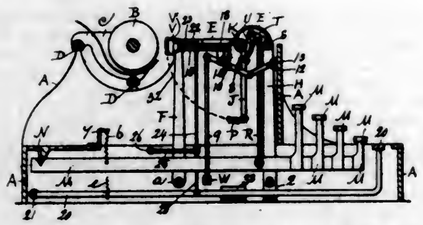
3. In an electrically operable switch, a polarized circuit closing member, a magnet adapted to hold said member in position to break circuit, in combination with a second magnet adapted to move said circuit closing means

4. In an apparatus of the character described, an electrically operated reciprocatory switch operating rod, actuating means therefor, terminals, circuit connections between said terminals and said actuating means, and a polarized bar yieldingly supported between said terminals.

5. In an apparatus of the character described, an electrically operated reciprocatory switch operating rod, actuating means thereof, terminals, circuit connections between said terminals and said actuating means, and a polarized, vibratory, bar yieldingly supported between said terminals.

[Claims 6 to 29 not printed in the Gazette.]

885,346. TYPE-WRITING MACHINE. JOSEPH H. JACKSON, Hamilton, Ontario, Canada. Filed Mar. 30, 1906, Serial No. 309,015. Renewed Sept. 17, 1907. Serial No. 393,326.



1. In a typewriting machine, an impression surface, type bars swinging at one end and likewise movable longitudinally thereof, means for actuating said type bars to dispose their printing characters adjacent to said impression surface, and means for moving said type bars longitudinally to complete the printing action.

2. In a typewriting machine, an impression surface, type bars swinging at one end and likewise movable longitudinally thereof and with lateral projections at the other end carrying spaced printing characters, means for actuating said type bars to dispose their printing characters adjacent to said impression surface, means for moving said bars longitudinally to complete the printing action, and means for bringing said spaced characters alternately into printing position relative to said impression surface.

3. In a typewriter a supporting frame, an impression surface carried by said frame, a movable carrier frame, a plurality of type bars swinging from said carrier frame and provided with laterally extending type arms, a plurality of keys carried by said frame, means whereby the depression of said keys will elevate said type bars to bring said type arms into position adjacent to said impression surface, and means operative by said keys for moving said type bars longitudinally to bring the printing characters into engagement with said impression surface.

4. In a typewriter a supporting frame, an impression surface carried by said frame, a plurality of type bars swinging from one end and movable longitudinally thereof, a plurality of keys, means whereby the type bars are actuated by the depression of the keys, means whereby said type bars are moved longitudinally to bring their characters into printing engagement with said impression surface, and means whereby said type bars are locked during the printing action.

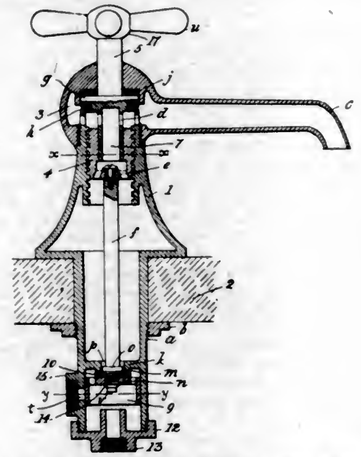
5. In a typewriter, an impression surface, a frame movable toward and away from said impression surface, a plurality of type bars swinging upon said movable frame and adapted to be brought to one common center, and means for moving said movable frame to bring the type of said bars into printing engagement with said impression surface.

[Claims 6 to 15 not printed in the Gazette.]

885,347. FAUCET. GEORGE T. KENLY, Baltimore, Md., assignor to The Plumbing Specialty Company, a Corporation of Delaware. Filed Mar. 22, 1907. Serial No. 363,809.

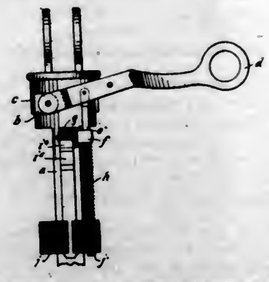
1. In a faucet, a shell having near its upper end an internal thread and a discharge nozzle, and at its lower end

two inlet nozzles at different vertical heights, combined with a hollow ported piston adapted to control the said inlet nozzles, an annular partition within the shell and situated above the said piston, a packing gasket carried by the said hollow ported piston to control the central opening in the annular partition, an exteriorly threaded plug the thread of which engages the thread in the upper portion of the shell, the plug being hollow and provided with a bridge at its lower end, a rod to connect the said bridge with the hollow ported piston, a hollow cylindrical stem having ports in communication with the discharge nozzle, the lower end of which stem enters the hollow threaded plug and has a vertical movement only therein, and a handle whereby the said stem can be turned and thus communicate a rotary motion to the exteriorly threaded plug and cause the raising or lowering of the hollow ported piston substantially as specified.



2. In a faucet, a shell which at the upper end is interiorly threaded and provided with a discharge nozzle, and at its lower end provided with inlet nozzles and means to control them, combined with an exteriorly threaded plug situated within the threaded portion of the shell, the said plug having a polygonal opening therethrough and a bridge, a rod to connect the said bridge with the means controlling the inlet nozzles, and an operating stem with a lower hollow ported and polygonal termination which rests in the hollow plug, substantially as specified.

885,348. TELEPHONE-HOOK SWITCH. HERBERT L. KNIGHT, Cleveland, Ohio, assignor, by mesne assignments, to Century Telephone Construction Company, Buffalo, N. Y., a Corporation of New York. Filed Apr. 13, 1906. Serial No. 311,410.



1. In a telephone hook switch of the class described, the combination with a tubular casing, of a telephone-supporting switch hook pivoted at one side of said casing, an insulating mounting positioned within the casing beneath said hook, closely assembled switch springs carried thereby in substantially parallel planes with their free ends extending upwardly, a plunger-part connected with the supporting switch hook and having vertical movement within the insulating mounting, a spring normally under tension to elevate or raise said hook, and a laterally extending insulated member carried by said plunger-part and adapted to actuate the contact springs into and out of electrical engagement, substantially as set forth.

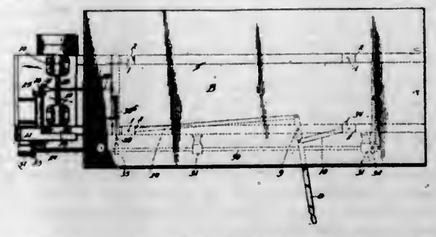
2. In a telephone hook switch adapted for positioning in restricted spaces, the combination with a frame or casing, of a transversely extending pivoted switch hook mounted therein, an insulating base below said switch hook, vertical contact springs carried thereby, a plunger-part connected above with said switch hook and freely movable within the insulating base, a laterally extending insulated member thereon positioned to engage and actuate the contact springs for altering their electrical relation, and a coiled spring mounted upon the stem of said plunger-part, re-acting upon said base and insulating member normally to elevate the switch hook, substantially as set forth.

3. In a telephone-hook switch, the combination with a sheet metal frame or casing, of a telephone-hook pivoted within the upper portion thereof, a plunger-part connected to be moved thereby, a laterally-extending actuating member thereon formed of insulating material, a spring under tension normally maintaining said parts in elevated position, and a plurality of contact springs disposed beneath and substantially in the plane of said hook, with which the actuating member is adapted to be brought into engagement to alter their electrical relations during the depression of the switch-hook, substantially as set forth.

4. In a telephone-hook switch adapted for positioning in desk-sets and the like, the combination with a sheet metal frame or casing, of a telephone-hook pivotally mounted therein, a plunger actuated thereby, a spring upon said plunger under tension normally to elevate the switch-hook, an actuating member laterally extending from the plunger and having an insulating sleeve, a plurality of contact springs adapted to be engaged and actuated into and out of contact by said sleeve during the movements of the plunger, the said parts being positioned substantially in the plane of movement of the telephone-hook, and an insulating mounting positioned within the casing for securely maintaining said contact springs in place, substantially as set forth.

5. In a telephone desk-set, the combination with the standard thereof, of a telephone-hook pivotally mounted near the upper part of the standard, an insulating support positioned in the standard a short distance beneath the telephone-hook, a plurality of upwardly-extending, vertically positioned contact springs carried thereby, a vertically movable plunger connected to be moved by the switch-hook, and a laterally extending insulated member upon the plunger for securing the actuation of the contact springs into and out of electrical engagement, substantially as set forth.

885,349. CONCENTRATING-TABLE. JOHN D. KOHLMANN, Milwaukee, Wis. Filed Feb. 9, 1905. Serial No. 244,954.



1. A laterally inclined and differentially reciprocating table adapted to discharge concentrates at one end and

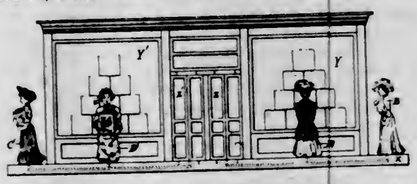
gangue over the side, in combination with a driving shaft, a secondary shaft imparting a direct reciprocating motion to the table independent of lateral motion, means for transmitting motion to the secondary shaft, an auxiliary shaft, and an independently adjustable arm connected therewith and with the table for imparting lateral motion to said table.

2. In combination, a laterally inclined and differentially reciprocating table adapted to discharge concentrates at one end and gangue over the side, a driving shaft, a secondary shaft imparting a direct reciprocating motion to the table indepehdent of lateral motion, means for transmitting motion to the secondary shaft, an auxiliary shaft, and independently adjustable means connected with the latter and with the head and tail ends of the table, respectively, for imparting lateral motion.

3. In combination, a laterally inclined and differentially reciprocating table adapted to discharge concentrates at one end and gangue over the side, a driving shaft, a secondary shaft imparting a direct reciprocating motion to the table independent of lateral motion, means for transmitting motion to the secondary shaft, an auxiliary shaft, gears on the secondary and auxiliary shafts, and independently adjustable arms connected with the auxiliary shaft and with the head and tail ends, respectively, of the table, for imparting lateral motion.

4. In combination, a laterally inclined and differentially reciprocating table adapted to discharge concentrates at one end and gangue over the side, a driving shaft, a secondary shaft imparting a direct reciprocating motion to the table independent of lateral motion, a balanced slotted lever on the secondary shaft engaging a crank disk on the driving shaft, an auxiliary shaft, a gear thereon meshing with a gear on the secondary shaft, and an independently adjustable arm connected with the auxiliary shaft and with the table, for imparting lateral motion thereto.

885,350. ADVERTISING DEVICE. GEOFFREY B. LEHY, Boston, Mass. Filed Nov. 9, 1906. Serial No. 342,623.



1. In an advertising device, the combination of a continuously moving flexible band, carrying an actuating dog; a secondary flexible band carrying coöperating abutments, the abutments upon the secondary band being so spaced upon the secondary band, substantially as described, that when one abutment is dropped by the actuating dog another abutment, by the movement of the secondary band, is in position to be engaged by the dog upon the primary band as it moves in its path with the primary band, to cause the continuously moving band to give discontinuous movement to the secondary band.

2. In an advertising device, the combination of a continuously moving flexible band carrying actuating dogs; a secondary flexible band carrying coöperating abutments, the abutments upon the secondary band being so spaced upon the secondary band, substantially as described, that when one abutment is dropped by the actuating dog another abutment by the movement of the secondary band, is in position to be engaged by a dog upon the primary band as it moves in its path with the primary band, the dogs being so spaced upon the primary band, substantially as described, that there will be an interval of time between the dropping of one abutment by one dog and the engagement of another abutment by another dog, to cause the continuously moving band to give discontinuous movement to the secondary band.

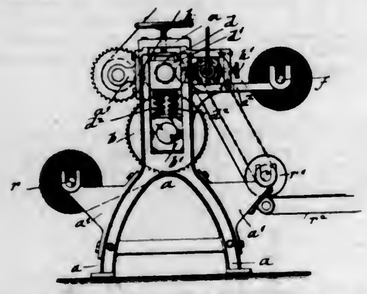
3. In an advertising device, the combination of a continuously moving sprocket chain carrying an actuating dog; a secondary sprocket chain carrying coöperating abutments and carrying also dolls, the abutments upon the secondary sprocket chain being so spaced, substantially as described, that when one abutment is dropped by the actuating dog, another abutment, by the movement of the secondary sprocket chain, is in position to be engaged by the dog upon the primary chain as it moves in its path with the primary chain, to cause the secondary chain to be discontinuously, positively actuated by the continuously moving chain.

4. In an advertising device, the combination of a continuously moving sprocket chain carrying actuating dogs; a secondary sprocket chain carrying coöperating abutments and carrying also dolls, the abutments upon the secondary sprocket chain being so spaced, substantially as described, that when one abutment is dropped by the actuating dog another abutment, by the movement of the secondary chain, is in position to be engaged by a dog upon the primary chain as it moves in its path with the primary chain, the dogs being so spaced, substantially as described, that there will be an interval of time between the dropping of one abutment by one dog and the engagement of another abutment by another dog, to cause the secondary chain to be discontinuously, positively actuated by the continuously moving chain.

5. In an advertising device, the combination of a continuously moving flexible band carrying an actuating dog; secondary flexible bands each carrying abutments to cooperate with the dog, the abutments upon the secondary bands being so spaced upon each secondary band, substantially as described, that when one abutment on a secondary band is dropped by the actuating dog, another abutment on that band, by the movement of that band, is in position to be engaged by a dog as it moves in its path with the primary band and the two secondary bands being alongside the primary band in series so that a dog passes and engages one secondary band, and after dropping that passes and engages successively another, to cause the secondary bands to be successively, discontinuously actuated.

[Claims 6 and 7 not printed in the Gazette.]

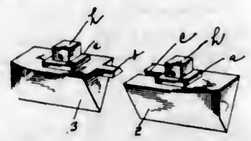
885,351. MACHINE FOR MAKING EMBOSSED WALL-PAPER. ALBERT LEISEL, Peekskill, N. Y., assignor to The Leisel Manufacturing Company, Newark, N. J., a Corporation of New Jersey. Filed Aug. 2, 1907. Serial No. 386,689.



1. A machine for making embossed wall-paper, consisting of a paper-roll, an embossing-roll having a design engraved thereon in intaglio and rotating in contact with the paper-roll, a heated presser-roll rotating in contact with the embossing-roll, and means for feeding the face and rear-layers of paper through between the paper-roll and embossing roll and the embossing-roll and heated presser-roll.

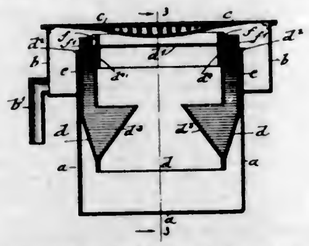
2. A machine for making embossed wall-paper, comprising a paper-roll, an embossing-roll having the design to be produced engraved into the same, a heated presser-roll rotating in contact with the embossing-roll, a supply-hopper between the embossing-roll and heated presser-roll for supplying a cement filling to the embossed parts and means for supplying two layers of paper, a face-layer and a rear-layer, the face-layer passing through between the paper and embossing rolls and the face and rear-layers between the embossing and heated presser-rolls.

885,352. HORSESHOE. JOHN H. LOCK, Rondo, Mich. Filed Nov. 9, 1907. Serial No. 401,416.



As a new article of manufacture a horseshoe comprising heel and toe calks, said toe calk being composed of two sections, one of said sections having a dove-tailed tongue and the other section a dove-tailed groove adapted to engage each other, said horseshoe having apertures, depressions surrounding the same, shoulders formed on said toe calks for engaging said depressions, and means for engaging said apertures, substantially as and for the purpose described.

885,353. APPARATUS FOR SEPARATING FAT FROM WATER. MAURICE LOEB, New York, N. Y., assignor of one-half to Maurice May, New York, N. Y. Filed Feb. 12, 1908. Serial No. 415,568.

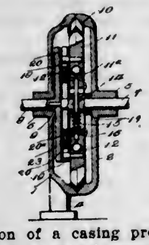


1. An apparatus for separating fat from water, comprising an outer vessel having a removable perforated cover and an overflow-trough adjacent to the upper edge thereof, an inner vessel open at the lower end and provided with an imperforate cover for closing its upper end, said inner cover having a flange surrounding the same and provided with outlets at opposite sides thereof, and channels communicating with said outlets for conducting the water to the interior of the inner vessel.

2. An apparatus for separating fat from water, comprising an outer vessel having a removable perforated cover and an overflow-trough adjacent to the upper edge thereof, an inner vessel open at the lower end and provided with an imperforate cover for closing the upper end, said inner cover having side-walls fitting into the upper part of the inner vessel and an upwardly-extending flange surrounding the cover and provided with outlets at opposite sides thereof, channels communicating with said outlets and upwardly-inclined ledges at the lower ends of said channels for conducting the water to the interior of the inner vessel.

3. An apparatus for separating fat from water, consisting of an outer vessel provided with an overflow-trough at its upper end, a perforated cover extending over the outer vessel and overflow-trough, an inner vessel open at the lower end, means for supporting said inner vessel on the upper edge of the outer vessel, an imperforate cover for the inner vessel, said inner cover having an upwardly-extending flange surrounding the same and provided with outlets having downwardly-bent lips at opposite sides thereof and channels communicating with said outlets and provided at the lower end with upwardly-inclined ledges for conducting the water to the interior of the inner chamber.

885,354. GEARING. ALEXANDER J. LOGUIN, Wilkinsburg, Pa. Filed June 21, 1907. Serial No. 380,127.

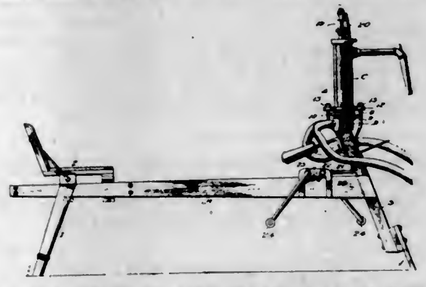


1. The combination of a casing provided with a stationary circular track, a wheel mounted to roll around said track and of less diameter than the same, an eccentric mounted within said wheel, a shaft journaled in said casing, a connection between said shaft and said eccentric, means for pressing the eccentric radially from the shaft whereby to press the wheel into engagement with the track, another shaft journaled in said casing in alinement with the first named shaft, and a radially movable connection between said last named shaft and said wheel.

2. The combination of a casing provided with a circular track, a wheel mounted to roll around said track and of less diameter than the same, an eccentric mounted in said wheel, a shaft having a radially yieldable connection with said eccentric and juornaled in said casing, another shaft journaled in said casing, disks mounted within said casing, one of said disks being secured to the last named shaft, and a radially slidable connection between said wheel and the other disk and between the latter and the first named disk.

3. An apparatus of the character described, comprising a casing provided with a circular track, a wheel mounted to roll around said track and of less diameter than the same, a shaft journaled in said casing, an eccentric mounted within the said wheel and connected to said shaft to turn therewith, means for pressing the eccentric radially from the shaft against the wheel, a disk mounted in the casing and provided with diametrically opposite radial slots, pins secured to said wheel and working in said slots, the disk being provided with two other diametrically opposite slots, another disk mounted in the casing and provided with studs working in the last named radial slots, and another shaft journaled in said casing and secured to said other disk.

885,355. COW-MILKER. WILLIAM M. MEHRING, York Road, Md. Filed Feb. 13, 1907. Serial No. 357,193.



1. In a cow milker, the combination with a suction pump, the cylinder of which is made in two sections, an independent valve seat having a peripheral flange resting and secured between the sections of the cylinder and provided with annular flanges which embrace the inside walls of the sections of the cylinder and external means for holding the sections of the cylinder together, of teat cups and connections extending from the latter to the pump.

2. In a cow milker the combination with a cylinder having internal screw-threads at its upper head, of a cap having an annular externally screw-threaded flange adapted

to screw into the threads of the cylinder and provided with an annular recess outside of said flange wherein a packing ring is held and adapted to receive the upper end of the cylinder, teat cups and connections extending from the latter to the pump.

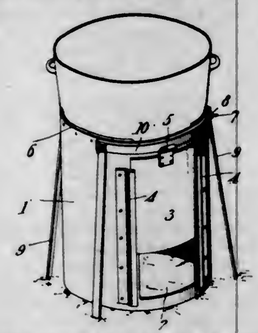
3. In a cow milker, the combination with a frame, a pump mounted thereon, teat cups and connections extending from the latter to the pump of two pedal shafts having pedals thereon, provided with gearing which causes one pedal when moving in one direction to reverse the other, and vice-versa.

4. In a cow milker, the combination with a frame, pump, teat cups and connections extending from the latter to the pump, of two intergeared pedal shafts having pedals thereon which move in opposite directions, and means guided by one of the pedal shafts extending to the opposite rod of the pump cylinder for reciprocating the pump piston.

5. In a cow milker, the combination with a frame, pump, teat cups and connections extending from the latter to the pump of two inter-geared pedal shafts having pedals thereon which move in opposite directions, and means extending from one of said pedal shafts to the piston rod of the cylinder for reciprocating the piston.

[Claim 6 not printed in the Gazette.]

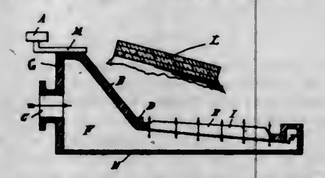
885,356. FURNACE. ANDY F. MILLER, Henderson, Tenn. Filed Aug. 30, 1907. Serial No. 390,818.



1. A furnace comprising a body, a circumferentially adjustable internally arranged utensil support at the upper end, an externally disposed brace bar, and bolts passing through the body, support and brace bar for holding the parts assembled and in adjusted positions.

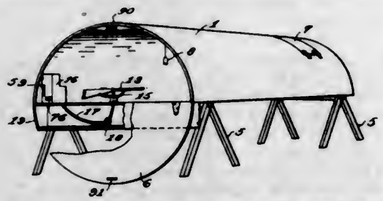
2. A furnace comprising a body, an internally arranged utensil support at the upper end thereof and provided adjacent to its terminals with a plurality of orifices, an externally disposed brace bar, and bolts passing through the body, support and brace bar for holding the parts assembled and the utensil support in adjusted position.

885,357. HYDROCARBON-BURNER. EMANUELE MOLINARI, Genoa, Italy, assignor to Società in Partecipazione per la Combustione Liquida, Genoa, Italy, a Company. Filed May 2, 1906. Serial No. 314,825.



In a hydrocarbon burner, the combination with a cistern adapted to contain liquid fuel, of a metallic casing provided with a port for the admission of air therein, said casing having its upper surface formed with a relatively steep inclined portion and a relatively slight inclined portion, said casing being further provided with a plurality of air-discharge alined openings at the juncture of the relatively steep and slight inclined portions and with a plurality of spaced air-discharge slots extending therethrough longitudinally of said relatively slight inclined portion and at substantially right angles to said air-discharge openings.

885,358. SHOOTING-GALLERY. CHARLES E. MORRIS, Lane, Kans., assignor of one-half to Thomas D. Morrow, Lane, Kans. Filed Oct. 11, 1906. Serial No. 338,485.



1. A shooting gallery comprising an inclosed range, a gun mounted at one end of said range and having a limited movement therein to permit the same to be aimed, a lock for preventing the firing of the gun, mechanism for delivering cartridges to a customer, and means controlled by said mechanism for releasing said lock to permit the firing of the gun.

2. The combination of a support, a gun mounted on said support and having a limited range of movement to permit the gun to be aimed and fired, a lock mounted on the gun for preventing the firing of the gun, and pneumatic means for releasing said lock, said lock being adapted to remain released until said gun is fired and to automatically relock the gun through the act of firing it.

3. The combination of a support, a gun mounted on said support and having a limited range of movement to permit the gun to be aimed and fired, a lock for preventing the firing of the gun, pneumatic means for releasing said lock, and a cartridge delivery apparatus located at a distance from the gun and adapted to operate said pneumatic means.

4. The combination of a gun having a hammer movable into and out of firing position, a rotatable member coacting with said hammer and adapted to be turned into and out of position for preventing a certain movement of said hammer, and pneumatic means adapted to shift said member to permit such certain movement of said hammer.

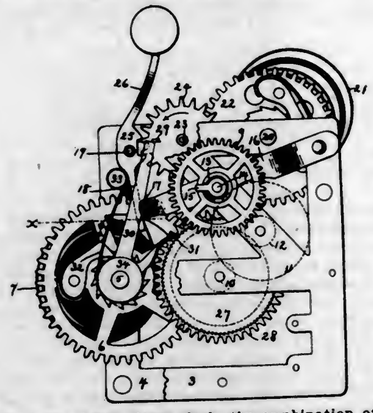
5. The combination of a gun having a hammer movable into and out of firing position, a rotatable member co-acting with said hammer and adapted to be turned into and out of position for preventing a certain movement of said hammer, and pneumatic means adapted to shift said member to permit such certain movement of said hammer, said member being adapted to be set through the movement of the hammer so as to prevent a succeeding movement thereof.

[Claims 6 to 10 not printed in the Gazette.]

885,359. REPEATING ALARM-CLOCK. JOHN W. MORWAY, Plainville, Conn., assignor to Sessions Clock Company, Forestville, Conn., a Corporation. Filed Sept. 12, 1907. Serial No. 392,556.

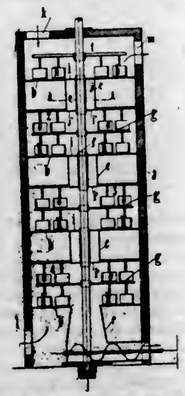
1. In a repeating alarm clock, the combination of a repeating wheel carried by the time train with a two armed repeating lever pivoted upon a fixed axis in position to have its repeating arm engage and disengage the said repeating wheel and its stop arm, engage and disengage a stop carried by the alarm train, a vibrating hammer shaft actuated by the alarm train, a vibrating arm of the said hammer shaft extended along by one side of the said stop arm of the repeating lever, and a shut off for the said alarm movement that is released by the running of the time train, the said shut off having one projection arranged in relation to the said stop arm of the repeating lever and

the said vibrating arm of the hammer shaft for having that one projection perform the double function of doing its ordinary work and of acting on the stop arm of the repeating lever to release its repeating arm from the repeating wheel whenever the said projection is in engagement with the said vibrating arm of the hammer shaft.



2. In a repeating alarm clock, the combination of a repeating wheel carried by the time train with a repeating lever actuated in one direction by the said wheel, an alarm movement controlled by the said repeating lever and wheel, and a cut off spring for said alarm movement that is released by the said time train, the said cut off spring having a lateral projection with its end portion adapted to engage and disengage a part of the alarm movement to cut off and let on the alarm, while a portion of said projection between the point of engagement with the alarm movement and the body of the said cut off spring, is arranged for engaging the said repeating lever for holding it out of action.

885,360. DRYING APPARATUS. LÉON MOURGEON, Suresnes, France, assignor to Alphonse Huillard, Suresnes, France. Filed July 6, 1907. Serial No. 382,542.



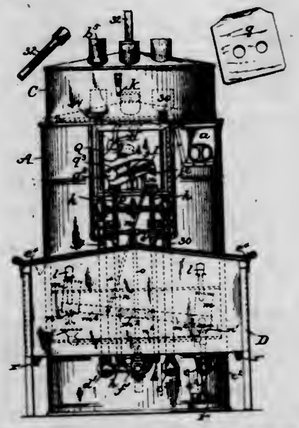
1. In a drying apparatus, the combination of a partition having an opening, an open-ended cylinder fixed in said opening, a shaft passing through said cylinder, and disks on said shaft at opposite ends of said cylinder to control the passage of material through the latter.

2. In a drying apparatus, the combination of a fixed horizontal partition having an opening, a shaft passing through said opening, an open-ended cylinder fixed in said opening and divided into compartments, and means mounted on said shaft at opposite ends of the cylinder to control the passage of the material through said compartments.

3. In a drying apparatus, the combination of a partition having an opening, an open-ended cylinder fixed in said opening and divided into a plurality of vertically extending compartments, a rotary shaft passing through said cylinder, and disks on said shaft at the ends of said cylinder and having cut-out portions so arranged that when each compartment is open at one end it is closed at the opposite end.

4. In a drying apparatus, the combination of a horizontal partition having an opening, an open-ended cylinder having its upper edge fixed to the edge of said opening, partitions which divide said cylinder radially into a plurality of vertically disposed compartments, an upright shaft passing centrally through said cylinder, and disks mounted on said shaft and extending over the ends of said cylinder, said disks having sector-shaped cut-away portions out of vertical alinement with each other.

885,361. ACETYLENE-GENERATOR. IRA MUMMA, Dayton, Ohio, assignor to The Gem City Acetylene Generator Company, Dayton, Ohio, a Corporation. Filed Apr. 28, 1906. Serial No. 314,121.



1. In the herein referred to device for generating acetylene gas from calcium-carbid, the combination of the water reservoir; the bell or gasometer adapted to rest and move in the water within said reservoir through the action of the gas; the gas generator attached to said water-reservoir and provided with carbid-receptacles which are surrounded with water; the water supply-pipes each having a receiving end, the discharge end of each resting in said gas generator; the rotary water-valve attached to said reservoir and which receives water from same; the swinging water-trough which receives the water from said rotary water-valve, and provided on each side with a discharge end; and means to actuate said swinging trough by the overflow waste water from said gas generator, the service-pipe which conveys the gas from the gasometer to the house pipes; and the escape pipe to allow of the escape of all superfluous gas; all substantially as described.

2. The combination in the herein referred to device for generating acetylene gas from calcium-carbid, of the reservoir for holding the water; the bell or gasometer in which the gas is stored, and which moves vertically in said reservoir; the generator attached to said reservoir in which the gas is generated, and provided with receptacles for holding calcium-carbid; the movable water-valve attached to said reservoir which is provided with a receiving end and a discharge end; the swinging water-trough adapted to be actuated by the overflow of water from said generator; the water-supply-pipes for conveying water from said reservoir to said gas generator; the gas-supply pipe for

conveying gas from said generator to said gasometer; the service pipe which conveys the gas to the house-pipe; the escape-pipe for allowing of the escape of all superfluous gas; all substantially as and for the purposes described.

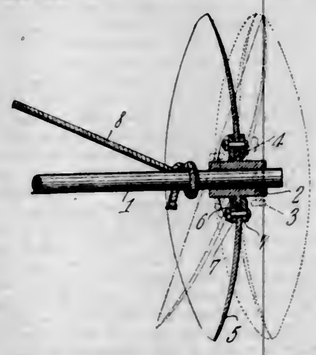
3. The combination in a double automatic water-feed acetylene generator; of the water-reservoir; the gasometer or bell adapted to have a vertical movement in the water in said reservoir through the action of the gas; the gas generator connected to said reservoir and divided into compartments, each of said compartments receiving carbid receptacles divided into cells for holding calcium-carbid in small quantities; the weighted rotary water valve attached to said water reservoir, and having a receiving end and a discharge end; the trough for receiving the water from said valve and conveying it to the water-supply pipes; the water-supply pipes each of which receives said water from said trough and conveys it to and delivers it onto the calcium-carbid in the carbid-receptacles in each compartment of said gas generator; the siphon connected to said gas generator and which receives the water from the same; the water buckets which receive the water from said siphon, and the lever and connecting-rod for shifting said water-trough; the gas supply pipe leading from each compartment of said gas generator to the gasometer, and provided with a three-way valve; the inlet-pipe leading into the gasometer; the service pipe which connects with the house-pipe; and the escape-pipe leading to a blow-off on outside of building; all substantially as and for the purposes described.

4. In a device as described the combination with a gas generator and gasometer, of a water supply valve comprising a pivoted lever, a conduit in one arm of said lever, a hollow trunnion forming the pivotal connection of said lever and connecting said conduit with the interior of the gasometer, a comparatively great amount of material in the opposite arm of said lever forming an integral weight which tends to move the lever about its pivotal connection to maintain the discharge orifice of said valve about the intake thereof, substantially as specified.

5. In an acetylene gas machine, the combination with gas generator and gasometer, of means for shifting or changing the flow of water from the supply reservoir, comprising a pivotally connected water trough, discharge spouts at opposite ends of said trough, receptacles adapted to ultimately receive the water discharged from the generators, and means whereby the preponderance of weight in the receiving receptacle will move said trough on its pivotal connection, thus alternating the flow through the respective spouts to the corresponding receptacle, substantially as and for the purpose specified.

[Claims 6 to 17 not printed in the Gazette.]

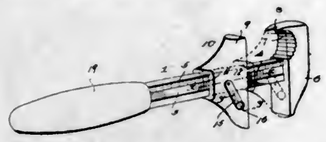
885,362. DISK MARKER. CHARLES H. MYERS, Le Roy, Ill. Filed May 20, 1907. Serial No. 374,647.



1. A disk marker comprising a shaft, a disk journaled for rotation, a guiding flange mounted on the shaft and passing through the center of the disk and being disposed at an acute angle to the longitudinal axis of the shaft.

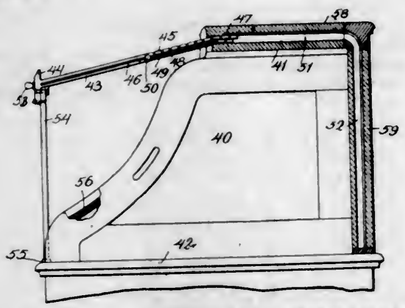
2. A disk marker comprising a shaft, a collar located thereon, a flange carried by the collar and being disposed at an acute angle to the longitudinal axis of the shaft, and a journaled disk having a central opening which receives said flange.

885,363. COMBINATION-TOOL. LE ROY MYERS, Fremont, Ohio. Filed Dec. 31, 1906. Serial No. 350,192.



The combination, in a wrench, of a shank provided upon its opposite sides with longitudinal grooves, the bottom wall of each groove being serrated to form a rack, a fixed jaw carried by said shank at its outer end, a sliding jaw carried by said shank and provided with a central channel through which the shank is adapted to extend to permit the movement of said jaw towards and from the fixed jaw, said sliding jaw having a pair of openings formed in each side thereof, one opening of each pair communicating with said channel and registering with the corresponding groove, a chisel-edged detent disposed within each of the last-mentioned openings, a lever pivoted to each side of the sliding jaws and secured at one end to the corresponding detent and provided at its opposite end with a button, and an expansive coil-spring located within the other opening of each pair and bearing against the button end of the corresponding lever, to hold the detents normally in engagement with the teeth of the corresponding rack.

885,364. DESK ATTACHMENT. JENNINGS S. MCCOMB, Dobbs Ferry, N. Y. Filed Mar. 27, 1907. Serial No. 364,932.



1. In desk attachments for roll-top desks, a detachable casing having a depending rear section and provided with a grooved passage, a table adapted to move in the grooved passage, said table comprising a rigid section, having a front ledge secured thereto, and a rearwardly extending flexible section secured to said rigid section and composed of interlocking members secured to a flexible backing, a stop on one of said members engaging the groove in said passage to limit the outward movement of said table, a bolt provided with an operating handle mounted in guideways in said table to hold said flexible members in proper coöperation when said table is in operative position, legs pivoted to said front ledge, and alining pins coöperating with said legs one of said pins being movable to hold said legs in operative position and in closed position behind said ledge.

2. In desk attachments for roll-top desks, a detachable casing having a depending rear section and provided with a passage, a table located in said passage, said table comprising a front ledge to coöperate with the front of said

casing when in closed position, a rigid section secured to said ledge, and a rearwardly extending flexible section secured to said rigid section, means to limit the outward movement of said table when withdrawn from said casing, stiffening members mounted in said table to hold said flexible section in proper operative position, legs pivotally mounted to said front ledge, and means to hold said legs in operative position and in closed position concealed behind said ledge.

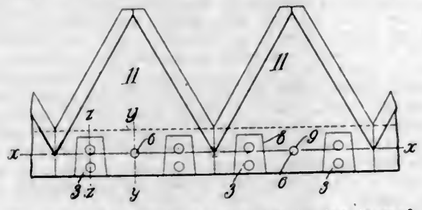
3. In desk attachments, a casing having a depending rear section and provided with a passage, a table having a front ledge coöperating with the front of said casing, said table having a flexible rear section to coöperate with the passage in said casing and stiffening means to hold said flexible section in proper operative position.

4. In desk attachments, a casing having a passage provided with a curved portion, a table comprising a flexible rear section and a rigid front section mounted in said passage to allow said table to be entirely inclosed in said casing and the flexible portion thereof to pass around the curved portion of said passage and means to reinforce said flexible section and hold the same in proper coöperation when said table is in extended operative position.

5. A desk attachment, consisting of a hollow removable casing different portions of which are at an angle to each other, one portion of the casing adapted to fit on the upper portion of the desk and the other portion of the casing adapted to lie parallel with the back of the desk, a table having a flexible portion, said table being normally mounted within the casing but adapted to be moved therefrom, and means for supporting the end of the table when it is in its operative position.

[Claims 6 to 10 not printed in the Gazette.]

885,365. CUTTER-BAR. BERNARD F. MCELWEE, Dunmore, W. Va. Filed Nov. 2, 1907. Serial No. 400,376.



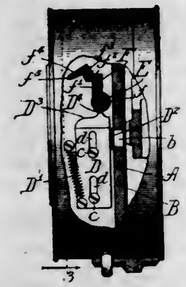
The combination with a cutter bar having tapered retaining plates thereon arranged in pairs, each of said plates having beveled side and front edges; of teeth removably mounted upon the bar, each tooth having recesses for the reception of one pair of retaining plates, said plates being designed to lap and bind upon all of the walls of the recesses, a latch pin engaging each tooth and extending through the bar, the ends of said pins being tapered, and a spring secured to the bar and common to pins of two adjoining teeth for holding said pins normally in engagement with the teeth.

885,366. WATCHMAN'S CLOCK. ABRAHAM A. NEWMAN, Chicago, Ill. Filed Dec. 4, 1906. Serial No. 346,277.

1. The combination with a casing having an opening for the entrance of a key, of a septum within the case and between the normal position of the dial and the opening aforesaid, a perforation in the septum, and means normally closing the perforation in said septum and constructed and arranged to be actuated by a key in its movement to uncover the perforation in the septum for the passage of a key.

2. The combination with a case having an opening for the passage of a key, of a septum separating said opening from the normal position of the dial, said septum being provided with a perforation whereby a key may have access to a dial, a cover for said perforation normally closing the same, and means whereby a key may move said cover to expose said perforation for its passage.

3. The combination with a casing having a key-hole, of a septum within the casing between said key-hole and the normal position of the dial, said septum being provided with a suitable perforation, a cover adapted to close said perforation, means for holding said cover in position normally to close said perforation, and means whereby the movement of the key will move said cover against the action of said holding means to open the perforation for the passage of the key.

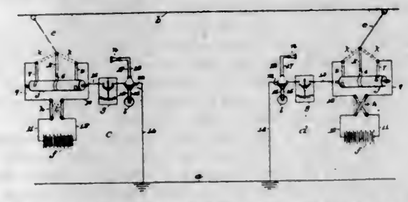


4. The combination with a casing having a key-hole, of a septum within the casing between the key-hole and the normal position of the dial, said septum being provided with a perforation, a cover adapted to close said perforation and a cam upon said cover adapted to be engaged by a suitable key to move said cover and open said perforation for the passage of the key.

5. The combination with a casing having a key-hole therein, of a septum lying between said key-hole and the normal position of the dial, said septum being provided with a perforation, a sliding plate having an ear adapted to close said perforation, and a cam-surface upon said plate adapted to be engaged by a suitable key to move said plate for the purpose of uncovering said perforation.

[Claims 6 and 7 not printed in the Gazette.]

885,367. RAILWAY SIGNAL AND TELEPHONE SYSTEM. FREDERICK L. ODENBACH, Cleveland, Ohio, assignor of one-half to John C. Poore, Cleveland, Ohio. Filed July 10, 1907. Serial No. 383,080.



1. In a railway signal system, the combination with a track rail, a line conductor, and a train unit provided with an electric generator, of a rotatable switch upon said train unit adapted to alternate the connection of said line conductor between said generator and said track rail, and an electric signal device connected between said track rail and said generator, substantially as set forth.

2. In a railway signal system, the combination with a track rail, a line conductor, and a train unit provided with an electric generator, of a rotatable switch upon said train unit adapted to alternate the connection of said line conductor between said generator and said track rail, a commutator connected between said generator and said switch, and an electric signal device connected between said track rail and a switch connection of said commutator, substantially as set forth.

3. In a railway signal system, the combination with a track rail, a line conductor, and a train unit provided with an electric generator, of a rotatable switch upon said train

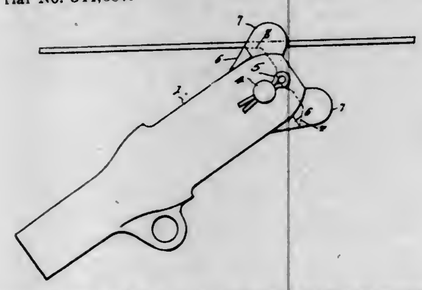
unit adapted to alternate the connection of said line conductor between said generator and said track rail, a commutator connected between said generator and said switch, and an electric signal lamp in circuit between said track rail and said commutator and switch, substantially as set forth.

4. In a railway signal system, the combination with a track rail, a line conductor, and a train unit provided with an electric generator, of a rotatable switch upon said train unit adapted to alternate the connection of said line conductor between said generator and said track rail, and an electric signal lamp in circuit between said track rail and said generator, substantially as set forth.

5. In a railway signal system, the combination with a track rail, a line conductor, and a train unit provided with an electric generator, of a rotatable switch upon said train unit adapted to alternate the connection of said line conductor between said generator and said track rail, and an electric signal lamp and a galvanometer in circuit between said track rail and said generator, substantially as set forth.

[Claims 6 to 12 not printed in the Gazette.]

885,368. ICE-CLEANER FOR TROLLEY-POLES. JACOB M. OLINGER, Springfield, Ohio. Filed Nov. 23, 1906. Serial No. 344,687.



1. In a device of the character described, the combination, with a harp, of a block mounted between the arms of said harp and having one end extending beyond the forward edges of said arms at substantially a right angle to the length of said harp, said forwardly extending portion being partially cut away to form a cutting edge.

2. In a device of the character described, the combination, with a harp, of a block mounted between the arms of said harp and having one end extending beyond the forward edges of said arms at substantially a right angle to the length of said harp and provided with a guideway, and a cutting edge adjacent to said guideway.

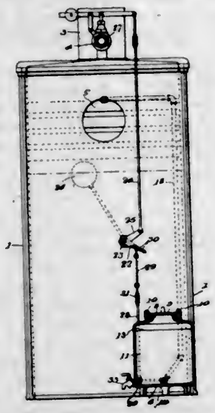
3. In a device of the character described, the combination, with a harp having apertures in the arms thereof, of a block having one end extending beyond the forward edges of said arms at substantially a right angle to the length of said harp and provided with a cutting edge, axles carried by said block and adapted to engage the apertures in said arms, and means for holding said block against rotation.

4. In a device of the character described, the combination, with a harp having apertures in the arms thereof, of a block having one end extending beyond the forward edges of said arms at substantially a right angle to the length of said harp and provided with a cutting edge, axles carried by said block and adapted to engage the apertures in said arms and a pair of lugs on each side of said block adapted to engage the edges of the adjacent arm.

5. In a device of the character described, the combination, with a harp, of a block mounted between the arms of said harp and having one end extending beyond the forward edges of said arms at substantially a right angle to the length of said harp, provided with a guideway, and having its lower portion cut away at an angle to said guideway to form a cutting edge.

[Claims 6 to 8 not printed in the Gazette.]

885,369. WATER-PURIFYING APPARATUS. EDWIN D. PACKARD and JOHN REIDENBAUGH, Marion, Ohio, assignors to The Marion Incline Filter and Heater Company, Marion, Ohio, a Corporation of Ohio. Filed Apr. 9, 1907. Serial No. 367,188.



1. In a water purifying apparatus, the combination, with a purifier having a steam inlet, of a chemical solution generating tank, and a discharge pipe connected thereto and having its discharge end adjacent to said steam inlet and in the path of the incoming steam.

2. In a water purifying apparatus, the combination, with a purifier having a steam inlet, of a chemical solution generating tank, and a discharge pipe connected thereto, terminating adjacent to said steam inlet in the path of the steam entering said purifier and having its discharge mouth turned in the direction of flow of said steam.

3. In a water purifying apparatus, the combination, with a purifier having a steam inlet, of a chemical solution generating tank located outside of said purifier and adjacent thereto, and a discharge pipe for said tank extending through the wall of said purifier to a point adjacent to said steam inlet and having its discharge mouth in alinement therewith, whereby said pipe is under the influence of the heat in said purifier for substantially its full length.

4. In a water purifying apparatus, the combination, with a purifier, of a solution generating tank having its upper end closed and a vertical partition therein dividing the same into two parts, one adapted to contain the raw chemical and the other adapted to contain the chemical solution, the two parts of said tank being in communication near their upper ends, and a discharge pipe leading from the solution containing part of said tank to said purifier.

5. In a water purifying apparatus, the combination, with a purifier, of a chemical solution generating tank having its upper end closed, means for introducing the raw chemical into the same, means for introducing live steam to said tank, whereby both water and heat are provided for the generation of said solution, and a discharge pipe leading from said tank to said purifier.

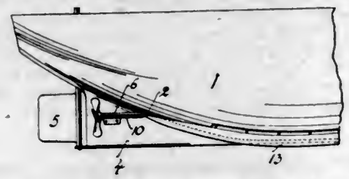
[Claims 6 to 9 not printed in the Gazette.]

885,370. HULL OF VESSELS. ISAAC E. PALMER, Middletown, Conn. Filed Jan. 11, 1907. Serial No. 351,786.

1. The combination with the hull of a vessel provided with a shaft bearing and a skeg to which the bearing is secured, of fins secured to the skeg and extending outwardly in opposite directions beyond the shaft bearing.

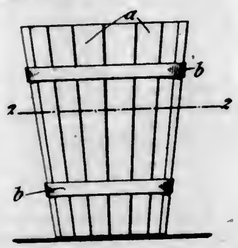
2. The combination with the hull of a vessel provided with a skeg and a plurality of shaft bearings fixed to the skeg, of fins fixed to and projecting outwardly from the said shaft bearings.

3. The combination with the hull of a vessel provided with a shaft bearing and bilge keels, of fins projecting in



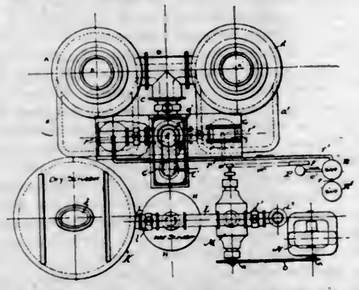
opposite directions from the shaft bearing and forming an extension of the bilge keels.

885,371. SEPARABLE BARREL OR OTHER RECEPTACLE. ADRIANO PETRACCHI, Milan, Italy. Filed Mar. 22, 1907. Serial No. 364,002.



A barrel or other receptacle comprising separable parts the adjacent edges of which are united by a separate narrow strip of frangible cement extending along the middle of said edges, the latter being free of each other at their inner and outer parts.

885,372. APPARATUS FOR MANUFACTURING GAS. HAWLEY PETTIBONE, New Rochelle, N. Y., assignor to Power and Mining Machinery Company, a Corporation of New York. Filed Apr. 24, 1906. Serial No. 313,413.



1. The combination with a cupola gas generator, of a gas take-off pipe connecting with the base thereof and rising as a stand-pipe, a water jacket around said stand-pipe and having a water inlet-pipe a hot air and vapor chamber inclosing said stand-pipe and jacket and a pipe and valve connection from said chamber to the top of the cupola, substantially as described.

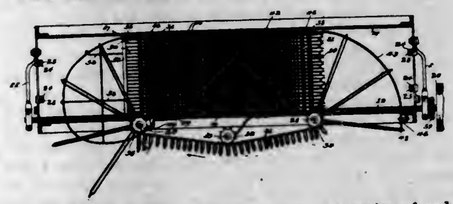
2. The combination with a cupola gas generator, of a gas take-off and stand-pipe connecting with the base thereof and having a horizontal section and valve, a water box surrounding said section and valve and having an air inlet provided with a slide or damper, a hot air and vapor chamber connecting with the water box and surrounding the stand-pipe, and a pipe and valve connection from said chamber to the top of the cupola, substantially as described.

3. The combination with a cupola gas generator, of a gas take-off and stand-pipe connecting with the base thereof and having a valve, a water vaporizing box inclosing part of the pipe and the valve and having an air inlet and damper, a water jacket surrounding part of the stand-pipe and open at the top, a supply pipe to said jacket, a hot air and vapor chamber connecting with the water box and surrounding the stand-pipe and jacket, and a pipe connection from said chamber to the top of the cupola, substantially as described.

4. The combination with a cupola gas generator, of a gas take-off and stand-pipe connecting with the base thereof and having a horizontal section and valve, a return or second stand-pipe a water vaporizing box having an air inlet and damper and a water jacket on said section and stand pipe, a hot air and vapor chamber surrounding both stand-pipes and having an air inlet and damper adjacent to the second stand-pipe, and a pipe and valve connection from said chamber to the top of the cupola, substantially as described.

5. The combination with a pair of cupola generators connected at the top and having extensions at the base, of horizontal pipe sections connecting with said extensions and each having a valve, a stand-pipe connecting with said sections, a water vaporizing box inclosing said sections and valves and having an air inlet and valve, a water jacket on the stand-pipe and having a water supply, a return stand-pipe, a hot air and vapor chamber surrounding said stand-pipes and jacket and having an air inlet and damper for admitting air to be heated, and a pipe and valve connection from said chamber to the tops of the cupolas, substantially as described.

885,373. CORN-SILKER. JOSEPH H. PIERCE, Chicago, Ill. Filed Mar. 15, 1906. Serial No. 306,295.



1. In a corn silker, the combination of a series of rods so mounted as to be wholly unobstructed at one end thereof, and a second series of rods movable longitudinally with respect to and below the rods of said first series to remove silk threads adhering thereto from said unobstructed ends, said first and second series of rods forming a screen or sieve, substantially as described.

2. In a corn silker, the combination of a series of rods so mounted as to be wholly unobstructed at one end thereof, and a second series of rods movable longitudinally with respect to the rods of said first series to remove silk threads adhering thereto from said unobstructed ends, said first and second series of rods forming a screen or sieve, substantially as described.

3. In a corn silker, the combination of a series of rods so mounted as to be wholly unobstructed at one end thereof, a second series of rods arranged transversely to and movable longitudinally with respect to the rods of said first series, said first and second series of rods forming a screen or sieve, and means to move said second series of rods longitudinally of said first series to wipe the latter and remove silk threads adhering thereto from said unobstructed ends, substantially as described.

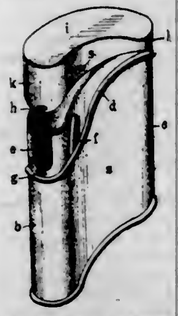
4. In a corn silker, the combination of a series of stationary rods, a second series of rods movable longitudinally of said first series to remove adhering silk threads, said stationary rods lying upon said movable rods, substantially as described.

5. In a corn silker, the combination of a series of stationary rods, a second series of rods removable longitudinally of said first series to remove adhering silk threads,

said stationary rods lying upon said second series of rods, and a third series of rods movable longitudinally of said stationary rods and lying thereupon, substantially as described.

[Claims 6 to 23 not printed in the Gazette.]

885,374. DISPENSING-BOX. EDGAR POHLIG, Richmond, Va. Filed Aug. 27, 1906. Serial No. 332,268.



1. A dispensing box having a dispensing opening in its front wall, a lid hinged to its rear wall and covering said opening, and means to limit the opening of the lid, to normally prevent the front lower edge of the lid from passing beyond the upper front edge of the box when uncovering the opening, substantially as described.

2. A dispensing box having an opening in its front wall near the upper edge thereof, and a bead to limit the closing of the lid, in combination with a lid having a longer front wall than rear wall hinged at the rear wall to the box, means formed on the wall of the box above the bead coöperating with means on the lid to limit the opening of the lid to uncover said opening in the front wall of the box without uncovering the top of the box, substantially as described.

3. A dispensing box having an open top, a dispensing opening in its front wall, and a groove pressed into a side wall in combination with a lid hinged to the box and having depending sides and front and a depression in a side registering with and slidable in the groove, whereby the raising of the lid will be normally limited by said depression striking the end of the groove, and when desired the side wall of the box may be pressed inward to release the depression from the groove, substantially as described.

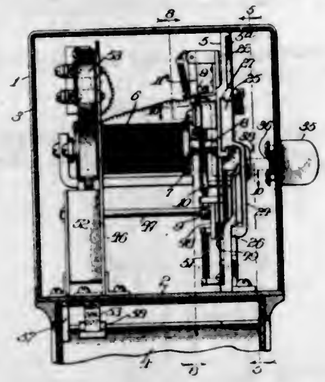
4. A dispensing box having an open-top, a dispensing opening in one of its walls and a guide-way formed in one of the walls thereof; in combination with a lid hinged to the box and covering said opening and top, and means on the lid to take into said guideway to normally limit the opening of the lid to uncover the opening in the wall of the box, substantially as described.

5. A dispensing box having an open top and a bead, and having a dispensing opening in one of its walls and a guide-way in one of its walls, both above the bead, in combination with a lid having depending walls and hinged to the box, said lid limited in its closure by the bead and having a portion of the metal of one of its walls entering and slidable in the guideway, and means on the box coöperating with means on the lid to lock the lid in closed position, substantially as described.

[Claims 6 to 11 not printed in the Gazette.]

885,375. COIN-BOX AND REGISTERING MECHANISM FOR TELEPHONES. FRANK D. POWELL and CHARLES S. ELLIS, Chicago, Ill., assignors to American Coin Register Company, a Corporation of Illinois. Filed Dec. 12, 1904. Serial No. 236,615.

1. In a device of the class described, the combination with a main coin-chute divided into stages, from one to the other of which the coin may be progressively transferred, exit channels, one leading from said coin-chute to the exterior of the box and the other to a coin-pocket adjacent to an exit leading to a separate coin-receptacle, two movable stops extending into the coin-channel in advance of said exit channels, a tilting armature, electrical means in operative connection therewith for controlling the same for actuating said stop, and a manually operated coin actuator having primary and secondary members, one for moving the coin from a primary to a secondary stage and the other from said coin-pocket to said coin-receptacle.



2. In a device of the class described, the combination with a coin chute, of a manually operated coin actuator having two members arranged to slide in different planes one above the other, the first to positively move a coin from a primary to a secondary position in the chute, while the second serves to move it from a detaining pocket into contact with a registering actuator and thence into a coin receptacle, of an exit leading from said coin chute to the outside, two pins for extending into said coin chute between said actuator members, and electrically controlled means for actuating said pins to direct a coin to said discharge exit or to said detaining pocket.

3. In a device of the class described, the combination of a coin-chute divided into arbitrary stages or rests, of a manually operated coin actuator having a member adapted to positively move the coin from a primary to a secondary stage, two yieldingly held arresting pins in said chute below said member for temporarily arresting said coin, electrical means for actuating said pins from the central office to release and arbitrarily direct said coin, and a gravity pawl upon said actuator member adapted to slide over said coin when the actuator is moved backward and to force the same from its arrested position upon the next advance movement of said coin actuator.

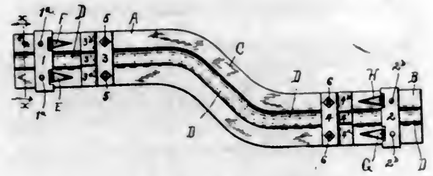
4. The combination with a coin-box for telephones, of a coin-chute having receiving, intermediate and discharge sections respectively, of a manually controlled coin actuator having two members arranged to move in unison, one member to transfer a coin from a primary to a secondary position and the other to move a previously deposited coin from an intermediate position into a discharge section, an armature under electrical control from the central office, two pins projecting therefrom into said intermediate coin section for arresting a coin, and means upon the primary member of said actuator for dislodging a coin from said pins upon the next succeeding movement of said actuator, after the lodging of the coin therein, whereby clogging may be prevented should the electrical mechanism fail to act.

885,376. FIRE AND WATER PROOF BUILDING MATERIAL. MARK G. RAY, Perth Amboy, N. J. Filed Dec. 28, 1907. Serial No. 408,372.

1. In building material, the combination of one or more sheets of soft paper board, with one or more sheets of asbestos, and a glue uniting them; the said glue comprising gum shellac dissolved in alcohol, and a paste having water as a menstruum.

2. A building material comprising one or more sheets of soft paper board, one or more sheets of asbestos and a glue uniting them; the glue comprising a resinous gum dissolved in spirits and insoluble in water, and a leader consisting of a starchy or glutinous substance dissolved in water, all combined as described.

885,377. METAL RAILWAY-TIE. JOHN A. REED, Richmond, Ind. Filed Aug. 3, 1907. Serial No. 386,875.



1. A railway-tie formed of a comparatively thin sheet of spring metal having its end portions formed parallel but offset laterally with reference to each other and connected by an angularly disposed central portion integral therewith and having a corrugation extending from end to end centrally of said tie forming a channel in its upper face, a pair of tongues formed integral with each end portion of the tie, each of said tongues being pointed and formed by cutting two divergent incisions through the body of the tie and then bending the points upward at an angle and directed centerward, a plate permanently secured across the tie near the base of each pair of tongues, a removable plate located centerward from and oppositely disposed with reference to said tongues, each of the last named plates having a flange divided into three equal portions the center portion being bent slightly down to extend under the base of a rail and the end portions being bent slightly upward to extend over the base of the rail, and means for detachably securing each of said last named plates to the tie, all substantially as shown and described.

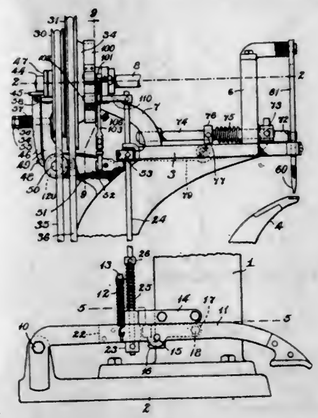
2. A metal railway-tie having its end portions parallel but offset with reference to each other and connected by an angularly disposed central portion formed integral therewith, a corrugation pressed in the face of said tie and extending centrally from end to end thereof forming a channel in the face of the tie and a ridge along the underside of the tie, a pair of pointed tongues extending upwardly at an angle from the end portions of the tie and formed integral therewith, a permanent plate secured to the end and extending across the tie near the base of said tongues, a removable plate located opposite each pair of said tongues, each of the last named plates having a flange divided into three portions whereby it may extend under and over the base of a rail, and bolts for securing said plates in position, all substantially as shown and described.

885,378. TREADLE MECHANISM FOR SHOE-SEWING MACHINES. EVERETT P. RICHARDSON, Lawrence, Mass., assignor to Richardson Shoe Machinery Company, Boston, Mass., a Corporation of Maine. Filed Mar. 27, 1905. Serial No. 252,128.

1. A sewing machine having a power or needle driving shaft in the head thereof, drivers loose on said shaft and actuated at different speeds and manually operated means for clutching said drivers to said shaft to cause it to be rotated at either of two different speeds.

2. A sewing machine having a power or needle-driving shaft in the head thereof, differently speeded drivers loose on said shaft, clutching means interposed between said drivers and said shaft, and manually operated means for controlling said clutching means to cause said shaft to be rotated by either of said differently speeded drivers.

3. The combination with a shaft rotatable at a predetermined speed and two pulleys of different diameters therein, of a sewing machine having a power or needle driving shaft in the head thereof, two pulleys loose on said last-mentioned shaft and driven at different speeds by said first-mentioned pulleys, and clutching means for clutching to the needle-driving shaft to rotate it either of the pulleys thereon.



4. The combination with a shaft rotatable at a predetermined speed and a sewing machine having a power shaft in the head thereof, of two pairs of complemental pulleys on said shafts, belts connecting the pulleys of each pair, said pulleys being of such diameter that one pulley on the power shaft is rotated at a high speed and the other at a low speed, and the pulleys on the power shaft being loose thereon, and manually controlled clutch-mechanism between the last-mentioned pulleys and the power-shaft for causing said shaft to be driven by either of the pulleys thereon at will.

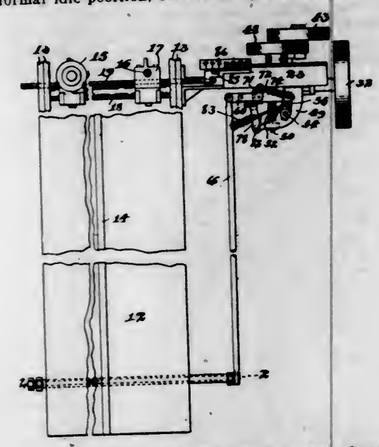
5. The combination with a shaft rotatable at a predetermined speed and a sewing machine having a power shaft, of two pairs of complemental pulleys on said shafts, belts connecting the pulleys of each pair, said pulleys being of such diameter that one pulley on the power shaft is rotated at a high speed and the other at a low speed, and the pulleys on the power shaft being loose thereon, manually controlled clutch mechanism between the last-mentioned pulleys and the power shaft for causing said shaft to be driven by either of the pulleys thereon at will, and stop-mechanism for automatically stopping the rotation of said power shaft when both pulleys are released therefrom.

[Claims 6 to 15 not printed in the Gazette.]

885,379. ADJUSTING MEANS FOR PLANER-HEADS. HARRY B. ROSS, Beloit, Wis., assignor to The Berlin Machine Works, Beloit, Wis., a Corporation of Wisconsin. Filed Nov. 4, 1907. Serial No. 400,656.

1. In an adjusting mechanism for planer heads and the like, the combination of a rack-bar connected to the tool to be adjusted, and having a series of holes therein, means for actuating said rack-bar in either direction, a clutch-mechanism controlling said actuating means, a stationary scale having graduations corresponding to the holes in said rack-bar, a pointer actuated by said rack-bar adapted to travel over said scale, a locking pin adapted to coöperate with the holes in said rack-bar, manually operable means adapted by a single operation to retract said locking pin and shift said clutch-mechanism from idle to operative position relatively to the actuating means of the rack-bar, and a spring operating after the release of said manually operable means to press said pin into locking engagement with the next hole of the rack-bar encountered thereby, and to simultaneously shift said clutch-mechanism to idle

position, and restore said manually operable means to normal idle position, substantially as described.



2. In an adjusting mechanism for planer heads and the like, the combination of an adjustable member, means for actuating said adjustable member in either direction of its adjusting movement, a double clutch controlling said actuating means, a clutch-shifting mechanism, a stationary scale, a pointer actuated by said adjustable member adapted to travel over said scale, a lock adapted to engage said adjustable member and secure the same in any one of the positions indicated by the scale, a manually operable lever, and connections from the latter to said lock and clutch-shifting mechanism operating, when said lever is swung in one direction, to release said lock and actuate said clutch-shifting mechanism in one direction, and when said lever is swung in the opposite direction to release said lock and actuate said clutch-shifting mechanism in the other direction, substantially as described.

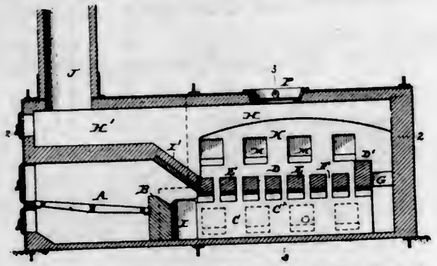
3. In an adjusting mechanism for planer-heads and the like, the combination of a pair of rack-bars toothed on their adjacent edges and connected to the tools to be adjusted, a pinion between and engaging said rack-bars, locking devices for said rack-bars, actuating means for said pinion, and means for simultaneously releasing either of said locking devices and setting in operation the actuating means of said pinion, substantially as described.

4. In an adjusting mechanism for planer-heads and the like, the combination of a pair of rack-bars toothed on their adjacent edges and connected to the tools to be adjusted, a pinion between and engaging said rack-bars, locking devices for said rack-bars, means for actuating said pinion in either direction of rotation, and means for simultaneously releasing either or both of said locking devices and setting in operation in either direction the actuating means of said pinion, substantially as described.

5. In an adjusting mechanism for planer-heads and the like, the combination of a pair of adjustable members, clutch-controlled mechanism for actuating either or both of said adjustable members in either direction of adjustment, a lock for each of said adjustable members, a pair of hand-levers, and duplicate actuating connections between said hand-levers and said locks and clutch-controlled mechanism, respectively, operating to release said locks and throw into action said clutch-controlled actuating mechanism, substantially as described.

885,380. INCINERATING-FURNACE. JOHN ROSS, Philadelphia, Pa. Filed Nov. 21, 1906. Serial No. 344,402.

1. In an incinerating furnace, the combination of a grate, a lower flue leading therefrom through which the flame passes, an incinerating arch having openings through it arranged above the lower flue, an incinerating chamber immediately above the incinerating arch and connected with the lower flue at its end most distant from the grate, a chimney flue leading from the incinerating chamber to the chimney, a lateral incinerating chamber opening laterally from the incinerating chamber above the incinerating arch and provided with an incinerating arched floor having openings through it, flues for causing hot gases to pass under and then over the arched floor of the lateral chamber, and means for charging the furnace with garbage.



2. In an incinerating furnace, the combination of a grate, a lower flue leading therefrom through which the flame passes, an incinerating arch having openings through it arranged above the lower flue, an incinerating chamber immediately above the incinerating arch and connected with the lower flue at its end most distant from the grate, a chimney flue leading from the incinerating chamber to the chimney, a lateral incinerating chamber opening laterally from the incinerating chamber above the incinerating arch and provided with an incinerating arched floor having openings through it, flues for causing hot gases to pass under and then over the arched floor of the lateral chamber, means for charging the furnace with garbage, and doors in the side of the lateral incinerating chamber both above and below its arched floor.

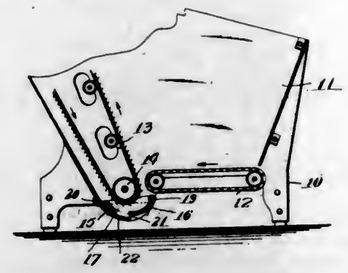
3. In an incinerating furnace, the combination of an incinerating arch having openings through it, a main incinerating chamber above the arch, a chimney flue leading from the main incinerating chamber, a grate, a combustion flue extending from the grate and arranged directly under the incinerating arch and also communicating with the incinerating chamber above the arch at the end most distant from the grate, a lateral incinerating chamber opening laterally to one side from the main incinerating chamber and having a floor composed of arches with open spaces between them, and flues for conducting gases from the grate thence under the arched floor of the lateral incinerating chamber and to a point above it, and means for charging the floor with garbage.

4. In an incinerating furnace, the combination of an incinerating arch having openings through it, a main incinerating chamber above the arch, a chimney flue leading from the main incinerating chamber, a grate, a combustion flue extending from the grate and arranged directly under the incinerating arch and also communicating with the incinerating chamber above the arch at the end most distant from the grate, a lateral incinerating chamber opening laterally to one side from the main incinerating chamber having a floor composed of arches with open spaces between them and having a continuous reverberatory roof, and flues for conducting gases from the grate thence under the arched floor of the lateral incinerating chamber and to a point above it whereby the gases pass in the same direction under both the incinerating arch and floor of the lateral incinerating chamber, and means for charging the floor with garbage.

5. In an incinerating furnace, an incinerating chamber having an incinerating arched floor with a flue formed beneath the arched floor for supplying hot gases to heat it and said flue communicating at one end with the incinerating chamber to supply hot gases thereto, a grate for supplying products of combustion and hot gases to the other end of the said flue, and an upper flue leading from the other end of the incinerating chamber for carrying off the products of combustion, combined with a lateral incinerating chamber opening laterally from and arranged at the same level as the incinerating chamber above the incinerating arched floor said lateral incinerating chamber having itself a floor composed of arches with open spaces between them, flues for conducting gases from the lower flue thence under the arched floor of the lateral chamber and to a place above it, means for charging the arched floor of the lateral incinerating chamber with garbage, and doors opening into the lateral incinerating chamber through its side above the floor and also opening through its side below the floor.

[Claim 6 not printed in the Gazette.]

885,381. ATTACHMENT FOR FEEDERS FOR FIBROUS MATERIAL. FREDERICK G. SARGENT, Westford, Mass., assignor to C. G. Sargent's Sons Corporation, Graniteville, Mass., a Corporation of Massachusetts. Filed Jan. 16, 1908. Serial No. 411,091.



1. A feeder of the class described comprising an elevating apron, and means under the bottom thereof for separating heavy particles from the fiber, discharging the former therefrom, and retaining the fiber under the bottom of the elevating apron, said means comprising a slot and a lip projecting downwardly from one side thereof.

2. A feeder of the class described comprising an elevating apron, and means under the bottom thereof for separating heavy particles from the fiber, discharging the former therefrom, and retaining the cleaned fiber under the bottom of the elevating apron, said means comprising a shell having a slot therein, and a lip projecting downwardly from below the slot, the wall of the shell slanting down to the slot, whereby the material will slide down over the slot and the dirt and heavy particles will be discharged therethrough.

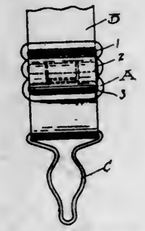
3. In an automatic feeder for fibrous material, the combination with a hopper for retaining said material, a slatted traveling apron in the bottom thereof, and an elevating apron working near the discharge end of said slatted apron, of a shell pivotally connected with the frame of said hopper and located below the bottom of said elevating apron, said shell being partially cylindrical in form, the cylindrical bottom wall thereof being substantially concentric with the lower end of the elevating apron, and means for fastening the shell in position on the frame, said cylindrical bottom having a slot therethrough near the bottom of one curved side thereof, and a lip projecting below said slot.

885,382. BUCKLE. HENRY D. SARGENT, Worcester, Mass. Filed Nov. 21, 1906. Serial No. 344,399.

1. As a new article of manufacture, a buckle formed of a flat piece of metal cut away to form a series of loops, penetrating prongs pivotally held by the buckle and extending across one of the loops, and a shield for the prongs formed along one of the edges of the loop, said shield being provided with apertures for the passage of the prongs.

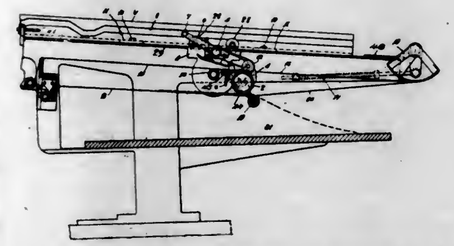
2. As a new article of manufacture, a buckle comprising three loops, penetrating prongs pivotally carried by the buckle and extending across the intermediate loop and pointed prongs extending within one of the end loops.

3. As a new article of manufacture, a buckle comprising three loops, penetrating prongs pivotally carried by the buckle and extending across the intermediate loop and



prongs formed upon an edge of one of the end loops, and projecting in a similar direction as the penetrating prongs when in their operative position.

885,383. DELIVERY MECHANISM. WALTER SCOTT, Plainfield, N. J.; Isabella Scott and David John Scott executors of said Walter Scott, deceased. Filed May 27, 1904. Serial No. 210,014.



1. In a printing or other machine, the combination of a reciprocating carriage, an auxiliary collapsible apron adapted to be drawn out on the froward stroke of the said carriage, and means for turning the sheet and feeding it on top of the said auxiliary apron.

2. In a printing or other machine, the combination of a reciprocating carriage, an auxiliary collapsible apron adapted to be drawn out on the forward stroke of the carriage, and means mounted on the said carriage for turning the sheet and feeding it on top of the said auxiliary apron.

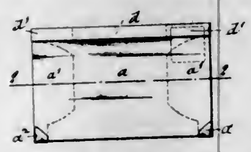
3. In a printing or other machine, the combination of a reciprocating carriage, an auxiliary collapsible apron adapted to be drawn out on the forward stroke of the said carriage, of a rotating sheet turning gripper mechanism moving with the said carriage for feeding the sheet on top of the said auxiliary apron.

4. In a printing or other machine, the combination of a reciprocating carriage, a main collapsible apron adapted to be drawn out on the forward stroke of the carriage, and to support the sheet as it is drawn out, an auxiliary collapsible apron adapted to be drawn out on the forward stroke of the said carriage, and means for turning the sheet and feeding it on top of the said auxiliary apron.

5. In a printing or other machine, the combination of a reciprocating carriage, a main collapsible apron adapted to be drawn out on the forward stroke of the carriage, and to support the sheet as it is drawn out, an auxiliary collapsible apron adapted to be drawn out on the forward stroke of the carriage, and means mounted on the said carriage for turning the sheet and feeding it on top of the said auxiliary apron.

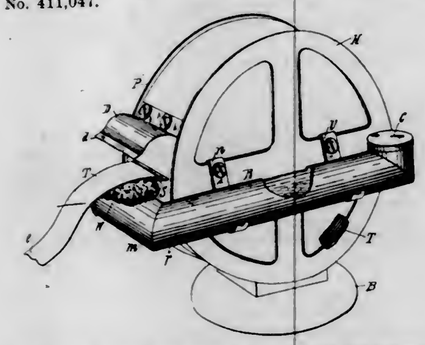
[Claims 6 to 9 not printed in the Gazette.]

885,384. ENVELOP. PAUL SEEBERGER, Jersey City, N. J. Filed Oct. 10, 1907. Serial No. 396,793.



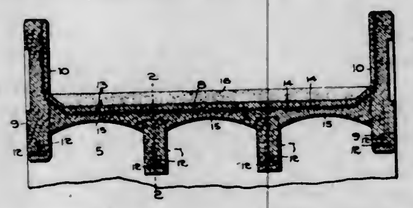
A safety-envelop comprising a front portion, a rear portion having ungummed side-edges without flaps, gummed side-flaps carried by the front portion, a gummed longitudinal flap carried by the rear-portion and extending along the upper edge thereof, said flap being adapted to fold over the upper edge of the front-portion, and short lateral extensions of equal length formed on said longitudinal flap at the ends thereof and adapted to be folded over on and secured to said rear portion at its upper corners.

885,385. TAPE-MOISTENING MACHINE. CAMILLUS SENNE, New York, N. Y. Filed Jan. 16, 1908. Serial No. 411,047.



The combination with a cylindrical holder for containing a roll of tape and having a slot in the periphery at one side through which the tape is drawn from the roll as unwound, a receptacle comprising an elongated portion secured at one side of the holder, and having a projecting portion extending across the periphery of the holder below the said slot, said projecting portion having an opening in its top, a sponge located in said opening and extending down into the water, said receptacle being positioned with the sponge located adjacent the opening slot in the holder to engage the lower face of the tape as drawn out from the holder through the slot.

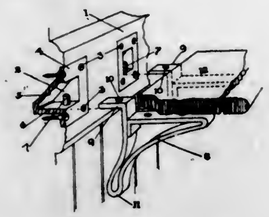
885,386. BRIDGE CONSTRUCTION. WALTER SHARP, Eldorado, Kans., assignor to The Walter Sharp Bridge Company. Filed Sept. 6, 1906. Serial No. 333,546.



1. A bridge structure comprising in combination a plurality of coalesced elements composed of concrete or analogous material, and including suitably supported abutments, parapets and intermediate beams connecting the same, and a floor between the said abutments and the said parapets and upon the said beams, and a wire net work embedded in the said floor and extending upwardly through the said parapets.

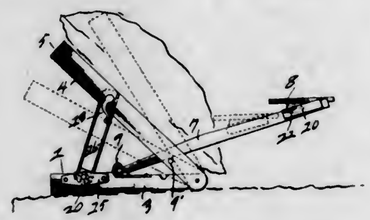
2. A bridge structure comprising in combination, a plurality of coherent elements composed of concrete or analogous material and including suitably supported abutments, beams connecting the same, and a floor between the said abutments, upon the said beams, and rods embedded in the said beams and projecting through the said abutments, into the said floor.

885,387. SHELF AND IRONING-BOARD ATTACHMENT. CHARLES R. SHAW, Fitchburg, Mass. Filed July 5, 1907. Serial No. 382,182.



In combination with a wall, sockets therein, a lug within the sockets, and perforated members extending within the sockets engaged by the lug, the top wall of the sockets being inclined.

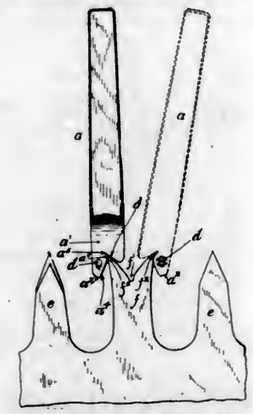
885,388. INVALID-SUPPORT. FRANKLIN D. SICKLES, Maumee, Ohio. Filed Nov. 30, 1906. Serial No. 345,676.



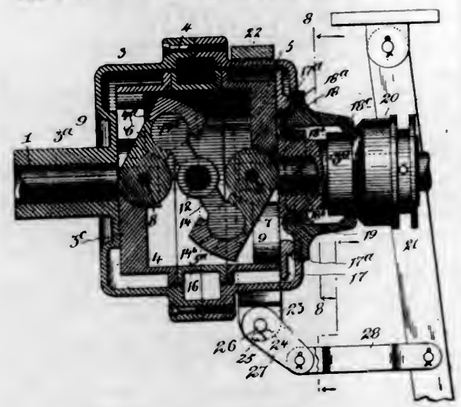
In an invalid support, a base section, a guide rod supported by the base section and having shouldered reduced portions adjacent to its ends, a back section pivotally connected with the base section, a rotatable right and left screw-threaded spindle mounted upon the back section, and two pairs of brace bars for the back section, said bars pivotally connected at their upper ends to blocks adapted to travel in opposite directions along the screw-threaded spindle, and pivotally connected at their lower ends to blocks adapted to slide along the guide rod supported by the base and engage the shoulders of the reduced portions upon said rod, substantially as described.

885,389. SAW-TOOTH TOOL. MOSES E. SIMMONS, Portland, Oreg. Filed Oct. 19, 1906. Serial No. 339,728.

A saw tool, consisting of a shank having a downward extension the extremity of which is divided into two sections of unequal length by a wedge-shape recess, a straight surface a^4 and shoulder a^5 formed on the longer of said sections, and a convexed surface a^3 formed on the shorter thereof, said surfaces a^4, a^3 intersecting each other at approximately right angles and thence curving to form the apex a^5 of said recess, substantially as described.



885,390. REVERSING MECHANISM. GUSTAV SITTMANN, New York, N. Y. Filed Mar. 16, 1907. Serial No. 362,604.



1. A reversing mechanism comprising a casing, driving and driven shafts, means interposed between said shafts to limit the thrust of said shafts toward each other, a lever movably supported between said shafts, means for pivotally connecting said lever with said shafts, means to lock said shafts firmly to said casing, and means to hold said lever from rotating with said shafts while permitting it to rock and slide with respect to said shafts.

2. A reversing mechanism comprising driving and driven shafts, a thrust ring between said shafts, a lever interposed between said shafts, a pivotal support for said lever adapted to permit lateral bodily movement thereof, means for pivotally connecting said lever with said shafts, means for limiting rotation of said lever-support, and means for locking said parts firmly together.

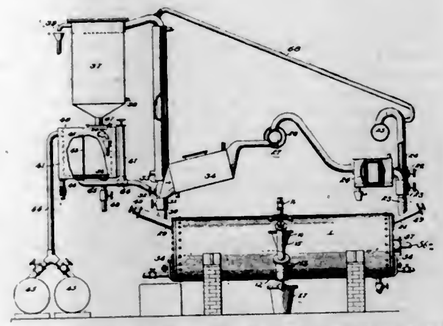
3. A reversing mechanism comprising a casing, driving and driven shafts located in substantial axial alinement, means interposed between said shafts to limit the thrust of said shafts toward each other, levers pivotally connected with said shafts, a lever interposed between and pivotally connected with the first named levers, a pivotal support for the second named lever adapted to permit it to rock and also move laterally, means to limit rotation of said lever-support, and means to lock said shaft firmly to said casing.

4. A reversing mechanism comprising a pair of shafts located in substantial axial alinement, a thrust ring between said shafts, levers pivotally connected with said shafts, a casing surrounding said levers, a support carried by said casing, a lever mounted upon said support and adapted to rock and also slide bodily laterally, said lever being pivotally connected with the first named levers, means to limit rotation of said casing and means to lock said shafts firmly to said casing.

5. A reversing mechanism comprising a pair of shafts provided with disks, a ring between said disks, a casing surrounding said disks and provided with a support, a lever movably mounted upon said support, means for pivotally connecting said lever with said shafts, means to limit rotation of said casing, and means to lock said parts firmly together.

[Claims 6 to 9 not printed in the Gazette.]

885,391. APPARATUS FOR EFFECTING REACTIONS. ELMER A. SPERRY, Brooklyn, N. Y. Filed Dec. 29, 1906. Serial No. 350,093.



1. Apparatus for effecting reactions, comprising a vessel, a vapor connection therefor, mechanically operated means for clearing said vapor connection, and heating means for said connection.

2. Apparatus for effecting reactions, comprising a vessel having a vapor connection, a rotary clearing device for said connection, and a wiper for said clearing device.

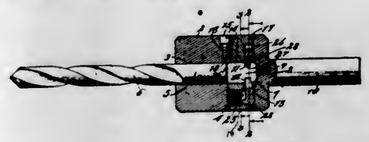
3. Apparatus for effecting reactions, comprising a vessel, an agitator therein, a jacket for said vessel, and separate induction and eduction connections for supplying steam and water to said jacket.

4. Apparatus for effecting reactions, comprising a vessel, a mechanical feeding device one end of which enters the vessel, and heating means for said feeding device.

5. Apparatus for effecting reactions, comprising a vessel, a mechanical feeding device one end of which is connected with the lower portion of the vessel, and heating means for said feeding device.

[Claims 6 to 30 not printed in the Gazette.]

885,392. DRILL-CHUCK. FRANK H. SPETS, Chicago, Ill. Filed Dec. 2, 1907. Serial No. 404,675.



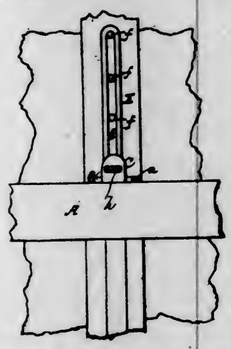
1. A solid chuck body 2 having the opening 3 for the boring tool and the transverse opening 4 which passes entirely through said body, a plug consisting of a pair of slides which substantially fill the opening 4, said slides

tensioned so that they tend to move apart in a longitudinal direction, means upon the slides for limiting such movement, means securing one of said slides against movement relative to the body 2, said slides having transverse openings which are normally out of register and which may be brought into register by inward pressure upon one of said slides.

2. A chuck consisting of a solid body 2 having a drill shank opening 3 and a transverse opening 4 which passes through said body and intersects the inner end of the first mentioned opening, a locking mechanism in said transverse opening which consists of a fixed and a movable slide, each having a head which forms a closer for one end of said transverse opening, means for removably securing the fixed slide in said transverse opening, a spring tending to force said slides apart, means upon the slides which limits the extent of their relative movement, said slides having normally non registering openings and one end of the opening in the movable slide having a chamfered edge adapted to automatically engage a notched tool as set forth.

3. A chuck that consists of a solid body 2 having a drill shank opening 3 and a transverse opening 4, a recess 7 in the side of the latter opening and in line with the drill shank opening, a locking mechanism substantially closing said transverse opening, said locking mechanism consisting of a fixed slide 14 and a movable slide 13, the fixed slide and the side of the transverse opening having threaded recesses 16, 18, a screw 15 therein which holds the fixed slide in said transverse opening, said slides 13 and 14 having transversely therethrough the openings 24 and 25 said fixed slide provided with a pin 20 and said movable slide with a slot 21 in which said pin is movable and which limits the movement of said pin and movable slide, and a spring 23 tensioned to normally hold the slides with their openings 24 and 25 out of register.

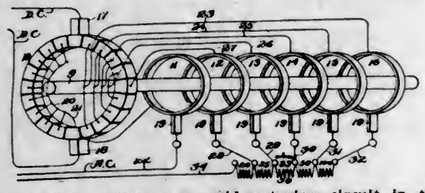
885,393. SASH-FASTENER. FRANK A. STAPLES and LOUIS MÖLLER, San Francisco, Cal. Filed July 8, 1907. Serial No. 382,726.



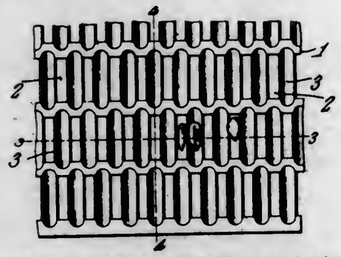
In a sash fastener the combination with the casing, provided with the spring actuated bolt, of the pivoted bar provided with the groove extending from one end to the other end and the recesses in said groove, said bar pivoted at its lower end to the bracket all as shown and described.

885,394. APPARATUS FOR CONVERTING DIRECT CURRENT INTO ALTERNATING CURRENT. FREDERICK F. STRONG, Boston Mass. Filed Feb. 16, 1906. Serial No. 301,346.

An electric apparatus for converting direct current into alternating current, comprising a rotary commutator, its brushes and feed wires for delivering direct current thereto, and an outgoing circuit including collector rings, brushes and circuit wires for conveying current from said commutator, and a plurality of resistances in series interposed in said outgoing circuit, said commutator having segments coöperating with said brushes to cut out the feed current at predetermined intervals, and segments connected with the rheostat for gradually cutting out the resistance from said outgoing circuit and gradually restoring said resistance to said outgoing circuit in the interval between said predetermined intervals, and means for reversing the feed current at said predetermined intervals.



885,395. CORN-GRADER. ALFRED STRUBLE, Carthage, Ill. Filed Apr. 15, 1907. Serial No. 368,287.



1. A grader comprising a metallic sheet having a plurality of rows of elongated openings and elongated concavities parallel with the openings, the edges of which form the edges of the openings.

2. A grader comprising a metallic sheet having a plurality of rows of elongated openings and elongated concavities parallel with the openings, the successive rows being arranged in staggered order with relation to each other.

885,396. PREPARATION FOR REMOVING PAINT AND VARNISH. WILLIAM STUHLMILLER, New York, N. Y. Filed Jan. 11, 1908. Serial No. 410,370.

1. A preparation for removing paint and varnish comprising fish oil, paraffin, a light hydrocarbon liquid, and alcohol.

2. A preparation for removing paint and varnish comprising menhaden oil, paraffin, a light hydrocarbon liquid, and alcohol.

3. A preparation for removing paint and varnish comprising fish oil, paraffin, benzol, and alcohol.

4. A preparation for removing paint and varnish comprising fish oil, paraffin, benzol, alcohol, and an essential oil.

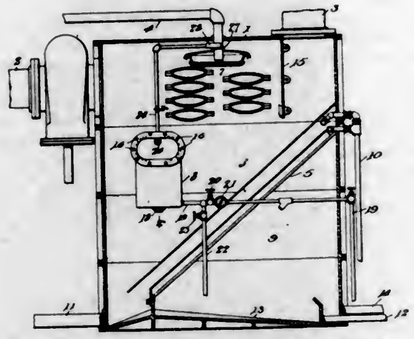
5. A preparation for removing paint and varnish comprising fish oil, paraffin, benzol, alcohol, an essential oil, and an acid.

[Claims 6 to 14 not printed in the Gazette.]

885,397. WATER-PURIFYING APPARATUS. OMAN L. STUMP, JOHN REIDENBAUGH, and EDWIN D. PACKARD, Marion, Ohio, assignors to The Marion Incline Filter and Heater Company, Marion, Ohio, a Corporation of Ohio. Filed June 22, 1906. Serial No. 322,911.

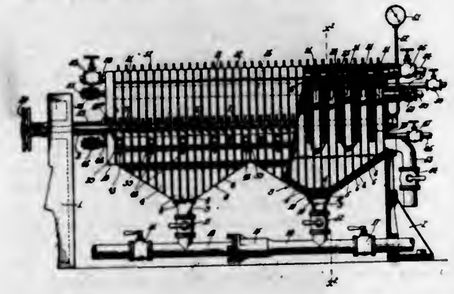
1. In a water purifying apparatus, the combination, with a purifier proper, of chemical appliances located therein and consisting of a tank or receptacle for containing a reagent, water supply means discharging into said tank or receptacle and discharge means therefrom to introduce the solution produced by the water acting on the reagent into the water to be purified.

2. In a water purifying apparatus, the combination, with a purifier proper, of chemical appliances consisting of a tank or receptacle mounted therein, a water supply pipe leading thereto and a solution conveying pipe extending therefrom and adapted to discharge a solution into the water to be purified.



3. In a water purifying apparatus, the combination, with a purifier proper having a series of purifying pans and filtering appliances, of chemical appliances comprising a tank or receptacle located inside of the filter proper, a water pipe leading thereto and a solution discharge pipe leading therefrom to discharge the chemical into the water in advance of the purifying pans.

885,398. FILTER. ERNEST J. SWEETLAND, Goldfield, Nev. Filed July 9, 1907. Serial No. 382,961.



1. In a filter, a chamber comprising a series of frames held together and graduated in length to form a hopper in the bottom of the chamber, and filtering means in the chamber.

2. In a filter, a chamber comprising a series of frames each having a rectangular upper portion and wedge shaped lower portion, means for holding the frames closely together, the frames being graduated in length with their upper ends in line to form a plurality of hoppers in the bottom of the chamber, and filtering means in the chamber.

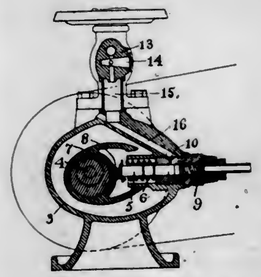
3. In a filter, a chamber comprising a series of frames each having a rectangular upper portion and wedge shaped lower portion, means for holding the frames closely together, the frames being graduated in length with their upper ends in line and forming a hopper in the bottom of the chamber, and filtering means in the chamber.

4. In a filter, a laminated chamber comprising a series of frames held together, each frame having a plurality of hollow ears, each ear having a passageway to the inside of the frame, thereby forming a plurality of conduits along the chamber which have communication with the chamber, filtering means inside the chamber, and test-cocks in certain ears communicating with the interior of the ears.

5. In a filter, a laminated chamber comprising a series of frames held together, each frame having a plurality of hollow ears, certain ears having passageways to the inside of the frame, thereby forming a plurality of conduits along the chamber which have communication with the chamber, a plurality of filtering devices in the chamber, each filtering device being supported by a frame, a connection from the passageway of the frame to the filter, and a valve for shutting off communication of the filter with the hollow ear and conduit associated therewith.

[Claims 6 to 26 not printed in the Gazette.]

885,399. LUBRICATING APPARATUS. ALBERT SZÁNTÓ, Paris, France. Filed Mar. 17, 1906. Serial No. 306,643.



1. In a lubricator, a pump cylinder, a plunger projecting with its free end beyond the end of the cylinder, a driving shaft located in front of said end, an eccentric upon the shaft, a strap around the eccentric in contact with the end of the plunger, and means for preventing the strap from turning while the eccentric rotates, substantially as described.

2. In a lubricator, a plurality of pump cylinders, a plunger located in each cylinder and having its end projecting beyond the end of the cylinder, a driving shaft located in line with said plungers, an eccentric upon the shaft and in line with said plungers, a strap encircling the eccentric and bearing against the plunger, and means for preventing the turning of the strap during the rotation of the eccentric, substantially as described.

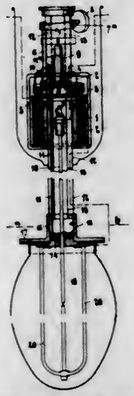
3. In a lubricator, a plurality of pump cylinders, plungers therein projecting beyond the ends of the cylinders, a driving shaft located in front of the plunger ends, an eccentric upon said shaft common to all of said plungers, a strap around the eccentric, a bar carried by the strap in contact with all said plungers, means for preventing the strap from turning during the rotation of the eccentric, said cylinders having separate feed channels, having a common source of supply and means for controlling the flow of oil through each of said channels, substantially as described.

4. In a lubricator, a casing, a shaft therein, a pump removably held in said casing at right angles to the shaft, means whereby the pump is operated from the shaft, there being a feed channel in the casing leading to the pump, and means for closing said channel prior to the removal of the pump, substantially as described.

5. In a lubricator, a casing, a shaft extending through the same, a pump removably seated in the casing at right angles to the shaft, means interposed between the pump and shaft for operating the pump, a delivery valve located in rear of the pump plunger, said pump cylinder having an inlet aperture in front of said valve and an outlet channel in rear of the valve, said latter channel extending in a direction of the longitudinal axis of the cylinder, a feed channel connected with said inlet aperture and means for closing said feed channel prior to the removal of the cylinder, substantially as described.

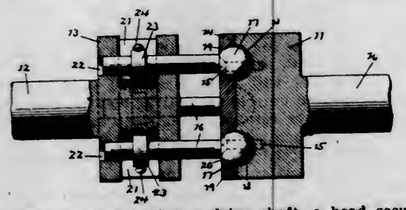
[Claims 6 and 7 not printed in the Gazette.]

885,400. ELECTRIC-ARC LAMP FOR ALTERNATING CURRENTS. GÉZA SZUK and WENZEL HACKL, Budapest, Austria-Hungary. Filed Feb. 24, 1904, Serial No. 195,053. Renewed Feb. 15, 1906. Serial No. 301,271.



In electric arc lamps for alternating currents the combination of a tubular main body receiving in its whole inner length the upper carbon and supporting an electromagnet-coil with iron core and ring armature movable upon said core and hinged to the coil, an arm supported by said ring and extending through an opening in the tubular main body, a rod linked to said arm and extending through the space between the tubular main body and the upper carbon, a clutch connected to said rod and acting upon the upper carbon, substantially as described, and for the purpose set forth.

885,401. UNIVERSAL JOINT. GEROME F. TADINI, New York, N. Y. Filed Nov. 18, 1907. Serial No. 402,576.



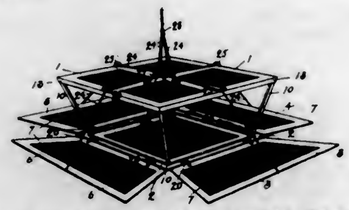
1. In a universal joint, a drive shaft, a head secured thereto, a driven shaft, a head secured to said driven shaft, a series of rods each secured at one end in one of said heads and adapted to swing therein and to pass into and slide in the other of said heads, and means for limiting the movement of the said rods.

2. In a universal joint, a drive shaft, a head connected thereto, a driven shaft, a head connected to said driven shaft, there being provided a series of sockets in one of the said heads and a corresponding series of radially disposed pockets and a like number of transverse bores in the other of said heads, a plurality of rods each adapted at one end to be received in one of the said sockets in one head and at the other to slide in one of the said bores and pass through one of the said pockets in the other of the said heads, and means within each of the said pockets and surrounding the rod therein for limiting the movement of the said rod.

3. In a universal joint, a drive shaft, a head connected therewith, a plate, means for securing the said plate to the outer face of the said head, there being provided a series of equally spaced sockets formed between the said head and plate, with an opening through the said plate to each socket, a driven shaft, a head therefor, there being provided a series of equally spaced bores in the last aforesaid head corresponding in number with the said sockets, a series of cylindrical rods each provided at one extremity with a ball end adapted to fit within one of the said sockets, each rod passing through the opening in said plate corresponding to the socket in which its ball end is secured, and the other end thereof sliding in one of the said bores in the said head connected to the driven shaft, and means associated with each of the said rods for limiting the slidable movement thereof.

4. In a universal joint, a drive shaft, a head connected therewith, a plate, means for securing the said plate to the outer face of the said head, there being provided a series of equally spaced sockets formed between the said head and plate, with an opening through the said plate to each socket, a driven shaft, a head connected to said driven shaft, there being provided in the last aforesaid head a series of equally spaced radially disposed pockets and a corresponding number of transverse bores, each of said bores passing approximately centrally through one of the said pockets, a series of rods, there being a ball end at one extremity of each rod adapted to be secured within one of the said sockets in the head connected with the drive shaft, each of said rods passing through an opening in the said plate corresponding to the socket in which the ball end of the rod is secured, the other end of each of said rods being adapted to fit into and slide within one of the said bores in the head connected to the driven shaft and to pass through a pocket in the last aforesaid head, a collar surrounding each of the said rods within its pocket and a set-screw for securing each collar in position on its rod.

885,402. BAIT-TRAP. JOSEPH E. THIAVILLE, Fair Haven, Vt., assignor of one-half to William Thiaville, Upper Troy, N. Y. Filed Sept. 12, 1907. Serial No. 392,420.



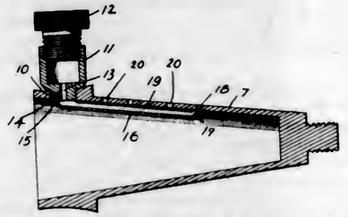
1. In a bait-trap, of the class described, the combination with a top-frame; a bottom-frame; side-frames hinged to the edges of the bottom-frame; and guides on the top-frame; of cords secured at one end to the oscillatory edges of such hinged frames, respectively, and passed through the guides on the top-frame to the central part of such frame and secured to each other at the desired distance from the frame; and a bait-support within the trap-inclosure.

2. In a bait-trap, of the class described, having a bottom-frame and a top frame larger in area than the bottom frame; and oppositely-disposed side-walls hinged at their lower edges to the smaller frame; means whereby the opening movement of the side-frames may be controlled and whereby the closing movement of such frames may be effected; and a bait-support within the trap inclosure.

3. In a bait-trap, of the class described, the combination with the bottom frame; of a pair of oppositely-disposed side-frames hinged to swing over upon one side of such bottom frame; another pair of such side-frames oppositely-disposed and hinged to the bottom-frame to swing over upon its opposite side; and a detachable top-frame, supports for the top-frame hinged to the bottom frame to swing over upon the latter frame after the top-frame has been detached from such supports.

4. In a bait-trap of the class described, having a bottom-frame; four side-frames hinged thereto and adapted to swing over on to the same; a top-frame and detachable connections between the top and bottom-frames; closing mechanism and a bait-support secured to one of the frames.

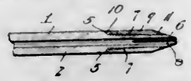
885,403. AXLE-LUBRICATOR. JOHN THOMI, Burns, Kans. Filed Feb. 18, 1907. Serial No. 357,953.



1. The combination of a bored skein provided with an outlet port and with an opening located adjacent said port; an oil-cup having its stem fitted in said opening, said stem being provided with an outlet port and with an opening located adjacent the same; an axle fitted within the skein bore and provided with a longitudinal groove; and an oil-tube fitted within said groove and provided with a channel formed in its upper face directly beneath the outlet ports in the skein and oil-cup, said tube having its opposite ends upturned, one of said ends being fitted in the opening in the oil-cup stem and the other end being positively secured to the skein, to retain the tube in place and prevent rotation of the skein with respect to the axle.

2. The combination of a bored skein provided with a series of outlet ports and with a pair of openings located adjacent the end ports of said series; an oil-cup having its stem fitted in one of said openings, said stem being provided with an outlet port and with a separate opening adjacent the same; a longitudinally-grooved axle fitted within the skein bore; an oil-tube fitted within said groove and having its opposite ends upturned, one of said ends being secured in the opening in the oil-cup stem and the opposite end in the other opening in the skein to retain the tube in place and prevent rotating of the skein with respect to the axle, said tube having a longitudinal channel formed in its upper face directly beneath the ports in the skein, one end of said channel lying directly beneath the port in the oil-cup stem; and a compression cap carried by said oil-cup, for forcing the lubricant therein through said cup port and channel and out through said skein ports.

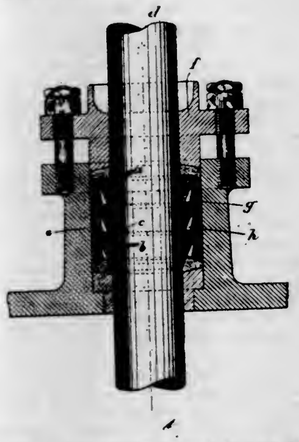
885,404. PENCIL. FRANKLIN THOMPSON, Brooklyn, N. Y. Filed Jan. 17, 1908. Serial No. 411,266.



A pencil the body of which comprises a plurality of strips separable throughout their length and grooved to receive the lead, one end of the body being reduced and shouldered and tapered from the shoulder toward the extremity which is pointed, such reduced part being provided with a screw-thread which starts from a point adjacent to the shoulder and gradually diminishes therefrom and disappears at a point intermediate the shoulder and extremity of the body; a cap having a corresponding shoulder, internal taper and thread and having the same outside diameter as the body and also pointed coincidently with the body; and means for confining said strips at the opposite end.

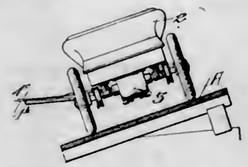
885,405. PACKING FOR STUFFING-BOXES OR SIMILAR DEVICES. ARTHUR R. TRIST, St. Albans, England. Filed Dec. 11, 1907. Serial No. 406,033.

1. In a packing of U-section having a thick heel on one side and a tapering flexible lip or tongue on the other side, the provision of a hardened or stiffened portion in the said heel through which the gland pressure is transmitted through the various layers of packing so as to prevent the deformation of the heel by such pressure, substantially as described.



2. A packing of U-section having a thick heel on one side and a tapering flexible lip on the other side.

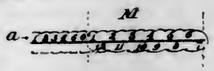
885,406. PLEASURE-CAR AND TRACK. WILLIAM H. VANCE, San Francisco, Cal. Filed Jan. 22, 1907. Serial No. 353,439.



1. In an apparatus of the character described, a circular track, cars adapted to travel thereon, each car having a motor and brake mechanism, a central vertical fixed sleeve, a hub revoluble thereon having radial arms connecting with the cars, stationary conducting rings insulated from the central sleeve and from each other, an exterior source of electrical energy and independent connection between it and the conducting rings, independent brushes carried by the revoluble portion of the apparatus connecting respectively with the two rings, insulated conductors leading from said brushes to each of the cars, one connecting with the motor, and the other with the brake mechanism and switches whereby either of said conductors may be energized.

2. An apparatus of the character described said apparatus comprising a circular track-surface; motor-cars adapted to travel thereover; a central revoluble hub, said hub having radial-arms with lugs on the outer ends and sockets at the inner ends; radial-arms lying upon said arms having inner ends fitting said sockets and outer portions fitting between said lugs; other radial-arms pivotally-connected to and forming extensions of the second-named arms and connected to the cars whereby the latter are allowed a vertical movement; adjustable stay-rods connecting the outer ends of the hub-arms, diagonally-disposed stay-chains extending divergently from the last-named radial-arms to the sides of the car, and attached thereto at points distant from the arm-connections, electrical connections with the cars; a distant switch-mechanism for controlling the current to the cars; brake-mechanism on the cars; and a separate and independent distant switch-mechanism for controlling said brake mechanism.

885,407. PATTERN FOR JACQUARD-WEAVING. CARL VORWERK, Barmen, Germany. Filed Oct. 3, 1903. Serial No. 175,547.



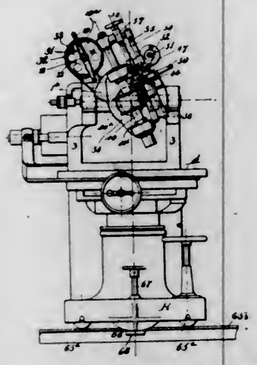
1. A pattern chain for Jacquard looms, comprising a series of cards for a single pattern or division thereof, the cards of the second half of such series alternated in reverse order between the cards for the first half of such series.

2. A pattern chain for Jacquard looms, comprising two series of cards, the cards of each series connected and the two series connected, the cards for the second half of one of said series alternated in reverse order between the cards for the first half of such series.

3. A pattern chain for Jacquard looms, comprising three series of cards, the cards of each series connected and the three series connected, the cards for the second half of one of said series alternated in reverse order between the cards for the first half of said series, such series having secured to one of its ends one of the other series and having secured to its other end the third series, the cards of said second and third series arranged in opposite order relatively to each other.

4. A pattern chain for Jacquard looms, comprising three series of cards, the cards of each series connected and the three series connected, the cards for the second half of one of said series alternated in reverse order between the cards of the first half of such series, the other two series of cards corresponding to the same pattern and having their cards arranged in opposite order, one of such series connected to one end of the first mentioned series, and the third of such series connected to the opposite end of such first mentioned series.

885,408. WOODWORKING-MACHINE. JOSEPH W. WADKINS and DENZIL J. JARVIS, Leicester, England. Filed Dec. 12, 1905, Serial No. 291,449. Renewed Sept. 14, 1907. Serial No. 392,823.



1. In a wood working machine, the combination of a main body portion, a counterbalanced arm pivoted for vertical swing thereon, a head rotatably mounted on said arm, a revoluble cutter spindle carried by said head, means for locking said arm in the several positions of its vertical swing, means for locking said head in its several rotated positions, means for adjusting said spindle longitudinally, and a work supporting table constructed to provide universal movement for the work thereon, substantially as described.

2. In a wood working machine, the combination of a main body portion, a counterbalanced arm pivoted for vertical swing thereon, a manually operated rod journaled on said arm, a drive gear secured to said rod, a driven gear journaled on said arm in mesh with said drive gear, a crank block radially adjustable on said driven gear, a rod pivoted to said crank block and to said main body portion, a head rotatably mounted on said arm, means for locking said head in its several rotated positions, a revoluble cutter spindle carried by said head, and means for adjusting said spindle longitudinally, substantially as described.

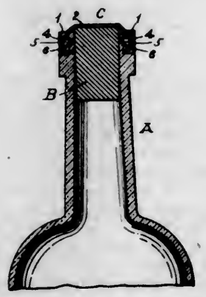
3. In a wood working machine, the combination of a main body portion, a counterbalanced arm pivoted for vertical swing thereon, a head rotatably mounted on said arm, a revoluble cutter spindle carried by said head means for locking said arm in several positions of its vertical swing, other means for imparting to the arm a definitely restricted swinging movement, means for rotating said head and locking it in different positions with respect to said arm, means for adjusting said spindle longitudinally, and other means for imparting to said spindle a definitely restricted longitudinal movement, substantially as described.

4. In a wood working machine, the combination of a main body portion having an arc-shaped extension, an arm pivoted thereon provided with an extension and having at one end an enlarged portion forming a counterbalance and at the other a rotatably mounted head, a revoluble cutter spindle carried by said head, means for imparting to said arm a definitely restricted vertical swinging movement, said means comprising a rod having a threaded portion in engagement with the extension on said arm, a pivoted lever connected with said rod and provided with a cam portion adapted to engage the arc-shaped extension on said main body, means for rotating said head, and means for adjusting said spindle longitudinally, substantially as described.

5. In a wood working machine, the combination of a main body portion, a counterbalanced arm pivoted thereon and provided with a rotatably mounted head having a slot, a revoluble cutter spindle carried by said head, means for imparting to said spindle a definitely restricted longitudinal movement, said means comprising a bracket, a plurality of rods parallel to said spindle and connected therewith passing through the bracket and secured thereto, an adjustable crank mechanism carried by said bracket, and a block adapted to slide in the slot in said head in engagement with said crank mechanism, substantially as described.

[Claim 6 not printed in the Gazette.]

885,409. BOTTLE-SEAL. SAMUEL D. WEBB and GEORGE SHILLING, Washington, D. C., assignors of one-fourth to Judson H. Sencindiver, Washington, D. C. Filed June 25, 1907. Serial No. 380,718.



1. A sealing device for a container, provided with a holding member having means for permanently attaching it to the container and a breakable element connected to said member.

2. A sealing device for a container, provided with a breakable element and a holding member, said holding member connected to the breakable element and having a chamber and means in said chamber for securing the holding member permanently to the container.

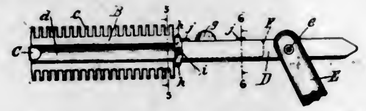
3. A sealing device for a container, provided with a breakable element and a holding member, said holding member connected to the breakable element and having a chamber and a resilient device in said chamber for securing the holding member permanently to the container.

4. A sealing device for a container, comprising a pair of holding members each of which is provided with a chamber having a resilient fastening device therein and an aperture leading from the chamber, and a breakable element having ends which extend through said apertures.

5. A bottle having recesses, holding members permanently fastened in said recesses and having closed chambers, and a sealing element having its ends arranged in said chambers, said element adapted to prevent withdrawal of the container-closure or contents of the container.

[Claims 6 and 7 not printed in the Gazette.]

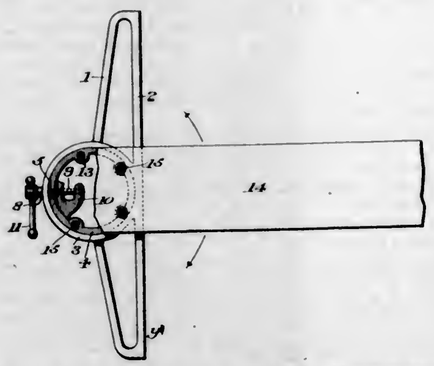
885,410. RAZOR. BARNETT J. WELLER, New York, N. Y. Filed Sept. 5, 1907. Serial No. 391,501.



1. In a razor, the combination of a guard plate provided with a groove, holding means carried at one end thereof, a blade adapted to be engaged at one end by said holding means and having a notch at its other end, and a sliding clamp member carried at the other end of the guard plate adapted to slide over the other end of said blade, the clamping member being provided with a downward projection adapted to slide within said groove and to abut against the edges of said notch, substantially as described.

2. In a razor, the combination of a guard plate, a shank comprising two parallel plates carried by the guard plate, a clamp member slidably carried between said plates, holding means carried by the guard plate, and a blade adapted to be held in place on the guard plate between the clamping member and the holding means, substantially as described.

885,411. T-SQUARE. EMIL WERNER, Philadelphia, Pa., assignor of one-half to Adrian St. Clair Garman, Philadelphia, Pa. Filed Aug. 13, 1907. Serial No. 388,348.



1. In a device of the character stated, the combination with a limb having a head, of an expansion ring rotatably carried by said head, a blade secured to said ring, and means disposed at an angle to and extending toward the axis of the ring and having a bearing in proximity to said axis for effecting the expansion and contraction of said ring.

2. In a device of the character stated, the combination with a limb having an annular head, of an expansion ring rotatably carried by said head, a blade fixedly secured at one end to said ring and means for effecting the expansion and contraction of said ring, said means being disposed at an angle to and toward the axis of said ring and in engagement with said ring only and entering between the separated ends thereof.

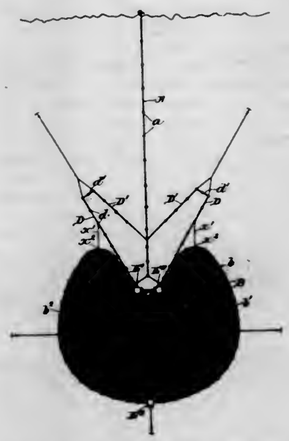
3. In a device of the character stated, the combination with a limb having a head, of an expansion ring provided with a conical aperture and rotatably mounted within said head, a blade secured at one end to said ring, and means engaging said aperture for effecting the expansion and contraction of said ring, said means being disposed at an angle to and extending toward the axis of said ring and having a plurality of bearings in said ring only.

4. In a device of the character stated, a limb having a recess therein, a split ring rotatably mounted in said recess and provided with an aperture formed in adjacent edges of its ends, an expansion member adapted to engage said aperture and having its inner end threaded, said ring having an inward extension with which the threaded end of said expansion member engages, and a blade secured to said ring.

5. In a device of the character stated, the combination of a limb having an annular recess therein, of a slotted ring rotatably mounted therein, said slot having a tapered aperture in the adjacent edges thereof, said ring having a lug, an expansion member provided with inclined walls adapted to engage the walls of said aperture and having a threaded extension engaging said lug, an actuating handle for said expansion member, and a blade secured to said ring.

[Claims 6 to 8 not printed in the Gazette.]

885,412. FISH-TRAP. JACKSON R. WILLIAMS, Provincetown, Mass. Filed Nov. 30, 1906. Serial No. 345,679.



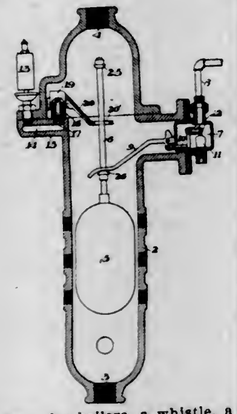
1. A fish trap, comprising a leader net; a "heart" made up of side nets D and reëntrant nets D'; a bib piece; the leader net, heart nets and bib piece extending to the bottom; a pound, made up of a bottom and a side wall having an opening upon one side; the leader net entering the base of the "heart" to guide the fish into the "heart," the "heart" walls and the bib piece converging to the opening in the wall of the pound to guide the fish into the pound.

2. In a fish trap the combination of a "heart;" a bib piece and a "pound" made up of a bottom and side wall and having an opening in its side wall, the "heart" walls and the bib piece extending to the bottom, the "heart" and the bib piece converging to the opening in the wall of the "pound" to guide the fish into the "pound" and means to raise the bottom of the "pound" adjacent to the

opening in the wall of the "pound" to the surface of the water, to close said opening.

3. In a fish trap, the combination of a "heart" made up of nets D, D'; a bib piece; a "pound" B made up of a bottom b^2 and side wall b' and having an opening in its side wall to which the heart and bib piece converge to guide the fish to the opening; a weighted spreader bar e' supported by the wall D of the "heart" adjacent the lower side of the opening in the wall b' of the "pound"; floats E' E'', carrying the opposed ends of the wall b' at the opening; and tackles connecting the bottom of the "pound" at the opening in the wall b' with the floats E', E'', to raise the bottom of the "pound" to close the opening in its wall.

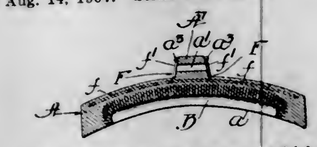
885,413. ALARM FOR BOILERS. JOHN M. WILLIAMS, Pittsburg, Pa. Filed May 17, 1907. Serial No. 374,135.



1. In an alarm for boilers, a whistle, a steam chamber communicating therewith, a ported plug forming the steam inlet to said chamber, a needle valve in the plug for controlling said port, a block loosely seated on said plug and to which the valve is pivoted, said block having depending guides engaging the plug at opposite sides and a float-actuated arm connected to said block; substantially as described.

2. In an alarm for boilers, a whistle, a steam chamber communicating therewith, a ported plug forming the inlet to said chamber, a recessed block seated loosely on the upper end of the plug, and a valve in the plug and having its stem pivoted in the recess of the block, said block having depending projections engaging lugs on the plug, and also having an actuating arm; substantially as described.

885,414. BRAKE-SHOE. EDWIN S. WOODS, Chicago, Ill. Filed Aug. 14, 1907. Serial No. 388,437.



1. A brake-shoe, the wearing face of which is formed partially of soft metal and having a depression of substantial depth, the side and bottom walls of which depression are chilled to provide hardened areas on the sides and bottom thereof.

2. A brake-shoe, the wearing face of which is formed with a depression of substantial depth, having a part which extends longitudinally of said face, the side and bottom walls of said depression being chilled to provide hardened areas at the sides and bottom thereof.

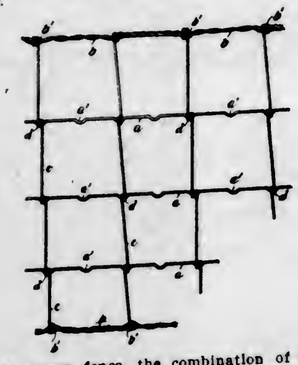
3. A brake-shoe, the wearing face of which is formed partially of soft metal and having a depression of substantial depth extending in part transversely of the wearing face, the side and bottom walls of the depression being chilled to provide hardened areas at the sides and bottom thereof.

4. A brake-shoe, the wearing face of which is formed partially of soft metal and having a depression of substantial depth extending from side to side of the wearing face and open at the ends thereof at the side margins of said face, the walls of the depression being chilled to provide hardened areas exterior to the depression.

5. A brake-shoe, the wearing face of which is formed with a depression, of which a portion extends longitudinally of the face and a portion extends transversely of said face, the walls of said depressions being chilled to provide hardened areas exterior to said depression.

[Claims 6 to 10 not printed in the Gazette.]

885,415. WOVEN-WIRE FENCE. GEORGE M. WRIGHT, Worcester, Mass. Filed Nov. 27, 1906. Serial No. 345,283.



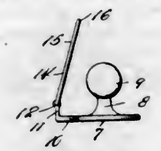
1. In a woven fence, the combination of longitudinal wires and a continuous stay wire wound around the longitudinal wires, said stay wire being passed from one side of the fence fabric to the other, twisted in with the selvage wire at one side, then passed to the other side around the longitudinal wires and twisted in with the opposite selvage wire, and then back around the longitudinal wires and so on in a continuous manner.

2. In a woven fence, the combination of longitudinal wires each having a series of crimps or off-sets, and a continuous stay wire wound around the longitudinal wires at the crimps, said stay wire being passed from one side of the fence fabric to the other, twisted in with the selvage wire, then passed back to the other side and twisted in with the opposite selvage wire, and so on in a continuous manner along the fabric.

3. In a woven wire fabric, the combination of longitudinal wires, twisted selvage wires parallel therewith, and a stay wire, said stay wire being wound a plurality of times around the longitudinal wires, passing from one side of the fabric to the other, then being wound a plurality of times around the selvage wire and twisted in therewith along the same for a certain distance, then brought back across the fabric in an opposite direction, being twisted around the several longitudinal wires, then being twisted around the opposite selvage wire and twisted with it longitudinally of the same for a short distance, then turned back around the longitudinal wires and so on forming a continuous stay wire.

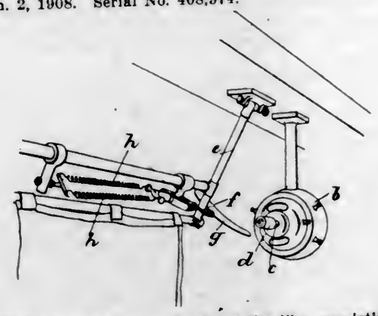
885,416. COLLAR-BUTTON. HARRY J. WYLIE, Kutztown, Pa. Filed May 18, 1906. Serial No. 317,612.

A button comprising a base including a lateral extension provided at its free end with an upwardly-extending member; a stem secured centrally to said base; a U-shaped retainer having the inturned ends of its legs pivoted to said member, said retainer being adapted to be swung into and out of engagement with the stem; and a head pivoted to said stem, for movement in a direction at right angles



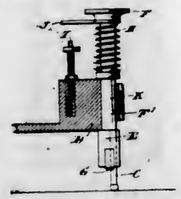
to that of said retainer, directly over the latter when in engagement with said stem, whereby the retainer is held against displacement from said stem.

885,417. ELECTRICALLY-OPERATED PUNKA AND THE LIKE. HARRY H. YOUNG, Colchester, England, assignor to himself, and Bergtheil and Young Limited, London, England, a Corporation of Great Britain. Filed Jan. 2, 1908. Serial No. 408,974.



Means for operating punkas and the like, consisting of a rotary electro-motor and an oscillating punka frame in combination with a friction pulley carried by the said motor, a friction blade pivotally carried by said frame and adapted to contact with and be driven by said pulley and adjustable springs connected to said frame and said friction blade adapted to maintain the said blade in operative contact with the said pulley substantially as described.

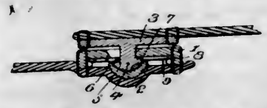
885,418. REPRODUCTION OF MAPS AND THE LIKE. EDWARD ABERLE, New York, N. Y. Filed Aug. 31, 1906. Serial No. 332,747.



1. The herein described process of reproducing maps and the like, which consists in first applying the line-work to a plate or surface, then stamping entire words or abbreviations on the plate or surface at one time and limiting the pressure applicable during this operation so that every letter of every word or abbreviation will receive the same amount of pressure, preparing the plate for printing, and making an impression therefrom.

2. The herein described process of reproducing maps and the like, which consists in first applying the line-work to a plate or surface, then stamping the lettering on the plate or surface while limiting the pressure applicable during this operation, preparing the plate for printing, and making an impression therefrom.

885,419. SNAP-FASTENER. JOSEPH M. ADAMS, Melrose, Mass. Filed May 8, 1907. Serial No. 372,518.

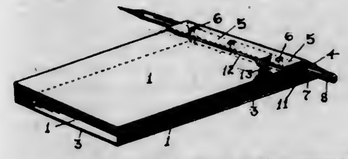


1. In a fastener, the combination of a socket plate provided with a socket having a shoulder on one side thereof and an incision in the opposite side, a spring arm carried by the socket plate and received by the said incision, and a key plate carrying a key designed to be received within the socket and having opposite sides thereof notched, the said key being movable laterally within the socket to permit one of the notches to be moved into and out of engagement with the shoulder of the socket, the opposite notch being yieldingly engaged by the spring arm.

2. In a fastener, the combination of a socket plate carrying a flattened socket having an incision in each end thereof, one of the incisions being located adjacent a portion of the socket plate constituting a shoulder, a key plate carrying a flattened key having opposite ends thereof notched, the said key being movable within the socket to permit one of the notches to be moved into or out of engagement with the before mentioned shoulder, and a spring arm carried by the socket plate and received within one of the incisions of the socket to yieldingly engage the opposite notch of the key.

3. In a fastener, the combination of a socket plate, having the edges thereof returned, the said socket plate being formed with a socket having a shoulder at one end thereof and an incision at the opposite end, a key plate formed with a key designed to be received loosely within the socket and having opposite sides thereof notched, the movement of the key within the socket permitting one of the notches to be thrown into and out of engagement with the shoulder, and a spring strip having end portions thereof curved and engaging the returned edges of the socket plate, an intermediate portion of the spring strip being crimped and formed with a flattened portion received within the incision of the socket and yieldingly engaging the opposite notch of the key.

885,420. WRITING-TABLET. GEORGE S. ANSELL, Berkley, Va. Filed Jan. 13, 1905. Serial No. 240,913.

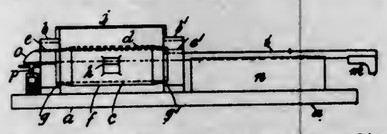


The combination, with a writing tablet composed of a plurality of superposed sheets of paper, of a stiffening back therefor provided at one end with an extension bent around the adjacent end of the tablet and over and upon the uppermost sheet, the space between said extension and the end of the tablet forming a pencil-receiving cavity, the upper edge of said extension forming a cutter along which sheets of paper are torn during their detachment.

885,421. APPARATUS FOR MAKING CIGARETTES. LAZARIDAS APTEKMAN, London, England. Filed July 1, 1907. Serial No. 381,771.

1. In an apparatus for making cigarettes, the combination of a pair of standards formed with openings, a cylindrical bar secured in said standards and having a cylindrical longitudinal groove in line with the openings in the standards, a sleeve having an opening in its periphery and fitting on the cylindrical bar, a handle on the sleeve to bring the opening of said sleeve into register with the longitudinal groove in the cylindrical bar, a concave filler

adapted to slide through the openings in the standards and the groove in the bar, means for limiting the movement of the filler, and a delivery tube in line with the opening in one of the standards to receive a cigarette tube.



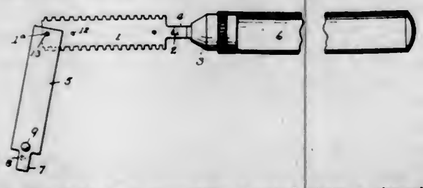
2. In a cigarette making apparatus, the combination with a cylindrical bar formed with a tobacco receiving groove, a sleeve formed with an opening in its periphery and fitted upon the cylindrical bar and adapted to turn thereon to bring the opening therein into register with the tobacco receiving groove in the bar, a hopper comprising a fixed section and a second section carried by the sleeve, said sleeve when turned forcing the second hopper section toward the fixed hopper section and also covering the groove in the bar, and a filler having a tobacco ejecting portion adapted to be turned in the groove and then forced lengthwise thereof to eject the tobacco.

3. In a cigarette making apparatus, the combination with standards formed with openings, a stationary hopper section a movable element formed with an opening and mounted in the standards and having a hopper section adjacent and spaced from the stationary hopper section when the movable element is in normal position, the movable element when turned closing the bottom of the hopper, and a filler adapted to operate in the openings in the standards and in the interior of the movable element to force tobacco from the opening of the movable element through the opening in one of the standards.

4. In a cigarette making apparatus, the combination with a stationary bar formed with a groove in its periphery, an element operating over the groove to open and close the same, a hopper for directing tobacco to the groove when the element opens the same, a tube in line with the groove to receive a cigarette tube, and a filler having a concave portion normally fitting in the groove to receive the tobacco from the hopper and an enlarged portion of substantially the cross sectional area of the groove to force the tobacco from the latter into the tube.

5. In a cigarette making apparatus, the combination with a bar having a longitudinal open groove, a hopper over the groove, means for covering the groove and closing the bottom of the hopper, a filler comprising a concave portion normally fitting in the groove to receive tobacco from the hopper and a headed portion at the end of the concave portion, said filler being adapted to be operated lengthwise of the groove, a tube in line with the groove to receive a cigarette tube into which the tobacco is ejected by the filler.

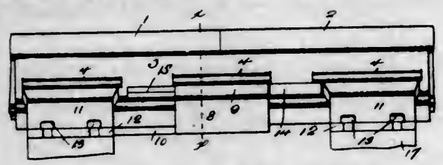
885,422. SAFETY-RAZOR. FREDERICK H. ARNOLD, Reading, Pa. Filed May 28, 1906. Serial No. 319,074.



1. A safety razor comprising a guard plate, a clamping plate pivoted thereto for edgewise movement only, a blade lying between said plates, and means for holding the free ends of the plates together.

2. A safety razor comprising a guard plate, a clamping plate pivoted thereto for edgewise movement only, a blade lying between said plates, said guard plate having an indentation and the clamping plate having a lug which is adapted to snap into engagement with said indentation.

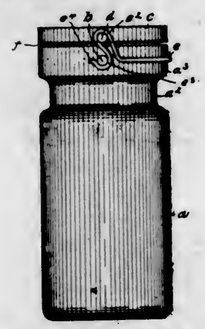
885,423. RAIL-JOINT. JAMES H. BARNHART, Empire, Ohio. Filed Aug. 31, 1907. Serial No. 390,905.



1. The combination with the meeting ends of railway rails, of a chair embracing the rails and provided with projecting arms, fish bars provided with longitudinally-disposed flanges positioned against the webs and base of the rails and having portions thereof embraced by said chair, said fish bars provided with longitudinally-disposed flanges, supplemental chairs adapted to be spiked to the railway ties on opposite sides of the first mentioned chair, and one of said supplemental chairs abutting against the arms of the first mentioned chair, and a wedge-shaped key formed with a longitudinal groove and positioned between one edge of the joint chair and a fish bar below the flange of the latter, the said edge being shaped to receive said groove.

2. The combination with the meeting ends of railway rails, of a chair embracing the rails and provided with projecting arms, fish bars provided with longitudinally-disposed flanges positioned against the webs and base of the rails and having portions thereof embraced by said chair, said fish bars provided with longitudinally-disposed flanges, supplemental chairs adapted to be spiked to the railway ties on opposite sides of the first mentioned chair, and one of said supplemental chairs abutting against the arms of the first mentioned chair, and a wedge-shaped key formed with a longitudinal V-shaped groove and positioned between one edge of the joint chair and a fish bar below the flange of the latter, the said edge being shaped to receive said groove.

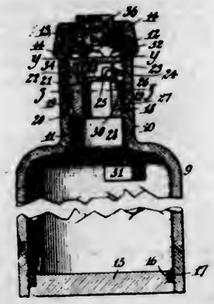
885,424. CLOSURE DEVICE FOR JARS, BOTTLES, AND THE LIKE. ALEXANDER R. BELL, Scarborough, England. Filed July 26, 1907. Serial No. 385,646.



1. A jar or other vessel, the top of which is provided at opposite sides with projecting lugs, a cap having corresponding lugs, and a bail the side portions of which are bent to form loops adapted to engage the lugs on the cap and to form hooks adapted to engage the lugs at the top of the vessel, substantially as shown and described.

2. A jar or other vessel, the top of which is provided at opposite sides with projecting lugs, a cap having corresponding lugs, and a bail the side portions of which are bent to form loops adapted to engage the lugs on the cap and to form hooks adapted to engage the lugs at the top of the vessel, said cap being provided with a depending member adapted to enter the top of the vessel and a packing gasket placed between the cap and the top of said vessel.

885,425. NON-REFILLABLE BOTTLE. ALEXANDER BENNETT, Buffalo, N. Y. Filed Oct. 18, 1907. Serial No. 398,062.



1. A non-refillable bottle having a depressible bottom, a valve in the neck of said bottle held in closed position when the bottle is in upright position, a weight in the body of the bottle, and mechanism between said weight and said valve to cause the latter to be held in closed position when the bottle is inverted, said valve being opened only by forcing said bottom into the body of the bottle and subjecting the contents to pressure.

2. In a non-refillable bottle, the combination of a sleeve in the neck thereof provided with a valve-seat, a valve closing inward against said seat, weight-controlled mechanism for holding said valve in closed position when the bottle is inverted, and means for subjecting the contents of the bottle to pressure so as to counteract the force of said weight-controlled means.

3. In a non-refillable bottle, the combination of a sleeve held in the neck thereof and having a valve-seat at its upper end and lugs projecting from the upper edge of said sleeve, a guard supported on said lugs, a valve seated against said valve-seat, a pivoted dog between said valve and said guard, a weighted rod movable lengthwise of the bottle-neck and acting against said dog to cause the latter to hold said valve in closed position when the bottle is inverted, and a depressible bottom adapted to be forced into the bottle to subject the contents thereof to pressure and cause the opening of said valve against the force of said weighted-rod.

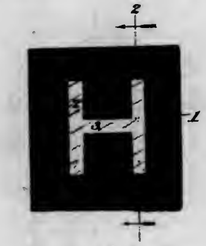
4. In a non-refillable bottle, the combination of a sleeve held in the neck thereof and having a valve-seat at its upper end, a lug projecting from the upper edge of said sleeve and a pair of lugs projecting from said edge at a point diametrically opposite said first-mentioned lug, a dog pivotally held between said pair of lugs, a weighted-rod slidable longitudinally between said sleeve and the wall of the bottle neck and adapted to actuate said dog, a guard supported on the lugs of said sleeve, and a depressible bottom adapted to be forced into the body of the bottle to subject the contents thereof to pressure for the purpose of opening the valve.

5. In a non-refillable bottle, the combination of a sleeve held in the neck thereof and having a valve-seat at its upper end and a longitudinal groove, a valve held against said valve-seat, a guard above said valve, a pivoted dog between said guard and valve, a weighted-rod movable in the longitudinal groove of said sleeve and adapted to actuate said dog when the bottle is inverted so as to cause said dog to retain said valve against its seat, and a depressible bottom adapted to be forced into the body of the bottle when inverted to subject the contents thereof to pressure and cause the valve to be opened against the force of said weighted-rod.

[Claims 6 and 7 not printed in the Gazette.]

885,426. SIGN. GEORGE BITTLE, Sharonville, Ohio. Filed Sept. 16, 1907. Serial No. 393,225. (Specimens.)

1. A sign consisting of a thin sheet of metal colored and varnished, a thin sheet of transparent celluloid material adhesively secured to the back-ground, and a character formed of metal foil embedded within the celluloid, substantially as described.

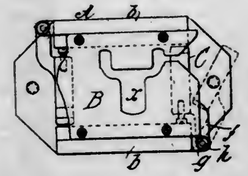


2. A metal foil character secured between two transparent sheets of celluloid material, substantially as described.

3. A metal foil character secured between two transparent sheets of celluloid material, and a colored display back-ground for the character, substantially as described.

4. A sign consisting of a colored and varnished back-ground, a thin sheet of transparent celluloid adhesively secured thereto, a metal foil character adhesively secured to said sheet, and a second sheet of transparent celluloid material adhesively secured over the first sheet and character, substantially as described.

885,427. TRIMMING-CHAIR FOR FORGINGS. LUCIEN P. BLOT, Springfield, Mass. Filed Dec. 20, 1907. Serial No. 407,328.

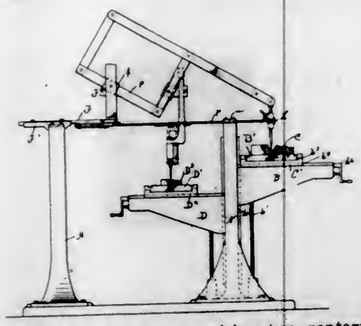


1. In an apparatus for trimming forgings, a hollow metallic body having an opening at its end, and including a top plate provided with a trimming die opening therethrough, and provided with a member which is hinge connected to the hollow body and movable to have a supporting engagement under the end portion of the die plate and to be displaced from the open end of the hollow body for freely permitting the withdrawal of a trimmed forging.

2. In an apparatus for trimming forgings, a hollow metallic trough shaped body or chair having an opening at its end, and having at the upper edge of its upstanding opposite walls step shaped rests or seats, a top plate provided with a trimming die opening therethrough, removably supported at its opposite edge portions by said rests, and a member, hinge-connected to the hollow body and movable to have a supporting engagement under the end portion of the die plate and to be displaced from the end of the hollow body for permitting, freely, the withdrawal of a trimmed forging from within the chair.

3. In an apparatus for trimming forgings, a hollow metallic body or chair having an opening at its end, and including a top plate provided with a trimming die opening therethrough, and provided with a member which is hinge connected to the end portion of the chair and movable and adapted to be itself supported in one position thereof by the base of the chair, and to then support the end portion of the die plate, and to be displaced from the open end of the chair to permit the withdrawal from therewithin of a trimmed forging.

885,428. ENGRAVING-MACHINE. WILLIAM E. BAIERLEY, Cleveland, Ohio. Filed Aug. 23, 1905. Serial No. 275,468.



1. A engraving machine comprising two pantographs, located and operating at right angles to each other, each having an adjustable fulcrum, said fulcrums being in vertical alinement, said fulcrums comprising sliding blocks, pivotally secured for the purpose set forth.

2. The combination in an engraving machine of two pantographs, having a pivotal and adjustable connection with each other, a tracer holder adjustably connected with the said pantographs, and a tool holder, adjustably connected with said pantographs, to control the adjustment of the tracer holder, and tool holder, to varying surfaces, and to positively control the relative motion of the tracer and tool holder, and to control the ratio of adjustment, also to control the adjustment after the ratio has been set to a desired adjustment.

3. In an engraving machine the combination of two pantographs operating at different angles, said pantographs being pivotally connected through adjustable clamps to a common pivotal member, a tracer holder carried on the pantographs and having an adjustable connection with said pantographs, a tool holder also carried by said pantographs, and having an adjustable connection with said pantographs.

4. The combination in an engraving machine of a frame, or bed, for the machine, having a retaining arm, a pantograph having an adjustable connection with the said arm, and an auxiliary pantograph, having an adjustable connection to the said arm, a tool holder, and a tracer holder, carried by the said pantographs, an adjustable work holder carried by the bed of the machine, and an adjustable pattern holder, carried by the bed of the machine.

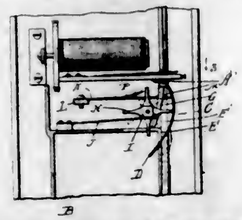
5. The combination in an engraving machine of a frame for the machine, an adjustable slide, carried by the frame, and a vertical pantograph having an adjustable pivotal connection with the said slide, and a horizontal pantograph having an adjustable pivotal connection with said slide, a tool holder carried by the said pantographs, and a tracer holder, carried by the said pantographs, an adjustable work holder, carried by the frame of the machine, and an adjustable pattern holder carried by the frame of the machine.

[Claims 6 to 10 not printed in the Gazette.]

885,429. TELEPHONE TOLL-BOX. ODILON BRISBOIS, Chicago, Ill., assignor of one-third to Richard W. Poelma and one-third to Martin Dahl, Chicago, Ill. Filed May 14, 1907. Serial No. 373,658.

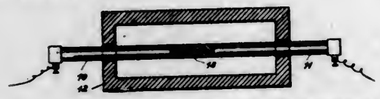
1. In a telephone toll box, the combination with a coin actuated turnstile, of a stop normally disposed in the path thereof and adapted to prevent rotation thereof, a stop normally disposed out of the path of said turnstile, said stops being adapted to be actuated by the coin actuating said turnstile to move said first-named stop out of the path and said last-named stop into the path thereof to limit the arc of rotation of said turnstile.

2. In a telephone toll box, the combination with a coin actuated turn-stile, of coin controlled means limiting the movements thereof, said means comprising a spring actuated arm, a projection thereon normally disposed in the path of said turnstile to prevent rotation thereof in either direction, an L-shaped projection between the ends of said arm, a stop disposed on the free end thereof oppositely disposed to said first-named projection and located



rearwardly thereof, said stop being normally disposed out of the path of said turnstile, the coin actuating said turnstile being adapted to actuate said arm to move said projection and said stop to permit said turnstile to rotate through a given arc.

885,430. THERMO-ELECTRIC COUPLE. WILLIAM H. BAISTOL, New York, N. Y. Filed Dec. 27, 1907. Serial No. 408,316.



1. A thermo-electric couple, the two elements which consist of graphite.

2. A thermo-electric couple, one element of which consists of substantially pure carbon, and the other of carbon containing an impurity.

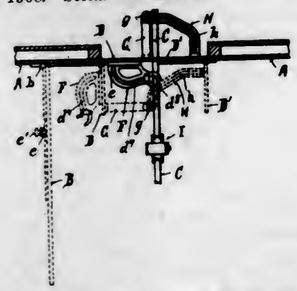
3. A thermo-electric couple, one element of which consists of substantially of pure graphite, and the other graphite containing an impurity.

4. A thermo-electric couple, the two elements of which consist of carbon, and one of the elements containing a clay.

5. A thermo-electric couple, the two elements of which consist of carbon, and each containing a different clay.

[Claims 6 to 13 not printed in the Gazette.]

885,431. DOOR-ACTUATING MECHANISM. JOHN BRUNZWICK, Cincinnati, Ohio, assignor to The C. Schmidt Company, Cincinnati, Ohio, a Corporation of Ohio. Filed Jan. 13, 1908. Serial No. 410,607.



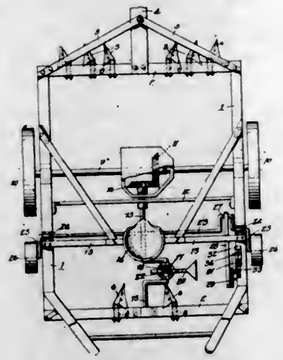
1. In a mechanism of the character indicated a main door, an auxiliary door, a stud carried by the main door, and a plate attached to the auxiliary door, projecting outwardly at substantially right angles to said auxiliary door, and having a curved slot open at its outer end to engage the stud of the main door to cause the auxiliary door to automatically open and close whenever the main door is opened or closed.

2. In a mechanism of the character indicated, a main door, a plurality of auxiliary doors, a stud carried by the main door, a plate carried by said first auxiliary door, said plate being provided with a curved slot to engage said stud to automatically open and close said first auxiliary door whenever the main door is opened or closed, an arm having a pin near its free end carried by said first auxiliary door, and an arm having a curved slot engaging said pin and said last named arm being carried by the second auxiliary door.

3. In a mechanism of the character indicated, a main door, a plurality of auxiliary doors, a stud carried by the main door, a plate having a curved slot carried by the first auxiliary door, and adapted to be engaged by said stud to automatically open and close said first auxiliary door, and means connecting the second auxiliary door with said first auxiliary door to cause said second auxiliary door to automatically open and close.

4. In a mechanism of the character indicated, a main door, an auxiliary door, a stud carried by the main door, a plate carried by the auxiliary door projecting into the path traveled by said stud, said plate being provided with a curved slot open at one end and diverging lips at the open end of said slot to cause said stud to enter and travel in said slot to close the auxiliary door in unison with the closing of the main door, and to open the auxiliary door when the main door is again opened.

885,432. COTTON-CHOPPER. ALEXANDER A. BULLOCK, Williamsboro, N. C. Filed Jan. 4, 1908. Serial No. 409,321.

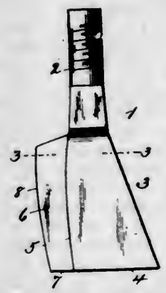


1. In a cotton chopper, the combination of a rotatable shaft, a frame mounted thereon, a chopping member engaging with said frame and provided with a continuously notched shank, and a locking bolt to hold said member in position, substantially as described.

2. In a cotton chopper, the combination of a rotatable shaft, a frame rigidly mounted thereon having radial slots in its face, a chopping member having a shank to engage within selected ones of said slots, said shank being continuously notched, and a locking bolt for engagement with a selected one of said notches to hold said chopping member in position substantially as described.

3. In a cotton chopper, the combination of a wheeled frame comprising side and end members, a crank shaft rotatably mounted in brackets upon said side members in the rear of the wheels of said frame, and provided with a crank portion adjacent one of said side members, said shaft further having angular extensions carrying wheels upon their ends normally free of contact with the ground, and a bell crank and operating mechanism mounted upon said side member adjacent said crank portion and connected therewith, for rocking said shaft to force said wheels carried thereby into engagement with the ground thereby raising the wheels of said frame upwardly therefrom, substantially as described.

885,433. TOOTH FOR THRESHING-MACHINES. FRED B. CARLSON, Holdrege, Nebr. Filed Nov. 11, 1907. Serial No. 401,647.



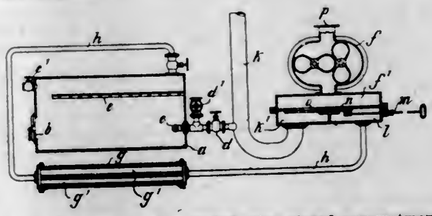
A threshing tooth comprising a shank and a body portion, said body portion tapering from its inner end where it joins the shank to the outer end and being provided along its outer edge with a rib which tapers from the point where it joins the body portion to its outer edge, which latter edge is sharpened along its entire length, and said rib also tapering from its inner to its outer end and being of less width than the body of the tooth whereby to form shoulders on opposite sides, and said ribs also being of less width at its outer end than at its inner end.

885,434. ATTACHING MEANS FOR FASTENING MEMBERS. FRED S. CARR, Malden, Mass., assignor to Carr Fastener Company, Boston, Mass., a Corporation of Maine. Filed June 13, 1907. Serial No. 378,754.



A fastening member having a sheet-metal clamping part adapted to bear on one side of the article to which the member is to be attached, and provided with a series of cuts and with offset portions, each including one edge of one of the cuts, said edges being raised above the clamping part, and constituting inwardly facing elongated jaws adapted to engage and prevent outward displacement of the portion of the article on which the clamping part bears, the said member being provided with a complemental clamping part.

885,435. DISINFECTING APPARATUS. THOMAS A. CLAYTON, Paris, France. Filed May 8, 1906. Serial No. 315,835.



1. In an apparatus for disinfecting closed compartments in combination a furnace, a cooler, a blower, a valve chest, a pipe connecting the furnace and cooler, a pipe connecting the cooler and valve chest, a pipe leading from the valve chest to the blower, a pipe leading from the blower to the compartment to be disinfected, a return pipe the inner end of which opens into the compartment, the outer end of the return pipe being connected to the said valve

chest and not to the cooler, a by pass from the said return pipe to the furnace, the said valve chest having a single valve operating over two orifices, one of these orifices conveying the contents of the return pipe to the blower, and the other admitting a stream of highly concentrated gas from the furnace, an undivided portion of the valve chest situated above the said orifices, where the said gas is mixed with the contents of the return pipe, said blower being situated above the valve chest, so that the mixed gases are drawn from the orifices of the valve chest and forced into the inlet pipe of the compartment.

2. In an apparatus for disinfecting closed compartments in combination a furnace, a cooler, a blower, a valve chest, a pipe connecting the furnace and cooler, a pipe connecting the cooler and valve chest, a pipe leading from the valve chest to the blower, a pipe leading from the blower to the compartment to be disinfected, a return pipe the inner end of which opens into the compartment, the outer end of the return pipe of large area being connected to the said valve chest, a by pass of relatively small area connected from the return pipe to the furnace, a shut down valve therein, an ingress from the atmosphere fixed between the valve and the furnace, a shut down valve therein, a single valve in the said valve chest operating over two orifices, one of a large size conveying the contents of the return pipe to the blower, the other of relatively small size admitting highly concentrated gas from the furnace, an undivided portion of the valve chest situated above the said orifices where the said gas is mixed with the contents of the return pipe, said blower being situated above the valve chest so that the mixed gases are drawn and forced to the inlet pipe of the compartment.

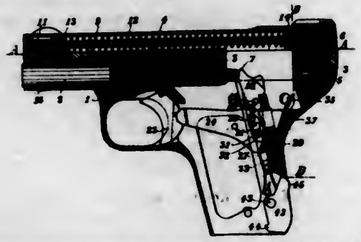
3. In an apparatus for disinfecting closed compartments in combination a furnace, a cooler, a blower, a valve chest, a pipe connecting the furnace and cooler, a pipe connecting the cooler and valve chest, a pipe leading from the valve chest to the blower, a pipe leading from the blower to the compartment to be disinfected, a return pipe the inner end of which opens into the compartment, the outer end of the return pipe of large area being connected at its outer end to the said valve chest, a by-pass of relatively small area connected from the return pipe to the furnace, a central transverse web in the said valve chest having two ports therein, an under vertical division dividing the under portion of the chest between the two ports in the transverse web, one of these ports being of relatively large size making a communication between the said return pipe and the upper undivided portion of the valve chest, the other port of relatively small size making a communication between the gas inlet from the furnace and the said upper portion of the valve chest, a sliding valve upon the under side of the transverse web with two ports therein, one a port larger towards the center of the valve than the port above it, the other a larger orifice towards the center of the valve than the small aperture above it, and a handle to operate the said valve passing through a stuffing box.

885,436. AUTOMATIC PISTOL. CHARLES P. CLÉMENT, Liege, Belgium. Filed June 24, 1907. Serial No. 380,581.

1. In a fire arm a frame supporting a barrel and provided with an abutment integral with the frame at the rear of the barrel, an intervening sliding breech block, and guide bars fitting side recesses in the frame connected integrally with the breech block and together at the rear back of the abutment and with serrated outer faces.

2. The combination in a fire arm of a frame having an abutment integral therewith, and supporting a barrel forward of and in line with said abutment, a breech block sliding between the abutment and the barrel and having a forwardly extending bar, a spring bearing on the frame at the rear and arranged above said bar, and a projection on the bar for engaging the front end of the spring.

3. The combination in a fire arm of a frame having an abutment integral therewith, and supporting a barrel forward of and in line with said abutment, a breech block sliding between the abutment and the barrel and having a forwardly extending bar, a spring bearing on the frame at the rear and arranged above said bar, and a projection on the bar for engaging the front end of the spring, and a casing inclosing the spring and supported at the rear by said abutment.

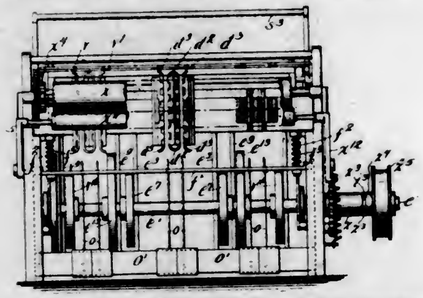


4. The combination in a fire arm of a frame, a barrel supported thereby, an abutment on the frame beyond the rear of the barrel, a breech block sliding between the barrel and the abutment, a bar extending over the barrel forward from the breech block and provided with a forked projection, a rod supported at the rear by the abutment, extending over the bar and carrying a coiled spring, and a sleeve sliding on the rod in a position to be engaged by the projection.

5. The combination in a fire arm of a frame supporting a barrel and with an abutment at the rear of the barrel, an intervening recess and breech block sliding therein, an ejector rod connected with the abutment and lying on the face of the recess, the breech block having a groove receiving said rod.

[Claims 6 and 7 not printed in the Gazette.]

885,437. MACHINE FOR GATHERING AND SEWING THE HEADS OF MANTLES. SAMUEL COHN, New York, N. Y. Filed Nov. 22, 1901. Serial No. 83,302.



1. In a machine for shirring, gathering or corrugating tubular or like fabrics, the combination of a toothed center member slotted for the passage of a thread, a plurality of movable toothed fabric corrugating jaws coöperating with said center member and having lateral slots therein for the passage of a thread and a spring device carried by the center member for ejecting the shirring string laterally from the slot in the said center member.

2. In a machine for gathering the mouths of tubular or like structures, the combination of a plurality of sets of movable corrugating means, means for moving the same simultaneously, one of each set serving as a center member for the organism.

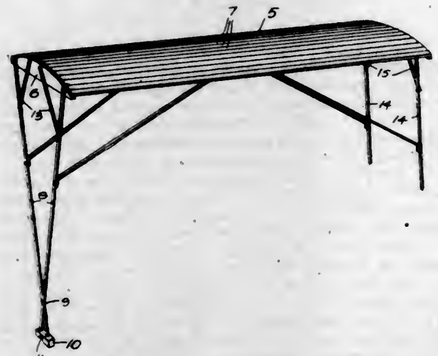
3. In a machine for gathering the open mouths of tubular or like structures, the combination of a plurality of sets of movable jaws provided with teeth or corrugations, the teeth or corrugations of each jaw being adapted to mesh simultaneously with the teeth or corrugations of another jaw, a plurality of the said movable jaws of the said sets being located within the periphery of the said open mouth of the tubular structure when the tubular structure is in position on the same.

4. In a machine for sewing the heads of mantles or like tubular structures the combination of a gang of individual sets of means for corrugating a tubular or like structure, a series of needle mechanisms, one of which cooperates with each set, the said needles being carried by a common carrier and a common operating means for producing harmonious relative movement between the needles and the individual parts or members of the gang.

5. In a machine for gathering the mouths of tubular or like structures, the combination of a gang of sets of mouth-gathering means, a gang of needles coöperating individually with individual sets of the mouth-gathering means and carried by a common movable support, and means connecting the needles and mouth-gathering means adapted for bringing about harmonious action between the parts.

[Claims 6 to 17 not printed in the Gazette.]

885,438. SUNSHADE. JOSEPH H. COFFMAN, Manhattan, Kans. Filed Sept. 14, 1907. Serial No. 392,941.



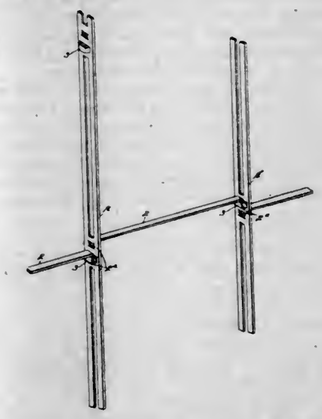
1. The combination in a sunshade for vehicles, of a top comprising a series of spaced arcuate cross-beams and longitudinal slats secured to the upper edges thereof; a front pair of braces attached at their upper ends to one of the forward cross-beams and at their lower ends to a block adapted to be carried by the pole of the vehicle, said braces being connected together intermediate their ends; and a rear pair of vertical braces attached at their upper ends to the rear cross beam, and adapted to be secured at their lower ends to the corresponding sides of the vehicle.

2. The combination, in a sunshade for vehicles, of a top comprising a series of parallel cross-beams having arcuate upper edges, and longitudinal slats secured to said edges, the side edges of adjacent slats being disposed in contact with each other; a front pair of braces attached at their upper ends to one of the forward cross-beams and at their lower ends to a block adapted for engagement with the pole of the vehicle and provided with a seat for the reception of said pole, said braces contacting with each other intermediate their ends and being connected together at such point; and a rear pair of vertical braces attached at their upper ends to one of the rear cross-beams and adapted to be secured at their lower ends to the corresponding sides of the vehicle.

3. The combination, in a sunshade for vehicles, of a top consisting of a series of spaced cross-beams, and a covering of longitudinally-disposed slats secured to the upper edges thereof; a pair of oppositely-bowed metal braces secured at their upper ends to one of the forward cross-beams and at their lower ends to a block adapted to be engaged with the pole of the vehicle, said braces contacting with each other intermediate their ends, and being connected together at such point; and a rear pair of vertically-disposed metal braces attached at their upper ends to one of the rear cross-beams, and adapted to be secured at their lower ends to the corresponding sides of the vehicle.

4. The combination, in a sunshade for vehicles, of a top comprising a series of parallel cross-beams having arcuate upper edges, and longitudinal slats secured to said edges, the side edges of adjacent slats being disposed in contact with each other; a front pair of oppositely-bowed metal braces attached at their upper ends to one of the forward cross-beams, and at their lower ends to a block adapted for engagement with the pole of the vehicle and provided with a seat for the reception of the said pole, said braces contacting with each other intermediate their ends and being connected together at such point; and a rear pair of vertical metal braces attached at their upper ends to one of the rear cross-beams and adapted to be secured at their inner ends to the corresponding sides of the vehicle.

885,439. FIREPROOF BUILDING CONSTRUCTION. CORNELIUS COLLINS, San Francisco, Cal. Filed Aug. 21, 1907. Serial No. 389,456.



1. A building structure consisting of vertical metal strips having rectangular sections cut out at intervals, and loops formed transversely and alternately upon opposite sides of the strips, said removed tongues or sections having their ends bent into hook form and engaged with the loops.

2. Vertical partition strips standing transversely to the plane of the partition, said strips having tongues cut out therefrom, leaving openings through the strips, said tongues having their ends bent at right angles, and a length substantially equal to the distance between two adjacent strips, and loops formed transversely in the partition strips between the longitudinal channels, with which loops the bent ends of the tongues are engaged.

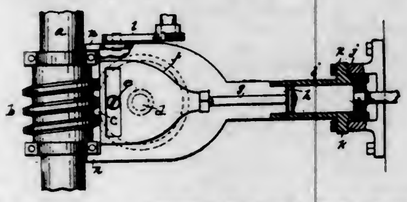
3. In a building and like structures, metallic partition and floor supporting strips, tongues cut out to leave longitudinal openings, said tongues having their ends bent into hook form, and loops formed transversely and between the ends of the longitudinal openings to receive said hooks and unite and support the strips.

885,440. AIR-PUMP FOR STREET-CARS AND ANALOGOUS PURPOSES. WILLIAM A. COLLINS, and WILLIAM WESTBROOK, Detroit, Mich. Filed Oct. 29, 1907. Serial No. 399,708.

1. An air pump comprising an axle, a worm mounted thereupon, a gear meshing with the worm, a reciprocatory head eccentrically connected with the gear, an oscillatory piston cylinder and a piston actuated by the reciprocation of said head, said cylinder forming an inclosing case for said gear and said head.

2. An air pump comprising an axle, a worm engaged upon the axle, a gear meshing with the worm, a piston cyl-

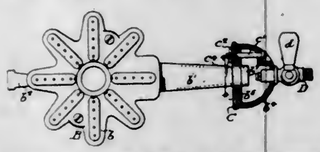
inder, and a reciprocatory piston within the cylinder actuated by the rotation of the gear, said cylinder forming an inclosing case for said gear and said head, and projecting over the extremities of the worm to hold the case from moving longitudinally of the axle.



3. An air pump comprising an axle, a worm mounted thereupon, a gear meshing with the worm, a reciprocatory head eccentrically connected with the gear, an oscillatory piston cylinder, and a piston actuated by the reciprocation of said head, said cylinder carried forward to form an inclosing case for the gear and head and provided with projecting shoulders on each side of the worm to hold the case from moving longitudinally of the axle, said gear movable into and out of engagement with said worm.

4. The combination with an axle of a worm mounted thereupon, a gear meshing with the worm, a reciprocatory head eccentrically connected with the gear, a piston cylinder, and a piston actuated by the reciprocation of said head, said cylinder having a jointed engagement with a suitable support at one extremity thereof, and means to throw the gear out of engagement with the worm.

885,441. GAS-BURNER. EDWARD M. COLQUHOUN, Philadelphia, Pa. Filed Apr. 8, 1907. Serial No. 367,036.



1. The combination of a burner, a gas supply pipe, a casing forming a mixing chamber connected between said supply pipe and the burner and provided with an opening or openings for the admission of air, an adjustable member for regulating the size of the openings, a bolt having a nut for retaining said member in any adjusted position, and a forked lug engaging said nut for keeping the same from turning, substantially as described.

2. The combination of a burner, a mixing tube therefor having a forked lug, a gas supply pipe, a casing forming a mixing chamber connected between the supply pipe and the mixing tube and provided with a flat face directed toward the burner, there being an opening or openings in said face, a plate mounted adjacent to the face and adjustable to vary the size of the openings therein, a bolt passing through the casing and said plate, and a nut on said bolt engaged by the forked lug of said mixing tube, substantially as described.

3. The combination of a burner, a gas supply pipe, a hemispherical casing forming an air guiding chamber having a plane surface facing said burner and provided with an opening or openings for the admission of air, and a mixing tube extending from the casing to the burner, said mixing tube increasing in diameter from a portion of minimum diameter both toward the mixing chamber and toward the burner, substantially as described.

885,442. GRAPPLE. EDWARD D. COOGAN, Caulksville, Ark. Filed Oct. 24, 1907. Serial No. 399,013.

1. In a grapple, the combination with a pole, of a sleeve carried by the pole, said sleeve being provided with a pair of oppositely-disposed spring arms extending below the lower end of the pole and having their free ends inclined outwardly, away from each other, said arms being formed integral with the sleeve.



2. In a grapple, the combination, with a pole having a pointed lower end, of a sleeve slidably mounted upon the pole and provided with a pair of oppositely-disposed depending arms extending below said pointed end, each arm having a barb formed on its inner face at the lower end thereof, and means for retaining the sleeve in adjusted position with respect to the pointed end of the pole.

3. In a grapple, the combination, with a pole, of a sleeve carried by the pole adjacent its inner end, said sleeve being provided with a pair of oppositely-disposed depending spring arms having their lower ends inclined outwardly, each arm having a separate inwardly extending barb formed on its inner face above the inclined end thereof.

4. The combination, in a grapple, of a pole, a sectional sleeve carried by the pole adjacent its lower end, each sleeve section being provided with a spring arm extending downwardly from the lower edge thereof and having its lower end inclined outwardly.

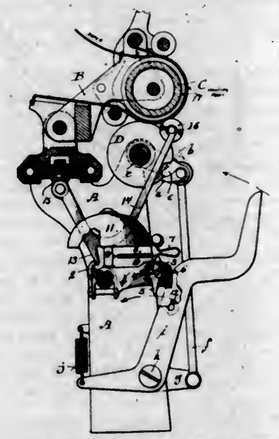
5. In a grapple, the combination, with a pole, of a split spring sleeve carried by the pole adjacent its lower end and provided with a pair of diametrically opposite depending arms, each provided on its inner face adjacent its lower end with an upwardly inclined barb, said arms being formed integral with said sleeve.

[Claims 6 to 9 not printed in the Gazette.]

885,443. ALARM FOR PAPER-FEED CARRIAGES. FRANK H. COTTRILL, Milwaukee, Wis. Filed Jan. 25, 1906. Serial No. 297,882.

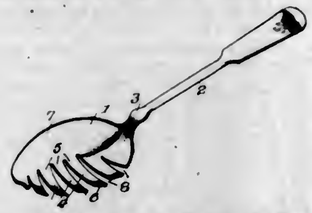
1. In a signal for paper-feeding devices for printing-machines, comprising an annular grooved printing-roller, an actuating-mechanism for the printing-roller, an operating-lever for the actuating-mechanism, and a pivoted finger adapted to engage the printing-roller grooves; the combination of a pivoted gravity-controlled dog arranged to oppose the finger and thereby tend to press said finger into a groove of said roller, a bell secured to the dog, and a spring-controlled pivoted bell-hammer for the bell carried by said dog, the hammer being adapted to engage the operating-lever of the aforesaid printing-roller actuating-mechanism when the said finger is forced into a groove of the roller.

2. In a signal device for the paper-feed mechanisms of printing-machines, comprising an annular grooved printing-roller and actuating-mechanism therefor, an operating-lever for the actuating-mechanism, and a pivoted finger adapted to engage any one of the printing-roller grooves; the combination of a pivoted gravity-controlled dog, a tail-piece projecting from the dog upon one side of its pivot, and arranged to oppose the finger, a bell carried by said dog, a bell-hammer pivoted to the aforesaid dog upon the opposite side of its pivot from that of the tail-piece, the bell-hammer being adapted to engage the operating-lever



of the actuating-mechanism when said finger engages any one of the roller-grooves.

885,444. MIXING-SPOON. ALONZO W. CRAM, Haverhill, Mass. Filed Apr. 13, 1906. Serial No. 311,576.



1. A mixing spoon comprising a bowl, blades formed therein extending transverse of the bowl, and curved to correspond with the bowl and having free outer ends.

2. A mixing spoon comprising a bowl, blades formed therein and extending transverse of the bowl and curved to correspond with the bowl, and having free outer ends, said blades set at an angle thereto longitudinally of their length.

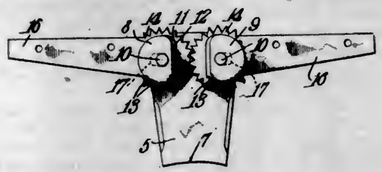
3. A mixing spoon, comprising a bowl, blades formed therein and extending transverse of the bowl and curved to correspond with the bowl, said blades set at an angle thereto longitudinally of their length, and their outer ends in a curved line corresponding with that of the outer side of the bowl.

4. A mixing spoon, comprising a bowl, blades formed therein and extending transverse of the bowl and having their outer free ends in a curved line corresponding with that of the other side of the bowl, said blades of a curvature to correspond with the bowl and twisted longitudinally thereof.

885,445. SPOKE-PULLER. JOSIAH R. CRENSHAW, Newborn, Ga. Filed Dec. 9, 1907. Serial No. 405,779.

1. A spoke puller comprising a frame having elongated slots formed therein and constituting bearings, spoke engaging members journaled in said bearings and provided with inclined handle supporting shanks, said spoke engaging members each being provided with a plurality of stepped bearing surfaces and each having a roughened surface disposed adjacent each bearing surface, and means for limiting the lateral movement of the spoke engaging members.

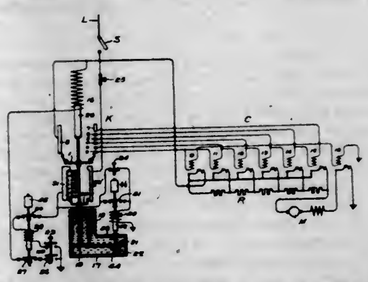
2. A spoke puller comprising a frame having elongated slots formed therein and constituting bearings, spoke engaging members journaled in said bearings and provided with intermeshing teeth, said spoke engaging members each being provided with a plurality of stepped bearing surfaces and each having a roughened surface disposed adjacent each stepped bearing inclined handle supporting members extending laterally from the spoke engaging members, and adjusting screws threaded in the frame and bearing against the adjacent ends of the spoke engaging members for limiting the lateral movement thereof.



3. A spoke puller including a supporting frame comprising spaced uprights having their upper ends provided with lateral extensions and their lower ends formed with concaved bearing faces, there being elongated slots formed in the extensions of the side members, transverse pins journaled in said slots, spoke engaging members mounted for rotation on the pins and provided with intermeshing gears, said spoke engaging members each being provided with a plurality of stepped bearing surfaces and each having a roughened surface disposed adjacent each bearing surface, inclined handle supporting shanks extending laterally from the spoke engaging members, and screws threaded in the longitudinal edges of the extensions and bearing against the adjacent pins for limiting the lateral movement of said spoke engaging members.

4. A spoke puller including a supporting frame comprising spaced side members having their upper ends provided with lateral extensions and their lower ends formed with concaved bearing surfaces, the longitudinal edges of the side members between the extensions and concaved bearing surface being inclined downwardly, elongated slots formed in the extensions of the side members, pins journaled in said slots, spoke engaging members mounted for rotation on the pins and each provided with a plurality of flat bearing surfaces disposed in stepped relation, intermeshing gears formed on the spoke engaging members, inclined handle supporting shanks formed integral with and extending laterally from the gears, there being a roughened surface formed on each spoke engaging member adjacent each stepped bearing, and adjusting screws threaded in the walls of the extensions of the side members and bearing against the adjacent pins for limiting the lateral movement of the spoke engaging members.

885,446. CONTROLLER. ARTHUR T. CROCKER, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Aug. 1, 1906. Serial No. 328,655.



1. In combination, a controller having a plurality of operative positions, a solenoid, a solenoid core for actuating said controller, and means for energizing said solen-

old and for automatically deënergizing it and again energizing it at predetermined points in the travel of the core corresponding to said operative points of the controller.

2. In combination, a controller having a plurality of operative positions, a solenoid, a solenoid core for actuating said controller, means for energizing said solenoid, and means for automatically deënergizing the solenoid at predetermined points in the travel of the said core and again energizing it a predetermined interval of time after each deënergization.

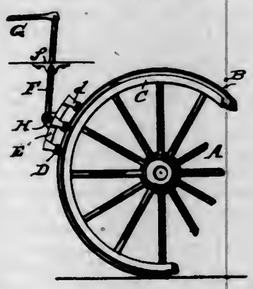
3. In combination, a movable member having a plurality of operative positions, a solenoid having a core for actuating said member, and means for automatically deënergizing said solenoid and again energizing it when the core reaches positions corresponding to said operative positions of the said member.

4. In combination, a movable member having a plurality of operative positions, a solenoid having a core for actuating said member, a master switch, and means controlled by said master switch for energizing said solenoid and for automatically deënergizing it and again energizing it when the core reaches positions corresponding to said operative positions of the said member.

5. In combination, a movable member having a plurality of operative positions, a solenoid having a core for actuating said member, a master switch, and means operative during the time said master switch is held closed for energizing said solenoid and for automatically deënergizing it and again energizing it when the core reaches positions corresponding to the said operative positions of said member, in order to cause said member to pass through any desired number of its operative positions step by step.

[Claims 6 to 13 not printed in the Gazette.]

885,447. BRAKE. JAMES W. CROSS, Walton, Ky., assignor of one-half to Benjamin B. Allphin, Walton, Ky. Filed Sept. 13, 1907. Serial No. 392,623.

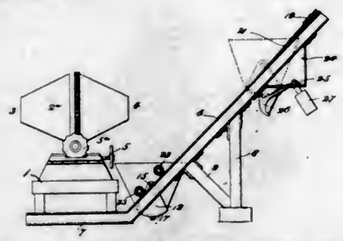


A brake-shoe consisting of a general supporting-member, three rollers provided thereon, one at each end and one between them, bearings for each roller, those at the ends being rigidly secured, while the others between them are rigidly adjustably mounted, and means for supporting the entire device in position opposite the periphery of a wheel.

885,448. UNLOADING APPARATUS FOR CONCRETE-MIXERS. HAROLD DAVIS, Washington, D. C., assignor to The Brennan Construction Company, a Corporation of West Virginia. Filed Aug. 3, 1907. Serial No. 386,954.

1. In an unloading apparatus for concrete mixers, the combination of an inclined way, a bucket mounted to travel along the way and having an outlet opening therein, a gate adapted to cover said opening, means for moving the bucket along the way, and means located along the point of travel of the bucket for automatically opening the gate during a return movement thereof, whereby the bucket is dumped.

2. In an unloading apparatus for concrete mixers, the combination of a way, a bucket mounted to travel along the way and having an outlet opening therein, a gate adapted to cover said opening, means for moving the bucket along the way, and means located along the travel of the bucket and adapted to engage and hold the gate during a return movement of the bucket, whereby the bucket is dumped.



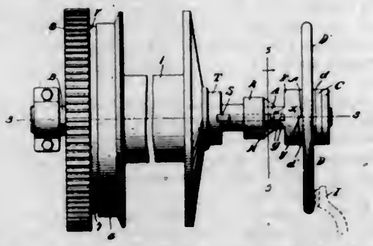
3. In an unloading apparatus for concrete mixers, the combination of a way, a bucket mounted to travel along the way and having an outlet opening in the bottom thereof, a swinging gate pivoted to the bucket and adapted to cover the opening in the bottom thereof, means for moving the bucket along the way, and means located along the travel of the bucket and adapted to engage and swing open the gate during a return movement of the bucket, whereby the bucket is dumped.

4. In an unloading apparatus for concrete-mixers, the combination, of a way, of a bucket having a curved bottom provided with an opening and a curved swinging-gate covering the same, means for operating or moving the bucket along the way, and a trip arranged in the path of the bucket and adapted to engage the swinging-gate thereof as the bucket returns, whereby the bucket is dumped.

5. In an unloading apparatus for concrete-mixers, the combination, of a pair of inclined beams, supports for the beams, a dumping-bucket mounted for movement on the beams and having a swinging-gate normally covering an opening in the bottom of the bucket, a shaft journaled below the beams and supported thereby, a trip carried by the shaft and adapted to yieldingly engage the swinging-gate of the bucket, and means for drawing the bucket up the beams to a position to be engaged by the trip.

[Claim 6 not printed in the Gazette.]

885,449. FRICTION-CLUTCH MECHANISM. SPURGEON J. DAVIS, Ostrander, Wash. Filed Dec. 26, 1906. Serial No. 349,473.



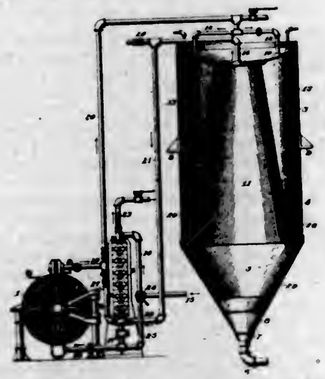
1. In a clutch mechanism of the character described, the combination with the drum shaft, a drum setting pin or rod mounted for longitudinal movement in said shaft, a cross key engaging the rod, having longitudinal movement through the shaft, the sliding clutch member, engaging with said key, the opposing and rotatable clutch member having radial grip portions, and adjustable members on the shaft for holding the rotatable clutch member from lateral movement.

2. In a clutch mechanism of the character described, the combination with the hollow drum shaft, the slotted shaft extension connected to said shaft, a setting pin or rod mounted within the said hollow and slotted shaft members, a cross key on the slotted shaft, the endwise slidable clutch member on the shaft that engages the cross key, means for normally forcing the setting rod or pin with the key and sliding clutch member outward, a grip wheel loosely mounted on the shaft extension, having a clutch face opposing the sliding clutch face, the outer end of the shaft extension being threaded, and the threaded adjusting member for engaging the threaded end of the shaft extension, all being arranged substantially as shown and described.

3. In a clutch mechanism, in which is included an endwise movable drum, a setting pin mounted within a hollow drum shaft, and a shiftable clutch member mounted on the drum shaft and held in engagement with the setting pin, of a grip wheel loosely mounted on the drum shaft having a clutch member to oppose the sliding clutch and adapted when its movement is retarded to shift the endwise movable clutch member and the setting rod and a means adapted on the shaft for holding the grip wheel from lateral movement on the shaft, as set forth.

4. In a clutch mechanism of the character described, the combination with the hollow drum shaft, a drive gear carried thereby, a drum spool loosely mounted on the said shaft, the spool and gear having coöperating clutch faces, said spool having a clutch collar, a slidable clutch key for engaging said collar and an endwise shiftable setting pin or rod connected to said collar mounted in the hollow shaft; of the cross key, movable longitudinally in the shaft and held in engagement with the setting rod, the sliding clutch member F, the grip wheel D, loosely mounted on the drum shaft and having a clutch face for opposing the clutch face of the member F and the adjustable member C—C on the outer end of the drum shaft, as set forth.

885,450. APPARATUS FOR SEPARATING SOLIDS FROM LIQUIDS. EUGENE W. DEMING, New York, N. Y. Filed Dec. 4, 1905. Serial No. 290,250.



1. In apparatus for separating solids from liquids, a heater, a separating device, adapted to operate under pressure, a heat-absorbing device and conduits arranged to convey the liquid from said heater to said separating device and thence to said heat-absorbing device.

2. In apparatus for separating solids from liquids, a heater, a settling tank, adapted to operate under pressure, a heat-absorbing device, and conduits arranged to convey the liquid from said heater to said settling tank and thence to said heat-absorbing device.

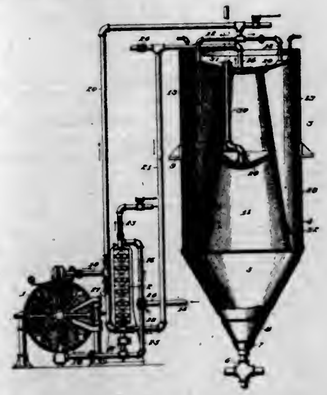
3. In apparatus for separating solids from liquids, a heater, a settling tank adapted to operate under pressure and comprising a body portion, a liquid-tight cover, an inlet and outlet for liquid communicating with said tank near the upper portion thereof, and means for directing the liquid in a tortuous path between said inlet and outlet.

4. In apparatus for separating solids from liquids, a heater, a settling tank comprising a body portion, a liquid-tight cover, an inlet and outlet for liquid, and means for directing the liquid in a tortuous path between said inlet and outlet, a heat-absorbing device, and means for directing the liquid successively through said heater, settling tank and heat-absorbing device.

5. A settling tank comprising a body portion having a converging bottom and an outlet therefrom, a liquid-tight cover, a partial partition or uptake having a liquid-tight connection with said cover, and an inlet and outlet for liquid communicating with the interior of said tank on the opposite sides of said uptake.

[Claim 6 not printed in the Gazette.]

885,451. PROCESS OF SEPARATING SOLIDS FROM LIQUIDS. EUGENE W. DEMING, New York, N. Y. Filed May 20, 1907. Serial No. 374,673.



1. The process of separating solids from liquids which consists in heating a liquid carrying solids in suspension while preventing flocculation of the solids, then permitting said solids to flocculate and collecting them beneath a body of the heated liquid, and finally cooling said liquid by transferring heat therefrom to the inflowing liquid.

2. The process of separating solids from liquids which consists in heating a liquid carrying solids in suspension while preventing flocculation of the solids, then permitting said solids to flocculate while retaining them under pressure and collecting them beneath a body of the heated liquid, and finally cooling said liquid by transferring heat therefrom to the inflowing liquid.

3. The process of separating solids from liquids which consists in heating a liquid carrying solids in suspension while preventing flocculation of the solids, then permitting said solids to flocculate and collecting them beneath a body of the heated liquid, continuously withdrawing the clear liquid and the separated solids, and finally cooling said liquid by transferring heat therefrom to the inflowing liquid.

4. The process of separating solids from liquids which consists in heating a liquid carrying solids in suspension while preventing flocculation of the solids, then permitting said solids to flocculate while retaining them under pressure and collecting them beneath a body of the heated liquid, continuously withdrawing the clear liquid and the separated solids, and finally cooling said liquid by transferring heat therefrom to the inflowing liquid.

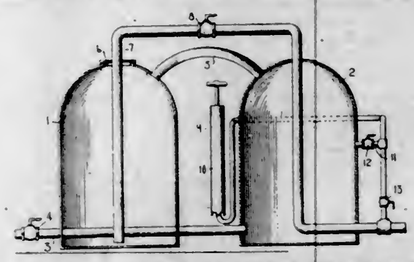
5. The process of separating solids from liquids which consists in heating a liquid carrying solids in suspension while preventing flocculation of the solids, then permitting said solids to flocculate, and separating them from the heated liquid by filtration, substantially as described.

[Claim 6 not printed in the Gazette.]

885,452. BEER-PIPE CLEANER. OWEN R. DICKENS, Springfield, Mo. Filed July 10, 1906. Serial No. 325,510.

An apparatus such as described, comprising a plurality of tanks, a water pipe connecting with the lower portion of one tank and passing through the other tank and having a valve, a pipe connecting the upper portions of the tanks together, a pipe entering the top of the tank through

which the water pipe passes and terminating in the vicinity of the bottom thereof, said pipe passing through the top of the other tank and emerging from the lower portion thereof and having a valve located between the tanks, and



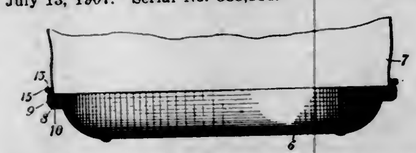
an air pipe connected with the last said pipe and the last said tank and having a valve located between the connection with the tank and the last said pipe, and a valve located upon the tank connection.

885,453. MANUFACTURE OF COLORED PHOTOGRAPHIC IMAGES. LÉON DIDIER, Höchst-on-the-Main, Germany, assignor to Farbwerke, vorm. Meister Lucius & Brüning, Höchst-on-the-Main, Germany, a Corporation of Germany. Filed Nov. 21, 1905. Serial No. 288,456.

The process herein described of producing colored photographic images on the three-color principle which consists in dyeing a gelatin-layer sensitized with bichromate, exposed under a diapositive and washed, by immersing it in an aqueous solution of sulfonic acids of indulin, then removing the excess of dyestuff and bringing the dyed layer into close contact with moistened gelatin paper, then superposing the blue image thus obtained on a gelatin-layer sensitized with bichromate, exposed under a diapositive and washed, by immersing it into an aqueous solution of natural carmin, then superposing the blue and red images thus obtained in a gelatin-layer sensitized with bichromate, exposed under a diapositive and washed, by immersing it into an aqueous solution of prinulin dye,

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885,454. FEED-BAG. FRANK A. DONNELLY, Bayonne, N. J., and JOHN E. BLANTHORN, Brooklyn, N. Y. Filed July 13, 1907. Serial No. 383,581.



1. A bag formed of a metallic bottom member, and a non-metallic body member, a ring, the body member having its lower end doubled and inclosing the ring, the bottom having a bead at its margin in which the ring and surrounding body portion are embedded with the edge of the bottom member projecting beyond the bead portion.

2. A bag formed of a metallic bottom member, and a non-metallic body, a ring, the body having its lower end doubled, with the ring secured therein, the bottom having a bead at its margin in which the ring and surrounding body portion are embedded, with the edge of the bottom member projecting beyond the bead portion.

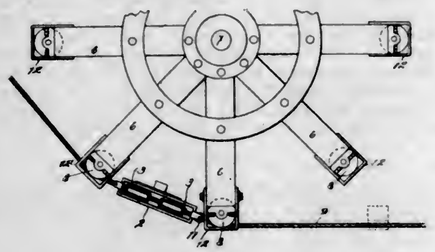
3. A bag formed of a metallic bottom member, and a non-metallic body member, a ring, the body member having its lower end doubled and inclosing the ring, the bottom having a bead at its margin in which the ring and surrounding body portion are embedded with the edge of the bottom member projecting beyond the bead portion, the bead having its mouth portion facing upward.

4. A bag formed of a metallic bottom member, and a non-metallic body member, a ring, the body member having its lower end doubled and inclosing the ring, the bottom having a bead at its margin in which the ring and surrounding body portion are embedded with the edge of the bottom member projecting beyond the bead portion, the projecting portion of the bottom extending upward and the bead having its mouth portion facing upward.

5. A bag formed of a metallic bottom member, and a non-metallic body member, a ring, the body member having its lower end doubled and inclosing the ring, the bottom having a bead at its margin in which the ring and surrounding body portion are embedded with the edge of the bottom member projecting beyond the bead portion, the bead having a rib on its inner side adjacent to the projecting portion in engagement with the body member.

[Claims 6 and 7 not printed in the Gazette.]

885,455. ROPE-CARRIER-DIRECTION-CHANGING DEVICE. FRANCIS V. DRAKE, Bishop, Cal. Filed Jan. 10, 1908. Serial No. 410,238.



1. In an apparatus of the character described, means for changing the direction of travel of a suspended load, said means including a fixed or standing track, a traveling rope supported and driven parallel with the track, rollers located at the point of curvature and following substantially said curvature, a load-suspending carriage with which the traveling rope is connected, and wheels journaled to the carriages and supported upon the standing track.

2. A means for changing the direction of travel of suspended loads, said means including a fixed or standing track, means by which said track is curved to change its direction, a carriage having wheels adapted to move freely upon said track, means for suspending a load from said carriage, horisontal rollers journaled beneath the line of curvature of the track, an endless traveling rope guided and movable by said rollers, and means for connecting said rope with the load-carrying carriage.

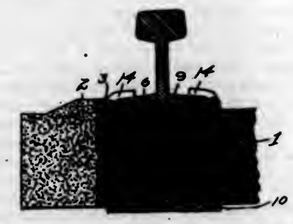
3. In an apparatus of the character described, a fixed or standing cable, arms projecting radially from a central shaft and turnable around said center, pulleys journaled horizontally in the outer ends of said arms, forming a support around which a change of direction of the cable is effected, a carriage having bearing-wheels adapted to move upon said cable, means for suspending a load from the carriage, an endless traveling rope connected with the carriage, and rollers coincident with those which support the fixed cable around which the change of direction of the rope is effected.

4. A device for transporting loads and changing the direction of travel thereof, said device including a fixed standing cable, a load-supporting carriage with wheels movable upon said cable, an endless traveling rope connecting with the carriage, and radially disposed arms having a journaled shaft at the point where change of direction is made, said arms having pulleys at the outer ends around which the standing cable passes, the space between the arms being adapted to receive the upper part of the carriage and the wheels, when said carriage arrives, and the structure being revolved in unison with the movement of the carriage while the change of direction is being effected.

5. In an apparatus of the character described, a direction-changing device, said device consisting of radial arms turnable about a central support and having pulleys journaled in the outer ends, a fixed or standing cable passing around said pulleys and forming substantially tangent lines between any two arms upon which it rests, a carriage having wheels adapted to travel upon the cable, and an endless traveling rope connected with the carriage to travel parallel with the cable, whereby each carriage will enter a space between the arms and impart a movement to said arms while the carriage is passing around the curvature between the tangent portions of the cable.

[Claims 6 to 9 not printed in the Gazette.]

885,456. RAIL-FASTENER FOR CONCRETE TIES. EDGAR J. DRAYER, Dayton, Ohio. Filed Oct. 18, 1907. Serial No. 397,996.



1. A rail fastener for concrete ties comprising a tie clip embracing the bottom and vertical sides of the tie and terminating in outwardly-extending ends in a plane with the upper surface of the tie, a rail plate between the rail and upper surface of the tie and embracing the edges of the rail flange, and clamping bands embracing the outwardly-extending ends of the tie clip and extending over the rail flange, substantially as specified.

2. A rail fastener for concrete ties comprising a tie clip embracing the bottom and vertical sides of the tie and terminating in outwardly-extending ends in a plane with the upper surface of the tie, and clamping bands embracing said outwardly-extended ends of the tie clip and holding said ends in contact with the lower side of the rail flange, substantially as specified.

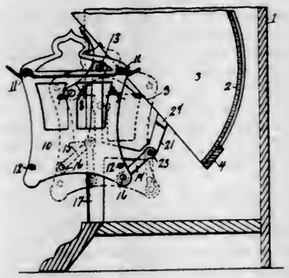
3. In a rail fastener for concrete ties, the combination with such a tie having recesses in its vertical sides, of a tie clip embracing the lower side of the tie, said clip having portions lying within the recesses in the tie and the ends of said clip extending outwardly in a plane with the upper surface of the tie, and clamping bands embracing said outwardly-extended ends of the clip and holding the same to the rail flange, substantially as specified.

4. In a rail fastener for concrete ties, a tie clip the lower side of which embraces the bottom of the tie, and the vertical sides of which embrace the vertical sides of the tie, and the ends of which extend outwardly and embrace the bottom of the rail flange on each side of the tie, said outwardly-extending ends having notches in opposite edges thereof, and clamping bands embracing the lower sides of said outwardly-extending ends projecting through the notches in said ends and overlapping the rail flange, substantially as set forth.

5. In a rail fastener for concrete ties, a tie clip embracing the lower and vertical sides of the tie, the ends of said clip extending outwardly from the tie and approximately in a plane with the upper surface of the tie, a rail plate interposed between the upper surface of the tie and the flange of the rail, the ends of said rail plate embracing the sides of the tie and the longitudinal edges of said rail plate embracing the edges of the rail flange, and clamping bands embracing the ends of the tie clip lying below the rail flange and rigidly holding said tie clip to the tie and the rail, substantially as specified.

[Claims 6 and 7 not printed in the Gazette.]

885,457. DISPLAY-CABINET. ALFONSE R. DU BOISE and LOUIS F. PERRY, Flint, Mich.; said Du Boise assignor to Edwin W. Atwood. Filed May 7, 1906. Serial No. 315,483.



1. In a display cabinet, the combination of a case, a semi-cylindrical door journaled to the ends of the case to rotate about its longitudinal axis, a rack mounted on the door to swing in the arc of a circle concurrently with the movement of the door, and movable means between the rack and case for maintaining the shelves of the rack in a horizontal plane during the movement thereof.

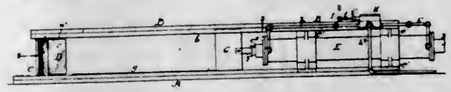
2. In a display cabinet, the combination of a case, a semi-cylindrical door journaled therein to rotate about its longitudinal axis, a rack mounted on said door to swing in the arc of a circle as said door is operated and links connecting said rack with the end of the case, whereby it is held against tipping during its period of travel.

3. In a display cabinet, the combination of a case, a door having semi-cylindrical ends provided with a straight edge, brackets mounted on the straight edges of the ends of the door and pivoted to the ends of the case, a rack pivoted to the projecting ends of said bracket to swing as the door turns on its pivot, and a movable connection between said rack and case which permits the rack to travel freely as the door is swung, but holds the rack rigidly against tilting.

4. In a display cabinet, the combination of a case, a door journaled in the case to rotate about its longitudinal axis, a rack pivotally mounted on the door, links pivoted at one end of the rack, and at the other end to the case, whereby the rack is supported in a true horizontal position when actuated through the manipulation of the door.

5. In a display cabinet, the combination of a suitable case, a door pivoted in the case to rotate about its longitudinal axis, a movable rack having shelves thereon consisting of longitudinally extending parallel rods, said rack being pivotally mounted on the door to swing in the arc of a circle concurrent with the movement of the door, and means upon the shelf rods of the rack consisting of a wire extending between said rods having loops intermediate its ends which embrace the rods of the rack and having upwardly turned end portions projecting beyond the rack rods for engaging a hat to hold it in position thereon as the rack is actuated.

885,458. WOOD-SPLITTING MACHINE. PHILIP ECKENROTH, Jr., Philadelphia, Pa. Filed Apr. 12, 1907. Serial No. 367,815.



1. The combination of two longitudinal beams, one mounted above the other, a fixed abutment block mounted between the two beams, a wedge mounted on said abutment block, a cylinder between the two beams at the end opposite to the wedge, a piston in the cylinder, a rod on

the piston, a head on the end of the rod outside of the piston, and two plates on the lower beam arranged with their upper faces inclined towards each other, said plates being placed to center a log to be split and to guide the head, substantially as described.

2. The combination in a wood splitting machine of two beams, one mounted above the other, an abutment block secured to both beams at one end of the machine, a wedge secured to the abutment block, with its edge vertical, a cylinder secured to the two beams at the opposite end of the machine, and a piston in the cylinder, a rod projecting from the piston and extending through the end of the cylinder, with a head at the end of the rod arranged to be guided by the upper and lower beams, substantially as described.

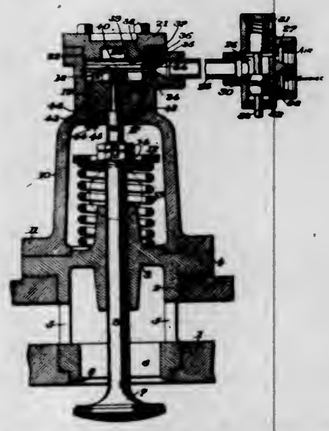
3. The combination in a log splitting machine of two longitudinal beams, a fixed abutment secured to the two beams, a detachable wedge mounted between the two beams at the opposite end of the machine, a piston rod, a piston in the cylinder, a head mounted between the two beams outside the cylinder and attached to the rod, and yielding buffers at the wedge end of the machine placed to check the movement of the head so as to prevent its striking the wedge, substantially as described.

4. The combination in a machine for splitting logs, of a frame, an abutment at one end of the frame; a wedge carried by the abutment, a cylinder at the opposite end of the frame, a piston in the cylinder, a head connected to the piston, a yielding buffer at the wedge end of the machine placed to prevent the head from striking the wedge, and a yielding buffer at the cylinder end of the machine placed to check the movement of the plunger when it moves away from the said wedge, substantially as described.

5. The combination in a wood splitting machine of a base, guide plates inclined towards each other and fixed to said base, a beam structure mounted so as to extend horizontally over the guide plates, a wedge secured to one end of the base, a head slidable between said guide plates and the beam structure, means for forcing the head towards the wedge so that a log placed between said parts will be split.

[Claim 6 not printed in the Gazette.]

885,459. VALVE FOR GAS-ENGINES. WILLIAM B. ENGLER and CONSTANT J. KRYZANOWSKY, Lansing, Mich., Filed May 22, 1907. Serial No. 375,184.



1. In a device of the character described, the combination with a valve having a stem therefor, of a bonnet having a piston chamber into which said valve stem extends, an unapertured piston carried by said stem, valve controlled means for admitting fluid pressure to advance said piston including a passage leading to the rear of said chamber and provided with an inwardly opening check valve, means for returning said piston, and means for cushioning the piston at each end of its stroke.

2. In a device of the character described, the combination of a valve having a stem, a spider in which said stem is mounted, a bonnet having a piston chamber into which said stem extends, a piston carried by said stem, valve controlled means for admitting fluid pressure to move said piston in one direction, a check valve controlling the initial admission of fluid pressure to advance said piston and located in said bonnet, means for returning said piston, and means for cushioning said piston at each end of its stroke.

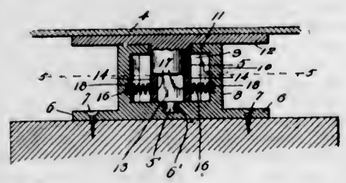
3. In a device of the character described, the combination with a valve having a stem, of a spider in which said stem is mounted, a bonnet through which said stem extends and provided with a piston chamber, a piston in said chamber and secured to said stem, ports and passages for the fluid pressure leading to said chamber, means for leading live motive fluid to either end of said chamber, one of said passages being automatically controlled and means for cushioning the piston at each end of its stroke.

4. In a device of the character described, the combination with a bonnet having a piston chamber therein, of a valve stem extending into said chamber, a piston secured to said stem, said chamber having passages leading thereto through the side wall near each end which serve alternately as inlet and exhaust, passages leading through said first passages and opening into the piston chamber at each end in rear of the piston, and a check valve in each of said passages.

5. In a device of the character described, the combination with a valve bonnet having a valve stem extending thereinto, of a piston secured to said stem, a combined inlet and exhaust port opening into said chamber through the side wall thereof near each end, a passage leading from each of said first named passages and opening into the piston chamber at each end thereof, a check valve in each of said passages, and valve controlled means for regulating the inlet and exhaust of motive fluid through said first named passages.

[Claims 6 to 9 not printed in the Gazette.]

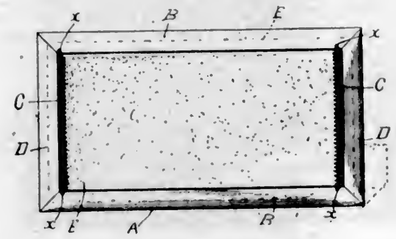
885,460. MAIL-BOX. SAMUEL J. FELKNOR, Morristown, Tenn. Filed Apr. 13, 1907. Serial No. 367,992.



1. In a device of the type set forth, a fixed plate, a casting thereon including vertical posts arranged in spaced relation and an overhanging flange having a central opening, a box, a plate secured to said box and bearing upon said flange, a shaft depending from said last named plate and passing through said opening, a dog pivoted to one of said posts, said shaft having a flat-sided portion for engagement by said dog and a spring interposed between the free end of said dog and the other of said posts to hold said dog against said flat-sided faces as and for the purpose set forth.

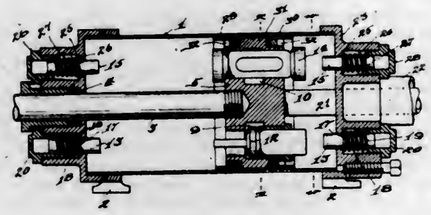
2. In a device of the type set forth a fixed plate, a disk-shaped casting thereon, a box, a shaft depending therefrom and projecting into said casting, said shaft having flat faces, and pivoted spring-pressed dogs in said casting designed to frictionally engage said flat faces.

885,461. STICKY-FLY-PAPER TRAY. LULA A. FEVER, Secor, Ill. Filed Oct. 24, 1907. Serial No. 398,945.



A sheet metal tray having its ends and sides bent over to form a beveled edged holder of the character described, and two coil springs extending across said tray from edge to edge, one at each end, each spring being in yielding contact with the bottom of said tray.

885,462. FLUID-MOTOR. JOHN B. FLETCHER, Newport, Ky. Filed July 31, 1906. Serial No. 328,618.



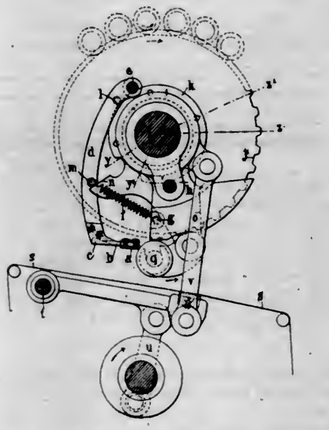
In a water motor, a cylinder, a piston having supply and exhaust compartments, supply and exhaust pipes carried by said piston and leading into their respective compartments, supply and exhaust valves in said piston compartment, said supply and exhaust pipes lying parallel with each other, cylinder heads detachably connected to said cylinder, sleeve projections extending from said head provided with differential diameter bores, a hollow cap detachably secured to said sleeve projections, a spring actuated plunger trip rod slidably mounted within said caps and smaller bores of said head and projecting into the cylinder in a position to trip the valves at the opposite ends of the piston stroke, substantially as described.

885,463. SUSPENDERS, BRACES, &c. WILLIAM FREEMAN, New York, N. Y., assignor to Harris Suspender Company, New York, N. Y. Filed Feb. 15, 1905. Serial No. 245,796.

A device of the character described, comprising a continuous webbing, a metal loop, a friction slide, and an attaching device connected with the metal loop, said slide comprising a frame having two parallel slots and a roller carried by said frame and disposed rearwardly thereof, said webbing passing successively through the slots of the frame and having frictional engagement with walls thereof, said web then passing freely through the metal loop and then extending upwardly and freely over the roller disposed behind the frame of the slide, said web then extending downwardly between the parallel portions of the webbing and fastened at its lower end to the metal loop.



885,464. COLOR-PRINTING DEVICE IN CASH-REGISTERS. JULES FEYDMANE and LOUIS CHAMBON, Paris, France. Filed July 31, 1906. Serial No. 328,524.



1. In combination with a cash register, having printing means, a single means for inking the printing means at each operation and a checking band, means for printing transactions other than those of a predetermined kind in the same column and in a different color, comprising a pivoted arm, a printing ribbon carried thereby differing in color from said inking means, and means for interposing said ribbon between said printing means and the checking band when said transactions take place.

2. In combination with a cash register having printing means, a single inking means therefor for inking the printing means at each operation, and a checking band, means for indicating thereon in the same column and in a different color transactions other than those of a predetermined kind comprising a supporting arm, a ribbon carried

thereby differing in color from said inking means, and means for interposing said ribbon between the printing means and the checking band when said transactions take place, so that the printing is done indirectly through said interposed ribbon in a different color.

3. In combination with a cash register having a main spindle, printing wheels carried thereby, means for inking said wheels, and a checking band, an auxiliary printing mechanism comprising a cam on said spindle, a pivoted lever engaged thereby, a printing ribbon differing in color from said inking means carried on said lever, and means for interposing said ribbon between the printing wheels and the checking band when transactions other than those of a predetermined kind are to be recorded.

4. In combination with a cash register having a main spindle, printing wheels carried thereby, means for inking said printing wheels, and a checking band, means for printing in the same column and in a different color transactions other than those of a predetermined kind comprising a rocking support, a ribbon carried thereby, a cam on said spindle engaging said support having a recess of an amplitude equal to that formed by the characters reserved for said transactions and so keyed to said spindle as to release said support at the proper moment to render the ribbon operative relatively to said printing wheels.

5. In combination with a cash register having a main spindle, printing means on said spindle, ordinary inking means adapted to be moved across said printing wheels, and a checking band, means for printing in a color different from said ordinary inking means and in the same column transactions other than those of a predetermined kind comprising a rocking support, a colored ribbon carried thereby, a cam on said main spindle engaging said support, and means for bringing said ribbon across the printing parts under predetermined conditions and when the inking means moves aside.

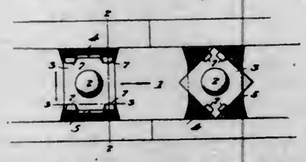
[Claims 6 to 12 not printed in the Gazette.]

885,465. NUT-LOCK. MARSHEL F. GIFFIN, Cove, Oreg. Filed Sept. 30, 1907. Serial No. 395,075.



In a nut-lock, the combination with a plate adapted to be held by adjacent bolts and having a keeper springing therefrom with sufficient space left for the application of a wrench to the nuts without interference with the keeper, said keeper thence spreading or widening and being formed into independent tongues, and a lock-block for engaging adjacent nuts against which the tongues are adapted to be independently bent between the nuts.

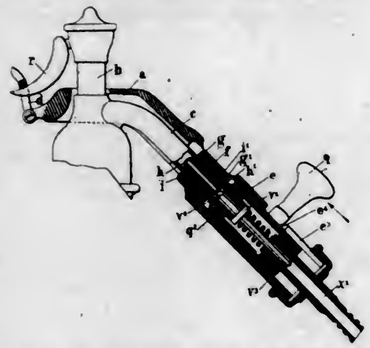
885,466. NUT-LOCK. MARSHEL F. GIFFIN, Cove, Oreg. Filed Nov. 4, 1907. Serial No. 400,526.



1. In a nut-lock, the combination with a bolt and nut therefor, and an object to which the bolt is attached which has a recess surrounding the bolt, of a nut-lock comprising a body having an opening to receive the bolt and provided with pairs of prongs on opposite sides of said opening, the prongs of each pair being relatively widely separated, said body being received in the recess and engaged and held by the walls thereof and the prongs being sufficiently long to be bent independently or collectively against the sides or corners and over and against the outer face of the nut.

2. In a nut-lock, the combination with a bolt and nut, and an object to which the bolt is attached which is provided with a recess, of a nut-lock having a body lying in the recess and a tongue bent against the nut, and a wedge driven into the object to which the bolt is attached and being in abutment with the outer edge of the body of the nut-lock to hold it in the recess.

885,467. APPARATUS FOR CHARGING SIPHONS WITH CARBONIC ACID. PIERRE GIRON, Paris, France. Filed July 9, 1907. Serial No. 382,892.



1. A device for charging siphons and the like comprising an arm adapted to engage the means for opening the discharge valve of the siphon, a part slidably secured to said arm and having a passage for the charging gases or the like adapted to be opened into a port leading past said discharge valve into the interior of the siphon, a valve normally closing said passage and means for moving said part and said arm with relation to each other to effect the simultaneous opening of said discharge valve of the siphon and the valve in said passage, substantially as described.

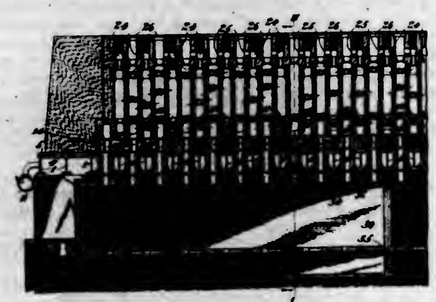
2. A device for charging siphons and the like comprising an arm adapted to engage the means for opening the discharge valve of the siphon, a part slidably secured to said arm and having a passage for the charging gases or the like adapted to be opened into a port leading past said discharge valve into the interior of the siphon, a valve normally closing said passage and a button on said part engaging said arm through a helicoidal slot in the same whereby on moving said button through said slot, the discharge valve of the siphon and the valve in the passage mentioned are simultaneously opened.

3. A device for charging siphons and the like comprising an arm adapted to engage the means for opening the discharge valve of the vessel, a part slidably secured to said arm and having a passage for the charging gases or the like therethrough, a valve normally closing said passage, a cushion piece having a corresponding passage and adapted to be interposed between said sliding part and a port opening into the interior of the siphon, in combination with means for moving said part and cushion piece with relation to said arm to effect the simultaneous opening of said discharge valve and the valve in said passage, substantially as described.

885,468. COKE-OVEN CONSTRUCTION. JOHN W. GOCHER, Johnstown, Pa. Filed Aug. 21, 1907. Serial No. 389,425.

1. In a battery of coke ovens, a superstructure comprising the ovens and combustion-chambers, a substructure, and means for anchoring the superstructure to the substructure at a point intermediate of the ends, whereby the

sections located at either side of the anchored portion are free to expand independently of the substructure.



2. In a battery of coke ovens, a superstructure comprising the ovens and combustion chambers, a substructure for same, and a channel-bar secured to the substructure and embedded in the brick work of the superstructure at a point intermediate of its ends.

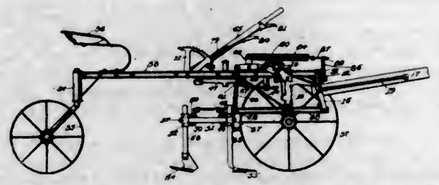
3. In a battery of coke ovens, a base, a platform thereon, a series of combustion chambers and a series of ovens above the platform, and means for anchoring that portion of the structure in which the ovens and the combustion chambers are located at a point intermediate of the ends thereof, whereby the sections of the structure located on either side are free to expand and move upon said platform.

4. In a battery of coke ovens, a base, a platform thereon, a series of combustion chambers, and a series of ovens above the platform, and a channel-bar secured to the platform and embedded in the brickwork of the central portion of the structure in which the ovens and combustion chambers are located.

5. In a battery of coke ovens, a base, a platform thereon, a series of combustion chambers and a series of ovens above the platform, regenerating chambers connecting with the combustion chambers, and an anchor secured to the platform and embedded in the brickwork of that portion of the structure in which the ovens and the combustion chambers are located.

[Claims 6 to 15 not printed in the Gazette.]

885,469. RIDING BEET-CULTIVATOR. WILLIAM S. GRAHAM, Canton, Ill., assignor to Parlin and Orendorff Company, Canton, Ill., a Corporation of Illinois. Filed Dec. 4, 1907. Serial No. 405,072.



1. In a cultivator, the combination with a front frame consisting of two parallel transverse bars, brace bars and hounds secured to said cross-bars, wheel carrying brackets carried by said cross-bars and adjustable laterally thereon, of a rearwardly-extending seat-support removably secured to said hounds, downwardly-extending hangers secured to said front frame, a gang-carrying frame, and draw-bars mounted on said gang-carrying frame and pivotally secured at their front ends to said hangers.

2. In a cultivator, the combination with a carrying frame, a gang frame, and draw-bar connections between said gang frame and said carrying frame, a pair of rock-shafts having rock arms at their outer ends and journaled in said carrying frame, link connections between said rock arms and the outer ends of said gang frame, a segment secured to said gang frame, a lever pivoted to said segment, a connection between said lever and one of said rock arms, a second segment rigidly mounted on said lever, a second lever pivotally mounted on said second segment, and a connection between said second lever and the other rock-shaft.

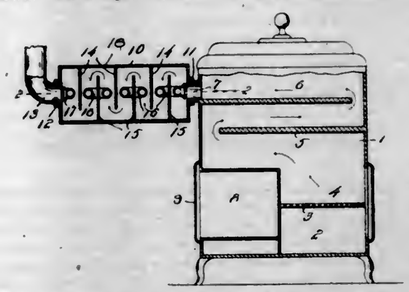
3. In a cultivator, the combination with a carrying frame, a gang frame, and draw-bar connections between said gang frame and said carrying frame, a pair of rock-shafts having rock arms at their outer ends and journaled in said carrying frame, link connections between said rock arms and the outer ends of said gang frame, a segment secured to said carrying frame, a lever pivotally connected with said segment, a latch adapted to adjustably lock said lever to said segment, a connection between said lever and one of said rock-shafts, a second segment rigidly mounted on said lever, a second lever pivoted to said second segment, latch connections adapted to adjustably lock said second lever and said second segment, and a connection between said second lever and the other rock-shaft.

4. In a cultivator, the combination with a carrying frame, a gang frame, and draw-bars connecting said gang frame and said carrying frame, of a pair of rock-shafts journaled in said carrying frame and having rock arms at their outer ends, link connections between said rock arms and the outer ends of said gang frame, and lever mechanism adapted to either rock said rock-shafts simultaneously or independently.

5. In a cultivator, the combination with a carrying frame, a gang frame and draw-bars connecting said gang frame with said carrying frame, of a pair of rock-shafts journaled in said carrying frame and having rock arms at their outer ends, link connections between said rock arms and the outer ends of said gang frame, a swinging lever carried by said carrying frame and connected with one of said rock-shafts, and mechanism connected with said lever and with the other of said rock shafts, whereby both the said rock-shafts may be rocked simultaneously.

[Claims 6 and 7 not printed in the Gazette.]

885,470. HEATING-DRUM. GEORGE HALLEY, Nevada, Iowa. Filed Apr. 17, 1907. Serial No. 368,685.



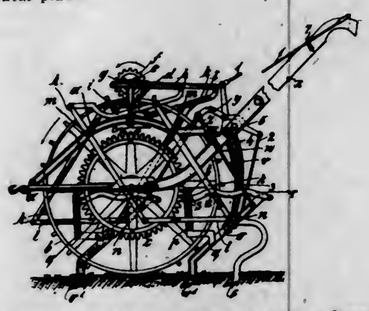
An attachment for heating stoves, comprising a casing adapted for communication with a stove and its chimney, baffle plates projecting in parallel relation alternately from the top and bottom of said casing to form a continuous tortuous passage therein, and a sinuous convoluted conductor within said casing and supported by said baffle plates, said conductor terminating at opposite ends adjacent the communications with the stove and its chimney.

885,471. HOEING-MACHINE. OTTO HARDER, Hökendorf, Germany. Filed Feb. 18, 1907. Serial No. 357,855.

1. A hoeing machine comprising in combination a framework, a centrally disposed wheel, hoeing shares one upon each side of said wheel, a centrally disposed hoeing share at the rear of the wheel, and gear-actuated parallel members for actuating said shares forward and backward parallel with each other in a horizontal plane.

2. A hoeing machine comprising in combination, a framework, hoeing shares carried thereby, a system of par-

allel levers connected to each share, means operated from the drive wheel for giving a to and fro movement to the shares, and means for converting said movement into a horizontal movement for causing the shares to move in a horizontal plane.



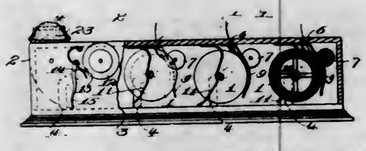
3. A hoeing machine comprising a wheel, a framework mounted thereon, hoeing shares and gear-actuated parallel members for actuating said shares to move them forward and backward parallel with each other in a horizontal plane.

4. A hoeing machine comprising, in combination, a framework mounted on a wheel, a hoeing share at each side of the wheel, parallel levers connected with each share and gear for operating the said levers.

5. A hoeing machine comprising, in combination, a framework mounted on a wheel, a hoeing share at each side of the wheel, parallel levers connected with each share, and gear for operating the said levers alternately in opposite directions.

[Claims 6 to 9 not printed in the Gazette.]

885,472. SERVING APPARATUS FOR POSTAGE-STAMPS, PAPER, AND THE LIKE. VINCENT HEGARTY, Dresden, Germany. Filed Oct. 16, 1907. Serial No. 397,682.

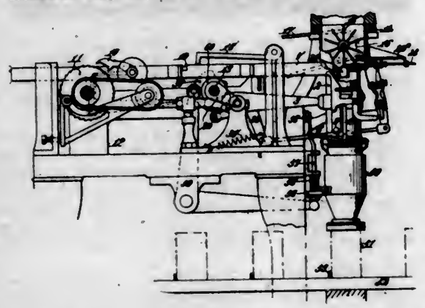


1. A serving apparatus comprising a casing having a closed top and a removable bottom, said top having an opening for the passage of a web, said casing having its sides provided with angularly-shaped recesses, web-carrying rolls mounted in said recesses, a feed roll engaging the web and adapted when operated to feed the web through the slot, and means engaging with the web-carrying roll and associating with said recesses for automatically adjusting said web-carrying roll towards the feed roll whereby the feed roll will permanently engage the web.

2. A serving apparatus comprising a casing having a closed top and a removable bottom, said top having an opening for the passage of a web, said casing having its sides provided with angularly-shaped recesses, web-carrying rolls mounted in said recesses, a feed roll engaging the web, adapted when operated to feed the web through the slot, means engaging with the web-carrying roll and associating with said recesses for automatically adjusting said web-carrying roll towards the feed roll whereby the feed roll will permanently engage the web, and means arranged exteriorly of the casing and engaging with the feed roll to arrest the movement thereof.

3. A serving apparatus comprising a casing having a closed top and a removable bottom, said top having an opening for the passage of a web, said casing having its sides provided with angularly-shaped recesses, web-carrying rolls mounted in said recesses, a feed roll engaging the web and adapted when operated to feed the web through the slot, means engaging with the web-carrying roll and associating with said recesses for automatically adjusting said web-carrying roll towards the feed roll whereby the feed roll will permanently engage the web, means arranged exteriorly of the casing and engaging with the feed roll to arrest the movement thereof, and a web arranged in said casing in operative relation with respect to said slot and having an opening through which extends the feed roll.

885,473. WEIGHING APPARATUS. FREDERICK J. HEYBACH, Savannah, Ga., assignor of one-half to Morehouse Manufacturing Co., Savannah, Ga., a Corporation of Georgia. Filed Sept. 11, 1906, Serial No. 334,180. Renewed Aug. 19, 1907. Serial No. 389,250.



1. The combination of a valve having a shank, shoulders on the shank, a lever to engage the shoulders to open and close the valve, means for operating the lever to give the valve a partial movement, and independent means for operating the lever to give the valve a second movement.

2. The combination of a valve provided with a shank, adjuatable shoulders on the shank, a lever to engage the shoulders to open and close the valve, and means for operating the lever.

3. The combination of a valve, a lever for operating the valve to move the same in opposite directions, an arm to oscillate the lever, means for oscillating said arm, and independent means for moving the lever, said arm serving to operate the lever to give the valve a primary movement in one direction, and said independent means by operating against the lever serving to give the valve a secondary movement in the same direction.

4. The combination of a valve, a lever to operate the valve, a shaft loosely carrying said lever, an arm fastened to said shaft, means for turning the shaft to cause said arm to engage the lever in a direction to give to the valve an initial movement, and independent means for acting against said lever to give to the valve a secondary movement.

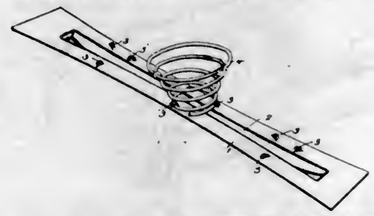
5. The combination of a valve, a lever to operate the valve, a shaft loosely carrying said lever, an arm fastened to said shaft, means for turning the shaft to cause said arm to engage the lever in a direction to give to the valve an initial movement, and a yieldingly mounted member for engaging the lever to give to the valve a secondary movement.

[Claims 6 to 14 not printed in the Gazette.]

885,474. SPRING-SEAT. HENRY HIRSH, Pittsburg, Pa. Filed Nov. 13, 1907. Serial No. 401,993.

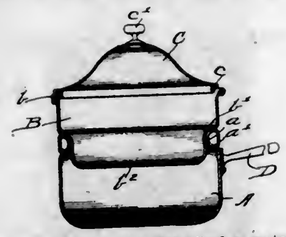
A seat of the type described comprising a metallic strip narrowest at its middle line and increasing in width from the middle line to each end and being widest at its ends, the said strip having a reinforcing rib on its underneath face and a longitudinally extending depression on its upper face, the said upper face of the strip at opposite sides of said groove being in the same plane from end to

end of the strip and forming spring supporting-surfaces, and loops struck up from said supporting-surfaces and arranged in groups along said surfaces, the loops of each



group on one supporting-surface arranged in staggered relation to the loops of the same group on the opposite supporting-surface.

885,475. CHIPPED-ICE BOWL. SARAH W. HITCHCOCK, Dixon, Ill. Filed May 23, 1907. Serial No. 375,300.



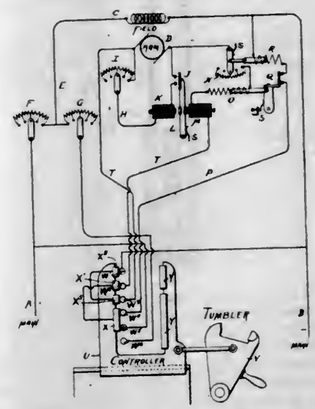
1. In a device of the class described a water receptacle having its wall inwardly curved at the top and a vertical outer part equal in length to the diameter of the curved part and flush with the wall, a handle rigidly secured to the water receptacle, an ice receptacle formed with a circumferential shoulder near the bottom thereof adapted to rest on and conform to the shape of the curved top wall, a bead formed at the top of the ice receptacle, said ice receptacle having its wall above the shoulder flush with the wall of the water receptacle, a cover for the ice receptacle and a triangular bead at the edge of the cover having one side concaved to fit the bead of the ice receptacle.

2. In a device of the class described the combination with a water receptacle having its wall curved inwardly at the top forming an inward bead and an outer shoulder and the upper extremity of the wall folded downwardly and resting on the shoulder, an ice receptacle reduced in diameter at its lower end resting on said bead, a perforated bottom integral with the reduced part of the ice receptacle, said ice receptacle having a rounded top, a cover having a somewhat triangular bead with one side concaved to the top of the ice receptacle and having the lower edge of the bead locking within the top of the ice receptacle and handles, one for the cover and one for the water receptacle.

885,476. MOTOR-CONTROLLING SYSTEM. ARTHUR E. HOGREBE and VICTOR O. STROBEL, Philadelphia, Pa., assignors to Niles-Bement-Pond Company, Jersey City, N. J. Filed Jan. 14, 1907. Serial No. 352,298.

1. A motor controlling system comprising a motor field, an armature, supply connections for furnishing current to the field and armature, a short circuit across the armature, a normally open switch in said short circuit, means for operating said switch at or before reversal of armature current, a pair of rheostats in parallel in the field supply connections, and a controller adapted to reverse the direction of current in the armature and to alternatively bring one or both of said rheostats into action, combined substantially as set forth.

2. A motor controlling system comprising a motor field, an armature, supply connections for furnishing current to the field and armature, a controller for reversing the direction of current in the armature, a short circuit across the armature, a normally open switch in said short circuit, means for closing said switch prior to and during reversal, a rheostat in the armature-supply circuit, means for automatically putting said rheostat to maximum resistance, an electromagnetic device controlling said rheostat, a normally closed adjustable switch controlling said electromagnetic device, and an electromagnetic device in the armature supply circuit coöperating with said switch and tending to open it, combined substantially as set forth.



3. The combination of a field, means for supplying the field through a single controlling device for one direction of rotation of the motor and through two controlling devices for the other direction of rotation, a main armature circuit including a magnet, and an armature short circuit including a magnet and a single switch controlled by the two magnets and arranged to open and close the armature short circuit.

4. The combination of a closed field circuit, an armature circuit including an electro-magnet, a solenoid and a rheostat, an armature short-circuit including an electro-magnet, a switch controlled by the two electro-magnets and arranged to open and close the armature short-circuit and a shunt circuit including a switch arranged to open and close the shunt circuit and actuated by the solenoid of the armature circuit and a shunt solenoid arranged to actuate the rheostat.

5. The combination of a closed field circuit, an armature circuit including an electro-magnet, a solenoid and a rheostat, means for reversing the armature circuit, an armature short circuit including an electro-magnet, a switch controlled by the two electro-magnets and arranged to open and close the armature short circuit, and a shunt circuit including a switch arranged to open and close the shunt circuit and actuated by the solenoid of the armature circuit and a shunt solenoid in the shunt circuit arranged to actuate the rheostat.

[Claim 6 not printed in the Gazette.]

885,477. NEWEL-POST. JOSEPH E. HOLBEIN, Evans City, Pa. Filed Aug. 26, 1907. Serial No. 390,213.

1. A newel post having an adjustable slide on its base, substantially as described.

2. A newel post having a base provided with an adjustable slide on its rear face, for the purpose and substantially as described.

3. The combination with a newel post, a base therefor comprising front and side members attached to the lower portion of the post, and an adjustable slide attached to the rear side of the post, for the purpose specified.

4. In combination with a post, a base therefor comprising frout and side boards rigidly attached to the lower portion of the post, and a slide and guide strips therefor at-

tached to the rear side of the post, said slide and strip being adjustable, for the purpose specified.



5. A newel post comprising vertical corner pieces longitudinally grooved on their opposed faces, ties connecting said corner pieces, panels interposed between the ties and adjacent corner pieces, a base secured to the lower end of the post composed of front and side pieces attached to the post; and a slide forming the rear portion of the base, said slide being vertically adjustable, for the purpose specified.

[Claim 6 not printed in the Gazette.]

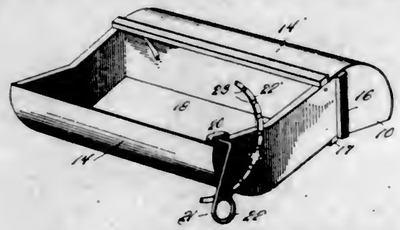
885,478. GRAB-TOOL. JOHN G. HOLLINGSWORTH, Lebanon, S. D. Filed Jan. 29, 1908. Serial No. 413,253.



A grab tool comprising a tube formed on its inner surface and adjacent to its lower end with an integral enlargement of substantially crescent shape, and rounded in cross section; in combination with a movable jaw of concavo-convex form having its concave face inclined and formed with upwardly projecting teeth; and means for suspending said movable jaw within the tube.

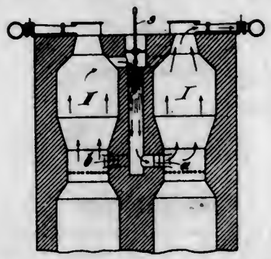
885,479. VENTILATOR. JOHN F. HUBER, Elida, Ohio. Filed Apr. 19, 1906. Serial No. 312,684.

A ventilator comprising a casing having one end formed as an air intake and its other end formed as an air outlet, the said casing being made in similarly constructed major and minor sections having upper and lower metallic walls, the walls of the major section fitting over the walls of the minor section, and a gate arranged in said casing to open or close communication between the ends thereof, the said gate comprising a section carried by the major section of said casing and having a deep recess and a section carried by the minor section of said casing and having



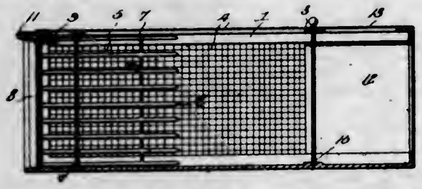
a tongue of reduced thickness designed to slidably fit into said recess.

885,480. PROCESS OF MAKING PRODUCER-GAS. FRIEDRICH JAHNS, von der Heydt, near Saarbrücken, Germany. Filed May 31, 1905. Serial No. 262,933.



The method substantially as herein shown and described of manufacturing gas poor in tar from tarry fuels consisting in employing two or more generating chambers, conducting the volatile products of distillation from out of the top of one of the chambers and passing it up through another chamber while the fuel in this latter chamber is incandescent, exhausting the gas from this latter chamber, the preparatory generators being worked at a lower pressure than the pressure present in the exhausting generator, substantially as described.

885,481. ANIMAL-TRAP. MARTIN JOACHIM, Mazeppa, Minn. Filed Nov. 22, 1907. Serial No. 403,333.

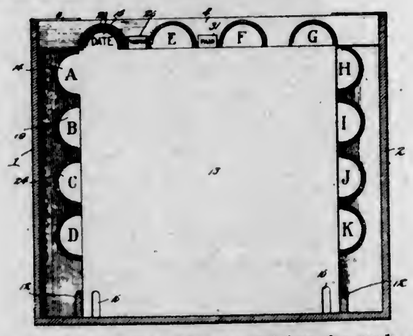


A trap comprising a casing, a series of rods extending vertically through the upper portion of the casing and engaging the lower portion or floor thereof to form a live bait compartment, converging members, each consisting of a series of bars having pointed ends and connected cross bars, spiral springs connected at one end to the casing and having their opposite ends connected to said converging members, and stops for said converging members.

885,482. LEDGER-FILE. PRESLEY B. JOHNSON, Berkeley, Cal. Filed Oct. 18, 1907. Serial No. 398,125.

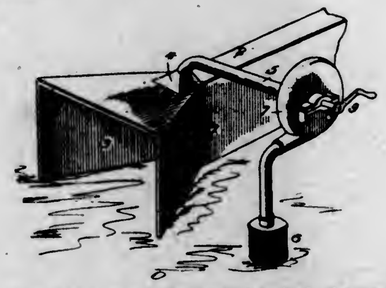
1. In a ledger card system, a container for cards, and cards cut to fit in said container, said cards comprising index cards, each of such index cards having a projecting

tab portion of semi-circular outline having printed thereon a letter of the alphabet and also the entire alphabet arranged adjacent to the outer edge of the tab and a second tab portion having the word "Date" and the numbers from 1 to 31 printed thereon, a series of sets of subject matter cards arranged one set for each index card, each card of a set having a tab portion positioned to aline with the letter tab of the index card and provided with a projection from such tab to aline with one of the letters of the alphabet printed adjacent to the edge of the tab of such index card, and a series of date cards having tabs and projections therefrom arranged to aline with the numerals of the date tabs of the index cards.



2. In a ledger card system, a container for cards, and cards cut to fit in said container, said cards comprising index cards, each of such index cards having a projecting tab portion of semi-circular outline having printed thereon a letter of the alphabet and also the entire alphabet arranged adjacent the outer edge of the tab and a second tab portion having the word "Date" and the numbers from 1 to 31 printed thereon, a series of sets of subject matter cards arranged one set for each index card, each card of a set having a tab portion positioned to aline with the letter tab of the index card and provided with a projection from such tab to aline with one of the letters of the alphabet printed adjacent the edge of the tab of such index card, a series of date cards having tabs and projections therefrom arranged to aline with the numerals on the date tabs of the index cards, and cards to indicate paid bills and bills of doubtful character.

885,483. INSECT-EXTERMINATOR. JOHN W. JONES, Roosevelt, Okla. Filed Apr. 20, 1907. Serial No. 369,319.

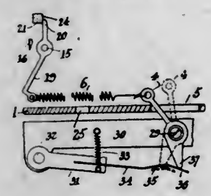


1. In a device of the character described, the combination of a run way formed with a contracted portion and a flared mouth, and a trap operating to withdraw the insects from the run way at the junction of the flared mouth and the contracted portion thereof.

2. In a device of the character described, the combination of a run way formed with a contracted portion and a flared mouth, a hood located over the run way at the junction of the flared mouth and contracted portion thereof, a tube leading from the hood, and means for producing a draft within the tube.

3. In a device of the character described, the combination of a run way formed with a contracted portion and a flared mouth, a hood located over the run way at the junction of the flared mouth and contracted portion thereof, a tube leading from the hood, a cage at the discharge end of the tube, a casing at an intermediate point of the tube, and a fan operating within the casing for producing a forced draft through the tube.

885,484. TALKING-MACHINE ATTACHMENT. BERNARD F. KEATING, Hawthorn, Victoria, Australia. Filed Nov. 22, 1907. Serial No. 403,372.



1. In a talking machine, a hand lever for controlling said machine; an attachment having an electro magnet and an armature lever; means for making an electric circuit through the coil of said magnet to operate the latter lever from a distance; an intermediate lever and spring connection to said hand lever; and a stop whereby the intermediate lever is held by the armature lever so that the hand lever is retainable in an intermediate position as set forth, and will allow the motor to move when the armature lever is moved as described.

2. In a talking machine an attachment comprising a hand lever for controlling said machine; a spring 6, connected to said lever; an intermediate lever 19, 20, controlled by said spring; an armature lever 24, and a stop 16, also, controlling said lever 19, 20, and a magnet controlling said armature lever, substantially as described.

3. In a talking machine, an attachment having an electro magnet for energizing it by making a contact at a distance from the machine; a pivoted armature lever for said magnet; an intermediate lever adapted to move and pass the armature lever and have its return stopped by the latter; a motor controlling hand lever; and a spring connection from the intermediate lever to said motor controlling hand lever, substantially as described.

4. In a talking machine attachment a base plate 7, provided with a lug 18; a pillar 17; a lug 16 and stops 11 and 22, integral with said pillar; a back plate 14; and a protective plate 12, integral with said back plate, substantially as described.

5. In a talking machine an attachment comprising a suitable base plate; an electro magnet; an armature lever for the same; an electrical circuit to operate the said lever from a distance; a pivoted lever 19, 20; a spring 6; a hand lever 4; and a member having surfaces 35, 36, adapted to control said hand lever, substantially as described.

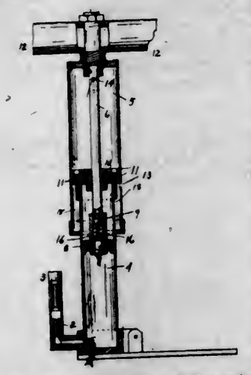
[Claim 6 not printed in the Gazette.]

885,485. AIR-PUMP. GEORGE W. KELLOGG, Rochester, N. Y., assignor to Wray Pump & Register Company, Rochester, N. Y., a Corporation of New York. Filed Nov. 1, 1906. Serial No. 341,637.

1. In a pump, the combination of the fixed and movable telescoping cylinders, the movable piston having a tubular rod and fixed thereby to the movable cylinder, said piston being operated in the fixed cylinder, and suitable ports whereby both cylinders are filled when they are extended and whereby air is compressed and delivered when one cylinder is telescoped within the other.

2. In a pump, the combination of a movable cylinder, a piston rod fixed to said cylinder, a fixed or stationary cylinder, a stuffing box between the cylinders and fixed to

said stationary cylinder, a piston fixed to said rod and operative in the stationary cylinder, and suitable ports whereby air is admitted to both cylinders when the piston is moved in one direction and compressed when it is oppositely moved.



3. In a pump, the combination of the outer cylinder, the inner cylinder, the stuffing box fixed to the inner cylinder and bearing on the interior of the outer cylinder, the air inlet in the outer cylinder adapted to be moved past said box to admit air to the outer cylinder during the down or air-compressing stroke, the piston actuated through the medium of the outer cylinder and operative within the inner cylinder, and means whereby to admit air directly from the outer to the inner cylinder.

4. In a pump, the combination of the outer and inner cylinders, the stuffing box fixed to the inner cylinder, the piston actuated through the medium of one cylinder and operative in the other, an air inlet in the periphery of the outer cylinder near its lower end and movable thereby past said box, and passages all substantially as described whereby air admitted during one movement of the piston may be compressed during a return movement, all exterior air being admitted through said inlet in the outer cylinder.

5. In a pump, the combination of two telescoping cylinders, a stationary valve packing and cap fixed to the end of the inner cylinder and bearing on the outer cylinder, said cap being perforated, said latter cylinder having an air inlet in its periphery near its end whereby air is successively admitted to the outer cylinder below and above said packing and without passing between the packing and outer cylinder.

[Claims 6 to 8 not printed in the Gazette.]

885,486. MACHINE FOR CUTTING SUGAR-CANE TRASH, &c. WILLIAM J. KENT, New York, N. Y. Filed Mar. 13, 1907. Serial No. 362,231.



1. In a machine for the purposes set forth, a frame, means adapted to pick up material from the ground and direct it longitudinally, a conveyer for receiving such material and feeding it longitudinally, and a cutter to which it is fed thereby.

2. In a machine for the purposes set forth, a frame, a conveyer, and means adapted to pick up material from the ground and lay it longitudinally on the conveyer, combined with feed rolls and a cutter.

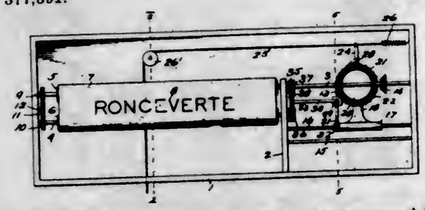
3. In a machine for the purposes set forth, a frame, a conveyer, a fixed comb in front of the conveyer, and means coöperating with such comb to gather up material from the ground and lay it longitudinally on the conveyer, combined with feed-rolls and a cutter.

4. In a machine for the purposes set forth, a frame, a conveyer, and a rake sweeping the ground rearwardly and adapted to pick up material and lay it longitudinally on the conveyer, combined with feed-rolls and a cutter.

5. In a machine for the purposes set forth, a frame, a conveyer, and a rake having teeth adapted to penetrate with a downward movement a mass of material upon the ground, and by a rearward movement to disentangle and straighten such material and throw it longitudinally upon the conveyer, combined with feed-rolls and a cutter.

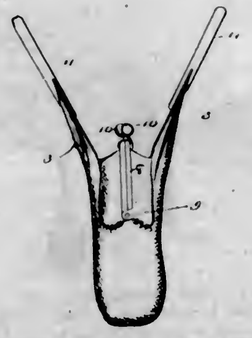
[Claims 6 to 19 not printed in the Gazette.]

885,487. STATION-INDICATOR. CHARLES W. KINCAID, Ronceverte, W. Va. Filed June 5, 1907. Serial No. 377,391.



A station indicator of the type set forth, comprising parallel shafts, rollers carried thereby, an indicating belt trained over said rollers, gearing between said shafts for driving one from the other in the same direction, confronting bevel pinions carried by one of said shafts, a slidable member, a casting carried thereby, having crown teeth for engagement alternately with each of said pinions, manually operated means for rotating said casting, means for resetting said manually operated means after each operation thereof, a pivoted bell crank lever having one end engaged with said member, spools carried by said parallel shafts, a rope trained over said spools, and buttons carried upon said rope at equidistant points, said bell crank lever having its other end projecting in the path of said buttons and formed to be engaged thereby.

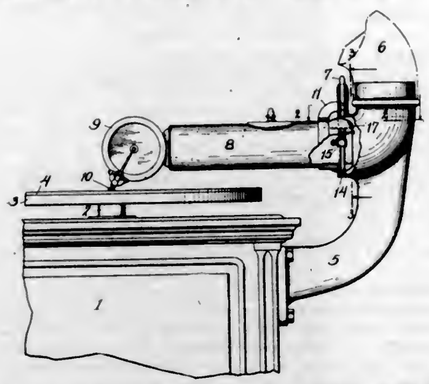
885,488. BAG. FRANK L. KIRK, New York, N. Y., assignor to The Gorham Company, New York, N. Y., a Corporation of New York. Filed Sept. 13, 1907. Serial No. 392,712.



1. A bag comprising a body portion consisting of a plurality of inner and outer walls forming side pockets, means for connecting the inner walls at their upper edges, thereby forming a central receptacle, upwardly projecting flexible extensions on the side walls, provided with handles, and constituting covers for the side pockets, said extensions spaced apart at the ends of the bag when the handles are in contact, thereby forming an extra closure or compartment above the central receptacle through which the latter and the side pockets are accessible while the handles remain in contact, and lateral extensions on the edges of the side walls proper, said lateral extensions connected with each other and constituting the ends of the central receptacle and of the side pockets.

2. A bag comprising a body portion consisting of a plurality of inner and outer walls forming side pockets, a locking device for connecting the inner walls at their upper edges, thereby forming a central receptacle, upwardly projecting flexible extensions on the side walls, provided with handles, and constituting covers for the side pockets, said extensions spaced apart at the ends of the bag when the handles are in contact, thereby forming an extra closure or compartment above the central receptacle and side pockets through which said receptacle and pockets are accessible while the handles remain in contact, and lateral extensions on the edges of the side walls proper, said lateral extensions connected with each other and constituting the ends of the central receptacle and of the side pockets.

885,489. TALKING-MACHINE. THOMAS KRAEMER, Philadelphia, Pa., assignor to Hawthorne & Sheble Manufacturing Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Nov. 5, 1907. Serial No. 400,735.



1. In a talking-machine, a sound-conveying device including a pivotally-mounted tubular member, a sound-box connected to one end of said member, and means inclosed within said sound-conveying device for exerting pressure on said tubular member to turn it about its pivot, substantially as set forth.

2. In a talking-machine, a sound-conveying device including a pivotally-mounted tubular member, a sound-box connected to one end of said member, and a spring within said sound-conveying device arranged to exert pressure on said tubular member to turn it about its pivot and to be restored to potential position in restoring said member to initial position, substantially as set forth.

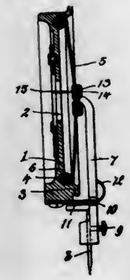
3. In a talking-machine, a tubular member, a support on which said member is pivotally mounted, a sound-box connected to the free end of said member, and means for exerting pressure on said member to turn it about its pivot, said means being brought to potential relation in mounting said member upon said support, substantially as set forth.

4. In a talking-machine, a tubular member, a support on which said member is pivotally mounted, a sound-box connected to the free end of said member, and a spring engaged and put under tension by said member in mounting the same upon said support, substantially as set forth.

5. In a talking-machine, a sound-conveying device including a support having an opening therethrough and a tubular member pivotally mounted thereon in communication with said opening, a sound-box connected to the free end of said tubular member, and means inclosed within said sound-conveying device for exerting pressure on said tubular member to turn it about its pivot, said means being brought to potential relation in mounting said member upon said support, substantially as set forth.

[Claims 6 to 14 not printed in the Gazette.]

885,490. SOUND-BOX FOR TALKING-MACHINES. THOMAS KRAEMER, Philadelphia, Pa., assignor to Hawthorne & Sheble Manufacturing Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Dec. 21, 1907. Serial No. 407,577.

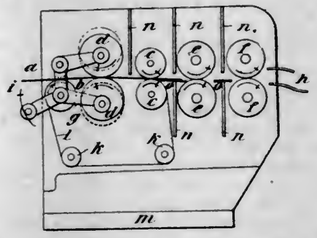


1. A sound-box having a diaphragm, a thin flat piece of non-metallic material, a casing therefor securing said piece to the diaphragm, a stylus-lever pivotally mounted on a wall of the box and bearing at its inner end on said piece and a stylus secured to the outer end of the lever, substantially as described.

2. A sound-box having a diaphragm, a thin flat piece of non-metallic material, a casing therefor securing said piece to the diaphragm, said casing having an opening therethrough, a stylus-lever pivotally mounted on a wall of the box and having its inner end extending through the opening in said casing and bearing on said piece, and a stylus secured to the outer end of the lever, substantially as described.

3. A sound-box having a diaphragm, a disk of non-metallic material, an annular casing overlying the same and having tangs extending through openings in the diaphragm and holding the casing and disk thereto, a stylus-lever pivotally mounted on a wall of the box and having its inner end extending through the opening in said casing and bearing on said disk and a stylus secured to the outer end of said lever, substantially as described.

885,491. METHOD OF AND APPARATUS FOR REMOVING SUPERFLUOUS BRONZE. HANS LAMBERGER, Leipzig, Germany. Filed June 22, 1907. Serial No. 380,303.



1. The method of dusting a sheet consisting in feeding the sheet and simultaneously dusting it in the direction it is being fed and in an opposite direction.

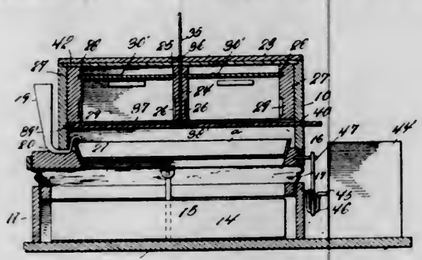
2. A sheet dusting apparatus of the character described comprising a pair of initial dusting rollers both of which move in the direction opposite to that of the sheet and a pair of dusting rollers both of which run in the same direc-

tion as the sheet and are adapted to grip and draw the sheet forward.

3. A sheet dusting apparatus of the character described having guide rollers and dusting rollers which rotate in the direction of travel of the sheet and a pair of dusting rollers which run in an opposite direction to the travel of the sheet the latter being arranged and adapted to be moved apart until the sheet is engaged and moved forward by the nearest guide rollers.

4. An apparatus of the character described having a pair of dusting rollers arranged and adapted to rotate in a direction opposite to the travel of the sheet, two arms on which said rollers are mounted, said arms being provided with toothed sectors engaging with each other in such manner that when one arm and its roller is moved in one direction the movement of the other roller in the opposite direction is positively effected.

885,492. DEVELOPING-MACHINE. ANDREW T. LARSON, Wheeler, Wis. Filed Apr. 18, 1906. Serial No. 312,508.



1. A device of the class described comprising upper and lower casings, means for supporting a tray in said upper casing, and means located in the lower casing for reflecting the light into said upper casing.

2. A device of the class described comprising upper and lower casings, means for supporting a tray in said upper casing, and means extending through said upper casing for moving plates into and out of the tray.

3. A device of the class described comprising upper and lower casings, means for supporting a tray in said upper casing, and a frame located in said upper casing and arranged for movement therein to move plates to and from said tray.

4. A device of the class described comprising upper and lower casings, means located in said upper casing for supporting a tray, means located in said lower casing for reflecting light into said upper casing, and means associated with the upper tray whereby the plates may be viewed.

5. A device of the class described comprising upper and lower casings, means located in said upper casing for supporting a tray, said upper casing being mounted to rock upon said lower casing, means for rocking said upper casing, and means located in the lower casing for reflecting the light into said upper casing.

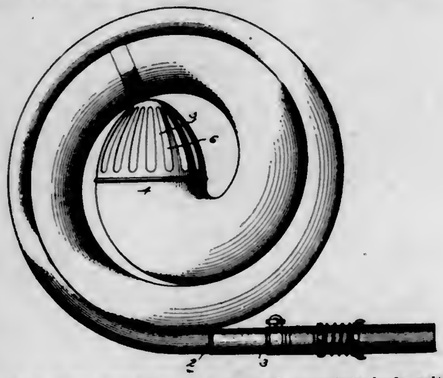
[Claim 6 not printed in the Gazette.]

885,493. HORN. HOWARD W. LESTER, Hartford, Conn., assignor to The Post & Lester Company, Hartford, Conn., a Corporation of Connecticut. Filed Nov. 5, 1907. Serial No. 400,752.

1. A horn consisting of a tapered convolute body with the smaller end of the body at the periphery and the larger end of the body at the center, said larger end having an ovoid perforated head in the plane of the coils, substantially as specified.

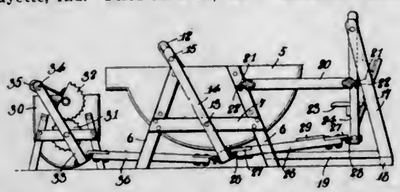
2. A horn consisting of a tapered convolute body with the smaller end of the body at the periphery and the larger end of the body at the center, said larger end terminating in the plane of the coils in a rounded head that is provided with slits, substantially as specified.

3. A horn consisting of a tapered convolute body with the smaller end of the body at the periphery and the larger end of the body at the center, said larger end terminating in the plane of the coils and provided with slits, substantially as specified.



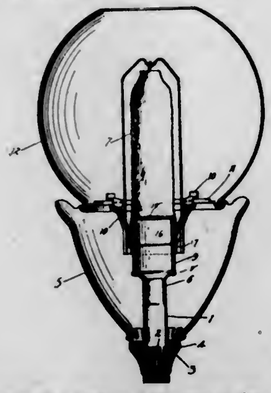
4. A horn consisting of a tapered convolute body with the smaller end of the body at the periphery and the larger end terminating in a rounded head at the center, said head lying in the plane of the coils and provided with perforations on both sides of the plane of the coils, substantially as specified.

885,494. MECHANICAL MOTOR. AUGUST LARSON, La Fayette, Ind. Filed June 10, 1907. Serial No. 378,176.



The combination of a supporting frame, a pair of upright parallel levers fulcrumed on the frame and connected together and adapted for connection to the machine to be operated, a swing frame connected to said supporting frame and having a pair of oscillating side bars which swing in planes parallel to those in which the levers vibrate, connecting bars between the levers and the side bars, and a foot rest supported on said connecting bars.

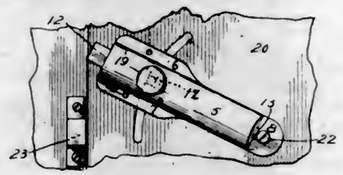
885,495. LAMP. EMIL N. LEBWOHL, San Francisco, Cal. Filed July 29, 1907. Serial No. 385,958.



1. In combination with a lamp, means for supporting a chimney, comprising outwardly extending arms, and arranged to support the chimney so that its lower edge is substantially at the level of the lowest part where combustion takes place, and of a diameter not less than twice the outside diameter of that part of the burner where combustion commences, the space between said part and supporting means being substantially unobstructed except for said arms, substantially as described.

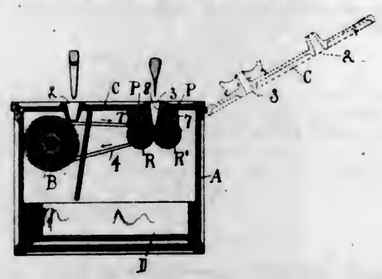
2. In combination with a lamp, a globe, a support therefor, and a shade for diffusing the light directed downwards from the lamp, the upper edge of said shade and the lower edge of said globe being arranged substantially at the level of the lowest part where combustion takes place, substantially as described.

885,496. LATCH WITH PIVOTED CASE. LOUIS C. LEOPOLD, Hancock, Iowa. Filed Jan. 31, 1908. Serial No. 413,659.



A combined latch and catch consisting of a casing formed integral, said casing having a central enlarged chamber opening through its rear face and having longitudinal passages in its ends opening into said chamber, one of said passages being rectangular in cross section and the other of said passages being cylindrical, a perforated flange projecting longitudinally from one end of the casing, lateral perforated flanges projecting from the opposite end portion of the casing, a bolt passed through the casing and having sliding engagement with the passages in the end portion thereof, the engaging portions of said bolts being formed to correspond with the cross sections of the passages with which they are engaged, a helical spring mounted upon the cylindrical portion of the bolt and resting with one end against the rectangular portion of the bolt and with its opposite end against the opposite end of the chamber of the casing, said casing having a longitudinal slot in its outer face, and a rod passed through said slot and engaged through the bolt, and having a knob at each end.

885,497. BARBER'S CABINET. WILLY MAIBAUM, Cleveland, Ohio. Filed Nov. 30, 1907. Serial No. 404,574.

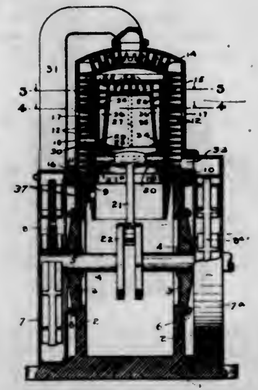


1. A cabinet for barbers adapted to disinfect razors and comprising a pair of rollers arranged to contact at their surfaces and means to rotate said rollers together, and an absorbent pad for a disinfectant arranged over each roller in contact therewith and said cabinet having a slot in its top between said pads to insert the razor.

2. A cabinet for barbers having a slot in its top to insert a razor, cleansing rollers arranged beneath said slot and absorbent pads confined within the cabinet on opposite sides of said slot over said rollers.

3. A barber's cabinet having a hinged cover with a slot lengthwise therein, rollers supported in the ends of said cabinet beneath and on opposite sides of said slot, absorbent pads to carry a disinfectant supported on the inside of said cover over said rollers and means to rotate the rollers.

885,498. MEANS FOR COOLING EXPLOSIVE-ENGINES. FRANK L. MANELIK, Burton, Ohio. Filed Feb. 4, 1907. Serial No. 355,572.



1. In an explosive engine, the combination of a shaft, a cylinder, a casing surrounding said cylinder and spaced therefrom and having an inlet and an outlet, flanges carried by said cylinder between the inlet and the outlet and projecting across the space between the cylinder and casing and having numerous fine perforations therein, the perforations of one flange being staggered with respect to those on an adjacent flange, and means for supplying air to the casing inlet, substantially as specified.

2. In an explosive engine, the combination of a shaft, a cylinder, a casing surrounding said cylinder and spaced therefrom, and having inlets communicating with both ends of such space and an outlet substantially midway between said inlets, flanges carried by said cylinder and extending across such space, the said flanges being provided with numerous perforations and the perforations in one flange, being staggered with respect to those in an adjacent flange, and means for supplying air to said inlets, substantially as specified.

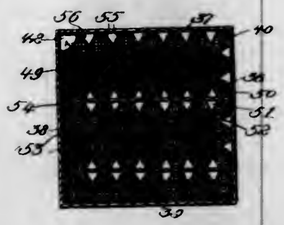
3. In an explosive engine, the combination of a cylinder having a closed end, said end being provided with concentric flanges and the body of the cylinder being provided with surrounding flanges, a casing surrounding the closed end and body of said cylinder, the said flanges being provided with numerous perforations and the perforations in one flange being staggered with respect to those in an adjacent flange, and fitting against the outer ends of the flanges, said casing being provided with an inlet at the central portion of the head and within the innermost of the concentric flanges thereon and with an outlet remote from said inlet, and means for supplying air through said inlet, substantially as specified.

4. In an explosive engine, the combination of a cylinder having a closed end, said end being provided with concentric flanges and the body of the cylinder being provided with surrounding flanges, the said flanges being provided with numerous perforations and the perforations in one flange being staggered with respect to those in an adjacent flange, a casing surrounding the closed end and body of the cylinder and fitting against the outer ends of the flanges and provided with an inlet at the central portion of the head within the innermost flange thereon, and with an inlet at the opposite end thereof and an outlet intermediate between said inlets, a shaft, and means driven thereby for forcing air through said inlets, substantially as specified.

5. In an explosive engine, the combination of a cylinder, a shaft, a hollow piston within said cylinder, a closed crank case within which said shaft is mounted, and means for supplying a current of air from the case in contact with the interior of said piston on one stroke of the piston and for supplying air from the atmosphere in contact with the interior of said piston on the reverse stroke thereof, substantially as specified.

[Claims 6 to 16 not printed in the Gazette.]

885,499. GRAIN-SCRUBBER. CHARLES E. MANOR, Stanleyton, Va., assignor of one-half to James D. Manor, Newmarket, Va. Filed Aug. 15, 1907. Serial No. 388,685.



1. A grain scrubber comprising a combined scrubbing and separating compartment having imperforate side walls with the inner faces thereof roughened, said compartment further having a foraminous bottom formed with an outlet, and a closed top for said compartment having an inlet adapted to communicate with a source of supply.

2. A grain scrubber comprising a combined scrubbing and separating compartment having an inlet and an outlet and further having imperforate side walls with the inner faces thereof roughened, said compartment further comprising a foraminous bottom, and V-shaped guides disposed in said compartment of a height equal to the height of said compartment, suitably spaced apart and arranged in such relation with respect to each other as to provide substantially wedge-shaped pockets.

3. A grain scrubber comprising a combined scrubbing and separating compartment having an inlet and an outlet and further having roughened walls and a foraminous bottom, said bottom provided with a plurality of enlarged openings and hollow perforated V-shaped guides spaced from each other disposed in said compartment and communicating with the openings in said bottom.

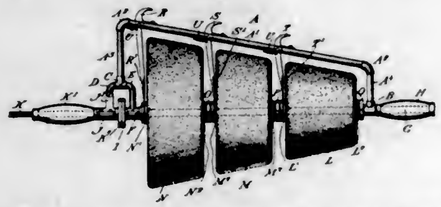
4. A grain scrubber comprising a combined scrubbing and separating compartment adapted to have a gyratory motion imparted thereto and provided with an inlet and an outlet, said compartment having roughened walls and a foraminous bottom, partitions arranged in said compartment and disposed in staggered relation with respect to each other, and V-shaped guides projecting at an angle with respect to said partitions, suitably spaced apart and arranged in such relation with respect to each other as to form substantially wedge-shaped pockets.

5. A grain scrubber comprising a combined scrubbing and separating compartment having an inlet and an outlet and further having roughened walls and a foraminous bottom, and a compartment connected with and arranged below said combined scrubbing and separating compartment for receiving the matter separated from the grain, said receiving compartment having an outlet and of the same area as the separating compartment, said compartments adapted to have a gyratory motion imparted thereto in unison.

[Claims 6 to 28 not printed in the Gazette.]

885,500. SHOE-POLISHING BRUSH. ROBERT B. MARTIN, Brooklyn, N. Y. Filed Jan. 22, 1907. Serial No. 353,475.

1. The combination with a frame, of a shaft mounted in said frame provided with brushes, a clutch wheel secured on one end of said shaft, an arm pivoted to said frame carrying a power shaft, and a clutch wheel secured on the end of said shaft adapted to engage the clutch wheel on the shaft carrying the brushes.



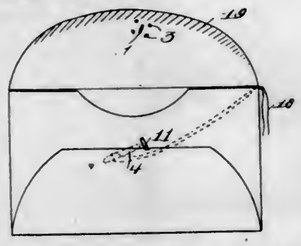
2. The combination with a frame having a shaft loosely mounted thereon, provided with a clutch-wheel at one end, brushes mounted on said shaft and a flexible shaft pivotally connected to said frame provided with a clutch-wheel at its end adapted to be thrown into engagement with the clutch-wheel on the shaft carrying the brushes for the purpose described.

3. The combination with a frame provided with journal-boxes, of a shaft mounted in said boxes provided with spaced clutch-wheels, brushes loosely mounted on said shaft provided with clutch-wheels, a clutch-wheel secured on one end of the shaft, a flexible shaft pivotally connected to said frame provided with a clutch-wheel adapted to engage said clutch-wheel on the shaft and means for throwing the clutch-wheels of the brushes into engagement with the clutch-wheels of the shaft, for the purpose described.

4. The combination with a frame provided with journal-boxes, of a shaft loosely mounted in said boxes provided with spaced clutch-wheels, a series of brushes provided with clutch-wheels loosely mounted on said shaft, grooved sleeves carried by the brushes, spring actuated levers mounted in said frame provided with enlarged notched ends working in said grooves of the sleeves, and means for operating said shaft, for the purpose described.

5. The combination with a frame provided with journal-boxes, of a shaft mounted in said boxes provided with a clutch-wheel at one end, an arm pivoted to said frame provided with a journal-box, a flexible shaft mounted in said box provided with a clutch-wheel adapted to engage the clutch-wheel of the shaft, and brushes mounted on said shaft, for the purpose described.

885,501. ENVELOP SEAL OR FASTENER. ENOCH MERRIFIELD and WILLIAM A. PEEK, Marysville, Mont.; said Merrifield assignor to said Peek. Filed Oct. 7, 1907. Serial No. 396,274.



1. An envelop seal or fastener involving an envelop, a longitudinally reciprocable securing part lockable from the interior of the envelop, and having means for detachably connecting an operating device thereto.

2. An envelop seal or fastener involving an envelop, a securing part accessible for operation from the interior of the envelop, and a detachable device operable from the exterior of the envelop for actuating said securing part.

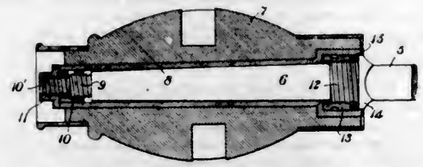
3. An envelop seal or fastener embodying an envelop, a reciprocable securing part mounted within and accessible from the interior only of the envelop, and provided with means for attaching an actuating device thereto.

4. An envelop seal or fastener involving an envelop, a movable securing part mounted within and accessible from the interior only of the envelop, and a detachable device operable from the exterior of the envelop for effecting the locking of the said part.

5. An envelop seal or fastener involving an envelop, a movable securing part accessible from the interior of the envelop only, and a string detachably connected to the said part for effecting operation thereof from the exterior of the envelop.

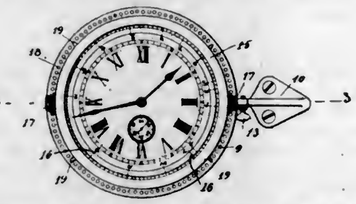
[Claims 6 to 14 not printed in the Gazette.]

885,502. BUGGY-SPINDLE. JEREMIAH C. MESSER, Austin, Tex., assignor of one-third to Robert C. Lambie and one-third to Jefferson Cook, Austin, Tex. Filed Apr. 15, 1907. Serial No. 368,272.



The combination with a spindle having one end thereof provided with threaded extensions of different cross-sectional diameters, of an axle-box surrounding the spindle, a collar carried by one end of the spindle and bearing against the adjacent end of the axle-box, a sleeve threaded on one of the extensions of the spindle and engaging the interior walls of the axle-box to form a bearing for the latter, and a nut threaded on the adjacent extension of the spindle and provided with a flat imperforate bearing face adapted to engage the adjacent end of the sleeve and axle-box, respectively said collar and sleeve being provided with apertures for the reception of a spanner.

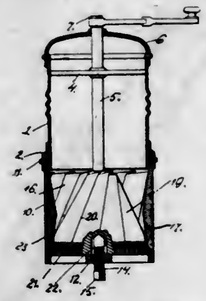
885,503. STATION-INDICATOR. CHRISTIAN MILLER, Chicago, Ill. Filed July 9, 1907. Serial No. 382,923.



The combination of a clock, the case of which has an exterior circumferential outwardly-projecting flange with a series of holes around the same, a ring in front of the clock and having pins adapted to enter said holes and clips engageable with the flange, and a transparent dial in the ring and covering the face of the clock, the dial having station marks thereon.

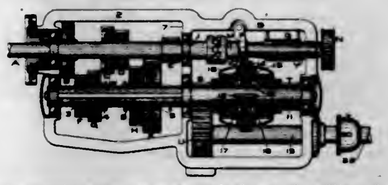
885,504. COFFEE-MILL. JOHANN MUSZAR, Cincinnati, Ohio. Filed Aug. 15, 1907. Serial No. 388,701.

In a coffee mill, two shells, an annular depending flange carried by the upper of said shells at the lower end thereof spaced from said shell and provided with bayonet slots, the upper end of the lower shell being received in the space between said upper shell and the flange and provided with pins to engage in said slots, the lower shell provided on its inner face with a grinding surface, a spider bearing carried by the upper shell near its upper end, a cap for said upper shell, a shaft journaled in said spider bearing and cap, means secured to the upper end of said shaft for operating the same, a bur carried on the lower end of said shaft, and an adjustable bearing within the



lower end of the lower shell for supporting the bur and also for adjusting the position thereof within the lower shell.

885,505. DRIVING-GEAR FOR AUTOMOBILES. HENRY G. MCCOMB, Detroit, Mich. Filed Jan. 2, 1907. Serial No. 350,441.



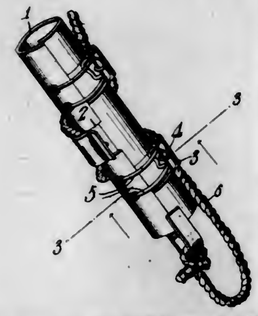
1. In combination a power shaft, a plurality of gear wheels fixed thereto, a counter shaft, complementary gear wheels carried thereby and adapted to be thrown into and out of operative connection with said first mentioned gear wheels, a plurality of driving wheel mechanisms, each deriving their power therefrom independently of the other, and a second counter shaft axially in line with the power shaft and adapted to be thrown into clutching engagement therewith to receive from it the power ordinarily transmitted to the first named counter shaft, substantially as described.

2. The combination of a shaft W through which power is transmitted, two parts of a balanced gear sleeved on said shaft, means for transmitting power from said shaft to said parts of the balanced gear, a gear wheel upon each of said parts, a counter-shaft, a gear wheel thereon meshing with one of said gear wheels, a second counter-shaft, a gear wheel thereon meshing with the other of said gear wheels, the severed halves of an axle, and connections independently coupling the halves of said axle with said counter-shafts.

3. The combination of a shaft W through which power is transmitted, two parts of a balanced gear sleeved on said shaft, means for transmitting power from said shaft to said parts of the balanced gear, a gear wheel upon each of said parts, a counter-shaft, a gear wheel thereon meshing with one of said gear wheels, a second counter-shaft, a gear wheel thereon meshing with the other of said gear wheels, the severed halves of an axle, connections independently coupling the halves of said axle with said counter-shafts, and a variable speed mechanism for driving the shaft W.

4. In combination with a power shaft, a counter shaft axially in alinement therewith, means for throwing the same into and out of operative connection with the power shaft, a second counter shaft parallel with the power shaft and adapted to be thrown into and out of operative connection therewith, and a plurality of independently acting transmission means deriving their actuation therefrom adapted to contemporaneously actuate individual mechanical members, substantially as described.

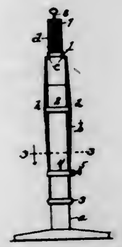
885,506. CLEAT. JOHN MCCLURE, Jr., Little Rock, Ark. Filed Feb. 15, 1907. Serial No. 357,592.



1. A cleat comprising a sheet having incisions cut in the edge thereof with the metal between the incisions bent up laterally and forming a tongue lying beyond the side of the sheet and a spring member attached to the edge of the sheet opposite to that edge having the incisions, said spring member lying in the opening formed by the bending of the tongue from the plate.

2. A cleat comprising a sheet formed into a cylinder and having at one edge incisions, the metal between which is formed up into a laterally disposed tongue, a spring member attached to the edge of the sheet opposite the edge thereof having the incisions, said spring member lying in the space formed by the removal of the tongue beyond the side of the sheet.

885,507. PLATFORM-SCAFFOLD. JAMES MCINTYRE, Edmonton, Alberta, Canada. Filed Apr. 18, 1907. Serial No. 368,816.



1. A platform scaffold comprising a vertical upright, a vertically arranged adjustable yoke extending longitudinally of the upright provided with downwardly projecting arms on opposite sides of the upright, and with a loop extending above the upright, means to adjustably secure the yoke in given position horizontally upon the upright, a horizontally extended putlog having its outer end engaged with said loop above the upright, means to tighten the putlog in given position in the yoke and an encircling band at the base of the loop upon which the outer end of the putlog rests.

2. A platform scaffold comprising a vertically extended upright, a vertically arranged adjustable yoke extending longitudinally of the upright, provided with downwardly projecting arms on opposite sides of the upright, and with a loop extending above the upright, horizontal bands encircling the upright and engaged with the arms of said yoke below said loop to secure the yoke upon the upright, a horizontally extended putlog having its outer extremity supported in said loop above the upright, means to hold the outer end of the putlog in position in the loop, and an encircling band at the base of the loop upon which the outer end of the putlog rests.

3. A platform scaffold comprising a vertically extended upright, a vertically arranged metallic yoke extending longitudinally of the upright provided with downwardly projecting arms on opposite sides of the upright and having a movable engagement upon the upright, said yoke provided with a loop extending above the upright, means to fasten the yoke in position upon the upright, a horizontally extended putlog having its outer extremity supported in said loop, and an encircling band at the base of the loop upon which the outer end of the putlog rests, said yoke provided with downwardly extended reinforcing bars secured to said arms for the purpose described.

885,508. ROLLING. WILLIS MCKEE, Elyria, Ohio. Filed May 24, 1907. Serial No. 375,547.



1. As an improvement in the art of rolling, the method herein described which consists in reducing or rolling down a billet or other large section, simultaneously forming two or more connected sections of smaller transverse dimensions, and finally causing an elongation of one of said smaller sections greater than that of adjacent sections and thereby partially or wholly rupturing the web between adjacent sections.

2. As an improvement in the art of rolling, the method herein described which consists in reducing or rolling down a billet or other large section and during such rolling progressively dividing the billet into two or more longitudinal, connected sections, causing a greater elongation to one of the sections than that of adjacent section and then causing adjacent sections to move transversely in respect to each other, and thereby rupturing the connection between adjacent sections.

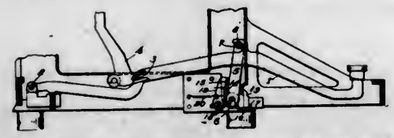
3. As an improvement in the art of rolling, the method herein described which consists in reducing or rolling down a billet or other large section and during such rolling progressively dividing the billet into two or more longitudinal connected sections, causing a greater elongation to one of the sections than that of adjacent sections and then causing a separation of the sections transversely in respect to the line of feed of the billet, thereby rupturing such webs.

4. As an improvement in the art of rolling, the method herein described which consists in reducing or rolling down a billet or other large section, and during such rolling operation progressively dividing the billet into two or more longitudinal web-connected sections, causing an elongation of one of the sections greater than that imparted to adjacent section or sections, and then separating the sections by moving them transversely in respect to each other.

5. As an improvement in the art of rolling, the method herein described which consists in reducing or rolling down a billet or other large section, forming two or more web-connected sections and causing the metal of one or more of such sections to move longitudinally with reference to an adjacent section or sections, whereby the web connecting adjacent sections is wholly or partially ruptured.

[Claims 6 to 8 not printed in the Gazette.]

885,509. TYPE-WRITING MACHINE. GEORGE A. MCLEAN, Atlanta, Ga., assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of New Jersey. Filed Feb. 25, 1908. Serial No. 417,783.



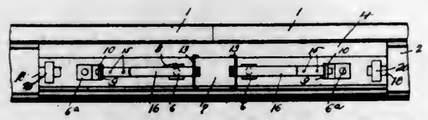
1. In a typewriting machine, the combination with key levers and a line-locking mechanism, of means for locking the key levers in normal positions, comprising a lock secured upon the machine frame having a bolt operable by a removable key, and an arm fulcrumed on said lock and movable by the bolt thereof to engage with the line-locking mechanism.

2. In a typewriting machine, the combination with key levers and a line-locking mechanism, of a lock secured upon the machine frame having a bolt operable by a removable key, and an arm fulcrumed on the casing of the lock having a pin or projection engageable by the bolt of the lock to move said arm in engagement with the line-locking mechanism to lock the key levers against movement.

3. In a typewriting machine, the combination with key-levers, of an arm fulcrumed in the machine frame, and supporting a locking-bar normally out of engagement with the key-levers, a lock secured in the machine frame and having a bolt operable by a removable key, and an arm pivoted upon the casing of the lock and movable by the bolt to engage the first-mentioned arm to swing it and the bar to lock the key-levers in normal positions.

4. In a typewriting machine, the combination with the key levers and line-locking mechanism, of a lock operable by a removable key and having a bolt, a bracket to secure said lock to the machine frame, and an arm pivoted on said bracket and having a pin or projection engageable by the bolt, said arm engageable with the line-locking mechanism to lock the levers in normal positions.

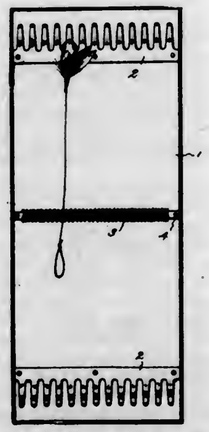
885,510. NUT-LOCK. THOMAS G. MCNEES and JOHN A. LACKEY, Slippery Rock, Pa. Filed Mar. 2, 1908. Serial No. 418,749.



1. In a nut lock and fastener, the combination with bolts, and nuts mounted thereon, of a plate mounted upon said nuts and having openings to receive said nuts and prevent their rotation, washers mounted on some of said bolts and having slotted extensions, links supported by said plate, fasteners engaging said slotted extensions and said links, said fasteners comprising toothed heads and resilient arms, substantially as described.

2. In a nut lock and fastener; the combination with bolts, and nuts mounted thereon, of a plate mounted upon said nuts and having openings to receive said nuts and prevent their rotation, washers mounted on some of said bolts and having slotted extensions, links supported by said plate, and fasteners engaging said slotted extensions and said links for holding said plate upon said nut.

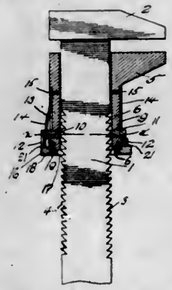
885,511. FISHING-FLY HOLDER. WILBUR R. NEWSOME, Hartford, Conn. Filed June 14, 1907. Serial No. 379,093.



1. A gut holder formed of a single coil of wire with the adjacent turns of the coil bent backwardly and forwardly so that the turns vary in distance from each other, substantially as specified.

2. A fishing fly holder having a back, means for the attachment of books and means for retaining gut, said gut-retaining means being formed by a single coil of wire with the adjacent turns of the coil bent backwardly and forwardly so that the turns vary in distance from each other, substantially as specified.

885,512. WRENCH. FRANKLIN D. NOBLE, Pittsburg, Pa. Filed Jan. 21, 1908. Serial No. 411,888.



1. In a wrench, the combination with a shank having oppositely disposed staggeredly arranged teeth, and a fixed jaw, of a movable jaw slidably mounted upon said shank, a sleeve carried by said jaw and embracing said shank, oppositely disposed spring pressed gripping blocks mounted in said sleeve and adapted to alternately engage the teeth of the said shank, depending semi-cylindrical lugs carried by said blocks, a lock-out member embracing the shank and mounted for rocking movement on the shank independently of the movable jaw, and shoulders at each end of said member for engagement with the lugs on said blocks to move the blocks out of engagement with said shank.

2. The combination with a toothed shank having a fixed jaw, of a movable jaw slidably mounted upon said shank, a sleeve carried by said jaw and embracing said shank, oppositely disposed spring pressed gripping blocks mounted in said sleeve and engaging said shank, depending lugs carried by said blocks, a lockout member connected to the lower end of said sleeve to rock on said shank, the movement of said member being independent of the sleeve, and beveled shoulders carried at opposite ends of the member for engagement with said lugs to move said blocks out of engagement with said shank.

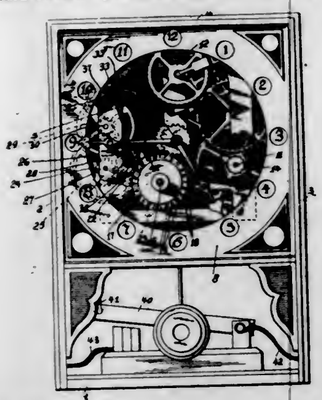
3. In a wrench, a gripping mechanism comprising a sleeve, oppositely disposed spring pressed gripping blocks mounted in said sleeves, depending lugs carried by said blocks, and a lock-out member movably mounted at the lower end of said sleeve and having beveled shoulders for engaging said lugs.

4. In a wrench, a gripping mechanism comprising a sleeve, oppositely disposed spring pressed gripping blocks mounted in said sleeve, depending lugs carried by said blocks, and means movably mounted upon the lower end of said sleeve for engaging said lugs and moving said blocks outwardly.

885,513. ELECTRIC TIME-SWITCH. CARL G. NYLANDER and FRANK J. REGENSBURGER, McKeesport, Pa., assignors to National Electric Time Switch Company, McKeesport, Pa., a Corporation of Pennsylvania. Filed Oct. 31, 1905. Serial No. 285,302.

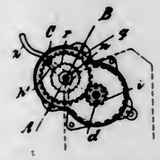
In a time switch mechanism for clocks in combination, a hand arbor, operating means therefor, a pinion on said arbor, a time setting means comprising a rotatable dial having teeth meshing with said pinion and having an exposed face provided with two series of numbers, each series having its numbers ranging clockwise from one to twelve, and two plates each having a projecting finger overlying

said numbered face, said plates being each rotatable with said dial and also each having rotary adjustment independent of one another with relation to said dial; an electric switch including a pivoted switch arm; switch operating means comprising a shaft having a crank at one end, means for rotating said shaft, a link connecting said shaft with said switch arm to move the latter from the former and a wheel on said shaft formed with diametrically opposite projecting arms, and an escapement mechanism for said switch operating means comprising a spring



held rock shaft, an escapement body on said shaft having oppositely projecting arms each formed at their ends with angular portions on corresponding sides thereof to impinge said lugs as stops during the rotation of said wheel, and an arm, rigidly secured to the end of said rock shaft and projecting angularly therefrom, said arm terminating in an angular finger projecting into the path of the fingers of said plates to be engaged thereby during the rotation of said plates.

885,514. CALCULATING-MACHINE. VALENTIN ODHNER, St. Petersburg, Russia. Filed June 5, 1907. Serial No. 377,383.



1. In a calculating machine, the combination of numbered disks and an axle for returning said numbered disks into the zero position, with a rotary pivot-shaft, a lever loosely mounted on said pivot-shaft, a spring for returning said lever, a driving member on said axle adapted to displace said axle longitudinally when the same is rotated, a gear wheel on said pivot adapted to drive said driving member, and ratchet mechanism connected with said lever adapted to drive said gear wheel when said lever is rotated forward, the ratio of transmission of said gear wheel and driving member being equal to the ratio of the angle through which said lever is rotated to one complete revolution, whereby when said lever is rotated forward said axle is displaced and rotated one revolution.

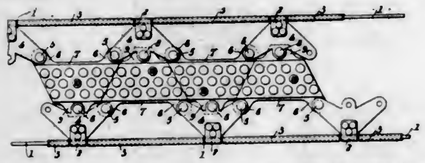
2. In a calculating machine, the combination of numbered disks and an axle for returning said numbered disks into the zero position, with a pivot, a lever on said pivot, gearing connected with said pivot adapted to drive said axle, ratchet mechanism connected with said lever adapted to drive said gearing when said lever is rotated forward, and means adapted to engage said lever for limiting the stroke of said lever corresponding to the ratio of transmission of said gearing, the ratio of transmission of said gearing being equal to the ratio of the angle through which said lever is rotated to one complete revolution, whereby when said lever is rotated forward said axle is rotated one revolution.

3. In a calculating machine, the combination of numbered disks and an axle for returning said numbered disks into the zero position, with a case having an opening and a slot, the end of said axle passing through said opening into said case, a ring having a notch in said case round said axle, a toothed wheel provided with a lug normally in said notch fixed on said axle, a pivot in said case, a lever on said pivot extending through said slot, a toothed wheel carrying a ratchet wheel on said pivot gearing with said former toothed wheel, and a spring-pressed ratchet on said lever for driving said ratchet wheel when said lever is moved forward, the ratio of transmission of said toothed wheels being equal to the ratio of the angle through which said lever is rotated to 360°, whereby when said lever is rotated forward said axle is displaced and rotated one revolution as set forth.

4. In a calculating machine, the combination of numbered disks and an axle for returning said numbered disks into the zero position, with a case having an opening and a slot, the end of said axle passing through said opening into said case, a ring having a notch in said case round said axle, a toothed wheel provided with a lug normally in said notch fixed on said axle, a pivot in said case, a lever on said pivot extending through said slot, a toothed wheel carrying a ratchet wheel on said pivot gearing with said former toothed wheel, and a spring-pressed ratchet on said lever for driving said ratchet wheel when said lever is moved forward, the ratio of transmission of said toothed wheels being equal to the ratio of the angle through which said lever is rotated to 360°, and said slot limiting the stroke of said lever corresponding to the ratio of transmission of said toothed wheels, whereby when said lever is rotated forward said axle is displaced and rotated one revolution as set forth.

5. In a calculating machine, the combination of numbered disks and an axle for returning said numbered disks into the zero position, with a pivot, a lever carried by said pivot, gearing connected with said pivot adapted to drive said axle, ratchet mechanism connected with said lever adapted to drive said gearing when said lever is rotated forward, the ratio of transmission of said gearing being equal to the ratio of the angle through which said lever is rotated to one complete revolution, whereby when said lever is rotated forward said axle is rotated one revolution.

885,515. TIRE-PROTECTOR. HARRY PARSONS, Southampton, England. Filed Aug. 27, 1906. Serial No. 332,122.



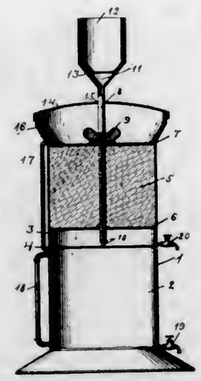
1. A detachable device for the purposes aforesaid, the said device comprising, a pair of rings, of less diameter than the tire, one for each side of the wheel, the said rings being connected by pieces of protective material extending over the tread of the tire, the said protective pieces being made with inclined sides and being reversely disposed alternately and constituting members capable of movement relatively to each other, but forming a practically continuous strip, or surface, around the tread of the tire and being flexible crosswise of the tire and capable of circumferential movement, or creeping, around the tire.

2. A tire protector having a plurality of protecting pieces with sides reversely inclined diagonally across the tire and means for loosely securing the same upon the tire so that the said protector can creep around the tire as the wheel rotates.

3. A tire protector comprising a series of adjacent protecting pieces with sides reversely inclined diagonally across the tire and means for loosely securing the same upon the tire so that the said protector can creep around the tire as the wheel rotates.

4. A tire protector comprising a plurality of protecting pieces with sides reversely inclined diagonally across the tire, a securing ring on each side of the tire and means for fastening said protecting pieces thereto zig-zag at points diagonally arranged on opposite sides of the tire.

885,516. FILTER. JOSEPH POLZIN, Davenport, Iowa. Filed Feb. 11, 1907. Serial No. 356,859.



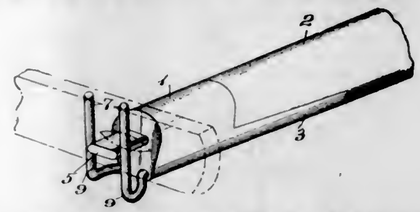
A filter comprising a receptacle with a flaring upper end, a solid partition arranged approximately midway of the receptacle to provide a lower chamber, a pipe extending from the upper end of the receptacle and having communication with the lower chamber, a perforated plate having a central opening therein arranged above the partition to provide a sediment chamber therebetween, a perforated plate having a central opening therein arranged near the top of the receptacle to permit of filtering material being arranged between it and the first mentioned perforated plate, a cover for the receptacle having a central opening therein, a funnel having a screw threaded inlet pipe, said pipe being inserted through the opening of the cover and through the openings of the perforated plates and having a perforated cone-shaped lower end which serves to contact with the partition, a thumb nut mounted on the threads of the pipe which serves to hold the perforated plate in an adjustable position within the receptacle, a faucet for the sediment chamber, and a faucet for the lower chamber, substantially as specified.

885,517. THREAD-HOLDER FOR SPOOLS. ELIZABETH S. PRESCOTT, San Francisco, Cal. Filed Jan. 29, 1908. Serial No. 413,207.



A thread holder for spools of thread formed of soft rubber and comprising a plug adapted to fit tightly within the central aperture of the spool and a disk arranged to lie in contact with the end of the spool when the plug has been inserted in said aperture, substantially as described.

885,518. WHIFFLETREE-HOOK. JOHN H. RABE, St. Louis, Mo. Filed Oct. 8, 1907. Serial No. 396,508.

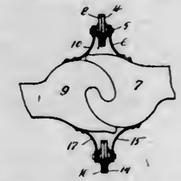


1. The combination with a whiffle-tree, of a cylindrical body fitted upon and inclosing the end of the whiffle-tree, a lug integral with and projecting outward from the end of the cylindrical body, a pair of locking fingers arranged for rotation in the cylindrical body and adapted to engage against the outer end of the lug, and flat springs bearing upon the inner ends of the locking fingers.

2. The combination with a whiffle-tree, of a cylindrical body fitted upon and inclosing the end of the whiffle-tree, a lug integral with the cylindrical body and projecting outwardly therefrom, a pair of pins arranged for rotation in the lower portion of the cylindrical body, the outer ends of said pins being bent vertically and adapted to bear against the outer end of the lug, and flat springs bearing upon the inner ends of the locking fingers.

3. A whiffle-tree hook, comprising a hollow cylindrical body, a lug integral with the outer end thereof, a plate integral with the bottom and inner end of said body, a pair of locking fingers having their horizontal portions arranged for rotation in the cylindrical body, the outer ends of which locking fingers are bent at right angles to the portions operating in the body, means whereby said locking fingers are held for rotation in the body, and springs fixed to the plate and engaging the rear ends of the fingers.

885,519. ELECTRIC SIGNAL. JOHN REBAR, Smithdale, Pa. Filed Nov. 11, 1907. Serial No. 401,585.



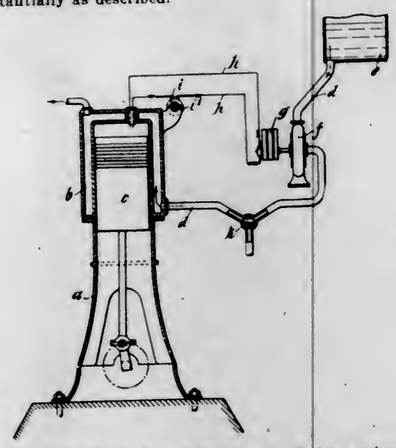
1. A railway train signal system, comprising a signal bell, a battery, a circuit from the battery to each car of the train, contacts carried on opposite sides of the couplers of said cars, each contact comprising a contact-disk, a curved spring arm having its inner end attached to the coupler and the said disk attached to its outer end and insulated therefrom, the said disks being included in said circuit, and circuit closers on each car, substantially as described.

2. In a railway train signaling system, the combination with a signal bell, a battery, and a circuit from the battery of each car of the train, of contacts carried on opposite sides of the couplers of said cars, each contact comprising a disk having a projecting hub, a curved spring attached at its inner end to one side of a coupler head and having said disk attached to its outer end and insulated therefrom, the said disks having the circuit wires connected direct thereto, and circuit closers in each car for said circuit.

885,520. DEVICE FOR IGNITING THE CHARGES OF INTERNAL-COMBUSTIIN ENGINES. FRITZ REICHENBACH, Charlottenburg, Germany. Filed May 2, 1906. Serial No. 314,867.

1. In a device of the class described, a gas engine having water jackets, electrodes carried by said engine, a

dynamo in circuit with said electrodes, a water motor to operate said dynamo, and means to convey the discharge of said motor through the water jackets of said engine, substantially as described.



2. In combination with a jacketed explosive engine embodying an igniter and a generator therefor, of a water motor operatively connected to the generator, means for supplying water under pressure to the motor, and a conduit leading from the exit of the motor to the jacket of the engine, for the purpose set forth.

3. In combination with a jacketed explosive engine embodying an igniter and a generator therefor, of a water motor operatively connected to the generator, means for supplying water under pressure to the motor, and a conduit leading from the exit of the motor to the jacket of the engine, a branch conduit connected to this conduit and a valve at the junction of the two conduits adapted to deflect the water away from the jacket in starting, for the purpose set forth.

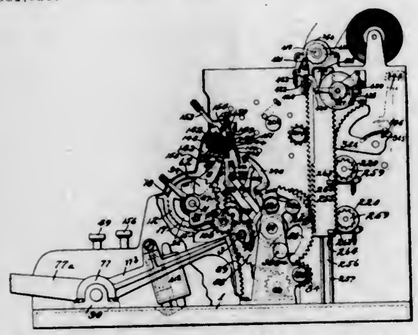
885,521. HANDSAW. ALFRED M. REMINGTON, Fitchburg, Mass., assignor to Simonds Manufacturing Co., Fitchburg, Mass., a Corporation of Massachusetts. Filed Jan. 28, 1908. Serial No. 412,962.



1. In a saw, having the blade and handle angularly adjustable in respect to each other, connecting slots which are arranged at an angle with one another in one of the members, a pair of pins which pass through said slots and through the other member, and which may be moved as desired in the said slots, and means to clamp the two members together in any position to which they are adjusted in relation to each other.

2. In a saw, having the blade and handle angularly adjustable in relation to each other, a T-shaped slot in one of such members, a pair of pins which extend through said slot and through openings in the other member, means to hold the pins in proper relation to the members to permit the pins to be readily moved about in the slots, and means to clamp the members securely together in any position of adjustment.

885,522. COMPUTING-MACHINE. RICHARD VON REPPERT, St. Louis, Mo. Filed July 1, 1907. Serial No. 381,635.



1. In a computing machine, totalizing mechanism comprising a series of total wheels, a carrying train arranged between each two adjacent total wheels and comprising a set lever arranged to be actuated to set the carrying train in position to carry when actuated, means to positively lock said lever in normal position and in set position, means operatively connected to the total wheel of lower order to unlock, to move and to relock said set lever in set position.

2. In a computing machine, totalizing mechanism comprising a series of total wheels, and a carrying train arranged between each two adjacent total wheels and comprising a set lever arranged to be actuated to set the carrying train in position to carry when actuated and arranged to be positively locked in normal and in set position, means operatively connected to the total wheel of lower order to unlock, to set and to relock said set lever, and means to unlock and move said set lever to normal position, said means being arranged to be functionally effective after the carrying movement of said train.

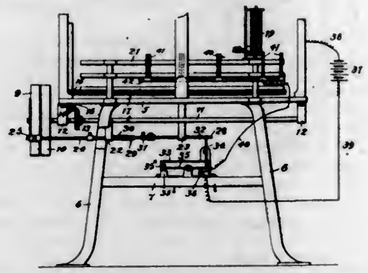
3. In a computing machine, totalizing mechanism comprising a series of totalizing wheels, and a carrying train arranged between each two adjacent total wheels and comprising a positively locked set lever arranged to be actuated to set the carrying train in position to carry when actuated, and means operatively connected to the total wheel of lower order to unlock, move and relock said set lever and keep it locked during carrying actuation.

4. In a computing machine, totalizing mechanism comprising a series of total wheels, and a carrying train arranged between each two adjacent total wheels, said carrying train comprising a set lever arranged to be actuated to set the carrying train in position to carry when actuated, a lock lever operatively connected to the total wheel of lower order and to said set lever to lock said set lever in normal position and in set position, and means operatively connected to the total wheel of lower order to release said lever and to relock said set lever through said lock lever.

5. In a computing machine, totalizing mechanism comprising a series of total wheels, and a carrying train arranged between each two adjacent total wheels, said carrying train comprising a set mechanism arranged to be actuated to set the carrying train in position to carry when actuated, said set mechanism being arranged to assume both a normal position and a set position, said set mechanism consisting of the total wheel of lower order and two levers, means on said total wheel to lock said levers against movement, means on said total wheel to unlock and set said set mechanism in set position and to lock the same in set position, and means to unlock said lock lever from said set lever while in set position and move said set lever to normal position.

[Claims 6 to 120 not printed in the Gazette.]

885,523. BRAIDING-MACHINE STOP-MOTION. OLIVER A. ROBBINS, Charlotte, N. C. Filed Mar. 13, 1907. Serial No. 362,161.



1. The combination in a braiding-machine including a movable bobbin, of a stop-motion comprising an electrically-affected power-shifter, a source of electricity, a contact device on and insulated from the machine for electrical contact with said bobbin, an electric circuit including the source of electricity, the bobbin, power-shifter, and contact device, and means associated with said bobbin whereby the circuit is closed upon exhaustion of material carried by the bobbin.

2. The combination in a braiding-machine including a movable bobbin in electrical contact with the machine, of a stop-motion comprising an electrically-affected power-shifter, a source of electricity, a contact device on and insulated from the machine for electrical contact with said bobbin, a conductor between the source of electricity and the machine, a conductor between the source of electricity and the power-shifter, a conductor between the power-shifter and the contact device, and means associated with the bobbin whereby the circuit is closed upon exhaustion of material carried by the bobbin.

3. In a braiding-machine, the combination with a movable bobbin included in an electric circuit, of a resilient contact device arranged adjacent to the path of said bobbin and to be engaged thereby.

4. In a braiding-machine, the combination with a movable bobbin included in an electric circuit, of a contact device to be engaged by said bobbin while in motion and comprising a strip of conductive material arranged adjacent to the path of the bobbin, and a support for said contact device insulated from the machine.

5. In a braiding-machine, the combination with a movable bobbin included in an electric circuit, of an insulated support on said machine, and upright resilient contact devices positioned in groups on said support adjacent to the path of said bobbin and arranged to be engaged thereby.

[Claims 6 to 10 not printed in the Gazette.]

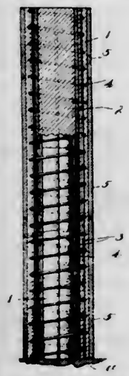
885,524. PANELING. HUGH M. ROBINSON, Eversley, Sawbridgeworth, England. Filed Apr. 23, 1907. Serial No. 369,823.

1. Paneling construction consisting of, in combination, supports adapted to be fixedly attached to or to form a part of the surface to be paneled, and provided with engaging means, rails of substantially similar width to said supports and provided with engaging means, stiles adapted at each end to engage with the said engaging means of both supports and rails so as to be held fixedly to the supports and to hold the rails fixedly in position on the supports and means for fixedly holding panels on the rails and stiles in the spaces bordered by the same so that the parts of the paneling structure can be assembled and held in position only by the said means, substantially as described.



2. Paneling construction consisting of, in combination, supports adapted to be fixedly attached to or to form a part of the surface to be paneled, and provided with engaging means, rails of substantially similar width to said supports and provided with engaging means, stiles adapted at each end to engage with the said engaging means of both supports and rails so as to be held fixedly to the supports and to hold the rails fixedly in position on the supports, means for holding panels on the rails and stiles in the spaces bordered by the same and a removable panel consisting of a frame having a panel movably carried thereby and adapted after insertion into the said space to be moved relative to the frame so that the panel edges engage with the holding means of the stiles and rails and hold the frame or panel fixedly in place in the same.

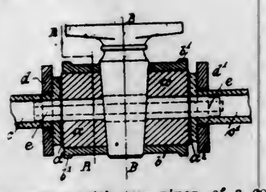
885,525. COLUMN. WILLIAM H. RONEY, Chicago, Ill. Filed Aug. 10, 1905. Serial No. 273,629.



1. A column comprising a tubular tier of tiles; a second tubular tier of tiles placed within the tube formed by the first mentioned tier, the tiles of the two tiers being arranged to break joints; a series of vertical rods spaced apart, between said tiers; metallic binding means encircling said rods; a filling of concrete for the inner tier; and a filling of mortar for the space between said tiers, said mortar binding said tiers and rods and metallic binding means together.

2. A column comprising a tubular tier of tiles; a second tubular tier of tiles placed within the tube formed by the first mentioned tier; a series of vertical rods spaced apart, between said tiers, metallic binding means encircling said rods; a filling of concrete for the inner tier; and a filling of mortar for the space between said tiers, said mortar binding said tiers and rods and metallic binding means together.

885,526. PROTECTED EARTHENWARE COCK. CARL RUPPEL, Höchst-on-the-Main, Germany. Filed Apr. 4, 1905. Serial No. 253,798.

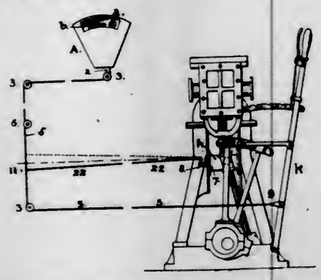


1. The combination with two pipes, of a cock comprising a cylindrical earthenware body having a passage adapted to communicate with both said pipes, a plug mounted in said body and adapted to control the flow of fluid through said passage, a metal shell surrounding the body of said cock, said shell being increased in thickness throughout its length on opposite sides of the cock, and bolts extending through apertures in said reinforced portions of said casing and connecting the aforesaid pipe sections, substantially as and for the purpose set forth.

2. The combination with two pipes having radial flanges at their adjacent ends, of a cock comprising a cylindrical earthenware body abutting against said radial pipe flanges and having a passage adapted to communicate with both said pipes, a plug mounted in said body and adapted to control the flow of fluid through said passage, a metal shell surrounding the body of said cock, said shell being increased in thickness throughout its length on opposite sides of the cock, rings *d*, *d'* fitted about said pipes, and bolts extending through apertures in said reinforced portions of said casing and through the rings and connecting the aforesaid pipe sections, substantially as and for the purpose set forth.

3. The combination with two pipes, of a cock comprising a cylindrical earthenware body having a passage adapted to communicate with both pipes, a plug mounted in said body and adapted to control the flow of fluid through said passage, a metal shell surrounding the body of the cock, said shell being increased in thickness throughout its length on opposite sides of the cock and having radial flanges at both ends, and bolts extending through apertures in said reinforced portions of the casing and connecting the pipe sections.

885,527. MOTION-INDICATOR FOR ENGINES. WALTER S. RUSH, San Francisco, Cal. Filed Aug. 2, 1906. Serial No. 328,970.



1. The combination with a shaft and an engine for driving it, having a part that moves according to the speed of the shaft, and another part that changes its position with each change taking place in the direction of the shaft, of a vibratory motion indicator for the engine, and mechanical connecting means through which motion is imparted to the indicator, having two engine connections, one leading to the said part that moves according to the speed of the shaft and arranged to impart to the indicator short vibrations in consonance with the revolutions of the shaft, and the other leading to the part that changes its position when the direction of rotation of the shaft is changed and arranged to shift the indicator when such changes are made, substantially as set forth.

2. The combination with a shaft and an engine for driving it, having a part that moves according to the speed of the engine, and mechanism controlling the direction of rotation of the shaft, of a vibratory indicator for the engine, and means through which motion is imparted to the indicator, connected to the said mechanism for controlling the direction of the shaft and arranged to shift the indicator relative to a sight opening, and a second connection with the said part that moves according to the speed of the shaft arranged to impart to the indicator short vibrations in consonance with the revolutions of the engine driven shaft, substantially as set forth.

3. The combination with a shaft and an engine for driving it, having a part that moves in consonance with the rotations of the said shaft and another part that changes its position as the direction of rotation of the shaft changes, a single line of connections leading from the indicator through which motion is imparted thereto, the said line branching and having one branch connected with the said part of the engine that moves in consonance with the speed of the shaft through which short vibratory motions are imparted to the indicator, and another branch leading to the part of the engine that changes its position with the change in the direction of the shaft through which the indicator is shifted when the said part is moved, substantially as set forth.

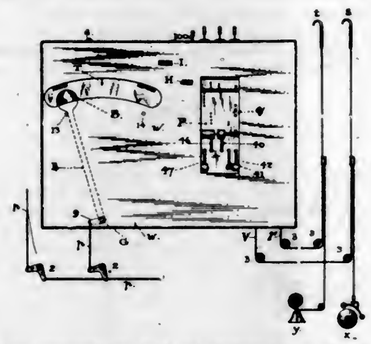
4. The combination with a shaft and an engine for driving it, having a part that moves in consonance with the speed of the shaft and another part that changes its position with each change in the direction of the shaft, a vibratory indicator, connections through which the indicator is moved, having one branch connected with the said part of the engine that moves in consonance with the speed of the shaft and another branch connected with the said part that changes its position when the direction of rotation of the shaft changes, and means for maintaining the said connections from the indicator to the different parts of the engine under working tension, substantially as set forth.

5. In a mechanism for indicating the working of an engine, the combination with an engine adapted to drive a shaft, having mechanism for controlling the direction of rotation of the shaft, of a vibratory motion indicator, a tappet or contact device arranged to be operated by a moving part of the engine when driven, and connections, leading respectively from the said tappet device and the said mechanism for controlling the direction of rotation of the shaft, for moving the indicator, the connections leading from the tappet being arranged to impart vibratory motions to the indicator and those leading from the motion-control devices being arranged to shift the working position of the indicator, substantially as set forth.

885,528. MOTION INDICATOR AND RECORDER. WALTER S. RUSH, San Francisco, Cal. Filed Jan. 23, 1907. Serial No. 353,720.

1. In a motion-indicator for an engine-driven shaft a hand having vibratory motion at a sight-opening and capable of adjustment as to its working position with relation to the center of the sight-opening, means for vibrating the hand in harmony with the revolutions of the engine-driven shaft and operating in every reversal of the shaft to change the hand from its working position on one side of the center of the sight-opening to a corresponding position in the opposite side thereof, and means operated by the vibrating means for making a record of the vibrations.

2. In a motion-indicator for an engine-driven shaft a hand having vibratory motion at a sight-opening and capable of adjustment as to working position during such vibrations, means for vibrating the said hand in harmony with the revolutions of the shaft and for adjusting the working position of the hand from one side to the other of the center of the sight-opening in every change taking place in the direction of the motion of the shaft, and means operated by said hand-vibrating and adjusting means for making a record of the said changes in the working position of the hand.



3. The combination with an engine-driven shaft, of a hand mounted for vibratory motion at a sight-opening and adjustable as to its working position on one side or the other of the center of said opening, means for imparting vibratory motion to the hand from and in harmony with the revolutions of the shaft, said means operating to set the hand in working position on one side or the other of the sight-opening according to the direction in which the shaft is being driven, a record-strip, and means for making a record of the vibrations of the hand, and separate means for making a record of the changes in the working position of the hand on the same record-strip.

4. In a motion-indicator and recorder for an engine-driven shaft, the combination of a plurality of motion-indicating hands, each separately mounted for vibratory motion at a sight-opening and adjustable as to working position with relation to the center of its sight-opening, means for vibrating all the hands in harmony with the revolutions of the engine-driven shaft and for adjusting all the hands simultaneously to a working position from one side of the center of its sight-opening to the opposite side in every reversal in the motion of the shaft, means for making a record of the revolutions of the shaft as indicated by the vibrations of the hands, and means for making a record of the changes in the direction of the motion imparted to the shaft by the engine, as the same takes place.

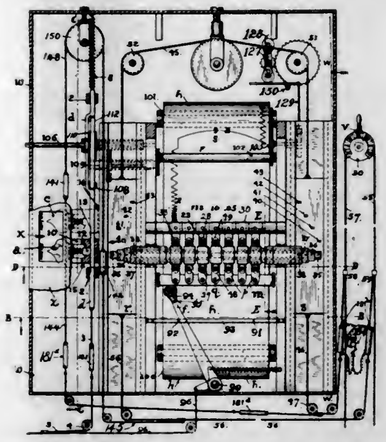
5. An apparatus for recording the movements of a ship's shaft, comprising a recording device for directly indicating its revolutions in one direction, a device for directly indicating its revolutions in the opposite direction, a contact device for operating the said recording devices, and connections between the contact device and the shaft to shift it to a position for operating one of the recording devices when the shaft turns forward, and for operating the other when it turns in the reverse direction.

[Claims 6 to 18 not printed in the Gazette.]

885,529. MOTION INDICATOR AND RECORDER. WALTER S. RUSH, San Francisco, Cal. Filed Mar. 25, 1907. Serial No. 364,468.

1. In a motion-indicator and recorder for an engine-driven shaft the combination, of a motion-indicating hand; means vibrating the hand in harmony with the revolutions of the shaft; a movable record-strip; a recording-device in contact with the record-strip; means for vibrating said record-device in harmony with the vibrations of the said hand; means for changing the working position of the motion-indicating hand in every change taking place in the direction of the revolutions of the shaft; and means operating at the moment of every change in the direction of the motion to similarly change the position of the recording-device upon the record-strip.

2. In a motion-indicator and recorder for a revolving shaft the combination, of a motion-indicating hand; means for vibrating the hand in harmony with the revolutions of the shaft; means operating to give the said hand a given position without affecting its vibrations when the shaft is revolving in one direction, and another position when revolving in a contrary direction; a movable record-strip; and a single recording-device actuated from the hand-vibrating means and operating to make a record on the recording-strip of the vibrations of the said hand and to change the relative position of its record simultaneously with the change in the position of the motion-indicating hand.



3. In a motion-indicator and recorder for a revolving shaft the combination, of a motion-indicating hand; means for vibrating the hand in harmony with the revolutions of the shaft; means controlled by said hand-vibrating means operating to give the said hand one working position during the revolutions of the shaft in one direction, and another position when its revolutions are in the contrary direction; a movable record-strip; means for recording thereon the vibrations of the motion-indicating hand; means operating in every change taking place in the working position of the motion-indicating hand to change the relative position on the record-strip of the record made by the recording-device.

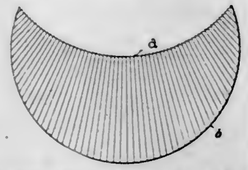
4. In a device for indicating and recording the motions of an engine-driven shaft the combination, of a motion-indicating hand; means for imparting longitudinal vibratory motion to the hand from, and in harmony with, the revolutions of the engine; means operating to change the relative position of the motion-indicating hand when the engine is reversed; a movable record-strip; means for giving progressive movement to the record-strip; an oscillating recording-device; means for actuating said recording-device in harmony with the vibrations of the motion-indicating hand; and means connecting said recording-device with the hand and operating to change the relative working-position of the said recording-device from one part to another part of the record-bearing surface of the said strip, as often as the direction of the motion being recorded is reversed.

5. The combination, with a revoluble shaft and means for driving the same and for changing its direction of motion; of a motion-indicating device having vibratory motion in harmony with the shaft; means for varying the working-position of the said device to indicate thereby the direction in which the shaft is being driven; a recording-device operating to make a record of such variations in working-position, and also of its vibrations; a signal-transmitting means operating sets of signals for controlling the direction and varying the character of the motion of the shaft both "ahead" and "astern"; recording-devices adapted to make separate records of both sets or characters of signals as transmitted; an alarm signal; and means for operating said signal, including two co-acting members,

one of which is adjusted as to its operative position from the signal-transmitting means, and means controlling the operative position of the other co-acting member from the shaft-driving means.

[Claims 6 to 24 not printed in the Gazette.]

885,530. DRESS-PRESERVER OR DRESS-SHIELD. GUSTAV H. SACHSENRÖDER, Barmen-Unterbarmen, Germany. Filed June 28, 1906. Serial No. 323,941.

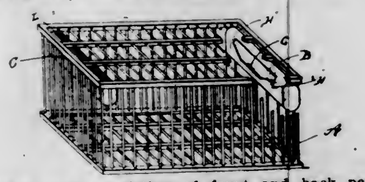


1. A dress preserver or shield having a convex edge and made of one piece of material which is fluted or plaited and folded transversely of the plaits or flutes to form a straight edge, the folded edge being given an arc shape by drawing out the flutes or plaits at the convex edge of the preserver or shield.

2. A dress preserver or shield having a convex edge and made of one piece of material which is fluted or plaited and folded transversely of the plaits or flutes and having a straight edge which is given an arc shape by drawing out the plaits or flutes adjacent to the convex edge of the shield, the material from which the preserver or shield is made being fluted or plaited prior to its formation into a dress preserver or shield.

3. A dress preserver or shield having a convex edge and made of one piece of material and having a straight edge, the material being fluted or plaited to the edge, and the latter given an arc shape to fit different curves by drawing out the plaits or flutes adjacent to the convex edge of the shield.

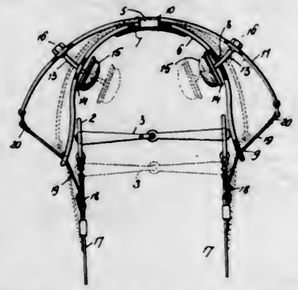
885,531. WATER-TANK FOR POULTRY-SHIPPING COOPS. JOHN W. SALMONS, Philadelphia, Pa. Filed Sept. 24, 1906. Serial No. 335,875.



A water tank consisting of front and back parallel straight walls, end walls, and semi-circular top and bottom walls, a partition extending from the central points of the width of said top and bottom and being disposed parallel with each of said front and back walls and of greater width than the latter, said partition being formed with a central elongated opening which terminates flush with the upper face of said bottom wall, the front wall having a V-shaped cut-out portion therein which extends from points slightly above the top of said elongated opening to the front face of said partition.

885,532. HORSE-CHECKING DEVICE. ALBERT SAUTER, Pittsburg, Pa. Filed Dec. 10, 1907. Serial No. 405,867.

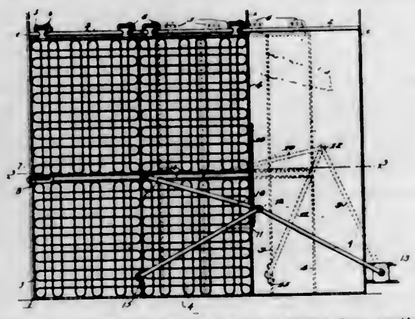
In a horse checking device, the combination with a bridle including a head strap, a nose strap, bit rings carried by the head strap and reins connected to said bit rings, of a substantially U-shaped metal member adapted to span the nose of a horse and having the rear ends thereof extending beyond the bridle bit rings and provided with oblong eyes, rollers mounted in said oblong eyes, said member provided intermediate its ends with openings, a strap connecting said member at its forward portion or bow with said nose strap, a pad secured to the inner face of said member at its forward or bow portion, and a resilient checking member comprising a spring metal strip connected intermediate its ends to the forward or bow portion of the U-shaped member and lying upon said member at said forward or bow portion thereof, oblong links carried by the ends of said checking member, the said ends of the checking member lying in a plane forward of the rear ends of the U-shaped



member, straps connecting the links in the ends of said checking member with said reins, said straps passing through the oblong openings in the U-shaped member and operating over the rollers in said oblong opening, and presser buttons each embodying a cushioned head lying within the U-shaped member and each having a shank extending through the openings in said member with its outer end fixedly connected to the resilient checking member.

885,533. [WITHDRAWN.]

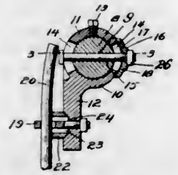
885,534. DOOR-MOVEMENT REGULATOR. FREDERICK G. SCHULDT, St. Paul, Minn., assignor of one-half to The Herzog Iron Works, St. Paul, Minn., a Corporation of Minnesota. Filed Feb. 5, 1907. Serial No. 355,805.



1. The combination with a pair of sliding door sections, of a three armed toggle, one arm of which is pivotally attached to a relatively fixed support, another arm of which is pivotally attached to the outer edge portion of the one door section at a relatively high point, and the other of which is pivotally attached to the inner edge portion of the other door section at a relatively low point, substantially as described.

2. The combination with the frame-work of an elevator shaft, of a pair of sliding doors 3—4 suitably mounted thereon, and a three armed toggle 9—10—11, the arm 9 being pivotally attached at 13 to a relatively fixed portion of said frame-work, the arm 10 being pivotally attached at 14 to the outer edge portion of said door section 4 and the said arm 11 being pivotally attached to said door 3, the said door 4 having a vertical guide bar 16 coöperating with said arm 10, substantially as described.

885,535. HARROW AND CULTIVATING IMPLEMENT. SAMUEL T. SHERRILL, Mexia, Tex. Filed July 31, 1907. Serial No. 386,394.



1. In an implement of the class described, a horizontally slotted supporting bar in combination with a tool holder comprising a sleeve having vertical slots in its front and rear sides, and a downwardly extending tool carrying shank, a fastening bolt extending through the slots in the sleeve and in the bar, a set screw extending through the sleeve and engaging the bar, and a clamping washer upon the bolt, said washer and sleeve being provided with opposed serrated faces.

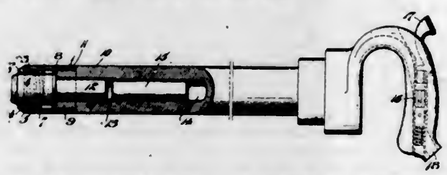
2. In an implement of the class described, a tool carrying holder comprising a sleeve having a downwardly extending shank provided with a recess forming a seat, a tool supporting eye bolt extending through the shank, and a notched collar fitted upon the eye bolt and engaging the seat in the shank.

885,536. ANT-TRAP. HARVEY L. SHIMER, Garden City, Kans. Filed July 27, 1907. Serial No. 385,781.



An ant-trap composed of three parts, as follows: a base ring having flanges inturned toward each other; an inner frusto-conical member having its major upper edge overturned in a curve outwardly, and its minor lower edge engaged under the flange at the inner edge of the base-ring; and an outer frusto-conical member having its lower major edge engaged under the outer flange of the base-ring and its minor upper edge overturned in a curve inwardly toward the upper edge of the first-mentioned member, whereby a smooth unobstructed surface leading from the outside and inside into the trap is obtained.

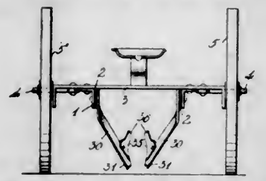
885,537. PNEUMATIC-TOOL RETAINER. EDWARD J. SHOFFNER, Roanoke, Va., assignor of fifty-one one-hundredths to Gurdon W. Merrell, Roanoke, Va. Filed Dec. 27, 1907. Serial No. 408,241.



1. The combination with the cylinder of a pneumatic tool, of a retainer secured to the forward end thereof and having a chamber therein provided, at its forward portion, with an internal wall or shoulder, a working tool contained within said chamber and having a head of lesser diameter than said chamber, a shoulder thereon, a spring interposed between said working tool shoulder and the forward inner wall of said chamber, said spring being of less length than the distance between said shoulder and wall, and a shank for said working tool projecting into the end of said tool cylinder, said shank being of lesser diameter than said button set head and shoulder.

2. The combination of a pneumatic tool cylinder, having a reduced end, a retaining sleeve, having a chamber within it, the rear of said chamber being secured to said reduced end, said sleeve having an opening through its forward portion of lesser diameter than the inner bore of said chamber, a button set having a head of such length as to always project through said opening, said head being of lesser diameter than said bore, a shoulder on said head of greater diameter than the latter and of less diameter than said bore, a compressible element in said chamber of less length than the distance between said button set shoulder and the forward inner wall of said chamber, and a shank on said button set of less diameter than said head and shoulder, said shank projecting rearwardly into said tool cylinder.

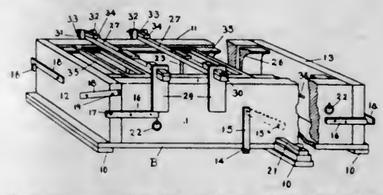
885,538. BEET-PULLER. EDWARD A. SMITH, Loveland, Colo. Filed Feb. 11, 1907. Serial No. 356,918.



1. In a beet puller, the combination of a supporting frame mounted on wheels, standing colters secured to said frame, and flat puller bars attached at their front ends to the rear of said colters and having their free ends inclined upwardly and converging toward each other.

2. In a beet puller, the combination of a supporting frame mounted on wheels, standing colters secured to said frame, flat vertically disposed puller bars secured at their front ends to the rear of said colters and having their free ends inclined upwardly and bent inwardly to form lifting means for engaging the tops of the beets.

885,539. CEMENT-TIE MOLD. RICHARD A. SMITH, Bay City, Mich. Filed June 27, 1907. Serial No. 381,186.



1. A mold comprising a pallet board, side and end pieces mounted on the pallet board, a tongue projecting from the pallet board, latches pivotally mounted on the side pieces and adapted to releasably engage the tongue, notched bars carried by the side pieces and projecting beyond the ends thereof, notched hooks pivoted to the end pieces and adapted to intermesh their notches with the notches in the bars, a rigid abutment against which the outer face of one side piece contacts, a pivotally-supported button, the free end of which engages the outer face of the opposite side piece, annular rosettes carried by the pallet board, pins, the lower ends of which are receivable in the rosettes, apertured cross-bars extending between the side pieces, the upper ends of the pins receivable in the apertures in the cross-bars, apertured ears in which one end of each cross-bar is received, wedges receivable in the apertures in the ears, spaced lugs between which the remaining ends of the respective cross-bars are received, hollow alined eyes carried by the lugs, rods receivable in the eyes and extending across the ends of the cross-bars, one of the end pieces having an aperture therethrough, and an adjustable connecting part passing through the apertnre.

2. A mold comprising a pallet board, side and end pieces, annular rosettes carried by the pallet board, pins, the lower ends of which are received in the rosettes, cross-bars extending across the mold, suitably supported apertured ears in which one end of each cross-bar is received, spaced lugs between which the remaining ends of the cross-bars are received, hollow alined eyes carried by the lugs and rods received in the eyes and extending above the ends of the cross-bars, the cross-bars provided with recesses to receive the upper ends of the pins.

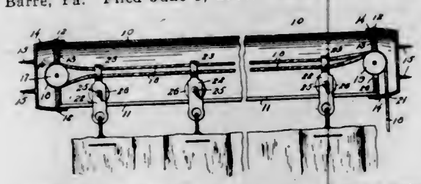
3. A mold comprising a pallet board, side and end pieces, annular rosettes carried by the pallet board, pins, the lower ends of which are received in the rosettes, cross-bars extending across the mold, suitably-supported apertured ears in which one end of each cross-bar is received, wedging members received in the apertures in the ears, spaced lugs between which the remaining ends of the cross-bars are received, hollow alined eyes carried by the lugs, and rods received in the eyes and extending above the ends of the cross-bars, the cross-bars provided with recesses to receive the upper ends of the pins.

4. A mold comprising a pallet board, side and end pieces, annular rosettes carried by the pallet board and adapted to form countersinks in the article molded, studs extending upward in the space inclosed by the rosettes, pins, the lower ends of which are received on the studs and within the rosettes, and means for releasably engaging the upper ends of the pins, to retain them in vertical position during the molding process.

5. A mold comprising side and end pieces, a pallet board, and a pattern frame removably placed in the mold after the latter has received its material, the pattern frame being open at top and bottom and adapted to receive and contain material, a raised portion on the tie, the ends of the frame engaging the side pieces of the mold, the bottom of the frame resting upon the material previously deposited in the mold.

[Claim 6 not printed in the Gazette.]

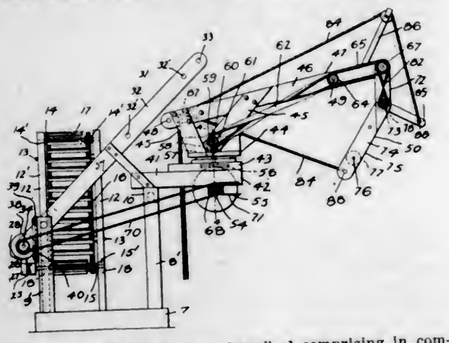
885,540. CURTAIN-POLE. WARREN B. SNYDER, Wilkes-Barre, Pa. Filed June 5, 1907. Serial No. 377,388.



1. A device of the class described comprising a tubular pole, said pole being provided with a slot extending longitudinally thereof, circular plates secured in the ends of the pole, a pulley journaled in one of the plates, a pair of pulleys journaled in the other plate, a cord engaged over the single pulley and having its strands engaged over the pair of pulleys last mentioned, and caps secured to the ends of the pole and concealing the said plates, the strands of the cord being passed through one of the said end caps, and curtain suspension devices arranged for movement in the pole longitudinally thereof, each of the said devices comprising a plate having an integral and divided eye formed at its upper end, the strands of the cord being passed through the said portions of the eye resulting from its division, one of the strands being secured in a corresponding portion of one of the eyes at one side of the middle of the pole, the other strand being loose, the strands of the cord having a converse arrangement at the opposite side of the middle portion of the pole, and anti-friction elements journaled on studs formed integral with the plates forming the suspension devices and resting upon the inner surfaces of the pole at opposite sides of the slot therein.

2. A device of the class described comprising a tubular pole, said pole being provided with a slot extending longitudinally thereof, circular plates secured in the ends of the pole, a pulley journaled in one of the plates, a pair of pulleys journaled in the other plate, a cord engaged over the single pulley and having its strands engaged over the pair of pulleys last mentioned, end caps secured to the ends of the pole and concealing the said plates, the strands of the cord being passed through one of the said end caps, and curtain suspension devices arranged for movement in the pole longitudinally thereof, each of the said devices comprising a plate having an integral and divided eye formed at its upper end, the strands of the cord being passed through the said portions of the eye resulting from its division, one of the strands being secured in a corresponding portion of one of the eyes at one side of the middle of the pole, the other strand being loose, the strands of the cord having a converse arrangement at the opposite side of the middle of the pole, and anti-friction elements journaled upon studs formed integral with the plates forming the suspension devices and resting upon the inner surface of the pole at opposite sides of the slot therein, each of the said anti-friction elements being semi-spherical in contour and the flat faces of the said elements upon each of the suspension devices being presented toward each other.

885,541. HAY-ELEVATOR. FREDERICK F. SOMMER, Kalona, Iowa. Filed Feb. 18, 1907. Serial No. 357,932.



1. A machine of the class described comprising in combination, a supporting platform; a frame mounted on said platform and including a pair of spaced longitudinal sills; a pair of inclined elevators mounted on said sills at right angles to each other; a laterally extending supplemental platform carried by one of said sills; a turn-table carried by said supplemental platform; an elevator carried by said turn-table and movable bodily therewith, said last-mentioned elevator having its feed end disposed directly beneath the discharge end of the adjacent inclined elevator; and means for driving the several elevators one from another.

2. A machine of the class described comprising in combination, a supporting platform; a frame mounted upon said platform and including a pair of spaced longitudinal sills; an inclined elevator frame secured to one of said sills longitudinally thereof; a second elevator frame secured to said sills transversely thereof; the lower end of said last-mentioned frame being disposed directly beneath the upper end of said first-mentioned frame; a laterally-extending supplemental platform carried by the opposite sill; a turntable mounted thereon; an elevator frame carried by said turntable and movable bodily therewith in an approximately horizontal plane, the lower end of said movable elevator being disposed directly beneath the upper end of said transversely-extending frame; an elevator movable upon each of said frames; and means for driving the several elevators one from another.

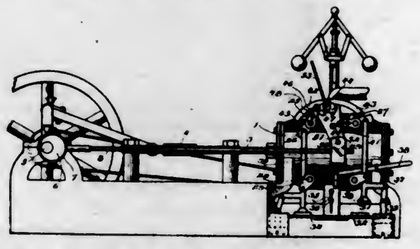
3. A machine of the class described comprising in combination a supporting platform; a frame mounted on said platform and including a pair of spaced longitudinal sills; an inclined elevator frame secured to one of said sills longitudinally thereof; a second elevator frame secured to said sills transversely thereof, the lower end of said last-mentioned frame being disposed directly beneath the upper end of said first-mentioned frame; a laterally-extending supplemental platform carried by the opposite sill; a turntable mounted thereon; an elevator frame carried by said turntable and movable bodily therewith in an approximately horizontal plane, the lower end of said movable frame being disposed directly beneath the upper end of said transversely-extending frame; a vertically movable elevator frame pivoted at its upper end to said horizontally movable frame, said vertically-movable frame extending rearwardly beneath the latter and movable bodily therewith; an elevator movable upon each of said elevator frames; means for driving the several elevators one from another; and means for raising and lowering said vertically movable elevator frames, to vary the points of discharge therefrom.

4. A machine of the class described comprising in combination, a supporting platform; a frame mounted on said platform and including a pair of spaced longitudinal sills; an inclined elevator frame secured to one of said sills longitudinally thereof; a second elevator frame secured to said sills transversely thereof, the lower end of said last-mentioned frame being disposed directly beneath the upper end of said first-mentioned frame; a laterally-extending supplemental platform carried by the opposite sill, a turntable mounted thereon; an elevator frame carried by said turntable and movable bodily therewith in an approximately horizontal plane, the lower end of said movable frame being disposed directly beneath the upper end of said transversely-extending frame; a vertically movable elevator frame pivoted at its upper end to said horizontally movable frame, said vertically-movable frame extending rearwardly beneath the latter and movable bodily therewith; an elevator movable upon each of said elevator frames; means for driving the several elevators one from another; and means for raising and lowering said vertically movable elevator frames, to vary the points of discharge therefrom.

885,542. METAL-POLISH. GEORGE I. STEVENS, Essex, Conn. Filed May 7, 1907. Serial No. 372,308.

A non-inflammable liquid polish consisting of ammonium oleate, aqua ammonia, silica, naphtha, an dcarbon tetrachlorid in the proportions herein set forth.

885,543. STEAM-ENGINE. JOHN H. STICK, Littlestown, Pa. Filed Sept. 26, 1907. Serial No. 394,701.

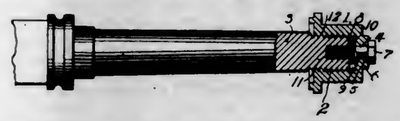


1. In a steam engine, the combination with a steam cylinder and eccentric rod, of the inlet and exhaust ports, inlet and exhaust vlives for opening and closing said ports, means for connecting each inlet valve with an exhaust valve, means actuated by said eccentric rod for successively operating each pair of inlet and exhaust valves, and means for simultaneously opening both inlet valves and for simultaneously closing both exhaust valves.

2. In a steam engine, the combination with a steam cylinder and eccentric rod, of the inlet and exhaust ports, inlet and exhaust valves for opening and closing said ports, means for actuating each inlet valve with an exhaust valve, means actuated by said eccentric rod for successively operating each pair of inlet and exhaust valves, means for opening both inlet valves and for simultaneously closing both exhaust valves, and a cushioning means for cushioning the valve operating mechanism, substantially as described.

3. In a steam engine, the combination with a steam cylinder and eccentric rod, of the inlet and exhaust ports, inlet and exhaust valves for opening and closing said ports, means for connecting each inlet valve with an exhaust valve, a pivoted member connected to said eccentric rod, two levers carried on said pivoted member, an arm connected to each inlet valve, each of said arms being arranged to be engaged by said levers on said pivoted member, means on each of said arms for engaging each of said levers to move each of said levers out of engagement with each of said arms, substantially as described.

885,544. LOCK-NUT. NESTOR H. SUMMONS, Woodstock, Ohio. Filed Oct. 19, 1907. Serial No. 398,225.

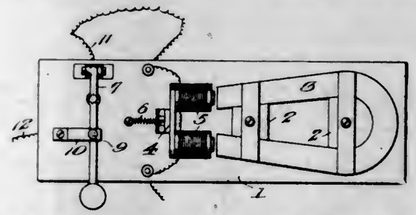


1. The combination with an element and a nut arranged for threaded engagement therewith, of a locking member adapted for threaded engagement with the element and mounted in the nut for free rotation, and means threaded on the member and arranged between the nut and element to prevent endwise movement of the member in one direction.

2. The combination with an element and a nut arranged for threaded engagement therewith, of a locking member arranged for threaded engagement with the element in a direction reverse to that of the nut, and means threaded on the member between the nut and element to prevent independent endwise movement of the member relative to the nut.

3. The combination with an element and a nut arranged for threaded engagement therewith and formed with a central opening, of a locking member adapted for threaded engagement with the element reverse to that of the engagement of the nut, said locking member being freely insertible through the opening in the nut, and an auxiliary nut arranged for threaded engagement with the member and disposed between the end of the element and the nut.

885,545. TELEGRAPH-SOUNDER. JAMES J. THOMAS, Whiting, Iowa, and ALBERT G. CHRISTOPHERSON, Scribner, Nebr. Filed Jan. 23, 1907. Serial No. 353,754.

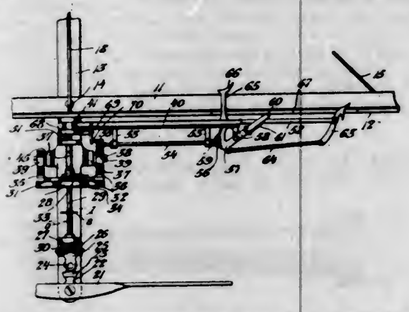


In a telegraphic sounding apparatus, a base having uprights, a permanent magnet supported upon the uprights, a lever pivoted upon the base, an electro-magnet supported by the lever adjacent to the permanent magnet and normally repelled by the latter, a spring connecting the lever with the base to support the weight of the electro-magnet and a breaking circuit including the electro-magnet.

885,546. MUSIC-TURNER. ANDREW J. THOMPSON, North Wilmington, Mass. Filed Oct. 28, 1905, Serial No. 284,846. Renewed Feb. 15, 1908. Serial No. 416,107.

1. A leaf turner comprising a base plate, a music rack supported thereby, a turning arm revolubly supported on the base plate, a sheet edge displacing means carried by

the arm, a gripping means carried by the arm, and mechanism supported on the base plate for operating in succession the displacing means, the gripping means, and the arm.



2. A leaf turner comprising a base plate, a music rack supported thereby, a turning arm revolubly supported on the base plate, a sheet edge displacing means carried by the arm, a gripping means carried by the arm, manually operable mechanism for positively actuating in succession the displacing means, gripping means, and turning arm.

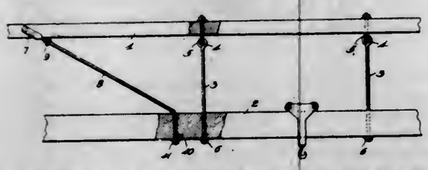
3. A leaf turner comprising a support, an arm movably mounted with relation to the support, gripping means carried by the arm, a stop carried on the support and adapted to normally prevent movement of the arm, means for causing successive operation of the gripping means and arm, and means carried by the arm for disengaging the stop therefrom.

4. A leaf turner comprising a support, an arm movably mounted with relation to the support, gripping means carried by the arm, a stop carried on the support and adapted to normally prevent movement of the arm, means for causing successive operation of the gripping means and arm, and means carried by the arm for disengaging the stop therefrom subsequent to the operation of the gripping means.

5. A leaf turner comprising a base plate, a music rack carried thereby an arm revolubly mounted on the base plate, a shaft carried by said arm, means for operating said shaft, a gripping device pivotally connected to the arm, means intermediate said device and the shaft for operating the former in the movement of the latter, and a sheet edge displacer carried by the arm and operated in the movement of the gripping means.

[Claim 6 not printed in the Gazette.]

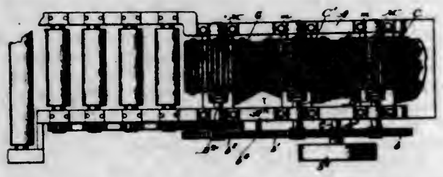
885,547. TRACK-SUPPORT FOR CARRIERS. FRANK B. TICE, Polo, Ill. Filed Jan. 6, 1908. Serial No. 409,513.



1. In a device of the character specified, the combination with a ridge board and track, of track supporting hangers sustained by the ridge board and connected with the track, and means comprising an obliquely disposed U-shaped support the arms of which are adapted to embrace opposite edges of the ridge board, and an obliquely disposed supporting member attached to the U-shaped support, the lower end of said member being bent to form a straight depending portion designed for insertion through the track, and fastening nuts screwing on said portion.

2. In a device of the character specified the combination with a ridge board and track, of track supporting hangers sustained by the ridge board and detachably connected with the track one of the hangers being arranged at an angle with the other of said hangers.

885,548. METAL CUTTING AND FORMING MACHINE. GEORGE A. TURNBULL, Chicago, Ill. Filed Sept. 28, 1903. Serial No. 174,897.



1. In a machine of the class described, a pair of cutting rolls having secured on the circumference thereof a plurality of rows of circumferentially alined independently removable knives arranged out of contact with each other and adapted to form a pair of parallel slits and locking means carried on the roll and adapted to engage a plurality of said knives.

2. In a machine of the class described, a plurality of pairs of cutting rolls and coacting, independently removable means on each pair of cutting rolls adapted to slit a sheet of metal into a plurality of relatively short slits, the knives on each pair of said rolls forming slits alternating with those formed by the knives on the other pair.

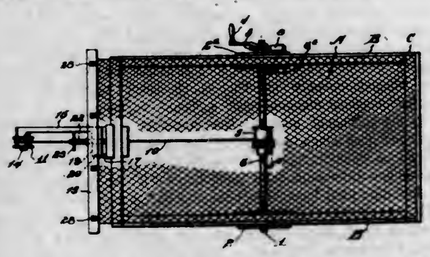
3. A roll for the purpose specified having secured thereon, in circumferential rows, a plurality of knives, each comprising a plain blank of metal and having a plurality of parallel cutting edges, adjacent knives longitudinally of the roll being seated a distance apart equal to the width of said knives.

4. A roll for the purpose specified having engaged on the circumference thereof a plurality of rings separated from each by a lateral projection, a plurality of relatively short independent knives arranged between said rings, each having double cutting edges, said knives being arranged in alinement at intervals apart both circumferentially and longitudinally of the roll.

5. In a machine of the class described, a plurality of pairs of cutting rolls, one of the rolls of each pair having removably secured thereon relatively short broad cutting knives, a plurality of cutting edges on each knife adapted to form short parallel slits at intervals apart longitudinally said knives being arranged in parallel circumferential rows and the adjacent longitudinally disposed knives of each roll being arranged a distance apart equal to the width of the knives, the knives of the second cutting roll being arranged to cut between and also out side those of the first roll.

[Claims 6 to 35 not printed in the Gazette.]

885,549. DEVICE FOR TIGHTENING THE FABRIC OF BED-SPRINGS. WILLARD VAN DUZEE, Jackson, Minn. Filed Oct. 24, 1907. Serial No. 399,009.

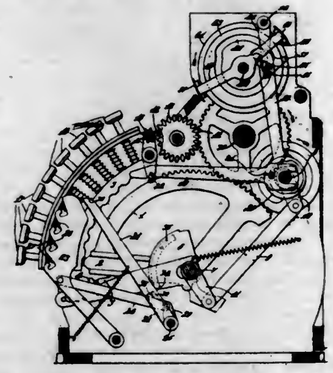


1. In a device of the class described, a shaft rotatably mounted in bearings, a drum mounted on said shaft and fixed to rotate therewith, means to rotate said shaft, a device adapted to embrace an end piece of a bed spring frame, said vise having a shank carrying a pulley and consisting of opposed shoulders and means to adjust said shoulders, clamping strips adapted to receive there-between the free ends of the bed spring, adjustable means to clamp said strips together and flexible means connecting said drum and said clamping strips in passing over said pulley.

2. In a device of the class described, means for clamping the free end of the wire fabric of the bed spring, a vise having adjustable jaws adapted to be secured to an end piece of the bed spring frame, a shank extended outwardly from said vise and adapted to project beyond the end of the bed spring frame, a pulley on said shank, a drum adapted to be rotatably mounted on said bed spring frame and flexible means connecting said pulley with the means for clamping the free end of the wire fabric, said flexible means passing over said pulley, and means for rotating said drum.

3. In a device of the class described, bearing blocks adapted to be fastened to the side piece of a bed spring frame, a shaft rotatably mounted in said bearing blocks and held against longitudinal movement with one of said blocks and longitudinally adjustable with respect to the other, a drum mounted intermediate the ends of said shaft adjustable for longitudinal movement and fixed to rotate with said shaft, an integral crank and ratchet wheel fixed at one end of said shaft, a pawl on one of said bearing blocks for operation with the teeth of said ratchet wheel, a vise adapted to embrace an end piece of said bed spring frame, said vise having a shank carrying a pulley and consisting of oppositely opposed shoulders with a block slidable therebetween, a screw-threaded rod adjustable in a perforation in one of said shoulders and adapted to bear against said slidable block, clamping strips adapted to receive therebetween the free ends of the bed spring fabric to be adjusted, bolts and nuts to clamp the said strips together, and a flexible means connecting the said drum and said clamping strips and passing over said pulley.

885,550. CASH-REGISTER. EDWARD J. VON PEIN, Dayton, Ohio, assignor, by mesne assignments, to The National Cash Register Company, Dayton, Ohio, a Corporation of Ohio, (incorporated in 1906.) Filed Nov. 4, 1905. Serial No. 285,803.



1. In a cash register, the combination with a series of amount keys, of a counter; means for controlling the operation of the counter by said amount keys; a special key bearing a designation denoting arrival or departure and also bearing a numeral "1" to represent an amount of ten hours; typecarriers controlled by said amount keys and said special key, the typecarrier for said special key having the numeral "1" thereon and also a designation corresponding to the designation on the special key; and means for throwing the counter out of operation when said special key is operated, substantially as and for the purpose described.

2. In a cash register, the combination with a series of amount keys, of a counter; means for controlling the operation of the counter by said amount keys; a series of special keys bearing designations representing arrival and departure; typecarriers controlled by said amount keys and said special keys, the typecarriers for said special keys having printing designations corresponding to the designations exposed on said special keys; means for throwing the counter out of operation when said special keys are utilized in conjunction with said amount keys; an indicator; and means controlled by said special keys for preventing the exposure of said indicator when said special keys are operated.

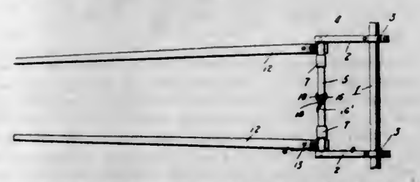
3. In a cash register, the combination with a series of amount keys, of a counter; means for controlling the operation of the counter by said amount keys; a special key bearing a designation denoting arrival or departure and having the numeral "1" thereon and also a designation ten hours; typecarriers controlled by said amount keys and said special key, the typecarrier for said special key having the numeral "1" thereon and also a designation corresponding to the designation on the special key; means for throwing the counter out of operation when said special key is operated; an amount indicator controlled by said amount keys; and means for preventing the exposure of said indicator when said special key is operated.

4. In a cash register, the combination with a series of amount keys, of a counter; means for controlling the operation of the counter by said amount keys; a series of special keys bearing designations representing arrival and departure; typecarriers controlled by said amount keys and said special keys, the typecarriers for said special keys having printing designations corresponding to the designations exposed on said special keys; means for throwing the counter out of operation when said special keys are utilized in conjunction with said amount keys; an indicator controlled by said amount keys; a flash for concealing said indicators; and means for maintaining said flash in concealing position when any one of the said special keys is operated.

5. In a cash register, the combination with an indicator device, of means for operating the same; an operating mechanism; a flash for said indicator device; means connected with said operating mechanism for operating said flash to conceal the indicators while they are being set and expose the same after they have been set; a special key; and means controlled by said special key for affecting the retention of said flash in concealing position when the operating mechanism is operated.

[Claims 6 to 19 not printed in the Gazette.]

885,551. SHAFT-DETACHING MEANS. JONATHAN W. WARD, Larue, Ohio. Filed Aug. 12, 1907. Serial No. 388,211.

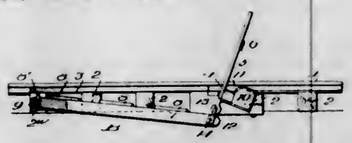


1. In a shaft detacher, a pivotally mounted bar adapted to be connected with the front axle of a vehicle, shaft irons having depressions for engaging said bar, retaining members reciprocally mounted on said bar, each provided with a projecting lip for extension under the shaft irons for holding it in engagement with said bar, and spring pressed means for simultaneously moving said members.

2. In a shaft detacher, a pivotally mounted bar adapted to be connected with the axle of a vehicle, a block reciprocally mounted on each end of said bar and provided with a lip, a spring controlled post mounted in said bar and provided with a handle, means connected with said post for simultaneously reciprocating said blocks, and shaft irons between said projections on the blocks and said bar.

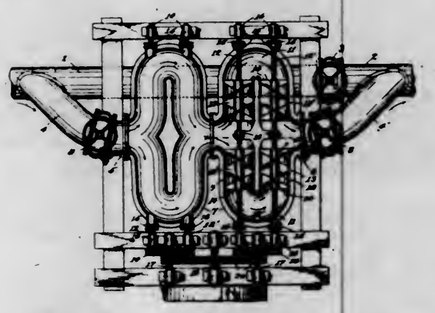
3. In a shaft detacher, a pivotally mounted bar adapted to be connected with the shaft of a vehicle, a spring upon the underside of each end of said bar, a block reciprocally mounted on each end of the bar and provided with an outwardly extending lip, a post journaled in said bar substantially midway of its length, an arm secured to the upper end of the post provided with a lip, a coiled spring, and a lever secured to the lower end of the post, and a rod from each block to said lever.

885,552. AUTOMATIC CATTLE-GUARD FOR RAILWAYS. ROBERT M. WARK, Spokane, Wash. Filed Sept. 11, 1907. Serial No. 392,306.



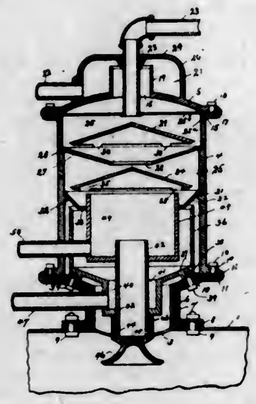
The combination, with railway rails and ties, of the improved cattle-guard comprising a platform formed of side bars 7, arranged outside of the rails, and planks 8 connecting the said bars, the guard proper formed of parallel bars and a rock-shaft to which they are secured, and couplings between the side bars 7 and said guard, consisting of links 12 which are pivoted to, swing vertically on, the adjacent ends of bars 7, and eye-bars 13 jointed with the said links and secured to the rock shaft, and the weight-receiving boxes 10 attached to, and pendent from, the rock-shaft and arranged on the ends thereof exterior to the track-rails, as shown and described.

885,553. WATER-MOTOR. MILO L. G. WHEELER, Seattle, Wash. Filed Nov. 21, 1904. Serial No. 233,564.



In a device of the class described, the combination with a water main of an elongated casing having inlet and discharge passages at its opposite sides and divided centrally by a longitudinal partition spaced at the ends from the casing and with bearings extending laterally therefrom, conduits leading at two points from said main and connected respectively to the discharge and intake passages of said casing regulating valves positioned in each of said conduits, shafts spaced apart and journaled through said casing at opposite sides of said partition and supported in said bearings, each shaft carrying an integral right hand screw and an integral left hand screw at opposite sides of said partition and operating in said casing, and a supporting framework surrounding said casing, the ends of said shafts journaled in said framework and a driven shaft carried thereby, gearing connecting one end of each of the aforementioned shafts to said driven shaft for transmitting the motion of said shafts simultaneously and the oppositely arranged screws carried by the separate shafts arranged within a continuous water passage, as fully described.

885,554. FEED-WATER PURIFIER. HENRY WHITE, Marion, Ohio, assignor, by mesne assignments, to Annie F. McNeal, Marion, Ohio. Filed May 26, 1905. Serial No. 262,402.



1. In a feed water purifier, the combination, with a boiler, of a vessel in communication with the steam space of the boiler at its upper and lower ends, whereby all parts of the interior of said vessel are penetrated by steam at substantially boiler pressure, a feed water supply connected with the upper end of said vessel, a combined sediment and pure water receptacle in the lower part of said vessel with steam spaces or passages between said vessel and said receptacle, and a pure water discharge from a point above the bottom of said receptacle to the boiler and a sediment discharge to a point outside the boiler, and distributing plates located between said receptacle and the feed water inlet, substantially as described.

2. In a feed water purifier, the combination, with a boiler, of a vessel in communication with the steam space of the boiler at its upper and lower ends, a feed water supply connected with the upper end of said vessel, a combined sediment and pure water receptacle in the lower part of said vessel having a pure water discharge from a point above the bottom of said receptacle to the boiler and a sediment discharge to a point outside the boiler, distributing plates located between said receptacle and the feed water inlet, and steam spaces or passages between said receptacle and vessel and between said plates, the lowermost plate having a central opening discharging into the collecting receptacle, substantially as described.

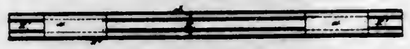
3. In a feed water purifier, the combination, with a boiler, of a main vessel communicating with the steam space of the boiler and provided internally with distributing plates and a collecting receptacle, the latter having a pure water discharge to the boiler and a separate sediment discharge, a feed water supply conduit, and a feed water receiving chamber into which said conduit opens and which communicates with the interior of the main vessel, whereby the entering feed water receives a preliminary heating as it accumulates in said receiving chamber, said receiving chamber being located at the top of the main vessel and said main vessel communicating with the steam space of the boiler at its lower end and having a steam pipe extending through said receiving chamber and also communicating with the steam space of the boiler, substantially as described.

4. In a feed water purifier of the character described, the combination, with a vessel adapted for connection with a boiler at its lower end and having a collection receptacle comprising an upper portion for the pure water and a lower reduced portion for the sediment, and steam passages extending between said receptacle and said vessel, of a sediment discharge pipe connected to the lower portion of said receptacle, and a pure water supply pipe having its receiving mouth located in the upper part of said receptacle and its lower end extending through said steam passage and discharging into the boiler thereby providing separate passages for the steam and water, substantially as described.

5. In a feed water purifier of the character described, the combination, with a vessel communicating with the steam space of the boiler and provided with an internal collecting receptacle having at its bottom a sediment cup, of a pure water supply pipe extending from the boiler through said sediment cup and above the bottom of the receptacle, within the upper part of which its receiving mouth is located, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

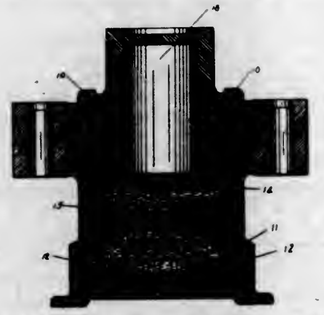
885,555. RAILWAY-TIE. STANLEY C. NEWLIN and GEORGE W. WILLIAMS, Anderson, Ind. Filed Apr. 19, 1907. Serial No. 369,189.



1. The improved tie composed of a wooden base X, and three wooden strips Y, Y and Z, secured thereon and spaced from each other laterally, the central strip Z being the larger, and an inclosing body of cement applied as shown and described.

2. The improved tie composed of a wooden skeleton formed of a base piece, parallel strips Y, Y and Z, secured thereon and spaced apart laterally, and rail-supporting wooden blocks W resting on the base and the outside strips Y, and the body of cement covering all the frame, save the blocks, as shown and described.

885,556. CYLINDER-PACKING. JOHN K. WILLIAMS, Akron, Ohio, assignor of one-half to The Williams Foundry & Machine Company, Akron, Ohio. Filed June 6, 1907. Serial No. 377,650.

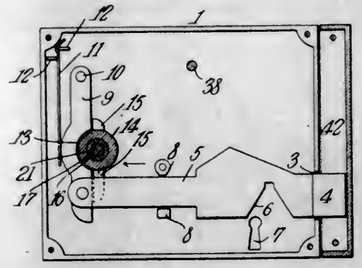


In a hydraulic press, the combination with a base member having a cylinder therein, of a circumferential groove in the curved walls of the interior of said cylinder in said press, of a ring of packing placed in said circumferential groove and having a substantially U-shaped channel upon the under side thereof, of a retaining band of approximately same diameter as the interior of the aforesaid cylinder, and of a ram with slightly rounded shoulder, all substantially as set forth.

885,557. LOCK. WALTER W. WINSLOW, Laredo, Tex., assignor of one-half to Andrew Winslow, Laredo, Tex. Filed Apr. 22, 1907. Serial No. 369,644.

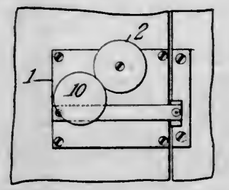
1. A lock provided with a lock-bolt, a knob in constant operative relation thereto, another knob, connections between the last-named knob and the first knob, and means for coupling the second knob to the first knob comprising a pin movable radially through the shank of one knob into engagement with the connections from the other knob and having one end formed into a handle, and a spring embracing said shank and carrying said pin.

2. A door lock having a spring-actuated lock-bolt, knobs in operative relation thereto, and a spring-actuated locking member for the lock-bolt exterior to the lock casing and movable across the end of the casing and beyond the latter into the path of the corresponding end of the lock-bolt in position to be engaged by that portion of the keeper which houses the lock-bolt.



3. A lock comprising a lock-bolt, a roll-back for operating the same, a knob having a hollow shank carrying said roll-back, another knob, a spindle fixed thereto and entering the hollow shank of the first-named knob, means for coupling the shank of the first-named knob and the spindle together, and a collar adjustably mounted on the spindle for fixing the relation of the second-named knob to the lock irrespective of its connection to the first-named knob.

885,558. LOCK. WALTER W. WINSLOW, Laredo, Tex. Original application filed Apr. 22, 1907, Serial No. 369,644. Divided and this application filed July 6, 1907. Serial No. 382,474.



1. In a lock, a bell, a knob in constant connection with the bell to ring the same whenever the knob is manipulated, another knob in constant connection with the latch bolt of the lock to operate the same whenever the last-named knob is manipulated, and means for connecting the first-named knob to the second-named knob to operate the latch bolt and bell simultaneously when either knob is manipulated.

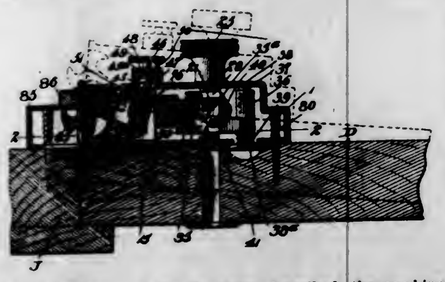
2. A lock comprising a suitable lock casing, a bell carried thereby, a knob in constant operative relation to the latch-bolt of the lock, another knob, a knob spindle fast to the last-named knob and extending into the shank of the first-named knob, means for coupling and uncoupling said knobs through the spindle carried by the second-named knob, a gear wheel on said spindle, and gear connections from said gear wheel to the bell.

885,559. DOOR-LATCH. CHARLES J. WOODWARD, New York, N. Y. Filed Aug. 1, 1907. Serial No. 386,589.

1. In a device of the character described, the combination of a suitable casing member, and a bolt member sliding therein, with a tumbler stop mounted upon one of said members, a tumbler-supporting pin mounted upon the other of said members, a bolt-controlling tumbler mounted upon said pin and movable parallel with the axis thereof into and out of engagement with said tumbler stop, and means for operating said tumbler and bolt member.

2. In a device of the character described, the combina-

tion of a suitable casing member, and a bolt member sliding therein, with a tumbler stop mounted upon one of said members, a tumbler-supporting pin mounted upon the other of said members, a bolt-controlling tumbler slidingly mounted upon said pin and movable parallel with the axis thereof into and out of engagement with said tumbler stop, a spring engaging said tumbler to yieldingly hold it in engaged position, an operating spindle, a cam device actuated by said spindle for shifting the tumbler upon its supporting pin, and means upon said spindle for operating the bolt member.



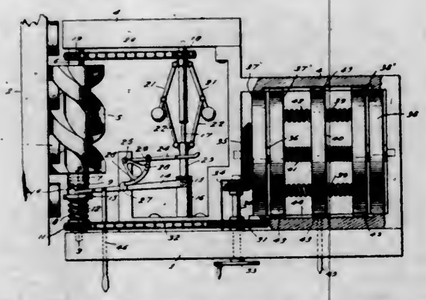
3. In a device of the character described, the combination of a suitable casing member, and a bolt member sliding therein, with a tumbler stop mounted upon one of said members, a headed tumbler-supporting pin mounted upon the other of said members, a bolt-controlling tumbler having a bored hub which is slidingly mounted upon said pin and movable thereon parallel with the axis thereof into and out of engagement with said tumbler stop, a spring mounted upon said pin between its head and said tumbler to yieldingly hold the tumbler in engagement with said stop, an operating spindle, a cam device actuated by said spindle for shifting the tumbler upon its supporting pin, and means carried by said spindle for engaging and moving the bolt in the casing.

4. In a device of the character described, the combination of a locking bolt, means normally locking said bolt, and an automatically locking latch-member suitably mounted upon said bolt.

5. In a device of the character described, the combination of a locking bolt, means normally locking said bolt, a latch-member mounted upon the bolt, and a latching tumbler engaging and controlling said latch-member.

[Claims 6 to 26 not printed in the Gazette.]

885,560. SAFETY-BRAKE FOR ELEVATORS. EDWARD A. WORTHINGTON, Lincoln, Nebr. Filed Jan. 30, 1907. Serial No. 354,878.



1. In an automatic elevator brake, the combination with a car, and a stationary brake element, of a coacting revoluble brake element on the car, a governor operated by the revoluble brake element, brake mechanism, gearing including clutch mechanism for connecting said brake mechanism with the revoluble brake element, and means controlled by the governor for throwing the clutch mechanism into action.

2. In an automatic elevator brake, the combination of a car, and a stationary brake element, of a revoluble brake element on the car, a governor operated by the movement of the revoluble brake element, brake mechanism including a screw shaft and brake devices operated thereby, gearing for driving the shaft, clutch mechanism for connecting said gearing with the revoluble brake element, and means controlled by the governor for holding the clutch mechanism out of action and throwing the same into action.

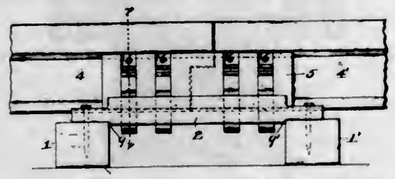
3. In an automatic elevator brake, the combination with a car, and a stationary brake element, of a revoluble brake element on the car, a governor operated by the revoluble brake element, friction brake mechanism, a screw shaft for operating said brake mechanism, gearing for driving said shaft from the revoluble brake element, clutch gearing for connecting said gearing with the revoluble brake element, and means for normally holding said clutch gearing out of action, said means being controlled by the governor and adapted to be thrown into action thereby.

4. In an automatic brake for elevators, the combination with a car, and a stationary brake element, of a revoluble brake element on the car, a governor driven by the revoluble brake element, friction brake mechanism, a screw shaft for operating the same, means for yieldingly opposing a resistance to the action of the brake mechanism, gearing for driving the shaft from the revoluble brake element, and a clutch controlled by the governor for throwing said gearing into connection with the revoluble brake element.

5. In an automatic brake for elevators, the combination with a car, and a stationary brake element, of a revoluble brake element on the car, a governor operated by the revoluble brake element, stationary friction disks, movable friction disks to engage the same, means including a screw shaft for operating the movable disks, gearing for driving the movable disks from the revoluble brake element, and means controlled by the governor for throwing said gearing into action.

[Claims 6 to 15 not printed in the Gazette.]

885,561. RAILWAY-RAIL JOINT. EZRA C. ALE, Altoona, Pa. Filed May 27, 1907. Serial No. 375,856.



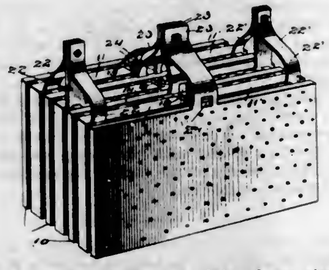
1. A railway rail joint, comprising a combined base and bridge-plate having upward projecting side walls, said plate being adapted to receive and support the end portion of two rails between said side walls, fish-plates fitted between the side walls and resting in contact therewith, and securing keys fitted in recesses in the fish-plates and openings in the bridge-plate, one of said keys engaging the other, substantially as described.

2. A joint for the meeting ends of two rails, comprising a base plate provided with openings therethrough, a fish-plate on each side of said rails, each fish-plate having a plurality of recesses, a securing key fitted in each of said recesses, and a locking key fitted to the base plate and adapted to interlock with said securing key, both keys being fitted in said openings in the base plate.

3. A joint for the meeting ends of two rails, comprising a base plate provided with openings therethrough, a fish-plate on each side of said rails having a plurality of recesses in the inclined face thereof, a securing key fitted in each recess, said key being provided with a series of ratchet teeth, and a resilient locking key, the upper portion of which is adapted to engage said ratchet teeth, both of said keys passing through an opening in the base plate.

4. A joint for the meeting ends of two rails, comprising a base plate, a fish-plate on each side of said rails having a plurality of recesses in its outer face, a securing key provided with a series of ratchet teeth fitted in each recess, and a locking key provided with outwardly extending lugs and a resilient upper portion the upper end of said resilient portion engaging the ratchet-teeth on said securing key, substantially as described.

885,562. SECONDARY BATTERY. WILLIAM A. F. ALT, Brooklyn, N. Y., assignor, by mesne assignments, to American Battery Company, Cedarhurst, N. Y., a Corporation of New York. Filed Apr. 1, 1907. Serial No. 365,742.



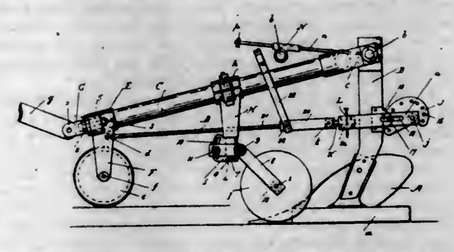
1. In a secondary battery, a plate of one sign, and a plurality of plates of the opposite sign, the aggregate area of said plurality of plates being substantially equal to the area of the single plate, means insulating the plates one from another, contact means carried by the plurality of plates adapted to engage like means, and means for separating the contact means.

2. In a secondary battery, a plate of one sign, a plurality of plates of the opposite sign, the aggregate area of said plurality of plates being substantially equal to the area of a single plate, means insulating the plurality of plates from the single plate, means insulating the plurality of plates each from the other, contact members carried at contiguous ends of the plurality of plates and adapted to engage like contact members, and means adapted to be inserted between and to separate the contact members.

3. In a secondary battery, a plurality of positive plates arranged in groups, the individual plates being insulated from each other, separable connections electrically connecting together elements of the separate groups, connections joining together the plates of each group, a plurality of negative plates interposed alternately between the positive plates, each of said negative plates having a surface substantially equal to that of the several co-acting positive plates, connections joining together the several negative plates, and means to separate the separable connections of the positive plates.

885,563. PLOW. GUSTAF A. ANDERSON, Waynesboro, Pa., assignor to The Gieser Manufacturing Company, Waynesboro, Pa. Filed Nov. 22, 1907. Serial No. 403,353.

1. The combination, with a plow, and its standard; of a draft-bar connected to the upper part of the said standard, a brace arranged between the front end portion of the said draft-bar and the middle portion of the said standard, a ground-wheel supporting the front end portion of the said draft-bar, and a draft attachment provided with a horizontal pivot connecting it with the front end portion of the said draft-bar.



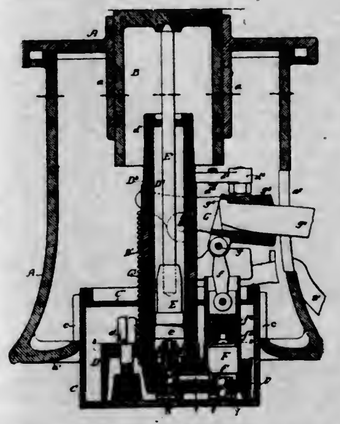
3. The combination, with a plow, and its standard; of a draft-bar pivoted to the upper part of the said standard, a brace pivotally connected to the front end portion of the said draft-bar and provided with plates which straddle the middle part of the said standard, and an adjusting cam pivoted to the said plates to the rear of the said standard and engaging with it.

4. The combination, with a plow, and its standard; of a draft-bar pivoted to the upper part of the said standard, a brace pivotally connected to the front end portion of the said draft-bar and provided with outer plates which straddle the middle part of the said standard, inner plates secured to the said standard between the said outer plates, an adjusting cam pivoted to the said outer plates, and a locking-device for connecting the said cam to the said inner plates.

5. The combination, with a plow, and its standard; of a draft-bar pivoted to the upper part of the said standard, a brace pivotally connected to the front end portion of the said draft-bar and to the middle portion of the said standard, said brace being provided with a pivot joint at its middle part, and an operating-device for the said brace connected to it at its said pivot joint and arranged at an angle to it.

[Claims 6 to 11 not printed in the Gazette.]

885,564. HYDRAULIC ELEVATOR FOR CHAIRS. JAMES BARKER, ALFRED BARKER, and JOSEPH P. BARKER, Philadelphia, Pa. Filed May 1, 1907. Serial No. 371,243.



1. The combination with the base of a chair, of a reservoir mounted in said base, a base section within the reservoir, a main cylinder projecting from the base section, a plunger within the main cylinder supporting the body of the chair, a pump cylinder at one side of the main cylinder and having a valved passage communicating

with the reservoir, a piston within the cylinder, a socket connected to the piston and terminating within the chair base, an operating lever extending through an opening in the base and removably fitting said socket, said base section having a passage leading from the pump cylinder to the main cylinder, a valve in said passage, and means for allowing the liquid to escape from the main cylinder to the reservoir, substantially as described.

2. The combination of a reservoir, a base plate mounted within the reservoir, a main cylinder projecting from the base plate, a piston within the main cylinder and arranged to support the body of the chair, a pump cylinder at one side of the main cylinder, a piston therein, there being a passage in the base-plate leading from the pump cylinder to the main cylinder, and a passage from the reservoir to the pump cylinder, a valve in the first passage opening towards the main cylinder, a valve in the second passage, means for operating the piston in the pump cylinder, there being a valved outlet communicating with the main cylinder and with the reservoir, and means for operating at will the valve in said outlet, said valve and piston operating means respectively consisting of two sockets and two arms movably fitted to said socket, substantially as described.

3. The combination in elevating means for chairs, of a reservoir mounted in the base of a chair, a base plate mounted within the reservoir and secured thereto, a pump cylinder mounted on the base plate, a piston in said cylinder, a main cylinder, a plunger in said main cylinder, a rod projecting from the plunger and adapted to support a chair body, said base plate having a valved passage leading from the pump cylinder to the main cylinder, and a passage leading from the reservoir to the first mentioned passage, a valve in said second passage opening towards the pump, a socket within the base of the chair connected to the pump piston, a lever arm extending into the base and movably fitting said socket, the base plate also having a passage leading from the main cylinder to the reservoir, a valve in said passage, means for normally holding said valve closed, and a lever for controlling the valve, with an operating arm extending into the base and removably engaging said valve, substantially as described.

4. The combination of a chair base having an internal flange, a removable reservoir having lugs resting on the flange to hold it in position, hydraulic mechanism mounted within the reservoir, a lever projecting into the base, and removably engaging said hydraulic mechanism for actuating the pump thereof, a cylinder having a plunger carrying the chair body, and means for operatively connecting the cylinder and the hydraulic mechanism, substantially as described.

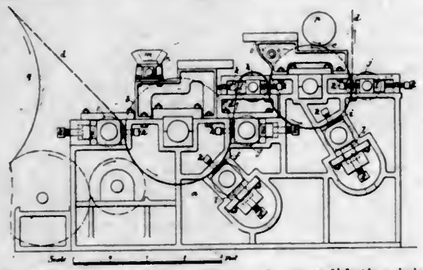
5. The combination of a base, an internal flange thereon, a reservoir mounted within the flange and having external lugs resting on the flange, a base plate mounted within the reservoir, a main cylinder projecting from the base, a main piston in said cylinder and supporting the body of the chair, a pump cylinder at one side of the main cylinder, a piston thereon, said base having a passage leading from the pump cylinder to the main cylinder and communicating with the reservoir, two valves in said passage, and an operating lever connected to the pump piston and provided with a socket, with an operating arm extending through the base of the chair, and removably fitting said socket, substantially as described.

[Claims 6 to 14 not printed in the Gazette.]

885,565. PRESSING MACHINERY FOR USE IN THE MANUFACTURE OF INLAID LINOLEUM. EDWARD BATTEN, Kirkcaldy, Scotland. Filed Nov. 2, 1907. Serial No. 400,426.

1. In pressing machinery for use in consolidating inlaid linoleum fabric a roll having a roughened surface for acting on the face of the said fabric substantially as described.

2. In pressing machinery for use in consolidating inlaid linoleum fabric two or more rolls having roughened surfaces and arranged to act in succession on the face of the said fabric in order of the degree of coarseness of the roughening the most coarsely roughened acting first.



3. In pressing machinery for use in consolidating inlaid linoleum fabric the combination of a roll having a roughened surface for acting on the face of the said fabric and a roll having a smooth surface arranged for subsequently acting thereon.

4. In pressing machinery for use in consolidating inlaid linoleum fabric the combination with two or more rolls having roughened surfaces and arranged to act in succession on the face of the said fabric of a smooth roll or smooth rolls for acting on the face of the said fabric after action of the aforesaid rolls.

885,566. PRODUCTION OF ALDEHYDE SULFOXYLATES. MAX BAZLEN, Ludwigshafen-on-the-Rhine, Germany, assignor to Badische Anilin & Soda Fabrik, Ludwigshafen-on-the-Rhine, Germany, a Corporation. Filed Jan. 31, 1906. Serial No. 298,867.

1. The process of producing aldehyde sulfoxylate by reacting with a reducing metal on a fixed alkali salt of an aldehyde sulfur oxid compound in the presence of zinc sulfite while totally avoiding the presence of extraneous acid.

2. The process of producing aldehyde sulfoxylate by reacting with zinc on a fixed alkali salt of an aldehyde sulfur oxid compound in the presence of zinc sulfite while totally avoiding the presence of extraneous acid.

3. The process of producing formaldehyde sulfoxylate by reacting with zinc on a fixed alkali salt of a formaldehyde sulfur oxid compound in the presence of zinc sulfite while totally avoiding the presence of extraneous acid.

4. The process of producing formaldehyde sulfoxylate by reacting with zinc on formaldehyde sodium bisulfite in the presence of zinc sulfite while totally avoiding the presence of extraneous acid.

885,567. PRODUCTION OF ALDEHYDE SULFOXYLATES. FRANZ BECKER, Prague Austria-Hungary, assignor to Badische Anilin & Soda Fabrik, Ludwigshafen-on-the-Rhine, Germany, a Corporation. Filed Feb. 6, 1906. Serial No. 299,783.

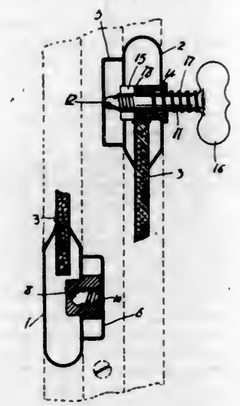
1. The process of producing aldehyde sulfoxylate by acting at a temperature above 40° C. on a bisulfite with an aldehyde and with a metal which has a reducing action, while totally avoiding the presence of extraneous acid.

2. The process of producing formaldehyde sulfoxylate by acting at a temperature above 40° C. on a bisulfite with formaldehyde and with a metal which has a reducing action, while totally avoiding the presence of extraneous acid.

3. The process of producing formaldehyde sulfoxylate by acting at a temperature above 40° C. on a bisulfite with formaldehyde and with zinc dust, while totally avoiding the presence of extraneous acid.

885,568. SASH-LOCK AND ANTIRATTLER. AUGUST BENNERSCHEIDT, San Francisco, Cal. Filed Apr. 29, 1907. Serial No. 370,751.

In a sash-lock and anti-rattler, the combination of an outer sash having a threaded socket, an inner sash having a guideway, the end of which next to the outer sash is formed with a recess, a threaded stem adapted to enter said socket, and having a laterally extending projection adapted to rest either against the end of the guideway next to the outer sash, or against the bottom of the recess, the end of said guideway being conformed to permit said



projection to rest stationary thereagainst, whereby the stem may be held stationary in either of two positions, one in which said projection rests against the end of the guideway, and the other in which it rests against the bottom of the recess, and a spring arranged to normally project said stem on the outer sash, substantially as described.

885,569. STRAWBERRY-PICKER. ARTHUR E. BERGQUIST, Lindstrom, Minn. Filed Aug. 14, 1907. Serial No. 388,519.



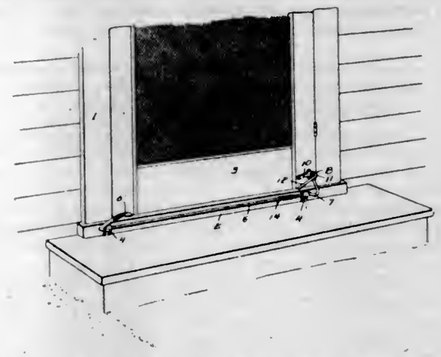
1. A berry picking implement of the class described comprising a thimble or stall closed at its outer end, disks on the outer and inner sides of said closed outer end of the thimble or stall and a plate having a stem at its inner end extending through said disks and said closed outer end of the stall.

2. A berry picking implement of the class described comprising a thimble or stall having a closed outer end convex on its outer side and concave on its inner side, concavo-convex disks on the outer and inner sides of said closed outer end of the stall and a plate having a stem at its inner end extending through said disks and said closed outer end of the thimble or stall.

885,570. DOOR-OPENER. ARTHUR E. BERGQUIST, Lindstrom, Minn. Filed Feb. 18, 1908. Serial No. 416,494.

1. The combination with a door frame and a door therefor, of a bar extending longitudinally with the sill of the door and secured in bearings thereto, the bar being provided with offsets at both of its ends, and a keeper secured to the door, said keeper providing a bearing face and a bent arm and adapted for engagement with one of the offsets of the bar.

2. The combination with a door frame and a door therefor, of a bar extending longitudinally of the sill of the door and mounted in bearings thereon, offsets upon each end of the bar, a coil spring connected with the bar and with the sill, and a keeper comprising a bearing face and an inclined inwardly extending arm secured to the door



and adapted for engagement with one of the offsets of the bar.

885,571. BOTTLE-TOP. ALFRED L. BERNARDIN, Evansville, Ind. Filed Mar. 28, 1906. Serial No. 308,459.



1. The improvement in bottle tops herein described consisting of a body portion of hard metal having a threaded portion at its lower end, a longitudinally ribbed portion above the said threaded portion and having a top plate provided with an upwardly projecting central portion or crown having a central opening and a flat bearing surface on its inner side surrounding said opening, and a discharge tube having near its lower end an annular bead to abut the said top plate and below the said bead a series of lips or tongues projecting through the opening in the top plate and bent along the flat inner bearing surface within the body portion and surrounding the opening in its top plate all substantially as and for the purpose set forth.

2. A bottle top of hard metal having a central opening in its top plate and a discharge tube having near its base an outwardly projecting annular bead to abut the top plate surrounding the central opening and provided below said bead with a series of lips or tongues bent outwardly beneath the top plate and coöperating with the annular bead in securing the tube, and a coating operating as a solder to complete the connection of the tube and cap, substantially as set forth.

3. A bottle top having a top plate provided with a discharge opening and a cylindrical side threaded near its free end and provided adjacent to its top plate with a series of longitudinal ribs to facilitate the application and removal of the top, and a separate discharge tube fitted to the top plate in communication with the discharge opening therein, substantially as described.

4. A bottle top comprising a body portion having its top plate provided with an opening, and a discharge tube composed of a plate of metal and corrugated along one edge and beaded from side to side above the said edge and bent to cause its side edges to overlap thereby to produce a tube, the said discharge tube being fitted to the top plate of the body portion with its bead abutting the upper side thereof and its lips or tongues bent or flanged along the inner side of the top plate, substantially as and for the purpose set forth.

5. A discharge tube for bottle tops bent from a plate of metal corrugated along its base edge, beaded transversely above said corrugations and tapering above the said transverse bead, substantially as and for the purposes set forth.

885,572. METHOD OF MANUFACTURING SHEET-METAL RECEPTACLES. LEWIS F. BETTS, New York, N. Y., assignor of one-fourth to H. Blake Gilmore and one-fourth to Joseph A. Kennedy, Brooklyn, N. Y. Filed Mar. 12, 1907. Serial No. 361,927.

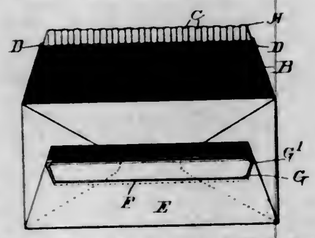


1. The method of forming the top-ring and bottom for a receptacle having a tapered body from a single sheet of metal, the same consisting of cutting an annulus from said sheet and bending the inner margin thereof to form a flange matching the interior of the top of said body, and bending the outer margin of the remaining circular disk of sheet metal in the same direction to form a flange matching to the interior of the lower portion of said body.

2. The method of simultaneously forming the top-ring and bottom for a tapered vessel, which consists in cutting an annulus from a sheet of material, and bending the adjacent edges of the annulus and the remaining circular disk in the same general direction, forming converging flanges.

3. The method of simultaneously forming the top-ring and the bottom of a tapered vessel, which consists in simultaneously cutting an annulus from a sheet of material, and bending the adjacent edges of the annulus and the circular disk remaining, in the same general direction and bending the outer margin of said disk to form an annular wire-receiving rim.

885,573. SAFETY-ENVELOP. CATHERINE C. BLAKE, Round Grove township, McLeod county, Minn. Filed May 17, 1906. Serial No. 317,279.



1. In an envelop, a flap having a folded edge provided with transverse corrugations, in combination with a longitudinal quadrilateral panel extending partway across the opposite flap, and adapted to receive said corrugated edge.

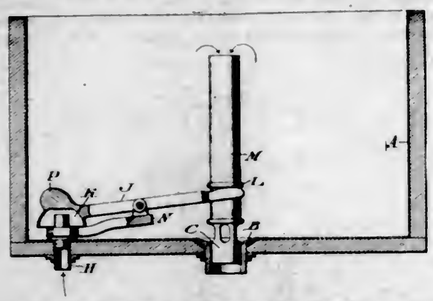
2. In an envelop, a free flap having a reverse fold near its edge and corrugations below said fold, in combination with an adhering flap formed with a depressed quadrilateral panel having a longitudinal marginal recess on each side thereof, said panel being adapted to receive the corrugated portion of the free flap.

3. An envelop comprising a body portion and a flap, said body portion being formed with a depressed longitudinal panel shorter than the envelop, and the flap being provided with corrugations adapted to be received by the panel.

885,574. FLUSH-TANK. CHARLES A. BLESSING, Philadelphia, Pa. Filed Mar. 14, 1906. Serial No. 305,938.

1. In a flush tank, a discharge valve therefor, a lever pivoted within the tank near the bottom thereof and adapted to engage said valve, a supply pipe for said tank and weighted means on said lever adapted to receive the impact of the inflowing water from said pipe the weight being upon the upper face of the lever.

2. In a flush tank, a discharge valve therefor, a supply pipe for said tank, an inverted vessel over the discharge end of said pipe, a carrier for said vessel pivoted upon a fixed member within the tank near the bottom thereof, and a weight for operating the carrier, said carrier being adapted to directly engage said valve to close the same by the impact of the inflowing water against said vessel.



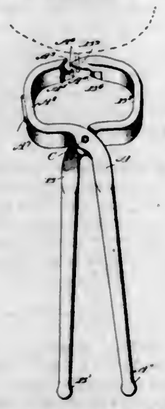
3. In a flush tank, a discharge valve therefor, a supply pipe for said tank entering the same, a movable vessel in the tank over the discharge end of said pipe, a weighted carrier for said vessel pivoted upon a fixed member supported near the bottom of the tank and means for loosely connecting said carrier with means on said valve to exert an upward pressure thereon.

4. In a flush tank, a tubular discharge valve therefor, a lever pivoted upon a fixed member supported within and near the bottom of said tank one limb of which is adapted to engage directly with means on said valve, and an inverted receptacle on the other limb of said lever located over the discharge end of said pipe, said lever being mounted within the tank near its bottom and weighted so as to overbalance the weight of said valve.

5. In a flush tank, a tubular discharge valve therefor, a supply pipe leading into said tank, an arm supported on said supply pipe within said tank, a lever mounted on said arm, an inverted vessel on one limb of said lever over the discharge end of said pipe and means on the other limb for engagement with said valve.

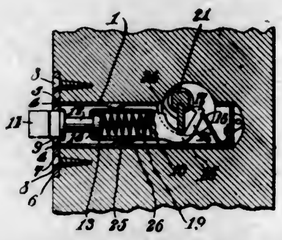
[Claim 6 not printed in the Gazette.]

885,575. STAPLE-PULLER. GEORGE BLOOD, Westhope, N. D., assignor of one-half to George Mead, Westhope, N. D. Filed May 6, 1907. Serial No. 372,238.



The staple puller substantially as herein described, consisting of a pair of pincers having the opposing jaws, one of which is provided at its free extremity with a cutting edge and laterally thereto in its outer face with a rounded groove for the reception of the prong on the opposing jaw, and the opposing jaw having at its free extremity a cutter coöperating with that on the opposite jaw and also provided alongside of said cutter with a prong projecting longitudinally beyond the cutting edge of its jaw and also projecting outwardly beyond the outer face of said jaw whereby the prong may be introduced in a staple for drawing the same without any interference on the part of the cutting edges and the said prong being tapered longitudinally whereby it may operate with a wedging action in pulling the staple, all as and for the purpose set forth.

885,576. COMBINED LATCH AND LOCK. WILLIAM T. BLOUNT, Jr., Thunderbolt, Ga. Filed Jan. 16, 1906. Serial No. 296,361.



1. A device of the character set forth, comprising a cylindrical casing, a tubular member movably mounted within the casing and provided with a rearwardly and upwardly inclined arm, a latch bolt slidably mounted within the casing and movably connected with the tubular member, a spring mounted within the tubular member behind the latch bolt, and means for engaging the arm of the tubular member for withdrawing the latch bolt.

2. A device of the character set forth, comprising a cylindrical casing provided on its interior with an annular shoulder, a tubular member movably mounted within the casing and provided with a lug adapted to engage said shoulder, means for retaining the tubular member normally projected, a latch bolt slidably mounted within the casing and movably connected with the tubular member, and a spring mounted within the tubular member behind the latch bolt.

3. A device of the character set forth, comprising a cylindrical casing provided on its interior with an annular shoulder, a tubular member movably mounted within the casing and provided with a lug adapted to engage said shoulder, said tubular member being provided with a rearwardly disposed arm cut-away to provide an upwardly inclined working face, means for retaining the tubular member normally projected, means for retracting the tubular member, a latch bolt provided with a shank portion having a head, said head being slidably mounted within the tubular member, and a spring mounted within the tubular member behind said head.

885,577. PROCESS OF MAKING ALIZARIN. JOHANN H. BONER, Ludwigshafen-on-the-Rhine, Germany, assignor to Badische Anilin and Soda Fabrik, Ludwigshafen-on-the-Rhine, Germany, a Corporation. Filed Sept. 9, 1904. Serial No. 223,922.

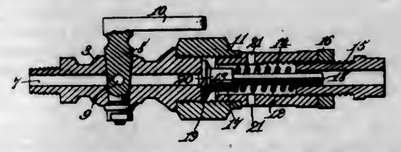
1. The process of producing alizarin which consists in heating anthraquinone with caustic alkali in the presence of an oxidizing agent.

2. The process of producing alizarin, which consists in heating anthraquinone with caustic soda in the presence of an oxidizing agent.

3. The process of producing alizarin, which consists in heating anthraquinone with caustic soda in the presence of potassium chlorate.

885,578. SAFETY-DISCHARGE-VALVE MECHANISM. JOHN C. BOWERS, Taylor, Tex., assignor of one-half to John F. Black, Taylor, Tex. Filed Jan. 28, 1908. Serial No. 413,024.

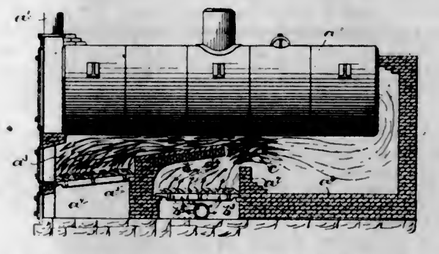
1. The combination of the equalizing reservoir, engineer's brake valve, and intermediate connection of an air brake system, a casing in communication with said reservoir, a valve in said casing, normally held to its seat by pressure of air in said reservoir, to prevent the escape of air to atmosphere, and means acting against said valve to permit the air to pass to atmosphere when the pressure in the reservoir passes below a certain point.



2. The combination of a casing having an air passage, a valve in said casing held closed against its seat by pressure of air in said passage, means to force the valve away from said seat when the pressure in said passage is reduced to a certain point, and a second valve for controlling the flow of air through said passage, said second valve having means coöperative therewith for putting the pressure side of the passage into communication with the atmosphere when said second valve is closed.

3. The combination of a casing having an air passage, a valve in said casing held closed against its seat by pressure of air in said passage, a spring to force the valve away from its seat and against the outlet end of said passage when the pressure of air therein is reduced to a predetermined point, and a second valve having a port adapted to register with said passage when said second valve is opened, the second valve having a second port and the casing having a tell-tale port, said second port and said tell-tale port being adapted to register when said second valve is closed.

885,579. SMOKE-CONSUMER. HENRY P. BRADBURY, Springfield, Ohio, assignor of one-half to L. H. Pursell, Springfield, Ohio. Filed Oct. 25, 1906. Serial No. 340,601.



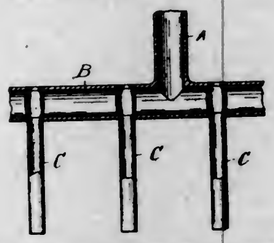
1. In a construction such as described, a plurality of fire-boxes, a dividing wall separating one fire-box from the other, one fire-box being at the rear of the other in the line of draft, a refractory roof extending rearwardly from the dividing wall and projecting over the rear fire-box, a passage-way formed by an opening in the refractory roof and near the rear end thereof for the passage of the products of combustion, a wall formed above the opening for causing the flames from the fire-boxes to take a rearward course.

2. In a construction such as described, a plurality of fire-boxes, a dividing wall separating one fire-box from the other, one fire-box being at the rear of the other in the line of draft, a refractory roof extending rearwardly from the dividing wall and projecting over the rear fire-box, a passage-way formed by an opening in the refractory roof and near the rear end thereof for the passage of the products of combustion, a wall formed above the opening for causing the flames from the fire-boxes to take a rearward course, and means for forcing a draft through said passage-way away from the fire-boxes, substantially as specified.

3. In a construction such as described, a plurality of fire-boxes, a dividing wall separating one fire-box from the other, one fire-box being at the rear of the other in the line

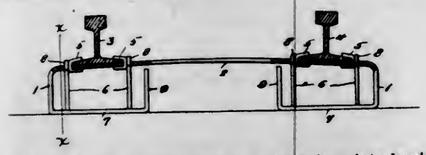
of draft, a refractory roof extending rearwardly from the dividing wall and projecting over the rear fire-box, a passage-way formed by an opening in the refractory roof and near the rear end thereof for the passage of the products of combustion, a wall formed above the opening for causing the flames from the fire-boxes to take a rearward course, and means for forcing a draft through said passage-way away from the fire-boxes, a stack and a fan for forcing a draft from said stack, and a passage-way connecting the fan with the rear fire-box, substantially as specified.

885,580. CAN-FORK OR CAN-LIFTER. ROELIFF M. BRECKENRIDGE, Hamilton, Ontario, Canada. Filed Feb. 24, 1906. Serial No. 302,825.



A fork for lifting hollow cylindrical bodies comprising a handle, a hollow cross-piece attached thereto, a series of hollow tines passing transversely through the cross-piece, the portion of the tines between the inner walls of the cross-piece being expanded laterally, whereby they are securely held from longitudinal movement in the cross-piece.

885,581. METALLIC TIE. HENRY B. BURKE, Youngwood, Pa. Filed Aug. 1, 1907. Serial No. 386,609.



1. A metallic tie comprising a rectangular plate having its end portions bent downwardly, inwardly and upwardly.

2. A metallic railway tie comprising a plate having its end portions bent downwardly, inwardly, and upwardly and a bracing means inclosed within the bent portions of the plate.

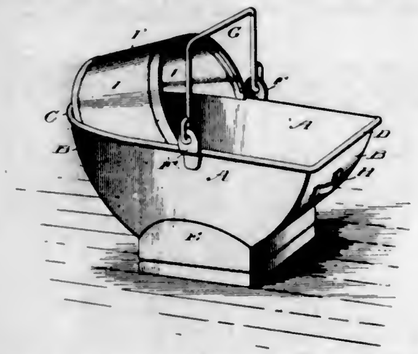
3. A metallic railway tie comprising a plate having its ends bent downwardly, inwardly, and upwardly, U-shaped rail fastening clips connected to the tie, and brace plates positioned within the tie and provided with lugs for maintaining said clips in position.

4. A metallic railway tie comprising a rectangular plate having its end portions bent downwardly, inwardly, and upwardly, means for connecting the rails to said plate, and bracing means positioned within the bent portions of the plate.

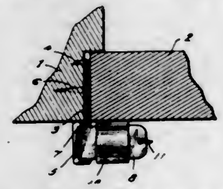
5. A metallic railway tie comprising a plate having its end portions bent downwardly, inwardly and upwardly thereby forming a support for the body portion of the plate, rail fastening clips carried by the plate, and bracing means positioned within the bent portions of the plate and engaging said fastening means for retaining them in position.

885,582. COAL-BUCKET. BALIE L. BURTT, Jeffersonville, Ind. Filed May 11, 1907. Serial No. 373,020.

A coal bucket consisting of sides, front, rear and bottom made from a single sheet of material, the front wall being curved horizontally and the rear wall and sides forming angular corners, the bottom and front and rear walls formed on a single or continuous curve, the front edge of the bucket being pitched higher than the rear edge, a rectangular base or standard secured to the bottom, a curved hood disposed adjacent to the front edge of the bucket, the upper wall of said hood inclined downwardly to the front and a ball or handle secured to the sides of the bucket at about its vertical center, said ball when dropped lying within the front or rear edges of the bucket body.

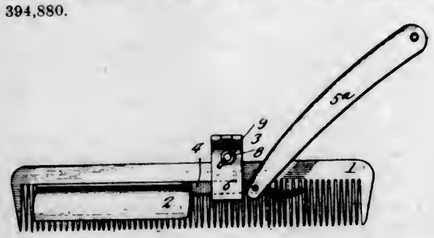


885,583. DOOR-SECURER. THOMAS J. BURY, Enid, Okla. Filed May 29, 1907. Serial No. 376,285.



A lock comprising a keeper having prongs thereon for engaging a door jamb, a loop formed on said keeper member on one side of the shank of said keeper member, and a detachable key comprising an L-shaped bar, one arm of which is inserted in the keeper, and a rubber buffer secured to the other arm to prevent marring the door.

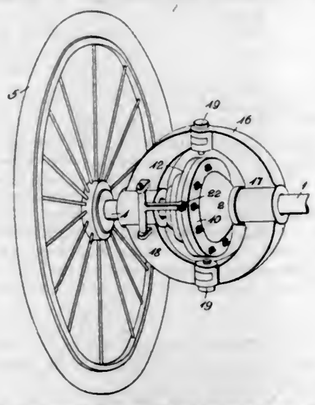
885,584. HAIR-CUTTING DEVICE. ROBERT CAMPBELL, New York, N. Y. Filed Sept. 27, 1907. Serial No. 394,880.



1. A combined comb and hair cutting device comprising a comb, a clip having a pair of members pivotally connected together, a set screw connecting said members together and a blade, said clip having one of its members bearing on one side of said comb and said blade being disposed between the comb and the other clip member and detachably connected to the said comb by the action of said set screw.

2. A combined comb and hair cutting device comprising a comb apd a gage block on one side thereof, a clip comprising a pair of members hinged together one of said members bearing on the side of the comb opposite said gage block, a blade having its tang bearing on said gage block and thereby disposed on one side of the comb, a gage block on the outer side of the tang of said blade and against the inner side of the other member of the clip and a set screw connecting said clip members together and clamping said comb, gage blocks and blade between them.

885,585. COMBINATION STEERING AND DRIVING AXLE FOR MOTOR-VEHICLES. JAMES P. CARPENTER, Ithaca, Mich. Filed Oct. 14, 1907. Serial No. 397,426.



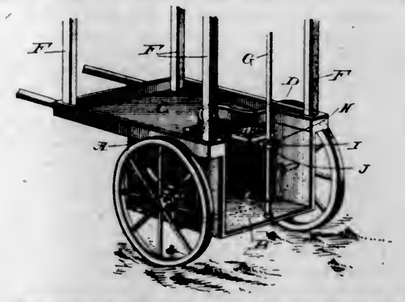
1. In a combined steering and driving axle for motor vehicles, the combination with an axle having on its opposite ends socket members, of wheel spindles having on their inner ends ball members adapted to engage said sockets on the ends of the axle, anti-frictional bearing balls arranged between said ball and socket, means to lock said socket against revolution on said ball, whereby the latter and the spindle connected thereto are driven by said axle irrespective of the angle at which said spindles are turned, and a supporting yoke connected to said axle and spindle, substantially as described.

2. In a device of the character described, the combination with a driving axle, of wheel spindles arranged at each end thereof, a ball and socket connection between the outer ends of the axle and inner ends of said spindles, means to lock the socket against revolution on the ball member of said connection, whereby the spindles are driven by the axle at various angles, a supporting yoke comprising an axle section and a spindle section, and means to pivotally connect the inner ends of said sections, substantially as described.

3. In a device of the character described, the combination with the driving axle, with spindles arranged at the opposite ends of said axle, a ball and socket joint connection arranged between the ends of the axle and the spindle, said connection comprising a socket member fixedly mounted on the end of the axle, a ball member fixedly mounted on the inner end of the spindle and adapted to engage said socket member, a guard ring to hold said ball in operative connection with the socket, an annular ball race formed in the inner side of said socket, anti-frictional bearing balls arranged in said race and adapted to engage said ball member, and means arranged in said ball race and on said ball to form stops to prevent the turning of the socket on the ball, whereby the latter and said wheel spindles are driven by the axle through said socket, substantially as described.

4. In a device of the character described, the combination with a driving axle, of wheel spindles arranged at the opposite ends of said axle, a universal joint connection between said spindles and the axle, said connection comprising a socket member fixedly mounted on the end of the axle, a guard ring forming part of said socket and detachably connected thereto, a ball member adapted to be operatively engaged with said socket, said ball member comprising an inner spherical portion, a series of radially projecting ribs formed on said spherical portion, an annular ball race formed on the inner side of said socket, a series of anti-frictional bearing balls arranged in said race between the ribs on said ball, stop blocks arranged in said race between said bearing balls, said ribs and blocks forming stops to lock the socket against rotation on said ball, thereby providing for the driving or turning of the latter, and the spindles mounted thereon, substantially as described.

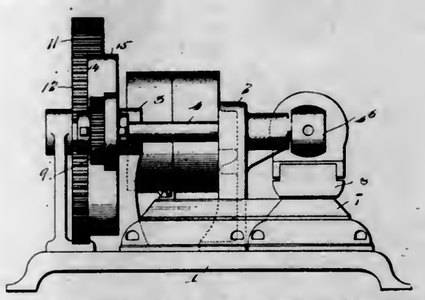
885,586. CART. CHARLES CARROLL, Chicago, Ill. Filed Nov. 27, 1906. Serial No. 345,323.



1. The combination with a vehicle comprising a body having a rear door-way, of an upright post located directly in the door-way, the post being secured to the vehicle body, at its upper and lower ends, and a seat arranged on the post, the seat being free to swing laterally and provided with vertical adjustment.

2. The combination with a vehicle-body, constructed with a rear door-way, of a vertically arranged post located extending from the door-way threshold, to the top of the door-way, the post being arranged midway between the vertical side walls of the door-way, a seat arranged on said post, projecting laterally therefrom into the interior of the vehicle body, means providing the seat with vertical adjustment, and means permitting free lateral swinging movement of the seat.

885,587. POWER PERFORATING-MACHINE. WALLACE G. CAPITAINE, Richmond, Va. Filed July 23, 1906. Serial No. 327,416.



1. In a machine for perforating sheet material, the combination with a female punch member, and a male punch member, of means for intermittently reciprocating said male member, comprising a gear wheel provided with teeth extending around its periphery, teeth extending only partially around its periphery, and a smooth peripheral portion, a gear pinion meshing with the peripheral teeth of said gear wheel, a second pinion adapted to engage the gear teeth extending partially around said wheel, and cam mechanism carried by the shaft of said second pinion.

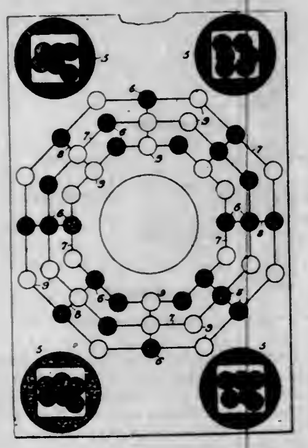
2. In a machine for perforating sheet material, the combination with punch members, of means for intermittently reciprocating one of said members, comprising a gear wheel having peripheral teeth, a portion of which are extended laterally, and a smooth peripheral surface, a pinion meshing with said peripheral teeth, a second pinion adapted to engage said extended teeth, cam mechanism carried by the shaft of said second pinion, and means also carried by said shaft for holding the reciprocating punch member away from the other member.

3. In a machine for perforating sheet material, the combination with punch members, of means for intermittently reciprocating one of said members, comprising a gear wheel having peripheral teeth, a portion of which are extended laterally, and a smooth peripheral surface, a pinion meshing with said peripheral teeth, a second pinion adapted to engage said extended teeth, cam mechanism carried by the shaft of said second pinion, and means also carried by said shaft for holding the reciprocating punch member away from the other member consisting of a shoe adapted to bear upon the smooth peripheral portion of said gear wheel.

4. In a machine for perforating sheet material, the combination with two punch members, of a continuously revoluble shaft, and means for intermittently reciprocating one of said punch members, comprising a gear wheel having peripheral teeth, a portion of which are laterally extended, and a smooth peripheral surface, a pinion adapted to engage said extended teeth, a sliding shoe mounted upon the shaft of said pinion and adapted to bear upon said smooth peripheral surface, a cam upon said pinion shaft, and a bearing for said cam, said bearing being connected to the reciprocating punch member.

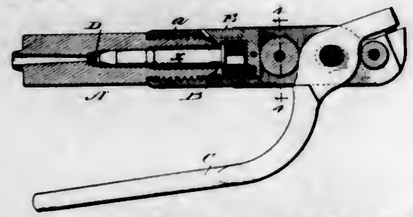
5. In a machine for perforating sheet material, the combination with a driving shaft, and a pinion mounted thereon, of a gear wheel having peripheral teeth, a portion of which are laterally extended, and a smooth peripheral surface, a second pinion adapted to engage said extended teeth, a sliding shoe carried by the shaft of said second pinion, and adapted to bear upon said smooth peripheral surface, a cam upon the shaft of said second pinion, punch members one of which is adapted to be reciprocated intermittently, and a cam-bearing secured to said reciprocating punch member.

885,588. GAME-BOARD. RICHARD DEHLS, Jersey City, N. J. Filed Apr. 20, 1907. Serial No. 369,284.



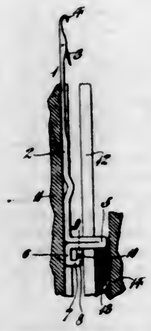
A game board having polygonal figures arranged one within another and having their sides parallel, bisecting lines at right angles to the sides, spaces or positions of different colors at a part of the angles of the figures and points of intersection of the bisecting lines with the sides of the figures, and blank or uncolored spaces or positions at the remaining angles and points of intersection of the bisecting lines.

885,589. CARTRIDGE-RELOADING TOOL. MARTIN H. DOPPLMAIER, Eureka, Cal. Filed May 27, 1907. Serial No. 375,900.



The combination with a reloading tool having a bore of a length adapted to receive a long cartridge which is continued as a reduced alined passage a', a supplemental die D whose inner flat end is wider than said passage a' so as to seat over the same, and having at its opposite end a cylindrical portion that fits the cylindrical cartridge bore or socket closely, the intervening or body portion of said die being reduced in diameter so that it is out of contact with the side of the socket, as shown and described.

885,590. KNITTING-MACHINE NEEDLE. GEORGE C. EGLY, Philadelphia, Pa. Filed Sept. 1, 1906. Serial No. 332,962.



1. As an improved article of manufacture, a knitting needle having a butt, a portion of said butt being deflected downwardly and thence laterally in proximity to and parallel with the butt and thence upwardly at a distance from said downwardly deflected portion, the terminal of the upward extension being provided with an offset out of the plane of the butt and out of the plane of the downwardly deflected portion.

2. As an improved article of manufacture, a knitting needle having a butt, a portion of said butt being deflected downwardly and thence laterally in proximity to and parallel with the butt and thence upwardly at a distance from said downwardly deflected portion, the terminal of said upward extension being split and having a member deflected to both sides of the body of the needle.

885,591. PROCESS FOR THE MANUFACTURE OF FUSEL-OIL AND ITS COMPONENTS. FELIX EHRLICH, Berlin, Germany, assignor to Adolf Sultan and Isidor Stern, Berlin, Germany. Filed Mar. 22, 1906. Serial No. 307,410.

1. A process of making fusel-oil and its components, which consists in adding leucin, iso-leucin and amino-isovaleric acid to a medium containing carbo-hydrates and ferments then effecting in any known manner fermentation of the mass and separating the fusel-oil and its components, thereby produced, from the ethyl-alcohol formed at the same time.

2. A process of making fusel-oil and its components consisting in exposing materials rich in leucin, iso-leucin and amino-isovaleric acid to the action of ferments in the presence of a medium containing carbo-hydrates, by adding such materials to mashes, such as molasses, potato mash, and the like, effecting fermentation in the usual manner and separating the fusel-oil and its components produced in the fermentation from the ethyl-alcohol formed by said process.

3. A process for making fusel-oil and its components, which consists in adding leucin to a mash, then adding yeast to effect fermentation of the mass and separating the fusel-oil and its components so formed from the ethyl-alcohol formed by the process.

4. A process for making fusel-oil and its components, which consists in adding iso-leucin to a mash, then adding yeast to effect fermentation of the mass, and then separating the fusel-oil and its components from the ethyl-alcohol produced by the process.

5. A process for making fusel-oil and its components, which consists in adding leucin to a medium containing carbo-hydrates and suitable food salts, then effecting fermentation in the mass, and then separating the fusel-oil and its components produced by the fermentation from the ethyl-alcohol formed in the process.

885,592. FLY-TRAP. WILLIAM P. EVERETT. Hornbeck, La. Filed Aug. 3, 1907. Serial No. 386,969.



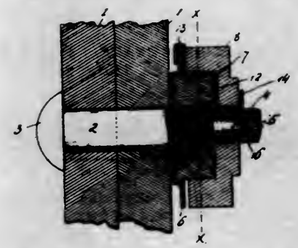
1. A fly-trap, comprising, a securing-plate having a depending portion, a bait-section frictionally and detachably connected thereto, a trap-section adapted to inclose the bait-section, and means for connecting the bait and trap sections together.

2. A fly-trap, comprising, a securing-plate having depending spring-tongues, a bait-section detachably engaging the tongues, and a trap-section adapted to inclose the bait-section and to be detachably connected thereto.

3. A fly-trap, comprising, a base-plate, a cup-shaped bait-section formed of wire-gauze and having depending cords, means for connecting the said section detachably to the base-plate, and a trap-section larger than and adapted to inclose the bait-section, said trap-section being formed of wire-gauze and cup-shaped, and means for securing the two sections rigidly yet detachably together.

4. A fly-trap, comprising, a base-plate having securing-means and depending spring-tongues each of which is provided with a transverse rib, a wire-gauze cup-shaped bait-section flared at its upper end and provided with an annular groove to engage the ribs of the spring-tongues, pins projecting from the bait section, a series of cords depending from said bait-section, and a cup-shaped trap-section of wire-gauze larger than and adapted to inclose the bait-section, the upper edge of the trap-section being provided with bayonet-slots adapted to engage the pins extending from the bait-section.

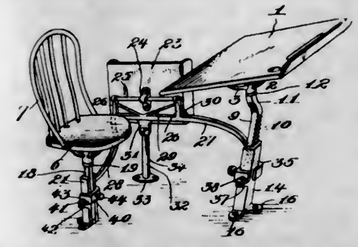
885,593. NUT-LOCK. EDWIN J. EWING and THOMAS M. SNYDER, Coraopolis, Pa. Filed Jan. 25, 1908. Serial No. 412,660.



1. In a nut lock, the combination of a bolt provided with flat faces, a saucer-shaped washer adapted to fit upon said bolt, a nut screwed upon said bolt and engaging said washer, a cap mounted upon said bolt for embracing said nut, a malleable strip of metal mounted in said cap for engaging said washer and the outer faces of said cap, and a cotter pin mounted in the end of said bolt.

2. In a nut lock, the combination of a bolt provided with flat faces, a saucer-shaped washer adapted to fit upon said bolt, a nut screwed upon said bolt and engaging said washer, a cap mounted upon said bolt for embracing said nut, and a malleable strip of metal mounted in said cap for engaging said washer and the outer faces of said cap.

885,594. COMBINED DESK, CHAIR, AND RECEPTACLE. JAMES H. FOSTER, Tuscaloosa, Ala. Filed June 18, 1907. Serial No. 379,666.



1. The combination of a desk, a chair, a vertically-adjustable support for the desk and for the chair, a pivoted receptacle, and vertically-adjustable means for the receptacle having connecting arms attached to the supports for the desk and chair.

2. The combination of a chair, a vertically-adjustable support therefor, a desk, a vertically-adjustable support therefor, a receptacle, a vertically-adjustable support therefor provided with a pair of connecting arms attached to the supports for the chair and desk and provided with means for securing the chair and desk in their adjusted positions, and means for pivotally connecting the receptacle to the vertically-adjustable means therefor.

3. The combination of a chair, supporting means therefor, a desk, supporting means therefor, a counter-balanced receptacle, and supporting means therefor connected with the supporting means for the desk and chair.

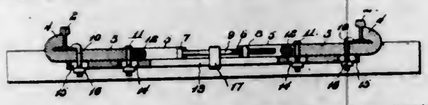
4. The combination of a desk, supporting means therefor, a chair, supporting means therefor, a receptacle, and supporting means therefor connected with the supporting means for the desk and chair.

5. The combination of a desk, a vertically-adjustable supporting means therefor, a chair, a vertically-adjustable supporting means therefor, a receptacle, a vertically-adjustable supporting means therefor, arms projecting from the vertically-adjustable supporting means for the receptacle, and clamps carried by said arms and connected to

the vertically-adjustable supporting means for the chair and desk for retaining said means in their adjusted positions.

[Claims 6 to 11 not printed in the Gazette.]

885,595. RAIL TIE AND BRACE. JOSEPH FRAMPTON, Willis, Tex. Filed June 21, 1907. Serial No. 380,117.



1. A rail tie and brace comprising brace bars having clamps to engage the rails and an intermediate adjustable coupling, said brace bars being pivotally connected with the coupling, in combination with a brace underneath said brace bars, and means for securing said brace to said brace bars and to said coupling.

2. A rail tie and brace comprising brace bars having clamps to engage the rails, ball shaped coupling members attached to the bars, an adjustable coupling connection between said ball shaped members, and a brace connected to said brace bars and to said adjustable coupling.

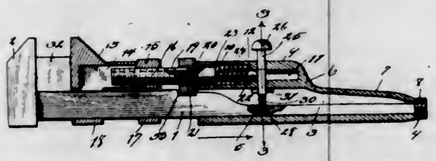
3. A rail tie and brace comprising brace bars provided with means of attachment to the rails, an adjustable, pivotal connection between the bars, and a brace provided with slotted enlargements and connected to said brace bars and pivotal connection.

4. A rail tie and brace comprising brace bars provided with means of attachment to the rails, ball shaped coupling members connected with the inner ends of the bars, and a tie bolt adjustably connecting said coupling members, in combination with a transverse brace secured to said brace bars and to said tie bolt.

5. A rail tie and brace comprising brace bars provided with means of attachment to the rails, a coupling connection between said bars, a transverse brace secured to said brace bars and coupling, and a key connected to said coupling and to said brace.

[Claim 6 not printed in the Gazette.]

885,596. WRENCH. JOHN C. FREY, Rochester, N. Y., assignor of one-half to George B. Fink, Rochester, N. Y. Filed Jan. 4, 1908. Serial No. 409,326.



1. In a wrench, a fixed jaw and its shank, a movable jaw, a screw and relatively fixed ring for adjusting said movable jaw, a handle portion, and a stop member slidable in the handle portion at right angles to the length of the screw and having an opening for the passage of the end of the latter.

2. In a wrench, a fixed jaw and its shank, a movable jaw, a screw and relatively fixed ring for adjusting said movable jaw, a handle portion, a stop member slidable in the handle portion at right angles to the length of the screw and having an opening for the passage of the ends of the latter, and a spring acting on said stop member to normally hold it with its opening out of the path of said ends of the screw.

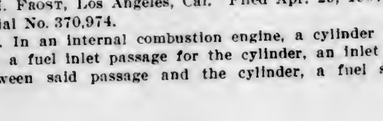
3. In a wrench, a fixed jaw and its shank, a movable jaw, a screw and relatively fixed ring for adjusting said movable jaw, a handle portion, a stop member slidable in the handle portion at right angles to the length of the screw and having an opening for the passage of the end of the latter, and a spring confined within the handle portion and acting on said screw.

4. In a wrench, a fixed jaw and its shank, a movable jaw, a screw and relatively fixed ring for adjusting said movable jaw, a handle portion, a stop member slidable in the handle portion at right angles to the length of the screw and having an opening for the passage of the end of the latter, a spring confined within the handle portion and acting on said screw, and a spring acting on said stop member to normally hold it with its opening out of the path of said end of the screw.

5. In a wrench, a fixed jaw and its shank, a handle portion, a movable jaw, a screw for adjusting the same, a relatively fixed ring splined to the screw and through which the latter freely moves, a spring acting on said screw to force the movable jaw in one direction, and a stop member disposed on the handle portion at right angles to the line of movement of the screw and slidably mounted to permit the screw and movable jaw to retreat when desired.

[Claims 6 and 7 not printed in the Gazette.]

885,597. FLY-SCREEN. CLYDE N. FRIZ, Baltimore, Md. Filed May 13, 1907. Serial No. 373,372.



1. A screen comprising a frame having grooved side bars; a bottom bar; and a hollow top bar which latter is provided with a plurality of openings in its bottom wall and said hollow top bar having openings leading from its interior to the exterior side of the screen, and a wire mesh attached to all of said bars.

2. A screen comprising a frame having top, bottom and side bars and the top bar being hollow and having a plurality of openings in its bottom wall and also having an opening in its outer wall; means extending crosswise in said hollow top bar between the inner wall openings and the outer wall opening thereof to intercept insects in passing from the outer to the inner side of the screen, and a wire mesh attached to said bars.

3. A screen comprising a frame having grooved side bars, a bottom bar and a hollow top bar with a wire mesh attached to said bars, and said hollow top bar having a plurality of openings in its bottom wall and also having an opening that communicates with the outer side of the wire mesh, and a perforated partition in said hollow bar between the openings in the inner wall and the opening in said outer wall.

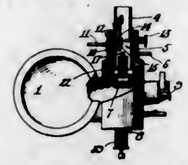
4. A screen comprising a frame having top, bottom and side bars, and one of said bars being hollow to form an interior passage and having a central opening and openings at the side of the central opening, perforated partitions in said passage between the central and side openings and a wire mesh attached to said bars and having an opening to the exterior adjacent the perforated partitions.

5. A screen comprising a frame having top, bottom and side bars and one of said bars being hollow to form an interior passage and having an opening in its outer wall leading to the exterior and openings in an inner wall leading to the interior; perforated partitions in said passage between the opening in the outer wall and the openings in the inner wall, and a wire mesh screen attached to said frame and having an opening that communicates with the passage of the hollow bar between said partitions.

[Claims 6 and 7 not printed in the Gazette.]

885,598. INTERNAL-COMBUSTION ENGINE. WARREN H. FROST, Los Angeles, Cal. Filed Apr. 29, 1907. Serial No. 370,974.

1. In an internal combustion engine, a cylinder therefor, a fuel inlet passage for the cylinder, an inlet valve between said passage and the cylinder, a fuel supply chamber adjacent the inlet passage and having an upwardly inclined duct extending into the inlet passage, a manually operated valve for controlling the discharge mouth of said duct, a slide in the inlet passage and operating through a slot in said duct and having a port adapted to register with the channel of said duct, said slide restricting the passage of oil from said duct and being arranged longitudinally of the inlet passage whereby passage of air through the inlet passage is unrestricted irrespective of the position of the slide, and means operated by the engine for sliding said slide into positions according to the load on the engine.



2. In an internal combustion engine, a cylinder therefor, a fuel inlet passage for the cylinder, an inlet valve between said passage and the cylinder, a fuel supply chamber adjacent the inlet passage and having a duct extending into the inlet passage, a manually operated valve for controlling the discharge mouth of said duct, a slide operating through a slot in said duct and having a port adapted to register with the channel of said duct, said slide restricting the passage of oil from said duct and being arranged longitudinally of the inlet passage whereby passage of air through the inlet passage is unrestricted irrespective of the position of the slide, and means operated by the engine for sliding said slide into positions according to the load on the engine.

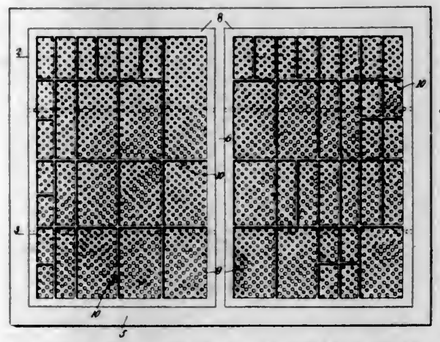
3. In an internal combustion engine, a cylinder therefor, a fuel inlet passage for the cylinder, an inlet valve between said passage and the cylinder, a fuel supply chamber surrounding said inlet passage and having a duct extending into the inlet passage, means for maintaining a substantially constant level of liquid fuel in the fuel chamber at a level below the discharge mouth of said duct, an adjustable valve opposite the discharge mouth of said duct, longitudinally of said inlet passage and a valve sliding in said duct across the passage of the duct and above the level of fuel in the fuel chamber, and means operated by the engine for sliding said slide into positions according to the load on the engine.

4. In an internal combustion engine, a cylinder therefor, a fuel inlet passage for the cylinder, an inlet valve between said passage and the cylinder, a fuel supply chamber adjacent said inlet passage and having a duct extending into the inlet passage, means for maintaining a substantially constant level of liquid fuel in the fuel chamber at a level below the discharge mouth of said duct, an adjustable valve opposite the discharge mouth of said duct, a valve sliding in said duct across the passage of the duct and above the level of fuel in the fuel chamber, a pivoted lever connected to the slide, a side shaft operated by the engine, a stepped cam on the side shaft, a rod connected to said lever and operated by the stepped cam, a governor geared with the side shaft, and means operated by the governor for shifting the stepped cam to impart regularly timed movements to the slide of different lengths according to the load on the engine.

885,599. TYPE-CASE. JAMES G. GALLEMORE, Washington, Mo. Filed Dec. 24, 1907. Serial No. 407,899.

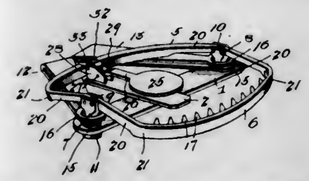
1. A type case, comprising a frame rabbeted at its inner edge, and a metal receptacle having outwardly-turned flanges seated in the rabbeted inner edge of the frame, said receptacle being provided with a continuous perforated bottom having partitions integral therewith, forming type compartments.

2. A type case, comprising a frame, a metal receptacle having outwardly-turned flanges seated on said frame, partitions dividing the receptacle into a plurality of type compartments, and supporting wires for the receptacle, conforming to the under side thereof and to said flanges, and seated in grooves in the frame.



3. A type case, comprising a frame rabbeted at its inner edge, a type receptacle divided into a plurality of type compartments and having outwardly-turned flanges seated in the rabbeted inner edge of the frame, and supporting wires for the receptacle, conforming to the under side thereof and seated in grooves in the frame.

885,600. ANIMAL-TRAP. NATHAN GALLOWAY, Vernal, Utah. Filed Sept. 27, 1906. Serial No. 336,439.



1. In an animal trap, the combination with a base, of jaws carried thereby, teeth upon the under side of one of said jaws, means for actuating the jaws at unequal speed, and a trigger mechanism.

2. In an animal trap, the combination with a base, of jaws carried thereby, teeth upon the under side of one of said jaws, convergently disposed springs whereby the jaws are actuated at unequal speed, and a trigger mechanism.

3. In an animal trap, the combination with a base, of jaws carried thereby, means for actuating the jaws, a pan provided with a shank movably mounted upon said base, and a slotted trigger adapted to engage one of said jaws and said shank.

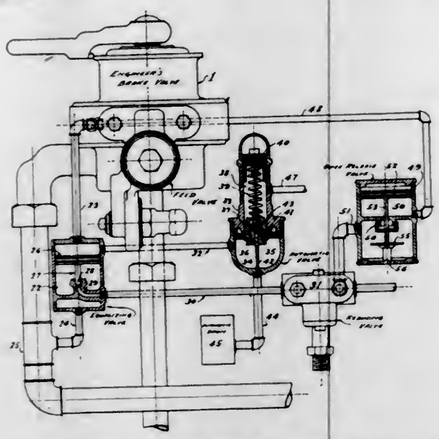
4. In an animal trap, the combination with a base, of jaws carried thereby, means for actuating the jaws, a pan provided with a shank movably mounted upon said base and provided with a trigger-finger, a trigger adapted to engage one of said jaws and provided with a finger-stall having a cross-piece adapted to engage said trigger-finger.

5. In an animal trap, the combination with a base, of jaws carried thereby, means for actuating the jaws, a pan provided with a shank movably mounted upon said base, a trigger-finger carried by said shank, a slotted trigger, a cross-piece defining one end of said slot and adapted to engage said trigger finger, and an over-hang upon said trigger adapted to engage one of the jaws.

885,601. ENGINEER'S BRAKE-VALVE. JOSEPH P. GAULT, Louisville, Ky., assignor of one-third to William Phillips, Louisville, Ky. Filed Sept. 9, 1907. Serial No. 391,984.

1. In an engineer's brake valve formed with ports and passages for the application and release of air to and from the train line, of a valve for controlling the flow

of main reservoir pressure to an engine brake cylinder, said valve having communication on one side with the main reservoir pressure and on the other side with said reservoir through a port in the brake-valve, said valve being controllable from the engineer's brake-valve to reduce the main reservoir pressure on one side to permit full main reservoir pressure to pass from the other side for straight air application of the engine-brakes, substantially as described.



2. In an engineer's brake valve formed with ports and passages for the application and release of air to and from the train line, of a valve controllable from the engineer's valve for straight air application of the engine brakes, and a second valve controllable from the engineer's valve for the application of main reservoir pressure to release the engine brakes, substantially as described.

3. In an engineer's brake valve, formed with ports and passages for the application and release of air to and from the train line, of a valve controllable from the engineer's valve for straight air application of the engine brakes, the ports and passages for the train line air and those for straight air application of the engine brakes being so arranged in relation to each other, that in emergency position the straight air is applied to the engine brakes and the train line air is exhausted, substantially as described.

4. In an engineer's brake valve formed with ports and passages for the application and release of air to and from the train line, of a quick release valve connected with a brake-cylinder pipe and with the brake-valve, said brake-valve having a port for the passage of main reservoir pressure to the release valve for release of the brakes, substantially as described.

5. In combination with an engineer's brake valve, an equalizing valve connected with a brake-cylinder pipe and in communication on one side of the valve with main reservoir pressure and on the other side with the engineer's brake-valve, said brake-valve being formed with ports and passages for feeding main reservoir pressure to one side of the equalizing valve to seat the valve and cut-off straight air from the brake-cylinder in release position, and for the exhaust of air from the same face of the valve to permit main reservoir pressure on the other side to unseat the valve and pass to the brake cylinder in straight air application of the brakes substantially as described.

[Claims 6 to 11 not printed in the Gazette.]

885,602. FOLDABLE UMBRELLA. WARREN J. GEIB, Booneville, Miss. Filed Apr. 26, 1907. Serial No. 370,468.

1. In a foldable umbrella, the combination of a handle rod hollow at one end, a tip provided with a slot, a link, a slidable member permanently retained in the hollow of the rod, a hinge between the member and link, a hinge between the link and tip, the link being of such length as to permit the tip to be folded back parallel with the handle rod, and a spring latch in the handle rod adapted to extend into the tip and engage the slot thereof for holding the tip in extended position.



2. In a foldable umbrella, the combination of a handle rod, a handle provided with a socket, a tubular member secured in the socket and extending from the handle, an element in the socket movable longitudinally therein, a link, a hinged connection between the link and element, a hinged connection between the link and handle rod, and a spring catch for locking the handle rod to the sleeve, the handle and sleeve being movable longitudinally from the rod to fold backwardly parallel with the latter when the locking device is released.

3. The combination of a rib composed of two telescoping sections, one section having a longitudinal slot, a lug on the other section projecting out of the slot, a stop on the slotted section, a brace rod pivotally connected with the lug, a locking rod slidably mounted on the brace rod, means on the locking rod for engaging the said stop, and means for disengaging said means from the stop by movement of the locking rod independently of the brace rod.

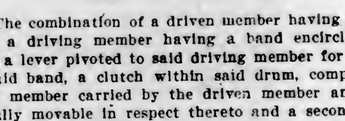
4. In an umbrella, the combination of a handle rod, a fixed ring thereon, ribs hingedly connected with the ring, a member movably mounted on the handle rod and slidably engaging the ribs adjacent their hinged ends for holding the ribs close to the handle rod when the umbrella is closed, and a spring on the handle rod and disposed between the ring and member and designed to press the member away from the ring, said spring being arranged with its ends bearing against the ring and member.

5. In an umbrella, the combination of a handle rod, collapsible ribs connected therewith, brace rods connected with the ribs, locking rods connected with the brace rods, locking devices between the locking rods and ribs, a runner on the handle rod provided with spaced arms, means for hingedly connecting the ribs to the runner, a sleeve slidably mounted on the runner and provided with arms engaging the arms of the runner, means for connecting the locking rods with the sleeve, the arms of the sleeve and runner preventing relative rotation, and a spring arranged between and acting on the runner and sleeve to hold the locking rod in locking position.

[Claims 6 to 15 not printed in the Gazette.]

885,603. STONE-SAW. EDUARD GELIUS, Rehau, Germany. Filed July 31, 1905. Serial No. 271,940.

1. In a stone saw, the combination, with a blade of substantially uniform thickness and made of soft steel and provided in either edge with a plurality of cuts, of a plurality of hard steel teeth of a greater thickness cast into and filling the cuts of said blade and projecting slightly on both sides.



2. In a stone saw, the combination, with a blade of soft steel of substantially uniform thickness and provided in either edge with a plurality of cuts having a serrated outline, of cutting teeth of a greater thickness than the blade formed of hard steel cast into and filling the cuts of said blade flush with the lower edge and projecting slightly on both sides.

3. In a stone saw, the combination, with a soft steel blade of substantially uniform thickness provided in either edge with a plurality of cuts having serrated outline, the saw blade at the boundary of said cuts being beveled, of a plurality of cutting teeth so cast in the serrated cuts of said blade as to completely fill the same and be flush with the lower edge while projecting slightly on both sides.

4. In a stone saw, the combination, with a soft steel blade of substantially uniform thickness provided in either edge with a plurality of cuts having serrated sides and a dovetail bottom, the blade forming the boundary of the cuts being beveled, of a plurality of hard steel cutting teeth of corresponding outline and grooved edges formed by casting the metal in the cuts so as to completely fill the same and be flush with the lower edge and project slightly on both sides.

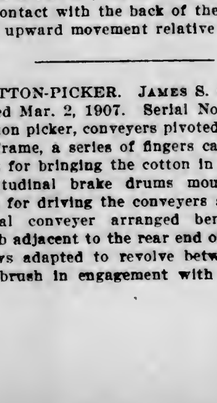
885,604. MEANS FOR OPERATING CLUTCHES. GILBERT H. GILBERT, New York, N. Y. Filed Jan. 24, 1908. Serial No. 412,432.

1. The combination of a driven member having a clutch drum, a driving member having a band encircling said drum, a lever pivoted to said driving member for tightening said band, a clutch within said drum, comprising a clutch member carried by the driven member and longitudinally movable in respect thereto and a second clutch member unattached to said driving member or driven member, and a link connecting said last-mentioned clutch member and said lever.

2. The combination of a driven member, a driving member, a clutch for connecting said members, a pivoted lever for applying said clutch, a second clutch comprising two clutch members, one of which is carried by said driven member and non-rotatable in respect thereto, and the other of which is unattached to the driving member or the driven member, and a link connecting said last-mentioned clutch member and said lever whereby when said last-mentioned clutch is thrown into operation, the last-mentioned clutch member is retarded and the first-mentioned clutch thrown into operation through the action of the link and lever.

3. In combination with a driving member, a driven member and a clutch member, including a drum and a band encircling the same for directly connecting said members, of a clutch-applying means, comprising an operating lever connected to said band, and a second clutch, including a clutch member carried by said driven member and longitudinally movable but non-rotatable in respect thereto, and a second clutch member unattached to either said driving member or said driven member but operatively connected to said lever.

885,605. WASHBOARD. HENRY J. GILBERT, Saginaw, Mich., assignor to National Washboard Company, Chicago, Ill., a Corporation of West Virginia. Filed May 12, 1905. Serial No. 260,143.



1. The combination with a wash-board, of a soap holder comprising a plate pivoted at the ends of the outer longitudinal edge to the board, its free inner longitudinal edge lying adjacent the back of the board.

2. The combination with the back and side rails of a wash board, of a soap-supporting rack formed of a plate provided along its outer edge with a roll or bead, and pivoted at the extremity of said bead to the side rails and having its free inner edge arranged to contact with said back.

3. The combination with the back and side rails of a wash board, of a single rotatable plate, the ends of the outer longitudinal edge of which are pivoted to the side rails in front of the back and spaced a distance from the back of the wash board approximately equal to the width of the plate, the plate capable only of movement upward from its normal approximately horizontal position.

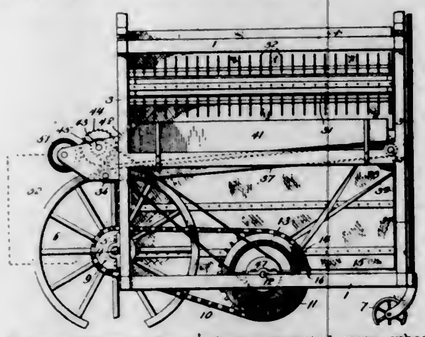
4. The combination in a wash board, of a rubbing surface, side bars, a back leading to the rubbing surface, a single plate, the outer longitudinal edge of which is pivoted at its ends to the side bars in front of the back, the body of the plate normally extending toward the back, the free inner longitudinal edge of the plate being serrated and engaging the back for support, the plate capable of rotation about its pivots to leave a space between the back and the pivoted longitudinal edge of the plate.

5. The combination with a wash board, of a soap holder comprising a plate pivoted at the ends of its outer longitudinal edge to the board, the free inner edge of the plate arranged to contact with the back of the wash board and having a free upward movement relative thereto.

885,606. COTTON-PICKER. JAMES S. GLOVER, Minnick, Tenn. Filed Mar. 2, 1907. Serial No. 360,129.

1. In a cotton picker, conveyers pivoted to the respective sides of the frame, a series of fingers carried by the conveyers, means for bringing the cotton in contact with the fingers, longitudinal brake drums mounted within the frame, means for driving the conveyers and brake drums, a longitudinal conveyer arranged beneath the brake drums, a comb adjacent to the rear end of the longitudinal conveyer, saws adapted to revolve between the teeth of the comb, a brush in engagement with the teeth of the

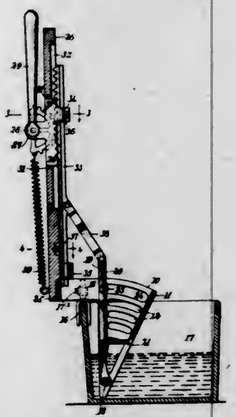
saw, and means for driving the said longitudinal conveyer, saws and brush, substantially as specified.



2. In a cotton picker, a frame mounted upon wheels, conveyers pivoted upon the respective sides of the frame and made adjustable thereupon, guides carried by the conveyers, longitudinal brake drums mounted within the frame, means for driving the said conveyers and brake drums, a longitudinal conveyer arranged beneath the brake drums, a comb arranged in juxtaposition to the longitudinal conveyer, a series of saws adapted to revolve between the teeth of the comb, a rotary brush engaging the teeth of the saws, means for driving the said longitudinal conveyer, saws and brush, substantially as shown and for the purpose specified.

3. In a cotton picker, a frame mounted upon wheels, conveyers pivoted upon the respective sides of the frame, rows of fingers carried by the conveyers, means for adjusting the receiving ends of the conveyers toward and away from the sides of the frame, deflecting guides carried by the conveyers, longitudinal brake drums mounted within the frame, means for driving the said conveyers and brake drums, a longitudinal conveyer arranged beneath the brake drums, a comb arranged in juxtaposition to the rear end of the longitudinal conveyer, a series of saws adapted to revolve between the teeth of the comb, a rotary brush engaging the teeth of the saws, and means for driving the said longitudinal conveyer, saws and brush, substantially as specified.

885,607. MOP-WRINGER. PAUL E. GOEHLE, Sr., Sault Ste. Marie, Mich., assignor of one-half to John Killacky, Sault Ste. Marie, Mich. Filed Apr. 26, 1907. Serial No. 370,479.



1. In a mop wringer, a frame, a fixed jaw in said frame, a movable jaw hinged to swing toward and from said fixed jaw, a rack mounted to slide in the planes of motion of said movable jaw but transversely to the direction of said motion, a toggle link connecting said rack with said movable jaw, a gear adapted to mesh with said rack, and means for rotating said gear.

2. In a mop wringer, a frame, a fixed jaw in said frame, a movable jaw hinged to swing toward and from said fixed jaw, a rack mounted to slide in the plane of motion of said movable jaw but transversely to the direction of said motion, a toggle link connecting said rack with said movable jaw, a gear adapted to mesh with said rack, means for rotating said gear, and a spring operating to return said movable jaw to inactive position away from said fixed jaw, and retain it normally in said inactive position.

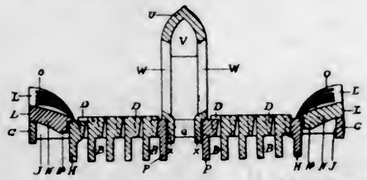
3. In a mop wringer a compression box formed with apertured side walls and an end wall, the side walls having rearwardly projecting extensions at their upper ends, a presser plate mounted to swing toward and from said end wall, means for operating said presser plate, yoke pieces adapted to engage the rim of a receptacle and each having an upwardly extending shank, and apertured lugs on the outer faces of said extensions of the side walls and adjustable on the shanks of the yokes to raise or lower the compression box.

4. In a mop wringer a compression box, having its side walls provided at the upper end with rearwardly projecting extensions, an apertured lug formed on each of said extensions, a plurality of yoke members adapted to engage the rim of a receptacle, said yoke members being formed with upwardly extending shanks adapted respectively to enter the apertures in said lugs, and a set screw threaded into each of said lugs, said set screw being adapted to engage said shanks.

5. In a mop wringer a compression box formed with apertured side walls and with an end wall, a presser plate adapted to swing toward said end wall, an upright frame member secured to said compression box, a slide adapted to slide on said frame member said slide being formed with rack teeth, a gear sector mounted in said frame member and meshing with said teeth, means for operating said sector, a toggle link connecting said slide with said presser board, and a roller adapted to relieve friction between said slide and said frame member.

[Claims 6 to 9 not printed in the Gazette.]

885,608. GRATE-SURFACE OF FURNACES. FRANK GOLD, Richmond, Victoria, Australia. Filed Mar. 26, 1907. Serial No. 364,569.



1. In combination with grate bars, a hollow bearer P arranged centrally of the grate between and parallel with the grate bars and having vertical openings; an intermediate hollow air supplier arranged over and mounted upon said bearer and having a crown and vertical slits forming air holes in its walls, and also having depending lugs engaging the openings in said bearer to prevent displacement of the air supplier thereon.

2. In combination, a grate, hollow side bearers at opposite sides of and parallel with the grate, side air suppliers supported upon said side bearers and each comprising a side piece adjacent the wall of the fire chamber having a series of curved lateral ribs projecting inwardly over the open spaces of the side bearers, said ribs being rounded on their upper surfaces and projecting above the surface of the grate and the central ribs standing above the end ribs.

3. In combination, a grate composed of ribbed bars; hollow side bearers G—H at each side of the grate having vertical openings, air suppliers supported upon said side bearers and each comprising a side piece L adjacent the wall of the fire chamber formed with a lateral series of inwardly extending ribs N, O, rounded on their upper surfaces and projecting above the surface of the grate and extending over the open spaces of the side bearers, the ribs N having depending lugs adapted to engage recesses in the bearers.

4. In combination, hollow side bearers, an intermediate hollow bearer parallel therewith, said bearers having vertical openings for the passage of air, and parallel fire bars arranged between said intermediate and side bearers; side air suppliers arranged above and supported upon the side bearers each comprising a plate provided with an inwardly projecting series of lateral ribs projecting above the side bearers and rising above the surface of the grate, and an intermediate air supplier resting upon the intermediate bearer and projecting above the grate and having vertical slots forming air holes in its side walls.

5. In combination, side bearers G—H—, an intermediate bearer P parallel therewith, said bearers having openings for the passage of air, parallel fire bars D arranged between the intermediate and side bearers, removable side air suppliers arranged above and supported upon the side bearers and each comprising a plate L provided with an inwardly projecting series of ribs N, O, said ribs being curved on their upper sides and projecting above the surfaces of the grate, and an intermediate removable air supplier W resting upon the intermediate bearer P and projecting above the side bearers and having air holes in its walls.

[Claim 6 not printed in the Gazette.]

885,609. SHOE-TREE. MILTON LE ROY GOUGH, Washington, D. C. Filed Dec. 28, 1904. Serial No. 238,597.

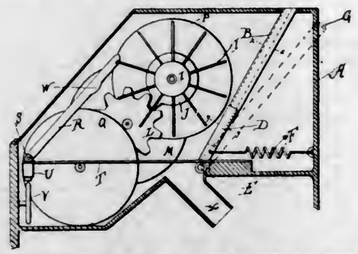


1. A shoe tree comprising a hollow last provided with a means for allowing a continuous circulation of air through the interior, and around the exterior thereof, when the tree is in its applied position.

2. A shoe tree comprising a hollow last provided with a corrugated exterior and a means whereby air may be conducted from the hollow interior of the last to the exterior of the corrugations.

3. A shoe tree comprising a hollow last provided with a corrugated exterior and perforations leading from the said exterior corrugations into the hollow interior of the lasts.

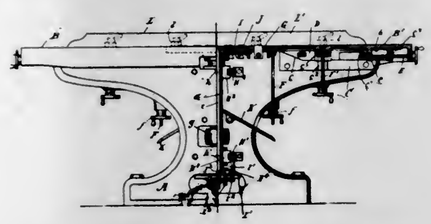
885,610. COIN-REGISTER. FREDERICK R. GRAEBER and CLARENCE T. ENTRIKIN, Philadelphia, Pa. Filed June 26, 1906. Serial No. 323,426.



1. In combination a coin chute, a lever adapted to receive a coin from the coin chute, means for operating said lever, a wheel adapted to be operated by said lever when containing a coin, a registering mechanism connected with the wheel for registering the number of coins deposited, a bell, a spring actuated hammer, and means connected with said hammer for locking the wheel against accidental rotation and for actuating the hammer, as specified.

2. In combination, a series of chutes for guiding coins, a series of forked levers secured upon the actuating shaft, said forked levers lying in alinement with the chutes where the coins will pass from the chutes to the forked levers, a skeleton wheel adapted to be actuated by the coin contained in either of the forked levers when the actuating shaft is operated, a train of registering mechanism connected with each of the skeleton wheels for registering the number of coins passed through each slot, and a bell mechanism adapted to be operated by each of the skeleton wheels, as and for the purpose set forth.

885,611. PLANER. ANTONI GWOREK, Aurora, Ill. Filed Aug. 21, 1907. Serial No. 389,486.



1. The combination with a main frame, of independently adjustable table sections thereon, a knife carrier adapted to revolve in a horizontal plane, a plurality of knives projecting upwardly therethrough, a tubular shaft projecting downwardly from said carrier, a removable bearing plate on the end of said shaft, an adjustable bearing beneath said plate, a bracket supporting said bearing and means extending through said shaft and brackets adapted to hold the shaft firmly on the bearing.

2. The combination with a main frame, of table sections thereon, means for independently adjusting said sections, a vertical, tubular drive shaft, a knife carrier on the top thereof adapted to revolve in a horizontal plane, a bracket beneath said shaft, an adjustable bearing thereon for said shaft and means extending through said shaft and bracket adapted to hold the shaft on said bearing.

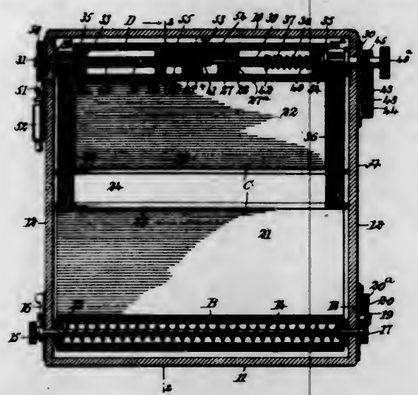
3. The combination with a main frame of vertically adjustable table sections thereon, a knife carrier between said sections, a tubular shaft extending downwardly from said carrier, bearings on said frame for said shaft, a bracket beneath said shaft, set screws in said bracket, a bearing plate supported on said screws beneath said shaft, a retaining plate on the carrier and a shaft connected with said plate and extending downwardly through said carrier, tubular shaft and bracket.

4. The combination with a main frame, of a vertical, tubular drive shaft journaled therein, a removable, apertured bearing plate on the lower end of said shaft, an apertured bracket beneath said shaft, adjusting screws in said bracket, an apertured bearing plate supported on said screws and adapted to support the aforesaid bearing plate, a retaining plate on said carrier and a shaft on said plate extending downwardly through said drive shaft, bearing plates and bracket.

5. The combination with a main frame having cross beams thereon, of a tubular drive shaft journaled in said cross beams, a bracket supported from one of said beams beneath the drive shaft and provided with an aperture registering with the bore of said shaft, a recessed knife carrier on the upper end of said shaft, a retaining plate therein, and a shaft engaged on said retaining plate and extending downwardly through said shaft and bearing plates and having threaded engagement in said bracket.

[Claims 6 to 8 not printed in the Gazette.]

885,612. PHOTOGRAPHIC SHUTTER. EDWARD L. HALL, New York, N. Y. Filed Dec. 29, 1905. Serial No. 293,769. Renewed June 18, 1907. Serial No. 379,607.



1. In a photographic curtain shutter, a winding roll, a gear controlled shutter adjusting mechanism contained in the winding roll, an exteriorly operating device common to both the roll and the gear-controlled adjusting mechanism, and means for directly connecting the roll with said gear adjusting mechanism and for disconnecting it therefrom.

2. In a photographic curtain shutter, a winding roll, spacing shafts mounted to turn in said roll, a transmission shaft also mounted in the roll, reels upon the spacing shafts, gear connections between the transmission shaft and the spacing shafts, a controlling shaft mounted for rotary and sliding movement in the roll and adapted to be exteriorly operated, means for driving the transmission shaft from the controlling shaft, and means operated by the controlling shaft for locking the same and the spacing shafts to the roll.

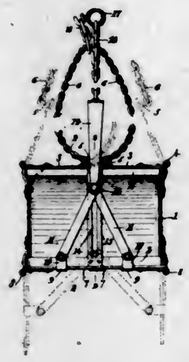
3. In a photographic curtain shutter, a frame, a tension roller mounted in the frame, a winding roller, curtain-adjusting shafts and gears carried by the winding roller, a controlling shaft in gear connection with the winding roller and the adjusting shafts and gears, means controlled by the controlling shaft for operating the adjusting mechanism independently of the winding roller, or for operating the said adjusting mechanism and the winding roller in unison, and a curtain, one section of which curtain is connected with the tension roller and the other section with the winding roller, and tape connections between the two sections of the curtain and the said reels.

885,613. DUMPING-BUCKET. JAMES HAMILTON, New York, N. Y. Filed Aug. 1, 1907. Serial No. 386,644.

1. A dumping bucket comprising a body, trap doors hinged to the lower portion of said body, vertical guideways secured to said body, links secured at their lower end to said trap doors, and slidingly connected at their upper end with said guideways, a bail connected with the upper end of said links, a supporting connection attached to said bail, trap doors hinged to the upper portion of said body, and suspending means connected with said upper doors.

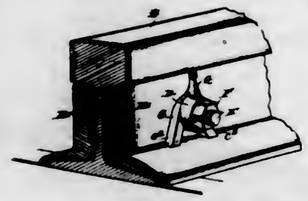
2. A dumping bucket comprising a body, trap doors hinged to the lower portion of said body, vertical guideways secured to the opposite sides of said body, links secured at their lower end to said doors and having a sliding engagement with said guideways, a bail connected with the upper end of said links, supporting means connected therewith, doors hinged to the upper part of said body, and supporting means connected with the free ends of the upper doors independently of the first named supporting means.

3. A dumping bucket comprising a body, trap doors hinged to the lower portion of said body, links pivotally connected at their lower ends to said doors, a bail connected with the upper ends of said links, a supporting connection attached to said bail, trap doors hinged to the upper



portion of said body, and supporting means connected with the free ends of the upper doors independently of the first named supporting means.

885,614. NUT-LOCK. TOWNSON HAND, Walla Walla, Wash. Filed Jan. 9, 1908. Serial No. 409,932.



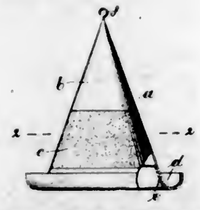
1. A nut lock comprising a two-part washer, both of which are bisected on one side with coinciding slots, arranged out of axial alinement, the inner washer being formed with means for restraining it against turning and having an inclined outer face, and the outer washer being formed with an inclined adjacent face and having on its exterior surface ratchet teeth adapted to be engaged by the adjacent face of the nut.

2. A nut lock comprising a two-part washer, both of which are bisected on one side with coinciding slots, arranged out of axial alinement, the inner washer being formed with means for restraining it against turning and having an inclined outer face, the outer washer being formed with an inclined adjacent face and having on its exterior surface ratchet teeth adapted to be engaged by the adjacent face of the nut, and a detachable key having a cross section corresponding to the shape of the coinciding slots.

3. A nut lock comprising a two-part washer, both bisected on one side with coinciding slots, the inner washer being formed on the outer faces of both its ends with inclines trending in the same direction and the outer washer being formed on its inner face at both its ends with corresponding inclined faces and having on its exterior face ratchet teeth adapted to engage and clutch the nut.

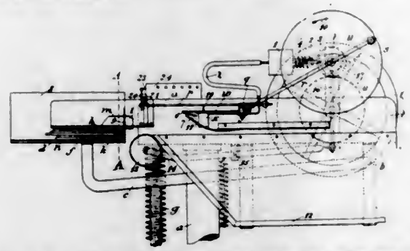
4. A nut lock comprising a two-part washer, both bisected on one side with coinciding slots, the inner washer being formed on the outer faces of both its ends with inclines trending in the same direction, the outer washer being formed on its inner face at both its ends with corresponding inclined faces and having on its exterior face ratchet teeth adapted to engage and clutch the nut, and a key made wedge-shape and corresponding in cross section to the coinciding slots.

885,615. ADVERTISING FLY-CATCHER. ALFRED F. HANDLER and KARL A. STARKE, New York, N. Y. Filed Mar. 22, 1907. Serial No. 363,863. Renewed Mar. 12, 1908. Serial No. 420,696.



An upright advertising fly-catcher consisting of a body portion of slanting outer surface having an upper portion adapted to be used for advertising purposes, a central glued portion, and a water and glue proof annular supporting trough below the glued portion and formed of double material.

885,616. PRINTING AND STAMPING MACHINE. JACOB C. HANSEN-ELLEHAMMER and EDMUND A. P. R. LUND, Copenhagen, Denmark. Filed Jan. 14, 1907. Serial No. 352,196.



1. In a machine of the character described, the combination with a letter-stack support, of a carrier, a stamp thereon normally in a plane below the top letter of the stack and means to depress said letter below the stamp.

2. In a machine of the character described, the combination with a letter-stack support, of a reciprocating carrier, a stamp thereon normally below the top of the stack, means operated by the movement of the carrier to depress the stack, and means to raise the stack.

3. In a machine of the character described, the combination of a yielding letter-stack support, a carrier, means to move the latter to and from the support, a stamp on the carrier normally below the top letter of the stack, a yielding member mounted over the stack support, and means to temporarily depress the yielding member.

4. In a machine of the character described, the combination of a yielding letter-stack support, a carrier, means to move the latter to and from the support, a stamp on the carrier normally below the top letter of the stack, a yielding member mounted over the stack support, means to temporarily depress the yielding member and means to raise the letters after being depressed.

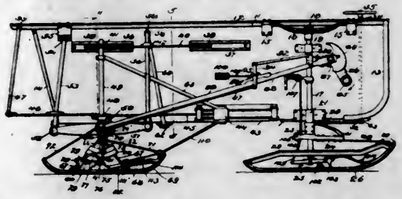
5. In a machine of the character described, a letter receptacle comprising a resiliently supported bed-plate, a stationary abutment having an opening therein above the latter, a spring secured to the underside of the abutment, a carrier, means to move the latter into the opening, a die on the carrier below the abutment, and means connected with the carrier to depress the spring.

[Claims 6 to 12 not printed in the Gazette.]

885,617. MOTOR-SLEIGH. CARL A. HANSON, Seattle, Wash. Filed Feb. 28, 1907. Serial No. 359,789.

1. In a motor sleigh, reciprocating runners, a walking beam supported upon one of the runners, and links pivotally connected with opposite ends of the walking beam.

2. In a motor sleigh, reciprocating runners, a walking beam supported upon the runner and in normal alinement with the body, and links pivoted upon the body and pivotally connected with opposite ends of the walking beam.



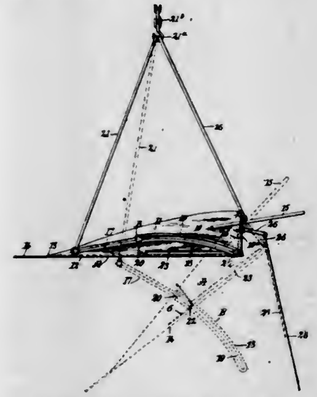
3. In a motor sleigh, a body, reciprocating runners, a walking beam supported centrally upon a runner, and links pivoted to the body and pivotally connected with opposite ends of the walking beam.

4. In a motor sleigh, a body, reciprocating runners disposed beneath the body, a walking beam fulcrumed centrally upon one of the runners, a link pivoted upon the body and pivotally connected with one end of the walking beam, a standard pivotally connected to and extending above the opposite end of the walking beam, and a link pivoted to the body and pivotally connected with the upper end of the standard.

5. In a motor sleigh, a body, reciprocating runners disposed beneath the body, a standard mounted to oscillate upon and extending above each of the runners, guides formed upon the body, means carried by the guide for controlling the position of the standard, a walking beam extending longitudinally of the body and fulcrumed centrally upon one of the runners, a link pivoted to the body and pivotally connected with one end of the walking beam, a standard pivoted to the opposite end of and extending above the walking beam, a link pivoted adjacent the lower edge of the body and having its upper end pivoted to the upper end of the pivoted standard, and means to reciprocate the runner and walking beam.

[Claims 6 to 15 not printed in the Gazette.]

885,618. GATHERING AND LOADING FORK. MARIUS A. HEFFNER, near Arenzville, Ill. Filed July 10, 1907. Serial No. 383,068.



1. In a gathering and loading dump fork, the combination with a pivotally mounted fork and suspension bails pivotally connected with the fork, of a latch for holding the fork in carrying position, and a scraper mounted for movement over the tines of the fork when in dumping position.

2. A gathering and loading dump fork comprising a body section, a movable load sustaining section carried by the body, a latch designed to normally hold the load sus-

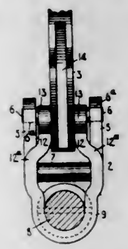
taining section in carrying position, and suspension bails for the fork.

3. In a gathering and loading dump fork, a body section, rocker arms to which the body section is pivoted, a suspension bail pivotally attached to the body at its rear, a second suspension bail pivotally attached to the rocker arms, and releasable means for locking the body to the rocker arms.

4. In a gathering and loading dump fork, a body section, rocker arms to which the body section is pivoted at a point between the center and the rear of the said body, a suspension bail pivotally attached to the rear portion of the body, a second suspension bail pivotally attached to the forward ends of the rocker arms, a scraper having sliding movement over the bottom of the fork, operated to and from the back portion of the fork by the movement of the rocker arms, and releasable means for locking the rocker arms and scraper carried thereby to the body.

5. In a gathering and loading dump fork, the combination with a body provided with a latch device at its rear, handles at its rear portion, and a suspension bail pivotally attached to said rear portion of the body, the said body at its lower side portion being provided with longitudinal slots, of rocker arms located at the sides of the side portions of the body, the said body being pivoted to the said rocker arms at a point between the center of the body and its rear portion, each rocker arm consisting of a substantially straight bar section extending forward of the said pivot, and a downwardly and rearwardly inclined curved section, which curved section is provided with a slot, pivots for the body, adjacent to the slot, a bar passed through the slots in the said body, and through the slots in the said rocker arms, and a scraper carried by the said bar adapted for movement over the bottom of the body, and having a member adapted for engagement with the said latch when the scraper is at the rear of the body.

885,619. TYPE-WRITING MACHINE. JOHN B. HENNESSY, New York, N. Y., assignor to The Monarch Typewriter Company, Syracuse, N. Y., a Corporation of New York. Filed Feb. 20, 1907. Serial No. 358,406.



1. In a typewriting machine, the combination of a pivoted type bar, a fixed abutment terminating close to the pivot of the type bar, and a contact on the type bar at the pivotal portion thereof which coöperates with said abutment along a line parallel with the pivotal axis of the type bar at the last portion of the printing stroke.

2. In a typewriting machine, the combination of a type bar, an abutment, and an eccentric on the type bar, said eccentric being normally out of contact with said abutment but adapted to be brought into coöperation therewith at the last portion of the printing stroke.

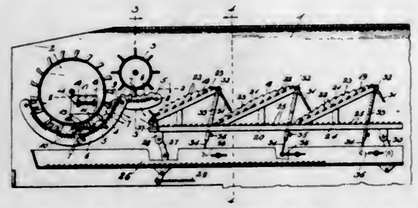
3. In a typewriting machine, the combination of a pivoted type bar, an abutment fixed against swinging movement, and an eccentric on the type bar which contacts with said abutment in a line parallel with the pivotal axis of the type bar and on opposite sides of the type bar at the last portion of the printing stroke.

4. In a typewriting machine, the combination of a type bar, a hanger, and an eccentric on the type bar which is brought into contact with a part of the hanger when the type bar is about to print.

5. In a typewriting machine, the combination of a type bar, a hanger, and eccentrics on opposite sides of the type bar, which eccentrics are brought into contact with the hanger when the type bar is about to print.

[Claims 6 to 30 not printed in the Gazette.]

885,620. GRAIN-SEPARATOR. NED HUFF, Jackson township, Wells county, Ind. Filed Aug. 8, 1907. Serial No. 387,654.



1. A grain separator of the character specified, embracing a frame, a toothed cylinder journaled in one end thereof, a toothed drum beater journaled in rear of the cylinder, a grate member section pivotally supported at its outer end under the drum beater, said section comprising a plurality of longitudinally and transversely disposed spaced grate bars, the outer edges of the former being corrugated and disposed in a plane above the latter and a second similar grate member section arranged under the cylinder, said last mentioned section being pivotally connected at its outer end with the frame and loosely connected at its inner end with the inner end of the first mentioned grate member section and yieldable supporting means for the connected ends of the grate member section and also for the second mentioned grate section.

2. A grain separator of the character specified embracing a reciprocatory separating rack comprising a lower horizontal rack member and a plurality of spaced inclined rack members, the latter being arranged on the former, an oppositely movable reciprocatory pan, suspended below the rack, a rock shaft journaled to the outer ends by each of the inclined rack members, a plurality of spaced lifting fingers fixed to each of the rock shafts and arranged to swing in a vertical plane over the adjacent inclined rack members, tubular members fixed to the ends of the rock shafts, extension rods adjustable in the tubular members, and adjustable connections between the lower ends of the extension rods and opposite sides of the grain pan.

3. A grain separator of the character specified, embracing a frame, a toothed cylinder journaled in one end thereof, a toothed drum beater journaled in rear of the cylinder, a grate member section pivotally supported at its outer end under the drum beater, said section comprising a plurality of longitudinally and transversely disposed spaced grate bars, the outer edges of the former being corrugated and disposed in a plane above the latter and being designed to coact with the drum beater teeth during the grain-separating operation, a second similar grate member section arranged under the cylinder, said last-mentioned section being pivotally connected at its outer end with the frame and loosely connected at its inner or opposite end to the first-mentioned grate member section, and the longitudinally corrugated grate bars of the second mentioned grate member section being designed to coact with the cylinder teeth during the grain-separating operation, and yieldable supporting means for the connected ends of the grate member sections.

885,621. RAILROAD-SIGNAL. JOHN K. JOHNSTON, Tyrone, Pa. Filed July 26, 1906. Serial No. 327,851.

1. In combination, a substantially vertical screen constructed to permit the passage of air therethrough, a signal arm adapted to be moved in front of said screen, and means for illuminating the side of the screen toward the signal arm and the rear side only of the signal arm.

2. In combination, a screen constructed to permit the passage of air therethrough and having a surface covered with a light reflecting substance, a semaphore signal arm adapted to be moved in front of said screen, and means for illuminating the screen the arrangement being such that the face of the arm away from said screen remains unilluminated.



3. The combination with a signal arm, of an opaque screen supported therebehind, and means arranged between the screen and the signal arm for illuminating the screen, said means being directed toward the screen and shielded from an observer in front of the signal arm for the purpose set forth.

4. The combination with a signal pole provided with movable signal arm, of an opaque screen arranged behind the signal arm, and means connected with the pole on the side of the pole toward the screen for illuminating said screen, the pole concealing said illuminating means from an observer in front of the screen.

885,622. PROCESS FOR OBTAINING PURE COPPER. LUCIEN JUMAU, Paris, France. Filed May 31, 1906. Serial No. 319,489.

1. The herein described process for obtaining pure copper from a solution containing salts of copper, which consists in treating said solution with a sulfite for producing a precipitate containing cuprous sulfite, and treating said cuprous sulfite with an acid to reduce a portion thereof to metallic copper.

2. The herein described process for obtaining pure copper from a solution containing salts of copper, which consists in treating said solution with a sulfite for producing a precipitate containing cuprous sulfite, and treating said cuprous sulfite with sulfuric acid to reduce a portion thereof to metallic copper.

3. The herein described process for obtaining pure copper from a solution containing salts of copper, which consists in treating said solution with sulfurous acid for producing a precipitate containing cuprous sulfite, and treating said cuprous sulfite with an acid to reduce a portion thereof to metallic copper.

4. The herein described process for obtaining pure copper from a solution containing salts of copper, which consists in treating said solution with a sulfite for producing a precipitate containing cuprous sulfite, treating said cuprous sulfite with an acid to reduce a portion thereof to metallic copper, forming said metallic copper into suitable anodes, and subjecting said anodes to an electrolytic refining process.

5. The herein described process for obtaining pure copper from a solution containing salts of copper, which consists in treating said solution with sulfurous acid for producing a precipitate containing cuprous sulfite, treating said cuprous sulfite with sulfuric acid to reduce a portion thereof to metallic copper, forming said metallic copper into suitable anodes, and subjecting said anodes to an electrolytic refining process.

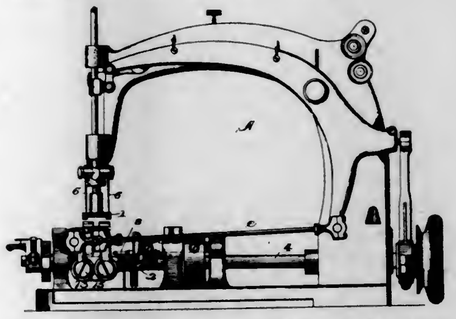
[Claim 6 not printed in the Gazette.]

885,623. REINFORCING MEANS FOR METAL PLATES. HENRY F. KEIL, Bronxville, N. Y. Filed Aug. 21, 1906. Serial No. 331,536.



A plate having turned down edges to serve as an outer support for the plate, and having an orifice with a depending flaring tubular wall extending downward a less distance than the said edges in combination with a supporting device consisting of an eyelet or bushing having a flange lying adjacent to the edge of the depending tubular wall and clenched thereto to form a flat base rim for the same, and to serve as an interior support for the plate, the bottom faces of the interior supporting device being in the plane of the bottom faces of the outer or edge support of the plate.

885,624. SEWING-MACHINE. CHARLES G. KRAMER, Chicago, Ill., assignor to The Union Special Sewing Machine Company, Chicago, Ill., a Corporation of Illinois. Filed Apr. 26, 1899. Serial No. 714,555.



1. In a sewing machine, a driving shaft, a frame, a plurality of looper supports pivotally connected to said frame, loopers carried by said supports, said supports being arranged one behind the other in the direction of the length of the loopers, connections between the looper supports and the driving shaft for vibrating said looper supports lengthwise the frame whereby said loopers are moved in the direction of their length, and means for oscillating the frame carrying the looper supports in a direction transverse to the direction of length of said loopers; substantially as described.

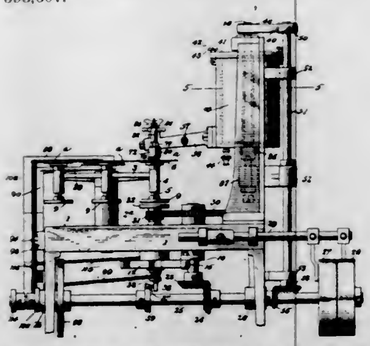
2. In a sewing machine, a driving shaft, a frame or bar, a plurality of looper supports adjustably secured thereto, loopers carried by said supports, said looper supports being arranged one behind the other in the direction of the length of the loopers, and connections between the looper supports and the driving shaft for giving to said loopers vibrating movements in the direction of their length; substantially as described.

3. In a sewing machine, a driving shaft, a frame or bar, a plurality of looper supports adjustably secured thereto, loopers carried by said supports, said looper supports being arranged one behind the other in the direction of the length of the loopers, and connections between the looper supports and the driving shaft for giving to said loopers vibrating movements in the direction of their length, said connections including a single pitman rod connected at one end with the supporting bar or frame, and at the other end with the needle lever; substantially as described.

4. In a sewing machine, a framework comprising a rock shaft, a bar having link connection therewith, and adjust-

able looper supports on said bar, arranged one behind the other in the direction of the length of the looper, and means for operating the loopers; substantially as described.

885,625. MACHINE FOR COATING CAN-COVERS. CHARLES LEFFLER, New York, N. Y., assignor to Henry J. White, Westfield, N. J. Filed Sept. 19, 1907. Serial No. 393,607.



1. In a machine of the class described, the combination of a rotary support movable in the direction of its axis, and a valved supply pipe adapted to deliver material to an object carried by said support, said valve being operated by the axial movement of said rotary support.

2. In a machine of the class described, the combination of a rotary support movable in the direction of its axis, a supply pipe adapted to deliver material to an object carried by said support, and a normally closed spring pressed valve for preventing the flow of material, said valve being opened by the axial movement of said rotary support.

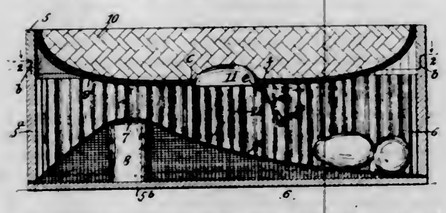
3. In a machine of the class described, the combination of a vertically movable rotary support, a supply pipe having a downwardly directed opening, a spring pressed valve within the supply pipe adapted to normally close said opening and having an extension which extends through the said opening to a point below the same.

4. In a machine of the class described, a rotary support, vertically movable driving means for said support, a valved supply pipe adapted to deliver material to an object carried by said support, said valve being operated by a vertical movement of said driving means.

5. In a machine of the class described, a rotary support, vertically movable driving means for said support, a supply pipe, a normally closed spring actuated valve for preventing the flow of material therefrom, said valve being operated by a vertical movement of said driving means.

[Claims 6 to 20 not printed in the Gazette.]

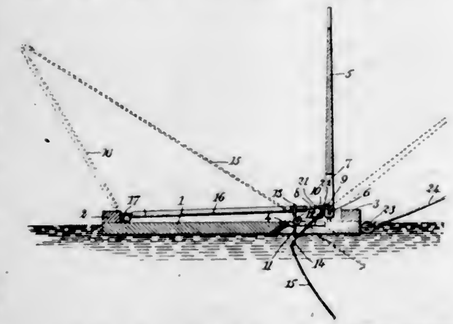
885,626. HEN'S NEST. LEWIS B. LODMELL, Flaxton, N. D. Filed July 18, 1907. Serial No. 384,351.



1. A hen's nest, comprising a lower box-like section open at the top and having a false bottom of reticulated material secured at its edges to the lower portion of the walls of the section, posts between the main bottom of the section and the false bottom thereof and located at one side of the center of length of the section, a removable lining of corrugated card board for said section, said lining resting upon the false bottom and extending to within a short distance of the top of the section, an upper section of the same size as the lower section and having a rabbeted connection therewith, said upper section being provided with a nest proper formed of reticulated material and a covering of soft material, secured at their edges to the upper portion of the said upper section, the reticulated material and covering being concave and extending into the upper portion of the lower section and having a central opening therein, and a pivoted and counterbalanced imitation egg in the said opening.

2. A hen's nest, comprising a lower box-like section open at the top and having an inclined false bottom of pliable material, a removable lining of corrugated card board for the said section, said lining having its lower edge shaped to fit and rest upon the false bottom, an upper section open at the top and bottom and fitting snugly on the lower section, a concave bottom of pliable material secured to the upper portion of the said upper section and forming a nest proper, the pliable material extending into the upper portion of the lower section and having a central opening therein, and a pivoted and counterbalanced imitation egg in the said opening.

885,627. FISHING-FLOAT. MILES E. LOEHR, Claypool, Ind. Filed June 29, 1907. Serial No. 381,460.



1. A fishing float having spring-actuated mechanism adapted to be set or sprung and having an indicator, means for holding said indicator erect when the fishing float remains set, a second indicator, means for holding said second indicator erect when said float is sprung, and means for holding said first indicator erect after said mechanism is sprung.

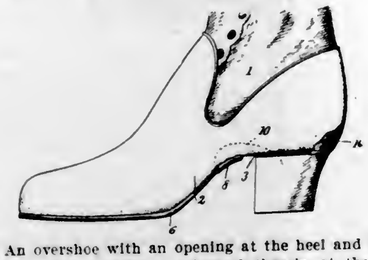
2. A fishing float having a releasable spring-acutated member having a fishing line attached thereto, a pivoted blade constituting an indicator, means for holding said blade erect, means for holding said spring-actuated member depressed when set, and means for holding said spring-actuated member erect when released, whereby said spring-actuated member also constitutes an indicator showing the condition of the float.

3. A fishing float having a body, a depressible spring-controlled member mounted thereupon, an indicator consisting of a blade, mechanism coöperating with said blade for setting said blade in an erect position and said member in a depressed position, a fishing line connected with said mechanism and affording means for releasing said member, and means for holding said member in an erect position when released.

4. A fishing float having a body, a blade pivotally mounted on said body, a trigger bar attached thereto, a second blade attached to said body opposite said first blade and adapted to be depressed upon said body with its free end lying near said trigger bar, a trigger attached to said body and affording means for holding said trigger bar across the free end of said second blade, and a line attached to said second blade and guided upon said trigger.

5. A fishing float having a body adapted to rest upon the water, an indicator blade hinged to the upper side of said body, a spring pressed member attached to said body, opposite said blade, and adapted to fold down upon said body with the free end thereof disposed near the attached end of said blade, a locking mechanism for holding said member depressed and said blade erect, said body having an opening near said mechanism, and a cord passing up through said opening attached to said member and affording means for releasing said locking mechanism.

885,628. HEELLESS OVERSHOE. PETER H. MARGULIS, New York, N. Y. Filed Mar. 21, 1907. Serial No. 363,608.

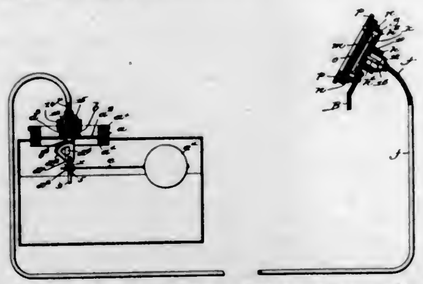


1. An overshoe with an opening at the heel and having non-elastic sides with gaps formed therein at the lower edges of the sides near the shank of the overshoe, elastic tongues set in said gaps and producing a tension in the lower edge of the counter of the overshoe around the heel.

2. An overshoe having an opening at the heel through which the heel of the inner shoe may project, a transversely disposed binder disposed at the forward edge of said opening, said binder being of elastic material and adapted to closely engage the shank of the inner shoe, and elastic ears formed at the ends of said binder and attached to the sides of said overshoe, the lining at the sides of the overshoe being cut away adjacent to the sole to form gaps at said ears whereby said ears may be extended in applying the counter of the overshoe to the counter of the inner shoe.

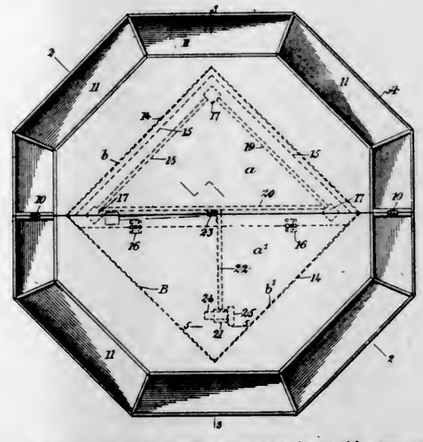
3. An overshoe having an opening to receive the heel of the inner shoe, elastic ears attached to the sides of said overshoe at the shank and adapted to be extended when the counter of the overshoe is applied to the counter of the inner shoe, the lower edge of the counter of the overshoe being curled inwardly whereby it will be displaced outwardly by the counter of the inner shoe.

885,629. FLUID-GAGE. MORRIS MARTIN, Malden, Mass., assignor to Boston Auto Gage Company, Boston, Mass., a Corporation of Massachusetts. Filed May 14, 1906. Serial No. 316,649.



In a fluid gage, a bushing having a shaft and adapted to be connected with a tank, a gage head remote from said tank, a magnet having a shaft and a magnetic needle both sustained in said head, combined with a pipe connecting said bushing and head gas and fluid tight, flexible connections attached at one end to the shank of the magnet, and at its other end to the shaft in said bushing, a float, and means intermediate said float and the shaft in the bushing to rotate said shaft as the float rises and falls due to level of fluid in the tank, the flexible connection rotating the magnet and the latter turning with it the magnetic needle.

885,630. POKER-TABLE. ISAAC MASON, New York, N. Y. Filed June 12, 1907. Serial No. 378,494.



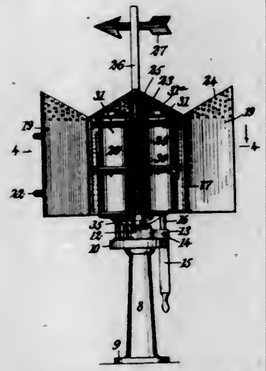
1. The combination with a rectangular table top consisting of a fixed and a drop leaf section, of an auxiliary table top constructed in hinged sections and having a chamber formed at its under face, of slightly greater dimensions yet the same shape as the marginal portion of the table top and adapted to receive the latter, said table and auxiliary top being divided approximately in the same vertical plane, the chambered portion of that section of the auxiliary top which lies over the fixed top section having horizontal flanges extending inward from the lower portion thereof for engagement with the under face of said fixed top section, the chambered portion of the other section having walls vertical throughout their height, and means for supporting said drop leaf at a level with the fixed top to support the auxiliary sections in their unfolded positions or to allow the same to be dropped out of the way when the auxiliary top sections are folded together.

2. An auxiliary top adapted to be detachably held on an ordinary fixed table top, consisting of two sections hinged together, cleats or bars attached to the under face of said auxiliary top and forming an inclosure of the same shape as the fixed table top, but of slightly greater dimensions, so as to fit down over and contain the same, the plane which divides said top into sections also dividing said chambers into two equal portions, and elements fixed to and extending inward from the lower portions of the cleats or bars on one section and adapted to engage with the under face of the fixed table top, whereby said latter section may be slipped laterally upon the table top and held thereon against vertical movement, the cleats or bars on the other section having unobstructed inner sides, whereby said latter section may be folded down over the fixed table top after the said first named section is in place to hold the entire auxiliary top against lateral movement.

3. As a new article of manufacture an auxiliary table top adapted to be detachably held on a fixed table top, consisting of two sections hinged together, the sections being provided with a plurality of marginal pockets in their upper faces, and on their under faces with a chamber corresponding in shape to the fixed table top but of slightly greater dimensions than the said top, and inwardly extending flanges on one section at the bottom of the wall of the chamber and adapted to engage the under face of

the fixed table top when the said section is slipped upon the said table top, the wall of the chamber on the other section being unobstructed to permit the said section to fold down over the fixed table top.

885,631. HOUSING FOR ELECTRIC ALARM MECHANISM. JAMES B. MAYBERRY, Houston, Tex. Filed Aug. 13, 1907. Serial No. 388,305.



1. The combination of a target rod, a rod connected therewith for actuating the same, a housing made in halves and disposed upon opposite sides of said target rod, and alarm mechanism associated with said target and disposed within said housing.

2. The combination of a stationary table, a revoluble head disposed centrally thereupon, a hand lever connected with said head, a target rod connected with said head and revoluble by movements thereof, a target connected with said target rod, a housing disposed adjacent to said target rod, a switch member mounted upon said target rod and revoluble therewith, stationary contact members disposed adjacent to the path of said switch member, an electric alarm, and electrical connections from said electric alarm to said stationary contact members.

3. The combination of a movable target rod, a housing partially encircling said target rod, batteries mounted within said housing, and electric alarms mounted within said housing and connected with said electric bells.

4. The combination of a target, a revoluble target rod for actuating the same, a hand lever for moving said target rod, electrical contacts disposed adjacent to said target rod and opened and closed by movements of the same, and electrical alarm mechanism connected with said contact mechanism and controlled thereby.

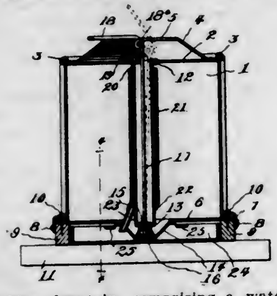
5. The combination of a housing, a revoluble target rod extending therethrough, contact mechanism controllable by movements of said revoluble target rod, and alarm mechanism mounted within said housing and connected with said contact mechanism.

[Claim 6 not printed in the Gazette.]

885,632. WATERING-TROUGH. ANCEAL C. MICHAEL, Flora, Ind., assignor of one-half to William B. Fisher, Flora, Ind. Filed Sept. 25, 1907. Serial No. 394,535.

1. A drinking fountain, comprising a water tank, a tube extending downward from the top of the tank, an air tube surrounding said downwardly extending tube and connected thereto at its lower end, a cup secured to the bottom of the tank and provided with a nozzle, an air tube communicating with the first mentioned air tube and extending through said cup and a removable trough under the bottom of the tank.

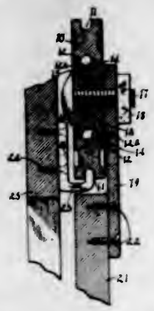
2. A drinking fountain, comprising a water tank, a filling tube extending from the top of said tank below the bottom thereof, a cup secured to the bottom of the tank and provided with a nozzle, a rod a stopper connected to said rod extending through said tube and said rod provided at its upper end with an eccentric operating lever.



3. A drinking fountain, comprising a water tank, an inner tube connected to and extending from the top of said tank, an air tube secured to and surrounding said inner tube and terminating at its upper end immediately below the top of the tank, a cup secured to the bottom of the tank, said cup having an upwardly extending nozzle, a stopper fitted to said nozzle means for operating said stopper to open and close said nozzle, a removable water trough below said cup, an air tube communicating with the first mentioned air tube and extending through said cup.

4. In a drinking fountain, the combination of a filling tube, a tank, an air tube secured to and surrounding said filling tube, a cup provided with a nozzle, a stopper, means for actuating said stopper to open and close said nozzle, an air tube communicating with the first mentioned air tube and extending through said cup, and a removable water trough below said cup.

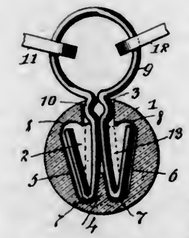
885,633. DOOR-HANGER. JAMES MONTGOMERY and ROSCOE LEED, Philadelphia, Pa. Filed July 29, 1907. Serial No. 386,063.



1. In a door-hanger, a hanger-arm, a sheave consisting of a hub having a socket in one side, a rim rotatably mounted on said hub, said rim and hub each having an annular groove formed in their contiguous edges, balls arranged in said grooves, a block removably arranged in said socket and having its inner face adapted to register with said hub groove, and a bolt securing said hanger arm to said sheave and adapted to hold said block in place.

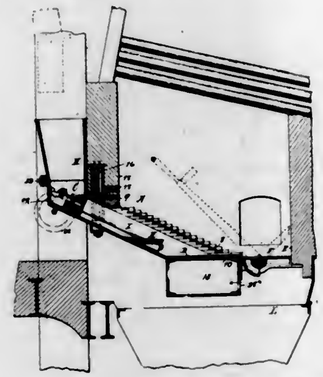
2. In a door-hanger, a sheave consisting of a hub having a threaded bore, an annular groove in its periphery and a socket entering said groove at one point, a block removably fitting said socket and having its inner face beveled, a rim surrounding said hub and having an annular groove registering with the groove in the hub, antifrictional bearings mounted in the hub and rim grooves, a bolt having a threaded engagement with said hub, means on said bolt overlapping said block when the parts are assembled, a hanger-arm and a nut mounted on said bolt.

885,634. SEAL-FASTENING. THOMAS E. MURRAY, New York, N. Y. Filed Oct. 8, 1907. Serial No. 396,463.



In combination with a wire loop having its end portions turned backward in substantially V shape, a holding block having a single cavity and a single entrance communicating therewith: the said cavity being constructed internally to form seats for the apexes of said V shaped parts and to form abutments for the extremities of said parts.

885,635. AUTOMATIC STOKING DEVICE FOR FURNACES. THOMAS E. MURRAY, New York, N. Y. Filed Nov. 2, 1907. Serial No. 400,375.



1. In a furnace, an inclined grate, two inclined troughs disposed parallel to said grate in juxtaposition thereto and on opposite sides thereof and receiving fuel at their elevated ends, pusher blocks in said troughs, rods connected to said pusher blocks, a pivoted lever, to the arms of which lever said rods are respectively connected and means for vibrating said lever on its pivot to move said blocks in relatively opposite directions.

2. In a furnace, an inclined grate, two inclined troughs disposed parallel to said grate in juxtaposition thereto and on opposite sides thereof and receiving fuel at their elevated ends, pusher blocks in said troughs, rods connected to said pusher blocks, a support, a lever pivoted on said support to the arms of which lever said rods are respectively connected, a segmental block pivoted at its apex and disposed in front of said lever, and means for vibrating said block on its pivot to cause it to strike said lever arms alternately and thereby to reciprocate said pusher blocks in said troughs, in relatively opposite directions.

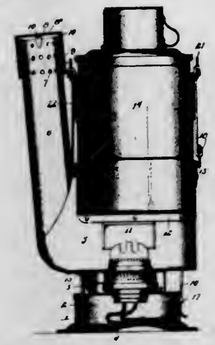
3. In a furnace, an inclined grate, two inclined troughs disposed parallel to said grate in juxtaposition thereto and on opposite sides thereof and receiving fuel at their elevated ends, pusher blocks in said troughs, rods connected to said pusher blocks, a support, a lever pivoted on said support to the arms of which lever said rods are respectively connected, a segmental block pivoted at its apex and disposed in front of said lever, a bar pivoted to said block, a stud on said bar, and a rotary cam having a groove receiving said stud: the said cam by its rotation causing said bar to vibrate said block on its pivot and the said block striking said lever arms alternately to reciprocate said pusher blocks in said troughs in relatively opposite directions.

4. In a furnace, an inclined grate, an inclined fuel-receiving trough disposed parallel to said grate and in juxtaposition thereto, and means in said trough for alternately pushing the fuel therein down the incline and raising said fuel vertically upward.

5. In a furnace, an inclined grate, an inclined fuel receiving trough disposed parallel to said grate and in juxtaposition thereto, and in said trough, a reciprocating pusher block wedge-shaped in longitudinal vertical section and disposed with the edge of the wedge toward the top of the incline.

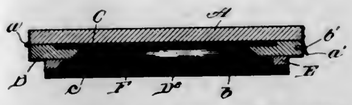
[Claims 6 to 12 not printed in the Gazette.]

885,636. HEATING DEVICE FOR DINNER-PAILS. JAMES W. MCKAY and CHARLES E. WAUGH, Tatamagouche, Nova Scotia, Canada. Filed Dec. 8, 1906. Serial No. 346,967.



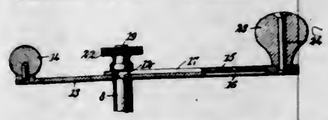
A device of the character described comprising an oil reservoir with a burner, a heating apparatus mounted over the burner and having a central supporting flange to provide an extension which serves as a receptacle for the lower portion of the dinner pail to permit of the bottom thereof to rest on the flange, said pail being provided with ears, a draft tube arranged at one side of the heater and extending upwardly therefrom, means secured on the opposite sides of the heater having extensions pivoted thereto, provided with angularly bent upper ends which serve to contact with the ears of the dinner pail to hold the same and the heater together, substantially as specified.

885,637. PHOTOGRAPHIC-PRINTING FRAME. JOSEPH NELSON, Chicago, Ill., assignor to Chicago Portrait Company, Chicago, Ill., a Corporation of Illinois. Filed Aug. 2, 1906. Serial No. 328,917.



In combination, a printing frame, a door hinged to said frame and overlying it, there being a space between said door and frame to receive and hold a sensitized sheet, said door having an opening therethrough corresponding in shape to the contour of the background desired to be imparted to the print, guides on said door and a diffusing plate arranged in said guides and covering the opening through the door, said door and frame being so related to each other that when the sensitized sheet is inserted and the door is closed against the frame the sheet is securely clamped in place.

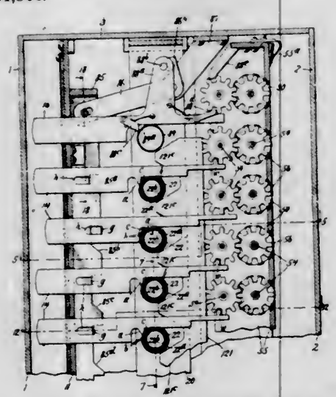
885,638. REEL-CRANK. JOHN J. NEWLANDS, New York, N. Y. Filed Oct. 14, 1907. Serial No. 397,304.



1. In a hand crank for reels or the like, the combination of a casing provided with a fixed sleeve rigid in relation thereto, a revoluble sleeve mounted within said fixed sleeve and provided with a gear member to be turned, said revoluble sleeve being further provided with an angular head, a bar provided with an aperture through which said head extends, a slide provided with an aperture through which said head extends, said slide being movable in the general direction of its length relatively to said bar, means for temporarily clamping said slide relatively to said bar, and a knob mounted upon said slide for the purpose of turning said slide and said bar.

2. The combination of a casing, a sleeve mounted rigidly thereupon and provided with an aperture, a revoluble sleeve mounted within said fixed sleeve and provided with a gear member for operating a reel or the like, a bolt fitting into said revoluble sleeve, a fastening member for securing said bolt and said revoluble sleeve rigidly together so as to enable said bolt to turn, said fastening member being so disposed relatively to said revoluble sleeve as to be brought into registry with said aperture of said fixed sleeve, a hand crank mounted upon said revoluble sleeve and made in a plurality of pieces movable relatively to each other, said bolt extending through said pieces, and a threaded thumb nut revolubly mounted upon said bolt for the purpose of clamping said pieces temporarily together.

885,639. VOTING-MACHINE. JOHN W. NUNAMAKER, Chicago, Ill., assignor, by mesne assignments, to Adolph J. Borgmeier, Chicago, Ill. Filed June 15, 1903. Serial No. 161,544.



1. In a voting machine, in combination with mechanisms for recording the votes cast upon a plurality of offices or propositions and for a plurality of candidates for said offices respectively, the several mechanisms for indicating the votes upon all mutually exclusive propositions and candidates being in rows in one direction, and the mechanisms for indicating votes for candidates and propositions not mutually exclusive being in rows in transverse direction; and means for operating all the mechanisms in said transverse rows in groups or sub-divisions, by one continuous operation acting upon such groups successively.

2. In a voting machine, mechanisms for indicating the votes cast for a plurality of candidates for the same office, comprising push-bars corresponding to the candidates respectively; registering trains operated by said push-bars respectively; a shaft extending transversely with respect to the push-bars, and means on the shaft for engagement by the push-bars respectively to rock the shaft, said means being adapted, when the shaft is rocked without a given push-bar, to obstruct the operation of such push-bar.

3. In a voting machine, mechanisms for indicating the votes cast for a plurality of candidates for the same office, comprising a plurality of push-bars corresponding to the candidates respectively; a like plurality of registering trains actuated by the push-bars respectively, the several bars being in a row; a shaft crossing all the push-bars of such row; means by which the actuation of any push-bar in direction to actuate its registering train rocks the shaft, and means by which the rocking of the shaft locks all the other push-bars against actuation.

4. In a voting machine, mechanisms for indicating the votes cast for a plurality of candidates for the same office, comprising an inclosing case; push-bars protruding from the case corresponding to the candidates respectively; registering trains actuated by the push-bars respectively; a tube or hollow shaft journaled transversely to the push-bars, the latter having operating fingers, and the tube having transverse slots in the paths of movement of said fingers respectively, said tube or hollow shaft being normally in position to have its slots entered by the fingers and to be rocked by their engagement with the remote end of the slot, said slots being only of sufficient amplitude to admit the fingers before the shafts are rocked, whereby the rocking of the shaft by any one push-bar carries the slots corresponding to the other push-bars out of position to be entered by the other fingers respectively, and the operation of the said other push-bars is obstructed.

5. In a voting machine, in combination with an inclosing case, mechanisms for indicating the votes cast for a plurality of candidates for each of a plurality of offices of a group, said mechanisms comprising push-bars protruding from the case, corresponding to the several candidates, said push-bars being in groups corresponding to the several groups of offices, one push-bar for each office in the group; registering trains actuated by the push-bars respectively; a plurality of telescoped tubes extending transversely to the bars, corresponding in number to the number of offices in the groups, said tubes being journaled for operation as independently rotatable shafts, and having transverse slots in the planes of the push-bars respectively, the slots in the several tubes except one at each plane, being of such amplitude with respect to the thrust of the bars, as not to afford engagement for the latter, whereby each bar of any group rocks only one of the tubes, each tube being slotted for actuation by some one bar of the group.

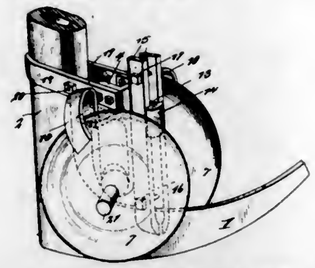
[Claims 6 to 46 not printed in the Gazette.]

885,640. NON-REFILLABLE BOTTLE. JOHN B. OGLE, Lancaster, and WILLIAM E. BARRIE, Carroll, N. H. Filed July 9, 1906. Serial No. 325,244.



The bottle substantially as herein described having its neck provided with a valve chamber with a contracted rounded seat at the lower end thereof, an enlarged portion above said seat, and with a threaded opening communicating with the upper end of the enlarged portion and having a circumferential series of short lugs or projections at the upper end of said enlarged portion of the valve chamber for the escape of liquid, a stopper having a threaded portion to screw in said threaded opening, and a flanged head to overlap the neck of the bottle, and a valve fitted to the chamber and having a lower rounded portion to fit the valve seat, a short shank projecting upwardly therefrom, and a body portion above the shank and screw threaded to fit the threaded opening leading to the valve chamber, all substantially as and for the purposes set forth.

885,641. FURROW-OPENER. OSCAR F. ORNDOFF and LAURITS T. RASMUSSEN, Council Bluffs, Iowa. Filed Nov. 5, 1907. Serial No. 400,821.



1. In combination with the shoe of a planter, a furrow opener embodying a frame element carrying disks, a headed lug projecting outwardly from the front face of said element, a horizontal lug on each side of said element, a scraper secured to each lug, and means to secure said element with respect to said shoe.

2. In combination with the seed tube and shoe of a planter, a furrow opener embodying a frame element carrying disks, a headed element projecting outwardly from the front face of said frame element, a pair of bars on opposite sides of said headed element disposed between the front face of the frame element and the head of the headed element so as to be held against outward movement by said head, means to clamp said bars to said headed element and to the shoe, and bars secured to the upper end of the frame element and to the seed tube of the shoe and clamped to each.

3. In combination with the shoe and seed tube of a planter, a frame element of U-shape in cross section, an outwardly projecting lug on each side of said frame element adjacent the top thereof, disks carried by the frame element, a scraper secured to each lug, horizontal bars on opposite sides of said frame element seating on the top faces of said lugs, means to secure said bars to said frame element and to the seed tube, a headed lug projecting outwardly from the front face of said frame element, a pair of vertical bars engaged between the head of said lug and the front face of said frame element, and means for clamping said vertical bars to said headed lug and to the shoe.

885,642. BAIT-HOLDER. EDDIE A. OSTERHOUT, Ilion, N. Y. Filed July 8, 1907. Serial No. 382,690.

1. In a bait holder, the combination with a fish hook of a supporting wire, loosely connected at one end thereof and adapted for attachment with a fishing line at its opposite end and fastening means sustained by and removable longitudinally of the supporting wire for maintaining the hook shank removably connected with the wire.

2. In a bait holder, the combination with a fish hook of a supporting wire loosely connected thereto, and adapted for attachment to a fish line, a bait plate comprising flat diverging arms bent in opposite directions at their outer ends to form oppositely extending blades sustained by and removable longitudinally of the supporting wire, and means for removably connecting the hook shank with the fastening wire.

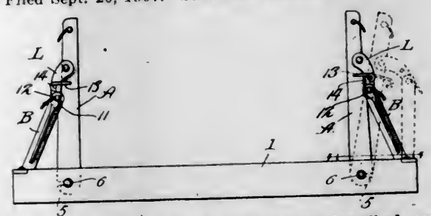
3. In a bait holder, the combination with a hook having an extension near the inner end of its shank, of a supporting wire loosely connected to the extension at one end adapted for attachment to a fishing line at its opposite end, a bait plate comprising flat diverging arms bent in opposite directions at their outer ends to form oppositely extending blades carried by and movable longitudinally of the supporting wire and means for removably connecting the hook shank in position to the fastening wire.



4. In a bait holder of the character described, the combination with a hook having an eyed extension at the inner end of its shank, of a supporting wire loosely connected in the eye of the extension and adapted for attachment at its opposite end, to a fishing line, and fastening means sustained by and movable longitudinally of the supporting wire for maintaining the shank of the hook removably connected with the wire.

5. In a bait holder of the character described, the combination with a hook, of a supporting wire attached near the inner end of the shank thereof, a rotary bait plate comprising flat diverging arms bent in opposite directions at their free ends to form blades removably sustained by the supporting wire and a fastening wire having longitudinally disposed coils at its ends adapted to receive the shank of the hook to maintain it removably connected with the supporting wire, one of the coils serving as a fastening means for the rotary plate.

885,643. CAR-STAKE. FRANCIS PARENT, Bagley, Minn. Filed Sept. 20, 1907. Serial No. 393,845.



1. A stake or standard of the character described, comprising an upright, a link connected pivotally therewith, and a bifurcated brace connected pivotally with the link.

2. A stake or standard of the character described, comprising an upright having a hook, a link connected pivotally with said upright and having a laterally extending pin, and a bifurcated brace connected pivotally with the link.

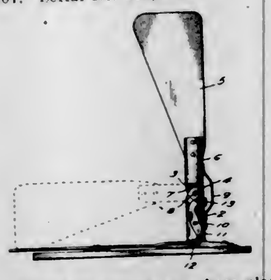
3. A stake or standard of the character described, comprising an upright having a shoulder or offset, a link pivoted upon the upright and having a notch adapted for engagement with the shoulder or offset, and a bifurcated brace connected pivotally with the link.

4. A stake or standard of the character described, comprising an upright, a link connected pivotally therewith, a bifurcated brace connected pivotally with the link, and means for securing the link in position with relation to the upright.

5. In a device of the character described, a sill or bolster having a mortise, a cap secured upon the mortised end of the sill and having vertical grooves or sockets, an upright pivoted upon a pin extending through the sill and the cap, a bifurcated brace having flanged rollers engaging the grooves or sockets of the cap, and a link connecting the bifurcated brace with the upright.

[Claim 6 not printed in the Gazette.]

885,644. SIGNAL. FRED H. PETTIT, Rhea, Okla. Filed July 10, 1907. Serial No. 383,098.



1. A signal apparatus comprising a base plate, a signal pivotally secured thereon and adapted to move to operative position by gravity, means for forcing the signal into set or operative position, means for holding the signal against such movement, and means for securing the holding means against signal releasing movement.

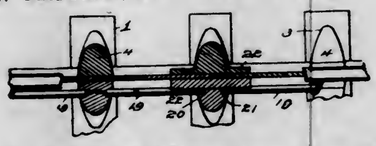
2. A signal apparatus comprising a base plate, a signal pivotally mounted thereon and adapted to move to operative position by gravity, a trigger for holding the signal against operative movement, and a trip lever for preventing signal releasing movement of the trigger.

3. A base plate, a standard rising therefrom, a signal pivotally mounted in the standard, a spring for moving the signal in one direction, a trigger mounted on the standard and operative to directly engage the signal and secure the same against movement in one direction, and a trip lever mounted on the base plate and normally engaging the trigger.

4. A base plate, a standard rising therefrom, a signal pivotally mounted in the standard, a trigger mounted on the standard and operative to directly engage the signal and secure the same against movement in one direction, and a trip lever mounted on the base plate and normally engaging the trigger.

5. A signal apparatus comprising a base plate, a standard rising therefrom and formed with a longitudinally extending slot, a semaphore pivotally mounted in the slot in the standard, a spring secured to the standard and bearing against the semaphore, a trigger mounted on the standard and having a guard arm to overlie the slot in the standard, and a trip lever mounted on the base plate and adapted to engage one end of the trigger to prevent signal releasing movement of the guard arm.

885,645. FASTENER. GEORGE J. POEHLEIN, Owensboro, Ky. Filed June 6, 1907. Serial No. 377,637.

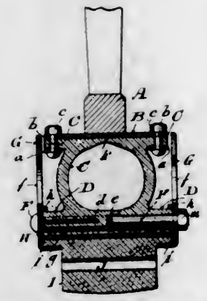


1. A device of the character described, comprising a plurality of bracing members positioned on each side of a rail, wedges positioned between the rail and one of said braces, and a bracing member connecting said wedges for holding the same in position.

2. A device of the character described, comprising a bracing member formed with a hook-shaped depending portion, said depending portion being formed with straight front and rear faces, the second brace positioned in opposition to the first-mentioned brace, a wedge positioned between said second-mentioned brace and said rail, and a tie formed with apertures formed with straight walls, said walls being designed to engage the straight portions of said hook shaped depending portion, but preventing any movement of said first-mentioned brace.

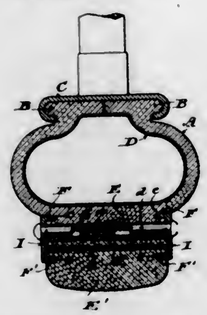
3. A device of the character described comprising a plurality of braces, a wedge formed with a cut out portion positioned between one of said braces and the rail, and a longitudinal brace engaging said cut-out portion for holding said wedge in position.

885,646. VEHICLE-TIRE. MARY B. PRIEST, Milwaukee, Wis., assignor to The Priest Tire Company, a Corporation of Wisconsin. Filed Feb. 18, 1907. Serial No. 357,809.



A vehicle-tire comprising a flat metal wheel-rim, a one-piece pneumatic casing having inner flanges projecting from its side-wall fitted to the wheel-rim, rings fitted over the inner flanges of the casing, securing-bolts connecting the rings and wheel-rim, a flat casing tread having flange-extensions projecting beyond the side-walls of said casing, cross-grooves in the face of the tread, a metallic band fitted to the tread, a detachable rubber tread having flanges coincident with the flange-extensions of the casing-tread mounted upon the metallic band, an apertured metallic side-guard having flanges engaging the flanges of said detachable tread, lips extending from the apertured portion of the side-guard engaging the flange-extensions of the casing, and clamping-bolts in connection with the side-guards fitted into the cross-grooves.

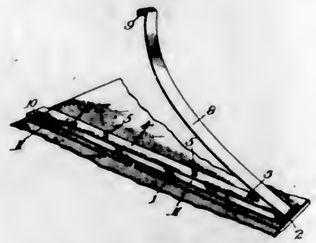
885,647. PNEUMATIC VEHICLE-TIRE. MARY B. PRIEST, Milwaukee, Wis., assignor to The Priest Tire Company, a Corporation of Wisconsin. Filed May 20, 1907. Serial No. 374,567.



In a pneumatic vehicle-tire comprising a one-piece tubular casing, having flexible side-walls, a flattened split-base, and an outer flat tread extension; the combination

of a metallic-band fitted to the flat tread extension, a pliable annular shoe fitted over the band, metallic clamping-rings fitted to the sides of the shoe and said flat tread extension, and securing bolts connecting the rings.

885,648. BINDER. IRWIN H. RICE, Los Angeles, Cal. Filed July 5, 1907. Serial No. 382,364.



1. In a binder, a cover, a bottom strip fastened to the cover, a strip above the bottom strip and fastened thereto and having an outer flange, a binding strap formed integral with the lower strip and having a hook on its end for engagement with the end of the bottom strip, and studs projecting up from the second strip.

2. In a binder, a cover, a bottom strip fastened to the cover, a strip above the bottom strip and fastened thereto and having an outer flange, a binding strap formed integral with the lower strip and having a hook on its end for engagement with the end of the bottom strip, and studs projecting up from the second strip, said studs having heads which lie between both said strips.

3. In a binder, a cover, a bottom strip fastened to the cover, a strip above the bottom strip and fastened thereto and having an outer flange, a binding strap formed integral with the lower strip and having a hook on its end for engagement with the end of the bottom strip, studs projecting up from the second strip, and spring means for holding the sheets down on the second strip.

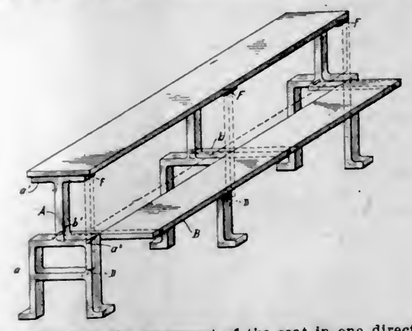
4. In a binder, a cover, a bottom strip fastened to the cover, a strip above the bottom strip and fastened thereto and having an outer flange, a binding strap formed integral with the lower strip and having a hook on its end for engagement with the end of the bottom strip, and studs projecting up from the second strip, the second strip having spurs projecting up for gripping the lower sheets of paper.

5. In a binder, a cover, a bottom strip fastened to the cover, a strip above the bottom strip and fastened thereto and having an outer flange, a binding strap formed integral with the lower strip and having a hook on its end for engagement with the end of the bottom strip, studs projecting up from the second strip, a bowed spring riveted at one end to the binding strap and its end being slotted, and a stud on the binding strap engaging the slotted end of the bowed spring.

885,649. COMBINED SEAT AND TABLE. MANUEL R. RODRIGUES, New York, N. Y. Filed May 31, 1907. Serial No. 376,738.

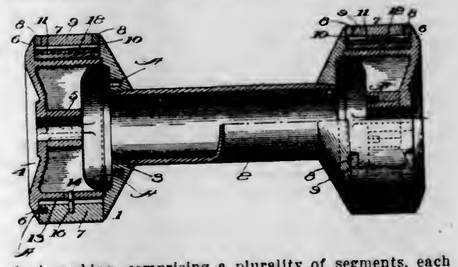
1. In a combined seat and table, a plurality of supporting standards consisting of inverted Y-shaped frames, comprising a base horizontally disposed at the top, and a vertical support having horizontal extensions, in combination with a flat top member wider than the said extensions, and with a seat member having rearwardly extending arms hinged to the frames, and with means consisting of stops in the frames to limit the movement of the seat in one direction in order to lie in the plane of the top faces of the said bases, and also with means to limit the movement of the seat in another direction, consisting of the abutting edges of the said horizontal extensions, in order to lie in the plane of the edge of the table top.

2. In a combined seat and table, a plurality of supporting standards consisting of inverted Y-shaped frames A, comprising a base *a* horizontally disposed at the top, and a central vertical support having horizontal extensions *a'*, in combination with a common flat top member C mounted on and rigidly secured to the standards and wider than the said extensions, and with a seat member B having rearwardly extending arms *b* hinged to the interior faces of the frames, and with means consisting of stops on the



frames to limit the movement of the seat in one direction in order to lie in the horizontal plane of the top faces of the said bases, and also with means to limit the movement of the same in another direction, consisting of the abutting edges of the said horizontal extensions, in order to lie in the vertical plane of the edge of the table top and of the front portions of the said bases.

885,650. PISTON-VALVE. JOSEPH A. SCOTT, New York, N. Y., assignor to Cockburn Barrow & Machine Company, Jersey City, N. J., a Corporation of New Jersey. Filed May 14, 1906. Serial No. 316,660.



1. A packing, comprising a plurality of segments, each segment having connecting jaws and tongues at opposite ends, and pins passing through said jaws and tongues to connect said segments together.

2. A packing comprising a plurality of segments having jaws and tongues at their opposite ends, said jaws and tongues having openings therein, and pins passing through said openings to connect the segments together and to permit them to have a hinged connection, said pins being of less diameter than the holes to permit expansion and contraction of said segments.

3. A device of the class described, having an annular recess, packing in said recess comprising a series of segments connected together to permit expansion and contraction of the same, and an expanding ring between the said segments and a head.

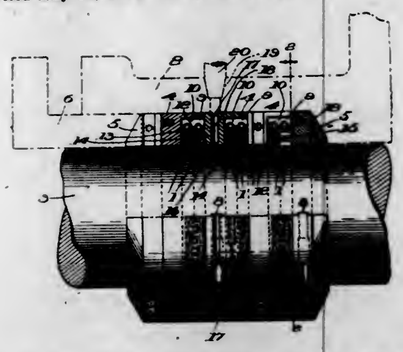
4. A device of the class described, having an annular recess, a head packing in said recess comprising a series of segments connected together to permit expansion and contraction of the same, an expanding ring acting upon the said segments, and a filler between said expanding ring and head.

5. In a device of the class described, a head having an annular recess, a packing in said recess comprising a series of segments connected together to permit expansion

or contraction, an expanding split ring interposed between said segments and head, and means to maintain the joints between the segments and the said split ring in staggered relation to each other.

[Claims 6 and 7 not printed in the Gazette.]

885,651. ROD-PACKING. JOSEPH A. SCOTT, New York, N. Y., assignor to Cockburn Barrow & Machine Company, Jersey City, N. J., a Corporation of New Jersey. Filed May 14, 1906. Serial No. 316,661.



1. In a device of the class described, a ring made up of segments adapted to surround a rod, an outer band on the periphery of said ring also made up of segments, said segments being arranged in staggered relation to those of the ring, and a spiral spring extending annularly around said band to compress the ring upon the rod.

2. In a device of the class described, a segmental packing ring adapted to surround a rod, an outer segmental band overlying said packing ring and having its segments arranged in staggered relation to those of the ring, said segmental bands being grooved annularly on their outer periphery to form a spring seat, and a spiral spring in said seat.

3. In a device of the class described, a segmental packing ring adapted to surround a rod, an outer segmental band overlying said packing ring and having its segments arranged in a staggered relation to those of the ring, a spiral spring extending annularly around the band and adapted to compress the ring upon the rod, and an annular keeper having a recess to receive said ring, band and spring.

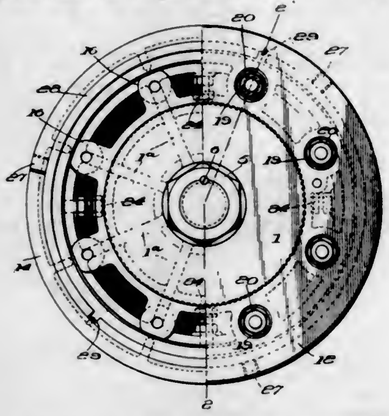
4. In a device of the class described, a segmental packing ring adapted to surround a rod, an outer segmental band overlying said packing ring and having its segments arranged in staggered relation to those of the ring, and means to maintain the parts in staggered relation to each other, and a spiral spring extending annularly around said band and adapted to press the ring upon the rod.

5. In a device of the class described, a plurality of segmental rings adapted to surround a rod, the segments of adjacent rings being arranged in staggered relation to each other, outer segmental bands overlying each of said rings and having their segments staggered with respect to said rings and with respect to each other, spiral springs annularly surrounding the band and tending to press the ring snugly against the rod, and keepers provided with recesses adapted to receive the ring, band and springs and to hold them in position within a stuffing box.

[Claims 6 to 8 not printed in the Gazette.]

885,652. PACKING FOR PISTONS. JOSEPH A. SCOTT, New York, N. Y., assignor to Cockburn Barrow & Machine Company, Jersey City, N. J., a Corporation of New Jersey. Filed May 25, 1906. Serial No. 318,651.

1. A piston comprising a body portion, having its perimeter annularly recessed, a plurality of segmental packing rings and a wearing or centering ring arranged in said recess, annular holding means removably secured to said body portion to hold said rings securely upon said piston, while permitting free radial movement of said packing rings, and means for radially adjusting said wearing ring.



2. A piston comprising a body portion, having its perimeter annularly recessed and provided with a recessed holding means removably secured thereto, and packing means in the recesses of the body and holding means comprising a plurality of segmental expansible packing rings, a wearing or centering ring, and means for radially adjusting the wearing or centering ring.

3. A piston comprising a body portion having its perimeter annularly recessed, and packing means in the recess, said packing means including an expansible packing ring, a wearing or centering ring provided externally with a separately-formed wearing element arranged approximately in the plane of the outer surface of the expansible ring, and means for adjusting the wearing or centering ring.

4. A piston comprising a body portion, having its perimeter annularly recessed, a plurality of segmental packing rings and a plurality of wearing rings arranged in said recess, and annular holding means removably secured to said body portion to hold said rings securely upon said piston, while permitting free radial movement of said rings.

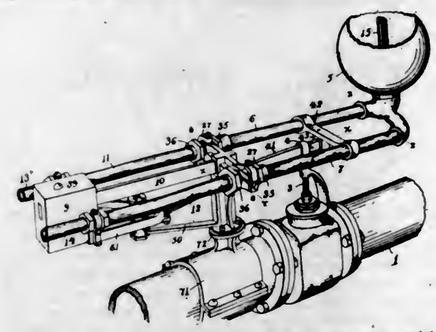
5. A piston comprising a body portion having its perimeter annularly recessed, a plurality of spring expansible segmental packing rings and a non-expansible wearing or centering ring arranged in said recess, means to adjust said non-expansible ring radially with respect to said piston, and an annular ring to hold said rings upon said piston.

[Claims 6 to 11 not printed in the Gazette.]

885,653. BOILER-FEED CONTROLLER. ALBERT B. SMITH, Boston, Mass. Filed Dec. 14, 1906. Serial No. 347,842.

1. The combination with a boiler and a valve-controlled water pipe for supplying it with water, of a feed water controller comprising a chamber, a pair of tubes communicating with and supporting the latter, a pivotal support for said tubes near their ends opposite to said chamber, a counter-weighted arm rigid with said tubes and counterbalancing said tubes and chamber when the latter is empty, sections of flexible tubing communicating with said tubes and boiler, and connections between said arm and valve for the operation of the latter by the movement of said arm and chamber.

2. The combination with a boiler and a valve-controlled water pipe for supplying water to said boiler, of a suitably supported standard having cross-arms, a cross-head pivotally supported on said cross-arms, a pair of tubes rigid with said cross-head, a chamber terminally supported by and communicating with said tubes, an arm rigidly projecting from said cross-head oppositely to said tubes, a counter-weight thereon, connections between said tubes and said valve disposed to open and close the latter by the former's rise and fall, a fixed pipe connecting with said boiler below its water-level and a second fixed pipe connecting with said boiler close above said level, and flexible tubing joining said fixed pipes with said tubes.

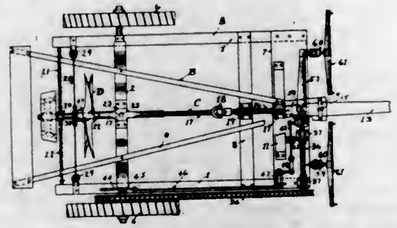


3. In a feed water controller, the combination with a boiler, valve-controlled means for admitting water thereto a chamber, tubes leading to and from said chamber, flexible connections with said tubes and boiler, and a counter-weight for said chamber and tubes, of a pivotal support for said parts consisting of a standard having cross-arms, and a cross-head rigid with said tubes and counter-weight; said cross-head and cross-arms being provided with hardened knife-edges coacting with hardened grooved-blocks removably held by said parts.

4. In a feed water controller, the combination with a water-supply pipe having a valve with a vertically rising stem, of a fixed standard, a pair of tubes pivotally supported thereon, a chamber terminally connected with said tubes, a counter-weight for the said chamber and tubes, flexible connections with said tubes, a cross-arm fixed to said tubes, a lever pivoted at one end to said standard and loosely held at its other end by said cross-arm, and an apertured head on said stem loosely penetrated by said lever.

5. In a feed water controller, the combination with a chamber, tubular connections therewith, and a weighted arm for counter-balancing said chamber and connections, of a buffer for said arm comprising a threaded thimble, a fixed socket movably containing said thimble, a plunger located in said thimble, means for preventing said plunger's rotation in said thimble but permitting its longitudinal play therein, a coiled spring within said thimble supporting said plunger, and nuts turning on said thimble above and below said socket.

885,654. COTTON-CHOPPER. TAYLOR J. SMITH, Ensley, Ala. Filed July 12, 1907. Serial No. 383,454.



1. In a cotton chopper, a chopping element comprising a screw or propeller shaped body, and adjustable blades on the body at the periphery thereof, each blade consisting of a pair of relatively adjustable plates.

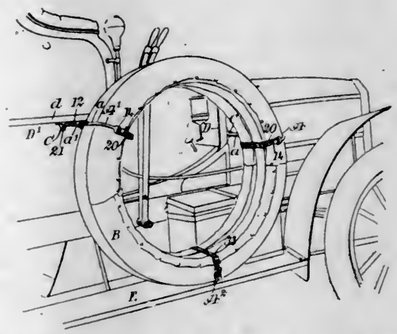
2. In a cotton chopper, a chopping element comprising a hub having projecting apertured arms arranged after the fashion of a screw or propeller, bolts arranged in said apertures, and a pair of overlapping blades provided with elongated slides arranged on said bolts, whereby said blades are capable of relative adjustment.

3. In a cotton chopper, the combination with a wheeled frame, of a rotatable shaft carried by said frame having a flexible joint, a chopping element carried by said shaft, springs connecting said shaft to the side beams of the frame, and an adjustable lever mounted to turn on two horizontal axes, having flexible connections with said shaft at each end.

4. In a cotton chopper, the combination with a wheeled frame, of a rotatable shaft carried by said frame, having a flexible joint, a chopping element mounted on said shaft, springs connecting said shaft to the side beams of the frame, a hinge pivotally mounted on said frame, a lever connected to the free leaf of said hinge, a chain connecting one end of said lever to said shaft, and a cable connected to the other end of said lever, passing over pulleys secured to the side beams of the frame, and connected to said shaft.

5. In a cotton chopper, the combination with a wheeled frame, of a rotatable shaft carried by said frame having a flexible joint, a chopping element carried by said shaft, a lever having a universal movement mounted on said frame connected to said shaft at each end, by flexible means, whereby said element can be swung in different positions.

885,655. HOLDER FOR SPARE TIRES. EDWARD H. STICKELS, Edgewater, N. J. Filed June 16, 1906. Serial No. 322,017.



1. In a holding device for spare tires, a fixed member, a movable member slidable on the fixed member, a strap secured to and connecting the members, and means whereby the movable member will be locked to the fixed member by the tightening of the strap.

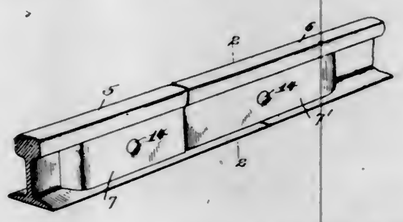
2. In a holding device for spare tires, a fixed member having one end curved and provided with an eye, a movable member slidable on the fixed member and having an eye at its end, a flexible strap passed through the eyes of the members and provided with a fastening for connecting the ends thereof, and means whereby the movable member will be locked to the fixed member by the tightening of the strap.

3. In a holding device for spare tires, a fixed member having a curved end and provided with an eye in said end, a movable member provided with an eye facing the eye of the fixed member, and means for slidably mounting the movable member on the fixed member so that when pressure is applied to the outer end of the movable member it will be locked to the fixed member.

4. In a holding device for spare tires, a fixed member having teeth formed thereon and provided with a curved end having an eye therein, and a movable curved member slidably mounted on the fixed member and provided with an eye at its end, the said member being curved reversely to the curved end of the fixed member and provided with a tooth adapted to engage the teeth of the fixed member to lock said movable member in position.

5. In a holding device for spare tires, a fixed member having a curved arm terminating in an eye, a movable member slidable on the fixed member and adapted to bind against the fixed member when tension is exerted on said movable member in a direction at an angle to its sliding movement, the said member having a curved arm facing the curved arm of the fixed member and also terminating in an eye, the said arms being of less length than the width of the tire tube, and a strap connecting the eyes of said members, the strap being of greater length than the distance between the eyes, whereby when the strap is tightened the movable member is caused to bind against the fixed member.

885,656. RAIL-JOINT. WILBUR B. TALIAFERRO,, Cape Girardeau, Mo. Filed June 12, 1907. Serial No. 378,566.

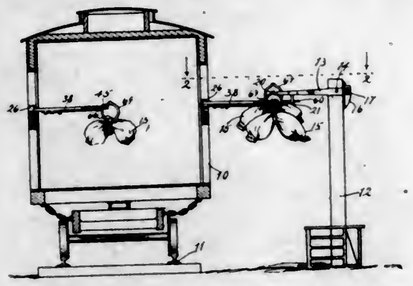


1. In a rail joint in combination, a pair of rail sections, each of which has one end formed with the web portion thereof enlarged, said enlarged web portion formed with a socket having an end, top, a bottom, and a pair of side walls, said web further provided with a longitudinally-extending tongue having an integral flange forming a continuation of the rail base, said flange of less length than said tongue, the tongue projecting from one of the enlarged web portions adapted to engage in the socket formed in the other of the enlarged web portions, each of said rail sections further having the base thereof cut away, the cut away portion upon one section alternately disposed with respect to the cut-away portion upon the other section.

2. In a rail joint in combination, a pair of rail sections each of which has the web portion provided with a socket, said socket having a top, an end, a bottom and a pair of side walls and with a portion of the bottom thereof cut away, each of said rail sections further provided with a tongue projecting from the web portion thereof, said tongues alternately disposed with respect to each other and of a length substantially equal to the length of a socket and adapted to enter the said sockets, each of said tongues formed at its bottom with a laterally-extending flange of less length than the length of the tongue said flanges alternately disposed with respect to each other and each of said rail sections further having the base thereof cut away, the cut-away portion of one rail section alternately disposed with respect to the cut-away portion of the other rail section.

3. In a rail joint in combination, a pair of rail sections each of which has the web portion provided with a socket, said socket having a top, an end, a bottom and a pair of side walls and with a portion of the bottom thereof cut away, each of said rail sections further provided with a tongue projecting from the web portion thereof, said tongues alternately disposed with respect to each other and of a length substantially equal to the length of a socket and adapted to enter the said sockets, each of said tongues formed at its bottom with a laterally-extending flange of less length than the length of the tongue, said flanges alternately disposed with respect to each other and each of said rail sections further having the base thereof cut away, the cut-away portion of one rail section alternately disposed with respect to the cut-away portion of the other rail section, and holdfast devices extending through the webs of the rail sections and the tongues for connecting the rail sections together.

885,657. MAIL-BAG CATCHER AND DELIVERER. JAMES WOOD, Noblesville, Ind., assignor of one-half to John Owen, Noblesville, Ind. Filed Oct. 31, 1907. Serial No. 400,075.



1. A device for delivering mail bags from cars having means permanently mounted thereon adapted to grip and hold the mail bag outwardly from the car, and means beside the railway for engaging and actuating said gripping and holding means for releasing the mail bag.

2. A device for delivering mail bags from cars having means permanently mounted thereon adapted to grip and hold the mail bag outwardly from the car, means beside the railway for engaging and actuating said gripping and holding means for releasing the mail bag, and means for receiving the said mail bag after it has been released.

3. A device for delivering mail bags from cars having means permanently mounted thereon adapted to grip and hold the mail bag outwardly from the car, and a single means mounted beside the railway for engaging and actuating said device to release the mail bag and for receiving the bag after it has been released.

4. A device for delivering mail bags from cars having means adapted to grip and hold the bag outwardly from the car, and an arm mounted beside the railway and projecting towards the same with a horizontal finger parallel with the railway for receiving the mail bag, and a downwardly extending trip for releasing the bag holding means from the car.

5. A device for delivering mail bags from cars provided with an arm adapted to extend outwardly from the car with a projection on the outer end extending transversely of said arm, a spring-withdrawn means adapted to cooperate with said projection for holding a mail bag to be delivered, a trip for holding said means in its gripping position, and means beside the railway for releasing said trip.

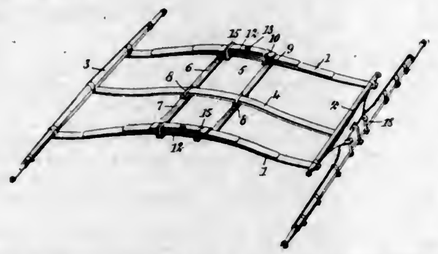
[Claims 6 to 17 not printed in the Gazette.]

885,658. BUILDER'S LEVEL. NATHAN ABRAHAMS, St. Louis, Mo. Filed Nov. 13, 1907. Serial No. 401,966.



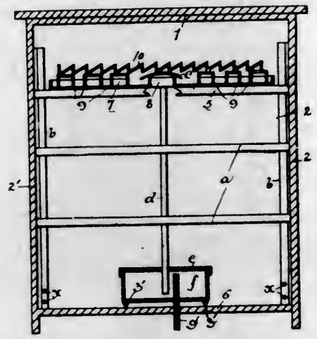
As an article of manufacture, a builder's level composed of two flat boards tapering toward one end, a hinge coupling the same together at their opposite ends, the hinge joint being disposed parallel to the faces of the boards, a spirit level mounted on one of the boards adjacent the hinge joint, the boards having alining depressions formed on opposite sides of the hinge-joint whereby a hand-hole is formed upon the unfolding of the boards, complementary sockets carried by the boards on opposite sides of the hinge-joint, a bolt mounted in one of the sockets and adapted to partially enter the complementary socket upon an unfolding of the boards whereby the latter are held rigidly in their unfolded position and in alinement, and means for clamping the free ends of the boards when folded, substantially as set forth.

885,659. HANGER FOR VEHICLE-BODIES. JOHN G. ANDERSON, Rockhill, S. C. Filed Oct. 24, 1907. Serial No. 398,926.



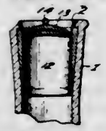
In a hanger construction, in combination, side springs, a hanger disposed transversely between said springs and having upwardly offset extremities forming angular pockers receiving said springs, and substantially flat shoes lying upon the upper faces of said springs, keeper plates attached respectively to said shoes on the upper sides thereof, and clips fastened around said springs and said shoes, and seating on said keeper plates, said keeper plates having means for holding said clips in position.

885,660. REFRIGERATOR. LEN A. BANTA, Ligonier, Ind. Filed Apr. 24, 1906. Serial No. 313,423.



In a refrigerator, the combination with suitable supporting bars, of a tray having a central flanged drip opening, a shield above said opening, a plurality of hollow sheet-metal draft flues supported by said tray and horizontally disposed and transversely positioned within the tray, said flues being of a height extending beyond the upper edge of said tray, and a sheet-metal ice shelf having a serrated surface, and supported by said flues, substantially as set forth.

885,661. BOTTLE. FRANK S. BARNES, Suffern, N. Y. Filed June 5, 1907. Serial No. 377,393.



1. As an article of manufacture, a bottle stopper comprising a hollow body having a closed end adapted to be punctured for removing the contents of a bottle, the wall of the body being bendable to permit the closed end to be drawn backwardly through the hollow of the body.

2. The combination of a bottle neck having an internal undercut portion forming a shoulder, a hollow stopper inserted in the neck and adapted to be expanded under the shoulder, and means on the inner end of the stopper for permitting the same to be drawn outwardly through the top end of the stopper.

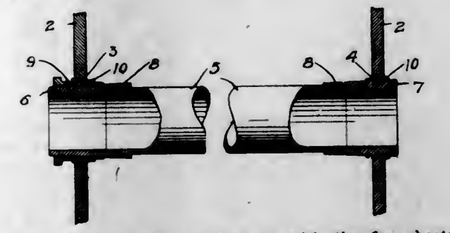
3. The combination of a bottle neck having an internal shoulder, a hollow stopper closed at one end and adapted to be inserted into the neck to a point inwardly of the shoulder, and means on the closed end of the stopper for expanding the walls of the open end thereof to engage under the shoulder.

4. The combination of a bottle neck having an internal shoulder, a hollow thimble-like stopper made of metal and having a wall of increasing thickness from the closed end of the stopper to the open end, said closed end being capable of being drawn outwardly through the hollow of the stopper, and a stiff expanding element on the closed end of the stopper for expanding the upper end of the latter for interlocking under the shoulder of the neck.

5. As an article of manufacture, a bottle stopper comprising a thimble-like body of flexible metal, and a stiff metallic disk permanently secured to the closed end of the stopper.

[Claims 6 to 8 not printed in the Gazette.]

885,662. DETACHABLE BOILER-FLUE. ALEXANDER J. BOWDEN, Minneapolis, Minn., assignor of one-half to Amos B. Robbins, Elroy, Wis. Filed May 31, 1907. Serial No. 376,625.



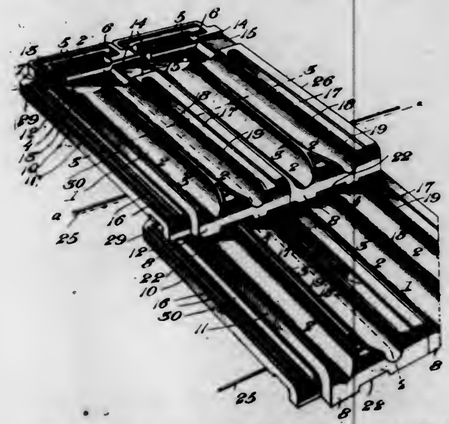
1. In a boiler, the combination, with the flue sheets spaced apart and in parallel relation with one another and having flue seats extending therethrough from one side to the other, said seats being tapered from the outer toward the inner surfaces of said sheets, a flue extending between said sheets and having end sections fitting within the openings in said sheets, the section at the fire box end of said flue being tapered from its outer end toward its inner end to fit the flue seat at that end and having a suitable packing ring, and the section at the opposite end of said flue being tapered from its inner end toward its outer end whereby both sleeves and the flue may be driven in the same direction out of the flue sheets, and an oppositely tapered sleeve inclosing said last named section and fitting between it and its flue seat and having a suitable packing ring, substantially as described.

2. In a boiler, the combination, with the flue sheets spaced apart and in parallel relation with one another and having flue seats extending therethrough from one side to the other, said seats being tapered from the outer toward the inner surfaces of said sheets, a flue provided between said sheets, tapered sections mounted on the ends of said flue, said sections being tapered in the same direction and fitting within the openings in said sheets, a sleeve tapered from its outer toward its inner end fitting between one of said sections and its flue seat and adapted when tightened to form a tight joint between the flue and seat, and said flue being removable by applying a tool to the end of one of said sections and driving it out of its flue sheet toward the other sheet, substantially as described.

3. In a boiler, the combination with the flue sheets having flue seats extending therethrough from one side to the other, said seats being tapered from the outer toward the inner surfaces of said sheets, of a flue having tapered ends, the taper at the fire box end of said flue being toward the middle of the flue and the taper at the

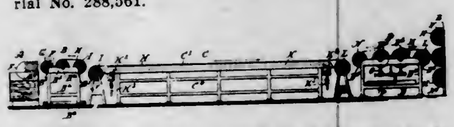
opposite end of the flue being toward its outer end, whereby a tool may be applied to drive it through the flue sheets into the fire box, packing rings interposed between the ends of the flue and the seats thereof in the flue sheets and a tapered sleeve fitting between the flue and its packing ring at the end thereof opposite from the fire box, substantially as described.

885,663. ROOFING-TILE. CARLOS N. BRUZAUD, Peekskill, N. Y. Filed Apr. 13, 1907. Serial No. 367,999.



A roofing tile provided with side flanges to establish an overlap with adjoining tiles of like formation and also provided with drain channels in its upper surface and a longitudinal groove in its lower surface, and a projection within said groove in the bottom of the tile having a hole for the reception of a tie wire connecting with the adjoining tiles, which hole is located above the plane of the lowermost surface of the tile, for the purpose specified.

885,664. METHOD FOR SHRINKING AND FINISHING WOOLEN AND OTHER FABRICS. FRANCIS I. BUAGHER, New York, N. Y. Filed Nov. 22, 1905. Serial No. 288,561.



1. The herein-described method for shrinking and finishing woolen and other fabrics, consisting in rolling up a dry woolen fabric with a wet dampening sheet to moisten the dry woolen fabric by moisture from the wet dampening sheet, then heating and drying the wet woolen fabric in open width, and finally sponging and finishing the dried woolen fabric by subjecting it to the action of dry steam while being rolled up.

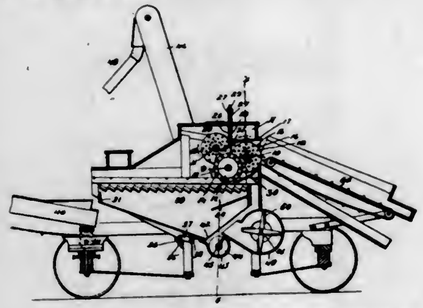
2. The herein-described method for shrinking and finishing woolen and other fabrics, consisting in saturating a fabric sheet to form a dampening sheet, then rolling this sheet up with the dry woolen fabric to moisten the latter by moisture absorbed from the wet dampening sheet, then unrolling the dampening sheet and the wet woolen fabric, then heating and drying the wet woolen fabric in open width, then rolling up the dried woolen fabric and simultaneously subjecting it to the action of dry steam to sponge and finish the woolen fabric.

3. The herein-described method for shrinking and finishing woolen and other fabrics, consisting in rolling up a dry woolen fabric with a wet dampening sheet to moisten the dry woolen fabric by moisture from the wet dampening sheet, then heating and drying the wet woolen fabric in open width, then sponging and finishing the dried woolen fabric by subjecting it to the action of dry steam while being rolled up, and finally drying, cooling and re-finishing the woolen fabric while rolled up.

4. The herein-described method for shrinking and finishing woolen and other fabrics, consisting in saturating a fabric sheet to form a dampening sheet, then rolling this sheet up with the dry woolen fabric to moisten the latter by moisture absorbed from the wet dampening sheet, then unrolling the dampening sheet and the wet woolen fabric, then heating and drying the wet woolen fabric in open width, then rolling up the dried woolen fabric and simultaneously subjecting it to the action of dry steam to sponge and finish the woolen fabric, and finally drying, cooling and re-finishing the woolen fabric while rolled up.

5. The here-described method for shrinking and finishing woolen and other fabrics, consisting in saturating a fabric sheet to form a dampening sheet, then rolling this sheet up with the dry woolen fabric to moisten the latter by moisture absorbed from the wet dampening sheet, then unrolling the dampening sheet and the wet woolen fabric, then heating and drying the wet woolen fabric in open width, then rolling up the dried woolen fabric, then subjecting it to the action of dry steam while rolled up, and finally re-rolling it and drying, cooling and re-finishing it while rolled up.
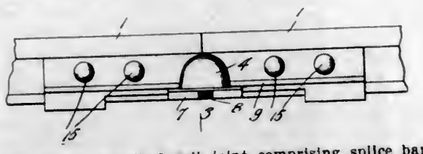
885,665. CORN-SHELLER MACHINE. ARTHUR D. CONE and ARVINE C. CONE, Ansley, Nebr. Filed July 31, 1907. Serial No. 386,405.



1. In a corn shelling machine, a casing having a feed opening, a shaft supported in said casing for rotation at high speed, disks mounted in pairs and having oppositely inclined serrated flanges, sheller disks and beater disks supported for rotation in coöperation with the flanged disks, presser springs secured adjacent the feed opening and having terminal shoes, said shoes being transversely toothed on the under side thereof, guide rods connected with the springs, housing and adjusting springs upon the guide rods, a suitably supported cross bar connecting the guide rods in series, tightening nuts upon the guide rods adjacent to the cross bar and bolts connected with the sides of the casing and equipped with adjusting nuts for simultaneously regulating the pressure of the said presser springs.

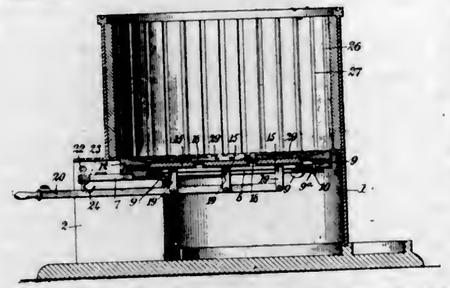
2. In a corn shelling machine, in combination of a casing including a hopper having a feed opening, a shaft supported for rotation at high speed, disks mounted in pairs upon said shaft and having oppositely inclined serrated flanges, sheller disks and beater disks supported for rotation in coöperation with the flanged disks, presser springs having terminal flanged shoes, guide rods connected with the spring, housings and adjusting springs upon the guide rods, a suitably supported cross bar connecting the guide rods in series, tightening nuts upon the guide rods adjacent to the cross bar, and adjusting means for the latter, with a separator comprising a shoe, links connecting said shoe to the casing, a discharge opening in the bottom of the casing, a casing beneath said opening, a spiral conveyer mounted upon a shaft and supported in said casing, said conveyer discharging at one end into an elevator casing, the lower end of the latter serving as a bearing for the shaft carrying the spiral conveyer, and an endless belt in said elevator casing for elevating and discharging the corn.

885,666. RAIL-SPLICE. WILLIAM C. CROSBY, Cyril, Fla. Filed Apr. 2, 1907. Serial No. 365,982.



The herein described rail joint comprising splice bars connected to opposite sides of the rail ends, each of said splice bars being provided with a hollow central brace provided with extensions having spike apertures therein and adapted to be connected to a central cross tie, the outer brace being larger than the inner one, said outer brace bearing against the underside of the head of the rail and the inner brace having a flange extending up under the lower side of the head of the rail, flanges at the ends of the splice bars, said flanges extending inwardly to engage underneath the base flanges of said rails, and bolts extending through the splice bars, substantially as described.

885,667. GRATE. AMBROSE V. DAVIDSON and CHARLES R. BEARD, Akron, Ohio. Filed July 7, 1906. Serial No. 325,090.



1. A stove having an imperforate grate mounted therein having openings for grate-bars, grate-bars mounted to rock in said openings and substantially filling said openings whereby an upward draft through said grate is prevented, said stove having draft openings from below around the edge of said grate whereby the consumption of fuel takes place near the periphery.

2. A stove having a body with an outwardly projecting discharging mouth, a grate-rest pivotally supported at the rear side of said body and having a guide frame projecting into said discharging mouth, hangers pendent pivotally in the forward portion of said body having two hooked horns to engage under said guide frame to hold said grate rest level or depressed forwardly, a grate rotatably supported on said grate rest, and a shaker rod attached to said grate and guided on said guide frame.

3. A stove having a body with a discharging mouth projecting therefrom, a grate rest mounted in said body at the rear thereof, and having a frame projecting into said mouth, means for supporting said frame in a depressed position to incline the grate, a grate rotatably mounted upon said grate rest, grate bars mounted transversely with respect to said mouth and adapted to rock in said grate, a shaker lever pivotally attached to said grate bars for rocking the same projecting through said mouth, affording means for rocking said grate bars by a longitudinal movement, and affording means for shaking said grate on the pivot point thereof.

4. A stove having a body with an outwardly projecting discharging mouth, a grate-rest having a ring-shaped body pivotally supported in said stove body, and having a guide frame projecting forwardly into said discharging mouth, a grate rotatably mounted on said grate-rest and having openings therein, plates mounted to rock on said grate-rest and normally closing said openings, a shaker-bar pivotally attached to said plates and projecting out through said discharging mouth, and hooks attached in said discharging mouth and engaging said guide frame to hold the same in an elevated or a depressed position.

5. A stove of cylindrical form at the grate level having an imperforate grate-ring of less diameter than said stove whereby draft space is formed beyond the edge of said grate-ring, said grate-ring having openings for grate bars, and imperforate grate bars mounted in said openings and stopping the draft therethrough.

885,668. METHOD OF UNITING IRON OR STEEL WITH EACH OTHER AND WITH OTHER METALS. EVAN L. DAVIES and WILLIAM G. CLARK, Wessels Nek, Natal. Filed Aug. 7, 1905. Serial No. 273,212.

1. The herein described method of uniting iron or steel with each other or with copper gold or silver or their alloys which consists in heating the surface of the iron or steel considerably above the melting point of the metal with which it is to be united, removing the iron oxid by a suitable flux and bringing the uniting metal heated to a corresponding temperature into intimate contact with the surface of the iron while the temperature is maintained, substantially as described.

2. The herein described method of uniting iron or steel with each other or with copper gold or silver or their alloys which consists in heating the surface of the iron or steel considerably above the melting point of the metal with which it is to be united, immersing the iron or steel surface in a suitable flux to remove the oxid, and displacing the flux from the iron or steel surface by bringing the latter into intimate contact with the metal with which it is to be united in a mold, the temperature of the mold and of the said metal having been previously raised to a temperature considerably above the melting point of said metal, substantially as described.

3. The herein described method of uniting iron or steel plates with copper, gold or silver or their alloys which consists in heating the iron or steel considerably above the melting point of the metal with which it is to be united and in removing the iron oxid by a suitable flux and bringing the metal with which it is to be united into intimate contact with the iron by adding the said flux and metal, the latter in small pieces to a mold formed by upturning the edges of the plate, while the temperature of the latter is maintained, substantially as described.

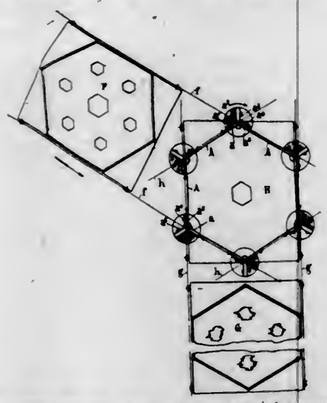
4. The herein described metod of uniting iron or steel with each other or with copper, gold or silver or their alloys, which consists in heating the surface of the iron or steel approximately to the boiling point of the metal with which it is to be united, removing the iron oxid by a flux containing approximately equal quantities of silica and an alkali carbonate and a small quantity of sodium phosphate, and heating the metal with which the iron or steel is to be united to a corresponding temperature and bringing the metal into intimate contact with the surface of such iron or steel while the temperature is maintained, substantially as described.

5. The herein described method of uniting iron or steel with each other or with copper, gold or silver or their alloys, which consists in heating the surface of the iron or steel approximately to the boiling point of the metal with which it is to be united, removing the iron oxid by a flux containing approximately equal quantities of silica and sodium carbonate and a small quantity of sodium phosphate, and heating the metal with which the iron or steel is to be united to a corresponding temperature and

bringing the metal into intimate contact with the surface of such iron or steel while the temperature is maintained, substantially as described.

[Claim 6 not printed in the Gazette.]

885,669. MEANS FOR OBTAINING ILLUSIONARY DECORATIVE EFFECTS IN ROOMS AND THE LIKE. HENRI L. DELLOYE and ALFRED E. HÉNARD, Paris, France. Filed Aug. 1, 1907. Serial No. 386,645.



1. The combination with the polygonal room having reflecting walls, and openings at the corners extending the full height of the room, of interchangeable panels for closing the openings, said panels being angular in form to correspond with the angle of the room corner and provided with decorations, said panels being arranged in series, the number of panels in a series corresponding to the number of corners in a room, the decoration of the panels being the same in each series and different from the panels of the other series.

2. The combination with the polygonal room having reflecting walls, and openings at the corners extending the full height of the room, of interchangeable panels for closing the openings, said panels being angular in form to correspond with the angle of the room corner and provided with decorations, said panels being arranged in series, the number of panels in a series corresponding to the number of corners in the room, and the decoration of the panels being the same in each series and different from the panels of the other series, and a plurality of interchangeable ceilings corresponding in number to the number of series and each provided with decorations corresponding to the decoration of the respective series.

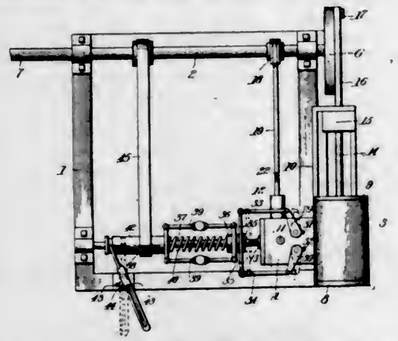
3. The combination with the polygonal room having reflecting walls, and openings at the corners extending the full height of the room, of interchangeable panels for closing the openings, said panels being angular in form to correspond with the angle of the room corner and provided with decorations, said panels being arranged in series, the number of panels in a series corresponding to the number of corners in a room, the decoration of the panels being the same in each series and different from the panels of the other series, and a plurality of sets of representations of butterflies, birds, stars and other luminous objects and means for lowering said objects into the room.

4. The combination with the polygonal room having reflecting walls, and openings at the corners extending the full height of the room, of interchangeable panels for closing the openings, said panels being angular in form to correspond with the angle of the room corner and provided with decorations, said panels being arranged in series, the number of panels in a series corresponding to the number of corners in the room, and the decoration of the panels being the same in each series and different from the panels of the other series, a plurality of interchangeable ceilings corresponding in number to the number of series and each provided with decorations corresponding to the decoration of the respective series, and a plurality of representations of butterflies, birds, stars, and other luminous objects, and means for lowering said objects into the room.

5. The combination with the polygonal room having reflecting walls and openings at the corners, extending the full height of the room, of interchangeable panels for closing the openings, said panels being angular in form to correspond with the angle of the room corner and pivotally mounted whereby they may swing into and out of the openings to close the same.

[Claim 6 not printed in the Gazette.]

885,670. STEAM-ENGINE. ALVA P. DWIGGINS, Waynetown, Ind., assignor to John E. Barricklow, Waynetown, Ind. Filed May 22, 1907. Serial No. 375,109.



1. The combination, with a steam engine, the distributing valve thereof and means for operating said valve, of a reversing valve having independent operating means, and a governor connected to said reversing valve operating means.

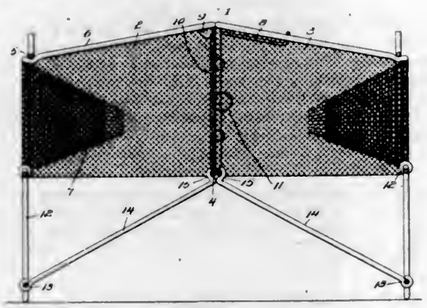
2. The combination, with a steam engine having its steam chest provided with two passages arranged in the plane of the longitudinal axis of the cylinder and leading to one end thereof and two passages similarly arranged and leading to the other end thereof, of two valve plugs each arranged in a seat cutting two of said passages, each plug having two ports at right angles to each other, one of the ports in each plug arranged in the plane of one of the passages leading to one end of the cylinder and the other port in the plane of one of the passages leading to the other end of said cylinder, a distributing valve arranged to reciprocate over the outer opening of said passages in said steam chest, and means to turn said plugs to reverse the engine.

3. The combination, with a steam engine, of valve plugs arranged in the steam chest, arms secured to said plugs and extending in opposite directions, a governor adapted to slide with relation to said steam chest, a hand lever connected to said governor and connections between said arms and the governor for controlling and reversing the engine.

4. The combination, with a steam engine, of valve plugs arranged in the steam chest, arms secured to said plugs, a rod arranged substantially at right angles to said arms, a governor mounted to slide on said rod, means of connection between said arms and governor and means to move said governor to reverse or stop the engine.

5. The combination, with a steam engine having its steam chest provided with two passages leading to one end of the cylinder and two passages leading to the other end thereof, of two valve plugs, each having two ports at right angles to each other, one of the ports in each plug arranged in the plane of one of the passages leading to one end of the cylinder and the other port in the plane of one of the passages leading to the other end of said cylinder, arms secured to said plugs, a rod arranged substantially at right angles to said arms, a governor mounted to slide on said rod, means of connection between said arms and governor and means to move said governor to reverse or stop the engine.

885,671. TRAP. WILLIAM B. EASON, Era, Ark. Filed Sept. 11, 1907. Serial No. 392,347.



1. A trap comprising a body formed of two hinged sections, each having an entrance at its outer end, a fastening for connecting the hinged ends of the sections, folding legs pivoted to the outer ends of the sections, and braces for holding the same in extended position.

2. A trap comprising a body formed of two sections pivotally connected at their inner ends and having inwardly extending tapering entrances at their outer ends, a latch device for holding the sections closed, pivoted legs at the outer ends of the sections, and braces for connecting the extended legs with the closed body.

3. A trap comprising a body formed of two hinged sections, said sections being provided at their outer ends with entrances, a fastening for holding the sections closed, legs pivotally mounted upon the ends of the sections to fold against the underside thereof, and braces pivotally connected with the legs and having hooked portions to engage the hinged ends of the sections, whereby the legs may be held extended.

4. A trap comprising a body composed of two hinged sections, means for holding the sections closed, inwardly extending entrances at the outer ends of the sections, and wings supported on the outer ends of the sections, said wings having clasps to detachably engage said sections.

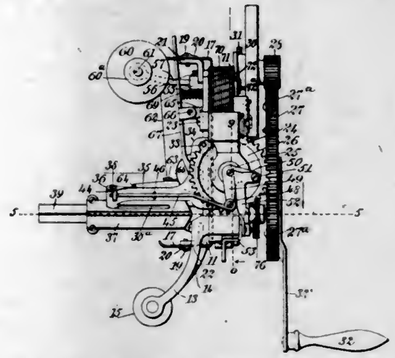
5. A trap comprising a body having entrances at its opposite ends, and detachable wing-sections adapted to be applied to the ends of the body, each section having a frame formed of wire bent to provide a spring clasp to partially surround and engage the end of the body.

[Claim 6 not printed in the Gazette.]

885,672. CARPET-SEWING MACHINE. CHARLES R. FISK, Los Angeles, Cal. Filed Mar. 1, 1906. Serial No. 303,661.

1. In a sewing machine, the combination of a pair of main plates connected together and adapted to straddle the work, a guide provided with a center piece mounted upon said main plates for the purpose of pressing down the nap of the carpets to be sewed, means for adjusting said guide so as to alter the position of said center piece relatively to said main plates, and stitching mechanism connected with said plates for the purpose of sewing the work.

2. In a device of the character described, the combination of a saddle-like member movable relatively to the edges of the carpets to be sewed, said saddle-like member being provided with plates, a shield mounted intermediate of said plates and adapted to engage the work to be operated upon, means for adjusting said shield bodily in relation to one of said plates, and for securing said shield firmly in position when thus moved, and sewing mechanism mounted upon said saddle-like member.



3. In a sewing machine, the combination of a saddle-like member adapted to travel along the edges of the goods to be sewed, said saddle-like member being provided with main plates, a guide mounted upon said saddle-like member and provided with a center piece for pressing down the nap of the goods operated upon, means for adjusting said guide relatively to said main plates, a shield mounted upon said saddle like member, and means for adjusting said shield relatively to said main plates.

4. In a sewing machine, the combination of a traveling saddle-like member, a reciprocating needle bar slidably mounted upon one side of said saddle-like member and adapted to give an end thrust in a direction crossing the general line of travel of said saddle-like member, a sliding head for actuating said needle bar, said head having a slot, a stationary cleat for guiding said head, a revoluble member provided with a boss projecting into said slot, and means for turning said revoluble member, said means including a hand wheel located upon the opposite side of said work from said needle bar.

5. The combination of a frame, a bearing sleeve connected therewith, a gear provided with a barrel encircled by said sleeve, mechanism for driving said gear, a looper having a general hook form and provided with a stem extending into said barrel, said stem being provided with a mutilation, a screw engaging said revoluble barrel and provided with a head fitting said mutilation of said stem so as to prevent said stem from turning relatively to said barrel, and a sewing needle movable in relation to said looper.

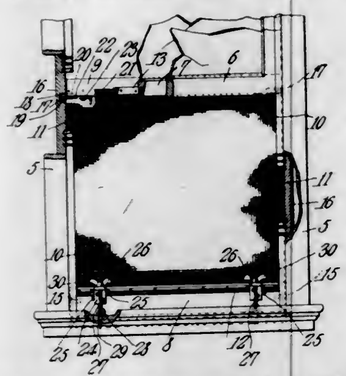
[Claim 6 not printed in the Gazette.]

885,673. WINDOW-SCREEN. CHARLES E. HALL, Rushville, Ind. Filed Aug. 7, 1907. Serial No. 387,523.

1. The combination with a window frame having horizontally alined openings formed therein, of a screen including spaced transverse bars, plates slidably mounted on the lower longitudinal edge of the upper bar and having their inner ends provided with terminal finger pieces and their outer ends formed with pins adapted to enter the openings in the window frame, said plates being provided with vertically disposed guide ears adapted to engage the outer face of the adjacent transverse bar, and a tension device carried by the lower bar and engaging the window frame for exerting a longitudinal pull on the screen.

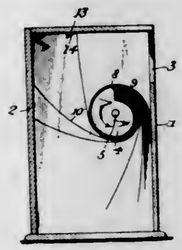
2. The combination with a window frame having a blind stop and provided with upper and lower sashes, of a window screen including spaced transverse bars, a strip extending laterally from the upper bar and bearing against the adjacent sliding sash, eyes secured to the bottom of the window frame, brackets secured to the lower transverse bar and having their upper ends bent laterally to form perforated ears, threaded rods extending through the perforations in the ears and provided with terminal

hooks for engagement with the eyes, clamping nuts engaging the threads on the rods and bearing against the ears for adjusting the tension of the screen, and locking



members slidably mounted on the upper transverse bar and engaging the window frame for locking the screen in position on said frame.

885,674. DEVICE FOR PRODUCING MOVING-PICTURE EFFECTS. ELIOT KEEN, New York, N. Y., assignor to John H. Eggers, Summit, N. J. Filed Jan. 16, 1907, Serial No. 352,505. Renewed Mar. 11, 1908. Serial No. 420,453.



1. In a device of the character set forth, a casing having a sight opening, a drum rotatably mounted therein and a book, the pages thereof at one end secured to said drum at the same point and their free ends projecting in succession beyond each other, substantially as described.

2. In a device of the character set forth, a casing having a sight opening, a drum rotatably mounted therein and a book the pages thereof at one end removably secured to said drum at the same point and their free ends projecting in succession beyond each other, substantially as described.

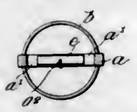
3. In a device of the character set forth, a casing having a sight opening, a drum rotatably mounted therein, and a book one end secured to said drum the pages thereof secured together at one end at the same point and the free ends of the pages projecting in succession beyond each other, substantially as described.

4. In a device of the character set forth, a casing having a sight opening, a drum rotatably mounted therein, and a book one end secured to said drum the pages thereof removably secured together at one end at the same point and the free ends of the pages projecting in succession beyond each other, substantially as described.

5. In a device of the character set forth, a casing having a sight opening, a drum rotatably mounted therein and provided with split pins, a book having eyes at one end engaging said pins for the purpose of removably securing it and the end of its pages projecting in succession beyond each other, substantially as described.

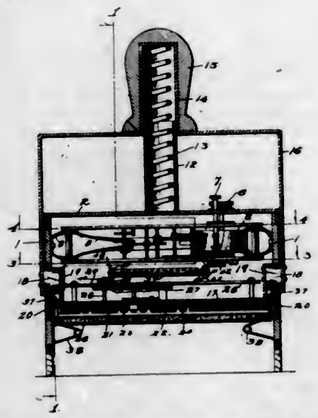
[Claims 6 to 9 not printed in the Gazette.]

885,675. FLUID-LEVEL INDICATOR. MORRIS MARTIN, Boston, Mass., assignor of one-half to Boston Auto Gage Company, Boston, Mass., a Corporation of Massachusetts. Filed Apr. 5, 1907. Serial No. 366,524.



The combination with a metal tank of a bearing connected to the inner side of the tank, a float-carrying shaft mounted in said bearing and provided with a magnet, a magnetic needle holder secured to the outer side of the tank, and a dial to indicate the position of the magnetic needle when moved by the magnet due to variations in the depth of fluid in the tank.

885,676. TIME-STAMP. GEORGE E. PERRY, Chicago, Ill., assignor to Perry Time Stamp Company, Chicago, Ill., a Corporation of Illinois. Filed Apr. 22, 1905. Serial No. 256,915.



1. In a time stamp, the combination with a frame having gage parts adapted to engage the surface to be impressed and adjust the impression mechanism relatively thereto, of an impression mechanism having moving time controlled parts, a horologic motor for driving said parts mounted wholly on said frame, said impression mechanism being movable relatively to said motor mechanism to make an impression, and a plurality of shafts, one of said shafts being operatively connected to said motor mechanism and another of said shafts being operatively connected to the time driven elements of said impression mechanism, said shafts constituting a continuous connection between said motor mechanism and said impression mechanism, and being adapted to occupy a substantially horizontal position when the stamp is in its normal position and adapted to move toward a vertical position when an impression is made, whereby shafts of the required length may be used without increasing the height of the stamp.

2. In a time stamp, the combination with impression mechanism, having moving time controlled parts, of a horologic motor for driving said parts, said impression mechanism being movable relatively to said motor mechanism to make an impression, and a plurality of shafts, one of said shafts being operatively pivoted or hinged to said motor mechanism and another of said shafts being operatively pivoted or hinged to the time driven elements of said impression mechanism, said shafts constituting a continuous connection between said motor mechanism and the time driven elements of said impression mechanism, and being adapted to slidingly engage each other when the impression mechanism is moved to make an impression.

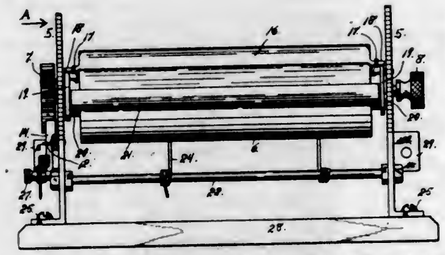
3. In a time stamp, the combination with a frame having gage parts adapted to engage the surface to be impressed and adjust the impression mechanism relatively thereto, of a horologic motor carried wholly by said frame, an impression mechanism operated by said motor and moved away from said motor in making an impression, and a motion transmitting device continuously connecting said motor and impression mechanism and arranged to occupy a substantially horizontal position when under normal conditions to reduce the space between said motor and impression mechanism to the minimum and move toward a vertical position when the impression mechanism is moved to make an impression.

4. In a time stamp, the combination with a frame having gage parts adapted to engage the surface to be impressed and adjust the impression mechanism relatively thereto, of a horologic motor carried wholly by said frame, an impression mechanism operated by said motor and movable relatively thereto in making an impression, a shaft continuously connecting said motor and impression mechanism and arranged to occupy a substantially horizontal position under normal conditions to reduce the space between said motor and impression mechanism to the minimum and adapted to move toward a vertical position when the impression mechanism is moved to make an impression.

5. In a time stamp, the combination with a frame having gage parts adapted to engage the surface to be impressed and adjust the impression mechanism relatively thereto, of a horologic motor carried wholly by said frame, an impression mechanism operated by said motor and movable relatively thereto in making an impression a splined shaft continuously connecting said motor and impression mechanism and arranged to occupy a substantially horizontal position under normal conditions to reduce the space between said motor and impression mechanism to the minimum and move toward a vertical position when the impression mechanism is adapted to move to make an impression.

[Claims 6 to 10 not printed in the Gazette.]

885,677. MANUSCRIPT OR COPY HOLDER. GEORGE H. PHELPS, Downer, Colo. Filed June 11, 1907. Serial No. 378,455.



1. In a manuscript holder, the combination with a suitable frame, of a roller journaled therein and provided with a longitudinal groove formed in its outer surface, a spring-actuated clamping plate engaging said groove and normally held flush with the face of the roller, the said plate having end extensions, and cam members carried by the frame and lying in the path of said extensions when the roller is reversed causing the extensions to override the cams and lift the clamping edge of the plate out of the groove, the said cams being loosely mounted to allow the extensions to pass thereunder when the roller is turning in its normal direction.

2. In a manuscript holder, the combination with a frame work, a roller journaled therein, a spring-actuated clamping device mounted on the face of the roller and provided with end extensions, cam members mounted on the frame and lying in the path of the rollers, the said cam members being loosely mounted to allow the extensions to pass thereunder when the roller is moving in one direction, while the end extensions are caused to override the cams when the roller is moved in the opposite direction, whereby the clamping plate is raised from the roller to permit the insertion of the manuscript, substantially as described.

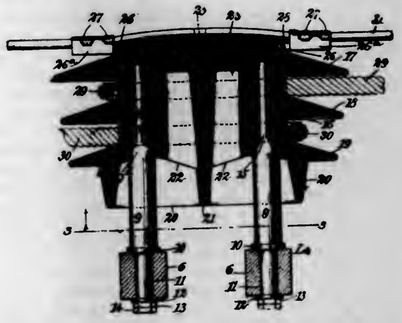
3. In a manuscript holder, the combination with a frame, of a roller journaled therein and provided with a spring-actuated clamping plate, the said plate having end extensions, a marker also mounted on the frame adjacent the clamping plate, and cam members loosely mounted on the marker and lying in the path of the end extensions and clamping plate, whereby when the roller is turned in one direction, the said extensions pass under the cam members, while when the rollers are turned in the opposite direction the said extensions are caused to override the cam members for the purpose set forth.

4. In a manuscript holder, the combination with a frame, of a roller journaled therein and provided with a spring-actuated plate, means mounted on the frame and adapted to engage the clamping plate for automatically lifting the latter to the manuscript receiving position, when the roller is turned in the direction opposite its normal travel, substantially as described.

5. In a manuscript holder, the combination with a suitable frame, of a roller journaled therein, means mounted on the roller for grasping a sheet of manuscript, whereby the latter is caused to wind thereon as the roller is turned, a ratchet wheel mounted on one extremity of the roller, a cam member mounted on the frame and lying in the path of the roller for the purpose described an actuating lever journaled on the frame, and a pawl loosely pivoted on the lever and acting to engage the ratchet to rotate the roller as the lever is operated, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

885,678. INSULATOR FOR HEAVY CURRENTS. LOUIS STEINBERGER, New York, N. Y. Filed Jan. 26, 1906. Serial No. 297,991.



1. An insulator, comprising a hollow member of insulating material provided with a portion for sustaining a wire, and also provided with webs whereby said member is strengthened, and a plurality of supports connected with said member and spaced apart.

2. An insulator, comprising a hollow member of insulating material provided internally with webs, supporting pins engaging said hollow member of insulating material and mounted upon opposite sides of said webs, and means for mounting an electrical conductor upon said body member of insulating material.

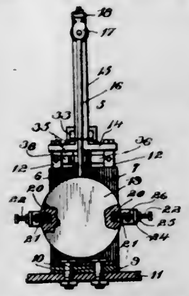
3. An insulator, comprising a member of insulating material provided with a plurality of hoods and with spaces intermediate of said hoods for the purpose of dead-ending cables, and a plurality of distinct supports engaging said member of insulating material for distributing the weight thereof.

4. An insulator, comprising a pair of twin cross arms, means for supporting said cross arms apart from each other, a pin mounted upon each cross arm, a body of insulating material engaging said pins, and means for supporting a conductor upon said body of insulating material.

5. An insulator, comprising a member of insulating material provided with means for supporting a conductor and also provided with a web, and a pair of pins connected with said member and spaced apart in a direction parallel with the plane of said web for the purpose of distributing to it the strains upon said pins.

[Claims 6 to 19 not printed in the Gazette.]

885,679. AUTOMATIC REFLECTOR FOR LOCOMOTIVES. NATHANIEL A. TERRELL, Charlottesville, Va., assignor of one-half to John Raines, Charlottesville, Va. Filed May 14, 1907. Serial No. 373,598.



1. In a headlight for locomotives, the combination of a reflector, a pendulum associated with said reflector, intermediate mechanism for communicating movement of said pendulum to said reflector, said reflector being provided with a depression near the edge thereof, a spring having a projection thereof for interlocking engagement with said depression for holding said reflector in a centered position after it is centered by the said pendulum, substantially as described.

2. In a headlight for locomotives, the combination of a reflector, a pendulum associated therewith, intermediate mechanism for communicating movement of said pendulum to said reflector, a spring having means thereon for interlocking engagement with said reflector for holding said reflector in a centered position after it has been centered by said pendulum, substantially as described.

3. In a headlight for locomotives, the combination of a reflector, a pendulum associated therewith, intermediate mechanism for communicating movement of said pendulum to said reflector, said pendulum being provided with radial cavities therein, a coil spring in each of said radial cavities, and means for increasing or diminishing the tension of said springs, substantially as described.

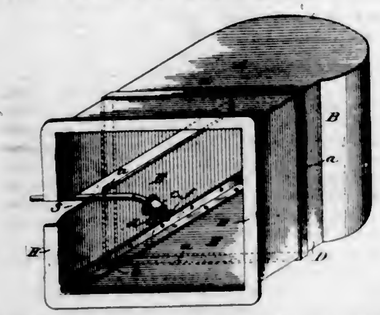
4. In a headlight for locomotives, the combination of a reflector, a pendulum, intermediate mechanism for communicating movement of said pendulum to said reflector, means for normally centering said reflector, and resilient means associated with said pendulum for altering the swing of said pendulum and for causing the same to swing more freely to one side than to the other, substantially as described.

5. In a headlight for locomotives, the combination of a reflector, a pendulum, intermediate mechanism for communicating movement of said pendulum to said reflector, means for normally centering said reflector, and means associated with said pendulum for altering the swing of said pendulum upon inclination of the locomotive at the curves in the track and for causing the reflector to project the light on the track irrespective of the extent of inclination of the locomotive, substantially as described.

[Claim 6 not printed in the Gazette.]

885,680. MAIL-BAG-RECEIVING DEVICE. CORNELIUS THOEN, Maywood, Ill. Filed Jan. 6, 1908. Serial No. 409,530.

1. In a device of the class described the combination with a car and its doorway, a curved mail bag delivering arm, said arm pivoted on a plate fastened to a mail car door frame, a receptacle stationed at a convenient distance from the car to receive the mail bag when delivered, and a collar having a flange and ring.



2. In a device of the class described the combination with a car and its doorway, a curved mail bag delivering arm, said arm pivoted on a plate fastened to a mail car door frame, a receptacle stationed at a convenient distance from the car to receive the mail bag when delivered, and a delivery arm having two releasing springs attached to end of said delivery arm.

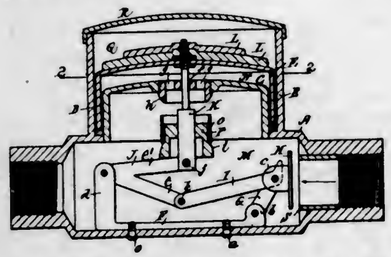
3. In a device of the class described the combination with a car and its doorway, a curved mail bag delivering arm, said arm pivoted on a plate fastened to a mail car door frame, and a receptacle stationed at a convenient distance from the car to receive the mail bag when delivered, said receiving device having an enlarged entrance in its side, and arranged to disengage the mail bag from the delivering arm.

4. In a device of the class described the combination with a car and its doorway, a curved mail bag delivering arm, said arm pivoted on a plate fastened to a mail car door frame, and a receptacle stationed at a convenient distance from the car to receive the mail bag when delivered, the receiving device having a curved edge around the entrance.

5. In a device of the class described the combination with a car and its doorway, a curved mail bag delivering arm, said arm pivoted on a plate fastened to a mail car door frame, and a receptacle stationed at a convenient distance from the car to receive the mail bag when delivered, the receiving device having an end made in a semi-circle.

[Claim 6 not printed in the Gazette.]

885,681. GAS-PRESSURE REGULATOR. JOHN W. WEEKS, Providence, R. I. Filed May 15, 1907. Serial No. 373,874.



1. In a gas regulator, the combination of the valve casing, the inlet valve, the gasometer, the gasometer spindle and the connecting links, whereby the inlet valve and gasometer are caused to move simultaneously, and a connected valve for closing the gas passage to the chamber of the gasometer, upon the closing of the inlet valve.

2. In a gas regulator, the combination of the valve casing, the regulating gasometer, the cup-formed shell provided with openings through which the gas passes from the chamber of the valve casing to the chamber of the gasometer, the spindle of the gasometer passing loosely through an opening in the said shell, the forked link jointed at one arm to the spindle of the gasometer the frame to which the forked link is pivoted, the link jointed to the other arm of the forked link, and the inlet valve jointed to the said frame, and to the link which is jointed to the arm of the forked link.

3. In a gas regulator, the combination of the valve casing, the inlet valve, the gasometer, the gasometer spindle, the circular valve seat upon the said spindle, the connecting links whereby the inlet valve and gasometer are caused to move simultaneously, the shell which serves to separate the chamber of the gasometer from the chamber of the valve casing and is provided with an opening between the said chambers, the valve seat upon the shell surrounding the said opening, and the loose annular valve held between the said valve seats of the gasometer spindle and the casing.

4. In a gas regulator, the combination of the valve casing, the inlet valve, the gasometer, a gasometer spindle connected therewith, connections from said spindle to said inlet-valve, the shell provided with an opening adapted for communication between the chamber of the valve casing and the chamber of the gasometer, the circular valve seat surrounding the said opening, and a valve carried by said gasometer spindle for closing said opening upon the closing of the inlet valve.

885,682. REMOVABLE COVER FOR BOXES OR CANS. JOHN ZIMMERMAN, Chicago, Ill., assignor of one-half to Harry Irwin Cromer, Chicago, Ill. Filed Jan. 28, 1907. Serial No. 354,422.

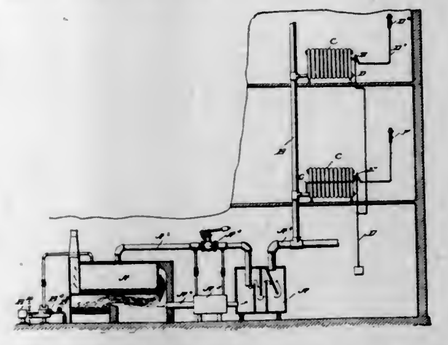
1. A box-body, and a cover having a depending flange the upper portion of which is in engagement with the box-body and the lower portion of which is provided with box-engaging segmental circular portions in securing engagement with the box-body and with a laterally projecting flexible portion extending outward between such lower box-engaging portions of the flange and adapted to be bent inward and thereby spread the lower portion of the flange to loosen the cover, the portion of the box which is encircled by the cover flange being smooth and free from projection.

2. A box-body having annular side walls provided with an upper outer surface portion which is smooth and free from lateral projection, and a cover having a depending flange the upper portion of which encircles the smooth upper portion of the box-body and the lower portion of which is provided with box-engaging portions in securing engagement with the box-body and with laterally projecting flexible portions on opposite sides of the cover, between box-engaging portions of the flange, adapted to be bent inward and thereby spread the box-engaging lower portions of the flange, to loosen the cover.

3. A box-body having circular walls and having a bead near the top of the body and a marginal portion between the said bead and the upper edge of the body which is smooth and free from projections, and a cover having a depending flange the upper portion of which is circular and in engagement with the box-body and the lower portion of which is provided with box-engaging segmental circular portions on opposite sides of the box-body, and downwardly and outwardly inclined laterally projecting flexible portions on opposite sides of the cover, between box-engaging portions of the flange, adapted to be bent inward and thereby spread the box-engaging lower portions of the flange, to loosen the cover.

4. A box-body, and a metallic cover having a depending inclosing flange the upper portion of which is circular and in engagement with the box-body and the lower portion of which is elliptical and in binding engagement with the box-body at the shorter diameter of the elliptical portion of the flange, the elliptical portion of the flange, at its longer diameter, extending laterally beyond and out of engagement with the box-body on opposite sides of the cover and forming flexible flaring portions between box-engaging flange portions and adapted to be bent inward and thereby spread the lower box-engaging portion of the flange to loosen the cover.

885,683. HEATING DEVICE. CHARLES G. ARMSTRONG, Chicago, Ill., assignor to Automatic Heating Company, Jersey City, N. J., a Corporation of New Jersey. Filed Mar. 8, 1902. Serial No. 97,297.



1. A regulating heating device comprising a source of supply of heating fluid, a heater, a connection between the source of supply and the heater, means for admitting air to the heater through the supply pipe, said heater arranged so as to confine the air therein, and cause it to displace steam, and means independent of the introducing means for withdrawing in part or in whole the air in the radiator.

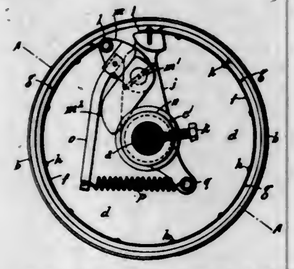
2. A heating device comprising a heater and a steam generator connected together, means for mixing a noncondensing gas with the steam, this mixture being inserted into the heater so that the non-condensing gas will accumulate in the heater as the steam gradually condenses so as to decrease the effective radiating area, a withdrawing device for withdrawing a portion of said noncondensing gas, said withdrawing device responsive to variations in temperature of the apartment to be heated.

3. A heating device comprising a heater and a steam generator connected together, means for mixing a noncondensing gas with the steam, this mixture being inserted into the heater so that the non-condensing gas will accumulate in the heater as the steam gradually condenses so as to decrease the effective radiating area, a withdrawing device for withdrawing a portion of said non-condensing gas, a controlling device for said withdrawing device responsive to variations in temperature of the apartment to be heated.

4. A heating device comprising a source of supply of heating fluid, one or more heaters and means for mixing a noncondensing gas with the heating fluid before being inserted into the heater, means for confining the noncondensing gas in the radiator, and a device for partially or wholly withdrawing it, said device independent of the means for introducing said non-condensing gas into the heater.

5. A heating system comprising a source of supply of heating fluid, means for mixing a noncondensing gas with the heating fluid and then inserting such mixture in the heater, and a device responsive to variations in temperature of the apartment to be heated for withdrawing a portion of said non-condensing gas from the heater when the temperature of the apartment falls below a predetermined point.

885,684. FRICTIONAL DRIVING-GEAR. DENIS M. BROUGHTON, Woodford Green, England, assignor of one-half to The British Sigarera Limited, London, England. Filed Sept. 14, 1907. Serial No. 392,830.



1. In a clutch, the combination of a shaft, a pulley mounted on said shaft and provided with a rim, a resilient strap, the tension of which is normally outward to impinge the inner surface of the rim, an arm fixed to the shaft and connected to the strap, a pivotally mounted lever pivotally connected to the opposite end of the strap, a slidable beveled member operable in the path of movement of the pivotally mounted arm to withdraw the strap out of contact with the rim.

2. In a clutch, the combination of a shaft, a pulley loosely mounted on said shaft and provided with a rim, a resilient strap, the tension of which is normally outward to impinge the inner surface of the rim, an arm fixed to the shaft, and connected to the end of the strap, a bell crank lever pivoted to the arm and pivotally connected to the opposite end of the strap, a spring normally pulling one arm of the bell crank lever toward the shaft to increase the friction between the strap and rim, and a slidable element operable in the path of movement of the bell crank lever to rock the same to disengage the strap from the inner surface of the rim.

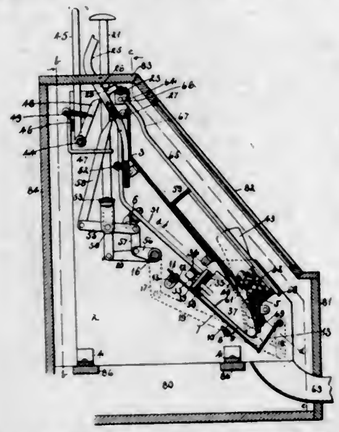
3. In a clutch, the combination of a shaft, a pulley mounted thereon, a resilient strap normally in frictional contact with the pulley, means connecting one end of the strap to the shaft, a pivoted lever connected to said latter means and the opposite end of the strap, and a sliding beveled collar operable in the path of movement of the pivoted lever to disengage the strap from the pulley and thereby free the said pulley on the shaft.

4. In a clutch, the combination of a shaft, a pulley mounted thereon and having an outwardly extending rim, an arm fixed to the shaft and connected at its outer end to the strap, a bell crank lever pivotally mounted on the arm, one member being pivoted to the strap and the other member of said bell crank lever being located in the path of movement of a releasing element, and a sliding releasing element for operating the bell crank lever to release the strap from contact with the inner surface of the outwardly extending rim.

5. In a clutch, the combination with a shaft, a pulley loosely mounted on said shaft and having a rim, a resilient strap normally engaging the inner surface of the rim, an arm fixed to the shaft and connected at its outer end to one end of the strap, a bell crank lever pivoted to the arm, one member of the bell crank lever being pivoted to the opposite end of the strap, the other member of the bell crank lever being in the path of movement of a releasing element, an arm extending from the bell crank lever, a spring connected to the latter arm and a projection fixed to the shaft, and a slidable element engaging one arm of the bell crank lever to release the strap from frictional engagement with the rim to free the pulley on the shaft.

885,685. CIGAR-VENDING MACHINE. WALLACE BUTLER, Davis Junction, Ill., assignor of one-half to William C. Doyle, Sycamore, Ill. Filed Mar. 18, 1907. Serial No. 363,111.

1. A cigar vending machine, comprising a cigar magazine having a movable wall to engage the ends of cigars therein, means for moving the wall, a cigar receptacle located beneath the magazine and having a movable wall, and means for moving the wall of the receptacle.



2. A cigar vending machine, comprising a cigar magazine having a movable and adjustable wall to engage the ends of cigars therein, means for moving the wall, a cigar receptacle located beneath the magazine and having a movable wall, and means for moving the wall of the receptacle.

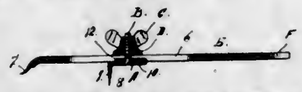
3. A cigar vending machine, comprising a cigar magazine having a movable wall to engage the ends of cigars therein, means for moving the wall, a cigar receptacle located beneath the magazine and having a movable wall, means for moving the wall of the receptacle, an agitator, and means for moving the agitator.

4. A cigar vending machine, comprising a cigar magazine having a movable wall, means for moving the wall, a cigar receptacle located beneath the holder and having a movable wall, means for moving the wall of the receptacle, and means for preventing the movement of the wall of the holder while the wall of the receptacle is in its open position.

5. A cigar vending machine, comprising a cigar box support having a cigar passage, a cigar box resting on said support and provided with a cigar passage in register with that of said cigar box support, a cigar receptacle, a cigar magazine communicating with the cigar passages through the cigar box and cigar box support and leading to said cigar receptacle, means engaging cigars in said magazine, means for releasing such engagement to permit discharge of the cigars from said magazine to said receptacle, and means for permitting discharge of cigars from said receptacle.

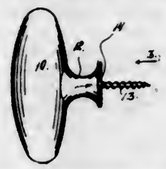
[Claims 6 to 11 not printed in the Gazette.]

885,686. CAN-OPENER. FRANK CANFIELD, Denver, Colo., assignor of one-half to Volney Howard, Denver, Colo. Filed May 10, 1906. Serial No. 316,152.



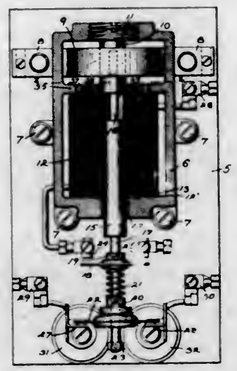
A can opener comprising a plate slotted intermediate its extremities, one of its extremities having a downwardly bent pointed portion adapted to enter the can to be opened, a knife slidable in the slot and having a downwardly extending cutter, and a body part provided with a reinforcing member bent thereupon to form a tongue adapted to enter and slide in the slot of the body of the tool, the body of the knife overlapping the slot, a screw whose head is countersunk in the body of the knife, a thumb nut applied to the screw on the opposite side of the body of the tool, and a washer interposed between the thumb nut and the body of the tool.

885,687. DEVICE FOR ATTACHING HANDLES TO DOORS. MONTFORD S. CHENOWETH, Denver, Colo. Filed June 1, 1906. Serial No. 319,701.



The herein described attachment for doors consisting of a hand hold provided with a screw adapted to be inserted in the door, and an apertured lug projecting laterally from the hand hold and adapted to receive a fastening device to prevent the hand hold from turning.

885,688. RELAY. ARCHIBALD S. CUBITT, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Aug. 24, 1907. Serial No. 390,031.



1. In a relay, a current carrying coil, a core movable in the magnetic field thereof, a frame serving as a path for the magnetic flux, and adjustable means coöperating with said frame for shunting more or less of the flux around said core.

2. In a relay, a current carrying coil, a core movable in the magnetic field thereof, a frame serving as a path for the flux and as a magnetic shunt around said core, and means for varying the reluctance of the shunt path.

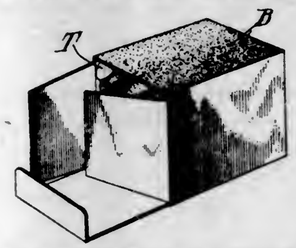
3. In a relay, a current carrying coil, a core movable in the magnetic field thereof, a frame serving as a path for the flux and as a magnetic shunt around said core, and bushings for varying the reluctance of the shunt path.

4. In a relay, a current carrying coil, a core movable in the magnetic field thereof, a frame for supporting said core and serving as a path for the flux and as a magnetic shunt around said core, and bushings arranged to nest one within the other for varying the reluctance of the shunt path.

5. In a relay, a current carrying coil of few turns, a current carrying coil of many turns, a core movable in the field produced by both coils, a frame for supporting said core and serving as a path for the flux, and an adjustable extension on said frame for shunting a portion of the flux of the first mentioned coil around said core.

885,689. PYROTECHNIC DEVICE. NICHOLAS DEL GRANDE, Petersburg, Va. Filed Jan. 3, 1907. Serial No. 350,573.

As a new article of manufacture a pyrotechnic device comprising a holder having one of its outer walls coated with an igniter compound consisting of amorphous phosphorus, gum arabic and plaster of paris, and a plurality of tablets inclosed by the holder and consisting of sugar of milk, gum arabic, and a solid inorganic oxidizing salt



that will give a colored flame upon ignition, the igniting of the tablets being effected by striking them upon the igniter surface of the holder.

885,690. GLOBE. WILLIAM DUBOIS, Chicago, Ill., assignor to Rand, McNally & Co., Chicago, Ill., a Corporation. Filed Dec. 14, 1905. Serial No. 291,760.



1. The combination of a globe, a support, a plate secured to the globe at a pole thereof, and an axle separate from the support and plate and arranged between them, the support and plate having means for engaging the axle and holding it in place, substantially as described.

2. The combination of a globe, a support, a plate secured to the globe at one pole thereof, an axle separate from the support and plate and arranged between them, both the support and plate having sockets for receiving the ends of the axle, and means for supporting the globe at the other pole, substantially as described.

3. The combination of a globe, a support, a plate secured to the outside of the globe at one pole thereof, an axle separate from the support and plate, and arranged between them, both the support and the plate having sockets, closed at one end, for receiving the ends of the axle, and means for supporting the other pole of the globe, substantially as described.

4. The combination of a globe, a strengthening block arranged within the globe at a pole thereof, means for permanently securing the strengthening block to the globe, a plate arranged on the outside of the globe opposite said block, and freely adjustable in directions transverse to its axis, means for securing the plate to the globe, a support, and an axle extending from the support to the plate and terminating at the plate, substantially as described.

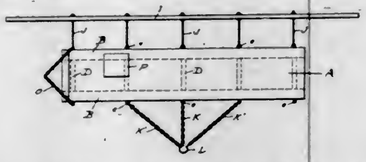
5. The combination of a globe, a strengthening block arranged within the globe at a pole thereof, means for permanently securing the block to the globe, a plate arranged on the outside of the globe opposite the strengthening block and freely adjustable on the globe in directions transverse to its axis, fastening devices passing through the plate, through the shell of the globe and into the block, a support, and an axle arranged between the support and plate and terminating at the plate, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

885,691. WEED-KILLER. JOSEPH F. DUNN, St. Joseph, Mo. Filed Jan. 20, 1908. Serial No. 411,671.

1. In a weed killer the combination with front and rear runners set crosswise, a detachable brake-bar spaced backward of said runners, iron bars having turned right angle flat ends thereof between said runners, bolts having nuts to lock said runners and said right angle ends together,

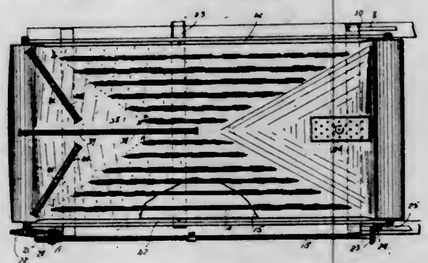
eyes in the heads of said bolts, rods and hooked ends thereof to connect said brake-bar with the rear runner, a deck and a seat and storage box thereon, halved bridge timbers carried by said runners, angle irons in corresponding forward position on said runners and brake-bar and chains connected with the front and end of the device, substantially as set forth and shown.



2. In a weed killer the combination of front and rear runners and an angle iron on the bottom front angle of each runner, bars holding said runners spaced rigidly apart, a brake-bar of greater length than the runners detachably connected with and spaced from the rear runner and means for hauling the device either forward or endwise, substantially as shown and set forth.

3. In a weed killer a forward runner, a runner spaced from and rearward of the forward runner, bars connecting said runners, a deck provided with a detachable box for seat and storage, an angle iron rigidly fastened on the lower front angle of each runner, and means for drawing said device, substantially as described and shown.

885,692. CONCENTRATING APPARATUS. JAMES P. EVANS and RANDALL P. AKINS, Denver, Colo., assignors of one-fifth to Isabel Nesmith Evans, Denver, Colo. Filed Jan. 21, 1907. Serial No. 353,245.



1. A concentrator comprising a table or concentrating surface having a forwardly and centrally located depressed feed space, a centrally located longitudinally disposed apex extending rearwardly from the feed space, the top of the table being transversely inclined on opposite sides of the apex, said sides being provided with longitudinally disposed riffles arranged parallel to the apex suitable means for feeding the material to be treated, to the forward portion thereof, and suitable means for supplying the table with wash water, substantially as described.

2. A concentrator provided with a concentrating surface or top, comprising a forwardly located depressed feed space, an apex extending longitudinally between and parallel with the side lines of the said top, the latter being transversely inclined from the said apex, and provided with riffles arranged parallel to said apex, substantially as described.

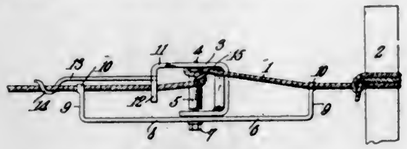
3. A concentrator comprising a concentrating surface or top having a forwardly and centrally located triangular depressed feed space, a longitudinally disposed apex located between the side lines of the top and extending parallel with the length of the table, the latter being transversely inclined from the apex downwardly in opposite directions, said table being provided with longitudinally disposed riffles arranged parallel to the apex and suitable means for imparting a longitudinal vibration to the said top, substantially as described.

4. A concentrating apparatus comprising a top having a forwardly located depressed feed space, a centrally located longitudinally disposed apex, the top being transversely inclined downwardly from the said apex, the said top being provided with longitudinally disposed riffles arranged parallel to the apex and extending rearwardly from the feed space.

5. A concentrator comprising a top and a forwardly located depressed feed space, a centrally located longitudinally disposed apex from which the sides of the table slope transversely downwardly in opposite directions, the sloping sides of the table being provided with longitudinally disposed riffles arranged parallel to the apex.

[Claims 6 to 30 not printed in the Gazette.]

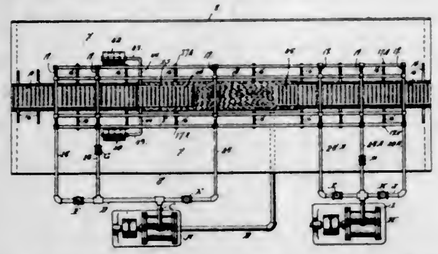
885,693. WIRE-STRETCHER. JOHN T. GARDNER, Buffalo, Mo., assignor to Levi Engle, Buffalo, Mo. Filed Apr. 25, 1907. Serial No. 370,253.



1. A wire stretcher comprising a yoke, a spool journaled within the yoke, an extension projecting from the yoke and at an angle thereto, an angular upstanding arm integral with the extension and extending partly across the open end of the yoke, an arm projecting beyond the extension and having a hooked terminal, a key detachably connected between its ends to the spool, and oppositely disposed hooks carried by the end portions of the arm and disposed in a plane extending longitudinally of the center of the yoke.

2. The combination with a flexible connecting device; of a stretcher comprising a yoke, a spool journaled therein, means carried by the spool for engaging said device, an intermediate holding arm connected to the yoke and disposed to overhang said device, a hooked holding arm extending beyond the yoke for engaging the flexible device, said device being disposed to extend over the yoke and hook and beneath the intermediate holding arm, and a key detachably connected to and disposed to actuate the spool, said key having oppositely disposed hooks carried by the terminals thereof for simultaneously engaging the flexible device when rotating in one direction.

885,694. PROCESS OF TREATING ANIMALS. FRANK C. GOFF, Denver, Colo. Original application filed July 16, 1907, Serial No. 384,061. Divided and this application filed Nov. 6, 1907. Serial No. 401,027.



1. A process for the treatment of live stock, consisting first in subjecting the animals to the action of liquid and subsequently subjecting them to the action of gas under pressure.

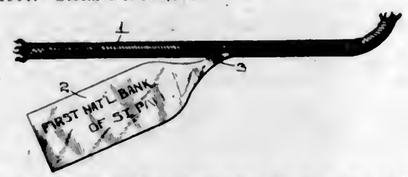
2. A process for the treatment of live stock, consisting first in subjecting the animals to liquid sprays, and subsequently subjecting them to air sprays.

3. A process for the treatment of live stock, consisting first in subjecting the animals to the action of a liquid insecticide and subsequently to the action of sprays of gas.

4. A process for the treatment of live stock consisting first in subjecting the animals to the action of a liquid insecticide, and subsequently subjecting them to the action of air under pressure for the purpose set forth.

5. A process for the treatment of live stock, consisting first in subjecting the animals to the action of a liquid insecticide delivered in the form of sprays, and finally subjecting them to the action of sprays of air.

885,695. BAG-TIE. MILFORD E. JEWETT, Keokuk, Iowa. Original application filed Mar. 21, 1907, Serial No. 363,748. Divided and this application filed May 20, 1907. Serial No. 374,630.



The combination with a package tie, of a tag having a connecting piece interwoven into said tie, substantially as set forth.

885,696. [WITHDRAWN.]

885,697. TURPENTINE-CUP. EDWIN A. MCKOY, New Orleans, La. Original application filed June 10, 1907, Serial No. 378,203. Divided and this application filed Oct. 25, 1907. Serial No. 399,202.



1. In a device of the class described, a substantially plain apron, and a wire secured along one edge of the apron and with its opposite ends extending beyond the opposite ends of the said apron.

2. In a device of the class described, a substantially plain apron, and a wire secured along the lower longitudinal edge of and extending at its opposite ends beyond the ends of the apron.

3. In a device of the class described, a substantially plain apron provided with a roll at its lower longitudinal edge, and a wire embraced by the roll and having its opposite ends formed to serve as a support for a receptacle.

4. In a device of the class described, a substantially plain apron provided with a roll along its lower longitudinal edge, and a wire embraced within the roll and having its opposite ends extending beyond the opposite ends of the apron.

5. In a device of the class described, an apron provided with a roll at one edge, and with a wire embraced within the roll and having its opposite ends extended beyond the roll and formed to serve as supporting members for a receptacle.

[Claim 6 not printed in the Gazette.]

885,698. WEIGHING APPARATUS. HORATIO B. OSGOOD, Binghamton, N. Y., assignor to Osgood Scale Company, Binghamton, N. Y., a Corporation of New York. Filed Dec. 6, 1906. Serial No. 346,571. Renewed Aug. 30, 1907. Serial No. 390,826.

1. In a scale, the combination of independent gages, actuating means for operating certain of said gages during loading of the scale throughout its full capacity, shifting means for adjusting said actuating means to operate the other of said gages, and manually operated means for actuating said shifting means at any load within the capacity of the scale, substantially as described.



2. In a scale, the combination of independent gages, actuating means for operating certain of said gages during loading of the scale throughout its full capacity, shifting means for adjusting said actuating means to operate the other of said gages, manually operated means for actuating said shifting means at any load within the capacity of the scale, and means for indicating the extent of movement of said shifting means, substantially as described.

3. In a scale, the combination of a traveling link, a pair of gages, connections between said traveling link and gages, means for converting said link into a lever at a predetermined loading of the scale, and shifting means for re-converting said link from a lever to a traveling link, substantially as described.

4. In a scale, the combination of a traveling link, a connecting rod for actuating said link, a pair of gages, connections between said traveling link and gages, means for converting said link into a lever at a predetermined loading of the scale, and shifting means for adjusting said link to re-convert it from a lever to a traveling link, substantially as described.

5. In a scale, the combination of a traveling link, a pair of gages, connections between said traveling link and gages, means for converting said link into a lever at a predetermined loading of the scale, shifting means for re-converting said link from a lever to a traveling link, and manually operated means for actuating said shifting means at any load within the capacity of the scale, substantially as described.

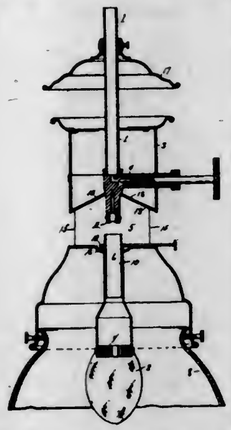
[Claims 6 to 20 not printed in the Gazette.]

885,699. LAMP. EDWARD H. PALMER and WILLIAM A. WILLITS, Detroit, Mich.; said Willits assignor to said Palmer. Filed Sept. 17, 1906. Serial No. 334,861.

1. In combination with a depending feed pipe and a regulating valve therefor, a mixing chamber below said feed pipe and spaced therefrom, a chimney surrounding the mixing chamber and the lower part of the feed pipe, an air chamber located within the chimney closed at its bottom and sides and provided with openings thereinto through the walls of said chimney adapted to admit of the production of a starting flame therein, and with a perforated diaphragm forming the upper side of said chamber, and located below the upper end of said chimney whereby a portion of the feed pipe hanging in said chimney is in position to be exposed to hot air currents arising from either the combustion at the mantle or from a combustion within said air chamber, substantially as described.

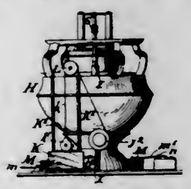
2. In combination with a chimney for a hanging vapor

producing and burning lamp, a mixing chamber and a fresh air supply chamber located within said chimney, a feed pipe hanging into said chimney and having a portion thereof within said chimney and above said fresh air



chamber exposed to heated air rising from below said fresh air chamber, said fresh air chamber being provided with discharge openings through the upper wall thereof into the said chimney, substantially as described.

885,700. HEATER FOR FREIGHT-CARS. CASSIUS C. PALMER, New York, N. Y., assignor to Railway & Stationary Refrigerating Company, a Corporation of Delaware. Filed Oct. 24, 1901. Serial No. 79,837.



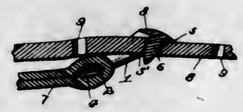
1. The combination with a car, of a heater therefor including a lamp member, an extinguishing device comprising, a rod for raising and lowering the wick of the lamp member, a vertically movable weight connected to the rod, a trip for holding the weight in an elevated position, and means for actuating the trip to operate the weight, such means comprising a longitudinally sliding displaceable weight.

2. The combination of a car, a heater therefor including a lamp, a rod for raising and lowering the wick of the lamp, a weight movable in guides for actuating said rod, an arm having a projection for sustaining the wick in an elevated position, a second weight sustaining the arm in its wick-elevating position, said sustaining weight being adapted to be displaced by a shock or jar to the car.

3. The combination of a car, a heater therefor, including a lamp, a rod coöperating with the wick of the lamp to lower the latter, an arm for normally holding said rod out of action, a weight to which said arm is attached, said weight being displaceable by shock to release the rod, and means for regulating the movement of the weight to accommodate its action to variations of shock.

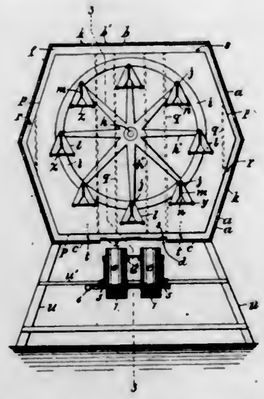
885,701. BUCKLE. CHARLES A. PATTERSON, Portland, Oreg. Filed Mar. 20, 1907. Serial No. 363,348.

A one-piece buckle comprising spaced side bars, a clamping plate having an inner flat face and an outer curved face, connecting the side bars at one end, the inner face of said plate lying at an angle to the line of normal strain, a stud projecting at direct right angles to said inner face of the clamping plate, the forward edge of the clamping plate being of appreciable width to form a binding face and lying in a plane coincident with the plane of the forward edges of the side bars and at an



angle to the plane of the inner face of the clamping plate, a connector-bar joining the side bars at the opposite end, and an approximately semicircular projection extending rearwardly from the connector-bar in a plane coincident with a plane passing through a median longitudinal line of the side bars.

885,702. PORTABLE REVOLVING BAKER'S GAS-OVEN. SAMUEL STEWART, Newark, N. J. Filed Jan. 17, 1907. Serial No. 352,673.



1. The combination, with the casing containing the baking chamber provided with a longitudinal opening in the bottom, of a series of burners situated beneath said chamber and communicating with said opening, means for independently regulating said burners, baffle-plates situated above said burners, and a removable support for said baffle-plates.

2. The combination, with the casing containing a baking chamber provided with a longitudinal opening in the bottom, of a series of burners situated beneath said chamber and communicating with said opening, means for independently regulating said burners, baffle-plates situated above said burners, wheels rotated within the casing adjacent to the heads with pivots thereon and shelf-hangers suspended from the pivots, angle tie-bars connecting the opposite edges of the shelf-hangers, and gratings supported detachably upon the angle-bars to form the shelves, with the vertical flanges of the angle-bars projected above the grating, whereby such flanges perform the double function of holding the gratings detachably upon the bars and of maintaining the baking pans in place when set upon the gratings.

3. A portable revolving baker's gas-oven, comprising a sheet-metal casing having sides and heads with a shaft extended through the heads, wheels secured to the shaft near the heads of the casing with pivots thereon and shelves suspended from the pivots, a door in the side of the casing, a longitudinal opening in the bottom of the casing, a series of gas burners discharging their heated gases into the casing, and flue-plates attached to the heads of the casing forming a downward flue with inlet

at the top of each flue for the entrance of the condensed gases, and outlet at the bottom for discharging such gases.

4. A portable revolving baker's gas-oven, comprising a sheet-metal casing having sides and heads with a shaft extended through the heads, wheels secured to the shaft near the heads of the casing with pivots thereon and shelves suspended from the pivots, a door in the side of the casing, a longitudinal opening in the floor of the casing, a row of gas burners discharging their heated gases into the opening excepting near the ends, and flue-plates attached to the heads of the casing forming a downward flue with inlet at the top and sides for the entrance of the condensed gases, and outlet at the bottom for discharging such gases through the ends of the opening in the floor of the casing.

5. A portable revolving baker's gas-oven, comprising a casing having the sides formed of double walls of sheet-metal with an intervening layer of incombustible and non-heat conducting material to resist radiation of heat, and heads formed of metal only to permit radiation of heat, a reel having suspended shelves rotated within the casing, a door in the side of the casing for access to the shelves, gas burners discharging their heated gases into the casing, and outlet flues for the condensed gases contiguous to the metallic heads.

885,703. WINDOW CONSTRUCTION. CHARLES E. STOSE, Kansas City, Mo., assignor of forty one-hundredths to Walter Munch, Kansas City, Mo. Filed Feb. 2, 1907. Serial No. 355,495.



1. In combination with a window casing provided with uprights, one of said uprights having a recess provided with end walls; a stationary jamb secured to one upright, a movable jamb adapted to move within the recess in the other upright, a sash adapted to move between said jambs and to have wedging engagement therewith, a spring mounted on each of said end walls of the recess, said springs having opposite tensions, members within said recess adapted to engage the movable jamb and the opposite wall of the recess under the opposing tensions of said springs to normally produce relative horizontal movement between said movable jamb and the recessed upright, and a single means for controlling said members.

2. In combination with a window casing provided with uprights, one of said uprights having a recess provided with end walls; a stationary jamb secured to one upright, a movable jamb adapted to move within the recess in the other upright, a sash adapted to move between said jambs and to have wedging engagement therewith, a spring mounted on each of said end walls of the recess, said springs having opposite tensions, members within said recess adapted to engage the movable jamb and the opposite wall of the recess under the opposing tensions of said springs to normaly produce relative horizontal movement between said movable jamb and the recessed upright at a plurality of points respectively, and a single means for controlling said members.

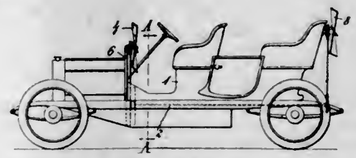
3. In combination with a window casing provided with uprights, one of said uprights having a recess provided with end walls; a stationary jamb secured to one upright, a movable jamb adapted to move within the recess in the other upright, a sash adapted to move between said jambs and to have wedging engagement therewith, a spring mounted on each of said end walls of the recess, said springs having opposite tensions, members within said recess adapted to engage the movable jamb and the opposite wall of the recess under the opposing tensions of said springs to normally produce relative horizontal movement between said movable jamb and the recessed upright, and a single manipulative means for releasing said engagement.

4. A car window, comprising a window casing provided with uprights, inner and outer stops secured thereto, a sash fitting slidingly in the grooves formed by and between the stops, a movable jamb for one side of the sash and extending the full length of the sashway, a shaft suitably journaled, a disk mounted on the shaft, reciprocatory bars suitably guided and linked to said disk at diametrically opposite points and provided with cam portions, springs for moving said bars yieldingly away from the shaft, and connections between the movable jamb and the cam portions of the bars whereby the movement of the latter induced by the springs shall cause the jambs to press against the sash.

5. A car window, comprising a window casing provided with uprights, inner and outer stops secured thereto, a sash fitting slidingly in the grooves formed by and between the stops, a movable jamb for one side of the sash and extending the full length of the sashway, a shaft suitably journaled, a disk mounted on the shaft, reciprocatory bars suitably guided and linked to said disk at diametrically opposite points and provided with cam portions, springs for moving said bars yieldingly away from the shaft, connections between the movable jamb and the cam portions of the bars whereby movement of the latter induced by the springs shall cause the jambs to press against the sash, a catch arm pivoted to one of the reciprocatory bars and having one end weighted and holding the other in an opening in the movable jamb and in a recess in the sash when said sash is down and its recess registers with the jamb opening.

[Claims 6 and 7 not printed in the Gazette.]

885,704. MOTOR-VEHICLE. GEORGE J. TAYLOR, Salt Lake City, Utah, assignor of one-half to Alonzo E. Hyde, Salt Lake City, Utah. Filed Oct. 19, 1907. Serial No. 398,226.



1. The combination with a motor vehicle, of a rotary fan mounted thereon in position to protect the occupant of the vehicle from wind pressure, dust, etc. and means for driving the fan in a direction to protect the said occupant when the vehicle is in motion.

2. The combination with a motor vehicle, of a rotary fan of missile deflecting material mounted thereon in position to protect the occupant of the vehicle from missiles and means for driving the fan in a direction to deflect the missiles and thus protect the said occupant when the vehicle is in motion.

3. The combination with a motor vehicle, of a rotary

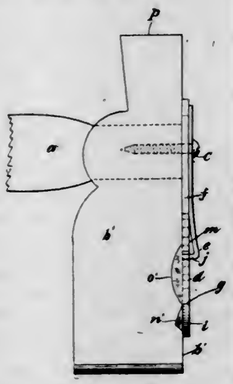
fan located at the rear of the vehicle in position to protect the occupant from wind pressure, dust, etc., when the vehicle is in motion.

4. The combination with a motor vehicle, of a rotary fan located at the front and rear of the vehicle in position to protect the occupant from wind pressure, dust, etc., when the vehicle is in motion.

5. The combination with a motor vehicle and its motor, of a rotary fan mounted on the vehicle in position to protect the occupant from wind pressure, dust, etc., said fan being driven by the motor in a direction to protect the said occupant of the vehicle.

[Claims 6 to 9 not printed in the Gazette.]

885,705. SHINGLE-GAGE. ALBERT A. UNRUH, Portland, Oreg. Continuation in part of application Serial No. 252,708, filed Mar. 29, 1905. This application filed July 27, 1907. Serial No. 385,930.



1. A gage attachment for hatchets comprising a metal strip, and means at one end for securing it in place on the outer edge of a hatchet blade, said strip having side flanges bent laterally on lines longitudinal to the strip adapted to embrace the sides of the hatchet and also having gage shoulders.

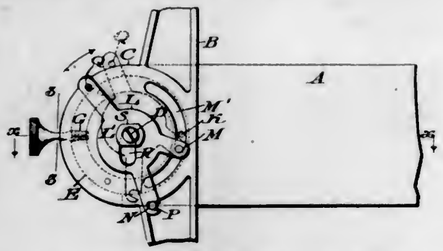
2. A gage attachment for hatchets comprising a comparatively thin metal strip, and means at one end for securing it to the end of a hatchet handle, said strip having side flanges bent laterally on lines longitudinal to the strip adapted to embrace the sides of the hatchet and also having gage shoulders projecting laterally or outwardly from the planes of said flanges.

3. A gage attachment for hatchets comprising a comparatively thin metal strip, and means at one end for securing it to the end of a hatchet handle, said strip having side flanges bent laterally on lines longitudinal to the strip adapted to embrace the sides of the hatchet and also having gage shoulders projecting laterally or outwardly from the planes of said flanges, and locking means to prevent longitudinal movement of the gage.

4. The combination with a shingle-hatchet head, of a longitudinally slotted gage-plate made with lateral portions at its outer end, which lateral portions constitute shoulders, said gage-plate being further made with a series of longitudinally alined cavities representing units of a scale, pendent lugs on said gage-plate arranged to hold the same longitudinally movable on the edge of the hatchet-head, a locking-bar, a stud at the outer end of the latter, a pin inserted into the head-end of the handle, pivotally securing the gage-plate and the locking-bar, one on top of the other; the locking-bar being made of resilient material so as to be adapted to spring the stud thereof into and out of the cavities of the gage-plate, to lock and unlock the parts.

5. The combination with a shingle-hatchet head, of a longitudinally slotted gage-plate made with lateral portions at its outer end, which lateral portions constitute shoulders, said gage-plate being further made with a series of longitudinally alined cavities representing units of a scale, pendent lugs on said gage-plate arranged to hold the same longitudinally movable on the edge of the hatchet-head, a locking-bar, a stud at the outer end of the latter, a pin inserted into the head-end of the handle, pivotally securing the gage-plate and the locking-bar, one on top of the other; the locking-bar being made of resilient material so as to be adapted to spring the stud thereof into and out of the cavities of the gage-plate, to lock and unlock the parts, and the stud-end of said locking-bar being shaped to lie spaced apart from the gage-plate when locked therewith, so as to allow an instrument to be conveniently inserted under said stud-end of the locking-bar, to disengage the latter.

885,706. T-SQUARE. EMIL WERNER, Philadelphia, Pa., assignor, by direct and mesne assignments, to Werner Manufacturing Company, a Corporation of Delaware. Filed May 25, 1907. Serial No. 375,630.



1. In a T-square, a blade member, a limb member having a head, means for pivotally connecting said members and resilient means mounted for movement on the pivot of said members and extending across said head to lock said members in their right angled position.

2. In a T-square, a blade member, a limb member having a head, a divided expansible device within said head for locking the same in the different positions of the blade member, and means extending through the periphery of said head for expanding said device.

3. In a T-square, a blade member, a limb member, a pivot connecting said members, a radially divided locking device mounted on the blade member, means on the limb member adapted to be engaged by said locking device, and means disposed at right angles to said pivot and engaging the walls of said division of said device to expand the same.

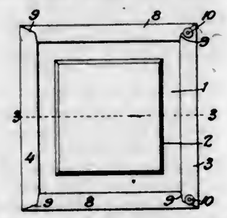
4. In a T-square, the blade and limb members and the pivot thereof, and a locking device for said pivoted blade and limb members, comprising a resilient plate mounted on the pivot of said members, and means engageable by said plate beyond the periphery of the limb member.

5. In a T-square, a locking device for the blade and limb members composed of a plate, means for movably mounting said plate on one member, means on the other member with which said plate may detachably engage, and a projection on said plate adapted to freely ride over a contiguous member and the periphery thereof respectively.

[Claims 6 to 10 not printed in the Gazette.]

885,707. METALLIC WASHTUB-COVER. WILLIAM H. RAMSDELL, New York, N. Y.; George H. Bruce administrator of said William H. Ramsdell, deceased. Filed June 24, 1905. Serial No. 266,827.

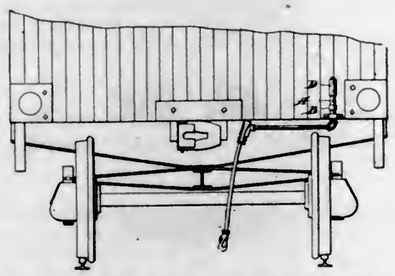
A rectangular metallic wash tub cover comprising the body thereof having a central depression the surrounding marginal edge of the cover being bent angularly to provide rectangular casings which serve to reinforce the same, the front and rear casings serving to receive a filling of fibrous material, and said front and rear casings having reinforcing strips on their under surfaces,



and cushions secured to the opposite ends of the front reinforcing strip, substantially as specified.

REISSUES.

12,780. BRAKE-SETTING DEVICE. ELLSWORTH GODLEY, Springfield, Ill. Filed Feb. 1, 1908. Serial No. 413,972. Original No. 826,780, dated July 24, 1906, Serial No. 301,476.



1. The combination of a cylinder having air-vents, a cap screwing onto said cylinder and having a central hole, a piston fitting in said cylinder and having a piston-rod slidable in the central hole of the cap, also having a circumferential groove, said piston being adapted to receive at one end the air-pressure of the main service-pipe of an air-brake system; gravitating latches mounted within said cap and having fingers fitting in the groove around the piston-rod; an annulus supported on the cylinder and adapted to hold the fingers of the latches in the groove around the piston-rod and a weight slidable on the piston-rod and striking against the annulus to move the annulus and release the latches.

2. The combination of a cylinder, a piston moving in said cylinder and acted upon by the air of the main service-pipe of a brake system, latches adapted to prevent movement of the piston in the cylinder, and a weight operative by concussion to release said latches.

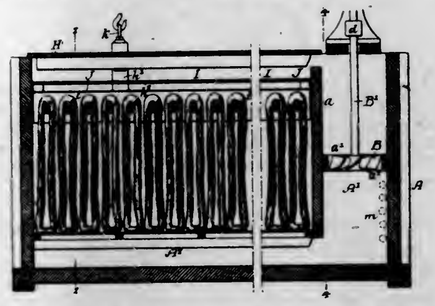
3. The combination of a cylinder, a cap secured on said cylinder, a piston acted upon by the air-pressure of the main service-pipe of an air-brake system and having a piston-rod slidable in a central opening in the cap, latches mounted on said cap and adapted to engage the piston-rod, a latch-retaining device holding the latches in engagement with the piston-rod, and a weight within the cylinder operating by concussion to move the latch-retaining device.

4. A brake-setting appliance for air-brake systems including a service air pipe, sealing means for the air pipe, restraining mechanism for normally holding the sealing means closed, and a weight adapted, upon violent movement of the brake-setting appliance, to be brought into operative connection with the restraining mechanism to cause said restraining mechanism to release the sealing means, the air within the service-pipe serving to open the sealing means when said sealing means are released.

5. A brake-setting appliance for air-brake systems including a service air pipe, sealing means for the air pipe, restraining mechanism for normally holding the sealing means closed, and an automatically operated device operable upon violent movement of the brake-setting appliance, for releasing the restraining mechanism, thereby to release the sealing means, the air within the service-pipe serving to open the sealing means when said sealing means are released.

[Claims 6 and 7 not printed in the Gazette.]

12,781. DYEING-MACHINE. JOSEPH HUSSONG, Camden, N. J., assignor to Hussong Dyeing Machine Company, Groveville, N. J., a Corporation of New Jersey. Filed Jan. 3, 1908. Serial No. 409,242. Original No. 822,844, dated June 5, 1906, Serial No. 248,566.



1. The combination in a dyeing machine, of a vat, a frame, sticks carried by the frame from which the yarn to be dyed is suspended, and means for circulating the liquor in the vat alternately in opposite directions, substantially as described.

2. The combination in a dyeing machine, of a vat, a frame, sticks carried by the frame from which the yarn to be dyed is suspended, means for circulating the liquor in the vat, and means for reversing the direction of said circulation, substantially as described.

3. The combination in a dye-vat, of a vertical partition separating the vat into two compartments, a frame in one compartment having sticks by which the yarn to be dyed is carried, circulating mechanism in the other compartment by which the liquor may be caused to flow over the partition and circulate through the compartments, first in one direction and then in the other, substantially as described.

4. The combination in a dyeing machine, of a vat, a frame, sticks carried by the frame, from which the yarn to be dyed is suspended, mechanism for circulating liquor in the dye-vat, and means for reversing the said mechanism so that the flow of liquor in the vat can be reversed, substantially as described.

5. The combination in a dye-vat, of a vertical partition separating the vat into two compartments, a frame in one compartment having sticks by which the hanks of yarn to be dyed are carried, circulating mechanism in the other compartment by which the liquor in the vat is circulated, and means for reversing the said mechanism so as to reverse the flow of liquor in the dye-vat, substantially as described.

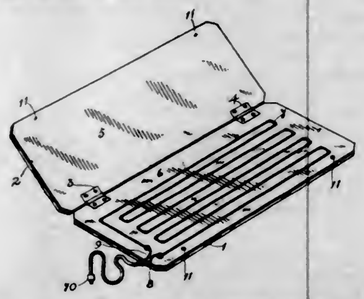
[Claims 6 to 8 not printed in the Gazette.]

12,782. ELECTRIC HEATER. MOISE LANDRY, San Francisco, Cal. Filed Jan. 20, 1908. Serial No. 414,662. Original No. 873,317, dated Dec. 10, 1907, Serial No. 364,748.

1. An electric heater comprising two boards hinged together, an asbestos covering on the inner surfaces of said boards and a high resistance wire arranged to lie between said coverings when said boards are closed.

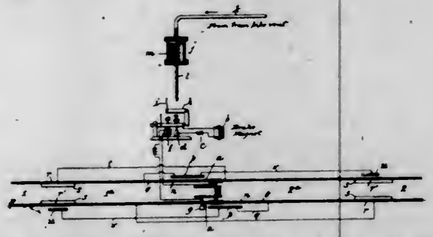
2. An electric heater comprising two boards hinged together, an asbestos covering on the inner surfaces of said boards, a high resistance wire arranged to lie between

said coverings when said boards are closed, means for securing said boards in their closed position, and means for supplying current to said wire.



3. In an electric heater, the combination with insulating and heating elements of a pair of boards hinged together and being provided with suitable clasps for securing them in closed position, for inclosing the said insulating and heating elements and allowing them to be readily handled.

12,783. AUTOMATIC TRAIN-STOP. HIRAM G. SEDGWICK, Mill Valley, Cal., assignor to American Train Stop Company, San Francisco, Cal., a Corporation of California. Filed Sept. 28, 1907. Serial No. 395,053. Original No. 864,866, dated Sept. 3, 1907, Serial No. 345,506.



1. In an apparatus of the class set forth, a brake magnet and circuit on the locomotive and means for opening and closing said circuit, said means embodying relatively movable contacts and a magnet and circuit and also means on the roadbed for closing this last named circuit, means for automatically holding the brake-magnet circuit closed when once closed by the roadbed devices, means for disengaging said holding means, and means for actuating this latter means by the application of the brake.

2. In an apparatus of the class set forth, a brake magnet and circuit on the locomotive and means for opening and closing said circuit, said means embodying relatively movable contacts and a magnet and circuit and also means on the roadbed for closing this last named circuit, and means for automatically holding the brake-magnet circuit closed when once closed by the roadbed devices, and means for opening the brake-magnet circuit operated by the application of the brake.

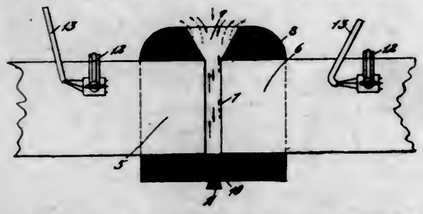
3. In a railway block system, means on the train for electrically operating the brake mechanism embodying a circuit one branch of which is connected to an insulated brush and the other branch of which is connected to one of the axles, and roadbed devices consisting of a series of rail blocks insulated at *a* from each other, an isolated rail section *n* at the beginning of the right-hand side of each block, and a contact rail along side each isolated rail section in line with the brush on the locomotive and electrically connected to the adjacent end of the right-hand rail of the preceding block, for the purpose set forth.

4. In an apparatus of the class set forth, brake-applying mechanism embodying a circuit one branch of which is connected with the forward axle of the locomotive and the other branch of which is connected to the brush on the locomotive, roadbed devices for closing said circuit embodying an isolated rail section, a contact rail adjacent to and shorter than said isolated rail, this contact rail being electrically connected to the adjacent end of one of the block rails.

5. In a railway block system, means on the train for electrically operating the brake mechanism embodying a circuit one branch of which is connected to an insulated brush and the other branch of which is connected to one of the axles, and roadbed devices consisting of a series of rail blocks insulated at *a* from each other, an isloted rail section *n* at the beginning of the right-hand side of each block, and a contact rail along side each isolated rail section in line with the brush on the locomotive and electrically connected to the adjacent end of the right-hand rail of the preceding block, said contact rail being arranged so that the brush leaves it before the adjacent wheel passes onto the rail to which it is electrically connected, for the purpose set forth.

[Claims 6 to 13 not printed in the Gazette.]

12,784. PROCESS FOR UNITING METAL PIECES. CHARLES F. JACOBS, Chicago, Ill., assignor to Jacobs Welding Company, Chicago, Ill., a Corporation of Illinois. Filed Oct. 31, 1907. Serial No. 400,137. Original No. 825,541, dated July 10, 1906, Serial No. 286,022.



1. The process of uniting metal pieces consisting in bringing the pieces to be united near together but not in actual contact, introducing molten flux between said pieces, passing an electric current through said flux from one of said pieces to the other, and finally replacing said flux with molten metal.

2. The process of uniting metal pieces consisting in bringing the pieces to be united near together but not in actual contact, inserting between said pieces a fusible flux which when cold is substantially a non conductor, and when fused is a conductor, passing an electric current from one of said pieces to the other through said flux, and finally replacing said flux with molten metal.

3. The herein described process of uniting metal pieces which consists in securing a form around the adjacent portions of the metallic pieces, placing a flux in the space between the ends of said pieces, passing an electric current through said flux from one of said pieces to the other to thereby raise said pieces to the required temperature, and replacing the flux by molten metal.

4. The herein described process of uniting metal pieces which consists in securing the ends of the pieces by placing an apertured form around the same, placing fusible flux in the space between the ends of said pieces, passing an electric current from one of said pieces to the other through said flux, removing the flux through one of the apertures of the form, and filling the space between the ends of the metal pieces with molten metal.

5. The herein described process of uniting metal pieces which consists in securing the ends of the pieces by placing an apertured form around the same, placing molten flux in the space between the ends of said pieces, passing an electric current from one of said pieces to the other through said flux, removing the flux through one of the apertures of the form, and filling the space between the ends of the metal pieces with molten metal.

[Claims 6 to 8 not printed in the Gazette.]

DESIGNS.

39,267. BAG. FRANK L. KIRK, New York, N. Y., assignor to Gorham Company, New York, N. Y., a Corporation of New York. Filed Feb. 27, 1908. Serial No. 418,156. Term of patent 7 years.



The ornamental design for a bag, as shown.

39,268. INKSTAND. CHARLES H. NUMAN, New York, N. Y. Filed Feb. 21, 1908. Serial No. 417,203. Term of patent 7 years.



The ornamental design for an inkstand, as shown.

39,269. FAUCET-HANDLE. BERNARD H. JANSEN, Cleveland, Ohio. Filed Feb. 14, 1908. Serial No. 415,965. Term of patent 7 years.



The ornamental design of a faucet handle as shown.

39,270. CLOTHES-HANGER BASE. MARGARET A. WIGGIN, Topeka, Kans. Filed Nov. 22, 1907. Serial No. 403,405. Term of patent 7 years.



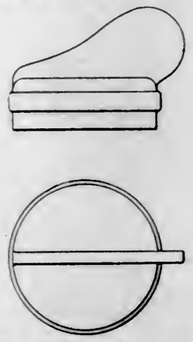
The ornamental design for a clothes hanger base as shown.

39,271. COMBINATION CABINET, COSTUMER, AND SHAVING-STAND. JOHN H. WILSON, Atlantic City, N. J. Filed Apr. 19, 1907. Serial No. 369,184. Term of patent 14 years.



The ornamental design for a combination cabinet, costumer and shaving stand substantially as herein shown.

39,272. RADIATOR-CASING CAP FOR AUTOMOBILES. SIDNEY D. WALDON, Detroit, Mich., assignor to Packard Motor Car Company, Detroit, Mich., a Corporation of West Virginia. Filed Feb. 25, 1907. Serial No. 359,308. Term of patent 14 years.



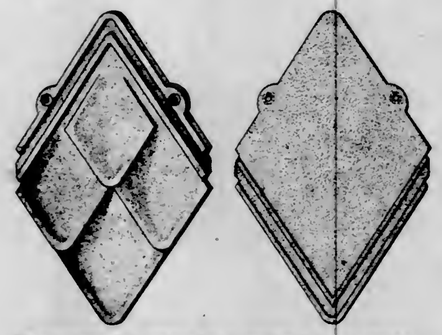
The ornamental design for a radiator casing cap for automobiles, as shown.

39,273. POST FOR FENCES. JOHN F. SHELTON, Fort Worth, Tex. Filed Sept. 4, 1906. Serial No. 333,274. Term of patent 7 years.



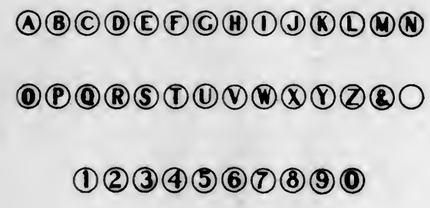
The ornamental design for a post for fences, as shown.

39,274. ROOFING-TILE. SAMUEL A. JONES, Deshler, Ohio. Filed Jan. 7, 1907. Serial No. 351,272. Term of patent 14 years.



The ornamental design for a roofing tile, as shown.

39,275. FONT OF TYPE. THOMAS C. ROBINSON, Appleton, Wis., assignor to Barnhart Brothers & Spindler, Chicago, Ill., a Corporation of Illinois. Filed Dec. 26, 1906. Serial No. 349,582. Term of patent 7 years.



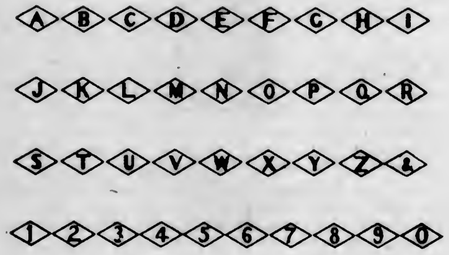
The ornamental design for a font of type, as shown.

39,276. FONT OF TYPE. THOMAS C. ROBINSON, Appleton, Wis., assignor to Barnhart Brothers & Spindler, Chicago, Ill., a Corporation of Illinois. Filed Nov. 24, 1906. Serial No. 344,983. Term of patent 7 years.



The ornamental design for a font of type, as shown.

39,277. FONT OF TYPE. THOMAS C. ROBINSON, Appleton, Wis., assignor to Barnhart Brothers & Spindler, Chicago, Ill., a Corporation of Illinois. Filed Dec. 26, 1906. Serial No. 349,584. Term of patent 7 years.



The ornamental design for a font of type, as shown.

TRADE-MARKS

PUBLISHED APRIL 21, 1908.

The following trade-marks have been adjudged entitled to registration under the act of February 20, 1905, and are published in compliance with section 6 of said act. Said section provides:

"Any person who believes he would be damaged by the registration of a mark may oppose the same by filing notice of opposition, stating the grounds therefor, in the Patent Office within thirty days after the publication of the mark sought to be registered, which said notice of opposition shall be verified by the person filing the same before one of the officers mentioned in section two of this act. If no notice of opposition is filed within said time the Commissioner shall issue a certificate of registration therefor, as hereinafter provided for."

Marks which are stated to have been "Used ten years" are registrable under the last proviso of section 5 of said act, which is as follows:

"And provided further, That nothing herein shall prevent the registration of any mark used by the applicant or his predecessors, or by those from whom title to the mark is derived, in commerce with foreign nations or among the several States, or with Indian tribes, which was in actual and exclusive use as a trade-mark of the applicant or his predecessors from whom he derived title for ten years next preceding the passage of this act."

Section 14 of said act provides for the following fee:

"On filing notice of opposition to the registration of a trade-mark, ten dollars."

Ser. No. 10,958. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) CHARLES ZOLLER CO., New York, N. Y. Filed July 28, 1905.

Particular description of goods.—Malt.

Ser. No. 15,041. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) STAENGEL & ZILLER, Unterturkheim, Germany. Filed Nov. 28, 1905.



Particular description of goods.—Chocolate and Cocoa.

Ser. No. 15,042. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) STAENGEL & ZILLER, Unterturkheim, Germany. Filed Nov. 28, 1905.

EDELWEISS

Particular description of goods.—Chocolate and Cocoa.

Ser. No. 16,537. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) UNITED STATES BUNTING CO., Lowell, Mass. Filed Jan. 26, 1906. Used ten years.



Particular description of goods.—Bunting.

Ser. No. 17,167. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) ALBERT & J. M. ANDERSON MANUFACTURING COMPANY, Boston, Mass. Filed Feb. 19, 1906. Used ten years.

AETNA

Particular description of goods.—Electric Insulators Employed in Electric-Railway Construction.

Ser. No. 18,527. (CLASS 17. TOBACCO PRODUCTS.) FREDERICK BEBBER, Jersey City, N. J. Filed Apr. 5, 1906.

MONARCH'S TASTE

Particular description of goods.—Cigars.

Ser. No. 18,564. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) EDDY PALMER, New York, N. Y., assignor to Solon Palmer, a Corporation of New York. Filed Apr. 6, 1906. Used ten years.

Palmer

Particular description of goods.—Perfumes, Including Extracts, Cologne, and Toilet Water, Sachet-Powder, Tooth-Powder, Smelling-Salts, and Skin and Complexion Powders, Toilet Pastes and Creams.

Ser. No. 18,602. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) J. & J. CASH LIMITED, Coventry, England, and New York, N. Y. Filed Apr. 7, 1906



Particular description of goods.—Cambric Frillings Made of Cotton.

Ser. No. 19,772. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) APPENDIXINE COMPANY, New York, N. Y. Filed May 22, 1906.

APPENDIXINE

The figure appearing within the legs of the letter "A" being printed in red.

Particular description of goods.—Medicine for Appendicitis, Constipation, Dyspepsia, Gall-Stones, Kidney Gravel, Indigestion, Mucous Colic, and General Debility.

Ser. No. 23,169. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) DAVIS & JOHNSON, Dido, Va. Filed Nov. 8, 1906.



Particular description of goods.—Canned Fish-Roe.

Ser. No. 23,825. (CLASS 39. CLOTHING.) MAGGIE MUNSON, Chicago, Ill. Filed Dec. 6, 1906.

WINDSPLIT

Particular description of goods.—Motoring-Hoods Consisting of Headwear of Textile Fabric Adapted to be Worn Over Ladies' Bonnets to Protect the Latter While Driving.

Ser. No. 24,438. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) FRANK A. FLYNN, Fall River, Mass. Filed Jan. 4, 1907.

FAF

Particular description of goods.—Whisky.

Ser. No. 25,191. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) HYGRADE WINE COMPANY, New York, N. Y. Filed Feb. 7, 1907.



Particular description of goods.—Whisky and Brandy.

Ser. No. 25,705. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) WM. KELLY MILLING COMPANY, Hutchinson, Kans. Filed Mar. 2, 1907.



The shield being yellow, the circle blue, and the seal red.

Particular description of goods.—Wheat-Flour.

Ser. No. 25,984. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) BARBER MILLING COMPANY, Minneapolis, Minn. Filed Mar. 15, 1907.

WHITE WONDER

Particular description of goods.—Wheat-Flour.

Ser. No. 26,151. (CLASS 37. PAPER AND STATIONERY.) THE GLOBE-WERNICKE COMPANY, Cincinnati, Ohio. Filed Mar. 22, 1907.

Every Day

Particular description of goods.—Document-Files.

Ser. No. 27,954. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) HANNOVERSCHE GUMMI-KAMM-COMPAGNIE ACTIEN-GESELLSCHAFT, Hanover-Limmer, Germany. Filed June 7, 1907.

Koh-i-noor

Particular description of goods.—Rubber Combs.

Ser. No. 28,323. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ALBERT PETER, St. Louis, Mo. Filed June 22, 1907.



Particular description of goods.—A Remedy for Rheumatism.

Ser. No. 28,395. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) J. A. GILKA, Berlin, Germany. Filed June 26, 1907. Used ten years.

Gilka

Particular description of goods.—Kummel.

Ser. No. 28,939. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) STAVANGER PRESERVING CO., Stavanger, Norway. Filed July 22, 1907.



Particular description of goods.—Sardines.

Ser. No. 29,004. (CLASS 48. MALT EXTRACTS AND LIQUORS.) YONKERS BREWERY, Yonkers, N. Y. Filed July 24, 1907.

MALTEX

Particular description of goods.—Extract of Malt and Hops.

Ser. No. 29,007. (CLASS 48. MALT EXTRACTS AND LIQUORS.) YONKERS BREWERY, Yonkers, N. Y. Filed July 24, 1907.

Particular description of goods.—Ale, Beer, Porter, Stout, and Extract of Malt and Hops.

Ser. No. 29,010. (CLASS 48. MALT EXTRACTS AND LIQUORS.) YONKERS BREWERY, Yonkers, N. Y. Filed July 24, 1907.

EDELBRÄU

Particular description of goods.—Beer.

Ser. No. 29,333. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) THE CHAMPION SAFETY LOCK COMPANY, Geneva, Ohio. Filed Aug. 10, 1907.

CHAMPION

Particular description of goods.—Sash-Lifts, Door Stops and Pulls, Base-Knobs, Push-Plates, Spring-Hinges.

Ser. No. 29,972. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) WRIGHT'S INDIAN VEGETABLE PILL COMPANY, New York, N. Y. Filed Sept. 14, 1907. Used ten years.

ROMAN EYE BALSAM.

Particular description of goods.—A Remedy for Diseases of the Eye.

Ser. No. 30,350. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) PFENNINGER PRETZEL & BAKING COMPANY, St. Louis, Mo. Filed Oct. 2, 1907.



Particular description of goods.—Pretzels.

Ser. No. 30,450. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) STEPHEN E. JACKMAN, New York, N. Y. Filed Oct. 7, 1907.

DIP THE DIP

Particular description of goods.—Pleasure-Railways and Rolling-Stock for the Same.

Ser. No. 30,451. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) STEPHEN E. JACKMAN, New York, N. Y. Filed Oct. 7, 1907.

THRILLER

Particular description of goods.—Pleasure-Railways and Rolling-Stock for the Same.

Ser. No. 30,452. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) STEPHEN E. JACKMAN, New York, N. Y. Filed Oct. 7, 1907.

WHIRLWIND

Particular description of goods.—Pleasure-Railways and Rolling-Stock for the Same.

Ser. No. 30,613. (CLASS 37. PAPER AND STATIONERY.) L. E. WATERMAN COMPANY, New York, N. Y. Filed Oct. 15, 1907.

IDEAL

Particular description of goods.—Fountain-Pens and Pencils.

Ser. No. 30,820. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) JOHN S. AINLEY, Huddersfield, England. Filed Oct. 28, 1907.

"TORTUM"

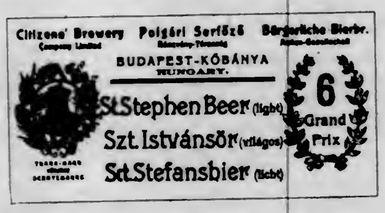
Particular description of goods.—Woolen and Worsted Woven Piece Goods.

Ser. No. 30,883. (CLASS 48. MALT EXTRACTS AND LIQUORS.) KŐBÁNYAI POLGÁRI SERFŐZŐ RÉSZVÉNY-TÁRSASÁG, Budapest, Hungary. Filed Oct. 30, 1907.



Particular description of goods.—Beer.

Ser. No. 30,887. (CLASS 48. MALT EXTRACTS AND LIQUORS.) KŐBÁNYAI POLGÁRI SERFŐZŐ RÉSZVÉNY-TÁRSASÁG, Budapest, Hungary. Filed Oct. 31, 1907.



Particular description of goods.—Beer.

Ser. No. 30,889. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) SHARP & DOHME, Baltimore, Md. Filed Oct. 31, 1907.

SPIRETS

Particular description of goods.—Inhalants Put Up in Capsules.

Ser. No. 30,956. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS, NOT INCLUDING ELECTRICAL APPARATUS.) JOSEPH F. GROSSWILLER, Toledo, Ohio. Filed Nov. 2, 1907.

NOXALL

Particular description of goods.—Steam and Hot-Water Boilers and Heaters for All Purposes, Instantaneous Hot-Water Heaters, Range-Boilers, and Steam and Hot-Water Expansion-Tanks.

Ser. No. 30,994. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) WESLEY C. RAMSEY, Hopedale, Ohio. Filed Nov. 4, 1907.

LILIES OF THE VALLEY



Particular description of goods.—A Remedy for the Alleviation of Diseases Peculiar to Women.

Ser. No. 31,171. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) COMMERCIAL IMPORTING CO., Seattle, Wash. Filed Nov. 14, 1907.

CIC

Particular description of goods.—Coffee and Tea.

Ser. No. 31,282. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) THE PHILADELPHIA DRYING MACHINERY COMPANY, Philadelphia, Pa. Filed Nov. 21, 1907.

HURRICANE

Particular description of goods.—Machinery for Drying Cotton Stock, Wool, Hair, or other Fibrous Materials in the Raw State, and Yarn, Warps, Slubbing, Rags, Cloth, Stockings, and Underwear in the Process of Their Manufacture.

Ser. No. 31,323. (CLASS 27. HOROLOGICAL INSTRUMENTS.) LANGENDORF WATCH CO., Langendorf, Switzerland. Filed Nov. 23, 1907.

REMINDER

Particular description of goods.—Watches, Watchcases, and Watch-Movements.

Ser. No. 31,404. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) EMANUEL KHUNER & SOHN, Vienna, Austria. Filed Nov. 27, 1907.

KUNEROL

Particular description of goods.—Vegetable Fats—That is to Say, Fats Pressed from All Kind of Seeds and Fruits to be Used as a Substitute for Butter.

Ser. No. 31,405. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) EMANUEL KHUNER, & SOHN, Vienna, Austria. Filed Nov. 27, 1907.

KUNERAT

Particular description of goods.—Vegetable Fats—That is to Say, Fats Pressed from All Kind of Seeds or Fruits to be Used as a Substitute for Butter.

Ser. No. 31,572. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) JOHN C. SIEGFRIED & CO., Chicago, Ill. Filed Dec. 4, 1907.

SOROSIS

Particular description of goods.—Teas.

Ser. No. 31,668. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS, NOT INCLUDING ELECTRICAL APPARATUS.) A. J. LINDEMANN & HOVERSON CO., Milwaukee, Wis. Filed Dec. 11, 1907.

ARCADIAN

Particular description of goods.—Stoves and Ranges.

Ser. No. 31,705. (CLASS 33. GLASSWARE.) EHRICH & GRAETZ, Berlin, Germany. Filed Dec. 13, 1907.

Graetzin

Particular description of goods.—Glass Lamp-Chimneys, Decorative Glass Shades, Glass Globes of Different Forms, Glass Reflectors.

Ser. No. 31,813. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JACOB LEON LASCOFF, New York, N. Y. Filed Dec. 18, 1907.

"LASCO"

Particular description of goods.—Laxative Tablets, Cod-Liver Oil, Iron and Manganese Peptonate, Compound Celery Nervine, Rhubarb and Soda Mixture, Kidney Remedy, Aromatic Cascara, Fluid Extract Ergot, Corn Remedy, Rhinitis-Tablets, Cholera-Tablets, Antibilious Pills, Perfumes, Tablets of Pepsin, Soda-Mint Tablets, Cachous, Iron Pills, Laxative Quinin, Toothache-Drops, Sarsaparilla, Liver-Pills, Beef, Wine, and Iron, Camphorated Chalk, Camomile Flowers, Licorice-Powder, Iron, Quinin, and Strychnin, Violet Ammonia, Toothache-Gum, Senna-Leaves, Camphor-Ice, Tincture of Valerian, Tincture of Iron, Liniment, Chalk Mixture, Syrup Rhubarb, Syrup Squills, Hair-Oil, Camphor Liniment, Camphorated Oil, Chloroform Liniment, Tincture Myrrh, Syrup of Tolu, Brown Mixture, Tincture Opium, Medicinal Teas, Bay-Rum, Sedlitz-Powders, Carbolated Petroleum-Jelly, Fig Syrup, Sandalwood-Oil Capsules, Compound Tincture Benzoin, Neuralgia-Powders, Neuralgia-Tablets, and Neuralgia-Wafers, Collodion, Quinin Pills, Quinin Tablets, and Quinin Capsules.

Ser. No. 31,829. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) LEO CIDER AND VINEGAR CO., Falls, City, Nebr. Filed Dec. 18, 1907.



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Particular description of goods.—Cider, Vinegar, Pickles, and Catsup.

Ser. No. 31,836. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE J. H. FLICKINGER CO., San Jose, Cal. Filed Dec. 19, 1907.



Particular description of goods.—Canned Fruits and Vegetables and Dried Fruits.

Ser. No. 31,966. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) LIZZIE C. RICKLES, Birmingham, Ala. Filed Dec. 26, 1907.



Particular description of goods.—A Complexion-Lotion.

Ser. No. 31,972. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) PFISTER & VOGEL LEATHER COMPANY, Milwaukee, Wis. Filed Dec. 30, 1907.

PEVEE

Particular description of goods.—Uncut Leathers for Manufacturing Purposes.

Ser. No. 31,982. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) WAYNE COUNTY PRESERVING COMPANY, Newark, N. Y. Filed Dec. 30, 1907.

E&B

Particular description of goods.—Bottled, Canned, Preserved, Evaporated, and Pickled Fruits and Vegetables.

Ser. No. 32,020. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) THE NATIONAL-ACME MFG. CO., Cleveland, Ohio. Filed Jan. 2, 1908.



Particular description of goods.—Set-Screws, Cap-Screws, Machine-Screws, Machine-Bolts, Screw-Pins, Pipe-Plugs, Hose-Couplings, Valve-Points, Parts of Valves, Nuts, Bushings, Faucet Parts, Knurled Caps, and Knurled Nuts.

Ser. No. 32,061. (CLASS 36. MUSICAL INSTRUMENTS AND SUPPLIES.) GEO. P. BENT, Chicago, Ill. Filed Jan. 4, 1908.

Combinola

Particular description of goods.—Interior Player-Pianos.

Ser. No. 32,185. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ATTIE E. WILLIAMS, Syracuse, N. Y. Filed Jan. 13, 1908.



Particular description of goods.—Skin and Scalp Lotions.

Ser. No. 32,219. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) EDMUND STEVENS, Vega Alta, Porto Rico. Filed Jan. 14, 1908.



Particular description of goods.—Citrous Fruits.

Ser. No. 32,280. (CLASS 33. GLASSWARE.) EDWARD JOHN DOBBINS, London, England. Filed Jan. 17, 1908.

CAT'S EYE

Particular description of goods.—Window-Glass.

Ser. No. 32,290. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) HERBERT DICKINSON, Huddersfield, England. Filed Jan. 18, 1908.

SOLIMAR

Particular description of goods.—Woolen Piece Goods.

Ser. No. 32,362. (CLASS 39. CLOTHING.) HAYNES HENSON SHOE COMPANY, Knoxville, Tenn. Filed Jan. 22, 1908.

A.A.A.

Particular description of goods.—Leather Boots and Shoes.

Ser. No. 32,363. (CLASS 39. CLOTHING.) HAYNES HENSON SHOE COMPANY, Knoxville, Tenn. Filed Jan. 22, 1908.

Templar

Particular description of goods.—Leather Boots and Shoes.

Ser. No. 32,380. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) PFISTER & VOGEL LEATHER COMPANY, Milwaukee, Wis. Filed Jan. 22, 1908.

P&V

Particular description of goods.—Uncut Leathers for Manufacturing Purposes.

Ser. No. 32,422. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) LEE O. WALLER, Philadelphia, Pa. Filed Jan. 24, 1908.

KAL-PHENO

Particular description of goods.—Tooth-Pastes, Tooth-Powders, Tooth-Washes, Nose, Ear, and Throat Washes, Antiseptics, Antipyretics, Disinfectants, Deodorizers, Styptics, Medicinal Creams, Local Stimulants, and Sedatives.

Ser. No. 32,442. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) JAMES PYLE & SONS, Edgewater, N. J. Filed Jan. 27, 1908.

O.K.

Particular description of goods.—Soaps of All Kinds and Detergent Washing-Powder.

Ser. No. 32,479. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) HENRY B. RICHARDS, Easton, Pa. Filed Jan. 28, 1908.

GRAMANA

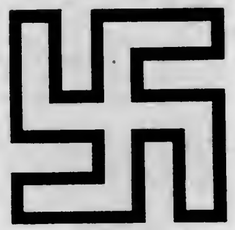
Particular description of goods.—Milk and Cream.

Ser. No. 32,514. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) HERMAN L. HOHLFELD, Philadelphia, Pa. Filed Feb. 1, 1908.

SWASTIKA

Particular description of goods.—Hammocks.

Ser. No. 32,515. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) HERMAN L. HOHLFELD, Philadelphia, Pa. Filed Feb. 1, 1908.



Particular description of goods.—Hammocks.

Ser. No. 32,541. (CLASS 39. CLOTHING.) LAMBERTVILLE RUBBER CO., Lambertville, N. J. Filed Feb. 3, 1908.

OYSTER BOY



Particular description of goods.—Rubber Boots and Shoes.

Ser. No. 32,559. (CLASS 39. CLOTHING.) ALSBERG, MORITZ AND LAVE, New York, N. Y. Filed Feb. 4, 1908.

DIABOLO

Particular description of goods.—Outer Suits, Overcoats, and Cloaks for Boys and Girls.

Ser. No. 32,560. (CLASS 32. FURNITURE AND UPHOLSTERY.) ALFRED A. BOECK, New York, N. Y. Filed Feb. 4, 1908.



Particular description of goods.—Slatted Shades for Windows, Verandas, and the Like.

Ser. No. 32,563. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) FARBWERKE VORM. MEISTER LUCIUS & BRÜNING, Höchst on the Main, Germany. Filed Feb. 4, 1908.

LENTOCALIN

Particular description of goods.—A Powder for the Treatment of Diseases of the Eyes by Stomachic Administration.

Ser. No. 32,571. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) WILLIAM LARSEN, Green Bay, Wis. Filed Feb. 4, 1908.

DAYBREAK BRAND

Particular description of goods.—Canned Vegetables, Comprising Peas, Corn, Beans, Pumpkin, Beets, Tomatoes, Cabbage, Sauer-Kraut, Vegetables for Soup, and Purée of Peas.

Ser. No. 32,572. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) WILLIAM LARSEN, Green Bay, Wis. Filed Feb. 4, 1908. Used ten years.

GREEN BAY

Particular description of goods.—Canned Vegetables, Comprising Peas, Corn, Beans, Pumpkin, Beets, Tomatoes, Cabbage, Sauer-Kraut, Vegetables for Soup, and Purée of Peas.

Ser. No. 32,573. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) WILLIAM LARSEN, Green Bay, Wis. Filed Feb. 4, 1908.



Particular description of goods.—Canned Vegetables, Comprising Peas, Corn, Beans, Pumpkin, Beets, Tomatoes, Cabbage, Sauer-Kraut, Vegetables for Soup, and Purée of Peas.

Ser. No. 32,574. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) WILLIAM LARSEN, Green Bay, Wis. Filed Feb. 4, 1908.

North Shore

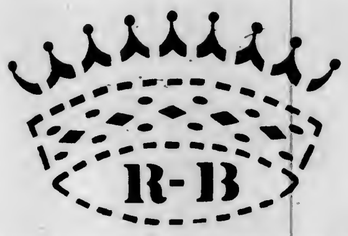
Particular description of goods.—Canned Vegetables, Comprising Peas, Corn, Beans, Pumpkin, Beets, Tomatoes, Cabbage, Sauer-Kraut, Vegetables for Soup, and Purée of Peas.

Ser. No. 32,575. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) WILLIAM LARSEN, Green Bay, Wis. Filed Feb. 4, 1908. Used ten years.



Particular description of goods.—Canned Vegetables, Comprising Peas, Corn, Beans, Pumpkin, Beets, Tomatoes, Cabbage, Sauer-Kraut, Vegetables for Soup, and Purée of Peas.

Ser. No. 32,686. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) RUSSE & BURGESS, Memphis, Tenn. Filed Feb. 10, 1908.



Particular description of Goods.—Lumber and Logs, (Inferior Grades.)

Ser. No. 32,687. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) RUSSE & BURGESS, Memphis, Tenn. Filed Feb. 10, 1908.



Particular description of goods.—Lumber and Logs, (Prime Grades.)

Ser. No. 32,711. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) PACIFIC MILLING COMPANY, San Francisco, Cal. Filed Feb. 11, 1908.

Cera

Particular description of goods.—A Cereal Breakfast Food.

Ser. No. 32,729. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE GREAT WESTERN CEREAL COMPANY, Jersey City, N. J., and Chicago, Ill. Filed Feb. 12, 1908.

CORNFALFA

Particular description of goods.—Food for Live Stock.

Ser. No. 32,732. (CLASS 12. MASONRY MATERIALS.) THE PARAFFINE PAINT CO., San Francisco, Cal. Filed Feb. 12, 1908.

Cronolite

Particular description of goods.—A Waterproof Material Made from Paper or Felt, or a Combination of Both, and Adapted for Use in Buildings for Various Purposes.

Ser. No. 32,744. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) FERN ROCK WOOLEN MILLS, Philadelphia, Pa. Filed Feb. 13, 1908.

Silkart

Particular description of goods.—Worsted Dress Goods.

Ser. No. 32,789. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) STROHMEYER & ARPE COMPANY, New York, N. Y. Filed Feb. 15, 1908.

J.B.

Particular description of goods.—Mackerel and Herrings.

Ser. No. 32,804. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) TOASTED CORN FLAKE CO., Battle Creek, Mich. Filed Feb. 17, 1908.

The sweetheart of the corn

Particular description of goods.—Cereal Breakfast Foods.

Ser. No. 32,887. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) HERMAN KUSSY, Newark, N. J. Filed Feb. 20, 1908.

Invincible

Particular description of goods.—Canned Fruits and Vegetables, Tapioca, Corn-Starch, and Extract of Vanilla.

Ser. No. 32,888. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ERNST BISCHOFF, New York, N. Y. Filed Feb. 20, 1908.

EXURGEN

Particular description of goods.—Aperient and Laxative Medicines.

Ser. No. 32,931. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) HARRISON M. GRAVES, New York, N. Y. Filed Feb. 21, 1908.



Particular description of goods.—Pills for Stomach, Bladder, and Kidney Diseases, Backache, Scalding Urine, Diabetes, Constipation, Biliousness, Rheumatism, and Uric-Acid Poisonings, and for Medicinal Plasters for Backache, Rheumatic Pains, Neuralgia, Strains, Chest-Colds, and Weak Lungs.

Ser. No. 32,950. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) THE GRABLER MANUFACTURING COMPANY, Cleveland, Ohio. Filed Feb. 24, 1908. Used ten years.

GRABLER

Particular description of goods.—Pipe-Hangers, Sockets, Beam-Clamps, Lag-Screws, Beam-Plates, Extension-Bars, Pipe-Supports, Boiler-Hangers, Wall-Supports, Hose-Clamps, Step-Rings, Coil-Hangers, Joist-Hangers, U-Hangers, Sprinkler-Clips, Pipe-Hooks, Pipe-Rolls, Floor-Thimbles, Fixture-Stems, Bushings, Nuts, Concrete-Holders, Expansion-Bolts, Machine-Bolts, Toggle-Bolts, Pole-Rings, Pole-Steps, Metallic Washers, Coil-Stands, Hook-Plates, Ring-Plates, Expansion-Plates, Pipe-Spacers, Pipe-Straps, Basin-Clamps, Pipe-Rests, Unions, Boiler-Couplings, Pipe-Fittings, Floor and Ceiling Plates, Double Floor and Ceiling Plates, Floor-Sleeves, Floor-Sleeve Plates, Pokers, Rakes, Slice-Bars for Firing Boilers.

Ser. No. 32,971. (CLASS 7. CORDAGE.) SAMSON CORDAGE WORKS, Boston, Mass. Filed Feb. 24, 1908.

PHOENIX

Particular description of goods.—Sash-Cord, Trolley-Cord, and Similar Braided Cotton Cords.

Ser. No. 32,980. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE NATIONAL HERB COMPANY, Washington, D. C. Filed Feb. 24, 1908.



Particular description of goods.—Internal Herb Remedies for Diseases of the Blood, Kidneys, and Liver, also Remedies for Colds, Coughs, Croup, Cramp, Diarrhea, and Cholera Morbus.

Ser. No. 32,996. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) FELIX TEMPEST CO., Los Angeles, Cal. Filed Feb. 25, 1908.

Fluff-Moquet

Particular description of goods.—Hair-Wash.

Ser. No. 33,009. (CLASS 43. THREAD AND YARN.) THE SPOOL COTTON COMPANY, Newark, N. J., and New York, N. Y. Filed Feb. 26, 1908.

"TRIDENT"

Particular description of goods.—Cotton Thread and Yarn.

Ser. No. 33,010. (CLASS 43. THREAD AND YARN.) THE SPOOL COTTON COMPANY, Newark, N. J., and New York, N. Y. Filed Feb. 26, 1908.



Particular description of goods.—Cotton Thread and Yarn.

Ser. No. 33,013. (CLASS 28. JEWELRY AND PRECIOUS-METAL WARE.) SCHANBACHER & BROD, Newark, N. J. Filed Feb. 26, 1908.



Particular description of goods.—Rings, Lockets, Scarf-Pins, Cuff-Buttons, Gold Fobs, Brooches, Pendants, Bracelets, Bangles, Festoons, Tie-Clasps, Tortoise-Shell Combs with Gold Decorations, Lorgnette-Chains, Studs, Ear-Rings, Charms.

Ser. No. 33,017. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) THE FIBRE CONDUIT COMPANY, Orangeburg, N. Y. Filed Feb. 26, 1908.

LINADUCT

Particular description of goods.—Fiber Conduits in which Electric Wires are Laid.

Ser. No. 33,032. (CLASS 37. PAPER AND STATIONERY.) EAGLE PENCIL COMPANY, New York, N. Y. Filed Feb. 27, 1908.



The band of the tip being of silver color and the body red.

Particular description of goods.—Lead-Pencils.

Ser. No. 33,035. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) THE CHARLES E. HIRES COMPANY, Philadelphia, Pa. Filed Feb. 27, 1908.

Punock

Particular description of goods.—Distilled Water, Lithia-Water, and Ginger-Ale.

Ser. No. 33,057. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) INDEPENDENT STARCH COMPANY, New York, N. Y. Filed Feb. 28, 1908.

FLUFFY RUFFLES

Particular description of goods.—Starches for Laundering Purposes.

Ser. No. 33,061. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) CHILTON CANNING COMPANY, Chilton, Wis. Filed Feb. 28, 1908.



Particular description of goods.—Canned and Preserved Fruits and Vegetables.

Ser. No. 33,073. (CLASS 38. PUBLICATIONS.) THE LEWIS PUBLISHING COMPANY, St. Louis Mo. Filed Feb. 29, 1908.

THE WOMAN'S NATIONAL DAILY

Particular description of goods.—A Daily Newspaper.

Ser. No. 33,088. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ANNA NITZ, New York, N. Y. Filed Feb. 29, 1908.



Particular description of goods.—Remedy for Neuritis, Sore Throat, Gout, Rheumatism, Sciatica, and Diseases Caused by Improper Circulation of the Blood and Unaccompanied by Fever.

Ser. No. 33,111. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE ELECTRIC MEAT CURING COMPANY, Cleveland, Ohio. Filed Mar. 2, 1908.



Particular description of goods.—Cured Meats.

Ser. No. 33,152. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) THE DARLING PUMP & MAN'FG. CO. (LIMITED), Williamsport, Pa. Filed Mar. 3, 1908.

EUREKA,

Particular description of goods.—Packing-Cups for Oil-Well and other Pumps.

Ser. No. 33,155. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) CRUTCHFIELD & WOOLFOLK, Pittsburg, Pa. Filed Mar. 4, 1908.



Particular description of goods.—Celery.

Ser. No. 33,167. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) WALTER K. FREEMAN, Oscawana, N. Y. Filed Mar. 4, 1908.

CUTALAX

Particular description of goods.—Soap.

Ser. No. 33,171. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) THE ERICKA MANUFACTURING CORPORATION, Springfield, Mass. Filed Mar. 5, 1908.



Particular description of goods.—Soaps.

Ser. No. 33,201. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) NEIL C. POLSON, Kingston, Ontario, Canada, and Hartford, Conn. Filed Mar. 6, 1908.

PILLOZONES

Particular description of goods.—Remedy for Disorders of the Stomach, Bowels, Kidneys, Liver, and Bladder.

Ser. No. 33,235. (CLASS 37. PAPER AND STATIONERY.) GEORGE B. HURD & CO., New York, N. Y. Filed Mar. 7, 1908.

711

Particular description of goods.—Writing-Paper and Envelops.

Ser. No. 33,243. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) F. AUGUST LUYTIES, St. Louis, Mo. Filed Mar. 7, 1908.

EUSANGUIN

Particular description of goods.—A Tonic.

Ser. No. 33,283. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) ZUCKER & LEVETT & LOEB COMPANY, New York, N. Y. Filed Mar. 10, 1908.



Particular description of goods.—Buffing-Wheels, Polishing-Wheels, and Sections for Said Wheels.

Ser. No. 33,292. (CLASS 48. MALT EXTRACTS AND LIQUORS.) CONSUMERS BREWING COMPANY, Philadelphia, Pa. Filed Mar. 10, 1908.

Quaker Brand

Particular description of goods.—Ale, Beer, and Porter.

Ser. No. 33,302. (CLASS 48. MALT EXTRACTS AND LIQUORS.) STORZ BREWING CO., Omaha, Nebr. Filed Mar. 11, 1908.

TRIUMPH

Particular description of goods.—Beer.

Ser. No. 33,317. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) W. T. WAGNER'S SONS, Cincinnati, Ohio. Filed Mar. 11, 1908.



Particular description of goods.—Table-Waters.

Ser. No. 33,325. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) GRIFFITH-DURNEY COMPANY, San Francisco, Cal. Filed Mar. 12, 1908.



Particular description of goods.—Canned Fruits and Vegetables.

Ser. No. 33,328. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) GRIFFITH-DURNEY COMPANY, San Francisco, Cal. Filed Mar. 12, 1908.

Regina

Particular description of goods.—Canned Fruits and Vegetables.

Ser. No. 33,329. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) GRIFFITH-DURNEY COMPANY, San Francisco, Cal. Filed Mar. 12, 1908.



Particular description of goods.—Canned Fruits and Vegetables.

Ser. No. 33,350. (CLASS 15. OILS AND GREASES NOT INTENDED FOR FOOD.) FISKE BROTHERS REFINING Co., New York, N. Y. Filed Mar. 13, 1908.

ZEROLEUM.

Particular description of goods.—Lubricating-Oils and Lubricating-Greases.

Ser. No. 33,357. (CLASS 29. BROOMS, BRUSHES, AND DUSTERS.) THE JOSEPH LAY COMPANY, Ridgeville, Ind. Filed Mar. 13, 1908. Used ten years.

Lay

Particular description of goods.—Brooms and Brushes.

Ser. No. 33,382. (CLASS 9. EXPLOSIVES, FIREARMS, EQUIPMENTS, AND PROJECTILES.) VON LENGERKE & DETMOLD, New York, N. Y. Filed Mar. 14, 1908.

LIGHTNING

Particular description of goods.—Paper Shot-Shells.

Ser. No. 33,391. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) RECKITT & SONS LIMITED, Hull, England. Filed Mar. 14, 1908.



Particular description of goods.—Blue for Laundry Purposes.

Ser. No. 33,396. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) ILSLEY & HELD Co., New York, N. Y. Filed Mar. 16, 1908. Used ten years.

LEMON
POLISHING OIL

Particular description of goods.—Polishing-Oil.

Ser. No. 33,415. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE MEADOLINE Co., Vidalia, Ga. Filed Mar. 16, 1908.

MEADOLINE

Particular description of goods.—A Salve or Ointment.

Ser. No. 33,468. (CLASS 15. OILS AND GREASES NOT INTENDED FOR FOOD.) CORN PRODUCTS REFINING COMPANY, Jersey City, N. J., and New York, N. Y. Filed Mar. 19, 1908.

ARGO

Particular description of goods.—Corn-Oil.

TRADE-MARKS

REGISTERED APRIL 21, 1908.

68,581. BEESWAX. E. A. BROMUND, New York, N. Y.
Filed January 14, 1908. Serial No. 32,215. PUBLISHED FEBRUARY 18, 1908.

68,582. BEESWAX. E. A. BROMUND, New York, N. Y.
Filed January 14, 1908. Serial No. 32,217. PUBLISHED FEBRUARY 18, 1908.

68,583. BEESWAX. E. A. BROMUND, New York, N. Y.
Filed January 14, 1908. Serial No. 32,218. PUBLISHED FEBRUARY 18, 1908.

68,584. CERTAIN MEDICATED CATTLE-DIP. IOWA HOG & CATTLE POWDER COMPANY, South Omaha, Nebr.
Filed November 29, 1907. Serial No. 31,465. PUBLISHED FEBRUARY 18, 1908.

68,585. BRISTLES FOR BRUSH-MAKING. ARCHIBALD JOHN LITTLE, London, England.
Filed July 8, 1905. Serial No. 9,935. PUBLISHED FEBRUARY 18, 1908.

68,586. CERTAIN CHEMICAL COMPOSITION. THE LIVERPOOL BORAX Co., LTD., Liverpool, England.
Filed October 22, 1907. Serial No. 30,721. PUBLISHED FEBRUARY 18, 1908.

68,587. CERTAIN CHEMICAL PREPARATIONS. MAX ELB GESELLSCHAFT MIT BESCHRÄNKTER HAFTUNG, Dresden, Germany.
Filed December 14, 1906. Serial No. 24,033. PUBLISHED FEBRUARY 18, 1908.

68,588. PREPARED BLACK-LEAD, PLUMBAGO OR GRAPHITE, AND FOUNDRY-FACINGS. FELICIA V. MORSE, Canton, Mass.
Filed September 24, 1906. Serial No. 22,271. PUBLISHED FEBRUARY 18, 1908.

68,589. PREPARED BLACK-LEAD, PLUMBAGO OR GRAPHITE, AND FOUNDRY-FACINGS. FELICIA V. MORSE, Canton. Mass.
Filed September 24, 1906. Serial No. 22,274. PUBLISHED FEBRUARY 18, 1908.

68,590. PREPARED BLACK-LEAD, PLUMBAGO OR GRAPHITE, AND FOUNDRY-FACINGS. FELICIA V. MORSE, Canton, Mass.
Filed September 24, 1906. Serial No. 22,275. PUBLISHED FEBRUARY 18, 1908.

68,591. PREPARED BLACK-LEAD, PLUMBAGO OR GRAPHITE, AND FOUNDRY-FACINGS. FELICIA V. MORSE, Canton, Mass.
Filed September 24, 1906. Serial No. 22,276. PUBLISHED FEBRUARY 18, 1908.

68,592. PREPARED BLACK-LEAD, PLUMBAGO OR GRAPHITE, AND FOUNDRY-FACINGS. FELICIA V. MORSE, Canton, Mass.
Filed September 24, 1906. Serial No. 22,278. PUBLISHED FEBRUARY 18, 1908.

68,593. SILVER-POLISH. JOSEPH C. ALLEN, Plainfield, N. J.
Filed August 21, 1906. Serial No. 21,094. PUBLISHED JUNE 11, 1907.

68,594. FACIAL SOAP AND SHAVING-SOAP. THE ANDREW JERGENS Co., Cincinnati, Ohio.
Filed July 10, 1905. Serial No. 9,995. PUBLISHED OCTOBER 2, 1906.

68,595. FELT ROOFING. BELKNAP HARDWARE AND MANUFACTURING Co., Louisville, Ky.
Filed October 7, 1907. Serial No. 30,480. PUBLISHED FEBRUARY 18, 1908.

68,596. POLISHING CHAMOIS-SKIN. CHARLES H. KEITH, Cleveland, Ohio.
Filed January 2, 1908. Serial No. 32,001. PUBLISHED FEBRUARY 18, 1908.

68,597. LEATHER AND SHOE DRESSINGS. S. M. BIXBY & Co., New York, N. Y.
Filed November 10, 1906. Serial No. 23,213. PUBLISHED APRIL 16 1907.

68,598. CERTAIN ARTICLES OF CROCKERY, EARTHENWARE, AND PORCELAIN. IGNAZ STRAUSS & Co., New York, N. Y.
Filed November 9, 1907. Serial No. 31,102. PUBLISHED FEBRUARY 18, 1908.

68,599. FERTILIZERS. UNION GUANO COMPANY, Winston Salem, N. C.
Filed January 18, 1908. Serial No. 32,301. PUBLISHED FEBRUARY 18, 1908.

68,600. FERTILIZERS. UNION GUANO COMPANY, Winston Salem, N. C.
Filed January 18, 1908. Serial No. 32,302. PUBLISHED FEBRUARY 18, 1908.

68,601. FERTILIZERS. UNION GUANO COMPANY, Winston Salem, N. C.
Filed January 18, 1908. Serial No. 32,303. PUBLISHED FEBRUARY 18, 1908.

68,602. FERTILIZERS. UNION GUANO COMPANY, Winston Salem, N. C.
Filed January 18, 1908. Serial No. 32,305. PUBLISHED FEBRUARY 18, 1908.

68,603. REMEDY FOR CERTAIN DISEASES. MOSES S. BARLOW, Newkirk, Okla.
Filed April 11, 1907. Serial No. 26,645. PUBLISHED FEBRUARY 18, 1908.

68,604. CERTAIN MEDICINES AND TOILET PREPARATIONS. P. BEIERSDORF & Co., Hamburg, Germany.
Filed July 29, 1907. Serial No. 29,084. PUBLISHED FEBRUARY 18, 1908.

68,605. SUPPOSITORIES. THE BONEWELL MEDICINE Co. LTD., Detroit, Mich.
Filed January 2, 1908. Serial No. 32,036. PUBLISHED FEBRUARY 18, 1908.

68,606. EYE-LOTIONS. CHAUNCEY S. CAREY, Elmira, N. Y.
Filed November 4, 1907. Serial No. 31,003. PUBLISHED FEBRUARY 18, 1908.

68,607. WATCHES, WATCHCASES, AND WATCH-MOVEMENTS. CIE DES MONTRES INVAR, Chaux de Fonds, Switzerland.
Filed September 23, 1907. Serial No. 30,165. PUBLISHED FEBRUARY 18, 1908.

68,608. CERTAIN CHEMICALS. FARBENFABRIKEN VORM. FRIEDR. BAYER & Co., Elberfeld, Germany.
Filed January 25, 1907. Serial No. 24,891. PUBLISHED MARCH 5, 1907.

68,609. CERTAIN MACHINES. FILTER & BRAUTECHNISCHE MASCHINENFABRIK ACTIEN GESELLSCHAFT VORMALS L. A. ENZINGER, Berlin, Germany.
Filed September 23, 1907. Serial No. 30,208. PUBLISHED FEBRUARY 18, 1908.

68,610. CERTAIN REMEDIES. AMEDEE FORTIER, Waterville, Me.
Filed December 26, 1907. Serial No. 31,926. PUBLISHED FEBRUARY 18, 1908.

68,611. REMEDY FOR RHEUMATISM. GEISENBERGER BROS., Natchez, Miss.
Filed December 28, 1906. Serial No. 24,317. PUBLISHED FEBRUARY 18, 1908.

68,612. LUBRICANTS. GENERAL LUBRICATING COMPANY, Philadelphia, Pa.
Filed December 21, 1907. Serial No. 31,878. PUBLISHED FEBRUARY 18, 1908.

68,613. CORN-SALVE. GIANT CHEMICAL COMPANY, Philadelphia, Pa.
Filed January 13, 1908. Serial No. 32,198. PUBLISHED FEBRUARY 18, 1908.

68,614. CIGARS AND CHEROOTS. GORDON CIGAR AND CHEROOT CO., INC., Richmond, Va.
Filed December 13, 1907. Serial No. 31,711. PUBLISHED FEBRUARY 11, 1908.

68,615. REMEDY FOR DYSPEPSIA. HOLLANDER BROS. DRUG CO., Braddock, Pa.
Filed August 7, 1907. Serial No. 29,274. PUBLISHED FEBRUARY 18, 1908.

68,616. REMEDY FOR GONORRHEA, GLEET, AND LEUCORRHEA. WILLIAM H. JUENGER, Los Angeles, Cal.
Filed October 24, 1907. Serial No. 30,758. PUBLISHED FEBRUARY 18, 1908.

68,617. SALVE. MARGARETHA LANGE, Omaha, Nebr.
Filed January 16, 1908. Serial No. 32,254. PUBLISHED FEBRUARY 18, 1908.

68,618. COUGH-DROPS. MALTET CHEMICAL COMPANY, New York, N. Y.
Filed December 18, 1907. Serial No. 31,826. PUBLISHED FEBRUARY 18, 1908.

68,619. BLOOD-BURIFIER AND TONIC. MANHATTAN DRUG CO., New York, N. Y.
Filed December 19, 1907. Serial No. 31,847. PUBLISHED FEBRUARY 18, 1908.

68,620. CERTAIN LUBRICANTS AND LUBRICATING MATERIAL. FELICIA V. MORSE, Canton, Mass.
Filed September 24, 1906. Serial No. 22,273. PUBLISHED FEBRUARY 18, 1908.

68,621. FISH-HOOKS. O. MUSTAD & SÖN, Christiania, Norway.
Filed June 12, 1907. Serial No. 28,067. PUBLISHED FEBRUARY 18, 1908.

68,622. FACE-CREAM, FACE-POWDER, AND SCALP-TONIC. ERNEST NARJOT, Los Angeles, Cal.
Filed December 3, 1907. Serial No. 31,520. PUBLISHED FEBRUARY 17, 1908.

68,623. SALVE. MARGARET A. PALERMO, Bellmore, N. Y.
Filed December 19, 1907. Serial No. 31,840. PUBLISHED FEBRUARY 18, 1908.

68,624. SALVE OR OINTMENT AND EMOLLIENT. WALTER K. PEEK, New York, N. Y.
Filed December 19, 1907. Serial No. 31,843. PUBLISHED FEBRUARY 18, 1908.

68,625. CERTAIN TOILET PREPARATIONS. PURITOL CHEMICAL CO., Kansas City, Mo.
Filed January 15, 1908. Serial No. 32,230. PUBLISHED FEBRUARY 18, 1908.

68,626. WHITEWASH-BRUSHES. RENNOUS, KLEINLE & CO. OF BALTIMORE CITY, Baltimore, Md.
Filed July 11, 1905. Serial No. 10,120. PUBLISHED FEBRUARY 18, 1908.

68,627. TONIC MEDICINES. José SOLIVERAS, Mexico, Mexico.
Filed April 6, 1907. Serial No. 26,528. PUBLISHED FEBRUARY 18, 1908.

68,628. TYPE-WRITING MACHINES AND TYPE-WRITING-MACHINE PARTS. UNDERWOOD TYPEWRITER COMPANY, New York, N. Y.
Filed December 9, 1907. Serial No. 31,641. PUBLISHED FEBRUARY 18, 1908.

68,629. CERTAIN TOILET PREPARATIONS. F. WOLFF & SOHN, Karlsruhe, Germany.
Filed May 18, 1906. Serial No. 19,668. PUBLISHED FEBRUARY 18, 1908.

68,630. CERTAIN CANNED FRUITS. ARMSBY PRESERVING CO., San Francisco, Cal.
Filed January 4, 1908. Serial No. 32,063. PUBLISHED FEBRUARY 18, 1908.

68,631. CERTAIN CANNED FRUITS. ARMSBY PRESERVING CO., San Francisco, Cal.
Filed January 4, 1908. Serial No. 32,064. PUBLISHED FEBRUARY 18, 1908.

68,632. CERTAIN CANNED FRUITS. ARMSBY PRESERVING CO., San Francisco, Cal.
Filed January 4, 1908. Serial No. 32,065. PUBLISHED FEBRUARY 18, 1908.

68,633. WHISKY. JOSEPH DEBAR, Cincinnati, Ohio.
Filed June 19, 1905. Serial No. 8,499. PUBLISHED FEBRUARY 18, 1908.

68,634. LARD. DUNLEVY & BROTHER, Pittsburg, Pa.
Filed May 8, 1905. Serial No. 4,097. PUBLISHED APRIL 17, 1906.

68,635. CERTAIN PHOTOGRAPHIC INSTRUMENTS AND SUPPLIES. EASTMAN KODAK CO., Rochester, N. Y.
Filed September 19, 1907. Serial No. 30,086. PUBLISHED FEBRUARY 18, 1908.

68,636. STEREOSCOPIC VIEWS AND PHOTOGRAPHS. H. C. WHITE CO., North Bennington, Vt.
Filed September 30, 1905. Serial No. 13,151. PUBLISHED FEBRUARY 18, 1908.

68,637. CERTAIN MACHINE-TOOLS. JONAS & COLVER, LIMITED, Sheffield, England.
Filed January 4, 1907. Serial No. 24,440. PUBLISHED FEBRUARY 18, 1908.

68,638. TEA. JONES-PADDOCK CO., San Francisco, Cal.
Filed July 24, 1907. Serial No. 29,019. PUBLISHED SEPTEMBER 3, 1907.

68,639. CERTAIN SEA FOODS. RIDENOUR-BAKER GROCERY CO., Kansas City, Mo.
Filed December 14, 1907. Serial No. 31,728. PUBLISHED FEBRUARY 18, 1908.

68,640. GIN. TANQUERAY GORDON & CO. LIMITED, London, England.
Filed November 13, 1905. Serial No. 14,540. PUBLISHED FEBRUARY 18, 1908.

68,641. WHISKY. BONNIE BROS., Louisville, Ky.
Filed January 3, 1908. Serial No. 32,038. PUBLISHED FEBRUARY 18, 1908.

68,642. SPICES. THE C. S. MOREY MERCANTILE COMPANY, Denver, Colo.
Filed December 16, 1907. Serial No. 31,744. PUBLISHED FEBRUARY 18, 1908.

68,643. RHEOSTATS AND RESISTANCE-COILS. CLARK & ROWLAND, Pittsburg, Pa.
Filed November 18, 1907. Serial No. 31,243. PUBLISHED FEBRUARY 18, 1908.

68,644. TEA, COFFEE, AND CHOCOLATE. EAST INDIA COFFEE COMPANY, Boston, Mass.
Filed November 19, 1907. Serial No. 31,249. PUBLISHED FEBRUARY 4, 1908.

68,645. ALE. EDWARD & JOHN BURKE, LIMITED, Dublin, Ireland, and New York, N. Y.
Filed December 6, 1907. Serial No. 31,597. PUBLISHED FEBRUARY 18, 1908.

68,646. BEER. THE F. W. GOOK BREWING CO., Evansville, Ind.
Filed January 13, 1908. Serial No. 32,197. PUBLISHED FEBRUARY 18, 1908.

68,647. WHISKY. LAZARUS GOODMAN CO., Lynchburg, Va.
Filed January 3, 1908. Serial No. 32,043. PUBLISHED FEBRUARY 18, 1908.

68,648. CLIPS OR HOLDING DEVICES FOR EYEGLASSES. MOSES H. HARRIS, New York, N. Y.
Filed January 3, 1908. Serial No. 32,046. PUBLISHED FEBRUARY 18, 1908.

68,649. SAUSAGE, LARD, DRIED BEEF, HAM, AND BACON. WM. J. JONES, Cleveland, Ohio.
Filed December 30, 1907. Serial No. 31,974. PUBLISHED FEBRUARY 18, 1908.

68,650. CERTAIN DRAFTSMEN'S INSTRUMENTS. THE KEUFFEL & ESSER COMPANY, Hoboken, N. J.
Filed January 4, 1907. Serial No. 24,450. PUBLISHED FEBRUARY 18, 1908.

68,651. SLIDE-RULES. KEUFFEL & ESSER COMPANY, Hoboken, N. J., and New York, N. Y.
Filed December 21, 1907. Serial No. 31,871. PUBLISHED FEBRUARY 18, 1908.

68,652. SCALES AND DRAFTING INSTRUMENTS. THE KEUFFEL & ESSER COMPANY, Hoboken, N. J.
Filed December 31, 1907. Serial No. 31,991. PUBLISHED FEBRUARY 18, 1908.

68,653. CERTAIN MEASURING AND SCIENTIFIC INSTRUMENTS. THE KEUFFEL & ESSER COMPANY, Hoboken, N. J.
Filed January 2, 1908. Serial No. 31,996. PUBLISHED FEBRUARY 18, 1908.

68,654. WHISKY. M. GANS CO., Pine Bluff, Ark.
Filed January 3, 1908. Serial No. 32,044. PUBLISHED FEBRUARY 18, 1908.

68,655. CHEWING-GUM. GEORGE H. PEMBROKE, New Brunswick, N. J.
Filed November 14, 1907. Serial No. 31,160. PUBLISHED FEBRUARY 18, 1908.

68,656. PREPARATION TO IMPROVE THE COLOR, AROMA, AND FLAVOR OF COFFEE. PFEIFFER & DILLER G. M. B. H., Horchheim, Germany.
Filed November 20, 1907. Serial No. 31,379. PUBLISHED FEBRUARY 18, 1908.

68,657. MINT CORDIAL. SOCIETE ANONYME DE LA GRANDE DISTILLERIE E. CUSENIER FILS AINE ET COMPAGNIE, Paris, France.
Filed December 18, 1907. Serial No. 31,832. PUBLISHED FEBRUARY 18, 1908.

68,658. CERTAIN CANNED SEA FOODS. STROHMEYER & ARPE COMPANY, New York, N. Y.
Filed October 2, 1907. Serial No. 30,340. PUBLISHED NOVEMBER 19, 1907.

68,659. WINE. BRAND BROTHERS COMPANY, Chicago, Ill.
Filed December 7, 1907. Serial No. 31,604. PUBLISHED FEBRUARY 4, 1908.

68,660. CERTAIN PAPER AND PAPER ARTICLES. DENNISON MANUFACTURING COMPANY, Boston, Mass.
Filed January 8, 1908. Serial No. 32,131. PUBLISHED FEBRUARY 18 1908.

68,661. CERTAIN RANGES AND FURNACES. DUPARQUET, HUOT & MONEUSE COMPANY, New York, N. Y.
Filed June 3, 1905. Serial No. 7,363. PUBLISHED JANUARY 1, 1907.

68,662. PAPER INDEX-FILES. FABRIK STOLZENBERG DEUTSCHE BUREAU-EINRICHTUNGS-GESELLSCHAFT MIT BESCHRÄNKTER HAFTUNG, Oos, Germany.
Filed October 26, 1905. Serial No. 13,954. PUBLISHED FEBRUARY 18, 1908.

68,663. STOVES, RANGES, LAMPS, AND LANTERNS. THE GEORGE TRITCH HARDWARE COMPANY, Denver, Colo.
Filed July 13, 1906. Serial No. 20,968. PUBLISHED FEBRUARY 18, 1908.

68,664. STOVES, RANGES, LAMPS, AND LANTERNS. THE GEORGE TRITCH HARDWARE COMPANY, Denver, Colo.
Filed July 13, 1906. Serial No. 20,969. PUBLISHED FEBRUARY 18, 1908.

68,665. CERTAIN DRIED FRUITS. THE J. K. ARMSBY COMPANY, Chicago, Ill., and San Francisco, Cal.
Filed December 27, 1907. Serial No. 31,947. PUBLISHED FEBRUARY 18, 1908.

68,666. CERTAIN DRIED FRUITS. THE J. K. ARMSBY COMPANY, Chicago, Ill., and San Francisco, Cal.
Filed December 27, 1907. Serial No. 31,948. PUBLISHED FEBRUARY 18, 1908.

68,667. WRITING-PAPER. J. W. BUTLER PAPER CO., Chicago, Ill.
Filed July 8, 1907. Serial No. 28,647. PUBLISHED FEBRUARY 18, 1908.

68,668. WRITING-PAPER. J. W. BUTLER PAPER CO., Chicago, Ill.
Filed July 8, 1907. Serial No. 28,655. PUBLISHED FEBRUARY 18, 1908.

68,669. WRITING-PAPER. J. W. BUTLER PAPER CO., Chicago, Ill.
Filed July 8, 1907. Serial No. 28,658. PUBLISHED FEBRUARY 18, 1908.

68,670. WRITING-PAPER. J. W. BUTLER PAPER CO., Chicago, Ill.
Filed July 8, 1907. Serial No. 28,660. PUBLISHED FEBRUARY 18, 1908.

68,671. CERTAIN PAPER AND BRISTOL-BOARD. THE KEUFFEL & ESSER COMPANY, Hoboken, N. J.
Filed January 4, 1907. Serial No. 24,451. PUBLISHED FEBRUARY 18 1908.

68,672. CERTAIN FOODS AND FLAVORING EXTRACTS. HOMER P. D. KINGSBURY, Redlands, Cal.
Filed December 9, 1907. Serial No. 31,625. PUBLISHED FEBRUARY 18, 1908

68,673. CERTAIN CLOTHING. LEVI STRAUSS & CO., San Francisco, Cal.
Filed November 16, 1907. Serial No. 31,200. PUBLISHED FEBRUARY 18, 1908.

68,674. CATALOGUES AND ADVERTISING-CIRCULARS. THE MCCLURE COMPANY, New York, N. Y.
Filed December 6, 1907. Serial No. 31,596. PUBLISHED FEBRUARY 18, 1908.

68,675. WOOD DISHES. THE OVAL WOOD DISH CO., Delta, Ohio.
Filed December 5, 1907. Serial No. 31,586. PUBLISHED FEBRUARY 18, 1908.

68,676. MEDICATED COTTON WOOL. SHARP & DOHME, Baltimore, Md.
Filed December 11, 1907. Serial No. 31,674. PUBLISHED FEBRUARY 18, 1908.

68,677. BEER. THE SMITH BREWING COMPANY, Youngstown, Ohio.
Filed November 26, 1907. Serial No. 31,383. PUBLISHED FEBRUARY 18, 1908.

68,678. EGG-CARRIERS AND EGG-TRAYS. STAR EGG CARRIER & TRAY MFG. CO., Rochester, N. Y.
Filed June 29, 1906. Serial No. 20,645. PUBLISHED FEBRUARY 18, 1908.

68,679. PAPER BAGS. THE UNION BAG & PAPER COMPANY, New York, N. Y.
Filed December 13, 1907. Serial No. 31,714. PUBLISHED FEBRUARY 18, 1908.

68,680. MAGAZINE. RICHARD D. WYCKOFF, New York, N. Y.
Filed October 21, 1907. Serial No. 30,717. PUBLISHED FEBRUARY 18, 1908.

68,681. CERTAIN WINES. THE BARTON VINEYARD COMPANY, LIMITED, Fresno, Cal.
Filed December 1, 1906. Serial No. 23,702. PUBLISHED OCTOBER 15, 1907.

68,682. ROOFING-PAPER. THE CHATFIELD MFG. CO., Cincinnati, Ohio.
Filed June 29, 1907. Serial No. 28,463. PUBLISHED DECEMBER 3 1907.

68,683. CERTAIN TIRES AND PARTS THEREOF. CONTINENTAL CAOUTCHOUC COMPANY, New York, N. Y.
Filed November 5, 1907. Serial No. 31,018. PUBLISHED FEBRUARY 11, 1908.

68,684. GINGHAMS, CHAMBRAYS, AND SHIRTINGS. ENO COTTON MILLS, Hillsboro, N. C.
Filed December 23, 1907. Serial No. 31,889. PUBLISHED FEBRUARY 18, 1908.

68,685. NEWSPAPER. WILLIAM R. HEARST, New York, N. Y.
Filed May 14, 1906. Serial No. 19,493. PUBLISHED SEPTEMBER 18, 1906.

68,686. NEWSPAPER. WILLIAM R. HEARST, New York, N. Y.
Filed May 14, 1906. Serial No. 19,494. PUBLISHED SEPTEMBER 18, 1906.

68,687. WATERPROOF CLOTH. ALEXANDER L. JACOBS, Alliance, Ohio.
Filed November 14, 1907. Serial No. 31,175. PUBLISHED FEBRUARY 18, 1908.

68,688. BROAD SILK. LAUREL SILK WORKS, Paterson, N. J., and New York, N. Y.
Filed December 17, 1907. Serial No. 31,763. PUBLISHED FEBRUARY 18, 1908.

68,689. BROAD SILK. LAUREL SILK WORKS, Paterson, N. J., and New York, N. Y.
Filed December 17, 1907. Serial No. 31,764. PUBLISHED FEBRUARY 18, 1908.

68,690. BROAD SILK. LAUREL SILK WORKS, Paterson, N. J., and New York, N. Y.
Filed December 17, 1907. Serial No. 31,765. PUBLISHED FEBRUARY 18, 1908.

68,691. LEATHER BOOTS, SHOES, AND SLIPPERS. M. D. WELLS Co., Chicago, Ill.
Filed July 11, 1905. Serial No. 10,091. PUBLISHED FEBRUARY 18, 1908.

68,692. BUTTER, CHEESE, MILK, AND CREAM. WILLIAM H. MINER, Chazy, N. Y.
Filed December 18, 1907. Serial No. 31 810. PUBLISHED FEBRUARY 18, 1908.

68,693. POULTRY, CHICKENS, DUCKS, TURKEYS AND EGGS. WILLIAM H. MINER, Chazy, N. Y.
Filed December 18, 1907. Serial No. 31,811. PUBLISHED FEBRUARY 18, 1908.

68,694. TEXTILE SHOE-LININGS. THE MONA MANUFACTURING COMPANY, Boston, Mass.
Filed September 3, 1907. Serial No. 29,739. PUBLISHED FEBRUARY 18, 1908.

68,695. STEAM-BOILER INJECTORS AND BOILER-FEEDERS. NATHAN MANUFACTURING Co., New York, N. Y.
Filed April 18, 1905. Serial No. 2,170. PUBLISHED JULY 4, 1905.

68,696. INSOLES. PAD O'POWDER INSHU Co., Omaha, Nebr.
Filed November 20, 1907. Serial No. 31,269. PUBLISHED FEBRUARY 18, 1908.

68,697. BLEACHED AND UNBLEACHED COTTON PIECE GOODS. PEPPERELL MANUFACTURING Co., Biddeford, Me.
Filed December 16, 1907. Serial No. 31,748. PUBLISHED FEBRUARY 18, 1908.

68,698. BLEACHED AND UNBLEACHED COTTON PIECE GOODS. PEPPERELL MANUFACTURING Co., Biddeford, Me.
Filed December 16, 1907. Serial No. 31,749. PUBLISHED FEBRUARY 18, 1908.

68,699. BLEACHED AND UNBLEACHED COTTON PIECE GOODS. PEPPERELL MANUFACTURING Co., Biddeford, Me.
Filed December 16, 1907. Serial No 31,750. PUBLISHED FEBRUARY 18, 1908.

68,700. BLEACHED AND UNBLEACHED COTTON PIECE GOODS. PEPPERELL MANUFACTURING Co., Biddeford, Me.
Filed December 16, 1907. Serial No. 31,752. PUBLISHED FEBRUARY 18, 1908.

68,701. BLEACHED AND UNBLEACHED COTTON PIECE GOODS. PEPPERELL MANUFACTURING Co., Biddeford, Me.
Filed December 16, 1907. Serial No. 31,753. PUBLISHED FEBRUARY 18, 1908.

68,702. CERTAIN EDGE-TOOLS. THE W. BINGHAM COMPANY, Cleveland, Ohio.
Filed May 1, 1905. Serial No. 3,709. PUBLISHED DECEMBER 17, 1907.

68,703. MINERAL WATER. WINOLA OIL GAS DEVELOPMENT AND IMPROVEMENT COMPANY, Factoryville, Pa.
Filed January 2, 1908. Serial No. 32,015. PUBLISHED FEBRUARY 18, 1908.

68,704. CANDIES AND SALTED NUTS. A. L. & J. W. DART, St. Paul, Minn.
Filed December 3, 1907. Serial No. 31,533. PUBLISHED FEBRUARY 18, 1908.

TRADE-MARKS CANCELED.

54,456. FERTILIZERS. VIRGINIA-CAROLINA CHEMICAL COMPANY, Jersey City, N. J.; Richmond and Norfolk, Va.; Charleston, S. C.; Savannah and Atlanta, Ga.; Montgomery, Ala.; Durham, N. C., and Memphis, Tenn.
Registered June 26, 1906. Canceled April 7, 1908.

LABELS

REGISTERED APRIL 21, 1908.

14,151.—*Title:* "STAR UNION." (For Cigars.) SCHMIDT & Co., New York, N. Y. Filed March 14, 1908.

14,152.—*Title:* "LA CEDAROSA." (For Cigars.) AMERICAN LITHOGRAPHIC COMPANY, New York, N. Y. Filed March 21, 1908.

14,153.—*Title:* "MURONA." (For Cigars.) AMERICAN LITHOGRAPHIC COMPANY, New York, N. Y. Filed March 21, 1908.

14,154.—*Title:* "MALT MEAD." (For a Non-Intoxicating Beer.) LEXINGTON BREWING COMPANY, Lexington, Ky. Filed March 24, 1908.

14,155.—*Title:* "OLD COUNTRY ASSAM TEA." (For Tea.) NIELS JOHN PETERSEN, Philadelphia, Pa. Filed March 19, 1908.

14,156.—*Title:* "POINSETTIA CREAMERY." (For Butter.) LEE H. YOUNG, Oceanpark, Cal. Filed March 18, 1908.

14,157.—*Title:* "YE 'PRYORY' SAUCE." (For Sauce.) THE PRYORY SAUCE Co., Chicago, Ill. Filed March 19, 1908.

14,158.—*Title:* "JUMBO BRAND." (For Salted Peanuts.) S. A. SHURTLEFF, Boston, Mass. Filed March 13, 1908.

14,159.—*Title:* "GRANDMA'S CLEANER." (For a Cleaning Preparation.) GRANDMA'S MANUFACTURING COMPANY, Chicago, Ill. Filed March 19, 1908.

14,160.—*Title:* "AMERICAN CORN REMOVER." (For Corn-Plasters.) THE GREAT AMERICAN HERB Co., Washington, D. C. Filed March 24, 1908.

14,161.—*Title:* "THE SPECIALTY WAIST." (For Waists.) GILL & MANDEL, New York, N. Y. Filed March 17, 1908.

PRINTS

REGISTERED APRIL 21, 1908.

2,262.—*Title:* "74 CARD DOMINOES." (For Game-Cards.) THE UNITED STATES PLAYING CARD COMPANY, Norwood, Ohio. Filed March 17, 1908.

2,263.—*Title:* "HOW DRY I AM." (For Raincoats.) C. KENYON Co., Brooklyn, N. Y. Filed March 7, 1908.

2,264.—*Title:* "MENS APPAREL." (For Men's Clothing.) SCHLOSS BROS. & Co., Baltimore, Md. Filed March 20, 1908.

2,265.—*Title:* "THE SIGN OF THE 7." (For Shoes.) A. ARTHUR KIMBALL, Milwaukee, Wis. Filed March 11, 1908.

DECISIONS

OF THE

COMMISSIONER OF PATENTS

AND OF

UNITED STATES COURTS IN PATENT CASES.

COMMISSIONER'S DECISIONS.

Ex Parte American Optical Company.

APPLICATION FOR REGISTRATION OF TRADE-MARK.

Decided April 9, 1908.

1. Trade-Marks—"Fits-U"—Descriptive.

The word "Fits-U" as a trade-mark for eyeglasses and spectacle frames and mountings is a mere misspelling of the descriptive words "fits you" and is not registrable as a technical trade-mark.

2. Same—"Merely Descriptive"—Section 5 of the Act of 1905 Construed.

The registration of words or devices which are "merely descriptive" being prohibited by section 5 of the act of 1905, an arrangement of the letters of such a word in a particular way or a mere misspelling thereof does not avoid the prohibition.

On rehearing.

TRADE-MARK FOR EYEGLASS AND SPECTACLE FRAMES, ETC.

Mr. John C. Dewey and *Mr. Henry Calver* for the applicant.

Moore, *Commissioner:*

This case comes before me upon a rehearing of my decision dated January 21, 1908. In that decision I held that the word "Fits-U" was not registrable as a trade-mark for eyeglasses and spectacle frames and mountings, as it amounted merely to the misspelling of the descriptive words *fits you*, it being pointed out that under the long recognized practice the mere misspelling of a descriptive word did not take away its descriptive character. (*Ex parte Kipling*, C. D., 1883, p. 54; *ex parte Henderson*, 85 O. G., 453; 1898, C. D., 647; *ex parte Crescent Mfg. Co.*, 97 O. G., 750; 1901, C. D., 160; *ex parte Seager*, 97 O. G., 749; C. D., 1901, 159; *ex parte Woolworth*, 100 O. G., 1976; 1902, C. D., 311; *ex parte Rat Biscuit Co.*, 130 O. G., 300.) The rehearing was requested on the ground that the principal point argued by counsel was that the statute permitted registration of marks of a descriptive nature unless they were "merely" descriptive, and that my decision did not pass upon the meaning of this word "merely" as used in the statute.

Since my decision in this case the Court of Appeals of the District of Columbia has rendered a decision in the case of the *Crescent Typewriter Supply Company*, (133 O. G., 231,) which presented the question of the right to register a mark for ink-ribbons and carbon-paper consisting of the following combination of letters: "ORIENT," inclosed in a wreath. The mark had been refused registration by the Commissioner on the ground substantially that the word "Orient" is of geographical significance, and that the arbitrary arrangement of two letters of the word and the addition thereto of a wreath surrounding the same did not entitle the mark to registration.

In that case it was contended by the appellant that—

The mark is a device consisting of a wreath, of letters arranged therein in an arbitrary manner, in other words, that it takes the whole design, wreath and letters, to compose the proposed trade-mark.

The court said:

We are of the opinion that the only reasonable interpretation of the combination of letters used is that they spell the word "Orient" and at once convey the use of that word to the mind.

The Commissioner refused to register the appellant's mark "for the reason that the word 'Orient,' the distinguishing feature of applicant's mark, is geographical." Section 5 of the trade-mark act of 1905, provides in part that—

"no mark, which consists merely in the name of an individual, firm, corporation or association, not written, printed, impressed or woven in some particular or distinctive manner or in association with the portrait of the individual, or merely in words or devices which are descriptive of the goods with which they are used, or of the character or quality of such goods, or merely a geographical name or term, shall be registered under the terms of this act."

It will be noted that this section of the trade-mark act does not permit the use of "a geographical name or term." We think this provision of the statute is broad enough to prohibit the use of any word that has an exclusive geographical significance, or that would suggest any particular geographical location.

Here the court, after quoting the section of the statutes which excepts from the right of registration marks which constitute "merely a geographical name or term," decided that the mark above described fell within the exception. While the court did not specifically refer to the effect of the word "merely," it cannot be presumed that this limitation in the statutes was overlooked. In the language prohibiting the registration of descriptive marks the word "merely" is used in the same way as it is in the language prohibiting the registration of geographical marks. In view of this construction of the statutes by the court of appeals with respect to geographical marks it is held that a particular arrangement of the letters of a descriptive word, or a mere misspelling thereof, does not avoid the prohibition of the statute.

I adhere to my previous opinion, and registration is accordingly refused.

Ex parte C. P. Goldsmith & Company.

APPLICATION FOR REGISTRATION OF TRADE-MARK.

Decided March 7, 1908.

Trade-Mark—"Hold On"—Descriptive.

The words "Hold On" as a trade-mark for clutches for scarf-pins and hat-pins properly refused registration since it is de-

scriptive of the character or quality of the goods to which it is applied.

ON APPEAL.

TRADE-MARK FOR CLUTCHES FOR SCARF-PINS AND HAT-PINS.

Mr. Joseph L. Levy for the applicant.

BILLINGS, *Assistant Commissioner:*

This is an appeal from the decision of the Examiner of Trade-Marks refusing to register the words "Hold On" as a trade-mark for clutches for scarf-pins and hat-pins.

The ground on which registration was refused is that the mark is descriptive of the character or quality of the goods and that the registration is therefore prohibited by section 5 of the Trade-Mark Act of 1905.

It appears that the article to which the trade-mark is applied is an attachment to a scarf-pin to prevent the loss of the latter.

The name appears to have been adopted to describe the fact that the clutch holds on to the pin. In the label filed with the application the following statement occurs under the head of "Advantages:" "It holds. The harder you pull the tighter it holds." These words therefore seem clearly to describe the character or quality of the clutch.

It is well settled by a long line of decisions in this Office and in the courts that words which are descriptive of the qualities of the goods do not constitute valid trade-marks and should not be registered.

Examples of such words are "No-Rip" for sweat-pads, which was refused registration in *ex parte The Crescent Company*, (97 O. G., 750;) "Nevers-Tick" as a trade-mark for lubricant, which was refused registration in *ex parte Woolworth*, (100 O. G., 1976;) "In Curve" for corsets, which was refused registration in *ex parte Kops Brothers*, (121 O. G., 1675,) and "Instantaneous" for a preparation of tapioca which was adapted for immediate use without a preliminary soaking, which in the case of *Bennett* v. *McKinley* (65 F. R., 505) was held by the court of appeals of the second circuit to be descriptive, and consequently not a valid trade-mark.

In the latter case, which counsel for applicants cites as a precedent for the registration of the mark, the following statements are made:

> No principle of the law of trade-mark is more familiar than that which denies protection to any word or name which is descriptive of the qualities, ingredients, or characteristics of the article to which it is applied. An exclusive right to the use of such a word, as a trade-mark, when applied to a particular article or class of articles, cannot be acquired by the prior appropriation of it, because all persons who are entitled to produce and vend similar articles are entitled to describe them, and to employ any appropriate terms for that purpose. * * *
>
> Applying the rule to the facts of the present case, we think the word "Instantaneous," as applied to the kind of tapioca dealt in by the parties, is descriptive, and consequently not a valid trade-mark. It not only is aptly and truthfully descriptive of one of the properties of the article to which it is sought to be applied, but it is especially appropriate to point out concisely and accurately the peculiar characteristic which distinguishes the particular tapioca from other varieties.

The following extract is cited by counsel for applicant from the case of *California Fig Syrup Co.* v. *Improved Fig Co.*, (51 F. R., 296:)

> Respondent urges that the words "Syrup of Figs" are descriptive. * * * It is unimportant if they are descriptive.

The whole paragraph from which this statement is taken reads as follows:

> But respondent urges that the words "Syrup of Figs" are descriptive, and that complainant deceives when it uses them to designate its compound. The deceit does not appear on the face of the bill, and it is unimportant if they are descriptive. The question is now, not whether complainant has the exclusive right to us the words "Syrup of Figs" or "Fig Syrup," but it is whether respondent has, by use of them and other words, and by the other imitations alleged and exhibited, so far imitated the form of complainant's device and description to represent its goods as its goods, and appropriate its reputation and trade. The gravamen of the action is the simulation of complainant's devices and the deception of purchasers.

From this quotation it appears that the question of the descriptiveness of the mark was held to be unimportant in this case because the suit was brought to restrain unfair competition.

The mark which it is sought to register is as descriptive as any of those in the decisions above cited and clearly falls within the definition of what constitutes a descriptive mark given in *Bennett* v. *McKinley*, *supra*. It must be held, therefore, that the action of the Examiner in refusing registration was clearly right.

The decision is affirmed.

ROBERT A. KEASBEY COMPANY *v.* PORTLAND CEMENTFABRIK HEMMOOR.

OPPOSITION.

Decided March 20, 1908.

TRADE-MARKS—OPPOSITION—TIME FOR FILING.

The thirty days allowed by statute for filing a notice of opposition include Sundays and holidays.

APPEAL from Examiner of Interferences.

TRADE-MARK FOR PORTLAND CEMENT.

Messrs. Gifford & Bull and *Messrs. Foster, Freeman, Watson & Coit* for Robert A. Keasbey Company.

Mr. Fritz Worm and *Messrs. Mason, Fenwick & Lawrence* for the Portland Cementfabrik Hemmoor.

BILLINGS, *Assistant Commissioner:*

This is an appeal from the decision of the Examiner of Interferences dismissing the above-entitled opposition on the ground that it was filed too late. The record shows that the mark was published in the OFFICIAL GAZETTE December 3, 1907. The notice of opposition was filed January 3, 1908. The ground upon which this appeal is based is that the Examiner erred in not excluding legal holidays in computing the thirty days allowed by law after the publication of the mark for the filing of a notice of opposition.

It is well settled that in the absence of positive written law excluding Sundays from the period of time prescribed for any purpose they are counted, even though the period ends on Sunday. (*Lewis' Sutherland Statutory Construction*, vol. 1, p. 335.) The same principle is applicable to holidays. Inasmuch as the period of thirty days fixed by section 6 of the Trade-Mark Act of February 20, 1905, does not contain any provision for excluding Sundays and holidays from such computation, they cannot be disregarded in the computation of time. A similar question was presented in the case of *Bass, Ratcliff & Gretton, Lim.*, v. *Hartmann Brewing Company*, (121 O. G., 2328.) in which notice of opposition was filed upon the thirty-first day after the publication of the mark, this period including the 30th of May, which is a legal holiday. In that case Commissioner Allen held that the notice of opposition was filed too late. It may be stated that Sundays and legal holidays have uniformly been counted in the periods provided by statute for action upon applications pending in this Office—as, for example, the period of one year within which action must be taken to avoid abandonment (*ex parte Koritski and Wipf*, 113 O. G., 1145; *ex parte Weirick*, 97 O. G., 1372) and the period of six months from the allowance of the application for the payment of the final fee. (*Ex parte Riley*, 56 O. G., 1203; see also the opinion of the Assistant Attorney-General in *ex parte Cannon*, 94 O. G., 2165.) It is therefore held that the dismissal of this notice of opposition was right.

The decision of the Examiner of Interferences is affirmed.

DECISIONS OF THE U. S. COURTS.

Court of Appeals of the District of Columbia.

BRAUNSTEIN *v.* HOLMES.

Decided February 4, 1908.

1. INTERFERENCE—EMPLOYER AND EMPLOYEE—PRINCIPAL AND ASSISTANT.

It is well settled that in the relation of employer and employee, where the employer conceived the principle or plan of an invention and the employee is directed to perfect the details, though the employee may make valuable improvements thereon, the improved result belongs to the employer. The same rule of law applies to principal and assistant, though they may be fellow employees.

2. SAME—SAME—SAME—PRESUMPTION.

B. was assigned to assist H. in making investigation and actually did the work which resulted in reducing the invention to practice. *Held* that the presumption is that what he accomplished was done under H.'s direction, and the burden is on him to overcome that presumption.

Mr. C. H. Howson for the appellant.

Mr. G. J. Harding for the appellee.

VAN ORSDEL, *J.:*

This is an appeal from the decision of the Commissioner of Patents in an interference proceeding. The decision of the Commissioner affirmed a decision of the Board of Examiners-in-Chief, which, in turn, affirmed a decision by the Examiner of Interferences, awarding judgment of priority to the appellee.

On July 21, 1904, the appellee, Fletcher B. Holmes, filed his application, No. 217,503, for a patent on an invention relating to the manufacture of commercial explosives from nitro-starch. The particular issue in interference relates to an explosive consisting of a mixture of nitro-starch and ammonium oxalate. In his preliminary statement, Holmes fixed July 1, 1903, as the date of his conception and disclosure of the invention in question, and September 1, 1903, as the date of reduction of the invention to practice. Braunstein filed his application, No. 223,503, for the same invention September 7, 1904. In his preliminary statement, June, 1903, is fixed as the date of his conception of the invention; June or July, 1903, as the date of disclosure; and July, 1903, as the date of reduction of the invention to actual practice.

Holmes is the senior party, and Braunstein the junior party. The issue before us is to determine which of the parties to this controversy is the inventor. Both were employed during the summer of 1903 as chemists in the Eastern Laboratory, a department of the high-explosive division of the Dupont Powder Company. This laboratory was established in 1902 for original experimental work in the production of explosives. It appears from the evidence that Holmes, shortly after he was employed in the Eastern Laboratory, was assigned to make experiments in the stabilizing of nitro starch. This assignment was made in June, 1903. Quoting from the evidence of Holmes, which is not denied—

> It had been known for some time that nitro starch was a powerful explosive, but it was as well known that nitro starch was exceedingly unstable and liable to spontaneous decomposition. The problem set before me was that of discovering some method by which nitro starch could be made stable.

This defines the class of work to which Holmes was assigned.

Braunstein's employment in the Eastern Laboratory dated from October 1, 1902, and consisted of miscellaneous laboratory work until about August 15, 1903. It is contended by counsel for Holmes that the evidence establishes, not only the assignment of Holmes to work on the nitro-starch problem, but that prior to September 1, 1903, he had formulated the plan of investigation which led to the invention in question; that about the middle of August the investigation had reached a point where the detail work became so great that it was necessary for Holmes to have an assistant; and that Braunstein was selected from the laboratory force and assigned to assist him.

It is contended by Braunstein that he had been working upon the problem of stabilizing nitro starch for some months prior to the date of his assignment to assist Holmes, and that, during the time that he was working with Holmes, he revealed to him the results of his investigation, which finally culminated in the discovery here sought to be patented. The evidence, we think, clearly discloses, and, in fact, it was admitted at bar, that the work of reducing the invention to practice was performed by Braunstein. The question at issue, which must be ascertained from an examination of the evidence alone, is whether the means which brought about the results, which are the basis of the claims of the contesting parties for patent, originated in the experiments of Braunstein, or were discovered by Holmes, and only put into operation by Braunstein under Holmes's direction.

That Braunstein was assigned to assist Holmes in making his investigations is established by the evidence of no less than six witnesses. All these witnesses were fellow employees, and the motives that might affect their credibility should be considered, but, considering all the testimony, nothing appears that would justify us in discrediting it. The evidence, we think, therefore clearly establishes the relation of principal and assistant. It is well settled that in the relation of employer and employee, where the employer conceived the principle or plan of an invention, and the employee is directed to perfect the details, though the employee may make valuable improvements therein, the improved result belongs to the employer. The same rule of law, we think, applies to principal and assistant, though they may be fellow employees. This principle of law is one generally recognized by the courts. In *Agawam Co.* v. *Jordan*, (7 Wall., 583,) the court said:

> Where a person has discovered an important principle in a machine, manufacture, or composition of matter, and employs

other persons to assist him in carrying out that principle, and they, in the course of experiments arising from that employment, make valuable discoveries ancillary to the plan and preconceived design of the employer, such suggested improvements are in general to be regarded as the property of the party who discovered the original improved principle, and may be embodied in his patent as a part of his invention. * * * Common justice would forbid that any partial aid rendered under such circumstances, during the progress of experiments in perfecting the improvement, should enable the person rendering the aid to appropriate to himself the entire result of the ingenuity and toil of the originator, or put it in the power of any subsequent infringer to defeat the patent under the plea that the invention was made by the assistant and not by the originator of the plan.

This court, in the case of *Robinson* v. *McCormick*, (29 App. D. C., 98,) in referring to this rule, said:

The reason for this rule is obvious. Inventors are often compelled to have their conceptions embodied in construction by skilled mechanics or manufacturers, whose practical knowledge often enables them to suggest and make valuable improvements in simplifying and perfecting machines or devices. These are things they are employed and paid to do. The inventor is entitled to protection from their efforts to claim his invention.

Braunstein, being the assistant and the junior applicant, the burden is placed upon him of establishing the fact that he possessed a knowledge of this invention independent of any suggestion he may have received from Holmes after he was assigned to assist him. His own testimony is the only positive evidence offered to establish this very important point, upon which the rights of the parties to this action depend. Braunstein called two witnesses, (Heard and Souder,) to establish his disclosure of the invention prior to his assignment to assist Holmes. Quoting from the opinion of the Board of Examiners—

Neither witness refers to ammonium oxalate. Heard testifies that about the first of May, 1903, Braunstein spoke to him about a stable nitro-starch powder, and that some time later, at a time which he does not remember, Braunstein spoke to him concerning the nitro-starch problem, and stated that he had tried ammonium carbonate as a stabilizing agent. There is no disclosure of the idea of using ammonium oxalate specifically and the date of the disclosure, such as it was, is uncertain. The disclosure to Souder amounts to nothing more than a statement by Braunstein to Souder that Braunstein was working on a process of making nitro starch stable. Braunstein also states that in June or July, secretly, without disclosure to any one, he made some experiments which embody this invention.

After a careful examination of the testimony of these witnesses, we have no reason to question the correctness of the conclusions of the Board of Examiners.

Thus it will be observed that on this crucial point, Braunstein stands uncorroborated. Aside from his own evidence, he is not shown to have had any conception of the invention at the time he came to the assistance of Holmes. Braunstein claims that he disclosed the invention to Holmes after he came to his assistance, but four witnesses, whose relations to the work being accomplished in the laboratory placed them in a position to know what Holmes was doing, testify that the plan of testing the ammonium compounds as stabilizing agents had been conceived by Holmes prior to the time of Braunstein's assignment as his assistant.

The contention is here made on behalf of Braunstein that, inasmuch as it is conceded that he did the work which resulted in reducing the invention to practice, the burden is upon Holmes to prove that he suggested to Braunstein the means by which the result could be attained. We think that the evidence discloses that Holmes was assigned to make the investigation that resulted in the invention, and, when he had proceeded to a point where he had made important discoveries along the line that ultimately led to the invention, Braunstein was assigned to assist him in carrying on the work. With Braunstein occupying the position of assistant to Holmes, the burden is upon him to overcome the presumption that what he accomplished was done under the direction of Holmes. Holmes being the first in point of time to file his application for patent, and thereby assert his right to the invention here in controversy, the burden rests with Braunstein, as junior applicant, to establish his earlier conception of the invention and his right to a patent thereon. It was the opinion of the three tribunals of the Patent Office that appellant had wholly failed to discharge that burden. After a careful analysis of the evidence, we agree with that conclusion. We are of the opinion that the evidence clearly discloses that the invention in question was conceived by Holmes and reduced to practical operation by Braunstein while working under the direction of Holmes.

The decision of the Commissioner of Patents is affirmed, and the clerk is directed to certify the proceedings as required by law.

Amendments to Rules of Practice.

(ORDER No. 1,760.)

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., April 13, 1908.

Acting under the provisions of section 483 of the Revised Statutes and with the approval of the Secretary of the Interior, Rules 17, 124, 151, 162, and 203 of the Rules of Practice in the United States Patent Office are amended in the following manner:

Rule 17 is amended by inserting the word *patent* after the word "competent," line 3; by inserting the words *who is a citizen or resident of the United States and* after the word "law," line 1, paragraph (*b*); by inserting the words *legal and technical* after the word "necessary," line 4 of the same paragraph; and by inserting after paragraph (*b*) the following:

(*c*) Any foreign patent attorney not a resident of the United States, who is a citizen or subject of a country granting the same reciprocal rights to citizens of the United States, who shall file proof to the satisfaction o fthe Commissioner that he is registered and in good standing before the Patent Office of the country of which he is a citizen or subject, and is possessed of the qualifications stated in paragraph (*b*).

No foreign patent attorney will be recognized in any application filed after June 30, 1908, unless entitled to registration under the provisions of this rule;

By changing the designating letter of paragraph (*c*) to (*d*); by inserting the words *or entitled to recognition* after the word "registered" in the last paragraph of the rule, so that the rule as amended shall read as follows:

17. An applicant or an assignee of the entire interest may prosecute his own case, but he is advised, unless familiar with such matters, to employ a competent patent attorney, as the value of patents depends largely upon the skilful preparation of the specification and claims. The Office cannot aid in the selection of an attorney.

A register of attorneys will be kept in this Office, on which will be entered the names of all persons entitled to represent applicants before the Patent Office in the presentation and prosecution of applications for patent. The names of persons in the following classes will, upon their written request, be entered upon this register:

(*a*) Any attorney-at-law who is in good standing in any court of record in the United States or any of the States or Territories thereof and shall furnish a certificate of the clerk of such United States, State, or Territorial court, duly authenticated under the seal of the court, that he is an attorney in good standing.

(*b*) Any person not an attorney-at-law who is a citizen or resident of the United States and who shall file proof to the satisfaction of the Commissioner that such person is of good moral character and of good repute and possessed of the necessary legal and technical qualifications to enable him to render applicants for patents valuable service and is otherwise competent to advise and assist them in the presentation and prosecution of their applications before the Patent Office.

(*c*) Any foreign patent attorney not a resident of the United States, who is a citizen or subject of a country granting the same reciprocal rights to citizens of the United States, who shall file proof to the satisfaction of the Commissioner that he is registered and in good standing before the Patent Office of the country of which he is a citizen or subject, and is possessed of the qualifications stated in paragraph (*b*)

No foreign patent attorney will be recognized in any application filed after June 30, 1908, unless entitled to registration under the provisions of this rule.

(*d*) Any firm will be registered which shall show that the individual members composing such firm are each and all registered under the provisions of the preceding sections.

The Commissioner may require proof of qualifications other than those specified in paragraph (*a*) and reserves the right to decline to recognize any attorney, agent, or other person applying for registration under this rule.

Any person or firm not registered and not entitled to be recognized under this rule as an attorney or agent to represent applicants generally may, upon a showing of circumstances which render it necessary or justifiable, be recognized by the Commissioner to prosecute as attorney or agent certain specified application or applications, but this limited recognition shall not extend further than the application or applications named.

No person not registered or entitled to recognition as above provided will be permitted to prosecute applications before the Patent Office.

Rule 124 is amended by canceling in lines 6 to 11 thereof the following words:

he shall at once reject such claims as may be affected and shall set a time for reconsideration; after reconsideration, if he adheres

to his original conclusion, he will make the previous rejection final and fix a limit of appeal. The appeal must go to the Examiners-in-Chief in the first instance and will be heard *inter partes*.

and substituting therefor:

he shall fix a limit of appeal not less than twenty days from the date of his decision. Appeal lies to the Examiners-in-Chief in the first instance and will be heard *inter partes*.

so that the rule as amended shall read:

124. Where, on motion for dissolution, the Primary Examiner renders an adverse decision upon the merits of a party's case, as when he holds that the issue is not patentable or that a party has no right to make a claim or that the counts of the issue have different meanings in the cases of different parties, he shall fix a limit of appeal not less than twenty days from the date of his decision. Appeal lies to the Examiners-in-Chief in the first instance and will be heard *inter partes*. If the appeal is not taken within the time fixed, it will not be entertained except by permission of the Commissioner.

No appeal will be permitted from a decision rendered upon motion for dissolution affirming the patentability of a claim or the applicant's right to make the same or the identity of meaning of counts in the cases of different parties.

Appeals may be taken directly to the Commissioner, except in the cases provided for in the preceding portions of this rule, from decisions on such motions as, in his judgment, should be appealable.

Rule 151 is amended by canceling "at 11 o'clock a. m.," lines 3 and 4, and substituting therefor *upon interlocutory matters at 10 o'clock a. m., and upon final hearings at 11 o'clock a. m.*, so that the rule as amended shall read:

151. Hearings will be had by the Commissioner at 10 o'clock a. m., and by the Board of Examiners-in-Chief at 1 o'clock p. m., and by the Examiner of Interferences upon interlocutory matters at 10 o'clock a. m., and upon final hearings at 11 o'clock a. m., on the day appointed, unless some other hour be specifically designated. If either party in a contested case, or the appellant in an *ex parte* case, appears at the proper time, he will be heard. After the day of hearing, a contested case will not be taken up for oral argument except by consent of all parties. If the engagements of the tribunal having jurisdiction are such as to prevent the case from being taken up on the day of hearing, a new assignment will be made, or the case will be continued from day to day until heard. Unless it shall be otherwise ordered before the hearing begins, oral arguments will be limited to one hour for each party in contested cases, and to one-half hour in other cases. After a contested case has been argued, nothing further relating thereto will be heard unless upon request of the tribunal having jurisdiction of the case; and all interviews for this purpose with parties in interest or their attorneys will be invariably denied.

Rule 162 is amended by canceling in lines 8 and 9, the words—

These copies must be filed not less than ten days before the day of hearing,

and substituting therefor the following:

These copies of the record of the junior party's testimony must be filed not less than forty days before the day of final hearing, and in the case of the senior party, not less than twenty days,

so that the rule as amended shall read:

162. Thirty-one or more printed copies of the testimony must be furnished, five for the use of the Office, one for each of the opposing parties, and twenty-five for the Court of Appeals of the District of Columbia, should appeal be taken. If no appeal be taken, the twenty-five copies will be returned to the party filing them. The preliminary statement required by Rule 110 must be printed as a part of the record. These copies of the record of the junior party's testimony must be filed not less than forty days before the day of final hearing, and in the case of the senior party, not less than twenty days. They will be of the same size, both page and print, as the Rules of Practice, with the names of the witnesses at the top of the pages over their testimony, and will contain indexes with the names of all witnesses and reference to the pages where copies of papers and documents introduced as exhibits are shown.

When it shall appear, on motion duly made and by satisfactory proof, that a party, by reason of poverty, is unable to print his testimony, the printing may be dispensed with; but in such case type-written copies must be furnished—one for the Office and one for each adverse party. Printing of the testimony cannot be dispensed with upon the stipulation of the parties.

Rule 203 is amended by canceling lines 40, 41, and 42, which are as follows:

For abstracts of title to patents or inventions:	
For the certificate of search	$1.00
For each brief from the digest of assignments	.20

and substituting therefor:

For abstracts of title to patents or inventions:	
For the search, one hour or less, and certificate	$1.00
Each additional hour or fraction thereof	.50
For each brief from the digest of assignments, of two hundred words or less	.20
Each additional hundred words or fraction thereof	.10

By canceling lines 51 to 75, which are as follows:

The Official Gazette:	
Annual subscriptions	$5.00
For postage upon foreign subscriptions, except those from Canada and Mexico, $5 or more as required. Moneys received from foreign subscribers in excess of the subscription price of $5 will be deposited to the credit of the subscriber and applied to postage upon the subscription as incurred.	
Single numbers	.10
Decision leaflets	.05
Trade-mark supplements	.05
For bound volumes of the Official Gazette:	
Semi-annual volumes, from January 1, 1872, to June 30, 1883, full-sheep binding, per volume	4.00
In half-sheep binding, per volume	3.50
Quarterly volumes, from July 1, 1883, to December 31, 1902, full-sheep binding, per volume	2.75
Bimonthly volumes from January 1, 1903, full-sheep binding, per volume	2.50
For the annual index, from January, 1872, full law binding, per volume	2.00
In paper covers, per volume	1.00
For the general index—a list of inventions patented from 1790 to 1873—three volumes, full law binding, per set.	10.00
For the index from 1790 to 1836, one volume, full law binding	5.00
For the monthly volumes, containing the specifications and photolithographed copies of the drawings of all patents issued during the month, certified, bound in full sheep, per volume	5.00
In half sheep, per volume	3.00

and substituting therefor:

The Official Gazette:	
Annual subscriptions	$5.00
For postage upon foreign subscriptions, except those from Canada and Mexico, $5 or more as required. Moneys received from foreign subscribers in excess of the subscription price of $5 will be deposited to the credit of the subscriber and applied to postage upon the subscription as incurred. All communications respecting the Gazette and all subscriptions should be addressed to the Superintendent of Documents, Government Printing Office.	
Single numbers	.10
Decision leaflets	.05
Trade-mark supplements	.05
For bound volumes of the Official Gazette:	
Semi-annual volumes, from January 1, 1872, to June 30, 1883, full-sheep binding, per volume	4.00
In half-sheep binding, per volume	3.50
Quarterly volumes, from July 1, 1883, to December 31, 1902, full-sheep binding, per volume	2.75
Bimonthly volumes, from January 1, 1903, to March 1, 1906, full-sheep binding, per volume	2.50
Bimonthly volumes, from March 1, 1906, tan duck binding	2.50
For the annual index, from January, 1872, to January 1, 1906, full law binding, per volume	2.00
In paper covers, per volume	1.00
For the annual index, from January 1, 1906, canvas binding	2.00
In paper covers, per volume	1.00
For the general index—a list of inventions patented from 1790 to 1873—three volumes, full law binding, per set.	10.00
For the index from 1790 to 1836, one volume, full law binding	5.00
For the monthly volumes to January 1, 1906, containing the specifications and photolithographed copies of the drawings of all patents issued during the month, certified, bound in full sheep, per volume	5.00
In half sheep to January 1, 1906, per volume	3.00
For the monthly volumes from January 1, 1906, canvas binding	5.00

By canceling lines 80 to 89, inclusive, which are as follows:

For Commissioner's Decisions:	
For 1869–70–71, one volume, full law binding	$2.00
For 1872–73–74, one volume, full law binding	2.00
For 1875–76, one volume, with decisions of United States courts in patent cases, full law binding	2.00
In paper covers	1.00
Subsequent annual volumes with decisions of United States courts, full law binding, per volume	2.00
In paper covers	1.00
Roster of attorneys	.20

and substituting therefor:

For Commissioner's Decisions:	
For 1869–70–71, one volume, full law binding	$2.00
For 1872–73–74, one volume, full law binding	2.00
For 1875–76, one volume, with decisions of United States courts in patent cases, full law binding	2.00
In paper covers	1.00
Annual volumes with decisions of United States courts, for 1877 to 1906, full law binding, per volume	2.00
In paper covers	1.00
Subsequent annual volume, canvas binding	2.00
In paper covers	1.00
Roster of attorneys	.20

so that the rule as amended shall read as follows:

203. The following is the schedule of fees and of prices of publications of the Patent Office:

On filing each original application for a patent, except in design cases	$15.00
On issuing each original patent, except in design cases	20.00
In design cases:	
For three years and six months	10.00
For seven years	15.00
For fourteen years	30.00
On filing each caveat	10.00
On every application for the reissue of a patent	30.00
On filing each disclaimer	10.00
On an appeal for the first time from the Primary Examiner to the Examiners-in-Chief	10.00
On every appeal from the Examiners-in-Chief to the Commissioner	20.00

For certified copies of patents, if in print:	
For specification and drawing, per copy	.05
For the certificate	.25
For the grant	.50
For certifying to a duplicate of a model	.50
For manuscript copies of records, for every one hundred words or fraction thereof	.10
If certified, for the certificate, additional	.25
For twenty coupon orders, each coupon good for one copy of a printed specification and drawing, and receivable in payment for prints, Official Gazette, and roster of attorneys	1.00
For one hundred coupons in stub-book	5.00
For uncertified copies of the specifications and accompanying drawings of patents, if in print, each	.05
For the drawings, if in print	.05
For copies of drawings not in print, the reasonable cost of making them.	
For photo prints of drawings, for each sheet of drawings:	
Size 10 by 15 inches, per copy	.25
Size 8 by 12½ inches, per copy	.15
For recording every assignment, agreement, power of attorney, or other paper, of three hundred words or under	1.00
Of over three hundred and under one thousand words	2.00
Of over one thousand words	3.00
For abstracts of title to patents or inventions:	
For the search, one hour or less, and certificate	1.00
Each additional hour or fraction thereof	.50
For each brief from the digest of assignments, of two hundred words or less	.20
Each additional hundred words or fraction thereof	.10
For searching titles or records, one hour or less	.50
Each additional hour or fraction thereof	.50
For assistance to attorneys in the examination of publications in the Scientific Library, one hour or less	1.00
Each additional hour or fraction thereof	1.00
For copies of matter in any foreign language, for every one hundred words or a fraction thereof	.10
For translation, for every one hundred words or fraction thereof	.50
The Official Gazette:	
Annual subscriptions	5.00
For postage upon foreign subscriptions, except those from Canada and Mexico, $5 or more, as required. Moneys received from foreign subscribers in excess of the subscription price of $5 will be deposited to the credit of the subscriber and applied to postage upon the subscription as incurred. All communications respecting the Gazette and all subscriptions should be addressed to the Superintendent of Documents, Government Printing Office.	
Single numbers	.10
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Quarterly volumes, from July 1, 1883, to December 31, 1902, full-sheep binding, per volume	2.75
Bimonthly volumes, from January 1, 1903, to March 1, 1906, full-sheep binding, per volume	2.50
Bimonthly volumes, from March 1, 1906, tan duck binding	2.50
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In paper covers, per volume	1.00
For the annual index from January 1, 1906, canvas binding	2.00
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For the index from 1790 to 1836—one volume, full law binding	5.00
For the monthly volumes to January 1, 1906, containing the specifications and photolithographed copies of the drawings of all patents issued during the month, certified, bound in full sheep, per volume	5.00
In half sheep to January 1, 1906, per volume	3.00
For the monthly volumes from January 1, 1906, canvas binding	5.00
For the index to patents relating to electricity, granted by the United States prior to June 30, 1882, one volume, 250 pages, bound	5.00
In paper covers	3.00
Annual appendixes for each fiscal year subsequent to June 30, 1882, paper covers	1.50
For Commissioner's Decisions:	
For 1869–70–71, one volume, full law binding	2.00
For 1872–73–74, one volume, full law binding	2.00
For 1875–76, one volume, with decisions of United States courts in patent cases, full law binding	2.00
In paper covers	1.00
Annual volumes with decisions of United States courts, for 1877 to 1906, full law binding, per volume	2.00
In paper covers	1.00
Subsequent annual volume, canvas binding	2.00
In paper covers	1.00
Roster of attorneys	.20

EDWARD B. MOORE,
Commissioner.

Interference Notices.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., April 13, 1908.

Thomas R. Herd & Company, their assigns or legal representatives take notice:

An interference having been declared by this Office between the application of George W. Wertz, of Wernersville, Pa., for registration of a trade-mark and a trade-mark registered to Thomas R. Herd & Company, of 98 and 100 Beach street, Allegheny city, Pa., and the notice of said declaration sent by registered mail to the said Thomas R. Herd & Company having been returned undelivered, notice is hereby given to the said Thomas R. Herd & Company, their assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents in order that the notices of declaration heretofore sent by and returned to the Office may be forwarded to them.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will be proceeded with as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., April 13, 1908.

Wells, Stone & Company, their assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of Jed Frye & Company, of 25 South street, New York, N. Y., for registration of a trade-mark and a trade-mark registered to Wells, Stone & Company, of 39 State street, Chicago, Ill., and the notice of said declaration sent by registered mail to the said Wells, Stone & Company having been returned undelivered, notice is hereby given to the said Wells, Stone & Company, their assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents in order that the notices of declaration heretofore sent by and returned to the Office may be forwarded to them.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will be proceeded with as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., April 6, 1908.

Jacob Fussell Company, its assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of John Govatos, of Wilmington, Del., for registration of a trade-mark and a trade-mark registered to the Jacob Fussell Company, of 1427 New York avenue, NW., Washington, D. C., and the notice of said declaration sent by the Patent Office by registered mail to the said Jacob Fussell Company having been returned unopened by one M. T. Fussell with the information that the Jacob Fussell Company failed in 1904, notice is hereby given to the said Jacob Fussell Company, the assigns or legal representatives of said company, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents in order that the notices of declaration heretofore sent by and returned to the Office may be forwarded to them.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will be proceeded with as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR.
UNITED STATES PATENT OFFICE,
Washington, D. C., March 25, 1908.

Ernest R. Schneider, his assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of The Union Distilling Company, of 1006 Richmond street, Cincinnati, Ohio, for registration of a trade-mark and a trade-mark registered to Ernest R. Schneider, of Augusta, Ga., of whom John R. Schneider claims to be successor, and the notice of said declaration sent by registered mail to the said Ernest R. Schneider having been returned undelivered, notice is hereby given to the said Ernest R. Schneider, his assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents in order that the notices of declaration heretofore sent by and returned to the Office may be forwarded to them.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will be proceeded with as in case of default.

E. B. MOORE, *Commissioner.*

THE
OFFICIAL GAZETTE
OF THE
United States Patent Office.
[BY AUTHORITY OF CONGRESS.]

VOL. 133—No. 19. TUESDAY, APRIL 28, 1908. PRICE—$5 per year.

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Reissues	4	No. 12,785 to No. 12,788, inclusive.
Total	810	

TO CITIZENS OF THE UNITED STATES.

States.	Patents and Designs.	Trade-Marks, Labels, and Prints.	States.	Patents and Designs.	Trade-Marks, Labels, and Prints.
Alabama	2	4	New Hampshire		
Alaska, District of			New Jersey	36	10
Arizona Territory	4		New Mexico Ter't'y		3
Arkansas	3		New York	72	45
California	23	7	North Carolina	4	
Colorado	4		North Dakota	4	
Connecticut	21	2	Ohio	50	9
Delaware			Oklahoma	7	
District of Columbia	5	2	Oregon	6	
Florida			Panama		
Georgia	5		Pennsylvania	69	11
Hawaii Territory			Philippine Islands		
Idaho			Rhode Island	13	2
Illinois	68	9	South Carolina	1	
Indiana	16	1	South Dakota	1	5
Iowa	19	1	Tennessee	4	
Kansas	6		Texas	6	
Kentucky	6		Utah	2	
Louisiana	2		Vermont		
Maine	4	2	Virginia	1	1
Maryland	4	2	Washington	10	2
Massachusetts	31	7	West Virginia	4	
Michigan	24	4	Wisconsin	19	1
Minnesota	12	4	Wyoming		
Mississippi	3		U. S. Army		
Missouri	9	6	U. S. Navy		
Montana	1				
Nebraska	3	1	Total to citizens of the United States	584	141
Nevada					

TO CITIZENS OF FOREIGN COUNTRIES.

Countries	Patents and Designs.	Trade-Marks and Prints.	Countries.	Patents and Designs.	Trade-Marks and Prints.
Argentina			Natal		
Austria-Hungary	1	1	Netherlands	1	
Belgium	1	2	Newfoundland		
Brazil			New South Wales	1	
British West Indies			New Zealand		
Canada	10	4	Norway		
Cape Colony			Persia		
Chile			Queensland		
China			Roumania		
Costa Rica			Russia		
Cuba			Scotland	1	
Denmark	1		South Australia		
Ecuador			Spain		
England	14	3	Sweden	2	
France	7	3	Switzerland		2
Germany	11	9	Transvaal, South Africa	1	
Haiti			Victoria	2	
India	1		Western Australia	1	
Ireland					
Italy	1				
Japan	1		Total to citizens of foreign countries	57	24
Mexico					

Interference Notices.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., April 13, 1908.

Wells, Stone & Company, their assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of Jed Frye & Company, of 25 South street, New York, N. Y., for registration of a trade-mark and a trade-mark registered to Wells, Stone & Company, of 39 State street, Chicago, Ill., and the notice of said declaration sent by registered mail to the said Wells, Stone & Company having been returned undelivered, notice is hereby given to the said Wells, Stone & Company, their assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents in order that the notices of declaration heretofore sent by and returned to the Office may be forwarded to them.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will be proceeded with as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., April 13, 1908.

Thomas R. Herd & Company, their assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of George W. Wertz, of Wernersville, Pa., for registration of a trade-mark and a trade-mark registered to Thomas R. Herd & Company, of 98 and 100 Beach street, Allegheny city, Pa., and the notice of said declaration sent by registered mail to the said Thomas R. Herd & Company having been returned undelivered, notice is hereby given to the said Thomas R. Herd & Company, their assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents in order that the notices of declaration heretofore sent by and returned to the Office may be forwarded to them.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will be proceeded with as in case of default.

EDWARD B. MOORE, *Commissioner*

APPLICATIONS UNDER EXAMINATION.

Condition at Close of Business April 21, 1908.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action. Amended	New.	No. of applications awaiting action.
303	XVII. Clutches; Linotyping; Matrix-Making; Nut and Bolt Locks; Printing.	Apr. 7	Mar. 23	163
179	XX. Artificial Limbs; Builders' Hardware; Dentistry; Locks and Latches; Safes; Undertaking.	Apr. 6	Mar. 9	278
244	XXXV. Buckles, Buttons, and Clasps; Card, Picture, and Sign Exhibiting; Garment-Supporters; Signals; Toilet.	Apr. 6	Feb. 11	669
304	XXXIV. Railways; Railway-Brakes; Railway Rolling-Stock.	Mar. 27	Feb. 1	490
172	XXXI. Alcohol; Ammonia, Water, and Wood Distillation; Charcoal and Coke; Gas, Heating and Illuminating; Hides, Skins, and Leather; Liquid Coating Compositions; Mineral Oils; Oils, Fats, and Glue; Water Purification.	Mar. 26	Mar. 3	233
379	XXIII. Acoustics; Coin-Handling; Horology; Recorders; Registers; Time-Controlling Mechanism.	Mar. 26	Mar. 2	266
378	XXXVIII. Artesian and Oil Wells; Bottles and Jars; Care of Live Stock; Educational Appliances; Fishing and Trapping; Stationery; Stone-Working.	Mar. 24	Mar. 6	366
147	XXIX. Coopering; Fire-Escapes; Ladders; Roofs; Wheelwright-Machines; Wooden Buildings; Wood-Sawing; Wood-Turning; Woodworking; Woodworking-Tools.	Mar. 21	Jan. 9	491
313	I. Fences; Harrows and Diggers; Plows; Seeders and Planters; Trees, Plants, and Flowers.	Mar. 18	Feb. 25	287
278	XXXII. Carbonating Beverages; Dispensing Beverages; Dispensing-Cans; Metallic Shipping and Storing Vessels; Packaging Liquids; Refrigeration.	Mar. 18	Nov. 26	481
135	VIII. Beds; Chairs; Furniture; Kitchen and Table Articles; Store Furniture.	Mar. 16	Jan. 11	407
167	V. Bookbinding; Harvesters; Jewelry; Music.	Mar. 14	Jan. 23	367
264	XXXVI. Curtains, Shades, and Screens; Drafting; Driers; Engraving; Measuring Instruments; Wind-Wheels.	Mar. 12	Mar. 9	504
318	VI. Bleaching and Dyeing; Chemicals; Explosives; Fertilizers; Medicines; Preserving; Sugar and Salt.	Mar. 12	Mar. 2	301
312	VII. Games and Toys; Mechanical Motors; Optics; Paper Manufactures; Velocipedes.	Mar. 12	Feb. 24	308
322	XII. Elevators; Journal-Boxes; Lubrication; Machine Elements; Pulleys and Shafting.	Mar. 11	Feb. 24	562
144	XXIV. Apparel; Apparel Apparatus; Sewing-Machines; Surgery.	Mar. 10	Mar. 9	370
164	XXXIII. Cutlery; Domestic Cooking Vessels; Electric Signaling; Electricity, Medical and Surgical; Fireproof Buildings; Masonry; Tents, Canopies, Umbrellas, and Canes.	Mar. 10	Feb. 18	296
247	XXII. Air-Guns, Catapults, and Targets; Ammunition and Explosive Devices; Boats and Buoys; Firearms; Marine Propulsion; Ordnance; Railway-Rails and Joints; Railway-Ties and Fasteners; Ships.	Mar. 10	Feb. 4	597
232	IV. Bridges; Conveyers; Cranes and Derricks; Excavating; Hoisting; Hydraulic Engineering; Iron Structures; Loading and Unloading; Towers.	Mar. 9	Mar. 14	352
327	XVIII. Injectors and Ejectors; Steam and Vacuum Pumps; Steam-Boilers; Steam-Engines; Steam-Engine Valves.	Mar. 7	Feb. 10	292
142	IX. Air and Gas Pumps; Fire-Extinguishers; Hydraulic Motors; Pumps; Sewerage.	Mar. 5	Mar. 2	238

Applications Under Examination—Continued.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action. Amended	New.	No. of applications awaiting action.
105	XXVI. Electric Heating and Rheostats; Electric Railways; Electricity, Generation; Motive Power.	Mar. 5	Feb. 11	379
154	XI. Boot and Shoe Making; Boots, Shoes, and Leggings; Button, Eyelet, and Rivet Setting; Harness; Leather Manufactures; Nailing and Stapling; Whips and Whip Apparatus.	Mar. 4	Jan. 28	399
308	XV. Bread, Pastry, and Confection Making; Coating; Fuel; Glass; Hydraulic Lime and Cement; Laminated Sheets and Fabrics; Paper-Making; Paving; Photography; Plastic Block and Earthenware Apparatus; Plastic Compositions; Plastics.	Mar. 2	Feb. 25	757
332	X. Carriages and Wagons	Mar. 2	Feb. 10	573
280	XL. Baggage; Check-Controlled Apparatus; Cloth, Leather, and Rubber Receptacles; Deposit and Collection Receptacles; Fine Arts; Lighting-Fixtures; Package and Article Carriers; Paper Receptacles; Special Receptacles and Packages; Wooden Receptacles.	Feb. 29	Jan. 31	674
375	XXVII. Brushing and Scrubbing; Grinding and Polishing; Laundry; Washing Apparatus.	Feb. 19	Feb. 19	438
175	III. Annealing and Tempering; Coating with Metal; Electrochemistry; Metal-Founding; Metallurgy; Shaping Fluid Metal.	Feb. 15	Jan. 17	452
128	II. Bee Culture; Dairy; Label-Affixers; Paper Files and Binders; Pneumatics; Presses; Store-Service; Tobacco.	Feb. 14	Jan. 4	465
152	XXX. Fluid-Pressure Regulators; Lamps and Gas-Fittings; Liquid and Gaseous Fuel Burners; Type-Writing Machines.	Feb. 12	Jan. 18	339
382	XXVIII. Internal-Combustion Engines; Miscellaneous Heating Plants.	Feb. 10	Jan. 18	542
238	XIX. Furnaces; Heating and Cooking Stoves, Liquid and Gaseous Fuel; Stoves and Furnaces.	Feb. 7	Jan. 2	503
329	XIII. Arms, Projectiles, and Explosive Charges, Making; Metal-Working, etc.	Feb. 5	Jan. 14	588
307	XIV. Compound Tools; Cutting and Punching Sheets and Bars; Farriery; Metal-Bending; Metal-Ornamenting; Sheet-Metal Ware, Making; Tools; Wire-Working.	Feb. 1	Dec. 19	401
315	XXV. Butchering; Mills; Threshing; Vegetable Cutters and Crushers.	Jan. 24	Jan. 27	482
321	XXXIX. Baths and Closets; Water Distribution.	Jan. 24	Nov. 18	848
107	XXXVII. Electric Lighting; Electricity, Conductors; Electricity, General Applications.	Jan. 21	Oct. 30	701
109	XVI. Telegraphy; Telephony	Jan. 17	Oct. 26	586
112	XXI. Brakes and Gins; Carding; Cloth-Finishing; Cordage; Felt and Fur; Knitting and Netting; Silk; Spinning; Weaving.	Jan. 11	Nov. 9	605
352	XLI. Railway Draft Appliances; Resilient Tires and Wheels.	Jan. 9	Sept. 13	863

Total number of applications awaiting action 18,912

161	TRADE-MARKS, DESIGNS, LABELS, AND PRINTS.			
	Trade-Marks	Apr. 13	Mar. 14	464
	Designs	Apr. 3	Mar. 7	103
	Labels and Prints			

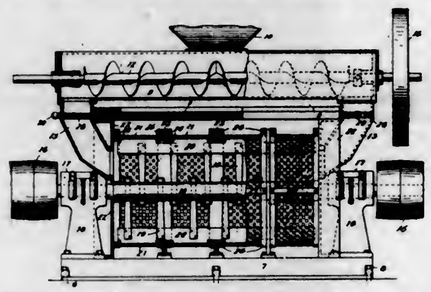
Notice.

Coupons unless properly filled out will not be accepted in payment of copies of publications.

PATENTS

GRANTED APRIL 28, 1908.

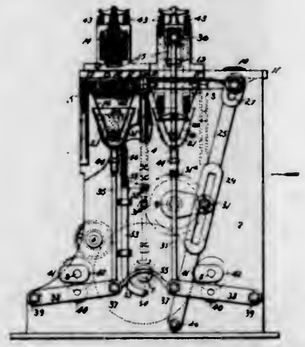
885,708. APPARATUS FOR REDUCING SOAP MATERIALS TO POWDER. WILLIAM B. ALLBRIGHT, Chicago, Ill. Filed Oct. 25, 1907. Serial No. 399,095.



1. The apparatus for reducing soap balls or lumps to powder, embracing a mixer a conveyer feeding the balls from the mixer to the reducing mechanism, and reducing mechanism consisting of a casing, revolving sharp toothed beaters in the casing, and a screen surrounding the beaters, said casing having a dust outlet and an outlet for the powdered soap.

2. The apparatus for reducing soap balls or lumps to powder, embracing a mixer a conveyer feeding the balls from the mixer, a passage having a valve and extending from the conveyer to the reducing mechanism, and reducing mechanism consisting of a casing, revolving sharp toothed beaters in the casing, and a screen surrounding the beaters, said casing having a dust outlet and an outlet for the powdered soap.

885,709. HOSIERY FIGURE DYEING AND EXTRACTING MACHINE. CHARLES S. ALTHOUSE, Reading, Pa. Filed Dec. 4, 1905. Serial No. 290,107.



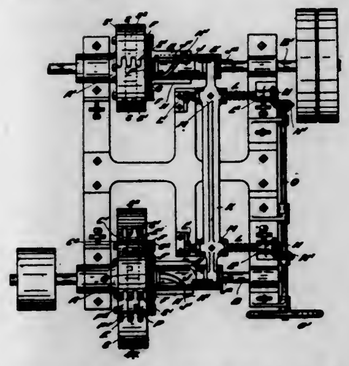
1. The combination of a plurality of dye-blocks and dye-applying means therefor, a fabric carrier mechanism for successively moving said carrier into position between each of said dye-blocks and its dye-applying means, and mechanism for successively moving each of said dye-blocks first into contact with its dye-applying means and thereafter into contact with the interposed fabric upon the carrier.

2. The combination of a plurality of vertically movable dye-blocks, a horizontally movable fabric carrier, dye-applying means located below said blocks and the plane of the carrier, mechanism for imparting to each block alternate dye-taking and impressing movements, and mechanism for imparting a step-by-step forward movement and a continuous return movement to the carrier; said carrier movements being timed to clear the respective dye-taking block movements, and to coöperate with the respective dye-impressing block movements, substantially as set forth.

3. The combination of a plurality of vertically movable dye-blocks, a horizontally movable fabric carrier, dye-feed belts located below the respective blocks and the plane of the carrier, mechanism for imparting to each block alternate dye-taking and impressing movements, mechanism for imparting a step-by-step forward movement and a continuous return movement to the carrier, and mechanism for imparting an intermittent movement to each belt timed to the respective dye-taking movements; said carrier movements being timed to clear the respective dye-taking block movements, and to coöperate with the respective dye-impressing block movements, substantially as set forth.

4. The combination with the supporting side frames and the fabric carrier and dye-block extending between the same, of a drive-roll bracket projecting laterally from one of said frames below said dye-block, drive rolls mounted in said bracket; an endless dye-feed belt carried upon said rolls and laterally removable thereform past the free end of the bracket, and a dye-reservoir into which said belt dips, substantially as set forth.

885,710. VARIABLE-SPEED GEAR. JOHN E. BARKER, Great Horton, Bradford, England. Filed Aug. 10, 1907. Serial No. 388,037.

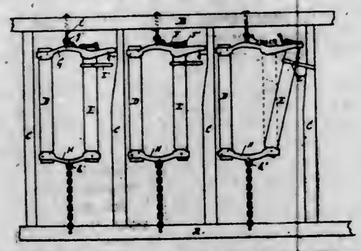


1. A variable speed gear comprising two disks each of which is made up of a plurality of segments, racked arms carrying said segments, pinions engaging the racked arms,

a sun wheel for operating the pinions, arms connected with the sun wheels, sleeves having each a thread engaged by the arms and a bar for operating the sleeves, substantially as described.

2. A variable speed gear comprising a disk and expanding segments, racked arms carrying the segments, pinions engaging the racked arms and carried by the disk towards the periphery thereof, a sun wheel, a threaded sleeve and means for operating the sun wheel from the threaded sleeve, substantially as described.

885,711. CATTLE-STANCHION. LINN C. BEEBE, Hamilton, N. Y. Filed May 18, 1905. Serial No. 260,957.



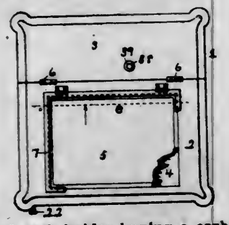
In a device of the character described, a frame and a revolving stanchion supported thereon, the means of such support consisting of a bolt fixed in the stanchion and passing through a link, the stanchion having walls substantially transverse the axis of the bolt and adjacent the link whereby to limit the movement of the link axially of the bolt to limit the swing of the link in the line of the bolt.

885,712. RAIL-FASTENER. HARRY F. BENDER, Harpster, Ohio. Filed May 4, 1907. Serial No. 371,834.



In a rail fastener, the combination of a pair of grooved guides, a stationary block provided with a seat for one flange of the rail, and a cylindrical bore therethrough, another block slidably mounted in said guides and provided with a seat for the other flange of the rail and having a cylindrical bore in alinement with the bore of the base of the stationary block, and means mounted in said bore of said blocks and adapted to be rotated to move the sliding block to or from the stationary block.

885,713. RECORDING-DESK AND CASH-HOLDER. JOSEPH E. BENJAMIN, Rochester, N. Y. Filed June 26, 1907. Serial No. 380,938.



1. A desk and cash holder having a cash drawer, and a frame within the inclosure, a holding catch on the drawer to engage with the frame, a spring to push the drawer, and means insertible from the outside of the desk to permit the closing of the drawer, and when in place preventing opening of the drawer.

2. A desk and cash holder having a cash drawer and a frame within the inclosure, a holding catch on the drawer to engage with the frame, a release bar on the frame adjacent to the catch, and means insertible from the outside of the desk and removable to move the release bar to disengage the holding catch, said means serving, by its presence, to control the opening and closing of the drawer and a spring to move the drawer.

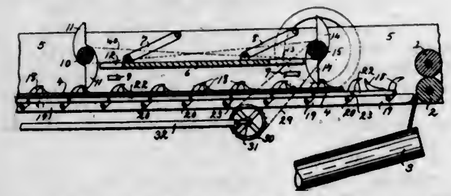
3. A desk and cash holder having a cash drawer and an adjacent fixed body, a catch on the drawer to engage with the fixed body, a bar to move the catch, a bell-crank to tilt said bar, a push-rod to turn the bell-crank, and means directly engaging said bar for temporarily holding the same against movement.

4. A desk and cash holder having a cash drawer and an adjacent fixed body, a catch on the drawer to engage with the fixed body, a bar to move the catch, and means for operating it, there being means for temporarily holding the bar motionless.

5. A desk and cash holder having a cash drawer and a fixed frame, a catch on the drawer to engage with the frame, a release bar to lift the catch, a duplex detent for the release bar, a lever with head near the cover of the desk and connector for said detent, the cover having an opening over the lever.

[Claims 6 to 14 not printed in the Gazette.]

885,714. SELF-FEEDING DEVICE. IRA G. BERRY, Madison, Wis., assignor, by mesne assignments, to J. I. Case Threshing Machine Company, Racine, Wis., a Corporation. Filed Aug. 13, 1903, Serial No. 169,325. Renewed Sept. 7, 1907. Serial No. 391,883.



1. In a device of the described class, the combination with a conveyer, of a set of band-cutting knives mounted upon a shaft, extending transversely of the conveyer and operative in the material carried by the conveyer in the direction of the line of feed; a second set of knives, mounted upon a shaft in the rear of the first mentioned set and operating in the opposite direction; a platform, movably supported between said sets of knives, and adapted to be lifted vertically by the material carried by the conveyer; and means for driving the respective sets of knives in opposite directions.

2. In a device of the described class, the combination with a conveyer, of a set of band-cutting knives mounted upon a shaft extending transversely of the conveyer and operative in the material carried by the conveyer in the direction of the line of feed; a second set of knives, mounted upon a shaft in the rear of the first mentioned set and operating in the opposite direction; a platform, movably supported between said sets of knives, and adapted to be lifted vertically by the material carried by the conveyer; said platform being connected with the conveyer frame by diagonally extending parallel links; and means for driving the respective sets of knives in opposite directions.

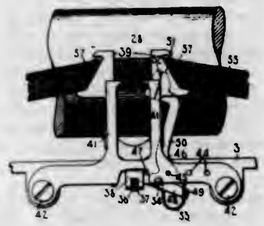
3. In a device of the described class, the combination with a slotted conveyer platform, of a series of supporting bars located underneath said platform; a series of teeth, pivotally connected with each of said bars and projecting through said slots above the platform; a series of actuating bars, pivotally connected with said teeth; and means for communicating motion to the actuating bars.

4. In a device of the described class, the combination with a slotted conveyer platform, of a series of supporting bars located underneath said platform; a series of teeth, pivotally connected with each of said bars and projecting through said slots above the platform; a series of actuating bars, pivotally connected with said teeth; and means for communicating motion to the actuating bars in alternation.

5. In a device of the described class, the combination with a conveyer platform; a series of conveyer teeth, pivotally connected with a suitable support underneath the platform and projecting through suitable apertures in the platform; operating bars, each having pivotal connection with a longitudinal set or row of said teeth; and means for reciprocating the bars in alternation, said teeth being curved at their upper ends in the direction of the line of feed.

[Claims 6 to 8 not printed in the Gazette.]

885,715. TYPE-WRITING MACHINE. CHARLES J. BOND, Syracuse, N. Y., assignor to The Monarch Typewriter Company, Syracuse, N. Y., a Corporation of New York. Filed July 19, 1905. Serial No. 270,323.



1. In a typewriting machine, the combination of a ribbon vibrator, a device for automatically actuating said ribbon vibrator at each printing operation and an indicator independent of the vibrator but which coöperates directly with the vibrator actuating device only at the last portion of the stroke of said device.

2. In a typewriting machine, the combination of a ribbon vibrator, an automatically actuated lever for operating said ribbon vibrator, and a spring restored pivoted printing point indicator that has an arm which is normally out of contact with said automatically actuated lever but with which said automatically actuated lever directly coöperates to turn the indicator away from the indicating position when the said lever is actuated to move the vibrator to bring the ribbon to the printing point and at the last portion of the stroke of said lever.

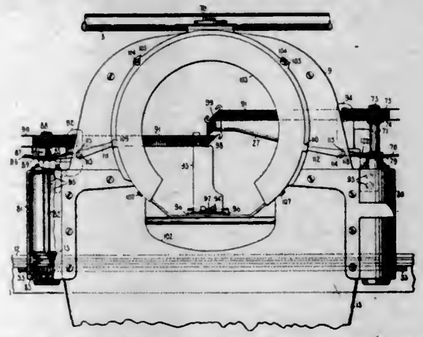
3. In a typewriting machine, the combination of an automatically actuated ribbon vibrator, a lever for actuating said vibrator, and a three-arm lever, one arm constituting a printing point indicator, another arm constituting a member with which said actuating lever coöperates to move the three-arm lever but which is normally out of contact with said actuating lever and the third arm cooperating with a fixed portion of the machine to arrest the indicator in the normal or indicating position.

4. In a typewriting machine, the combination of an automatically actuated ribbon vibrator, a lever for actuating said vibrator, a three-arm lever, one arm extending inwardly and carrying a printing point indicator, another arm extending inwardly and constituting a member with which said actuating lever coöperates to move the three-arm lever and the third arm extending outwardly and cooperating with a fixed portion of the machine to arrest the indicator in the normal or indicating position, and a spring for moving the three-arm lever to the normal position.

5. In a typewriting machine, the combination of a vertically movable ribbon vibrator, a fixed guide on which said vibrator slides, a horizontally disposed lever which extends fore and aft of the machine for automatically actuating said vibrator, and a spring restored printing point indicator pivoted to said guide and having an arm on which said lever bears, so that the indicator will be moved from and to the indicating position by an actuation of the lever.

[Claims 6 to 8 not printed in the Gazette.]

885,716. TYPE-WRITING MACHINE. ALEXANDER T. BROWN, Syracuse, N. Y. Filed Jan. 4, 1905. Serial No. 239,642.



1. The combination with a ribbon spool, of driving means for said ribbon spool including a clutch, one member of which is slidable into and out of engagement with the other and is formed with a groove, a shifting arm extending into said groove and having a spring tongue, said arm being adapted to engage one of the walls of said groove to slide said clutch member out of engagement with its fellow and said spring tongue being adapted to engage the other wall of said groove to slide said clutch member into engagement with its fellow.

2. The combination of a ratchet toothed clutch, one member of which is slidable into and out of engagement with the other, of a shifting device adapted when operated in one direction to positively shift said slidable member out of engagement with its fellow and when operated in the other direction to press said slidable member only yieldingly into engagement with its fellow; and a ribbon spool adapted to be driven by said clutch when its members are in engagement.

3. The combination of a shaft having one member of a ratchet toothed clutch fixed thereon, a pinion slidably mounted on said shaft and having the other member of said clutch, annular flanges projecting beyond the teeth of said pinion, a shifting arm having a spring tongue, said arm and tongue extending between said flanges, said arm being adapted to engage one of said flanges to positively disconnect said clutch members when operated in one direction and said tongue being adapted to engage the other of said flanges to yieldingly press said clutch members into engagement with said arm when operated in the other direction; a gear meshing with said pinion, and a ribbon spool operatively connected to said gear.

4. The combination with a type basket, of ink ribbon spools on opposite sides of said basket, means for actuating said ribbon spools to feed the ribbon, and a reversing device including a member arranged to be shifted bodily substantially concentrically of said type basket to reverse the feed of the ink ribbon.

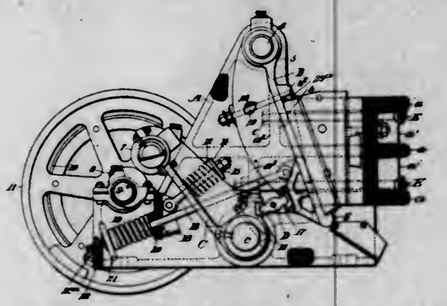
5. The combination with a platen and a series of type bars arranged to strike said platen at a common point, of ribbon spools on opposite sides of said printing point, means for actuating one or the other of said ribbon spools to feed the ribbon, an arc-shaped member extending around the printing point and mounted to be shifted bodily concentrically of the type basket, and ribbon feed reversing devices connected to said arc-shaped member.

[Claims 6 to 19 not printed in the Gazette.]

885,717. ROCK-CRUSHER. J GROVE BROWN, Kingston, N. Y. Filed Mar. 15, 1907. Serial No. 362,520.

1. In a rock crusher, a hollow frame of cast iron or steel, stationary and movable jaw plates therein, said stationary jaw plate fitting against one end of the frame, and said end being integral with the sides and having on its outer side a centrally located rib or projection, extending outwardly beyond the body and forming a strut.

and one or more metal reinforcing rods extending around said end and partly along the sides of the frame and bearing against the outer surface of said rib or projection, the ends of said rod or rods being anchored at the sides of the frame.



2. In a rock crusher, a hollow frame of cast iron or steel, stationary and movable jaw plates therein, said stationary jaw plates fitting against one end of the frame, and said end being integral with the sides and having on its outer side horizontal flanges and a centrally located, vertically extending, rib between said flanges, and one or more metal reinforcing rods bearing against the outer side of said rib and extending partly along the sides of the frame, the ends of said rod or rods being secured to the frame.

3. In a rock crusher, a hollow frame, a stationary jaw plate at one end of the frame, a swinging jaw journaled at the upper part of the frame, a cam shaft having a cam thereon, a lever arranged between said shaft and swinging jaw, said lever being journaled in the lower part of the frame and having its free end engaging said cam, a toggle or distance block resting against said lever near its pivotal point and supporting the free end of the swinging jaw, a rod connected to said swinging jaw, a pair of stops, a hand wheel threaded on to said rod between said stops, and a spring interposed between said wheel and one of said stops.

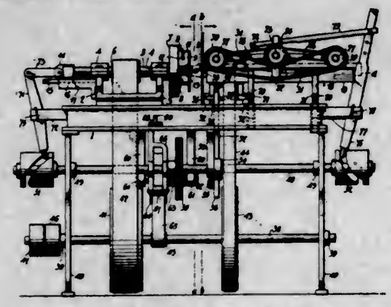
4. In a rock crusher the combination with fixed and swinging-jaws, of a cam shaft, a lever movable thereby, a removable toggle or distance block arranged between said lever and swinging-jaw, a rod pivotally connected, at one end, to the swinging-jaw, a pair of stops, an adjusting device threaded on to said rod between said stops, and a spring interposed between said device and one of said stops.

5. In a rock crusher, the combination with fixed and swinging-jaws, of a cam shaft, a lever movable thereby, a removable toggle or distance block arranged between said lever and swinging-jaw, a rod pivotally connected, at one end, to the swinging-jaw, a pair of stops, a hand-wheel threaded on to said rod between said stops, said wheel being overbalanced at one side, and a spring interposed between said wheel and one of said stops.

885,718. MACHINE FOR MAKING PAPER-ROLL PLUGS. HENRY BRUBAKER, York, Pa., assignor of two-thirds to Henry D. Hershey, Columbia, Pa. Filed Dec. 17, 1906. Serial No. 348,257.

1. In a plug making machine, a frame, a cutter head journaled thereon, a work support on the frame, a shaft mounted on said support, spring pressed arms pivotally mounted at their inner ends on said shaft, feed wheels journaled in the free ends of said arms, and means for intermittently actuating said wheels in unison.

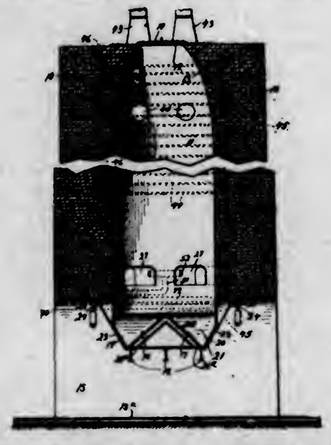
2. In a plug making machine, a frame, a cutter head journaled thereon, a work support on the frame provided with standards, a shaft journaled in the standards and provided with a sprocket wheel, oppositely extending spring pressed arms pivotally mounted on said shaft at their inner ends, a shaft journaled in the outer end of each arm provided with a feed wheel and a sprocket wheel, a sprocket chain on said sprocket wheels, and means connected with the shaft in the standards for actuating said chains and wheels intermittently.



3. In a plug making machine, a frame, a cutter head journaled thereon, a work support on the frame, a shaft mounted on the support provided with a ratchet wheel at one end, arms pivotally mounted on said shaft at their inner ends, feed wheels at the outer ends of said arms, means for actuating said feed wheels from said shaft, a cam, a lever pivotally mounted on the frame with one end in engagement with said cam, and a notched bar connected with the other end of the lever in position for engaging with said ratchet wheel.

4. In a plug making machine, a frame, a cutter head journaled thereon, a work support provided with standards, a shaft journaled in the standards, two oppositely extending arms pivotally mounted on said shaft at their inner ends, feed wheels journaled in the outer ends of said arms, a spring having its ends in engagement with said wheels, and means for intermittently actuating the feed wheels in unison.

885,719. LIMEKILN. PATRICK J. BUCKLEY, Waukesha, Wis. Filed May 11, 1907. Serial No. 373,112.



1. A lime kiln comprising, in combination, a structure having a vertical chamber, the walls of the chamber adjacent its lower end being provided with cooling ducts, means for heating material contained in the upper portion of the chamber, fuel bins, and flues receiving from the cooling ducts and traversing the interior of the bins.

2. A lime kiln comprising, in combination, a structure having a calcining chamber and a vertically-disposed chamber adjacent thereto, a fuel bin arranged within the last-named chamber to provide an up and a down flue at opposite sides of the bin, connection between the flues below the bin, and connection between the down flue and the calcining chamber.

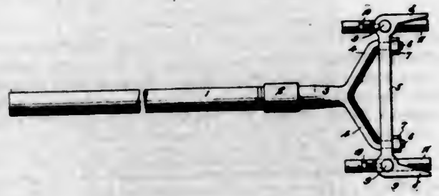
3. A lime kiln comprising, in combination, a structure having a vertical chamber, a horizontal fire chamber communicating therewith and a second vertical chamber above the fire chamber, a fuel bin arranged within the last-named chamber to provide an up and down flue at opposite sides of the bin and having a discharge opening in the wall of the structure adjacent the mouth of the furnace chamber, connection between the up and down flue below the bin, and connection between the down flue and the higher end of the first-named vertical chamber.

4. A lime kiln comprising, in combination, a structure having a calcining chamber and a vertically-disposed chamber adjacent thereto, a fuel bin arranged within the last-named chamber to provide an up and a down flue at opposite sides of the bin, the wall of the bin adjacent the up flue being freely perforated for the purpose set forth, connection between the flues below the bin, and connection between the down flue and the calcining chamber.

5. A lime kiln comprising, in combination, a structure having a vertical chamber, a fire chamber communicating therewith intermediate its ends, and a second vertical chamber adjacent the first-named chamber, the walls of the first-named chamber below the furnace being provided with cooling ducts, a fuel bin arranged within the second-named vertical chamber to provide an up and a down flue, a radiator within the bin, connection between the cooling ducts and the radiator, connection between the up and the down flue below the bin, and connection between the first-named vertical chamber and the down flue.

[Claims 6 to 9 not printed in the Gazette.]

885,720. FIRING-TOOL FOR BRICK-KILN FURNACES. EDWARD H. CALLAWAY, Westfield, N. J., assignor to The American Clay Machinery Company, Bucyrus, Ohio, a Corporation of Ohio. Filed May 8, 1907. Serial No. 372,526.



1. The combination of a handle, a forked front part therefor, a transverse scraper secured to the fork, said scraper having terminal vanes which project forward and also below the scraper, and runner means adjustably supported on the scraper.

2. The combination of a handle, a transverse scraper carried thereby, said scraper having projecting wings whose opposing faces are outwardly inclined, and runner means consisting of curved slides adjustably supported on the scraper.

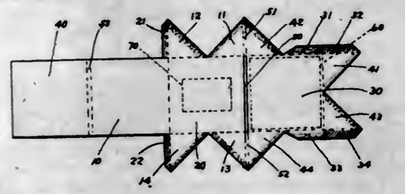
3. The combination of a handle, a transverse scraper secured thereto, said scraper having projecting wings with inclined inner opposing faces, and sliding means at the forward end of the device for the purpose of enabling it to move easily over the surface on which it acts, said sliding means having rods entering passages in the scraper, and means for holding said rods in place so that the runners may be adjusted relatively to the scraper.

4. In a firing tool for furnaces, the combination with a handle, of a transverse scraper secured thereto, said scraper having terminal vanes which project forwardly of the scraper, and curved runners arranged below the scraper and having rods secured in passages in the scraper.

5. In a firing tool for furnaces, the combination of a handle having a forked end, a transverse scraper secured to the fork, said scraper having terminal vanes which project forwardly, and curved runners having upwardly-extending rods secured in passages in the scraper, and set screws bearing against said rods, so that the runners may be adjusted relatively to the scraper.

[Claims 6 to 10 not printed in the Gazette.]

885,721. HANDKERCHIEF-RECEPTACLE. JOSEPH CAVE, Philadelphia, Pa. Filed Dec. 26, 1906. Serial No. 349,453.



1. A handkerchief receptacle composed of an integral blank, comprising a front panel, a rear panel, a front panel lining, a rear panel lining, and flaps foldable respectively upon the front panel and rear panel and closing the spaces between the two panels and their linings respectively, substantially as described.

2. A handkerchief receptacle composed of an integral blank comprising a front panel and its lining, a rear panel and its lining, flaps integral with the front panel lining and foldable upon the face of the front panel, and flaps integral with the rear panel lining and foldable upon the face of the rear panel, substantially as described.

3. A handkerchief receptacle composed of an integral blank comprising a front panel and its lining, a rear panel and its lining, flaps integral with the front panel lining and foldable upon the face of the front panel and flaps integral with the rear panel lining and foldable upon the face of the rear panel, and strips connecting respectively the front panel with the rear panel, the front panel lining with the rear panel lining, and the flaps of the front panel lining with the adjacent flaps of the rear panel lining, substantially as described.

4. A handkerchief receptacle composed of an integral blank comprising a front panel and its lining, a rear panel and its lining, flaps extending beyond the side edges of the front panel lining and foldable upon the face of the front panel, and flaps extending respectively beyond the end edges and side edges of the rear panel lining and foldable upon the face of the rear panel, substantially as described.

5. A handkerchief receptacle composed of an integral blank comprising a front panel and its lining, a rear panel and its lining, flaps extending beyond the side edges of the front panel lining and foldable upon the face of the front panel, flaps extending respectively beyond the end edges and side edges of the rear panel lining and foldable upon the face of the rear panel, and strips connecting respectively the front panel with the rear panel, the front panel lining with the rear panel lining, and the flaps extending beyond the side edges of the front panel lining with the adjacent flaps of the rear panel lining, substantially as described.

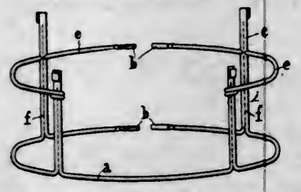
[Claims 6 to 8 not printed in the Gazette.]

885,722. COLLAR-SUPPORT. ETHEL CHRISTIE, London, England. Filed Nov. 2, 1907. Serial No. 400,383.

1. A support for the collars of blouses and like garments, said support comprising a member which is adapted to be fastened about the neck of the wearer independently of the blouse or collar, and said support provided with upwardly presented substantially hook-shaped devices for detachably engaging and holding up a collar applied to such support.

2. A support for the collars of blouses and like garments, comprising a frame member adapted to embrace the neck of the wearer, a fastening device for the ends of said frame member, upright arms secured upon said frame

member and upwardly presented substantially book-shaped devices fitted to said arms whereby the collar may be detachably secured to said support.



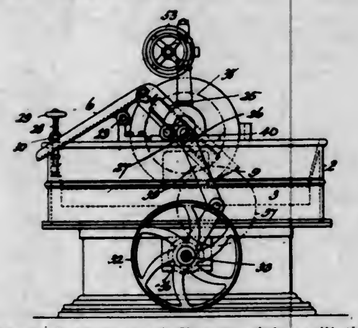
3. A support for the collars of blouses and like garments, comprising a frame member, interengaging connections at the ends of said frame member, upright arms secured upon said member and hooks upon said arms adapted to hold said collar in a detachable manner.

4. A collar-support comprising a frame member adapted to embrace the neck of the wearer, arms mounted on said frame member and extending upwardly thereof, connections upon said arms to engage and hold said collar in a detachable manner, means for adjusting the length of said frame member, and a wrapping of binding material for said frame and said arms.

5. A support for the collars of blouses and like garments, comprising a frame member adapted to encircle the neck of the wearer, inter-engaging connections at the facing ends of said frame member, arms arranged upon said member, connections upon said arms adapted to hold said collar in a detachable manner and an inverted V-extension in the length of the frame member.

[Claims 6 to 9 not printed in the Gazette.]

885,723. EDGE-RUNNER GRINDING OR MIXING MILL. CALEB B. COLE, Bristol, England. Filed Oct. 12, 1906. Serial No. 338,653.



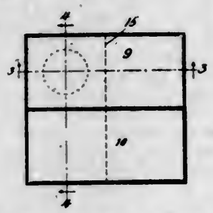
1. In an edge-runner grinding or mixing mill the combination with a horizontally revolving bed and vertical revolving grinding roll coöperating therewith, of a displaceable chute and scraper adapted to be brought into direct contact with the grinding roll to collect the ground material therefrom and deliver it clear of the bed, substantially as described.

2. In an edge-runner grinding or mixing mill, the combination with a horizontally revolving bed and a vertical revolving grinding roll coöperating therewith, of a displaceable scraper adapted to be brought into direct contact with the grinding roll to collect the ground material therefrom and deliver it clear of the bed, an auxiliary scraper for removing the material from the roll back onto the bed, and means for positively connecting said scrapers, whereby when the first mentioned scraper is in contact with the roll the auxiliary scraper is out of contact therewith and vice versa, substantially as described.

3. In an edge-runner grinding or mixing mill the combination with a stationary flanged pan, a horizontally revoluble bed therein, and a vertical grinding roll coöperating therewith, of a delivery chute pivoted horizontally to the pan and adapted to be brought into direct contact with the grinding roll above the level of the edge of the pan to collect the ground material from said roll and deliver it clear of the pan.

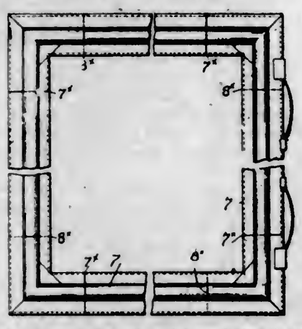
4. In an edge-runner grinding or mixing mill the combination with a horizontally revoluble bed and vertical grinding roll, means for lifting the grinding roll from the bed, independent driving gear for rotating said grinding roll and bed severally and independently of each other at different speeds, and a chute adapted to be brought in contact with the grinding roll for stripping material lifted thereby from the pan, said chute being constructed to deliver the stripped material clear of the bed.

885,724. COIN-MAILER. GEORGE W. COLLINGS, Chicago, Ill., assignor to Collings Paper Goods Company, Chicago, Ill., a Corporation of Illinois. Filed May 5, 1906. Serial No. 315,420.



A coin mailer consisting of a blank having longitudinal folds, and having its longitudinally folded ends folded on transverse lines and lying on the back of the mailer, and transverse stitching passing through the folded ends and through the middle part of the mailer between the transverse lines of folding, to produce a plurality of coin pockets on both the front and back of the mailer.

885,725. WINDOW-SCREEN AND THE PROCESS OF MAKING THE SAME. CHARLES M. CONKLIN, Cincinnati, Ohio, assignor, by mesne assignments, to The Lunken Steel Window Co., a Corporation of Ohio. Filed Jan. 25, 1907. Serial No. 354,028.



1. In the manufacture of articles of the class described, the process of tightening the fabric consisting in clamping the same in a frame and then moving outwardly a clamping portion or portions of the said frame, substantially in the plane of the frame by transforming the material itself, of which the said portion is composed, substantially as described.

2. In the manufacture of articles of the class described, the process of tightening the fabric consisting in simultaneously moving outwardly the margins of all the sides of the frame at which the fabric is held by transforming the material of which the frame is composed, substantially as described.

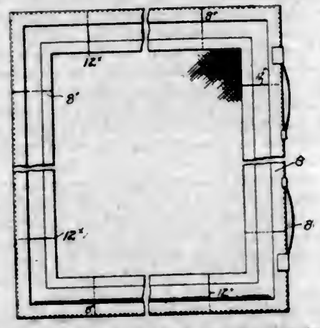
3. In the manufacture of articles of the class described, the hereindescribed process, consisting in making up the frame and clamping the fabric therein and then pressing or drawing the material of the frame transversely to the plane of the frame to form a corrugation therein and thereby cause its fabric holding portions to move outwardly to stretch the said fabric, substantially as described.

4. The hereindescribed process consisting in clamping the fabric beneath the flange 10 of the channel member by the clamping member, then folding down the flange 9 and subjecting the members to dies to draw the inner margin outwardly and thereby stretch the fabric, substantially as described.

5. An article of the class described, comprising the frame carrying the fabric attached thereto at or near its inner edge and corrugated at a point out beyond this point of attachment to thereby stretch the same after the fabric is clamped in place, substantially as described.

[Claims 6 to 10 not printed in the Gazette.]

885,726. WINDOW-SCREEN. CHARLES M. CONKLIN, Cincinnati, Ohio, assignor, by mesne assignments, to The Lunken Steel Window Co., a Corporation of Ohio. Filed Jan. 25, 1907. Serial N.o 354,029.



1. An article of the class described comprising frame members adapted to be placed together by moving one pivotally in relation to the other, the said members having means for gripping the fabric first at their outer portions during said pivotal movement, and having means which when the frame members are closed one upon the other stretch the fabric, said frame members being combined with other frame members at the other side of the frame which hold the fabric while being stretched substantially as described.

2. In combination, frame members having means for gripping the fabric first between their outer portions against movement inwardly, the said members having corrugations, one fitting within the other, whereby when the members are closed one upon the other they press the fabric laterally and stretch the same, said frame members being combined with other frame members at the other side of the frame which hold the fabric while being stretched substantially as described.

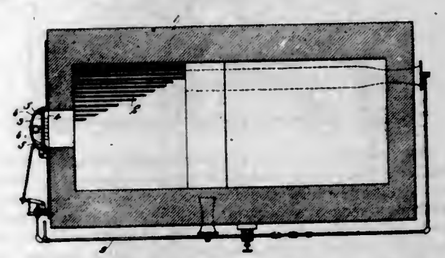
3. In combination in an article of the class described, a frame member having a groove and a second member having a projection to enter said groove, said members having outer interlocking flanges gripping the fabric between said outer flanges and between the projection and groove and said members being held together by said interlocking flanges, substantially as described.

4. In combination in an article of the class described, a frame member having a corrugation with the plain flange on each side thereof and the coöperating member having a corrugation to enter that of the member first mentioned, and having a flange to lie upon the plain flange with an extension 14 to embrace the said plain flange of the first mentioned member, and the fabric extending between the members and between the interlocked flanges, substantially as described.

5. An article of the class described, comprising two members, each made up of a plurality of sections, each section having an intact portion extending around the corner, lapping upon and breaking joints with the sections of the other member, said sections constituting the entire frame substantially as described.

[Claims 6 to 10 not printed in the Gazette.]

885,727. FURNACE-DOOR. ALFRED COTTON, Newark, N. J. Original application filed Mar. 26, 1906, Serial No. 307,982. Divided and this application filed Sept. 6, 1907. Serial No. 391,587.



1. A fire door for a smoke consuming furnace consisting of a shell provided with a perforated inner face plate to form a chamber within the door which will be in communication with the fire box through the said perforated inner face plate, said plate being provided with a row of perforations near its vertical edges whose walls incline forwardly and outwardly, whereby jets passing outwardly through said perforations would travel in forwardly extending lines oblique to the vertical inner face plate of the door, a blower entering said door, a steam jet nozzle adapted to deliver steam through said blower whereby steam and air will be delivered within the chamber in the door, a valve to control the supply of steam to said nozzle, and means carried by the door and adapted to open said valve when the door is closed.

2. A door for a furnace consisting of a hollow shell closed at its outer side and provided with a vertical inner perforated face plate whereby the chamber within the door is in communication with the fire box through said perforated plate, said plate being provided near each vertical edge and near its upper substantially horizontal edge with a series of openings having forwardly and outwardly inclined walls whereby jets of steam and air passing outward through said openings will travel in lines oblique to said inner face plate, and means for delivering steam and air into the chamber within said door.

3. A door for a furnace consisting of a shell closed at its outer side and provided with a vertically arranged perforated inner face plate, the walls of said perforations being oblique to the vertical plane of said face plate whereby jets of steam and air passing outward through said openings will travel in lines oblique to the vertical plane of said plate, and means for delivering steam and air within the chamber in said door.

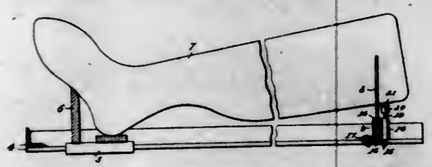
4. A door for a furnace comprising a hollow shell closed at its outer side, a perforated inner face plate forming the inner side thereof, a series of horizontal ribs formed on the outer side of said inner face plate and extending inward toward the fire box, the walls of said perforations in said plate being oblique to the vertical plane of the plate and directed toward the adjacent horizontal rib whereby jets passing through said perforations will impinge on said ribs and be deflected thereby, and means for supplying steam and air to said door.

5. A door for a furnace comprising a hollow shell closed at its outer side, a perforated inner face plate forming the inner side thereof, a series of horizontal ribs formed on the outer side of said inner face plate and extending inward toward the fire box, the walls of said perforations in said plate being oblique to the vertical plane of the plate and directed toward the adjacent horizontal rib whereby jets passing through said perforations will impinge on said

ribs and be deflected thereby, means for supplying steam and air to said door when the door is closed, and means for cutting off the supply of steam when said door is open.

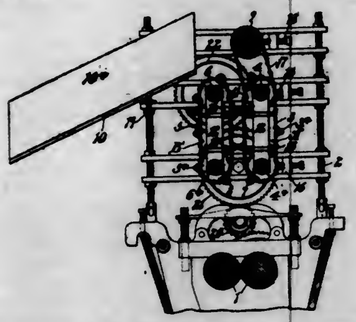
[Claims 6 and 7 not printed in the Gazette.]

885,728. CUSHIONING-PROTECTOR FOR HOSIERY-DRYING BOARDS. JAMES J. CRIMLISK, Philadelphia, Pa., assignor of one-half to Louis Delpino, Philadelphia, Pa. Filed Dec. 13, 1907. Serial No. 406,290.



The combination with a hosiery board having vertical rods or wires at one extremital portion arranged so as to form guide openings therefor, vertical spring positioned spindles arranged to register with the openings between the rods or wires and said spindles provided with receptacles to receive yielding buffers with which engage the hosiery boards in position, substantially as and for the purposes described.

885,729. TIN-PLATE CATCHER. ERNEST L. CRONEMEYER, Granite City, Ill. Filed Nov. 15, 1907. Serial No. 402,280.



1. A catching device for tinning-machines, comprising a pair of endless conveyers arranged adjacent to each other and provided with devices for gripping a plate as it emerges from the rolls of the tinning-machine and feeding it away from said rolls; substantially as described.

2. A catching device for tinning-machines, comprising a pair of parallel conveyers provided with separated gripping devices adapted to engage a plate and feed it away from the tinning-machine; substantially as described.

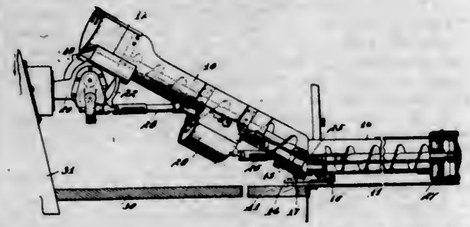
3. A catching device for tinning-machines, comprising a pair of vertically disposed endless conveyers arranged parallel to each other and provided with coöperating gripping devices that engage a plate and feed it away from the tinning-machine; substantially as described.

4. A catching device for tinning-machines, comprising endless conveyers arranged parallel to each other and provided at intervals with coöperating gripping devices, the gripping devices on one conveyer having flat engaging faces and those on the other conveyer having rounded or curved engaging faces; substantially as described.

5. A catching device for tinning-machines, comprising a pair of vertically disposed conveyers arranged adjacent to each other, and each consisting of sprocket chains and cross bars connected thereto, and coöperating gripping devices on said crossbars which are adapted to engage a plate and feed it vertically away from the rolls of the tinning-machine; substantially as described.

[Claims 6 to 18 not printed in the Gazette.]

885,730. CONVEYING MECHANISM. CLARENCE W. CROSBY, Chicago, Ill., assignor to International Stoker Company, Chicago, Ill., a Corporation of South Dakota. Filed Feb. 4, 1907. Serial No. 355,565.



1. The combination with two vehicles in the form of a locomotive and tender, of a conveyer for transferring fuel from the tender to the locomotive fire box, said conveyer having a support upon one vehicle and a second support upon the other vehicle, with respect to which latter support it is slidable.

2. The combination with two vehicles in the form of a locomotive and tender, of a conveyer for transferring fuel from the tender to the locomotive fire box, said conveyer having a flexible support upon one vehicle and a second support upon the other vehicle, with respect to which latter support it has pivotal connection.

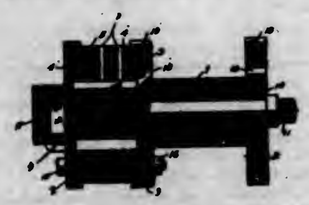
3. The combination with two vehicles in the form of a locomotive and tender, of a conveyer pivotally connected with one vehicle for transferring fuel from the tender to the locomotive fire box, said conveyer having a support upon one vehicle and a second support upon the other vehicle, with respect to which latter support it is slidable.

4. The combination with two vehicles in the form of a locomotive and tender, of a conveyer supported upon both locomotive and tender for transferring fuel from the tender to the locomotive fire box, said conveyer having a universal mounting upon one of said vehicles.

5. The combination with two vehicles in the form of a locomotive and tender, of a conveyer for transferring fuel from the tender to the locomotive fire box, said conveyer having a universal mounting upon the tender having flexible connection with the locomotive fire box.

[Claims 6 to 38 not printed in the Gazette.]

885,731. ROTARY MACHINE. PHILIP J. DARLINGTON, Pittsburg, Pa. Filed Sept. 10, 1907. Serial No. 392,148.



1. In a rotary machine, the combination with its casing of a piston journaled at one end, means for conducting motive fluid for actuating the said piston and means for partially balancing the pressure of the motive fluid on the rear end of the piston.

2. In a rotary machine, the combination with its casing of a single flanged rear head, a double flanged forward head and means for uniting the said heads and casing.

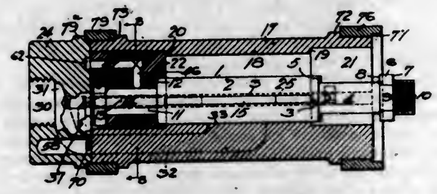
3. In a rotary machine, the combination of a casing having a piston chamber, and a piston therein provided with a forward reduced portion journaled in the casing and forming a shoulder with the piston proper, said casing being provided with an inlet for the motive fluid and with a port leading from the chamber to the forward shoulder of the piston to counterbalance the pressure of the motive fluid on the rear end of said piston.

4. A rotary machine comprising a frame provided with a piston chamber and with an axial portion of relatively small diameter and having an enlarged flange at its end, and a rotary piston mounted axially in said frame, the exhaust being from the forward end of said piston chamber and the flange of said frame being provided with an opening for the escape of exhaust.

5. A rotary machine comprising a frame provided with a piston chamber and with a forwardly projecting portion of smaller diameter provided on its end with an enlarged flange, a rotary piston journaled axially in said frame and having a journal portion projecting through said reduced portion and provided with tool carrying means, said piston being slotted, and a piston blade mounted in said slot, the exhaust being from the forward end of said piston chamber and the flange on the reduced portion being provided with an opening for the escape of the exhaust.

[Claim 6 not printed in the Gazette.]

885,732. ROTARY MOTOR. PHILIP J. DARLINGTON, Pittsburg, Pa. Filed Jan. 20, 1908. Serial No. 411,632.



1. A rotary motor comprising a cylinder, a piston therein, a bearing for said piston closing the front end of the cylinder, a head at the rear end of the cylinder, and headed bolts extending longitudinally through the cylinder into the rear head and having their heads overlying the front face of the bearing.

2. A rotary motor comprising a cylinder open at both ends and counterbored from the ends to form shoulders, a piston in said cylinder, bushings in the counterbores and seating against the shoulders in the cylinder, a head fitting against the rear end of the cylinder, and headed bolts extending through the cylinder into the rear head and having their heads overlying the front face of the front bushing.

3. A rotary motor comprising a cylinder, a piston therein, a bushing fitting in the front end of the cylinder, a dowel fitting in alining grooves in the cylinder and bushing, a head fitting against the rear end of the cylinder, and headed bolts extending longitudinally through the cylinder and into the rear head and having their heads overlying the front face of the bushing and the dowel.

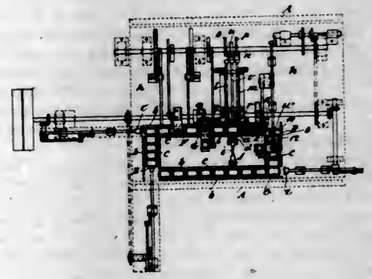
4. A rotary motor comprising a cylinder open at both ends, a piston in said cylinder, bearings fitting in the ends of said cylinder, dowels or keys fitting in alining grooves in the cylinder and said bearings, a head fitting against the rear end of the cylinder, and headed bolts extending longitudinally through the cylinder and into the rear head and having their heads overlying the front face of the front bearing and the dowel.

5. In a rotary motor a cylinder having externally shouldered portions at its ends, shoe rings fitting said shouldered portions, a head fitting one end of the cylinder and bearing against one shoe ring, and headed bolts extending through the cylinder radially internal to said shoe rings and into said head and having their heads overlapping a portion of the other shoe ring.

[Claims 6 to 24 not printed in the Gazette.]

885,733. PACKAGING-MACHINE. ALBERT DAY, Leeds, England. Filed Mar. 27, 1905. Serial No. 252,325.

1. In a packaging machine, the combination with a rectangular guide trough having boxes intermittently reciprocating therein and means for intermittently reciprocating the boxes, of guide rods fixed to one of the sides of the trough, a block with an inclined inner face adapted to slide on the guide rods, means for intermittently reciprocating said block over the trough, a second block with vertical face and sides arranged on the side of the said trough opposite to the inclined block, a rod upon which the last named block is mounted, and the means for intermittently reciprocating it across the top of the trough, substantially as herein set forth.



2. In a packaging machine, the combination with a rectangular guide trough having boxes intermittently reciprocating therein and means for intermittently reciprocating the boxes, of a block having an inclined face and working transversely over the said trough, guide rods fixed to the trough upon which said block slides, and means for intermittently reciprocating the block, a second block with vertical sides and face arranged to slide transversely over the trough from the side opposite to the first named block, a rod upon which the second block is mounted, means for intermittently reciprocating the same, a pair of side folders arranged one on each side of the second block, rods to which said side folders are jointed, and the means for intermittently separately actuating the rods and side folders, substantially as herein set forth.

3. The combination of a pair of side folders each having a curved and inclined end and vertical inner side, rods to which said side folders are jointed, means for separately intermittently reciprocating said folders, and cam paths fixed to the framework of the machine below the folders for causing the latter to close, and pins and runners fixed to side folders and working in said cam paths, substantially as herein set forth.

4. The combination of a pair of side folders each having a curved and inclined end and vertical inner side, rods to which said side folders are jointed, means for separately intermittently reciprocating said folders, and cam paths fixed to the framework of the machine below the folders for causing the latter to close, pins and runners fixed to side folders and working in said cam paths, a block with vertical sides and face mounted upon a rod between the two side folders and their rods, and the means for separately intermittently traversing the same, substantially as herein set forth.

5. The combination with a rectangular guide trough having boxes intermittently reciprocating therein and means for intermittently reciprocating the boxes of a pair of side folders each having a curved and inclined end and vertical inner side, rods to which said side folders are joined, means for separately intermittently reciprocating said folders, and cam paths fixed to the frame work of the machine below the folders for causing the latter to close, pins and runners fixed to side folders and working in said cam paths, a block with vertical sides and face mounted upon a rod between the two side folders and their rods, the means for separately intermittently traversing the same across the top of said trough, a block with an inclined face arranged on the opposite side of the trough to the side folders, guide rods fixed to side of the trough upon which the inclined block slides, and the means for intermittently and separately causing it to traverse across the top of the trough substantially as herein set forth.

[Claims 6 to 10 not printed in the Gazette.]

885,734. BOTTLE AND SEALING-CAP. JOHN M. DEEMER, New York, N. Y. Filed Aug. 9, 1904. Serial No. 220,078.



1. A bottle closing device comprising a metallic cap having a cork disk therein, and a depending annular flange and a pair of oppositely located depending tongues formed integral with said flange, said tongues each having a serrated lower edge, each of the said tongues adapted to be bent into a horizontal depression in a bottle-neck, substantially as shown and described.

2. The combination with a bottle cap having a pair of depending tongues; of a bottle having horizontal grooves in its neck, the inner walls of said grooves extending into the channel of the bottle-neck and forming bars to prevent the insertion of a cylindrical cork, and the outer walls forming depressions, the free ends of the said depending tongues of the bottle cap being bent into engagement with said depressions to fasten the cap, substantially as shown and described.

3. In combination with a cork-lined bottle-cap having a pair of oppositely located depending tongues, a bottle having horizontal grooves located opposite each other, the inner walls of said grooves extending into the channel of the bottle-neck and the outer walls thereof forming depressions which engage the free ends of the said tongues which are bent into engagement with said depressions as a means for fastening the cap to the bottle-neck, substantially as shown and described.

4. A bottle having oppositely located depressions in its neck, the walls of said depressions extended into the channel of the bottle-neck, said walls in vertical sectional elevation, each embodying an approximately horizontal part and an oblique part; in combination with a metallic cap having a cork disk and a pair of oppositely located depending tongues, the free ends of said tongues bent under and in contact with the said horizontal parts of the walls of the said grooves for fastening the bottle and cap together, substantially as shown and described.

885,735. GUARD FOR EYEGLASSES. WILLIAM I. DENGLER, Atlantic City, N. J. Filed Feb. 12, 1904. Serial No. 193,222.

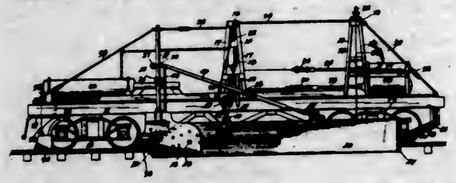


1. In eyeglasses, the combination with lenses; of lens clips; a bridge spring; and, nose guards connected with said lenses and clips, and having spirally bent oppositely extending arms, free at their extremities, and arranged to independently press upon the nose, substantially as set forth.

2. In an eyeglass guard, an attaching arm arranged to be fastened to a lens clip and laterally bent at its base and there connected with integral oppositely extending arms which are spirally bent near said base and free at their opposite extremities to independently press against the nose, substantially as set forth.

3. In eyeglasses, the combination with lenses; of lens clips; a bridge spring seated on said clips at opposite ends; and, nose guards each comprising an arm seated on the bridge spring, having a curved base and oppositely extending arms, bent into spiral form at said base and provided at their free ends with independent plates arranged to engage the nose, substantially as set forth.

885,736. RAILWAY-SPREADER. JOHN C. DEPEW, Chicago, Ill. Filed July 13, 1907. Serial No. 383,594.



1. A spreader, the combination of a vehicle body, a spreader wing, a mounting for the spreader wing permitting lateral distention and vertical adjustment, and a supporting arm pivoted at its inner end and connected to the spreader wing and adapted to be swung up and down to adjust the spreader wing, substantially as described.

2. A spreader, the combination of a vehicle body, a spreader wing, a mounting for the spreader wing permitting lateral distention and vertical adjustment, a supporting arm pivoted at its inner end and connected to the spreader wing and adapted to be swung up and down to adjust the spreader wing, a cylinder and piston, and a connection between the piston and the supporting arm, for adjusting the latter, substantially as described.

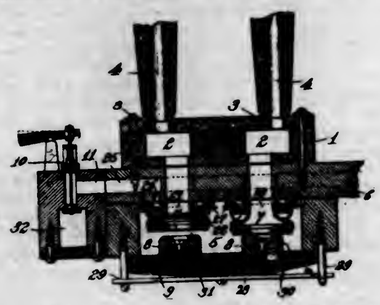
3. A spreader, the combination of a vehicle body, a spreader wing, a mounting for the spreader wing permitting lateral distention and vertical adjustment, a supporting arm pivoted at its inner end and connected to the spreader wing and adapted to be swung up and down to adjust the spreader wing, and a brace extending between the wing and the vehicle body, substantially as described.

4. A spreader, the combination of a vehicle body, a spreader wing, a mounting for the spreader wing permitting lateral distention and vertical adjustment, a supporting arm pivoted at its inner end and connected to the spreader wing and adapted to be swung up and down to adjust the spreader wing, a brace extending between the wing and the vehicle body, a motor cylinder and piston, and a connection between the piston and the supporting arm, for adjusting the latter, substantially as described.

5. In a spreader, the combination of a vehicle body, a wing, a vertical guideway to which the inner end of the wing is pivoted, and slidably connected, a supporting arm pivoted at its inner end, a hanger and sheave connected with the wing and adapted to travel along the arm, and means for raising and lowering the arm to vertically and laterally adjust the wing, substantially as described.

[Claims 6 to 21 not printed in the Gazette.]

885,737. PNEUMATIC VALVE. GUSTAV F. DÖHRING, Cranford, N. J. Filed Sept. 12, 1906. Serial No. 334,340.



1. In a pneumatic valve the combination with a stationary member having an opening therein, of a movable disk having an opening therein, a conduit having flexible walls, joining said openings and a stationary seat for said movable disk.

2. In a pneumatic valve the combination with a stationary member having an opening therein, of a movable disk having an opening therein, a conduit having flexible walls, joining said openings, and a collapsible air chamber between said stationary member and said movable disk out of communication with said conduit.

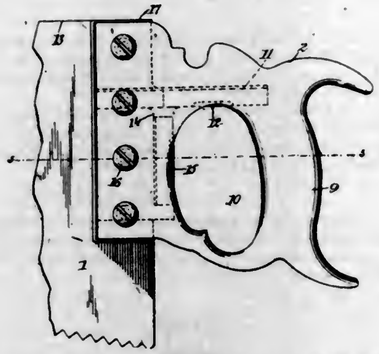
3. In a pneumatic valve the combination with a stationary member having an opening therein, a movable disk having an opening therein, a flexible conduit joining said openings, a flexible walled air chamber connecting said stationary member and said movable disk, said stationary member having an opening therein leading to said air chamber and out of communication with said conduit.

4. An organ pallet consisting of a pair of rings joined by a pair of flexible imperforate connections surrounding the central openings in said rings and separated from each other to form an air chamber between them, one of said rings being provided with an opening leading to said air chamber.

5. A pneumatic valve having stationary and movable members each provided with openings, a flexible connection joining said members, said flexible connection being of such shape as to form a passage through said valve in communication with said openings and a collapsible air chamber between said members out of communication with said passage.

[Claims 6 to 10 not printed in the Gazette.]

885,738. SAW. JOHN DOWLING, Olympia, Wash. Filed June 29, 1906, Serial No. 324,013. Renewed July 19, 1907. Serial No. 384,612.



1. A saw having a handle with an eye, a blade, a keeper of sheet metal bent to form a tubular case at the rear and presenting forwardly projecting plates clamping said blade therebetween, said plates and said blade having corrugations holding said keeper in a fixed angular relation with respect to said blade a spirit level received in said case, said handle having a recess receiving said keeper and case and exposing said spirit level on the edge of said eye.

2. A saw having a handle with an eye, a blade, a keeper of sheet metal bent to form a tubular case at the rear and presenting forwardly projecting plates clamping said blade therebetween, said plates and said blade having corrugations holding said keeper in a fixed angular relation with respect to said blade a spirit level received in said case, said handle having a recess receiving said keeper and case and exposing said spirit level on the edge of said eye, a second tubular case projecting rearwardly from said keeper at right angles to said first case and carrying a second spirit level exposed at said eye, said handle having a bore in which said second case is received.

3. A saw having a handle with an eye, a blade, a keeper of sheet metal bent to form a vertical tubular case at the rear, and presenting forwardly projecting plates between which the butt of the saw blade is secured, a spirit level in said case, said handle having a vertical slot or recess in its forward portion adapted to receive said keeper and case, the said slot opening at its rear at the edge of said eye to expose said spirit level, and a second tubular case projecting rearwardly from the upper portion of said keeper at right angles to said first case and carrying a second spirit level, said handle having a bore in which said second case is secured, said bore opening at the edge of the eye to expose the spirit level.

4. A saw having a handle with an eye therein, the handle being provided with a slot at its forward portion, a keeper mounted in said slot and constructed of sheet metal bent to form opposite plates between which the butt of the saw blade is received, said keeper having an integral case carrying a spirit level visible at the edge of said eye, the plates of the keeper at the forward edges being formed with laterally projecting flanges arranged to cover the forward face of the saw handle, and cap flanges at the upper and lower extremities of said first mentioned flanges and arranged to seat upon the upper and lower faces of said handle.

5. A saw having a handle with an eye, a blade, a keeper formed of sheet metal and folded to present opposite plates between which the saw blade is clamped, the said keeper having at its upper portion a rearwardly projecting tubular extension or case carrying a spirit level, the keeper being further provided at its rear portion with a similar tubular case extending vertically or at right angles to the first case and carrying a second spirit level, the handle having a vertical slot or recess at its forward portion adapted to receive the keeper and vertical tubular case, the handle also having a bore to receive the rearwardly extending tubular case, the recess and bore opening at the edge of the eye to expose the spirit levels, the said keeper having flanges at its forward portion adapted to cover the forward face of the saw handle, and cap flanges adapted to seat upon the upper and lower faces of said handle.

[Claims 6 and 7 not printed in the Gazette.]

885,739. BAG-FASTENER. GEORGE L. EDGERTON, Goldsboro, N. C. Filed Apr. 6, 1907. Serial No. 366,789.



1. A bag fastener including coöperating members having their inner ends over-lapped and their outer ends provided with means for engagement with the adjacent corners of a bag.

2. A bag fastener including separable members adapted to pierce the walls of a bag and having their inner ends over-lapped and their outer ends provided with means for engagement with the bag.

3. A bag fastener including separable members adapted to pierce the walls of a bag and having their inner ends over-lapped and their outer ends provided with means for engagement with the adjacent corners of the bag.

4. A bag fastener including separable members adapted to engage the walls of a bag and provided with terminal loops for the reception of the corners of said bag, and means extending transversely across the loops and adapted to engage the corners of the bag for locking the members against accidental displacement.

5. A bag fastener including co-acting members each provided with oppositely disposed piercing points adapted to engage the intermediate portion and opposite corners of a bag, respectively.

[Claims 6 to 8 not printed in the Gazette.]

885,740. REGENERATIVE RETORT-FURNACE. OSCAR H. ELIEL, La Salle, Ill. Filed Feb. 16, 1907. Serial No. 357,688.



1. In a furnace of the class described, the combination with a centrally divided retort chamber, of gas and air regenerators placed beneath the retort chamber compartments, gas flues communicating with the gas regenerators and with the retort chamber compartments at the top, air flues communicating with the air regenerators and with the retort chamber compartments at the bottom and at various intermediate points, the relative arrangement of the gas flues and air flues being such that the gas and air respectively, passing therefrom into the compartments shall move in opposite directions and flues for the products of combustion leading from the retort chamber compartments to the regenerators.

2. In a furnace of the class described, the combination with a centrally divided retort chamber of gas regenerators and air regenerators placed beneath the retort chamber compartments, gas flues communicating with the gas regenerators and with the retort chamber compartments at the top, air flues communicating with the air regenerators and with the retort chamber compartments at various points, flues for the products of combustion arranged beneath the retort chamber compartments at the front parts thereof, and communicating with the same, and flues connecting the said flues for the products of combustion with the gas and the air regenerators.

3. In a furnace of the class described and in combination, a centrally divided retort chamber, sectional gas regenerators and air regenerators placed beneath the retort chamber compartments and at the ends thereof with intervening space between them near the mid-length of the furnace, a centrally located horizontal gas flue extended beneath the retort chamber compartments and having communication with the sectional gas regenerators at each side of the open space between them and communicating with the chamber compartment spaces at the top, horizontal air flues extended beneath the retort chamber compartments and having communication with the sectional air regenerators at each side of the open space between them and with the chamber spaces at the bottom and top and at various other points between the bottom and top, horizontal flues for the products of combustion extended beneath the retort chambers and having communication with the chamber spaces at the bottom and with the sectional gas and air regenerators at each side of the space between them, and reversing dampers for alternating the flow of gas and air in the sectional regenerators.

885,741. DUPLEX TUBE. HOMER EMERSON, Milton, Mass. Filed June 29, 1907. Serial No. 381,428.

1. A multiple tubular package, comprising a series of collapsible tubes, each having a threaded extension at one end and a flattened portion at the opposite end, a yoke having openings to receive the threaded extensions of the tubes, and a key receiving the flattened ends of said tubes.

2. A multiple tubular package comprising a series of collapsible tubes, each having a threaded extension at one end and a flattened terminal at the opposite end, a key connecting the flattened ends of the tubes and adapted to collapse the same, and a yoke having openings in which the



threaded extensions of the tube are screwed, said yoke being intended to fit close to the ends of the tubes between the threaded extensions thereof.

885,742. TYPE-WRITING MACHINE. MICHAEL H. FLYNN, Hartford, Conn., assignor to Royal Typewriter Company, Hoboken, N. J., a Corporation of New Jersey. Filed Nov. 16, 1907. Serial No. 402,402.



1. A link having a portion displaced from alinement with the body of the link and a plate having tongues of unequal length turned respectively around the displaced and undisplaced parts of the link.

2. A link having a portion displaced from alinement with the body of the link and a plate having tongues of unequal length turned around and clamped respectively upon the displaced and undisplaced parts of the link.

885,743. STOPPER FOR BOTTLES AND OTHER RECEPTACLES. LIONELLO GANUCCI-CANCELLIERI and ANCHISE CAPPELLETTI, Florence, Italy. Filed Mar. 2, 1907. Serial No. 360,297.

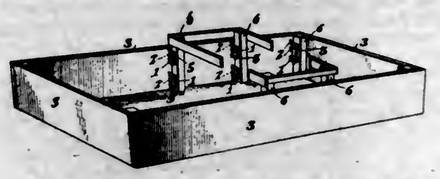


1. The combination, with a vessel having an orifice to be stopped, provided with interior shoulders, a stopper adapted to close said orifice and means for preventing the withdrawal of said stopper, said means comprising two parts, one sliding on the other and adapted to engage with the interior shoulder when expanded, and means for locking the parts in their expanded position.

2. A bottle having an annular groove in its neck, a stopper for the bottle and means for preventing the withdrawal of the stopper, said means consisting of two interlocking parts, one sliding on the other and adapted to be expanded to engage the groove, each part having a projecting portion thereon which engage with each other to lock the parts in their expanded position.

885,744. CARRIAGE-BODY. NELSON GILBERT, Alexandria, Ontario, Canada. Filed Jan. 29, 1907. Serial No. 354,766.

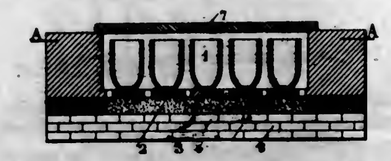
1. In a vehicle body, the combination with a frame member, and a panel provided at its inner face with a plurality of short spaced mortises or recesses, of a fastener consisting of a plate bearing flat against the outside of the frame member and provided at its inner edge with a plurality of hook-shaped engaging portions extending into said recesses and having bills disposed longitudinally of the fastener and embedded in the walls of the mortises or recesses and adapted to be simultaneously driven into the same by driving the plate longitudinally, said plate having its inner edge bearing against and firmly engaging the panel between the recesses or mortises.



2. In a vehicle body, the combination with a frame member, and a panel provided at its inner face with a plurality of short spaced mortises or recesses, of a fastener comprising a plate bearing flat against the outside of the frame member and having a driving end and provided with a plurality of hook-shaped engaging portions extending into the mortises or recesses and consisting of straight transverse shanks, and longitudinally disposed bills embedded in the walls of the mortises or recesses and extending in the same direction to enable them to be simultaneously driven into the panel and having their inner edges arranged at an angle to the plate and adapted to draw the same and the inner edge of the plate firmly into engagement with the inner face of the panel between the mortises or recesses, and fastening means piercing the plate and securing the same to the frame member for permanently connecting the panel to the latter.

3. A panel fastener for securing the panel of a vehicle body to the frame member thereof comprising a plate having a driving end and provided at its inner longitudinal edge with a plurality of hook-shaped portions, one extending inwardly from the driving end of the plate, another extending outwardly from the other end of the plate, and an intermediate hook-shaped portion located at a point between the ends of the plate, said hook-shaped portions consisting of straight transverse shanks and longitudinal bills extending in the opposite direction from the driving end of the plate and provided with straight alined outer edges to enable them to be driven in straight and having their inner edges arranged at an angle to the plate for driving the latter tightly against the inner face of the panel.

885,745. ELECTRIC FURNACE. PAUL GIROD, Ugine, France. Filed Dec. 20, 1905. Serial No. 292,616.

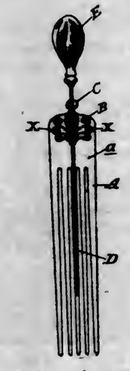


1. In an electric furnace, the combination, with a receptacle forming a chamber arranged to receive a plurality of objects to be heated, of a mass of resistance material arranged in layers in contact with the sides, ends and bottom of said receptacle, and a plurality of pole pieces of opposite polarity at each end of the receptacle.

2. In an electric furnace, the combination, with a receptacle forming a chamber arranged to receive a plurality of objects to be heated, and provided with end extensions, of insulating masonry inclosing said receptacle and arranged to support said extensions, a mass of resistance material between the receptacle and the masonry pole pieces extending through the masonry and arranged to conduct current to the resistance material.

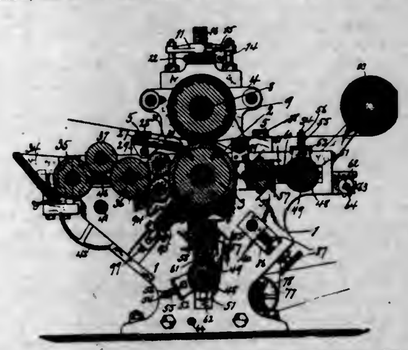
3. In an electric furnace, the combination, with a rectangular receptacle forming a chamber arranged to receive a plurality of objects to be heated, said receptacle having a perforated bottom, of resistance material in contact with the outer walls and bottom of said receptacle, means for conducting current to said resistance material, and a cover for the receptacle, said cover being formed in sections.

885,746. COMB HAT-FASTENER. WARREN H. GOODALE, Leominster, Mass., and ELY A. STACY, New York, N. Y. Filed May 17, 1907. Serial No. 374,312.



In combination with a comb, a pin secured to the head of said comb approximately centrally of said head, said pin extending a greater portion of its length away from the comb and projecting a suitable distance above said head.

885,747. PRINTING-PRESS. WARREN L. GREEN, New York, N. Y. Filed Mar. 31, 1905. Serial No. 253,186.



1. In a printing machine for printing from intaglio printing plates, the combination with an intaglio printing surface, means for applying an ink repelling metal to said surface, means for inking said surface, and means for removing the surplus ink.

2. In a printing machine for printing from intaglio printing plates, the combination with an intaglio printing surface provided with intaglio printing lines, means for applying ink repelling metal to said surface, means for inking said surface and means for removing the surplus ink.

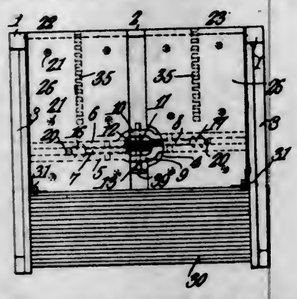
3. In a printing machine for printing from intaglio printing plates the combination of a printing surface having intaglio printing lines and capable of amalgamation, means for applying an amalgamating substance to said surface, means for inking said surface, and means for rubbing said surface to remove the excess of amalgamating material and ink.

4. In a printing machine for printing from intaglio printing plates, the combination of a printing surface having intaglio printing lines and capable of amalgamation, means for applying an amalgamating substance to said surface, means for inking said surface, means for rubbing said surface to remove the excess ink and amalgam, and means for polishing said surface.

5. In a printing machine for printing from intaglio printing plates, the combination of a printing surface having intaglio printing lines and capable of amalgamation, means for applying an amalgamating substance to said surface, and means for polishing said surface.

[Claims 6 to 22 not printed in the Gazette.]

885,748. WRITING-DESK. COBE Y. HAGGARD, Wheat, Tenn. Filed July 13, 1907. Serial No. 383,671.



1. A desk comprising two similar independent separate tops, independent mechanisms for raising and lowering said tops, and operative means adapted to be moved into engagement with either of said mechanisms or simultaneously with both of them.

2. A desk comprising two separate independent tops, an independent mechanism for raising and lowering each of said tops said mechanisms being in different vertical parallel planes, and operative means adapted to be moved into engagement with either of said mechanisms or simultaneously with both of them.

3. A desk comprising two separate independent tops, each top being formed of two leaves one above the other each upper leaf being movable over the lower leaf from front to back, and means between said leaves for locking the movable leaf to the fixed leaf.

4. A desk comprising two separate independent tops, each top being formed of two leaves one above the other each upper leaf being movable over the lower leaf from front to back, a ratchet bar attached to one leaf, and a coöperating pawl pivoted to the other leaf, said pawl and ratchet holding said upper leaf in adjusted position on the lower leaf.

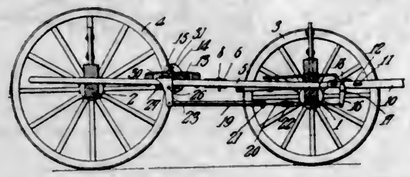
5. In a desk comprising two separate independent tops, each top being formed of two leaves one above the other and each upper leaf being movable over the lower leaf from front to back, a pivotal connection between each top and its elevating mechanism independent mechanisms for raising and lowering said tops, and operative means adapted to be moved into engagement with either of said mechanisms or simultaneously with both of them.

[Claims 6 to 16 not printed in the Gazette.]

885,749. WAGON-BRAKE. JOHN F. EAGLER, Shenandoah, Iowa. Filed July 27, 1907. Serial No. 385,824.

1. In a brake mechanism of the character described, the combination with a brake beam having shoes adapted to coöperate with the vehicle wheels, of a brake operating device having stepped portions thereon arranged at different distances from the beam, a part of the latter arranged to coöperate with the stepped portions, and means actuated by the draft rigging of the vehicle and connected to the brake operating device for setting the brake.

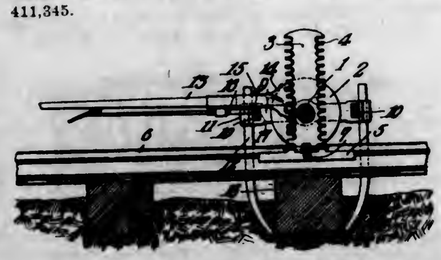
2. In a brake mechanism of the character described, the combination with a vehicle, and a part having a limited longitudinal movement relatively thereto, of a brake beam mounted in coöperative relation to the vehicle wheels and capable of a relative vertical movement, a brake operating lever pivotally mounted on a relatively fixed portion of the vehicle and having stepped shoulders formed thereon at different distances from the brake beam and arranged in different vertical planes, a part on the brake beam arranged to disengage from the lower shoulder when the brake beam is lifted, and means connecting the longitudinally movable part of the vehicle and the brake operating lever.



3. The combination with a vehicle having a tongue movable longitudinally thereof, and a brake beam mounted to coöperate with the vehicle wheels and capable of a relative vertical movement, of a brake operating lever mounted on a relatively fixed part of the vehicle and having stepped portions thereon arranged at different distances from the brake beam and in different horizontal planes, a part on the beam adapted to normally coöperate with the lower portion on the said lever and to disengage therefrom when the brake beam is lifted, and means connecting the tongue and the said lever for operating the brake.

4. The combination with a vehicle having a tongue movable longitudinally thereof, and a brake beam mounted to coöperate with the vehicle wheels, of a brake operating lever composed of a pair of parallel members mounted on a common pivot and having pairs of stepped shoulders on their upper ends, the shoulders being arranged at different distances from the brake beam and in different horizontal planes, the upper shoulders being closer to the beam and provided with overhanging fingers, a loop connected to the beam and arranged to coöperate with the shoulders of the said lever, a tongue actuated lever pivoted on a relatively fixed part of the vehicle and operatively connected to the tongue, and a tension rod connecting the said levers.

885,750. TRACK-TAMPING IMPLEMENT. ABLE F. HART, Hickory, N. C. Filed Jan. 17, 1908. Serial No. 411,345.



1. A tamping implement comprising a wheel mounted axle, rack standards supported upon the axle, bars mounted for reciprocation upon the axle, tamping bits carried by the bars, operating levers adjustably engaging the standards and means carried by the levers for engaging the bars.

2. A tamping implement comprising a wheel mounted axle, standards located upon the axle, rail clamps attached to the standards, bars mounted for reciprocation upon the axle, tamping bits carried by the bars, levers adjustably engaging the standards and means carried by the levers for engaging the bars.

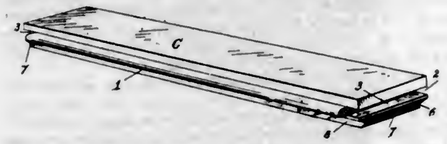
3. A tamping implement comprising a wheel mounted axle, a standard located thereon, a bar mounted for reciprocation upon the axle, a tamping bit carried by the bar, a lever adapted to adjustably engage the standard and means mounted upon the lever for engagement with the bar.

4. A tamping implement comprising a wheel mounted axle, standards located thereon, clamp members hingedly attached to said standards, bars mounted for reciprocation upon the axle, tamping bits carried by the bars, levers adapted to adjustably engage the standards and means mounted upon the levers for engagement with the bars.

5. In a tamping implement as described, tamping bits mounted for longitudinal reciprocation, means for operating the bits, track clamping members hingedly mounted upon the implement and a longitudinally extensible push bar adapted to operate at its ends against the track clamps.

[Claims 6 to 16 not printed in the Gazette.]

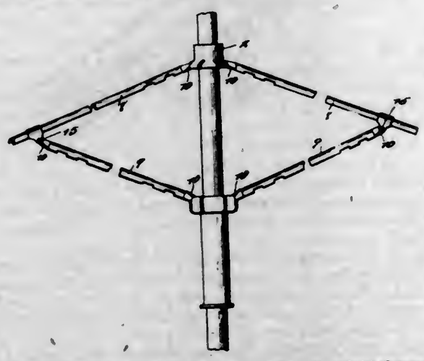
885,751. FLOORING. SAMUEL W. HEATON, Philadelphia, Pa. Filed Apr. 2, 1906. Serial No. 309,320.



1. A series of blocks for a flooring, to be laid on a mastic base, each of said blocks being formed with an integral side tongue 1, an opposite side groove 2, end grooves 3, downwardly and inwardly extending end bevels 7 below the end grooves, and side grooves 6 below the said tongue and side groove, substantially as and for the purposes described.

2. A wooden block floor consisting of a base of adhesive material, and blocks laid thereon and interlocked with each other, the blocks being each provided with a side tongue and with an opposite side groove, the side tongue of one block being interlocked with the side groove of the next block, and also provided with end grooves certain of which are interlocked with the side tongues of contiguous blocks, and also provided with spaces to receive the adhesive material, such spaces being situated below the side tongues, the blocks having end bevels 7 to force the adhesive material into said spaces, substantially as set forth.

885,752. UMBRELLA. CHARLES H. HILL, Scranton, Pa. Filed Oct. 15, 1906. Serial No. 338,994.

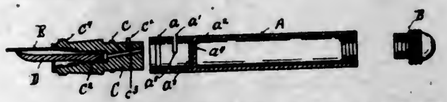


1. In combination with an umbrella rib of U-shape in cross section, a tip having its top longitudinal edge formed with a shoulder adapted to abut against the outer end of said rib, means to secure the tip to said rib, said tip beyond said shoulder thereof being formed with a hook having an oblique face, the bill of said hook having a long oblique face to engage said first named face, the end of said hook being disposed on the under longitudinal edge of said tip.

2. In combination with an umbrella rib of U-shape in cross section, a tip therefor having a hooked end, said tip being of such thickness to be received between the legs of the U and being formed on its under face with a pair of spaced depressions, each of the free longitudinal edges of the legs of the U at points alining with said depressions, being bent inwardly towards one another to occupy the space formed by said depressions and being disposed at right angles to the side faces of said tip.

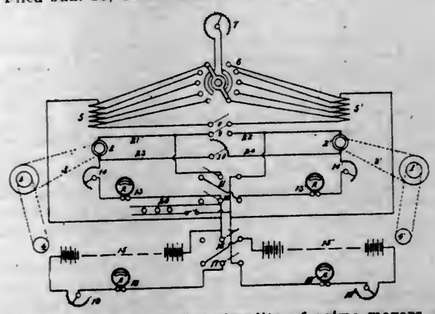
3. In an umbrella, a runner having a ring and a series of spaced fingers to secure said ring in position, tips engaging in said space between said fingers and each having hook-shaped ends and an eye at the inner end of said hook, said hook on its under side being formed with an oblique face which extends from said eye to the hook extremity, the under side of said tip having an oblique face which extends from said eye rearwardly and which is to engage said oblique face of the hook, said hook being comparatively long so that when its eye is positioned with respect to said ring, the hook extremity will be at a point away from said fingers which secure said ring, and means carried by the tip to engage the outer end of the rib to thereby properly position said hook with respect to the outer end of the rib.

885,753. FOUNTAIN-PEN. JOHN A. HOLLAND, Cincinnati, Ohio, assignor to The John Holland Gold Pen Company, Cincinnati, Ohio, a Corporation of Ohio. Filed Sept. 18, 1907. Serial No. 393,498.



In a fountain pen the combination of a barrel having near its front end an eccentrically bored partition and an internal annular groove in front of the partition, a disk of yielding material with a bore to register with the aforesaid bore and being secured upon the front of the partition, a plug journaled in the front end of the barrel and having an external collar fitting within the groove of the barrel and holding the rear end of the plug firmly but yet rotatably against the disk, the plug having a longitudinal channel adapted to be brought in and out of register with the bore of the disk at one end and to lead at the other end to a pen point.

885,754. SYSTEM OF ELECTRICAL DISTRIBUTION. ALBERT S. HUBBARD, Greenwich, Conn., assignor to Gould Storage Battery Company, a Corporation of New York. Filed Jan. 19, 1903. Serial No. 139,589.



1. The combination of a plurality of prime movers, direct current dynamo-electric machines connected therewith to regulate the speed of said prime movers, and connections between the armatures of said dynamo machines

whereby the differences in speed in the prime movers are automatically compensated.

2. The combination of a plurality of prime movers, direct current dynamo-electric machines connected therewith to regulate the speed of said prime movers, and connections between the armatures of said dynamo machines whereby the energy generated by the relative increase of speed of one prime mover is automatically applied to increase the speed of another prime mover.

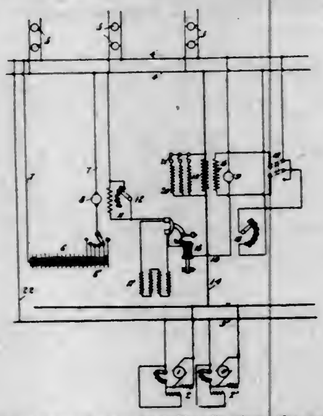
3. The combination of a plurality of prime movers, a corresponding plurality of dynamo-electric machines connected to the prime movers to regulate the speed of the same, and means to adjust the regulation whereby the prime movers may be regulated to run at the same or different relative speeds.

4. The combination of a plurality of prime movers, a corresponding plurality of energy-consumption devices connected thereto, a corresponding plurality of dynamo-electric machines connected to the prime movers to regulate the speed of the same, and means to adjust the regulation whereby the prime movers may be regulated to run at the same or different relative speeds.

5. The combination of a plurality of prime movers, a corresponding plurality of energy-consumption devices connected thereto, a corresponding plurality of dynamo-electric machines connected to regulate the speed of the energy-consumption devices, and means to adjust the regulation whereby the energy-consumption devices may be regulated to run at the same or different relative speeds.

[Claims 6 to 17 not printed in the Gazette.]

885,755. SYSTEM OF ELECTRICAL DISTRIBUTION. ALBERT S. HUBBARD, Belleville, N. J., assignor to Gould Storage Battery Company, a Corporation of New York. Original application filed June 24, 1903, Serial No. 162,845. Divided and this application filed Aug. 24, 1905. Serial No. 275,601.



1. In a system of electrical distribution, the combination with a work circuit, generators for supplying the same, a storage battery and booster connected to the work circuit in parallel with the generators, a field-winding for said booster, a circuit including said booster field-winding connected in parallel with the generators and having substantially constant E. M. F. in one direction, a counter E. M. F. generator in said circuit, means responsive to load fluctuations in the generator circuit for varying said counter E. M. F. and manually adjustable means for assisting or opposing the effect of the load fluctuations on the counter E. M. F. generator.

2. In a system of electrical distribution, the combination with a work circuit, generators for supplying the same, a storage battery connected in parallel with the work circuit, a booster in series to the battery, a field-winding for said booster, a circuit including said field-winding connected across the work circuit, a counter E. M. F. generator in said circuit, a field-winding for said counter E. M. F. generator in series with the main generator, and a second field-winding for said counter E. M. F. generator, and means for causing said second field-winding to be cumulative or differential in respect to the other field-winding.

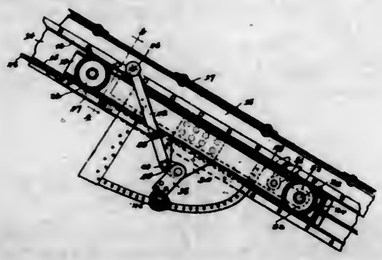
3. In a system of electrical distribution, the combination with a work circuit, generators supplying the same, auxiliary devices comprising a storage battery connected to the work circuit and a booster for regulating the battery action, of a field-winding for said booster, means for causing variations of current therein in accordance with the resultant of opposing potential differences, said means comprising a regulating coil responsive to generator load changes, apparatus acted upon by said regulating coil to vary said resultant of potential differences, and an independent manually adjustable means for varying said resultant.

4. In a system of electrical distribution, the combination of a work circuit, a generator supplying the same, a storage battery in parallel with the generator and a booster in series with the battery, of a circuit connecting the battery and one side of the mains, a field-winding for the booster in said circuit, said field-winding being in parallel relation with the booster armature, an apparatus included in said circuit for regulating the effect on the booster field-winding between a positive and negative maximum value, a regulating coil in series with the generator, and manually adjustable means acting jointly with said regulating coil on said apparatus to control the same.

5. In a system of electrical distribution, the combination of a work circuit, a generator supplying the same, auxiliary devices comprising a storage battery and booster in series connected to the work circuit in parallel with the generators, of a field-winding for the booster, a circuit connected in parallel with the main circuit and including said field-winding therein, automatically operating apparatus for causing said circuit to be neutral under normal loads and having a positive and negative E. M. F. under increase and decrease of loads respectively, and a regulating coil responsive to generator loads and manually adjustable means coöperatively acting upon said apparatus.

[Claims 6 to 14 not printed in the Gazette.]

885,756. EXCAVATOR. CHARLES C. JACOBS, Chicago, Ill., assignor to F. C. Austin Drainage Excavator Company, Chicago, Ill., a Corporation of Illinois. Filed Feb. 28, 1907. Serial No. 359,795.



1. In an excavator, the combination of a truck bucket rotatably mounted on said truck, an arm pivotally connected to said bucket, and means connected to said arm whereby the bucket may be pulled along, substantially as described.

2. In an excavator, the combination of a rotatably mounted bucket, an arm pivotally connected to said bucket, a stop coöperating with said arm to limit its travel, and means connected to said arm whereby the bucket may be pulled along, substantially as described.

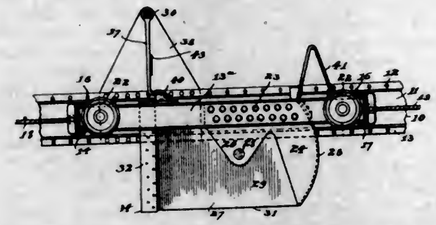
3. In an excavator, the combination of a rotatably mounted bucket, an arm pivoted thereto, a roller mounted on said arm, a track upon which said roller travels, a stop to limit the travel of said roller, and means connected to said arm whereby the bucket may be pulled along, substantially as described.

4. In an excavator, the combination of a truck, a bucket rotatably mounted on said truck, a crank arm adapted to turn with said bucket, an arm pivotally connected to said crank arm and a cable fastened to said arm whereby the bucket may be pulled along, substantially as described.

5. In an excavator, the combination of a truck, a bucket, a bail pivotally connected at its opposite ends to said bucket, and means fastened to said bail whereby the bucket may be pulled along, substantially as described.

[Claims 6 to 11 not printed in the Gazette.]

885,757. EXCAVATOR. CHARLES C. JACOBS, Chicago, Ill., assignor to F. C. Austin Drainage Excavator Company, Chicago, Ill., a Corporation of Illinois. Filed June 15, 1907. Serial No. 379,203.



1. The combination of an excavating bucket having an open rear end, a hood or closure for said open end, and means to move said bucket so that the hood or closure no longer closes its rear open end whereby the contents may be discharged, substantially as described.

2. The combination of a pivoted or hinged excavating bucket having an open rear end, a hood or closure for said open end, and means to tilt said bucket on its pivots or hinges so that the hood or closure no longer closes its rear open end whereby the contents may be discharged, substantially as described.

3. The combination of a pivoted or hinged bucket having an open front mouth with a sharp cutting edge and an open rear end, a hood or closure for said open end, and means to tilt said bucket on its pivots or hinges so that the hood or closure no longer closes its rear open end whereby the contents may be discharged, substantially as described.

4. The combination of a truck, an excavating bucket pivoted or hinged to said truck and having an open front mouth with a sharp cutting edge and an open rear end, a hood or closure for said open end, and means to tilt said bucket on its pivots or hinges so that the hood or closure no longer closes its rear open end whereby the contents may be discharged, substantially as described.

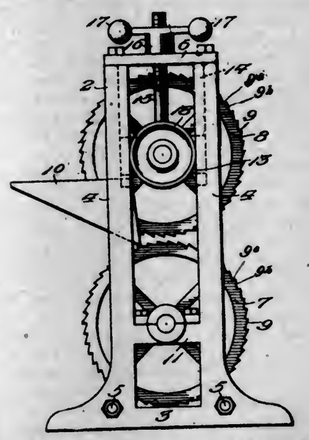
5. The combination of a trackway shaped to conform substantially to the cross-sectional outline of the trench to be dug, a truck adapted to travel on said trackway, an excavating bucket pivoted or hinged to said truck and having an open front mouth with a sharp cutting edge and an open rear end, a hood or closure for said open end, and means to tilt said bucket on its pivots or hinges so that the hood or closure no longer closes its rear open end whereby the contents may be discharged, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

885,758. COTTON-SEED HULLER. ZACHARY T. JOB, Atlanta, Ga. Filed Sept. 12, 1906. Serial No. 334,338.

1. In a cotton seed huller the combination with a feeding roll having means thereon for receiving the seed in thin layers and for retaining said seed in place thereon, means for rotating said roll, a hulling roll adjacent said feeding roll, said hulling roll having cutting teeth thereon adapted to strike the top of the seed held on the feeding roll and to cut a portion of the hull thereof, and means for rotating the hulling roll.

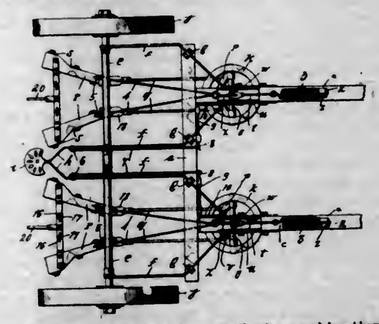
2. In a cotton seed huller, the combination with an upper cutting roll, of a lower feeding roll in proximity and parallel thereto, means for driving the cutting roll at a high rate of speed, and means for driving the feeding roll in the opposite direction at a slower rate of speed, means for feeding cotton seed in a layer to the lower roll whereby the said seed will remain thereon by gravity and will be carried by said roll between the two rolls to be operated upon by the cutting roll, said lower roll having longitudinal teeth projecting therefrom to hold the seed in position thereon, and said upper roll having longitudinal cutting teeth thereon opposite the teeth on the lower roll.



3. In a cotton seed huller, the combination with a feed roll provided with pockets in its surface of such depth that cotton seed placed therein will project beyond the surface, of a parallel superposed cutting roll having cutting teeth adapted to approach the lower roll so closely as to strike and cut the tops of the seed held in the pockets, and means for rotating said rolls at relatively different rates of speed.

4. A cotton seed huller comprising a frame, a lower feed roll journaled therein and provided with longitudinally extending teeth facing reversely to its direction of rotation, an oppositely rotating superposed hulling roll provided with longitudinally extending cutting teeth facing in its direction of rotation, the teeth upon each roll being each provided with an abrupt shoulder and an inclined or beveled face leading therefrom to the base of the shoulder of the next adjacent tooth, means for rotating said rolls at relatively low and high rates of speed, and a hopper supported in rear of the rolls with its outlet arranged to discharge the seed upon the upper portion of the feeding roll in rear of the axial line of the roll.

885,759. PLOW. TRUMAN J. JOHNSON, Williams, Iowa. Filed Apr. 15, 1907. Serial No. 368,297.



1. In a plow of the class described, the combination with a suitable supporting member, of a pair of bands supported thereby and fastened together, said bands being separated from each other through a part of their length; a rod pivotally mounted on said member, the ends of said rod trav-

eling between said bands; a plate mounted free to swing upon said rod; a drag-bar one end of which is fastened to said plate and the other end of which extends to the rear; and soil-cutting devices mounted on said other end.

2. In a plow of the class described, the combination with a suitable supporting member, of a rock-shaft mounted thereon; three rocker-arms fast upon said shaft; a coil spring one end of which is fastened to said member and the other end of which is fastened to one of said rocker-arms; a drag-bar one end of which is pivotally mounted upon said member; a link-rod which connects the other end of said drag-bar with the second of said rocker-arms; an operating lever under control of the plowman; link devices connecting said lever with the third of said rocker-arms, said third rocker-arm being slotted where said devices are connected with it; and soil-cutting devices mounted on said drag-bar.

3. In a plow of the class described, the combination with a suitable supporting member, of a pair of bands supported thereby and fastened together, said bands being separated from each other through a part of their length; a rod pivotally mounted on said member, the ends of said rod traveling between said bands; a plate mounted free to swing upon said rod; a drag-bar one end of which is fastened to said plate; soil-cutting devices on the other end of said drag-bar; and spring-controlled devices for automatically swinging said drag-bar about said rod as an axis.

4. In a plow of the class described, the combination with a suitable supporting member, of a pair of drag-bars pivotally mounted thereon; a plow-beam mounted free to swing on the free end of each of said drag-bars and a two-part arch-support which connects said plow-beams, the parts of said arch-support being free to be adjusted relatively to each other, whereby said plow-beams may be swung closer together and further apart and secured in adjusted position and said arch-support serving as a means of moving said plow-beams relatively to the soil.

885,760. DOOR-PLATE. WILLARD JONES, Auburn, Me. Filed May 24, 1907. Serial No. 375,524.



1. A name plate including a frame having a display opening and provided with parallel guide flanges, designating characters slidably mounted on the guide flanges, a transparent plate seated between the flanges and forming a closure for the designating characters, a spring locking tongue extending from one wall of the display opening and bearing against the transparent plate, and a stop formed on one end of each guide flange for limiting the longitudinal movement of the designating characters.

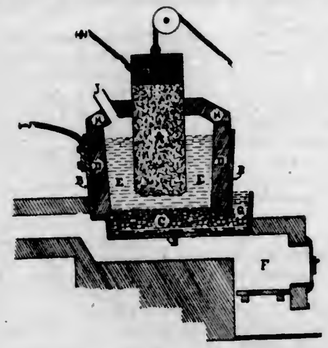
2. A name plate including a frame provided with a display opening the walls of which are bent inwardly and thence laterally to form parallel guide flanges defining seating grooves, letter carrying plates slidably mounted on said flanges and provided with corresponding flanges for engagement with the guide flanges, a transparent plate slidably mounted in said grooves, and a spring locking tongue extending laterally from one wall of the display opening and yieldably engaging the transparent plate.

3. A name plate including a frame having a display opening formed therein, the walls of which are extended inwardly and thence bent upon themselves to form terminal guide flanges defining seating grooves, letter carrying plates slidably mounted on the guide flanges and provided with corresponding flanges at the closed ends of the seating grooves adapted to engage the guide flanges, a transparent plate seated in the grooves of the guide flanges and forming a closure for the display openings, and a spring locking tongue extending laterally from one wall of the display opening and having its free end yieldably engaging the transparent plate.

4. A name plate including a frame provided with a marginal flange and having a display opening formed therein the walls of which are bent inwardly and terminate short of the free end of the marginal flange, the longitudinal walls of said opening being extended laterally and thence bent upon itself to form parallel guide flanges defining seating grooves, removable letter carrying plates slidably mounted on the flanges, a transparent plate slidably mounted in the grooves of the guide flanges, and a stop formed on one end of each guide flange for limiting the longitudinal movement of the letter carrying plates.

5. A name plate including a substantially rectangular frame provided with a marginal flange and having a longitudinal display opening formed therein the walls of which are inclined towards the center of the frame and terminate short of the free end of the marginal flange of the latter, the longitudinal walls of the display opening being bent upon themselves to form terminal guide flanges defining seating grooves, plates slidably mounted on the guide flanges and each formed with an integral upstruck designating character, transverse flanges formed on the opposite ends of the plates and engaging the guide flanges at the closed ends of said seating groove, a transparent plate engaging the seating grooves of the guide flanges and forming a closure for the letter carrying plates, and a spring locking tongue extending from the frame at one of the end walls of the display opening and having its free end yieldably engaging the transparent plate for locking the same within the seating grooves.

885,761. PROCESS OF RECOVERING METALS FROM THEIR SULFID ORES. EDWARD F. KERN, Knoxville, Tenn. Filed Sept. 1, 1906. Serial No. 333,018.



1. The process of recovering lead and associated metals from lead sulfid-containing ore which consists in treating the same to increase its electrical conductivity and then electrolyzing a suitable fused electrolyte comprising a metal haloid compound, with said treated material as anode.

2. The process of recovering lead and associated metals from lead sulfid-containing ore which consists in treating the same to increase its conductivity and then electrolyzing a suitable fused electrolyte comprising a metal haloid compound and a metal sulfid, with said treated material as anode.

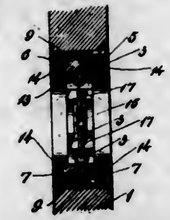
3. The process of recovering lead and associated metals from lead sulfid-containing ore which consists in fusing the same to remove impurities and increase its electrical conductivity, and in electrolyzing a suitable fused electrolyte comprising a metal haloid compound, with said fused sulfid-containing material as anode.

4. The process of recovering lead and associated metals from lead sulfid-containing ore which consists in fusing the same to form a matte and then electrolyzing a suitable fused electrolyte comprising a metal haloid compound and metal sulfid, with said matte as anode.

5. The process of recovering lead and associated metals from lead sulfid-containing ore which consists in fusing the same to form a matte and then electrolyzing a suitable fused electrolyte comprising lead chlorid, with said matte as anode.

[Claims 6 to 17 not printed in the Gazette.]

885,762. SPIRIT-LEVEL. MATHIAS KLEINBAUER, Chicago, Ill. Filed Sept. 12, 1907. Serial No. 392,506.

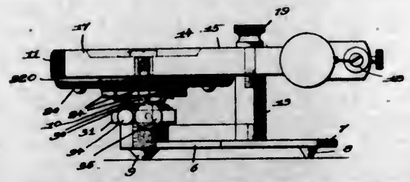


1. In a spirit level, the combination of opposite face plates having circular openings therein, means connected to the respective plates to draw the same together as a clamp, a ring clamped between the plates and capable of being turned to adjustment, and having lateral projections fitting within and against the edges of said openings, and a level glass carried by said ring.

2. In a spirit level, the combination of opposite face plates having circular openings therein, screws connecting the plates to draw the same toward each other, a rotatable ring clamped between the plates and having segmental projections fitting within said openings, to center the ring, and a level glass carried by said ring.

3. In a spirit level, the combination of opposite face plates, an annular holder clamped between said plates and having a socket supported at the center and adapted to receive a key to turn said holder, and a level glass carried by said holder.

885,763. PHYSICAL LABORATORY APPARATUS. LOUIE E. KNOTT, Boston, Mass., assignor to L. E. Knott Apparatus Company, Boston, Mass., a Corporation of Massachusetts. Filed Nov. 23, 1907. Serial No. 403,513.



1. In a device of the class described, the combination with a base having two posts and a pivotal pin rising therefrom, of a field element and its winding resting on said posts and detachably connected thereto, and an armature rotatably sustained by said pivotal pin and removable therefrom independently of the field element.

2. In a device of the class described, the combination with a T-shaped base having two posts rising from the end of the transverse arms and a pivotal pin rising from the end of the central arm, of an armature member rotatably mounted on said pivotal pin, and a field member resting on said posts and detachably connected thereto by screws.

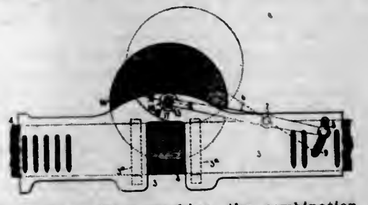
3. In an apparatus of the class described, the combination with a base having two posts and a pivotal pin rising therefrom, of an armature element having a pin-receiving bushing provided at its upper end with a bearing to rest on the end of the pin, a brush holder loosely surrounding said pin, and a field member resting on the posts and detachably secured thereto by screws.

4. In an apparatus of the class described, the combination with a base having two posts and a pivotal pin rising therefrom, of a brush holder loosely surrounding said pin, an armature member rotatably sustained by said pin, and a field member resting on the posts and secured thereto by screws.

5. In an apparatus of the class described, the combination with a base having two posts rising therefrom, a field member resting on said posts and detachably secured thereto, a pivotal pin member provided with a screw-threaded shank screw-threaded to said base, said pivotal pin member extending above the base and provided with portions of different diameters, a brush holder loosely surrounding the portion of said pin of larger diameter, and an armature member sustained by the upper end of said pin.

[Claim 6 not printed in the Gazette.]

885,764. TYPE-WRITING MACHINE. CHARLES S. LABOFISH, Washington, D. C., assignor to Wyckoff, Seamans & Benedict, Ilion, N. Y., a Corporation of New York. Filed July 18, 1905. Serial No. 270,274.



1. In a typewriting machine, the combination of an inking disk, hand actuated means for moving said disk into and out of operative position, and means for automatically turning said disk when it is in the operative position.

2. In a typewriting machine, the combination with any suitable inking ribbon and means for actuating it, of an auxiliary inking disk, and hand actuated means for interposing said disk between the inking ribbon and the platen or the paper thereon and for removing the disk from such position at will.

3. In a typewriting machine, the combination with any suitable inking ribbon and means for actuating it, of an auxiliary inking disk, hand actuated means for interposing said disk between the inking ribbon and the platen or the paper thereon and for removing the disk from such position at will, and means for automatically turning said disk when it is in the interposed position.

4. In a typewriting machine, the combination with any suitable inking ribbon and means for actuating it, of an auxiliary inking disk, hand actuated means for interposing said disk between the inking ribbon and the platen or the paper thereon and for removing the disk from such position at will, the disk contacting with the ordinary inking ribbon when the disk is in the operative position so as to afford a turning of the disk by a feed movement of the ribbon.

5. In a typewriting machine, the combination of an inking ribbon, and an independent auxiliary inking device that is fed by the main inking ribbon.

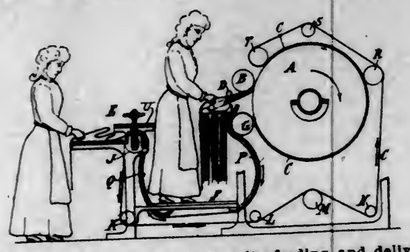
[Claims 6 to 25 not printed in the Gazette.]

885,765. IRONING-MACHINE. JOHN S. LANGWORTHY, East Orange, N. J., assignor to The Victor Mangle Company, Lowell, Mass., a Corporation of Massachusetts. Filed Mar. 26, 1906. Serial No. 307,972.

1. An ironing machine having a heated part, means adapted to carry goods over a desired portion of such heated part and thence to deliver the goods on the same side of the machine as the feeding point, and a support for an operator past which such carrying means convey the goods.

2. An ironing machine having a heated part, and feed-

ing and delivery points both arranged on the same side of said heated part, one in front of the other, said feeding and delivery points being spaced apart to form a passage in which an operator can work, and means carrying the goods over a desired portion of such heated part and conveying them past such passage to the rear point.



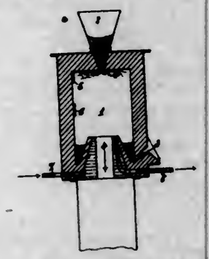
3. An ironing machine having its feeding and delivery points on the same side of the machine, one in front of the other, a stand for an operator at the front point, and means for conveying the goods between the ironing device and the rear point, such means running in a general vertical direction to pass around said stand.

4. An ironing machine having its feeding and delivery points on the same side of the machine, one in front of the other, a stand for an operator at the front point, and means for conveying the goods under said stand to the rear point.

5. An ironing machine having a vertically traveling apron C and guiding members along which said apron moves, said members being adapted to guide such apron over a desired portion of the surface of the heated part of the machine, and thence to the rear of the machine, and said apron being adapted to carry the goods over such heated part and to deliver them a sufficient distance to the rear of the feeding point to permit an operator to stand between the feeding and delivery points.

[Claims 6 to 9 not printed in the Gazette.]

885,766. PROCESS OF OBTAINING A VIOLENT CHEMICAL REACTION BETWEEN MATERIALS. CARL G. P. DE LAVAL, Stockholm, Sweden, assignor to Société Anonyme Métallurgique Procédés de Laval, Frankfort-on-the-Main, Germany, a Corporation of Belgium. Filed July 15, 1905. Serial No. 269,755.



The process of bringing about violent chemical reaction between materials consisting in introducing the materials into the center of a spirally shaped rotating body of gaseous fluid in a furnace.

885,767. COTTON-PICKING GLOVE. JOHN A. LAYTON, Elmore, Okla. Filed Sept. 27, 1907. Serial No. 394,807.

1. In a glove, the combination with the fingers and thumb, thereof, of pliable reinforcing material embedded within the same.

2. In a glove, the combination with the fingers thereof, of coils of wire embedded within the material of the same.

3. In a glove, the combination with the fingers thereof, of coils of wire having contracted ends, embedded within the material of the same.

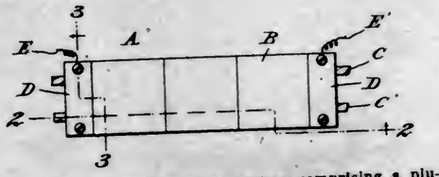


885,768. COMPOSITION OF MATTER. HENRY L. LILIENTHAL, Spokane, Wash. Filed Jan. 20, 1908. Serial No. 411,711.

1. The herein described composition of matter, consisting of liquid asphalt, petroleum, petrolene, water, crushed rock, sand and gravel, substantially as described above for the purpose specified.

2. The herein described composition of matter for constructing hard and smooth surface of streets and highways, consisting of 10 cubic yards of crushed rock, 5 cubic yards of gravel, 3 cubic yards sand, 808 gallons of liquid asphalt, 145 gallons of petrolene, 117 gallons of petroleum and 20 gallons of water, substantially as described.

885,769. ELEMENT FOR ELECTRIC HEATERS. ABBOT A. LOW, Horseshoe, and HARRY HERTZBERG, New York, N. Y.; said Hertzberg assignor to said Low. Filed May 4, 1907. Serial No. 371,874.



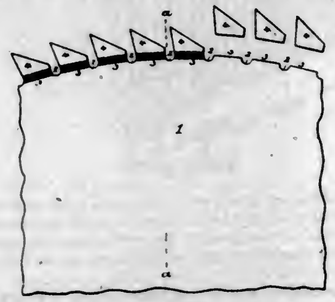
1. An element for electrical heaters comprising a plurality of perforated blocks each composed of molded carbonaceous material, said blocks being assembled with their faces in direct engagement with each other, a core composed of a strand of non-combustible material which extends through said perforations of the blocks, and metallic terminal members secured on said core and engaging with the end blocks of the series of blocks for clamping the latter in contact firmly with each other.

2. An element for electrical heaters comprising a series of perforated molded blocks composed of resistance material, each of said blocks having a plurality of openings, a plurality of parallel strands composed of electrical insulating and non-combustible material, said strands extending through the openings of said blocks, and metallic terminal members each secured on said strands and engaging the end blocks of the series of blocks, said terminal members clamping the series of blocks firmly in contact with each other.

3. An element for electrical heaters comprising a pliable core composed of a strand of non-combustible and insulating material, a series of members composed of resistance material and threaded on said core, metallic terminal members secured on the core and operating to exert pressure on the members for clamping the latter in direct engagement, and a mass of heat absorbing material incasing said members and the core.

4. An element for electrical heaters comprising a core of insulating and non-combustible material, blocks composed of resistance material and threaded on said core, metallic terminal members adapted to clamp said blocks into engagement with each other, and a mass of molded heat absorbing material permanently incasing said members.

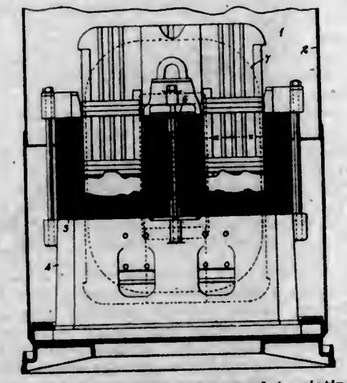
885,770. METAL-CUTTING SAW. WILLIAM H. LUCAS, Philadelphia, Pa., assignor to Espen-Lucas Machine Works, Philadelphia, Pa., a Corporation of Pennsylvania. Filed May 31, 1906. Serial No. 319,589.



1. A metal cutting saw having a body composed of tough metal, provided with separate teeth integrally united to the margin of said body, said teeth being composed of hardened steel of different composition.

2. A metal cutting saw having a body composed of tough metal provided with separate teeth integrally united to separate seats on the margin of said body, said teeth being composed of hardened steel of different composition.

885,771. TRANSFORMER-COIL INSULATION. JESSE E. MATEER, Wilkinsburg, Pa., assignor to Westinghouse Electric & Manufacturing Company, a Corporation of Pennsylvania. Filed Dec. 16, 1905. Serial No. 292,104.



1. A transformer coil having spaced insulating strips at its sides, insulating channel pieces fitted over its edges, angle pieces fitted over the channel pieces, and barrier plates extending along the sides of the coil in contact with said strips and angle pieces to form an inclosing casing.

2. In an alternating electric current transformer, the combination with a plurality of coils, of means for insulating said coils comprising spaced strips along their sides, channel pieces fitting over the edges of the several coils, angle pieces fitting over the edges and the channel pieces, and barrier plates between the sides of the coils.

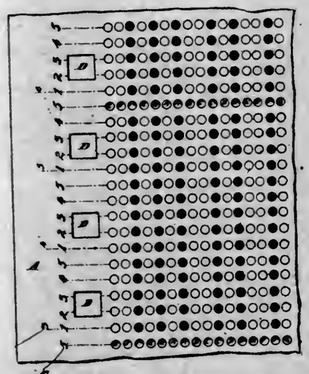
3. In an alternating electric current transformer, the combination with a plurality of coils, of insulating means for said coils comprising a plurality of channel pieces which fit over the edges of the coils, a series of barrier plates between adjacent sides of the coils, angle pieces fitting over the channel pieces, and spacing strips between the sides of the coils and the barrier plates.

4. In an alternating electric current transformer, the combination with a plurality of coils, of insulating means for said coils comprising a plurality of channel pieces fitted over the coil edges, barrier plates between adjacent sides of the coils, angle pieces fitted over the channel pieces and spacing strips, all constructed of relatively hard insulating material and constituting a ventilated inclosing casing for said coils.

5. In an alternating electric current transformer, the combination with a plurality of coils, of insulating means for said coils comprising channel pieces around the coil edges, barrier plates between the sides of the adjacent coils, angle pieces fitted over the channel pieces, and spacing strips between the coils and the barrier plates.

[Claims 6 to 13 not printed in the Gazette.]

885,772. MASTER-SHEET. PHILIP J. MEAHL, Bayonne, N. J. Filed Mar. 8, 1907. Serial No. 361,365.



1. A master sheet for use in music sheet cutting machines, having a series of parallel longitudinal rows of equi-distant dots which dots in transverse direction are provided with visible distinctions on the same order as the keys of a piano-forte key-board, substantially as set forth.

2. A master sheet for use in music sheet cutting machines, having a series of parallel longitudinal rows of equi-distant dots, which dots in transverse direction are provided with visible distinctions on the same order as the keys of a piano-forte key-board, one of these transverse rows being provided with markings indicating the name of the notes represented by the said dots in the transverse row, substantially as set forth.

3. A master sheet for use in music sheet cutting machines, having a series of parallel longitudinal rows of equi-distant dots, which dots form transverse rows and these transverse rows are divided into groups each containing an equal number of transverse rows, the number of transverse rows of dots in each group corresponding to the number of dots required to represent the smallest note in a composition, the beginnings of such groups being numbered, substantially as set forth.

4. A master sheet for use in music sheet cutting machines, having a series of parallel longitudinal rows of equi-distant dots, which dots form transverse rows and these transverse rows are divided into groups each containing an equal number of transverse rows, the number of transverse rows of dots in each group corresponding to the number of dots required to represent the smallest note

in a composition, the beginnings of such groups being numbered, and the transverse rows in each group being also numbered, substantially as set forth.

885,773. FEED-GAGE. EDWARD L. MEGILL, New York, N. Y. Filed Apr. 20, 1907. Serial No. 370,839.



1. A feed-gage including superposed members one of which is provided with a locking lip and the other with spaced ears, a stripper extending beneath the lip, and a clamping device pivotally mounted between the ears and adapted to engage the lip and adjacent member.

2. A feed gage including superposed members one of which is provided with a locking lip and the other with spaced supporting ears, a stripper disposed beneath the lip, and a lever pivotally mounted between the ears and provided with spaced contact points adapted to bear against the adjacent member, an intermediate portion of the lever being adapted to depress the lip for locking the stripper against longitudinal movement.

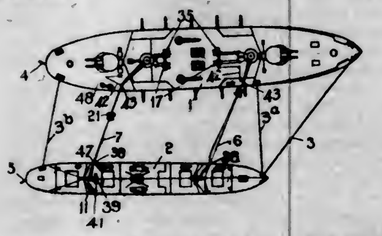
3. A feed gage including superposed members one of which is provided with an upstruck lip and spaced guiding lugs, a stripper extending beneath the lip and bearing against the lugs, and a clamping device carried by the opposite member and adapted to engage the lip and the adjacent member.

4. A feed gage including superposed members one of which is provided with spaced openings and the other with laterally projecting ears extending through said openings, and a clamping device pivotally mounted between the ears and adapted to bear against the adjacent member for clamping said members in engagement with the tympan.

5. A feed gage including superposed members one of parallel, a connecting cableway supported thereon and a slots formed in the adjacent member and provided with terminal eyes, and a clamping lever pivotally mounted for swinging movement in said eyes and adapted to engage the adjacent members for clamping said members in engagement with the tympan.

[Claims 6 to 10 not printed in the Gazette.]

885,774. CONVEYING APPARATUS. THOMAS S. MILLER, South Orange, N. J. Filed Mar. 20, 1906. Serial No. 306,955.



1. In combination, a cableway and two advancing boats connected by a forward line and divergently steered upon which said cableway is mounted.

2. In combination, a cableway and two boats advancing on courses-in-parallel upon which said cableway is mounted, a load carriage traveling on said cableway and a haul-down for the cableway.

3. In combination, a plurality of substantially parallel cableways and two boats advancing on courses-in-parallel upon which said cableways are mounted.

4. In combination, a cableway, a towing and a towed boat advancing on courses-in-parallel upon which boats said cableway is mounted.

5. In combination, two boats advancing on courses-in-parallel, a connecting cableway supported thereon and a haul-down rope on each boat whereby the cableway is hauled down to receive and deliver the load successively.

[Claims 6 to 27 not printed in the Gazette.]

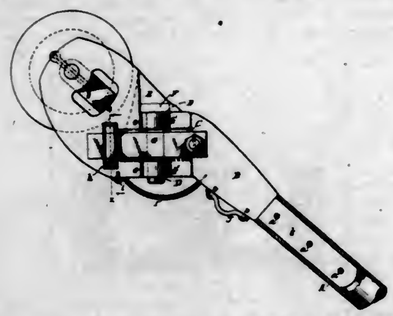
885,775. STOP-COCK. WILLIAM W. MILLER, Shillington, Pa. Filed Apr. 4, 1907. Serial No. 366,300.



1. A turning-plug for stop cocks having a sheet metal handle rigidly secured to the protruding head thereof and formed with a wing portion projecting laterally from the body of the plug to serve as a stop to rotary motion thereof in the casing.

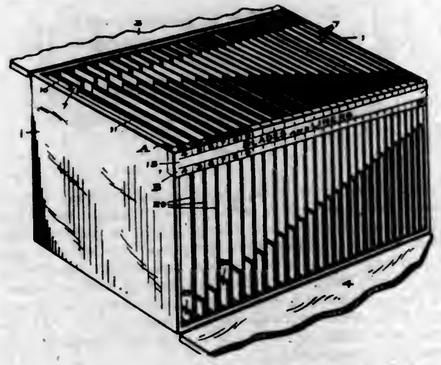
2. The combination with a stop cock casing having an offset rim, of a turning plug having a protruding head provided with a handle-slot extending into the tapered body of the plug, and a sheet metal handle rigidly secured in said slot and formed with a wing portion projecting laterally from the body of the plug to serve as a stop against said rim offset, substantially as set forth.

885,776. TROLLEY-POLE HEAD. GARRET MOTT, New York, N. Y., and ADOLPH G. KOENIG, Weehawken, N. J. Filed Apr. 25, 1907. Serial No. 370,156.



In a trolley-pole head, the combination of a rearwardly inclined shank provided with a vertically pierced male hinged-member having mitered shoulders forming side stops thereupon, a trolley fork having a trolley wheel mounted therein and being provided with vertically pierced female hinged-members having mitered shoulders forming side stops thereupon adapted to engage with the side stops on said male hinged-member to limit the swing of the trolley fork to less than a quarter turn to either side, a vertical pivot-pin connecting said hinged-members upon a line passing in close proximity to the forward edge of the trolley wheel, the trolley fork extending parallel to and slightly back of the line of the shank, and a flat spring rigidly secured on either side of said trolley shank extending horizontally past said hinged joint and having its free end slidably held within an external guide-loop on the side of the trolley fork.

885,777. CABINET FOR LINERS AND BLADES FOR LINOTYPE-MACHINES. THOMAS F. MULDOON, Indianapolis, Ind. Filed Dec. 17, 1907. Serial No. 406,885.

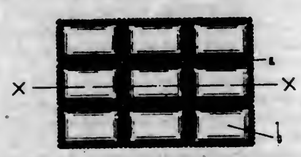


1. A cabinet for holding liners and ejector blades for linotype machines comprising the body, said body being divided into two major compartments; one of said major compartments being divided into lesser compartments adapted to receive a pair of companion liners; the second major compartment being divided into lesser compartments, which register with the lesser compartments in the former major compartment, and adapted to receive the ejector blades belonging to their respective companion liners.

2. A cabinet for retaining liners and blades for linotype machines comprising the body, means for dividing said body into a plurality of major compartments, means for dividing one of said major compartments into a series of minor compartments, said series of minor compartments adapted to receive the liners in numerically arranged order, means arranged within said series of minor compartments to hold the liners in their respective ends of said compartments, and means for dividing the other major compartment into a series of minor compartments which are adapted to receive the blades, of the associated liners, in numerically arranged order.

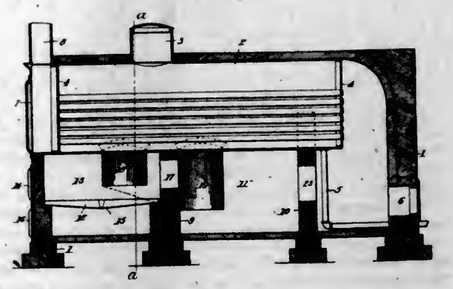
3. A cabinet for retaining liners and blades for linotype machines comprising the body, means for dividing said body into a plurality of major compartments, means for dividing one of said major compartments into a series of minor compartments, said series of minor compartments adapted to receive the liners in numerically arranged order, means arranged within said series of minor compartments to hold the liners in their respective ends of said compartments, means dividing the other major compartment into a series of minor compartments which are adapted to receive the ejector-blades, of the associated liners, in numerically arranged order, and means consisting of numerals, or similar indicators, arranged, in invert order according to their values, along the edge of said minor compartments.

885,778. PAD. OTTO NEUBERGER, Frankfort-on-the-Main, Germany. Filed Aug. 4, 1906. Serial No. 329,212.



A cushion comprising two breadths of fabric carrying between them a filling and connected together by hollow seams that cross one another, so as to produce separate small cushions that can easily be separated from each other, the point of separation being sewed so that it will not ravel out.

885,779. SMOKELESS FURNACE. CARL J. OBERG, Salt Lake City, Utah. Filed July 8, 1907. Serial No. 382,805.



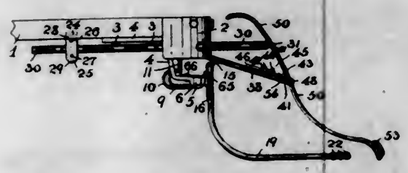
1. In a furnace, a main combustion chamber, a bridge wall provided with an intermediate transverse opening, a supplemental combustion chamber having spaced side walls and a rear wall, the rear wall provided with transverse openings, passage ways in the side walls providing substantially horizontal independent and direct means of communication between the main combustion chamber and supplemental combustion chamber.

2. In a furnace, a main combustion chamber, a supplemental combustion chamber, a bridge wall between the chambers, said bridge wall having an intermediate transverse aperture providing communication between the chambers and a supplemental chamber having transverse apertures in its rear wall, and passage ways providing substantially horizontal communication between the chambers around the ends of the bridge wall.

3. In a furnace, an inclosing structure including side walls and with a smoke arch at one end and a main combustion chamber at the other end, a supplemental combustion chamber between the smoke arch and the main combustion chamber, a bridge wall between the main combustion chamber and supplemental combustion chamber and having an intermediate communicating aperture, passages within said side walls providing independent substantially horizontal means of communication between said main chamber and supplemental chamber around the end of the bridge wall, and a wall between the supplemental chamber and smoke arch and provided with a plurality of transverse apertures providing communication between the supplemental chamber and the smoke arch.

4. In a furnace, an inclosing structure including side walls and with a smoke arch at one end and a main combustion chamber at the other end with spaced feed openings provided with movable doors next the side walls of the main combustion chamber, a supplemental combustion chamber between the smoke arch and the main combustion chamber, a bridge wall between the main combustion chamber and supplemental combustion chamber and having an intermediate communicating aperture, passages within said side walls providing independent substantially horizontal means of communication between said main chamber and supplemental chamber around the end of the bridge wall, and a wall between the supplemental chamber and smoke arch and provided with a plurality of transverse apertures providing communication between the supplemental chamber and the smoke arch, whereby the fuel may be fed alternately through said doors to the main combustion chamber at the opposite sides thereof and the products of combustion conducted into the supplemental combustion chamber alternately at opposite sides.

885,780. CAR-FENDER. LEO OLSCHEWSKI and FRANK TRENSCH, Newark, N. J. Filed July 26, 1907. Serial No. 385,622.



1. A fender for cars comprising two sets of rods extending longitudinally beneath the body of a car, and a pair of fender-elements or guards, one of said fender-elements being pivotally connected with one set of said rods, and said other set of rods being adapted to be brought in retaining engagement with portions of said fender-element to retain said fender-element in its operative relation, and means connected with said second fender-element adapted to be engaged by said first-mentioned set of rods to retain said second fender-element in its raised position, substantially as and for the purposes set forth.

2. A fender for cars comprising two sets of rods extending longitudinally beneath the body of a car, and a pair of fender-elements or guards, one of said fender-elements being pivotally connected with one set of said rods, and said other set of rods being adapted to be brought in retaining engagement with portions of said fender-element to retain said fender-element in its operative relation, a pair of upwardly extending carriers, and a roller upon each carrier with which the said rods which carry said first-mentioned fender-element are adapted to be brought in engagement for retaining said second fender-element in its raised position, substantially as and for the purposes set forth.

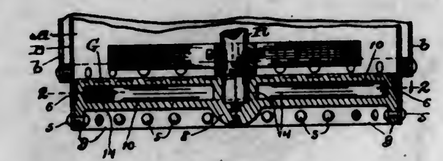
3. A fender for cars comprising two sets of rods extending longitudinally beneath the body of a car, one of said sets of rods being pivotally connected with said other set of rods, and both sets of rods being capable of reciprocatory movements, and a pair of fender-elements or guards, one of said fender-elements being pivotally connected with said set of pivotally connected rods, and said other set being adapted to be brought in retaining engagement with portions of said fender-element to retain said fender-element in its operative relation, and means connected with said second fender-element adapted to be engaged by said pivotally connected set of rods, substantially as and for the purposes set forth.

4. A fender for cars comprising two sets of rods extending longitudinally beneath the body of a car, one of said sets of rods being pivotally connected with said other set of rods, and both sets of rods being capable of reciprocatory movements, and a pair of fender-elements or guards, one of said fender-elements being pivotally connected with said set of pivotally connected rods, and said other set being adapted to be brought in retaining engagement with portions of said fender-element to retain said fender-element in its operative relation, a pair of upwardly extending carriers, and a roller upon each carrier with which said set of pivotally connected rods are adapted to be brought in engagement for retaining said second fender-element in its raised position, substantially as and for the purposes set forth.

5. A fender for cars comprising two sets of rods extending longitudinally beneath the body of a car, an upper fender-element pivotally connected with one set of said rods, and said other set of rods being adapted to be brought in retaining engagement with portions of said fender-element to retain it in its operative relation, supports extending from the body of the car, each support being provided with a bearing-portion, a rock-bar mounted in said bearing-portions, and a drop-fender or guard connected with said rock-bar, substantially as and for the purposes set forth.

[Claims 6 to 24 not printed in the Gazette.]

885,781. FLUID-HEATED CHAMBER. CHARLES E. ORD, Cleveland, Ohio. Filed Oct. 29, 1906. Serial No. 341,083.



1. A fluid-heated chamber whose surrounding wall is formed by a cylindrical casing, which chamber has a bottom composed of a single casting which is provided interiorly with a sinuous passageway provided at one end with a fluid-inlet and at the opposite end with a fluid-outlet, said casting being also provided centrally with a depending lug and having a depending annular flange snugly embraced by and rigid with the aforesaid casing, with the lower extremities of the flange and the lug arranged in the same plane horizontally.

2. A fluid-heated chamber having a bottom which is provided interiorly with a row of chambers extending transversely of the bottom, with each chamber of the said row between the end chambers of the row in communication at one end with one of the adjacent chambers of the row and at its opposite end with the other of the adjacent chambers, with one of the said end chambers provided with a fluid-inlet and with the other of the said end-chambers provided with a fluid-outlet, and with the partition between the two central chambers of the row of chambers enlarged laterally centrally of the bottom to form a vertically arranged shaft-bearing.

3. A fluid-heated chamber having its surrounding wall formed by a cylindrical casing, said chamber having a bottom composed of a single casting which is provided interiorly with a sinuous passageway provided at one end with a fluid-inlet and at its opposite end with a fluid-outlet, said casting having a depending annular flange which is snugly embraced by and rigid with the aforesaid casing and larger in external diameter than the upper portion of the bottom so as to form a narrow space extending around the upper portion of the bottom.

4. A fluid-heated chamber having its surrounding wall formed by a cylindrical casing, said chamber having a bottom comprising a casting which has a depending annular flange snugly embraced and rigid with the aforesaid casing and larger in external diameter than the upper portion of the bottom so as to form a narrow space extending around the said upper portion of the bottom.

885,782. RHEOSTAT. GRANVILLE F. PACKARD, Pittsburg, Pa., assignor to Westinghouse Electric & Manufacturing Company, a Corporation of Pennsylvania. Filed Apr. 28, 1906. Serial No. 314,275.

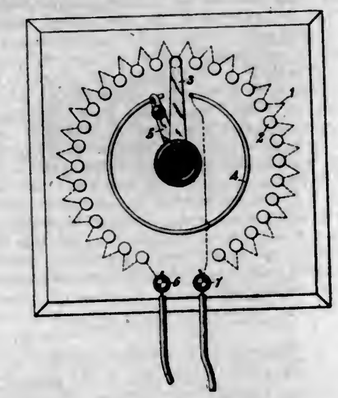
1. In a rheostat, the combination with a sub-divided resistance element and means for making circuit connections to the points of sub-division thereof, of another resistance element and means for making continuous circuit connection thereto.

2. In a rheostat, the combination with a sub-divided resistance element and means for making circuit connections to the points of sub-division thereof, of another resistance element the resistance of which is approximately equal to that between the points of sub-division of the other element and means for making continuous circuit connection thereto.

3. In a rheostat, the combination with means for varying the resistance in steps or gradations, of means for varying the resistance uninterruptedly.

4. In a rheostat, the combination with means for varying the resistance in steps or gradations, of means for varying the resistance uninterruptedly between the steps or gradations.

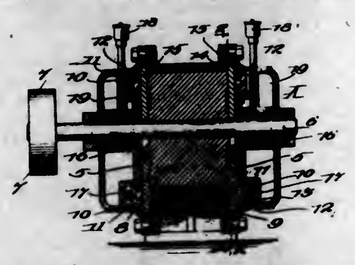
5. A rheostat comprising two resistance elements, means whereby circuit connection may be made to one of them at



intervals and means for making continuous circuit connection to the other.

[Claims 6 to 11 not printed in the Gazette.]

885,783. ROTARY COMPRESSOR. CASSIUS C. PALMER, Cranford, N. J. Filed Dec. 15, 1906. Serial No. 348,075.



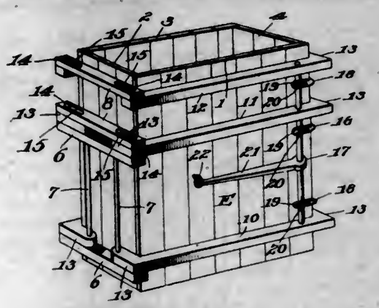
1. In a rotary compressor, the combination with the casing, a grooved head therefor the drum shaft and the drum, a ring member carrying anti-friction means located within the grooved head of the casing, an abutment plate separate from but adapted to revolve with the drum and to bear against the anti-friction means within the ring, and means for holding the ring carrying the anti-friction means in yielding engagement with the plate.

2. In a rotary compressor the combination with the casing, grooved heads therefor the drum shaft and the drum, of rings located within the grooved heads and adapted to retain anti-friction devices, a second groove formed in each head of the casing, an abutment plate separate from, but revolving with the drum and moving within said grooves, and springs for holding the retaining rings in yielding engagement with the abutment plates.

3. In a rotary compressor, the combination with the casing, a grooved head therefor, the drum shaft and the drum, an anti-friction ring member located within the grooved head of the casing, an abutment plate separate from but adapted to revolve with the drum and to bear against the anti-friction ring member, and means for holding the anti-friction ring member in yielding engagement with the plate.

4. In a rotary compressor the combination with the casing, grooved heads therefor, the drum shaft and the drum, of anti-friction ring members located within the grooved heads, a second groove formed in each head of the casing, an abutment plate separate from, but revolving with the drum and moving within said groove, and springs for holding the anti-friction ring members in yielding engagement with the abutment plates.

885,784. PRESS-BOX. FRANK PHELPS, Wellston, Okla. Filed Oct. 21, 1907. Serial No. 398,435.



1. A press-box having displaceable or separable sides, and a three-sided holding frame inclosing and secured to the three corresponding separable sides of the box, two opposite sides of said holding frame being pivotally-mounted adjacent to the third side so as to swing oppositely outward, and having sliding-pivot connections with said third side arranged to move the latter outward by the swinging apart of said opposite sides, whereby the opposite sides of the box are swung outward toward the third side which automatically recedes, and detachable connections adjoining the free ends of said holding-frame across the fourth side of the box.

2. A press-box having a fixed section and a separable section thereon, a three-sided holding-frame surrounding the box on three sides, the intermediate side of said holding-frame being attached to the corresponding side of the box apd having that portion thereof which is attached to the separable section of the box capable of a receding displacement, the two other sides of said holding frame being hinged or pivotally-connected to said intermediate side and having sliding pivot connections with the said displaceable portion thereof, whereby when said two sides of said holding-frame are swung outward the displaceable portion of said intermediate side recedes and carries with it the corresponding displaceable side of the separable section of the box, and means for connecting the sides of said holding-frame across the fourth side of the box.

3. A press-box having a lower fixed section and an upper separable section thereon, a three-sided holding-frame surrounding the box on three sides, and having means for embracing the corners of the box at its fourth side, the intermediate side of said holding-frame being attached to the corresponding side of the box and having that portion thereof which is attached to the separable section of the box capable of a receding displacement, the two other sides of said holding-frame being attached only to the sides of the separable section of the box and being hinged or pivotally-connected to said intermediate side of the frame and adapted to be swung oppositely outward, the arrangement being such that when said two sides of said holding-frame are swung outward the displaceable portion of said intermediate side recedes and carries with it the corresponding displaceable side of the separable section of the box, and detachable tie-connections between the free ends of said holding-frame at its fourth side.

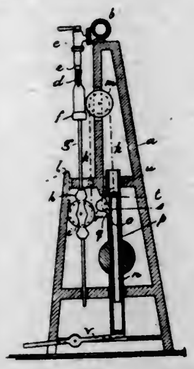
4. A press-box having separable or displaceable sides, and a three-sided holding-frame inclosing said box on three sides, the intermediate side of said frame being secured to the corresponding separable side of the box, the other two sides of said frame being hinged to swing oppositely outward and being so pivotally-connected to the said intermediate side as to move the same outward by the swinging outward of the said two hinged sides, a plurality of tie-rods attached to the free end of one of said hinged sides, said tie-rods having slotted free ends, and a pivot-post carried by the free end of the other hinged side having hooks for engaging in the slotted ends of

said tie-rods, said pivot-post having a lever for turning the same to release said hooks or to engage them forcibly in the slotted ends of the tie-rods and to tension the latter.

5. A press-box having a fixed section and a separable section thereon, and a holding-frame comprising opposite sets of beams (as 11 and 12) arranged across the front and rear faces of the box, cross-bars (as at 8) secured on one displaceable side of the separable section of the box, sliding pivot connections between the ends of said beams and cross-bars, at least one opposite pair of said beams (as 11) having angular or L-shaped extensions hinged or pivotally-mounted on the fixed section of the box at the aforementioned side thereof, whereby the swinging outward of the two sets of beams causes the said cross-bars to recede and carry back the separable side attached thereto, and means for connecting the free ends of the two sets of beams across the side of the box which is opposite said cross-bars.

[Claims 6 to 11 not printed in the Gazette.]

885,785. BOTTLING APPARATUS. ANDERS A. PINDSTOFTE, Copenhagen, Denmark. Filed Oct. 4, 1906. Serial No. 337,539.



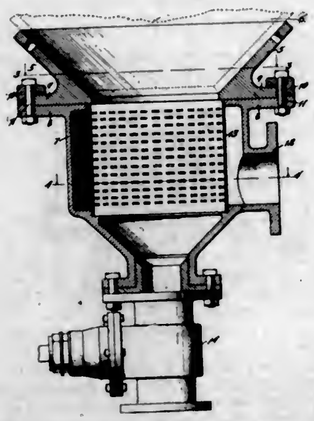
1. In an apparatus of the character described, the combination of a supporting frame-work, a feed-pipe mounted thereon and provided with a suitable outlet, a vertically-movable bottle-carrying table mounted beneath said outlet, a weight mounted in the frame-work of said apparatus, means for raising said weight, a counter-weight mounted within said weight and provided with a plurality of teeth, a pawl mounted on the first-named weight and adapted to engage said teeth, a pulley mounted on said bottle-carrying table, a second pulley mounted on said frame-work, and a chain connected to said frame-work and to said counter-weight and riding over said pulleys.

2. In an apparatus of the character described, the combination of a supporting frame-work, a feed-pipe mounted thereon and provided with a suitable outlet, a bottle-carrying table movably mounted beneath said outlet, a weight movably mounted in said frame-work, a plurality of pulleys mounted on said table and on said frame-work, a chain secured to said frame-work and riding over said pulleys, means for raising said weight, a counter-weight mounted within said weight and connected to said chain and provided with a plurality of teeth and a pawl member secured to the first-named weight and adapted to lock said counter-weight to said weight, for the purpose described.

3. In an apparatus of the character described, the combination of a suitable frame-work, a feed-pipe mounted thereon and provided with an outlet having an elastic mouth-piece, a bottle-carrying table movably mounted beneath said outlet, a weight slidably mounted in said frame-work, means for raising said weight, a plurality of pulleys mounted on said table and on said frame-work, a counter-weight mounted within the first-named weight and provided with teeth on one side thereof, a chain secured to said frame-work and riding over said pulleys and having its other end secured to said counter-weight, and a pawl member secured to the first-named weight and adapted to engage the teeth of said counter-weight.

4. In an apparatus of the character described, the combination of a frame-work, a feed-pipe mounted thereon and provided with a suitable outlet having an elastic mouth-piece, a vertically movable bottle-carrying table mounted beneath said mouth-piece, a weight suitably mounted in said frame-work, means for raising said weight, a counter-weight located within said weight, a plurality of pulleys mounted on said table and on said frame-work, a chain connected to said frame-work and riding over said pulleys and secured at its other end to said counter-weight, a rack formed on one side of said counter-weight, and a pawl member pivotally mounted on the first-named weight and adapted to engage the rack of said counter-weight.

885,786. STRAINER FOR STEEP-TANKS. WILLIAM H. PRINZ, Oak Park, Ill., assignor to The Saladin Pneumatic Malting Construction Company, Chicago, Ill., a Corporation of Illinois. Filed Aug. 14, 1907. Serial No. 388,541.



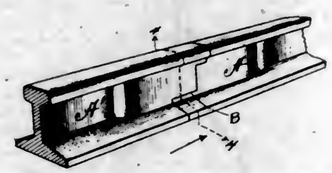
1. A strainer for steep-tanks comprising an upper member secured to the steep-tank and having an outwardly-extending flange at its lower end, a lower member having an outwardly-extending flange at its upper end adapted to fit against the first-mentioned flange, adjustable means connecting said flanges together, and a strainer mounted in said lower member.

2. The combination with a steep-tank of a cylindrical strainer and a plurality of outlets, said strainer being interposed between one of said outlets and the steep-tank, the other outlet communicating directly with said steep-tank, and means detachably connecting said strainer with the steep-tank.

3. A strainer casting for steep tanks comprising an upper member having an outwardly-extending flange at its lower end, a lower member having a corresponding flange at its upper end, one of said flanges being of greater diameter than the other, clips mounted on one of said flanges and engaging the other, and bolts for clamping said clips in position.

4. A strainer casting for steep-tanks comprising an upper member having an outwardly-extending flange at its lower end, a lower member having a corresponding flange at its upper end, one of said flanges being of greater diameter than the other, clips mounted on one of said flanges and engaging the other, and bolts extending through the wider flange and through said clips for binding said flanges together.

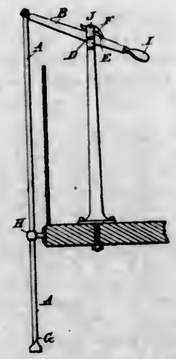
885,787. RAILWAY-RAIL JOINT. WILBUR H. REEL, Pennsgrove, N. J. Filed July 8, 1907. Serial No. 382,642.



1. A rail joint comprising two rails, one of which has the tread surface and the opposite faces of the web thereof recessed, the inner end walls of the recesses being inclined, parallel ribs rising from the flange of the rail and spaced apart from the opposite faces to the recesses of said web, the other rail having a longitudinal groove in its end to receive said recessed web, the ends of the walls of said groove being inclined to conform to the inclined end walls of the recesses in said web, the lower edges of the walls of the groove being contracted and adapted to seat in the spaces intermediate said ribs, and the opposite faces of the web of the recessed rail, and having shouldered portions resting upon said ribs, lugs projecting from the top of the groove and designed to engage in indentures in the web of the recessed rail, as set forth.

2. A rail joint comprising two rails, one of which has the tread surface and the opposite faces of the web thereof recessed, the inner end walls of the recesses being inclined, parallel ribs rising from the flange of the rail and spaced apart from the opposite faces of the recesses of said web, the other rail having a longitudinal groove in its end to receive said recessed web, the ends of the walls of said groove being inclined to conform to the inclined end walls of the recesses in said web, the lower edges of the walls of the groove being contracted and adapted to seat in the spaces intermediate said ribs and the opposite faces of the web of the recessed rail, and having shouldered portions resting upon said ribs, lugs projecting from the top of the groove, and designed to engage in the indentures of the recessed rail, the tread and the web at the end of the grooved rail being undercut, as set forth.

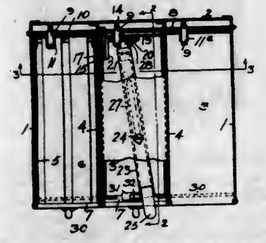
885,788. STREET-RAILWAY AUTOMATIC SWITCH-IRON. WINFIELD K. REICHNER, Philadelphia, Pa. Filed Dec. 9, 1905. Serial No. 291,078.



1. In a switch point throwing device, a vertical rod loosely held by a guide rigidly secured to the front end of a car, a horizontal rod secured by pins D to a vertical bracket rigidly secured upon the front platform of a car, and operatively connected with the aforesaid vertical rod substantially as specified.

2. In a switch point throwing device in which a vertical bracket, secured to a horizontal rod by means of pins D, operates a vertical rod loosely held by a guide rigidly secured to the front end of a car, substantially as specified.

885,789. DOCUMENT-FILING CASE. JOHN D. RIPSON and ERICK G. SAMPSON, Jamestown, N. Y., assignors to Art Metal Construction Company, Jamestown, N. Y., a Corporation of New York. Filed Aug. 29, 1907. Serial No. 390,572.



1. In a filing cabinet, the combination of the casing, filing bases slidably mounted therein, locking members at the rear of the casing arranged to engage said filing bases and hold the same against withdrawal, a lever having actuating connections to said locking members, said lever being pivotally mounted in the casing and having a telescoping member arranged to be drawn out through the front of the casing, and a key-controlled lock arranged to engage said lever to prevent its actuation.

2. In a filing cabinet, the combination of the casing, filing bases slidably mounted therein, rock shafts mounted in the rear side of the casing and carrying members arranged to engage the bases and hold the same against withdrawal, mechanism for rocking said shafts, an actuating lever for said mechanism projecting to the front of the casing, and a key-controlled lock arranged to engage said lever to prevent its actuation.

3. In a filing cabinet, the combination of a casing, filing bases slidably mounted therein, rock shafts mounted in the casing and provided with means for engaging the bases and holding the same against withdrawal, a reciprocating bar connected to each of said rock shafts, and a telescoping lever having actuating connections to said bar.

4. In a filing cabinet, the combination of the casing, filing bases slidably mounted therein, horizontal rock shafts mounted in the casing and carrying means for engaging the filing bases and holding the same against withdrawal, arms on said rock shafts, a vertically reciprocating bar connected to said arms, a bell crank lever having one arm connected to said reciprocating bar, and a horizontally moving operating member connected to the opposite end of said bell crank lever.

5. In a filing cabinet, the combination of the casing, filing bases slidable therein, horizontal rock shafts mounted in the rear part of the casing and carrying hooks for engaging the filing bases and holding the same against withdrawal, arms on said rock shafts, a vertically reciprocating bar connected to said arms, and a lever having actuating connections to said reciprocating bar.

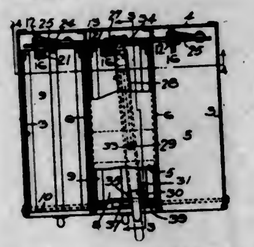
[Claims 6 to 8 not printed in the Gazette.]

885,790. LOCKING DEVICE. JOHN D. RIPSON, Rochester, and ERICK G. SAMPSON, Jamestown, N. Y., assignors to Art Metal Construction Company, Jamestown, N. Y., a Corporation of New York. Filed Oct. 26, 1907. Serial No. 399,289.

1. In a filing cabinet, the combination of a casing, filing bases movably mounted therein, vertically movable frame, locking devices carried by said frame to engage said bases, toggle mechanism connected to said frame, a lever, connections between said lever and said toggle mechanism, and means for locking said lever.

2. In a filing cabinet, the combination of a casing, filing bases movably mounted therein, a vertically movable

frame comprising vertical strips and cross strips connected thereto, locking devices carried by said vertical strips, toggle mechanism connected to said frame, a lever, connections between said lever and said toggle mechanism and means for locking said lever.

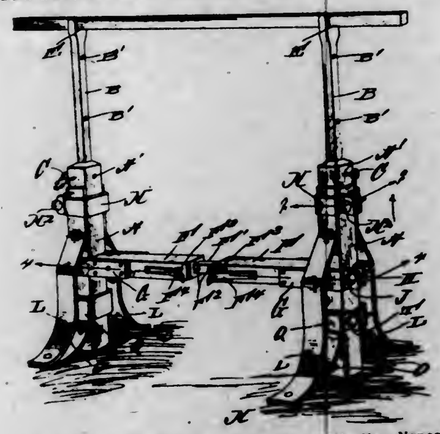


3. In a filing cabinet, the combination of a casing, filing bases movably mounted therein, a vertically movable frame comprising vertical strips and cross strips connected thereto, locking devices carried by said frame engaging said bases, toggle mechanism connected to said frame, a strap connecting said toggle mechanism, a lever connected to said strap, and means for locking said lever.

4. In a filing cabinet, the combination of a casing, filing bases mounted therein, a vertically movable strip having slots therein, locking devices adapted to engage said slots and having recesses therein to engage said strip, said locking devices adapted to engage said bases, a lever, connections between said lever and said movable strip, and means for locking said lever.

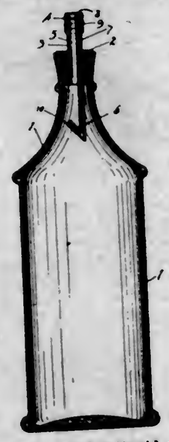
5. In a filing cabinet, the combination of a casing, filing bases movably mounted therein, a vertically movable strip having slots therein, toggle mechanism, locking devices in said slots and having recesses adapted to engage said strip, projections on said locking devices adapted to enter openings in said bases, a lever, connections between said lever and said toggle mechanism, and means for locking said lever.

885,791. ADJUSTABLE SCAFFOLD. MATHEW RUSSELL, Paw Paw, Mich. Filed Oct. 8, 1907. Serial No. 396,447.



An adjustable scaffold comprising vertically disposed hollow posts, horizontally disposed clamping plates fastened to the opposite faces of each of said posts, hollow horizontally disposed places clamped by said plates, an apertured strip designed to be adjustably held in said hollow pieces, extension strips mounted in said hollow posts, brace bars arranged in pairs and fastened together at their lower ends, clamping members positioned one above and one below said plates and designed to frictionally hold said brace bars against said posts, as set forth.

885,792. DISPENSING-STOPPER. HERBERT G. SCOTT, Berkeley, Cal. Filed July 2, 1907. Serial No. 381,873.



1. A dispensing stopper for liquid receptacles, provided with a tube having a longitudinal partition therein, dividing the same into a liquid couduit and an air conduit, the air conduit being closed at its outer end and having a vent in its side.

2. A dispensing stopper provided with a liquid outlet passage and an air inlet conduit closed at its outer end, said air conduit being provided with an air-inlet hole formed in the wall thereof.

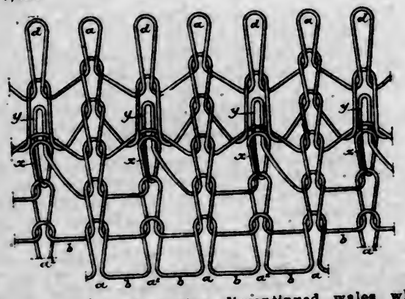
3. A dispensing stopper provided with a liquid outlet passage and an air inlet conduit closed at its outer end, said air conduit provided with an air-inlet hole formed in the wall thereof and spaced from the outer end, to form a pocket between the hole and the closed end of the conduit.

4. A dispensing stopper provided with a liquid outlet passage and an air inlet conduit closed at its outer end, said conduit provided with a vent hole formed in the wall thereof, on the side of the conduit which is uppermost when the receptacle is canted to discharge the liquid.

5. A dispensing stopper provided with a liquid outlet passage and an air inlet conduit closed at its outer end, said air conduit being provided outside of the stopper with a vent-hole smaller than the inner diameter of the conduit.

[Claims 6 to 13 not printed in the Gazette.]

885,793. KNITTED FABRIC. ROBERT W. SCOTT, Leeds Point, N. J., assignor of one-half to Louis N. D. Williams, Ogontz, Pa. Filed June 5, 1907. Serial No. 377,421.



1. A knitted web having discontinued wales whose terminal stitches are engaged by loops drawn from adjoining sinker wales of the web.

2. A knitted web having discontinued wales whose terminal stitches are engaged by loops drawn from adjoining sinker wales of the web, said discontinued wales being supplanted by wales of another face of the web.

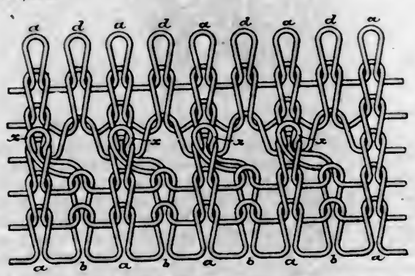
3. A knitted web, partly ribbed and partly plain, having discontinued wales whose terminal stitches are engaged by loops drawn from adjoining sinker wales of the web, said discontinued wales being supplanted by wales of another face of the web.

4. A knitted web having discontinued rib wales whose terminal stitches are engaged by loops drawn from adjoining sinker wales of the web.

5. A knitted web, partly ribbed and partly plain, having discontinued rib wales whose terminal stitches are engaged by loops drawn from adjoining sinker wales of the web.

[Claims 6 and 7 not printed in the Gazette.]

885,794. KNITTED FABRIC. ROBERT W. SCOTT, Leeds Point, N. J., assignor of one-half to Louis N. D. Williams, Ogontz, Pa. Filed June 6, 1907. Serial No. 377,604.



1. A knitted web having discontinued wales whose terminal stitches are engaged with adjoining wales but do not form part of the permanent structure of such wales.

2. A knitted web having discontinued wales whose terminal stitches are drawn through the stitches of adjoining wales.

3. A knitted web having discontinued rib wales whose terminal stitches are engaged with adjoining wales but do not form part of the permanent structure thereof.

4. A knitted web, partly ribbed and partly plain, having discontinued rib wales whose terminal stitches are engaged with adjoining wales but do not form part of the permanent structure thereof.

5. A knitted web having discontinued rib wales whose terminal stitches are drawn through stitches of adjoining wales.

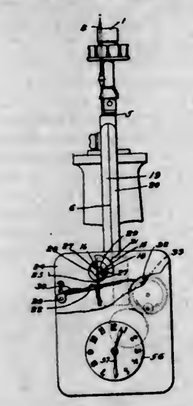
[Claims 7 to 14 not printed in the Gazette.]

885,795. AUTOMATIC GAS-LIGHTING MECHANISM. NATHANIEL H. SHAW, Boston, Mass. Filed Feb. 9, 1907. Serial No. 356,500.

1. In a device of the class described, the combination with a valve, of an oscillating actuator therefor, said actuator having oppositely-disposed arms, a pivoted gravity-actuated lever, means to move the lever in one direction, a spring arm carried by said lever, and means to cause said spring arm to engage the arms of the actuator alternately upon successive downward movements of the lever.

2. The combination with a valve of an oscillatory actuator therefor having oppositely-disposed arms, an actuating lever having a resilient arm which is adapted to engage one of said arms of the actuator during the movement of the lever in one direction and is automatically shifted into position to engage the other arm during the movement of the lever in the opposite direction.

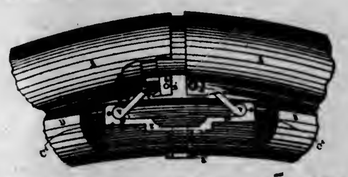
3. The combination with a valve of an oscillatory actuator therefor having two oppositely-disposed arms, a V-shaped projection carried by said actuator, an actuating lever having a resilient arm which is adapted to engage one of the arms of the actuator during the movement of the lever in one direction, said resilient arm being carried by its resiliency over said projection and into position to engage the other arm of the actuator during the movement of the lever in the opposite direction.



4. In a device of the class described, the combination with a valve, of an oscillatory actuator therefor having oppositely-disposed arms, a gravity-actuated lever provided with a resilient arm extending substantially at right angles thereto and provided with a nose to engage the arms of the actuator, and a V-shaped projection carried by the actuator and operating to automatically shift the nose from one arm to the other upon successive downward movements of the lever.

5. The combination with a valve, of an oscillatory actuator therefor having two oppositely-disposed arms and a V-shaped projection between the arms, the apex of said projection moving from one side to the other of the vertical plane of the axis of oscillation of said actuator as the latter oscillates, an actuating lever having a resilient arm which is adapted to engage one of the arms of the actuator during the movement of the lever in one direction, said arm being carried out of normal position by the movement of said V-shaped projection as the actuator oscillates, whereby when the actuating lever is moved in the opposite direction, the resiliency of said arm carries it over the apex of said V-shaped member into position to engage the other arm of the actuator during the next movement of said lever.

885,796. PNEUMATIC AND OTHER TIRES. HENRY C. SHEARMAN, Providence, R. I. Filed June 13, 1903. Serial No. 161,287.



1. In combination with a wheel rim and a tire having free ends, a lever with one end bearing on an approximate end of the tire and the other end bearing on the wheel rim at a point anterior to that occupied by the other end of lever when ends of tire are united or contact together in their allotted position on wheel rim, substantially as shown and described.

2. In combination with a wheel rim and a tire having free ends, two levers, each with one end bearing on an approximate end of the tire and the other end bearing on the wheel rim; the points of bearing on the wheel rim of the lever ends being so placed relative to each other and to the opposite ends of levers and ends of tire as to secure

the desired union of ends of said tire at a point preferably intermediate and equi-distant from them, substantially as shown and described.

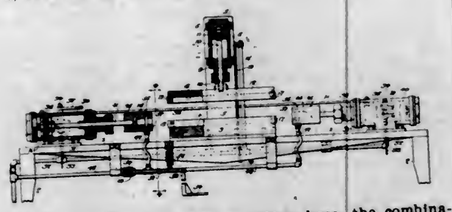
3. As a means for tightening a free ended tire to a wheel rim, a lever with one end adapted to bear on the wheel rim and the other end on an approximate end of the tire, substantially as shown.

4. As a means for tightening a free ended tire to a wheel rim, a lever device consisting of a lever with an end attached to an end of a tire by means of counterpart rocking bearings with its opposite end adapted to bear on the rim of a wheel, substantially as described.

5. As a means for tightening a free ended tire to a wheel rim, a lever device consisting of a lever with an end attached to and engaging a wheel rim by means of counterpart rocking bearings and its opposite end adapted to bear on the end of a tire, substantially as described.

[Claims 6 to 143 not printed in the Gazette.]

885,797. APPARATUS FOR CAPPING HOSE-SECTIONS. SAMUEL J. SILL, Buffalo, N. Y., assignor of one-half to Herbert H. Hewitt, Buffalo, N. Y. Filed Jan. 8, 1908. Serial No. 409,768.



1. In a machine for capping rubber hose, the combination of clamping means for holding the hose and the mandrel whereon it is mounted, and a movable block or plunger having an annular end to admit the mandrel and compress the rubber at the end of the hose.

2. In a machine for capping rubber hose, the combination of clamping means for holding the hose and the mandrel whereon it is mounted and a movable block or plunger having a chambered end to admit the mandrel and compress the rubber at the end of the hose and means for admitting air under pressure to the chambered end of the block or plunger.

3. In a machine for capping rubber hose, the combination with clamping means for holding the hose and the mandrel whereon it is mounted and a movable block or plunger having an annular end to admit the mandrel and serving to compress the rubber at the end of the hose and means for spreading outwardly the inner rubber tube over the end of the hose.

4. In a machine for capping rubber hose, the combination of clamping means for holding the hose and the mandrel whereon it is mounted, a knife at the end of said block or plunger, a block at the end of said clamping means and a movable block or plunger to admit the mandrel and compress the rubber at the end of the hose against said knife.

5. In a machine for capping rubber hose, the combination of clamping means for holding the hose and the mandrel whereon it is mounted, a knife at the end of said clamping means, a plunger having a chambered end to admit the mandrel and means for admitting air under pressure to said chambered end of the plunger in order to spread outwardly the inner tube of the hose across the edge of the knife.

[Claims 6 to 10 not printed in the Gazette.]

885,798. BALANCED PUMP. ALBERT P. SMITH, Sumpter, Oreg. Filed Dec. 22, 1905. Serial No. 292,958.

1. A pump comprising two single acting pumps, a plunger in each barrel having a hollow plunger rod provided within the barrel with a port, stationary pipe connections from one pump barrel to the other pump barrel and communicating with the port of the plunger rod, and means for moving the plunger in one pump down while the other ascends.



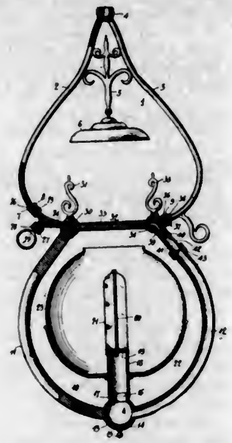
2. A pump comprising two single acting pumps each having a barrel, a plunger in each barrel having a hollow plunger rod extending up to the point of delivery of the water, the plunger rod being of the same diameter as the bore of the pump barrel and fitting closely within the same, each plunger rod being provided within the pump barrel with a port in its wall, and stationary pipe connections from one pump barrel to the other pump barrel and communicating with the port of the plunger rod.

3. A pump comprising two single acting pumps, each having a pump barrel provided with an opening in its side, a plunger in each barrel provided with a hollow plunger rod extending above the barrel of the pump and having a discharge spout at its upper end, the plunger rod being of the same diameter as the bore of the pump barrel and fitting closely within the same, each plunger rod being provided with an elongated port in its wall, the port being within the pump barrel and communicating with the opening in the side of the pump barrel, and stationary pipe connections between the pump barrels to discharge the water from one pump into the hollow plunger rod of the other pump by way of the corresponding port in the plunger rod.

4. A pump comprising two single acting pumps, each having a pump barrel provided with a valved suction chamber, each barrel having an opening in its side above the suction chamber, a plunger in each barrel having a hollow plunger rod extending up to the point of delivery of the water, the plunger rod fitting closely in the pump barrel and provided in its wall with an elongated slot, the slot being within the pump barrel and registering at all times with the opening in the side of the pump barrel, stationary pipe connections from the suction chamber of one pump barrel to the opening in the side of the other pump barrel, and check valves at the junction of the pipe connections with said suction chambers.

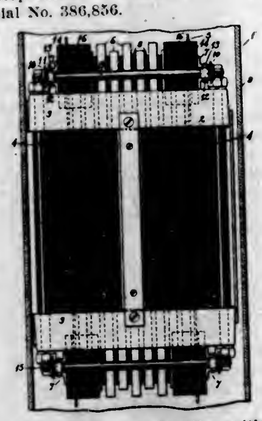
885,799. GASOLENE-LAMP. ISAAC T. SMITH, Norfolk, Va. Filed Mar. 25, 1907. Serial No. 364,472.

In a gasolene burner, a hanger comprising a vertically arranged curved conduit provided with unions and having a burner connected with its lower end, the portion of the conduit between the unions being rigidly connected therewith at its ends and extending transversely above the burner to form a generator, the portion of the conduit at the side of one union opposite the generator being in the form of an inclined Bunsen burner tube which is connected with the adjoining section by means of a coupling sleeve, and the portion of the conduit at the side of the other union opposite the generator being provided with a valve and connected with the adjoining section by means



of a coupling sleeve, and dead arms connected with the conduit to complete the hanger.

885,800. COIL-SUPPORT FOR ELECTRIC TRANSFORMERS. HERBERT C. SOULE, Wilkinsburg, Pa., assignor to Westinghouse Electric & Manufacturing Company, a Corporation of Pennsylvania. Filed Aug. 3, 1907. Serial No. 386,856.



1. In a transformer, the combination with a core member and a winding having a plurality of coils which project beyond the ends of the core member, of means independent of the other transformer parts for supporting the projecting ends of the windings.

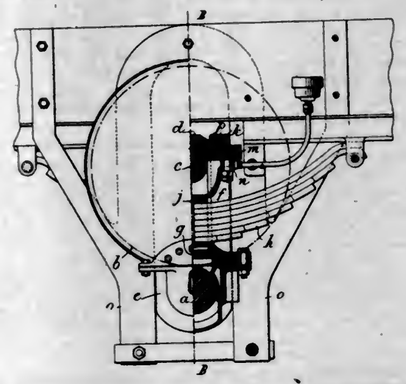
2. In a transformer, the combination with a core member and a winding having a plurality of coils which project beyond the ends of the core member, of a supporting frame, independent of the other transformer parts, for clamping the ends of the coils in position.

3. In a transformer, the combination with a core member and a winding having a plurality of coils which project beyond the ends of the core member, of an adjustable clamping frame, independent of the other transformer parts, for holding the ends of the coils in position.

4. In a transformer, the combination with a core member and a winding having a plurality of coils which project beyond the ends of the core member, of means for supporting the projecting ends of the windings comprising side bars which rest against and are insulated from the coils, and cross bolts which connect the ends of the side bars.

5. In a transformer, the combination with a core member, a winding having a plurality of coils which project beyond the end of the core member, of an adjustable coil-supporting frame comprising side bars built up of angle irons, insulating strips secured to the side bars and cross bolts which connect the extremities of the side bars.

885,801. ANTIFRICTION MECHANISM FOR RAILWAY-WAGONS AND OTHER VEHICLES. ALEXANDER SPENCER, London, England. Filed Aug. 2, 1907. Serial No. 386,738.



1. Antifriction mechanism for vehicles, comprising a wheeled axle having journals, antifriction wheels bearing upon said journals and means connecting said antifriction wheels to the vehicle and permitting said antifriction wheels to rock in relation to the vehicle so that the axes of the journals and the antifriction wheels will remain parallel.

2. In antifriction mechanism, a journal, a box for said journal, horn plates which guide said box, two relatively large antifriction wheels running on said journal one at each side of said horn plates, an axle on which said antifriction wheels are mounted, a bearing box for said axle guided by said horn plates, and an abutment for said bearing box connected to said journal box and against which said bearing box can rock.

3. In antifriction mechanism, a journal, a box for said journal, horn plates which guide said box, two relatively large antifriction wheels running on said journal one at each side of said horn plates, an axle on which said antifriction wheels are mounted, a bearing box for said axle guided by said horn plates, flanges on said bearing box extending between said horn plates, and an abutment for said bearing box connected to said journal box and against which said bearing box can rock.

4. In antifriction mechanism, a journal, a box for said journal, horn plates which guide said box, two relatively large antifriction wheels running on said journal one at each side of said horn plates, an axle on which said antifriction wheels are mounted, a bearing box for said axle guided by said horn plates, an abutment against which said bearing box can rock, and strap plates connecting said abutment to said journal box.

5. In antifriction mechanism, a journal, a box for said journal, horn plates which guide said box, two relatively large antifriction wheels running on said journal one at each side of said horn plates, an axle on which said antifriction wheels are mounted, a bearing box for said axle guided by said horn plates, flanges on said bearing box extending between said horn plates, an abutment against which said bearing box can rock, and strap plates connecting said abutment to said journal box.

[Claims 6 to 8 not printed in the Gazette.]

885,802. TOY MASK. HARRISON D. STERRICK, Pittsburg, Pa. Filed July 18, 1906. Serial No. 326,681.



1. A false face provided with openings, and retractile and extensible features placed near said openings, and means to protrude the features at the will of the wearer.

2. The combination with a mask or false face having openings in the position of features, with a flexible and extensible bag formed to simulate the feature placed in said openings and having a connected pipe by which air may be blown into said bag to protrude the feature through the hole in the mask.

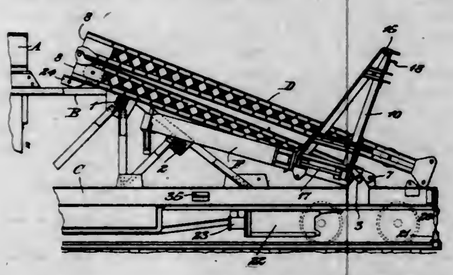
3. A mask or false face provided with openings at the position of the several features of a face, and said openings being closed by an extensible membrane, a supplementary membrane behind the first membrane and both membranes being sealed together and attached to the mask, and means for introducing air pressure between the two membranes, substantially as described.

4. The combination with a mask or false face having extensible and retractile flexible features, of a membrane behind said features and forming an air-tight compartment thereover, and a tube and bellows connected thereto whereby the features may be protruded from the mask by air pressure created in the bellows.

5. The combination with a mask having an opening, of a movable feature and means whereby said feature may be exposed or withdrawn through the opening.

[Claims 6 to 8 not printed in the Gazette.]

885,803. COLLAPSIBLE WRECKING DERRICK AND CAR. EDWARD F. TERRY, New York, N. Y. Filed Dec. 24, 1907. Serial No. 407,939.



1. The combination with a car of a folding boom carried thereby, comprising a plurality of pivoted sections adapted to be folded together and to be lowered upon the body of the car when folded.

2. The combination with a car of a folding boom and a pivoted derrick frame carried thereby, connections between the frame and the boom, and an outrigger member carried by the frame.

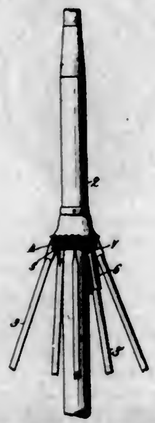
3. The combination with a car of a folding boom and a pivoted derrick frame carried thereby, said boom comprising a plurality of sections adapted to be folded together, and said frame and said boom when folded being adapted to be lowered upon the car body.

4. The combination with a car of a folding boom and a pivoted derrick frame carried thereby, and an outrigger member carried by the frame, said boom comprising a plurality of sections adapted to be folded together and lowered upon the car body, said frame being adapted to be lowered upon the car body, and said outrigger member being adapted to be swung inward of the car body.

5. The combination with a car of a folding boom and a pivoted derrick frame carried thereby, and a supporting frame mounted on the car body, said boom comprising a plurality of sections adapted to be folded together, and said boom and said derrick frame being adapted to be lowered longitudinally of the car body upon said supporting frame.

[Claims 6 to 9 not printed in the Gazette.]

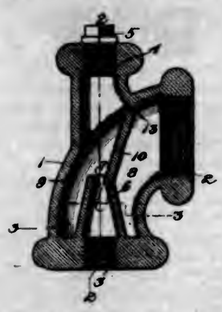
885,804. UMBRELLA. WILLIAM B. THINES, Trenton, N. J. Filed June 26, 1906, Serial No. 323,502. Renewed Sept. 19, 1907. Serial No. 393,689.



1. An umbrella attachment comprising a metallic tube to fit an umbrella rib, and a metallic attaching loop separate therefrom, the loop having a shank to extend through the open outer end of the tube, into the interior of said tube to constitute a hinge for the rib to which said tube is fitted.

2. An article of manufacture consisting of a tube to fit an umbrella rib, and a loop serving as a hinge for said rib, said loop having a shank extended through the tube and bent back on the latter.

885,805. WATER-SEAL VACUUM RETURN-PIPE FITTING. WALLACE E. TILLINGHAST, Worcester, Mass. Filed Sept. 24, 1907. Serial No. 394,306.



1. A trap, provided with an inlet in its upper portion for connection to a radiator or the like, and an outlet in its lower portion for connection to a return discharge pipe, said trap having an internal cavity, an upright partition dividing said cavity into an inlet chamber and a vacuum chamber, the upper portion of said partition having a small air vent affording communication between said

chambers, the trap being provided with a water port between said chambers at the lower end of said partition, and a tubular portion containing a discharge passage extending up from said outlet above said port and opening into said vacuum chamber.

2. A trap, provided with an inlet in its upper portion for connection to a radiator or the like, and an outlet in its lower portion for connection to a return discharge pipe, said trap having an internal cavity, an upright partition dividing said cavity into an inlet chamber and a vacuum chamber, the upper portion of said partition having a small air vent affording communication between said chambers, the trap being provided with a water port between said chambers at the lower end of said partition, and a suction cone extending into said vacuum chamber vertically above the outlet provided with a discharge passage communicating at its lower end with said outlet and opening into said vacuum chamber at its upper end in approximate alinement with the bottom edge of said inlet.

3. A trap, provided with an inlet in its upper portion for connection to a radiator or the like, and an outlet in its lower portion for connection to a return discharge pipe, said trap having an internal cavity, an upright partition extending obliquely downward and forward, dividing said cavity into an inlet chamber and a vacuum chamber, and having a small air vent through its upper portion affording communication between said chambers, said trap being provided with a water port between said chambers at the lower end of said partition, and a tubular discharge device extending up from said outlet above said port into said vacuum chamber and provided with a discharge passage affording communication between said vacuum chamber and outlet.

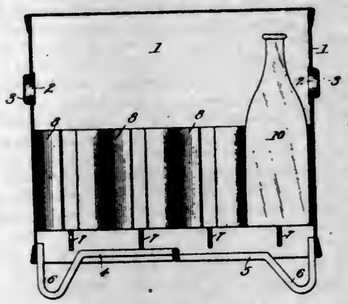
4. A trap formed in a single piece, provided with an inlet in its upper portion for connection to a radiator or the like, and an outlet in its lower portion for connection to a return discharge pipe, said trap containing an internal cavity, an upright partition extending obliquely downward and forward dividing said cavity into an inlet chamber and a vacuum chamber and containing a small air vent through its upper portion affording communication between said chambers, said trap being provided with a water port between said chambers at the lower end of said partition, and a suction cone extending into said vacuum chamber vertically above the outlet, terminating at its upper end in approximate alinement with the bottom of the inlet and provided with a discharge passage affording communication through said cone between said vacuum chamber and outlet.

5. A trap, consisting of a casing provided in one side with an inlet, an outlet in its bottom, and a clean-out in its top, and provided with an internal cavity, an upright partition extending from side to side of said cavity, located between the clean-out and the inlet, dividing said cavity into an inlet chamber communicating with said inlet and a vacuum chamber communicating with both the outlet and the clean-out, said partition having an air vent through its upper portion affording communication between said two chambers, the trap being provided with a water port below said partition and with means coöperating with said water port to provide a water seal between said chambers and at the same time to permit the free escape of air and water from the vacuum chamber.

885,806. BOTTLE HOLDER AND RACK. IRVING J. TAUB, Providence, R. I. Filed Apr. 8, 1907. Serial No. 367,093.

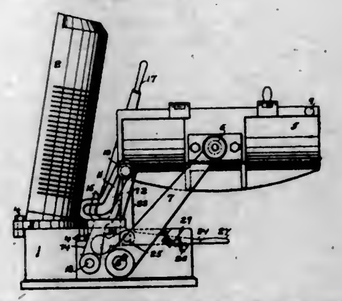
1. A bottle holder comprising a body having closed side walls and open at top and bottom and with supports projecting below the body, vertical bars spaced apart and disposed within said body and extending from side to side thereof, a plurality of partitions bearing upon said bars and forming bottle holding compartments and with independent tempering chambers between the partitions.

2. A bottle holder comprising a body open at top and bottom, cross bars connecting opposite sides of the body, a plurality of bottle holding compartments arranged above the cross bars, whereby said cross bars form supports for the bottles when in the compartments and with tempering chambers between the compartments, and supporting elements connected to the body and projecting below the same.



3. A bottle holder or rack comprising a body, cross bars connecting opposite sides of the body, a series of bottle holding compartments arranged over each cross bar, supporting elements each connecting diagonally opposite corners of the body and engaging the cross bars, portions of diagonally disposed elements having feet, tempering chambers arranged within the body adjacent the compartments to temper the contents of the bottles, and hand openings in the ends of the body.

885,807. MOLD. EDWIN D. TUCKER, New York, N. Y., assignor to Robert Hoe, New York, N. Y. Filed Oct. 3, 1901. Serial No. 77,355.



1. In a stereotype plate casting mold, the combination with the bottom and cover, of a support on which one of said parts is pivoted, said support being capacitated to receive a movement whereby the pivoted part may be caused to move towards and away from the other part of the mold and to swing with respect to the support, means including a pin and slot connection for controlling said pivotal movement, and a power device for assisting in the movement of said pivoted part toward the other part, substantially as described.

2. In a stereotype plate casting mold, the combination with the bottom and cover, of a support on which one of said parts is pivoted, said support being capacitated to receive a movement whereby the pivoted part may be caused to move towards and away from the other part of the mold and to swing with respect to the support, means including a pin and slot connection for controlling said pivotal movement, and a spring for assisting in the movement of said pivoted part toward the other part, substantially as described.

3. In a stereotype plate casting mold, the combination with a stationary cover, of a rocking support, a bottom pivoted thereto, whereby said bottom may swing with respect to the support and may move with it toward and

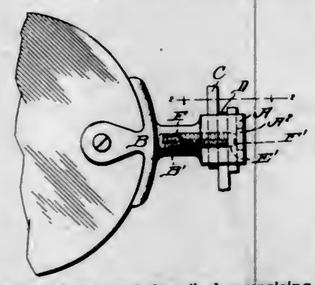
away from the cover, means including a pin and slot connection for controlling said pivotal movement, and a power device of assisting in the movement of the bottom toward the cover, substantially as described.

4. In a stereotype plate casting mold, the combination with a stationary cover, of a rocking support, a bottom pivoted thereto, whereby said bottom may swing with respect to the support and may move with it toward and away from the cover, means including a pin and slot connection for controlling said pivotal movement, and a spring for assisting in the movement of the bottom toward the cover, substantially as described.

5. The combination with the bottom and cover of a stereotype plate casting mold, of a rocking support on which one of said parts is pivoted, whereby said part may swing with respect to the support and move with it towards and away from the other part, means for controlling the pivotal movement so as to bring said pivoted part into substantial parallelism with the other part, means for positively forcing the two parts together to close the mold, and a spring for assisting in the movement of the pivoted part toward the other part, substantially as described.

[Claims 6 to 17 not printed in the Gazette.]

885,808. EYEGLASS-STUD. DAVID D. UPDEGRAFF, Port Ewen, N. Y. Filed Apr. 18, 1907. Serial No. 368,902.



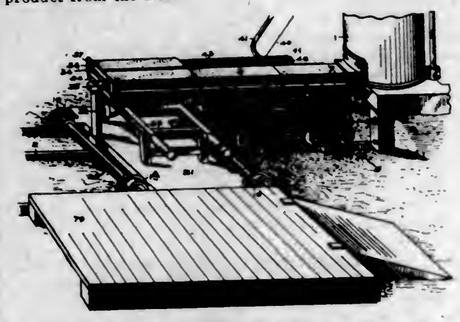
1. A device of the kind described comprising in combination with a lens guard, a perforated bridge spring and nose guard shank, a block carried by the lens guard and having an opening to receive the bridge spring and nose guard shank, a locking plate fitting in said block, said plate having a beveled opening, and a screw having a tapering head adapted to be seated in said opening, said screw passing loosely through the perforations of the bridge spring and nose guard shank, said screw working in the block.

2. A device of the kind described comprising in combination with a lens guard, a cut-out block carried thereby, an opening being formed in the block in alinement with the cut-out portion, a bridge spring and a nose guard shank extending into the block through the cut-out portion, said spring and shank having alining perforations, a locking plate having a beveled opening, a screw arranged within the block and working through the openings of the bridge spring and the guard shank, the head of said screw fitting in the beveled opening of the locking plate.

885,809. OFF-BEARING MACHINE. WILLIAM R. WAGGONER, Brazil, Ind., assignor of two-thirds to Guy T. Van Cleve and Oscar O. Van Cleve, Cory, Ind. Filed Apr. 5, 1906, Serial No. 310,190. Renewed Sept. 6, 1907. Serial No. 391,699.

1. In an off-bearing machine, a mill, a table movable longitudinally to and from the mill, a platform at the opposite end of the table from the mill movable in a direction longitudinally of the table, and a truck on the movable platform to receive and carry away the product coming to it over the table.

2. In an off-bearing machine, a mill, a table in a plurality of transversely divided sections each independently movable in a direction longitudinally of the table as a whole, a platform at the end of the table opposite the mill movable in the same direction as the table sections, and a truck on the platform to receive and carry off the product from the mill.



3. In an off-bearing machine, a mill, a platform movable toward and from the mill, means for moving the platform, and a table between the mill and the platform to receive the product from the mill, said table being movable by the action of the product from the mill when said table is not held by the platform.

4. The combination with a clay working mill of a track leading therefrom, a wheeled platform mounted on said track, a table between the platform and mill in a plurality of transversely divided parts, said table having wheels by which it is movably mounted on said track, a rack-bar fastened to the platform, a stationary shaft, means for rotating the shaft, a cog wheel mounted on the shaft having cogs to engage the teeth of the rock-bar, a truck adapted to be placed upon the platform to receive the product, means extending up from the platform to engage and press the truck against the table when the platform is moved toward the mill and thereby close the sections of the table together and toward the mill.

5. The combination of a mill, a track leading therefrom, a wheeled platform mounted on the track, a wheeled table mounted on a track between the said platform and mill, stationary standards, a shaft mounted on said standards having a crank at one end, a toothed wheel on said shaft, a rack-bar secured to the platform and extending into engagement with the toothed wheel, a truck mounted on the platform, said platform having a projection on the opposite side of the truck from the table, and a cut-off attached to the table for cutting the product of the mill into pieces.

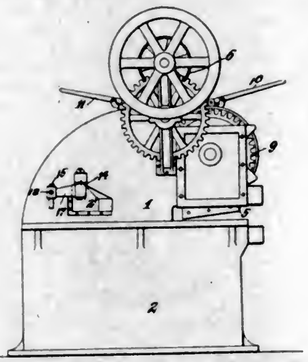
[Claims 6 to 10 not printed in the Gazette.]

885,810. SHEARING-MACHINE. CHRISTAIN WAIS, Cincinnati, Ohio. Filed Apr. 14, 1906. Serial No. 311,710.

1. In a shearing machine, a frame formed of a lower part, an upper part composed of a single integral web bolted to said lower part, a plate-shear shaft and an angle-shear shaft extended through said web, a gear on each shaft disposed adjacent to one another, a common transmitter in engagement with each gear, a clutch on each shaft, means for operating each clutch, and means carried by said web to support said shaft, transmitter and clutches.

2. In a shearing machine, a frame embodying a lower part and an upper part composed of a single integral web bolted to said lower part, a pair of spaced hubs carried by said webs with openings formed in the web alining with the openings in the hubs, a plate shear shaft extending through one of said hubs and web openings, an angle shear shaft extending through the other hub and the other web opening, a gear on each shaft disposed adjacent said hubs, hubs on the gears having clutch faces, a common transmitter in engagement with each gear, a clutch

movable on each shaft at the outer free ends thereof so as to engage and be disengaged from the clutch faces of said gears, and means carried by said web to operate each clutch.



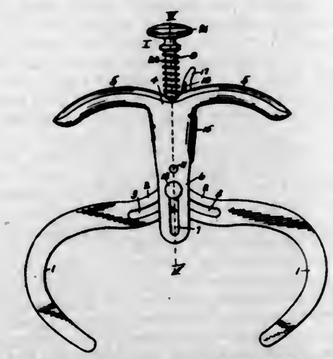
3. In a shearing machine, having an opening, an angle shear operating adjacent said opening, a regulator disposed adjacent said opening and embodying a pivoted arm secured at one end and to the machine, and at its free end carrying a vertically movable pin.

4. In combination with a shearing machine having an opening and a knife operating thereacross, a regulator disposed adjacent said opening and having movement in a horizontal rotary plane, and a vertically movable presser pin carried by said regulator.

5. In combination with a shearing machine having an opening and a knife operating thereacross, a horizontal arm having a graduated scale on one end thereof pivoted to said machine adjacent said opening, a vertically movable presser pin on the free end of said arm, and means for securing said pin in adjusted position.

[Claims 6 and 7 not printed in the Gazette.]

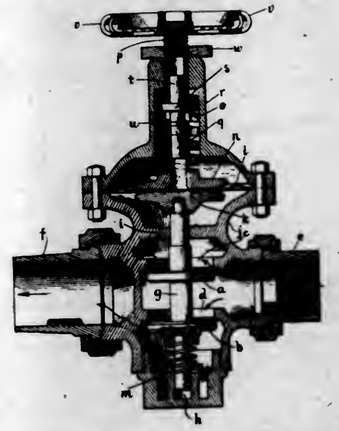
885,811. MANACLE. BARNARD L. WARD, Ottumwa, Iowa. Filed Mar. 28, 1907. Serial No. 365,178.



1. A manacle comprising a head having a stem channel and a lever recess, handle portions projecting laterally from said head, yoke arms projecting from said head intermediate said handle portions, clamp arms carried by said yoke arms, an actuating stem projecting through said stem channel and connected with said clamp members, a catch lever pivoted to said head and projecting through said lever recess, a stem locking member on one of said lever arms, an operating head on the opposite lever arm, the latter located above said handle portions, and means for normally retaining said locking member in engagement with said stem.

2. A manacle comprising a head having a lever recess, a neck projecting from said head and provided with a stem channel, and communicating with the recess in said head, clamp members carried by said neck, an actuating stem extending through said channel and having a connection with the clamp members, ratchet teeth on said stem, and a catch lever pivoted in said recess and normally held in yielding locking engagement with said stem.

885,812. PRESSURE-REGULATOR. JOHN E. WARD, New York, N. Y., assignor to Ward Equipment Company, New York, N. Y., a Corporation of New York. Filed Dec. 26, 1907. Serial No. 408,156.



1. In a pressure regulator, the combination of a valve, a diaphragm in operative relation with the valve, a member bearing upon the diaphragm and having an extended portion, a spring embracing the extended portion and pressing said member against the diaphragm, a regulating screw and a connecting piece loosely fitted between said screw and the extended portion of said member to maintain said member in a central position.

2. In a pressure regulator, the combination of a valve, a diaphragm in operative relation with the valve, a member having a large head bearing upon the diaphragm and a tubular shank projecting from the head, a spring embracing the shank and pressing the head against the diaphragm, a tubular regulating screw, and a connecting piece extended within both the shank and the regulating screw and against which the spring operates.

3. In a pressure regulator, the combination of a valve, a diaphragm in operative relation with the valve, a member having a large head bearing upon the diaphragm and a tubular shank projecting from the head, a spring embracing the shank and pressing the head against the diaphragm, a tubular regulating screw, and a connecting piece having a flange, one end of said connecting piece being inserted within the regulating screw and the flange of the connecting piece being interposed between the regulating screw and the spring.

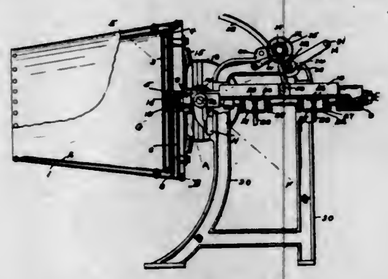
4. In a pressure regulator, the combination of a valve, a diaphragm in operative relation with the valve, a member bearing upon the diaphragm having a projecting tubular shank, a spring embracing the shank, a tubular regulating screw for the spring, and a connecting piece having a flange, a projection extending within the regulating screw and a projection extending within the shank.

5. In a pressure regulator, the combination of a valve, a diaphragm in operative relation with the valve, a member bearing upon the diaphragm and having an extended portion, a regulating screw coöperating with the extended portion of said member to center said member, a spring bearing directly upon said member, embracing said extended portion and adapted to be placed under tension

by said screw to press said member against the diaphragm and positive means to limit the movement of the diaphragm.

[Claim 6 not printed in the Gazette.]

885,813. DRYING-OUT BARREL. CHARLES L. WARNER, Watertown, Conn., assignor to The Baird Machine Company, Watertown, Conn., a Corporation of Connecticut. Filed Apr. 14, 1906. Serial No. 311,745.



1. In a device of the character described, the combination with a rotary jacketed barrel with a chamber between the walls thereof; of a shaft rotating with said barrel and provided with longitudinal passages therein lying side by side and substantially parallel with each other; means for admitting steam to said chamber through one of said passages; and means for removing the exhaust steam and water from said chamber through a second passage in said shaft.

2. In a device of the character described, the combination with a rotary jacketed barrel, with a chamber between the walls thereof; of a shaft rotating with said barrel and provided with longitudinal passages therein lying side by side and substantially parallel with each other; means for admitting steam to said chamber through one of said passages; a pocket connected with said barrel and rotating therewith; a connection between said chamber and pocket; and means for removing the contents of said pocket and chamber through a second of said passages in said shaft.

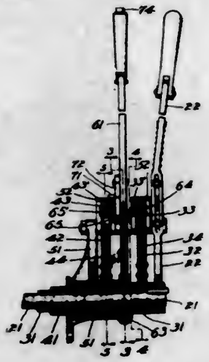
3. In a device of the character described, the combination with a rotary jacketed barrel, having a chamber between the walls thereof and a pocket connected with said chamber; of a shaft having independent live steam and exhaust steam passages therein with separate and independent openings through the sides of said shaft connecting therewith, one of said passages having a direct connection with said chamber and the other an indirect connection through said pocket.

4. In a device of the character described, the combination with a rotary barrel; of a shaft connected therewith having an outer solid end and two steam passages therein one of said passages opening at the inner end into said barrel and at the other end through the side of said shaft; a pivotally mounted carriage within which said shaft is journaled; means for moving said carriage upon its pivot mounting; and means for continuously rotating said barrel irrespective of the position of said carriage.

5. In a device of the character described, the combination with a rotary barrel; of a shaft connected therewith having steam passages therein; a carriage, within which said shaft is journaled, pivotally mounted at one end, having crank means connected with the opposite end, whereby the same may be moved upon its pivot mounting; and means located between the ends of said shaft for admitting steam to one of said passages and exhausting condensed steam from the other of said passages during the rotation of said shaft.

[Claims 6 to 8 not printed in the Gazette.]

885,814. SELECTIVE LEVER. THOMAS W. WARNER and FRANK H. JONES, Muncie, Ind. Filed Apr. 22, 1907. Serial No. 369,553.



1. The combination, in a selective lever, of a stationary structure embodying a segmental plate having a central slot or opening and notched flanges alongside said opening, a plurality of sleeved shafts, a sub-lever for each shaft and having a slot in its upper end, a spring-operated engaging device secured to each sub-lever embodying a lug extending through the slot in the sub-lever to which it is attached, a centrally-arranged operating-lever pivotally mounted at the lower end and extending up through the opening in the segment, said operating lever having projections on opposite sides thereof respectively arranged to engage with and force back the lugs of the spring-operated engaging devices on the corresponding sub-levers, each of said projections being of such length as when one of them is fully engaged with the corresponding sub-lever that the other will be free of engagement with the notch in the flange adjacent thereto.

2. The combination, in a selective lever, of a stationary structure embodying a segment having a slot-opening therein, a plurality of sleeved shafts mounted in a bearing adjacent to said segment-structure, a sub-lever for each of the shafts, spring-operated engaging devices carried by said sub-levers, there being flanges on the segment-structure alongside the opening therein having notches with which said spring-operated engaging devices will engage, a main lever of less width than the width of the slot in the segment-structure and passing through said slot and mounted upon a pivot adjacent to the shafts and provided with projections adapted to contact with said spring-operated engaging devices, one of said projections having an upturned lip which will pass through the notch in an adjacent flange and engage behind said flange when said lever is moved sidewise in one direction and with the front of said flange when said lever is moved sidewise in the other direction, thereby locking said lever to the position to which it has been moved at all points except when said lip and said notch are in registry.

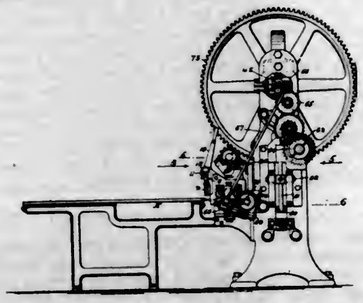
3. The combination, in a selective lever, of a stationary segment-structure having a slot-opening therein, a plurality of sleeved shafts mounted in a bearing adjacent to said segment-structure, sub-levers attached to said shafts, an operating lever pivotally mounted at a point adjacent to said shafts and extending up through the slot-opening in the segment-structure, a detent attached to the segment-structure alongside the slot-opening therein at one side, a pawl pivoted to the operating lever and adapted to engage with said detent in one direction only, the said operating-lever being free to be moved to its three other positions without interference by said detent and coöperating pawl, a rod extending from said pivoted pawl up through the handle of said lever, a push button on the upper end of said rod, and a spring within a chamber in said lever-handle whereby the rod is held normally upward and the pawl thus held into the path of the detent on the segment-structure.

4. The combination, in a selective lever, of a stationary segment-structure having a slot-opening therein, a plurality of nested shafts mounted in a bearing adjacent to said segment structure, sub-levers attached to said shafts, one of which is adapted when moved in one direction to "reverse" the movement of the mechanism, an operating lever pivotally mounted at a point adjacent to said shafts and extending up through the slot-opening in the segment-structure and adapted to engage separately with the sub-levers, a detent attached to the segment-structure alongside the slot-opening therein at that side nearest the operating lever when swung to engage with the sub-lever adapted to perform the reversing operation, a pawl mounted on said operating-lever and arranged in the path of said detent when said lever is thus positioned to engage the detent in one direction only, the operating lever being free to be moved to any one of its other three positions without interference by said detent and pawl, and means whereby said pawl will be held continuously in said path except when purposely removed therefrom, whereby accidental reversing of the mechanism is guarded against while all other permissible movements of the operating lever are freely permitted.

5. A selective lever system for automobiles comprising a pair of members adapted to be connected with the speed controlling mechanism comprising a reversing means, of a selective lever adapted to engage either of said pair of members and shift the same in either of two directions, a movable detent adapted, when the lever is associated with one of said pair of members, to restrain the movement of said lever in one direction only, and means mounted on said lever for shifting said detent to permit movement of the lever in said direction, the selective lever being free to be moved in any one of its other three directions without interference by the movable detent.

[Claims 6 and 7 not printed in the Gazette.]

885,815. METAL-SLITTING MACHINE. FERDINAND J. WENDELL, New York, N. Y., assignor to The Roebling Construction Company, New York, N. Y., a Corporation of New Jersey. Filed July 20, 1906. Serial No. 326,979.



1. The combination of a series of metal slitting knives, and means for moving both series of the knives sidewise and advancing the metal between the slitting operations.

2. The combination with two series of co-acting metal slitting knives, of means for moving one series of knives toward and from the other for slitting, and means for moving both series of knives sidewise and advancing the metal between the slitting operations.

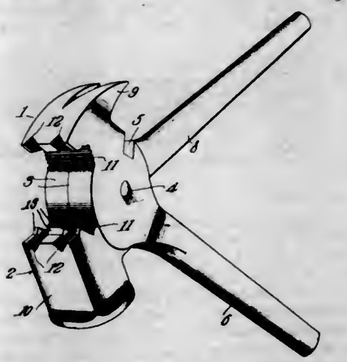
3. The combination with two series of co-acting metal slitting knives connected to move sidewise together, of means for causing a relative movement of the knives toward and from each other for slitting, and a cam and connections for moving the knives sidewise between the slitting operations.

4. The combination with two series of co-acting metal slitting knives connected to move sidewise together, of means for causing a relative movement of the knives toward and from each other for slitting, a cam and connections for moving the knives sidewise between the slitting operations, and metal feeding devices for advancing the metal between the slitting operations.

5. The combination with the feeding rolls 13 formed of disks, of the spring pressed fingers 22, 23 between the disks.

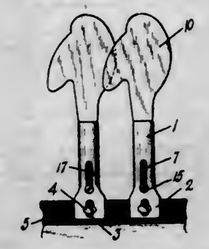
[Claims 6 and 7 not printed in the Gazette.]

885,816. FENCE-MAKER'S COMBINATION-TOOL. JACOB E. WEYENETH, Danbury, Nebr. Filed June 21, 1907. Serial No. 380,137.



A tool comprising two pivotally connected handles each provided with a jaw having a flat meeting face, each of said faces formed with two longitudinally disposed V-shaped grooves connected to a transverse groove at the rear of the same, the grooves in each jaw adapted to register when the jaws are closed, and a transverse rib projecting from the face of one of said jaws adjacent the transverse groove therein adapted to project inwardly of the face of the other jaw when said faces are brought together.

885,817. TAKE-UP HOOK FOR EMBROIDERING-MACHINES. CHARLES N. WHEATON, Warren, R. I. Filed Mar. 29, 1907. Serial No. 365,300.



1. The combination with the hook bar of an embroidering machine, of a member affixed thereto, a flat hook head, and a shank carrying said head and vertically movable in said member.

2. The combination with the hook bar of an embroidering machine, of a member affixed thereto, a flat hook head, a shank vertically movable in said member and carrying said head, means for limiting the vertical movement of said shank, and a vertically compressible means acting on said shank.

3. The combination with a hook bar of an embroidering machine, of a plurality of overlapping flat hook heads mounted on said bar for independent movement, and yielding means permitting vertical movement of each hook independent of the other.

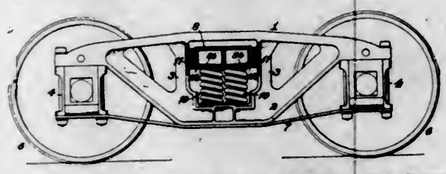
4. A flat hook head, a shank therefor, a member in which said shank is vertically movable, and a lateral

flange on said member having means whereby it may be attached to the hook bar of an embroidering machine.

5. A flat hook head, a shank therefor, a member on which said shank is vertically movable, a lateral flange on said member having means whereby it may be attached to the hook bar of an embroidering machine, and springs within said member acting on said shank and means carried by said shank for limiting the vertical movement of the hook.

[Claims 6 to 10 not printed in the Gazette.]

885,818. CAR-TRUCK. FREDERIC M. WHYTE, Tarrytown, N. Y. Filed July 22, 1907. Serial No. 384,996.



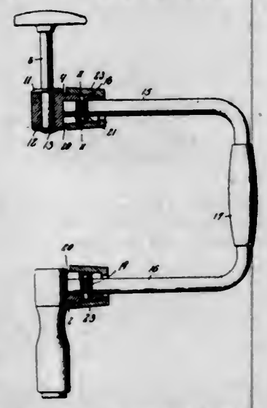
1. A truck bolster having pairs of vertical guide flanges on its sides adjacent to its ends, and having its lower web cut away at its sides between the guide flanges for the reception of bolster guides.

2. A truck bolster having pairs of vertical guide flanges on its sides adjacent to its ends, and recesses on its lower side extending inwardly from the spaces between the guide flanges and extending entirely through the bottom web of the bolster at their central portions.

3. A truck bolster having pairs of vertical guide flanges on its sides adjacent to its ends, recesses on its lower side extending inwardly from the spaces between the guide flanges, and downwardly extending projections on its lower side adjacent to said recesses.

4. In a car truck, the combination of a side frame having a pair of vertical bolster columns, a bolster having pairs of vertical guide flanges on its sides adjacent to its ends, and having its lower web cut away at its sides between the guide flanges, and bolster guides having bodies fitting between said flanges and having a tongue and groove engagement with the bolster columns and lateral extensions fitting in the cut away portions of the lower web of the bolster.

885,819. BRACE. DAVID O. WILKINS, Oklahoma, Okla. Filed Apr. 30, 1907. Serial No. 371,083.



1. In a brace, a coupling for attaching the pressure receiving head to the double armed crank, said coupling comprising a hollow nipple carried by the pressure receiving head and provided with slotted taper walls, a coupling member carried by the double armed crank and provided with a wedge shaped key attached thereto in such manner as to adapt it to fit into and fill the hollow space in said tapered nipple, and a sleeve tapered interiorly to correspond to said tapered nipple by which means it is adapted to slide on to and clamp the tapered sleeve upon the crank arm.

2. In a brace, the combination with a pressure receiving head and a crank handle, of a coupling for connecting them together said coupling comprising a slotted hollow taper nipple having a pin hole therein and journaled upon the pressure receiving head, a wedge-shaped protuberance secured to the arm of said crank handle whereby said crank handle end is adapted to fit into and fill the hollow in said nipple, a pin projecting from the end of the crank arm and adapted to engage with the pin hole in said nipple, and a taper sleeve movable longitudinally along the axis of the crank arm and nipple whereby the coupling may be made rigid.

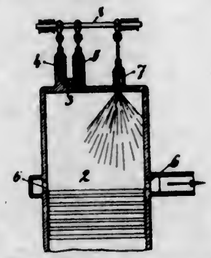
3. In a brace, the combination with the pressure receiving head, a bit-chucking member, and a double armed crank handle, of hollow slotted nipples swiveled upon the head and bit-chucking members respectively and adapted to receive the arms of the crank handle, each of said nipples being provided with a pin hole, a pin projecting from each arm of the crank handle and adapted to engage in said pin hole to prevent relative longitudinal movement between nipple and arm and a key rigidly secured to each arm of the crank handle whereby is prevented a relative rotary movement between said nipples and arms.

4. In a brace, the combination with a pressure receiving head, a bit-chucking member, a double armed crank handle, tapered coupling members carried by the pressure receiving head and bit-chucking members respectively, each of said coupling members being provided with a central bore and having a slot throughout the length of the taper on said coupling whereby it is adapted to receive the arms of the crank handle; keys secured to the arms of the crank handles and proportioned to fit into the slots in said clutch members whereby they are prevented turning therein, and a taper sleeve adapted to fit said coupling to make a rigid joint.

5. In a brace, the combination of a pressure receiving head, a bit chuck, a double armed crank handle and means for detachably connecting each of the arms of the crank handle to the pressure receiving head and the bit chuck, the said means comprising a hollow slotted coupling member provided with a pin hole secured to one of said members at right angles thereto, a wedge shaped key secured to the other of said members and fitting the slot of the clutch member, a pin projecting from an arm of the crank handle and adapted to engage the pin hole in the slotted coupling member, and a sleeve sliding upon said slotted coupling member to retain the several parts in position.

[Claim 6 not printed in the Gazette.]

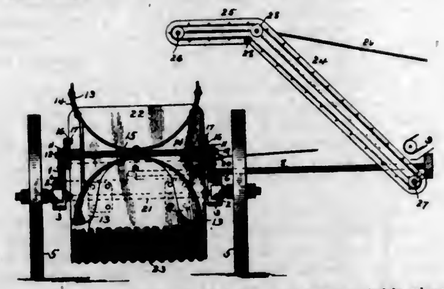
885,820. METHOD OF OPERATING COMBUSTION-ENGINES. PAUL WINAND, Cologne, and HANS NEUMANN, Bergisch-Gladbach, Germany. Filed Nov. 5, 1906. Serial No. 342,127.



1. The method of operating combustion engines, which consists in igniting and exploding in the working cylinder thereof, an explosive charge containing a combustible and a substance richer in oxygen than air, exhausting a portion of the resultant products of combustion, retaining and cooling the remainder of the products of combustion by spraying water into them, and admitting the next succeeding charge of combustible and oxygen-carrier into the said retained, cooled and sprayed portion of the products of combustion; substantially as described.

2. The method of operating combustion engines, which consists in igniting and exploding in the working cylinder, an explosive charge containing a combustible and a substance richer in oxygen than air, exhausting a portion of the resultant products of combustion, retaining and cooling the remainder of the products of combustion by spraying water into them, compressing said cooled portion, and drawing the next succeeding charge of combustion and oxygen-carrier into the said retained, cooled, sprayed and compressed portion; substantially as described.

885,821. SHOCKER. ROBERT WOODS, Grand Forks, N. D. Filed Sept. 14, 1907. Serial No. 392,912.



1. The combination with a frame, of a revoluble shock dumping receptacle, and a plate disposed between the dumping receptacle and the forward end of the frame, said plate having a hinge-connection between its upper and lower ends, with the frame.

2. The combination with a frame, of a revoluble shock dumping receptacle, and a hinged tucker plate disposed between the dumping receptacle and the forward end of the frame, and provided at its lower end with a rearwardly and downwardly projecting flange.

3. The combination with a frame, of a revoluble dumping receptacle, said receptacle being approximately semi-circular in cross-section, and having less width at one end than at the other, and a tucker plate disposed between the forward end of the frame and said dumping receptacle and coöperating with the latter, said tucker plate having a hinge-connection between its upper and lower ends, with the frame.

4. The combination with a frame, of two dumping receptacles secured back to back and revolubly mounted in said frame, and a pivoted tucker plate disposed between the forward end of said frame and the revoluble receptacles and coöperating with the latter.

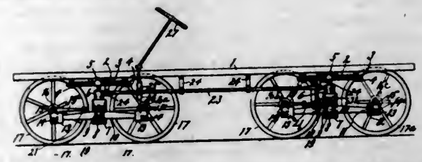
5. The combination with a grain binder and a traveling frame connected therewith, of shock dumping receptacles secured back to back and revolubly mounted in said traveling frame, a conveyer mounted on and receiving motion from the grain binder, said conveyer disposed to discharge bundles of grain into the dumping receptacles.

[Claims 6 to 8 not printed in the Gazette.]

885,822. AUTOMOBILE. ARTHUR H. WRIGHT, South St. Paul, Minn. Filed June 21, 1907. Serial No. 380,149.

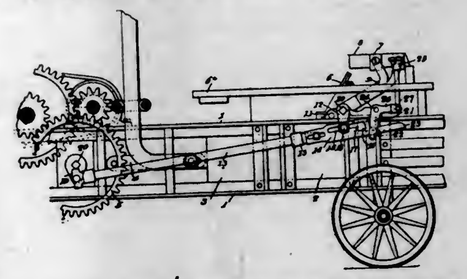
1. In an automobile, the combination with a front and rear wheel-supported truck, of upright cylinders carried thereby, pistons or plungers in the cylinders, fifth-wheels supported upon the plungers and supporting the body of the vehicle, said plungers having at their upper ends ball-shaped heads embraced by sockets formed on the lower rings of the fifth-wheels.

2. In an automobile, the combination with a front and rear wheel-supported truck, of upright cylinders carried thereby, pistons or plungers in the cylinders, fifth-wheels supported upon the plungers and supporting the body of the vehicle, said trucks being each formed with two axles and four supporting wheels thereon and two longitudinal frame bars, each supporting one of the cylinders, hangers on the axles, clevises pivoted to the hangers and having sockets with vertical side slots, said supporting bars having at their ends heads resting in said sockets, and near the heads flat portions loosely guided in the slots for the purpose set forth.



3. In an automobile, the combination with a front and rear wheel-supported truck, of upright cylinders carried thereby, pistons or plungers in the cylinders, fifth-wheels supported upon the plungers and supporting the body of the vehicle, and means for steering the two trucks simultaneously in opposite directions.

885,823. HAY-PRESS. LEWIS B. WYGANT, Bellevue, Ohio, assignor of one-half to The Ohio Cultivator Company, Bellevue, Ohio, a Corporation of Ohio. Filed Dec. 26, 1907. Serial No. 408,161.



1. In a hay press, the combination, with a compression chamber, a compressing plunger reciprocating therein, and power driven mechanism for actuating said plunger, of a division block holder pivotally mounted adjacent to the receiving mouth of the compression chamber, an actuating arm for said block holder having a projection, an actuating rod operatively connected to said power driven mechanism and having a guideway normally in engagement with said projection and provided with a recess forming a shoulder, and means controlled by the operator for moving said actuating rod to cause said shoulder to engage said projection.

2. In a hay press, the combination, with a compression chamber, a compressing plunger reciprocating therein, and power driven mechanism for actuating said plunger, of a division block holder pivotally mounted adjacent to the receiving mouth of the compression chamber, an actuating arm for said block holder having a projection, an actuating rod operatively connected to said power driven mechanism and having a longitudinal slot adapted to receive said projection and provided with a shoulder near one end thereof, and means controlled by the operator for moving said actuating rod to cause said shoulder to engage said projection.

3. In a hay press, the combination, with a compression chamber, a compressing plunger reciprocating therein, and power driven mechanism for actuating said plunger, of a division block holder pivotally mounted adjacent to the receiving mouth of the compression chamber, an actu-

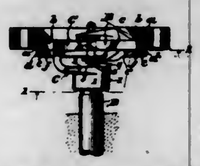
ating arm for said block holder having a projection, a pitman operatively connected to said power driven mechanism and provided with a longitudinal slot adapted to receive said projection and having a transverse extension near one end thereof forming a shoulder, and means controlled by the operator for moving said pitman to cause said shoulder to engage said projection.

4. In a hay press, the combination, with a compression chamber, a compression plunger reciprocating therein, and power driven mechanism for actuating said plunger, of a division block holder pivotally mounted adjacent to the receiving mouth of the compression chamber, an actuating arm for said block holder having a projection, an actuating rod operatively connected to said power driven mechanism and having a shoulder adapted to engage said projection; an arm pivotally mounted near said rod having a part extending beneath the same, and means for rocking said arm about its pivotal center to cause the shoulder carried by said actuating rod to engage said projection.

5. In a hay press, the combination, with a compression chamber, a compressing plunger reciprocating therein, and power driven mechanism for actuating said plunger, of a division block holder pivotally mounted adjacent to the receiving mouth of the compression chamber, an actuating arm for said block holder having a projection, an actuating rod operatively connected to said power driven mechanism and having a shoulder adapted to engage said projection, a rock-shaft extending transversely of said compression chamber, an arm secured to one end of said shaft and having a part adapted to extend beneath said actuating rod, and a push rod operatively connected to said rock-shaft and adapted to actuate the same to cause said arm to move said shoulder into position to engage said projection.

[Claim 6 not printed in the Gazette.]

885,824. SEWING-MACHINE SHUTTLE. CHARLES F. ZANZIG, Milwaukee, Wis. Filed May 23, 1907. Serial No. 375,269.



1. In a shuttle-mechanism, having a shuttle-guide, a rotary shuttle fitted in the guide, a segmental web extending from the body of the shuttle to a point concentric with the axis thereof, and a drive-shaft for the shuttle concentric with the same; the combination of a flat spring detachably connected to the drive-shaft, the spring being provided with a conical head concentric with said drive-shaft, and adapted to impinge against the web of the shuttle.

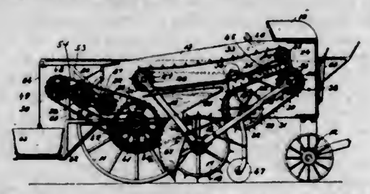
2. In a shuttle-mechanism, having a shuttle-guide, a rotary shuttle fitted in the guide, a segmental web extending from the body of the shuttle to a point concentric with the axis thereof, and driving mechanism for the shuttle concentric with the same; the combination of a spring-clip detachably connected to the driving-mechanism, said clip being provided with a conical head, adapted to engage the segmental web of the shuttle.

3. In a sewing-machine provided with a rotary shuttle, a guide therefor, and driving-mechanism for the shuttle; the combination of a clip carried by the driving-mechanism, said clip being provided with a spring-arm, adapted to impinge the shuttle-center to hold the same against its guide, whereby pay of the shuttle in said guide is taken up

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885,825. WEED-DESTROYER. CHARLES P. ANDERSON, Brown Valley, Minn. Filed Nov. 1, 1907. Serial No. 400,193.

1. A weed-destroyer comprising a supporting-frame, a cylinder armed with spikes which dig into the ground, a spiked-belt traveling in close proximity to the spiked cylinder for removing the material therefrom, a receptacle, removing the material from the spiked belt.



2. A weed-destroyer comprising a supporting-frame, a cylinder armed with spikes which dig into the ground, a spiked belt traveling in close proximity to the spiked cylinder for removing the material therefrom, a receptacle, and means for removing the material from the spiked belt to the receptacle.

3. A weed-destroyer comprising a supporting-frame, a cylinder armed with spikes which dig into the ground, a spiked belt traveling in close proximity to the spiked cylinder for removing the material therefrom, a conveyer, and means for removing the material from the spiked belt to the conveyer.

4. A weed-destroyer comprising a supporting-frame, a cylinder armed with spikes which dig into the ground, a spiked-belt traveling in close proximity to the spiked cylinder for removing the material therefrom, and a spiked belt traveling in close proximity to the other belt and in the opposite direction for removing the material therefrom.

5. A weed-destroyer comprising a supporting-frame, a cylinder armed with spikes which dig into the ground, a spiked belt traveling in close proximity to the spiked cylinder for removing the material therefrom, a spiked belt traveling in close proximity to the other belt and in the opposite direction for removing the material therefrom, a receptacle, and means for conveying the material to the receptacle.

[Claims 6 and 7 not printed in the Gazette.]

885,826. CARD SYSTEM. GEORGE C. ANDERSON, Springfield, Ill. Filed June 24, 1907. Serial No. 380,580.



1. A card system comprising plural cards each having a designating member and a part removed; complemental cards each having a designating member bearing a designation differing from the designation of said first named cards; the designating members of all of the complemental cards being adjacent to the space previously occupied by the designating members detached from said first named cards.

2. A card system comprising cards having designating members, pulling members, and spaces in such relation to each other that all the designating members of one class will be associated together, all of the designating members of another class will be associated together and all the cards of one designation may be separated from all of the cards of another designation by grasping between the thumb and finger of one hand the members of one designation, and grasping between the thumb and finger of the other hand the members of the other designation, and moving the hands apart to separate all the cards of one designation from all of the cards of the other designation.

3. A card system comprising cards having a corner designation, a central space, a corner space, and a pulling member; complemental cards having a corner space, an upper central space, a corner designation differing from the corner designation of said first named cards, and a central pulling member; and cards having a central designation matching the upper central spaces of said first named cards and said complemental cards and having a central lower space matching the central pulling members of said first named cards and said complemental cards.

4. A card system comprising cards each having a central designating member, upper corner spaces, and a lower corner space; and complemental cards each having a central designating member, corner designating members matching the corner spaces of said first named cards, and central lower spaces matching the central lower spaces of said first named cards.

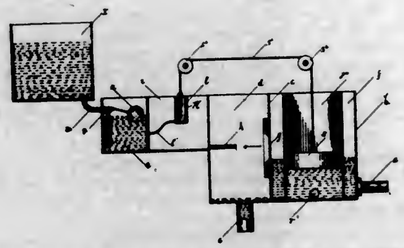
5. A card system comprising cards each having a notch and an inclined edge at one end, and a hole near the other end of said card; and complemental cards each having a corner and a hole near one end of said card; the notches, the holes, the corners and the inclined edges of said cards being so arranged that if any one of said cards is turned end for end the corner of that card will project across the inclined edge of the associated cards.

885,827. ICE-CREEPER. JOHN A. E. ANDERSON, Chicago, Ill. Filed May 2, 1907. Serial No. 371,403.



An ice creeper consisting of a single piece of wire whose central portion is formed into a horizontal loop whose ends are then bent downward into a substantially right angular relation therewith, then bent inwardly to embrace the shoe in front of the heel, then bent downwardly and then rearwardly to form unconnected tread portions which are provided with right angular terminal prongs, in combination with a flexible retainer mounted upon the said horizontal loop.

885,828. WATER-SOFTENING APPARATUS. KENT W. BARTLETT, Chicago, Ill. Filed Sept. 21, 1906. Serial No. 335,640.



1. A water softening apparatus including a container for chemical having a discharge opening for permitting the passage of the chemical into the water, and mechanism automatically operated by the water for causing the level of the chemical to occupy varying positions relatively with respect to the discharge opening to alter the quantity of chemical supplied to the water as the quantity of water supplied for treatment varies.

2. A water softening apparatus including a container for chemical having a discharge opening for permitting the passage of chemical into the water, and mechanism automatically operated by the water for regulating the position of the container to thereby adjust the level of the chemical with respect to the discharge opening to vary the quantity of chemical supplied to the water as the quantity of water supplied for treatment varies.

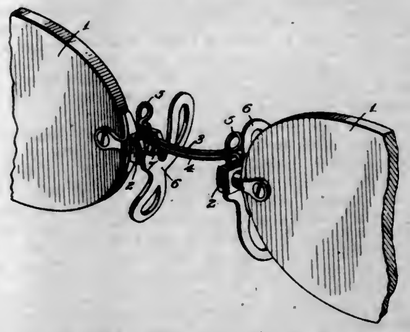
3. A water softening apparatus including a container for chemical having a discharge opening for permitting the passage of chemical into the water, and mechanism automatically operated by the water serving to vary the vertical position of the container to thereby adjust the level of the chemical with respect to the discharge opening to vary the quantity of chemical supplied to the water as the quantity of water supplied for treatment varies.

4. A water softening apparatus including a container for chemical having a discharge opening for permitting the passage of chemical into the water, mechanism automatically operated by the water for regulating the level of the chemical with respect to the discharge opening to vary the quantity of chemical supplied to the water as the quantity of water supplied for treatment varies, and a constant level chamber in communication with said container serving to maintain the same supplied with chemical.

5. A water softening apparatus including a container for chemical having a discharge opening for permitting the passage of chemical into the water, mechanism automatically operated by the water for regulating the position of the container to thereby adjust the level of the chemical with respect to the discharge opening to vary the quantity of chemical supplied to the water as the quantity of water supplied for treatment varies, and a constant level chamber in communication with said container serving to maintain the same supplied with chemical.

[Claims 6 to 25 not printed in the Gazette.]

885,829. EYEGLASSES. LOUIS B. BECKER, New York, N. Y., assignor, by direct and mesne assignments, of one-half to Leo F. Adt, Albany, N. Y., and one-half to E. Kirstein Sons Company, Rochester, N. Y., a Corporation of New York. Filed Jan. 24, 1907. Serial No. 353,764.



1. In eyeglasses, the combination with the lenses, and nose-guards, of a bridge spring attached to the lenses and having a plurality of resilient members adapted to span the nose and to permit relative turning movement of the lenses for operating the nose-guards the ends of the bridge being formed into eyes secured to the lenses.

2. In eyeglasses, the combination with the lenses, and nose-guards attached thereto, of a bridge spring attached to the lenses and having an intermediate portion embodying a plurality of nose spanning portions, one of said portions being provided with a resilient bend for permitting relative turning movement of the lenses to operate the nose-guards.

3. In eyeglasses, the combination with the lenses, and

nose-guards attached thereto, of a bridge spring attached at its ends to the lenses and having an intermediate portion embodying a pair of nose spanning members, the latter being provided with resilient bends for permitting relative turning movement of the lenses to operate the nose-guards.

4. In eyeglasses, the combination with the lenses, and nose-guards movable therewith, of a bridge spring attached at its ends to the lenses and embodying a pair of nose spanning members, one of the latter being provided with resilient bends for permitting relative turning movements of the lenses, and the other member being less resilient and serving to limit the turning movements of the lenses.

5. A bridge spring for eyeglasses embodying suitable attaching portions, and an intermediate portion embodying a plurality of nose spanning members, one of the latter being provided with resilient bends for permitting relative turning movements of the lenses.

[Claims 6 to 9 not printed in the Gazette.]

885,830. WIRE STRETCHER AND SPLICER. HARRY F. BONESTEELE, Iowa Falls, Iowa. Filed Mar. 18, 1907. Serial No. 363,029.



1. In a device of the kind described, two rotatably connected members with one or more openings parallel with and near their common center, means upon said members for separately engaging the lapped ends of oppositely extended wires passed through said openings, and straining means for drawing said wires toward each other, whereby the wires may be strained to any desired tension and by rotating one of said members upon the other the wires may be wrapped about each other to form a splice connecting the wires.

2. In a device of the kind described, two rotatably connected members, with one or more openings parallel with and near their common center, means upon said members for separately engaging the lapped ends of oppositely extended wires passed through said openings, and straining means for drawing said wires toward each other, whereby the wires may be strained to any desired tension and by rotating one of said members upon the other the wires may be wrapped about each other to form a splice connecting the wires, and means for releasing the several parts from said spliced wire.

3. In a device of the kind described, two members both rotatably and pivotally connected with the axes of said connections at right angles to each other, means upon said members for separately engaging the lapped ends of oppositely extended wires, and straining means for drawing said wires toward each other, whereby the wires may be strained to any desired tension and by rotating one of said members upon the other the wires may be wrapped about each other to form a splice connecting the wires.

4. In a device of the kind described, two rotatably connected members with one or more openings parallel with and near said common center, means upon their members for separately engaging the lapped ends of oppositely extended wires passed through said openings, and straining means comprising a winch-pin rotatably mounted upon one of said members, for drawing said wires toward each other, whereby the wires may be strained to any desired tension and by rotating one of said members upon the other the wires may be wrapped about each other to form a splice connecting the wires.

5. In a device of the kind described, two rotatably connected members with one or more openings parallel with and near their common center, means upon said members for separately engaging the lapped ends of oppositely extended wires passed through said openings, straining means comprising a winch-pin rotatably mounted upon one of said members, means adapted to control the direction of rotation of said winch-pin and means for engaging said pin to rotate the same and draw said wires toward each other, whereby the wires may be strained to any desired tension and by rotating one of said members upon the other the wires may be wrapped about each other to form a splice connecting the wires.

[Claims 6 to 20 not printed in the Gazette.]

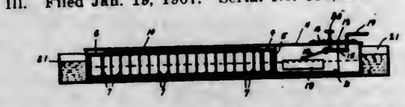
885,831. ILLUMINATED SIGN. WILLIAM BOOTH, Edgewater, N. J. Filed July 25, 1907. Serial No. 385,417.



1. In a sign, the combination of a relatively long and narrow strip adapted to secure or contain the sign characters and arranged at an inclination in the sign, a plurality of light sources arranged at intervals along the lower end of said strip and constituting the entire means of illumination for the sign, and a screen completely inclosing the sources of illumination at the bottom and the sides substantially as described.

2. In a sign, the combination of a relatively long and narrow wedge shaped strip adapted to secure or contain characters on each side thereof at an inclination, a plurality of light sources arranged at intervals along the lower end of said strip and constituting the entire means of illumination for the sign, and a trough-shaped screen secured to the lower and narrower end of said strip and completely covering the means of illumination at the bottom and the sides substantially as described.

885,832. CARBURETER. ALBERT W. BREIDING, Sterling, Ill. Filed Jan. 19, 1907. Serial No. 353,025.

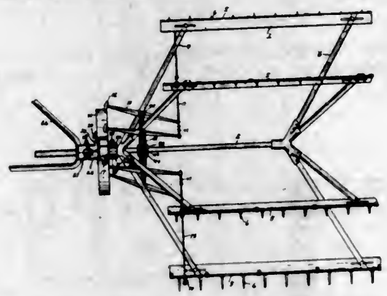


1. A carbureter, comprising a closed tank, having an air inlet and gas outlet; a series of partitions, alternately disposed, to form a series of adjacent passages constituting one continuous passage from said air inlet to said gas outlet; a plurality of rectangular frames, located in said passages; and a plurality of absorbent curtains, alternately disposed at short intervals in said frames, at right angles to the walls of said passages, substantially as shown and described.

2. In a carbureter, the combination, with a closed tank, having an air inlet and gas outlet, and a valve-chamber in one corner thereof; of a winding passage connecting said air inlet and gas outlet, and provided with a plurality of absorbent curtains, extending alternately from opposite sides of such passage, partially across the same; a supply pipe, entering said valve-chamber, and provided with a cut-off valve at its inner end; a float, located in said valve-chamber, and actuating said valve; and means for raising and lowering said valve from without the carbureter, when the same is closed, substantially as shown and for the purpose named.

885,833. HARVESTER-REEL. JAMES T. BRETT, Milwaukee, Wis. Filed Feb. 19, 1906. Serial No. 301,745.

1. In apparatus of the described class, the combination with a reel shaft and a reel provided with radial reel arms and oscillating rake teeth; of a cam mounted upon a suitable support adjacent to the inner bearing of the radial arms of the reel; a spider frame located on the reel shaft within the reel and beyond said bearing and having radially projecting arms; tooth actuating levers fulcrumed to said radial arms extending between said reel arms into operative relation to said cam; and connections between said levers and the rake teeth.



2. In apparatus of the described class, the combination with a reel shaft and a reel provided with radial reel arms and oscillating rake teeth; of a cam mounted upon a suitable support adjacent to the inner bearing of the radial arms of the reel; a spider frame located on the reel shaft within the reel and beyond said bearing and having radially projecting arms; tooth actuating levers fulcrumed to said spider frame arms and extending between said reel arms into operative relation to said cam; and connections between said levers and the rake teeth; said cam; the support therefor, and the lever supporting frames, being each formed in sections and adapted to be connected with the reel shaft without removing the reel.

3. In apparatus of the described class, the combination with a reel shaft and reel provided with adjustable rake teeth,—of a stationary cam, a set of actuating levers bearing upon said cam at one end, a support for said levers rigidly connected with the reel shaft, and motion transmitting connections between said levers and the rake teeth adapted to permit said teeth to yield when subjected to unusual strain.

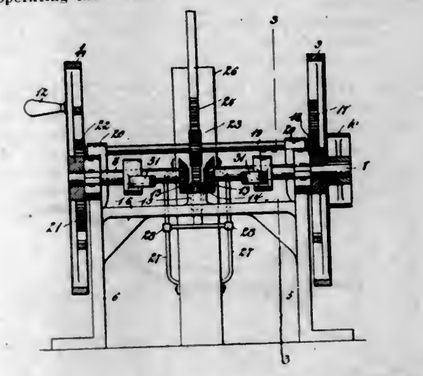
4. In apparatus of the described class, the combination with a reel shaft and a reel having radial arms provided with adjustable rake teeth,—of a stationary cam, a web connected with said radial reel arms and provided with a stud shaft in axial alinement with the reel shaft, a support for said levers rigidly mounted upon the said shaft, a motion transmitting rod for each set of rake teeth adapted to communicate motion thereto from the corresponding lever, said rods being passed loosely through one of the points of connection and provided with a buffer spring adapted to permit an independent movement of the rake teeth when subjected to an unusual strain.

5. In apparatus of the described class, the combination with a reel shaft and a reel provided with adjustable rake teeth, of a stationary cam; a set of actuating levers in operative relation to said cam; a support for said levers rigidly connected with the reel shaft; and a rod for each set of rake teeth connecting such teeth with one of the levers; said rods being passed loosely through the levers and provided with buffer springs adapted to permit an independent movement of the rake teeth when subjected to unusual strain.

885,834. MECHANISM FOR CONVERTING MOTION. LUTHER R. BRIGGS, Chambersburg, Ill. Filed Dec. 16, 1907. Serial No. 406,764.

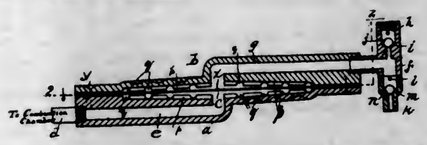
1. A mechanism for converting motion comprising mutilated gear-wheels the teeth of one wheel being in alinement with the blank spaces of the opposite wheel, a rack, a shaft, a pinion on said shaft meshing with the rack, pinions on the shaft meshing with the aforesaid gears, and means for rotating the gears in opposite directions.

2. A mechanism for converting motion comprising a pair of shafts, mutilated gear-wheels thereon the teeth of one wheel being in alinement with the blank spaces of the opposite wheel, a gearing between the gear-wheel shafts whereby they turn in opposite directions, a rack, a shaft, a pinion on said shaft meshing with the rack, pinions on the shaft meshing with the aforesaid gears, oppositely presented ratchets on the first mentioned shafts, a lever carrying pawls engageable with the ratchets, and means for operating the lever.



3. A mechanism for converting motion comprising a pair of shafts, miter-gears on said shafts, an intermediate miter-gear meshing therewith, mutilated gear-wheels on the shafts the teeth of one wheel being in alinement with the blank spaces of the opposite wheel, a rack, a shaft, a pinion on said shaft meshing with the rack, pinions on the shaft meshing with the aforesaid gears, and means for driving the first mentioned shafts.

885,835. PULSATING PUMP. ALANSON P. BRUSH, Detroit, Mich. Filed Aug. 18, 1905. Serial No. 274,776.



1. A pulsating pump having in combination connected plates forming an interior chamber therebetween and a pulsating diaphragm located between said plates within said chamber, each of said plates provided with a passage leading into said chamber, the inner walls of said chamber channeled on their adjacent surfaces on opposite sides of the diaphragm to prevent the adherence of the diaphragm thereupon by suction.

2. A pulsating pump having in combination a chambered case, a pulsating diaphragm located within the chamber of the case, said case provided with passages leading into said chamber on opposite sides of the diaphragm, and means to control the inlet into and the discharge from one of said passages, the interior walls of said chamber channeled on their adjacent surfaces on opposite sides of the diaphragm to limit the movement of the diaphragm.

3. A pulsating pump having in combination a chambered case, a pulsating diaphragm located within the chamber of the case, said case provided with passages leading into said chamber on opposite sides of the diaphragm, means to connect one of said passages with the combustion chamber of an internal combustion engine, and means connected with the other of said passages to control the admission and discharge therefrom, the interior walls of said chamber channeled on their adjacent surfaces on opposite sides of the diaphragm to limit the movement of the diaphragm.

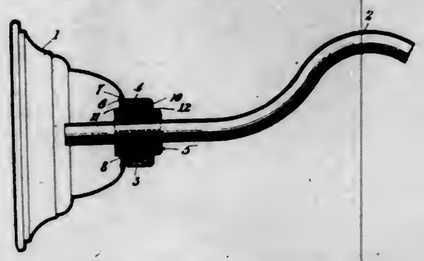
4. A pulsating pump having in combination a chambered case, and a pulsating diaphragm located within the

chamber of the case, the interior walls of the case channeled upon their adjacent surfaces upon opposite sides of said diaphragm for the purpose set forth.

5. A pulsating pump having in combination connected plates forming an interior chamber therebetween and a pulsating diaphragm located within said chamber, the interior surfaces of said plates provided with channels or recesses upon opposite sides of the diaphragm for the purpose set forth.

[Claims 6 to 8 not printed in the Gazette.]

885,836. INSULATED CANOPY-COLLAR. THOMAS H. BULLOCK, Jr., New York, N. Y., assignor to John H. Dale, New York, N. Y. Filed Aug. 24, 1906. Serial No. 331,821.



1. In a canopy collar, a split sleeve of insulating material adapted to be applied to a tubing and having an inclined or beveled surface, a two-part clamp embracing said sleeve and of greater interior diameter than the bore of the sleeve, one of the parts of said clamp preventing the independent longitudinal movement of said sleeve, and the other acting upon said inclined surface for forcing the sleeve into frictional engagement with the tubing, and a canopy carried by said clamp.

2. In a canopy collar, a split sleeve of insulating material adapted to be applied to a tubing and having an inclined or beveled surface, a clamp embracing said sleeve and of substantially greater interior diameter than the bore thereof, and consisting of an externally screw-threaded ring having an abutment against which the sleeve bears and an internally screw-threaded cap having a flange thereon adapted to engage said inclined surface.

885,837. NECK-YOKE. MARTIN A. CHRISTENSON, Spring Valley, Minn. Filed Sept. 30, 1907. Serial No. 395,102.
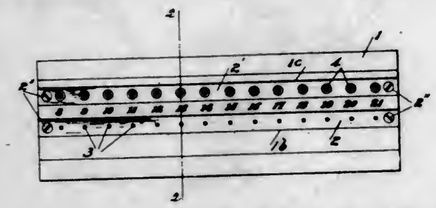


1. A device of the kind described, comprising a multiplicity of rods having inwardly bent ends, hubs having a multiplicity of radial seats with which the bent ends of said rods are interlocked, caps telescoped over said hubs and the ends of said rods, and means rigidly securing said caps on said hubs, substantially as described.

2. A device of the kind described comprising a multiplicity of rods, devices securing the ends of said rods together, upper and lower spacing brackets engaging the upper and lower rods, and perforated tie plates located at the ends of said spacing brackets and through which the said rods are passed, substantially as described.

3. A neck-yoke comprising a multiplicity of rods rigidly secured together at their ends, a pair of sockets secured to the intermediate portions of said rods, and a neck-yoke ring swiveled in said sockets, in combination with a pole having a lateral projection adapted to be moved laterally between certain of the rods of said neck-yoke when the neck-yoke is turned into angular position, and to be engaged between said pole ring and one of the rods of said neck-yoke when the neck-yoke is turned into a substantially horizontal position, to thereby lock the neck-yoke to the pole, substantially as described.

885,838. JEWEL AND PIVOT GAGE. FRED R. COATS, Springfield, Ill. Filed Aug. 9, 1907. Serial No. 387,943.



1. In a jewel and pivot gage the combination of a block having longitudinal channels and gage-designations intermediate of said channels, retaining plates fitting in said channels respectively, posts secured on one of said retaining plates and having pivots of standard gage corresponding to the designations on the block, and jewels mounted on the other retaining plate and having holes corresponding to the designations on said blocks respectively.

2. In a jewel and pivot gage, the combination of a block having longitudinal channels of a depth sufficient to protect the upper part of pivots and jewels mounted within the channels of said block and having intermediate designations corresponding to standard gages, a post-retaining plate mounted in one channel of said block, posts secured on said post-retaining plate and provided with pivots corresponding in gage to the designations on said block respectively, the points of said pivots being below the upper surface of said block; a jewel-retaining plate fitting in the other channel of said block, jewels mounted on said jewel-retaining plate and having holes corresponding to the gage-designations on said block respectively, the upper surface of said jewels being below the upper surface of said plate.

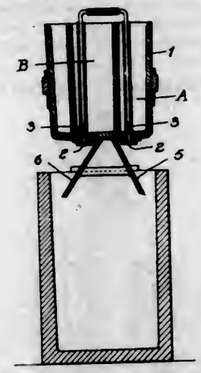
3. In a jewel and pivot gage, the combination of a block having longitudinal channels, and intermediate gage-designations, a post-retaining plate secured in one of said channels, posts secured on said post-retaining plate adjacent to said designations respectively and having pivots corresponding to said gage-designations respectively; a jewel-retaining plate secured in the other channel of said block and having holes respectively adjacent to the gage-designations on said block and adapted to accommodate jewel settings, jewel-settings fitting in said holes respectively, and jewels mounted on said jewel-settings and having holes corresponding to the gage-designations on said block respectively.

885,839. MANUFACTURE OF COMPOUND INGOTS. WILLIAM H. CONNELL, Pittsburg, Pa. Filed Aug. 30, 1907. Serial No. 390,797.

1. As an improvement in the art of making compound ingots, the method herein described which consists in teeming metals differing in characteristics simultaneously into a mold, and preventing the intermingling of the metals or the modification of the characteristics of one by the other while flowing into the mold.

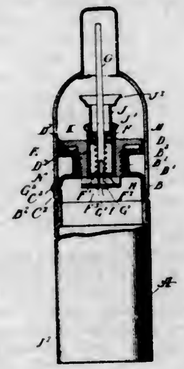
2. As an improvement in the art of making compound ingots, the method herein described which consists in simultaneously introducing metals varying in one or more characteristics into the mold in distinct streams side by side and permitting the metals to move laterally in opposite directions and intermingle in the zone of meeting or junction.

3. As an improvement in the art of making compound ingots, the method herein described which consists in simultaneously pouring the metals into the mold in streams having volumes proportional to the relative quantities of the



metals desired in the finished ingot, and keeping the streams separate and distinct while moving in a vertical direction.

885,840. OIL-CAN. JOSEPH W. CUSHMAN, New York, N. Y. Filed Oct. 30, 1905. Serial No. 285,219.



1. An improved article of manufacture comprising an oil casing, a stopper having a portion removably engaged with said casing, a cylinder also engaged by said portion and bearing in the stopper and having its lower end flush with the lower end of said stopper, a valve seated against said ends of the stopper and cylinder, and means for operating said valve, the construction being such that there are no internal surfaces in the upper part of the oil casing proper, occupying a higher plane than the valve seating.

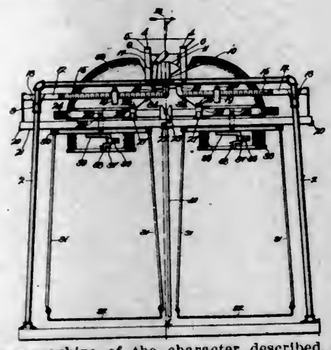
2. An improved article of manufacture comprising an oil casing, a stopper having a portion removably engaged with said casing, a cylinder also engaged by said portion and bearing in the stopper and having its lower end flush with the lower end of said stopper, a valve seated against said cylinder end, and means for operating said valve, all of the parts of sheet metal and the construction being such that there are no internal surfaces in the upper part of the oil casing proper, occupying a higher plane than the valve seating.

3. An oil can comprising an oil casing, a stopper having a portion removably engaged with said casing, a cylinder also engaged by said portion and bearing in the stopper and having its lower end flush with the lower end of the stopper, a valve seated against the lower end of said cylinder, and vertically movable valve operating means extending within the cylinder.

4. An improved article of manufacture comprising an oil casing, a stopper removably secured to said casing, a cylinder bearing in said stopper and having its lower end flush with the lower end of the stopper, a valve seated against the lower end of the cylinder, a sheet metal spout, and a shell having a lower contracted end in bearing engagement with the spout to insure a firm joint therewith.

5. In an oil can, a sheet metal spout, a shell, having an upper oil-holding end, the lower end of the shell being contracted and extended in bearing engagement with the spout, a cylinder forming with said shell an annular recess, packing material in said recess, said shell being vertically movable with respect to the cylinder, and means for holding said packing material in position.

885,841. GRAIN WEIGHING AND BAGGING MACHINE. MONROE DAVIS, Tonkawa, Okla., assignor of one-half to O. W. Hutchison, Tonkawa, Okla. Filed May 28, 1907. Serial No. 376,158.



1. In a machine of the character described, a framework, scale-beams pivoted thereon, a frame suspended from the scale-beams, a second frame supported by the frame carried by said beams, and platforms suspended from said second frame.

2. In a machine of the character described, a suitable framework, scale-beams pivoted thereon and pivotally linked together at their inner ends, a frame suspended from the outer ends of the scale-beams, a second frame supported on the first-named frame, and platforms suspended from said second frame.

3. In a machine of the character described, a framework comprising a base, a pair of inverted-U frames thereon and cross bars connecting said U-frames, a pair of scale-beams pivoted near their outer ends on said cross bars, a frame supported from the outer ends of the scale-beams, a second frame carried by the first-named frame, and means suspended from the second frame at opposite sides of its center, for supporting an article to be weighed.

4. In a machine of the character described, a framework comprising a base, a pair of inverted-U frames thereon and cross bars connecting said U-frames, a pair of scale-beams pivoted near their outer ends on said cross bars, a frame supported from the outer ends of the scale-beams, a second frame carried by the first-named frame, and platforms pivotally suspended from the second frame at opposite sides of its center.

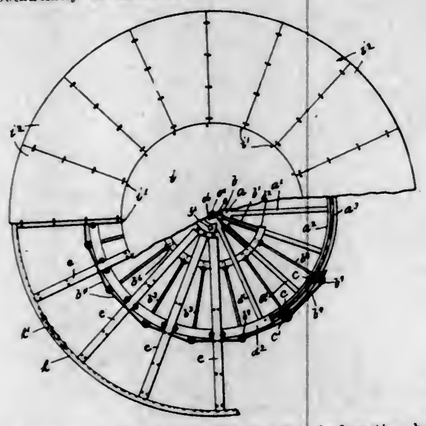
5. In a machine of the character described, a framework, scale-beams pivoted thereon, a frame supported therefrom, a second frame pivoted on the first, and tubes carried by the second frame and adapted to form supports for the articles to be weighed.

[Claims 6 to 14 not printed in the Gazette.]

885,842. TURN-TABLE. STERLING ELLIOTT, Newton, Mass. Filed July 5, 1907. Serial No. 382,140. Renewed Mar. 11, 1908. Serial No. 420,455.

1. In a turn-table, the combination of a bed-casting having a circular track, a rotatable platform-supporting

frame also having a circular track, an interposed rotatable roller-supporting frame having a plurality of longitudinally adjustable radially disposed shafts, and an anti-friction roller on each shaft which engages said tracks, substantially as described.



2. In a turn-table, the combination of a bed-casting having a circular track, a rotatable-platform-supporting frame also having a circular track, and an interposed roller-supporting frame comprising a hub and a circular rim, and means for connecting said hub and rim, a plurality of roller-supporting shafts extending radially from said rim bearing anti-friction rollers at their extremities which engage said tracks, substantially as described.

3. In a turn-table, the combination of a bed-casting having a circular track, a rotatable platform-supporting frame also having a circular track, an interposed roller-supporting frame comprising a hub and a circular rim, and means for connecting said hub and rim, and a plurality of shafts adjustably connected with said rim, extending radially therefrom, and anti-friction rollers borne by said shafts which engage said tracks, substantially as described.

4. In a turn-table, the combination with a bed-casting having a circular track, a rotatable platform-supporting frame also having a circular track, an interposed rotatable roller-supporting frame having a plurality of radially extended shafts bearing anti-friction rollers, which engage said tracks, and spacing-bars connecting the outer ends of said shafts together, substantially as described.

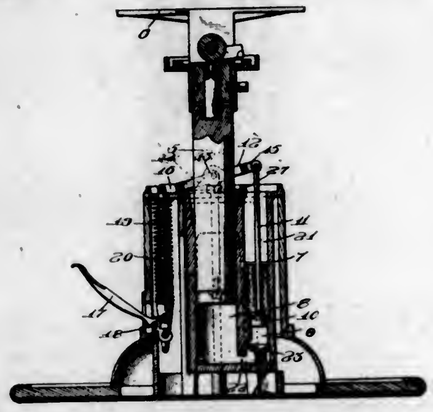
5. In a turn-table, the combination of a bed-casting comprising a hub, radially extended spokes and a rim having a circular track on its upper side, a rotatable platform-supporting frame comprising a hub, radially extended spokes and a rim having a circular track upon its under side, an interposed rotatable roller-supporting frame having radially extended shafts, each bearing at its extremity an anti-friction roller which engages said tracks, and spacing-bars connected to the extremities of said shafts, substantially as described.

[Claims 6 to 14 not printed in the Gazette.]

885,843. CHAIR. CHARLES W. FISCHER, CHARLES ZIMMERMAN, and EDWARD C. WALKER, Chicago, Ill., assignors to Theo. A. Kochs Company, Chicago, Ill., a Corporation of Illinois. Filed Mar. 17, 1905. Serial No. 250,631.

1. The combination of a plunger, a chamber in which said plunger moves, means for elevating said plunger, and a split sleeve at the upper end of said chamber and surrounding said plunger, said sleeve being actuated by said plunger elevating mechanism to lock the plunger against descent.

2. The combination of a plunger, a chamber in which said plunger moves, a cross-head, a lever connected with one arm of said cross-head, means connected with the other arm of said cross-head for raising the plunger, and a split sleeve at the upper end of said chamber surrounding said plunger, said cross-head having means adapted to depress said split sleeve on each alternate stroke of the lever.



3. The combination of a plunger, a chamber in which said plunger moves, a cross-head, a lever connected with one arm of said cross-head, means connected with the other arm of said cross-head for raising the plunger, and a split sleeve at the upper end of said chamber surrounding said plunger, said cross-head having adjustable means adapted to depress said split sleeve on each alternate stroke of the lever.

4. The combination of a plunger, a plunger chamber, a split sleeve at the upper end of said plunger chamber surrounding said plunger, and lever actuated mechanism for forcing fluid into said plunger chamber below the plunger and operating to move said sleeve into operative engagement with the plunger.

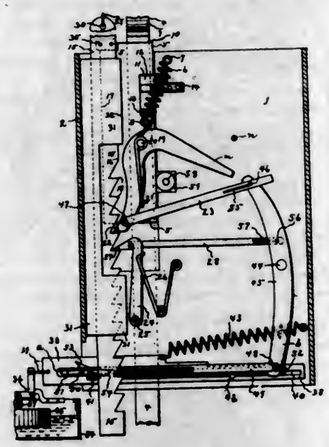
5. The combination of a plunger, a plunger chamber, a split sleeve at the upper end of said plunger chamber surrounding said plunger, and lever actuated mechanism for forcing fluid into said plunger chamber below the plunger and operating to move said sleeve into operative engagement with the plunger at each alternate stroke of the lever.

[Claims 6 to 14 not printed in the Gazette.]

885,844. WINDMILL-REGULATOR. LYMAN S. HAGERMAN, Mondamin, Iowa. Filed Nov. 25, 1907. Serial No. 403,681.

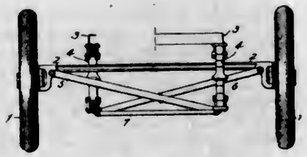
1. In a windmill regulator, the combination with the pump-rod having an engaging-lug thereon, of a sliding-bar adapted to have a downward vertical movement from contact with said engaging-lug at the time of the downward stroke of said pump-rod; a vertically-disposed rack-bar; a tank having a float therein; a regulating-plate having a connection with and to have a forwardly sliding movement from actuation of said float; a pawl mounted upon said sliding-bar and having means for normal engagement with said vertically-disposed rack-bar, said pawl making engagement with said rack-bar during the downwardly vertical movement of said sliding-bar; said regulating-plate having a connection with said pawl to release the engagement of said pawl with said rack-bar by the forwardly sliding movement of said regulating-plate.

2. In a windmill regulator, the combination with the pump-rod having an engaging-lug thereon, of a sliding-bar adapted to have a downward vertical movement from contact with said engaging-lug at the time of the downward stroke of said pump-rod; a vertically-disposed rack-bar; a tank having a float therein; a regulating-plate having a connection with and to have a forwardly-sliding movement from actuation of said float; a pawl mounted upon said sliding-bar and having means for normal engagement with the vertically-disposed rack-bar, said pawl making engagement with said rack-bar during the downwardly vertical movement of said sliding-bar to cause said vertically-disposed rack-bar to have a downwardly-slidable movement; a dog having means for normal engagement with the ver-



tically-disposed rack-bar, said dog making engagement with and during the downwardly-sliding movement of said rack-bar; said regulating-plate having connections with said pawl and with said dog to release engagement of the pawl and dog with said rack-bar by the forwardly-sliding movement of said regulating-plate.

885,845. VEHICLE SUSPENSION. ROBERT G. HANDY, Bay City, Mich. Filed Dec. 17, 1906. Serial No. 348,129.

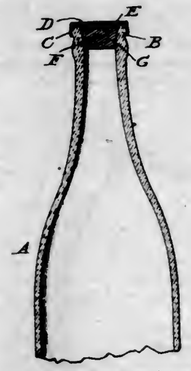


1. In a motor vehicle, the combination with an axle, a body supporting frame, a strut substantially parallel to the axle and a spring yielding means supporting the frame on a strut, of a pair of obliquely crossed, independent bars in a plane substantially parallel to the axle, each articulating an end of the strut to the remote end of the axle.

2. In a motor vehicle, the combination with an axle, and a body supporting frame, of elliptic springs secured to the body frame at their upper side and extending below the axle, bars pivoted at one end to the axle near the ends thereof and each pivotally attached to the lower side of one of said springs and a strut or bar connecting the lower sides of the springs.

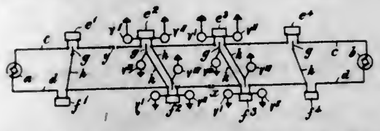
3. In a motor vehicle, the combination with an axle, and a body supporting frame, of elliptic springs secured to the body frame at their upper side and extending below the axle, bars pivoted at one end to the axle near the free ends thereof and each extending inward through the adjacent spring and pivotally attached to the lower side of the opposite spring and a strut or bar connecting the lower sides of the springs.

885,846. MEANS FOR SEALING VESSELS. JOHN A. HICKS, Summit, N. J., assignor, by mesne assignments, to Auto Stopper Company, New York, N. Y., a Corporation of New York. Filed Jan. 15, 1906. Serial No. 296,062.



A vessel having an unbroken continuous circumferential bead near the top of its neck; downwardly and centrally tapering walls in the bore of said neck; a stopper entered within said taper walls of the vessel; a sealing cap having a top surface; a flange pendent from said top surface and containing a sealing wafer, said cap being secured over and beneath said bead on the vessel neck by pressure exerted vertically thereon, substantially as specified.

885,847. ELECTRICAL DISTRIBUTION. JOHN S. HIGHFIELD, London, England. Filed Jan. 20, 1908. Serial No. 411,579.



1. In a series system of direct-current electric supply the combination with central and sub-stations and supply and consuming devices at said stations, of main conductors joining said devices, intermediate conductors joined at one end to said main conductors, and means for connecting them to said main conductors at another point so as to complete a circuit through a part only of the supply and consuming devices.

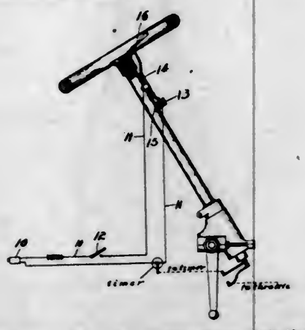
2. In a series system of direct-current electric supply the combination with central and sub-stations and supply and consuming devices at said stations, of main conductors joining said devices, intermediate conductors joined at one end to said main conductors, means for connecting them to said main conductors at another point so as to complete a circuit through a part only of the supply and consuming devices and means for indicating the occurrence and position of an "earth" on the main conductors.

3. In a series system of direct-current electric supply, the combination with central and sub-stations, and supply and consuming devices at said stations, of a looped main conductor joining said devices in series, auxiliary conductors joined at one end to said main conductor, and terminating at the other in switching devices at sub-stations so situated on the main conductor that when said switching devices are closed loops are completed including some of said supply and consuming devices.

4. In a series system of direct-current electric supply the combination with a plurality of central stations and sub-stations, and supply and consuming devices at said stations, of a looped main conductor joining said devices in series, cross-connections between parts of said main conductor on opposite sides of a central station, switching

means for completing said cross-connections, and voltmeters at sub-stations connected between the earth and said main conductor and cross-connections, whereby the occurrence and location of an "earth" on the main conductor may be indicated.

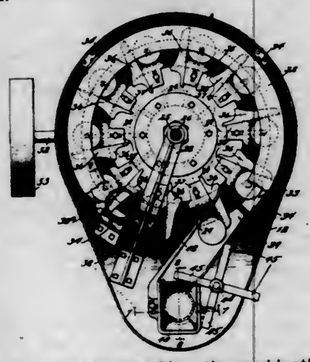
885,848. CIRCUIT-BREAKER FOR AUTOMOBILES. WILLIAM C. HORNER, Indianapolis, Ind. Filed May 27, 1907. Serial No. 375,963.



1. In an automobile, the combination, with the sparking circuit of an internal combustion engine, of a spark timer controlling lever, a throttle valve lever, and means controlled by each of said levers for breaking the sparking circuit when either of said levers is brought to proper position.

2. The combination, with the sparking circuit of the internal combustion engine of an automobile, of a throttle valve lever and a spark timer lever, and means controlled by each of said levers for preventing spark production when either of said levers is in zero position.

885,849. MACHINE FOR CLEANING CANS. JOHN M. C. JONES, Gibson City, Ill. Filed Nov. 11, 1907. Serial No. 401,752.



1. In a can cleaning machine, the combination with a stationary can support and means for moving a can thereon, of a pipe adapted to discharge into said can, means for successively forcing different cleaning fluids through said pipe into the can, and means for moving the can away from the pipe near the end of the movement of the can on said support.

2. In a can cleaning machine, the combination with a stationary can support and means for moving a can thereon, of a traveling pipe adapted to discharge into said can, means for successively forcing different cleaning fluids through said pipe into the can, and means for moving the can away from the pipe near the end of the movement of the can on said support.

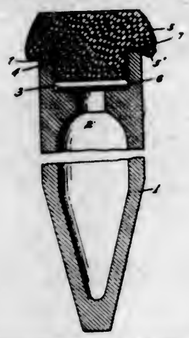
3. In a can cleaning machine, the combination with a rotating member, and a pipe projecting therefrom and rotating therewith, of a guide upon which a can is adapted to travel, means for moving said can on said guide, and means for successively forcing water and steam through said pipe into said can.

4. In a can-cleaning machine, the combination with a stationary can support and means for moving a can thereon, of a pipe adapted to discharge into said can, and means for successively forcing different cleaning fluids through said pipe into the can while said can is being moved, said can support having a raised portion near one end adapted when the can passes over it to move the can away from said pipe.

5. In a can cleaning machine, the combination with a rotatable chest and means for rotating the same, of a hollow valve in said chest, means for supplying steam and water to said chest and valve respectively, a pipe communicating with and projecting from said chest and adapted upon the rotation of said chest to be successively supplied with water and steam from said valve and chest respectively, an annular guide surrounding said chest and pipe, and means for movably retaining a can on said guide in communication with said pipe so that it will receive the water and steam that successively issues from said pipe.

[Claims 6 to 14 not printed in the Gazette.]

885,850. SURVEYOR'S STAKE. TIMOTHEUS JOSENHANS, Seattle, Wash. Filed Nov. 4, 1907. Serial No. 400,673.



1. A stake comprising a body formed in its upper portion with a compartment, and a transparent closure on the upper end portion of said body for closing the said compartment thereof, said closure having a depending portion fitting about the upper portion of said body.

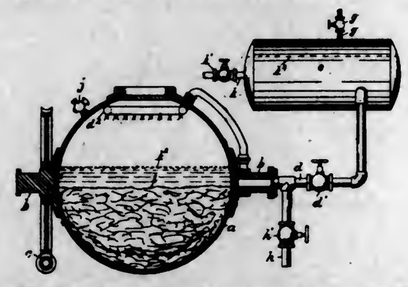
2. A stake comprising a body formed with a compartment, a support in said compartment, and a removable transparent closure for the compartment of said body.

885,851. USE OF HOT AIR IN EXTRACTING FIBER FROM VEGETABLE TISSUES. MICHAEL R. KENNEDY, Dansville, N. Y., assignor to The National Straw Pulp Company, New York, N. Y., a Corporation of South Dakota. Filed July 28, 1906. Serial No. 328,212.

1. The improvement in the process of extracting fiber from straw with chemical liquors at high temperatures, which consists in confining a charge of the straw with the required chemical liquor in a closed receptacle or cooker, and heating the contents of the receptacle by the injection of heated air, whereby the charge is heated to the high temperature desired with a pressure corresponding to that of steam at such temperature, and without the condensation of vapor and the weakening of the chemical liquor.

2. The improvement in the process of extracting fiber from straw &c. at high temperatures, which consists in confining a charge of straw with suitable chemical liquor in a closed receptacle or cooker and injecting heated air and steam into such cooker, with agitation of the charge, whereby the charge is heated with a small condensation of vapor and slight weakening of the liquor.

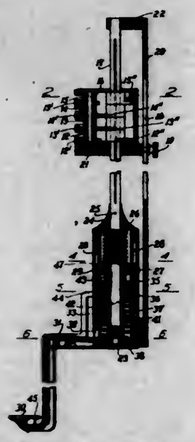
3. The improvement in the process of extracting fiber from straw at high temperatures, which consists in charging a closed cooker or receptacle with a charge of straw, placing the liquor required for treating such charge in a closed tank, forcing heated air into the said tank, and propelling the liquor into the cooker by air pressure.



4. The improvement in the process of extracting fiber from straw at high temperatures, which consists in charging a closed cooker or receptacle with a charge of straw, spraying the liquor required for treating the straw upon the straw in the cooker, injecting heated air into the cooker while the liquor and straw are agitated and thus heating the mixture to the required temperature without materially weakening the liquor.

5. The improvement in the process of extracting fiber from straw at high temperatures, which consists in charging a closed cooker or receptacle with a charge of straw, spraying the liquor required for treating the straw upon the straw in the cooker, and injecting a mixture of heated air and superheated steam into the cooker while the liquor and straw are agitated, and thus heating the mixture to the required temperature with slight weakening of the liquor.

885,852. MUSIC-SHEET TURNER. FREDERICK LOWE, Cambridge, Mass., assignor of one-half to Michael H. Barry, Danvers, Mass. Filed Dec. 12, 1906. Serial No. 347,436.



1. Apparatus of the class described, comprising a driving shaft; a series of pivoted arms; mechanism engaged between the shaft and the arms whereby the arms are moved successively by said shaft; means pressing the shaft continuously in one direction; a latch restraining this movement; and means to operate the shaft in the opposite direction.

2. Apparatus of the class described, comprising a series of arms; a shaft mounted rotatably and having means whereby it engages the arms successively; means pressing the shaft continuously in one direction of rotation; a latch restraining its movement; and means to drive the shaft in opposite direction.

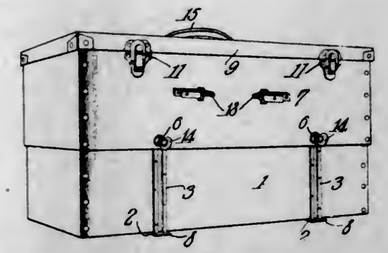
3. Apparatus of the class described, comprising a driving shaft; a series of arms and means whereby they are moved successively by said shaft; two springs acting in opposed directions and each arranged to engage and actuate said shaft; and means to throw the shaft under control of either spring.

4. Apparatus of the class described, comprising a series of arms; a shaft, and means whereby it actuates them successively; springs arranged to engage and operate the shaft in opposite directions, one spring being more powerful than the other, and being normally disengaged; and means to throw the more powerful spring into engagement.

5. Apparatus of the class described, comprising a series of arms; a driving shaft, and means whereby it actuates them successively; springs arranged to engage and operate the shaft in opposite directions, one spring being more powerful than the other, and being normally disengaged; a latch blocking the unwinding movement of each spring; and a release key for each latch.

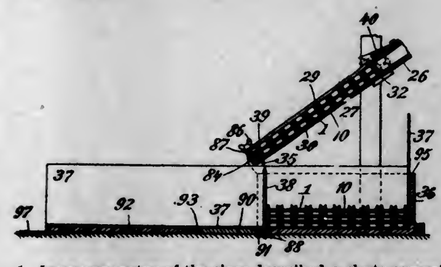
[Claims 6 to 14 not printed in the Gazette.]

885,853. TRAVELING-CASE. WILLIAM MABLE, Fort Collins, Colo., assignor of one-half to Winthrop B. Morris, Fort Collins, Colo. Filed Oct. 9, 1907. Serial No. 396,687.



A traveling case comprising telescopically connected body and top sections, longitudinally slotted guide strips secured upon the sides of the body section, said strips having inturned ends extending under the bottom of the body, feet outstanding from the strips adjacent said ends, a button slidably mounted within each guide strip, means extending therefrom for engaging the top section, and clamping means engaging said extending means for binding the top section upon the guide strips, said feet constituting abutments for the top section, and a handle upon the top section.

885,854. APPARATUS FOR PACKING CAMES. THOMAS W. MORRELL, Bloomfield, N. J. Filed Apr. 8, 1907. Serial No. 367,122.



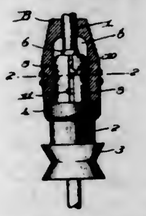
1. In an apparatus of the class described, a chute comprising a lower member consisting of spaced strips the space between said strips being unobstructed at their outer ends, an upper member parallel to said lower member, and

means for securing said members at varying distances from each other.

2. A portable carrying chute comprising a cross bar, a lower member and an upper member each formed of spaced strips attached at one end to said cross bar the spaces between said strips being unobstructed at their outer ends.

3. A portable shoe comprising a lower member formed of spaced strips, the spaces between said strips being unobstructed at their outer ends, in combination with means for aiding in the removal of articles from the chute, said means comprising stationary upright pins adapted to project through the spaces between the strips.

885,855. BOBBIN-DRIVING MEANS FOR ROTATABLE SPINDLES. ANDREW D. MORSE, Hopedale, Mass., assignor to Draper Company, Hopedale, Mass., a Corporation of Maine. Filed Dec. 6, 1907. Serial No. 405,318.



1. The combination with a rotatable spindle, of elongated bobbin-clutching members, rotatable therewith and adapted to interiorly engage a bobbin, means to limit outward movement of said members, and means whereby outward movement of one of said members positively effects simultaneous and uniform outward movement of the other members.

2. The combination with a rotatable spindle, of elongated bobbin-clutching members rotatable therewith, and adapted to interiorly engage a bobbin, means to limit outward movement of said members, and means to effect mutual engagement between adjacent members whereby said members will move outward simultaneously and uniformly to center the bobbin with relation to the spindle.

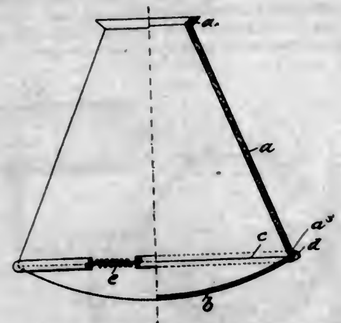
3. The combination, with a rotatable spindle, of elongated, centrifugally-acting bobbin-clutching members rotatable therewith and adapted to interiorly engage a bobbin, and means whereby outward movement of each member effects simultaneous and equal outward movement of the adjacent member.

4. The combination, with a rotatable spindle, of elongated, centrifugally-acting bobbin-clutching members rotatable therewith and adapted to interiorly engage a bobbin, and means on each member to engage the inner faces of adjacent members and effect outward movement of the several members simultaneously and uniformly.

5. The combination, with a rotatable spindle of three elongated and transversely segmental, centrifugally-acting bobbin-clutching members surrounding and rotatable with the spindle, and lateral projections on each member to extend back of the adjacent edges of the other two members, to effect outward movement of all the members simultaneously and uniformly.

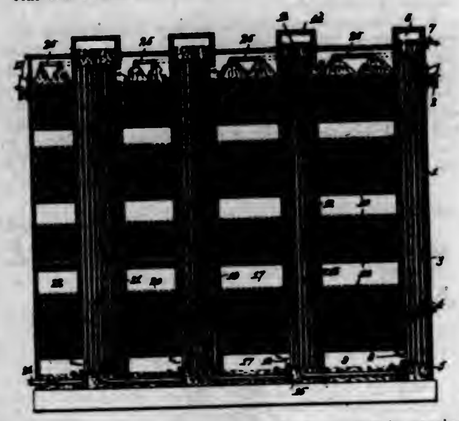
885,856. COMBINATION LIGHT REFLECTOR AND DIFFUSER. HARRISON D. MCFADDIN, New York, N. Y. Filed July 7, 1906. Serial No. 325,132.

In a device of the class described, the combination with a reflector the light-discharging end of which is provided with a flattened edge to form a seat, of a diffuser concavo-convex in cross section associated with said body and having its edges flattened to coöperate with the flattened edge of the light-discharging end of the reflector, said edges of the reflector and diffuser coöperating to form an angular projection at the meeting portions of the reflector and diffuser, a band encircling the reflector and diffuser having an open inner side to receive the projecting portions of the reflector and diffuser, and means for tensioning said band, whereby the same is adapted to embrace



the meeting portions of the reflector and diffuser for holding the same in associated relation.

885,857. METHOD OF TREATING GAS. JAMES S. MCILHENNY, Washington, D. C., assignor of one-half to Peter Young, Pittsburg, Pa. Filed Apr. 11, 1907. Serial No. 367,551.



1. The method of treating gas, which consists in passing said gas through a condenser in one direction, passing a separate cooling medium through said condenser in the opposite direction in such manner as to exert its cooling action on said gas, and successively decreasing the speed of said gas in its passage through said condenser while subjected to the action of said cooling medium.

2. The method of treating gas, which consists in passing said gas through a condenser in one direction, passing a cooling medium through said condenser in the opposite direction in such manner as to exert its cooling action on said gas, and successively increasing the speed of said cooling medium in its passage through said condenser.

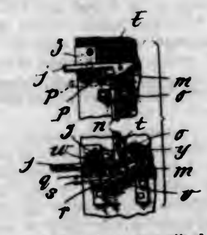
3. The method of treating gas, which consists in passing said gas through a condenser in one direction, successively decreasing the speed of said gas in its passage through said condenser while subjected to the action of said cooling medium, passing a cooling medium through said condenser in the opposite direction in such manner as to exert its cooling action on said gas, and successively increasing the speed of said cooling medium in its passage through said condenser.

4. The method of treating gas, which consists in passing the same through a condenser, subjecting it to successive scrubbing actions in its passage through said condenser, and successively increasing the speed of the gas through the scrubbers in its passage through said condenser.

5. The method of treating gas, which consists in subjecting said gas alternately to cooling and scrubbing actions, and increasing the speed of travel of said gas while subjected to said scrubbing actions.

[Claims 6 to 9 not printed in the Gazette.]

885,858. MECHANISM FOR LOCKING ROUNDHOUSE-DOORS. JOEL U. NETTENSTROM, Chicago, Ill. Filed Sept. 20, 1906. Serial No. 335,450.



1. In a device of the class described, the combination of a hinged door, a tension member secured to the inner side of the door, and door operating lever mechanism mounted adjacent to the hinged side of the door and movable into and out of engagement with such tension member and thereby with the door.

2. In a device of the class described, the combination of a hinged door, lever mechanism mounted adjacent to the hinged side of such door, and a hooked tension member secured to the door and movable into and out of engagement with such lever mechanism.

3. In a device of the class described, the combination of a rock-shaft provided with lever arms, means for connecting the lever-arms of such rock-shaft with door mechanism to be operated thereby, means for pivotally supporting such rock-shaft, and guiding mechanism mounted in engagement with the rock-shaft mechanism and provided with means for holding the same in door closing position.

4. In a device of the class described the combination of a longitudinally movable rock-shaft provided with crank or lever-arm portions, means for connecting the lever arm portions of such rock-shaft with door-mechanism to be operated thereby, and guiding mechanism having an inclined guiding surface portion in engagement with such rock shaft.

5. In a device of the class described, the combination of a plurality of hinged doors, tension members secured to a plurality of such doors, and a rock-shaft having a plurality of crank arms each movable into and out of engagement with one of such tension members.

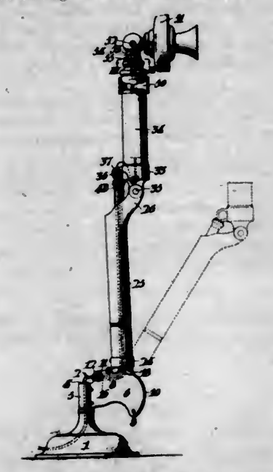
[Claims 6 and 7 not printed in the Gazette.]

885,859. TELEPHONE-STAND. WILLIAM B. OLIVER, Collingswood, N. J., assignor to Oliver Manufacturing Company, Philadelphia, Pa., a Corporation of Pennsylvania. Original application filed Sept. 13, 1906, Serial No. 334,396. Divided and this application filed Mar. 23, 1907. Serial No. 364,038.

1. A telephone support, including in combination an adjustable counter-balancing supporting means, a stem comprising a switch box carried by said supporting means, and held from horizontal rotation thereon, a switch hook mounted upon said stem and a transmitter carried by said stem and mounted to rotate with relation thereto in a substantially horizontal plane.

2. A telephone support, including in combination, a pivoted counter-balancing supporting means, a stem comprising a switch box carried by said supporting means, and held from horizontal rotation thereon, a switch hook mounted upon said stem and a transmitter carried by said stem and mounted to rotate with relation thereto in a substantially horizontal plane.

3. A telephone support, including in combination a pivoted counter-balancing supporting means, a stem comprising a switch box carried by said supporting means, and held from horizontal rotation thereon, a switch hook mounted upon said stem and a transmitter carried by said stem and mounted to rotate with relation thereto in a substantially horizontal plane, and means whereby said transmitter may be swung in a vertical plane.



4. A telephone support including in combination a pivoted counter-balancing supporting means, a stem comprising a switch box carried by said supporting means and held from horizontal rotation thereon, a switch hook mounted upon said stem, a movable head piece mounted upon said stem, for rotative movement with relation thereto, and a transmitter directly mounted on said head piece, to rotate therewith in a substantially horizontal plane.

5. A telephone support, including in combination a pivoted counter-balancing supporting means, a stem comprising a switch box carried by said supporting means, and held from horizontal rotation thereon, a switch hook mounted upon said stem, a transmitter carried by said stem and mounted to rotate with relation thereto in a substantially horizontal plane, and coöperative stops for limiting the extent of rotation of said transmitter.

[Claims 6 to 8 not printed in the Gazette.]

885,860. RESILIENT VEHICLE-TIRE. HARRY A. PALMER, Akron, Ohio. Filed May 31, 1907. Serial No. 376,693.



1. The combination of a wheel-rim, flanges adapted to be secured to the sides thereof lugs on the inner face of said flanges, a sectional resilient tire composed of resilient sections having their sides in close contact, transverse rods or rivets extending through said sections so as to engage the lugs on the inner faces of the flanges, and loose endless rings between the tire sections embracing said rods or rivets, substantially as set forth.

2. The combination in a vehicle tire of annular resilient sections having their side faces in close contact, a set of transverse rods or rivets extending through said sections, and endless annular metal rings removably inserted between the meeting faces of the resilient tire sections so as to embrace said rods or rivets, substantially as set forth.

3. The combination of a wheel-rim, a fixed metal tire

thereon, flanges removably secured to the sides of the wheel rim, a series of pairs of inwardly projecting lugs on the inner faces of said flanges, a tire composed of resilient sections the side faces whereof are in close contact, rivets or rods extending transversely through said resilient tire sections; and between the pairs of lugs on the flanges so as to be engaged thereby, and endless annular rings removably inserted between the meeting faces of the resilient tire sections so as to embrace the rods or rivets extending through the resilient tire sections, substantially as set forth.

4. The combination in a vehicle-tire of annular resilient tire sections having their side faces in close contact, a set of transverse rivets through said sections near the peripheries thereof, a set of transverse rods or rivets through the bases of said resilient sections extending a short distance outwardly beyond the outer faces of said side sections, and loose endless metal rings removably inserted between the meeting faces of said resilient sections so as to embrace the transverse rods or rivets through the bases thereof, substantially as set forth.

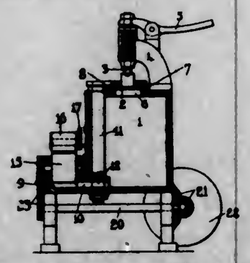
885,861. ARTIFICIAL BAIT. JOSEPH E. PEPPER, Rome, N. Y. Filed Sept. 20, 1907. Serial No. 393,763.



1. The herein described artificial bait, consisting of a cigar-shaped body having a series of laterally projecting flexible spring legs arranged along the sides of the body, and gangs of hooks at the front and rear of the bait, substantially as set forth.

2. The herein described artificial bait consisting of a cigar-shaped body, a substantially spherical head, a series of laterally projecting flexible spring legs arranged along the sides of the body, fore and aft spinners and gangs of hooks at the front and rear of the bait, substantially as set forth.

885,862. CEMENTING APPARATUS. CHARLES W. PHIPPS and WILLIAM J. STEELE, Northampton, England; said Steele assignor to said Phipps. Filed Jan. 4, 1907. Serial No. 350,749.



1. A cementing machine, comprising a stock receptacle, a trough communicating therewith, a feed opening in the said receptacle, a door and means to slide the said door over and away from the said opening respectively, a spring controlled bolt to lock the said door in its closed position and a lever to release the said bolt and unlock the door.

2. A cementing machine, comprising a stock receptacle, a trough communicating therewith, a feed opening to the said receptacle, a door; and a cam lever to actuate the said door to close and open respectively the said feed opening.

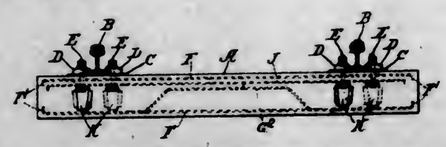
3. A cementing machine comprising a stock receptacle, a trough, a duct communicating therebetween, a valve rod extending from top to bottom and inside of the stock receptacle and having in its lower end a through opening which upon the said rod being rotated is moved either into or out of register with the said duct to permit or check the flow of cement into the said trough, and means located exterior to and at the top of the stock receptacle and connected to the said rod to rotate the latter for the purpose described.

4. A cemening machine, comprising a stock receptacle, a trough, a duct communicating therebetween, a valve to open and close the said duct, a rod connected to said valve, a feed opening to said receptacle, a door to said opening and a lever to simultaneously slide the said door away from said opening and actuate the said rod to close the said valve for the purpose described.

5. A cementing machine comprising a stock receptacle, a trough, a duct communicating therebetween, a valve to open and close said duct, a rod connected to said valve, a feed opening to the said receptacle, a door to said opening and a lever to simultaneously slide the said door to close said feed opening and actuate the said rod to open the said valve for the purpose described.

[Claim 6 not printed in the Gazette.]

885,863. CONCRETE RAILWAY-TIE. WILLIAM H. PRUYN, Jr., Chicago, Ill. Filed Oct. 29, 1906. Serial No. 340,981.



1. In a railway tie, the combination of a body part of concrete like material with inwardly projecting cup like openings on its sides beneath the rail seating part provided with holes into such openings extending from such openings upwardly through the tie and securing devices in such holes which take against the upper inner part of the cup like opening and the upper part of the base flange of the rail.

2. In a railway tie, the combination of a body part of concrete like material with inwardly projecting openings on its sides beneath the rail seating part provided with holes into such openings extending from such openings upwardly through the tie, securing devices in such holes which take against the upper part of the openings, and a metallic lining for the upper portion of said opening.

3. In a railway tie, the combination of a body part of concrete like material with inwardly projecting openings on its sides beneath the upper rail seating part provided with holes extending from such openings upwardly through the tie and securing devices in such holes which take against the upper part of the opening and the upper part of the base of the rail, and a metallic lining for said opening.

4. In a railway tie, the combination of a body part of concrete like material with inwardly projecting openings on its sides beneath the rail seating part provided with holes extending from such openings upwardly through the tie, and securing devices in such holes which take against the upper part of the opening and the upper part of the base of the rail, and a metallic lining for said hole and the upper part of the opening.

5. In a railway tie, the combination of a body part of concrete-like material with inwardly projecting openings on its sides beneath the upper rail seating part, provided with holes extending from such openings upwardly and securing devices in such holes which take against the upper part of the opening and the upper part of the base of the rail, and a metallic lining for said opening.

[Claims 6 to 12 not printed in the Gazette.]

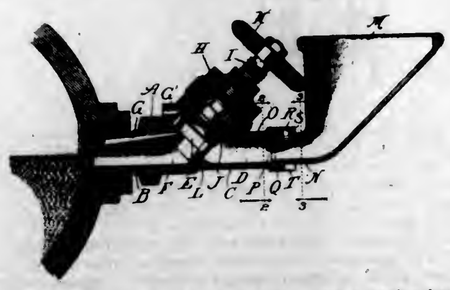
885,864. ELECTRICAL CONNECTION. HENRY R. READ, Brooklyn, N. Y. Filed Apr. 26, 1907. Serial No. 370,513.



1. A conductor for the purpose described, embodying a metallic conductor with means at one end for engagement with a binding post, said means comprising an independent member of spring wire presenting a coil a portion of which is electrically engaged on the conductor, and having an outer part forming a horizontally disposed fold merging in a reverse turn and outwardly diverted extension, the latter extending solely at the same side of the fold as the reverse turn.

2. A conductor for the purpose described, embodying a metallic conductor with means at one end for engagement with a binding post, said means comprising an independent member of spring wire presenting a coil a portion of which is electrically engaged on the conductor, and having an outer part forming a horizontally disposed fold merging in a reverse turn and outwardly diverted extension, and a bifurcated sheet metal tongue having its shank folded and clamped on the wire fold.

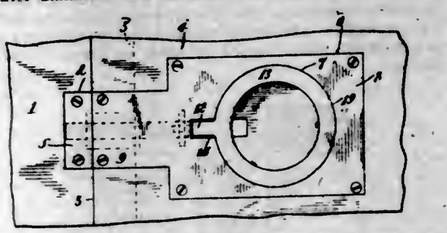
885,865. FILLING ATTACHMENT. EDWARD N. ROTH, Chicago, Ill., assignor to Egbert H. Gold, Chicago, Ill. Filed Mar. 17, 1906. Serial No. 306,604.



In a filling device, the combination with a casing having a fluid passage-way therethrough, of a partition at the end of said passage-way and closing the upper half thereof, a funnel, said funnel having a neck at substantially right angles to the funnel, said neck being rotatably connected with the casing and provided with a thickened part wedge shaped in longitudinal section which lies behind said partition when the funnel is in its upright position and which obstructs the passage from the funnel to the casing when the funnel is inverted.

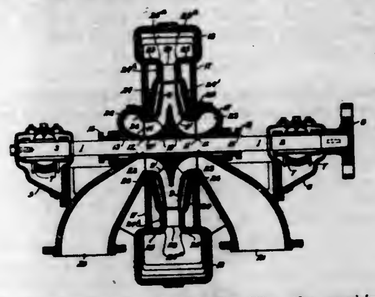
885,866. DOOR-BOLT. JOSEPH A. ROY, Montreal, Quebec, Canada. Filed Nov. 25, 1907. Serial No. 403,665.

A door latch comprising a recessed plate, an actuating member pivoted to the plate and adapted to lie in the recess, a bolt pivoted to the actuating member in such manner as to allow the pivotal point to move downwardly and rearwardly as the actuating member is raised, and a flange on the plate provided with an opening of slightly greater diameter than the bolt and adapted to guide the



bolt and to permit the downward and rearward movement of the pivotal point of the same.

885,867. CENTRIFUGAL PUMP. RUDOLF SALZER, Philadelphia, Pa., assignor to D'Olier Engineering Company, a Corporation of New Jersey. Filed May 18, 1907. Serial No. 374,388.



1. In a centrifugal pump or the like, the combination with a casing having a discharge passage therein, of an impeller, and an independent distributer, having guide vanes or ribs, secured in operative relation to said impeller by said casing, said distributer extending outwardly beyond said vanes or ribs and forming a wall of said discharge passage.

2. In a centrifugal pump or the like, the combination with a casing having a discharge passage therein, of an impeller, and an independent distributer, having guide vanes or ribs, said distributer extending outwardly beyond said vanes or ribs, and forming in effect a wall of said discharge passage.

3. In a centrifugal pump or the like, the combination with a pump casing, of an impeller, and an independent distributer supported by said pump casing, said distributer intervening between said casing and the intake of said impeller.

4. In a centrifugal pump or the like, the combination with the pump casing having a discharge passage therein, of an impeller, and an independent distributer, having guide vanes or ribs, embracing said impeller, said distributer extending outwardly beyond said vanes or ribs and forming a wall of said discharge passage.

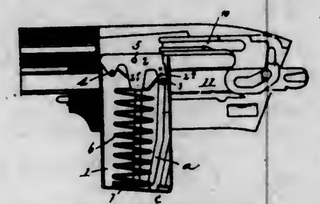
5. In a centrifugal pump or the like, the combination with the pump casing, of a discharge passage therein, an impeller, and an independent distributer embracing said impeller and supported by said pump casing at regions of approximately maximum and minimum diameters of said distributer, the maximum diameter of said impeller being greater than the minimum diameter of said distributer.

[Claims 6 to 23 not printed in the Gazette.]

885,868. MAGAZINE FOR FIREARMS. ARTHUR W. SAVAGE, Utica, N. Y., assignor to Savage Arms Company, Utica, N. Y. Filed Nov. 25, 1904. Serial No. 234,301.

1. The combination in a magazine for fire arms of a flattened tubular casing open at one end, and having

cartridge engaging lips or shoulders *d*, the annular grooves *a* and the ribs *b* and shoulders *c* of a follower having projections engaging in the grooves *a* and with the ribs *b*, and projections adapted to engage with the shoulder *c* and a spring for actuating the follower, substantially as set forth.



2. The combination in a magazine for fire arms, of a casing adapted to receive a column of cartridges, a follower arranged in the magazine having a downwardly extending part 2^a at the rear end thereof, guide grooves formed in the side walls of the magazine, and projections from the part 2^a engaging in the guide grooves, and an actuating spring also engaging with the part 2^a, substantially as set forth.

885,869. ROTATABLE DISTRIBUTING-NOZZLE. AUGUSTUS SCHMIDT, Indianapolis, Ind. Filed July 19, 1907. Serial No. 384,492.



1. A revoluble water distributing nozzle comprising a hollow globular shell provided with a plurality of water discharging slots, a hollow sleeve forming the inlet to said shell, a primary collar rigidly engaging the shell and projecting into said inlet sleeve, a secondary collar extending longitudinally through the primary collar and abutting the internal wall of the inlet sleeve, means permitting longitudinal movement between the collars, and a valve normally to close the inlet to said shell.

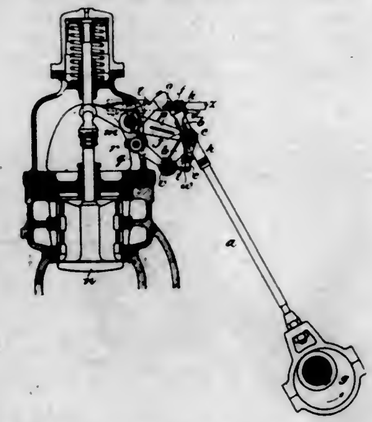
2. A revoluble water distributing nozzle comprising a hollow globular shell provided with a plurality of water discharging slots, a hollow sleeve forming the inlet to said shell, a primary collar rigidly engaging the shell and projecting into said inlet sleeve, a secondary collar extending longitudinally through the primary collar and abutting the internal wall of the inlet sleeve, means permitting longitudinal movement between the collars, means to prevent separation of the sleeve and the shell, and a valve normally to close the inlet to said nozzle.

3. A revoluble water distributing nozzle comprising a hollow globular shell provided with a plurality of water discharging slots, a hollow sleeve forming the inlet to said shell, a primary collar rigidly engaging the shell and projecting into said inlet sleeve, a secondary collar extending longitudinally through the primary collar and abutting the internal wall of the inlet sleeve, means permitting longitudinal movement between the collars, a valve normally to close the inlet to said shell, means for moving said valve to close the inlet to the nozzle, and means for securing said valve in a determined position.

4. A revoluble water distributing nozzle comprising a hollow globular shell provided with a plurality of water discharging slots, a hollow sleeve forming the inlet to said shell, a primary collar rigidly engaging the shell and projecting into said inlet sleeve, a secondary collar extending longitudinally through the primary collar and abutting the internal wall of the inlet sleeve, means permitting longitudinal movement but preventing circumferential movement between the collars, means to prevent separation of the sleeve and shell, and a valve normally to close the inlet to said shell.

5. A revoluble water distributing nozzle comprising a hollow globular shell provided with a plurality of water discharging slots, a hollow sleeve forming the inlet to said shell, a primary collar rigidly engaging the shell and projecting into said inlet sleeve, a secondary collar extending longitudinally through the primary collar and abutting the internal wall of the inlet sleeve, means permitting longitudinal movement between the collars, means to prevent separation of the sleeve and shell, a propeller arranged within the inlet sleeve and rigidly engaging and moving both longitudinally and circumferentially with the secondary collar, and a valve normally to close the inlet to said shell.

885,870. RELEASING-GEAR FOR ENGINES. RUDOLPH SCHNEIDER and PAUL G. ROESTI, Milwaukee, Wis. Filed Mar. 16, 1907. Serial No. 362,709.



1. In variable releasing gear for engines the combination of actuating and actuated members one of which has a trip block movably connected therewith, a governor and an elastic connection between the governor and said trip block, operative during the normal operation of the engine, substantially as described.

2. In variable releasing gear for engines the combination of actuating and actuated members one of which has a clutch member and a trip block movable with relation to said clutch member, a governor having an elastic connection arranged to shift said trip block while it is disengaged from said clutch member, said trip block being adapted and arranged while engaged with the other member of the releasing gear to be engaged by and held immovable with relation to the clutch member, substantially as described.

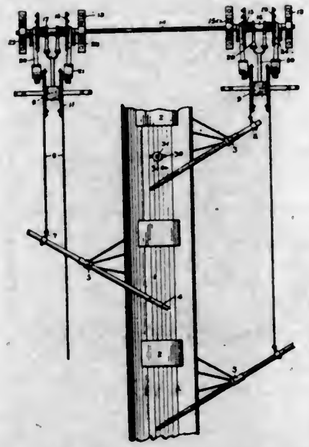
3. In variable releasing gear for engines the combination of actuating and actuated members provided with trip bearings, a trip adjusting arm or lever pivoted to one of said members, a link connection between that member and a fixed part or support, a sleeve arranged and movable axially with relation to the fixed pivot of said link connection, a governor connected with said sleeve, and a connection between said sleeve and said trip adjusting arm or lever, substantially as described.

4. In a variable releasing gear for engines the combination of actuating and actuated members, a lever fulcrumed to one of said members, a trip block carried by one arm of said lever, and a link connecting the other arm of said lever with a fixed support, substantially as described.

5. In variable releasing gear for engines the combination of an actuated member provided with a trip bearing, an actuating member comprising a reciprocating rod provided with a clutch member, a trip lever fulcrumed to said rod and having a spring arm, and a trip block attached to said spring arm adjacent to said clutch member; a link connection between said rod and a fixed support, a sleeve arranged and movable axially with relation to the fixed pivot of said link connection, a governor connected with said sleeve, and a connection between said sleeve and said trip lever, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

885,871. EXERCISING APPARATUS FOR OARSMEN. DANIEL SCANLAN, Halifax, Nova Scotia, Canada. Filed July 25, 1907. Serial No. 385,595.



1. An exercising apparatus for oarsmen, comprising a boat shell, an oarlock for the boat shell, an oar handle mounted in the oarlock, a standard, a bell crank lever pivoted to the standard, a connecting link attached, at one end, to one arm of the bell crank lever, and at the other end to the oar handle beyond the oarlock, a rocking lever pivoted to the standard, a link connecting the other arm of the bell crank lever, with one end of the rocking lever, a shaft, means for supporting the shaft, a ratchet disk loosely mounted on the shaft, rearwardly inclined ratchet teeth for the ratchet disk, a drum axially secured to the ratchet disk, a weighted lever oscillatingly mounted on the shaft and engaging the teeth of the ratchet disk, a second link connecting the outer end of the weighted lever with the other end of the rocking lever, a pulley, a cord wound on the drum and passing over the pulley, and a weight attached to the cord.

2. An exercising apparatus for oarsmen comprising a boat shell, an oarlock for the boat shell, an oar handle mounted in the oarlock, a standard at the rear of the boat shell, a bell crank lever pivoted to the standard, a connecting link attached, at one end, to one arm of the bell crank lever, and at the other end, to the oar handle beyond the oarlock, a rocking lever pivoted to the standard, a link connecting the other arm of the bell crank lever with one end of the rocking lever, a shaft, means for supporting the shaft, a ratchet disk loosely mounted on the shaft, ratchet teeth for the ratchet disk, a drum axially secured to the ratchet disk, a ratchet wheel attached to the end of the drum remote from the ratchet disk, a pawl for the ratchet wheel, a weighted lever oscillatingly mounted on the shaft and engaging the teeth of the ratchet disk, a second link connecting the outer end of the weighted lever with the other end of the rocking lever, a pulley, a cord wound on the drum and passing over the pulley, and a weight attached to the cord.

3. An exercising apparatus for oarsmen, comprising a boat shell, an oarlock for the boat shell, an oar handle mounted in the oarlock, a standard at the rear of the boat shell, a bell crank lever pivoted on the standard, a connecting link attached, at one end, to one arm of the bell crank lever, and at the other end, to the oar handle beyond the oarlock, a rocking lever pivoted to the standard, a link connecting the other arm of the bell crank lever with one end of the rocking lever, a shaft, means supporting the shaft, a ratchet disk loosely mounted on the shaft, ratchet teeth for the ratchet disk, a drum axially secured to the ratchet disk, a ratchet wheel attached to the end of the drum remote from the ratchet disk, a pawl for the ratchet wheel, a weighted lever oscillatingly mounted on the shaft and engaging the teeth of the ratchet disk, spring actuated means for flexibly holding the weighted lever in engagement with the teeth of the ratchet disk, a pulley, a cord wound on the drum and passing over the pulley and weight attached to the cord.

4. An exercising apparatus for oarsmen comprising a boat shell, oarlocks for the boat shell, oar handles mounted in the oarlocks, standards at the rear of the boat shell, bell crank levers pivoted to the standards, one bell crank lever being provided for each oar handle, connecting links, each attached at one end to one arm of the bell crank lever and at the other end to an oar handle beyond the oarlock, rocking levers pivoted on the standard, links connecting the bell crank levers with the rocking levers, a shaft, means for supporting the shaft, ratchet disks equal to the number of oar handles loosely mounted on the shaft, ratchet teeth for the ratchet wheel, drums axially secured to the ratchet disks, spacing sleeves between each pair of drums, a ratchet wheel fixed to each drum, pawls for the ratchet wheels, weighted levers oscillatingly mounted on the shaft and engaging the teeth of the ratchet disks, links connecting the weighted levers with the other ends of the rocking levers, pulleys, cords wound on the drums and passing over the pulleys, and weights attached to the cords.

5. An exercising apparatus for oarsmen comprising a boat shell, having a slot in the shell bottom disposed transversely to the length thereof, a bolt extending through the transverse slot and rockably holding the boat shell, an oarlock for the boat shell, an oar handle mounted in the oarlock, and a load moving device actuated by the movement of the oar handle.

885,872. MUFFLER. JAMES C. SCOTT, Portsmouth, Ohio. Filed Dec. 20, 1907. Serial No. 407,305.

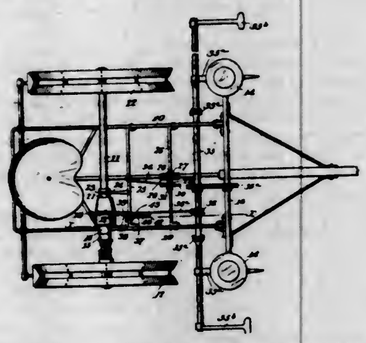


1. A muffler consisting of an elongated piece of fabric, having enlarged and rounded end portions or wings, a recess in the middle of its lower edge, and a rounded and tapering upper edge merging into the edge of the end portions, the upper rounded edge being folded to form a long roll collar and lapels, the edge of said fold being secured to

cause the ends of the muffler to remain in any crossed position in which they are placed.

2. A muffler consisting of an elongated piece of fabric, having enlarged and rounded end portions, or wings, a neck recess in the middle of its lower edge, and a rounded and tapering upper edge merging into the edge of the end portions, the upper rounded and tapering edge being folded to form a long roll collar, and lapels, the edge of said fold being secured by overedging to hold the ends or wings of the muffler in any crossed position in which they are placed.

885,873. WIRELESS CHECK-ROW PLANTER. GAILLARD F. SEEMS and GEORGE B. COPLY, Mitchellville, Iowa. Filed Apr. 29, 1907. Serial No. 370,767.



1. In a device of the class described, the combination of a rotatable axle, a rotatable operating shaft, a casing fixed to the axle, a series of arms radially movable in said casing, their outer ends being adapted to receive a belt, a pulley operatively connected with the operating shaft, a belt connecting said pulley with said arms, a cylindrically tapered guide block slidingly mounted on the axle within the casing, and means for sliding said block to give a radial movement outwardly to the said arms

2. In a device of the class described, the combination of a rotatable axle, a rotatable operating shaft, a casing fixed to the axle, a series of arms radially movable in said casing, their outer ends being adapted to receive a belt, a pulley operatively connected with the operating shaft, a belt connecting said pulley with said arms, a cylindrically tapered guide block slidingly mounted on the axle within the casing, means for sliding said block to give a radial movement outwardly to the said arms, said means comprising a combined hand lever and foot treadle, an adjusting device connecting the hand lever with the guide block, a spring actuated pawl carried by the lever, a sector to coact with the pawl, and a keeper for holding the spring actuated pawl out of engagement with the sector.

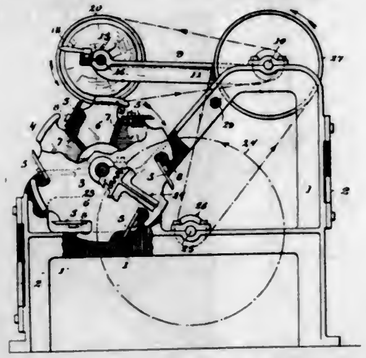
3. In a device of the class described, the combination of a rotatable axle, a rotatable operating shaft, a casing fixed to the axle, a series of arms radially movable in said casing, their outer ends being adapted to receive a belt, a pulley operatively connected with the operating shaft, a belt connecting said pulley with said arms, a cylindrically tapered guide block slidingly mounted on the axle within the casing, and means for sliding said block to give a radial movement outwardly to the said arms and means for applying yielding pressure to both the upper and lower portions of the belt.

4. In a device of the class described, the combination of a rotatable axle, a rotatable operating shaft, a casing fixed to the axle, a series of arms radially movable in said casing, their outer ends being adapted to receive a belt, a pulley operatively connected with the operating shaft, a belt connecting said pulley with said arms, a cylindrically tapered guide block slidingly mounted on the axle within the casing, and means for sliding said block to give a radial movement outwardly to the said arms, and means for applying yielding pressure to both the upper and lower portions of the belt, said means comprising a support, an arm pivoted to the support, a pulley on the arm to engage the top of the belt, a lever fulcrumed to the bottom of the support, a pulley on one end thereof to engage the lower portion of the belt, an adjustable weight on the other end of the lever, and a link connecting the weighted end of the lever with the free end of the first mentioned arm.

5. In a device of the class described, the combination of an axle, an operating shaft, a casing fixed to the axle, a series of arms extended radially through said casing, and slidingly mounted, and having forked outer ends and rounded inner ends, a guide block slidingly mounted on the axle within the casing, and having a tapered outer end portion to engage the rounded inner ends of said arms, a bell crank lever operatively connected with said sliding block, a shaft supported in front of the axle, a sleeve thereon, a foot treadle and a hand lever fixed to said sleeve, a link connecting the hand lever with the bell crank lever, a sector supported adjacent to the hand lever, a spring actuated pawl carried by the lever, and normally in engagement with the sector, a pulley operatively connected with the operating shaft, a belt connecting said pulley with the arms in the casing, and means for applying adjustably yielding pressure to the upper and lower portions of the belt.

[Claim 6 not printed in the Gazette.]

885,874. WOOD-SHAVING MACHINE. HARRY W. SELLE, Chicago, Ill. Filed Dec. 9, 1907. Serial No. 405,675.

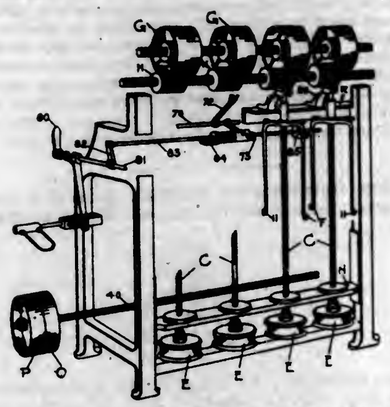


1. In a wood-shaving machine, a horizontally disposed rotary drum, knives carried by the drum, having cutting-edges parallel to said drum-axis, a horizontally disposed swinging yoke above the aforesaid drum, and a revoluble log-chucking mechanism carried by the yoke, the axis of the log-chucking mechanism being parallel to the drum-axis.

2. In a wood-shaving machine, a frame, a drive-shaft mounted therein, a horizontally disposed rotatory drum secured to the drive-shaft, knives carried by the drum, having cutting-edges parallel to the drum-axis, a shaft carried by said frame, a floating yoke pivotally mounted about the shaft, a revoluble log-chucking mechanism carried by the yoke at its free end, the axis of the log-chucking mechanism being parallel to said drum-axis, driving means for the shaft in connection with the driven shaft on which is secured the drum, and driving means for the chucking-mechanism in connection with the first named shaft.

3. In a wood-shaving machine, a horizontally disposed drum comprising a series of heads connected by strips, adjustable knife-blades, having cutting-edges parallel to the axis of the drum secured to the strips, a horizontally disposed swinging yoke above the drum, revoluble log-chucking mechanism carried by the yoke, the log-chucking mechanism being parallel to said drum-axis, and driving-means connecting the log-chucking mechanism and drum, whereby said log-chucking mechanism is rotated at a reduced speed relative to that of the drum.

885,875. STOP-MOTION. ABRAHAM G. SHIDEED, Lawrence, Mass. Filed Oct. 23, 1907. Serial No. 398,798.



1. In a stop motion for drawing boxes, a spindle, a bearing cup at the top thereof, a spindle bracket provided with a socket for the bearing cup, a rocker arm pivoted to the spindle bracket and bent at one end over the bearing cup and straight at the other end, a pivot shaft, a contact arm carried thereby which engages the straight end of the rocker arm, a counterweight carried by the pivot shaft, and a trigger arm carried by the pivot shaft, combined with a shipper arm, a shipper rod pivoted thereto and slidably supported in fixed bearings, a collar fixed to the shipper rod, and a spiral spring between said collar and one of the shipper rod bearings.

2. In a stop motion for drawing boxes, a plurality of spindles, bearing cups at the top thereof, spindle brackets each provided with a socket for a bearing cup, rocker arms straight at one end and each pivoted to a spindle bracket and bent at the other end over a bearing cup, a pivot shaft, a plurality of contact arms carried thereby each of which engages the straight end of a rocker arm, a trigger arm carried by the pivot shaft, and means whereby the belt will be thrown from the fast to the loose pulley when released by the trigger arm.

3. In a stop motion for drawing boxes, a plurality of spindles, bearing cups at the top thereof, spindle brackets each provided with a socket for a bearing cup, rocker arms straight at one end and each pivoted to a spindle bracket and bent at the other end over a bearing cup, a pivot shaft; a plurality of contact arms carried thereby each of which engages the straight end of a rocker arm, a trigger arm carried by the pivot shaft, a spring actuated shipper rod, and a collar carried thereby at such a point as to engage the trigger arm.

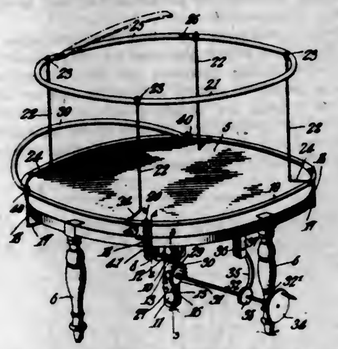
885,876. SKIRT-MARKER. REUBEN SIDEMAN, San Francisco, Cal. Filed Nov. 12, 1907. Serial No. 401,879.

1. A skirt marker including a stand, spaced marking frames secured to and adjustable vertically of the stand rods secured to the upper frame and having their lower portions off set and attached to the lower frame, and means for adjusting said frames.

2. A skirt marker including a stand, spaced marking frames of different horizontal diameters mounted on and adjustable vertically of the stand, rods secured to the lower frame and having their intermediate portions off set and their terminals threaded and passing through openings in the upper frame, nuts engaging the threaded terminals of the rods and bearing against the upper frame and means for adjusting said frames.

3. A skirt marker including a stand having spaced marking frames mounted thereon and adjustable vertically of the stand, an auxiliary frame detachably secured to and movable with one of the marking frames for marking the train of a garment and means for adjusting said frames.

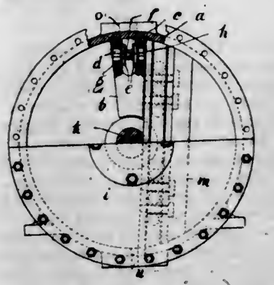
4. A skirt marker including a stand, spaced marking frames mounted on and adjustable vertically of the same, a train marking attachment carried by and movable with the lower frame, a pivoted section forming part of the upper frame, and means for simultaneously adjusting the several frames vertically of the stand.



5. A skirt marker including spaced marking frames, vertical rods connecting said frames and having their lower ends off set to form inwardly extending arms, and means operatively connected with the lower frame for adjusting both frames vertically of the stand.

[Claims 6 to 9 not printed in the Gazette.]

885,877. AIR-COMPRESSOR. JOSEPH T. SIMPSON and THOMAS LISHMAN, Durham, England. Filed Mar. 7, 1907. Serial No. 361,174.



1. An air compressor including in combination a casing having inlet and outlet passages for air, means comprising a valved radial partition for controlling the outlet passage or passages, an oscillating arm or vane working in the casing for compressing out therefrom air which is admitted thereto by way of the air inlet opening or openings, such admission of the air which is to be delivered under compression out of the casing not taking place during the delivery stroke of the arm or vane, substantially as described.

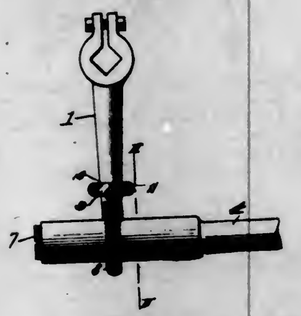
2. An air compressor including in combination a casing having inlet and outlet passages for air, means for controlling the outlet passage or passages, comprising a radial partition provided with a number of delivery valves; and an oscillating arm or vane working in the casing for compressing out therefrom air which is admitted thereto by way of the air inlet opening or openings, such admission of the air which is to be delivered under compression out of the casing not taking place during the delivery stroke of the arm or vane, substantially as described.

3. An air compressor including in combination a casing having inlet and outlet passages for air, means for controlling the outlet passage or passages, comprising a radial partition, a number of delivery valves provided on each side of said partitions, each valve on one side being coincidental with a valve on the opposite side and the co-inci-

dental valves coöperating with each other under the influence of a spring; and an oscillating arm or vane working in the casing for compressing out therefrom air which is admitted thereto by way of the air inlet opening or openings, such admission of the air which is to be delivered under compression out of the casing not taking place during the delivery stroke of the arm or vane, substantially as described.

4. An air compressor including in combination a casing having inlet and outlet passages for air; means comprising a valved radial partition for controlling the outlet passage or passages, and an oscillating arm or vane working in the casing for compressing out from the casing the air which is admitted thereto at or substantially at the end of each stroke of the oscillating arm or vane, substantially as herein described.

885,878. STEERING-ROD CONNECTION. JOHN F. SKIROW, East Orange, N. J. Filed Nov. 4, 1907. Serial No. 400,476.



1. A steering rod connection comprising two members one of which is formed with a ball and the other with a socket to receive said ball, yieldable means within the socket to retain the ball member therein, a yieldable retainer connected to the ball-carrying member and extending around the socket member whereby the two members will be held yieldingly together and said members may have a movement with respect to each other.

2. A steering rod connection comprising two members one of said members being formed with a ball and the other with a socket to receive said ball, means for yieldably holding said ball in said socket and permitting it to have a longitudinal movement therein, and a spring retainer connected to the ball-carrying member and extending around the socket member and serving to draw said two members toward each other while at the same time permitting the ball-carrying member to have a longitudinal movement in the socket member.

3. A steering rod connection comprising two members one of said members being formed with a ball or enlargement and one with a socket to receive said ball, yieldable means within the socket to permit longitudinal movement of the ball therein, a coil spring connected at its ends on opposite sides of the ball-carrying member and extending around the socket member and serving to draw said members toward each other, whereby said spring will serve to hold the socket member to the ball-carrying member while at the same time permitting an independent movement of the ball-carrying member in the socket member.

4. A steering rod connection comprising two members one of said members being formed with a ball or enlargement and one with a socket to receive said ball, yieldable means within the socket to permit longitudinal movement of the ball therein, a coil spring connected at its ends on opposite sides of the ball-carrying member and extending around the socket member and serving to draw said members toward each other whereby said spring will serve to hold the socket member to the ball-carrying member while at the same time permitting an independent movement of the ball-carrying member in the socket member, and means for detachably connecting the ends of said spring to the ball-carrying member.

5. A steering rod connection comprising two members, one of which is formed with a ball and the other with a socket to receive said ball, a yieldable retainer connected to the ball-carrying member and extending around the socket member, whereby the two members will be yieldingly held together and said members will have a movement with respect to each other.

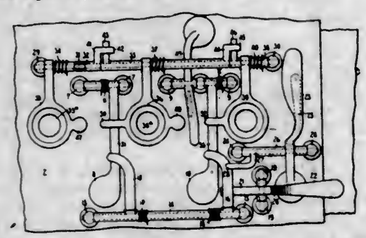
[Claim 6 not printed in the Gazette.]

885,879. DETACHABLE BUTTON. LILLIAN Y. SMITH, Parker, Kans. Filed Dec. 8, 1906. Serial No. 346,861.



In a button, the combination with the head comprising a back plate of spring material, a front plate secured at its edges to said back plate and having an opening, and two parallel pairs of bearings opposite said opening; of two straight prongs with pointed front ends having their rear portions entering said opening and bent at right angles into extensions, both prongs and extensions standing in a single plane, a rectangular cross bar secured to each extension and having one flat face contacting with said spring plate, and trunnions projecting from the outer ends of the cross bar and journaled in said bearings.

885,880. CLARINET. FRANK W. STAHL, Denver, Colo. Filed Apr. 12, 1904. Serial No. 202,755.



1. In a clarinet or similar instrument, the combination of a plurality of covers some of which are normally closed, a finger piece, means mounted independently of said finger piece for opening a plurality of said normally closed covers when the finger piece is actuated, and means for closing certain of said normally closed covers after said finger piece has been actuated and before it is released.

2. In a clarinet or similar instrument, the combination of a plurality of covers some of which are normally closed, a finger piece, means mounted independently of said finger piece for opening three of said normally closed covers when the finger piece is depressed, and means for closing one of said normally closed covers while said finger piece is held depressed.

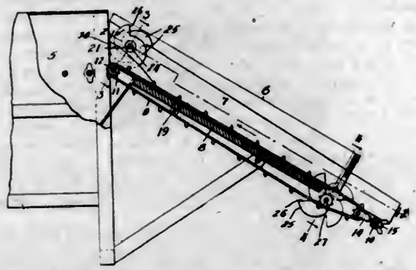
3. In a clarinet or similar instrument, the combination of a plurality of covers including normally-closed F-natural, E-flat and D-flat covers, a finger piece, means for opening the F-natural, E-flat and D-flat covers when the finger piece is actuated, and means for closing the F-natural cover while said E-flat and D-flat covers remain open.

4. In a clarinet or similar instrument, the combination of a plurality of covers including F-natural and E-flat covers, a finger piece, a restraining member normally closing said F-natural and E-flat covers and operative when said finger piece is actuated to permit of the opening of the F-natural and E-flat covers, rings, means connected with said rings and adapted to close said F-natural and E-flat covers after said finger piece has been actuated to allow them to open and before said finger piece is released, and means for opening said covers.

5. In a clarinet or similar instrument, the combination of a plurality of covers including normally-closed F-natural, E-flat and D-flat covers, a finger piece, means for opening the F-natural, E-flat and D-flat covers when the finger piece is actuated, and means whereby the F-natural and E-flat covers may be closed while said D-flat cover remains open.

[Claims 6 to 14 not printed in the Gazette.]

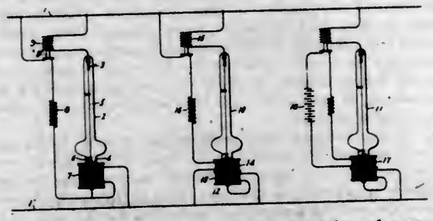
885,881. FEED-REGULATOR FOR CORN-SHELLERS. WILLIAM J. STECKEL, Joliet, Ill., assignor to Joliet Manufacturing Company, Joliet, Ill., a Corporation of Illinois. Filed May 28, 1906. Serial No. 318,984.



1. The corn sheller feeder consisting of a trough and a plurality of independent elevating chains moving longitudinally of said trough, in combination with a transverse rotating shaft arranged on the trough and elevated above the path of the corn, projections mounted on said shaft in planes between each pair of chains, and adapted to straighten crosswise ears, such projections having curved outer edges of gradually increasing diameter, and means for actuating the shaft in a direction contrary to the feed.

2. The corn sheller feeder consisting of a trough and a plurality of independent elevating chains moving longitudinally of said trough, in combination with a transverse rotating shaft arranged on the trough and elevated above the path of the corn, regulating wings or devices mounted on the shaft in planes between each pair of chains and adapted to reach and straighten crosswise ears, means for operating said shaft in a direction contrary to the feed, and stationary guide plates at each side of each regulating device, such guide plates extending upward above the plane of the path of the regulating devices.

885,882. STARTING DEVICE FOR MERCURY-LAMPS. CHARLES P. STEINMETZ, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Oct. 17, 1904. Serial No. 228,661.



1. In an electrical system, the combination of a vapor electric device having an initially conductive path of high resistance therein, means for supplying current therethrough, a movable member to start an arc in said device, electromagnetic means traversed by said current and disposed for operating said movable member, and means for abnormally increasing the effectiveness of said electro-magnetic means at starting.

2. In an electrical system, the combination of a mercury arc tube, means for supplying current thereto to form an arc, a movable member to start said arc, electro-magnetic means traversed by all the current flowing through said tube and disposed for operating said movable member, and means for abnormally increasing the ampere turns of said solenoid during the interval of starting.

3. In an electrical system the combination of a mercury vapor tube, means for supplying current thereto, a movable member within said tube, a solenoid for operating said movable member, and an auxiliary conducting path for supplying current to said solenoid independent of that transmitted by said vapor tube.

4. In an electrical system, the combination of a mercury vapor tube, means for supplying current thereto, a movable member within said tube, a solenoid for operating said movable member, an auxiliary conductive path for supplying current to said solenoid independent of that transmitted by said vapor tube, and means for automatically opening said auxiliary path when the current in said vapor tube has attained substantially its normal value.

5. In an electrical system, the combination of a mercury vapor tube, a plunger within said tube, a solenoid for operating said plunger, and a resistance device connected in series with said solenoid and receiving current independent of that transmitted by said vapor tube.

[Claims 6 to 11 not printed in the Gazette.]

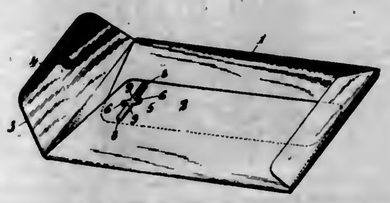
885,883. SNAP-HOOK. WALLACE C. STILES, West Boylston, Mass., assignor to Mills Woven Cartridge Belt Company, Worcester, Mass., a Corporation of Massachusetts. Filed June 12, 1907. Serial No. 378,530.



1. A snap-hook comprising a shank or stem, a bill and a loop all formed of a single piece of wire, and a spring-tongue secured at one end by coiling therearound a portion of the wire forming the hook proper, said spring-tongue being notched where it is engaged by said coils.

2. A snap hook comprising a shank or stem, a bill and a loop all formed of a single piece of wire, and a spring tongue consisting of a separate piece of spring metal secured at one end by coiling therearound a portion of the wire forming the hook proper.

885,884. ENVELOP-FASTENER. EDWIN B. STIMPSON, New York, N. Y., assignor to United States Envelope Co., Worcester, Mass. Filed Oct. 2, 1906. Serial No. 337,042.



An envelop fastener comprising a body portion of zig-zag formation, the ends of which have integral eyelets produced upon and projecting from them for attachment to the envelop and the central portion of which is adapted to bear upon the surface of the envelop and is provided with a flap-engaging prong extended at an angle thereto and adapted to be bent to project from the envelop in position for engagement with the closing flap thereof.

885,885. SCALE-BEARING SUPPORT. WALTER F. STIMPSON, Detroit, Mich. Filed Dec. 8, 1906. Serial No. 346,879.

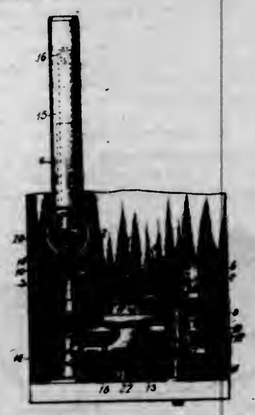


1. The combination with a scale bearing block, of a supporting platform therefor, having downwardly projecting spaced lugs, and a pivotal support for said platform extending between said lugs and beneath said platform and held from displacement thereby.

2. The combination with a scale bearing block, of a supporting platform therefor having upwardly extending portions for embracing the ends of the block and apaced downwardly projecting portions, a loop embracing the sides of said block, and extending beneath the platform between said spaced downwardly projecting portions and an inward projection on the side of said loop above the block, for the purpose described.

3. The combination with a scale bearing block, of a supporting platform therefor struck up from sheet metal having upwardly extending end portions, and downwardly extending notched side portions and a bent loop having its ends extending inwardly at the bottom, said loop embracing the block with the ends extending beneath the platform engaging the notched downwardly extending side portions and an inwardly extending lug on said loop above the bearing block, for the purpose described.

885,886. HYDROCARBON-GAS GENERATOR. ALVA D. SUMNER, Chicago, Ill., assignor to Acorn Brass Manufacturing Company, Chicago, Ill. Filed May 28, 1906. Serial No. 319,160.



1. In a gas generator, the combination of a continuously ascending generator coil, a member supporting the lower end of said coil and having a liquid-fuel receiving-chamber provided with independent inlet and discharge valves, said discharge valve supplying fuel to said generator, a mixing chamber at a higher level than said coil and receiving the hydro-carbon vapor therefrom, a burner beneath said generator and a supply pipe connecting said mixing chamber with said burner.

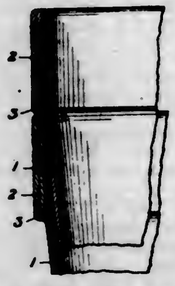
2. In a gas generator, the combination of a continuously ascending generator coil, a member supporting the lower end of said coil and having a liquid-fuel receiving-chamber provided with independent inlet and discharge valves, said discharge valve supplying fuel to said generator, a mixing chamber at a higher level than said coil and receiving the hydro-carbon vapor therefrom, a burner beneath said generator, means for preheating said generator and a supply pipe connecting said mixing chamber with said burner.

3. In a gas generator, the combination of a member having a chamber for receiving liquid hydro-carbon, independent inlet and discharge valves for said chamber, a generator adjacent to and supplied from said discharge valve, said generator comprising a continuously ascending pipe coiled into a substantially laterally closed frustum of a cone, a mixing chamber having its lower end above the level of the upper generator coil and adapted to receive the combustible vapor therefrom, a heating burner beneath said generator, and a supply pipe connecting an intermediate point of said mixing chamber with said burner.

4. A gas generator comprising a continuously ascending pipe coiled into a substantially laterally closed frustum of a cone, a mixing chamber having its lower end above the level of the upper generator coil and adapted to receive the combustible vapor therefrom, a heating burner beneath said generator and adapted to discharge a substantially continuous sheet of flame against the inside of the lowest coil, and a supply pipe connecting said mixing chamber with said burner.

5. A gas generator comprising a continuously ascending pipe coiled into a substantially laterally closed frustum of a cone, a mixing chamber having its lower end above the level of the upper generator coil and adapted to receive the combustible vapor therefrom, a heating burner beneath said generator, and a supply pipe connecting said mixing chamber with said burner.

885,887. MILK-RECEPTACLE. ELMER Z. TAYLOR, London, England, assignor to Mono Service Vessels, Limited, London, England. Filed Apr. 12, 1907. Serial No. 367,872.



1. A paper vessel having its upper margin folded inwardly and downwardly to form a reinforced upper marginal portion, said inwardly folded margin being unconnected with the body of the vessel said portion being forced outwardly at a point adjacent the free edge of said downwardly folded margin to form an annular projection on the outside of the vessel, said edge engaging said shoulder on its inner surface.

2. A paper vessel having its upper margin folded inwardly against its inner face to form a reinforced marginal portion, said inwardly folded margin being unconnected with the body of the vessel said portion being forced outwardly to form an annular projection on the outside of the vessel at a point adjacent the free edge of said inwardly turned portion so as to effect engagement between said edge and said shoulder to brace the latter, said reinforced portion being forced outwardly sufficiently to bring its inner face substantially flush with the inner face or surface of the body of the vessel whereby said reinforced portion may serve to take up the strain imposed by nested vessels.

3. A paper conical vessel having its upper margin folded inwardly against its inner face to form a reinforced marginal portion, said inwardly folded margin being unconnected with the body of the vessel said portion being forced outwardly to form an annular projection or shoulder on the outside of said vessel and in a manner to cause the reinforced portion to be vertically disposed, said outwardly forced portion being formed so as to bring the free edge of said inwardly folded portion into engagement with said shoulder whereby said reinforced portion may serve to take up the compressive strain imposed by nested vessels.

885,888. CONCAVE VEHICLE-TIRE. ARTHUR G. THOMSON, San Francisco, Cal. Filed Oct. 29, 1906. Serial No. 341,079.

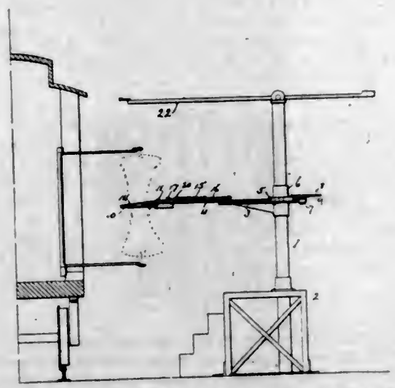


1. A wheel tire composed of a plurality of separable independent counterpart sections, each section comprising a body having a tongue projecting from one edge thereof, and a tongue of equal length but of less thickness projecting from the opposite edge, the said tongues constituting a part of the sides of the tire with the end of one tongue at a reverse incline to the end of the other tongue.

2. A wheel tire composed of a plurality of separable independent counterpart sections telescoping each other, each section embodying an integral tread portion, sides, and rim engaging portion, the ends of the said sections being on reverse inclines preventing the mutual approach of the sections after their adjustment, and the treads of said sections having integral ridges forming a wearing surface for the tire, substantially as described.

3. A wheel tire composed of a plurality of separable independent counterpart sections, each section embodying an integral tread, sides, and a rim engaging portion, said rim engaging portion having divided flange ridges arranged to meet co-incidently, the ends of the sections being cut at reverse incline to each other and the treads having ridges upon the periphery thereof forming a wearing surface for the tire, substantially as described.

885,889. APPARATUS FOR CATCHING AND DELIVERING MAIL-BAGS AND THE LIKE. BENJAMIN L. TOQUET, Westport, Conn. Filed Feb. 10, 1908. Serial No. 415,158.



1. A device of the character described, having a support, a freely rotatable catching arm mounted thereon and means for shortening the radial length of said arm during its rotation.

2. A device of the character described, having a support, a rotatable catching arm mounted thereon and means for shifting the axis of rotation of said catching arm during its rotation.

3. A device of the character described, having a support and a catching arm, in combination with a rotatable carrier for said arm slidably connected thereto and mounted on said support and cam means for sliding said arm with relation to its carrier during their rotation.

4. A device of the character described, having a support and a catching arm, in combination with a carrier for the latter mounted on the former and means for sliding said arm horizontally on its carrier.

5. A device of the character described, having a support, a cam thereon, a carrier freely rotating on said support, a catching arm slidably secured to said carrier and a bearing for said arm on said cam whereby the axis of rotation of said arm is shifted lengthwise thereof during its revolution, substantially as described.

[Claims 6 to 10 not printed in the Gazette.]

885,890. LAMP-SOCKET. WILLIAM C. TREGONING, Cleveland, Ohio. Filed Aug. 12, 1907. Serial No. 388,128.



1. A lamp socket of insulating material having a cross wall with lateral openings on opposite sides of said socket and located front and rear respectively of said wall, a lamp receiving shell within said socket, separate conducting members front and rear of said cross wall and seated within said lateral openings, and a central screw and insulating disk jointly securing all said parts together.

2. An insulating socket member for lamps and the like having opposite recesses through the wall thereof and a recess in its rear face and a cross portion bridging said rear recess, in combination with current conductors fixed in said recesses and constructed at their outer ends to engage the line wires, a conducting shell within said socket bearing upon one of said conductors to hold it in place, an insulating disk within said shell and a single fastening and conducting member adapted to secure said parts in their respective places within and upon said socket member.

3. A socket for lamps and the like constructed of insulating material and provided with opposite openings through the wall thereof, and having a part circular recess within its inner end, conductors fixed in said openings having their outer portions constructed to fasten the conducting wires thereto and one of said conductors formed to seat within said recess, a conducting shell in said socket in electrical contact with one of said conductors, an insulating disk within said shell, and a conducting screw centrally of said socket member adapted to fasten said disk and shell and both said conductors upon said socket.

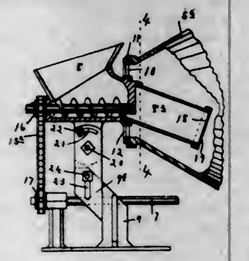
4. In electric lamps, an insulating socket of circular formation having protecting ribs on its outside and lateral openings at the end of said ribs open to the interior of the socket, in combination with conductors mounted in said openings having their outer ends terminating below the outer face of said ribs and adapted to make connection with the circuit wires, a shell bearing upon one of said conductors, an insulating member within said shell, and a single fastening member securing said parts to the other conductor and the socket and providing a central contact for the lamp.

5. An electric lamp socket having conducting members for the line connections and a metallic shell in said socket engaged with and bearing upon one of said conductors and

a central screw and insulating member fixing said shell and said conductor in place, said screw being threaded through the other of said conductors, which serves as a nut for said screw and secures said parts jointly together.

[Claims 6 and 7 not printed in the Gazette.]

885,891. FEEDING DEVICE FOR SULFUR-BURNERS. ANDREW TROMBLEE, Glens Falls, N. Y., assignor to Glens Falls Machine Works, Glens Falls, N. Y. Filed July 3, 1907. Serial No. 381,990.



1. The combination in a feeding device of the character described of a hopper, a melting reservoir extended from the hopper into the burner and means in the bottom of the hopper to move the contents into the reservoir, substantially as set forth.

2. The combination in a feeding device of the character described of a hopper mounted on a stand, an inclined reservoir extension from the hopper adapted to be introduced into the burner and a conveyer arranged in the bottom of the hopper, substantially as set forth.

3. The combination in a feeding device of the character described of a hopper, a tubular inclined melting reservoir, a conveyer in the hopper, a closing plate for the opening in the burner all mounted on a stand for coöperation with a rotary sulfur burner, substantially as set forth.

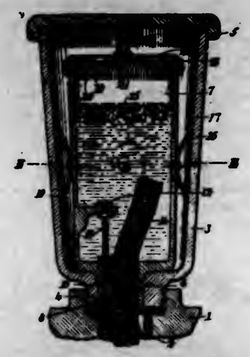
4. The combination in a feeding device of the character described of a hopper, an angularly arranged reservoir extension adapted to be projected into the burner, an angularly adjustable stand on which the hopper and extension are mounted and a conveyer in the hopper for moving the contents into the extension, substantially as set forth.

885,892. HORSE-POWER. JOSIAH S. TUTTLE, Bellevue, Ohio, assignor to Ohio Cultivator Company, Bellevue, Ohio, a Corporation. Filed Sept. 3, 1907. Serial No. 390,999.



In a horse-power, the combination of a vertical shaft, a cap on the upper end of the same having diametrically opposite bosses, a sweep pivoted upon one of said bosses, a brace pivoted on the other of said bosses, a sleeve secured on the free end of the sweep and provided with a vertically-disposed tubular boss, the outer end of the brace being secured to the side of said sleeve, a standard fitted in the tubular boss and carrying a ground-engaging device at its lower end, a draft-bar pivotally mounted on the standard, and a whiffletree carried by the outer end of said draft-bar.

885,893. OIL-CUP. IRVING S. VAN LOAN, New York, N. Y. Filed Aug. 9, 1905, Serial No. 273,328. Renewed June 3, 1907. Serial No. 377,042.



1. In combination, an outer cup having an opening therein, an inner cup having a spout received in said opening, and resilient members carried by one of said cups and engaging the sides of said inner cup to support the same.

2. In combination, an oil cup having an opening therefrom, a wedge block mounted in said opening and adapted to jam a wick passing through said opening, and means for adjusting said wedge-block longitudinally.

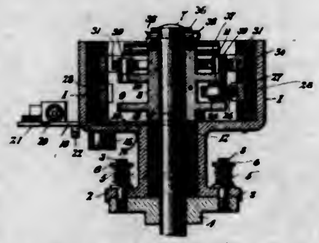
3. In combination, an oil-cup having an opening to receive a wick; a member adapted to be reciprocated through the opening; said member having one face next the wick and an opposite face in wedging contact with the side of the opening to move the member, when reciprocated, to and from the wick, said member being confined to be non-rotary in the opening relative to the wick; and means for reciprocating said member.

4. In combination, an oil cup having an opening to receive a wick, a member mounted to be reciprocated lengthwise of the wick in the opening and when so reciprocated to move laterally with greater or less pressure against the wick, and packing material between said member and the sides of the opening in the oil cup, and means for reciprocating said member.

5. An oil cup adapted to be received into a grease-receptacle on a machine, said oil cup having an opening for a wick to pass through and carrying resilient members adapted to engage the interior of the grease-receptacle to support the cup therein.

[Claim 6 not printed in the Gazette.]

885,894. IGNITION SYSTEM FOR EXPLOSION-ENGINES. RICHARD VARLEY, Englewood, N. J., assignor to The Autocoil Company, a Corporation of New Jersey. Filed Nov. 17, 1906. Serial No. 343,833.



1. In an ignition system for explosion engines, a shaft having a sleeve angularly adjustable thereon, a plurality of rollers carried by said sleeve, and metallic conductors concentric with said shaft in the path of said rollers, certain of said conductors being connected into the primary circuits of a plurality of induction coils to periodically interrupt such circuits when the engine is running and centrifugal means coöperating with the remaining conductor to permanently interrupt the circuits when the engine is at rest.

2. In an ignition system for explosion engines, a sleeve having a cam integral therewith and a pair of flanges, a finger journaled between said flanges, a roller on said finger, segments in the path of said roller, a circuit breaking lever in the path of said cam, and circuits including said lever and said conductors and the primaries of a plurality of induction coils.

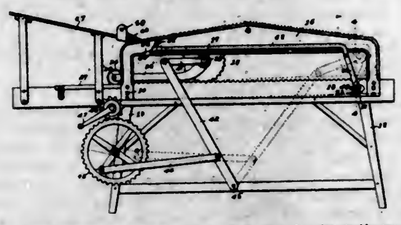
3. In an ignition system for explosion engines, a shaft having a sleeve angularly adjustable thereon, a cam integral with said sleeve, a circuit breaking lever in the path of said cam, a pair of flanges integral with said sleeve adjacent said cam, a finger having a roller carried by said flanges, a plurality of segments in the path of said finger, and a plurality of induction coils having their primaries in circuit with said lever and said segments.

4. In an ignition system for explosion engines, a plurality of non-vibrator induction coils each having a primary winding, said primary windings having one common terminal, a circuit controller having a plurality of segments respectively connected to the other terminals of said primary windings, a permanently grounded arm rotatably engaging said segments, a circuit opening device including a cam-impelled lever connected to the circuit of said common terminal, a dynamo and a battery, and means for connecting the potential terminal of either to said circuit-opening device, centrifugal means for grounding the battery when the engine is running, and a separate push button for grounding the battery whenever desired, said battery being normally ungrounded.

5. In an ignition system for explosion engines, a sleeve having a plurality of integral flanges, one of said flanges being toothed or crowned, fingers pivoted between adjacent flanges and spring impelled with respect to said sleeve, means in the path of said fingers for opening and closing the primary circuits of a plurality of induction coils, and a collar having a toothed or crowned edge coöperating with the toothed or crowned edge of said flange for fixing said sleeve in different phase relations to the cycle of the engine.

[Claims 6 and 7 not printed in the Gazette.]

885,895. PRINTING-PRESS. AUGUSTUS W. VAUGHN, Adel, Iowa. Filed Dec. 1, 1903. Serial No. 183,414.



1. In a printing press, a frame, a track pivotally mounted upon which the impression roll of the press is designed to be mounted, an arm pivotally attached to said track, having a slot near its lower end, a pin in said frame and extending into said slot, so arranged that as the upper end of the arm is moved from its inner limit of movement outwardly, the track will be moved upwardly, and means attached to the upper end of said arm for drawing it from its outer limit of movement inwardly for lowering the track from its raised position.

2. In a device of the class described, a frame, a track having two rails therein pivotally attached to said frame, a rack on each of said rails, a shaft having an impression roll mounted thereon, a pinion wheel at each end of said shaft and outside of said impression roll, each pinion being in mesh with the rack nearest it, an arm mounted on each end of said shaft, ink spreading rollers mounted between said arms, a ball bearing roller on each end of said shaft and outside of said arms, and a frame attached to each of said rails and in engagement with the ball bearing roller nearest it, and means for operating said shaft.

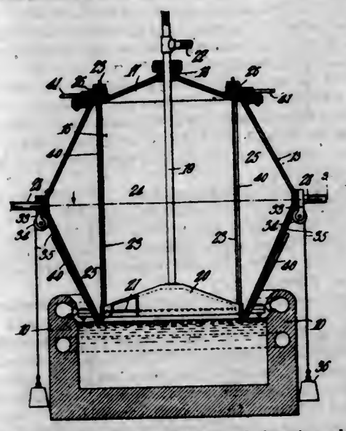
3. In a printing press, a track, a form bed mounted between the rails of the track, an impression roll, a shaft upon which the roll is mounted, frames mounted above the ends of the shaft and attached to the track designed to prevent the shaft from vertical movement, means designed to be operated by the shaft for swinging the outer end of the track upwardly and downwardly and means for operating the shaft.

4. In a printing press, a pivotally mounted track, an impression roll designed to move longitudinally of the track, frames connected with the track and designed to maintain the impression roll against vertical movement as it is operated longitudinally of the track, means designed to be operated by the impression roll for swinging the free end of the track upwardly and downwardly.

5. In a printing press, a pivotally mounted track, an impression roll designed to move longitudinally of the track, frames mounted outside of the track and designed to maintain the impression roll against vertical movement as it is operated longitudinally of the track, means designed to be operated by the impression roll for swinging the free end of the track upwardly and downwardly, a shaft upon which the impression roll is mounted, a ball bearing roller mounted on each end of the shaft and in engagement with the frame adjacent to it.

[Claims 6 and 7 not printed in the Gazette.]

885,896. METHOD OF AND APPARATUS FOR DRAWING SHEETS OF GLASS. HUGO J. WALTER, Kane, Pa. Filed June 26, 1907. Serial No. 380,932.



1. That improvement in the art of drawing sheets of glass, which consists in engaging and holding the full length of the edges of the sheet from inward movement during and after the drawing operation by means applied exteriorly of said sheet.

2. That improvement in the art of drawing sheets of glass which consists in mechanically supporting the edges of the sheets and reducing the atmospheric pressure at the edges, and in a line parallel with the two surfaces of the sheet independently of any variations in pressure on said surfaces.

3. That improvement in the art of drawing sheets of glass which consists in applying a support exteriorly to the edges of the sheet as the drawing operation progresses, and continuously holding such supports from inward movement for the full length of the sheet during and after the drawing operation.

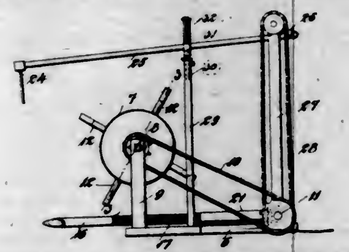
4. In a glass drawing machine, means for creating a vacuum at the opposite edges of the sheet during the drawing operation independently of any variations in pressure

on the surfaces of the sheet, the suction force thereby created tending to spread the sheet on lines parallel with the surfaces thereof.

5. In a glass drawing machine, means for continnously supporting the edges of the sheets during the drawing operation, and continuous flanges of a length equal at least to the full length of the sheet and holding said supporting means from inward movement.

[Claims 6 to 22 not printed in the Gazette.]

885,897. FLAX-HARVESTER. IRA W. WEEKS, Richmond, Mich. Filed Dec. 30, 1907. Serial No. 408,494.



1. The combination of a shaft, a cylinder rotatable thereon and having openings in its sides, rows of pincers carried by the cylinder and extending through said openings and adapted to open and close to grip and lift plants, and cams on the shaft, engageable by the inner ends of the pincers to open and close the latter.

2. The combination of a shaft, a carrier rotatable thereon, gripping devices mounted in rows on said carrier and arranged to open and close in a plane parallel to the axis of the carrier, the devices having inner ends in proximity to the shaft, and means located on the shaft to open and close said gripping devices.

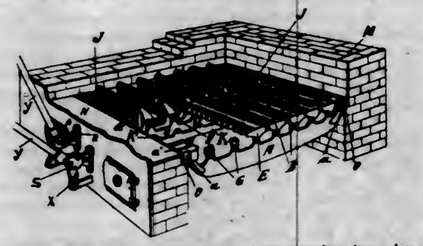
3. The combination of a set of rollers arranged in pairs and extending lengthwise and pointed at the front ends to admit plants therebetween, and a rotary carrier located above said rollers, and gripping devices mounted on said carrier and having operating means, to grip and pull said plants.

4. In a plant pulling machine, the combination of a pair of pulling rollers extending parallel to the line of travel of the machine and in substantially horizontal position, said rollers being beveled at the front end, the bevels being opposite on the respective rollers, and on one side only thereof.

5. The combination of a set of pairs of horizontal pulling rollers extending lengthwise, a rotary carrier located over the rollers and extending crosswise and having gripping and pulling devices mounted thereon, and an endless belt conveyer located behind the rollers and the carrier and traveling laterally and arranged to receive material from both and to deliver the same at one side.

[Claims 6 and 7 not printed in the Gazette.]

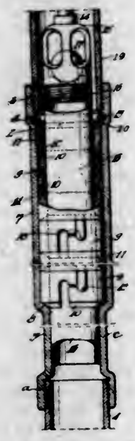
885,898. GRATE. HARRY W. WHELAN, Chicago, Ill. Filed July 10, 1907. Serial No. 383,037.



1. In a grate, the combination of supporting bars having bearings and curved ribs projecting under said bearings, and grate bars having trunnions mounted in the bearings and lugs projecting under said ribs.

2. In a rocking grate, the combination with a bracket having a notch in the top, a shaking lever pivoted on the bracket and connected to the grate bars and having a notch adapted to register with said notch when the grate bars are level, and a latch pivoted to the bracket and arranged to fall in said notches.

885,899. PUMP FOR OIL-WELLS. ARTHUR G. WILLARD, Bakersfield, Cal., assignor to Bakersfield Iron Works, a Corporation of California. Filed May 8, 1905. Serial No. 259,257.



1. An oil pump comprising a working barrel, a hollow plunger therein, a sucker rod connected with the said plunger, a standing valve and cage, a valve and cage at the upper end of said plunger, alternate split and solid packing rings upon said plunger at the upper end of said working barrel, said split rings having their upper edges beveled, and said solid rings having inwardly-tapering sockets in their lower ends and adapted to fit over and compress said split rings, a portion of the split extending horizontally of the split rings and leaving a pocket at the end of a longitudinal portion of the split, and means for holding said packing rings in fixed relation to said working barrel.

2. An oil pump comprising a working barrel having an expanded upper portion, alternate split and solid metallic packing rings mounted in said expanded portion, the solid rings fitting over and embracing the upper edges of the split rings and adapted when pressure is applied to the rings to cause the split rings to contract, a plunger working through said rings and working barrel, valve cages, a sucker rod, means for holding said packing rings in fixed relation to said working barrel, said split rings having pockets for preventing solid matter passing through the split portion of said split rings.

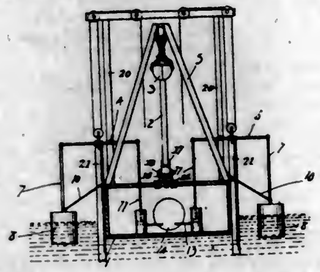
3. A pump provided with a split packing-ring, and means for causing said ring to contract, the split in said ring comprising longitudinal cuts connected by a horizontal cut, said horizontal cut being arranged with relation to a longitudinal cut to leave a pocket at the end of said longitudinal cut.

4. A deep well oil pump comprising a working barrel and plunger, elastic and inelastic packing rings alternately arranged in said barrel, the inelastic rings being above and tending to compress the elastic rings around the plunger, and elastic means at the top for retaining said rings.

5. A pump provided with a split packing ring, the split in said ring comprising longitudinal cuts connected by a horizontal cut, said horizontal cut being arranged with relation to a longitudinal cut to leave a pocket at the end of said longitudinal cut.

[Claims 6 to 16 not printed in the Gazette.]

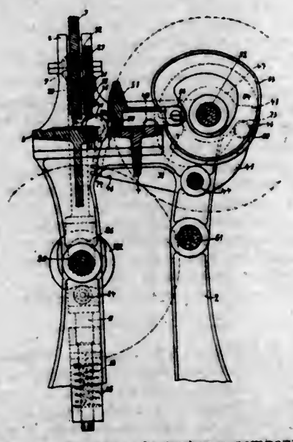
885,900. MEANS FOR UTILIZING WASTE POWER IN DREDGES. ROBERT M. WILSON, San Francisco, Cal. Filed May 21, 1907. Serial No. 374,957.



1. In an apparatus of the character described, the combination with the hull of a dredger, and a boom thereon adapted to swing to a side of the dredger, and means for carrying a load at the end of said boom, a device supported at the side of the dredger independently thereof, and means carried by the dredger and movable therewith as it rocks transversely with the swinging movement of the boom, said means co-acting with said device to generate power, substantially as described.

2. In an apparatus of the character described, the combination with the hull of a dredger, and a boom thereon adapted to swing to a side of the dredger, and means for carrying a load at the end of said boom, a device supported at the side of the dredger independently thereof, and means carried by the dredger and movable therewith as it rocks transversely with the swinging movement of the boom, said means co-acting with said device to generate power, and means for storing the power so generated, substantially as described.

885,901. APPARATUS FOR MANUFACTURING COMPOUND PLATES OR TABLETS. MAX WINKELSTRÖTER, Hanover, Germany. Filed Apr. 30, 1907. Serial No. 371,173.



1. In apparatus for manufacturing a compound plate or tablet, a stamp for holding and releasing a compound plate or tablet, means for raising and lowering said stamp as desired, an oscillatory folding bar for bending the rim of a plate, when held by the stamp, and means for rotating said bar 180° forwardly and backwardly, and comprising a toothed wheel and a segment meshing with said toothed wheel and means for intermittently operating said parts, in combination with a grooved bar for curving the bent rim, and means for advancing and retracting said grooved bar.

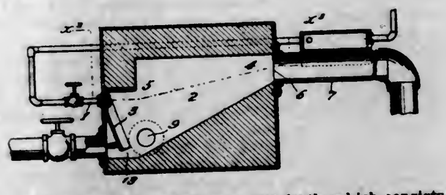
2. In apparatus for manufacturing a compound plate or tablet, a stamp for holding and releasing a compound plate or tablet, means which include cams, rolls and rods for pressing said stamp upon the compound plate or tablet, a bar flexibly connected with said stamp, a separate bar for bending the rim of a plate when held by the stamp, means for rocking said second-named bar forwardly and backwardly, a pair of cams operating with said bending bar, and engaging means carried by the bar flexibly connected with the stamp as aforesaid, a grooved bar for curving the rim when bent by the bending bar, and means for advancing and retracting said grooved bar.

885,902. CHEMICAL-MIXING ATTACHMENT FOR HOSE. BENJAMIN F. WOODING, Denver, Colo. Filed Jan. 23, 1905. Serial No. 242,261.



A device for mixing soluble material with fluid, consisting of a chamber provided with an unobstructed interior surface and having an inlet opening at one extremity, an exit opening at the opposite extremity, and a nozzle connected with the exit extremity thereof and extending beyond the chamber in alinement with the latter, the inlet extremity being surrounded by a nipple adapted to be connected with a conduit, the forward extremity of the chamber or that adjacent the nozzle being provided with a concavo convex disk projecting interiorly or in the direction opposite the discharge from the nozzle, the chamber being provided with a soluble substance consisting of pieces of globular shape whereby clogging of the mixing chamber is prevented.

885,903. METHOD OF PRODUCING GAS. EDWARD H. AMET, Phœnix, Ariz. Ter., assignor to International Amet Company, Phœnix, Ariz. Ter., a Corporation of Arizona Territory. Filed Jan. 21, 1907. Serial No. 353,385.



1. The method of producing gas set forth, which consists in dissociating gas-producing material by the direct heat of the flame of its own combustion while in motion and in flame form without breaking up by impingement, then extinguishing the flame, and then associating and combining said elements in the form of a fixed combustible gas, said operation being continuous and without varying the supply of the gas-making material or interrupting the initial flame and flow of the gaseous substances.

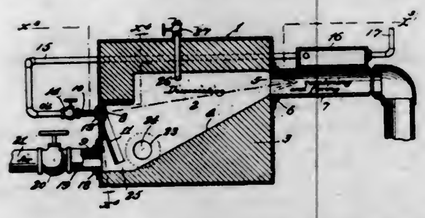
2. The method of producing gas which consists in continuously dissociating the elements of a hydrocarbon in the presence of a flame and air, extinguishing the flame, intermingling said elements, and combining the same, gradually decreasing the temperature and producing a fixed gas substantially as set forth.

3. The method of producing gas which consists in continuously supplying to a chamber a sheet of inflowing air

and continuously supplying carbonaceous material to the top of such sheet and igniting the same, thereby suspending said material and products thereof in the chamber in a state of combustion; withdrawing the resultant products from the chamber without interrupting such suspension and then arresting the combustion.

4. The method of producing gas which consists in continuously supplying to a chamber a sheet of inflowing air, and continuously supplying carbonaceous material to the top of such sheet and igniting the same, thereby suspending said material and products thereof in the chamber in a state of combustion; withdrawing the resultant products from the chamber without interrupting such suspension then arresting the combustion, and then holding the products in combination until the residual heat has effected the fixing of the gas.

885,904. APPARATUS FOR PRODUCING GAS. EDWARD H. AMET, Phœnix, Ariz. Ter., assignor to International Amet Company, Phœnix, Ariz. Ter., a Corporation of Arizona Territory. Filed Jan. 21, 1907, Serial No. 353,384. Renewed Feb. 4, 1908. Serial No. 414,269.



1. A gas-making apparatus comprising a tapering chamber, oil and air inlets at the larger end of said chamber, the former being above the latter, an oil-spreader between said inlets, a contracted outlet at the smaller end of the chamber, and a flue to receive the products from said contracted outlet and hold the elements thereof in intimate relation for the purpose of combining the same to form fixed gas.

2. A tapering dissociating chamber, the floor of which slopes upwardly toward the smaller end, means for supplying air and hydrocarbonaceous substances at the larger end of said chamber, a contracted outlet at the smaller end of said chamber, and a narrow combining tube leading directly from said outlet.

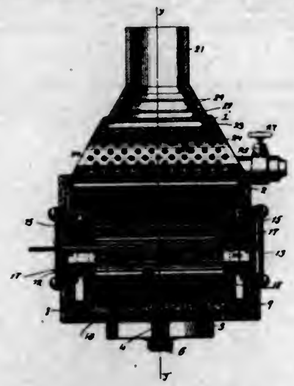
3. A refractory chamber having a sloping floor, means for supplying heat-producing combustibles at one end of said chamber, a contracted outlet at the other end to form a flame extinguisher, and a narrow combining tube to hold the extinguished products for a period in close relation in the presence of their residual heat produced by the flame in the chamber, said tube leading directly from the outlet and being adapted to pass the resultant products onward as a fixed gas.

4. The gas apparatus set forth comprising a dissociating chamber having a contracted outlet at one end, means for supplying carbonaceous substances to the chamber at the other end, means for supplying a sheet of air to the chamber below the carbonaceous substance, and a combining tube or flue leading directly from the contracted outlet, said chamber being unobstructed from inlet to outlet, said outlet being of such size relative to the chamber as to extinguish the flame of the products of the chamber, and said tube or flue being of such proportions as to confine the gases under their residual heat until a fixed gas results.

5. A gas apparatus provided with a combining tube, a dissociating chamber having at one end an extinguisher formed by said combining tube at its connection with the dissociating chamber and leading directly from such end, and also having an upwardly-inclined floor leading to said extinguisher, and means for supplying combustibles to the chamber at the lower end of said floor.

[Claims 6 to 10 not printed in the Gazette.]

885,905. CARBURETER. SYLVESTER G. AVERELL, New York, N. Y. Filed Apr. 28, 1906. Serial No. 314,133.



1. In a carbureter, a casing for containing liquid hydrocarbon, a hollow rotary capillary screen receiving in its interior the air to be carbureted, partly immersed in said hydrocarbon and having the interstitial area of its unimmersed portion mechanically unobstructed, an air inlet to the interior of said screen and an escape duct receiving carbureted air from the whole unimmersed periphery of said screen; the combined area of the interstitial openings in the said unimmersed portion of the screen being greater than that of said air inlet whereby the velocity of the air passing through said screen is decreased.

2. In a carbureter, a casing for containing liquid hydrocarbon, a rotary cylindrical capillary screen partly immersed in said hydrocarbon, and having an air inlet in its end for admitting air directly to its interior and a duct having an enlarged inlet and constructed directly to receive from said screen the air flow passing through the whole interstitial area of the unimmersed portion thereof; the combined area of the interstitial openings in the said unimmersed portion of the screen being greater than that of said air inlet whereby the velocity of the air passing through said screen is decreased.

3. In a carbureter, a casing for containing liquid hydrocarbon, a rotary shaft therein, heads on said shaft having air inlet openings, a cylindrical capillary screen carried by said heads and partly immersed in said hydrocarbon, and a duct constructed to receive directly from said screen the air flow passing through the whole interstitial area of the unimmersed portion thereof.

4. In a carbureter, a casing for containing liquid hydrocarbon, a rotary vessel having a foraminated circumferential wall entering said liquid and an open foraminated tube seated at its extremities in opposite walls of said casing and disposed above said vessel and between said vessel and an outlet in said casing.

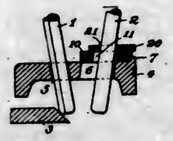
5. In a carbureter, a casing for containing liquid hydrocarbon, a rotary vessel having a foraminated circumferential wall entering said liquid, an open foraminated tube seated at its extremities in opposite walls of said casing, a second foraminated tube extending into said casing and closed at its inner end, and a valve in said tube controllable outside of said casing.

[Claims 6 to 10 not printed in the Gazette.]

885,906. ELECTRIC-ARC LAMP. HEINRICH BECK, Frankfort-on-the-Main, Germany, assignor to Beck Flaming Lamp Company, Canton, N. Y., a Corporation of New York. Filed Nov. 16, 1906. Serial No. 343,739.

1. In an electric arc lamp, an electrode, a frame having an aperture through which the electrode passes, said aperture of greater diameter than the electrode so as to permit lateral movement of the latter, and means for sealing the aperture, comprising a plurality of superimposed plates supported by the frame and apertured for the passage of

the electrode through them, one of said plates partially sealing the aperture in the frame and another partially sealing the aperture in the plate below it, each of said plates being free to slide by the lateral movement of the electrode.



2. In an electric arc lamp, an electrode, a frame having an aperture through which the electrode passes, said aperture of greater diameter than the electrode so as to permit lateral movement of the latter, and means for sealing the aperture, comprising a plurality of superimposed plates supported by the frame and formed with apertures of successively reduced diameter, one of said apertures being approximately of the diameter of the electrode and another of greater diameter than the same and of lesser diameter than the aperture in the frame, each of said plates being free to slide by the lateral movement of the electrode.

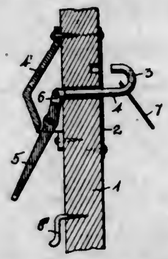
3. In an electric arc lamp, an electrode, a frame having an aperture through which the electrode passes, said aperture of greater diameter than the electrode so as to permit lateral movement of the latter, and means for sealing the aperture, comprising a plurality of superimposed plates supported by the frame and formed with apertures of successively reduced diameter, one of said apertures being approximately of the diameter of the electrode and another of greater diameter than the same and of lesser diameter than the aperture in the frame, each of said plates being free to slide by the lateral movement of the electrode, and a stop projecting from the frame in the path of movement of one of said plates.

4. In an electric arc lamp, a pair of electrodes having relative lateral movement, an apertured frame through which both electrodes pass, and means adapted to seal one of the apertures in the frame, comprising a first plate snugly fitting one of the electrodes, and a second plate intermediate the first plate and the aperture in the frame and loosely fitted to said electrode, said plates being free to slide by the lateral movement of the electrode.

5. In an electric arc lamp, an apertured frame, an electrode adapted to be fed through the same, and a plurality of sliding frames having apertures of progressively decreasing diameters through which the electrode also passes, said plates free to be moved by the electrode, and cooperating to seal the aperture in the frame.

[Claim 6 not printed in the Gazette.]

885,907. CHECK-LOCK FOR CARS. HENRY S. BOUCHER, Glade, Pa. Filed Sept. 9, 1907. Serial No. 392,028.



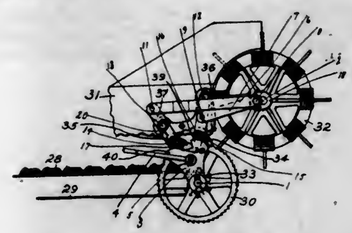
1. In combination with a car, a locking member having its outer end curved inwardly, arranged to work through one side thereof, an operating lever pivoted within the car and attached at one end to the inner end of the locking member and a catch arranged in the car in position to engage the free end of the lever.

2. In combination with a car, a locking member in the form of a hook extending through one side thereof, a casing arranged within the car and attached to said side in position to receive the inner or shank end of the locking member, an operating lever pivoted to the casing and connected at one end to the inner end of the locking member, and a catch arranged in the car in position to engage the free end of the lever.

3. In combination with a car having an aperture in one side, a plate apertured at two points, said plate being arranged on the outer face of the apertured car in position to have one of its apertures register with that of said side, a locking member comprising a straight body portion designed to extend through the aperture of the apertured side of the car and through the registering aperture of said plate, and an outer curved end portion designed to extend through the other aperture of said plate, a casing attached to the inner face of the apertured side of the car in position to receive the inner end of the locking member, an operating lever pivoted within the car and connected at one end to the inner end of the locking member, and a catch arranged in the car in position to engage the free end of the lever.

4. In combination with a car having an aperture in one side, a plate apertured at two points, said plate being arranged on the outer face of the apertured side of the car in position to have one of its apertures register with that of said side, a locking member comprising a straight body portion designed to extend through the aperture of the apertured side of the car and through the registering aperture of said plate, and an outer curved end portion designed to extend through the other aperture of the plate, an operating lever pivoted within the car and connected at one end to the inner end of the locking member, and a catch arranged in the car in position to engage the free end of the lever.

885,908. MANURE-SPREADER. EUGENE BUSWELL, Waterloo, Iowa. Filed Aug. 19, 1907. Serial No. 389,174.



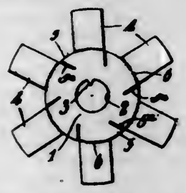
1. In a manure-spreader, the combination of a spreader-box having a beater-drum secured on a rotatable shaft at one end thereof, a movable apron in said box, a shaft provided with means for driving said apron, a ratchet-wheel on one end of said apron-shaft, a crank secured to the beater-drum-shaft, connecting-rods pivoted to said crank and to levers, said levers being fulcrumed to said spreader-box, pawls pivoted to said levers and adapted to alternately engage and separate from said ratchet-wheel to exercise a continuous driving-contact therewith.

2. In a manure-spreader, the combination of a spreader-box having a beater-drum secured on a rotatable shaft at one end thereof, a movable apron in said box, a shaft provided with means for driving said apron, a ratchet-wheel on one end of said apron-shaft, a crank secured to the beater-drum-shaft, connecting-rods pivoted to said crank, levers fulcrumed to said spreader-box and pivoted to said connecting-rods and to pawls, pawls adapted to alternately engage and separate from said ratchet-wheel to exercise a continuous driving-contact thereon, and means for regulating the drop of said pawls whereby the speed of said apron may be varied at will.

3. In a manure-spreader, the combination of a spreader-box having a beater-drum secured on a rotatable shaft at one end thereof, a movable apron in said box, a shaft provided with means for driving said apron, a ratchet-wheel

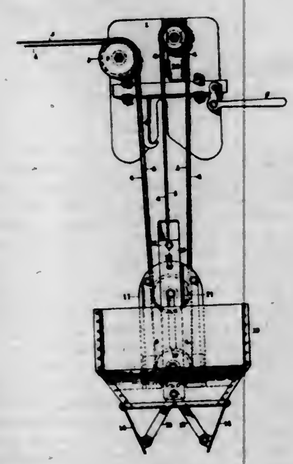
on one end of said apron shaft, a crank secured to said beater-drum-shaft, connecting-rods pivoted to said crank, levers fulcrumed to said spreader-box and pivoted to said connecting-rods, pawls pivotally connected to said levers and adapted to alternately lift and then engage the teeth of said ratchet-wheel to exercise a continuous driving-action thereon, contact-blocks adapted to vary the action of said pawls on said ratchet-wheel so as to cause them to skip a desired number of teeth thereon at each driving-contact, and means for adjustably setting said contact-blocks in a desired position to vary the action of said pawls on said ratchet-wheel.

885,909. NUT-LOCK. TOM CASEY, Frankfort, Ky., assignor of one-half to James A. Taylor, Waco, Ky. Filed Aug. 13, 1906. Serial No. 330,397.



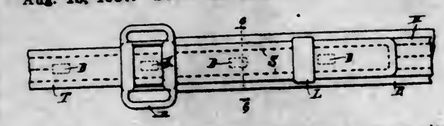
A nut lock comprising a washer provided with a bolt opening having an inwardly projecting lug, and with a plurality of radial wings weakened at the periphery of the washer by scorings arranged concentric with the bolt opening, the washer being incised along and in alinement with one edge of each of the wings forming thereby on each of the adjacent wings an approximately triangular prong.

885,910. HOISTING-BUCKET. CLARK CHASE, Fall River, Mass. Original application filed Sept. 24, 1906, Serial No. 335,874. Divided and this application filed Mar. 16, 1907. Serial No. 362,635.



In a tub provided with an outlet and means for opening and closing said outlet; a dumping sheave mounted in the tub; a dumping rope made fast to the tub and in engagement with said sheave; a bail movably mounted in said tub and operatively connected to said means for opening and closing said outlet; a hoisting sheave mounted in said bail; and a hoisting rope made fast to the bail and in engagement with said hoisting sheave.

885,911. HARNESS. ALEXANDER M. CRAIG, Rome, N. Y., assignor to Rome Saddlery Hardware Manufacturing Co., Rome, N. Y., a Corporation of New York. Filed Aug. 13, 1907. Serial No. 388,357.



1. A multiple-strand wire trace having cross pieces uniting said strands and serving as stops and means adapted to be connected to the hames for engaging said stops to vary the working length of the trace.

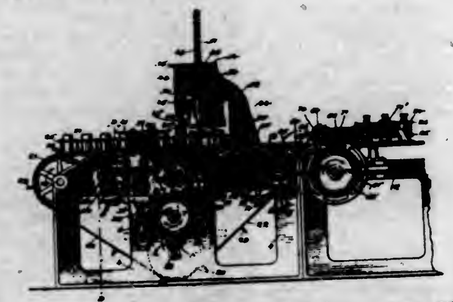
2. A multiple-strand wire trace having cross pieces uniting said strands and serving as stops for trace adjusting devices and consisting of sheet metal strips wrapped about the strands and connected thereto as by soldering or brazing.

3. A multiple-strand wire trace having cross pieces uniting said strands and serving as stops for trace adjusting devices and consisting of sheet metal strips wrapped about the strands and connected thereto by soldering or brazing and a reinforcing and filling strip wrapped about the cross strip between the strands and united by soldering or brazing to the cross strip and strands.

4. In a harness, the combination with a hame tug, of a buckle hinged thereto by its cross piece and a tongue for the buckle rigidly fixed to the hame tug and a multiple-strand wire trace having metal cross pieces joining the strands at intervals to form stops for said tongue.

5. In a harness, the combination with a hame tug, of a buckle hinged thereto by its cross piece and a tongue for the buckle rigidly fixed to the hame tug and a multiple-strand wire trace having cross pieces uniting the strands at intervals for engagement with said tongue and having a covering of leather with openings on the inner side, through which the tongue may pass into engagement with said cross pieces.

885,912. BOTTLE-HANDLING APPARATUS. HENRY J. CHILTON, Chicago, Ill. Filed Mar. 26, 1906. Serial No. 308,158.



1. In a bottle handling apparatus, the combination with a suitable main frame, of a conveyer mechanism for moving crates of bottles along said frame, step by step, means operating automatically for washing the interiors of the bottles during an early part of their progress through the machine and while in an inverted position, and automatic mechanism for reversing the crates at the end of their travel.

2. In a bottle handling apparatus, the combination with a suitable supporting frame, of a conveyer mechanism, means for actuating the conveyer mechanism, one or more bottle holders moving with the conveyer, take-off mechanism operating to automatically withdraw the bottles from the holder or holders and to restore them to their original seats therein, and scrubbing mechanism arranged to wash the sides of the bottles while supported by the take-off mechanism.

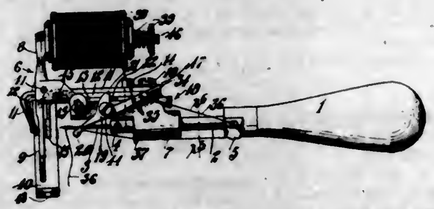
3. In a bottle handling apparatus, the combination with a suitable main frame, of a conveyer mechanism, bottle holding crates actuated by said conveyer mechanism and wherein the bottles are arranged in rows extending transversely to the direction of movement of the conveyer, means for actuating the conveyer mechanism step by step distances corresponding to the distance between rows of bottles, take-off mechanism operating to automatically withdraw a row of bottles from a crate while the latter is in register with said take-off mechanism and to restore them to their original seats therein, and scrubbing mechanism associated with said take-off mechanism and operating upon the exteriors of the bottles while supported in the take-off machanism.

4. In a bottle handling apparatus, the combination with a suitable main frame, of a conveyer mechanism, crates actuated by said conveyer mechanism and in the initial part of their travel arranged with the bottles inverted, means for actuating said conveyer step by step, automatically advancing and retracting brushes arranged to pass into each group of bottles, scrub the latter and withdraw as they are brought into register by the conveyer, automatically advancing and retracting take-off mechanism operating to shift the bottles bodily out of the crate and return them to position therein, and scrubbing mechanism associated with the take-off mechanism and operating to wash the exteriors of the bottles while supported by the take-off mechanism.

5. In a bottle handling apparatus, the combination with a suitable supporting frame and a conveyer traveling thereon, of a series of crates carried by said conveyer, mechanism for subjecting the bottles to treatment during their travel with the conveyer, a reciprocatory reversing basket mounted in proximity to the conveyer and adapted to remove the crates bodily from the conveyer and reverse them and suitably timed automatic means operating to actuate said reversing mechanism.

[Claims 6 to 9 not printed in the Gazette.]

885,913. SEWING-AWL. CHARLES A. CONNAN, Los Angeles, Cal., assignor of one-half to Abram A. Greenwood, Los Angeles, Cal. Filed Jan. 4, 1906. Serial No. 294,494.



1. An awl comprising a handle 1, a shank 2 and a machine needle 3 fastened by a projecting screw 4, said awl being also provided with a thread eyelet 5; a frame 6 provided with a bearing 7 in which the shank 2 works, and also provided with a spool-standard 8 and a stitching-plate 9; a pivot stud 10 screwed into the frame 7; a slotted looper lever 11 having a looper 32, a slotted loop-spreading lever 12 having a loop, spreader 33, and a slotted feeding lever 13, all pivoted on the stud screw 10; an actuating stud 14 screwed into the shank 2 and extending through the slots 15, 16, and 17 of the looper lever, loop-spreading lever and feeding lever respectively; a pressure spring 18 engaging the feeding lever 13, a pressure-releasing lever 19 provided with an arm 20 to be engaged by a needle-holding screw 4, said lever being provided with an arm 21; said feeding lever 13 being provided with a lug 22 to be engaged with said arm 21 to retract the feeding lever against the pressure of the spring 18, said feeding lever 13 being also provided with a cam projection 25 to be engaged by the stud 14 for operating the feeding lever against the force of spring 18.

2. A sewing awl provided with a needle and a frame, a pivot carried by said frame, a slotted looper lever, a slotted loop-spreading lever and a slotted feeding lever superimposed upon each other and all mounted on said pivot to turn thereon, and a shank working in the frame and provided with a stud extending through the slots of said levers.

3. A sewing awl provided with a frame and needle, a slotted looper lever, a slotted loop-spreading lever and a slotted feeding lever pivoted to the frame, a pressure-releasing lever pivoted to the frame and arranged to operate the feeding lever, a spring for the feeding lever, and a shank provided with a stud for operating said slotted levers and provided with another stud to operate the pressure-releasing lever.

4. An awl comprising a handle, a shank and a machine needle, said awl being also provided with thread-guiding means, a frame having a bearing in which the shank works, and also having a spool-standard and a stitching plate; a pivot stud on the frame; a slotted looper lever, a slotted loop-spreading lever, and a slotted feeding lever, all pivoted on the pivot stud; an actuating stud on the shank and extending through the slots on the looper lever, loop-spreading lever and feeding lever respectively, a pressure spring engaging the feeding lever, a pressure releasing lever to retract the feeding lever against the pressure of the spring, said feeding lever being provided with a cam projection to be engaged by the stud for operating the feeding lever against the force of the spring.

5. The combination with an awl having stitch-forming mechanism, of the feeding lever 13 having slot 17, cam projection 25, lug 22, and notch 29; stud 14; pressure-releasing lever provided with arm 21, and spring 18 fixed at one end and engaging said notch at the other end.

885,914. REVERSIBLE TAPPING-CHUCK. JOSEPH A. DALTON, Pawtucket, and ELLIOTT D. THOMPSON, Central Falls, R. I.; said Dalton assignor to said Thompson. Filed June 17, 1907. Serial No. 379,446.



1. In an implement of the class described, a stock having means at one end for connection to the drive mechanism and with an upper drive gear rotative upon the other end and provided with upper and lower clutch faces, a clutch member rotative with said stock and movable longitudinally thereon and adapted to be coupled with and uncoupled from the clutch face of said upper drive gear, a tap socket, a lower drive gear rotative upon said tap socket and provided with an upper clutch face, a collar carried by said tap socket and operating between

said drive gears and provided with clutch faces in its opposite sides adapted to be alternately engaged with the clutch faces of said gears, and a gear engaging said upper and lower gear.

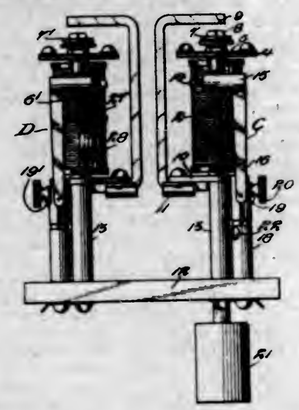
2. In an implement of the class described, a stock having means at one end for connection to the drive mechanism and with an upper drive gear rotative upon the other end and provided with upper and lower clutch faces, a clutch member rotative with said stock and movable longitudinally thereon and adapted to be coupled with and uncoupled from the clutch face of said upper drive gear, a tap socket, a lower drive gear rotative upon said tap socket and provided with an upper clutch face, a collar carried by said tap socket and operating between said drive gears and provided with clutch faces in its opposite sides adapted to be alternately engaged with the clutch faces of said gears, a housing in which said stock is rotatively disposed and in which said tap socket is slidably and rotatively disposed, and a gear mounted for rotation in said housing and engaging said upper and lower drive gears.

3. In an implement of the class described, a stock having means at one end for connection to the driving mechanism and with an upper drive gear rotative upon the other end and having a lower clutch face, a tap socket, a lower drive gear rotative upon said tap socket and provided with an upper clutch face, a collar carried by said tap socket and operating between said drive gears and provided with clutch faces at its opposite sides adapted to be alternately engaged with the clutch faces of said gears, a housing in which said stock is rotatively disposed and in which said tap socket is slidably and rotatively disposed, and a gear mounted for rotation in said housing and engaging said upper and lower drive gears.

4. In an implement of the class described, a stock having means at one end for connection to the driving mechanism and with an upper drive gear rotative upon the other end and provided with upper and lower clutch faces, said stock having guide-keys and longitudinal slots adjacent to said upper drive gear, a clutch member having a clutch face adapted to be engaged with the adjacent clutch face of said upper drive gear and provided with channels slidably engaging said guideways, a transverse pin extending through said clutch member and likewise through the slots in said stock, a tap socket, a lower drive gear rotative upon said tap socket and provided with an upper clutch face, a collar carried by said tap socket and operating between said drive gears and provided with clutch faces in its opposite sides adapted to be alternately engaged with the clutch faces of said gears, a gear engaging said upper and lower gears, and a rod extending through said tap socket and into said stock and connected to said transverse pin.

5. In an implement of the class described, a stock having means at one end for connection to the driving mechanism and with an upper drive gear rotative upon the other end and provided with upper and lower clutch faces, said stock having longitudinal guide-channels and longitudinal slots adjacent to said upper drive gear, a clutch member having a clutch face adapted to be engaged with the adjacent clutch face of said upper drive gear and provided with guide-keys slidably engaging said guide-channels, a transverse pin extending through said clutch member and likewise through the slots in said stock, a tap socket, a lower drive gear rotative upon said tap socket and provided with an upper clutch face, a collar carried by said tap socket and operating between said drive gears and provided with clutch faces in its opposite sides adapted to be alternately engaged with the clutch faces of said gears, a housing in which said stock is rotatively disposed and in which said tap socket is slidably and rotatively disposed, a gear mounted for rotation in said housing and engaging said upper and lower drive gears, a spring operating to maintain said clutch member yieldably in operative position relative to said upper drive gear, and a rod operating through said tap socket and connected to said transverse pin.

885,915. BUSY-SIGNAL APPARATUS. CHARLES J. ERICKSON, Chicago, Ill., assignor to Automatic Electric Company, Chicago, Ill., a Corporation of Illinois. Filed Nov. 12, 1906. Serial No. 343,029.



1. An interrupter or buzzer for producing an interrupted current of a relative high rate vibration, and a second interrupter or buzzer for interrupting the said current at a relatively low rate of vibration.

2. The combination of an interrupter or buzzer of a relatively high rate of vibration, another interrupter or buzzer of a relatively low rate of vibration, and means by which the two interrupters coöperate to produce an interrupted high frequency alternating current.

3. An interrupter or buzzer, a second interrupter or buzzer, circuits for said interrupters or buzzers, and means by which the second buzzer interrupts the current of both circuits.

4. A plurality of current interrupters or buzzers of different rates or periods of vibration, and means by which one buzzer interrupts the current of another.

5. In an apparatus of the character set forth, the combination of a primary winding, a secondary winding, means for producing a vibratory current in the primary, and means for interrupting the vibratory current of the primary, to produce a pulsating alternating current in the secondary.

[Claims 6 to 8 not printed in the Gazette.]

885,916. BALE-TIE-MAKING MACHINE. WILLIAM D. FERRIS, Sterling, Ill. Filed Mar. 6, 1907. Serial No. 360,913.

1. In a machine for making wire bale ties, means for producing a completely closed eye at one end of the tie wire and means for forming said eye into predetermined shape: the said means operating successively in the order named.

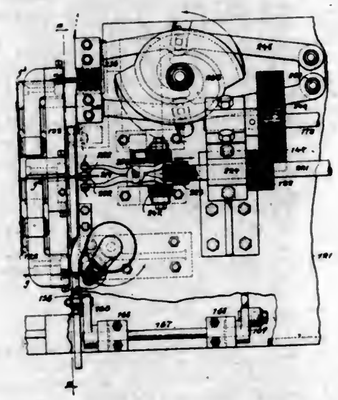
2. In a machine for making wire bale ties, means for producing a completely closed eye at one end of the tie wire and means for subjecting said closed eye to lateral compression to change its shape: the said means operating successively in the order named.

3. In a machine for making wire bale ties, means for bending over the end of a tie wire, means for twisting together the bent over end and standing part to form a completely closed eye, and means for subjecting said closed eye to lateral compression to change its shape: the said means operating successively in the order named.

4. In a machine for making wire bale ties, means for producing a completely closed eye at one end of the tie wire, means for holding said eye in position, and means for laterally compressing said eye into predetermined shape.

5. In a machine for making wire bale ties, means for producing a completely closed eye at one end of the tie wire, means for holding said eye in position, means for laterally compressing said eye into predetermined shape, and jaws moving in the plane of said eye and constructed to compress said eye into predetermined shape.

[Claims 6 to 62 not printed in the Gazette.]



885,917. BALE-TIE. WILLIAM D. FERRIS, Sterling, Ill. Filed Mar. 6, 1907. Serial No. 360,914.



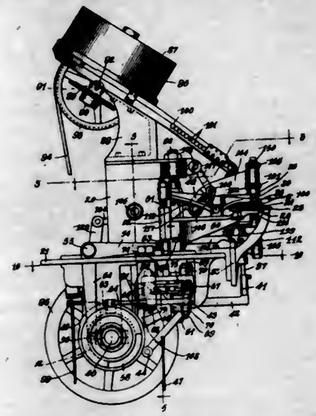
In a wire bale-tie crosshead, a loop formed by twisting together the doubled over end and the standing portion of the tie wire and having both of its parts in the same plane, a bend in said loop located between the extremity thereof and the twist, a hook formed in one of said parts and at said bend, the other of said parts being straight from the bend to the extremity of the loop, and both parts being in substantially close contact from said extremity for a distance toward the hook.

885,918. LIFE-BELT APPARATUS. JACK FOCKETYN, Antwerp, Belgium. Filed June 1, 1907. Serial No. 376,860.



A life-belt or buoy consisting of two floatable-cushion-shaped members each having a straight upper plane and a swelled lower plane for increasing the surface to be acted upon by water, straps connected with said members for firmly fitting the same upon the shoulders and upper part of the body of a wearer, and lateral connecting supports for passing under the arms of a wearer, the whole arranged to maintain a person in a vertical position in the water.

885,919. LACING-HOOK-SETTING MACHINE. WARREN F. FRASER, Dorchester, Mass., assignor to Fraser Machine and Manufacturing Co., a Corporation of Massachusetts. Filed Nov. 17, 1906. Serial No. 344,137.



1. In a machine for setting lacing hooks in the upper of a boot or shoe, a tilting frame, a raceway thereon, a carrier pivotally supported on said tilting frame and adapted to hold a lacing hook, and mechanism to feed a lacing hook along said raceway and onto said carrier, the axis of rotation of said carrier extending parallel to the longitudinal median line of the shank of a lacing hook thereon, whereby, when said carrier is rocked, it may be disengaged from said lacing hook, after the same has been set in said upper.

2. In a machine for setting lacing hooks in the upper of a boot or shoe, a raceway, a tilting frame, a carrier pivotally supported on said tilting frame and adapted to hold a lacing hook, mechanism to feed a lacing hook from said raceway to said carrier, an anvil pivotally supported on said tilting frame, and instrumentalities adapted to move said lacing hook carrier toward and away from said anvil, whereby said lacing hook may be clenched against said anvil.

3. In a machine for setting lacing hooks in the upper of a boot or shoe, a raceway, a tilting frame, a carrier supported on said tilting frame and adapted to hold a lacing hook, mechanism to feed a lacing hook from said raceway to said carrier, an anvil pivotally supported on said tilting frame, and mechanism to move said anvil and tilting frame relatively to each other, whereby said carrier clenches said hook against said anvil.

4. In a machine for setting lacing hooks in the upper of a boot or shoe, a raceway, a tilting frame, a carrier pivotally supported on said tilting frame and adapted to hold a lacing hook, mechanism to feed a lacing hook from said raceway to said carrier, an anvil pivotally supported on said tilting frame, instrumentalities adapted to move said lacing hook carrier toward and away from said anvil, whereby said lacing hook may be driven through said upper and clenched therein against said anvil, and means to move said carrier away from said lacing hook.

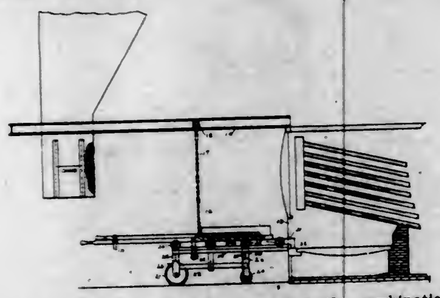
5. In a machine for setting lacing hooks in the upper of a boot or shoe, a raceway, a tilting frame, a carrier pivotally supported on said tilting frame adjustable relatively thereto and adapted to hold a lacing hook, and mechanism to feed a lacing hook from said raceway onto said carrier.

[Claims 6 to 34 not printed in the Gazette.]

885,920. FURNACE-CHARGING APPARATUS. FRANK B. GOLDEY, Collingdale, Pa. Filed Aug. 10, 1907. Serial No. 387,968.

1. In a furnace charging apparatus, the combination with a fuel carrier, adapted to enter a furnace door, of a

track-way therefor, and adjustable sustaining means between the carrier and track-way, means for controlling and guiding the carrier and automatically operated means combined therewith, whereby the contents of the carrier may be discharged by gravity.



2. In a furnace charging apparatus, the combination with a fuel carrier, adapted to enter a furnace, having means of support and means for manual guidance combined therewith, of shafts mounted in bearings formed in the carrier frame provided with sectional bottom members, the ends of said shafts extending out to one side of the carrier frame and oscillating bar parallel with and above one of the carrier frame members, means for securing said oscillating bar to the respective shafts, means for locking said bar together with means for tripping said locking means.

3. In a furnace charging apparatus, the combination with a fuel carrier, adapted to be used as a rake or leveler, of a sectional bottom transversely disposed within the frame, shafts supporting each of the bottom sections, journaled in the frame, stiffening ribs attached to the shafts and extending beyond the edges of the bottom sections, in such manner that the next succeeding bottom section may partially rest thereon, and means for sustaining said bottom sections, and automatically releasing the same.

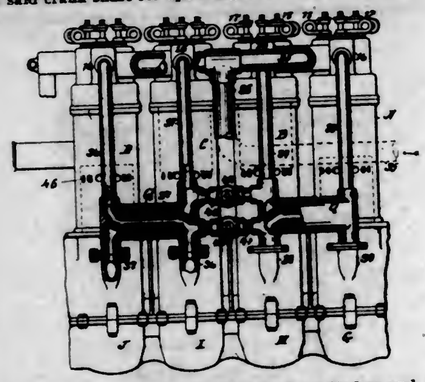
4. In a furnace charging apparatus, the combination with a fuel carrier, comprising a frame adapted to enter a furnace door, and means for manual operation thereof, of a plurality of shafts transversely disposed in the frame, bottom plate sections connected to the shafts, an oscillating bar lateral with the frame, links rigidly connected to the shafts, and pivotally secured to the oscillating bar, and means for securing said bar, whereby the plate sections may be maintained horizontally together with means for releasing said bar automatically, so as to allow said plate sections to drop.

5. In a furnace charging apparatus, the combination with a fuel carrier, comprising a frame, and means combined therewith whereby it may be sustained and directed, of a plurality of shafts transversely mounted in the frame, each shaft extending outwardly beyond its bearing alternately on the sides thereof, bottom forming plate sections secured to the shafts, oscillating bars parallel with and above the side frames, links rigidly connected to the extending ends of the shafts and to the adjacent oscillating bar, and means for holding or releasing said bars whereby the plate sections may be maintained as a flooring to the carrier, together with means for automatically releasing said bar.

[Claims 6 to 8 not printed in the Gazette.]

885,921. GAS-ENGINE. CHESTER GRISWOLD and SYLVESTER G. AVERELL, New York, N. Y. Filed Dec. 21, 1906. Serial No. 348,863.

1. The combination of two gas engine cylinders and, associated with each cylinder, a piston and a compressed air chamber in the cylinder base receiving said piston, a crank shaft common to both pistons passing through said compressed air chambers and having its crank in one chamber set 180° distant from the crank in the other chamber, an air inlet valve in each cylinder head, ducts connecting the said air chamber associated with each cylinder with the air inlet valve of the other cylinder and means actuated by said crank shaft for operating said air inlet valves.



2. The combination of four gas engine cylinders and, associated with each cylinder, a piston and a chamber wherein air is compressed by said piston, connecting ducts between said chambers and said cylinders, valves in said ducts and means for operating said valves: the aforesaid parts being constructed and operating so that the compressed air in two of the said air chambers associated with said cylinders is intermittently admitted to one of the cylinders associated with the remaining chambers to purge combustion products therefrom.

3. The combination of four gas engine cylinders and, associated with each cylinder, a piston and a compressed air chamber in the cylinder base receiving said piston, a crank shaft common to all of said pistons passing through said air chambers and having two cranks in two chambers set alike and at 180° distance from the remaining cranks respectively in the other two chambers, an air inlet valve in each cylinder head, ducts connecting the air chamber associated with each cylinder with the air inlet valves of two of the other cylinders, and means actuated by said crank shaft for operating said valves.

4. The combination with four gas engine cylinders, a piston in each, independent air chambers in the crank cases of said cylinders, a crank shaft common to said pistons passing through said chambers, and piston rods extending from the pistons to the cranks, of means for causing simultaneous compression in two crank cases and means for transferring the entire charge thus compressed to a third cylinder for purging.

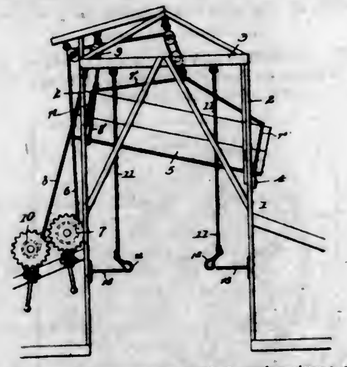
5. The combination of four gas engine cylinders, a piston in each, piston rods, independent air chambers in the crank cases of said cylinders, a crank shaft to which the piston rods are connected, the aforesaid parts being constructed and operating to compress air simultaneously in two crank cases, and means for transferring the entire charge thus compressed to a third cylinder for purging, the said parts being also constructed and operating to subsequently compress air in two more crank cases and then discharging the air thus compressed into another cylinder for purging.

885,922. TELEPHONE SYSTEM FOR FIRE-HOSE. HARRY GROSWITH, Philadelphia, Pa. Filed Mar. 8, 1905, Serial No. 248,973. Renewed Mar. 24, 1908. Serial No. 422,964.



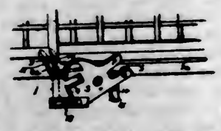
The combination of two lengths of hose adapted to be coupled, a two part coupling comprising annular members having annular integral internally projecting flanges against the rear interior faces of which the ends of the hose lengths abut, said flanges having longitudinal apertures extending through the same adapted to register when the members are coupled, insulating blocks in said apertures, contacts in said blocks normally projecting slightly beyond the faces of the blocks, wires wholly embedded in the walls of the hose lengths and extending through the apertures in the flanges of the coupling members and terminating in contact with said contacts, and an annular insulating gasket adapted to be compressed in grooves in the inner edges of the flanges and prevent access of water or other material to the contacts.

885,923. LOADING DEVICE FOR GRAIN, &c. HARRY E. HAWKINS, Parker, Kans. Filed Aug. 26, 1907. Serial No. 390,181.



A device of the character specified, embracing a supporting frame, comprising upright frame members, hoisting apparatus operatively sustained by the frame, a flexible connecting element formed at its ends with loops for receiving or encircling opposite ends of a receptacle, said element constituting means for connecting the hoisting apparatus therewith, apparatus for raising the receptacle in dumping position, and for elevating and supporting one end thereof, after the receptacle has been swung in such position, said apparatus comprising a flexible element formed with a loop for receiving one end of the receptacle, a cross supporting member arranged between two of the upright frame members for supporting the opposite end of the receptacle when the latter is swung into dumping position and flexible guide elements for guiding the receptacle during the operation of raising it into or lowering it from dumping position with means for detachably connecting the free ends of the guide elements with the supporting frame.

885,924. SAFETY DEVICE FOR ELEVATORS. ANDREW HOLLINGER, Canton, Ohio. Filed May 4, 1907. Serial No. 371,906.
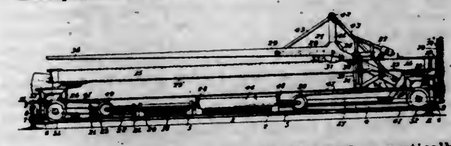


1. In a safety device for elevators, an elevator cage, and a door, a pivoted door locking plate provided with recesses upon opposite sides of its pivotal point, a shaft provided with an L-shaped lever, one of the arms of the L-shaped lever adapted to pass through one slot of the door locking plate, and means carried by the elevator door and the elevator cage to actuate the locking plate and the L-shaped lever, substantially as and for the purpose specified.

2. In a safety device, the combination of an elevator cage, and a door, a pivoted plate located in the elevator shaft, means carried by the cage adapted to actuate the pivoted plate, an L-shaped lever, one arm of said lever adapted for engagement with the pivoted plate and the other arm of said lever adapted to be actuated by the elevator door, said plate provided with a recess adapted to release the L-shaped lever, substantially as and for the purpose specified.

3. In a safety device for elevators, the combination of an elevator cage and a door, a pivoted locking plate located in the shaft of the elevator near the elevator door, said plate provided with spaced arms, means carried by the cage adapted to engage the arms of the locking plate, cage locking devices, and means carried by the door adapted to actuate the cage locking devices, substantially as and for the purpose specified.

4. In a safety device for elevators, the combination of an elevator cage and a door, a pivoted locking plate located in the shaft, said plate provided with spaced arms, means carried by the cage adapted to engage the arms of the locking plate, cage locking devices, means carried by the door adapted to actuate the cage locking devices, and a spring adapted to engage the pivoted locking plate, substantially as and for the purpose specified.

885,925. SERVING APPARATUS. CHARLES N. HOOPER, Dubuque, Iowa. Filed May 29, 1907. Serial No. 376,332.



1. In an apparatus of the class described, a vertically movable track, a load handling device supported for travel horizontally upon the track, and actuating means mounted independently of the track to move the load handling device horizontally.

2. In an apparatus of the class described, a vertically movable track, a load handling device supported for travel horizontally upon the track, actuating means mounted independently of the track, and an adjustable connection between said actuating means and the load handling device.

3. In an apparatus of the class described, a vertically movable track, a load handling device supported for travel horizontally upon the track, actuating means mounted independent of the track, and a vertically adjustable connection between said actuating means and the load handling device.

4. In an apparatus of the class described, a vertically movable track, a load handling device supported for travel horizontally upon the track, actuating means mounted independently of the track, and an extensible connection between said actuating means and the load handling device.

5. In an apparatus of the class described, a supporting base, a vertically movable track, a load handling device supported for travel horizontally upon the track, and actuating means mounted on the supporting base to move the load handling device horizontally.

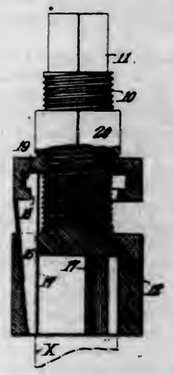
[Claims 6 to 25 not printed in the Gazette.]

885,926. PIPE-WRENCH. JOHN HORST, Hubbell, Mich. Filed Dec. 30, 1907. Serial No. 408,631.

1. In a pipe wrench, a body portion comprising a threaded stem, and a guide, the latter being provided with tapered grooves, wedge shaped clamping blocks arranged in the grooves, a nut mounted on the threaded stem, and means for connecting the nut to said clamping blocks.

2. In a wrench of the class described, a body portion comprising a stem having a non-circular portion at one end and provided at the opposite end with a cup, the inner wall of the cup having tapered grooves, a plurality of

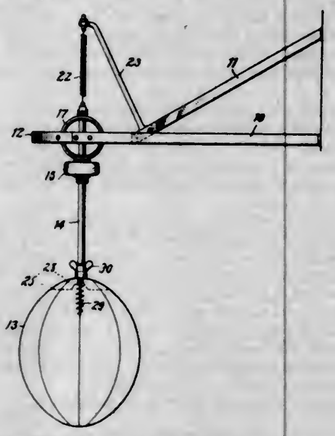
wedge shaped clamping blocks mounted in the grooves and provided with serrated clamping faces, the outer faces of the upper portions of said blocks being grooved, and an adjusting nut mounted on the threaded stem and having an internal flange fitting within the grooves of the wedge blocks.



3. In a pipe wrench, a cup arranged for the reception of the end of a pipe, a tapered guide groove formed in said cup extending longitudinally thereof, a wedge shaped clamping block carried by said cup in said groove, and means for forcing the block into engagement with the pipe.

4. In a pipe wrench, a cup arranged for the reception of the end of a pipe, a tapered guide groove formed in said cup extending longitudinally thereof, a wedge shaped clamping block provided with a serrated face carried by said cup in said groove, and means for forcing the block into engagement with the pipe.

885,927. PUNCHING-BAG APPARATUS. FREDERIC HULSMANN, New York, N. Y. Filed Jan. 28, 1908. Serial No. 413,017.



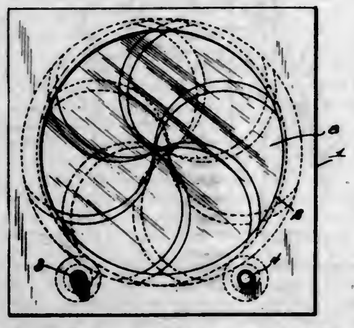
1. In punching-bag apparatus, the combination of a striking-bag, a suspending-rod therefor, a support for said rod, a universal connection between said rod and support comprising a relatively-narrow socket ring mounted on this support, and a second ring attached to said rod and having a universal sliding bearing in the socket ring, a rebounding member on the rod, and a rebounding plate surrounding the universal joint.

2. In punching-bag apparatus, the combination of a rebounding plate, a striking-bag, a suspending-rod for said bag having a universal mounting within said plate and an extension above said mounting, a rebounding member on the rod for coacting with said plate, and a rod-centralizing spring having its upper end fixed and its lower end attached to the rod extension.

3. In punching-bag apparatus, the combination of a fixed rebounding-plate, a bag-suspending rod having a universal mounting within said plate and a buffer to rebound against the plate, a bag at the lower end of the rod comprising an inner inflatable sac and an outer casing having a slit to afford access to the sac, and an attaching and reinforcing plate mounted on the lower end of the rod and interposed between the sac and casing, said plate formed with a cleft under the casing slit.

4. In punching-bag apparatus, the combination of a fixed rebounding-plate, a bag-suspending rod having a universal mounting within said plate and a buffer to rebound against the plate, a bag at the lower end of the rod comprising an outer casing and a removable inner inflatable sac, a cup-shaped plate interposed between said casing and sac at their upper ends, and means for detachably securing said plate to the lower end of the rod.

885,928. CHROMATROPE. SILAS A. HUNT, Chicago, Ill., assignor to Frederick H. Meyer, Chicago, Ill. Filed Oct. 24, 1907. Serial No. 398,981.



1. A chromatrope comprising a pair of shafts driven in relatively reverse directions, and a plurality of disks supported by their respective peripheries by said shafts and adapted to be driven in relatively reverse directions.

2. In a device of the class described, a plurality of disks bearing fanciful designs, a rotary member engaged with the peripheries of some of said disks for supporting and driving them in one direction, and a rotary member similarly engaged with and for driving the remainder of the disks in an opposite direction.

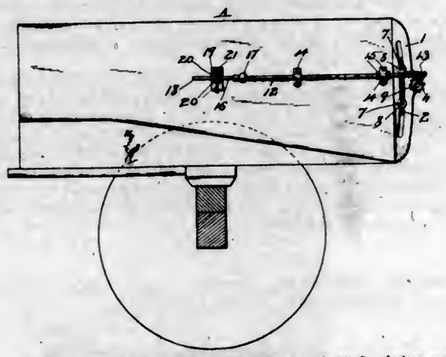
3. In a device of the class described, a series of free disks bearing fanciful designs, and of different diameters, and a pair of rotary members driven in opposite directions and each engaged with and driving a number of said disks.

4. In a device of the class described, a pair of shafts driven in relatively reverse directions, pulleys fixed on said shafts, idler spacers between the pulleys, the pulleys on one shaft being disposed oppositely to the spacers on the other shaft, and a series of disks each peripherally supported on a pulley and a spacer to provide for some of the disks being operated by one of the shafts and the others by the other shaft.

5. In a device of the class described, a pair of rotary shafts carrying loose and drive pulleys, means connecting the shafts to be driven one from the other in relatively reverse directions, and a series of disks of different diameters each arranged to rest at its periphery on a loose pulley on one shaft and a fixed pulley on the other shaft, said disks bearing fanciful patterns or designs.

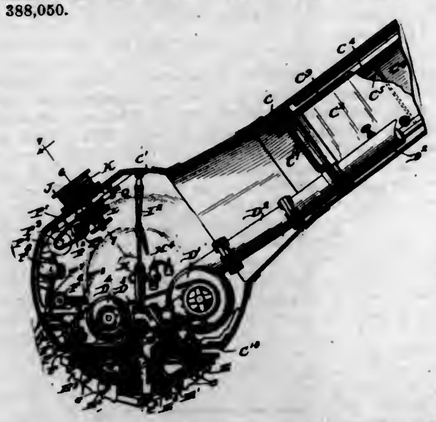
885,929. SIEVE-ADJUSTER. JESSE G. KEITH, Spokane, Wash. Filed July 16, 1907. Serial No. 384,056.

1. In combination with sieve shoes, slotted plates secured thereto, sieve racks slidably mounted on said slotted plates having gear teeth on one edge thereof, a shaft journaled in said plates having pinions keyed thereto meshing with said gear teeth, a worm wheel keyed to one end of said shaft, a worm shaft journaled on one of said shoes and meshing with the worm wheel aforesaid, and a short shaft connected by means of a universal joint with said worm shaft, said short shaft having a rectangular end to receive a tool for rotating it, and a clamp to engage said short shaft to hold it from rotation, substantially as shown and described.



2. In combination with sieve shoes, slotted plates secured thereto, sieve racks pivotally secured to said shoes, other sieve racks, cross rods connecting said racks, rollers on the ends of said rods and mounted in the slots in the plates, rods connecting each of the slidable racks, gear teeth on said slidable racks, a shaft journaled on said slotted plates, pinions keyed to said shaft and meshing with the gear teeth on the slidable plates, a worm wheel keyed to one end of said shaft, a worm shaft journaled on one of the sieve shoes and geared with said worm wheel, a short shaft connected with the worm shaft by means of a universal joint, said short shaft having a rectangular end to receive a tool for rotating it, and a clamp to engage said rectangular end of the short shaft to hold it from rotation, substantially as shown and described.

885,930. DREDGING APPARATUS. SIMON LAKE, Bridgeport, Conn. Filed Aug. 10, 1907. Serial No. 388,050.



1. A dredging apparatus, comprising a submergible tube, having a water-tight working-chamber at its lower end, a rotary cutter-head beneath said working-chamber, a suction-pump having its intake immediately adjacent to the cutter-head for collecting the debris caused by the cutter-head, means for operating the cutter-head, and means for operating the pump.

2. A dredging apparatus, comprising a submergible tube, having a water-tight working-chamber at its lower end, a rotary cutter-head beneath said chamber, a suction-pump having its intake immediately adjacent to the cutter-head, means for operating the cutter-head, means for operating the pump, and means for moving the lower end of the tube in lateral directions.

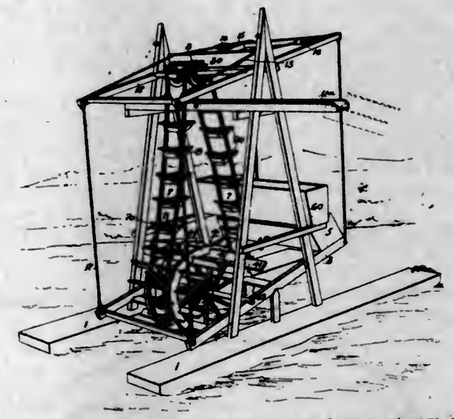
3. A dredging apparatus, comprising a submergible tube, having a water-tight working-chamber at its lower end, a pipe projecting therefrom, a rotary cutter-head mounted upon the projecting end of the pipe, a suction-pump connected to the inner end of the pipe, and independent means for operating the cutter-head and the pump.

4. A dredging apparatus, comprising a submergible tube, a cutter-head carried thereby and having a convex lower surface, a suction-pump co-acting with the cutter-head, and independent means for operating the cutter-head and the pump.

5. A dredging apparatus, comprising a submergible tube, a rotary cutter-head carried at its lower end and having a central opening and ribs arranged upon its lower face and extending outwardly from the central opening upon involute curve lines, and a suction-pump having a pipe which projects throught the opening.

[Claims 6 to 28 not printed in the Gazette.]

885,931. WATER-ELEVATOR. HENRY M. LAMBERT, Portland, Oreg. Filed Sept. 13, 1907. Serial No. 392,784.



1. An apparatus for elevating water from a stream or river which comprises the following elements in combination, a platform, a frame work projected vertically therefrom, upper and lower horizontally disposed frames tiltably mounted upon the said frame work and connected to move together, one of the said frames having counterbalanced devices on one end thereof, a water wheel mounted on the lower tiltable frame, an overhead wheel mounted on the other tiltable frame and an endless bucket that takes around the water wheel and the overhead wheel, substantially as shown and described.

2. In a water elevating means of the character described the combination with a float and a vertical frame; of the upper and lower beams tiltably mounted on the frame, rod connections that join the ends of the said tiltable frame, a water wheel mounted on the lower tiltable frame, an overhead wheel mounted on the upper tiltable frame, a bucket carrying endless chain that takes around the said wheels and an adjustable counterbalance mounted on the lower tiltable frame, for the purposes described.

3. In a water elevating means of the character described, the combination with the float and a vertical frame; of the upper and lower beams tiltably mounted

on the frame; rod connections that join the ends of the said tiltable frame, a water wheel mounted on the lower tiltable frame, an overhead wheel mounted on the upper tiltable frame, a bucket carrying endless chain that takes around the said wheels, an adjustable counterbalance mounted on the lower tiltable frame, said counterbalance consisting of a tank having means for drawing water therefrom and a filling tank having a filling faucet arranged to discharge into the water tank on the tiltable frame, for the purposes described.

885,932. CURTAIN-RING. MARY E. LA RUE, Richmond, Ky. Filed Jan. 18, 1908. Serial No. 411,447.

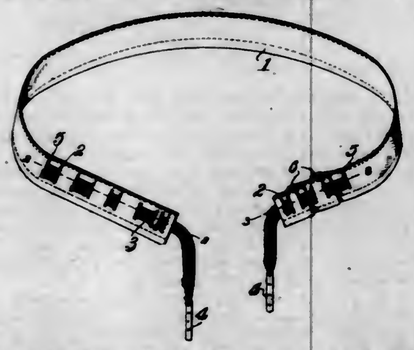


1. As an article of manufacture a curtain ring, a curtain pin and a keeper for said pin made of a single piece of spring wire doubled upon itself the two strands thus formed being bent into a ring and firmly connected at their ends by looping one of the wire ends into the eye formed by doubling the wire, one of said wire ends being bent to form a spring hook and the other a keeper for the same.

2. As an article of manufacture a curtain ring formed of a single piece of wire doubled upon itself and the doubled portion bent to form the ring, one end of said wire being bent into a spring pin, and the other end after passing through the loop formed by doubling the wire, being bent around the first named wire near said loop and then around the pin to form a keeper therefor.

3. As an article of manufacture a curtain ring formed of a single piece of wire doubled upon itself and twisted throughout its length except for a short distance at the ends of the wire, and then bent to form the ring, one of said free ends being fashioned into a spring pin with an upwardly extending pointed end, and the other free end after first passing through the doubled end of the ring being bent around the base of the spring pin for a full turn and then formed into a keeper for the end of said pin.

885,933. WAISTBAND. SOLOMON LINDY, New Orleans, La. Filed Dec. 3, 1907. Serial No. 404,898.



1. As a new article of manufacture, a waist band provided at its end portions with a plurality or orifices, and lacings threaded through the orifices and permanently secured at their inner ends to the band whereby a series of transverse plaits may be formed.

2. As a new article of manufacture, a multi-ply waist band provided at its end portions with a plurality of transversely disposed orifices, and flat lacings threaded through the orifices and having their inner ends secured between the plies of the band.

885,934. METHOD OF MAKING ARTIFICIAL MICAS. FLORENTINE J. MACHALSKE, Niagara Falls, N. Y., assignor of one-fourth to Ralph Modjeski, Chicago, Ill. Filed Nov. 21, 1907. Serial No. 403,238.

1. The method of making artificial micas which consists in melting in an electric furnace a charge proportioned to yield a mica.

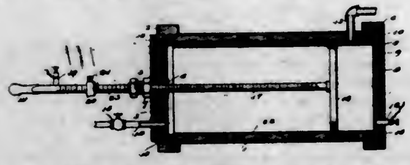
2. The method of making artificial micas which consists in melting in an electric furnace and out of contact with carbon surfaces, a charge proportioned to yield a mica.

3. The method of making artificial micas which consists in melting in an electric furnace in presence of metallic silicon serving as an electric conductor, a charge proportioned to yield a mica.

4. The method of making artificial micas which consists in melting a suitable charge containing the non-alkali ingredients of a mica, incorporating an alkali-metal hydroxid with the melted mass, and permitting the product to cool.

5. The method of making artificial micas which consists in melting a suitable charge containing the non-alkali ingredients of a mica, incorporating an alkali-metal hydroxid with the melted mass, and permitting the product to cool in presence of moisture.

885,935. RHEOSTAT. EDWARD L. MAHON, Bellaire, Ohio. Filed June 6, 1907. Serial No. 377,658.

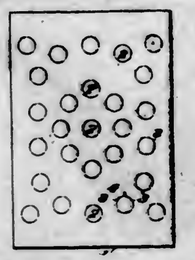


1. In a rheostat adapted to contain water under pressure; an insulated stationary conductor plate; a movable conductor plate; means for supplying and discharging water, and means for adjusting the movable conductor plate substantially as hereinbefore set forth.

2. In a rheostat provided with a stationary and an adjustable conductor plate, means for interposing a body of water under pressure between the conductor plates, substantially as and for the purpose set forth.

3. In a rheostat such as described and embodying stationary and adjustable conductor plates, a reciprocating stem for adjusting one of said plates, and an adjustable stop located upon said stem, substantially as hereinbefore set forth.

885,936. SIGN-LETTER. GEORGE L. MASON, Newark, N. J., assignor to George L. Mason Company, New York, N. Y., a Corporation of New York. Filed Apr. 28, 1905, Serial No. 257,892. Renewed Aug. 27, 1907. Serial No. 390,380.



1. A sheet provided with a plurality of removable sections arranged along predetermined lines and in substantially the plane of the sheet, whereby by removing certain of said sections different designs may be formed the openings formed by the removal of the sections being capable of having light transmitted through them from a common source.

2. A sheet provided with a plurality of removable sections arranged in the form of a monogram and in substantially the plane of the sheet, whereby by removing certain of said sections any letter or character may be formed, the openings formed by the removal of the sections being capable of having light transmitted through them from a common source.

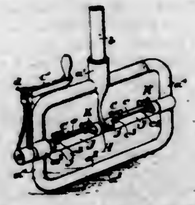
3. A sheet provided with a plurality of removable sections formed by incisions which form, but do not sever the sections from the sheet, said sections being arranged along predetermined lines, whereby by removing certain of said sections different designs may be formed.

4. A sheet provided with a plurality of removable sections formed by incisions which form, but do not sever the sections from the sheet, said sections being arranged to form a monogram whereby by removing certain of said sections any letter or character may be formed.

5. A sheet provided with a plurality of removable sections arranged along predetermined lines, and in substan- of said sections different designs may be formed and a backtially the plane of the sheet, whereby by removing certain of said sections different designs may be formed and a backing sheet secured to said first mentioned sheet.

[Claim 6 not printed in the Gazette.]

885,937. MOP HEAD AND WRINGER. ALEXANDER S. MATHERS, Armington, Mont. Filed Apr. 24, 1906. Serial No. 313,515.



1. A floor mop comprising a rectangular frame, a crank shaft removably mounted thereon, a means at each end of the shaft for fastening the ends of a mop cloth thereto and a member on the frame that projects on the shaft centrally thereof.

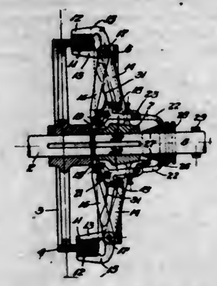
2. A floor mop, comprising a rectangular frame, a shaft removably journaled in the side members thereof, a crank handle for the shaft, an adjustable means at each end of the shaft located within the side bars of the frame for securing the ends of the mop cloth, one of said means forming a lock for holding the shaft in its bearings and a member on the frame that projects down over the shaft centrally thereof, for the purposes described.

3. The combination with the rectangular handle carrying frame, having a centrally disposed inwardly projecting tongue; said frame having a bearing-aperture in each of its opposite side portions; of a shaft slidable into the said bearings, a crank member on one end of the shaft, said shaft being disposed closely to the projecting tongue of the frame, and means for holding the shaft while in its bearings from longitudinal displacement.

4. The combination with the rectangular frame, a crank shaft journaled in the opening thereof, said shaft having a pair of separated slots, a rigid member on the frame that projects down over the shaft between its slots and a means on the shaft for fastening the ends of the mop cloth in the shaft slots.

5. The combination with the rectangular frame having a tongue projected inwardly of the opening therein, and having apertured opposing bosses in its side portions; of a shaft removably journaled in said bosses, having a crank handle, said shaft having a pair of separated elongated slots, an adjustable channeled clamp member mounted in each slot, and means for adjusting said members, one of said channeled members having extensions arranged to extend closely to one of the apertured bosses of the frame, all being arranged substantially as shown and for the purposes specified.

885,938. FRICTION-CLUTCH. FRANK MAXANT, Allegheny, Pa. Filed Apr. 25, 1907. Serial No. 370,159.



1. In a friction clutch, the combination with a driving shaft and a flanged pulley thereon, of a driven shaft provided with a circular carrying frame, pairs of levers pivotally mounted for operation in said frame and provided with gripping shoes engaging the inner and outer sides of the flange of the driving pulley, a pivotally mounted actuating lever having integral oppositely disposed arms connected by links to the terminals of said levers and provided with a backwardly extending arm having a bearing roller, and an actuating cone slidingly mounted on the driven shaft and arranged to engage said roller, substantially as set forth.

2. In a friction clutch, the combination with a driving shaft and a flanged pulley thereon, of a driven shaft provided with a circular carrying frame, pairs of levers pivotally mounted for operation in said frame and provided with gripping shoes engaging the inner and outer sides of the flange of the driving pulley, a pivotally mounted actuating lever having integral oppositely disposed arms connected by links to the terminals of said levers and provided with a backwardly extending arm, an actuating cone slidingly mounted on the driven shaft, and a spring secured to the actuating lever and bearing against one of the gripping levers, substantially as set forth.

3. In a friction clutch, the combination with a driving element having a portion for frictional engagement, of a shaft carrying a driven element having a frame, opening and closing levers mounted in said frame, and provided with gripping shoes adapted to grip the opposite sides of said frictional engagement portion, a pivotally mounted actuating lever having integral oppositely disposed arms connected by links to the terminals of said levers and provided with a backwardly extending arm having a pivoted adjustable bearing terminal provided with a roller, a separating spring secured to the actuating lever and bearing against one of the gripping levers, and an actuating cone slidingly mounted on the shaft of the driven element, substantially as set forth.

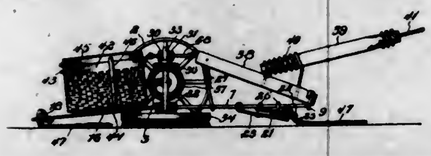
4. In a friction clutch, the combination with a driving element having a portion for frictional engagement, of a shaft carrying a driven element having a frame, opening and closing levers mounted in said frame and provided with gripping shoes adapted to grip the opposite sides of said frictional engagement portion, a pivotally mounted actuating lever having integral oppositely disposed arms connected by links to the terminals of said levers and provided with a backwardly extending arm having a pivoted adjustable bearing terminal provided with a roller, and an actuating cone slidingly mounted on the shaft of the driven element and provided with an annular recess adapted to engage the roller of the bearing terminal, substantially as set forth.

5. In a friction clutch, the combination with a driving shaft and a flanged pulley thereon, of a driven shaft provided with a circular carrying frame, oppositely located pairs of opening and closing levers provided with gripping shoes and pivotally mounted for operation in said frame, a pivotally mounted actuating lever for each of said pairs having integral oppositely disposed arms connected by links to the terminals of said levers and provided with a

backwardly extending arm having a pivoted adjustable bearing terminal with a roller extremity, and an actuating cone slidingly mounted on the driven shaft and provided with an annular recess adapted to engage the rollers of said terminals, substantially as set forth.

[Claims 6 and 7 not printed in the Gazette.]

885,939. SCRUBBING-MACHINE. JEFFERSON D. METCALF, Gloster, Miss., assignor of one-half to Joe C. Causey, Gloster, Miss. Filed Mar. 12, 1907. Serial No. 362,019.



1. A scrubbing machine comprising a main frame constructed of wire, a brush rotatably supported thereby, and a mop clamp carried by the forward end of the frame, said clamp comprising one member formed integral with the frame and a coöperating member carried by the frame, said members being arranged for coöperation through their inherent resiliency.

2. A scrubbing machine comprising a main frame constructed of wire, a brush rotatably supported thereby, and a mop clamp carried by the forward end of the frame, said clamp comprising one member formed integral with the frame and a coöperating member carried by the frame, each of said members being formed with interengaging portions between which the mop is adapted to be clamped, said members being arranged for coöperation through their inherent resiliency.

3. A scrubbing machine comprising a main frame constructed of wire, a wheeled support for the frame, a mop clamp comprising interlocking spring members carried by the forward end of the frame, part of said clamp being formed integral with the frame, and a mop clamp carried by the rear end of the frame and independent thereof.

4. A scrubbing machine comprising a main frame constructed of wire, a wheeled support for the frame, a mop clamp comprising interlocking spring members carried by the forward end of the frame, part of said clamp being formed integral with the frame, a mop clamp carried by the rear end of the frame and independent thereof, and a receptacle supported on one member of the mop clamp at the forward end of the frame.

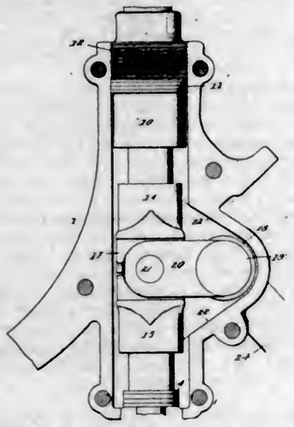
5. A scrubbing machine comprising a main frame, a wheeled support therefor, said frame being constructed of a wire rod bent into rectangular outline, the forward cross bar of the frame being formed with U-shaped projections, and a clamping member movably mounted on the frame and formed with U-shaped projections to coöperate with the projections on the frame and provide a mop clamp.

[Claim 6 not printed in the Gazette.]

885,940. STEERING-GEAR FOR AUTOMOBILES. GROVE E. MILLER, West Detroit, Mich. Filed May 18, 1907. Serial No. 374,361.

1. In a steering gear, the combination of a driving screw member, a driven screw member, a clutch connection between said members, nuts mounted on said screw members, a bearing block arranged between said nuts, a rock shaft connected with said block and means for compressing said block between said nuts.

2. In a steering gear, the combination of a driving screw member, a driven screw member, a clutch connection between said members, nuts mounted on said screw members, said nuts having oppositely-disposed grooves or recesses arranged in one side thereof, a slotted bearing block arranged in said grooves, a rock shaft connected with said block and means for compressing said block between said nuts.



3. In a steering gear, the combination of a driving screw member, a driven screw member, a clutch connection between said members, nuts mounted on said screw members and having oppositely-disposed grooves or recesses arranged in one side thereof, a slotted bearing block arranged in said grooves, a rock shaft mounted adjacent said nuts and having an arm connected with said bearing block and means for compressing said block between said nuts.

4. In a steering gear, the combination of a driving screw member, a driven screw member, a clutch connection between said members, nuts mounted on said screw members and having grooves arranged in one side thereof, slotted or split bearing blocks arranged between said nuts in said grooves, a rock-shaft mounted adjacent said nuts and having an arm provided with a trunnion adapted to engage said bearing-block and means for compressing said block between said nuts.
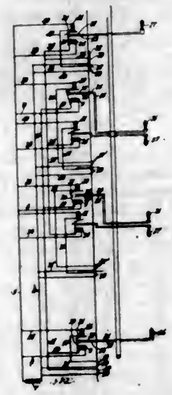
5. In a steering gear, the combination of a casing, a driving screw member mounted therein, a driven screw member mounted in said casing, a clutch connection between said members, a steering post connected with said driving member, nuts mounted on said screw members, a slotted bearing block arranged between said nuts, a rock-shaft connected with said block, and an adjusting member mounted on one of said screw members and having means for engaging the casing.

[Claims 6 to 9 not printed in the Gazette.]

885,941. ELEVATOR INDICATING SYSTEM. CHARLES E. MOORE, Los Angeles, Cal. Filed Sept. 3, 1907. Serial No. 391,279.

1. An elevator indicator system comprising an indicator, at each floor or landing, provided with means to indicate "up" travel of the car and with means to indicate "down travel" of the car, electric lights in connection with said indicating means, normally open circuits for said lights, means operated by the car for closing the circuits of all "up" indicator lights when the car reaches the lower floor and for successively breaking the lighting circuits as the car passes the respective floors in ascending, and means for automatically closing the circuits of all "down" indicator lights when the car reaches the top floor and for successively breaking the lighting circuits as the car passes the respective floors in descending.

2. An elevator indicator system comprising an indicator at each floor or landing, said indicators provided with panels containing respectively indications of "up" and "down" direction of the car, electric lights arranged behind said panels, normally open circuits for said electric lights, means for closing said circuits, electromagnetic means for controlling said circuit closing means, normally open circuits for said controlling means, said circuits arranged to be closed and broken by a contact carried by the car whereby when the car reaches the lower floor the lights behind the "up" panels of said indicators are lighted and are successively cut out as the car passes the respective floors in ascending, and the lights behind the "down" panels of said indicators are lighted when the car reaches the upper floor and are successively cut out as the car passes the floors in descending.



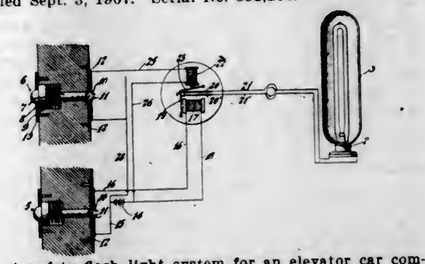
3. An elevator indicator system comprising an indicator at each floor or landing, the indicators of the intermediate floors having two indicating portions, one to show that the car is upward bound and the other to show the car is downward bound, the lower landing indicator provided with an indicating portion to show the car is upward bound and the upper landing indicator provided with an indicating portion to show the car is downward bound, electric lights arranged in connection with each indicating portion of said indicators, normally open circuits for said lights, a circuit closer for each of said light circuits, magnetic means for operating said circuit closers, the magnetic closer operating means of the "up" indicator lights connected in a normally open circuit, and the magnetic closer operating means of the "down" lights connected in a normally open circuit, a circuit closer carried by the car and adapted to close said "up" circuit when the car approaches the lower floor and to close the "down" circuit when the car approaches the upper floor, and means for successively cutting out each light as the car passes the floor of that light.

4. An elevator indicator system comprising an indicator at each floor or landing, the indicators of the intermediate floors having two indicating portions, one to indicate that the car is upward bound and the other to indicate the car is downward bound, electric lights arranged in connection with each indicating portion, normally open circuits for said lights, a magnetically operated circuit closer for each of said lamp circuits, the closer of all the light circuits in connection with "up" indicators connected in a normally open circuit, circuit closing means carried by the car and adapted to close said last named circuit when the car approaches the lower landing, means for retaining said magnetically operated closers in position to maintain said light circuits closed, means operated by the car as the car passes successive floors for releasing and retaining means and breaking the light circuit of the landing passed by the car, the closers of all the light circuits in connection with the "down" indicators connected in a normally open circuit, said circuit closing means carried by the car adapted to close said last named circuit as the car approaches the upper landing, means for retaining said magnetically operated closers in position to maintain said light circuits closed, and means operated by the car as the car passes down by successive landings for releasing said retaining means and breaking the light circuit of the landing passed by the car.

5. An elevator indicator system comprising an indicator at each floor or landing, the indicators of the intermediate floors having two indicating portions, one to indicate that the car is upward bound and the other to indicate the car is downward bound, electric lights arranged in connection with each indicating portion, normally open circuits for said lights, a magnetically operated circuit closer for each of said lamp circuits, the closer of all the light circuits in connection with "up" indicators connected in a normally open circuit, circuit closing means carried by the car and adapted to close said last named circuit when the car approaches the lower landing, means for retaining said magnetically operated closers in position to maintain said light circuits closed, the closer of all the light circuits in connection with "down" indicators connected in a normally open circuit, said circuit closing means carried by the car adapted to close said last named circuit as the car approaches the upper landing, means for retaining said magnetically operated circuit closers in position to maintain said light circuit closed, electromagnets in connection with each of said retaining means, each of said electro-magnets connected in a normally open circuit having contacts arranged in the path of the car to be closed by the car as the car passes a given floor, whereby when the "up" indicator lights have been lighted and the car passes above a given floor the light for that floor is extinguished, and when the "down" indicator lights are lighted and the car passes below a given floor the indicator light for that floor is extinguished.

[Claim 6 not printed in the Gazette.]

885,942. SAFETY FLASH-LIGHT APPARATUS FOR ELEVATORS. CHARLES E. MOORE, Los Angeles, Cal. Filed Sept. 3, 1907. Serial No. 391,280.



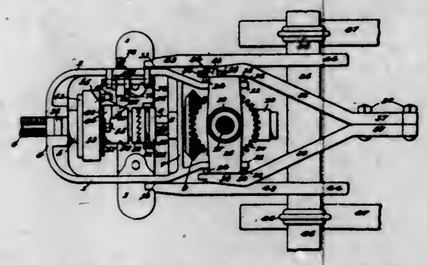
1. A safety flash light system for an elevator car comprising a light adapted to flash across the floor of the car at the gateway thereto, electrical connections for said light, and means, in combination with the operating lever of the car, for automatically lighting said light when the lever is thrown to stop the car.

2. A safety flash light for elevators comprising in combination with the car-controlling lever, an electrical circuit normally open, an electric lamp connected in said circuit and positioned to throw its light out along the floor of the entrance to the car, magnetic means for making and breaking said light circuit, said magnetic means provided with circuit and circuit makers and breakers operated by the car-controlling lever to complete said light circuit when the car is stopped and break the circuit when the car is put in motion.

3. A safety flash light for elevators, comprising in combination with the car-controlling lever an electric lamp, a normally open circuit for said lamp, magnetically operated means for closing said circuit, magnetically operated means for breaking said circuit, a circuit closing means for closing the electric circuit through the magnet of said magnetic circuit closing means, when the car-controlling lever is brought to a position to stop the car, and a circuit closing means, for closing the circuit through the magnet of said circuit breaking means, operated by said car-controlling lever when said lever is thrown to a position to put the car in motion.

4. A safety flash light for elevators comprising in combination with the car-controlling lever, of a normally open circuit, an electric lamp in said circuit and positioned to throw its light out along the floor of the car through the gateway thereof, magnetically controlled circuit-closer means for said light circuit, means operated by said car-controlling lever to actuate said circuit-closer to close said light circuit when the elevator car is stopped, and means operated by said car-controlling lever to actuate said circuit-closer to break said light circuit when said car is started.

885,943. RAIL-DRILLING MACHINE. DAVID A. MOORE, Harvey, Ill. Filed July 15, 1904. Serial No. 216,661.



1. In a device of the character described, the combination of a driving spindle having screw-threads; a nut engaged with the threads; a casing having clutch mechanism for operating it in connection with the spindle; a lever pivoted on the casing and adapted for reverse actuation; two dogs adapted for movement in and out of locking engagement with the nut and alternately and reversely actuated from the lever when reversely moved to grip and release the nut; and means for moving said lever.

2. In a device of the character described, the combination of a screw-threaded spindle having driving means; a nut engaged with the threads of the spindle and having a circumferential groove; two dogs in said groove with portions adapted when the dogs are moved pivotally to grip and release the nut; a casing extended over said dogs; clutch mechanism for operating the casing from the spindle; a lever pivoted on the casing and having a shoulder adapted when the lever is moved in one direction, to engage one dog and move the same pivotally; a link extended from the opposite end of the lever and having connection with the other dog to move the same when the lever is moved in a reverse direction; a spring for returning the last named dog to normal position; a pivoted bracket; a roller carried thereby and engageable with the lever in the rotation of the casing; and means for adjusting the bracket.

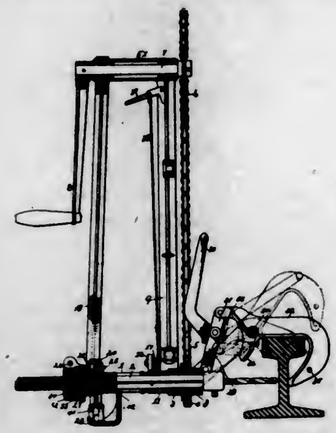
3. A device of the character described, comprising a frame; a drill spindle; driving mechanism; a connection for turning the drill spindle from the driving mechanism; a lever having means for turning it in unison with the driving mechanism and adapted for reciprocatory movement, independently thereof; feed mechanism comprising reciprocal screw-threaded parts adapted when independently actuated, to move the drill spindle endwise, one of said parts having connection with the lever for moving it independently of the other part when said lever is reciprocated; and a device carried by the frame and engageable with said lever to impart reciprocatory movement thereto.

4. A device of the character described, comprising a frame; a drill spindle; driving mechanism; feed mechanism comprising reciprocal screw-threaded parts adapted, when independently actuated, to impart endwise movement to the drill spindle and a dog adapted for engagement with one of said parts to independently actuate the same; a device driven from the driving mechanism, but capable of independent movement and having connection with the dog to move the same to actuate one part of the feed mechanism independently of the other part; and means carried by the frame for engagement with said device to independently move the same to actuate said dog.

5. In a device of the character described, the combination of a drill spindle; driving means; feed mechanism comprising reciprocal screw-threaded parts; a device arranged to lock the parts of the feed mechanism to turn in unison; another device arranged to turn one part of the feed mechanism relative to the other part to impart endwise feeding movement to the drill spindle and means for alternately operating said devices.

[Claims 6 to 18 not printed in the Gazette.]

885,944. TRACK-DRILL. DAVID A. MOORE, Kalamazoo, Mich. Filed Aug. 11, 1906. Serial No. 330,141.



1. The combination with the frame of a rail-engaging hook pivoted on said frame; a link pivoted to said frame; an operating-lever carried thereby; a link pivoted to the rear end of said hook and to the first-named link; a stop for limiting the rearward movement of said link relative to each other; and a depending projection on said hooks adapted to engage a rail when said lever is thrown forwardly to break the toggle, for the purpose specified.

2. The combination with the frame, of a rail-engaging hook pivoted on said frame; a link pivoted to said frame; an operating lever carried thereby; a link pivoted to the rear end of said hook and to the first-named link; and a stop for limiting the rearward movement of said links relative to each other, for the purpose specified.

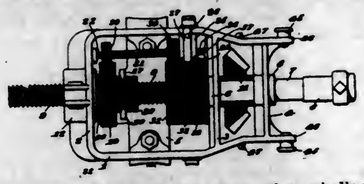
3. The combination with a frame, of a rail-engaging hook pivoted on said frame; a toggle connection for said hook to said frame; a projection on said hook adapted to engage a rail when said toggle is broken, whereby said hook is swung upwardly and said frame is pushed away from the rail; and a shoe-like base for said frame, for the purpose specified.

4. The combination with a frame, of a rail-engaging hook pivoted on said frame; a toggle connection for said hook to said frame; a projection on said hook adapted to engage a rail when said toggle is broken, whereby said hook is swung upwardly to free it from the rail, for the purpose specified.

5. The combination with a horizontally arranged frame, having a base portion at its rear end and a pair of forwardly projecting arm-like members at its forward end adapted to rest upon the rail; a rail-engaging hook pivoted upon said forwardly projecting members, said hook having an arm projecting rearwardly of the pivot thereof and a toggle connection from said frame to said rearwardly projecting arm of said hook, whereby when said toggle is straightened, the hook is thrown downwardly and locked in engagement with the rail and when said toggle is broken, said hook is disengaged from the rail and thrown upwardly above said arm-like members of said frame.

[Claims 6 to 16 not printed in the Gazette.]

885,945. DRILLING-MACHINE. DAVID A. MOORE, Kalamazoo, Mich. Filed Sept. 8, 1906. Serial No. 333,744.



1. The combination with the frame, of a spindle; driving mechanism for said spindle; a feed-screw for said spindle; a feed-nut therefor, said feed-nut having a gear thereon; a feed-member splined upon said spindle, comprising a plurality of shrouded gears, said gears being of substantially the same circumference but having varying numbers of teeth; a shaft; a pinion thereon arranged to mesh with said gear on said feed-nut; a pinion on said shaft, adapted to be brought into mesh with one or another of said feed gears; and means for shifting said shaft to bring said pinion into mesh with one of the said shrouded gears of said feed-member, whereby said feed-member is held against longitudinal movement on said spindle, or to bring it into engagement with the frame, whereby the revolution of said feed-nut is prevented.

2. The combination with the frame, of a spindle; driving mechanism for said spindle; a feed-screw for said spindle; a feed-nut therefor; a feed-gear on said spindle; a pinion having driving connections to the said feed-nut and means for shifting said pinion to bring it into mesh with said feed-gear or into engagement with the said frame, whereby said feed-nut is driven or its revolution prevented, as desired.

3. The combination with the frame, of a spindle; driving mechanism for said spindle; a feed-screw for said spindle; a feed-nut therefor, said feed-nut having a gear thereon; a feed-gear on said spindle; a pinion; gear connections for said pinion to said gear on said feed-nut; and means for shifting said pinion to bring it into mesh with said feed-gear or into engagement with the said frame, whereby said feed-nut is driven or its revolution prevented, as desired.

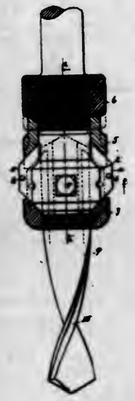
4. The combination with the frame, of a spindle; driving mechanism for said spindle; a feed-screw for said spindle; a feed-nut therefor, said feed-nut having a gear thereon; a feed-member splined upon said spindle, comprising a plurality of gears, said gears having varying numbers of teeth; a shaft; a pinion thereon arranged to mesh with said gear on said feed-nut; a pinion on said shaft, adapted to be brought into mesh with one or another of said gears.

5. The combination with the frame, of a spindle; a driving mechanism for said spindle; a feed-screw for said spindle; a feed-nut therefor; a pinion, having a driving connection with said feed-nut; a feed-member splined upon said spindle comprising a plurality of shrouded gears, said pinion being arranged to be shifted to bring it into mesh with one or another of the said shrouded gears of said feed-member, said pinion being fixed against axial movement, whereby the longitudinal movement of said feed-member on said spindle is prevented when said pinion is in mesh with one of the gears thereof.

[Claims 6 to 10 not printed in the Gazette.]

885,946. CHUCK. DAVID A. MOORE, Kalamazoo, Mich. Filed Dec. 6, 1906. Serial No. 346,656.

1. In a chuck, the combination of a cylindrical body provided with a double conical enlargement, said body having a slot-like socket; a clamping ring adapted to fit the outer end of said conical enlargement; an adjustable clamping ring adapted to fit the inner end of said conical enlargement sleeved upon said body; a clamping nut for adjustably securing said adjustable clamping ring threaded upon said body; clamping jaws having tapered ends adapted to be engaged by said clamping rings loosely arranged in said slot-like socket; and a spring arranged to hold said jaws normally outward for the purpose specified.



2. In a chuck, the combination of a cylindrical body provided with a double conical enlargement, said body having a slot-like socket provided with a cylindrical central portion; a clamping ring adapted to fit the outer end of said conical enlargement; an adjustable clamping ring adapted to fit the inner end of said conical enlargement sleeved upon said body; a clamping nut for adjustably securing said adjustable clamping ring threaded upon said body; clamping jaws having tapered ends adapted to be engaged by said clamping rings loosely arranged in said slot-like socket; a set screw arranged between said clamping rings, for the purpose specified.

3. In a chuck, the combination of a cylindrical body provided with a double conical enlargement, said body having a slot-like socket; a clamping ring adapted to fit the outer end of said conical enlargement; an adjustable clamping ring adapted to fit the inner end of said conical enlargement sleeved upon said body; a clamping nut for adjustably securing said adjustable clamping ring threaded upon said body; and clamping jaws having tapered ends adapted to be engaged by said clamping rings loosely arranged in said slot-like socket, for the purpose specified.

4. In a chuck, the combination of a body having a slot-like socket adapted to receive a flat shank; an inwardly facing clamping member arranged at the outer end of said body; an outwardly facing adjustable clamping member sleeved upon said body; a clamping nut for securing said adjustable clamping member threaded upon said body; clamping jaws having beveled ends adapted to be engaged by said clamping members loosely arranged in said slot-like socket, said clamping jaws being adapted to center the drill in the chuck; and a spring arranged to hold said jaws normally outward, for the purpose specified.

5. In a chuck, the combination of a body having a slot-like socket adapted to receive a flat shank; an inwardly facing clamping member arranged at the outer end of said body; an outwardly facing adjustable clamping member sleeved upon said body; a clamping nut threaded upon said body; clamping jaws adapted to be engaged by said clamping members loosely arranged in said slot-like socket, said clamping jaws being adapted to center the drill in the chuck, for the purpose specified.

[Claims 6 to 8 not printed in the Gazette.]

885,947. CRUET. THOMAS M. MULKERINS, Chicago, Ill. Filed Jan. 9, 1908. Serial No. 409,995.



1. A cruet having a closed upper end, said end having in one side a small discharge opening and in the opposite side a large discharge opening, substantially as described.

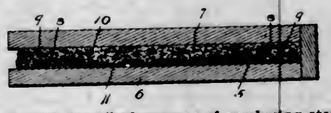
2. In a water cruet of the character described, a body portion, a reduced neck closed at its upper end, said end having a reduced discharge port formed in one side thereof, and a larger discharge port in its opposite side.

3. A cruet of the character described comprising a body portion having a reduced neck and an outwardly flared upper end, and an integrally formed cover adapted to close said upper end, said cover having formed therein adjacent to one side of the neck, a reduced opening, and at the opposite side of the neck a larger opening, and means whereby the upper portion of the neck is strengthened, substantially as described.

4. In a cruet of the character described, a body portion having a reduced neck, and an outwardly flaring upper end, a pouring spout formed on one side of the neck, an outwardly curved integrally formed cover plate on the upper end of said neck, said plate having formed in one side over the discharge spout of the neck, a reduced discharge port, and at the opposite side a larger discharge and filling opening, substantially as described.

5. In a cruet of the character described, a body portion having a reduced neck and an outwardly flared closed upper end, said closed head having formed in one side a reduced discharge port and at its opposite side a larger filling and discharge opening, a series of strengthening ribs formed on the outwardly flared upper portion of the neck, and a series of annular ribs or beads formed around said neck and body portion of the cruet, substantially as described.

885,948. STEREOTYPE. MILTON A. MCKEE, Westerly, R. I., assignor to C. B. Cottrell & Sons Company, New York, N. Y., a Corporation of New Jersey. Filed Dec. 28, 1906. Serial No. 349,827.



1. The herein described process of producing stereotypes which consists in first forming a matrix, then applying to the back of the matrix an overlay, and then casting.

2. The herein described process of producing stereotypes, which consists in making a matrix, making a reverse overlay from proofs of the subject to be printed, and applying it to the back of the matrix, and then casting.

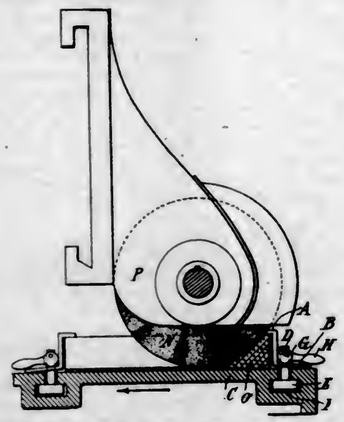
3. The herein described process of producing stereotypes, which consists in making a matrix, then applying to the back of the matrix elevations and depressions corresponding respectively to the high lights and dark or solids of the subject upon the face of the matrix, and then casting.

4. The herein described process of producing stereotypes, which consists in applying a flong to a form, then applying to the back of the resulting matrix resting on the form an overlay, then removing the combined matrix and overlay, and casting.

5. The herein described process of producing stereotypes, which consists in placing a flong upon a form, beating in to form a matrix, fixing to the back of the matrix resting on the form an overlay having elevations and depressions corresponding respectively to the high lights and the darks or solids of subject upon the face of the form, placing a backing sheet over the overlay, removing the matrix, and casting.

[Claims 6 to 20 not printed in the Gazette.]

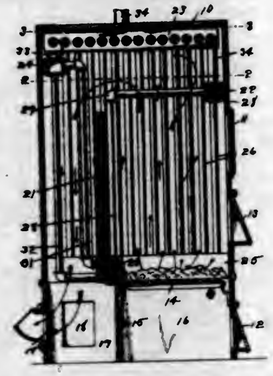
885,949. CLAMP. JOHN R. PEIRCE, New York, N. Y., assignor to Royden Marble Machinery Company, New York, N. Y., a Corporation of New Jersey. Original application filed Mar. 17, 1906, Serial No. 306,558. Divided and this application filed Oct. 17, 1906. Serial No. 339,358.



A clamp for holding a slab down on a bed with a flat face and an undercut groove, said clamp comprising a pin with a head fitting the enlarged portion of said groove to hold it down, and adapted to be slid along in said groove, a clip having a slot through which said pin passes, and an eccentric fastened on said pin for pressing said clip down on the flat face of said bed, said eccentric having a handle arranged at such an angle as to lie, when in the fastened position, below the top of the slab, said slot being open at its outer end to permit withdrawal of the clip from the pin.

885,950. SMOKE-CONSUMING FURNACE. CHARLES PHELPS, Oskaloosa, Iowa. Filed Jan. 22, 1907. Serial No. 353,424.

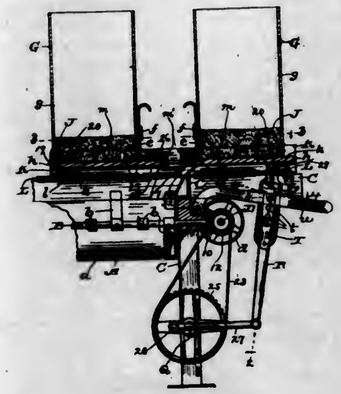
1. In a furnace, the combination of a casing, a grate, two water chambers extended along the sides of the casing adjacent to the sides of the grate, a water chamber extended across the furnace above the rear of the grate, and spaced apart from the rear of the casing, a fire wall above said latter water chamber extended upwardly and spaced apart from the top of the casing, a water chamber extended across the top of the casing at the rear upper corner thereof, a water chamber extending from the front to the rear of the casing near the top thereon, a series of pipes fixed to and communicating with each of the chambers at the sides of the grate, extended upwardly and then inwardly and fixed to and communicating with the chamber at the top of the casing, a series of pipes fixed to and communicating with the water chamber at the rear of the grate, extended upwardly adjacent to the rear of the fire wall, and then rearwardly and connected to and communicating with the water chamber at the rear upper corner of the casing, a second series of pipes fixed to and communicating with the rear of the water chamber in the rear of the grate, extended first horizontally to a point near the rear of the casing, and then upwardly and fixed to and communicating with the chamber at the rear upper corner of the casing, a pipe for providing communication between said water chambers at the top of the casing, and a water service pipe communicating with the water chamber at the top of the casing.



2. In a furnace, the combination of a casing, a grate, two water chambers extending along the sides of the casing adjacent to the sides of the grate, a water chamber extended across the casing at the rear of the grate and spaced apart from the rear of the casing, a fire wall on top of said chamber extended upwardly and spaced apart from the top of the casing, a water chamber at the front of the casing above the fire box, a water chamber extending from the front to the rear of the casing near the top thereof, a serief of pipes fixed to and communicating with each of the chambers at the sides of the grate, and extended upwardly and then inwardly and fixed to and communicating with the chamber at the top of the casing, a series of pipes fixed to and communicating with the chamber at the rear of the grate, extended upwardly and then horizontally and fixed to and communicating with the chamber at the front of the casing, a pipe for providing communication between said water chamber at the front of the casing, and said water chamber at the top of the casing, and a water service pipe communicating with the chamber at the top of the casing.

3. In a furnace, the combination of a casing, a grate, two water chambers extending along the sides of the casing, adjacent to the sides of the grate, a water chamber extended across the furnace at the rear of the grate and spaced apart from the rear of the casing, a fire wall on top of said chamber extended upwardly and spaced apart from the top of the casing, a water chamber at the front of the furnace above the fire box, a water chamber extended across the top of the casing at the rear upper corner thereof, a water chamber extending from the front to the rear of the furnace near the top thereof, a series of pipes fixed to and communicating with each of the chambers at the side of the grate and extended upwardly and then inwardly and fixed to and communicating with the chamber at the top of the furnace, a series of pipes fixed to and communicating with the chamber at the rear of the grate extended upwardly and then horizontally and fixed to and communicating with the chamber at the front of the furnace, a pipe providing communication between said water chamber at the front of the furnace and said water chamber at the top of the furnace, a series of pipes fixed to and communicating with the rear of the water chamber at the rear of the grate extended upwardly adjacent to the rear of the fire wall and then rearwardly and connected to and communicating with the water chamber at the rear upper corner of the furnace, a second series of pipes fixed to and communicating with the rear of the water chamber in the rear of the grate, extended first horizontally to a point near the rear of the casing and then upwardly and fixed to and communicating with the chamber at the rear upper corner of the furnace, means for providing communication between said water chamber and the water chamber at the top of the furnace and a water service pipe communicating with the water chamber at the top of the furnace.

885,951. APPARATUS FOR FEEDING MATERIALS TO A MIXER. ALVAH L. POST, Kent, Ohio, assignor to The Kent Machine Company, Kent, Ohio, a Corporation of Ohio. Filed Feb. 12, 1906. Serial No. 300,727.



1. In a feeding apparatus, two stationary hoppers separated by a discharge space, in combination with two hopper bottoms separated by a discharge space, connected together and mounted and adapted to be reciprocated together, each having a lateral discharge outlet leading into the space between the hoppers, and the hopper bottoms adapted to always intercept the materials discharged from the hoppers, so that, in operation, the hopper bottoms convey the materials from the hoppers and discharge them near together through the space between said bottoms.

2. In a feeding apparatus, two stationary hoppers separated by a discharge space and each having a lateral outlet into said discharge space, in combination with two movable hopper bottoms separated by a discharge space, mounted, connected together and adapted for simultaneous reciprocation and adapted to always intercept the materials discharged from the hoppers, means adapted and connected for actuating the hopper bottoms, and means adapted to vary the extent of the movements of said hopper bottoms; so that, in operation, the hopper bottoms convey the materials from the hoppers and discharge them near together at adjustably variable rates.

3. In a feeding apparatus, two stationary hoppers separated by a space into which there is a lateral outlet from each hopper, and two movable hopper bottoms separated by a discharge space, said bottoms being mounted and connected together for simultaneous operation and adapted to always intercept the materials discharged from the hoppers, in combination with an oscillatory feed lever connected for operating the hopper bottoms, a fulcrum pivot on which the feed lever oscillates, adapted to be shifted along said feed lever, means for shifting the fulcrum pivot along the feed lever, and means for retaining said fulcrum pivot in different positions along said feed lever; so that, in operation, the hopper bottoms convey the materials from the hoppers and discharge them near together, at adjustably variable rates.

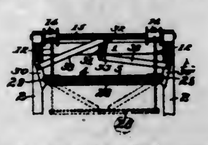
4. In a feeding apparatus two stationary hoppers separated by a space into which there is a lateral outlet, and two movable hopper bottoms separated by a discharge space, mounted, connected together for simultaneous op-

eration and adapted to always intercept the materials discharged from the hoppers, in combination with an oscillatory feed lever connected for operating the hopper bottoms, a fulcrum pivot on which the feed lever oscillates adapted to be shifted along said feed lever, an adjusting lever adapted and connected to shift the fulcrum pivot longitudinally of the feed lever and a retaining device adapted to retain the fulcrum pivot in different positions along the feed lever; so that, in operation, the hopper bottoms convey the materials from the hoppers and discharge them near together at adjustably variable rates.

5. In a feeding apparatus, two stationary hoppers separated by a space into which there is a lateral outlet from each hopper, and two movable hopper bottoms separated by a discharge space, said bottoms being mounted and connected together and adapted for simultaneous operation and adapted to always intercept the materials discharged from the hoppers, in combination with an oscillatory feed lever connected for operating the hopper bottoms, a fulcrum pivot on which the feed lever oscillates, adapted to be shifted along said feed lever, an adjusting lever adapted and connected to shift the fulcrum pivot longitudinally of the feed lever, a retaining plate adapted to retain the fulcrum pivot in different positions along the feed lever and a hand lever adapted and connected to shift the fulcrum pivot into and out of engagement with the retaining plate; so that, in operation, the hopper bottoms convey the materials from the hoppers and discharge them near together at adjustably variable rates.

[Claims 6 to 17 not printed in the Gazette.]

885,952. LOADER. THOMAS J. QUALLEY, Decorah, Iowa. Filed May 23, 1906. Serial No. 318,416.



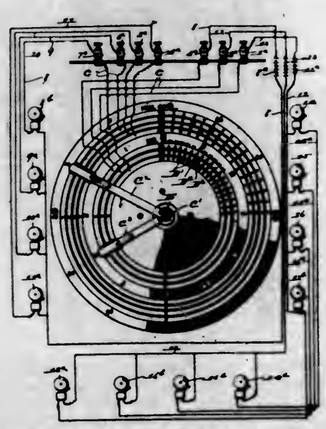
1. A device of the kind described, comprising a frame, a vertically movable substantially two-part platform therefor, each of said parts provided with a plurality of supporting members extended under the adjacent part, and means for lifting and supporting the free ends of said supporting members, and means for temporarily engaging and supporting the outer edges of said platform parts.

2. A device of the kind described, comprising a frame, a vertically movable two-part platform therefor, each of said parts provided with a plurality of supporting members extended under the adjacent part, means for lifting and supporting the free ends of said supporting members comprising a plurality of supporting cables secured thereto drums for operating said cables, means for operating said drums, and means for temporarily engaging and supporting the outer edges of said platform part.

3. A device of the kind described, comprising a frame, a vertically movable two-part platform therefor, each of said parts provided with a plurality of supporting members extending under the adjacent part, means for lifting and supporting the free ends of said supporting members comprising a plurality of supporting cables secured thereto drums for operating said cables, means for operating said drums comprising a bull-wheel, gearing connecting the said operating drums and bull-wheel, and means for operating said bull-wheel, means for temporarily engaging and supporting the outer edges of said platform parts and means for simultaneously disengaging said temporary engaging and supporting means.

4. A device of the kind described, comprising a frame, a vertically movable two-part platform therefor, each of said parts being provided with a plurality of supporting members extending under the adjacent part means for lifting and supporting the free ends of said supporting members comprising a plurality of supporting cables secured thereto, drums for operating said cables, means for operating said drums comprising a bull-wheel gearing connecting the said operating drums and bull-wheel and means for operating said bull-wheel, hooks for temporarily engaging and supporting the outer edges of said platform parts, means for simultaneously engaging said hooks as desired, and means for preventing the accidental lowering operation of the bull-wheel.

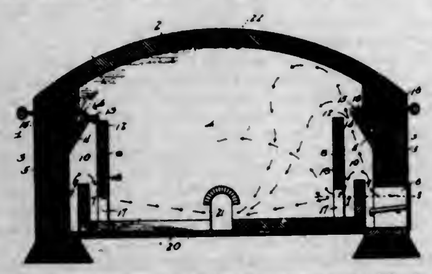
885,953. ELECTRICAL ATTACHMENT FOR CLOCKS. OWEN P. RAGAN, Ridgeway, Mo. Filed Mar. 6, 1906. Serial No. 304,572.



1. The combination with a clock, a center pinion of said clock, extending through the rear portion of the clock casing, of an extra cannon pinion secured to said extended portion of the center pinion, hands carried by the extra hour hand arbor, means for completing electrical circuits through said hands, a nut threaded upon the hour hand arbor and insulated therefrom and engaged with one of the hands, and a spring secured to the other hand and having its free end dragging upon said nut.

2. A device of the kind described comprising a disk having two sets of concentric conducting rings, carried thereby, each ring having a plurality of sockets formed therein, electrical circuits, including said rings, the said circuits being broken between the rings, movable plugs adapted to fit in said sockets, hands adapted to travel over the disk synchronously with the hands of the clock, plates hinged to the hands, brushes pivoted to the plates, means for holding the plates parallel to the hands, each brush alining with one of the rings, and means for electrically connecting the said rings when two or more brushes are in engagement with two or more of the said plugs.

885,954. BRICK-KILN. SHERMAN T. RAWLES, Galesburg, Ill. Filed Apr. 27, 1906. Serial No. 314,033.



1. In a combined up and down draft kiln, the kiln body having a plurality of furnaces each of which consists of an outer wall section having a fire box, an interior flash wall spaced from the outer wall section and forming with the same an intervening circulating flue having top and bottom flue openings respectively, means for covering and uncovering said top flue opening, and an upright baffle wall interposed between the flash wall and the fire box and projecting above the plane of the crown of the latter.

2. In a kiln of the class described, the kiln body having a floor provided with a central longitudinal outlet flue, and a plurality of open lateral bed flues communicating therewith, said flue body being further provided with a plurality of furnaces each comprising an outer wall section having a fire box and at its inner side formed with an inwardly deflected flue wall, an interior flash wall spaced from the outer wall section and forming with the same an intervening main circulating flue having top and bottom flue openings, said flash wall being provided at its lower end with an arch flue, an upright baffle wall interposed between and in spaced relation to the fire box and flash wall in the horizontal plane of the arch flue of the latter, said baffle wall projecting above the plane of the crown of the fire box, and a damper slab arranged for support by the flue wall portion of the outer wall section and adapted to be shifted over and from said top flue opening.

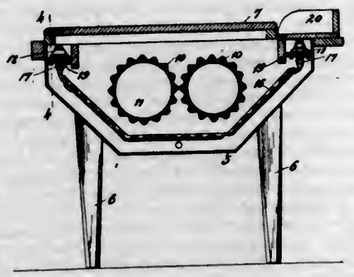
885,955. MANUFACTURE OF CONVEYER-BELTING AND MACHINE-BELTING. FRANK REDDAWAY, Pendleton, Manchester, England. Filed Sept. 27, 1907. Serial No. 394,918.



1. A belt composed of cotton canvas duck, woven wholly or partly from cabled yarns, for reducing the tendency of the belt to stretch.

2. Conveyer belting composed of cotton canvas duck, woven wholly or partly from cabled yarns cemented together in layers and having a protective surface as rubber or other composition.

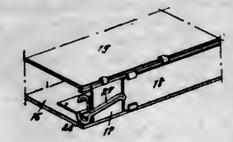
885,956. WASHING-MACHINE. EZEKIEL ROBERTS, Stillwater, Okla. Filed Sept. 23, 1907. Serial No. 394,133.



In a washing-machine, a suds-box, a pair of rotary rubbers therein means for turning the rubbers in the same direction and with different peripheral speeds, and a wash-board coöperating with the rubbers.

885,957. ACCOUNT-KEEPING DEVICE. WILLIAM W. ROBINSON, Des Moines, Iowa, assignor to Ideal Manufacturing Company, Des Moines, Iowa, a Corporation of Iowa. Filed Jan. 12, 1904. Serial No. 188,807.

1. A device for use in keeping accounts comprising a casing, a series of file-holders therein, each adapted to carry loose files, and an indicator for each file-holder normally in a position from which it must be moved in order to withdraw from or deposit a file within its holder, whereby the indicator is certainly changed from normal to indicating position whenever access is had to said file, without having to remember to make such change, and whereby it may be certainly determined, after a certain period, at a glance which file holders have been used during said period.



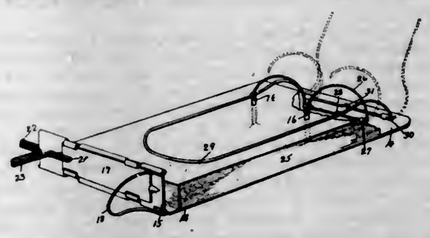
2. A device for use in keeping accounts comprising a casing, a series of file-holders, each adapted to carry files, and indicators for the file-holders, each normally in position from which it must be moved in order to withdraw from or deposit a file within its holder, whereby the movement of the indicator from normal position is not dependent on the memory of the operator, and whereby after a certain period it may be certainly determined at a glance which file-holders have had their indicators moved from normal position during said period.

3. A device for use in keeping accounts comprising a casing, a file-holder therein adapted to carry files, and an indicator mounted on the file-holder normally in a position from which it must be moved in order to have access to its contents, whereby the movement of the indicator from normal position is not dependent upon the memory of the operator, and whereby it may be certainly determined at a glance whether or not the indicator has been moved from its normal position to its indicating position.

4. In a device of the class described, the combination of a series of file holders, and an indicator for each file holder, said indicator being normally in a non-indicating position and designed to be set to an indicating position by the operator's act in obtaining access to the file holder.

5. In a device of the class described, the combination of a cabinet, a series of file-holders in the cabinet, and an indicating device for each file-holder, normally in a non-indicating position, and designed to be automatically set to indicating position when access is had to the file-holder.

885,958. INDIVIDUAL-ACCOUNT-KEEPING APPARATUS. WILLIAM W. ROBINSON, Des Moines, Iowa, assignor to Ideal Manufacturing Company, Des Moines, Iowa, a Corporation of Iowa. Filed Mar. 14, 1904. Serial No. 197,934.



1. A device for keeping accounts comprising a cabinet, a series of file holders therein, each adapted to carry files and a combined lock and indicator for each file holder normally in a locked position from which it must be unlocked and moved in order to withdraw from or deposit a file within its holder whereby the lock and indicator is certainly changed from normal to indicating position whenever access is had to said file without having to re-

member to make such change and whereby it may be certainly determined after a certain period at a glance which file holders have been used during said period.

2. A device for use in keeping accounts comprising a casing, a series of file holders therein, each adapted to carry files and a lock and indicator for each file holder, each normally in a position from which it must be unlocked and moved in order to withdraw from or deposit a file within its holder whereby the movement of the indicator from normally locked position is not dependent upon the memory of the operator and whereby after a certain period it may be certainly determined at a glance which file holders have had their indicators unlocked and moved from normal to indicating position during said period.

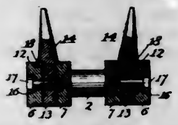
3. A device for use in keeping accounts, comprising a casing, a series of file holders therein, each adapted to carry files, indicators for the file holders, each normally in a position from which it must be manually removed in order to withdraw from or deposit a file within its holder and to which it must be returned to complete the movement and a locking device for each file holder coacting with the indicator thereof to prevent a complete movement of the indicator until the locking device is first released.

4. In a device of the class described, a frame having a number of compartments, files in the compartments, a name card on each file and a combined lock and indicator connected with each file, said lock and indicator in one position engaging the frame to prevent the removal of the file and in its other position having the indicator extending over the name card.

5. In a device of the class described, a frame having a number of compartments, files in the compartments, each file provided with a stationary handle member and also with a sliding handle member, said sliding handle member having a lock, said lock in one position engaging the frame to prevent the removal of the file.

[Claims 6 to 8 not printed in the Gazette.]

885,959. LOG-CONVEYER CHAIN. JACOB SCHILLEMAN, Wabeno, Wis. Filed June 24, 1907. Serial No. 380,490.



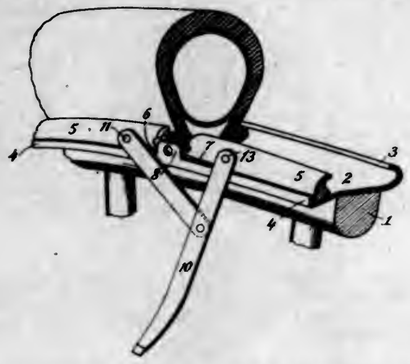
1. A dog-carrying shoe for a log conveyer chain having a pair of blocks and connecting parts, each of said blocks being provided with an inclosed socket in its upper face intermediate of its side faces, lock-engaging dogs having shanks in said sockets, and means to hold said shanks in place.

2. A dog carrying shoe for log conveying chains, comprising pairs of blocks adapted to be engaged with the link pins of the chain, set screws adapted to be screwed through the ends of the blocks and into engagement with the ends of the link pins to detachably secure said blocks thereon, log engaging dogs having formed thereon reduced shanks adapted to be engaged with sockets formed in said blocks, shoulders formed along the base of said dog to engage the upper side of the blocks, thus forming lateral supports or braces for the dogs, and fastening bolts adapted to be passed through said blocks and the shanks of the dogs to detachably secure the same in place, substantially as described.

3. A dog-carrying shoe for a log conveyer chain, comprising a pair of blocks and connecting parts, each of said blocks being provided with an inclosed socket in its upper face and intermediate of the side faces thereof, lock-engaging dogs with reduced shanks seating in said sockets, and screws to hold said shanks in place.

4. A dog-carrying shoe for a log-conveying chain, comprising a pair of blocks and connecting parts, a socket in each of said blocks, the forward wall of said socket being forwardly and downwardly inclined, dogs with shanks engaged in said sockets.

885,960. VEHICLE-WHEEL RIM. EDWIN C. SHAW, Akron, Ohio, assignor to B. F. Goodrich Company, Akron, Ohio, a Corporation of Ohio. Filed Feb. 20, 1907. Serial No. 358,463.



1. A vehicle wheel rim comprising a channel-iron carrying one permanent tire flange, a removable split ring carrying an opposing tire flange, downwardly extending lugs upon the split ring, near its terminals, slots in said channel-iron adapted to receive the said lugs, a lip or lug extending upwardly from the channel-iron, and a key adapted to pass through said upwardly extending lip and through mutually registering grooves in the contacting surfaces of the ring terminals.

2. Means for securing a detachable tire flange to the channel-iron of a vehicle wheel rim comprising downwardly extending lugs upon the detachable flange near its terminals, slots in the channel-iron adapted to receive said lugs, an upwardly extending lip upon said channel-iron opposite the ring joint and a key adapted to pass through said lip and through a perforation in the contacting surfaces of the ring terminals.

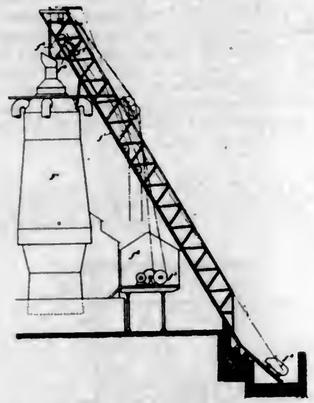
3. In a vehicle wheel rim the combination of a channel-iron carrying a permanent tire flange, an opposing tire flange mounted upon a removable transversely split ring, and means for securing said ring to said channel-iron, comprising a retaining flange along the edge of the channel-iron, downwardly extending lugs upon said split ring, near its terminals, and a bolt adapted to pass through mutually registering grooves extending through the contacting surfaces of the ring terminals and through an upwardly projecting lug upon said channel-iron.

4. A two-part channel-iron for use with vehicle wheels, the one member seated upon the wheel felly and having its edges formed into flanges, one flange formed to retain the tire and the other forming a seat for the second member of the channel-iron, said second member comprising a transversely split ring having downwardly extending lugs near its terminals adapted to fit within slots in the channel-iron, means being provided for securing the terminals of said lugs to an upwardly projecting lug formed upon said channel-iron.

5. The combination in a vehicle wheel rim of a channel-iron having at one edge a flange for engagement with the tire, and at its opposite edge a downwardly inclined portion terminating in an upwardly projecting retaining flange adapted to form a seat for a split ring, said split ring comprising a base fitted to said seat, a flange for engagement with the tire, and two downwardly extending lugs, near the terminals of said ring, adapted to enter slots in said channel-iron; and a key passing through a hole drilled in the terminals of said split ring and through an upwardly projecting flange upon said channel-iron.

[Claims 6 to 8 not printed in the Gazette.]

885,961. CONTROLLING SYSTEM FOR HOISTS. BARTON R. SHOVER, Chicago, Ill., and ARTHUR C. EASTWOOD, Cleveland, Ohio. Filed June 20, 1907. Serial No. 379,885.



1. In a balanced skip-hoist, an inclined runway, a pair of skip-cars having travel thereon simultaneously in reverse directions, a winding engine for propelling either of said skip-cars up said inclined runway, and automatic means for dumping each of said skip-cars when its upper limit of travel is reached, said automatic dumping means deriving the energy required to dump either of said upwardly moving skip-cars from the energy due to the downward motion of the other skip-car and the energy due to the motion of the parts of said winding engine.

2. In a hoisting mechanism, an inclined runway, a skip-car traveling thereon, a winding engine for propelling said skip-car up said inclined runway and automatic means for dumping said skip-car at a predetermined point on said runway, said automatic dumping means deriving the energy required to dump said skip-car from the energy stored in the moving parts of said hoisting mechanism.

3. In a hoisting mechanism, an inclined runway, a skip-car traveling thereon, and means for causing the energy stored in the moving parts of said hoisting mechanism to dump said skip-car at a predetermined point on said runway.

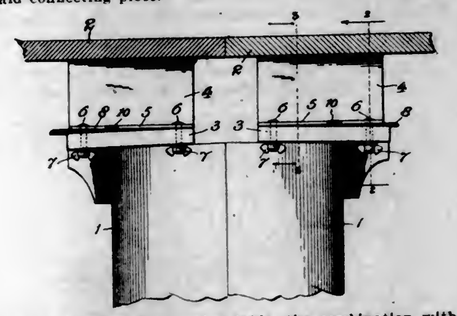
4. In a hoisting mechanism, an inclined runway, a skip-car traveling thereon, a winding engine for drawing said skip-car up said runway, means for automatically cutting off the power from said winding engine when said skip-car reaches a predetermined point on said runway, and for causing the energy stored in the moving parts of said hoisting mechanism to automatically dump said skip-car.

5. In a hoisting mechanism, an inclined runway, a skip-car, a motor driven hoisting engine for propelling said skip-car up said runway, and automatic means for cutting off the supply of power from said motor before the limit of travel of said skip-car is reached and for causing energy due to the motion of the parts of said hoisting mechanism to be absorbed in completing the travel of said skip-car against gravity.

[Claims 6 to 11 not printed in the Gazette.]

885,962. EXTENSION-TABLE. FRANK J. SENG, Chicago, Ill., assignor to The Seng Company, a Corporation of Illinois. Filed Mar. 2, 1907. Serial No. 360,160.

1. In a pedestal extension table, the combination with opposite table sections connected to move to and from each other, and each comprising a top section, a pedestal section, and a connecting piece attached to and lying between the same, of bolts securing said connecting piece to one of said sections and located near the opposite ends of said piece, and a wedge interposed between said connecting piece and said latter section and having retaining ears at its longitudinal edges adapted to bear on each side of said connecting piece.



2. In a pedestal extension table, the combination with opposite table sections connected to move to and from each other, and each comprising a top section, a pedestal section, and a connecting piece attached to and lying between the same, of bolts securing said connecting piece to one of said sections and located near the opposite ends of said piece, and a wedge interposed between said connecting piece and said latter section and having a longitudinal slot through which passes one of the retaining bolts, and retaining ears at the smaller end of said wedge adapted to bear on each side of said connecting piece.

3. In a pedestal extension table, the combination with opposite table sections connected to move to and from each other and each comprising a top section, a pedestal section, and a connecting piece attached to and lying between the same, of bolts securing said connecting piece to one of said sections and located near the opposite ends of said piece, and a wedge interposed between said connecting piece and said latter section and comprising a plate having a longitudinal slot to receive one of the retaining bolts, inclined walls at the opposite longitudinal edges of the plate, and retaining ears at the smaller end of the wedge adapted to bear on each side of said connecting piece.

4. In a pedestal extension table, the combination with opposite table sections connected to move to and from each other, and each comprising a top section, a pedestal section, and an angle plate attached to one of said sections and having a horizontal flange portion, of bolts securing said flange portion to the other of said sections and located near the ends of said portion, and a wedge interposed between said flange portion and said latter section at one end of said portion.

5. In a pedestal extension table, the combination with opposite table sections connected to move to and from each other and each comprising a top section, a pedestal section, and an angle plate attached to one of said sections and having a horizontal flange portion, of bolts securing said flange portion to the other of said sections and located near the ends of said portion, and a wedge interposed between said flange portion and said latter section at one end of said portion and having a slot through which passes one of the retaining bolts.

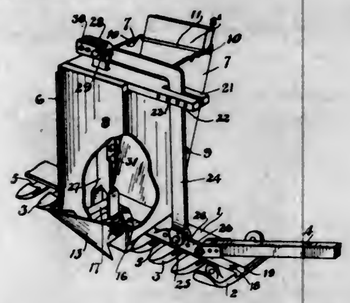
[Claim 6 not printed in the Gazette.]

885,963. POTATO-PLANTING MACHINE. JOHN SIEFFERT, Winnipegosis, Manitoba, Canada. Filed Aug. 13, 1907. Serial No. 388,388.

1. In a potato planting machine, the combination with the finger bar of a mower, of a hopper adapted to be secured to the finger bar, a forward shoe and a rear disk on the hopper, a horizontal reciprocating knife and a vertical reciprocating fork within the hopper, as and for the purpose specified.

2. In a device of the class described, the combination with the finger bar of a mower, of a hopper adapted to be secured to the finger bar, a forward shoe on the hopper, a disk pivoted by an arm to the rear of the hopper, a horizontal reciprocating bar carrying a knife, and a vertical

reciprocating fork within the hopper, the knife operating between the prongs of the fork, and a housing for the fork, as and for the purpose specified.

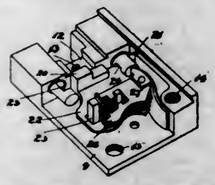


3. In a potato planting machine, the combination with the finger bar and the knife pitman of a mower, of a hopper adapted to be secured to the finger bar, a bar carrying at its one end a two edged knife and having its other end attached to the pitman from which it receives a horizontal reciprocating motion, a fork operating vertically within the hopper and reciprocated by the motion of the knife bar, a shoe forwardly on the hopper, and a disk pivoted by an arm to the rear of the hopper, and a housing for the fork, as and for the purpose specified.

4. In a potato planting machine, the combination with the finger bar having guards arranged along its forward side, and the knife pitman, of a mower, of a hopper having a pivoted back, and a set of recesses toward the lower inner edge of the front, means for holding the back in a fixed position, a bar carrying at its one end a two edged knife, and having its other end connected to the lower end of the pitman, a bell crank pivoted in a cross beam on the hopper, the lower end of such crank being connected to the knife bar, a fork extending vertically within the hopper and connected at its upper end to the upper end of the bell crank, a housing for the fork, a shoe secured on the hopper, and a disk to the rear of the hopper, as and for the purpose specified.

5. In a potato planting machine, the combination with the finger bar and the knife pitman of a mower, of a hopper having a pivoted back, the front and back extending below the sides, and recesses in the inner lower edge of the front to receive the tips of the guards on the finger bar, means whereby the pivoted back may be held in engagement with the finger bar, a horizontal bar carrying a two-edged blade, the outer end of the bar being connected to the pitman, a vertical fork connected to the bar by a bell crank, means whereby the length of the stroke of the fork and the knife may be controlled, a housing for the fork, a shoe on the forward face of the hopper and a disk pivoted at the rear of the hopper, as and for the purpose specified.

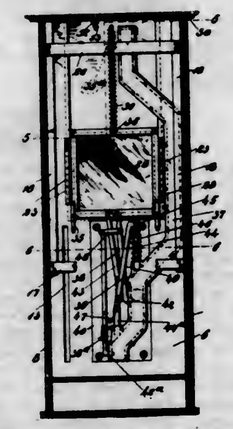
885,964. LOCK. AUGUSTUS H. SPARLING, Aligarh, India. Filed Jan. 18, 1907. Serial No. 353,000.



1. In a lock, a fixed standard or stud 23 against which one or more lugs 26 on the levers 27 of the lock impinge when any one or more of the said levers is or are moved beyond the position in which the stump 29 of the bolt 22 is capable of passing through the gatings, substantially as described and for the purpose set forth.

2. In a lock, means for blocking the levers 27 and preventing the further movement of the key in the event of any of such levers being raised beyond the correct position to permit of the stump 29 of the bolt 22 passing through the gatings which means consists of a standard or stud 25 fixed to the body of the lock, and lugs 26 on the levers 27 so situated that when the said levers are raised into the correct position for the stump 29 to pass the gatings, the said lugs come nearly, but not quite, into contact with said standard 25, but if one or more of said levers is raised beyond that position it comes immediately into contact with the said standard and further movement of the key is thereby prevented, substantially as described.

885,965. VENDING-MACHINE. THOMAS A. STEELE, Point Marion, Pa., assignor of one-half to Elgie P. Durr, Point Marion, Pa. Filed Jan. 15, 1908. Serial No. 410,958.



1. In a vending machine, the combination of a casing having a delivery and exhibiting opening, a magazine for articles in the casing, comprising a plurality of adjoining compartments one of which is opposite said opening, means to shift the articles to and from one compartment to the other, at opposite ends thereof, to bring the articles in succession opposite said opening, and means permitting removal of the selected articles through said opening.

2. In a vending machine, the combination of a casing having a delivery and exhibiting opening in the front thereof, a magazine in the casing, consisting of two compartments located adjacent to each other and having spaces at the ends thereof permitting transfer of articles from one compartment to the other, the front end of one of said compartments being opposite the said opening, a frame slidable in said spaces and constructed to shift articles in succession from one compartment to the other, and means permitting removal of an article through said opening.

3. In a vending machine, the combination of a casing having a delivery and exhibiting opening in the front thereof, upper and lower compartments in the casing for the articles to be vended, having spaces at their ends through which articles may be shifted from one compartment to the other, the front end of one compartment being opposite the said opening, and a transfer frame slidable in said spaces and across the ends of the compartments and provided with means for engaging and shifting articles in succession from one compartment to the other.

4. In a vending machine, the combination of a casing having a delivery and exhibiting opening in the front thereof, upper and lower guides in the casing forming upper and lower compartments for articles to be vended, the front of the lower compartment being in line with said opening, holders for said articles, slidable on the guides and filling the compartments, said guides having spaces at the ends through which a holder may be shifted from the front end of the upper compartment to the same end of the lower, and from the rear end of the lower to the same end of the upper, and a frame slidable up and down in the casing and having means at the ends of the compartments for engaging and shifting the holders as stated.

5. In a vending machine, the combination of a casing having a delivery opening and a sliding window across the same, an article holder behind the opening, having an article retaining device, and means permitting opening of the window to allow access to the holder, said window having a projection engageable with said retaining device to release the same when the window is opened.

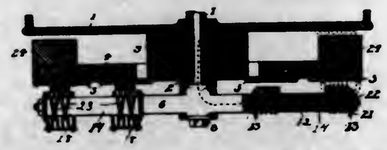
[Claims 6 to 8 not printed in the Gazette.]

885,966. SAFETY-RAZOR. GEBHARD TITTMANN, Foche, near Solingen, Germany. Filed Apr. 30, 1907. Serial No. 371,116.



A safety razor provided with a guard, a clamp plate, laterally extending fulcrums on one of said parts, slotted wings on the other part removably engaged by said fulcrums, a perforation in the guard above the fulcrums, and tilting means passing through said perforation and adapted to engage the clamp plate, substantially as described.

885,967. ELECTRIC CONTROLLER. REUBEN I. WRIGHT, Cleveland, Ohio, assignor to Electric Controller and Supply Company, Cleveland, Ohio, a Corporation of Ohio. Filed Oct. 11, 1906. Serial No. 338,366.



1. In a movable contact finger-carrier for electric controllers, the combination of a metallic bar, a hub cast thereon, insulating sleeves surrounding said bar toward either end, tubular finger-carriers surrounding said insulating sleeves, and contact fingers pivoted in said carriers.

2. In a movable contact finger-carrier for electric controllers, the combination of a metallic bar, a hub cast thereon, insulating sleeves surrounding said bar toward either end, tubular finger-carriers surrounding said insulating sleeves, and contact members flexibly mounted on said carriers.

3. In an electric controller, a controller arm composed of a metallic bar, a hub cast thereon, said hub being offset at right angles to the length of the bar, and contact members flexibly mounted toward either end of said bar and insulated therefrom.

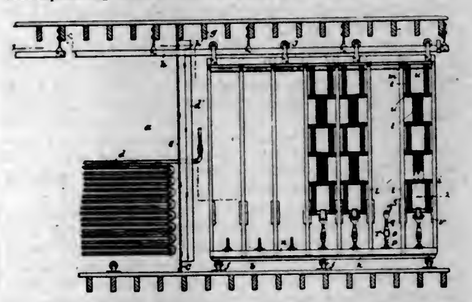
4. In an electric controller, a controller arm composed of a bar, a hub cast thereon, and a shaft seated in said hub, said hub being offset at right angles to the length of said bar in such manner that said bar is not cut by the hole in said offset hub.

5. In an electric controller, a controller arm, a sleeve of insulating material thereon, a metallic tubular holder sleeved on said sleeve, and contact devices carried by said holder readily removable means for securing said second sleeve on the bar.

[Claims 6 to 9 not printed in the Gazette.]

885,968. APPARATUS FOR LUSTERING SKEINS. DWIGHT ASHLEY, Paterson, N. J. Filed Jan. 31, 1907. Serial No. 355,029.

1. In an apparatus for lustering skeins, the combination, with a chamber having vertical elongated openings leading thereto, and means for heating said chamber, of guideways extending through the openings into said chamber, substantially flat frames arranged to move in said guideways, and means for securing the skeins, under tension, in the frames in substantially flat series, each series with its own plane substantially coincident with that of the corresponding frame, substantially as described.



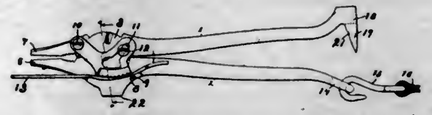
2. In an apparatus for lustering skeins, the combination, with a chamber having vertical elongated openings leading thereto, and means for heating said chamber, of guideways extending through the openings into said chamber, substantially flat frames arranged to move in said guideways and having parallel members, and means for securing the skeins, under tension, in the frames in substantially flat series, each series with its own plane substantially coincident with that of the corresponding frame, said series alternating with said parallel members, substantially as described.

3. In a means for stretching skeins connected in series by means of rods, the combination, with the rods, of a substantially flat frame, means for holding each end rod in the series in substantially the plane of the frame, and means for subjecting the skeins to tension, substantially as described.

4. In a means for stretching skeins connected in series by means of rods, the combination, with the rods, of a substantially flat frame, and means for holding each end rod in the series in substantially the plane of the frame, substantially as described.

5. In a means for stretching skeins connected in series by means of rods, the combination, with the rods, of a suitable frame, parallel members arranged in said frame, said members being adapted to support one end rod in the series between them in the plane of the frame, means, connected with the frame and adapted to be connected with the other end rod, for subjecting the skeins to tension, and guides on said members for maintaining the other end rod also in the plane of the frame, substantially as described.

885,969. PLIERS. CHARLES W. BAKER, Waverly township, Van Buren county, Mich. Filed Sept. 9, 1907. Serial No. 392,015.



1. A tool comprising a pair of lever-like handles; heads for said handles having forwardly-projecting plier jaws thereon; a fixed wire gripping jaw on one of said heads projecting laterally under and outwardly beyond the other head; a V-shaped movable jaw pivoted by its forward arm to said head having said fixed jaw, said movable jaw having a slot in its rear arm; a pin on the other head arranged to engage said slot whereby the wire gripping jaw may be opened or closed by said handles, and an eye in the outer end of said handle having said wire gripping jaws thereon.

2. A tool comprising a pair of lever-like handles; heads for said handles having forwardly-projecting plier jaws

thereon; a fixed wire gripping jaw on one of said heads projecting laterally under and outwardly beyond the other head; a V-shaped movable jaw pivoted by its forward arm to said head having said fixed jaw, said movable jaw having a slot in its rear arm; a pin on the other head arranged to engage said slot whereby the wire gripping jaw may be opened or closed by said handles; and a wire cutter formed in the upper edges of said heads between the arms of said movable jaws.
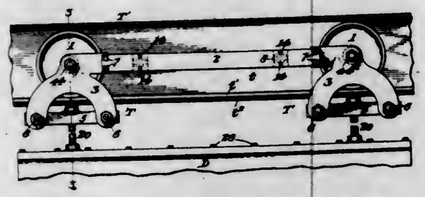
3. A tool comprising a pair of lever-like handles; heads for said handles having forwardly-projecting plier jaws thereon; a fixed wire gripping jaw on one of said heads projecting laterally under and outwardly beyond the other head; a V-shaped movable jaw pivoted by its forward arm to said head having said fixed jaw, said movable jaw having a slot in its rear arm; and a pin on the other head arranged to engage said slot whereby the wire gripping jaw may be opened or closed by said handles.

4. A tool comprising a pair of lever-like handles; heads for said handles having forwardly-projecting plier jaws thereon; a fixed wire gripping jaw on one of said heads projecting under and outwardly beyond the other head; a movable jaw pivoted at its forward end upon said head having said fixed jaw thereon; and a sliding connection for said movable jaw to the other head whereby said wire gripping jaws may be opened or closed by said handles.

5. A tool comprising a pair of lever-like handles; heads for said handles having forwardly-projecting plier jaws thereon; a fixed wire gripping jaw on one of said heads projecting under and outwardly beyond the other head; a movable jaw pivoted at its forward end upon said head having said fixed jaw thereon; a sliding connection for said movable jaw to the other head whereby said wire gripping jaws may be opened or closed by said handles; and an eye in the outer end of said handle having said wire gripping jaws thereon.

[Claims 6 and 7 not printed in the Gazette.]

885,970. HANGER FOR EDGEWISE-MOVABLE DOORS. SIDNEY U. BARR, New York, N. Y., assignor to Wm. H. Jackson Company, New York, N. Y., a Corporation of New York. Filed Mar. 29, 1907. Serial No. 365,351.



1. A door-hanger comprising, in combination, a pair of wheeled trucks each having opposite side-frames spaced apart and connected at their bottoms by a base and the wheels of each truck being mounted at the inner walls of said side-frames and spaced apart; a pair of side-bars spaced apart and each connecting at its opposite ends with two of said side-frames; and a pair of horizontal, truck-centering wheels operatively mounted, spaced apart and projecting inwardly of said side-bars.

2. A door-hanger comprising, in combination, a pair of wheeled trucks each having opposite side-frames spaced apart and connected at their bottoms by a base, and the wheels of each truck being mounted at the inner walls of said side-frames and spaced apart; a pair of detachable side-bars spaced apart and each connected at their opposite ends with two of said side-frames; and a pair of horizontal truck-centering wheels spaced apart, one wheel of said pair being supported by one of said side-bars and the other wheel of said pair being connected to the other of said side-bars.

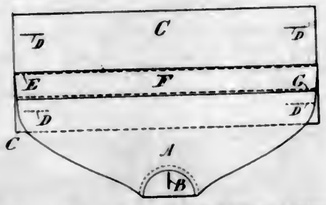
3. A door-hanger comprising, in combination, a pair of wheeled trucks each having opposite side-frames spaced apart and connected at their bottoms by a base, and the wheels of each truck being mounted at the inner walls of said side-frames and spaced apart; a pair of detachable side-bars spaced apart and each connected with two of said trucks; and a plurality of horizontal truck-centering wheels carried by each of said side-bars and projecting inwardly thereof.

4. A door-hanger comprising, in combination, a pair of wheeled trucks each having opposite side-frames spaced apart and connected at their bottoms by a base, and the wheels of each truck being mounted at the inner walls of said side-frames and spaced apart; a pair of detachable side-bars spaced apart and each connected at its opposite ends to a pair of side-frames, and a plurality of pairs of horizontal truck-centering wheels adjustably mounted on brackets attached to the inner sides of said side-bars.

5. The combination of a pair of wheeled trucks having side-frames spaced apart; side-bars spaced apart and each connected at its opposite ends with two of said trucks; horizontally mounted truck-centering wheels carried by the side-bars, a track comprising a vertical web between opposed peripheries of the horizontal wheels and also comprising a pair of parallel rails the tops of which are convex and support the truck wheels.

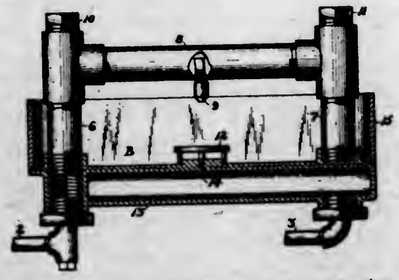
[Claims 6 to 10 not printed in the Gazette.]

885,971. HINGEABLE CUFF ATTACHMENT FOR SHIRTS AND THE LIKE. ALBERT E. G. BENNETT, Fitzroy, and WILLIAM R. FINDLAY, St. Kilda, Victoria, Australia. Filed Dec. 26, 1906. Serial No. 349,521.



A detachable and reversible cuff having a narrow fillet secured at one edge to the longitudinal center thereof and a flap connected to the other edge of said fillet, said flap and fillet being of greater width than the width of the cuff, and the length of the fillet adjacent the cuff being the same as the cuff and having converging ends, and said flap having converging sides and fastening means at the outer end of said flap.

885,972. STEAM-BLAST GAS-BURNER. GEORGE S. BENNETT, San Francisco, Cal. Filed Mar. 13, 1907. Serial No. 362,227.



1. In a steam blast gas burner, the combination of a base plate having a passage for gas and a vertical passage for water therethrough, a steam generator above the base and connected with the water passage therethrough, a downwardly projecting nozzle carried by the steam generator discharging toward the end of the gas passage in the base plate, and gas and water pipes connected with the base plate below the same.

2. In a steam blast gas burner, the combination of a base plate having a passage for gas and a vertical passage for water therethrough, a steam generator threaded into the water passage in the base plate and carried thereby, a downwardly projecting nozzle carried by the steam generator and discharging toward the end of the gas passage in the base plate, and gas and water supply pipes connected to the base plate below the same.

3. In a steam blast gas burner, the combination of a base plate having a passage for gas and a vertical passage for water therethrough, a steam generator carried by the base plate and connected with the water passage therein, a nozzle connected with the steam generator and discharging toward the end of the gas passage in the base plate, an upwardly projecting ring carried by the base plate, and a gas and a water supply pipe connected with the base plate below the same.

4. In a steam blast gas burner, the combination of a base plate having a passage for gas and a vertical passage for water therethrough, a steam generator carried by the base plate and connected with the water passage in the same, a nozzle extending into and through the bottom of the steam generator and discharging toward the end of the gas passage in the base plate, an upwardly projecting ring carried by the base plate, and a gas and a water supply pipe connected to the bottom of the base plate.

5. In a steam blast gas burner, the combination of a base plate having gas and water passages therein and supply pipes connected therewith below the same, a steam generator above the base plate and connected with the water supply, means to direct a jet of steam toward the base plate and the gas escaping therefrom said means extending into and through the bottom of the steam generator, and a gas and a water supply valve in the supply pipes.

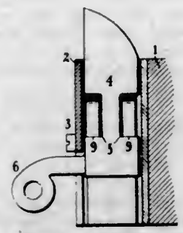
[Claims 6 to 10 not printed in the Gazette.]

885,973. PAINT. ARTHUR L. BERRY, Portland, Me. Filed Jan. 29, 1908. Serial No. 413,147.

1. A paint consisting of amorphous graphite, zinc oxid, copper arsenite and turpentine.

2. A paint composed of amorphous graphite, zinc oxid, copper arsenite and turpentine mixed in about the proportion of 76 oz. graphite, 8 oz. zinc oxid, 1 oz. arsenite and 88 oz. turpentine to the gallon and mixed by grinding the graphite and zinc oxid in turpentine to a pasty consistency, dissolving the arsenite in sufficient turpentine to reduce it to a pasty consistency and then grinding all together in the balance of the turpentine, substantially as described.

885,974. SWINGING-WINDOW CATCH. PIETRO BOGGIO, West Hoboken, N. J. Filed June 19, 1907. Serial No. 379,772.



In a swinging window catch, the combination with a hollow window sash, of a catch-bolt mounted therein, and having a manipulating arm projecting from the hollow sash, and a controlling weight pivoted at the side of the bolt, entirely within the window sash, and engaging with the bolt, substantially as shown and described.

885,975. WATCH-GUARD. HORACE N. BOLTON, Paterson, N. J. Filed Jan. 9, 1908. Serial No. 409,987.

1. A watch guard comprising two semi-circular pieces formed each with an outwardly projecting spur at one end, and means for securing said pieces with their spurs projecting oppositely around the stem of a watch, substantially as described.



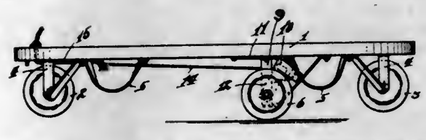
2. A watch guard comprising two semi-circular pieces formed each with an outwardly projecting spur at one end and an outwardly projecting lug at the other end, and means for securing said pieces together in the form of a band with the lug of one lying face to face with respect to the spur of the other, substantially as described.

885,976. COMPOSITION OF MATTER. SHERMAN BROWN, Pittsburg, Kans. Filed Apr. 24, 1907. Serial No. 370,065.

1. The herein described composition of matter consisting of gambier, a decoction of witch hazel, and a decoction of blackberry roots and water.

2. The herein described composition of matter consisting of gambier, five pounds, decoction of witch hazel, one-eighth of an ounce, decoction of blackberry roots, one-eighth of an ounce, and soft water, six gallons.

885,977. COASTER. SILAS B. BROWN, Cincinnati, Ohio. Filed Aug. 19, 1907. Serial No. 389,273.



A coaster consisting of a flat board, two wheels medially alined, and two wheels parallel between the first named wheels and extending in a different plane, said wheels being supported on the under side of the board, and guards downwardly projected from the front ends of the under side of the board, adapted to protect the hands gripping the edge of the board, and also adapted to limit the rocking movements of the coaster, substantially as described.

885,978. PREPARATION OF THE INDIGO-VAT EMPLOYED IN DYEING. HENRI CHAUMAT, Paris, France. Filed Aug. 20, 1907. Serial No. 389,400.

An electrolytic process for the preparation of the indigo vat employed in dyeing, consisting in treating by the electric current, with exclusion of air, an alkali solution, placing an anode in a chamber separated from the bath by a diaphragm, said anode being constituted by a metal which is not oxidizable in the conditions of the operation, forming a cathode by a mixture of metallic powder which is a conductor of electricity, and protecting the vat from external oxidation.

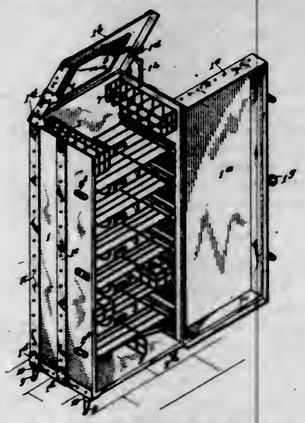
885,979. PACKING-CASE FOR HATS. ANNE I. COE, New York, N. Y. Filed Oct. 17, 1906. Serial No. 339,289.

1. In a hat case, a wire shelf comprising wires crossing each other and secured together, one of the wires being bent outwardly in U-shape, and a piece of flat perforable material attached to the wire of the U within the U.

2. In a hat case, a wire shelf comprising wires crossing each other and secured together, one of the wires being bent outwardly in U-shape, and a flat piece of felt attached to the wire of the U within the U.

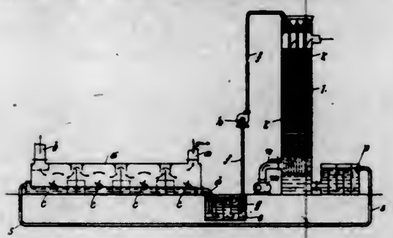
3. In a packing case, the combination of a body, a plurality of removable horizontal shelves therein constructed of crossed wires forming a reticulated structure adapted

to support a hat brim while permitting the trimming material of the hat to project through the shelf, and hat



securing devices mounted on the shelves and formed to enter the crowns of the hats to secure them to the shelves.

885,980. PROCESS OF RECOVERING AMMONIA AND HEATING AIR IN THE MANUFACTURE OF PRODUCER-GAS. WILLIAM J. CROSSLEY and THOMAS RIGBY, Openshaw, near Manchester, England. Filed Aug. 30, 1907. Serial No. 390,833.



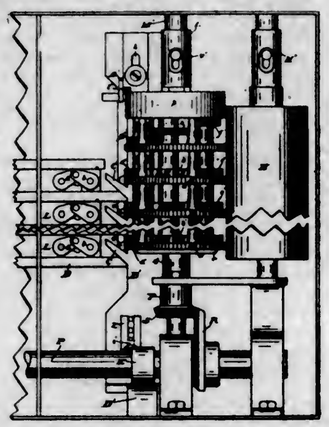
1. The process of recovering ammonia and heating air in the manufacture of producer gas which consists in circulating continuously sulfate liquor and bringing producer gas in contact therewith so as to absorb the ammonia, cool and wash the gas, condense the water vapor and simultaneously heat and saturate the air supplied to the producers with said sulfate liquor, substantially as and for the purposes herein described.

2. The process of recovering ammonia and heating air in the manufacture of producer gas which consists essentially in combining in one operation and by the use of sulfate liquor as the regenerative or heat interchanging medium, the recovery of the latent heat from the gas and the heating and saturation with water vapor of the air on its way to the generator.

885,981. VOTING-MACHINE. WILLIAM H. DANA, Dayton, Ohio, assignor to Leopold Rauh, Dayton, Ohio. Filed Aug. 7, 1903. Serial No. 168,615.

1. In a voting machine, a plurality of movable devices for receiving the irregular ballots, regular key operated voting mechanisms, and intermediate mechanism directly connecting the irregular ballot receiving devices and the regular key operated voting mechanisms, and means operated by the voter in approaching and leaving the machine for simultaneously locking and unlocking the regular voting mechanisms, and the irregular ballot receivers.

2. In a voting machine, a plurality of movable devices for receiving the irregular ballots, regular key operated voting mechanisms, and intermediate mechanism directly connecting the irregular ballot receiving devices and the regular key operated voting mechanisms, and interlocking devices for limiting the operation of the regular voting mechanisms and the ballot receiving devices in corresponding rows.



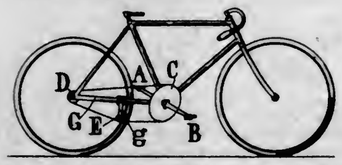
3. In a voting machine, a regular ticket voting mechanism and interlocking devices for limiting their operation, a plurality of movable ballot receivers for receiving the irregular ballots, and intermediate mechanisms directly connecting the ballot receivers and regular voting mechanisms, whereby the movement of a ballot receiver will render inoperative the corresponding regular voting mechanism.

4. In a voting machine, a regular ticket voting mechanism and interlocking devices for limiting their operation, a plurality of movable ballot receivers, normally locked, for receiving the irregular ballots, and intermediate mechanisms directly connecting the ballot receivers and regular voting mechanism, whereby the movement of a ballot receiver will render inoperative the corresponding regular voting mechanism.

5. In a voting machine, regular ticket voting mechanisms, and interlocking devices for preventing their operation for more than a single candidate in any one office row, a plurality of movable ballot receivers for receiving and holding the irregular ballots, one for each office row, normally closed against the reception of a ballot, and intermediate mechanism directly connecting the ballot receivers and interlocking devices, whereby when the ballot receivers are moved for voting, the interlocking devices for the corresponding regular ticket mechanisms will be locked from movement.

[Claims 6 to 35 not printed in the Gazette.]

885,982. DRIVING-GEAR FOR VELOCIPEDES. RENÉ J. A. DELACROIX, Besançon, France. Filed Aug. 4, 1906. Serial No. 329,186.

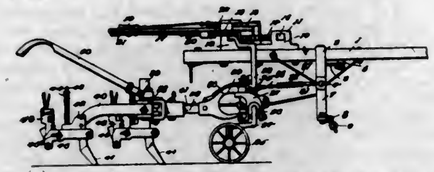


1. In a transmission gear for velocipedes, the combination of a chain wheel, said chain wheel having a major axis, and a minor axis, pedal cranks for operating said chain wheel, said pedal cranks lying at an inclination to the major axis and slightly in advance of the minor axis of said chain wheel, a chain, a small chain wheel mounted

on the hub of the driving wheel, and of a jockey pinion revoluble on a fixed axis upon the frame and serving to regulate automatically the tension of the chain and situated so that tangents from the small chain wheel and the jockey pinion respectively to a circle concentric with the chain wheel having as diameter the mean of the axes of the same, will be parallel.

2. In a driving gear for velocipedes, the combination of a chain wheel, said chain wheel having a major axis and a minor axis, pedal cranks for operating said chain wheel, said pedal cranks lying at inclination to the major axis, and at about 10° or 12° in advance of the axis perpendicular to said major axis, so as to be slightly in advance of the minor axis of said chain wheel, a chain, a chain sprocket secured to the road wheel, a jockey wheel revoluble on a fixed axis, said fixed axis being carried by a forked bracket secured to the chain-stay and so situated that tangents from the small chain wheel and the jockey pinion respectively to a circle concentric with the chain wheel having as diameter the mean of the axes of the same, will be parallel.

885,983. CULTIVATOR. WILLIAM A. DEWBERRY, Center Hill, Ark. Filed Apr. 25, 1907. Serial No. 370,252.



1. In an implement of the class described, and in combination with supporting means, laterally adjustable standards mounted thereon, said standards being formed with lateral arms near the lower ends thereof and being provided with stub axles, at the lower extremities, ground wheels mounted upon stub axles spaced longitudinal beams, saddle members straddling the arms of the standards, couplings attached to said saddle members and pivotally connecting the longitudinal beams thereto for lateral movement and admitting of vertical movement of said beams, and shovels carried by the beams.

2. In an implement of the character described, the combination of supporting means, transversely adjustable rack bars, standards on said bars, each standard having its lower end extending outwardly to form an arm and thence downwardly and provided with a stub axle, ground wheels mounted upon the stub axles, longitudinal beams, shovels carried by said beams, saddle members straddling the arms of the standards, couplings connecting the beams with the standards and comprising a coupling member receiving the saddle member, means securing said coupling member to the saddle member and preventing displacement of these members from the standard, and a second coupling member secured to the front end of each beam and having a vertical pivotal connection with the first mentioned coupling member of the coupling, said coupling permitting both lateral and vertical movement of the beam substantially as described.

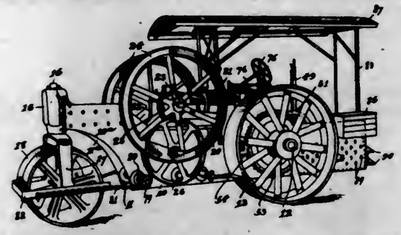
3. In an implement of the class described, the combination of a supporting framework, spaced vertical standards mounted thereon, means for adjusting said standards lateral, ground wheels applied to the lower ends of the standards, spaced longitudinal beams, shovels carried by said beams, couplings connecting the beams with the standards intermediate of the ends of the latter, and permitting vertical and lateral movement of the beams, a tongue, a draft bar mounted thereon, and yielding connections between said draft bar and the couplings whereby the beams are attached to the bar.

4. In an implement of the class described, the combination of a tongue, laterally adjustable depending standards mounted thereon, beams pivotally connected at their front ends with said standards for free lateral movement, cultivating shovels applied to said beams, handles connected with the beams as specified, a transverse draft bar applied to the tongue, and elastic connections between said draft bar and the beams.

5. In an implement of the class described, the combination of a supporting framework, spaced vertical standards mounted thereon, means for adjusting said standards, ground wheels applied to the lower ends of the standards, spaced longitudinal beams, shovels carried by said beams, couplings connecting the beams with the standards intermediate of the ends of the latter, and permitting vertical and lateral movement of the beams, a tongue, a draft bar mounted thereon, yielding connections between said draft bar and the couplings whereby the beams are attached to the bar, means for adjustably connecting the rear ends of the yielding connections with the couplings aforesaid, and means admitting of lateral adjustment of the points of connection of the yielding elements above mentioned with the draft member.

[Claims 6 to 10 not printed in the Gazette.]

885,984. GASOLENE ROAD-ROLLER. NORMAN DE WIND and FRANK R. JONES, Harvey, Ill., assignors to Austin Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed Mar. 25, 1907. Serial No. 364,305.



1. In a power-propelled road-roller, the combination with a frame, a steering-wheel in the forward end thereof, and an axle and pair of traction wheels mounted thereon supporting the rear end, of a gas engine and engine-shaft mounted on said frame, a gear on said axle, two trains of power-transmitting gears between said engine-shaft and axle gear, one transmitting a forward and the other a backward travel to said roller, and a travel-reversing double-clutch serving to simultaneously render either train of gears operative and the other idle, substantially as described.

2. In a power-propelled road-roller, the combination with a frame, a steering-wheel in the forward end thereof, and a pair of traction-wheels supporting the rear end, of a gas engine and engine-shaft mounted on said frame, a differential gear in driving relation to said traction-wheels, two trains of power-transmitting gears between said engine-shaft and said differential gear, one adapted to transmit a forward and the other a backward travel to said roller, a double clutch adapted to render either train of gears operative and the other idle, and a speed-changing mechanism interposed in said gear trains, substantially as described.

3. In a power-propelled road-roller, the combination with a frame, a steering-wheel swiveled in the forward end and a pair of traction wheels supporting the rear end thereof, of a gas engine and engine-shaft mounted on said frame, a counter-shaft beneath and geared to said engine-shaft, a pair of clutch-disks loose on said counter-shaft, a slidable clutch-sleeve splined on said counter-shaft between said clutch-disks, a differential gear in driving relation to said traction wheels, two gear trains between said clutch-disks and said differential gear, respectively, adapted to transmit motion to the latter in opposite directions, and means for throwing said clutch-sleeve into driving engagement with either of said clutch-disks or into an intermediate idle position, substantially as described.

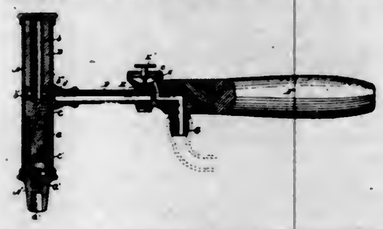
4. In a power-propelled road roller, the combination

with a frame, a steering-wheel swiveled in the forward end and a pair of traction wheels supporting the rear end thereof, of a gas engine and engine-shaft mounted on said frame, a counter-shaft beneath and geared to said engine-shaft, a pair of clutch-disks loose on said counter-shaft, a slidable clutch-sleeve splined on said counter-shaft between said clutch-disks, a differential gear in driving relation to said traction wheels, two gear trains between said clutch-disks and said differential gear, respectively, adapted to transmit motion to the latter in opposite directions, a single operating lever, and connections therefrom to said clutch-sleeve whereby the latter may be thrown into driving engagement with either of said clutch-disks or into an intermediate idle position, substantially as described.

5. In a power-propelled road roller, the combination with a frame, a steering-wheel swiveled in the forward end and a pair of traction wheels supporting the rear end thereof, of a gas engine and engine-shaft mounted on said frame, a counter-shaft beneath and geared to said engine-shaft, a pair of clutch-disks loose on said counter-shaft, a slidable clutch-sleeve splined on said counter-shaft between said clutch-disks, a differential gear in driving relation to said traction wheels, two gear trains between said clutch-disks and said differential gear, respectively, adapted to transmit motion to the latter in opposite directions, a speed-changing mechanism interposed in said gear train, an operating lever therefor, a main operating lever, and connections from the latter to said clutch-sleeve, substantially as described.

[Claim 6 not printed in the Gazette.]

885,985. PNEUMATIC TOOL. HARLEY M. DUNLAP, Battle Creek, Mich. Filed Apr. 18, 1904. Serial No. 203,724.



1. In a structure of the class described, the combination of a cylinder; a piston having a longitudinal passage opening at its outer end and an annular passage connected to said longitudinal passage; an inlet port for said cylinder adapted to register with said annular passage when said piston is in its initial or outer position, and to be closed by said piston when the same is in its inner position; an exhaust port adapted to register with said annular passage when said piston is in its inner position; a vent port for the inner end of said cylinder; a return spring adapted to engage the lower end of said piston; a rebound spring adapted to receive the blows of said piston; a laterally projecting handle for said cylinder, having a passage therethrough, connected to said inlet port; and an automatic valve adapted to control said passage, arranged in said handle, for the purpose specified.

2. In a structure of the class described, the combination of a cylinder; a piston having a longitudinal passage opening at its outer end and an annular passage connected to said longitudinal passage; an inlet port for said cylinder adapted to register with said annular passage when said piston is in its initial or outer position, and to be closed by said piston when same is in its inner position; an exhaust port adapted to register with said annular passage when said piston is in its inner position; a vent port for the inner end of said cylinder; a return spring adapted to engage the lower end of said piston; and a rebound spring adapted to receive the blows of said piston, for the purpose specified.

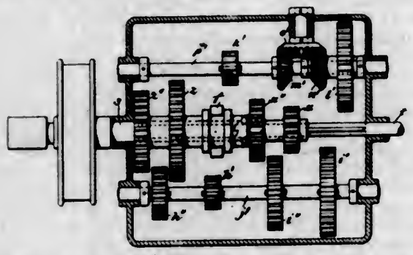
3. In a structure of the class described, the combination of a cylinder; a piston having a longitudinal passage opening at its outer end and an annular passage connected to said longitudinal passage; an inlet port for said cylinder adapted to register with said annular passage when said piston is in its initial or outer position, and to be closed by said piston when the same is in its inner position; an exhaust port adapted to register with said annular passage when said piston is in its inner position; a vent port for the inner end of said cylinder; a laterally projecting handle for said cylinder, having a passage therethrough, connected to said inlet port; and an automatic valve adapted to control said passage, arranged in said handle, for the purpose specified.

4. In a structure of the class described, the combination of a cylinder; a piston having a longitudinal passage opening at its outer end, and an annular passage connected to said longitudinal passage; an inlet port for said cylinder adapted to register with said annular passage when said piston is in its initial or outer position, and to be closed by said piston when the same is in its inner position; an exhaust port adapted to register with said annular passage when said piston is in its inner position; a vent port for the inner end of said cylinder; a return spring adapted to engage the lower end of said piston; a laterally projecting handle for said cylinder, having a passage therethrough, connected to said inlet port; and an automatic valve adapted to control said passage, arranged in said handle, for the purpose specified.

5. In a structure of the class described, the combination of a cylinder; a piston having a longitudinal passage opening at its outer end, and an annular passage connected to said longitudinal passage; an inlet port for said cylinder adapted to register with said annular passage when said piston is in its initial or outer position, and to be closed by said piston when the same is in its inner position; an exhaust port adapted to register with said annular passage when said piston is in its inner position; a return spring adapted to engage the lower end of said piston; a rebound spring adapted to receive the blows of said piston; and an automatic valve adapted to control said inlet port, for the purpose specified.

[Claims 6 and 7 not printed in the Gazette.]

885,986. TRANSMISSION-GEAR FOR MOTOR-VEHICLES. LEONARD H. DYER, New York, N. Y. Filed Jan. 22, 1906. Serial No. 297,116.



1. In a transmission-gear for automobiles, the combination of a driving member, a driven member, a driving-gear for the former, a plurality of intermediate gears, including a reversing-gear, and means, including mechanism shiftable as an entirety, for driving said driven member through any one of said intermediate gears.

2. In a transmission-gear for automobiles, the combination of a driving member, a driven member, a driving-gear for the former, a plurality of intermediate gears, including a reversing-gear, and means, including mechanism shiftable as an entirety, for coupling said driving member to said driven member and for also driving said driven member through any one of said intermediate gears.

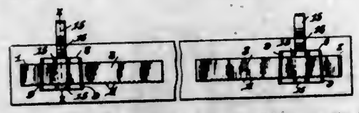
3. Transmission mechanism for motor-vehicles, the same comprising a driving member, a driven member, means to couple said driven member to said driving member to be driven by the latter and means comprising mechanism shiftable as an entirety to drive said driven member at a different speed from said driving member and to drive said driven member in reverse direction from said driving member.

4. Transmission mechanism for motor-vehicles, the same comprising a driving member, a driven shaft axially alined therewith, means to couple said member and shaft one to the other for direct drive of the latter by the former, a plurality of gears arranged out of line with the axis of said shaft and driven by said member, and a shiftable transmission device on said shaft and adapted to engage the said plurality of gears to drive said shaft in the same, and also in a reverse direction.

5. In a transmission-gear for automobiles, the combination of a driving member, a driven member, and means comprising mechanism shiftable as an entirety coupling said driving member to said driven member to drive the latter from the former and for varying the speed and direction of movement transmitted from said driving member to said driven member.

[Claims 6 to 57 not printed in the Gazette.]

885,987. SHADE AND CURTAIN FIXTURE. WILLIAM R. EVANS, Eagleville, Mo. Filed July 12, 1907. Serial No. 383,453.

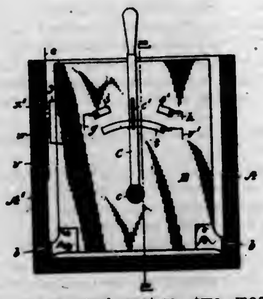


1. A curtain fixture comprising spaced supports having outwardly extending guides and provided with outwardly bowed portions forming sockets, bearing brackets having arms fitting in and engaging the guides, and curtain pole brackets fitting in the sockets formed by the outwardly bowed portions of the supports.

2. A curtain fixture comprising a support having its ends bent outwardly to form guide flanges and bowed outwardly at an intermediate point to provide a socket, a bearing bracket adjustably supported by the guide flanges, and a curtain pole bracket having an arm to fit the said socket.

3. A curtain fixture comprising a support having its ends bent outwardly to form guide flanges and provided with alined openings, said support being also bowed outwardly at a point between the flanges, and the outwardly bowed portion being tapered downwardly to provide a wedge-shaped socket and to set the flanges at an inclination, and bearing brackets having notched arms fitting in the openings of the guide flanges and engaging the latter.

885,988. DUPLEX MOTOR-CONTROL SYSTEM. FRED R. FISHBACK, Cleveland, Ohio, assignor to The Electric Controller & Supply Company, Cleveland, Ohio, a Corporation of Ohio. Filed Sept. 13, 1907. Serial No. 392,662.



1. In a motor control system, two magnetic switch controllers, a motor controlled by each of said controllers, a master switch having contacts arranged to control the magnetic switches separately and both jointly, and a single handle for operating the master switch.

2. In a motor control system, two magnetic switch controllers, a motor controlled as to its direction of rotation by each of said controllers, a master switch having contacts arranged to control the magnetic switches separately and both jointly, and a single handle for operating the master switch.

3. In a motor control system, two magnetic switch controllers, a motor controlled by each of said controllers, a master switch having contacts arranged to control the magnetic switches separately and both jointly, and a single handle for operating the master switch, movable in one direction to control one motor, in a different direction to control the other motor, and in a third direction to control both motors.

4. In a motor control system, two electric motors, a master controller therefor, consisting of an oscillatory member, movable contacts carried thereby, fixed contacts coöperating with the said movable contacts and associated with one motor, a second oscillatory member pivotally supported by the first member, movable contacts carried by the second member, and contacts carried by the first movable member coöperating with the last named movable contacts, and associated with the remaining motor.

885,989. GRAPHOPHONE-NEEDLE. WILLIAM FITZPATRICK, Lowell, Mass. Filed July 31, 1907. Serial No. 386,437.

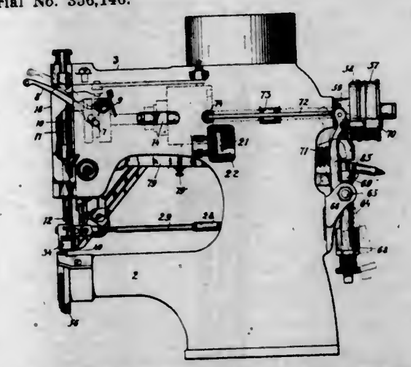


1. A phonograph needle provided with a series of flattened portions arranged at intervals between the point and the butt thereof, one of said flattened portions being thinner than the others.

2. A phonograph needle provided with a series of flattened portions arranged at intervals between the point and the butt thereof, the flattened portion nearest the point being thinner than the others.

3. A phonograph needle provided with a series of flattened portions arranged at intervals between the point and the butt thereof, alternate flattened portions being arranged at an angle to each other.

885,990. THREAD-CUTTING MECHANISM FOR SEWING-MACHINES. GEORGE S. GATCHELL, Elizabeth, N. J., assignor to The Singer Manufacturing Company, a Corporation of New Jersey. Filed Feb. 7, 1907. Serial No. 356,146.



1. In a sewing machine, the combination with stitch-forming mechanism including a reciprocating thread-carrying needle, of a thread-cutter for severing the needle-thread after the formation of a group of stitches, and operating means for said thread-cutter including a positively driven actuating member and a normally unyielding connection adapted to transmit operative movements directly from said actuating member to the thread-

cutter, said connection being adapted to yield under excessive loads imposed by abnormal resistances to the action of the cutter.

2. In a sewing machine, the combination with stitch-forming mechanism including a reciprocating thread-carrying needle, and a pattern-cam for controlling the character of the stitches, of a thread-cutter for severing the needle-thread after the production of a group or succession of stitches, and a normally unyielding connection intermediate said cam and the thread-cutter, which is adapted to transmit operative movements directly from the one to the other and to yield under abnormal resistances to the cutting operation.

3. In a sewing machine, the combination with stitch-forming mechanism including a reciprocating thread-carrying needle, and a pattern-cam for controlling the character of the stitches, of a thread-cutter for severing the needle-thread after the production of a group or succession of stitches, and a normally unyielding connection intermediate said cam and thread-cutter including two relatively movable members having abutting portions and a spring for maintaining such abutting portions forcibly in contact relation, and means including a positive connection with one of such members for actuating said cutter to sever the needle-thread.

4. In a sewing machine, the combination with stitch-forming mechanism including a reciprocating thread-carrying needle, and a pattern-cam for controlling the character of the stitches, of a thread-cutter for severing the needle-thread after the production of a group or succession of stitches, and a normally unyielding connection intermediate said cam and thread-cutter including a link-member composed of a socket and a headed rod embraced by the latter and maintained firmly seated therein by means of a spring, whereby said cutter is actuated to sever the needle-thread.

5. In a sewing machine, the combination with stitch-forming mechanism, a presser-foot and a thread-cutting and-nipping device carried by said presser-foot, of automatically acting means for actuating said thread-cutting and-nipping device for severing and nipping the thread, and automatically acting means operating independently of said actuating means for lifting the presser-foot after the thread-cutting and-nipping operation.

[Claims 6 to 13 not printed in the Gazette.]

885,991. SHEEP-SHEARING MACHINE. THOMAS GRACE, Darlington, near Sydney, New South Wales, Australia, assignor of one-third to Charles Alfred Jaques and one-third to Algernon James Metcalfe, Sydney, New South Wales, Australia. Filed Sept. 30, 1907. Serial No. 395,137.



1. A sheep shearing machine comprising a comb, a cutter thereon, an operating lever for the cutter, a hinged portion, a ball between said hinged portion and lever, a casing, a wedge between said casing and hinged portion, and means for adjusting the position of the wedge, substantially as described.

2. A sheep shearing machine, comprising a casing, a comb removably held therein, a cutter on said comb, an operating lever for the cutter, a hinged flap, a ball between said flap and lever, a wedge between the flap and casing, and a screw passing through the casing and engaging the wedge to adjust the position of the same, substantially as described.

3. A sheep shearing machine, comprising a casing, a removable base plate therefor, a comb on said base plate, a cutter, an operating lever for said cutter, a spherical bulb on said operating lever, a bridge holding the spherical bulb on the base plate, a hinged flap secured to said bridge, a ball between said flap and lever, a wedge between said flap and casing, and a screw passing through said casing and engaging with the flap, substantially as described.

885,992. FITTING FOR REINFORCED CONCRETE STRUCTURES. GEORGE M. GRAHAM, Chicago, Ill., assignor to G. A. Edward Kohler, Chicago, Ill. Filed Dec. 10, 1907. Serial No. 405,891.



1. A fitting for connecting together the tubular members of a reinforcing frame for concrete structures, comprising a tubular main shell having at one end a pair of semi-flexible tongues in opposed relation, and laterally disposed stirrup branches on its sides, said branches being open at top and extending above a transverse plane intersecting the longitudinal axis of the branches, and means for drawing said tongues together, substantially as set forth.

2. A fitting for connecting together the tubular members of a reinforcing frame for concrete structures, comprising a tubular main shell having at each end a pair of semi-flexible tongues in opposed relation and laterally disposed stirrup branches on its sides, said branches being open at top and extending above a transverse plane intersecting the longitudinal axis of the branches, and means for drawing said tongues together, substantially as set forth.

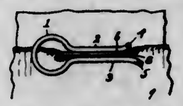
3. A fitting for connecting together the cylindrical members of a reinforcing frame for concrete structures, comprising a cylindrical main shell having at one end a pair of segmental tongues in opposed relation, and laterally-disposed U shaped branches on its sides, said branches being open at top and extending above a transverse plane intersecting the longitudinal axis of the branches, and means for drawing said tongues together, substantially as set forth.

4. A fitting for connecting together the cylindrical members of a reinforcing frame for concrete structures, comprising a cylindrical main shell having at each end a pair of segmental tongues in opposed relation, and laterally disposed U shaped branches on its sides, said branches being open at top and extending above a transverse plane intersecting the longitudinal axis of the branches, and means for drawing said tongues together, substantially as set forth.

5. The combination with the vertical column and horizontal girders of a reinforcing frame for concrete structures, of a fitting consisting of a tubular main shell having at one end a pair of semi-flexible tongues in opposed relation, and laterally disposed stirrup branches on its sides, said branches being open at top and extending above a transverse plane intersecting the longitudinal axis of the branches, and bolts passing through said tongues and column and through said branches and girders to secure the parts in position, substantially as set forth.

[Claims 6 to 8 not printed in the Gazette.]

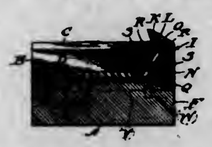
885,993. CLASP. BYRON L. GREEN, Mount Clemens, Mich. Filed Nov. 25, 1907. Serial No. 403,622.



1. A clasp formed of resilient metal consisting of a relatively large loop at one end, subatantially circular in form, jaw members formed integral with and projecting from the terminals of said loop in parallel relation, the inner faces of said jaw members being contiguous and the whole clasp curved laterally from end to end thereof, the terminals of the jaw members being turned outwardly in opposite directions to facilitate the entrance of articles between said jaws, and one of the jaw members being longer than the other.

2. A clasp formed of spring metal, consisting of a relatively large loop at one end, integral jaw members projecting from the terminals of said loop, said jaw members extending in parallel relation and the whole clasp comprising the loop and jaw members being bent laterally to describe the arc of a circle.

885,994. REGISTER-HOOK. WILLIAM L. HAMILTON, Chicago, Ill. Filed Aug. 15, 1907. Serial No. 388,683.



1. In a register hook of the kind described, consisting of the body part having an open longitudinal channel, said channel having parallel walls, top and base, the longitudinal central part of said base having double curved ratchet teeth, the vertical part of said teeth facing the front end of said body; a clamp slidably supported in said channel and adapted to be moved therein from end to end, on said clamp is a transverse jaw, and a bore and a key-hole, said bore being in the under part of said clamp and said key-hole extending through the central part of said jaw; a nut insertible in said bore in said clamp and adapted to be supported and rotated therein, the axis of said nut being adapted to fit a key inserted through said hole through the jaw of said clamp, said nut having a conical face with a spiral groove therein said face and groove being adapted to mesh into said ratchet teeth, said nut being thereby adapted when rotated to move said clamp in said channel as described.

2. In a register hook of the kind described the combination with a body part having an open longitudinal channel with parallel walls and top, the base of said channel being threaded from end to end, the front face of each thread being vertical and thereby adapted to be engaged in a spiral groove in the conical face of a nut; of a clamp slidably supported in said channel and movable therein from end to end, said clamp having a vertically inclined bore and key hole, said bore being adapted for the insertion and support of a conical faced spiral grooved nut in engagement with said thread in said base, the key hole affording access to said nut, the rotation of which moves said clamp in said channel.

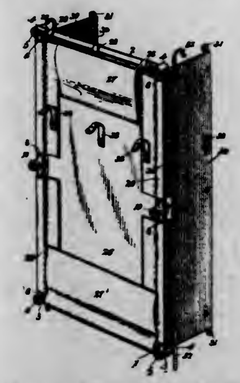
3. In a register hook, the combination with a main body having a longitudinal channel the base thereof being threaded from end to end, the threads therein being adapted to fit in a spiral groove in the conical face of a nut; of a clamp slidably secured in said channel having a transverse jaw, and a bore adapted to support a nut in engagement with said thread in said channel and to be moved therein by the rotation of said nut in said bore.

4. In a register hook, the combination with a main body having a channel therethrough, the base of said channel having a threaded portion adapted to mesh in a spiral groove in the conical face of a nut; of a clamp slidably secured in said channel, having a jaw and a countersunk bore extending from the underside of said clamp through said jaw, said bore being adapted to rotatably support a nut in engagement with said threaded portion of said main body whereby said clamp is moved in said channel.

5. In a register hook, the combination with the body having an open channel and threaded portion in the base thereof adapted to mesh in a spiral groove in the conical face of a nut, and a clamp slidable in said channel having a countersunk bore; of a conical nut rotatably supported in said bore, said nut having a spiral groove in the conical face thereof, said grooved face being adapted to engage said threaded portion in said body whereby the rotation of said nut moves said clamp in said channel.

[Claims 6 to 9 not printed in the Gazette.]

885,995. KNOCKDOWN BED. SOREN S. HANSON, New York, N. Y. Filed Sept. 24, 1907. Serial No. 394,274.



1. A knock-down bed comprising wooden posts having tapered portions at substantially the middle of their length, end bars having metal socket members at their ends with vertical tapered holes adapted to receive the tapered portions of said legs, said socket members also having laterally extending socket holes, wooden side bars having ends adapted to be received in said lateral sockets, top rails having openings to receive the tops of said legs, means on said top rails and the said end bars for connecting said parts together, and a canvas strip permanently attached to one end bar and having means by which it can be adjustably fastened to the bar at the other end of the bed.

2. In a knock-down bed, end bars having socket members, legs received in said socket members, top rails having holes to fit over the tops of said legs and cords attached to said end bars and to said top rails, and means engaging said cords to connect said top rails and end bars whereby a latticed partition is established therebetween.

3. A knockdown bed comprising end bars permanently formed with vertical tapered and lateral sockets, legs with tapered portions corresponding to the taper of said sockets received in the vertical sockets and having reduced portions at their upper ends, side bars received in the lateral sockets, and top rails having holes to receive the reduced portions of said legs, and flexible strips for lacing said top rails to the end bars.

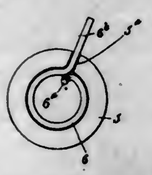
4. A knock-down bed comprising end bars permanently

formed with vertically tapered and lateral sockets, legs with tapered portions corresponding to the taper of said sockets received in the vertical sockets and having reduced portions at their upper ends, side bars received in the lateral sockets, top rails having holes to receive the reduced portions of said legs, flexible cords for lacing said top rails to the end bars, a canvas strip connected to one end bar, and means on said canvas strip for joining it to the end bar at the opposite end of the bed.

5. A knockdown bed comprising end bars having sockets, legs and side bars received therein, and a canvas strip permanently attached to one end bar having means, whereby it may be stretched in connection with the other end bar, said canvas strip having a pocket or flap to receive the legs and side bar sections when the bed is knocked down or taken apart.

[Claims 6 and 7 not printed in the Gazette.]

885,996. NUT-LOCK. HENRY HENTHORNE, Newark, Ohio. Filed Jan. 6, 1908. Serial No. 409,456.



1. In a nut lock, the combination with a washer having a central opening, of the locking device consisting of a wire rod bent to form a ring to fit within the wall of said central opening, said rod also having at one end a bolt-engaging spur and at the other end a finger to be bent to engage the superposed nut.

2. In a nut lock, the combination with a washer having a central opening and an open passage from said central opening through the washer, of the locking device consisting of a wire rod bent to form a ring to fit within the wall of the central opening of the washer, said rod also having at one end a bolt-engaging spur and at the other end a nut-engaging finger, said finger extending through said open passage from the central opening.

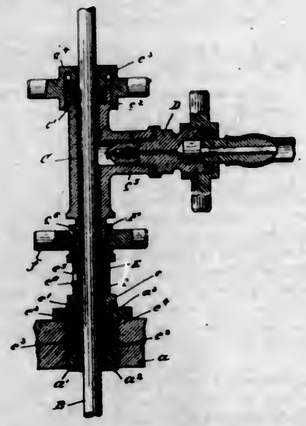
3. In a nut lock, the combination with a washer having a central opening and a radial opening, of a locking device consisting of a wire rod bent to form a ring to fit within the wall forming the said central opening, and having at one end a bolt-engaging spur bent outwardly from the plane of the washer and inwardly with reference to the axis thereof, and at the other end forming a finger extending through the radial opening and having its end adapted to be bent to engage a superposed nut.

4. In a nut lock, the combination with the washer having a central opening, of a locking device consisting of a wire rod square in cross section bent to form a ring to fit within the wall of the central opening of the washer and having at one end a bolt-engaging spur formed by a corner of said square rod, and at its other end a finger adapted to be bent to engage and lock the superposed nut.

885,997. BUNG-CLOSURE FOR BARRELS. OTTO A. HILGERMANN, Rhinelander, Wis. Filed Oct. 11, 1907. Serial No. 396,895.

1. In a device of the class described the combination with a bung having a chamber therein, of a tubular member extending into said chamber, packing rings on the inner end of said member, a movable collar separating said rings, a sleeve slidably engaged on said member, a nut adapted to force said sleeve downwardly onto said rings and means adapted to hold the sleeve from rotation.

2. In a device of the class described the combination with a bung having a chamber therein, of a tubular member extending into said chamber, a collar rigidly engaged on the inner end of said member, a slotted sleeve slidably engaged on said member, packing rings on said member between the collar and sleeve, a movable collar between said rings, a pin in said member extending through the slot in said sleeve and means for forcing the sleeve into engagement with said rings.



3. In a device of the class described the combination with a bung having a chamber therein, of a tubular member extending into said chamber, a pipe extending axially through said member, means affording a tight joint between the outer end of said member and the pipe, a collar rigidly engaged on the inner end of said member, a flanged compression sleeve slidably engaged on the inner end of said member and having a slot in one side thereof, packing rings on said member between the sleeve and collar, a movable collar therebetween, a packing ring between the flange on said sleeve and said bung, a nut having threaded engagement on said member and adapted to force the sleeve into the bung and compress said rings and means engaged in said slot adapted to hold the sleeve from rotation.

885,998. DIAPHRAGM AND METHOD OF MAKING THE SAME. HEINRICH HIRTZ, West Hampstead, England. Filed Oct. 3, 1905. Serial No. 281,167.

1. A process for modifying textile fabrics that are to be used as diaphragms in electrolytic cells consisting in impregnating the fabric successively with a solution of a double cyanid and a solution of a metallic salt that forms an insoluble compound with the said cyanid, substantially as described.

2. A diaphragm for use in an electrolytic cell consisting of a suitable textile fabric having deposited in it an insoluble double cyanid, substantially as described.

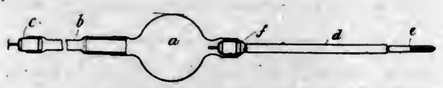
3. A diaphragm for use in an electrolytic cell wherein a solution of a metal yielding an insoluble double cyanid is to be electrolyzed, consisting of a suitable textile fabric having deposited in it such double cyanid of the said metal, substantially as described.

4. The process of manufacturing diaphragms for electrolytic cells which consists in subjecting a suitable textile fabric to the combined action of a soluble double cyanid and a metallic salt, capable of uniting with the cyanid and forming a semipermeable membrane, substantially as described.

5. The process of manufacturing diaphragms for electrolytic cells which consist in first impregnating a suitable textile fabric with a solution of a double cyanid and then subjecting the same to the action of a metallic salt, capable of uniting with the cyanid and forming a semipermeable membrane substantially as described.

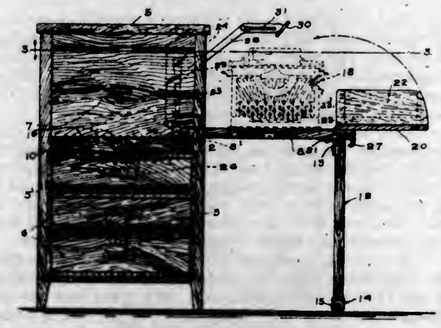
[Claims 6 to 14 not printed in the Gazette.]

885,999. URETHRAL SYRINGE. JAMES H. HOSEASON, Manchester, England. Filed Mar. 30, 1907. Serial No. 365,513.



The improved urethral syringe consisting of a collapsible ball *a*, a tube *b* provided with a non-return valve *c*, a soft tube *d* formed in one piece and tapered to its extreme end which is closed and is provided with the outlet holes *e* sloping rearwardly, all substantially as and for the purpose herein set forth.

886,000. CABINET. LOUIS E. HUDSON, Ellisburg, N. Y. Filed May 13, 1907. Serial No. 373,371.



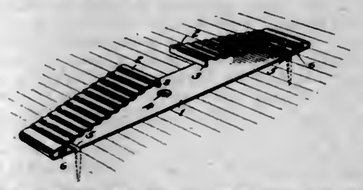
1. In a typewriter cabinet, the combination with the case formed with a typewriter compartment in its upper portion and having an open side thereto, of a typewriter table slidable in and out of said compartment through the open end thereof, and a door for closing the open end of the compartment, said door being hinged to the outer end of the typewriter-table and provided at one end with a wing extending at right angles to the plane of the door and adapted to lie within the compartment of the case when the door is closed, substantially as described.

2. In a typewriter cabinet, the combination with the case formed with a typewriter compartment in its upper portion and having an open side thereto, of a typewriter table slidable in and out of said compartment through the open end thereof, a door hinged to the end of the table for closing the open end of the compartment, said door having at one end a wing arranged to lie within the compartment when the door is closed, and a spring-stop located within the typewriter compartment of the case in position to engage a shoulder on the wing of the door and prevent the door from tilting until the table is moved outward, substantially as described.

3. In a typewriter cabinet, the combination with the case and slidable typewriter table, of the copy-holder consisting of a slidable arm having an angular extension at one end formed with an enlarged head, the opposite end of the arm being notched, a pin within the case to engage the notched end of the arm, and a post at the rear of the case formed with an opening to receive said arm, substantially as described.

886,001. DUPLEX DOOR-CHECK HOLDER AND BUFFER. ISAAC P. KIBBE, Cuero, Tex. Filed Feb. 8, 1908. Serial No. 414,867.

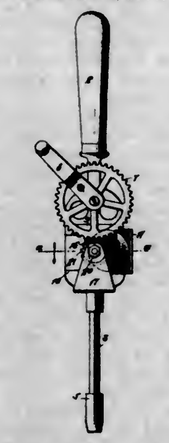
1. As a new article of manufacture, a door-check and holder formed of a plate of spring metal having its ends bent toward each other in overlapping relation to the base and forming identical duplex upward inclined spring-arms each terminating in a downward buffer-lip and forming the door holding space therebetween, and means for mediately fastening the base to allow the check to be reversed in position on its mediate fastening.



2. A door check and holder, consisting of a plate of spring metal having its ends bent toward each other in overlapping relation to the base and forming identical duplex upward inclined spring-arms each terminating in a downward buffer-lip and forming the door holding space between them, a mediate pivot fastening for the base and fastening staples in the angle of each arm.

3. A door check and holder, consisting of a plate of spring metal having its ends bent toward each other in overlapping relation to the base and forming identical duplex upward inclined spring-arms, each arm having transverse corrugations, and means for fastening the base to allow it to be reversed end for end.

886,002. VALVE-SEAT GRINDER. FRANK KOPRIVA, New York, N. Y. Filed Nov. 4, 1907. Serial No. 400,465.



1. A valve-seat grinder in which is comprised a frame carrying rotatable mechanism, rotatable mechanism, a chuck-spindle, a gear on the chuck-spindle, a rack, and an eccentric engaging said rack, substantially as shown and described.

2. In a device of the character herein specified, a chuck-spindle provided with a gear, a rack engaging said gear, an eccentric for reciprocating said rack, and means for regulating the orbit of rotation of the eccentric.

886,003. GAFF-HOOK. CHARLES H. F. KRAFT, Battle Creek, Mich., assignor of one-half to V. Howard Wattles, Battle Creek, Mich. Filed Aug. 8. 1907. Serial No. 387,729.



1. In a gaff-hook, the combination of a hollow handle, having a longitudinal slot therein towards its upper end;

a flat shank for said handle having a longitudinal slot therein; a transversely-arranged relatively-fixed hand piece at the upper end of said handle; a transversely-arranged movable hand piece sleeved upon said handle; a pair of oppositely-arranged jaws pivotally mounted on said shank of said handle, said jaws being provided with rearwardly-projecting longitudinally-slotted arms, the inner ends of said slots being correspondingly curved; a rod arranged in said hollow handle having a laterally projecting portion arranged to engage said slots in said handle shank and in the arms of said jaws; a pin arranged through said slot at the upper end of said handle for connecting said movable hand piece to said rod; a coiled spring arranged in said handle to engage said rod; and a screw plug against which the outer end of said spring bears, threaded into said handle, whereby the tension of the spring may be adjusted.

2. In a gaff-hook, the combination of a hollow handle, having a longitudinal slot therein towards its upper end; a flat shank for said handle having a longitudinal slot therein; a transversely-arranged relatively-fixed hand piece at the upper end of said handle; a transversely-arranged movable hand piece sleeved upon said handle; a pair of oppositely-arranged jaws pivotally mounted on said shank of said handle, said jaws being provided with rearwardly-projecting longitudinally-slotted arms; a rod arranged in said hollow handle having a laterally-projecting portion arranged to engage said slots in said handle shank and in the arms of said jaws; a pin arranged through said slot at the upper end of said handle for connecting said movable hand piece to said rod; a coiled spring arranged in said handle to engage said rod; and a screw plug against which the outer end of said spring bears, threaded into said handle, whereby the tension of the spring may be adjusted.

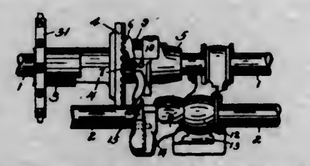
3. In a gaff-hook, the combination of a hollow handle; a flat shank for said handle having a longitudinal slot therein; a transversely-arranged relatively-fixed hand piece at the upper end of said handle; a transversely-arranged movable hand piece sleeved upon said handle; a pair of oppositely-arranged jaws pivotally mounted on said shank of said handle, said jaws being provided with rearwardly-projecting longitudinally-slotted arms, the inner ends of said slots being correspondingly curved; a rod arranged in said hollow handle to engage said slots in said handle shank and in the arms of said jaws, said rod being connected to said movable hand piece; a coiled spring arranged in said handle to engage said rod; and a screw plug against which the outer end of said spring bears, threaded into said handle, whereby the tension of the spring may be adjusted.

4. In a gaff-hook, the combination of a hollow handle; a flat shank for said handle having a longitudinal slot therein; a transversely-arranged relatively-fixed hand-piece at the upper end of said handle; a transversely-arranged movable hand piece sleeved upon said handle; a pair of oppositely-arranged jaws pivotally mounted on said shank of said handle, said jaws being provided with rearwardly-projecting longitudinally-slotted arms; a rod arranged in said hollow handle to engage said slots in said handle shank and in the arms of said jaws, said rod being connected to said movable hand piece; a coiled spring arranged in said handle to engage said rod; and a screw plug against which the outer end of said spring gears, threaded into said handle, whereby the tension of the spring may be adjusted.

5. In a gaff-hook, the combination of a hollow handle, having a longitudinal slot therein towards its upper end; a flat shank for said handle having a longitudinal slot therein; a transversely-arranged relatively-fixed hand piece at the upper end of said handle; a transversely-arranged movable hand piece sleeved upon said handle; a pair of oppositely-arranged jaws pivotally mounted on said shank of said handle, said jaws being provided with rearwardly-projecting longitudinally-slotted arms, the inner ends of said slots being correspondingly curved; a rod arranged in said hollow handle having a laterally projecting portion arranged to engage said slots in said handle shank and in the arms of said jaws; a pin arranged through said slot at the upper end of said handle for connecting said movable hand piece to said rod; and a spring arranged to hold said jaws normally open.

[Claims 6 to 12 not printed in the Gazette.]

886,004. CLUTCH MECHANISM. FRANK K. LATHROP, Dayton, Ohio, assignor to The Ohio Rake Company, Dayton, Ohio, a Corporation of Ohio. Filed Dec. 18, 1905. Serial No. 292,265.

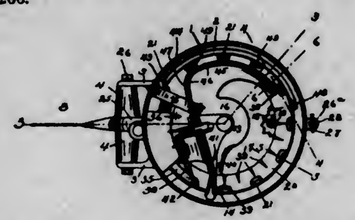


1. In a clutch mechanism for corn planters and the like, the combination with the shaft for operating the seeding device and the check row shaft, of a pawl and ratchet clutch mounted on the seeding device shaft, and a yielding wedge piece on the check row shaft arranged to engage the pawl only of the clutch to release the same.

2. In a clutch mechanism for corn planters and the like, the combination with the shaft for operating the seeding device and the check row shaft, of a pawl and ratchet clutch mounted on the seeding device shaft, a stop fixed on the seeding device shaft, and a yielding wedge piece on the check row shaft arranged to engage said pawl and stop whereby the pawl is operated to release the clutch.

3. In a clutch mechanism for corn planters and the like, the combination with the shaft for operating the seeding device and the check row shaft, of a pawl and ratchet clutch mounted on the seeding device shaft, and a wedge piece on the check row shaft arranged to engage the pawl only of the clutch, said pawl being arranged to operate between the wedge and ratchet.

886,005. CORN-PLANTER. FRANK K. LATHROP, Dayton, Ohio, assignor to Ohio Rake Company, Dayton, Ohio, a Corporation of Ohio. Filed Dec. 18, 1905. Serial No. 292,266.



1. In a corn planter, a seed plate, provided with elongated seed cups to receive the seed on edge, and a rim plate coöperating therewith, having its contiguous side wall recessed and beveled towards the seed plate with a guard plate coöperating with the rim to form a channel to an edge slightly below the upper surface of the seed plate, to cause the grain to take an edge position over the seed plate.

2. In a corn planter, a seed plate, provided with elongated seed cups to receive the seed on edge, and a rim plate coöperating therewith, having its contiguous side wall recessed and beveled towards the seed plate to an edge slightly below the upper surface of the seed plate, with a guard plate concentric with said recessed rim to form a channel for the grain narrower at the bottom than at the top for the purpose set forth.

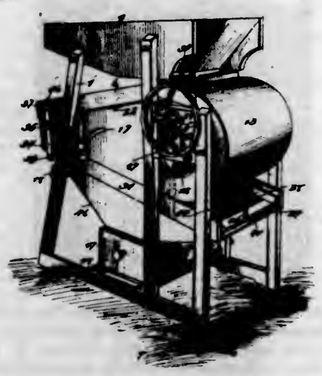
3. In a corn planter, a seed plate provided with elongated seed cups to receive the seed on edge, a discharge orifice for the seed cups, an arched passageway with downwardly beveled walls, contiguous to said discharge orifice to carry the grain in an edge position to a point immediately beyond the discharge orifice for delivery on edge to the seed cups, for the purpose set forth.

4. In a corn planter, a seed plate provided with elongated seed cups to receive the seed on edge, a discharge orifice for the seed cups, an arched passageway with downwardly beveled walls, contiguous to said discharge orifice to carry the grain in an edge position to a point immediately beyond the discharge orifice for delivery on edge to the seed cups, and a rim plate coöperating with the seed plate and having its contiguous side wall recessed and beveled towards the seed plate opposite said arched passageway, for the purpose set forth.

5. In a corn planter, a seed plate provided with elongated seed cups to receive the seed on edge, a discharge orifice for the seed cups, an arched passage-way with downwardly beveled walls, contiguous to said discharge orifice to carry the grain in an edge position to a point immediately beyond the discharge orifice for delivery on edge to the seed cups, and a rim plate coöperating with the seed plate, and having its contiguous side wall recessed and beveled towards the seed plate opposite said arched passage-way, with a guard plate concentric with said recessed rim to form a channel for the grain narrower at the bottom than at the top for the purpose set forth.

[Claims 6 to 8 not printed in the Gazette.]

886,006. SEED-SEPARATOR. FRANK G. LYMAN, Wapakoneta, Ohio, assignor of one-half to John E. Gunther, Wapakoneta, Ohio. Filed July 19, 1907. Serial No. 384,651.



1. The combination with a frame, of an inclined screen, means for vibrating said screen longitudinally, a series of chains extending longitudinally of the screen and having free ends resting thereon at its lower end, and means for vertically vibrating the lower end of said screen.

2. The combination with a frame and inclined screen therein, of a fan and driving shaft therefor, a crank shaft beneath the screen provided with an arm at one end connected with said driving shaft, and a pitman pivoted at opposite ends to said crank shaft and the under face of said screen.

3. The combination with a frame and oppositely inclined screens, of a wind box disposed between the screens, a fan and driving shaft therefor provided with a crank arm, a crank shaft beneath the upper screen connected to said arm, a pitman pivoted to said crank shaft and pivotally connected to the under face of said screen, and a lever extending from the tail of the upper screen to the head of the lower screen.

4. The combination with a frame and oppositely inclined screens, of a wind box disposed between the screens, a fan and driving shaft therefor provided with a crank arm, a crank shaft beneath the upper screen connected to said arm, a pitman pivoted at its opposite ends to said crank shaft and screen, levers at opposite sides of the frame pivoted to the tail of the upper screen and connected by a cross bar at their lower ends, a bearing upon the head of the lower screen resting upon said cross bar, and means to vibrate the opposite end of the lower screen vertically.

5. The combination with a frame and oppositely inclined screens, of a wind box disposed between the screens, a fan and driving shaft therefor provided with a crank arm, a crank shaft beneath the upper screen connected to said arm, a pitman pivoted to said crank shaft and screen, levers carried by the frame and pivotally connected to the tail of the upper screen and head of the lower screen, means to vibrate the tail of the lower screen vertically, and a series of parallel chains secured at the pivoted end of the lower screen and having free ends lying thereon.

[Claim 6 not printed in the Gazette.]

886,007. COUPLING-HEAD. JOHN M. MALLOY, Depot Harbor, Ontario, Canada. Filed June 12, 1907. Serial No. 378,678.

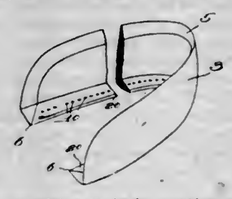


1. An improved coupling head comprising a head having a recess therein, opening at the front, a knuckle pivoted in the recess, a pin extending vertically through the recess, a locking block slidable thereon, and a lever connected to both the knuckle and the locking block and adapted when operated to release the block and swing the knuckle outwardly.

2. An improved coupling head comprising a head, a knuckle pivoted thereto, a pin on the head, a block slidable thereon adapted, in normal position, to lock the knuckle, and an operating lever pivoted to the knuckle having loose connection with the locking block.

3. An improved coupling head comprising a recessed head, a knuckle pivoted therein, a projection integral with the knuckle, a pin through the recess, a locking block vertically slidable thereon adapted, in its lowest position, to engage with a projection on the knuckle, a lever pivoted to the knuckle extending through a slot in the block, and through a corresponding slot in the side of the coupling head, as and for the purpose specified.

886,008. COUNTER. THOMAS H. MAYO, Melrose, Mass. Filed Oct. 23, 1907. Serial No. 398,794.

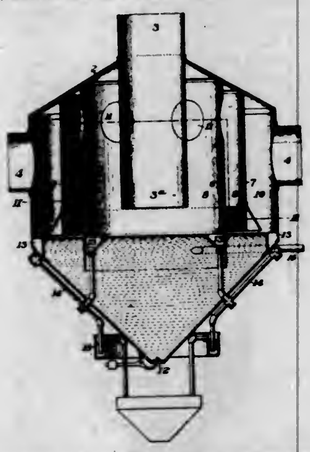


A counter comprising a body portion split from the bottom nearly to the top and nearly to each end to form a pocket having two sides which are integrally connected at both the top and the ends of the counter, and a stiffening member inserted into the pocket between said sides.

886,009. GAS-WASHER. FREDELLIA H. MOYER, Clairton, Pa. Filed Mar. 1, 1907. Serial No. 360,029.

1. Apparatus for cleaning gases, comprising a vessel having inlet and outlet openings for the gases, inlet and

overflow openings for water, and a depending partition having a fluted lower end, the end of said partition being open and terminating above the level of the water overflow to form an annular opening for the passage of the gases between the end of the partition and the surface of the water; substantially as described.



2. Apparatus for cleaning gases, comprising a vessel having inlet and outlet openings for the gases, inlet and overflow openings for water, and a depending partition having a fluted lower end, the end of said partition being open, said water inlet opening delivering the water tangentially into the apparatus and imparting a rotary motion to the water; substantially as described.

3. Apparatus for cleaning gases, comprising a vessel having inlet and outlet openings for the gases, inlet and overflow openings for water, and a depending partition having a fluted lower end, the end of said partition being open and terminating above the level of the water overflow, so as to form an annular opening having a height of less than one quarter of the diameter of the depending partition and an area greater than the area of said pipe; substantially as described.

4. Apparatus for cleaning gases, comprising a vessel having inlet and outlet openings for the gases, inlet and overflow openings for water, and a depending partition having a fluted lower end, the end of said partition being open and terminating above the level of the water overflow, so as to form an annular opening, having its area at least equal to the area of the depending partition and a vertical width of less than one quarter of the diameter of said pipe; substantially as described.

5. Apparatus for cleaning gases, comprising a vessel having inlet and outlet openings for the gases, inlet and overflow openings for water, a depending extension to the inlet opening for gases, having an open lower end, a depending partition in the vessel extending below the level of the water overflow opening, openings for the gases in the upper portion of said partition, and a second depending partition having a fluted lower end terminating above the level of the water overflow to form an annular opening for the passage of the gases between the end of the partition and the surface of the water; substantially as described.

[Claims 6 to 16 not printed in the Gazette.]

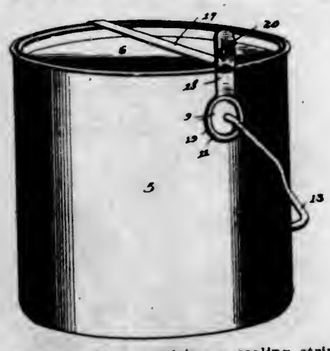
886,010. SEAL-FASTENING. THOMAS E. MURRAY, New York, N. Y. Filed Oct. 8, 1907. Serial No. 396,465.

1. In a seal fastening and in combination with a fastening wire loop, a holding block having a transverse opening formed of three radiating passages, two of said passages receiving respectively each a part of said loop and a third passage both parts of said loop, means for preventing withdrawal of said loop by strain applied thereto at the end of either of said two first named passages and, the said loop itself being provided with means, coacting with means in the holding block, for preventing withdrawal of said loop by strain applied at the end of the third passage.



2. In combination with a closed wire loop formed by twisting together the parts of the wire and having a double bend in one of said parts, a holding block having three radiating passages, one of said passages being provided with a recess to receive the part of said loop having the double bend, another of said passages receiving the other part of said loop, and another of said passages receiving the twisted together parts of the wire: whereby said wire is prevented from being withdrawn from said passages by strain applied thereto at the end of any one of said passages.

886,011. PAIL-SEAL. JESSE W. NICHOLS, Chicago, Ill. Filed Dec. 26, 1906. Serial No. 349,391.



1. A seal for pails, comprising a sealing strip formed of breakable metal extending entirely across the cover of the pail and having downwardly turned end portions terminating in rings adapted to be clamped between the pail ears and the body of the pail, substantially as described.

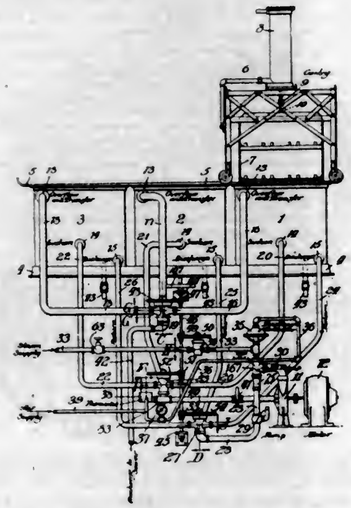
2. The combination with a pail cover and pail ears seated in the side walls of the pail, of a sealing strip formed in two sections directly and non-detachably united above the cover, the lower ends of said strip sections terminating in ring-shaped members embracing said pail ears, substantially as described.

3. The combination with a pail having a cover and pail ears non-detachably secured in the side walls of the pail, of a sealing strip formed in two sections directly and non-detachably united above the cover, the lower ends of said strip sections terminating in ring-shaped members embracing said ears and clamped between the latter and the side walls of the pail, substantially as described.

4. The combination with a pail having a cover, and pail ears non-detachably secured in the side walls of the pail, of a sealing strip formed in two sections, the lower ends of said sections being non-detachably secured to said pail ears, and the upper ends extending above the cover and directly and inseparably interlocked with each other, substantially as described.

5. The combination with a pail and its cover, of a seal therefor comprising a sealing strip formed in two sections, the lower ends of said sections being permanently secured to the body of the pail and the upper ends of said sections extending above the cover and being directly and permanently interlocked with each other.

886,012. PASTEURIZING APPARATUS. JOHN T. H. PAUL, Chicago, Ill., assignor to E. Goldman & Company, Inc., Chicago, Ill., a Corporation of Illinois. Filed June 17, 1907. Serial No. 379,530.



1. In a pasteurizing apparatus, the combination with a plurality of tanks for the sterilizing liquid in each one of which the complete pasteurization is effected, of a system of pipes communicating with all said tanks, and valves in said pipes for controlling the flow of the liquid from any tank to any other tank, whereby the temperature of the liquid in one tank is raised, the temperature of the liquid in another tank kept substantially stationary, and in a third tank reduced.

2. In a pasteurizing apparatus, the combination with a plurality of tanks for the sterilizing liquid in each one of which the complete pasteurization is effected, of a series of inlet pipes one for each tank, said series having a common valve, and a series of outlet pipes one for each tank, said series having a common valve whereby the flow of the liquid is controlled.

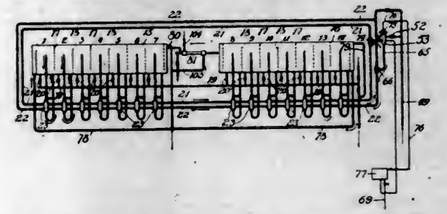
3. In a pasteurizing apparatus, the combination with a plurality of tanks for the sterilizing liquid in each one of which the complete pasteurization is effected, of a system of pipes communicating with all of said tanks, valves in said pipes for controlling the flow of the liquid from any tank to any other tank and a heating device in said system, said parts operating so that the temperature of the liquid in one tank is raised while the temperature of the liquid in another tank is kept stationary, and in a third tank reduced.

4. In a pasteurizing apparatus, the combination with a plurality of tanks for the aterilizing liquid in each one of which the complete pasteurization is effected, of a system of pipes communicating with all of said tanks, valves in said pipes for controlling the flow of the liquid, and connections between said valves adapting them to be simultaneously set by a single operation, said parts operating so that while the temperature of the liquid in one tank is being raised the temperature of the liquid in another tank is kept substantially stationary, and in a third tank reduced.

5. In a pasteurizing apparatus, the combination with a plurality of tanks for the sterilizing liquid in each one of which the complete pasteurization is effected, of a system of outflow and return pipes through which said tanks intercommunicate valves in said pipes for controlling the flow of liquid from any tank to any other tank, a pump and heater in said pipe system, said parts being adapted and arranged so that while the temperature of the liquid in one tank is being raised the temperature of the liquid in another tank is held substantially stationary, and in a third tank reduced.

[Claims 6 to 35 not printed in the Gazette.]

886,013. PASTEURIZING APPARATUS. JOHN T. H. PAUL, Chicago, Ill., assignor to E. Goldman & Co. Inc., Chicago, Ill., a Corporation of Illinois. Filed July 25, 1907. Serial No. 385,460.



1. In a pasteurizing apparatus, the combination with a series of compartments for the pasteurizing liquid, forming a sinuous course for said liquid, an outlet and inlet pipe for each compartment in circuit therewith, a heating pump in said circuit and a circulating pump communicating at its suction and discharge sides, respectively, with the end compartments.

2. In a pasteurizing apparatus, the combination with a series of compartments for the pasteurizing liquid, forming a sinuous course for said liquid, an outlet and inlet pipe for each compartment in circuit therewith, a heating pump controllably communicating with all of said circuits, valves for controlling said communication, and a circulating pump communicating at its suction and discharge sides, respectively, with the end compartments.

3. In a pasteurizing apparatus, the combination with a tank for the pasteurizing liquid containing alternating partitions, forming compartments and a sinuous course through them for said liquid, an outlet and inlet pipe for each compartment in circuit therewith, a heating pump in said circuit and a circulating pump communicating at its suction and discharge sides, respectively, with the end compartments.

4. In a pasteurizing apparatus, the combination with a tank for the pasteurizing liquid, of alternating partitions in said tank forming compartments therein and a sinuous course through them for the liquid, the end partitions forming with the tank-walls relatively narrow spaces, an outlet and an inlet pipe for each compartment in circuit therewith, a heating pump for the liquid communicating with each circuit, a valve for controlling the communication, and a circulating pump communicating at its suction and discharge ends, respectively, with said relatively narrow spaces in the tank ends.

5. In a pasteurizing apparatus, the combination with a series of compartments for the pasteurizing liquid forming a sinuous course for the liquid, of a pair of pipes extending about said compartments, a heating pump communicating with said pipes, valve devices, one for each compartment, connected with both said pipes, outlet and inlet pipes for each compartment in circuit therewith and communicating through said valve device, and a circulating pump communicating at its suction and discharge sides, with the end compartments.

[Claims 6 to 14 not printed in the Gazette.]

886,014. CLOSURE FOR MILK-JARS AND THE LIKE. FREDERIC K. PLYMPTON, Wellesley, Mass. Filed Nov. 21, 1907. Serial No. 403,152.

1. A bottle or jar closure or cover comprising a thin disk and an extractor fitting around the edge of the said disk clasping the latter, with a handle or tab at the upper surface of the disk which normally lies close to said surface and is adapted to be lifted therefrom.

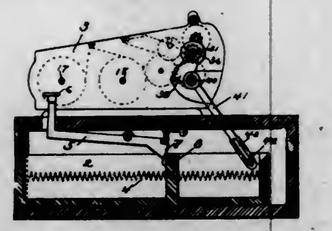
2. A bottle or jar closure or cover comprising a thin disk and an extractor fitting around the edge of the said

disk and clasping the latter, with a flexible handle or tab at the upper surface of the disk and a second limb at the under surface thereof engaged with the material of the disk.



3. A bottle or jar closure or cover comprising a thin disk and an extractor fitting around the edge of the said disk and clasping the latter, with a flexible handle or tab at the upper surface of the disk and a second limb at the under surface thereof having a projecting portion engaged with the material of the disk.

886,015. AUTOGRAPHIC REGISTER. THEODOR F. SCHIRMER and MILTON C. STERN, Dayton, Ohio, assignors to The Egry Autographic Register Company, Dayton, Ohio, a Corporation of Ohio. Filed Dec. 11, 1905. Serial No. 291,361.



1. In an autographic register, the combination with paper strips and a writing table over which the paper is propelled, with mechanism for feeding the paper, of a money till, and means for opening said till, with connecting mechanism intermediate said till and feeding mechanism for the paper, with means to prevent the operation of said connecting mechanism until the till is completely closed.

2. In an autographic register, the combination with paper strips and a writing tablet over which the paper is propelled, with mechanism for feeding the paper, of a cash drawer, and spring for opening same, with connecting mechanism intermediate said drawer and feeding mechanism for the paper, with means to prevent the operation of said connecting mechanism until the drawer is completely closed.

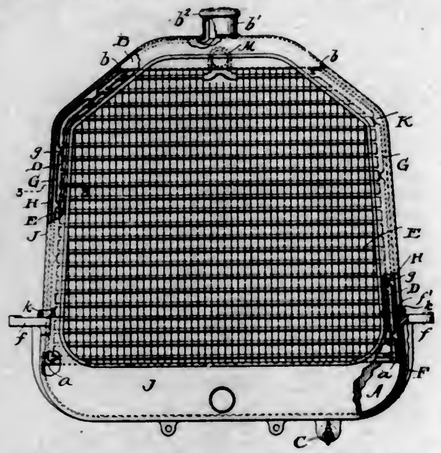
3. In an autographic register, the combination with paper strips and a writing tablet over which the paper is propelled with mechanism for feeding the paper, of a money till, and means for opening said till, with connecting mechanism intermediate said till and feeding mechanism for the paper, and a clutch for throwing said connecting mechanism into operation disengaged until the till is closed.

4. In an autographic register, the combination with paper strips and a writing tablet over which the paper is propelled with mechanism for feeding the paper, of a money till, and means for opening said till, with connecting mechanism intermediate said till and feeding mechanism for the paper, and a pawl and ratchet clutch for throwing said connecting mechanism into operation disengaged until the till is closed.

5. In an autographic register, feed rollers for the paper strips, gearing for driving same, a clutch for actuating said gearing, with cash drawer, and lever intermediate said drawer and clutch, and means for throwing said clutch into operation, inoperative until the drawer is closed.

[Claim 6 not printed in the Gazette.]

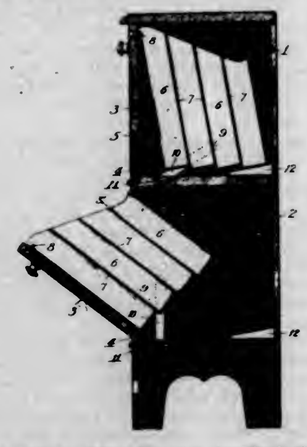
886,016. AUTOMOBILE-RADIATOR. CHARLES SCHMIDT, Cleveland, Ohio, assignor to The Peerless Motor Car Company, Cleveland, Ohio, a Corporation of West Virginia. Filed Nov. 18, 1907. Serial No. 402,637.



1. In an automobile radiator, the combination of an upper tank having outlets through its bottom near its sides, a lower tank having inlets through its top near its sides, side members secured to said two tanks inside of said inlet and outlet openings, rows of horizontal tubes extending between and passing through said side members and secured thereto, return bend plates secured to said side members and covering a plurality of rows of tubes, and cover plates secured to the bottom of the upper tank and to the top of the lower tank outside of said openings therein, and secured at its side edges to said side members.

2. In an automobile radiator, the combination with the radiator proper and a frame comprising a cast metal cradle on which the radiator rests, which cradle has laterally extended arms and upwardly projecting lugs and an upper member of approximately inverted U shape, the lower ends of which are clamped to said lugs.

886,017. MUSIC-CABINET. LOUIS SCHRAM and DOMINIQUE KIES, Chicago, Ill.; said Kies assignor to said Schram. Filed Mar. 7, 1908. Serial No. 419,747.



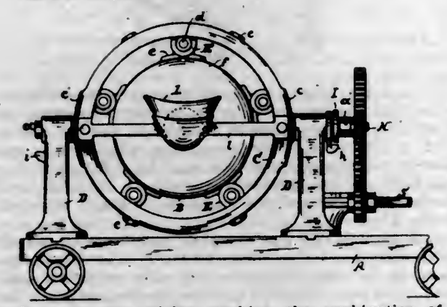
1. In a cabinet of the character described, the combination of a door hinged to swing from its lower end-portion a receptacle in the cabinet connected with the door to move coincidently therewith at its upper end, and means for swinging the receptacle at its lower end toward and away from the door in the movements of the latter, for the purpose set forth.

2. In a cabinet, of the character described, the combination of a door hinged to swing from its lower end-portion, a receptacle in the cabinet connected with the door to move coincidently therewith at its upper end and swinging link-supports for the receptacle operating to swing the lower end of the receptacle toward and away from the door in the movements of the latter, for the purpose set forth.

3. In a cabinet, of the character described, the combination of a door hinged to swing from its lower end-portion, a receptacle in the cabinet connected with the door to move coincidently therewith at its upper end and swinging means for the lower end of the receptacle operating to move said lower end away from the door in the closing movement thereof and to said door in its opening movement to limit the same, substantially as and for the purpose set forth.

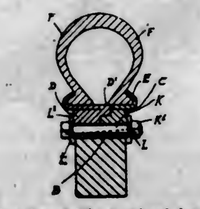
4. In a cabinet of the character described, the combination of a door hinged to swing from its lower end-portion a receptacle in the cabinet having a series of partitions separating it into compartments and bottoms for the separate compartments at different elevations and extending at right-angles to the partitions, said receptacle being connected with the door to move coincidently therewith at its upper end, and means for swinging the receptacle at its lower end toward and away from the door in the movements of the latter, substantially as set forth.

886,018. CONCRETE-MIXING MACHINE. ROBERT J. SELLENTINE, Cleveland, Ohio. Filed July 17, 1907. Serial No. 384,277.



In a concrete mixing machine, the combination of a tilting frame having two drum supporting rings, with a mixing drum, a beveled gear around and concentric with said drum, a plurality of brackets which secure the gear to the drum, shafts rotatably mounted in said brackets parallel with the axis of the drum, and flanged wheels secured to the ends of said shafts and engaging the inner peripheries of said rings respectively.

886,019. RIM FOR MOTOR-CAR WHEELS. DON C. SMITH and WILLIAM F. GORTON, Muncie, Ind. Filed Oct. 10, 1906. Serial No. 338,214.

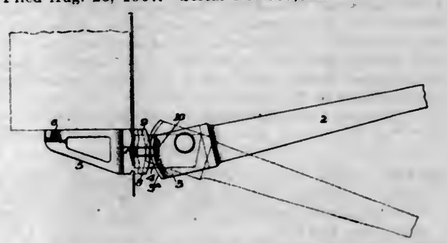


1. The combination with a wheel having a rigidly secured felly rim thereon, of a tire-retaining rim comprising oppositely disposed annular rings having in-turned flanges at their outer edges, their vertical facing edges being provided with a rabbeted joint having the seat thereof beveled, the vertical line of jointure of the facing edges of the rings being to one side of a line central between the flanges, there being transverse apertures provided in the rings and having bolts therein whereby the members may be secured together, the inner surface of the tire-retaining rim being machined to fit the felly rim, and transverse apertures being provided at intervals at the line of jointure of the tire-retaining rim and the felly rim and having bolts therein whereby the tire-retaining rim, in assembled form, may be secured to the wheel, substantially as described.

2. The combination with a wheel having a rigidly secured felly-rim thereon beveled and provided with a series of transverse grooves therein, of a tire-retaining rim composed of a pair of oppositely disposed annular rings, their inner sides being transversely grooved to receive bolts for securing the sections together, their vertical facing edges provided with a rabbet joint having the seat thereof beveled and the inner surface of said tire-rim being beveled so as to register throughout with the beveled face of the felly-rim and having transverse grooves at suitable intervals to register with the corresponding grooves in the felly-rim for the reception of bolts for securing the tire-retaining rim to the wheel.

3. The combination with a wheel having a rigidly secured felly-rim thereon beveled and provided with a series of transverse grooves therein, of a tire-retaining rim composed of a pair of oppositely disposed annular rings, their inner sides being transversely grooved to receive bolts for securing the sections together, their vertical facing edges being provided with a rabbet joint having its seat beveled, the ledge being provided with radially disposed holes at proper intervals opening into semicircular recesses provided correspondingly in the faces of said sections and the inner surface of the said tire-rim being beveled so as to register throughout with the beveled face of the felly-rim having transverse grooves at suitable intervals to register with the corresponding grooves in the felly-rim for the reception of bolts for securing the tire-rim to the wheel.

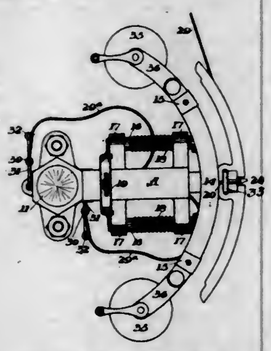
886,020. WIRE-STRETCHER. ARTHUR W. SPRAGUE, La Grange, Ill., assignor to American Steel & Wire Company, Chicago, Ill., a Corporation of New Jersey. Filed Aug. 23, 1907. Serial No. 389,891.



1. In a wire stretching tool, a lever having a bifurcated convexed and laterally flanged end portion, a head formed with a jaw and having a shank pivoted in the bifurcation, and a movable jaw mounted on said shank between the fixed jaw and the end of the head and arranged to be actuated by the convexed end of the latter, said movable jaw having guide lugs engaging the flanges of said end; substantially as described.

2. A wire stretching tool comprising a lever having a bifurcated forward end and provided with arcuate flanges upon the sides of the bifurcation, a head having a shank pivoted in the bifurcation eccentric to the flanges, transverse shoulders upon opposite sides of the head constituting jaws spaced from the lever, and a movable jaw slidably embracing the shank between the fixed jaws and the lever and provided with rearwardly directed projections embracing the respective flanges of the lever, substantially as described.

886,021. ENGINE-INDICATOR. JOSEPH W. THOMPSON, Salem, Ohio, assignor to Buckeye Engine Company, Salem, Ohio, a Corporation of Ohio. Filed Aug. 17, 1906. Serial No. 331,091.



1. In an engine indicator, a stationary convex platen, a pencil holder in operative relation with the convex side of the platen, and connections to move the pencil holder in accordance with the pressure and the reciprocating part of the engine; substantially as described.

2. In an indicator, a curved stationary platen, a movable pencil holder in operative relation with the convex side of the platen, a pressure device connected with the pencil holder, and means for oscillating the pencil holder; substantially as described.

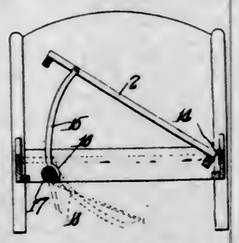
3. An engine indicator, a stationary convex platen, means for attaching a roll of paper to the convex side of the platen, a pencil in operative relation with the convex side of the platen, connections for actuating the pencil, and means for moving the platen into contact with the pencil; substantially as described.

4. In an engine indicator, a platen having a convex paper-supporting surface, a movable pencil in operative relation with the convex side of the platen, and hand controlled means for moving them into and out of contact with each other, the platen being stationary with respect to the directions of movement of the pencil, substantially as described.

5. In an engine indicator, a curved platen having a convexed paper-supporting surface, a pencil, a holder therefor, a piston having lever connection with the pencil, and means for oscillating the holder and pencil during the taking of the card, the platen being stationary with respect to the directions of movement of the pencil, substantially as described.

[Claims 6 to 15 not printed in the Gazette.]

886,022. BED. MAX WENSAUER, Sheboygan, Wis., assignor of one-third to Herman Krause and one-third to George Kleber, Sheboygan, Wis. Filed Dec. 31, 1907. Serial No. 408,713.

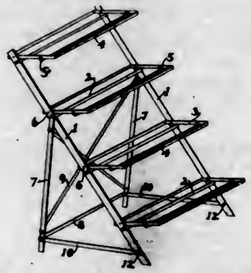


1. The combination with a bed and winding means journaled thereon; of a bed bottom hingedly connected to the bed, a member pivotally connected to and depending from the bed bottom, said member being held by gravity in constant contact with the winding means, and a flexible connection between the winding means and said member, said connection being disposed to direct said member into engagement with the winding means to hold the bed bottom at a predetermined angle to the bed.

2. The combination with a bed and winding means journaled thereon; of a bed bottom hingedly connected to the bed, a member pivotally connected to and depending from the bed bottom, said member being shaped to engage the winding means to hold the bed bottom at a predetermined angle to the bed, and a flexible connection between the winding means and said member, said winding means being disposed to guide said member out of contact with the surface on which the bed is resting.

3. The combination with a bed and a shaft journaled thereon; of a bed bottom hingedly connected to the bed, a member pivotally connected to the bed bottom and having a shaft engaging terminal, and a flexible connection between the shaft and said member for directing said terminal onto the shaft to support the bottom at a predetermined angle.

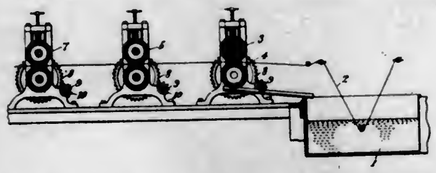
886,023. DISPLAY-RACK. EDWARD B. WESTON, Dayton, Ohio. Filed June 9, 1906. Serial No. 321,068.



1. A display rack constructed of metal side standards, with rigid, horizontal cross braces secured across the front of the side standards, and open metallic frames with transverse bars for the frames suspended at the ends to the sides of the frames near the front and below the front bar of the frame to support the cans, said frames pivoted to the side standards to rest on the cross braces when open.

2. A display rack constructed of metal side standards, with rigid horizontal cross braces secured across the front of the side standards, and open metallic frames with transverse bars for the frames suspended at the ends to the sides of the frames near the front to support the cans, said frames pivoted to the side standards to rest on the cross braces when open, said cross braces also serving as supports for the cans in connection with the depending transverse bars for the frames.

886,024. RIBBOZINE-MACHINE. CHARLES WIEBKE, Newark, N. J. Filed Oct. 31, 1907. Serial No. 400,079.

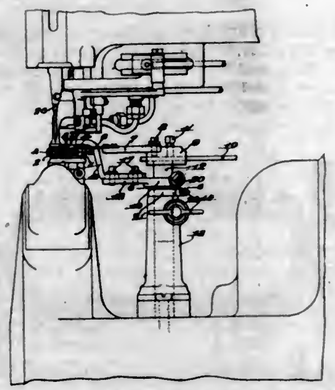


1. A ribbozine machine comprising a pair of burnishing rolls, a pair of crimping rolls, and driving mechanism for actuating the rolls constructed and operating to drive the crimping rolls more slowly than the burnishing rolls to compensate for the shortening of the material.

2. A ribbozine machine comprising a pair of pressing rolls, a pair of burnishing rolls, and driving mechanism for actuating the rolls constructed and operating to drive the burnishing rolls faster than the pressing rolls.

3. A ribbozine machine comprising means for sizing the ribbozine, a pair of pressing rolls for removing the surplus size and flattening the material, a pair of heated burnishing rolls for drying and burnishing the material, and driving mechanism for actuating the rolls, said mechanism being adjustable to vary independently the speeds of the several sets of rolls.

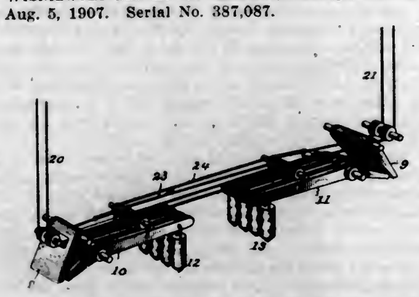
886,025. WELTING ATTACHMENT FOR SEWING-MACHINES. WILLIAM WILSON, Boston, Mass., assignor to Campbell Bosworth Machinery Company, Portland, Me., a Corporation of Maine. Filed Mar. 17, 1906. Serial No. 306,549.



1. A welting attachment for sewing machines, having, in combination, an edge gage of sufficient height to engage the edges of two pieces of leather with a piece of welting between, a welt guide having its upper and lower sides beveled toward the edge gage so that it may be located clase to the edge gage without interferehce with the presser foot, substantially as described.

2. A welting attachment for sewing machines, having, in combination, an edge gage of sufficient height to engage the edges of two pieces of leather with a strip of welting between, consisting of a roll mounted to rotate on a vertical axis and have its periphery engage the edges of the materials to be sewed, and a welt guide located in proximity thereto, with its top and bottom sides beveled toward the edge gage, substantially as described.

886,026. SAFETY-STOP FOR ELEVATORS. KASIMIR WISNIEWSKI and ANTON MATLAK, Chicago, Ill. Filed Aug. 5, 1907. Serial No. 387,087.

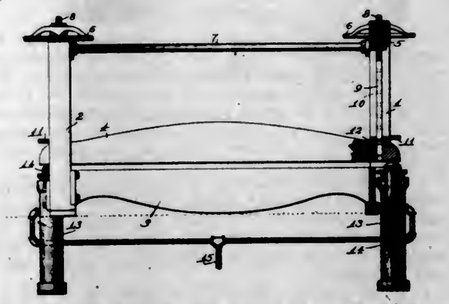


1. A safety stop for elevators, comprising in combination, an elevator cab, vertical guide racks for said cab, a pair of safety pawls adapted to engage said guide racks, a series of lifting levers common to each safety pawl, and multiple means controlled by the lifting ropes of the cab and comprising in part flexible connections branched at one end and connected to individual pairs of levers aforesaid, substantially as set forth.

2. A safety stop for elevators, comprising in combination, an elevator cab, vertcal guide racks for said cab, a pair of safety pawls adapted to engage said guide racks, a series of lifting levers common to each safety pawl, and multiple controlling means comprising a series of holding arms in engagement with the lifting ropes of the cab, and a series of flexible connections attached at one end to said holding arms, the other end of said flexible connections being branched and connected to individual pairs of the lifting levers aforesaid, substantially as set forth.

3. A safety stop for elevators, comprising in combination, an elevator cab, vertical guide racks for said cab, a pair of safety pawls adapted to engage said guide racks, a series of lifting levers common to each safety pawl, and multiple controlling means comprising a series of holding arms provided with vertical shoes adapted to bear upon and be supported by the lifting ropes of the cab, and a series of flexible connections attached at one end to said holding arms, the other end of said flexible connections being branched and connected to individual pairs of the lifting levers aforesaid, substantially as set forth.

886,027. BENDING-MACHINE. AUGUSTUS WOOD, Hamilton, Ohio, assignor to Niles-Bement-Pond Company, Jersey City, N. J. Filed Feb. 27, 1908. Serial No. 418,004.



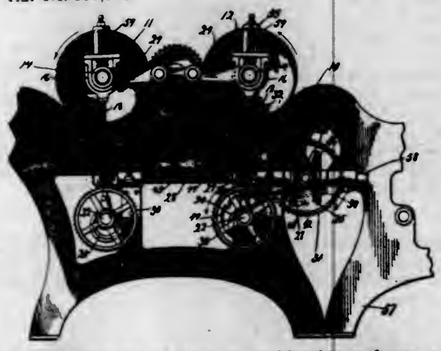
1. A bending machine comprising, a pair of housings, a bridge-piece connecting the housings and forming a lower press-member, a gate forming the upper press-member and having its ends arranged for vertical motion in said housings, a cylinder under each end of said gate, plungers in the cylinders with their upper ends engaging under the gate, means for admitting pressure fluid to and exhausting it from the cylinders, a screw device at the top of each housing, a downward extension from each screw device to the appropirate end of the gate, the gate being vertically movable relative to such extensions, and means coöperating with said extensions and the gate to limit the downward motion of said extensions relative to the gate, combined substantially as set forth.

2. A bending machine comprising, a pair of housings, a bridge-piece connecting the housings and forming a lower press-member, a gate forming the upper press-member and having its ends arranged for vertical motion in said housings, a cylinder under each end of said gate, plungers in the cylinders with their upper ends engaging under the gate, means for admitting pressure fluid to and exhausting it from the cylinders, a nut journaled in the top of each housing over the appropriate end of the gate, means for turning said nuts, a screw in each nut, a flat extension from the foot of each screw downward to and through a perforation in the appropriate end of the gate, said flat extension being provided with a vertical series of perforations, and pins adapted for insertion in selected ones of said perforations over the ends of the gate, combined substantially as set forth.

3. A bending machine comprising, a pair of vertical housings, a fixed horizontal lower press-member secured to

the housings, a movable horizontal upper press-member sliding in the housings, screw devices supported by the housings for forcing the upper press-member down, cylinder and plunger devices for moving the upper press-member upwardly, and coupling devices between the screw devices and the upper press-member, combined substantially as set forth.

886,028. IRONING-MACHINE. WILLIAM E. ANDRÉE, Chicago, Ill., assignor, by mesne assignments, to The American Laundry Machinery Manufacturing Company, a Corporation of New Jersey. Filed Feb. 14, 1906. Serial No. 300,978.



1. In an ironing machine, in combination, a frame, an ironing plate carried by the frame, a rotatable cylinder coacting with the plate, reciprocating yokes carrying the roller, guide-arms connected with the cylinder and pivotally attached to the frame, eccentrics for reciprocating the yokes, a power shaft, and manually applied and power-released clutch mechanism connecting the power shaft with the eccentrics.

2. In an ironing machine, in combination, a concave ironing plate; a cylinder coacting therewith; a yoke supporting the cylinder; an eccentric for reciprocating the yoke; a power shaft; and a manually applied and automatically released clutch for connecting the power shaft with the eccentric.

3. In an ironing machine, in combination, a concave ironing plate; a cylinder coacting therewith; a yoke supporting the cylinder; an eccentric for reciprocating the yoke; a power shaft; a gear driven by the power shaft and having a lateral projection; a disk mounted concentrically with the gear; a dog carried by the disk; means for throwing the dog into the path of the gear projection; automatic means for withdrawing the dog from such path; and operative connection beween the disk and the eccentric.

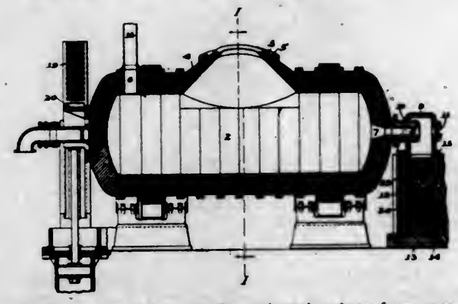
886,029. BUCKLE. PAUL I. ANDREWS, Kennebunk, Me. Filed Oct. 8, 1907. Serial No. 396,406.



1. In a buckle, a frame, a tongue pivoted to one part thereof and overlapping another part, an extension bar rigidly connected with the said tongue and extending away from it beyond its pivotal axis, so as to form one arm of a lever, of which the tongue proper is the other arm, said extension bar being at an angle with the plane in which lies the tongue and its pivotal axis; whereby pressure upon said extension bar toward said plane tends to raise the point of the tongue from its normal position in contact with the frame; in combination with a strap of flexible material inclosing the said extension of the tongue and that part of said frame which constitutes the pivotal axis about which the tongue is movable, whereby tension upon said strap in a direction away from the buckle tends to press down the tongue extension and raise the opposite end of the tongue, arranged and to operate substantially as herein set forth.

2. In a buckle, a frame, a tongue pivoted to one of its ends and overlapping its opposite end, and an extension of said tongue beyond the end of the frame to which it is pivoted and when the point of said tongue is in contact with the frame rising upward above the plane in which lies the frame, in combination with a strap of flexible material around the end of said frame to which the tongue is pivoted, inclosing the said extension of the tongue, and fastened to itself so as to form an inclosing loop whereby tension upon the said strap in a direction away from the buckle tends to press down the tongue extension and raise the opposite end of the tongue, all arranged and to operate substantially as herein set forth.

886,030. SMELTING CONVERTER AND FOREHEARTH. RALPH BAGGALEY, Pittsburg, Pa., CHARLES M. ALLEN, Lo Lo, Mont., and EDWARD W. LINDQUIST, Chicago, Ill.; said Allen and Lindquist assignors to said Baggaley. Filed Apr. 3, 1905. Serial No. 253,548.



1. Apparatus for recovering mineral values from ores, which consists in the combination of a smelting converter provided with an ore inlet at one end and with a water-jacketed slag and matte overflow-spout at the other end with a separating vessel and having a covered drop-tube between the overflow-spout and the separating vessel provided with means whereby access may be had to the overflow-spout for examination and rodding when occasion requires; substantially as described.

2. Apparatus for recovering mineral values from ores, which consists in the combination of a smelting converter provided with an ore inlet above the horizontal axis of the converter at or near one end thereof and a water-jacketed overflow-spout in the horizontal axis of the opposite end of the vessel; a separating vessel and a covered drop-tube provided with a covered orifice through which the overflow-spout may be examined and rodded; substantially as described.

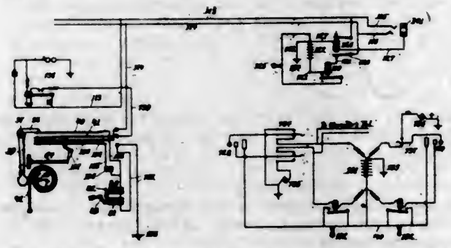
3. Apparatus for recovering mineral values from ores, comprising a converter having its top at least partially closed to choke the escape of hot gases, and provided with an outlet above the bottom of the converter to control the level of the bath, the converter also being provided with twyer holes below the level of the outlet of the converter, a separating chamber, and a passage leading from the outlet of the converter to the separating chamber.

4. Apparatus for recovering mineral values from ores comprising an invertible converting vessel mounted upon a substantially horizontal axis and provided with an unobstructed outlet at one end of the vessel and in the axis thereof, the top of the vessel being at least partially closed to choke the escape of hot gases, twyers piercing a side of the converter above the bottom and below the axis thereof, a separating chamber, and a passage leading from the outlet of the converter to the separating chamber.

5. A smelting converter provided with twyers mounted for inversion upon its longitudinal axis and having its longitudinal axis disposed in a substantially horizontal direction, there being an unobstructed matte and slag outlet at one end of the longitudinal axis of the converter, and a feed inlet through the top of the converter, and adjacent the opposite end thereof, substantially as described.

[Claim 6 not printed in the Gazette.]

886,031. TOLL TELEPHONE SYSTEM. EDWARD P. BAIRD, Evanston, Ill., assignor to Baird Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed Jan. 27, 1902. Serial No. 91,345. Renewed Mar. 19, 1906. Serial No. 306,908.



1. In a toll-apparatus, the combination with coin-refunding-means of shifting-means operated by the depositor, for operating the refunding-means, and means whereby the shift of the refunding-means by the shifting-means can be controlled.

2. In a toll-telephone-system, the combination with a telephone-line, of a toll-apparatus comprising coin-refunding-means, shifting-means operable by the depositor, for operating the refunding-means, and means whereby shift of the refunding-means by the shifting-means can be controlled by the exchange-operator.

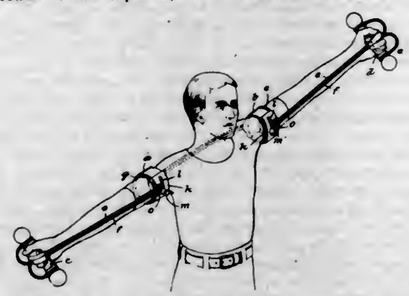
3. In a toll-apparatus, the combination with coin-refunding-means, of shifting-means operated by the depositor, for operating the refunding-means, and means whereby the shift of the refunding-means by the shifting-means can be controlled, said refunding-means being normally inoperative.

4. In a toll-telephone-system, the combination with a telephone-line, of a toll-apparatus comprising coin-refunding-means, shifting means, operated by the depositor, for operating the refunding-means, and means whereby the operation of the refunding-means by the shifting-means can be controlled by the exchange-operator, said refunding-means being normally inoperative.

5. In a toll-apparatus, the combination with coin-refunding-means, of shifting-means for operating said refunding-means, and means rendering the refunding-means shiftable by the shifting-means when a coin is deposited.

[Claims 6 to 74 not printed in the Gazette.]

886,032. EXERCISER. WILFRED BARRETT, Waltham, Mass. Filed Sept. 11, 1907. Serial No. 392,252.



1. An exerciser consisting of elastic members each of which is independently adjustable in length and which are adapted to be supported on the body so as to extend across the shoulders and along each arm.

2. An exerciser consisting of elastic bands adapted to surround the arms and resist the flexing of the muscles thereof, elastically extensible members engaged with said bands so as to extend across the shoulders and along the arms, and grips attached to the ends of the arm members.

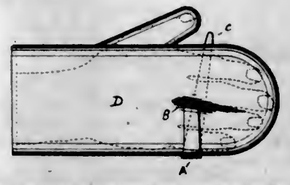
3. An exerciser consisting of elastic bands adjustable as to tension and adapted to surround the arms, and elastic cords held by said bands and arranged to cross the shoulders and pass along the arms of the user.

4. An exerciser consisting of elastic bands adapted to surround the arms of the user, hand grips, and elastic cords attached at their ends to said grips and confined and guided from the rear to the front side of the arms by said bands.

5. An exerciser consisting of elastic bands adapted to surround the arms of the user, hand grips, and elastic cords attached at their ends to said grips and confined and guided by said bands, said cords being held adjustably both by the bands and the grips so as to provide independently adjustable back and arm sections or members, which can be made conformable to the breadth of shoulder and length of arm of any user.

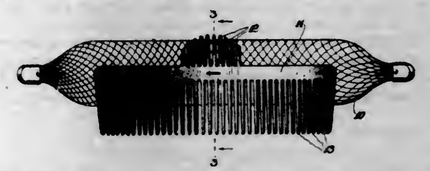
[Claims 6 to 10 not printed in the Gazette.]

886,033. CORN-HUSKING IMPLEMENT. ALBERT C. BAUGHMAN, Griswold, Iowa. Filed Sept. 24, 1907. Serial No. 394,424.



As a new article of manufacture, the herein described corn-husking implement formed of a single piece of material of even thickness throughout, and consisting essentially of a blade, a loop at the heel of the blade, of a length to receive the third and fourth fingers of an operator's hand, and a depending tongue at the end of the loop remote from the heel of the blade; the end of the said tongue being separated from the blade by an intervening space, and the said space being arranged and being of a size to receive the thicknesses of the palm portion and back portion of a mitten.

886,034. PUFF-COMB. WILLIAM S. BECHTOLD, Newark, N. J. Filed Dec. 14, 1907. Serial No. 406,407.



1. In an article of the character described: a hair-roll; and a comb secured thereto having oppositely disposed sets of teeth, one set of which is shorter than the other, said teeth being adapted to lock said hair-roll in the hair in such a manner as to prevent accidental forward, backward and lateral displacement of same.

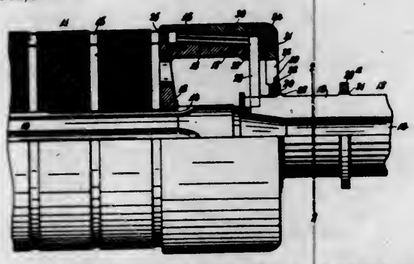
2. In an article of the character described: a hair-roll; and a comb secured thereto having oppositely disposed sets of teeth, one set of which is shorter than the other and curved to conform to the curvature of the head, said teeth being adapted to lock said hair-roll in the hair in such a manner as to prevent accidental forward, backward and lateral displacement of same.

3. In an article of the character described: a hair-roll; and a comb secured thereto having two oppositely dis-

posed sets of teeth, the teeth of one of which sets are shorter than those of the other, and of lesser number, said sets of teeth being adapted to lock said hair-roll in the hair in such a manner as to prevent accidental forward, backward and lateral displacement of same.

4. In an article of the character described: a hair-roll; and a comb secured thereto having two oppositely disposed sets of teeth, one of which comprises a lesser number of teeth than the other and which teeth are shorter than the teeth of said other set, and are also progressively shorter from the middle toward each end.

886,035. DIRECT-CURRENT TURBO-GENERATOR. BERNARD A. BEHREND, Norwood, Ohio, assignor to Allis-Chalmers Company, a Corporation of New Jersey, and The Bullock Electric Manufacturing Company, a Corporation of Ohio. Filed Oct. 31, 1906. Serial No. 341,377.



1. In a dynamo-electric machine, an armature core, coils carried thereby, a commutator, a clamping device for said commutator, and a protective end-ring surrounding the ends of the coils and extending inward to said clamping device.

2. In a dynamo-electric machine, an armature core, coils carried thereby, a clamping ring for the commutator bars, an end-ring surrounding the ends of the coils and extending adjacent said clamping ring, and means on said clamping ring for retaining the end-ring in position.

3. In a dynamo-electric machine, an armature core, coils carried thereby, a commutator, a shrink-ring surrounding the commutator, and a protective end-ring surrounding the ends of the coils and extending inward and engaging said shrink-ring.

4. In a dynamo-electric machine, an armature core, coils carried thereby, a commutator ring or band surrounding the commutator bars, an end-ring surrounding the ends of the coils and extending adjacent said commutator ring, and a nut on said commutator ring for retaining the end-ring in position.

5. In a dynamo-electric machine, an armature core, coils carried thereby, a commutator, a shrink-ring surrounding the commutator, a protective end-ring surrounding the ends of the coils and extending inward into engagement with said shrink-ring, and a nut on said shrink-ring engaging said end-ring to retain the latter in position.

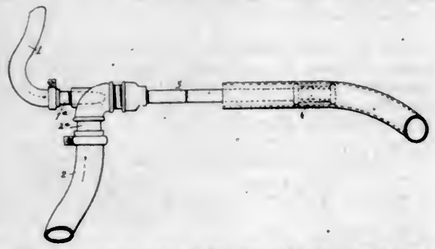
[Claims 6 to 8 not printed in the Gazette.]

886,036. PROCESS FOR HEATING AND BENDING PIPES. WILLARD L. BROWN, Toledo, Ohio, assignor to The Shaw-Kendall Engineering Company, Toledo, Ohio. Filed Nov. 7, 1904. Serial No. 231,633.

1. The process of bending pipes which consists in applying heat from and to the interior of the pipe to be bent on the side which is to form the longer side of the bend, and then subjecting the pipe to lateral strains at opposite sides of the heated portion.

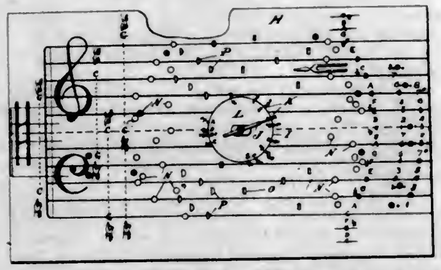
2. In the process of bending pipes, the steps which consist in supplying a fluidal fuel to a burner introduced into the pipe to be bent, and consuming the fuel within the pipe at the point where the bend is to take place and then subjecting the pipe to lateral strain at opposite sides of the heated portion.

3. The herein described improvement in the art of bending pipes, which consists in the application of heat directly to the inner surface of the wall of the pipe by



means of a burner, and then bending the pipe while the same is subjected to the heating medium, substantially as specified.

886,037. CHART FOR MUSIC STUDENTS. CHARLES H. CALDWELL, Seattle, Wash. Filed Apr. 11, 1907. Serial No. 367,621.



1. A chart of the character described, consisting of a sheet containing indicia designating clefs and letters designating the different keys of the grand clef, said sheet being formed with a series of circular openings, a series of oblong openings, and a series of crescent shaped openings and being provided at its middle with a circularly arranged series of letters and signatures designating the different major scales and their relative minors, and a disk mounted to revolve over the rear surface of said sheet and provided in its surface with dots, and sharp and flat signs, said dots and signs being adapted to be displayed through the various openings of the sheet, and a pointer mounted to turn with said disk at the middle of the sheet around within the series of letters that designate the different scales, the relation between the indicia on the disk, the various openings in the sheet, said pointer, and said scale denoting letters being such that the dots and scale signs will show through on the clefs at the proper points to designate the different keys, according to the position of the pointer with respect to the scale denoting characters of said different keys.

2. A chart of the character described, consisting of a sheet containing indicia designating clefs and letters designating the different keys of the grand clef, said sheet being formed with a series of circular openings, a series of oblong openings, and a series of crescent shaped openings and being provided at its middle with a circularly arranged series of letters and signatures designating the different major scales and their relative minors, and a disk mounted to revolve over the rear surface of said sheet and provided in its surface with dots, and sharp and flat signs, said dots and signs being adapted to be displayed through the various openings of the sheet, and a pointer mounted to turn in said disk at the middle of the sheet around within the series of letters that designate the different scales, the relation between the indicia on the disk, the various openings in the sheet, said pointer, and said scale denoting letters being such that the dots and scale signs will show through on the clefs at the proper points to designate the different keys, according to the position of the pointer with respect to the scale denoting characters of said different keys, the sheet also displaying digits arranged alongside of the letters denoting the grand clef, said digits ranging from one to eight and corresponding to the relative positions of the different keys in an octave.

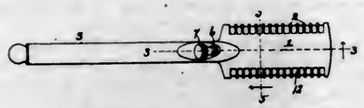
3. A chart of the character described, consisting of a sheet containing indicia designating clefs and letters designating the different keys of the grand clef, said sheet being formed with a series of circular openings, a series of oblong openings, and a series of crescent shaped openings and being provided at its middle with a circularly arranged series of letters and signatures designating the different major scales and their relative minors, and a disk mounted to revolve over the rear surface of said sheet and provided in its surface with dots, and sharp and flat signs, said dots and signs being adapted to be displayed through the various openings of the sheet, and a pointer mounted to turn in said disk at the middle of the sheet around within the series of letters that designate the different scales, the relation between the indicia on the disk, the various openings in the sheet, said pointer, and said scale denoting letters being such that the dots and scale signs will show through on the clefs at the proper points to designate the different keys, according to the position of the pointer with respect to the scale denoting characters of said different keys, the sheet also displaying at intervals the fraction "½", and the circular openings being arranged so as to display the dots of the disk at points in juxtaposition to the fractional designations, for those keys requiring a rise or fall of one-half tone from the natural pitch, in the scale.

886,038. EXPLOSIVE. AUGUSTE E. CHARBONNEAUX, Los Angeles, Cal. Filed Oct. 1, 1907. Serial No. 395,392.

1. The herein described composition of matter for an explosive consisting of saccharine one part by weight and

2. The herein described composition of matter for an explosive consisting of saccharin one part by weight and potassium chlorate three parts by weight.

886,039. SAFETY-RAZOR. HENRIE CLAUSS, Fremont, Ohio. Filed May 9, 1907. Serial No. 372,715.



1. A razor comprising a handle having at one end an integral flat portion forming a blade-holding plate, said plate having a guard at one edge, a fixed blade-engaging member at one end and a movable blade-engaging member at the opposite end, a flat sheet metal blade lying upon said plate, said fixed and movable members engaging the opposite ends of the blade only to removably retain it in place upon said plate.

2. A razor consisting of a handle having a flattened portion at one end thereof and an offset therein at the termination of said flattened portion, a guard upon said flattened portion, a blade lying upon the flattened portion and guard, means for centering the blade on said flattened portion, and an inclined screw passing through said handle at said off-set therein for engaging the blade to detachably retain it in place.

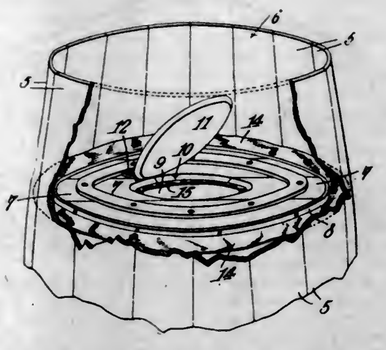
3. A razor comprising a handle having a flattened portion at one end, a lug at the outer end of the flattened portion, a blade lying upon the flattened portion and having in one end a notch to receive said lug, the opposite end of the blade also having a notch and a tapered screw engaging therein.

4. A safety razor, consisting of a handle having at one end a flattened portion to support a blade, a blade lying upon said flattened portion, an undercut lug at one end of the flattened portion engaging one end of said blade, and a tapered screw passing at an angle through the handle and engaging the opposite end of the blade for forcing it against said lug and clamping it against the face of said flattened portion.

5. A safety razor, consisting of a handle having a flattened portion at one end, a blade adapted to lie upon said flattened portion, a stop to engage one end of the blade, and an inclined screw passing through the handle and engaging the blade at the other end at an angle to its longitudinal axis.

[Claims 6 and 7 not printed in the Gazette.]

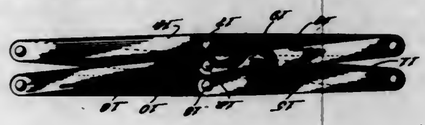
886,040. COMBINED COVER AND FOLLOWER FOR BARRELS, KEGS, AND THE LIKE. THOMAS M. DANSBY, Pine Bluff, Ark. Filed Feb. 15, 1907. Serial No. 357,582.



1. A device of the class described including a substantially circular body portion having an opening formed therein and provided with a weighted reinforcing band secured to the peripheral edge of the body portion and disposed flush with the upper and lower surfaces thereof, a strip of flexible material secured to the lower surface of the body portion and having its inner edge projecting within the opening and its outer edge extended beyond the reinforcing band to produce a yieldable circumferential flange, a closure pivotally mounted on the body portion and adapted to normally close the opening therein, and a flat weighted annulus rigidly secured to the upper surface of the body portion between the opening and the reinforcing band, and disposed concentric with the same the upper surface of the body portion between the reinforcing band and the annulus being smooth and unobstructed.

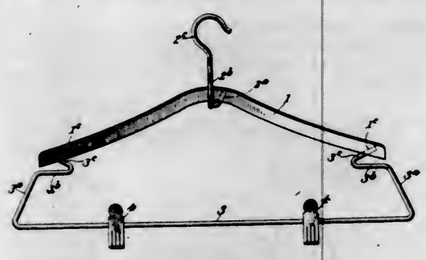
2. A device of the class described including a substantially circular body portion formed of a plurality of parallel strips and provided with a marginal reinforcing band disposed flush with the upper and lower surfaces of the body portion and forming a housing for the ends of the strips, there being an opening formed in the center of the body portion and having its walls inclined towards the lower surface thereof, a strip of flexible material secured to the lower surface of said body portion and having its inner edge projected within the opening and its outer edge extended beyond the reinforcing band to produce a yieldable circumferential flange, a closure pivotally mounted on the upper surface of the body portion and having its walls inclined to conform to the inclination of the walls of the opening and adapted to normally close the latter, and a flat weighted annulus rigidly secured to the upper surface of said body portion between the opening and reinforcing band and disposed concentric therewith.

886,041. COAT-HANGER. JAMES C. DAWSON, St. Louis, Mo. Filed Feb. 21, 1907. Serial No. 358,598.



A folding coat hanger comprising, in combination a set of lazy tongs, and a hook attached to the pivot uniting the members of a pair of crossed levers of the lazy tongs.

886,042. GARMENT-HANGER. WALTER DE FREAR, Albany, N. Y. Filed Mar. 12, 1908. Serial No. 420,573.



1. A garment hanger comprising a yoke, a suspending hook connected therewith, and a suspending rod longer than the yoke and below the yoke, having its end bent upwardly to form shoulder-supports for the garment, and the extremities of the upturned portions being connected to the yoke, substantially as described.

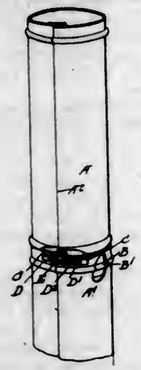
2. A garment hanger comprising a yoke, a suspending hook connected centrally therewith and having a return bend above the yoke, and a hook above the bend; and a suspending rod below the yoke, having its ends bent upwardly to form shoulder-supports for the garment, and the extremities of the upturned portions being outwardly inclined and engaged with sockets in the yoke, substantially as described.

3. The herein described garment hanger comprising a yoke, a suspending-rod underlying the yoke, and having a straight portion projecting beyond the ends of the yoke, and upwardly and inwardly inclined portions at the ends of the straight portion forming supports for the shoulders of the garment, and also having outwardly inclined portions, at the upper ends of the shoulder supporting portions, said outwardly inclined portions engaging sockets in the underside of the yoke.

4. The herein described garment hanger comprising a yoke; a suspending rod, underlying the yoke and having a straight portion projecting beyond the ends of the yoke, and upwardly and inwardly inclined portions at the ends of the straight portion, and inwardly extending portions at the upper ends of the shoulder supporting portions, and outwardly inclined portions at the extremities of the inwardly extending portions, said outwardly inclined portions engaging sockets in the underside of the yoke; and suspending hook attached to the yoke, substantially as described.

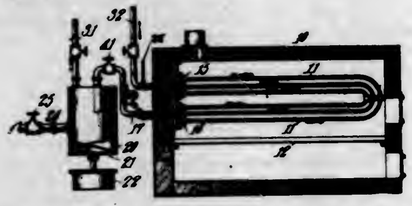
886,043. STOVEPIPE-CONNECTOR FOR NESTING PIPES. HENRY DITCHBURN, Rosseau, Ontario, Canada. Filed May 21, 1907. Serial No. 374,818.

A nesting stove pipe comprising a longitudinally divided pipe, one of the edges of the divided pipe being formed into a double fold forming a groove into which the opposing edge fits, beads formed at each end of the length and designed to fit within the corresponding bead of the connected length, said pipe having slots made at each side of the connected edges and plates connected to the pipe through the slots and having outwardly extending bent ends or projections, one of which is threaded



and a screw extending through one of the aforesaid projections as and for the purpose specified.

886,044. EXHAUST-STEAM REGENERATOR. FORNIA DRAPER and OSCAR L. CURTISS, Cayuga, Ind. Filed Aug. 9, 1907. Serial No. 387,884.



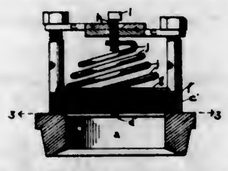
1. In apparatus of the class described, a superheater, an exhaust and live steam mixing chamber having pipe connection with the inlet side of said superheater, an exhaust steam pipe and a live steam pipe both connected to said chamber, said exhaust steam and live steam pipes being equipped with valves for controlling the supply of exhaust and live steam to said mixing chamber and superheater, respectively, and said live steam pipe having a pipe connection with the outlet side of said superheater, with controlling valves, as herein set forth.

2. In apparatus of the character described, a steam superheater, a tank connected to the inlet side of said superheater, an exhaust pipe connected to said tank, a live steam pipe having branches, one connected to said tank and the other connected to the discharge side of said superheater, a valve arranged in the main steam pipe at a point between said branch connection, a set of independent valves arranged in said branches, a pipe connecting the main steam pipe with a distributing pipe connecting with the engine, an exhaust steam pipe connecting with the main steam pipe and the distributing pipe, and a second set of independent valves arranged in said live steam and exhaust pipes adjacent to such point of connection.

886,045. VALVE. HERMAN J. EHRLICH and HERMAN B. EHRLICH, Brazil, Ind. Filed Mar. 6, 1906. Serial No. 304,606.

A valve having a seat provided with separated standards having threaded outer end portions, removable cross pieces having perforated ends fitting over said standards, securing nuts engaging the threaded end portions of said standards, said cross pieces having central threaded alined perforations, a set screw engaging the central perforations of the cross pieces, and having a slotted inner end portion, a valve having a metal head provided with a

central boss, and a conically coiled spring having its contracted end portion engaging the slot of said set screw



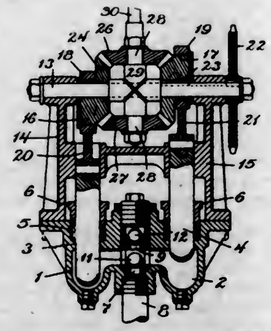
and having its expanded end portion surrounding the central boss of the metal head and in contact with the valve.

886,046. DUSTING-BRUSH. RICHARD N. FICKETT, Atlanta, Ga. Filed May 28, 1907. Serial No. 376,149.



In a dusting brush, a handle having a transversely disposed aperture and longitudinally disposed recesses extending from the apertures to the end of the handle, a length of wire bent centrally to form a loop, the looped portion lying in the aperture, the sections of the wire adjacent the looped portion lying in the recesses of the handle the said wire overlying the end of the handle and twisted centrally of the handle to act as a retaining means for the wire and handle, the remaining portion of the wire being twisted together, a ferrule embracing the handle and having its outer edge turned over the end of said handle, said ferrule being cupped to embrace the wire to hold the wire against undue play and strips of paper interposed between the said twisted sections.

886,047. VARIABLE-DELIVERY PUMP. RICHARD J. FLINN, Boston, Mass., assignor of one-third to Thomas F. Flinn, Brooklyn, N. Y. Filed Aug. 2, 1905. Serial No. 272,313.



1. A pump comprising a chamber adapted to contain fluid and having an inlet and an outlet, displacing means having a reciprocatory movement into and out of said chamber, a plurality of eccentrics arranged to cause reciprocation of said displacing means, a single shaft on which the eccentrics are mounted gearing intermediate said eccentrics connected thereto for transmitting motion from one to another, said gearing being constructed and arranged with capability of planetary movement about the axis of said shaft whereby the angular adjustment of the eccentrics relatively to each other may be varied, and connections for driving said shaft.

2. In a pump having a fluid-containing chamber and plunger-displacing means operating therein for changing the effective volume of the chamber, mechanism for operating said plunger-displacing means and for varying the amount of displacement thereof in the chamber, comprising a single shaft a plurality of eccentrics connected to reciprocate said plunger-displacing means and angularly adjustable mounted on said shaft and one of them secured to turn therewith, a gear-wheel rigidly connected to each of said eccentrics, intermediate idle gears meshing therewith and arranged to transmit movement from one to another, and means for rotating the shaft and thereby turning positively one of the eccentrics and its connected gear, said intermediate gears having capabilities of planetary adjustment about the axes of the eccentrics whereby the latter may be angularly shifted with respect to each other.

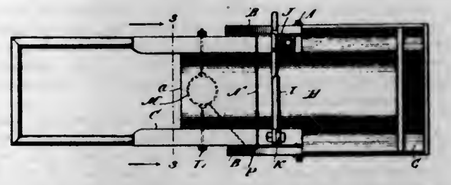
3. A pump comprising a fluid chamber, a plurality of reciprocating plungers arranged to enter and withdraw from the chamber, and driving means therefor including a single shaft and eccentrics mounted on said shaft relatively adjustable about the axis of rotation to vary the relative positions of the plungers and the relative timing of their strokes without affecting the length thereof.

4. A pump consisting of connected fluid-containing spaces, plungers reciprocable into said spaces to vary the effective volume therein, a single driving shaft, rotatable by external means, a plurality of eccentrics mounted on said shaft, connections between each one of the eccentrics and one of the plungers for reciprocating the latter, and means for shifting the relative angularity of the eccentrics.

5. A pump consisting of connected fluid-containing spaces, plungers reciprocable into said spaces to vary the effective volume thereon, a pair of eccentrics mounted on the same axis and having bevel gear portions on their adjacent sides, driving connections from the eccentrics to the plungers, intermediate bevel pinions between the eccentrics for transferring motion from one to the other, and a holder for said pinions mounted rotarily on the same axis with the eccentrics and adapted to be turned while one eccentric is stationary to shift the other eccentric.

[Claims 6 and 7 not printed in the Gazette.]

886,048. DEVICE FOR FACILITATING THE TYING OF CORN-TOPS. DENNIS W. FLYNN, Viola, Ill. Filed Jan. 14, 1908. Serial No. 410,827.



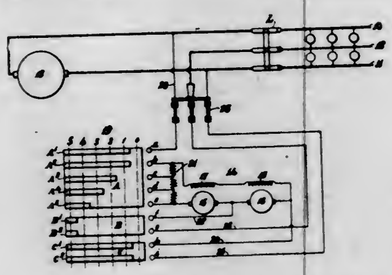
1. The herein described device for facilitating the tying of corn tops, comprising a wheel-supported main frame having side bars separated by an intervening space and arranged to be moved in the direction of their length between rows of corn, a longitudinally-disposed trough-like receiver connected to and arranged between the said frame bars and open at one end and closed at its opposite end, a keeper arranged on one frame bar and at one side of the receiver, and a lever capable of both vertical and horizontal movement arranged to be engaged with and disengaged from the said keeper; the said lever being pivoted on an upright bolt and arranged to swing vertically on the bolt, and the said bolt being arranged and adapted to turn about its axis in the frame bar opposite to that bearing the keeper.

2. The herein described device for facilitating the tying

of corn tops, comprising a wheel-supported main frame having side bars separated by an intervening space and arranged to be moved in the direction of their length between rows of corn, a longitudinally disposed trough-like receiver connected to and arranged between the said frame bars and open at one end and closed at its opposite end, a keeper arranged on one frame bar and at one side of the receiver, a lever connected with the other frame bar and arranged to swing both vertically and horizontally, a hanger connected to the side bars of the frame and depending therefrom, and a twine-holder carried by said hanger and disposed below the trough-like receiver.

3. In a device for facilitating the tying of corn tops, the combination with a wheel-supported, trough-like receiver open at one end and closed at its opposite end and arranged to be moved in the direction of its length between rows of corn, a keeper connected with the receiver and disposed at one side thereof, and a lever capable of both vertical and horizontal movements connected with the receiver at the opposite side thereof and arranged to be moved into engagement with and disengaged from the keeper.

886,049. MULTIPLE-VOLTAGE SYSTEM OF DISTRIBUTION. BUDD FRANKENFIELD, Norwood, Ohio, assignor to Allis-Chalmers Company, a Corporation of New Jersey, and The Bullock Electric Manufacturing Company, a Corporation of Ohio. Filed Nov. 30, 1906. Serial No. 345,591.



1. In a multiple voltage system of distribution, main and compensating conductors, a balancer, and a controller for first connecting the balancer to the main conductors and then, after the balancer is up to speed, to a compensating conductor.

2. In a multiple voltage system of distribution, main and compensating conductors, a balancer, and a single controller for connecting said balancer first to the main conductors, then causing the balancer to be gradually brought up to speed, and then connecting the balancer to a compensating conductor.

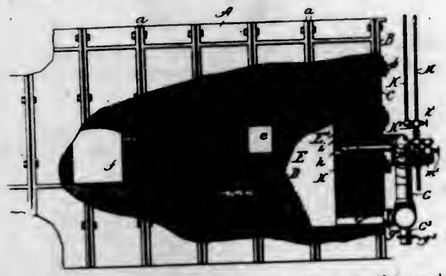
3. In a multiple-voltage system of distribution, main and compensating conductors, a balancer, a starting resistance therefor, and a single controlling device for connecting the balancer to the main conductors and to the starting resistance, gradually cutting out the starting resistance to bring the balancer up to speed, and finally connecting the balancer to a compensating conductor.

4. In a multiple-voltage system of distribution, main and compensating conductors, a compound wound balancer arranged for connection to said conductors, and a unitary controller for first connecting the balancer to the main conductors, for then regulating the speed of the balancer, and for then connecting the latter to an equalizer.

5. In a multiple-voltage system of distribution, a plurality of main and compensating conductors, two or more compound-wound balancers, each having series and shunt field windings, a starting resistance for each balancer, one or more equalizers for connecting the balancers together, and a controller for connecting each balancer to the main conductors, for regulating the speed of the balancers, and for connecting the balancer to the equalizer or equalizers and to a compensating conductor of the system.

[Claims 6 to 8 not printed in the Gazette.]

886,050. OIL-BURNING REVERBERATORY FURNACE. GEORGE FRASER, Topeka, Kans. Filed Apr. 22, 1907. Serial No. 369,617.



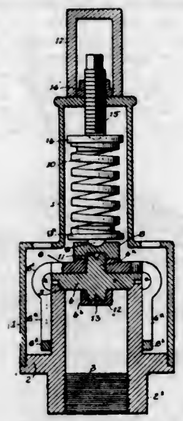
1. In an oil burning reverberatory furnace, the combination with an initial chamber, of a working chamber, said chambers having a continuous dome, a rearwardly inclined bridge wall intermediate of said chambers, a burner located in the same horizontal plane as the top of the bridge wall and extending in concentric alinement with an opening in the furnace front, said opening being adjacent the under surface of the dome of the initial chamber, an air supply conduit communicating with said burner, an oil supply conduit communicating with said burner, and means for regulating the supply of oil and air to said burner.

2. In an oil burning reverberatory furnace, the combination with an initial chamber, of a working chamber having a dome forming a continuation of the dome of the initial chamber, a rearwardly inclined bridge wall intermediate of said chambers, a burner located in substantially the same horizontal plane as the top of said bridge wall and extending in concentric alinement with an opening in the furnace front, said opening lying adjacent the under surface of the dome of the initial chamber, means for regulating the supply of oil and air to said burner, an air supply conduit leading to said initial chamber below said burner, and means for controlling the supply of air through said opening.

3. In an oil burning reverberatory furnace, the combination with an initial chamber, of a working chamber having a dome forming a continuation of the dome of the initial chamber, a rearwardly inclined bridge wall intermediate of said chambers, a plurality of burners located in the same horizontal plane as the top of said bridge wall and extending in concentric alinement with openings in the furnace front, said openings lying adjacent the dome of the initial chamber, an air supply conduit having branches communicating with said burners, an oil supply conduit having branches communicating with said burners, and means for regulating the supply of air and oil to said burners.

4. In an oil burning reverberatory furnace, the combination with an initial chamber, of a working chamber having a dome forming a continuation of the dome of the initial chamber, a rearwardly inclined bridge wall intermediate of said chambers, a plurality of burners located in the same horizontal plane as the top of said bridge wall and concentrically alining with openings in the furnace front, said burners comprising concentric outer and inner tubes, an air supply conduit having branches communicating with the outer tubes of said burners, an oil supply conduit having branches communicating with the inner tubes of said burners, means for regulating the supply of oil and air to said burners, a steam supply conduit having branches communicating with the inner tubes of said burners, and means for controlling the flow of steam to said burners.

886,051. SAFETY-VALVE. JAMES FRASER, New Haven, Conn. Filed Nov. 7, 1906. Serial No. 342,371.



1. The combination, in a safety valve, of an outer shell having a threaded mouth, a hollow base having an exteriorly threaded flange therefor, an inwardly projecting cylindrical column rising from said base and integral therewith, and having a valve seat on its upper end, a valve for said seat having upper and lower threaded projections central therewith, a guide for the valve having an upper surface provided with a threaded hole central therewith adapted to engage with the upper threaded projection of the valve, said guide embracing the column so as to steady the valve in its vertical movements, a cap nut engaging said upper threaded projection of the valve and resting on the guide, a compression spring resting on the upper surface of said cap nut, means for exerting a tension on said spring, a cap nut engaging the lower threaded projection of the valve, for the purpose set forth.

2. In a safety valve, a hollow base and a hollow column projecting therefrom and having a valve seat at its upper end, a valve therefor, a skeleton guide for said valve embracing the column comprising vertical ribs, the upper end of said ribs having depressions opposite the seat so as to permit of a free escape of steam, for the purpose set forth.

3. In a safety valve of the character described, a hollow base, an outer shell connected thereto, said base having a hollow column rising therefrom and within the shell and having at its upper end a valve seat, a valve therefor, said valve having central projections and centers in said projections, a guide mounted on one of said projections and embracing the column, a cap for the end of said projection, a pressure spring bearing on said cap, and a protecting cover for the other of said valve projections, for the purpose set forth.

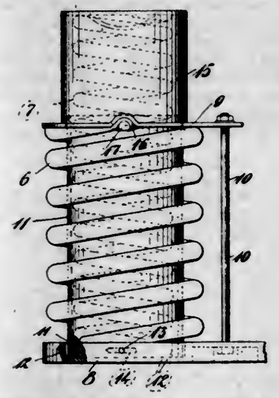
886,052. COIL-SPRING. RAYMOND GREGG, Hammond, Ind. Filed Feb. 7, 1908. Serial No. 414,724.

1. The combination with a coil spring, of a longitudinally rigid and diametrically resilient member arranged within the coil and in frictional contact with the inner surface of the coil along its entire length.

2. The combination with a coil spring, of a metallic resilient member arranged lengthwise within the coil and in frictional contact with the inner surface thereof, the length of the said member being not less than the normal length of the coil, whereby said contact is provided along the entire length of said coil.

3. The combination with a coil spring, of a split spring steel bushing compressed and inserted within the spring, the length of the bushing being at least equal to that of the normal length of the coil.

4. The combination with a coil spring, of a metallic tubular resilient member located within the coil and exerting pressure on the inner surface of the coil along the whole length thereof in all conditions.



5. The combination with a coil spring, and a bearing plate at the end thereof, of a resilient member fastened to the plate and projecting along the coil and in frictional contact with the surface thereof.

[Claims 6 to 12 not printed in the Gazette.]

886,053. AIR-LIFT PUMP. OTTO E. HARRIS, Indianapolis, Ind., assignor of one-half to Oran M. Pruitt, Indianapolis, Ind. Filed Oct. 14, 1907. Serial No. 397,268.



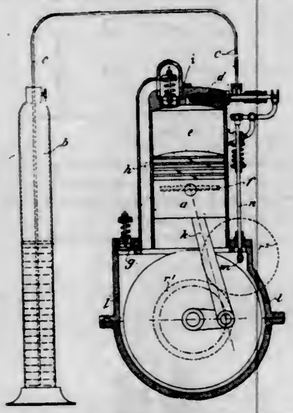
1. An air lift nozzle structure comprising a central air nozzle having an outwardly flared upper end, and a straight water pipe surrounding said nozzle and having induction openings in its lower end below the discharge end of the air nozzle.

2. An air lift nozzle structure comprising a central air nozzle having an outwardly flared upper end and a straight water pipe surrounding said nozzle and having induction openings at its lower end below the discharge end of the air nozzle, a shell surrounding said water pipe, the said water pipe having openings in its lower wall forming a communication between its interior and the shell below the discharge end of the air nozzle, and a bell arranged within said outer shell at the upper end of the water pipe and forming an annular suction opening around the upper end of said water pipe.

3. An air lift nozzle structure comprising a main shell

open at its bottom, a tube arranged in said shell and of smaller diameter than the shell and open at its bottom, a coupling member carried at the upper end of the main shell and adapted to receive the lower end of the water pipe, a bell threaded at its upper end in said coupling member and having a lower end outwardly and downwardly flared and arranged over the upper end of the inner tube, an air nozzle smaller than the inner tube and arranged therein in its open lower end and having its upper end outwardly flared, and an air supply tube extending down alongside a main shell to a point near the bottom thereof and thence upwardly into the nozzle.

886,054. METHOD OF WORKING EXPANSION-ENGINES. FRITZ HILDEBRAND, Deutsch Wilmersdorf, Germany. Filed Feb. 19, 1907. Serial No. 358,197.



1. The method of working an expansion engine, consisting in supplying the working cylinder with liquefied gas and compressed air, and allowing the mixture to expand, substantially as described.

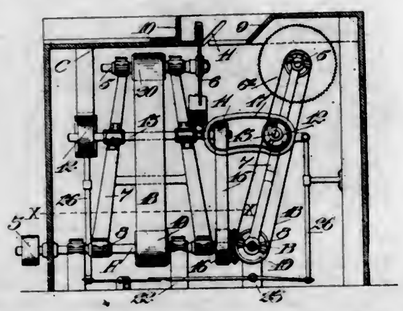
2. The method of working an expansion engine, consisting in supplying atmospheric air to the working cylinder, and compressing it by means of the piston, and thereupon admitting liquefied gas into the said cylinder, and allowing the mixture to expand, substantially as described.

3. The method of working an expansion engine, consisting in supplying atmospheric air to the working cylinder and compressing it by means of the piston, and at the moment of maximum compression admitting liquefied gas into the said cylinder, and allowing the mixture to expand, substantially as described.

886,055. POWER MITER-SAW. ANDREW A. HILLBACK, San Francisco, Cal. Filed Oct. 18, 1907. Serial No. 398,058.

1. An apparatus for sawing miters, said apparatus including power shafts journaled at right angles, frames supported upon and movable transversely of said shafts, saws having their arbors journaled upon said frames, means whereby power is transmitted from the main shafts to the saw arbors, a table adapted to support the work and having channels in the line of movement of the saws, and means by which the saws may be moved forward and back in the slots of the table, said last-named means comprising fixed arcs arranged concentric with the power shafts, and driven-rollers mounted on the saw-frames and adapted to travel over said arcs.

2. An apparatus for sawing miters, said apparatus including a table and guides upon which the parts to be mitered are carried, power shafts journaled at right angles in the lower part and having bevel gears whereby they are revoluble in unison, frames having their lower ends loosely supported upon the shafts, saw carrying arbors journaled at the upper ends of the frames with the saws projecting above the table, belts whereby motion is transmitted from the main shafts to the saw arbors, other shafts journaled upon said frames, having rollers at one end, and pulleys and belts whereby said shafts and rollers are revolved in unison with the revolution of the power shafts, and surfaces with means by which they are brought in contact with the rollers, whereby the latter roll upon said surfaces and advance the saw frames and saws across the table.



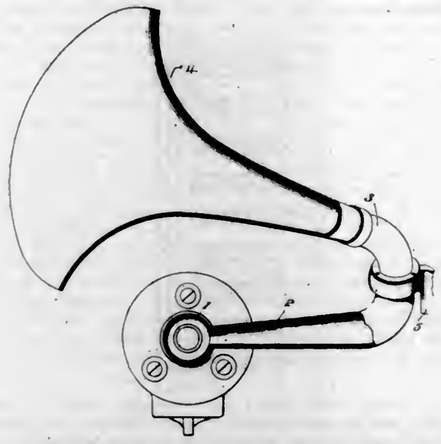
3. In an apparatus of the character described, a table or support, power shafts journaled at right angles across the lower part, means by which said shafts are revolved in unison, frames having their lower ends supported by boxes in which the power shafts are turnable, saws mounted upon arbors journaled in the upper part of the frame and parallel with the power shaft, pulleys and belts by which power is transmitted from the power shafts to drive the saws, rollers fixed upon shafts journaled across said frames, and belts and pulleys by which the shafts and rollers are revolved, frictional contact surfaces, foot-levers and connecting rods whereby said contact surfaces are pressed against the rollers so that the latter are caused to advance upon said surfaces, whereby the saws are moved across the table.

4. In an apparatus of the character described, a work-table having a housing in the rear portion and guides upon the front portion, said table and housing being slotted diagonally, power shafts journaled at right angles, and miter gears by which the shafts are revolved in unison, saw-carrying frames mounted and tiltable upon said shafts, belts and pulleys whereby motion is transmitted from the shafts to the saw arbors, roller-carrying shafts journaled upon the saw frames parallel with the power shafts and saw arbors, frictional surfaces having one end fulcrumed to supports, foot-levers and rods connecting with the opposite end of said surfaces, whereby the surfaces may be alternately raised into contact with the rollers, and the saws caused to swing forward within the table slots and across the work-supporting guides.

5. In an apparatus of the character described, a work-table having a housing in the rear portion and guides upon the front portion, said table and housing being slotted diagonally, power shafts journaled at right angles, and miter gears by which the shafts are revolved in unison, saw-carrying frames mounted and tiltable upon said shafts, belts and pulleys whereby motion is transmitted from the shafts to the saw arbors, roller-carrying shafts journaled upon the saw frames parallel with the power shafts and saw arbors, frames having curved slots, with the power shafts as their radii, and within which slots the rollers are turnable, foot-levers and connecting rods whereby said slotted frames may be raised to bring the lower part of the rollers into contact with the bottom of the slot and advance the saws across the table, or depressed to bring the upper part of the rollers into contact with the upper part of the slot, to return the saws to their normal position.

[Claim 6 not printed in the Gazette.]

886,056. GRAPHOPHONE, PHONOGRAPH, AND THE LIKE. JOSEPH O. HIRSCHFELDER, San Francisco, Cal. Filed July 16, 1907. Serial No. 384,014.

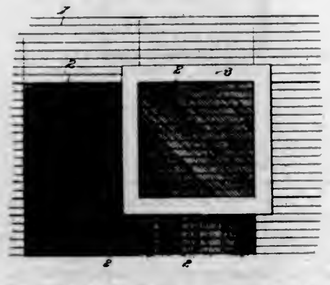


1. A horn for phonographs or similar instruments, comprising a tapered portion and an elbow portion both of which parts are lined throughout with a continuous sound deadening material consisting of rubber, felt, or cloth, as set forth.

2. The combination with a horn for phonographs or similar instruments, comprising a tapered portion and an elbow portion, both of which parts are lined throughout with a continuous sound deadening material, of a sound box to which such horn is adapted to be connected, said sound box being also lined with sound deadening material, as set forth.

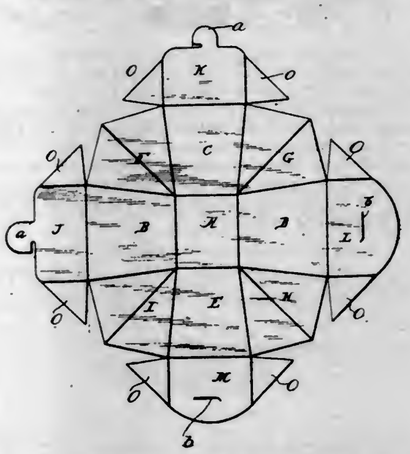
3. The combination with a horn for phonographs or similar instruments, comprising a tapered portion and an elbow portion, both of which parts are lined throughout with a continuous sound deadening material consisting of rubber, felt, cloth, or the like, of a sound box to which said horn is connected and the interior of which is lined with the material constituting the lining of the horn.

886,057. PAINT AND COLOR EXHIBITING DEVICE. ISAAC N. HOCKADAY, Wichita, Kans. Filed Sept. 3, 1907. Serial No. 391,121.



The herein-described color exhibiting device comprising a show-board formed of weather boarding and provided with a continuous surface subdivided into a plurality of contiguous rectangular sections, each of which displays a different color, and a set of rectangular trimming sample frames displaying different colors and adapted to be employed independently of each other, each of the said frames being of a size to circumscribe any selected one of the sections so that the said section will be displayed through the frame independently of the remaining sections and the color of the said section shown in combination with the color of the frame.

886,058. PAPER VESSEL. IRA W. HOLLETT, Chicago, Ill., assignor to The J. W. Sefton Manufacturing Company, Anderson, Ind., a Corporation of Indiana. Filed Nov. 9, 1898. Serial No. 695,937.



1. A pail of the character described, provided with a plurality of cover flaps two of the flaps of which have substantially triangular parts O arranged to be inserted into the pail, the inner edge of each part O being adapted to engage the inner surface of the adjacent wall of the pail and the opposite edge of which is substantially straight and inclines upwardly to its flap and terminates at a point adjacent to the point of termination of the corresponding edge of an opposite flap when the cover is closed; substantially as described.

2. A pail of the character described provided with a plurality of cover flaps one of which has substantially triangular parts O on opposite sides thereof, the inner edge of each part O being adapted to engage the inner surface of the adjacent wall of the pail and the opposite edge of which is substantially straight and inclines upwardly to its flap; substantially as described.

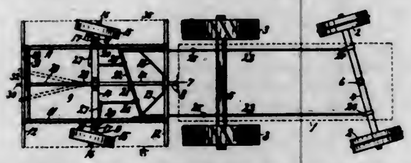
3. A pail of the character described, provided with a cover flap having substantially triangular parts O on opposite sides thereof, the inner edge of each part O being adapted to engage the inner surface of the adjacent wall of the pail and the opposite edge of which is substantially straight and inclines upwardly to its flap; substantially as described.

4. A paper pail of the character described provided with corner folds folded outwardly in pairs upon two opposite sides of the box, and having four flaps each provided upon its opposite edge with substantially triangular parts O, the parts O on two opposite cover flaps being adapted to be inserted in the end of the pail to engage with and abut against the inner surface of the respective adjacent side walls of the pail, the parts O on the other two flaps being in the completed box inserted between the outer surface of the other two sides and the pairs of corner folds which are folded outwardly against such sides; substantially as described.

5. The herein described blank for a paper vessel, composed of a bottom A, four sides B, C, D, and E, corner folds F, G, H, I, and four cover flaps J, K, L, M, two of said cover flaps, as J and L, being provided with the substantially triangular projecting parts O, substantially as and for the purpose set forth.

[Claims 6 to 10 not printed in the Gazette.]

886,059. TENDER FOR TRACTION-ENGINES. MARTIN JORSTAD, Walker, Minn. Filed Apr. 25, 1907. Serial No. 370,174.



1. A tender for traction engines, the same having supporting wheels and water tanks arranged above the wheels and formed with gaps or clearings for the wheels.

2. A tender for traction engines, the same having supporting wheels and water tanks arranged above the wheels and formed with gaps or clearings for the wheels, a floor supporting said tanks, a coupling member at the front end thereof, the same being offset upwardly so as to connect with the coupling member of a traction engine at a point higher than said floor.

886,060. PENHOLDER. WILLIAM KRIEGER, New York, N. Y. Filed May 31, 1907. Serial No. 376,662.



1. The improved penholder, comprising a holder having an enlarged cylindrical head and a notch therein to receive the pen, a ring rotatively mounted on said head and extended rearwards thereof, a spiral shoulder in said ring to act against the rear end of the pen so as to force the latter forward by the rotation of the ring means for preventing a longitudinal displacement of the latter, and means for temporarily locking the ring in position substantially as and for the purpose specified.

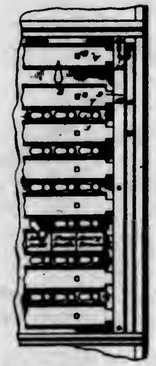
2. The improved penholder, comprising a holder having an enlarged cylindrical head and a notch therein to receive the pen, a ring rotatively mounted on said head and extended rearwards thereof, said ring having a recess at the lower forward part of its surface, which extends throughout the length of the head, and is as wide as the rear end of the pen, a spiral shoulder at the rear of the inner circumference of said ring, the pitch of which is equal to the depth at which the pen projects rearwards of the head, the rear end of said shoulder being on the upper side of the ring so as to act against the pen and, by the rotation of the ring, to force the same forward to be released from the penholder by the said forward recess when turned upward, means for preventing a longitudinal displacement of the ring, and means for locking the latter in position, substantially as and for the purpose specified.

886,061. LABEL-HOLDER FOR VOTING-MACHINES. WILLIAM J. LAUSTERER, Jamestown, N. Y., assignor to U. S. Standard Voting Machine Company, Rochester, N. Y., a Corporation of New York. Filed Aug. 25, 1904. Serial No. 222,059.

1. A label holder having the longitudinally-extending overhanging flanges, a clamping plate in rear and movable lengthwise thereof between which and the said flanges the label is adapted to be secured and means for causing the positive movement of the clamping plate and flanges toward each other to clamp the label between them.

2. A label holder having the longitudinally extending overhanging flanges and a longitudinally movable locking slide arranged beneath said flanges between which the label is adapted to be secured and means for causing the positive movement of the locking slide toward the flanges when it is moved longitudinally.

3. A label holder having the overhanging flanges at the edges and a clamping plate beneath said flanges movable lengthwise thereof and means for causing the positively relative movement of the parts to clamp the label between them.

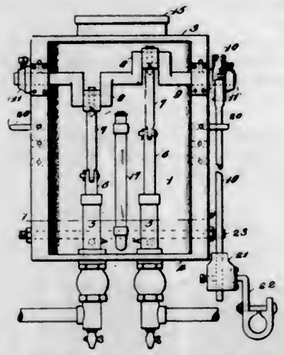


4. A label holder having the overhanging flanges at the edges and a longitudinally movable clamping plate arranged between the flanges, and a wedge between said holder and slide for causing their relative movement laterally of the flanges to clamp the label between the parts.

5. A label holder having overhanging flanges at the edges and projections arranged intermediate said flanges in combination with the locking plate movable beneath the flanges and having recesses with which said projections are adapted to coöperate when said plate is moved in one direction.

[Claims 6 to 15 not printed in the Gazette.]

886,062. LUBRICATOR. ROBERT F. MOORE, Williston, N. D. Filed Aug. 12, 1907. Serial No. 388,204.

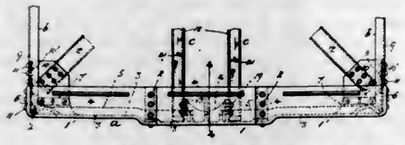


1. In a force feed lubricator, the combination of a body chambered to contain a quantity of lubricant and having a hollow or depression in a side thereof, a pump located in said depression and having connection with the chamber, a shaft extended across the depression and journaled in bearings applied to the body at opposite sides of said depression, said shaft having a crank portion to operate in the depression and having connection with the pump, and means exterior to the body for imparting an intermittent movement to the shaft.

2. In a force feed lubricator, the combination of a chambered body, having a depression in a side, a series of pumps located within said depression and secured to a wall closing the end thereof, each of said pumps having connection with the chamber, a sight gage also located in the depression and having connection with the chamber, a shaft extended across the opposite end portion of the depression and journaled bearings applied to the body at opposite sides of the depression thereof, said shaft having a series of cranks arranged at different relative angles and having connection with the respective pumps, and means exterior to the body and coöperating with said shaft to impart an intermittent movement thereto.

3. The herein described force feed lubricator, consisting of a chambered body having a half-round depression in a side, pumps secured to an end wall of said depression and arranged within the latter, a sight gage arranged between the pumps and located within the depression and having connection with the chamber of the body, a compound crank shaft extended across the depression and mounted in bearings of the body at opposite sides thereof, connecting means between the crank portions of said crank shaft and the pumps, a ratchet wheel fast to a projecting end of the crank shaft, an oscillatory actuator coöperating with said ratchet wheel, a guide secured to the body and holding said actuator in proper position, a clip having adjustable connection with said actuator, and a second clip having swivel connection with the first-mentioned clip and adapted to connect it with a moving part from which power is derived for operating the lubricator.

886,063. CAR-UNDERFRAME. WILLIAM MCINTOSH, North Plainfield, N. J., assignor to Locomotive Tender Frame Company, St. Louis, Mo., a Corporation of Delaware. Filed Nov. 22, 1907. Serial No. 403,370.



1. In a car underframe of the class described, the combination with the side longitudinal sills, of an end sill having an upright web, an upper horizontal flange and a lower horizontal flange, projecting rearward from the web, a member uniting the said web and flanges at each end of the end sill and adapted to bear against the end portion of the corresponding side sill, a rib projecting horizontally from, and integral with the web between the said flanges, adjacent to the said member, a gusset-plate fixed to the said rib and having a lateral flange, and means for fixing the said member, end portion of the side sill, and lateral flange together, substantially as described.

2. In a car underframe of the class described, the combination with the side longitudinal sills, of an end sill having an upright web, an upper horizontal flange and a lower horizontal flange, projecting rearward from the web, a member uniting the said web and flanges at each end of the end sill and adapted to bear against the end portion of the corresponding side sill, a rib projecting horizontally from, and integral with the web adjacent to the said member, a gusset-plate fixed to the said rib and having a lateral flange, a splice-plate between the said flanges adapted to bear laterally against the said member and end portion of the side sill, and means for fixing the said member, end portion, splice-plate, and lateral flange together, substantially as described.

3. In a car underframe of the class described, the combination with the middle and side longitudinal sills, of an end sill having an upright web, an upper horizontal flange and a lower horizontal flange, projecting rearward from the web, an upright rib integral with the body between the said flanges, at each side of, and parallel to the longitudinal center of the underframe, means for fixing the end portions of the middle longitudinal sills laterally to the said ribs, a member uniting the said web and flanges at each end of the end sill and adapted to bear against the end portion of the corresponding side sill, a rib projecting horizontally from, and integral with the web adjacent to the said member, a gusset-plate fixed to the said horizontal rib and having a lateral flange, and means for fixing the said member, end portion of the side sill, and lateral flange together, substantially as described.

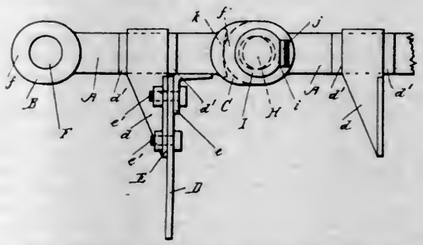
4. In a car underframe of the class described, the combination with the side longitudinal sills, of an end sill having an upright web, an upper horizontal flange and a lower horizontal flange projecting rearward from the web, a member uniting the said web and flanges at each end of the end sill and adapted to bear against the end portion of the corresponding side sill, a rib projecting horizontally from, and integral with the web, adjacent to the said member, a gusset-plate fixed to the said rib and having a lateral flange, and means for fixing the said member, end portion of the side sill, and lateral flange together, the said plate being adapted for the attachment thereto of a diagonal brace between the said plate and a transverse member of the underframe to the end sills, substantially as described.

886,064. PROCESS OF MANUFACTURE OF ARTIFICIAL MARBLE FROM GYPSUM. WILLIAM MCKEE, New York, N. Y., assignor of two-thirds to Moritz Jacobowsky and Max Bowsky, New York, N. Y. Filed May 29, 1903. Serial No. 159,340.

1. The hereinbefore described process of indurating gypsum, consisting of the following steps: first, subjecting it to dry heat of from 200° to 225° F. until heated throughout; second, saturating it by an aqueous solution of aluminum sulfate, potassium hydroxid, and sal soda; and third, evaporating the surplus water not assimilated in the process.

2. The hereinbefore described process of indurating gypsum, consisting of the following steps: first, subjecting it to dry heat of from 200° to 225° F. until heated throughout; second, saturating it by a solution of approximately equal parts, measured dry by weight, of aluminum sulfate, potassium hydroxid and sal soda, approximately half a pound of each to one gallon of water; and third, driving off the surplus water, not consumed by the process.

886,065. CONVEYER-CHAIN. JESMOND T. NICHOLSON, Wilkes-Barre, Pa. Filed Dec. 12, 1907. Serial No. 406,130.



1. In a conveyer chain, the combination, with a link provided with a guide at its middle part, of a loop-shaped bracket which straddles the said link and which is secured in the said guide, and a flight-plate secured to the said bracket.

2. In a conveyer chain, the combination, with a link provided with a guide at its middle part, of a loop-shaped bracket which straddles the said link and engages with its said guide, a flight-plate, a fastening-bar which prevents the said bracket from sliding, and means for securing the said flight-plate and the said fastening-bar to the end portions of the said bracket.

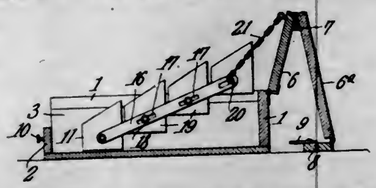
3. In a conveyer chain, the combination, with a link provided with a single-eye having an eccentric portion at its end, of a link provided with a double-eye having a bearing which engages with the said projection and moves the holes of the said eyes out of line with each other, and a pivot-pin slidable into engagement with the said eyes

and provided with an eccentric portion which engages with one of the said eyes when the said holes are out of line and thereby prevents the said pin from sliding longitudinally.

4. In a conveyer chain, the combination, with a link provided with a single-eye having an eccentric projection at its end, of a link provided with a double-eye having a bearing which engages with the said projection and moves the holes of the said eyes out of line with each other, a pivot-pin slidable into engagement with the said holes of the said eyes and provided with eccentric portions which engage with the holes of the said double-eye when the holes of the said eyes are moved out of line.

5. In a conveyer chain, the combination, with a link provided with a single-eye having an eccentric projection at its end, of a link provided with a double-eye having a bearing which engages with the said projection and moves the holes of the said eyes out of line with each other, a pivot-pin slidable into engagement with the said eyes and provided with an eccentric portion which engages with one of the said eyes when their said holes are out of line, and means for preventing the said pin from revolving.

886,066. DISPLAY-CASE. EDWIN D. OBERTRIFTER, Fredonia, N. Y. Filed Aug. 27, 1907. Serial No. 390,377.



1. A display device comprising a body, a sectional cover movably connected thereto, a tray fixedly secured within the body, a plurality of movable trays within the body, links connected to and solely supported by the trays, and a flexible connection between the links and the cover for supporting the links and trays in raised positions when the cover is open.

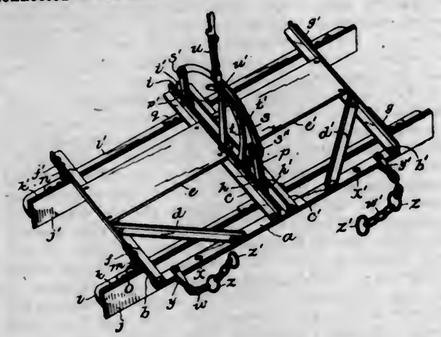
2. A device of the character described comprising a body, a sectional cover movably connected thereto and foldable into contact with a supporting structure to hold said folded cover projected above the body, a plurality of movably connected trays within the body, and flexible connections between the trays and cover for simultaneously raising the trays into tiers when the cover is open and folded.

3. A device of the character described comprising a body, a sectional cover hingedly connected thereto, a tray fixedly secured within the body, a supporting strip pivotally connected thereto, flexible connections between said strip and the cover, and trays connected to the strip, said strip being connected to all of and supported solely by the trays, said cover being movable into open position to raise the strips and support the trays in tiers.

886,067. ROAD-DRAG. FRANK E. OTT, Indianapolis, Ind. Filed Dec. 31, 1907. Serial No. 408,793.

1. A road drag including a frame comprising a plurality of frame beams, two of the beams being spaced nearly together and central between two other of the beams; a plurality of blades each adjustably connected with the frame beams, a lever pivoted between the two central beams, a connecting rod pivoted to the lever, and means connected to the rod and the blades for adjusting the blades.

2. A road drag including a frame comprising a plurality of frame beams, two of the beams being spaced nearly together and central between two other of the beams; a plurality of blades each adjustably connected with a plurality of the beams, each blade having an arm secured thereto and mounted between the two central beams, a connecting rod pivoted to the arms, and a lever connected to the rod.



3. A road drag including a plurality of frame beams, a plurality of blades arranged close to the beams and having each a flange plate on the rear side thereof, each blade being provided with a plurality of rigid pivoting ears that are connected pivotally with the beams, a plurality of arms, either arm secured to either blade, a connecting rod connected to the plurality of arms, and a lever connected to the rod.

4. A road drag including a plurality of frame beams having each a plurality of pivot heads attached thereto and extending beyond the under side thereof, a pair of blades each pivoted to a plurality of the pivot heads, a pair of arms each attached to either one of the blades and pivoted to a plurality of the pivot heads, a connecting rod pivoted at its ends to the arms, a lever pivoted to a plurality of the beams between the arms and also pivoted to the connecting rod between the ends thereof, and a latch for the lever.

5. A road drag including a plurality of frame beams having each a plurality of pivot heads attached thereto, a pair of blades having each a flange plate extending rearward from the middle portion between the bottom and top thereof, the plates each having a plurality of ears attached thereto, pivots secured to the ears and each rotatively mounted in either one of the plurality of pivot heads of the beams, a draw-bar attached to the forward ends of the beams and having a plurality of draft devices connected adjustably thereto, a pair of braces attached to the draw-bar and also each to a separate frame beam, an arm attached to the flange plate of one of the blades and pivoted to a plurality of the pivot heads, another arm attached to the flange plate of the other one of the blades and pivoted to another plurality of the pivot heads of the beams, two platforms mounted on the beams, and a lever mounted on beams between the two arms and operatively connected therewith.

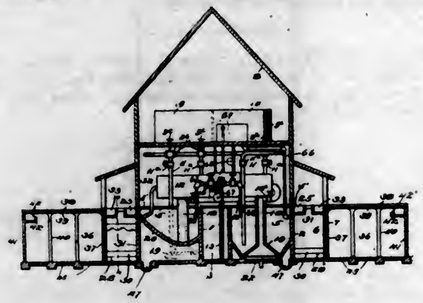
[Claims 6 to 8 not printed in the Gazette.]

886,068. APPARATUS FOR THE CHEMICAL TREATMENT OF WATER. ALEXANDER POTTER, New York, N. Y. Filed Jan. 14, 1907. Serial No. 352,280.

1. In an apparatus for the chemical treatment of liquids, the combination of a plurality of basins, means for supplying a chemical to a portion of the basins, means for withdrawing the surplus from these basins and delivering it to the remaining basins, and a trough receiving the discharge from all of the basins.

2. In an apparatus for the chemical treatment of liquids, the combination of a plurality of basins, means for supplying a chemical to a portion of the basins, means for withdrawing the surplus from these basins and delivering it to the remaining basins, and a trough receiving the discharge from all of the basins, the said trough discharging into a circulation chamber.

3. In an apparatus for the chemical treatment of liquids, the combination of a basin, means for supplying a chemical to the basin, a trough receiving the discharge from the basin, and a circulation apartment into which the trough discharges.



4. In an apparatus for the chemical treatment of liquids, the combination of a plurality of basins, means for supplying a chemical to the basins, a common trough receiving the discharge from the basins, a circulation apartment into which the trough discharges, and baffles arranged in the circulation apartment.

5. In an apparatus for the chemical treatment of liquids, the combination of a basin, means for supplying a chemical to the basin, a trough receiving the discharge from the basin, a circulation apartment into which the trough discharges, and a second trough receiving the discharge from the circulation apartment.

[Claims 6 to 25 not printed in the Gazette.]

886,069. CAR-BOLSTER. OSWALD S. PULLIAM, Pittsburg, Pa., assignor to Pittsburgh Equipment Company, Pittsburg, Pa., a Corporation of Pennsylvania. Filed June 6, 1907. Serial No. 377,625.



1. A bolster comprising a top-member of channel-form, a bottom-member formed with an end hooked portion, an end-member provided with a groove corresponding in contour with the hooked end portion and adapted to receive the same, lugs formed on the end-member, and said top-member having the ends of its sides located between the lugs and the body of the end-member.

2. A bolster comprising a top-member, a bottom-member formed with an end engaging portion, an end-member provided with a groove adapted to receive the end engaging portion, and a clip secured to the end-member and engaging an end of the top-member.

3. A bolster comprising a top-member of channel-form, a bottom-member formed with an end engaging portion, an end-member provided with a groove adapted to receive the end engaging portion, lugs formed on the end-member adapted to engage the sides of the top-member, and a clip secured to the end-member and engaging an end of the top-member.

4. A bolster comprising a top-member of channel form, a bottom-member provided with end-engaging means, an end-member provided with means to engage an end of the bottom-member and having a bearing-face in contact with an end of the top-member, lugs formed integral with the end-member, said top-member having the end of its sides located between the lugs and the body of the end-member.

5. A bolster comprising a top-member of channel form, a bottom-member provided with end-engaging-means, an end-member provided with means to engage an end of the bottom-member and having a bearing-face in contact with an end of the top-member, lugs formed integral with the end-member, said top-member having the end of its sides located between the lugs and the body of the end-member, and a clip engaging an end of the top-member.

[Claim 6 not printed in the Gazette.]

886,070. CAR-BOLSTER. OSWALD S. PULLIAM, Pittsburg, Pa., assignor to Pittsburgh Equipment Company, Pittsburg, Pa., a Corporation of Pennsylvania. Filed Sept. 16, 1907. Serial No. 393,109.

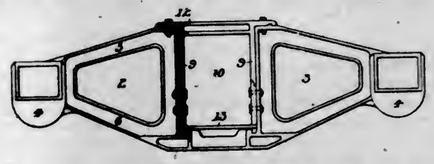


1. A bolster comprising a top-member, a bottom-member having an end-portion bent upon itself, a filler located in the bent-portion, an end-member formed to receive the end bent-portion, and a clip secured to the end-member and engaging an end of the top-member.

2. A bolster comprising a top member, a bottom-member having an end-portion bent upon itself, a filler located in the bent-portion, and an end-member provided with a groove adapted to receive the end bent-portion and filler.

3. A bolster comprising a top-member, a bottom-member having an end-portion bent upon itself, a filler located in the bent-portion, an end-member provided with a groove to receive the bent-portion and filler, and a clip secured to the end-member and engaging an end of the top-member.

886,071. SIDE-FRAME CONSTRUCTION. OSWALD S. PULLIAM, Pittsburg, Pa., assignor to Pittsburgh Equipment Company, Pittsburg, Pa., a Corporation of Pennsylvania. Filed Sept. 16, 1907. Serial No. 393,110.



1. A side-frame comprising separable main end-members each formed with a journal-box, and a separable middle-member connecting the end-members.

2. A side-frame comprising separable end-members each formed with a journal-box, said side-frame having a bolster-receiving-opening comprising an enlarged intermediate portion and contracted upper and lower portions.

3. A side-frame composed of transversely divided metallic end-sections, and a separate middle section joining the end-sections, and having a bolster-receiving-opening.

4. A side-frame having a separable section composed of a journal-box, a top-member, a bottom-member, and a vertical-member joining the inner ends of the top and bottom-members.

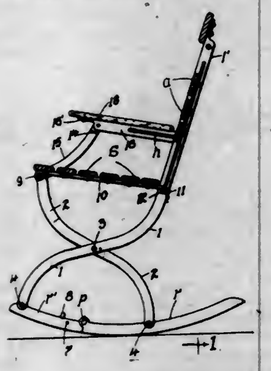
5. A side-frame comprising separable main end-members each formed with a journal-box, and a separate middle-member connecting the end-members and having a bolster-receiving-opening comprising an enlarged intermediate portion and contracted upper and lower portions.

[Claim 6 not printed in the Gazette.]

886,072. FOLDING FURNITURE. WILLIAM RABICH, St. Louis, Mo., assignor to Franklin Manufacturing Company, St. Louis, Mo., a Corporation of Illinois. Filed Nov. 2, 1907. Serial No. 400,373.

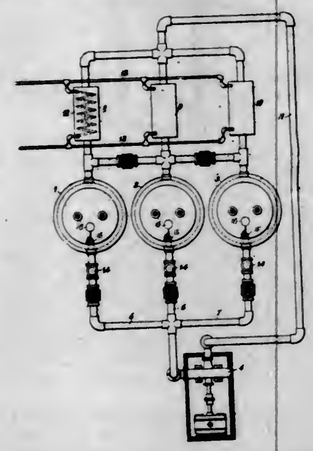
In a folding rocking chair, two pair of members in hinged relation to one another, one pair having extensions forming the sides of the chair-back, a seat hinged to the

upper ends of the shorter pair of members and engaging the opposite pair, flanged rockers composed of two sections in hinged relation to one another and to the lower ends of the respective hinged members, a sliding latch mounted on one of the rocker sections and engaging the flanges of the sections and having a portion adapted to be moved across the hinge-joint between the sections, and a head



on the hinge-pin between the sections adapted to be engaged by the opposite side of the portion spanning the hinge-joint, substantially as set forth.

886,073. COOLING SYSTEM FOR ELECTRIC APPARATUS. KARL C. RANDALL, Edgewood Park, and CHARLES B. GIBSON, Wilkinsburg, Pa., assignors to Westinghouse Electric & Manufacturing Company, a Corporation of Pennsylvania. Filed Aug. 3, 1907. Serial No. 386,915.

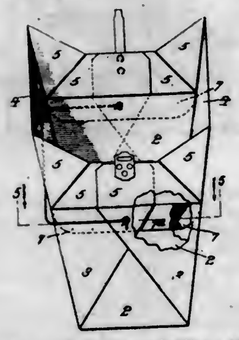


1. The combination with electrical apparatus, fluid containing tanks therefor, cooling chambers, and means for maintaining a circulation of cooling fluid through the tanks, of means for keeping the fluid at substantially the same level in all the tanks.

2. The combination with a plurality of electric transformers, fluid-containing tanks therefor, cooling chambers and means for maintaining a circulation of insulating fluid through the tanks and the chambers, a throttle valve in the supply line of each tank and means for automatically controlling the throttle valve.

3. The combination with a plurality of electric transformers, fluid-containing tanks therefor, cooling chambers and means for maintaining the circulation of insulating fluid through the tanks and the chambers, of a throttle valve in the supply line of each tank and floats for controlling the openings of the valves.

886,074. OYSTER-PAIL. JOHN G. REESER, Chicago, Ill., assignor to J. W. Sefton Manufacturing Company, Anderson, Ind., a Corporation of Indiana. Filed Aug. 7, 1905. Serial No. 273,117.



1. In an oyster pail, the combination, with two of the opposite side walls thereof and their pairs of corner folds, of strips formed separate therefrom and tucked between the members of the corner folds and engaging the upper ends of their respective side walls whereby the space between the side walls and corner folds is sealed to prevent slopping of the contents of the pail; substantially as described.

2. In an oyster pail, the combination, with two of the opposite side walls thereof and their pairs of corner folds, of strips formed separate therefrom tucked between the members of the corner folds and folded over upon and secured to the inner upper portion of their respective side walls whereby the space between the side walls and corner folds is sealed to prevent slopping of the contents of the pail; substantially as described.

3. In an oyster pail, the combination, with two of the opposite side walls thereof and their pairs of corner folds, of strips longitudinally creased to form two portions, one portion of each strip being folded over and secured to the inner upper ends of its side wall and the other portion being tucked between the members of the corner folds corresponding to its side wall to seal the space between the walls and folds and thereby prevent slopping of the contents of the pail; substantially as described.

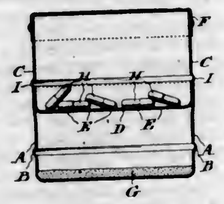
4. In an oyster pail, the combination, with two of the opposite side walls thereof and their pairs of corner folds, of strips longitudinally creased to form two portions, one portion of each strip being folded over and secured to the inner upper ends of its side wall and the other portion being transversely slotted and tucked between the members of the corner folds corresponding to its side wall; substantially as described.

5. In an oyster pail, the combination, with two of the opposite side walls thereof and their pairs of corner folds, of strips creased longitudinally to form two portions, one portion being folded over the inner upper ends of its side wall and the other portion being provided intermediate its length with an oblique open ended slot extending from one edge to said crease whereby said other portion may be tucked between the members of the corner folds and the corresponding side wall.

886,075. DEVICE FOR CLEANING CAPSULES. JOSEPH P. REMINGTON, Philadelphia, Pa. Filed May 18, 1906, Serial No. 317,513. Renewed Mar. 21, 1908. Serial No. 422,490.

A capsule cleaner, comprising a cylindrical receptacle, a second cylindrical receptacle, having a perforated sheet

metal bottom adapted to fit the mouth of said first receptacle, and a cover for said second receptacle, said three



elements being separably removable; substantially as described.

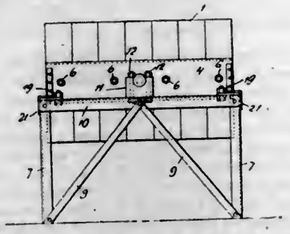
886,076. CORSET ATTACHMENT. MAY E. RISK, Hartford, Conn. Filed Dec. 2, 1907. Serial No. 404,824.



1. In a corset the combination with the front steels and the fabric covering therefor, of a metallic loop secured to each of said front steels, said loops being in alinement with one another and projecting through and beyond the surface of said fabric, and a skirt holder supported by said loops.

2. In a corset the front steels, fabric covering therefor, metallic loop members fixedly secured to said steels, the loops thereof extending through and beyond the surface of said fabric and being arranged in alinement with one another, a pin adapted to engage said loops, and a skirt-holder carried by said pin, substantially as described.

886,077. BUTCHER'S BLOCK. LEWIS ROWE, Homestead, Pa., assignor of one-half to William G. Lewis, Homestead, Pa. Filed Oct. 10, 1907. Serial No. 396,827.
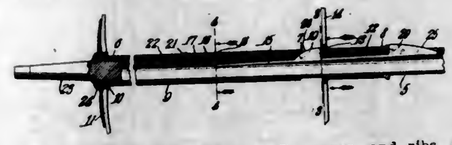


1. A butcher's block embodying a metallic frame, bearing blocks carried by said frame, a block trunnioned upon said bearing blocks, said block comprising a plurality of oblong sections, a plurality of double dove-tailed tongues connecting said sections, tie bolts passing through some of said sections, channel bars carried by the sides of said block, angle bars carried by the ends of said channel bars, and latches movably mounted upon said frame for engaging said angle bars, substantially as described.

2. In a butcher's block, the combination with a suitable support, of a reversible block comprising a plurality of connected sections, channel bars engaging in and secured to the sides of said block, angle irons carried by the block and latches arranged upon said support and adapted to extend under the angle irons for holding said block in a horizontal position.

3. In combination a pivoted butcher's block, angle irons carried at each end of each side thereof, a support for the block, and means carried by the support and extending under the angle irons for maintaining the block in a horizontal position.

886,078. UMBRELLA. GEORGE W. RUGG, Newark, Ohio. Filed Dec. 16, 1907. Serial No. 406,684.



1. An umbrella including a staff, runner, and ribs, a locking member adapted to engage the runner for supporting the umbrella in open position, means forming a support for the adjacent ends of the ribs for moving the locking member to operative and inoperative position, and a removable member coacting with the lock actuating means for preventing longitudinal movement of the latter.

2. An umbrella including a staff, runner and ribs, a locking member adapted to engage the runner for holding the umbrella in open position, a sleeve slidably mounted on the staff for moving the locking member to operative and inoperative position, said sleeve forming a support for the adjacent ends of the ribs, and a tip detachably secured to the staff and adapted to engage the sleeve for locking the latter against longitudinal movement.

3. An umbrella including a staff, runner and ribs, a sleeve slidably mounted on the staff, a spring actuated locking member carried by the sleeve and adapted to engage the runner for supporting the umbrella in open position, and a removable section detachably engaging the staff and adapted to bear against the sleeve for locking the latter against longitudinal movement.

4. An umbrella including a staff, runner and ribs, said staff being provided with an elongated slot, a sleeve slidably mounted on the staff, a locking member secured to the sleeve and provided with a terminal catch adapted to extend through the slot in the staff for engagement with the runner, and a section detachably secured to the staff and bearing against the sleeve for locking the latter against longitudinal movement.

5. An umbrella including a staff, runner and ribs, said staff being provided with spaced longitudinal slots, a sleeve slidably mounted on the staff, a spring actuated locking member secured to the sleeve and having its opposite end disposed within the staff and provided with spaced locking lugs extending through the slots in the staff for engagement with the runner, and a removable tip piece detachably engaging the staff and bearing against the sleeve for locking the latter against longitudinal movement.

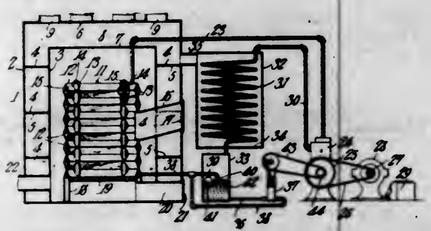
[Claims 6 to 10 not printed in the Gazette.]

886,079. HEATING SYSTEM. THOMAS F. SCOLLARD, Warsaw, Ind. Filed June 4, 1907. Serial No. 377,167.

1. A heating system comprising an air-heating furnace, a steam generator contained therein, a steam engine receiving steam from the generator, an air-cooled condenser for the exhaust steam from the engine, a pump driven by the engine for returning the water of condensation to the steam generator, and means for directing the air used to cause the condensation of steam into the air-heating system of the furnace.

2. A heating system comprising a steam generator constituting a fire-pot, a fire chamber surrounding the same, an air-heating chamber exterior to the fire chamber, hot-air ducts leading from the top of the air-heating chamber, a steam engine connected to the steam generator, a steam condensing coil connected to the exhaust side of

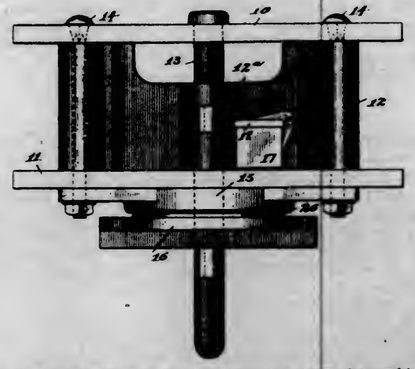
the steam engine, a water reservoir connected to the water side of the condenser, a pump connected to the reservoir and to the steam generator, connections between the pump and the engine, and an air chamber surrounding the condenser, said air chamber having air inlets at the water end of the condenser and communicating at the other end with the air-heating chamber adjacent to the hot-air ducts leading therefrom.



3. A heating system comprising a tortuous, air-heating chamber terminating in out-going air ducts, a fire chamber interior to the air-heating chamber, a fire-box composed of interconnected, diamond-shaped, metallic, annular tubes constituting a steam boiler, a steam engine, live steam connections between the boiler and engine, an air-cooled condenser, connections between the same and the exhaust side of the engine, a water reservoir connected with the water side of the condenser, a water pump driven by the engine and interposed between the water reservoir and the boiler, and a chamber surrounding the condenser and receiving air at the water side of the condenser and delivering the heated air at the receiving side of the condenser to the air chamber adjacent to the out-going ducts.

4. A heating system comprising a furnace provided with an air-heating chamber, a fire chamber interior thereto, a fire-box constituting a steam boiler, a steam engine, connections between the steam boiler and the engine, an air-cooled condenser connected to the exhaust side of the engine, air connections from the condenser to the air-heating chamber, a water reservoir connected to the water side of the condenser, connections between the water reservoir and the boiler, a pump interposed in said connections and operated by the engine, and a by-pass from the connections between the water reservoir and boiler leading into said reservoir and there provided with a valve controlled by the water level in the said reservoir.

886,080. LUBRICATING DEVICE FOR CENTER-BEARINGS. RALPH T. SENTER, Chicago, Ill., assignor to The J. G. Brill Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Oct. 23, 1907. Serial No. 398,800.



1. In a lubricating device for center bearings, the combination with a pair of center-plates, of an oil-holder having a discharge duct communicating with the space between said center-plates, there being means actuated through the relative angular movements of said center-plates for controlling the flow of lubricant to the latter, substantially as described.

2. In a lubricating device for center-bearings, the combination with a pair of center-plates, of a superposed oil-holder having a discharge duct extending through the upper center-plate to the space between said center-plates, there being means actuated through the relative angular movements of said center-plates for controlling the flow of lubricant to the latter, substantially as described.

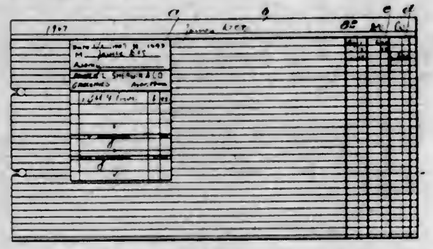
3. In a lubricating device for center-bearings, the combination with a body-bolster and body and truck center-plates, of an oil-holder mounted on said bolster and having a discharge duct extending through said bolster and body center-plate to the space between said center-plates, there being means actuated through the relative angular movements of said center-plates for controlling the flow of lubricant to the latter, substantially as described.

4. In a lubricating device for center-bearings, the combination with a pair of center-plates, of a superposed oil-holder having a discharge duct leading to the space between said center-plates, a spindle loosely fitted to said discharge duct, there being means for reciprocating said spindle under relative angular movements of said center-plates, substantially as described.

5. In a lubricating device for center-bearings, the combination with a pair of center-plates, of a superposed oil-holder having a discharge duct extending through the upper center-plate to the space between said center-plates, a spindle loosely fitted to said discharge duct, there being means on the lower center-plate engaging the lower end of said spindle and reciprocating the latter under relative angular movements of said center-plates, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

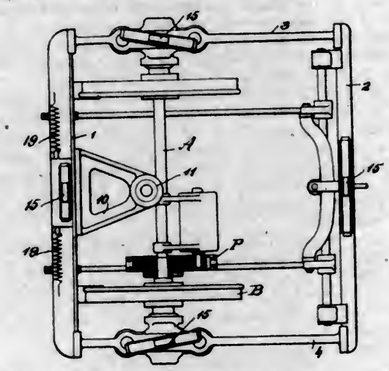
886,081. BOOKKEEPING SYSTEM. CHARLES SHERWIN, Ayer, Mass. Filed Sept. 13, 1907. Serial No. 392,637.



1. The herein described appliances for use in a bookkeeping system, which consist in ledger pages, each having a space to receive sales-slips, and date, debit and credit columns to one side of said space, said space being of such area relative to the sales-slips that a plurality of slips may be secured therein in a row, the slips being attached to said page one above the other, so that each slip partially overlaps the slip next below to leave exposed that portion of the lower slip containing the total sale amount, and whereby the entire data of any one of said attached sales-slips may be exposed to view by raising the overlying slip or slips without detaching said slips from the ledger page, combined with sales-slips provided with means whereby they may be attached at their upper portions only.

2. The herein described appliances for use in a bookkeeping system, comprising ledger pages, each having a space to receive sales-slips, and date, debit and credit columns to one side of said space, said space being of such area relative to the sales-slips that a plurality of slips may be secured therein in a plurality of rows, the slips of each row being attached one above the other, so that each slip partially overlaps the slip next below to leave exposed that portion of the lower slip containing the total sale amount, and whereby the entire data of any one of said attached slips may be exposed to view by raising the overlying slip or slips without detaching the slips from the ledger page, combined with sales-slips provided with gummed upper edges whereby they may be attached at their upper portions only.

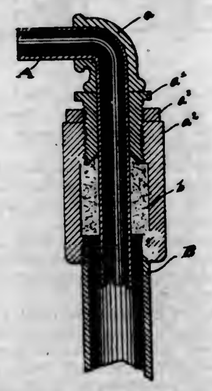
886,082. POWER-DRIVEN VEHICLE. ROBERT H. SIMPSON and WILLIAM PARK, Rugby, England. Filed Dec. 31, 1907. Serial No. 409,372.



1. A railway vehicle having an axle connected thereto by a swivel connection, to enable the axle to assume a radial position with respect to the curvature of the rails, in combination with differential gearing between the axle and wheels, whereby the wheel on the outer side of the curve may run faster than the wheel on the inner side of the curve and radiation is assisted; substantially as described.

2. A railway vehicle having a single-axle "bogie" truck connected thereto by a swivel connection to enable the axle to assume a radial position with respect to the curvature of the rails, and mechanism for normally centering the "bogie" truck with respect to the car body, in combination with differential gearing between the axle and wheels, whereby the wheel on the outer side of the curve may run faster than the wheel on the inner side of the curve and radiation is assisted, substantially as described.

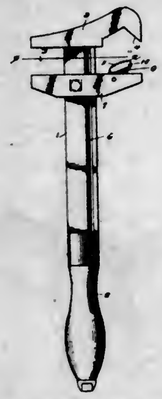
886,083. DISCHARGE-STEM. CHRISTOPHER SMITH, Orrville, Ohio, assignor to The Cyclone Drill Company, Orrville, Ohio, a Corporation of Ohio. Filed Jan. 28, 1908. Serial No. 413,142.



1. A discharge stem, having a bent tube reinforced at its bend by an elbow cast thereon.

2. A discharge stem, comprising a bent metal tube with an elbow cast thereon inclosing the bend of said stem, a packing nut, whose upper face is adjacent to the lower face of the reinforcing elbow and is threaded underneath into a packing box adapted to receive the discharge stem, said packing box, a jam nut threaded to packing nut, and a threaded opening in the under side of said packing box adapted to receive a drill spindle.

886,084. WRENCH. HAROLD B. SOHN and FRANKLIN C. MILLER, Allegheny, Pa. Filed June 28, 1907, Serial No. 381,305. Renewed Mar. 20, 1908. Serial No. 422,235.



1. A wrench comprising a shank having longitudinally disposed grooves, a fixed jaw carried by the shank and provided with a flat and angular gripping surface, a slidable jaw mounted upon the shank provided with a pair of diametrically opposed recesses, springs housed in said recesses and adapted to engage the shank to frictionally retain the sliding jaw in its adjusted position, said sliding jaw further provided in its upper face with a recess, a gripping block of a width substantially equal to the width of the sliding jaw and normally maintained above the upper face of said jaw, a web depending from said gripping block and pivotally connected in the recess formed in the upper face of the sliding jaw, and a spring secured to the upper face of the sliding jaw and engaging said web for maintaining the gripping block in an elevated position.

2. A wrench comprising a shank having longitudinally disposed grooves, a fixed jaw carried by the shank and provided with a flat and angular gripping surface, a slidable jaw mounted upon the shank provided with a pair of diametrically opposed recesses, spring housed in said recesses and adapted to engage the shank to frictionally retain the sliding jaw in its adjusted position, said sliding jaw further provided in its upper face with a recess, a gripping block of a width substantially equal to the width of the sliding jaw and normally maintained above the upper face of said jaw, a web depending from said gripping block and pivotally connected in the recess formed in the upper face of the sliding jaw, a spring secured to the upper face of the sliding jaw and engaging said web for maintaining the gripping block in an elevated position, and a knurled plate screwed into the sliding jaw and adapted to engage the shank to prevent the slipping of the jaw.

886,085. PROCESS OF MANUFACTURING PROTOCATECHUIC ALDEHYDE. GERHARD STALMANN, Leipzig-Gohlis, Germany, assignor to The Firm of Schimmel U. Co., Miltitz-Leipzig, Germany. Filed Oct. 5, 1905. Serial No. 281,525.

1. The process for manufacturing protocatechuic aldehyde which consists in heating piperonal with halogen

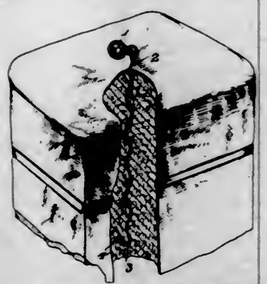
compounds of sulfur and boiling the product formed with water.

2. The process for manufacturing protocatechuic aldehyde which consists in heating piperonal with halogen compounds of sulfur and solvents and boiling the product formed with water.

3. The process for manufacturing protocatechuic aldehyde which consists in heating piperonal with sulfur and introducing a halogen into the mixture and boiling the product formed with water.

4. The process for manufacturing protocatechuic aldehyde which consists in heating piperonal with sulfur and solvents and introducing a halogen into the mixture and boiling the product formed with water.

886,086. LABEL FOR COTTON-BALES. THOMAS F. STEELE, New Orleans, La. Filed Nov. 13, 1907. Serial No. 402,019.



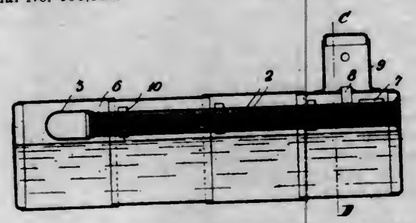
1. In combination, a label, and an anchor therefor of spiral formation having means for preventing it from being withdrawn from the bale.

2. In combination, a label, and an anchor therefor of spiral formation having adjacent to its inner end a barb projecting at an acute angle therefrom.

3. A label for baled goods comprising, in combination, a label, and an anchor therefor consisting of a wire having a barb extending at an angle therefrom, and means for inserting such wire into a bale and forming it into a screw or spiral while being inserted.

4. A label for baled goods comprising, in combination, a label, and an anchor therefor consisting of a wire bent to form a loop and a barb projecting therefrom, and a spiral tool having a seat adjacent to one end for accommodating the loop, said tool forming such wire into a screw or spiral as it is being inserted into the bale.

886,087. STEAM-SUPERHEATER. JOEL N. STEAN, Falun, Sweden, assignor of one-half to Hugo Theodor Tilliquist, Stockholm, Sweden. Filed Dec. 17, 1907. Serial No. 406,894.



1. In a steam superheater, the combination with a steam chamber, of groups of gas pipes secured at one end in a wall of the steam chamber, a steam pipe surrounding each group of gas pipes, a chamber supported by the ends of the steam pipes but closed thereto, said chamber being in communication with said gas pipes, and a conduit connecting said steam pipes.

2. In a device of the character herein described, the combination with a steam chamber, of a plurality of gas pipes extending thereinto and secured in one wall only of the steam chamber, and a connecting chamber arranged within said steam chamber and adapted to retain the ends of the gas pipes within said steam chamber and provide for communication between said pipes.

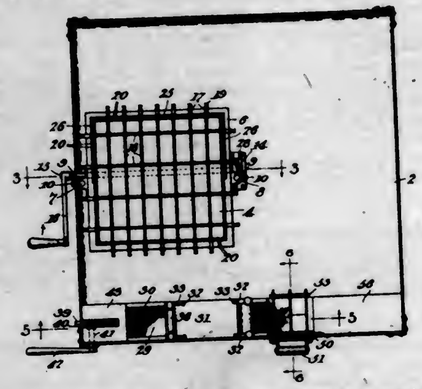
3. In a device of the character herein described, the combination with a steam chamber, of a plurality of gas pipes arranged in groups and extending into the steam chamber, each pipe having one end thereof secured in one end wall of the steam chamber, the other end stopping short of the opposite wall of the steam chamber, a connecting chamber for establishing communication between the several gas pipes within the steam chamber, and a steam pipe surrounding each group of gas pipes.

4. In a device of the character described, the combination of a steam chamber, groups of lower and superposed gas pipes connected at one end to a wall of the chamber, means for establishing communication between some of the superposed pipes and some of said lower pipes, and a steam pipe surrounding each group of superposed pipes, said groups of superposed pipes being in communication with each other.

5. In a device of the character herein described, the combination with a steam chamber, of the groups of gas pipes 1 and 2 therein, the groups of gas pipes 13 and 14, below the pipes 1 and 2 respectively, and the door 15 designed to place the groups 2 and 13 or 1 and 14 in communication.

[Claims 6 to 8 not printed in the Gazette.]

886,088. BUTTER-CUTTING MACHINE. RICHARD F. STEWART, Pocantico Hills, N. Y., assignor to American Butter Cutting Machine Company, New York, N. Y., a Corporation of New York. Filed Aug. 23, 1907. Serial No. 389,823.



1. In a machine of the class described and in combination, a cutting bed, a cutter-frame movable toward and from said bed, and a guard-plate open at one side carried by said cutter frame.

2. In a machine of the class described and in combination, a cutting bed, a cutter-frame movable toward and from said bed, and a frontless guard plate having sides of less length than the cutter-frame.

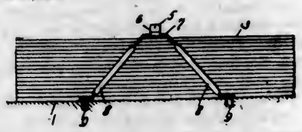
3. In a machine of the class described, the combination with a cutting-bed, of a cutter-frame movable toward and from said bed, and supporting standards for said frame removably connected therewith.

4. In a machine of the class described, the combination with a cutting-bed, of a cutter frame movable toward and from said bed, and supporting standards removably and adjustably connected at their upper ends to said frame.

5. A butter-cutter comprising a frame, T-shaped clamps having integral wire-engaging hooks adjustably mounted on said frame, and cutting wires secured to said hooks.

[Claims 6 to 27 not printed in the Gazette.]

886,089. BRACE FOR SHEET-METAL PILES. ALBERT P. STOCKER, Struthers, Ohio. Filed Jan. 31, 1908. Serial No. 413,592.

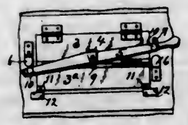


1. The combination with a car and a pile of material located in said car, of a brace for maintaining said material in a pile, said brace comprising a bar or plate mounted upon the top of the pile and having one end secured to said car, and a strip engaging the opposite end of said plate or bar and having its ends fixed to the bottom of said car, substantially as described.

2. The combination with a car, and a pile of material located therein, of a bar or plate arranged upon the top of said pile and having one end fixed to said car, a trip engaging the opposite end of said bar or plate and having its ends secured to the bottom of said car.

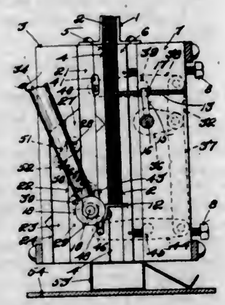
3. A brace of the type described comprising a bar or plate having a hook shaped end, a strip engaging the hook shaped end of said bar or plate and having its ends disposed at an angle thereto.

886,090. GRAIN-DOOR. ROBERT D. STRYKER, Huron, Ohio. Filed Sept. 30, 1907. Serial No. 395,282.



A main grain door provided with an opening, a supplemental door adapted to close said opening and consisting of an upper and a lower section, the upper section being hinged at its upper edge to the main door and arranged to swing outwardly therefrom and the lower section being hinged to the upper section and adapted to fold inwardly upon the upper section and to extend in closed position back of the extremity of the lower edge of the opening, and a latch bar pivoted intermediate of its ends on the supplemental door at the meeting edges of the hinged sections thereof, the main door being provided with keepers for engagement by said latch bar.

886,091. MACHINE FOR BOXING TOOTHPICKS. SIMON S. TAINTER, Dixfield, Me. Filed Jan. 28, 1907. Serial No. 354,490.



1. In a box-filling machine, a conduit through which the articles are fed to the box, a movable seat for the articles which is adapted to move in the conduit from the entrance end to the discharge end and forms a seat for the articles during the passage through the conduit, means for cutting off the feed when the movable seat has reached the bottom of the conduit and means for withdrawing the said movable seat from the conduit after it has reached the discharge end.

2. In a box-filling machine, a conduit through which the articles are fed to the box, a movable seat for the articles which is adapted to move in the conduit from the entrance end to the discharge end and forms a seat for the articles during the passage through the conduit, means for cutting off the feed when the movable seat has reached the bottom of the conduit, means for moving said seat lengthwise of said conduit from the entrance end to the discharge end and withdrawing it from the conduit and returning it again into the conduit at the entrance end.

3. In a box-filling machine, a conduit through which the articles are fed to the box, a movable seat for the articles which is adapted to move in the conduit from the entrance end to the discharge end and forms a seat for the articles during the passage through the conduit, means for cutting off the feed when the movable seat has reached the bottom of the conduit, means for withdrawing the said movable seat from the conduit after it has reached the discharge end and means for varying the size of said conduit.

4. In a box-filling machine, a conduit through which the articles are fed to the box, a movable seat for the articles which is adapted to move in the conduit from the entrance end to the discharge end and forms a seat for the articles during the passage through the conduit, a cut-off for the feed and means for actuating said movable seat and said cut-off whereby the cut-off will shut off the supply before the discharge end is opened.

5. In a box-filling machine for tooth picks and similarly formed articles, a conduit whose width is slightly in excess of the articles which are to be boxed, a movable plate which extends transversely of said conduit and is adapted to receive the said articles at the entrance end of the conduit and prevents the articles from passing through the conduit except as the said plate moves, said conduit having a lateral opening in the lower part thereof for the withdrawal of said movable plate and having a lateral opening in the upper portion for the return of said movable plate into said conduit, a cut-off at the upper end of said conduit, means for moving said first mentioned plate longitudinally through said conduit and out through said lower lateral opening and returning it through said upper lateral opening into the upper end, said actuating mechanism also actuating the cut-off to cut off the supply before said first mentioned plate is withdrawn from the lower end of the conduit and which withdraws said cut-off after said first mentioned plate has been returned to its position across the upper end of said conduit.

[Claims 6 to 15 not printed in the Gazette.]

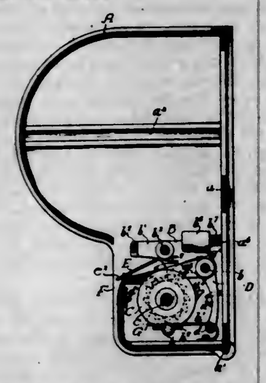
886,092. PAPER-HOLDER. STEPHEN B. TILY, MARTIN O. REHFUSS, and JOHN G. REHFUSS, Philadelphia, Pa., assignors to said Tily. Filed Jan. 16, 1908. Serial No. 411,090.

1. The combination with a paper holder of means for feeding the paper from said holder, pawl and ratchet mechanism for locking said feeding means after a predetermined amount of paper has been delivered, and means placed to be moved by tension on the paper delivered from said holder for causing the pawl to disengage the ratchet and permit another length of paper to be fed out.

2. The combination with a paper holder of means for feeding the paper from said holder, and a device for locking said feeding means after a predetermined amount of paper has been delivered, said device having unlocking means constructed to be actuated by pressure applied by the paper after said latter has passed the feed means.

3. The combination with means for holding a body of paper, of means for feeding paper from said holder, a device for automatically locking the feeding means after a predetermined amount of paper has been delivered, and a device constructed to be operated by the act of severing a length of paper from the body thereof for releasing said locking means.

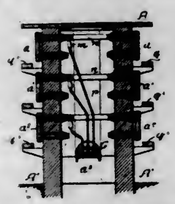
4. The combination with means for holding a body of paper, of means for feeding paper from said holder, a device for automatically locking said feeding means after a predetermined amount of paper has been delivered from the holder, and a device actuated by pressure applied by the paper for releasing said locking means after said latter has passed the feed means.



5. The combination with a holder for a body of paper, of means for feeding said paper from said holder, a device for severing a length of paper from the main body thereof, means for locking said feeding device after a predetermined length of paper has been delivered, and means operated by the paper at the time when the delivered length is severed from the remainder, for releasing said locking means.

[Claims 6 to 20 not printed in the Gazette.]

886,093. CONTACT-POST SYSTEM FOR TRANSMITTING ELECTRIC POWER. GEORGE E. TITCOMB, Philadelphia, Pa., assignor to Dodge Coal Storage Company, Naugatuck, Conn., a Corporation of Connecticut. Filed Feb. 29, 1908. Serial No. 418,534.



1. The combination in a system for transmitting electric power, of a series of posts spaced a given distance apart and having contacts, conduits extending from one post to another, a moving element having a shoe arranged to bear against the contacts of the posts, removable covers for the posts, and removable covers for the conduits so that on removing the covers the wires and terminals are exposed.

2. The combination of a series of posts spaced a given distance apart, conduits extending from one post to another, conducting wires arranged in the conduits, removable covers for the conduits, a series of contacts mounted on the posts, terminals attached to the contacts and connected to the wires in the conduits, and a cover detachably mounted over the posts and acting as a protector for the terminals and as a guard for the contacts.
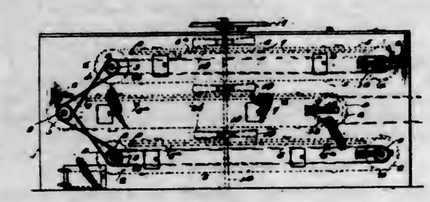
3. The combination in a post contact system for transmitting electric current, of a series of uprights arranged a given distance apart, conduits extending from one upright to another, a series of contact plates, one mounted above another on one side of each post, bolts extending through the posts from the contacts, terminals attached to the bolts, and conductors extending from the terminals to wires in the conduits.

4. The combination of a series of contact posts spaced a given distance apart, each contact post consisting of two uprights, a series of contact plates mounted one above another on the outside of each upright, bolts extending through the uprights and connected to the contacts, conductors extending from the bolt on one upright to the bolt on the other upright, and terminals connected to one set of bolts and to the wires in the conduit.

5. The combination of a series of posts arranged a given distance apart, conduits extending from one post to another, a series of contacts on the posts connected to wires in the conduits, a detachable cover having side members and a top, and guards projecting between each contact.

[Claims 6 to 9 not printed in the Gazette.]

886,094. FISH-DRYING APPARATUS. JOHN URQUHART, Monterey, Cal. Filed July 11, 1907. Serial No. 383,332.



1. A continuous drying apparatus for the purpose set forth, comprising a casing, an endless conveyer mounted within the casing, means for actuating said conveyer, a heating coil mounted within the casing contiguous to the conveyer and underneath the uppermost stretch thereof, and adapted to produce currents of heated air passing upwardly through the conveyer, a fan mounted within the casing above the coil and conveyer, and means for rotating said fan whereby the upwardly moving currents of heated air from the coil through the conveyer will be spread over the upper surface of the conveyer.

2. A drying apparatus for the purpose set forth, comprising a casing, an endless conveyer mounted within the casing and embodying a pair of horizontally alined rollers and foraminous material stretched around the same, the said material being constructed in two lengths and each roller being provided intermediate of its ends with a head dividing it into two parts, the respective lengths of foraminous material being located on opposite sides of the heads of the respective rollers, a vertical shaft mounted to rotate in the casing and in the space formed by the said heads and lengths of foraminous material, a fan mounted on said shaft, means for rotating said shaft, means for actuating said conveyer, and a heating coil mounted within the casing below the upper stretch of the conveyer, whereby the upwardly traveling currents of heated air passing through the conveyer will be distributed over the upper surface thereof by the fan.

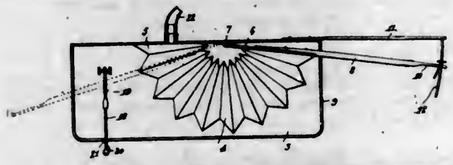
886,095. FOUNTAIN-PEN RETAINER. LEVI D. VAN VALKENBURG, Holyoke, Mass. Filed Mar. 4, 1907. Serial No. 360,493.

The combination with a cap for a fountain pen having separated transverse rectangular slots through the side wall thereof, of a sheet metal plate comprising a base portion conforming to the outer surface of the cap, having integrally formed, rearwardly extending prongs, at the opposite ends thereof, which are engaged through said slots and clenched on the inner side of the wall of the pen cap, said plate having at its opposite sides integrally formed, forwardly extended perforated ears, and also having an integrally formed struck up, forwardly extended guard tongue located between said ears, and adjacent, but offset from the line of the perforations in said ears, a lever composed of sheet metal having intermediate oppositely located ears positioned against the forwardly extended ears of said base plate, a pivot connecting both pairs of ears, and a V shaped spring embracing said pivot, having its divergent members in compression and bearing against



said base plate and a member of said lever, and having its return bent portion engaged by said guard tongue.

886,096. MUSIC-LEAF TURNER. HOLGER VARDER, Baltimore, Md. Filed June 28, 1906. Serial No. 323,880.



1. In a music leaf turner, a rack for holding sheets of music, clips to be attached to the sheets, bellows fast at one end on one side of the turning axis of the sheets and hinged at the other end on the opposite side of the turning axis of the sheets, means for forcing air into the bellows, and an arm secured to the hinged end of the bellows operating to engage the clips when the bellows are opened and to release the clips when the bellows are closed.

2. In a music leaf turner, a rack for holding sheets of music, a casing secured to said rack provided with a horizontal slot in its front and side walls, bellows contained within said casing with one end fast to the rear wall of the casing on one side of the turning axis of the sheets and hinged at the other end to the rear wall of the casing on the opposite side of the turning axis of the sheets, means for forcing air into the bellows, an arm secured to the hinged end of the bellows projecting through said horizontal slot, and clips for the sheets of music to be engaged by said arm when the bellows are opened and to be released when the bellows are closed.

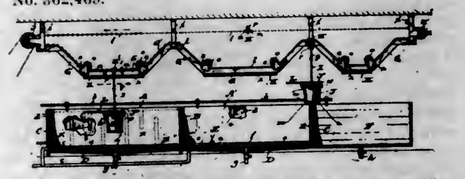
3. In a music leaf turner, a casing provided with a horizontal slot in its front and side walls, bellows contained within said casing with one end fast to the rear wall thereof and the other end hinged to said rear wall, an inlet pipe communicating with the fixed end of the bellows, means for forcing air through said inlet pipe into the bellows, an arm secured at its inner end to the hinged end of the bellows and projecting through said horizontal slot, and a clip to be engaged by the outer end of said arm when the bellows are opened and to be released by said arm when the bellows are closed.

4. In a music leaf turner, a rack for supporting sheets of music, a casing secured to said rack provided with a horizontal slot in its front and side walls and with a vertical slot in its top and front walls, bellows contained within said casing with one end fast to the rear wall thereof and the other end hinged to said rear wall, means for forcing air into said bellows, an arm secured to the free end of said bellows and projecting through said horizontal slot, clips for the music sheets to be engaged by said arm when the bellows are opened and to be released when the bellows are closed, and an angular lever pivoted at its angle to said casing and projecting at one end through said vertical slot and extending at the other end into the path of travel of said arm.

5. In a music leaf turner, a clip, a bail pivoted to said clip, a swinging arm for engaging with said bail to move said clip, and means for actuating said arm.

[Claims 6 to 8 not printed in the Gazette.]

886,097. BLANCHING APPARATUS. EDWARD J. VAUDREUIL, Two Rivers, Wis. Filed Mar. 15, 1907. Serial No. 362,469.



1. In an apparatus for blanching vegetables or the like, a series of fluid containing tanks, an endless traveling carrier above the tanks, a colander receptacle connected to the carrier, means for raising and lowering the receptacle in each tank, a rotary agitator in said colander receptacle, and driving means for the agitator above the tanks.

2. In an apparatus for blanching vegetables or the like, a series of fluid containing tanks, an endless traveling carrier above the same, a colander receptacle, means for raising and lowering the receptacle in each tank, an agitator in the receptacle, a trolley in connection with the carrier and agitator, a gear in connection with the agitator, and a rack for the gear extending longitudinally of the path of travel of the carrier.

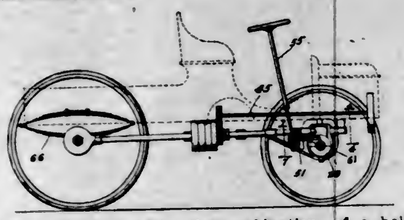
3. In an apparatus for blanching vegetables or the like, a series of fluid containing tanks, an endless traveling carrier chain above the tanks, a horizontal supporting-rail for the lower loop of the carrier-chain, upwardly V-shaped inclined sections in the rail, horizontal rack-sections secured to the horizontal section of said rail, a bucket, an agitator for the bucket, driving means connecting the agitator and traveling carrier-chain, and a pinion carried by the driving means, the pinion being adapted to engage the rack-sections.

4. A blanching apparatus comprising one or more jacketed wall fluid tanks, steam inlets in the jacketed walls of the tanks, a rinsing-tank in line with the fluid-tanks aforesaid, the combination of an endless traveling carrier, a detachable bucket in connection with the carrier, an agitator in the bucket, means for imparting intermittent motion to the agitator in connection with the carrier, and means for raising and lowering the bucket into the several tanks.

886,098. MOTOR-VEHICLE. WILLIAM W. WAINWRIGHT, Connersville, Ind. Filed Mar. 7, 1907. Serial No. 361,089.

1. In a motor vehicle, the combination, of a hollow steering axle-structure, a pair of live shafts mounted in said structure and connected at their inner ends by a compensating gear also mounted within the structure, a driving pinion structure journaled within the hollow axle-structure and meshing with the compensating gear, a frame yoke pivotally mounted exteriorly upon the axle-structure on an axis at right angles to the axis of the axle-structure, a driving shaft journaled in said yoke, a pinion meshing with the driving pinion-structure, the axle-structure having a substantially horizontal opening permitting the engagement of the driving shaft pinion

with the driving pinion-structure, and means for swinging said axle-structure in the yoke upon the pivotal connection therebetween.



2. In a motor vehicle, the combination, of a hollow steering axle-structure, a pair of live shafts mounted in said structure and connected at their inner ends by a compensating gear also mounted within the structure, a driving pinion structure journaled within the hollow axle-structure and meshing with the compensating gear, a frame yoke pivotally mounted exteriorly upon the axle-structure on an axis at right angles to the axis of the axle-structure, a driving shaft journaled in said yoke, a pinion arranged wthin the axle-structure and meshing with the driving pinion structure, the axle-structure having a substantially horizontal opening permitting the engagement of the driving shaft pinion with the driving pinion structure, and means for swinging said axle structure in the yoke upon the pivotal connection therebetween.

3. In a motor vehicle, the combination, of a hollow axle structure having a pair of live shafts journaled therein, a compensating gear also mounted within said structure and connecting the inner ends of the live shafts, a stud shaft mounted in said axle-structure at right angles to the live shafts, a pair of connected pinions journaled on said stud within the axle-structure, one of said pinions meshing with the compensating gear, a frame yoke pivoted exteriorly upon the axle-structure on an axis coincident with the axis of the stud, a driving shaft journaled in said yoke and projected through a substantially horizontal slot in the axle-structure, a pinion carried by said shaft and meshing with the corresponding pinion journaled upon the stud, and means for swinging the axle-structure within the yoke.

4. The combination, in a motor-vehicle, with an axle and the gear for driving said axle, of a shell surrounding the same and composed of two parts, the ends whereof which are immediately adjacent to the axle being tapered slightly and exteriorly threaded, and nuts upon said threaded portions, whereby by screwing up said nuts the two halves of said shell will be forced tightly together.

5. In a motor vehicle, the combination, of a hollow axle-structure having a pair of live shafts journaled therein, a compensating gear also mounted within said structure and connecting the inner ends of the live shafts, a stud shaft mounted in said axle-structure at right angles to the live shafts, a pair of connected pinions journaled on said stud within the axle-structure, one of said pinions meshing with the compensating gear, a frame yoke pivoted exteriorly upon the axle-structure on an axis coincident with the axis of the stud, a driving shaft journaled in said yoke and projected through a substantially horizontal slot into the axle-structure, a pinion carried by said shaft and meshing with the corresponding pinion journaled upon the stud, a segment carried by the axle-structure, a worm journaled upon the yoke and meshing with said segment, and means for rotating said worm.

886,099. GRINDING-ROLL. LESTER C. WALES, Edgewood, R. I. Filed Sept. 7, 1907. Serial No. 391,776.

1. In a grinding roll, a cylindrical roll having a longitudinal slot, a cylindrical shell rotatably supported on the roll and having a longitudinal slot, and means in the roll for securing the ends of a sheet of abrasive material.

2. In a grinding roll, a cylindrical roll having a longitudinal slot, a cylindrical shell rotatably supported on the roll and having a longitudinal slot, means for holding the shell from longitudinal movement on the roll, and means for securing the ends of a sheet of abrasive material in the roll.



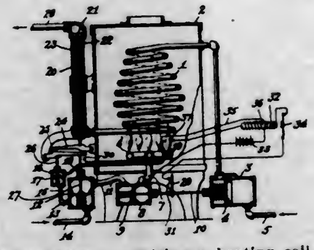
3. In a grinding roll, a cylindrical roll having a longitudinal slot, a cylindrical shell rotatably supported on the roll having a longitudinal slot and covered with an abrasive material, and means for securing the ends of a sheet of abrasive material in the roll.

4. In a grinding roll, a cylindrical roll having a longitudinal slot in its face, a cylindrical shell rotatably supported on the roll having a longitudinal slot in its face and covered with a resilient material, means for holding the shell from longitudinal movement on the roll, and means for securing the ends of a sheet of abrasive material in the roll.

5. In a grinding roll, a cylindrical roll having annular radial flanges at each end and a longitudinal slot in its face, a cylindrical shell rotatably supported on the roll and having a longitudinal slot in its face coinciding with the slot in the roll, and means for detachably securing the ends of a sheet of abrasive material in the roll.

[Claims 6 to 9 not printed in the Gazette.]

886,100. AUTOMATIC WATER-HEATER. GILBERT S. WALKER, Wheeling, W. Va. Filed July 22, 1907. Serial No. 384,914.



1. A water heater comprising a heating coil having a cold water inlet and a hot water outlet, a burner, a gas supply for said burner, means for igniting said burner, and means operated by the difference of pressure between the cold water inlet and hot water outlet for automatically controlling the flow of water through the heating coil and gas to the burner and operating the igniting means.

2. A water heater comprising a heating coil having a cold water inlet and a hot water outlet, a burner, a gas supply for said burner, an igniter for said burner, and means operated by the difference of pressure between the cold water inlet and hot water outlet for automatically controlling the flow of water through the heating coil and gas to the burner and operating the igniter.

3. A water heater comprising a heating coil having a cold water inlet and a hot water outlet, a main burner, a gas supply for said burner, an igniter for said burner, a pilot burner for said main burner, and means operated by the difference of pressure between the cold water inlet and the hot water outlet for automatically controlling the flow of water through the heating coil and gas to the burner and operating the igniter.

4. A water heater comprising a heating coil having a cold water inlet and a hot water outlet, a burner, a gas supply for said burner, a thermostat controlling the gas supply, an igniter for said burner, and means operated by the difference of pressure between the cold water inlet and hot water outlet for automatically controlling the flow of water through the heating coil and gas to the burner and operating the igniter.

5. A water heater comprising a heating coil having a cold water inlet and a hot water outlet, a burner, a gas supply for said burner, a thermostat in the hot water outlet controlling the gas supply, an igniter for said burner, and means operated by the difference of pressure between the cold water inlet and hot water outlet for automatically controlling the flow of water through the heating coil and gas to the burner and operating the igniter.

[Claims 6 to 18 not printed in the Gazette.]

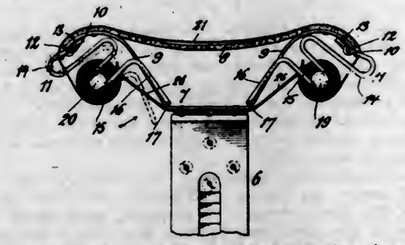
886,101. CAKE-HOLDER FOR CONVEYERS. HOWARD B. WARD, Pittsburg, Pa. Filed Dec. 17, 1907. Serial No. 406,876.



1. A cake holder comprising a rod having bent hook-shaped ends, said rod having a plurality of openings formed therein, strands of wire passing through said openings, strands of wire passing beneath said rod and twisted upon the first mentioned strands of wire said strands of wire having their ends bent to provide parallel arms for holding cakes.

2. A cake holder consisting of a rod having hook-shaped ends, said rod having a plurality of openings formed therein, strands of wire passed through said openings and projecting on opposite sides of said rods, and strands of wire intertwisted with the first mentioned strands and looping a portion of said rod, each of said strands of wire formed at their ends with parallel arms between which a cake is received.

886,102. HEAD-REST FOR CHAIRS. SETH WHEELER, Castleton, N. Y. Filed Feb. 9, 1907. Serial No. 356,508.



1. A head rest comprising a frame, a bridge piece supported by said frame, and hinged brackets supported by the said frame at opposite ends thereof, said hinged bracket constituting supporting means for feed and take-up rollers for a web of material which is adapted to travel from one to the other over the said bridge piece.

2. A head rest comprising a frame, a bridge piece supported by said frame, two pairs of hinged brackets, one pair supported at each end of the said frame, said brackets constituting supporting means for feed and take-up rollers for a web of material which is adapted to travel from one to the other over the said bridge piece.

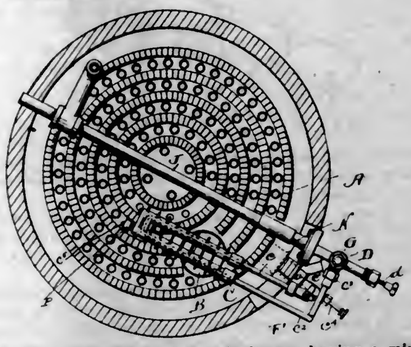
3. A head rest comprising a frame, a bridge piece supported by said frame, brackets pivoted at opposite ends of the said frame, the said brackets having bearing portions for supporting feed and take-up rollers, portions engaging the said frame to limit the movement of the bracket, and portions adapted under strain of the bracket to engage the frame to hold the brackets in predetermined position.

4. A head rest comprising a frame, a bridge piece supported by said frame, and brackets pivoted to opposite ends of the said frame, said brackets comprising each a portion 12 forming a pivotal hinge, a portion 13 extending therefrom at an angle thereto and adapted to engage the said frame, a spring loop 14 extending in the other direction from said part 12, a bearing portion 15 developed from said spring loop, and a part 17 adapted to engage the frame, substantially as set forth, the bearing portions of said brackets constituting supporting elements for feed and take-up rollers.

5. A head rest comprising a frame, a bridge piece supported by said frame, brackets pivoted to opposite ends of the said frame, feed and take-up rollers supported by said brackets, a web extending from one of said rollers to the other over the bridge piece, and spring members adapted to engage the portion of the web wound up upon the rolls to act as a friction drag.

[Claims 6 and 7 not printed in the Gazette.]

886,103. HYDROCARBON-BURNER. ROLLIN H. WHITE, Cleveland, Ohio, assignor to The White Sewing Machine Company, Cleveland, Ohio, a Corporation of Ohio. Filed Feb. 24, 1903. Serial No. 144,557.



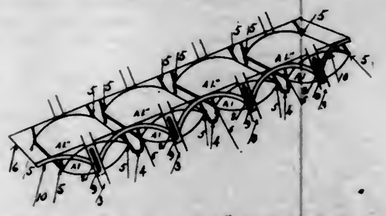
1. The combination of a main burner having a mixing tube, a casing above the main burner and inclosing the combustion chamber, a sub-burner which extends up through the main burner, a vaporizer removably supported within said combustion chamber and extending over the sub-burner and over a part of the main burner, and a support for said vaporizer within the combustion chamber, with a feed pipe, a valve casing secured to said feed pipe, a vaporizer feed pipe which extends through a hole in the wall of the combustion chamber and separably connects the vaporizer with said valve casing, a valveless pipe connected with the discharge end of the vaporizer and extended out through the same hole in the wall of the combustion chamber and terminating in a nozzle which discharges into said mixing tube, and an independent feed pipe for said sub-burner, substantially as specified.

2. The combination of a main burner having a mixing tube, a casing above the main burner inclosing the combustion chamber, a sub-burner which extends up through the main burner, and a vaporizer within said combustion chamber and extending over the sub-burner and over part of the main burner, with a feed pipe, a valve casing secured to said feed pipe, a vaporizer feed pipe permanently connected with the inlet end of the vaporizer and extending through a hole in the wall of the combustion chamber and separably connected with said valve casing, a valveless pipe connected with the discharge end of said vaporizer and extending out through the hole in the wall of the com-

bustion chamber and terminating in a nozzle which discharges into said mixing tube, and an independent feed pipe for said sub-burner, substantially as described.

3. The combination of a main burner having a mixing tube, and a casing above said main burner inclosing the combustion chamber and having a hole through one side just above the burner, a fixed support P in the combustion chamber having a hole in it, a vaporizer adapted to be inserted into the combustion chamber through the hole in its side wall and having a boss at one end which enters the hole in said fixed support, a valve casing located outside of said combustion chamber and containing a valve, a feed pipe therefor, a vaporizer feed pipe permanently connected with the inlet end of said vaporizer and extending through the hole in the wall of the combustion chamber and being separably connected with the discharge end of said valve casing, and a valveless discharge pipe connected with the discharge end of the vaporizer and extending out through the hole in the wall of the combustion chamber and terminating in a nozzle which discharges into said mixing tube, and an independent feed pipe for the sub-burner substantially as described.

886,104. APPARATUS FOR UTILIZING WAVE-POWER. THOMAS WILLANS, Philadelphia, Pa.; William Willans administrator of said Thomas Willans, deceased. Filed Oct. 13, 1905. Serial No. 282,681.



1. A wave power air compressor comprising pumps, axially movable floats connected thereto and flexible elements connecting said floats together.

2. A wave power air compressor comprising pumps, axially movable floats connected thereto and flexible elements connecting the adjacent edges of said floats together.

3. In a wave motor a float with trunnions projecting directly from its ends having oscillatory rotative movement on said trunnions, a framework having vertical slots in which said trunnions are mounted, said float thus having both free bodily vertical movement and an oscillatory movement, and means located on opposite sides of the trunnions of the float independent of each other, connecting the float with mechanism for converting the said oscillatory and bodily vertical movements of the float into power.

4. In a wave motor, a float having trunnions projecting directly from its ends and having an oscillatory rotative movement on said trunnions, said float having also a free bodily vertical movement, and mechanism connected to the margin of the float at one side of the trunnions whereby the said oscillatory and bodily vertical movements can be converted into power.

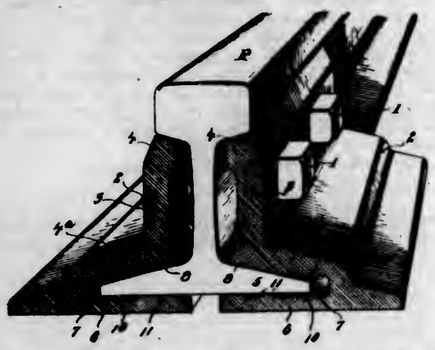
5. In a wave motor, vertically slotted float supports, a float having trunnions at either end entering said slots, and mechanism connected to the margin of said float at one side of its vertical axis for converting the oscillatory and bodily vertical movements into power.

[Claims 6 to 10 not printed in the Gazette.]

886,105. RAIL-JOINT. BENJAMIN WOLHAUPTER, New York, N. Y., assignor to The Rail Joint Company, New York, N. Y., a Corporation of New York. Filed Sept. 12, 1907. Serial No. 392,469.

1. In a rail joint, the rails, and the joint bars, each of which is provided with a rail supporting base section contacting with the rail bottom, and also having a clearance from the latter at the outer edge portion of the rail flange.

2. In a rail joint, the rails, and the joint bars, each of which is provided with an integral rail supporting base section having a clearance from the rail bottom at the outer edge portion of the rail flange.



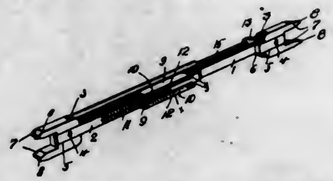
3. In a rail joint, the rails, and the joint bars each of which is provided with an integral rail supporting base section contacting with the rail bottom, and also having a clearance from the latter at the outer edge portion of the rail flange.

4. In a rail joint, the rails, and the joint bars each of which is provided with a rail supporting base section having a clearance portion thinner than the remainder thereof.

5. In a rail joint, the rails, and the joint bars each of which is provided with a rail supporting base section having a clearance portion thinner than the remainder thereof and arranged beneath the outer edge portion of the rail flange.

[Claims 6 to 10 not printed in the Gazette.]

886,106. MEASURING DEVICE. EARL C. ADAMS, Allegheny, Pa. Filed Oct. 19, 1906. Serial No. 339,641.



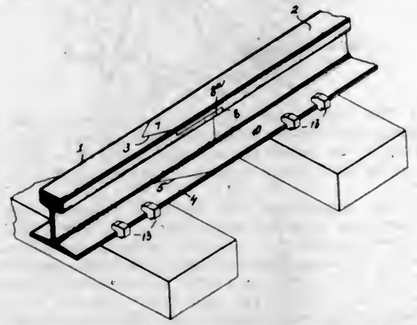
1. In a centering device, two overlapping bars, flanges carried by one bar and receiving the overlapping portion of the other bar and provided with an indicating mark, the other of said bars being provided on its outer face with graduations, heads carried by the outer ends of the bars, and means suspended from the heads and including a spring exerting its tension to normally force the heads away from each other.

2. A center-finder comprising two telescopic bars of equal length, one bearing graduations on its outer face, while the other bar bears an indicating mark, heads secured to the outer ends of said bars, and a sectional spring pressed guide secured to said heads.

3. A center-finder, comprising two telescopic bars of equal length, recessed heads secured to the outer ends of said bars, brackets secured to said heads, and a telescopic guide comprising a rod secured to one of said heads, a tube secured to the opposite head and inclosing the inner end of said rod, and a coil spring within said tube.
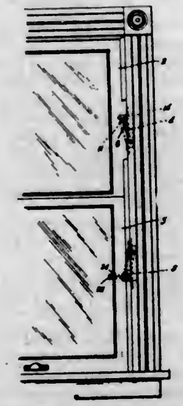
4. A center-finder, comprising two telescopic bars of equal length, one of said bars having flanged plates serving as a guide for the other bar, bifurcated heads secured to the outer ends of said bars, and having their ends formed with lugs, brackets secured to said heads, and a telescopic guide supported by said brackets and comprising a tube, a rod extending within the tube, and a coil spring within said tube.

886,107. RAIL-JOINT. THEOPHILUS C. ADAMS, Freeport, Pa. Filed Nov. 27, 1907. Serial No. 404,193.



In a rail joint, the combination of the rail 1 having the tread thereof cutaway at its end, the inner end of said cutaway portion terminating in a V-shaped recess, said rail 1 also having a V-shaped cutaway portion in its base at the end thereof, the said cutaway portion in the base being equal in length to the cutaway portion in the tread, and said rail 1 further having a groove in the base of its web equal in length to said cutaway portions, and the rail 2 having its web cutaway at end and the underneath portion of its tread also cutaway, the remaining portion of said tread being equal in thickness to the depth of the cutaway portion of the tread of the rail 1, the end of said tread and of the base of the rail 2 being V-shape to fit respectively with the V-shaped recess in the tread and V-shaped cutaway portion in the base of the rail 1, and a tongue carried by the base of the rail 2 and engaging in the groove in the web of the rail 1.

886,108. SASH-LOCK. WILLIAM G. ALLEN, South Bethlehem, Pa. Filed Oct. 29, 1907. Serial No. 399,639.

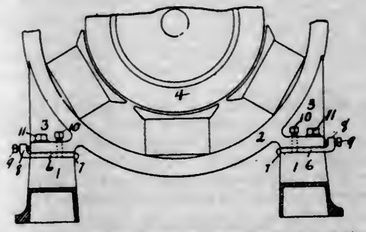


1. The combination with a window frame and a sash, of a vertically disposed recessed bearing plate set in the frame and formed in the inner faces of its opposite side walls, adjacent its top, with bearing recesses, a spring projected pawl having pivots at its upper end to engage said bearing recesses, a ratchet plate set in the sash and adapted to receive the free lower end of the pawl, said ratchet plate being angular and formed with a vertical slot, a swinging member pivoted at its upper end in the vertical slot in the ratchet plate, stops for limiting the swinging movement of said member, a bearing sleeve in the sash and a push rod slidable in said sleeve and adapted to engage and actuate the free lower end of said member to cause the latter to retract the pawl, substantially as set forth.

2. The combination with the frame and the upper and lower sashes of a window, of a bearing plate set in the frame and having a recessed body and apertured attaching flanges, said recessed body being formed in its opposing side walls with curved bearing recesses opening upon the front face of the plate, a pivot removably arranged in said curved bearing recesses, a locking pawl projecting from said pivot adjacent to one end and adapted to enter a ratchet recess in the upper sash, a retracting arm projecting from said pivot adjacent to its other end and adapted to extend into the path of the lower sash, a spring for projecting said pawl, and means for securing the lower sash in its closed position.

3. The combination with the frame and the upper and lower sashes of a window, of a bearing plate set in the frame and having opposing bearing recesses in its side walls, a pivot arranged in said bearing recesses, an integral locking pawl formed upon said pivot and adapted to enter a ratchet recess in the upper sash, an integral retracting arm formed upon said pivot and adapted to project into the path of the lower sash, a spring for projecting said pawl, a second bearing plate set in the lower part of the frame, a spring projected locking pawl pivoted in the last mentioned plate, a ratchet plate set in the lower sash and adapted to receive the last mentioned pawl, a pivoted member in said ratchet plate adapted to engage said pivoted pawl and a push rod arranged in the lower sash and adapted to actuate the said pivoted member to retract said pivoted pawl.

886,109. FIELD-ADJUSTING DEVICE FOR ELECTRIC GENERATORS AND MOTORS. FREDERICK O. BALL, North Plainfield, N. J. Filed Jan. 11, 1907. Serial No. 351,826.



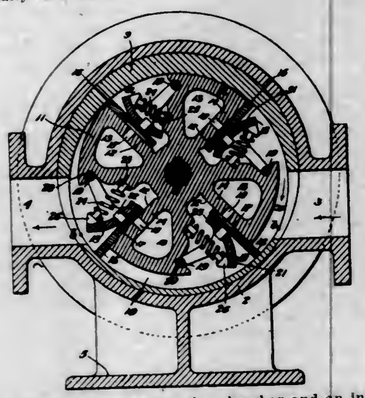
1. In a field adjusting device for electric generators and motors, the combination with the field support and base; of a device extending loosely between said support and base, having oppositely protruding lugs, one opposing a portion of the base and the other opposing a portion of the support; and adjusting means on one of the supports for adjusting the support laterally with relation to the base.

2. In a field adjusting device for electric generators and motors, the combination with the base 1 and yoke 2 having the feet 3; blocks 5 between the base and feet 3 forming spaces between the blocks; devices 6 loosely arranged in said spaces, said devices 6 having the hooks 7 for engaging the base, the lugs 8 extending upwardly opposite the feet 3, and screws 9 extending through the lugs against the feet.

886,110. ROTARY PUMP. ROBERT C. BROMLEY, Ben Avon, Pa. Filed Dec. 7, 1907. Serial No. 405,503.

1. A pump having an interior chamber and an inlet and an outlet opening, a rotatable piston head eccentrically mounted in said chamber and provided with radially ar-

ranged vanes, and co-acting vane frames bearing against the faces of the vanes to hold them to their seats, substantially as set forth.



2. A pump having an interior chamber and an inlet and an outlet opening, a rotatable piston head eccentrically mounted in said chamber and provided with radially arranged vane-bearing seats having sliding vanes, and pivoted vane frames having curved bearing faces operatively engaging the faces of the vanes at one side to hold their other sides against their seats, substantially as set forth.

3. A pump having an interior chamber and an inlet and an outlet opening, a rotatable piston head eccentrically mounted in said chamber and provided with radially arranged vane-bearing seats having sliding vanes, pivoted vane frames having curved bearing faces operatively engaging the faces of the vanes at one side to hold their other sides against their seats, and means for projecting the vanes outwardly, substantially as set forth.

4. A pump having an interior chamber and an inlet and an outlet opening, a rotatable piston head eccentrically mounted in said chamber and provided with radially arranged vane-bearing seats having sliding vanes, pivoted vane frames having curved bearing faces operatively engaging the faces of the vanes at one side to hold their other sides against their seats, and springs arranged to press the vane frames outwardly, substantially as set forth.

5. A pump having an interior chamber and an inlet and an outlet opening, a rotatable piston head eccentrically mounted in said chamber and provided with radially arranged vane seats having exhaust ports, and vanes slidingly mounted thereon, substantially as set forth.

[Claims 6 to 18 not printed in the Gazette.]

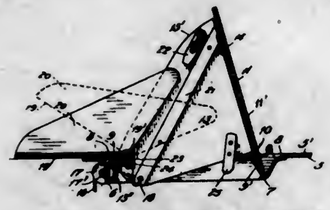
886,111. PROCESS OF MANUFACTURING CRUCIBLE COMPOUNDS. CARL CASPAR, Stuttgart, Germany. Filed Jan. 6, 1908. Serial No. 409,566.

1. The described process of manufacturing crucible compounds, consisting in shaping small pieces of pure, amorphous, hydrate of alumina by the addition of water, drying and then heating gradually in a closed vessel up to an intense white heat, and then cooling.

2. The described process of manufacturing crucible compounds which consists in shaping small pieces of pure, amorphous, hydrate of alumina by the addition of water, drying and then heating gradually in a closed vessel up to an intense white heat, and maintaining at this temperature for a definite period, then cooling without access of air.

3. The improved process for manufacturing crucible compounds which consists in shaping small pieces of pure, amorphous, hydrate of alumina, and pure magnesia by the addition of water, drying, and then heating in a closed vessel, gradually to intense white heat, maintaining such temperature for a definite period, then cooling without access of air.

886,112. SIDEWALK COAL-CHUTE. THEODORE F. CLARK, Seattle, Wash. Filed Aug. 13, 1907. Serial No. 388,334.



1. The combination with the frame provided with an opening and a rabbet about the latter, a cover fitted for seating in the rabbet and arranged to be tilted into and out of the same, and a trough pivotally connected with the cover.

2. The combination with the frame provided with an opening and depressed ledges thereabout, said ledges at the sides and adjacent of the rear end being directed downwardly and terminating in a concave shelf depending from the rear of the frame, of a cover, counter-weights, flexible connections between the said cover and the counter-weights, and a trough hinged to said cover and adapted to be swung outwardly to rest upon the frame when the cover is tilted rearwardly to expose the frame opening.

3. The combination with the frame provided with an opening and depressed ledges thereabout, said ledges at the sides and adjacent of the rear end being directed downwardly and terminating in a concave shelf depending from the rear of the frame, of a cover, counter-weights, flexible connections between the said cover and the counter-weights, a trough hinged to said cover and adapted to be swung outwardly to rest upon the frame when the cover is tilted rearwardly to expose the frame opening, and means for securing the trough to and between the walls of the cover.

4. The combination with the frame provided with an opening and depressed ledges thereabout, said ledges at the sides and adjacent of the rear end being directed downwardly and terminating in a concave shelf depending from the rear of the frame, of a cover provided with side walls, counter-weights, flexible connections between said walls and the counter-weights, and a trough hinged to said walls and adapted to be swung outwardly to rest upon the frame when the cover is tilted rearwardly to expose the frame opening.

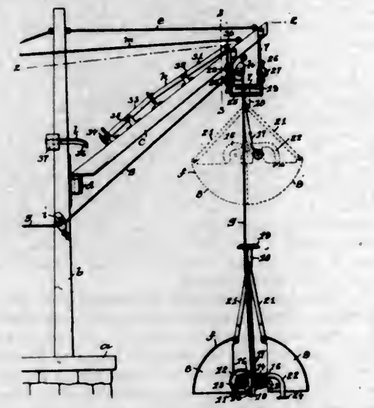
5. The combination with the frame provided with an opening and depressed ledges thereabout, said ledges at the sides and adjacent of the rear end being directed downwardly and terminating in a concave shelf depending from the rear of the frame, of a cover provided with side walls, counter-weights, flexible connections between said walls and the counter-weights, a trough hinged to said walls and adapted to be swung outwardly to rest upon the frame when the cover is tilted rearwardly to expose the frame opening, and means for securing the trough to and between the walls of the cover.

[Claims 6 to 15 not printed in the Gazette.]

886,113. HOISTING APPARATUS. HENRY P. CLOUGH, Providence, R. I. Filed Aug. 16, 1907. Serial No. 388,851.

1. In a hoisting apparatus, a derrick having an off-center swinging boom, a bucket, a holding member on the bucket, a single rope operatively connected with the bucket and the boom, locking jaws on the end of the boom, and mechanism on the derrick adapted to automatically close the locking jaws onto the holding member on the bucket, when the bucket is swung into the discharge position.

2. In a hoisting apparatus, a derrick having an off-center swinging boom, a bucket adapted to open and close and automatically lock in the open position, a holding member, arms pivotally connecting the holding member with the bucket, a frame on the end of the boom, locking jaws pivotally secured to the frame, a single rope operatively connected with the bucket and the boom, and coöperative mechanism on the derrick operatively connected with the locking jaws, whereby the bucket is lowered, closed, hoisted, swung into the discharge position, held in the discharge position and opened, all by the operation of the single rope.



3. In a hoisting apparatus, a derrick having an off-center swinging boom, a two part bucket, a holding member, arms pivotally connecting the holding member with the bucket, a single rope operatively connected with the bucket and the boom, a frame on the end of the boom, locking jaws pivotally secured to the frame, a cam arm on the derrick mast, and mechanism intermediate the locking jaws and the cam arm, whereby the bucket is lowered, closed, hoisted, swung into the discharge position, held in the discharge position and opened, all through the operation of the single rope.

4. In a hoisting apparatus, a derrick having an off-center swinging boom, a two part bucket, a holding member, arms pivotally connecting the holding member with the bucket, a single rope operatively connected with the bucket and the derrick, a frame on the end of the boom, locking jaws pivotally secured to the frame, a cam arm on the derrick mast, mechanism on the boom adapted to engage with the cam arm on the derrick mast and operate the locking jaws, and means for swinging the boom into the hoisting position, whereby the bucket is lowered, closed, hoisted, swung into the discharge position, held in the discharge position and opened, all through the operation of the single rope.

5. In a hoisting apparatus, a derrick having an off-center swinging boom, a two part bucket, a holding member, arms pivotally connecting the holding member with the bucket, a single rope operatively connected with the bucket and the boom, a frame on the end of the boom, locking jaws pivotally secured to the frame, a cam arm on the derrick mast, a system of levers on the boom operatively connected with the locking jaws, a roll on one of the levers in a position to engage with the cam arm on the derrick mast, whereby the bucket is lowered, closed, hoisted, swung into the discharge position, held in the discharge position and opened, all through the operation of the single rope.

[Claim 6 not printed in the Gazette.]

886,114. OIL-WELL PACKER. ALFRED COLLINGWOOD, Franklin, Pa., assignor of one-fourth to Jacob N. Harlan and one-fourth to Ebner Harlan, Franklin, Pa. Filed May 20, 1907. Serial No. 374,625.

1. In a well packer, a tubular member, a pair of expansible packing members held thereon at suitable intervals apart, expanding sleeves for such packing members, and means coöperating with said expanding sleeves for forcing said expanding sleeves into said packing members to expand the same by rotating the tubular member, substantially as shown and described.



2. In a well packer, the combination with a tubular member, an upper and a lower packer thereon, each of said packers comprising an expansible packing member, an expanding sleeve mounted on said tubular member, and having a threaded engagement therewith, means for holding said sleeves from rotation, means whereby said tubular members may be rotated to force said sleeves toward one another to expand said packing members, substantially as shown and described.

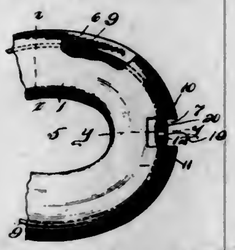
3. In an apparatus of the class described, a pair of packers, each comprising a tubular portion having threaded ends, a jam nut held on said tubular portion, an expansible packing a sleeve held on said tubular portion, an expanding sleeve also held on said tubular portion having a threaded engagement therewith, said expanding sleeves each having an internal lubricant receiving chamber, leaf springs on the outside of said expanding sleeves to engage the well walls for preventing rotation of the sleeves, a tube section coupled with said packer tubular portions to form an extension thereof and another tube section connecting one tubular portion with the other, substantially as shown and described.

4. In an apparatus of the class described, the tubular section 1, having threaded ends, collars 2 screwed thereon, packers secured at each end of said tubular member 1 and each comprising a tubular section 3 having a threaded end to coöperate with said collars 2, an expansible packing sleeve carried on each of said tubular members 3 an expanding sleeve also carried on each of said tubular members 3, means for holding said expanding sleeves from rotation, means whereby said tubular sections 3 may be rotated and means coöperatively connecting said tubular sections 3 with said expanding sleeve whereby the rotation of the tubular section 3 will force the expanding sleeves toward the expansible packing sleeves to expand the same, substantially as shown and described.

5. In an apparatus of the class described, a tubular section 1 having threaded ends, collars 2 screwed thereon, packers secured at each end of said tubular section and each comprising the tubular section 3 having a threaded end to coöperate with said collars, an expansible packing sleeve carried on each of said tubular sections 3, an expanding sleeve also carried by each of said tubular sections 3, means for holding said expanding sleeves from rotation, means for rotating said tubular sections 3 and means coöperatively connecting said tubular sections 3 with said expanding sleeves whereby the rotation of the tubular sections 3 will force the expanding sleeves toward the expansible sleeves to expand the same, said rotating means including an upwardly extending tubular member 11 connected with one of said tubular sections 3 and having a bayonet slot substantially as shown and described.

[Claims 6 to 9 not printed in the Gazette.]

886,115. SEAT. FRANK H. CULLEN, Pittsburg, Pa. Filed Apr. 7, 1906. Serial No. 310,571.



1. In combination with a hopper or bowl seat, said seat having a peripheral groove formed therein, the rear edge of said seat having a cut out portion extending inwardly from the periphery of the seat to form a filler block, said filler block having a recess formed therein and extending in the opposite direction from the peripheral groove, a wire mounted in said groove and having its ends adjustably connected together within the recess of the filler block of said seat, the groove in said seat extending in a direction at right angles to the axis of the seat and being of a depth greater than the depth of the wire extending therein, means to secure said filler block in said cut out portion of said seat, and means to close the groove in said seat, substantially as described.

2. A reinforced seat comprising a seat portion having a cut out portion at a predetermined point in the periphery thereof, a peripheral groove formed in said seat, said groove extending inwardly in a direction at right angles to the axis of the seat, the cut out portion of the seat being of greater depth than the depth of the groove, a filler block fitting within said cut out portion, said block having a recess extending from the unexposed edges thereof and located on a plane corresponding with that of the groove of the seat, and a reinforcing wire adjustably mounted within said groove and the recess, said groove being of greater depth than the thickness of the reinforcing wire.

886,116. GARMENT-HANGER. DWIGHT W. CUSTER, New York, N. Y. Filed July 5, 1907. Serial No. 382,198.



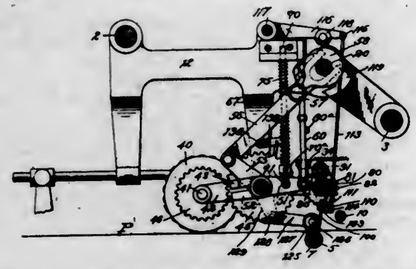
1. In a garment hanger the combination of a plurality of frames, means pivotally connecting said frames whereby one edge of each of the adjoining bars of said frames will be spaced apart and the other edge thereof permitted to contact, a plurality of garment supports accessible from one side of said frames, a clamp bar at the free end of each of said frames, means clamping a garment between said bar and its frame whereby said garment will tend to hold said hanger open and serve as a backing for said frames, and means whereby said frames may be suspended.

2. In a garment support, the combination of a plurality of frames, spring hinges connecting said frames normally tending to open said frames, and so set as to space one of the adjoining edges of said frames apart and permit the other edges to contact, whereby said frames will set, when opened, off center, a plurality of garment supports accessible from one side of said frames, a clamp bar at the free end of each of said frames, means clamping a garment between said bar and its frame whereby said garment will tend to hold said hanger open and serve as a backing for said frames, and means whereby said frames may be suspended.

3. In a garment hanger, the combination of a plurality of frames, each shaped like a trapezoid, with the non-parallel sides of one in substantial alinement with those of the other, the narrower of said frames being longer than the other, means pivotally connecting said frames, a clamp bar at the free end of each of said frames, means adapted to act on said bars respectively adjacent to each end, to clamp a garment between said bar and its frame, one of said bars being wider than the other whereby the other frame is permitted to pass between the clamping means thereof when folded, a plurality of garment supports on the other side of said frames respectively, and means whereby said frames may be suspended.

4. In a garment hanger, the combination of a plurality of frames, means pivotally connecting said frames, whereby when said frames are opened said means will set off center, a plurality of garment supports accessible from one side of said frames, a clamp bar at the free end of each of said frames, means clamping a garment between said bar and its frame, whereby said garment will tend to hold said hanger open and serve as a backing for said frames, a supplemental hanger rod, means whereby said supplemental hanger rod may be projected outwardly or folded against the upper frame, and means whereby said frames may be suspended.

886,117. PAPER-FEEDING MACHINE. TALBOT C. DEXTER, Pearl River, N. Y. Filed Aug. 1, 1907. Serial No. 386,602.



1. In a paper feeding machine, the combination of a sheet moving instrument, automatic means for arresting the operation of said instrument, a movable member normally restraining said instrument-arresting means, and a sheet-actuated wedging blade or plate adapted to move into engagement with and thereby actuate said movable restraining member and release the arresting means.

2. In a paper feeding machine, the combination of a sheet moving instrument, means for operating said instrument, means for raising the said instrument into inactive position, a movable member normally restraining said instrument raising means, and a sheet actuated wedging blade or plate adapted to move into engagement with and thereby actuate said movable restraining member to release and permit the operation of the instrument raising means.

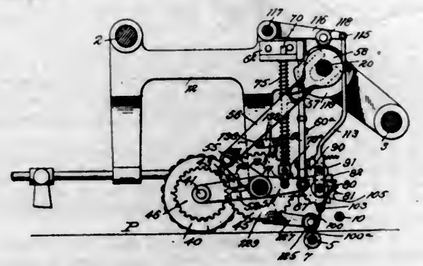
3. In a paper feeding machine, the combination of a sheet moving instrument, means for operating said instrument, means for raising the said instrument into inactive position, a movable member normally restraining said instrument raising means, a wedging blade or plate adapted to move into engagement and thereby actuate said movable restraining member, and a tripping finger supported in the path of sheets and suitably connected with said wedging blade or plate to actuate it.

4. In a paper feeding machine, the combination of a sheet moving instrument, automatic means for arresting the operation of said instrument, a movable member controlling and normally restraining said instrument arresting means, a fixed member adjacent to said movable member, and a sheet-actuated wedging blade or plate adapted to be projected between said movable controlling member and said fixed member to thereby operate the former and release the arresting means.

5. In a paper feeding machine, the combination of a sheet moving instrument, automatic means for arresting the operation of said instrument, a movable member controlling said arresting means, an antifriction roller upon said movable member, and a sheet-actuated wedging blade or plate adapted to move into engagement with said roller and thereby operate said controlling member to release said arresting means.

[Claims 6 to 24 not printed in the Gazette.]

886,118. PAPER-FEEDING MACHINE. TALBOT C. DEXTER, Pearl River, N. Y. Filed Aug. 3, 1907. Serial No. 386,867.



1. The combination of a sheet moving instrument, means for operating said instrument, and arresting means for holding said instrument out of operation, with a sheet actuated tripping finger supported in the path of sheets and arranged to trip said arresting means, a movable support for said tripping finger, and means for periodically raising and lowering said tripping finger support for moving the tripping finger into and out of the path of sheets.

2. The combination of a sheet moving instrument, means for operating said instrument, and arresting means for holding said instrument out of operation, with a sheet actuated tripping finger supported in the path of sheets, a movable support for said tripping finger, tripping means operated by said finger and arranged to control said arresting means, and means for periodically raising said tripping finger support and actuating said tripping means independently of said finger.

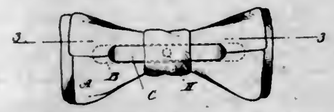
3. The combination of a sheet moving instrument, means for operating said instrument, and means for arresting the operation of said instrument including latching mechanism, with means for tripping said latching mechanism including a tripping finger supported in the path of sheets, a movable support for said tripping finger, and mechanism for periodically raising and lowering said movable support.

4. The combination of a sheet moving instrument, means for operating said instrument, and means for arresting the operation of said instrument, with means for tripping said arresting means including a tripping finger supported in the path of sheets, a movable support for said tripping means, and mechanism for periodically raising said movable support and actuating said tripping means independently of said tripping finger.

5. The combination of a sheet moving instrument, means for operating said instrument, and means for arresting the operation of said instrument including a latching bar and a coöperating latching arm, with means for tripping said latching arm including a tripping finger supported in the path of sheets, a movable support for said tripping means, and cam actuated mechanism for periodically raising and lowering said movable support.

[Claims 6 to 24 not printed in the Gazette.]

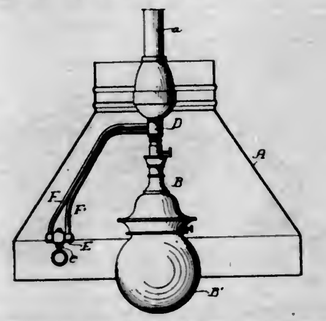
886,119. NECKTIE. CHARLES H. GASKILL, Jr., Peekskill, N. Y. Filed Apr. 13, 1907. Serial No. 368,078.



1. In a neck tie or similar article, the combination with the body of the tie proper, of a strip of comparatively unyielding material located within the body of the tie and secured thereto by its middle portion; a substantially similar strip located outside the body of the tie and secured thereto by its middle portion; and means for permanently securing the strips together and to the body of the tie; the ends of said strips being spaced slightly apart and adapted to receive between them a fold of a collar or other support and to grip or clamp the same so as to secure the tie in place upon the garments of the wearer.

2. In a neck tie or similar article, the combination with the body of the tie proper, of a curved strip of spring metal located within the body of the tie proper and being secured thereto by its middle portion; a substantially similar but slightly more curved strip of spring metal located outside thereof and secured thereto by its middle portion; and means for permanently securing the strips together and to the body of the tie, the ends of said strips being spaced slightly apart and adapted to receive between them a fold of a collar or other support and to grip or clamp the same so as to secure the tie in place upon the garments of the wearer.

886,120. GAS-FIXTURE. CHARLES GERLACH, Philadelphia, Pa., assignor to John L. Gaumer Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Sept. 4, 1907. Serial No. 391,299.

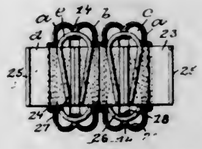


1. The combination in a gas fixture, of a burner, a fixture consisting of a coupling, a gas cock casing and two pipes leading from the coupling to the gas cock casing, and a dome surmounting the above described parts, said gas cock casing being arranged within the dome some distance from the burner, substantially as described.

2. The combination in a gas fixture of a gas supply pipe, a burner, a coupling having a central partition forming two compartments, one compartment being connected to the supply pipe and the other to the burner, two pipes extending from the coupling, one attached to the coupling on one side of the partition and the other attached to the coupling on the other side of the partition, a gas cock casing attached to both pipes and mounted between them, and a dome surmounting the above described parts, substantially as described.

3. A fixture for attaching to a dome gas fixture consisting of a coupling, a gas cock casing, a cock therein, two bent tubes leading from the coupling to the casing, said coupling having a central partition, one tube connected with the coupling on one side of the partition, the other tube connected to the coupling on the other side of the partition, the said coupling being shaped to fit a gas supply pipe and a burner pipe, substantially as described.

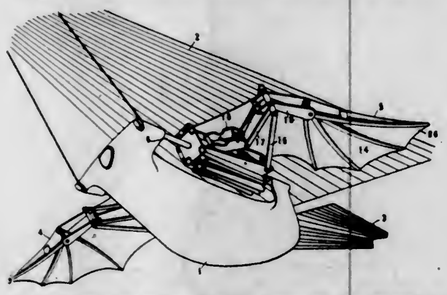
886,121. BRACELET. THOMAS D. GIGUERE, North Attleboro, Mass., assignor to Annie M. Hale and Edwin E. Hale, executors of the estate of O. M. Draper, North Attleboro, Mass. Filed May 10, 1907. Serial No. 372,982.



1. A bracelet composed of a plurality of units each consisting of a two-part shell, a frame in the shell, I-shaped connecting links extending through the slots in the frame and shell, and U-shaped springs in the frame the arms of which straddle and bear on the ends of the connecting links, whereby the units are held in their normal or contracted position, and means for spacing the units.

2. A bracelet composed of a plurality of units each consisting of a two-part shell, a box frame in the shell, I-shaped connecting links extending through the slots in the frame and shell and having central webs for spacing the units, and U-shaped springs in the frame the arms of which straddle the adjacent ends of the connecting links, whereby the units are spaced and held in their normal or contracted position under spring tension.

886,122. FLYING-MACHINE. BAYARD GUTHRIE, Pittsburg, Pa., assignor of one-half to Joseph P. Karch, Pittsburg, Pa. Filed Oct. 31, 1907. Serial No. 400,106.



1. In a flying machine, a pair of oppositely disposed rotatable wheels arranged with their axles longitudinal of the machine, a plurality of folding wings carried by the wheels and arranged to fold radially and toward the rear, and means for extending and folding said wings successively in planes radial to the axes of the wheels.

2. In a flying machine, a body, an aeroplane secured thereto, means for steering the machine, and a pair of oppositely disposed rotating propelling wings with posteriorly yielding ribs.

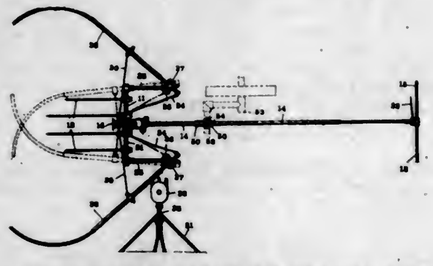
3. In a flying machine, a body, a shaft at each side, a rotating wheel on each shaft having folding wings, including a plurality of ribs substantially rigid at their forward portions but yielding upward at their posterior portions and means for automatically extending said wings forwardly and closing them rearwardly.

4. In a flying machine, an aeroplane and oppositely disposed rotating series of radially extensible and contractible wings yielding upwardly at their posterior portions, whereby on a downward movement a propulsive effort is obtained.

5. In a flying machine, a rotating wheel, including folding wings, a reciprocating bar connected to each wing and means for successively operating said bars.

[Claims 6 to 12 not printed in the Gazette.]

886,123. SHOCK-LIFTER. ARTEMUS N. HADLEY, Indianapolis, Ind. Filed May 29, 1905. Serial No. 262,841.



1. A shock grapple consisting of a main body, a shaft rotatably mounted therein, shock entering prongs carried by said shaft, releasable means for holding said shaft in one position, and a shock embracing means coöperating with said prongs.

2. A shock grapple consisting of a main body, a prong member movably mounted on said main body, releasable means for holding said prong member in one position on said main body, and shock embracing means carried by the prong member.

3. A shock grapple consisting of a main body, a prong-member movably mounted on said main body, releasable means for holding said prong-member in one position on said main body, shock embracing arms carried by the prong-member, means for drawing said shock embracing arms about a shock, and releasable means for holding said arms in embracing position.

4. A shock grapple consisting of a main body, a prong member journaled thereon so as to swing in a substantially vertical plane, a pair of shock embracing arms pivotally mounted on the prong member so as to swing in a substantially horizontal plane, releasable means for holding the prongs of the prong-member in a substantially horizontal plane, means for swinging the embracing arms to embrace a shock, and releasable means for holding said arms in embracing position.

5. A shock grapple consisting of a main body, a shaft journaled therein on a substantially horizontal axis, shock entering prongs carried by said shaft, a pair of shock-embracing arms pivotally mounted upon supports carried by the prong shaft and arranged to swing in a substantially horizontal plane, a windlass carried by the main body, a cable connecting said windlass with the embracing arms to draw said arms to embracing position, a second cable having its ends attached to the shock embracing arms beyond the pivots thereof and its middle arranged to be engaged by means for supporting the entire structure, means for winding said windlass, releasable means for holding said windlass, and releasable means for holding the prongs in a substantially horizontal plane.

[Claims 6 to 8 not printed in the Gazette.]

886,124. MANUFACTURE OF ARTIFICIAL STONE. JOHN C. HENDERSON, Oakland, Cal. Filed Nov. 16, 1907. Serial No. 402,481.

1. In the manufacture of artificial stone, the improvement in the method, which consists in first pouring a fluid aqueous mass of Portland cement into a non-porous mold, and then, before the initial set of the mass, applying to its top surface dry Portland cement in quantity sufficient to absorb from the mass the excess of water.

2. In the manufacture of artificial stone, the improvement in the method, which consists in first lubricating a non-porous mold; then pouring into said mold a fluid aqueous mass of Portland cement; and then, before the initial set of the mass, applying to its top surface dry Portland cement in quantity sufficient to absorb from the mass the excess of water.

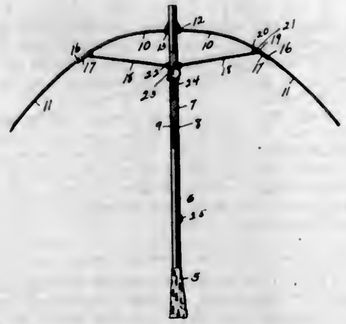
3. In the manufacture of artificial stone, the improvement in the method, which consists in first pouring a fluid aqueous mass of Portland cement into a non-porous mold; then, before the initial set of the mass, applying to its top surface dry Portland cement in quantity sufficient to absorb from the mass the excess of water; then pouring upon the mold content a second increment of a fluid aqueous mass of Portland cement; then applying to the top surface of the second increment, before its initial set, dry Portland cement in like quantity to the first; and so on to complete the desired thickness of the stone.

4. In the manufacture of artificial stone, the improvement in the method, which consists in first veining in a non-porous mold a fluid aqueous thin coating of colored Portland cement; then pouring upon said veined coating a fluid aqueous mass of Portland cement; and then, before the initial set of the mass, applying to its top surface dry Portland cement in quantities sufficient to absorb from the mass the excess of water.

5. In the manufacture of artificial stone, the improvement in the method, which consists in first applying to a non-porous mold a lubricant; then veining upon said lubricant a fluid aqueous thin coating of colored Portland cement; then pouring upon said veined coating a fluid aqueous mass of Portland cement; and then, before the initial set of the mass, applying to its top surface dry Portland cement in quantity sufficient to absorb from the mass the excess of water.

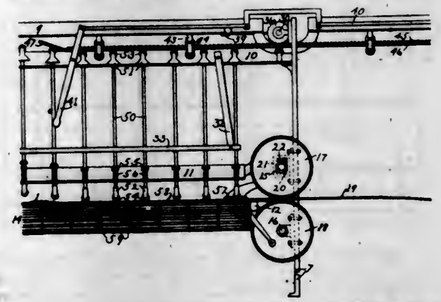
[Claims 6 to 8 not printed in the Gazette.]

886,125. UMBRELLA. ARTHUR H. HIXSON, Columbus, Ohio. Filed Sept. 5, 1907. Serial No. 391,412.



In a device of the character described, the combination with an umbrella rod, of ribs pivotally connected at their upper ends to said umbrella rod, said ribs being made in two sections and the outer sections being pivoted to the inner sections off-set portions carried by the outer sections, said off-set portions underlying the inner sections, a runner slidably disposed upon the umbrella rod, stays which extend from said runner to the off-set portions of the outer sections of the ribs, curved hook-like members carried by the stays and eyelets carried by the upper portions of the ribs with which the curved hook-like members are adapted to engage when the umbrella is open, to thereby positively lock the inner and outer sections of the ribs into alinement with each other.

886,126. MECHANISM FOR REPLACING WEFT UNITS. AZEL C. HOUGH, Janesville, Wis., assignor to Hough Shade Corporation, Janesville, Wis., a Corporation of Connecticut. Filed Dec. 31, 1906. Serial No. 350,115.



1. In a replacing machine, means to forcibly actuate a weft unit into slat fabric along a weft unit previously introduced into the fabric, and means adapted to be applied to the forward end of the new weft unit and to ride on said previously-introduced unit for opening the warp ahead of the new unit to make a passage for the same.

2. A needle, of the class described, consisting of a transversely rounded body provided at its rear end with means of connection with or attachment for a weft unit, and a transversely rounded beak or bill, tapered both horizontally and vertically throughout its entire length, extending forward from such body and having a pointed or sharpened front end, the bottom surface of such needle being longitudinally concave.

3. A needle, of the class described, consisting of a transversely rounded body provided at its rear end with a socket adapted to receive one end of a weft unit, and a transversely rounded beak or bill, tapered both horizontally and vertically throughout its entire length, extending forward from such beak and having a pointed or sharpened front end, the bottom surface of such needle being longitudinally concave.

4. As an improved article of manufacture, a needle, of the class described, consisting of a horizontally and vertically tapered and transversely curved beak or bill having a pointed or sharpened front end, such beak or bill being adapted to enter between a weft unit and a warp loop and to extend or open the latter when the needle is forced along said weft unit, and a transversely curved body larger than said beak or bill and adapted to enter the loop extended or opened by the beak or bill and to extend or open said loop still more or to a sufficient extent for the entrance of a weft unit above the one already in place, and connecting or attaching means on said body for the weft unit which is to be superimposed, the needle being so formed that only its ends are adapted to contact with the weft unit below.

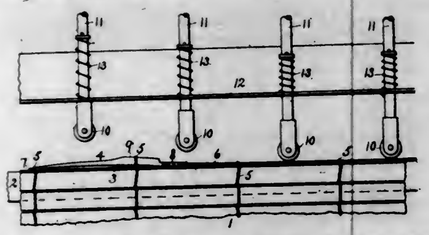
5. As an improved article of manufacture, a needle, for use in connection with slat fabric, comprising a body part and a bill and adapted to be connected with a weft unit, the front end of said bill being pointed and smaller than said body part, and the whole needle being adapted to be forced between a weft unit already in the fabric and two or more warp loops already in the fabric one after another, the front end of the bill entering beneath the loop ahead before the body part passes from under the loop behind.

[Claims 6 to 14 not printed in the Gazette.]

886,127. METHOD OF REPLACING WEFT UNITS. AZEL C. HOUGH, Janesville, Wis., assignor to Hough Shade Corporation, Janesville, Wis., a Corporation of Connecticut. Original application filed Dec. 31, 1906, Serial No. 350,115. Divided and this application filed Sept. 30, 1907. Serial No. 395,105.

1. The method of replacing weft units, in woven fabric of the class described, consisting in automatically extend-

ing or opening the warp, in automatically inserting an additional weft unit, in the openings so formed, between the warp and a weft unit already in the fabric, and in afterwards removing the defective weft unit.



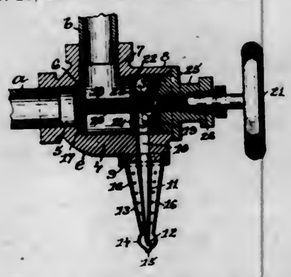
2. The method of replacing weft units, in woven fabric of the class described, consisting in automatically forcing an additional weft unit into the fabric between the warp and a weft unit already in place, and in afterwards removing the defective weft unit.

3. The method of replacing weft units, in woven fabric of the class described, consisting in automatically extending or opening the warp by degrees, in inserting an additional weft unit, in the openings thus formed, between the warp and a weft unit already in the fabric, and in afterwards removing the defective weft unit.

4. The method of replacing weft units, in woven fabric of the class described, consisting in automatically extending or opening the warp, in automatically inserting an additional weft unit, in the openings so formed, between the warp and a weft unit already in the fabric in automatically guarding said additional unit against buckling as it advances, and in afterwards removing the defective weft unit.

5. The method of replacing weft units, in woven fabric of the class described, consisting in extending or opening the lines of warp progressively, in inserting an additional weft unit, in the openings thus formed, between the warp and a weft unit already in the fabric, in abutting said additional unit between said lines of warp as the said unit advances, and in afterwards removing the defective weft unit.

886,128. VALVE. ELISHA H. HOWARD, Providence, R. I. Filed Nov. 29, 1907. Serial No. 404,348.



1. In an automatic sprinkler system, a main controlling valve comprising a body having inlet and outlet ducts, a drip duct, a valve controlling the inlet duct having a bypass extending through the valve and connecting with the drip duct when the valve is closed, and means for preventing the insertion of foreign articles.

2. In an automatic sprinkler system, a main controlling valve comprising a body having inlet and outlet ducts, a drip duct, a valve controlling the inlet duct and having a hole extending through the valve into the drip duct when the valve is closed, a tapered drip tube extending downward from the drip duct, an inverted cone-shaped perforated casing surrounding the drip tube and having a drip hole in its end, whereby water is allowed to drip from the valve when the valve is closed and the insertion of foreign articles into the drip duct prevented.

3. In an automatic sprinkler system, a main controlling valve consisting of a body 4 having the inlet duct 5, the valve seat 6, the outlet duct 7, the cylindrical end 8, the boss 9, and the drip duct 10, a tapered drip tube 11 having the bent end 12, an inverted cone-shaped casing 13 having the globular end 14 with the drip hole 15 and a series of perforations 16 16 in the side of the casing, a valve 17, having the stem 18 in which is an annular groove 19, a hole 20 which extends through the valve 17 and the stem 18 into the annular groove 19, and a hand wheel 21 on the outer end of the stem, a plug 22 having a central hole 23 for the stem 18, and a radial hole 24 in a position for the hole 24 to coincide wth the drip duct 10 and with the annular groove 19 in the stem 18 when the valve is closed, and a sleeve 25 closing the end 8 and having the stuffing box 26 for the valve stem, as described.

886,129. PRISON-BAR. CLARENCE L. JACKSON, Sandusky, and EDWARD N. LOY, Tippecanoe City, Ohio. Filed Aug. 13, 1907. Serial No. 388,365.



1. A prison bar comprising a tubular casing, bearing blocks or plugs arranged in said casing and formed with cone-shaped seats and a roller arranged within the casing and having its ends formed with cone-shaped pivots to engage said seats.

2. A prison bar comprising a tubular casing having a cylindrical bore, a cylindrical roller arranged within the casing and having its ends reduced to provide cone-shaped pivots, bearing blocks or plugs arranged in the bore of said casing and formed with seats to receive said pivots and transverse fastenings for retaining said blocks or plugs in said casing.

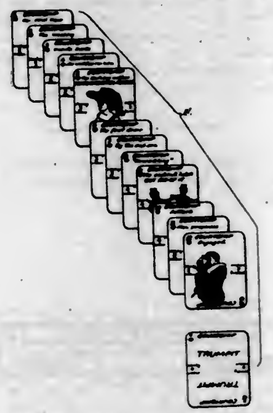
886,130. PLAYING-CARD PACK. HARRY DE JOANNIS, Chicago, Ill. Filed Aug. 12, 1907. Serial No. 388,095.

1. In a playing card pack, a series of cards sequentially numbered for rank in play, one of said cards numerically below the maximum playing value, bearing an expression indicative of enhanced value at critical moments.

2. In a playing card pack, a series of cards sequentially designated for rank in play, one of said cards numerically below the maximum playing value bearing an expression indicative of winning rank at critical moments.

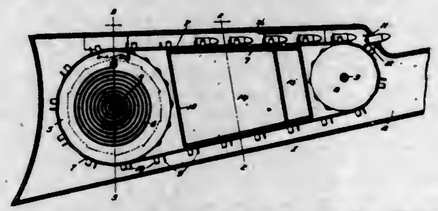
3. In a playing card pack, a plurality of suits of cards, the several cards of each suit bearing like suit indications, and bearing also indications of trick-taking value, there being in said pack a card devoid of trick-taking value bearing an expression calling for the play of trumps thereon.

4. In a playing card pack, a plurality of suits of cards, the several cards of each suit having different indicated trick-taking values and similar suit indications, and each suit comprising a card bearing an expression of command calling for the play of trumps thereon.



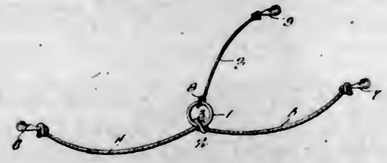
5. A playing card pack comprising cards divided into equal suits, the cards of each suit bearing a suit indication, indications of sequential trick-taking value, and independent scoring value indications, a card of each suit bearing an expression of command calling for the play of trumps thereon, another card of each suit bearing an expression indicative of increased value at critical moments, and another card of each suit bearing an expression of command indicative of advantage in getting rid of such card.

886,131. GUN-STOCK. RUDOLPH H. JULIEN, Otisville, Minn. Filed Aug. 23, 1907. Serial No. 389,884.



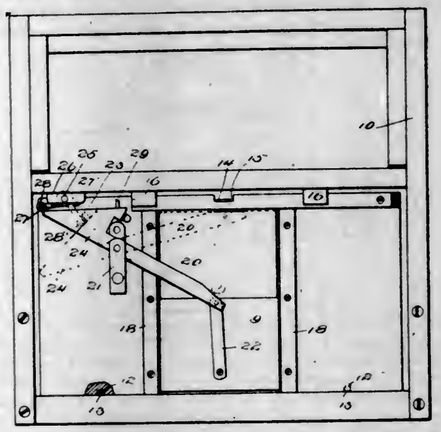
A hollow firearm stock having an opening through which cartridges may be projected to the exterior of such stock and a flange extending inwardly into said stock at one side of said opening, a pair of wheels mounted in said stock, one of said wheels being below said flange and proximate thereto and an endless carrier engaged and operated by the wheels and provided with outwardly projecting stops and spring clamps to hold the cartridges and present them successively to said flange, the latter serving to detach the cartridges successively from said carrier and to project the same through said opening.

886,132. SHACKLE. GEORGE C. KENYON, Mount Carroll, Ill. Filed Dec. 11, 1907. Serial No. 406,072.



A device of the class described comprising a ring member, a flexible shackle secured to the ring member at its center and being provided with clasps upon each of its ends, and a flexible member having a clasp also secured to the ring.

886,133. CASE FOR PLAYER-PIANOS. HERMAN J. KIEFER, New York, N. Y., assignor to The Laffargue Co., Inc., New York, N. Y., a Corporation of New York. Filed Feb. 6, 1908. Serial No. 414,594.

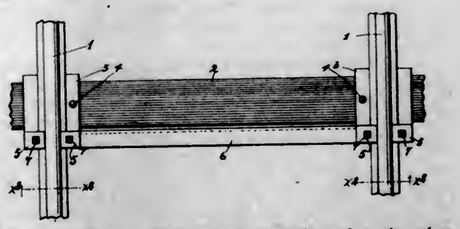


1. In a device of the class described, the combination with a player piano case, of a closure vertically slidable, a lever pivoted to the case and positioned to actuate the closure, of a head carried by the lever, a roller positioned to move upon and actuate the head and lever, and means without the case to actuate the roller.

2. The combination with a player piano case, of an opening in the front of the said case, of a closure proportioned to close the said opening, and slidable vertically, a lever pivoted adjacent the opening, and operatively connected with the closure, a head carried by the lever and provided with a surface inclined to the length of the lever, a shaft journaled adjacent the closure and having one end within and the other end without the case, a roller carried by the inner end of the shaft, and manipulating means carried by the outer end of the shaft.

3. The combination with a player piano case, of a front board removably associated therewith, and provided with a pedal opening, a closure for the said pedal opening slidable vertically of the front board, a lever pivoted to the front board, and removable therewith, and a crank journaled to the case and adapted to engage with and operate the lever when the front board is in position in the case.

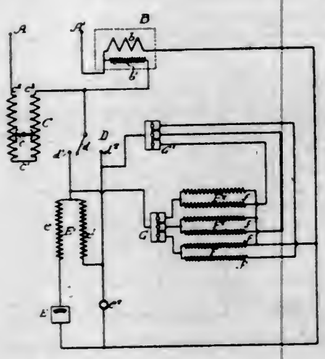
886,134. SPACING DEVICE FOR RAILWAY-TRACKS. JOSEPH KLINKHAMMER, Hopkins, Minn. Filed Nov. 4, 1907. Serial No. 400,458.



The combination with a pair of rails and a tie, of a pair of bearing plates interposed between the base flanges of said rails and said tie, and projecting beyond one side of said tie, means for securing said plates to said tie, rail engaging clamps resting upon the upper projecting

ends of said bearing plates, a spacing angle bar underlying the projecting ends of said bearing plates, with its horizontal flange engaging therewith, and its vertical flange turned next to said tie, and nutted bolts passed through the rail engaging clamps, bearing plates and spacing bar rigidly securing the same together, substantially as described.

886,135. WATTMETER-TESTING APPARATUS. OTTO A. KNOPP, Oakland, Cal. Filed June 19, 1907. Serial No. 379,783.



1. A wattmeter testing set including a two-point switch connected to one current supply main, a standard resistance unit having two sections, an ammeter having one terminal connected to one of said sections and a second terminal connected to the wattmeter to be tested, and a second switch connected between one of the points of the first switch and the connection between the wattmeter and the ammeter, both sections of the resistance unit being connected to the second point of the two-point switch, and the second section of said resistance unit being connected between the first point of said switch and the second switch, substantially as described.

2. A wattmeter testing set including a standard resistance unit having two sections, an ammeter, a two-point switch, and a single point switch, with connections between said apparatus arranged to permit of said two resistance sections being connected both in series with the ammeter, one in series with the ammeter and the other in parallel with the ammeter and the first section, or one of said sections in series with the ammeter, substantially as described.

3. A wattmeter testing set including a two-point switch, a standard resitance unit having one section connected between the two contact points of said switch and a second section having one end connected to one of the contacts of said switch, an ammeter in series with said second section, with a connection between said ammeter and the wattmeter to be tested, and a switch for connecting the two sections of the resistance in parallel with each other, substantially as described.

4. A wattmeter testing set including a two-point switch, a standard resistance unit having two sections, a plurality of standard shunt resistances also each having two sections, an ammeter in series with one of the sections of the standard resistance unit, means for placing one section of any one of the shunt resistances in parallel with one of the sections of the standard resistance and the ammeter, and means for placing both sections of any one of the shunt resistances in parallel with both sections of the standard resistance unit connected in series with each other and with the ammeter, substantially as described.

5. The combination of a two-point switch, two multiple point switches, a plurality of bodies of shunt resistance connected to said multiple point switches, a body of standard resistance having two sections, one of the sections being connected between the contacts of the two-point switch, an ammeter in series with the other section, and connections whereby any one of the shunt resistances may be connected as a whole in parallel to the two sections of the standard resistance connected in series with each other and with the ammeter, said connections also permitting one section of any of the shunt resistances being connected in parallel with one of the sections of the standard resistance, substantially as described.

886,136. KEYLESS LOCK FOR TRAVELING BAGS, &c. JOHN KRUSE, St. Louis, Mo. Filed July 5, 1907. Serial No. 382,341.



1. A lock of the class described, comprising a housing, a plurality of locking bars arranged to slide therein, in which locking bars are formed notches, means actuated from the exterior of the housing for shifting the sliding locking bars, and adjustable means for limiting the outward movement of the locking bars.

2. A lock of the class described, comprising a housing, a plurality of locking bars arranged to slide therein, in which locking bars are formed notches, means actuated from the exterior of the housing for shifting the sliding locking bars, means whereby said locking bars are released after having been shifted to bring the notches into alinement, and adjustable means for limiting the outward movement of the locking bars.

3. A lock of the class described, comprising a housing, a plurality of locking bars arranged to slide therein, in which locking bars are formed notches, means actuated from the exterior of the housing for shifting the sliding locking bars, means whereby said locking bars are returned to their normal positions, and adjustable means for limiting the outward movement of the locking bars.

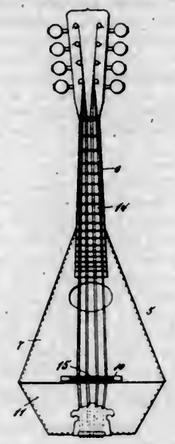
4. In a lock of the class described, a housing, a plurality of spring actuated locking bars arranged to slide in the housing, in which locking bars are formed notches, means arranged on the interior of the housing and actuated from the exterior thereof for shifting the sliding bars to bring the notches into alinement, means actuated from the exterior of the housing for releasing the locking bars, and adjustable means for limiting the outward movement of the locking bars.

5. In a lock of the class described, a housing, a plurality of spring actuated locking bars arranged to slide in the housing, in which locking bars are formed notches, means arranged on the interior of the housing and actuated from the exterior thereof for shifting the sliding bars to bring the notches into alinement, and adjustable means for limiting the movement of the locking bars in one direction.

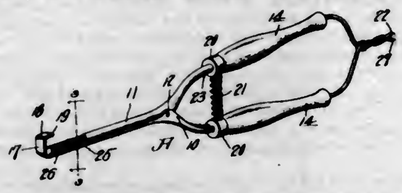
886,137. MANDOLIN. FRANK LANG, Chicago, Ill. Filed Jan. 27, 1908. Serial No. 412,807.

1. In a musical instrument, a sound-box comprising a sounding-board and back having angular surfaces and outlines, and side walls secured thereto.

2. In a musical instrument, a sound-box comprising a sounding-board and a back which are tapered and converge at opposite ends and side walls secured thereto.



886,138. ELECTRIC IGNITER. JOHN N. LANSINGER, Kent, Ohio. Filed Apr. 24, 1907. Serial No. 370,007.



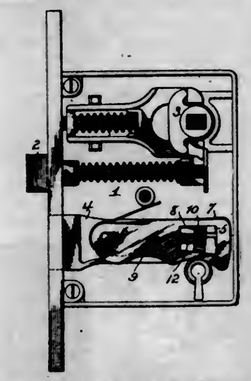
1. An electric igniter comprising, in combination, a member substantially semi-circular in cross-section and having its ends flattened and bent back parallel with the main portion thereof, said end constituting a stationary contact, a member substantially tubular in cross-section pivoted to and normally within the first-named member, a movable contact secured to said tubular member and passing therethrough and insulated therefrom, the movable contact being adapted to engage the said stationary contact, handles secured to the said pivoted members, and circuit wires attached to the contact members and passing through the said handles.

2. In an electric igniter, the combination of two contact members pivoted together intermediate of their ends, one of said members carrying a movable spring contact which contact projects in substantial alinement therewith and moves in a plane coincident with the plane of movement of said carrying member, the other of said contact members having a flattened end adapted to substantially guard the movable contact from outside influence and constituting a stationary contact, operating handles secured to the ends of the said contact members, circuit wires secured to the said contact members within the said handles, and spring means normally tending to retain the movable contact within the stationary contact, substantially as set forth.

886,139. LOCK. ALFRED LAWRENCE, Stamford, Conn., assignor to The Yale & Towne Manufacturing Company, Stamford, Conn. Filed Nov. 20, 1907. Serial No. 403,084.

1. The combination with a lock the bolt of which is adapted to be actuated by a plurality of keys, one of which is an emergency key, of an emergency tumbler, adapted when the bolt is thrown to its locked position by the emergency key to prevent the operation of any one of the other keys.

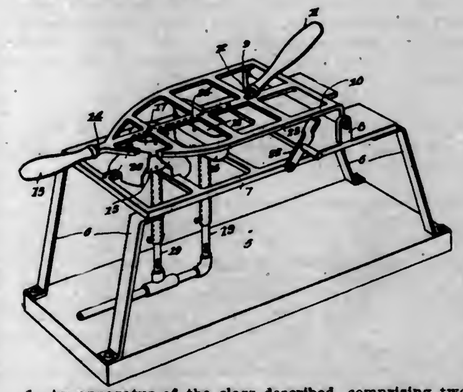
2. A lock comprising a bolt and tumbler mechanism adapted to be actuated by any one of a series of keys including an emergency key, and means, operable when the tumbler mechanism and bolt have been actuated by the emergency key, to prevent the operation of the tumblers or bolt by any other key.



3. A lock comprising a bolt and main tumbler mechanism adapted to be actuated by any one of a series of keys including an emergency key, and an emergency tumbler operable when the main tumbler mechanism and bolt have been actuated by the emergency key to prevent the rotation in the lock, of any other key.

4. In a lock, the combination with a bolt, and a series of main tumblers adapted to be actuated by a plurality of keys including an emergency key, of an emergency tumbler actuated by all the keys except the emergency key, and adapted, when the bolt is thrown to its locking position by the emergency key to prevent the unlocking movement of any other key.

886,140. APPARATUS FOR FORMING DENTAL STRUCTURES. JOHN A. LENTZ, Phœnix, Ariz. Filed Mar. 16, 1907. Serial No. 362,657.

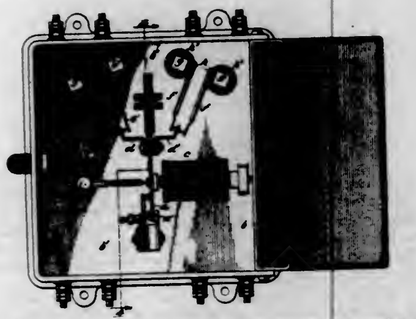


1. An apparatus of the class described, comprising two frames pivotally secured together; oppositely disposed mold retaining cups rigidly secured to the opposing faces of each of said frames; and a heat retaining shield secured to the lower frame and surrounding the lower mold retaining cup, and means to heat said lower cup.

2. An apparatus of the class described, comprising two frames pivotally secured together; oppositely disposed mold retaining cups rigidly secured to the opposing faces of each of said frames, said cups provided with a plurality of ports; a heat retaining shield secured to the lower frame and surrounding the lower mold retaining cup; and means to supply heat to the retaining cups.

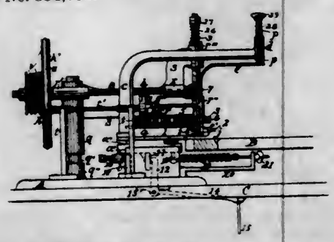
3. A dental structure holding machine, comprising two open work frames pivotally secured to each other at one end; mold retaining cups having ports near the bottom thereof secured to said frame on their opposing faces, the tops of said cups being adapted to register when in operative relation to each other; a heat concentrating shield removably secured to the bottom frame and surrounding the bottom cup; means to supply heat to the bottom of said cups; and means to hold said top frame elevated above said bottom frame.

886,141. INTERRUPTER. AUGUST R. LUSCHKA, River Forest, Ill., assignor to Western Electric Company, Chicago, Ill., a Corporation of Illinois. Filed Dec. 11, 1905. Serial No. 291,205.



In a pole changer, the combination with a base, of a vibratory arm carried thereby, insulated-angularly disposed contact fingers carried by said arm, a pair of contact springs mounted on edge associated with each finger, adapted to be intermittently connected with said finger in the operation of said arm, the free ends of each pair of springs lying on opposite sides of its associated finger, and a supporting post for each spring, the fixed end of each spring being bent at right angles to the body of said spring to slide in a groove in the rear side of its supporting post to vary the distance between the free end of said spring and its associated finger, the said angular end of the spring being longitudinally slotted, and a screw passing through said slot into the post to secure the spring in an adjusted position.

886,142. HAT-CURLING MACHINE. EDUARD M. LYMAN and JOSEPH IVES, Peekskill, N. Y. Filed Jan. 30, 1907. Serial No. 354,788.



1. In a hat curling machine, the combination with wheels for moving the hat brim, flexible guides on one side of said wheels for guiding the hat brim to the said wheels, on the other side of said wheels and adjacent thereto a curved ironing plate and means for heating said plate, an ironer for vibrating longitudinally in said ironing plate, means for suspending and operating said ironer, a plate beneath the ironing plate curved to conform to the curves of the ironing plate but separated therefrom by an air space, and a former adjacent to the ironing plate.

2. In a hat brim curling machine the combination with means for moving the hat brim, of flexible guides for guiding the hat brim to the moving means, a curved ironing plate adjacent to the moving means and means for heating said plate, an ironer operating longitudinally within the ironing plate, means for suspending and operating the ironer, a plate beneath the ironing plate curved to conform to the curves of the ironing plate but separated therefrom by an air space, and a former adjacent to the ironing plate.

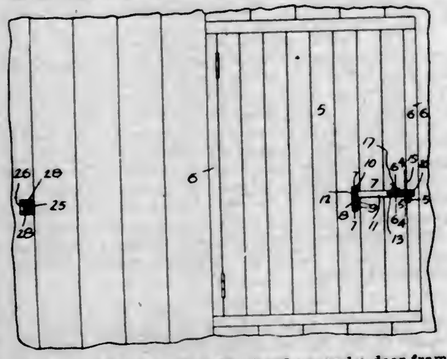
3. In a hat brim curling machine a wheel having a fixed bearing and a movable wheel for carrying the hat brim adapted to engage and disengage one from the other, a sliding base supporting the movable wheel, a bracket on said sliding base supporting a spindle above and about centrally of a hat in position for curling on the fixed table, an arm from said spindle extending out and down to the ironing plate, an ironer on the end of said arm lying within the ironing plate, means for reciprocating said arm comprising an extension from said arm and a connecting rod uniting the arm with a revolving crank-disk, a curved ironing plate within which the ironer operates and means for heating said plate both secured to the movable base, a stationary table in front of the movable base, a plate used in conjunction with the ironing plate fixed to the stationary table, and a former secured to the stationary table adjacent to the ironing plate.

4. In a hat brim curling machine the combination of a fixed and a movable means for moving the hat brim, the movable means being on a movable base, a bracket on the movable base supporting a spindle above and about centrally of a hat in position for curling on a fixed table, an arm from said spindle extending out and down to an ironing plate, an ironer on the end of said arm lying within the ironing plate, means for reciprocating said arm, a curved ironing plate adjacent to the moving elements within which the ironer oscillates, and means for heating the ironing plate both secured to the movable base, a fixed table in front of the movable base, a plate on the fixed table beneath the ironing plate, a former adjacent to the ironing plate, and adjustable guides to direct the hat brim to the hat moving means.

5. In a hat brim curling machine, the combination with a curved ironing plate, of an ironer operating inside of said ironing plate, and means for imparting a reciprocating motion to said ironer in the direction of the length of said plate and upon a curve whose axis corresponds with that of the ironing plate.

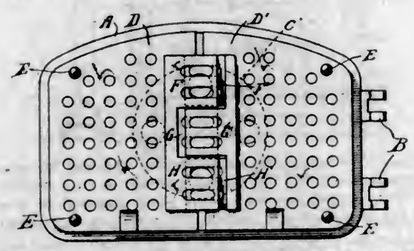
[Claims 6 to 12 not printed in the Gazette.]

886,143. DOOR-LATCH. WILLIAM F. MARTEN, Pine River, Wis. Filed June 26, 1907. Serial No. 380,915.



The combination with a swinging door, and a door frame, of a strap secured to said door, said strap having its upper end bent upon itself in spaced relation, a latch member having one end disposed between the body of said strap and the bent portion thereof, a pivot pin engaged through said bent portion, said latch member, and said strap, a guard plate secured to the free end of said door and having a vertical slot, said latch member having its free end projecting through and beyond said slot, and a keeper secured to said door frame and projecting outwardly therefrom, said keeper having a notch in its upper edge to receive the free end of said latch member, said guard plate being adjacent to said keeper in the closed position of said door.

886,144. FURNACE-DOOR PROTECTOR. HENRY J. MARX, Holyoke, Mass. Filed Sept. 13, 1907. Serial No. 392,615.



1. The combination of a furnace door of a furnace door protector consisting of a plurality of perforated parts having overlapping portions correspondingly perforated, and means for securing said parts to the door.

2. The combination with a furnace door of a protector consisting of a plurality of parts having alining means connecting said parts and permitting relative to-and-fro and up-and-down movement of the abutting end surfaces of said parts, and means for securing the outer ends of said parts to the door.

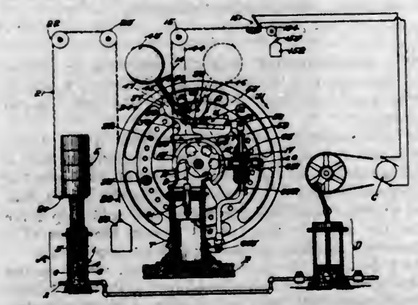
3. The combination with a furnace door of a protector having a plurality of parts, said parts each having projections in different vertical planes to slidably engage the adjacent part, and means for securing the outer ends of said parts to the door.

4. The combination with a furnace door of a protector consisting of a plurality of perforated parts, a plurality of projections on the adjacent edges of said parts, overlapping and slidable upon each other in both vertical and horizontal planes, and a damper in the furnace door.

5. The combination with a furnace door of a protector consisting of a plurality of perforated parts, a series of alternating projections on the adjacent edges of said parts slidable upon each other and correspondingly perforated, and a revoluble damper in the door.

[Claim 6 not printed in the Gazette.]

886,145. ACCUMULATOR-CONTROLLER. WILLIAM B. MASON, Boston, Mass., assignor to Mason Regulator Company, Boston, Mass., a Corporation of Maine. Filed Oct. 12, 1905. Serial No. 282,435.



1. In devices for regulating the feed of an accumulator, in combination, the accumulator, a tappet-carrier, connections intermediate the accumulator and the tappet-carrier whereby the said tappet-carrier is operated through variations in the volume of the contents of the accumulator, tappets on the said tappet-carrier, a tilt-lever with which said tappets engage, and a fluid pressure motor in operative connection with the said tilt-lever.

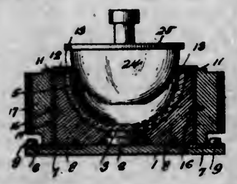
2. In devices for regulating the feed to an accumulator, in combination, the accumulator, the tappet-carrier, connection intermediate the accumulator and the tappet-carrier whereby the said tappet-carrier is operated through variations in the volume of the contents of the accumulator, tappets on the said tappet-carrier, a tilt-lever with which said tappets engage, a valve in operative connection with said tilt-lever and a fluid pressure motor itself controlled by said valve.

3. In devices for regulating the feed to an accumulator, in combination, the accumulator, a tappet-carrier, connections intermediate the accumulator and the tappet-carrier whereby the said tappet-carrier is operated through variations in the volume of the contents of the accumulator, tappets on the said tappet-carrier, a tilt-lever with which said tappets engage, a motive power controller, a fluid pressure motor operating the motive power controller, and a valve controlling the said motor and in operative connection with the said tilt-lever.

4. In devices for regulating the feed to an accumulator, in combination, the accumulator, a tappet-carrier, tappets thereon, connections intermediate the accumulator and the tappet-carrier whereby the said tappet-carrier is operated through variations in volume of the contents of the accumulator, a motive power controller, a fluid pressure motor actuating the said controller, a valve for said motor, a tilt-lever having projections thereon and being engaged by the said tappets, and a lever in operative connection with the said valve and alternately engaged by the projections on the said tilt-lever.

5. In devices for regulating the feed to an accumulator, in combination, the accumulator, a motive power controller, a tilt lever, a fluid pressure motor set in operation by said tilt lever and operatively connected with the said motive power controller, knocking over means contacting with the said tilt lever and connections intermediate the accumulator and the knocking over means.

886,146. GLASS-MOLD. WILLIAM MILLSTEIN, Beaver, Pa. Filed Aug. 23, 1907. Serial No. 389,849.



1. In a glass mold, the combination with a base, formed with radial grooves on its upper surface, of mold sections each having a guide arm pivotally secured thereto, and fitting the grooves in said base, and also formed with a horizontal groove, and a plurality of clamping arms embracing said mold sections and provided with means engaging in said horizontal grooves whereby said arms have free sliding movement upon said sections.

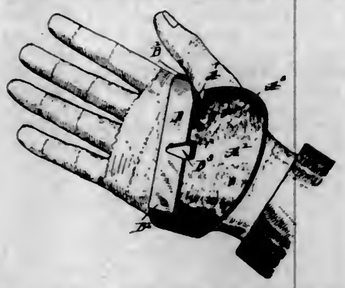
2. In a glass mold, the combination with a base provided with a central serrated boss, and a plurality of radial grooves, of mold sections, each having a guide arm pivotally secured thereto and fitting said grooves, rollers carried by said guide arms, clamping arms pivotally secured together and embracing said mold sections, and means for ornamenting the upper edge of the molded article.

3. In a glass mold, the combination with a base provided with a central serrated boss, and a plurality of radial grooves, of mold sections, each having a guide arm pivotally secured thereto and fitting said grooves, rollers carried by said guide arms, clamping arms pivotally secured together and embracing said mold sections, and means for ornamenting the edge of the molded article,

comprising a ring formed with bands or undulations, and serrated on its under surface.

4. In a glass mold, the combination with a base provided with a central serrated boss, and a plurality of radial grooves, of mold sections each having a guide arm pivotally secured thereto and fitting said grooves, rollers carried by said guide arms, clamping arms pivotally secured together and embracing said mold sections, and means for ornamenting the edge of the molded article, comprising a ring formed with bands or undulations, and serrated on its under surface, and a plunger provided with an annular flange adapted to bear upon said ring.

886,147. CORN-HUSKER. SAMUEL H. MINNIS, Carrollton, Mo. Filed Dec. 5, 1907. Serial No. 405,180.



1. A device of the class described comprising a flexible member consisting of a hand plate and a side extension for covering the thumb, strap extensions for securing the device to the hand, a rigid bar attached to the hand plate and having a curved end extension secured to one of the strap extensions, the curved portion being below the side extension and adapted to form a rest for the thumb, and a husking hook or spur extending outwardly and upwardly from said rigid bar.

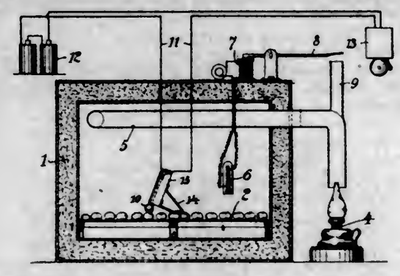
2. A device of the class described comprising a flexible member adapted to be attached to the hand, said member consisting of a hand plate having a side extension forming an apron for the upper portion of the thumb, a lip bent from said hand plate to form a rest for the lower face of the thumb, and a rigid husking bar secured to said hand plate, one end of said bar bent to extend beneath the aforesaid lip of the hand plate, and a husking hook or spur projecting upwardly and outwardly from said rigid bar.

3. A device of the class described comprising a flexible member consisting of a hand plate, and strap extensions for securing the device to the hand, a rigid bar attached to the hand plate and having a curved extension secured to the hand plate and adapted to extend under the thumb, and a husking hook or spur extending outwardly and upwardly from said rigid bar in a line coincident with the longitudinal axis of the hand of the wearer.

886,148. SIGNALING DEVICE FOR INCUBATORS. GEORG MÜCKE, Reisenberg, Austria-Hungary. Filed Dec. 31, 1907. Serial No. 408,832.

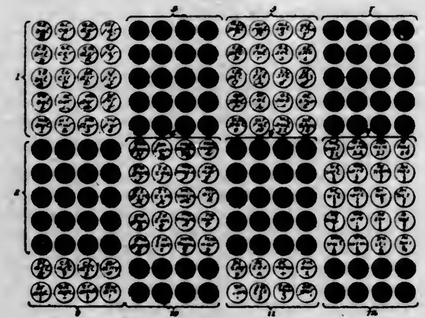
1. In an alarm for incubators, a receptacle for receiving eggs, an electrically operated alarm, a circuit for said alarm including a source of current, and means contacting with the eggs in said receptacle for closing said circuit, said means comprising a thermometer having an indicating portion and a bulb bent at right angles to said indicating portion for forming a comparatively large contact portion for contacting with the said eggs, said circuit being connected to different parts of said thermometer thereby upon the rise of the mercury in the thermometer said circuit will be closed for permitting said source of current to operate said alarm.

2. A signaling device for incubators, comprising a receptacle, for containing eggs, an alarm, a source of current, means for connecting said source of current to said alarm, and a thermostat connected to said connecting means, said thermostat being formed with an indicating portion and a contact portion, said contact portion being designed to be in contact with the eggs in said re-



ceptacle for causing the thermostat to indicate the temperature thereof, the rise of the mercury in said thermostat above a predetermined point being designed to complete the circuit of said current for operating said signal.

886,149. SYLLABIC KEYBOARD FOR TYPE-WRITERS AND TYPE-SETTING MACHINES. HENRY G. McCOOL, Carmichaels, Pa. Filed Aug. 21, 1906. Serial No. 331,511.



1. In a keyboard of the class indicated, a series of blocks of keys bearing as marks the vowels a, e, i, o, u, and the series of consonants associated with said vowels in alphabetical order and thus forming syllables, substantially as described.

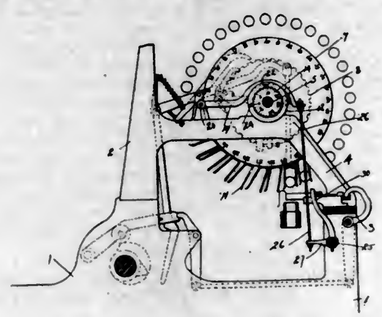
2. The keyboard of the class indicated formed of keys arranged in blocks, each comprising five rows of keys which bear consonants arranged successively in alphabetical order and associated with the vowels a, e, i, o, u, in the same order, as shown and described.

886,150. STOP-MOTION FOR LOOMS. FELIX O'DONNELL, Pawtucket, R. I., assignor of one-half to Susan A. Brown, Pawtucket, R. I. Filed Feb. 27, 1906. Serial No. 303,212.

1. In a device of the character described, a stop lever, rotary means for carrying cops to be transferred into a shuttle, actuating means rotated by said cop carrying means, means engaging said actuating means, and a connection between said engaging means and said stop lever whereby the latter is knocked off to stop the loom at a predetermined point in the rotation of the cop carrier.

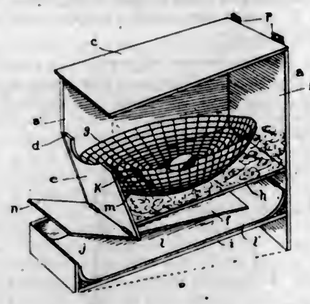
2. In a device of the character described, rotary means for carrying cops to be transferred into a shuttle, actuating means rotated by said cop carrier, a lever engaging said actuating means, a rock shaft and a positive connection between said lever and said shaft whereby the loom will be automatically stopped at a predetermined position of said carrier.

3. In a device of the character described, rotary means for carrying cops to be transferred into a shuttle, actuating means rotated by said cop carrying means, a lever engaging said actuating means, a rock shaft, a positive



connection between the engaging end of said lever and said shaft whereby the loom will be automatically stopped at a predetermined position of said carrier.

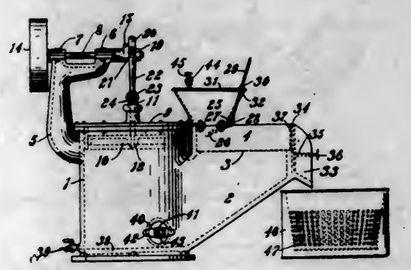
886,151. NEST FOR POULTRY. OLE K. OLSON, Clifford, N. D. Filed June 20, 1907. Serial No. 379,947.



A nest for poultry including a housing having side walls provided with forward extensions at their lower portions, a rear wall, a forward and downward inclined top wall, a downward and rearward inclined partial front wall connecting said side walls above the forward extensions thereof and below said top wall, whereby an entrance opening is provided, a bottom board for the nest proper having a downward and forward inclination and intersecting said partial front wall near the lower portion thereof, a nest above said bottom board having a similar inclination thereto, such nest and bottom board having registering openings at the forward end portions thereof for passage of eggs, a downward and rearward inclined cloth strip under the nest proper connected at its front end to the partial front wall and terminating at its rear end short of the rear wall of the housing, to leave an interval for passage of the eggs, said housing having a bottom chamber provided with a downward and forward inclined bottom wall having an up-curved cushioned upper end and an egg receiving forward extension having an up-curved cushioned lower end, and a hinged cover.

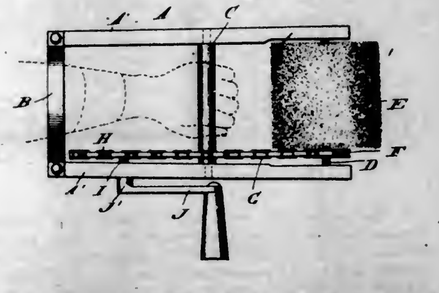
886,152. FOUNDRY-SEPARATOR. EDWARD G. PFAU, Cincinnati, Ohio, assignor to The Pfau Manufacturing Company, Cincinnati, Ohio, a Corporation of Ohio. Filed Mar. 11, 1905. Serial No. 249,577.

In a separator, the combination with a receptacle, of a hopper for supplying material to said receptacle, a gate for said hopper, a horizontally disposed rim on said hopper, a lever for actuating said gate, a member slidably disposed upon said lever, means carried by said member



for engaging said rim, and means for binding said member against movement with relation to said rim.

886,153. HORSE-BRUSH. JOHN B. PFAU, Duluth, Minn. Filed Apr. 22, 1907. Serial No. 369,554.



1. The combination with a frame, of a shaft mounted in said frame carrying a brush, means adapted to receive the arm of a person whereby the frame may be supported, and means for operating said shaft.

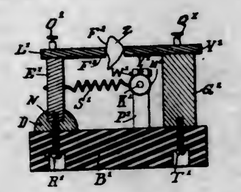
2. In a device of the kind described, the combination with a frame provided with a handle and an opening adapted to receive the arm of a person, of a rotary brush mounted in said frame, and means for operating said brush.

3. In a device of the kind described, the combination with a pair of parallel bars, of a pair of bowed plates connecting one end of said bars, a handle secured between said bars and a rotary brush mounted between said bars for the purpose described.

4. In a device of the kind described, the combination with a pair of bars, of a handle connecting said bars, bowed plates secured on one end of said bars, a shaft mounted in the other end of said bars, a brush secured on said shaft, a sprocket secured on said shaft, a shaft mounted in one of said bars, a sprocket secured on the last mentioned shaft, a chain mounted on said sprocket passing over the first mentioned sprocket and a crank arm for operating said shaft for the purpose described.

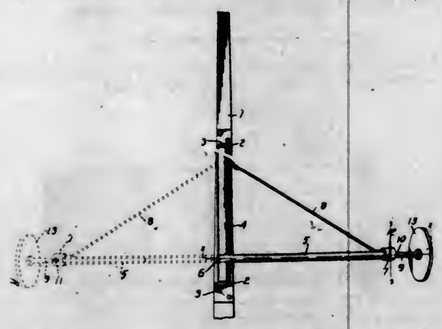
5. A brush of the kind described comprising a frame formed of a pair of parallel bars, a pair of bowed plates connecting one end of said bars forming an opening adapted to receive the arm of a person, a handle connecting said bars centrally and adapted to be grasped by the hand, a shaft mounted in the bars adjacent the open end of the frame, a brush secured on said shaft, a sprocket secured on said shaft at one end of the brush, a shaft mounted in the side bar and carrying a sprocket and a crank, and a sprocket chain passing over the said sprockets for the purpose set forth.

886,154. OSCILLATION-RECEIVER. GREENLEAF W. PICKARD, Amesbury, Mass. Filed Sept. 30, 1907. Serial No. 395,151.



A member of an oscillation receiver, which consists of a fused mass of oxid of zinc.

886,155. LAND-MARKER. ROBERT G. RICKS, Murphy, Ga. Filed July 11, 1907. Serial No. 383,203.

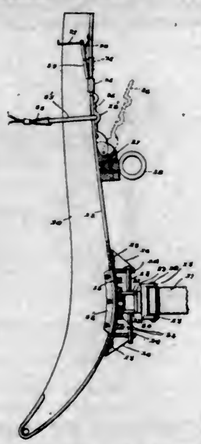


1. The combination with a plow beam, of a rotatable member mounted thereon, a bracket of U shape in cross section having an end formed for engagement with said member and having an end projecting laterally therefrom, a brace between said member and said bracket, a clip engaged with one end of said bracket, a rod projected through said clip and slidable with relation to said bracket, said rod carrying on its projecting end a marking device and being formed along its body portion with a plurality of determinately spaced openings, and a set screw threaded through said clip and designed to engage selectively in said openings.

2. The combination with a plow beam, of bracket bearings secured to the upper face thereof, a rotatable member having end trunnions journaled in said bracket bearings, a laterally projecting bracket of inverted U-shape in cross section having one end surrounding and fixed to said member and having its other end provided with an annular clip, a brace between said member and said bracket, said clip surrounding said brace, a rod projected through said clip and slidable with relation to said bracket, a marking device provided on the outer end of said rod, said rod being formed along its body portion with a plurality of determinately spaced openings and a set screw threaded through said clip and passing through a selected one of said openings.

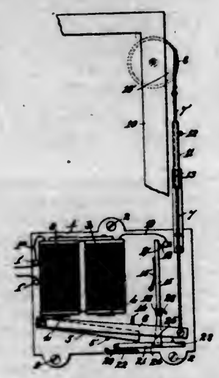
886,156. HAME. KITTEL O. RUE, Wolf-Butte, N. D. Filed Jan. 9, 1907, Serial No. 351,492. Renewed Nov. 19, 1907. Serial No. 402,912.

1. The combination with the hame, of a toothed plate secured thereon having flanges on its end portions and a pintle bolt extended through the said flanges, a yoke having the tug attached thereto, said yoke being provided with means having flanges extending between the teeth of the said plate, and a slot formed in the said flanges and connecting means, whereby the yoke may be folded over on said plate with the teeth thereof extending into the said slot and said yoke be allowed to be adjusted on the said plate, substantially as described.



2. The combination with the hames having a toothed and flanged plate connected therewith, a pintle extended through the said flanges, a yoke with which the tug is connected having flanges extended between the said teeth and hinged on said pintle, said flanges being slotted to permit the teeth to pass therethrough when the yoke is folded over on the said plate.

886,157. ELECTRICALLY-OPERATED CLOCK. DOMINIC SANDRETTO, Ladd, Ill. Filed Nov. 21, 1907. Serial No. 403,149.

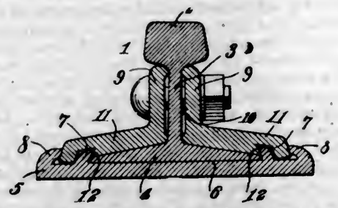


1. In a device of the class described, an electro-magnet, in combination with a bar pivotally mounted beneath said magnet, a rod extending upwardly from the free end of said bar and having means at its upper end for engaging the teeth of a wheel of a clock, means operable by said bar when at its lower limit of movement for energizing said magnet and when at its upper limit of movement for de-energizing said magnet, and a second bar pivoted adjacent to the first said bar and adapted to assist in bringing said bar further into the magnetic field, substantially as described.

2. In a device of the class described, an electro-magnet, in combination with a bar pivotally mounted beneath said magnet, means for connecting the free ends of said bar with the teeth of one of the wheels of a clock, a circuit closing lever pivoted adjacent to said bar and adapted in one position to close the circuit to said magnet and when in retracted position to break the circuit, a second lever pivotally mounted beneath said bar and having a pin adapted to engage said circuit closing lever to hold the same in retracted position, said pin extending into the path of said bar and adapted to be disengaged from the circuit closing lever by the downward movement of said bar and an arm on said circuit closing lever adapted to be engaged by said bar at its upward limit of movement to move said circuit closing lever into retracted position to break the circuit, substantially as described.

3. A device for transforming an ordinary clock into an electrically operated clock and comprising a frame adapted to be secured in a clock case, a bar pivotally mounted on said frame, an electro-magnet arranged above said bar, means operable by said bar for energizing said magnet when said bar reaches its lower limit of movement and for deënergizing said magnet when it reaches its upper limit of movement, and an adjustable member for connecting the free end of said bar with one of the wheels of the clock, substantially as described.

886,158. SPLICE-BAR. GUST A. SANTA, Virginia, Minn. Filed Nov. 26, 1907. Serial No. 403,881.



1. A splice bar for rail joints comprising a base plate having longitudinal ribs upon the body portion of the base plate and flanges upon the ends of the base plate, and angle fish plates having a longitudinal channel and an inclined edge, the edge of the fish plate adapted to engage with the flange of the base plate and the longitudinal channel provided within the fish plate adapted to engage upon the ribs of the base plate, and means for preventing longitudinal movement of the fish plates and the base plate.

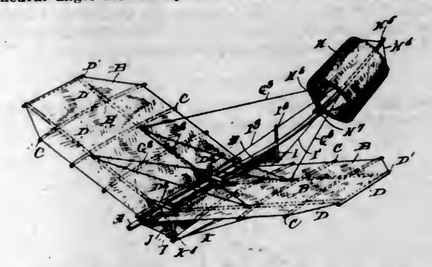
2. In a splice bar for railway rails, a base plate having ribs, and flanges upon its ends spaced from the ribs, of fish plates having a channel adapted to engage the ribs and beveled edges adapted to engage the flanges of the base plate, and means for preventing longitudinal displacement of the fish plates and the base plate.

3. In combination with the meeting ends of a pair of railway rails, of a base plate having upwardly projecting inwardly inclined ribs engaging the edges of the base of the rail, and having upwardly inclined flanges upon their edges, and a pair of angle fish plates, the vertical walls of the fish plates engaging the web of the rail and the base of the fish plates being provided with longitudinally inclined grooves and a beveled edge, the groove of the fish plates adapted for engagement with the ribs of the base plate and the inclined edges of the fish plates adapted to engage with the inclined flanges of the base plates, means for preventing longitudinal displacement of the fish plates and base plate, and means for securing the fish plates and rail together.

886,159. AERIAL APPARATUS. MATTHEW B. SELLERS, Baltimore, Md. Filed July 24, 1907. Serial No. 385,323.

1. An aerial apparatus comprising a central longitudinal boom, spars extending laterally therefrom, ribs crossing the spars, and covering means formed with the spars, and ribs, wings at a dihedral angle on opposite sides of the boom, transverse and diagonal backstays above the wings, posts depending from the boom and material connecting the said posts and forming a keel below the boom, stays between the wings and the said depending posts and stays between the wings and the rear ends of the boom and adjustably connected with the latter, and an open cylindrical rudder in rear of the wings and carried by the boom, substantially as and for the purpose set forth.

2. An aerial apparatus comprising a boom, wings extending laterally therefrom and at a dihedral angle, and a cylindrical rudder in rear of and at an angle to the dihedral angle formed by the wings.



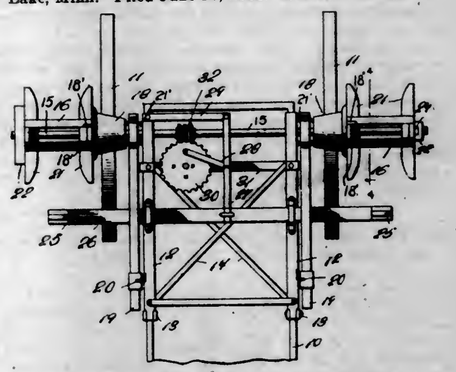
3. In an aerial apparatus, the combination of a pair of laterally extending wings set at a dihedral angle, a central boom between the inner ends of said wings, and a cylindrical rudder on said boom in rear of the wings.

4. An aerial apparatus comprising an inclined sustaining surface and a cylindrical rudder in rear of the inclined surface and connected with the sustaining surface, whereby to guide and steady the apparatus.

5. In an aerial apparatus, the combination of a wing or an aeroplane, arched from front to rear, and having a plurality of ribs extending from front to rear, whereby to maintain its curvature, with stays connecting the ends of said ribs whereby to maintain them in a bowed form.

[Claims 6 to 24 not printed in the Gazette.]

886,160. WIRE-REEL. CHARLIS W. STARK, Mountain Lake, Minn. Filed June 27, 1906. Serial No. 323,627.

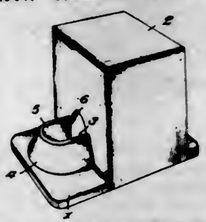


1. In a machine of the class specified, the combination of a shaft, a wire spool mounted thereon, means for rotating said shaft and spool, an end-wise movable bar provided with an eye for guiding the wire to said spool, a worm secured to said shaft, a worm gear engaged by the worm and provided with a plurality of holes formed therein at varying distances from its axis of rotation, an oscillating lever pivoted at one end to said bar, and a pitman pivoted at one end in one of the holes in said worm wheel and at the other end to said lever, for actuating the latter, to effect the movement of said bar and lay the wire evenly upon said spool.

2. In a machine of the class described, in combination, a frame, an axle, ground wheels carried by the axle, beams constituting the sides of the frame, a shaft journaled at opposite ends in bearings secured to said beams, a drive wheel and a wire spool carried by said shaft, the drive wheel being in frictional engagement with the adjacent ground wheel, means carried by said drive wheel for engagement with said spool, to rotate the latter, a notched standard secured to each beam, spring levers each having

one end engaged with the adjacent standard and the intermediate part bearing upon said shaft to hold said drive wheel against said ground wheel, a chain connecting each beam with the axle, a chain connecting the other end of each lever with the axle, means for guiding the wire to said spool, and means for reciprocating said guiding means, to lay the wire evenly upon said spool.

886,161. INK-WELL. ARCHIE E. SWAN, Waynesville, Ill. Filed Oct. 1, 1907. Serial No. 395,426.

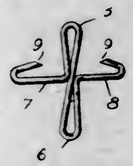


1. An ink well of the class described, comprising a base, a reservoir on said base, said reservoir having a substantially V-shaped opening in one wall thereof, said wall also having a depression around the opening, a wall on said base, surrounding said opening, said wall forming a dip cup and means to remove all of the fluid from the reservoir.

2. An ink well of the class described, comprising a base, a reservoir integral with said base, the upper face of the base, surrounded by the reservoir, being inclined, the forward wall of said reservoir having a substantially V-shaped opening in the lower edge thereof, said wall also having a depression surrounding the opening, a wall on the forward portion of said base and surrounding the opening in the reservoir, said wall forming a dip cup, the bottom of said dip cup being concaved and that portion of the wall at the forward end of the dip cup being inclined.

3. An ink-well of the class described, comprising a base, a reservoir integral with said base, the upper face of which is inclined forwardly, the forward wall of said reservoir having an inverted V-shaped opening therein adjacent the lower edge of the wall, said wall also having means surrounding the opening to convey fluid to the opening and a dip-cup adjacent the opening, the wall of which is concave and extended below the plane of the lower end of the opening.

886,162. HOG-RING. PETER A. SWANSON, Lynn Center, Ill. Filed July 31, 1907. Serial No. 386,472.

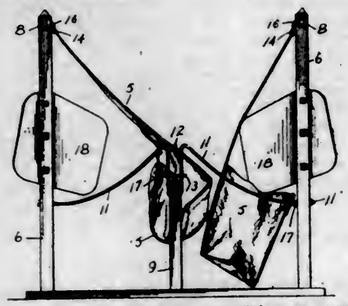


A nose-ring for hogs formed of a single strip of wire bent into the shape of a Maltese cross, each vertical arm of the cross consisting of a flat loop, and each horizontal arm consisting of a right-angular extension of the free arm of the adjacent loop, the sharpened extremities of the last-mentioned arms being bent backwardly and directed towards each other to form spurs.

886,163. MAIL-POUCH CATCHER. ELLA J. SWOMLEY, Monrovia, Md. Filed Jan. 16, 1908. Serial No. 411,110.

1. A mail-pouch catcher, comprising a pocket suspended wholly from its upper edge for bodily swinging movement under the impact of a mail-pouch thrown thereinto, and means for holding the pocket normally in predetermined receiving position.

2. A mail pouch catcher, comprising a pocket suspended wholly from its upper edge for bodily swinging movement under the impact of a mail pouch thrown thereinto, and means for retaining the pocket at the rearward limit of its swinging movement.



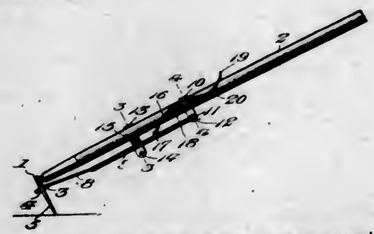
3. A mail pouch catcher, comprising a receptacle mounted for a rearward swinging movement bodily under the impact of a mail pouch thrown thereinto, means for retaining the receptacle at the rearward limit of its movement, and means for directing the receptacle to receiving position when released from the retaining means.

4. A mail pouch catcher, comprising in combination, an elevated support, an open-topped receptacle having its rear side continued upwardly above the open top and connected at its upper edge with said support, to permit its swinging movement bodily under the impact of a mail pouch thrown thereinto, and means for directing the receptacle to and retaining it normally in its receiving position.

5. A mail pouch catcher, comprising in combination, an elevated support, an open-topped receptacle supported wholly at its rear upper edge from said support and adapted to swing bodily under the impact of a mail pouch thrown thereinto, the rear side of the receptacle being continued upwardly above the open top, means for retaining the receptacle at the rearward limit of its swinging movement, and means for directing the receptacle to receiving position when released from the retaining means.

[Claims 6 to 18 not printed in the Gazette.]

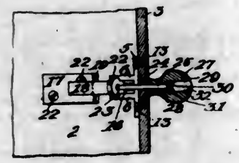
886,164. RAKE-TOOTH CLEANER. HERBERT TAIT, Buffalo, N. Y. Filed June 13, 1907. Serial No. 378,865.



The herein described rake tooth cleaner comprising a perforated cleaner plate to engage the teeth of the rake, braces connected to the cleaner plate, a bar formed on said braces, said bar being pivotally connected to the handle of the rake by means of a clip, a spring connected to said bar and to said handle, a clip provided with a stop bolt for limiting the movement of the cleaner plate, and a lever consisting of a bent wire pivotally connected to the opposite sides of the handle and pivoted to said bar.

886,165. LOCKING DEVICE. ERNEST E. VORE, Huntington Park, Cal. Filed Oct. 29, 1907. Serial No. 399,693.

1. A device of the character described, comprising a bracket, a catch-plate normally in engagement with said latch, a shank or rod secured near one end to said latch, a knob provided with apertures of different dimensions positioned upon said shank or rod, the shank extending entirely through one aperture and having one end positioned in the other aperture, a washer upon the shank within the last-mentioned aperture, the end of the shank within the aperture being bifurcated or split, and the bifurcated portion bent outwardly, and filling means in said last-mentioned aperture and in engagement with the bifurcated or split end.



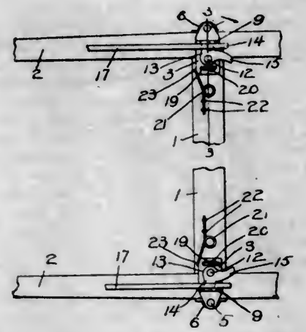
2. In a locking device, the combination with a support and a movable member or door carried thereby, a bracket provided with parallel lugs, carried by said door or movable support, said lugs provided near their lower edge with registering apertures, a latch positioned between said lugs, fastening means extending through said latch and through said apertures, said latch provided with a depending portion adapted to engage the lower end of said bracket for limiting pivotal movement of the latch, a spring interposed between the lugs and the base of the bracket and said latch for normally exerting an outward pressure upon the latch, a catch-plate carried by the support and normally in engagement with said latch, and an operating device carried by said door or movable support and connected to said latch.

3. In a device of the character described, the combination of a bracket provided with lugs, a latch positioned between said lugs, said lugs provided with registering apertures near their lower edge, said latch provided with a depending portion, having an aperture formed therein, means extending through the apertures of said lugs and through the aperture of said depending portion, and pivotally securing said latch upon said lugs, said bracket provided with a seat or socket formed therein between the lugs, a spring seated at one end in the seat formed in said bracket and having its opposite end bearing against the latch between the lugs, said lugs constituting a protecting casing for said spring, the lower end of said depending portion extending below the lower end of said lugs and below the lower end of the bracket, said latch provided with a vertical, flat finger-portion, said finger portion provided with a transverse aperture, the depending portion and the finger portion formed in the same vertical plane, said latch provided with a hook portion formed at right-angles to the plane in which said depending portion and finger portion is formed, means positioned in the aperture of said finger portion, and being capable of swinging said latch upon a support, and a catch co-operating with said hook of the latch.

886,166. HITCHING DEVICE. ADAM WAGNER, Georgetown, Ohio. Filed May 13, 1907. Serial No. 373,439.

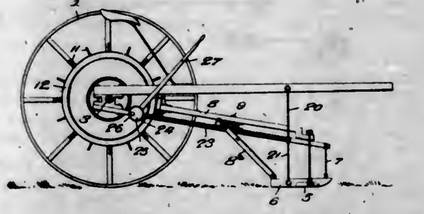
1. A device of the type set forth, comprising the combination with the front cross beam of a vehicle, of a plate pivoted at its outer end to said cross beam, displaceable independently movable trace fastening means carried by said plate, and a spring for moving said plate rearwardly on its pivot.

2. A device of the class described comprising the combination with the front cross beam of a vehicle, of a plate pivoted at its outer end to said cross beam for horizontal swinging movement, means for limiting the swinging movement of said plate in either direction, displaceable independently movable trace fastening means carried by and movable with the plate, and a spring tending to hold said plate normally at the rearward limit of its movement.



3. A device of the type set forth, comprising the combination with the front cross beam, of a vehicle, of a plate pivoted at its outer end to said cross beam for horizontal swinging movement, said plate being formed with a transverse slot, a post carried by said beam and projecting through said slot, a spring secured to said beam and bearing against said plate, said spring tending to hold said plate at the rearward limit of its movement, and trace fastening means carried by said plate.

886,167. MOWER. OSCAR C. WEIKEL and EBBERT R. WEIKEL, Ronceverte, W. Va. Filed July 25, 1907. Serial No. 385,590.

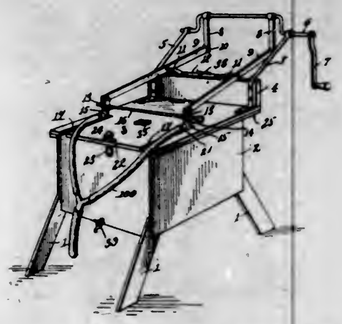


A device of the class described comprising the combination with a frame and carrying wheels therefor; of a driving wheel having a plurality of pins arranged in staggered form upon its periphery, a driving lever pivotally mounted on said frame, a cutter bar, an arm connecting one end of said lever to the cutter bar, a pin on the opposite end of said lever, a roller rotatably mounted on said pin, members secured to the upper and lower faces of said lever, V-shaped guiding members on said members and disposed above and below said roller, adapted to engage said pins upon the driving wheel, a shoe, arms pivotally secured to said shoe and frame, a rod, said rod and arms being pivotally connected at a common point, an eccentric pivotally mounted on the frame, a collar at the rear end of said rod and secured around said eccentric and a controlling lever connected with said eccentric, whereby when the lever is operated the sickle will be raised or lowered.

886,168. CLOTHES-WASHING MACHINE. LAWRENCE M. ADAMS, Fort Steele, British Columbia, Canada. Filed May 29, 1907. Serial No. 376,237.

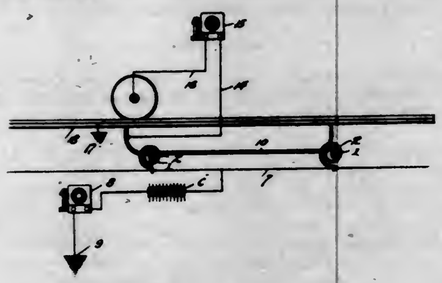
In combination, in a washing machine a casing, a hollow perforate plunger disposed in the casing and having projecting side members, levers, a member secured to the

casing and provided with spring fingers inserted through the levers, means for removably securing the lower ends of



the levers to the side members of the plunger, and means for rocking the levers.

886,169. MEANS FOR ESTABLISHING ELECTRICAL COMMUNICATION WITH MOVING TRAINS. JOEL AMES, Montrose, Iowa, assignor of one-half to Edward Leech, Montrose, Iowa. Filed Sept. 16, 1907. Serial No. 393,216.



1. A railroad track, an electrical conductor arranged parallel thereto, contact members arranged at suitable intervals and consisting of wire coils having upwardly extending vertical terminals and laterally extending horizontal terminals, the latter being connected with the conductor, and a collector shoe carried by a moving train and adapted for engagement with the upstanding terminals of the contact members.

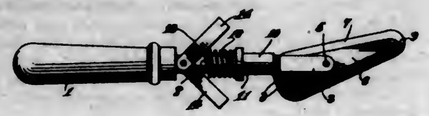
2. In a device of the class described, a contact member consisting of a resilient wire coil having an upstanding terminal and a laterally extending terminal.

3. In a device of the class described, a contact member consisting of a resilient wire coil having a vertically upstanding terminal and a horisontal laterally extending terminal, said coil being secured upon an insulating plate.

4. In a device of the class described, a collector shoe consisting of a resilient wire yoke having a laterally extending portion and upward extending limbs, and suitable supporting members connected with a railroad car.

5. In a device of the class described, a collector shoe supported by a car of a moving train and consisting of a resilient yoke having a laterally extended portion, a plurality of contact members consisting of resilient wire coils supported at intervals upon the track and having upward extending terminals adapted to be engaged by the collector shoe and laterally extending terminals, a conducting wire connected with the laterally extending terminals of the contact members, an electrical conductor connecting the collector shoe with the ground through the metallic car structure, and a battery connected with the conductor connecting the contact members along the track.

886,170. DEVICE FOR MARKING PATTERNS. JULIA AVANSINO, Pleasant Valley, Cal. Filed Jan. 25, 1908. Serial No. 412,611.

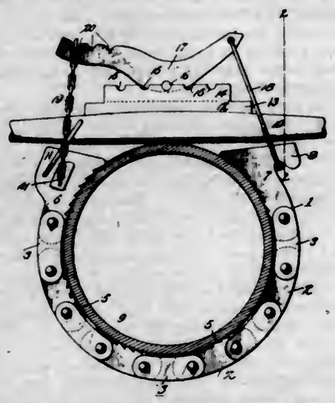


1. A device for marking patterns on goods comprising a handle and a V-shaped iron having beveled edges pivoted to the handle.

2. A device for marking patterns on goods comprising a handle and a V-shaped iron having beveled edges upon two of its sides and apex and serrations upon its remaining side, pivoted to the handle, and a spring pressed collar upon the handle adapted to engage with the serrations of the iron.

3. In a device of the character described, a handle having pivoted arms, and a spring pressed collar, a V-shaped iron having bevels upon two of its edges and apex and the remaining edge being provided with a series of serrations pivoted to the handle, the spring pressed collar upon the handle being adapted to engage the serrations of the iron, and the pivoted arms of the handle being adapted to support the device over a frame whereby the iron is heated.

886,171. PIPE-GRIPPER. WILLIAM F. BARRON, Jacksonburg, W. Va. Filed Jan. 14, 1908. Serial No. 410,859.



1. A gripping member including alternately arranged solid and open links, and means for detachably connecting the links, the links on opposite sides of the center of the member having oppositely effective gripping surfaces.

2. A pipe gripper including an operating bar, a gripping member movably connected to the bar, a saddle carried by the bar, a lever having an adjustable pivotal connection with the saddle, and independent means for connecting each end of the member to the respective ends of the lever.

3. A pipe gripper including an operating bar, a gripping member movably connected to the bar, a saddle carried by the bar, a lever having an adjustable pivotal connection with the saddle, and means for connecting the respective ends of the member to the ends of the lever, one of said connections being adjustable with relation to the pivotal support of the lever.

4. A pipe gripper including an operating bar, a gripping member connected with the bar, a saddle connected to the bar, a lever having an adjustable pivotal connection with the saddle, a link connecting one end of the lever with one end of the member, and a chain connecting the opposite end of the member with the remaining end of the lever.

5. A pipe gripper including an operating bar, a gripping member connected with the bar, a saddle connected to the bar, a lever having an adjustable pivotal connection with the saddle, a link connecting one end of the lever with one end of the member, and a chain connecting the opposite end of the member with the remaining end of the lever, said lever being formed with a series of notches respectively designed to receive the chain.

886,172. EDUCATIONAL DEVICE. JAMES W. BEVANS, Garrett Park, Md. Filed Apr. 30, 1907. Serial No 371,119. Renewed Mar. 30, 1908. Serial No. 424,156.



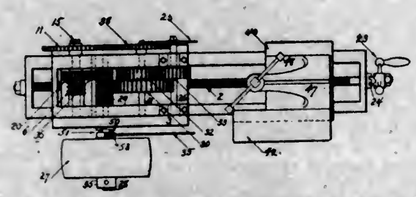
1. An educational device comprising a plurality of sections pivoted together by a common pivot and not connected with each other in any way other than by the pivot, each section having thereon a letter of the alphabet and a pictorial representation designed to be indicated by said letter.

2. An educational device comprising a plurality of sections pivoted together at one end and each carrying a portion of an object and a letter of the alphabet, the letters and portions of objects being so arranged that when some of the sections have been brought together to form a complete object, the letters on these sections will spell the name of the object.

3. An educational device comprising a plurality of sections pivoted together at one end and each carrying upon one face a portion of an object and on the other face a letter of the alphabet and a complete object designed to be indicated by said letter, the portions of the object and the letters being so arranged that when some of the sections have been brought together to spell the name of the object the latter will appear complete upon the reverse side of the sections thus assembled.

4. A device of the character described comprising a plurality of sections pivoted together at one end and not connected with each other in any way other than by said pivot, each section carrying a portion of a representation, the sections being so arranged that they may be moved into position to form a complete representation.

886,173. SAWING-MACHINE. GOTTLIEB BINDER, Louisville, Ky., assignor, by direct and mesne assignments, to Kentucky Gear and Machine Company, Louisville, Ky., Incorporated. Filed Feb. 11, 1907. Serial No. 356,869.



1. In a sawing machine, a base provided with a feed screw, a carriage mounted upon said base and provided with a worm nut mounted upon said screw, a driving shaft mounted in the carriage and provided with a worm to engage said nut, a driving pinion loosely mounted on said shaft, a speed gear loosely mounted upon said driving shaft, a shiftable device adapted to clutch either said pinion or speed gear to said shaft, a power shaft upon said carriage, and separate gearing trains therefrom to said pinion and speed gear.

2. In a sawing machine, a base provided with a feeding device, a carriage mounted upon the base and connected to said device, a slotted driving shaft upon said carriage operatively connected to drive said feeding device and provided with an aperture therein, a slidable key rod mounted in said aperture and provided with keys extending through slots in said shaft, a driving pinion loosely mounted on said shaft and adapted to be engaged by one of said keys, a driving gear loosely mounted upon said shaft and adapted to be engaged by another of said keys, a power shaft upon said carriage, and separate gearing trains therefrom to said pinion and driving gear.

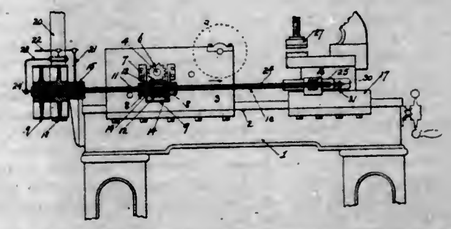
3. In a sawing machine, a carriage provided with a power shaft mounted thereon and having a pinion, a parallel countershaft having a gear meshing with said pinion and a transmitting gear thereon, a parallel saw shaft provided with a driving pinion meshing with said transmitting gear, a base provided with a feed screw, a driving shaft upon said carriage geared to said screw, a gearing from the power shaft to said driving shaft, and a supplemental gearing from said countershaft to said driving shaft.

4. In a sawing machine, a carriage provided with a power shaft mounted thereon and having a pinion, a parallel countershaft having a gear meshing with said pinion and a transmitting gear thereon, a parallel saw shaft provided with a driving pinion meshing with said transmitting gear, a base provided with a feed screw, a driving shaft upon said carriage geared to said screw, a gearing from the counter shaft to said driving shaft, a loosely mounted pinion upon said driving shaft, an intermediate pinion disposed between the loose pinion and the power shaft, and means for connecting the loose pinion to the driving shaft.

5. In a sawing machine, a carriage having a driving shaft provided with a driving pinion, a countershaft having a gear meshing with said pinion and a transmitting gear thereon, a saw shaft provided with a driving pinion meshing with said transmitting gear, a feed screw mounted in the machine base, a traveling nut carried by said screw, a driving shaft for said nut provided with a pinion thereon, an intermediate pinion between the driving pinion and the pinion upon the feed nut driving shaft, a speed gear carried upon said countershaft, a coöperating meshing gear carried upon the feed nut driving shaft, and means for connecting either the pinion or gear upon the feed nut driving shaft to actuate the same.

[Claims 6 to 8 not printed in the Gazette.]

886,174. CARRIAGE-FEED FOR SAWING-MACHINES. GOTTLIEB BINDER, Louisville, Ky., assignor, by direct and mesne assignments, to Kentucky Gear and Machine Company, Louisville, Ky., Incorporated. Filed Mar. 22, 1907. Serial No. 363,949.



1. In a carriage feed, the combination with a frame provided with a way, a carriage mounted to travel there-

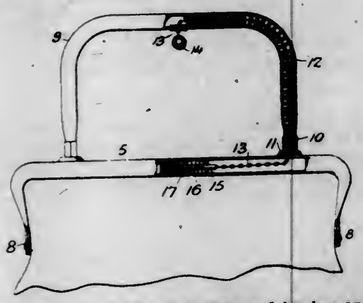
on, a driving shaft supported by the frame parallel to said way, driving means for the carriage carried by said shaft, a rod slidably supported upon said shaft and extended beyond the opposite ends thereof, driving devices mounted upon one end of said shaft, a power shipping device mounted upon the extended end of said rod beyond and adjacent to the driving devices, and shifting means disposed at the opposite extended end of said rod and projecting into the path of the carriage to be automatically actuated thereby.

2. In a carriage feed, the combination with a frame provided with a way, a carriage mounted to travel thereon, a driving shaft supported by the frame parallel to said way, driving means for the carriage carried by said shaft, a rod slidably supported upon said shaft and extended beyond the opposite ends thereof, driving devices mounted upon one end of said shaft, a power shipping device mounted upon the extended end of said rod beyond and adjacent to the driving devices, a shifting lever disposed at one end of said driving shaft to engage an extended end of said rod, and means projecting from said lever into the path of travel of said carriage.

3. In a carriage feed, the combination with a frame provided with a way, a carriage mounted to travel thereon, a carriage driving shaft supported by the frame parallel to said way, a rod slidably supported upon said shaft, driving devices connected to said shaft, a power shipping device carried by one end of said rod beyond the driving devices, a shifting lever disconnected from the rod and disposed at one end of said driving shaft to engage an end of said rod, and a slotted plate slidably mounted upon a fixed support in the path of travel of the carriage and pivotally connected to said lever for operating the same.

4. In a sawing machine, the combination with a frame provided with a way, a traveling carriage mounted thereon, a tubular driving shaft having a longitudinal groove upon its periphery and extending parallel to the way, means carried by said driving shaft to actuate the carriage therefrom, driving pulleys carried by one end of said shaft, a slidable rod extending through said shaft and projected beyond the opposite ends thereof, a belt shipper carried by the end of said projected rod beyond and adjacent to said pulleys, and a shifting device mounted upon a fixed support at the opposite projected end of the rod and extending into the path of the carriage to be automatically actuated thereby.

886,175. PURSE AND BAG FASTENER. FREDERIC H. BLEYER, Brooklyn, N. Y. Filed June 21, 1907. Serial No. 380,128.



1. A receptacle of the class described having an opening, a frame comprising pivotally connected members about said opening to open and close said receptacle, a hollow handle connected to said frame, a bolt in one of the members of the frame to lock the members of the frame together when closed, and means to move the bolt to disengaging position, such bolt-moving means passing through the said hollow handle.

2. In a lock for purses or bags, the combination with a frame composed of coöperative parts and containing locking means, of a hollow handle, and means passing through the handle connecting with the lock and adapted to operate the locking means.

3. In a lock for purses or bags, the combination with a frame composed of two parts, of a bolt in one of the parts, means for engaging the body in the other part, means for causing the engagement of the bolt, a hollow handle connected with one of the frame parts, and a cord or chain connnected with the bolt and passing up and out of the handle to a point where its end may be grasped by the owner.

4. A receptacle of the class described having an opening, a frame comprising pivotally connected members about said opening to open and close said receptacle, a locking device on one member of the frame to engage the other and lock said members when closed, a handle having its ends connected to one side of the said frame and flexible means guided by said handle and connected to said locking means, to disengage the latter and thereby unlock such receptacle.

886,176. TROLLEY-HARP. PERCY C. BLIVEN, Danielson, Conn. Filed May 23, 1907. Serial No. 375,287.



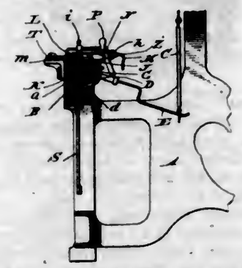
1. A trolley harp comprising a stationary member having spaced arms, a member pivotally connected to the stationary member at the outer end thereof, yokes pivoted to the stationary member, bearing caps connected to said member, in combination with a trolley wheel having a rigidly connected axle, the ends of which are journaled in the bearing caps.

2. A trolley harp comprising a stationary member and a pivoted member, a removable pin for holding said two members in position, bearing caps connected between said two members, yokes pivoted to the stationary member and provided with spaced arms to engage the axle of the trolley wheel, in combination with a trolley wheel having a rigidly connected axle, the ends of which are journaled in the bearing caps, lubricating packing in said bearing caps, and means whereby a lubricant may be fed to the lubricating packing.

886,177. STOP-MOTION FOR LOOMS. BURL F. BOBO, Laurens, S. C., assignor of one-half to E. G. Jessee, Laurens, S. C. Filed Jan. 2, 1908. Serial No. 409,065.

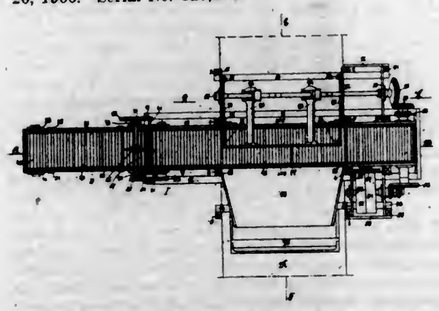
1. In a loom, a filling-fork, means arranged on depression of the tail of said fork to stop the loom, spring-moved means for depressing the tail of the fork, a movable device for normally holding said means against movement, harness, and means arranged when the breakage of a strap causes the harness to fall, to move the said movable device and thereby permit the spring-moved means to move under the action of its spring and depress the tail of the filling-fork.

2. In a loom, the breast-beam, a filling-fork thereon, means arranged on depression of the tail of said fork to stop the loom, harness, a swinging-piece mounted on the breast-beam and arranged when moved to depress the tail of the filling-fork, a spring for so moving the swinging-piece, a rock-shaft mounted on the breast-beam and having an arm disposed under the harness, a spring connected with said shaft and arranged to yieldingly hold said arm against downward movement, and a finger connected and movable with the rock-shaft and arranged to normally hold the swinging-piece against movement under the action of its spring.



3. In a loom, the breast-beam, a filling-fork thereon, means arranged on depression of the tail of said fork to stop the loom, harness, a rod fixed on the breast-beam and arranged alongside the filling-fork, a swinging-piece loosely mounted at an intermediate point of its length on said rod, a spring surrounding and connected to the rod and also connected to the swinging-piece and arranged when said piece is released to force the upper arm thereof downward against the tail of the filling-fork, a rock-shaft journaled in bearings on the breast-beam and having arms disposed under the harness, a finger carried by and movable with the rock-shaft and normally engaging the lower arm of the swinging-piece to hold the latter against movement, and a spring surrounding and connected with the rock-shaft and having an arm bearing against the breast-beam, for the purpose set forth.

886,178. BAND-CUTTER AND FEEDER. ALFRED BÖTTCHER, Benndorf, near Delitzsch, Germany. Filed July 20, 1906. Serial No. 327,106.



1. In a band-cutter and feeder, the combination with a thresher frame, of a threshing drum in said thresher frame in its cross direction, an endless feed-carrier above said thresher frame and parallel to said threshing drum, a chute in the longitudinal direction of said thresher frame and leading from one longitudinal edge of said endless feed-carrier downwards to said threshing drum, a pusher reciprocating in the longitudinal direction of said thresher frame and adapted to push the grain off said endless feed-carrier to said chute, a reversible endless feed-carrier adapted to be connected with either end of said endless feed-carrier, said reversible feed-carrier and said pusher.

2. In a band-cutter and feeder, the combination with a thresher frame, of a threshing drum in said thresher frame in its cross direction, an endless feed-carrier above said thresher frame and parallel to said threshing drum, a chute in the longitudinal direction of said thresher frame and leading from one longitudinal edge of said endless feed-carrier downwards to said threshing drum, a pusher reciprocating in the longitudinal direction of said thresher frame and adapted to push the grain off said endless feed-carrier to said chute, a reversible endless feed-carrier adapted to be connected with either end of said endless feed-carrier, a circular band-cutter above said endless feed-carrier and adapted to cut in the longitudinal direction of the latter, a stop in the other channel of said box and adapted to sweep the surface of said endless feed-carrier for stopping the grain, a chute leading from one slot in said box downwards to said hopper, a pusher reciprocating in the longitudinal direction of said thresher frame and passing through the other slot in said box for sweeping the surface of said endless feed-carrier and pushing the grain off to said chute, and means for driving said endless feed-carrier, said reversible endless feed-carrier, said circular band-cutter and said pusher.

3. In a band-cutter and feeder, the combination with a thresher frame provided with a hopper, of a threshing drum in said thresher frame in its cross direction and beneath the hopper, a box on said thresher frame parallel to said threshing drum and open at the top and provided in its two longitudinal sides with slots of a length approximately corresponding to that of said hopper, an endless feed-carrier in said box and forming with the upper parts of its two longitudinal sides two opposite channels, a chute leading from one slot in said box downwards to said hopper, a pusher reciprocating in longitudinal direction of said thresher frame and passing through the other slot in said box for sweeping the surface of said endless feed-carrier and pushing the grain off to said chute, and means for driving said endless feed-carrier and said pusher.

4. In a band-cutter and feeder, the combination with a thresher frame provided with a hopper, of a threshing drum in said thresher frame in its cross direction and beneath the hopper, a box on said thresher frame parallel to said threshing drum and open at the top and provided in its two longitudinal sides with slots of a length approximately corresponding to that of said hopper, an endless feed-carrier in said box and forming with the upper parts of its two longitudinal sides two opposite channels, a circular band-cutter above said endless feed-carrier in one channel of said box and adapted to cut in the longitudinal direction of the latter, a stop in the other channel of said box and adapted to sweep the surface of said endless feed-carrier for stopping the grain, a chute leading from one slot in said box downwards to said hopper, a pusher reciprocating in the longitudinal direction of said thresher frame and passing through the other slot in said box for sweeping the surface of said endless feed-carrier and pushing the grain off to said chute, and means for driving said endless feed-carrier, said reversible endless feed-carrier, said circular band-cutter and said pusher.

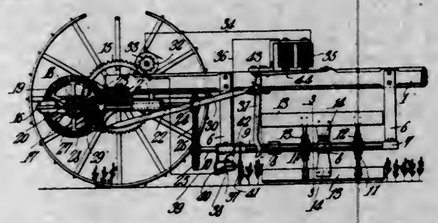
5. In a band-cutter and feeder, the combination with a thresher frame provided with a hopper, of a threshing drum in said thresher frame in its cross direction and beneath the hopper, a box on said thresher frame parallel to said threshing drum and open at the top and in the upper parts of the end sides and provided in its two longitudinal sides with slots of a length approximately corresponding to that of said hopper, an endless feed-carrier in said box and forming with the upper parts of its two longitudinal sides two opposite channels, a chute leading from one slot in said box downwards to said hopper, a pusher reciprocating in the longitudinal direction of said thresher frame and passing through the other slot in said box for sweeping the surface of said endless feed-carrier and pushing the grain off to said chute, a reversible box adapted to be connected with either end of said box, a second endless feed-carrier in said reversible box, a circular band-cutter above said reversible box and adapted to cut in the longitudinal direction of the latter, and means for driving said two endless feed-carriers, said band-cutter and said pusher.

[Claims 6 to 8 not printed in the Gazette.]

886,179. AUTOMATIC ELECTRIC COTTON-CHOPPER. DAVID R. BRAGUNIER and ALFORD B. THOMPSON, Columbia, Ala. Filed May 14, 1907. Serial No. 373,549.

1. A chopper comprising a chopping blade, means for actuating the same, an electric generator mounted upon

the chopper, a circuit closer operatively connected with the terminals thereof, an electro-magnetic catch mechanism connected with the electric circuit, and a spring actuated lever for engaging the catch mechanism and the blade.



2. A chopper comprising a movable blade, means for disconnecting the blade from its actuating means and an electrically operated catch mechanism for retaining the first said means.

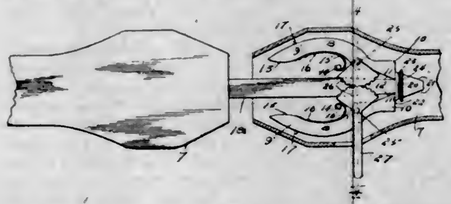
3. A chopper comprising a movable blade, movable means for disconnecting the blade from its actuating means which extends at intervals into the path of the blade, and an electrically operated catch mechanism for retaining the first said means out of the path of the blade.

4. A chopper comprising a movable blade, movable means for disconnecting the blade from its actuating means which extends at intervals into the path of the blade, an electrically operated catch mechanism for retaining the first said means out of the path of the blade, and a trip operated circuit closing means electrically connected with the catch mechanism.

5. A chopper comprising a movable blade, movable means for disconnecting the blade from its actuating means which extends at intervals into the path of the blade, a spring for holding said means in the path of the blade, an electrically operated catch mechanism for retaining the first said means out of the path of the blade, and a trip operated circuit closing means electrically connected with the catch mechanism.

[Claims 6 to 11 not printed in the Gazette.]

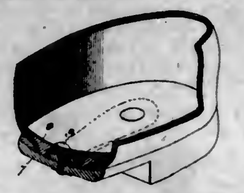
886,180. COUPLING. OLOF N. BRANDT, Bridgeport, Tex. Filed Jan. 3, 1906. Serial No. 294,393.



A device of the class described comprising a support, a pair of spring controlled jaws pivoted upon the support, the jaws being provided at their inner ends with abrupt shoulders, a yoke rigidly fixed upon the support rearwardly of said jaws, and a coupling rod provided at each end with a tapered head which is of greater width than the remainder of the rod thereby resulting in abrupt shoulders which seat behind the shoulders at the rear ends of the jaws, the upper face of said head being beveled whereby, when the shoulders upon the head engage behind the shoulders upon the jaws, the head will have a wedging reception in the yoke.

886,181. SHANK FOR SHOES. HUBERT BRENNAN, Brooklyn, N. Y., assignor of one-half to Edward L. White, Brooklyn, N. Y. Filed Sept. 12, 1907. Serial No. 392,591.

1. A shoe shank comprising a metallic strip provided along its longitudinal edges with reinforcing flanges that are bent inward for forming ways therebetween said flanges falling short of both ends of said shank.



2. A shoe shank comprising an elongated metallic strip provided along its longitudinal edges with reinforcing flanges that are bent inward to form ways, said flanges having the maximum depth at approximately midway of the ends of said shank and gradually decreasing in depth towards the ends of the shank.

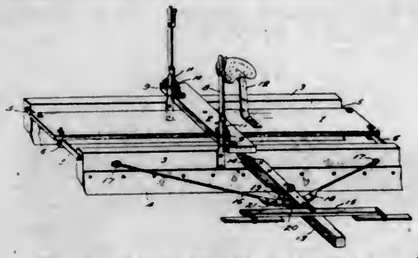
3. A shoe shank comprising an elongated metallic strip which is constricted at an intermediate point and provided along its longitudinal edges with stiffening flanges bent inward for forming ways, said flanges being of greatest size at approximately the middle of the shank and decreasing in size towards the end of the shank, said flanges falling short of said ends.

4. A shoe shank comprising a plate provided with flanges at opposite sides inclined towards each other and tapered toward each end of said plate.

5. A shoe shank comprising a plate curved transversely and provided with flanges at opposite sides extending from the convex side of the plate, said flanges projecting toward each other for forming ways for receiving a filler and extending from near one end to near the opposite end of the shank.

[Claims 6 and 7 not printed in the Gazette.]

886,182. ROAD-WORKING MACHINE. WILLIAM B. BROTHERS, Illiopolis, Ill. Filed May 3, 1907. Serial No. 371,704.



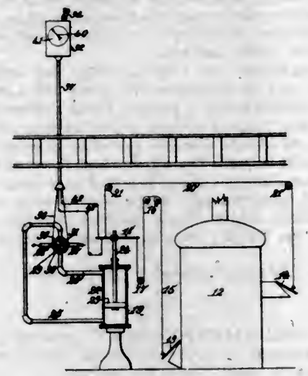
1. In a road working machine, the combination of a pair of surface working elements disposed parallel, a platform, a cross beam at the center of the platform, adjusting levers mounted on the beam and connected with the elements for independently inclining the elements to a vertical plane, connections between the ends of the elements and platform arranged to permit the elements to tilt, a tongue flexibly connected with the front element, a bowed bar connected with the ends of the front element and extending forwardly therefrom, and means for connecting the tongue with the bar.

2. In a road working machine, the combination of a frame, parallel surface working elements, levers fulcrumed on the frame to swing in a vertical plane on horizontal pivots and rigidly connected with the elements at the front thereof for tilting the same, and means for bracing the ends of the elements on the frame, a draft member flexibly connected with the front element, a bowed rod connected with the front element and extending forwardly therefrom and connected with the tongue.

3. In a road working machine, the combination of a platform, a cross beam at the middle thereof, surface working elements arranged in front and behind the platform, adjusting levers mounted on the beam and connected with the elements for tilting the same, links between the ends of the platform and elements, pivots on the ends of the elements and to which the links are connected, a draft device connected entirely with the front element.

4. In a road working machine, the combination of a frame, surface working elements thereon, means for tilting the elements independently and holding them in adjusted position, a tongue flexibly connected at its rear end to the front element, and connecting means between the tongue and the extremities of the front element.

886,183. DAMPER-REGULATOR. HUGH M. BROWNE, Cheyney, Pa. Filed July 1, 1907. Serial No. 381,727.

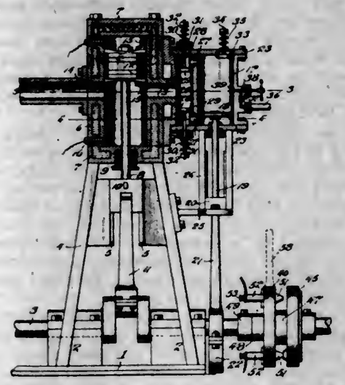


1. In a draft regulating apparatus, the combination with the dampers of a furnace, of a plurality of pulleys, flexible means traveling over the pulleys and connecting with the dampers for regulating the positions thereof, a fluid-pressure operated means for operating said flexible means, means for controlling the operation of said fluid-pressure operated means, a lever and flexible connections between said controlling means and lever for actuating the controlling means when the lever is shifted, and an indicating device connected with said fluid-pressure regulating means for indicating the positions of the dampers.

2. In a draft regulating apparatus, the combination with the dampers of a furnace, of a plurality of pulleys, flexible means traveling over the pulleys and connecting with the dampers for regulating the positions thereof, a fluid-pressure operated means for operating said flexible means, means for controlling the operation of said fluid-pressure operated means, a lever and flexible connections between said controlling means and lever for actuating the controlling means when the lever is shifted, an indicator device for indicating the positions of the dampers, and a flexible connection between said indicator device and said fluid-pressure operated means for operating said indicator when said means is actuated.

3. In a draft regulating apparatus, the combination with the dampers of a furnace, of a plurality of pulleys, flexible means traveling over the pulleys and connected with the dampers for regulating the positions thereof, a cylinder, means for supplying fluid under pressure to each end of said cylinder, a reciprocatory member extending in said cylinder and operated in either direction by fluid pressure, said reciprocatory member connected with said flexible means and adapted to operate the same, a valvular element of controlling the supply of fluid to said cylinder, means for actuating said valvular element, an indicator for indicating the positions of the dampers, and a flexible connection between said indicator and said member for operating the indicator when the member is actuated.

886,184. EXPLOSIVE-ENGINE. CLARANCE R. BRYANT, Manistee, Mich. Filed Apr. 6, 1907. Serial No. 366,859.
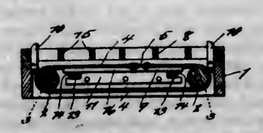


1. In an explosive engine, the combination of a double-acting piston, a cylinder, an inlet port disposed midway between the ends of the cylinders, a pump, means for discharging fuel thereto after an initial quantity of air is drawn into the pump, valved passages between the pump and inlet port of the engine, and means for igniting the compressed charges in the cylinder.

2. In an explosive engine, the combination of a cylinder, a piston therein of the double-acting type, an inlet port at the middle of the cylinder for supplying an explosive mixture alternately to the opposite sides of the piston, a pump cylinder supported on the engine cylinder, separate means for admitting air and fuel to the pump, a passage connected with the inlet port, automatically actuated valves between the opposite ends of the pump cylinder and passage, and means for igniting the compressed charges in the engine cylinder.

3. The combination of an engine cylinder closed at both ends and having inlet and exhaust ports arranged centrally between the ends, a piston therein for controlling the said ports, a pump cylinder having a passage communicating with both ends of the latter and the inlet port of the engine cylinder, and air admission valves in the pump cylinders automatically actuated valves in the said passage controlling communication between the pump and engine cylinders, and controllable means for supplying fuel to the pump cylinder, whereby the pump and engine can be changed from single to double acting or vice versa.

4. The combination of an engine of the explosive type adapted for single or double acting operation, a pump for supplying explosive mixture to the engine, means for controlling the pump for double or single acting operation, sparking devices arranged in the engine cylinder, and a circuit making and breaking device having controllable contacts for cutting the sparking devices into or out of operation.

886,185. EGG-TURNER. WILLIAM BUNKER, Eaton Rapids, Mich. Filed Jan. 24, 1908. Serial No. 412,460.



1. In an incubator tray, a main frame having rollers journaled in its opposite ends, an endless apron mounted on said rollers, a removable upper and lower rack, one disposed above and the other below the upper portion of the apron, said main frame having strips provided with

recesses, the lower rack having projections to engage said recesses.

2. In an incubator tray, a main frame, an endless apron, said apron being movable, removable racks disposed above and below the upper and lower surfaces of the upper portion of said apron, each of said racks having bars, those of one rack being disposed at right angles to those of the other rack, said main frame having strips provided with recesses, and the lower rack having projections to engage said recesses.

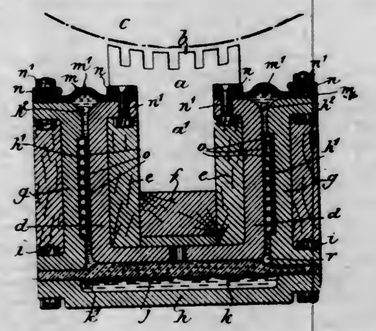
3. In an incubator tray, a main frame having rollers journaled in its opposite ends, an endless apron mounted on said rollers, removable upper and lower racks, one disposed above and the other below the upper portion of the apron and each rack having bars extending at right angles to the bars contained in the other rack, the said lower rack positioned to be engaged by the upper portion of the apron which traverses thereover, said main frame having strips provided with recesses, the lower rack having projections to engage said recesses.

4. In an incubator tray, a main frame having rollers journaled in its opposite ends, an endless apron mounted on said rollers, removable upper and lower racks, one disposed above and the other below the upper portion of the apron and each rack having bars extending at right angles to the bars contained in the other rack, the said lower rack positioned to be engaged by the upper portion of the apron which traverses thereover, said main frame having strips provided with recesses, the lower rack having projections to engage said recesses, and means to guide and hold the upper rack in position.

5. A tray for incubators, having a pair of rollers, an endless apron mounted upon said rollers, a rack mounted upon the upper face of said apron and adapted to prevent the eggs from moving longitudinally of said tray, a lower rack having bars arranged transversely of those of the upper rack, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

886,186. APPARATUS FOR TREATING PULP. ALFRED S. CALDWELL, Inverkeithing, Scotland. Filed Nov. 29, 1907. Serial No. 404,361.



1. In an apparatus for treating pulp, the combination with a movable plate carrier with plate and a stationary outer box having an elastic diaphragm upon which said plate carrier bears and, between its lower end and said diaphragm, a chamber for liquid under pressure to form a yielding support for said movable plate carrier, of means adapted to prevent entry of pulp material between said movable plate carrier and outer box while leaving said carrier free to move sufficiently to admit of the necessary adjustment and resilient action relatively to the beating device with which said movable plate holder with plate is used.

2. In apparatus for treating pulp, the combination with a movable plate carrier with plate, and a stationary outer box provided at its lower end with a yielding support for said carrier, of an elastic diaphragm secured to said carrier and outer box and adapted to prevent pulp material passing between the adjacent surfaces of said carrier and box.

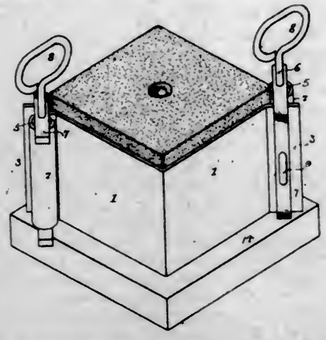
3. In apparatus for treating pulp, the combination with a movable plate carrier with plate and a stationary outer box having an elastic diaphragm upon which said plate carrier bears and a chamber between its lower end and said diaphragm for liquid under pressure to form a yielding support for said movable plate carrier, of a diaphragm of elastic material secured to the movable plate carrier and stationary outer box to prevent entry of pulp material between the adjacent surfaces of these parts.

4. In apparatus for treating pulp, the combination with a movable plate carrier with plate, and a stationary outer box provided at its lower end with a yielding support for said carrier, of an elastic diaphragm secured to said carrier and outer box and adapted to prevent pulp material passing between the adjacent surfaces of said carrier and box, said outer box being adapted to admit of the introduction of lubricant between the adjacent surfaces of said carrier and box.

5. In apparatus for treating pulp, the combination with a movable plate carrier with plate and a stationary outer box provided with a yielding liquid container having an elastic side adapted to form a yielding support for said carrier, of an elastic closure adapted to prevent entry of pulp material between the adjacent surfaces of said carrier and box, said box being provided at a point between said liquid container and elastic closure with a leakage outlet through which liquid entering the box through failure of the liquid container or elastic closure can escape.

[Claims 6 to 14 not printed in the Gazette.]

886,187. MOLD-JACKET. HENRY C. CALDWELL, Buffalo, N. Y., assignor to Cyrus T. Hanna, Philadelphia, Pa. Filed Aug. 8, 1906. Serial No. 329,709.



1. An adjustable and removable jacket or frame for molds comprising a plurality of sections, in combination with means for moving said sections from and toward each other, said means serving also to hold said sections relatively fixed in open and closed positions.

2. An adjustable and removable jacket or frame for molds, comprising a pair of separable sections of similar size and shape, and means for moving said sections from and toward each other, said means serving also to hold said sections relatively fixed in open and closed positions.

3. An adjustable and removable jacket or frame for molds, comprising a plurality of sections arranged for mutual engagement with a mold but movable therefrom without separation, means for holding said sections together for relative movement without separation, and coacting means combined therewith for moving them into and out of contact with the molds, such means serving also to hold said sections relatively fixed in open and closed positions.

4. An adjustable and removable jacket or frame for molds, comprising a plurality of sections arranged for mutual engagement with a mold but movable therefrom without separation, means for adjusting said sections with respect to the molds and relatively to each other for greater or less separation when open, and means for moving said sections into and out of contact with the molds, such means serving also to hold said sections relatively fixed in open and closed positions.

5. An adjustable and removable jacket or frame for snap-molds, comprising a plurality of sections having means for adjustably fitting them to said molds and releasing them therefrom to permit of ready application and removal, such means serving also to confine said sections against separation and to hold them relatively fixed in any degree of the open and closed positions.

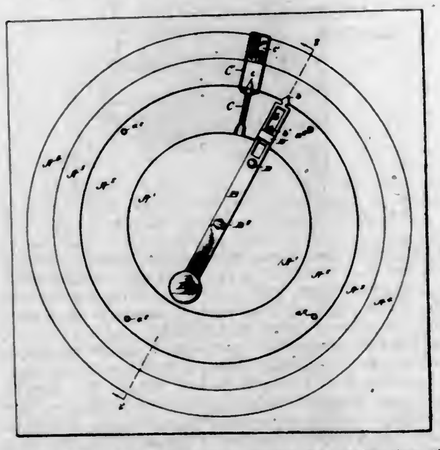
[Claims 6 to 17 not printed in the Gazette.]

886,188. GUN-CLEANING ROD. BENJAMINE E. CLEMENT, Humboldt, Tenn. Filed June 12, 1907. Serial No. 378,614.



A gun rod of the type set forth, comprising a body portion having its end formed with spiral convolutions affording a gimlet, and constructed with notches cut thereinto.

886,189. CALCULATING DEVICE. THOMAS T. CROUCH, Chicago, Ill. Filed Nov. 15, 1907. Serial No. 402,288.



1. A race track calculating device for estimating the values and positions of horses, comprising three parallel scales; an outer scale A^4, an innermost scale A^2, and a middle scale A^3, all bearing graduations and markings as described and two movable index hands, one of said index hands having two pointers, one of which pointers extends to and reads upon the middle scale and the other pointer being mounted with a longitudinal adjustment on the said index hand and moving over and reading upon the innermost scale, and the other index hand having a pointer also reading upon the middle scale and an indicator attached thereto and extending across the outermost scale, and means for moving the two index hands simultaneously or independently.

2. A race track calculating device for estimating the values and positions of horses, comprising three concentric circular scales; an outer scale A^4, an innermost scale A^2, and a middle scale A^3, all bearing graduations and markings as described, and two concentrically hung and rotarily adjustable index hands, one of said index hands having two pointers, one of which pointers extends to and reads upon the middle scale and the other pointer being mounted with a longitudinal adjustment on the said index hand and moving over and reading upon the innermost scale, and the other index hand having a pointer also reading upon the middle scale and an indicator attached thereto and extending across the outermost scale, and means for moving the two index hands simultaneously or independently.

3. A race track calculating device for estimating the values and positions of horses, comprising three parallel scales; an outer scale A^4, an innermost scale A^2, and a middle scale A^3, all bearing graduations and markings as described, the inner one of which scales is movable and the two others stationary, and two movable index hands, one of said index hands having two pointers, one of which pointers extends to and reads upon the middle scale and the other pointer being mounted with a longitudinal adjustment on the said index hand and moving over and reading upon the innermost scale, and the other index hand having a pointer also reading on the middle scale and an attached indicator extending across the outermost scale, and means for moving the two index hands simultaneously or independently.

4. A race track calculating device for estimating the values and positions of horses, comprising three concentric circular scales; an outer scale A^4, an innermost scale A^2, and a middle scale A^3, all bearing graduations and markings as described, the innermost one of which scales is rotarily adjustable and the two outer ones stationary, and two concentrically hung and rotarily adjustable index hands, one of said index hands having a central pivot and two pointers, one of which pointers extends to and reads upon the middle scale and the other pointer being mounted with a longitudinal adjustment on the said index hand and moving over and reading upon the innermost scale, and the other index hand having rigidly attached thereto a central disk having a peripheral bearing against the movable innermost scale and having a pointer also reading upon the middle scale and an indicator attached thereto and extending across the outermost scale and means for connecting the first named index hand to the swiveling disk of the second index hand for simultaneous or independent movement.

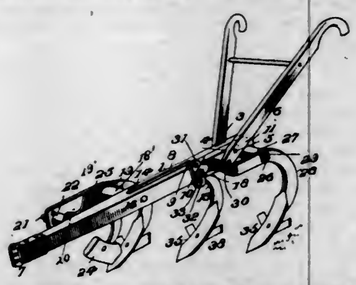
5. In a device of the kind described, the combination with a supporting base, of a disk pivotally mounted at the center to rotate and bearing a radially extended index hand, a centrally pivoted index hand having a tilting support at its turning center with a pointer at one end, a weight at the other end normally holding the pointer up, and a prick pin on the tilting index hand on the opposite side of the center from the weight adapted to engage and lock said index hand to the disk.

[Claims 6 to 9 not printed in the Gazette.]

886,190. CULTIVATOR. JACOB F. DEAL, Tilton, Ga. Filed Nov. 19, 1906. Serial No. 344,110.

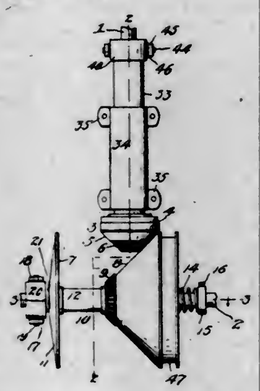
1. A cultivator comprising a beam having a central elongated slot therein intermediate its ends, and said beam having a vertical cut extending from the rear wall of the slot through the end of the beam, a standard having a horizontal portion within the slot, a horizontal bolt passing through the forward end of the slot and through the standard and adapted to form the pivot of a standard on the outside of the beam, and a second bolt passing through

the beam opposite the rear end of the slot and through the standard and adapted to secure the forward end of another standard on the outside of the beam, and a bolt passing through the rear split end of the beam and holding the beam together and forming a pivot for the standard.



2. A cultivator comprising a beam having a central elongated slot therein intermediate its ends, and said beam having a vertical cut extending from the rear wall of the slot through the rear end of the beam, a standard having a horizontal portion within the slot, the forward end of the horizontal standard having a segmental series of openings arranged in its forward end, a bolt passing through the beam and through one of the series of openings in the standard, and adapted to form the pivot of a second standard on the outside of the beam, a second bolt passing through the beam opposite the rear end of the slot and through the standard and forming the pivot of said standard and adapted to secure the forward end of a third standard on the outside of the beam, and a bolt passing through the rear split end of the beam and holding the beam together and said bolt adapted to form the pivot of the third standard on the outside of the beam.

886,191. VARIABLE-SPEED POWER-TRANSMISSION DEVICE. DAVID M. DEARING, Jackson, Mich. Filed Feb. 15, 1906, Serial No. 301,282. Renewed Apr. 1, 1907. Serial No. 365,856.



1. A transmission gearing, including a driving shaft, a driven shaft arranged at substantially right angles to the driving shaft, a beveled frictional wheel having a bevel pinion fixed to the driven shaft, and a beveled friction wheel having a bevel pinion fixed to the driving shaft adapted to successively engage with the wheel and pinion carried by the driven shaft.

2. In a device of the character described, a member having peripheral, beveled and toothed working surfaces, a second member having beveled and toothed working surfaces to coact with the corresponding surfaces on the first mentioned member and a flat working surface opposed to its beveled and toothed faces for coaction with the peripheral surface of the first mentioned member, and means for varying the relative positions of said members for the purpose set forth.

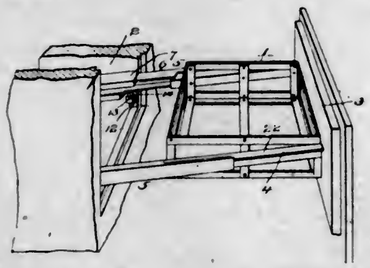
3. In a device of the character described, a member having peripheral, beveled and toothed working surfaces, a second member having beveled and toothed working surfaces to coact with the corresponding surfaces on the first mentioned member and a flat working surface opposed to its beveled and toothed faces for coaction with the peripheral surface of the first mentioned member, means for holding the complementary working surfaces of said members normally in engagement with each other, and means for varying the relative positions of said members, substantially as described and for the purpose set forth.

4. In a device of the character described, a member having peripheral, beveled and toothed working surfaces, a second member having beveled and toothed working surfaces to coact with the corresponding surfaces on the first mentioned member and a flat working surface opposed to its beveled and toothed faces for coaction with the peripheral surface of the first mentioned member, a spring for holding the complementary working surfaces of said members normally in engagement with each other, means for shifting the spring actuated member against the tension of its actuating spring, and means for shifting the other member toward and from the spring actuated member, substantially as described.

5. In a device of the character described, a driving member having peripheral, beveled and toothed working surfaces, a driven member having beveled and toothed surfaces to coact with the corresponding surfaces on said driving member, and a flat working surface opposed to its beveled and toothed surfaces for coaction with the peripheral surfaces of said driving member, a driving shaft upon which said driving element is slidably but non-rotatably adjustable, a driven shaft upon which said driven member is slidably but non-rotatably mounted, an adjustable stop upon said driven shaft, and a coil spring between said stop and said driven member, substantially as described and for the purpose set forth.

[Claims 6 and 7 not printed in the Gazette.]

886,192. SELF-CLOSING DRAWER. VICTOR A. DE CANIO, Union Hill, N. J. Filed Nov. 18, 1905. Serial No. 288,091.



1. A drawer mechanism, comprising a drawer receptacle positioned in a horizontal plane, a drawer carrying member positioned at an angle to said drawer and secured thereto, and run-ways positioned at an angle to a horizontal plane for receiving said member.

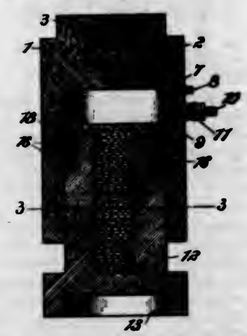
2. A drawer mechanism comprising a drawer receptacle positioned in a horizontal plane, a drawer carrying angle iron positioned at an angle to said drawer and secured thereto and run-ways for said angle iron, said run-ways comprising a fixed member having inwardly extending flanges, and a movable member having inwardly extending flanges.

3. A drawer mechanism comprising a drawer receptacle, drawer carrying run-ways, each of said run-ways having a fixed section provided with inwardly extending flanges, edge flanges upon said inner extending flanges and extending at a right angle thereto, movable sections for each fixed section having lateral flanges at the top and bottom, said movable sections fitting between said edge flanges and the top of said fixed section, and angle bars secured to the said drawer, and anti-friction rollers interposed between the adjacent ends of the run-way sections.

4. A self-closing drawer mechanism, comprising a receptacle, an inclined channel iron fixedly secured in place, an angle iron secured to said receptacle, an angle iron connecting said channel iron and the first mentioned angle iron, the weight of the drawer operating to close the same by gravity when released, anti-friction means positioned upon the outer end of said channel iron, anti-friction means positioned on both ends of said connecting angle irons and anti-friction means positioned on the inner ends of said first-mentioned angle iron, all of said anti-friction means being designed to hold said irons out of contact with each other.

5. A drawer mechanism, comprising a receptacle inclined run-ways arranged at the sides of the drawer, each run-way comprising an inclined channel bar, a movable channel bar telescoping within the same, a roller carried at the inner end of the movable channel bar, a limiting detent carried by the movable channel bar, the fixed channel bar having an elongated slot for engaging and limiting the movement of the said detent, an angle bar carried by the drawer, a detent projecting from said angle bar and a coöperating detent on the movable channel bar for limiting the movement of the angle bar, the said movable channel bar having a cut away portion for facilitating the assembling of the parts and anti-friction rollers interposed between said angle bar and the said movable channel bar.

886,193. COMPRESSED-AIR-CUSHION BLOCK. CLINTON C. DE WITT, St. Louis, Mo., assignor of one-half to Frank L. Aymond, St. Louis, Mo. Filed Nov. 12, 1907. Serial No. 401,898.



1. A cushion block of the class described, comprising a pair of telescoping members, there being a chamber formed between said members, a flexible packing ring arranged in one of the bearing faces of one of the members and a solid ring engaging the flexible ring for maintaining the same in position.

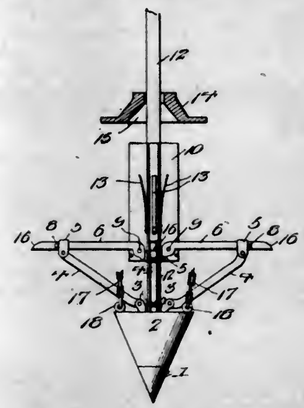
2. A cushion block of the class described, comprising a pair of telescoping members, there being a chamber formed between said members, flexible packing rings arranged on the upper end of the inner member, solid rings engaging the flexible rings for maintaining the same in position.

3. A cushion block, comprising a pair of telescoping members, between which is formed a flexible chamber, a packing ring arranged in the bearing face of one of the members, a solid ring engaging the flexible ring to maintain the same in position, and means whereby fluid is delivered to and allowed to discharge from the air chamber.

4. A cushion block, comprising a pair of telescoping members, between which is formed a chamber, there being a recess formed in the under side of the lower one of the telescoping members, a flexible packing ring arranged in the bearing face of one of the members, and a solid ring engaging the flexible ring to maintain the same in position.

5. A cushion block, comprising a pair of telescoping members, a flexible packing ring arranged between the bearing surfaces of the members, a solid ring engaging the flexible ring to maintain the same in position, and means whereby fluid is delivered to and allowed to discharge from the chamber.

886,194. DEVICE FOR RAISING VESSELS. CHARLES DOWNER and EUGENE H. SIMPSON, Blaine, Wash. Filed Sept. 17, 1907. Serial No. 393,307.



1. In a device for raising sunken vessels, a penetrating point, a cone to which said point is connected, arms pivoted to said cone and slidingly connected to levers, a tubular member to which said levers are pivoted and a drive rod extending through said tubular member, springs for throwing the levers outward and a cap for holding the levers in retracted positions.

2. In a device of the character described, a grapple comprising a point, a cone to which said point is secured, arms pivoted to said cone, levers connected with said arms, a sliding member to which said levers are pivoted, means for holding said arms and levers in retracted positions, a drive rod for driving said grapple, and hoisting chains connected thereto.

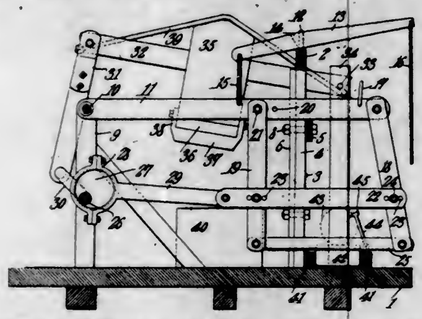
3. In a device of the character described, a penetrating point, a cone to which said point is connected, arms pivoted to the cone, levers slidably connected to said arms, a sliding member to which said levers are pivoted, a detachable drive rod, and lifting chains.

886,195. WOOD-SAWING MACHINE. ARCH L. EVERETT, North Fort Worth, Tex. Filed May 25, 1907. Serial No. 375,684.

1. In a machine of the character described the combination with a standard, a supporting beam pivotally connected thereto, and adjustable guides for the beam; of hangers pivotally connected to the beam, one of said hangers being adjustable, a saw carried by the hangers and extending between the guides, a brace strip adjustably and pivotally connected to the hangers and parallel with the saw and beam, a lifting lever pivotally supported upon the guides, a connection between said lever and the supporting beam, means upon said beam for engaging the lever to supoprt the beam and saw in raised position between the guides, a drive element, and means for transmitting motion from said element to the brace strip.

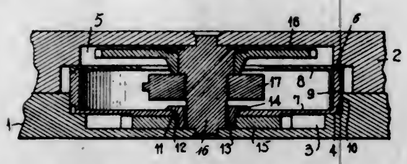
2. In a machine of the character described the combination with guides adjustable toward or from each other, a supporting beam extending between the guides and piv-

oted at one end, oscillatory hangers depending from the beam, a saw carried by the hangers, adjustable means for holding the hangers at a desired angle to each other, and means for oscillating the hangers; of an upstanding pivot device carried by the guides, a lifting lever mounted to



swing either vertically or laterally upon said device, a connection between one end of the lever and the supporting beam, and means upon said beam for engaging the lever to hold the beam and saw in raised position.

886,196. WATCH-BARREL. LEWIS A. FALLER, Nashville, Tenn., assignor of one-fourth to Stief Jewelry Co., Nashville, Tenn. Filed Oct. 14, 1907. Serial No. 397,417.

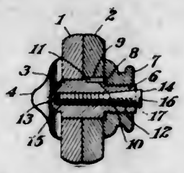


1. In a watch barrel, a substantially cylindrical casing having an opening in its bottom, two of the walls of said opening being straight and parallel with each other, a hollow hub in said opening, the body of which is shouldered and has two of its sides flattened to correspond with said straight walls, the length of said shoulder being less than the thickness of the bottom of the barrel, one end of said hub being provided with a flange and the opposite end being screw-threaded, and a screw-threaded click wheel secured upon said screw-threaded end and adapted to clamp the bottom of the barrel between itself and the flange upon the inner end of the hub.

2. In a watch, a plate provided with a circular recess having a shoulder at its bottom, a bridge provided with a shouldered recess opposite the recess in the plate, a barrel rotatably mounted in the recess of the plate and resting upon said shoulder, a cover for the barrel adapted to be engaged by the shoulder in the bridge, a hollow hub through the bottom of the cover provided with a flange upon its inner end and having its outer end screw-threaded, and a click wheel screwed upon said end of the hub and seated between the bottom of the barrel and the bottom of the recess in said plate.

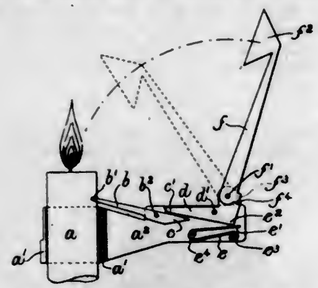
886,197. PIVOT-SCREW FOR SHEARS. JOSEPH W. FLETZ, Chicago, Ill. Filed Jan. 28, 1908. Serial No. 413,133.

1. In a device of the class described, a pair of blades, in combination with a pivot screw extending therethrough and comprising a cylindrical portion extending through said blades and having a head formed upon one end thereof and a threaded extension at the other end, a nut threaded on said extension and a conical plug arranged within said threaded extension and adapted to expand the same to lock said nut, said extension being split, as and for the purpose specified.



2. In a device of the class described, a pair of blades, in combination with a pivot screw extending therethrough and comprising a cylindrical stem portion extending through said blade and having a head formed upon one end thereof and a threaded extension at the other, said extension being split and having a conical socket formed therein, said socket terminating in a threaded cylindrical bore extending into said stem portion, a nut threaded upon said extension and a conical plug fitted in said socket and having a threaded stem extending into said bore, as and for the purpose specified.

886,198. SELF-ACTING CANDLE-EXTINGUISHER. ALEXANDER C. FINDLAY, Perth, Western Australia, Australia. Filed June 7, 1907. Serial No. 377,810.



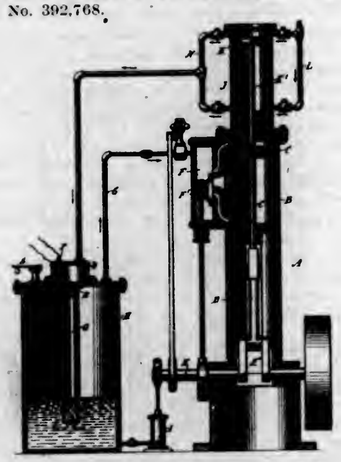
1. In an automatic candle extinguisher, the combination with a frame adapted to be applied to a candle, of a lever pivoted on the frame, an arm pivotally attached to the said lever provided with an extinguishing cap and having a lug thereon arranged to coöperate with the lever to normally poise the cap in inoperative position, a spring normally acting to tilt the said lever and thereby dislodge the cap and permit movement thereof toward extinguishing position, and a device released by the burning of the candle for controlling the operation of the lever.

2. A self-acting candle extinguisher comprising a frame, a fork movably mounted on the frame, adapted to engage the candle and to be released thereby when the candle is consumed to a certain line, a spring-operated lever movably mounted on the frame and held against operation by said fork when the latter is held by the candle, and an arm provided with an extinguishing cap, said arm being operable by said lever when the same is released by said fork, to carry said cap into position for extinguishing the candle.

3. In an automatic candle extinguisher, the combination with a suitable frame adapted for application to a candle or the like, of a lever pivotally mounted on the frame and having an eccentrically arranged pivot thereon, an arm having its lower end coöperating with the eccentric pivot of the lever having an extinguishing cap on the upper free end thereof and provided with a lug to coöperate with the lever to poise the cap in inoperative position, and a spring controlled by the burning of the candle for operating the lever to unbalance the extinguishing cap and cause movement thereof toward extinguishing position.

4. In an automatic candle extinguisher, the combination with a frame adapted to be applied to a candle, of a lever pivoted on the frame provided with an eccentrically arranged pivot and having a heel at one side of its pivot adjacent to the said pivot, an arm having its lower end coöperating with the eccentric pivot of said lever and provided with an extinguishing cap on its free end, means for poising the cap in inoperative position while the lever occupies a predetermined position, a spring coöperating with the heel portion of the lever and acting to operate the latter to release the cap, and a second lever intermediately pivoted on the frame, one end thereof coöperating with the lever first mentioned and the opposite end thereof coöperating with the candle for controlling operation of the extinguishing cap.

886,199. COMBINATION GAS AND STEAM ENGINE. MARTIN S. FLAIG, La Crosse, Wis. Filed Sept. 13, 1907. Serial No. 392,768.



1. A combination gas and steam engine, comprising a reservoir for containing water, an explosion chamber above the reservoir, a pipe leading from the explosion chamber into the reservoir below the normal level of the water therein, an engine connected with the reservoir and adapted to be driven by the steam and gas therein, a compressor connected with the explosion chamber and operated by the engine, and a pump driven by the engine for supplying water to the reservoir.

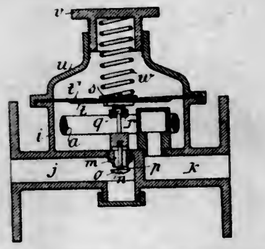
2. A combination gas and steam engine, comprising a reservoir for containing water, an explosion chamber above the reservoir, a pipe leading from the explosion chamber into the reservoir below the normal level of the water therein, an engine connected with the reservoir and adapted to be driven by the steam and gas therein, a compression cylinder in alinement with the cylinder of the engine and connected with the explosion chamber, a piston in the cylinder having a direct connection with the piston of the engine cylinder, and a pump driven by the engine for supplying water to the reservoir.

886,200. ROLLER-BEARING. FRANK M. FOOTE, Marshall, Mich. Filed Aug. 8, 1906. Serial No. 329,694.



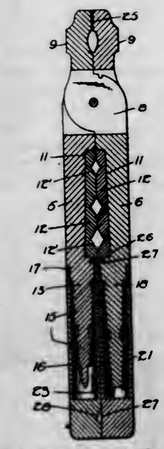
In a roller bearing, the combination of a threaded nut, bearing rollers located within a race-way thereon, and a casing loosely mounted upon the nut and fitting over and against the bearing rollers to hold them against displacement, the casing being free to rotate with respect to the nut and having means provided whereby it is prevented from slipping off from the nut, the casing also having an opening that permits the threaded portion of said nut to engage with the threaded portion of a spindle.

886,201. MEANS FOR USING FROM A DISTANCE THE VARIATIONS IN TEMPERATURE. JOSEPH B. FOURNIER, Paris, France. Filed Nov. 17, 1904. Serial No. 233,158.



A manometer comprising a curved manometric tube and a narrow tube, the latter having one of its ends connected to the said curved manometric tube and having its other end closed, both of said tubes containing liquids and said curved manometric tube containing in addition a solid material distributed substantially throughout its entire length so as to restrict the space left for the liquid contained within said curved manometric tube.

886,202. COMPOUND TOOL. WILLIAM H. GRASSER, Clarkston, Wash. Filed Aug. 13, 1907. Serial No. 388,373.



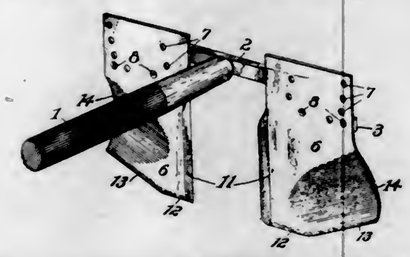
1. A tool of the class described comprising a pair of pivoted handle members formed at one side of their pivot with opposed coöperating faces, each of the members at the other side of the pivot being formed with a tool, and a removable protecting hand grip engaged upon the said tool end of each member.

2. A tool of the class described comprising a pair of pivoted handle members formed at one side of their pivot with opposed coöperating faces, each of the members at the other side of the pivot being formed with a tool, a removable protecting hand grip engaged upon the said tool end of each member, and means carried by one grip and engageable by the other for holding the members closed.

3. A tool of the class described comprising a pair of pivoted handle members formed at one side of their pivot with opposed coöperating faces, each of the members at

the other side of the pivot being formed with a tool, a removable protecting hand grip engaged upon the said tool end of each member, the opposing sides of the two grips being flattened to fit one against the other, and means carried by one of the grips and engageable by the other for holding the pivoted members closed.

886,203. GARDEN-HOE. THOMAS GRASSHAW, Columbia, Ill. Filed Nov. 18, 1907. Serial No. 402,706.

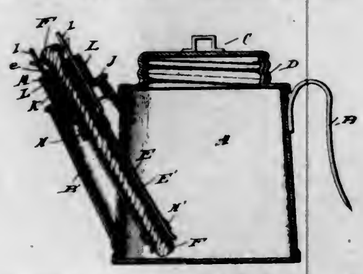


1. A hoe, comprising a handle, a bar transversely positioned on the forward end of the handle, a pair of shovels adjustably arranged on the ends of the bar, the inner edges of which shovels are bent at right angles to the body portions and which bent edges are sharpened, and the outer lower corners of the shovels being bent at an angle relative the body portions of the shovels.

2. A hoe, comprising a handle, a bar transversely positioned on the forward end of the handle, a pair of shovels adjustably arranged on the ends of the bar, and integral cutting blades arranged on the inner edges of the shovels, and the outer lower corners being bent at an angle relative the body portions of the shovels.

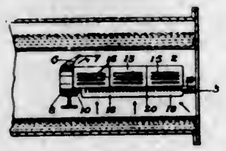
3. A hoe, comprising a handle, a transversely arranged bar positioned on the forward end of the handle, in the ends of which bar are formed apertures, a pair of shovels, there being a series of apertures formed in each shovel, fastening devices adapted to engage through the apertures of the shovels and the bar for detachably connecting the same, the inner edges of which shovels are bent at right angles to the body portions and which bent edges are sharpened, and the outer lower corners of the shovels being bent at an angle relative the body portions of the shovels.

886,204. MINER'S LAMP. RALPH L. GRAVES, Sumter, Oreg. Filed May 8, 1907. Serial No. 372,468.



In a miner's lamp, the combination with the spout thereof, of a wick tube container adjustably held in said spout, said container comprising a series of wires held in tubular arrangement, the upper portion of said container being of greater diameter than the lower portion thereof, of a wick collar having a slot in one side and rigidly secured to said spout and projecting beyond the same, within the upper portion of the container, a sleeve surrounding said collar, and provided with slots, and an expansible foraminous wick tube horizontally flanged at its outer end and snugly held in said container and adapted to be longitudinally adjustable in the container by a candlestick pin inserted through the aforesaid slots and to be removed from the outside by means of the aforesaid flange.

886,205. FURNACE. FRANK GOLD, Richmond, Victoria, Australia. Filed Sept. 30, 1907. Serial No. 395,240.



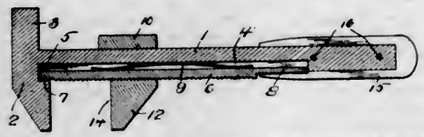
1. In combination with a furnace grate, a hollow bridge wall having front and rear walls an dits upper portion overhanging toward the grate and provided with draft apertures for the products of combustion in its front and rear walls, and a hollow air supplier at the lower edge and front side of the bridge wall.

2. In combination, a furnace grate, a bridge or diaphragm having its upper portion projecting inwardly toward and partially overhanging the fire, and having draft apertures for the products of combustion below said overhanging portion, and a hollow air supplier at the lower edge and front side of said bridge.

3. The combination of a grate, a bridge at the inner end thereof provided with draft apertures for the products of combustion, and having its upper portion projecting toward the fire, a hollow air supplier above the grate at the base of said bridge, air suppliers at each side of the grate, and a central air supplier open at the bottom and having apertures in its sides for the escape of air.

4. In combination, a grate, a hollow bridge wall at the inner end of said grate having front and rear walls, and an overhanging portion projecting toward the grate, and provided with draft holes for the products of combustion in its front and rear walls below the overhanging portion; a hollow end air supplier mounted at the lower side and in front of the bridge, hollow side air suppliers and a hollow central air supplier.

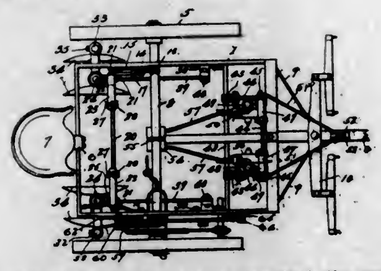
886,206. WRENCH. SAMUEL A. GRUBER, Pittsburg, Pa. Filed June 18, 1906. Serial No. 322,163.



In a wrench, a shank having one face provided with a groove extending from its upper end and terminating at a point removed from its lower end, a handle detachably connected to the lower end of the shank and of a length as to extend over the lower part of said groove thereby forming in connection with said groove a pocket, a jaw formed integral with the upper end of the shank and having that portion of its lower face which constitutes a gripping surface extending below the plane of the remaining portion of its lower face, that portion of said jaw which projects below the remaining portion arranged forwardly of the upper end of the groove and forming in connection with the groove a pocket, said last mentioned pocket of less length than the first-mentioned pocket a movable jaw mounted on the shank and having that portion of its upper face which constitutes a gripping surface arranged in a plane below the remaining portion of said face thereby forming a shoulder adapted to enter in the pocket at the upper end of the shank whereby the gripping surface of the jaws can be positioned in close proximity to each other, a toothed bar mounted in said

groove and having its upper end smooth and projecting in the upper pocket, the lower end of said bar being reduced and smooth to extend in the lower of said pockets, said smooth lower end of greater length than the smooth upper end, said movable jaw having an opening whereby said jaw is mounted upon the shank, one wall of said opening being toothed and a bow-shaped spring interposed between said bar and the inner wall of the groove, said spring having its ends bearing against said bar and its intermediate portion engaging said shank thereby maintaining said bar in engagement with the teeth of the movable jaw.

886,207. FERTILIZER-DISTRIBUTER. EPHRAIM B. HACKBURN, WILLIAM C. WILLETT, and DENNIS F. DEPPE, Newbern, N. C. Filed Jan. 4, 1907. Serial No. 350,836.



1. In a device of the character described, the combination of a frame, forward and rear cross bars adjustably held therein, brackets carried by said cross bars and adjustable longitudinally, and angularly thereof, soil working devices having supporting standards, tubular standard supporting members adapted to receive said standards adjustably therein, and means carried by said brackets for adjustably holding said supporting members therein.

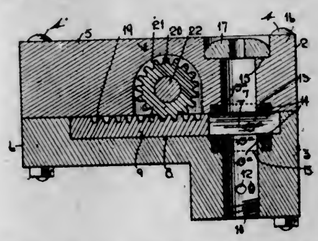
2. In a device of the character described, the combination of a frame, a slotted cross bar carried thereby, brackets adjustably secured through said slots and having depending tubular portions, soil working devices having supporting standards, tubular supporting members adapted to receive said standards adjustably therein, said tubular supporting members being in turn adjustably secured within said depending tubular portions of said brackets.

3. In a device of the character described, the combination of a frame, a slotted cross bar carried thereby, brackets adjustably secured through said slots and having angularly constructed tubular members having angular extensions porting standards, tubular supporting members adjustably carried within said depending tubular portions of said brackets and having angular tubular extensions and similarly constructed tubular members having angular extensions telescopingly adjustably carried within said angular extension of said first named members, both of said members being adapted to receive one of said supporting standards adjustably therein.

4. In a device of the character described, the combination of a wheeled frame, slotted cross bars carried forwardly and rearwardly therein, brackets mounted longitudinally adjustably within said slots and having means to permit of the angular adjustment thereof, said brackets having depending tubular portions, soil working devices having supporting standards and tubular supporting members adjustably carried within said tubular portions of said brackets, said tubular members being adapted to receive said standards adjustably therein.

5. In a device of the character described, the combination of a wheeled frame, slotted cross bars carried forwardly and rearwardly therein, brackets mounted longitudinally adjustably within said slots and having means to permit of the angular adjustment thereof, said brackets having depending tubular portions, soil working devices having supporting standards, tubular supporting members adjustably carried within said depending tubular portions of said brackets and having angular tubular extensions, and similarly constructed tubular members having angular extensions telescopingly adjustably carried with said angular extensions of said first named members, both of said members being adapted to receive one of said supporting standards adjustably therein.

886,208. CASING-HEAD FOR OIL-WELLS. RICHARD F. HADLEY, Slicker, W. Va. Filed May 27, 1907. Serial No. 375,927.



A device as described, comprising a casing head formed in sections detachably connected together and adapted to be connected to the upper ends of a well tube, a gate valve, a vertical passage or bore in said casing head controlled by said valve, said casing head also having its sections provided with annular recesses surrounding and opening into said bore, annular packing members in said recesses adapted to form a fluid-tight joint with the valve when in closed position, a rack on said valve, a pinion engaging said rack, a squared end stub shaft keyed to said pinion and having its squared end flush with the side of the upper section, and a crank handle adapted to enter the upper section and engage said squared end to turn the pinion and operate the valve.

886,209. EYE-SHIELD. GEORGE E. HENRY, Philadelphia, Pa. Filed Nov. 18, 1907. Serial No. 402,641.



1. A shield for the eyes having an attaching device secured to its lower face and comprising a spring member, and means for supporting the said shield upon the nose of the wearer, the said means comprising a support having a member for engagement with the spring member of the attaching device, to removably hold the support in connection with the shield.

2. A shield for the eyes having an attaching device on its under face, and means for supporting the said shield upon the nose of the wearer, the said means comprising a spring support having a top member removably connected with the attaching device, and side members extending from the top member and provided at their ends with jaws.

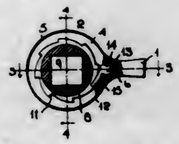
3. A shield for the eyes comprising a support consisting of a spring material bent upon itself to form an upper member and side members, the side members terminating in jaws, and a shield adapted to be carried by said support, which shield is provided with a spring connecting member at its lower portion adapted for removable engagement with the upper member of the support.

4. The combination with a shield for the eyes, provided on its under central portion with a spring attaching device, of a spring support for the shield provided with jaws, the said support being constructed to engage said attaching device on the shield.

5. The combination with a shield for the eyes, of an attaching device comprising a spring hook secured to the under face of the shield and having its bill facing forwardly, and a spring support for the shield adapted to removably secure it in position, the said support having a top member adapted to be slipped between the body and bill of the hook, and side members extending downward from the top member and provided at their lower ends with jaws.

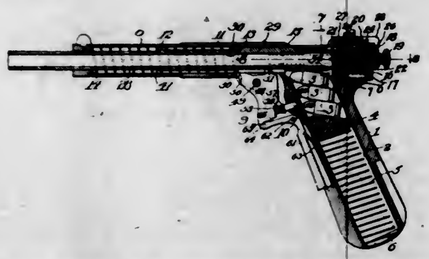
[Claims 6 to 8 not printed in the Gazette.]

886,210. WRENCH. HARDY HESTAND and CHRIST RENAS, Comanche, Okla. Filed July 26, 1906. Serial No. 327,842.



In a wrench, a handle having a terminal enlargement provided with a circular recess open at its forward side, a hollow casing attached to said enlargement and comprising a pair of spaced detachable side plates and an edge band marginally connecting said plates, the latter being provided with opposed circular bearing openings, a rotary head journaled in said openings and provided between its ends with a marginally toothed flange housed in the casing to bear between the side plates thereof, a pawl arranged tangentially to the head for engagement with said teeth and having at one end a circular enlargement seated in the recess within the enlargement for pivoting the pawl, and a spring disposed to bear behind the free end of the pawl for throwing the same to engaging position.

886,211. PISTOL. KUMAZO HINO and TOMIJIRO KOMURO, Ushigome, Tokyo, Japan. Filed Sept. 23, 1904, Serial No. 225,681. Renewed Feb. 7, 1908. Serial No. 414,780.



1. In a pistol, the combination of a stock, a slidable barrel in said stock, a spring for urging said barrel into retracted position, a trigger provided with detents adapted to engage with notches on said barrel, a movable bolt connected with said barrel and adapted to draw a cartridge in position for loading, a magazine cartridge feed, means for extracting the shells, and a firing pin adapted to project through an opening in said bolt.

2. In a device of the character set forth, the combination of a stock, a slidable barrel in said stock, a coiled spring in said stock for urging the barrel backward, a trigger provided with a rigid detent, a movable detent in said trigger, said detent being adapted to engage with said barrel to hold it in forward position after firing, a magazine, means for feeding the cartridges from the magazine to the barrel, means for extracting the shells, and a safeguard comprising a bell crank lever pivoted to the handle, having one end provided with a projection adapted to engage with the trigger and the other end lying along said handle, and a spring for holding said safeguard in normal position to engage with the trigger, substantially as described.

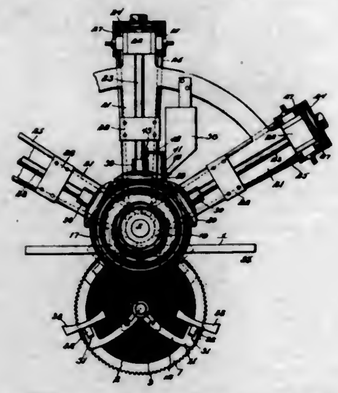
3. In a pistol, the combination of a stock, a spring actuated barrel therefor having engaging members, and a trigger provided with firing and retaining members for engagement with said barrel.

4. In a pistol, the combination of a stock, a spring actuated barrel therefor having engaging portions, and a pivotally mounted trigger provided on opposite sides of its pivot with firing and retaining detents for engagement with said barrel.

5. In a pistol, the combination of a stock, a spring actuated barrel therefor having engaging members, and a pivotally mounted trigger provided on one side of the pivot with a rigid firing detent and on the opposite side with a yieldingly acting retaining detent for engagement with said barrel.

[Claims 6 to 9 not printed in the Gazette.]

886,212. LENS GRINDING AND POLISHING MACHINE. WALTER F. HOFFMAN, Minneapolis, Minn. Filed Sept. 12, 1906. Serial No. 334,332.



1. In a machine of the class described, a vertically disposed wheel supported for rotation, disk-carrying shafts supported for rotation radially to the wheel, a receptacle or hopper supported to discharge its contents in the direction of the face of the wheel, a gate for said hopper having a spring actuated stem whereby said gate is held normally closed, an arm extending radially from the gate stem, and a lug upon one of the radial shafts for intermittent engagement with said arm.

2. In a machine of the class described, a vertically disposed grinding and polishing wheel supported for rotation, a bracket supported for reciprocation in a plane parallel to the axis of the wheel, a disk carried by the bracket, and means for forcing the latter resiliently in the direction of the face of the wheel.

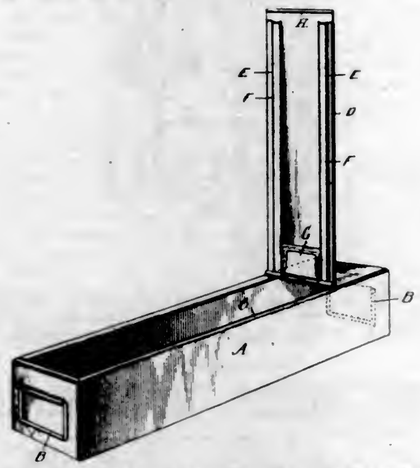
3. In a machine of the class described, a driven main shaft, a counter-shaft slidably supported parallel thereto and receiving motion therefrom, means for imparting longitudinal reciprocatory motion to the counter-shaft when the latter is rotated, a wheel supported detachably upon the main shaft, disk carrying brackets supported hingedly upon the counter-shaft, collars upon the latter to prevent displacement of the brackets, and means for forcing the disk-carrying brackets resiliently in the direction of the face of the wheel.

4. In a machine of the class described, a grinding and polishing wheel supported for rotation, a bracket supported for reciprocation, a disk carried by the bracket, and means for forcing the disk in the direction of the face of the wheel.

5. In a machine of the class described, a grinding and polishing wheel supported for rotation, a bracket supported for reciprocation in a plane parallel to the axis of the wheel, a disk carried by the bracket, and means for forcing the disk in the direction of the face of the wheel.

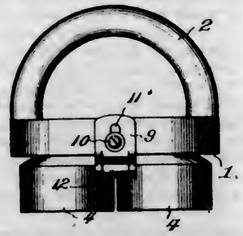
[Claims 6 to 11 not printed in the Gazette.]

886,213. COVER FOR SAFE-DEPOSIT BOXES. HARRY W. HOLDER, Durham, Conn. Filed Jan. 25, 1908. Serial No. 412,639.



In combination with a safe deposit box having a beading along the longitudinal marginal edges of the opening therein, a cover hinged to the box and having longitudinal flanges turned back against the under surface thereof and each flange having a longitudinal beading adapted to bear against the beading upon the edge of the opening in the box, the ends of said flanges terminating a slight distance from the ends of the cover and adapted to bear against the end beading of the opening with a portion of the cover projecting beyond the end of the box, as set forth.

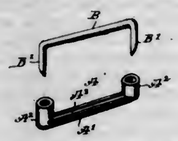
886,214. SEAM-CLOSER. ASA F. HOUCK, Easton, Pa. Filed July 31, 1907. Serial No. 386,463.



1. In a device of the class described, a body plate having an integral upward extending hand and downward extending spaced lugs, seam closing rollers supported for rotation upon said lugs and having recesses at their outer ends, washers fitted in said recesses and secured upon the lugs, and slides adjustably engaging the front and rear edges of the body plate and carrying supporting rollers.

2. In a device of the class described, a body plate having an upward extending handle, downward extending lugs and provided at its front and rear edges with vertical recesses intermediate the lugs, seam closing rollers supported for rotation upon the lugs, slides mounted adjustably in the vertical recesses, and rollers carried by the slides, said rollers being disposed approximately at right angles to the seam closing rollers.

886,215. BELT-FASTENER. PERRY A. HUDSON, New York, N. Y. Filed July 18, 1907. Serial No. 384,350.



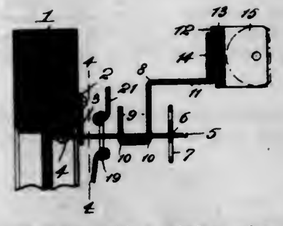
1. A belt fastener comprising a socket member formed of a bar grooved at one face, and sockets integrally rising from the said face at the ends of the bar, the sockets opening into the groove of the bar, and a staple having its pointed ends passing into the sockets and into the groove of the bar to be bent into clenching position.

2. A belt fastener having a socket member formed of a bar, and sockets projecting at an angle from the ends of the bar, the bar being grooved lengthwise and the groove leading into the sockets.

3. A belt fastener comprising a staple, and a bar provided at its ends with sockets for receiving the points of the staple, said sockets having openings at the face of the bar adjacent to the body of the staple for the purpose set forth.

4. A belt fastener comprising a staple, and a bar provided at its ends with sockets for receiving the points of the staple, and means in connection with the bar for bending the points of the staple inwardly and upwardly.

886,216. COMBINED SHADE-ADJUSTER AND SASH-OPERATOR. RICHARD HUITT, St. Louis, Mo. Filed July 15, 1907. Serial No. 383,729.



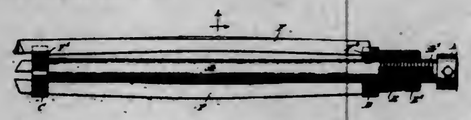
1. The combination with a window, of a horizontally disposed bar pivotally secured at its rear end to the top rail of the upper sash and at the center thereof, a slotted plate fixed to the top rail of the sash and adapted to receive the bar when the same is swung into position at right angles to the sash rail, a bracket detachably mounted on the forward end of the pivoted bar, a curtain supporting bar detachably arranged on the outer end of the bracket, bearings fixed to the top and bottom of the window frame, and a cord having its ends detachably connected to the pivoted bar and passing around said bearings.

2. The combination with a window, of a horizontally disposed bar pivotally secured at its rear end to the top rail of the upper sash and at the center thereof, a slotted plate fixed to the top rail of the sash and adapted to receive the bar when the same is swung into position at right angles to the sash rail, a bracket detachably mounted on the forward end of the pivoted bar, a curtain supporting bar detachably arranged on the outer end of the bracket, a ring detachably located on the pivoted bar, and a cord having its ends secured to the ring, and which cord passes through bearings fixed to the top and bottom of the window frame.

886,217. PIPE OR TUBE CLEANER. EDMUND A. JABLONSKY, New York, N. Y. Filed June 24, 1907. Serial No. 380,475.

1. A boiler tube cleaner, comprising a rod provided at its outer end with a fixed head provided with an annular series of spaced recesses extending therethrough, a movable head provided on its inner face with an annular series of

recesses, means for moving the movable head toward the fixed head, and cutters in the form of bars triangular in cross section, said bars being arranged parallel with the rod, and with their bases toward the rod, one end of said bars being seated in the recesses of the movable head, and the other end extending through the recesses in the fixed head, each of said bars being provided with a shoulder for engaging the inner face of the fixed or the movable head for the purpose set forth.

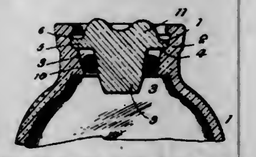


2. A boiler tube cleaner, comprising a rod having a fixed and a movable head, and longitudinally extending cutters grouped around and normally parallel with the said rod and held in the said heads, the said cutters being in the form of steel bars triangular in cross section, and each having a flat side opposite the rod, the cutting edge of the bar being outside and the ends of said bars extending beyond the fixed head.

3. A boiler tube cleaner, comprising a rod having a fixed and a movable head, and longitudinally extending cutters grouped around and normally parallel to said rod and held in the said heads, the said cutters being in the form of steel bars triangular in cross section, and which have a flat side opposite the rod, the cutting edge of the bar being outside, the bevel of the said cutting edge increasing in width toward the center of the bar.

4. A boiler cleaner, comprising a rod having a fixed and a movable head and longitudinally extending cutters grouped around normally parallel with the said rod, and held in the said heads, the said cutters being in the form of steel bars triangular in cross section, and each having a flat side opposite the rod, and the outermost edge beveled in a transverse direction to form a longitudinal cutting edge.

886,218. JAR-CLOSURE. HOWARD E. JOLLY, Columbus, Ohio. Filed June 28, 1907. Serial No. 381,281.

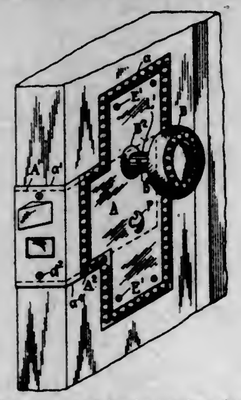


1. The combination of a necked receptacle in which the interior walls of the neck are flared outwardly from the base thereof, the outer portion of the neck having a groove therein, a washer applied to the flared walls of the neck, a cover, a tapered plug pendent from the cover, and having a wedge action upon the washer, and tongues carried by the cover and having an interlocking connection with the groove.

2. The combination of a necked receptacle in which the interior walls of the neck are flared outwardly from the base thereof, the outer portion of the neck being provided with a shoulder and with a groove located immediately above the shoulder, the said neck also having notches formed therein in communication with the groove, a cover normally resting upon the shoulder, a washer applied to the flared walls of the neck, a tapered plug pendent from the cover and serving to engage the washer, and tongues carried by the cover, the said tongues corresponding to the before mentioned notches and being adapted to fit within the groove.

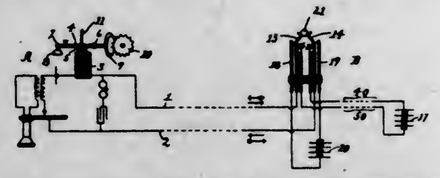
886,219. LOCK. HENRY F. KEIL, Bronxville, N. Y. Filed May 14, 1906. Serial No. 316,654.

In a lock, a combined escutcheons and face plate to rest against the sides of a door and extending around its front edge and of greater dimensions than and overlapping a notch cut in the stile of the door, a lock mechanism adapted to be inserted in the said notch and supported by the said combined escutcheons and face plate, the escutcheons having orifices greater in diameter than the knob spindle



encircled by the same, and knobs having shanks adapted to bear directly against the escutcheon plates and roses supported by the knob shanks and slidable on the escutcheons.

886,220. REGISTERING TELEPHONE-CALLS. ISIDOR KITSEE, Philadelphia, Pa. Filed June 26, 1907. Serial No. 380,959.



1. In combination with a telephonic circuit, centering in an exchange a common battery therefor, stationed at said exchange, an outlying station for said circuit, and means positioned in part at said outlying station and in part at the exchange to register a call, the means positioned at the outlying station comprising a polarized electro-magnet, a registering device and means for said electro-magnet to actuate said registering device through the flow of the current in one direction and to remain inactive through the flow of the current in an opposite direction, the means positioned at the center comprising an auxiliary battery a switching device, and means therefor to disconnect the main subscriber's circuit from the common battery and connect the main subscriber's circuit to said second battery, the current of said second battery flowing then in a direction opposite from the flow of the first named battery through the telephonic circuit, independent of the plug circuit or devices therein connecting two subscriber circuits to each other.

2. In a registering device for a telephonic circuit, a polarized electro-magnet stationed at the subscriber's station, a registering device in operative relation thereto, and means to give audible signal through the operation of said electro-magnet, in combination with two sources of current and a switching device stationed at the center, one source normally connected to said circuit, said switching device adapted to disconnect both legs of the subscriber's circuit from one source of current and to connect said circuit, independent of a plug circuit, to the second source of current.

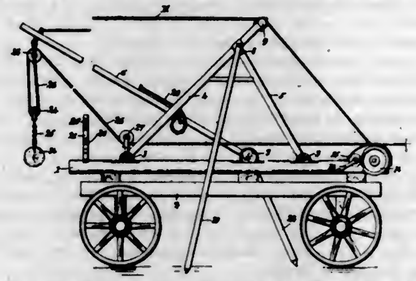
3. Means to register a telephonic call, said means comprising a registering device with polarized electro-magnet located at the outlying or subscriber's station, and comprising an auxiliary source of current and switching means located at the center, the switching means adapted to connect said source to the circuit of said outlying station and disconnect said circuit from its normal source of current, said switching device adapted to be manipulated by the operator independent of the means to connect two subscribers' stations with each other.

4. In combination with a telephonic circuit a common battery therefor stationed at the center or exchange, means at the outlying station of said circuit to register a call, said means comprising a registering device and an electro-magnet, polarized in a manner, so as not to be affected by the flow of the common battery, both the device and electro-magnet in operative relation as to each other, a second battery at said exchange, and means at the exchange to disconnect the telephonic circuit from the common battery and connect the same directly and without the interposition of a connecting cord to said second battery, the current of which is then flowing through the circuit in opposition to the former flow of the current.

5. Means to register a telephonic call at an outlying or subscriber's station, said means comprising polarized means to register a call located at said outlying station and comprising, at the central station, an auxiliary source of current, independent of the source of current normally connected to the circuit of said outlying station and comprising switching means adapted to disconnect the normal source and connect the auxiliary source to said circuit, independent of the means for connecting said circuit to a second circuit.

[Claim 6 not printed in the Gazette.]

886,221. LOADING DEVICE. WILLIAM F. KLEWITTER, Mosinee, Wis. Filed May 28, 1907. Serial No. 376,046.



1. A loading device consisting of a frame, a boom pivoted near the center of the frame and extending outwardly toward its edge, a guy rope secured to the free terminal of the boom and to a drum on the opposite side of the frame, and means for rotating the drum.

2. A loading device consisting of a frame, a boom pivoted near the center of the frame and extending outwardly toward its edge, a guide supported on the frame, a guy rope secured to the free terminal of the boom, said guy rope passing through the guide and to a drum opposite the free terminal of the boom, means for rotating the drum, and means for preventing the drum from rotating.

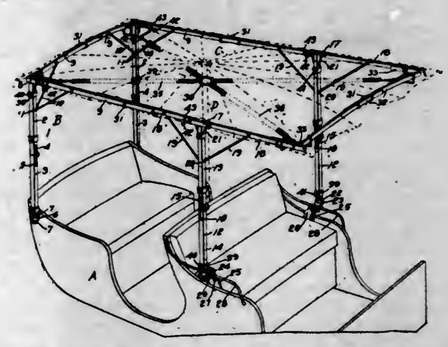
3. A derrick frame consisting of longitudinal members, a transverse member disposed approximately nearer one of the terminals of the frame than to the opposite one, a boom pivoted to said transverse member and projecting toward the most distant terminal of the frame, transverse members supporting forward and rear braces, a member supported by the said braces, the said member having a guide adapted to receive a guy rope, and adjustable side braces secured to the upper portions of the braces and adapted to be planted in the ground at either side of the frame.

4. A derrick frame consisting of longitudinal members, a transverse member approximately nearer one of the terminals than to the opposite one, a boom pivoted to said transverse member and projecting toward the most distant terminal of the frame, transverse members supporting forward and rear braces, the said braces projecting inwardly toward the center line of the frame, a member supported by the said braces, said member having a guide adapted to receive a guy rope, and adjustable side braces secured to the upper portions of the braces and adapted to be planted in the ground at either side of the frame.

5. A derrick frame consisting of longitudinal members, a transverse member approximately nearer one of the terminals of the frame than to the opposite one, a boom pivoted to said transverse member and projecting toward the most distant terminal of the frame, transverse members supporting forward and rear braces, a member supported by the braces, the said member having a guide adapted to receive a guy rope, adjustable side braces secured to the upper portions of the braces and adapted to be planted in the ground at either side of the frame, anchors secured to the frame, and a chain connecting the boom and frame body, by which the swing of the boom is limited.

[Claims 6 to 9 not printed in the Gazette.]

886,222. REMOVABLE SUPPORT FOR VEHICLE-CURTAINS. HARVEY S. KOINER and SHEARMAN BOTTERSE, Washington, D. C. Filed Oct. 12, 1907. Serial No. 397,227.



1. In a curtain supporting frame for carriages, the combination of a post; a cross-piece secured to the upper end thereof; a wing pivoted to each end of the cross-piece and movable into and out of horizontal position; and a U-shaped retaining clip pivoted to the post and having the free ends of its arms adapted for engagement with the wings when the latter are in horizontal position.

2. In a curtain supporting frame for carriages, the combination of a post; a cross-piece secured to the upper end thereof; a wing pivoted to each end of the cross-piece and provided at its inner end with a perforation, said wings being movable into and out of horizontal position; and a U-shaped retaining clip pivoted to the post, the free ends of each clip arm being adapted for engagement with the perforated end of the corresponding wing when the latter is in horizontal position.

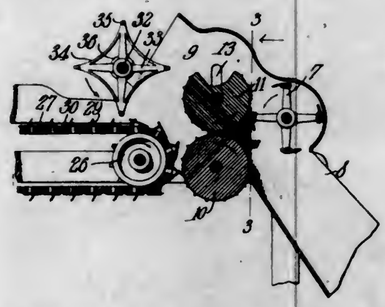
3. In a curtain supporting frame for carriages, a foldable post comprising an upper and a lower section hinged together; a pair of wings pivotally connected to the upper section and movable into and out of horizontal position; retaining clips carried by said section and adapted for engagement with the wings when the latter are in horizontal position; and a brace pivoted to each wing and adapted for engagement with the upper section when said wings are in such position.

4. In a curtain supporting frame for carriages, a foldable post comprising an upper and a lower section hinged together, the upper section being socketed; a cross-piece secured to the upper section; a wing pivoted to each end of the cross-piece and movable into and out of horizontal position, each wing being provided at its inner end with a perforation; a U-shaped retaining clip pivoted to the upper section and having the free ends of its arms adapted for engagement with the perforated ends of the corresponding wings, when the latter are in horizontal position; and a brace pivoted to each wing and having its free ends adapted for engagement in the corresponding socket in the post, when the wings are in such position.

5. In a device of the class described, the combination, with an umbrella and its supporting pole, of a curtain-supporting frame comprising an open rectangular top and supporting posts therefor; a clip connected to each corner of the top; and a series of coil-springs connected at their outer ends with said clips and at their inner ends to a ring through which the umbrella pole is adapted to pass.

[Claims 6 to 9 not printed in the Gazette.]

886,223. STRAW OR FEED CUTER. HENRY C. KRASE and RICHARD GRIMM, Two Rivers, Wis. Filed Aug. 28, 1907. Serial No. 390,507.



1. A feed cutter including a frame, an endless conveyer mounted for rotation on the frame, feed rollers disposed at one end of the conveyer, a cutter, brackets secured to the frame above the conveyer, a shaft journaled in said brackets, spaced heads secured to the shaft and formed of intersecting spokes connected by integral concaved braces, longitudinal bars connecting the heads at the intersection of the concaved braces, said heads and connecting bars constituting a reel for feeding the material between the rollers to the cutter.

2. A feed cutter including a frame, an endless conveyer mounted for rotation on the frame, rollers disposed at one end of the conveyer, a cutter, brackets secured to the frame, a shaft journaled in the brackets, a reel carried by the shaft and including spaced heads formed of radiating spokes connected by concaved braces, longitudinal bars connecting the heads at the juncture of the adjacent concaved braces and forming a part of the reel, and members secured to the brackets and forming journals for the shaft.

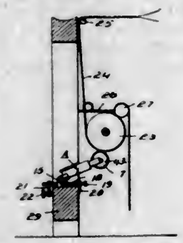
3. A feed cutter including a frame having slots formed therein, an endless conveyer, a cutter, a relatively stationary roller journaled in the frame, a movable roller co-acting with the stationary roller and provided with a stub shaft extending through the slots in the frame, a stub shaft carried by the stationary roller, spaced bars having slots formed therein for the reception of the stub shafts, sprocket wheels secured to the stub shafts and mounted for rotation between the bars, a power wheel on the cutter shaft for transmitting motion to the lower feed roller, a reel mounted for rotation above the conveyer, a sprocket chain engaging the roller actuating sprockets and operatively connected with the reel and conveyer, respectively, and a tension device for adjusting the slack in the sprocket chain.

4. A feed cutter including a frame, feed rollers mounted for rotation in the frame, a cutter, an endless conveyer including a plurality of transverse slats, pulling teeth secured to each slat for feeding the material to the feed rollers, and stripping teeth secured to each slat and adapted to engage the pulling teeth of a succeeding slat for disengaging the material from said pulling teeth.

5. A feed cutter including a frame, feed rollers mounted for rotation on the frame, a cutter, an endless conveyer including a plurality of transverse slats, a reel mounted for rotation above the conveyer for compressing the material, pulling teeth secured to the slats and extending in the direction of the feed rollers, and rearwardly extending stripping teeth secured to each slat and bearing against the pulling teeth of the succeeding slat for disengaging the material from the pulling teeth.

[Claims 6 to 8 not printed in the Gazette.]

886,224. MEASURING DEVICE. ROBERT LAUFER, East Greenville, Pa., assignor of one-half to Charles L. Huber, East Greenville, Pa. Filed Dec. 4, 1907. Serial No. 405,076.



1. The combination of a measuring device including a contact element with a mounting for the device comprising a member hingedly connected with the device and provided with a threaded opening, a threaded rod screwed into the opening, a pair of clamping jaws removably threaded on the rod, a screw carried by one of the jaws and coöperating with the other jaw to secure the device to a support, and a spring arranged to operate between the member and device for holding the latter in operative position.

2. The combination of a contact element, a support on which the element is rotatably mounted, a gear wheel secured to the element to rotate therewith, a worm shaft, a pinion on the shaft meshing with the said gear wheel, a second shaft, a worm wheel on the second shaft, an indicating mechanism, an adjustable means between the mechanism and the second shaft for actuating the mechanism in one direction by the rotation of the second shaft in either direction.

3. The combination of a measuring device including a contact element, with a mounting therefor comprising a threaded rod, a pair of independently adjustable clamping jaws threaded on the rod, a clamping screw on one of the jaws, and a pivotal connection between the rod and measuring device.

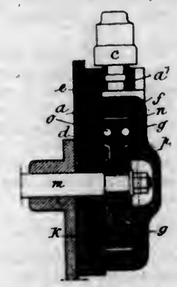
4. The combination of a measuring device, with a mounting therefor, said mounting comprising a yoke, a pintle hingedly connecting the device with the yoke, a spring arranged on the pintle to act on the yoke and device to constantly urge the latter in a definite direction, a head on the yoke having right-angularly disposed threaded openings, a member designed to engage in either of the openings, and clamping devices on the member.

5. In a measuring device, the combination of an indicating mechanism, a support therefor, a rotary contact element on the support, and means between the mechanism and element for permitting the latter to rotate in either direction with the same effect on the mechanism, said means comprising a gear wheel driven by the element, a gear wheel for driving the mechanism, an oscillatory member, a pair of pinions on the member permanently in mesh with the second gear wheel and arranged to permit one of the pinions to be thrown into mesh with the first-mentioned gear wheel, and a pinion permanently meshing with the other of the two pinions and adapted to be thrown into mesh with the first-mentioned gear wheel.

[Claim 6 not printed in the Gazette.]

886,225. CURRENT-DISTRIBUTING DEVICE FOR IGNITING EXPLOSIVE-ENGINES. HENRI DE LA VALETTE, Paris, France. Filed May 8, 1906. Serial No. 315,769.

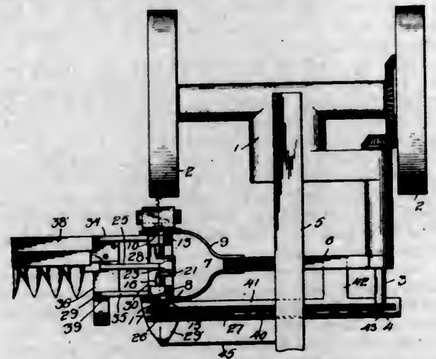
1. A high tension current distributing device, comprising a plate of insulating material, a lid of insulating material on the plate, a revolving disk of insulating material located between the plate and the lid, contact pieces arranged in a circle in the plate, a contact ring located in the lid, and a brush located within the revolving disk, adapted to ride on one side on the said contact pieces and on the other side on the said contact ring.



2. In a high tension current distributing device, the combination of a plate of insulating material, a flange extending forwardly of the said plate, terminals on the said flange, contact pieces arranged in a circle in the plate, wires stowed away within the plate and connecting the contact pieces to the terminals, a lid on the plate, a metal ring in the lid, a contact piece in the periphery of the lid adapted to touch the middle terminal on the flange of the plate, a wire stowed away in the lid and connecting the contact ring with the last named contact piece, and a revolving brush to put the contact ring successively in communication with the contact pieces of the plate.

3. In a device of the character described, the combination of a revoluble member provided with an aperture extending therethrough, a pair of contact balls located within said aperture, a spring mounted within said aperture and pressing said balls in opposite directions, a stationary member provided with a contact ring disposed adjacent to the path of one of said balls so that the ball in question is pressed thereagainst, and contact members disposed adjacent to the path of the other ball and intermittently engaged by said ball as said revoluble member rotates.

886,226. MOWER. CARL LORENSON, Wausa, Nebr. Filed Dec. 18, 1905. Serial No. 292,321.

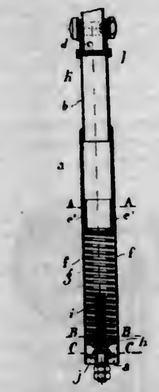


1. A machine of the class described comprising a frame, a shaft rotatably mounted in said frame, means for rotating said shaft, an arm supported by said shaft, guide-members carried by said arm, bearing-blocks mounted in said guide-members, bearing-sleeves extended through said blocks, a hanger pivotally mounted upon said bearing sleeves, a finger-bar connected at one of its ends to said hanger, a crank-shaft mounted in said bearing-sleeves, a sprocket-gear carried by said first-named shaft, a sprocket-gear carried by said crank-shaft, a chain connecting said sprocket-gears, a shoe and attached parts connected with said guide-members, and a chain-guard connected at one of its ends to said shoe and extending beneath said sprocket-chain.

2. A machine of the class described comprising a frame, a shaft rotatably mounted in said frame, means for rotating said shaft, an arm supported by said shaft, guide-members carried by said arm, bearing-blocks mounted in said guide-members, bearing-sleeves extended through said blocks, a hanger pivotally mounted upon said bearing sleeves, a finger-bar connected at one of its ends with said hanger, a crank shaft mounted in said bearing sleeves, a sprocket-gear carried by said first-named shaft, a sprocket-gear carried by said crank-shaft, a chain connecting said sprocket-gears, a shoe and attached parts connected with said guide-members, and a chain-guard connected at one of its ends to said shoe and provided at the other of its ends with ears, the said ears being connected one to the said arm and the other to the said first-named shaft.

3. A machine of the class described comprising a frame, a shaft rotatably mounted in said frame, means for rotating said shaft, an arm supported by said shaft, guide-members carried by said arm, bearing-blocks mounted in said guide-members, said bearing-blocks being formed with an opening having grooved walls, bearing-sleeves engaged in said bearing-blocks, said bearing-sleeves being provided with ribs for engagement in said grooves, a hanger supported by said bearing-sleeves, a finger-bar supported at one of its ends by said hanger, a crank-shaft mounted in said bearing-sleeves, a sprocket-gear carried by said first-named shaft, a sprocket-gear carried by said crank-shaft, a sprocket-chain connecting said sprocket-gears, a shoe and attached parts connected with said guide-members, and a chain-guard arranged beneath said sprocket-chain.

886,227. SADDLE-SUPPORT FOR CYCLES. JULIEN F. MAMET, Billancourt, and PAUL HALLOT, Vincennes, France. Filed June 20, 1905. Serial No. 266,190.



1. A device of the class described comprising telescopic tubular sections, the outer section being adapted to fit into a socket of a bicycle frame, a key movable longitudinally of one of said sections and held from longitudinal movement relatively to the other section, a compression spring having its ends arranged to act respectively upon said key and said section which is longitudinally movable relatively to said key, and means coöperating with one end of said spring for adjusting the tension thereof.

2. A device of the class described comprising telescopic tubular sections, the outer section being adapted to fit into a socket of a bicycle frame, one of said sections being provided with longitudinally extending slots, a key having portions guided to slide in the slots of the said section and held from longitudinal movement relatively to the

other section, and a spring having one end bearing against said key and having its opposite end arranged to act upon the section provided with the longitudinal slots.

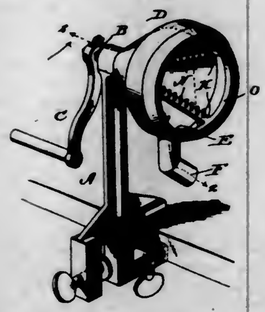
3. A spring support for a saddle and handle bars of bicycles, consisting of two concentric tubes inclosing a spring, a key of horse-shoe shape in the lower end of the outer tube and having an adjustable nut for serving as a tensioning device for the spring, substantially as described.

886,228. DRILL AND BIT HOLDER FOR BORING-MACHINES. JAMES MARSTON, Braddock, Pa. Filed Mar. 8, 1907. Serial No. 361,383.



A holder for drills consisting of a hollow cylindrical body portion having a shank and a flanged end, said cylindrical body portion having diametrically opposed openings formed therein, a drill holding block having a longitudinal channel and mounted in said cylindrical body portion, a key mounted in the openings of said body portion transversely of said block, and a sleeve adapted to fit down over said cylindrical body portion, and key and rest upon said flange.

886,229. APPARATUS FOR TIPPING SEED-CORN. BENJAMIN G. MEASE, Vinton, Iowa. Filed Dec. 20, 1907. Serial No. 407,309.

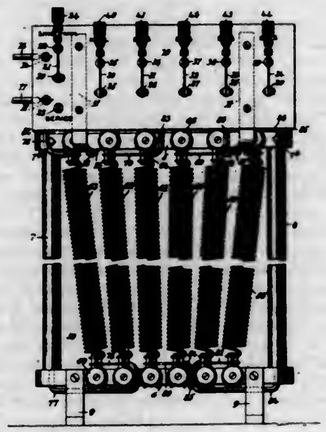


1. An apparatus for tipping seed corn comprising a bracket arm, a shaft journaled therein, means for rotating the shaft, a conical-shaped casing mounted upon said arm, a series of radially disposed arms fixed to said shaft and divergently disposed to describe a cone, and a series of teeth in alinement with one another mounted upon each of said arms, as set forth.

2. An apparatus for tipping seed corn comprising a bracket arm, a shaft journaled therein, means for rotating the shaft, a series of radially disposed arms fixed to said shaft and divergently disposed to describe a cone, a series of teeth in alinement with one another mounted upon each of said arms, a conical-shaped casing fixed to said arm and surrounding said arms, the outer end of said casing being contracted to a narrow cylindrical portion near the edge and an inwardly projecting conical rim at the edge, and an exit tube leading from said cylindrical portion of the casing, as set forth.

3. An apparatus for tipping seed corn comprising a bracket arm, a shouldered shaft journaled therein, means for operating said shaft, a disk mounted upon a contracted end of said shaft, a nut adapted to hold said disk against the shoulder of the shaft, arms projecting from said disk and divergently disposed to describe a cone, a series of teeth arranged in alinement with one another upon each of said arms upon the disk, and a ring connecting the outer ends of the arms, as set forth.

886,230. RHEOSTAT. JOHN W. MERTZ, Mount Clemens, Mich. Filed Jan. 14, 1908. Serial No. 410,721.



1. In a rheostat, the combination of an upper bar, a lower bar, tubular posts connecting said bars together, resistance windings disposed intermediate said upper bar and said lower bar, and electrical connections for said windings, some of said electrical connections extending through said tubular posts.

2. In a rheostat, the combination of a pair of bars provided with openings, tubular posts extending through said openings, fastening members for securing said tubular posts within said openings so that the parts may be readily disassembled, and windings supported upon said bars.

3. In a rheostat, the combination of a winding, clips connected with said winding and provided with U-shaped portions of malleable metal, insulating members engaged by said U-shaped members, said U-shaped members being bent so as to hold on to said insulating members, and connections for said windings.

4. In a rheostat, the combination of a frame work, windings supported upon said framework and provided with electrical connections, a switch panel, and rods connected with said switch panel and bent into L shape, said rods being connected with said framework, and a plurality of switches mounted upon said switch panel and connected with said windings.

5. In a rheostat, the combination of a framework, a plurality of resistance windings supported upon said framework, a switch panel, switches mounted upon said switch panel, and connections from said switches to said windings, the arrangement of said connections being such that by moving said switches said windings may be connected either in series or in parallel as desired.

[Claims 6 and 7 not printed in the Gazette.]

886,231. JARRING DEVICE. EUGENE E. MESSMORE, Epworth, Iowa. Filed July 2, 1907. Serial No. 381,846.



1. A drill jar made in sections, and means for connecting the sections, said sections being interiorly formed with contact members for engaging a portion of the drill.

2. A drill jar made in sections, and means for connecting the sections, said sections being arranged to encircle the drill rope, the lower portion of the jar being formed with fixed abutments to engage a portion of the drill.

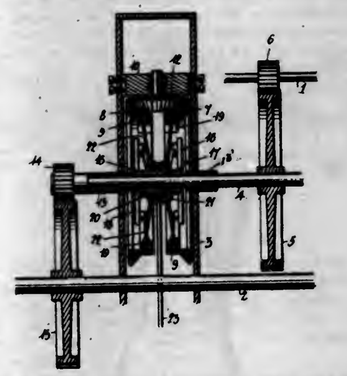
3. A drill jar made in sections connected together adjacent their upper ends, said jar being adapted for sliding engagement with the drill rope, the lower portion of said jar having fixed abutments to provide impact faces for a collar on the drill, the lower portion of the jar being arranged to permit said drill collar to pass between the lower abutments in the initial downward movement of the jar.

4. A drill jar made up in duplicate sections, and means for connecting the sections, each section including an upper portion and a lower portion of greater diameter than the upper portion, and lugs formed adjacent the respective ends of the enlarged portion of each section, the lower portion of each lower lug of the section being inclined inwardly and upwardly relative to the section.

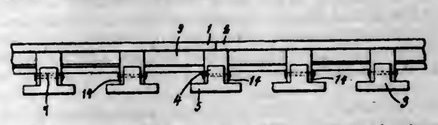
5. A drill jar made up in duplicate sections, each section including an upper portion and a lower portion of greater diameter than the upper portion, and lugs formed adjacent the respective ends of the enlarged portion of each section, the lower portion of each lower lug of the section being inclined inwardly and upwardly relative to the section, and means for connecting the sections to permit the passage of the drill rope therebetween and to permit an independent spreading movement of the lower ends of the sections.

886,232. REVERSING MECHANISM FOR TRACTION-ENGINES. JOHN C. METCALF, Mercersburg, Pa. Filed June 21, 1906. Serial No. 322,767.

A reversing mechanism for traction engines comprising a frame with a bearing block, a beveled gear wheel journaled therein, flanged gears each having hubs rotatably mounted in said frame, a pinion on one of the hubs, a clutch shaft rotatably mounted in said hubs with a gear wheel thereon, a shaft geared to the gear wheel of the clutch shaft, a drive wheel shaft geared to the pinion on the hub, a hub keyed to the clutch shaft having radial arms pivoted segmental shoes thereon, a shifting collar on the keyed hub having lugs, and links connecting said lugs to the shoes of the radial arms to cause the segmental portions of the shoes to frictionally contact with the inner surfaces of the flanged portions of said beveled gear wheels, substantially as specified.



886,233. RAIL-JOINT AND CROSS-TIE. SAMUEL MICHAELS, Mount Pulaski, Ill., assignor of one-half to Nelson Downing, Mount Pulaski, Ill. Filed Oct. 4, 1907. Serial No. 395,932.



1. The combination with a metallic cross-tie having a rectangular body formed with a rail seat in its flat top and upon the bottom edges of its sides with outwardly projecting horizontal base flanges, of a track rail having its base arranged in the seat in the body of the tie, fastening members having their inner sides shaped to engage the webs and base flanges of the rail and their bottom portions channeled to straddle the body of the tie to form depending flanges to engage the side faces of the same, and transverse keys passing through said depending flanges and the body of the tie, substantially as described.

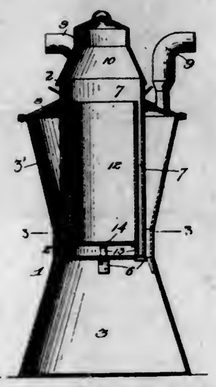
2. In a rail joint, the combination with three metallic cross-ties formed with transverse openings and with rail seats, the latter being in the top of the ties, of track rails engaged with the seats in said ties, the abutting ends of the rails being above the center of the intermediate tie, and joint fastening members arranged upon the opposite sides of the rails to straddle the three ties, each of said members consisting of a body portion or bar shaped to engage the webs and base flanges of the rails and enlargements projecting outwardly from said body or bar and recessed upon their bottom to straddle the ties and to provide depending flanges, the latter being engaged with the opposite sides of said ties and formed with apertures to aline with those in the ties, and transverse fastenings passed through the alined apertures in the ties and the fastening members, substantially as described.

886,234. WASHBOILER. MILO A. MORTON, Brownwood, Tex., assignor of one-half to Samuel W. Johnson, Brownwood, Tex. Filed Aug. 9, 1906. Serial No. 329,911.

1. The combination of a casing having its side walls inclined from its upper and lower ends toward its center, lateral arms extending inwardly from said reduced center, a receptacle supported on said arms, a closure for the upper end of said casing provided with a smoke flue to create a draft at said reduced center and cause the heat from the fire box to pass around said receptacle.

2. The combination of an hourglass-shaped casing having lateral arms extending inwardly from the throat there-

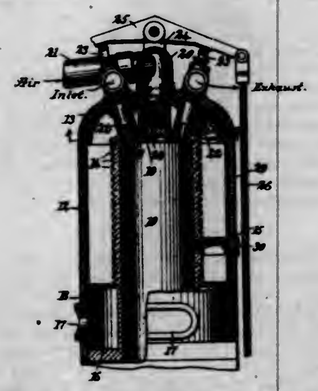
of, a receptacle, the lower end of which is of smaller diameter than said throat, said receptacle being disposed in the upper end of said casing and resting on said lateral arms, a closure for the upper end of said casing provided with a plurality of smoke flues to produce a draft, thereby causing the heat to be evenly distributed around said receptacle.



3. The combination of a fire box, a heating chamber arranged thereabove and having its walls flared outwardly toward its upper end, lateral arms extending inwardly from the reduced end of said heating chamber, a boiler disposed in said heating chamber and resting on said arms, a closure for the upper end of said heating chamber, and a plurality of smoke flues opening through said closure to produce a draft, causing the heat from the fire-box to be evenly distributed around the boiler.

4. The combination of an hourglass-shaped casing, the lower end of which forms a fire box, lateral arms extending inwardly from the reduced center or throat of said casing, a cover for the upper end of said casing having an opening therein for the insertion of a receptacle therethrough, a receptacle arranged in said casing and supported on said arms with its upper end projecting through and fitting in the opening in said cover, a plurality of smoke pipes opening through said cover, and a door arranged in the fire box portion of said casing and provided with draft openings.

886,235. INTERNAL-COMBUSTION ENGINE. CHARLES J. MUNDHENK, Freeport, Ill. Filed July 9, 1907. Serial No. 382,844.



1. An internal combustion engine, including a cylinder having a cylinder head, a jacket having a jacket head, partitions between the cylinder and jacket forming longitudinally-extending passages, partitions integral with the first-mentioned partitions and disposed between said cylinder head and said jacket head forming radially-disposed passages communicating with the first-mentioned passages, and means for delivering a cooling medium into engagement with the cylinder head adjacent the center thereof, whereby it may flow through said radial and longitudinally-disposed passages.

2. In an internal combustion engine, a cylinder having a cylinder head, a jacket having a jacket head, flanges between the cylinder and jacket and forming longitudinally-extending passages, flanges integral with the first-mentioned flanges and extending between said cylinder head and jacket head and forming radially-disposed passages communicating with the first-mentioned passages, and means for delivering a cooling medium into engagement with the cylinder head adjacent the inner end of each of said radially-disposed passages.

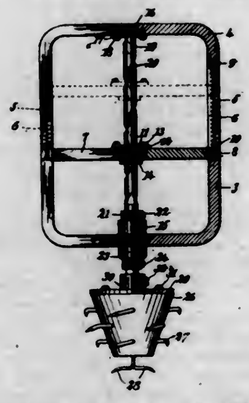
3. In an internal combustion engine, a cylinder having a cylinder head, a jacket having a jacket head, flanges carried by said jacket and jacket head and extending into engagement with said cylinder and cylinder head, each of said flanges having one end thereof adjacent the center of the cylinder head and the other end thereof adjacent the opposite end of the cylinder, said flanges forming radially-disposed and longitudinally-extending passages, and means for delivering a cooling medium adjacent one end of each of said passages.

4. In an internal combustion engine, a cylinder having a cylinder head, a jacket having a jacket head, and means for delivering a cooling medium through said jacket head and into engagement with the cylinder head adjacent the center of the latter, the cylinder and jacket being constructed to form radially-disposed passages extending from the center of the cylinder head to the edges thereof and longitudinally-extending passages along said cylinder, and said jacket being provided with an opening for the escape of the cooling medium adjacent the end of the cylinder opposite to said cylinder head.

5. In an internal combustion engine, a cylinder having a cylinder head, a jacket having a jacket head, an annular flange closing the space between said jacket and cylinder adjacent the end opposite to said heads, a plurality of longitudinally-extending passages between said cylinder and jacket and terminating a short distance from said annular flange, means for delivering a cooling medium through the jacket head into engagement with the cylinder head adjacent the center thereof, and means for uniformly distributing said cooling medium to the several longitudinally-extending passages.

[Claims 6 and 7 not printed in the Gazette.]

886,236. COTTON-PICKER. ISAAC A. MURCHISON, Manchester, N. C. Filed June 19, 1907. Serial No. 379,745.



1. The combination of a frame, a bar slidably mounted therein and provided with a bearing sleeve having a spiral thread disposed internally of the same, a spindle journaled within said frame and provided with a groove mating said thread so that movements of said sliding bar cause said spindle to turn, and mechanism mounted upon said spindle for the purpose of engaging cotton to be picked.

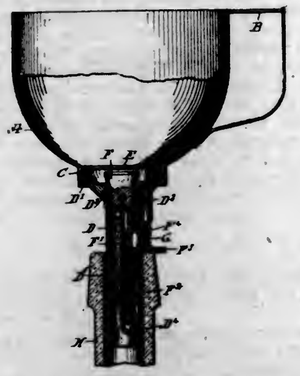
2. The combination with a frame provided with slots, a bar movably connected with said frame and provided with portions fitting slidably into said slots, springs mounted within said slots and engaging said portions of said bar extending thereinto, a spindle mounted within said frame and provided with a spiral groove, a bearing sleeve mounted upon said bar, said bearing sleeve being provided with a thread extending into said groove of said spindle for the purpose of turning the latter, and a revoluble member mounted upon said spindle and provided with metallic spikes for engaging cotton to be picked.

3. In a cotton picker, the combination of a frame, a spindle journaled therein and adapted to rotate, means for preventing said spindle from moving endwise in relation to said frame, a bar movably connected with said frame and provided with means for turning said spindle, and mechanism mounted upon said spindle for the purpose of engaging the cotton to be picked.

4. In a cotton picker, the combination of a frame, a sliding bar mounted thereupon, a revoluble member journaled in said frame and provided with barbs for entwining cotton, said sliding bar being provided with means for turning said revoluble member, and mechanism for preventing travel of said revoluble member in the general direction of its axis of rotation relatively to said frame.

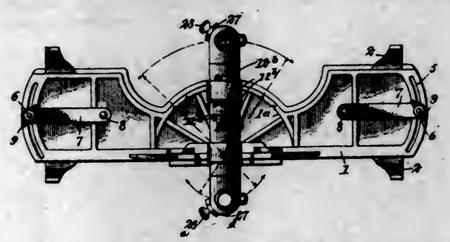
5. The combination of a frame, a cone revoluble in relation thereto, means for preventing travel of said cone relatively to said frame in the general direction of the axis of revolution of said cone, and means controllable by hand for turning said cone relatively to said frame.

886,237. FUNNEL. JAMES P. MURTHA, Little Rock, Ark., assignor of one-half to John H. Turcotte, St. Louis, Mo. Filed May 21, 1907. Serial No. 374,891.



A funnel comprising a bowl, a spout thereon, having a slot extending lengthwise thereof, a valve seat in the enlarged end of said spout, a shield arranged longitudinally within the spout over the said slot, a valve adapted to be seated on the said seat a stem in connection with the valve, a portion of which extends down the spout, and this portion terminating in a bent up portion extending within the shield, the upper end of the bent up portion terminating in a transverse arm for engagement with the neck of the vessel to be filled, a guide pin on said arm slidably engaging a bearing on the spout, and a spring coiled on the guide pin and pressing the said arm to hold the valve normally to its seat.

886,238. MITER-BOX. JOHN MCCUNE, Santa Cruz, Cal. Filed Nov. 21, 1906. Serial No. 344,385.



1. The combination with a bed plate, of a casing pivoted horizontally thereon, sleeves provided with saw posts and rotatably mounted in said casing and movable longitudinally thereof, a lever pivoted to one of said sleeves, and provided with a pin adapted to have a locking engagement with both of said sleeves.

2. The combination with a bed plate, of a casing pivoted horizontally thereon, sleeves provided with saw posts rotatably mounted in said casing and movable longitudinally thereof, a lever pivoted to one of said sleeves and provided with a pin adapted to engage both of said sleeves, and means adapted to hold said sleeves against rotary motion relatively to each other independently of said lever.

3. The combination with a bed plate, of a casing pivoted horizontally thereon, sleeves rotatably mounted in said casing, movable longitudinally thereof and provided with saw posts, a lever extensible in length pivoted to one of said sleeves, and adapted to engage apertures formed in both of said sleeves.

4. The combination with a bed plate, of a casing pivoted horizontally thereon, inner and outer telescoping sleeves rotatably mounted in said casing and adapted to be moved longitudinally thereof, a pin attached at its ends to the outer casing and engaging a longitudinal slot formed in the inner casing, and a lever extensible in length provided with a pin adapted to engage registering apertures formed in both of said sleeves.

5. The combination with a bed plate, of a casing pivoted horizontally thereon and provided with a series of transverse apertures, inner and outer telescoping sleeves rotatably mounted in said casing and movable longitudinally thereof, saw posts mounted on said sleeves, a lever pivoted to one of said sleeves and provided with a pin adapted to engage registering apertures formed in both of said sleeves, and the apertures of said casing.

[Claim 6 not printed in the Gazette.]

886,239. TROLLEY-WHEEL. WILLIAM W. NEIGHBOUR, Denison, Tex. Filed July 13, 1907. Serial No. 383,589.

1. A trolley wheel comprising a central metallic disk provided with a hub, disks of insulating material on opposite sides of the metallic disk and perforated to receive the ends of the hub, and a conducting rim secured to the disks and in contact with the central disk.

2. A trolley wheel comprising a central conducting disk provided with a hub, disks of insulating material on opposite sides of the central disk and perforated to receive the ends of the hub, a sectional rim receiving the edges of the disks, and means fastening the rim sections to the disks.

3. In a trolley wheel, the combination of a harp, conducting spindles supported by the arms of the harp, and a trolley wheel having a hub turning on said spindles, and provided with an insulated conductor leading from its rim to said hub.

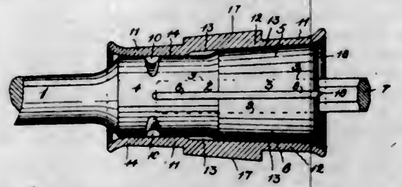
4. In a trolley wheel, the combination of a harp, conducting bearings upon the arms of the harp, a trolley wheel journaled on said bearings and provided with a conductor leading from its rim to the hub, and ball bear-

ings between the wheel and harp arms, said bearings being insulated from the wheel and arms.



5. In a trolley wheel, the combination of a harp, hollow lubricating spindles upon the arms of the harp, said spindles forming conductors, a wheel journaled on said spindles and having an electrical conductor connected therewith, and ball bearings between the sides of the wheel and harp arms, said bearings being insulated from the spindles and conductor.

886,240. COUPLING FOR PERCUSSIVE APPARATUS. CHARLES R. NEWTON, East Rand, Transvaal. Filed Sept. 24, 1906. Serial No. 336,032.

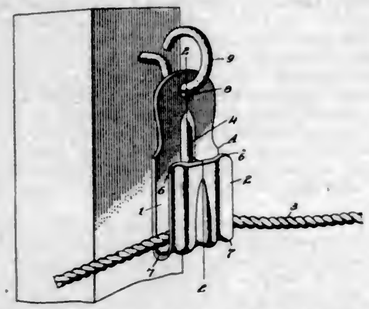


1. In a coupling device for percussive apparatus, in combination, a reciprocating part formed with a head, the latter made cylindrical in its rear portion and conical in its front portion, the front portion being made of elliptical cross section, a central hole in the head for the reception of the piece to be secured thereto, the head being flexibly segmented round said hole, and a surrounding sleeve having diametrically opposite external projections, said sleeve being flared at both ends and shaped to fit the cylindrical and conical rear and front portions of the head for forcing the segments together.

2. In a coupling device for percussive apparatus, in combination, a reciprocating part formed with a head, the latter being made cylindrical in its rear portion and conical in its front portion, the front portion being also made of elliptical cross section, the head being split in halves for the greater portion of its length and having a hole between the halves for the reception of the piece to be fixed to the head, grooves in the cylindrical rear portion of the head at the rear ends of the segments for increasing the resiliency of the latter, and a sleeve surrounding the head having diametrically opposite external projections, said sleeve being flared at both ends and shaped to fit the rear cylindrical and front conical portions so as to cause the externally coned portions of the segments to grip the piece to be fixed, as set forth.

886,241. SUPPORTING DEVICE. ENOS NORTON, Milwaukee, Wis. Filed July 31, 1907. Serial No. 386,458.

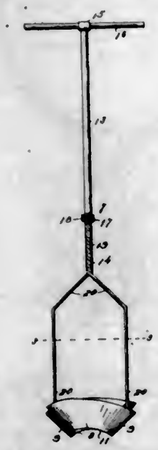
1. A supporting device of the class described, consisting of a broad flat hook, the shank portion of which is provided with a central vertical rib extending toward the lip portion and the lip portion of which has a corresponding rib extending toward the shank portion, beveled upwardly, and terminating at a distance from the terminal edge of said lip portion.



2. A supporting device of the class described, consisting of a broad flat hook, the shank portion of which is provided with a central vertical rib extending toward the lip portion and the lip portion of which has a corresponding rib extending toward the shank portion; said lip portion being provided with auxiliary ribs adjacent to the side edges thereof.

3. A supporting device of the class described, consisting of a broad flat hook, the shank portion of which is provided with a central vertical rib extending toward and above or beyond the lip portion and the lip portion of which is provided with a corresponding vertical rib extending toward the shank portion and terminating at a distance from the terminal edge of the lip portion, said lip portion being provided with auxiliary ribs adjacent to its side edges and extending to the free terminal edge of the lip; said central ribs converging and merging together at the inner end of the hook.

886,242. EARTH-AUGER. JOHN S. PARK, Rockport, Ind. Filed Aug. 29, 1907. Serial No. 390,650.

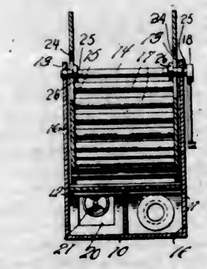


1. The combination, in an auger, of a pair of concavo-convex semicircular blades arranged opposite and set at an angle to each other, to dispose the cutting edge of each blade directly beneath the adjacent edge of the opposite blade, the lower ends of said blades being cut away to form a channel therebetween through which a cylindrical core of uncut earth is adapted to pass, when the auger is rotated, and an operating handle provided at its lower end with a plurality of radiating feet secured to each of said blades.

2. The combination, in an auger, of an operating handle consisting of an upper member having a socketed lower end, and a lower member formed of rods intertwisted to provide a stem portion and feet radiating therefrom, the upper end of the stem being adapted to fit in said socket, and a pair of oppositely-disposed concavo-convex blades, each blade having a plurality of said feet attached at their lower ends thereto.

3. The combination, in an auger, of an operating handle consisting of an upper member having a socketed lower end and a lower member formed of rods intertwisted to provide a stem portion and depending feet radiating therefrom, the upper end of the stem being adapted to fit in said socket, and a pair of concavo-convex blades arranged opposite and set at an angle to each other, to dispose the cutting edge of each blade beneath the adjacent edge of the opposite blade, the lower ends of said blades being cut away to form a channel therebetween through which a cylindrical core of uncut earth is adapted to pass, when the auger is rotated, each blade having a plurality of said feet attached at their lower ends thereto.

886,243. WASHING-MACHINE. MINNIE A. PATTEN, Milltown, Ga. Filed Oct. 13, 1906. Serial No. 338,818.

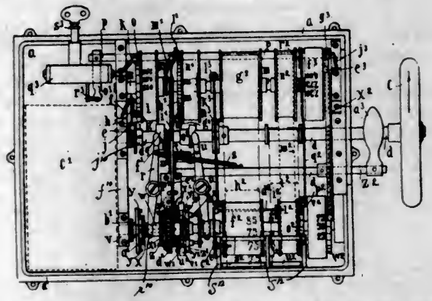


A washing machine of the type set forth, comprising a receptacle formed with vertical sides, and a concavely curved bottom, a rubber comprising side plates and having its bottom spaced away from the bottom of said receptacle and curved conformably thereto, said side plates being formed with vertical extensions having longitudinal slots, a crank shaft journaled in the side walls of said receptacle for rocking movement and having threaded portions, said crank shaft being projected through said slots, and nuts mounted upon said threaded portions and adapted to bear frictionally against said extensions, whereby said sides plates are mounted for vertical adjustment with relation to the bottom of said receptacle.

886,244. FARE-INDICATOR FOR CARRIAGES. RENÉ PICARD, Neuilly, Seine, France. Filed Nov. 21, 1905. Serial No. 288,387.

1. In an apparatus of the character described the combination with a rotatable shaft and a collar thereon having a pin, of a spring-controlled lever mounted loosely on said shaft and provided with a pawl and with which lever the said pin is adapted to come in contact, a ratchet wheel with the teeth of which the pawl is adapted to engage, a cylinder carrying said ratchet wheel and provided with numerical indications, and a shaft upon which said cylinder is mounted, all arranged for coöperation as described.

2. In an apparatus of the character described the combination with a rotatable shaft and a collar thereon having a pin, of a spring-controlled lever mounted loosely on said shaft and provided with a pawl and with which lever the said pin is adapted to come in contact, a ratchet wheel with the teeth of which the pawl is adapted to engage, a cylinder carrying said ratchet wheel and provided with numerical indications, a shaft upon which said cylinder is mounted, a stop pawl adapted to engage the teeth of the ratchet wheel and a spring within said cylinder and adapted to act thereon to turn the same reversely in the manner described.



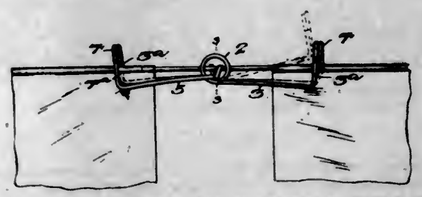
3. The combination with a rotatable shaft, of two cams secured to said shaft and the face of each of which is constructed as described, spring-pressed oscillatable levers, one end of each of which bears upon one of the cam faces whereby said levers will be given different positions by the cams, a clockwork, a shaft V driven by the latter, a grooved sleeve slidably mounted on a square portion of the latter shaft, a pin on one of the said levers and engaging in the groove of the sleeve, toothed wheels X X' carried by said sleeve, an integral toothed wheel and a sleeve loosely mounted on the shaft V, pawls on the last mentioned sleeve adapted to engage the teeth of wheel X, a worm wheel loosely mounted on the shaft V, pawls on said worm wheel adapted to engage the teeth of wheel X' and adapted in the intermediate position of the oscillatable levers to remain in engagement with wheel X' when the wheel X is freed from its engaging pawls, means for actuating the worm wheel from a vehicle wheel, a rotatable cylinder having distance indications upon its periphery, means for imparting step by step rotation to said cylinder from the worm wheel, and a spring adapted to turn the said cylinder back to zero, as set forth.

4. The combination with the worm wheel d' and an endless screw engaging the same, of means for rotating the said screw comprising a helical cam, a pinion adapted to be carried by the vehicle axle and engaged by the said cam and a shaft carrying said pinion and a flexible shaft connecting the latter shaft and the endless screw.

5. The combination with the worm wheel d' and means for rotating same, of laterally-projecting pins carried thereby, a spring actuated lever having one end adapted to rest on said pins successively, a pawl on said lever, a pin on said pawl, a lever k' having a slot in which the pin on the pawl engages, a ratchet wheel engaged by the pawl, and a cylinder n' carrying said ratchet wheel.

[Claims 6 to 15 not printed in the Gazette.]

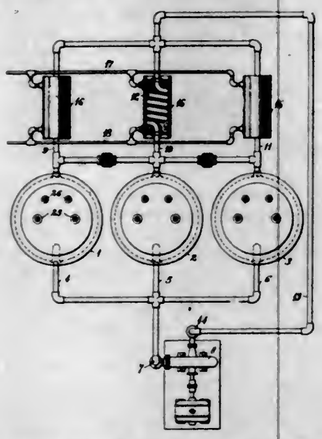
886,245. CLOTHES-PIN. WILLIAM A. PUGH, Dadeville, Mo. Filed July 3, 1906. Serial No. 324,646.



A clothes-pin comprising an expansion spring adapted to receive a line, an arm forming an integral part of the spring and adapted to be held below the clothes-line thereby, a clamp forming an integral part of the arm, and another arm forming an integral part of the clamp, said

other arm having its end bent to provide a hook member disposed within the spring, the horizontal portion of the hook member being adapted to be disposed beneath the line and its vertical portion to one side thereof.

886,246. COOLING SYSTEM FOR TRANSFORMERS. KARL C. RANDALL, Edgewood Park, Pa., assignor to Westinghouse Electric & Manufacturing Company, a Corporation of Pennsylvania. Filed Aug. 3, 1907. Serial No. 386,889.



1. In a cooling system, the combination with electrical apparatus, fluid-containing tanks, cooling chambers, and means for maintaining a fluid circulation through the tanks and the chambers, of means for automatically regulating the rate of circulation through the tanks.

2. In a cooling system, the combination with electrical apparatus, a fluid-containing tank, a cooling chamber, and means for maintaining a fluid circulation through the tank and the chamber, of means dependent upon the load variations of the electrical apparatus for automatically regulating the rate of circulation in the tanks.

3. In a cooling system, the combination with electric transformers, fluid-containing tanks, cooling chambers and a pump for maintaining a fluid circulation through the tanks and the chambers, of independent means for automatically regulating the rate of circulation through each of the tanks as the load on the transformer contained therein varies.

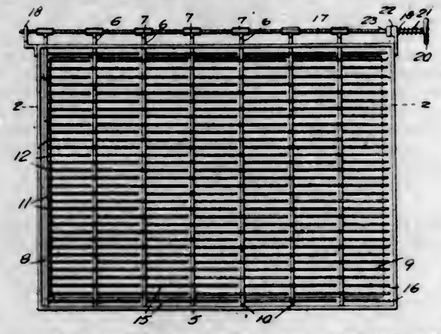
4. In a cooling system, the combination with an electric transformer, a fluid-containing tank, a cooling chamber and a pump for maintaining a fluid circulation through the tank and the chamber, of a throttle valve in the supply line of the tank and electro-responsive means for governing the valve opening.

5. In a cooling system, the combination with an electric transformer, a fluid-containing tank, a cooling chamber and a pump for maintaining a fluid circulation through the tank and the chamber, of a throttle valve in the supply line of the tank and electro-responsive means for governing the valve opening, said means being dependent for its regulation upon the current traversing the transformer windings.

[Claims 6 and 7 not printed in the Gazette.]

886,247. GRAIN-SCREEN. GEORGE H. RECHTENBACH, Bridgewater, Iowa. Filed Apr. 13, 1907. Serial No. 368,015.

1. The combination, in a grain screen, of a frame; a series of parallel rods journaled therein and projecting therebeyond at one end; a series of spaced, laterally-extending fingers secured at one end to each rod, said fingers being bent intermediate their ends to form front and rear portions disposed in parallel planes, the fingers of adjacent rods being alternately arranged with respect to each other, whereby the front portions of the fingers of one rod lie normally between the rear portions of the fingers of the succeeding rod; a nut secured to the projecting end of each rod and provided with a threaded opening formed horizontally therethrough; a threaded shaft carried by said frame and extending through the threaded openings in said nuts; and means for operating said threaded shaft to rock all of said rods simultaneously and swing said fingers in one direction or the other, in a vertical plane, and open or close the screen bottom.



2. The combination, in a grain screen, of a frame; a series of parallel rods journaled therein and projecting therebeyond at one end; a series of upwardly and forwardly inclined, lateral fingers secured at their lower ends to each of said rods, said fingers being bent intermediate their ends to form front and rear portions disposed in parallel planes, the fingers of adjacent rods being alternately arranged with respect to each other, whereby the front portions of the fingers of one rod lie normally between the rear portions of the fingers of the succeeding rod; a nut secured to the projecting end of each rod and provided with a threaded opening formed horizontally therethrough; a threaded shaft carried by said frame and extending through the threaded openings in said nuts; means for operating said threaded shaft, to rock all of said rods simultaneously and swing said fingers in one direction or the other, in a vertical plane, and open or close the screen bottom; and means for normally holding said shaft against operation.

886,248. RAIL-LOCK AND TIE-PLATE. WILLIAM N. REYNOLDS, Litchfield, Conn. Filed Aug. 6, 1907. Serial No. 387,314.



1. In railway construction, a tie plate adapted for attachment to a sleeper, having bearings for the outer edges of the rail flange the tie plate being provided with transversely arranged apertures adapted to receive fastening devices for securing the outer and inner edges of the flanges of the rails to said tie plate, and rail locks, which locks include brace sections and a guard section, both having interlocking engagement with the tie plate, the brace section engaging with the outer face of the head of the rail, and the guard section with the inner edge of the flange of the rail.

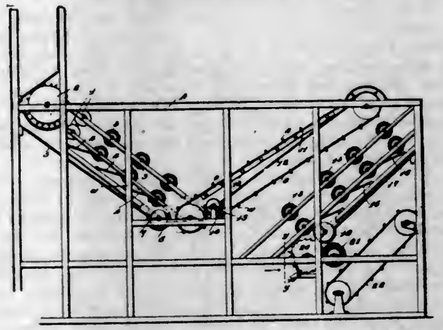
2. In railway construction, a tie plate adapted for attachment to a sleeper and having transverse shoulders for engagement with the outer edge of the flanges of the rails, the tie plate being provided adjacent to the shoulders with a set of transversely arranged apertures, and also having a second set of transverse apertures between the said shoulders and the center of the tie plate, the said apertures being adapted to receive fastening devices for securing the inner and outer edges of the flanges of the rails to said tie plate, and locking devices for the rails, each comprising an outer brace section and an inner guard section, each section having an interlocking connection with the tie plate, and auxiliary locking means, the brace sections consisting each of a base plate and an arm extending therefrom adapted for engagement with the outer side and the under face of the tread of the rail, the engaging end of said arm being of less width than the space between the said apertures adjacent to the shoulders and extending over said space, the guard section consisting of a flat plate adapted for engagement with the inner edge of the flange of the rail, the engaging end of said guard section extending between the said second set of transversely arranged apertures.

3. In a railway construction, the combination with a tie plate having transverse shoulders produced therein adjacent its ends and a recess between the said shoulders and the ends of the plate, and recesses between the center of the plate and the said shoulders, the tie plate being further provided at each end portion with a set of transversely arranged apertures in line with the last mentioned recesses, and a set of transversely arranged apertures adjacent to the said shoulders, the flanges of the rails lying between the said sets of apertures and the sets of apertures being adapted to receive fastening devices to secure the flanges of the rails to said tie plate, of a lock for the rails, which lock consists of a brace section and a guard section, each brace section comprising a base plate having a lug upon its under face adapted to enter a recess in the tie plate adjacent an end thereof, and an arm that extends upwardly and inwardly from the base plate, terminating in a wide head having a groove in its inner edge, which groove receives a portion of the outer side face of the tread of the rail and adjacent portion of the under face of the said tread, each guard section consisting of a flat T plate, its wider or head portion having lugs formed upon its under face at the outer end thereof and adapted to enter the recesses in the tie plate located between the shoulders of said plate and its center, the outer edge of the head of a guard section engaging with the inner edge of the flange of the rail, and means for securing the two sections to the said tie plate, auxiliary to the aforesaid lugs.

4. In railway construction, a tie plate adapted for attachment to a sleeper and having transverse shoulders for engagement with the outer edges of the flanges of the rails, and locking devices for the rails each comprising an outer brace section engaging with the outer face of the head of the rail, and an inner guard section, the guard sections each comprising a flat plate having one of its ends enlarged forming a head adapted to engage the inner edge of the flange of the rail, the said head being provided on its under face at the outer end thereof with spaced lugs, and the body portion of the plate being provided with longitudinally arranged apertures, the said tie plate having recesses in its upper face adapted to receive the said lugs, the tie plate being provided with longitudinally arranged apertures adapted to register with the apertures in the body portion of the guard section for the passage of fastening means, the tie plate being further provided with transverse apertures in line with the said recesses and between which the head of the guard section extends, the said apertures at each side of the head of the guard section being adapted to receive spikes to secure the inner edge of the flange of the rail to the tie plate.

5. In railway construction, a tie plate adapted for attachment to a sleeper and having transverse shoulders for engagement with the outer edges of the flanges of the rails, the said tie being provided with transversely arranged apertures adjacent to the shoulders, a group of apertures between the shoulders and the ends of the tie plate, and a recess formed in the tie plate centrally of the group of apertures, and locking devices for the rails comprising an outer brace section engaging with the outer face of the head of the rail, and an inner guard section engaging with the inner edge of the flange of the rail, the brace sections each comprising a base plate adapted to rest on the tie plate and when in position being spaced at its inner end from the said apertures adjacent to the shoulder of the tie plate, the base plate being provided with apertures corresponding with the group of apertures in the tie plate for the passage of fastening means, the said base plate having a lug upon its under face adapted to enter the recess in the tie plate, an arm extending upwardly and inwardly from the base plate and having a head at its free end provided with a groove in its edge adapted to receive a portion of the outer side face of the tread of the rail and the adjacent portion of the under face of said tread, the said head extending beyond the inner end of the base plate and located above the space between the said apertures adjacent to the shoulder of the tie plate, the said last mentioned apertures being adapted to receive spikes to secure the outer edge of the flange of the rail to the said tie plate.

886,249. COTTON-SEPARATOR. WILLIAM E. RICKEY, Rocky, Okla. Filed July 17, 1907. Serial No. 384,241.



1. In a cotton separator, the combination of a feeder, crushing rolls arranged to receive the cotton from said feeder, and a series of pairs of separating or evening rolls arranged with said crushing rolls in a declining series, and grates arranged below the spaces formed between adjacent pairs of rolls and inclined rearward and downward, and having their rear ends terminating close to the lowermost rolls of the respective pairs to insure delivery of the cotton from one pair of rolls to the other.

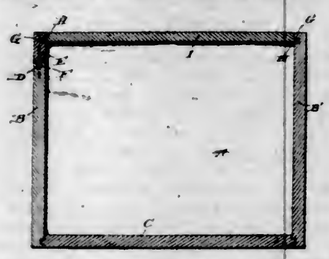
2. In a cotton separator, the combination of a pair of crushing rolls, a feeder for supplying cotton thereto, a series of pairs of separating rolls arranged with the crushing rolls in a declining series and spaced apart, the several rolls being of like diameter and driven at unequal rates of speed, whereby one roll of a pair acts as a clearer for the coöperating roll, rearwardly and downwardly inclining grates arranged below the spaces formed between adjacent pairs of rolls, a plate located below the feeder, grates and rolls and terminating at its lower end in a trough, and a screw conveyer arranged to operate in the said trough.

3. In a cotton separator, the combination of an endless apron of mesh or open work material, supporting means arranged beneath the upper run or portion of said apron, and tappets applied to the inner sides of said endless apron to coöperate with the aforesaid supporting means to impart a trembling or vibratory movement to the upper run of the apron in the operation of the machine.

886,250. BOX. HIRAM P. ROBERTS, Louisville, Ky. Filed May 20, 1904. Serial No. 208,826.

1. In combination with the sides, ends and bottom of a box secured together in such manner as to produce a substantially unyielding structure and to preclude their separation without showing that such parts have been tampered with, one end of the box being of a height less than that of the remainder; a lid or closure for said box, said lid making an interlocking joint with that end of the

box which is of full height; and a filling-strip making an interlocking joint with the short end of the box and with the lid or closure, substantially as described.



2. A substantially unyielding rectangular box having one low end; a closure making an interlocking connection with the opposite end of the box; and a filling member forming an interlocking connection with the low end and the adjacent end of the closure.

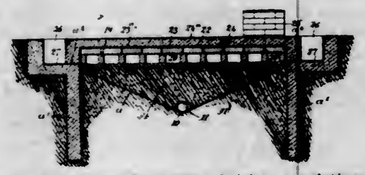
3. In combination with a box having one low end; a closure having tongues or ribs on its ends, one tongue entering a corresponding groove in the high end of the box; a filling member having a tongue or rib upon its under edge adapted and designed to pass into a groove in the upper edge of the low end, and likewise provided with a groove in its side face to receive the adjacent tongue of the closure; and means for securing the parts in place, substantially as described.

4. In combination with a box having one low end with a groove or channel formed in its upper edge; a closure having tongues at its opposite ends, one tongue entering a groove formed in the face of the high end of the box; and a filling member having a tongue or rib upon its under face fitting into the groove in the low end, and likewise provided with a groove in its side face to receive the adjacent tongue of the closure, the filling member being glued to the end, and the sides of the box being nailed to the filling member, substantially as described.

5. A box comprising sides and ends locked-jointed and glued together at the corners, one end being of a height less than the other and having a groove formed in its upper face; a bottom having ribs or tongues which pass into grooves formed in the adjacent ends of the box; a closure having tongues formed upon its opposite ends, one of said tongues passing into a groove formed in the inner face of the high end of the box; and a filling member having a tongue which enters the groove in the low end, and likewise formed with a groove which receives the adjacent tongue of the closure, the filling member and the end being glued together, substantially as and for the purpose set forth.

[Claims 6 and 7 not printed in the Gazette.]

886,251. DRYING-FLOOR. HENRY O. ROBINSON, Brookline, and CHRISTOPHER STEADMAN, Salem, Mass. Filed Jan. 23, 1908. Serial No. 412,229.



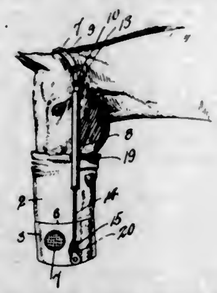
1. A drying floor for green bricks, consisting of a natural bed, an impervious wall surrounding said natural bed, tiles laid upon the said bed, forming longitudinal and transverse channels, a tile covering for the tiles so laid, and a moisture-proof covering for the overlying tiles.

2. In a floor for drying green bricks, a natural foundation, an impervious wall surrounding said natural foundation, bricks laid in parallel lines on said foundation, providing between them longitudinal and transverse channels, a source of heat supply in communication with said channels, an overlying and inclosing series of bricks or tiles laid upon those supported by the said natural bed, a covering of impervious material for the overlying tiles, and a concrete covering for said impervious material.

3. In a floor for drying green bricks, a natural foundation, an impervious wall surrounding said natural foundation, bricks laid in parallel lines on said foundation, providing between them longitudinal and transverse channels, a source of heat supply in communication with said channels, an overlying and inclosing series of bricks or tiles laid upon those supported by the said natural bed, a covering of impervious material for the overlying tiles, and a concrete covering for said impervious material, a flue connected with the said channels, and a drain pipe located in the said natural bed.

4. In a bed for drying green bricks, a natural foundation, an impervious wall surrounding said natural foundation, a chamber formed at one side of the foundation, a heating agent introduced into the said chamber, a series of bricks laid in parallelism on the said natural foundation, forming between them transverse and longitudinal channels in communication with the chamber into which the heat is introduced, a series of bricks laid in close order, located upon and over those that are supported by the natural bed, a grouting of cement covering the closely laid bricks, a waterproofing covering the grouting, a bed of concrete covering the said waterproofing, a flue connected with the channels formed by the bricks laid on the natural bed, a drain pipe located in the said natural bed, and a gutter formed around the said bed.

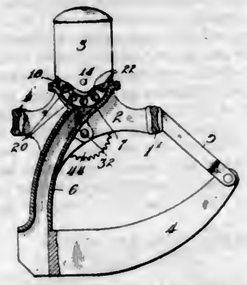
886,252. FEED-BAG. GEORGE RODRIGUEZ, Castroville, Cal. Filed Mar. 21, 1907. Serial No. 363,632.



A feed bag comprising a rigid section, a collapsible section connected therewith, spring supports for said bag, comprising telescoping members, the spring of each of said supports tending to telescope said members, one end of one of said members being connected to the lower end of the rigid section, the other of said members being connected intermediate its ends to the upper end of the collapsible section, the normally distended positions of the sections serving to maintain the members extended, the member connected to the collapsible section being directly supported from the head of the animal, whereby as the feed is exhausted from the bag the rigid section is gradually moved upward toward the mouth of the animal, the connection of the supporting member with the collapsible section and head of the animal serving to maintain the upper portion of the collapsible section in fixed relation to the head of the animal and thereby collapsing said section in the movement of the rigid section.

886,253. DROPPING MECHANISM FOR CORN-PLANTERS. TOBIAS C. ROSELAND, Gilman, Iowa, assignor of one-half to Frank R. Ensminger, Gilman, Iowa. Filed July 12, 1907. Serial No. 383,494.

1. In a corn dropping mechanism, an ejector provided with a channel-like seed recess narrower than the width of ordinary shaped kernels of corn and wider than the thickness of ordinary shaped kernels of corn, automatic gripper mechanism working within said ejector recess, and operative connections for actuating said parts in suitably timed relation and order.



2. In a corn dropping mechanism, a circular ejector mounted to rotate about a non-vertical axis and provided interiorly with a circumferentially extending seed recess, a plurality of automatic gripper mechanism working within said ejector recess, and operative connections for rotating said ejector and for actuating the gripper mechanisms in suitably timed relation to the rotary movement of the ejector.

3. In a corn dropping mechanism, a cam-hub provided with a seed passage leading therethrough, a circular agitator mounted to rotate around said hub and provided interiorly with one or more circumferentially extending channel-like seed recesses, gripper mechanisms mounted upon the ejector and working through said recess or recesses, cam connections between the cam-hub and gripper mechanisms, and means for rotating the agitator.

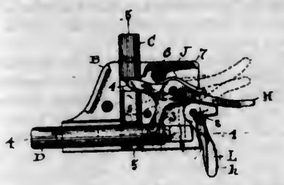
4. In a corn dropping mechanism, the combination of a hub, an ejector journaled to rotate adjacent to said hub and forming in conjunction with the latter a substantially closed seed chamber, said agitator being provided internally with one or more circumferentially extending seed recesses of channel-like form, a plurality of gripper mechanisms movably mounted in said ejector, each gripper mechanism comprising a recessed body member and a complementary gripper, means for imparting a bodily movement to each of said body members, means for imparting a relative gripping movement to each gripper, and means for rotating the agitator.

5. In a corn dropping mechanism, the combination of a housing, a cam-hub fixed within said housing having a hollowed-out interior and a seed passage communicating with said interior, a circular agitator journaled to rotate adjacent to the hollowed end of said hub and provided with a peripheral portion overhanging the exterior of the hub, said agitator being provided with an internal circumferential seed channel extending radially into its peripheral portion, a plurality of gripper mechanisms mounted in the peripheral portion of said ejector, each comprising a recessed dropper plunger mounted to reciprocate endwise to carry its recess into and out of register with the seed channel of the ejector, and a gripper mounted within each dropper plunger to reciprocate endwise therein and arranged to enter the recess of the plunger at its acting end, suitable cam connections between the cam-hub and each dropper plunger, other cam connections between the cam-hub and several gripper members, and suitable driving connections for rotating the ejector.

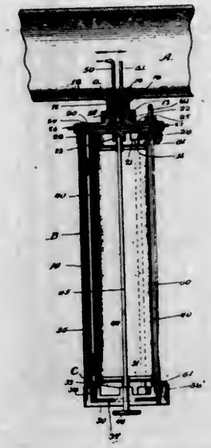
[Claims 6 and 7 not printed in the Gazette.]

886,254. LOCK FOR WINDOW-SASHES. JOHN RUMERY, Cleveland, Ohio, assignor of one-half to F. G. Nunn, Cleveland, Ohio. Filed June 10, 1907. Serial No. 378,137.

A window-sash lock having two locking bolts, C and D, at right angles to each other, a single pivoted lever having two extensions, 3 and 4 respectively, loosely engaged in transverse slots in said bolts and adapted to operate both at the same time, in combination with upper and lower window sashes and a window casing, said casing and upper sash having a series of holes each for said bolts, and a pivoted lock L constructed to engage said lever and prevent opening the same.



886,255. STEAM-METER. CHARLES E. SARGENT, Chicago, Ill., assignor to Sargent Steam Meter Company, Chicago, Ill., a Corporation of Illinois. Filed Jan. 28, 1907. Serial No. 354,410.



1. In a meter, the combination of a movable dial, calibrated to indicate the weight of steam passing by during any given period of time and at various degrees of static pressure, a sight tube adjacent thereto, a well communicating with said sight tube, a body of mobile substance in said well, and nozzles communicating with said sight tube and well each opening into the fluid to be measured the nozzle communicating with the well pointing toward the moving column of fluid in a direction opposite to the direction of movement of the column.

2. In a meter, the combination of a rotatable dial, calibrated to indicate the weight of steam passing by during any given period of time and at various degrees of static pressure, a tube adjacent thereto, a well communicating with said tube, a body of mercury in said well and tube, and nozzles communicating with said well and tube and opening into the fluid to be measured, the nozzle communicating with the opening in the well being directed toward the moving column of fluid in a direction opposite to the movement of the column.

3. In a meter, the combination of a movable dial, calibrated to indicate the weight of steam passing by during any given period of time and at various degrees of static pressure, a well, an inlet nozzle directed toward the moving column of fluid to be measured and in a direction opposite to the movement thereof, a connection between the inlet nozzle and well a sight tube communicating with the well and with the fluid to be measured, and a body of mercury in said well and sight tube.

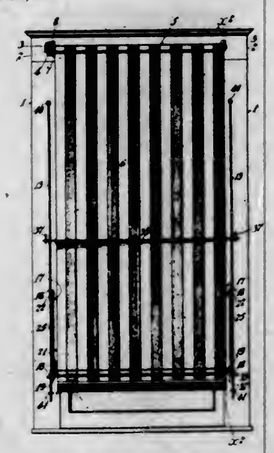
4. In a meter, the combination of a movable dial, calibrated to indicate the weight of steam passing by during any given period of time and at various degrees of static pressure, a sight tube adjacent thereto, a well communi-

cating with said tube, a body of mercury in said well and tube, an inlet nozzle and an outlet nozzle communicating with the fluid to be measured, and connections between the inlet nozzle and well and between the outlet nozzle and sight tube.

5. In a meter, the combination of a movable dial, calibrated to indicate the weight of steam passing by during any given period of time and at various degrees of static pressure, a sight tube adjacent thereto, a well communicating with the sight tube, a body of mercury in said well and sight tube, an inlet nozzle, and an outlet nozzle communicating with the fluid to be measured, connection between the inlet nozzle and well and between the outlet nozzle and sight tube and means for closing the entrance to the sight tube and well.

[Claims 6 to 14 not printed in the Gazette.]

886,256. AWNING. WALTER W. SCHWEMER and FRANK L. SCHWEMER, Glendale, Cal. Filed Apr. 18, 1907. Serial No. 369,007.



1. A window awning comprising a curtain, a roller on which said curtain is mounted to roll, means for turning said roller to wind the curtain thereon, means for extending the lower portion of the curtain outwardly, and a retaining device extending across the curtain, means for supporting said retaining device in a definite position across the window, and means on the curtain for lifting the retaining device when the curtain is raised.

2. A window awning comprising a roller, a curtain winding thereon, means for turning the roller to wind the curtain, arms for extending the lower portion of the awning at each side thereof, slides for supporting said arms, guides for supporting said slides to enable vertical motion thereof, stops for limiting the downward motion of said slides, and braces pivoted to said slides, the said arms being slotted and having two notches and the said braces having projections engaging in said slots and in the notches to hold the awning in two different positions.

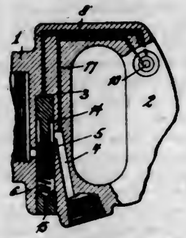
3. A window awning comprising a roller, a curtain winding thereon, means for turning the roller to wind the curtain, arms for extending the lower portion of the awning at each side thereof, slides for supporting said arms, guides for supporting said slides to enable vertical motion thereof, stops for limiting the downward motion of said slides, each of said arms having a longitudinal slot with two notches therein and a brace having a projection to engage in said slot and notches, and a slide longitudinally movable in said slot and having an L-shaped slot to guard the notches from entrance by the projection.

4. A window awning comprising a curtain, a roller on which said curtain is mounted to roll, means for turning said roller to wind the curtain thereon, means for extending the lower portion of the curtain outwardly, a retaining device extending across the curtain and comprising two bars embracing the curtain between them, hooks for engaging and supporting said retaining device in a definite position across the window, and means on the lower portion of the curtain for engaging and lifting the retaining device when the curtain is raised.

5. A window awning comprising a curtain, a roller on which said curtain is mounted to roll, a window, frame having an opening therethrough, a cord extending through said opening and connected to said roller to turn the same, and means for extending the lower portion of the curtain outwardly comprising vertical guides, slides vertically movable thereon, arms pivoted on said slides and braces pivoted to said slides, said braces and arms having interengaging means to enable engagement of the brace with the arm to hold the lower part of the awning in two different positions.

[Claim 6 not printed in the Gazette.]

886,257. CONTROLLING MECHANISM FOR PNEUMATIC TOOLS. CHARLES H. SERGEANT, Brooklyn, N. Y., assignor, by mesne assignments, to Chicago Pneumatic Tool Company, Chicago, Ill., a Corporation of New Jersey. Filed Jan. 21, 1904. Serial No. 189,940.



1. In a pneumatic tool handle, the combination of a main throttle valve, means for counterbalancing the same by the fluid pressure, a spring acting on said valve to aid such pressure in seating the valve, and a hand-operated auxiliary valve for controlling the movements of said main valve.

2. In a pneumatic tool handle, the combination with a handle having an air inlet duct therein, a valve for controlling same, means for counterbalancing the same by the fluid pressure, a spring acting on said valve to aid such pressure in seating the valve of an auxiliary hand operated valve controlling movement of said first named valve.

3. In a pneumatic tool handle, the combination with a valve chamber a throttle valve fitted thereto, means for counterbalancing the same by the fluid pressure, a spring acting on said valve to aid such pressure in seating the valve said valve chamber having a port or passage leading therefrom, of an auxiliary hand operated valve for controlling passage of fluid through said port or passage.

4. In a pneumatic tool handle, the combination with a valve chamber and a main throttle valve fitted thereto and normally balanced as to fluid pressure, said valve spring-actuated in one direction, of an auxiliary hand operated valve arranged in its operation to overbalance the main valve as to fluid pressure in a direction opposite to the direction of spring actuation.

5. In a pneumatic tool handle, the combination with a valve chamber, a main fluid pressure operated throttle valve fitted thereto, and a spring tending to force said valve in one direction, of an auxiliary hand operated valve for controlling the fluid pressure to operate said valve in a direction opposing the action of said spring.

[Claims 6 to 24 not printed in the Gazette.]

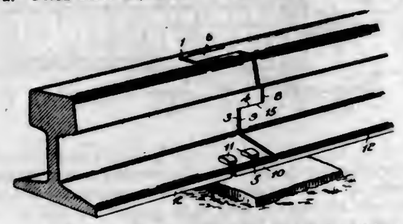
886,258. PROCESS FOR HARDENING ARTIFICIAL STONE. EAICH SCHWANENBERG and ALBERT RINNE, Hanover, Germany. Filed Dec. 4, 1906. Serial No. 346,308.

1. The process of hardening artificial blocks containing hydrate of lime which consists in treating the same with carbonic acid gas at a temperature between 35°and 110° C. and capable of taking up moisture.

2. The process of hardening artificial blocks containing hydrate of lime and suitable cabonates which consists in treating the same with carbonic acid gas at a temperature between 35° and 110° C. and capable of taking up moisture.

3. The process of hardening artificial blocks containing hydrate of lime and suitable coloring matters, which consists in treating the same with carbonic acid gas at a temperature between 35° and 110° C. and capable of taking up moisture.

886,259. RAIL-JOINT. CHARLES G. SKILES, Masontown, Pa. Filed Nov. 21, 1907. Serial No. 403,211.



1. In a rail-joint, a member having an end tread recess, a support 2, formed by the web on a level with the base of the tread and projecting from its end, the web having an end recess 3, below said support forming an overhanging shoulder 4, said member having a bottom recess, the other member having a tread extension adapted to fit the tread-recess and a recess below said tread extension, formed in the web and forming a shoulder 15, registering with the shoulder 4, the end of the base of said last mentioned member having an extension registering with the base-recess of the other member, spikes driven through the flanges of one rail section into and through the base extension of the other rail-section and into the rail-tie, said base extension having a brace-rib registering with a groove in the base recess of the other rail.

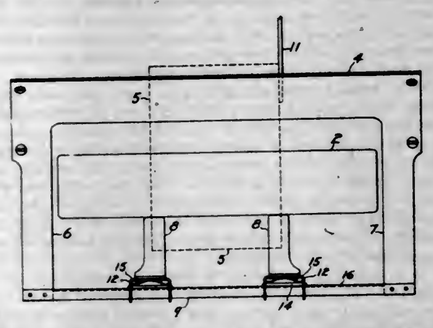
2. In a rail-joint, a member having an end tread-recess, a support 2, formed by the web on a level with the base of the tread and projecting from its end, the web having a recess 3, below said support forming a shoulder 4, the other member having a tread extension adapted to fit the tread recess, and a tread extension adapted to rest upon said web support 2, the said last named tread extension overhanging a recess 8, formed in the web and forming a shoulder 15, registering with the web shoulder 4, whereby the rail ends are supported upon the web at two points, and means whereby the rails are secured together at the base of the joint.

886,260. STENCILING-MACHINE. ALEXANDER J. SMITH, Stamford, Conn., assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of New Jersey. Filed Feb. 5, 1908. Serial No. 414,305.

1. In a stenciling machine, the combination with a stencil cylinder and a pressure roll, of a fixed rod extending along the delivery side of the cylinder, and a stripping finger splined upon said rod for adjustment thereabout; said rod having a longitudinal groove and said finger having a key to engage said groove to hold the finger in working position, said key yielding to enable the finger to be turned upon the rod to a position of disuse.

2. In a stenciling machine, the combination with a stencil cylinder and a pressure roll, of a fixed rod extending along the delivery side of the cylinder and having a longitudinal groove, and a pair of stripping fingers, and means to engage the groove and adjustable independently of each other along the rod; said fingers being revoluble upon said rod to enable them to be turned to a position of disuse.

3. In a stenciling machine, the combination with a stencil cylinder and a pressure roll, of a fixed rod extending along the delivery side of the cylinder and having a longitudinal groove, and a pair of stripping fingers, and means to engage the groove and adjustable independently of each other along the rod; said fingers being revoluble upon said rod to enable them to be turned to a position of disuse, each of said fingers having a spring-pressed key to engage said groove yieldingly and permit rotation of the finger upon the rod.

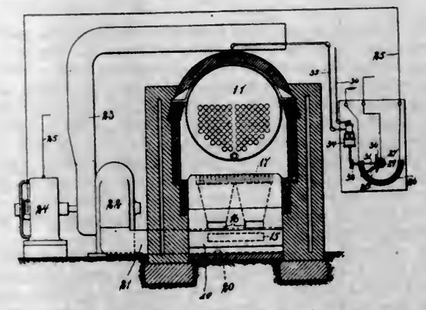


4. In a stenciling machine, the combination with a stencil cylinder and a roll to press the sheets against the cylinder, of a stripping tongue to engage the side edge of a sheet of paper, a rod mounted transversely of the cylinder on the delivery side thereof, and a stripping finger adjustable along said rod, the latter being mounted upon the end of said stripping finger.

5. In a machine the combination with a stencil cylinder and a roll to press the sheets against the cylinder, of tongues extending along the ends of said roll close to said cylinder, to keep the side edges of the paper out of contact with the stencil, and a stripping finger upon the delivery side of the cylinder and adjustable along the same; said finger mounted upon a rod which is secured at its ends to said tongues.

[Claim 6 not printed in the Gazette.]

886,261. FURNACE. CLARENCE W. SMITH, Cambridge, Mass. Filed Dec. 28, 1905. Serial No. 293,577.



1. A furnace comprising a grate, a bridge-wall provided with a passage terminating in a series of contracted openings in its upper portion said passage opening beneath the grate and a second passage also opening beneath the grate, means for forcing air to the space beneath the grate, means for distributing the air beneath the grate, and automatic means for governing the air-forcing means responsive to variations of boiler pressure.

2. A furnace comprising a grate, a bridge-wall provided with a passage terminating in a series of contracted openings at its upper portion and a second passage extending through the bridge-wall, both of said pas-

sages opening beneath the grate, means for forcing air to the space beneath the grate, a deflector situated between the passage openings and inclined downwardly from the grate, and automatic means for governing the air-forcing means responsive to variations of boiler pressure.

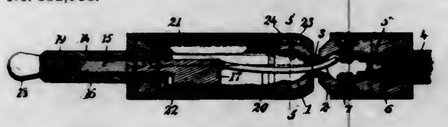
3. A furnace comprising a grate, a bridge-wall provided with a passage terminating in a recess, fire resisting tile formed with a series of contracted openings and set in said recess and a second passage extending through the bridge-wall, both of said passages opening beneath the grate, means for forcing air to the space beneath the grate, a deflector situated between the passage-openings, and automatic means for governing the air-forcing means responsive to variations of boiler pressure.

4. A furnace comprising a grate, a bridge-wall provided with a passage terminating in a recess, fire-resisting tile formed with a series of contracted openings and set in said recess, and a second passage extending through the bridge-wall, both of said passages opening beneath the grate, means for forcing air to the space beneath the grate, a deflector situated between the passage openings and inclined downwardly from the grate, and automatic means for governing the air-forcing means responsive to variations of boiler pressure.

5. A furnace comprising a grate, a bridge-wall provided with a passage terminating in a series of contracted openings in its upper portion and a second passage extending through the bridge-wall, both of said passages opening beneath the grate, a deflector situated between the passage openings, and means for supplying air under pressure to said passages, said means comprising a blower, a motor for operating the blower, a rheostat for controlling the motor, a pressure regulator connected with the boiler, and means for communicating movement from the regulator to the rheostat.

[Claims 6 to 10 not printed in the Gazette.]

886,262. SWITCH-CORD PLUG. EUGENE L. SMITH, Oak Cliff, Tex., assignor of two-thirds to George F. Childress, Wills Point, Tex. Filed Sept. 1, 1906. Serial No. 332,958.

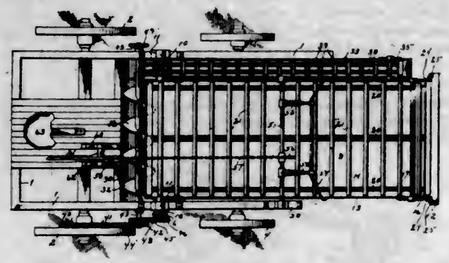


1. A device of the class described, comprising a switch cord and a switch cord plug movable in respect to each other, the switch cord being provided with a hollow ball secured thereto by a hollow neck and the switch cord plug being provided with a socket adapted to receive said ball, said socket member being formed of two sections rigidly secured together to hold the ball within the socket, a cylindrical casing inclosing said sections, and a wire extending through said hollow ball and socket and insulated from both and one of said sections being provided with an opening adjacent the end of said wire and normally covered by said casing.

2. A device of the class described, comprising a switch cord and a switch cord plug, the switch cord being provided with a hollow ball secured thereto by a hollow neck and the switch cord plug being provided with a socket adapted to receive said ball, said plug being formed of two semi-cylindrical members rigidly secured together to hold the ball within said socket, and a cylindrical casing surrounding said plug.

3. A device of the class described, comprising two members movable in respect to each other, a hollow ball carried by one of said members, a socket carried by the other of said members and adapted to receive said ball, said socket member being formed of two sections secured together to retain the ball within the socket and one of said sections having an opening therein, a casing inclosing said sections and normally covering said opening, and a wire extending through said ball and socket and terminating within said socket member adjacent the said opening.

886,263. STREET-CLEANER. JOHN W. SMITH, Dayton, Ohio. Filed Nov. 29, 1907. Serial No. 404,290.



1. In a machine as described, a main frame, carrying wheels therefor, a forwardly and downwardly inclined elevator, a yielding scraper blade terminating said elevator and adapted to bear upon the ground and to collect refuse material therefrom, and a receptacle into which said material is discharged, substantially as specified.

2. In a machine as described, a main frame, carrying wheels therefor, a forwardly and downwardly inclined elevator, a scraper blade terminating said elevator and adapted to gather refuse material from the ground, a second forwardly and downwardly inclined elevator and a revolving brush coöperating therewith to gather the material which may escape said scraper, substantially as specified.

3. In a machine as described, a main frame, carrying wheels therefor, a forwardly and downwardly inclined elevator, a scraper blade hinged to the lower portion of said elevator and adapted to bear on the ground and scrape the material therefrom, a spring adapted to return said blade to normal position after the blade has been forced therefrom by contact with an unyielding obstruction, substantially as specified.

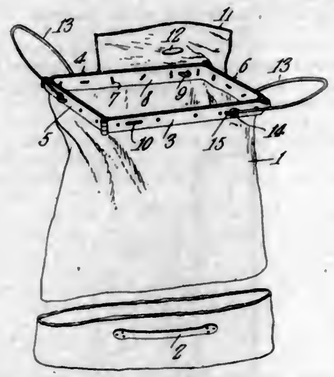
4. In a machine as described, a main frame, carrying wheels therefor, a downwardly and forwardly inclined elevator, a scraper blade carried by said elevator and adapted to scrape the refuse material from the ground said scraper blade being further adapted to yield when brought into engagement with an obstruction, and means to return the blade to normal position when the obstruction has been passed, substantially as specified.

5. In a machine as described, a main frame, carrying wheels therefor, a forwardly and downwardly inclined elevator, a scraper blade carried by said elevator and adapted to gather refuse material by scraping the ground, a second downwardly and forwardly inclined elevator, a scraper blade and a revoluble brush coöperating with said second elevator, and following in operation the first named elevator and scraper, and means for actuating said parts, substantially as specified.

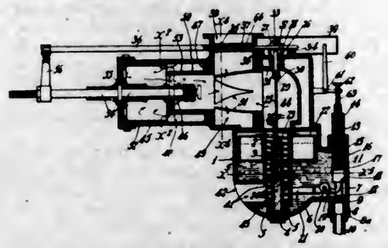
[Claim 6 not printed in the Gazette.]

886,264. MAIL-SACK. GERTRUDE SMOOT, Gratz, Ky.; assignor of one-third to Willis H. Johnson and one-third to Claud J. Smither, Gratz, Ky. Filed July 15, 1907. Serial No. 383,784.

A mail bag inclosure embodying a plurality of pivotally connected side and end members each provided with a staple, ball-shaped springs having their terminals formed into eyes to engage the staples and their crests disposed at such distance from the corners of the frame as to adapt them to constitute handles, a staple carried by the inner face of one side member and adapted to engage a slot in the other side member, a flap or shield secured to one of the side and end members and provided with an orifice through which the last-named staple projects when the members of the closure are in closed position, and means for engaging the staple for holding the closure members against opening.



886,265. RAPID-FIRE CARUBETER. JAMES A. SPEED, Los Angeles, Cal., assignor to Speed Manufacturing Company, Los Angeles, Cal., a Corporation of California. Filed Apr. 25, 1907. Serial No. 370,324.



1. In a carbureter, a strangling tube, means for spraying gasolene into the strangling tube comprising a nozzle in the tube, a valve at the upper end of the nozzle, an upper stem on said valve, a lower stem on said valve projecting into said nozzle, a guide in the nozzle in which the lower stem slides, means for admitting air to the strangling tube to combine with the spray of gasolene, auxiliary means for admitting a further supply of air to the mixture after it has left the strangling tube, and mechanism having an engagement with said upper valve stem and with said auxiliary means for simultaneously operating the auxiliary means and valve.

2. In a carbureter, a strangling tube, a gasolene nozzle concentric therewith, means for admitting gasolene to the lower portion of the nozzle, means for admitting air to the lower portion of the strangling tube, a valve at the upper end of the nozzle, a mixing chamber above the strangling tube, a stem on said valve projecting through the mixing chamber and having a head, and a wedge slidably engaging said head for adjusting the valve.

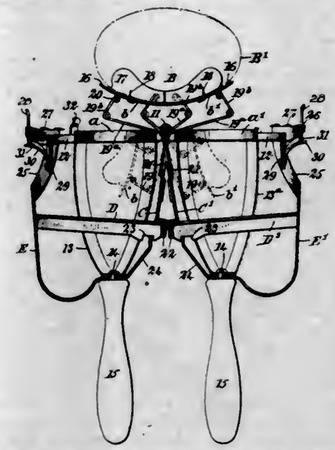
3. In a carbureter, a strangling tube, a gasolene nozzle concentric therewith, means for admitting gasolene to the lower portion of the nozzle, means for admitting air to the lower portion of the strangling tube, a valve at the upper end of the nozzle, a mixing chamber above the strangling tube, a stem on said valve projecting through the mixing chamber and having a head, a wedge slidably engaging said head for adjusting the valve, a roller carried by the head bearing against the upper edge of the wedge, rollers mounted above the mixing chamber and bearing against the lower edge of said wedge, and a spring bearing against a flange on the valve stem for closing the valve.

4. In a carbureter, vaporizing means, a horizontal cylinder having a partition, a tube in said partition, the cylinder having an air inlet at one side of the partition, said tube having mixture outlet openings on the other side of the partition, a cylindrical sliding valve in said tube for regulating the size of the latter openings, a larger cylindrical valve in the cylinder for regulating the air inlet opening, a valve rod for operating both valves, and a mixing chamber communicating with said vaporizing means and the adjacent open end of said tube.

5. In a carbureter, vaporizing means, a horizontal cylinder having a partition, a tube in said partition, the cylinder having an air inlet at one side of the partition, said tube having mixture outlet openings on the other side of the partition, a cylindrical sliding valve in said tube for regulating the size of the latter openings, a larger cylindrical valve in the cylinder for regulating the air inlet opening, a valve rod for operating both valves, a mixing chamber communicating with said vaporizing means and the adjacent open end of said tube, a valve for the vaporizing means, the valve having a stem which projects through the mixing chamber and having a head on its upper end, a wedge slidably engaging said head, an operating rod pivoted to one end of the wedge, and an arm connecting the operating rod with the first named valve rod.

[Claim 6 not printed in the Gazette.]

886,266. EGG-OPENER. DONALD P. STEVENS, Rio, Wis. Filed Aug. 19, 1907. Serial No. 389,201.



1. In an egg opener, hemispherical hinge connected sections, a spring-supported egg cradle located at the connection of the sections, exposed in one position of the sections and inclosed in the other position, a toothed spring jaw carried by each section, and means for locking the jaws in position to operate, and for releasing the said jaws for operation.

2. In an egg opener, hemispherical hinge connected sections, a sectional, spring-supported egg-cradle located at the hinge connection of the sections, the sections of the cradle corresponding to the said hemispherical sections, said cradle being exposed at the open position of the hemispherical sections, and inclosed at their closed position, spring-controlled toothed jaws carried at the inner end portion of each hemispherical section, means for expanding the jaws, and devices for locking the jaws in expanded position.

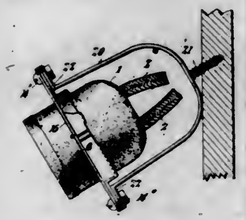
3. In an egg opener, hemispherical hinge connected sections, a sectional, spring-supported egg-cradle located at the hinge connection of the sections, the sections of the cradle corresponding to the said hemispherical sections, said cradle being exposed at the open position of the hemispherical sections, and inclosed at their closed position, spring-controlled toothed jaws carried at the inner end portion of said hemspherical sections, means for expand-

ing the jaws, and devices for automatically locking the jaws in expanded position, and means for tripping the locking devices.

4. In an egg opener, the combination with hemispherical body sections having a hinge connection, handles for the sections, an egg cradle located over the hinge connection between the body sections, which cradle is constructed in sections corresponding to those of the body, and spring supports for the cradle sections, of spring arms carried by the body sections, extending over the same and terminating in jaws located over the body sections at their inner ends, teeth for the said jaws, oppositely extending hinged supporting arms pivoted at the hinge connection between the body sections, expanding bars carried by the said arms, and adapted in one position of the body sections to force the jaws outward, and means for locking the jaws in their expanded position.

5. In an egg opener, the combination with hemispherical body sections, each consisting of an inner ring member, and straps attached to said ring member and to each other, said ring members having a space between them when closed, a hinge connection between the body sections, and a spring supported cradle located above said hinge connection, of spring arms secured at the ends of the body sections, extending over them, segmental jaws at the inner ends of the arms, teeth extending down from the said jaws into the space between the ring members, spring latch devices carried by the ring members adapted for automatic engagement with the under faces of the jaws, oppositely extending supporting arms pivoted at the hinge connection between the body sections, expanding bars secured to the supporting arms and adapted in one position of the body sections to force said jaws outward for engagement by the locking devices, and means for limiting the movement of the expanding bars.

886,267. MEANS FOR SUPPORTING LAMP-RECEPTACLES. JAMES S. STEWART, New York, N. Y., assignor to Annie Stewart, New York, N. Y. Filed Apr. 12, 1907. Serial No. 367,752.



1. In combination with a lamp receptacle having a body with a circumferential bead or rib, a fastening device adapted to detachably engage and surround said rib to hold and support the same.

2. In combination with a lamp receptacle having an integral bead or rib formed thereon, a fastening device having an annular portion adapted to surround said bead or rib and having means coöperating therewith to prevent relative rotation.

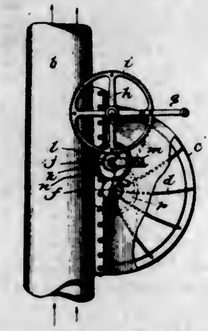
3. In combination with a lamp receptacle having an annular rib or bead integrally formed thereon, a fastening device having an annular portion adapted to surround said bead and having an internal rim or flange adapted to lap over the edge of the said bead on to the rear surface thereof, and means whereby said fastening device is removable.

4. In combination with a lamp receptacle having a notched or interrupted integral bead thereon, a fastening device having an annular portion adapted to surround said bead and having an internal lug or perforation to engage the notch thereof.

5. In combination with a lamp receptacle having a notched or interrupted integral bead thereon, a fastening device adapted to surround said bead and having a lug or protuberance to engage the notch thereof, said fastening device having an ear or extension perforated to receive a fastening device.

[Claims 6 to 10 not printed in the Gazette.]

886,268. AUTOMATIC FORCE OR SUCTION DRAFT. GEORGE S. STUART, Hollidaysburg, Pa. Filed Nov. 27, 1907. Serial No. 404,116.



1. The combination of a flue or stack having a cut-away portion, and a force draft device adapted to be fitted around said cut-away portion, and having a shaft provided with curved vanes extending only part way around said shaft, forming a partial wheel, and means for rotating said shaft, substantially as described.

2. The combination of a flue or stack having a cut-away portion, and a force draft device adapted to be fitted around said cut-away portion and having a shaft provided with curved vanes extending approximately half way around said shaft, and means for rotating said shaft, substantially as described.

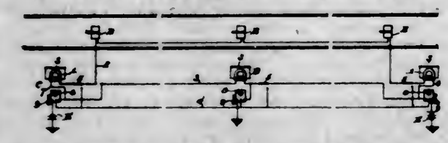
3. The combination of a flue or stack having a part cut away, with a casing adapted to be fitted around said cut-away portion, a shaft journaled in said casing, a series of removable curved vanes fastened to said shaft and extending approximately half way around it, and means carried by said casing for rotating said shaft, substantially as described.

4. The combination of a flue or stack having a cut-away portion, with a force draft device consisting of a casing adapted to be fitted around said cut-away portion, a shaft mounted in said casing and provided with curved vanes, said vanes extending only part way around said shaft, and means for locking said shaft in any position whereby said vanes may be caused to act as a damper, substantially as described.

5. The combination of a flue or stack having a cut-away portion, with a force draft device including a casing adapted to be fitted around said cut-away portion, a shaft mounted in said casing and provided with a purality of vanes extending about half way around said shaft, means for rotating said shaft, and adjustable devices for fastening said shaft in any desired position, substantially as described.

[Claims 6 to 10 not printed in the Gazette.]

886,269. RAILROAD DANGER-SIGNALING AND TELEPHONING APPARATUS. EDWARD SUGHROUE, Bartley, Nebr. Filed May 18, 1907. Serial No. 374,329.



1. In a signaling system, the combination of a plurality of pyrotechnic signaling devices, mechanical means for igniting each device, and electrical means for simultaneously actuating the mechanical means of the several devices.

2. In an apparatus of the class described, the combination of a pyrotechnic signaling device, means for firing the same, an engine stop, and a manually-controlled electric circuit for simultaneously actuating the said means and stop from a distant point.

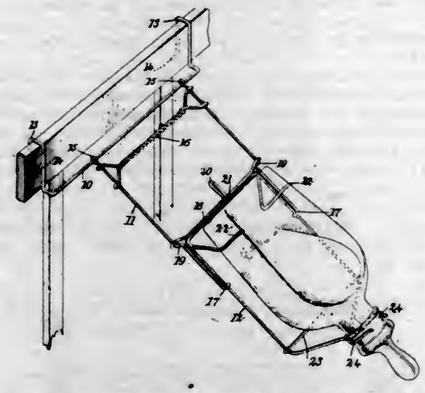
3. In an apparatus of the class described, the combination of a pyrotechnic signaling device, means for firing the device, an engine stop, a system for transmitting messages and including a generator, and means for actuating the firing means and said stop by current derived from the generator.

4. In an apparatus of the class described, the combination of a plurality of signaling devices, a telephone system including generators, and means for connecting the generators in circuit for setting off the signaling devices or producing ringing current in the telephone system.

5. In a signaling system, the combination of a visual signaling device including a firing means, a mechanical means for setting off the firing means and for releasing the second device to move to operative position, and apparatus for controlling the said mechanical means from any desired point.

[Claims 6 to 14 not printed in the Gazette.]

886,270. HOLDER FOR NURSING-BOTTLES. MODESTE L. SURPRENANT, Indian Lake, N. Y. Filed Sept. 14, 1907. Serial No. 392,883.



1. In a nursing bottle holder, a wire member having the opposite ends thereof bent to provide clips, a second wire member consisting of side wires connected together and swingingly suspended on the intermediate portion of the first member, and a third wire member having clamping-jaws for embracing the body of the bottle and embracing the nipple about the neck of the bottle.

2. In a nursing bottle holder, a member for attaching the holder, a second member pivoted to the attaching member, and a third member slidably connected with the second member, having means for retaining the bottle.

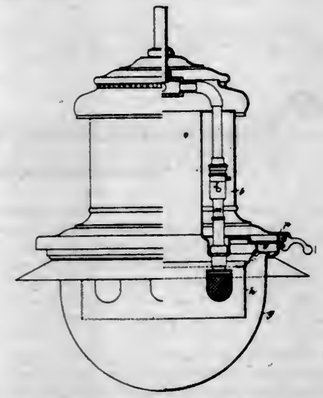
3. In a nursing bottle holder, a member for attaching the holder, a second member pivoted to the attaching member, and a third member slidably connected with the second member, having clamping-jaws for embracing the body of the bottle and embracing the nipple about the neck of the bottle.

4. In a nursing bottle holder, a member having means for attaching it to the top rail of a crib or the like, a second member pivoted to the attaching member, a third member slidably connected with the second member, having means for retaining the bottle, and means carried by said third member for engaging said rail and holding the bottle in a removed position.

5. In a nursing bottle holder, a wire member having clamping-jaws for embracing the body of the bottle, and clamping-jaws for binding the nipple about the neck of the bottle.

[Claims 6 and 7 not printed in the Gazette.]

886,271. INCANDESCENT GAS-LAMP. HEINRICH SÜSSMANN, Berlin, Germany, assignor to The Firm of Deutsche Gasglühlicht Aktiengesellschaft (Auergesellschaft), Berlin, Germany. Filed June 7, 1906. Serial No. 320,676.



1. An incandescent gas lamp for inverted burners, comprising a combustion chamber, a chimney through which the combustion gases are conducted to the outside, an air reservoir closed at its top and surrounding the said chimney, and burner tubes provided with mixing devices and arranged in said air reservoir, mantles supported at the lower part of the burner tubes, said burner tubes extending through the bottom of the air reservoir into the combustion chamber of the lamp, as and for the purpose specified.

2. An incandescent gas lamp for inverted burners, comprising a burner and mixing tube provided with air inlets and having its outlet lowermost, a combustion chamber, a chimney leading upward from the combustion chamber, and an air reservoir closed at the top and surrounding said chimney, said air reservoir communicating at its lower part with the atmosphere, the burner and mixing tube being arranged in said air reservoir and communicating therewith through said air inlets, the burner and mixing tube having its outlet end extending through the bottom of said air reservoir into the combustion chamber, the air reservoir being provided with openings in its bottom communicating with the combustion chamber, substantially as described.

3. In an incandescent gas lamp for inverted burners, a burner and mixing tube having its outlet lowermost and provided with air inlets, a combustion chamber, a chimney leading upwardly from said combustion chamber, and an air reservoir receiving the burner and mixing tube and communicating therewith through said air inlets, the said reservoir surrounding said chimney and being in communication with the outer air only at its lower part, the reservoir being closed at its top and extending upward above the said air inlets of the burner and mixing tube thereby forming a space in which the air accumulates producing excess pressure above said air inlets, substantially as described.

4. In a gas lamp, in combination, an upright burner-tube having its outlet lowermost and provided intermediately with air-inlets, a chamber to receive the gases of combustion, a chimney leading upwardly from said chamber, and an air chamber closed at the top and surrounding said burner-tube and chimney directly above said first-named chamber, said air-chamber being open at its lower part and communicating at its upper part by means of said air-inlets with said burner-tube.

5. In an incandescent gas-lamp, in combination, a plurality of upright burner-tubes having their outlets lowermost, a chamber to receive the products of combustion, a chimney extending upwardly from said chamber, and a cap surrounding said burner-tubes and chimney above said first-named chamber and forming an air-chamber which is closed at the top and open at its lower edge, there being openings in said burner-tubes at the upper portion only of said air chamber.

[Claim 6 not printed in the Gazette.]

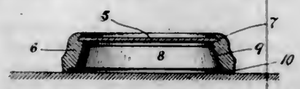
886,272. HOSE-NOZZLE. SUGAJI SUZUKI, Ogden, Utah. Filed Sept. 4, 1907. Serial No. 391,328.



1. A nozzle elliptical in cross section, a spring valve comprising a plate shaped to conform to the inner wall of the nozzle and secured thereto, said plate being cut away toward the free end thereof to substantially a semicircular cross section, and a screw threaded through the nozzle and engaging the outer face of the plate, whereby to move said plate to restrict the passage of liquid through the nozzle.

2. The combination with a nozzle, of a spraying cap having an opening therethrough and pivoted to the end of the nozzle, an arm rigid with the cap and a locking member pivoted to the arm and adapted to engage opposite faces of the nozzle, whereby to lock said cap in open or closed position.

886,273. SUCTION DEVICE FOR SECURING GLASSES IN PLACE. JOHN J. TANZEY, Hartford, Conn., assignor of one-half to George Ulrich, Hartford, Conn. Filed Dec. 6, 1906. Serial No. 346,555.



1. The combination, with a yieldable carrier normally open at both ends, of a plate secured in one open end of said carrier,—the carrier being rabbeted at its other end to aid the same in being secured to an object by suction.

2. A device comprising a yieldable frame having open ends; a plate held in and covering one open end of said frame; and a suction-space within the frame.

3. A device comprising a frame or carrier of rubber, said frame having open ends; a glass plate secured in a groove of one of said open ends; and a suction-space within the frame or carrier, the wall of said frame or carrier being rabbeted at its end opposite the plate.

4. A device consisting of a plate; a rubber frame recessed on one end to engage the edge of said plate; and a suction-space in said rubber-frame for securing the same to an object.

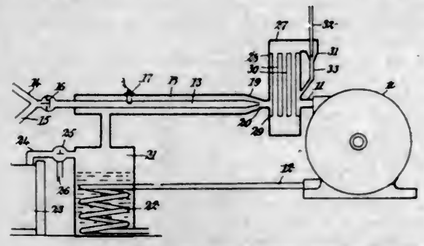
5. A device comprising an annular rubber frame recessed at one end; a plate secured in said recess; a suction-space in said rubber frame; and a groove or recess at the end of said rubber frame opposite the plate.

[Claim 6 not printed in the Gazette.]

886,274. MEANS FOR PRODUCING MOTIVE POWER. JOHN L. TATE, Jersey City, N. J. Filed Apr. 27, 1907. Serial No. 370,644.

1. In combination, an engine, a combustion chamber delivering thereto, a jacket surrounding said combustion chamber, and means whereby water vapor is passed through said jacket and also delivered to said engine.

2. In combination, an engine, a boiler, a conduit connecting the same, an ejector for maintaining a pressure within said boiler below that of the atmosphere and delivering the vapor therefrom to said engine, and a combination chamber within said conduit and delivering to said ejector for heating said vapor intermediate the boiler and the engine.



3. In combination, an engine, a boiler, means for delivering the vapor from said boiler to said engine heating the vapor intermediate the boiler and the engine and maintaining a pressure within the boiler below that of the atmosphere, and means for heating said boiler by the exhaust fluid from said engine.

4. In combination, an engine, a boiler, a combustion chamber, means for delivering an explosive mixture to said chamber, an igniter, a jacket surrounding said combustion chamber and communicating with said boiler, a conduit connecting said chamber to said engine, and an ejecting nozzle receiving its motive fluid from said combustion chamber and serving to force the water vapor from said jacket into said engine and maintain a pressure in said boiler below that of the atmosphere, and means for heating said boiler by the exhaust gases from said engine.

5. In combination, a primary engine, a secondary engine, a combustion chamber, means for delivering the exhaust steam from the primary engine adjacent the combustion chamber, and means for delivering the products of combustion and said exhaust steam to the secondary engine.

[Claims 6 and 7 not printed in the Gazette.]

886,275. ADVERTISING DEVICE. IRA O. THORLEY, Philadelphia, Pa. Filed Dec. 15, 1906. Serial No. 348,035.



1. A device of the class described, comprising a casing, two sets of slides mounted therein, means adapted to engage with said slides for moving the same laterally, segment racks in engagement with said slide-operating means, a shaft on which the segment racks are mounted, arms extending from the segment racks, a bar slidable in the casing, springs for moving said bar in one direction, connections between said bar and the arms extending from the segment racks, a longitudinally movable operating bar having link connection with the first-mentioned bar, and means for limiting the longitudinal movement of the operating bar.

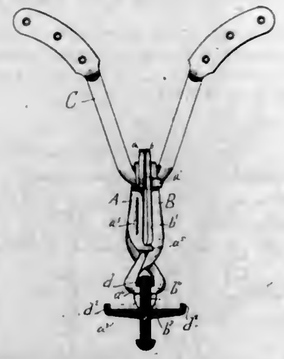
2. A device of the class described comprising a casing, two sets of slides mounted in the casing, each of said slides having a frame slotted at its ends, flanges in the end walls of the casing for engaging in said slots, the said flanges terminating inward of the sides of the casing, plates mounted to slide in the casing, pawls carried by said plates for engaging in the slots of the slides, racks attached to said plates, segment racks at the ends of the casing and engaging with the first-named racks, a shaft on which said segment racks are mounted, a spring-pressed bar having link connection with said segment rack, and an operating bar having link connection with said spring-pressed bar.

3. A device of the class described comprising a casing, two sets of advertising slides arranged in the casing, each of said slides being slotted at its ends, flanges in the ends of the casing for engaging the slots in said slides, the ends of said flanges terminating inward of the sides of the casing, sliding plates on the ends of the casing, spring-pressed pawls carried by the plates and adapted to engage with the slots of said slides, racks to which said plates are secured, segment racks engaging with the first-named racks, a shaft on which the segment racks are mounted, arms extended from the segmental racks, a bar slidable in the casing, springs for moving said bar in one direction, link connection between said bar and the arms extended from the segmental racks, a longitudinally slidable operating bar having link connection with the first-named bar, and means for limiting the longitudinal movement of the operating bar.

4. A device of the class described, comprising a casing, two sets of slides arranged therein, means adapted to engage with said slides for moving them laterally, segment racks for operating said slide-moving means, a shaft on which said segment racks are mounted, a bar movable longitudinally of the casing, a bar movable laterally of the casing, means for connecting said bars, and means for connecting said last-mentioned bar to said segments, whereby the longitudinal movement of the first-mentioned bar causes a lateral movement of the last-mentioned bar and a rotation of the segments.

5. A device of the class described, comprising a casing, two sets of slides arranged therein, means adapted to engage with said slides for moving them laterally, segment racks for operating said slide-moving means, a shaft on which said segment racks are mounted, a bar movable longitudinally of the casing, a bar movable laterally of the casing, means for connecting said bars, means for connecting said last-mentioned bar to said segments, whereby the longitudinal movement of the first-mentioned bar causes a lateral movement of the last-mentioned bar and a rotation of the segments, and means for preventing the return of said first-mentioned bar before it completes its full longitudinal movement.

886,276. HANGER FOR OVERHEAD TRACKS. DAVID TOLTON, Guelph, Ontario, Canada. Filed Feb. 19, 1906. Serial No. 301,944.



1. A hanger for overhead tracks comprising two oppositely disposed members whose upper ends are oppositely turned hooks which together form an eyelet encircling the hanger support, and whose lower ends are opposing jaws, said members being crossed and fulcrumed on each other between their ends to form self closing tongs, and being detachably interlocked at the pivotal point.

2. A hanger for overhead tracks comprising two oppositely disposed members interlocking and rocking on each other between their ends to form self-closing tongs, the upper extremities of said members forming a closed eyelet encircling the hanger support, and the lower ends being two opposing track jaws.

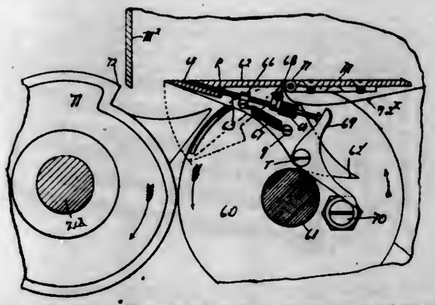
3. A hanger for overhead tracks comprising two oppositely disposed members halved together between their ends and rocking on each other at the line of contact to form self-closing tongs, the upper portions of said members being oppositely bent to form an eyelet encircling the hanger support, and the lower ends being opposing track jaws.

4. A hanger for overhead tracks comprising two members which cross each other between their ends and are fulcrumed on each other at the point of crossing to form self-closing tongs, said members being detachably and movably interlocked at the intersection by lugs integrally formed on the members, the lower ends of said members being inturned, mating jaws adapted to grasp a rail web between the rail flanges, and the upper ends of the members being bent transversely to the plane of the jaws into hooks which close past each other and encircle the hanger support the proximate faces of the members being in contact only at the fulcrum point.

5. A hanger for overhead tracks comprising two members detachably interlocked between their ends, the upper parts of said members being bent past each other into an eyelet, and the lower portion of each member being obliquely offset and crossing the corresponding portion of the opposed members, their lower ends being inturned to form mating jaws, said members being so fulcrumed on each other at the line of interlocking only and forming tongs so that said jaws close on an interposed object when said members are suspended by the eyelet.

[Claims 6 to 9 not printed in the Gazette.]

886,277. FEEDING-OFF MECHANISM. WEBSTER A. TOMPKINS, Portland, Oreg. Filed Dec. 18, 1906. Serial No. 348,491.



1. A feeding off mechanism for articles, comprising a receptacle having an opening in the bottom thereof, a hinged deflector mounted in the bottom of the receptacle, a movable needle point carried by the deflector, a roller, means carried thereby for tilting said deflector and operating the needle point, and a feeding off roll having a lipped recess upon its circumference coöperating with the deflector to receive an article to be fed between said rollers, as set forth.

2. A feeding off mechanism for articles, comprising a receptacle having an opening in the bottom thereof, a hinged deflector mounted in the bottom of the receptacle, means for operating said deflector a movable needle point carried by the deflector, a roller, a stud mounted upon said roller, a thrust pawl pivotally mounted upon a wing of said deflector and in the path of said stud, said needle point being actuated by said pawl, and a feeding off roll having a lipped recess in the circumference thereof and positioned adjacent to said stud carrying roller, as set forth.

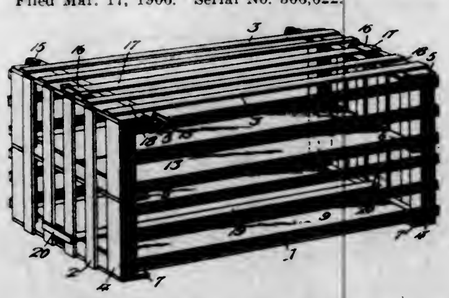
3. A feeding off mechanism for articles, comprising a receptacle having an opening in the bottom thereof, a

hinged deflector mounted in the bottom of the receptacle, means for operating said deflector, a needle carrying bar mounted upon said deflector, a needle carried by said bar, a spring fastened at one end to said bar and its other end to the deflector, a thrust pawl pivotally mounted upon the latter, a roller, a stud mounted thereon and positioned in the path of said pawl, and a feeding off roll having a lipped recess in the circumference and positioned adjacent to the stud carrying roll, as set forth.

4. A feeding off mechanism for articles, comprising a receptacle having an opening in the bottom thereof, a hinged deflector mounted in the bottom of the receptacle, a needle carrying bar mounted upon said deflector, a needle carried by said bar, a spring fastened at one end to said bar and its other end to the deflector, a thrust pawl pivotally mounted upon the latter, a roller, a stud mounted thereon and positioned in the path of said pawl, a wing of said deflector having a cam edge also in the path of said stud, and a feeding off roll having a lipped recess in its circumference and positioned adjacent to the stud carrying roll, as set forth.

5. A feeding off apparatus comprising a receptacle having an opening in the bottom thereof, a deflector hinged to the bottom of said receptacle, means for operating said deflector a bearing box mounted upon a wing of said deflector, a rod passing through said bearing box, one end of said rod being split, a needle point mounted in said split end and extending through a diagonally disposed opening in the deflector, a clamping member fixed to the split portion of the rod, a spring connecting said clamping member and wing of the deflector, a pivotal thrust pawl mounted upon the wing of the deflector, a roller, a stud mounted thereon and positioned in the path of said pawl, and a feeding off roll with a lipped recess in the circumference thereof mounted adjacent to said stud carrying pawl, as set forth.

886,278. COOP. CHARLES B. TREAT, Buchanan, Mich. Filed Mar. 17, 1906. Serial No. 306,622.

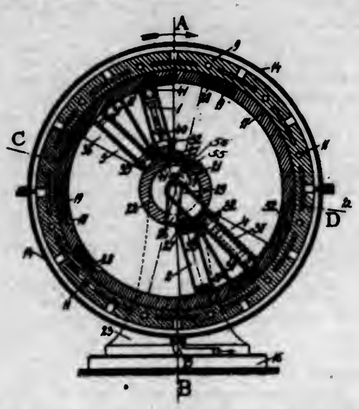


The herein described plate comprising corner posts of rectangular cross section, sides permanently secured to said posts, ends provided with upper and lower cross bars pivoted to said posts, a bottom comprising two sections, each pivoted at its end to said posts, cross bars to prevent said bottom sections from swinging outwardly, and an intermediate floor between the top and bottom of the crate comprising sections pivoted at their ends to said posts to swing upwardly, a cover in two sections hinged at opposite sides of the crate, a removable locking slat having its ends engaged by keepers, and cross bars to prevent the downward movement of said intermediate floor sections.

886,279. ROTATING INTERNAL-COMBUSTION ENGINE. EWALD L. VERVOORT, Apeldoorn, Netherlands. Filed June 8, 1907. Serial No. 378,001.

1. In a rotary internal combustion engine, the combination with a casing and a shaft rotatable relatively thereto, of a set of blades mounted to operate within the casing and about the shaft as an axis, and devices carried by the blades for automatically connecting them alternately to the shaft and casing.

2. In a rotary internal combustion engine, the combination with a casing and a shaft rotatable relatively thereto, of a set of operating blades mounted to revolve within the casing and about the shaft, and latches carried by the blades and serving to alternately connect the latter to the shaft and casing.



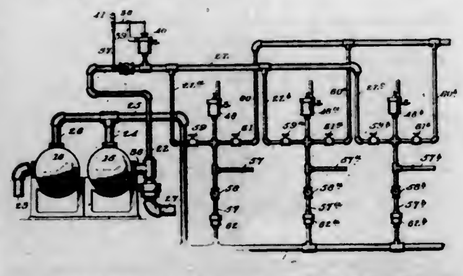
3. In a rotary internal combustion engine, the combination with a casing and a relatively rotatable shaft, of a set of operating blades mounted to revolve within the casing and about the shaft, devices for connecting the blades alternately to the shaft and casing, and means carried by certain blades for controlling the operation of the said connecting devices.

4. In a rotary internal combustion engine, the combination with a casing and a relatively rotatable shaft, of a set of operating blades mounted to revolve within the casing and about the shaft, devices carried by the blades for alternately connecting them to the shaft and casing, and operating devices movable with the blades and serving to actuate the connecting devices to alternately engage them with the shaft and casing.

5. In a rotary internal combustion engine, the combination with a casing and a relatively rotatable shaft, of a set of operating blades mounted to operate within the casing and about the shaft, and locking devices carried by the blades and movable in one direction to connect the corresponding blades to the casing and in an opposite direction to connect them to the shaft.

[Claims 6 to 11 not printed in the Gazette.]

886,280. APPARATUS FOR FORCING FLUID FROM WELLS. JOHN W. WAITZ, Oil City, Pa. Filed Oct. 17, 1903. Serial No. 177,488.



1. In an apparatus for forcing oil from wells, the combination of a single pocket arranged at or near the bottom of a well, an air supply pipe and an oil discharge pipe leading into said pocket, and an air compressing device comprising a plurality of cylinders, one of which is connected with the open air and the other or back pressure cylinder is connected with the air supply pipe, whereby the air remaining in a pocket after the oil has been discharged therefrom may be utilized by being delivered into said back pressure cylinder, substantially as described.

2. In an apparatus for forcing oil from wells, the combination of a single pocket arranged at or near the bottom of a well, an air supply pipe and an oil discharge pipe leading into said pocket, a main air pipe connected to said air supply pipe, an air compressing device comprising two cylinders, one of which is connected with the outer air and the other of which is connected to said air supply pipe, and both of said cylinders delivering their supply of compressed air into said main air supply pipe, substantially as described.

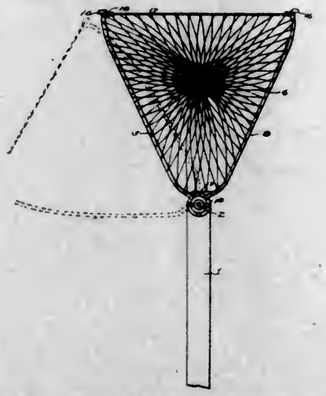
3. In an apparatus for forcing oil from wells, the combination of a single pocket arranged at or near the bottom of each well, an air supply pipe and an oil discharge pipe leading into each pocket, a main air supply pipe connected to said first named air supply pipes, an air compressor composed of two cylinders, both of said cylinders being connected with the outer air, and one of said cylinders being connected with the air supply pipe that runs to each well, and a yielding valve mechanism in said second named cylinder allowing atmospheric air to enter when there is no back pressure in the air supply pipe leading into each well, substantially as described.

4. In an apparatus for forcing oil from wells, the combination of a single pocket arranged at or near the bottom of each well, an air supply pipe and an oil discharge pipe leading into each pocket, a main air supply pipe connected with the air supply pipes of each well, an air compressing device composed of a free air cylinder and a back pressure cylinder, connections between said air pipes that run to each well and said back pressure cylinder, and means including a spring actuated piston located in said connections for causing the surplus air from wells that have been flowed to enter the back pressure cylinder at a uniform pressure, substantially as described.

5. In an apparatus for forcing oil from wells, the combination of a single pocket located at or near the bottom of each well, an air supply pipe and an oil discharge pipe leading into each pocket, a main air supply pipe connected with all of said individual air supply pipes, an air compressing device comprising a plurality of cylinders delivering into said main supply pipe, and connections between the individual air supply pipes for each well and half of the air compressor cylinders, whereby the surplus fluid pressure remaining after one or more wells have been flowed may be utilized, and a fluid pressure mechanism for giving a signal when one or more wells have been discharged of fluid, substantially as described.

[Claims 6 to 21 not printed in the Gazette.]

886,281. NET. ALBERT O. WARNER, Denver, Colo. Filed Aug. 27, 1907. Serial No. 390,368.



1. A net, comprising a handle, an annular casing revolubly mounted thereon, a pair of rods extending into said casing, one of the rods being movably mounted and movable toward and away from the other rod within the casing, means for securing said rods in a position spaced apart, means connecting the free ends of said rods, and a net proper sustained by the rods and said connecting means.

2. A net, comprising a handle, an annular casing revolubly mounted thereon, and formed with notches in its walls, a pair of rods having their ends extending into said casing through some of said notches, one of said rods being adapted to be moved from one of the notches to another for being adjusted toward or away from the other rod, means for securing the rods against movement while in any given notches, means connecting the free ends of the rods, and a net proper supported by said rods and connecting means.

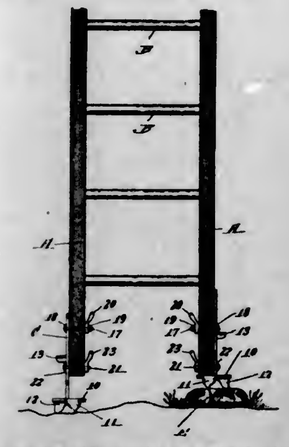
3. A net, comprising a handle, an annular casing revolubly connected thereto, a rod extending into said casing and having an eye formed therein, means for preventing removal of the eye from the casing, the casing being formed with notches spaced apart and spaced from the said rod, a second rod extending through one of the notches and formed with an eye arranged within the eye of the first mentioned rod and concentric thereto, so as to be adapted to be revolved therein, the rod being adapted to be swung from one of the notches to the other when free, means for at times preventing the second mentioned rod from escaping from its given notch, means for connecting the free ends of the rods when the rods are spaced apart, and a net proper suspended from said rods and connecting means.

4. A net, comprising a handle, an annular casing revolubly mounted thereon, a pin extending through said handle and casing, rods extending into said casing and formed with eyes surrounding said pin, one of said rods being movable toward and away from the other, means connected with the pin for retaining said rod against movement, means for connecting the free ends of said rods, and a net proper supported by said rod and connecting means.

5. A net, comprising a handle, a casing revolubly mounted thereon, a pin extending through said handle and casing, a pair of rods extending into said casing, one of said rods being movable toward and away from the other, a nut engaging said pin and adapted to be threaded thereon for clamping the movable rod against movement, means for connecting the free ends of said rods together, and a net proper supported by said rods and connecting means.

[Claim 6 not printed in the Gazette.]

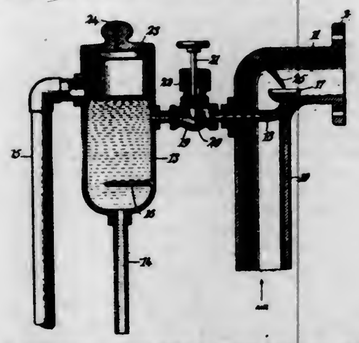
886,282. LADDER. JASON WATERS, West Sutton, Mass. Filed Feb. 28, 1906. Serial No. 303,403.



A ladder having side members provided with transverse bolts, in combination with legs or supporting members comprising elongated plates, said plates being provided

with upper and lower vertical slots and engaging the said bolts, transverse arcuate slots intersecting the lower vertical slots, a base member at the lower ends of the elongated plates, projections extending laterally from the legs or supporting members between the upper and lower vertical slots, toes carried by the base and disposed to one side of the legs or supporting members, a heel disposed on one end of the base member and spaced from the toes to provide a securing space between them, said heel being offset from the ladder to extend the bearing portion of the legs or supporting members.

886,283. CARBURETER. WILLIAM L. WAIRINEN, Dolph, S. D. Filed June 15, 1907. Serial No. 379,159.



1. A carbureter, comprising a liquid fuel cup, means for maintaining a liquid therein at a substantially constant level, means for delivering air into engagement with the under surface of said cup, and means for deflecting the air into engagement with the surface of the liquid, whereby the liquid is brought to the temperature of the air by conduction and evaporated by direct contact.

2. A carbureter, comprising an air supply conduit having a vertically-extending portion and a horizontally-extending portion meeting in an elbow, a liquid fuel cup within said container and adjacent said elbow, a baffle plate within said conduit and extending from the upper side of the conduit to a point above said cup, whereby the air in passing through the conduit is deflected against the liquid in the cup, and means for maintaining a constant liquid level.

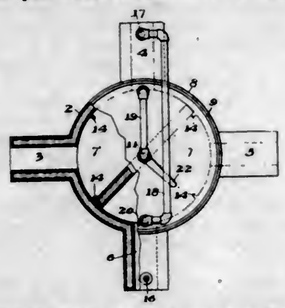
886,284. TRUCK. SAMUEL A. WILSON, Petoskey, Mich. Filed June 15, 1907. Serial No. 379,228.



A hand operated truck mounted on wheels and provided with forwardly extensible handle bars comprising keepers secured to the side bars of the truck, and each provided with a longitudinal slot and a branch slot, extensible handle bars mounted to slide in said keepers and provided with a lug to slide in said slot and branch, substantially as described.

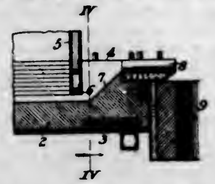
886,285. WATER-COOLED REVERSING-VALVE. JOHN BARNES, Portvue, Pa., assignor of one-third to Harry Woods and one-third to Charles Zimmerman, of Steubenville, Ohio. Filed July 3, 1905. Serial No. 268,070.

1. A reversing valve having a double walled casing formed with a plurality of port openings, the walls of said openings extending beyond the casing and having annular water spaces therein which communicate with the space between the double walls of the casing, and means for circulating water through the said spaces, some of the circulating connections being made directly to the spaces in the port walls; substantially as described.



2. A reversing valve, having a double wall casing with port-openings therethrough, the port openings also having extended double walls which are integral with the adjacent casing wall, and the interior spaces of which communicate with the interior spaces of the casing walls, substantially as described.

886,286. SMELTING-FURNACE SPOUT. DAVID H. BROWNE, Copper Cliff, Ontario, Canada, assignor to The Canadian Copper Company, New York, N. Y., a Corporation of Ohio. Filed July 18, 1905. Serial No. 270,183.



1. A smelting furnace having a water jacket wall, the bottom and hearth walls being lined with refractory material, there being a connection opening having its top defined by the bottom of the water jacket wall and its bottom defined by the refractory bottom of the furnace, a spout of refractory material in communication with the connection opening and rising above the same, the internal bottom portion of the spout being inclined upwardly and outwardly from the connection opening, water-cooled elements within the bottom portion, sides and outer end of the spout, and a water-cooled trough set into the top of the spout and leading outwardly therefrom.

2. A smelting furnace having a water jacket wall, the bottom and hearth walls being lined with refractory material, there being a connection opening having its top defined by the bottom of the water jacket wall and its bottom defined by the refractory bottom of the furnace, a spout of refractory material communicating with the connection opening and rising above the same, water-cooled elements embedded in the bottom, sides and outer ends of the spout, and a water-cooled trough embedded in the top of the spout and leading outwardly therefrom.

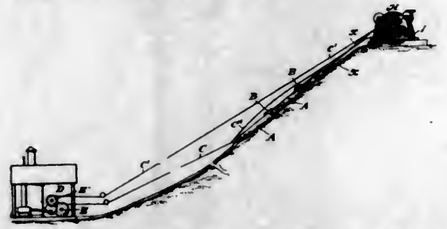
3. A smelting furnace having a water jacket wall, the bottom and hearth walls being lined with refractory material, there being a connection opening having its top defined by the bottom of the water jacket wall and its bottom defined by the refractory bottom of the furnace, said refractory bottom being extended externally of the furnace and formed into an integral spout in communication with the connection opening and rising above the same, the internal bottom portion of the spout being inclined upwardly and outwardly from the connection opening, water-cooled elements embedded in the sides, bottom, and outer end of spout, and a water-cooled trough embedded in the top of the spout and leading outwardly from the inclined wall thereof.

4. A smelting furnace having an outlet spout and provided with a connection hole communicating with the spout below the outlet end thereof, whereby the hole is trapped against the action of the twyers, the top wall of the hole being formed by a water jacket, the bottom of the hole being formed of refractory material, and a water-cooled trough constituting the upper outlet end of the spout, substantially as described.

5. A smelting furnace having its bottom and hearth walls formed of refractory material which is projected at one side of the furnace to form a spout, a water jacket extending between the hearth walls and defining one side of the furnace, a portion of the bottom of the jacket terminating short of the bottom of the furnace and constituting the top wall of the connection hole, the bottom of said hole being formed by the bottom of the furnace, the connecting hole being located below the outlet end of the spout, whereby the hole is trapped against the action of the twyers, and a water-cooled trough set in the top of the spout and constituting the outlet thereof, substantially as described.

[Claim 6 not printed in the Gazette.]

886,287. LOGGING MEANS. SPURGEON J. DAVIS, Ostrander, Wash., assignor to Davis McGregor Manufacturing Company, Portland, Oreg., a Corporation. Filed Mar. 27, 1907. Serial No. 364,925.



1. A logging means, which comprises a pull and a return cable for engaging with the logs, a hold back cable, means for sustaining the hold back cable at the discharging point for the logs, a winding drum for the hold back cable and means controlled by the pulling in of the return cable for winding up the hold back cable drum.

2. A logging means, which comprises a pull and a return cable for engaging with the logs, a hold back cable arranged for connection with the logs for the hold back cable at the discharging point of the logs.

3. A logging means, which comprises in combination with a pull and a return cable, arranged for connection with a log; of means located at the log delivering point for controlling the said cables, a hold back cable arranged for connection with the log, and means located at the log starting point for controlling the hold back cable.

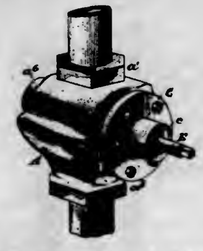
4. In a logging means of the character described, the combination with devices for pulling the logs and the return cable; of a hold back cable arranged for connection with the logs, means for controlling the out run of the said cable, and a wind up for such cable actuated from the pulling of the return cable, as set forth.

5. A logging means of the character stated, which comprises a pull cable for connection with the front end of the log, a return cable connected to the pull cable, drums for simultaneously winding up one of said cables and unwinding the other, and a hold back cable arranged for connection with the rear end of a log, a drum for said hold back cable controlled in one of its movements by the pulling in of the return cable, and a brake mechanism for the hold back cable.

[Claims 6 to 8 not printed in the Gazette.]

886,288. BALANCE THROTTLE-VALVE. SPURGEON J. DAVIS, Ostrander, Wash., assignor to Davis McGregor Manufacturing Company, Portland, Oreg., a Corporation. Filed July 18, 1907. Serial No. 384,401.

1. A throttle valve, comprising a casing having a hollow circular valve chamber formed with a port that connects the inlet and outlet of the casing, a hollow valve rotatably mounted in the casing, having a closure member for coöperating with the said port, means connected with one end of the valve for rotating it, another means that engages the other end of the valve for limiting its rotary movement, the latter means including devices for preventing endwise movement of the valve.



2. A throttle valve comprising a casing having a valve chamber, formed with a port that connects with the inlet and outlet of the casing, end bearings for the valve, one of which forms the means for turning the valve, said valve having a closure member for coöperating with the steam port in the chamber, and means for limiting the rotary adjustments of the valve as set forth.

3. In a throttle valve, the combination with the casing having a valve chamber formed with a port that connects the inlet and outlet of the casing, a rotary valve mounted in said chamber, an axial end thrust bearing for one end of the valve, a valve stem connected with the other end of the valve, said stem and valve having relatively independent movement, the said valve having a port closing member and means for limiting the rotary movement of the valve, as set forth.

4. In a throttle valve, having a tapered valve chamber, the latter having a port that connects with the inlet and outlet of the casing; a tapered valve rotatably mounted in the said chamber, axial end thrust bearings for the valve, one of which forms the valve turning means, said valve having a port closing portion, and means on the casing for coöperating with the valve to limit the rotary movement of said valve, substantially as set forth.

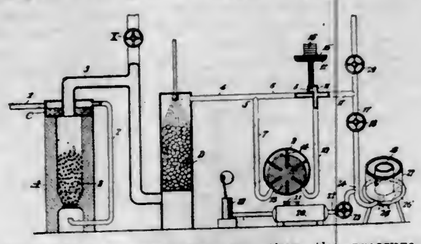
5. The combination with the valve casing, the removable cap therefor, said cap bearing having an axial bearing, the casing having a valve chamber formed with a port that connects with the inlet and outlet of the casing, said valve chamber having an annular seat at one end; of a valve having circular head portions for engaging the said annular seat, and having a transverse wing for closing the valve chamber steam port, a valve stem rotatably mounted in the axial bearing of the cap member, having a shiftable connection with the valve and adapted for rotating the said valve substantially as shown and for the purposes described.

[Claims 6 to 8 not printed in the Gazette.]

886,289. PROCESS OF GENERATING AND DELIVERING GAS UNDER UNIFORM PRESSURE. WILLIAM C. FINCK, Elizabeth, N. J., assignor to George H. Benjamin, New York, N. Y. Filed Feb. 26, 1906, Serial No. 302,829. Renewed Aug. 24, 1907. Serial No. 390,042.

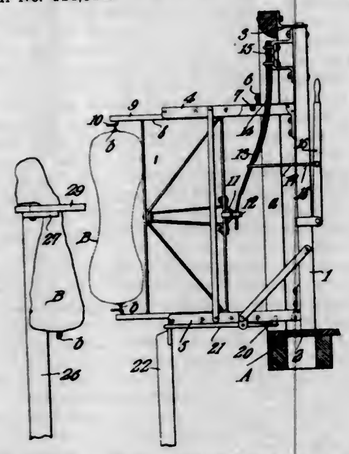
The process for generating and delivering gas to a point of consumption under a uniform pressure which consists in creating a partial vacuum on the inlet side of a pressure pump, connecting such inlet with a fuel chamber whereby air is sucked through the fuel chamber, the air having previously passed across the surface of warm water, the gas being delivered from the pressure pump against a weighted valve so that the valve is not operated unless a certain predetermined pressure at the outlet side of the pump is exceeded, the stream of gas being then divided in case such pressure is exceeded, by the operation of said valve so that part of the stream passes to the point of consumption under a fixed pressure, while the re-

mainder returns to the inlet side of the pump, and finally adding air to the gaseous stream at a point beyond said



valve and at a pressure greater than the pressure of said gas at the outlet side of the pump.

886,290. APPARATUS FOR DELIVERING MAIL-SACKS. THOMAS J. GRACE, Mobile, Ala., assignor of one-half to Jno. W. Rutherford, Mobile, Ala. Filed Feb. 6, 1908. Serial No. 414,614.



1. In apparatus of the character described the combination with guide arms and a carriage therebetween and movable longitudinally thereof; of an actuating spring supported adjacent the arms and engaging and disposed to actuate the carriage, manually operated means for setting the spring, and means for automatically engaging the carriage to lock the spring when set.

2. In apparatus of the character described the combination with parallel guide arms; of a carriage therebetween and movable longitudinally thereof, an actuating spring supported adjacent one of the arms and engaging and disposed to actuate the carriage, means for simultaneously setting the spring and retracting the carriage, means for automatically locking the carriage when set, and tripping means for releasing the carriage.

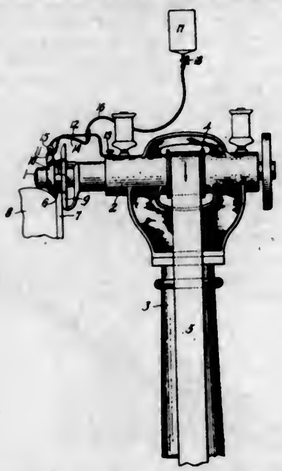
3. In apparatus of the character described the combination with parallel guide arms; of a spring actuated carriage movably mounted between the arms, manually operated means for setting the carriage against the stress of the spring, means for automatically locking the carriage when set, and tripping means for releasing the carriage.

4. In apparatus of the character described the combination with guide arms; of a spring actuated carriage movably mounted between the arms, manually operated means for setting the carriage against the stress of the spring, a catch carried by one of the arms for automatically engaging the carriage to lock it in set position, and tripping means in the path of the catch for releasing the carriage.

5. In apparatus of the character described the combination with a pivoted support; of guide arms outstanding therefrom, a spring actuated carriage movably mounted between the arms, manually operated means upon the support for setting the carriage against the stress of the spring, and means upon one of the arms for automatically locking the carriage when set.

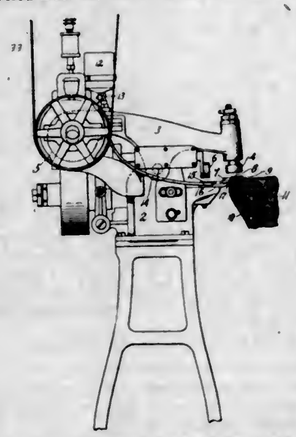
[Claims 6 to 11 not printed in the Gazette.]

886,291. HEEL-SEAT TRIMMER FOR PATENT-LEATHER. DORR H. HADSELL, Brockton, Mass., assignor of one-half to T. D. Barry, Brockton, Mass. Filed Dec. 10, 1907. Serial No. 405,903.



In a machine of the kind described, a rotary cutter, high speed driving means therefor, a slow speed guard plate mounted at one end of said cutter for traveling in the rand crease, and a combined retarder and oiler for restricting the movement of said guard plate and at the same time maintaining the outer surface thereof continuously smeared with oil.

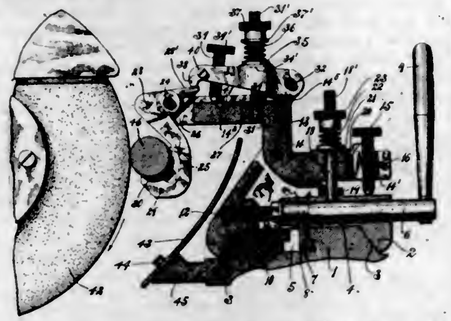
886,292. WELT-BEATER. DORR H. HADSELL, Brockton, Mass., assignor of one-half to T. D. Barry, Brockton, Mass. Filed Dec. 10, 1907. Serial No. 405,904.



A welt beater, comprising an anvil having a top surface for holding the welt in position to be beaten out, a nose to follow the seam and enter between the welt and upper,

and a curved under surface to receive the adjacent upper as it is hard pressed by the edge of the last in the process of welt beating, a source of oil supply, a tube leading therefrom to said anvil, said anvil being provided with an internal duct opening in the midst of said curved under surface, and a vibrating hammer above said anvil, operating to beat out the welt on the upper side of the anvil and coöperate with the work and anvil in spreading the oil on the shoe upper and under side of the anvil as it oozes from said opening.

886,293. BACK-REST FOR METAL-REDUCING MACHINES. BENGT M. W. HANSON, Hartford, Conn., assignor to Pratt & Whitney Company, Hartford, Conn., a Corporation of New Jersey. Filed Sept. 8, 1905. Serial No. 277,549.



1. The combination with a support having a slot, of a stock mounted on the support; a clamp inserted through the throat of the slot and laterally movable in said slot; and means for actuating said clamp to cause it to secure the stock to the support.

2. The combination, with a support having a T-slot; a stock mounted on the support; a clamp having a projection, and insertible through the throat of the T-slot; means whereby said clamp may be moved laterally to force its projection beneath the overhang of the slot; and means for actuating the clamp.

3. The combination, with a support having a T-slot, of a stock on the support; an L-shaped clamp insertible through the throat of the T-slot; means for moving said clamp laterally to cause its L part to pass beneath the overhang of the slot; and means carried by the stock for actuating the clamp.

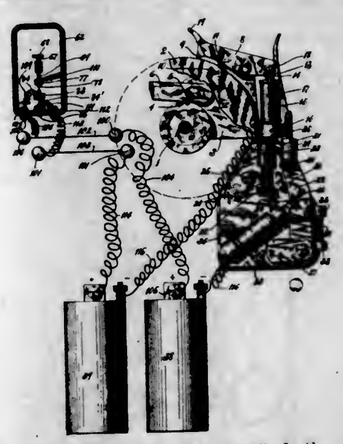
4. The cobmination, with a support having a T-slot, of a stock mounted on said support; a shaft mounted in a bore of said stock, and carrying an eccentric; an L-shaped clamp sleeved upon the eccentric part of the shaft; and means for forcing said shaft and clamp endwise to cause the clamp to pass beneath the overhang of the slot.

5. The combination, with a support having a T-slot, of a device mounted on said support; a clamp carried by said device, and having a lateral projection insertible through the throat of the T-slot; means for forcing said clamp endwise to carry its projection beneath the overhang of the slot; and means for actuating the clamp.

[Claims 6 to 16 not printed in the Gazette.]

886,294. ELECTRICALLY-CONTROLLED FEED MECHANISM. BENGT M. W. HANSON, Hartford, Conn., assignor to Pratt & Whitney Company, Hartford, Conn., a Corporation of New Jersey. Filed Feb. 28, 1906. Serial No. 303,453.

1. The combination, with a feeler adapted to engage work to be reduced, of a movable device on which the feeler is mounted; a contact-point carried by the device; levers pivoted beyond said contact-point; contact-plugs carried by said levers; feed-mechanism; an electric-circuit; and means for disconnecting said feed-mechanism when the said circuit is established.



2. In mechanism of the class described, the combination, with a pivoted angle-lever, of a feeler carried by one arm of said angle-lever; a contact-point carried by the other arm of said angle-lever; movably-mounted devices having plugs; an electric-circuit; a support having an insulated contact-point adapted to engage one of the contacts of said movable devices; feed-mechanism; means for actuating said feed-mechanism; and electrically-controlled devices for withdrawing the means for actuating the feed-mechanism.

3. The combination, with a slide, of an angle-lever pivoted to said slide; a feeler carried by one arm of the angle-lever; a contact-point carried by the other arm of said angle-lever; a support; weighted levers pivoted to said support; contact-points carried by said weighted levers; a contact-point carried by the support; feed-mechanism; means for operating said feed-mechanism; an electric-circuit; and means for throwing out of action the operative element of the feed-mechanism when the electric-circuit is established.

4. The combination, with an angle-lever, of a contact-point carried by one end of said lever; a feeler carried by the other end of said lever; a pivoted lever; a contact-device carried by said pivoted lever; an electric-circuit; a feed-element; and means controlled by the electric-circuit when the contact-point of the angle-lever engages the contact-device of said pivoted lever for controlling said feed-element.

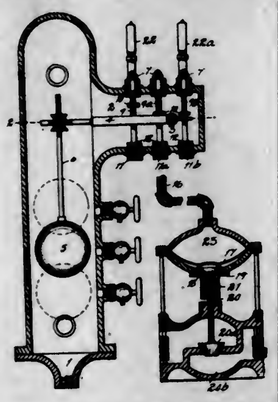
5. The combination, with a feeler, and with means for movably supporting the same, of a contact-point carried by said means; a pair of pivoted levers; a contact-device carried by each of said levers; a circuit; a feed-element; and means controlled by the circuit for actuating said feed element.

[Claims 6 to 30 not printed in the Gazette.]

886,295. FEED-WATER REGULATOR AND ALARM. WILLIAM D. HODGSON, Detroit, Mich., assignor to Alexander J. McDonough, Detroit, Mich. Filed Nov. 25, 1907. Serial No. 403,641.

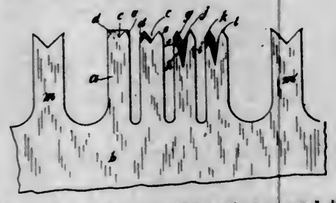
1. In a device of the kind described, the combination of a casing, a chamber 2, therein, a lever 4 in said chamber, an auxiliary chamber 8, a shaft extending into each of said chambers, said lever being secured to said shaft, an arm 25 extending from said shaft in said auxiliary chamber upon the opposite side of said shaft, a valve apparatus 13, 9^a in the chamber 2 upon one side of said shaft adapted to be operated by the lever 4, a valve apparatus 13, 9^c, in the auxiliary chamber adapted to be operated by the arm 25, an opening through the bottom of one of said chambers, said casing being provided with a conduit ex-

tending from said opening into the other of said chambers, a plug adapted to fill said opening and provided with a passage communicating with said conduit and adapted to be controlled by one of said valve apparatus, a pressure controlled actuating apparatus communicating with the auxiliary chamber, the first mentioned valve apparatus being adapted to control the passage between said chambers, said casing being provided with an exhaust passage controlled by the second mentioned valve apparatus substantially as and for the purpose described.



2. In a device of the kind described, the combination of a casing, a chamber 2 therein, a lever 4 in said chamber, an auxiliary chamber 8, a shaft extending into each of said chambers, said lever being secured to said shaft, an arm 25 extending from said shaft in said auxiliary chamber upon the opposite side of said shaft, a valve apparatus 13, 9^a, in the chamber 2, upon one side of said shaft adapted to be operated by said lever 4, a valve apparatus 13, 9^c, in the auxiliary chamber adapted to be operated by the arm 25, a pressure controlled actuating apparatus communicating to the auxiliary chamber, said casing being provided with a passage between said chambers controlled by the first mentioned valve apparatus, and an exhaust passage controlled by the second mentioned valve apparatus, substantially as and for the purpose described.

886,296. CROSSCUT-SAW. GEORGE M. HOWATSON, Clatskanie, Oreg. Filed Apr. 26, 1907. Serial No. 370,503.

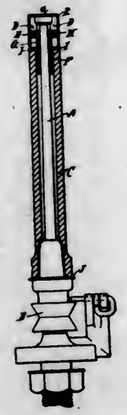


1. In a cross-cut saw, cutting-teeth arranged in pairs and having a common integral root or base connecting the same with the body of the saw-blade, said cutting-teeth being divided from each other by deep V-shaped vertical grooves cut in from the opposite or outer faces of the saw, each of said cutting grooves comprising a wide flat face and a narrower face of acuter angle, the wide face of one V-shaped groove being made opposite to the narrow face of the opposite groove, and opposite angular faces on the cutting points of the teeth, on the same face as the wide face of said V-shaped grooves.

2. In a cross-cut saw, cutting-teeth arranged in pairs and having a common integral root or base connecting the same with the body of the saw-blade, said cutting-teeth being divided from each other by deep V-shaped vertical grooves cut in from the opposite or outer faces of the saw, each of said cutting grooves comprising a wide flat face and a narrower face of acuter angle, the wide face of one V-shaped groove being made opposite to the narrow face of the opposite groove, and opposite angular faces on the cutting points of the teeth, on the same face as the wide face of said V-shaped grooves, in combination with rakers having only a slightly lesser length than such cutting-teeth, measuring from their common base or root.

3. In a cross-cut saw, the combination of cutting-teeth arranged in pairs and having a common integral root or base connecting the same with the body of the saw-blade, said cutting-teeth being divided from each other by deep V-shaped vertical grooves cut in from the opposite or outer faces of the saw, each of said cutting grooves comprising a wide flat face and a narrower face of acuter angle, the wide face of one V-shaped groove being made opposite to the narrow face of the opposite groove, and opposite angular faces on the cutting points of the teeth, on the same face as the wide face of said V-shaped grooves, and raker teeth arranged between each set of eight cutting-teeth, said rakers being only of slightly lesser length than such cutting-teeth, measuring from their common base or root.

886,297. BOBBIN AND SPINDLE CONNECTOR. HENRY E. HUGHES, Central Falls, R. I. Filed Feb. 1, 1906. Serial No. 299,018.



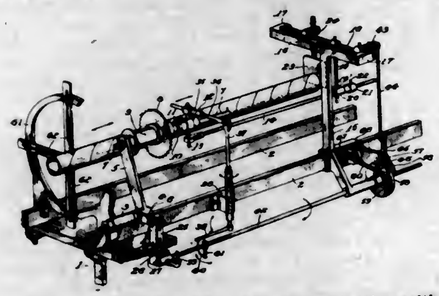
1. In a bobbin and spindle connector, the combination of the spinning spindle, with the weight held loosely for longitudinal movement within the bore of the bobbin at its upper end, and having a bore which frictionally fits the tapering upper end of the spindle, with means for preventing the rotation of the weight relatively to the bobbin, substantially as described.

2. In a bobbin and spindle connector, the combination of the spinning spindle, with the bobbin provided at its upper end with the longitudinal slots, the sliding weight held loosely for longitudinal movement within the bore of the bobbin and provided with projecting ears which are in engagement with the slots, and serve to prevent the rotation of the weight relatively to the bobbin, and the strap which serves to retain the weight in its working position within the bore of the bobbin, substantially as described.

886,298. TUBE-CUTTER. PAUL A. JOHNS, Philadelphia, Pa. Filed Dec. 17, 1906. Serial No. 348,338.

1. In a tube cutting machine, the combination with a cutter, of means for causing said cutter to travel longitudinally with the tube, comprising a rock shaft, having a target plate swinging therefrom within the path of the advancing tube.

2. In a tube cutting machine, the combination with a cutter, of means for causing said cutter to travel longitudinally with the tube, comprising a rock shaft, having a target plate swinging therefrom within the path of the advancing tube and a draw rod operated by said rock shaft.



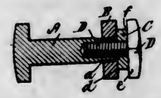
3. In a tube cutting machine, the combination with a cutter, of means for causing said cutter to travel longitudinally with the tube, comprising a rock shaft, having a target plate swinging therefrom, a draw rod and a crank arm, connecting said rock shaft with said draw rod.

4. In a tube cutting machine, the combination with a cutter, of a swinging target within the path of the tube and mechanism, operated by the movement of said target, for causing said cutter to travel longitudinally with the tube during its cutting operation, the said means comprising an adjustable crank.

5. In a tube cutting machine, the combination with a cutter, of a swinging target within the path of the tube and mechanism, operated by the movement of said target, for causing said cutter to travel longitudinally with the tube during its operation, the said means comprising a crank and draw rod.

[Claims 6 to 27 not printed in the Gazette.]

886,299. NUT-LOCK. WILLIAM F. KENNEY, Providence, R. I. Filed Oct. 21, 1907. Serial No. 398,523.

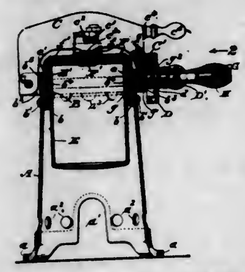


1. The combination of a bolt provided with an external screw thread and a reversely screw-threaded bore, and the bolt nut fitting the said external screw-thread, with a set screw engaging with the screw thread of the bore of the bolt, and the locking nut arranged exteriorly of the end of the bolt in screw-threaded engagement with the set screw and also in locked engagement with the bolt nut, substantially as described.

2. The combination of a bolt provided with an external screw thread, and with a reversely screw-threaded bore, and the bolt-nut, with a set screw adapted to enter the bore of the bolt, the locking nut fitting the threads of the set screw and engaging with the bolt-nut, and means for adjusting the said locking-nut relatively to the bolt-nut so that the set screw may be caused to enter the bore of the bolt with the proper binding fit between the threads, substantially as described.

886,300. DENTAL VULCANIZER. FREDERICK W. KORB and WILLIAM F. HIEBER, Cleveland, Ohio, assignors to The United States Dental Manufacturing Company, Cleveland, Ohio, a Corporation of Ohio. Filed Aug. 18, 1906. Serial No. 331,150.

1. In a dental vulcanizer, the combination of a casing, a boiler vessel adapted to seat in said casing, a cover adapted to close the boiler vessel, a lever pivoted on the casing and adapted to bear on the boiler cover, a lug projecting from the free end of the lever, a bearing pin projecting from the casing, a cam disk mounted thereon at a right angle to the plane of the lever and having an eccentric groove cut in its inner face adapted to engage the lug on the lever, with a gap from said groove and means for adjusting the lever to compensate for wear of the cam etc., substantially as set forth.



2. In a dental vulcanizer, the combination of a casing, a boiler vessel adapted to seat in said casing, a cover adapted to close the boiler vessel and having an adjusting screw projecting from its top, a lever pivoted on the casing and adapted to bear upon the screw of the cover, with a cam adapted to engage the free end of the lever and draw it down upon the cover, substantially as set forth.

3. In a dental vulcanizer, the combination of a casing having an annular seat near its top and a bayonet-joint groove at the side of the seat, a boiler vessel having a flange adapted to rest on said seat, and having a projecting pin adapted to engage the bayonet-joint groove, a cover adapted to close the boiler vessel, a lever pivoted to the casing and pivotally connected to the cover, a cam adapted to engage the free end of the lever and draw it down upon the cover, the cam being so set that it first draws the cover down into contact with the boiler and then clamps it, and in reverse releases the clamping pressure and then lifts the covers slightly from the boiler substantially as set forth.

4. In a dental vulcanizer, the combination of a casing having an annular seat near its top and a bayonet-joint groove at the side of the seat, a boiler vessel having a flange adapted to rest in said seat and a projecting pin adapted to engage the bayonet-joint groove and hold the vessel against accidentally lifting, with a cover adapted to close the boiler vessel and means for clamping said cover upon said vessel, substantially as set forth.

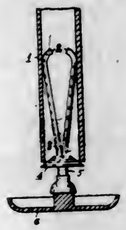
5. In a dental vulcanizer, the combination of a casing, a boiler vessel adapted to seat in the casing, means for locking the boiler vessel against accidental lifting from its seat, a cover adapted to close the boiler vessel, a lever pivoted to the casing and also pivotally connected to the boiler cover, a cam disk pivoted on the casing at a right angle to the plane of the lever and having an eccentric groove formed on its inner face adapted to engage the free end of the lever to close and clamp the lid on the boiler or to release and then initially lift the lid from its seat on the boiler, substantially as set forth.

[Claims 6 to 8 not printed in the Gazette.]

886,301. SPRING-RETAINER FOR SLIDING SHOES. ORTON C. LITTLE, Menasha, Wis., assignor of one-fourth to Edward V. Treleven, Menasha, Wis. Filed June 16, 1906. Serial No. 322,057.

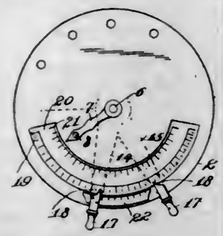
In a retainer for sliding shoes for detachably connecting them with tubular legs of furniture, the combination with a shoe of a pin of half the diameter or less, than that of the tube in which the pin is to be used, it being split into two leaves for a part of its length, their outer ends being spaced apart, and then curved inwardly and their extreme ends normally left separated from each other for their easy entrance into for filling the tube diametrically and for their retention therein, and a plain

faced cone shaped collar mounted upon the pin below its split adapted for centering the pin, and for sustaining



tubes of different diameter thereon, substantially as set forth.

886,302. COMBINED TUNING-COIL AND CONDENSER. WALTER W. MASSIE, Providence, R. I., assignor to Massie Wireless Telegraph Co., Providence, R. I., a Corporation of Rhode Island. Filed Apr. 3, 1907. Serial No. 366,191.



1. In a device of the class described, a casing, an inductance coil in the casing, and a condenser in the casing made up of superposed stationary and movable plates, the movable plates being adapted to expand into the spaces between the stationary plates, and a member for operating said movable plates, the inductance being substantially circular and approximately concentric with the axis of motion of the movable plates and being engageable by said operating member.

2. In a device of the class described, a casing, an inductance coil in the casing, a condenser in the casing made up of superposed stationary and movable plates, and a lever connected with the movable plates for simultaneously operating them all to carry them into and out of the spaces between the stationary plates, the inductance coil being substantially circular, approximately concentric with the axis of motion of the lever, and engageable by said lever.

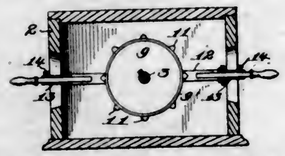
3. In a device of the class described, a casing, an inductance coil in the casing, a condenser in the casing made up of superposed stationary and movable substantially semi-circular plates, the movable plates being adapted to enter the spaces between the stationary plates, and a lever connected with and for simultaneously operating all the movable plates, the inductance coil being substantially circular, approximately concentric with the axis of motion of the lever, and engageable by the latter.

4. In a device of the class described, an inductance coil, a condenser having movable plates, a lever for operating the movable plates to vary the capacity of the condenser, and a substantially circular inductance coil operatively associated with the condenser, approximately concentric with the axis of motion of and engageable by said lever.

5. In a device of the class described, the combination of capacity involving superposed plates, certain of which are movable, an inductance, and means for simultaneously moving the several movable plates to regulate the capacity and for simultaneously adjusting the inductance.

[Claim 6 not printed in the Gazette.]

886,303. SPARK-GAP APPARATUS. WALTER W. MASSIE, Providence, R. I., assignor to Massie Wireless Telegraph Co., Providence, R. I., a Corporation of Rhode Island. Filed May 2, 1907. Serial No. 371,446.



1. In an apparatus of the class described, a rotary spark gap wheel having an air chamber and also having an inlet leading to and an outlet leading from said chamber, and spark gap rods coöperative with said wheel.

2. In an apparatus of the class described, a rotary spark gap wheel having an air chamber and also having an inlet leading to and an outlet leading from said chamber, and spark gap rods coöperative with said wheel, said spark gap rods being mounted for adjustment circumferentially of the wheel.

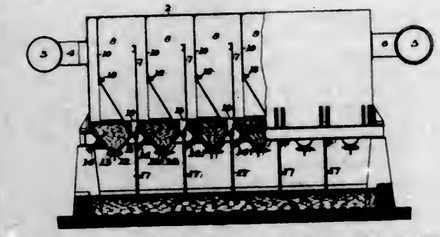
3. In an apparatus of the class described, a rotary spark gap wheel having an air chamber and also having an inlet leading to and an outlet leading from said chamber, and spark gap rods coöperative with said wheel, said spark gap rods being mounted for adjustment circumferentially of the wheel and being also longitudinally adjustable.

4. In an apparatus of the class described, a rotary spark gap wheel having an annular air circulating chamber, lateral inlets for the admission of air into said chamber, and outlets leading from the chamber to the periphery of the wheel, and spark gap rods coöperative with said wheel.

5. In an apparatus of the class described, a casing, a spark gap wheel rotatively mounted in the casing, the latter having an opening for the entrance of air thereto and the discharge of air therefrom, a fan independent of and rotative with the wheel, and spark gap rods cooperative with said wheel.

[Claims 6 to 14 not printed in the Gazette.]

886,304. GAS-WASHER. FREDELLIA H. MOYER, Clairton, Pa. Filed May 16, 1907, Serial No. 374,094. Renewed Feb. 11, 1908. Serial No. 415,370.



1. Apparatus for cleaning gases comprising a vessel having gas inlet and outlet openings, liquid inlet and overflow outlet openings, said overflow being arranged to maintain the liquid at a certain level and a downwardly projecting partition in said vessel, the lower end of the partition being fluted or irregular in contour and terminating above the level of the overflow outlet; substantially as described.

2. Apparatus for cleaning gases comprising a vessel having gas inlet and outlet openings, liquid inlet and overflow outlet openings, said overflow being arranged to maintain the liquid at a certain level and a downwardly projecting partition in said vessel, the lower end of the partition being fluted or irregular in contour and terminating above the level of the overflow outlet and a water seal for the liqiud overflow; substantially as described.

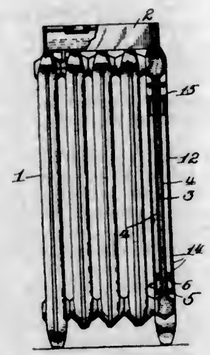
3. Apparatus for cleaning gases comprising a vessel having gas inlet and outlet openings, liquid inlet and overflow openings, said overflow being arranged to maintain the liquid at a certain level, upwardly extending partitions dividing said vessels into compartments and terminating below the top of said vessel to afford communication between said compartments and a downwardly projecting partition in each compartment, the lower ends of the downwardly projecting partitions being fluted or irregular in contour and terminating above the level of the overflow outlet; substantially as described.

4. Apparatus for cleaning gases comprising a vessel having inlet and outlet openings for the gases, inlet and overflow outlet openings for the liquid, said overflow outlet opening being arranged to maintain a constant level for the liquid in the vessel and a downwardly extending partition in the vessel, the lower end of the partition being fluted or irregular in contour and terminating above the level of the overflow outlet; substantially as described.

5. Apparatus for cleaning gases comprising a vessel having inlet and outlet openings for the gases, inlet and overflow outlet openings for the liquid, said overflow outlet opening being arranged to maintain a constant level for the liquid in the vessel, a downwardly extending partition in the vessel, the lower end of the partition being fluted or irregular in contour and terminating above the level of the overflow outlet, and a spray device arranged to spray said fluted partition with liquid; substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

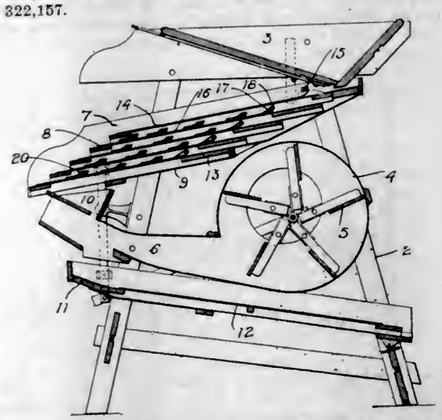
886,305. PORTABLE HOT-FLUID HEATING APPARATUS. HENRY T. OFFTERDINGER, Washington, D. C., assignor, by mesne assignments, to Ofte Radiator Company, Washington, D. C., a Corporation of Virginia. Filed Apr. 2, 1906. Serial No. 309,511.



1. A portable hot water radiator, one of the columns of which consists of relatively broad closely associated walls to compel the fluid to pass therethrough in a thin film, a burner having removable end plates whereby it is adapted to be positioned to surround said column, and a heat-confining jacket composed of sections connected together and arranged to surround said column.

2. A portable hot water radiator, one of the middle columns of the end section of which consists of relatively broad closely associated walls to compel the fluid to pass therethrough in a thin film, a burner combined with and surrounding said column at the lower end thereof, and a heat-confining jacket associated with said burner and surrounding said column, said burner and jacket being arranged within the normal area of the radiator and protected by the outside columns.

886,306. GRAIN-SEPARATOR. ROBERT J. OWENS, Minneapolis, Minn. Filed June 18, 1906. Serial No. 322,157.



1. In a grain separator, the combination, with a sieve, of an apron, flexible throughout its extent, and provided with a series of irregularly disposed feed-openings extending through it, said apron being secured at its upper edge and resting freely upon said sieve and means for delivering grain to said apron.

2. In a grain separator, the combination, with a sieve, of an apron flexible throughout its extent, and provided with a series of feed-openings extending through it, said apron being secured by a loose connection at its upper edge and resting freely upon said sieve and means for delivering the grain to the upper surface of said apron.

3. In a grain separator, the combination, with a sieve, of an apron, flexible throughout its extent, and provided with a series of feed-openings extending through it, said apron being secured at its upper edge and resting freely upon said sieve and means for delivering the grain to said apron.

4. In a grain separator, the combination, with a sieve, of a flexible apron provided with a series of feed-openings extending through it, the upper edge of said apron being secured above said sieve and said apron resting freely upon said sieve with the under exits of the openings through the apron practically in the plane of the sieve and a screen wherefrom the grain is delivered to said apron.

5. In a grain separator, the combination, with a sieve, of a flexible apron, provided with a series of feed-openings extending through it, said apron being secured at its upper edge and resting freely upon said sieve, and means provided upon said apron for preventing grain from falling directly into said feed-openings and a screen arranged to deliver the grain to said apron.

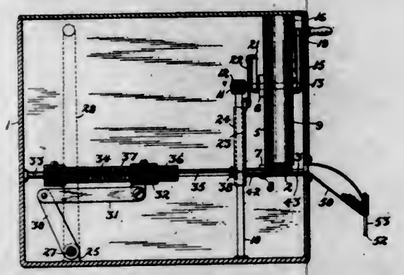
[Claims 6 to 8 not printed in the Gazette.]

886,307. CHANGE-MAKING MACHINE. THOMAS I. POTTER, Oakland, Cal. Filed Apr. 15, 1907. Serial No. 368,135.

1. In a change-making machine, the combination of a series of coin-receptacles, a corresponding series of reciprocable ejectors, guides for said ejectors, means for each ejector arranged to normally hold the same in operative position, a selector-plate, traversing the path thereof, and provided with relatively arranged apertures, means to position said ejector plate so as to selectively permit certain of the ejectors to pass through the apertures of said plate, and means to advance the selected ejectors as a unit.

2. In a change-making machine, the combination of a series of coin-receptacles, a corresponding series of reciprocable ejectors, guides for said ejectors, a spring for each ejector arranged to normally hold the same in operative

position, a selector-plate, traversing the path thereof, and provided with relatively arranged apertures, means to position said selector-plate so as to selectively permit certain of the selected ejectors to pass through the apertures of said plate, and means to advance the selected ejectors as a unit.



3. In a change-making machine, the combination of a series of coin-receptacles, a corresponding series of reciprocable ejectors, a carrier for each ejector, guides for said carriers, a spring for each ejector arranged to normally hold the same extended from its carrier, a selector-plate arranged in front of the ejectors, traversing the path thereof, and provided with relatively arranged apertures, means to position said selector-plate so as to permit the selected ejectors to pass through the apertures thereof and arrest the unselected ejectors, and means to advance the ejector-carriers as a unit.

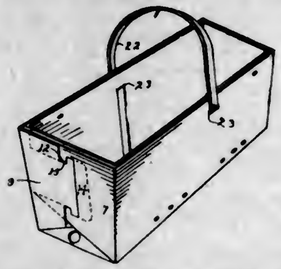
4. A change-making machine comprising a series of gravity-feed coin-receptacles, a corresponding series of reciprocable ejectors, a carrier for each ejector, guides for said carriers, a spring for each ejector arranged to normally hold the same extended from its carrier, a selector-plate arranged in front of the ejectors, traversing the path thereof, and provided with relatively arranged apertures, a rock shaft, a pointer thereon, an index element over which the pointer is moved, the rotation of said pointer rock-shaft operating to position the selector-plate relatively to the money denominations indicated, so as to permit the selected ejectors to pass through the apertures thereof and arrest the unselected ejectors, and means to advance the ejector-carriers as a unit.

5. A change-making machine comprising a frame, guide-members, a series of gravity-feed coin-receptacles, a corresponding series of carriers slidable on the guides, an ejector in each carrier, means for each ejector arranged to normally hold the same extended from its carrier, a guide for the extended ends of the ejectors, a selector-plate arranged in front of the ejectors, traversing the path thereof, and provided with relatively arranged apertures, a rock shaft, a pointer thereon, an index element over which the pointer is moved, means connected with said pointer rock-shaft operating to position the selector-plate relatively to the money denominations indicated, whereby certain of said ejectors are selectively permitted to pass through said plate and others are arrested thereby, and means to advance the ejector-carriers as a unit.

[Claim 6 not printed in the Gazette.]

886,308. BASKET. LEANDER E. REYNOLDS and LEANDER B. REYNOLDS, Grand Rapids, Mich.; said Leander B. Reynolds assignor to said Leander E. Reynolds. Filed Aug. 7, 1905. Serial No. 273,183.

1. In a folding basket, the combination of a bottom, turned-up sides carrying terminal locking flaps, and turned-up ends having the flaps bearing thereagainst, one of said flaps having a main opening extending fully through the free end thereof continuous with an inner seat opening having a greater extent across the width of the said flap than the main opening, and the other flap having a terminal head connected thereto by a neck of the same width as the main opening in the first mentioned flap and freely movable through the latter, the head being of greater length than the maximum extent of the said seat-opening, whereby when the basket is set up the heads on the opposing flaps will engage and interlock with corresponding openings of the flaps and the interlocked terminals of the said flaps lie in the same plane.



2. In a folding basket, a main bottom having integral turned-up sides and ends, each of the sides having terminal locking flaps, the flap at one end of each side extending longitudinally through the outer end edge thereof and communicating with an inner opening having an extent transversely of the flap greater than the said longitudinal opening to form inner locking shoulders, the flap at the opposite end of the same side having a locking head connected thereto by a neck, the head of the latter flap having a greater length than the width of the longitudinal opening of the first named flap and of the same length as the transverse extent of the said inner seat opening, the neck being freely movable through the longitudinal opening, the flaps with the openings and heads being in diagonal relation on the opposite sides and bendable inwardly over the ends and interlocking within the same plane.

3. In a basket, the combination of the main body having a bottom, sides and ends, the basket sides having openings therethrough, one in each, and a separable handle having a shoulder upon the side thereof adjacent to the side of the basket, the extremities of the handle being insertible through the openings in the basket sides and such openings having free spring edges adapted to make a locking engagement with the shoulders on the handle whereby the upward withdrawal of the handle is prevented, the basket body as an entirety being of the knock-down type.

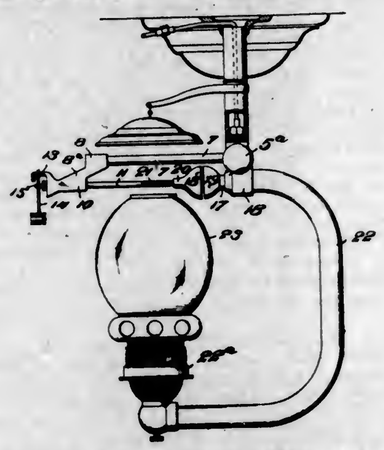
4. In a folding basket, the combination of a main body having a foldable bottom, sides and ends, and a separable handle having the opposite extremities thereof removably engaging intermediate portions of the sides of the basket, the said extremities extending fully down over the sides and the terminals bearing against and braced by the bottom.

5. In a basket, the combination of a main body comprising a folding bottom, sides and ends, the sides having openings therein below the upper edges thereof, and a separable handle removably engaging the opposite sides of the body and inserted from the exterior inwardly through said openings, the ends of the extremities of the handles bearing against the inner side of the bottom and held against longitudinal movement whereby any rocking motion of the handle is prevented.

[Claims 6 to 9 not printed in the Gazette.]

886,309. GAS-GENERATOR. WILLIAM TURES, Milwaukee, Wis., assignor to Tures Manufacturing Company, Milwaukee, Wis., a Corporation of Wisconsin. Filed Feb. 11, 1907. Serial No. 356,749.

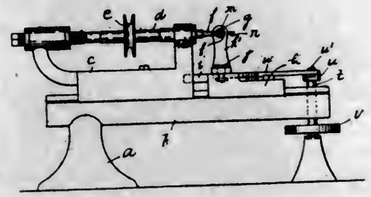
The herein described gas generator comprising a support, a union carried by said support, means to convey oil to said union, an upper generating tube communicating with said union, a lower generating tube, a member connecting said generating tubes, a mixing chamber concentric with the lower generating tube, said mixing chamber being adjustably mounted in said union whereby the space between said mixing chamber and lower generating tube may be varied, means to control the flow of air into the mixing chamber comprising a semi-globular member



formed integral with the mixing chamber, said mixing chamber extending beyond the rim of semi-globular member, and a semi-globular member adjustably mounted on the free end of the lower generating tube

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886,310. JEWEL-CUPPING MACHINE. JOHN WENNSTROM, Brooklyn, N. Y., assignor to The American Cupped Diamond Co., a Corporation of Maine. Filed Mar. 29, 1906. Serial No. 308,699.



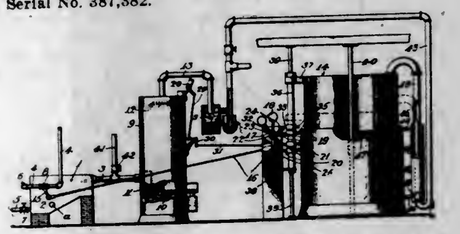
1. In a grinding machine, a rotatable grinding head, a work holder, a rod rotatably mounted in said holder and longitudinally movable therein to and from said head, said rod having a chuck in its end next the head, and means for locking said rod in different positions of rotation, said means permitting said longitudinal movement of said rod, substantially as described.

2. In a grinding machine, a rotatable grinding head, a chuck mounted to rotate about and move longitudinally of an axis which intersects the axis of said head at an angle, and means for locking said chuck in different positions of rotation which permit said longitudinal movement thereof, substantially as described.

3. In a grinding machine, a rotatable grinding head, a chuck holder, a rod having a chuck in one end and mounted to rotate, and to move longitudinally in said holder towards said head, an arm rotatably connected to said rod and extending transversely thereof, means for locking said arm on said rod, and means engaging said arm for holding it from swinging movement about said rod and permitting longitudinal movement of the rod while the arm is locked thereon, substantially as described.

4. In a cup-grinding machine, a rotatable, curved-faced grinding head, a bed, a chuck-holder pivoted thereon and movable about an axis which intersects the center of said head, a chuck mounted on said holder, and movable in a line intersecting said center, means for automatically oscillating said holder about its said axis, said bed having a flat bearing surface extending transversely of said holder's axis for supporting said holder in the different oscillatory positions thereof, substantially as described.

886,311. GAS APPARATUS. EDWARD H. AMET, Phœnix, Ariz., assignor to International Amet Company, Phœnix, Ariz., a Corporation of Arizona. Filed Aug. 6, 1907. Serial No. 387,382.



1. A fixed gas apparatus comprising a dissociating chamber, means for supplying air to said chamber, means for supplying oil to said chamber, a cut-off valve for the oil supply, a gas holder connected with the dissociating chamber to receive gas therefrom, and means operable by the rise and fall of the holder to turn on and cut off the oil and to relieve the air pressure.

2. In a fixed gas apparatus, a dissociating chamber, regulable means to supply air thereto, regulable means to supply oil to said chamber, a cut-off valve for the oil supply means, a gas holder connected with the dissociating chamber to receive gas therefrom, and means operable by the rise and fall of the holder to turn on and shut off the oil and to relieve the air pressure.

3. A fixed gas apparatus comprising a dissociating chamber, means for supplying air to said chamber, means for supplying oil to said chamber, a cut-off valve for the oil supply, a gas holder connected with the dissociating chamber to receive gas therefrom, means operable by the rise and fall of the holder to turn on and cut off the oil, blow-off means between the dissociating chamber and the gas holder, and means operable by the rise and fall of the gas holder to open and close the blow-off means.

4. In a fixed gas apparatus, a dissociating chamber, regulable means to supply air thereto, regulable means to supply oil to said chamber, a cut-off valve for the oil-supply means, a gas holder connected with the dissociating chamber to receive gas therefrom, means operable by the rise and fall of the holder to turn on and shut off the oil, blow-off means between the dissociating chamber and the gas-holder, and means operable by the rise and fall of the gas holder to open and close the blow-off means.

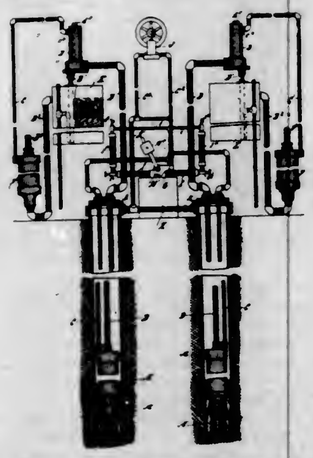
5. A gas producer, a scrubber to receive gas therefrom, blow-off means for the scrubber, a gas-holder connected with the scrubber, air and oil supply means for the producer, means operable by the rise and fall of the holder to turn on and cut off the oil supply, and means operable by the rise and fall of the holder to open and close the blow-off.

[Claims 6 and 7 not printed in the Gazette.]

886,312. APPARATUS FOR ACTUATING FLUIDS. RUDOLPH CONRADER, Erie, Pa., assignor to John W. Waitz, Oil City, Pa. Filed June 7, 1901. Serial No. 63,568.

1. In an apparatus for actuating fluids under pressure, the combination of two lifts; means arranged to carry the actuated fluid through said lifts by a following action of the actuating fluid through the lifts in contact with the actuated fluid; a suction device; a connection leading from one of said lifts to a source of motor fluid supply; a connection leading from said lifts to said suction device; a connection between said lifts; means for admitting fluid to be actuated to each of said lifts; and a valve mechanism for controlling the movement of motor fluid arranged to successively open the connection leading from the source of supply during a closure of the connection

leading to the suction device and the connection between said lifts, then to open a connection between said lifts during a closure of the connection leading from the source of supply and the suction device, and then to open a connection leading to the suction device during a closure of the connection leading to the source of supply and the connection between the lifts.



2. In an apparatus for actuating fluids under pressure, the combination of two lifts; means arranged to carry the actuated fluid through said lifts by a following action of the actuating fluid through the lifts in contact with the actuated fluid; connections leading from one of said lifts to a source of motor fluid supply; a motor fluid connection between said lifts; means for admitting a fluid to be actuated by said lifts; valve mechanisms controlling the movement of motor fluid arranged to open a connection to one of said lifts during a closure of the connection between said lifts and to open a connection between said lifts during a closure of the connection to the source of motor fluid supply; and an automatic means for actuating said valve device.

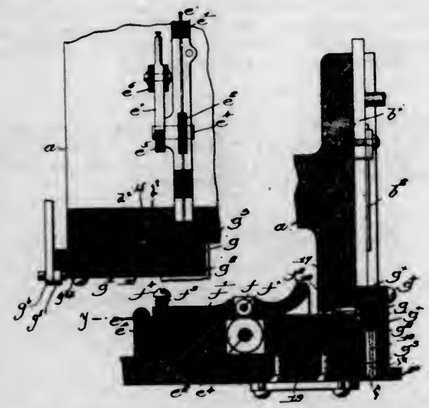
3. In an apparatus for actuating fluids under pressure, the combination of two lifts; means arranged to carry the actuated fluid through said lifts by a following action of the actuating fluid through the lifts in contact with the acfuated fluid; connections leading from one of said lifts to a source of motor fluid supply; a motor fluid connection between said lifts; means for admitting a fluid to be actuated by said lifts; valve mechanism controlling the movement of motor fluid arranged to open a connection to one of said lifts during a closure of the connection between said lifts and to open a connection between said lifts during a closure of the connection to the source of motor fluid supply; and an automatic means for actuating said valve device.

4. In an apparatus for actuating fluids under pressure, the combination of two lifts; means arranged to carry the actuated fluid through said lifts by a following action of the actuating fluid through the lifts in contact with the actuated fluid; connections leading from one of said lifts to a source of motor fluid supply; a motor fluid connection between said lifts; means for admitting a fluid to be actuated by said lifts; valve mechanism controlling the movement of motor fluids arranged to open a connection to one of said lifts during a closure of the connection between said lifts and to open a connection between said lifts during a closure of the connection to the source of motor fluid supply, to open the connection between the second of said lifts and the source of supply during a closure of the connection between said lifts and to open the first lift to an exhaust during a connection of the second lift to the source of supply; and an automatic means for actuating said valve device.

5. In an apparatus for actuating fluids under pressure, the combination of two lifts; means arranged to carry the actuated fluid through said lifts by a following action of the actuating fluid through the lifts in contact with the actuated fluid; a suction device; a connection leading from one of said lifts to a source of motor fluid supply; a connection leading from said lifts to said suction device; a connection between said lifts; means for admitting fluid to be actuated to each of said lifts; a valve mechanism for controlling the movement of motor fluid arranged to successively open the connection leading from the source of supply during a closure of the connection leading to the suction device and the connection between said lifts, then to open a connection between said lifts during a closure of the connection leading from the source of supply and the suction device, and then to open a connection leading to the suction device during a closure of the connection leading to the source of supply and the connection between the lifts; and an automatic means for actuating said valve device.

[Claims 6 to 39 not printed in the Gazette.]

886,313. NAILING-MACHINE. SOLOMON M. CUTTER, Ashland, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., and Boston, Mass., a Corporation of New Jersey. Original application filed Apr. 19, 1898, Serial No. 678,148. Divided and this application filed Dec. 16, 1901. Serial No. 86,083.



1. In a nailing machine, a circularly movable carrier having a passage to receive wire, a bar having a knife edge at one end in contact with the carrier, means to reciprocate said knife edge across the passage in the carrier to sever the wire, and means for preventing the severed nail from dropping out of the carrier.

2. In a nailing machine, a cylindrical carrier having a passage to receive wire, a wire cutter in contact with said carrier, means to move said cutter in a direction parallel to the longitudinal axis of the carrier and across said passage to sever the wire, means to thereafter partially rotate said carrier to bring its passage into driving position, and means for preventing the severed nail from dropping out of the carrier.

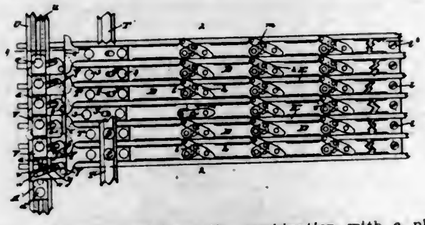
3. In a nailing machine, a cylindrical nail carrier having a passage to receive wire, a support for said carrier providing a driving passage extending on opposite sides thereof, a cutter in contact with the carrier, means to move the cutter longitudinally of the axis of the carrier and across one end of said passage to sever the wire, and means to thereafter partially rotate said carrier to bring its passage into alinement with the driver passage.

4. In a nailing machine, a driver, a cylindrical nail carrier having a passage to receive the end of a wire, a cutter movable longitudinally of the axis of the nail carrier to sever the wire into nail lengths, means to thereafter partially rotate said carrier in one direction to place the nail in line with the driver and to then return said carrier into nail receiving position, a stationary wire cutter in contact with said carrier and having a cutting edge at right angles to the cutting edge of the movable cutter, said stationary cutter severing the wire during the rotative movement of the carrier in case the movable cutter fails to completely sever it.

5. In a nailing machine, a cylindrical nail carrier having a nail passage at right angles to its longitudinal axis, means to oscillate said carrier about its longitudinal axis, means to feed a wire into said nail passage, a plate to close one end of said passage when the wire is inserted therein, a driver passage formed in said plate, a driver, a wire cutter, and means to move said cutter to sever the wire.

[Claims 6 to 18 not printed in the Gazette.]

886,314. VOTING-MACHINE. WILLIAM H. DANA, Dayton, Ohio, assignor to Leopold Rauh, Dayton, Ohio. Original application filed May 6, 1903, Serial No. 155,898. Divided and this application filed Apr. 18, 1904. Serial No. 203,726.



1. In a voting machine, the combination with a plurality of voting keys arranged in rows, and a corresponding plurality of interfering blocks, of a plurality of wedge plates, one for each row of interfering blocks, and actuated thereby, said wedge plates being disconnected from the interfering blocks and positively movable bodily in the direction of the movement, and transversely of the movement, of single candidate interfering blocks, with adjustable stops to limit the movement of the wedge plates, substantially as described.

2. In a voting machine, the combination with a plurality of voting keys arranged in rows, and a corresponding plurality of interfering blocks, of a plurality of wedge plates one for each row of interfering blocks, and actuated thereby, said wedge plates being disconnected from the interfering blocks and positively movable bodily in the direction of the movement, and transversely of the movement, of single candidate interfering blocks, and a series of stop blocks with adjustable stops therefor to couple together and limit the movement of any selected plurality of rows of interfering blocks, substantially as described.

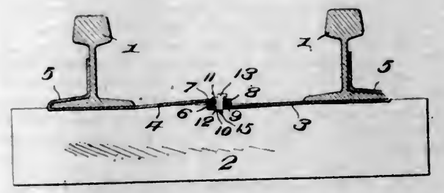
3. In a voting machine, the combination with a plurality of voting keys arranged in rows, of a series of channel bars, with abutting blocks sliding in said channels a toggle lever between each pair of abutting blocks actuated by its voting key, and a plurality of wedge plates, one for each row of interfering blocks and actuated thereby said wedge plates being disconnected from the interfering blocks with adjustable stops to limit the movement of the wedge plates, substantially as described.

4. In a voting machine, the combination with a plurality of voting keys arranged in rows, of a series of channel bars with abutting blocks sliding in said channels, a toggle lever between each pair of abutting blocks actuated by its voting key, and a plurality of wedge plates, one for each row of interfering blocks and actuated thereby, said wedge plates being disconnected from the interfering blocks and a series of stop blocks with adjustable stops therefor, to couple together and limit the movement of any selected plurality of rows of interfering blocks, substantially as described.

5. In a voting machine, the combination with a plurality of keys arranged in rows, and a series of channel bars, with abutting blocks sliding in said channels free to move in one direction only, a channel bar secured across the free ends of said sliding blocks, stop blocks sliding in said channel bar, with wedge plates between said stop blocks actuated by the movement of the sliding blocks, said wedge plates being disconnected from the sliding blocks and positively movable bodily in the direction of the movement and transversely of the movement of said sliding blocks, with stops for the stop blocks to limit the movement thereof, whereby the movement of the wedge plates is limited to prevent the movement of the sliding blocks beyond a pre-determined amount, substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

886,315. APPLIANCE TO PREVENT RAILWAY-TRACK RAILS FROM SPREADING. JAMES M. DE WITT, Bloomsburg, Pa., assignor of one-fourth to Wm. C. Johnston, Bloomsburg, Pa. Filed July 25, 1907. Serial No. 385,451.



1. A locking device for track-rails, comprising rail-connecting members having their opposed or meeting end-portions formed with reversely extending terminals, one of which overlies the other, and means adapted for engagement with said meeting end-portions and for locking the same together.

2. A locking device for track-rails, comprising rail-connecting members having their meeting end-portions formed with reversely extending terminals, one of which overlies the other and means adapted for locking the same together, said meeting end-portions and their reversely extending terminals being provided with coincident or registering slots for receiving said locking means.

3. A locking device for track-rails, comprising rail-connecting members having their meeting end-portions formed with reversely extending terminals, one of which overlies the other, and locking wedges or keys, said meeting end-portions together with their reversely extending terminals having coincident or registering slots for receiving said locking wedges or keys.

4. A locking device for track-rails, comprising rail-connecting members having their meeting end-portions formed with reversely extending terminals one of which overlies the other of said meeting end-portions, together with said reversely extending terminals, having registering slots, and locking members insertible through said slots, one of said locking members having opposite-end projections embracing said meeting end portions and said reversely extending terminals and the other member engaging the aforesaid member and equipped with means for securing the same in effective position.

5. A locking device for track-rails, consisting of rail connecting bar-members having their meeting end portions formed with reversely extending terminals, one of which overlies the other, said meeting end-portions, together with said reversely extending terminals, having registering slots, and locking members insertible through said slots, one locking member having opposite-end projections embracing said meeting end-portions and said reversely extending terminals, and the other locking member having a split lower end adapted to be clenched in place, said locking members having serrated interlocking meeting surfaces.

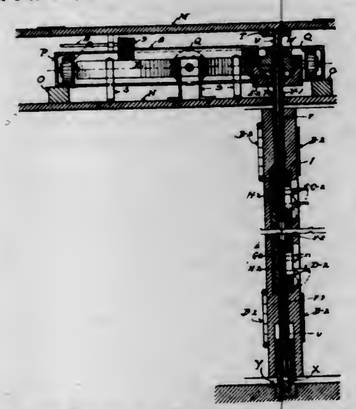
886,316. VALVE FOR TIRES. JOHN S. DUNN, Vincennes, Ind., assignor of one-third to Samuel T. Langdon, Jr., Vincennes, Ind., and one-third to Leonard C. Langdon, Oak Park, Ill. Filed Sept. 13, 1906. Serial No. 334,475.



1. A valve for pneumatic tires consisting of a disk of hard rubber secured between the outer and inner tubes, provided centrally with an outwardly extended hollow neck, having an interiorly screw-threaded bushing secured in said hollow neck and extending to substantially the periphery of the tire and beyond the said hollow neck, a protecting ring surrounding the outer end of the bushing, a plug adapted to be screwed into and out of the said bushing and a flap valve to control the opening of the said bushing at its inner end.

2. A valve for pneumatic tires consisting of a disk having its upper side or face sloping outward to its edge and a flat lower face secured between the outer and inner tubes of the tire, said disk being provided centrally with an outwardly extended hollow neck, an interiorly screw-threaded bushing secured in said hollow neck and extending outwardly beyond the hollow neck, a protecting ring surrounding the outer end of the bushing projecting beyond the hollow neck and having an inturned offset near its inner end, a plug adapted to be screwed into and out of said bushing, a packing ring interposed between the inner end of the plug and the said offset, and a flap valve to control the opening of the bushing at its inner end.

886,317. REVOLVING DOOR. HARRY W. DYER, East Orange, N. J., assignor to The Dyer Revolving Door Company, a Corporation of Arizona. Filed Aug. 30, 1907. Serial No. 390,713.



1. The combination of a turntable support, a turntable carried thereby and having at least three points of support spaced around its circumference, a roller at each point of support, a door comprising radial wings, and means for rotatably supporting said door upon said turntable at a point eccentric thereto and at a distance from the center thereof which does not exceed the distance of one of the supporting rollers from said center.

2. The combination of a turntable support, a turntable carried thereby and having at least three points of support spaced around its circumference, a roller at each point of support, a door comprising radial wings foldable with respect to each other, and means for rotatably supporting said door upon said turntable at a point eccentric thereto and at a distance from the center thereof which does not exceed the distance of one of the supporting rollers from said center.

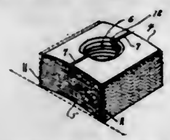
3. A revolving door comprising radial wings and a support therefor, a translating device, a rotary bearing carried by said translating device, a vertical tube supported by said bearing, depending therefrom and carrying said support, means for locking said translating device comprising a rod sleeved within said tube and extending through the rotary bearing which supports said tube and of sufficient size to fill the bore thereof, a fixed socket above said bearing and adapted to directly receive the upper end of said rod, and means for sustaining said rod in an elevated position, said means permitting the rod to be lowered so as to be withdrawn from said socket.

4. A revolving door comprising radial wings, a translating device, means for rotatably supporting said door upon said translating device, and supporting means for said translating device which permits movement thereof in a circular path, the diameter of which does not exceed the radius of the door.

5. A revolving door comprising radial wings, a turntable, and a rotary support for said door carried by said turntable at such a distance from its axis that the diameter of the path of said rotary support does not exceed the radius of the door.

[Claims 6 to 17 not printed in the Gazette.]

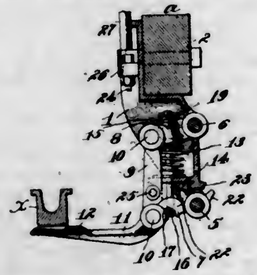
886,318. PROCESS OF MAKING LOCK-NUTS. ALBERT L. EICHER, Alliance, Ohio. Original application filed Oct. 26, 1904, Serial No. 230,038. Divided and this application filed May 31, 1905. Serial No. 263,074.



1. The process of making a lock-nut out of a nut having a through grain and a threaded axial aperture therein, consisting in cutting a kerf in the outer face across the grain and the end of the aperture and then compressing the adjacent outer parts of the nut endwise along the grain to approximately close the kerf.

2. The process of making a lock-nut out of a nut having a through grain with laminations substantially perpendicular to its faces, and having a threaded axial aperture in the plane of the laminations, consisting in cutting a kerf in the outer face across the grain and the end of the aperture, and compressing the adjacent outer parts of the nut endwise to approximately close the kerf.

886,319. SUPPORT FOR ELECTRIC CONTACT-SHOES. ED W. FARNHAM, Chicago, Ill. assignor to Allen G. Mills, Chicago, Ill. Filed Aug. 2, 1905. Serial No. 272,370.



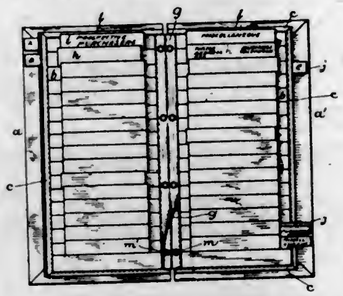
1. In a support for electric contact shoes, in combination, a hanger adapted to be secured to the car and comprising a shelf; two parallel arms of equal length pivoted at one of their ends to said hanger; a link connecting the opposite ends of said arms; a substantially horizontal shoe-supporting arm connected with said link; a U-bolt, the

middle portion of which extends under and supports one of said parallel pivoted arms; and two springs seated upon said shelf and each surrounding one arm of said bolt and bearing against one end of its bolt-arm.

2. In a support for electric contact shoes, in combination, a hanger adapted to be secured to the car; and means carried by said hanger for yieldingly holding a contact shoe upward into contact with an inverted third rail, said means comprising two parallel arms of equal length pivoted at one of their ends to said hanger and extending in a plane at right angles with the third rail; a link connecting the opposite ends of said arms; a substantially horizontal shoe-supporting arm connected with said link; and means for yieldingly pressing said shoe-supporting arm upward.

3. In a support for electric contact shoes, in combination, a hanger provided at its upper end with attaching means; bearings in the lower portion of said hanger; two arms of equal length having means at one end for pivotally supporting them in said bearings; a link connecting the opposite ends of said arms, said link being of substantially the same length as the distance between said bearings; a shelf on said hanger; a coiled spring seated on said shelf and connected with one of said arms and tending to swing said arms upwardly; and a shoe-supporting arm connected with said link.

886,320. COMBINED LOOSE-LEAF BOOK AND CARD SYSTEM. CHARLES P. FERRERO, Portland, Oreg., assignor, by mesne assignments, of one-half to Loose Card Book Company, a Corporation of Oregon. Filed Aug. 16, 1905. Serial No. 274,365.

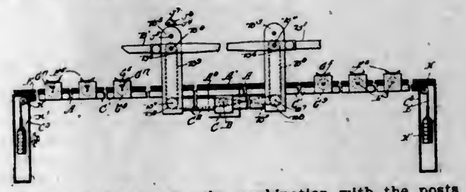


1. A loose-card leaf comprising two strips of material arranged back to back, made with horizontal folds constituting pockets, and a binding strip encompassing and fastened to the margins of the leaf, and closing the end of the pocket-folds.

2. In a loose-card book, a leaf comprising two strips of material, arranged back to back, made with horizontal folds constituting pockets, a binding-strip encompassing and fastened over the margins of the leaf and closing the ends of the pocket-folds, and a hinge strip on the binding edge of the leaf, said hinge comprising a tongue and two members secured, one on each side, to the binding edge of the leaf, and fastener-devices on the binding edge of the leaf and the members of the binding strip.

3. In a loose-leaf book, comprising a plurality of leaves, the combination of a hinge strip comprising a flexible tongue secured to the binding edge of the leaf, and a snap fastener comprising male and female parts whereby the leaves are removably bound together, the male and female parts of said fastener being respectively provided on the binder edge of the leaf and on the tongue of the hinge strip, and the tongue of the hinge strip of one leaf overlapping the other, whereby each leaf is hinged or bound, by said hinge strips, on both faces of its binding edge, to the binding edges of the adjoining leaves.

886,321. AUTOMATIC GATE FOR RAILROAD-CROSSINGS. KAROL GRZESLOWSKI, Chicago, Ill., assignor of one-third to J. P. Kaczorowski, Chicago, Ill. Filed Mar. 4, 1907. Serial No. 360,617.



1. In a railway gate, the combination with the posts and arms pivoted thereto on opposite sides of a railway track and of the roadway crossing said track, of sprocket gearing within each post, and chains connecting said gearing in the two posts located on the same side of the track on opposite sides of said roadway, a main shaft extending from side to side of said track journaled in suitable bearings and having a cable wheel and pair of sprocket wheels affixed thereon, said sprocket wheels being in engagement with said chains on either side of the track and adapted to operate said chains, sprocket gearing and arms, a cable lapped on said cable wheel and extending in both directions at right angles to said main shaft, under the center line of said track, a series of cable wheels supporting said cable journaled in boxes projecting above said track and spaced from each other, and operating mechanism in each of said boxes adapted to operate said wheels and said cable, and weights attached to the ends of said cable adapted to hold said cable taut.

2. In a railway gate, the combination with the posts and arms pivotally supported thereon, of a gearing in each of said posts consisting of two parallel shafts journaled in each post, arranged vertically one above the other, the upper adapted to support the arm, and having a sprocket wheel affixed thereon within the post, the lower shaft having a pair of sprocket wheels affixed thereon, one of said wheels being in a vertical line with the wheel on said upper shaft, and connected therewith by a sprocket chain, the other wheel being adapted to support a chain extending horizontally through one side of the post; a pair of sprocket chains connecting said gearing in the two posts located on the same side of the track; a transverse shaft and cable and sprocket wheels affixed thereon, said sprocket wheels being adapted to engage and operate said horizontal chains; a cable lapped on said wheel; a series of cable wheels engaged by said cable mechanism connected with and adapted to operate each of said wheels and said cable, and means for holding said cable taut.

3. In a railway gate, the combination with the posts, and gearing therein adapted to support and operate the arms of said gate; of a pair of sprocket chains located horizontally one on each side of the railway, beneath the roadway crossing said railway, and adapted to connect the gearing in both of the posts on the same side of the railway, each of said chains being crossed and thereby adapted when moved to operate the gearing in each of said posts in opposite directions; a transverse shaft and cable and sprocket wheels affixed thereon, said sprocket wheels being adapted to engage and operate said pair of chains; a cable lapped on said cable wheel; a series of cable wheels engaged by said cable, a means for operating said wheels and cable, and means for holding said cable taut.

4. In a railway gate, the combination with the post, the sprocket gearing therein and arms supported thereby and the pair of horizontal sprocket chains connecting said gearing as described; of a transverse shaft extend-

ing beneath the railway and in line with the center of the roadway crossing the railway, said shaft being journaled in suitable bearings and having a pair of sprocket wheels affixed one on each end thereof adapted to engage and operate said pair of horizontal chains, a cable wheel centrally located on said shaft and affixed thereto; the cable supported on said wheel and extending in opposite directions therefrom; a series of cable wheels engaged by said cable and the means for operating said cable and for holding it taut, as described.

5. In a railway gate, the combination with the posts, the gearing therein the arms supported thereby and horizontal chains connecting said gearing, the shaft and gears thereon engaged with said chains, and the cable wheel on said shaft; of a cable lapped around said wheel, said cable extending at right angles to said shaft horizontally in both directions from the top of said wheel, supported on suitable roller bearings, and lapped around a series of vertical cable wheels, the horizontal line of said cable corresponding with the lowest point of the rim of said wheels; and means for operating said series of wheels and for holding said cable taut.

[Claims 6 to 9 not printed in the Gazette.]

886,322. POTATO-DIGGER. DANIEL Y. HALLOCK and DANIEL E. HALLOCK, York, Pa., assignors to A. B. Farquhar Company, Limited, York, Pa., a Limited Corporation. Original application filed Mar. 2, 1907, Serial No. 360,194. Divided and this application filed Jan. 16, 1908. Serial No. 411,170.

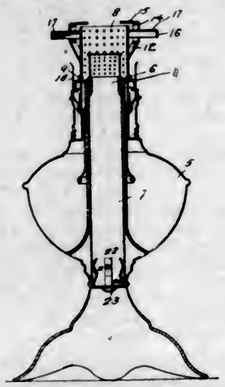


1. In a potato digger, the combination of the shovel, the main frame and the axle and wheels by which the same are carried, the pole, the transverse draft bolt by which the rear end of the pole is jointed to the frame, the truck, the truck supporting frame mounted and capable of swinging movement on the draft bolt, the "depth-gage" lever on the main frame and connections between said lever and the truck frame whereby the latter may be swung upon the draft bolt in a direction to raise or lower the truck as desired, and locked in its adjusted position, substantially as and for the purposes hereinbefore set forth.

2. In a potato digger, the combination of the shovel, the main frame and the wheels and axle by which the same are carried, the pole, the transverse draft bolt by which the pole is jointed to the frame, the truck, the truck supporting frame mounted, and capable of swinging movement, upon the draft bolt, the depth gage lever on the main frame and connections between it and the truck frame for adjusting the latter, the lifting lever mounted also on the main frame, and connections between said lifting lever and the pole whereby the truck and shovel may be lifted bodily and together above the ground and held in that position, substantially as hereinbefore set forth.

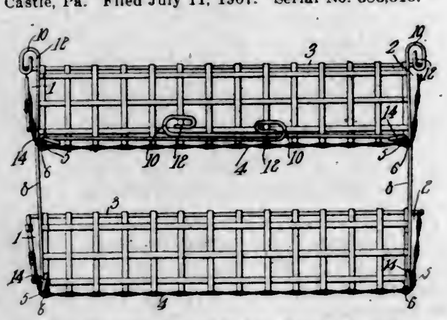
886,323. LAMP ATTACHMENT. WESTERN D. MARKHAM, Friar Point, Miss., assignor of one-half to W. B. Morley, Friar Point, Miss. Filed Jan. 31, 1907. Serial No. 355,061.

The combination with a central draft lamp, and a vessel supporting member supported upon the burner of the lamp, of a device for partly closing the central draft tube of the lamp, said device comprising a circular disk, fingers formed integral with the periphery of the disk at equidistant points thereon and bent upwardly and inwardly and thence upwardly and outwardly and again inwardly, the last mentioned bends of the fingers being located beyond a periphery of the said disk whereby



when the device is inserted within the central draft tube, the fingers will bind frictionally against the inner side of the said tube, and a curved finger piece stamped upwardly from the disk and centrally thereof, the formation of the finger piece resulting in an opening for the passage of air into the said tube.

886,324. SECTIONAL TRAY. JOHN E. NORRIS, New Castle, Pa., assignor to The Standard Wire Co., New Castle, Pa. Filed July 11, 1907. Serial No. 383,313.



1. An attachment for trays and similar articles, having means for mounting it on a tray, and hooked portions projecting above the tray and adapted to coöperate with another tray for removably upholding the second tray over and spaced from the first-named tray.

2. An attachment for trays and the like, having means for supporting it to move into and out of operative relation to a tray, and devices on the attachment projecting above said tray and adapted to be brought into operative relation with another tray to uphold the last-named tray above and in spaced relation to the first-named tray and to detachably lock the second-named tray in such upheld position.

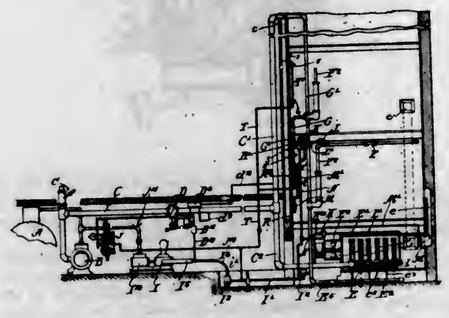
3. The combination with a tray or similar article, of a pair of attachments for upholding another tray above and in spaced relation to the first-named tray, said attachments having hooks thereon to coöperate with portions of the upper tray.

4. Devices for supporting trays and similar articles in superposed spaced relation embodying a pair of upholding devices pivotally attached to a lower tray and having locking devices thereon adapted to coöperate with an upper tray and to support it above the first-named tray.

5. Devices for supporting trays and similar articles in superposed relation embodying a pair of supporting devices pivotally attached to one of the trays and having locking devices thereon adapted to coöperate with another tray, and catches for retaining the locking devices in engagement with the coöperating tray.

[Claims 6 to 12 not printed in the Gazette.]

886,325. HEATING AND VENTILATING APPARATUS. EUGENE F. OSBORNE, Chicago, Ill., assignor to Osborne Steam Engineering Company, Chicago, Ill., a Corporation of Illinois. Filed Feb. 23, 1904. Serial No. 194,927.



1. In an apparatus for heating and ventilating apartments, means for introducing heated air into the apartment at or near the breathing level, a plurality of outlet passages, one located near the floor and the other above the breathing level, and means for heating said apartment by direct radiation so arranged that the heavier air constituents do not rise but are discharged near the floor and the lighter air constituents near the ceiling are kept so warm that they do not fall to the breathing level whereby the newly introduced air is maintained substantially free from the vitiated air.

2. In an apparatus for heating and ventilating apartments, means for introducing heated air into the apartment at or near the breathing level, a heating device located near the ceiling of the apartment and a plurality of outlet openings for the apartment, one located near the floor thereof and another above the breathing level.

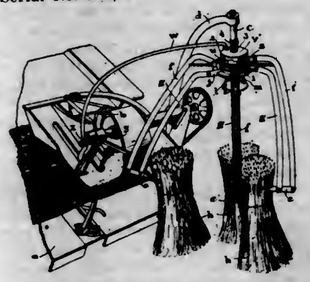
3. In an apparatus for heating and ventilating apartments, means for introducing heated air into the apartment at or near the breathing level, a heating device located near the ceiling of the apartment, and a plurality of outlet openings for the apartment, one located near the floor thereof, one located near the ceiling and another intermediate the same above the breathing level.

4. In an apparatus for heating and ventilating apartments, means for introducing heated air into the apartment at or near the breathing level, a heating device located near the ceiling of the apartment, a plurality of outlet openings for the apartment, one located near the floor thereof, one located near the ceiling and another intermediate the same above the breathing level, a damper in the upper outlet opening and means for opening and closing said damper.

5. In an apparatus for heating and ventilating apartments, means for introducing heated air into the apartment at or near the breathing level, a steam heating device located near the ceiling, a plurality of outlet openings for said apartment, one located near the floor thereof and another located above the breathing line, and a thermostat located near the floor for controlling the supply of steam to the heating device.

[Claims 6 and 7 not printed in the Gazette.]

886,326. SHOCKING ATTACHMENT FOR BINDERS. WILLIAM H. PERRIN, New Liskeard, Ontario, Canada. Original application filed Apr. 12, 1907, Serial No. 367,896. Divided and this application filed Aug. 31, 1907. Serial No. 390,980.

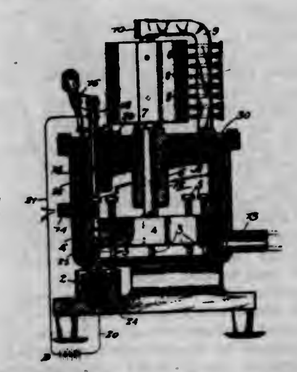


1. The combination with a double arm supporting a fork of a vertically movable bracket connected to the lower arm, a fixed plate normally supporting the bracket in its uppermost position, and means on said plate permitting the intermittent lowering of the bracket, and means for restoring the bracket to its normal position, as and for the purpose specified.

2. The combination with a double arm supporting a fork, of a vertically movable bracket connected to the lower arm, a fixed plate normally supporting the bracket in its uppermost position and means on said plate permitting the intermittent lowering of the bracket and cam means for restoring the bracket to its normal position, as and for the purpose specified.

3. In a sheave shocker, the combination with a double arm supporting the fork, of a plate connected to the lower arm, a bracket supporting the plate and having two downwardly extending arms, a plate on which the said arms rest, having two slots therein, and cam plates on the side of said slots, as and for the purpose specified.

886,327. MECHANISM FOR MAKING TYPES. FRANCIS H. RICHARDS, Hartford, Conn., assignor, by mesne assignments, to American Typographic Corporation, a Corporation of New Jersey. Original application filed July 29, 1899, Serial No. 725,456. Divided and this application filed June 19, 1900. Serial No. 20,814.



1. As an improvement in type-forming mechanism, means for supporting the type body; means for bringing successive type-forming dies to the working point; means for bringing the type and a selected die into engagement one with the other; and means for supplying heat during the operation of the die to the metal being operated upon by the die.

2. In a machine for forming raised metal types on the edges of typebars, the combination with means for holding the typebar; of a series of selective dies, means for heating the dies; and means for bringing the type-bar and a selected die into typeforming engagement.

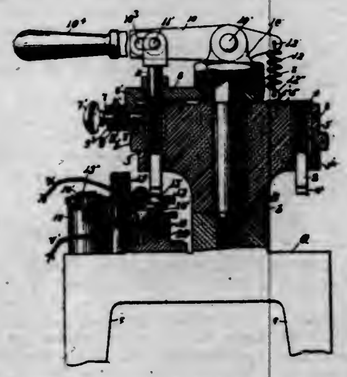
3. The combination, with means for supporting a type body or typebar, of a series of dies; means for bringing a selected die to a working point; means for actuating the selected die; and means for heating the die to thereby heat the metal operated upon and so bring such metal to a plastic condition.

4. In a machine of the class specified, the combination with a series of typeforming dies, of an oven surrounding said dies, and means for supplying heat to the oven and directly to the dies.

5. In a machine of the class specified, the combination, with means for holding and feeding a type body or blank, of a series of type-forming dies; means for carrying said dies; an actuator for a selected die; and electrical apparatus for subjecting the metal being operated upon to the action of an electric heating current.

[Claims 6 to 40 not printed in the Gazette.]

886,328. APPARATUS FOR MAKING TYPES AND LINES OF TYPE. FRANCIS H. RICHARDS, Hartford, Conn., assignor, by mesne assignments, to American Typographic Corporation, a Corporation of New Jersey. Filed July 15, 1902. Serial No. 115,622.



1. The combination with a support for a blank, of a type die adapted to engage with a blank in such support and form a type thereon, and an electric circuit for heating the blank, and means for closing the circuit during the working of the die and blank.

2. The combination with a support for a blank, of a plurality of selective type dies adapted to form on a blank in such support a succession of types, and an electric circuit for heating the blank, and means for closing the circuit during the type formation.

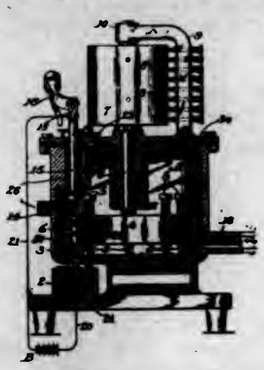
3. The combination with a support for a blank, of a plurality of selective type dies adapted to form on a blank in such support a succession of types, an electric circuit for heating the blank, and means for closing the same during each type forming operation.

4. The combination with means for supporting and insulating a blank, of a type die adapted to engage with a supported and insulated blank and form a type thereon, an electric circuit for heating the blank during the type forming operation, and a circuit closer controlled by the type die in its working movement.

5. The combination with means for supporting and insulating a blank, of a plurality of selective type dies adapted to form on a supported and insulated blank a succession of types; an electric circuit, and means for rendering the same effective during each type forming operation for heating the blank.

[Claims 6 to 21 not printed in the Gazette.]

886,329. MANUFACTURE OF TYPE-BARS. FRANCIS H. RICHARDS, Hartford, Conn., assignor, by mesne assignments, to American Typographic Corporation, a Corporation of New Jersey. Filed July 29, 1899, Serial No. 725,456. Renewed Aug. 1, 1903. Serial No. 167,947.



1. That improvement in the art of making types which consists in subjecting the type metal to the action of a die and during the operation of the die subjecting the said die and the said type metal to heat.

2. That improvement in the art of making type-bars which consists in successively subjecting successive portions respectively on the edge of the typebar-blank to the operation of type-forming dies and during the type forming action of each die applying heat to the said die and to the type then being formed.

3. That improvement in the art of making type which consists in subjecting a body of type metal to the action of a type-forming die and simultaneously applying a heating current to the metal being operated upon during the operation of the die thereon.

4. That improvement in the art of making typebars which consists in successively subjecting successive portions respectively of the edge of a typebar-blank to the operation of type-forming dies and in applying heat to each portion during its subjection to the action of the die.

5. That improvement in the art of making typebars which consists in successively subjecting successive portions respectively of the edge of a typebar-blank to the operation of type-forming dies and in applying a heating current to the metal thereunder simultaneously with the action of each die.

[Claims 6 to 24 not printed in the Gazette.]

886,330. MECHANISM FOR MAKING TYPES AND LINES OF TYPE. FRANCIS H. RICHARDS, Hartford, Conn., assignor, by mesne assignments, to American Typographic Corporation, a Corporation of New Jersey. Filed May 27, 1902, Serial No. 109,152. Renewed July 8, 1904. Serial No. 215,729.

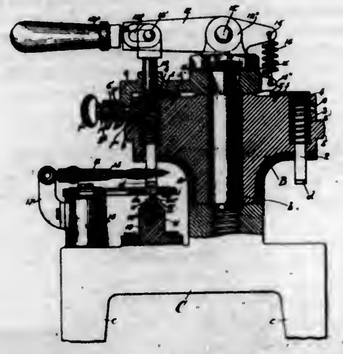
1. The combination with a support for a blank of a plurality of selective type dies adapted to form on a blank in such support a succession of types; and means for projecting a stream of heated fluid toward and thereby heating the working die during the type forming operation.

2. The combination with means for supporting and insulating a blank from loss of heat, of a type die adapted to engage with a supported and insulated blank and form a type thereon; and means for projecting a stream of heated fluid toward and thereby heating the die during its type forming operation.

3. The combination with means for supporting and insulating a blank from loss of heat, of a plurality of selective type dies adapted to form on a supported and insulated blank a succession of types; and means for projecting a stream of heated fluid toward and thereby heating the working die.

4. The combination with means for supporting and

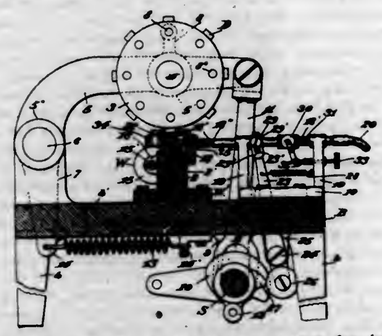
insulating a blank from loss of heat, of a plurality of selective type dies adapted to form on a supported and insulated blank a succession of types; and means for projecting a stream of heated fluid toward and thereby heating the working die during its type forming operation.



5. The combination with a support for a blank, of a type die adapted to engage with a blank in such support and form a type thereon; means for projecting a stream of heated fluid toward and thereby heating the die during its type forming operation; and feed mechanism operative to impart a step by step movement to the blank.

[Claims 6 to 21 not printed in the Gazette.]

886,331. MANUFACTURE OF TYPE AND TYPE-BARS. FRANCIS H. RICHARDS, Hartford, Conn., assignor, by mesne assignments, to American Typographic Corporation, a Corporation of New Jersey. Filed Dec. 1, 1902, Serial No. 133,383. Renewed Mar. 11, 1908. Serial No. 420,448.



1. In a type making mechanism, means for heating the edge of the blank while the blank and heating means move relatively to each other in combination with means for imparting relative movement to the blank and heating means.

2. The combination with a plurality of selective dies and mechanism for causing the operation of selected dies in succession, of means for heating each type-making portion of the blank immediately before the die is applied thereto to form a type.

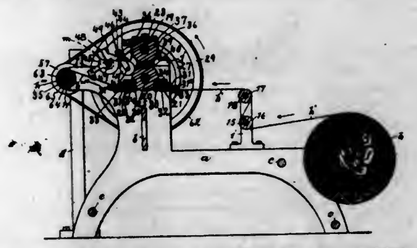
3. The combination with a plurality of selective dies, and mechanism for causing the selected dies to operate in succession, of a heating device, and mechanism for moving said device into and out of operative position.

4. The combination with type-making mechanism adapted to make types on a blank, of a heating device, and means organized and timed to cause the operation of said type-making mechanism to alternate with the action of said device in heating the blank.

5. The combination with mechanism adapted to operate intermittently and make a succession of type one after another along a blank, of means for heating each type-blank portion of the blank prior to the operation of the mechanism to make thereon a type.

[Claims 6 to 53 not printed in the Gazette.]

886,332. ROLL-TOILET-PAPER MACHINE. GEORGE H. SIBLEY, Springfield, Mass. Filed June 8, 1905. Serial No. 264,257.



1. The combination, in a roll toilet paper machine, with means for holding the paper supply, combined perforating and slitting mechanism comprising a perforator and a slitter with a platen common to both, of a winding spindle, and a driving tension therefor having a predetermined amount of resistance and adapted to yield and permit said spindle to cease revolving when such resistance is overcome.

2. Combined perforating and slitting mechanism, for a roll toilet paper machine, comprising a rotary perforator provided with serrated knives, a slitter or slitters, and a rotary platen having longitudinal slots therein to receive the teeth on said knives and an annular groove or grooves therein to receive said slitter or slitters, the latter being suitably mounted in operative relation with said platen.

3. Perforating mechanism, for a roll toilet paper machine, comprising a rotary perforator provided with serrated knives having no movement independent of the perforator, and a rotary platen having annular grooves and longitudinal slots therein with buffers of yielding material in said slots adapted to receive the teeth on said knives, each of said buffers being placed against one side of its slot and cut away at the points of intersection with said grooves.

4. Perforating mechanism, for a roll toilet paper machine, comprising a rotary perforator provided with serrated knives, and a rotary platen having annular grooves and longitudinal slots therein with buffers in said slots, each of said buffers being cut away at the points of intersection with said grooves, and the periphery of said platen being continued across the slots at points adjacent to the intersections of the slots with the grooves.

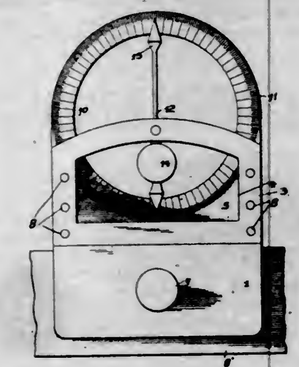
5. Slitting mechanism, for a roll toilet paper machine, comprising a roller or platen having an annular groove therein, a loosely mounted shaft, a carrier adjustably mounted on said shaft, an adjustable arm slidingly connected with the carrier and extending at substantially right-angles thereto, means for firmly holding said arm after adjustment, and a slitter mounted on the arm and adapted to enter the groove in said platen.

[Claims 6 to 18 not printed in the Gazette.]

886,333. ATTACHMENT FOR LEVELS. DAVID H. SOUTHWARD, Pittsburg, Pa., assignor of one-half to Michael J. King, Pittsburg, Pa. Filed July 18, 1907. Serial No. 384,462.

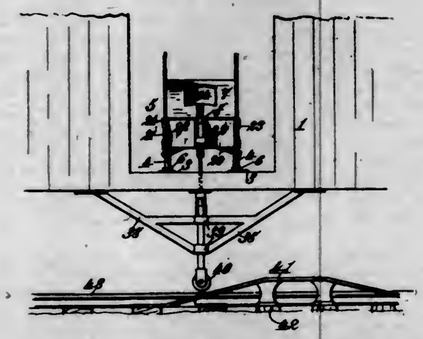
A level attachment consisting of two plates adapted to embrace a level and having upward extensions forming parallel frames, a set screw carried by one of said plates, a central plate arranged between said frames and adapted to be centrally positioned upon one side of a level, side plates interposed between said central plate and said frames, said central plate having a circular opening formed therein and graduations arranged in a complete circle

around said opening upon each side of said plate, a weighted indicator trunnioned between said frames within the



circular opening of said central plate and having bifurcated spear-shaped pointers at each end thereof.

886,334. MAIL-POUCH-DELIVERING APPARATUS. CHARLES A. WILLIS, Washington, D. C., assignor of one-fourth to Charles F. Creager, Washington, D. C., and one-fourth to Abram B. Appler, Albany, N. Y. Filed Nov. 16, 1907. Serial No. 402,469.



1. A mail pouch delivering apparatus, comprising a stationary pouch support mounted above the floor of a car at an inclination thereto, swinging doors carried by said support and constituting means to retain the pouch normally within the support, and means for automatically operating said doors to open the same and permit the delivery of a pouch from the support.

2. A mail pouch delivering apparatus, comprising a stationary pouch support mounted above the floor of a car at an inclination thereto, movable-means carried by said support and acting normally to retain the pouch within the support, and means for automatically actuating said movable-means to permit the delivery of the pouch from the support.

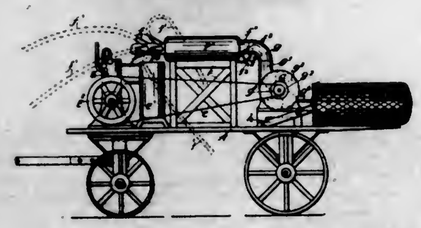
3. A mail pouch delivering apparatus, comprising a pouch support removably-mounted in the floor of a car and remaining stationary during the delivery of the pouch therefrom, movable-means carried by said support and acting normally to retain the pouch in the support, and means for automatically operating said movable-means to permit the delivery of the pouch from the support.

4. A mail pouch delivering apparatus, comprising a stationary pouch support mounted within a car above the floor thereof and at an inclination to said floor, movable-means carried by the lower end of said support acting to normally retain the pouch within the support, and means for automatically actuating said movable-means to permit the delivery of the pouch from the support.

5. A mail pouch delivering apparatus, comprising a stationary pouch support mounted within a car above the floor thereof and at an inclination to said floor, movable-means carried by the lower end of the support acting to normally retain the pouch within the support, means for automatically operating said movable-means to permit the delivery of the pouch from the support, and means for accelerating the movement of the pouch during its delivery.

[Claims 6 to 28 not printed in the Gazette.]

886,335. COTTON-HARVESTING MACHINE. GEORGE H. ZEMPTER, Greenville, Miss., assignor of one-half to John Witney & Goldfarb, Greenville, Miss. Filed May 27, 1907. Serial No. 376,042.



1. In a cotton-harvester, the combination with a platform having a forwardly located motor thereon, of a casing having forwardly projecting nippies, a stationary horizontal suction chest, a motor-geared fan having a curved communication with said chest and provided with a discharge for longitudinally delivering in a horizontal direction, and a sack horizontally disposed and supported and having its mouth portion detachably engaged in receiving position relative to said discharge, said casing, chest, fan communication, fan and engaged portion of the sack all successively disposed in the same vertical longitudinal plane, and said motor being also in the same plane, said motor and other longitudinally arranged elements mentioned being all within the plan area of the platform.

2. In a cotton-harvester, the combination with a suction chest, means for conveying cotton to the latter, and a fan communicating with said chest and having a discharge for horizontally delivering in a longitudinal direction, of tilting means in receiving position relative to said discharge, and a sack horizontally disposed and supported and having its mouth portion detachably engaging the tilting means, said several elements being mutually disposed in vertical longitudinal relation and all within the plan area of the platform.

3. In a cotton-harvester, the combination with a suction chest, means for conveying the cotton to the latter, and a fan communicating with said chest, of a ring provided with a guard receiving the fan-discharge and perforated for the escape of air, and a cotton receptacle detachably engaged with said ring.

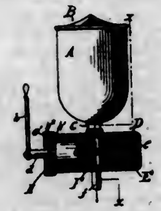
4. In a cotton-harvester, the combination with a suction chest, means for conveying the cotton to the latter, and a fan communicating with said chest and discharging horizontally, of a vertical ring supported in receiving position relative to the fan discharge and having sack-engaging projections, and a horizontal sack-support adapted to maintain a sack with its mouth in longitudinal registry with the ring.

5. In a cotton-harvester, the combination with a suction chest, means for conveying the cotton to the latter, and a fan communicating with said chest and discharging horizontally, of a ring pivotally supported at each side in receiving position relative to the fan discharge and having sack-engaging projections and a horizontal sack-support adapted to maintain a sack with its mouth in longitudinal registry with the ring.

[Claim 6 not printed in the Gazette.]

REISSUES.

12,785. LUBRICATING DEVICE. BENJAMIN F. CAMPBELL, Little Rock, Ark., assignor, by direct and mesne assignments, to Campbell Graphite Lubricator Co., Little Rock, Ark. Filed Nov. 12, 1907. Serial No. 401,901. Original No. 755,741, dated Mar. 29, 1904, Serial No. 191,249.



1. In a lubricating device, a lubricant reservoir provided with a discharge opening at its bottom, a valve casing communicating with said opening, a valve seated in said casing and having a lubricant-discharging chamber extending therethrough, a pipe for the introduction of air or fluid pressure connected to one side of said casing, a second pipe for the transmission of the charge of lubricant connected to the opposite side of said casing, means for holding the valve with the lubricant-charging chamber in position to receive a supply of lubricant from the reservoir, and means for turning said valve out of communication with said reservoir and into alinement with said pipes to forcibly discharge the charge of lubricant to the parts to be lubricated, substantially as described.

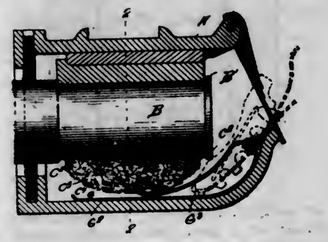
2. In a lubricating device, the combination of a reservoir or cup, a valve-casing connected thereto and provided with a tapering bore, a valve or plug conforming with the bore of the casing and having a lubricant-charging chamber extending therethrough, a pipe for the introduction of air or fluid pressure connected to one side of said casing, a second pipe for transmission of the charge of lubricant connected to the opposite side of said casing, means for holding the plug or valve with the lubricant-charging chamber in position to receive a supply of lubricant and devices for turning said plug or valve to shut off communication between the lubricant-charging chamber and reservoir or cup, and bring the said chamber into register with the said pipes to thereby forcibly discharge a definite supply of lubricant to the parts to be lubricated.

3. In a lubricating device, the combination of a reservoir or cup, a valve-casing connected thereto, and provided with a tapering bore, a valve or plug conforming with the bore of the casing and having a lubricant-charging chamber extending therethrough, a pipe connected to said casing for introducing a blast of air or other fluid, an oppositely-disposed pipe connected to said casing for transmitting the charge of lubricant, means for turning the valve or plug to bring the lubricant-charging chamber into register with said oppositely-disposed pipes, and a spring for returning the valve or plug to its original position when said means is released.

4. In a lubricating device, a lubricant reservoir or cup, a valve-casing connected thereto and having a tapering bore, a valve or plug fitting the bore of the casing and having a lubricant-charging chamber extending therethrough, means for positively turning said valve or plug in the casing and a spring disposed between one end of the casing and valve or plug and connected to said parts, said spring acting to force the valve lengthwise of the casing to form a proper joint between the valve and casing and to return the valve to its original position when the means for positively turning said valve or plug is released.

5. In a lubricating device, a reservoir or cup, a casing having a tapering bore connected thereto, a valve formed with a taper corresponding to the taper of the bore of the casing and provided with a lubricant-charging chamber extending therethrough, a pipe connected to said casing for introducing a blast of air or other fluid, an oppositely-disposed pipe connected to said casing for transmitting the charge of lubricant, a handle for positively turning said valve or plug to close connection between the reservoir or cup and the lubricant-charging chamber, and a spring disposed between one end of the casing and plug or valve to maintain a close joint between said parts, one end of the spring being connected to the valve and the other end to the casing to act by its torsional force to return the valve to its initial position when the handle is released.

12,786. LUBRICATING-PACKING HOLDER FOR CAR-AXLE BOXES. JAMES S. PATTEN, Baltimore, Md., assignor of three-twelfths to Richard M. Duvall and nine-twelfths to Morton Schaeffer, Baltimore, Md. Filed Sept. 8, 1906. Serial No. 333,800. Original No. 770,242, dated Sept. 13, 1904, Serial No. 132,260.



1. The improvement in lubricating devices herein described, comprising an actuating-spring having a base portion and returned arms provided with bearing portions and with stop projections beyond the same, and the carrier in the form of a rack having side plates curved in their upper edges between their ends, to permit the insertion of the carrier-box when rocked on its pivots, the end plates curved from side to side in their upper edges, the partition-plate arranged between the side plates and having its upper edges at its ends in a common plane with those portions of the upper edges of the end plates with which it connects, the studs projecting from the opposite sides of the carrier, and the flanges projecting from the opposite sides of the carrier above the studs and having openings to receive the stop portions of the spring when the carrier is adjusted to the position for use substantially as set forth.

2. In a lubricating device, a packing-carrier comprising a rack-like box having its ends curved in their upper edges to conform to the journal and its sides provided in their upper edges with curved recesses between their ends to permit the box to pass the end flange of a journal in inserting and removing the carrier, and an actuating-spring for said carrier substantially as set forth.

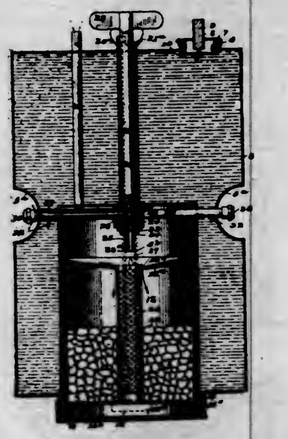
3. In a lubricating device, a packing-carrier comprising a box-like rack having its side plates provided in their upper edges between their ends with recesses to facilitate the insertion and removal of the carrier and having its end plates curved in their upper sides to conform to a journal, and also to facilitate the insertion of the carrier into the standard car-axle box, substantially as set forth.

4. In a lubricating device, a packing-carrier having side plates provided with recesses in their upper edges between their ends to facilitate the insertion and removal of the carrier past the end flange of a journal and having its end plates curved in their upper edges to conform to a journal and provided with a partition extending between said end plates substantially as set forth.

5. In a lubricating device, a carrier consisting of a rack-like box having side plates and a series of bottom bars spaced apart and extending between the opposite side plates, the latter being provided with slots in their lower edges in line with the spaces between the bottom bars, substantially as set forth.

[Claims 6 to 11 not printed in the Gazette.]

12,787. ACETYLENE-GENERATOR. RICHARD H. WELLES, Kenosha, Wis., assignôr to The Badger Brass Manufacturing Company, Kenosha, Wis., a Corporation of Wisconsin. Filed Nov. 19, 1904. Serial No. 233,540. Original No. 737,183, dated Aug. 25, 1903, Serial No. 130,537.



1. In an acetylene-generator, the combination with a water-chamber, of a generation-chamber within and surrounded by said water-chamber, a carbid-receptacle within and wholly contained by said generation-chamber, a water-supply pipe extending across and through the upper end of said generation-chamber and outside of the latter communicating freely with said water-chamber, a water-controlling valve communicating with said water-supply pipe within the generation-chamber and controlling and directing the flow of water therefrom to the underlying carbid-receptacle, and a gas discharge pipe leading from said generation-chamber, substantially as described.

2. In an acetylene-generator, the combination with a water-chamber, of a generation-chamber within and surrounded by said water-chamber, a carbid-receptacle within and wholly contained by said generation-chamber, a water-supply pipe extending across and between the opposite side walls of said water-chamber and through the upper portion of said generation-chamber, said pipe having lateral openings communicating with said water and generation chambers, respectively, an absorbent filling in said pipe, and a valve controlling the flow of water from said pipe through the generation-chamber to the carbid-receptacle, substantially as described.

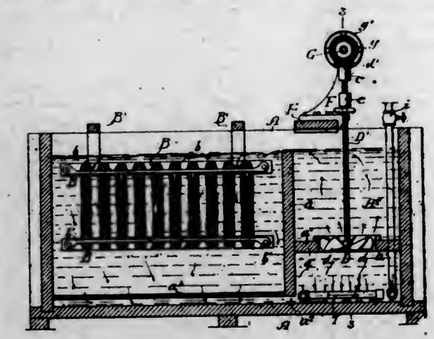
3. In an acetylene generator, the combination with a water-chamber and a generation chamber within and surrounded by said water-chamber, of a water-inlet pipe from said water-chamber to said generation chamber, a blow-off pipe from said generation chamber to the outer air, a valve-block in said generation-chamber having two lateral passages in the same transverse plane, and a valve-plug turnable in said valve-block, said valve-plug having a duct one end of which communicates constantly with the generation chamber while its other end is adapted to communicate with either of the ways of said valve-block to the exclusion of the other, substantially as described.

4. In an acetylene-generator, the combination with a water-chamber and a generation-chamber within and surrounded by said water-chamber, of a water-inlet pipe extending across and through said water and generation chambers and having openings therein communicating with said water and generation chambers, respectively, means in said pipe for permitting a limited flow of water therethrough, a blow-off pipe from said generation-chamber to the outer air, a two-way valve-block in said generation-chamber, one way of which connects with said water-inlet pipe and the other with said blow-off pipe, a suitably ported valve-plug turnable in said valve-block to establish communication between the interior of the generation-chamber and either of said pipes, and means for turning said valve-plug extending to the exterior of said water-chamber, substantially as described.

5. In an acetylene-generator, the combination with a water-chamber and a generation chamber within and surrounded by said water-chamber, of a water-inlet pipe extending across and through said water and generation chambers and having openings therein communicating with said water and generation chambers, respectively, means in said pipe for permitting a limited flow of water therethrough, a blow-off pipe from said generation-chamber to the outer air, a valve-block secured to the inner wall of said generation-chamber and having two radially-arranged passages one of which communicates with said water-inlet pipe and the other with said blow-off pipe, said valve-block being further provided with a conical bore extending entirely therethrough, and a cone-shaped valve-plug seated in said bore and provided with an actuating-stem extending through the wall of the water-chamber, said valve-plug being axially bored and further provided at the upper end of its bore with a radial opening adapted to communicate with either of said radial passages of the valve-block, substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

12,788. DYEING-MACHINE. JOSEPH HUSSONG, Camden, N. J., assignor to Hussong Dyeing Machine Company, Groveville, N. J., a Corporation of New Jersey. Filed Jan. 3, 1908. Serial No. 409,243. Original No. 661,343, dated Nov. 6, 1900, Serial No. 726,542.



1. The combination in a dye-vat, of a partition dividing the vat into two sections, one section containing the material to be dyed and having a perforated floor arranged near the bottom of the vat for the passage of the dye liquor, and means on the other side of the partition for maintaining a circulation of the dye liquor through the vat, said dye liquor being drawn under the partition from the dyeing-section and forced over said partition into the dyeing-section, substantially as described.

2. The combination in a dye-vat, of a vertical transverse partition dividing the vat into two sections, one section containing the material to be dyed and having a perforated floor arranged near the bottom of the vat for the passage of the dye liquor, and means in the other section for maintaining a circulation of the dye liquor through the vat, said dye liquor being drawn under the partition from the dyeing section and forced over said partition into the dyeing section, substantially as described.

3. The combination in a dye vat, of a vertical transverse partition dividing the vat into two sections, one section containing the material to be dyed and having a perforated floor arranged near the bottom of the vat for the passage of the dye liquor, and a circulating wheel in the other section for maintaining a circulation of the dye liquor through the vat, said dye liquor being drawn under the partition from the dyeing-section and forced over said partition into the dyeing section, substantially as described.

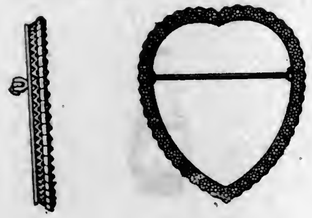
4. The combination of the vat, a partition therein dividing the vat into two sections, said partition stopping short of the bottom so as to form a communicating passage between the two sections, a horizontal partition in one section, one or more openings in said partition, and one or more bladed wheels adapted to the openings, means for driving said wheels so that a current of liquor will flow from one compartment under the partition to the other, and will be discharged over the partition in the first-mentioned section, substantially as described.

5. The combination of a dye-vat having a partition therein stopping short of the bottom thereof, dividing the said vat into two sections, a perforated bottom in that section in which the yarn to be dyed is placed, a horizontal partition in the other section, driving bladed wheels mounted in openings in the said partition so as to create a current and cause the liquor to flow from the dyeing-section under the partition, up through the other section, and over the partition in the dyeing-section, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

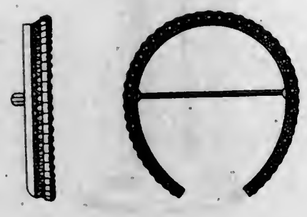
DESIGNS.

39,278. BROOCH-PIN. HENRY W. FISHEL, New York, N. Y., assignor to himself and Theodore H. Fishel, Copartners trading as Fishel, Nessler & Co., New York, N. Y. Filed Mar. 27, 1908. Serial No. 423,792. Term of patent 14 years.



The ornamental design for a brooch-pin as shown.

39,279. BROOCH-PIN. HENRY W. FISHEL, New York, N. Y., assignor to himself and Theodore H. Fishel, Copartners trading as Fishel, Nessler & Co., New York, N. Y. Filed Mar. 27, 1908. Serial No. 423,793. Term of patent 14 years.



The ornamental design for a brooch-pin as shown.

39,280. LOCKET. SIDNEY A. KELLER, New York, N. Y., assignor to The Shiman Miller Manufacturing Company, New York, N. Y., a Corporation of New York. Filed Mar. 30, 1908. Serial No. 424,287. Term of patent 3½ years.



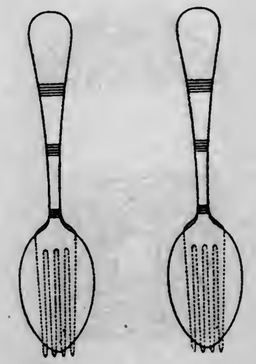
The ornamental design for a locket, as shown.

39,281. SPOON, FORK, OR SIMILAR ARTICLE. SAUL ROBERT JACOBS, Alameda, Cal. Filed July 5, 1907. Serial No. 382,403. Term of patent 7 years.



The ornamental design for a spoon fork or similar article, as shown.

39,282. HANDLE FOR SPOONS, FORKS, OR SIMILAR ARTICLES. JOSEPH E. STRAKER, Jr., Attleboro, Mass. Filed Mar. 2, 1908. Serial No. 418,894. Term of patent 7 years.



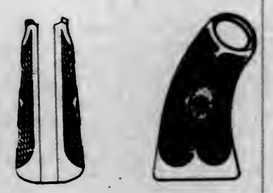
The ornamental design for the handle of a spoon, fork or similar article as shown.

39,283. BAG-HANDLE CAP. CHRISTIAN HIERING and ALBERT FULLER, Newark, N. J. Filed Jan. 15, 1907. Serial No. 352,463. Term of patent 3½ years.



The ornamental design for a bag handle cap, as shown.

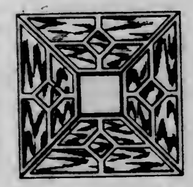
39,284. PISTOL-HANDLE. FRANK C. NICHOLS, Hartford, Conn., assignor to Colt's Patent Fire Arms Manufacturing Company, Hartford, Conn., a Corporation of Connecticut. Filed Jan. 29, 1908. Serial No. 413,323. Term of patent 14 years.



The ornamental design for a pistol-handle, as shown.

39,285. LAMP-SHADE. FRANK S. VERBECK, Chicago, Ill. Filed Mar. 23, 1908. Serial No. 422,811. Term of patent 7 years.





The ornamental design for a lamp shade, as shown.

39,286. CLUSTER-ELECTROLIER. JOHN W. THOMAS, Allentown, Pa. Filed Mar. 25, 1908. Serial No. 423,283. Term of patent 14 years.



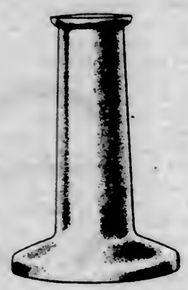
The ornamental design for a cluster electrolier, as shown.

39,287. SPARK-PLUG. WILLIAM DIEBEL, Philadelphia, Pa. Filed Nov. 25, 1907. Serial No. 403,830. Term of patent 7 years.



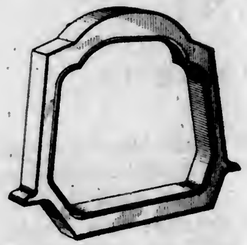
The ornamental design for a spark plug, as shown.

39,288. PEDESTAL FOR LAVATORIES. EDWARD C. STOVER, Trenton, N. J., assignor to The Trenton Potteries Company, Trenton, N. J., a Corporation of New Jersey. Filed Mar. 16, 1907. Serial No. 362,777. Term of patent 14 years.



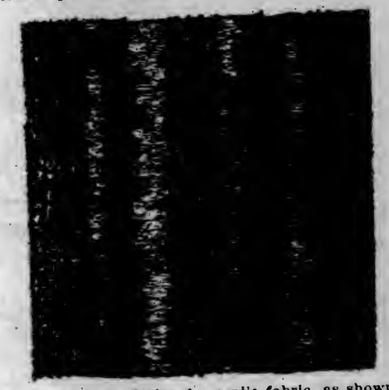
The ornamental design for a pedestal for lavatories, as shown.

39,289. RADIATOR-FRAME FOR MOTOR-VEHICLES. RUSSELL HUFF, Detroit, Mich., assignor to Packard Motor Car Company, Detroit, Mich., a Corporation of West Virginia. Filed Mar. 4, 1907. Serial No. 360,620. Term of patent 14 years.



The ornamental design for a radiator frame for motor vehicles, as shown.

39,290. PILE FABRIC. FREDERICK H. WALKER, Newtown, Pa. Filed Feb. 28, 1908. Serial No. 418,404. Term of patent 3½ years.



The ornamental design for a pile fabric, as shown.

TRADE-MARKS

PUBLISHED APRIL 28, 1908.

The following trade-marks have been adjudged entitled to registration under the act of February 20, 1905, and are published in compliance with section 6 of said act. Said section provides:

"Any person who believes he would be damaged by the registration of a mark may oppose the same by filing notice of opposition, stating the grounds therefor, in the Patent Office within thirty days after the publication of the mark sought to be registered, which said notice of opposition shall be verified by the person filing the same before one of the officers mentioned in section two of this act. If no notice of opposition is filed within said time the Commissioner shall issue a certificate of registration therefor, as hereinafter provided for."

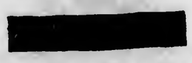
Marks which are stated to have been "Used ten years" are registrable under the last proviso of section 5 of said act, which is as follows:

"And provided further, That nothing herein shall prevent the registration of any mark used by the applicant or his predecessors, or by those from whom title to the mark is derived, in commerce with foreign nations or among the several States, or with Indian tribes, which was in actual and exclusive use as a trade-mark of the applicant or his predecessors from whom he derived title for ten years next preceding the passage of this act."

Section 14 of said act provides for the following fee:

"On filing notice of opposition to the registration of a trade-mark, ten dollars."

Ser. No. 6,082. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) THE SAFETY INSULATED WIRE & CABLE CO., New York, N. Y. Filed May 19, 1905.



The spirally arranged strand is yellow.

Particular description of goods.—Covered Electrical Conductors.

Ser. No. 8,771. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) POLK AND CALDER DRUG COMPANY, Troy, N. Y. Filed June 22, 1905.



Particular description of goods.—Washing-Soda.

Ser. No. 9,168. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE WILL & BAUMER COMPANY, Syracuse, N. Y. Filed June 27, 1905.



Particular description of goods.—Beeswax.

Ser. No. 10,861. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) WESSON COMPANY, Jersey City, N. J. Filed July 27, 1905.

PALMATINA

Particular description of goods.—A Mixture Having for its Essential Ingredients a Vegetable Oil and an Animal Fat.

Ser. No. 10,862. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) WESSON COMPANY, Jersey City, N. J. Filed July 27, 1905.



Particular description of goods.—A Mixture Having for its Essential Ingredients a Vegetable Oil and an Animal Fat.

Ser. No. 10,865. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) WESSON COMPANY, Jersey City, N. J. Filed July 27, 1905.



Particular description of goods.—Cotton-Seed Oils.

Ser. No. 13,173. (CLASS 47. WINES, EXCEPT MEDICATED.) J. PETIT LAROCHE & Co., Bordeaux, France. Filed Sept. 30, 1905.



Particular description of goods.—Still Wines.

Ser. No. 14,769. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) HEATH & Co. LIMITED, Crayford, England. Filed Nov. 17, 1905.

HEZZANITH

Particular description of goods.—Sextants, Telescopes, Binocular Glasses, Barometers, Octants, Chart-Rules, Chart-Dividers, Mathematical Instruments, Azimuth Instruments, Logs and Log-Lines, Sounding-Machines, Artificial Horizons, Thermometers, and Ships' Compasses.

Ser. No. 17,895. (CLASS 7. CORDAGE.) C. W. HUNT COMPANY, New York, N. Y. Filed Mar. 15, 1906.

STEVEDORE

Particular description of goods.—Fiber Rope.

Ser. No. 18,280. (CLASS 17. TOBACCO PRODUCTS.) LEAVITT & PEIRCE, INCORPORATED, Cambridge, Mass. Filed Mar. 26, 1906.

CAKE BOX

Particular description of goods.—Cigars, Cigarettes, and Smoking-Tobacco.

Ser. No. 19,776. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) THE AHRENS & OTT MFG. CO., Louisville, Ky. Filed May 22, 1906.



Particular description of goods.—Iron and Enamel-Coated Metal Bath-Tubs, Lavatories, Sinks, and Water-Closets, and Brass Cocks and Faucets.

Ser. No. 21,118. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) LANE & SCHMAND, Bridgeport, Conn. Filed July 24, 1906.

FOREST

Particular description of goods.—Candy.

Ser. No. 24,630. (CLASS 48. MALT EXTRACTS AND LIQUORS.) LEONHARD MICHEL BREWING COMPANY, New York, N. Y. Filed Jan. 14, 1907.



Particular description of goods.—Beers and Ales.

Ser. No. 26,068. (CLASS 9. EXPLOSIVES, FIREARMS, EQUIPMENTS, AND PROJECTILES.) THE EASTERN DYNAMITE COMPANY, Kenvil, N. J., assignor to E. I. du Pont de Nemours Powder Company, a Corporation of New Jersey. Filed Mar. 19, 1907.



Particular description of goods.—High Explosives.

Ser. No. 26,152. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) HERMANN C. KÖNIG, Steinhagen, Germany. Filed Mar. 22, 1907.



Particular description of goods.—Corn-Brandy.

Ser. No. 26,935. (CLASS 39. CLOTHING.) T. N. FOSTER & Co., New York, N. Y. Filed Apr. 26, 1907.



Particular description of goods.—Kid Gloves.

Ser. No. 27,612. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) JOHN V. FARWELL COMPANY, Chicago, Ill. Filed May 23, 1907.



Particular description of goods.—Ribbons.

Ser. No. 28,318. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ROBERT NATHANIEL BATES, Ottawa, Ontario, Canada. Filed June 22, 1907.

ELECTRIC BEANS

Particular description of goods.—Pills.

Ser. No. 28,712. (CLASS 19. VEHICLES, NOT INCLUDING ENGINES.) DAIMLER-MOTOREN-GESELLSCHAFT, Untertürkheim, near Stuttgart, Germany. Filed July 11, 1907.

MERCÉDÈS

Particular description of goods.—Automobiles, Motor-Boats, Automobile Transport-Wagons, Chassées, Motor-Bicycles, Motor-Tricycles, Trailers for Use with Motor Bicycles and Tricycles, Motor-Sleighs, Air-Ships, Awnings, Hoods, Wind-Screens, Dust-Guards, and Dress-Guards for Use in Vehicles.

Ser. No. 28,760. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ATLAS PRESERVATIVE COMPANY, LIMITED, London, England. Filed July 12, 1907.

Particular description of goods.—Preservatives and Disinfectants for Use in Seasoning and Preserving Timber, in Cleansing and Hardening Woodwork, in Destroying Vegetation, Insects, and Parasites, in Disinfecting, Cleansing, and Deoxidizing Metallic Surfaces, and Protecting Them from Corrosion, in Cleansing and Preserving Steam-Boilers, and in Preserving Raw Hides and Skins.

Ser. No. 28,842. (CLASS 50. MERCHANDISE NOT OTHERWISE CLASSIFIED.) THE CRAVENETTE COMPANY, LIMITED, Bradford, England. Filed July 17, 1907. Used ten years.

CRAVENETTE

Particular description of goods.—Waterproofed Woolen, Worsted, Cotton, and Linen Tarpaulins, Tents, Awnings, and Hay-Rick Covers.

Ser. No. 29,283. (CLASS 27. HOROLOGICAL INSTRUMENTS.) AMERICAN CUCKOO CLOCK COMPANY, Philadelphia, Pa. Filed Aug. 8, 1907.



Particular description of goods.—Watches and Clocks.

Ser. No. 29,975. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) WRIGHT'S INDIAN VEGETABLE PILL COMPANY, New York, N. Y. Filed Sept. 14, 1907. Used ten years.



Particular description of goods.—A Remedy for Worms.

Ser. No. 30,125. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) CROCKER GROCERY COMPANY, Wilkes-Barre, Pa. Filed Sept. 21, 1907.

WINOLA

Particular description of goods.—Coffee and Tea.

Ser. No. 30,215. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE SOUTHERN COTTON OIL COMPANY, Jersey City, N. J.; New York, N. Y., Savannah, Ga., and Gretna, La. Filed Sept. 26, 1907.

SNOWDRIFT

Particular description of goods.—Cotton-Seed Oils.

Ser. No. 30,262. (CLASS 37. PAPER AND STATIONERY.) UNITED STATES CORPORATION COMPANY, New York, N. Y. Filed Sept. 27, 1907.

UNISCO

Particular description of goods.—Corporation Stock-Books, Stock-Ledgers, Minute and Record Books, and Books of Stock-Certificates.

Ser. No. 30,346. (CLASS 12. MASONRY MATERIALS.) HASSAM PAVING COMPANY, Worcester, Mass. Filed Oct. 2, 1907.

HASSAMITE

Particular description of goods.—Concrete and Cement Pavements for Roads and Walks, Concrete and Cement Foundations, Walls, and Structures, and Plastic Concrete and Cement Mixtures and Compositions.

Ser. No. 30,495. (CLASS 37. PAPER AND STATIONERY.) E. A. SCHWERDTFEGER & Co., Berlin, Germany. Filed Oct. 7, 1907.

EAS

Particular description of goods.—Illustrated Post-Cards and Congratulatory Cards.

Ser. No. 31,097. (CLASS 19. VEHICLES, NOT INCLUDING ENGINES.) THE BIRMINGHAM SMALL ARMS CO., LIMITED, Small Heath, near Birmingham, England. Filed Nov. 9, 1907.

B.S.A.

Particular description of goods.—Cycles, Motor-Cycles, Automobiles, and Spare and Repair Parts for the Same, Comprising Frames, Wheels, Steering-Heads, Steering-Forks, Back-Stays, Seat-Stays, Frame Junction-Lugs, Frame-Tubes, Bottom Brackets, Chain-Wheels, Cranks, Pedals, Handle-Bars, Seat-Pillars, Variable-Speed Gears, Coaster-Hubs, Single and Variable Speed Hubs, Free-Wheel Clutches, Drive-Chains, Drive-Chain Adjusters, Mud-Guards, Rest-Guards, Gear-Cases and Chain-Covers, Wheel-Rims, Wheel-Spokes and Spoke-Nipples, Brakes, Steering-Locks, and Saddles.

Ser. No. 31,236. (CLASS 17. TOBACCO PRODUCTS.) CHARLES H. REED & Co., Brockton, Mass. Filed Nov. 18, 1907.



Particular description of goods.—Cigars, Cigarettes, Smoking and Chewing Tobacco, (Both Plug and Cut,) and Snuff.

Ser. No. 31,246. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) CHRISTOPH LOWEL, Los Angeles Cal. Filed Nov. 18, 1907.

Christol
Fever
Remedy

Particular description of goods.—Remedies for Fevers and Diseases of the Liver, Stomach, and Kidneys.

Ser. No. 31,264. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) CHARLES F. WONSON, Gloucester, Mass. Filed Nov. 20, 1907.

GOLD BOND BRAND

Particular description of goods.—Salted, Canned, and Pickled Fish.

Ser. No. 31,271. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) RUFUS A. WALLACE, Bradley, Ind. Ter. Filed Nov. 21, 1907.



Particular description of goods.—An Insecticide.

Ser. No. 31,567. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) BAKTERIOLOGISK LABORATORIUM, NEUMANN & Co., I AALBORG, Aalborg, Denmark. Filed Dec. 4, 1907.

RATIN

Particular description of goods.—Bacteriological Preparations for the Extermination of Rats and Mice.

Ser. No. 31,612. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS). RUDOLF SARASIN & Co., Basel, Switzerland. Filed Dec. 7, 1907.

489

Particular description of goods.—Ribbons.

Ser. No. 31,704. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) EHRICH & GRAETZ, Berlin, Germany. Filed Dec. 13, 1907.

Siva

Particular description of goods.—Arc-Lamps, Carbons for Use Therein, Holders and Regulators for Lamp-Carbons, Incandescent Electric Lamps and Furnishings Therefor, Switches, Fuses, Cut-Outs, Resistances, Plugs, Conductors, and Protecting Metal Tubes Therefor, Electric Heating Stoves and Cookers, and Electrically-Heated Baking-Ovens.

Ser. No. 31,884. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) L. T. PIVER ET CIE, Paris, France. Filed Dec. 20, 1907.

VIOLETTE REGIS

Particular description of goods.—Soaps.

Ser. No. 32,175. (CLASS 38. PUBLICATIONS.) CHARLES CAPEHART, New York, N. Y. Filed Jan. 10, 1908.

THE CARTOON

Particular description of goods.—A Weekly Magazine.

Ser. No. 32,199. (CLASS 18. AGRICULTURAL AND DAIRY MACHINERY AND PARTS THEREOF.) CHATTANOOGA PLOW Co., Chattanooga, Tenn. Filed Jan. 13, 1908.

G 2

Particular description of goods.—Plows and Parts of Plows.

Ser. No. 32,229. (CLASS 30. CROCKERY, EARTHENWARE, AND PORCELAIN.) MINTONS LIMITED, Stoke-upon-Trent, England. Filed Jan. 15, 1908.

MINTONS

Particular description of goods.—China, Earthenware, and All Kinds of Pottery.

Ser. No. 32,312. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE YAKUTAT & SOUTHERN RAILWAY Co., Seattle, Wash. Filed Jan. 18, 1908.

Zenith

Particular description of goods.—Canned Salmon.

Ser. No. 32,313. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE YAKUTAT & SOUTHERN RAILWAY Co., Seattle, Wash. Filed Jan. 18, 1908.

HUB

Particular description of goods.—Canned Salmon.

Ser. No. 32,314. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE YAKUTAT & SOUTHERN RAILWAY Co., Seattle, Wash. Filed Jan. 18, 1908.

TYEE BRAND

Particular description of goods.—Canned Salmon.

Ser. No. 32,335. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE YAKUTAT & SOUTHERN RAILWAY CO., Seattle, Wash. Filed Jan. 20, 1908.



Particular description of goods.—Canned Salmon.

Ser. No. 32,364. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) KATE HART, Philadelphia, Pa. Filed Jan. 22, 1908.

Shamo

Particular description of goods.—Textile Fabrics Made in Imitation of Chamois.

Ser. No. 32,483. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) BARTZ, WYGANT & BROWN, INC., Hornell, N. Y. Filed Jan. 29, 1908.

ROYAL

Particular description of goods.—Coffee-Mills, Meat-Choppers, Meat-Slicing Machines, and Bone-Cutters.

Ser. No. 32,499. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) SOC.TA PROD.TI CHIM.CO FARMAC.CI A. BERTELLI & C., Milan, Italy. Filed Jan. 30, 1908.



Particular description of goods.—Medical Preparations Consisting of Pills, Pastils, and Oils for Medicinal Purposes.

Ser. No. 32,529. (CLASS 12. MASONRY MATERIALS.) JONATHAN PARKER B. FISKE, Auburndale, Mass. Filed Feb. 3, 1908.

TAPESTRY

Particular description of goods.—Bricks.

Ser. No. 32,552. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) MEYER BROTHERS COFFEE AND SPICE COMPANY, St. Louis, Mo. Filed Feb. 3, 1908.

BUCKEYE

Particular description of goods.—Coffee.

Ser. No. 32,594. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) HOLT & SMITH, Los Angeles, Cal. Filed Feb. 5, 1908.

Crown Flooring

Particular description of goods.—Tongued-and-Grooved Boards.

Ser. No. 32,619. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) THE IRONITE COMPANY, Poplar Bluff, Mo. Filed Feb. 6, 1908.



Particular description of goods.—Carbonated or Aerated Drinking Water, Either Plain or Flavored.

Ser. No. 32,642. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) THOMAS A. SUTTON, Johnstown, N. Y. Filed Feb. 7, 1908.

Particular description of goods.—Glove-Buttons.

Ser. No. 32,706. (CLASS 38. PUBLICATIONS.) ROBERT EDGAR LONG, Washington, D. C. Filed Feb. 11, 1908.

GREENROOM GLIMPSES

Particular description of goods.—A Magazine.

Ser. No. 32,725. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) HANCE BROS. & WHITE, Philadelphia, Pa. Filed Feb. 12, 1908.

NARCO

Particular description of goods.—Cough and Cold Remedies, Tonics for Debilitated System, Impaired Digestion, Pulmonary Tuberculosis and Other Affections of the Respiratory Organs, Antiseptic Solutions, Effervescent Salts and Tablets, Headache-Powders and Remedies, Diuretics, Bronchial Remedies, Liniments for Rheumatism, Neuralgia, Bruises, Sprains, and Inflammation, Hepatic Salts, Pills and Tablets for Blood, Nerves, Liver, Stomach, Bowels, and Kidneys, Diarrhea Remedy, Dyspepsia Remedy, Healing-Salves, Laxatives and Cathartics, Sedlitz-Powders, and Hair-Tonic.

Ser. No. 32,783. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) BERT. K. BLOCH, New York, N. Y. Filed Feb. 15, 1908.

BREYERBROOK

Particular description of goods.—Whisky.

Ser. No. 32,808. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) CLARENCE O. CASE, Somerville, Mass. Filed Feb. 17, 1908.



Particular description of goods.—Wheat-Flour.

Ser. No. 32,860. (CLASS 37. PAPER AND STATIONERY.) GEORGE B. HURD & Co., New York, N. Y. Filed Feb. 18, 1908.

SWASTIKA

Particular description of goods.—Writing-Paper and Envelops.

Ser. No. 32,886. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) JOHN C. WELLER CO. INC., Louisville, Ky. Filed Feb. 20, 1908.

Particular description of goods.—Whisky.

Ser. No. 32,903. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) HOWELL & BURSK, Philadelphia, Pa. Filed Feb. 20, 1908. Used ten years.

Victoria

Particular description of goods.—Canned Fruits, Canned Vegetables, Coffee, Maple and Cane Syrup, Extract of Vanilla, Cider-Vinegar, and Cheese.

Ser. No. 32,908. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) WINDSOR F. CHILDS, Boston, Mass. Filed Feb. 20, 1908.

ICEFROS

Particular description of goods.—Cake Icing and Filling.

Ser. No. 32,957. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE SAWYER CRYSTAL BLUE COMPANY, Boston, Mass. Filed Feb. 24, 1908. Used ten years.

CRYSTAL

Particular description of goods.—Ammonia.

Ser. No. 32,973. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) ONEIDA COMMUNITY LIMITED, Oneida, N. Y. Filed Feb. 24, 1908.

OLD APPLE TREE SWING

Particular description of goods.—Chain Swings.

Ser. No. 33,033. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) INTERNATIONAL CHEMICAL MFG & IMPORT CO, New York, N. Y. Filed Feb. 27, 1908.

BIOGENIO

Particular description of goods.—A Preparation of Peroxid of Hydrogen.

Ser. No. 33,053. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) WORONOCO CHEMICAL COMPANY, Westfield, Mass. Filed Feb. 27, 1908.

Mucus Septine

Particular description of goods.—Antiseptics.

Ser. No. 33,054. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) GEORGE M. BURROUGHS, Killingly, Conn. Filed Feb. 28, 1908. Used ten years.

PAINICURE

Particular description of goods.—A Liquid Medical Compound Used Internally and Externally for Relief of Pain.

Ser. No. 33,068. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) GUSTAV A. KRUTTSCHNITT, Newark, N. J. Filed Feb. 28, 1908.

MINTLOX

Particular description of goods.—Breath-Purifying Tablets.

Ser. No. 33,069. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) GUSTAV A. KRUTTSCHNITT, Newark, N. J. Filed Feb. 28, 1908.

VIOLOX

Particular description of goods.—Breath-Purifying Tablets.

Ser. No. 33,104. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) BORIS KOHOSOFF, New York, N. Y. Filed Feb. 29, 1908.



Particular description of goods.—A Salve for External Application to the Skin.

Ser. No. 33,139. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) HARRIS SUSPENDER CO., New York, N. Y. Filed Mar. 3, 1908.



Particular description of goods.—Suspenders.

Ser. No. 33,140. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE WILL & BAUMER COMPANY, Syracuse, N. Y. Filed Mar. 3, 1908.



Particular description of goods.—Beeswax.

Ser. No. 33,145. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) HORACE E. CONKLIN, Binghamton, N. Y. Filed Mar. 3, 1908.

ARROW

Particular description of goods.—All Mixtures of Grains and Peas for Poultry and Pigeon Foods.

Ser. No. 33,157. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ALFRED THAMM, Berlin, Germany. Filed Mar. 4, 1908.

Tuberal

Particular description of goods.—Remedy for Tuberculosis.

Ser. No. 33,173. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ROYAL OLIVER EASTMAN, Battle Creek, Mich. Filed Mar. 5, 1908.

YOGURT

Particular description of goods.—Antitoxic Ferments and Remedies for Diseases Caused by Intestinal Auto-Intoxication.

Ser. No. 33,174. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) SHARP & DOHME, Baltimore, Md. Filed Mar. 5, 1908.

LIQUOR SANTAIBA

Particular description of goods.—A Medicinal Preparation for the Treatment of Genito-Urinary Diseases.

Ser. No. 33,197. (CLASS 39. CLOTHING.) MME. IRÈNE, New York, N. Y. Filed Mar. 6, 1908.

The Delice

Particular description of goods.—Corsets.

Ser. No. 33,245. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) UNION CONDENSED MILK COMPANY, New York, N. Y. Filed Mar. 7, 1908.



Particular description of goods.—Milk, Cream, Condensed Milk, Concentrated Milk, Desiccated Milk, and Milk-Powders.

Ser. No. 33,246. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) UNION CONDENSED MILK COMPANY, New York, N. Y. Filed Mar. 7, 1908.

WHITE CROSS

Particular description of goods.—Milk, Cream, Condensed Milk, Concentrated Milk, Desiccated Milk, and Milk-Powders.

Ser. No. 33,251. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JACOB J. LAUFFER, Brooklyn, N. Y. Filed Mar. 9, 1908.

NERVOIDS

Particular description of goods.—Tonics.

Ser. No. 33,257. (CLASS 37. PAPER AND STATIONERY.) IGNAZ NEUBURG, New York, N. Y. Filed Mar. 9, 1908.

SKYSCRAPER

Particular description of goods.—Post-Cards.

Ser. No. 33,260. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) THE HILO GUM COMPANY, Chicago, Ill. Filed Mar. 9, 1908.

HILO

Particular description of goods.—Vending-Machines.

Ser. No. 33,271. (CLASS 17. TOBACCO PRODUCTS.) WILLIAM T. DONOVAN, St. Albans, Vt. Filed Mar. 9, 1908.



Particular description of goods.—Cigars, Cheroots, Cigarettes, Smoking, Fine-Cut, and Plug Tobacco.

Ser. No. 33,279. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) MINER ROBINSON, Newton, Mass. Filed Mar. 10, 1908.

RENIM

Particular description of goods.—Electrical Switch-Boxes, Electrical Outlet-Boxes, Electrical Cut-Out Cabinets, and Seals for Electrical Outlet-Boxes.

Ser. No. 33,280. (CLASS 27. HOROLOGICAL INSTRUMENTS.) JULES RACINE AND COMPANY, New York, N. Y. Filed Mar. 10, 1908. Used ten years.

CONTINENTAL

Particular description of goods.—Watches and Watch-Movements.

Ser. No. 33,285. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) DODGE CITY MILLING & ELEVATOR COMPANY, Dodge City, Kans. Filed Mar. 10, 1908.



Particular description of goods.—Wheat-Flour.

Ser. No. 33,309. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE C. HOFFMAN & SON MILLING COMPANY, Enterprise, Kans. Filed Mar. 11, 1908.

FANCHON

Particular description of goods.—Wheat-Flour.

Ser. No. 33,319. (CLASS 50. MERCHANDISE NOT OTHERWISE CLASSIFIED.) LUCY BISCHOFF, Philadelphia, Pa. Filed Mar. 12, 1908.

APEX

Particular description of goods.—Poultry Fountains, Cups, and Feeders.

Ser. No. 33,323. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) GRIFFITH-DURNEY COMPANY, San Francisco, Cal. Filed Mar. 12, 1908.



Particular description of goods.—Canned Salmon.

Ser. No. 33,327. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) GRIFFITH-DURNEY COMPANY, San Francisco, Cal. Filed Mar. 12, 1908.



Particular description of goods.—Canned Salmon.

Ser. No. 33,343. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) BARNHART MERCANTILE CO., St. Louis, Mo. Filed Mar. 12, 1908.



The star being printed in red.

Particular description of goods.—Shelled and Unshelled Peanuts.

Ser. No. 33,351. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) GORHAM RUBBER COMPANY, San Francisco, Cal. Filed Mar. 13, 1908.

OLYMPIC

Particular description of goods.—Rubber Hose.

Ser. No. 33,354. (CLASS 8. SMOKERS' ARTICLES, NOT INCLUDING TOBACCO PRODUCTS.) REISS BROS. & CO., Chicago, Ill. Filed Mar. 13, 1908.

"ANTIDOTE"

Particular description of goods.—Pipes.

Ser. No. 33,371. (CLASS 27. HOROLOGICAL INSTRUMENTS.) ELGIN NATIONAL WATCH COMPANY, Elgin and Chicago, Ill. Filed Mar. 14, 1908. Used ten years.

FATHER TIME

Particular description of goods.—Watch-Movements.

Ser. No. 33,374. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) STRASBAUGH, SILVER & CO., Aberdeen, Md. Filed Mar. 14, 1908.

BLUE BELL
BRAND

Particular description of goods.—Canned Vegetables.

Ser. No. 33,380. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) NEW HEALTH FOOD COMPANY, Bridgeport, Conn. Filed Mar. 14, 1908.

RIBESTO

Particular description of goods.—Crackers.

Ser. No. 33,386. (CLASS 12. MASONRY MATERIALS.) HOUSTON BROTHERS COMPANY, Pittsburg, Pa. Filed Mar. 14, 1908.



Particular description of goods.—Portland Cement.

Ser. No. 33,393. (CLASS 37. PAPER AND STATIONERY.) L. E. WATERMAN COMPANY, New York, N. Y. Filed Mar. 14, 1908.

Mercantile

Particular description of goods.—Safety-Holders for Pencils and Penholders.

Ser. No. 33,401. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) SPARKS MILLING COMPANY, Alton, Ill. Filed Mar. 16, 1908.

ARMADALE

Particular description of goods.—Wheat-Flour.

Ser. No. 33,402. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) SPARKS MILLING COMPANY, Alton, Ill. Filed Mar. 16, 1908.

RINGLEADER

Particular description of goods.—Wheat-Flour.

Ser. No. 33,424. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) CORLISS CHEMICAL COMPANY, St. Louis, Mo. Filed Mar. 16, 1908.



Particular description of goods.—Boiler Compound, a Chemical Composition Intended for Prolonging the Life of Leather Belts, a Chemical Composition Intended to Prevent the Slipping of Rubber Belts, and a Chemical Composition Intended to Absorb the Heat of Metal-Cutting Tools, Soldering-Stick, Soldering-Paste, Soldering-Salt, and Welding Compound.

Ser. No. 33,430. (CLASS 15. OILS AND GREASES NOT INTENDED FOR FOOD.) STANDARD OIL CO. OF NEW YORK, New York, N. Y. Filed Mar. 17, 1908. Used ten years.



Particular description of goods.—Refined Petroleum for Illuminating, Heating, and Power Purposes.

Ser. No. 33,431. (CLASS 15. OILS AND GREASES NOT INTENDED FOR FOOD.) STANDARD OIL CO. OF NEW YORK, New York, N. Y. Filed Mar. 17, 1908.

"SOCONY"

Particular description of goods.—Refined Petroleum for Illuminating, Heating, and Power Purposes.

Ser. No. 33,432. (CLASS 15. OILS AND GREASES NOT INTENDED FOR FOOD.) STANDARD OIL CO. OF NEW YORK, New York, N. Y. Filed Mar. 17, 1908.



Particular description of goods.—Refined Petroleum for Illuminating, Heating, and Power Purposes.

Ser. No. 33,434. (CLASS 37. PAPER AND STATIONERY.) GEORGE B. HURD & CO., New York, N. Y. Filed Mar. 17, 1908. Used ten years.



Particular description of goods.—Writing-Paper and Envelops.

Ser. No. 33,435. (CLASS 37. PAPER AND STATIONERY.) GEORGE B. HURD & CO., New York, N. Y. Filed Mar. 17, 1908.

XXV

Particular description of goods.—Writing-Paper and Envelops.

Ser. No. 33,440. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) PE CO POP CO. OF BALTIMORE CITY, Baltimore, Md. Filed Mar. 17, 1908.

PE·CO·POP

Particular description of goods.—A Confection Comprising a Combination of Nuts, Popcorn, and Syrup.

Ser. No. 33,450. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE RHINALGEN COMPANY, New York, N. Y. Filed Mar. 18, 1908.

RHINALGEN

Particular description of goods.—Alkaline Antiseptic Solutions.

Ser. No. 33,482. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) MARY A. ZALEWSKI, Detroit, Mich. Filed Mar. 20, 1908.

O-SO-RO

Particular description of goods.—Salves.

Ser. No. 33,510. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS, NOT INCLUDING ELECTRICAL APPARATUS.) ALICE JACKSON, St. Paul, Minn. Filed Mar. 21, 1908.

Hickory

Particular description of goods.—Incandescent Gas-Mantles.

Ser. No. 33,519. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) NATIONAL FILE & TOOL COMPANY, Philadelphia, Pa. Filed Mar. 21, 1908.

VIXEN

Particular description of goods.—Files.

Ser. No. 33,570. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THREEFOOT BROS. & Co, Meridian, Miss. Filed Mar. 24, 1908.



Particular description of goods.—Wheat-Flour.

Ser. No. 33,571. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THREEFOOT BROS. & Co, Meridian, Miss. Filed Mar. 24, 1908.



Particular description of goods.—Wheat-Flour.

Ser. No. 33,573. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THREEFOOT BROS. & Co, Meridian, Miss. Filed Mar. 24, 1908.



Particular description of goods.—Wheat-Flour.

Ser. No. 33,585. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE ZONA TOILET COMPANY, Wichita, Kans. Filed Mar. 24, 1908.



Particular description of goods.—Face-Pomade, Salve for the Lips and Cheeks, and Eyebrow-Pencils.

Ser. No. 33,593. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ASHER BRAKELEY, Bordentown, N. J. Filed Mar. 24, 1908.



Particular description of goods.—Canned Vegetables.

Ser. No. 33,616. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) RICHARD RAY, Kansas City, Mo. Filed Mar. 25, 1908. Used ten years.

EMERSON'S
COMPOUND EXTRACT OF
Honduras
SARSAPARILLA

Particular description of goods.—A Remedy for Rheumatism, Catarrh, Indigestion, Dyspepsia, Kidney and Liver Complaints, Female Weakness, Malaria, Sick and Nervous Headache, Syphilitic Afflictions, and Blood Impurities.

Ser. No. 33,619. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) RED CIRCLE PILL COMPANY, Lexington, Ky. Filed Mar. 25, 1908.

THE RED CIRCLE

The rim of the circle being red.

Particular description of goods.—Remedies for Diseases of Skin and Liver, a Blood-Purifier, a Tonic for General Debility, a Liniment, and a Worm-Remover.

Ser. No. 33,622. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) SPARKS MILLING COMPANY, Alton, Ill. Filed Mar. 25, 1908.

TAURUS

Particular description of goods.—Wheat-Flour.

Ser. No. 33,698. (CLASS 24. LAUNDRY APPLIANCES AND MACHINES.) WAXO MANUFACTURING COMPANY, Newark, N. J. Filed Mar. 27, 1908.

WAXO

Particular description of goods.—Waxing-Pads.

Ser. No. 33,714. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ROBT. LEE HATCH, New York, N. Y. Filed Mar. 28, 1908.

SALTO

Particular description of goods.—Nuts.

Ser. No. 33,715. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ROBT. LEE HATCH, New York, N. Y. Filed Mar. 28, 1908.

Hatch

Particular description of goods.—Nuts.

TRADE-MARKS

REGISTERED APRIL 28, 1908.

68,705. PIGSKIN. A. C. LAWRENCE LEATHER CO., Boston, Mass.
Filed January 10, 1908. Serial No. 32,172. PUBLISHED FEBRUARY 25, 1908.

68,706. FURNITURE AND METAL POLISH. SEYMOUR W. BONSALL, New York, N. Y.
Filed November 14, 1907. Serial No. 31,177. PUBLISHED FEBRUARY 25, 1908.

68,707. SOAPS AND WASHING-POWDERS. FRANK GAIUS BURKE, New York, N. Y.
Filed December 17, 1907. Serial No. 31,774. PUBLISHED FEBRUARY 25, 1908.

68,708. SOAP POWDERS. COLGATE & CO., New York, New York.
Filed December 27, 1907. Serial No. 31,939. PUBLISHED FEBRUARY 25, 1908.

68,709. SOAP AND SOAP POWDERS. COLGATE & CO., New York, N. Y.
Filed January 14, 1908. Serial No. 32,220. PUBLISHED FEBRUARY 25, 1908.

68,710. STARCH SIZE FOR TEXTILE MANUFACTURES. ROBERT W. NEFF, Boston, Mass.
Filed January 10, 1908. Serial No. 32,166. PUBLISHED FEBRUARY 25 1908.

68,711. STARCH SIZE FOR TEXTILE MANUFACTURES. ROBERT W. NEFF, Boston, Mass.
Filed January 10, 1908. Serial No. 32,167. PUBLISHED FEBRUARY 25, 1908.

68,712. METAL-POLISH. RECKITT & SONS LIMITED, Hull, England.
Filed December 13, 1907. Serial No. 31,709. PUBLISHED FEBRUARY 25, 1908.

68,713. COAL AND COKE. THE ST. LOUIS, ROCKY MOUNTAIN & PACIFIC COMPANY, Raton, N. Mex. Ter.
Filed January 2, 1908. Serial No. 32,033. PUBLISHED FEBRUARY 25, 1908.

68,714. COAL. THE ST. LOUIS, ROCKY MOUNTAIN & PACIFIC COMPANY, Raton, N. Mex. Ter.
Filed January 2, 1908. Serial No. 32,034. PUBLISHED FEBRUARY 25, 1908.

68,715. COKE. THE ST. LOUIS, ROCKY MOUNTAIN & PACIFIC COMPANY, Raton, N. Mex. Ter.
Filed January 2, 1908. Serial No. 32,035. PUBLISHED FEBRUARY 25, 1908.

68,716. PIN-TICKETS. A. KIMBALL CO., New York, N. Y.
Filed January 2, 1908. Serial No. 32,013. PUBLISHED FEBRUARY 25, 1908.

68,717. WRITING-PAPER, WRITING TABLETS AND PADS, AND ENVELOPS. THE AMERICAN NEWS COMPANY, New York, N. Y.
Filed December 23, 1907. Serial No. 31,894. PUBLISHED FEBRUARY 25, 1908.

68,718. RAZORS. AUTOMATIC UTILITIES COMPANY, New York, N. Y.
Filed December 27, 1907. Serial No. 31,938. PUBLISHED FEBRUARY 25, 1908.

68,719. FINE WRITING-PAPER. B. D. RISING PAPER COMPANY, Housatonic, Mass.
Filed December 20, 1907. Serial No. 31,854. PUBLISHED FEBRUARY 25, 1908.

68,720. CERTAIN TOOLS. THE CINCINNATI TOOL CO., Norwood, Ohio.
Filed August 20, 1906. Serial No. 21,678. PUBLISHED FEBRUARY 25, 1908.

68,721. CERTAIN HAND-TOOLS. THE CRONK & CARRIER MFG. CO., Elmira, N. Y.
Filed December 13, 1907. Serial No. 31,701. PUBLISHED FEBRUARY 25, 1908.

68,722. GINGER-ALE. WM. L. DELLHEIM & CO., Birmingham, Ala.
Filed January 2, 1908. Serial No. 32,000. PUBLISHED FEBRUARY 25, 1908.

68,723. LEAD-PENCILS AND COLORED PENCILS. A. W. FABER, Stein, near Nuremberg, and Berlin, Germany.
Filed May 16, 1906. Serial No. 19,597. PUBLISHED FEBRUARY 25, 1908.

68,724. CERTAIN STATIONERY. A. W. FABER, Stein, near Nuremberg, and Berlin, Germany.
Filed June 22, 1906. Serial No. 20,481. PUBLISHED FEBRUARY 25, 1908.

68,725. BOTTLED SPRING-WATER. ALFRED PAUL GARDINER, New York, N. Y.
Filed January 15, 1908. Serial No. 32,223. PUBLISHED FEBRUARY 25, 1908.

68,726. WRITING-PAPER. J. W. BUTLER PAPER CO., Chicago, Ill.
Filed July 8, 1907. Serial No. 28,643. PUBLISHED FEBRUARY 25, 1908.

68,727. LEDGER-PAPER, BOND-PAPER, AND DRAWING-PAPER. THE KEUFFEL & ESSER COMPANY, Hoboken, N. J.
Filed January 2, 1908. Serial No. 31,997. PUBLISHED FEBRUARY 25, 1908.

68,728. CERTAIN TOOLS AND TOOL-HANDLES. MOORE & HANDLEY HARDWARE COMPANY, Birmingham, Ala.
Filed October 17, 1907. Serial No. 30,640. PUBLISHED FEBRUARY 25, 1908.

68,729. CERTAIN TOOLS. MOORE & HANDLEY HARDWARE COMPANY, Birmingham, Ala.
Filed October 17, 1907. Serial No. 30,641. PUBLISHED FEBRUARY 25, 1908.

68,730. CERTAIN CUTLERY. MOORE & HANDLEY HARDWARE COMPANY, Birmingham, Ala.
Filed October 17, 1907. Serial No. 30,642. PUBLISHED FEBRUARY 25, 1908.

68,731. CERTAIN TOOLS. PETER STUBS LIMITED, Warrington and Rotherham, England.
Filed May 29, 1905. Serial No. 6,945. PUBLISHED FEBRUARY 25, 1908.

68,732. CERTAIN TOOLS. PETER STUBS LIMITED, Warrington and Rotherham, England.
Filed May 29, 1905. Serial No. 6,946. PUBLISHED FEBRUARY 25, 1908.

68,733. RAZORS, KNIVES, SCISSORS, AND SHEARS. SCHWABACHER HARDWARE CO., Seattle, Wash.
Filed December 28, 1907. Serial No. 31,963. PUBLISHED FEBRUARY 25, 1908.

68,734. CERTAIN EDGE-TOOLS. SCHWABACHER HARDWARE CO., Seattle, Wash.
Filed December 28, 1907. Serial No. 31,964. PUBLISHED FEBRUARY 25, 1908.

68,735. NON-ALCOHOLIC LIQUID FLAVORING FOR BEVERAGES. HAROLD A. SEYD, Maywood, N. J.
Filed November 18, 1907. Serial No. 31,223. PUBLISHED FEBRUARY 25, 1908.

68,736. NON-ALCOHOLIC LIQUID FLAVORING FOR BEVERAGES. HAROLD A. SEYD, Maywood, N. J.
Filed November 18, 1907. Serial No. 31,224. PUBLISHED FEBRUARY 25, 1908.

68,737. GINGER-ALE. W. T. WAGNER'S SONS, Cincinnati, Ohio.
Filed December 13, 1907. Serial No. 31,700. PUBLISHED FEBRUARY 25, 1908.

68,738. LUBRICANTS CONTAINING GRAPHITE AND WATER. EDWARD GOODRICH ACHESON, Niagara Falls, N. Y.
Filed November 8, 1907. Serial No. 31,075. PUBLISHED FEBRUARY 25, 1908.

68,739. LUBRICANTS CONTAINING OIL AND GRAPHITE. EDWARD GOODRICH ACHESON, Niagara Falls, N. Y.
Filed November 8, 1907. Serial No. 31,076. PUBLISHED FEBRUARY 25, 1908.

68,740. BEER. JOHN BUEHLER, Steubenville, Ohio.
Filed October 26, 1906. Serial No. 22,922. PUBLISHED FEBRUARY 25, 1908.

68,741. CANDY. HALSTED BURNET, St. Louis, Mo.
Filed November 23, 1907. Serial No. 31,327. PUBLISHED FEBRUARY 25, 1908.

68,742. CANDIES. DAVIES-WILLIAMS COMPANY, Akron, Ohio.
Filed January 4, 1908. Serial No. 32,059. PUBLISHED FEBRUARY 25, 1908.

68,743. CATHARTIC PILLS. FOSTER-MCCLELLAN COMPANY, Buffalo, N. Y.
Filed December 18, 1907. Serial No. 31,818. PUBLISHED FEBRUARY 25, 1908.

68,744. SKIN-LOTION AND TOILET CREAM. FRANK CHESTER FOWLER, New London, Conn.
Filed January 13, 1908. Serial No. 32,200. PUBLISHED FEBRUARY 25, 1908.

68,745. CERTAIN AROMATIC LIQUID. WILLIAM A. HINCKLE, Peoria, Ill.
Filed November 18, 1907. Serial No. 31,239. PUBLISHED FEBRUARY 25, 1908.

68,746. CONDENSED SKIMMED MILK. HIRES CONDENSED MILK CO., Philadelphia, Pa.
Filed December 28, 1907. Serial No. 31,954. PUBLISHED FEBRUARY 25, 1908.

68,747. CERTAIN TOILET PREPARATIONS. HELENE LECLAIRE, New York, N. Y.
Filed April 27, 1907. Serial No. 26,963. PUBLISHED FEBRUARY 25, 1908.

68,748. CANDY. THE LIPPS-MURRACH CO. OF BALTIMORE CITY, Baltimore, Md.
Filed December 21, 1907. Serial No. 31,872. PUBLISHED FEBRUARY 25, 1908.

68,749. REMEDIES FOR DYSPEPSIA AND DISEASES OF THE BLOOD. LONG ISLAND PHARMACEUTICAL CO., New York, N. Y.
Filed September 5, 1907. Serial No. 29,762. PUBLISHED FEBRUARY 25, 1908.

68,750. CANDY. MANUFACTURING COMPANY OF AMERICA, Philadelphia, Pa.
Filed December 18, 1907. Serial No. 31,807. PUBLISHED FEBRUARY 25, 1908.

68,751. CANDY. MANUFACTURING COMPANY OF AMERICA, Philadelphia, Pa.
Filed December 18, 1907. Serial No. 31,808. PUBLISHED FEBRUARY 25, 1908.

68,752. CERTAIN LUBRICANTS AND LUBRICATING MATERIAL. FELICIA V. MORSE, Canton, Mass.
Filed September 24, 1906. Serial No. 22,270. PUBLISHED FEBRUARY 25, 1908.

68,753. EVAPORATED AND CONDENSED MILK. THE PAGE MILK COMPANY, Ubly, Mich.
Filed January 7, 1908. Serial No. 32,119. PUBLISHED FEBRUARY 25, 1908.

68,754. CONDENSED MILK AND CHEESE. RIDENOUR-BAKER GROCERY CO., Kansas City, Mo.
Filed December 27, 1907. Serial No. 31,942. PUBLISHED FEBRUARY 25, 1908.

68,755. CANDIES. JOSHUA GEORGE SMITH, St. Paul, Minn.
Filed September 4, 1906. Serial No. 21,881. PUBLISHED FEBRUARY 25, 1908.

68,756. ALE. SPRINGFIELD BREWERIES COMPANY, Springfield, Mass.
Filed January 2, 1908. Serial No. 31,995. PUBLISHED FEBRUARY 25, 1908.

68,757. CHOCOLATES AND CANDIES. STUYVESANT CHOCOLATE COMPANY, New York, N. Y.
Filed January 13, 1908. Serial No. 32,239. PUBLISHED FEBRUARY 25, 1908.

68,758. CERTAIN METAL PLATES AND SHEETS. AMERICAN SHEET & TIN PLATE CO., Pittsburg, Pa.
Filed November 30, 1907. Serial No. 31,490. PUBLISHED FEBRUARY 25, 1908.

68,759. WINE. CALIFORNIA WINE ASSOCIATION, San Francisco, Cal.
Filed January 18, 1908. Serial No. 32,295. PUBLISHED FEBRUARY 25, 1908.

68,760. VALVES AND LOW-WATER INDICATORS. DETROIT LUBRICATOR CO., Detroit, Mich.
Filed December 14, 1907. Serial No. 31,720. PUBLISHED FEBRUARY 25, 1908.

68,761. HYDRAULIC JACKS. WILLIAM M. DUDGEON, New York, N. Y., executor of Richard Dudgeon, deceased.
Filed February 11, 1907. Serial No. 25,230. PUBLISHED FEBRUARY 25, 1908.

68,762. WINE. FATHERLAND WINE CO., St. Paul, Minn.
Filed June 17, 1907. Serial No. 28,208. PUBLISHED FEBRUARY 25, 1908.

68,763. ROASTED COFFEE. EDWIN J. GILLIES & CO., New York, N. Y.
Filed January 16, 1908. Serial No. 32,248. PUBLISHED FEBRUARY 25, 1908.

68,764. HOISTING-ENGINE DRUMS. THE HAYWARD COMPANY, New York, N. Y.
Filed May 16, 1905. Serial No. 5,798. PUBLISHED FEBRUARY 25, 1908.

68,765. HOISTING-ENGINE DRUMS. THE HAYWARD COMPANY, New York, N. Y.
Filed May 16, 1905. Serial No. 5,799. PUBLISHED FEBRUARY 25, 1908.

68,766. SEWING-MACHINE NEEDLES. ILLINOIS SEWING MCH. CO., Chicago, Ill.
Filed December 2, 1907. Serial No. 31,513. PUBLISHED FEBRUARY 25 1908.

68,767. ETCHED ZINC PLATES. HENRY A. MUELLER, Chicago, Ill.
Filed December 16, 1907. Serial No. 31,759. PUBLISHED FEBRUARY 25, 1908.

68,768. STEAM-BOILER INJECTORS. PENBERTHY INJECTOR COMPANY, Detroit, Mich.
Filed December 14, 1907. Serial No. 31,727. PUBLISHED FEBRUARY 25, 1908.

68,769. TOPS. THE STROBEL & WILKEN CO., New York, N. Y.
Filed January 14, 1908. Serial No. 32,208. PUBLISHED FEBRUARY 25, 1908.

68,770. TACKLE-BLOCKS AND SHEAVES. WESTERN BLOCK CO., Lockport, N. Y.
Filed January 18, 1908. Serial No. 32,299. PUBLISHED FEBRUARY 25, 1908.

68,771. FISHING-LINES. WILLIAM SHAKESPEARE JR. COMPANY, Kalamazoo, Mich.
Filed January 13, 1908. Serial No. 32,192. PUBLISHED FEBRUARY 25, 1908.

68,772. CERTAIN VALVES AND VALVE-FITTINGS. HENRY W. WORTCHE, Baltimore, Md.
Filed January 3, 1908. Serial No. 32,042. PUBLISHED FEBRUARY 25, 1908.

68,773. CANNED FRUITS AND VEGETABLES. THE BURT OLNEY CANNING CO., Oneida and Albion, N. Y.
Filed July 22, 1907. Serial No. 28,960. PUBLISHED SEPTEMBER 17, 1907.

68,774. SUBSTITUTE FOR EGGS. WILLIAM FERDINAND EBERLE, Zurich, Switzerland.
Filed September 5, 1907. Serial No. 29,757. PUBLISHED FEBRUARY 25, 1908.

68,775. SUBSTITUTE FOR EGGS. WILLIAM FERDINAND EBERLE, Zurich, Switzerland.
Filed September 5, 1907. Serial No. 29,758. PUBLISHED FEBRUARY 25, 1908.

68,776. HERMETICALLY-SEALED FRUITS. GRIFFIN & SKELLEY COMPANY, San Francisco, Cal.
Filed April 24, 1905. Serial No. 2,815. PUBLISHED FEBRUARY 25, 1908.

68,777. HERMETICALLY-SEALED FRUITS. GRIFFIN & SKELLEY CO., San Francisco, Cal.
Filed April 24, 1905. Serial No. 2,816. PUBLISHED FEBRUARY 25, 1908.

68,778. DRIED FRUITS AND EVAPORATED FRUITS. GRIFFIN & SKELLEY CO., San Francisco, Cal.
Filed May 8, 1905. Serial No. 4,747. PUBLISHED FEBRUARY 25, 1908.

68,779. CERTAIN FRUITS AND VEGETABLES. GRIFFIN & SKELLEY CO., San Francisco, Cal.
Filed September 14, 1905. Serial No. 12,572. PUBLISHED FEBRUARY 25, 1908.

68,780. CERTAIN FOOD FLAVORING AND COATING. JAMES M. HERRON, New York, N. Y., assignor, by mesne assignments, to Ceylon Cocoa & Coffee Company, a Corporation of New York.
Filed January 6, 1906. Serial No. 15,953. PUBLISHED FEBRUARY 25, 1908.

68,781. GELATIN. S. LAPRÉVOTE & CO., St. Fons and Lyon, France, and New York, N. Y.
Filed September 19, 1905. Serial No. 12,786. PUBLISHED FEBRUARY 25, 1908.

68,782. CANDIES. NATIONAL CANDY COMPANY, Jersey City, N. J., and St. Louis, Mo.
Filed May 15, 1907. Serial No. 27,380. PUBLISHED JUNE 18, 1907.

68,783. VERMUTH. NOILLY PRAT & CIE., Marseille, France.
Filed November 30, 1907. Serial No. 31,499. PUBLISHED FEBRUARY 25, 1908.

68,784. CIGARETTES. PHILIP MORRIS & CO., LTD., New York, N. Y.
Filed January 23, 1908. Serial No. 32,390. PUBLISHED FEBRUARY 25, 1908.

68,785. RAISINS AND DRIED FRUITS. WILLIS PIKE, Fresno, Cal.
Filed December 30, 1907. Serial No. 31,975. PUBLISHED FEBRUARY 25, 1908.

68,786. CERTAIN FOODS. SCHNULL & CO., Indianapolis, Ind.
Filed April 29, 1905. Serial No. 3,599. PUBLISHED DECEMBER 11, 1906.

68,787. CIGARETTES. SOCIETE ANONYME LE KHEDIVE, Brussels, Belgium, and Paris, France.
Filed December 23, 1907. Serial No. 31,902. PUBLISHED FEBRUARY 18, 1908.

68,788. CIGARETTES. SOCIETE ANONYME LE KHEDIVE, Brussels, Belgium, and Paris, France.
Filed December 23, 1907. Serial No. 31,903. PUBLISHED FEBRUARY 18, 1908.

68,789. WHISKY. THE UNION DISLL'G CO., Cincinnati, Ohio.
Filed May 15, 1906. Serial No. 19,546. PUBLISHED SEPTEMBER 25, 1906.

68,790. CANNED FRUITS AND VEGETABLES. A. J. WENHAM'S SONS, Cleveland, Ohio.
Filed September 3, 1907. Serial No. 29,743. PUBLISHED FEBRUARY 25, 1908.

68,791. SPOOL-COTTON, SEWING-COTTON, AND THREAD. THE AMERICAN THREAD COMPANY, Jersey City, N. J.
Filed January 7, 1908. Serial No. 32,109. PUBLISHED FEBRUARY 25 1908.

68,792. SPOOL-COTTON, SEWING-COTTON, KNITTING AND EMBROIDERY COTTON AND THREAD. THE AMERICAN THREAD COMPANY, Jersey City, N. J.
Filed January 7, 1908. Serial No. 32,110. PUBLISHED FEBRUARY 25 1908.

68,793. SPOOL-COTTON, SEWING-COTTON, AND THREAD. THE AMERICAN THREAD COMPANY, Jersey City, N. J.
Filed January 7, 1908. Serial No. 32,112. PUBLISHED FEBRUARY 25, 1908.

68,794. SPOOL-COTTON, SEWING-COTTON, KNITTING YARNS AND THREAD. THE AMERICAN THREAD COMPANY, Jersey City, N. J.
Filed January 7, 1908. Serial No. 32,115. PUBLISHED FEBRUARY 25 1908.

68,795. PORTLAND CEMENT. BERKSHIRE WHITE PORTLAND CEMENT COMPANY, Portland, Me.; Clayton, Mass., and New York, N. Y.
Filed January 10, 1908. Serial No. 32,156. PUBLISHED FEBRUARY 25, 1908.

68,796. WHEAT-FLOUR. THE COLUMBIA FLOURING MILLS COMPANY, LTD., Enderby, British Columbia, Canada.
Filed August 1, 1907. Serial No. 29,165. PUBLISHED FEBRUARY 25, 1908.

68,797. LEATHER-DRESSING AND LEATHER-BLACKING. DAIMLER-MOTOREN-GESELLSCHAFT, Untertürkheim, near Stuttgart, Germany.
Filed July 11, 1907. Serial No. 28,710. PUBLISHED FEBRUARY 25, 1908.

68,798. REFRIGERATING-DECANTERS. ARTHUR EUGÈNE FRANTZ, Verdun-sur-Meuse, France.
Filed November 27, 1907. Serial No. 31,392. PUBLISHED FEBRUARY 25, 1908.

68,799. CERTAIN GLASSWARE. GILL BROTHERS COMPANY, Steubenville, Ohio.
Filed December 23, 1907. Serial No. 31,892. PUBLISHED FEBRUARY 25, 1908.

68,800. LARD AND CERTAIN MEATS. JOHN HOFFMANN'S SONS, Cincinnati, Ohio, assignor to The John Hoffmann's Sons Company, of Cincinnati, Ohio, a Corporation of Ohio.
Filed October 26, 1907. Serial No. 30,813. PUBLISHED FEBRUARY 25, 1908.

68,801. MORTAR. IDEAL CONCRETE LIMITED, Montreal, Quebec, Canada.
Filed October 8, 1907. Serial No. 30,492. PUBLISHED FEBRUARY 25, 1908.

68,802. UNDERSHIRTS, DRAWERS, HOSE, AND STOCKINGS. J. A. LAMY MANUFACTURING COMPANY, Sedalia, Mo.
Filed December 20, 1907. Serial No. 31,856. PUBLISHED FEBRUARY 25, 1908.

68,803. POLISH FOR PIANOS, FURNITURE, AND FLOORS. PHILIP LEVI, Philadelphia, Pa.
Filed December 14, 1907. Serial No. 31,724. PUBLISHED FEBRUARY 25, 1908.

68,804. CEMENT FOR FILLING FISSURES IN METALS. LIEBERT & MEYERHOF, Hamburg, Germany.
Filed August 6, 1907. Serial No. 29,255. PUBLISHED FEBRUARY 25, 1908.

68,805. RAZORS AND RAZOR-BLADES. ROLKA & KLEIN, New York, N. Y.
Filed December 17, 1907. Serial No. 31,783. PUBLISHED FEBRUARY 11, 1908.

68,806. BOOT AND SHOE POLISH. FREDERICK AVARD SECORD, St. John, New Brunswick, Canada.
Filed December 11, 1907. Serial No. 31,670. PUBLISHED FEBRUARY 25, 1908.

68,807. WHEAT-FLOUR. STANARD-TILTON MILLING COMPANY, St. Louis, Mo.
Filed August 29, 1907. Serial No. 29,668. PUBLISHED FEBRUARY 25, 1908.

68,808. WHEAT-FLOUR. W. H. STOKES MILLING CO., Watertown, S. D.
Filed December 4, 1907. Serial No. 31,549. PUBLISHED FEBRUARY 25, 1908.

68,809. WHEAT-FLOUR. W. H. STOKES MILLING CO., Watertown, S. D.
Filed December 4, 1907. Serial No. 31,550. PUBLISHED FEBRUARY 25, 1908.

68,810. WHEAT-FLOUR. W. H. STOKES MILLING CO., Watertown, S. D.
Filed December 4, 1907. Serial No. 31,551. PUBLISHED FEBRUARY 25, 1908.

68,811. WHEAT-FLOUR. W. H. STOKES MILLING CO., Watertown, S. D.
Filed December 4, 1907. Serial No. 31,552. PUBLISHED FEBRUARY 25, 1908.

68,812. WHEAT-FLOUR. W. H. STOKES MILLING CO., Watertown, S. D.
Filed December 4, 1907. Serial No. 31,555. PUBLISHED FEBRUARY 25, 1908.

68,813. WHEAT-FLOUR. W. J. JENNISON COMPANY, Minneapolis, Minn.
Filed January 18, 1908. Serial No. 32,306. PUBLISHED FEBRUARY 25, 1908.

68,814. CLOTHES-WRINGERS. THE AMERICAN WRINGER COMPANY, Providence, R. I., and New York, N. Y.
Filed January 16, 1908. Serial No. 32,270. PUBLISHED FEBRUARY 25, 1908.

68,815. CLOTHES-WRINGERS. THE AMERICAN WRINGER COMPANY, Providence, R. I., and New York, N. Y.
Filed January 16, 1908. Serial No. 32,271. PUBLISHED FEBRUARY 25, 1908.

68,816. ELECTRIC SWITCHES. THE AUTO-SAFETY ELECTRIC SWITCH CO., Montreal, Quebec, Canada.
Filed November 12, 1906. Serial No. 23,290. PUBLISHED FEBRUARY 25, 1908.

68,817. HAT-PINS. THE CASTLE BRAID COMPANY, New York, N. Y.
Filed November 2, 1907. Serial No. 30,996. PUBLISHED FEBRUARY 25, 1908.

68,818. SUSPENDERS AND NECKTIES. DRUCK BROTHERS, St. Paul, Minn.
Filed November 25, 1907. Serial No. 31,358. PUBLISHED FEBRUARY 25, 1908.

68,819. DRY BATTERIES. ELECTRIC APPLIANCE COMPANY, Chicago, Ill.
Filed September 26, 1905. Serial No. 13,031. PUBLISHED FEBRUARY 25, 1908.

68,820. CERTAIN PRECIOUS-METAL WARE. ORIVIT ACTIENGESELLSCHAFT, Cologne-Braunsfeld, Germany.
Filed December 23, 1905. Serial No. 15,608. PUBLISHED FEBRUARY 25, 1908.

68,821. CERTAIN PRECIOUS-METAL WARE. ORIVIT ACTIENGESELLSCHAFT, Cologne-Braunsfeld, Germany.
Filed December 23, 1905. Serial No. 15,609. PUBLISHED FEBRUARY 25, 1908.

68,822. INSULATING MATERIALS FOR ELECTRICAL PURPOSES. RHADONIT-WERKE GESELLSCHAFT MIT BESCHRÄNKTER HAFTUNG, Dohna, near Dresden, Germany.
Filed June 10, 1907. Serial No. 28,011. PUBLISHED FEBRUARY 25, 1908.

68,823. ELECTRIC INCANDESCENT LAMPS. ST. MARY'S INCANDESCENT LAMP COMPANY, St. Marys, Pa.
Filed February 24, 1906. Serial No. 17,321. PUBLISHED FEBRUARY 25, 1908.

68,824. ELECTRIC INCANDESCENT LAMPS. ST. MARY'S INCANDESCENT LAMP CO., St. Marys, Pa.
Filed February 24, 1906. Serial No. 17,323. PUBLISHED FEBRUARY 25, 1908.

68,825. AUTOMOBILE, CARRIAGE, AND WAGON SPRINGS. SUPPLEMENTARY SPIRAL SPRING COMPANY, St. Louis, Mo.
Filed December 7, 1907. Serial No. 31,614. PUBLISHED FEBRUARY 25, 1908.

68,826. CERTAIN AGRICULTURAL MACHINERY. BATEMAN MANUFACTURING COMPANY, Grenloch, N. J.
Filed June 6, 1905. Serial No. 7,540. PUBLISHED FEBRUARY 25, 1908.

68,827. TEXTILE FABRICS COATED WITH WATERPROOF MATERIAL. THE C. E. CONOVER CO., New York, N. Y.
Filed December 24, 1907. Serial No. 31,907. PUBLISHED FEBRUARY 25, 1908.

68,828. CERTAIN ELECTRICAL APPARATUS AND MACHINES. DAIMLER-MOTOREN-GESELLSCHAFT, Untertürkheim, near Stuttgart, Germany.
Filed July 11, 1907. Serial No. 28,713. PUBLISHED FEBRUARY 25, 1908.

68,829. ASBESTOS ENGINE AND MACHINERY PACKING. H. W. JOHNS-MANVILLE COMPANY, New York, N. Y.
Filed December 14, 1907. Serial No. 31,729. PUBLISHED FEBRUARY 25, 1908.

68,830. MONTHLY PERIODICAL. JNO. C. HAGAN, Richmond, Va.
Filed January 18, 1908. Serial No. 32,291. PUBLISHED FEBRUARY 25, 1908.

68,831. TIRE-REPAIR PLUGS. RALPH P. KINNEY, Huntington, N. Y.
Filed August 25, 1906. Serial No. 21,744. PUBLISHED FEBRUARY 25, 1908.

68,832. CERTAIN ELECTRICAL APPARATUS AND MACHINES. MANHATTAN ELECTRICAL SUPPLY COMPANY, Jersey City, N. J.; New York, N. Y., and Chicago, Ill.
Filed December 21, 1907. Serial No. 31,873. PUBLISHED FEBRUARY 25, 1908.

68,833. HAIR-NETS AND HAIR-ROLLS. MORITZ KALMUS & NEFFEN, New York, N. Y.
Filed January 9, 1908. Serial No. 32,149. PUBLISHED FEBRUARY 25, 1908.

68,834. CERTAIN LEATHER GOODS. GEORGE A. RUTHERFORD, Saranac Lake, N. Y.
Filed November 14, 1907. Serial No. 31,174. PUBLISHED FEBRUARY 25 1908.

68,835. SASH AND HAIR BOW SETS, AND HAIR-BOW SETS. SMITH & KAUFMANN, New York, N. Y.
Filed December 20, 1907. Serial No. 31,860. PUBLISHED FEBRUARY 25, 1908.

68,836. GARMENT-SUPPORTERS, HOSE-SUPPORTERS, AND ARM-BANDS. A. STEIN & COMPANY, Chicago, Ill.
Filed September 12, 1907. Serial No. 29,890. PUBLISHED FEBRUARY 25, 1908.

68,837. LADIES' NECKTIES. WILLIAM TREVOR, New York, N. Y.
Filed December 23, 1907. Serial No. 31,900. PUBLISHED FEBRUARY 25, 1908.

68,838. LADIES' NECKTIES. WILLIAM TREVOR, New York, N. Y.
Filed December 23, 1907. Serial No. 31,901. PUBLISHED FEBRUARY 25, 1908.

68,839. RUBBER AND ASBESTOS PACKING. UNGARISCHE GUMMIWAARENFABRIKS ACTIENGESELLSCHAFT, Budapest, Austria-Hungary.
Filed January 14, 1908. Serial No. 32,213. PUBLISHED FEBRUARY 25, 1908.

68,840. HOSE-SUPPORTERS. THE WARNER BROS. CO., Bridgeport, Conn.
Filed January 17, 1908. Serial No. 32,275. PUBLISHED FEBRUARY 25, 1908.

68,841. WATERPROOF COLLARS AND CUFFS. CAPITAL COLLAR & CUFF CO., Lincoln, Nebr.
Filed December 17, 1907. Serial No. 31,785. PUBLISHED FEBRUARY 18, 1908.

68,842. CERTAIN CLOTHING. DAIMLER-MOTOREN-GESELLSCHAFT, Untertürkheim, near Stuttgart, Germany.
Filed July 11, 1907. Serial No. 28,715. PUBLISHED FEBRUARY 25, 1908.

68,843. LADIES' WALKING-SKIRTS AND PETTICOATS. DAVENPORT WOOLEN MILLS CO., Davenport, Iowa.
Filed November 11, 1907. Serial No. 31,132. PUBLISHED FEBRUARY 25, 1908.

68,844. LEATHER BOOTS, SHOES, AND SLIPPERS, PARKER HOLMES & COMPANY, Boston, Mass.
Filed January 2, 1908. Serial No. 32,029. PUBLISHED FEBRUARY 25, 1908.

68,845. CERTAIN DENTAL INSTRUMENTS, MACHINES, AND SUPPLIES. THE S. S. WHITE DENTAL MFG. CO., Philadelphia, Pa.; Chicago, Ill.; New York, Brooklyn, and Rochester, N. Y.; Boston, Mass.; Altanta, Ga.; New Orleans, La.; Toronto, Canada; Buenos Ayres, Argentina; Berlin, Germany, and St. Petersburg, Russia.
Filed July 6, 1905. Serial No. 9,822. PUBLISHED FEBRUARY 25, 1908.

68,846. CRYSTALLINE GOLD TOOTH-FILLING. THE S. S. WHITE DENTAL MFG. CO., Philadelphia, Pa.; Chicago, Ill.; New York, Brooklyn, and Rochester, N. Y.; Boston, Mass.; Atlanta, Ga.; New Orleans, La.; Toronto, Canada; Buenos Ayres, Argentina; Berlin, Germany, and St. Petersburg, Russia.
Filed September 21, 1905. Serial No. 12,867. PUBLISHED FEBRUARY 25, 1908.

68,847. LEATHER AND CANVAS BOOTS AND SHOES. SOMMER & KAUFMANN, INC., San Francisco, Cal.
Filed January 8, 1908. Serial No. 32,135. PUBLISHED FEBRUARY 25, 1908.

68,848. PLEASURE-RAILWAYS AND ROLLING-STOCK FOR THE SAME. W. F. MANGELS COMPANY, New York N. Y.
Filed December 14, 1907. Serial No. 31,726. PUBLISHED FEBRUARY 25, 1908.

68,849. GELATIN. S. LAPRÉVOTE & Co., St. Fons and Lyon, France, and New York, N. Y.
Filed September 19, 1905. Serial No. 12,787. PUBLISHED FEBRUARY 25, 1908.

68,850. MAPLE-SYRUP AND MAPLE-SUGAR. WILLIAM H. MINER, Chicago, Ill., and Chazy, N. Y.
Filed December 18, 1907. Serial No. 31,812. PUBLISHED FEBRUARY 25, 1908.

68,851. SAFETY-PINS. THE PLUME & ATWOOD MFG. CO., Waterbury, Conn., and New York, N. Y.
Filed January 20, 1908. Serial No. 32,327. PUBLISHED FEBRUARY 25, 1908.

68,852. PINS. THE PLUME & ATWOOD MFG. CO., Waterbury, Conn., and New York, N. Y.
Filed January 20, 1908. Serial No. 32,328. PUBLISHED FEBRUARY 25, 1908.

68,853. LEATHER BOOTS AND SHOES. W. L. DOUGLAS SHOE CO., Portland, Me.; Boston and Brockton, Mass.; New York, N. Y.; Denver, Colo.; Philadelphia, Pa., and Buffalo, N. Y.
Filed January 10, 1908. Serial No. 32,173. PUBLISHED FEBRUARY 25, 1908.

LABELS

REGISTERED APRIL 28, 1908.

14,162.—*Title:* "TEMPLE ASSOCIATION." (For Cigars.) NATIONAL TEMPLE OF LABOR, Washington, D. C. Filed March 17, 1908.

14,163.—*Title:* "NATIONAL TEMPLE." (For Cigars.) NATIONAL TEMPLE OF LABOR, Washington, D. C. Filed March 17, 1908.

14,164.—*Title:* "STAR FIVE." (For Cigars.) SCHMIDT & Co., New York, N. Y. Filed March 14, 1908.

14,165.—*Title:* "SUZANNE." (For Cigars.) SCHMIDT & Co., New York, N. Y. Filed March 26, 1908.

14,166.—*Title:* "MAJESTIC." (For Beer.) WILMANNS BROS. Co., Milwaukee, Wis. Filed March 30, 1908.

14,167.—*Title:* "NIPPER BRAND." (For Ginger-Ale.) RED ROCK SPRING WATER Co., Spring Valley, N. J. Filed April 1, 1908.

14,168.—*Title:* "COLLEGE BREAD." (For Bread.) SCHULER-SIXEAS BAKING Co., Chicago, Ill. Filed March 31, 1908.

14,169.—*Title:* "SPUD." (For Bread.) SCHULER-SIXEAS BAKING Co., Chicago, Ill. Filed March 31, 1908.

14,170.—*Title:* "THIS IS ITT." (For Medicine.) WILL S. RICHARDSON, Marietta, Ohio. Filed March 26, 1908.

14,171.—*Title:* "MEDICATED NAPTHALINE REMEDIES." (For Medicines.) THOMAS P. WITHERS, Monett, Mo. Filed December 12, 1907.

14,172.—*Title:* "FLUFFY RUFFLES STARCH." (For Laundry Starch.) INDEPENDENT STARCH COMPANY, New York, N. Y. Filed March 26, 1908.

14,173.—*Title:* "KERCHIEFS." (For Handkerchiefs.) THE ROYAL PAPER BOX M'F'G Co., Philadelphia, Pa. Filed March 20, 1908.

PRINTS

REGISTERED APRIL 28, 1908.

2,266.—*Title:* "THE TWELVE BIRTHSTONE AND WHERE FOUND." (For Birthstones.) MAXWELL & BERLET INC., Philadelphia, Pa. Filed March 26, 1908.

2,267.—*Title:* "PLAKO." (For a Dress-Fastener.) THE CLARKE SALES COMPANY, New York, N. Y. Filed March 31, 1908.

2,268.—*Title:* "GROUP DRAWING B. V. D. PRODUCTIONS." (For Men's Underwear.) ERLANGER BROS., New York, N. Y. Filed March 27, 1908.

2,269.—*Title:* "MEN'S AND BOYS' APPAREL." (For Men's and Boys' Apparel.) H. C. LYTTON, Chicago, Ill. Filed March 27, 1908.

DECISIONS

OF THE

COMMISSIONER OF PATENTS

AND OF

UNITED STATES COURTS IN PATENT CASES.

COMMISSIONER'S DECISIONS.

EX PARTE KONOLD.

APPLICATION FOR PATENT.

Decided March 21, 1908.

PRACTICE—EXAMINER BOUND BY THE DECISIONS OF THE HIGHER TRIBUNALS.

It is self evident that an Examiner should follow the decisions of the higher tribunals whether he agrees with them or not; but where the Examiner holds that a decision is not applicable to a given case the proper manner in which to have his decision reviewed is by appeal to the Examiners-in-Chief in the first instance and not by a petition to the Commissioner.

ON PETITION.

DIES FOR MAKING MATTOCKS AND SIMILAR TOOLS.

Messrs. Kay, Totten & Winter for the applicant.

MOORE, *Commissioner:*

This petition asks that the Examiner be ordered to show cause why he should not allow the present application and follow the decision of the Examiners-in-Chief in acting upon this and other applications where such decisions rule the questions involved therein.

It appears that the claims in the case cover an alleged combination of dies to be used in making mattocks and similar tools. The Examiner held that the claims were not patentable, as they covered aggregations of elements. His attention was called to the decision of the Examiners-in-Chief in the application of John M. Hansen. In this case the same Examiner rejected certain claims for alleged combinations of dies for making wheels on the ground that there was "no combinable relationship between the several sets of dies enumerated therein." On appeal his decision was reversed by the Examiners-in-Chief, who held that the claims covered true combinations.

It is urged by this applicant that the cases are on all fours and that the Examiner should be instructed to follow this decision of the Examiners-in-Chief in this and all similar cases.

It is self evident that the Examiner should follow the decisions of the higher tribunals whether he agrees with those decisions or not. It would not be proper, however, for the Commissioner to instruct the Examiner that the claims of a particular application should be allowed in view of a prior decision. The Examiner has pointed out in his statement reasons why he thinks the decision in the Hansen case is not applicable to the present case. If he is in error in this, the proper manner in which to have his decision reviewed is by appeal in the first instance to the Examiners-in-Chief.

The petition is denied.

DECISIONS OF THE U. S. COURTS.

Supreme Court of the United States.

WERCKMEISTER *v.* AMERICAN TOBACCO COMPANY.

Decided December 16, 1907.

COPYRIGHT—ACTION—SECTION 4965, REVISED STATUTES—SUIT TO RECOVER PENALTY AFTER JUDGMENT OF FORFEITURE.

After judgment of forfeiture of infringing copies of a copyrighted painting under section 4965 of the Revised Statutes (U. S. Comp. St. 1901, p. 3414) a separate action cannot be maintained to recover the penalty prescribed in said section for every infringing copy of the copyrighted painting found in the infringer's possession or sold by him, since such section contemplates but a single action in the nature of replevin, in which may be had both a forfeiture and a recovery of penalties.

Mr. Antonio Knauth for the plaintiff in error.

Mr. William A. Jenner for the defendant in error.

Mr. Justice DAY delivered the opinion of the Court.

This case was argued and submitted with *American Tobacco Company* v. *Werckmeister*, decided December 2, 1907. (See 133 O. G., 1433.)

The present action was brought to recover, under section 4965 of the Copyright Act (3 U. S. Compiled Stat., 3414), the penalties of $10 each, for 1,196 sheets of the alleged infringing publications claimed to have been found in the defendant's possession and seized by the United States marshals, under the two writs of replevin described in that suit.

Plaintiff in error, Werckmeister, offered in evidence the judgment roll in the former suit, with the pleadings and judgment, and also offered in evidence the writs and returns of the marshals for the Southern and Western Districts of New York, respectively, showing seizures of 203 copies and 993 copies; the court excluded these writs as immaterial. No other evidence being offered, the court instructed the jury to render a verdict for the defendant, and judgment was afterwards rendered accordingly upon the verdict. (138 Fed., 162.) On writ of error to the circuit court of appeals the judgment below was affirmed, (148 Fed., 1022,) and this

writ of error is prosecuted to reverse the judgment of the circuit court of appeals.

This action requires the construction of section 4965, Revised Statutes as amended (U. S. Compiled Stat., v. 3, p. 3414), which is as follows:

Sec. 4965. If any person, after the recording of the title of any map, chart, dramatic or musical composition, print, cut, engraving, or photograph, or chromo, or of the description of any painting, drawing, statue, statuary, or model or design intended to be perfected and executed as a work of the fine arts, as provided by this act, shall, within the term limited, contrary to the provisions of this act, and without the consent of the proprietor of the copyright first obtained in writing, signed in presence of two or more witnesses, engrave, etch, work, copy, print, publish, dramatize, translate or import, either in whole or in part, or by varying the main design, with intent to evade the law, or, knowing the same to be so printed, published, dramatized, translated, or imported, shall sell or expose to sale any copy of such map or other article, as aforesaid, he shall forfeit to the proprietor all the plates on which the same shall be copied, and every sheet thereof, either copied or printed, and shall further forfeit one dollar for every sheet of the same found in his possession, either printing, printed, copied, published, imported, or exposed for sale; and in case of a painting, statue or statuary, he shall forfeit ten dollars for every copy of the same in his possession, or by him sold or exposed for sale: Provided, however, That in case of any such infringement of the copyright of a photograph made from any object not a work of fine arts, the sum to be recovered in any action brought under the provisions of this section shall be not less than one hundred dollars, nor more than five thousand dollars: And, provided further, That in case of any such infringement of the copyright of a painting, drawing, statue, engraving, etching, print or model or design for a work of the fine arts or of a photograph of a work of the fine arts, the sum to be recovered in any action brought through the provisions of this section shall be not less than two hundred and fifty dollars, and not more than ten thousand dollars. One half of all the foregoing penalties shall go to the proprietors of the copyright and the other half to the use of the United States.

As with the sections of the Copyright Act under consideration in *Tobacco Company* v. *Werckmeister*, *supra*, this section has been the subject of consideration in the Federal courts, with different conclusions as to its purport and meaning. While the statute provides for the forfeiture of the plates and sheets and for the sum of $10 in case of a painting, for every copy found in the offending person's possession or sold by him, it is silent as to the kind of action to be brought, and we are left to discover the meaning of the act in this respect from a consideration of the language used, read in the light of the objects and purposes to be effected.

Obviously the statute does not provide a proceeding *in rem*, as is sometimes done in the revenue laws, for the act is leveled against *any person* who shall, contrary to its provisions, without consent, etc., engrave, work, copy, print, etc., forfeit to the proprietor the plates and sheets and a sum of money for each sheet, etc., found in his possession. This section of the statute is penal, and there should be especial care to work no extension of its provisions by construction. Statutory provisions similar to those above cited have been the subject of consideration in a number of cases in this Court. In *Backus* v. *Gould*, (7 How., 798,) it was held that there could be no recovery for publishing sheets, copyright matter, etc., unless the same were found in the possession of the defendant. In *Stevens* v. *Cady*, (2 Curtis, 200; Fed. Cases No. 13,395,) Mr. Justice Curtis, sitting at the circuit, held there could be no accounting for the penalties in an action in equity, and that the proprietor of the copyright was left by the act to his remedy at law by trover or replevin. In *Thornton* v. *Schreiber*, (124 U. S., 612,) it was held that action would not lie against Thornton, who was the business manager of Sharpless & Son, of Philadelphia, in whose store the prints in question in that case were found, and in speaking for the Court Mr. Justice Miller, who delivered the opinion in that case, said (p. 620):

> Counsel for defendants in error, Schreiber & Sons, insist that the words "found in his possession" are to be construed as referring to the finding of the jury; that the expression means simply that where the sheets are ascertained by the finding of the jury to have been at any time in the possession of the person who committed the wrongful act, such persons shall forfeit one dollar for each sheet so ascertained to have been in his possession. We, however, think that the word "found" means that there must be a time before the cause of action accrues at which they are found in the possession of the defendant.

This language was held in *Falk* v. *Curtis Pub. Co.*, (102 Fed., 967, 971,) affirmed by the Circuit Court of Appeals for the Third Circuit in *Falk* v. *Curtis Pub. Co.*, (107 Fed., 128,) to mean that before the action for the penalty would lie there must be a finding of the articles in the possession of the defendant by means of a proceeding instituted for the express purpose of condemnation and forfeiture, and that an action of assumpsit brought at the same time with the action of replevin was premature.

In the case of *Bolles* v. *The Outing Co.*, (77 Fed., 966,) Judge Wallace, who spoke for the court of appeals in that case, said (p. 968):

> The statute is apparently framed to give the party whose copyright has been invaded complete relief by an action in which he can procure a condemnation of the infringing sheets, and at the same time recover, by way of compensation, a penalty for every sheet which he is entitled to condemn. The words "found in his possession" aptly refer to a finding for the purposes of forfeiture and condemnation. The remedy by condemnation and forfeiture is only appropriate in a case where the property can be seized upon process; and where, as here, the forfeiture declared is against property of the "offender," it is only appropriate when it can be seized in his hands. The section contemplates two remedies, enforceable in a single suit, each of which depends upon the same state of facts. The aggrieved party may, at his election, pursue either one or both remedies. But it does not contemplate a recovery of penalties, except in respect to the sheets which can be condemned.

And in *Bolles* v. *The Outing Co.*, (175 U. S., 262, 266,) this Court, speaking by Mr. Justice Brown, observed:

> No remedy is provided by the act, although by section 4970 a bill in equity will lie for an injunction, but the provision for a forfeiture of the plates and of the copies seems to contemplate an action in the nature of replevin for their seizure, and in addition to the confiscation of the copies, for a recovery of one dollar for every copy so seized or found in the possession of the defendant.

And in that case the view expressed in the Circuit Court of Appeals for the Second Circuit was approved, (175 U. S., 268,) and while the point was not necessarily involved, we think the indication in *Bolles* v. *The Outing Company*, that a single action in the nature of replevin for the recovery of plates and copies and a penalty for copies found, is correct.

We agree with the Circuit Court of Appeals for the Second Circuit that the language in *Thornton* v. *Schreiber*, above quoted, was not intended to indicate that an action declaring the forfeiture was required by the statute before the adjudication of the articles to the plaintiff, as is generally necessary in actions of forfeiture, (*Cooley's Constitutional Limitations*, 518,) but that the true construction of the statute, and the one intended to be indicated by Mr. Justice Miller, is that before the penalty can be recovered it is necessary that the sheets be actually found in the possession of the defendant. As we have said, this section of the statute is highly penal (*Bolles* v. *The Outing Co.*, *supra*), and there is nothing in its terms to indicate that the offender is to be subjected to more than one action; on the contrary, the provisions of the section seem to point clearly to the conclusion that when the offender is brought into court, under this section, he shall forfeit to the proprietor the plates on which the articles shall be copied and every sheet thereof, whether copied or printed, "and shall further forfeit one dollar for every sheet of the same found in his possession, etc., and in case of a painting, etc.," he shall forfeit ten dollars for every copy of the same in his possession, or by him sold or exposed for sale.

There is nothing in this section which seems to contemplate the method of procedure pursued in this case, namely, a separate action for the money penalty, upon the theory that it arose only in case of actual finding and judgment of condemnation, but the statute contemplates the bringing of the offender into court in one suit, in which the plates and sheets shall be seized and forfeited and the penalty recovered.

If it had been the intention of Congress to provide two actions, one for the forfeiture of the plates, sheets, etc., and another for the recovery of the money penalty, it would have been easy to have said so. Likewise, had it been the intention of Congress to permit a recovery for the money penalty only after judgment of forfeiture had gone in favor of the plaintiff, it would have been equally as easy to have made such provision.

Until Congress shall provide otherwise, and this section might well be made more specific as to the nature and character of the remedy given, we think this section intended to provide, in a single action, all the remedy which is within its scope, and that to construe it as requiring two actions would be extending a penal act beyond the provisions incorporated in its terms.

In reaching this conclusion we have not overlooked the fact that one-half of the penalties go to the proprietors of the copyright and one-half to the United States. There is no requirement that the United States shall be a party to the action, and we think the purpose of the statute was to make the proprietor of the copyright accountable to the United States for one-half of the money penalty recovered.

Upon this construction of the statute the plaintiff in error had exhausted his remedy in the judgment rendered in the first suit, and as the action is wholly statutory and no second action is given as we construe the act, the court was without power to award the second judgment in the separate action for the money penalty, and the circuit court properly directed the verdict for the defendant below.

The judgment of the United States Circuit Court of Appeals for the Second Circuit is affirmed.

NOTE.—The names of counsel appearing in the companion case, American Tobacco Co. *v.* Werckmeister, 133 O. G., 1433, are erroneously stated, and should appear as follows:

Mr. William A. Jenner for the plaintiff in error.

Mr. Antonio Knauth for the defendant in error.

Court of Appeals of the District of Columbia.

IN RE LACROIX.

Decided February 4, 1908.

1. REISSUE APPLICATION—PATENTABILITY OF CLAIMS CANCELED FROM ORIGINAL.

   The deliberate cancelation of claims from an application in response to an official objection precludes the assertion of such claims in an application for the reissue of a patent granted thereon notwithstanding the fact that applicant had another application pending in which such claims could have been made which had not matured into a patent when the application for reissue was filed.

2. SAME—NEW MATTER.

   In an application for the reissue of a patent for a cigar-bunch-shaping machine disclosing no means for transporting the bunch after it is formed except the hand of the operator claims cannot properly be allowed which include as an element means for "transferring" or "transporting" the bunches.

3. SAME—SAME—CHANGES ALLEGED TO BE IMMATERIAL.

   Claims will not be allowed in a reissue application which are not clearly readable upon the disclosure of the patent, and the contention that they cover an "adaptation of means" involving "immaterial changes" is of no avail where the patent does not disclose the nature of the changes or how the adaptation can be accomplished.

Mr. James L. Norris, Jr., and *Mr. W. C. Henderson* for the appellant.

Mr. Fairfax Bayard and *Mr. W. S. Ruckman* for the Commissioner of Patents.

VAN ORSDEL, *J.*:

The appellant, Joseph D. Lacroix, obtained Letters Patent, dated January 3, 1905. No. 779,368, on a cigar-bunch-shaping machine, application for which was filed December 11, 1901. During the pendency of this application, and before the issuance of Letters Patent, appellant, on October 10, 1902, filed in the Patent Office another application Serial No. 126,739. This application is still pending, and at present is involved in interference with two applications of one Oluf Tyberg, No. 53,211, filed March 28, 1901, and No. 123,979, filed September 19, 1902. It will be observed that both of the Tyberg applications antedate, in point of filing, the Lacroix application No. 126,739. On January 7, 1906, Lacroix filed an application for reissue of Letters Patent on the machine on which Letters Patent had been issued, claiming the right to have the application for reissue, when allowed, relate back to the date of the original application, December 11, 1901. In this application for reissue, the first twenty-two claims are copies of the twenty-two claims of the application which ripened into the original patent. On July 7, 1906, the Commissioner of Patents finally refused, among others, claims 23, 24, 25, 26, 27, 34, 35, 37 and 38, of the application for reissue. These are the claims involved in this appeal, and are as follows:

> 23. In a cigar-machine of the class set forth, the combination of means for supporting a plurality of bunches, and means for removing and transferring the bunches to a distance from the supporting means.
>
> 24. In a cigar-machine of the class set forth, the combination of means for automatically disposing a bunch in a mold and for supporting the latter, and means for lifting the bunch from the mold and transferring it a distance from said mold.
>
> 25. The combination with a bunch-support operating to sustain a plurality of bunches, of a lifting device including means for engaging the bunches, and devices for operating the lifting device to remove the bunches and transport them from the support.
>
> 26. The combination with means for supporting a mold having a plurality of bunch-receptacles, of means for removing the bunches from said receptacles and transporting them from the mold.
>
> 27. The combination with a bunch-support, of bunch-removing means, said means including a bunch-impaling device, and means for operating said bunch-removing means to transport the bunch from the support.
>
> 34. A bunch-shaping machine, provided with a bunch-removing device having swinging and rocking arms provided with pins adjustable transversely in the arms, as set forth.
>
> 35. A bunch-shaping machine having a carrier provided with cups for containing bunches, and a bunch-removing device for removing the bunches from said carrier, said removing device comprising arms mounted to swing up and down and to slide toward and from each other, and pins carried by said arms for engaging a bunch at the ends, the pins projecting into the bunch, as set forth.
>
> 37. The combination with a bunch-support operating to sustain a plurality of bunches, of mechanism for simultaneously removing the bunches from and transporting them from the support.
>
> 38. The combination with a bunch-support operating to sus-

tain a plurality of bunches, of a lifting device including means for engaging each bunch, and devices for operating the lifting device to remove the bunches from and transport them from the support.

It appears that the reissue was refused by the Commissioner because the aforesaid claims can not be read upon the original disclosure, except by strained, unnatural and improper interpretation of their terms. Quoting from the opinion of the Examiner,

> The Patent No. 779,368, of January 3, 1905, granted in an application filed December 11, 1901, which applicant now desires to reissue, contains, broadly stated, the following coacting elements:—
>
> A circular shaper or mold having a series of cups on its periphery, designed to receive cigar-bunches, and provided with movable covers, the whole revolving in a closed, heated compartment.
>
> A feed-carriage which takes a cigar-bunch placed therein, and, through coacting mechanism, deposits it in an uncovered cup.
>
> Bunch-trimming mechanism.
>
> Cover lifting and transferring mechanism.
>
> A bunch-removing device, consisting of oppositely-curved arms having opposed impaling-pins at their ends constructed to move inwardly and penetrate the ends of an uncovered cigar-bunch, and lift it a short distance from the circular mold, in which position it can be "taken hold of by the operator or carried off by suitable mechanism." * * * At the time this patent was issued there was pending in the Office another application, Serial No. 126,739, filed by applicant October 10, 1902, showing and claiming a device which removes bunches separately from a series of cups mounted on a flexible carrier, and which transfers them to a wrapping mechanism.

The distinctive feature of all the machines involved in this inquiry, is the device for removing the bunches from the molds. The devices in the Lacroix machines are capable of removing but one bunch at a time, while the Tyberg mechanism is so constructed that all the bunches are removed at one time, or simultaneously, as stated in the specification.

It is sought by appellant to secure a reissue of his original patent upon claims that will not only dispose of the interference between the claims of his pending application and the Tyberg claims, but will operate to make the claims in the application for reissue prior to the claims set forth in the Tyberg applications. It appears that the first twenty-two claims of the Lacroix application for reissue are exact copies of the twenty-two claims of the original patent. Quoting from the opinion of the Examiner,

> These claims (referring to the twenty-two) relate to specific novel features of the device embracing especially the feed-carriage mechanism, the bunch shaper or carrier, the cover-transferring mechanism, and the bunch-trimming devices, claimed either separately, or in combination. In claims 7 and 11, the bunch-removing device is claimed broadly in combination with other novel elements, but no claim appears in the patent, either broadly or specifically, covering the bunch-removing mechanism as a separate feature, nor is it anywhere in the specification or claims of the patent referred to as a bunch-transferring or a bunch-transporting device.

This describes briefly the original Lacroix machine, and the claims upon which Letters Patent were issued. It must be remembered that in this machine the device for removing the bunch has only a perpendicular and no lateral motion. It lifts the bunch a short distance above the mold, where it is claimed "it can be taken hold of by the operator, or carried off by suitable mechanism." This machine, for which patent was issued, discloses no mechanism of any description whatever for carrying off the bunch. The only means disclosed for receiving the bunch, when lifted from the mold, is by the hand of the operator. It is contended by counsel for appellant, that the mere adaptation of means for removing the bunch to any desired distance from the mold would involve only immaterial changes, but his patent does not disclose the nature of the changes, or how the adaptation can be accomplished.

Appellant's later application goes further and discloses not only a wrapping mechanism, but a means of transferring the bunch from the mold to the wrapping device. In his second application, it is admitted that appellant has been held to be entitled to the claims here under consideration, and they have been included in the interference with Tyberg. We think, therefore, that claims 23, 24, 25, 26, 27, and 38 were properly disallowed in the application for reissue, as they are embraced in appellant's subsequent application now in interference and seem to be proper claims in that application, inasmuch as that machine discloses a device for removing and transferring the bunch from the mold to a mechanism for wrapping the bunch, which operates clearly as a transference of the bunch by a mechanical device from one part of the machine to another and depositing it in the wrapping device, which is the next succeeding step in the process of manufacture. This application, however, is now involved in an interference proceeding, which is not before us, and as to the rights of the parties thereto, we are not expressing any opinion. In the interference proceeding, the rights of the appellant can be protected, as the issue involved properly belongs to that application, and not to the original application upon which the Letters Patent were issued. We can view this application for reissue in no other light than as an attempt on the part of the appellant, by means of this reissue proceeding, to extract certain claims from the pending application and so weave them into his original application as to dispose of the interference, and possibly gain thereby an unjust priority over Tyberg. As was said in *Miller* v. *Brass Co.*, (104 U. S., 350,)

> It will not do for the patentee to wait until other inventors have produced new forms of improvement, and then, with the new light thus acquired, under pretence of inadvertence and mistake, apply for such an enlargement of his claim as to make it embrace these new forms. Such a process of expansion carried on indefinitely, without regard to lapse of time, would operate most unjustly against the public, and is totally unauthorized by the law. In such a case, even he who has rights, and sleeps upon them, justly loses them.

Claim 37, which relates to "mechanism for simultaneously removing the bunches from and transporting them over the support" is the principal issue in the interference between the second application of Lacroix and the applications of Tyberg. It is not contended that either of the Lacroix machines contains a mechanism or device that will lift or transfer from the molds more than one bunch at a single movement, while the Tyberg machine discloses a mechanism whereby the bunches from all the molds are removed and transferred by a single movement of the transporting device. It is not apparent just how this appellant can assert a claim to a device for simultaneously removing and transporting the bunches, when neither of his machines is capable of removing more than a single bunch at a time, and the machine for which a reissue of Letters Patent is sought discloses only a removing and not a transporting device. On this point, we agree with the Commissioner of Patents, where, in his opinion, he says:—

> Appellant states that the means for "removing" the bunches is found in the needles which penetrate the ends of the bunch while it is in the mold and that the means for "transferring" or "transporting" the bunch from a mold or support is found in the pivoted arms, on the ends of which the needles are mounted. Upon reading this language in connection with the construction to which it refers, the conclusion cannot be avoided that this interpretation of the language is strained, unnatural, and improper. The needles cannot properly be referred to as means for "removing," because they, in themselves, cannot remove the bunches from the mold. To do this the pivoted arms on which they are mounted must be removed; the arms must be considered a part of the "removing" means. Nor can the language be considered as properly used even if the arms and needles together be considered as the removing and transferring means, when it is considered that the arms move only through a small arc of a circle and do not deliver the bunches to any other disclosed mechanism, but simply lift them out of the molds. If the language used refers only to the mechanism now disclosed, it is objectionable as being inapt and misleading, and the claims including it should not be allowed; if it refers to any other operation—for example, that disclosed in appellant's later application—it covers new matter and for this reason the claims including it should not be allowed.

Claims 34 and 35 were first presented as claims 35 and 37 by the appellant in the application for the patent for which he now seeks a reissue. They were canceled from that application in response to an official objection to the same. Quoting from appellant's brief,

> Applicant concedes that ordinarily claims deliberately canceled in view of references cited cannot be reinstated in an application for reissue, but submits that, if at the time they are canceled, applicant has another application pending in which the claims could be made, it is permissible, under a reissue application, to reinstate them in the original case, especially if the second filed or copending application has not eventuated in a grant of a patent when the reissue application is filed, and the latter is filed without unreasonable delay.

The law is settled that the deliberate cancelation of claims from an application for patent precludes their assertion in a reissue. In *Corbin Cabinet Lock Co.* v. *Eagle Lock Co.* (150 U. S., 38) it was said,

> It is also settled by the authorities that, in applications for reissue, the patentee is not allowed to incorporate or secure claims covering or embracing what had been previously rejected upon his original application. (*Bantz* v. *Frantz*, 105 U. S., 160; *Heald* v. *Rice*, 104 U. S., 737; *James* v. *Campbell*, 104 U. S., 356; *Topliff* v. *Topliff*, 145 U. S., 156.)

In *Dobson* v. *Lees* (137 U. S., 258) the Court said,

> A reissue is an amendment, and cannot be allowed unless the imperfections in the original patent arose without fraud and from inadvertence, accident, or mistake. (Rev. Stat., sec. 4916.) Hence, the reissue cannot be permitted to enlarge the claims of the original patent by including matter once intentionally omitted. Acquiescence in the rejection of a claim; its withdrawal by amendment, either to save the application, or to escape an interference; the acceptance of a patent containing limitations imposed by the Patent Office, which narrow the scope of the invention as at first described and claimed, are instances of such omission.

This principle, so frequently announced by the Supreme Court, was followed by this court in passing upon an appeal from the Patent Office in the case of *Denton*, (12 App. D. C., 504,) where it was said,

> It may be that it was a mistake on the part of the applicant to limit the invention to the extent only of the claim contained in the specification annexed to the patent; but with this, of course, we have nothing to do here. The only question for us is, whether the claim now put forward on his behalf was so far contained in his original claims that were abandoned by him as to be itself thereby necessarily abandoned. And this we must answer in the affirmative; for abandonment of the whole necessarily implies and involves the abandonment of all the parts except such as are necessarily and specifically retained.

In this case, unlike the case at bar, the claim sought in the reissue was not as broad as the original claim, but the court held that this was of no consequence. Where the claim was abandoned, even though through the mistake of the applicant, it must be considered as abandoned, and, as the court said,

> There can be no middle ground. There can be no retrogression to take back part of what had been abandoned any more than to take back the whole.

In this case, claims 34 and 35 of the reissue application are exactly the same as the original claims that were abandoned in the former application that ripened into a patent. In the face of these decisions and the settled law on this point, further discussion or consideration is unnecessary.

The decision of the Commissioner of Patents is affirmed, and the clerk will certify the proceedings of this court as required by law. Affirmed.

Amendments to Trade-Mark Rules.

(ORDER No. 1,761.)

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., April 20, 1908.

Acting under the provisions of section 483 of the Revised Statutes and with the approval of the Secretary of the Interior, Rules 11 and 69 of the Trade-Mark Rules in the United States Patent Office are amended in the following manner:

Rule 11 is amended by canceling in line 1 thereof the words "of the entire interest;" by inserting the word *patent* after the word "competent," line 2; by inserting the words *in the presentation and prosecution of applications for patent* after the words "Patent Office," line 5; by inserting the words *who is a citizen or resident of the United States and* after the word "law," line 1 of paragraph (*b*); by inserting the words *legal and technical* after the word "necessary," line 3 of the same paragraph; by inserting after paragraph (*b*) the following:

(*c*) Any foreign patent attorney not a resident of the United States, who is a citizen or subject of a country granting the same reciprocal rights to citizens of the United States, who shall file proof to the satisfaction of the Commissioner that he is registered and in good standing before the Patent Office of the country of which he is a citizen or subject, and is possessed of the qualifications stated in paragraph (*b*).

No foreign patent attorney will be recognized in any application filed after June 30, 1908, unless entitled to registration under the provisions of this rule.

By changing the designating letter of paragraph (*c*) to (*d*); by inserting in the last paragraph of the rule after the word "registered," in line 1 thereof, the words *or entitled to recognition*, so that the rule as amended shall read as follows:

11. An applicant or an assignee may prosecute his own case, but he is advised, unless familiar with such matters, to employ a competent patent attorney. The Office cannot aid in the selection of an attorney.

A register of attorneys will be kept in this Office, on which will be entered the names of all persons entitled to represent applicants before the Patent Office in the presentation and prosecution of applications for patent. The names of persons in the following classes will, upon their written request, be entered upon this register:

(*a*) Any attorney-at-law who is in good standing in any court of record in the United States or any of the States or Territories thereof and who shall furnish a certificate of the clerk of such United States, State, or Territorial court, duly authenticated under the seal of the court, that he is an attorney in good standing.

(*b*) Any person not an attorney at law who is a citizen or resident of the United States and who shall file proof to the satisfaction of the Commissioner that such person is of good moral character and of good repute and possessed of the necessary legal and technical qualifications to enable him to render applicants for patents valuable service and is otherwise competent to advise and assist them in the presentation and prosecution of their applications before the Patent Office.

(*c*) Any foreign patent attorney not a resident of the United States, who is a citizen or subject of a country granting the same reciprocal rights to citizens of the United States, who shall file proof to the satisfaction of the Commissioner that he is registered and in good standing before the Patent Office of the country of which he is a citizen or subject, and is possessed of the qualifications stated in paragraph (*b*).

No foreign patent attorney will be recognized in any application filed after June 30, 1908, unless entitled to registration under the provisions of this rule.

(*d*) Any firm will be registered which shall show that the individual members composing such firm are each and all registered under the provisions of the preceding sections.

The Commissioner may require proof of qualifications other than those specified in paragraph (*a*) and reserves the right to decline to recognize any attorney, agent, or other person applying for registration under this rule.

Any person or firm not registered and not entitled to be recognized under this rule as an attorney or agent to represent applicants generally may, upon a showing of circumstances which render it necessary or justifiable, be recognized by the Commissioner to prosecute as attorney or agent certain specified application or applications, but this limited recognition shall not extend further than the application or applications named.

No person not registered or entitled to recognition as above provided will be permitted to prosecute applications before the Patent Office.

Rule 69 is amended by canceling lines 21–28, inclusive, which are as follows:

For abstracts of title:	
For the certificates of search	$1.00
For each brief from the digest of assignments	.20
For searching titles or records, one hour or less	.50
Each additional hour or fraction thereof	.50
For a single printed copy of statement, declaration, and drawing	.05
If certified, for the grant, additional	.50
For the certificate	.25

and substituting therefor the following:

For abstracts of title:	
For the search, one hour or less, and certificate	$1.00
Each additional hour or fraction thereof	.50
For each brief from the digest of assignments of two hundred words or less	.20
Each additional hundred words or fraction thereof	.10
For searching titles or records, one hour or less	.50
Each additional hour or fraction thereof	.50
For a single printed copy of statement, declaration, and drawing	.05
If certified, for the grant, additional	.50
For the certificate	.25

so that the rule as amended shall read:

69. On filing each original application for registration of a trade-mark	$10.00
On filing each application for renewal of the registration of a trade-mark	10.00
On filing notice of opposition to the registration of a trade-mark	10.00
On appeal from the Examiner in charge of trade-marks to the Commissioner of Patents	15.00
On appeal from the decision of the Examiner in charge of interferences, awarding ownership of a trade-mark or canceling the registration of a trade-mark, to the Commissioner of Patents	15.00
On appeal from the decision of the Examiner in charge of trade-marks, on a motion for the dissolution of an interference on the ground of non-interference in fact or non-registrability of a mark, to the Commissioner of Patents	15.00
For manuscript copies, for every one hundred words or fraction thereof	.10
For recording every assignment, agreement, power of attorney, or other paper of three hundred words or less	1.00
For recording every assignment, agreement, power of attorney, or other paper of more than three hundred words, and less than one thousand words	2.00
For recording every assignment, agreement, power of attorney, or other paper of more than one thousand words	3.00
For abstracts of title:	
For the search, one hour or less, and certificate	1.00
Each additional hour or fraction thereof	.50
For each brief from the digest of assignments, of two hundred words or less	.20
Each additional hundred words or fraction thereof	.10
For searching titles or records, one hour or less	.50
Each additional hour or fraction thereof	.50
For a single printed copy of statement, declaration, and drawing	.05
If certified, for the grant, additional	.50
For the certificate	.25

EDWARD B. MOORE,
Commissioner.

Interference Notices.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., April 15, 1908.

Klen-So Pharmacal Company, its assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of the F. E. Johnson Company, of 55 Haverhill street, Boston, Mass., for registration of a trade-mark and a trade-mark registered to the Klen-So Pharmacal Company, of 2104 Reed street, Philadelphia, Pa., and the notice of said declaration sent by registered mail to the said Klen-So Pharmacal Company having been returned undelivered, notice is hereby given to the said Klen-So Pharmacal Company, its assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents in order that the notices of declaration heretofore sent by and returned to the Office may be forwarded to them.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will be proceeded with as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR.
UNITED STATES PATENT OFFICE,
Washington, D. C., April 6, 1908.

Jacob Fussell Company, its assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of John Govatos, of Wilmington, Del., for registration of a trade-mark and a trade-mark registered to the Jacob Fussell Company, of 1427 New York avenue, NW., Washington, D. C., and the notice of said declaration sent by the Patent Office by registered mail to the said Jacob Fussell Company having been returned unopened by one M. T. Fussell with the information that the Jacob Fussell Company failed in 1904, notice is hereby given to the said Jacob Fussell Company, the assigns or legal representatives of said company, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents in order that the notices of declaration heretofore sent by and returned to the Office may be forwarded to them.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will be proceeded with as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., March 25, 1908.

Ernest R. Schneider, his assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of The Union Distilling Company, of 1006 Richmond street, Cincinnati, Ohio, for registration of a trade-mark and a trade-mark registered to Ernest R. Schneider, of Augusta, Ga., of whom John R. Schneider claims to be successor, and the notice of said declaration sent by registered mail to the said Ernest R. Schneider having been returned undelivered, notice is hereby given to the said Ernest R. Schneider, his assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents in order that the notices of declaration heretofore sent by and returned to the Office may be forwarded to them.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will be proceeded with as in case of default.

E. B. MOORE, *Commissioner.*

[Vol. 133 No. 9.]

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OF THE

COMMISSIONER OF PATENTS

AND OF

UNITED STATES COURTS

IN THE MATTER OF

PATENTS, TRADE-MARKS, ETC.

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DIGEST OF DECISIONS

OF THE

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OFFICIAL GAZETTE—MARCH-APRIL, 1908.

DIGEST OF DECISIONS.

[Decisions of the United States courts are indicated by an asterisk (*).]

ABANDONMENT OF APPLICATIONS.

1. RESPONSIVENESS OF ACTION—REINSERTION OF CLAIMS AFTER ELECTION.

An amendment which is otherwise responsive to an action by the Office is not rendered unresponsive by reason of the fact that it includes a claim to an independent invention, claims for which were previously canceled upon requirement for division. In such cases the Examiner should require the cancelation of such claim on the ground that it covers an invention different from that originally elected, and the amendment should otherwise receive action as though such claim were not present.

[*Ex parte* Gally, 991.

2. PRACTICE—AMENDMENT—REINSERTING CLAIMS TO AN INDEPENDENT INVENTION AFTER ELECTION.

Where an applicant cancels claims to an independent invention upon requirement for division and just within the year allowed by law for action responds to a rejection by amending the rejected claims and adding a series of new claims, one of which is drawn to the independent invention, the amendment should be entered and a requirement should be made that the reinserted claim be canceled on the ground that applicant was bound by his original election, and at the same time action should be given on the merits of the claims of the invention elected. [Id.

ACCESS TO PENDING APPLICATIONS.

PERMISSION TO INSPECT.

A corporation which held an exclusive license to make and use an article disclosed in certain applications went into bankruptcy, and the trustee in bankruptcy included this license in the assets of the company. *Held* that the purchaser of said assets at the trustee's sale did not acquire such a title to the license as will entitle him to be permitted to inspect these applications.

[*In re* Bayle, Jr., 762.

ALLEGATIONS.

(See Preliminary Statement, 3.)

AMENDMENTS.

(See Abandonment of Applications.)

RIGHT TO WITHDRAW.

Where an applicant filed an amendment directing the cancelation of the finally-rejected claims of his application and requesting that the case be passed to issue, but on the same day filed an appeal from the Examiner's final rejection, in which appeal papers he asked that the amendment be withdrawn, although the request for the withdrawal of the amendment was informal, in that it was embodied in the appeal papers instead of in a separate paper, the Examiner should not have entered the amendment and passed the case to issue without giving the applicant an opportunity to elect the course he desired to pursue. [*Ex parte* Kruse, 229.

AMENDMENT TO NOTICE OF OPPOSITION.

(See Trade-Marks, 10.)

AMENDMENT TO PRELIMINARY STATEMENTS.

(See Preliminary Statement, 2, 3, 4.)

ANCILLARY QUESTIONS.

(See Interference, 8.)

ANTICIPATION.

(See Invention.)

APPEAL.

(See Interference, 9.)

OBJECTION TO FORM OF ACTION.

The objection to the form of an action embodied, after verdict, in a motion for a new trial comes too late to be available in an appellate court.

[*American Tobacco Company *v.* Werckmeister, 1433.

APPEAL FROM THE EXAMINER OF INTERFERENCES.

(See Interference, 2; Motion to Suppress Testimony Trade-Marks, 9.)

APPEAL FROM FAVORABLE DECISION.

(See Interference, 5; Motion to Dissolve Interference, 2.)

APPEAL TO THE COURT OF APPEALS OF THE DISTRICT OF COLUMBIA.

(See Interference, 8; Motion to Suppress Testimony, 1.)

APPEAL TO THE EXAMINERS-IN-CHIEF.

(See Amendments; Examination of Applications, 3.)

APPLICATIONS.

(See Amendments; Motion to Amend Application; New Application; Reissue Applications.)

ASSIGNMENTS.

(See Construction of Statutes, 2; Copyright, 5, 6.)

BANKRUPTCY.

(See Access to Pending Applications.)

BURDEN OF PROOF.

(See Employer and Employee, 2.)

CANCELATION OF TRADE-MARK REGISTRATION.

(See Trade-Marks, 13, 14, 15.)

CLAIMS.

(See Abandonment of Applications; Reissue Applications.)

COMMISSIONER OF PATENTS.

(See Construction of Statutes, 3; Interference, 5; New Application.)

CONSTITUTIONAL RIGHTS.

(See Process of Law.)

CONSTRUCTION OF RULES.

(See Interference, 1, 3, 6.)

CONSTRUCTION OF STATUTES.

(See Copyright, 1, 2, 3, 4, 8; Interference, 5.)

1. COPYRIGHT.
In construing a statute the court is not always confined to a literal reading thereof, and may consider its object and purpose, the things with which it is dealing, and the conditions of affairs which led to its enactment so as to effectuate rather than destroy the spirit and force of the law which the legislature intended to enact.
[*American Tobacco Company *v.* Werckmeister, 1433.

2. SECTION 4952 AS AMENDED MARCH 3, 1891, CONSTRUED—MEANING OF "ASSIGNS."
The word "assigns" in section 4952, Revised Statutes, as amended March 3, 1891, (26 Stat. L., 1106, c. 565; U. S. Comp. St., 1901, p. 3406,) is not used as descriptive of the character of the estate which the "author, inventor, designer or proprietor" may acquire. The statute was intended to give to the assigns of the original owner of the right to copyright an article the right to take out the copyright secured by the statute independently of the ownership of the article itself. [*Id.

3. SECTION 4904, REVISED STATUTES—COMMISSIONER MAY DELEGATE AUTHORITY.
Although section 4904, Revised Statutes, provides that whenever "in the opinion of the Commissioner" an interference exists notice shall be given to the parties, etc., the Commissioner is not obliged personally to determine in the first instance whether an interference in fact exists, but may delegate this duty to the Primary Examiner. The demands of the statute are fully met when it is provided that at some stage in the proceedings the personal opinion of the Commissioner may be invoked by either party.
[*United States of America, *ex rel.* The Newcomb Motor Company, *v.* Moore, Commissioner of Patents, 1680.

4. RIGHT TO HAVE CLAIMS TWICE REJECTED—INTER PARTES CASE.
The provisions of the statutes giving an applicant the right to have his claim twice rejected (secs. 4903 and 4909, R. S.) does not apply in *inter parties* cases. [*Id.

CONSTRUCTION OF TRADE-MARK STATUTES.

(See Trade-Marks, 1, 3, 13, 14, 15, 18, 20, 22.)

COPYRIGHT.

(See Construction of Statutes, 2.)

1. PUBLICATION ABROAD WITHOUT NOTICE OF COPYRIGHT—EFFECT ON RIGHTS IN THIS COUNTRY.
The requirement of the act of June 18, 1874, chapter 301, section 1, 18 Statutes, 78, (Rev. Stat., sec. 4962,) that "no person shall maintain an action for the infringement of his copyright "unless the required notice shall be inserted "in the several copies of every edition published" does not extend to publications abroad, and the owner of a work copyrighted in this country may restrain the publication thereof by another who has imported for purposes of reproduction copies published by such owner abroad without such notice.
[*United Dictionary Company *v.* G. & C. Merriam Company, 515.

2. INFRINGEMENT—MUSICAL COMPOSITION.
The copyright of a musical composition which is published in the form of sheet-music is not infringed by a perforated roll of paper designed to be used in connection with an automatic piano-player in reproducing the music recorded in the copyrighted sheets, since such perforated roll is not a "copy" within the meaning of the copyright statutes.
[*White-Smith Music Publishing Company *v.* Apollo Company, 762.

3. PROPERTY RIGHTS IN, CREATURE OF FEDERAL STATUTE.
Property in copyright is the creature of the Federal statute passed in the exercise of the power vested in Congress by the Federal Constitution in Article I, section 8, "to promote the progress of science and useful arts by securing for limited times to authors and inventors the exclusive right to their respective writings and discoveries." (See *Wheaton* v. *Peters*, 8 Pet., 591, 656; *Holmes* v. *Hurst*, 174 U. S., 82; *Banks* v. *Manchester*, 128 U. S., 244, 252; *Thompson* v. *Hubbard*, 131 U. S., 123, 151.)
[*American Tobacco Company *v.* Werckmeister, 1433.

4. SECTION 4962 OF THE REVISED STATUTES CONSTRUED—WHERE NOTICE SHOULD BE INSCRIBED.
Section 4962 of the Revised Statutes as amended by act of June 18, 1874, chapter 301, (18 Stat. L., 78; U. S. Comp. St., 1901, p. 3411,) providing "that no person shall maintain an action for the infringement of his copyright unless he shall give notice thereof by inserting in the several copies of every edition published * * * by inscribing upon some visible portion thereof, or of the substance on which the same shall be mounted, "the notice of copyright, has not for its object to require the inscription upon the original painting, map, etc., but only upon those published copies concerning which it is designed to convey information to the public which shall limit its use and circumscribe the rights of the purchaser. [*Id.

5. ASSIGNMENT.
An instrument providing that "I hereby transfer the copyright in my picture 'Chorus' to the Photographische Gesellschaft, Berlin (The Berlin Photographic Company) for the sum of £200, London, April 2, 1894," signed by the author of the painting, *Held* to constitute a complete transfer of the property right of copyright existing in the picture, there being no evidence of any intention on the part of the author to retain any further interest in the copyright. [*Id.

6. SAME.
An author may, before publication, assign the right or privilege of taking a copyright independent of the transfer of the copyrightable thing itself. [*Id.

7. PAINTING—LOSS OF RIGHTS BY PUBLIC EXHIBITION.
The exhibition of a painting at a public gallery by the author prior to copyrighting the same does not deprive him or his assigns from subsequently securing a valid copyright where the same was expressly entered at the gallery with copyright reserved. [*Id.

8. ACTION—SECTION 4965, REVISED STATUTES—SUIT TO RECOVER PENALTY AFTER JUDGMENT OF FORFEITURE.
After judgment of forfeiture of infringing copies of a copyrighted painting under section 4965 of the Revised Statutes (U. S. Comp. St. 1901, p. 3414) a separate action cannot be maintained to recover the penalty prescribed in said section for every infringing copy of the copyrighted painting found in the infringer's possession or sold by him, since such section contemplates but a single action in the nature of replevin, in which may be had both a forfeiture and a recovery of penalties.
[*Werckmeister *v.* American Tobacco Company, 2179.

CORPORATIONS.

(See Access to Pending Applications; Process of Law.)

DECISIONS OF EXAMINER.

(See Mandamus.)

DELAY IN FILING MOTIONS.

(See Motion to Amend Preliminary Statements, 1; Motion to Dissolve Interference, 1.)

DELAY IN FILING PRELIMINARY STATEMENT.

(See Preliminary Statement, 1.)

DESCRIPTIVE TERMS.

(See Trade-Marks, 4, 5, 6, 17, 19, 20, 21.)

DISCLOSURE OF INVENTION.

(See Preliminary Statement, 2, 3; Reissue Applications, 3.)

DIVISION OF APPLICATIONS.

(See Abandonment of Applications.)

EMPLOYER AND EMPLOYEE.

1. INTERFERENCE—PRINCIPAL AND ASSISTANT.
It is well settled that in the relation of employer and employee where the employer conceived the principle or plan of an invention and the employee is directed to perfect the details, though the employee may make valuable improvements thereon, the improved result belongs to the employer. The same rule of law applies to principal and assistant, though they may be fellow employees. [*Braunstein *v.* Holmes, 1937.

2. SAME—SAME—PRESUMPTION.
B. was assigned to assist H. in making investigation and actually did the work which resulted in reducing the invention to practice. *Held* that the presumption is that what he accomplished was done under H.'s direction, and the burden is on him to overcome that presumption. [*Id.

EXAMINATION OF APPLICATIONS.

(See Amendments.)

1. REJECTION—EXPLANATION OF REFERENCES.
The statement by the Examiner that the first three claims were clearly met in either one of three references cited and that the last three claims were met in the same in view of either of the last two references cited, *Held* in view of the character of the invention to be a sufficient compliance with applicant's request for a specific application of the references.
[*Ex parte* Samstag, 1188.

2. SAME—RECONSIDERATION.
After the Examiner has properly applied the references the applicant is not entitled to further reconsideration unless he points out why the references did not meet the claims. [*Id.

3. PRACTICE—EXAMINER BOUND BY THE DECISIONS OF THE HIGHER TRIBUNALS.
It is self-evident that an Examiner should follow the decisions of the higher tribunals whether he agrees with them or not; but where the Examiner holds that a decision is not applicable to a given case the proper manner in which to have his decision reviewed is by appeal to the Examiners-in-Chief in the first instance and not by a petition to the Commissioner.
[*Ex parte* Konold, 2179.

EXAMINER OF INTERFERENCES.

(See Motion to Amend Preliminary Statements, 3, 4; Motion to Suppress Testimony; Preliminary Statement, 4; Trade-Marks, 9, 16.)

EXCLUSIVE USE.

(See Trade-Marks, 5, 16, 18.)

FINAL HEARING.

(See Interference, 2, 3, 6.)

FOREIGN PUBLICATION.

(See Copyright, 1.)

FORMER DECISION EXTENDED.

(See Motion to Dissolve Interference, 5.)

FORMER DECISIONS CITED.

(See Copyright, 3.)

FORMER DECISIONS MODIFIED.

(See Motion to Dissolve Interference, 5.)

GEOGRAPHICAL TERMS.

(See Trade-Marks, 1, 2, 3.)

INFRINGEMENT.

(See Copyright, 1, 2.)

INTERFERENCE.

(See Employer and Employee; Invention; Mandamus; Motion to Amend Application; Motion to Amend Preliminary Statement; Motion to Dissolve Interference; Motion to Suppress Testimony; Preliminary Statement; Trade-Marks, 16.)

1. MOTION TO AMEND ISSUE UNDER RULE 109—TRANSMISSION.
A motion to amend the issue of an interference under Rule 109 was properly refused transmission where it contained a proviso that the claims shall be added "without prejudice to the right to contest such claims under the provisions of Rule 122."
[Wheeler *v.* Palmros, 230.

2. SETTING ASIDE RECORD JUDGMENT—APPEAL.
No appeal will be entertained from a decision of the Examiner of Interferences setting aside a record judgment and fixing a time for final hearing.
[O'Brien *v.* Gale *v.* Zimmer *v.* Calderwood, 514.

3. RULE 130.
The fact that on appeal from a decision on a motion to dissolve the Examiners-in-Chief have held that a party has a right to make the claims does not prevent the question being raised before the Examiner of Interferences at final hearing under Rule 130. [Id.

4. TESTIMONY—SURREBUTTAL.
The junior party took testimony as to priority, but did not attack the operativeness of the senior party's device. The senior party took the testimony of two witnesses to show that the device shown in Figure 3 of his application was operative, and certain exhibits were introduced, which one of the witnesses testified were tested by him. In rebuttal the junior party offered expert testimony to show certain structural differences between the exhibits and the invention disclosed in the senior party's application. *Held* that such testimony afforded no ground for allowing the senior party to take surrebuttal testimony.
[Gold *v.* Gold, 993.

5. MOTION TO DISSOLVE—FAVORABLE DECISION NON-APPEALABLE.
A party to an interference has no right to a review by the Commissioner of a favorable decision by the Primary Examiner on a motion to dissolve alleging non-patentability of the issue either on direct appeal or upon petition for the exercise of his supervisory authority. While section 4904, Revised Statutes, gives the Commissioner the right to determine when an interference exists, this authority is delegable, and when it is delegated to the Primary Examiner and he makes a favorable decision thereon such decision will be reviewed only in an extraordinary case.
[Hawkins *v.* Coleman *v.* Thullen, 1187.

6. RENEWAL OF MOTION—NOTICE.
Rule 153 provides that reasonable notice of all motions must be given and that a motion will not be entertained in the absence of proof of service of such notice. The same reason exists for requiring notice of the renewal of a motion as of the motion itself, and the mere request at the final hearing and in a brief filed at final hearing is not such notice.
[Dyson *v.* Land *v.* Dunbar *v.* Browne, 1679.

7. MOTION TO DISSOLVE—IRREGULARITY IN DECLARATION.
The Examiner suggested to M. two claims which were the same as two of K.'s claims, except that the term "supporting member" was substituted for "attaching-bracket," but did not suggest them to K. After M. made the claims the interference was declared with these claims as two counts of the issue. *Held* that this was an irregularity in the declaration of the interference, as Rule 96 clearly contemplates that the issue shall be in terms of the claims actually made by both parties or which they have had an opportunity to make.
[McBride *v.* Kroder, 1680.

8. RIGHT TO MAKE CLAIMS A QUESTION OF PRIORITY—APPEAL TO COURT.
The right of a party to make a claim goes to the foundation of an interference, and a judgment of a Primary Examiner denying that right may be appealed to the Court of Appeals of the District of Columbia, and that court will take jurisdiction to determine that question "as an ancillary question to be considered in awarding priority of invention."
[*United States of America, *ex rel.* The Newcomb Motor Company, *v.* Moore, Commissioner of Patents, 1680.

9. MOTION TO DISSOLVE—EXAMINER'S DECISION FINAL UNLESS APPEAL PROSECUTED.
Where a Primary Examiner on a motion to dissolve decides that one of the parties has no right to make the claims of an interference issue and such party, after filing an appeal from such decision, fails to prosecute the same and abandons it, such decision becomes final and binding upon the parties and precludes the subsequent *ex parte* consideration of the same question. [*Id.

10. SAME—SAME—SUPERVISORY AUTHORITY OF COMMISSIONER.
Upon a motion to dissolve it was held that one of the parties had no right to make the claims in issue, and the appeal from that decision was abandoned; but subsequently in the *ex parte* prosecution of that party's case it was held by the Examiners-in-Chief that said party had a right to make the identical claims, and the interference was redeclared. The Commissioner thereupon set aside the *ex parte* decisions and directed a rehearing of the case before the Examiners-in-Chief *inter partes*. *Held* that the decision in the interference was *res adjudicata* and that the Commissioner was without authority to direct the readjudication in such *ex parte* application of the question whether said party had a right to make the identical claims of the issue of the interference. [*Id.

INVENTION.

(See Employer and Employee.)

PATENTABILITY—NOVELTY—ANTICIPATION.
Held that a method of covering playing-balls consisting of knitting separately a wrapper leaving a slit therein, inserting a deflated rubber ball through said slit, closing the slit by meshes of the same material as that forming the cover, and finally inflating the ball is anticipated by certain patents showing the idea of covering inflated rubber balls with a crocheted or knitted cover and another patent which contains the idea of inserting a deflated ball in a cover, inflating the ball, and then closing the aperture. [*In re* Droop, 517.

IRREGULARITY IN DECLARATION OF INTERFERENCE.

(See Interference, 7.)

JUDGMENT ON THE RECORD.

(See Interference, 2, 3.)

JURISDICTION OF THE COURT OF APPEALS OF THE DISTRICT OF COLUMBIA.

(See Interference, 8.)

JURISDICTION OF THE EXAMINER OF TRADE-MARKS.

(See Trade-Marks, 16.)

JURISDICTION OF THE EXAMINERS-IN-CHIEF.

(See Motion to Suppress Testimony, 2.)

LICENSES.

(See Access to Pending Applications.)

LIMIT OF APPEAL.

(See Motion to Amend Preliminary Statement, 3.)

LIMIT OF TIME.

(See Preliminary Statement, 1; Trade-Marks, 22.)

MANDAMUS.

PROPERLY INVOKED FOR ENFORCEMENT OF DECISION OF PRIMARY EXAMINER.

Where a Primary Examiner on a motion to dissolve decides that one of the parties has no right to make the claims of an interference issue and such party, after filing an appeal from such decision, fails to prosecute the same and abandons it, such judgment becomes final and binding upon the parties, and mandamus is the proper proceeding to secure the enforcement of such judgment and a vacation of any subsequent *ex parte* or *inter partes* proceedings adjudicating the same question or based upon such an adjudication.

[*United States of America, *ex rel.* The Newcomb Motor Company, *v.* Moore, Commissioner of Patents, 1680.

MOTION TO AMEND APPLICATION.

INTERFERENCE—TRANSMISSION.

A motion to amend the specification of an application involved in an interference for the purpose of curing an alleged error therein should not be transmitted.

[Wheeler *v.* Palmros, 230.

MOTION TO AMEND PRELIMINARY STATEMENT.

(See Preliminary Statement, 2, 3, 4.)

1. DELAY IN BRINGING.

A motion to amend a preliminary statement should be brought promptly after the discovery of the facts on which the motion is based, and delay in bringing the motion is a sufficient ground for denying it. [Floyd *v.* Rohlfing, 992.

2. BASED ON TESTIMONY—DEFINITENESS.

Where a motion to amend a preliminary statement is based upon testimony taken in the case, it is indefinite if it fails to point out the particular parts of the testimony upon which reliance is placed. [Id.

3. APPEALS.

Since the granting of a motion to amend a preliminary statement will injure the opposing party only so far as his case will be prejudiced by evidence showing the true state of facts, a limit of appeal should be set by the Examiner of Interferences in his decision on such motions only when he denies the motion.

[Smith and Wickes *v.* Emerson *v.* Sanders, 1433.

4. RECONSIDERATION AFTER DECISION BY THE COMMISSIONER.

Where a motion to amend a preliminary statement has been denied by the Examiner of Interferences and his decision affirmed on appeal, it should not be reconsidered in the absence of any additional showing as to the grounds on which it was denied. [Dyson *v.* Land *v.* Dunbar *v.* Browne, 1679.

MOTION TO DISSOLVE INTERFERENCE.

(See Interference, 5, 7, 9, 10; Mandamus.)

1. DELAY IN BRINGING.

The pendency of a motion to shift the burden of proof is no excuse for the delay in bringing a motion to dissolve.

[Price *v.* Blackmore, 514.

2. RES ADJUDICATA.

A decision refusing to dissolve an interference on the ground of *res adjudicata* is a favorable decision on the merits and will not be reviewed on appeal. (Rule 124.) [Degen *v.* Pfadt, 514.

3. TRANSMISSION.

A motion to dissolve based on the defectiveness of the oath filed by the opposing party should not be transmitted, as it is well settled that the matter of a proper oath is an *ex parte* one and furnishes no ground for dissolution.

[Rowe *v.* Brinkmann, 515.

4. SAME.

A motion alleging that the opposing party has no right to make the claims on account of informality of his specification is too indefinite to be transmitted. [Id.

5. PARTY'S RIGHT TO QUESTION HIS OWN RIGHT TO MAKE CLAIMS.

Where an applicant adopted claims suggested under Rule 96 from another application, a motion to dissolve filed by him alleging that he has no right to make such claims is proper, and the same should be transmitted to the Primary Examiner. (*Miller* v. *Perham*, 121 O. G., 2667, and *Martin* v. *Mullin*, 127 O. G., 3216, modified; doctrine of *Eichelberger and Hibner* v. *Dillon*, 129 O. G. 3161, extended.) [Hermsdorf *v.* Driggs *v.* Schneider, 1189.

MOTION TO SHIFT BURDEN OF PROOF.

(See Motion to Dissolve Interference, 1.)

MOTION TO SUPPRESS TESTIMONY.

1. APPEAL FROM DECISION OF THE EXAMINER OF INTERFERENCES.

Where the Examiner of Interferences in his decision on priority decided a motion to suppress testimony, *Held* that an appeal from that decision will not be considered until the case comes before the Commissioner on appeal on priority.

[Dyson *v.* Land *v.* Dunbar *v.* Browne, 1679.

2. SAME—JURISDICTION OF THE EXAMINERS-IN-CHIEF.

The Examiners-in-Chief have jurisdiction to pass upon the correctness of the action of the Examiner of Interferences in suppressing testimony and to consider the same if in their opinion it should not have been suppressed. [Id.

MUSICAL COMPOSITIONS.

(See Copyright, 2.)

NAME OF APPLICANT.

(See Trade-Marks, 7.)

NEGLIGENCE.

(See Preliminary Statement, 1, 2.)

NEW APPLICATION.

PATENTABILITY—SECOND APPLICATION—RES ADJUDICATA.

Where an applicant after having been refused a patent by the Commissioner on appeal presented a new application containing claims differing from those of the earlier application in phraseology rather than in meaning, *Held* that such differences or any changes merely broadening claims that have been once determined do not affect the conclusiveness of the former adjudication and that the subject-matter was *res adjudicata*.

[*In re* Edison, 1190.

NEW MATTER.

(See Reissue Applications, 2.)

NOTICE OF MOTION.

(See Interference, 6.)

OATH.

(See Motion to Dissolve Interference, 3.)

OPERATIVENESS.

(See Interference, 4.)

OPPOSITION TO REGISTRATION.

(See Trade-Marks, 5, 6, 7, 8, 9, 10, 11, 12, 16, 22.)

PATENTABILITY.

(See Invention; New Application.)

PETITION TO THE COMMISSIONER OF PATENTS.

(See Examination of Applications, 3.)

POVERTY.

(See Preliminary Statement, 2.)

PRACTICE IN THE PATENT OFFICE.

(See Examination of Applications.)

PRELIMINARY STATEMENT.

1. DELAY IN FILING—EXCUSE INSUFFICIENT.

Permission to file a preliminary statement will not be granted when filed nearly four months after the expiration of the period allowed for such action and after the granting of two extensions of time for the taking of testimony where it appears that applicant's counsel notified the assignee of an undivided half interest of the interference and asked him to secure from the applicant the information necessary to make a preliminary statement and that said counsel addressed a letter to applicant advising him about the preliminary statement, which presumably was delivered, as it was not returned. Whether applicant had actual notice or not, the failure to obtain the necessary data by counsel or by the assignee was negligence with which applicant is chargeable. [Anderson *v.* Peck, 229.

2. AMENDMENT AFTER TESTIMONY TAKEN.

Where a party in preparing a preliminary statement recollects having had a conversation in which the invention in issue was discussed and writes a letter addressed to the party with whom the conversation was had to find out whether the invention was disclosed to him at that time, but gets no reply, and does nothing further with respect thereto, and it does not appear whether the letter was returned or whether it even had a return card on it, or that applicant endeavored to find out through mutual friends of such party's whereabouts, *Held* that such party was negligent and that he was not entitled to amend his preliminary statement after testimony was taken carrying his date of disclosure back to the date of such conversation on the plea of poverty, applicant having failed to take the steps within his means to secure the information sought.

[Floyd *v.* Rohlfing, 992.

3. AMENDMENT TO CARRY BACK DATE OF DISCLOSURE.

Since the rule regarding the allegations of preliminary statements requires a specific statement as to disclosure as well as to conception of the invention, a party may not amend his statement by carrying back the date alleged for disclosure to the date alleged for conception on the theory that disclosure is merely evidence of conception. [Id.

4. MOTION TO AMEND.

The practice in permitting amendments to preliminary statements has been well defined in many consistent decisions, and the applicability of the principles announced therein to the facts in any particular case should ordinarily be left to the discretion of the Examiner of Interferences.

[Smith and Wickes *v.* Emerson v. Sanders, 1433.

PRESUMPTION.

(See Employer and Employee, 2.)

PRIORITY OF INVENTION.

(See Interference, 8; Motion to Suppress Testimony, 1.)

PROCESS OF LAW.

CONSTITUTIONAL LAW—SEARCHES AND SEIZURES.

Constitutional rights of a corporate defendant in an action for the forfeiture of infringing copies of a painting protected by copyright are not violated by the admission in evidence of the replevin proceedings under which such infringing copies were seized over the objection that by such proceedings rights under the fourth and fifth amendments to the Federal Constitution were invaded.

[*American Tobacco Company *v.* Werckmeister, 1433.

PROPERTY RIGHTS.

(See Copyright, 3, 4, 5, 6, 7.)

RECONSIDERATION.

(See Examination of Applications, 1, 2; Motion to Amend Preliminary Statement, 4.)

REFERENCE.

(See Examination of Applications, 1, 2.)

REGISTRABILITY.

See Trade-Marks, 1, 2, 3, 4, 19, 20, 21.)

REISSUE APPLICATIONS.

1. PATENTABILITY OF CLAIMS CANCELED FROM ORIGINAL.

The deliberate cancelation of claims from an application in response to an official objection precludes the assertion of such claims in an application for the reissue of a patent granted thereon notwithstanding the fact that applicant had another application pending in which such claims could have been made which had not matured into a patent when the application for reissue was filed. **In re* Lacroix, 2181.

2. NEW MATTER.

In an application for the reissue of a patent for a cigar-bunch-shaping machine disclosing no means for transporting the bunch after it is formed except the hand of the operator claims cannot properly be allowed which include as an element means for "transferring" or "transporting" the bunches. [*Id.

3. SAME—CHANGES ALLEGED TO BE IMMATERIAL.

Claims will not be allowed in a reissue application which are not clearly readable upon the disclosure of the patent, and the contention that they cover an "adaptation of means" involving "immaterial changes" is of no avail where the patent does not disclose the nature of the changes or how the adaptation can be accomplished. [*Id.

REJECTION OF CLAIMS.

(See Construction of Statutes, 4; Examination of Applications, 1, 2.)

RES ADJUDICATA.

(See Interference, 10; Motion to Dissolve Interference, 2; New Application.)

RESPONSIVE ACTION BY APPLICANT.

(See Abandonment of Applications.)

RIGHT TO MAKE CLAIMS.

(See Interference, 3, 8, 9, 10; Motion to Dissolve Interference, 4, 5.)

SIMILARITY OF MARKS.

(See Trade-Marks, 11, 12.)

SPECIFICATIONS.

(See Motion to Amend Application; Motion to Dissolve Interference, 3, 4.)

SUPERVISORY AUTHORITY OF THE COMMISSIONER OF PATENTS.

(See Interference, 5, 10.)

SURREBUTTAL TESTIMONY.

(See Interference, 4.)

TEN YEARS' CLAUSE.

(See Trade-Marks, 18.)

TESTIMONY.

(See Interference, 4; Motion to Amend Preliminary Statement, 2; Trade-Marks, 6.)

TRADE-MARKS.

1. REGISTRATION OF GEOGRAPHICAL MARKS PROHIBITED.

Section 5 of the Trade-Mark Act of 1905 is broad enough to prohibit the registration of any word that has an exclusive geographical significance or that would suggest any particular geographical location.

[*In re* Crescent Typewriter Supply Co., 231.

2. "ORIENT"—GEOGRAPHICAL.
The word "Orient" is generally understood to refer to certain Eastern countries, and, as applied to ink-ribbons and carbon-paper, *Held* to be geographical and not registrable. [*Id.

3. SAME—SAME.
A mark for ink-ribbons and carbon-paper consisting of the word "Orient" inclosed in a wreath, the letters E and I of the word being printed as a monogram, *Held* not registrable under section 5 of the Trade-Mark Act of 1905, as the word "Orient" is geographical. [*Id.

4. "SHREDDED WHOLE WHEAT"—DESCRIPTIVE.
The words "Shredded Whole Wheat" as applied to certain food preparations *Held* to be descriptive, and therefore incapable of appropriation as a trade-mark.
[*The Natural Food Company *v.* Williams, 232.

5. OPPOSITION—EXCLUSIVE USE—CHARACTER OF USE BY OPPOSER.
In determining if applicant's use of a mark has been "exclusive" within the meaning of section 5 of the Trade-Mark Act it is immaterial whether the opposer used the mark as a trade-mark or merely in a descriptive sense. [*Id.

6. SAME—TESTIMONY.
The fact that the opposer built machines to produce shredded whole wheat and actually produced and sold such an article is sufficient corroboration of his testimony that the boxes in which the product was packed were marked "Shredded Whole Wheat." [*Id.

7. SAME—NAME OF APPLICANT.
The applicant, Woodbury, having given opposer the exclusive right to use certain trade-names and a trade-mark which had been associated for many years with applicant's name, *Held* that he is not entitled to register a mark of which the name "Woodbury" constitutes a prominent feature for goods of the same descriptive properties.
[The Andrew Jergens Co. *v.* Woodbury, 513.

8. SAME—ALLEGATIONS—NOTICE OF.
Where an application for registration of a trade-mark alleges that the mark had been used on "perfumery, toilet powder, and talcum powder," a notice of opposition which alleges that the opposer used the same mark on perfumeries is sufficient to warrant the acceptance of proof.
[Oakley & Company *v.* Babcock, 761.

9. SAME—APPEAL FROM DECISION DENYING MOTION TO DISMISS.
An appeal from a decision of the Examiner of Interferences denying a motion to dismiss a notice of opposition will not be allowed. [Id.

10. SAME—AMENDMENT TO NOTICE OF.
An amendment to a notice of opposition setting forth that the opposer believes he would be damaged by the registration of the mark *Held* to have been properly admitted. [Id.

11. SAME—RESEMBLANCE OF MARKS.
Applicant's mark consists of the representation of two hands above the figure "5" and the words "To One" associated therewith. The mark of the opposer consists of the numeral "1," with the numeral "3" and the word "In" contained within the numeral "1" and the words "Three in One" associated therewith. *Held* that these marks do not so resemble each other that purchasers would be likely to be deceived thereby.
[G. W. Cole Co. *v.* Marshall Oil Co., 994.

12. SAME—ACTUAL CONFUSION.
Where the marks of the opposer and the applicant do not so nearly resemble each other that it is apparent that confusion in trade would be likely to arise from their use, registration of applicant's mark will not be refused in the absence of proof that confusion has taken place. [Id.

13. CANCELATION—PLEADING—SUFFICIENCY OF PETITION.
As the statute providing for the cancelation of registered trade-marks (act of Feb. 20, 1905, sec. 26, 33 Stat. L.) does not contemplate that any one may petition the Commissioner to cancel a trade-mark regularly registered, but it does provide that any one who "shall deem himself injured" may do so, the petition for cancelation must contain a statement of fact on this jurisdictional question sufficiently full to show that the petitioner has been injured by the registration, and this fact must not be left to conjecture, but must affirmatively appear, and where such a statement of fact is lacking the petition is demurrable.
*E. Mollhenny's Son *v.* New Iberia Extract of Tabasco Pepper Company, Limited, 995.

14. SAME—SAME.
An averment in a petition for the cancelation of the registered trade-mark "Tabasco" for pepper-sauce that petitioner has used such trade-mark is not sufficient, for the reason that unless the word has been used in the same business no injury contemplated by the statute would have followed. [*Id.

15. SAME—SAME.
In a petition for the cancelation of a registered trade-mark a general averment that the registration "has been much to the prejudice, damage, and loss" of the petitioner unsupported by averments of facts is merely the conclusion of the pleader and is not a sufficient averment of damage to give petitioner a standing in a cancelation proceeding. [*Id.

16. INTERFERENCE—MOTION TO DISSOLVE—TRANSMISSION REFUSED.
The question of the right of an applicant for registration of a trade-mark to demand an interference with another party because of his failure for more than two years to file a notice of opposition to the registration of the mark of such party is a question for the determination of the Examiner of Interferences at final hearing after opportunity has been had for the presentation of testimony and is not a proper question for transmission to the Examiner of Trade-Marks on a motion to dissolve.
[Graham Paper Co. *v.* National Blank Book Co., 1187.

17. DESCRIPTIVE—"STERLING."
The word "Sterling" as a trade-mark for ale or for any other kind of goods is descriptive of the quality of the articles on which it is used, as it denotes that the article is genuine, pure, and of superior quality, and it is therefore ineligible for registration as a technical mark.
[*Worcester Brewing Corporation *v.* Rueter & Company, 1190.

18. NON-TECHNICAL MARKS—TEN-YEAR PROVISO—EXCLUSIVE USE.
A non-technical mark is not entitled to registration under the ten-year proviso of section 5 of the Trade-Mark Act of February 20, 1905, unless it is shown that the applicant possessed and enjoyed an actual use of the mark for the specified period to the sole exclusion of all others, and if it appears that during such period another was using the same word as a trade-mark upon the same character of goods the use cannot be considered "exclusive" within the meaning of the statute. [*Id.

19. "FITS-U"—DESCRIPTIVE.
The word "Fits-U" as a trade-mark for eyeglasses and spectacle frames and mountings is a mere misspelling of the descriptive words "fits you" and is not registrable as a technical trade-mark. [*Ex parte* American Optical Company, 1935.

20. "MERELY DESCRIPTIVE"—SECTION 5 OF THE ACT OF 1905 CONSTRUED.
The registration of words or devices which are "merely descriptive" being prohibited by section 5 of the act of 1905, an arrangement of the letters of such a word in a particular way or a mere misspelling thereof does not avoid the prohibition. [Id.

21. "HOLD ON"—DESCRIPTIVE.
The words "Hold On" as a trade-mark for clutches for scarf-pins and hat-pins properly refused registration, since it is descriptive of the character or quality of the goods to which it is applied. *Ex parte* C. P. Goldsmith & Company, 1935.

22. OPPOSITION—TIME FOR FILING.
The thirty days allowed by statute for filing a notice of opposition include Sundays and holidays.
[Robert A. Keasbey Company *v.* Portland Cementfabrik Hemmoor, 1936.

TRANSMISSION OF MOTIONS.

(See Interference, 1; Motion to Amend Application; Motion to Dissolve Interference, 3, 4, 5.)

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ALPHABETICAL LIST OF PATENTEES

TO WHOM

PATENTS WERE ISSUED DURING THE MONTH OF MARCH, 1908.

[Abbreviations: "Sp."=Monthly Volume of Specifications; "Dr."=Monthly Volume of Drawings; "Gaz."=Official Gazette.]

A. B. Dick Company (See Dick, A. B., assignor.)
A. B. C. Machine Company. (See Cohn, A. B., assignor.)
A. E. Traeger Specialty Manufacturing Company. (See Traeger, A. E., assignor.)
Abbé, R. F., Hoboken, N. J., assignor to J. R. Alsing Engineering Co., New York, N. Y. Rotating drum. No. 881,171; Mar. 10; Sp. p. 1351; Dr. p. 291; Gaz. vol. 133; p. 260.
Abbott, A. E., Rhyolite, Nev. Rotary engine. No. 883,605; Mar. 31; Sp. p. 6229; Dr. pp. 1328–9; Gaz. vol. 133; p. 1141.
Abbott, C., *et al.* (See Fowler, S. E., assignor.)
Abbott, C. C., assignor to Triumph Voting Machine Company, Pittsfield, Mass. Counter operating and locking mechanism for voting-machines. No. 881,991; Mar. 17; Sp. p. 3016; Dr. pp. 643–4; Gaz. vol. 133; p. 554.
Abbott, C. C., assignor to Triumph Voting Machine Company, Pittsfield, Mass. Primary voting and vote-challenging mechanism for voting-machines. No. 881,992; Mar. 17; Sp. p. 3022; Dr. p. 644; Gaz. vol. 133; p. 554.
Abbott, C. C., assignor to Triumph Voting Machine Company, Pittsfield, Mass. Primary voting and vote-challenging mechanism for voting-machines. No. 881,993; Mar. 17; Sp. p. 3024; Dr. pp. 644–5; Gaz. vol. 133; p. 555.
Abbott, M., Blytheville Miss. Farming implement. No. 883,072; Mar. 24; Sp. p. 5119; Dr. p. 1092; Gaz. vol. 133; p. 939.
Abramson, A. C. (See Person, W., assignor.)
Abramson, A. C., and W. Person, assignors to Rockford Cabinet Company, Rockford, Ill. Sectional case. No. 883,506; Mar. 31; Sp. p. 6045; Dr. p. 1290; Gaz. vol. 133; p. 1113.
Ach, M., Egg, Vorarlberg, Austria-Hungary. Apparatus for cleansing corks. No. 880,955; Mar. 3; Sp. p. 943; Dr. p. 204; Gaz. vol. 133; p. 159.
Acheson, E. G., Stamford township, Welland county, Ontario, Canada. Mold and mold-lining. No. 881,645; Mar. 10; Sp. p. 2301; Dr. p. 498, Gaz. vol. 133; p. 414.
Acheson, J. M., Portland, Oreg. Garment-hanger. No. 881,277; Mar. 10; Sp. p. 1578; Dr. p. 337, Gaz. vol. 133; p. 294.
Acheson, J. M., Portland, Oreg. Combination table and fitting-stand. No. 881,278; Mar. 10; Sp. p. 1578; Dr. p. 337; Gaz. vol. 133; p. 295.
Ackermann, W., Wilmersdorf, near Berlin, Germany. Coating the surfaces of vessels. No. 881,759; Mar. 10; Sp. p. 2514; Gaz. vol. 133; p. 448.
Acme Flexible Clasp Company. (See Norton, R. H., assignor.)
Acosta, W. J. (See Wallis, T. H., assignor.)
Adams, A. L., Cedar Rapids, Iowa. Rope-clamp. No. 881,760; Mar. 10; Sp. p. 2515; Dr. p. 542; Gaz. vol. 133; p. 448.
Adams, D. F., Providence, R. I. Ring. No. 882,810; Mar. 24; Sp. p. 4668; Dr. p. 982; Gaz. vol. 133; p. 854.
Adams, E. E., Omaha, Nebr. Revolving flash-lamp. No. 882,442; Mar. 17; Sp. p. 3871; Dr. p. 827; Gaz. vol. 133; p. 700.
Adams, E. G., near Plain City, Ohio. Corn-husking machine. No. 881,761; Mar. 10; Sp. p. 2516; Dr. p. 542; Gaz. vol. 133; p. 449.
Adams, H. W., assignor of one-half to P. W. Farnham, Fargo, N. D. Compressor for internal-combustion engines. No. 881,040; Mar. 3; Sp. p. 1093; Dr. p. 237; Gaz. vol. 133; p. 187.
Adams, V. B. (See Schaller and Adams.)
Adams, W. T. (See Green, F. D., assignor.)
Adamson, C. E., Marion, Ind. Copy-press. No. 880,491; Mar. 3; Sp. p. 1; Dr. p. 1; Gaz. vol. 133; p. 3.
Adamson, C. E., Muncie, Ind. Rotary copying-press. No. 880,492; Mar. 3; Sp. p. 3; Dr. p. 1; Gaz. vol. 133; p. 3.
Adder Machine Company. (See Wales, C., assignor.)
Addressograph Company. (See Duncan, J. S., assignor.)
Adler, H. M., Boston, Mass. Loose-leaf binder. No. 882,284; Mar. 17; Sp. p. 3599; Dr. p. 763; Gaz. vol. 133; p. 649.
Adreon, E. L., Jr., St. Louis, Mo. Reinforcing-bar. No. 881,762; Mar. 10; Sp. p. 2518; Dr. p. 542; Gaz. vol. 133; p. 449.
Aeolian Company. (See Young, F. L., assignor.)
Aggett, C. J., *et al.* (See Boyler, E. J., assignor.)
Ahlemeier, O. H., Poland, Ind. Gate. No. 882,987; Mar. 24; Sp. p. 4964; Dr. p. 1056; Gaz. vol. 133; p. 912.
Air-Brake and Steam-Heat Connection Company. (See Kilpatrick, W. W., assignor.)
Akeson, A., Worcester, Mass. Hydrocarbon-burner. No. 883,373; Mar. 31; Sp. p. 5750; Dr. p. 1228; Gaz. vol. 133; p. 1068.
Akeson, A., Worcester, Mass. Feed device for hydrocarbon-burners. No. 883,374; Mar. 31; Sp. p. 5753; Dr. p. 1229; Gaz. vol. 133; p. 1068.
Alberger, L. R., Greenwich, Conn., assignor, by mesne assignments, to Alberger Pump Company, New York, N. Y. Centrifugal pump. No. 880,956; Mar. 3; Sp. p. 944; Dr. p. 204; Gaz. vol. 133; p. 159.
Alberger Pump Company. (See Alberger, L. R., assignor.)
Albertson, B. (See Hall and Albertson.)
Alexander, A. J. and I. B., Hartsville, S. C. Bottle-vending machine. No. 882,858; Mar. 24; Sp. p. 4719; Dr. p. 1003; Gaz. vol. 133; p. 870.
Alexander, E. F., Salem, W. Va. Water-gage for steam-boilers. No. 883,606; Mar. 31; Sp. p. 6231; Dr. p. 1329; Gaz. vol. 133; p. 1141.
Alexander, I. (See Brown, C. R., assignor.)
Alexander, I. B. (See Alexander, A. J. and I. B.)
Alexander, I., New York N. Y. Method of and apparatus for testing jelly. No. 882,731; Mar. 24; Sp. p. 4452; Dr. p. 947; Gaz. vol. 133; p. 828.
Alexanderson, E. F. W., Schenectady, N. Y., assignor to General Electric Company. Self-excited alternator. No. 881,647; Mar. 10; Sp. p. 2307; Dr. p. 499; Gaz. vol. 133, p. 415.
Alexanderson, E. F. W., Schenectady, N. Y., assignor to General Electric Company. Induction-motor control. No. 882,606; Mar. 24; Sp. p. 4202; Dr. p. 891; Gaz. vol. 133; p. 787.
Allan, A. (See Cavanagh and Allan.)
Allan, A. (See Silbert, H., assignor.)
Allen, A. A., Glouster, Ohio. Nut-lock. No. 881,763; Mar. 10; Sp. p. 2519; Dr. p. 543; Gaz. vol. 133; p. 449.
Allen, C. C., assignor to F. A. Hardy & Company, Chicago, Ill. Machine for grinding lenses. No. 881,646; Mar. 10; Sp. p. 2302; Dr. pp. 498–9; Gaz. vol. 133; p. 414.
Allen, C. J. (See Sparks and Allen.)
Allen, C. L., Winchester, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Sole-rounding machine. No 881,994; Mar. 17; Sp. p. 3029; Dr. p. 645; Gaz. vol. 133; p. 555.
Allen, E. B., Bridgeport, Conn., assignor to Singer Manufacturing Company. Sewing-machine. No. 882,484; Mar. 17; Sp. p. 3944; Dr. pp. 843–4; Gaz. vol. 133; p. 714.
Allen, J. H., assignor to Rail Joint Company, New York, N. Y. Apparatus for molding rail-joint castings. No. 882,660; Mar. 24; Sp. p. 4312; Dr. p. 916; Gaz. vol. 133; p. 805.
Allen, P., Flint, Mich. Carbureter for internal-combustion engines. No. 881,279; Mar. 10; Sp. p. 1580; Dr. p. 337; Gaz. vol. 133; p. 295.
Allen, W. W., Cincinnati, Ohio. Switch-stand. No. 883,074; Mar. 24; Sp. p. 5122; Dr. p. 1093; Gaz. vol. 133; p. 940.
Allender, J. L., Arlington, Ind. Combined corn harvester and husker. No. 883,073; Mar. 24; Sp. p. 5120; Dr. pp. 1092–3; Gaz. vol. 133; p. 939.
Alley, J. J., Bristol, Va. Coke-oven door. No. 882,365; Mar. 17; Sp. p. 3747; Dr. p. 797; Gaz. vol. 133; p. 675.
Almstead, F., Clayville, N. Y. Rope-clamp. No. 881,041; Mar. 3; Sp. p. 1096; Dr. p. 237; Gaz. vol. 133; p. 187.

Aloyos, N., and O. Strohbach, Raab, Austria-Hungary. Apparatus for sighting rifles. No. 882,988; Mar. 24; Sp. p. 4066; Dr. p. 1057; Gaz. vol. 133; p. 913.
Altmann, F. C., assignor to English & Mersick Co., New Haven, Conn. Latch for vehicle-doors. No. 882,136; Mar. 17; Sp. p. 3299; Dr. p. 704; Gaz. vol. 133; p. 601.
Altolaguirre, M., and J. Zubillaga, Vedado, Cuba. Apparatus for removing foreign substances from liquids. No. 881,451; Mar. 10; Sp. p. 1911; Dr. p. 416; Gaz. vol. 133; p. 349.
Alvey, B. H., assignor to Alvey-Ferguson Company, Louisville, Ky. Conveyer. No. 881,042; Mar. 3; Sp. p. 1097; Dr. pp. 237–8; Gaz. vol. 133; p. 188.
Alvey-Ferguson Company. (See Alvey, B. H., assignor.)
Amborn, G., New York, assignor to J. H. Williams & Co., Brooklyn, N. Y. Chain pipe-wrench. No. 881,216; Mar. 10; Sp. p. 1442; Dr. p. 311; Gaz. vol. 133; p. 273.
American Air Liquefying Co. (See Place, J. F., assignor.)
American Ball-Bearing Company. (See Baker, W. C., assignor.)
American Can Company. (See Stollberg, C., assignor.)
American Car & Foundry Company. (See Brown, T. R., assignor.)
American Car and Foundry Company. (See Harrington, C. G., assignor.)
American Car and Foundry Company. (See Ostrander, A. E., assignor.)
American Circular Loom Company. (See Lutz, G. A., assignor.)
American Coin Register Company. (See Powell and Ellis, assignors.)
American Cyanamid Company. (See Frank and Caro, assignors.) (Reissue.)
American District Telegraph Company. (See Bullock, H. S., Jr., assignor.)
American District Telegraph Company. (See Hamblin, M. W., assignor.)
American Electric Alarm Company. (See Eichler, E., assignor.)
American Electric Alarm Company. (See Heinrich, S. J., assignor.)
American Heel Machine Company. (See Wolfe, W., assignor.)
American Lacing Hook Co. (See Bartel and Taft, assignors.)
American Lacing Hook Co. (See Taft, S. R., assignor.)
American Paper Bottle Company. (See Kimsey, J. C., assignor.)
American Pneumatic Service Company. (See Stoddard, C. F., assignor.)
American Radiator Company. (See Thompson, C. B., assignor.)
American Sheet & Tin Plate Company. (See McArthur, A. R., assignor.)
American Steel Package Company. (See Kruse, A. T., assignor.)
American Steel & Wire Company. (See Harter, N. S., assignor.)
American Telegraphone Company. (See Lieb, J. A., assignor.)
American Tobacco Company. (See Prescott, S. I., assignor.)
American Typographic Corporation. (See Richards, F. H., assignor.)
American Woven Lath Company. (See Carpenter, H. W., assignor.)
Ammerman, P. B., Brooklyn, N. Y. Rug corner-weight. No. 882,859; Mar. 24; Sp. p. 4721; Dr. p. 1003; Gaz. vol. 133; p. 870.
Amphion Piano-Player Company. (See Doman, L. B., assignor.)
Andersen, J. P., and E. G. Dean, Naper, Nebr. Post-hole digger. No. 881,280; Mar. 10; Sp. p. 1582; Dr. p. 338; Gaz. vol 133; p. 296.
Anderson, A. (See Warren and Anderson.)
Anderson, A., Somerville, Mass. Jig-saw. No. 882,044; Mar. 17; Sp. p. 3143; Dr. p. 667; Gaz. vol. 133; p. 571.
Anderson, A. G., assignor to Illinois Malleable Iron Company, Chicago, Ill. Pipe-union. No. 883,075; Mar. 24; Sp. p. 5125; Dr. p. 1094; Gaz. vol. 133; p. 940.
Anderson, E. J., Davenport, Iowa. Track-sanding device. No. 881,452; Mar. 10; Sp. p. 1913; Dr. p. 416; Gaz. vol. 133; p. 349.
Anderson, E. M., Washington, Iowa. Grain-board for wagons. No. 880,493; Mar. 3; Sp. p. 5; Dr. p. 2; Gaz. vol. 133; p. 3.
Anderson, J. A. E., assignor of one-half to S. A. Hitchcock, Chicago, Ill. Portable fire-extinguisher. No. 883,679; Mar. 31; Sp. p. 6386; Dr. p. 1362; Gaz. vol. 133; p. 1164.
Anderson, J. P. A., Madrid, Iowa. Lightning-protector attachment for trees. No. 880,854; Mar. 3; Sp. p. 755; Dr. p. 160; Gaz. vol. 133; p. 127.
Anderson, J. P. A., Madrid, Iowa. Apparatus for protecting grain-stacks. No. 881,453; Mar. 10; Sp. p. 1916; Dr. p. 416; Gaz. vol. 133; p. 350.
Anderson, O. T., and F. A. Johnson, Chicago, Ill. Marking-gage. No. 881,887; Mar. 17; Sp. p. 2811; Dr. p. 600; Gaz. vol. 133; p. 521.
Anderson & Prigge. (See Greiner, F., assignor.)
Anderson, R., Schenectady, N. Y., assignor to General Electric Company. Magnetic clutch. No. 882,607; Mar. 24; Sp. p. 4204; Dr. p. 891; Gaz. vol. 133; p. 788.
Andrew, C. H. and H. E. B., Stockport, England. Tobacco-stemming machine. No. 880,616; Mar. 3; Sp. p. 259; Dr. p. 54; Gaz. vol. 133; p. 45.
Andrew, H. E. B. (See Andrew, C. H. and H. E. B.)
Andrews, A. G., Pittsburg, Pa. Amusement device. No. 883,441; Mar. 31; Sp. p. 5920; Dr. pp. 1263–4; Gaz. vol. 133; p. 1092.
Andrews, C. C., Memphis, Tenn. Mail catching and delivering device. No. 882,661; Mar. 24; Sp. p. 4314; Dr. pp. 916–17; Gaz. vol. 133; p. 806.
Andrews, F. S., assignor to E. F. Cassel, London, England. Photographic camera. No. 883,607; Mar. 31; Sp. p. 6232; Dr. pp. 1329–30; Gaz. vol. 133; p. 1141.
Andrews, H., Stratton, Nebr. Hoof-cutting knife. No. 882,662; Mar. 24; Sp. p. 4318; Dr. p. 917; Gaz. vol. 133; p. 806.
Andrews, J. S., New York, N. Y. Underframe for cars. No. 881,281; Mar. 10; Sp. p. 1584; Dr. p. 338; Gaz. vol. 133; p. 296.
Andrews, T. A., Grantville, Ga. Rib for cotton-gins. No. 882,732; Mar. 24; Sp. p. 4453; Dr. p. 947; Gaz. vol. 133; p. 828.
Anello, F. P., Newark, N. J. Fin. No. 883,375; Mar. 31; Sp. p. 5755; Dr. p. 1229; Gaz. vol. 133; p. 1068.
Anger, E. W., Jr. (See Hornsby and Anger.)
Angerer, V., Ridley Park, assignor to William Wharton, Jr., & Company, Incorporated, Philadelphia, Pa. Tongue-switch. No. 881,043; Mar. 3; Sp. p. 1100; Dr. p. 238; Gaz. vol. 133; p. 188.
Ansonia Clock Company. (See Davies, W. D., assignor.)
Anthony, F. (See Cook, E. R., assignor.)
Anthony, M. O., New York, N. Y. Cooking and heat-retaining apparatus. No. 881,648; Mar. 10; Sp. p. 2308; Dr. p. 499; Gaz. vol. 133; p. 415.
Antoine, V., Lambermont, Belginm. Apparatus for separating foreign substances from water. No. 883,608; Mar. 31; Sp. p. 6236; Dr. p. 1330; Gaz. vol. 133; p. 1142.
Apfel, P. F., Seattle, Wash., and R. L. Earneat, Portland, Oreg. Fireproof paint. No. 882,774; Mar. 24; Sp. p. 4530; Gaz. vol. 133; p. 841.
Apfel, P. F., Seattle, Wash., and R. L. Earnest, Portland, Oreg. Protecting piles against worms, &c. No. 883,507; Mar. 31; Sp. p. 6047; Gaz. vol. 133; p. 1114.
Appel, G. O., Bushton, Kans. Automatic feeding mechanism for threshing-machines. No. 881,839; Mar. 10; Sp. p. 2673; Dr. p. 572; Gaz. vol. 133; p. 475.
Appleby, E., Chicago, Ill. Electric furnace. No. 882,733; Mar. 24; Sp. p. 4454; Dr. pp. 947–8; Gaz. vol. 133; p. 829.
Appler, A. B., *et al.* (See Willis, C. A., assignor.)
Arkenberg, J. F., Fostoria, Ohio. Non-refillable bottle. No. 883,609; Mar. 31; Sp. p. 6238; Dr. p. 1331; Gaz. vol. 133; p. 1142.
Armac Motor Company. (See Keller, E. W., assignor.)
Armour & Company. (See Smith, C. L., assignor.)
Arms, L., Wimbledon, N. D. Combined scraper and conveyer. No. 882,775; Mar. 24; Sp. p. 4531; Dr. p. 967; Gaz. vol. 133; p. 841.
Armstrong, C. C., Marysville, Ohio. Window or like screen. No. 881,282; Mar. 10; Sp. p. 1586; Dr. p. 339; Gaz. vol. 133; p. 296.
Armstrong, E. E., Niagara Falls, N. Y. Treating complex cobalt ores and refining cobalt from nickel, arsenical, and silver-bearing ores. No. 881,527; Mar. 10; Sp. p. 2059; Dr. p. 450; Gaz. vol. 133; p. 374.
Armstrong, J., Bridgeport, Conn. Bias binding and trimming. No. 882,285; Mar. 17; Sp. p. 3601; Dr. p. 764; Gaz. vol. 133; p. 649.
Armstrong, J. B. (See McNeil, C. W., assignor.)
Armstrong, T. B., Lakewood, Ohio. Mechanism for moving hatch-covers. No. 881,649; Mar. 10; Sp. p. 2311; Dr. p. 500; Gaz. vol. 133; p. 415.
Arndt, W. F., and H. M. Hamilton, Watertown, Wis. Sewing-machine. No. 881,283; Mar. 10; Sp. p. 1587; Dr. pp. 339–41; Gaz. vol. 133; p. 296.
Arnold, O., Jr., Magdeburg, Buckau, Germany. Pressure-gage. No. 881,764; Mar. 10; Sp. p. 2520; Dr. p. 543; Gaz. vol. 133; p. 449.
Arter, A., *et al.* (See Baker, J. D., assignor.)
Ashcroft Manufacturing Company. (See Blanchard, F. C., assignor.)
Ashelm, P., Berlin, Germany. Device for assembling printed-paper strips in true register. No. 882,366; Mar. 17; Sp. p. 3750; Dr. p. 798; Gaz. vol. 133; p. 676.
Askenasy, P. (See Teichner and Askenasy.)
Askins, J., Lima, Ohio. Insole for boots and shoes. No. 881,840; Mar. 10; Sp. p. 2676; Dr. p. 573; Gaz. vol. 133; p. 475.
Askins, W. H., Garrison, Tex. Insertible saw-tooth. No. 883,076; Mar. 24; Sp. p. 5126; Dr. p. 1094; Gaz. vol. 133; p. 940.

Astfalck, W., Tegel, near Berlin, Germany. Hydraulic press. No. 882,045; Mar. 17; Sp. p. 3145; Dr. pp. 668–9; Gaz. vol. 133; p. 571.
Atkinson, W. R., New York, N. Y. Wall-bracket for electric lights. No. 881,284; Mar. 10; Sp. p. 1593; Dr. p. 341; Gaz. vol. 133; p. 297.
Atlas Anchor Company. (See Frost, C. E., assignor.)
Atwood, W. H., Lincoln, Nebr. Digester. No. 881,888; Mar. 17; Sp. p. 2812; Dr. p. 600; Gaz. vol. 133; p. 521.
Auchu, H. Emporium, Pa. Machine for forming a cartridge-rope from explosive gelatin. No. 881,365; Mar. 10; Sp. p. 1741; Dr. pp. 375–6; Gaz. vol. 133; p. 322.
Auchu, H., Emporium, Pa. Machine for forming a cartridge-rope from explosive gelatin. No. 881,366; Mar. 10; Sp. p. 1746; Dr. p. 376; Gaz. vol. 133; p. 323.
Auchu, H., Emporium, Pa. Machine for forming a cartridge-rope from explosive gelatin. No. 881,367; Mar. 10; Sp. p. 1749; Dr. pp. 376–7; Gaz. vol. 133; p. 323.
Auchu, H., Emporium, Pa. Machine for forming a cartridge-rope from explosive gelatin. No. 881,368; Mar. 10; Sp. p. 1754; Dr. pp. 378–80; Gaz. vol. 133; p. 323.
Audet, F., St. Jean Des Chaillons, Quebec, Canada. Boat. No. 881,650; Mar. 10; Sp. p. 2316; Dr. pp. 500–1; Gaz. vol. 133; p. 416.
Audibert, L. A., Lodève, France. Starting device for mercury-vapor electric lamps. No. 881,765; Mar. 10; Sp. p. 2522; Dr. p. 543; Gaz. vol. 133; p. 450.
Audley, F. H., New York, N. Y., assignor to K. M. Audley, Stamford, Conn. Revolver-holster. No. 881,044; Mar. 3; Sp. p. 1101; Dr. p. 238; Gaz. vol. 133; p. 188.
Audley, K. M. (See Audley, F. H., assignor.)
Aurand, W. L., Milford, Ill. Grain-car door. No. 882,286; Mar. 17; Sp. p. 3602; Dr. p. 764; Gaz. vol. 133; p. 649.
Austin, E. E., *et al.* (See Fowler, B. F., assignor.)
Austin, W. M., Swissvale, assignor to Westinghouse Air Brake Company, Pittsburg, Pa. Engineer's valve for air-brakes. No. 882,608; Mar. 24; Sp. p. 4206; Dr. pp. 891–2; Gaz. vol. 133; p. 788.
Automatic Rapid Unloading Company. (See Schwartz, A., assignor.)
Automatic Utilities Company. (See Heissenberger, J., assignor.)
Automultigraph Co. (See Hutches, B. F., Jr., assignor.)
Autopiano Co. (See Danquard, T., assignor.)
Avery, C. E., Jersey City, N. J. Time-switch. No. 883,273; Mar. 31; Sp. p. 5552; Dr. p. 1184; Gaz. vol. 133; p. 1036.
Axt, J. N., assignor to Boyce Automatic Etching Company, New York, N. Y. Apparatus for etching plates. No. 882,443; Mar. 17; Sp. p. 3872; Dr. p. 827; Gaz. vol. 133; p. 701.
Ayer, F. H., Chicago Heights, Ill. Bonding-pin. No. 882,609; Mar. 24; Sp. p. 4212; Dr. p. 892; Gaz. vol. 133; p. 788.
Aylsworth, J. W., East Orange, assignor to New Jersey Patent Company, West Orange, N. J. Composition for making duplicate phonograph-records. No. 880,707; Mar. 3; Sp. p. 428; Dr. p. 91; Gaz. vol. 133; p. 76.
Aylsworth, J. W., East Orange, assignor to Edison Storage Battery Company, West Orange N. J. Storage-battery electrode. No. 880,957; Mar. 3; Sp. p. 948; Dr. p. 205; Gaz. vol. 133; p. 160.
Aylward, H. W., *et al.* (See Lehmann, J. C., assignor.)
Aylward, J. J., *et al.* (See Lehmann, J. C., assignor.)
Babcock, C. W., Portland, Oreg. Razor-strop. No. 882,228; Mar. 17; Sp. p. 3482; Dr. p. 740; Gaz. vol. 133; p. 629.
Babin, H., assignor of two-thirds to A. J. Richard and A. Bergeron, Lafourche Crossing, La. Pickle-fork. No. 881,285; Mar. 10; Sp. p. 1595; Dr. p. 341; Gaz. vol. 133; p. 298.
Bach, C., Jr., Milwaukee, Wis. Electric-circuit controller. No. 880,617; Mar. 3; Sp. p. 261; Dr. p. 55; Gaz. vol. 133; p. 46.
Bacharach, H., Pittsburg, Pa. Machine for making coal-bits. No. 880,618; Mar. 3; Sp. p. 263; Dr. pp. 55–6; Gaz. vol. 133; p. 46.
Bachle, F. X., and J. C. L. Krebs, Clyde, Ohio. Multiple-cylinder engine. No. 880,958; Mar. 3; Sp. p. 951; Dr. pp. 205–6; Gaz. vol. 133; p. 160.
Bacon, G. W., Grand Junction, Colo. Mowing-machine. No. 880,771; Mar. 3; Sp. p. 575; Dr. p. 122; Gaz. vol. 133; p. 99.
Badger, A. C., Cohasset, Mass. Hand-hole pipe-coupling attachment for boiler-heads, &c. No. 881,045; Mar. 3; Sp. p. 1104; Dr. p. 238; Gaz. vol. 133; p. 189.
Badische Anilin & Soda Fabrik. (See Le Blanc, M., assignor.)
Baecker, A., assignor of one-half to J. Wagner, Detroit, Mich. Clothes-drier. No. 883,162; Mar. 31; Sp. p. 5319; Dr. p. 1135; Gaz. vol. 133; p. 999.
Baer, H. J., San Francisco, Cal. Form-fitting waist-lining. No. 882,989; Mar. 24; Sp. p. 4967; Dr. p. 1057; Gaz. vol. 133; p. 913.
Baer, M., and P. Flachshaar, Berlin, Germany. Ignition device for gas-burners. No. 881,528; Mar. 10; Sp. p. 2061; Dr. p. 450; Gaz. vol. 133; p. 375.
Bahn, G. A., Austin, Tex. Device for slitting sweet corn. No. 881,841; Mar. 10; Sp. p. 2677; Dr. p. 573; Gaz. vol. 133; p. 476.
Bailey, A. J., Salford, England. Device for carrying spare wheels or tires on motor-cars. No. 883,274; Mar. 31; Sp. p. 5554; Dr. p. 1185; Gaz. vol. 133; p. 1036.
Bailey, A. R., New York, assignor to Sanitary Water-Still Company, Brooklyn, N. Y. Water-still. No. 882,811; Mar. 24; Sp. p. 4609; Dr. p. 983; Gaz. vol. 133; p. 854.
Bailey, F. E., Ceres, N. Y. Lubricator for railway-tracks. No. 880,494; Mar. 3; Sp. p. 7; Dr. p. 2; Gaz. voi. 133; p. 4.
Bailey, J. P. H., Burnet, Tex. Rail-joint. No. 883,508; Mar. 31; Sp. p. 6047; Dr. p. 1230; Gaz. vol. 133; p. 1114.
Bailey, T. L. W. (See Chandler, O. H., assignor.)
Baird, E. P., Evanston, assignor to Baird Manufacturing Company, Chicago, Ill. Telephone toll apparatus. No. 880,708; Mar. 3; Sp. p. 430; Dr. pp. 91–2; Gaz. vol. 133; p. 76.
Baird, G. M., Oklahoma, Okla. Automatic grain-weigher. No. 881,217; Mar. 10; Sp. p. 1444; Dr. p. 312; Gaz. vol. 133; p. 274.
Baird Manufacturing Company. (See Baird, E. P., assignor.)
Baker, A. D., Swanton, Ohio. Valve-gear for steam-engines. No. 881,286; Mar. 10; Sp. p. 1596; Dr. p. 342; Gaz. vol. 133; p. 298.
Baker, A. G., Stockton, Cal. Paste-bottle. No. 881,889; Mar. 17; Sp. p. 2815; Dr. p. 600; Gaz. vol. 133; p. 521.
Baker, C. L., Sr., assignor of one-half to E. Goodwill, Chatawa, Miss. Combined loader, excavator, and pile-driver. No. 881,529; Mar. 10; Sp. p. 2061; Dr. pp. 450–1; Gaz. vol. 133; p. 375.
Baker, D. B., and J. A. Stein, Hoquiam, Wash. Sectional grate. No. 882,860; Mar. 24; Sp. p. 4722; Dr. p. 1004; Gaz. vol. 133; p. 870.
Baker, G. S., London, England. Machine for grinding plastic substances, such as chocolate and the like. No. 881,287; Mar. 10; Sp. p. 1598; Dr. p. 342; Gaz. vol. 133; p. 298.
Baker, J. D., assignor of two-thirds to A. Arter and G. B. Harvey, Lisbon, Ohio. Friction-gearing. No. 882,861; Mar. 24; Sp. p. 4724; Dr. p. 1004; Gaz. vol. 133; p. 871.
Baker, W., Birmingham, England. Drop-down small-arm No. 881,046; Mar. 3; Sp. p. 1105; Dr. pp. 239–40; Gaz. vol. 133; p. 189.
Baker, W., Caversham, near Reading, England. Target and bullet-catcher for use with air-guns. No. 883,077; Mar. 24; Sp. p. 5127; Dr. p. 1094; Gaz. vol. 133; p. 941.
Baker, W. C., assignor to American Ball-Bearing Company, Cleveland, Ohio. Antifriction-bearing No. 881,102; Mar. 3; Sp. p. 1214; Dr. p. 262; Gaz. vol. 133; p. 207.
Baldwin, A. J., East Orange, N. J. Making wire-glass. No. 880,772; Mar. 3; Sp. p. 576; Dr. p. 122; Gaz. vol. 133; p. 99.
Baldwin, G. P., Los Angeles, Cal. Transfer-track system. No. 881,454; Mar. 10; Sp. p. 1917; Dr. pp. 417–18; Gaz. vol. 133; p. 350.
Baldwin, H. L., Watertown, N. Y. Non-refillable bottle. No. 881,995; Mar. 17; Sp. p. 3034; Dr. pp. 645–6; Gaz. vol. 133; p. 555.
Ball, C. E., Alexandria, Ind., assignor to Macbeth-Evans Glass Company, Pittsburg, Pa. Grinding-machine. No. 883,163; Mar. 31; Sp. p. 5320; Dr. p. 1135; Gaz. vol. 133; p. 999.
Ball, F. H. (See Ball, F. O., assignor.)
Ball, F. O., Plainfield, N. J. Adjustable electrical resistance. No. 882,610; Mar. 24; Sp. p. 4214; Dr. p. 892; Gaz. vol. 133; p. 789.
Ball, F. O., assignor of one-half to F. H. Ball, Plainfield, N. J. Connection for electric conductors. No. 882,514; Mar. 17; Sp. p. 4006; Dr. p. 857; Gaz. vol. 133; p. 724.
Ball, G. M. (See Servatius, C. M., assignor.)
Ball, I. J., Brock, Nebr. Corn harvester and husker. No. 882,734; Mar. 24; Sp. p. 4457; Dr. pp. 948–9; Gaz. vol. 133; p. 829.
Ballance, D. S., assignor of one-third to M. A. Ballance, Wysocking, N. C. Cotton-chopper. No. 883,610; Mar. 31; Sp. p. 6239; Dr. p. 1331; Gaz. vol. 133; p. 1143.
Ballance, M. A. (See Ballance, D. S., assignor.)
Ballentine, W. I., Philadelphia, Pa. Testing apparatus. No. 881,047; Mar. 3; Sp. p. 1107; Dr. p. 240; Gaz. vol. 133; p. 189.
Balliet, H. H., Coplay, Pa. Friction-pulley. No. 882,444; Mar. 17; Sp. p. 3875; Dr. pp. 827–8; Gaz. vol. 133; p. 701.
Balloco, A., assignor to Itala Fabbrica di Automobili, Turin, Italy. Speed-change mechanism. No. 882,091; Mar. 17; Sp. p. 3229; Dr. p. 686; Gaz. vol. 133; p. 587.
Bancroft, J. S., and M. C. Indahl, assignors to Lanston Monotype Machine Company, Philadelphia, Pa. Keyboard perforating-machine. No. 883,376; Mar. 31; Sp. p. 5756; Dr. pp. 1229–30; Gaz. vol. 133; p. 1069.
Bancroft, J. S., and M. C. Indahl, assignors to Lanston Monotype Machine Company, Philadelphia, Pa. Record-strip composing-machine. No. 883,377; Mar. 31; Sp. p. 5761; Dr. pp. 1230–1; Gaz. vol. 133; p. 1069.
Bancroft, J. S., and M. C. Indahl, assignors to Lanston Monotype Machine Company, Philadelphia, Pa. Type-machine. No. 883,378; Mar. 31; Sp. p. 5770; Dr. pp. 1232–3; Gaz. vol. 133; p. 1070.
Bannister, R., Birmingham, England. Milling-cutter. No. 880,773; Mar. 3; Sp. p. 577; Dr. p. 122; Gaz. vol. 133; p. 99.
Barad, J., and E. E. Markoff, Providence, R. I. Device employed for exterminating rats, mice, and other animals. No. 883,611; Mar. 31; Sp. p. 6241; Dr. p. 1332; Gaz. vol. 133; p. 1143.
Barbrake, J. A., Canton, Ohio. Tire-wire-pulling machine. No. 881,651; Mar. 10; Sp. p. 2318; Dr. pp. 501–2; Gaz. vol. 133; p. 416.

Barcroft, H. G., and W. H. Crawford, Bradford, Pa. Pumping apparatus for oil-wells. No. 883,612; Mar. 31; Sp. p. 6243; Dr. p. 1332; Gaz. vol. 133; p. 1143.
Bard, L. (See Nelson and Bard.)
Bardsley, H., Providence, R. I., assignor to Crompton & Knowles Loom Works. Loom. No. 882,922; Mar. 24; Sp. p. 4842; Dr. p. 1027; Gaz. vol. 133; p. 800.
Barker, B., Ann Arbor, Mich. Folding crate. No. 883,509; Mar. 31; Sp. p. 6048; Dr. p. 1291; Gaz. vol. 133; p. 1114.
Barker, E., Batavia, N. Y. Gluing-clamp. No. 881,530; Mar. 10; Sp. p. 2063; Dr. p. 451; Gaz. vol. 133; p. 375.
Barker, E. T., Marshalltown, Iowa. Adjustable trap for soil-pipes. No. 883,275; Mar. 31; Sp. p. 5555; Dr. p. 1186; Gaz. vol. 133; p. 1037.
Barlow, A. E. (See Berthiaume and Barlow.)
Barlow, S. S., Chicago, Ill. Mouth-organ. No. 880,709; Mar. 3; Sp. p. 439; Dr. p. 92; Gaz. vol. 133; p. 77.
Barna, J. W., and V. Hoffman, Chicago, Ill. Hook-setting machine. No. 883,378; Mar. 31; Sp. p. 5775; Dr. pp. 1233–4; Gaz. vol. 133; p. 1070.
Barna, J. W., and V. Hoffman, Chicago, Ill. Hook-setting machine. No. 883,510; Mar. 31; Sp. p. 6040; Dr. p. 1291; Gaz. vol. 133; p. 1114.
Barnes, A. T., Neola, Iowa. Concrete-block machine. No. 880,495; Mar. 3; Sp. p. 8; Dr. p. 2; Gaz. vol. 133; p. 4.
Barnes, E. M. (See Luttrell, J. D., assignor.)
Barnes, F. C., Fremont, Ohio. Syringe. No. 880,496; Mar. 3; Sp. p. 10; Dr. p. 2; Gaz. vol. 133; p. 4.
Barnes, W. G., Wilson, N. C. Display-rack. No. 882,367; Mar. 17; Sp. p. 3751; Dr. p. 798; Gaz. vol. 133; p. 676.
Barnett, G. R. (See Patten and Barnett.)
Barnett, S. D., Newark, N. J. Hose or pipe coupling. No. 881,369; Mar. 10; Sp. p. 1761; Dr. pp. 380–1; Gaz. vol. 133; p. 324.
Barnish, O., assignor of one-half to J. M. Newell, Springfield, Mass. Railway block system. No. 881,766; Mar. 10; Sp. p. 2524; Dr. pp. 543–4; Gaz. vol. 133; p. 450.
Barnum, T. E., assignor to Cutler-Hammer Mfg. Co., Milwaukee, Wis. Controller for electric motors. No. 883,078; Mar. 24; Sp. p. 5128; Dr. pp. 1094–5; Gaz. vol. 133; p. 941.
Barr, G. T., Waco, Tex. Buttonhole cutter or shears. No. 881,860; Mar. 17; Sp. p. 2815; Dr. p. 601; Gaz. vol. 133; p. 521.
Barrett, H. G., Chicago, Ill., assignor, by mesne assignments, to W. H. Cowles, Spokane, Wash. Printing-press. No. 881,288; Mar. 10; Sp. p. 1569; Dr. pp. 342–3; Gaz. vol. 133; p. 299.
Barrell, H. O., Reading, Pa. Flue-cleaner. No. 880,855; Mar. 3; Sp. p. 756; Dr. p. 160; Gaz. vol. 133; p. 128.
Barrett, W. W. (See Frysinger and Barrett.)
Barringer, L. E., Schenectady, N. Y., assignor to General Electric Company. Resistance unit. No. 882,990; Mar. 24; Sp. p. 4969; Dr. p. 1057; Gaz. vol. 133; p. 913.
Barry, R. J. (See Muller, Driscoll, and Barry.)
Bartel, W. P., Waltham, and S. E. Taft, South Framingham, Mass., assignors to American Lacing Hook Co. Hook-separating mechanism. No. 881,172; Mar. 10; Sp. p. 1353; Dr. pp. 291–2; Gaz. vol. 133; p. 260.
Bartelme, M. M., administratrix. (See Raymond, A.)
Bartels, Dierichs & Co. Gesellschaft mit beschränkter Haftung. (See Meyer, F., assignor.)
Barthel, G., Dresden, Germany. Bunsen burner. No. 882,611; Mar. 24; Sp. p. 4215; Dr. p. 803; Gaz. vol. 133; p. 789.
Barthold, F., assignor to Vilter Manufacturing Company, Milwaukee, Wis. Corking-machine. No. 882,612; Mar. 24; Sp. p. 4217; Dr. pp. 803–4; Gaz. vol. 133; p. 789.
Barthold, F., assignor to Vilter Manufacturing Company, Milwaukee, Wis. Corking-machine. No. 882,663; Mar. 24; Sp. p. 4318; Dr. pp. 917–18; Gaz. vol. 133; p. 806.
Bartholomew, M. (See Megson and Sculthorp, assignors.)
Bartlett, G. H., San Francisco, Cal. Heater. No. 882,229; Mar. 17; Sp. p. 3483; Dr. p. 740; Gaz. vol. 133; p. 629.
Bartosik, J., and P. Krummel, Pittsburg, Pa. Reversible and variable-speed power-transmitting device. No. 880,856; Mar. 3; Sp. p. 756; Dr. p. 160; Gaz. vol. 133; p. 128.
Barzee, C. W., The Dalles, Oreg. Rotary soil-drag. No. 881,289; Mar. 10; Sp. p. 1603; Dr. p. 343; Gaz. vol. 133; p. 299.
Basch, D., New York, N. Y. Garment-retaining device. No. 882,445; Mar. 17; Sp. p. 3877; Dr. p. 828; Gaz. vol. 133; p. 701.
Bassett, J. C., *et al.*, trustees. (See Kovach, F. J., assignor.)
Bastin, H. V., Lancaster, Ky. Lightning-arrester. No. 883,613; Mar. 31; Sp. p. 6245; Dr. p. 1332; Gaz. vol. 133; p. 1144.
Bates, T. O., Liverpool, England. Machinery for making cup-wafers, sugar-wafer biscuits, and the like. No. 880,497; Mar. 3; Sp. p. 11; Dr. p. 3; Gaz. vol. 133; p. 5.
Bates, T. O., Liverpool, England. Machinery for making cup-wafers, sugar-wafer biscuits, and the like. No. 880,498; Mar. 3; Sp. p. 13; Dr. pp. 3–4; Gaz. vol. 133; p. 5.
Bathrick, E. R., Akron, Ohio. Truss-pad. No. 881,218; Mar. 10; Sp. p. 1446; Dr. p. 312; Gaz. vol. 133; p. 275.
Bathrick, E. R., Akron, Ohio. Truss-pad. No. 881,219; Mar. 10; Sp. p. 1447; Dr. p. 312; Gaz. vol. 133; p. 275.
Battishill, E. W., *et al.* (See Shank, A. W., assignor.)
Baty, L. D., Knoxville, Iowa. Road-grader. No. 880,774; Mar. 3; Sp. p. 578; Dr. p. 123; Gaz. vol. 133; p. 99.
Bauer, J. H., and J. J. Dillon, Stanberry, Mo. Gate. No. 881,532; Mar. 10; Sp. p. 2067; Dr. p. 452; Gaz. vol. 133; p. 376.
Baukat, J. G., White Plains, N. Y. Current-collector for the third rail of electric railways. No. 881,531; Mar. 10; Sp. p. 2065; Dr. p. 451; Gaz. vol. 133; p. 375.
Baxter, G. A. (See Ried, G. M., assignor.)
Bayles, F. P. (See Lloyd and Bayles.)
Bayles, L. C. (See Hellman and Bayles.)
Beach, S. Y. (See Whitehead, G., assignor.)
Beadles, J. M., Denver, Colo. Lamp-burner. No. 881,103; Mar. 10; Sp. p. 1221; Dr. p. 263; Gaz. vol. 133; p. 237.
Beamer, F. M., Philadelphia, Pa. Stuffing-box. No. 882,613; Mar. 24; Sp. p. 4220; Dr. p. 804; Gaz. vol. 133; p. 790.
Beard, A. H., Memphis, Tenn. Electromagnetic motor. No. 883,276; Mar. 31; Sp. p. 5556; Dr. p. 1186; Gaz. vol. 133; p. 1037.
Beatty, D., and S. C. Irving, Berkeley, Cal. Felt-like substance. No. 883,442; Mar. 31; Sp. p. 5922; Gaz. vol. 133; p. 1092.
Beaudet, G. A., San Francisco, Cal. Gas-engine. No. 883,511; Mar. 31; Sp. p. 6056; Dr. p. 1292; Gaz. vol. 133; p. 1114.
Bechi, G. de, assignor of one-half to R. W. Rucker, London, England. Treatment of complex sulfid ores. No. 880,775; Mar. 3; Sp. p. 579; Gaz. vol. 133; p. 100.
Bechman, H. F., assignor to Duplex Printing Press Company, Battle Creek, Mich. Folding mechanism for web-printing presses. No. 880,499; Mar. 3; Sp. p. 15; Dr. p. 4; Gaz. vol. 133; p. 5.
Bechman, H. F., assignor to Duplex Printing Press Company, Battle Creek, Mich. Adjustable web-guide. No. 880,950; Mar. 3; Sp. p. 954; Dr. p. 206; Gaz. vol. 133; p. 161.
Bechman, H. F., assignor to Duplex Printing Press Company, Battle Creek, Mich. Rotary-cylinder web-perfecting printing-press. No. 880,960; Mar. 3; Sp. p. 956; Dr. p. 206; Gaz. vol. 133; p. 161.
Beck, J. F., Sr., Germantown, Pa. Mechanism for interlocking gun parts. No. 883,680; Mar. 31; Sp. p. 6388; Dr. p. 1362; Gaz. vol. 133; p. 1165.
Becker, G., Oklahoma, Okla. Banana-crate. No. 882,046; Mar. 17; Sp. p. 3148; Dr. p. 669; Gaz. vol. 133; p. 572.
Beckwith, E. P., Cazenovia, N. Y., assignor to General Electric Company. Sterilizing. No. 881,533; Mar. 10; Sp. p. 2068; Dr. p. 452; Gaz. vol. 133; p. 376.
Bee, B. F., Harwich, Mass. Funnel. No. 881,891; Mar. 17; Sp. p. 2817; Dr. p. 601; Gaz. vol. 133; p. 522.
Bee, F. X., Philadelphia, Pa. Coin-controlled mechanism for telephone-boxes and the like. No. 881,652; Mar. 10; Sp. p. 2319; Dr. p. 502; Gaz. vol. 133; p. 416.
Beemster, J., De Pere, Wis. Press. No. 880,619; Mar. 3; Sp. p. 267; Dr. p. 56; Gaz. vol. 133; p. 47.
Behan, T., Aliquippa, Pa. Safety-valve for air-brakes (Reissue.) No. 12,758; Mar. 10; Sp. p. 2782; Dr. p. 597; Gaz. vol. 133; p. 491.
Behr, H., Philadelphia, Pa. Bottle-closure. No. 882,287; Mar. 17; Sp. p. 3604; Dr. p. 764; Gaz. vol. 133; p. 649.
Beilke, W., Charlottenburg, Germany. Friction-coupling. No. 881,290; Mar. 10; Sp. p. 1604; Dr. pp. 343–4; Gaz. vol. 133; p. 299.
Beisswingert, V. (See Hunsaker, Beisswingert, and Davis.)
Bell, G. F., Sistersville, W. Va. Vehicle-tongue support. No. 880,776; Mar. 3; Sp. p. 581; Dr. p. 123; Gaz. vol. 133; p. 100.
Bell, J. C., Cleveland, Ohio. Commercial paper. No. 881,291; Mar. 10; Sp. p. 1605; Dr. p. 344; Gaz. vol. 133; p. 299.
Bell, J. C., Cleveland, Ohio. Check. No. 883,380; Mar. 31; Sp. p. 5782; Dr. p. 1234; Gaz. vol. 133; p. 1070.
Bell, J. C., Cleveland, Ohio. Check or money-order. No. 883,381; Mar. 31; Sp. p. 5783; Dr. p. 1234; Gaz. vol. 133; p. 1071.
Bellens, C. (See Lentz and Bellens.)
Bellis, J., Shreveport, La. Collapsible umbrella. No. 883,277; Mar. 31; Sp. p. 5558; Dr. p. 1186; Gaz. vol. 133; p. 1037.
Belliss & Marcom. (See Jude, A., assignor.)
Belt, J. E., Minneapolis, Minn. Ore-separator. No. 883,278; Mar. 31; Sp. p. 5560; Dr. p. 1186; Gaz. vol. 133; p. 1038.
Bender, O., Neu-Babelsberg, near Berlin, Germany. Nozzle for the supply of liquid or gaseous fuel to furnaces. No. 881,842; Mar. 10; Sp. p. 2678; Dr. p. 573; Gaz. vol. 133; p. 476.
Bender, R. C., St. Louis, Mo. Oyster-carrier. No. 881,653; Mar. 10; Sp. p. 2320; Dr. p. 502; Gaz. vol. 133; p. 417.
Benedict, C. L., Toronto, Ontario, Canada. Combined letter-sheet and envelop. No. 881,534; Mar. 10; Sp. p. 2069; Dr. pp. 452–3; Gaz. vol. 133; p. 376.
Benjamin Electric Manufacturing Company. (See Benjamin, R. B., assignor.) (Reissue.)
Benjamin, R. B., assignor to Benjamin Electric Manufacturing Company, Chicago, Ill. Plural-lamp socket. (Reissue.) No. 12,765; Mar. 24; Sp. p. 5306; Dr. p. 1132; Gaz. vol. 133; p. 969.

Benjamin, R. B., assignor to Benjamin Electric Manufacturing Company, Chicago, Ill. Plural-lamp socket. (Reissue.) No. 12,766; Mar. 24; Sp. p. 5309; Dr. p. 1133; Gaz. vol. 133; p. 969.
Bennerscheidt, A., San Francisco, Cal. Protective shield for windows. No. 881,455; Mar. 10; Sp. p. 1919; Dr. p. 418; Gaz. vol. 133; p. 350.
Bennett, E. C., New York, N. Y. Removable dental bridgework. No. 883,382; Mar. 31; Sp. p. 5785; Dr. pp. 1234–5; Gaz. vol. 133; p. 1071.
Bennett, E. M., Sulphur, Okla. Kitchen-cabinet. No. 882,368; Mar. 17; Sp. p. 3753; Dr. pp. 798–9; Gaz. vol. 133; p. 676.
Bennett, H. (See Broad, H., assignor.)
Bennett, J. H., Kansas City, Mo. Furnace. No. 880,710; Mar. 3; Sp. p. 440; Dr. p. 92; Gaz. vol. 133; p. 77.
Bennett, J. J., and J. Klein, Centralia, Ill. Safety device for elevators. No. 883,279; Mar. 31; Sp. p. 5562; Dr. p. 1187; Gaz. vol. 133; p. 1038.
Bennett, R. H., assignor of two-thirds to D. W. Davies and S. Winterbottom, Amsterdam, N. Y. Hoel. No. 881,535; Mar. 10; Sp. p. 2071; Dr. p. 453; Gaz. vol. 133; p. 377.
Benson, M. P. (See Morrison and Benson.)
Benson, O. T., Worcester, Mass. Chimney or stack. No. 883,164; Mar. 31; Sp. p. 5322; Dr. p. 1135; Gaz. vol. 133; p. 999.
Bentley, H., trustee. (See Schultz and Gerding, assignors.)
Benton, F. E., Stoughton, assignor of one-half to Woodward and Wright, Campello, Mass. Shoe-last. No. 880,711; Mar. 3; Sp. p. 443; Dr. p. 93; Gaz. vol. 133; p. 78.
Beppler, C. A., New York, N. Y. Phonograph-horn. No. 881,843; Mar. 10; Sp. p. 2680; Dr. pp. 573–4; Gaz. vol. 133; p. 476.
Beresin, P., St. Petersburg, Russia. Manufacturing artificial caoutchouc. No. 881,536; Mar. 10; Sp. p. 2072; Gaz. vol. 133; p. 377.
Berg, A. H., Clarkfield, Minn. Threshing-machine cylinder. No. 881,202; Mar. 10; Sp. p. 1607; Dr. p. 344; Gaz. vol. 133; p. 300.
Berg, H., Orange, N. J. Dynamo-electric machine. No. 881,456; Mar. 10; Sp. p. 1921; Dr. p. 418; Gaz. vol. 133; p. 351.
Berg, L. J., Chicago, Ill., assignor to Metallic Sheathing Company. Trap-door. No. 883,443; Mar. 31; Sp. p. 5922; Dr. p. 1264; Gaz. vol. 133; p. 1092.
Berg, L. J., Chicago, Ill., assignor to Metallic Sheathing Company. Curtain catch or holder. No. 883,444; Mar. 31; Sp. p. 5925; Dr. p. 1264; Gaz. vol. 133; p. 1092.
Berge, E. H. Zum, Dallas, Tex. Lifting-jack. No. 882,991; Mar. 24; Sp. p. 4970; Dr. p. 1057; Gaz. vol. 133; p. 913.
Bergeron, A., *et al.* (See Babin, H., assignor.)
Bergman, T. (See Mahoney, T. J., assignor.)
Bergsather, R. S., Northwood, Iowa. Warehouse-truck. No. 882,735; Mar. 24; Sp. p. 4460; Dr. p. 940; Gaz. vol. 133; p. 830.
Bergstrom, M. O., Canton, S. D. Plow. No. 881,457; Mar. 10; Sp. p. 1922; Dr. p. 418; Gaz. vol. 133; p. 351.
Berkovits, B. (See Moskovits, Berkovits, and Günsberger.)
Berlin Machine Works. (See Stevens, B. D., assignor.)
Bernegan, C. M., assignor to Keuffel & Esser Company, Hoboken, N. J. Calculating-machine. No. 882,614; Mar. 24; Sp. p. 4221; Dr. pp. 894–5; Gaz. vol. 133; p. 790.
Bernhart, M., assignor of one-half to J. D. Brennan, Lancaster, N. Y. Molding apparatus. No. 880,500; Mar. 3; Sp. p. 17; Dr. pp. 4–5; Gaz. vol. 133; p. 6.
Berry, C. M., assignor of one-half to H. Gray, New York, N. Y. Bottle for case goods. No. 881,293; Mar. 10; Sp. p. 1609; Dr. p. 344; Gaz. vol. 133; p. 300.
Berry, M., Fayetteville, Ark. Lightning-arrester. No. 883,280; Mar. 31; Sp. p. 5563; Dr. pp. 1187–8; Gaz. vol. 133; p. 1038.
Berthiaume, J. G., and A. E. Barlow, assignors of one-half to Wright Wire Company, Worcester, Mass. Implement for applying clamps to wire fences. No. 880,712; Mar. 3; Sp. p. 443; Dr. p. 93; Gaz. vol. 133; p. 78.
Bertram, W. H., Springfield, Mo. Check-form. No. 882,485; Mar. 17; Sp. p. 3947; Dr. p. 844; Gaz. vol. 133; p. 714.
Bertrand, A., Kankakee, Ill., assignor to J. E. Bowman, Evansville, Ind. Railway-crossing. No. 881,654; Mar. 10; Sp. p. 2322; Dr. p. 503; Gaz. vol. 133; p. 417.
Berwanger, A. C. (See Schollenberger, E. M., assignor.)
Besserdich, W. (See Zachow and Besserdich.)
Bethany, W., Mars, Ark. Means for propelling ships. No. 881,537; Mar. 10; Sp. p. 2073; Dr. p. 453; Gaz. vol. 133; p. 377.
Betts, W. H., Admire, Kans. Steam-engine. No. 881,048; Mar. 3; Sp. p. 1110; Dr. p. 241; Gaz. vol. 133; p. 190.
Bevan, H., Burlington, N. J. Heater. No. 881,844; Mar. 10; Sp. p. 2682; Dr. p. 574; Gaz. vol. 133; p. 477.
Bicker, E. B., and C. R. Schilling, assignors to said Bicker and H. H. Nolte, St. Louis, Mo. Vending-machine. No. 882,923; Mar. 24; Sp. p. 4843; Dr. p. 1028; Gaz. vol. 133; p. 891.
Bickford Drill & Tool Company. (See Norris, H. M., assignor.)
Bicklein, F., Valmeyer, Ill. Scrubbing-machine. No. 883,512; Mar. 31; Sp. p. 6060; Dr. pp. 1292–3; Gaz. vol. 133; p. 1115.
Bienk, A., Königsberg, Germany. Wood-cleaver. No. 881,538; Mar. 10; Sp. p. 2075; Dr. p. 453; Gaz. vol. 133; p. 378.
Bierley, H. A., Portsmouth, Ohio. Trace-holder. No. 881,655; Mar. 10; Sp. p. 2324; Dr. p. 503; Gaz. vol. 133; p. 417.
Billings, C. E., Hartford, Conn. Knife. No. 881,294; Mar. 10; Sp. p. 1611; Dr. p. 345; Gaz. vol. 133; p. 301.
Billings, F. G., Milwaukee, Wis. Piano-action frame. No. 882,288; Mar. 17; Sp. p. 3606; Dr. pp. 764–5; Gaz. vol. 133; p. 650.
Bimmerle, F. X., Cincinnati, Ohio. Advertising-vehicle. No. 882,446; Mar. 17; Sp. p. 3879; Dr. pp. 828–30; Gaz. vol. 133; p. 702.
Bindewald, E., Kaiserslautern, Germany. Flushing device. No. 881,458; Mar. 10; Sp. p. 1923; Dr. p. 419; Gaz. vol. 133; p. 351.
Binnig, J., assignor of one-half to Mason & Hamlin, Cambridge, Mass. Organ. No. 882,736; Mar. 24; Sp. p. 4462; Dr. p. 950; Gaz. vol. 133; p. 830.
Birch, A., Belmont, Mass. Cloth opener, spreader, and guider. No. 882,515; Mar. 17; Sp. p. 4008; Dr. p. 857; Gaz. vol. 133; p. 725.
Birdsall, S. N., Dayton, Ohio, assignor to I. Cornwell, Northumberland, Pa. Vehicle-gear. No. 880,620; Mar. 3; Sp. p. 269; Dr. pp. 56–7; Gaz. vol. 133; p. 47.
Birge, L. D. (See Borton and Birge.)
Bischoff, J. B., Mount Clemens, Mich. Damper and pressure regulator. No. 881,656; Mar. 10; Sp. p. 2325; Dr. pp. 503–4; Gaz. vol. 133; p. 418.
Bissell Carpet Sweeper Company. (See Mason, F. C., assignor.)
Bittner, C., New York, N. Y. Stump and root puller. No. 881,657; Mar. 10; Sp. p. 2327; Dr. p. 504; Gaz. vol. 133; p. 418.
Bixby, G. H., Chicago, Ill. Embroidery-hoop. No. 882,737; Mar. 24; Sp. p. 4464; Dr. p. 950; Gaz. vol. 133; p. 830.
Blackmore, H. S., Mount Vernon, N. Y. Liberating aluminium and other metals. No. 881,049; Mar. 3; Sp. p. 1112; Dr. p. 241; Gaz. vol. 133; p. 190.
Blackwell, G. (See Thomas and Blackwell.)
Blair, J. R., Boston, Mass. Can-washing machine. No. 880,713; Mar. 3; Sp. p. 445; Dr. pp. 93–4; Gaz. vol. 133; p. 78.
Blaisdell, H. W., Los Angeles, Cal. Filter-machine. No. 882,738; Mar. 24; Sp. p. 4465; Dr. pp. 950–1; Gaz. vol. 133; p. 831.
Blaisdell Paper Pencil Company. (See Smith, C. A., assignor.)
Blake, W. F., Chicago, Ill., and L. C. Hunter, Fort Wayne, Ind. Manifolding-receipt. No. 883,079; Mar. 24; Sp. p. 5134; Dr. p. 1095; Gaz. vol. 133; p. 941.
Blakeman, W. N., Jr., New York, N. Y. Paint compound. No. 883,513; Mar. 31; Sp. p. 6062; Gaz. vol. 133; p. 1115.
Blakeman, W. N., Jr., New York, N. Y. Paint compound and making the same. No. 883,514; Mar. 31; Sp. p. 6064; Gaz. vol. 133; p. 1115.
Blakeman, W. N., Jr., New York, N. Y. Oil. No. 883,515; Mar. 31; Sp. p. 6066; Gaz. vol. 133; p. 1115.
Blakeman, W. N., Jr., New York, N. Y. Pigment compound and making the same. No. 883,516; Mar. 31; Sp. p. 6067; Gaz. vol. 133; p. 1115.
Blakeman, W. N., Jr., New York, N. Y. Paint compound. No. 883,517; Mar. 31; Sp. p. 6069; Gaz. vol. 133; p. 1115.
Blakeman, W. N., Jr., New York, N. Y. Paint compound and making the same. No. 883,518; Mar. 31; Sp. p. 6070; Gaz. vol. 133; p. 1116.
Blakeman, W. N., Jr., New York, N. Y. Oil. No. 883,519; Mar. 31; Sp. p. 6072; Gaz. vol. 133; p. 1116.
Blakeman, W. N., Jr., New York, N. Y. Paint compound and making the same. No. 883,520; Mar. 31; Sp. p. 6073; Gaz. vol. 133; p. 1116.
Blakeman, W. N., Jr., New York, N. Y. Oil. No. 883,521; Mar. 31; Sp. p. 6076; Gaz. vol. 133; p. 1116.
Blakeman, W. N., Jr., New York, N. Y. Oil. No. 883,522; Mar. 31; Sp. p. 6077; Gaz. vol. 133; p. 1116.
Blåkkan, I. J. (See Hestness, B., assignor.)
Bland, M. A. (See Bradshaw, W. A., assignor.)
Blanchard, A. S., and H. M. Foote, Cleveland, Ohio. Truck-bolster. No. 881,220; Mar. 10; Sp. p. 1449; Dr. p. 313; Gaz. vol. 133; p. 275.
Blanchard, F. C., assignor to Ashcroft Manufacturing Company, Bridgeport, Conn. Lavatory-basin. No. 880,961; Mar. 3; Sp. p. 958; Dr. p. 207; Gaz. vol. 133; p. 161.
Blanchard, J. W., and A. E. Covell, Montpelier, Vt. Lewis. No. 880,962; Mar. 3; Sp. p. 960; Dr. p. 207; Gaz. vol. 133; p. 162.
Blean, R. C., and F. B. Canode, Chicago, Ill.; said Blean assignor to said Canode. Cooking utensil. No. 881,050; Mar. 3; Sp. p. 1114; Dr. p. 241; Gaz. vol. 133; p. 190.
Bleckley, F. W., Hazleton, Pa. Vehicle-reach. No. 882,615; Mar. 24; Sp. p. 4226; Dr. p. 896; Gaz. vol. 133; p. 791.
Blériot, L., Paris, France. Automobile-lamp. No. 881,892; Mar. 17; Sp. p. 2819; Dr. pp. 601–2; Gaz. vol. 133; p. 522.
Bliss, A. R. (See Brigham, M. S., assignor.)
Bliss, D. M., New York, N. Y. Electric bell. No. 881,539; Mar. 10; Sp. p. 2076; Dr. p. 454; Gaz. vol. 133; p. 378.
Block, O. C. A., Davenport, Iowa. Ladder-jack. No. 881,996; Mar. 17; Sp. p. 3035; Dr. p. 646; Gaz. vol. 133; p. 556.
Bloom, J. H. (See Bloom, N. H. and J. H.)
Bloom, N. H. and J. H., Nashua, Iowa. Fertilizer-distributer. No. 882,230; Mar. 17; Sp. p. 3484; Dr. p. 741; Gaz. vol. 133; p. 629.

Bloomberg, W., New York, N. Y. Suspender-buckle. No. 882,486; Mar. 17; Sp. p. 3048; Dr. p. 844; Gaz. vol. 133; p. 714.
Bloomington, L. L., St. Louis, Mo. Shoe. No. 883,281; Mar. 31; Sp. p. 5568; Dr. p. 1188; Gaz. vol. 133; p. 1039.
Bluhm, H., and J. H. Regan, Boston, Mass. Furnace. No. 882,616; Mar. 24; Sp. p. 4228; Dr. p. 896; Gaz. vol. 133; p. 791.
Blum, R., Lebanon, Ill. Axle-bearing. No. 882,047; Mar. 17; Sp. p. 3149; Dr. p. 669; Gaz. vol. 133; p. 572.
Blumenthal, F., Biebrich, Germany. Baking-powder. No. 883,165; Mar. 31; Sp. p. 5325; Gaz. vol. 133; p. 1000.
Boal, S., Piqua, Ohio. Stove. No. 882,617; Mar. 24; Sp. p. 4230; Dr. p. 896; Gaz. vol. 133; p. 791.
Boeckman, H. J., Dayton, Ohio. Meat-rack. No. 880,857; Mar. 3; Sp. p. 758; Dr. p. 161; Gaz. vol. 133; p. 128.
Boegel, C. W. E., Lima, Ohio. Suction-nozzle. No. 881,879; Mar. 10; Sp. p. 2770; Dr. p. 594; Gaz. vol. 133; p. 489.
Boehm, V. F., Chicago, Ill. Beer cooling and purifying apparatus. No. 882,862; Mar. 24; Sp. p. 4727; Dr. p. 1004; Gaz. vol. 133; p. 871.
Bohlin, C. A., *et al.* (See Swanberg, A. W., assignor.)
Bohr, N. C., assignor, by mesne assignments, to T. G. Plant, Boston, Mass. Heel-scourer guard. No. 883,445; Mar. 31; Sp. p. 5926; Dr. p. 1265; Gaz. vol. 133; p. 1093.
Boilers and Engineering Company. (See Del Mar, H., assignor.)
Bolger, R. S., New York, N. Y., assignor, by mesne assignments, to Velox Manufacturing Company. Stencil and frame. No. 881,173; Mar. 10; Sp. p. 1355; Dr. p. 292; Gaz. vol. 133; p. 260.
Bolger, R. S., Richmond Hill, N. Y., assignor, by mesne assignments, to Velox Manufacturing Company. Stencil and frame. No. 881,174; Mar. 10; Sp. p. 1357; Dr. p. 292; Gaz. vol. 133; p. 261.
Bollman, F. (See Gehricke, F., assignor.)
Bommer, A. H. and W. J. Robert, St. Louis, Mo. Shaft-coupling. No. 882,739; Mar. 24; Sp. p. 4469; Dr. p. 952; Gaz. vol. 133; p. 831.
Bommer, E., New York, N. Y. Spring-hinge for screen-doors. No. 882,289; Mar. 17; Sp. p. 3608; Dr. p. 765; Gaz. vol. 133; p. 650.
Bond Bottle Sealing Company. (See Bond, S. C., assignor.)
Bond, C. L., Los Angeles, Cal. Electro-automatic weighing apparatus. No. 880,858; Mar. 3; Sp. p. 760; Dr. pp. 161–3; Gaz. vol. 133; p. 128.
Bond, S. C., Wilmington, Del., assignor, by mesne assignments, to Bond Bottle Sealing Company. Machine for capping bottles. No. 883,127; Mar. 24; Sp. p. 5239; Dr. p. 1118; Gaz. vol. 133; p. 958.
Bond, S. C., Wilmington, Del., assignor, by mesne assignments, to Bond Bottle Sealing Company. Metal-shaping tool. No. 883,128; Mar. 24; Sp. p. 5241; Dr. p. 1119; Gaz. vol. 133; p. 958.
Bonifay, J., *et al.* (See Gannon, W. E., assignor.)
Bontempi, A., New York, N. Y. Rust-proofing iron, steel, &c. No. 881,221; Mar. 10; Sp. p. 1453; Dr. p. 313; Gaz. vol. 133; p. 275.
Bonvillain, P., Paris, France, assignor, by mesne assignments, to E. H. Mumford Company, Philadelphia, Pa. Apparatus for use in manufacturing small metallic pattern-plates. (Reissue.) No. 12,760; Mar. 10; Sp. p. 2787; Dr. p. 598; Gaz. vol. 133; p. 492.
Booth, C., Ilion, N. Y. Type-writer. No. 881,459; Mar. 10; Sp. p. 1925; Dr. p. 419; Gaz. vol. 133; p. 352.
Booth, G. R., Chana, Ill. Lever for lifting-jacks. No. 882,447; Mar. 17; Sp. p. 3381; Dr. p. 830; Gaz. vol. 133; p. 702.
Borden, M. M., Collingswood, assignor to Simplex Valve & Meter Company, Camden, N. J. Automatic fluid-controller. No. 883,383; Mar. 31; Sp. p. 5787; Dr. p. 1235; Gaz. vol. 133; p. 1071.
Borger, J. C. F., Curwensville, Pa. Carpet-fastener. No. 883,129; Mar. 24; Sp. p. 5243; Dr. p. 1119; Gaz. vol. 133; p. 958.
Börreson, B. H. (See Washburn, Roney, and Börreson.)
Borton, S., Providence, R. I., assignor to Willcox & Gibbs Sewing Machine Company, New York, N. Y. Seam. No. 883,614; Mar. 31; Sp. p. 6247; Dr. p. 1333; Gaz. vol. 133; p. 1144.
Borton, S., and L. D. Birge, Providence, R. I., assignors to Willcox & Gibbs Sewing Machine Company, New York, N. Y. Seam. No. 883,615; Mar. 31; Sp. p. 6252; Dr. p. 1333; Gaz. vol. 133; p. 1145.
Bossert, C. P., Milwaukee, Wis., assignor to Pfister & Vogel Leather Company. Leather blackening and seasoning machine. No. 880,859; Mar. 3; Sp. p. 769; Dr. pp. 163–4; Gaz. vol. 133; p. 129.
Bostick, W. E., Lancaster, Pa. Cigar-tip. No. 882,185; Mar. 17; Sp. p. 3407; Dr. p. 724; Gaz. vol. 133; p. 617.
Bostrom, E. A., Atlanta, Ga., assignor to Clayton & Bentley Co. Detector or feeler-point. No. 882,992; Mar. 24; Sp. p. 4972; Dr. p. 1058; Gaz. vol. 133; p. 914.
Bostwick, H. J. (See Bostwick, J. R., assignor.)
Bostwick, J. R., assignor of one-half to H. J. Bostwick, Clifton Springs, N. Y. Cover for milk-pails. No. 881,767; Mar. 10; Sp. p. 2527; Dr. p. 544; Gaz. vol. 133; p. 451.
Bosworth, F. C. (See Kurtz, C. B., assignor.)
Bosworth, F. E., San Francisco, Cal. Mirror. No. 883,616; Mar. 31; Sp. p. 6255; Dr. p. 1333; Gaz. vol. 133; p. 1145.
Bothwell, G. A., Owen Sound, Ontario, Canada. Locomotive. No. 882,618; Mar. 24; Sp. p. 4231; Dr. p. 897; Gaz. vol. 133; p. 792.
Bottlers Machinery Manufacturing Company. (See Strasburger, F. C. H., assignor.)
Bouchard, H., Austin, Tex. Trolley-pole. No. 880,963; Mar. 3; Sp. p. 961; Dr. p. 207; Gaz. vol. 133; p. 162.
Bouchard, J. B. (See Robidoux, E., assignor.)
Bowden, E. A. B. (See Jacobs, Insell, and Bowden.)
Bowell, G. B., Westminster, London, England. Secondary electric clock. No. 882,186; Mar. 17; Sp. p. 3409; Dr. p. 724; Gaz. vol 133; p. 617.
Bowen, J., Philadelphia, assignor to Sayre Stamping Company, Sayre, Pa. Machine for cutting screws, &c. No. 882,290; Mar. 17; Sp. p. 3609; Dr. p. 765; Gaz. vol. 133; p. 650.
Bowen, J. H., Philadelphia, Pa. Safety-razor. No. 880,860; Mar. 3; Sp. p. 774; Dr. p. 164; Gaz. vol. 133; p. 129.
Bowers, B. B., Macon, Ga. Car-door fastening. No. 880,621; Mar. 3; Sp. p. 270; Dr. p. 57; Gaz. vol. 133; p. 48.
Bowman, A. K., Pittsburg, Pa. Pipe. No. 881,845; Mar. 10; Sp. p. 2683; Dr. p. 574; Gaz. vol. 133; p. 477.
Bowman, J. E. (See Bertrand, A., assignor.)
Bowman, J. W., Chicago, Ill. Sash-lock. No. 881,658; Mar. 10; Sp. p. 2328; Dr. p. 504; Gaz. vol. 133; p. 418.
Bowman, R. H., Canon City, Colo. Mechanical motor. No. 880,501; Mar. 3; Sp. p. 19; Dr. p. 5; Gaz. vol. 133; p. 6.
Boxmeyer, B. W. (See Gray, C. A., assignor.)
Boyce Automatic Etching Company. (See Axt, J. N., assignor.)
Boyd, B., Uniontown, Pa. Lorry. No. 880,777; Mar. 3; Sp. p. 582; Dr. p. 124; Gaz. vol. 133; p. 100.
Boyd, D. C., Galion, Ohio. Culvert. No. 881,770; Mar. 10; Sp. p. 2531; Dr. p. 545; Gaz. vol. 133; p. 452.
Boyd, L., Eminence, Ky. Filter. No. 882,448; Mar. 17; Sp. p. 3384; Dr. p. 830; Gaz. vol. 133; p. 702.
Boyd, T., Cleveland, Ohio. Baking-pan. No. 883,094; Mar. 17; Sp. p. 3233; Dr. p. 687; Gaz. vol. 133; p. 588.
Boyd, T., Cleveland, Ohio. Package-tie. No. 882,863; Mar. 24; Sp. p. 4729; Dr. p. 1005; Gaz. vol. 133; p. 863.
Boyd, W. L., Lincoln, Nebr. Insect-exterminator. No. 881,370; Mar. 10; Sp. p. 1766; Dr. p. 381; Gaz. vol. 133; p. 324.
Boyle, J. C., Calgary, Alberta, Canada. Portable coasting device. No. 880,964; Mar. 3; Sp. p. 962; Dr. p. 208; Gaz. vol. 133; p. 162.
Boyler, E. J., assignor of two-thirds to C. J. Aggett and A. Stalker, Peterborough, Ontario, Canada. Carbureter for explosive-engines. No. 880,502; Mar. 3; Sp. p. 23; Dr. p. 6; Gaz. vol. 133; p. 7.
Boyler, E. J., assignor of two-thirds to C. J. Aggett and A. Stalker, Peterborough, Ontario, Canada. Explosive-engine. No. 880,503; Mar. 3; Sp. p. 25; Dr. p. 6; Gaz. vol. 133; p. 7.
Boynton, F. C., Minneapolis, Minn. Mill-stock mixer and distributer. No. 882,924; Mar. 24; Sp. p. 4845; Dr. p. 1028; Gaz. vol. 133; p. 891.
Boynton, F. C., Minneapolis, Minn. Mill-stock mixer and distributer. No. 882,925; Mar. 24; Sp. p. 4846; Dr. p. 1029; Gaz. vol. 133; p. 892.
Boynton, F. C., Minneapolis, Minn. Mill-stock mixer and distributer. No. 882,926; Mar. 24; Sp. p. 4848; Dr. p. 1029; Gaz. vol. 133; p. 892.
Bradford, C., Indianapolis, Ind. Swinging conveyer. No. 881,295; Mar. 10; Sp. p. 1612; Dr. p. 345; Gaz. vol. 133; p. 301.
Bradley, H. M., Fort Worth, Tex. Tire-protector. No. 881,768; Mar. 10; Sp. p. 2528; Dr. p. 544; Gaz. vol. 133; p. 451.
Bradshaw, R. A., Winters, Tex. Spike-puller. No. 882,440; Mar. 17; Sp. p. 3386; Dr. pp. 830–1; Gaz. vol. 133; p. 703.
Bradshaw, R. H. (See Erickson and Bradshaw.)
Bradshaw, W. A., assignor of one-half to M. A. Bland, Charlotte, N. C. Fire-extinguisher. No. 881,893; Mar. 17; Sp. p. 2820; Dr. p. 603; Gaz. vol. 133; p. 522.
Bragg, B. H., Whitman, Mass. Continuous photographic-printing apparatus. No. 883,617; Mar. 31; Sp. p. 6256; Dr. p. 1334; Gaz. vol. 133; p. 1146.
Brammer, H., St. Louis, Mo. Gearing for washing-machines. No. 882,619; Mar. 24; Sp. p. 4235; Dr. p. 897; Gaz. vol. 133; p. 792.
Brandenburg, R. J., assignor of one-half to J. A. White, Oxford, Ohio. Holder for hones. No. 882,137; Mar. 17; Sp. p. 3300; Dr. p. 704; Gaz. vol. 133; p. 601.
Brannan, S. L., Garden City, Kans. Holder for drill-rods and pipes. No. 881,659; Mar. 10; Sp. p. 2329; Dr. p. 504; Gaz. vol. 133; p. 418.
Brantley, J. T., Salisbury, N. C. Sandpaper-machine. No. 880,965; Mar. 3; Sp. p. 964; Dr. p. 208; Gaz. vol. 133; p. 163.
Braun, A., West Hoboken, assignor of one-half to G. E. Steinhauser, Union Hill, N. J. Hinge-borer for embroidery-machines. No. 881,894; Mar. 17; Sp. p. 2821; Dr. p. 603; Gaz. vol. 133; p. 523.
Bray, R. L., Long Branch, N. J. Laundry-edger. No. 880,714; Mar. 3; Sp. p. 449; Dr. p. 94; Gaz. vol. 133; p. 79.
Brazeal, F. E., Monson, assignor of one-half to H. S. Mowry, North Adams, Mass. Trolley. No. 882,450; Mar. 17; Sp. p. 3387; Dr. p. 831; Gaz. vol. 133; p. 703.
Bredin, C. H., *et al.* (See Henrich, C. W., assignor.)
Breese, C. (See Breese, G. and C.)
Breese, G. and C., New Straitsville, Ohio. Tie-holder. No. 883,282; Mar. 31; Sp. p. 5569; Dr. p. 1188; Gaz. vol. 133; p. 1039.

Breitenstein, F., Denver, Colo. Water-motor. No. 881,222; Mar. 10; Sp. p. 1454; Dr. p. 313; Gaz. vol. 133; p. 276.
Bremer, I. M., New York, N. Y. Dog-collar. No. 883,384; Mar. 31; Sp. p. 5788; Dr. p. 1235; Gaz. vol. 133; p. 1072.
Brennan, J. D. (See Bernhart, M., assignor.)
Brennan, J. F., Brooklyn, N. Y. Paper-hanging device. No. 882,092; Mar. 17; Sp. p. 3230; Dr. p. 687; Gaz. vol. 133; p. 588.
Brett, O. C., Humboldt, Kans. Mail-bag catcher. No. 881,175; Mar. 10; Sp. p. 1358; Dr. pp. 292–3; Gaz. vol. 133; p. 261.
Brews, D., Cleveland, Ohio. Blow-out device for steam-boilers. No. 881,895; Mar. 17; Sp. p. 2823; Dr. p. 603; Gaz. vol. 133; p. 523.
Brewster, C. (See Dodge, R. E., assignor.)
Brewster, M. B., Columbus, Ohio. Automatic stoker. No. 880,622; Mar. 3; Sp. p. 271; Dr. pp. 57–8; Gaz. vol. 133; p. 48.
Brewster, M. B., Columbus, Ohio. Automatic stoker. No. 880,623; Mar. 3; Sp. p. 274; Dr. pp. 58–9; Gaz. vol. 133; p. 48.
Brewster, W. A., assignor of one-half to H. J. Robinhold, Philadelphia, Pa. Match-safe. No. 881,051; Mar. 3; Sp. p. 1116; Dr. p. 241; Gaz. vol. 133; p. 191.
Breyer, T. E., Waukegan, Ill. Making thin boiling starch. No. 881,104; Mar. 10; Sp. p. 1222; Dr. p. 263; Gaz. vol. 133; p. 237.
Breyer, T. E., Waukegan, Ill. Apparatus for making thin boiling starch. No. 881,105; Mar. 10; Sp. p. 1224; Dr. p. 263; Gaz. vol. 133; p. 237.
Brickell, W. S., Buffalo, N. Y. Weatherproof window-frame. No. 881,052; Mar. 3; Sp. p. 1117; Dr. p. 242; Gaz. vol. 133; p. 191.
Briddon, G., and R. J. Fowler, Manchester, England. Roller-mill. No. 881,296; Mar. 10; Sp. p. 1615; Dr. p. 345; Gaz. vol. 133; p. 301.
Bridgeport Brass Company. (See Stapley, W. S., assignor.)
Brigance, A. O., Navasota, Tex. Bale-tie. No. 881,053; Mar. 3; Sp. p. 1119; Dr. p. 242; Gaz. vol. 133; p. 191.
Brigham, M. S., Detroit, Mich., assignor of one-half to A. R. Bliss, Lowell, Mass. Induction-coil. No. 882,048; Mar. 17; Sp. p. 3150; Dr. p. 669; Gaz. vol. 133; p. 572.
Brigham, W. C., Danbury, Conn. Wagon-wheel. No. 880,504; Mar. 3; Sp. p. 27; Dr. p. 7; Gaz. vol. 133; p. 8.
Brink, A. W. (See Hastings and Brink.)
Brinn, G. A., St. Helen, Oreg. Ironing-board. No. 882,093; Mar. 17; Sp. p. 3232; Dr. p. 687; Gaz. vol. 133; p. 588.
Brinton, W., assignor to Taylor Iron & Steel Company, High Bridge, N. J. Pin for dredges or dredging-chains. No. 882,138; Mar. 17; Sp. p. 3301; Dr. p. 704; Gaz. vol. 133; p. 602.
Brinton, W., assignor to Taylor Iron & Steel Company, High Bridge, N. J. Burglar-proof safe and vault. No. 882,620; Mar. 24; Sp. p. 4236; Dr. p. 898; Gaz. vol. 133; p. 792.
Brion, A. E. (See Price, A. M., assignor.)
Broad, H., assignor to H. Bennett, London, England. Consuming smoke in boiler-furnaces and the like. No. 880,966; Mar. 3; Sp. p. 966; Dr. pp. 208–9; Gaz. vol. 133; p. 163.
Broadbooks, P., Batavia, N. Y. Shears. No. 880,967; Mar. 3; Sp. p. 967; Dr. p. 209; Gaz. vol. 133; p. 163.
Broadbooks, P., Batavia, N. Y. Pliers. No. 881,092; Mar. 3; Sp. p. 1198; Dr. p. 259; Gaz. vol. 133; p. 204.
Brocke, R., Aachen, Germany. Automatic flushing apparatus. No. 882,451; Mar. 17; Sp. p. 3389; Dr. p. 831; Gaz. vol. 133; p. 703.
Bronson, A., Simpson, Kans. Vegetable-cutter. No. 881,106; Mar. 10; Sp. p. 1226; Dr. pp. 263–4; Gaz. vol. 133; p. 237.
Brooks, G. H., assignor to Grauman, Beckman and Brooks, Louisville, Ky. Restoring attachment to trolley-wheels and electric signal for the same. No. 882,139; Mar. 17; Sp. p. 3304; Dr. p. 705; Gaz. vol. 133; p. 602.
Brooks, J. W., and J. H. Kinealy, Ferguson, Mo. Sheet to be used for printing publications. No. 883,157; Mar. 24; Sp. p. 5299; Dr. p. 1131; Gaz. vol. 133; p. 968.
Brooks, P. C. (See Griffith, S., assignor.)
Brooks, R. A. (See Owen and Brooks.)
Brooks, R. A., Chicago, Ill. Fluid-controlled flushing-valve. No. 882,740; Mar. 24; Sp. p. 4470; Dr. p. 952; Gaz. vol. 133; p. 831.
Brown, A. G., Spokane, Wash. Dumping-car. No. 882,621; Mar. 24; Sp. p. 4238; Dr. p. 898; Gaz. vol. 133; p. 793.
Brown, A. T. (See Edlund, J. A., assignor.)
Brown, A. T., Syracuse, N. Y. Type-writing machine. No. 882,993; Mar. 24; Sp. p. 4974; Dr. pp. 1058–9; Gaz. vol. 133; p. 914.
Brown & Bailey Company. (See Brown, H. T., assignor.) (Reissue.)
Brown, C. E., and W. J. Gibbs, Denver, Colo. Wood-trimming machine. (Reissue.) No. 12,763; Mar. 17; Sp. p. 4086; Dr. p. 868; Gaz. vol. 133; p. 736.
Brown, C. F., trustee. (See Noyes, E. P., assignor.)
Brown, C. F., trustee. (See Reeve, S. A., assignor.)
Brown, C. R., assignor of one-half to I. Alexander, Kansas City, Mo. Jug-holder. No. 882,231; Mar. 17; Sp. p. 3494; Dr. p. 741; Gaz. vol. 133; p. 630.
Brown, D. (See Downie and Brown.)
Brown, F. H., Philadelphia, Pa., assignor to Combustion Engineering Company. Combustion and damper regulator for furnaces. No. 883,283; Mar. 31; Sp. p. 5570; Dr. pp. 1188–9; Gaz. vol. 133; p. 1039.
Brown, F. H., Philadelphia, Pa., assignor to Combustion Engineering Company. Automatic governing mechanism. No. 883,284; Mar. 31; Sp. p. 5574; Dr. p. 1189; Gaz. vol. 133; p. 1040.
Brown, G. C., Leechburg, Pa. Rail-joint. No. 882,291; Mar. 17; Sp. p. 3612; Dr. p. 765; Gaz. vol. 133; p. 651.
Brown, H. E., Goldthwaite, Tex. Windmill-oiler. No. 881,896; Mar. 17; Sp. p. 2824; Dr. p. 603; Gaz. vol. 133; p. 523.
Brown, H. H., Boston, Mass. Magneto for sparking mechanisms. No. 881,460; Mar. 10; Sp. p. 1926; Dr. p. 420; Gaz. vol. 133; p. 352.
Brown, H. P., and C. L. Johnston, San Francisco, Cal., assignors to F. B. Redington, Chicago, Ill. Sheet-delivery mechanism for printing-presses. No. 881,223; Mar. 10; Sp. p. 1459; Dr. p. 314; Gaz. vol. 133; p. 276.
Brown, H. T., Moorestown, N. J., assignor to Brown & Bailey Company, Philadelphia, Pa. Collapsible box. (Reissue.) No. 12,770; Mar. 31; Sp. p. 6396; Dr. p. 1363; Gaz. vol. 133; p. 1166.
Brown, J. Y., Providence, Ky. Attachment for bow instruments. No. 881,769; Mar. 10; Sp. p. 2529; Dr. p. 544; Gaz. vol. 133; p. 451.
Brown, M. J., Chicago, Ill. Bottle-neck check-valve. No. 882,622; Mar. 24; Sp. p. 4240; Dr. p. 898; Gaz. vol. 133; p. 793.
Brown, O. E., Andalusia, Ill. Gate. No. 880,624; Mar. 3; Sp. p. 276; Dr. p. 59; Gaz. vol. 133; p. 48.
Brown, O. E., and A. M. Field, Tulare, Cal.; said Brown assignor to said Field. Oil-burner. No. 881,540; Mar. 10; Sp. p. 2077; Dr. p. 454; Gaz. vol. 133; p. 378.
Brown, P. C., Boston, Mass., assignor of one-half to F. J. Russell, New York, N. Y. Electrical plug and receptacle. No. 881,371; Mar. 10; Sp. p. 1767; Dr. p. 381; Gaz. vol. 133; p. 324.
Brown, T. P., assignor to Simplex Piano Player Company, Worcester, Mass. Pneumatically-operated musical instrument. No. 882,623; Mar. 24; Sp. p. 4242; Dr. p. 899; Gaz. vol. 133; p. 793.
Brown, T. R., assignor to American Car & Foundry Company, St. Louis, Mo. Railway passenger-car. No. 882,927; Mar. 24; Sp. p. 4850; Dr. pp. 1029–31; Gaz. vol. 133; p. 893.
Brown, S. G., London, England. Galvanometer. No. 881,880; Mar. 10; Sp. p. 2773; Dr. p. 595; Gaz. vol. 133; p. 490.
Brown, S. H., Lockhart, Tex. Tag. No. 882,452; Mar. 17; Sp. p. 3390; Dr. p. 831; Gaz. vol. 133; p. 704.
Brown, W. F., Baltimore, Md. Nut-lock. No. 882,369; Mar. 17; Sp. p. 3754; Dr. p. 799; Gaz. vol. 133; p. 677.
Brown, W. S., New York, N. Y. Flexible conduit. No. 882,292; Mar. 17; Sp. p. 3613; Dr. p. 766; Gaz. vol. 133; p. 651.
Browne, H. P. C., and W. H. Palmer, Jr., New York, N. Y. Rotation-indicating instrument. No. 883,385; Mar. 31; Sp. p. 5789; Dr. p. 1236; Gaz. vol. 133; p. 1072.
Brownell, F. A., assignor to Eastman Kodak Company, Rochester, N. Y. Photographic enlarging-camera. No. 881,997; Mar. 17; Sp. p. 3036; Dr. pp. 646–7; Gaz. vol. 133; p. 556.
Brownell, J. H., Chicago, Ill. Chair. No. 883,446; Mar. 31; Sp. p. 5928; Dr. p. 1265; Gaz. vol. 133; p. 1093.
Brucker, F. (See Stump and Brucker.)
Bruckner, J., *et al.* (See Elliott and Stanton, assignors.)
Bruer, J. J., Adelaide, South Australia, Australia. Piano-tuning pin. No. 883,285; Mar. 31; Sp. p. 5577; Dr. p. 1189; Gaz. vol. 133; p. 1040.
Bruehl, W. J., Philadelphia, Pa. Collar. No. 881,660; Mar. 10; Sp. p. 2330; Dr. p. 505; Gaz. vol. 133; p. 419.
Brugger, H. A., Radolfzell, Germany. Dumb-waiter for boots and the like. No. 880,625; Mar. 3; Sp. p. 279; Dr. pp. 59–60; Gaz. vol. 133; p. 49.
Brunner, A. (See Schirmacher and Brunner.)
Bruton, E. P., Rockingham, N. C. Vending-machine. No. 883,523; Mar. 31; Sp. p. 6078; Dr. p. 1293; Gaz. vol. 133; p. 1116.
Bruyère, J., Le Puy, France. Brush for parquetry-flooring and the like. No. 883,166; Mar. 31; Sp. p. 5326; Dr. p. 1135; Gaz. vol. 133; p. 1000.
Bryan, S. (See Dunn, G. R., assignor.)
Bryant Electric Company. (See Seeley, F. E., assignor.) (Reissue.)
Bryers, J., Chicago, Ill. Combined medicine-measure and corkscrew. No. 880,505; Mar. 3; Sp. p. 29; Dr. p. 7; Gaz. vol. 133; p. 8.
Bryk, E. (See Schmidt and Bryk.)
Buchanan, J. J., assignor to Waterbury Buckle Co., Waterbury, Conn. Garment-supporter clasp. No. 881,372; Mar. 10; Sp. p. 1770; Dr. p. 381; Gaz. vol. 133; p. 325.
Bucher, W. K., assignor to Columbian Hardware Company, Cleveland, Ohio. Spring-hinge. No. 882,140; Mar. 17; Sp. p. 3305; Dr. p. 705; Gaz. vol. 133; p. 602.
Buchner, M., Mannheim-Waldhof, Germany. Manufacturing and treating composite aluminium oxids. No. 883,286; Mar. 31; Sp. p. 5579; Gaz. vol. 133; p. 1041.
Buckius, A. O., Jr., Chicago, Ill., assignor to National Malleable Castings Company, Cleveland, Ohio. Journal-box. No. 882,487; Mar. 17; Sp. p. 3049; Dr. pp. 844–5; Gaz. vol. 133; p. 715.

Buckley, R. W., Jr., New York, N. Y. Anchor. No. 881,541; Mar. 10; Sp. p. 2078; Dr. p. 454; Gaz. vol. 133; p. 378.
Buckwalter, T. V., Altoona, Pa. Electrically-operated baggage-truck. (Reissue.) No. 12,767; Mar. 24; Sp. p. 5311; Dr. p. 1133; Gaz. vol. 133; p. 970.
Buda Foundry & Manufacturing Company. (See Jenkins, M. L., assignor.)
Buehler, B. M., Odebolt, Iowa. Manure-spreader. No. 882,370; Mar. 17; Sp. p. 3756; Dr. p. 800; Gaz. vol. 133; p. 677.
Buerger, W. L., assignor to Williamsport Staple Company, Williamsport, Pa. Winker blind. No. 883,287; Mar. 31; Sp. p. 5580; Dr. p. 1190; Gaz. vol. 133; p. 1041.
Buffalo Lounge Company. (See Jacobs, H. J., assignor.)
Buffalo Pitts Company. (See Todd, M. J., assignor.)
Buffum, F. D., Columbus, Ohio, assignor, by mesne assignments, to Jeffrey Manufacturing Company. Box car loader. No. 883,288; Mar. 31; Sp. p. 5583; Dr. pp. 1190–1; Gaz. vol. 133; p. 1041.
Buhler, A. J., Harris, Minn. Means for gathering and destroying potato-bugs. No. 883,618; Mar. 31; Sp. p. 6258; Dr. pp. 1334–5; Gaz. vol. 133; p. 1146.
Bull, E. C., Naugatuck, assignor of one-half to C. E. Graham, West Haven, Conn. Machine for galvanizing chain. No. 882,776; Mar. 24; Sp. p. 4533; Dr. pp. 967–8; Gaz. vol. 133; p. 842.
Bullock Electric Manufacturing Company. (See Hall, D., assignor.)
Bullock, H. E., assignor to Illinois Malleable Iron Company, Chicago, Ill. Union. No. 883,080; Mar. 24; Sp. p. 5135; Dr. p. 1096; Gaz. vol. 133; p. 942.
Bullock, H. S., Jr., assignor to American District Telegraph Company, New York, N. Y. Call-box. No. 883,447; Mar. 31; Sp. p. 5931; Dr. pp. 1265–6; Gaz. vol. 133; p. 1094.
Bundesen, F. (See Traulsen and Bundesen.)
Bunker, J. W., Providence, R. I., assignor to Providence Plant Irrigator Company. Irrigating device. No. 880,968; Mar. 3; Sp. p. 968; Dr. p. 209; Gaz. vol. 133; p. 164.
Burbach, A., Leipzig-Schleussig, assignor to J. G. Schelter & Giesecke, Leipzig, Germany. Printing-press, especially of the bed-and-platen type. No. 881,998; Mar. 17; Sp. p. 3042; Dr. pp. 647–8; Gaz. vol. 133; p. 556.
Burch, C. E. S. (See Burch, F. R. and C. E. S.)
Burch, F. R. and C. E. S., Seattle, Wash. Power-transmitting mechanism. No. 881,846; Mar. 10; Sp. p. 2685; Dr. p. 574; Gaz. vol. 133; p. 477.
Burch, L. H., Dryden, N. Y. Mail-bag-receiving apparatus. No. 882,293; Mar. 17; Sp. p. 3614; Dr. p. 766; Gaz. vol. 133; p. 651.
Burchill, J. C., Jamaica Plain, Mass. Presser-foot for irregular molders. No. 882,777; Mar. 24; Sp. p. 4534; Dr. p. 968; Gaz. vol. 133; p. 842.
Burckhardt, F., St. Charles, Mo. Window-screen. No. 882,778; Mar. 24; Sp. p. 4536; Dr. p. 968; Gaz. vol. 133; p. 842.
Burdon, J., W. M., and M. M., Bellshill, Scotland. Liquid-fuel furnace. No. 882,294; Mar. 17; Sp. p. 3615; Dr. pp. 766–7; Gaz. vol. 133; p. 652.
Burdon, M. M. (See Burdon, J., W. M., and M. M.)
Burdon, W. M. (See Burdon, J., W. M., and M. M.)
Burg, B. R., Pana, Kans. Funnel. No. 883,289; Mar. 31; Sp. p. 5590; Dr. p. 1191; Gaz. vol. 133; p. 1041.
Burg, H. L. (See Burg, O. E., and H. L.)
Burg, O. E. and H. L., Dallas City, Ill. Vehicle-top. No. 882,232; Mar. 17; Sp. p. 3495; Dr. p. 742; Gaz. vol. 133; p. 630.
Burgess, N., Highlands, N. J. Stage apparatus. No. 883,290; Mar. 31; Sp. p. 5592; Dr. p. 1192; Gaz. vol. 133; p. 1042.
Burgess, N., Highlands, N. J. Apparatus for producing illusory dramatic effects. No. 883,291; Mar. 31; Sp. p. 5595; Dr. p. 1192; Gaz. vol. 133; p. 1042.
Burgner, C. L., Clinton, Ohio. Apparatus for unloading hay in barns. No. 881,542; Mar. 10; Sp. p. 2080; Dr. p. 455; Gaz. vol. 133; p. 379.
Burke, E. J., Brooklyn, N. Y. Telephone system. (Reissue.) No. 12,756; Mar. 3; Sp. p. 1217; Dr. p. 262; Gaz. vol. 133; p. 207.
Burke, J. J., Pittsburg, Pa. Store-front construction. No. 881,897; Mar. 17; Sp. p. 2626; Dr. pp. 603–4; Gaz. vol. 133; p. 523.
Burke, N. G., Hot Springs, Ark. Bottle. No. 882,864; Mar. 24; Sp. p. 4730; Dr. p. 1005; Gaz. vol. 133; p. 872.
Burnard, H. C., Tower, Mich. Picture-hanger. No. 881,661; Mar. 10; Sp. p. 2331; Dr. p. 505; Gaz. vol. 133; p. 419.
Burnett, H. S., Lisbon, Ohio. Clevis. No. 880,626; Mar. 3; Sp. p. 280; Dr. p. 60; Gaz. vol. 133; p. 49.
Burns, G. (See Harrison and Burns.)
Burns, L. T., Waterbury, Conn. Automatic gas-burner. No. 882,664; Mar. 24; Sp. p. 4322; Dr. p. 919; Gaz. vol. 133; p. 807.
Burns, M. F., administratrix. (See Francis, P.)
Burnside, G., Shiney Row, England. Safety boring apparatus. No. 882,741; Mar. 24; Sp. p. 4476; Dr. p. 953; Gaz. vol. 133; p. 892.
Burnstiel, J., *et al.* (See Walker, G., assignor.)
Burra, W. P. (See Davidson and Burra.)
Burrows, C. W. (See Tverdahl, E. A., assignor.)
Burt, J., Narberth, assignor to William Sellers & Company, Incorporated, Philadelphia, Pa. Lathe-driver. No. 881,373; Mar. 10; Sp. p. 1770; Dr. p. 382; Gaz. vol. 133; p. 325.
Burtch, D. H., assignor of one-third to M. T. Gautreaux, Morgan City, La. Door-lock. No. 883,158; Mar. 24; Sp. p. 5300; Dr. p. 1131; Gaz. vol. 133; p. 968.
Burton, C. G., Peru, Ind. Socket for electric lamps. No. 881,297; Mar. 10; Sp. p. 1616; Dr. p. 346; Gaz. vol. 133; p. 301.
Burton, H. H., Los Angeles, Cal. Adding attachment for type-writers. No. 883,081; Mar. 24; Sp. p. 5135; Dr. pp. 1096–7; Gaz. vol. 133; p. 942.
Bushong, I. (See Caldwell, J. D., assignor.)
Buswell, E. (See Wilson and Buswell.)
Butler, A. M., Cleveland, Ohio. Device for sealing fruit-cans and other receptacles. No. 880,969; Mar. 3; Sp. p. 971; Dr. p. 209; Gaz. vol. 133; p. 164.
Butler, H. H., and R. Decker, Marine City, Mich. Clod-crusher. No. 882,295; Mar. 17; Sp. p. 3617; Dr. p. 767; Gaz. vol. 133; p. 652.
Butler, J. A., Winthrop, C. Reynolds and A. J. Seaman, Boston, Mass. Glue-applying machine. No. 883,082; Mar. 24; Sp. p. 5142; Dr. pp. 1097–8; Gaz. vol. 133; p. 942.
Butman, F. P., Holbrook, Mass. Thermostat. No. 881,847; Mar. 10; Sp. p. 2688; Dr. p. 575; Gaz. vol. 133; p. 478.
Butterworth, J. S., Wallingford, assignor of one-half to B. C. Fox, Chester, Pa. Process of manufacturing yarn. No. 882,866; Mar. 24; Sp. p. 4732; Gaz. vol. 133; p. 872.
Byng, W. T., Krugersdorp, Transvaal. Guide-block of stamp-mills. No. 882,624; Mar. 24; Sp. p. 4245; Dr. p. 899; Gaz. vol. 133; p. 794.
C. A. Mezger Inc. (See Mezger, C. A., assignor.)
C. A. Willey Company. (See Corbin, H. P., assignor.)
Caflisch, J. A., Union City, Pa. Extension-ladder. No. 882,371; Mar. 17; Sp. p. 3757; Dr. p. 800–1; Gaz. vol. 133; p. 677.
Cahill, V. B., Portland, Oreg. Lifting apparatus. No. 883,448; Mar. 31; Sp. p. 5936; Dr. p. 1266; Gaz. vol. 133; p. 1094.
Cain, E. M., Wilmington, Del. Automatic air-brake-operating device. No. 882,372; Mar. 17; Sp. p. 3760; Dr. p. 801; Gaz. vol. 133; p. 678.
Cain, H., Paris, France. Mirror for motor-vehicles. No. 881,771; Mar. 10; Sp. p. 2532; Dr. p. 545; Gaz. vol. 133; p. 452.
Caldwell, J. D., Olympia, assignor to I. Bushong, Seattle, Wash. Shingle-butt-cutting machine. No. 882,233; Mar. 17; Sp. p. 3497; Dr. p. 742; Gaz. vol. 133; p. 631.
Cale, A. W., Alberta, Minn. Portable lavatory. No. 881,543; Mar. 10; Sp. p. 2083; Dr. p. 455; Gaz. vol. 133; p. 379.
Call, C. C., assignor to J. H. Wesson, Springfield, Mass. Revolver. No. 881,374; Mar. 10; Sp. p. 1773; Dr. p. 382; Gaz. vol. 133; p. 326.
Callahan, A. T., Fairwood, Va., assignor of one-half to H. L. Cohick, Slate Run, Pa. Broom-bridle. No. 883,524; Mar. 31; Sp. p. 6081; Dr. p. 1294; Gaz. vol. 133; p. 1117.
Callan, J. G., Lynn, Mass., assignor to General Electric Company. Governing mechanism for turbines. No. 881,544; Mar. 10; Sp. p. 2083; Dr. p. 456; Gaz. vol. 133; p. 379.
Callane, W. E., Flora, Ind. Wire tie for insulators. No. 882,095; Mar. 17; Sp. p. 3234; Dr. p. 688; Gaz. vol. 133; p. 588.
Calvert, J. B., Guthrie, Okla. Crown-loop for harness-bridles. No. 881,375; Mar. 10; Sp. p. 1774; Dr. p. 382; Gaz. vol. 133; p. 326.
Calvert, J. C., Golconda, Nev. Trip for hay-nets. No. 883,083; Mar. 24; Sp. p. 5145; Dr. p. 1098; Gaz. vol. 133; p. 942.
Cameron, M. A., Kansas City, Kans., and W. H. Cowles, Rockford, Ill. Pencil-sharpener. No. 880,715; Mar. 3; Sp. p. 450; Dr. p. 94; Gaz. vol. 133; p. 79.
Cameron, W. A. H., and J. W. Marshall, Wellington, New South Wales, Australia. Machine for washing drinking-glasses. No. 881,898; Mar. 17; Sp. p. 2828; Dr. p. 604; Gaz. vol. 133; p. 524.
Campbell, B. D., Oakland, Cal. Coin-controlled attachment for vending-machines. No. 883,386; Mar. 31; Sp. p. 5793; Dr. p. 1236; Gaz. vol. 133; p. 1072.
Campbell, G. H., Harrisburg, Pa. Piano-flange. No. 883,387; Mar. 31; Sp. p. 5796; Dr. p. 1237; Gaz. vol. 133; p. 1073.
Campbell, G. P., and F. H. Ringemann, Cincinnati, Ohio. Air-forcing means for a gas-generator. No. 882,994; Mar. 24; Sp. p. 4982; Dr. p. 1059; Gaz. vol. 133; p. 914.
Campbell, J., Providence, R. I. Coal-hoisting apparatus. No. 882,867; Mar. 24; Sp. p. 4734; Dr. p. 1006; Gaz. vol. 133; p. 872.
Campbell, J., Providence, R. I. Coal-delivery wagon. No. 882,868; Mar. 24; Sp. p. 4736; Dr. p. 1007; Gaz. vol. 133; p. 873.
Campbell, J., Providence, R. I. Chute-wagon. No. 882,869; Mar. 24; Sp. p. 4738; Dr. p. 1007; Gaz. vol. 133; p. 873.
Campbell, W. R., Little York, Ill. Differential-draft appliance. No. 883,449; Mar. 31; Sp. p. 5938; Dr. p. 1266; Gaz. vol. 133; p. 1094.
Canda, F. M., New York, N. Y. Crusher plate, head, and the like. No. 883,619; Mar. 31; Sp. p. 6259; Dr. p. 1335; Gaz. vol. 133; p. 1146.
Canavan, J. J., Brooklyn, N. Y. Abrading or polishing machine. No. 882,665; Mar. 24; Sp. p. 4323; Dr. pp. 919–20; Gaz. vol. 133; p. 807.

Canney, H., Colusa, Cal. Reel for clothes-lines. No. 881,772; Mar. 10; Sp. p. 2533; Dr. pp. 545–6; Gaz. vol. 133; p. 453.
Canode, F. B. (See Blean and Canode.)
Caps, A. W. (See Caps, J. E. and A. W.)
Caps, J. E. and A. W., Kansas City, Mo. Power-transmission means. No. 881,545; Mar. 10; Sp. p. 2086; Dr. pp. 456–7; Gaz. vol. 133; p. 380.
Carey, E., Myrtle Point, Oreg. Rope-clamp. No. 881,662; Mar. 10; Sp. p. 2231; Dr. p. 505; Gaz. vol. 133; p. 419.
Carey, W., Lexington, Miss. Band-saw. No. 881,107; Mar. 10; Sp. p. 1227; Dr. p. 264; Gaz. vol. 133; p. 238.
Carle, T., Jr., Kingston, Pa. Paint pot and brush holder. No. 881,054; Mar. 3; Sp. p. 1119; Dr. p. 242; Gaz. vol. 133; p. 191.
Carlin, D., Bellevue, Pa. Lead-press. No. 882,742; Mar. 24; Sp. p. 4478; Dr. p. 953; Gaz. vol. 133; p. 832.
Carlson, C. J., Wahoo, Nebr. Road-drag. No. 880,970; Mar. 3; Sp. p. 972; Dr. p. 210; Gaz. vol. 133; p. 164.
Carlson, C. O., Port Richmond, N. Y. Gas-engine. No. 882,812; Mar. 24; Sp. p. 4612; Dr. p. 983; Gaz. vol. 133; p. 855.
Carlson, O., assignor of one-half to F. G. Theselius, Chicago, Ill. Brick-handling appliance. No. 883,388; Mar. 31; Sp. p. 5797; Dr. p. 1237; Gaz. vol. 133; p. 1073.
Carlton, W. F., Advance, Mo. Pneumatic grain-conveyer. No. 883,292; Mar. 31; Sp. p. 5598; Dr. p. 1193; Gaz. vol. 133; p. 1042.
Carmichael, H. A., West Lorne, Ontario, Canada. Corner-lock for cement-molds. No. 881,224; Mar. 10; Sp. p. 1462; Dr. p. 314; Gaz. vol. 133; p. 277.
Caro, N. (See Frank and Caro.) (Reissue.)
Carpenter, C. U., New York, N. Y. Safe. No. 882,995; Mar. 24; Sp. p. 4984; Dr. pp. 1059–60; Gaz. vol. 133; p. 915.
Carpenter, G. J. F. (See Carpenter, J. H., Jr., and G. J. F.)
Carpenter, H. A., Sewickley, Pa., assignor to Riter-Conley Manufacturing Company, Jersey City, N. J. Mechanism for controlling fluid-pressure. No. 881,376; Mar. 10; Sp. p. 1775; Dr. p. 383; Gaz. vol. 133; p. 326.
Carpenter, H. W., assignor to American Woven Lath Company, Washington, D. C. Slat-weaving machine. No. 881,225; Mar. 10; Sp. p. 1463; Dr. p. 315; Gaz. vol. 133; p. 277.
Carpenter, J. H., Jr., and G. J. F., Ossining, N. Y. Attachment for motor-vehicles. No. 883,167; Mar. 31; Sp. p. 5327; Dr. p. 1136; Gaz. vol. 133; p. 1000.
Carraway, J. W., St. James City, Fla. Envelop. No. 883,620; Mar. 31; Sp. p. 6262; Dr. p. 1336; Gaz. vol. 133; p. 1146.
Carrier, C. F., Jr., assignor to Elmira Electrochemical Company, Elmira, N. Y. Apparatus for electrolysis of brine. No. 881,108; Mar. 10; Sp. p. 1228; Dr. p. 264; Gaz. vol. 133; p. 238.
Carrick, J. T., and S. Pattison, Johannesburg, Transvaal. Smelting sulfid ores. No. 882,234; Mar. 17; Sp. p. 3499; Gaz. vol. 133; p. 631.
Carrington, R. W., Kansas City, Mo. Hinge for window-screens. No. 882,813; Mar. 24; Sp. p. 4614; Dr. p. 983; Gaz. vol. 133; p. 855.
Carroll, G. H., Vacaville, Cal. Fire-alarm. No. 881,663; Mar. 10; Sp. p. 2332; Dr. p. 505; Gaz. vol. 133; p. 419.
Carroll, W. N., assignor of one-half to H. F. Schlink and D. G. Tyler, Minneapolis, Minn. Sliding-door fastener. No. 882,296; Mar. 17; Sp. p. 3619; Dr. p. 768; Gaz. vol. 133; p. 652.
Carroll, T., Anaheim, Cal. Combination wagon or other vehicle. No. 882,743; Mar. 24; Sp. p. 4481; Dr. pp. 954–5; Gaz. vol. 133; p. 892.
Cart, S. C., Spokane, Wash. Signaling device. No. 882,744; Mar. 24; Sp. p. 4484; Dr. p. 955; Gaz. vol. 133; p. 833.
Carter, G. F. (See Gardenhire, J. A., assignor.)
Carter, G. W., Canyonville, Oreg. Insulator. No. 880,971; Mar. 3; Sp. p. 974; Dr. p. 210; Gaz. vol. 133; p. 164.
Carter, H. E., Brooklyn, Iowa. Animal-trap. No. 882,373; Mar. 17; Sp. p. 3760; Dr. p. 801; Gaz. vol. 133; p. 678.
Carter, J. H., Chicago, Ill. Filler for egg-crates. No. 882,049; Mar. 17; Sp. p. 3151; Dr. p. 670; Gaz. vol. 133; p. 572.
Carter, J. N., Wichita, Kans. Crude-oil burner. No. 883,621; Mar. 31; Sp. p. 6263; Dr. p. 1336; Gaz. vol. 133; p. 1147.
Carter, J. T., Danville, Va. Tobacco-stemming machine. No. 883,622; Mar. 31; Sp. p. 6264; Dr. p. 1336; Gaz. vol. 133; p. 1147.
Carter, M. O., and W. T. Davis, Travellers Rest, S. C. Drive-gear for engines. No. 880,627; Mar. 3; Sp. p. 281; Dr. p. 60; Gaz. vol. 133; p. 49.
Cary, F. O., Hamilton, assignor of one-half to G. Savage, Birdsview, Wash. Shelter-shed. No. 882,870; Mar. 24; Sp. p. 4740; Dr. p. 1008; Gaz. vol. 133; p. 873.
Case, A. B., Springfield, Mass. Lawn-mower. No. 880,628; Mar. 3; Sp. p. 282; Dr. p. 60; Gaz. vol. 133; p. 50.
Casse, A., Brussels, Belgium. Apparatus for placing bed and bank coverings in waterways. No. 883,084; Mar. 24; Sp. p. 5146; Dr. p. 1008; Gaz. vol. 133; p. 943.
Cassell, B. E., Sparland, Ill. Windmill. No. 882,871; Mar. 24; Sp. p. 4741; Dr. p. 1008; Gaz. vol. 133; p. 874.
Cassel, E. F. (See Andrews, F. S., assignor.)
Castiau, L. J., Strathcona, Alberta, Canada. Safety-pin. No. 880,972; Mar. 3; Sp. p. 975; Dr. p. 210; Gaz. vol. 133; p. 165.
Cathriner, H. (See Childress and Cathriner.)
Catron, J. J., Bonham, Tex. Magazine-rifle. No. 882,625; Mar. 24; Sp. p. 4246; Dr. pp. 899–900; Gaz. vol. 133; p. 794.
Cauble, F. P., Lincolnton, N. C. Lightning-arrester. No. 882,096; Mar. 17; Sp. p. 3235; Dr. p. 688; Gaz. vol. 133; p. 589.
Cavanagh, A. W., and A. Allan, North Bay, Ontario, Canada. Automatic train-brake-applying device. No. 883,293; Mar. 31; Sp. p. 5599; Dr. p. 1193; Gaz. vol. 133; p. 1043.
Cawood, H. M., Los Angeles, Cal. Car-replacer. No. 882,997; Mar. 17; Sp. p. 3236; Dr. p. 688; Gaz. vol. 133; p. 589.
Central Fish Company. (See Rochow, F. J., assignor.)
Central Trust Company of New York, trustee. (See Price, E. F., assignor.)
Ceylon Cocoa & Coffee Company. (See Herron, J. M., assignor.)
Chamberlain, R. N., Depew, N. Y., assignor to Gould Storage Battery Company. System of electrical distribution. No. 882,872; Mar. 24; Sp. p. 4743; Dr. p. 1009; Gaz. vol. 133; p. 874.
Chambers, J. F. (See Van Cise and Chambers.)
Champagne, J. N., Ste. Clothilde, Quebec, assignor of two-thirds to A. Gagner, Manchester, N. H., and O. Charland, Ste. Philomene, Canada. Potato-digger. No. 880,861; Mar. 3; Sp. p. 776; Dr. pp. 164–5; Gaz. vol. 133; p. 130.
Chandler, F. M., Buffalo, N. Y. Speaking-tube. No. 881,993; Mar. 3; Sp. p. 1199; Dr. p. 259; Gaz. vol. 133; p. 204.
Chandler, O. H., assignor of one-half to T. L. W. Bailey, Clinton, S. C. Dipper-handle. No. 883,623; Mar. 31; Sp. p. 6267; Dr. p 1337; Gaz. vol. 133; p. 1147.
Chaplin, E. D., Boston, assignor to W. E. Robinson, Malden, Mass. Shaving appliance. No. 882,488; Mar. 17; Sp. p. 3951; Dr. p. 845; Gaz. vol. 133; p. 715.
Chapman, C. F., assignor to Hotaling Manufacturing Company, Philadelphia, Pa. Implement for cutting shaped sections from glass sheets. No. 881,899; Mar. 17; Sp. p. 2829; Dr. p. 604; Gaz. vol. 133; p. 524.
Chapman, F. F. B., Winchester, Mass. Poultry trap-nest. No. 880,778; Mar. 3; Sp. p. 584; Dr. p. 124; Gaz. vol. 133; p. 101.
Chapman, L., Berwind, Colo. Wrench. No. 883,168; Mar. 31; Sp. p. 5327; Dr. p. 1136; Gaz. vol. 133; p. 1000.
Chappel, J. M., Dallas, Tex. Screw-driver and attachment therefor. No. 881,298; Mar. 10; Sp. p. 1619; Dr. p. 346; Gaz. vol. 133; p. 302.
Charland, O., *et al.* (See Champagne, J. N., assignor.)
Charles, B. R., Portland, Oreg. Electrothermal garment. No. 880,716; Mar. 3; Sp. p. 452; Dr. p. 95; Gaz. vol. 133; p. 79.
Chase, C., Fall River, Mass. Grab-bucket. No. 882,666; Mar. 24; Sp. p. 4327; Dr. p. 920; Gaz. vol. 133; p. 807.
Chase Foundry and Manufacturing Company. (See Chase, S. M., assignor.)
Chase, R. G., Medford, Mass. Tread-surface. No. 880,862; Sp. p. 777; Dr. p. 165; Gaz. vol. 133; p. 130.
Chase, S. M., assignor to Chase Foundry and Manufacturing Company, Columbus, Ohio. Transporting and drying car for cement or concrete blocks. No. 883,294; Mar. 31; Sp. p. 5600; Dr. pp. 1193–4; Gaz. vol. 133; p. 1043.
Chaulin, A. L. M., Paris, France. Electrical appliance for protection against insects. No. 881,055; Mar. 3; Sp. p. 1121; Dr. p. 242; Gaz. vol. 133; p. 191.
Cheesman, G. R., assignor to Dunn and McCarthy, Auburn, N. Y. Welt-dressing machine. No. 883,525; Mar. 31; Sp. p. 6082; Dr. p. 1294; Gaz. vol. 133; p. 1117.
Cheesman, R. E., La Fayette, Ind. Cotton-picker. No. 881,056; Mar. 3; Sp. p. 1122; Dr. p. 243; Gaz. vol. 133; p. 192.
Chellis, E. D., assignor, by mesne assignments, to National Metal Seal Company, Portland, Me. Closure for containing vessels. No. 882,546; Mar. 17; Sp. p. 4079; Dr. p. 867; Gaz. vol. 133; p. 735.
Chellis, E. D., assignor, by mesne assignments, to National Metal Seal Company, Portland, Me. Cap for bottles. No. 882,547; Mar. 17; Sp. p. 4080; Dr. p 867; Gaz. vol. 133; p. 735.
Chellis, E. D., assignor, by mesne assignments, to National Metal Seal Company, Portland, Me. Closure for containing vessels. No. 882,548; Mar. 17; Sp. p. 4082; Dr. p. 868; Gaz. vol. 133; p. 735.
Chellis, E. D., assignor to National Metal Seal Company, Portland, Me. Closure for containing vessels. No. 882,549, Mar. 17; Sp. p. 4083; Dr. p. 868; Gaz. vol. 133; p. 736.
Chellis, E. D., assignor to National Metal Seal Company, Portland, Me. Closure for containing vessels. No. 882,550; Mar. 17; Sp. p. 8084; Dr. p. 868; Gaz. vol. 133; p. 736.
Chemical Reduction Company. (See Sperry, E. A., assignor.)
Chemische Fabrik Relahold Gesellschaft M. B. H. (See Evers, F., assignor.)
Chesney, J., Paulsboro, N. J., assignor to E. I. du Pont de Nemours Powder Company, Wilmington, Del. Machine for making paper shells. No. 883,169; Mar. 31; Sp. p. 5329; Dr. p. 1136; Gaz. vol. 133; p. 1001.
Chezem, S. S., Terre Haute, Ind. Mold. No. 881,299; Mar. 10; Sp. p. 1621; Dr. p. 346; Gaz. vol. 133; p. 302.
Chial, J., Lake Park, Minn. Water-tank. No. 882,098; Mar. 17; Sp. p. 3237; Dr. pp. 688–9; Gaz. vol. 133; p. 589.
Childress, A. E., and H. Cathriner, Houston, Tex. Water or oil well screen. No. 883,065; Mar. 24; Sp. p. 5147; Dr. p. 1099; Gaz. vol. 133; p. 943.
Childs, G. W., New York, N. Y. Utilizing sapped tanning liquors. No. 881,094; Mar. 3; Sp. p. 1201; Gaz. vol. 133; p. 204.

Childs, G. W., New York, N. Y. Making leather-dressing from sapped or exhausted tanning liquors. No. 882,489; Mar. 17; Sp. p. 3952; Gaz. vol. 133; p 715.
Childs, G. W., New York, N. Y. Making liquid leather-dressings from tanning liquors. No. 882,490; Mar. 17; Sp. p. 3953; Gaz. vol. 133; p. 715.
Chisholm, C. L., Marysville, New Brunswick, Canada. Speaking-machine. No. 881,546; Mar. 10; Sp. p. 2091; Dr. p. 457; Gaz. vol. 133; p. 380.
Chisholm, C. L., Marysville, New Brunswick, Canada. Reproducer. No. 881,547; Mar. 10; Sp. p. 2093; Dr. p. 458; Gaz. vol. 133; p. 381.
Christ, M. (See Stankey and Christ.)
Christensen, O., and C. P. Sölbeck, Copenhagen, Denmark. Combined churn and butter-worker. No. 882,745; Mar. 24; Sp. p. 4487; Dr. p. 955; Gaz. vol. 133; p. 833.
Christenson C. J., Kellogg, Iowa. Hydrant. No. 883,086; Mar. 24; Sp. p. 5149; Dr. p. 1099; Gaz. vol. 133; p. 943.
Christiansen, W. A., *et al.* (See Owen and Brooks, assignors.)
Christianson, H. C., Fanwood, N. J. Crystallizing sugar. No. 880,629; Mar. 3; Sp. p. 283; Dr. p. 61; Gaz. vol. 133; p. 50.
Christy, S. B., Berkeley, Cal. Electrode for the recovery of metals from solutions by electrolysis. No. 883,170; Mar. 31; Sp. p. 5330; Dr. pp. 1136–7; Gaz. vol. 133; p. 1001.
Chubbuck, E. F., Hornell, N. Y. Pleasure-wheel. No. 881,095; Mar. 3; Sp. p. 1202; Dr. p. 259; Gaz. vol. 133; p. 204.
Church, C. F., Brooklyn, N. Y. Apparatus for covering articles with materials. No. 883,450; Mar. 31; Sp. p. 5940; Dr. p. 1267; Gaz. vol. 133; p. 1095.
Church, G. W., Stamford, Conn., assignor to R. Hoe, New York, N. Y. Stapling mechanism. No. 881,900; Mar. 17; Sp. p. 2831; Dr. p. 605; Gaz. vol. 133; p. 524.
Cipar, F., Chicago, Ill. Drum. No. 881,109; Mar. 10; Sp. p. 1230; Dr. p. 265; Gaz. vol. 133; p. 239.
Claflin, C. A., Medford, Mass. Air-exhausting liquid-supply apparatus. No. 881,548; Mar. 10; Sp. p. 2095; Dr. p. 458; Gaz. vol. 133; p. 381.
Clark, A. L. (See Porter and Clark.)
Clark, A. M., Kalamazoo, Mich. Fastener. No. 882,996; Mar. 24; Sp. p. 4985; Dr. p. 1060; Gaz. vol. 133; p. 915.
Clark, H. S. (See Lerch and Clark.)
Clark, J. M., Whitestone, N. Y. Steam-generator. No. 881,057; Mar. 3; Sp. p. 1123; Dr. pp. 243–4; Gaz. vol. 133; p. 192.
Clark, J. M., 3d, assignor of one-third to T. F. Williams, Attleboro, Mass. Target-practice attachment for firearms. No. 882,551; Mar. 24; Sp. p. 4093; Dr. p. 869; Gaz. vol. 133; p. 769.
Clark, J. S., Island City, Oreg. Vehicle-spring. No. 881,773; Mar. 10; Sp. p. 2534; Dr. p. 546; Gaz. vol. 133; p. 453.
Clark, N. E., Plainville, Conn. Expanded metal and producing the same. No. 882,491; Mar. 17; Sp. p. 3954; Dr. p. 845; Gaz. vol. 133; p. 715.
Clark, R., Charlie, Tex. Door-holder. No. 880,630; Mar. 3; Sp. p. 284; Dr. p. 61; Gaz. vol. 133; p. 50.
Clark, R. R., Smith Center, Kans. Ticket-case. No. 883,295; Mar. 31; Sp. p. 5603; Dr. p. 1194; Gaz. vol. 133; p. 1043.
Clarke, C. W., Swiss, W. Va. Derailing device. No. 880,717; Mar. 3; Sp. p. 453; Dr. p. 95; Gaz. vol. 133; p. 80.
Clarke Chapman & Company. (See Robson, J., assignor.)
Clarke, W. L., Waynesburg, Pa. Attachment for ink-bottles and ink-wells. No. 880,973; Mar. 3; Sp. p. 976; Dr. p. 210; Gaz. vol. 133; p. 165.
Classon, A. N., Rutland township, Lasalle county, Ill. Operating mechanism for magnetos. No. 880,974; Mar. 3; Sp. p. 977; Dr. p. 211; Gaz. vol. 133; p. 165.
Classon, A. N., Rutland township, Lasalle county, Ill. Gas-engine igniter. No. 881,058; Mar. 3; Sp. p. 1125; Dr. p. 244; Gaz. vol. 133; p. 192.
Claude, G., Paris, France. Apparatus for the liquefaction of air. No. 881,176; Mar. 10; Sp. p. 1360; Dr. p. 293; Gaz. vol. 133; p. 261.
Claude, G., Paris, France. Blowpipe. No. 882,997; Mar. 24; Sp. p. 4987; Dr. p. 1060; Gaz. vol. 133; p. 915.
Clawson, S. I., Salt Lake City, Utah. Fume-arrester. No. 880,506; Mar. 3; Sp. p. 29; Dr. p. 7; Gaz. vol. 133; p. 8.
Clay, F. W. H., Pittsburg, Pa. Sound-recording apparatus. No. 881,664; Mar. 10; Sp. p. 2333; Dr. p. 506; Gaz. vol. 133; p. 419.
Clay, J., New York, N. Y. Switch-clip. No. 883,389; Mar. 31; Sp. p. 5799; Dr. p. 1237; Gaz. vol. 133; p. 1073.
Clayton & Bentley Co. (See Bostrom, E. A., assignor.)
Clayton & Bentley Co. (See Ginn, L. H., assignor.)
Clemans, W. M., Wheeling, W. Va. Touch-adjusting mechanism for piano-keys. No. 882,814; Mar. 24; Sp. p. 4615; Dr. p. 984; Gaz. vol. 133; p. 855.
Clements, G. H., Chicago, Ill. Sprayer attachment for furnaces. No. 881,549; Mar. 10; Sp. p. 2097; Dr. p. 458; Gaz. vol. 133; p. 381.
Clendenin, M. S., Mexico, Mo. Bandage. No. 880,718; Mar. 3; Sp. p. 455; Dr. p. 96; Gaz. vol. 133; p. 80.
Clever, R. H. (See Lindeman, B. T., assignor.)
Clossey, L. J., Montpelier, Vt. Power-hammer frame. No. 882,492; Mar. 17; Sp. p. 3955; Dr. pp. 845–6; Gaz. vol. 133; p. 716.
Clough, H. H., Elyria, Ohio. Rail-fastening for concrete railway-ties. No. 882,050; Mar. 17; Sp. p. 3153; Dr. p. 670; Gaz. vol. 133; p. 573.
Clough, H. H., Elyria, Ohio. Concrete railway-tie. No. 882,051; Mar. 17; Sp. p. 3155; Dr. p. 670; Gaz. vol. 133; p. 573.
Clugston, C. E., Bigspring, Nebr. Hay-loader. No. 883,087; Mar. 24; Sp. p. 5150; Dr. pp. 1099–1100; Gaz. vol. 133; p. 944.
Coats, M. C., Marysville, Cal. Load-indicator for railway-cars. No. 880,719; Mar. 3; Sp. p. 456; Dr. p. 96; Gaz. vol. 133; p. 80.
Cobb, J. C., Washington, D. C. Loading apparatus. No. 881,774; Mar. 10; Sp. p. 2536; Dr. p. 546; Gaz. vol. 133; p. 453.
Coburn, E. R., Bluffton, Ohio. Waterproof dressing for boots and shoes. No. 881,901; Mar. 17; Sp. p. 2834; Gaz. vol. 133; p. 525.
Cochran, C. M., Emporia, Kans., assignor to W. S. Thomas, Springfield, Ohio. Grain-shocker. No. 882,052; Mar. 17; Sp. p. 3155; Dr. pp. 670–1; Gaz. vol. 133; p. 573.
Coffey, N. F., Black Rock, Ark. Six-wheeled logging-automobile. No. 882,998; Mar. 24; Sp. p. 4988; Dr. pp. 1060–1; Gaz. vol. 133; p. 915.
Coffin, E. M., Oakland, Cal. Electric switch. No. 881,300; Mar. 10; Sp. p. 1623; Dr. p. 347; Gaz. vol. 133; p. 302.
Cohen, H., Brooklyn, N. Y. Gaiter. No. 882,235; Mar. 17; Sp. p. 3500; Dr. p. 742; Gaz. vol. 133; p. 631.
Cohick, H. L. (See Callahan, A. T., assignor.)
Cohn, A. B., New York, N. Y., assignor to A. B. C. Machine Company, Philadelphia, Pa. Power-transmitting device. No. 881,881; Mar. 10; Sp. p. 2774; Dr. p. 595; Gaz. vol. 133; p. 490.
Colbath, M. D., Hampden, Me. Carbureter. No. 883,171; Mar. 31; Sp. p. 5338; Dr. p. 1137; Gaz. vol. 133; p. 1002.
Colborn, W. T., *et al.* (See Teller, J. C., assignor.)
Colborn, Z. C., *et al.* (See Teller, J. C., assignor.)
Cole, C. E., assignor of one-half to S. A. White, Birmingham, Ala. Telephone instrument. No. 883,088; Mar. 24; Sp. p. 5152; Dr. p. 1100; Gaz. vol. 133; p. 944.
Cole, G. W., Brooklyn, N. Y. Detachable and reversible spout or nozzle for dispensing-cans. No. 881,550; Mar. 10; Sp. p. 2098; Dr. p. 459; Gaz. vol. 133; p. 382.
Cole, H. W. (See Ireland and Cole.)
Cole, E. S., Upper Montclair, N. J. Recording device. No. 880,720; Mar. 3; Sp. p. 457; Dr. p. 96; Gaz. vol. 133; p. 80.
Coleman, B. B., Berlin, Conn., assignor of one-half to S. J. Schack, New York, N. Y. Toy. No. 883,390; Mar. 31; Sp. p. 5800; Dr. p. 1237; Gaz. vol. 133; p. 1073.
Coleman, C. W., Westfield, N. J., assignor to Hall Signal Company. Railway-signal check. No. 881,226; Mar. 10; Sp. p. 1409; Dr. p. 315; Gaz. vol. 133; p. 277.
Coleman, C. W., Westfield, N. J., assignor to Hall Signal Company. Railway-signal check. No. 881,301; Mar. 10; Sp. p. 1625; Dr. p. 347; Gaz. vol. 133; p. 303.
Coleman, C. W., Westfield, N. J., assignor to Hall Signal Company. Railway-semaphore. No. 882,928; Mar. 24; Sp. p. 4856; Dr. pp. 1031–2; Gaz. vol. 133; p. 893.
Coleman, C. W., Westfield, N. J., assignor to Hall Signal Company. Railway-semaphore. No. 882,929; Mar. 24; Sp. p. 4860; Dr. p. 1032; Gaz. vol. 133; p. 893.
Coleman, C. W., Westfield, N. J., assignor to Hall Signal Company. Railway-semaphore. No. 882,930; Mar. 24; Sp. p. 4863; Dr. pp. 1032–3; Gaz. vol. 133; p. 894.
Coler, P. P., Chicago, Ill. Recording-tool. No. 881,302; Mar. 10; Sp. p. 1627; Dr. pp. 347–8; Gaz. vol. 133; p. 303.
Collier, F. A., Galveston, Tex. Rail-joint. No. 883,089; Mar. 24; Sp. p. 5153; Dr. p. 1100; Gaz. vol. 133; p. 944.
Collier, O. G., Fairbury, Nebr. Bail and hasp fastener. No. 883,451; Mar. 31; Sp. p. 5944; Dr. p. 1267; Gaz. vol. 133; p. 1095.
Collison, C. D., Montclair, N. J. Non-refillable bottle. No. 881,551; Mar. 10; Sp. p. 2099; Dr. p. 459; Gaz. vol. 133; p. 382.
Columbian Hardware Company. (See Bucher, W. K., assignor.)
Colvin, W. (See Copenhaver and Colvin.)
Colwell, F. A., Oakesdale, Wash. Friction-clutch. No. 882,187; Mar. 17; Sp. p. 3410; Dr. p. 725; Gaz. vol. 133; p. 617.
Combs, G. W., Leavenworth, Kans. Gyratory structure. No. 883,526; Mar. 31; Sp. p. 6086; Dr. p. 1295; Gaz. vol. 133; p. 1117.
Combs, W. L., Bearcreek, Mont. Rock-digger. No. 883,624; Mar. 31; Sp. p. 6268; Dr. p. 1337; Gaz. vol. 133; p. 1147.
Combustion Engineering Company. (See Brown, F. H., assignor.)
Comissiong, J. S., Gulfport, Miss. Curtain-pole. No. 882,374; Mar. 17; Sp. p. 3762; Dr. p. 802; Gaz. vol. 133; p. 678.
Commercial Gas Company. (See Meyer and Hickey, assignors.)
Commerford, P. H. (See Wright and Commerford.)
Conde, H. W., Ottawa, Ill. Automatic gate for railway-crossings. No. 880,721; Mar. 3; Sp. p. 459; Dr. pp. 97–8; Gaz. vol. 133; p. 81.
Conkle, A., Luray, Mo. Drag-scraper. No. 882,053; Mar. 17; Sp. p. 3158; Dr. p. 671; Gaz. vol. 133; p. 574.
Connell, A. H., Annona, Tex. Cotton-cultivator attachment. No. 882,667; Mar. 24; Sp. p. 4329; Dr. p. 921; Gaz. vol. 133; p. 808.

Connelly, D., Cleveland Heights, and C. E. Schafer, Cleveland, Ohio. Street-flushing apparatus. No. 882,626; Mar. 24; Sp. p. 4251; Dr. pp. 900–1; Gaz. vol. 133; p. 794.
Conrad, E. A. and F. M., Elizabeth, N. J. Water trap and seal. No. 880,975; Mar. 3; Sp. p. 979; Dr. p. 211; Gaz. vol. 133; p. 166.
Conrad, F. M. (See Conrad, E. A. and F. M.)
Conrad, J. J., Luverne, Minn. Corn-plow shovel. No. 881,303; Mar. 10; Sp. p. 1629; Dr. p. 348; Gaz. vol. 133; p. 303.
Conrady, P. (See Gause and Conrady.)
Continental Automobile Company. (See Mabley and Franquist, assignors.)
Continental Investment Company. (See Hartenstein, H. L., assignor.)
Continental Manufacturing Company. (See Dun Lany, W. P., assignor.)
Converse, F. B., Jr., New Haven, Conn., assignor to Mergenthaler Linotype Company. Linotype-machine. No. 880,779; Mar. 3; Sp. p. 586; Dr. pp. 124–5; Gaz. vol. 133; p. 101.
Cook, C. W., Holyoke, Mass. Combined envelop and letter-sheet. No. 882,297; Mar. 17; Sp. p. 3620; Dr. p. 768; Gaz. vol. 133; p. 653.
Cook, E. G., Brooklyn, N. Y. Metal barrel. No. 880,507; Mar. 3; Sp. p. 31; Dr. p. 7; Gaz. vol. 133; p. 8.
Cook, E. O., Norman, Okla. Pie-tin. No. 883,296; Mar. 31; Sp. p. 5604; Dr. p. 1194; Gaz. vol. 133; p. 1044.
Cook, E. R., assignor of one-half to F. Anthony, Portland, Oreg. Gold-concentrating apparatus. No. 880,631; Mar. 3; Sp. p. 286; Dr. pp. 61–2; Gaz. vol. 133; p. 50.
Cook, F. B. (See Nolen, J. G., assignor.)
Cook, F. B., Chicago, Ill. Cable terminal. No. 883,625; Mar. 31; Sp. p. 6270; Dr. pp. 1337–8; Gaz. vol. 133; p. 1148.
Cook, F. B., Chicago, Ill. Electrical line-protector. No. 883,626; Mar. 31; Sp. p. 6272; Dr. p. 1338; Gaz. vol. 133; p. 1148.
Cook, F. H., Buckeye, Wash. Means for transferring passengers and the like to and from moving trains. No. 881,377; Mar. 10; Sp. p. 1779; Dr. pp. 383–4; Gaz. vol. 133; p. 326.
Cook, H. J., Ottumwa, Iowa. Rock-drill. No. 881,059; Mar. 3; Sp. p. 1127; Dr. pp. 244–5; Gaz. vol. 133; p. 193.
Cook, J. J., Medford, assignor to Crosby Steam Gage and Valve Company, Boston, Mass. Valve. No. 881,060; Mar. 3; Sp. p. 1129; Dr. p. 245; Gaz. vol. 133; p. 193.
Coon, R. E., Portland, Oreg. Screw-propeller. No. 881,775; Mar. 10; Sp. p. 2538; Dr. p. 546; Gaz. vol. 133; p. 453.
Cooper, M., Minneapolis, Minn. Refrigerator-car. No. 881,902; Mar. 17; Sp. p. 2835; Dr. p. 605; Gaz. vol. 133; p. 525.
Cope, T., New Waterford, Ohio. Cable insulating and testing system. No. 882,141; Mar. 17; Sp. p. 3397; Dr. p. 705; Gaz. vol. 133; p. 603.
Copenhaver, E. H., and W. Colvin, Dunlevy, Pa. Roller-skate. No. 882,999; Mar. 24; Sp. p. 4990; Dr. p. 1061; Gaz. vol. 133; p. 916.
Corbin Cabinet Lock Company. (See Johnson, C. E., assignor.)
Corbin, H. P., Moline, Ill., assignor to C. A. Willey Company, New York, N. Y. Wheel-painting machine. No. 883,172; Mar. 31; Sp. p. 5341; Dr. p. 1137; Gaz. vol. 133; p. 1002.
Corcoran, R. M., Cleveland, Ohio. Joint-wiping apparatus. No. 881,665; Mar. 10; Sp. p. 2336; Dr. pp. 506–7; Gaz. vol. 133; p. 420.
Cordley, H. G., Glenridge, N. J. Water-cooler. No. 882,552; Mar. 24; Sp. p. 4095; Dr. p. 869; Gaz. vol. 133; p. 769.
Corey, F. B., Schenectady, N. Y., assignor to General Electric Company. Emergency-brake. No. 881,552; Mar. 10; Sp. p. 2101; Dr. p. 456; Gaz. vol. 133; p. 382.
Corey, F. B., Schenectady, N. Y., assignor to General Electric Company. Block-signal system. No. 882,553; Mar. 24; Sp. p. 4096; Dr. p. 869; Gaz. vol. 133; p. 770.
Corey, F. B., Schenectady, N. Y., assignor to General Electric Company. Signal. No. 882,554; Mar. 24; Sp. p. 4099; Dr. pp. 869–70; Gaz. vol. 133; p. 770.
Corliss, F. A., Boston, Mass. Finger-cot. No. 883,452; Mar. 31; Sp. p. 5945; Dr. p. 1268; Gaz. vol. 133; p. 1095.
Cornell, D. F. (See Edwards, Ellis, and Cornell.)
Cornely, R., Paris, France. Ornamental seam. No. 881,903; Mar. 17; Sp. p. 2836; Dr. p. 606; Gaz. vol. 133; p. 523.
Cornish, H. S., New York, N. Y., assignor to New York Liquid Dispensing Machine Company. Means for measuring and mixing liquids. No. 881,553; Mar. 10; Sp. p. 2106; Dr. p. 460; Gaz. vol. 133; p. 383.
Corns, W. H. (See Wenrich, E. Z., assignor.)
Cornwell, I. (See Birdsall, S. N., assignor.)
Corrugated Concrete Pile Company of America. (See Gilbreth, F. B., assignor.)
Cosel, N. B. L., *et al.* (See Ilg, C. C., assignor.)
Cotton, F., Hornsby, New South Wales, Australia. Reverberatory furnace. No. 881,110; Mar. 10; Sp. p. 1231; Dr. p. 265; Gaz. vol. 133; p. 239.
Cotton, J. W., Newton, assignor of one-half to W. Korsmeier, Laurel, Iowa. Fifth-wheel. No. 881,882; Mar. 10; Sp. p. 2775; Dr. p. 595; Gaz. vol. 133; p. 490.
Courtney, W. E., assignor to Mathews Gravity Carrier Company, St. Paul, Minn. Gravity freight-carrier. No. 883,297; Mar. 31; Sp. p. 5605; Dr. p. 1195; Gaz. vol. 133; p. 1044.
Covell, A. E. (See Blanchard and Covell.)
Covel Manufacturing Company. (See Filstrup, E. C., assignor.)
Covel Manufacturing Company. (See Filstrup, L. L., assignor.)
Cowham, W. F. (See Rowley, W. W., assignor.)
Cowles, O. M., Devils Lake, N. D. Stovepipe-joint. No. 881,378; Mar. 10; Sp. p. 1782; Dr. p. 384; Gaz. vol. 133; p. 327.
Cowles, W. H. (See Barrett, H. G., assignor.)
Cowles, W. H. (See Cameron and Cowles.)
Cowper-Coles, S. O., London, England. Production of electrotypes. No. 881,554; Mar. 10; Sp. p. 2109; Dr. p. 461; Gaz. vol. 133; p. 383.
Cox, A. L., Madison, Mo. Load-holding device. No. 882,746; Mar. 24; Sp. p. 4488; Dr. p. 955; Gaz. vol. 133; p. 833.
Cox and Brother, G. S. (See Cox, G. S., assignor.)
Cox, G. S., Fitzwatertown, Pa., assignor to G. S. Cox and Brother. Take-up mechanism for looms. No. 881,904; Mar. 17; Sp. p. 2837; Dr. p. 606; Gaz. vol. 133; p. 525.
Cox, J. H., Erie, Kans. Sad-iron handle. No. 882,747; Mar. 24; Sp. p. 4489; Dr. p. 956; Gaz. vol. 133; p. 834.
Coy, J. H., Milford, Mo. Sawmill attachment. No. 880,722; Mar. 3; Sp. p. 462; Dr. p. 98; Gaz. vol. 133; p. 81.
Craddock, W. (See Stratton, A., assignor.)
Crafton, B. (See Nilsen, E. A., assignor.)
Cragun, H. J., Logansport, Ind. Flying-machine. No. 883,090; Mar. 24; Sp. p. 5154; Dr. p. 1101; Gaz. vol. 133; p. 944.
Craig, B. D., administratrix. (See Craig, S. P.)
Craig, J. (See Mears and Craig.)
Craig, S. B. (See Hulings and Craig.)
Craig, S. P., deceased; B. D. Craig administratrix, Brooklyn, N. Y. Holding or retaining device. No. 881,461; Mar. 10; Sp. p. 1930; Dr. p. 420; Gaz. vol. 133; p. 352.
Craig, S. P., deceased; B. D. Craig administratrix, Brooklyn, N. Y. Holding or retaining device. No. 881,462; Mar. 10; Sp. p. 1932; Dr. pp. 420–1; Gaz. vol. 133; p. 353.
Craig, W. J., Pine Bluff, Ark. Trolley mechanism. No. 880,976; Mar. 3; Sp. p. 980; Dr. p. 211; Gaz. vol. 133; p. 166.
Crandall, C. F., Ilion, N. Y. Hanger for type-writer type-bars. No. 882,627; Mar. 24; Sp. p. 4253; Dr. p. 901; Gaz. vol. 133; p. 795.
Crapo, J. B., Parker, Idaho. Plowshare. No. 881,379; Mar. 10; Sp. p. 1783; Dr. p. 384; Gaz. vol. 133; p. 327.
Crann, W. R., Butler, Ind. Insect-destroyer. No. 882,142; Mar. 17; Sp. p. 3398; Dr. p. 705; Gaz. vol. 133; p. 603.
Crawford, H. E. (See Scott and Crawford.)
Crawford McGregor & Canby Company. (See Eastman, E. A., assignor.)
Crawford, W. H. (See Barcroft and Crawford.)
Creager, C. E., *et al.* (See Willis, C. A., assignor.)
Creamery Package Mfg. Company. (See Valerius, T. L., assignor.)
Creelman, A. L., Chicago, Ill. Cash-register revolving indicating-target. No. 880,632; Mar. 3; Sp. p. 288; Dr. pp. 62–4; Gaz. vol. 133; p. 51.
Cregier, F. Q., assignor of one-half to C. H. Edgcomb, Chicago, Ill. Armor for pneumatic tires. No. 881,905; Mar. 17; Sp. p. 2838; Dr. p. 606; Gaz. vol. 133; p. 526.
Crew, W. A., Salisbury, Md. Grave-vault. No. 883,627; Mar. 31; Sp. p. 6275; Dr. p. 1338; Gaz. vol. 133; p. 1149.
Crites, O. T., and H. T. Smoot, Parkersburg, W. Va. Shoe-cleaner. No. 881,380; Mar. 10; Sp. p. 1783; Dr. p. 385; Gaz. vol. 133; p. 327.
Crockett, D. W., Indianapolis, Ind. Lock. No. 881,999; Mar. 17; Sp. p. 3045; Dr. pp. 648–9; Gaz. vol. 133; p. 557.
Crofts, S. T. (See Rankin, C. C., assignor.)
Crompton & Knowles Loom Works. (See Bardsley, H., assignor.)
Crompton & Knowles Loom Works. (See Lutton, W. J., assignor.)
Crompton & Knowles Loom Works. (See Morell, A., assignor.)
Crosby, R. A., Portland, assignor of one-half to E. C. Verrill, Cape Elizabeth, Me. Developing-tray. No. 880,863; Mar. 3; Sp. p. 781; Dr. p. 165; Gaz. vol. 133; p. 130.
Crosby Steam Gage and Valve Company. (See Cook, J. J., assignor.)
Croskey, J. H., assignor to Duquesne Glass Co., Pittsburg, Pa. Glass-gathering apparatus. No. 881,096; Mar. 3; Sp. p. 1203; Dr. pp. 259–60; Gaz. vol. 133; p. 205.
Cross, C. S. (See Tighe and Cross.)
Crucible Steel Company of America. (See Illingworth, R. H., assignor.)
Culbreth, S. A. (See Smith and Culbreth.)

Cullen, J., McGirk, Mo. Poultry-fountain. No. 881,806; Mar. 17; Sp. p. 2840; Dr. pp. 606–7; Gaz. vol. 133; p. 526.
Culp, W. H., King, Tex. Sash-lock. No. 881,177; Mar. 10; Sp. p. 1361; Dr. p. 293; Gaz. vol. 133; p. 261.
Culver, E., Pittsburg, Pa. Egg-tester. No. 881,304; Mar. 10; Sp. p. 1629; Dr. p. 348; Gaz. vol. 133; p. 304.
Cumming, J. M., Newark, N. J. Bottle-closure. No. 880,723; Mar. 3; Sp. p. 403; Dr. p. 98; Gaz. vol. 133; p. 82.
Cumming, W. O., assignor to R. C. and J. W. Hicks, Macon, Ga. Combined furrow-maker and fertilizer-distributer. No. 883,000; Mar. 24; Sp. p. 4991; Dr. p. 1061; Gaz. vol. 133; p. 916.
Cunningham, F. H., South Omaha, Nebr. Mail-cart. No. 881,178; Mar. 10; Sp. p. 1362; Dr. p. 294; Gaz. vol. 133; p. 262.
Cunningham, M. F. (See McGrath, L. A., assignor.)
Curran, E. J. (See Lewis, L. L., assignor.)
Curran, M., Baltimore, Md. Curtain-fixture. No. 880,864; Mar. 3; Sp. p. 782; Dr. p. 166; Gaz. vol. 133; p. 131.
Currie, S. C. C., Los Angeles, Cal. Treating ores. No. 881,101; Mar. 3; Sp. p. 1213; Dr. p. 261; Gaz. vol. 133; p. 206.
Curry, C. D., and A. W. Linn, Memphis, Tenn. Machine for assembling newspaper parts. No. 881,305; Mar. 10; Sp. p. 1631; Dr. pp. 348–9; Gaz. vol. 133; p. 304.
Curtis, G. W., New Britain, Conn. Shelf. No. 883,001; Mar. 24; Sp. p. 4994; Dr. p. 1062; Gaz. vol. 133; p. 916.
Curtis, J. T., Bement, Ill. Toy. No. 880,633; Mar. 3; Sp. p. 294; Dr. p. 65; Gaz. vol. 133; p. 51.
Curtis, T. H., Louisville, Ky. Car-truck. No. 882,236; Mar. 17; Sp. p. 3501; Dr. p. 743; Gaz. vol. 133; p. 631.
Cushwa, C. B., Youngstown, Ohio. Corner-bar. No. 881,463; Mar. 10; Sp. p. 1936; Dr. p. 421; Gaz. vol. 133; p. 353.
Custer, L. R., Munhall, Pa. Metallic rail-tie. No. 882,298; Mar. 17; Sp. p. 3621; Dr. p. 768; Gaz. vol. 133; p. 653.
Cutler, J. W., assignor to Cutler Manufacturing Company, Rochester, N. Y. Mail-chute. No. 881,111; Mar. 10; Sp. p. 1232; Dr. p. 265; Gaz. vol. 133; p. 239.
Cutler, J. W., assignor to Cutler Manufacturing Company, Rochester, N. Y. Locking device for mail-chutes. No. 881,112; Mar. 10; Sp. p. 1235; Dr. p. 266; Gaz. vol. 133; p. 239.
Cutler, J. W., assignor to Cutler Manufacturing Company, Rochester, N. Y. Locking device for mail-chutes. No. 881,179; Mar. 10. Sp. p. 1363; Dr. p. 294; Gaz. vol. 133; p. 262.
Cutler, J. W., assignor to Cutler Manufacturing Company, Rochester, N. Y. Mail-chute. No. 881,180; Mar. 10; Sp. p. 1366; Dr. pp. 295–6; Gaz. vol. 133; p. 262.
Cutler-Hammer Manufacturing Company. (See Starrett, H. F., assignor.)
Cutler-Hammer Mfg. Co. (See Barnum, T. E., assignor.)
Cutler Manufacturing Company. (See Cutler, J. W., assignor.)
Cutter, G., South Bend, Ind. Electric switch. No. 881,306; Mar. 10; Sp. p. 1634; Dr. p. 349; Gaz. vol. 133; p. 304.
D. M. Steward Manufacturing Company. (See Steward and Lowry, assignors.)
D'Isepo, G. A., Passaic, N. J. Comb. No. 880,639; Mar. 3; Sp. p. 302; Dr. p. 67; Gaz. vol. 133; p. 53.
D'Oronzio, R., New York, N. Y. Fender. No. 881,849; Mar. 10; Sp. p. 2691; Dr. pp. 575–6; Gaz. vol. 133; p. 479.
Daffrin, A. J. E., Dieppe, France, assignor to A. L. Melvin, Chicago, Ill. Apparatus for inflating automobile-tires. No. 882,099; Mar. 17; Sp. p. 3240; Dr. p. 689; Gaz. vol. 133; p. 589.
Dailey, A. A., Vinal Haven, Me. Hoop-shaving machine. No. 881,907; Mar. 17; Sp. p. 2841; Dr. p. 607; Gaz. vol. 133; p. 526.
Daimler Motorengesellschaft. (See Maybach, W., assignor.)
Dain, J., Ottumwa, Iowa. Raker-bar. No. 880,634; Mar. 3; Sp. p. 295; Dr. p. 65; Gaz. vol. 133; p. 52.
Dalkranian, J. K., assignor, by mesne assignments, to United States Persian Carpet Company, New York, N. Y. Forming woven pile fabrics. No. 882,454; Mar. 17; Sp. p. 3892; Dr. p. 832; Gaz. vol. 133; p. 704.
Dalkranian, J. K., assignor, by mesne assignments, to United States Persian Carpet Company, New York, N. Y. Yarn-selecting mechanism for tufted-fabric looms. No. 882,455; Mar. 17; Sp. p. 3894; Dr. pp. 832–3; Gaz. vol. 133; p. 705.
Danielson, G. F., Youngstown, Ohio. Whiffletree. No. 882,748; Mar. 24; Sp. p. 4490; Dr. p. 956; Gaz. vol. 133; p. 834.
Danischevski, J., St. Petersburg, Russia. Device for automatic kindling of incandescent lamps. No. 882,815; Mar. 24; Sp. p. 4016; Dr. p. 984; Gaz. vol. 133; p. 855.
Danner, W., New Orleans, La., assignor of one-half to J. D. Lacey, Chicago, Ill. Apparatus for distilling wood. No. 883,091; Mar. 24; Sp. p. 5155; Dr. pp. 1101–2; Gaz. vol. 133; p. 945.
Danquard, T., assignor to Autopiano Co., New York, N. Y. Tube-joint for metal tracker-bars and forming the same. No. 880,508; Mar. 3; Sp. p. 32; Dr. p. 8; Gaz. vol. 133; p. 9.
Darley J. W., Jr., Baltimore, Md. Expression device for keyboard musical instruments. No. 881,464; Mar. 10; Sp. p. 1938; Dr. p. 422; Gaz. vol. 133; p. 354
Darling, W. P., Meadville, Mo. Steam-boiler furnace. No. 880,977; Mar. 3; Sp. p. 981; Dr. p. 212; Gaz. vol. 133; p. 166.
Darrow, J. M., Asherville, Kans Attachment for binders. No. 881,113; Mar. 10; Sp. p. 1237; Dr. p. 266; Gaz. vol. 133; p. 240.
Daum, L., New York, N. Y. Label-pasting board. No. 881,776; Mar. 10; Sp. p. 2539; Dr. p. 547; Gaz. vol. 133; p. 453.
Davenport Wagon Company. (See Hecht, J. L., assignor.)
Daves, W., Bloomington, Ill., assignor to Inter-State Signal Company, Camden, N. J. Block-signal system. No. 882,143; Mar. 17; Sp. p. 3309; Dr. p. 706; Gaz. vol. 133; p. 603.
Davids, V. V., New York, N. Y. Abdominal support. No. 882,188; Mar. 17; Sp. p. 3412; Dr. p. 725; Gaz. vol. 133; p. 617.
Davidson, F. S., and W. P. Burra, Ashford, England. Hop-extracting apparatus. No. 883,173; Mar. 31; Sp. p. 5342; Dr. p. 1137; Gaz. vol. 133; p. 1003.
Davidson, F. S., and W. P. Burra, Ashford, England. Forming extracts from hops and yeast. No. 883,174; Mar. 31; Sp. p. 5343; Dr. p. 1138; Gaz. vol. 133; p. 1003.
Davidson, J., assignor of one-half to W. D. Nash, Atlanta, Ga. Cotton-seed-linting machine. No. 882,453; Mar. 17; Sp. p. 3891; Dr. p. 832; Gaz. vol. 133; p. 704.
Davies, D. W., *et al.* (See Bennett, R. H., assignor.)
Davies, W. D., New York, N. Y., assignor to Ansonia Clock Company, Ansonia, Conn. Repeating alarm-clock. No. 881,555; Mar. 10; Sp. p. 2110; Dr. p. 461; Gaz. vol. 133; p. 384.
Davis, A. H., Burlington, Iowa. Current-motor. No. 880,509; Mar. 3; Sp. p. 33; Dr. p. 8; Gaz. vol. 133; p. 9.
Davis, C. M., Battle Creek, Mich. Shaving-cup. No. 882,668; Mar. 24; Sp. p. 4330; Dr. p. 921; Gaz. vol. 133; p. 808.
Davis, C. R., assignor to Oliver Chilled Plow Works, South Bend, Ind. Sulky-plow. No. 880,724; Mar. 3; Sp. p. 468; Dr. p. 99; Gaz. vol. 133; p. 82.
Davis, C. W., Edgeworth, assignor to Standard Underground Cable Company, Pittsburg, Pa. Terminal for electric cables. No. 881,777; Mar. 10; Sp. p. 2541; Dr. p. 547; Gaz. vol. 133; p. 454.
Davis, E. A., New Orleans, La. Dust-settler for brooms. No. 883,175; Mar. 31; Sp. p. 5345; Dr. p. 1138; Gaz. vol. 133; p. 1003.
Davis, E. N., Lodi, Wis. Crate. No. 883,002; Mar. 24; Sp. p. 4995; Dr. p. 1062; Gaz. vol. 133; p. 917.
Davis, E. S. (See Wright, J. T., assignor.)
Davis, F. S., Detroit, Mich. Faucet attachment. No. 883,176; Mar. 31; Sp. p. 5346; Dr. p. 1138; Gaz. vol. 133; p. 1003.
Davis & Furber Machine Company. (See Stevens, F. C., assignor.)
Davis, J. C. (See Perry, A. W., assignor.)
Davis, N. A., Chicago, Ill. Sliding door. No. 880,865; Mar. 3; Sp. p. 783; Dr. p. 166; Gaz. vol. 133; p. 131.
Davis, O. C., Brockton, Mass. Sole for boots and shoes. No. 883,299; Mar. 31; Sp. p. 5008; Dr. p. 1195; Gaz. vol. 133; p. 1045.
Davis, R. L. (See Hunsaker, Beiswingert, and Davis.)
Davis, T. E., Crystal City, Manitoba, Canada. Carpet-stretcher. No. 882,873; Mar. 24; Sp. p. 4746; Dr. p. 1009; Gaz. vol. 133; p. 874.
Davis, W. B., Popes Ferry, assignor of one-half to F. M. Ewing, Bolingbroke, Ga. Cotton-chopper. No. 883,628; Mar. 31; Sp. p. 6277; Dr. p. 1339; Gaz. vol. 133; p. 1140.
Davis, W. T. (See Carter and Davis.)
Davison, H. J., Bexhill, England. Window. No. 883,177; Mar. 31; Sp. p. 5347; Dr. pp. 1138–9; Gaz. vol. 133; p. 1004.
Davy, O. J., assignor to G. G. Schroeder, Washington, D. C. Audiphone. No. 883,003; Mar. 24; Sp. p. 4997; Dr. pp. 1062–3; Gaz. vol. 133; p. 917.
Dawson, F. W. (See Taylor and Dawson.)
Day, G. W., Gasport, N. Y. Water-relief valve. No. 881,848; Mar. 10; Sp. p. 2690; Dr. p. 575; Gaz. vol. 133; p. 478.
Day, J. O., Mayfield, Ky. Solar germicide. No. 882,100; Mar. 17; Sp. p. 3242; Dr. p. 689; Gaz. vol. 133; p. 590.
Day, W. P., Altoona, Pa. Conduit construction. No. 883,092; Mar. 24; Sp. p. 5150; Dr. p. 1102; Gaz. vol. 133; p. 945.
Dayton, J. C., Petersburg, W. Va. Mail-bag catching and delivering apparatus. No. 882,237; Mar. 17; Sp. p. 3502; Dr. p. 743; Gaz. vol. 133; p. 632.
De Laney, A. J. (See Reynolds, H. C., assignor.)
De Long, E. L., Clearwater, Fla. Nozzle for irrigating systems. No. 883,527; Mar. 31; Sp. p. 6088; Dr. p. 1295; Gaz. vol. 133; p. 1118.
De Lutter, C. L., *et al.* (See Loudon, L. T., assignor.)
De Mayo Coaling Company. (See De Mayo, L. A., assignor.)
De Mayo, L. A., assignor to De Mayo Coaling Company, New York, N. Y. Apparatus for coaling vessels. No. 881,429; Mar. 10; Sp. p. 1866; Dr. p. 406; Gaz. vol. 133; p. 342.
De Remer, J. R., Glenwood Springs, Colo. Water-wheel. No. 883,528; Mar. 31; Sp. p. 6089; Dr. p. 1295; Gaz. vol. 133; p. 1118.
De Vito, J. A., Boston, Mass. Automatic dish-washer. No. 880,637; Mar. 3; Sp. p. 299; Dr. p. 66; Gaz. vol. 133; p. 52.
Dean, A. F., Chicago, Ill. Indexed book. No. 882,816; Mar. 24; Sp. p. 4617; Dr. pp. 984–5; Gaz. vol. 133; p. 856.
Dean, C. R., Glen Elder, Kans. Cultivator. No. 881,778; Mar. 10; Sp. p. 2543; Dr. p. 547; Gaz. vol. 133; p. 454.
Dean, E. G. (See Andersen and Dean.)

Dean, W. (See Hodgson, E. G., assignor.)
Dean, W. W., assignor to Kellogg Switchboard & Supply Company, Chicago, Ill. Divided-central telephone system. No. 883,093; Mar. 24; Sp. p. 5161; Dr. p. 1102; Gaz. vol. 133; p. 946.
Dear, A. V., Malvern, Victoria, assignor of one-half to D. P. Dear, Wollongong, Australia. Dental articulator. No. 882,375; Mar. 17; Sp. p. 3763; Dr. p. 802; Gaz. vol. 133; p. 678.
Dear, D. P. (See Dear, A. V., assignor.)
Debacher, R. R., Hoboken, N. J. Frame for mirrors, brushes, pictures, and the like. No. 883,094; Mar. 24; Sp. p. 5165; Dr. p. 1103; Gaz. vol. 133; p. 946.
Decker, F., *et al.* (See Hansen, F., assignor.)
Decker, H. P., *et al.* (See Hansen, F., assignor.)
Decker, H. R., Houston, Tex. Oil and water well strainer. No. 880,635; Mar. 3; Sp. p. 297; Dr. p. 65; Gaz. vol. 133; p. 52.
Decker, M., Chicago, Ill., and M. H. Matty, Clayton, N. Y. Cream-separator. No. 880,866; Mar. 3; Sp. p. 784; Dr. p. 166; Gaz. vol. 133; p. 131.
Decker, R. (See Butler and Decker.)
Deeley, J. S., deceased, (R. E. Deeley, Bellingham, administratrix.) and W. W. Ollendorff, assignors, by mesne assignments, to W. W. Ollendorff, West Medway, Mass. Drawing-roll cleaner for spinning-frames. No. 882,931; Mar. 24; Sp. p. 4865; Dr. p. 1033; Gaz. vol. 133; p. 894.
Deeley, R. E., administratrix. (See Deeley and Ollendorff.)
Deem, M. M., assignor of one-half to Reading Saddle & Manufacturing Company, Reading, Pa. Bicycle-saddle spring. No. 881,381; Mar. 10; Sp. p. 1784; Dr. p. 385; Gaz. vol. 133; p. 327.
Deevy, P., Melrose, Iowa. Adjustable sole-plate for plows. No. 880,636; Mar. 3; Sp. p. 298; Dr. p. 66; Gaz. vol. 133; p. 52.
Dehler, A. S., Minneapolis, Minn. Jack. No. 881,556; Mar. 10; Sp. p. 2112; Dr. p. 461; Gaz. vol. 133; p. 384.
Deicke, B. (See Schirmacher and Deicke.)
Deiter, J. H. (See Robinson and Deiter.)
Dejonge, M. E., Fitchburg, Mass. Conveyer for drying-boxes. No. 883,453; Mar. 31; Sp. p. 5946; Dr. p. 1268; Gaz. vol. 133; p. 1096.
Del Mar, H., New York, N. Y., assignor to Boilers and Engineering Company, Jersey City, N. J. Steam-generator. No. 883,095; Mar. 24; Sp. p. 5166; Dr. p. 1103; Gaz. vol. 133; p. 947.
Del Mar, H., New York, N. Y., assignor to Boilers and Engineering Company, Jersey City, N. J. Manhole-cover. No. 883,096; Mar. 24; Sp. p. 5167; Dr. p. 1103; Gaz. vol. 133; p. 947.
Delashaw, W. G., Moulton, Ala. Hand-positioning device for penmen. No. 880,510; Mar. 3; Sp. p. 35; Dr. p. 8; Gaz. vol. 133; p. 9.
Demarest, E., Patterson, La. Cleat for cable-chain conveyers. No. 881,908; Mar. 17; Sp. p. 2844; Dr. p. 607; Gaz. vol. 133; p. 527.
Deming, F. B., Warren, Ohio. Hand-buffer. No. 881,557; Mar. 10; Sp. p. 2114; Dr. p. 462; Gaz. vol. 133; p. 384.
Denison, W. B., *et al.* (See Dickey, J. A., assignor.)
Denison, W. W., *et al.* (See Dickey, J. A., assignor.)
Denler, A. F., Buffalo, N. Y. Drain. No. 883,629; Mar. 31; Sp. p. 6278; Dr. p. 1339; Gaz. vol. 133; p. 1149.
Denne, M. T., assignor to John Cave and Sons, Limited, Rushden, England. Boot and shoe sewing machine. No. 883,300; Mar. 31; Sp. p. 5610; Dr. p. 1196; Gaz. vol. 133; p. 1045.
Dennis, S. K., Chicago, Ill., assignor to International Harvester Company. Wagon running-gear. No. 883,301; Mar. 31; Sp. p. 5612; Dr. p. 1196; Gaz. vol. 133; p. 1045.
Desgraz, A. (See Schmidt and Desgraz.)
Desmond, J., Chicago, Ill. Pump. No. 882,874; Mar. 24; Sp. p. 4747; Dr. p. 1009; Gaz. vol. 133; p. 875.
Destree, L., Haren, Belgium. Dyeing apparatus. No. 881,097; Mar. 3; Sp. p. 1207; Dr. p. 260; Gaz. vol. 133; p. 205.
Detroit Steam Engine Company. (See MacLachlan, J. D., assignor.)
Devlin, L. K., Havre, Mont. Adjustable metallic screen-fastener. No. 881,061; Mar. 3; Sp. p. 1130; Dr. p. 245; Gaz. vol. 133; p. 193.
Dexter, T. C., Pearl River, N. Y. Friction-clutch. No. 882,299; Mar. 17; Sp. p. 3622; Dr. p. 769; Gaz. vol. 133; p. 653.
Dick, A. B., Lake Forest, assignor to A. B. Dick Company, Chicago, Ill. Stencil-duplicating apparatus. No. 881,307; Mar. 10; Sp. p. 1636; Dr. p. 350; Gaz. vol. 133; p. 305.
Dick, J., Canton, Ohio. Fodder-cutter. No. 883,391; Mar. 31; Sp. p. 5802; Dr. p. 1238; Gaz. vol. 133; p. 1074.
Dick, J., Canton, Ohio. Fodder-cutter. No. 883,392; Mar. 31; Sp. p. 5803; Dr. pp. 1238–9; Gaz. vol. 133; p. 1074.
Dickens, J., assignor to Standard Sheet Metal Company, Passaic, N. J. Bottle-closure. No. 881,779; Mar. 10; Sp. p. 2544; Dr. p. 547; Gaz. vol. 133; p. 454.
Dickerson, M., assignor of one-half to F. L. Luz, Newark, N. J. Grinding-machine. No. 881,465; Mar. 10; Sp. p. 1946; Dr. p. 423; Gaz. vol. 133; p. 354.
Dickey, J. A., assignor of one-half to W. W. and W. B. Denison, Columbus, Ind. Lubricator for steam-engines. No. 880,638; Mar. 3; Sp. p. 301; Dr. p. 66; Gaz. vol. 133; p. 53.
Dickinson, J. H. (See Miller and Dickinson.)
Dickson, J. L., Winfield, Kans. Road-bed. No. 883,178; Mar. 31; Sp. p. 5348; Dr. p. 1139; Gaz. vol. 133; p. 1004.
Dieckmann, A., Cincinnati, Ohio. Sheet-metal elbow. No. 882,238; Mar. 17; Sp. p. 3505; Dr. p. 744; Gaz. vol. 133; p. 632.
Diehl, W. R., assignor of one-half to E. Johnson, Pittsburg, Pa. Folding tent. No. 882,875; Mar. 24; Sp. p. 4748; Dr. p. 1010; Gaz. vol. 133; p. 875.
Dillon, J. J. (See Bauer and Dillon.)
Dillon, W. M., assignor to Northwestern Barb Wire Company, Sterling, Ill. Gate. No. 881,883; Mar. 10; Sp. p. 2776; Dr. p. 596; Gaz. vol. 133; p. 490.
Dingman, C. H., San Francisco, Cal. Adjustable arm-supporter. No. 883,004; Mar. 24; Sp. p. 4998; Dr. p. 1063; Gaz. vol. 133; p. 917.
Dinkins, J. M., assignor to Hercules Electric & Mfg. Co., Indianapolis, Ind. Electric vibrator. No. 881,114; Mar. 10; Sp. p. 1238; Dr. p. 266; Gaz. vol. 133; p. 240.
Dippert, W. E., Des Moines, Iowa. Trace-carrier. No. 883,097; Mar. 24; Sp. p. 5168; Dr. p. 1104; Gaz. vol. 133; p. 947.
Diskin, M. B., New York, N. Y. Paper-board. No. 881,098; Mar. 3; Sp. p. 1208; Gaz. vol. 133; p. 206.
Ditwiler, H. B., assignor of one-fourth to L. W. Roe, Mansfield, Ohio. Steering-gear for motor-machines. No. 883,179; Mar. 31; Sp. p. 5350; Dr. p. 1140; Gaz. vol. 133; p. 1004.
Divine, B. H., Utica, N. Y. Machine for cleaning and polishing tin. No. 883,098; Mar. 24; Sp. p. 5169; Dr. p. 1104; Gaz. vol. 133; p. 947.
Dixie Match Company. (See Parker, W. H., assignor.)
Dixon, R. M. (See Erb, E. M., assignor.)
Dixon, R. M., East Orange, N. J., assignor to Safety Car Heating & Lighting Company. Gas-lamp. No. 881,666; Mar. 10; Sp. p. 2339; Dr. p. 507; Gaz. vol. 133; p. 420.
Dixon, R. M., East Orange, N. J., assignor to Safety Car Heating & Lighting Company. Beacon, light-buoy, &c. No. 881,667; Mar. 10; Sp. p. 2341; Dr. p. 507; Gaz. vol. 133; p. 421.
Dixon, R. M., East Orange, N. J., assignor to Safety Car Heating & Lighting Company. Expansion-trap. No. 881,668; Mar. 10; Sp. p. 2341; Dr. p. 507; Gaz. vol. 133; p. 421.
Doane, S. E., Cleveland, Ohio. Electric sign. No. 882,555; Mar. 24; Sp. p. 4104; Dr. p. 870; Gaz. vol. 133; p. 770.
Dobyns, P. K., Franklin, Ind. Instrument for inserting tags beneath the skin of animals. No. 881,062; Mar. 3; Sp. p. 1131; Dr. p. 246; Gaz. vol. 133; p. 194.
Dockes, L. L., *et al.* (See Pasteur, C. D. A., assignor.)
Doddridge, J. H., Vincennes, Ind. Post. No. 883,005; Mar. 24; Sp. p. 4999; Dr. p. 1063; Gaz. vol. 133; p. 917.
Dodds, E. I., assignor to Pullman Company, Chicago, Ill. Railway-car. No. 881,466; Mar. 10; Sp. p. 1949; Dr. pp. 423–4; Gaz. vol. 133; p. 354.
Dodds, E. I., Pullman, assignor to Pullman Company, Chicago, Ill. Railway dumping-car. No. 881,884; Mar. 10; Sp. p. 2777; Dr. p. 596; Gaz. vol. 133; p. 491.
Dodge, C. A., Syracuse, N. Y. Washing-machine. No. 881,382; Mar. 10; Sp. p. 1785; Dr. p. 385; Gaz. vol. 133; p. 328.
Dodge, C. C., Newark, N. J., assignor to Dodge Lubricator Company, Boston, Mass. Antivibration device for automobiles. No. 881,227; Mar. 10; Sp. p. 1471; Dr. p. 316; Gaz. vol. 133; p. 278.
Dodge, C. C., Wollaston, assignor to Dodge Lubricator Company, Boston, Mass. Spark-timing apparatus. No. 882,876; Mar. 24; Sp. p. 4752; Dr. p. 1010; Gaz. vol. 133; p. 875.
Dodge, H. A., Newark, N. J. Pocket-book. No. 882,493; Mar. 17; Sp. p. 3957; Dr. p. 846; Gaz. vol. 133; p. 716.
Dodge Lubricator Company. (See Dodge, C. C., assignor.)
Dodge, P. T., Washington, D. C., assignor to Mergenthaler Linotype Company. Linotype-machine. No. 883,180; Mar. 31; Sp. p. 5352; Dr. p. 1140; Gaz. vol. 133; p. 1005.
Dodge, R. E., assignor of one-half to C. Brewster, Derby, Conn. Machine for applying strips of tape to fabric. No. 882,779; Mar. 24; Sp. p. 4538; Dr. pp. 968–9; Gaz. vol. 133; p. 842.
Dohan, J. M., Darlington, Pa. Apparatus for reclaiming matter discharged in the manufacture of pulp and paper. No. 881,383; Mar. 10; Sp. p. 1787; Dr. p. 386; Gaz. vol. 133; p. 328.
Doman, L. B., assignor to Amphion Piano-Player Company, Elbridge, N. Y. Air-motor. No. 881,885; Mar. 10; Sp. p. 2779; Dr. pp. 596–7; Gaz. vol. 133; p. 491.
Donagen, E., and F. L. Kujawa, Magdeburg, Germany. Holder for standing matter. No. 883,302; Mar. 31; Sp. p. 5613; Dr. p. 1197; Gaz. vol. 133; p. 1046.
Donaldson, J. H., Chicago, Ill. Vestibule-diaphragm. No. 882,516; Mar. 17; Sp. p. 4010; Dr. p. 857; Gaz. vol. 133; p. 725.

Donaldson, J. W., Houston, Tex. Hinge. No. 881,308; Mar. 10; Sp. p. 1637; Dr. p. 350; Gaz. vol. 133; p. 305.
Donaldson, R. E. (See Willard and Donaldson.)
Donohue, J. S. (See Moran and Donohue.)
Donnelly, J. A., New York, N. Y. Steam-heating system. No. 882,300; Mar. 17; Sp. p. 3625; Dr. p. 769; Gaz. vol. 133; p. 653.
Dorman, W. S., Brooklyn, assignor to Spring Seal Company, New York, N. Y. Bottle-seal. No. 881,780; Mar. 10; Sp. p. 2546; Dr. p. 548; Gaz. vol. 133; p. 455.
Dorris, S. M., assignor of one-half to W. E. Talbot, Broken Bow, Nebr. Antirattler for vehicle shafts and tongues. No. 881,309; Mar. 10; Sp. p. 1638; Dr. p. 350; Gaz. vol. 133; p. 305.
Dorsey, F. F., New York, N. Y., assignor to A. F. Staples, Dorchester, and C. W. Potter, Waltham, Mass. Account-register. No. 882,817; Mar. 24; Sp. p. 4619; Dr. p. 985; Gaz. vol. 133; p. 856.
Doud, W. E., Topeka, Kans. Combined curtain-pole and shade-holder. No. 882,054; Mar. 17; Sp. p. 3159; Dr. p. 671; Gaz. vol. 133; p. 574.
Dougherty, O. T., Minneapolis, Minn. Car-replacing wheel. No. 882,101; Mar. 17; Sp. p. 3243; Dr. p. 689; Gaz. vol. 133; p. 590.
Douglass, R. W. (See Underwood and Douglass.)
Dowd, J. P. and T. P., Cedar Rapids, Iowa. Electric street-railway switch. No. 883,181; Mar. 31; Sp. p. 5355; Dr. p. 1141; Gaz. vol. 133; p. 1005.
Dowd, T. P. (See Dowd, J. P. and T. P.)
Dowerman, W. F., Pittsburg, Pa. Bolt-heading die. No. 882,628; Mar. 24; Sp. p. 4255; Dr. p. 901; Gaz. vol. 133; p. 795.
Downie, T., Wallasey, and D. Brown, Bootle, England. Furnace front and door. No. 880,511; Mar. 3; Sp. p. 36; Dr. p. 9; Gaz. vol. 133; p. 10.
Downing, W. C., Chicago, Ill. Numbering-machine. No. 882,932; Mar. 24; Sp. p. 4869; Dr. pp. 1033–4; Gaz. vol. 133; p. 895.
Doyle, M. E., Constableville, N. Y. Catamenial bandage. No. 882,201; Mar. 17; Sp. p. 3630; Dr. p. 769; Gaz. vol. 133; p. 654.
Drake, E. L., Winchester, Tenn. Flying-machine. No. 882,189; Mar. 17; Sp. p. 3414; Dr. pp. 725–6; Gaz. vol. 133; p. 618.
Drake, G. A., Denver, Colo. Means for electrically operating fire-engines. No. 880,780; Mar. 3; Sp. p. 589; Dr. pp. 125–6; Gaz. vol. 133; p. 101.
Drake, M. D., Beard, Ky. Wheel. No. 881,909; Mar. 17; Sp. p. 2845; Dr. p. 607; Gaz. vol. 133; p. 527.
Drake, W. E., Chandlerville, Ill. Mud-guard for vehicle-wheels. No. 882,933; Mar. 24; Sp. p. 4872; Dr. p. 1034; Gaz. vol. 133; p. 895.
Drake, W. E., Grand Island, Nebr. Security lightning-arrester. No. 883,303; Mar. 31; Sp. p. 5614; Dr. p. 1197; Gaz. vol. 133; p. 1046.
Draper, C. H., assignor to Draper Company, Hopedale, Mass. Filling-replenishing loom. No. 881,063; Mar. 3; Sp. p. 1132; Dr. p. 246; Gaz. vol. 133; p. 194.
Draper, C. W., Jr., and G. H., Detroit, Mich. Adjustable window-shade and curtain-pole holder. No. 881,384; Mar. 10; Sp. p. 1789; Dr. p. 386; Gaz. vol. 133; p. 328.
Draper Company. (See Draper, C. H., assignor.)
Draper Company. (See Joy, C. L., assignor.)
Draper Company. (See Northrop, J., assignor.)
Draper, G. H. (See Draper, C. W., Jr., and G. H.)
Drevet, P., *et al.* (See Isnard, M. J. S. A., assignor.)
Drews, F. (See Jetter and Drews.)
Drinkwater, H. A. (See Littlefield and Drinkwater.)
Dripps, M. E., Washington, D. C. Eyeglass-holder. (Reissue.) No. 12,771; Mar. 31; Sp. p. 6398; Dr. p. 1364; Gaz. vol. 133; p. 1166.
Driscoll, F. M. (See Muller, Driscoll, and Barry.)
Dubendorf, D., Middletown, Pa. Hose-clamp applier. No. 883,009; Mar. 24; Sp. p. 5171; Dr. p. 1104; Gaz. vol. 133; p. 948.
Ducker, O., Washington, D. C. Bottle-cap. No. 881,671; Mar. 10; Sp. p. 2346; Dr. p. 508; Gaz. vol. 133; p. 422.
Dudley, W. R. (See Dudley, Greenleaf, and Dudley.)
Dudley, W. W., Lancaster, Pa., L. A. Greenleaf and W. R. Dudley, Trenton, N. J., assignors to Star Speedometer Company. Odometer. No. 880,781; Mar. 3; Sp. p. 592; Dr. p. 126; Gaz. vol. 133; p. 102.
Duer, C. W., Austin, Ill. Automobile. No. 882,239; Mar. 17; Sp. p. 3506; Dr. p. 744; Gaz. vol. 133; p. 632.
Duff Manufacturing Company. (See Freed, G. F., assignor.)
Dufresne, J. C. (See Hosking, J., assignor.)
Dümmig, F., New York, N. Y. Fishing-reel. No. 883,100; Mar. 24; Sp. p. 5173; Dr. p. 1105; Gaz. vol. 133; p. 948.
Dumonceau, J. J., Brussels, Belgium. Pattern for cutting out boots and shoes. No. 882,749; Mar. 24; Sp. p. 4492; Dr. p. 956; Gaz. vol. 133; p. 834.
Dumond, N., *et al.* (See Isnard, M. J. S. A., assignor.)
Dun Lany, W. P., assignor to J. A. Lannert, Cleveland, Ohio. Mold and making the same. No. 881,558; Mar. 10; Sp. p. 2115; Dr. p. 462; Gaz. vol. 133; p. 385.
Dun Lany, W. P., assignor to Continental Manufacturing Company, Cleveland, Ohio. Marking-machine. No. 881,559; Mar. 10; Sp. p. 2116; Dr. p. 462; Gaz. vol. 133; p. 385.
Dunaway, N. S., Pelham, Ala. Wheeled scraper. No. 881,669; Mar. 10; Sp. p. 2344; Dr. p. 508; Gaz. vol. 133; p. 421.
Duncan, J. S., assignor to Addressograph Company, Chicago, Ill. Printing device. No. 881,385; Mar. 10; Sp. p. 1790; Dr. p. 386; Gaz. vol. 133; p. 329.
Duncan, J. S., assignor to Addressograph Company, Chicago, Ill. Holder for metal type-bars. No. 881,467; Mar. 10; Sp. p. 1951; Dr. p. 424; Gaz. vol. 133; p. 355.
Dunford, P., Summit, Ga. Latch. No. 881,670; Mar. 10; Sp. p. 2345; Dr. p. 508; Gaz. vol. 133; p. 421.
Dunham, G. W., assignor to Olds Motor Works, Lansing, Mich. Mud-shield for vehicle-wheel guards. No. 883,454; Mar. 31; Sp. p. 5947; Dr. p. 1268; Gaz. vol. 133; p. 1096.
Dunlap, G. W., Vancouver, British Columbia, Canada. Face-plate for cement-block molds. No. 880,782; Mar. 3; Sp. p. 595; Dr. p. 127; Gaz. vol. 133; p. 102.
Dunn, E. M., and W. H. Francis, Fairhaven, Mass. Horseshoe. No. 882,404; Mar. 17; Sp. p. 3959; Dr. p. 846; Gaz. vol. 133; p. 717.
Dunn, G. R., assignor of one-half to S. Bryan, San Diego, Cal. Trolley-car-pole attachment. No. 882,495; Mar. 17; Sp. p. 3960; Dr. p. 847; Gaz. vol. 133; p. 717.
Dunn and McCarthy. (See Cheesman, G. R., assignor.)
Dunn, W. L., Santa Barbara county, Cal. Apparatus for screwing well-casing. No. 883,630; Mar. 31; Sp. p. 6279; Dr. p. 1339; Gaz. vol. 133; p. 1149.
Duntley, W. O., Chicago, Ill. Steam-turbine. No. 882,102; Mar. 17; Sp. p. 3244; Dr. p. 690; Gaz. vol. 133; p. 500.
Duplex Printing Press Company. (See Bechman, H. F., assignor.)
Duquesne, A. E., *et al.* (See Pasteur, C. D. A., assignor.)
Duquesne Glass Co. (See Croskey, J. H., assignor.)
Durgin, F., Sioux, Nebr. Draft-equalizer. No. 883,298; Mar. 31; Sp. p. 5607; Dr. p. 1195; Gaz. vol. 133; p. 1044.
Durkee, W. H., New York, N. Y. Deck-plate. No. 882,877; Mar. 24; Sp. p. 4753; Dr. p. 1011; Gaz. vol. 133; p. 876.
Dutton, F. D., Mount Pleasant, Iowa. Corn-rack. No. 881,560; Mar. 10; Sp. p. 2119; Dr. p. 463; Gaz. vol. 133; p. 386.
Dwight, A. S., and R. L. Lloyd, Cananea, Mexico. Treating ores. No. 882,517; Mar. 17; Sp. p. 4012; Dr. p. 857; Gaz. vol. 133; p. 725.
Dwight, A. S., and R. L. Lloyd, Cananea, Mexico. Roasting and sintering ores. No. 882,518; Mar. 17; Sp. p. 4020; Dr. p. 858; Gaz. vol. 133; p. 726.
Dyblie, J. A., Joliet, assignor of one-half to H. R. McCullough, Chicago, Ill. Cock for controlling fluid under pressure. No. 881,228; Mar. 10; Sp. p. 1473; Dr. p. 316; Gaz. vol. 133; p. 278.
Dyett, F. J., Ilion, N. Y. Type-writing machine. No. 881,910; Mar. 17; Sp. p. 2847; Dr. p. 608; Gaz. vol. 133; p. 527.
E. Eiger & Bros. (See Nattenheimer, J., assignor.)
E. Goldman & Co. (See Paul, J. T. H., assignor.)
E. A. Pflueger Company. (See Pflueger, E. A., assignor.)
E. H. Mumford Company. (See Bonvillain, P., assignor.) (Reissue.)
E. H. Stafford Manufacturing Company. (See Field, J. F., assignor.)
E. I. du Pont de Nemours Powder Company. (See Chesney, J., assignor.)
E. T. Fraim Lock Company. (See Fraim, S. R., assignor.)
E. W. Bliss Company. (See Leavitt, F. M., assignor.)
E. W. Bliss Company. (See Rigby, J. J., assignor.)
Earnest, R. L. (See Apfel and Earnest.)
Earnshaw, J. C., assignor to Moss Rose Manufacturing Company, Philadelphia, Pa. Double-faced woven fabric. No. 881,386; Mar. 10; Sp. p. 1791; Dr. p. 387; Gaz. vol. 133; p. 329.
Eastman, A. S., Morrow, assignor of one-half to G. W. Hengst, Norwood, Ohio. Combination churn and butter-worker. No. 881,781; Mar. 10; Sp. p. 2549; Dr. p. 548; Gaz. vol. 133; p. 455.
Eastman, E. A., Chicago, Ill., assignor of one-half to Crawford McGregor & Canby Company, Dayton, Ohio. Last-demonstrator. No. 882,818; Mar. 24; Sp. p. 4622; Dr. p. 985; Gaz. vol. 133; p. 856.
Eastman Kodak Company. (See Brownell, F. A., assignor.)
Eastman, R. A., *et al.* (See Hansen, F., assignor.)
Eastwood, A. C., Cleveland Ohio. System of control for electric motors. No. 881,387; Mar. 10; Sp. p. 1792; Dr. pp. 387–8; Gaz. vol. 133; p. 329.
Eastwood, R., Colne, England. Piano-action. No. 882,302; Mar. 17; Sp. p. 3630; Dr. p. 770; Gaz. vol. 133; p. 654.

Eastwood, W. P., Hailey, Idaho. Motor-sled. No. 881,388; Mar. 10; Sp. p. 1797; Dr. p. 388; Gaz. vol. 133; p. 330.
Eaton, A. L., New York, N. Y. Belt-fastener. No. 881,389; Mar. 10; Sp. p. 1799; Dr. p. 389; Gaz. vol. 133; p. 330.
Eaton, J. A., Chicago, Ill. Rotary engine. No. 882,750; Mar. 24; Sp. p. 4492; Dr. p. 957; Gaz. vol. 133; p. 834.
Ebenhoch, G., Belle Vernon, Pa. Curtain-fixture. No. 881,672; Mar. 10; Sp. p. 2348; Dr. p. 508; Gaz. vol. 133; p. 422.
Eckstein, H. G., assignor to Rueckheim Bros. & Eckstein, Chicago, Ill. Moisture-proof package. No. 881,561; Mar. 10; Sp. p. 2120; Dr. p. 463; Gaz. vol. 133; p. 386.
Edgar, C. E., Parsons, Kans., assignor to Edgar Manufacturing Company, Kansas City, Mo. Refrigerator. No. 880,867; Mar. 3; Sp. p. 786; Dr. pp. 166–7; Gaz. vol. 133; p. 131.
Edgar Manufacturing Company. (See Edgar, C. E., assignor.)
Edgar, W. T., *et al.* (See Horstmann, S. A., assignor.)
Edgcomb, C. H. (See Cregier, F. Q., assignor.)
Edgecumbe, J. C., Cranford, N. J. Rod-packing. No. 882,103; Mar. 17; Sp. p. 3247; Dr. p. 690; Gaz. vol. 133; p. 591.
Edison Storage Battery Company. (See Aylsworth, J. W., assignor.)
Edison Storage Battery Company. (See Edison, T. A., assignor.)
Edison, T. A., Llewellyn Park, Orange, assignor to Edison Storage Battery Company, West Orange, N. J. Electrode element for storage batteries. No. 880,978; Mar. 3; Sp. p. 982; Dr. p. 212; Gaz. vol. 133; p. 167.
Edison, T. A., Llewellyn Park, Orange, assignor to Edison Storage Battery Company, West Orange, N. J. Making storage-battery electrodes. No. 880,979; Mar. 3; Sp. p. 987; Dr. p. 212; Gaz. vol. 133; p. 167.
Edison, T. A., Llewellyn Park, Orange, assignor to Edison Storage Battery Company, West Orange, N. J. Storage-battery electrode. No. 882,144; Mar. 17; Sp. p. 3311; Dr. p. 706; Gaz. vol. 133; p. 603.
Edlund, J. A., assignor to A. T. Brown, Syracuse, N. Y. Type-writing machine. No. 883,393; Mar. 31; Sp. p. 5806; Dr. p. 1239; Gaz. vol. 133; p. 1074.
Edwards, E. E., Ithaca, Mich. Runner attachment for plows. No. 882,751; Mar. 24; Sp. p. 4497; Dr. p. 958; Gaz. vol. 133; p. 835.
Edwards, Ellis & Cornell Company. (See Edwards, Ellis, and Cornell, assignors.)
Edwards, O. E., Jr., New York, N. Y., assignor to J. G. Brill Company, Philadelphia, Pa. Car. No. 881,468; Mar. 10; Sp. p. 1952; Dr. p. 424; Gaz. vol. 133; p. 355.
Edwards, W. A., C. E. Ellis, and D. F. Cornell, assignors to Edwards, Ellis & Cornell Company, Rochester, Minn. Engine. No. 881,310; Mar. 10; Sp. p. 1639; Dr. pp. 350–1; Gaz. vol. 133; p. 305.
Effenberger, A., Orange, N. J. Button. No. 880,725; Mar. 3; Sp. p. 470; Dr. p. 99; Gaz. vol. 133; p. 82.
Egan, P. M., Council Bluffs, Iowa. Ventilator. No. 881,911; Mar. 17; Sp. p. 2851; Dr. pp. 608–9; Gaz. vol. 133; p. 528.
Egge, E. S., Montgomery, Ala. Battery-holder. No. 881,181; Mar. 10; Sp. p. 1372; Dr. p. 296; Gaz. vol. 133; p. 263.
Egger, L. G., Buffalo, Iowa. Broom-molstener. No. 882,934; Mar. 24; Sp. p. 4873; Dr. p. 1034; Gaz. vol. 133; p. 896.
Elber, F. M., Millvale, Pa. Shut-off box. No. 882,145; Mar. 17; Sp. p. 3316; Dr. p. 706; Gaz. vol. 133; p. 604.
Eichelberger, J. C., Stockton, Cal. Comb-reel for headers. No. 882,376; Mar. 17; Sp. p. 3765; Dr. p. 802; Gaz. vol. 133; p. 579.
Elchler, E., assignor to American Electric Alarm Company, Pittsburg, Pa. Lock. No. 882,303; Mar. 17; Sp. p. 3631; Dr. p. 770; Gaz. vol. 133; p. 654.
Elsen, W. M., New York, N. Y. Shoulder-brace. No. 883,101; Mar. 24; Sp. p. 5174; Dr. p. 1105; Gaz. vol. 133; p. 948.
Eitle, C., Stuttgart, Germany. Extracting apparatus for horizontal retorts. No. 882,304; Mar. 17; Sp. p. 3634; Dr. pp. 770–1; Gaz. vol. 133; p. 655.
Elder, J., and C. M. Scoggins, Louisiana, Mo. Wireless attachment for check-row corn-planters. No. 883,394; Mar. 31; Sp. p. 5811; Dr. pp. 1239–40; Gaz. vol. 133; p. 1075.
Eldredge, F. E., Waverly, Iowa. Gate. No. 883,182; Mar. 31; Sp. p. 5356; Dr. p. 1141; Gaz. vol. 133; p. 1005.
Electric Carriage Call Company. (See Norden, M., assignor.)
Electric Cash Carrier and Change Maker Company. (See Gill, E. R., assignor.)
Electric Floor Surfacer Company. (See Wattles, C. B., assignor.)
Electric Motor & Equipment Company. (See Wolfe, E. B., assignor.)
Electric Protection Company. (See Jones, W. E., assignor.)
Electro Dental Manufacturing Company. (See Schramm, A. W., assignor.)
Electro Metallurgical Company. (See Huffard, J. B., assignor.)
Elliott, A. D., deceased; M. E. Elliott, executrix, Lawrence, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Heel-breasting machine. No. 880,868; Mar. 3; Sp. p. 788; Dr. p. 167; Gaz. vol. 133; p. 132.
Elliott, D., and L. B. Stanton, assignors to said Elliott, J. Bruckner, Saugerties, and C. D. B. Nearing, New York, N. Y. Protective device for cooking utensils. No. 883,183; Mar. 31; Sp. p. 5358; Dr. p. 1141; Gaz. vol. 133; p. 1006.
Elliott-Fisher Company. (See Julihn, L. G., assignor.)
Elliott, G. F., U. S. Marine Corps. Intrenching-tool. No. 881,782; Mar. 10; Sp. p. 2553; Dr. p. 548; Gaz. vol. 133; p. 456.
Elliott, M. E., executrix. (See Elliott, A. D.)
Elliott, W. K., Payson, Ill. Gas-lighting device. No. 882,055; Mar. 17; Sp. p. 3160; Dr. pp. 671–2; Gaz. vol. 133; p. 574.
Elliott, W. P. and W. P., Jr., La Grange, Ill. Swinging bell. No. 882,780; Mar. 24; Sp. p. 4539; Dr. p. 969; Gaz. vol. 133; p. 843.
Ellis, C. E. (See Edwards, Ellis, and Cornell.)
Ellis, C. S. (See Powell and Ellis.)
Ellis, J. W., assignor of one-half to A. P. Thompson, Denver, Colo. Illuminated sign. No. 881,390; Mar. 10; Sp. p. 1800; Dr. p. 389; Gaz. vol. 133; p. 330.
Ellis, L. J., Plainfield, N. J. Cooking or culinary utensil. No. 881,562; Mar. 10; Sp. p. 2122; Dr. p. 463; Gaz. vol. 133; p. 386.
Ellis, O. A., San Francisco, Cal. Traction apparatus for stationary cables. No. 880,869; Mar. 3; Sp. p. 791; Dr. pp. 167–8; Gaz. vol. 133; p. 132.
Ellis, W. J., Andrews, N. C. Combined boiler and furnace. No. 882,456; Mar. 17; Sp. p. 3898; Dr. p. 833; Gaz. vol. 133; p. 705.
Ellis, W. O. C., Greenfield, Ohio. Nut-lock for axle-spindles. No. 883,102; Mar. 24; Sp. p. 5175; Dr. p. 1105; Gaz. vol. 133; p. 949.
Ellison, A. L., High Point, N. C. Wardrobe or safe. No. 881,673; Mar. 10; Sp. p. 2349; Dr. p. 509; Gaz. vol. 133; p. 422.
Ellrich, R. C., assignor to Peck, Stow & Wilcox Company, Southington, Conn. Ratchet mechanism. No. 880,870; Mar. 3; Sp. p. 794; Dr. p. 168; Gaz. vol. 133; p. 133.
Elmira Electrochemical Company. (See Carrier, C. F., Jr., assignor.)
Ely, C. U. (See Hill, A. M., assignor.)
Emenaker, J., assignor of two-thirds to G. Mitchell and M. F. Fritterer, Hamilton, Ohio. Window. No. 883,130; Mar. 24; Sp. p. 5244; Dr. pp. 1119–20; Gaz. vol. 133; p. 958.
Emerson, C. H., Whitehall, N. Y. Question-answering device. No. 880,640; Mar. 3; Sp. p. 303; Dr. p. 67; Gaz. vol. 133; p. 53.
Emerson Manufacturing Company. (See Waterman, L. E., assignor.)
Emery, B. F., Thayer, Iowa. Locking-hook. No. 881,229; Mar. 10; Sp. p. 1475; Dr. p. 317; Gaz. vol. 133; p. 278.
Emmet, W. L. R., Schenectady, N. Y., assignor to General Electric Company. Brake for elastic-fluid turbines. No. 881,563; Mar. 10; Sp. p. 2124; Dr. pp. 463–4; Gaz. vol. 133; p. 386.
Empire Cream Separator Company. (See Ohlsson, O., assignor.)
Emrick, F. C., St. Louis, Mo. Die and making same. No. 881,912; Mar. 17; Sp. p. 2854; Dr. p. 609; Gaz. vol. 133; p. 528.
Engel, M. A., Carrick, Pa. Basket. No. 882,935; Mar. 24; Sp. p. 4874; Dr. p. 1035; Gaz. vol. 133; p. 896.
Engle, L. (See Gardner, J. T., assignor.)
English & Mersick Co. (See Altmann, F. C., assignor.)
Enns, D. H. (See Enns and Wiebe.)
Enns, H. H. and D. H., and J. J. Wiebe, Hooker, Okla. Combined cultivator and planter. No. 883,006; Mar. 24; Sp. p. 5000; Dr. pp. 1063–4; Gaz. vol. 133; p. 918.
Enterprise Specialty Company. (See Menkin, E. F., assignor.)
Epstein, G., New York, N. Y. Strainer for coffee-urns. No. 881,564; Mar. 10; Sp. p. 2126; Dr. p. 464; Gaz. vol. 133; p. 387.
Erb, E. M., Jersey City, assignor to R. M. Dixon, East Orange, N. J. Sash-balance. No. 881,783; Mar. 10; Sp. p. 2555; Dr. p. 549; Gaz. vol. 133; p. 456.
Ereckson, M., and J. O. Jystad, Galesburg, N. D. Shock-gatherer. No. 882,819; Mar. 24; Sp. p. 4624; Dr. p. 986; Gaz. vol. 133; p. 857.
Erichsen, A. C. E., Cranston, assignor to Gorham Manufacturing Company, Providence, R. I. Bottle-holder. No. 883,395; Mar. 31; Sp. p. 5815; Dr. p. 1240; Gaz. vol. 133; p. 1075.
Erickson, O. F., Berkeley, and R. H. Bradshaw, Oakland, Cal. Letter-box alarm and indicator. No. 882,752; Mar. 24; Sp. p. 4497; Dr. p. 958; Gaz. vol. 133; p. 835.
Erlwein, G., Charlottenburg, and E. Marquardt, Carow, near Berlin, Germany. Regenerating water in reservoirs containing aquatic animals. No. 880,783; Mar. 3; Sp. p. 597; Dr. p. 127; Gaz. vol. 133; p. 103.
Ernst, E. R., Warrenpoint, N. J. Flying-machine. No. 882,457; Mar. 17; Sp. p. 3900; Dr. pp. 833–4; Gaz. vol. 133; p. 705.
Eschellmann, G., and A. Harmuth, assignors to Tov. Tentelevskago Ximichesk Zavoda, St. Petersburg, Russia. Catalytic apparatus for making sulfuric anhydrid. (Reissue.) No. 12,759; Mar. 10; Sp. p. 2784; Dr. p. 597; Gaz. vol. 133; p. 492.
Espich, J. W., assignor of one-third to E. G. Powell, Carney, Okla. Cultivator attachment for thinning cotton. No. 883,304; Mar. 31; Sp. p. 5615; Dr. p. 1197; Gaz. vol. 133; p. 1046.
Estell, S. F., Los Angeles, Cal. Clasp. No. 883,184; Mar. 31; Sp. p. 5358; Dr. p. 1141; Gaz. vol. 133; p. 1006.
Estes, W. B., assignor to Universal Horse Collar Fastener Company, Atlanta, Ga. Fastener for horse-collars. No. 883,631; Mar. 31; Sp. p. 6283; Dr. p. 1340; Gaz. vol. 133; p. 1149.

Ethridge, M. V. B., New York, N. Y. Canceling and post-marking machine. No. 882,519; Mar. 17; Sp. p. 4024; Dr. pp. 858–9; Gaz. vol. 133; p. 726.
Etting, N., Philadelphia, Pa. Cupola. No. 882,000; Mar. 17; Sp. p. 3051; Dr. p. 649; Gaz. vol. 133; p. 558.
Etzel, J. T., *et al.* (See Roadhouse, N. F., assignor.)
Eubank, J. H., Ysleta, assignor of one-half to W. B. Merchant, El Paso, Tex. Wire clamp or grip. No. 881,311; Mar. 10; Sp. p. 1641; Dr. p. 351; Gaz. vol. 133; p. 306.
Eustace, E. C. (See Lascomme, G., assignor.)
Evans, D. (See Raney, W. D., assignor.)
Evans, F. W., Park City, Utah. Attachment for pencils and the like. No. 882,377; Mar. 17; Sp. p. 3766; Dr. p. 803; Gaz. vol. 133; p. 679.
Evans, J. M., Chanute, Kans. Tightener. No. 880,980; Mar. 3; Sp. p. 992; Dr. p. 212; Gaz. vol. 133; p. 168.
Everarts, R. C., Beaver Falls, Pa. Radiator connection. No. 883,103; Mar. 24; Sp. p. 5176; Dr. p. 1106; Gaz. vol. 133; p. 949.
Everest, A. R., Rugby, England, assignor to General Electric Company. Alternating-current regulator. No. 883,007; Mar. 24; Sp. p. 5002; Dr. p. 1054; Gaz. vol. 133; p. 918.
Everett, C. J., and J. V. McAdam, assignors to Revolute Machine Company, New York, N. Y. Photographic-printing machine. No. 883,396; Mar. 31; Sp. p. 5817; Dr. p. 1240; Gaz. vol. 133; p. 1075.
Everett, H. A., Barrington, N. J., and A. Parker, Philadelphia, Pa. Safety-limit switch. No. 881,565; Mar. 10; Sp. p. 2127; Dr. p. 464; Gaz. vol. 133; p. 387.
Everingham, F. M., deceased; M. Everingham, executrix, East Onondaga, N. Y. Weeder attachment to cultivators. No. 881,566; Mar. 10; Sp. p. 2129; Dr. p. 464; Gaz. vol. 133; p. 388.
Everingham, M., executrix. (See Everingham, F. M.)
Evers, F., assignor to Chemische Fabrik Reisholz Gesellschaft M. B. H., Reisholz, near Dusseldorf, Germany. Manufacture of artificial aromatic balsams. No. 880,641; Mar. 3; Sp. p. 305; Gaz. vol. 133; p. 54.
Ewing, F. M. (See Davis, W. B., assignor.)
Excelsior Needle Company. (See Lamb, A. G., assignor.)
F. A. Hardy & Company. (See Allen, C. C., assignor.)
F. E. Myers and Brother. (See Myers, P. A., assignor.)
Fagan, J. T., assignor to National Electric Lamp Company, Cleveland, Ohio. Machine for heating glass tubes. No. 882,190; Mar. 17; Sp. p. 3417; Dr. p. 726; Gaz. vol. 133; p. 618.
Fagan, L. E., Minneapolis, Minn. Head for automatic fire-extinguishers. No. 882,629; Mar. 24; Sp. p. 4256; Dr. p. 901; Gaz. vol. 133; p. 795.
Fagan, L. E., Minneapolis, Minn. Dry-pipe valve. No. 882,669; Mar. 24; Sp. p. 4331; Dr. pp. 921–2; Gaz. vol. 133; p. 808.
Fairbanks, J. G., Marion, Ohio. Engine-reversing valve. No. 880,642; Mar. 3; Sp. p. 306; Dr. pp. 67–8; Gaz. vol. 133; p. 54.
Fairbanks, J. G., Marion, Ohio. Excavating-scraper. No. 880,643; Mar. 3; Sp. p. 308; Dr. p. 68; Gaz. vol. 133; p. 54.
Fallek, N., Denver, Colo. Electrically-operated fender for street-railway cars. No. 881,115; Mar. 10; Sp. p. 1240; Dr. p. 267; Gaz. vol. 133; p. 240.
Farbenfabriken vorm. Friedr. Bayer & Co. (See Waldinger and Iserioth, assignors.)
Farbwerke vorm. Meister, Lucius & Brüning. (See Schirmacher and Brunner, assignors.)
Farbwerke vorm. Meister, Lucius & Brüning. (See Schirmacher and Deicke, assignors.)
Farbwerke vorm. Meister, Lucius & Brüning. (See Schirmacher and Leopold, assignors.)
Farbwerke vorm. Meister, Lucius & Brüning. (See Schmidt and Bryk, assignors.)
Farm Motor Company. (See Glascock, A. E., assignor.)
Farm Motor Company. (See Schroeder, G. G., assignor.)
Farmer, A. J., Detroit, Mich. Bottle. No. 881,886; Mar. 10; Sp. p. 2781; Dr. p. 597; Gaz. vol. 133; p. 491.
Farnham, F. G., Honesdale, Pa. Device for manipulating glass articles. No. 881,913; Mar. 17; Sp. p. 2856; Dr. pp. 609–10; Gaz. vol. 133; p. 528.
Farnham, F. G., Honesdale, Pa. Device for manipulating glass articles. No. 881,914; Mar. 17; Sp. p. 2859; Dr. p. 610; Gaz. vol. 133; p. 529.
Farnham, F. G., Honesdale, Pa. Protecting the inside of vessels during ornamentation. No. 881,915; Mar. 17; Sp. p. 2862; Dr. p. 610; Gaz. vol. 133; p. 529.
Farnham, P. W. (See Adams, H. W., assignor.)
Faro, A. Lo, New York, N. Y. Burglar-alarm box. No. 880,981; Mar. 3; Sp. p. 993; Dr. p. 213; Gaz. vol. 133; p. 168.
Farrand Company. (See Steel, E. A., assignor.)
Farrand, H. A., assignor to Kinetoplane Display Company, New York, N. Y. Picture-display machine. No. 881,916; Mar. 17; Sp. p. 2863; Dr. p. 611; Gaz. vol. 133; p. 529.
Farrell, M., *et al.* (See Jacoby, C. A., assignor.)
Farrington, J. W., Alba, Tex. Plow. No. 881,391; Mar. 10; Sp. p. 1802; Dr. p. 389; Gaz. vol. 133; p. 331.
Faust, A., Pittsburg, Pa. Burglar-alarm. No. 881,674; Mar. 10; Sp. p. 2351; Dr. p. 509; Gaz. vol. 133; p. 422.
Favreau, W., New York, N. Y. Slotting-machine. No. 881,064; Mar. 3; Sp. p. 1140; Dr. pp. 246–7; Gaz. vol. 133; p. 194.
Fawcett, I., Minneapolis, Minn. Heating-drum. No. 880,644; Mar. 3; Sp. p. 310; Dr. p. 68; Gaz. vol. 133; p. 55.
Feary, C. H. and D. H., Guthrie, Okla. Cotton-picker. No. 882,458; Mar. 17; Sp. p. 3902; Dr. p. 834; Gaz. vol. 133; p. 705.
Feary, D. H. (See Feary, C. H. and D. H.)
Fedders, T. C., Buffalo, N. Y. Radiator for cooling liquids. No. 881,392; Mar. 10; Sp. p. 1802; Dr. pp. 389–90; Gaz. vol. 133; p. 331.
Fegley, T. J., assignor to North Brothers Manufacturing Company, Philadelphia, Pa. Ice-cream freezer. No. 882,936; Mar. 24; Sp. p. 4875; Dr. p. 1035; Gaz. vol. 133; p. 896.
Fegley, T. J., assignor to North Bros. M'f'g Co., Philadelphia, Pa. Screw-eye driver. No. 882,937; Mar. 24; Sp. p. 4877; Dr. p. 1035; Gaz. vol. 133; p. 897.
Felbel, J., New York, N. Y., assignor to Union Typewriter Company, Jersey City, N. J. Type-writing machine. No. 882,104; Mar. 17; Sp. p. 3248; Dr. pp. 690–1; Gaz. vol. 133; p. 591.
Felkey, J., Bemidji, Minn. Car-stake. No. 880,982; Mar. 3; Sp. p. 995; Dr. p. 213; Gaz. vol. 133; p. 168.
Fell, C., Lorain, Ohio, assignor to National Tube Company, Pittsburg, Pa. Pipe-expanding apparatus. No. 882,305; Mar. 17; Sp. p. 3636; Dr. p. 771; Gaz. vol. 133; p. 655.
Fell, J. M., Roslindale, Mass., assignor to Western Electric Company, Chicago, Ill. Holder for soldering-irons. No. 880,871; Mar. 3; Sp. p. 796; Dr. p. 168; Gaz. vol. 133; p. 133.
Felsing, S. D., assignor to Maplebay Wind Stacker Company, Crookston, Minn. Belt-guide. No. 883,185; Mar. 31; Sp. p. 5861; Dr. p. 1142; Gaz. vol. 133; p. 1006.
Fender, J. B., Kaufman, Tex. Water-purifying apparatus. No. 882,240; Mar. 17; Sp. p. 3508; Dr. p. 744; Gaz. vol. 133; p. 633.
Ferguson, W. H., *et al.* (See Jones, T. N., assignor.)
Ferres, J. T., assignor to J. W. Sefton Manufacturing Company, Anderson, Ind. Board. No. 880,784; Mar. 3; Sp. p. 598; Dr. p. 127; Gaz. vol. 133; p. 103.
Ferres, J. T., assignor to J. W. Sefton Manufacturing Company, Anderson, Ind. Packing or shipping box. No. 881,567; Mar. 10; Sp. p. 2131; Dr. p. 465; Gaz. vol. 133; p. 388.
Ferris, H. G., Leavenworth, Kans. Self-adjusting sheave for cable-tramways. No. 883,529; Mar. 31; Sp. p. 6091; Dr. p. 1296; Gaz. vol. 133; p. 1118.
Ferris, L. G. (See McGregor and Ferris.)
Ferris, W. H., Sault Ste. Marie, Mich. Harness-fitting. No. 882,459; Mar. 17; Sp. p. 3903; Dr. p. 835; Gaz. vol. 133; p. 706.
Fetch, W. E., Mingo Junction, Ohio. Type-writer support. No. 883,305; Mar. 31; Sp. p. 5617; Dr. pp. 1197–8; Gaz. vol. 133; p. 1046.
Fettback, F., Hanover, Germany. Wrapper for boxes and similar articles. No. 882,241; Mar. 17; Sp. p. 3510; Dr. p. 745; Gaz. vol. 133; p. 633.
Feyler, W., Sturgeon, Mo. Eaves-trough and fastening therefor. No. 883,632; Mar. 31; Sp. p. 6284; Dr. p. 1340; Gaz. vol. 133; p. 1150.
Field, A. M. (See Brown and Field.)
Field, J. F., assignor to E. H. Stafford Manufacturing Company, Ionia, Mich. Adjustable desk. No. 881,312; Mar. 10; Sp. p. 1641; Dr. p. 352; Gaz. vol. 133; p. 306.
Field, S. D., Stockbridge, Mass. Telegraph-repeater. No. 883,530; Mar. 31; Sp. p. 6091; Dr. p. 1296; Gaz. vol. 133; p. 1119.
Fields, R. E., Gordon, Nebr. Brush. No. 880,785; Mar. 3; Sp. p. 599; Dr. p. 127; Gaz. vol. 133; p. 103.
Filstrup, E. C., assignor to Covel Manufacturing Company, Chicago, Ill. Saw-sharpening machine. No. 881,230; Mar. 10; Sp. p. 1477; Dr. p. 317; Gaz. vol. 133; p. 279.
Filstrup, L. L., assignor to Covel Manufacturing Company, Chicago, Ill. Saw-sharpening machine. No. 881,231; Mar. 10; Sp. p. 1478; Dr. pp. 318–19; Gaz. vol. 133; p. 279.
Finch, J. S. (See Noble and Finch.)
Finch, W. F., Litherland, near Liverpool, England. Machinery for stretching and setting leather. No. 880,512; Mar. 3; Sp. p. 38; Dr. pp. 9–10; Gaz. vol. 133; p. 10.
Fine, H. E., Trenton, N. J. Lamp. No. 882,146; Mar. 17; Sp. p. 3317; Dr. p. 706; Gaz. vol. 133; p. 1007.
Fine, J., Louisville, Ky. Hose-bridge. No. 883,186; Mar. 31; Sp. p. 5363; Dr. p. 1142; Gaz. vol. 133; p. 906.
Finley, A. P., Sherman, Tex. Compound railway-rail. No. 881,313; Mar. 10; Sp. p. 1644; Dr. p. 352; Gaz. vol. 133; p. 604.
Finn, J., Elmo, Kans. Self-registering land-measuring device. No. 882,191; Mar. 17; Sp. p. 3420; Dr. p. 727; Gaz. vol. 133; p. 618.
Finnegan, J. J., and C. E. Webster, Benwood, W. Va. Gage-cock. No. 880,786; Mar. 3; Sp. p. 600; Dr. p. 128; Gaz. vol. 133; p. 104.

Firth, R., assignor to Rowland Firth & Son, Phillipsburg, N. J. Vehicle-brake mechanism. No. 882,105; Mar. 17; Sp. p. 3251; Dr. p. 691; Gaz. vol. 133; p. 591.
Fishel, H. W., assignor to Fishel, Nessler & Company, New York, N. Y. Jewel-bar. No. 881,065; Mar. 3; Sp. p. 1142; Dr. p. 247; Gaz. vol. 133; p. 195.
Fishel, H. W., assignor to Fishel, Nessler & Company, New York, N. Y. Jewel-bar. No. 881,066; Mar. 3; Sp. p. 1143; Dr. p. 247; Gaz. vol. 133; p. 195.
Fishel, Nessler & Company. (See Fishel, H. W., assignor.)
Fisher, C. J., Oakmont, Pa. Envelop. No. 881,675; Mar. 10; Sp. p. 2352; Dr. p. 509; Gaz. vol. 133; p. 423.
Fisk, H. M., Pella, Iowa. Traveling capstan. No. 881,568; Mar. 10; Sp. p. 2133; Dr. pp. 465–6; Gaz. vol. 133; p. 388.
Fitts, M. B., Minneapolis, Kans. Clothes-drier. No. 881,784; Mar. 10; Sp. p. 2558; Dr. p. 549; Gaz. vol. 133; p. 457.
Fitz, A. G., Auburn, Me. Last. No. 882,556; Mar. 24; Sp. p. 4105; Dr. p. 870; Gaz. vol. 133; p. 770.
Fitzgerald, S. P., *et al.* (See Flickenstien, L. J., assignor.)
Fitzpatrick, R. T., assignor of one-half to J. H. Mills, St. Louis, Mo. Lock-nut for axles. No. 881,676; Mar. 10; Sp. p. 2353; Dr. p. 509; Gaz. vol. 133; p. 423.
Flachshaar, P. (See Baer and Flachshaar.)
Flaig, J., Leon, Wis. Tongue-truck for harvesters and binders. No. 882,820; Mar. 24; Sp. p. 4626; Dr. p. 986; Gaz. vol. 133; p. 857.
Flanary, L. D., Long, Okla. Lister for plows. No. 880,726; Mar. 3; Sp. p. 473; Dr. p. 99; Gaz. vol. 133; p. 83.
Flatley, D., Manchester, Mass. Scaffold. No. 881,232; Mar. 10; Sp. p. 1481; Dr. p. 319; Gaz. vol. 133; p. 279.
Flock, H., W. G. Haldane, Golden, and E. L. White, Denver, Colo. Extracting uranium and vanadium from ores. No. 880,645; Mar. 3; Sp. p. 311; Gaz. vol. 133; p. 55.
Fleckenstien, J., *et al.* (See Fleckenstien, L. J., assignor.)
Fleckenstien, L. J., assignor of three-fourths to J. Fleckenstien, J. J. O'Meara, and S. P. Fitzgerald, Kalamazoo, Mich. Button-holder. No. 880,646; Mar. 3; Sp. p. 313; Dr. p. 69; Gaz. vol. 133; p. 55.
Fiegel, B. F., Racine, Wis. Fishing-tackle. No. 881,850; Mar. 10; Sp. p. 2693; Dr. p. 576; Gaz. vol. 133; p. 479.
Fleischmann, G., McKees Rocks, Pa. Moving device. No. 882,938; Mar. 24; Sp. p. 4878; Dr. p. 1026; Gaz. vol. 133; p. 897.
Fleming, A. H., Fairmont, W. Va. Razor-stropper. No. 882,630; Mar. 24; Sp. p. 4257; Dr. p. 902; Gaz. vol. 133; p. 796.
Fleming, H. G. (See Jaggers, R. B., assignor.)
Fleming, W. (See Parsons and Fleming.)
Fleming, W. M., Holyoke, Mass., assignor to International Steam Pump Company, New York, N. Y. Air or vacuum pump. No. 881,116; Mar. 10; Sp. p. 1243; Dr. p. 267; Gaz. vol. 133; p. 241.
Fleming, W. P., Port Huron, Mich. Closure. No. 881,067; Mar. 3; Sp. p. 1144; Dr. p. 248; Gaz. vol. 133; p. 195.
Fletcher, K. B., Lancaster, N. H., assignor to United Printing Machinery Company, Boston, Mass. Paper-feeder elevator. No. 880,647; Mar. 3; Sp. p. 314; Dr. pp. 69–70; Gaz. vol. 133; p. 56.
Fletcher, K. B., Lancaster, N. H., assignor to United Printing Machinery Company, Boston, Mass. Paper-feeding machine. No. 880,872; Mar. 3; Sp. p. 796; Dr. pp. 168–9; Gaz. vol. 133; p. 134.
Flindt, C. J. H., Copenhagen, Denmark. Ship-propeller. No. 881,393; Mar. 10; Sp. p. 1804; Dr. p. 390; Gaz. vol. 133; p. 313.
Flint & Walling Manufacturing Company. (See Macomber, H. H., assignor.)
Flintkote Manufacturing Company. (See Overbury, F. C., assignor.)
Flora, E. E., assignor of one-half to W. F. Rothermel, Chicago, Ill. Metal-bound box. No. 881,785; Mar. 10; Sp. p. 2560; Dr. p. 550; Gaz. vol. 133; p. 457.
Flowers, E. L., Hickory, N. C. Fire-escape. No. 883,104; Mar. 24; Sp. p. 5178; Dr. p. 1106; Gaz. vol. 133; p. 949.
Foerstering, H., Perth Amboy, N. J., assignor to Roessler & Hasslacher Chemical Co., New York, N. Y. Apparatus for making stannic oxid. No. 880,873; Mar. 3; Sp. p. 801; Dr. p. 170; Gaz. vol. 133; p. 134.
Foerstering, H., and H. Philipp, Perth Amboy, N. J., assignors to Roessler & Hasslacher Chemical Co., New York, N. Y. Generating hydrogen. No. 883,531; Mar. 31; Sp. p. 6096; Dr. p. 1296; Gaz. vol. 133; p. 1119.
Fogde, M. (See Luckett and Fogde.)
Fogg, C. F., New York, N. Y. Account-register. No. 883,306; Mar. 31; Sp. p. 5619; Dr. pp. 1198–9; Gaz. vol. 133; p. 1047.
Folger, H. C., Everett, Mass. Car-seal. No. 882,670; Mar. 24; Sp. p. 4333; Dr. p. 922; Gaz. vol. 133; p. 808.
Folkerts, R., Lakefield, Minn. Scraper. No. 882,056; Mar. 17; Sp. p. 3161; Dr. p. 672; Gaz. vol. 133; p. 574.
Foot, W. H., Wilkinsburg, Pa., assignor to Westinghouse Electric & Manufacturing Company. Cross connection for dynamo-electric machines. No. 882,242; Mar. 17; Sp. p. 3510; Dr. p. 745; Gaz. vol. 133; p. 633.
Foote, H. M. (See Blanchard and Foote.)
Forbes, W. C., Melbourne, Victoria, Australia. Distance and course recorder for ships. No. 881,068; Mar. 3; Sp. p. 1145; Dr. p. 248; Gaz. vol. 133; p. 196.
Ford, H. (See Huff, E. S., assignor.)
Ford, H. R., Buffalo, N. Y. Coal and rock-drill. No. 882,878; Mar. 24; Sp. p. 4754; Dr. p. 1011; Gaz. vol. 133; p. 876.
Forester, G. G., Bagley, Iowa. Gasolene engine and pump drain. No. 882,496; Mar. 17; Sp. p. 3961; Dr. p. 847; Gaz. vol. 133; p. 717.
Forged Steel Wheel Company. (See Hansen, J. M., assignor.)
Forsyth G. H., Chicago, Ill. Metal window construction. No. 882,671; Mar. 24; Sp. p. 4334; Dr. p. 923; Gaz. vol. 133; p. 809.
Fort, H. K. (See Wilson, F. K., assignor.)
Fort Pitt Bedding Company. (See Pennepacker, H. W., assignor.) (Reissue.)
Forté, L., Paris, France. Life-belt. No. 882,057; Mar. 17; Sp. p. 3161; Dr. p. 672; Gaz. vol. 133; p. 574.
Forter Miller Engineering Company. (See Waldburger, J. A., assignor.)
Forwood, D. F., Taylor, Tex. Cover. No. 881,851; Mar. 10; Sp. p. 2694; Dr. p. 576; Gaz. vol. 133; p. 479.
Fose, M., Manchester, Iowa. Sewing-machine gage. No. 883,532; Mar. 31; Sp. p. 6097; Dr. p. 1297; Gaz. vol. 133; p. 1119.
Foss, C., Brighton, Iowa. Hay-fork. No. 881,394; Mar. 10; Sp. p. 1805; Dr. p. 390; Gaz. vol. 133; p. 331.
Fournier, J. B., Paris, France. Means for showing from a distance the variations in temperature. No. 883,159; Mar. 24; Sp. p. 5302; Dr. p. 1132; Gaz. vol. 133; p. 968.
Fowler, B. F., assignor of two-thirds to E. E. Austin and G. H. Richards, Minneapolis, Minn. Hydraulic motor. No. 883,105; Mar. 24; Sp. p. 5179; Dr. p. 1106; Gaz. vol. 133; p. 950.
Fowler, M. B. (See Haas, G. W., assignor.)
Fowler, R. J. (See Briddon and Fowler.)
Fowler, S. E., Winslow, assignor of two-thirds to C. Abbott and R. M. Gray, Otwell, Ind. Hay-stacker. No. 883,633; Mar. 31; Sp. p. 6285; Dr. p. 1340; Gaz. vol. 133; p. 1150.
Fox, B. C. (See Butterworth, J. S., assignor.)
Fox, C., Leavenworth, Kans. Device for distributing or taking up barb-wire. No. 881,233; Mar. 10; Sp. p. 1464; Dr. p. 319; Gaz. vol. 133; p. 280.
Fox, C. H., Cincinnati, Ohio. Advertisement. No. 880,513; Mar. 3; Sp. p. 40; Dr. p. 10; Gaz. vol. 133; p. 10.
Fox, C. J., London, England. Thermostat. No. 883,006; Mar. 24; Sp. p. 5003; Dr. p. 1064; Gaz. vol. 133; p. 918.
Fox, S. S., Marion, Ohio. Cuff-holder. No. 883,634; Mar. 31; Sp. p. 6287; Dr. p. 1341; Gaz. vol. 133; p. 1150.
Fox, W. R., Grand Rapids, Mich. Ribbon mechanism for front-strike type-writing machines. No. 880,648; Mar. 3; Sp. p. 317; Dr. pp. 70–1; Gaz. vol. 133; p. 56.
Fox, W. R., Grand Rapids, Mich. Tabulator for type-writers. No. 882,058; Mar. 17; Sp. p. 3163; Dr. pp. 672–3; Gaz. vol. 133; p. 575.
Fraim, S. R., assignor to E. T. Fraim Lock Company, Lancaster, Pa. Padlock. No. 882,192; Mar. 17; Sp. p. 3421; Dr. p. 727; Gaz. vol. 133; p. 618.
Francis, A., St. Louis, Mo. Reducing lead ores. No. 882,193; Mar. 17; Sp. p. 3423; Gaz. vol. 133; p. 619.
Francis, G., Chelsea, Mass. Bucket for dredgers. No. 883,635; Mar. 31; Sp. p. 6289; Dr. pp. 1341–2; Gaz. vol. 133; p. 1151.
Francis, P., deceased; M. F. Burns, Marine City, Mich., administratrix. Extension-table. No. 882,865; Mar. 24; Sp. p. 4731; Dr. pp. 1005–6; Gaz. vol. 133; p. 872.
Francis, H. P., Oroville, Cal. Engine-starter. No. 881,069; Mar. 3; Sp. p. 1147; Dr. p. 249; Gaz. vol. 133; p. 196.
Francis, W. H. (See Dunn and Francis.)
Francfort, A. H., Jersey City, N. J., assignor to Niagara Hydraulic Engine Company. Hydraulic ram. No. 881,314; Mar. 10; Sp. p. 1645; Dr. pp. 352–3; Gaz. vol. 133; p. 307.
Frank, A., Charlottenburg, and N. Caro, Berlin, Germany, assignors, by mesne assignments, to American Cyanamid Company, Portland, Me. Making nitrogen compounds. (Reissue.) No. 12,762; Mar. 10; Sp. p. 2807; Gaz. vol. 133; p. 493.
Frankenbush, R., *et al.* (See Ilg, C. C., assignor.)
Franklin, M. B., Providence, R. I. Picture-hanger. No. 882,243; Mar. 17; Sp. p. 3512; Dr. p. 745; Gaz. vol. 133; p. 634.
Franklin, R. M., Galveston, Tex. Trap for crustacea. No. 880,727; Mar. 3; Sp. p. 474; Dr. p. 100; Gaz. vol. 133; p. 83.
Franquist, G. E. (See Mabley and Franquist.)
Frantz, W. W., Waynesboro, Pa. Shipper's type-writer. No. 883,636; Mar. 31; Sp. p. 6291; Dr. pp. 1342–3; Gaz. vol. 133; p. 1151.
Fraser, G. C. (See Fraser, N. P., assignor.)
Fraser, N. P., assignor of one-half to G. C. Fraser, Carsonville, Mich. Damper-operating mechanism. No. 881,099; Mar. 3; Sp. p. 1209; Dr. p. 261; Gaz. vol. 133; p. 206.
Frehorg, C., De Kalb assignor to Gulbransen, Dickinson Company, Chicago, Ill. Fluid-motor. No. 882,672; Mar. 24; Sp. p. 4337; Dr. p. 923; Gaz. vol. 133; p. 809.
Fredrickson, G., Pittsburg, Pa. Fly-trap. No. 882,306; Mar. 17; Sp. p. 3688; Dr. p. 772; Gaz. vol. 133; p. 655.

Freed, G. F., Allegheny, assignor to Duff Manufacturing Company, Pittsburg, Pa. Lifting-jack. No. 880,874; Mar. 3; Sp. p. 804; Dr. pp. 170–1; Gaz. vol. 133; p. 134.
Freeman, C. C., Dixfield, Me. Machine for boxing toothpicks. No. 882,879; Mar. 24; Sp. p. 4757; Dr. pp. 1012–13; Gaz. vol. 133; p. 876.
French, A. G., Grey Lynn, near Auckland, New Zealand. Manufacturing ammonium chlorid. No. 882,460; Mar. 17; Sp. p. 3905; Gaz. vol. 133; p. 706.
French, W. S., *et al.* (See Houck, W., assignor.)
Frick, H. E. (See Rolin, C. W., assignor.)
Fricke, H. C., and G. E. Turner, assignors to Turner-Fricke Manufacturing Company, Pittsburg, Pa. Mixing-valve for explosive-engines. No. 882,939; Mar. 24; Sp. p. 4879; Dr. p. 1036; Gaz. vol. 133; p. 897.
Friedel, A. H., Cleveland, Ohio. Hoist. No. 883,455; Mar. 31; Sp. p. 5948; Dr. pp. 1268–9; Gaz. vol. 133; p. 1096.
Friendlich, E., New York, N. Y. Drinking vessel. No. 882,378; Mar. 17; Sp. p. 3766; Dr. p. 803; Gaz. vol. 133; p. 679.
Frith, J. (See Hopkinson and Frith.)
Fritterer, M. F., *et al.* (See Emenaker, J., assignor.)
Frocheur, O., Charleroi, Pa. Bottle-stopper. No. 883,533; Mar. 31; Sp. p. 6098; Dr. p. 1297; Gaz. vol. 133; p. 1119.
Frost, C. E., assignor to Atlas Anchor Company, Cleveland, Ohio. Device for setting earth-anchors. No. 880,649; Mar. 3; Sp. p. 328; Dr. p. 71; Gaz. vol. 133; p. 56.
Frost, J. E., Newman Grove, Nebr. Automatic brake. No. 883,637; Mar. 31; Sp. p. 6299; Dr. pp. 1343–4; Gaz. vol. 133; p. 1152.
Fruin, J. L., *et al.* (See Jacoby, C. A., assignor.)
Fry, J. E., Gibsonburg, Ohio. Self-heating sad-iron. No. 880,514; Mar. 3; Sp. p. 41; Dr. p. 10; Gaz. vol. 133; p. 10.
Frysinger, H. M., and W. W. Barrett, Wilmington, Del. Means for setting type compositions on curved lines. No. 880,875; Mar. 3; Sp. p. 807; Dr. p. 171; Gaz. vol. 133; p. 135.
Fuller, C. A., Manzanola, Colo. Post. No. 880,728; Mar. 3; Sp. p. 476; Dr. p. 100; Gaz. vol. 133; p. 84.
Fuller, J. M. (See Wells and Fuller.)
Fuller, W. D., Springfield, Ohio. Fly-trap. No. 882,631; Mar. 24; Sp. p. 4258; Dr. p. 902; Gaz. vol. 133; p. 796.
Füllipp, G. A., assignor of one-half to W. H. Lang, East McKeesport, Pa. Automatic shut-off valve. No. 883,160; Mar. 24; Sp. p. 5304; Dr. p. 1132; Gaz. vol. 133; p. 969.
Fulton, C. W., Paisley, Scotland. Production of patterns, designs, or other similar markings in fabrics. No. 880,983; Mar. 3; Sp. p. 996; Dr. p. 213; Gaz. vol. 133; p. 169.
Fusch, G., Hanover, Germany, assignor to Schutte and Koerting Company, Philadelphia, Pa. Valve. No. 881,234; Mar. 10; Sp. p. 1485; Dr. p. 320; Gaz. vol. 133; p. 280.
Gabler, J., Hornberg, Germany, assignor to Societe Anonym des Metiers Gabler, Basel, Switzerland. Weft-replenishing mechanism for looms. No. 882,106; Mar. 17; Sp. p. 3254; Dr. pp. 691–2; Gaz. vol. 133; p. 592.
Gabriele, T., New York, N. Y. Envelop. No. 883,456; Mar. 31; Sp. p. 5950; Dr. p. 1269; Gaz. vol. 133; p. 1096.
Gabridian, A. J., Boston, Mass. Welt-shoe. No. 880,515; Mar. 3; Sp. p. 43; Dr. pp. 10–11; Gaz. vol. 133; p. 11.
Gacth, P., Cleveland, Ohio. Sparking igniter. No. 880,650; Mar. 3; Sp. p. 329; Dr. pp. 71–2; Gaz. vol. 133; p. 58.
Gagner, A., *et al.* (See Champagne, J. N., assignor.)
Galley, J. M., McKeesport, Pa. Injector. No. 880,984; Mar. 3; Sp. p. 998; Dr. pp. 213–14; Gaz. vol. 133; p. 169.
Gaines, R. H., New York, N. Y. Waterproof Portland-cement mortar and making the same. No. 883,683; Mar. 31; Sp. p. 6392; Gaz. vol. 133; p. 1166.
Gallagher, R. D., Jr., New York, N. Y. Draft and buffing rigging for railway-cars. No. 880,516; Mar. 3; Sp. p. 45; Dr. pp. 11–12; Gaz. vol. 133; p. 11.
Gallagher, R. D., Jr., New York, N. Y. Frame for railway-cars. No. 883,187; Mar. 31; Sp. p. 5365; Dr. p. 1142; Gaz. vol. 133; p. 1007.
Galloway, C. C., Washington, D. C. Dental appliance. No. 883,106; Mar. 24; Sp. p. 5182; Dr. p. 1106; Gaz. vol. 133; p. 950.
Galvin, A. J., Cleveland, Ohio. Sewer construction. No. 882,940; Mar. 24; Sp. p. 4883; Dr. p. 1036; Gaz. vol. 133; p. 898.
Galvin, A. J., Cleveland, Ohio. Sewer construction. No. 882,941; Mar. 24; Sp. p. 4885; Dr. p. 1037; Gaz. vol. 133; p. 898.
Gamage, H. C., Lynn, Mass., assignor, by mesne assignments, to Gamo Company, Jersey City, N. J. Apparatus for manufacturing steel or other metal wool. No. 881,852; Mar. 10; Sp. p. 2695; Dr. pp. 576–8; Gaz. vol. 133; p. 479.
Gamble, J., assignor to G. A. Reach, Philadelphia, Pa. Base-ball glove. No. 881,315; Mar. 10; Sp. p. 1647; Dr. p. 353; Gaz. vol. 133; p. 307.
Gamo Company. (See Gamage, H. C., assignor.)
Gannon, W. E., McDavid, Fla., assignor of two-thirds to B. F. Jernigan, Pollard, Ala., and J. Bonifay, McDavid, Fla. Governor mechanism for engines. No. 881,917; Mar. 17; Sp. p. 2866; Dr. p. 611; Gaz. vol. 133; p. 530.
Gardenhire, J. A., assignor of one-half to G. F. Carter, Nashville, Tenn. Copy-holder. No. 881,786; Mar. 10; Sp. p. 2561; Dr. p. 550; Gaz. vol. 133; p. 457.
Garfield, J. D., Springfield, Mass. Lens-shutter reflecting-camera. No. 882,307; Mar. 17; Sp. p. 3639; Dr. pp. 772–3; Gaz. vol. 133; p. 656.
Gardner, E. F. and A. J. Schmidt, Scranton, Pa. Pleasure-railway. No. 881,788; Mar. 10; Sp. p. 2535; Dr. p. 551; Gaz. vol. 133; p. 458.
Gardner & Highet Company. (See Gardner, P., assignor.)
Gardner, J. G., assignor to Pure White Turpentine Company, Jacksonville, Fla. Extracting turpentine from wood. No. 881,787; Mar. 10; Sp. p. 2563; Dr. p. 550; Gaz. vol. 133; p. 457.
Gardner, J. T., assignor to L. Engle, Buffalo, Mo. Wire-grip. No. 881,853; Mar. 10; Sp. p. 2698; Dr. p. 578; Gaz. vol. 133; p. 480.
Gardner, P., assignor to Gardner & Highet Company, New York, N. Y. Packet for braids, laces, and other narrow fabrics. No. 881,789; Mar. 10; Sp. p. 2569; Dr. p. 551; Gaz. vol. 133; p. 458.
Gardner, R. J., assignor to S. Jarvis Adams Company, Pittsburg, Pa. Piercing-mandrel. No. 880,517; Mar. 3; Sp. p. 48; Dr. p. 12; Gaz. vol. 133; p. 12.
Garland, W. H., assignor of one-half to R. M. Havens, Kansas City, Mo. Loose-leaf post binder. No. 882,059; Mar. 17; Sp. p. 3168; Dr. p. 673; Gaz. vol. 133; p. 576.
Garlock, O. J., assignor to Garlock Packing Company, Palmyra, N. Y. Rod-packing. No. 883,534; Mar. 31; Sp. p. 6099; Dr. p. 1297; Gaz. vol. 133; p. 1120.
Garlock Packing Company. (See Garlock, O. J., assignor.)
Garrett, J. A., Auburn, N. Y. Steering device for power-boats. No. 882,821; Mar. 24; Sp. p. 4627; Dr. p. 987; Gaz. vol. 133; p. 857.
Gartenberg, A. (See Ginaca, H. G., assignor.)
Garton-Daniels Company. (See Goddard, W. T., assignor.)
Gassett, J. N., Laurin, Mont. Castrating tool. No. 881,117; Mar. 10; Sp. p. 1244; Dr. p. 267; Gaz. vol. 133; p. 241.
Gasspar-Unternehmung nach System Wouwermans Halbmayr & Co. (See Wouwermans, P. von, assignor.)
Gates, J. P., assignor of one-half to J. Glisch, Milwaukee, Wis. Tobacco-moistener. No. 881,790; Mar. 10; Sp. p. 2570; Dr. p. 551; Gaz. vol. 133; p. 458.
Gathright, J. B., Louisville, Ky. Container for perforated music-rolls. No. 882,557; Mar. 24; Sp. p. 4106; Dr. p. 870; Gaz. vol. 133; p. 771.
Gaul, A., Jr., Ridgefield, N. J. Feed-bag. No. 880,651; Mar. 3; Sp. p. 331; Dr. p. 72; Gaz. vol. 133; p. 58.
Gault, M. M., Medford, and J. L. Stockbridge, Portland, Oreg. Miner's candlestick. No. 883,307; Mar. 31; Sp. p. 5624; Dr. p. 1199; Gaz. vol. 133; p. 1047.
Gause, C., and P. Conrady, Berlin, Germany. Rotary engine. No. 883,188; Mar. 31; Sp. p. 5366; Dr. p. 1143; Gaz. vol. 133; p. 1008.
Gautreaux, M. T. (See Burtch, D. H., assignor.)
Gay, C. W., West Springfield, Mass. Paper-box machine. No. 881,118; Mar. 10; Sp. p. 1245; Dr. pp. 268–9; Gaz. vol. 133; p. 242.
Gay, J. W., Rickreall, Oreg. Boat. No. 882,194; Mar. 17; Sp. p. 3424; Dr. pp. 727–8; Gaz. vol. 133; p. 619.
Gay, J. W., Solomon Rapids, assignor of one-half to G. W. Morehead, Beloit, Kans. Spoke-extractor. No. 881,070; Mar. 3; Sp. p. 1151; Dr. p. 250; Gaz. vol. 133; p. 196.
Gaylor, F. W., White Plains, N. Y. Egg-testing device. No. 883,308; Mar. 31; Sp. p. 5625; Dr. p. 1199; Gaz. vol. 133; p. 1048.
Gee, M. M., Orange, N. J. Crayon-holder. No. 883,009; Mar. 24; Sp. p. 5004; Dr. p. 1064; Gaz. vol. 133; p. 919.
Gefficken, H. E., Dublin, Ga. Ratchet-wrench. No. 883,309; Mar. 31; Sp. p. 5627; Dr. p. 1200; Gaz. vol. 133; p. 1048.
Gehricke, F., assignor of one-half to F. Bollmann, Berlin, Germany. Derailment-guard. No. 883,107; Mar. 24; Sp. p. 5184; Dr. p. 1107; Gaz. vol. 133; p. 950.
Geiger, F. J., *et al.* (See Halle, L. T., assignor.)
Geis, C., Wilkinsburg, Pa. Shears. No. 883,457; Mar. 31; Sp. p. 5951; Dr. p. 1269; Gaz. vol. 133; p. 1097.
Geisel, E. L., Morganville, N. J. Dry closet. No. 881,918; Mar. 17; Sp. p. 2869; Dr. pp. 612–13; Gaz. vol. 133; p. 530.
Gendron, W. C., *et al.* (See Roadhouse, N. F., assignor.)
General Acoustic Company. (See Kelly, J. W., Jr., assignor.)
General Electric Company. (See Alexanderson, E. F. W., assignor.)
General Electric Company. (See Anderson, R., assignor.)
General Electric Company. (See Barringer, L. E., assignor.)
General Electric Company. (See Beckwith, E. P., assignor.)
General Electric Company. (See Callan, J. G., assignor.)
General Electric Company. (See Corey, F. B., assignor.)
General Electric Company. (See Emmet, W. L. R., assignor.)
General Electric Company. (See Everest, A. R., assignor.)

General Electric Company. (See Hewlett, E. M., assignor.)
General Electric Company. (See Howell, F. B., assignor.)
General Electric Company. (See Jackson, A. M., assignor.)
General Electric Company. (See Knight, C. D., assignor.)
General Electric Company. (See Kruh, O. O., assignor.)
General Electric Company. (See Lord, C. E., assignor.)
General Electric Company. (See Merriam, E. B., assignor.)
General Electric Company. (See Musgrove, G. E., assignor.)
General Electric Company. (See Pauly, K. A., assignor.)
General Electric Company. (See Rice, R. H., assignor.)
General Electric Company. (See Robinson, L. T., assignor.)
General Electric Company. (See Rosenberg, E., assignor.)
General Electric Company. (See Stumpf, J., assignor.)
General Electric Company. (See Thomson, D. P., assignor.)
General Electric Company. (See Thomson, E., assignor.)
General Electric Company. (See Underwood and Douglass, assignors.)
General Electric Company. (See White, H. E., assignor.)
General Railway Signal Company. (See Howe, W. K., assignor.)
George A. McKeel & Company. (See McKeel, G. A., assignor.)
George, A. F., Bisbee, Ariz. Ter., assignor of one-half to J. Ryan, Kansas City, Mo. Windmill. No. 880,518; Mar. 3; Sp. p. 49; Dr. p. 12; Gaz. vol. 133; p. 12.
George, S. P., Puyallup, Wash. Stake for logging-cars. No. 880,652; Mar. 3; Sp. p. 331; Dr. p. 72; Gaz. vol. 133; p. 58.
Gerber, G. H. (See Losch and Gerber.)
Gerdes, H., Berlin, Germany. Apparatus for making oil-gas. No. 883,681; Mar. 31; Sp. p. 6389; Dr. p. 1363; Gaz. vol. 133; p. 1165.
Gerdes, H., Berlin, Germany, assignor, by mesne assignments, to Olds Gas Power Company, Lansing, Mich. Gas-producer. No. 883,131; Mar. 24; Sp. p. 5246; Dr. p. 1120; Gaz. vol. 133; p. 959.
Gerding, H. (See Schultz and Gerding.)
Gerfin, W. H., East Petersburg, Pa. Pruning implement. No. 882,781; Mar. 24; Sp. p. 4540; Dr. p. 969; Gaz. vol. 133; p. 843.
Gerrard, C. L., Columbus, Nebr. Feed-regulator for gas-generators. No. 883,189; Mar. 31; Sp. p. 5371; Dr. pp. 1143–4; Gaz. vol. 133; p. 1008.
Gessner, A., Sergeant, Pa. Apparatus for manufacturing wire-glass. No. 881,791; Mar. 10; Sp. p. 2571; Dr. p. 552; Gaz. vol. 133; p. 459.
Gessner, E., Aue, Germany. Textile-spreading device. No. 883,535; Mar. 31; Sp. p. 6101; Dr. pp. 1297–8; Gaz. vol. 133; p. 1120.
Gessner, E., Aue, Germany. Machine for extracting liquid from cloth. No. 883,536; Mar. 31; Sp. p. 6104; Dr. pp. 1298–9; Gaz. vol. 133; p. 1120.
Gibbs, C., assignor to Underwood Typewriter Company, New York, N. Y. Type-writing machine. No. 882,246; Mar. 17; Sp. p. 3516; Dr. p. 746; Gaz. vol. 133; p. 635.
Gibbs, C. A., Williamsport, Pa. Air and water heating furnace. No. 882,558; Mar. 24; Sp. p. 4108; Dr. p. 871; Gaz. vol. 133; p. 771.
Gibbs, G. W., Jr., Atlanta, Ga. Explosive-engine. No. 882,942; Mar. 24; Sp. p. 4887; Dr. p. 1037; Gaz. vol. 133; p. 898.
Gibbs, L. L., South Boston, Mass. Galvanizing apparatus. No. 883,458; Mar. 31; Sp. p. 5952; Dr. pp. 1269–70; Gaz. vol. 133; p. 1097.
Gibbs Manufacturing Company. (See Gibbs, S. W., assignor.)
Gibbs, S. W., assignor of one-half to Gibbs Manufacturing Company, Canton, Ohio. Phonograph-stop. No. 883,190; Mar. 31; Sp. p. 5373; Dr. p. 1144; Gaz. vol. 133; p. 1009.
Gibbs, W. J. (See Brown and Gibbs.) (Reissue.)
Gibson, E., Dallas, Tex. Non-refillable bottle. No. 880,787; Mar. 3; Sp. p. 601; Dr. p. 128; Gaz. vol. 133; p. 104.
Gibson, F. W., West Roxbury, Mass., assignor to H. D. Beach Company, Coshocton, Ohio. Twine-holder. No. 882,244; Mar. 17; Sp. p. 3513; Dr. p. 746; Gaz. vol. 133; p. 634.
Gibson, F. W., West Roxbury, Mass., assignor to H. D. Beach Company, Coshocton, Ohio. Twine-holder. No. 882,245; Mar. 17; Sp. p. 3515; Dr. p. 746; Gaz. vol. 133; p. 634.
Gibson, W. H. (See Moberg, C. G., assignor.)
Gilbert, C. A., Haverhill, Mass. Upper-deflector for shoe-sewing machines. No. 881,569; Mar. 10; Sp. p. 2136; Dr. p. 466; Gaz. vol. 133; p. 388.
Gilbreath, W. D., Arapaho, Okla. Attachment for planters. No. 882,379; Mar. 17; Sp. p. 3767; Dr. pp. 803–4; Gaz. vol. 133; p. 679.
Gilbreth, F. B., assignor to Corrugated Concrete Pile Company of America, New York, N. Y. Means for sinking piles. No. 882,520; Mar. 17; Sp. p. 4032; Dr. p. 859; Gaz. vol. 133; p. 727.
Gill, E. R., Yonkers, N. Y., assignor to Electric Cash Carrier and Change Maker Company. Change-maker. No. 881,854; Mar. 10; Sp. p. 2699; Dr. pp. 578–82; Gaz. vol. 133; p. 480.
Gill, M. S. (See Wright and Gill.)
Gillen, A. P., Youngstown, Ohio. Casket-handle. No. 881,395; Mar. 10; Sp. p. 1806; Dr. p. 391; Gaz. vol. 133; p. 331.
Gillespie, R. T., Bloomfield, N. J. Adjustable cleaning-brush. No. 883,108; Mar. 24; Sp. p. 5185; Dr. p. 1107; Gaz. vol. 133; p. 951.
Gillett, G. F., San Francisco, Cal. Loose-leaf ledger. No. 881,396; Mar. 10; Sp. p. 1807; Dr. p. 391; Gaz. vol. 133; p. 332.
Gilligan, J. (See Wilson, C. H., assignor.)
Gillis, J. B., Eden, Md. Spike-puller. No. 882,380; Mar. 17; Sp. p. 3769; Dr. p. 804; Gaz. vol. 133; p. 680.
Gillmor, H. G., Bath, Me. Means of forming electrically-bonded rail-joints. No. 880,788; Mar. 3; Sp. p. 602; Dr. p. 128; Gaz. vol. 133; p. 104.
Gillmor, H. G., Bath, Me. Means of forming joints in electrical conductors. No. 880,789; Mar. 3; Sp. p. 604; Dr. p. 128; Gaz. vol. 133; p. 105.
Gilman, E. R., *et al.* (See Reynolds, H. S., assignor.)
Gilman, G. H., St. Paul, Minn. Grain-door for cars. No. 882,308; Mar. 17; Sp. p. 3646; Dr. p. 773; Gaz. vol. 133; p. 656.
Gilman, J. H., assignor to King & Hamilton Company, Ottawa, Ill. Flexible spout. No. 883,109; Mar. 24; Sp. p. 5188; Dr. pp. 1107–8; Gaz. vol. 133; p. 951.
Gilman, J. L., assignor of one-third to T. L. Strawn and W. E. Whitacre, Boulder, Colo. Method of and means for making mortise-joints. No. 882,001; Mar. 17; Sp. p. 3051; Dr. p. 649; Gaz. vol. 133; p. 528.
Ginaca, H. G., assignor of two-fifths to A. Gartenberg, Honolulu, Hawaii. Harvesting sugar-cane. No. 883,537; Mar. 31; Sp. p. 6108; Dr. p. 1299; Gaz. vol. 133; p. 1120.
Ginn, L. H., Atlanta, Ga., assignor of one-half to Clayton & Bentley Co. Planer-chuck. No. 882,943; Mar. 24; Sp. p. 4889; Dr. p. 1037; Gaz. vol. 133; p. 899.
Ginn, R. J. (See Hall, J. R., assignor.)
Giorgi, C. T., Florence, Italy. Gas-igniter. No. 881,235; Mar. 10; Sp. p. 1487; Dr. p. 320; Gaz. vol. 133; p. 280.
Giovanna, G., New York, N. Y. Apparatus for preparing extracts. No. 881,570; Mar. 10; Sp. p. 2138; Dr. p. 467; Gaz. vol. 133; p. 389.
Giulietti, E., Milan, Italy. Scene-shifting device. No. 883,193; Mar. 31; Sp. p. 5379; Dr. pp. 1145–6; Gaz. vol. 133; p. 1009.
Gladding, S. E., Jersey City, N. J. Padlock attachment. No. 880,520; Mar. 3; Sp. p. 55; Dr. p. 13; Gaz. vol. 133; p. 13.
Glascock, A. E., Washington, D. C., assignor, by mesne assignments, to Farm Motor Company. Traction-wheel. No. 883,010; Mar. 24; Sp. p. 5005; Dr. p. 1065; Gaz. vol. 133; p. 919.
Gleissner, W. E., Abilene, Kans. Brazing. No. 883,011; Mar. 24; Sp. p. 5008; Gaz. vol. 133; p. 919.
Glenck, W., Newark, N. J. Fire-alarm. No. 880,521; Mar. 3; Sp. p. 56; Dr. p. 13; Gaz. vol. 133; p. 13.
Glenn, G. G., Gastonia, N. C. Machine for reshaping bottle-caps. No. 882,060; Mar. 17; Sp. p. 3170; Dr. p. 674; Gaz. vol. 133; p. 576.
Glisch, J. (See Gates, J. P., assignor.)
Globe Machine & Stopper Company. (See Strebel, L., assignor.)
Goddard, H., Canton, Ohio. Casting-tool. No. 882,461; Mar. 17; Sp. p. 3905; Dr. p. 835; Gaz. vol. 133; p. 706.
Goddard, W. T., Victor, N. Y., assignor, by mesne assignments, to Garton-Daniels Company, Keokuk, Iowa. Lightning-arrester. No. 882,673; Mar. 24; Sp. p. 4340; Dr. p. 923; Gaz. vol. 133; p. 810.
Goddard, W. T., and J. S. Lapp, assignors to Locke Insulator Manufacturing Company, Victor, N. Y. Insulator. No. 883,397; Mar. 31; Sp. p. 5818; Dr. p. 1240; Gaz. vol. 133; p. 1076.
Godefroid, A., Berlin, Germany. Cash-register. No. 880,653; Mar. 3; Sp. p. 333; Dr. p. 72; Gaz. vol. 133; p. 58.
Goehst, J. H., Chicago, Ill. Implement for removing insulating-covering from electric-circuit wires. No. 880,790; Mar. 3; Sp. p. 607; Dr. p. 129; Gaz. vol. 133; p. 105.
Goff, F. C., Denver, Colo. Apparatus for treating animals. No. 883,132; Mar. 24; Sp. p. 5248; Dr. pp. 1126–1; Gaz. vol. 133; p. 959.
Goldberg Calculating Machine Company. (See Goldberg, H. E., assignor.)
Goldberg, H. E., Chicago, Ill., assignor to Goldberg Calculating Machine Company. Calculating-machine. No. 881,571; Mar. 10; Sp. p. 2140; Dr. pp. 467–8; Gaz. vol. 133; p. 389.
Goldberg, H. E., Chicago, Ill., assignor to Goldberg Calculating Machine Company. Calculating-machine. No. 881,572; Mar. 10; Sp. p. 2145; Dr. pp. 468–9; Gaz. vol. 133; p. 390.
Goldfaden, S., New York, N. Y. Stylus for talking-machines. No. 881,792; Mar. 10; Sp. p. 2573; Dr. p. 552; Gaz. vol. 133; p. 459.
Goldsboro, G. W., Tulsa, Okla. Marker attachment for planters. No. 882,462; Mar. 17; Sp. p. 3907; Dr. pp. 835–6; Gaz. vol. 133; p. 707.
Goldthwait, E., Elkhart, Ind. Coin-controlled brushing-machine. No. 880,876; Mar. 3; Sp. p. 807; Dr. p. 171; Gaz. vol. 133; p. 135.
Goodenough, C. E., Pierrepont Manor, N. Y. Trap-nest. No. 881,677; Mar. 10; Sp. p. 2355; Dr. p. 510; Gaz. vol. 133; p. 423.

Goodfellow, J., Vienna Cross Roads, Ohio. Press. No. 880,877; Mar. 3; Sp. p. 810; Dr. p. 172; Gaz. vol. 133; p. 135.
Goodwill, E. (See Baker, C. L., Sr., assignor.)
Goodwin, W. B., Columbus, Ohio. Brake-shoe. No. 882,107; Mar. 17; Sp. p. 3255; Dr. p. 692; Gaz. vol. 133; p. 502.
Gorham Manufacturing Company. (See Erichsen, A. C. E., assignor.)
Gosnell, C. B., and A. M. Harris, Keyser, W. Va. Brake-head. No. 883,012; Mar. 24; Sp. p. 5009; Dr. pp. 1065–6; Gaz. vol. 133; p. 920.
Goss, C. E. (See Goss, G. W. and C. E.)
Goss, G. W. and C. E., Baltimore, Ohio. Gate. No. 881,119; Mar. 10; Sp. p. 1251; Dr. p. 269; Gaz. vol. 133; p. 242.
Goss, G. W. and C. E., Baltimore, Ohio. Latch. No. 881,182; Mar. 10; Sp. p. 1374; Dr. p. 296; Gaz. vol. 133; p. 263.
Goss Printing Press Company. (See Husby, H. P., assignor.) (Reissue.)
Gouin, C. C., Paris, France. Flexible tire for vehicle-wheels. No. 883,398; Mar. 31; Sp. p. 5819; Dr. p. 1241; Gaz. vol. 133; p. 1076.
Gould Storage Battery Company. (See Chamberlain, R. N., assignor.)
Graaff & Compagnie, Ges. mit beschr. Haftung. Firm of W. (See Milkorey, H., assignor.)
Grace, F. A., Sharon, Pa. Vehicle or wagon brake. No. 880,791; Mar. 3; Sp. p. 610; Dr. p. 129; Gaz. vol. 133; p. 105.
Graf, A. (See Graf, O. and A.)
Graf, O. and A., Boehringen, near Radolfzell, Germany. Machine for stringing up tobacco-leaves. No. 881,573; Mar. 10; Sp. p. 2151; Dr. p. 469; Gaz. vol. 133; p. 390.
Graffenberger, F., Milwaukee, Wis. Convertible skate. No. 880,519; Mar. 3; Sp. p. 54; Dr. p. 13; Gaz. vol. 133; p. 12.
Graham, C. E. (See Bull, E. C., assignor.)
Graham, J. W., St. Louis, and C. A. Jones, Midland, Mo. Concrete ash-pit. No. 881,678; Mar. 10; Sp. p. 2357; Dr. p. 510; Gaz. vol. 133; p. 423.
Graham, L. C., Whigham, Ga. Dental-crown-swaging machine. No. 881,574; Mar. 10; Sp. p. 2152; Dr. p. 470; Gaz. vol. 133; p. 390.
Grahn, P. J., Boston, Mass. Return water-tank. No. 882,195; Mar. 17; Sp. p. 3426; Dr. p. 728; Gaz. vol. 133; p. 619.
Grann, O. T., Cadillac, Mich. Door-lock. No. 880,985; Mar. 3; Sp. p. 1000; Dr. p. 214; Gaz. vol. 133; p. 169.
Grant, D. D., Pittsfield, Mass. Trolley-wheel. No. 882,753; Mar. 24; Sp. p. 4499; Dr. p. 958; Gaz. vol. 133; p. 836.
Grasberger, L. B. (See Perkins, J. N., assignor.)
Graser, T. T., Rochester, N. Y. Toilet-roll-paper holder. No. 883,538; Mar. 31; Sp. p. 6109; Dr. pp. 1299–1300; Gaz. vol. 133; p. 1121.
Grasselli Chemical Company. (See Lithme, I. P., assignor.)
Grau, R. Z. de, Barcelona, Spain. Feed-water heater. No. 883,191; Mar. 31; Sp. p. 5376; Dr. p. 1144; Gaz. vol. 133; p. 1009.
Grauman, Beckman, and Brooks. (See Brooks, George H., assignor.)
Graves, C., Sandwich, Ill. Hay-loader. No. 881,397; Mar. 10; Sp. p. 1809; Dr. pp. 391–2; Gaz. vol. 133; p. 332.
Gray, A. G., St. John, New Brunswick, Canada. Vibrator. No. 883,013; Mar. 24; Sp. p. 5010; Dr. p. 1066; Gaz. vol. 133; p. 920.
Gray, C. A., assignor to B. W. Boxmeyer, Kansas City, Mo. Emergency-valve for sprinkler systems. No. 882,822; Mar. 24; Sp. p. 4628; Dr. p. 983; Gaz. vol. 133; p. 857.
Gray, H. (See Berry, C. M., assignor.)
Gray, J. W., Salt Lake City, Utah. Stiffening-cape for coat-collars. No. 882,674; Mar. 24; Sp. p. 4343; Dr. p. 924; Gaz. vol. 133; p. 810.
Gray, J. Y., Clanton, Ala. Harness-saddle. No. 883,192; Mar. 31; Sp. p. 5377; Dr. p. 1145; Gaz. vol. 133; p. 1009.
Gray, R. M., *et al.* (See Fowler, S. E., assignor.)
Gray, W., Rochester, N. Y. Watering-can. No. 880,522; Mar. 3; Sp. p. 57; Dr. p. 13; Gaz. vol. 133; p. 13.
Greeff, E. F., *et al.* (See Roeder, G. H., assignor.)
Green, D. S., St. Louis, Mo. Mail-bag catcher. No. 882,559; Mar. 24; Sp. p. 4110; Dr. p. 871; Gaz. vol. 133; p. 771.
Green, F. D., Florence, Ala., assignor of one-half to W. T. Adams, Corinth, Miss. Wood-molding machine. No. 881,793; Mar. 10; Sp. p. 2375; Dr. p. 553; Gaz. vol. 133; p. 459.
Green, T. J., Andalusia, Ala. Subsoil-plow. No. 880,729; Mar. 3; Sp. p. 477; Dr. p. 100; Gaz. vol. 133; p. 84.
Green, T. W., assignor to Wilbraham-Green Blower Company, Philadelphia, Pa. Boring and finishing device. No. 883,133; Mar. 24; Sp. p. 5250; Dr. pp. 1121–2; Gaz. vol. 133; p. 960.
Greene, J. H., High Point, N. C. Brush-handle. No. 880,996; Mar. 3; Sp. p. 1002; Dr. p. 214; Gaz. vol. 133; p. 170.
Greenleaf, L. A. (See Dudley, Greenleaf, and Dudley.)
Greiner, F., Berlin, assignor to Maschinenbau-Anstalt Altenessen A. G., Altenessen, Germany. Step-bearing. No. 882,061; Mar. 17; Sp. p. 3173; Dr. p. 675; Gaz. vol. 133; p. 577.
Greiner, F., Jersey City, N. J., assignor to Anderson & Prigge, New York, N. Y. Binder-frame. No. 882,880; Mar. 24; Sp. p. 4763; Dr. p. 1013; Gaz. vol. 133; p. 877.
Grenier, J. N., Boston, Mass. Skylight. No. 880,654; Mar. 3; Sp. p. 334; Dr. p. 73; Gaz. vol. 133; p. 59.
Grieser, R., assignor to Pollard-Alling Manufacturing Company, New York, N. Y. Feeding mechanism for reliefographs. No. 883,399; Mar. 31; Sp. p. 5821; Dr. pp. 1241–2; Gaz. vol. 133; p. 1076.
Grieser, R., assignor to Pollard-Alling Manufacturing Company, New York, N. Y. Die-carrier. No. 883,400; Mar. 31; Sp. p. 5826; Dr. p. 1242; Gaz. vol. 133; p. 1077.
Grieser, R., assignor to Pollard-Alling Manufacturing Company, New York, N. Y. Carriage-operating mechanism for reliefographs. No. 883,401; Mar. 31; Sp. p. 5828; Dr. p. 1242; Gaz. vol. 133; p. 1077.
Griesinger, J., assignor of one-half to W. F. Wismar, Los Angeles, Cal. Book. No. 881,794; Mar. 10; Sp. p. 2577; Dr. p. 553; Gaz. vol. 133; p. 459.
Griffeth, F. E., assignor to Griffeth Manufacturing Company, Athens, Ga. Device for attaching and detaching horses to and from vehicles. No. 883,134; Mar. 24; Sp. p. 5253; Dr. p. 1122; Gaz. vol. 133; p. 960.
Griffeth Manufacturing Company. (See Griffeth, F. E., assignor.)
Griffin, J. A., Olean, N. Y. Bottom for baskets or demijohns, &c. No. 881,919; Mar. 17; Sp. p. 2875; Dr. p. 613; Gaz. vol. 133; p. 531.
Griffith, S., assignor of one-half to P. C. Brooks, Beloit, Wis. Molder's apparatus. No. 882,923; Mar. 24; Sp. p. 4630; Dr. p. 987; Gaz. vol. 133; p. 858.
Grimmett, J. F. (See Singleton, J. E., assignor.)
Griggs, M. G., Atlanta, Ga. Educational appliance. No. 882,463; Mar. 17; Sp. p. 3908; Dr. p. 836; Gaz. vol. 133; p. 707.
Gros, H. C., Leipzig-Leutzsch, Germany. Fastening device. No. 881,679; Mar. 10; Sp. p. 2358; Dr. p. 510; Gaz. vol. 133; p. 424.
Grothe, L. O. (See Mitchell and Tomlyll, assignors.)
Grout, L. W., Springfield, Mass., assignor of one-half to W. Nicoll, Newark, N. J. Foot rest or guard for vehicles. No. 880,730; Mar. 3; Sp. p. 477; Dr. p. 101; Gaz. vol. 133; p. 84.
Grubbs, J. F., Oklahoma, Okla. Combination steam and water bath cabinet. No. 881,855; Mar. 10; Sp. p. 2716; Dr. p. 582; Gaz. vol. 133; p. 490.
Grützmann, P., Stettin, assignor to Nähmaschinen-und Fahrräder-Fabrik Bernhard Stoewer Actien-Gesellschaft, Stettin-Grünhoff, Germany. Type-writer. No. 881,795; Mar. 10; Sp. p. 2579; Dr. p. 554; Gaz. vol. 133; p. 460.
Guibbini, J. S., Benicia, Cal. Combined retort and shaker. No. 881,120; Mar. 10; Sp. p. 1252; Dr. p. 270; Gaz. vol. 133; p. 242.
Gulbransen, Dickinson Company. (See Freborg, C., assignor.)
Gülke, C., assignor to Maschinenfabrik Germania, vorm. J. S. Schwalbe & Sohn, Chemnitz, Germany. Apparatus for rinsing and air-ing casks. No. 881,575; Mar. 10; Sp. p. 2153; Dr. p. 470; Gaz. vol. 133; p. 391.
Gulzow, F. B., Flandreau, S. D. Concrete-mixer. No. 881,236; Mar. 10; Sp. p. 1489; Dr. pp. 320–1; Gaz. vol. 133; p. 281.
Gundorph, F., Portland, Oreg. Trolley-wire finder. No. 880,655; Mar. 3; Sp. p. 337; Dr. p. 73; Gaz. vol. 133; p. 59.
Gunnell, E., Manitowoc, Wis. Hose-coupling. No. 882,497; Mar. 17; Sp. p. 3963; Dr. p. 847; Gaz. vol. 133; p. 718.
Günsberger, J. (See Moskovits, Berkovits, and Günsberger.)
Gunter, W. S., Swedeburg, and C. E. Welton, Fairbury, Nebr. Announcing or station indicator for railways and street-cars. No. 882,675; Mar. 24; Sp. p. 4344; Dr. p. 924; Gaz. vol. 133; p. 810.
Gustafson, C. G. (See Thompson, B. D., assignor.)
Gustafson, G. A., Chicago, Ill. Furnace attachment. No. 880,656; Mar. 3; Sp. p. 338; Dr. pp. 73–4; Gaz. vol. 133; p. 59.
Guthrie, K. O., Brooklyn, N. Y. Sewer-mold. No. 883,194; Mar. 31; Sp. p. 5382; Dr. pp. 1146–7; Gaz. vol. 133; p. 1010.
Guyer, R. H., La Fayette, Ind. Cement column. No. 881,183; Mar. 10; Sp. p. 1375; Dr. p. 296; Gaz. vol. 133; p. 263.
H. D. Beach Company. (See Gibson, F. W., assignor.)
Haas, G. W., Los Angeles, assignor of one-half to M. B. Fowler, Pasadena, Cal. Attachment for chairs. No. 882,248; Mar. 17; Sp. p. 3519; Dr. p. 747; Gaz. vol. 133; p. 636.
Haas, P., Dayton, Ohio. Water-closet valve. No. 882,944; Mar. 24; Sp. p. 4892; Dr. p. 1038; Gaz. vol. 133; p. 899.
Haase, J., Fort Madison, Iowa. Valve-gear. No. 882,247; Mar. 17; Sp. p. 3518; Dr. p. 747; Gaz. vol. 133; p. 636.
Haase, L. G., Pasadena, Cal. Film-pack. No. 880,657; Mar. 3; Sp. p. 339; Dr. p. 74; Gaz. vol. 133; p. 59.
Hackett, S. B., Ray, Ind. Gate. No. 880,967; Mar. 3; Sp. p. 1003; Dr. pp. 214–15; Gaz. vol. 133; p. 170.
Hadaway, J. B., Brockton, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Stitch-separating machine. No. 880,792; Mar. 3; Sp. p. 611; Dr. pp. 129–30; Gaz. vol. 133; p. 106.
Hadean, A. B., Chicago, Ill. Pocket tobacco case and cutter. No. 881,920; Mar. 17; Sp. p. 2876; Dr. p. 613; Gaz. vol. 133; p. 531.
Haentze, A., Chicago, Ill. Mail-receiving case. No. 882,381; Mar. 17; Sp. p. 3770; Dr. p. 804; Gaz. vol. 133; p. 680.
Hagman, W. J., Philadelphia, Pa., assignor to Niles-Bement-Pond Company, Jersey City, N. J. Cylinder-boring machine. No. 883,459; Mar. 31; Sp. p. 5954; Dr. p. 1270; Gaz. vol. 133; p. 1097.
Hagstrom Bros. Manufacturing Co. (See Hagstrom, W., G., and E., assignors.)
Hagstrom Brothers Manufacturing Company. (See Hagstrom, E. and G., assignors.)
Hagstrom, E. (See Hagstrom, W., G., and E.)

Hagstrom, E. and G., assignors to Hagstrom Brothers Manufacturing Company, Lindsborg, Kans. Implement for severing brittle substances. No. 880,878; Mar. 3; Sp. p. 812; Dr. p. 172; Gaz. vol. 133; p. 136.
Hagstrom, G. (See Hagstrom, E. and G.)
Hagstrom, G. (See Hagstrom, W., G., and E.)
Hagstrom, W., G., and E., assignors to Hagstrom Bros. Manufacturing Co., Lindsborg, Kans. Cup attachment for augers. No. 881,856; Mar. 10; Sp. p. 2718; Dr. p. 583; Gaz. vol. 133; p. 481.
Hahn, H. H., Kenosha, Wis. Building monolithic walls. No. 882,196; Mar. 17; Sp. p. 3427; Dr. p. 728; Gaz. vol. 133; p. 620.
Haight, A. M., assignor to D. P. Vining, Jackson, Mich. Cement or concrete block mold. No. 882,249; Mar. 17; Sp. p. 3521; Dr. p. 747; Gaz. vol. 133; p. 636.
Haile, L. T., assignor of one-half to M. N. Weyl, W. A. Mackie, J. W. Shannon, F. J. Geiger, and L. W. Mulford, Philadelphia, Pa. Gramophone or other sound reproducing or recording machine. No. 880,879; Mar. 3; Sp. p. 813; Dr. p. 172; Gaz. vol. 133; p. 136.
Haile, L. T., assignor of one-fifth to M. N. Weyl and W. A. Mackie, one-fifth to J. W. Shannon, one-twentieth to F. J. Geiger, and one-twentieth to L. W. Mulford, Philadelphia, Pa. Gramophone. No. 883,135; Mar. 24; Sp. p. 5256; Dr. pp. 1122–3; Gaz. vol. 133; p. 960.
Haines, R. T., London, England. Speed-indicator. No. 882,382; Mar. 17; Sp. p. 3771; Dr. pp. 804–5; Gaz. vol. 133; p. 680.
Hainline, J. W., Great Bend, Kans. Tray attachment for blackboards. No. 883,402; Mar. 31; Sp. p. 5832; Dr. p. 1243; Gaz. vol. 133; p. 1078.
Haldane, W. G. (See Fleck, Haldane, and White.)
Haldenwang, R., Jr., New York, N. Y. Puzzle device. No. 882,464; Mar. 17; Sp. p. 3910; Dr. p. 836; Gaz. vol. 133; p. 707.
Hale, C. W., Springfield, Mass. Attachment for dental syringes. No. 881,469; Mar. 10; Sp. p. 1953; Dr. p. 425; Gaz. vol. 133; p. 355.
Hale, W. S. (See Walden, W. E., assignor.)
Haley, O. G., Kents Store, Va. Cider-press. No. 882,754; Mar. 24; Sp. p. 4500; Dr. pp. 958–9; Gaz. vol. 133; p. 836.
Hall, B. J., Barnes, England. Photographic-printing apparatus. No. 882,676; Mar. 24; Sp. p. 4348; Dr. p. 925; Gaz. vol. 133; p. 811.
Hall-Borchert Dress Form Co. (See Herman, R. L., assignor.)
Hall, C. C., Hellaire, Ohio. Transom-lifter. No. 880,988; Mar. 3; Sp. p. 1004; Dr. p. 215; Gaz. vol. 133; p. 170.
Hall, D., Norwood, Ohio, assignor to Bullock Electric Manufacturing Company. System of distribution. No. 883,195; Mar. 31; Sp. p. 5385; Dr. p. 1147; Gaz. vol. 133; p. 1010.
Hall, E. S., Water Witch, N. J. Bed. No. 881,071; Mar. 3; Sp. p. 1152; Dr. p. 250; Gaz. vol. 133; p. 197.
Hall, F. A. (See McIntosh, B., assignor.)
Hall, G. F., Jersey City, and B. Albertson, Mantoloking, N. J.; said Hall assignor, by mesne assignments, to said Albertson. Air-compressor. No. 880,731; Mar. 3; Sp. p. 481; Dr. pp. 101–2; Gaz. vol. 133; p. 84.
Hall, G. L., assignor to National Railway Materials Company, New York, N. Y. Rail-brace. No. 881,237; Mar. 10; Sp. p. 1490; Dr. p. 321; Gaz. vol. 133; p. 281.
Hall, J. R., Forest Grove, Oreg., assignor of one-half to R. J. Ginn, Longbeach, Cal. Cistern for water-closets. No. 881,680; Mar. 10; Sp. p. 2359; Dr. p. 511; Gaz. vol. 133; p. 424.
Hall, L., St. Paul, Minn. Refrigerator. No. 882,824; Mar. 24; Sp. p. 4633; Dr. p. 988; Gaz. vol. 133; p. 858.
Hall, S. F., La Fayette, Ind. Advertising appliance. No. 880,658; Mar. 3; Sp. p. 340; Dr. p. 74; Gaz. vol. 133; p. 60.
Hall Signal Company. (See Coleman, C. W., assignor.)
Hall Signal Company. (See Wilson, J. A., assignor.)
Hall, W., *et al.* (See Thomas, M. E., assignor.)
Halle, W., Union, N. J. Flying-machine. No. 881,184; Mar. 10; Sp. p. 1376; Dr. p. 297; Gaz. vol. 133; p. 264.
Halsey, E. R., South Orange, N. J. Driving mechanism. No. 880,732; Mar. 3; Sp. p. 484; Dr. pp. 102–3; Gaz. vol. 133; p. 85
Hamaker, W. D. (See Melvin, R. N., assignor.)
Hamblin, M. W., Milwaukee, Wis., assignor to American District Telegraph Company, New York, N. Y. Fire-alarm box. No. 882,250; Mar. 17; Sp. p. 3523; Dr. p. 748; Gaz. vol. 133; p. 636.
Hamel, C. F., and W. G. Vollmayer, Toledo, Ohio. Heel for boots or shoes. No. 881,921; Mar. 17; Sp. p. 2878; Dr. p. 613; Gaz. vol. 133; p. 532.
Hamilton, A. A., Pawnee City, Nebr. Animal-trap. No. 882,755; Mar. 24; Sp. p. 4501; Dr. p. 959; Gaz. vol. 133; p. 836.
Hamilton, H. M. (See Arndt and Hamilton.)
Hamilton, L. I., New Madrid, Mo. Seal-lock. No. 883,638; Mar. 31; Sp. p. 6300; Dr. p. 1344; Gaz. vol. 133; p. 1152.
Hamilton, W., Erie, Pa. Brake-beam hanger. No. 882,108; Mar. 17; Sp. p. 3257; Dr. p. 692; Gaz. vol. 133; p. 592.
Hammel, C. A., Los Angeles, Cal. Oil-burning steam-boiler. No. 882,756; Mar. 24; Sp. p. 4502; Dr. p. 959; Gaz. vol. 133; p. 836.
Hammergren, N. O., Portland, Oreg. Combined needle and tweezers. No. 880,659; Mar. 3; Sp. p. 342; Dr. p. 75; Gaz. vol. 133; p. 60.
Hampton, W. B., Fremont, Mo. Planter. No. 883,014; Mar. 24; Sp. p. 5011; Dr. pp. 1066–7; Gaz. vol. 133; p. 920.
Handlan, A. H., Jr., St. Louis, Mo. Combined base-ring and bracket for signal-lamps. No. 882,309; Mar. 17; Sp. p. 3647; Dr. p. 773; Gaz. vol. 133; p. 657.
Hanks, G. P., Wilkes-Barre, Pa. Air-brake attachment and tripping mechanism therefor. No. 881,796; Mar. 10; Sp. p. 2581; Dr. pp. 554–5; Gaz. vol. 133; p. 460.
Hanlon, G. V., Mountainair, N. Mex. Ter. Frame for tent-openings. No. 882,383; Mar. 17; Sp. p. 3773; Dr. p. 805; Gaz. vol. 133; p. 681.
Hanna, J. N., and D. K. Waugh, Ordway, Colo. Beet-topping machine. No. 882,465; Mar. 17; Sp. p. 3911; Dr. pp. 836–7; Gaz. vol. 133; p. 707.
Hansen, J. M., assignor to Forged Steel Wheel Company, Pittsburg, Pa. Making circular wrought-metal blanks. No. 881,398; Mar. 10; Sp. p. 1812; Dr. p. 392; Gaz. vol. 133; p. 332.
Hansen, J. M., assignor to Forged Steel Wheel Company, Pittsburg, Pa. Making circular wrought-metal blanks. No. 881,399; Mar. 10; Sp. p. 1814; Dr. p. 392; Gaz. vol. 133; p. 333.
Hansen, N. D., Fairfax, S. D. Loading apparatus. No. 882,384; Mar. 17; Sp. p. 3774; Dr. pp. 805–6; Gaz. vol. 133; p. 681.
Hansen, V., Sparks, Nev. Attachment for shirts. No. 883,639; Mar. 31; Sp. p. 6301; Dr. p. 1344; Gaz. vol. 133; p. 1152.
Hansen, W. L., and A. Hayes, Coalville, Utah. Drop-axle for tilting platforms. No. 881,316; Mar. 10; Sp. p. 1648; Dr. p. 353; Gaz. vol. 133; p. 307.
Hanses, F., assignor of three-fourths to H. P. and F. Decker and R. A. Eastman, Chicago, Ill. Machine for turning irregular objects. No. 882,632; Mar. 24; Sp. p. 4260; Dr. pp. 902–3; Gaz. vol. 133; p. 796.
Hanson & Van Winkle Company. (See King, W. R., assignor.)
Hanssen, C. J. A., assignor to A. Winge, Christiania, Norway. Balcony fire-escape. No. 882,677; Mar. 24; Sp. p. 4349; Dr. p. 925; Gaz. vol. 133; p. 811.
Hardacre, J. H. (See Rushton, Hopper, and Hardacre.)
Hardin, L. J., Sherman, Ill. Shoe-polisher. No. 882,197; Mar. 17; Sp. p. 3428; Dr. p. 729; Gaz. vol. 133; p. 620.
Hardin, S. J., and B. F. Norcross, Beatrice, Nebr. Soil-pulverizer. No. 881,681; Mar. 10; Sp. p. 2360; Dr. p. 511; Gaz. vol. 133; p. 424.
Hardman, Peck & Co. (See Hattemer and Kuhle, assignors.)
Hardman, Peck & Company. (See Kuhle, A., assignor.)
Hardsocg, M., Ottumwa, Iowa. Pneumatic and other drill. No. 880,880; Mar. 3; Sp. p. 815; Dr. p. 173; Gaz. vol. 133; p. 136.
Hardsocg, M., Ottumwa, Iowa. Pneumatic and other drill. No. 880,881; Mar. 3; Sp. p. 817; Dr. p. 173; Gaz vol. 133; p. 137.
Hardy, A. W., May, Tex. Milking apparatus. No. 881,922; Mar. 17; Sp. p. 2879; Dr. p. 614; Gaz. vol. 133; p. 532.
Hardy, C. A., Chicago, Ill. Disk plow. No. 881,797; Mar. 10; Sp. p. 2583; Dr. p. 555; Gaz. vol. 133; p. 461.
Harman, E. B., and L. Taylor, assignors of one-third to G. D. Melkiejohn, Fullerton, Nebr. Corn-husking machine. No. 882,466; Mar. 17; Sp. p. 3915; Dr. pp. 837–8; Gaz. vol. 133; p. 708.
Harkness, C., Providence, R. I., assignor, by mesne assignments, to United Traction Improvement Company. Trolley. No. 881,470; Mar. 10; Sp. p. 1954; Dr. p. 425; Gaz. vol. 133; p. 355.
Harmuth, A. (See Eschellmann and Harmuth.) (Reissue.)
Harp, W. L., Galax, Va. Indexed book. No. 883,460; Mar. 31; Sp. p. 5956; Dr. pp. 1270–1; Gaz. vol. 133; p. 1098.
Harpster, J. M., Ironwood, Mich. Combined step and extension ladder. No. 881,400; Mar. 10; Sp. p. 1815; Dr. p. 393; Gaz. vol. 133; p. 333.
Harrington, C. G., Maplewood, assignor to American Car & Foundry Company, St. Louis, Mo. Door-operating mechanism. No. 881,576; Mar. 10; Sp. p. 2155; Dr. p. 470; Gaz. vol. 133; p. 391.
Harrington, C. G., Maplewood, assignor to American Car & Foundry Company, St. Louis, Mo. Door-operating mechanism for cars. No. 881,857; Mar. 10; Sp. p. 2719; Dr. p. 583; Gaz. vol. 133; p. 481.
Harris, A. M. (See Gosnell and Harris.)
Harris Automatic Press Company. (See Harris, C. G., assignor.)
Harris, C. G., assignor to Harris Automatic Press Company, Niles, Ohio. Means for securing sheets or blankets to printing-press cylinders. No. 880,523; Mar. 3; Sp. p. 58; Dr. p. 14; Gaz. vol. 133; p. 13.
Harris, C. W., Hawkinsville, Ga. Cane cutter and crusher. No. 880,989; Mar. 3; Sp. p. 1005; Dr. p. 215; Gaz. vol. 133; p. 171.
Harris, F. E. L., Alderley Edge, England. Apparatus for cleaning large panes of glass. No. 880,660; Mar. 3; Sp. p. 343; Dr. p. 75; Gaz. vol. 133; p. 60.
Harris, J. C., *et al.* (See Taylor, J. T., assignor.)
Harris, J. P., Cleveland, Ohio. Mantle-support and protecting same. No. 881,577; Mar. 10; Sp. p. 2157; Dr. p. 471; Gaz. vol. 133; p. 392.
Harris, R. A., Tucson, Ariz. Ter. Building-block and manner of assembling. No. 882,633; Mar. 24; Sp. p. 4263; Dr. p. 903; Gaz. vol. 133; p. 797.

Harris, V. E., Way Cross, Ga. Heel-support for shoes. No. 882,109; Mar. 17; Sp. p. 3259; Dr. p. 663; Gaz. vol. 133; p. 593.
Harris, W. W., Winthrop, assignor to J. S. Wilson, Chelsea, Mass. Flexible tube. No. 880,882; Mar. 3; Sp. p. 818; Dr. p. 173; Gaz. vol. 133; p. 137.
Harrison, E. J., South Bend, Ind. Trolley-harp. No. 883,310; Mar. 31; Sp. p. 5628; Dr. p. 1200; Gaz. vol. 133; p. 1048.
Harrison, G. E., and G. Burns, Detroit, Mich. Shield for the use of linemen. No. 881,682; Mar. 10; Sp. p. 2361; Dr. p. 512; Gaz. vol. 133; p. 424.
Harrison Safety Boiler Works. (See Sibson, H. E., assignor.)
Harry, O. K., St. Louis, Mo., assignor to O. K. Harry Steel Co. Steel tank. No. 882,678; Mar. 24; Sp. p. 4350; Dr. p. 925; Gaz. vol. 133; p. 811.
Hart, D. A., Attleboro, Mass. Collar-button. No. 882,062; Mar. 17; Sp. p. 3173; Dr. p. 675; Gaz. vol. 133; p. 577.
Hartenstein, H. L., Constantine, Mich., assignor, by mesne assignments, to Continental Investment Company, Duluth, Minn. Electric furnace. No. 883,110; Mar. 24; Sp. p. 5191; Dr. pp. 1108–9; Gaz. vol. 133; p. 952.
Harter, N. S., Waukegan, assignor to American Steel & Wire Company, Chicago, Ill. Machine for the manufacture of coiled springs. No. 882,385; Mar. 17; Sp. p. 3776; Dr. pp. 806–7; Gaz. vol. 133; p. 681.
Hartie, E. G., Columbus, Ohio. Axle. No. 880,990; Mar. 3; Sp. p. 1006; Dr. p. 216; Gaz. vol. 133; p. 171.
Hartman, E., Houston, assignor of eighty-five one-hundredths to L. C. Hill, Brownsville, Tex. Machine for disintegrating fibrous plants. No. 880,661; Mar. 3; Sp. p. 343; Dr. pp. 75–6; Gaz. vol. 133; p. 60.
Harton, J. A. G., New York, N. Y. Guide-plate for correction-type. No. 880,883; Mar. 3; Sp. p. 819; Dr. p. 173; Gaz. vol. 133; p. 137.
Harvey, G. B., *et al.* (See Baker, J. D., assignor.)
Hasbrouck, S., Providence, R. I. Insufflator. No. 881,238; Mar. 10; Sp. p. 1492; Dr. p. 321; Gaz. vol. 133; p. 281.
Haskins, G. W., New York, assignor to A. A. Low, Horseshoe, N. Y. Cutting implement. No. 881,578; Mar. 10; Sp. p. 2159; Dr. p. 471; Gaz. vol. 133; p. 392.
Haslett, J. W., Washington, D. C. Toy. No. 880,793; Mar. 3; Sp. p. 614; Dr. p. 130; Gaz. vol. 133; p. 106.
Hassel, J. M. von, Lima, Peru. Testing apparatus. No. 880,991; Mar. 3; Sp. p. 1007; Dr. p. 216; Gaz. vol. 133; p. 171.
Hastings, D., and A. W. Brink, Oklahoma, Okla. Cooling gas and separating gasolene therefrom. No. 883,640; Mar. 31; Sp. p. 6302; Dr. pp. 1344–5; Gaz. vol. 133; p. 1152.
Hatfield, L. T., Sacramento, Cal. Electrical socket-seal. No. 881,683; Mar. 10; Sp. p. 2362; Dr. p. 512; Gaz. vol. 133; p. 424.
Hathway, F. J., Chicago, Ill. Device for recovering submerged logs. No. 882,310; Mar. 17; Sp. p. 3648; Dr. p. 774; Gaz. vol. 133; p. 657.
Hattemer, J., and A. Kuhle, West New York, N. J., assignors to Hardman, Peck & Co. Tracker-bar. No. 881,317; Mar. 10; Sp. p. 1648; Dr. p. 353; Gaz. vol. 133; p. 307.
Hatton, F., Portersville, Cal. Tire-remover. No. 882,396; Mar. 17; Sp. p. 3780; Dr. p. 807; Gaz. vol. 133; p. 682.
Haugh, J. A., Colusa, Cal. Box-fastener. No. 882,881; Mar. 24; Sp. p. 4765; Dr. p. 1013; Gaz. vol. 133; p. 877.
Hauphoff, E., Dusseldorf, Germany. Washable covering for pillows, feather-beds, quilts, and the like. No. 880,524; Mar. 3; Sp. p. 60; Dr. p. 14; Gaz. vol. 133; p. 14.
Hausstein, W. F., Lyndhurst, assignor to Keuffel & Esser Company, Hoboken, N. J. Calculating-machine. No. 882,387; Mar. 17; Sp. p. 3781; Dr. p. 807; Gaz. vol. 133; p. 682.
Hausstein, W. F., Lyndhurst, assignor to Keuffel & Esser Company, Hoboken, N. J. Calculating-machine. No. 882,560; Mar. 24; Sp. p. 4111; Dr. p. 872; Gaz. vol. 133; p. 772.
Hausstein, W. F., Lyndhurst, assignor to Keuffel & Esser Company, Hoboken, N. J. Calculating-machine. No. 882,679; Mar. 24; Sp. p. 4351; Dr. p. 926; Gaz. vol. 133; p. 812.
Hausstein, W. F., Lyndhurst, assignor to Keuffel & Esser Company, Hoboken, N. J. Calculating-machine. No. 882,680; Mar. 24; Sp. p. 4352; Dr. p. 926; Gaz. vol. 133; p. 812.
Hausstein, W. F., Lyndhurst, assignor to Keuffel & Esser Company, Hoboken, N. J. Calculating-machine. No. 883,403; Mar. 31; Sp. p. 5833; Dr. pp. 1243–4; Gaz. vol. 133; p. 1079.
Havens, R. M. (See Garland, W. H., assignor.)
Hawekotte, H. G., and H. W. Klausmann, Indianapolis, Ind. Electromagnetic toy engine. No. 882,681; Mar. 24; Sp. p. 4355; Dr. p. 927; Gaz. vol. 133; p. 813.
Hawley C. T., assignor to Simplex Time Recorder Company, Gardner, Mass. Workman's time-recorder. (Reissue.) No. 12,761; Mar. 10; Sp. p. 2789; Dr. pp. 598–9; Gaz. vol. 133; p. 493.
Hawthorne & Sheble Manufacturing Company. (See Kraemer, T., assignor.)
Hayden, E. E., Washington, D. C. Automatic electric fire-alarm signal. No. 880,662; Mar. 3; Sp. p. 346; Dr. p. 76; Gaz. vol. 133; p. 61.
Hayden, W. B., New York, N. Y. Spark-plug. No. 881,684; Mar. 10; Sp. p. 2363; Dr. p. 512; Gaz. vol. 133; p. 424.
Hayes, A. (See Hansen and Hayes.)
Hayes, J. F., Broad Brook, Conn. Dump-wagon. No. 880,733; Mar. 3; Sp. p. 494; Dr. p. 103; Gaz. vol. 133; p. 85.
Hayes, J. N., Dallas City, Pa. Fence-post. No. 880,992; Mar. 3; Sp. p. 1008; Dr. p. 216; Gaz. vol. 133; p. 171.
Hayes Pump and Planter Company. (See Hayes, R. W. E., assignor.)
Hayes, R. W. E., assignor of one-half to Hayes Pump & Planter Company, Galva, Ill. Drag-bar for cultivators. No. 881,858; Mar. 10; Sp. p. 2722; Dr. p. 583; Gaz. vol. 133; p. 462.
Haynes, D., Atlanta, Ga. Mattress-making machine. No. 883,015; Mar. 24; Sp. p. 5017; Dr. p. 1067; Gaz. vol. 133; p. 921.
Haynes, K. (See O'Dell and Haynes.)
Haynes, L. C., Boston, Mass. Spring for vehicles. No. 880,884; Mar. 3; Sp. p. 820; Dr. p. 174; Gaz. vol. 133; p. 137.
Hazzard, F. H. (See Hazzard, W. H., assignor.)
Hazzard, W. H., Easton, Pa., assignor of one-half to F. H. Hazzard, New York, N. Y. Trestle. No. 880,525; Mar. 3; Sp. p. 60; Dr. p. 14; Gaz. vol. 133; p. 14.
Heald, I. A., Washington, D. C. Cigar and cigarette holder. No. 882,825; Mar. 24; Sp. p. 4635; Dr. p. 988; Gaz. vol. 133; p. 859.
Hedlund, P. J., Stockholm, Sweden. Steam-turbine. No. 883,404; Mar. 31; Sp. p. 5836; Dr. p. 1244; Gaz. vol. 133; p. 1079.
Hecht, J. L., Davenport, Iowa, assignor to Davenport Wagon Company. Hook for swingletrees or neck-yokes. No. 880,734; Mar. 3; Sp. p. 496; Dr. p. 103; Gaz. vol. 133; p. 86.
Heck, A. C., Findlay, Ohio. Sectional conveyer-frame for excavating-machines. No. 883,016; Mar. 24; Sp. p. 5019; Dr. p. 1067; Gaz. vol. 133; p. 921.
Heck, A. C., Findlay, Ohio. Ditching-wheel. No. 883,017; Mar. 24; Sp. p. 5021; Dr. p. 1068; Gaz. vol. 133; p. 921.
Heeter, C. M., Butler, Pa. Jar for drilling wells. No. 881,923; Mar. 17; Sp. p. 2880; Dr. p. 614; Gaz. vol. 133; p. 532.
Hegyi, G., Los Angeles, Cal. Cleaning compound. No. 881,859; Mar. 10; Sp. p. 2724; Gaz. vol. 133; p. 482.
Heinrich, S. J., Bellevue, assignor to American Electric Alarm Company, Pittsburg, Pa. Annunciator. No. 883,539; Mar. 31; Sp. p. 6111; Dr. p. 1300; Gaz. vol. 133; p. 1121.
Heinze, J. O., Jr., Lowell, Mass. Induction-coil. No. 882,198; Mar. 17; Sp. p. 3429; Dr. p. 729; Gaz. vol. 133; p. 620.
Heisenberger, J., assignor to Automatic Utilities Company, New York, N. Y. Safety-razor. No. 880,735; Mar. 3; Sp. p. 497; Dr. p. 103; Gaz. vol. 133; p. 86.
Helander, H. A. B., St. Louis, Mo. Gas-burner. No. 883,196; Mar. 31; Sp. p. 5392; Dr. p. 1148; Gaz. vol. 133; p. 1011.
Heibling, A. F., Philadelphia, Pa. Locomotive-boiler. No. 881,072; Mar. 3; Sp. p. 1161; Dr. p. 251; Gaz. vol. 133; p. 197.
Held, R., Randolph, Mo. Oil-grate. No. 882,634; Mar. 24; Sp. p. 4264; Dr. p. 903; Gaz. vol. 133; p. 797.
Hele-Shaw, H. S., London, England. Vehicle. No. 880,526; Mar. 3; Sp. p. 62; Dr. pp. 14–16; Gaz. vol. 133; p. 14.
Hellman, H., and L. C. Bayles, Johannesburg, Transvaal. Water-supplying attachment for rock-drills. No. 881,579; Mar. 10; Sp. p. 2160; Dr. p. 471; Gaz. vol. 133; p. 392.
Helvig, G. O., Dawson, Minn. Car-door. No. 881,798; Mar. 10; Sp. p. 2586; Dr. pp. 555–6; Gaz. vol. 133; p. 461.
Hendee, E. T. (See Matheus and Hendee.)
Hengst, G. W. (See Eastwood, A. S., assignor.)
Henrich, C. W., assignor of two-thirds to C. H. Bredin and H. E. Kenny, Detroit, Mich. Graphophone-clock. No. 883,111; Mar. 24; Sp. p. 5194; Dr. pp. 1109–10; Gaz. vol. 133; p. 952.
Henrichs, H. R., Woodward, Okla. Breast-strap connection. No. 880,794; Mar. 3; Sp. p. 615; Dr. p. 130; Gaz. vol. 133; p. 106.
Henry, J. L., Watsonville, Cal. Water-bicycle. No. 883,018; Mar. 24; Sp. p. 5022; Dr. p. 1068; Gaz. vol. 133; p. 922.
Henry, M., Terre Haute, Ind. Scissors-sharpener. No. 883,019; Mar. 24; Sp. p. 5023; Dr. p. 1069; Gaz. vol. 133; p. 922.
Henry, R., Forney, Tex. Cotton-chopper. No. 882,757; Mar. 24; Sp. p. 4504; Dr. p. 900; Gaz. vol. 133; p. 837.
Henry & S. G. Lindeman. (See Thumler, R. K., assignor.)
Henry W. Price Co. (See Newman, A., assignor.)
Henson, W. M., Kansas City, Mo. Kitchen-cabinet. No. 880,885; Mar. 3; Sp. p. 821; Dr. p. 174; Gaz. vol. 133; p. 138.
Henzel, J. G., Chicago, Ill. Fish-hook. No. 882,882; Mar. 24; Sp. p. 4766; Dr. p. 1014; Gaz. vol. 133; p. 877.
Hepburn, L. L., assignor to Marlin Fire Arms Company, New Haven, Conn. Repeating firearm. No. 882,561; Mar. 24; Sp. p. 4113; Dr. pp. 872–3; Gaz. vol. 133; p. 772.
Hepburn, L. L., assignor to Marlin Fire Arms Company, New Haven, Conn. Repeating firearm. No. 882,562; Mar. 24; Sp. p. 4117; Dr. p. 873; Gaz. vol. 133; p. 772.
Hepburn, L. L., assignor to Marlin Firearms Company, New Haven, Conn. Repeating firearm. No. 882,563; Mar. 24; Sp. p. 4118; Dr. p. 873; Gaz. vol. 133; p. 773.
Hepburn, L. L., assignor to Marlin Firearms Company, New Haven, Conn. Repeating firearm. No. 883,020; Mar. 24; Sp. p. 5025; Dr. p. 1069; Gaz. vol. 133; p. 922.
Hepp, J., Shively, Ky. Digger. No. 880,527; Mar. 3; Sp. p. 68; Dr. p. 16; Gaz. vol. 133; p. 15.

Herbeck, F., Orange, Mass. Door latch and lock. No. 881,860; Mar. 10; Sp. p. 2725; Dr. pp. 583–4; Gaz. vol. 133; p. 482.
Hercules Electric & Mfg. Co. (See Dinkins, J. M., assignor.)
Herkenhoff, A. L., Minster, Ohio. Friction-clutch. No. 880,528; Mar. 3; Sp. p. 68; Dr. p. 16; Gaz. vol. 133; p. 15.
Herman, R. L., assignor to Hall-Borchert Dress Form Co., New York, N. Y. Marking device. No. 882,199; Mar. 17; Sp. p. 3431; Dr. p. 729; Gaz. vol. 133; p. 620.
Herndon, C., Wagoner, Okla. Combination rat-trap and bucket. No. 881,401; Mar. 10; Sp. p. 1817; Dr. p. 393; Gaz. vol. 133; p. 333.
Herndon, C., Wagoner, Okla. Railway joint-chair. No. 882,200; Mar. 17; Sp. p. 3432; Dr. p. 729; Gaz. vol. 133; p. 621.
Herring-Hall-Marvin Safe Company. (See Schultz, W. F., assignor.)
Herrmann, G., Fort Smith, Ark. Sandpapering-machine. No. 880,663; Mar. 3; Sp. p. 347; Dr. pp. 76–7; Gaz. vol. 133; p. 61.
Herron, J. M., East Orange, N. J., assignor, by mesne assignments, to Ceylon Cocoa & Coffee Company. Sorting cocoa-beans. No. 881,861; Mar. 10; Sp. p. 2727; Dr. p. 584; Gaz. vol. 133; p. 482.
Hess, H. K., Philadelphia, Pa. Recovering copper from ore or matte by electrolysis. No. 881,580; Mar. 10; Sp. p. 2162; Dr. p. 472; Gaz. vol. 133; p. 393.
Hessemer, A., Brooklyn, N. Y. Car-fender. No. 881,581; Mar. 10; Sp. p. 2163; Dr. p. 472; Gaz. vol. 133; p. 393.
Hestness, B., assignor of one-half to I. J. Blåkkan, Rockford, Wash. Toy gun. No. 883,197; Mar. 31; Sp. p. 5393; Dr. p. 1148; Gaz. vol. 133; p. 1011.
Hettinger, H. A., Bridgeton, N. J. Gas-engine. No. 881,582; Mar. 10; Sp. p. 2165; Dr. p. 472; Gaz. vol. 133; p. 393.
Hettinger, H. A., Bridgeton, N. J. Derrick. No. 882,311; Mar. 17; Sp. p. 3651; Dr. p. 774; Gaz. vol. 133; p. 657.
Hewitt, E. G., Ringwood Manor, Pompton township, Passaic county, N. J. Picture-frame. No. 881,073; Mar. 3; Sp. p. 1164; Dr. p. 251; Gaz. vol. 133; p. 198.
Hewlett, E. M., Schenectady, N. Y., assignor to General Electric Company. Electric heater. No. 882,564; Mar. 24; Sp. p. 4119; Dr. p. 874; Gaz. vol. 133; p. 773.
Heyartz, P. (See Völker, P., assignor.)
Heyenga, M. W., Chicago, Ill. Running-gear. No. 882,826; Mar. 24; Sp. p. 4637; Dr. pp. 988–9; Gaz. vol. 133; p. 859.
Heyland, A., Brussels, Belgium. Commutator for polyphase currents. No. 882,682; Mar. 24; Sp. p. 4356; Dr. pp. 927–8; Gaz. vol. 133; p. 813.
Heynau, H., Dotzheim, near Wiesbaden, Germany. Thoroughfare tap-holder. No. 880,529; Mar. 3; Sp. p. 70; Dr. p. 17; Gaz. vol. 133; p. 15.
Heywood, C. H., and D. E. Travis, Waukegan, Ill., assignors to United States Envelope Co., Springfield, Mass. Delivery mechanism for envelop and similar machines. No. 880,795; Mar. 3; Sp. p. 617; Dr. p. 130; Gaz. vol. 133; p. 107.
Hibbard, J. M., Oregon, Mo. Safety-stirrup. No. 882,683; Mar. 24; Sp. p. 4360; Dr. p. 928; Gaz. vol. 133; p. 813.
Hibner, P. D., Seattle, Wash. Railway-switch. No. 881,799; Mar. 10; Sp. p. 2588; Dr. p. 556; Gaz. vol. 133; p. 462.
Hickey, F. J. (See Woodall, G., assignor.)
Hickey, N. P. (See Meyer and Hickey.)
Hicks, E. J., assignor to R. L. Hicks, Indianapolis, Ind. Combined saw jointer and gage. No. 883,641; Mar. 31; Sp. p. 6303; Dr. p. 1345; Gaz. vol. 133; p. 1152.
Hicks, J. W., *et al.* (See Cumming, W. O., assignor.)
Hicks, L. (See Linville and Hicks.)
Hicks, R. C., *et al.* (See Cumming, W. O., assignor.)
Hicks, R. L. (See Hicks, E. J., assignor.)
Higgins, E. E., St. Paul, and H. L. McCoy, Minneapolis, Minn. Colander. No. 881,924; Mar. 17; Sp. p. 2881; Dr. p. 614; Gaz. vol. 133; p. 532.
Hight, A. W., Ballard, Wash., assignor to H. G. Monen, Toledo, Ohio. Spirit-level. No. 883,642; Mar. 31; Sp. p. 6305; Dr. p. 1345; Gaz. vol. 133; p. 1153.
Hildreth, H. L. (See Robinson and Deiter, assignors.)
Hill, A. M., New Haven, Conn., assignor to C. U. Ely, Brooklyn, N. Y. Anode. No. 882,110; Mar. 17; Sp. p. 3260; Dr. p. 693; Gaz. vol. 133; p. 593.
Hill, H. L. (See Wright, A. N., assignor.)
Hill, L. C. (See Hartman, E., assignor.)
Hill, T. A., Bivins, Tex. Mail-holder. No. 883,198; Mar. 31; Sp. p. 5395; Dr. p. 1148; Gaz. vol. 133; p. 1011.
Hilliard, J. D., Jr., and C. E. Parsons, Glens Falls, N. Y. Electric oil-switch. No. 882,388; Mar. 17; Sp. p. 3783; Dr. p. 808; Gaz. vol. 133; p. 682.
Hilliard, W. J., Elmira, N. Y. Friction-clutch. No. 880,664; Mar. 3; Sp. p. 349; Dr. p. 77; Gaz. vol. 133; p. 61.
Hillier, H. H., Pasadena, Cal. Fire-alarm system. No. 882,758; Mar. 24; Sp. p. 4505; Dr. pp. 960–1; Gaz. vol. 133; p. 837.
Hilliman, J. H., Pittsburg, Pa. Manufacture of coke. No. 881,685; Mar. 10; Sp. p. 2365; Dr. p. 512; Gaz. vol. 133; p. 425.
Hills, W. J., Waterford, Pa. Window-sash fastener. No. 880,530; Mar. 3; Sp. p. 71; Dr. p. 17; Gaz. vol. 133; p. 15.
Hillson, W. E., Crandon, Wis. Wave-motor. No. 882,883; Mar. 24; Sp. p. 4767; Dr. p. 1014; Gaz. vol. 133; p. 878.
Hinde, H. J., assignor to Toledo Machine & Tool Company, Toledo, Ohio. Drawing-press. No. 883,021; Mar. 24; Sp. p. 5029; Dr. p. 1070; Gaz. vol. 133; p. 923.
Hine, C. L., Tuscola, Ill. Nut-lock. No. 882,389; Mar. 17; Sp. p. 3786; Dr. p. 808; Gaz. vol. 133; p. 683.
Hiorth, K. A. F., Christiania, Norway. Electrical smelting-furnace. No. 883,311; Mar. 31; Sp. p. 5629; Dr. p. 1200; Gaz. vol. 133; p. 1048.
Hirsh, H. M. (See Hirsh, J. F. and H. M.)
Hirsh, J. F. and H. M., St. Louis, Mo. Sound-muffler. No. 882,684; Mar. 24; Sp. p. 4361; Dr. p. 928; Gaz. vol. 133; p. 814.
Hitchcock, S. A. (See Anderson, J. A. E., assignor.)
Hoadley, S., Gosport, Ind. Electric switch. No. 881,686; Mar. 10; Sp. p. 2366; Dr. p. 513; Gaz. vol. 133; p. 425.
Hodgins, B. M., Colorado Springs, Colo. Evaporator-cooler. No. 881,121; Mar. 10; Sp. p. 1253; Dr. p. 270; Gaz. vol. 133; p. 243.
Hodgkins, C. H., Attleboro, Mass. Jewelry-polishing device. No. 881,583; Mar. 10; Sp. p. 2168; Dr. p. 473; Gaz. vol. 133; p. 394.
Hodgkins, F. H., Chicago, Ill. Speed mechanism. No. 881,122; Mar. 10; Sp. p. 1254; Dr. p. 271; Gaz. vol. 133; p. 243.
Hodgkinson, E. H., London, England. Belt, rope, or chain gearing. No. 882,635; Mar. 24; Sp. p. 4265; Dr. p. 904; Gaz. vol. 133; p. 797.
Hodgson, E. (See Hodgson, T. A., assignor.)
Hodgson, E. G., assignor of one-half to W. Dean, Middletown, Conn. Puzzle. No. 880,993; Mar. 3; Sp. p. 1009; Dr. p. 217; Gaz. vol. 133; p. 172.
Hodgson, J. G., Sr., *et al.* (See Owen and Brooks, assignors.)
Hodgson, T. A., assignor to E. Hodgson, Ottawa, Ontario, Canada. Window frame and sash. No. 881,239; Mar. 10; Sp. p. 1494; Dr. p. 322; Gaz. vol. 133; p. 282.
Hoe, R. (See Church, G. W., assignor.)
Hoefftcke, C. A., London, England. Apparatus for facilitating the putting on of india-rubber gloves. No. 882,312; Mar. 17; Sp. p. 3652; Dr. p. 775; Gaz. vol. 133; p. 658.
Hoellig, J., and M. Lidster, Los Angeles, Cal. Hollow built-up material for wooden structures. No. 881,074; Mar. 3; Sp. p. 1165; Dr. p. 251; Gaz. vol. 133; p. 198.
Hoepner, G., Chicago, Ill. Weighing-machine. No. 883,540; Mar. 31; Sp. p. 6113; Dr. p. 1300–1; Gaz. vol. 133; p. 1122.
Hofe, G. D. von, New York, N. Y. Machine for cutting pile designs on fabrics. No. 882,313; Mar. 17; Sp. p. 3654; Dr. p. 775; Gaz. vol. 133; p. 658.
Hoffman, R. J., Bradford, Pa. Cylinder or tube. No. 881,584; Mar. 10; Sp. p. 2170; Dr. p. 473; Gaz. vol. 133; p. 394.
Hoffman, V. (See Barna and Hoffman.)
Hoffmann, E. G., New Rochelle, N. Y. Manufacturing and assembling ball-bearings. No. 881,471; Mar. 10; Sp. p. 1958; Dr. p. 426; Gaz. vol. 133; p. 356.
Hoffner, L. B., assignor of one-half to R. D. Work, Philadelphia, Pa. Valve. No. 881,687; Mar. 10; Sp. p. 2369; Dr. p. 513; Gaz. vol. 133; p. 425.
Hofheimer, M., New York, N. Y. Coin-controlled machine. No. 881,688; Mar. 10; Sp. p. 2371; Dr. pp. 513–14; Gaz. vol. 133; p. 426.
Hofschneider, L., Hoboken, N. J. Sleeping-car. No. 881,123; Mar. 10; Sp. p. 1258; Dr. pp. 271–2; Gaz. vol. 133; p. 243.
Hoglund, B. A., New York, N. Y. Automatic musical instrument. No. 881,318; Mar. 10; Sp. p. 1650; Dr. p. 354; Gaz. vol. 133; p. 308.
Hoglund, B. A., New York, N. Y. Motor for music-rolls of pneumatic musical instruments. No. 881,402; Mar. 10; Sp. p. 1818; Dr. p. 363; Gaz. vol. 133; p. 333.
Hoglund, B. A., New York, N. Y. Pneumatic action for mechanical musical instruments. No. 881,403; Mar. 10; Sp. p. 1820; Dr. p. 364; Gaz. vol. 133; p. 334.
Hogue, L. E., Greenville, Pa. Injector. No. 881,124; Mar. 10; Sp. p. 1259; Dr. p. 272; Gaz. vol. 133; p. 244.
Hohmann, R. K., San Diego, Cal. Gem-setting. No. 881,689; Mar. 10; Sp. p. 2373; Dr. p. 514; Gaz. vol. 133; p. 426.
Hohn, F. C., Greencastle, Ind. Machine for making cement brick and the like. No. 880,886; Mar. 3; Sp. p. 823; Dr. pp. 174–5; Gaz. vol. 133; p. 138.
Holbrook, H. R., Attleboro, Mass. Bracelet. No. 881,925; Mar. 17; Sp. p. 2883; Dr. p. 615; Gaz. vol. 133; p. 533.
Holdaway, H. H. (See Holdaway, W. S. and H. H.)
Holdaway, W. S. and H. H., Union, Oreg. Button-sewing attachment. No. 882,314; Mar. 17; Sp. p. 3657; Dr. p. 776; Gaz. vol. 133; p. 659.

Holfelder, J. A., Uniontown, Pa., assignor to McCrum-Howell Company, Norwich, Conn. Connection for radiator wall-sections. No. 882,315; Mar. 17; Sp. p. 3659; Dr. p. 776; Gaz. vol. 133; p. 659.
Holley, R. B., Chicago, Ill. Casting-machine. No. 883,312; Mar. 31; Sp. p. 5630; Dr. p. 1201; Gaz. vol. 133; p. 1049.
Hollingsworth and Whitney Company. (See Marr, J. W., assignor.)
Hollister, C. F., Waterbury, Conn. Electric escapement for time-movements. No. 881,404; Mar. 10; Sp. p. 1822; Dr. p. 394; Gaz. vol. 133; p. 334.
Hollister, C. P., assignor to himself and H. M. Stilson, Pittsfield, Mass. Power-transmission device. No. 881,472; Mar. 10; Sp. p. 1960; Dr. pp. 426–7; Gaz. vol. 133; p. 356.
Holman, J. W., West Creek, N. J. Berry-picker. No. 880,887; Mar. 3; Sp. p. 825; Dr. p. 175; Gaz. vol. 133; p. 138.
Holmquist, A., Hoopeston, Ill. Pocket manicuring-tool. No. 881,125; Mar. 3; Sp. p. 1262; Dr. p. 272; Gaz. vol. 133; p. 244.
Holmstrom, C., London, assignor of one-half to E. Middleton, Sheffield, England. Breech mechanism for ordnance. No. 880,994; Mar. 3; Sp. p. 1012; Dr. pp. 217–18; Gaz. vol. 133; p. 172.
Holpuch, A., Chicago, Ill. Horse sanitary pan. No. 881,319; Mar. 10; Sp. p. 1652; Dr. p. 354; Gaz. vol. 133; p. 308.
Holt-Lyon Company. (See Holt, T., assignor.)
Holt, T., assignor to Holt-Lyon Company, Tarrytown, N. Y. Carpet-beater. No. 880,531; Mar. 3; Sp. p. 71; Dr. p. 17; Gaz. vol. 133; p. 16.
Homan, F. W., Swampscott, Mass. Shoe. No. 883,199; Mar. 31; Sp. p. 5306; Dr. p. 1149; Gaz. vol. 133; p. 1012.
Honiss, W. H., Hartford, Conn. Fare-register-operating mechanism. No. 882,063; Mar. 17; Sp. p. 3175; Dr. p. 675; Gaz. vol. 133; p. 578.
Hopewell, F. B. (See Kinder, A. H., assignor.)
Hopkins, R. G., Des Moines, Iowa. Dental swaging device. No. 882,002; Mar. 17; Sp. p. 3053; Dr. p. 650; Gaz. vol. 133; p. 558.
Hopkins, W. K. Wolfe City, Tex. Glass-holding attachment for bottles. No. 882,636; Mar. 24; Sp. p. 4267; Dr. p. 904; Gaz. vol. 133; p. 798.
Hopkinson, E., and J. Frith, assignors to Mather & Platt Limited, Manchester, England. Electric motor. No. 881,585; Mar. 10; Sp. p. 2172; Dr. pp. 473–4; Gaz. vol. 133; p. 394.
Hoppenrath, C. E., Elwood, Ind. Calf-weaner. No. 881,405; Mar. 10; Sp. p. 1823; Dr. p. 394; Gaz. vol. 133; p. 334.
Hopper, A., Orion, Ill. Portable stock-chute. No. 880,665; Mar. 3; Sp. p. 352; Dr. pp. 77–8; Gaz. vol. 133; p. 62.
Hopper, J. F., Sherman, Tex. Rotary engine. No. 882,884; Mar. 24; Sp. p. 4768; Dr. p. 1014; Gaz. vol. 133; p. 878.
Hopper, J. L. (See Rushton, Hopper, and Hardacre.)
Hopson, G., Dickson, Tenn. Bumping-post. No. 882,147; Mar. 17; Sp. p. 3319; Dr. p. 707; Gaz. vol. 133; p. 604.
Horan, M. J., Hughesville, Mo. Signal-flag for railway-trains. No. 881,690; Mar. 10; Sp. p. 2374; Dr. p. 514; Gaz. vol. 133; p. 426.
Horelschi, W., Zurich, Switzerland. Adjustable chart. No. 882,111; Mar. 17; Sp. p. 3261; Dr. p. 693; Gaz. vol. 133; p. 593.
Horn, B., assignor to H. C. Lowe, Chicago, Ill. Molding apparatus. No. 882,885; Mar. 24; Sp. p. 4769; Dr. p. 1015; Gaz. vol. 133; p. 878.
Horn, J. F., Hazleton, Pa. Lantern. No. 882,201; Mar. 17; Sp. p. 3433; Dr. p. 730; Gaz. vol. 133; p. 621.
Hornsby, B. F., Grangeville, Ia. Vehicle-wheel brake. No. 882,759; Mar. 24; Sp. p. 4509; Dr. p. 962; Gaz. vol. 133; p. 837.
Hornsby, H. H., and E. [illegible]ger, Jr., Chicago, Ill. Protective appliance for electric circuits and apparatus. No. 882,498; Mar. 17; Sp. p. 3965; Dr. p. 848; Gaz. vol. 133; p. 718.
Hornshaw, C., Port Huron, Mich. Cement post. No. 883,022; Mar. 24; Sp. p. 5031; Dr. p. 1070; Gaz. vol. 133; p. 923.
Horstmann, A., *et al.* (See Horstmann, S. A., assignor.)
Horstmann, E. H., *et al.* (See Horstmann, S. A., assignor.)
Horstmann, G. O. H., *et al.* (See Horstmann, S. A., assignor.)
Horstmann, S. A., assignor of five-sixths to A., G. O. H., and E. H. Horstmann, W. T. Edgar, Bath, and R. A. Lister & Company, Limited, Dursley, England. Carbureter for internal-combustion engines. No. 881,800; Mar. 10; Sp. p. 2593; Dr. pp. 556–7; Gaz. vol. 133; p. 462.
Horrocks, W. E., Cleveland, Ohio. Drafting instrument. No. 880,796; Mar. 3; Sp. p. 619; Dr. p. 131; Gaz. vol. 133; p. 107.
Horton, E., Elmira, N. Y. Basket-making machine. No. 881,320; Mar. 10; Sp. p. 1653; Dr. p. 354; Gaz. vol. 133; p. 308.
Horton, J. M., Arcata, Cal. Take-down chair. No. 882,316; Mar. 17; Sp. p. 3660; Dr. pp. 776–7; Gaz. vol. 133; p. 660.
Horton, R. W., and J. E. Molesworth, New Athens, Ohio. Clip. No. 882,896; Mar. 24; Sp. p. 4770; Dr. p. 1015; Gaz. vol. 133; p. 878.
Hose, H. G., New York, N. Y. Game-counter and the like. No. 881,926; Mar. 17; Sp. p. 2884; Dr. p. 615; Gaz. vol. 133; p. 533.
Hosking, J., assignor of one-half to J. C. Dufresne, Claremont, N. H. Safety connection for taps and chucks. No. 881,075; Mar. 3; Sp. p. 1166; Dr. p. 251; Gaz. vol. 133; p. 198.
Hoskins Company. (See Marsh, A. L., assignor.)
Hoskins, Z. T., Brookhaven, Miss. Corset. No. 880,532; Mar. 3; Sp. p. 73; Dr. p. 18; Gaz. vol. 133; p. 16.
Hoskins, Z. T., Brookhaven, Miss. Corset-closure. No. 880,736; Mar. 3; Sp. p. 499; Dr. p. 104; Gaz. vol. 133; p. 86.
Hotaling Manufacturing Company. (See Chapman, C. F., assignor.)
Hotchner, J., San Francisco, Cal. Illuminated sign. No. 883,682; Mar. 31; Sp. p. 6390; Dr. p. 1363; Gaz. vol. 133; p. 1166.
Houck, W., assignor of one-half to W. S. French and S. M. Keller, Monte Vista, Colo. Drill-boot. No. 883,023; Mar. 24; Sp. p. 5031; Dr. p. 1071; Gaz. vol. 133; p. 923.
Housinger, A. C., Sylvia, Kans. Wagon-raiser. No. 881,240; Mar. 10; Sp. p. 1495; Dr. p. 322; Gaz. vol. 133; p. 282.
Howard, C., Brooklyn, N. Y. Fire-extinguishing apparatus. No. 881,076; Mar. 3; Sp. p. 1167; Dr. p. 252; Gaz. vol. 133; p. 199.
Howard, C. H., St. Louis, Mo. Car-underframe. No. 881,185; Mar. 10; Sp. p. 1377; Dr. p. 297; Gaz. vol. 133; p. 264.
Howe, G. G., Indianapolis, Ind. Chain-link. No. 882,317; Mar. 17; Sp. p. 3663; Dr. p. 777; Gaz. vol. 133; p. 660.
Howe-Gould, R., Springs, Transvaal. Fluid-meter. No. 881,586; Mar. 10; Sp. p. 2175; Dr. p. 474; Gaz. vol. 133; p. 395.
Howe, I. H., Beloit, Kans. Saw attachment. No. 882,318; Mar. 17; Sp. p. 3664; Dr. p. 777; Gaz. vol. 133; p. 660.
Howe, W. K., Buffalo, N. Y., assignor to General Railway Signal Company. Electromagnet. No. 880,888; Mar. 3; Sp. p. 826; Dr. p 175; Gaz. vol. 133; p. 139.
Howell, F. B., Schenectady, N. Y., assignor to General Electric Company. Brush-holder. No. 882,565; Mar. 24; Sp. p. 4121; Dr. p. 874; Gaz. vol. 133; p. 773.
Howlett, A. E., Detroit, Mich. Folding table. No. 882,064; Mar. 17; Sp. p. 3178; Dr. p. 676; Gaz. vol. 133; p. 578.
Hoyt, J. S., Banister, Mich. Potato-harvester. No. 880,533; Mar. 3; Sp. p. 74; Dr. p. 18; Gaz. vol. 133; p. 16.
Hoyt, L. M., Hillsboro, Oreg. Repair-tip for umbrellas. No. 880,534; Mar. 3; Sp. p. 75; Dr. p. 18; Gaz. vol. 133; p. 17.
Hoxie, K. C., Duluth, Minn. Reversing device for engine-valves and other uses. No. 882,887; Mar. 24; Sp. p. 4771; Dr. p. 1015; Gaz. vol. 133; p. 878.
Hruby, T. J., Chicago, Ill. Roller-skate. No. 882,782; Mar. 24; Sp. p. 4542; Dr. p. 969; Gaz. vol. 133; p. 843.
Hubbard, H. W., Middletown, Conn. Oil-can. No. 881,241; Mar. 10; Sp. p. 1498; Dr. p. 322; Gaz. vol. 133; p. 283.
Hubbard, W. W., Philadelphia, Pa. Shedding mechanism. No. 883,541; Mar. 31; Sp. p. 6121; Dr. p. 1302; Gaz. vol. 133; p. 1122.
Hubbell, O., Petaluma, Cal. Attachment for hand-rakes. No. 882,467; Mar. 17; Sp. p. 3919; Dr. p. 838; Gaz. vol. 133; p. 708.
Huber, A., Mannheim, Germany, assignor to J. Schneiderwind, Omaha, Nebr. Non-refillable bottle. No. 881,801; Mar. 10; Sp. p. 2594; Dr. p. 557; Gaz. vol. 133; p. 462.
Hubert, J., Reno, Nev. Dry ore-concentrator. No. 880,995; Mar. 3; Sp. p. 1014; Dr. p. 218; Gaz. vol. 133; p. 173.
Hubert, P. G., Los Angeles, Cal. Extensible chamber. No. 882,760; Mar. 24; Sp. p. 4510; Dr. p. 962; Gaz. vol. 133; p. 837.
Hudson, E. A., Oquawka, Ill. Kitchen device. No. 881,077; Mar. 3; Sp. p. 1169; Dr. p. 252; Gaz. vol. 133; p. 199.
Huebner, E., and H. Klose, New York, N. Y. Camp-stool. No. 882,468; Mar. 17; Sp. p. 3919; Dr. p. 838; Gaz. vol. 133; p. 708.
Huebschwerlen, P., and J. F. Romig, Estevan, Saskatchewan, Canada. Railway-tie and rail-joint means therefor. No. 882,319; Mar. 17; Sp. p. 3665; Dr. p. 778; Gaz. vol. 133; p. 660.
Huff, E. S., assignor to H. Ford, Detroit, Mich. Electrical igniting apparatus. No. 882,003; Mar. 17; Sp. p. 3054; Dr. p. 650; Gaz. vol. 133; p. 558.
Huff, R., assignor to Packard Motor Car Company, Detroit, Mich. Electric ignition apparatus. No. 881,862; Mar. 10; Sp. p. 2730; Dr. p. 585; Gaz. vol. 133; p. 483.
Huffard, J. B., Ferris, W. Va., assignor to Electro Metallurgical Company, Chicago, Ill. No. 882,637; Mar. 24; Sp. p. 4268; Dr. p. 904; Gaz. vol. 133; p. 798.
Hughes, G. W. (See Kirkland, C. M., assignor.)
Hughes, H. S., Union City, Tenn. Mandrel for dental engines. No. 881,691; Mar. 10; Sp. p. 2376; Dr. pp. 514–15; Gaz. vol. 133; p. 427.
Hullings, J., and S. B. Craig, Hastings, Mich. Fruit-pulping apparatus. No. 881,186; Mar. 10; Sp. p. 1378; Dr. p. 297; Gaz. vol. 133; p. 264.
Hull, J. W., Sr., Zion City, Ill., assignor to Zion City Manufacturing Co. Fire-escape. No. 882,499; Mar. 17; Sp. p. 3970; Dr. p. 848; Gaz. vol. 133; p. 719.
Huise, E. M., Columbus, Ohio. Table for manufacturing upholstery-pads. No. 882,685; Mar. 24; Sp. p. 4362; Dr. p. 929; Gaz. vol. 133; p. 814.
Humpert, G. A., Pittsfield, Ill. Mechanical movement. No. 883,024; Mar. 24; Sp. p. 5032; Dr. pp. 1071–2; Gaz. vol. 133; p. 924.
Humphrey, A. H., New York, N. Y. Gas-lamp. No. 880,797; Mar. 3; Sp. p. 620; Dr. p. 131; Gaz. vol. 133; p. 107.
Humphrey, F. J., Kalamazoo, Mich. Water-motor. No. 880,737; Mar. 3; Sp. p. 500; Dr. p. 104; Gaz. vol. 133; p. 86.
Hunold, E., Providence, R. I. Scissors and shears. No. 880,535; Mar. 3; Sp. p. 76; Dr. p. 18; Gaz. vol. 133; p. 17.
Hunsaker, J. W., V. Beiswingert, and R. L. Davis, Anna, Ill. Mining apparatus. No. 882,148; Mar. 17; Sp. p. 3320; Dr. p. 707; Gaz. vol. 133; p. 604.
Hunt, A. T., New York, N. Y. Jewel-holder. No. 881,802; Mar. 10; Sp. p. 2596; Dr. p. 558; Gaz. vol. 133; p. 463.

Hunt, B., San Francisco, Cal. Continuous filter for cyaniding and the like. No. 882,202; Mar. 17; Sp. p. 3434; Dr. p. 730; Gaz. vol. 133; p. 621.
Hunt, F. T., *et al.* (See Taylor, J. T., assignor.)
Hunt, R. H., Chelsea, N. Y. Railway safety apparatus. No. 880,996; Mar. 3; Sp. p. 1015; Dr. p. 219; Gaz. vol. 133; p. 173.
Hunter, L. C. (See Blake and Hunter.)
Hurst, O. E., Staten Island, N. Y. Game apparatus. No. 882,945; Mar. 24; Sp. p. 4896; Dr. p. 1038; Gaz. vol. 133; p. 900.
Husby, H. P., assignor to Goss Printing Press Company, Chicago, Ill. Rotary folding mechanism for printing-presses. (Reissue.) No. 12,772; Mar. 31; Sp. p. 6399; Dr. p. 1364; Gaz. vol. 133; p. 1167.
Husted, H. G., Oberlin, Ohio. Trolley-wheel-placing device. No. 881,587; Mar. 10; Sp. p. 2176; Dr. p. 474; Gaz. vol. 133; p. 395.
Hutches, B. F., Jr., Ridgewood, N. J., assignor to Automultigraph Co., New York, N. Y. Paper-feed attachment for type-writers. No. 881,126; Mar. 10; Sp. p. 1263; Dr. p. 273; Gaz. vol. 133; p. 244.
Hutchison, M. R., Summit, N. J. Mechanically-actuated acoustic diaphragm. No. 883,643; Mar. 31; Sp. p. 6306; Dr. p. 1345; Gaz. vol. 133; p. 1153.
Hygienic Refiner Company. (See Mears and Craig, assignors.)
Hymers, C., St. Louis, Mo. Combined furniture-leg and caster. No. 880,997; Mar. 3; Sp. p. 1018; Dr. p. 219; Gaz. vol. 133; p. 174.
Hyre, W., Stroh, Ind. Harrow. No. 880,998; Mar. 3; Sp. p. 1019; Dr. pp. 219–20; Gaz. vol. 133; p. 174.
Ibbitson, W. P., Henry, S. D. Corn-planter. No. 880,999; Mar. 3; Sp. p. 1020; Dr. pp. 220–1; Gaz. vol. 133; p. 174.
Ilg, C. C., assignor of two-thirds to N. B. L. Cosel and R. Frankenbush, New York, N. Y. Explosive-engine starter. No. 883,461; Mar. 31; Sp. p. 5957; Dr. p. 1271; Gaz. vol. 133; p. 1098.
Illingworth, J., Newark, N. J. Ingot-compressing apparatus. No. 881,927; Mar. 17; Sp. p. 2887; Dr. pp. 615–16; Gaz. vol. 133; p. 534.
Illingworth, J., Newark, N. J. Ingot-compressing apparatus. No. 881,928; Mar. 17; Sp. p. 2889; Dr. p. 616; Gaz. vol. 133; p. 534.
Illingworth, R. H., Newark, N. J., assignor to Crucible Steel Company of America. Steel. No. 882,112; Mar. 17; Sp. p. 3262; Gaz. vol. 133; p. 593.
Illinois Malleable Iron Company. (See Anderson, A. G., assignor.)
Illinois Malleable Iron Company. (See Bullock, H. E., assignor.)
Illinois Malleable Iron Company. (See Steneck, J. R., assignor.)
Illoway, N., New York, N. Y. Detachable button. No. 881,473; Mar. 10; Sp. p. 1963; Dr. p. 427; Gaz. vol. 133; p. 356.
Imperial Ore Separator Company. (See Moffatt, R. R., assignor.)
Indahl, M. C. (See Bancroft and Indahl.)
Ingersoll, F. A., New York, N. Y. Corn-husker. No. 882,500; Mar. 17; Sp. p. 3972; Dr. p. 849; Gaz. vol. 133; p. 719.
Insell, R. J. (See Jacobs, Insell, and Bowden.)
Inter-State Signal Company. (See Daves, W., assignor.)
International Cigar Machinery Company. (See Luckett and Fogde, assignors.)
International Harvester Company. (See Dennis, S. K., assignor.)
International Harvester Company. (See Johnston, E. A., assignor.)
International Harvester Company. (See Pridmore, J. W., assignor.)
International Harvester Company. (See Sharp, C. S., assignor.)
International Patent Corporation. (See Veitch, T., assignor.)
International Steam Pump Company. (See Fleming, W. M., assignor.)
Interwoven Stocking Company. (See Mettler, J. W., assignor.)
Ireland, R., and H. W. Cole, Kalgoorlie, Western Australia, Australia. Cap for the protection of the human head. No. 882,686; Mar. 24; Sp. p. 4364; Dr. p. 929; Gaz. vol. 133; p. 814.
Irving, S. C. (See Beatty and Irving.)
Irwin, F. L., assignor to Ralston Steel Car Company, Columbus, Ohio. Steel underframing for railway-cars. No. 882,638; Mar. 24; Sp. p. 4268; Dr. p. 905; Gaz. vol. 133; p. 798.
Irwin, H., Tikokino, New Zealand. Alarm. No. 883,025; Mar. 24; Sp. p. 5034; Dr. p. 1072; Gaz. vol. 133; p. 924.
Iserloth, C. F. (See Waldinger and Iserloth.)
Isnard, M. J. S. A., Grenoble, assignor to P. Drevet, L. A. Nove-Josserand, Lyon, and N. Dumond, Tassin la Demi-Lune, near Lyon, France. Starting device for motors. No. 882,946; Mar. 24; Sp. p. 4898; Dr. p. 1039; Gaz. vol. 133; p. 900.
Itala Fabbrica di Automobili. (See Balloco, A., assignor.)
Ivory, J. W. (See Sausser, E. R., assignor.)
Izer, E. E., Pomona, Cal. Water-gate. No. 881,692; Mar. 10; Sp. p. 2377; Dr. p. 515; Gaz. vol. 133; p. 427.
J. A. Fay & Egan Company. (See Thomas, J. R., assignor.)
J. G. Brill Company. (See Edwards, O. E., Jr., assignor.)
J. G. Brill Company. (See Pickles, C. K., assignor.)
J. H. Williams & Co. (See Amborn, G., assignor.)
J. I. Case Plow Works. (See Michael, C. W., assignor.)
J. P. Karns Tunneling Machine Co. (See Karns, J. P., assignor.)
J. R. Alsing Engineering Co. (See Abbé, R. F., assignor.)
J. S. McDonald Company. (See Wiedman, H., assignor.)
J. W. Sefton Manufacturing Company. (See Ferres, J. T., assignor.)
Jackman, S. E., New York, N. Y. Switch for pleasure-railways. No. 881,000; Mar. 3; Sp. p. 1022; Dr. p. 221; Gaz. vol. 133; p. 174.
Jackson, A. M., Schenectady, N. Y., assignor to General Electric Company. Exhausting vapor conductors. No. 881,588; Mar. 10; Sp. p. 2177; Dr. p. 474; Gaz. vol. 133; p. 396
Jackson, G. E., Newark, Ill. Folding coop. No. 883,405; Mar. 31; Sp. p. 5837; Dr. p. 1244; Gaz. vol. 133; p. 1079.
Jackson, G. E., Newark, Ill. Folding egg crate or case. No. 883,406; Mar. 31; Sp. p. 5839; Dr. p. 1245; Gaz. vol. 133; p. 1079.
Jackson, J. A., Ithaca, N. Y. Automatic railway-switch. No. 880,536; Mar. 3; Sp. p. 77; Dr. p. 19; Gaz. vol. 133; p. 17.
Jackson, J. H., Denison, Tex. Baling-press attachment. No. 882,469; Mar. 17; Sp. p. 3921; Dr. p. 839; Gaz. vol. 133; p. 709.
Jackson, L. D., Harrington, Del. Can-opener. No. 883,313; Mar. 31; Sp. p. 5634; Dr. p. 1201; Gaz. vol. 133; p. 1049.
Jackson, T. J., Pine Ridge, S. D. Reservoir. No. 882,761; Mar. 24; Sp. p. 4512; Dr. p. 962; Gaz. vol. 133; p. 838.
Jacob, B., New Rochelle, N. Y. Combined carpenter's tool. No. 883,112; Mar. 24; Sp. p. 5198; Dr. pp. 1110–11; Gaz. vol. 133; p. 953.
Jacob, H., Steglitz, near Berlin, assignor to Firm of Optische Anstalt C. P. Goerz Aktiengesellschaft, Friedenau, near Berlin, Germany. Instrument for optically measuring distances. No. 881,127; Mar. 10; Sp. p. 1266; Dr. p. 273; Gaz. vol. 133; p. 245.
Jacob, H., assignor to Firm of Optische Anstalt C. P. Goerz Aktiengesellschaft, Friedenau, near Berlin, Germany. Mounting of sighting-telescopes. No. 881,590; Mar. 10; Sp. p. 2180; Dr. p. 475; Gaz. vol. 133; p. 396.
Jacob, H., Steglitz, near Berlin, Germany, assignor to Firm of Optische Anstalt C. P. Goerz Aktiengesellschaft, Friedenau, near Berlin, Germany. Panoramic telescope. No. 882,762; Mar. 24; Sp. p. 4513; Dr. p. 962; Gaz. vol. 133; p. 838.
Jacobi, H. (See Wedeking, W. M., assignor.)
Jacobs, A. E., Cleveland, Ohio. Toy bank. No. 881,589; Mar. 10; Sp. p. 2179; Dr. p. 475; Gaz. vol. 133; p. 396.
Jacobs, C. M., R. J. Insell, Reading, and E. A. B. Bowden, Hanwell, England. Signaling on railways. No. 883,026; Mar. 24; Sp. p. 5036; Dr. p. 1072; Gaz. vol. 133; p. 926.
Jacobs, H. J., assignor to Buffalo Lounge Company, Buffalo, N. Y. Upholstered furniture. No. 880,738; Mar. 3; Sp. p. 504; Dr. p. 104; Gaz. vol. 133; p. 87.
Jacoby, C. A., Chicago, Ill., assignor of two-thirds to M. Farrell and J. L. Fruin, New York, N. Y. Automatic sprinkling and fire-alarm system. No. 880,889; Mar. 3; Sp. p. 827; Dr. pp. 175–6; Gaz. vol. 133; p. 139.
Jaggers, R. B., Hot Springs, Ark., assignor of one-half to H. G. Fleming, Memphis, Tenn. Folding bed. No. 880,666; Mar. 3; Sp. p. 354; Dr. p. 78; Gaz. vol. 133; p. 62.
James, H., Rush Springs, Okla. Churn. No. 883,027; Mar. 24; Sp. p. 5037; Dr. p. 1073; Gaz. vol. 133; p. 925.
James, H. D., Pittsburg, Pa., assignor to Westinghouse Electric & Manufacturing Company. Controlling system for electric motors. No. 882,639; Mar. 24; Sp. p. 4270; Dr. p. 905; Gaz. vol. 133; p. 798.
James, H. D., Pittsburg, Pa., assignor to Westinghouse Electric & Manufacturing Company. Electrical control system. No. 882,687; Mar. 24; Sp. p. 4365; Dr. p. 929; Gaz. vol. 133; p. 815.
James, H. D., Pittsburg, Pa., assignor to Westinghouse Electric & Manufacturing Company. Controller for electric motors. No. 883,200; Mar. 31; Sp. p. 5396; Dr. pp. 1149–50; Gaz. vol. 133; p. 1012.
Jamison, A. P. (See Lewis and Jamison.)
Jamison, S. S., Saltsburg, Pa. Canal-lock. No. 882,501; Mar. 17; Sp. p. 3973; Dr. p. 849; Gaz. vol. 133; p. 719.
Janicke, H. W., Augusta, Kans. Egg-carton. No. 882,688; Mar. 24; Sp. p. 4367; Dr. p. 929; Gaz. vol. 133; p. 815.
Jansen, A. Y., Chicago, Ill. Flash-light electrical alarm and bank and call clock. No. 882,320; Mar. 17; Sp. p. 3666; Dr. p. 778; Gaz. vol. 133; p. 661.
Jansen, H., Chicago, Ill. Threading-tool. No. 881,406; Mar. 10; Sp. p. 1824; Dr. p. 395; Gaz. vol. 133; p. 335.
Janssen, T. A., and H. W. Moats, Sterling, Ill.; said Moats assignor to said Janssen. Machine for cutting and crimping pipes. No. 882,502; Mar. 17; Sp. p. 3975; Dr. p. 849; Gaz. vol. 133; p. 720.
Jarvies, T. B., Kansas City, Mo. Bath-tub-heating device. No. 882,689; Mar. 24; Sp. p. 4368; Dr. p. 930; Gaz. vol. 133; p. 815.
Jaubert, G. F., Paris, France. Propulsion of submarine boats. No. 881,803; Mar. 10; Sp. p. 2597; Dr. pp. 558–9; Gaz. vol. 133; p. 463.
Jebsen, F. (See Kirkegaard and Jebsen.)
Jeffrey Manufacturing Company. (See Buffum, F. D., assignor.)

Jeffrey Manufacturing Company. (See Sessions, F. L., assignor.)
Jenkins, C., Delevan, N. Y. Potato cutter and feeder for planters. No. 880,798; Mar. 3; Sp. p. 626; Dr. pp. 131–2; Gaz. vol. 133; p. 108.
Jenkins, M. L., Harvey, assignor to Buda Foundry & Manufacturing Company, Chicago, Ill. Lifting-jack. No. 882,004; Mar. 17; Sp. p. 3058; Dr. p. 650; Gaz. vol. 133; p. 559.
Jenks, T. W., Avalon, Pa. Rolling ribbed bars. No. 882,321; Mar. 17; Sp. p. 3668; Dr. p. 779; Gaz. vol. 133; p. 661.
Jensen, A., Eureka, Cal. Liquid-ripener. No. 881,128; Mar. 10; Sp. p. 1267; Dr. pp. 273–4; Gaz. vol. 133; p. 245.
Jensen, C., Chicago, Ill. Lock. No. 882,566; Mar. 24; Sp. p. 4122; Dr. pp. 874–5; Gaz. vol. 133; p. 773.
Jensen, W. F., Lincoln, Nebr. Renovating butter, oils, &c. No. 881,929; Mar. 17; Sp. p. 2891; Dr. p. 617; Gaz. vol. 133; p. 534.
Jernigan, B. F., *et al.* (See Gannon, W. E., assignor.)
Jessup, G. W., Jr., Waltham, Mass. Steam-generator. No. 883,467; Mar. 31; Sp. p. 5840; Dr. pp. 1245–6; Gaz. vol. 133; p. 1080.
Jetter, J. M., and F. Drews, South Omaha, Nebr. Beer-case curtain. No. 882,470; Mar. 17; Sp. p. 3023; Dr. p. 839; Gaz. vol. 133; p. 709.
Jewell, O. H. (See Jewell and Wagner, assignors.)
Jewell, W. M., Winnetka, and W. Wagner, Berwyn, assignors of one-third to O. H. Jewell, Chicago, Ill. Water-purifying apparatus. No. 882,005; Mar. 17; Sp. p. 3059; Dr. p. 651; Gaz. vol. 133; p. 559.
Jewett, M. E., Keokuk, Iowa. Sealing device for money-bags. No. 881,407; Mar. 10; Sp. p. 1826; Dr. p. 395; Gaz. vol. 133; p. 335.
John Cave and Sons. (See Denne, M. T., assignor.)
Johnson, A., Quincy, Ill. Coupling. No. 882,390; Mar. 17; Sp. p. 3786; Dr. p. 808; Gaz. vol. 133; p. 683.
Johnson, C. B., Columbus, Ohio. Bridle-bit. No. 881,242; Mar. 10; Sp. p. 1499; Dr. p. 323; Gaz. vol. 133; p. 283.
Johnson, C. E., assignor to Corbin Cabinet Lock Company, New Britain, Conn. Padlock. No. 881,591; Mar. 10; Sp. p. 2182; Dr. p. 476; Gaz. vol. 133; p. 397.
Johnson, C. E., Indianapolis, Ind. Advertising-indicator. No. 882,640; Mar. 24; Sp. p. 4273; Dr. pp. 905–6; Gaz. vol. 133; p. 799.
Johnson, C. J., Sunrise, Wyo. Can-opener. No. 882,065; Mar. 17; Sp. p. 3180; Dr. p. 676; Gaz. vol. 133; p. 578.
Johnson, E. (See Diehl, W. R., assignor.)
Johnson Educator Food Company. (See Johnson, F. A., assignor.)
Johnson, F. A. (See Anderson and Johnson.)
Johnson, F. A., Salisbury, assignor to Johnson Educator Food Company, Boston, Mass. Making crackers. No. 882,006; Mar. 17; Sp. p. 3062; Gaz. vol. 133; p. 559.
Johnson, H. B., Atlanta, Ga. Tamper. No. 881,001; Mar. 3; Sp. p. 1025; Dr. p. 222; Gaz. vol. 133; p. 175.
Johnson, H. P., assignor of one-half to J. E. Thomas, Terre Haute, Ind. Mowing-machine. No. 883,136; Mar. 24; Sp. p. 5258; Dr. p. 1123; Gaz. vol. 133; p. 961.
Johnson, H. T., New York, N. Y. Terminal connector. No. 883,201; Mar. 31; Sp. p. 5402; Dr. p. 1150; Gaz. vol. 133; p. 1012.
Johnson, J. C. (See Tanck and Johnson.)
Johnson, L. G., Apple, Minn. Tongue-truck for harvesters. No. 882,113; Mar. 17; Sp. p. 3262; Dr. pp. 693–4; Gaz. vol. 133; p. 594.
Johnson, M. A., Waterford, Cal. Wire-stretcher. No. 882,149; Mar. 17; Sp. p. 3323; Dr. p. 707; Gaz. vol. 133; p. 605.
Johnson, M. M., Clay Center, Nebr. Automobile. No. 880,739; Mar. 3; Sp. p. 506; Dr. p. 105; Gaz. vol. 133; p. 88.
Johnson, P. T., Magnolia, Ill. Amusement device. No. 881,002; Mar. 3; Sp. p. 1026; Dr. p. 222; Gaz. vol. 133; p. 175.
Johnson, W. A., London, England. Letter-file and the like. No. 881,078; Mar. 3; Sp. p. 1171; Dr. pp. 252–3; Gaz. vol. 133; p. 199.
Johnson, W. E., assignor to Rock Island Plow Company, Rock Island, Ill. Wheel-plow. No. 881,243; Mar. 10; Sp. p. 1500; Dr. pp. 323–4; Gaz. vol. 133; p. 283.
Johnston, C. L. (See Brown and Johnston.)
Johnston, E. A., Sterling, Ill., assignor to International Harvester Company. Vehicle-brake. No. 883,202; Mar. 31; Sp. p. 5403; Dr. p. 1151; Gaz. vol. 133; p. 1013.
Johnston, W. R., assignor to Walter R. Johnston Manufacturing Company, New York, N. Y. Fire-extinguishing engine. No. 881,129; Mar. 10; Sp. p. 1270; Dr. p. 274; Gaz. vol. 133; p. 245.
Johnston, W. W., Hammond, Ind. Switch-operating rod. No. 880,667; Mar. 3; Sp. p. 356; Dr. p. 78; Gaz. vol. 133; p. 62.
Jolitz, F. W., West Duluth, Minn. Instep-protector. No. 881,079; Mar. 3; Sp. p. 1172; Dr. p. 253; Gaz. vol. 133; p. 200.
Jolly, F. S., McFall, Mo. Line-holder. No. 883,644; Mar. 31; Sp. p. 6312; Dr. p. 1346; Gaz. vol. 133; p. 1153.
Jones, A. E., Flume, Austria-Hungary. Immersion-regulator. No. 881,930; Mar. 17; Sp. p. 2893; Dr. p. 617; Gaz. vol. 133; p. 535.
Jones, A. E., Flume, Austria-Hungary. Means for actuating submersion-rudders for torpedoes. No. 883,028; Mar. 24; Sp. p. 5038; Dr. p. 1073; Gaz. vol. 133; p. 925.
Jones, C. A. (See Graham and Jones.)
Jones F., Scranton, Pa. Fire-brick clamp and stove-top brace. No. 883,408; Mar. 31; Sp. p. 5843; Dr. p. 1246; Gaz. vol. 133; p. 1080.
Jones, G., Marion, Mich. Vehicle-wheel. No. 881,693; Mar. 10; Sp. p. 2379; Dr. pp. 515–16; Gaz. vol. 133; p. 427.
Jones, G. P., Emporium, Pa. Machine for mixing explosives. No. 882,114; Mar. 17; Sp. p. 3264; Dr. pp. 694–5; Gaz. vol. 133; p. 594.
Jones, J. B., Maxie, Miss. Wagon-brake. No. 882,391; Mar. 17; Sp. p. 3788; Dr. p. 809; Gaz. vol. 133; p. 683.
Jones, J. H., and P. Lynch, Atlantic, Iowa. Grain-car door. No. 881,244; Mar. 10; Sp. p. 1504; Dr. p. 324; Gaz. vol. 133; p. 283.
Jones, J. T., Iron Mountain, Mich., assignor of one-half to G. A. St. Clair, Duluth, Minn. Reducing ores. No. 880,799; Mar. 3; Sp. p. 629; Dr. p. 132; Gaz. vol. 133; p. 108.
Jones, T. N., Boulder, Colo., assignor to J. T. Powers, Hastings, N. S. Shannon and W. H. Ferguson, Lincoln, Nebr. Hose-coupling. No. 882,690; Mar. 24; Sp. p. 4370; Dr. p. 930; Gaz. vol. 133; p. 816.
Jones, W. E., assignor to Electric Protection Company, Minneapolis, Minn. Burglar-alarm. No. 880,668; Mar. 3; Sp. p. 357; Dr. p. 79; Gaz. vol. 133; p. 63.
Jones, W. W., Downs, Kans. Axle-nut. No. 883,314; Mar. 31; Sp. p. 5635; Dr. p. 1201; Gaz. vol. 133; p. 1049.
Jordan, A. L., New York, N. Y. Catamenial device. No. 881,130; Mar. 10; Sp. p. 1274; Dr. p. 274; Gaz. vol. 133; p. 246.
Jorgensen, N., Craig, Nebr. Loading apparatus. No. 881,408; Mar. 10; Sp. p. 1828; Dr. pp. 395–6; Gaz. vol. 133; p. 335.
Joslin, C. T., Jerusalem, N. Y. Invalid-bed. No. 882,641; Mar. 24; Sp. p. 4275; Dr. pp. 906–7; Gaz. vol. 133; p. 799.
Jost, W. M., Chicago, Ill. Locking device for extension-tables. No. 881,245; Mar. 10; Sp. p. 1505; Dr. p. 324; Gaz. vol. 133; p. 284.
Joy, A. H., Newton, Iowa. Dental soldering device. No. 880,740; Mar. 3; Sp. p. 509; Dr. p. 105; Gaz. vol. 133; p. 88.
Joy, C. L., Lowell, assignor to Draper Company, Hopedale, Mass. Loom-temple. No. 882,827; Mar. 24; Sp. p. 4040; Dr. p. 989; Gaz. vol. 133; p. 859.
Joyce, M., Jr., Burdette, S. D. Automatic releasing device for gang-plows. No. 883,315; Mar. 31; Sp. p. 5636; Dr. p. 1202; Gaz. vol. 133; p. 1050.
Jude, A., assignor to Belliss & Morcom Limited, Birmingham, England. Guide blade and vane for turbines. No. 881,409; Mar. 10; Sp. p. 1830; Dr. pp. 396–7; Gaz. vol. 133; p. 335.
Jude, A., assignor to Belliss & Morcom Limited, Birmingham, England. Turbine-motor. No. 881,474; Mar. 10; Sp. p. 1965; Dr. p. 427; Gaz. vol. 133; p. 357.
Jude, A., assignor to Belliss & Morcom Limited, Birmingham, England. Turbine. No. 882,521; Mar. 17; Sp. p. 4035; Dr. pp. 859–60; Gaz. vol. 133; p. 727.
Julihn, L. G., Washington, D. C., assignor to Elliott-Fisher Company, New York, N. Y. Key-lock for key-operated machines. No. 883,645; Mar. 31; Sp. p. 6313; Dr. p. 1346; Gaz. vol. 133; p. 1154.
Just Mining and Extraction Company. (See Porter and Clark, assignors.)
Jystad, J. O. (See Erickson and Jystad.)
Kaisser, C. F., Lille, France. Torrefying apparatus for the textile industry. No. 882,691; Mar. 24; Sp. p. 4371; Dr. p. 930; Gaz. vol. 133; p. 816.
Kales, J. W., Franklinville, N. Y. Gas or other explosive engine. No. 880,741; Mar. 3; Sp. p. 510; Dr. p. 105; Gaz. vol. 133; p. 89.
Kalkhurst, C. J., Beaver Dam, Wis. Seeder. No. 881,131; Mar. 10; Sp. p. 1275; Dr. p. 274; Gaz. vol. 133; p. 246.
Kalling, L., Baltimore, Md. Sealing-cap for bottles. No. 882,888; Mar. 24; Sp. p. 4773; Dr. p. 1016; Gaz. vol. 133; p. 879.
Kalling, L., Baltimore, Md. Bottle-sealing cap. No. 882,889; Mar. 24; Sp. p. 4774; Dr. p. 1016; Gaz. vol. 133; p. 879.
Kalstrom, C. N., Manson, N. C. Combined sash and blind lock. No. 881,694; Mar. 10; Sp. p. 2380; Dr. p. 516; Gaz. vol. 133; p. 428.
Kane, P. H., Buffalo, N. Y. Blowing-engine. No. 883,316; Mar. 31; Sp. p. 5637; Dr. p. 1202; Gaz. vol. 133; p. 1050.
Kaufmann, F. J., Fultonville, N. Y., assignor, by mesne assignments, to Singer Manufacturing Company. Sewing-machine attachment. No. 881,187; Mar. 10; Sp. p. 1380; Dr. pp. 297–8; Gaz. vol. 133; p. 264.
Kauffman, J. H., Hope, Kans. Band-cutter and feeder. No. 881,951; Mar. 17; Sp. p. 2896; Dr. pp. 617–18; Gaz. vol. 133; p. 535.
Karns, J. P., assignor to J. P. Karns Tunnelling Machine Co., Boulder, Colo. Drill-head and cutter-blade therefor. No. 883,137; Mar. 24; Sp. p. 5262; Dr. pp. 1123–4; Gaz. vol. 133; p. 961.
Kay, A. E., Chicago, Ill. Valve-stem and tire-deflation alarm. No. 881,410; Mar. 10; Sp. p. 1832; Dr. pp. 397–8; Gaz. vol. 133; p. 336.
Kay Brothers. (See Kay, T., assignor.)
Kay, T., Moorfield, Stockport, assignor to Kay Brothers, Limited, Stockport, England. Fly-catcher. No. 883,203; Mar. 31; Sp. p. 5404; Dr. p. 1151; Gaz. vol. 133; p. 1013.
Keefer-Heart Iron and Steel Company. (See Welch, J. R., assignor.)
Keeler, I. J., Cameron, Mo. Lifting-jack. No. 882,066; Mar. 17; Sp. p. 3181; Dr. p. 676; Gaz. vol. 133; p. 579.
Keen, C. W., Lodi, Cal. Rotary implement. No. 881,932; Mar. 17; Sp. p. 2899; Dr. p. 618; Gaz. vol. 133; p. 535.
Kell, H. F., Bronxville, N. Y. Lock. No. 882,067; Mar. 17; Sp. p. 3183; Dr. p. 677; Gaz. vol. 133; p. 579.
Kelk, A. E., Louisville, Ky. Converting hides or skins into leather. No. 881,246; Mar. 10; Sp. p. 1506; Gaz. vol. 133; p. 284.
Keller, E. W., assignor to Armac Motor Company, Chicago, Ill. Apparatus for muffling the exhaust of motor-cycles. No. 882,068; Mar. 17; Sp. p. 3185; Dr. p. 677; Gaz. vol. 133; p. 579.

Keller, R., Detroit, Mich. Bottle-stopper. No. 880,669; Mar. 3; Sp. p. 359; Dr. p. 79; Gaz. vol. 133; p. 63.
Keller, S. M., *et al.* (See Houck, W., assignor.)
Kelley, C. E., assignor to Underwood Typewriter Company, New York, N. Y. Type-writing machine. No. 883,462; Mar. 31; Sp. p. 5959; Dr. p. 1271; Gaz. vol. 133; p. 1098.
Kellogg, J. H., Battle Creek, Mich. Massage apparatus. No. 881,321; Mar. 10; Sp. p. 1656; Dr. p. 355; Gaz. vol. 133; p. 309.
Kellogg Switchboard & Supply Company. (See Dean, W. D., assignor.)
Kelly, D. J., assignor to Kelly Filter Press Co., Salt Lake City, Utah. Removing caked material from pressure-filters. No. 880,742; Mar. 3; Sp. p. 512; Dr. p. 106; Gaz. vol. 133; p. 89.
Kelly Filter Press Co. (See Kelly, D. J., assignor.)
Kelly, G., Hinsdale, Ill. Fire and water proof composition. No. 882,890; Mar. 24; Sp. p. 4775; Gaz. vol. 133; p. 879.
Kelly, G., Hinsdale, Ill. Fire and water proof composition. No. 882,891; Mar. 24; Sp. p. 4776; Gaz. vol. 133; p. 879.
Kelly, H. (See Petersen, P. C., assignor.)
Kelly, J. W., Jr., Camden, N. J., assignor to General Acoustic Company. Telephone dictating system or apparatus. No. 880,537; Mar. 3; Sp. p. 80; Dr. p. 19; Gaz. vol. 133; p. 18.
Kelly, W. J., Clinton, Iowa. Method of veneering. No. 882,203; Mar. 17; Sp. p. 3435; Dr. pp. 730–1; Gaz. vol. 133; p. 621.
Kenepp, A. M., Owensville, Ind. Crate. No. 882,392; Mar. 17; Sp. p. 3789; Dr. p. 809; Gaz. vol. 133; p. 683.
Kennedy, G. W., Delaware City, Del. Window-ventilator. No. 880,538; Mar. 3; Sp. p. 84; Dr. p. 20; Gaz. vol. 133; p. 18.
Kennedy, H. P., Peterboro, Ontario, Canada. Horseshoe. No. 882,007; Mar. 17; Sp. p. 3063; Dr. p. 651; Gaz. vol. 133; p. 560.
Kennedy, M., assignor of one-half to W. Renshaw, Chicago, Ill. Railway-car truck. No. 882,642; Mar. 24; Sp. p. 4279; Dr. pp. 907–8; Gaz. vol. 133; p. 800.
Kennedy, R. G., Edinburgh, Scotland. Device for controlling a supply of water for irrigating and other purposes. No. 881,804; Mar. 10; Sp. p. 2599; Dr. p. 559; Gaz. vol. 133; p. 463.
Kennelly, E. F., Boston, Mass. Artificial-stone sewer-cap. No. 881,003; Mar. 3; Sp. p. 1027; Dr. p. 222; Gaz. vol. 133; p. 175.
Kennington, R. B., Fitzpatrick, Ga. Rail-joint. No. 883,542; Mar. 31; Sp. p. 6128; Dr. p. 1303; Gaz. vol. 133; p. 1122.
Kenny, H. E., *et al.* (See Henrich, C. W., assignor.)
Kenny, J. A., Chicago, Ill. Electrical protective apparatus. No. 882,892; Mar. 24; Sp. p. 4777; Dr. p. 1016; Gaz. vol. 133; p. 879.
Kenny, J. V., Omaha, Nebr. Steam-boiler furnace. No. 880,539; Mar. 3; Sp. p. 86; Dr. p. 20; Gaz. vol. 133; p. 18.
Keough, D. I., Lewis Run, Pa. Sawmill. No. 881,004; Mar. 3; Sp. p. 1028; Dr. p. 223; Gaz. vol. 133; p. 176.
Kerfoot, H. W. (See Betzer, L., assignor.)
Kersey, F. E., Cincinnati, Ohio. Power-excavator. No. 881,695; Mar. 10; Sp. p. 2382; Dr. pp. 516–17; Gaz. vol. 133; p. 428.
Kessels, N. J., *et al.* (See Skerman, W., assignor.)
Kestner Evaporator Company. (See Kestner, P., assignor.)
Kestner, P., Lille, France, assignor to Kestner Evaporator Company, Philadelphia, Pa. Apparatus for concentrating liquids. No. 882,322; Mar. 17; Sp. p. 3669; Dr. p. 779; Gaz. vol. 133; p. 661.
Keuffel & Esser Company. (See Bernegau, C. M., assignor.)
Keuffel & Esser Company. (See Hausstein, W. F., assignor.)
Keuffel & Esser Company. (See Keuffel, W. L. E., assignor.)
Keuffel, W. L. E., assignor to Keuffel & Esser Company, Hoboken, N. J. Calculating-machine. No. 882,567; Mar. 24; Sp. p. 4125; Dr. p. 875; Gaz. vol. 133; p. 774.
Keyser, C. C., Washington, D. C. Automobile running-gear. No. 881,696; Mar. 10; Sp. p. 2383; Dr. pp. 517–18; Gaz. vol. 133; p. 428.
Keystone Telephone Company. (See Sharer, C. W., assignor.)
Kidd, W. C. (See Snow and Kidd.)
Kidd, W. C., Suffern, N. Y., assignor to Standard Equipment Company, Mahwah, N. J. Switch-stand. No. 882,069; Mar. 17; Sp. p. 3186; Dr. p. 677; Gaz. vol. 133; p. 580.
Kidder, G. O., Marcus, Iowa. Gate. No. 882,692; Mar. 24; Sp. p. 4372; Dr. p. 930; Gaz. vol. 133; p. 816.
Kidder, W. P., Boston, Mass., assignor to Parker Machine Company, Buffalo, N. Y. Carriage-shifting mechanism for type-writers. No. 882,828; Mar. 24; Sp. p. 4042; Dr. pp. 989–90; Gaz. vol. 133; p. 860.
Kidder, W. P., Boston, Mass., assignor to Parker Machine Company, Buffalo, N. Y. Ribbon-reversing mechanism for type-writing machines. No. 882,829; Mar. 24; Sp. p. 4649; Dr. p. 990; Gaz. vol. 133; p. 860.
Kilburn, J. E., New Bedford, Mass. Pin-setting apparatus for bowling-alleys. No. 882,008; Mar. 17; Sp. p. 3065; Dr. p. 651; Gaz. vol. 133; p. 560.
Kilpatrick, W. W., assignor to Air-Brake and Steam-Heat Connection Company, Atlanta, Ga. Air-hose coupling. No. 882,503; Mar. 17; Sp. p. 3977; Dr. pp. 849–50; Gaz. vol. 133; p. 720.
Kimball, S. R., Staseton, S. D. Attachment for stables. No. 883,204; Mar. 31; Sp. p. 5405; Dr. pp. 1151–2; Gaz. vol. 133; p. 1013.
Kimsey, J. C., assignor to American Paper Bottle Company, Philadelphia, Pa. Paper box or container. No. 882,522; Mar. 17; Sp. p. 4038; Dr. p. 860; Gaz. vol. 133; p. 728.
Kinder, A. H., Boston, assignor to F. B. Hopewell, Newton, Mass. Tire-case. No. 881,411; Mar. 10; Sp. p. 1835; Dr. p. 398; Gaz. vol. 133; p. 336.
Kinder, T. G., Mount Olive, Ind. Ratchet-wrench. No. 880,670; Mar. 3; Sp. p. 360; Dr. p. 79; Gaz. vol. 133; p. 63.
Kinealy, J. H. (See Brooks and Kinealy.)
Kinealy, J. H., Ferguson, Mo. Apparatus for sewage disposal. No. 880,540; Mar. 3; Sp. p. 87; Dr. p. 20; Gaz. vol. 133; p. 19.
Kiner, A. G., Chicago, Ill. Hat-protector. No. 881,132; Mar. 10; Sp. p. 1278; Dr. p. 275; Gaz. vol. 133; p. 247.
Kinetoplane Display Company. (See Farrand, H. A., assignor.)
Kindwall, A. T., Albert City, Iowa. Device for holding bills and the like. No. 883,317; Mar. 31; Sp. p. 5639; Dr. p. 1203; Gaz. vol. 133; p. 1050.
King, C. E., Randolph, Kans. Paper-file. No. 883,543; Mar. 31; Sp. p. 6129; Dr. p. 1303; Gaz. vol. 133; p. 1123.
King, H. G., Denver, Colo. Rotary screen for ore and materials. No. 882,070; Mar. 17; Sp. p. 3188; Dr. p. 678; Gaz. vol. 133; p. 580.
King & Hamilton Company. (See Gilman, J. H., assignor.)
King Machine Tool Company. (See Muller, E. A., assignor.)
King, V. J., Lorain, Ohio. Engine-stop. No. 883,029; Mar. 24; Sp. p. 5040; Dr. p. 1073; Gaz. vol. 133; p. 925.
King, W. R., Newark, N. J., assignor to Hanson & Van Winkle Company. Basket raising and lowering device for electroplating apparatus. No. 882,783; Mar. 24; Sp. p. 4543; Dr. p. 970; Gaz. vol. 133; p. 844.
Kingsbury, A., Pittsburg, Pa., assignor to Westinghouse Electric & Manufacturing Company. Friction-clutch. No. 882,693; Mar. 24; Sp. p. 4373; Dr. p. 931; Gaz. vol. 133; p. 816.
Kingsbury, H. T., Keene, N. H. Printing-press. No. 881,133; Mar. 10; Sp. p. 1279; Dr. pp. 275–6; Gaz. vol. 133; p. 247.
Kingsbury, H. T., Keene, N. H. Printing-press. No. 881,134; Mar. 10; Sp. p. 1282; Dr. p. 276; Gaz. vol. 133; p. 247.
Kinnicutt, A., West Albany, N. Y. Picture-card. No. 882,150; Mar. 17; Sp. p. 3324; Dr. p. 708; Gaz. vol. 133; p. 605.
Kinon, V., Aix-la-Chapelle, Germany. Machine for grinding and polishing the edges of plates of glass, marble, and the like. No. 882,115; Mar. 17; Sp. p. 3266; Dr. p. 695; Gaz. vol. 133; p. 594.
Kinsman, F. E., Plainfield, N. J. Block-signal system. No. 882,523; Mar. 17; Sp. p. 4039; Dr. p. 861; Gaz. vol. 133; p. 728.
Kirchhoff, W. G., Chicago, Ill. Adjustable bracket. No. 883,138; Mar. 24; Sp. p. 5265; Dr. p. 1124; Gaz. vol. 133; p. 962.
Kirk, A. H., Minneapolis, Minn. Grain-dampener. No. 881,135; Mar. 10; Sp. p. 1283; Dr. p. 277; Gaz. vol. 133; p. 248.
Kirkegaard, G., New York, N. Y. Bottle-capping machine. No. 880,671; Mar. 3; Sp. p. 361; Dr. pp. 79–80; Gaz. vol. 133; p. 64.
Kirkegaard, G., and F. Jebsen, New York, N. Y. Bottle-stopper. No. 883,544; Mar. 31; Sp. p. 6130; Dr. p. 1303; Gaz. vol. 133; p. 1123.
Kirkland, C. M., assignor to G. W. Hughes, St. Paul, Minn. Manifolding sales-book. No. 882,568; Mar. 24; Sp. p. 4128; Dr. p. 876; Gaz. vol. 133; p. 774.
Kirschweng, J., Spokane, Wash. Current-motor. No. 882,694; Mar. 24; Sp. p. 4375; Dr. p. 931; Gaz. vol. 133; p. 817.
Kissack, L. D., Cloverdale, Cal. Marine governor. No. 881,697; Mar. 10; Sp. p. 2385; Dr. p. 518; Gaz. vol. 133; p. 429.
Kitchen, J. M. W., East Orange, N. J. Heating system. No. 880,542; Mar. 3; Sp. p. 90; Dr. p. 21; Gaz. vol. 133; p. 20.
Klassen, J. H. (See Smith and Klassen.)
Klausmann, H. W. (See Hawekotte and Klausmann.)
Klein, H. D., Butternut, Wis. Fish-bait. No. 881,805; Mar. 10; Sp. p. 2602; Dr. p. 559; Gaz. vol. 133; p. 464.
Klein, G., Medina, N. D. Threshing-machine. No. 882,763; Mar. 24; Sp. p. 4514; Dr. p. 963; Gaz. vol. 133; p. 838.
Klein, J. (See Bennett and Klein.)
Kleinschmidt, E. E., assignor to G. M. Seeley, New York, N. Y. Signaling system. No. 881,005; Mar. 3; Sp. p. 1031; Dr. pp. 223–4; Gaz. vol. 133; p. 176.
Kleinschmidt, E. E., assignor to G. M. Seeley, New York, N. Y. System for automatically stopping cars or trains. No. 882,695; Mar. 24; Sp. p. 4376; Dr. p. 931; Gaz. vol. 133; p. 817.
Kline, F. W., North Germantown, N. Y. Toy flagstaff. No. 881,006; Mar. 3; Sp. p. 1036; Dr. p. 224; Gaz. vol. 133; p. 177.
Kling, P. M., Allegheny, Pa. Semiconvertible car. No. 880,541; Mar. 3; Sp. p. 89; Dr. p. 21; Gaz. vol. 133; p. 19.
Klinglesmith, A., Noble, Okla. Car-coupling. No. 882,696; Mar. 24; Sp. p. 4379; Dr. p. 932; Gaz. vol. 133; p. 818.
Kloss, H. (See Huebner and Kloss.)
Klousnitzer, F., Herman, Pa. Agricultural implement. No. 881,080; Mar. 3; Sp. p. 1173; Dr. p. 253; Gaz. vol. 133; p. 200.
Kluge, V. M., Syracuse, N. Y. Burglar-alarm. No. 881,007; Mar. 3; Sp. p. 1037; Dr. p. 224; Gaz. vol. 133; p. 177.
Knight, C. D., Schenectady, N. Y., assignor to General Electric Company. Rheostat. No. 882,569; Mar. 24; Sp. p. 4130; Dr. p. 876; Gaz. vol. 133; p. 774.

Knight, C. E., Shelbyville, Ill. Sectional hog and poultry crate. No. 882,893; Mar. 24; Sp. p. 4780; Dr. p. 1017; Gaz. vol. 133; p. 879.
Knight, G. W., assignor to Pittsburgh Filter Manufacturing Co., Pittsburg, Pa. Mechanism for operating indicators for hydraulic valves. No. 881,412; Mar. 10; Sp. p. 1836; Dr. p. 398; Gaz. vol. 133; p. 336.
Knipe, W. A., Ward Hill, Mass. Cementing-machine. No. 882,251; Mar. 17; Sp. p. 3529; Dr. p. 748; Gaz. vol. 133; p. 637.
Knoll, A. V., Davenport, Iowa. Drainage-valve. No. 882,784; Mar. 24; Sp. p. 4546; Dr. p. 970; Gaz. vol. 133; p. 844.
Knox, A. H., Alpena, S. D. Pitchfork. No. 883,545; Mar. 31; Sp. p. 6133; Dr. p. 1303; Gaz. vol. 133; p. 1123.
Knox, H. A., Springfield, Mass. Suspension devide for motor-frames. No. 883,113; Mar. 24; Sp. p. 5200; Dr. pp. 1111–12; Gaz. vol. 133; p. 953.
Knox, O. M., Oneida, N. Y. Hop-pole. No. 881,392; Mar. 10; Sp. p. 2183; Dr. p. 476; Gaz. vol. 133; p. 397.
Knox, O. M., Oneida, N. Y. Training-string connector. No. 881,393; Mar. 10; Sp. p. 2185; Dr. p. 476; Gaz. vol. 133; p. 398.
Knut, S. P., Washington, D. C. Truck. No. 881,008; Mar. 3; Sp. p. 1039; Dr. p. 225; Gaz. vol. 133; p. 177.
Knuth, P., St. Joseph, Mich. Guard for the knives of machines. No. 882,252; Mar. 17; Sp. p. 3531; Dr. p. 748; Gaz. vol. 133; p. 638.
Knutzen, W. J., Burlington, Wash. Swinging gate. No. 881,413; Mar. 10; Sp. p. 1839; Dr. p. 399; Gaz. vol. 133; p. 337.
Koch, F., St. Paul, Minn. Load-moving apparatus. No. 882,894; Mar. 24; Sp. p. 4782; Dr. p. 1017; Gaz. vol. 133; p. 880.
Koch, G., Lausigk, Germany. Fire-tube boiler. No. 880,672; Mar. 3; Sp. p. 365; Dr. p. 80; Gaz. vol. 133; p. 64.
Koenig, R. H., Camden, N. J., assignor to N. A. Petry, Philadelphia, Pa. Make-and-break igniter for explosive-engines. No. 881,009; Mar. 3; Sp. p. 1044; Dr. p. 226; Gaz. vol. 133; p. 178.
Koeppen, A., Buffalo, N. Y. Kitchen utensil. No. 882,151; Mar. 17; Sp. p. 3325; Dr. p. 708; Gaz. vol. 133; p. 605.
Koernig, A., *et al.* (See Roadhouse, N. F., assignor.)
Koesche, A., Chicago, Ill. Electric pump-regulator. No. 881,247; Mar. 10; Sp. p. 1508; Dr. p. 325; Gaz. vol. 133; p. 284.
Komm, G., Buckeye, Wash. Fly-trap. No. 883,318; Mar. 31; Sp. p. 5640; Dr. p. 1203; Gaz. vol. 133; p. 1050.
Königstein, G., San Francisco, Cal. Talking-machine needle. No. 881,594; Mar. 10; Sp. p. 2186; Dr. p. 476; Gaz. vol. 133; p. 398.
Kormil, A., and F. Radloff, Goldendale, Wash. Wheel-fork. No. 880,543; Mar. 3; Sp. p. 95; Dr. pp. 21–2; Gaz. vol. 133; p. 20.
Korsmeier, W. (See Cotton, J. W., assignor.)
Körting, W., Barmen, Germany. Braiding-machine. No. 881,475; Mar. 10; Sp. p. 1966; Dr. pp. 427–8; Gaz. vol. 133; p. 357.
Kottmair, L., Munich, and R. Zwack, Nordendorf, near Augsburg, Germany. Safety device for electric point shifting, signaling, locking, and switching apparatus. No. 883,646; Mar. 31; Sp. p. 6316; Dr. pp. 1346–8; Gaz. vol. 133; p. 1154.
Kovach, F. J., assignor to J. C. Bassett, Cambridge, T. E. Parker, New Bedford, Mass., and H. F. Strout, Mount Vernon, N. Y., trustees. Flux and making the same. No. 881,081; Mar. 3; Sp. p. 1175; Gaz. vol. 133; p. 200.
Krabill, C., Edgerton, Ohio. Post-brace. No. 883,205; Mar. 31; Sp. p. 5407; Dr. p. 1152; Gaz. vol. 133; p. 1013.
Kraemer, T., assignor to Hawthorne & Sheble Manufacturing Company, Philadelphia, Pa. Talking-machine. No. 881,322; Mar. 10; Sp. p. 1658; Dr. p. 355; Gaz. vol. 133; p. 309.
Kraemer, T., assignor to Hawthorne & Sheble Manufacturing Company, Philadelphia, Pa. Talking-machine. No. 882,785; Mar. 24; Sp. p. 4547; Dr. p. 971; Gaz. vol. 133; p. 845.
Kramer, C. H., Pittsburg, Pa. Vehicle. No. 881,933; Mar. 17; Sp. p. 2900; Dr. p. 618; Gaz. vol. 133; p. 536.
Kramer, E. M., Paxton, Ill. Harrow attachment for plows. No. 881,414; Mar. 10; Sp. p. 1840; Dr. p. 399; Gaz. vol. 133; p. 337.
Kramer, L., Philadelphia, Pa. Paint and varnish remover and preparing the same. No. 882,947; Mar. 24; Sp. p. 4900; Gaz. vol. 133; p. 901.
Kramer, W. J., New York, N. Y. Gasolene-trap. No. 882,393; Mar. 17; Sp. p. 3790; Dr. p. 809; Gaz. vol. 133; p. 684.
Krannichfeldt, J., Cologne, Germany. Producing electric resistance bodies. No. 881,010; Mar. 3; Sp. p. 1046; Gaz. vol. 133; p. 178.
Krannichfeldt, J., Cologne, Germany. Contact apparatus for electric igniters. No. 882,394; Mar. 17; Sp. p. 3792; Dr. p. 810; Gaz. vol. 133; p. 684.
Krause, A. E., Jersey City, N. J. Apparatus for purifying water and steam and for extracting oil and grease. No. 881,082; Mar. 3; Sp. p. 1175; Dr. pp. 253–5; Gaz. vol. 133; p. 200.
Krawczyk, F., Lodz, Russia. Pocket attachment for watches. No. 881,415; Mar. 10; Sp. p. 1838; Dr. p. 399; Gaz. vol. 133; p. 337.
Krebs, C., Newark, N. J. Carbureter. No. 881,416; Mar. 10; Sp. p. 1842; Dr. pp. 400–1; Gaz. vol. 133; p. 338.
Krebs, J. C. L. (See Bachle and Krebs.)
Krech, T., Meiningen, Germany. Foldable beach-chair. No. 882,948; Mar. 24; Sp. p. 4901; Dr. p. 1039; Gaz. vol. 133; p. 901.
Krentler Brothers Company. (See Pym, C. F., assignor.)
Kroll, F., Sebewaing, Mich. Automatic railway gate and signal. No. 883,546; Mar. 31; Sp. p. 6134; Dr. p. 1304; Gaz. vol. 133; p. 1123.
Kronman, E., New York, N. Y. Sterilizing apparatus. No. 883,463; Mar. 31; Sp. p. 5961; Dr. pp. 1271–2; Gaz. vol. 133; p. 1099.
Krotoschin, S., Leipzig, Germany. Advertising-sign or the like. No. 882,949; Mar. 24; Sp. p. 4902; Dr. p. 1039; Gaz. vol. 133; p. 901.
Krüger, C. H., Bradford, England. Life-saving appliance. No. 881,417; Mar. 10; Sp. p. 1846; Dr. p. 401; Gaz. vol. 133; p. 338.
Kruger, J. L., New York, N. Y. Sectional outlet-conduit. No. 883,409; Mar. 31; Sp. p. 5844; Dr. p. 1246; Gaz. vol. 133; p. 1080.
Kruh, O. O., Schenectady, N. Y., assignor to General Electric Company. Vapor electric apparatus. No. 883,030; Mar. 24; Sp. p. 5041; Dr. p. 1073; Gaz. vol. 133; p. 926.
Kruh, O. O., Schenectady, N. Y., assignor to General Electric Company. Vapor electric apparatus. No. 883,114; Mar. 24; Sp. p. 5203; Dr. p. 1112; Gaz. vol. 133; p. 953.
Krummel, P. (See Bartosik and Krummel.)
Kruse, A. T., assignor to American Steel Package Company, Defiance, Ohio. Sheet-metal packing-case. No. 881,418; Mar. 10; Sp. p. 1848; Dr. p. 401; Gaz. vol. 133; p. 338.
Kruse, A. T., assignor to American Steel Package Company, Defiance, Ohio. Sheet-metal packing-case. No. 881,419; Mar. 10; Sp. p. 1849; Dr. p. 402; Gaz. vol. 133; p. 339.
Kuhlerschky, K., Brunswick, Germany. Removing chlorin from raw bromin. No. 881,806; Mar. 10; Sp. p. 2604; Gaz. vol. 133; p. 464.
Kueffer, H. R., Wellmanville, Kans. Belt-guide. No. 881,698; Mar. 10; Sp. p. 2287; Dr. p. 518; Gaz. vol. 133; p. 429.
Kügelgen, F. von. (See Seward and Kügelgen.)
Kügelgen, F. von, and G. O. Seward, Holcombs Rock, Va., assignors to Virginia Laboratory Company, New York, N. Y. Electric-furnace process. No. 880,743; Mar. 3; Sp. p. 514; Dr. p. 106; Gaz. vol. 133; p. 89.
Kügelgen, F. von, and G. O. Seward, Holcombs Rock, Va., assignors to Virginia Laboratory Company, New York, N. Y. Producing aluminum-magnesium alloys. No. 881,934; Mar. 17; Sp. p. 2901; Dr. p. 619; Gaz. vol. 133; p. 536.
Kügelgen, F. von, Holcombs Rock, Va., and G. O. Seward, New York, N. Y. Cyclic process of recovering metallic tin. No. 883,139; Mar. 24; Sp. p. 5267; Gaz. vol. 133; p. 962.
Kügelgen, F. von, Holcombs Rock, Va., and G. O. Seward, New York, N. Y. Electrolyzing aqueous solutions of stannic chlorid. No. 883,140; Mar. 24; Sp. p. 5269; Gaz. vol. 133; p. 963.
Kügelgen, F. von, Holcombs Rock, Va., and G. O. Seward, New York, N. Y. Electrolyzing aqueous stannic-chlorid solutions. No. 883,141; Mar. 24; Sp. p. 5270; Gaz. vol. 133; p. 963.
Kuhle, A. (See Hattemer and Kuhle.)
Kuhle, A., West New York, N. J., assignor to Hardman, Peck & Company, New York, N. Y. Shiftable tracker-bar. No. 883,206; Mar. 31; Sp. p. 5408; Dr. p. 1152; Gaz. vol. 133; p. 1014.
Kuhsiek, A. J. H., Jersey City, N. J., assignor to R. Neuman Hardware Co. Fastener for bag-frames. No. 883,647; Mar. 31; Sp. p. 6326; Dr. p. 1348; Gaz. vol. 133; p. 1155.
Kujawa, F. L. (See Domagen and Kujawa.)
Kumler, H. R., Etiwanda, Cal. Shock-absorbing vehicle-wheel. No. 882,607; Mar. 24; Sp. p. 4380; Dr. p. 932; Gaz. vol. 133; p. 818.
Kunkel, F. R., Wilkinsburg, Pa., assignor to Westinghouse Electric & Manufacturing Company. Coil-winding machine. No. 882,253; Mar. 17; Sp. p. 3532; Dr. p. 749; Gaz. vol. 133; p. 638.
Kunzmann, J. (See Zahnter and Kunzmann.)
Kurpgeweit, L. F., Greenmont, S. D. Mail-bag receiver and deliverer. No. 883,547; Mar. 31; Sp. p. 6136; Dr. pp. 1304–5; Gaz. vol. 133; p. 1124.
Kürtz, C. B., assignor of one-half to F. C. Bosworth, Cleveland, Ohio. Air-cooled gas-engine. No. 883,207; Mar. 31; Sp. p. 5409; Dr. p. 1152; Gaz. vol. 133; p. 1014.
Kurz, O., assignor, by mesne assignments, to Sturgis Steel Go-Cart Company, Sturgis, Mich. Go-cart. No. 882,805; Mar. 24; Sp. p. 4794; Dr. p. 1018; Gaz. vol. 133; p. 880.
La Plant, H. E., Kennett, Cal. Sewing-machine. No. 880,890; Mar. 3; Sp. p. 830; Dr. p. 176; Gaz. vol. 133; p. 139.
Lacey, J. D. (See Danner, W., assignor.)
Lacomme, G., assignor of one-half to E. C. Eustace, New York, N. Y. Amusement apparatus. No. 880,673; Mar. 3; Sp. p. 366; Dr. p. 80; Gaz. vol. 133; p. 64.
Ladd, J. P., Detroit, Mich. Gate-valve. No. 880,674; Mar. 3; Sp. p. 367; Dr. p. 81; Gaz. vol. 133; p. 65.
Ladner, T. C., *et al.* (See Skerman, W., assignor.)
Lahl, E., San Francisco, Cal. Nail-pick-up device. No. 882,698; Mar. 24; Sp. p. 4381; Dr. p. 932; Gaz. vol. 133; p. 818.
Laidlaw, A. J., Red Wing, Minn. Baling-press. No. 880,800; Mar. 3; Sp. p. 631; Dr. p. 132; Gaz. vol. 133; p. 109.
Laitner, B. G. A., Detroit, Mich. Flexible brush. No. 883,548; Mar. 31; Sp. p. 6140; Dr. p. 1305; Gaz. vol. 133; p. 1124.
Lake, S., Berlin, Germany. Heat-engine. No. 880,744; Mar. 3; Sp. p. 516; Dr. pp. 106–9; Gaz. vol. 133; p. 89.
Lakin, A. R., New York, N. Y. Fitting for electric conduits. No. 883,549; Mar. 31; Sp. p. 6141; Dr. p. 1305; Gaz. vol. 133; p. 1124.
Lamb, A. G., assignor to Excelsior Needle Company, Torrington, Conn. Ruffler attachment for sewing-machines. No. 882,323; Mar. 17; Sp. p. 3672; Dr. p. 780; Gaz. vol. 133; p. 662.
Lambert, J. W., St. Louis, Mo. Wrapping-sheet. No. 881,011; Mar. 3; Sp. p. 1047; Dr. p. 226; Gaz. vol. 133; p. 178.

Lamprecht, W. G. (See Reid, W. H., assignor.)
Lamson Consolidated Store Service Company. (See Litchfield, I. W., assignor.)
Landau, D., assignor to Landau Economic Syphon Company, San Francisco, Cal. Siphon-bottle. No. 881,420; Mar. 10; Sp. p. 1851; Dr. p. 402; Gaz. vol. 133; p. 339.
Landau Economic Syphon Company. (See Landau, D., assignor.)
Landers, G. H., Boise, Idaho. Miner's knife. No. 883,648; Mar. 31; Sp. p. 6330; Dr. p. 1348; Gaz. vol. 133; p. 1155.
Landis, A. B., Waynesboro, Pa. Grinding-machine. No. 883,649; Mar. 31; Sp. p. 6331; Dr. pp. 1349–50; Gaz. vol. 133; p. 1155.
Landis, A. B., Waynesboro, Pa. Grinding-wheel truer for grinding-machines. No. 883,650; Mar. 31; Sp. p. 6335; Dr. p. 1350; Gaz. vol. 133; p. 1156.
Landis F. F., Waynesboro, Pa. Threshing-machine. No. 882,896; Mar. 24; Sp. p. 4787; Dr. p. 1018; Gaz. vol. 133; p. 881.
Lang, J., Mannheim, Germany. Window-frame. No. 882,152; Mar. 17; Sp. p. 3327; Dr. pp. 708–9; Gaz. vol. 133; p. 605.
Lang, W. H. (See Füllipp, G. A., assignor.)
Langley, F., Rouses Point, N. Y. Car-door fastener. No. 882,071; Mar. 17; Sp. p. 3194; Dr. p. 679; Gaz. vol. 133; p. 581.
Langstaff, R., Donora, Pa. Music-leaf turner. No. 881,807; Mar. 10; Sp. p. 2606; Dr. pp. 559–60; Gaz. vol. 133; p. 464.
Lannert, J. A. (See Dun Lany, W. P., assignor.)
Lanston Monotype Machine Company. (See Bancroft and Indahl, assignors.)
Lapp, J. S. (See Goddard and Lapp.)
Larava, H. F., Worcester, Mass. Indicator. No. 882,897; Mar. 24; Sp. p. 4789; Dr. p. 1019; Gaz. vol. 133; p. 881.
Larkin, C. M., Baker City, Oreg. Saw-handle. No. 881,188; Mar. 10; Sp. p. 1383; Dr. p. 298; Gaz. vol. 133; p. 265.
Larsen, H., Springfield, Ohio. Vibrator. No. 880,801; Mar. 3; Sp. p. 634; Dr. p. 133; Gaz. vol. 133; p. 109.
Larsen, J., Copenhagen, Denmark. Machine for soling footwear. No. 882,395; Mar. 17; Sp. p. 3793; Dr. p. 810; Gaz. vol. 133; p. 684.
Larson, M. L., Hawick, Minn. Animal-trap. No. 882,471; Mar. 17; Sp. p. 3924; Dr. p. 839; Gaz. vol. 133; p. 709.
Larson, N., Agra, Kans. Tricycle. No. 881,808; Mar. 10; Sp. p. 2608; Dr. p. 560; Gaz. vol. 133; p. 465.
Lassen, A. T. (See Lassen, M. E. and A. T.)
Lassen, M. E., Brooklyn, N. Y., and A. T. Lassen, Chicago, Ill. Needle-threader. No. 882,204; Mar. 17; Sp. p. 3437; Dr. p. 731; Gaz. vol. 133; p. 622.
Latchford, W. J., Chicago, Ill. Process alarm-clock. No. 880,675; Mar. 3; Sp. p. 368; Dr. p. 81; Gaz. vol. 133; p. 65.
Latchford, W. J., Chicago, Ill. Green-corn-husking machine. No. 882,472; Mar. 17; Sp. p. 3927; Dr. p. 839; Gaz. vol. 133; p. 710.
Latshaw, H. S., Jersey Shore, Pa. Electrical receptacle for plants. No. 882,699; Mar. 24; Sp. p. 4382; Dr. p. 933; Gaz. vol. 133; p. 818.
Latta, M., Valentine, Nebr. Pump. No. 882,524; Mar. 17; Sp. p. 4044; Dr. p. 861; Gaz. vol. 133; p. 729.
Laubscher, A., Bridgeport, Conn., assignor, by mesne assignments, to Singer Manufacturing Company. Ruffling mechanism for sewing-machines. No. 882,254; Mar. 17; Sp. p. 3534; Dr. pp. 749–50; Gaz. vol. 133; p. 638.
Laubscher, A., Bridgeport, Conn., assignor, by mesne assignments, to Singer Manufacturing Company. Tuck-marker for sewing-machines. No. 882,255; Mar. 17; Sp. p. 3538; Dr. pp. 750–1; Gaz. vol. 133; p. 639.
Laubscher, A., Bridgeport, Conn., assignor to Singer Manufacturing Company. Strip-guide for sewing-machines. No. 882,473; Mar. 17; Sp. p. 3929; Dr. p. 840; Gaz. vol. 133; p. 710.
Lawler, J. C., Colorado Springs, Colo. Ground-detector. No. 880,544; Mar. 3; Sp. p. 98; Dr. p. 22; Gaz. vol. 133; p. 21.
Lawrence, G. R., Chicago, Ill. Apparatus for flash-light photography. No. 881,595; Mar. 10; Sp. p. 2187; Dr. p. 477; Gaz. vol. 133; p. 398.
Lawson, J. L., Leith, Edinburgh, Scotland. Electrical purification of flour, grain, &c. No. 880,891; Mar. 3; Sp. p. 833; Dr. p. 177; Gaz. vol. 133; p. 140.
Layton, B. C. (See McKay and Layton.)
Le Blanc, M., Karlsruhe, assignor to Badische Anilin & Soda Fabrik, Ludwigshafen-on-the-Rhine, Germany. Electrolytic production of chromic acid. No. 883,651; Mar. 31; Sp. p. 6338; Dr. p. 1351; Gaz. vol. 133; p. 1156.
Le Blon, H., Paris, France. Change-speed gearing. No. 881,248; Mar. 10; Sp. p. 1510; Dr. p. 325; Gaz. vol. 133; p. 285.
Lea, H. I., Pittsburg, Pa., assignor to Westinghouse Machine Company. Gas-producer. No. 881,100; Mar. 3; Sp. p. 1211; Dr. p. 261; Gaz. vol. 133; p. 206.
Leaning, C. W., Yankton, S. D. Lantern-holder. No. 882,396; Mar. 17; Sp. p. 3794; Dr. p. 810; Gaz. vol. 133; p. 685.
Leask, J. A., Cranbrook, British Columbia, Canada. Rotary engine. No. 883,319; Mar. 31; Sp. p. 5641; Dr. pp. 1203–4; Gaz. vol. 133; p. 1050.
Leavitt, F. M., New York, assignor to E. W. Bliss Company, Brooklyn, N. Y. Controlling mechanism. No. 880,545; Mar. 3; Sp. p. 101; Dr. p. 23; Gaz. vol. 133; p. 21.
Lebkuecher, F. A., Newark, N. J. Hinge. No. 880,892; Mar. 3; Sp. p. 835; Dr. p. 178; Gaz. vol. 133; p. 140.
Lecoutre, A. J., Worcester, Mass., assignor to Royal Worcester Corset Company. Corset. No. 880,802; Mar. 3; Sp. p. 636; Dr. p. 133; Gaz. vol. 133; p. 110.
Lee, C. S., assignor to F. G. Turner, Baltimore, Md. Centrifugal sand-drier. No. 882,256; Mar. 17; Sp. p. 3541; Dr. p. 751; Gaz. vol. 133; p. 639.
Lee, F. H., Danbury, Conn. Mold for hats. No. 882,324; Mar. 17; Sp. p. 3674; Dr. p. 780; Gaz. vol. 133; p. 662.
Lehman, J., Toronto, Ontario, Canada. Oar. No. 882,072; Mar. 17; Sp. p. 3195; Dr. p. 679; Gaz. vol. 133; p. 581.
Lehmann, J. C., assignor of three-fifths to H. W. and J. J. Aylward and J. Schlagel, New York, N. Y. Hook for lacings. No. 881,421; Mar. 10; Sp. p. 1853; Dr. p. 403; Gaz. vol. 133; p. 339.
Lehikoinen, M. (See Manning, C., assignor.)
Leiman, G. W. and W. H., New York, N. Y. Blower. No. 883,464; Mar. 31; Sp. p. 5964; Dr. p. 1272; Gaz. vol. 133; p. 1099.
Leiman, W. H. (See Leiman, G. W. and W. H.)
Leitch, M., Brooklyn, N. Y., assignor, by mesne assignments, to Metal Process Company. Separating incombustible materials having different melting temperatures. No. 883,208; Mar. 31; Sp. p. 5411; Dr. p. 1153; Gaz. vol. 133; p. 1015.
Leitch, M., Elizabeth, N. J., assignor to Metal Process Company. Tin-scrap rending and shredding apparatus. No. 883,209; Mar. 31; Sp. p. 5413; Dr. p. 1153; Gaz. vol. 133; p. 1015.
Leitch, M., Elizabeth, N. J., assignor to Metal Process Company. Treating tin-scrap. No. 883,210; Mar. 31; Sp. p. 5416; Dr. p. 1154; Gaz. vol. 133; p. 1016.
Leitch, M., Springfield, Mass., assignor, by mesne assignments, to Metal Process Company. Apparatus for treating tin-scrap. No. 883,211; Mar. 31; Sp. p. 5418; Dr. pp. 1154–5; Gaz. vol. 133; p. 1016.
Leitch, M., Elizabeth, N. J., assignor to Metal Process Company. Apparatus for detinning tin-scrap. No. 883,410; Mar. 31; Sp. p. 5846; Dr. pp. 1246–7; Gaz. vol. 133; p. 1061.
Leitch, M., Elizabeth, N. J., assignor to Metal Process Company. Detinning tin-scrap. No. 883,411; Mar. 31; Sp. p. 5850; Dr. p. 1247; Gaz. vol. 133; p. 1061.
Lemay, L. L., Pepperell, Mass. Headlight-support. No. 882,898; Mar. 24; Sp. p. 4792; Dr. p. 1019; Gaz. vol. 133; p. 881.
Lennox, J., Brackenridge, Pa. Trolley-head. No. 882,153; Mar. 17; Sp. p. 3328; Dr. p. 709; Gaz. vol. 133; p. 606.
Lenschow, O., and C. Mathieson, Butte, Mont. Cooking vessel. No. 883,652; Mar. 31; Sp. p. 6339; Dr. p. 1351; Gaz. vol. 133; p. 1156.
Lentz, H., Halensee, near Berlin, and W. Voit, Berlin-Steglitz, Germany. Distributing-valve. No. 881,863; Mar. 10; Sp. p. 2731; Dr. p. 585; Gaz. vol. 133; p. 483.
Lentz, H., Halensee, near Berlin, Germany, and C. Bellens, Neuilly-sur-Seine, France. Shifting eccentric. No. 883,031; Mar. 24; Sp. p. 5043; Dr. p. 1074; Gaz. vol. 133; p. 926.
Leon, K. O., Stockholm, Sweden. Apparatus for regulating the depth of moored floating bodies. No. 881,136; Mar. 10; Sp. p. 1288; Dr. pp. 277–8; Gaz. vol. 133; p. 248.
Leonard, M., Salina, Kans. Grain-separator. No. 881,422; Mar. 10; Sp. p. 1854; Dr. p. 403; Gaz. vol. 133; p. 339.
Leopold, R. (See Schirmacher and Leopold.)
Lerch, T., and H. S. Clark, Cleveland, Ohio. Chemical fire-engine. No. 880,676; Mar. 3; Sp. p. 370; Dr. p. 81; Gaz. vol. 133; p. 66.
Levenson, S., *et al.* (See Wimmer, L., assignor.)
Levison, W. G., New York, N. Y. Apparatus for exhibiting the fluorescence of fluorescent substances. No. 883,653; Mar. 31; Sp. p. 6340; Dr. p. 1351; Gaz. vol. 133; p. 1157.
Lewin, C., Cleveland, Ohio. Weighing-faucet. No. 880,893; Mar. 3; Sp. p. 837; Dr. p. 178; Gaz. vol. 133; p. 141.
Lewin, G., Schöneberg, near Berlin, assignor to Siemens-Schuckert-Werke, G. M. B. H., Berlin, Germany. Means for transmitting power electrically. No. 881,864; Mar. 10; Sp. p. 2733; Dr. pp. 585–7; Gaz. vol. 133; p. 483.
Lewis, E. A. (See Lewis, P. G., assignor.)
Lewis, E. L., and A. P. Jamison, La Fayette, Ind. Laundry-marker. No. 881,012; Mar. 3; Sp. p. 1048; Dr. pp. 226–7; Gaz. vol. 133; p. 178.
Lewis, G. A., Detroit, Mich. Hearing-tube for sound-reproducing devices. No. 882,700; Mar. 24; Sp. p. 4383; Dr. p. 933; Gaz. vol. 133; p. 819.
Lewis, L. L., assignor to E. J. Curran, Oil City, Pa. Firing device for gas-engines. No. 882,325; Mar. 17; Sp. p. 3676; Dr. p. 780; Gaz. vol. 133; p. 663.
Lewis, M. T., near Marseilles, Ill. Hose-supporter. No. 880,804; Mar. 3; Sp. p. 839; Dr. p. 178; Gaz. vol. 133; p. 141.
Lewis, P. G., assignor to E. A. Lewis, Milwaukee, Wis. Sheet-music turner. No. 880,546; Mar. 3; Sp. p. 105; Dr. pp. 23–4; Gaz. vol. 133; p. 21.
Lewis, R. S., Omaha, Nebr. Mitten-pressing machine. No. 882,326; Mar. 17; Sp. p. 3679; Dr. pp. 780–1; Gaz. vol. 133; p. 663.
Lheure, L., Paris, France. Fuse for mines. No. 882,154; Mar. 17; Sp. p. 3329; Dr. p. 710; Gaz. vol. 133; p. 606.
Llaci, C., New Haven, Conn. Burglar-alarm. No. 882,570; Mar. 24; Sp. p. 4131; Dr. pp. 876–7; Gaz. vol. 133; p. 775.

Libby, S. H., East Orange, N. J., assignor to Sprague Electric Company. Electric carrier. No. 881,596; Mar. 10; Sp. p. 2190; Dr. pp. 477–8; Gaz. vol. 133; p. 398.
Lidster, M. (See Hoellig and Lidster.)
Lieb, J. A., New York, N. Y., assignor to American Telegraphone Company. Circuit-controlling device for telegraphones. No. 882,327; Mar. 17; Sp. p. 3681; Dr. p. 781; Gaz. vol. 133; p. 663.
Lieb, J. A., New York, N. Y., assignor to American Telegraphone Company. Amplifying-magnet system for telegraphones. No. 882,328; Mar. 17; Sp. p. 3683; Dr. p. 781; Gaz. vol. 133; p. 664.
Lieb, J. A., New York, N. Y., assignor to American Telegraphone Company. Telegraphone. No. 882,329; Mar. 17; Sp. p. 3685; Dr. p. 781; Gaz. vol. 133; p. 664.
Lienert-Market, E., Einsiedeln, Switzerland. Pipe-union. No. 883,320; Mar. 31; Sp. p. 5643; Dr. p. 1204; Gaz. vol. 133; p. 1051.
Liermann, M., *et al.* (See Schlager, A., assignor.)
Lighthiser, G., Toledo, Ohio. Car-door fastener. No. 881,240; Mar. 10; Sp. p. 1514; Dr. p. 325; Gaz. vol. 133; p. 285.
Lihme, I. P., assignor to Grasselli Chemical Company, Cleveland, Ohio. Non-darkening lithopone and making the same. No. 883,142; Mar. 24; Sp. p. 5271; Gaz. vol. 133; p. 963.
Lilly, J. C., Bedford, Pa. Device for removing calks from horseshoes. No. 883,654; Mar. 31; Sp. p. 6343; Dr. p. 1351; Gaz. vol. 133; p. 1157.
Limoge, T., assignor to Porter Screen Manufacturing Company, Burlington, Vt. Metallic extension-screen. No. 882,397; Mar. 17; Sp. p. 3796; Dr. pp. 810–11; Gaz. vol. 133; p. 685.
Lindbeck, C., *et al.* (See Wallen, C. J., assignor.)
Lindblad, A. R., and O. Stålhane, Ludvika, Sweden. Transformer-furnace. No. 880,547; Mar. 3; Sp. p. 108; Dr. p. 24; Gaz. vol. 133; p. 22.
Lindeman, B. F., assignor of three-eighths to R. H. Clever, McKees Rocks, Pa. Nail puller and starter. No. 883,321; Mar. 31; Sp. p. 5644; Dr. p. 1204; Gaz. vol. 133; p. 1051.
Linder, L. S., Mankato, Minn. Hen's nest. No. 881,250; Mar. 10; Sp. p. 1515; Dr. p. 326; Gaz. vol. 133; p. 285.
Lindman, E. H., San Pedro, Cal. Boat-detacher. No. 880,895; Mar. 3; Sp. p. 839; Dr. p. 179; Gaz. vol. 133; p. 141.
Lineback, E. E. (See Traxler and Lineback.)
Lingle, G. W., Chicago, Ill. Spirit-level. No. 883,212; Mar. 31; Sp. p. 5421; Dr. p. 1155; Gaz. vol. 133; p. 1016.
Link, W. D., Erie, Pa. Log-dumping device. No. 883,032; Mar. 24; Sp. p. 5045; Dr. pp. 1074–5; Gaz. vol. 133; p. 926.
Linn, A. W. (See Curry and Linn.)
Linnert, F. W., Warrenton, Mo. Anchor for contour amalgam fillings. No. 880,896; Mar. 3; Sp. p. 840; Dr. p. 179; Gaz. vol. 133; p. 142.
Linotype and Machinery. (See Pearce, H., assignor.)
Linville, S. A. M., and L. Hicks, Concordia, Kans. Bridle-bit. No. 880,803; Mar. 3; Sp. p. 638; Dr. p. 134; Gaz. vol. 133; p. 110.
Lipschutz, A., Chicago, Ill. Car-truck side frame. No. 883,143; Mar. 24; Sp. p. 5272; Dr. p. 1124; Gaz. vol. 133; p. 963.
Lipschutz, A., Chicago, Ill. Car-truck side frame. No. 883,465; Mar. 31; Sp. p. 5965; Dr. p. 1273; Gaz. vol. 133; p. 1099.
Lister & Company, R. A., *et al.* (See Horstmann, S. A., assignor.)
Litchfield, I. W., Boston, Mass., assignor to Lamson Consolidated Store Service Company, Newark, N. J. Store-service apparatus. No. 881,699; Mar. 10; Sp. p. 2300; Dr. p. 519; Gaz. vol. 133; p. 429.
Little, H. P., Forest Home, Ala. Back-band hook. No. 881,809; Mar. 10; Sp. p. 2611; Dr. p. 560; Gaz. vol. 133; p. 465.
Littlefield, D. B., Chicago, Ill. Sustaining and propelling mechanism. No. 882,899; Mar. 24; Sp. p. 4794; Dr. pp. 1019–20; Gaz. vol. 133; p. 882.
Littlefield, E. F., and H. A. Drinkwater, Belfast, Me. Rewinder for perforating-machines. No. 883,213; Mar. 31; Sp. p. 5422; Dr. p. 1155; Gaz. vol. 133; p. 1017.
Livingston, D. (See Smith and Livingston.)
Lloyd, B., assignor of one-half to F. P. Bayles, Cokedale, Colo. Dumping car, wagon, and the like. No. 880,548; Mar. 3; Sp. p. 109; Dr. p. 25; Gaz. vol. 133; p. 22.
Lloyd, G. G., Donaldson, Minn. Watch-bezel. No. 880,897; Mar. 3; Sp. p. 841; Dr. p. 179; Gaz. vol. 133; p. 142.
Lloyd, R. L. (See Dwight and Lloyd.)
Lobmiller, J., Wellsburg, W. Va. Box-scraper. No. 880,745; Mar. 3; Sp. p. 523; Dr. p. 109; Gaz. vol. 133; p. 90.
Locke Insulator Manufacturing Company. (See Goddard and Lapp, assignors.)
Lockyer, E., McKeesport, Pa. Caster. No. 883,655; Mar. 31; Sp. p. 6344; Dr. p. 1352; Gaz. vol. 133; p. 1157.
Loewenstein, L. (See Wouwermans, P. von, assignor.)
Loffi, F., Garrett, Ind. Jar-closure. No. 882,116; Mar. 17; Sp. p. 3268; Dr. p. 695; Gaz. vol. 133; p. 595.
Loffin, C. M., Ellis, Kans. Draft-equalizer. No. 880,804; Mar. 3; Sp. p. 639; Dr. p. 134; Gaz. vol. 133; p. 110.
Loller, M. B., New York, N. Y. Shoe-lace fastener. No. 882,701; Mar. 24; Sp. p. 4385; Dr. p. 933; Gaz. vol. 133; p. 619.
Long, J. H., New Philadelphia, Ohio. Street-sweeper. No. 881,323; Mar. 10; Sp. p. 1659; Dr. p. 355; Gaz. vol. 133; p. 309.
Long, W. W., Coulee City, assignor of three-fifths to N. E. Nuzum, Spokane, Wash. Neck-yoke fastening. No. 883,656; Mar. 31; Sp. p. 6345; Dr. p. 1352; Gaz. vol. 133; p. 1157.
Loppentien, J. D., Orange, Cal. Violin. No. 882,702; Mar. 24; Sp. p. 4386; Dr. p. 933; Gaz. vol. 133; p. 819.
Lord, C. E., Cincinnati, Ohio, assignor to General Electric Company. Projector. No. 881,597; Mar. 10; Sp. p. 2192; Dr. p. 478; Gaz. vol. 133; p. 399.
Lord, L. P., Owatonna, Minn. Box for transporting potted plants. No. 880,549; Mar. 3; Sp. p. 112; Dr. pp. 25–6; Gaz. vol. 133; p. 23.
Lorenz, J., assignor of one-half to J. H. Robeson, Matteawan, N. Y. Means for attaching swingletrees to doubletrees. No. 881,423; Mar. 10; Sp. p. 1855; Dr. p. 403; Gaz. vol. 133; p. 340.
Loring, F. H., London, England. Brush and brush-holder for dynamo-electric machines. No. 883,550; Mar. 31; Sp. p. 6142; Dr. p. 1306; Gaz. vol. 133; p. 1125.
Losch, J. S., and G. H. Gerber, Reading, Pa. Explosive-engine. No. 881,189; Mar. 10; Sp. p. 1384; Dr. pp. 298–300; Gaz. vol. 133; p. 265.
Loshbough, A. W., assignor, by mesne assignments, to Sturgis Steel Go-Cart Company, Sturgis, Mich. Child's carriage. No. 882,900; Mar. 24; Sp. p. 4798; Dr. p. 1020; Gaz. vol. 133; p. 882.
Loshbough, J. E., Elkhart, Ind., assignor, by mesne assignments, to Sturgis Steel Go-Cart Company, Sturgis, Mich. Baby-carriage. No. 882,901; Mar. 24; Sp. p. 4900; Dr. p. 1021; Gaz. vol. 133; p. 883.
Loshbough, J. E., Elkhart, Ind., assignor, by mesne assignments, to Sturgis Steel Go-Cart Company, Sturgis, Mich. Folding baby-carriage. No. 882,902; Mar. 24; Sp. p. 4904; Dr. p. 1021; Gaz. vol. 133; p. 884.
Lott, H. M., Havana, Fla. Tobacco-hanger. No. 882,474; Mar. 17; Sp. p. 3931; Dr. p. 840; Gaz. vol. 133; p. 710.
Louden Machinery Company. (See Neller, A. H., assignor.)
Loudon, L. T., assignor of two-thirds to T. West and C. I. De Lutter, Williamson, N. Y. Mounting for eyeglasses. No. 881,476; Mar. 10; Sp. p. 1968; Dr. p. 428; Gaz. vol. 133; p. 357.
Lovelace, C. D., San Angelo, Tex. Trap-gun. No. 882,786; Mar. 24; Sp. p. 4549; Dr. pp. 971–2; Gaz. vol. 133; p. 845.
Lovell, A. K., New York, N. Y. Window or shutter operating device. No. 881,477; Mar. 10; Sp. p. 1969; Dr. pp. 428–9; Gaz. vol. 133; p. 358.
Low, A. A. (See Haskins, G. W., assignor.)
Low, A. A., Horseshoe, N. Y. Hydrocarbon-motor. No. 883,412; Mar. 31; Sp. p. 5855; Dr. p. 1247; Gaz. vol. 133; p. 1081.
Lowe, L. P., San Francisco, Cal. Making gas. No. 882,764; Mar. 24; Sp. p. 4515; Dr. p. 963; Gaz. vol. 133; p. 839.
Lowe, L. P., San Francisco, Cal. Making gas and coke. No. 883,466; Mar. 31; Sp. p. 5967; Dr. p. 1273; Gaz. vol. 133; p. 1100
Lowell, R. W., Searsport, Me. Steering-wheel. No. 881,324; Mar. 10; Sp. p. 1661; Dr. p. 356; Gaz. vol. 133; p. 310.
Lowry, W. T. (See Steward and Lowry.)
Lows, H. C. (See Horn, B., assignor.)
Loxley, S. E., Dayton, Ohio. Tobacco-harvester. No. 881,598; Mar. 10; Sp. p. 2195; Dr. pp. 478–9; Gaz. vol. 133; p. 399.
Lubin, S. (See Weiser, O. T., assignor.)
Lucas, S. L., Mulberry, Fla. Mail-crane. No. 880,550; Mar. 3; Sp. p. 113; Dr. p. 26; Gaz. vol. 133; p. 23.
Luckett, W. S., East Orange, N. J., and M. Fogde, assignors to International Cigar Machinery Company, New York, N. Y. Wrapper-smoothing mechanism for cigar-machines. No. 882,703; Mar. 24; Sp. p. 4387; Dr. p. 934; Gaz. vol. 133; p. 820.
Ludington, C. F., New Britain, Conn. Copy-holder. No. 882,903; Mar. 24; Sp. p. 4907; Dr. p. 1022; Gaz. vol. 133; p. 884.
Luebbers, E. H., Jr., New York, N. Y. Garment-support. No. 881,424; Mar. 10; Sp. p. 1857; Dr. p. 404; Gaz. vol. 133; p. 340
Luhman, W. E., Port Chester, N. Y. Fire-extinguisher. No. 880,551; Mar. 3; Sp. p. 117; Dr. p. 26; Gaz. vol. 133; p. 24.
Lukacsevics, C. de, New York, N. Y. Blue-printing device. No. 883,214; Mar. 31; Sp. p. 5424; Dr. pp. 1155–6; Gaz. vol. 133; p. 1017.
Lukacsevics, C., New York, N. Y. Blue-printing machine. No. 883,322; Mar. 31; Sp. p. 5645; Dr. pp. 1204–5; Gaz. vol. 133; p. 1051.
Luke, G. W., Jackson, Mich.. Seat-iron. No. 883,215; Mar. 31; Sp. p. 5426; Dr. p. 1156; Gaz. vol. 133; p. 1017.
Luker, W. H., assignor of three-fourths to J. R. Stauffer, Scottdale, Pa. Mail-bag catching and delivering mechanism. No. 883,033; Mar. 24; Sp. p. 5047; Dr. pp. 1075–6; Gaz. vol. 133; p. 926.
Lumbard, M. A. (See McCormick and Lumbard.)
Lund, T., Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Heel. No. 880,898; Mar. 3; Sp. p. 842; Dr. p. 179; Gaz. vol. 133; p. 142.
Lundell, O. P., Sioux Falls, S. D. Building-block. No. 881,425; Mar. 10; Sp. p. 1858; Dr. p. 404; Gaz. vol. 133; p. 340.
Lundgren, J. W., Duluth, Minn. Power-transmission device. No. 882,643; Mar. 24; Sp. p. 4283; Dr. p. 908; Gaz. vol. 133; p. 800.
Lundin, A. G., New York, N. Y. Net drawing or lifting device. No. 880,552; Mar. 3; Sp. p. 119; Dr. p. 27; Gaz. vol. 133; p. 24.

Lundquist, R., Laguna de Terminos, Mexico. Rotary engine. No. 883,034; Mar. 24; Sp. p. 5051; Dr. p. 1076; Gaz. vol. 133; p. 927.
Lundy, N. W., Marshalltown, Iowa. Soldering-furnace. No. 883,216; Mar. 31; Sp. p. 5427; Dr. pp. 1156–7; Gaz. vol. 133; p. 1017.
Luppert, V. C., South Williamsport, Pa. Table-support. No. 881,190; Mar. 10; Sp. p. 1386; Dr. p. 300; Gaz. vol. 133; p. 265.
Lupo, T. B., New York, N. Y. Column for interior decoration. No. 882,398; Mar. 17; Sp. p. 3798; Dr. p. 811; Gaz. vol. 133; p. 686.
Lütge, H. C. A., Anderson, Ind. Bottle-stopper. No. 883,657; Mar. 31; Sp. p. 6346; Dr. p. 1352; Gaz. vol. 133; p. 1158.
Lutin, J., Sterling, Colo. Cutting apparatus for harvesters. No. 880,553; Mar. 3; Sp. p. 120; Dr. p. 27; Gaz. vol. 133; p. 24.
Lutton, W. J., Paterson, N. J., assignor to Crompton & Knowles Loom Works. Take-up mechanism for looms. No. 882,904; Mar. 24; Sp. p. 4810; Dr. p. 1022; Gaz. vol. 133; p. 885.
Luttrell, J. D., Benton Harbor, assignor to E. M. Barnes, St. Joseph, Mich. Concrete-mixer. No. 882,830; Mar. 24; Sp. p. 4654; Dr. pp. 960–1; Gaz. vol. 133; p. 861.
Lutz, G. A., New York, N. Y., assignor to American Circular Loom Company, Portland, Me. Electroplating apparatus. No. 881,810; Mar. 10; Sp. p. 2611; Dr. p. 561; Gaz. vol. 133; p. 465.
Lutz, G. A., New York, N. Y., assignor to American Circular Loom Company, Portland, Me. Electroplating apparatus. No. 881,811; Mar. 10; Sp. p. 2613; Dr. p. 561; Gaz. vol. 133; p. 466.
Lutz, H., Denver, Colo. Friction-clutch. No. 883,658; Mar. 31; Sp. p. 6347; Dr. pp. 1352–3; Gaz. vol. 133; p. 1158.
Luxmore, W., Chicago, Ill. Dental articulator. No. 880,899; Mar. 3; Sp. p. 843; Dr. p. 180; Gaz. vol. 133; p. 142.
Luz, F. L. (See Dickerson, M., assignor.)
Lyle, A., and C. Owens; said Lyle assignor to D. P. Montague, Chattanooga, Tenn. Machine for producing printing-surfaces. No. 882,704; Mar. 24; Sp. p. 4389; Dr. pp. 934–5; Gaz. vol. 133; p. 820.
Lynch, P. (See Jones and Lynch.)
Lyon, O. B., Modesto, Cal. Oil-burner. No. 882,795; Mar. 24; Sp. p. 4397; Dr. p. 935; Gaz. vol. 133; p. 820.
Lyon, W. T., Portland, Oreg. Dental impression-tray. No. 882,155; Mar. 17; Sp. p. 3330; Dr. p. 710; Gaz. vol. 133; p. 606.
Lytle, W. W., St. Louis, Mo. Bed-spring. No. 883,551; Mar. 31; Sp. p. 6144; Dr. p. 1306; Gaz. vol. 133; p. 1125.
Mabley, C. R., and G. E. Franquist, New York, N. Y., assignors, by mesne assignments, to Continental Automobile Company. Clutch mechanism. No. 883,552; Mar. 31; Sp. p. 6145; Dr. p. 1306; Gaz. vol. 133; p. 1125.
Mabry, H. W., Dundee, Tex. Churn. No. 881,251; Mar. 10; Sp. p. 1518; Dr. p. 326; Gaz. vol. 133; p. 286.
MacDonald, A. P., Morris, Ill. Machine for separating hulled from unhulled grain. No. 882,156; Mar. 17; Sp. p. 3331; Dr. p. 710; Gaz. vol. 133; p. 606.
MacKaye, J., Cambridge, assignor to Stone & Webster, Boston, Mass. Producing chlorids of carbon. No. 880,900; Mar. 3; Sp. p. 845; Dr. pp. 180–1; Gaz. vol. 133; p. 142.
MacLachlan, J. D., assignor to Detroit Steam Engine Company, Detroit, Mich. Valve. No. 881,191; Mar. 10; Sp. p. 1388; Dr. p. 300; Gaz. vol. 133; p. 266.
MacLean, F. F., Philadelphia, Pa. Rotary engine. No. 883,324; Mar. 31; Sp. p. 5648; Dr. p. 1205; Gaz. vol. 133; p. 1052.
MacMillan, K. C., Portland, Oreg. Bed-screen and table-frame. No. 883,325; Mar. 31; Sp. p. 5650; Dr. p. 1206; Gaz. vol. 133; p. 1052.
MacNiven, H. H., Breedsville, Mich. Bridle-bit. No. 882,791; Mar. 24; Sp. p. 4559; Dr. p. 973; Gaz. vol. 133; p. 847.
Macadam, A. C. Y., Revere, Mass. Photographic-printing apparatus. No. 882,571; Mar. 24; Sp. p. 4134; Dr. p. 877; Gaz. vol. 133; p. 775.
Macallen Company. (See Terry, W. C., assignor.)
Macbeth-Evans Glass Company. (See Ball, C. E., assignor.)
Macduff, J. B., Brooklyn, N. Y. Bracket. No. 883,323; Mar. 31; Sp. p. 5647; Dr. p. 1205; Gaz. vol. 133; p. 1052.
Mackay, W. M., Newark, N. J. Steam and hot-water boiler formed of circular sections. No. 881,137; Mar. 10; Sp. p. 1292; Dr. pp. 278–9; Gaz. vol. 133; p. 249.
Macke, F., *et al.* (See McIntosh, W. M., assignor.)
Mackie, W. A., *et al.* (See Haile, L. T., assignor.)
Macomber, H. H., assignor to Flint & Walling Manufacturing Company, Kendallville, Ind. Windmill. No. 882,644; Mar. 24; Sp. p. 4284; Dr. p. 908; Gaz. vol. 133; p. 801.
Madsen, M. H., Kimballton, Iowa. Hay-handling mechanism. No. 881,426; Mar. 10; Sp. p. 1859; Dr. p. 404; Gaz. vol. 133; p. 341.
Mage, L. A. (See Thirot, A. J. M., assignor.)
Magout, L. A., Paris, France. Change speed and reversing gear mechanism. No. 883,553; Mar. 31; Sp. p. 6148; Dr. p. 1307; Gaz. vol. 133; p. 1126.
Maher, L. C., Philadelphia, Pa. Means for transmitting power from the axles of railway-cars. No. 881,599; Mar. 10; Sp. p. 2198; Dr. p. 479; Gaz. vol. 133; p. 399.
Mahnke, W. J. (See Rowland and Mahnke.)
Mahoney, T. J., assignor of one-third to T. Bergman, Hot Springs, Ark. Spirit-level. No. 883,659; Mar. 31; Sp. p. 6349; Dr. p. 1353; Gaz. vol. 133; p. 1158.
Mahony, W. F., Washington, D. C. Pneumatic dust-collector. No. 883,413; Mar. 31; Sp. p. 5856; Dr. p. 1248; Gaz. vol. 133; p. 1082.
Maillard, H., Paris, France. Sparking device. No. 883,554; Mar. 31; Sp. p. 6151; Dr. p. 1307; Gaz. vol. 133; p. 1126.
Malloy, E. T., Hamilton, Ohio. Smoke-house. No. 882,787; Mar. 24; Sp. p. 4552; Dr. p. 972; Gaz. vol. 133; p. 846.
Maloney, J. C., Chicago, Ill. Checking device for lunch-counters, &c. No. 882,399; Mar. 17; Sp. p. 3799; Dr. p. 811; Gaz. vol. 133; p. 686.
Manhattan Briar Pipe Company. (See O'Sullivan, W., assignor.)
Manifold, H. F., Avondale, Ala. Flask-hinge. No. 881,325; Mar. 10; Sp. p. 1662; Dr. p. 356; Gaz. vol. 133; p. 310.
Manley, H. F., Victor, N. Y. Envelop-fastener. No. 883,035; Mar. 24; Sp. p. 5053; Dr. p. 1077; Gaz. vol. 133; p. 927.
Manley, R. E., Hanover, Pa. Apparatus for maintaining the tension of a moving wire. No. 881,812; Mar. 10; Sp. p. 2615; Dr. pp. 561–2; Gaz. vol. 133; p. 466.
Manley, R. H., San Francisco, Cal. Ore-concentrator. No. 881,013; Mar. 3; Sp. p. 1051; Dr. p. 227; Gaz. vol. 133; p. 179.
Mann, B. F., Baltimore, Md. Can-making machine. No. 881,326; Mar. 10; Sp. p. 1663; Dr. pp. 356–7; Gaz. vol. 133; p. 310.
Mannewitz, A. M., Dallas, Tex. Fuel-briquet. No. 881,192; Mar. 10; Sp. p. 1389; Gaz. vol. 133; p. 266.
Manners, W. F., Parker, Kans. Fly-guard. No. 880,554; Mar. 3; Sp. p. 121; Dr. p. 27; Gaz. vol. 133; p. 25.
Manning, Bowman & Company. (See Savage, G. E., assignor.)
Manning, C., assignor of one-third to M. Lehikoinen, Brackenridge, Pa. Wrench. No. 881,083; Mar. 3; Sp. p. 1179; Dr. p. 255; Gaz. vol. 133; p. 201.
Manson, J. P., Hartland, Me. Combined fender and track-cleaner. No. 881,600; Mar. 10; Sp. p. 2199; Dr. p. 479; Gaz. vol. 133; p. 399.
Manzel, C. W., assignor to Standard Automatic Lubricator Co., Buffalo, N. Y. Motor. No. 881,935; Mar. 17; Sp. p. 2903; Dr. pp. 619–20; Gaz. vol. 133; p. 536.
Manzo, A., Paterson, N. J. Ash-sifter. No. 881,601; Mar. 10; Sp. p. 2202; Dr. p. 480; Gaz. vol. 133; p. 400.
Maplebay Wind Stacker Company. (See Felsing, S. D., assignor.)
Markham Air Rifle Company. (See Markham and Roe, assignors.)
Markham, W. F., and E. S. Roe, assignors to Markham Air Rifle Company, Plymouth, Mich. Gun. No. 880,555; Mar. 3; Sp. p. 123; Dr. p. 27; Gaz. vol. 133; p. 25.
Markoff, E. E. (See Barad and Markoff.)
Marlin Fire Arms Company. (See Hepburn, L. L., assignor.)
Marlow, A. A., Boundbrook, N. J. Cooling and condensing tower. No. 882,330; Mar. 17; Sp. p. 3686; Dr. p. 782; Gaz. vol. 133; p. 664.
Marot, R., Paris, France. Apparatus for producing a gaseous mixture having disinfecting and extinguishing properties. No. 883,036; Mar. 24; Sp. p. 5054; Dr. p. 1077; Gaz. vol. 133; p. 927.
Marquardt, E. (See Eriwein and Marquardt.)
Marr, A. N., Thorner, near Leeds, England. Machine for drying yarn and textile goods. No. 881,602; Mar. 10; Sp. p. 2203; Dr. pp. 480–1; Gaz. vol. 133; p. 400.
Marr, J. W., Waterville, Me., assignor to Hollingsworth and Whitney Company, Boston, Mass. Measuring-calipers. No. 883,660; Mar. 31; Sp. p. 6350; Dr. p. 1353; Gaz. vol. 133; p. 1159.
Mars, E. M., assignor of one-half to T. H. Mars, Chicago, Ill. Device for threading conduits and for analogous purposes. No. 880,677; Mar. 3; Sp. p. 372; Dr. p. 81–2; Gaz. vol. 133; p. 66.
Mars, T. H. (See Mars E. M., assignor.)
Mars, T. H., Chicago, Ill. Automatically-tripping trolley-pole mechanism. No. 883,217; Mar. 31; Sp. p. 5430; Dr. p. 1157; Gaz. vol. 133; p. 1018.
Marsh, A. L., Lake Bluff, assignor to Hoskins Company, Chicago, Ill. Electric furnace. No. 882,788; Mar. 24; Sp. p. 4554; Dr. p. 972; Gaz. vol. 133; p. 846.
Marsh, E. A., Detroit, Mich. Pneumatic tire. No. 882,905; Mar. 24; Sp. p. 4812; Dr. p. 1023; Gaz. vol. 133; p. 885.
Marsh, E. A., Chicago, Ill. Lock or latch for windows. No. 883,555; Mar. 31; Sp. p. 6153; Dr. p. 1308; Gaz. vol. 133; p. 1126.
Marsh, J. G., Manchester, N. H. Playing-hoop. No. 881,427; Mar. 10; Sp. p. 1861; Dr. p. 405; Gaz. vol. 133; p. 341.
Marshall, E. H., Markham, Va. Feed-bag holder. No. 881,813; Mar. 10; Sp. p. 2618; Dr. p. 562; Gaz. vol. 133; p. 467.
Marshall, J. W. (See Cameron and Marshall.)
Marte, M., East Syracuse, N. Y. Roofing-tile. No. 882,765; Mar. 24; Sp. p. 4517; Dr. p. 963; Gaz. vol. 133; p. 839.
Martin, A., Rock Elm, Wis. Hemmer. No. 880,678; Mar. 3; Sp. p. 374; Dr. p. 82; Gaz. vol. 133; p. 66.
Martin, C. V., Charleston, W. Va. Engine. No. 881,428; Mar. 10; Sp. p. 1863; Dr. p. 405; Gaz. vol. 133; p. 341.
Martin, J. (See Shatzky, A., assignor.)

Martin, M., Gilmore, Md. Coal-auger. No. 882,475; Mar. 17; Sp. p. 3931; Dr. p. 840; Gaz. vol. 133; p. 711.
Martin, N., Seaforth, Minn. Spark-arrester. No. 883,218; Mar. 31; Sp. p. 5433; Dr. p. 1157; Gaz. vol. 133; p. 1019.
Marvin, G. N., Oberlin, Kans. Picture-holder. No. 881,956; Mar. 17; Sp. p. 2905; Dr. p. 620; Gaz. vol. 133; p. 537.
Marx, A., *et al.* (See Wimmer, L., assignor.)
Marx and Rawolle. (See Wood, F. J., assignor.)
Maschinenbau-Anstalt Altenessen A. G. (See Greiner, F., assignor.)
Maschinenfabrik Germania, vorm. J. S. Schwalbe & Sohn. (See Gülke, C., assignor.)
Mason, F. C., assignor to Bissell Carpet Sweeper Company, Grand Rapids, Mich. Ball-bearing for carpet-sweepers. No. 881,603; Mar. 10; Sp. p. 2208; Dr. p. 481; Gaz. vol. 133; p. 400.
Mason, G. W., Sharon, Pa. Wrench. No. 881,937; Mar. 17; Sp. p. 2906; Dr. p. 620; Gaz. vol. 133; p. 537.
Mason & Hamlin. (See Binnig, J., assignor.)
Mason, R., Gladstone, Mich. Closure for mucilage and other receptacles. No. 880,679; Mar. 3; Sp. p. 375; Dr. p. 82. Gaz. vol. 133; p. 66.
Mason Smokeless Combustion Company. (See Mason, T. C., assignor.)
Mason, T. C., Los Angeles, Cal., assignor, by mesne assignments, to Mason Smokeless Combustion Company, Carson City, Nev. Means for burning oil. No. 882,305; Mar. 17; Sp. p. 3438; Dr. p. 731; Gaz. vol. 133; p. 622.
Massey, J. F., Douglas, Arz. Ter. Rotary engine. No. 881,014; Mar. 3; Sp. p. 1052; Dr. p. 228; Gaz. vol. 133; p. 179.
Massey, J. M., Gahanna, Ohio. Grooving or routing tool. No. 882,331; Mar. 17; Sp. p. 3688; Dr. p. 782; Gaz. vol. 133; p. 665.
Matchette, F. J. (See Moukoe, C., assignor.)
Mather & Platt. (See Hopkinson and Frith, assignors.)
Matheus, K., and E. T. Hendee, Chicago, Ill. Piston. No. 882,572; Mar. 24; Sp. p. 4135; Dr. p. 877; Gaz. vol. 133; p. 775.
Mathews Gravity Carrier Company. (See Courtney, W. E., assignor.)
Mathieson, C. (See Lenschow and Mathieson.)
Matter, F. P., Alexandria, Va. Electric block-signal. No. 881,138; Mar. 10; Sp. p. 1294; Dr. p. 279; Gaz. vol. 133; p. 249.
Matteson, J. South Hartford, N. Y. Ice-creeper. No. 883,556; Mar. 31; Sp. p. 6155; Dr. p. 1308; Gaz. vol. 133; p. 1126.
Matthes, S., and J. B. Rinehart, Mansfield, Ohio. Valve. No. 882,831; Mar. 24; Sp. p. 4655; Dr. p. 991; Gaz. vol. 133; p. 861.
Matthews, C. J., Grand Rapids, Mich. Lubricator. No. 880,680; Mar. 3; Sp. p. 376; Dr. pp. 82–3; Gaz. vol. 133; p. 67.
Mattingley, R. S., Rockport, Ind. Plow attachment. No. 880,556; Mar. 3; Sp. p. 124; Dr. p. 28; Gaz. vol. 133; p. 25.
Mattson, J., Redmond, Wash. Logging-block. No. 880,805; Mar. 3; Sp. p. 640. Dr. p. 134; Gaz. vol. 133; p. 110.
Matty, M. H. (See Decker and Matty.)
Maurer, J. H., Oakland, Cal. Machine for cutting butter, &c. No. 883,037; Mar. 24; Sp. p. 5057; Dr. p. 1078; Gaz. vol. 133; p. 928.
Maxwell, W. H., Kalamazoo, Mich. Angle-metal folding bench. No. 882,010; Mar. 17; Sp. p. 3074; Dr. p. 653; Gaz. vol. 133; p. 561.
Maybach, W., Cannstatt, assignor to Daimler Motorengesellschaft, Untertürkheim-Stuttgart, Germany. Device for the relief of wagon-springs. No. 881,252; Mar. 10; Sp. p. [illegible]19; Dr. pp. 326–7; Gaz. vol. 133; p. 286.
Mayer, E. (See Mayer, I. and E.)
Mayer, I. and E., Vienna, Austria-Hungary. Steam-trap. No. 882,400; Mar. 17; Sp. p. 3800; Dr. pp. 811–12; Gaz. vol. 133; p. 686.
Mayo, B. F., Salem, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Sole-pressing machine. No. 881,478; Mar. 10; Sp. p. 1971; Dr. pp. 429–30; Gaz. vol. 133; [illegible]358.
Mayo, B. F., Salem, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Sole-rounding machine. No. 882,009; Mar. 17; Sp. p. 3067; Dr. p. 652; Gaz. vol. 133; p. 560.
Mazzatenta, V., Turin, Italy. Metal seal. No. 882,525; Mar. 17; Sp. p. 4046; Dr. p. 861; Gaz. vol. 133; p. 729.
McAdam, J. V. (See Everett and McAdam.)
McArthur, A. R., Elwood, Ind., assignor to American Sheet & Tin Plate Company, Pittsburg, Pa. Discharge mechanism for shears. No. 880,811; Mar. 3; Sp. p. 651; Dr. pp. 136-7; Gaz. vol. 133; p. 113.
McArthur, G. P., Rockledge, Pa. Evaporating apparatus. No. 880,812; Mar. 3; Sp. p. 652; Dr. p. 137; Gaz. vol. 133; p. 113.
McAslan, N., Yorkshire, Iowa. Compound tool. (Reissue.) No. 12,773; Mar. 31; Sp. p. 6401; Dr. p. 1365; Gaz. vol. 133; p. 1167.
McCabe, J. M., *et al.* (See Stoops, W. B., assignor.)
McCaleb, W., Bluffs, Ill. Cotton-chopper. No. 882,409; Mar. 17; Sp. p. 3814; Dr. p. 815; Gaz. vol. 133; p. 689.
McCall, J. H., Huntingdon, Tenn. Sanitary appliance. No. 882,410; Mar. 17; Sp. p. 3817; Gaz. vol. 133; p. 690.
McCall, J. L., Mobile, Ala. Rolling-screen. No. 881,196; Mar. 10; Sp. p. 1397; Dr. p. 302; Gaz. vol. 133; p. 267.
McCall, T. A., Xenia, Ohio. Apparatus for automatically operating type-writers. No. 882,263; Mar. 17; Sp. p. 3555; Dr. pp. 754–5; Gaz. vol. 133; p. 642.
McCall, T. A., Xenia, Ohio. Pneumatically-operated massage apparatus. No. 882,532; Mar. 17; Sp. p. 4050; Dr. p. 864; Gaz. vol. 133; p. 731.
McCampbell, T., New York, N. Y. Combined pattern-pouch and sales-check. No. 881,255; Mar. 10; Sp. p. 1525; Dr. p. 328; Gaz. vol. 133; p. 287.
McCausland, T. G. (See Warfel, H. C., assignor.)
McClanahan, I. W., Spokane, Wash. Chair attachment. No. 883,330; Mar. 31; Sp. p. 5657; Dr. p. 1207; Gaz. vol. 133; p. 1054.
McClellan, L. K., Billings, Mont. Clevis. No. 882,476; Mar. 17; Sp. p. 3932; Dr. p. 841; Gaz. vol. 133; p. 711.
McClelland, D. A., Gas, Kans. Clothes-sprinkler. No. 883,331; Mar. 31; Sp. p. 5658; Dr. p. 1207; Gaz. vol. 133; p. 1054.
McClellon, J. M., Everett, Mass. Superheater. No. 880,562; Mar. 3; Sp. p. 133; Dr. p. 30; Gaz. vol. 133; p. 27.
McCloud, E. H., Columbus, Ohio. Automatic fire-shutter. No. 881,256; Mar. 10; Sp. p. 1526; Dr. p. 328; Gaz. vol. 133; p. 288.
McClure, W. D., Kirksey, assignor of one-half to W. A. Strom, Pleasant Lane, S. C. Cotton-chopper. No. 882,335; Mar. 17; Sp. p. 3697; Dr. p. 786; Gaz. vol. 133; p. 666.
McColloch, E. H., New Orleans, La. Stocking. No. 882,834; Mar. 24; Sp. p. 4658; Dr. p. 992; Gaz. vol. 133; p. 862.
McCollum, J. H. K., Toronto, Ontario, Canada. Automatic stop for railway-vehicles. No. 881,706; Mar. 10; Sp. p. 2400; Dr. pp. 521–2; Gaz. vol. 133; p. 432.
McComb, J. S., Dobbs Ferry, N. Y. Desk. No. 882,207; Mar. 17; Sp. p. 3442; Dr. p. 732; Gaz. vol. 133; p. 622.
McComb, J. S., Dobbs Ferry, N. Y. Desk. No. 883,419; Mar. 31; Sp. p. 5867; Dr. p. 1250; Gaz. vol. 133; p. 1084.
McComb, W. N., New York, N. Y. Electric sign or illuminating device. No. 882,013; Mar. 17; Sp. p. 3079; Dr. p. 655; Gaz. vol. 133; p. 562.
McCormick, H., and M. A. Lumbard, Des Moines, Iowa. Duplicate-sale-slip file. No. 881,481; Mar. 10; Sp. p 1978; Dr. p. 431; Gaz. vol. 133; p. 359.
McCoy, H. L. (See Higgins and McCoy.)
McCracken, C. H., Perry, Okla. Animal-poke. No. 881,436; Mar. 10; Sp. p. 1879; Dr. p. 409; Gaz. vol. 133; p. 344.
McCrum-Howell Company. (See Holfelder, J. A., assignor.)
McCullough, H. R. (See Dyblie, J. A., assignor.)
McCurdy, J. F., San Jose, Cal. Try-square. No. 883,041; Mar. 24; Sp. p. 5064; Dr. p. 1080; Gaz. vol. 133; p. 929.
McDaniel, D., Macon, Ill. Road drag and scraper. No. 883,332; Mar. 31; Sp. p. 5659; Dr. p. 1208; Gaz. vol. 133; p. 1054.
McDougall, D., Fall River, Mass. Clothes-line prop. No. 880,748; Mar. 3; Sp. p. 528; Dr. p. 110; Gaz. vol. 133; p. 91.
McDougall, W. M., East Orange, N. J., and S. R. V. Robinson, New York, N. Y. Primary battery. No. 880,689; Mar. 3; Sp. p. 391; Dr. p. 85; Gaz. vol. 133; p. 70.
McElhone, M. H., New York, N. Y. Finger-pad. No. 882,117; Mar. 17; Sp. p. 3268; Dr. p. 696; Gaz. vol. 133; p. 595.
McElree, V., Pittsburg, Pa. Envelop. No. 883,662; Mar. 31; Sp. p. 6353; Dr. p. 1353; Gaz. vol. 133; p. 1159.
McGillivray, J. E., Walla Walla, Wash. Device for attaching cross-arms to telegraph-poles. No. 882,835; Mar. 24; Sp. p. 4660; Dr. p. 992; Gaz. vol. 133; p. 862.
McGinn, J. P., Denver, assignor of three-fourths to C. T. Roach, Glenwood Springs, Colo. Amalgamator. No. 883,117; Mar. 24; Sp. p. 5221; Dr. pp. 1114–15; Gaz. vol. 133; p. 955.
McGrath, L. A., assignor of one-fourth to M. F. Cunningham, Randolph, Mass. Machine for stringing tags. No. 883,223; Mar. 31; Sp. p. 5443; Dr. pp. 1160–1; Gaz. vol. 133; p. 1020.
McGregor, J. W., and L. G. Ferris, Tacoma, Wash. Pulley-clutch bushing. No. 883,559; Mar. 31; Sp. p. 6158; Dr. p. 1309; Gaz. vol. 133; p. 1127.
McIlwain, A. T., Abbeville, S. C. Siding attachment for plows. No. 882,768; Mar. 24; Sp. p. 4523; Dr. p. 965; Gaz. vol. 133; p. 840.
McIntosh, B., New York, N. Y., assignor to F. A. Hall, Montclair, N. J. Bed-spring. No. 882,264; Mar. 17; Sp. p. 3565; Dr. pp. 755–6; Gaz. vol. 133; p. 642.
McIntosh, W. M., assignor of one-half to H. B. Seaton and F. Macke, Denver, Colo. Key-bolt and automatic lock therefor. No. 881,819; Mar. 10; Sp. p. 2626; Dr. p. 564; Gaz. vol. 133; p. 469.
McKay, E., and B. C. Layton, Addison township, Oakland county, Mich. Automatic box-adjusting mechanism. No. 881,941; Mar. 17; Sp. p. 2919; Dr. p. 623; Gaz. vol. 133; p. 538.
McKay, T. J., Atlanta, Ga. Trunk. No. 883,420; Mar. 31; Sp. p. 5869; Dr. p. 1251; Gaz. vol. 133; p. 1084.
McKee, C. W., Phœnix, Ariz. Ter. Weighing-scale. No. 881,020; Mar. 3; Sp. p. 1061; Dr. p. 230; Gaz. vol. 133; p. 181.
McKee, W. W., Tacoma, Wash. Segment-sawing machine. No. 883,333; Mar. 31; Sp. p. 5660; Dr. p. 1208; Gaz. vol. 133; p. 1054.
McKeel, G. A., assignor to George A. McKeel & Company, Limited, Jackson, Mich. Roller-bearing. No. 883,469; Mar. 31; Sp. p. 5971; Dr. p. 1274; Gaz. vol. 133; p. 1101.
McKennan, J. B., Pueblo, Colo. Flue and valve system for furnaces. No. 881,328; Mar. 10; Sp. p. 1668; Dr. pp. 358–9; Gaz. vol. 133; p. 311.
McKeough, W. P. (See Schermerhorn, E., assignor.)

McKinnon, E. L., Sheboygan Falls, Wis. Cheese-press. No. 882,792; Mar. 24; Sp. p. 4560; Dr. pp. 973–4; Gaz. vol. 133; p. 847.
McKnight, E. J. (See Nichols, T., assignor.)
McLane, J. A., assignor to Patent Holding and Manufacturing Company, Grafton, W. Va. Engraving-machine. No. 881,021; Mar. 3; Sp. p. 1063; Dr. pp. 230–1; Gaz. vol. 133; p. 181.
McLaughlin, J. C., assignor to Underwood Typewriter Company, New York, N. Y. Type-writing machine. No. 883,470; Mar. 31; Sp. p. 5972; Dr. pp. 1274–5; Gaz. vol. 133; p. 1101.
McLaughlin, M. P., Wakefield, Mass. Flexible conduit-joint. No. 882,836; Mar. 24; Sp. p. 4662; Dr. p. 992; Gaz. vol. 133; p. 862.
McLaurin, R. A., Kelvinside, Scotland. Treatment of gum-paper and the like. No. 882,336; Mar. 17; Sp. p. 3698; Dr. p. 786; Gaz. vol. 133; p. 666.
McMullan, J., Milford, Tex. Wheel-plow. No. 881,820; Mar. 10; Sp. p. 2628; Dr. p. 564; Gaz. vol. 133; p. 469.
McMurry, E. H., assignor of one-fourth to J. L. West and three-sixths to H. S. and R. L. Mixon and L. Robinson, Marianna, Ark. Baling-press. No. 883,145; Mar. 24; Sp. p. 5275; Dr. p. 1125; Gaz. vol. 133; p. 963.
McMurtrie, A., assignor to Thomas and Betts, New York, N. Y. Junction-box for electrical conduits. No. 882,337; Mar. 17; Sp. p. 3700; Dr. p. 787; Gaz. vol. 133; p. 666.
McNeil, C. W., San Antonio, assignor of one-half to J. B. Armstrong, Cameron county, Tex. Locking-bolt for guards to openings. No. 883,471; Mar. 31; Sp. p. 5975; Dr. p. 1275; Gaz. vol. 133; p. 1101.
McNeill, B., London, England. Tabulated gage for telegraphic or secret codes. No. 880,905; Mar. 3; Sp. p. 860; Dr. p. 183; Gaz. vol. 133; p. 144.
McNitt, C. J., Salt Lake City, Utah. Railway-car transom and other window screen. No. 881,608; Mar. 10; Sp. p. 2222; Dr. p. 483; Gaz. vol. 133; p. 403.
McTear, B. F., Rainhill, England. Apparatus for drawing hard-metal tubes. No. 880,563; Mar. 3; Sp. p. 137; Dr. p. 31; Gaz. vol. 133; p. 27.
Mears, F., Minneapolis, and J. Craig, assignors, by mesne assignments, to Hygienic Refiner Company, Princeton, Minn. Apparatus for bleaching and aging flour and other grain products. No. 882,526; Mar. 17; Sp. p. 4047; Dr. p. 862; Gaz. vol. 133; p. 729.
Mears, F., Minneapolis, and J. Craig, assignors, by mesne assignments, to Hygienic Refiner Company, Princeton, Minn. Bleaching and aging flour and other grain products. No. 882,527; Mar. 17; Sp. p. 4049; Dr. p. 862; Gaz. vol. 133; p. 730.
Mears, F., Minneapolis, and J. Craig, assignors, by mesne assignments, to Hygienic Refiner Company, Princeton, Minn. Gas-generator. No. 882,528; Mar. 17; Sp. p. 4051; Dr. p. 562; Gaz. vol. 133; p. 730.
Meece, J. R., Rosman, N. C. Log-turner. No. 880,557; Mar. 3; Sp. p. 125; Dr. p. 28; Gaz. vol. 133; p. 25.
Megson, C. H., and G. H. Sculthorp, Manchester, assignors to M. Bartholomew, London, England. Means for mounting carbon sheets. No. 883,219; Mar. 31; Sp. p. 5434; Dr. p. 1157; Gaz. vol. 133; p. 1019.
Meiklejohn, G. D. (See Harman and Taylor, assignors.)
Meine, F., La Grange, Ill. Hernial truss. No. 880,681; Mar. 3; Sp. p. 378; Dr. p. 83; Gaz. vol. 133; p. 67.
Meinhardt, A. B., Paxico, Kans. Trace-carrier. No. 881,814; Mar. 10; Sp. p. 2619; Dr. p. 562; Gaz. vol. 133; p. 467.
Melhuish, A. G., Edmonton, England. Internal-combustion engine. No. 882,401; [illegible]. 17; Sp. p. 3803; Dr. pp. 812–13; Gaz. vol. 133; p. 686.
Melton, F. J., Chicago, Ill. Heating system. No. 880,806; Mar. 3; Sp. p. 641; Dr. p. 134; Gaz. vol. 133; p. 111.
Melvin, A. L. (See Daffrin, A. J. E., assignor.)
Melvin, R. N., assignor of one-half to W. D. Hamaker, Meadville, Pa. Reamer and boring-head. No. 882,529; Mar. 17; Sp. p. 4052; Dr. p. 862; Gaz. vol. 133; p. 730.
Melvin, R. N., assignor of one-half to W. D. Hamaker, Meadville, Pa. Boring-tool. No. 882,530; Mar. 17; Sp. p. 4054; Dr. p. 863; Gaz. vol. 133; p. 730.
Menkin, E. F., Chicago, Ill., assignor, by mesne assignments, to Enterprise Specialty Company. Pickle-fork. No. 880,807; Mar. 3; Sp. p. 642; Dr. p. 135; Gaz. vol. 133; p. 111.
Mensing, L. C. H., Rugby, England. Electric-arc lamp. No. 881,015; Mar. 3; Sp. p. 1054; Dr. p. 229; Gaz. vol. 133; p. 179.
Merchant, W. B. (See Eubank, J. H., assignor.)
Mergenthaler Linotype Company. (See Converse, F. B., Jr., assignor.)
Mergenthaler Linotype Company. (See Dodge, P. T., assignor.)
Mergenthaler Linotype Company. (See Petri-Palmedo, D., assignor.)
Mergenthaler Linotype Company. (See Rogers, J. R., assignor.)
Meriam, J. B., Cleveland, Ohio. Air-pump. No. 880,746; Mar. 3; Sp. p. 525; Dr. [illegible]109; Gaz. vol. 133; p. 91.
Merriam, F. B., Schenectady, N. Y., assignor to General Electric Company. Chronograph. No. 881,479; Mar. 10; Sp. p. 1975; Dr. p. 430; Gaz. vol. 133; p. 358.
Merrill, F. M., Los Angeles, Cal. Padlock. No. 883,414; Mar. 31; Sp. p. 5858; Dr. p. 1248; Gaz. vol. 133; p. 1082.
Merrill, F. M., Los Angeles, Cal. Door-lock. No. 883,415; Mar. 31; Sp. p. 5860; Dr. p. 1249; Gaz. vol. 133; p. 1083.
Merrill, F. M., Los Angeles, Cal. Electric-alarm for locks. No. 883,416; Mar. 31; Sp. p. 5863; Dr. p. 1249; Gaz. vol. 133; p. 1082.
Merrill, F. M., Los Angeles, Cal. Padlock. No. 883,417; Mar. 31; Sp. p. 5865; Dr. p. 1249; Gaz. vol. 133; p. 1083.
Merrill, N. C., Vancouver, British Columbia, Canada. Tiltable bed. No. 880,662; Mar. 3; Sp. p. 379; Dr. p. 83; Gaz. vol. 133; p. 67.
Merriman, T. S., Beaver Falls, Pa. Car-door hanger. No. 882,950; Mar. 24; Sp. p. 4903; Dr. p. 1040; Gaz. vol. 133; p. 901.
Merrin, W. L., Fredericktown, Ohio. Storage battery. No. 882,573; Mar. 24; Sp. p. 4137; Dr. p. 878; Gaz. vol. 133; p. 776.
Merritt, D. H., Lincoln, Nebr. Cement-brick machine. No. 881,815; Mar. 10; Sp. p. 2620; Dr. pp. 562–3; Gaz. vol. 133; p. 467.
Merritt, M. M., Middleton, Mass., assignor to National Electric Lamp Company, Cleveland, Ohio. Incandescent lamp. No. 882,257; Mar. 17; Sp. p. 3543; Dr. p. 752; Gaz. vol. 133; p. 640.
Merritt, M. M., Middleton, Mass., assignor to National Electric Lamp Company, Cleveland, Ohio. Manufacture of incandescent-lamp bases. No. 882,258; Mar. 17; Sp. p. 3546; Dr. p. 752; Gaz. vol. 133; p. 640.
Merritt, W. N., Nocona, Tex. Lawn-mower. No. 881,430; Mar. 10; Sp. p. 1871; Dr. p. 407; Gaz. vol. 133; p. 342.
Merrow, F. S., Portland, Me. Screwless type-writer base-board. No. 880,683; Mar. 3; Sp. p. 380; Dr. p. 83; Gaz. vol. 133; p. 68.
Merrow, J. M., assignor to Merrow Machine Company, Hartford, Conn. Presser-foot for sewing-machines. No. 881,816; Mar. 10; Sp. p. 2622; Dr. p. 563; Gaz. vol. 133; p. 467.
Merrow Machine Company. (See Merrow, J. M., assignor.)
Metal Process Company. (See Leitch, M., assignor.)
Metallic Sheathing Company. (See Berg, L. J., assignor.)
Metcalf, B., New York, N. Y. Self-cleansing filter. No. 880,558; Mar. 3; Sp. p. 126; Dr. pp. 28–9; Gaz. vol. 133; p. 26.
Metcalfe, H. W., Ealing, England. Crane mechanism. No. 882,011; Mar. 17; Sp. p. 3075; Dr. pp. 653–4; Gaz. vol. 133; p. 561.
Metrofanoff, N. P., Bridgeport, Conn. Mechanical fountain. No. 883,038; Mar. 24; Sp. p. 5060; Dr. p. 1078; Gaz. vol. 133; p. 928.
Mettler, J. W., East Millstone, assignor to Interwoven Stocking Company, New Brunswick, N. J. Hosiery. No. 882,951; Mar. 24; Sp. p. 4903; Dr. p. 1040; Gaz. vol. 133; p. 901.
Metzker, K., New York, N. Y. Swinging door. No. 883,418; Mar. 31; Sp. p. 5866; Dr. p. 1250; Gaz. vol. 133; p. 1084.
Meulen, A. A. van der, Amsterdam, Netherlands. Forming hygienic metallic ends on cigars and the like. No. 882,770; Mar. 24; Sp. p. 4525; Gaz. vol. 133; p. 840.
Meyer, A. J., Cleveland, Ohio. Variable-speed-transmitting mechanism. No. 882,952; Mar. 24; Sp. p. 4905; Dr. p. 1040; Gaz. vol. 133; p. 902.
Meyer, C. L., and N. P. Hickey, Detroit, Mich., assignors to Commercial Gas Company, Limited, Windsor, Canada. Apparatus for carbureting air. No. 881,431; Mar. 10; Sp. p. 1871; Dr. p. 407; Gaz. vol. 133; p. 342.
Meyer, F., assignor to Bartels, Dierichs & Co. Gesellschaft mit beschränkter Haftung, Barmen, Germany. Braiding and lace-making machine. No. 882,332; Mar. 17; Sp. p. 3689; Dr. pp. 782–4; Gaz. vol. 133; p. 665.
Meyer, H., St. Louis, Mo. Pneumatic carving-drill. No. 882,259; Mar. 17; Sp. p. 3549; Dr. p. 752; Gaz. vol. 133; p. 640.
Meyer, H., New York, N. Y. Pneumatic action. No. 882,402; Mar. 17; Sp. p. 3804; Dr. p. 813; Gaz. vol. 133; p. 687.
Meyer, J., Muttersholz, near Schlettstadt, Germany. Non-refillable bottle. No. 881,817; Mar. 10; Sp. p. 2624; Dr. p. 563; Gaz. vol. 133; p. 468.
Mezger, C. A., New York, N. Y. Deriving energy from the direct combustion of fuel. No. 882,261; Mar. 17; Sp. p. 3552; Dr. p. 753; Gaz. vol. 133; p. 641.
Mezger, C. A., assignor to C. A. Mezger Inc., New York, N. Y. Spark-plug clip. No. 882,260; Mar. 17; Sp. p. 3551; Dr. p. 753; Gaz. vol. 133; p. 641.
Michael, C. W., assignor to J. I. Case Plow Works, Racine, Wis. Planter. No. 881,193; Mar. 10; Sp. p. 1389; Dr. p. 301; Gaz. vol. 133; p. 266.
Michaelsen, C. O., Omaha, Nebr. Mineral-concentrator. No. 880,808; Mar. 3; Sp. p. 644; Dr. p. 135; Gaz. vol. 133; p. 111.
Middlebrook, W. H., Southport, Conn., assignor of one-half to J. P. Osterhoudt, Kingston, N. Y. Clamp for gas-hose. No. 883,220; Mar. 31; Sp. p. 5435; Dr. p. 1158; Gaz. vol. 133; p. 1019.
Middleton, E. (See Holmstrom, C., assignor.)
Miehle, R., Chicago, Ill. Printing-press. No. 881,139; Mar. 10; Sp. p. 1296; Dr. pp. 279–80; Gaz. vol. 133; p. 250.
Mikolasek, W. F., Vodnany, S. D. Toy. No. 882,403; Mar. 17; Sp. p. 3806; Dr. pp. 813–14; Gaz. vol. 133; p. 687.
Mikorey, H., Schöneberg, near Berlin, assignor to Firm of W. Graaff & Compagnie, Ges. mit beschr. Haftung, Berlin, Germany. Hand-operated sand-blast. No. 882,645; Mar. 24; Sp. p. 4286; Dr. p. 909; Gaz. vol. 133; p. 801.
Mikorey, H., Schöneberg, near Berlin, Germany. Color-spraying apparatus. No. 883,144; Mar. 24; Sp. p. 5274; Dr. p. 1125; Gaz. vol. 133; p. 963.

Miles, D. D., Jr., Aurora, Ill. Block-signal. No. 881,938; Mar. 17; Sp. 2907; Dr. p. 621; Gaz. vol. 133; p. 537.
Millard, J. A., New York, N. Y. Bridle-bit. No. 880,901; Mar. 3; Sp. p. 849; Dr. p. 181; Gaz. vol. 133; p. 143.
Millard, R. C., Atlanta, Ga. Safety appliance for railway-trains. No. 882,157; Mar. 17; Sp. p. 3333; Dr. p. 711; Gaz. vol. 133; p. 607.
Miller, C. J., Chicago, Ill. Forging-crane. No. 881,253; Mar. 10; Sp. p. 1521; Dr. p. 327; Gaz. vol. 133; p. 287.
Miller, E. J., Canton, Ohio. Pasteurizing apparatus. No. 882,706; Mar. 24; Sp. p. 4396; Dr. p. 936; Gaz. vol. 133; p. 821.
Miller, F. J., Detroit, Mich. Reinforced concrete sidewalk. No. 881,700; Mar. 10; Sp. p. 2392; Dr. p. 519; Gaz. vol. 133; p. 430.
Miller, G. A., Tamaroa, Ill. Binding attachment for baling-presses. No. 881,432; Mar. 10; Sp. p. 1873; Dr. pp. 407–8; Gaz. vol. 133; p. 343.
Miller, J. M., Chicago, Ill. Acid-bottle cage for fire-extinguishers. No. 883,326; Mar. 31; Sp. p. 5652; Dr. p. 1206; Gaz. vol. 133; p. 1052.
Miller, M., St. Louis, Mo. Apparatus for treating, storing, and delivering water. No. 883,221; Mar. 31; Sp. p. 5436; Dr. pp. 1158–9; Gaz. vol. 133; p. 1019.
Miller, R., Appleton, Wis. Hay-carrier. No. 881,604; Mar. 10; Sp. p. 2209; Dr. p. 482; Gaz. vol. 133; p. 401.
Miller, R. R., Pueblo, Colo. Railroad switching device. No. 882,707; Mar. 24; Sp. p. 4401; Dr. p. 936; Gaz. vol. 133; p. 821.
Miller, R. W., Perry, Iowa. Mattress-frame. No. 881,701; Mar. 10; Sp. p. 2394; Dr. p. 519; Gaz. vol. 133; p. 430.
Miller, T. S., South Orange, and J. H. Dickinson, Montclair, N. J. Loading apparatus. No. 883,115; Mar. 24; Sp. p. 5206; Dr. p. 1112–13; Gaz. vol. 133; p. 954.
Miller, W. H., Orange, assignor to New Jersey Patent Company, West Orange, N. J. Diaphragm. No. 883,327; Mar. 31; Sp. p. 5653; Dr. p. 1206; Gaz. vol. 133; p. 1053.
Milligan, M. W., East Las Vegas, N. Mex. Ter. Truss. No. 880,559; Mar. 3; Sp. p. 130; Dr. p. 29; Gaz. vol. 133; p. 26.
Mills, H. E. (See Mills, L. M. and H. E.)
Mills, J. H. (See Fitzpatrick, R. T., assignor.)
Mills, L. M. and H. E., New York, N. Y. Stocking-cap. No. 882,789; Mar. 24; Sp. p. 4556; Dr. p. 973; Gaz. vol. 133; p. 846.
Mills, W., London, England. Manufacturing white lead. No. 881,016; Mar. 3; Sp. p. 1055; Gaz. vol. 133; p. 180.
Milroy, S., Milledgeville, Ill. Pump-support. No. 880,560; Mar. 3; Sp. p. 131; Dr. p. 29; Gaz. vol. 133; p. 27.
Miner, E. R., New York, N. Y. Spike for railways. No. 882,953; Mar. 24; Sp. p. 4908; Dr. p. 1041; Gaz. vol. 133; p. 902.
Miner, J., Detroit, Mich. Roller-skate. No. 880,684; Mar. 3; Sp. p. 382; Dr. p. 84; Gaz. vol. 133; p. 68.
Miner, W. C., Boston, Mass. Dental forceps. No. 882,404; Mar. 17; Sp. p. 3809; Dr. p. 814; Gaz. vol. 133; p. 688.
Minneapolis Threshing Machine Co. (See Stradley, J. V., assignor.)
Mitchell, C. P., Boston, Mass. Twine-winding machine. No. 883,116; Mar. 24; Sp. p. 5208; Dr. pp. 1113–14; Gaz. vol. 133; p. 954.
Mitchell, F. P. (See Thompson and Mitchell.)
Mitchell, G., *et al.* (See Emenaker, J., assignor.)
Mitchell, G. D., Chelsea, Mass., assignor to Swimming Pool Filtration Company. Water-purifying system for swimming-tanks. No. 883,467; Mar. 31; Sp. p. 5969; Dr. p. 1273; Gaz. vol. 133; p. 1100.
Mitchell, G. P., Galva, Ill. Window-blind. No. 881,433; Mar. 10; Sp. p. 1876; Dr. p. 408; Gaz. vol. 133; p. 343.
Mitchell, J., Auckland, New Zealand. Violin mute. No. 881,480; Mar. 10; Sp. p. 1977; Dr. p. 431; Gaz. vol. 133; p. 359.
Mitchell, J. A., Ludington, Mich. Pier or breakwater. No. 881,605; Mar. 10; Sp. p. 2212; Dr. p. 482; Gaz. vol. 133; p. 401.
Mitchell, T. E., Americus, Ga. Detonating toy. No. 881,702; Mar. 10; Sp. p. 2395; Dr. p. 520; Gaz. vol. 133; p. 430.
Mitchell, T. E., and T. H. Tombyll, assignors to L. O. Grothe, trustee, Montreal, Canada. Decorticating apparatus. No. 882,766; Mar. 24; Sp. p. 4518; Dr. pp. 964–5; Gaz. vol. 133; p. 839
Mitchell, W. A., Fitzgerald, Ga. Fertilizer-distributer. No. 880,561; Mar. 3; Sp. p. 132; Dr. p. 29; Gaz. vol. 133; p. 27.
Mixon, H. S., *et al.* (See McMurry, E. H., assignor.)
Mixon, R. L., *et al.* (See McMurry, E. H., assignor.)
Moats, H. W. (See Janssen and Moats.)
Moberg, C. G., Keelerville, Saskatchewan, assignor of one-half to W. H. Gibson, Orillia, Canada. Dividers. No. 882,405; Mar. 17; Sp. p. 3810; Dr. p. 814; Gaz. vol. 133; p. 688.
Moburg, F. O., Omaha, Nebr. Apparatus for boiling lime and sulfur. No. 881,434; Mar. 10; Sp. p. 1877; Dr. p. 408; Gaz. vol. 133; p. 343.
Moffatt, R. R., New York, N. Y., assignor to Imperial Ore Separator Company. Magnetic ore-separator. No. 882,158; Mar. 17; Sp. p. 3335; Dr. pp. 711–12; Gaz. vol. 133; p. 607.
Moffitt, J. R., Denver, Colo. Fume-condensing apparatus. No. 882,073; Mar. 17; Sp. p. 3197; Dr. pp. 679–80; Gaz. vol. 133; p. 582.
Mohn, F., *et al.* (See Shank, A. W., assignor.)
Mohr, E., Milwaukee, Wis., assignor to National Enameling and Stamping Company. Reinforced neck for milk-cans. No. 882,504; Mar. 17; Sp. p. 3079; Dr. p. 650; Gaz. vol. 133; p. 720.
Moidenhauer, W. E., Wild Rose, Wis. Vine-cutter. No. 882,333; Mar. 17; Sp. p. 3691; Dr. p. 784; Gaz. vol. 133; p. 665.
Molenaar, W., Paterson, N. J. Bill-file. No. 883,468; Mar. 31; Sp. p. 5970; Dr. p. 1274; Gaz. vol. 133; p. 1100.
Molesworth, J. E. (See Horton and Molesworth.)
Monarch Typewriter Company. (See Steele, H. H. assignor.)
Monarch Typewriter Company. (See Young, F. A., assignor.)
Moncrief, J. T., Montgomery, Ala. Advertising device. No. 880,309; Mar. 3; Sp. p. 647; Dr. p. 136; Gaz. vol. 133; p. 112.
Monen, H. G. (See Hight, A. W., assignor.)
Monson, T., Cynthiana, Ky. Gate-hinge. No. 880,362; Mar. 3; Sp. p. 850; Dr. p. 181; Gaz. vol. 133; p. 143.
Montagne, D. P. (See Lyle and Owens, assignors.)
Montanye, S. S., Canton, Pa. Filter. No. 880,685; Mar. 3; Sp. p. 384; Dr. p. 84; Gaz. vol. 133; p. 68.
Montgomery, J. W., assignor to S. J. Montgomery, Columbus, Ohio. Air-ship. No. 881,327; Mar. 10; Sp. p. 1666; Dr. pp. 357–8; Gaz. vol. 133; p. 310.
Montgomery, S. J. (See Montgomery, J. W., assignor.)
Moore, D. P., Washington, D. C. Dampening-machine. No. 882,334; Mar. 17; Sp. p. 3692; Dr. pp. 784–5; Gaz. vol. 133; p. 666.
Moore, E. Y., Cleveland, Ohio. Hoist. No. 882,262; Mar. 17; Sp. p. 3554; Dr. p. 753; Gaz. vol. 133; p. 641.
Moore, F. W., Pittsburg, Pa. Lock for switch-levers. No. 881,703; Mar. 10; Sp. p. 2396; Dr. p. 520; Gaz. vol. 133; p. 431.
Moore, G. A. (See Warren, W. S., assignor.)
Moore, R. A., Jr., Berlin, assignor to Waterbury Buckle Co., Waterbury, Conn. Fastening device for men's garters. No. 881,930; Mar. 17; Sp. p. 2913; Dr. p. 622; Gaz. vol. 133; p. 538.
Moran, M. V., and J. S. Donohue, Washington, D. C. Smoke-consumer. No. 882,767; Mar. 24; Sp. p. 4522; Dr. p. 965; Gaz. vol. 133; p. 840.
Morby, G., Robinson, Utah. Smoke-purifier. No. 880,747; Mar. 3; Sp. p. 527; Dr. pp. 103–4; Gaz. vol. 133; p. 91.
Morden, L. M., Waterbury, Conn. Temporary binder. No. 881,606; Mar. 10; Sp. p. 2220; Dr. p. 483; Gaz. vol. 133; p. 402.
Morehead, G. (See Gay, J. W., assignor.)
Morell, A., Worcester, Mass., assignor to Crompton & Knowles Loom Works. Weft-replenishing loom. No. 880,810; Mar. 3; Sp. p. 649; Dr. p. 136; Gaz. vol. 133; p. 112.
Morenus, E., Cleveland, N. Y., assignor of one-half to G. W. Morenus, Kane, Pa. Producing glass. No. 883,039; Mar. 24; Sp. p. 5061; Dr. pp. 1078–9; Gaz. vol. 133; p. 928.
Morenus, G. W. (See Morenus, E., assignor.)
Morgan, B. J., Bevier, Mo. Automatic coupling for air-brake systems. No. 882,406; Mar. 17; Sp. p. 3811; Dr. p. 814; Gaz. vol. 133; p 688.
Morgan Engineering Company. (See Taylor, C. L., assignor.)
Morris, J. E., Columbus, Ohio. Conduit-bending device. No. 882,012; Mar. 17; Sp. p. 3078; Dr. p. 654; Gaz. vol. 133; p. 561.
Morrison, J., Jr., and M. P. Benson, Upper Troy, N. Y. Combined wardrobe appliance. No. 881,818; Mar. 10; Sp. p. 2625; Dr. p. 563; Gaz. vol. 133; p. 468.
Morrow, A. P., Elmira, N. Y. Back-pedaling coaster-brake. No. 882,159; Mar. 17; Sp. p. 3339; Dr. p. 712; Gaz. vol. 133; p. 607.
Mors, E. L. P., assignor to Société Anonyme d'Electricité et d'Automobiles Mors, Paris, France. Latch for change speed-gears for automobiles. No. 883,557; Mar. 31; Sp. p. 6156; Dr. p. 1309; Gaz. vol. 133; p. 1127.
Morse, W. E. H., Algona, Iowa. Heating device. No. 881,017; Mar. 3; Sp. p. 1057; Dr. p. 229; Gaz. vol. 133; p. 180.
Morterud, E., Christiania, Norway. Manufacture of cellulose. No. 883,328; Mar. 31; Sp. p. 5655; Dr. p. 1207; Gaz. vol. 133; p. 1053.
Morton, A. H., Lowell, Mass. Cotton-distributing apparatus. No. 881,940; Mar. 17; Sp. p. 2914; Dr. pp. 622–3; Gaz. vol. 133; p. 538.
Mosby, A. L., San Diego, Cal. Scissors. No. 881,704; Mar. 10; Sp. p. 2397; Dr. p. 520; Gaz. vol. 133; p. 431.
Moskovitz, F., B. Berkovits, and J. Günsberger, Nagyvárad, Austria-Hungary. Garment-fastener. No. 881,435; Mar. 10; Sp. p. 1879; Dr. p. 408; Gaz. vol. 133; p. 344.
Moss, F. M., Burkes Garden, Va. Fodder and corn shock binder. No. 882,954; Mar. 24; Sp. p. 4909; Dr. p. 1041; Gaz. vol. 133; p. 902.
Moss, G., St. Peter, Minn. Cloth. No. 882,832; Mar. 24; Sp. p. 4657; Dr. p. 991; Gaz. vol. 133; p. 862.
Moss Rose Manufacturing Company. (See Earnshaw, J. C. assignor.)
Mott, F., Shabbona, Mich. Submarine boat. No. 883,040; Mar. 24; Sp. p. 5063; Dr. p. 1079; Gaz. vol. 133; p. 929.
Mott, W. F., Cleveland, Ohio. Bedstead attachment. No. 881,018; Mar. 3; Sp. p. 1058; Dr. p. 229; Gaz. vol. 133; p. 180.
Moughler, W. F., Toledo, assignor to Vacuum and Compressor Company, Wauseon, Ohio. Dust separator and collector. No. 881,194; Mar. 10; Sp. p. 1393; Dr. p. 301; Gaz. vol. 133; p. 266.
Moughler, W. F., Toledo, assignor to Vacuum and Compressor Company, Wauseon, Ohio. Sight-glass and separator for pneumatic renovators. No. 881,195; Mar. 10; Sp. p. 1396; Dr. p. 301; Gaz. vol. 133; p. 267.

Moukos, C., assignor to F. J. Matchette, Milwaukee, Wis. Pneumatic cleaning-tool. No. 882,574; Mar. 24; Sp. p. 4139; Dr. p. 878; Gaz. vol. 133; p. 776.
Mowlds, T. D., Bala, Pa. Rock-channeling machine. No. 880,903; Mar. 3; Sp. p. 852; Dr. pp. 181–2; Gaz. vol. 133; p. 143.
Mowry, H. S. (See Brazeal, F. E., assignor.)
Moy, J. F., Woodcliff, N. J. Attachment for nutcrackers. No. 883,558; Mar. 31; Sp. p. 6157; Dr. p. 1309; Gaz. vol. 133; p. 1127.
Moyer, E. H., Rockford, assignor of one-half to J. Moyer, Van Wert, Ohio. Hay-rack. No. 882,407; Mar. 17; Sp. p. 3812; Dr. p. 815; Gaz. vol. 133; p. 689.
Moyer, J. (See Moyer, E. H., assignor.)
Mudler, F. M., Pittsburg, Pa. Trolley-harp. No. 882,833; Mar. 24; Sp. p. 4658; Dr. p. 991; Gaz. vol. 133; p. 862.
Mueller, J. H., Oakley, Ill. Back-supporter. No. 880,904; Mar. 3; Sp. p. 859; Dr. p. 183; Gaz. vol. 133; p. 144.
Mulford, L. W. (See Haile, L. T., assignor.)
Mulford, L. W., *et al.* (See Haile, L. T., assignor.)
Muller, C. F., F. M. Driscoll, and R. J. Barry, Oakland, Cal. System of tabulating cars. No. 881,019; Mar. 3; Sp. p. 1058; Dr. p. 230; Gaz. vol. 133; p. 180.
Muller, E. A., Madisonville, assignor to King Machine Tool Company, Winston Place, Ohio. Rapid-traverse mechanism. No. 882,074; Mar. 17; Sp. p. 3199; Dr. p. 680; Gaz. vol. 133; p. 582.
Müller, H., and J. Stein, London, England. Stringed musical instrument. No. 883,222; Mar. 31; Sp. p. 5442; Dr. p. 1159; Gaz. vol. 133; p. 1020.
Müller-Jacobs, A., assignor to C. Müller-Jacobs, Huntington, N. Y., and E. Weingärtner, Englewood, N. J. Bleaching beeswax. No. 883,661; Mar. 31; Sp. p. 6352; Gaz. vol. 133; p. 1159.
Müller-Jacobs, C., *et al.* (See Müller-Jacobs, A., assignor.)
Mullin, W., New York, N. Y. Clothes-line clamp. No. 882,408; Mar. 17; Sp. p. 3813; Dr. p. 815; Gaz. vol. 133; p. 689.
Mumford, W. J., South Bend, Wash. Clam-digger. No. 880,686; Mar. 3; Sp. p. 386; Dr. p. 84; Gaz. vol. 133; p. 69.
Mund, C. C., Cincinnati, Ohio. Separable fastening. No. 882,708; Mar. 24; Sp. p. 4403; Dr. p. 936; Gaz. vol. 133; p. 821.
Munroe, W. H., Maplewood, Mass. Spindling plug for paper cores. No. 880,687; Mar. 3; Sp. p. 388; Dr. p. 84; Gaz. vol. 133; p. 69.
Müntzing, A., Stockholm, Sweden. Method and apparatus for producing cellulose. No. 882,790; Mar. 24; Sp. p. 4557; Dr. p. 973; Gaz. vol. 133; p. 847.
Murdock, J. L., Boundbrook, N. J. Rotary converter. No. 882,531; Mar. 17; Sp. p. 4056; Dr. p. 863; Gaz. vol. 133; p. 731.
Murphy, J. E., Chicago, Ill. Reed-harmonica. No. 882,575; Mar. 24; Sp. p. 4142; Dr. p. 878; Gaz. vol. 133; p. 776.
Murray, C. H., Macon, Ga. Double masseur and medicator. No. 883,329; Mar. 31; Sp. p. 5656; Dr. p. 1207; Gaz. vol. 133; p. 1053.
Murray, E., Mullen, Nebr. Hay pitching and stacking apparatus. No. 881,705; Mar. 10; Sp. p. 2398; Dr. pp. 520–1; Gaz. vol. 133; p. 431.
Murray, J., Waterford, N. Y. Rotary engine. No. 882,576; Mar. 24; Sp. p. 4145; Dr. p. 878–9; Gaz. vol. 133; p. 777.
Murray, T. E., New York, N. Y. Fastening-wire for seals, &c. No. 880,688; Mar. 3; Sp. p. 390; Dr. p. 85; Gaz. vol. 133; p. 70.
Murray, W. E., London, England. Machine for making chocolate. No. 882,646; Mar. 24; Sp. p. 4285; Dr. p. 909; Gaz. vol. 133; p. 801.
Murray, W. J., New York, N. Y. Scaffold. No. 882,206; Mar. 17; Sp. p. 3441; Dr. p. 732; Gaz. vol. 133; p. 622.
Musgrove, G. E., Wilkinsburg, Pa., assignor to General Electric Company. Gage for tanks. No. 881,607; Mar. 10; Sp. p. 2221; Dr. p. 483; Gaz. vol. 133; p. 402.
Myer, A. J., Lake View, N. Y. Retarding mechanism for elevators. No. 882,577; Mar. 24; Sp. p. 4146; Dr. p. 879; Gaz. vol. 133; p. 777.
Myer Bridges Company. (See Stocker, L., assignor.)
Myers, P. A., assignor to F. E. Myers and Brother, Ashland, Ohio. Pump. No. 881,254; Mar. 10; Sp. p. 1523; Dr. p. 327; Gaz. vol. 133; p. 287.
N. O. Nelson Manufacturing Company. (See Reid, W. A., assignor.)
Nadasdy, J. E., Chicago, Ill. Gas-burner. No. 880,690; Mar. 3; Sp. p. 392; Dr. p. 85; Gaz. vol. 133; p. 70.
Nagasse, S., Los Angeles, Cal. Fruit and vegetable parer and slicer. No. 881,329; Mar. 10; Sp. p. 1671; Dr. p. 359; Gaz. vol. 133; p. 311
Nagel, E. (See Weiss and Nagel.)
Nähmaschinen-und Fahrräder-Fabrik Bernhard Stoewer Actien-Gesellschaft. (See Grützmann, P., assignor.)
Nailler, R. F., Cleveland, Ohio. Coupling for enameled pipes. No. 880,813; Mar. 3; Sp. p. 655; Dr. p. 138; Gaz. vol. 133; p. 113.
Nailler, R. F., Cleveland, Ohio. Pipe-coupling. No. 881,022; Mar. 3; Sp. p. 1066; Dr. p. 231; Gaz. vol. 133; p. 181.
Nash, J. P., *et al.* (See Neale, C. C., assignor.)
Nash, W. D. (See Davidson, J., assignor.)
Nash, W. M., *et al.* (See Neale, C. C., assignor.)
Nation, B. M., Bloomfield, Ind. Bolt tightener and cutter for wheels. No. 881,140; Mar. 10; Sp. p. 1300; Dr. p. 280; Gaz. vol. 133; p. 250.
National Electric Lamp Company. (See Fagan, J. T., assignor.)
National Electric Lamp Company. (See Merritt, M. M., assignor.)
National Enameling and Stamping Company. (See Mohr, E., assignor.)
National Malleable Castings Company. (See Buckius, A. O., Jr., assignor.)
National Metal Seal Company. (See Chellis, E. D., assignor.)
National Railway Materials Company. (See Hall, G. L., assignor.)
National Ring Traveler Company. (See Potter, A. B., assignor.)
National Tube Company. (See Fell, C., assignor.)
Nattenheimer, J., assignor of one-half to E. Eiger & Bros., Chicago, Ill. Hat-frame-forming device. No. 881,257; Mar. 10; Sp. p. 1528; Dr. pp. 328–9; Gaz. vol. 133; p. 288.
Natural Power Company. (See Neumann, C., assignor.)
Neal, E. E., assignor of one-half to J. H. Wesson, Springfield, Mass. Loading-pack. No. 881,437; Mar. 10; Sp. p. 1880; Dr. p. 409; Gaz vol. 133; p. 344.
Neale, C. C., assignor to J. P. and W. M. Nash, H. M. Neale, and J. H. Steele, Minneapolis, Minn. Grain-door for cars. No. 882,014; Mar. 17; Sp. p. 3081; Dr. p. 655; Gaz. vol. 133; p. 562.
Neale, H. M., *et al.* (See Neale, C. C., assignor.)
Neall, N. J., Pittsburg, Pa., assignor to Westinghouse Electric & Manufacturing Company. Lightning-arrester. No. 882,265; Mar. 17; Sp. p. 3566; Dr. p. 756; Gaz. vol. 133; p. 642.
Nearing, C. D. B., *et al.* (See Elliott and Stanton, assignors.)
Needham, J. T., Bayonne, N. J., assignor of one-half to Postal Telegraph-Cable Company, New York, N. Y. Annunciator. No. 882,118; Mar. 17; Sp. p. 3269; Dr. p. 696; Gaz. vol. 133; p. 595.
Neher, W. H., Inglewood, Cal. Oil-gasifier. No. 883,472; Mar. 31; Sp. p. 5976; Dr. p. 1275; Gaz. vol. 133; p. 1102.
Neil, J. M., Toronto, Ontario, Canada, assignor to F. C. Norris, trustee, Detroit, Mich. Separating the metals contained in copper-nickel matte. No. 882,075; Mar. 17; Sp. p. 3200; Gaz. vol. 133; p. 562.
Neima, M., Amherst, Nova Scotia, Canada. Suspenders. No. 881,482; Mar. 10; Sp. p. 1960; Dr. pp. 431–2; Gaz. vol. 133; p. 359.
Nellen, F., and A. Voigt, Essen, Germany. Prop for mines. No. 881,609; Mar. 10; Sp. p. 2223; Dr. p. 483; Gaz. vol. 133; p. 403.
Neller, A. H., assignor to Louden Machinery Company, Fairfield, Iowa. Curve for overhead tracks. No. 883,663; Mar. 31; Sp. p. 6354; Dr. p. 1354; Gaz. vol. 133; p. 1159.
Nelson, C. A., Cristobal, Panama. Pants-presser. No. 883,560; Mar. 31; Sp. p. 6159; Dr. pp. 1309–10; Gaz. vol. 133; p. 1127.
Nelson, E. H., Glenville, Minn. Hog-trap. No. 882,647; Mar. 24; Sp. p. 4289; Dr. pp. 909–10; Gaz. vol. 133; p. 8002.
Nelson, F. H., and L. Bard, Norma, N. J. Automatic printing-machine. No. 883,421; Mar. 31; Sp. p. 5871; Dr. p. 1251; Gaz. vol. 133; p. 1084.
Nelson, J., Chicago, Ill. Street-sweeper. No. 882,578; Mar. 24; Sp. p. 4149; Dr. p. 880; Gaz. vol. 133; p. 777.
Nelson, N. D., New York, N. Y. Register. No. 882,076; Mar. 17; Sp. p. 3203; Dr. p. 681; Gaz. vol. 133; p. 582.
Nelson, N. H., Willmar, Minn. Digging and loading machine. No. 880,814; Mar. 3; Sp. p. 657; Dr. pp. 138–9; Gaz. vol. 133; p. 114.
Nelson, N. R., Beaver Dam, Wis. Dust-proof disk bearing and attachment. No. 881,141; Mar. 10; Sp. p. 1302; Dr. p. 281; Gaz. vol. 133; p. 251.
Nesseth, O. H., Badger, Minn. Holder for use in cleaning cream-separator disks. No. 880,564; Mar. 3; Sp. p. 139; Dr. p. 31; Gaz. vol. 133; p. 28.
Nestor, F., Elkins, W. Va. Cooking-vessel. No. 882,411; Mar. 17; Sp. p. 3819; Dr. p. 816; Gaz. vol. 133; p. 690.
Neufeld, J. A., Mountain Lake, Minn. Grain-separator. No. 882,955; Mar. 24; Sp. p. 4912; Dr. pp. 1041–2; Gaz. vol. 133; p. 903.
Neugass, W., New York, N. Y. Washable Hat. No. 882,648; Mar. 24; Sp. p. 4290; Dr. p. 910; Gaz. vol. 133; p. 802.
Neumann, C., assignor to Natural Power Company, St. Louis, Mo. Centrifugal suction-machine. No. 882,477; Mar. 17; Sp. p. 3933; Dr. p. 841; Gaz. vol. 133; p. 712.
Neumann, C., assignor to Natural Power Company, St. Louis, Mo. Pressure-blower. No. 882,478; Mar. 17; Sp. p. 3934; Dr. p. 841; Gaz. vol. 133; p. 712.
Neuner, M. C., assignor to Neuner Specialty Book Co., Los Angeles, Cal. Loose-leaf binder. No. 883,042; Mar. 24; Sp. p. 5065; Dr. p. 1080; Gaz. vol. 133; p. 929.
Neuner Specialty Book Co. (See Neuner, M. C., assignor.)
Neville, H., Los Angeles, Cal. Taper cutting and threading attachment for bolt-cutting machines. No. 883,561; Mar. 31; Sp. p. 6159; Dr. p. 1310; Gaz. vol. 133; p. 1128.
Neville, J. F., Woodruff, Utah. Rotary pump. No. 883,224; Mar. 31; Sp. p. 5453; Dr. p. 1161; Gaz. vol. 133; p. 1020.
New Haven Clock Co. (See Porter, W. E., assignor.)
New Holland Machine Co. (See Zimmerman, A. M., assignor.)
New Jersey Patent Company. (See Aylsworth, J. W., assignor.)

New Jersey Patent Company. (See Miller, W. H., assignor.)
New York Liquid Dispensing Machine Company. (See Cornish, H. S., assignor.)
Newark Cornice & Skylight Works. (See Yunker, G., assignor.)
Newcomb, D. L., San Diego, Cal. Mechanical ballot. No. 881,821; Mar. 10; Sp. p. 2630; Dr. pp. 564–5; Gaz. vol. 133; p. 469.
Newcomb, D. L., San Diego, Cal. Vote-registering machine. No. 882,160; Mar. 17; Sp. p. 3342; Dr. pp. 713–16; Gaz. vol. 133; p. 608.
Newell Engineering Company. (See Newell, H. T., assignor.)
Newell, H. T., Wilkinsburg, assignor to Newell Engineering Company, Pittsburg, Pa. Gas-producer. No. 881,258; Mar. 10; Sp. p. 1530; Dr. p. 329; Gaz. vol. 133; p. 288.
Newell, J. M. (See Barnish, O., assignor.)
Newgent, W., West Baden, Ind. Rail-joint. No. 880,906; Mar. 3; Sp. p. 862; Dr. pp. 183–4; Gaz. vol. 133; p. 144.
Newman, A., assignor to Henry W. Price Co., Rockford, Ill. Glove. No. 883,334; Mar. 31; Sp. p. 5663; Dr. p. 1209; Gaz. vol. 133; p. 1055.
Newman, A. A., Chicago, Ill. Time-recorder. No. 883,473; Mar. 31; Sp. p. 5982; Dr. p. 1276; Gaz. vol. 133; p. 1102.
Newman, W. J., Chicago, Ill. Digging-shovel. No. 881,330; Mar. 10; Sp. p. 1672; Dr. p. 360; Gaz. vol. 133; p. 311.
Niagara Hydraulic Engine Company. (See Francfort, A. H., assignor.)
Nichols, R. C., Everett, Wash. Rail-tie. No. 883,562; Mar. 31; Sp. p. 6161; Dr. p. 1310; Gaz. vol. 133; p. 1128.
Nichols, S. A., Los Angeles, Cal. Extension-table. No. 881,610; Mar. 10; Sp. p. 2224; Dr. p. 484; Gaz. vol. 133; p. 403.
Nichols, T., Templeton, assignor of one-half to E. J. McKnight, Gardner, Mass. Flexibly-supported tool. No. 881,865; Mar. 10; Sp. p. 2739; Dr. p. 587; Gaz. vol. 133; p. 484.
Nicholls, G. H., Galveston, Tex. Shoe-lace fastener. No. 882,479; Mar. 17; Sp. p. 3635; Dr. p. 841; Gaz. vol. 133; p. 712.
Nicholson, L. C., Buffalo, N. Y. Fault-locating apparatus. No. 880,565; Mar. 3; Sp. p. 141; Dr. p. 32; Gaz. vol. 133; p. 28.
Nicholson, T. E., Washington, Iowa. Ditching-machine. No. 881,942; Mar. 17; Sp. p. 2921; Dr. p. 623; Gaz. vol. 133; p. 539.
Nickel, F. F., East Orange, N. J. Slide-rule. No. 880,907; Mar. 3; Sp. p. 863; Dr. pp. 184–5; Gaz. vol. 133; p. 144.
Nicoll, W. (See Grout, L. W., assignor.)
Niebel, G., Dunkirk, N. Y. Fertilizer-distributer. No. 880,908; Mar. 3; Sp. p. 866; Dr. p. 185; Gaz. vol. 133; p. 145.
Niederlander, N. F., assignor to Westinghouse Automatic Air & Steam Coupler Company, St. Louis, Mo. Coupling apparatus for electric circuits. No. 883,225; Mar. 31; Sp. p. 5454; Dr. pp. 1161–2; Gaz. vol. 133; p. 1021.
Nikonow, J. P., Pittsburg, Pa. Dynamo-electric machine. No. 883,043; Mar. 24; Sp. p. 5067; Dr. pp. 1080–1; Gaz. vol. 133; p. 930.
Niles-Bement-Pond Company. (See Hagman, W. J., assignor.)
Niles-Bement-Pond Company. (See Parker, F. W., assignor.)
Niles-Bement-Pond Company. (See Reiss, G. T., assignor.)
Niles-Bement-Pond Company. (See Sears, W. T., assignor.)
Nilsen, E. A., Christiania, Norway, assignor of one-half to B. Crafton, Chicago, Ill. Torpedo-boat. No. 883,664; Mar. 31; Sp. p. 6357; Dr. p. 1354; Gaz. vol. 133; p. 1160.
Nix, J. L., Homer City, Pa. Incubator. No. 881,331; Mar. 10; Sp. p. 1673; Dr. p. 360; Gaz. vol. 133; p. 312.
Noble, D., and J. S. Finch, Bridgeport, Conn., assignors, by mesne assignments, to Singer Manufacturing Company. Feeding mechanism for sewing-machines. No. 882,266; Mar. 17; Sp. p. 3568; Dr. pp. 756–7; Gaz. vol. 133; p. 643.
Noble, G. W., Colbran, Colo. Cable-laying machine. No. 882,649; Mar. 24; Sp. p. 4291; Dr. p. 910; Gaz. vol. 133; p. 802.
Noble, P. W., New York, assignor to C. A. Singer, Larchmont, and H. U. Palmer, Brooklyn, N. Y. Bearing for supporting radiators in automobile frames. No. 883,146; Mar. 24; Sp. p. 5279; Dr. p. 1126; Gaz. vol. 133; p. 964.
Nohl, G., Manchester, England, assignor to H. Schultz, Plauen, Germany. Dumb-bell for physical exercises. No. 881,438; Mar. 10; Sp. p. 1882; Dr. p. 409; Gaz. vol. 133; p. 345.
Nolen, J. D., Toledo, Ohio, assignor, by mesne assignments, to J. E. Shepherd, Chicago, Ill. Fire-alarm and signaling system. No. 883,226; Mar. 31; Sp. p. 5456; Dr. p. 1162; Gaz. vol. 133; p. 1021.
Nolen, J. G., assignor of one-half to F. B. Cook, Chicago, Ill. Police-call, fire-alarm, and watchman's box. No. 883,665; Mar. 31; Sp. p. 6358; Dr. pp. 1355–6; Gaz. vol. 133; p. 1160.
Nolte, H. H., *et al.* (See Bicker and Schilling, assignors.)
Norborn, H. E., Philadelphia, Pa. Shaft or journal box. No. 882,579; Mar. 24; Sp. p. 4150; Dr. p. 880; Gaz. vol. 133; p. 778.
Norcross, B. F. (See Hardin and Norcross.)
Norden, M., assignor to Electric Carriage Call Company, New York, N. Y. Electric-light sign. No. 881,943; Mar. 17; Sp. p. 2922; Dr. p. 624; Gaz. vol. 133; p. 539.
Norpoth, T., St. Louis, Mo. Electric alarm. No. 880,691; Mar. 3; Sp. p. 393; Dr. p. 85; Gaz. vol. 133; p. 70.
Norris, F. C., trustee. (See Neil, J. M., assignor.)
Norris, G. E., Columbus, Ohio. Clothes-pounder. No. 881,707; Mar. 10; Sp. p. 2427; Dr. p. 522; Gaz. vol. 133; p. 432.
Norris, H. M., assignor to Bickford Drill & Tool Company, Cincinnati, Ohio. Arm for radial drills. No. 883,118; Mar. 24; Sp. p. 5222; Dr. p. 1115; Gaz. vol. 133; p. 955.
Norris, W. F., Sistersville, W. Va. Automatic cut-off. No. 882,956; Mar. 24; Sp. p. 4915; Dr. p. 1042; Gaz. vol. 133; p. 903.
North Brothers Manufacturing Company. (See Fegley, T. J., assignor.)
Northrop, J., assignor to Draper Company, Hopedale, Mass. Traverse-motion for yarn-spinning apparatus. No. 882,793; Mar. 24; Sp. p. 4362; Dr. p. 974; Gaz. vol. 133; p. 847.
Northwestern Barb Wire Company. (See Dillon, W. M., assignor.)
Norton, F. E., and I. H. Reynolds, Youngstown, Ohio. Regulator for compressors. No. 882,338; Mar. 17; Sp. p. 3701; Dr. p. 787; Gaz. vol. 133; p. 667.
Norton, M., Cleveland, Ohio. Toe-weight. No. 882,837; Mar. 24; Sp. p. 4664; Dr. p. 992; Gaz. vol. 133; p. 863.
Norton, R. H., assignor to Acme Flexible Clasp Company, Chicago, Ill. Machine for making twisted-wire box-strapping. No. 881,611; Mar. 10; Sp. p. 2225; Dr. pp. 484–6; Gaz. vol. 133; p. 403.
Norwood, L. M., Savannah, Ga. Envelop-fastener. No. 882,015; Mar. 17; Sp. p. 3082; Dr. p. 656; Gaz. vol. 133; p. 562.
Nott Fire Engine Company. (See Pennet, H. E., assignor.)
Nove-Josserand, L. A., *et al.* (See Isnard, M. J. S. A., assignor.)
Novess, A. C., Rochester, N. Y. Photographer's light-regulator. No. 882,838; Mar. 24; Sp. p. 4665; Dr. p. 993; Gaz. vol. 133; p. 863.
Noyes, E. P., Winchester, assignor to C. F. Brown, trustee, Reading, Mass. Stored-pressure motor-starting device. No. 880,815; Mar. 3; Sp. p. 662; Dr. p. 140; Gaz. vol. 133; p. 114.
Noyes, R. G., Patten, Me. Logging-sled. No. 881,708; Mar. 10; Sp. p. 2429; Dr. p. 523; Gaz. vol. 133; p. 432.
Null, J., Evanston, Ill. Belt-tightener. No. 880,816; Mar. 3; Sp. p. 663; Dr. p. 140; Gaz. vol. 133; p. 114.
Nunnelly, S. L., Winthrop, Ark. Draft and lap ring. No. 880,817; Mar. 3; Sp. p. 664; Dr. p. 140; Gaz. vol. 133; p. 115.
Nuzum, N. E. (See Long, W. W., assignor.)
Nye, J. R., Waterville, Me. Carpet and rug cleaning machine. No. 882,208; Mar. 17; Sp. p. 3444; Dr. pp. 732–3; Gaz. vol. 133; p. 623.
O. K. Harry Steel Co. (See Harry, O. K., assignor.)
O'Brien, J. J., St. Louis, Mo. Furnace-grate. No. 882,794; Mar. 24; Sp. p. 4571; Dr. pp. 974–5; Gaz. vol. 133; p. 848.
O'Connor, J. J., St. Paul Minn. Electric theft-alarm system. No. 883,335; Mar. 31; Sp. p. 5664; Dr. pp. 1209–10; Gaz. vol. 133; p. 1055.
O'Connor, J. P., Chicago, Ill. Lunar-caustic holder. No. 881,142; Mar. 10; Sp. p. 1304; Dr. p. 281; Gaz. vol. 133; p. 251.
O'Dell, C. F., and K. Haynes, Ceylon, Minn. Egg-tester. No. 881,197; Mar. 10; Sp. p. 1399; Dr. p. 302; Gaz. vol. 133; p. 268.
O'Leary, D. J., Green Bay, Wis. Drill-chuck. No. 881,709; Mar. 10; Sp. p. 2430; Dr. p. 523; Gaz. vol. 133; p. 432.
O'Meara, J. J., *et al.* (See Fleckenstien, L. J., assignor.)
O'Sullivan, W., assignor to Manhattan Briar Pipe Company, New York, N. Y. Pipe-cleaner. No. 880,749; Mar. 3; Sp. p. 529; Dr. p. 110; Gaz. vol. 133; p. 92.
Oakley, W. F., New York, N. Y. Clip. No. 883,119; Mar. 24; Sp. p. 5223; Dr. p. 1115; Gaz. vol. 133; p. 955.
Ohsol, J., Jersey City, N. J. Newspaper-holder. No. 883,336; Mar. 31; Sp. p. 5666; Dr. p. 1210; Gaz. vol. 133; p. 1055.
Ohlsson, O., Södertelje, Sweden, assignor, by meane assignments, to Empire Cream Separator Company, Bloomfield, N. J. Liner for centrifugal separators. No. 882,119; Mar. 17; Sp. p. 3271; Dr. p. 696; Gaz. vol. 133; p. 595.
Oldendorf, J., Elizabeth, N. J. Rail-brace. No. 881,198; Mar. 10; Sp. p. 1400; Dr. p. 303; Gaz. vol. 133; p. 268.
Oldman, E., Buffalo, N. Y. Device for replacing fusible plugs. No. 881,143; Mar. 10; Sp. p. 1304; Dr. p. 281; Gaz. vol. 133; p. 251.
Olds Gas Power Company. (See Gerdes, H., assignor.)
Olds Motor Works. (See Dunham, G. W., assignor.)
Olive, L. T., Sarasota, Fla. Portable ladder-like scaffold. No. 882,161; Mar. 17; Sp. p. 3362; Dr. pp. 716–17; Gaz. vol. 133; p. 608.
Oliver Chilled Plow Works. (See Davis, C. R., assignor.)
Oliver Chilled Plow Works. (See Paul, W. L., assignor.)
Ollendorff, W. W. (See Deeley and Ollendorff, assignors.)
Olsen, C. N., and A. P. Petersen, Jersey City, N. J. Gas-filter. No. 881,483; Mar. 10; Sp. p. 1983; Dr. p. 432; Gaz. vol. 133; p. 360.
Olson, O. S., Rosholt, Wis. Picture-hanger. No. 882,330; Mar. 17; Sp. p. 3704; Dr. p. 787; Gaz. vol. 133; p. 667.
Oneal, W. R., Maryville, Mo. Envelop-seal. No. 880,909; Mar. 3; Sp. p. 868; Dr. p. 186; Gaz. vol. 133; p. 145.
Oppitz, R., Koblenz, Germany. Soundboard for stringed musical instruments. No. 880,662; Mar. 3; Sp. p. 396; Dr. p. 86; Gaz. vol. 133; p. 71.
Optische Anstalt C. P. Goerz Aktiengesellschaft, Firm of. (See Jacob, H., assignor.)
Orewiler, B. F., Chicago, Ill. Garment-supporter. No. 881,710; Mar. 10; Sp. p. 2432; Dr. p. 523; Gaz. vol. 133; p. 432.
Orr, R. S., Allegheny, Pa. Pole. No. 883,474; Mar. 31; Sp. p. 5983; Dr. p. 1274; Gaz. vol. 133; p. 1102.
Ortell, B., New York, N. Y. Combined pocket and garment supporter. No. 883,475; Mar. 31; Sp. p. 5985; Dr. p. 1275; Gaz. vol. 133; p. 1103.

Orth, F., Indiana Harbor, Ind. Arch construction for furnaces. No. 880,910; Mar. 3; Sp. p. 868; Dr. p. 186; Gaz. vol. 133; p. 146.
Osborne, O., assignor of one-half to L. B. Slocomb, Zanesville, Ohio. Boring attachment for drills. No. 881,822; Mar. 10; Sp. p. 2639; Dr. p. 565; Gaz. vol. 133; p. 470.
Osterhoudt, J. P. (See Middlebrook, W. H., assignor.)
Ostrander, A. E., Paterson, N. J., assignor to American Car and Foundry Company, St. Louis, Mo. Car-truck. No. 881,612; Mar. 10; Sp. p. 2234; Dr. pp. 486–7; Gaz. vol. 133; p. 404.
Otis, S., Chicago, Ill. Dump-car. No. 880,750; Mar. 3; Sp. p. 531; Dr. pp. 110–11; Gaz. vol. 133; p. 92.
Otis, W. D., Trenton, Nebr. Device for reinforcing buggy-boxes. No. 881,944; Mar. 17; Sp. p. 2923; Dr. p. 624; Gaz. vol. 133; p. 539.
Ott, F., South Bethlehem, Pa. Stop-motion. No. 881,144; Mar. 10; Sp. p. 1306; Dr. pp. 281–2; Gaz. vol. 133; p. 252.
Ott, F., South Bethlehem, Pa. Loom. No. 882,120; Mar. 17; Sp. p. 3272; Dr. p. 697; Gaz. vol. 133; p. 596.
Ottusch, F., Brooklyn, N. Y. Washline-hanger. No. 882,121; Mar. 17; Sp. p. 3274; Dr. p. 698; Gaz. vol. 133; p. 596.
Overbury, F. C., New York, N. Y., assignor to Flintkote Manufacturing Company, Rutherford, N. J. Apparatus for making serrated roofing-strips. No. 881,023; Mar. 3; Sp. p. 1066; Dr. p. 232; Gaz. vol. 133; p. 182.
Overbury, F. C., New York, N. Y., assignor to Flintkote Manufacturing Company, Rutherford, N. J. Roofing-package and making same. No. 881,024; Mar. 3; Sp. p. 1068; Dr. p. 232; Gaz. vol. 133; p. 182.
Owen, I. J., Oak Park, and R. A. Brooks, assignors to J. G. Hodgson, Sr., and W. A. Christiansen, Chicago, Ill. Bath-spray. No. 881,332; Mar. 10; Sp. p. 1673; Dr. p. 360; Gaz. vol. 133; p. 312.
Owens, C. (See Lyle and Owens.)
Packard Motor Car Company. (See Huff, R., assignor.)
Padden, E. F., Chicago, Ill. Insulator. No. 883,227; Mar. 31; Sp. p. 5460; Dr. p. 1163; Gaz. vol. 133; p. 1021.
Paige, D. O., Detroit, Mich., assignor to Pfaudler Company, Rochester, N. Y. Erecting-hoist. No. 880,566; Mar. 3; Sp. p. 145; Dr. p. 32; Gaz. vol. 133; p. 29.
Painter, W. A., Allegheny, Pa. Hardening steel. No. 882,102; Mar. 17; Sp. p. 3364; Gaz. vol. 133; p. 609.
Palmer, B. F., Jacksonburg, W. Va. Combined plug and stop-cock. No. 881,711; Mar. 10, Sp. p. 2434; Dr. p. 524; Gaz. vol. 133; p. 433.
Palmer, G. E., Elmira, N. Y. Stove-ring. No. 881,199; Mar. 10; Sp. p. 1400; Dr. p. 303; Gaz. vol. 133; p. 268.
Palmer, G. E., Boston, assignor of one-half to C. B. and F. S. Price, Salem, Mass. Electrically-controlled switch mechanism. No. 882,340; Mar. 17; Sp. p. 3705; Dr. p. 788; Gaz. vol. 133; p. 667.
Palmer, G. W., and F. E. Pierce, Lancaster, Mass. Flushing-tank. No. 881,145; Mar. 10; Sp. p. 1307; Dr. p. 282; Gaz. vol. 133; p. 252.
Palmer, G. W., and F. E. Pierce, Lancaster, Mass. Closet-bowl. No. 881,333; Mar. 10; Sp. p. 1676; Dr. p. 361; Gaz. vol. 133; p. 312.
Palmer, H. O., Washington, D. C. Machine for manufacturing and sharpening star-bit drills. No. 880,567; Mar. 3; Sp. p. 149; Dr. pp. 32–4; Gaz. vol. 133; p. 29.
Palmer, H. U., *et al.* (See Noble, P. W., assignor.)
Palmer, I. E., Middleton, Conn. Thread-guide. (Reissue.) No. 12,769; Mar. 24; Sp. p. 5315; Dr. p. 1134; Gaz. vol. 133; p. 971.
Palmer, W. H., Jr. (See Browne and Palmer, Jr.)
Palmer, W. W., Jericho, Vt. Mail-box. No. 882,709; Mar. 24; Sp. p. 4405; Dr. p. 937; Gaz. vol. 133; p. 822.
Pangher, J., assignor to E. Thomas, Vienna, Austria-Hungary. Mechanical time-fuse. No. 880,818; Mar. 3; Sp. p. 665; Dr. pp. 140–1; Gaz. vol. 133; p. 115.
Pape, H. G., New York, N. Y. Telephone-receiver. No. 881,712; Mar. 10; Sp. p. 2435; Dr. p. 524; Gaz. vol. 133; p. 434.
Paquette, D. (See Paquette, N. and D.)
Paquette, N. and D., Lowell, Mass. Oscillating lease-rod. No. 881,336; Mar. 10; Sp. p. 1681; Dr. p. 362; Gaz. vol. 133; p. 313.
Paris, M. E., Newkirk, Okla. Removable umbrella-covering. No. 883,476; Mar. 31; Sp. p. 5986; Dr. p. 1277; Gaz. vol. 133; p. 1103.
Parker, A. (See Everett and Parker.)
Parker, B. F., Cowiche, Wash. Nut-lock. No. 880,751; Mar. 3; Sp. p. 532; Dr. p. 111; Gaz. vol. 133; p. 92.
Parker, F. W., New York, N. Y., assignor to Niles-Bement-Pond Company, Jersey City, N. J. Boring-mill. No. 882,580; Mar. 24; Sp. p. 4152; Dr. p. 881; Gaz. vol. 133; p. 778.
Parker, H. S., Trenton, N. J. Cooling or refrigerating attachment for milk-cans. No. 881,025; Mar. 3; Sp. p. 1069; Dr. p. 232; Gaz. vol. 133; p. 182.
Parker, M. B., Rockwood, Tenn. Stock-distributer and gas-seal for metallurgical furnaces. No. 883,044; Mar. 24; Sp. p. 5069; Dr. p. 1081; Gaz. vol. 133; p. 930.
Parker Machine Company. (See Kidder, W. P., assignor.)
Parker, T. E., *et al.*, trustees. (See Kovach, F. J., assignor.)
Parker, W. H., Passaic, N. J., assignor to Dixie Match Company. Match-machine. No. 881,334; Mar. 10; Sp. p. 1677; Dr. p. 361; Gaz. vol. 133; p. 312.
Parker, W. J., Wandin South, Victoria, Australia. Attachment for corsets and other garments. No. 882,412; Mar. 17; Sp. p. 3821; Dr. p. 816; Gaz. vol. 133; p. 660.
Parkison, J. E., Colorado Springs, Colo. Razor. No. 882,413; Mar. 17; Sp. p. 3822; Dr. pp. 816–17; Gaz. vol. 133; p. 661.
Parks & Woolson Machine Company. (See Richardson, C. G., assignor.)
Parr, R. V., Fordwick, Va. Bag-holder. No. 883,477; Mar. 31; Sp. p. 5988; Dr. p. 1277; Gaz. vol. 133; p. 1104.
Parrish, W. B., Kara, Va. Seed-dropper. No. 883,563; Mar. 31; Sp. p. 6162; Dr. p. 1311; Gaz. vol. 133; p. 1128.
Parrish, W. B., Kara, Va. Fertilizer-distributer. No. 883,564; Mar. 31; Sp. p. 6164; Dr. p. 1311; Gaz. vol. 133; p. 1129.
Pars, W., Seattle, Wash. Aero-tube. No. 883,565; Mar. 31; Sp. p. 6166; Dr. p. 1311; Gaz. vol. 133; p. 1129.
Parsons, C. E. (See Hilliard and Parsons.)
Parsons, I. B., Bathgate, N. D. Washboiler. No. 881,335; Mar. 10; Sp. p. 1679; Dr. p. 362; Gaz. vol. 133; p. 313.
Parsons, J. P., and W. Fleming, Pittsburg, Pa. Spring-cushion for automobile-tires. No. 881,026; Mar. 3; Sp. p. 1072; Dr. pp. 232–3; Gaz. vol. 133; p. 183.
Partin, A., Cooke, Mont. Combination tool-wrench. No. 881,713; Mar. 10; Sp. p. 2438; Dr. p. 524; Gaz. vol. 133; p. 434.
Pasteur, C. D. A., assignor of two-thirds to A. E. Duquesne and L. L. Dockes, Paris, France. Indicating and controlling apparatus for inflating mechanisms. No. 883,228; Mar. 31; Sp. p. 5461; Dr. pp. 1163–4; Gaz. vol. 133; p. 1022.
Patent Holding and Manufacturing Company. (See McLane, J. A., assignor.)
Patten, J., and C. R. Barnett, Baltimore, Md. Treating ores. No. 880,752; Mar. 3; Sp. p. 533; Dr. p. 111; Gaz. vol. 133; p. 93.
Patten, J. S., Baltimore, Md. Journal-box. No. 881,866; Mar. 10; Sp. p. 2741; Dr. p. 587; Gaz. vol. 133; p. 484.
Patterson, T. S., Morgantown, W. Va. Coin-controlled apparatus. No. 883,478; Mar. 31; Sp. p. 5989; Dr. p. 1277; Gaz. vol. 133; p. 1104.
Patterson, W. W., Fairview, Okla. Machine for grading and separating grain. No. 880,911; Mar. 3; Sp. p. 869; Dr. pp. 186–7; Gaz. vol. 133; p. 146.
Pattillo, G. A., Cartersville, Ga. Nut-lock. No. 883,566; Mar. 31; Sp. p. 6169; Dr. p. 1312; Gaz. vol. 133; p. 1129.
Pattison, S. (See Carrick and Pattison.)
Patton, C. W. (See Washington, D. E., assignor.)
Paul, J. T. H., assignor to E. Goldman & Co., Inc., Chicago, Ill. Conveyer. No. 882,795; Mar. 24; Sp. p. 4573; Dr. pp. 975–6; Gaz. vol. 133; p. 849.
Paul, W. L., assignor to Oliver Chilled Plow Works, South Bend, Ind. Cultivator. No. 882,957; Mar. 24; Sp. p. 4916; Dr. pp. 1042–3; Gaz. vol. 133; p. 904.
Pauley, W. T. H., Waynesburg, Pa. Chandelier. No. 883,045; Mar. 24; Sp. p. 5072; Dr. p. 1082; Gaz. vol. 133; p. 930.
Paulling, H., Brandau, Austria-Hungary, assignor to Westdeutsche Thomasphosphat-Werke, G. M. B. H., Berlin, Germany. Manufacturing nitric acid by means of superheating, &c. No. 882,958; Mar. 24; Sp. p. 4918; Dr. p. 1043; Gaz. vol. 133; p. 904.
Pauly, K. A., Schenectady, N. Y., assignor to General Electric Company. Induction-motor control. No. 882,581; Mar. 24; Sp. p. 4153; Dr. p. 881; Gaz. vol. 133; p. 778.
Payette Insulator Pin Company, Limited. (See Scharfhausen, W., assignor.)
Payne, F. J., Portland, Oreg. Current-motor. No. 880,912; Mar. 3; Sp. p. 871; Dr. p. 187; Gaz. vol. 133; p. 146.
Payne, G., London, England, and W. J. H. Payne, San Francisco, Cal. Imitation marble and granite. No. 880,753; Mar. 3; Sp. p. 535; Dr. p. 111; Gaz. vol. 133; p. 93.
Payne, W. J. H. (See Payne, G. and W. J. H.)
Peabody, E. H., New York, N. Y. Oil-burner for furnaces. No. 880,693; Mar. 3; Sp. p. 397; Dr. p. 86; Gaz. vol. 133; p. 71.
Pearce, C. O., Cheneyville, La. Tire-setter. No. 883,666; Mar. 31; Sp. p. 6363; Dr. p. 1356; Gaz. vol. 133; p. 1160.
Pearce, H., Altrincham, assignor to Linotype and Machinery Limited, London, England. Magazine for linotype-machines. No. 880,568; Mar. 3; Sp. p. 157; Dr. pp. 34–5; Gaz. vol. 133; p. 30.
Pearsall, G. F. E., New York, N. Y. Border for pictures. No. 882,710; Mar. 24; Sp. p. 4407; Dr. p. 937; Gaz. vol. 133; p. 822.
Pearsall, W. B., Hampstead, London, England. Dental instrument. No. 882,711; Mar. 24; Sp. p. 4408; Dr. p. 937; Gaz. vol. 133; p. 822.
Pearson, B. F., Canyonville, Oreg. Blasting-fuse igniter. No. 881,714; Mar. 10; Sp. p. 2439; Dr. p. 524; Gaz. vol. 133; p. 434.
Peck, C. C., Rochester, N. Y. Drainage-valve. No. 883,337; Mar. 31; Sp. p. 5667; Dr. p. 1210; Gaz. vol. 133; p. 1056.
Peck, C. E., New York, N. Y. Music-sheet. No. 881,337; Mar. 10; Sp. p. 1682; Dr. pp. 362–3; Gaz. vol. 133; p. 313.
Peck, I. H., assignor of one-half to F. S. Slauter, Derby, Conn. Skirt-marker. No. 881,484; Mar. 10; Sp. p. 1984; Dr. p. 432; Gaz. vol. 133; p. 360.
Peck, Stow & Wilcox Company. (See Ellrich, R. C., assignor.)
Pecor, F. F., Oconto, assignor of one-half to E. Sauld, Mountain, Wis. Clothes-pin. No. 883,667; Mar. 31; Sp. p. 6365; Dr. p. 1357; Gaz. vol. 133; p. 1161.
Pedigo, L. T., Greensburg, Kans. Grapple. No. 882,796; Mar. 24; Sp. p. 4575; Dr. p. 976; Gaz. vol. 133; p. 849.

Peerless Motor Car Company. (See Schmidt, C., assignor.)
Pekat, C., Chicago, Ill. Grate. No. 883,046; Mar. 24; Sp. p. 5073; Dr. pp. 1082–3; Gaz. vol. 133; p. 931.
Pennell, C. L., assignor of one-half to C. Wagner, Canal Dover, Ohio. Ore-car. No. 881,146; Mar. 10; Sp. p. 1309; Dr. pp. 282–3; Gaz. vol. 133; p. 252.
Pennepacker, H. W., assignor to Fort Pitt Bedding Company, Allegheny, Pa. Bed-spring. (Reissue.) No. 12,768; Mar. 24; Sp. p. 5313; Dr. pp. 1133–4; Gaz. vol. 133; p. 970.
Penney, H. E., assignor to Nott Fire Engine Company, Minneapolis, Minn. Marine boiler. No. 882,959; Mar. 24; Sp. p. 4919; Dr. p. 1043; Gaz. vol. 133; p. 904.
Penney, H. E., assignor to Nott Fire Engine Company, Minneapolis, Minn. Steam-generator. No. 883,229; Mar. 31; Sp. p. 5465; Dr. p. 1164; Gaz. vol. 133; p. 1022.
Penwell, O. E., Mountain Home, Idaho. Scraper and grader. No. 881,027; Mar. 3; Sp. p. 1073; Dr. p. 233; Gaz. vol. 133; p. 183.
Pépin, D., Sr., Montreal, Quebec, Canada. Apparatus for examining submerged bodies. No. 881,148; Mar. 10; Sp. p. 1313; Dr. p. 283; Gaz. vol. 133; p. 253.
Pepper, C. L., Indianapolis, Ind. Curing or vulcanizing rubber goods. No. 882,341; Mar. 17; Sp. p. 3707; Dr. p. 788; Gaz. vol. 133; p. 668.
Peres, C., Lebo, Kans. Draft-equalizer. No. 881,715; Mar. 10; Sp. p. 2441; Dr. p. 525; Gaz. vol. 133; p. 435.
Perez, M., Chicago, Ill. Bottle-seal. No. 881,945; Mar. 17; Sp. p. 2924; Dr. p. 624; Gaz. vol. 133; p. 540.
Perez, M., Chicago, Ill. Non-refillable bottle. No. 881,946; Mar. 17; Sp. p. 2926; Dr. p. 624; Gaz. vol. 133; p. 540.
Perkins, J. A. and O. J., Salem, Mass. Shuttle for looms. No. 882,267; Mar. 17; Sp. p. 3571; Dr. p. 757; Gaz. vol. 133; p. 643.
Perkins, J. L., Springfield, Mass. Heat-radiating device. No. 881,147; Mar. 10; Sp. p. 1311; Dr. p. 283; Gaz. vol. 133; p. 253.
Perkins, J. N., assignor of one-half to L. B. Grasberger, Richmond, Va. Attachment for molders' flasks. No. 881,823; Mar. 10; Sp. p. 2640; Dr. p. 566; Gaz. vol. 133; p. 470.
Perkins, O. J. (See Perkins, J. A. and O. J.)
Pernat, J., Cleveland, Ohio. Automatic railway-gate. No. 882,342; Mar. 17; Sp. p. 3709; Dr. pp. 788–9; Gaz. vol. 133; p. 668.
Perrine, J. B., Valparaiso, Ind., assignor to J. E. Plew, Chicago, Ill. Self-indexing ledger. No. 880,754; Mar. 3; Sp. p. 537; Dr. p. 112; Gaz. vol. 133; p. 93.
Person, W. (See Abramson and Person.)
Person, W., assignor of one-half to A. C. Abramson, Rockford, Ill. Lock. No. 883,567; Mar. 31; Sp. p. 6169; Dr. p. 1312; Gaz. vol. 133; p. 1130.
Perry, A. W., Wakefield, assignor of one-half to J. C. Davis, Peace Dale, R. I. Thill-support. No. 882,650; Mar. 24; Sp. p. 4294; Dr. p. 911; Gaz. vol. 133; p. 802.
Perry, E. L., Paterson, N. J. Testing tubular bodies. No. 880,755; Mar. 3; Sp. p. 542; Dr. p. 113; Gaz. vol. 133; p. 94.
Perry, F. H., Beverly, Mass. Clothes-pin. No. 880,819; Mar. 3; Sp. p. 669; Dr. p. 141; Gaz. vol. 133; p. 115.
Perry, G., Listowel, Ontario, Canada. Threader and protector for inked ribbons. No. 880,913; Mar. 3; Sp. p. 873; Dr. p. 188; Gaz. vol. 133; p. 146.
Perry, R. W., Stoneham, assignor of one-half to G. H. Stevens, Melrose, Mass. Cushion-heel. No. 882,268; Mar. 17; Sp. p. 3572; Dr. p. 758; Gaz. vol. 133; p. 644.
Peters, F. M., Chicago, Ill. Dough-sheeting machine. No. 881,439; Mar. 10; Sp. p. 1884; Dr. pp. 409–11; Gaz. vol. 133; p. 345.
Peters, F. M., Chicago, Ill. Machine for baking sugar-wafers. No. 881,824; Mar. 10; Sp. p. 2641; Dr. pp. 566–7; Gaz. vol. 133; p. 470.
Petersen, A. P. (See Olsen and Petersen.)
Petersen, H. P., Waupaca, Wis. Folding umbrella. No. 881,825; Mar. 10; Sp. p. 2646; Dr. p. 568; Gaz. vol. 133; p. 470.
Petersen, P. C., assignor of two-fifths to H. Kelly, Chicago, Ill. Folding hand-mirror. No. 881,947; Mar. 17; Sp. p. 2929; Dr. p. 625; Gaz. vol. 133; p. 541.
Peterson, H. C., *et al.* (See Swanberg, A. W., assignor.)
Peterson, J. J., Chicago, Ill. Guard-rail for passenger-cars. No. 880,914; Mar. 3; Sp. p. 874; Dr. p. 188; Gaz. vol. 133; p. 147.
Peterson, M. P., Eastlake, Mich. Clothes-drier. No. 882,960; Mar. 24; Sp. p. 4920; Dr. pp. 1043–4; Gaz. vol. 133; p. 905.
Peterson, P. O., Winona, S. D. Gate-fastener. No. 881,259; Mar. 10; Sp. p. 1531; Dr. p. 330; Gaz. vol. 133; p. 289.
Petri-Palmedo, D., Hoboken, N. J., assignor to Mergenthaler Linotype Company. Mold for linotype-machines. No. 881,716; Mar. 10; Sp. p. 2442; Dr. p. 525; Gaz. vol. 133; p. 435.
Petry, N. A. (See Koenig, R. H., assignor.)
Petsche, G. B., assignor to Southwark Foundry and Machine Company, Philadelphia, Pa. Throttle-valve mechanism for steam-engines. No. 881,485; Mar. 10; Sp. p. 1966; Dr. pp. 432–3; Gaz. vol. 133; p. 360.
Petsche, G. B., assignor to Southwark Foundry and Machine Company, Philadelphia, Pa. Throttle-valve mechanism for steam-engines. No. 881,486; Mar. 10; Sp. p. 1968; Dr. p. 433; Gaz. vol. 133; p. 361.
Pettigrew, H. N., New Orleans, La. Hollow concrete block. No. 882,414; Mar. 17; Sp. p. 3825; Dr. p. 817; Gaz. vol. 133; p. 691.
Pettit, G. F., Springfield, Ill. Shock-handler. No. 881,260; Mar. 10; Sp. p. 1533; Dr. p. 330; Gaz. vol. 133; p. 289.
Pettit, G. F., Springfield, Ill. Vestibule stock-car. No. 882,163; Mar. 17; Sp. p. 3365; Dr. p. 717; Gaz. vol. 133; p. 609.
Peulecke, F., Chicago, Ill. Water-jacketed controlling and check valve. No. 880,569; Mar. 3; Sp. p. 160; Dr. p. 35; Gaz. vol. 133; p. 30.
Pfau, C. and E. G., assignors to Pfau Manufacturing Company, Cincinnati, Ohio. Escape-valve for water-closet flushing-tanks. No. 883,047; Mar. 24; Sp. p. 5076; Dr. p. 1083; Gaz. vol. 133; p. 931.
Pfau, E. G. (See Pfau, C. and E. G.)
Pfau Manufacturing Company. (See Pfau, C. and E. G., assignors.)
Pfaudler Company. (See Paige, D. O., assignor.)
Pfeiff, A. T., Stockholm, Sweden. Apparatus for cooling and ventilating milk, cream, &c. No. 883,338; Mar. 31; Sp. p. 5670; Dr. p. 1210; Gaz. vol. 133; p. 1056.
Pfeiff, A. T., Stockholm, Sweden. Liquid-heating apparatus. No. 883,339; Mar. 31; Sp. p. 5671; Dr. p. 1211; Gaz. vol. 133; p. 1056.
Pfister & Vogel Leather Company. (See Bossert, C. P., assignor.)
Pfleghar, F. P., assignor to F. P. Pfleghar & Son, New Haven, Conn. Bolt. No. 881,613; Mar. 10; Sp. p. 2237; Dr. p. 487; Gaz. vol. 133; p. 404.
Pfleghar, F. P., Jr., assignor to F. P. Pfleghar & Son, New Haven, Conn. Door-lock. No. 881,487; Mar. 10; Sp. p. 1990; Dr. p. 434; Gaz. vol. 133; p. 361.
Pfleghar, F. P., Jr., assignor to F. P. Pfleghar & Son, New Haven, Conn. Door-lock. No. 881,614; Mar. 10; Sp. p. 2238; Dr. p. 487; Gaz. vol. 133; p. 404.
Pfleghar & Son, F. P. (See Pfleghar, F. P., assignor.)
Pfleghar & Son, F. P. (See Pfleghar, F. P., Jr., assignor.)
Pflueger, E. A., assignor to E. A. Pflueger Company, Akron, Ohio. Sinker for fishing-tackle. No. 883,048; Mar. 24; Sp. p. 5077; Dr. p. 1083; Gaz. vol. 133; p. 931.
Phelps, A. S., Jr., Chicago, Ill. Acetylene-gas generator. No. 881,615; Mar. 10; Sp. p. 2240; Dr. pp. 487–8; Gaz. vol. 133; p. 405.
Philipp, H. (See Foersterling and Philipp.)
Phillips, C. M., and C. M. Royer, Middlebranch, Ohio. Railway-tie. No. 882,906; Mar. 24; Sp. p. 4814; Dr. p. 1023; Gaz. vol. 133; p. 885.
Phillips, G. W., assignor to Phillips Lawn Boot Company, Cleveland, Ohio. Lawn-boot. No. 882,016; Mar. 17; Sp. p. 3083; Dr. p. 656; Gaz. vol. 133; p. 562.
Phillips, J. H., Pottsville, Pa. Compressed-air liquid-elevator. No. 880,570; Mar. 3; Sp. p. 162; Dr. p. 35; Gaz. vol. 133; p. 30.
Phillips, J. M. and R. F., Carrick, Pa. Running-gear for mine-cars. No. 882,533; Mar. 17; Sp. p. 4061; Dr. p. 864; Gaz. vol. 133; p. 731.
Phillips, J. M. and R. F., Carrick, Pa. Running-gear for mine-cars. No. 882,534; Mar. 17; Sp. p. 4062; Dr. p. 864; Gaz. vol. 133; p. 732.
Phillips Lawn Boot Company. (See Phillips, G. W., assignor.)
Phillips, R. E., Westminster, London, England. Induction-valve for internal-combustion engines. No. 883,340; Mar. 31; Sp. p. 5673; Dr. p. 1211; Gaz. vol. 133; p. 1057.
Phillips, R. F. (See Phillips, J. M. and R. F.)
Pickel, E., Portland, Oreg. Advertising-machine. No. 881,616; Mar. 10; Sp. p. 2249; Dr. pp. 488–9; Gaz. vol. 133; p. 405.
Pickles, C. K., Danville, Ill., assignor to J. G. Brill Company, Philadelphia, Pa. Car. No. 883,230; Mar. 31; Sp. p. 5466; Dr. pp. 1164–5; Gaz. vol. 133; p. 1022.
Pierce, C. R., Rainier, Wash. Saw-jointer. No. 882,961; Mar. 24; Sp. p. 4922; Dr. p. 1044; Gaz. vol. 133; p. 905.
Pierce, F. E. (See Palmer and Pierce.)
Pierson, A. S., Morristown, N. J. Reinforcing and tension device for concrete structures. No. 880,820; Mar. 3; Sp. p. 670; Dr. p. 141; Gaz. vol. 133; p. 116.
Pierson, A. S., Morristown, N. J. Shutter-worker. No. 883,341; Mar. 31; Sp. p. 5676; Dr. p. 1212; Gaz. vol. 133; p. 1057.
Pierson, H. M., New York, N. Y. Apparatus for manufacturing gas. No. 882,907; Mar. 24; Sp. p. 4815; Dr. p. 1023; Gaz. vol. 133; p. 885.
Pierson, H. M., New York, N. Y. Manufacturing gas. No. 882,908; Mar. 24; Sp. p. 4817; Dr. p. 1023; Gaz. vol. 133; p. 886.
Pierson, H. M., New York, N. Y. Manufacturing gas. No. 882,909; Mar. 24; Sp. p. 4819; Dr. p. 1024; Gaz. vol. 133; p. 887.
Pierson, H. M., New York, N. Y. Manufacturing gas. No. 882,343; Mar. 17; Sp. p. 3711; Dr. p. 789; Gaz. vol. 133; p. 668.
Pike, C. A., Paw Paw, Mich. Weather-strip. No. 882,712; Mar. 24; Sp. p. 4409; Dr. pp. 937–8; Gaz. vol. 133; p. 822.
Pike, H. A., New York, N. Y. Coffee-pot. No. 883,231; Mar. 31; Sp. p. 5468; Dr. p. 1165; Gaz. vol. 133; p. 1023.
Pilkington, J. H., Waterbury, Conn. Clasp. No. 881,149; Mar. 10; Sp. p. 1314; Dr. p. 284; Gaz. vol. 133; p. 254.
Pilscheur, C. W., Barmen, Germany. Reel for winding-machines. No. 881,149; Mar. 10; Sp. p. 1314; Dr. p. 284; Gaz. vol. 133; p. 254.
Pindstofte, A. A., Frederiksberg, Denmark. Bottle-cleaning machine. No. 882,962; Mar. 24; Sp. p. 4923; Dr. p. 1044; Gaz. vol. 133; p. 905.

Pine, J. K. P., assignor to United Shirt and Collar Company, Troy, N. Y. Collar. No. 882,415; Mar. 17; Sp. p. 3827; Dr. p. 817; Gaz. vol. 133; p. 691.
Pinkham, M. B. (See Swazey and Pinkham.)
Pinson, B. F., Jr., Skiatook, Okla. Truss-braced tree. No. 883,342; Mar. 31; Sp. p. 5677; Dr. p. 1212; Gaz. vol. 133; p. 1057.
Pintsch, Firm of J. (See Würker, A., assignor.)
Pitner, M. W., Chicago, Ill. Check-valve. No. 882,416; Mar. 17; Sp. p. 3828; Dr. p. 817; Gaz. vol. 133; p. 691.
Pitt, E. D., Niagara Falls, Ontario, Canada, and L. G. Robinson, Plattsburg, N. Y. Metallic reinforcement for concrete structures. No. 881,617; Mar. 10; Sp. p. 2251; Dr. p. 489; Gaz. vol. 133; p. 406.
Pittsburgh Filter Manufacturing Co. (See Knight, G. W., assignor.)
Piver, J. W., Lakeland, Fla. Tongue-and-groove joint for flooring. No. 883,040; Mar. 24; Sp. p. 5078; Dr. p. 1083; Gaz. vol. 133; p. 932.
Place, J. F., Glenridge, N. J., assignor to American Air Liquefying Co. Insulated container for liquid air, &c. No. 883,479; Mar. 31; Sp. p. 5992; Dr. p. 1278; Gaz. vol. 133; p. 1104.
Plant, O., *et al.* (See Shank, A. W., assignor.)
Plant, T. G. (See Bohr, N. C., assignor.)
Plew, J. E. (See Perrine, J. B., assignor.)
Poindexter, T. B., Alexandria, Ind. Sled. No. 883,050; Mar. 24; Sp. p. 5080; Dr. p. 1084; Gaz. vol. 133; p. 932.
Polinger, N. L., New York, N. Y. Dental mouth-prop. No. 883,232; Mar. 31; Sp. p. 5469; Dr. p. 1165; Gaz. vol. 133; p. 1023.
Pollard-Alling Manufacturing Company. (See Grieser, R., assignor.)
Porter, A. D. (See Porter, C. O. and A. D.)
Porter, C. O. and A. D., Grand Rapids, Mich. Cutter-guard for buzz-planers. No. 882,122; Mar. 17; Sp. p. 3275; Dr. p. 698; Gaz. vol. 133; p. 596.
Porter, H. J., San Luis Obispo, Cal. Bee-keeper's knife. No. 883,343; Mar. 31; Sp. p. 5678; Dr. p. 1212; Gaz. vol. 133; p. 1058.
Porter, J. E., Syracuse, and A. L. Clark, New York, N. Y., assignors to Just Mining and Extraction Company. Process of extraction. No. 880,821; Mar. 3; Sp. p. 671; Dr. p. 142; Gaz. vol. 133; p. 116.
Porter, M. L., Redding, Cal. Vehicle-wheel. No. 880,915; Mar. 3; Sp. p. 875; Dr. p. 188; Gaz. vol. 133; p. 147.
Porter Screen Manufacturing Company. (See Limoge, T., assignor.)
Porter, W. E., assignor to New Haven Clock Co., New Haven, Conn. Watch. No. 881,440; Mar. 10; Sp. p. 1889; Dr. p. 411; Gaz. vol. 133; p. 345.
Portius, C. (See Weinrich, M., assignor.)
Post, C. B., assignor to Ward-Stilson Company, New London, Ohio. Amusement device. No. 881,150; Mar. 10; Sp. p. 1315; Dr. p. 284; Gaz. vol. 133; p. 254.
Post, T. W., Battle Creek, Mich., assignor to Ventilating Shoe Tree Co., New York, N. Y. Shoe tree or last. No. 881,338; Mar. 10; Sp. p. 1684; Dr. p. 363; Gaz. vol. 133; p. 314.
Postal Telegraph-Cable Company. (See Needham, J. T., assignor.)
Potter, A. B., Salmon Falls, N. H., assignor to National Ring Traveler Company, Providence, R. I. Ring-traveler. No. 882,077; Mar. 17; Sp. p. 3205; Dr. p. 681; Gaz. vol. 133; p. 583.
Potter, C. W., *et al.* (See Dorsey, F. F., assignor.)
Potter, C. W., *et al.* (See Wildman, J. E., assignor.)
Potter, J. C., assignor to Potter & Johnston Machine Co., Pawtucket, R. I. Carriage-feeding mechanism for lathes, &c. No. 880,916; Mar. 3; Sp. p. 877; Dr. pp. 188–9; Gaz. vol. 133; p. 147.
Potter & Johnston Machine Co. (See Potter, J. C., assignor.)
Povall, I., Des Moines, Iowa. Bracket. No. 881,339; Mar. 10; Sp. p. 1685; Dr. p. 363; Gaz. vol. 133; p. 314.
Powell, E. G. (See Espich, J. W., assignor.)
Powell, F. D., and C. S. Ellis, assignors to American Coin Register Company, Chicago, Ill. Coin-registering mechanism. No. 880,571; Mar. 3; Sp. p. 163; Dr. pp. 36–8; Gaz. vol. 133; p. 31.
Powell, J., assignor to William Powell Co., Cincinnati, Ohio. Valve-locking means. No. 882,535; Mar. 17; Sp. p. 4063; Dr. p. 864; Gaz. vol. 133; p. 732.
Powell, T. C., Boston, Mass. Ring spinning and twisting apparatus. No. 883,120; Mar. 24; Sp. p. 5224, Dr. p. 1115; Gaz. vol. 133; p. 956.
Power, G. S., Passaic, N. J. Stuffing-box with reversible gland. No. 881,867; Mar. 10; Sp. p. 2742; Dr. p. 587; Gaz. vol. 133; p. 485.
Powers, C. P. (See Powers, V. M. and C. P.)
Powers, J. T., *et al.* (See Jones, T. N., assignor.)
Powers, S. B., Springfield, Mo. Automatic seed-cabinet. No. 883,233; Mar. 31; Sp. p. 5470; Dr. p. 1166; Gaz. vol. 133; p. 1023.
Powers, V. M. and C. P., Sattley, Cal. Cultivator. No. 881,151; Mar. 10; Sp. p. 1317; Dr. p. 284; Gaz. vol. 133; p. 254.
Prather, F. M., Los Angeles, Cal. Wave-motor. No. 882,209; Mar. 17; Sp. p. 3573; Dr. pp. 758–9; Gaz. vol. 133; p. 644.
Prentice, G. E., New Britain, Conn., assignor to Traut & Hine Manufacturing Company. Metal ornamentation. No. 880,572; Mar. 3; Sp. p. 173; Dr. p. 38; Gaz. vol. 133; p. 31.
Prescott, S. I., assignor to American Tobacco Company, New York, N. Y. Paper-strip controlling and printing mechanism for cigarette-machines. No. 882,651; Mar. 24; Sp. p. 4295; Dr. p. 911; Gaz. vol. 133; p. 803.
Preston, W. L., Lincoln, Ill. Wagon-jack. No. 883,344; Mar. 31; Sp. p. 5679; Dr. p. 1212; Gaz. vol. 133; p. 1058.
Price, A. M., Elgin, Ill., assignor, by mesne assignments, to A. E. Brion, New York, N. Y. Feeding mechanism for wrapping-machines. No. 881,084; Mar. 3; Sp. p. 1180; Dr. pp. 255–6; Gaz. vol. 133; p. 201.
Price, C. B., *et al.* (See Palmer, G. E., assignor.)
Price, E. F., Niagara Falls, N. Y., assignor, by mesne assignments, to Central Trust Company of New York, trustee. Producing ferrosilicon. No. 882,417; Mar. 17; Sp. p. 3830; Dr. p. 818; Gaz. vol. 133; p. 692.
Price, E. F., Niagara Falls, N. Y., assignor, by mesne assignments, to Central Trust Company of New York, trustee. Producing silicospiegel. No. 882,418; Mar. 17; Sp. p. 3831; Dr. p. 818; Gaz. vol. 133; p. 692.
Price, E. F., Niagara Falls, N. Y., assignor, by mesne assignments, to Central Trust Company of New York, trustee. Producing manganese silicid. No. 882,582; Mar. 24; Sp. p. 4156; Dr. p. 881; Gaz. vol. 133; p. 779.
Price, F. S., *et al.* (See Palmer, G. E., assignor.)
Price, W. G., New Castle, Pa. Elliptic spring. No. 881,948; Mar. 17; Sp. p. 2930; Dr. p. 625; Gaz. vol. 133; p. 541.
Price, W. G., New Castle, Pa. Truck-bolster hanger. No. 881,949; Mar. 17; Sp. p. 2931; Dr. p. 625; Gaz. vol. 133; p. 541.
Pridmore, J. W., Chicago, Ill., assignor to International Harvester Company. Reaping attachment for mowers. No. 882,164; Mar. 17; Sp. p. 3368; Dr. pp. 717–18; Gaz. vol. 133; p. 609.
Priley, N. H., Duluth, Minn. Box-lid support. No. 882,713; Mar. 24; Sp. p. 4414; Dr. p. 938; Gaz. vol. 133; p. 823.
Prindle, W. A., Merrillan, Wis. Potato-masher. No. 882,078; Mar. 17; Sp. p. 3207; Dr. p. 681; Gaz. vol. 133; p. 583.
Proctor, W. H., Corning, N. Y. Device for warming beds. No. 882,714; Mar. 24; Sp. p. 4415; Dr. pp. 938–9; Gaz. vol. 133; p. 823.
Proebstel, J. C., Portland, Oreg. Recording and duplicating device. No. 882,123; Mar. 17; Sp. p. 3276; Dr. pp. 698–9; Gaz. vol. 133; p. 597.
Progler, C. H., Ripley, W. Va. Cabinet for holding disk records. No. 881,950; Mar. 17; Sp. p. 2933; Dr. p. 625; Gaz. vol. 133; p. 541.
Prouty, G. W., Dorchester, Mass. Dampening device for printing-presses and similar machines. No. 882,536; Mar. 17; Sp. p. 4065; Dr. p. 865; Gaz. vol. 133; p. 732.
Prouty, J. R., Reedsburg, Wis. Butter-printing machine. No. 883,345; Mar. 31; Sp. p. 5680; Dr. pp. 1213–14; Gaz. vol. 133; p. 1058.
Providence Plant Irrigator Company. (See Bunker, J. W., assignor.)
Pullam, W. Z., Benton, Ill. Train-pipe coupling. No. 882,017; Mar. 17; Sp. p. 3084; Dr. p. 656; Gaz. vol. 133; p. 563.
Pullman Company. (See Dodds, E. L., assignor.)
Purcell, W. F. (See Smith and Purcell.)
Purdy, F., Chicago, Ill. Time-stamp. No. 882,165; Mar. 17; Sp. p. 3370; Dr. p. 718; Gaz. vol. 133; p. 610.
Purdy, F., Chicago, Ill. Automatic time-stamp. No. 882,166; Mar. 17; Sp. p. 3376; Dr. p. 718; Gaz. vol. 133; p. 610.
Pure White Turpentine Company. (See Gardner, J. G., assignor.)
Pym, C. F., Essex, Ontario, Canada, assignor of one-half to Krentler Brothers Company, Detroit, Mich. Heel-seat laster. No. 881,441; Mar. 10; Sp. p. 1890; Dr. pp. 411–12; Gaz. vol. 133; p. 346.
Pym, C. F., assignor of one-half to Krentler Brothers Company, Detroit, Mich. Lasting-machine. No. 882,018; Mar. 17; Sp. p. 3085; Dr. pp. 656–8; Gaz. vol. 133; p. 563.
Quackenboss, L. G., Chicago, Ill. Window-box support. No. 880,694; Mar. 3; Sp. p. 398; Dr. p. 86; Gaz. vol. 133; p. 71.
Quentell, A. R. (See Quentell, W. P., assignor.)
Quentell, W. P., New York, N. Y., assignor to A. R. Quentell, Stamford, Conn. Calculating or adding machine. No. 881,717; Mar. 10; Sp. p. 2444; Dr. p. 526; Gaz. vol. 133; p. 435.
Quentell, W. P., assignor to A. R. Quentell, Stamford, Conn. Calculating-machine. No. 881,868; Mar. 10; Sp. p. 2743; Dr. p. 588; Gaz. vol. 133; p. 485.
Quigley, E. J., Newark, N. J. Shirt. No. 881,261; Mar. 10; Sp. p. 1534; Dr. p. 330; Gaz. vol. 133; p. 289.
Quint, E. M., Concord, N. H. Safety-razor. No. 882,963; Mar. 24; Sp. p. 4925; Dr. p. 1045; Gaz. vol. 133; p. 905.
R. Neuman Hardware Co. (See Kuhsiek, A. J. H., assignor.)
Rabbidge, P., Neutral Bay, near Sydney, New South Wales, Australia. Inductor electric generator. No. 883,346; Mar. 31; Sp. p. 5684; Dr. p. 1214; Gaz. vol. 133; p. 1059.
Rabone, H. J., Birmingham, England. Flexible steel or metal measuring-tape. No. 881,826; Mar. 10; Sp. p. 2648; Dr. p. 568; Gaz. vol. 133; p. 471.

Racine-Sattley Company. (See Weaver, I. A., assignor.)
Rackley, J. C., Robert Lee, Tex. Weight-motor. No. 882,583; Mar. 24; Sp. p. 4157; Dr. p. 882; Gaz. vol. 133; p. 779.
Radloff, F. (See Kormil and Radloff.)
Radoll, C. W., Chicago, Ill. Clothes-line holder. No. 883,668; Mar. 31; Sp. p. 6366; Dr. p. 1357; Gaz. vol. 133; p. 1161.
Railford, J. A., Columbus, Ga. Plow-stock. No. 881,340; Mar. 10; Sp. p. 1686; Dr. p. 363; Gaz. vol. 133; p. 314.
Railford, J. A., Columbus, Ga. Plow-fender. No. 881,341; Mar. 10; Sp. p. 1687; Dr. p. 364; Gaz. vol. 133; p. 314.
Rail Joint Company. (See Allen J. H., assignor.)
Rail Joint Company. (See Wolhaupter, B., assignor.)
Ralston Steel Car Company. (See Irwin, F. L., assignor.)
Rambacher, A., Rosenheim, Germany. Railway-track. No. 882,964; Mar. 24; Sp. p. 4925; Dr. pp. 1045–6; Gaz. vol. 133; p. 906.
Ramboux, L., Erquelinnes, Belgium. Marble and stone saw. No. 880,822; Mar. 3; Sp. p. 676; Dr. p 142; Gaz. vol. 133; p. 116.
Ramsey, W. W., Chicago, Ill. Concrete-reinforcing bar. No. 881,618; Mar. 10; Sp. p. 2253; Dr. p. 489; Gaz. vol. 133; p. 406.
Rand, F. L., Pittsfield, N. H. Painter's hook. No. 882,965; Mar. 24; Sp. p. 4928; Dr. p. 1046; Gaz. vol. 133; p. 906.
Raney, W. D., assignor of one-half to D. Evans, Fort Worth, Tex. Toy magazine-gun. No. 883,234; Mar. 31; Sp. p. 5471; Dr. p. 1166; Gaz. vol. 133; p. 1023.
Rankin, C. C., assignor of one-third to S. T. Crofts, Louisville Ky. Clevis for plows. No. 882,797; Mar. 24; Sp. p. 4576; Dr. p. 976; Gaz. vol. 133; p. 849.
Rankin, C. C., assignor of one-third to S. T. Crofts, Louisville, Ky. Plow. No. 882,839; Mar. 24; Sp. p. 4666; Dr. p. 993; Gaz. vol. 133; p. 863.
Ranney, W. D., Columbus, Ohio. Emergency cut-off valve for steam-engines. No. 883,480; Mar. 31; Sp. p. 5995; Dr. p. 1279; Gaz. vol. 133; p. 1105.
Rasmussen, H., Skovgaarde, Denmark. Harness for horse-training. No. 882,584; Mar. 24; Sp. p. 4159; Dr. p. 882; Gaz. vol. 133; p. 779.
Rasmussen, H. R., Aztec, N. Mex. Ter. Pneumatic horse-collar. No. 880,756; Mar. 3; Sp. p. 543; Dr. p. 113; Gaz. vol. 133; p. 94.
Ratz, G. V., Pekin, Ind. Harvester-reel and actuating mechanism therefor. No. 882,715; Mar. 24; Sp. p. 4418; Dr. p. 939; Gaz. vol. 133; p. 823.
Rauch, F., Milwaukee Wis. Tree-holder. No. 883,235; Mar. 31; Sp. p. 5473; Dr. p. 1166; Gaz. vol. 133; p. 1024.
Raymond, A., deceased, Chicago, Ill.; M. M. Bartelme, administratrix. Centrifugal roller-mill. No. 881,262; Mar. 10; Sp. p. 1536; Dr. p. 331; Gaz. vol. 133; p. 289.
Rayner, H. W., Eagle Lake, Tex. Drier. No. 880,917; Mar. 3; Sp. p. 880; Dr. p. 190; Gaz. vol. 133; p. 147.
Reach, G. A. (See Gamble, J., assignor.)
Read, J. L., Philadelphia, Pa. Book-cover. No. 881,718; Mar. 10; Sp. p. 2447; Dr. p. 526; Gaz. vol. 133; p. 436.
Read & Sons, W. (See Ridlon, G. H., assignor.)
Reading Saddle & Manufacturing Company. (See Deem, M. M., assignor.)
Redfield, C. L., Chicago, Ill. Motor-vehicle. No. 880,823; Mar. 3; Sp. p. 677; Dr. p. 142–3; Gaz. vol. 133; p. 117.
Redington, F. B. (See Brown and Johnston, assignors.)
Reed, C. M., Sumneytown, Pa. Railway-tie organization. No. 880,918; Mar. 3; Sp. p. 882; Dr. p. 190; Gaz. vol. 133; p. 148.
Reed, E. L., Oregon, Ill. Shipping-crate. No. 881,300; Mar. 10; Sp. p. 1402; Dr. p. 303; Gaz. vol. 133; p. 268.
Reed, G. L., assignor to Reed Manufacturing Company, Springfield, Ohio. Warping-machine. No. 882,019; Mar. 17; Sp. p. 3092; Dr. p. 658; Gaz. vol. 133; p. 563.
Reed, G. W., Greenfield, Ind. Hydrocarbon-burner. No. 882,585; Mar. 24; Sp. p. 4160; Dr. p. 882; Gaz. vol. 133; p. 779.
Reed Manufacturing Company. (See Reed, G. L., assignor.)
Reed, W. B., Portland, Oreg. Car-fender. No. 882,079; Mar. 17; Sp. p. 3298; Dr. pp. 681–2; Gaz. vol. 133; p. 583.
Reeve, S. A., Worcester, assignor to C. F. Brown, trustee, Reading, Mass. Valve mechanism for engines and compressors. No. 880,824; Mar. 3; Sp. p. 684; Dr. pp. 143–6; Gaz. vol. 133; p. 117.
Reeve, S. A., Worcester, assignor to C. F. Brown, trustee, Reading, Mass. Variable-clearance engine. No. 880,825; Mar. 3; Sp. p. 691; Dr. p. 146; Gaz. vol. 133; p. 117.
Regan, J. H. (See Bluhm and Regan.)
Rehbein, G., Canton, Kans. Hydrocarbon-burner. No. 883,236; Mar. 31; Sp. p. 5474; Dr. p. 1167; Gaz. vol. 133; p. 1024.
Reich, H. A., assignor to R. Reich & Son, New York, N. Y. Finishing the mouths of the animal-heads of skin rugs. No. 880,919; Mar. 3; Sp. p. 884; Dr. p. 190; Gaz. vol. 133; p. 148.
Reich & Son, R. (See Reich, H. A., assignor.)
Reid, F. T., Kansas City, Mo. Automatic stop-valve. No. 882,798; Mar. 24; Sp. p. 4577; Dr. p. 976; Gaz. vol. 133; p. 850.
Reid, W. A., assignor to N. O. Nelson Manufacturing Company, St. Louis, Mo. Drum-trap. No. 882,209; Mar. 17; Sp. p. 3445; Dr. p. 733; Gaz. vol. 133; p. 623.
Reid, W. H., assignor to W. G. Lamprecht, Brooklyn, N. Y. Bottle-closure. No. 882,840; Mar. 24; Sp. p. 4667; Dr. p. 993; Gaz. vol. 133; p. 863.
Reif, J., Jr., Hebron, Ind. Wrench. No. 883,237; Mar. 31; Sp. p. 5475; Dr. p. 1167; Gaz. vol. 133; p. 1024.
Reiness, I., New York, N. Y. Device for securing scarf-pins. No. 883,422; Mar. 31; Sp. p. 5873; Dr. p. 1251; Gaz. vol. 133; p. 1085.
Reinoehl, C. W. (See Weaver and Reinoehl.)
Reiss, G. T., Hamilton, Ohio, assignor to Niles-Bement-Pond Company, Jersey City, N. J. Multiple drill. No. 883,481; Mar. 31; Sp. p. 5996; Dr. p. 1279; Gaz. vol. 133; p. 1105.
Reistad, T., St. Paul, Minn. Excavating-machine. No. 880,826; Mar. 3; Sp. p. 695; Dr. p. 146; Gaz. vol. 133; p. 118.
Renkenberger, E., Buffalo, N. Y. Stopper-extractor. No. 883,482; Mar. 31; Sp. p. 5998; Dr. p. 1279; Gaz. vol. 133; p. 1106.
Reno, J. B., Canton, Ohio. Harness-swing. No. 883,238; Mar. 31; Sp. p. 5477; Dr. p. 1167; Gaz. vol. 133; p. 1025.
Renshaw, C. M., Lake Andes, S. D. Poultry indicator and marker. No. 881,152; Mar. 10; Sp. p. 1319; Dr. p. 285; Gaz. vol. 133; p. 255.
Renshaw, W. (See Kennedy, M., assignor.)
Rentchler, P. (See Rogerson and Rentchler.)
Renz, J. (See Vrana and Schiba, assignors.)
Replogle, J. B., Chicago, Ill., assignor to J. Saltzman. Clothes-pressing machine. No. 882,841; Mar. 24; Sp. p. 4670; Dr. pp. 993–4; Gaz. vol. 133; p. 864.
Reschke, B. G., Hamburg, Germany. Safety-explosive. No. 882,910; Mar. 24; Sp. p. 4821; Gaz. vol. 133; p. 887.
Resler, A. D., Montesano, Wash. Show-case. No. 880,827; Mar. 3; Sp. p. 698; Dr. p. 147; Gaz. vol. 133; p. 118.
Revolute Machine Company. (See Everett and McAdam, assignors.)
Rex Light and Stove Company. (See Tures, W., assignor.)
Reynolds, C. (See Butler, Reynolds, and Seaman.)
Reynolds, C., Jersey City Heights, N. J. Necktie slip device. No. 883,483; Mar. 31; Sp. p. 5999; Dr. p. 1280; Gaz. vol. 133; p. 1106.
Reynolds, H. C., assignor of one-half to A. J. De Laney, Portersville, Cal. Trolley. No. 882,966; Mar. 24; Sp. p. 4928; Dr. p. 1046; Gaz. vol. 133; p. 906.
Reynolds, H. S., assignor to E. C. Seaman and E. R. Gilman, Brooklyn, N. Y. Barrel or receptacle. No. 881,951; Mar. 17; Sp. p. 2934; Dr. p. 626; Gaz. vol. 133; p. 542.
Reynolds, I. H. (See Norton and Reynolds.)
Rhodes, J. B., assignor to W. Shakespeare, Jr., Kalamazoo, Mich. Artificial bait. No. 882,344; Mar. 17; Sp. p. 3714; Dr. p. 789; Gaz. vol. 133; p. 669.
Rhodes, W. H., Brandenberg, assignor of one-half to G. Storms, Louisville, Ky. Automatic power-releasing device for draft-engines. No. 882,419; Mar. 17; Sp. p. 3832; Dr. p. 818; Gaz. vol. 133; p. 692.
Rhorer, C. E., Columbus, Ind. Rotary engine. No. 882,168; Mar. 17; Sp. p. 3386; Dr. p. 720; Gaz. vol. 133; p. 612.
Rice, J. V., Jr., Bordentown, N. J. Igniting device for gas-engines. No. 881,952; Mar. 17; Sp. p. 2935; Dr. p. 626; Gaz. vol. 133; p. 542.
Rice, J. V., Jr., Bordentown, N. J. Igniting device for gas-engines. No. 881,953; Mar. 17; Sp. p. 2937; Dr. p. 626; Gaz. vol. 133; p. 542.
Rice, J. V., Jr., Bordentown, N. J. Igniting device for gas-engines. No. 881,954; Mar. 17; Sp. p. 2938; Dr. p. 627; Gaz. vol. 133; p. 542.
Rice, J. V., Jr., Bordentown, N. J. Igniting device for gas-engines. No. 882,716; Mar. 24; Sp. p. 4424; Dr. p. 940; Gaz. vol. 133; p. 824.
Rice, J. V., Jr., Bordentown, N. J. Governing mechanism for turbines. No. 881,869; Mar. 10; Sp. p. 2745; Dr. pp. 588–9; Gaz. vol. 133; p. 485.
Rice, R. H., Lynn, Mass., assignor to General Electric Company. Regulating-valve for turbines. No. 881,871; Mar. 10; Sp. p. 2754; Dr. p. 590; Gaz. vol. 133; p. 486.
Rice, R. H., Swampscott, Mass., assignor to General Electric Company. Elastic-fluid turbine. No. 881,870; Mar. 10; Sp. p. 2750; Dr. p. 589–90; Gaz. vol. 133; p. 486.
Rice, T. B., Jr., Philadelphia, Pa. Clutch. No. 882,911; Mar. 24; Sp. p. 4822; Dr. p. 1024; Gaz. vol. 133; p. 887.
Richard, A. J., *et al.* (See Babin, H., assignor.)
Richards, F. H., Hartford, Conn. Carving-machine. No. 881,956; Mar. 17; Sp. p. 2948; Dr. p. 628; Gaz. vol. 133; p. 543.
Richards, F. H., Hartford, Conn. Carving-machine. No. 882,842; Mar. 24; Sp. p. 4673; Dr. pp. 994–5; Gaz. vol. 133; p. 864.
Richards, F. H., Hartford, Conn., assignor, by mesne assignments, to American Typographic Corporation. Typographic machine. No. 881,955; Mar. 17; Sp. p. 2940; Dr. p. 627; Gaz. vol. 133; p. 543.
Richards, G. H., *et al.* (See Fowler, B. F., assignor.)
Richards, T., Philadelphia, Pa. Sash lock and adjuster. No. 881,719; Mar. 10; Sp. p. 2448; Dr. p. 526; Gaz. vol. 133; p. 436.
Richardson, C. G., Springfield, Vt., assignor to Parks & Woolson Machine Company. Cloth-measuring machine. No. 883,669; Mar. 31; Sp. p. 6367; Dr. p. 1357; Gaz. vol. 133; p. 1161.

Richardson, F. L., Manifest, La. Envelop. No. 882,843; Mar. 24; Sp. p. 4680; Dr. pp. 995–6; Gaz. vol. 133; p. 865.
Richardson, R. R., Ottawa, Ill. Feeding mechanism for coating-machines and the like. No. 882,167; Mar. 17; Sp. p. 3381; Dr. p. 719; Gaz. vol. 133; p. 611.
Richardson, S. S., assignor of one-half to H. G. Shaw, Montague, Mass. Scaffold-bracket. No. 882,020; Mar. 17; Sp. p. 3093; Dr. p. 659; Gaz. vol. 133; p. 564.
Richardson, W. S., Canton, assignor to United States Fastener Company, Boston, Mass. Snap-fastener. No. 880,573; Mar. 3; Sp. p. 176; Dr. p. 38; Gaz. vol. 133; p. 32.
Richbourg, J. F. and R. F., Alba, Tex. Fly-trap. No. 882,124; Mar. 17; Sp. p. 3279; Dr. p. 609; Gaz. vol. 133; p. 597.
Richbourg, R. F. (See Richbourg, J. F. and R. F.)
Rickert, E. P., Cleveland, Ohio. Overshoe. No. 881,153; Mar. 10; Sp. p. 1320; Dr. p. 285; Gaz. vol. 133; p. 255.
Ridout, W. L., Luling, Tex. Sunshade. No. 881,720; Mar. 10; Sp. p. 2449; Dr. p. 527; Gaz. vol. 133; p. 436.
Ridgway, H. N., Boston, Mass. Amusement device. No. 883,484; Mar. 31; Sp. p. 6000; Dr. p. 1280; Gaz. vol. 133; p. 1106.
Ridgway, H. N., Boston, Mass. Amusement apparatus. No. 883,485; Mar. 31; Sp. p. 6002; Dr. p. 1280; Gaz. vol. 133; p. 1106.
Ridgway, H. N., Boston, Mass. Amusement apparatus. No. 883,568; Mar. 31; Sp. p. 6170; Dr. pp. 1312–13; Gaz. vol. 133; p. 1130.
Ridgway, R. (See Scott, E., assignor.)
Ridlon, G. H., Revere, assignor to W. Read & Sons, Boston, Mass. Base-ball mask. No. 881,957; Mar. 17; Sp. p. 2952; Dr. p. 629; Gaz. vol. 133; p. 543.
Ried, G. M., assignor of one-half to G. A. Baxter, Meridian, Miss. Skeleton eccentric for locomotives. No. 882,537; Mar. 17; Sp. p. 4067; Dr. p. 865; Gaz. vol. 133; p. 732.
Rigby, J. J., New York, assignor to E. W. Bliss Company, Brooklyn, N. Y. Means for controlling the feeding of sheets. No. 882,125; Mar. 17; Sp. p. 3280; Dr. p. 700; Gaz. vol. 133; p. 597.
Rigsby, L. J., Manning, Tex. Balanced valve. No. 880,920; Mar. 3; Sp. p. 886; Dr. p. 191; Gaz. vol. 133; p. 149.
Rinehart, J. B. (See Matthes and Rinehart.)
Ringemann, F. H. (See Campbell and Ringemann.)
Riter-Conley Manufacturing Company. (See Carpenter, H. A., assignor.)
Rivard, F. L. and L. B., Marine City, Mich. Extension-table. No. 882,799; Mar. 24; Sp. p. 4579; Dr. p. 977; Gaz. vol. 133; p. 850.
Rivard, L. B. (See Rivard, F. L. and L. B.)
Roach, C. T. (See McGinn, J. P., assignor.)
Roadhouse, N. F., assignor of one-fourth to J. T. Etzel, one-half to W. C. Gendron, and one-fourth to A. Koernig, Detroit, Mich. Switch-actuating device. No. 883,486; Mar. 31; Sp. p. 6003; Dr. pp. 1280–1; Gaz. vol. 133; p. 1107.
Robert, W. J. (See Bommer and Robert.)
Roberts, E. W., Clyde, Ohio. Compressor. No. 883,347; Mar. 31; Sp. p. 5686; Dr. pp. 1214–15; Gaz. vol. 133; p. 1059.
Roberts, J. W., Denver, Colo. Wheel advertising device. No. 882,505; Mar. 17; Sp. p. 3980; Dr. p. 850; Gaz. vol. 133; p. 721.
Robeson, J. H. (See Lorenz, J., assignor.)
Robidoux, E., Ludlow, assignor one-half to J. B. Bouchard, Chicopee Falls, Mass. Horseshoer's clenching-pliers. No. 881,619; Mar. 10; Sp. p. 2254; Dr. p. 489; Gaz. vol. 133; p. 406.
Robinhold, H. J. (See Brewster, W. A., assignor.)
Robinson, A. S. F., Beccles, England. Clutch. No. 881,028; Mar. 3; Sp. p. 1074; Dr. pp. 233–4; Gaz. vol. 133; p. 183.
Robinson, E. M., and J. H. Deiter, Lancaster, Pa., assignors, by mesne assignments, to H. L. Hildreth, Boston, Mass. Candy-pulling machine. No. 881,442; Mar. 10; Sp. p. 1894; Dr. p. 412; Gaz. vol. 133; p. 346.
Robinson, F. T., Chicago, Ill., assignor to Twin Bottle-Cap Company. Combined metallic and frangible cap for bottles. No. 882,912; Mar. 24; Sp. p. 4824; Dr. p. 1024; Gaz. vol. 133; p. 887.
Robinson, L., *et al.* (See McMurry, E. H., assignor.)
Robinson, L. E., Butler, Pa. Well-packer. No. 881,154; Mar. 10; Sp. p. 1322; Dr. p. 285; Gaz. vol. 133; p. 255.
Robinson, L. G. (See Pitt and Robinson.)
Robinson, L. T., Schenectady, N. Y., assignor to General Electric Company. Electrical recording instrument. No. 882,586; Mar. 24; Sp. p. 4162; Dr. pp. 882–3; Gaz. vol. 133; p. 780.
Robinson, S. A., Northville, N. Y. Glove-turner. No. 881,155; Mar. 10; Sp. p. 1326; Dr. p. 286; Gaz. vol. 133; p. 256.
Robinson, S. R. V. (See McDougall and Robinson.)
Robinson, S. W., assignor to Robinson-Tilton Machinery Company, Columbus, Ohio. Angle-coupling. No. 881,958; Mar. 17; Sp. p. 2953; Dr. p. 629; Gaz. vol. 133; p. 544.
Robinson-Tilton Machinery Company. (See Robinson, S. W., assignor.)
Robinson, W. E. (See Chaplin, E. D., assignor.)
Robson, G., Sidney, New South Wales, Australia. Gas lighting and extinguishing mechanism. No. 882,967; Mar. 24; Sp. p. 4930; Dr. pp. 1046–7; Gaz. vol. 133; p. 907.
Robson, J., Wallsend, assignor to Clarke Chapman & Company Limited, Durham, England. Ammonia apparatus. No. 883,487; Mar. 31; Sp. p. 6005; Dr. pp. 1281–3; Gaz. vol. 133; p. 1107.
Rochow, F. J., New York, N. Y., assignor to Central Fish Company. Vehicle for transporting live fish. No. 881,488; Mar. 10; Sp. p. 1991; Dr. pp. 434–5; Gaz. vol. 133; p. 362.
Rock Island Plow Company. (See Johnson, W. E., assignor.)
Rockford Cabinet Company. (See Abramson and Person, assignors.)
Rockwell, B. C., Malvern, Ark. Window-screen. No. 883,348; Mar. 31; Sp. p. 5690; Dr. p. 1215; Gaz. vol. 133; p. 1059.
Röd, L., Montreal, Quebec, Canada. Non-refillable bottle. No. 881,959; Mar. 17; Sp. p. 2955; Dr. p. 629; Gaz. vol. 133; p. 544.
Rodgers, H. H., Good Hope, Ohio. Mold for fence-posts. No. 883,509; Mar. 31; Sp. p. 6172; Dr. p. 1313; Gaz. vol. 133; p. 1130.
Roe, E. S. (See Markham and Roe.)
Roe, J. P., Pottstown, Pa. Oscillating puddling-furnace. No. 881,342; Mar. 10; Sp. p. 1688; Dr. pp. 364–5; Gaz. vol. 133; p. 315.
Roe, L. W. (See Ditwiler, H. B., assignor.)
Roeder, C. K., administratrix. (See Roeder, G. H.)
Roeder, G. H., deceased, Philadelphia, Pa.; C. K. Roeder, administratrix, assignor to E. F. Greeff, A. Tilt, New York, and C. C. Rossire, Yonkers, N. Y. Producing fibers from rhea-plants. No. 881,489; Mar. 10; Sp. p. 1994; Gaz. vol. 133; p. 362.
Roessler & Hasslacher Chemical Co. (See Foersterling, H., assignor.)
Roessler & Hasslacher Chemical Co. (See Foersterling and Philipp, assignors.)
Rogers, A. R., Jonesport, Me. Ship-cleaning apparatus. No. 883,423; Mar. 31; Sp. p. 5874; Dr. p. 1252; Gaz. vol. 133; p. 1085.
Rogers, B. F., and E. L. Rucker, Lewiston, Idaho. Attachment for harvesters and separators. No. 883,424; Mar. 31; Sp. p. 5876; Dr. p. 1252; Gaz. vol. 133; p. 1085.
Rogers, J., Chicago, Ill. Vehicle-top. No. 880,574; Mar. 3; Sp. p. 177; Dr. p. 38; Gaz. vol. 133; p. 32.
Rogers, J. R., Brooklyn, N. Y., assignor to Mergenthaler Linotype Company. Type casting and composing machine. No. 883,425; Mar. 31; Sp. p. 5877; Dr. pp. 1252–5; Gaz. vol. 133; p. 1086.
Rogers, W. H., Lookout Mountain, Tenn. Mail-bag deliverer and catcher. No. 882,345; Mar. 17; Sp. p. 3716; Dr. p. 790; Gaz. vol. 133; p. 669.
Rogerson, T. C., and P. Rentchler, Jacksonville, Ill. Sheet for boiler-furnaces. No. 882,420; Mar. 17; Sp. p. 3834; Dr. pp. 818–19; Gaz. vol. 133; p. 693.
Rohifing, J. M., St. Louis, Mo. Truck-frame. No. 881,721; Mar. 10; Sp. p. 2450; Dr. p. 527; Gaz. vol. 133; p. 437.
Rolin, C. W., assignor to himself and H. E. Frick, Philadelphia, Pa. Grate-bar. No. 881,960; Mar. 17; Sp. p. 2957; Dr. p. 630; Gaz. vol. 133; p. 544.
Romig, J. F. (See Huebschwerlen and Romig.)
Roney, F. P., *et al.* (See Washburn, Roney, and Börreson.)
Rontke, A., Bridgeport, Conn., assignor to Singer Manufacturing Company. Binding attachment for sewing-machines. No. 882,480; Mar. 17; Sp. p. 3937; Dr. p. 842; Gaz. vol. 133; p. 712.
Root Dairy Supply Company. (See Root, H. C., assignor.)
Root, H. C., Avondale, assignor to Root Dairy Supply Company, Westgrove, Pa. Milk-cooler. No. 883,147; Mar. 24; Sp. p. 5280; Dr. p. 1126; Gaz. vol. 133; p. 964.
Rorabeck, S. H., Eaton Rapids, Mich. Blanket-fastening for animals. No. 881,961; Mar. 17; Sp. p. 2958; Dr. p. 630; Gaz. vol. 133; p. 545.
Rosekelly, F. E., Huron, Ohio. Wrench. No. 881,620; Mar. 10; Sp. p. 2256; Dr. p. 490; Gaz. vol. 133; p. 407.
Rosenbaum, A., New York, N. Y. Clutch for scarf-pins. No. 881,622; Mar. 10; Sp. p. 2258; Dr. p. 490; Gaz. vol. 133; p. 407.
Rosenberg, C., East Pittsburg, Pa. Roller-skate. No. 880,921; Mar. 3; Sp. p. 887; Dr. p. 191; Gaz. vol. 133; p. 149.
Rosenberg, E., Paris, France, assignor to General Electric Company. Cable-reel. No. 882,587; Mar. 24; Sp. p. 4165; Dr. p. 883; Gaz. vol. 133; p. 780.
Rosenerance, C. W., Gacoma, S. D. Parcel-carrier for bicycles. No. 882,346; Mar. 17; Sp. p. 3718; Dr. p. 790; Gaz. vol. 133; p. 670.
Rosenfeld, I., New York, N. Y. Change-making machine. No. 881,443; Mar. 10; Sp. p. 1895; Dr. pp. 412–13; Gaz. vol. 133; p. 346.
Rosentreter, E. R., Chicago, Ill. Folding decoy. No. 883,161; Mar. 24; Sp. p. 5305; Dr. p. 1112; Gaz. vol. 133; p. 969.
Ross, H. E., *et al.* (See Williams, H. E., assignor.)
Ross, J. W., *et al.* (See Williams, H. E., assignor.)
Rossi, A. J., New York, N. Y., assignor, by mesne assignments, to Titanium Alloy Manufacturing Company. Producing alloys or compounds of copper and titanium. (Reissue.) No. 12,764; Mar. 17; Sp. p. 4088; Gaz. vol. 133; p. 737.

Rossire, C. C., *et al.* (See Roeder, G. H., assignor.)
Rote, C. V., and P. E. Shee, assignors of one-third to F. Shoff, Lancaster, Pa. Car-brake. No. 881,263; Mar. 10; Sp. p. 1540; Dr. pp. 331–2; Gaz. vol. 133; p. 290.
Rothermel, W. E., Chicago, Ill. Protecting means for the ends of rolls of merchandise. No. 881,490; Mar. 10; Sp. p. 1995; Dr. p. 435; Gaz. vol. 133; p. 362.
Rothermel, W. E. (See Flora, E. E., assignor.)
Rouquier, A., Natchitoches, La. Cotton-cleaner. No. 883,349; Mar. 31; Sp. p. 5601; Dr. pp. 1215–16; Gaz. vol. 133; p. 1060.
Roussel, W. J., New Orleans, La. Index. No. 881,156; Mar. 10; Sp. p. 1327; Dr. p. 286; Gaz. vol. 133; p. 256.
Rouxeville, E. A. L., Paris, France. Celluloid substitute and making the same. No. 881,827; Mar. 10; Sp. p. 2649; Gaz. vol. 133; p. 471.
Rowe, C. W., Concord, N. C. Smoke-filtering attachment for pipes, &c. No. 882,913; Mar. 24; Sp. p. 4826; Dr. p. 1024; Gaz. vol. 133; p. 888.
Rowe, M. A., West Hoboken, N. J. Ice-cream freezer. No. 883,570; Mar. 31; Sp. p. 6174; Dr. p. 1313; Gaz. vol. 133; p. 1130.
Rowland Firth & Son. (See Firth, R., assignor.)
Rowland, R. A., and W. J. Mahnke, Cleveland, Ohio. Abrasive tool and mounting. No. 881,621; Mar. 10; Sp. p. 2257; Dr. p. 400; Gaz. vol. 133; p. 407.
Rowley, W. W., assignor to W. F. Cowham, Jackson, Mich. Molding-machine. No. 880,575; Mar. 3; Sp. p. 177; Dr. p. 39; Gaz. vol. 133; p. 32.
Roy, L. A. (See Sprague, A. R., assignor.)
Royal Worcester Corset Company. (See Lecourtre, A. J., assignor.)
Royer, C. M. (See Phillips and Royer.)
Rubin, M., New York, N. Y. Buckle. No. 880,576; Mar. 3; Sp. p. 178; Dr. p. 39; Gaz. vol. 133; p. 32.
Ruck, R. M., London, England. Variable-speed driving mechanism. No. 882,968; Mar. 24; Sp. p. 4931; Dr. p. 1047; Gaz. vol. 133; p. 907.
Rucker, E. L. (See Rogers and Rucker.)
Rucker, R. W. (See Bechi, G. de, assignor.)
Rudolph, A. J., Chicago, Ill. Device for transferring parcels to and from moving trains. No. 883,239; Mar. 31; Sp. p. 5479; Dr. pp. 1168–9; Gaz. vol. 133; p. 1025.
Rueckheim Bros. & Eckstein. (See Eckstein, H. G., assignor.)
Ruetschi, A., Cleveland, Ohio. Clam-shell bucket. No. 882,844; Mar. 24; Sp. p. 4682; Dr. p. 906; Gaz. vol. 133; p. 865.
Rugh, H. O., Sandwich, Ill. Composite signaling and telephone system. No. 882,347; Mar. 17; Sp. p. 3719; Dr. p. 791; Gaz. vol. 133; p. 670.
Rugg, D., Catskill, N. Y. Hinge. No. 880,757; Mar. 3; Sp. p. 544; Dr. p. 113; Gaz. vol. 133; p. 94.
Ruhmann, B., Jersey City, N. J. Arch-supporter for flat feet. No. 881,343; Mar. 10; Sp. p. 1660; Dr. p. 365; Gaz. vol. 133; p. 315.
Rump, F., Cheboygan, Mich. Harvester. No. 882,969; Mar. 24; Sp. p. 4934; Dr. p. 1047; Gaz. vol. 133; p. 907.
Rupp, L., Montreal, Quebec, Canada. Fleshing apparatus. No. 882,270; Mar. 17; Sp. p. 3576; Dr. p. 759; Gaz. vol. 133; p. 644.
Rushton, J., J. L. Hopper, and J. H. Hardacre, Nelson, England. Sow-box of sizing or slashing machines. No. 882,421; Mar. 17; Sp. p. 3834; Dr. p. 819; Gaz. vol. 133; p. 693.
Rusk, C., Bucklin, Kans. Forced-draft appliance. No. 880,922; Mar. 3; Sp. p. 888; Dr. pp. 191–2; Gaz. vol. 133; p. 149.
Russell, F. J., (See Brown, P. C., assignor.)
Russell, F. J., New York, N. Y. Electrical sign-receptacle. No. 881,344; Mar. 10; Sp. p. 1662; Dr. p. 366; Gaz. vol. 133; p. 315.
Russo, P., Pittsburg, Pa. Envelop. No. 880,528; Mar. 3; Sp. p. 700; Dr. p. 147; Gaz. vol. 133; p. 119.
Rust, E. G., Dallas, Tex. Screen-hanger. No. 880,577; Mar. 3; Sp. p. 179; Dr. p. 39; Gaz. vol. 133; p. 32.
Rust, O. R., Springfield, Ohio. Belt-buckle. No. 880,758; Mar. 3; Sp. p. 545; Dr. p. 113; Gaz. vol. 133; p. 94.
Rust, R. R., Waukegan, Ill. Making zinc chlorid. No. 883,426; Mar. 31; Sp. p. 5894; Dr. p. 1255; Gaz. vol. 133; p. 1086.
Ruthenburg, M., Philadelphia, Pa. Electrode. No. 882,169; Mar. 17; Sp. p. 3388; Gaz. vol. 133; p. 612.
Ruthven, A. L., Topeka, Kans. Combination signal and train-stopping apparatus. No. 883,350; Mar. 31; Sp. p. 5694; Dr. p. 1216; Gaz. vol. 133; p. 1060.
Ryan, J. (See George, A. F., assignor.)
Rydberg, C. O., Göteborg, Sweden. Free-wheel hub for bicycles. No. 882,126; Mar. 17; Sp. p. 3282; Dr. p. 700; Gaz. vol. 133; p. 508.
S. Jarvis Adams Company. (See Gardner, R. J., assignor.)
S. R. Dresser Manufacturing Company. (See Smith, F. N., assignor.)
Sabathé, L. G., Paris, France. Internal-combustion engine. No. 883,240; Mar. 31; Sp. p. 5483; Dr. p. 1169; Gaz. vol. 133; p. 1025.
Sabin, H. B., Cleveland, Ohio. Display-stand. No. 881,345; Mar. 10; Sp. p. 1694; Dr. p. 366; Gaz. vol. 133; p. 316.
Sachs, E., Schweinfurt, Germany. Two-speed driving-gear and free-wheel mechanism for cycles. No. 882,845; Mar. 24; Sp. p. 4685; Dr. p. 997; Gaz. vol. 133; p. 866.
Sachs, E., Schweinfurt, Germany. Wheel-hub with ball-bearings. No. 882,846; Mar. 24; Sp. p. 4689; Dr. p. 997; Gaz. vol. 133; p. 866.
Sackman, L. A., New York, N. Y. Doll. No. 882,422; Mar. 17; Sp. p. 3836; Dr. p. 819; Gaz. vol. 133; p. 693.
Safety Car Heating & Lighting Company. (See Dixon, R. M., assignor.)
Safety Car Heating & Lighting Company. (See Thomson, W. L., assignor.)
Safety Car Heating & Lighting Company. (See Towne, J. M., assignor.)
Sahlsten, N., Duluth, Minn. Lock. No. 883,671; Mar. 31; Sp. p. 6176; Dr. p. 1313; Gaz. vol. 133; p. 1131.
Saile, C. (See Wall and Saile.)
Saloman, S., Washington, D. C. Shaving-brush. No. 882,423; Mar. 17; Sp. p. 3836; Dr. p. 819; Gaz. vol. 133; p. 693.
Saltzman, J. (See Replogle, J. B., assignor.)
Sammons, T. A., Dayton, Ohio. Gas-engine. No. 881,623; Mar. 10; Sp. p. 2259; Dr. pp. 400–1; Gaz. vol. 133; p. 407.
Sanders, F., McKeesport, Pa. Molding-machine for cutting panels. No. 883,148; Mar. 24; Sp. p. 5283; Dr. p. 1126; Gaz. vol. 133; p. 965.
Sandoz, H., Tarannes, Switzerland. Winding and setting mechanism for watches. No. 883,427; Mar. 31; Sp. p. 5886; Dr. p. 1255; Gaz. vol. 133; p. 1086.
Sandstrom, T., Indianapolis, Ind. Short-turning gear. No. 883,488; Mar. 31; Sp. p. 6011; Dr. p. 1284; Gaz. vol. 133; p. 1107.
Sandvoss, H., Neuss, Germany. Regulator for liquids, &c. No. 881,491; Mar. 10; Sp. p. 1906; Dr. p. 435; Gaz. vol. 133; p. 362.
Sanford, E. F., Merced, Cal. Fire-fighting apparatus. No. 881,872; Mar. 10; Sp. p. 2756; Dr. pp. 500–1; Gaz. vol. 133; p. 487.
Sanford, E. F., Merced, Cal. Fire-fighting apparatus. No. 881,873; Mar. 10; Sp. p. 2758; Dr. pp. 591–2; Gaz. vol. 133; p. 487.
Sang, A., Sewickley, Pa. Coating metals. No. 881,029; Mar. 3; Sp. p. 1078; Dr. p. 234; Gaz. vol. 133; p. 184.
Sanitary Hot Water Radiator Co. (See Wheelock, C. M., assignor.)
Sanitary Water-Still Company. (See Bailey, A. R., assignor.)
Sargent, A., New York, N. Y. Plastic. No. 882,538; Mar. 17; Sp. p. 4068; Gaz. vol. 133; p. 733.
Sargent, C. E., Chicago, Ill. Steam-meter. No. 883,670; Mar. 31; Sp. p. 6370; Dr. pp. 1358–9; Gaz. vol. 133; p. 1162.
Sargent, F. G., Westford, Mass. Wireless receiving instrument. No. 883,241; Mar. 31; Sp. p. 5485; Dr. p. 1170; Gaz. vol. 133; p. 1026.
Sargent, H. D., Worcester, Mass. Wrench. No. 881,346; Mar. 10; Sp. p. 1695; Dr. p. 366; Gaz. vol. 133; p. 316.
Sauld, E. (See Pecor, F. F., assignor.)
Saunders, M., London, England. Variable-speed gearing. No. 880,578; Mar. 3; Sp. p. 180; Dr. pp. 39–40; Gaz. vol. 133; p. 33.
Sausser, E. R., assignor to J. W. Ivory, Philadelphia, Pa. Dental tool. No. 881,722; Mar. 10; Sp. p. 2452; Dr. p. 528; Gaz. vol. 133; p. 437.
Savage, F. W., Granville, N. Y. Pneumatic-tire shield. No. 883,572; Mar. 31; Sp. p. 6179; Dr. p. 1314; Gaz. vol. 133; p. 1131.
Savage, F. W., Granville, N. Y. Felt boot or sock. No. 883,573; Mar. 31; Sp. p. 6180; Dr. p. 1314; Gaz. vol. 133; p. 1131.
Savage, G. (See Cary, F. O., assignor.)
Savage, G. E., assignor to Manning, Bowman & Company, Meriden, Conn. Percolator-pot construction. No. 882,080; Mar. 17; Sp. p. 3212; Dr. p. 682; Gaz. vol. 133; p. 584.
Savage, W. F., Columbus, Ohio. Attachment for trolley-harps. No. 883,242; Mar. 31; Sp. p. 5487; Dr. p. 1170; Gaz. vol. 133; p. 1026.
Sayre Stamping Company. (See Bowen, J., assignor.)
Schachner, L., St. Louis, Mo. Shade-bracket. No. 883,574; Mar. 31; Sp. p. 6181; Dr. p. 1314; Gaz. vol. 133; p. 1132.
Schack, S. J. (See Coleman, B. B., assignor.)
Schade, E. A., New Britain, Conn. Ratchet mechanism. No. 882,559; Mar. 17; Sp. p. 4069; Dr. p. 865; Gaz. vol. 133; p. 733.
Schaefer, H. C., El Paso, Tex. Rotary engine. No. 883,575; Mar. 31; Sp. p. 6182; Dr. pp. 1314–15; Gaz. vol. 133; p. 1132.
Schafer, C. E. (See Connelly and Schafer.)
Schaller, G. J., Covington, Ky., and V. B. Adams, Cincinnati, Ohio. Rip-saw. No. 883,671; Mar. 31; Sp. p. 6372; Dr. p. 1359; Gaz. vol. 133; p. 1162.
Schaper, A., Hanover, Germany. Valve-bung. No. 882,652; Mar. 24; Sp. p. 4298; Dr. p. 911; Gaz. vol. 133; p. 803.
Scharfhausen, W., assignor to Payette Insulator Pin Company, Limited, Payette, Idaho. Insulator-pin. No. 882,424; Mar. 17; Sp. p. 3837; Dr. p. 820; Gaz. vol. 133; p. 694.
Schee, F. E., Athens, Mo. Combined manure loader and spreader. No. 883,243; Mar. 31; Sp. p. 5488; Dr. p. 1170; Gaz. vol. 133; p. 1026.
Scheibe, R., Leipzig, Germany. Separator. No. 881,723; Mar. 10; Sp. p. 2453; Dr. p. 528; Gaz. vol. 133; p. 437.
Scheidt, R. J., California, Mo. Automatic brake for road-vehicles. No. 882,210; Mar. 17; Sp. p. 3446; Dr. p. 733; Gaz. vol. 133; p. 623.
Schellhase, E. E. (See Williams, W. J., assignor.)
Schelter & Giesecke, J. G. (See Burbach, A., assignor.)
Scheper, B. H., Lexington Pike, Kenton county, Ky. Vehicle-top. No. 882,914; Mar. 24; Sp. p. 4827; Dr. p. 1025; Gaz. vol. 133; p. 888.
Scherl, B., Erfurt, Germany. Bedstead. No. 881,030; Mar. 3; Sp. p. 1079; Dr. p. 234; Gaz. vol. 133; p. 184.

Schermerhorn, E., assignor of one-half to W. P. McKeough, Amsterdam, N. Y. Electric signal device. No. 881,264; Mar. 10; Sp. p. 1541; Dr. p. 332; Gaz. vol. 133; p. 290.
Schiba, B. (See Vrana and Schiba.)
Schigelinsky, J., Cleveland, Ohio. Bottle-cleaner. No. 882,021; Mar. 17; Sp. p. 3094; Dr. p. 659; Gaz. vol. 133; p. 564.
Schiller, W. A., Chicago, Ill. Lid-support. No. 881,492; Mar. 10; Sp. p. 1997; Dr. p. 435; Gaz. vol. 133; p. 362.
Schilling, C. R. (See Bicker and Schilling.)
Schimpf, J. J., Texarkana, Tex. Tram-car. No. 882,915; Mar. 24; Sp. p. 4830; Dr. p. 1025; Gaz. vol. 133; p. 889.
Schindler, H. E., Sisseton, S. D. Spring-wheel. No. 882,348; Mar. 17; Sp. p. 3722; Dr. p. 791; Gaz. vol. 133; p. 670.
Schirmacher, K., and R. Leopold, assignors to Farbwerke vorm. Meister, Lucius & Brüning, Höchst-on-the-Main, Germany. Dark-green-black dye. No. 881,157; Mar. 10; Sp. p. 1328; Gaz. vol. 133; p. 256.
Schirmacher, K., and B. Deicke, assignors to Farbwerke vorm. Meister, Lucius & Brüning, Höchst-on-the-Main, Germany. Dark-blue-violet dye. No. 881,158; Mar. 10; Sp. p. 1330; Gaz. vol. 133; p. 256.
Schirmacher, K., and A. Brunner, assignors to Farbwerke vorm. Meister, Lucius & Brüning, Höchst-on-the-Main, Germany. Red vat-dye. No. 881,159; Mar. 10; Sp. p. 1331; Gaz. vol. 133; p. 256.
Schirmer, B. F., Indianapolis, Ind. Non-puncturable inner tire. No. 880,923; Mar. 3; Sp. p. 889; Dr. p. 192; Gaz. vol. 133; p. 149.
Schlachter, C. A., Rockwell City, Iowa. Power-transmission device. No. 881,444; Mar. 10; Sp. p. 1907; Dr. pp. 413–14; Gaz. vol. 133; p. 347.
Schlageck, P., Angelus, Kans. Attachment for pumps. No. 881,347; Mar. 10; Sp. p. 1696; Dr. p. 367; Gaz. vol. 133; p. 316.
Schlagel, J., *et al.* (See Lehmann, J. C., assignor.)
Schlafly, J. H., Canton, Ohio. Corrugated-metal culvert. No. 882,081; Mar. 17; Sp. p. 3213; Dr. p. 682; Gaz. vol. 133; p. 584.
Schlager, A., Gaggenau, Baden, Germany, assignor to F. Schlager and M. Liermann, St. Louis, Mo. Combined pencil-box and book-support. No. 883,051; Mar. 24; Sp. p. 5081; Dr. p. 1084; Gaz. vol. 133; p. 932.
Schlager, F., *et al.* (See Schlager, A., assignor.)
Schlenk, L. G., Rockford, Ill. Rein-protector. No. 881,201; Mar. 10; Sp. p. 1403; Dr. p. 303; Gaz. vol. 133; p. 269.
Schlink, H. F., *et al.* (See Carroll, W. N., assignor.)
Schlueter, M. L., Chicago, Ill. Floor-surfacing machine. No. 882,847; Mar. 24; Sp. p. 4691; Dr. p. 998; Gaz. vol. 133; p. 866.
Schmidt, A., and E. Bryk, assignors to Farbwerke vorm. Meister, Lucius & Brüning, Höchst-on-the-Main, Germany. Making vat-dyestuffs. No. 881,624; Mar. 10; Sp. p. 2267; Gaz. vol. 133; p. 408.
Schmidt, A. J. (See Gardner and Schmidt.)
Schmidt, C., assignor to Peerless Motor Car Company, Cleveland, Ohio. Carbureter. No. 882,170; Mar. 17; Sp. p. 3388; Dr. p. 720; Gaz. vol. 133; p. 613.
Schmidt, C. F., Jeffersontown, Ky. Potato-planter. No. 882,349; Mar. 17; Sp. p. 3723; Dr. pp. 791–2; Gaz. vol. 133; p. 671.
Schmidt, C. G. A., Jr., New York, N. Y. Drive-chain. No. 881,493; Mar. 10; Sp. p. 1998; Dr. p. 436; Gaz. vol. 133; p. 363.
Schmidt, F., Indianapolis, Ind. Attachment for tape-lines. No. 882,022; Mar. 17; Sp. p. 3096; Dr. p. 659; Gaz. vol. 133; p. 564.
Schmidt, P., and A. Desgraz, Hanover, Germany. Working gas-furnaces. No. 881,724; Mar. 10; Sp. p. 2454; Dr. pp. 528–9; Gaz. vol. 133; p. 437.
Schmidt, W. C., Richmond, Va. Indicating-bottle. No. 883,672; Mar. 31; Sp. p. 6374; Dr. p. 1359; Gaz. vol. 133; p. 1162.
Schmiedel, R., Dresden, Germany. Liquid composition to be used in the manufacture of fancy stained papers. No. 882,916; Mar. 24; Sp. p. 4831; Gaz. vol. 133; p. 889.
Schmit, F., Douglas, assignor of one-half to E. A. Tovrea, Bisbee, Ariz. Ter. Butchering-tool. No. 881,828; Mar. 10; Sp. p. 2651; Dr. p. 568; Gaz. vol. 133; p. 471.
Schneider, E., Le Creusot, France. Firing mechanism of ordnance. No. 883,576; Mar. 31; Sp. p. 6184; Dr. pp. 1315–17; Gaz. vol. 133; p. 1132.
Schneiderwind, J. (See Huber, A., assignor.)
Schnell, G. V., Troy, Ohio. Hood for emery polishing or buffing wheels. No. 880,695; Mar. 3; Sp. p. 401; Dr. p. 87; Gaz. vol. 133; p. 72.
Schneller, F. O., Munich, Germany. Set for tramway-rail channels. No. 883,052; Mar. 24; Sp. p. 5082; Dr. p. 1084; Gaz. vol. 133; p. 933.
Schoenner, G., Nuremberg, Germany. Compasses. No. 882,171; Mar. 17; Sp. p. 3391; Dr. p. 720; Gaz. vol. 133; p. 613.
Schoenner, G., Nuremberg, Germany. Drawing-pen. No. 882,172; Mar. 17; Sp. p. 3391; Dr. p. 721; Gaz. vol. 133; p. 613.
Schofield, C., Philadelphia, Pa. Fiber-cleaning machine. No. 881,445; Mar. 10; Sp. p. 1901; Dr. p. 414; Gaz. vol. 133; p. 347.
Schofield, R., New Bedford, Mass. Skewer and bearing therefor. No. 881,202; Mar. 10; Sp. p. 1404; Dr. p. 304; Gaz. vol. 133; p. 269.
Schollenberger, E. M., assignor of one-half to A. C. Berwanger, Chicago, Ill. Combined trolley-wheel and sleet-cutter. No. 882,717; Mar. 24; Sp. p. 4426; Dr. p. 940; Gaz. vol. 133; p. 824.
Schoop, P., Nuremberg, Germany. Carbon electrode for electrical bleaching apparatus. No. 880,579; Mar. 3; Sp. p. 184; Dr. p. 40; Gaz. vol. 133; p. 33.
Schossow, F. A., Detroit, Mich. Joint for wood members. No. 883,489; Mar. 31; Sp. p. 6014; Dr. p. 1284; Gaz. vol. 133; p. 1108.
Schottlander, M., New York, N. Y. Corset. No. 882,425; Mar. 17; Sp. p. 3839; Dr. p. 820; Gaz. vol. 133; p. 694.
Schrafft, A. (See Tabor, C. D., assignor.)
Schramm, A. W., Riverton, N. J., assignor to Electro Dental Manufacturing Company, Philadelphia, Pa. Water-heater. No. 883,490; Mar. 31; Sp. p. 6015; Dr. p. 1285; Gaz. vol. 133; p. 1108.
Schreurs, G. W., Muscatine, Iowa. Button-blank-cutting machine. No. 882,426; Mar. 17; Sp. p. 3840; Dr. p. 820; Gaz. vol. 133; p. 695.
Schroeder, G. G. (See Davy, O. J., assignor.)
Schroeder, G. G., Washington, D. C., assignor to Farm Motor Company. Motor-vehicle. No. 880,759; Mar. 3; Sp. p. 547; Dr. pp. 114–16; Gaz. vol. 133; p. 94.
Schroyer, H. H., Chicago, Ill. Curtain-fixture. No. 882,082; Mar. 17; Sp. p. 3214; Dr. pp. 682–3; Gaz. vol. 133; p. 585.
Schuetz, G. E., West Hoboken, N. J. Automatic draft-controller. No. 880,924; Mar. 3; Sp. p. 890; Dr. p. 192; Gaz. vol. 133; p. 150.
Schultz, G. E., New York, N. Y. Safety-match. No. 882,427; Mar. 17; Sp. p. 3842; Dr. p. 821; Gaz. vol. 133; p. 695.
Schultz, H. (See Nohl, G., assignor.)
Schultz, W. B., Phillipsburg, N. J. Yard-meter. No. 883,577; Mar. 31; Sp. p. 6186; Dr. p. 1317; Gaz. vol. 133; p. 1133.
Schultz, W. F., Cincinnati, Ohio, assignor to Herring-Hall-Marvin Safe Company, New York, N. Y. Safe and vault. No. 881,031; Mar. 3; Sp. p. 1080; Dr. p. 235; Gaz. vol. 133; p. 184.
Schultz, W. F., Cincinnati, Ohio, assignor to Herring-Hall-Marvin Safe Company, New York, N. Y. Safe and vault construction. No. 881,032; Mar. 3; Sp. p. 1081; Dr. p. 235; Gaz. vol. 133; p. 185.
Schultz, W. J., and H. Gerding, assignors, by mesne assignments, to H. Bentley, trustee, Cincinnati, Ohio. Loose-leaf book. No. 881,829; Mar. 10; Sp. p. 2652; Dr. p. 568; Gaz. vol. 133; p. 471.
Schuster, J., Clay Banks, Wis. Milk-pail support. No. 882,211; Mar. 17; Sp. p. 3448; Dr. p. 733; Gaz. vol. 133; p. 623.
Schupinsky, A. F., Jr., Milwaukee, Wis. Parlor bowling-alley. No. 880,096; Mar. 3; Sp. p. 402; Dr. p. 87; Gaz. vol. 133; p. 72.
Schutte and Koerting Company. (See Fusch, G., assignor.)
Schwalbe, W. A., Mosinee, Wis. Making leguminous food. No. 882,173; Mar. 17; Sp. p. 3392; Gaz. vol. 133; p. 613.
Schwartz, A., assignor to Automatic Rapid Unloading Company, Boston, Mass. Apparatus for unloading vessels. No. 881,446; Mar. 10; Sp. p. 1903; Dr. p. 414; Gaz. vol. 133; p. 348.
Schwartz, A., assignor to Automatic Rapid Unloading Company, Boston, Mass. Apparatus for unloading vessels. No. 881,874; Mar. 10; Sp. p. 2760; Dr. p. 592; Gaz. vol. 133; p. 487.
Schwerin, E., Berlin, Germany. Gas-bracket, pendant, and the like. No. 882,970; Mar. 24; Sp. p. 4935; Dr. p. 1048; Gaz. vol. 133; p. 908.
Scoggins, C. M. (See Elder and Scoggins.)
Scott, D. J., *et al.*, executors. (See Scott, W.)
Scott, E., Marion, assignor of one-half to R. Ridgway, Amboy, Ind. Cooking stove or range. No. 881,962; Mar. 17; Sp. p. 2959; Dr. p. 630; Gaz. vol. 133; p. 545.
Scott, E., Marion, assignor to Scott Stove and Furnace Company, Cambridge City, Ind. Heating-stove. No. 882,212; Mar. 17; Sp. p. 3449; Dr. p. 734; Gaz. vol. 133; p. 624.
Scott, G., Amsterdam, N. Y., assignor to Union Special Machine Company, Chicago, Ill. Trimming mechanism for sewing-machines. No. 880,829; Mar. 3; Sp. p. 701; Dr. pp. 147–8; Gaz. vol. 133; p. 119.
Scott, G. W., *et al.* (See Stoops, W. B., assignor.)
Scott, I., *et al.*, executors. (See Scott, W.)
Scott, J. E., Louisville, Ky. Weather-strip. No. 883,351; Mar. 31; Sp. p. 5699; Dr. pp. 1216–17; Gaz. vol. 133; p. 1061.
Scott, L. H., Princeton, Ill. Fence-post. No. 883,491; Mar. 31; Sp. p. 6018; Dr. p. 1285; Gaz. vol. 133; p. 1109.
Scott, R. W., Leeds Point, N. J., assignor of one-half to L. N. D. Williams, Ogontz, Pa. Fleeced ribbed web. No. 881,494; Mar. 10; Sp. p. 2000; Dr. p. 436; Gaz. vol. 133; p. 363.
Scott, R. W., Leeds Point, N. J., assignor of one-half to L. N. D. Williams, Ogontz, Pa. Knitted web. No. 881,495; Mar. 10; Sp. p. 2001; Dr. p. 436; Gaz. vol. 133; p. 363.
Scott Stove and Furnace Company. (See Scott, E., assignor.)
Scott, T. A., and H. E. Crawford, Bentonville, Ind. Wire-stretching tool. No. 880,830; Mar. 3; Sp. p. 707; Dr. p. 149; Gaz. vol. 133; p. 119.
Scott, W., Fredericksburg, Va. Door stop and fastening. No. 881,725; Mar. 10; Sp. p. 2456; Dr. p. 529; Gaz. vol. 133; p. 438.
Scott, W., deceased, Plainfield, N. J.; I. and D. J. Scott, executors. Web-printing machine. No. 882,800; Mar. 24; Sp. p. 4581; Dr. pp. 977–8; Gaz. vol. 133; p. 850.

Scott, W. D., Buffalo, N. Y. Distribution-fixture. No. 881,963; Mar. 17; Sp. p. 2961; Dr. p. 631; Gaz. vol. 133; p. 546.
Scott, W. D., Sherman, Tex. Safety-valve for water syatems in connection with air-brake syatems. No. 882,271; Mar. 17; Sp. p. 3577; Dr. p. 759; Gaz. vol. 133; p. 644.
Scott, W. M., and J. H. Wyatt, Philadelphia, Pa.; said Wyatt assignor to said Scott. Snap-switch. No. 882,848; Mar. 24; Sp. p 4692; Dr. p. 998; Gaz. vol. 133; p. 867.
Scovill Manufacturing Co. (See Stevens, F. M., assignor.)
Scullin, T., and S. R. Skov, Cleveland, Ohio. Convertible and interchangeable seat. No. 882,653; Mar. 24; Sp. p. 4299; Dr. p. 912; Gaz. vol. 133; p. 803.
Scully, W., Chicago, Ill. Clothes-drier. No. 883,053; Mar. 24; Sp. p. 5083; Dr. pp. 1084–5; Gaz. vol. 133; p. 933.
Sculthorp, G. H. (See Megson and Sculthorp.)
Seagrave, F. S., Detroit, Mich. Hydrant cut-off valve. No. 880,580; Mar. 3; Sp. p. 185; Dr. p. 40; Gaz. vol. 133; p. 33.
Seagrave, F. S., Detroit, Mich. Hydrant and hose cut-off valve. No. 880,581; Mar. 3; Sp. p. 186; Dr. p. 40; Gaz. vol. 133; p. 34.
Seaman, A. J. (See Butler, Reynolds, and Seaman.)
Seaman, E. C., *et al.* (See Reynolds, H. S., assignor.)
Seaman, W. S., Beaver, N. D. Pipe-grab. No. 881,496; Mar. 10; Sp. p. 2003; Dr. p. 437; Gaz. vol. 133; p. 364.
Searle, F. C., Wilmington, Del. Portable burial-vault. No. 883,492; Mar. 31; Sp. p. 6019; Dr. p. 1285; Gaz. vol. 133; p. 1109.
Sears, W. T., Philadelphia, Pa., assignor to Niles-Bement-Pond Company, Jersey City, N. J. Drop-hammer. No. 882,588; Mar. 24; Sp. p. 4166; Dr. pp. 883–4; Gaz. vol. 133; p. 780.
Seaton, H. B., *et al.* (See McIntosh, W. M., assignor.)
Secrest, H. O., Cleveland, Ohio. Pot-lifter. No. 880,582; Mar. 3; Sp. p. 188; Dr. p. 41; Gaz. vol. 133; p. 34.
Seeley, F. E., assignor to Bryant Electric Company, Bridgeport, Conn. Incandescent-lamp socket. (Reissue.) No. 12,757; Mar. 3; Sp. p. 1219; Dr. p. 262; Gaz. vol. 133; p. 207.
Seeley, G. M. (See Kleinschmidt, E. E., assignor.)
Seelye, Z. N., Centralia, Wash. Saw-gage and filing-tool. No. 882,213; Mar. 17; Sp. p. 3450; Dr. p. 734; Gaz. vol. 133; p. 624.
Segschneider, G., assignor to Waring Hat Mf'g Co., Yonkers, N. Y. Brim-stretching and hat-blocking machine. No. 881,625; Mar. 10; Sp. p. 2268; Dr. p. 492; Gaz. vol. 133; p. 408.
Selinsky, F. W., Sr., Dearborn, Mich. Garment and book support. No. 883,428; Mar. 31; Sp. p. 5888; Dr. p. 1256; Gaz. vol. 133; p. 1087.
Semple, M. E., Sharon, Pa. Rail-joint. No. 881,348; Mar. 10; Sp. p. 1697; Dr. p. 367; Gaz. vol. 133; p. 317.
Servatius, C. M., assignor of one-half to G. M. Ball, Utica, N. Y. Skylight frame-bar and frame construction. No. 881,964; Mar. 17; Sp. p. 2963; Dr. p. 631; Gaz. vol. 133; p. 546.
Sessions, F. L., Columbus, Ohio, assignor, by mesne assignments, to Jeffrey Manufacturing Company. Fuse and fuse-box. No. 881,965; Mar. 17; Sp. p. 2964; Dr. p. 631; Gaz. vol. 133; p. 546.
Setzer, L., assignor to H. W. Kerfoot, Gentryville, Mo. Whip-socket. No. 881,203; Mar. 10; Sp. p. 1406; Dr. p. 304; Gaz. vol. 133; p. 269.
Seward, G. O. (See von Kügelen and Seward.)
Seward, G. O., and F. von Kügelgen, Holcombs Rock, Va., assignors to Virginia Laboratory Company, New York, N. Y. Producing metals by electrolysis. No. 880,760; Mar. 3; Sp. p. 549; Dr. p. 116; Gaz. vol. 133; p. 95.
Shafer, J. C., assignor of one-half to J. R. Shumate, Edina, Mo. Fire-extinguisher. No. 883,149; Mar. 24; Sp. p. 5284; Dr. p. 1127; Gaz. vol. 133; p. 965.
Shain, C. D., Rockaway Park, N. Y. Vaporizer or carbureter for gas-engines. No. 882,023; Mar. 17; Sp. p. 3097; Dr. p. 659; Gaz. vol. 133; p. 564.
Shakespeare, W., Jr. (See Rhodes, J. B., assignor.)
Shank, A. W., assignor of three-fourths to O. Plant, F. Mohn, E. W. Battishill, and O. Wachsmann, Detroit, Mich. Car-fender. No. 882,506; Mar. 17; Sp. p. 3981; Dr. p. 851; Gaz. vol. 133; p. 721.
Shanks, S. W., Benton Harbor, Mich. Hoe. No. 880,925; Mar. 3; Sp. p. 892; Dr. p. 192; Gaz. vol. 133; p. 150.
Shannon, J. W., *et al.* (See Halle, L. T., assignor.)
Shannon, N. S., *et al.* (See Jones, T. N., assignor.)
Shapiro, M. H., Hoboken, N. J. Combination blotter, pen-wiper or pen-cleaner, and pen-rack. No. 881,966; Mar. 17; Sp. p. 2966; Dr. p. 632; Gaz. vol. 133; p. 547.
Sharer, C. W., assignor to Keystone Telephone Company, Philadelphia, Pa. Apparatus for registering telephone calls. No. 881,447; Mar. 10; Sp. p. 1965; Dr. p. 415; Gaz. vol. 133; p. 348.
Sharp, C. S., Auburn, N. Y., assignor to International Harvester Company. Disk harrow. No. 882,589; Mar. 24; Sp. p. 4168; Dr. p. 884; Gaz. vol. 133; p. 781.
Sharp, G. W., Baum, Okla. Combined cotton chopper and cultivator. No. 882,971; Mar. 24; Sp. p. 4936; Dr. p. 1048; Gaz. vol. 133; p. 908.
Shatzky, A., New York, assignor of one-half to J. Martin, Brooklyn, N. Y. Water-heater. No. 882,174; Mar. 17; Sp. p. 3393; Dr. p. 721; Gaz. vol. 133; p. 614.
Shaughnessy, B. F., Pittsburg, Pa. Seal for pipe-joints. No. 882,350; Mar. 17; Sp. p. 3725; Dr. p. 792; Gaz. vol. 133; p. 671.
Shaw, G. E., Sheldon, Cal. Harvester. No. 883,578; Mar. 31; Sp. p. 6188; Dr. p. 1318; Gaz. vol. 133; p. 1133.
Shaw, H. G. (See Richardson, S. S., assignor.)
Shaw, L. H., Brockton, Mass., assignor, by mesne assignments, to United Shoe Machinery Company, Paterson, N. J. Heel. No. 880,583; Mar. 3; Sp. p. 189; Dr. p. 41; Gaz. vol. 133; p. 35.
Sheafe, J. S., Chicago, Ill. Brake-shoe. No. 880,584; Mar. 3; Sp. p. 192; Dr. p. 41; Gaz. vol. 133; p. 35.
Shee, P. E. (See Rote and Shee.)
Sheehan, W. E., Albany, N. Y. Roller for paper-making machines and manufacturing said rollers. No. 882,351; Mar. 17; Sp. p. 3726; Dr. p. 792; Gaz. vol. 133; p. 671.
Sheffield, G. S., assignor to Sheffield Manufacturing Company, Burr Oak, Mich. Combined planter and fertilizer-distributer. No. 883,403; Mar. 31; Sp. p. 6021; Dr. p. 1285; Gaz. vol. 133; p. 1109.
Sheffield Manufacturing Company. (See Sheffield, G. S., assignor.)
Shelby Spring Hinge Company. (See Stump and Brucker, assignors.)
Shepard, C. W., Bellefourche, S. D. Stovepipe-hanger. No. 883,673; Mar. 31; Sp. p. 6376; Dr. p. 1359; Gaz. vol. 133; p. 1163.
Shepherd, J. E. (See Nolen, J. D., assignor.)
Sherman, C. O., Rutland, Vt. Rotary engine. No. 882,428; Mar. 17; Sp. p. 3543; Dr. pp. 821–2; Gaz. vol. 133; p. 695.
Sherwood, G. S., Shelbyville, Ky. Combined camp-stool and walking-stick. No. 883,674; Mar. 31; Sp. p. 6377; Dr. p. 1360; Gaz. vol. 133; p. 1163.
Shimerda, F., Swanton, Nebr. Stay-roller. No. 881,626; Mar. 10; Sp. p. 2270; Dr. p. 492; Gaz. vol. 133; p. 408.
Shingleton, A. A., Cincinnati, Ohio. Automatic time-valve. No. 881,349; Mar. 10; Sp. p. 1698; Dr. pp. 367–8; Gaz. vol. 133; p. 317.
Shingleton, A. A., Cincinnati, Ohio. Automatic time-valve. No. 883,121; Mar. 24; Sp. p. 5226; Dr. p. 1116; Gaz. vol. 133; p. 956.
Shiramine, K., Vancouver, British Columbia, Canada. Portable barbed machine for military defense. No. 883,494; Mar. 31; Sp. p. 6023; Dr. p. 1286; Gaz. vol. 133; p. 1110.
Shires, J. A., Denver, Colo. Music-notation. No. 881,085; Mar. 3; Sp. p. 1184; Dr. p. 256; Gaz. vol. 133; p. 201.
Shoemaker, J. S., New Lothrop, Mich. Thill-coupling. No. 882,972; Mar. 24; Sp. p. 4938; Dr. p. 1049; Gaz. vol. 133; p. 908.
Shoemaker, S. D., Grogan, Ohio. Sheet-metal gutter. No. 882,801; Mar. 24; Sp. p. 4593; Dr. p. 979; Gaz. vol. 133; p. 851.
Shoff, F. (See Rote and Shee, assignors.)
Sholes, Z. G., Evanston, Ill., assignor to Union Typewriter Company, Jersey City, N. J. Type-writing machine. No. 881,350; Mar. 10; Sp. p. 1702; Dr. p. 369; Gaz. vol. 133; p. 317.
Showell, C. P., Stirchley, England. Manufacture of bull-rings. No. 881,726; Mar. 10; Sp. p. 2457; Dr. p. 529; Gaz. vol. 133; p. 438.
Shrader, H., Dixon, Ill. Row-marker for planters. No. 883,244; Mar. 31; Sp. p. 5460; Dr. p. 1171; Gaz. vol. 133; p. 1026.
Shugart, C. S., Fairmount, Ind. Knockdown barrel. No. 880,926; Mar. 3; Sp. p. 893; Dr. p. 193; Gaz. vol. 133; p. 150.
Shuter, I., Martin, Mich. Loose-leaf binder. No. 882,429; Mar. 17; Sp. p. 3848; Dr. p. 822; Gaz. vol. 133; p. 696.
Shumate, J. R. (See Shafer, J. C., assignor.)
Shumer, F. F., Norwalk, Ohio. Tooth-brush. No. 882,352; Mar. 17; Sp. p. 3728; Dr. p. 793; Gaz. vol. 133; p. 671.
Shurtz, S. E., Pittsburg, Pa. Ironing-board. No. 881,727; Mar. 10; Sp. p. 2458; Dr. p. 529; Gaz. vol. 133; p. 438.
Sibson, H. E., assignor to Harrison Safety Boiler Works, Philadelphia, Pa. Means for purifying and regulating water. No. 883,245; Mar. 31; Sp. p. 5493; Dr. pp. 1171–2; Gaz. vol. 133; p. 1027.
Sicotte, P., Lansing, Kans. Fastener. No. 882,430; Mar. 17; Sp. p. 3849; Dr. p. 822; Gaz. vol. 133; p. 696.
Siegfried, R., Pittsburg, Pa., assignor to Westinghouse Electric & Manufacturing Company. Dynamo-electric machine. No. 883,246; Mar. 31; Sp. p. 5495; Dr. p. 1172; Gaz. vol. 133; p. 1027.
Siegfried, R., Pittsburg, Pa., assignor to Westinghouse Electric & Manufacturing Company. Supporting structure for dynamo-electric machines. No. 883,247; Mar. 31; Sp. p. 5497; Dr. p. 1172; Gaz. vol. 133; p. 1027.
Siegfried, R., Pittsburg, Pa., assignor to Westinghouse Electric & Manufacturing Company. Supporting structure for dynamo-electric machines. No. 883,248; Mar. 31; Sp. p. 5499; Dr. p. 1172; Gaz. vol. 133; p. 1028.
Siemens-Schuckert-Werke, G. M. B. H. (See Lewin, G., assignor.)
Siggins, F. E., Craddock, W. Va. Cross-line buckle. No. 882,175; Mar. 17; Sp. p. 3394; Dr. p. 721; Gaz. vol. 133; p. 614.
Silbert, H., assignor of one-half to A. Allan, Buffalo, N. Y. Eyeglass or spectacle mounting. No. 882,540; Mar. 17; Sp. p. 4071; Dr. p. 826; Gaz. vol. 133; p. 733.
Silverwood, T. A., London, England. Tire for vehicle-wheels. No. 881,728; Mar. 10; Sp. p. 2460; Dr. p. 530; Gaz. vol. 133; p. 438.

Simmonds, J., Utica, N. Y. Pedal attachment. No. 880,585; Mar. 3; Sp. p. 193; Dr. p. 41; Gaz. vol. 133; p. 35.
Simms, H. W., Bay City, Mich. Pipe-wrench. No. 882,272; Mar. 17; Sp. p. 3579; Dr. p. 759; Gaz. vol. 133; p. 645.
Simon, A. M., New York, N. Y. Pictorial mailing-card. No. 883,552; Mar. 31; Sp. p. 5701; Dr. p. 1217; Gaz. vol. 133; p. 1061.
Simplex Piano Player Company. (See Brown, T. P., assignor.)
Simplex Time Recorder Company. (See Hawley, C. T., assignor.) (Reissue.)
Simplex Valve & Meter Company. (See Borden, M. M., assignor.)
Siner, F. M., Diamond, Ind. Therapeutic pessary. No. 882,176; Mar. 17; Sp. p. 3395; Dr. p. 721; Gaz. vol. 133; p. 614.
Sines, J., Empire, Ohio. Curtain-stretcher. No. 883,495; Mar. 31; Sp. p. 6024; Dr. p. 1286; Gaz. vol. 133; p. 1110.
Singer, C. A., *et al.* (See Noble, P. W., assignor.)
Singer Manufacturing Company. (See Allen, E. B., assignor.)
Singer Manufacturing Company. (See Kaufmann, F. J., assignor.)
Singer Manufacturing Company. (See Laubscher, A., assignor.)
Singer Manufacturing Company. (See Noble and Finch, assignors.)
Singer Manufacturing Company. (See Rontke, A., assignor.)
Singleton, J. E., Morden, assignor of one-half to J. F. Grimmett, Boissevain, Manitoba, Canada. Safety-pin. No. 883,429; Mar. 31; Sp. p. 5880; Dr. p. 1256; Gaz. vol. 133; p. 1087.
Sipes, I. W., Zion City, Ill. Board-clamp for benches. No. 880,586; Mar. 3; Sp. p. 194; Dr. p. 42; Gaz. vol. 133; p. 35.
Sippert, G., Bowdle, S. D. Pump. No. 883,496; Mar. 31; Sp. p. 6025; Dr. p. 1286; Gaz. vol. 133; p. 1110.
Sisty, H. J., Caborca, Mexico, assignor of one-fourth to G. F. Smith, Pittsburg, Pa. Separator. No. 882,177; Mar. 17; Sp. p. 3397; Dr. p. 722; Gaz. vol. 133; p. 614.
Skelton, G. F., Wabasso, Minn. Vehicle-shaft. No. 883,579; Mar. 31; Sp. p. 6190; Dr. p. 1318; Gaz. vol. 133; p. 1133.
Skerman, W., assignor to T. C. Ladner and N. J. Kessels, Brisbane, Queensland, Australia. Hose-coupling. No. 881,830; Mar. 10; Sp. p. 2654; Dr. p. 569; Gaz. vol. 133; p. 472.
Skov, S. R. (See Scullin and Skov.)
Slaght, L. H., Toronto, Ontario, Canada. Mangle. No. 883,497; Mar. 31; Sp. p. 6026; Dr. pp. 1286–7; Gaz. vol. 133; p. 1111.
Slater, A. R., Fruitvale, Cal. Catamenial bandage. No. 880,928; Mar. 3; Sp. p. 896; Dr. pp. 193–4; Gaz. vol. 133; p. 151.
Slauter, F. S. (See Peck, I. H., assignor.)
Slayton, O. E., Dillon, Okla. Weed-cutter and cultivator. No. 882,973; Mar. 24; Sp. p. 4939; Dr. p. 1049; Gaz. vol. 133; p. 909.
Slee, J., Newton-le-Willows, England. Road-vehicle wheel. No. 882,718; Mar. 24; Sp. p. 4427; Dr. p. 940; Gaz. vol. 133; p. 824.
Slentz, E. P., Oak, Pa. Mold-stripping machine. No. 880,929; Mar. 3; Sp. p. 898; Dr. p. 194; Gaz. vol. 133; p. 151.
Slick, E. E., Pittsburg, Pa. Bar for reinforced concrete construction. No. 882,273; Mar. 17; Sp. p. 3581; Dr. p. 760; Gaz. vol. 133; p. 645.
Sloat, L. J., Cleveland, Ohio. Punch-holder. No. 882,178; Mar. 17; Sp. p. 3398; Dr. p. 722; Gaz. vol. 133; p. 615.
Slocomb, L. B. (See Osborne, O., assignor.)
Sloper, T., Devizes, England. Apparatus for manufacturing pneumatic tires. No. 880,587; Mar. 3; Sp. p. 196; Dr. pp. 42–3; Gaz. vol. 133; p. 36.
Slusser, C. R., Montpelier, Idaho. Electric insulator. No. 881,967; Mar. 17; Sp. p. 2967; Dr. p. 632; Gaz. vol. 133; p. 547.
Smart, W. J., Brooklyn, assignor to M., M., and A. S. Zinn, New York, N. Y. Safety-razor. No. 881,033; Mar. 3; Sp. p. 1083; Dr. p. 235; Gaz. vol. 133; p. 185.
Smiley, J. B., South Omaha, Nebr. Grain-door for freight-cars. No. 883,353; Mar. 31; Sp. p. 5702; Dr. p. 1217; Gaz. vol. 133; p. 1061.
Smith, A. C., Dobbs Ferry, N. Y. Wrench. No. 881,627; Mar. 10; Sp. p. 2271; Dr. p. 493; Gaz. vol. 133; p. 408.
Smith, A. F., Pittsburg, Pa., assignor to Wyckoff, Seamans & Benedict, Ilion, N. Y. Type-writing machine. No. 881,205; Mar. 10; Sp. p. 1409; Dr. pp. 304–5; Gaz. vol. 133; p. 270.
Smith, A. J., Boston, and D. Livingston, Cambridge, Mass. Means for draining manholes of electric conduit systems. No. 880,761; Mar. 3; Sp. p. 551; Dr. p. 116; Gaz. vol. 133; p. 95.
Smith, A. P., Philadelphia, Pa. Vacuum-pan. No. 881,351; Mar. 10; Sp. p. 1715; Dr. p. 370; Gaz. vol. 133; p. 318.
Smith, C. A., assignor to Blaisdell Paper Pencil Company, Philadelphia, Pa. Pencil. No. 883,354; Mar. 31; Sp. p. 5704; Dr. p. 1218; Gaz. vol. 133; p. 1061.
Smith, C. E., Coleman, Tex. Cotton-chopper. No. 883,580; Mar. 31; Sp. p. 6191; Dr. pp. 1318–19; Gaz. vol. 133; p. 1134.
Smith, C. L., assignor to Armour & Company, Chicago, Ill. Carcass-scrubber. No. 882,719; Mar. 24; Sp. p. 4428; Dr. pp. 941–2; Gaz. vol. 133; p. 824.
Smith, C. S., East St. Louis, Ill. Seal-lock. No. 881,034; Mar. 3; Sp. p. 1084; Dr. p. 235; Gaz. vol. 133; p. 185.
Smith, D. C., Kalgoorlie, Western Australia, Australia. Electric kettle. No. 881,968; Mar. 17; Sp. p. 2968; Dr. p. 632; Gaz. vol. 133; p. 547.
Smith, D. F., and W. F. Purcell, New York, N. Y. Fluid-pressure engine. No. 883,430; Mar. 31; Sp. p. 5890; Dr. pp. 1256–7; Gaz. vol. 133; p. 1087.
Smith, D. L., Wellford, S. C. Land-marker. No. 883,581; Mar. 31; Sp. p. 6192; Dr. p. 1319; Gaz. vol. 133; p. 1134.
Smith, E. R., Paris, Tex. Fountain-pen. No. 882,179; Mar. 17; Sp. p. 3399; Dr. p. 722; Gaz. vol. 133; p. 615.
Smith, E. S., Jr., Orange, Mass. Holding device. No. 881,162; Mar. 10; Sp p. 1334; Dr. p. 287; Gaz. vol. 133; p. 257.
Smith, E. W., New York, N. Y. Telephone cut-out. No. 881,628; Mar. 10; Sp. p. 2272; Dr. p. 493; Gaz. vol. 133; p. 409.
Smith, F. H., assignor of one-half to J. L. Tisdale, Alameda, Cal. Loose-leaf binder. No. 881,161; Mar. 10; Sp. p. 1333; Dr. p. 286; Gaz. vol. 133; p. 257.
Smith, F. F., Newark, N. J. Fireproof gravity-sash. No. 883,054; Mar. 24; Sp. p. 5084; Dr. pp. 1085–6; Gaz. vol. 133; p. 933.
Smith, F. N., assignor to S. R. Dresser Manufacturing Company, Bradford, Pa. Clamping-ring for pipe-couplings. No. 880,831; Mar. 3; Sp. p. 708; Dr. p. 149; Gaz. vol. 133; p. 120.
Smith, G. A., Marshalltown, Iowa. Thread-cutting device. No. 881,449; Mar. 10; Sp. p. 1908; Dr. p. 415; Gaz. vol. 133; p. 349.
Smith, G. E., Winnfield, La. Meat-tenderer. No. 881,204; Mar. 10; Sp. p. 1407; Dr. p. 304; Gaz. vol. 133; p. 270.
Smith, G. F. (See Sisty, H. J., assignor.)
Smith, G. R., Dover, N. H. Shock-absorbing device. No. 881,629; Mar. 10; Sp. p. 2275; Dr. p. 493; Gaz. vol. 133; p. 409.
Smith, H. E., Edinburgh, Scotland. Carbureting apparatus. No. 883,249; Mar. 31; Sp. p. 5501; Dr. p. 1173; Gaz. vol. 133; p. 1028.
Smith, H. F., Seattle, Wash. Dental impression-tray. No. 883,055; Mar. 24; Sp. p. 5087; Dr. p. 1086; Gaz. vol. 133; p. 934.
Smith, J. D., St. Louis, Mo. Time-recorder. No. 883,355; Mar. 31; Sp. p. 5705; Dr. p. 1218; Gaz. vol. 133; p. 1062.
Smith, J. G., Pawnee, Ill. Rail-joint. No. 881,160; Mar. 10; Sp. p. 1332; Dr. p. 286; Gaz. vol. 133; p. 256.
Smith, J. J., New York, N. Y. Making lasts. No. 882,274; Mar. 17; Sp. p. 3582; Dr. p. 760; Gaz. vol. 133; p. 646.
Smith, J. M. (See Williams, J. H., assignor.)
Smith, J. W., and S. A. Culbreth, Gordon, Ala. Journal-box. No. 880,927; Mar. 3; Sp. p. 894; Dr. p. 193; Gaz. vol. 133; p. 151.
Smith, M. A., New York, N. Y. Combined filter and hydraulic press. No. 880,588; Mar. 3; Sp. p. 200; Dr. p. 43; Gaz. vol. 133; p. 36.
Smith, M. B., Gunnison, Colo. Folding umbrella. No. 883,675; Mar. 31; Sp. p. 6378; Dr. p. 1360; Gaz. vol. 133; p. 1163.
Smith, M. V., New York, N. Y. Furnace. No. 883,057; Mar. 24; Sp. p. 5088; Dr. p. 1087; Gaz. vol. 133; p. 934.
Smith, R. B., New York, N. Y. Sound-reproducer. No. 881,631; Mar. 10; Sp. p. 2656; Dr. p. 569; Gaz. vol. 133; p. 472.
Smith, R. L., Lynchburg, Va. Feeding device for draft-animals. No. 883,056; Mar. 24; Sp. p. 5088; Dr. p. 1086; Gaz. vol. 133; p. 934.
Smith, S. T., Jr., Stamford, Conn., assignor to Underwood Typewriter Company, New York, N. Y. Stenciling-machine. No. 881,448; Mar. 10; Sp. p. 1907; Dr. p. 415; Gaz. vol. 133; p. 348.
Smith, T. L., assignor to T. L. Smith Company, Milwaukee, Wis. Machine for mixing concrete and the like. No. 883,498; Mar. 31; Sp. p. 6029; Dr. pp. 1287–8; Gaz. vol. 133; p. 1111.
Smith, V. G., Copenhagen, Denmark. Washing butter. No. 881,630; Mar. 10; Sp. p. 2276; Dr. p. 494; Gaz. vol. 133; p. 409.
Smith, W. B., Grand Ledge, Mich. Gearing mechanism for bicycles, &c. No. 881,729; Mar. 10; Sp. p. 2460; Dr. p. 530; Gaz. vol. 133; p. 439.
Smith, W. E., Pineville, Ky. Coupling member for tool-handles. No. 883,499; Mar. 31; Sp. p. 6034; Dr. p. 1288; Gaz. vol. 133; p. 1111.
Smith, W. H., and J. H. Klassen, Los Angeles, Cal. Vehicle-spring. No. 883,356; Mar. 31; Sp. p. 5711; Dr. p. 1218; Gaz. vol. 133; p. 1062.
Smith, W. R., Jackson, Mich., assignor to Ventilated Cushion and Spring Company, Chicago, Ill. Spring structure. No. 882,654; Mar. 24; Sp. p. 4301; Dr. p. 913; Gaz. vol. 133; p. 803.
Smithwick, J. W. P., La Grange, N. C. Device for automatically controlling lamps on vehicles. No. 883,582; Mar. 31; Sp. p. 6193; Dr. p. 1319; Gaz. vol. 133; p. 1134.
Smoot, H. T. (See Crites and Smoot.)
Snell, C. A. (See Snell, M. A. and C. A.)
Snell, H. B., Toledo, Ohio, assignor to Snell-Judd Company. Actuating mechanism for electric switches. No. 883,150; Mar. 24; Sp. p. 5286; Dr. p. 1127; Gaz. vol. 133; p. 965.
Snell-Judd Company. (See Snell, H. B., assignor.)
Snell, M. A. and C. A., Syracuse, N. Y. Combined abdominal and hernia pad. No. 883,357; Mar. 31; Sp. p. 5711; Dr. p. 1219; Gaz. vol. 133; p. 1062.
Snelling, J. E., Newark, Ohio. Meat-tenderer. No. 880,589; Mar. 3; Sp. p. 202; Dr. p. 44; Gaz. vol. 130; p. 36.
Snow, F. W., Hillburn, and W. C. Kidd, Suffern, N. Y., assignors to Standard Equipment Company, Mahwah, N. J. Switch-stand. No. 881,969; Mar. 17; Sp. p. 2969; Dr. pp. 632–3; Gaz. vol. 133; p. 547.
Snow, F. W., Hillburn, and W. C. Kidd, Suffern, N. Y., assignors to Standard Equipment Company, Mahwah, N. J. Switch-stand. No. 882,024; Mar. 17; Sp. p. 3098; Dr. p. 660; Gaz. vol. 133; p. 565.

Snow, L. T., New Haven, Conn. Safety-razor. No. 881,730; Mar. 10; Sp. p. 2463; Dr. p. 530; Gaz. vol. 133; p. 439.
Snow, L. T. New Haven Conn. Safety-razor. No. 881,731; Mar. 10; Sp. p 2465; Dr. p. 531; Gaz. vol. 133; p. 440.
Societe Anonym des Metiers Gabler. (See Gabler, J., assignor.)
Société Anonyme d'Electricité et d'Automobiles Mors. (See Mors, E. L. P., assignor.)
Sölbeck, C. P. (See Christensen and Sölbeck.)
Solomon, A., Buffalo, N. Y. Sad-iron waxer, polisher, and holder. No. 883,250; Mar. 31; Sp. p. 5504; Dr. pp. 1173–4; Gaz. vol. 133; p. 1029.
Somers, M. J., assignor to South Bend Foundry Co., South Bend, Ind. Producing chilled castings. No. 882,720; Mar. 24; Sp. p. 4433; Dr. p. 942; Gaz. vol. 133; p. 825.
Somerville, G., Denver, Colo. Resonant box of string instruments. No. 881,206; Mar. 10; Sp. p. 1414; Dr. p. 305; Gaz. vol. 133; p. 270.
Sommer, A., Cambridge, Mass. Display-box. No. 880,590; Mar. 3; Sp. p. 204; Dr. p. 44; Gaz. vol. 133; p. 37.
Sommers, C. E., Hastings, Minn. Folding crate or box. No. 883,251; Mar. 31; Sp. p. 5506; Dr. p. 1174; Gaz. vol. 133; p. 1029.
Sonn, L., New York, N. Y. Reel for ruchings, &c. No. 882,431; Mar. 17; Sp. p. 3850; Dr. p. 822; Gaz. vol. 133; p. 606.
Sorensen, C. M., Brooklyn, assignor to Vidal Typewriter Company, New York, N. Y. Type-writer liner. No. 881,631; Mar. 10; Sp. p. 2277; Dr. p. 494; Gaz. vol. 133; p. 409.
Sorger, C., Frankfort-on-the-Main, Germany. Manufacture of salicylic acid glycerin esters. No. 882,590; Mar. 24; Sp. p. 4170; Gaz. vol. 133; p. 782.
Soss, J., New York, N. Y. Hinge. No. 880,607; Mar. 3; Sp. p. 405; Dr. pp. 87–8; Gaz. vol. 133; p. 73.
Soss, J., New York, N. Y. Door-check. No. 882,721; Mar. 24; Sp. p. 4434; Dr. p. 943; Gaz. vol. 133; p. 825.
South Bend Foundry Co. (See Somers, M. J., assignor.)
Southwark Foundry and Machine Company. (See Petsche, G. B., assignor.)
Sparks, C. W., Cherryvale, assignor of one-half to J. W. Sparks, Thayer, Kans. Corn-planter. No. 883,151; Mar. 24; Sp. p. 5287; Dr. pp. 1127–8; Gaz. vol. 133; p. 966.
Sparks, J. W. (See Sparks, C. W., assignor.)
Sparks, J. W., and C. J. Allen, Sabina, Ohio. Automatic railway-switch. No. 883,358; Mar. 31; Sp. p. 5713; Dr. pp. 1219–20; Gaz. vol. 133; p. 1063.
Sparks, R. J., Browning, Mo. Swinging hay-stacker. No. 882,214; Mar. 17; Sp. p. 3452; Dr. pp. 734–5; Gaz. vol. 133; p. 624.
Spaulding, C. F., Tarrytown, N. Y. Paper-coating machine. No. 883,359; Mar. 31; Sp. p. 5719; Dr. p. 1220; Gaz. vol. 133; p. 1063.
Speirs, P., Tullamarine, Victoria, Australia. Plow-disk and the like. No. 882,353; Mar. 17; Sp. p. 3730; Dr. p. 793; Gaz. vol. 133; p. 672.
Spence, G. W., Tully, N. Y. Trap-nest. No. 881,732; Mar. 10; Sp. p. 2467; Dr. p. 531; Gaz. vol. 133; p. 440.
Spencer, J. W. (See Wolters, W. E., assignor.)
Spencer, W. M., Burns, Tenn. Rotary engine. No. 882,591; Mar. 24; Sp. p. 4171; Dr. p. 885; Gaz. vol. 133; p. 782.
Sperry, E. A., Brooklyn, N. Y. Detinning. No. 883,500; Mar. 31; Sp. p. 6035; Dr. p. 1288; Gaz. vol. 133; p. 1112.
Sperry, E. A., Brooklyn, assignor to Chemical Reduction Company, New York, N. Y. Making stannic chlorid. No. 882,354; Mar. 17; Sp. p. 3732; Dr. p. 793; Gaz. vol. 133; p. 672.
Spiess, G., Berlin, Germany. Device for putting on and taking off hose. No. 881,163; Mar. 10; Sp. p. 1335; Dr. p. 287; Gaz. vol. 133; p. 257.
Spiro, C., New York, N. Y. Clip-file. No. 881,970; Mar. 17; Sp. p. 2972; Dr. p. 633; Gaz. vol. 133; p. 547.
Spoelstra, G. W., Grand Rapids, Mich. Water-motor. No. 882,025; Mar. 17; Sp. p. 3101; Dr. p. 660; Gaz. vol. 133; p. 505.
Sprague, A. R., Sacramento, Cal. Apparatus for golf practice. No. 883,058; Mar. 24; Sp. p. 5092; Dr. p. 1087; Gaz. vol. 133; p. 935.
Sprague, A. R., Sacramento, Cal., assignor, by mesne assignments, to L. A. Roy, Chicago, Ill. Apparatus for refrigeration. No. 881,733; Mar 10; Sp. p. 2468; Dr. p. 531; Gaz. vol. 133; p. 440.
Sprague, A. R., Sacramento, Cal., assignor, by mesne assignments, to L. A. Roy, Chicago, Ill. Apparatus for refrigeration. No. 881 832; Mar. 10; Sp. p. 2658; Dr. p. 569; Gaz. vol. 133; p. 473.
Sprague Electric Company. (See Libby, S. H., assignor.)
Spring Seal Company. (See Dorman, W. S., assignor.)
Springer, B. (See Suhl, E. H., assignor.)
St. Antoine, J., Cheboygan, Mich. Wreck-indicator. No. 882,974; Mar. 24; Sp. p. 4941; Dr. p. 1049; Gaz. vol. 133; p. 909.
St. Clair, G. A. (See Jones, J. T., assignor.)
Stålhane, O. (See Lindblad and Stålhane.)
Stalker, A., *et al.* (See Boyler, E. J., assignor.)
Stallsmith, J. F., Topeka, Kans. Stomach-pump. No. 883,583; Mar. 31; Sp. p. 6195; Dr. p. 1320; Gaz. vol. 133; p. 1134.
Stamm, C. H., Kokomo, Ind. Automatic train-pipe coupling. No. 881,632; Mar. 10; Sp. p. 2278; Dr. p. 494; Gaz. vol. 133; p. 410.
Standard Automatic Lubricator Co. (See Manzel, C. W., assignor.)
Standard Equipment Company. (See Kidd, W. C., assignor.)
Standard Equipment Company. (See Snow and Kidd, assignors.)
Standard Sheet Metal Company. (See Dickens, J., assignor.)
Standard Underground Cable Company. (See Davis, C. W., assignor.)
Stankey, O., and M. Christ, East St. Louis, Ill. Safety-indicator for railways. No. 882,802; Mar. 24; Sp. p. 4594; Dr. p. 979; Gaz. vol. 133; p. 851.
Stanton, G. S., Knoxville, Tenn. Garment-hanger. No. 882,592; Mar. 24; Sp. p. 4173; Dr. p. 885; Gaz. vol. 133; p. 782.
Stanton, L. B. (See Elliott and Stanton.)
Stanworth, W. T., Norfolk, Va. Signaling apparatus. No. 881,734; Mar. 10; Sp. p. 2471; Dr. p. 531; Gaz. vol. 133; p. 440.
Staples, A. F. *et al.* (See Dorsey, F. F., assignor.)
Staples, A. F., *et al.* (See Wildman, J. E., assignor.)
Staples, A. F., Alliance, Ohio. Manifolding pad-holder. No. 881,497; Mar. 10; Sp. p. 2005; Dr. p. 437; Gaz. vol. 133; p. 364.
Stapley, W. S., assignor to Bridgeport Brass Company, Bridgeport, Conn. Tire-pump. No. 882,215; Mar. 17; Sp. p. 3457; Dr. p. 735; Gaz. vol. 133; p. 625.
Star Speedometer Company. (See Dudley, Greenleaf, and Dudley, assignors.)
Stark, W. A., Tacoma, Wash. Melon-carrier. No. 882,722; Mar. 24; Sp. p. 4437; Dr. p. 943; Gaz. vol. 133; p. 825.
Starman, J. (See Weis and Starman.)
Starrett, D. (See Starrett, L. H., assignor.)
Starrett, H. F., assignor to Cutler-Hammer Manufacturing Company, Milwaukee, Wis. Electrically-operated switch. No. 883,050; Mar. 24; Sp. p. 5093; Dr. pp. 1087–8; Gaz. vol. 133; p. 935.
Starrett, L. H., assignor of one-half to D. Starrett Portland, Oreg. Spark-arrester. No. 881,735; Mar. 10; Sp. p. 2473; Dr. p. 532; Gaz. vol. 133; p. 441.
Staub, B., New York, N. Y. Signaling system. No. 880,762; Mar. 3; Sp. p. 553; Dr. p. 117; Gaz. vol. 133; p. 96.
Staudt, J., Bonn, Germany. Manufacturing artificial stone. No. 882,975; Mar. 24; Sp. p. 4942; Gaz. vol. 133; p. 900.
Stauffer, J. R. (See Luker, W. H., assignor.)
Steel, E. A., assignor to Farrand Company, Detroit, Mich. Detachable automatic action for pianos. No. 883,252; Mar. 31; Sp. p. 5508; Dr. p. 1174; Gaz. vol. 133; p. 1029.
Steel, J. M., Waialua, Hawaii. Feeder for sugar-cane mills. No. 880,832; Mar. 3; Sp. p. 710; Dr. p. 149; Gaz. vol. 133; p. 120.
Steele, E. W., *et al.* (See Thomas, M. E., assignor.)
Steele, H. H., Marcellus, assignor to Monarch Typewriter Company, Syracuse, N. Y. Type-writing machine. No. 880,591; Mar. 3; Sp. p. 205; Dr. pp. 44–5; Gaz. vol. 133; p. 37.
Steele, J. H., *et al.* (See Neale, C. C., assignor.)
Steese, M. C., Steubenville, Ohio. Casting apparatus. No. 883,253; Mar. 31; Sp. p. 5509; Dr. p. 1174; Gaz. vol. 133; p. 1030.
Stein, J. (See Müller and Stein.)
Stein, J. A. (See Baker and Stein.)
Steinhauser, G. E. (See Braun, A., assignor.)
Steneck, J. R., Oak Park, assignor to Illinois Malleable Iron Company, Chicago, Ill. Union. No. 883,122; Mar. 24; Sp. p. 5234; Dr. p. 1116; Gaz. vol. 133; p. 956.
Stephens, E. L. (See Stephens, L. and E. L.)
Stephens, L. and E. L., Macksburg, Ohio. Rope-grab. No. 881,736; Mar. 10; Sp. p. 2474; Dr. p. 532; Gaz. vol. 133; p. 441.
Sterling Electric Company. (See Wells, B. O., assignor.)
Sterling, R. H., Watsonville, Cal. Long-distance recording-indicator for reciprocating devices. No. 880,502; Mar. 3; Sp. p. 216; Dr. p. 45; Gaz. vol. 133; p. 37.
Sterner, F. J., Baltimore, Md. Railway-chair. No. 881,737; Mar. 10; Sp. p. 2475; Dr. p. 532; Gaz. vol. 133; p. 441.
Stevens, B., Oakland, Cal. Turbine-motor. No. 882,127; Mar. 17; Sp. p. 3283; Dr. p. 700; Gaz. vol. 133; p. 596.
Stevens, B. D., assignor to Berlin Machine Works, Beloit, Wis. Variable-speed mechanism. No. 881,066; Mar. 3; Sp. p. 1185; Dr. p. 257; Gaz. vol. 133; p. 201.
Stevens, F. C., assignor to Davis & Furber Machine Company, North Andover, Mass. Car-truck. No. 880,833; Mar. 3; Sp. p. 711; Dr. p. 150; Gaz. vol. 133; p. 120.
Stevens F. M., assignor to Scovill Manufacturing Company, Waterbury, Conn. Float. No. 881,450; Mar. 10; Sp. p. 1910; Dr. p. 415; Gaz. vol. 133; p. 340.
Stevens, G. C., Chicago, Ill. Twine-holder. No. 880,593; Mar. 3; Sp. p. 219; Dr. p. 46; Gaz. vol. 133; p. 38.

Stevens, G. H. (See Perry, R. W., assignor.)
Stevenson, R. A., and J. T. Story, assignors to J. T. Story & Co., New York, N. Y. Electric insole. No. 881,087; Mar. 3; Sp. p. 1187; Dr. p. 257; Gaz. vol. 133; p. 202.
Steward, C. S., and W. T. Lowry, assignors to D. M. Steward Manufacturing Company, Chattanooga, Tenn. Machine for making acetylene-gas tips. No. 881,352; Mar. 10; Sp. p. 1717; Dr. pp. 370–1; Gaz. vol. 133; p. 318.
Stewart, A. T., Washington, D. C. Boiler-tube cleaner. No. 881,353; Mar. 10; Sp. p. 1720; Dr. p. 371; Gaz. vol. 133; p. 319.
Stewart, G. W., Fort Wayne, Ind. Sash-lock. No. 881,354; Mar. 10; Sp. p. 1722; Dr. p. 371; Gaz. vol. 133; p. 319.
Stickdorn, R., Dusseldorf, Germany. Closet-flushing apparatus. No. 880,594; Mar. 3; Sp. p. 220; Dr. p. 46; Gaz. vol. 133; p. 38.
Stiles, H. A., Philadelphia, Pa. Autograph-album. No. 881,739; Mar. 10; Sp. p. 2477; Dr. p. 533; Gaz. vol. 133; p. 442.
Stillwagen, A. H., Pittsburg, Pa. Pie cutter and crimper. No. 881,738; Mar. 10; Sp. p. 2476; Dr. p. 533; Gaz. vol. 133; p. 442.
Stillwell, C. B., Jacksonville, Fla. Nut-lock. No. 880,930; Mar. 3; Sp. p. 900; Dr. p. 194; Gaz. vol. 133; p. 151.
Stilson, H. M., *et al.* (See Hollister, C. P., assignor.)
Stockbridge, J. L. (See Gault and Stockbridge.)
Stocker, L., Knoxville, Tenn., assignor to Myer Bridges Company, Louisville, Ky. Machine for making mops and brushes. No. 881,740; Mar. 10; Sp. p. 2477; Dr. pp. 533–4; Gaz. vol. 133; p. 442.
Stoddard, C. F., Boston, Mass., assignor to American Pneumatic Service Company, Dover, Del. Pneumatic-despatch-tube apparatus. No. 880,565; Mar. 3: Sp. p. 221; Dr. p. 46; Gaz. vol. 133; p. 38.
Stöhr, A., Harthau, Chemnitz, Germany. Process for the manufacture of floating soap. No. 883,360; Mar. 31; Sp. p. 5722; Gaz. vol. 133; p. 1063.
Stokoe, J. W., Jeanneratte, La. Car-stake. No. 881,971; Mar. 17; Sp. p. 2973; Dr. p. 633; Gaz. vol. 133; p. 548.
Stollberg, C., Toledo, Ohio, assignor to American Can Company, New York, N. Y. Sheet-metal keg for white lead and other heavy articles. No. 880,834; Mar. 3; Sp. p. 714; Dr. p. 150; Gaz. vol. 133; p. 121.
Stoltenberg, H., assignor to White Lily Washer Company, Davenport, Iowa. Valve mechanism for gas-engines. No. 880,835; Mar. 3; Sp. p. 717; Dr. pp. 150–1; Gaz. vol. 133; p. 121.
Stoltzfus, S. F., Leola, Pa. Plant-cutter. No. 883,361; Mar. 31; Sp. p. 5723; Dr. p. 1220; Gaz. vol. 133; p. 1054.
Stolzenwald, G., Valea Calugareasca, Roumania. Treating zinc-retort residues. No. 881,355; Mar. 10; Sp. p. 1723; Gaz. vol. 133; p. 319.
Stone, L. R., Minden, Kans. Pumping-jack. No. 881,972; Mar. 17; Sp. p. 2975; Dr. p. 633; Gaz. vol. 133; p. 548.
Stone & Webster. (See MacKaye, J., assignor.)
Stonebreaker, C. A. (See Wissler, R., assignor.)
Stoner, B. (See Stoner, H. S. and B.)
Stoner, H. S. and B., Massillon, Ohio. Acetylene-gas generator. No. 880,698; Mar. 3; Sp. p. 408; Dr. p. 88; Gaz. vol. 133; p. 73.
Stoner, H. S. and B., Massillon, Ohio. Acetylene-gas generator. No. 880,763; Mar. 3; Sp. p. 554; Dr. pp. 117–18; Gaz. vol. 133; p. 96.
Stoops, W. B., assignor of one-half to G. W. Scott and J. M. McCabe, Coraopolis, Pa. Attachment for swinging scaffolds or stages. No. 882,709; Mar. 24; Sp. p. 4523; Dr. p. 966; Gaz. vol. 133; p. 840.
Storey, C. B. C., Lancaster, England. Disintegrating, washing, and screening machine. No. 881,207; Mar. 10; Sp. p. 1415; Dr. pp. 305–6; Gaz. vol. 133; p. 271.
Storms, G. (See Rhodes, W. H., assignor.)
Storror, L. W., San Francisco, Cal. Insulator. No. 882,803; Mar. 24; Sp. p. 4596; Dr. p. 979; Gaz. vol. 133; p. 852.
Story & Co., J. T. (See Stevenson and Story, assignors.)
Story, J. T. (See Stevenson and Story).
Stradley, J. V., assignor to Minneapolis Threshing Machine Co., Minneapolis, Minn. Corn-sheller. No. 882,723; Mar. 24; Sp. p. 4437; Dr. p. 943; Gaz. vol. 133; p. 826.
Stragiotti, P., Berkeley, Cal. Reinforced concrete construction. No. 882,216; Mar. 17; Sp. p. 3458; Dr. pp. 735–6; Gaz. vol. 133; p. 625.
Straight, A. W., Chicago, Ill. Safety-pin. No. 882,917; Mar. 24; Sp. p. 4832; Dr. p. 1025; Gaz. vol. 133; p. 889.
Strasburger, F. C. H., assignor to Bottlers Machinery Manufacturing Company, Chicago, Ill. Float-valve for filling-machines. No. 883,254; Mar. 31; Sp. p. 5510; Dr. p. 1175; Gaz. vol. 133; p. 1030.
Strater, T. G., Boston, Mass. Fluid-drawer. No. 881,208; Mar. 10; Sp. p. 1417; Dr. p. 306; Gaz. vol. 133; p. 271.
Stratton, A., deceased, (J. Stratton, administratrix,) assignor of one-half to W. Craddock, Lake City, Ark. Clothes-pin. No. 883,060; Mar. 24; Sp. p. 5098; Dr. p. 1088; Gaz. vol. 133; p. 935.
Stratton, J., administratrix. (See Stratton, A.)
Stratton, J. A., Chicago, Ill. Means for transmitting electric currents with increased energy. No. 882,026; Mar. 17; Sp. p. 3103; Dr. p. 660; Gaz. vol. 133; p. 506.
Strauss, M. M., Chicago, Ill. Combined button and garment supporter. No. 882,027; Mar. 17; Sp. p. 3108; Dr. p. 661; Gaz. vol. 133; p. 506.
Strawn, T. L., *et al.* (See Gilman, J. L., assignor.)
Strebel, L., assignor to Globe Machine & Stopper Company, New York, N. Y. Bottle-filling machine. No. 882,849; Mar. 24; Sp. p. 4604; Dr. pp. 998–9; Gaz. vol. 133; p. 867.
Strohbach, O. (See Aloyos and Strohbach.)
Strom, W. A. (See McClure, W. D., assignor.)
Stroschein, E. A., Cottonwood, Minn. Gravel-loader. No. 881,741; Mar. 10; Sp. p. 2484; Dr. p. 535; Gaz. vol. 133; p. 443.
Strout, H. F., *et al.*, trustees. (See Kovach, F. J., assignor.)
Suhl, E. H., assignor of one-half to B. Springer, Sparks, Okla. Replanting attachment for cultivators. No. 882,355; Mar. 17; Sp. p. 3734; Dr. p. 794; Gaz. vol. 133; p. 672.
Sullivan, W. H., Fort Shaw, Mont. Fence-wire fastener. No. 883,584; Mar. 31; Sp. p. 6196; Dr. p. 1320; Gaz. vol. 133; p. 1135.
Stump, A. L., and F. Brucker, assignors to Shelby Spring Hinge Company, Shelby, Ohio. Spring-hinge. No. 880,596; Mar. 3; Sp. p. 223; Dr. p. 47; Gaz. vol. 133; p. 39.
Stumpf, J., Charlottenburg, Germany, assignor to General Electric Company. Steam-turbine. No. 881,633; Mar. 10; Sp. p. 2280; Dr. p. 494; Gaz. vol. 133; p. 410.
Sturgess, J., Troy, N. Y. Air-compressor. No. 881,498; Mar. 10; Sp. p. 2006; Dr. p. 437; Gaz. vol. 133; p. 364.
Sturgis Steel Go-Cart Company. (See Kurz, O., assignor.)
Sturgis Steel Go-Cart Company. (See Loshbough, A. W., assignor.)
Sturgis Steel Go-Cart Company. (See Loshbough, J. E., assignor.)
Suck, A., Boston, Mass. Gate for coal-pockets. No. 882,804; Mar. 24; Sp. p. 4598; Dr. p. 980; Gaz. vol. 133; p. 852.
Suess, A., Witkowitz, Austria-Hungary. Transporting apparatus. No. 882,976; Mar. 24; Sp. p. 4944; Dr. pp. 1050–1; Gaz. vol. 133; p. 909.
Surmann, W., Cologne, Germany. Press for manufacturing briquets, blocks, artificial stone, and the like. No. 881,164; Mar. 10; Sp. p. 1335; Dr. pp. 287–8; Gaz. vol. 133; p. 257.
Susemihl, F. G., Detroit, Mich., assignor of one-fourth to F. L. Susemihl, Chicago, Ill. Roller-bearing. No. 880,931; Mar. 3; Sp. p. 902; Dr. p. 194; Gaz. vol. 133; p. 152.
Susemihl, F. L. (See Susemihl, F. G., assignor.)
Suter, R., Kölliken, Switzerland. Umbrella-runner. No. 881,634; Mar. 10; Sp. p. 2282; Dr. p. 495; Gaz. vol. 133; p. 410.
Sutherland, W. W., Griswold, Iowa. Power-lever. No. 883,255; Mar. 31; Sp. p. 5511; Dr. p. 1175; Gaz. vol. 133; p. 1030.
Suttle, H. A., Chicago, Ill. Vehicle-fender. No. 881,973; Mar. 17; Sp. p. 2976; Dr. p. 634; Gaz. vol. 133; p. 548.
Swallow, J. G., New York, N. Y. Seal. No. 883,501; Mar. 31; Sp. p. 6039; Dr. p. 1288; Gaz. vol. 133; p. 1112.
Swanberg, A. W., assignor of two-thirds to C. A. Bohlin and H. C. Peterson, Minneapolis, Minn. Alcohol-stove. No. 880,836; Mar. 3; Sp. p. 719; Dr. p. 151; Gaz. vol. 133; p. 122.
Swanson, C., *et al.* (See Wallen, C. J., assignor.)
Swanson, C. M., Des Moines, Iowa. Loose pulley. No. 882,028; Mar. 17; Sp. p. 3110; Dr. p. 661; Gaz. vol. 133; p. 506.
Swart, W. G., Denver, Colo. Ore-treating process. No. 882,217; Mar. 17; Sp. p. 3460; Dr. p. 736; Gaz. vol. 133; p. 625.
Swazey, H. L., and M. B. Pinkham, Lincoln, Me. Lamp-burner. No. 881,265; Mar. 10; Sp. p. 1543; Dr. p. 332; Gaz. vol. 133; p. 290.
Sweetwood, A. M., Bradner, Ohio. Merry-go-round. No. 883,585; Mar. 31; Sp. p. 6197; Dr. pp. 1320–1; Gaz. vol. 133; p. 1135.
Swimming Pool Filtration Company. (See Mitchell, G. D., assignor.)
Swintek, M., Des Moines, Iowa. Wall-plug. No. 880,699; Mar. 3; Sp. p. 410; Dr. p. 88; Gaz. vol. 133; p. 74.
Swoggers, H., New Galilee, Pa. Padlock. No. 880,932; Mar. 3; Sp. p. 905; Dr. p. 195; Gaz. vol. 133; p. 152.
Swope, E., Morgan Hill, Cal. Harrow. No. 883,586; Mar. 31; Sp. p. 6200; Dr. p. 1321; Gaz. vol. 133; p. 1135.
Sylvester, R., Lindsay, Ontario, Canada. Traveling thresher. No. 882,977; Mar. 24; Sp. p. 4947; Dr. pp. 1051–2; Gaz. vol. 133; p. 910.
Syze, J. F., Yorktown Heights, N. Y. Well-curb. No. 880,597; Mar. 3; Sp. p. 225; Dr. p. 47; Gaz. vol. 133; p. 39.
T. L. Smith Company. (See Smith, T. L., assignor.)
Tabor, C. D., New York, N. Y., assignor of one-half to A. Schrafft, Newark, N. J. Weather-strip. No. 882,503; Mar. 24; Sp. p. 4174; Dr. p. 886; Gaz. vol. 133; p. 782.
Taft, S. E. (See Bartel and Taft.)
Taft, S. E., South Framingham, Mass., assignor to American Lacing Hook Co. Lacing-hook-setting machine. No. 883,256; Mar. 31; Sp. p. 5512; Dr. pp. 1175–6; Gaz. vol. 133; p. 1031.
Talbot, H. H., St. Joseph, Mo. Firearm. No. 882,594; Mar. 24; Sp. p. 4178; Dr. pp. 886–7; Gaz. vol. 133; p. 783.
Talbot, W. E. (See Dorris, S. M., assignor.)
Tanck, J., and J. C. Johnson, Kenosha, Wis. Axle-skein. No. 881,499; Mar. 10; Sp. p. 2007; Dr. p. 438; Gaz. vol. 133; p. 365.

Tanner, R. J., Lincoln, Nebr. Dancing toy. No. 880,933; Mar. 3; Sp. p. 906; Dr. p. 195; Gaz. vol. 133; p. 153.
Tarbox, G. E., Spokane, Wash. Clothes steaming and pressing machine. No. 880,934; Mar. 3; Sp. p. 907; Dr. p. 195; Gaz. vol. 133; p. 153.
Tate, C. C., Bogalusa, La. Tie-cutting machine. No. 880,935; Mar. 3; Sp. p. 908; Dr. pp. 195-6; Gaz. vol. 133; p. 153.
Tayler, G. B., Germantown, Nebr. Door-locking device. No. 881,209; Mar. 10; Sp. p. 1419; Dr. pp. 306-7; Gaz. vol. 133; p. 271.
Taylor, A. C., and F. W. Dawson, Charleston, S. C. Combined curtain-pole and shade-roller support. No. 882,180; Mar. 17; Sp. p. 3400; Dr. p. 722; Gaz. vol. 133; p. 615.
Taylor, A. E., Necedah, Wis. Sleigh. No. 882,356; Mar. 17; Sp. p. 3736; Dr. p. 794; Gaz. vol. 133; p. 673.
Taylor, C. L., assignor to Morgan Engineering Company, Alliance, Ohio. Throttling device for hydraulic machinery. No. 881,165; Mar. 10; Sp. p. 1339; Dr. pp. 288-9; Gaz. vol. 133; p. 258.
Taylor, H. C., Gilmer, Tex. Insecticide. No. 882,724; Mar. 24; Sp. p. 4439; Gaz. vol. 133; p. 826.
Taylor, H. H., Bridgeport, Conn. Pompadour-roll. No. 882,655; Mar. 24; Sp. p. 4302; Dr. p. 913; Gaz. vol. 133; p. 804.
Taylor Iron & Steel Company. (See Brinton, W., assignor.)
Taylor, J. D., Edgewood Park, assignor to Union Switch & Signal Company, Swissvale, Pa. Railway signaling apparatus. No. 882,275; Mar. 17; Sp. p. 3584; Dr. p. 761; Gaz. vol. 133; p. 646.
Taylor, J. D., Edgewood Park, assignor to Union Switch & Signal Company, Swissvale, Pa. Electric signaling system. No. 882,276; Mar. 17; Sp. p. 3586; Dr. p. 761; Gaz. vol. 133; p. 646.
Taylor, H. G., St. Paul, Minn. Card-exhibiting machine. No. 880,598; Mar. 3; Sp. p. 227; Dr. pp. 47-8; Gaz. vol. 133; p. 40.
Taylor, J. H., Waterloo, Nebr. Horse-collar pad. No. 881,356; Mar. 10; Sp. p. 1724; Dr. p. 371; Gaz. vol. 133; p. 319.
Taylor, J. T., assignor of two-thirds to J. G. Harris and F. T. Hunt, South Boston, Va. Railway-curve tester and gage. No. 880,837; Mar. 3; Sp. p. 720; Dr. p. 151; Gaz. vol. 133; p. 122.
Taylor, J. W., Fulton, Ky. Vehicle brake apparatus. No. 883,061; Mar. 24; Sp. p. 5099; Dr. p. 1088; Gaz. vol. 133; p. 936.
Taylor, L. (See Harman and Taylor.)
Taylor, W. H., assignor to Yale & Towne Manufacturing Company, Stamford, Conn. Changeable combination-lock. No. 883,587; Mar. 31; Sp. p. 6201; Dr. pp. 1321-2; Gaz. vol. 133; p. 1136.
Teachworth, W. H., Waxahachie, Tex. Strain-relieving attachment for telegraph-keys. No. 883,062; Mar. 24; Sp. p. 5100; Dr. p. 1088; Gaz. vol. 133; p. 936.
Teasley, A. W., and M. Van, Ozone, Tenn. Tobacco-cutter. No. 881,357; Mar. 10; Sp. p. 1725; Dr. p. 372; Gaz. vol. 133; p. 319.
Teichner, G., and P. Askenasy, Nuremberg, Germany. Electrolytically producing persulfates. No. 880,599; Mar. 3; Sp. p. 229; Gaz. vol. 133; p. 40.
Teipel, H. C., St. Louis, Mo. Clothes-rack. No. 882,277; Mar. 17; Sp. p. 3589; Dr. p. 761; Gaz. vol. 133; p. 646.
Teller, J. C., assignor of forty-nine one-hundredths to Z. C. Colborn, Minneapolis, Minn., and W. T. Colborn, Kansas City, Mo. Supplemental draft device for furnaces. No. 881,166; Mar. 10; Sp. p. 1341; Dr. p. 289; Gaz. vol. 133; p. 258.
Temps, H. W., Harburg-on-the-Elbe, Germany. Method of and apparatus for stripping weaving-strips from ratan canes. No. 882,978; Mar. 24; Sp. p. 4948; Dr. p. 1052; Gaz. vol. 133; p. 910.
Terry, W. C., assignor, by mesne assignments, to Macallen Company, Boston, Mass. Strain-insulator. No. 882,979; Mar. 24; Sp. p. 4950; Dr. p. 1053; Gaz. vol. 133; p. 910.
Thatcher, C. B., Bangor, Me. Invisible air-chamber and sponson for canoes. No. 883,588; Mar. 31; Sp. p. 6204; Dr. p. 1322; Gaz. vol. 133; p. 1136.
Therrien, G., Oldtown, Me. Money-drawer. No. 883,676; Mar. 31; Sp. p. 6380; Dr. pp. 1360-1; Gaz. vol. 133; p. 1163.
Theselius, F. G. (See Carlson, O., assignor.)
Thevenet, P. N., Dallas, Tex. Electric-light support. No. 881,742; Mar. 10; Sp. p. 2486; Dr. p. 535; Gaz. vol. 133; p. 443.
Thirot, A. J. M., Bourges, assignor to himself, and L. A. Mage, Avignon, France. Electrolytic production of pure tin. No. 883,589; Mar. 31; Sp. p. 6204; Gaz. vol. 133; p. 1136.
Thomas, A., Worcester, Mass. Spraying device for watering streets. No. 883,257; Mar. 31; Sp. p. 5522; Dr. p. 1177; Gaz. vol. 133; p. 1031.
Thomas, A. S. (See Thomas, W. J., assignor.)
Thomas and Betts. (See McMurtrie, A., assignor.)
Thomas, E. (See Pangher, J., assignor.)
Thomas, J. E. (See Johnson, H. P., assignor.)
Thomas, J. P., New York, N. Y. Exercising apparatus. No. 882,181; Mar. 17; Sp. p. 3401; Dr. p. 723; Gaz. vol. 133; p. 615.
Thomas, J. R., assignor to J. A. Fay & Egan Company, Cincinnati, Ohio. Vertical tenoning-machine. No. 882,278; Mar. 17; Sp. p. 3590; Dr. pp. 761-2; Gaz. vol. 133; p. 647.
Thomas, M. E., assignor of three-fourths to W. Hall and E. W. Steele, Ottumwa, Iowa. Auger. No. 882,128; Mar. 17; Sp. p. 3285; Dr. p. 700; Gaz. vol. 133; p. 599.
Thomas, O., and G. Blackwell, Bedford, Ind. Tube-cutter. No. 881,358; Mar. 10; Sp. p. 1726; Dr. p. 372; Gaz. vol. 133; p. 320.
Thomas, P. H., Pittsburg, Pa., assignor to Westinghouse Electric & Manufacturing Company. Electric discharge apparatus. No. 882,218; Mar. 17; Sp. p. 3462; Dr. p. 736; Gaz. vol. 133; p. 626.
Thomas, R. L., San Marcos, Tex. Pipe-cutter. No. 882,432; Mar. 17; Sp. p. 3851; Dr. p. 823; Gaz. vol. 133; p. 697.
Thomas, W. H., New York, N. Y. Printing-machine. No. 881,167; Mar. 10; Sp. p. 1342; Dr. pp. 289-90; Gaz. vol. 133; p. 258.
Thomas, W. J., Grand Rapids, Mich., assignor of one-half to A. S. Thomas, Buffalo, N. Y. Basket. No. 881,500; Mar. 10; Sp. p. 2008; Dr. p. 438; Gaz. vol. 133; p. 365.
Thomas, W. S. (See Cochran, C. M., assignor.)
Thompson, A. P. (See Ellis, J. W., assignor.)
Thompson, B. D., assignor of one-half to C. G. Gustafson, Mount Jewett, Pa. Detachable stopper-holder for bottles. No. 883,590; Mar. 31; Sp. p. 6207; Dr. p. 1323; Gaz. vol. 133; p. 1136.
Thompson, B. F., Malone, N. Y. Combined sash fastener and lift. No. 880,600; Mar. 3; Sp. p. 230; Dr. p. 48; Gaz. vol. 133; p. 40.
Thompson, C. B., Buffalo, N. Y., assignor to American Radiator Company. Steam-trap and air-vent for radiators. No. 882,595; Mar. 24; Sp. p. 4181; Dr. p. 887; Gaz. vol. 133; p. 783.
Thompson, C. T., Philadelphia, Pa., and F. P. Mitchell, Laurel Springs, N. J. Tennis-racket. No. 881,266; Mar. 10; Sp. p. 1544; Dr. p. 332; Gaz. vol. 133; p. 291.
Thompson, J. E., Madrid, N. Y. Front sight for firearms. No. 882,182; Mar. 17; Sp. p. 3403; Dr. p. 723; Gaz. vol. 133; p. 616.
Thompson, J. I., Centerville, Iowa. Gas-engine valve. No. 880,601; Mar. 3; Sp. p. 231; Dr. p. 48; Gaz. vol. 133; p. 40.
Thompson, M. N., Enterprise, Ala. Safety-envelop. No. 880,936; Mar. 3; Sp. p. 910; Dr. p. 196; Gaz. vol. 133; p. 153.
Thompson, T. H., Winfield, Tex. Desk. No. 881,501; Mar. 10; Sp. p. 2009; Dr. p. 438; Gaz. vol. 133; p. 365.
Thoms, R., Schleswig, Germany. Door-lifter. No. 882,029; Mar. 17; Sp. p. 3111; Dr. p. 661; Gaz. vol. 133; p. 566.
Thomson, A. J., Canton, Mass. Leather-stretching-string clamp. No. 880,764; Mar. 3; Sp. p. 557; Dr. p. 118; Gaz. vol. 133; p. 97.
Thomson, D. P., Schenectady, N. Y., assignor to General Electric Company. Cab signal system. No. 881,635; Mar. 10; Sp. p. 2283; Dr. p. 495; Gaz. vol. 133; p. 411.
Thomson, E., Swampscott, Mass., assignor to General Electric Company. Mechanical movement. No. 881,502; Mar. 10; Sp. p. 2011; Dr. pp. 438-9; Gaz. vol. 133; p. 366.
Thomson, W. I., Newark, N. J., assignor to Safety Car Heating & Lighting Company. Dynamo suspension. No. 881,743; Mar. 10; Sp. p. 2488; Dr. p. 536; Gaz. vol. 133; p. 443.
Thomson, W. I., Newark, N. J., assignor to Safety Car Heating & Lighting Company. Car-axle driving-gear for dynamos. No. 881,744; Mar. 10; Sp. p. 2490; Dr. p. 536; Gaz. vol. 133; p. 444.
Thordarson, C. H., Chicago, Ill. High-potential transformer. No. 880,838; Mar. 3; Sp. p. 721; Dr. pp. 151-2; Gaz. vol. 133; p. 122.
Thornburg, M. C. (See Thornburg, R. M. and M. C.)
Thornburg, R. M. and M. C., Muncie, Ind. Power-transmission device. No. 883,431; Mar. 31; Sp. p. 5896; Dr. pp. 1257-9; Gaz. vol. 133; p. 1088.
Thorndike, A. L. (See Young, F., assignor.)
Thortvedt, L., Glyndon, Minn. Ditching-machine. No. 880,937; Mar. 3; Sp. p. 910; Dr. p. 196; Gaz. vol. 133; p. 154.
Thum, O., Grand Rapids, Mich. Throttle-controller. No. 881,088; Mar. 3; Sp. p. 1189; Dr. p. 257; Gaz. vol. 133; p. 202.
Thumler, R. K., assignor to Henry & S. G. Lindeman, New York, N. Y. Lock-slip for automatic pianos. No. 882,433; Mar. 17; Sp. p. 3855; Dr. p. 823; Gaz. vol. 133; p. 697.
Thwaite, B. H., London, England. Making a dustless road-surface. No. 881,035; Mar. 3; Sp. p. 1085; Dr. p. 236; Gaz. vol. 133; p. 186.
Tice, F. B., Polo, Ill. Supplemental hopper for grinding-mills. No. 881,745; Mar. 10; Sp. p. 2493; Dr. p. 537; Gaz. vol. 133; p. 444.
Tietjen, E. A., New York, N. Y. Chafing-shield. No. 882,357; Mar. 17; Sp. p. 3737; Dr. p. 794; Gaz. vol. 133; p. 673.
Tighe, T., and C. S. Cross, New York, N. Y. Automatic street-indicator. No. 881,503; Mar. 10; Sp. p. 2014; Dr. p. 440; Gaz. vol. 133; p. 366.
Tilch, A., Lewiston, Me. Shuttle-binder. No. 880,602; Mar. 3; Sp. p. 234; Dr. p. 48; Gaz. vol. 133; p. 41.
Till, G. W., Philadelphia, Pa. Implement for replacing bridle-tapes in piano-actions. No. 883,502; Mar. 31; Sp. p. 6040; Dr. p. 1289; Gaz. vol. 133; p. 1112.
Tilt, A., *et al.* (See Roeder, G. H., assignor.)
Timochowitsch, S., Moscow, Russia. Ventilating system for rooms and the like. No. 882,219; Mar. 17; Sp. p. 3464; Dr. p. 737; Gaz. vol. 133; p. 626.
Tindall, A. W., Leeds, England. Machine for pressing coats. No. 883,362; Mar. 31; Sp. p. 5724; Dr. p. 1221; Gaz. vol. 133; p. 1054.
Tingdahl, W. J., Lowell, Mass. Furniture. No. 882,656; Mar. 24; Sp. p. 4303; Dr. p. 914; Gaz. vol. 133; p. 804.
Tisdale, J. L. (See Smith, F. H., assignor.)

Titanium Alloy Manufacturing Company. (See Rossi, A. J., assignor.) (Reissue.)
Titsworth, R., Fort Bliss, El Paso, Tex. Fence-post. No. 881,267; Mar. 10; Sp. p. 1545; Dr. p. 333; Gaz. vol. 133; p. 291.
Todd, M. J., assignor to Buffalo Pitts Company, Buffalo, N. Y. Running-gear for dump-wagons. No. 882,358; Mar. 17; Sp. p. 3738; Dr. p. 795; Gaz. vol. 133; p. 673.
Toennes, R., Boonville, Mo. Station-indicator. No. 883,591; Mar. 31; Sp. p. 6208; Dr. p. 1323; Gaz. vol. 133; p. 1137.
Toledo Machine & Tool Company. (See Hinde, H. J., assignor.)
Tolle, W. J., Reesville, Ohio. Sled. No. 883,258; Mar. 31; Sp. p. 5523; Dr. p. 1178; Gaz. vol. 133; p. 1031.
Tombyll, T. H. (See Mitchell and Tombyll.)
Tooth, A., Glenside, Pa. Collar support and closer. No. 880,839; Mar. 3; Sp. p. 725; Dr. p. 152; Gaz. vol. 133; p. 123.
Toporezer, A., assignor of one-half to E. Van der Heyden, New York, N. Y. Instep-supporter. No. 881,635; Mar. 17; Sp. p. 2978; Dr. p. 634; Gaz. vol. 133; p. 548.
Totten, R. C., Pittsburg, Pa. Composition of metal. No. 881,036; Mar. 3; Sp. p. 1087; Gaz. vol. 133; p. 186.
Tov. Tentelevskago Ximicheak Zavoda. (See Eschellmann and Harmuth, assignors.) (Reissue.)
Tovrea, E. A. (See Schmit, F., assignor.)
Towne, J. M., East Orange, N. J., assignor to Safety Car Heating & Lighting Company. Hose-coupling. No. 881,746; Mar. 10; Sp. p. 2494; Dr. p. 537; Gaz. vol. 133; p. 444.
Townsend, L., Evansville, Ind. Artificial-stone fence. No. 881,747; Mar. 10; Sp. p. 2495; Dr. p. 537; Gaz. vol. 133; p. 444.
Traeger, A. E., assignor to A. E. Traeger Specialty Manufacturing Company, Buffalo, N. Y. Toaster. No. 883,432; Mar. 31; Sp. p. 5901; Dr. p. 1259; Gaz. vol. 133; p. 1088.
Traulsen, P., and F. Bundesen, Bergedorf, near Hamburg, Germany. Filter. No. 882,030; Mar. 17; Sp. p. 3112; Dr. p. 661; Gaz. vol. 133; p. 567.
Traut & Hine Manufacturing Company. (See Prentice, G. E., assignor.)
Travis, D. E. (See Heywood and Travis.)
Traxler, C. R., and E. E. Lineback, Winston Salem, N. C. Trolley-pole controller. No. 881,359; Mar. 10; Sp. p. 1729; Dr. p. 372; Gaz. vol. 133; p. 320.
Treadwell, M. H., New York, N. Y. Dumping-car. No. 882,129; Mar. 17; Sp. p. 3287; Dr. p. 701; Gaz. vol. 133; p. 599.
Tredway, W. E., Nardin, Okla. Incubator. No. 881,504; Mar. 10; Sp. p. 2018; Dr. p. 440; Gaz. vol. 133; p. 367.
Tredway, W. E., Blackwell, Okla. Attachment for incubators and brooders. No. 882,657; Mar. 24 Sp. p. 4305; Dr. p. 914; Gaz. vol. 133; p. 804.
Trescott, W. A., Fairport, N. Y. Separating-machine. No. 880,603; Mar. 3; Sp. p. 235; Dr. p. 49; Gaz. vol. 133; p. 41.
Trigger, T. C., St. Thomas, Ontario, Canada. Dental cavity-impression tray. No. 883,592; Mar. 31; Sp. p. 6209; Dr. p. 1324; Gaz. vol. 133; p. 1137.
Trippensee, F. J., assignor to Trippensee Manufacturing Company, Detroit, Mich. Planetarium. No. 881,875; Mar. 10; Sp. p. 2763; Dr. pp. 502-3; Gaz. vol. 133; p. 488.
Trippensee Manufacturing Company. (See Trippensee, F. J., assignor.)
Triumph Voting Machine Company. (See Abbott, C. C., assignor.)
Troell, C. T., Seguin, Tex. Lineman's portable telegraph and telephone pole seat. No. 882,850; Mar. 24; Sp. p. 4701; Dr. p. 999; Gaz. vol. 133; p. 867.
Truax, B. F., Keosauqua, Iowa. Copy-holder. No. 882,220; Mar. 17; Sp. p. 3466; Dr. p. 737; Gaz. vol. 133; p. 626.
Trumbull Electric Manufacturing Company. (See Wheeler, F. T., assignor.)
Truscott Boat Manufacturing Company. (See Truscott, J. M. and E. E., assignors.)
Truscott, E. E. (See Truscott, J. M. and E. E.)
Truscott, J. M. and E. E., assignors to Truscott Boat Manufacturing Company, St. Joseph, Mich. Exhaust-mechanism for explosive-engines. No. 880,604; Mar. 3; Sp. p. 237; Dr. p. 49; Gaz. vol. 133; p. 41.
Tschantz, D. L., Canton, Ohio. Vehicle-hub. No. 880,605; Mar. 3; Sp. p. 239; Dr. p. 49; Gaz. vol. 133; p. 42.
Tucker, T., Oakland, Cal. Submarine projectile. No. 882,980; Mar. 24; Sp. p. 4951; Dr. p. 1053; Gaz. vol. 133; p. 910.
Tueckmantel, H., Newark, N. J. Bottle-stopper. No. 883,259; Mar. 31; Sp. p. 5524; Dr. p. 1178; Gaz. vol. 133; p. 1032.
Tures, W., assignor to Rex Light and Stove Company, Milwaukee, Wis. Hydrocarbon-lamp. No. 883,152; Mar. 24; Sp. p. 5290; Dr. p. 1128; Gaz. vol. 133; p. 996.
Turner, F. G. (See Lee, C. S., assignor.)
Turner-Fricke Manufacturing Company. (See Fricke and Turner, assignors.)
Turner, G. E. (See Fricke and Turner.)
Turner, M., Steamboat Springs, Colo. Vehicle-coupling. No. 882,981; Mar. 24; Sp. p. 4954; Dr. pp. 1053-4; Gaz. vol. 133; p. 911.
Turner, W. V., Wilkinsburg, assignor to Westinghouse Air Brake Company, Pittsburg, Pa. Engineer's brake-valve. No. 882,596; Mar. 24; Sp. p. 4182; Dr. p. 887; Gaz. vol. 133; p. 784.
Turner, W. V., Wilkinsburg, assignor to Westinghouse Air Brake Company, Pittsburg, Pa. Air-brake. No. 882,918; Mar. 24; Sp. p. 4833; Dr. p. 1026; Gaz. vol. 133; p. 889.
Turney, A., Kansas City, Mo. Sanitary floor for animal-stalls. No. 880,700; Mar. 3; Sp. p. 411; Dr. p. 88; Gaz. vol. 133; p. 74.
Tuson, C. R., Windsor, Ontario, Canada. Combination kitchen utensil. No. 881,268; Mar. 10; Sp. p. 1546; Dr. p. 333; Gaz. vol. 133; p. 291.
Tverdahl, E. A., assignor of one-half to C. W. Burrows, Coshocton, Ohio. Chill-mold. No. 882,507; Mar. 17; Sp. p. 3983; Dr. p. 851; Gaz. vol. 133; p. 721.
Twin Bottle-Cap Company. (See Robinson, F. T., assignor.)
Tyler, D. G., *et al.* (See Carroll, W. N., assignor.)
Ulenast, E., Zurich, Switzerland. Conveyer for drying apparatus. No. 880,606; Mar. 3; Sp. p. 241; Dr. p. 50; Gaz. vol. 133; p. 42.
Uhlmann, G., Dresden, Germany. Delivery apparatus. No. 882,031; Mar. 17; Sp. p. 3114; Dr. p. 662; Gaz. vol. 133; p. 567.
Ulrich, J. O., Tamaqua, Pa. Railway-track structure. No. 883,063; Mar. 24; Sp. p. 5102; Dr. p. 1089; Gaz. vol. 133; p. 936.
Underwood, C. W., Crowley, La. Telephone-relay. No. 881,360; Mar. 10; Sp. p. 1731; Dr. pp. 372-3; Gaz. vol. 133; p. 321.
Underwood, L. E., and R. W. Douglass, Lynn, Mass., assignors to General Electric Company. Balancer set. No. 881,636; Mar. 10; Sp. p. 2285; Dr. p. 495; Gaz. vol. 133; p. 411.
Underwood Typewriter Company. (See Gibbs, C., assignor.)
Underwood Typewriter Company. (See Kelley, C. E., assignor.)
Underwood Typewriter Company. (See McLaughlin, J. C., assignor.)
Underwood Typewriter Company. (See Smith, S. T., Jr., assignor.)
Union Special Machine Company. (See Scott, G., assignor.)
Union Switch & Signal Company. (See Taylor, J. D., assignor.)
Union Typewriter Company. (See Felbel, J., assignor.)
Union Typewriter Company. (See Sholes, Z. G., assignor.)
United Printing Machinery Company. (See Fletcher, K. B., assignor.)
United Shirt and Collar Company. (See Pine, J. K. P., assignor.)
United Shoe Machinery Company. (See Allen, C. L., assignor.)
United Shoe Machinery Company. (See Elliott, A. D., assignor.)
United Shoe Machinery Company. (See Hadaway, J. B., assignor.)
United Shoe Machinery Company. (See Lund, T., assignor.)
United Shoe Machinery Company. (See Mayo, B. F., assignor.)
United Shoe Machinery Company. (See Shaw, L. H., assignor.)
United States Envelope Co. (See Heywood and Travis, assignors.)
United States Fastener Company. (See Richardson, W. S., assignor.)
United States Persian Carpet Company. (See Dalkranian, J. K., assignor.)
United Store Service and Tube Company. (See Waterhouse, H. D., assignor.)
United Traction Improvement Company. (See Harkness, C., assignor.)
Universal Horse Collar Fastener Company. (See Estes, W. B., assignor.)
Urban, A. G., Johnstown, Pa. Folding square. No. 882,130; Mar. 17; Sp. p. 3289; Dr. p. 701; Gaz. vol. 133; p. 599.
Urick, J. M., Ironton, Ohio. Sash-fastener. No. 883,593; Mar. 31; Sp. p. 6210; Dr. p. 1324; Gaz. vol. 133; p. 1137.
Utter, C., Lebanon, Ind. Razor-blade holder. No. 880,765; Mar. 3; Sp. p. 558; Dr. p. 118; Gaz. vol. 133; p. 97.
Utz, H. B., College Hill, Ohio. Book-holder. No. 883,433; Mar. 31; Sp. p. 5903; Dr. p. 1260; Gaz. vol. 133; p. 1089.
Vacuum and Compressor Company. (See Moughler, W. F., assignor.)
Valerius, T. L., Fort Atkinson, Wis., assignor to Creamery Package Mfg. Company, Chicago, Ill. Ice-cream freezer. No. 882,032; Mar. 17; Sp. p. 3115; Dr. p. 662; Gaz. vol. 133; p. 567.
Valerius, T. L., Fort Atkinson, Wis., assignor to Creamery Package Mfg Company, Chicago, Ill. Ice-cream freezer. No. 883,064; Mar. 24; Sp. p. 5104; Dr. p. 1089; Gaz. vol. 133; p. 936.
Van Cise, W. M., Summit, N. J., and J. F. Chambers, Washington, D. C. Clamping and locking device. No. 881,975; Mar. 17; Sp. p. 2978; Dr. p. 634; Gaz. vol. 133; p. 549.
Van der Heyden, E. (See Toporczer, A., assignor.)
Van Duser, A., Eureka, Cal. Buckle. No. 881,976; Mar. 17; Sp. p. 2980; Dr. p. 635; Gaz. vol. 133; p. 549.
Van Hook, F. P., Normal, Ill. Concrete fence-post. No. 882,131; Mar. 17; Sp. p. 3291; Dr. p. 701; Gaz. vol. 133; p. 600.

Van Horn, W., Piqua, Ohio. Weather-strip. No. 881,261; Mar. 10; Sp. p. 1735; Dr. p. 373; Gaz. vol. 133; p. 321.
Van Houten, J. W., Amsterdam, Netherlands. Device for stretching the strings of musical instruments. No. 881,269; Mar. 10; Sp. p. 1547; Dr. p. 333; Gaz. vol. 133; p. 291.
Van, M. (See Teasley and Van.)
Van Ness, M. B., Welsh, La. Well tube and strainer. No. 882,359; Mar. 17; Sp. p. 3739; Dr. p. 795; Gaz. vol. 133; p. 673.
Van Rinsum, A. W., Altoona, Iowa. Tank-heater. No. 881,302; Mar. 10; Sp. p. 1736; Dr. p. 373; Gaz. vol. 133; p. 321.
Van Sant, W. S., Oakland, Cal. Amusement device. No. 881,637; Mar. 10; Sp. p. 2287; Dr. pp. 495–6; Gaz. vol. 133; p. 411.
Van Stockum, A. J., Amsterdam, Netherlands. Steering apparatus for torpedoes. No. 882,962; Mar. 24; Sp. p. 4955; Dr. pp. 1054–5; Gaz. vol. 133; p. 911.
Van Tassel, J. R., Geneva, N. Y. Mounting for eyeglasses. No. 881,506; Mar. 10; Sp. p. 2022; Dr. p. 441; Gaz. vol. 133; p. 367.
Van Valkenburg, H. L., Pittsburg, Pa., assignor to Westinghouse Electric & Manufacturing Company. Control system for electric motors. No. 882,658; Mar. 24; Sp. p. 4206; Dr. p. 914; Gaz. vol. 133; p. 805.
Van Zeck, F. (See Zeck and Van Zeck.)
Vance, F. M., Geneva, N. Y. Eyeglasses. No. 881,833; Mar. 10; Sp. p. 2662; Dr. p. 570; Gaz. vol. 133; p. 473.
Vance, H. E., Columbus, Ohio. Fireproof blind. No. 880,701; Mar. 3; Sp. p. 413; Dr. p. 80; Gaz. vol. 133; p. 74.
Vance, W. H., Denver, Colo. Amusement apparatus. No. 881,505; Mar. 10; Sp. p. 2019; Dr. pp 440–1; Gaz. vol. 133; p. 367.
Vandervort, C. L., Enderlin, N. D. Car-door. No. 880,766; Mar. 3; Sp. p. 561; Dr. pp. 118–19; Gaz. vol. 133; p. 97.
Vandiver, J. W., *et al.* (See Vandiver, L. A., assignor.)
Vandiver, L. A., Hannibal, assignor of one-half to J. W. Vandiver, Hagers Grove, Mo., and R. H. Viager, Chicago, Ill. Spurious-coin detector. No. 881,037; Mar. 3; Sp. p. 1088; Dr. p. 236; Gaz. vol. 133; p. 186.
Vandiver, L. A., Hannibal, assignor of one-half to J. W. Vandiver, Hagers Grove, Mo., and R. H. Viager, Chicago, Ill. Coin-operated mechanism for vending-machines. No. 881,089; Mar. 3; Sp. p. 1191; Dr. p. 258; Gaz. vol. 133; p. 202.
Vanes, A. B., Uitenhage, Cape Colony. Letter-copying device. No. 882,063; Mar. 17; Sp. p. 3216; Dr. p. 663; Gaz. vol. 133; p. 585.
Varney, C. F., New York, N. Y. Reinforced bar for concrete. No. 881,834; Mar. 10; Sp. p. 2663; Dr. p. 570; Gaz. vol. 133; p. 473.
Vaudreuil, E. J., Two Rivers, Wis. Separator. No. 882,084; Mar. 17; Sp. p. 3217; Dr. p. 683; Gaz. vol. 133; p. 585.
Vearing, W. W., Philadelphia, Pa. Bowling-alley. No. 882,851; Mar. 24; Sp. p. 4702; Dr. p. 999; Gaz. vol. 133; p. 868.
Veitch, T., New York, N. Y., assignor to International Patent Corporation, Jersey City, N. J. Internal-combustion engine. No. 882,221; Mar. 17; Sp. p. 3467; Dr. p. 738; Gaz. vol. 133; p. 627.
Velox Manufacturing Company. (See Bolger, R. S., assignor.)
Ventilated Cushion and Spring Company. (See Smith, W. R., assignor.)
Ventilating Shoe Tree Co. (See Post, T. W., assignor.)
Vero, E. (See Wilhelm and Vero.)
Verrill, E. C. (See Crosby, R. A., assignor.)
Vest, E. W., Tacoma, Wash. Water-heating attachment for ranges, &c. No. 882,541; Mar. 17; Sp. p. 4072; Dr. p. 826; Gaz. vol. 133; p. 734.
Vickers, E. J., New Philadelphia, Ohio. Account-file. No. 881,363; Mar. 10; Sp. p. 1737; Dr. p. 374; Gaz. vol. 133; p. 322.
Vidal Typewriter Company. (See Sorensen, C. M., assignor.)
Viel, E., Rennes, France. Obtaining metals and alloys by reduction. No. 883,594; Mar. 31; Sp. p. 6211; Dr. p. 1324; Gaz. vol. 133; p. 1137.
Viel, E., Rennes, France. Apparatus for obtaining metals and alloys. No. 883,595; Mar. 31; Sp. p. 6213; Dr. p. 1324; Gaz. vol. 133; p. 1138.
Vilter Manufacturing Company. (See Barthold, F., assignor.)
Vincent, S. W., Nashua, N. H. Rotary engine. No. 882,360; Mar. 17; Sp. p. 3740; Dr. pp. 795–6; Gaz. vol. 133; p. 673.
Vining, D. P. (See Haight, A. M., assignor.)
Vinson, C. C., Wichita, Kans. Valve-gear. No. 881,748; Mar. 10; Sp. p. 2496; Dr. pp. 537–8; Gaz. vol. 133; p. 445.
Vinton, J. H., Boston, Mass. Metallic protector for heels or soles of boots and shoes. No. 882,542; Mar. 17; Sp. p. 4074; Dr. p. 827; Gaz. vol. 133; p. 734.
Virginia Laboratory Company. (See Kügelgen and Seward, assignors.)
Virginia Laboratory Company. (See Seward and Kügelgen, assignors.)
Virgo, J. E., Bridgeport, Conn. Nut-lock. No. 880,939; Mar. 3; Sp. p. 915; Dr. p. 197; Gaz. vol. 133; p. 154.
Visger, R. H., *et al.* (See Vandiver, L. A., assignor.)
Vlajnic, S., McKeesport, Pa. Rail-joint. No. 880,938; Mar. 3; Sp. p. 914; Dr. p. 197; Gaz. vol. 133; p. 154.
Vogt, H. H. (See Winsor, B. V., assignor.)
Voigt, A. (See Nellen and Voigt.)
Voit, W. (See Lentz and Voit.)
Vold, L. H., Westville, N. J., assignor to William Sellers & Company, Incorporated, Philadelphia, Pa. Lathe-driver. No. 881,749; Mar. 10; Sp. p. 2498; Dr. p. 538; Gaz. vol. 133; p. 445.
Völker, P., assignor to P. Heyartz, Cologne, Germany. Antifriction thrust-bearing. No. 881,876; Mar. 10; Sp. p. 2766; Dr. p. 593; Gaz. vol. 133; p. 488.
Vollmayer, W. G. (See Hamel and Vollmayer.)
Voorhels, E. C., Sutter Creek, Cal. Fluid-fuel furnace. No. 883,260; Mar. 31; Sp. p. 5525; Dr. p. 1178; Gaz. vol. 133; p. 1032.
Voss, C., Neümunster, Germany. Leather-rolling press. No. 882,033; Mar. 17; Sp. p. 3119; Dr. p. 662; Gaz. vol. 133; p. 567.
Vrana, T., and B. Schiba; said Vrana assignor to J. Renz, New York, N. Y. Pneumatic-valve mechanism. No. 883,055; Mar. 24; Sp. p. 5107; Dr. p. 1089; Gaz. vol. 133; p. 937.
Vroom, G. H., Columbus, Ohio. Bookkeeping system and leaf forming part of the same. No. 881,750; Mar. 10; Sp. p. 2501; Dr. pp. 538–9; Gaz. vol. 133; p. 445.
Vulcan Iron Works Company. (See Webber, J. B., Jr., assignor.)
W. F. Bossert Manufacturing Company. (See Williams, H. C., assignor.)
Wachsmann, O., *et al.* (See Shank, A. W., assignor.)
Wade, W. B., Ridgeway, Va. Valve mechanism. No. 883,123; Mar. 24; Sp. p. 5235; Dr. p. 1117; Gaz. vol. 133; p. 957.
Waggner, B. G., Philadelphia, Pa. Prepayment gas-meter. No. 880,767; Mar. 3; Sp. p. 563; Dr. p. 119; Gaz. vol. 133; p. 97.
Wagner, C. (See Pennell, C. L., assignor.)
Wagner, C. J., Chicago, Ill. Electric bell. No. 880,940; Mar. 3; Sp. p. 916; Dr. p. 197; Gaz. vol. 133; p. 155.
Wagner, J. (See Baecker, A., assignor.)
Wagner Manufacturing Company. (See Wells and Fuller, assignors.)
Wagner, P. F., Greensburg, Ind. Combined window-shade and lace-curtain hanger. No. 881,977; Mar. 17; Sp. p. 2983; Dr. p. 635; Gaz. vol. 133; p. 549.
Wagner, W. (See Jewell and Wagner.)
Wahler, O. J., Leavenworth, Kans. Machine for treating broom-corn. No. 883,596; Mar. 31; Sp. p. 6215; Dr. p. 1325; Gaz. vol. 133; p. 1138.
Walt, C. E., Knoxville, Tenn. Bread and process of making same. No. 882,852; Mar. 24; Sp. p. 4703; Gaz. vol. 133; p. 868.
Waite, G. B., New York, N. Y. Centering for fireproof floor constructions. No. 883,434; Mar. 31; Sp. p. 5005; Dr. p. 1260; Gaz. vol. 133; p. 1089.
Waldburger, J. A., McKeesport, assignor to Forter Miller Engineering Company, Pittsburg, Pa. Furnace. No. 880,840; Mar. 3; Sp. p. 726; Dr. pp. 152–3; Gaz. vol. 133; p. 123.
Walden, W. E., assignor of one-half to W. S. Hale, Marietta, Okla. Means for attaching implements to cultivator-frames. No. 883,435; Mar. 31; Sp. p. 5007; Dr. p. 1261; Gaz. vol. 133; p. 1090.
Waldinger, G. A., and C. F. Iserloth, assignors to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany. Dyeing. No. 882,543; Mar. 17; Sp. p. 4075; Gaz. vol. 133; p. 734.
Waldmann, G., Geestemünde, Germany. Device for raising liquids. No. 882,725; Mar. 24; Sp. p. 4439; Dr. p. 944; Gaz. vol. 133; p. 826.
Waldorf, C. E., Bridgeport, Conn. Shade-bracket. No. 880,941; Mar. 3; Sp. p. 918; Dr. p. 197; Gaz. vol. 133; p. 155.
Wales, C., assignor to Adder Machine Company, Detroit, Mich. Pneumatic motor for adding-machines. No. 880,607; Mar. 3; Sp. p. 243; Dr. p. 50; Gaz. vol. 133; p. 42.
Walgren, S. P., Worthington, Minn. Land-roller. No. 880,608; Mar. 3; Sp. p. 245; Dr. p. 50; Gaz. vol. 133; p. 43.
Walker, A. (See Walker, A. E., A., and G.)
Walker, A. E., A., and G., Norwood Green, near Halifax, England. Shuttle-box for rotary-box looms. No. 882,361; Mar 17; Sp. p. 3741; Dr. p. 796; Gaz. vol. 133; p. 674.
Walker, A. U., *et al.* (See Williams, H. R., assignor.)
Walker, F. H., Atwood, Kans. Starting device for internal-combustion engines. No. 882,507; Mar. 24; Sp. p. 4185; Dr. p. 887; Gaz. vol. 133; p. 794.
Walker, G. (See Walker, A. E., A., and G.)
Walker, G., assignor of two-thirds to J. Burnstiel, Carnegie, and M. Zeugschmidt, Pittsburg, Pa. Curtain and pole holder. No. 882,853; Mar. 24; Sp. p. 4704; Dr. p. 1000; Gaz. vol. 133; p. 868.
Walker, J. C., Waco, Tex. Rotary explosive-engine. No. 883,363; Mar. 31; Sp. p. 5724; Dr. pp. 1221–2; Gaz. vol. 133; p. 1054.
Walker, T. H., Kansas City, Mo. Sheet-metal radiator manufacture. No. 881,270; Mar. 10; Sp. p. 1547; Dr. p. 333; Gaz. vol. 133; p. 292.
Walker, T. H., Kansas City, Mo. Fire protective system. No. 881,271; Mar. 10; Sp. p. 1551; Dr. p. 334; Gaz. vol. 133; p. 292.

Wall, C. F., and C. Salle, Philadelphia, Pa.; said Salle assignor to said Wall. Machine for grinding toric lenses. No. 881,168; Mar. 10; Sp. p. 1345; Dr. p. 290; Gaz. vol. 133; p. 259.
Wallen, C. J., assignor to C. Lindbeck and C. Swanson, Jamestown, N. Y. Roller window-screen. No. 881,507; Mar. 10; Sp. p. 2023; Dr. p. 441; Gaz. vol. 133; p. 367.
Waller, C. (See Waller, G. E., C., and R. J.)
Waller, G. E., C., and R. J., Halls Summit, Kans. Combined corn harvester and shocker. No. 883,597; Mar. 31; Sp. p. 6217; Dr. pp. 1325–6; Gaz. vol. 133; p. 1138.
Waller, R. J. (See Waller, G. E., C., and R. J.)
Wallerstein, F., Brooklyn, N. Y. Clothes-beating apparatus. No. 881,978; Mar. 17; Sp. p. 2985; Dr. pp. 635–6; Gaz. vol. 133; p. 555.
Wallis, M. O., administratrix. (See Wallis, T. H.)
Wallis, T. H., deceased, Ocala, Fla.; M. O. Wallis, administratrix, assignor to W. J. Acosta, Greyton, Ga. Syringe. No. 883,153; Mar. 24; Sp. p. 5292; Dr. p. 1129; Gaz. vol. 133; p. 967.
Walrath, A. A., Fort Plain, N. Y. Game apparatus. No. 881,835; Mar. 10; Sp. p. 2665; Dr. p. 570; Gaz. vol. 133; p. 474.
Walter, M., Paterson, N. J. Lease-reed. No. 881,169; Mar. 10; Sp. p. 1349; Dr. p. 291; Gaz. vol. 133; p. 259.
Walter, M. L., Kramer, N. D. Envelop. No. 883,304; Mar. 31; Sp. p. 5730; Dr. p. 1222; Gaz. vol. 133; p. 1054.
Walter R. Johnston Manufacturing Company. (See Johnston, W. R., assignor.)
Ward, E. J., Chicago, Ill. Derrick. No. 882,034; Mar. 17; Sp. p. 3120; Dr. p. 663; Gaz. vol. 133; p. 568.
Ward, O. P., Canton, Pa. Gun-cleaner. No. 882,598; Mar. 24; Sp. p. 4186; Dr. p. 888; Gaz. vol. 133; p. 784.
Ward-Stilson Company. (See Post, C. B., assignor.)
Wardwell, S. W., Providence, R. I. Winding-machine. No. 881,210; Mar. 10; Sp. p. 1420; Dr. p. 307; Gaz. vol. 133; p. 271.
Wardwell, S. W., Providence, R. I. Winding-machine. No. 881,211; Mar. 10; Sp. p. 1425; Dr. p. 308; Gaz. vol. 133; p. 272.
Warfel, H. C., assignor of one-half to T. G. McCausland, Philipsburg, Pa. Umbrella crown and runner. No. 883,503; Mar. 31; Sp. p. 6041; Dr. p. 1289; Gaz. vol. 133; p. 1112.
Waring, A. B., Yonkers, N. Y. Hat-blocking-machine. No. 881,508; Mar. 10; Sp. p. 2024; Dr. p. 441; Gaz. vol. 133; p. 368.
Waring, A. B., Yonkers, N. Y. Hat-blocking machine. No. 881,509; Mar. 10; Sp. p. 2026; Dr. p. 442; Gaz. vol. 133; p. 368.
Waring Hat M'f'g Co. (See Segschneider, G., assignor.)
Warman, W. A., Moncton, New Brunswick, Canada. Machine for gathering and transporting snow. No. 882,132; Mar. 17; Sp. p. 3291; Dr. p. 702; Gaz. vol. 133; p. 600.
Warner, E. E., Hartford, Conn. Wing for flying-machines. No. 881,836; Mar. 10; Sp. p. 2666; Dr. p. 571; Gaz. vol. 133; p. 474.
Warren, J. A., Surry, Va. Peanut-picker. No. 881,979; Mar. 17; Sp. p. 2986; Dr. pp. 636–9; Gaz. vol. 133; p. 550.
Warren, L. E., and A. Anderson, New York, N. Y. Friction-clutch. No. 881,510; Mar. 10; Sp. p. 2028; Dr. p. 442; Gaz. vol. 133; p. 369.
Warren, M., Rochester, N. Y. Fluid-pressure generator. No. 882,085; Mar. 17; Sp. p. 3219; Dr. p. 684; Gaz. vol. 133; p. 586.
Warren, W. S., assignor of one-half to G. A. Moore, Chicago, Ill. Toilet comb. No. 883,598; Mar. 31; Sp. p. 6219; Dr. p. 1326; Gaz. vol. 133; p. 1138.
Washburn, E. C., Minneapolis, Minn. Spring-cushion. No. 882,279; Mar. 17; Sp. p. 3592; Dr. p. 762; Gaz. vol. 133; p. 647.
Washburn, E. C., Minneapolis, Minn. Bumper-beam draft-rigging. No. 883,677; Mar. 31; Sp. p. 6383; Dr. p. 1361; Gaz. vol. 133; p. 1164.
Washburn, J. W., F. P. Roney, Minneapolis, and B. H. Börreson, St. Paul, Minn. Temporary shoe-lacing. No. 882,919; Mar. 24; Sp. p. 4836; Dr. p. 1026; Gaz. vol. 133; p. 889.
Washington, D. E., assignor of one-half to C. W. Patton, Chicago, Ill. Conveyer. No. 881,212; Mar. 10; Sp. p. 1431; Dr. pp. 306–9; Gaz. vol. 133; p. 272.
Waterbury Buckle Co. (See Buchanan, J. J., assignor.)
Waterbury Buckle Co. (See Moore, R. A., Jr., assignor.)
Waterhouse, H. D., Quincy, assignor to United Store Service and Tube Company, Boston, Mass. Sending mechanism for pneumatic-despatch apparatus. No. 881,980; Mar. 17; Sp. p. 2991; Dr. p. 639; Gaz. vol. 133; p. 550.
Waterman, L. E., assignor to Emerson Manufacturing Company, Rockford, Ill. Corn-planter. No. 880,841; Mar. 3; Sp. p. 728; Dr. pp. 153–4; Gaz. vol. 133; p. 123.
Waterman, L. E., assignor to Emerson Manufacturing Company, Rockford, Ill. Agricultural implement. No. 880,842; Mar. 3; Sp. p. 730; Dr. pp. 154–5; Gaz. vol. 133; p. 123.
Waterman, L. E., assignor to Emerson Manufacturing Company, Rockford, Ill. Disk harrow. No. 880,843; Mar. 3; Sp. p. 732; Dr. p. 155; Gaz. vol. 133; p. 124.
Waters, B. L., Aurora, Ill. Bench-drawer. No. 881,511; Mar. 10; Sp. p. 2031; Dr. p. 443; Gaz. vol. 133; p. 369.
Watkins, F. M. B., Lapeer, Mich. Heat-retaining cover for flat-irons. No. 880,942; Mar. 3; Sp. p. 919; Dr. p. 198; Gaz. vol. 133; p. 155.
Watson, R. D., Toledo, Ohio. Drafting device. No. 881,981; Mar. 17; Sp. p. 2994; Dr. p. 639; Gaz. vol. 133; p. 551.
Watters, A., Chicago, Ill. Loose-leaf book. No. 883,154; Mar. 24; Sp. p. 5292; Dr. p. 1129; Gaz. vol. 133; p. 967.
Wattles, C. B., Providence, R. I., assignor, by mesne assignments, to Electric Floor Surfacer Company, Gardiner, Me. Floor-dressing machine. No. 881,638; Mar. 10; Sp. p. 2289; Dr. p. 496; Gaz. vol. 133; p. 412.
Wattles, C. B., Providence, R. I., assignor, by mesne assignments, to Electric Floor Surfacer Company, Gardiner, Me. Floor-dressing machine. No. 881,639; Mar. 10; Sp. p. 2291; Dr. p. 496; Gaz. vol. 133; p. 412.
Watts, T. P., Kansas City, Mo. Gas heating apparatus. No. 880,844; Mar. 3; Sp. p. 733; Dr. p. 155; Gaz. vol. 133; p. 124.
Watts, W., Spring Grove, Ill. Mail-crane. No. 880,609; Mar. 3; Sp. p. 246; Dr. p. 51; Gaz. vol. 133; p. 43.
Waugh, D. K. (See Hanna and Waugh.)
Way, L. D., Rugby, N. D. Safety window-catch. No. 880,610; Mar. 3; Sp. p. 247; Dr. p. 51; Gaz. vol. 133; p. 43.
Weant, W. A., Mocksville, N. C. Fluid-pressure railway-brake. No. 881,751; Mar. 10; Sp. p. 2502; Dr. p. 539; Gaz. vol. 133; p. 446.
Weant, W. A., Mocksville, N. C. Triple valve. No. 882,599; Mar. 24; Sp. p. 4187; Dr. p. 888; Gaz. vol. 133; p. 784.
Weaver, B. L., and C. W. Reinoehl, Steelton, Pa. Heel-block for railway-frogs and the like. No. 881,982; Mar. 17; Sp. p. 2996; Dr. p. 640; Gaz. vol. 133; p. 551.
Weaver, B. L., and C. W. Reinoehl, Steelton, Pa. Heel-block for railway-frogs and the like. No. 881,983; Mar. 17; Sp. p. 2997; Dr. p. 640; Gaz. vol. 133; p. 552.
Weaver, B. L., and C. W. Reinoehl, Steelton, Pa. Heel-block for railway-frogs and the like. No. 881,984; Mar. 17; Sp. p. 2998; Dr. p. 640; Gaz. vol. 133; p. 552.
Weaver, I. A., assignor to Racine-Sattley Company, Springfield, Ill. Wheeled plow. No. 883,365; Mar. 31; Sp. p. 5731; Dr. p. 1222; Gaz. vol. 133; p. 1065.
Weaver, I. A., assignor to Racine-Sattley Company, Springfield, Ill. Wheeled plow. No. 883,678; Mar. 31; Sp. p. 6384; Dr. p. 1362; Gaz. vol. 133; p. 1164.
Weaver, W. S., Bethlehem, Pa. Folding milk-bottle receptacle. No. 882,854; Mar. 24; Sp. p. 4706; Dr. p. 1000; Gaz. vol. 133; p. 868.
Webber, J. B., Jr., assignor to Vulcan Iron Works Company, Toledo, Ohio. Power-shovel jack-arm and mounting. No. 882,086; Mar. 17; Sp. p. 3221; Dr. p. 684; Gaz. vol. 133; p. 586.
Weber, C., Columbus, Ohio. Water-motor. No. 883,504; Mar. 31; Sp. p. 6042; Dr. p. 1289; Gaz. vol. 133; p. 1113.
Weber, H. J. (See Weber, M. J. and H. J.)
Weber, M. J. and H. J., Chicago, Ill. Core-arbor. No. 881,090; Mar. 3; Sp. p. 1194; Dr. p. 258; Gaz. vol. 133; p. 203.
Weborg, A., Jamestown, N. Y. Furniture-spring. No. 882,600; Mar. 24; Sp. p. 4191; Dr. p. 888; Gaz. vol. 133; p. 785.
Webster, C. E. (See Finnegan and Webster.)
Webster, J., Chicago, Ill. Wind-shield. No. 883,261; Mar. 31; Sp. p. 5527; Dr. p. 1179; Gaz. vol. 133; p. 1032.
Wedeking, W. M., and H. Jacobi, Abbotsford, Wis. Draft-equalizer. No. 883,599; Mar. 31; Sp. p. 6220; Dr. p. 1326; Gaz. vol. 133; p. 1139.
Weeks, W. C., Spokane, Wash. Excavating apparatus. No. 882,726; Mar. 24; Sp. p. 4440; Dr. p. 944; Gaz. vol. 133; p. 826.
Weingärtner, E., *et al.* (See Müller-Jacobs, A., assignor.)
Weinrich, M., Yonkers, N. Y., assignor of one-third to C. Portius, Halle-on-the-Saale, Germany. Treating sugar-beets. No. 881,641; Mar. 10; Sp. p. 2294; Dr. p. 497; Gaz. vol. 133; p. 413.
Weis, A. W. D., Waterloo, and J. Starman, Cedar Rapids, Iowa; said Starman assignor to said Weis. Cell-case machine. No. 880,845; Mar. 3; Sp. p. 734; Dr. pp. 155–6; Gaz. vol. 133; p. 124.
Weisenbach, C. and J., Pittsburg, Pa. Toy oil-well. No. 880,943; Mar. 3; Sp. p. 920; Dr. p. 198; Gaz. vol. 133; p. 155.
Weisenbach, J. (See Weisenbach, C. and J.)
Weiser, O. T., assignor to S. Lubin, Philadelphia, Pa. Moving-picture-projecting machine. No. 881,512; Mar. 10; Sp. p. 2032; Dr. p. 443; Gaz. vol. 133; p. 369.
Weiss, A., and E. Nagel, Fredericksburg, Tex. Stone-drilling machine. No. 882,805; Mar. 24; Sp. p. 4660; Dr. p. 980; Gaz. vol. 133; p. 852.
Weiss, A. R., Jr., Hilchenbach, Germany. Extraction of glue from mineral-dressed or chrome-tanned leather. No. 882,481; Mar. 17; Sp. p. 3939; Gaz. vol. 133; p. 713.
Welch, J. R., assignor to Keefer-Heart Iron and Steel Company, Alexandria, Ind. Trimming-machine. No. 881,213; Mar. 10; Sp. p. 1435; Dr. pp. 309–10; Gaz. vol. 133; p. 272.
Welch, J. R., assignor to Keefer-Heart Iron and Steel Company, Alexandria, Ind. Bending-machine. No. 882,133; Mar. 17; Sp. p. 3295; Dr. pp. 702–3; Gaz. vol. 133; p. 600.
Welch, J. R., assignor to Keefer-Heart Iron and Steel Company, Alexandria, Ind. Wheel-assembling machine. No. 882,855; Mar. 24; Sp. p. 4707; Dr. p. 1001; Gaz. vol. 133; p. 869.

Wellman, C. A., Ottumwa, Iowa. Banana-shipping case. No. 880,702; Mar. 3; Sp. p. 414; Dr. p. 89; Gaz. vol. 133; p. 74.
Wellman, H. R., Riverside, assignor to Western Electric Company, Chicago, Ill. Adding-machine attachment. No. 882,806; Mar. 24; Sp. p. 4001; Dr. pp. 980–1; Gaz. vol. 133; p. 852.
Wells, B. O., Charleston, Ill., assignor to Sterling Electric Company, La Fayette, Ind. Plug-seat switch. No. 881,985; Mar. 17; Sp. p. 2999; Dr. p. 640; Gaz. vol. 133; p. 552.
Wells, E. J., and J. M. Fuller, Nashua, assignors to Wagner Manufacturing Company, Blackhawk county, Iowa. Hay-rack. No. 881,752; Mar. 10; Sp. p. 2506; Dr. pp. 539–40; Gaz. vol. 133; p. 446.
Wells, G. H., Neinda, Tex. Harrow. No. 883,436; Mar. 31; Sp. p. 5008; Dr. p. 1261; Gaz. vol. 133; p. 1000.
Wells, H. L., New Haven, Conn. Coffee-pot. No. 882,183; Mar. 17; Sp. p. 3404; Dr. pp. 723–4; Gaz. vol. 133; p. 616.
Wells, S., Schaller, Iowa. Gas street-light extinguisher. No. 883,262; Mar. 31; Sp. p. 5529; Dr. p. 1179; Gaz. vol. 133; p. 1032.
Welton, C. E. (See Gunter and Welton.)
Wenrich, E. Z., Washington township, Monroe county, assignor of one-half to W. H. Corns, Baker township, Ind. Nut-lock washer. No. 883,505; Mar. 31; Sp. p. 6044; Dr. p. 1209; Gaz. vol. 133; p. 1113.
Wentworth, F. B., Independence, Kans. Tank. No. 880,846; Mar. 3; Sp. p. 738; Dr. p. 156; Gaz. vol. 133; p. 125.
Wentworth, L. C., Webster, Mass. Adjustable chair. No. 882,983; Mar. 24; Sp. p. 4057; Dr. p. 1055; Gaz. vol. 133; p. 911.
Wengs, J., Monroe, Mich. Cement-block machine. No. 881,513; Mar. 10; Sp. p. 2033; Dr. p. 444; Gaz. vol. 133; p. 369.
Wermerskirchen, A. W., Chicago, Ill. Display-book. No. 880,611; Mar. 3; Sp. p. 248; Dr. p. 51; Gaz. vol. 133; p. 44.
Wernicke, C. G. W., Minneapolis, Minn. Safety tooth-catcher for threshing-machines. No. 882,035; Mar. 17; Sp. p. 3122; Dr. p. 663; Gaz. vol. 133; p. 568.
Wessa, F. R., Norwood, Ohio. Treating hides. No. 883,124; Mar. 24; Sp. p. 5236; Dr. p. 1117; Gaz. vol. 133; p. 957.
Wessel, K., St. Paul, Minn. Briquet-machine. No. 883,263; Mar. 31; Sp. p. 5531; Dr. pp. 1179–80; Gaz. vol. 133; p. 1035.
Wesson, J. H. (See Call, C. C., assignor.)
Wesson, J. H. (See Neal, E. E., assignor.)
West, H. H., Plymouth, Pa. Music-leaf turner. No. 882,036; Mar. 17; Sp. p. 3123; Dr. p. 664; Gaz. vol. 133; p. 568.
West, J. L., *et al.* (See McMurry, E. H., assignor.)
West, T., *et al.* (See Loudon, L. T., assignor.)
Westdeutsche Thomasphosphat-Werke, G. M. B. H. (See Pauling, H., assignor.)
Western Electric Company. (See Fell, J. M., assignor.)
Western Electric Company. (See Wellman, H. R., assignor.)
Westinghouse Air Brake Company. (See Austin, W. M., assignor.)
Westinghouse Air Brake Company. (See Turner, W. V., assignor.)
Westinghouse Automatic Air & Steam Coupler Company. (See Niederlander, N. F., assignor.)
Westinghouse Electric & Manufacturing Company. (See Foot, W. H., assignor.)
Westinghouse Electric & Manufacturing Company. (See James, H. D., assignor.)
Westinghouse Electric & Manufacturing Company. (See Kingsbury, A., assignor.)
Westinghouse Electric & Manufacturing Company. (See Kunkel, F. R., assignor.)
Westinghouse Electric & Manufacturing Company. (See Neall, N. J., assignor.)
Westinghouse Electric & Manufacturing Company. (See Siegfried, R., assignor.)
Westinghouse Electric & Manufacturing Company. (See Thomas, P. H., assignor.)
Westinghouse Electric & Manufacturing Company. (See Van Valkenburg, H. L., assignor.)
Westinghouse, G., Pittsburg, Pa., assignor to Westinghouse Machine Company. Elastic-fluid turbine. No. 880,847; Mar. 3; Sp. p. 739; Dr. p. 157; Gaz. vol. 133; p. 125.
Westinghouse, G., Pittsburg, Pa., assignor to Westinghouse Machine Company. Shaft-packing. No. 883,155; Mar. 24; Sp. p. 5293; Dr. p. 1129; Gaz. vol. 133; p. 967.
Westinghouse Machine Company. (See Lea, H. I., assignor.)
Westinghouse Machine Company. (See Westinghouse, G., assignor.)
Weston, E., Newark, N. J. Electric relay. No. 881,642; Mar. 10; Sp. p. 2297; Dr. p. 497; Gaz. vol. 133; p. 413.
Westover, H. J., New York, N. Y. Automatic draft-regulator. No. 881,272; Mar. 10; Sp. p. 1558; Dr. pp. 334–5; Gaz. vol. 133; p. 293.
Westover, H. J., New York, N. Y. Automatic gas-analyzer. No. 881,966; Mar. 17; Sp. p. 3000; Dr. p. 641; Gaz. vol. 133; p. 553.
Westwood, F., Short Creek, W. Va. Attachment for plate-doubling machines. No. 882,434; Mar. 17; Sp. p. 3856; Dr. p. 824; Gaz. vol. 133; p. 697.
Wetherill, J. P., Jr. (See Wetherill, S. P., Jr., and J. P., Jr.)
Wetherill, S. P. (See Wetherill, S. P., Jr., and J. P., Jr., assignors.)
Wetherill, S. P., Jr., and J. P., Jr., assignors to S. P. Wetherill, Philadelphia, Pa. Fly-wheel. No. 882,037; Mar. 17; Sp. p. 3125; Dr. p. 664; Gaz. vol. 133; p. 569.
Wettlaufer, G., Stratford, Ontario, Canada. Skirt-supporter. No. 883,264; Mar. 31; Sp. p. 5533; Dr. p. 1180; Gaz. vol. 133; p. 1035.
Weyl, M. N., *et al.* (See Haile, L. T., assignor.)
Whalen, T. J., Middlebrook, Va. Flying-machine. No. 882,435; Mar. 17; Sp. p. 3859; Dr. pp. 824–5; Gaz. vol. 133; p. 698.
Wheeler, D. Y., Denver, Colo. Lock-guard. No. 881,364; Mar. 10; Sp. p. 1740; Dr. p. 374; Gaz. vol. 133; p. 322.
Wheeler, F. B., St. Louis, Mo. Pin. No. 880,944; Mar. 3; Sp. p. 921; Dr. p. 199; Gaz. vol. 133; p. 156.
Wheeler, F. T., assignor to Trumbull Electric Manufacturing Company, Plainville, Conn. Flush-receptacle. No. 882,225; Mar. 17; Sp. p. 3477; Dr. p. 739; Gaz. vol. 133; p. 628.
Wheeler, G. M., and H. Wilhelm, Brooklyn, N. Y. Battery. No. 880,703; Mar. 3; Sp. p. 416; Dr. p. 89; Gaz. vol. 133; p. 75.
Wheeler, J. K., Cerro Gordo, Ill. Gate. No. 880,945; Mar. 3; Sp. p. 922; Dr. p. 199; Gaz. vol. 133; p. 156.
Wheelock, C. M., Washington, D. C., assignor to Sanitary Hot-Water Radiator Co., Inc. Hot-water heater. No. 882,436; Mar. 17; Sp. p. 3861; Dr. p. 825; Gaz. vol. 133; p. 698.
Whitacre, W. E., *et al.* (See Gilman, J. L., assignor.)
White, A. L., Cresco, Iowa. Electric switch. No. 883,366; Mar. 31; Sp. p. 5733; Dr. p. 1223; Gaz. vol. 133; p. 1065.
White, E. L. (See Fleck, Haldane, and White.)
White, F. H., Philadelphia, Pa. Fastening for handles of suit-cases, &c. No. 882,601; Mar. 24; Sp. p. 4192; Dr. p. 889; Gaz. vol. 133; p. 785.
White, H. E., Schenectady, N. Y., assignor to General Electric Company. Controlling-switch. No. 882,602; Mar. 24; Sp. p. 4194; Dr. p. 889; Gaz. vol. 133; p. 786.
White, J. I. (See Brandenburg, R. J., assignor.)
White Lily Washer Company. (See Stoltenberg, H., assignor.)
White, S. A. (See Cole, C. E., assignor.)
White, W. I., Greenwood, Ind. Can-cap-placing machine. No. 882,603; Mar. 24; Sp. p. 4196; Dr. pp. 889–90; Gaz. vol. 133; p. 786.
Whitehead, G., Bridgeport, assignor of one-half to S. Y. Beach, Stratford, Conn. Aeroplane. No. 881,837; Mar. 10; Sp. p. 2667; Dr. p. 571; Gaz. vol. 133; p. 474.
Whitehorn, T., Coburg, Victoria, Australia. Automatic weighing-machine. No. 882,437; Mar. 17; Sp. p. 3862; Dr. p. 825; Gaz. vol. 133; p. 698.
Whitehouse, E. A., Newark, N. J. Excrement-sack for domestic animals. No. 881,753; Mar. 10; Sp. p. 2507; Dr. p. 540; Gaz. vol. 133; p. 447.
Whitehouse, R. A., Birmingham, England. Combined corset and corselet. No. 883,125; Mar. 24; Sp. p. 5237; Dr. p. 1117; Gaz. vol. 133; p. 957.
Whitley, A. A., Whitefield, Bury, England. Clip for stentering-machines. No. 880,946; Mar. 3; Sp. p. 923; Dr. pp. 199–200; Gaz. vol. 133; p. 156.
Whittaker, B., New York, N. Y. Pipe-wrench. No. 880,612; Mar. 3; Sp. p. 249; Dr. p. 52; Gaz. vol. 133; p. 44.
Whittaker, T. R., Lawrence, Mass. Gage-cock. No. 883,066; Mar. 24; Sp. p. 5109; Dr. p. 1099; Gaz. vol. 133; p. 937.
Wicksteed, C., Kettering, England. Gearing. No. 881,273; Mar. 10; Sp. p. 1565; Dr. pp. 335–6; Gaz. vol. 133; p. 293.
Widerman, F. M., Harrison, N. J. Cutting mechanism for corn-harvesters. No. 883,367; Mar. 31; Sp. p. 5734; Dr. p. 1223; Gaz. vol. 133; p. 1065.
Widziszowski, T., Donora, Pa. Curtain-fixture. No. 882,280; Mar. 17; Sp. p. 3594; Dr. p. 762; Gaz. vol. 133; p. 647.
Wiebe, J. J. (See Enns and Wiebe.)
Wiedeman, H., assignor to J. S. McDonald Company, Chicago, Ill. Temporary binder for loose leaves. No. 881,514; Mar. 10; Sp. p. 2035; Dr. p. 444; Gaz. vol. 133; p. 370.
Wiener, H., Henderson, Ky. Collapsible basket. No. 880,848; Mar. 3; Sp. p. 741; Dr. p. 157; Gaz. vol. 133; p. 125.
Wieser, J., New York, N. Y. Pneumatic valve-action. No. 883,609; Mar. 31; Sp. p. 6222; Dr. p. 1327; Gaz. vol. 133; p. 1139.
Wiggins, W., Brockton, Mass. Last. No. 881,643; Mar. 10; Sp. p. 2296; Dr. p. 496; Gaz. vol. 133; p. 413.
Wiggs, J. A., Jr., Beaumont, Tex. Rotary well-boring machine. No. 883,265; Mar. 31; Sp. p. 5534; Dr. pp. 1180–1; Gaz. vol. 133; p. 1035.
Wiggs, J. A., Jr., Beaumont, Tex. Rotary boring mechanism. No. 883,368; Mar. 31; Sp. p. 5737; Dr. pp. 1223–5; Gaz. vol. 133; p. 1066.
Wiggs, J. A., Jr., Beaumont, Tex. Bearing for driving and other shafts. No. 883,369; Mar. 31; Sp. p. 5742; Dr. pp. 1225–6; Gaz. vol. 133; p. 1066.
Wilber, H. I., Dorchester, Mass. Variable-speed mechanism. No. 881,987; Mar. 17; Sp. p. 3003; Dr. pp. 642–3; Gaz. vol. 133; p. 553.

Wilbraham-Green Blower Company. (See Green, T. W., assignor.)
Wilcox, F. E., Mechanicsburg, Pa. Vehicle-clip. No. 881,754; Mar. 10; Sp. p. 2508; Dr. p. 540; Gaz. vol. 133; p. 447.
Wilczek, L. A., Paris, France. Means for molding hollow articles with bulged or swelled walls. No. 880,947; Mar. 3; Sp. p. 924; Dr. p. 200; Gaz. vol. 133; p. 156.
Wildman, J. E., Landover, Md., assignor, by mesne assignments, to A. F. Staples, Alliance, Ohio, and C. W. Potter, Waltham, Mass. Accounting appliance. No. 882,856; Mar. 24; Sp. p. 4710; Dr. pp. 1001–2; Gaz. vol. 133; p. 869.
Wildman, L. D., San Francisco, Cal. Receiver for space signaling systems. No. 883,437; Mar. 31; Sp. p. 5910; Dr. p. 1261; Gaz. vol. 133; p. 1000.
Wilhelm, H. (See Wheeler and Wilhelm.)
Wilhelm, H. P., and E. Vero, Millvale, Pa. Tool-post. No. 880,948; Mar. 3; Sp. p. 925; Dr. p. 200; Gaz. vol. 133; p. 156.
Wilhelmy, W. H., Nebraska City, Nebr. Hydrocarbon-burner. No. 881,515; Mar. 10; Sp. p. 2036; Dr. p. 444; Gaz. vol. 133; p. 370.
Wilke, C., Brunswick, Germany. Dowel for fastening wood-screws in rail cross-ties. No. 881,755; Mar. 10; Sp. p. 2509; Dr. p. 540; Gaz. vol. 133; p. 447.
Wilkin, A., New York, N. Y. Preserving-jar. No. 882,438; Mar. 17; Sp. p. 3866; Dr. p. 826; Gaz. vol. 133; p. 699.
Wilkinson, J. F., Gloucester, Mass. Starting-clutch. No. 883,266; Mar. 31; Sp. p. 5536; Dr. pp. 1181–2; Gaz. vol. 133; p. 1034.
Wiltoshesky, E. Z., Chicago, Ill. Ticket-holder. No. 882,771; Mar. 24; Sp. p. 4526; Dr. p. 966; Gaz. vol. 133; p. 840.
Willard, F. S., and R. E. Donaldson, Chicago, Ill. Frog-box. No. 882,184; Mar. 17; Sp. p. 3406; Dr. p. 724; Gaz. vol. 133; p. 616.
Willaredt, J. A., Brussels, Belgium. Annular valve for compressors, blowing-engines, and the like. No. 881,516; Mar. 10; Sp. p. 2038; Dr. pp. 444–5; Gaz. vol. 133; p. 371.
Willcox, G. B., Bay City, Mich. Raking-machine for grainers. No. 882,727; Mar. 24; Sp. p. 4442; Dr. pp. 944–5; Gaz. vol. 133; p. 827.
Willcox & Gibbs Sewing Machine Company. (See Borton, S., assignor.)
Willcox & Gibbs Sewing Machine Company. (See Borton and Birge, assignors.)
William Galloway Company. (See Wilson, D. K., assignor.)
William Galloway Company. (See Wilson and Buswell, assignors.)
William Powell Co. (See Powell, J., assignor.)
William Sellers & Company. (See Burt, J., assignor.)
William Sellers & Company. (See Vold, L. H., assignor.)
William Wharton, Jr., & Company. (See Angerer, V., assignor.)
Williams, C., Wittenberg, Wis. Aiming device for firearms. No. 883,267; Mar. 31; Sp. p. 5542; Dr. p. 1182; Gaz. vol. 133; p. 1034.
Williams, E. T., New York, N. Y. Ice-making apparatus. No. 882,224; Mar. 17; Sp. p. 3476; Dr. p. 739; Gaz. vol. 133; p. 628.
Williams, H. C., assignor to W. F. Bossert Manufacturing Company, Utica, N. Y. Signal-blade clasp. No. 880,949; Mar. 3; Sp. p. 927; Dr. p. 200; Gaz. vol. 133; p. 157.
Williams, H. E., assignor of one-half to A. U. Walker, H. E. Ross, and J. W. Ross, Savannah, Tenn. Gate-operating mechanism. No. 882,964; Mar. 24; Sp. p. 4059; Dr. p. 1055; Gaz. vol. 133; p. 911.
Williams, H. T., Indianapolis, Ind. Veneer-machine. No. 880,849; Mar. 3; Sp. p. 743; Dr. p. 158; Gaz. vol. 133; p. 126.
Williams, J. D., Indianapolis, Ind. Fence-post mold. No. 882,439; Mar. 17; Sp. p. 3867; Dr. p. 826; Gaz. vol. 133; p. 699.
Williams, J. F., West Orange, N. J. Roller for hat-sizing machines. No. 880,708; Mar. 3; Sp. p. 565; Dr. p. 119; Gaz. vol. 133; p. 98.
Williams, J. H., Milano, assignor of one-half to J. M. Smith, Cameron, Tex. Wire-stretcher. No. 880,613; Mar. 3; Sp. p. 251; Dr. p. 52; Gaz. vol. 133; p. 44.
Williams, J. P., New Orleans, La. Combined track and roller support for freight-car doors. No. 881,756; Mar. 10; Sp. p. 2510; Dr. p. 541; Gaz. vol. 133; p. 448.
Williams, J. S., Commerce, Tex. Cotton-chopper. No. 881,274; Mar. 10; Sp. p. 1571; Dr. p. 336; Gaz. vol. 133; p. 294.
Williams, L. N. D. (See Scott, R. W., assignor.)
Williams, T. F. (See Clark, J. M., 3d, assignor.)
Williams, W. D., Kirkland, Ariz. Ter. Rail-joint. No. 883,601; Mar. 31; Sp. p. 6224; Dr. p. 1327; Gaz. vol. 133; p. 1139.
Williams, W. J., Carrick, assignor of one-half to E. E. Schellhase, Uniontown, Pa. Pipe. No. 882,281; Mar. 17; Sp. p. 3595; Dr. p. 762; Gaz. vol. 133; p. 648.
Williams, W. L. G., Paget, Clermont, Bermuda. Guide for molding-machines. No. 882,440; Mar. 17; Sp. p. 3868; Dr. p. 826; Gaz. vol. 133; p. 699.
Williams, W. R., Salt Lake City, Utah. Wrapping-machine. No. 882,659; Mar. 24; Sp. p. 4310; Dr. p. 915; Gaz. vol. 133; p. 805.
Williamsport Staple Company. (See Buerger, W. L., assignor.)
Willis, C. A., assignor of one-half to C. E. Creager, Washington, D. C., and A. B. Appler, Albany, N. Y. Mail-pouch-delivering apparatus. No. 882,223; Mar. 17; Sp. p. 3472; Dr. p. 738; Gaz. vol. 133; p. 627.
Willson, E. C., Tillamook, Oreg. Feed-water-heating grate. No. 883,602; Mar. 31; Sp. p. 6225; Dr. p. 1327; Gaz. vol. 133; p. 1140.
Willson, T. L., Ottawa, Ontario, Canada. Fog signaling apparatus. No. 882,039; Mar. 17; Sp. p. 3131; Dr. p. 665; Gaz. vol. 133; p. 569.
Wilmore, J. T., Denver, Colo. Can-cap-placing apparatus. No. 882,728; Mar. 24; Sp. p. 4445; Dr. pp. 945–6; Gaz. vol. 133; p. 827.
Wilner, E. R., New York, N. Y. Inverted gas-lamp. No. 882,222; Mar. 17; Sp. p. 3471; Dr. p. 738; Gaz. vol. 133; p. 627.
Wilson, C. E., Ferris, W. Va. Electric furnace. No. 881,517; Mar. 10; Sp. p. 2039; Dr. p. 445; Gaz. vol. 133; p. 371.
Wilson, C. E., Ferris, W. Va. Electric furnace. No. 881,518; Mar. 10; Sp. p. 2041; Dr. p. 446; Gaz. vol. 133; p. 371.
Wilson, C. E., Ferris, W. Va. Electrode-holder for electric smelting-furnaces. No. 881,519; Mar. 10; Sp. p. 2043; Dr. pp. 446–7; Gaz. vol. 133; p. 372.
Wilson, C. E., Ferris, W. Va. Sectional electrode for electric furnaces. No. 881,520; Mar. 10; Sp. p. 2045; Dr. p. 447; Gaz. vol. 133; p. 372.
Wilson, C. H., Red Oak, Iowa, assignor of one-half to J. Gilligan, Falls City, Nebr. Construction of buildings. No. 882,482; Mar. 17; Sp. p. 3940; Dr. p. 842; Gaz. vol. 133; p. 713.
Wilson, D. K., assignor to William Galloway Company, Waterloo, Iowa. Manure-spreader. No. 883,268; Mar. 31; Sp. p. 5543; Dr. p. 1182; Gaz. vol. 133; p. 1035.
Wilson, D. K., assignor to William Galloway Company, Waterloo, Iowa. Manure-spreader. No. 883,270; Mar. 31; Sp. p. 5547; Dr. p. 1183; Gaz. vol. 133; p. 1035.
Wilson, D. K., and E. Buswell, assignors to William Galloway Company, Waterloo, Iowa. Manure-spreader. No. 883,269; Mar. 31; Sp. p. 5544; Dr. p. 1183; Gaz. vol. 133; p. 1035.
Wilson, F. E., Cleveland, Ohio. Garment-fastener. No. 882,087; Mar. 17; Sp. p. 3223; Dr. p. 685; Gaz. vol. 133; p. 586.
Wilson, F. E., Cleveland, Ohio. Garment-fastener. No. 882,483; Mar. 17; Sp. p. 3942; Dr. p. 848; Gaz. vol. 133; p. 713.
Wilson, F. K., Coatesville, Pa., assignor of one-half to H. K. Fort, West Haddonfield, N. J. Amusement device. No. 880,769; Mar. 3; Sp. p. 566; Dr. pp. 120–1; Gaz. vol. 133; p. 98.
Wilson, G., Sharrow, Sheffield, England. Rotary pump. No. 883,271; Mar. 31; Sp. p. 5548; Dr. p. 1184; Gaz. vol. 133; p. 1035.
Wilson, J. A., Westfield, N. J., assignor to Hall Signal Company, New York, N. Y. Signaling-circuit for railways. No. 880,770; Mar. 3; Sp. p. 570; Dr. p. 121; Gaz. vol. 133; p. 98.
Wilson, J. A., Westfield, N. J., assignor to Hall Signal Company, New York, N. Y. Railway signaling system. No. 880,851; Mar. 3; Sp. p. 746; Dr. pp. 158–9; Gaz. vol. 133; p. 126.
Wilson, J. S. (See Harris, W. W., assignor.)
Wilson, J. S., Chelsea, Mass. Flexible conduit. No. 880,850; Mar. 3; Sp. p. 745; Dr. p. 158; Gaz. vol. 133; p. 126.
Wilson, R. L., Salina, Kans. Wheel-hub. No. 882,441; Mar. 17; Sp. p. 3869; Dr. p. 826; Gaz. vol. 133; p. 700.
Wilson, R. M., San Francisco, Cal. Hoisting apparatus for dredgers and the like. No. 881,838; Mar. 10; Sp. p. 2670; Dr. pp. 571–2; Gaz. vol. 133; p. 474.
Wilson, S. G., Philadelphia, Pa. Mechanical chair. No. 881,521; Mar. 10; Sp. p. 2046; Dr. pp. 447–8; Gaz. vol. 133; p. 372.
Wilson, W. W., Dallas, Tex. Poultry-greaser. No. 882,985; Mar. 24; Sp. p. 4961; Dr. p. 1056; Gaz. vol. 133; p. 912.
Wimmel, H., Frankfort-on-the-Main, Germany. Diaper-cover. No. 881,640; Mar. 10; Sp. p. 2292; Dr. p. 497; Gaz. vol. 133; p. 412.
Wimmer, L., Elizabethport, assignor of two-thirds to S. Levenson, Elizabeth, and A. Marx, Newark, N. J. Leather-blacking machine. No. 883,438; Mar. 31; Sp. p. 5914; Dr. p. 1262; Gaz. vol. 133; p. 1091.
Windsor, J. R., Des Moines, Iowa. Chocolate-warming table. No. 882,040; Mar. 17; Sp. p. 3136; Dr. p. 665; Gaz. vol. 133; p. 569.
Winge, A. (See Hanssen, C. J. A., assignor.)
Winkler, C., New York, N. Y. Pin tag or ticket. No. 882,088; Mar. 17; Sp. p. 3224; Dr. p. 685; Gaz. vol. 133; p. 587.
Winne, R. P., Brooklyn, N. Y. Making phonograms. No. 881,644; Mar. 10; Sp. p. 2300; Dr. p. 498; Gaz. vol. 133; p. 414.
Winslow, E. J., Chicago, Ill. Fireproof roofing-tile. No. 881,522; Mar. 10; Sp. p. 2049; Dr. p. 448; Gaz. vol. 133; p. 373.
Winsor, B. V., assignor of one-half to H. H. Vogt, Davenport, Iowa. Rule-holder. No. 881,757; Mar. 10; Sp. p. 2511; Dr. p. 541; Gaz. vol. 133; p. 448.
Winter, H., Charlottenburg, Germany. Apparatus for continuous evaporation. No. 881,523; Mar. 10; Sp. p. 2051; Dr. p. 449; Gaz. vol. 133; p. 373.
Winterbottom, S., *et al.* (See Bennett, R. H., assignor.)
Wirthlin, P., Eureka, Utah. Culinary utensil. No. 881,988; Mar. 17; Sp. p. 3012; Dr. p. 643; Gaz. vol. 133; p. 553.
Wise, J. J., Pittsburg, Pa. Wrench. No. 882,302; Mar. 17; Sp. p. 3743; Dr. p. 796; Gaz. vol. 133; p. 674.
Wismar, W. F. (See Griesinger, J., assignor.)
Wissler, R., Indianapolis, Ind., assignor of one-half to C. A. Stonebreaker, Urbana, Ill. Paper-hanging device. No. 880,852; Mar. 3; Sp. p. 752; Dr. p. 159; Gaz. vol. 133; p. 126.

Withenbury, W. W., Chicago, Ill. Weather-strip. No. 883,603; Mar. 31; Sp. p. 6226; Dr. p. 1328; Gaz. vol. 133; p. 1140.
Withered, H. E., Le Roy, Kans. Appliance for compressing Sarven-wheel hubs, &c. No. 881,091; Mar. 3; Sp. p. 1196; Dr. p. 258; Gaz. vol. 133; p. 203.
Wittbold, L., Chicago, Ill. Mold for making florists' benches. No. 883,439; Mar. 31; Sp. p. 5916; Dr. p. 1263; Gaz. vol. 133; p. 1091.
Witzke, H. R., Chicago, Ill. School-desk. No. 882,282; Mar. 17; Sp. p. 3596; Dr. p. 703; Gaz. vol. 133; p. 648.
Woerner, R., Mannheim, Germany. Pressing cigars. No. 883,156; Mar. 24; Sp. p. 5294; Dr. pp. 1129–31; Gaz. vol. 133; p. 967.
Wolf, F., New York, N. Y. Stamping attachment for cloth-measuring machines. No. 882,283; Mar. 17; Sp. p. 3596; Dr. p. 703; Gaz. vol. 133; p. 648.
Wolfe, E. B., Newark, N. J., assignor to Electric Motor & Equipment Company. Sign. No. 882,857; Mar. 24; Sp. p. 4714; Dr. p. 1002; Gaz. vol. 133; p. 869.
Wolfe, W., Batavia, assignor to American Heel Machine Company, Cincinnati, Ohio. Wire-feed and nail-forming device. No. 883,126; Mar. 24; Sp. p. 5238; Dr. p. 1118; Gaz. vol. 133; p. 957.
Wolff, E., New York, N. Y. Campaign toy device. No. 883,440; Mar. 31; Sp. p. 5919; Dr. p. 1263; Gaz. vol. 133; p. 1092.
Wolhaupter, B., New York, N. Y., assignor to Rail Joint Company. Insulating rail-joint. No. 882,041; Mar. 17; Sp. p. 3137; Dr. p. 666; Gaz. vol. 133: p. 570.
Wolken, F. E., Diller, Nebr. Mail-conveyer. No. 883,067; Mar. 24; Sp. p. 5111; Dr. p. 1090; Gaz. vol. 133; p. 938.
Wollheim, S., Milwaukee, Wis. Paper-punch. No. 881,524; Mar. 10; Sp. p. 2052; Dr. p. 449; Gaz. vol. 133; p. 373.
Wolters, W. E., Pueblo, Colo., assignor of one-half to J. W. Spencer. Waffle-iron. No. 881,038; Mar. 3; Sp. p. 1090; Dr. p. 236; Gaz. vol. 133; p. 186.
Wommelsdorf, H., Charlottenburg, Germany. Static-influence electric machine. No. 882,508; Mar. 17; Sp. p. 3084; Dr. p. 851; Gaz. vol. 133; p. 722.
Wood, A. C., Philadelphia, Pa. Apparatus for producing ozone. No. 882,509; Mar. 17; Sp. p. 3086; Dr. p. 852; Gaz. vol. 133; p. 722.
Wood, A. C., Philadelphia, Pa. Apparatus for producing ozone. No. 882,510; Mar. 17; Sp. p. 3088; Dr. pp. 852–3; Gaz. vol. 133; p. 722.
Wood, F. J., assignor to Marx and Rawolle, New York, N. Y. Distilling glycerin. No. 881,525; Mar. 10; Sp. p. 2054; Dr. p. 449; Gaz. vol. 133; p. 374.
Wood, M. L., Montpelier, Vt. Gas-engine. No. 880,704; Mar. 3; Sp. p. 418; Dr. p. 90; Gaz. vol. 133; p. 75.
Wood, W. H., Minneapolis, Minn. Bread kneading and molding machine. No. 883,370; Mar. 31; Sp. p. 5743; Dr. pp. 1226–7; Gaz. vol. 133; p. 1067.
Wood, W. T., Nashville, Tenn. Toy. No. 882,604; Mar. 24; Sp. p. 4197; Dr. p. 890; Gaz. vol. 133; p. 787.
Woodall, G., assignor of one-half to F. J. Hickey, Sacramento, Cal. Low-water alarm. No. 882,807; Mar. 24; Sp. p. 4604; Dr. p. 982; Gaz. vol. 133; p. 853.
Woodard, M. E., Folsom, Cal. Wrapper for fruits. No. 882,134; Mar. 17; Sp. p. 3297; Dr. p. 703; Gaz. vol. 133; p. 661.
Woodbridge, J. L., Philadelphia, Pa. System of electrical distribution. No. 880,705; Mar. 3; Sp. p. 423; Dr. p. 90; Gaz. vol. 133; p. 76.
Woodbridge, J. L., Philadelphia, Pa. Electrical distribution. No. 880,706; Mar. 3; Sp. p. 426; Dr. p. 91; Gaz. vol. 133; p. 76.
Woodbury, G. E., San Francisco, Cal. Ore-concentrating table. No. 882,511; Mar. 17; Sp. p. 3090; Dr. pp. 853–4; Gaz. vol. 133; p. 723.
Woodbury, G. E., San Francisco, Cal. Drive mechanism for ore-concentrators. No. 882,512; Mar. 17; Sp. p. 3096; Dr. p. 854; Gaz. vol. 133; p. 723.
Wooding, B. F., Denver, Colo. Electrical signaling apparatus. No. 882,089; Mar. 17; Sp. p. 3225; Dr. pp. 685–6; Gaz. vol. 133; p. 587.
Woods, F. C., Galesburg, Ill. Combined fused connector and lightning-arrester for electric wires. No. 883,272; Mar. 31; Sp. p. 5550; Dr. p. 1184; Gaz. vol. 133; p. 1036.
Woodward, C. A., Baltimore, Md. Watermelon-carrier. No. 882,808; Mar. 24; Sp. p. 4606; Dr. p. 982; Gaz. vol. 133; p. 853.
Woodward, W. R., New York, N. Y. Means for writing a plurality of signatures or inscriptions. No. 880,950; Mar. 3; Sp. p. 928; Dr. p. 201; Gaz. vol. 133; p. 157.
Woodward and Wright. (See Benton, F. E., assignor.)
Woolf, E. J., assignor to Woolf Valve Gear Company, Minneapolis, Minn. Explosive compound engine. No. 881,214; Mar. 10; Sp. p. 1437; Dr. pp. 310–11; Gaz. vol. 133; p. 273.
Woolf Valve Gear Company. (See Woolf, E. J., assignor.)
Work, R. D. (See Hoffner, L. B., assignor.)
Worth, W. O., Evansville, Ind. Power-transmitting mechanism. No. 882,513; Mar. 17; Sp. p. 3098; Dr. pp. 855–6; Gaz. vol. 133; p. 724.
Wouwermans, P., von, assignor to L. Loewenstein, Vienna, Austria-Hungary. Bunsen burner. No. 881,877; Mar. 10; Sp. p. 2767; Dr. pp. 593–4; Gaz. vol. 133; p. 489.
Wouwermans, P., von, assignor to Gasspar-Unternehmung Nach System Wouwermans Halbmayr & Co., Vienna, Austria-Hungary. Bunsen burner. No. 882,544; Mar. 17; Sp. p. 4076; Dr. pp. 866–7; Gaz. vol. 133; p. 734.
Wouwermans, P., von, assignor to Gasspar-Unternehmung Nach System Wouwermans Halbmayr & Co., Vienna, Austria-Hungary. Bunsen burner. No. 882,545; Mar. 17; Sp. p. 4077; Dr. p. 867; Gaz. vol. 133; p. 735.
Wright, A. N., assignor of one-third to H. L. Hill, Jackson Center, Ohio. Telephone-switch. No. 881,878; Mar. 10; Sp. p. 2769; Dr. p. 594; Gaz. vol. 133; p. 489.
Wright, F. W., and F. H. Commerford, Binghamton, N. Y. Automatic piano-player treadle. No. 883,068; Mar. 24; Sp. p. 5112; Dr. pp. 1090–1; Gaz. vol. 133; p. 938.
Wright, H. C., Shumansville, Va. Cleaning compound. No. 881,989; Mar. 17; Sp. p. 3013; Gaz. vol. 133; p. 553.
Wright, J. T., assignor of one-half to E. S. Davis, Richmond, Va. Dental instrument. No. 882,363; Mar. 17; Sp. p. 3744; Dr. p. 797; Gaz. vol. 133; p. 674.
Wright, R. H., and M. S. Gill, Mexico, Mo. Rotary engine. No. 880,614; Mar. 3; Sp. p. 251; Dr. pp. 52–3; Gaz. vol. 133; p. 44.
Wright, T., Reading, Pa. Stop-motion and regulator for winding-machines. No. 883,853; Mar. 3; Sp. p. 754; Dr. p. 160; Gaz. vol. 133; p. 127.
Wright, W. E., Saltsburg, Pa. Whip. No. 880,951; Mar. 3; Sp. p. 935; Dr. p. 202; Gaz. vol. 133; p. 158.
Wright Wire Company. (See Berthiaume and Barlow, assignors.)
Wurdemann, F. H., National Military Home, Tenn. Fountain-pen. No. 881,215; Mar. 10; Sp. p. 1441; Dr. p. 311; Gaz. vol. 133; p. 273.
Würker, A., Karlshorst, near Berlin, assignor to Firm of J. Pintsch, Berlin, Germany. Inverted incandescent lamp with emergency-burner. No. 880,615; Mar. 3; Sp. p. 258; Dr. p. 534; Gaz. vol. 133; p. 45.
Wyatt, J. H. (See Scott and Wyatt.)
Wyckoff, Seamans & Benedict. (See Smith, A. F., assignor.)
Wyeth, H. L., Garrett, Ill. Clamp. No. 883,604; Mar. 31; Sp. p. 6228; Dr. p. 1328; Gaz. vol. 133; p. 1140.
Wynkoop, J. F., Minneapolis, Minn. Household article. No. 881,758; Mar. 10; Sp. p. 2512; Dr. p. 541; Gaz. vol. 133; p. 448.
Yale & Towne Manufacturing Company. (See Taylor, W. H., assignor.)
Yarnall, J. M., New York, N. Y. Folding paper box. No. 880,952; Mar. 3; Sp. p. 936; Dr. p. 202; Gaz. vol. 133; p. 158.
Yawman & Erbe Manufacturing Company. (See Yawman, P. H., assignor.)
Yawman, P. H., assignor to Yawman & Erbe Manufacturing Company, Rochester, N. Y. Drawer-support for filing-cases. No. 883,069; Mar. 24; Sp. p. 5113; Dr. p. 1091; Gaz. vol. 133; p. 938.
Yeomans, W. C., Pe Ell, Wash. Manufacture of crates. No. 883,070; Mar. 24; Sp. p. 5117; Dr. p. 1091; Gaz. vol. 133; p. 939.
Young, C. R., Oberlin, Kans. Chute attachment for windows. No. 882,605; Mar. 24; Sp. p. 4200; Dr. p. 890; Gaz. vol. 133; p. 787.
Young, F., assignor to A. L. Thorndike, Brewster, Mass. Cranberry-pruner. No. 881,039; Mar. 3; Sp. p. 1092; Dr. p. 237; Gaz. vol. 133; p. 187.
Young, F. A., assignor to Monarch Typewriter Company, Syracuse, N. Y. Type-writing machine. No. 881,275; Mar. 10; Sp. p. 1572; Dr. p. 336; Gaz. vol. 133; p. 294.
Young, F. A., assignor to Monarch Typewriter Company, Syracuse, N. Y. Type-writing machine. No. 882,042; Mar. 17; Sp. p. 3139; Dr. p. 666; Gaz. vol. 133; p. 570.
Young, F. L., assignor to Aeolian Company, New York, N. Y. Key-striking mechanism for musical instruments. No. 882,920; Mar. 24; Sp. p. 4838; Dr. p. 1026; Gaz. vol. 133; p. 890.
Young, G. H., Des Moines, Iowa. Vehicle steering device. No. 883,371; Mar. 31; Sp. p. 5747; Dr. p. 1227; Gaz. vol. 133; p. 1067.
Young, H. W., Alameda, Cal. Railway-car ventilator. No. 882,364; Mar. 17; Sp. p. 3745; Dr. p. 797; Gaz. vol. 133; p. 675.
Young, T. J., New York, N. Y. Combination furniture. No. 882,772; Mar. 24; Sp. p. 4527; Dr. p. 966; Gaz. vol. 133; p. 841.
Yount, J. R., Nyssa, Oreg. Ore-separator. No. 881,526; Mar. 10; Sp. p. 2057; Dr. p. 450; Gaz. vol. 133; p. 374.
Yunker, G., assignor to Newark Cornice & Skylight Works, Newark, N. J. Gravity-lock. No. 882,921; Mar. 24; Sp. p. 4840; Dr. p. 1027; Gaz. vol. 133; p. 890.
Zachow, O., and W. Beserdich, Clintonville, Wis. Axle. No. 882,986; Mar. 24; Sp. p. 4963; Dr. p. 1056; Gaz. vol. 133; p. 912.
Zager, R. E., Branscomb, Cal. Traction-vehicle. No. 880,953; Mar. 3; Sp. p. 938; Dr. pp. 202–3; Gaz. vol. 133; p. 158.
Zahnter, E. P., and J. Kunzmann, Highland, Cal. Axle. No. 882,773; Mar. 24; Sp. p. 4529; Dr. p. 967; Gaz. vol. 133; p. 841.
Zander, J., Hoboken, N. J. Match holder, lighter, and cigar-cutter. No. 882,729; Mar. 24; Sp. p. 4447; Dr. p. 946; Gaz. vol. 133; p. 827.
Zaremba, E., Chicago, Ill. Evaporator. No. 881,990; Mar. 17; Sp. p. 3014; Dr. p. 643; Gaz. vol. 133; p. 554.
Zaremba, E., Chicago, Ill. Evaporator. No. 882,043; Mar. 17; Sp. p. 3142; Dr. pp. 666–7; Gaz. vol. 133; p. 570.
Zeck, A., and F. Van Zeck, Grafton, W. Va. Heating apparatus. No. 880,954; Mar. 3; Sp. p. 941; Dr. p. 203; Gaz. vol. 133; p. 159.
Zeigler, G. E., Economy, Pa. Bottle. No. 882,809; Mar. 24; Sp. p. 4607; Dr. p. 982; Gaz. vol. 133; p. 854.
Zelewski, R. von, Engis, Belgium. Mechanical roasting-furnace. No. 882,730; Mar. 24; Sp. p. 4450; Dr. p. 946; Gaz. vol. 133; p. 828.
Zeliff, G., New York, N. Y. Sash-fastener. No. 882,135; Mar. 17; Sp. p. 3298; Dr. p. 704; Gaz. vol. 133; p. 661.

Zellers, W. H., Philadelphia, Pa. Looper-hook. No. 882,090; Mar. 17; Sp. p. 3228; Dr. p. 686; Gaz. vol. 133; p. 587.
Zeugschmidt, M., *et al.* (See Walker, G., assignor.)
Zletarski, S., Newark, N. J. Working metals. No. 881,170; Mar. 10; Sp. p. 1350; Dr. p. 291; Gaz. vol. 133; p. 259.
Zimmel, B., New York, N. Y. Shovel and scoop. No. 883,071; Mar. 24; Sp. p. 5118; Dr. p. 1092; Gaz. vol. 133; p. 939.
Zimmerman, A. M., assignor to New Holland Machine Co., New Holland, Pa. Means for forcing cooling liquids to engines. No. 882,226; Mar. 17; Sp. p. 3479; Dr. pp. 739–40; Gaz. vol. 133; p. 628.
Zimmermann, J., New York, N. Y. Toy. No. 883,372; Mar. 31; Sp. p. 5749; Dr. p. 1228; Gaz. vol. 133; p. 1067.
Zinn, A. S., *et al.* (See Smart, W. J., assignor.)
Zinn, M., *et al.* (See Smart, W. J., assignor.)
Zion City Manufacturing Co. (See Hull, J. W., Sr., assignor.)
Zömach, W., Cologne, Germany. Adjustable drawing-board. No. 881,276; Mar. 10; Sp. p. 1577; Dr. p. 337; Gaz. vol. 133; p. 294.
Zubillaga, J. (See Alfolaguirre and Zubillaga.)
Zurcher, G., La Salle, N. Y. Package or mail catcher. No. 882,227; Mar. 17; Sp. p. 3480; Dr. p. 740; Gaz. vol. 133; p. 629.
Zwack, R. (See Kottmair and Zwack.)

ALPHABETICAL LIST OF INVENTIONS

FOR WHICH

PATENTS WERE ISSUED DURING THE MONTH OF MARCH, 1908.

[Abbreviations: "Sp."=Monthly Volume of Specifications; "Dr."=Monthly Volume of Drawings; "Gaz."=Official Gazette.]

Abdominal and hernia pad, Combined. M. A. and C. A. Snell. No. 883,357; Mar. 31; Sp. p. 5711; Dr. p. 1219; Gaz. vol. 133; p. 1062.
Abdominal support. V. V. Davids. No. 882,188; Mar. 17; Sp. p. 3412; Dr. p. 725; Gaz. vol. 133; p. 617.
Abrading or polishing machine. J. J. Canavan. No. 882,065; Mar. 24; Sp. p. 4323; Dr. pp. 919–20; Gaz. vol. 133; p. 807.
Abrasive tool and mounting. R. A. Rowland and W. J. Mahnke. No. 881,621; Mar. 10; Sp. p. 2257; Dr. p. 490; Gaz. vol. 133; p. 407.
Account-register. F. F. Dorsey. No. 882,817; Mar. 24; Sp. p. 4619; Dr. p. 985; Gaz. vol. 133; p. 856.
Account-register. C. F. Fogg. No. 883,306; Mar. 31; Sp. p. 5619; Dr. pp. 1198–9; Gaz. vol. 133; p. 1047.
Accounting appliance. J. E. Wildman. No. 882,856; Mar. 24; Sp. p. 4710; Dr. pp. 1001–2; Gaz. vol. 133; p. 869.
Acid by means of superheating, &c., Manufacturing nitric. H. Pauling. No. 882,958; Mar. 24; Sp. p. 4918; Dr. p. 1043; Gaz. vol. 133; p. 904.
Acid, Electrolytic production of chromic. M. Le Blanc. No. 883,651; Mar. 31; Sp. p. 6338; Dr. p. 1351; Gaz. vol. 133; p. 1156.
Acid glycerin esters, Manufacture of salicylic. C. Sorger. No. 882,580; Mar. 24; Sp. p. 4170; Gaz. vol. 133; p. 782.
Acoustic diaphragm, Mechanically-actuated. M. R. Hutchison. No. 883,043; Mar. 31; Sp. p. 6306; Dr. p. 1345; Gaz. vol. 133; p. 1153.
Adding-machine attachment. H. R. Wellman. No. 882,806; Mar. 24; Sp. p. 4601; Dr. pp. 980–1; Gaz. vol. 133; p. 852.
Adding-machines, Pneumatic motor for. C. Wales. No. 880,607; Mar. 3; Sp. p. 243; Dr. p. 50; Gaz. vol. 133; p. 42.
Adjustable bracket. W. G. Kirchhoff. No. 883,138; Mar. 24; Sp. p. 5265; Dr. p. 1124; Gaz. vol. 133; p. 962.
Adjustable chair. L. C. Wentworth. No. 882,963; Mar. 24; Sp. p. 4957; Dr. p. 1055; Gaz. vol. 133; p. 911.
Advertisement. C. H. Fox. No. 880,513; Mar. 3; Sp. p. 40; Dr. p. 10; Gaz. vol. 133; p. 10.
Advertising appliance. S. F. Hall. No. 880,658; Mar. 3; Sp. p. 340; Dr. p. 74; Gaz. vol. 133; p. 60.
Advertising device. J. T. Moncrief. No. 880,809; Mar. 3; Sp. p. 647; Dr. p. 136; Gaz. vol. 133; p. 112.
Advertising device, Wheel. J. W. Roberts. No. 882,505; Mar. 17; Sp. p. 3980; Dr. p. 850; Gaz. vol. 133; p. 721.
Advertising-indicator. C. E. Johnson. No. 882,640; Mar. 24; Sp. p. 4273; Dr. pp. 905–6; Gaz. vol. 133; p. 799.
Advertising-machine. E. Pickel. No. 881,616; Mar. 10; Sp. p. 2249; Dr. pp. 488–9; Gaz. vol. 133; p. 405.
Advertising-vehicle. F. X. Bimmerle. No. 882,446; Mar. 17; Sp. p. 3879; Dr. pp. 828–30; Gaz. vol. 133; p. 702.
Aero-tube. W. Pars. No. 883,565; Mar. 31; Sp. p. 6166; Dr. p. 1311; Gaz. vol. 133; p. 1129.
Aeroplane. G. Whitehead. No. 881,837; Mar. 10; Sp. p. 2667; Dr. p. 571; Gaz. vol. 133; p. 474.
Agricultural implement. L. E. Waterman. No. 880,842; Mar. 3; Sp. p. 730; Dr. pp. 154–5; Gaz. vol. 133; p. 123.
Agricultural implement. F. Klousnitzer. No. 881,090; Mar. 3; Sp. p. 1173; Dr. p. 253; Gaz. vol. 133; p. 200.
Air, Apparatus for the liquefaction of. G. Claude. No. 881,176; Mar. 10; Sp. p. 1360; Dr. p. 293; Gaz. vol. 133; p. 261.
Air-brake. W. V. Turner. No. 882,918; Mar. 24; Sp. p. 4833; Dr. p. 1026; Gaz. vol. 133; p. 899.
Air-brake attachment and tripping mechanism therefor. G. P. Hanks. No. 881,796; Mar. 10; Sp. p. 2581; Dr. pp. 554–5; Gaz. vol. 133; p. 460.
Air-brake-operating device, Automatic. E. M. Cain. No. 882,372; Mar. 17; Sp. p. 3760; Dr. p. 801; Gaz. vol. 133; p. 678.
Air-brake systems, Automatic coupling for. B. J. Morgan. No. 882,406; Mar. 17; Sp. p. 3811; Dr. p. 814; Gaz. vol. 133; p. 688.
Air-brake systems, Safety-valve for water systems in connection with. W. D. Scott. No. 882,271; Mar. 17; Sp. p. 3577; Dr. p. 759; Gaz. vol. 133; p. 644.
Air-brake valve, Safety. T. Behan. (Reissue.) No. 12,758; Mar. 10; Sp. p. 2782; Dr. p. 597; Gaz. vol. 133; p. 491.
Air-compressor. G. F. Hall and B. Albertson. No. 880,731; Mar. 3; Sp. p. 481; Dr. pp. 102–3; Gaz. vol. 133; p. 84.
Air-compressor. J. Sturgess. No. 881,498; Mar. 10; Sp. p. 2006; Dr. p. 437; Gaz. vol. 133; p. 364.
Air-motor. L. B. Doman. No. 881,885; Mar. 10; Sp. p. 2779; Dr. pp. 596–7; Gaz. vol. 133; p. 491.
Air-ship. J. W. Montgomery. No. 881,327; Mar. 10; Sp. p. 1666; Dr. pp. 357–8; Gaz. vol. 133; p. 310.
Alarm: *See* Burglar-alarm; Electric alarm; Fire-alarm; Letter-box alarm; Low-water alarm.
Alarm. H. Irwin. No. 883,025; Mar. 24; Sp. p. 5034; Dr. p. 1072; Gaz. vol. 133; p. 924.
Alarm system, Electric theft-. J. J. O'Connor. No. 883,335; Mar. 31; Sp. p. 5664; Dr. pp. 1209–10; Gaz. vol. 133; p. 1055.
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Alloys, Producing aluminium-magnesium. F. von Kügelgen and G. O. Seward. No. 881,934; Mar. 17; Sp. p. 2901; Dr. p. 619; Gaz. vol. 133; p. 536.
Alternator, Self-excited. E. F. W. Alexanderson. No. 881,647; Mar. 10; Sp. p. 2307; Dr. p. 499; Gaz. vol. 133; p. 415.
Aluminium and other metals, Liberating. H. S. Blackmore. No. 881,049; Mar. 3; Sp. p. 1112; Dr. p. 241; Gaz. vol. 133; p. 190.
Aluminium oxids, Manufacturing and treating composite. M. Buchner. No. 883,286; Mar. 31; Sp. p. 5579; Gaz. vol. 133; p. 1041.
Amalgam fillings, Anchor for contour. F. W. Linnert. No. 880,806; Mar. 3; Sp. p. 840; Dr. p. 179; Gaz. vol. 133; p. 142.
Amalgamator. J. P. McGinn. No. 883,117; Mar. 24; Sp. p. 5221; Dr. pp. 114–15; Gaz. vol. 133; p. 955.
Ammonia apparatus. J. Robson. No. 883,457; Mar. 31; Sp. p. 6005; Dr. pp. 1281–3; Gaz. vol. 133; p. 1107.
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Amusement apparatus. W. H. Vance. No. 881,505; Mar. 10; Sp. p. 2019; Dr. pp. 440–1; Gaz. vol. 133; p. 367.
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Amusement device. F. K. Wilson. No. 880,769; Mar. 3; Sp. p. 566; Dr. pp. 120–1; Gaz. vol. 133; p. 98.
Amusement device. P. T. Johnson. No. 881,002; Mar. 3; Sp. p. 1026; Dr. p. 222; Gaz. vol. 133; p. 175.
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Anchor-setting device, Earth-. C. E. Frost. No. 880,649; Mar. 3; Sp. p. 328; Dr. p. 71; Gaz. vol. 133; p. 57.
Angle-coupling. S. W. Robinson. No. 881,958; Mar. 17; Sp. p. 2963; Dr. p. 629; Gaz. vol. 133; p. 544.
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Animal-trap. M. L. Larson. No. 882,471; Mar. 17; Sp. p. 3924; Dr. p. 839; Gaz. vol. 133; p. 709.
Animal-trap. A. A. Hamilton. No. 882,755; Mar. 24; Sp. p. 4501; Dr. p. 959; Gaz. vol. 133; p. 836.
Animal-treating apparatus. F. C. Goff. No. 883,132; Mar. 24; Sp. p. 5248; Dr. pp. 1120–1; Gaz. vol. 133; p. 959.
Animals, Excrement-sack for domestic. E. A. Whitehouse. No. 881,753; Mar. 10; Sp. p. 2507; Dr. p. 540; Gaz. vol. 133; p. 447.
Announcing or station indicator for railways and street-cars. W. S. Gunter and C. E. Welton. No. 882,675; Mar. 24; Sp. p. 4344; Dr. p. 924; Gaz. vol. 133; p. 810.
Annunciator. J. T. Needham. No. 882,118; Mar. 17; Sp. p. 3269; Dr. p. 696; Gaz. vol. 133; p. 595.
Annunciator. S. J. Heinrich. No. 883,539; Mar. 31; Sp. p. 6111; Dr. p. 1300; Gaz. vol. 133; p. 1121.
Anode. A. M. Hill. No. 882,110; Mar. 17; Sp. p. 3260; Dr. p. 693; Gaz. vol. 133; p. 593.
Arm-supporter, Adjustable. C. H. Dingman. No. 884,004; Mar. 24; Sp. p. 4998; Dr. p. 1063; Gaz. vol. 133; p. 917.
Audiphone. O. J. Davy. No. 883,003; Mar. 24; Sp. p. 4997; Dr. pp. 1062–3; Gaz. vol. 133; p. 917.
Auger. M. E. Thomas. No. 882,128; Mar. 17; Sp. p. 3285; Dr. p. 700; Gaz. vol. 133; p. 599.
Auger, Coal-. M. Martin. No. 882,475; Mar. 17; Sp. p. 3931; Dr. p. 840; Gaz. vol. 133; p. 711.

Augers, Cup attachment for. W., G., and E. Hagstrom. No. 881,856; Mar. 10; Sp. p. 2718; Dr. p. 583; Gaz. vol. 133; p. 481.
Automatic brake. J. E. Frost. No. 883,637; Mar. 31; Sp. p. 6299; Dr. pp. 1343–4; Gaz. vol. 133; p. 1152.
Automobile. M. M. Johnson. No. 880,739; Mar. 3; Sp. p. 506; Dr. p. 105; Gaz. vol. 133; p. 88.
Automobile. C. W. Duer. No. 882,239; Mar. 17; Sp. p. 3506; Dr. p. 744; Gaz. vol. 133; p. 632.
Automobile-frames, Bearing for supporting radiators in. P. W. Noble. No. 883,146; Mar. 24; Sp. p. 5279; Dr. p. 1126; Gaz. vol. 133; p. 964.
Automobile running-gear. C. C. Keyser. No. 881,696; Mar. 10; Sp. p. 2383; Dr. pp. 517–18; Gaz. vol. 133; p. 428.
Automobile, Six-wheeled logging-. N. F. Coffey. No. 882,998; Mar. 24; Sp. p. 4988; Dr. pp. 1060–1; Gaz. vol. 133; p. 915.
Automobiles, Antivibration device for. C. C. Dodge. No. 881,227; Mar. 10; Sp. p. 1471; Dr. p. 316; Gaz. vol. 133; p. 278.
Automobiles, Latch for change-speed gears for. E. L. P. Mors. No. 883,557; Mar. 31; Sp. p. 6156; Dr. p. 1309; Gaz. vol. 133; p. 1127.
Axle. E. G. Hartle. No. 880,990; Mar. 3; Sp. p. 1006; Dr. p. 216; Gaz. vol. 133; p. 171.
Axle. E. P. Zahnter and J. Kunzmann. No. 882,773; Mar. 24; Sp. p. 4529; Dr. p. 967; Gaz. vol. 133; p. 841.
Axle. O. Zachow and W. Besserdich. No. 882,986; Mar. 24; Sp. p. 4983; Dr. p. 1056; Gaz. vol. 133; p. 912.
Axle driving-gear for dynamos, Car-. W. I. Thomson. No. 881,744; Mar. 10; Sp. p. 2490; Dr. p. 536; Gaz. vol. 133; p. 444.
Axle for tilting platforms, Drop-. W. L. Hansen and A. Hayes. No. 881,316; Mar. 10; Sp. p. 1648; Dr. p. 353; Gaz. vol. 133; p. 307.
Axle-skein. J. Tanck and J. C. Johnson. No. 881,499; Mar. 10; Sp. p. 2007; Dr. p. 438; Gaz. vol. 133; p. 365.
Back-band hook. H. P. Little. No. 881,809; Mar. 10; Sp. p. 2611; Dr. p. 560; Gaz. vol. 133; p. 465.
Back-supporter. J. H. Mueller. No. 880,904; Mar. 3; Sp. p. 859; Dr. p. 183; Gaz. vol. 133; p. 144.
Bag: *See* Feed-bag.
Bag-frame fastener. A. J. H. Kuhslek. No. 883,647; Mar. 31; Sp. p. 6326; Dr. p. 1348; Gaz. vol. 133; p. 1155.
Bag-holder. R. V. Parr. No. 883,477; Mar. 31; Sp. p. 5988; Dr. p. 1277; Gaz. vol. 133; p. 1104.
Bail and hasp fastener. O. G. Collier. No. 883,451; Mar. 31; Sp. p. 5944; Dr. p. 1267; Gaz. vol. 133; p. 1095.
Bait, Artificial. J. B. Rhodes. No. 882,344; Mar. 17; Sp. p. 3714; Dr. p. 789; Gaz. vol. 133; p. 669.
Baking machine, Sugar-wafer-. F. M. Peters. No. 881,824; Mar. 10; Sp. p. 2641; Dr. pp. 566–7; Gaz. vol. 133; p. 470.
Baking-pan. T. Boyd. No. 882,094; Mar. 17; Sp. p. 3233; Dr. p. 687; Gaz. vol. 133; p. 588.
Baking-powder. F. Blumenthal. No. 883,165; Mar. 31; Sp. p. 5325; Gaz. vol. 133; p. 1000.
Balancer set. L. E. Underwood and R. W. Douglass. No. 881,636; Mar. 10; Sp. p. 2285; Dr. p. 495; Gaz. vol. 133; p. 411.
Bale-tie. A. O. Brigance. No. 881,053; Mar. 3; Sp. p. 1119; Dr. p. 242; Gaz. vol. 133; p. 191.
Baling-press. A. J. Laidlaw. No. 880,800; Mar. 3; Sp. p. 631; Dr. p. 132; Gaz. vol. 133; p. 109.
Baling-press. E. H. McMurry. No. 883,145; Mar. 24; Sp. p. 5275; Dr. p. 1125; Gaz. vol. 133; p. 963.
Baling-press attachment. J. H. Jackson. No. 882,469; Mar. 17; Sp. p. 3921; Dr. p. 839; Gaz. vol. 133; p. 709.
Baling-press binding attachment. G. A. Miller. No. 881,432; Mar. 10; Sp. p. 1873; Dr. pp. 407–8; Gaz. vol. 133; p. 343.
Ballot, Mechanical. D. L. Newcomb. No. 881,821; Mar. 10; Sp. p. 2630; Dr. pp. 564–5; Gaz. vol. 133; p. 469.
Balsams, Manufacture of artificial aromatic. F. Evers. No. 880,641; Mar. 3; Sp. p. 305; Gaz. vol. 133; p. 54.
Band-cutter and feeder. J. H. Kauffman. No. 881,931; Mar. 17; Sp. p. 2896; Dr. pp. 617–18; Gaz. vol. 133; p. 535.
Bandage. M. S. Clendenin. No. 880,718; Mar. 3; Sp. p. 455; Dr. p. 96; Gaz. vol. 133; p. 80.
Bar: *See* Concrete bar; Concrete-reinforcing bar; Corner-bar; Grate-bar; Jewel-bar; Raker-bar; Reinforcing-bar; Skylight frame-bar; Tracker-bar.
Barb-wire, Device for distributing or taking up. C. Fox. No. 881,233; Mar. 10; Sp. p. 1484; Dr. p. 319; Gaz. vol. 133; p. 280.
Barrel, Knockdown. C. S. Shugart. No. 880,926; Mar. 3; Sp. p. 893; Dr. p. 193; Gaz. vol. 133; p. 150.
Barrel, Metal. E. G. Cook. No. 880,507; Mar. 3; Sp. p. 31; Dr. p. 7; Gaz. vol. 133; p. 8.
Barrel or receptacle. H. S. Reynolds. No. 881,951; Mar. 17; Sp. p. 2934; Dr. p. 626; Gaz. vol. 133; p. 542.
Basin, Lavatory-. F. C. Blanchard. No. 880,961; Mar. 3; Sp. p. 958; Dr. p. 207; Gaz. vol. 133; p. 161.
Basket. W. J. Thomas. No. 881,500; Mar. 10; Sp. p. 2008; Dr. p. 438; Gaz. vol. 133; p. 365.
Basket. M. A. Engel. No. 882,935; Mar. 24; Sp. p. 4874; Dr. p. 1035; Gaz. vol. 133; p. 906.
Basket, Collapsible. H. Wiener. No. 880,843; Mar. 3; Sp. p. 741; Dr. p. 157; Gaz. vol. 133; p. 125.
Basket-making machine. E. Horton. No. 881,320; Mar. 10; Sp. p. 1653; Dr. p. 354; Gaz. vol. 133; p. 308.
Baskets or demijohns, &c., Bottom for. J. A. Griffin. No. 881,919; Mar. 17; Sp. p. 2875; Dr. p. 613; Gaz. vol. 133; p. 531.
Bath cabinet, Combination steam and water. J. F. Grubbs. No. 881,855; Mar. 10; Sp. p. 2716; Dr. p. 582; Gaz. vol. 133; p. 480.
Bath-spray. I. J. Owen and R. A. Brooks. No. 881,332; Mar. 10; Sp. p. 1673; Dr. p. 360; Gaz. vol. 133; p. 312.
Bath-tub-heating device. T. B. Jarvies. No. 882,689; Mar. 24; Sp. p. 4368; Dr. p. 930; Gaz. vol. 133; p. 815.
Battery: *See* Primary battery; Storage battery.
Battery. G. M. Wheeler and H. Wilhelm. No. 880,703; Mar. 3; Sp. p. 416; Dr. p. 89; Gaz. vol. 133; p. 75.
Battery-holder. E. S. Eggs. No. 881,181; Mar. 10; Sp. p. 1372; Dr. p. 296; Gaz. vol. 133; p. 263.
Beach-chair, Foldable. T. Krech. No. 882,948; Mar. 24; Sp. p. 4901; Dr. p. 1039; Gaz. vol. 133; p. 901.
Beacon, light-buoy, &c. R. M. Dixon. No. 881,667; Mar. 10; Sp. p. 2341; Dr. p. 507; Gaz. vol. 133; p. 421.
Bearing and attachment, Dust-proof disk. N. R. Nelson. No. 881,141; Mar. 10; Sp. p. 1302; Dr. p. 281; Gaz. vol. 133; p. 251.
Bearing, Antifriction-. W. C. Baker. No. 881,102; Mar. 3; Sp. p. 1214; Dr. p. 262; Gaz. vol. 133; p. 207.
Bearing, Antifriction thrust-. P. Völker. No. 881,876; Mar. 10; Sp. p. 2766; Dr. p. 593; Gaz. vol. 133; p. 488.
Bearing, Axle-. R. Blum. No. 882,047; Mar. 17; Sp. p. 3149; Dr. p. 669; Gaz. vol. 133; p. 572.
Bearing for carpet-sweepers, Ball-. F. C. Mason. No. 881,603; Mar. 10; Sp. p. 2208; Dr. p. 481; Gaz. vol. 133; p. 400.
Bearing for driving and other shafts. J. A. Wiggs, Jr. No. 883,369; Mar. 31; Sp. p. 5742; Dr. pp. 1225–6; Gaz. vol. 133; p. 1066.
Bearing, Roller-. F. G. Susemihl. No. 880,981; Mar. 3; Sp. p. 902; Dr. p. 194; Gaz. vol. 133; p. 152.
Bearing, Roller-. G. A. McKeel. No. 883,469; Mar. 31; Sp. p. 5971; Dr. p. 1274; Gaz. vol. 133; p. 1101.
Bearing, Step-. F. Greiner. No. 882,061; Mar. 17; Sp. p. 3173; Dr. p. 675; Gaz. vol. 133; p. 577.
Bearings, Manufacturing and assembling ball-. E. G. Hoffmann. No. 881,471; Mar. 10; Sp. p. 1958; Dr. p. 426; Gaz. vol. 133; p. 356.
Bed. E. S. Hall. No. 881,071; Mar. 3; Sp. p. 1152; Dr. p. 250; Gaz. vol. 133; p. 197.
Bed, Folding. R. B. Jaggers. No. 880,666; Mar. 3; Sp. p. 354; Dr. p. 78; Gaz. vol. 133; p. 62.
Bed, Invalid-. C. T. Joslin. No. 882,641; Mar. 24; Sp. p. 4275; Dr. pp. 906–7; Gaz. vol. 133; p. 799.
Bed screen and table frame. K. C. MacMillan. No. 883,325; Mar. 31; Sp. p. 5650; Dr. p. 1206; Gaz. vol. 133; p. 1052.
Bed-spring. B. McIntosh. No. 882,264; Mar. 17; Sp. p. 3565; Dr. pp. 755–6; Gaz. vol. 133; p. 642.
Bed-spring. H. W. Pennepacker. (Reissue.) No. 12,768; Mar. 24; Sp. p. 5313; Dr. pp. 1133–4; Gaz. vol. 133; p. 970.
Bed-spring. W. W. Lytle. No. 883,551; Mar. 31; Sp. p. 6144; Dr. p. 1306; Gaz. vol. 133; p. 1125.
Bed, Tiltable. N. C. Merrill. No. 880,682; Mar. 3; Sp. p. 379; Dr. p. 83; Gaz. vol. 133; p. 67.
Bed-warming device. W. H. Proctor. No. 882,714; Mar. 24; Sp. p. 4415; Dr. pp. 938–9; Gaz. vol. 133; p. 823.
Bedstead. B. Scheri. No. 881,030; Mar. 3; Sp. p. 1079; Dr. p. 234; Gaz. vol. 133; p. 184.
Bedstead attachment. W. T. Mott. No. 881,018; Mar. 3; Sp. p. 1058; Dr. p. 229; Gaz. vol. 133; p. 190.
Bee-keeper's knife. H. J. Porter. No. 883,343; Mar. 31; Sp. p. 5678; Dr. p. 1212; Gaz. vol. 133; p. 1058.
Beer cooling and purifying apparatus. V. F. Boehm. No. 882,962; Mar. 24; Sp. p. 4727; Dr. p. 1004; Gaz. vol. 133; p. 871.
Beeswax, Bleaching. A. Muller-Jacobs. No. 883,661; Mar. 31; Sp. p. 6352; Gaz. vol. 133; p. 1159.
Beet-topping machine. J. N. Hanna and D. K. Waugh. No. 882,465; Mar. 17; Sp. p. 3911; Dr. pp. 836–7; Gaz. vol. 133; p. 707.
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Bell, Electric. C. J. Wagner. No. 880,940; Mar. 3; Sp. p. 916; Dr. p. 197; Gaz. vol. 133; p. 155.
Bell, Electric. D. M. Bliss. No. 881,539; Mar. 10; Sp. p. 2076; Dr. p. 454; Gaz. vol. 133; p. 378.
Bell, Swinging. W. P. and W. P. Elliott, Jr. No. 882,780; Mar. 24; Sp. p. 4539; Dr. p. 969; Gaz. vol. 133; p. 843.
Belt-fastener. A. L. Eaton. No. 881,389; Mar. 10; Sp. p. 1799; Dr. p. 389; Gaz. vol. 133; p. 330.
Belt-guide. H. R. Kueffer. No. 881,608; Mar. 10; Sp. p. 2387; Dr. p. 518; Gaz. vol. 133; p. 429.
Belt-guide. S. D. Felsing. No. 883,185; Mar. 31; Sp. p. 5361; Dr. p. 1142; Gaz. vol. 133; p. 1006.
Belt, Life-. L. Forté. No. 882,057; Mar. 17; Sp. p. 3161; Dr. p. 672; Gaz. vol. 133; p. 574.
Belt-tightener. J. Null. No. 880,816; Mar. 3; Sp. p. 663; Dr. p. 140; Gaz. vol. 133; p. 114.
Bench-drawer. B. L. Waters. No. 881,511; Mar. 10; Sp. p. 2031; Dr. p. 443; Gaz. vol. 133; p. 369.
Bending-machine. J. R. Welch. No. 882,133; Mar. 17; Sp. p. 3295; Dr. pp. 702–3; Gaz. vol. 133; p. 600.
Berry-picker. J. W. Holman. No. 880,887; Mar. 3; Sp. p. 825; Dr. p. 175; Gaz. vol. 133; p. 138.
Bicycle parcel-carrier. C. W. Rosencrance. No. 882,346; Mar. 17; Sp. p. 3718; Dr. p. 790; Gaz. vol. 133; p. 670.
Bicycle-saddle spring. M. M. Deem. No. 881,381; Mar. 10; Sp. p. 1784; Dr. p. 385; Gaz. vol. 133; p. 327.
Bicycle, Water-. J. L. Henry. No. 883,018; Mar. 24; Sp. p. 5022; Dr. p. 1068; Gaz. vol. 133; p. 922.
Bicycles, Free-wheel hub for. C. O. Rydberg. No. 882,126; Mar. 17; Sp. p. 3282; Dr. p. 700; Gaz. vol. 133; p. 598.
Bicycles, &c., Gearing mechanism for. W. H. Smith. No. 881,729; Mar. 10; Sp. p. 2460; Dr. p. 530; Gaz. vol. 133; p. 439.
Bills and the like, Device for holding. A. T. Kindwall. No. 883,317; Mar. 31; Sp. p. 5639; Dr. p. 1203; Gaz. vol. 133; p. 1050.
Binder attachment. J. M. Darrow. No. 881,113; Mar. 10; Sp. p. 1237; Dr. p. 266; Gaz. vol. 133; p. 240.
Binder for loose leaves, Temporary. H. Wiedeman. No. 881,514; Mar. 10; Sp. p. 2035; Dr. p. 444; Gaz. vol. 133; p. 370.
Binder-frame. F. Greiner. No. 882,890; Mar. 24; Sp. p. 4763; Dr. p. 1013; Gaz. vol. 133; p. 877.
Binder, Loose-leaf. F. H. Smith. No. 881,191; Mar. 10; Sp. p. 1333; Dr. p. 286; Gaz. vol. 133; p. 257.
Binder, Loose-leaf. H. M. Adler. No. 882,204; Mar. 17; Sp. p. 3599; Dr. p. 763; Gaz. vol. 133; p. 649.
Binder, Loose-leaf. I. Shuites. No. 882,429; Mar. 17; Sp. p. 3848; Dr. p. 822; Gaz. vol. 133; p. 906.
Binder, Loose-leaf. M. C. Neuner. No. 883,042; Mar. 24; Sp. p. 5065; Dr. p. 1080; Gaz. vol. 133; p. 929.

Binder, Loose-leaf post. W. H. Garland. No. 882,059; Mar. 17; Sp. p. 3168; Dr. p. 673; Gaz. vol. 133; p. 576.
Binder, Temporary. L. M. Morden. No. 881,606; Mar. 10; Sp. p. 2220; Dr. p. 483; Gaz. vol. 133; p. 402.
Binding and trimming, Bias. J. Armstrong. No. 882,285; Mar. 17; Sp. p. 3601; Dr. p. 764; Gaz. vol. 133; p. 649.
Bit: *See* Bridle-bit.
Blackboards, Tray attachment for. J. W. Hainline. No. 883,402; Mar. 31; Sp. p. 5832; Dr. p. 1243; Gaz. vol. 133; p. 1078.
Blacking machine, Leather-. L. Wimmer. No. 883,438; Mar. 31; Sp. p. 5914; Dr. p. 1262; Gaz. vol. 133; p. 1091.
Blanket-fastening for animals. S. H. Rorabeck. No. 881,961; Mar. 17; Sp. p. 2958; Dr. p. 630; Gaz. vol. 133; p. 545.
Blind, Window-. G. P. Mitchell. No. 881,433; Mar. 10; Sp. p. 1876; Dr. p. 406; Gaz. vol. 133; p. 343.
Block: *See* Building-block; Concrete block; Logging-block; Stamp-mill guide-block.
Block-signal. D. D. Miles, Jr. No. 881,938; Mar. 17; Sp. p. 2907; Dr. p. 621; Gaz. vol. 133; p. 537.
Block-signal, Electric. E. P. Matter. No. 881,138; Mar. 10; Sp. p. 1294; Dr. p. 279; Gaz. vol. 133; p. 249.
Block-signal system. W. Daves. No. 882,143; Mar. 17; Sp. p. 3309; Dr. p. 706; Gaz. vol. 133; p. 603.
Block-signal system. F. E. Kinsman. No. 882,523; Mar. 17; Sp. p. 4039; Dr. p. 861; Gaz. vol. 133; p. 728.
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Blotter, pen-wiper or pen-cleaner, and pen-rack, Combination. M. H. Shapiro. No. 881,966; Mar. 17; Sp. p. 2966; Dr. p. 632; Gaz. vol. 133; p. 547.
Blower. G. W., and W. H. Leiman. No. 883,464; Mar. 31; Sp. p. 5964; Dr. p. 1272; Gaz. vol. 133; p. 1099.
Blower Pressure-. C. Neumann. No. 882,478; Mar. 17; Sp. p. 3934; Dr. p. 841; Gaz. vol. 133; p. 712.
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Blowpipe. G. Claude. No. 882,997; Mar. 24; Sp. p. 4987; Dr. p. 1060; Gaz. vol. 133; p. 915.
Board: *See* Drawing-board; Ironing-board; Label-pasting board; Paper-board; Wagon grain-board.
Board. J. T. Ferres. No. 880,784; Mar. 3; Sp. p. 598; Dr. p. 127; Gaz. vol. 133; p. 103.
Board-clamp for benches. I. W. Sipes. No. 880,586; Mar. 3; Sp. p. 194; Dr. p. 42; Gaz. vol. 133; p. 35.
Boat. F. Audet. No. 881,650; Mar. 10; Sp. p. 2316; Dr. pp. 500–1; Gaz. vol. 133; p. 416.
Boat. J. W. Gay. No. 882,194; Mar. 17; Sp. p. 3424; Dr. pp. 727–8; Gaz. vol. 133; p. 619.
Boat. A. H. Friedel. No. 883,455; Mar. 31; Sp. p. 5948; Dr. pp. 1268–9; Gaz. vol. 133; p. 1096.
Boat-detacher. E. H. Lindman. No. 880,895; Mar. 3; Sp. p. 839; Dr. p. 179; Gaz. vol. 133; p. 141.
Boat, Submarine. F. Mott. No. 883,040; Mar. 24; Sp. p. 5063; Dr. p. 1079; Gaz. vol. 133; p. 929.
Boat, Torpedo-. E. A. Nilsen. No. 883,664; Mar. 31; Sp. p. 6357; Dr. p. 1354; Gaz. vol. 133; p. 1160.
Boiler: *See* Fire-tube boiler; Locomotive-boiler; Marine boiler; Steam-boiler; Washboiler.
Boiler and furnace, Combined. W. J. Ellis. No. 882,456; Mar. 17; Sp. p. 3888; Dr. p. 833; Gaz. vol. 133; p. 705.
Boiler furnace, Steam-. J. V. Kenny. No. 880,539; Mar. 3; Sp. p. 86; Dr. p. 20; Gaz. vol. 133; p. 18.
Boiler furnace, Steam-. W. P. Darling. No. 880,977; Mar. 3; Sp. p. 981; Dr. p. 212; Gaz. vol. 133; p. 166.
Boiler-tube cleaner. A. T. Stewart. No. 881,353; Mar. 10; Sp. p. 1720; Dr. p. 371; Gaz. vol. 133; p. 319.
Boiler water-gage, Steam-. E. F. Alexander. No. 883,606; Mar. 31; Sp. p. 6231; Dr. p. 1329; Gaz. vol. 133; p. 1141.
Boilers, Blow-out device for steam-. D. Brews. No. 881,895; Mar. 17; Sp. p. 2823; Dr. p. 603; Gaz. vol. 133; p. 523.
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Bolt. F. P. Pfleghar. No. 881,613; Mar. 10; Sp. p. 2237; Dr. p. 487; Gaz. vol. 133; p. 404.
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Bolt-heading die. W. F. Dowerman. No. 882,628; Mar. 24; Sp. p. 4255; Dr. p. 901; Gaz. vol. 133; p. 795.
Bonding-pin. F. H. Ayer. No. 882,609; Mar. 24; Sp. p. 4212; Dr. p. 892; Gaz. vol. 133; p. 788.
Book. J. Griesinger. No. 881,794; Mar. 10; Sp. p. 2577; Dr. p. 553; Gaz. vol. 133; p. 459.
Book-cover. J. L. Read. No. 881,718; Mar. 10; Sp. p. 2447; Dr. p. 526; Gaz. vol. 133; p. 436.
Book-holder. H. B. Utz. No. 883,433; Mar. 31; Sp. p. 5903; Dr. p. 1259; Gaz. vol. 133; p. 1089.
Book, Indexed. A. F. Dean. No. 882,816; Mar. 24; Sp. p. 4617; Dr. pp. 984–5; Gaz. vol. 133; p. 856.
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Book, Loose-leaf. W. J. Schultz and H. Gerding. No. 881,829; Mar. 10; Sp. p. 2652; Dr. p. 568; Gaz. vol. 133; p. 471.
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Bookkeeping system and leaf forming part of the same. G. H. Vroom. No. 881,750; Mar. 10; Sp. p. 2501; Dr. pp. 538–9; Gaz. vol. 133; p. 445.
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Boot or sock, Felt. F. W. Savage. No. 883,573; Mar. 31; Sp. p. 6180; Dr. p. 1314; Gaz. vol. 133; p. 1131.
Boots and shoes, Pattern for cutting out. J. J. Dumonceau. No. 882,749; Mar. 24; Sp. p. 4492; Dr. p. 957; Gaz. vol. 133; p. 834.
Boots and shoes, Waterproof dressing for. E. R. Coburn. No. 881,901; Mar. 17; Sp. p. 2834; Gaz. vol. 133; p. 525.
Boring and finishing device. T. W. Green. No. 883,133; Mar. 24; Sp. p. 5250; Dr. pp. 1121–2; Gaz. vol. 133; p. 960.
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Boring machine, Cylinder-. W. J. Hagman. No. 883,459; Mar. 31; Sp. p. 5954; Dr. p. 1270; Gaz. vol. 133; p. 1097.
Boring mechanism, Rotary. J. A. Wiggs, Jr. No. 883,368; Mar. 31; Sp. p. 5737; Dr. pp. 1223–5; Gaz. vol. 133; p. 1066.
Boring-mill. F. W. Parker. No. 882,590; Mar. 24; Sp. p. 4152; Dr. p. 881; Gaz. vol. 133; p. 778.
Boring-tool. R. N. Melvin. No. 882,530; Mar. 17; Sp. p. 4054; Dr. p. 863; Gaz. vol. 133; p. 730.
Bottle. A. J. Farmer. No. 881,886; Mar. 10; Sp. p. 2781; Dr. p. 597; Gaz. vol. 133; p. 491.
Bottle. G. E. Zeigler. No. 882,809; Mar. 24; Sp. p. 4607; Dr. p. 982; Gaz. vol. 133; p. 854.
Bottle. N. G. Burke. No. 882,864; Mar. 24; Sp. p. 4730; Dr. p. 1005; Gaz. vol. 133; p. 872.
Bottle and ink-well attachment, Ink-. W. L. Clarke. No. 880,973; Mar. 3; Sp. p. 976; Dr. p. 210; Gaz. vol. 133; p. 165.
Bottle-cap. O. Ducker. No. 881,671; Mar. 10; Sp. p. 2346; Dr. p. 508; Gaz. vol. 133; p. 422.
Bottle-cap. E. D. Chellis. No. 882,547; Mar. 17; Sp. p. 4080; Dr. p. 867; Gaz. vol. 133; p. 735.
Bottle-cap, Combined metallic and frangible. F. T. Robinson. No. 882,912; Mar. 24; Sp. p. 4824; Dr. p. 1024; Gaz. vol. 133; p. 887.
Bottle-cap-reshaping machine. G. G. Glenn. No. 882,060; Mar. 17; Sp. p. 3170; Dr. p. 674; Gaz. vol. 133; p. 576.
Bottle-capping machine. G. Kirkegaard. No. 880,671; Mar. 3; Sp. p. 361; Dr. pp. 79–80; Gaz. vol. 133; p. 64.
Bottle-capping machine. S. C. Bond. No. 883,127; Mar. 24; Sp. p. 5239; Dr. p. 1118; Gaz. vol. 133; p. 958.
Bottle-cleaner. J. Schigelinsky. No. 882,021; Mar. 17; Sp. p. 3094; Dr. p. 659; Gaz. vol. 133; p. 564.
Bottle-cleaning machine. A. A. Pindstofte. No. 882,962; Mar. 24; Sp. p. 4923; Dr. p. 1044; Gaz. vol. 133; p. 905.
Bottle-closure. J. M. Cumming. No. 880,723; Mar. 3; Sp. p. 463; Dr. p. 98; Gaz. vol. 133; p. 82.
Bottle-closure. J. Dickens. No. 881,779; Mar. 10; Sp. p. 2544; Dr. p. 547; Gaz. vol. 133; p. 454.
Bottle-closure. H. Behr. No. 882,287; Mar. 17; Sp. p. 3604; Dr. p. 764; Gaz. vol. 133; p. 649.
Bottle-closure. W. H. Reid. No. 882,840; Mar. 24; Sp. p. 4667; Dr. p. 993; Gaz. vol. 133; p. 863.
Bottle-filling machine. L. Strebel. No. 882,849; Mar. 24; Sp. p. 4694; Dr. pp. 998–9; Gaz. vol. 133; p. 867.
Bottle for case goods. C. M. Berry. No. 881,203; Mar. 10; Sp. p. 1609; Dr. p. 344; Gaz. vol. 133; p. 300.
Bottle-holder. A. C. E. Erichsen. No. 883,395; Mar. 31; Sp. p. 5815; Dr. p. 1240; Gaz. vol. 133; p. 1075.
Bottle, Indicating-. W. C. Schmidt. No. 883,672; Mar. 31; Sp. p. 6374; Dr. p. 1356; Gaz. vol. 133; p. 1162.
Bottle, Non-refillable. E. Gibson. No. 880,787; Mar. 3; Sp. p. 601; Dr. p. 128; Gaz. vol. 133; p. 104.
Bottle, Non-refillable. C. D. Collison. No. 881,551; Mar. 10; Sp. p. 2069; Dr. p. 459; Gaz. vol. 133; p. 382.
Bottle, Non-refillable. A. Huber. No. 881,801; Mar. 10; Sp. p. 2594; Dr. p. 557; Gaz. vol. 133; p. 462.
Bottle, Non-refillable. J. Meyer. No. 881,817; Mar. 10; Sp. p. 2624; Dr. p. 563; Gaz. vol. 133; p. 468.
Bottle, Non-refillable. M. Perez. No. 881,946; Mar. 17; Sp. p. 2926; Dr. p. 624; Gaz. vol. 133; p. 540.
Bottle, Non-refillable. L. Röd. No. 881,959; Mar. 17; Sp. p. 2955; Dr. p. 629; Gaz. vol. 133; p. 544.
Bottle, Non-refillable. H. L. Baldwin. No. 881,995; Mar. 17; Sp. p. 3034; Dr. pp. 645–6; Gaz. vol. 133; p. 555.
Bottle, Non-refillable. J. F. Arkenberg. No. 883,609; Mar. 31; Sp. p. 6238; Dr. p. 1331; Gaz. vol. 133; p. 1142.
Bottle, Paste-. A. G. Baker. No. 881,899; Mar. 17; Sp. p. 2815; Dr. p. 600; Gaz. vol. 133; p. 521.
Bottle receptacle, Folding milk-. W. S. Weaver. No. 882,854; Mar. 24; Sp. p. 4706; Dr. p. 1000; Gaz. vol. 133; p. 868.
Bottle, Siphon-. D. Landau. No. 881,420; Mar. 10; Sp. p. 1851; Dr. p. 402; Gaz. vol. 133; p. 339.
Bottle-stopper. R. Keller. No. 880,669; Mar. 3; Sp. p. 359; Dr. p. 79; Gaz. vol. 133; p. 63.
Bottle-stopper. H. Tueckmantel. No. 883,259; Mar. 31; Sp. p. 5524; Dr. p. 1178; Gaz. vol. 133; p. 1032.
Bottle-stopper. O. Frocheur. No. 883,533; Mar. 31; Sp. p. 6098; Dr. p. 1297; Gaz. vol. 133; p. 1119.
Bottle-stopper. G. Kirkegaard and F. Jebsen. No. 883,544; Mar. 31; Sp. p. 6130; Dr. p. 1303; Gaz. vol. 133; p. 1123.
Bottle-stopper. H. C. A. Lütge. No. 883,657; Mar. 31; Sp. p. 6346; Dr. p. 1352; Gaz. vol. 133; p. 1158.
Bottle-stopper holder, Detachable. B. D. Thompson. No. 883,590; Mar. 31; Sp. p. 6207; Dr. p. 1323; Gaz. vol. 133; p. 1136.
Bottles, Glass-holding attachment for. W. K. Hopkins. No. 882,636; Mar. 24; Sp. p. 4267; Dr. p. 904; Gaz. vol. 133; p. 798.
Bow-instrument attachment. J. Y. Brown. No. 881,769; Mar. 10; Sp. p. 2529; Dr. p. 544; Gaz. vol. 133; p. 451.
Bowling-alley. W. W. Vearing. No. 882,851; Mar. 24; Sp. p. 4702; Dr. p. 999; Gaz. vol. 133; p. 868.
Bowling-alley pin-setting apparatus. J. E. Kilburn. No. 882,008; Mar. 17; Sp. p. 3065; Dr. p. 651; Gaz. vol. 133; p. 560.
Bowling-alley, Parlor. A. F. Schupinsky, Jr. No. 880,696; Mar. 3; Sp. p. 402; Dr. p. 87; Gaz. vol. 133; p. 72.
Box: *See* Burglar-alarm box; Call-box; Collapsible box; Display-box; Fire-alarm box; Frog-box; Journal-box; Mail-box; Metal-bound box; Packing or shipping box; Paper box; Pencil-box; Shaft or journal box; Shut-off box; Stuffing-box.

Box-adjusting mechanism, Automatic. E. McKay and B. C. Layton. No. 881,941; Mar. 17; Sp. p. 2919; Dr. p. 623; Gaz. vol. 133; p. 538.
Box-fastener. J. A. Haugh. No. 882,881; Mar. 24; Sp. p. 4765; Dr. p. 1013; Gaz. vol. 133; p. 877.
Box for transporting potted plants. L. P. Lord. No. 880,549; Mar. 3; Sp. p. 112; Dr. pp. 25–6; Gaz. vol. 133; p. 23.
Box-lid support. N. H. Priley. No. 882,713; Mar. 24; Sp. p. 4414; Dr. p. 938; Gaz. vol. 133; p. 823.
Box-strapping, Machine for making twisted-wire. R. H. Norton. No. 881,611; Mar. 10; Sp. p. 2225; Dr. pp. 484–6; Gaz. vol. 133; p. 403.
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Bracelet. H. R. Holbrook. No. 881,925; Mar. 17; Sp. p. 2883; Dr. p. 615; Gaz. vol. 133; p. 533.
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Bracket. I. Povall. No. 881,239; Mar. 10; Sp. p. 1685; Dr. p. 363; Gaz. vol. 133; p. 314.
Bracket. J. B. Macduff. No. 883,323; Mar. 31; Sp. p. 5647; Dr. p. 1205; Gaz. vol. 133; p. 1052.
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Braiding-machine. W. Körting. No. 881,475; Mar. 10; Sp. p. 1966; Dr. pp. 427–8; Gaz. vol. 133; p. 357.
Braids, laces, and other narrow fabrics, Packet for. P. Gardner. No. 881,799; Mar. 10; Sp. p. 2569; Dr. p. 551; Gaz. vol. 133; p. 458.
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Brake-beam hanger. W. Hamilton. No. 882,108; Mar. 17; Sp. p. 3257; Dr. p. 692; Gaz. vol. 133; p. 592.
Brake-head. C. B. Gosnell and A. M. Harris. No. 883,012; Mar. 24; Sp. p. 5009; Dr. pp. 1065–6; Gaz. vol. 133; p. 920.
Brake-shoe. J. S. Sheafe. No. 880,584; Mar. 3; Sp. p. 192; Dr. p. 41; Gaz. vol. 133; p. 35.
Brake-shoe. W. B. Goodwin. No. 882,107; Mar. 17; Sp. p. 3255; Dr. p. 692; Gaz. vol. 133; p. 592.
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Bread and making same. C. E. Wait. No. 882,852; Mar. 24; Sp. p. 4703; Gaz. vol. 133; p. 868.
Breast-strap connection. H. R. Henriche. No. 880,794; Mar. 3; Sp. p. 615; Dr. p. 130; Gaz. vol. 133; p. 106.
Brick-handling appliance. O. Carlson. No. 883,388; Mar. 31; Sp. p. 5797; Dr. p. 1237; Gaz. vol. 133; p. 1073.
Bridle-bit. S. A. M. Linville and L. Hicks. No. 880,803; Mar. 3; Sp. p. 638; Dr. p. 134; Gaz. vol. 133; p. 110.
Bridle-bit. J. A. Millard. No. 880,901; Mar. 3; Sp. p. 849; Dr. p. 181; Gaz. vol. 133; p. 143.
Bridle-bit. C. B. Johnson. No. 881,242; Mar. 10; Sp. p. 1499; Dr. p. 323; Gaz. vol. 133; p. 283.
Bridle-bit. H. H. MacNiven. No. 882,791; Mar. 24; Sp. p. 4560; Dr. p. 973; Gaz. vol. 133; p. 847.
Bridles, Crown-loop for harness-. J. B. Calvert. No. 881,375; Mar. 10; Sp. p. 1774; Dr. p. 382; Gaz. vol. 133; p. 326.
Brim-stretching and hat-blocking machine. G. Segschneider. No. 881,625; Mar. 10; Sp. p. 2268; Dr. p. 492; Gaz. vol. 133; p. 408.
Brine, Apparatus for electrolysis of. C. F. Carrier, Jr. No. 881,108; Mar. 10; Sp. p. 1228; Dr. p. 264; Gaz. vol. 133; p. 238.
Briquet-machine. K. Wessel. No. 883,263; Mar. 31; Sp. p. 5531; Dr. pp. 1179–80; Gaz. vol. 133; p. 1033.
Brittle substances, Implement for severing. E. and G. Hagstrom. No. 880,878; Mar. 3; Sp. p. 812; Dr. p. 172; Gaz. vol. 133; p. 136.
Broom-bridle. A. T. Callahan. No. 883,524; Mar. 31; Sp. p. 6081; Dr. p. 1294; Gaz. vol. 133; p. 1117.
Broom-corn-treating machine. O. J. Wahler. No. 883,596; Mar. 31; Sp. p. 6215; Dr. p. 1325; Gaz. vol. 133; p. 1138.
Broom-moistener. L. G. Egger. No. 882,934; Mar. 24; Sp. p. 4873; Dr. p. 1034; Gaz. vol. 133; p. 896.
Brooms, Dust-settler for. E. A. Davis. No. 883,175; Mar. 31; Sp. p. 5345; Dr. p. 1138; Gaz. vol. 133; p. 1003.
Brush. R. E. Fields. No. 880,785; Mar. 3; Sp. p. 509; Dr. p. 127; Gaz. vol. 133; p. 103.
Brush, Adjustable cleaning-. R. T. Gillespie. No. 883,108; Mar. 24; Sp. p. 5185; Dr. p. 1107; Gaz. vol. 133; p. 951.
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Brush for parquetry-flooring and the like. J. Bruyère. No. 883,166; Mar. 31; Sp. p. 5326; Dr. p. 1135; Gaz. vol. 133; p. 1000.
Brush-handle. J. H. Greene. No. 880,990; Mar. 3; Sp. p. 1002; Dr. p. 214; Gaz. vol. 133; p. 170.
Brush-holder. F. B. Howell. No. 882,565; Mar. 24; Sp. p. 4121; Dr. p. 874; Gaz. vol. 133; p. 773.
Brush, Shaving-. S. Saloman. No. 882,423; Mar. 17; Sp. p. 3636; Dr. p. 819; Gaz. vol. 133; p. 693.
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Brushing-machine, Coin-controlled. E. Goldthwait. No. 880,876; Mar. 3; Sp. p. 807; Dr. p. 171; Gaz. vol. 133; p. 135.
Bucket, Clam-shell. A. Ruetschi. No. 882,844; Mar. 24; Sp. p. 4682; Dr. p. 996; Gaz. vol. 133; p. 865.
Bucket, Dredger-. G. Francis. No. 883,635; Mar. 31; Sp. p. 6289; Dr. pp. 1341–2; Gaz. vol. 133; p. 1151.
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Buckle. M. Rubin. No. 880,576; Mar. 3; Sp. p. 178; Dr. p. 39; Gaz. vol. 133; p. 32
Buckle. A. Van Duzer. No. 881,976; Mar. 17; Sp. p. 2980; Dr. p. 635; Gaz. vol. 133; p. 549.
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Building-block. O. P. Lundell. No. 881,425; Mar. 10; Sp. p. 1858; Dr. p. 404; Gaz. vol. 133; p. 340.
Building-block and manner of assembling. R. A. Harris. No. 882,633; Mar. 24; Sp. p. 4263; Dr. p. 903; Gaz. vol. 133; p. 797.
Buildings, Construction of. C. H. Wilson. No. 882,482; Mar. 17; Sp. p. 3940; Dr. p. 842; Gaz. vol. 133; p. 713.
Bull-rings, Manufacture of. C. P. Showell. No. 881,726; Mar. 10; Sp. p. 2457; Dr. p. 529; Gaz. vol. 133; p. 438.
Bumping-post. G. Hopson. No. 882,147; Mar. 17; Sp. p. 3319; Dr. p. 707; Gaz. vol. 133; p. 604.
Bung, Valve-. A. Schaper. No. 882,652; Mar. 24; Sp. p. 4298; Dr. p. 911; Gaz. vol. 133; p. 803.
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Bushing, Pulley-clutch. J. W. McGregor and L. G. Ferris. No. 883,559; Mar. 31; Sp. p. 6158; Dr. p. 1309; Gaz. vol. 133; p. 1127.
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Butter, &c., Machine for cutting. J. H. Mauter. No. 883,037; Mar. 24; Sp. p. 5057; Dr. p. 1078; Gaz. vol. 133; p. 928.
Butter, oils, &c., Renovating. W. F. Jensen. No. 881,929; Mar. 17; Sp. p. 2891; Dr. p. 617; Gaz. vol. 133; p. 534.
Butter-printing machine. J. R. Prouty. No. 883,345; Mar. 31; Sp. p. 5680; Dr. pp. 1213–14; Gaz. vol. 133; p. 1058.
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Button and garment supporter, Combined. M. M. Strauss. No. 882,027; Mar. 17; Sp. p. 3108; Dr. p. 661; Gaz. vol. 133; p. 566.
Button-blank-cutting machine. G. W. Schreurs. No. 882,426; Mar. 17; Sp. p. 3840; Dr. p. 820; Gaz. vol. 133; p. 695.
Button, Collar-. D. A. Hart. No. 882,062; Mar. 17; Sp. p. 3173; Dr. p. 675; Gaz. vol. 133; p. 577.
Button, Detachable. N. Illoway. No. 881,473; Mar. 10; Sp. p. 1963; Dr. p. 427; Gaz. vol. 133; p. 356.
Button-holder. L. J. Fleckenstien. No. 880,546; Mar. 3; Sp. p. 313; Dr. p. 69; Gaz. vol. 133; p. 55.
Buttonhole cutter or shears. G. T. Barr. No. 881,890; Mar. 17; Sp. p. 2815; Dr. p. 601; Gaz. vol. 133; p. 521.
Cab signal system. D. P. Thomson. No. 883,635; Mar. 10; Sp. p. 2283; Dr. p. 495; Gaz. vol. 133; p. 411.
Cabinet, Automatic seed-. S. B. Powers. No. 883,233; Mar. 31; Sp. p. 5470; Dr. p. 1166; Gaz. vol. 133; p. 1023.
Cabinet for holding disk records. C. H. Progler. No. 881,950; Mar. 17; Sp. p. 2933; Dr. p. 626; Gaz. vol. 133; p. 541.
Cabinet, Kitchen-. W. M. Henson. No. 880,885; Mar. 3; Sp. p. 821; Dr. p. 174; Gaz. vol. 133; p. 138.
Cabinet, Kitchen-. E. M. Bennett. No. 882,368; Mar. 17; Sp. p. 3753; Dr. pp. 798–9; Gaz. vol. 133; p. 676.
Cable-laying machine. G. W. Noble. No. 882,640; Mar. 24; Sp. p. 4291; Dr. p. 910; Gaz. vol. 133; p. 802.
Cable-reel. E. Rosenberg. No. 882,587; Mar. 24; Sp. p. 4165; Dr. p. 883; Gaz. vol. 133; p. 780.
Cable terminal. F. B. Cook. No. 883,625; Mar. 31; Sp. p. 6270; Dr. pp. 1337–8; Gaz. vol. 133; p. 1148.
Cables, Traction apparatus for stationary. O. A. Ellis. No. 880,809; Mar. 3; Sp. p. 791; Dr. pp. 167–8; Gaz. vol. 133; p. 132.
Calculating-machine. H. E. Goldberg. No. 881,571; Mar. 10; Sp. p. 2140; Dr. pp. 467–8; Gaz. vol. 133; p. 389.
Calculating-machine. H. E. Goldberg. No. 881,572; Mar. 10; Sp. p. 2145; Dr. pp. 468–9; Gaz. vol. 133; p. 390.
Calculating-machine. W. P. Quentell. No. 881,868; Mar. 10; Sp. p. 2743; Dr. p. 588; Gaz. vol. 133; p. 485.
Calculating-machine. W. F. Hausstein. No. 882,387; Mar. 17; Sp. p. 3781; Dr. p. 807; Gaz. vol. 133; p. 682.
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Calculating-machine. W. L. E. Keuffel. No. 882,567; Mar. 24; Sp. p. 4125; Dr. p. 875; Gaz. vol. 133; p. 774.
Calculating-machine. C. M. Bernegau. No. 882,614; Mar. 24; Sp. p. 4221; Dr. pp. 894–5; Gaz. vol. 133; p. 790.
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Calculating-machine. W. F. Hausstein. No. 883,403; Mar. 31; Sp. p. 5833; Dr. pp. 1243–4; Gaz. vol. 133; p. 1078.
Calculating or adding machine. W. P. Quentell. No. 881,717; Mar. 10; Sp. p. 2444; Dr. p. 526; Gaz. vol. 133; p. 435.

Calipers, Measuring-. J. W. Marr. No. 883,660; Mar. 31; Sp. p. 6350; Dr. p. 1353; Gaz. vol. 133; p. 1159.
Call-box. H. S. Bullock, Jr. No. 883,447; Mar. 31; Sp. p. 5931; Dr. pp. 1265–6; Gaz. vol. 133; p. 1094.
Camera, Lens-shutter reflecting-. J. D. Garfield. No. 882,307; Mar. 17; Sp. p. 3639; Dr. pp. 772–3; Gaz. vol. 133; p. 656.
Camera, Photographic. F. S. Andrews. No. 883,607; Mar. 31; Sp. p. 6232; Dr. pp. 1329–30; Gaz. vol. 133; p. 1141.
Camera, Photographic enlarging-. F. A. Brownell. No. 881,997; Mar. 17; Sp. p. 3036; Dr. pp. 646–7; Gaz. vol. 133; p. 556.
Can: *See* Oil-can; Watering-can.
Can-cap-placing apparatus. J. T. Wilmore. No. 882,728; Mar. 24; Sp. p. 4445; Dr. pp. 945–6; Gaz. vol. 133; p. 827.
Can-cap-placing machine. W. I. White. No. 882,603; Mar. 24; Sp. p. 4196; Dr. pp. 889–90; Gaz. vol. 133; p. 786.
Can cooling or refrigerating attachment, Milk-. H. S. Parker. No. 881,025; Mar. 3; Sp. p. 1069; Dr. p. 232; Gaz. vol. 133; p. 182.
Can-making machine. B. F. Mann. No. 881,326; Mar. 10; Sp. p. 1663; Dr. pp. 356–7; Gaz. vol. 133; p. 310.
Can-opener. C. J. Johnson. No. 882,065; Mar. 17; Sp. p. 3180; Dr. p. 676; Gaz. vol. 133; p. 578.
Can-opener. L. D. Jackson. No. 883,313; Mar. 31; Sp. p. 5634; Dr. p. 1201; Gaz. vol. 133; p. 1049.
Can-washing machine. J. R. Blair. No. 880,713; Mar. 3; Sp. p. 445; Dr. pp. 93–4; Gaz. vol. 133; p. 78.
Cans, Detachable and reversible spout or nozzle for dispensing-. G. W. Cole. No. 881,550; Mar. 10; Sp. p. 2098; Dr. p. 459; Gaz. vol. 133; p. 382.
Cans, Reinforced neck for milk-. E. Mohr. No. 882,504; Mar. 17; Sp. p. 3979; Dr. p. 850; Gaz. vol. 133; p. 720.
Canal-lock. S. S. Jamison. No. 882,501; Mar. 17; Sp. p. 3973; Dr. p. 849; Gaz. vol. 133; p. 719.
Canceling and postmarking machine. M. V. B. Ethridge. No. 882,519; Mar. 17; Sp. p. 4024; Dr. pp. 858–9; Gaz. vol. 133; p. 726.
Candlestick, Miner's. M. M. Gault and J. L. Stockbridge. No. 883,307; Mar. 31; Sp. p. 5624; Dr. p. 1199; Gaz. vol. 133; p. 1047.
Candy-pulling machine. E. M. Robinson and J. H. Deiter. No. 881,442; Mar. 10; Sp. p. 1894; Dr. p. 412; Gaz. vol. 133; p. 346.
Cane cutter and crusher. C. W. Harris. No. 880,989; Mar. 3; Sp. p. 1005; Dr. p. 215; Gaz. vol. 133; p. 171.
Cane-mill feeder, Sugar-. J. M. Steel. No. 880,832; Mar. 3; Sp. p. 710; Dr. p. 149; Gaz. vol. 133; p. 120.
Canoes, Invisible air-chamber and sponson for. C. B. Thatcher. No. 883,558; Mar. 31; Sp. p. 6204; Dr. p. 1322; Gaz. vol. 133; p. 1136.
Caoutchouc, Manufacturing artificial. P. Beresin. No. 881,536; Mar. 10; Sp. p. 2072; Gaz. vol. 133; p. 377.
Cap for the protection of the human head. R. Ireland and H. W. Cole. No. 882,686; Mar. 24; Sp. p. 4364; Dr. p. 929; Gaz. vol. 133; p. 814.
Capstan, Traveling. H. M. Fisk. No. 881,508; Mar. 10; Sp. p. 2133; Dr. pp. 465–6; Gaz. vol. 133; p. 388.
Car. O. E. Edwards, Jr. No. 881,468; Mar. 10; Sp. p. 1952; Dr. p. 424; Gaz. vol. 133; p. 355.
Car. C. K. Pickles. No. 883,230; Mar. 31; Sp. p. 5466; Dr. p. 1164; Gaz. vol. 133; p. 1022.
Car-brake. C. V. Rote and P. E. Shec. No. 881,263; Mar. 10; Sp. p. 1540; Dr. pp. 331–2; Gaz. vol. 133; p. 290.
Car-coupling. A. Klinglesmith. No. 882,696; Mar. 24; Sp. p. 4379; Dr. p. 932; Gaz. vol. 133; p. 818.
Car-door. C. L. Vandervort. No. 880,766; Mar. 3; Sp. p. 561; Dr. pp. 118–19; Gaz. vol. 133; p. 97.
Car-door. G. O. Helvig. No. 881,798; Mar. 10; Sp. p. 2586; Dr. pp. 555–6; Gaz. vol. 133; p. 461.
Car-door fastener. G. Lighthiser. No. 881,249; Mar. 10; Sp. p. 1514; Dr. p. 325; Gaz. vol. 133; p. 285.
Car-door fastener. P. Langley. No. 882,071; Mar. 17; Sp. p. 3194; Dr. p. 679; Gaz. vol. 133; p. 581.
Car-door fastening. B. B. Bowers. No. 880,621; Mar. 3; Sp. p. 270; Dr. p. 57; Gaz. vol. 133; p. 47.
Car door, Grain-. J. H. Jones and P. Lynch. No. 881,244; Mar. 10; Sp. p. 1504; Dr. p. 324; Gaz. vol. 133; p. 283.
Car door, Grain-. W. L. Anrand. No. 882,286; Mar. 17; Sp. p. 3602; Dr. p. 764; Gaz. vol. 133; p. 649.
Car-door hanger. T. S. Merriman. No. 882,950; Mar. 24; Sp. p. 4903; Dr. p. 1040; Gaz. vol. 133; p. 901.
Car-door-operating mechanism. C. G. Harrington. No. 881,857; Mar. 10; Sp. p. 2719; Dr. p. 583; Gaz. vol. 133; p. 481.
Car doors, Combined track and roller support for freight-. J. P. Williams. No. 881,756; Mar. 10; Sp. p. 2510; Dr. p. 541; Gaz. vol. 133; p. 448.
Car draft and buffing rigging, Railway-. R. D. Gallagher, Jr. No. 880,516; Mar. 3; Sp. p. 45; Dr. pp. 11–12; Gaz. vol. 133; p. 11.
Car, Dump-. S. Otis. No. 880,750; Mar. 3; Sp. p. 531; Dr. pp. 110–11; Gaz. vol. 133; p. 92.
Car, Dumping-. M. H. Treadwell. No. 882,129; Mar. 17; Sp. p. 3287; Dr. p. 701; Gaz. vol. 133; p. 599.
Car, Dumping-. A. G. Brown. No. 882,621; Mar. 24; Sp. p. 4238; Dr. p. 898; Gaz. vol. 133; p. 793.
Car-fender. A. Hessemer. No. 881,581; Mar. 10; Sp. p. 2163; Dr. p. 472; Gaz. vol. 133; p. 393.
Car-fender. W. B. Reed. No. 882,079; Mar. 17; Sp. p. 3208; Dr. pp. 681–2; Gaz. vol. 133; p. 583.
Car-fender. A. W. Shank. No. 882,506; Mar. 17; Sp. p. 3981; Dr. p. 851; Gaz vol. 133; p. 721.
Car fender, Electrically-operated street-railway-. N. Fallek. No. 881,115; Mar. 10; Sp. p. 1240; Dr. p. 267; Gaz. vol. 133; p. 240.
Car for cement or concrete blocks, Transporting and drying. S. M. Chase. No. 883,294; Mar. 31; Sp. p. 5600; Dr. pp. 1193–4; Gaz. vol. 133; p. 1043.
Car frame, Railway-. R. D. Gallagher, Jr. No. 883,187; Mar. 31; Sp. p. 5365; Dr. p. 1142; Gaz. vol. 133; p. 1007.
Car grain-door. C. C. Neale. No. 882,014; Mar. 17; Sp. p. 3081; Dr. p. 655; Gaz. vol. 133; p. 562.
Car grain-door. G. H. Gilman. No. 882,308; Mar. 17; Sp. p. 3646; Dr. p. 773; Gaz. vol. 133; p. 656.
Car grain-door, Freight-. J. B. Smiley. No. 883,353; Mar. 31; Sp. p. 5702; Dr. p. 1217; Gaz. vol. 133; p. 1061.
Car guard-rail, Passenger-. J. J. Peterson. No. 880,914; Mar. 3; Sp. p. 874; Dr. p. 188; Gaz. vol. 133; p. 147.
Car load-indicator, Railway-. M. C. Coats. No. 880,719; Mar. 3; Sp. p. 456; Dr. p. 96; Gaz. vol. 133; p. 80.
Car loader, Box-. F. D. Buffum. No. 883,288; Mar. 31; Sp. p. 5583; Dr. pp. 1190–1; Gaz. vol. 133; p. 1041.
Car, Ore-. C. L. Pennell. No. 881,146; Mar. 10; Sp. p. 1309; Dr. p. 282; Gaz. vol. 133; p. 252.
Car-pole attachment, Trolley-. G. R. Dunn. No. 882,495; Mar. 17; Sp. p. 3960; Dr. p. 847; Gaz. vol. 133; p. 717.
Car, Railway-. E. I. Dodds. No. 881,466; Mar. 10; Sp. p. 1949; Dr. pp. 423–4; Gaz. vol. 133; p. 354.
Car, Railway dumping-. E. I. Dodds. No. 881,884; Mar. 10; Sp. p. 2777; Dr. p. 596; Gaz. vol. 133; p. 491.
Car, Railway passenger-. T. R. Brown. No. 882,927; Mar. 24; Sp. p. 4850; Dr. pp. 1029–31; Gaz. vol. 133; p. 893.
Car-replacer. H. M. Cawood. No. 882,097; Mar. 17; Sp. p. 3236; Dr. p. 688; Gaz. vol. 133; p. 590.
Car-replacing wheel. O. T. Dougherty. No. 882,101; Mar. 17; Sp. p. 3243; Dr. p. 689; Gaz. vol. 133; p. 590.
Car running-gear, Mine-. J. M. and R. F. Phillips. No. 882,533; Mar. 17; Sp. p. 4061; Dr. p. 864; Gaz. vol. 133; p. 731.
Car running-gear, Mine-. J. M. and R. F. Phillips. No. 882,534; Mar. 17; Sp. p. 4062; Dr. p. 864; Gaz. vol. 133; p. 732.
Car, Semiconvertible. P. M. Kling. No. 880,541; Mar. 3; Sp. p. 89; Dr. p. 21; Gaz. vol. 133; p. 19.
Car, Sleeping-. L. Hofschneider. No. 881,123; Mar. 10; Sp. p. 1258; Dr. pp. 271–2; Gaz. vol. 133; p. 243.
Car-stake. J. Felkey. No. 880,982; Mar. 3; Sp. p. 995; Dr. p. 213; Gaz. vol. 133; p. 168.
Car-stake. J. W. Stokoe. No. 881,971; Mar. 17; Sp. p. 2973; Dr. p. 633; Gaz. vol. 133; p. 548.
Car stake, Logging-. S. P. George. No. 880,652; Mar. 3; Sp. p. 331; Dr. p. 72; Gaz. vol. 133; p. 58.
Car-tabulating system. C. F. Muller, F. M. Driscoll, and R. J. Barry. No. 881,019; Mar. 3; Sp. p. 1058; Dr. p. 230; Gaz. vol. 133; p. 180.
Car, Tram-. J. J. Schimpf. No. 882,915; Mar. 24; Sp. p. 4830; Dr. p. 1025; Gaz. vol. 133; p. 899.
Car transom and other window screen, Railway-. C. J. McNitt. No. 881,606; Mar. 10; Sp. p. 2222; Dr. p. 483; Gaz. vol. 133; p. 403.
Car-underframe. C. H. Howard. No. 881,185; Mar. 10; Sp. p. 1377; Dr. p. 297; Gaz. vol. 133; p. 264.
Car-underframe. J. S. Andrews. No. 881,281; Mar. 10; Sp. p. 1584; Dr. p. 338; Gaz. vol. 133; p. 296.
Car ventilator, Railway-. H. W. Young. No. 882,364; Mar. 17; Sp. p. 3745; Dr. p. 797; Gaz. vol. 133; p. 675.
Car vestibule, Stock-. G. F. Pettit. No. 882,163; Mar. 17; Sp. p. 3365; Dr. p. 717; Gaz. vol. 133; p. 609.
Car, wagon, and the like, Dumping. B. Lloyd. No. 880,548; Mar. 3; Sp. p. 109; Dr. p. 25; Gaz. vol. 133; p. 22.
Cars or trains, System for automatically stopping. E. E. Kleinschmidt. No. 882,695; Mar. 24; Sp. p. 4376; Dr. p. 931; Gaz. vol. 133; p. 817.
Cars, Steel underframing for railway-. F. L. Irwin. No. 882,638; Mar. 24; Sp. p. 4268; Dr. p. 905; Gaz. vol. 133; p. 798.
Carbon, Producing chlorids of. J. MacKaye. No. 880,900; Mar. 3; Sp. p. 845; Dr. pp. 180–1; Gaz. vol. 133; p. 142.
Carbon sheets, Means for mounting. C. H. Megson and G. H. Sculthorp. No. 883,219; Mar. 31; Sp. p. 5434; Dr. p. 1157; Gaz. vol. 133; p. 1019.
Carburetor. C. Krebs. No. 881,416; Mar. 10; Sp. p. 1842; Dr. pp. 400–1; Gaz. vol. 133; p. 338.
Carbureter. C. Schmidt. No. 882,170; Mar. 17; Sp. p. 3388; Dr. p. 720; Gaz. vol. 133; p. 613.
Carbureter. M. D. Colbath. No. 883,171; Mar. 31; Sp. p. 5338; Dr. p. 1137; Gaz. vol. 133; p. 1002.
Carbureter for explosive-engines. E. J. Boyler. No. 880,502; Mar. 3; Sp. p. 23; Dr. p. 6; Gaz. vol. 133; p. 7.
Carbureter for internal-combustion engines. P. Allen. No. 881,279; Mar. 10; Sp. p. 1580; Dr. p. 337; Gaz. vol. 133; p. 295.
Carbureter for internal-combustion engines. S. A. Horstmann. No. 881,800; Mar. 10; Sp. p. 2593; Dr. pp. 556–7; Gaz. vol. 133; p. 462.
Carbureting apparatus. H. E. Smith. No. 883,249; Mar. 31; Sp. p. 5501; Dr. p. 1173; Gaz. vol. 133; p. 1028.
Carbureting apparatus, Air-. C. L. Meyer and N. P. Hickey. No. 881,431; Mar. 10; Sp. p. 1871; Dr. p. 407; Gaz. vol. 133; p. 342.
Carcase-scrubber. C. L. Smith. No. 882,719; Mar. 24; Sp. p. 4428; Dr. pp. 941–2; Gaz. vol. 133; p. 824.
Card-exhibiting machine. H. G. Taylor. No. 880,598; Mar. 3; Sp. p. 227; Dr. pp. 47–8; Gaz. vol. 133; p. 40.
Carpenter's tool, Combined. B. Jacob. No. 883,112; Mar. 24; Sp. p. 5198; Dr. pp. 1110–11; Gaz. vol. 133; p. 953.
Carpet and rug cleaning machine. J. R. Nye. No. 882,208; Mar. 17; Sp. p. 3444; Dr. pp. 732–3; Gaz. vol. 133; p. 623.
Carpet-beater. T. Holt. No. 880,531; Mar. 3; Sp. p. 71; Dr. p. 17; Gaz. vol. 133; p. 16.
Carpet-fastener. J. C. F. Borger. No. 883,129; Mar. 24; Sp. p. 5243; Dr. p. 1119; Gaz. vol. 133; p. 958.
Carpet-stretcher. T. E. Davis. No. 882,873; Mar. 24; Sp. p. 4746; Dr. p. 1009; Gaz. vol. 133; p. 874.
Carriage, Baby-. J. E. Loshbough. No. 882,901; Mar. 24; Sp. p. 4900; Dr. p. 1021; Gaz. vol. 133; p. 883.
Carriage, Child's. A. W. Loshbough. No. 882,900; Mar. 24; Sp. p. 4798; Dr. p. 1020; Gaz. vol. 133; p. 882.
Carriage, Folding baby-. J. E. Loshbough. No. 882,902; Mar. 24; Sp. p. 4804; Dr. p. 1021; Gaz. vol. 133; p. 884.
Carrier: *See* Bicycle parcel-carrier; Die-carrier; Electric carrier; Freight-carrier; Hay-carrier; Melon-carrier; Oyster-carrier; Trace-carrier; Watermelon-carrier.

Cartridge-rope from explosive gelatin, Machine for forming a. H. Auchu. No. 881,365; Mar. 10; Sp. p. 1741; Dr. pp. 375–6; Gaz. vol. 133; p. 322.
Cartridge-rope from explosive gelatin, Machine for forming a. H. Auchu. No. 881,366; Mar. 10; Sp. p. 1746; Dr. p. 376; Gaz. vol. 133; p. 323.
Cartridge-rope from explosive gelatin, Machine for forming a. H. Auchu. No. 881,367; Mar. 10; Sp. p. 1749; Dr. pp. 376–7; Gaz. vol. 133; p. 323.
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Carving-drill, Pneumatic. H. Meyer. No. 882,250; Mar. 17; Sp. p. 3549; Dr. p. 752; Gaz. vol. 133; p. 640.
Carving-machine. F. H. Richards. No. 881,956; Mar. 17; Sp. p. 2948; Dr. p. 628; Gaz. vol. 133; p. 543.
Carving-machine. F. H. Richards. No. 882,842; Mar. 24; Sp. p. 4673; Dr. pp. 994–5; Gaz. vol. 133; p. 864.
Case: *See* Mail-receiving case; Packing-case; Sectional case; Shipping-case; Show-case; Ticket-case; Tire-case; Tobacco-case.
Cash-register. A. Godefroid. No. 880,653; Mar. 3; Sp. p. 333; Dr. p. 72; Gaz. vol. 133; p. 58.
Cash-register revolving indicating-target. A. L. Creelman. No. 880,632; Mar. 3; Sp. p. 288; Dr. pp. 62–4; Gaz. vol. 133; p. 51.
Cask rinsing and airing apparatus. C. Gülke. No. 881,575; Mar. 10; Sp. p. 2153; Dr. p. 470; Gaz. vol. 133; p. 391.
Casket-handle. A. P. Gillen. No. 881,305; Mar. 10; Sp. p. 1806; Dr. p. 391; Gaz. vol. 133; p. 331.
Caster. E. Lockyer. No. 883,655; Mar. 31; Sp. p. 6344; Dr. p. 1352; Gaz. vol. 133; p. 1157.
Casting apparatus. M. C. Steese. No. 883,253; Mar. 31; Sp. p. 5509; Dr. p. 1174; Gaz. vol. 133; p. 1030.
Casting-machine. R. B. Holley. No. 883,312; Mar. 31; Sp. p. 5630; Dr. p. 1201; Gaz. vol. 133; p. 1049.
Casting-tool. H. Goddard. No. 882,461; Mar. 17; Sp. p. 3905; Dr. p. 835; Gaz. vol. 133; p. 706.
Castings, Producing chilled. M. J. Somers. No. 882,720; Mar. 24; Sp. p. 4433; Dr. p. 942; Gaz. vol. 133; p. 825.
Castrating-tool. J. N. Gassett. No. 881,117; Mar. 10; Sp. p. 1244; Dr. p. 267; Gaz. vol. 133; p. 241.
Catamenial bandage. A. R. Slater. No. 880,928; Mar. 3; Sp. p. 896; Dr. pp. 193–4; Gaz. vol. 133; p. 151.
Catamenial bandage. M. E. Doyle. No. 882,301; Mar. 17; Sp. p. 3630; Dr. p. 769; Gaz. vol. 133; p. 654.
Catamenial device. A. I. Jordan. No. 881,130; Mar. 10; Sp. p. 1274; Dr. p. 274; Gaz. vol. 133; p. 246.
Caustic holder, Lunar-. J. P. O'Connor. No. 881,142; Mar. 10; Sp. p. 1304; Dr. p. 281; Gaz. vol. 133, p. 251.
Cell-case machine. A. W. D. Weis and J. Starman. No. 880,845; Mar. 3; Sp. p. 734; Dr. pp. 155–6; Gaz. vol. 133; p. 124.
Celluloid substitute and making same. H. A. L. Rouxeville. No. 881,827; Mar. 10; Sp. p. 2649; Gaz. vol. 133; p. 471.
Cellulose, Manufacture of. E. Morterud. No. 883,328; Mar. 31; Sp. p. 5655; Dr. p. 1207; Gaz. vol. 133; p. 1053.
Cellulose, Method and apparatus for producing. A. Müntzing. No. 882,790; Mar. 24; Sp. p. 4557; Dr. p. 973; Gaz. vol. 133; p. 847.
Cement-block machine. J. Wengs. No. 881,513; Mar. 10; Sp. p. 2033; Dr. p. 444; Gaz. vol. 133; p. 369.
Cement-block molds, Face-plate for. G. W. Dunlap. No. 880,782; Mar. 3; Sp. p. 595; Dr. p. 127; Gaz. vol. 133; p. 102.
Cement-brick machine. D. H. Merritt. No. 881,815; Mar. 10; Sp. p. 2620; Dr. pp. 562–3; Gaz. vol. 133; p. 467.
Cement column. R. H. Guyer. No. 881,193; Mar. 10; Sp. p. 1375; Dr. p. 296; Gaz. vol. 133; p. 263.
Cement-molds, Corner-lock for. H. A. Carmichael. No. 881,224; Mar. 10; Sp. p. 1462; Dr. p. 314; Gaz. vol. 133; p. 277.
Cement mortar and making the same, Waterproof Portland-. R. H. Gaines. No. 883,683; Mar. 31; Sp. p. 6392; Gaz. vol. 133; p. 1166.
Cement or concrete block mold. A. M. Haight. No. 882,249; Mar. 17; Sp. p. 3521; Dr. p. 747; Gaz. vol. 133; p. 636.
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Chandelier. W. T. H. Pauley. No. 883,045; Mar. 24; Sp. p. 5072; Dr. p. 1082; Gaz. vol. 133; p. 930.
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Chart, Adjustable. W. Horeischi. No. 882,111; Mar. 17; Sp. p. 3261; Dr. p. 693; Gaz. vol. 133; p. 593.
Check. J. C. Bell. No. 883,390; Mar. 31; Sp. p. 5782; Dr. p. 1234; Gaz. vol. 133; p. 1070.
Check-form. W. H. Bertram. No. 882,455; Mar. 17; Sp. p. 3947; Dr. p. 844; Gaz. vol. 133; p. 714.
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Cheese-press. E. L. McKinnon. No. 882,792; Mar. 24; Sp. p. 4560; Dr. pp. 973–4; Gaz. vol. 133; p. 847.
Chill-mold. E. A. Tverdahl. No. 882,507; Mar. 17; Sp. p. 3983; Dr. p. 851; Gaz. vol. 133; p. 721.
Chimney or stack. O. T. Benson. No. 883,164; Mar. 31; Sp. p. 5322; Dr. p. 1135; Gaz. vol. 133; p. 999.
Chlorin from raw bromin, Removing. K. Kubierschky. No. 881,806; Mar. 10; Sp. p. 2604; Gaz. vol. 133; p. 801.
Chocolate-making machine. W. E. Murray. No. 882,646; Mar. 24; Sp. p. 4288; Dr. p. 909; Gaz. vol. 133; p. 801.
Chocolate-warming table. J. R. Windsor. No. 882,040; Mar. 17; Sp. p. 3136; Dr. p. 665; Gaz. vol. 133; p. 560.
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Chronograph. E. B. Merriam. No. 881,479; Mar. 10; Sp. p. 1975; Dr. p. 430; Gaz. vol. 133; p. 358.
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Cigar and cigarette holder. I. A. Heald. No. 882,825; Mar. 24; Sp. p. 4635; Dr. p. 988; Gaz. vol. 133; p. 859.
Cigar-machines, Wrapper-smoothing mechanism for. W. S. Luckett and M. Fogde. No. 882,703; Mar. 24; Sp. p. 4387; Dr. p. 934; Gaz. vol. 133; p. 820.
Cigar-tip. W. E. Bostick. No. 882,185; Mar. 17; Sp. p. 3407; Dr. p. 724; Gaz. vol. 133; p. 617.
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Cigars, Pressing. R. Woerner. No. 883,156; Mar. 24; Sp. p. 5294; Dr. pp. 1129–31; Gaz. vol. 133; p. 967.
Cigarette-machines, Paper-strip controlling and printing mechanism for. S. I. Prescott. No. 882,651; Mar. 24; Sp. p. 4295; Dr. p. 911; Gaz. vol. 133; p. 803.
Clam-digger. W. J. Mumford. No. 880,986; Mar. 3; Sp. p. 386; Dr. p. 84; Gaz. vol. 133; p. 69.
Clamp: *See* Board-clamp; Clothes-line clamp; Fire-brick clamp; Gluing-clamp; Hose-clamp; Rope-clamp; Wire-clamp.
Clamp. H. L. Wyeth. No. 883,604; Mar. 31; Sp. p. 6228; Dr. p. 1328; Gaz. vol. 133; p. 1140.
Clamping and locking device. W. M. Van Cise and J. F. Chambers. No. 881,975; Mar. 17; Sp. p. 2978; Dr. p. 634; Gaz. vol. 133; p. 549.
Clasp: *See* Garment-supporter clasp; Signal-blade clasp.
Clasp. S. F. Estell. No. 883,184; Mar. 31; Sp. p. 5358; Dr. p. 1141; Gaz. vol. 133; p. 1006.
Clasp. J. H. Pilkington. No. 883,231; Mar. 31; Sp. p. 5468; Dr. p. 1165; Gaz. vol. 133; p. 1023.
Cleaner: *See* Boiler-tube cleaner; Bottle-cleaner; Cotton cleaner; Flue-cleaner; Gun-cleaner; Pipe-cleaner; Shoe-cleaner.
Cleaning compound. G. Hegyi. No. 881,859; Mar. 10; Sp. p. 2724; Gaz. vol. 133; p. 492.
Cleaning compound. H. C. Wright. No. 881,989; Mar. 17; Sp. p. 3013; Gaz. vol. 133; p. 553.
Cleaning-tool, Pneumatic. C. Moukos. No. 882,574; Mar. 24; Sp. p. 4139; Dr. p. 878; Gaz. vol. 133; p. 776.
Cleaver, Wood-. A. Blenk. No. 881,538; Mar. 10; Sp. p. 2075; Dr. p. 453; Gaz. vol. 133; p. 378.
Clevis. H. S. Burnett. No. 880,626; Mar. 3; Sp. p. 280; Dr. p. 60; Gaz. vol. 133; p. 49.
Clevis. L. K. McClellan. No. 882,476; Mar. 17; Sp. p. 3932; Dr. p. 841; Gaz. vol. 133; p. 711.
Clevis, Plow-. C. C. Rankin. No. 882,777; Mar. 24; Sp. p. 4576; Dr. p. 976; Gaz. vol. 133; p. 849.
Clip: *See* Spark-plug clip; Stenciling-machine clip; Switch-clip; Vehicle-clip.
Clip. R. W. Horton and J. E. Molesworth. No. 882,886; Mar. 24; Sp. p. 4770; Dr. p. 1015; Gaz. vol. 133; p. 878.
Clip. W. F. Oakley. No. 883,119; Mar. 24; Sp. p. 5223; Dr. p. 1115; Gaz. vol. 133; p. 955.
Clock, Flash-light electrical alarm and bank and call. A. Y. Jansen. No. 882,320; Mar. 17; Sp. p. 3666; Dr. p. 778; Gaz. vol. 133; p. 661.
Clock, Graphophone-. C. W. Henrich. No. 883,111; Mar. 24; Sp. p. 5194; Dr. pp. 1109–10; Gaz. vol. 133; p. 952.
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Clock, Repeating alarm-. W. D. Davies. No. 881,555; Mar. 10; Sp. p. 2110; Dr. p. 461; Gaz. vol. 133; p. 384.
Clock, Secondary electric. G. B. Bowell. No. 882,186; Mar. 17; Sp. p. 3409; Dr. p. 724; Gaz. vol. 133; p. 617.
Clod-crusher. H. H. Butler and R. Decker. No. 882,295; Mar. 17; Sp. p. 3617; Dr. p. 767; Gaz. vol. 133; p. 652.
Closet: *See* Dry closet.

Closet-bowl. G. W. Palmer and F. E. Pierce. No. 881,333; Mar. 10; Sp. p. 1676; Dr. p. 361; Gaz. vol. 133; p. 312.
Closet-flushing apparatus. R. Stickdorn. No. 880,504; Mar. 3; Sp. p. 220; Dr. p. 46; Gaz. vol. 133; p. 38.
Closure. W. P. Fleming. No. 881,067; Mar. 3; Sp. p. 1144; Dr. p. 248; Gaz. vol. 133; p. 195.
Cloth. G. Moss. No. 882,832; Mar. 24; Sp. p. 4657; Dr. p. 991; Gaz. vol. 133; p. 861.
Cloth, Machine for extracting liquid from. E. Gessner. No. 883,536; Mar. 31; Sp. p. 6104; Dr. pp. 1298–9; Gaz. vol. 133; p. 1120.
Cloth opener, spreader, and guider. A. Birch. No. 882,515; Mar. 17; Sp. p. 4008; Dr. p. 857; Gaz. vol. 133; p. 725.
Clothes-beating apparatus. F. Wallerstein. No. 881,978; Mar. 17; Sp. p. 2985; Dr. pp. 635–6; Gaz. vol. 133; p. 550.
Clothes-drier. M. B. Fitts. No. 881,784; Mar. 10; Sp. p. 2558; Dr. p. 549; Gaz. vol. 133; p. 457.
Clothes-drier. M. P. Peterson. No. 882,960; Mar. 24; Sp. p. 4920; Dr. pp. 1043–4; Gaz. vol. 133; p. 905.
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Clothes-line holder. C. W. Radoll. No. 883,668; Mar. 31; Sp. p. 6366; Dr. p. 1357; Gaz. vol. 133; p. 1161.
Clothes-line prop. D. McDougall. No. 880,748; Mar. 3; Sp. p. 528; Dr. p. 110; Gaz. vol. 133; p. 91.
Clothes-line reel. H. Canney. No. 881,772; Mar. 10; Sp. p. 2533; Dr. pp. 545–6; Gaz. vol. 133; p. 452.
Clothes-pin. F. H. Perry. No. 880,819; Mar. 3; Sp. p. 669; Dr. p. 141; Gaz. vol. 133; p. 115.
Clothes-pin. A. Stratton. No. 883,060; Mar. 24; Sp. p. 5098; Dr. p. 1088; Gaz. vol. 133; p. 935.
Clothes-pin. F. F. Pecor. No. 883,667; Mar. 31; Sp. p. 6365; Dr. p. 1357; Gaz. vol. 133; p. 1161.
Clothes-pounder. G. E. Norris. No. 881,707; Mar. 10; Sp. p. 2427; Dr. p. 522; Gaz. vol. 133; p. 432.
Clothes-pressing machine. J. B. Replogle. No. 882,841; Mar. 24; Sp. p. 4670; Dr. pp. 993–4; Gaz. vol. 133; p. 864.
Clothes-rack. H. C. Teipel. No. 882,277; Mar. 17; Sp. p. 3589; Dr. p. 761; Gaz. vol. 133; p. 646.
Clothes-sprinkler. D. A. McClelland. No. 883,331; Mar. 31; Sp. p. 5658; Dr. p. 1207; Gaz. vol. 133; p. 1054.
Clutch. A. S. F. Robinson. No. 881,028; Mar. 3; Sp. p. 1074; Dr. pp. 233–4; Gaz. vol. 133; p. 183.
Clutch. T. B. Rice, Jr. No. 882,911; Mar. 24; Sp. p. 4822; Dr. p. 1024; Gaz. vol. 133; p. 887.
Clutch, Friction-. A. L. Herkenhoff. No. 880,528; Mar. 3; Sp. p. 68; Dr. p. 16; Gaz. vol. 133; p. 15.
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Clutch mechanism. C. R. Mabley and G. E. Franquist. No. 883,552; Mar. 31; Sp. p. 6145; Dr. p. 1306; Gaz. vol. 133; p. 1125.
Clutch, Starting-. J. F. Wilkinson. No. 883,266; Mar. 31; Sp. p. 5536; Dr. pp. 1181–2; Gaz. vol. 133; p. 1034.
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Coat-pressing machine. A. W. Tindall. No. 883,362; Mar. 31; Sp. p. 5724; Dr. p. 1221; Gaz. vol. 133; p. 1064.
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Cobalt ores and refining cobalt from nickel, arsenical, and silver-bearing ores, Treating. E. E. Armstrong. No. 881,527; Mar. 10; Sp. p. 2059; Dr. p. 450; Gaz. vol. 133; p. 374.
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Coke, Manufacture of. J. H. Hillman. No. 881,685; Mar. 10; Sp. p. 2365; Dr. p. 512; Gaz. vol. 133; p. 425.
Coke-oven door. J. J. Alley. No. 882,365; Mar. 17; Sp. p. 3747; Dr. p. 797; Gaz. vol. 133; p. 675.
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Collars, Stiffening-cape for coat-. J. W. Gray. No. 882,674; Mar. 24; Sp. p. 4343; Dr. p. 924; Gaz. vol. 133; p. 810.
Column for interior decoration. T. B. Lupo. No. 882,398; Mar. 17; Sp. p. 3798; Dr. p. 811; Gaz. vol. 133; p. 686.
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Convertible and interchangeable seat. T. Scullin and S. R. Skov. No. 882,653; Mar. 24; Sp. p. 4299; Dr. p. 912; Gaz. vol. 133; p. 803.
Conveyer. B. H. Alvey. No. 881,042; Mar. 3; Sp. p. 1097; Dr. pp. 237–8; Gaz. vol. 133; p. 188.
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Conveyer. J. T. H. Paul. No. 882,795; Mar. 24; Sp. p. 4573; Dr. pp. 975–6; Gaz. vol. 133; p. 849.

Conveyer, Swinging. C. Bradford. No. 881,295; Mar. 10; Sp. p. 1612; Dr. p. 345; Gaz. vol. 133; p. 301.
Conveyers, Cleat for cable-chain. E. Demarest. No. 881,908; Mar. 17; Sp. p. 2844; Dr. p. 607; Gaz. vol. 133; p. 527.
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Cooking or culinary utensil. L. J. Ellis. No. 881,562; Mar. 10; Sp. p. 2122; Dr. p. 463; Gaz. vol. 133; p. 396.
Cooking utensil. R. C. Blean and F. B. Canode. No. 881,050; Mar. 3; Sp. p. 1114; Dr. p. 241; Gaz. vol. 133; p. 190.
Cooking utensils, Protective device for. D. Elliott and L. B. Stanton. No. 883,183; Mar. 31; Sp. p. 5358; Dr. p. 1141; Gaz. vol. 133; p. 1006.
Cooking vessel. F. Nestor. No. 882,411; Mar. 17; Sp. p. 3819; Dr. p. 816; Gaz. vol. 133; p. 690.
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Cooler: *See* Evaporator-cooler; Milk-cooler; Water-cooler.
Cooling and condensing tower. A. A. Marlow. No. 882,330; Mar. 17; Sp. p. 3686; Dr. p. 782; Gaz. vol. 133; p. 664.
Coop, Folding. G. E. Jackson. No. 883,405; Mar. 31; Sp. p. 5837; Dr. p. 1244; Gaz. vol. 133; p. 1079.
Copper from ore or matte by electrolysis, Recovering. H. K. Hess. No. 881,580; Mar. 10; Sp. p. 2162; Dr. p. 472; Gaz. vol. 133; p. 393.
Copy-holder. J. A. Gardenhire. No. 881,786; Mar. 10; Sp. p. 2561; Dr. p. 550; Gaz. vol. 133; p. 457.
Copy-holder. B. F. Truax. No. 882,220; Mar. 17; Sp. p. 3466; Dr. p. 737; Gaz. vol. 133; p. 626.
Copy-holder. C. F. Ludington. No. 882,993; Mar. 24; Sp. p. 4807; Dr. p. 1022; Gaz. vol. 133; p. 884.
Copy-press. C. E. Adamson. No. 880,491; Mar. 3; Sp. p. 1; Dr. p. 1; Gaz. vol. 133; p. 3.
Copying device, Letter-. A. B. Vanes. No. 882,083; Mar. 17; Sp. p. 3216; Dr. p. 683; Gaz. vol. 133; p. 585.
Copying-press, Rotary. C. E. Adamson. No. 880,492; Mar. 3; Sp. p. 3; Dr. p. 1; Gaz. vol. 133; p. 3.
Core-arbor. M. J. and H. J. Weber. No. 881,090; Mar. 3; Sp. p. 1194; Dr. p. 258; Gaz. vol. 133; p. 203.
Cork-cleansing apparatus. M. Ach. No. 880,955; Mar. 3; Sp. p. 943; Dr. p. 204; Gaz. vol. 133; p. 159.
Corking-machine. F. Barthold. No. 882,612; Mar. 24; Sp. p. 4217; Dr. pp. 893–4; Gaz. vol. 133; p. 789.
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Corn-husking machine. E. G. Adams. No. 881,761; Mar. 10; Sp. p. 2516; Dr. p. 542; Gaz. vol. 133; p. 449.
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Corn-husking machine, Green-. W. J. Latchford. No. 882,472; Mar. 17; Sp. p. 3927; Dr. p. 839; Gaz. vol. 132; p. 710.
Corn-rack. F. D. Dutton. No. 881,560; Mar. 10; Sp. p. 2119; Dr. p. 463; Gaz. vol. 133; p. 386.
Corn-sheller. J. V. Stradley. No. 882,723; Mar. 24; Sp. p. 4437; Dr. p. 943; Gaz. vol. 133; p. 826.
Corn-slitting device, Sweet-. G. A. Bahn. No. 881,841; Mar. 10; Sp. p. 2677; Dr. p. 573; Gaz. vol. 133; p. 476.
Corner-bar. C. B. Cushwa. No. 881,463; Mar. 10; Sp. p. 1936; Dr. p. 421; Gaz. vol. 133; p. 353.
Corset. Z. T. Hoskins. No. 880,532; Mar. 3; Sp. p. 73; Dr. p. 18; Gaz. vol. 133; p. 16.
Corset. A. J. Lecoutre. No. 880,902; Mar. 3; Sp. p. 636; Dr. p. 133; Gaz. vol. 133; p. 110.
Corset. M. Schottlander. No. 882,425; Mar. 17; Sp. p. 3839; Dr. p. 820; Gaz. vol. 133; p. 694.
Corset and corselet, Combined. R. A Whitehouse. No. 883,125; Mar. 24; Sp. p. 5237; Dr. p. 1117; Gaz. vol. 133; p. 957.
Corset-closure. Z. T. Hoskins. No. 880,736; Mar. 3; Sp. p. 409; Dr. p. 104; Gaz. vol. 133; p. 86.
Corsets and other garments, Attachment for. W. J. Parker. No. 882,412; Mar. 17; Sp. p. 3821; Dr. p. 816; Gaz. vol. 133; p. 690.
Cotton-chopper. J. S. Williams. No. 881,274; Mar. 10; Sp. p. 1571; Dr. p. 336; Gaz. vol. 133; p. 294.
Cotton-chopper. W. D. McClure. No. 882,335; Mar. 17; Sp. p. 3697; Dr. p. 786; Gaz. vol. 133; p. 666.
Cotton-chopper. W. McCaleb. No. 882,409; Mar. 17; Sp. p. 3814; Dr. p. 815; Gaz. vol. 133; p. 689.
Cotton-chopper. R. Henry. No. 882,757; Mar. 24; Sp. p. 4504; Dr. p. 960; Gaz. vol. 133; p. 837.
Cotton-chopper. C. E. Smith. No. 883,540; Mar. 31; Sp. p. 6191; Dr. pp. 1318–19; Gaz. vol. 133; p. 1134.
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Cotton-chopper. W. B. Davis. No. 883,628; Mar. 31; Sp. p. 6277; Dr. p. 1339; Gaz. vol. 133; p. 1149.
Cotton chopper and cultivator, Combined. G. W. Sharp. No. 882,971; Mar. 24; Sp. p. 4936; Dr. p. 1048; Gaz. vol. 133; p. 908.
Cotton-cleaner. A. Rouquier. No. 883,349; Mar. 31; Sp. p. 5691; Dr. pp. 1215–16; Gaz. vol. 133; p. 1060.
Cotton-distributing apparatus. A. H. Morton. No. 881,940; Mar. 17; Sp. p. 2914; Dr. pp. 622–3; Gaz. vol. 133; p. 538.
Cotton-gin rib. T. A. Andrews. No. 882,732; Mar. 24; Sp. p. 4453; Dr. p. 947; Gaz. vol. 133; p. 828.
Cotton-picker. R. E. Cheesman. No. 881,056; Mar. 3; Sp. p. 1122; Dr. p. 243; Gaz. vol. 133; p. 192.
Cotton-picker. C. H. and D. H. Feary. No. 882,458; Mar. 17; Sp. p. 3902; Dr. p. 834; Gaz. vol. 133; p. 705.
Coupling: *See* Angle-coupling; Car-coupling; Friction-coupling; Hose-coupling; Hose or pipe coupling; Pipe-coupling; Shaft-coupling; Thill-coupling; Vehicle-coupling.
Coupling. A. Johnson. No. 882,300; Mar. 17; Sp. p. 3786; Dr. p. 808; Gaz. vol. 133; p. 683.
Cover. D. F. Forwood. No. 881,851; Mar. 10; Sp. p. 2694; Dr. p. 576; Gaz. vol. 133; p. 479.
Covering articles with materials, Apparatus for. C. F. Church. No. 883,450; Mar. 31; Sp. p. 5940; Dr. p. 1267; Gaz. vol. 133; p. 1095.
Crackers, Making. F. A. Johnson. No. 882,006; Mar. 17; Sp. p. 3052; Gaz. vol. 133; p. 559.
Cranberry-pruner. F. Young. No. 881,089; Mar. 3; Sp. p. 1092; Dr. p. 237; Gaz. vol. 133; p. 187.
Crane, Forging-. C. J. Miller. No. 880,243; Mar. 10; Sp. p. 1521; Dr. p. 327; Gaz. vol. 133; p. 287.
Crane mechanism. H. W. Metcalfe. No. 882,011; Mar. 17; Sp. p. 3075; Dr. pp. 653–4; Gaz. vol. 133; p. 561.
Crate. A. M. Keneipp. No. 882,392; Mar. 17; Sp. p. 3789; Dr. p. 809; Gaz. vol. 133; p. 683.
Crate. E. N. Davis. No. 883,002; Mar. 24; Sp. p. 4995; Dr. p. 1062; Gaz. vol. 133; p. 917.
Crate, Banana-. G. Becker. No. 882,046; Mar. 17; Sp. p. 3148; Dr. p. 669; Gaz. vol. 133; p. 572.
Crate filler, Egg-. J. H. Carter. No. 882,049; Mar. 17; Sp. p. 3151; Dr. p. 670; Gaz. vol. 133; p. 572.
Crate, Folding. B. Barker. No. 883,509; Mar. 31; Sp. p. 6048; Dr. p. 1291; Gaz. vol. 133; p. 1114.
Crate or box, Folding. C. E. Sommers. No. 883,251; Mar. 31; Sp. p. 5506; Dr. p. 1174; Gaz. vol. 133; p. 1029.
Crate or case, Folding egg. G. E. Jackson. No. 883,406; Mar. 31; Sp. p. 5839; Dr. p. 1245; Gaz. vol. 133; p. 1079.
Crate, Sectional hog and poultry. C. E. Knight. No. 882,803; Mar. 24; Sp. p. 4780; Dr. p. 1017; Gaz. vol. 133; p. 879.
Crate, Shipping-. E. L. Reed. No. 881,200; Mar. 10; Sp. p. 1402; Dr. p. 303; Gaz. vol. 133; p. 268.
Crates, Manufacture of. W. C. Yeomans. No. 883,070; Mar. 24; Sp. p. 5117; Dr. p. 1001; Gaz. vol. 133; p. 939.
Crayon-holder. M. M. Gee. No. 883,009; Mar. 24; Sp. p. 5004; Dr. p. 1064; Gaz. vol. 133; p. 919.
Cream-separator. M. Decker and M. H. Matty. No. 880,866; Mar. 3; Sp. p. 784; Dr. p. 166; Gaz. vol. 133; p. 131.
Cream-separator disks, Holder for use in cleaning. O. H. Nesseth. No. 880,564; Mar. 3; Sp. p. 139; Dr. p. 31; Gaz. vol. 133; p. 28.
Crusher: *See* Clod-crusher.
Crusher plate, head, and the like. F. M. Canda. No. 883,619; Mar. 31; Sp. p. 6259; Dr. p. 1335; Gaz. vol. 133; p. 1146.
Crustacea-trap. R. M. Franklin. No. 880,727; Mar. 3; Sp. p. 474; Dr. p. 109; Gaz. vol. 133; p. 83.
Cuff-holder. S. S. Fox. No. 883,634; Mar. 31; Sp. p. 6287; Dr. p. 1341; Gaz. vol. 133; p. 1150.
Culinary utensil. P. Wirthlin. No. 881,968; Mar. 17; Sp. p. 3012; Dr. p. 643; Gaz. vol. 133; p. 553.
Cultivator. V. M. and C. P. Powers. No. 881,151; Mar. 10; Sp. p. 1317; Dr. p. 284; Gaz. vol. 133; p. 254.
Cultivator. C. R. Dean. No. 881,778; Mar. 10; Sp. p. 2543; Dr. p. 547; Gaz. vol. 133; p. 454.
Cultivator. W. L. Paul. No. 882,957; Mar. 24; Sp. p. 4916; Dr. pp. 1042–3; Gaz. vol. 133; p. 904.
Cultivator and planter, Combined. H. H. and D. H. Enns and J. J. Wiebe. No. 883,006; Mar. 24; Sp. p. 5000; Dr. pp. 1063–4; Gaz. vol. 133; p. 918.
Cultivator attachment, Cotton-. A. H. Connell. No. 882,667; Mar. 24; Sp. p. 4329; Dr. p. 921; Gaz. vol. 133; p. 808.
Cultivator attachment for thinning cotton. J. W. Espich. No. 883,304; Mar. 31; Sp. p. 5615; Dr. p. 1197; Gaz. vol. 133; p. 1046.
Cultivator, Drag-bar. R. W. E. Hayes. No. 881,858; Mar. 10; Sp. p. 2722; Dr. p. 583; Gaz. vol. 133; p. 482.
Cultivator-frames, Means for attaching implements to. W. E. Walden. No. 883,435; Mar. 31; Sp. p. 5907; Dr. p. 1261; Gaz. vol. 133; p. 1090.
Cultivator weeder attachment. F. M. Everingham. No. 881,566; Mar. 10; Sp. p. 2129; Dr. p. 464; Gaz. vol. 133; p. 388.
Cultivators, Replanting attachment for. E. H. Suhl. No. 882,355; Mar. 17; Sp. p. 3734; Dr. p. 794; Gaz. vol. 133; p. 672.
Culvert. D. C. Boyd. No. 881,770; Mar. 10; Sp. p. 2531; Dr. p. 545; Gaz. vol. 133; p. 452.
Culvert, Corrugated-metal. J. H. Schlafly. No. 882,091; Mar. 17; Sp. p. 3213; Dr. p. 682; Gaz. vol. 133; p. 584.
Cup: *See* Shaving-cup.
Cupola. N. Etting. No. 882,000; Mar. 17; Sp. p. 3051; Dr. p. 649; Gaz. vol. 133; p. 558.
Current-motor. A. H. Davis. No. 880,509; Mar. 3; Sp. p. 33; Dr. p. 8; Gaz. vol. 133; p. 9.
Current-motor. F. J. Payne. No. 880,912; Mar. 3; Sp. p. 871; Dr. p. 187; Gaz. vol. 133; p. 146.
Current-motor. J. Kirschweng. No. 882,694; Mar. 24; Sp. p. 4375; Dr. p. 931; Gaz. vol. 133; p. 817.
Current regulator, Alternating-. A. R. Everest. No. 883,007; Mar. 24; Sp. p. 5002; Dr. p. 1064; Gaz. vol. 133; p. 918.
Curtain and pole holder. G. Walker. No. 882,853; Mar. 24; Sp. p. 4704; Dr. p. 1000; Gaz. vol. 133; p. 868.
Curtain, Beer-case. J. M. Jetter and F. Drews. No. 882,470; Mar. 17; Sp. p. 3923; Dr. p. 839; Gaz. vol. 133; p. 709.
Curtain catch or holder. L. J. Berg. No. 883,444; Mar. 31; Sp. p. 5925; Dr. p. 1264; Gaz. vol. 133; p. 1092.
Curtain-fixture. M. Curran. No. 880,864; Mar. 3; Sp. p. 782; Dr. p. 166; Gaz. vol. 133; p. 131.
Curtain-fixture. G. Ebenhoch. No. 881,672; Mar. 10; Sp. p. 2348; Dr. p. 508; Gaz. vol. 133; p. 422.
Curtain-fixture. H. H. Schroyer. No. 882,082; Mar. 17; Sp. p. 3214; Dr. pp. 682–3; Gaz. vol. 133; p. 585.
Curtain-fixture. T. Widziszowski. No. 882,280; Mar. 17; Sp. p. 3594; Dr. p. 762; Gaz. vol. 133; p. 647.
Curtain-pole. J. S. Comlestong. No. 882,374; Mar. 17; Sp. p. 3762; Dr. p. 802; Gaz. vol. 133; p. 678.
Curtain-pole and shade-holder, Combined. W. E. Doud. No. 882,054; Mar. 17; Sp. p. 3150; Dr. p. 671; Gaz. vol. 133; p. 574.

Curtain-pole and shade-roller support, Combined. A. C. Taylor and F. W. Dawson. No. 882,180; Mar. 17; Sp. p. 3400; Dr. p. 722; Gaz. vol. 133; p. 615.
Curtain-stretcher. J. Sines. No. 883,495; Mar. 31; Sp. p. 6024; Dr. p. 1286; Gaz. vol. 133; p. 1110.
Cushion: *See* Spring-cushion.
Cut-off, Automatic. W. P. Norris. No. 882,956; Mar. 24; Sp. p. 4915; Dr. p. 1042; Gaz. vol. 133; p. 903.
Cutter: *See* Band-cutter; Buttonhole-cutter; Cane-cutter; Fodder-cutter; Milling-cutter: Pie-cutter; Plant-cutter; Tobacco-cutter; Tube-cutter; Vegetable-cutter; Vine-cutter; Weed-cutter.
Cutting implement. G. W. Haskins. No. 881,578; Mar. 10; Sp. p. 2159; Dr. p. 471; Gaz. vol. 133; p. 392.
Cycles, Apparatus for muffling the exhaust of motor-. E. W. Keller. No. 882,068; Mar. 17; Sp. p. 3185; Dr. p. 677; Gaz. vol. 133; p. 579.
Cycles, Two-speed driving-gear and free-wheel mechanism for. E. Sachs. No. 882,845; Mar. 24; Sp. p. 4685; Dr. p. 997; Gaz. vol. 133; p. 866.
Cylinder or tube. R. J. Hoffman. No. 881,584; Mar. 10; Sp. p. 2170; Dr. p. 473; Gaz. vol. 133; p. 394.
Dampening-machine. D. P. Moore. No. 882,334; Mar. 17; Sp. p. 3692; Dr. pp. 784–5; Gaz. vol. 133; p. 666.
Damper and pressure regulator. J. B. Bischoff. No. 881,656; Mar. 10; Sp. p. 2325; Dr. pp. 503–4; Gaz. vol. 133; p. 418.
Damper-operating mechanism. N. P. Fraser. No. 881,099; Mar. 3; Sp. p. 1209; Dr. p. 261; Gaz. vol. 133; p. 206.
Deck-plate. W. H. Durkee. No. 882,877; Mar. 24; Sp. p. 4753; Dr. p. 1011; Gaz. vol. 133; p. 876.
Decorticating apparatus. T. E. Mitchell and T. H. Tombyll. No. 882,766; Mar. 24; Sp. p. 4518; Dr. pp. 964–5; Gaz. vol. 133; p. 839.
Decoy, Folding. E. R. Rosentreter. No. 883,161; Mar. 24; Sp. p. 5305; Dr. p. 1132; Gaz. vol. 133; p. 960.
Delivery apparatus. G. Uhlmann. No. 882,031; Mar. 17; Sp. p. 3114; Dr. p. 662; Gaz. vol. 133; p. 567.
Dental appliance. C. C. Galloway. No. 883,106; Mar. 24; Sp. p. 5182; Dr. p. 1106; Gaz. vol. 133; p. 950.
Dental articulator. W. Luxmore. No. 880,899; Mar. 3; Sp. p. 843; Dr. p. 180; Gaz. vol. 133; p. 142.
Dental articulator. A. V. Dear. No. 882,375; Mar. 17; Sp. p. 3763; Dr. p. 802; Gaz. vol. 133; p. 678.
Dental bridgework, Removable. E. C. Bennett. No. 883,382; Mar. 31; Sp. p. 5785; Dr. pp. 1234–5; Gaz. vol. 133; p. 1071.
Dental cavity-impression tray. T. C. Trigger. No. 883,592; Mar. 31; Sp. p. 6209; Dr. p. 1324; Gaz. vol. 133; p. 1137.
Dental-crown-swaging machine. L. C. Graham. No. 881,574; Mar. 10; Sp. p. 2152; Dr. p. 470; Gaz. vol. 133; p. 390.
Dental-engine mandrel. H. S. Hughes. No. 881,691; Mar. 10; Sp. p. 2376; Dr. pp. 514–15; Gaz. vol. 133; p. 427.
Dental forceps. W. C. Miner. No. 882,404; Mar. 17; Sp. p. 3809; Dr. p. 814; Gaz. vol. 133; p. 688.
Dental impression-tray. W. T. Lyon. No. 882,155; Mar. 17; Sp. p. 3330; Dr. p. 710; Gaz. vol. 133; p. 606.
Dental impression-tray. H. F. Smith. No. 883,055; Mar. 24; Sp. p. 5087; Dr. p. 1086; Gaz. vol. 133; p. 934.
Dental instrument. J. T. Wright. No. 882,363; Mar. 17; Sp. p. 3744; Dr. p. 797; Gaz. vol. 133; p. 674.
Dental instrument. W. B. Pearsall. No. 882,711; Mar. 24; Sp. p. 4408; Dr. p. 937; Gaz. vol. 133; p. 822.
Dental mouth-prop. N. L. Pollinger. No. 883,232; Mar. 31; Sp. p. 5469; Dr. p. 1161; Gaz. vol. 133; p. 1023.
Dental soldering device. A. H. Joy. No. 880,740; Mar. 3; Sp. p. 509; Dr. p. 105; Gaz. vol. 133; p. 88.
Dental swaging device. R. G. Hopkins. No. 882,002; Mar. 17; Sp. p. 3053; Dr. p. 650; Gaz. vol. 133; p. 558.
Dental-syringe attachment. C. W. Hale. No. 881,469; Mar. 10; Sp. p. 1953; Dr. p. 425; Gaz. vol. 133; p. 355.
Dental tool. E. R. Sausser. No. 881,722; Mar. 10; Sp. p. 2452; Dr. p. 528; Gaz. vol. 133; p. 437.
Deralling device. C. W. Clarke. No. 880,717; Mar. 3; Sp. p. 453; Dr. p. 95; Gaz. vol. 133; p. 80.
Derailment-guard. F. Gehricke. No. 883,107; Mar. 24; Sp. p. 5184; Dr. p. 1107; Gaz. vol. 133; p. 950.
Derrick. E. J. Ward. No. 882,034; Mar. 17; Sp. p. 3120; Dr. p. 663; Gaz. vol. 133; p. 568.
Derrick. H. A. Hettinger. No. 882,311; Mar. 17; Sp. p. 3651; Dr. p. 774; Gaz. vol. 133; p. 657.
Desk. T. H. Thompson. No. 881,501; Mar. 10; Sp. p. 2003; Dr. p. 438; Gaz. vol. 133; p. 365.
Desk. J. S. McComb. No. 882,207; Mar. 17; Sp. p. 3442; Dr. p. 732; Gaz. vol. 133; p. 622.
Desk. J. S. McComb. No. 883,419; Mar. 31; Sp. p. 5867; Dr. p. 1250; Gaz. vol. 133; p. 1084.
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Detinning, Method of. E. A. Sperry. No. 883,500; Mar. 31; Sp. p. 6035; Dr. p. 1288; Gaz. vol. 133; p. 1112.
Developing-tray. R. A. Crosby. No. 880,863; Mar. 3; Sp. p. 781; Dr. p. 165; Gaz. vol. 133; p. 130.
Diaper-cover. H. Wimmel. No. 881,640; Mar. 10; Sp. p. 2292; Dr. p. 497; Gaz. vol. 133; p. 412.
Diaphragm. W. H. Miller. No. 883,327; Mar. 31; Sp. p. 5653; Dr. p. 1206; Gaz. vol. 133; p. 1053.
Die: *See* Bolt-heading die.
Die and making same. F. C. Emrick. No. 881,912; Mar. 17; Sp. p. 2854; Dr. p. 609; Gaz. vol. 133; p. 528.
Die-carrier. R. Grieser. No. 883,400; Mar. 31; Sp. p. 5826; Dr. p. 1242; Gaz. vol. 133; p. 1077.
Digester. W. H. Atwood. No. 881,888; Mar. 17; Sp. p. 2812; Dr. p. 600; Gaz. vol. 133; p. 521.
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Dredges or dredging-chains, Pin for. W. Brinton. No. 882,138; Mar. 17; Sp. p. 3301; Dr. p. 704; Gaz. vol. 133; p. 602.
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Drier. H. W. Rayner. No. 880,917; Mar. 3; Sp. p. 880; Dr. p. 190; Gaz. vol. 133; p. 147.
Dry closet. E. L. Geisel. No. 881,918; Mar. 17; Sp. p. 2869; Dr. pp. 612–13; Gaz. vol. 133; p. 530.
Drying apparatus, Conveyer for. E. Ufenast. No. 880,606; Mar. 3; Sp. p. 241; Dr. p. 50; Gaz. vol. 133; p. 42.
Drying-boxes, Conveyer for. M. E. Dejonge. No. 883,453; Mar. 31; Sp. p. 5946; Dr. p. 1268; Gaz. vol. 133; p. 1096.
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Drill-arm, Radial. H. M. Norris. No. 883,118; Mar. 24; Sp. p. 5222; Dr. p. 1115; Gaz. vol. 133; p. 955.
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Drill-head and cutter-blade therefor. J. P. Karns. No. 883,137; Mar. 24; Sp. p. 5262; Dr. pp. 1123–4; Gaz. vol. 133; p. 962.
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Drills, Machine for manufacturing and sharpening star-bit. H. O. Palmer. No. 880,567; Mar. 3; Sp. p. 149; Dr. pp. 32–4; Gaz. vol. 133; p. 29.
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Driving mechanism, Variable-speed. R. M. Ruck. No. 882,968; Mar. 24; Sp. p. 4931; Dr. p. 1047; Gaz. vol. 133; p. 907.
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Drum. F. Cipar. No. 881,109; Mar. 10; Sp. p. 1230; Dr. p. 265; Gaz. vol. 133; p. 239.
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Dye, Dark-blue-violet. K. Schirmacher and B. Deicke. No. 881,158; Mar. 10; Sp. p. 1330; Gaz. vol. 133; p. 256.
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Egg-tester. C. F. O'Dell and K. Haynes. No. 881,197; Mar. 10; Sp. p. 1399; Dr. p. 302; Gaz. vol. 133; p. 268.
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Elevator-retarding mechanism. A. J. Myer. No. 882,577; Mar. 24; Sp. p. 4146; Dr. p. 879; Gaz. vol. 133; p. 777.
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Elliptic spring. W. G. Price. No. 881,948; Mar. 17; Sp. p. 2930; Dr. p. 625; Gaz. vol. 133; p. 541.
Embroidery-hoop. G. H. Bixby. No. 882,737; Mar. 24; Sp. p. 4464; Dr. p. 950; Gaz. vol. 133; p. 830.
Embroidery-machines, Hinge-borer for. A. Braun. No. 881,894; Mar. 17; Sp. p. 2821, Dr. p. 603; Gaz. vol. 133; p. 523.
Emergency-brake. F. B. Corey. No. 881,552; Mar. 10; Sp. p. 2101; Dr. p. 459; Gaz. vol. 133; p. 382.
Emery polishing or buffing wheels, Hood for. G. V. Schnell. No. 880,695; Mar. 3; Sp. p. 401; Dr. p. 87; Gaz. vol. 133; p. 72.
Energy from the direct combustion of fuel, Deriving. C. A. Mezger. No. 882,261; Mar. 17; Sp. p. 3552; Dr. p. 753; Gaz. vol. 133; p. 641.
Engine: *See* Blowing-engine; Explosive-engine; Fluid-pressure engine; Gas-engine; Gas or other engine; Gasolene-engine; Heat-engine; Internal-combustion engine; Multiple-cylinder engine; Rotary engine; Rotary explosive-engine; Steam-engine; Toy engine; Variable-clearance engine.
Engine. W. A. Edwards, C. E. Ellis, and D. F. Cornell. No. 881,310; Mar. 10; Sp. p. 1639; Dr. pp. 350–1; Gaz. vol. 133; p. 305.
Engine. C. V. Martin. No. 881,428; Mar. 10; Sp. p. 1863; Dr. p. 405; Gaz. vol. 133; p. 341.
Engine drive-gear. M. O. Carter and W. T. Davis. No. 880,627; Mar. 3; Sp. p. 281; Dr. p. 60; Gaz. vol. 133; p. 49.
Engine exhaust mechanism, Explosive-. J. M. and E. E. Truscott. No. 880,604; Mar. 3; Sp. p. 237; Dr. p. 40; Gaz. vol. 133; p. 41.
Engine igniter, Gas-. A. N. Classon. No. 881,058; Mar. 3; Sp. p. 1125; Dr. p. 244; Gaz. vol. 133; p. 192.
Engine igniting device, Gas-. J. V. Rice, Jr. No. 881,952; Mar. 17; Sp. p. 2935; Dr. p. 626; Gaz. vol. 133; p. 542.
Engine igniting device, Gas-. J. V. Rice, Jr. No. 881,953; Mar. 17; Sp. p. 2937; Dr. p. 626; Gaz. vol. 133; p. 542.
Engine igniting device, Gas-. J. V. Rice, Jr. No. 881,954; Mar. 17; Sp. p. 2938; Dr. p. 627; Gaz. vol. 133; p. 542.
Engine igniting device, Gas-. J. V. Rice, Jr. No. 882,716; Mar. 24; Sp. p. 4424; Dr. p. 940; Gaz. vol. 133; p. 824.
Engine lubricator, Steam-. J. A. Dickey. No. 880,638; Mar. 3; Sp. p. 301; Dr. p. 66; Gaz. vol. 133; p. 53.
Engine-starter. H. P. Francis. No. 881,069; Mar. 3; Sp. p. 1147; Dr. p. 249; Gaz. vol. 133; p. 196.
Engine starter, Explosive-. C. C. Ilg. No. 883,461; Mar. 31; Sp. p. 5057; Dr. p. 1271; Gaz. vol. 133; p. 1098.
Engine starting device, Internal-combustion-. F. H. Walker. No. 882,597; Mar. 24; Sp. p. 4185; Dr. p. 887; Gaz. vol. 133; p. 784.
Engine-stop. V. J. King. No. 883,029; Mar. 24; Sp. p. 5040; Dr. p. 1073; Gaz. vol. 133; p. 925.
Engines, Automatic power-releasing device for draft-. W. H. Rhodes. No. 882,419; Mar. 17; Sp. p. 3832; Dr. p. 818; Gaz. vol. 133; p. 692.
Engines, Compressor for internal-combustion. H. W. Adams. No. 881,040; Mar. 3; Sp. p. 1093; Dr. p. 237; Gaz. vol. 133; p. 187.
Engines, Firing device for gas-. L. L. Lewis. No. 882,325; Mar. 17; Sp. p. 3676; Dr. p. 780; Gaz. vol. 133; p. 663.
Engines, Make-and-break igniter for explosive-. R. H. Koenig. No. 881,009; Mar. 3; Sp. p. 1044; Dr. p. 226; Gaz. vol. 133; p. 178.
Engines, Means for forcing cooling liquids to. A. M. Zimmerman. No. 882,226; Mar. 17; Sp. p. 3479; Dr. pp. 739–40; Gaz. vol. 133; p. 628.
Engines, Vaporizer or carbureter for gas-. C. D. Shain. No. 882,023; Mar. 17; Sp. p. 3097; Dr. p. 659; Gaz. vol. 133; p. 564.
Engraving-machine. J. A. McLane. No. 881,021; Mar. 3; Sp. p. 1063; Dr. pp. 230–1; Gaz. vol. 133; p. 181.
Envelop. P. Russo. No. 880,828; Mar. 3; Sp. p. 700; Dr. p. 147; Gaz. vol. 133; p. 119.
Envelop. C. J. Fisher. No. 881,675; Mar. 10; Sp. p. 2352; Dr. p. 509; Gaz. vol. 133; p. 423.
Envelop. F. L. Richardson. No. 882,843; Mar. 24; Sp. p. 4680; Dr. pp. 995–6; Gaz. vol. 133; p. 865.
Envelop. M. L. Walter. No. 883,364; Mar. 31; Sp. p. 5730; Dr. p. 1222; Gaz. vol. 133; p. 1064.
Envelop. T. Gabriele. No. 883,456; Mar. 31; Sp. p. 5950; Dr. p. 1269; Gaz. vol. 133; p. 1096.
Envelop. J. W. Carraway. No. 883,620; Mar. 31; Sp. p. 6262; Dr. p. 1336; Gaz. vol. 133; p. 1146.
Envelop. V. McElree. No. 883,662; Mar. 31; Sp. p. 6353; Dr. p. 1353; Gaz. vol. 133; p. 1159.
Envelop and letter-sheet, Combined. C. W. Cook. No. 882,297; Mar. 17; Sp. p. 3620; Dr. p. 768; Gaz. vol. 133; p. 653.
Envelop and similar machines, Delivery mechanism for. C. H. Heywood and D. E. Travis. No. 880,795; Mar. 3; Sp. p. 617; Dr. p. 130; Gaz. vol. 133; p. 107.
Envelop-fastener. L. M. Norwood. No. 882,015; Mar. 17; Sp. p. 3082; Dr. p. 656; Gaz. vol. 133; p. 562.
Envelop-fastener. H. F. Manley. No. 883,035; Mar. 24; Sp. p. 5053; Dr. p. 1077; Gaz. vol. 133; p. 927.
Envelop, Safety-. M. N. Thompson. No. 880,936; Mar. 3; Sp. p. 910; Dr. p. 196; Gaz. vol. 133; p. 153.
Etching apparatus, Plate-. J. N. Axt. No. 882,443; Mar. 17; Sp. p. 3872; Dr. p. 827; Gaz. vol. 133; p. 701.
Evaporating apparatus. G. P. McArthur. No. 880,812; Mar. 3; Sp. p. 652; Dr. p. 137; Gaz. vol. 133; p. 113.
Evaporation, Apparatus for continuous. H. Winter. No. 881,523; Mar. 10; Sp. p. 2051; Dr. p. 449; Gaz. vol 133; p. 373.
Evaporator. E. Zaremba. No. 881,990; Mar. 17; Sp. p. 3014; Dr. p. 643; Gaz. vol. 133; p. 554.
Evaporator. E. Zaremba. No. 882,043; Mar. 17; Sp. p. 3142; Dr. pp. 666–7; Gaz. vol. 133; p. 570.
Evaporator-cooler. B. M. Hodgins. No. 881,121; Mar. 10; Sp. p. 1253; Dr. p. 270; Gaz. vol. 133; p. 243.
Excavating apparatus. W. C. Weeks. No. 882,726; Mar. 24; Sp. p. 4440; Dr. p. 944; Gaz. vol. 133; p. 826.
Excavating-machine. T. Reistad. No. 880,826; Mar. 3; Sp. p. 695; Dr. p. 146; Gaz. vol. 133; p. 118.
Excavating-machines, Sectional conveyer-frame for. A. C. Heck. No. 883,016; Mar. 24; Sp. p. 5019; Dr. p. 1067; Gaz. vol. 133; p. 921.
Excavator, Power-. F. E. Kersey. No. 881,695; Mar. 10; Sp. p. 2382; Dr. pp. 516–17; Gaz. vol. 133; p. 428.
Exercising apparatus. J. P. Thomas. No. 882,181; Mar. 17; Sp. p. 3401; Dr. p. 723; Gaz. vol. 133; p. 615.
Expansion-trap. R. M. Dixon. No. 881,668; Mar. 10; Sp. p. 2341; Dr. p. 507; Gaz. vol. 133; p. 421.
Explosive compound engine. E. J. Woolf. No. 881,214; Mar. 10; Sp. p. 1437; Dr. pp. 310–11; Gaz. vol. 133; p. 273.
Explosive-engine. E. J. Boyler. No. 880,503; Mar. 3; Sp. p. 25; Dr. p. 6; Gaz. vol. 133; p. 7.
Explosive-engine. J. S. Losch and G. H. Gerber. No. 881,189; Mar. 10; Sp. p. 1384; Dr. pp. 298–300; Gaz. vol. 133; p. 265.
Explosive-engine. G. W. Gibbs, Jr. No. 882,942; Mar. 24; Sp. p. 4887; Dr. p. 1037; Gaz. vol. 133; p. 898.
Explosive-mixing machine. G. P. Jones. No. 882,114; Mar. 17; Sp. p. 3264; Dr. pp. 694–5; Gaz. vol. 133; p. 594.
Explosive, Safety-. B. G. Reschke. No. 882,910; Mar. 24; Sp. p. 4821; Gaz. vol. 133; p. 887.
Extension-screen, Metallic. T. Limoge. No. 882,397; Mar. 17; Sp. p. 3796; Dr. pp. 810–11; Gaz. vol. 133; p. 685.
Extension-table. S. A. Nichols. No. 881,610; Mar. 10; Sp. p. 2224; Dr. p. 484; Gaz. vol. 133; p. 403.
Extension-table. F. L. and L. B. Rivard. No. 882,799; Mar. 24; Sp. p. 4579; Dr. p. 977; Gaz. vol. 133; p. 850.
Extension-table. P. Francis. No. 882,865; Mar. 24; Sp. p. 4731; Dr. pp. 1005–6; Gaz. vol. 133; p. 872.
Extract-preparing apparatus. G. Giovanna. No. 881,570; Mar. 10; Sp. p. 2138; Dr. p. 467; Gaz. vol. 133; p. 389.
Extraction, Process of. J. E. Porter and A. L. Clark. No. 880,821; Mar. 3; Sp. p. 671; Dr. p. 142; Gaz. vol. 133; p. 116.
Extractor: *See* Spoke-extractor; Stopper-extractor.
Eyeglass-holder. M. E. Dripps. (Reissue.) No. 12,771; Mar. 31; Sp. p. 6398; Dr. p. 1364; Gaz. vol. 133; p. 1166.
Eyeglass-mounting. L. T. Loudon. No. 881,476; Mar. 10; Sp. p. 1968; Dr. p. 428; Gaz. vol. 133; p. 357.
Eyeglass-mounting. J. R. Van Tassel. No. 881,506; Mar. 10; Sp. p. 2022; Dr. p. 441; Gaz. vol. 133; p. 367.
Eyeglass or spectacle mounting. H. Silbert. No. 882,540; Mar. 17; Sp. p. 4071; Dr. p. 865; Gaz. vol. 133; p. 733.
Eyeglasses. F. M. Vance. No. 881,833; Mar. 10; Sp. p. 2662; Dr. p. 570; Gaz. vol. 133; p. 473.
Fabric: *See* Woven fabric.
Fabric, Machine for applying strips of tape to. R. E. Dodge. No. 882,779; Mar. 24; Sp. p. 4538; Dr. pp. 968–9; Gaz. vol. 133; p. 842.
Fabrics, Forming woven pile. J. K. Dalkranian. No. 882,454; Mar. 17; Sp. p. 3892; Dr. p. 832; Gaz. vol. 133; p. 704.
Fabrics, Machine for cutting pile designs on. G. D. von Hofe. No. 882,313; Mar. 17; Sp. p. 3654; Dr. p. 775; Gaz. vol. 133; p. 658.
Fabrics, Production of patterns, designs, or other similar markings in. C. W. Fulton. No. 880,983; Mar. 3; Sp. p. 996; Dr. p. 213; Gaz. vol. 133; p. 109.
Fare-register-operating mechanism. W. H. Honiss. No. 882,063; Mar. 17; Sp. p. 3175; Dr. p. 675; Gaz. vol. 133; p. 578.
Farming implement. M. Abbott. No. 883,072; Mar. 24; Sp. p. 5119; Dr. p. 1092; Gaz. vol. 133; p. 939.
Fastener. P. Sicotte. No. 882,430; Mar. 17; Sp. p. 3849; Dr. p. 822; Gaz. vol. 133; p. 696.
Fastener. A. M. Clark. No. 882,996; Mar. 24; Sp. p. 4985; Dr. p. 1060; Gaz. vol. 133; p. 915.
Fastening device. H. C. Gros. No. 881,679; Mar. 10; Sp. p. 2358; Dr. p. 510; Gaz. vol. 133; p. 424.
Fastening, Separable. C. C. Mund. No. 882,706; Mar. 24; Sp. p. 4403; Dr. p. 936; Gaz. vol. 133; p. 821.
Faucet attachment. F. S. Davis. No. 883,176; Mar. 31; Sp. p. 5346; Dr. p. 1138; Gaz. vol. 133; p. 1003.
Faucet, Weighing-. C. Lewin. No. 880,893; Mar. 3; Sp. p. 837; Dr. p. 178; Gaz. vol. 133; p. 141.
Fault-locating apparatus. L. C. Nicholson. No. 880,565; Mar. 3; Sp. p. 141; Dr. p. 32; Gaz. vol. 133; p. 28.

Feed-bag. A. Gaul, Jr. No. 880,651; Mar. 3; Sp. p. 331; Dr. p. 72; Gaz. vol. 133; p. 58.
Feed-bag holder. E. H. Marshall. No. 881,813; Mar. 10; Sp. p. 2618; Dr. p. 562; Gaz. vol. 133; p. 467.
Feed-water heater. R. Z. de Grau. No. 883,191; Mar. 31; Sp. p. 5376; Dr. p. 1144; Gaz. vol. 133; p. 1009.
Feed-water-heating grate. E. C. Willson. No. 883,602; Mar. 31; Sp. p. 6225; Dr. p. 1327; Gaz. vol. 133; p. 1140.
Feeding device for draft-animals. R. L. Smith. No. 883,056; Mar. 24; Sp. p. 5088; Dr. p. 1086; Gaz. vol. 133; p. 934.
Feet, Arch-supporter for flat. B. Ruhmann. No. 881,343; Mar. 10; Sp. p. 1690; Dr. p. 365; Gaz. vol. 133; p. 315.
Felt-like substance. D. Beatty and S. C. Irving. No. 883,442; Mar. 31; Sp. p. 5922; Gaz. vol. 133; p. 1092.
Fence, Artificial-stone. L. Townsend. No. 881,747; Mar. 10; Sp. p. 2495; Dr. p. 537; Gaz. vol. 133; p. 444.
Fence-post. J. N. Hayes. No. 880,992; Mar 3; Sp. p. 1008; Dr. p. 216; Gaz. vol. 133; p. 171.
Fence-post. R. Titsworth. No. 881,267; Mar. 10; Sp. p. 1545; Dr. p. 333; Gaz. vol. 133; p. 291.
Fence-post. L. H. Scott. No. 883,491; Mar. 31; Sp. p. 6018; Dr. p. 1285; Gaz. vol. 133; p. 1109.
Fence-post, Concrete. F. P. Van Hook. No. 882,131; Mar. 17; Sp. p. 3291; Dr. p. 701; Gaz. vol. 133; p. 600.
Fence-post mold. J. D. Williams. No. 882,439; Mar. 17; Sp. p. 3867; Dr. p. 826; Gaz. vol. 133; p. 669.
Fence-post mold. H. H. Rodgers. No. 883,409; Mar. 31; Sp. p. 6172; Dr. p. 1313; Gaz. vol. 133; p. 1130.
Fence-wire fastener. W. H. Sullivan. No. 883,584; Mar. 31; Sp. p. 6196; Dr. p. 1320; Gaz. vol. 133; p. 1135.
Fences, Implement for applying clamps to wire. J. G. Berthiaume and A. E. Barlow. No. 880,712; Mar. 3; Sp. p. 443; Dr. p. 93; Gaz. vol. 133; p. 78.
Fender: *See* Car-fender; Plow-fender; Vehicle-fender.
Fender R. D'Oronzio. No. 881,849; Mar. 10; Sp. p. 2691; Dr. pp. 575–6; Gaz. vol. 133; p. 479.
Fender and track-cleaner, Combined. J. P. Manson. No. 881,600; Mar. 10; Sp. p. 2199; Dr. p. 479; Gaz. vol. 133; p. 399.
Ferrochromium, Producing slag-free. J. B. Huffard. No. 882,637; Mar. 24; Sp. p. 4266; Dr. p. 904; Gaz. vol. 133; p. 798.
Ferrosilicon, Producing. E. F. Price. No. 882,417; Mar. 17; Sp. p. 3830; Dr. p. 818; Gaz. vol. 133; p. 662.
Fertilizer-distributer. W. A. Mitchell. No. 880,561; Mar. 3; Sp. p. 132; Dr. p. 29; Gaz. vol. 133; p. 27.
Fertilizer-distributer. G. Niebel. No. 880,998; Mar. 3; Sp. p. 866; Dr. p. 185; Gaz. vol. 133; p. 145.
Fertilizer-distributer. N. H. and J. H. Blodgett. No. 882,230; Mar. 17; Sp. p. 3484; Dr. p. 741; Gaz. vol. 133; p. 629.
Fertilizer-distributer. W. B. Parrish. No. 883,564; Mar. 31; Sp. p. 6164; Dr. p. 1311; Gaz. vol. 133; p. 1129.
Fiber-cleaning machine. C. Schofield. No. 881,445; Mar. 10; Sp. p. 1901; Dr. p. 414; Gaz. vol. 133; p. 347.
Fibers from rhea-plants, Producing. G. H. Roeder. No. 881,499; Mar. 10; Sp. p. 1994; Gaz. vol. 133; p. 362.
Fibrous plants, Machine for disintegrating. E. Hartman. No. 880,661; Mar. 3; Sp. p. 343; Dr. pp. 75–6; Gaz. vol. 133; p. 60.
Fifth-wheel. J. W. Cotton. No. 881,882; Mar. 10; Sp. p. 2775; Dr. p. 595; Gaz. vol. 133; p. 490.
File, Account-. E. J. Vickers. No. 881,363; Mar. 10; Sp. p. 1737; Dr. p. 374; Gaz. vol. 133; p. 322.
File and the like, Letter-. W. A. Johnson. No. 881,078; Mar. 3; Sp. p. 1171; Dr. pp. 252–3; Gaz. vol. 133; p. 199.
File, Bill-. C. Spiro. No. 881,970; Mar. 17; Sp. p. 2972; Dr. p. 633; Gaz. vol. 133; p. 547.
File, Duplicate-sale-slip. H. McCormick and M. A. Lumbard. No. 881,481; Mar. 10; Sp. p. 1978; Dr. p. 431; Gaz. vol. 133; p. 359.
File, Paper-. C. E. King. No. 883,543; Mar. 31; Sp. p. 6129; Dr. p. 1303; Gaz. vol. 133; p. 1123.
Filing-cases, Drawer-support for. P. H. Yawman. No. 883,009; Mar. 24; Sp. p. 5113; Dr. p. 1091; Gaz. vol. 133; p. 938.
Film-pack. L. G. Haase. No. 880,657; Mar. 3; Sp. p. 339; Dr. p. 74; Gaz. vol. 133; p. 59.
Filter. S. S. Montanye. No. 880,685; Mar. 3; Sp. p. 384; Dr. p. 84; Gaz. vol. 133; p. 66.
Filter. P. Traulsen and F. Bundesen. No. 882,030; Mar. 17; Sp. p. 3112; Dr. p. 661; Gaz. vol. 133; p. 567.
Filter. I. Boyd. No. 882,448; Mar. 17; Sp. p. 3684; Dr. p. 830; Gaz. vol. 133; p. 702.
Filter and hydraulic press, Combined. M. A. Smith. No. 880,588; Mar. 3; Sp. p. 200; Dr. p. 43; Gaz. vol. 133; p. 36.
Filter for cyaniding and the like, Continuous. B. Hunt. No. 882,202; Mar. 17; Sp. p. 3434; Dr. p. 730; Gaz. vol. 133; p. 621.
Filter-machine. H. W. Blaisdell. No. 882,738; Mar. 17; Sp. p. 4465; Dr. pp. 950–1; Gaz. vol. 133; p. 831.
Filter, Self-cleansing. B. Metcalf. No. 880,458; Mar. 3; Sp. p. 126; Dr. pp. 28–9; Gaz. vol. 133; p. 26.
Filters, Removing caked material from pressure-. D. J. Kelly. No. 880,742; Mar. 3; Sp. p. 512; Dr. p. 106; Gaz. vol. 133; p. 89.
Finger-cot. F. A. Corliss. No. 883,452; Mar. 31; Sp. p. 5945; Dr. p. 1268; Gaz. vol. 133; p. 1095.
Finger-pad. M. H. McElhone. No. 882,117; Mar. 17; Sp. p. 3268; Dr. p. 696; Gaz. vol. 133; p. 595.
Fire-alarm. W. Glenck. No. 880,521; Mar. 3; Sp. p. 56; Dr. p. 13; Gaz. vol. 133; p. 13.
Fire-alarm. G. H. Carroll. No. 881,663; Mar. 10; Sp. p. 2332; Dr. p. 505; Gaz. vol. 133; p. 419.
Fire-alarm and signaling system. J. D. Nolen. No. 883,226; Mar. 31; Sp. p. 5456; Dr. p. 1162; Gaz. vol. 133; p. 1021.
Fire-alarm box. M. W. Hamblin. No. 882,250; Mar. 17; Sp. p. 3523; Dr. p. 748; Gaz. vol. 133; p. 636.
Fire-alarm signal, Automatic electric. E. E. Hayden. No. 880,662; Mar. 3; Sp. p. 346; Dr. p. 76; Gaz. vol. 133; p. 61.
Fire-alarm system. H. H. Hillier. No. 882,758; Mar. 24; Sp. p. 4505; Dr. pp. 960–1; Gaz. vol. 133; p. 837.
Fire and water proof composition. G. Kelly. No. 882,890; Mar. 24; Sp. p. 4775; Gaz. vol. 133; p. 879.
Fire and water proof composition. G. Kelly. No. 882,891; Mar. 24; Sp. p. 4776; Gaz. vol. 133; p. 879.
Fire-brick clamp and stove-top brace. F. Jones. No. 883,408; Mar. 31; Sp. p. 5843; Dr. p. 1246; Gaz. vol. 133; p. 1080.
Fire-engine, Chemical. T. Lerch and H. S. Clark. No. 880,676; Mar. 3; Sp. p. 370; Dr. p. 81; Gaz. vol. 133; p. 66.
Fire-engines, Means for electrically operating. G. A. Drake. No. 880,780; Mar. 3; Sp. p. 589; Dr. pp. 125–6; Gaz. vol. 133; p. 101.
Fire-escape. J. W. Hull, Sr. No. 882,499; Mar. 17; Sp. p. 3970; Dr. p. 848; Gaz. vol. 133; p. 719.
Fire-escape. E. L. Flowers. No. 883,104; Mar. 24; Sp. p. 5178; Dr. p. 1106; Gaz. vol. 133; p. 949.
Fire-escape, Balcony. C. J. A. Hanssen. No. 882,677; Mar. 24; Sp. p. 4349; Dr. p. 925; Gaz. vol. 133; p. 811.
Fire-extinguisher. W. E. Luhman. No. 880,551; Mar. 3; Sp. p. 117; Dr. p. 26; Gaz. vol. 133; p. 24.
Fire-extinguisher. W. A. Bradshaw. No. 881,893; Mar. 17; Sp. p. 2820; Dr. p. 602; Gaz. vol. 133; p. 522.
Fire-extinguisher. J. C. Shafer. No. 883,149; Mar. 24; Sp. p. 5264; Dr. p. 1127; Gaz. vol. 133; p. 965.
Fire-extinguisher, Portable. J. A. E. Anderson. No. 883,679; Mar. 31; Sp. p. 6386; Dr. p. 1362; Gaz. vol. 133; p. 1164.
Fire-extinguishers, Acid-bottle cage for. J. M. Miller. No. 883,326; Mar. 31; Sp. p. 5652; Dr. p. 1206; Gaz. vol. 133; p. 1052.
Fire-extinguishers, Head for automatic. L. E. Fagan. No. 882,629; Mar. 24; Sp. p. 4256; Dr. p. 901; Gaz. vol. 133; p. 795.
Fire-extinguishing apparatus. C. Howard. No. 881,076; Mar. 3; Sp. p. 1167; Dr. p. 252; Gaz. vol. 133; p. 199.
Fire-extinguishing engine. W. R. Johnston. No. 881,129; Mar. 10; Sp. p. 1270; Dr. p. 274; Gaz. vol. 133; p. 245.
Fire-fighting apparatus. E. F. Sanford. No. 881,872; Mar. 10; Sp. p. 2756; Dr. pp. 590–1; Gaz. vol. 133; p. 487.
Fire-fighting apparatus. E. F. Sanford. No. 881,873; Mar. 10; Sp. p. 2758; Dr. pp. 591–2; Gaz. vol. 133; p. 487.
Fire-protective system. T. H. Walker. No. 881,271; Mar. 10; Sp. p. 1551; Dr. p. 334; Gaz. vol. 133; p. 292.
Fire-shutter, Automatic. E. H. McCloud. No. 881,256; Mar. 10; Sp. p. 1526; Dr. p. 328; Gaz. vol. 133; p. 288.
Fire-tube boiler. G. Koch. No. 880,672; Mar. 3; Sp. p. 365; Dr. p. 80; Gaz. vol. 133; p. 64.
Firearm. H. H. Talbot. No. 882,594; Mar. 24; Sp. p. 4178; Dr. pp. 886–7; Gaz. vol. 133; p. 783.
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Firearm, Repeating. L. L. Hepburn. No. 882,561; Mar. 24; Sp. p. 4113; Dr. pp. 872–3; Gaz. vol. 133; p. 772.
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Fleeced ribbed web. R. W. Scott. No. 881,494; Mar. 10; Sp. p. 2000; Dr. p. 436; Gaz. vol. 133; p. 363.
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Flue-cleaner. H. O. Barrell. No. 880,855; Mar. 3; Sp. p. 756; Dr. p. 160; Gaz. vol. 133; p. 128.
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Fly-catcher. T. Kay. No. 883,203; Mar. 31; Sp. p. 5404; Dr. p. 1151; Gaz. vol. 133; p. 1013.
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Fly-wheel. S. P., Jr., and J. F. Wetherill, Jr. No. 882,037; Mar. 17; Sp. p. 3125; Dr. p. 664; Gaz. vol. 133; p. 569.
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Folding bench, Angle-metal. W. H. Maxwell. No. 882,010; Mar. 17; Sp. p. 3074; Dr. p. 653; Gaz. vol. 133; p. 561.
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Fountain: *See* Mechanical fountain; Poultry-fountain.
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Fuel-briquet. A. M. Mannewitz. No. 881,192; Mar. 10; Sp. p. 1389; Gaz. vol. 133; p. 266.
Fume-arrester. S. I. Clawson. No. 880,506; Mar. 3; Sp. p. 29; Dr. p. 7; Gaz. vol. 133; p. 8.
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Funnel. B. F. Bee. No. 881,891; Mar. 17; Sp. p. 2817; Dr. p. 601; Gaz. vol. 133; p. 522.
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Furnace. J. H. Bennett. No. 880,710; Mar. 3; Sp. p. 440; Dr. p. 92; Gaz. vol. 133; p. 77.
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Furnaces, Sheet for boiler-. T. C. Rogerson and P. Rentchler. No. 882,420; Mar. 17; Sp. p. 3834; Dr. pp. 818–19; Gaz. vol. 133; p. 663.
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Furniture, Upholstered. H. J. Jacobs. No. 880,738; Mar. 3; Sp. p. 504; Dr. p. 104; Gaz. vol. 133; p. 87.
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Gas-engine. M. L. Wood. No. 880,704; Mar. 3; Sp. p. 418; Dr. p. 90; Gaz. vol. 133; p. 75.
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Gas-meter, Prepayment. B. G. Waggner. No. 880,767; Mar. 3; Sp. p. 563; Dr. p. 119; Gaz. vol. 133; p. 97.
Gas or other explosive engine. J. W. Kales. No. 880,741; Mar. 3; Sp. p. 510; Dr. p. 105; Gaz. vol. 133; p. 89.
Gas-producer. H. I. Lea. No. 881,100; Mar. 3; Sp. p. 1211; Dr. p. 261; Gaz. vol. p. 133; p. 206.
Gas-producer. H. T. Newell. No. 881,258; Mar. 10; Sp. p. 1530; Dr. p. 329; Gaz. vol. 133; p. 288.
Gas-producer. H. Gerdes. No. 883,131; Mar. 24; Sp. p. 5246; Dr. p. 1120; Gaz. vol. 133; p. 959.
Gas street-light extinguisher. S. Wells. No. 883,262; Mar. 31; Sp. p. 5529; Dr. p. 1179; Gaz. vol. 133; p. 1032.
Gas tips, Machine for making acetylene-. C. S. Steward and W. T. Lowry. No. 881,352; Mar. 10; Sp. p. 1717; Dr. pp. 370–1; Gaz. vol. 133; p. 318.
Gaseous mixture having disinfecting and extinguishing properties, Apparatus for producing a. R. Marot. No. 883,036; Mar. 24; Sp. p. 5054; Dr. p. 1077; Gaz. vol. 133; p. 927.
Gasolene engine and pump drain. G. G. Forester. No. 882,496; Mar. 17; Sp. p. 3961; Dr. p. 847; Gaz. vol. 133; p. 717.
Gasolene-trap. W. J. Kramer. No. 882,393; Mar. 17; Sp. p. 3790; Dr. p. 809; Gaz. vol. 133; p. 684.
Gate: *See* Railway-gate; Railway-crossing gate; Swinging gate; Water-gate.
Gate. O. E. Brown. No. 880,624; Mar. 3; Sp. p. 276; Dr. p. 59; Gaz. vol. 133; p. 48.
Gate. J. K. Wheeler. No. 880,945; Mar. 3; Sp. p. 922; Dr. p. 199; Gaz. vol. 133; p. 156.
Gate. S. B. Hackett. No. 880,967; Mar. 3; Sp. p. 1003; Dr. pp. 214–15; Gaz. vol. 133; p. 170.
Gate. G. W. and C. E. Goss. No. 881,119; Mar. 10; Sp. p. 1251; Dr. p. 269; Gaz. vol. 133; p. 242.
Gate. J. H. Bauer and J. J. Dillon. No. 881,532; Mar. 10; Sp. p. 2067; Dr. p. 452; Gaz. vol. 133; p. 376.
Gate. W. M. Dillon. No. 881,883; Mar. 10; Sp. p. 2776; Dr. p. 596; Gaz. vol. 133; p. 490.
Gate. G. O. Kidder. No. 882,692; Mar. 24; Sp. p. 4372; Dr. p. 930; Gaz. vol. 133; p. 816.
Gate. O. H. Ahlemeier. No. 882,987; Mar. 24; Sp. p. 4964; Dr. p. 1056; Gaz. vol. 133; p. 912.
Gate. F. E. Eldredge. No. 883,182; Mar. 31; Sp. p. 5356; Dr. p. 1141; Gaz. vol. 133; p. 1005.
Gate-fastener. P. O. Peterson. No. 881,259; Mar. 10; Sp. p. 1531; Dr. p. 330; Gaz. vol. 133; p. 289.
Gate-operating mechanism. H. E. Williams. No. 882,984; Mar. 24; Sp. p. 4959; Dr. p. 1055; Gaz. vol. 133; p. 911.
Gasolene-trap. W. J. Kramer. No. 882,393; Mar. 17; Sp. p. 3790; Dr. p. 809; Gaz. vol. 133; p. 684.
Gear mechanism, Change-speed and reversing-. L. A. Magout. No. 883,353; Mar. 31; Sp. p. 6148; Dr. p. 1307; Gaz. vol. 133; p. 1126.
Gear, Short-turning. T. Sandstrom. No. 883,488; Mar. 31; Sp. p. 6011; Dr. p. 1284; Gaz. vol. 133; p. 1107.
Gearing. C. Wicksteed. No. 881,273; Mar. 10; Sp. p. 1565; Dr. pp. 335–6; Gaz. vol. 133; p. 293.
Gearing, Belt, rope, or chain. E. H. Hodgkinson. No. 882,635; Mar. 24; Sp. p. 4265; Dr. p. 904; Gaz. vol. 133; p. 797.
Gearing, Change-speed. H. Le Bion. No. 881,248; Mar. 10; Sp. p. 1510; Dr. p. 325; Gaz. vol. 133; p. 285.
Gearing, Friction-. J. D. Baker. No. 882,841; Mar. 24; Sp. p. 4724; Dr. p. 1004; Gaz. vol. 133; p. 871.
Gearing, Variable-speed. M. Saunders. No. 880,578; Mar. 3; Sp. p. 180; Dr. pp. 39–40; Gaz. vol. 133; p. 33.
Gem-setting. R. K. Hohmann. No. 881,699; Mar. 10; Sp. p. 2373; Dr. p. 514; Gaz. vol. 133; p. 426.
Generator: *See* Electric generator; Fluid-pressure generator; Gas-generator; Steam-generator.
Germicide, Solar. J. O. Day. No. 882,100; Mar. 17; Sp. p. 3242; Dr. p. 689; Gaz. vol. 133; p. 590.
Glass, Apparatus for cleaning large panes of. F. E. L. Harris. No. 880,660; Mar. 3; Sp. p. 343; Dr. p. 75; Gaz. vol. 133; p. 60.
Glass articles, Device for manipulating. F. G. Farnham. No. 881,913; Mar. 17; Sp. p. 2856; Dr. pp. 609–10; Gaz. vol. 133; p. 528.
Glass articles, Device for manipulating. F. G. Farnham. No. 881,914; Mar. 17; Sp. p. 2859; Dr. p. 610; Gaz. vol. 133; p. 529.
Glass-gathering apparatus. J. H. Croskey. No. 881,096; Mar. 3; Sp. p. 1203; Dr. pp. 259–61; Gaz. vol. 133; p. 205.
Glass, Making wire-. A. J. Baldwin. No. 880,772; Mar. 3; Sp. p. 576; Dr. p. 122; Gaz. vol. 133; p. 99.
Glass-manufacturing apparatus, Wire-. A. Gessner. No. 881,791; Mar. 10; Sp. p. 2571; Dr. p. 552; Gaz. vol. 133; p. 459.
Glass, marble, and the like, Machine for grinding and polishing the edges of plates of. V. Kimon. No. 882,115; Mar. 17; Sp. p. 3266; Dr. p. 695; Gaz. vol. 133; p. 594.
Glass, Producing. E. Morenus. No. 883,039; Mar. 24; Sp. p. 5061; Dr. pp. 1078–9; Gaz. vol. 133; p. 928.
Glass sheets, Implement for cutting shaped sections from. C. F. Chapman. No. 881,809; Mar. 17; Sp. p. 2829; Dr. p. 604; Gaz. vol. 133; p. 524.
Glass tubes, Machine for heating. J. T. Fagan. No. 882,190; Mar. 17; Sp. p. 3417; Dr. p. 726; Gaz. vol. 133; p. 618.
Glove. A. Newman. No. 883,334; Mar. 31; Sp. p. 5663; Dr. p. 1209; Gaz. vol. 133; p. 1055.
Glove, Base-ball. J. Gamble. No. 881,315; Mar. 10; Sp. p. 1647; Dr. p. 353; Gaz. vol. 133; p. 307.
Glove-turner. S. A. Robinson. No. 881,155; Mar. 10; Sp. p. 1326; Dr. p. 286; Gaz. vol. 133; p. 256.
Gloves, Apparatus for facilitating the putting on of india-rubber. C. A. Hoefftcke. No. 882,312; Mar. 17; Sp. p. 3652; Dr. p. 775; Gaz. vol. 133; p. 658.
Glue-applying machine. J. A. Butler, C. Reynolds, and A. J. Seaman. No. 883,082; Mar. 24; Sp. p. 5142; Dr. pp. 1097–8; Gaz. vol. 133; p. 942.
Gluing-clamp. E. Barker. No. 881,530; Mar. 10; Sp. p. 2063; Dr. p. 451; Gaz. vol. 133; p. 375.
Go-cart. O. Kurz. No. 882,895; Mar. 24; Sp. p. 4784; Dr. p. 1018; Gaz. vol. 133; p. 880.
Gold-concentrating apparatus. E. R. Cook. No. 880,631; Mar. 3; Sp. p. 286; Dr. pp. 61–2; Gaz. vol. 133; p. 50.
Golf-practice apparatus. A. R. Sprague. No. 883,058; Mar. 24; Sp. p. 5092; Dr. p. 1087; Gaz. vol. 133; p. 935.
Governing mechanism, Automatic. F. H. Brown. No. 883,284; Mar. 31; Sp. p. 5574; Dr. p. 1189; Gaz. vol. 133; p. 1040.
Governor, Marine. L. D. Kissack. No. 881,697; Mar. 10; Sp. p. 2385; Dr. p. 518; Gaz. vol. 133; p. 429.
Governor mechanism for engines. W. E. Gannon. No. 881,917; Mar. 17; Sp. p. 2866; Dr. p. 611; Gaz. vol. 133; p. 530.
Grader, Road-. L. D. Baty. No. 880,774; Mar. 3; Sp. p. 578; Dr. p. 123; Gaz. vol. 133; p. 99.
Grain-conveyer, Pneumatic. W. F. Carlton. No. 883,292; Mar. 31; Sp. p. 5598; Dr. p. 1193; Gaz. vol. 133; p. 1042.
Grain-dampener. A. H. Kirk. No. 881,135; Mar. 10; Sp. p. 1283; Dr. p. 277; Gaz. vol. 133; p. 248.
Grain grading and separating machine. W. W. Patterson. No. 880,911; Mar. 3; Sp. p. 869; Dr. pp. 186–7; Gaz. vol. 133; p. 146.
Grain, Machine for separating hulled from unhulled. A. P. MacDonald. No. 882,156; Mar. 17; Sp. p. 3331; Dr. p. 710; Gaz. vol. 133; p. 606.
Grain-separator. M. Leonard. No. 881,422; Mar. 10; Sp. p. 1854; Dr. p. 403; Gaz. vol. 133; p. 339.
Grain-separator. J. A. Neufeld. No. 882,945; Mar. 24; Sp. p. 4912; Dr. pp. 1041–2; Gaz. vol. 133; p. 903.
Grain-shocker. C. M. Cochran. No. 882,052; Mar. 17; Sp. p. 3155; Dr. pp. 670–1; Gaz. vol. 133; p. 573.
Grain-weigher, Automatic. G. M. Baird. No. 881,217; Mar. 10; Sp. p. 1444; Dr. p. 312; Gaz. vol. 133; p. 274.
Grainers, Raking-machine for. G. B. Willcox. No. 882,727; Mar. 24; Sp. p. 4442; Dr. pp. 944–5; Gaz. vol. 133; p. 827.
Gramophone. L. T. Halle. No. 883,135; Mar. 24; Sp. p. 5256; Dr. pp. 1122–3; Gaz. vol. 133; p. 960.
Gramophone or other sound reproducing or recording machine. L. T. Halle. No. 880,879; Mar. 3; Sp. p. 813; Dr. p. 172; Gaz. vol. 133; p. 136.
Grapple. L. T. Pedigo. No. 882,796; Mar. 24; Sp. p. 4575; Dr. p. 976; Gaz. vol. 133; p. 849.

Grate. C. Pekat. No. 883,046; Mar. 24; Sp. p. 5073; Dr. pp. 1082–3; Gaz. vol. 133; p. 931.
Grate-bar. C. W. Rolin. No. 881,960; Mar. 17; Sp. p. 2957; Dr. p. 630; Gaz. vol. 133; p. 544.
Grate, Oil-. R. Held. No. 882,634; Mar. 24; Sp. p. 4264; Dr. p. 903; Gaz. vol. 133; p. 797.
Grate, Sectional. D. B. Baker and J. A. Stein. No. 882,860; Mar. 24; Sp. p. 4722; Dr. p. 1004; Gaz. vol. 133; p. 870.
Gravity-lock. G. Yunker. No. 882,921; Mar. 24; Sp. p. 4840; Dr. p. 1027; Gaz. vol. 133; p. 890.
Grinding-machine. M. Dickerson. No. 881,465; Mar. 10; Sp. p. 1946; Dr. p. 423; Gaz. vol. 133; p. 354.
Grinding-machine. C. E. Ball. No. 883,163; Mar. 31; Sp. p. 5320; Dr. p. 1135; Gaz. vol. 133; p. 1155.
Grinding-machine. A. B. Landis. No. 883,649; Mar. 31; Sp. p. 6331; Dr. pp. 1349–50; Gaz. vol. 133; p. 1156.
Grinding-machines, Grinding-wheel truer for. A. B. Landis. No. 883,650; Mar. 31; Sp. p. 6335; Dr. p. 1350; Gaz. vol. 133; p. 1156.
Grinding-mills, Supplemental hopper for. F. B. Tice. No. 881,745; Mar. 10; Sp. p. 2493; Dr. p. 537; Gaz. vol. 133; p. 444.
Grinding plastic substances, such as chocolate, &c., Machine for. G. S. Baker. No. 881,287; Mar. 10; Sp. p. 1598; Dr. p. 342; Gaz. vol. 133; p. 298.
Grooving or routing tool. J. M. Massey. No. 882,331; Mar. 17; Sp. p. 3688; Dr. p. 782; Gaz. vol. 133; p. 665.
Ground-detector. J. C. Lawler. No. 880,544; Mar. 3; Sp. p. 98; Dr. p. 22; Gaz. vol. 133; p. 21.
Gun. W. F. Markham and E. S. Roe. No. 880,555; Mar. 3; Sp. p. 122; Dr. p. 27; Gaz. vol. 133; p. 25.
Gun-cleaner. O. P. Ward. No. 882,598; Mar. 24; Sp. p. 4186; Dr. p. 888; Gaz. vol. 133; p. 784.
Gun parts, Mechanism for interlocking. J. F. Beck, Sr. No. 883,690; Mar. 31; Sp. p. 6388; Dr. p. 1362; Gaz. vol. 133; p. 1165.
Gun, Trap-. C. D. Lovelace. No. 882,786; Mar. 24; Sp. p. 4549; Dr. pp. 971–2; Gaz. vol. 133; p. 845.
Guns, Target and bullet-catcher for use with air-. W. Baker. No. 883,077; Mar. 24; Sp. p. 5127; Dr. p. 1094; Gaz. vol. 133; p. 941.
Gyratory structure. G. W. Combs. No. 882,588; Mar. 24; Sp. p. 4166; Dr. pp. 883–4; Gaz. vol. 133; p. 780.
Hammer, Drop-. W. T. Sears. No. 882,558; Mar. 24; Sp. p. 4166; Dr. pp. 883–4; Gaz. vol. 133; p. 780.
Hammer frame, Power-. L. J. Clossey. No. 882,492; Mar. 17; Sp. p. 3055; Dr. pp. 845–6; Gaz. vol. 133; p. 716.
Handle: *See* Brush-handle; Casket-handle; Dipper-handle; Sad-iron handle; Saw-handle; Shock-handle.
Hanger: *See* Brake-beam hanger; Car-door hanger; Garment-hanger; Picture-hanger; Screen-hanger; Shade and lace-curtain hanger; Stovepipe-hanger; Tobacco-hanger; Truck-bolster hanger; Washline-hanger.
Harmonica, Reed-. J. E. Murphy. No. 882,575; Mar. 24; Sp. p. 4142; Dr. p. 878; Gaz. vol. 133; p. 776.
Harness-fitting. W. H. Ferris. No. 882,450; Mar. 17; Sp. p. 3903; Dr. p. 835; Gaz. vol. 133; p. 706.
Harness for horse-training. H. Rasmussen. No. 882,584; Mar. 24; Sp. p. 4159; Dr. p. 882; Gaz. vol. 133; p. 779.
Harness-swing. J. B. Reno. No. 883,238; Mar. 31; Sp. p. 5477; Dr. p. 1167; Gaz. vol. 133; p. 1025.
Harrow. W. Hyre. No. 880,998; Mar. 3; Sp. p. 1019; Dr. pp. 219–20; Gaz. vol. 133; p. 174.
Harrow. G. H. Wells. No. 883,436; Mar. 31; Sp. p. 5908; Dr. p. 1261; Gaz. vol. 133; p. 1090.
Harrow. E. Swope. No. 883,586; Mar. 31; Sp. p. 6200; Dr. p. 1321; Gaz. vol. 133; p. 1135.
Harrow, Disk. L. E. Waterman. No. 880,843; Mar. 3; Sp. p. 732; Dr. p. 155; Gaz. vol. 133; p. 124.
Harrow, Disk. C. S. Sharp. No. 882,589; Mar. 24; Sp. p. 4168; Dr. p. 884; Gaz. vol. 133; p. 781.
Harvester. F. Rump. No. 882,969; Mar. 24; Sp. p. 4934; Dr. p. 1047; Gaz. vol. 133; p. 907.
Harvester. G. E. Shaw. No. 883,578; Mar. 31; Sp. p. 6188; Dr. p. 1318; Gaz. vol. 133; p. 1133.
Harvester and binder tongue-truck. J. Flaig. No. 882,820; Mar. 24; Sp. p. 4626; Dr. p. 986; Gaz. vol. 133; p. 857.
Harvester and husker, Combined corn. J. L. Allender. No. 883,073; Mar. 24; Sp. p. 5120; Dr. pp. 1092–3; Gaz. vol. 133; p. 939.
Harvester and husker, Corn. I. J. Ball. No. 882,734; Mar. 24; Sp. p. 4457; Dr. pp. 948–9; Gaz. vol. 133; p. 829.
Harvester and separator attachment. B. F. Rogers and E. L. Rucker. No. 883,424; Mar. 31; Sp. p. 5876; Dr. p. 1252; Gaz. vol. 133; p. 1085.
Harvester and shocker, Combined corn. G. E., C., and R. J. Waller. No. 883,597; Mar. 31; Sp. p. 6217; Dr. pp. 1325–6; Gaz. vol. 133; p. 1138.
Harvester cutting apparatus. J. Lutin. No. 880,553; Mar. 3; Sp. p. 120; Dr. p. 27; Gaz. vol. 133; p. 24.
Harvester cutting mechanism, Corn-. F. M. Widerman. No. 883,367; Mar. 31; Sp. p. 5734; Dr. p. 1223; Gaz. vol. 133; p. 1065.
Harvester, Potato-. J. S. Hoyt. No. 880,533; Mar. 3; Sp. p. 74; Dr. p. 18; Gaz. vol. 133; p. 16.
Harvester-reel and actuating mechanism therefor. G. V. Ratz. No. 882,715; Mar. 24; Sp. p. 4418; Dr. p. 939; Gaz. vol. 133; p. 823.
Harvester, Tobacco-. S. E. Loxley. No. 881,598; Mar. 10; Sp. p. 2195; Dr. pp. 478–9; Gaz. vol. 133; p. 399.
Harvesting sugar-cane. H. G. Ginaca. No. 883,537; Mar. 31; Sp. p. 6108; Dr. p. 1299; Gaz. vol. 133; p. 1120.
Hat-blocking machine. A. B. Waring. No. 881,506; Mar. 10; Sp. p. 2024; Dr. p. 441; Gaz. vol. 133; p. 368.
Hat-blocking machine. A. B. Waring. No. 881,509; Mar. 10; Sp. p. 2026; Dr. p. 442; Gaz. vol. 133; p. 368.
Hat-frame-forming device. J. Nattenheimer. No. 881,257; Mar. 10; Sp. p. 1528; Dr. pp. 328–9; Gaz. vol. 133; p. 288.
Hat-mold. F. H. Lee. No. 882,324; Mar. 17; Sp. p. 3674; Dr. p. 780; Gaz. vol. 133; p. 662.
Hat-protector. A. G. Kiner. No. 881,132; Mar. 10; Sp. p. 1278; Dr. p. 275; Gaz. vol. 133; p. 247.
Hat-sizing-machine roller. J. F. Williams. No. 880,768; Mar. 3; Sp. p. 565; Dr. p. 119; Gaz. vol. 133; p. 98.
Hat, Washable. W. Neugass. No. 882,648; Mar. 24; Sp. p. 4290; Dr. p. 910; Gaz. vol. 133; p. 802.
Hatch-covers, Mechanism for moving. T. B. Armstrong. No. 881,649; Mar. 10; Sp. p. 2311; Dr. p. 500; Gaz. vol. 133; p. 415.
Hay-carrier. R. Miller. No. 881,604; Mar. 10; Sp. p. 2209; Dr. p. 482; Gaz. vol. 133; p. 401.
Hay-fork. C. Foss. No. 881,394; Mar. 10; Sp. p. 1805; Dr. p. 390; Gaz. vol. 133; p. 331.
Hay-handling mechanism. M. H. Madsen. No. 881,426; Mar. 10; Sp. p. 1859; Dr. p. 404; Gaz. vol. 133; p. 341.
Hay in barns, Appparatus for unloading. C. L. Burgner. No. 881,542; Mar. 10; Sp. p. 2080; Dr. p. 455; Gaz. vol. 133; p. 379.
Hay-loader. C. Graves. No. 881,397; Mar. 10; Sp. p. 1809; Dr. pp. 391–2; Gaz. vol. 133; p. 332.
Hay-loader. C. E. Clugston. No. 883,087; Mar. 24; Sp. p. 5150; Dr. pp. 1099–1100; Gaz. vol. 133; p. 944.
Hay pitching and stacking apparatus. E. Murray. No. 881,705; Mar. 10; Sp. p. 2398; Dr. pp. 520–1; Gaz. vol. 133; p. 431.
Hay-rack. E. J. Wells and J. M. Fuller. No. 881,752; Mar. 10; Sp. p. 2506; Dr. pp. 539–40; Gaz. vol. 133; p. 446.
Hay-rack. E. H. Moyer. No. 882,407; Mar. 17; Sp. p. 3812; Dr. p. 815; Gaz. vol. 133; p. 689.
Headers, Comb-reel for. J. C. Eichelberger. No. 882,376; Mar. 17; Sp. p. 3765; Dr. p. 802; Gaz. vol. 133; p. 679.
Headlight-support. L. L. Lemay. No. 882,898; Mar. 24; Sp. p. 4792; Dr. p. 1019; Gaz. vol. 133; p. 881.
Heat-engine. S. Lake. No. 880,744; Mar. 3; Sp. p. 516; Dr. pp. 106–9; Gaz. vol. 133; p. 89.
Heat-radiating device. J. L. Perkins. No. 881,147; Mar. 10; Sp. p. 1311; Dr. p. 283; Gaz. vol. 133; p. 253.
Heater: *See* Electric heater; Feed-water heater; Hot-water heater; Tank-heater; Water-heater.
Heater. H. Bevan. No. 881,844; Mar. 10; Sp. p. 2682; Dr. p. 574; Gaz. vol. 133; p. 477.
Heater. G. H. Bartlett. No. 882,229; Mar. 17; Sp. p. 3483; Dr. p. 740; Gaz. vol. 133; p. 629.
Heating apparatus. A. Zeck and F. Van Zeck. No. 880,954; Mar. 3; Sp. p. 941; Dr. p. 203; Gaz. vol. 133; p. 159.
Heating apparatus, Gas. T. P. Watts. No. 880,844; Mar. 3; Sp. p. 733; Dr. p. 155; Gaz. vol. 133; p. 124.
Heating device. W. E. H. Morse. No. 881,017; Mar. 3; Sp. p. 1057; Dr. p. 229; Gaz. vol. 133; p. 180.
Heating furnace, Air and water. C. A. Gibbs. No. 882,558; Mar. 24; Sp. p. 4108; Dr. p. 871; Gaz. vol. 133; p. 771.
Heating system. J. M. W. Kitchen. No. 880,542; Mar. 3; Sp. p. 90; Dr. p. 21; Gaz. vol. 133; p. 20.
Heating system. F. J. Melton. No. 880,806; Mar. 3; Sp. p. 641; Dr. p. 134; Gaz. vol. 133; p. 111.
Heating system, Steam-. J. A. Donnelly. No. 882,300; Mar. 17; Sp. p. 3625; Dr. p. 769; Gaz. vol. 133; p. 653.
Heel. L. H. Shaw. No. 880,583; Mar. 3; Sp. p. 189; Dr. p. 41; Gaz. vol. 133; p. 35.
Heel. T. Lund. No. 880,898; Mar. 3; Sp. p. 842; Dr. p. 179; Gaz. vol. 133; p. 142.
Heel. R. H. Bennett. No. 881,535; Mar. 10; Sp. p. 2071; Dr. p. 453; Gaz. vol. 133; p. 377.
Heel, Boot or shoe. C. F. Hamel and W. G. Vollmayer. No. 881,921; Mar. 17; Sp. p. 2878; Dr. p. 613; Gaz. vol. 133; p. 532.
Heel-breasting machine. A. D. Elliott. No. 880,868; Mar. 3; Sp. p. 788; Dr. p. 167; Gaz. vol. 133; p. 132.
Heel, Cushion-. R. W. Perry. No. 882,268; Mar. 17; Sp. p. 3572; Dr. p. 758; Gaz. vol. 133; p. 644.
Heel-scourer guard. N. C. Bohr. No. 883,445; Mar. 31; Sp. p. 5926; Dr. p. 1265; Gaz. vol. 133; p. 1093.
Heel support, Shoe-. V. E. Harris. No. 882,109; Mar. 17; Sp. p. 3259; Dr. p. 693; Gaz. vol. 133; p. 593.
Heels or soles of boots and shoes, Metallic protector for. J. H. Vinton. No. 882,542; Mar. 17; Sp. p. 4074; Dr. p. 866; Gaz. vol. 133; p. 734.
Hemmer. A. Martin. No. 880,678; Mar. 3; Sp. p. 374; Dr. p. 82; Gaz. vol. 133; p. 66.
Hides or skins into leather, Converting. A. E. Kelk. No. 881,246; Mar. 10; Sp. p. 1506; Gaz. vol. 133; p. 284.
Hides, Treating. F. R. Wessa. No. 883,124; Mar. 24; Sp. p. 5236; Dr. p. 1117; Gaz. vol. 133; p. 957.
Hinge. J. Soss. No. 880,697; Mar. 3; Sp. p. 405; Dr. pp. 87–8; Gaz. vol. 133; p. 73.
Hinge. D. Rugg. No. 880,757; Mar. 3; Sp. p. 544; Dr. p. 113; Gaz. vol. 133; p. 94.
Hinge. F. A. Lebkuecher. No. 880,892; Mar. 3; Sp. p. 835; Dr. p. 178; Gaz. vol. 133; p. 140.
Hinge. J. W. Donaldson. No. 881,308; Mar. 10; Sp. p. 1637; Dr. p. 350; Gaz. vol. 133; p. 305.
Hinge, Flask-. H. F. Manifold. No. 881,325; Mar. 10; Sp. p. 1662; Dr. p. 356; Gaz. vol. 133; p. 310.
Hinge for screen-doors, Spring-. E. Bommer. No. 882,280; Mar. 17; Sp. p. 3608; Dr. p. 765; Gaz. vol. 133; p. 650.
Hinge for window-screens. R. W. Carrington. No. 882,813; Mar. 24; Sp. p. 4614; Dr. p. 983; Gaz. vol. 133; p. 855.
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Household article. J. F. Wynkoop. No. 881,758; Mar. 10; Sp. p. 2512; Dr. p. 541; Gaz. vol. 133; p. 448.
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Hydrogen, Generating. H. Foersterling and H. Philipp. No. 883,531; Mar. 31; Sp. p. 6096; Dr. p. 1296; Gaz. vol. 133; p. 1119.
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Insect-destroyer. W. R. Craun. No. 882,142; Mar. 17; Sp. p. 3308; Dr. p. 705; Gaz. vol. 133; p. 603.
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Lamp with emergency-burner, Inverted incandescent. A. Würker. No. 880,615; Mar. 3; Sp. p. 258; Dr. pp. 53–4; Gaz. vol. 133; p. 45.
Lamps, Combined base-ring and bracket for signal-. A. H. Handlan, Jr. No. 882,309; Mar. 17; Sp. p. 3647; Dr. p. 773; Gaz. vol. 133; p. 657.
Lamps, Device for automatic kindling of incandescent. J. Danischevski. No. 882,815; Mar. 24; Sp. p. 4616; Dr. p. 984; Gaz. vol. 133; p. 855.
Lamps on vehicles, Device for automatically controlling. J. W. P. Smithwick. No. 883,582; Mar. 31; Sp. p. 6193; Dr. p. 1319; Gaz. vol. 133; p. 1134.
Lamps, Starting device for mercury-vapor electric. L. A. Audibert. No. 881,765; Mar. 10; Sp. p. 2522; Dr. p. 543; Gaz. vol. 133; p. 450.
Land-roller. S. P. Walgren. No. 880,608; Mar. 3; Sp. p. 245; Dr. p. 50; Gaz. vol. 133; p. 43.
Lantern. J. F. Horn. No. 882,201; Mar. 17; Sp. p. 3433; Dr. p. 730; Gaz. vol. 133; p. 621.
Lantern-holder. C. W. Leaning. No. 882,396; Mar. 17; Sp. p. 3794; Dr. p. 810; Gaz. vol. 133; p. 685.
Last. W. Wiggins. No. 881,643; Mar. 10; Sp. p. 2299; Dr. p. 498; Gaz. vol. 133; p. 413.
Last. A. G. Fitz. No. 882,556; Mar. 24; Sp. p. 4105; Dr. p. 870; Gaz. vol. 133; p. 770.
Last-demonstrator. E. A. Eastman. No. 882,818; Mar. 24; Sp. p. 4622; Dr. p. 985; Gaz. vol. 133; p. 856.
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Lasts, Making. J. J. Smith. No. 882,274; Mar. 17; Sp. p. 3582; Dr. p. 760; Gaz. vol. 133; p. 646.
Laster, Heel-seat. C. F. Pym. No. 881,441; Mar. 10; Sp. p. 1890; Dr. pp. 411–12; Gaz. vol. 133; p. 346.
Lasting-machine. C. F. Pym. No. 882,018; Mar. 17; Sp. p. 3085; Dr. pp. 656–8; Gaz. vol. 133; p. 563.
Latch. G. W. and C. E. Goss. No. 881,182; Mar. 10; Sp. p. 1374; Dr. p. 296; Gaz. vol. 133; p. 263.
Latch. P. Dunford. No. 881,670; Mar. 10; Sp. p. 2345; Dr. p. 508; Gaz. vol. 133; p. 421.
Latch and lock, Door. F. Herbeck. No. 881,860; Mar. 10; Sp. p. 2725; Dr. pp. 583–4; Gaz. vol. 133; p. 482.
Latch, Vehicle-door. F. C. Altmann. No. 882,136; Mar. 17; Sp. p. 3299; Dr. p. 704; Gaz. vol. 133; p. 601.
Lathe-driver. J. Burt. No. 881,373; Mar. 10; Sp. p. 1770; Dr. pp. 382–3; Gaz. vol. 133; p. 325.
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Lathes, &c., Carriage-feeding mechanism for. J. C. Potter. No. 880,916; Mar. 3; Sp. p. 877; Dr. pp. 188–9; Gaz. vol. 133; p. 147.
Laundry-edger. R. L. Bray. No. 880,714; Mar. 3; Sp. p. 449; Dr. p. 94; Gaz. vol. 133; p. 79.
Laundry-marker. E. L. Lewis and A. P. Jamison. No. 881,012; Mar. 3; Sp. p. 1048; Dr. pp. 226–7; Gaz. vol. 133; p. 178.
Lavatory, Portable. A. W. Cale. No. 881,543; Mar. 10; Sp. p. 2083; Dr. p. 455; Gaz. vol. 133; p. 379.
Lead, Manufacturing white. W. Mills. No. 881,016; Mar. 3; Sp. p. 1055; Gaz. vol. 133; p. 180.
Lead ores, Reducing. A. Francis. No. 882,193; Mar. 17; Sp. p. 3423; Gaz. vol. 133; p. 619.
Lead-press. D. Carlin. No. 882,742; Mar. 24; Sp. p. 4478; Dr. p. 953; Gaz. vol. 133; p. 832.
Lease-reed. M. Walter. No. 881,160; Mar. 10; Sp. p. 1349; Dr. p. 291; Gaz. vol. 133; p. 259.
Lease-rod, Oscillating. N. and D. Paquette. No. 881,336; Mar. 10; Sp. p. 1681; Dr. p. 362; Gaz. vol. 133; p. 313.
Leather blackening and seasoning machine. C. P. Bossert. No. 880,859; Mar. 3; Sp. p. 769; Dr. pp. 163–4; Gaz. vol. 133; p. 129.
Leather-dressing from sapped or exhausted tanning liquors, Making. G. W. Childs. No. 882,489; Mar. 17; Sp. p. 3952; Gaz. vol. 133; p. 715.
Leather-dressing from tanning liquors, Making liquid. G. W. Childs. No. 882,490; Mar. 17; Sp. p. 3953; Gaz. vol. 133; p. 715.
Leather, Extraction of glue from mineral-dressed or chrome-tanned. A. R. Weiss, Jr. No. 882,481; Mar. 17; Sp. p. 3939; Gaz. vol. 133; p. 713.
Leather-rolling press. C. Voss. No. 882,033; Mar. 17; Sp. p. 3119; Dr. p. 662; Gaz. vol. 133; p. 567.
Leather stretching and setting machinery. W. F. Finch. No. 880,512; Mar. 3; Sp. p. 38; Dr. pp. 9–10; Gaz. vol. 133; p. 10.
Leather-stretching-string clamp. A. J. Thomson. No. 880,764; Mar. 3; Sp. p. 557; Dr. p. 118; Gaz. vol. 133; p. 97.
Ledger, Loose-leaf. G. F. Gillett. No. 881,396; Mar. 10; Sp. p. 1807; Dr. p. 391; Gaz. vol. 133; p. 332.
Ledger, Self-indexing. J. B. Perrine. No. 880,754; Mar. 3; Sp. p. 537; Dr. p. 112; Gaz. vol. 133; p. 93.
Lens-grinding machine. C. C. Allen. No. 881,646; Mar. 10; Sp. p. 2302; Dr. pp. 498–9; Gaz. vol. 133; p. 414.
Lenses, Machine for grinding toric. C. F. Wall and C. Salle. No. 881,168; Mar. 10; Sp. p. 1345; Dr. p. 290; Gaz. vol. 133; p. 259.
Letter-box alarm and indicator. O. F. Erickson and R. H. Bradshaw. No. 882,752; Mar. 24; Sp. p. 4497; Dr. p. 958; Gaz. vol. 133; p. 835.

Letter-sheet and envelop, Combined. C. L. Benedict. No. 881,534; Mar. 10; Sp. p. 2069; Dr. pp. 452–3; Gaz. vol. 133; p. 376.
Level, Spirit-. G. W. Lingle. No. 883,212; Mar. 31; Sp. p. 5421; Dr. p. 1155; Gaz. vol. 133; p. 1016.
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Level, Spirit-. T. J. Mahoney. No. 883,659; Mar. 31; Sp. p. 6349; Dr. p. 1353; Gaz. vol. 133; p. 1158.
Lever for lifting-jacks. G. R. Booth. No. 882,447; Mar. 17; Sp. p. 3881; Dr. p. 830; Gaz. vol. 133; p. 702.
Lever, Power-. W. W. Sutherland. No. 883,255; Mar. 31; Sp. p. 5511; Dr. p. 1175; Gaz. vol. 133; p. 1030.
Lewis. J. W. Blanchard and A. E. Covell. No. 880,962; Mar. 3; Sp. p. 960; Dr. p. 207; Gaz. vol. 133; p. 162.
Lid-support. W. A. Schiller. No. 881,492; Mar. 10; Sp. p. 1997; Dr. p. 435; Gaz. vol. 133; p. 363.
Life-saving appliance. C. H. Krüger. No. 881,417; Mar. 10; Sp. p. 1846; Dr. p. 401; Gaz. vol. 133; p. 338.
Lifter: *See* Door-lifter; Pot-lifter; Transom-lifter.
Lifting apparatus. V. B. Cahill. No. 883,448; Mar. 31; Sp. p. 5936; Dr. p. 1266; Gaz. vol. 133; p. 1094.
Lifting-jack. G. F. Freed. No. 880,874; Mar. 3; Sp. p. 804; Dr. pp. 170–1; Gaz. vol. 133; p. 134.
Lifting-jack. M. L. Jenkins. No. 882,004; Mar. 17; Sp. p. 3068; Dr. p. 650; Gaz. vol. 133; p. 559.
Lifting-jack. I. J. Keeler. No. 882,066; Mar. 17; Sp. p. 3181; Dr. p. 676; Gaz. vol. 133; p. 579.
Lifting-jack. E. H. Z. Berge. No. 882,991; Mar. 24; Sp. p. 4970; Dr. p. 1057; Gaz. vol. 133; p. 913.
Lightning-arrester. F. P. Cauble. No. 882,096; Mar. 17; Sp. p. 3235; Dr. p. 688; Gaz. vol. 133; p. 589.
Lightning-arrester. N. J. Neall. No. 882,265; Mar. 17; Sp. p. 3566; Dr. p. 756; Gaz. vol. 133; p. 642.
Lightning-arrester. W. T. Goddard. No. 882,673; Mar. 24; Sp. p. 4340; Dr. p. 923; Gaz. vol. 133; p. 810.
Lightning-arrester. M. Berry. No. 883,280; Mar. 31; Sp. p. 5563; Dr. pp. 1187–8; Gaz. vol. 133; p. 1038.
Lightning-arrester. H. V. Bastin. No. 883,613; Mar. 31; Sp. p. 6245; Dr. p. 1332; Gaz. vol. 133; p. 1144.
Lightning-arrester, Security. W. E. Drake. No. 883,303; Mar. 31; Sp. p. 5614; Dr. p. 1197; Gaz. vol. 133; p. 1046.
Lightning-protector attachment for trees. J. P. A. Anderson. No. 880,854; Mar. 3; Sp. p. 755; Dr. p. 160; Gaz. vol. 133; p. 198.
Lime and sulfur boiling apparatus. F. O. Moburg. No. 881,434; Mar. 10; Sp. p. 1877; Dr. p. 408; Gaz. vol. 133; p. 343.
Line-holder. F. S. Jolly. No. 883,644; Mar. 31; Sp. p. 6312; Dr. p. 1346; Gaz. vol. 133; p. 1153.
Linotype-machine. F. B. Converse, Jr. No. 880,779; Mar. 3; Sp. p. 586; Dr. pp. 124–5; Gaz. vol. 133; p. 101.
Linotype-machine. P. T. Dodge. No. 883,180; Mar. 31; Sp. p. 5352; Dr. p. 1140; Gaz. vol. 133; p. 1005.
Linotype-machine magazine. H. Pearce. No. 880,568; Mar. 3; Sp. p. 157; Dr. pp. 34–5; Gaz. vol. 133; p. 30.
Linotype-machine mold. D. Petri-Palmedo. No. 881,716; Mar. 10; Sp. p. 2442; Dr. p. 525; Gaz. vol. 133; p. 435.
Liquid-concentrating apparatus. P. Kestner. No. 882,322; Mar. 17; Sp. p. 3669; Dr. p. 779; Gaz. vol. 133; p. 661.
Liquid-elevator, Compressed-air. J. H. Phillips. No. 880,570; Mar. 3; Sp. p. 162; Dr. p. 35; Gaz. vol. 133; p. 30.
Liquid-fuel furnace. J., W. M., and M. M. Burdon. No. 882,294; Mar. 17; Sp. p. 3615; Dr. pp. 766–7; Gaz. vol. 133; p. 652.
Liquid-heating apparatus. A. T. Pfeiff. No. 883,339; Mar. 31; Sp. p. 5671; Dr. p. 1211; Gaz. vol. 133; p. 1056.
Liquid-raising device. G. Waldmann. No. 882,725; Mar. 24; Sp. p. 4439; Dr. p. 944; Gaz. vol. 133; p. 826.
Liquid-ripener. A. Jensen. No. 881,128; Mar. 10; Sp.p 1267; Dr. pp. 273–4; Gaz. vol. 133; p. 245.
Liquid-supply apparatus, Air-exhausting. C. A. Claflin. No. 881,548; Mar. 10; Sp. p. 2095; Dr. p. 458; Gaz. vol. 133; p. 381.
Liquids, Apparatus for removing foreign substances from. M. Altolaguirre and J. Zubillaga. No. 881,451; Mar. 10; Sp. p. 1911; Dr. p. 416; Gaz. vol. 133; p. 349.
Liquids, &c., Regulator for. H. Sandvoss. No. 881,491; Mar. 10; Sp. p. 1996; Dr. p. 435; Gaz. vol. 133; p. 362.
Lithopone and making the same, Non-darkening. I. P. Lihme. No. 883,142; Mar. 24; Sp. p. 5271; Gaz. vol. 133; p. 963.
Load-holding device. A. L. Cox. No. 882,746; Mar. 24; Sp. p. 4488; Dr. p. 955; Gaz. vol. 133; p. 833.
Load-moving apparatus. F. Koch. No. 882,894; Mar. 24; Sp. p. 4782; Dr. p. 1017; Gaz. vol. 133; p. 880.
Loader, excavator, and pile-driver, Combined. C. L. Baker, Sr. No. 881,529; Mar. 10; Sp. p. 2061; Dr. pp. 450–1; Gaz. vol. 133; p. 375.
Loader, Gravel-. E. A. Stroschein. No. 881,741; Mar. 10; Sp. p. 2484; Dr. p. 535; Gaz. vol. 133; p. 442.
Loading apparatus. N. Jorgensen. No. 881,408; Mar. 10; Sp. p. 1828; Dr. pp. 395–6; Gaz. vol. 133; p. 335.
Loading apparatus. J. C. Cobb. No. 881,774; Mar. 10; Sp. p. 2536; Dr. p. 546; Gaz. vol. 133; p. 453.
Loading apparatus. N. D. Hansen. No. 882,364; Mar. 17; Sp. p. 3774; Dr. pp. 805–6; Gaz. vol. 133; p. 681.
Loading apparatus. T. S. Miller and J. H. Dickinson. No. 883,115; Mar. 24; Sp. p. 5206; Dr. pp. 1112–13; Gaz. vol. 133; p. 954.
Loading-pack. E. E. Neal. No. 881,437; Mar. 10; Sp. p. 1890; Dr. p. 409; Gaz. vol. 133; p. 344.
Lock: *See* Canal-lock; Combination lock; Door-lock; Gravity-lock; Key-lock; Nut-lock; Padlock; Sash-lock; Sash and blind lock; Seal Lock; Switch-lever lock; Window-lock.
Lock. D. W. Crockett. No. 881,999; Mar. 17; Sp. p. 3045; Dr. pp. 648–9; Gaz. vol. 133; p. 557.
Lock. H. F. Kell. No. 882,067; Mar. 17; Sp. p. 3183; Dr. p. 677; Gaz. vol. 133; p. 579.
Lock. E. Eichler. No. 882,303; Mar. 17; Sp. p. 3631; Dr. p. 770; Gaz. vol. 133; p. 654.
Lock. C. Jensen. No. 882,566; Mar. 24; Sp. p. 4122; Dr. pp. 874–5; Gaz. vol. 133; p. 773.
Lock. W. Person. No. 883,567; Mar. 31; Sp. p. 6169; Dr. p. 1312; Gaz. vol. 133; p. 1130.
Lock. N. Sahlsten. No. 883,571; Mar. 31; Sp. p. 6176; Dr. p. 1313; Gaz. vol. 133; p. 1131.
Lock-guard. D. Y. Wheeler. No. 881,364; Mar. 10; Sp. p. 1740; Dr. p. 374; Gaz. vol. 133; p. 322.
Locks, Electric alarm for. F. M. Merrill. No. 883,416; Mar. 31; Sp. p. 5863; Dr. p. 1249; Gaz. vol. 133; p. 1083.
Locking-bolt for guards to openings. C. W. McNeil. No. 883,471; Mar. 31; Sp. p. 5975; Dr. p. 1275; Gaz. vol. 133; p. 1101.
Locking-hook. B. F. Emery. No. 881,229; Mar. 10; Sp. p. 1475; Dr. p. 317; Gaz. vol. 133; p. 278.
Locomotive. G. A. Bothwell. No. 882,618; Mar. 24; Sp. p. 4231; Dr. p. 897; Gaz. vol. 133; p. 792.
Locomotive-boiler. A. F. Helbling. No. 881,072; Mar. 3; Sp. p. 1161; Dr. p. 251; Gaz. vol. 133; p. 197.
Locomotives, Skeleton eccentric for. G. M. Ried. No. 882,537; Mar. 17; Sp. p. 4067; Dr. p. 865; Gaz. vol. 133; p. 732.
Log-dumping device. W. D. Link. No. 883,032; Mar. 24; Sp. p. 5045; Dr. pp. 1074–5; Gaz. vol. 133; p. 926.
Log-turner. J. R. Meece. No. 880,557; Mar. 3; Sp. p. 125; Dr. p. 28; Gaz. vol. 133; p. 25.
Logs, Device for recovering submerged. F. J. Hathway. No. 882,310; Mar. 17; Sp. p. 3648; Dr. p. 774; Gaz. vol. 133; p. 657.
Logging-block J. Mattson. No. 880,805; Mar. 3; Sp. p. 640; Dr. p. 134; Gaz. vol. 133; p. 110.
Loom. F. Ott. No. 882,120; Mar. 17; Sp. p. 3272; Dr. p. 697; Gaz. vol. 133; p. 596.
Loom. H. Bardsley. No. 882,922; Mar. 24; Sp. p. 4842; Dr. p. 1027; Gaz. vol. 133; p. 890.
Loom, Filling-replenishing. C. H. Draper. No. 881,063; Mar. 3; Sp. p. 1132; Dr. p. 246; Gaz. vol. 133; p. 194.
Loom-shuttle. J. A. and O. J. Perkins. No. 882,267; Mar. 17; Sp. p. 3571; Dr. p. 757; Gaz. vol. 133; p. 643.
Loom shuttle-box, Rotary-box-. A. E., A., and G. Walker. No. 882,361; Mar. 17; Sp. p. 3741; Dr. p. 796; Gaz. vol. 133; p. 674.
Loom take-up mechanism. G. S. Cox. No. 881,904; Mar. 17; Sp. p. 2837; Dr. p. 606; Gaz. vol. 133; p. 525.
Loom take-up mechanism. W. J. Lutton. No. 882,904; Mar. 24; Sp. p. 4810; Dr. p. 1022; Gaz. vol. 133; p. 885.
Loom-temple. C. L. Joy. No. 882,827; Mar. 24; Sp. p. 4640; Dr. p. 989; Gaz. vol. 133; p. 850.
Loom, Weft-replenishing. A. Morell. No. 880,810; Mar. 3; Sp. p. 649; Dr. p. 136; Gaz. vol. 133; p. 112.
Looms, Weft-replenishing mechanism for. J. Gabler. No. 882,106; Mar. 17; Sp. p. 3254; Dr. pp. 691–2; Gaz. vol. 133; p. 592.
Looms, Yarn-selecting mechanism for tufted-fabric. J. K. Dalkranian. No. 882,455; Mar. 17; Sp. p. 3894; Dr. pp. 832–3; Gaz. vol. 133; p. 705.
Looper-hook. W. H. Zellers. No. 882,090; Mar. 17; Sp. p. 3228; Dr. p. 686; Gaz. vol. 133; p. 587.
Lorry. B. Boyd. No. 880,777; Mar. 3; Sp. p. 582; Dr. p. 124; Gaz. vol. 133; p. 100.
Low-water alarm. G. Woodall. No. 882,807; Mar. 24; Sp. p. 4604; Dr. p. 982; Gaz. vol. 133; p. 853.
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Lubricator. C. J. Matthews. No. 880,680; Mar. 3; Sp. p. 376; Dr. pp. 82–3; Gaz. vol. 133; p. 67.
Magneto for sparking mechanisms. H. H. Brown. No. 881,400; Mar. 10; Sp. p. 1926; Dr. p. 420; Gaz. vol. 133; p. 352.
Magnetos, Operating mechanism for. A. N. Classon. No. 880,974; Mar. 3; Sp. p. 977; Dr. p. 211; Gaz. vol. 133; p. 165.
Mail-bag catcher. O. C. Brett. No. 881,175; Mar. 10; Sp. p. 1358; Dr. pp. 292–3; Gaz. vol. 133; p. 261.
Mail-bag catcher. D. S. Green. No. 882,559; Mar. 24; Sp. p. 4110; Dr. p. 871; Gaz. vol. 133; p. 771.
Mail-bag catching and delivering apparatus. J. C. Dayton. No. 882,237; Mar. 17; Sp. p. 3502; Dr. p. 743; Gaz. vol. 133; p. 632.
Mail-bag catching and delivering mechanism. W. H. Luker. No. 883,033; Mar. 24; Sp. p. 5047; Dr. pp. 1075–6; Gaz. vol. 133; p. 926.
Mail-bag deliverer and catcher. W. H. Rogers. No. 882,345; Mar. 17; Sp. p. 3716; Dr. p. 790; Gaz. vol. 133; p. 669.
Mail-bag receiver and deliverer. L. F. Kurpgeweit. No. 883,547; Mar. 31; Sp. p. 6136; Dr. pp. 1304–5; Gaz. vol. 133; p. 1124.
Mail-bag-receiving apparatus. L. H. Burch. No. 882,293; Mar. 17; Sp. p. 3614; Dr. p. 766; Gaz. vol. 133; p. 651.
Mail-box. W. W. Palmer. No. 882,709; Mar. 24; Sp. p. 4405; Dr. p. 937; Gaz. vol. 133; p. 822.
Mail-cart. F. H. Cunningham. No. 881,178; Mar. 10; Sp. p. 1362; Dr. p. 294; Gaz. vol. 133; p. 262.
Mail catching and delivering device. C. C. Andrews. No. 882,661; Mar. 24; Sp. p. 4314; Dr. pp. 916–17; Gaz. vol. 133; p. 806.
Mail-chute. J. W. Cutler. No. 881,111; Mar. 10; Sp. p. 1232; Dr. p. 265; Gaz. vol. 133; p. 239.
Mail-chute. J. W. Cutler. No. 881,180; Mar. 10; Sp. p. 1366; Dr. pp. 295–6; Gaz. vol. 133; p. 262.
Mail-chute locking device. J. W. Cutler. No. 881,112; Mar. 10; Sp. p. 1235; Dr. p. 266; Gaz. vol. 133; p. 239.
Mail-chute locking device. J. W. Cutler. No. 881,179; Mar. 10; Sp. p. 1363; Dr. p. 294; Gaz. vol. 133; p. 262.
Mail-conveyer. F. E. Wolken. No. 883,067; Mar. 24; Sp. p. 5111; Dr. p. 1060; Gaz. vol. 133; p. 938.
Mail-crane. S. L. Lucas. No. 880,550; Mar. 3; Sp. p. 113; Dr. p. 26; Gaz. vol. 133; p. 23.
Mail-crane. W. Watts. No. 880,609; Mar. 3; Sp. p. 246; Dr. p. 51; Gaz. vol. 133; p. 43.
Mail-holder. T. A. Hill. No. 883,198; Mar. 31; Sp. p. 5396; Dr. p. 1148; Gaz. vol. 133; p. 1011.
Mail-pouch-delivering apparatus. C. A. Willis. No. 882,223; Mar. 17; Sp. p. 3472; Dr. p. 738; Gaz. vol. 133; p. 627.
Mail-receiving case. A. Haentze. No. 882,381; Mar. 17; Sp. p. 3770; Dr. p. 804; Gaz. vol. 133; p. 680.

Mailing-card, Pictorial. A. M. Simon. No. 883,352; Mar. 31; Sp. p. 5701; Dr. p. 1217; Gaz. vol. 133; p. 1061.
Mandrel, Piercing-. R. J. Gardner. No. 880,517; Mar. 3; Sp. p. 48; Dr. p. 12; Gaz. vol. 133; p. 12.
Manganese silicid, Producing. E. F. Price. No. 882,582; Mar. 24; Sp. p. 4156; Dr. p. 881; Gaz. vol. 133; p. 779.
Mangle. L. H. Slaght. No. 883,407; Mar. 31; Sp. p. 6026; Dr. pp. 1286–7; Gaz. vol. 133; p. 1111.
Manhole-cover. H. Del Mar. No. 883,096; Mar. 24; Sp. p. 5167; Dr. p. 1103; Gaz. vol. 133; p. 947.
Manicuring-tool, Pocket. A. Holmquist. No. 881,125; Mar. 10; Sp. p. 1262; Dr. p. 272; Gaz. vol. 133; p. 244.
Manifolding-pad holder. A. F. Staples. No. 881,497; Mar. 10; Sp. p. 2005; Dr. p. 437; Gaz. vol. 133; p. 364.
Mantle-support and protecting same. J. P. Harris. No. 881,577; Mar. 10; Sp. p. 2157; Dr. p. 471; Gaz. vol. 133; p. 392.
Manure loader and spreader, Combined. F. E. Schee. No. 883,243; Mar. 31; Sp. p. 5488; Dr. p. 1170; Gaz. vol. 133; p. 1026.
Manure-spreader. B. M. Buehler. No. 882,370; Mar. 17; Sp. p. 3756; Dr. p. 800; Gaz. vol. 133; p. 677.
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Marking device. R. L. Herman. No. 882,199; Mar. 17; Sp. p. 3431; Dr. p. 729; Gaz. vol. 133; p. 620.
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Mill-stock mixer and distributer. F. C. Boynton. No. 882,924; Mar. 24; Sp. p. 4845; Dr. p. 1028; Gaz. vol. 133; p. 891.
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Mine-prop. F. Nellen and A. Voigt. No. 881,609; Mar. 10; Sp. p. 2223; Dr. p. 483; Gaz. vol. 133; p. 403.
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Mirror. F. E. Bosworth. No. 883,616; Mar. 31; Sp. p. 6255; Dr. p. 1333; Gaz. vol. 133; p. 1145.
Mirror, Folding hand-. P. C. Petersen. No. 881,947; Mar. 17; Sp. p. 2929; Dr. p. 625; Gaz. vol. 133; p. 541.
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Mold: *See* Cement or concrete block mold; Chill-mold; Fence-post mold; Hat-mold; Linotype-machine mold; Sewer-mold.
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Molder's apparatus. S. Griffith. No. 882,823; Mar. 24; Sp. p. 4630; Dr. p. 987; Gaz. vol. 133; p. 858.
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Molding-machine for cutting panels. F. Sanders. No. 883,148; Mar. 24; Sp. p. 5283; Dr. p. 1126; Gaz. vol. 133; p. 965.
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Oil-can. H. W. Hubbard. No. 881,241; Mar. 10; Sp. p. 1498; Dr. p. 322; Gaz. vol. 133; p. 283.
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Oil, Means for burning. T. C. Mason. No. 882,205; Mar. 17; Sp. p. 3438; Dr. p. 731; Gaz. vol. 133; p. 622.
Oil-switch, Electric. J. D. Hilliard, Jr., and C. E. Parsons. No. 882,388; Mar. 17; Sp. p. 3783; Dr. p. 808; Gaz. vol. 133; p. 682.
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Ordnance, Breech mechanism of. C. Holmstrom. No. 880,994; Mar. 3; Sp. p. 1012; Dr. pp. 217-18; Gaz. vol. 133; p. 172.
Ordnance firing mechanism. E. Schneider. No. 883,576; Mar. 31; Sp. p. 6184; Dr. pp. 1315-17; Gaz. vol. 133; p. 1132.
Ore and materials, Rotary screen for. H. G. King. No. 882,070; Mar. 17; Sp. p. 3188; Dr. p. 696; Gaz. vol. 133; p. 580.
Ore-concentrating table. G. E. Woodbury. No. 882,511; Mar. 17; Sp. p. 3990; Dr. pp. 853-4; Gaz. vol. 133; p. 723.
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Ore-concentrator, Dry. J. Hubert. No. 880,995; Mar. 3; Sp. p. 1014; Dr. p. 218; Gaz. vol. 133; p. 173.
Ore-concentrators, Drive mechanism for. G. E. Woodbury. No. 882,512; Mar. 17; Sp. p. 3996; Dr. p. 854; Gaz. vol. 133; p. 723.
Ore-separator. J. R. Yount. No. 881,526; Mar. 10; Sp. p. 2057; Dr. p. 450; Gaz. vol. 133; p. 374.
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Ore-separator, Magnetic. R. R. Moffatt. No. 882,158; Mar. 17; Sp. p. 3335; Dr. pp. 711-12; Gaz. vol. 133; p. 607.
Ore-treating process. W. G. Swart. No. 882,217; Mar. 17; Sp. p. 3460; Dr. p. 736; Gaz. vol. 133; p. 625.
Ores, Reducing. J. T. Jones. No. 880,799; Mar. 3; Sp. p. 629; Dr. p. 132; Gaz. vol. 133; p. 106.
Ores, Roasting and sintering. A. S. Dwight and R. L. Lloyd. No. 882,518; Mar. 17; Sp. p. 4020; Dr. p. 858; Gaz. vol. 133; p. 726.
Ores, Treating. J. Patten and C. R. Barnett. No. 880,752; Mar. 3; Sp. p. 533; Dr. p. 111; Gaz. vol. 133; p. 93.
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Organ. J. Blunig. No. 882,736; Mar. 24; Sp. p. 4462; Dr. p. 950; Gaz. vol. 133; p. 830.
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Package-tie. T. Boyd. No. 882,863; Mar. 24; Sp. p. 4729; Dr. p. 1005; Gaz. vol. 133; p. 871.
Packing-case, Sheet-metal. A. T. Kruse. No. 881,418; Mar. 10; Sp. p. 1848; Dr. p. 401; Gaz. vol. 133; p. 338.
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Packing or shipping box. J. T. Ferres. No. 881,567; Mar. 10; Sp. p. 2131; Dr. p. 465; Gaz. vol. 133; p. 388.
Packing, Rod-. J. C. Edgecumbe. No. 882,103; Mar. 17; Sp. p. 3247; Dr. p. 690; Gaz. vol. 133; p. 591.
Packing, Rod-. O. J. Garlock. No. 883,534; Mar. 31; Sp. p. 6099; Dr. p. 1297; Gaz. vol. 133; p. 1120.
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Padlock. H. Swoggers. No. 880,932; Mar. 3; Sp. p. 905; Dr. p. 195; Gaz. vol. 133; p. 152.
Padlock. C. E. Johnson. No. 881,591; Mar. 10; Sp. p. 2182; Dr. p. 476; Gaz. vol. 133; p. 397.
Padlock. S. R. Fraim. No. 882,192; Mar. 17; Sp. p. 3421; Dr. p. 727; Gaz. vol. 133; p. 618.
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Padlock attachment. S. E. Gladding. No. 880,520; Mar. 3; Sp. p. 55; Dr. p. 13; Gaz. vol. 133; p. 13.
Pail cover, Milk-. J. R. Bostwick. No. 881,767; Mar. 10; Sp. p. 2527; Dr. p. 544; Gaz. vol. 133; p. 451.
Pail support, Milk-. J. Schuster. No. 882,211; Mar. 17; Sp. p. 3448; Dr. p. 733; Gaz. vol. 133; p. 623.
Paint and varnish remover and preparing the same. L. Kramer. No. 882,947; Mar. 24; Sp. p. 4900; Gaz. vol. 133; p. 901.
Paint compound. W. N. Blakeman, Jr. No. 883,513; Mar. 31; Sp. p. 6062; Gaz. vol. 133; p. 1115.
Paint compound. W. N. Blakeman, Jr. No. 883,517; Mar. 31; Sp. p. 6069; Gaz. vol. 133; p. 1115.
Paint compound and making the same. W. N. Blakeman, Jr. No. 883,514; Mar. 31; Sp. p. 6064; Gaz. vol. 133; p. 1115.
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Paint, Fireproof. P. F. Apfel and R. L. Earnest. No. 882,774; Mar. 24; Sp. p. 4530; Gaz. vol. 133; p. 841.
Paint pot and brush holder. T. Carle, Jr. No. 881,054; Mar. 3; Sp. p. 1119; Dr. p. 242; Gaz. vol. 133; p. 191.
Painter's hook. F. L. Rand. No. 882,965; Mar. 24; Sp. p. 4928; Dr. p. 1046; Gaz. vol. 133; p. 906.
Painting machine, Wheel-. H. P. Corbin. No. 883,172; Mar. 31; Sp. p. 5341; Dr. p. 1137; Gaz. vol. 133; p. 1002.
Pan: *See* Baking-pan; Horse sanitary pan; Vacuum-pan.
Pants-presser. C. A. Nelson. No. 883,560; Mar. 31; Sp. p. 6159; Dr. pp. 1309-10; Gaz. vol. 133; p. 1127.
Paper and the like, Treatment of gum-. R. A. McLaurin. No. 882,336; Mar. 17; Sp. p. 3698; Dr. p. 786; Gaz. vol. 133; p. 660.
Paper-board. M. B. Diskin. No. 881,098; Mar. 3; Sp. p. 1208; Gaz. vol. 133; p. 206.
Paper box, Folding. J. M. Yarnall. No. 880,952; Mar. 3; Sp. p. 936; Dr. p. 202; Gaz. vol. 133; p. 158.
Paper-box machine. C. W. Gay. No. 881,118; Mar. 10; Sp. p. 1245; Dr. pp. 268-9; Gaz. vol. 133; p. 242.
Paper box or container. J. C. Kimsey. No. 882,522; Mar. 17; Sp. p. 4038; Dr. p. 860; Gaz. vol. 133; p. 728.
Paper-coating machine. C. F. Spaulding. No. 883,359; Mar. 31; Sp. p. 5719; Dr. p. 1220; Gaz. vol. 133; p. 1063.
Paper, Commercial. J. C. Bell. No. 881,291; Mar. 10; Sp. p. 1605; Dr. p. 344; Gaz. vol. 133; p. 299.
Paper cores, Spindling plug for. W. H. Munroe. No. 880,687; Mar. 3; Sp. p. 388; Dr. p. 84; Gaz. vol. 133; p. 69.
Paper-feeder elevator. K. B. Fletcher. No. 880,647; Mar. 3; Sp. p. 314; Dr. pp. 69-70; Gaz. vol. 133; p. 56.
Paper-feeding machine. K. B. Fletcher. No. 880,672; Mar. 3; Sp. p. 798; Dr. pp. 168-9; Gaz. vol. 133; p. 134.
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Paper-making-machine roller and manufacturing same. W. E. Sheehan. No. 882,351; Mar. 17; Sp. p. 3726; Dr. p. 792; Gaz. vol. 133; p. 671.
Paper-shell-making machine. J. Chesney. No. 883,169; Mar. 31; Sp. p. 5329; Dr. p. 1136; Gaz. vol. 133; p. 1001.
Papers, Liquid composition to be used in the manufacture of fancy stained. R. Schmiedel. No. 882,916; Mar. 24; Sp. p. 4831; Gaz. vol. 133; p. 889.
Parer and slicer, Fruit and vegetable. S. Nagasse. No. 881,329; Mar. 10; Sp. p. 1671; Dr. p. 359; Gaz. vol. 133; p. 311.
Pasteurizing apparatus. E. J. Miller. No. 882,706; Mar. 24; Sp. p. 4398; Dr. p. 936; Gaz. vol. 133; p. 821.
Pattern-plates, Apparatus for use in manufacturing small metallic. P. Bonvillain. (Reissue.) No. 12,760; Mar. 10; Sp. p. 2787; Dr. p. 598; Gaz. vol. 133; p. 492.
Pattern-pouch and sales-check, Combined. T. McCampbell. No. 881,255; Mar. 10; Sp. p. 1525; Dr. p. 328; Gaz. vol. 133; p. 287.
Peanut-picker. J. A. Warren. No. 881,979; Mar. 17; Sp. p. 2986; Dr. pp. 636-9; Gaz. vol. 133; p. 550.
Pedal attachment. J. Simmonds. No. 880,585; Mar. 3; Sp. p. 193; Dr. p. 41; Gaz. vol. 133; p. 35.
Pen, Drawing-. G. Schoenner. No. 882,172; Mar. 17; Sp. p. 3391; Dr. p. 721; Gaz. vol. 133; p. 613.
Pen, Fountain-. F. H. Wurdemann. No. 881,215; Mar. 10; Sp. p. 1441; Dr. p. 311; Gaz. vol. 133; p. 273.
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Pencil. C. A. Smith. No. 883,354; Mar. 31; Sp. p. 5704; Dr. p. 1218; Gaz. vol. 133; p. 1061.
Pencil-box and book-support, Combined. A. Schlager. No. 883,051; Mar. 24; Sp. p. 5081; Dr. p. 1084; Gaz. vol. 133; p. 932.
Pencil-sharpener. M. A. Cameron and W. H. Cowles. No. 880,715; Mar. 3; Sp. p. 450; Dr. p. 94; Gaz. vol. 133; p. 79.
Pencils and the like, Attachment for. F. W. Evans. No. 882,377; Mar. 17; Sp. p. 3766; Dr. p. 803; Gaz. vol. 133; p. 679.
Penmen, Hand-positioning device for. W. G. Delashaw. No. 880,510; Mar. 3; Sp. p. 35; Dr. p. 8; Gaz. vol. 133; p. 9.
Percolator-pot construction. G. E. Savage. No. 882,080; Mar. 17; Sp. p. 3212; Dr. p. 682; Gaz. vol. 133; p. 584.
Perforating-machine, Keyboard. J. S. Bancroft and M. C. Indahl. No. 883,370; Mar. 31; Sp. p. 5756; Dr. pp. 1229-30; Gaz. vol. 133; p. 1069.
Perforating-machines, Rewinder for. E. F. Littlefield and H. A. Drinkwater. No. 883,213; Mar. 31; Sp. p. 5422; Dr. p. 1155; Gaz. vol. 133; p. 1017.
Persulfates, Electrolytically producing. G. Teichner and P. Askenasy. No. 880,599; Mar. 3; Sp. p. 229; Gaz. vol. 133; p. 40.
Pessary, Therapeutic. F. M. Siner. No. 882,176; Mar. 17; Sp. p. 3395; Dr. p. 721; Gaz. vol. 133; p. 614.
Phonograms, Making. R. P. Winne. No. 881,644; Mar. 10; Sp. p. 2300; Dr. p. 498; Gaz. vol. 133; p. 414.
Phonograph-horn. C. A. Beppler. No. 881,843; Mar. 10; Sp. p. 2680; Dr. pp. 573-4; Gaz. vol. 133; p. 476.
Phonograph-records, Composition for making duplicate. J. W. Aylsworth. No. 880,707; Mar. 3; Sp. p. 428; Dr. p. 91; Gaz. vol. 133; p. 76.
Phonograph-stop. S. W. Gibbs. No. 883,190; Mar. 31; Sp. p. 5373; Dr. p. 1144; Gaz. vol. 133; p. 1009.
Photographer's light-regulator. A. C. Novess. No. 882,838; Mar. 24; Sp. p. 4665; Dr. p. 993; Gaz. vol. 133; p. 863.
Photographic-printing apparatus. A. C. Y. Macadam. No. 882,571; Mar. 24; Sp. p. 4134; Dr. p. 877; Gaz. vol. 133; p. 775.
Photographic-printing apparatus. B. J. Hall. No. 882,676; Mar. 24; Sp. p. 4348; Dr. p. 925; Gaz. vol. 133; p. 811.
Photographic-printing apparatus, Continuous. B. H. Bragg. No. 883,617; Mar. 31; Sp. p. 6256; Dr. p. 1334; Gaz. vol. 133; p. 1146.
Photographic-printing machine. C. J. Everett and J. V. McAdam. No. 883,396; Mar. 31; Sp. p. 5817; Dr. p. 1240; Gaz. vol. 133; p. 1075.
Photography, Apparatus for flash-light. G. R. Lawrence. No. 881,595; Mar. 10; Sp. p. 2187; Dr. p. 477; Gaz. vol. 133; p. 398.
Piano-action. R. Eastwood. No. 882,302; Mar. 17; Sp. p. 3630; Dr. p. 770; Gaz. vol. 133; p. 654.
Piano-action frame. F. G. Billings. No. 882,288; Mar. 17; Sp. p. 3606; Dr. pp. 764-5; Gaz. vol. 133; p. 650.
Piano-actions, Implement for replacing bridle-tapes in. G. W. Till. No. 883,502; Mar. 31; Sp. p. 6040; Dr. p. 1289; Gaz. vol. 133; p. 1112.
Piano-flange. G. H. Campbell. No. 883,387; Mar. 31; Sp. p. 5796; Dr. p. 1237; Gaz. vol. 133; p. 1073.
Piano-keys, Touch-adjusting mechanism for. W. M. Clemans. No. 882,814; Mar. 24; Sp. p. 4615; Dr. p. 984; Gaz. vol. 133; p. 855.
Piano-player treadle, Automatic. F. W. Wright and P. H. Cummerford. No. 883,068; Mar. 24; Sp. p. 5112; Dr. pp. 1090-1; Gaz. vol. 133; p. 938.
Piano-tuning pin. J. J. Bruer. No. 883,285; Mar. 31; Sp. p. 5577; Dr. p. 1189; Gaz. vol. 133; p. 1040.
Pianos, Detachable automatic action for. E. A. Steel. No. 883,252; Mar. 31; Sp. p. 5508; Dr. p. 1174; Gaz. vol. 133; p. 1029.
Pianos, Lock-slip for automatic. R. K. Thumler. No. 882,433; Mar. 17; Sp. p. 3855; Dr. p. 823; Gaz. vol. 133; p. 697.
Picker: *See* Berry-picker; Cotton-picker; Peanut-picker.
Pickle-fork. E. F. Menkin. No. 880,807; Mar. 3; Sp. p. 642; Dr. p. 135; Gaz. vol. 133; p. 111.
Pickle-fork. H. Babin. No. 881,285; Mar. 10; Sp. p. 1595; Dr. pp. 341; Gaz. vol. 133; p. 298.
Picture-border. G. F. E. Pearsall. No. 882,710; Mar. 28; Sp. p. 4407; Dr. p. 937; Gaz. vol. 133; p. 822.
Picture-card. A. Kinnicutt. No. 882,150; Mar. 17; Sp. p. 3324; Dr. p. 708; Gaz. vol. 133; p. 605.
Picture-display machine. H. A. Farrand. No. 881,916; Mar. 17; Sp. p. 2863; Dr. p. 611; Gaz. vol. 133; p. 529.
Picture-frame. E. G. Hewitt. No. 881,073; Mar. 3; Sp. p. 1164; Dr. p. 251; Gaz. vol. 133; p. 198.
Picture-hanger. H. C. Burnard. No. 881,661; Mar. 10; Sp. p. 2331; Dr. p. 505; Gaz. vol. 133; p. 419.
Picture-hanger. M. B. Franklin. No. 882,243; Mar. 17; Sp. p. 3512; Dr. p. 743; Gaz. vol. 133; p. 634.
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Picture-holder. G. N. Marvin. No. 881,936; Mar. 17; Sp. p. 2905; Dr. p. 620; Gaz. vol. 133; p. 537.
Picture-projecting machine, Moving-. O. T. Welser. No. 881,512; Mar. 10; Sp. p. 2032; Dr. p. 443; Gaz. vol. 133; p. 369.
Pie cutter and crimper. A. H. Stillwagen. No. 881,738; Mar. 10; Sp. p. 2476; Dr. p. 533; Gaz. vol. 133; p. 442.
Pie-tin. E. O. Cook. No. 883,296; Mar. 31; Sp. p. 5604; Dr. p. 1194; Gaz. vol. 133; p. 1044.
Pier or breakwater. J. A. Mitchell. No. 881,605; Mar. 10; Sp. p. 2212; Dr. p. 482; Gaz. vol. 133; p. 401.
Pigment compound and making the same. W. N. Blakeman, Jr. No. 883,516; Mar. 31; Sp. p. 6067; Gaz. vol. 133; p. 1115.
Piles against worms, &c., Protecting. P. T. Apfel and R. L. Earnest. No. 883,507; Mar. 31; Sp. p. 6047; Gaz. vol. 133; p. 1114.
Piles, Means for sinking. F. B. Gilbreth. No. 882,520; Mar. 17; Sp. p. 4032; Dr. p. 859; Gaz. vol. 133; p. 727.

Pillows, feather-beds, quilts, and the like, Washable covering for. E. Hauphoff. No. 880,524; Mar. 3; Sp. p. 60; Dr. p. 14; Gaz. vol. 133; p. 14.
Pin: *See* Bonding-pin; Clothes-pin; Insulator-pin; Piano-tuning pin; Safety-pin.
Pin. F. B. Wheeler. No. 880,944; Mar. 3; Sp. p. 921; Dr. p. 199; Gaz. vol. 133; p. 156.
Pin. F. P. Anello. No. 883,375; Mar. 31; Sp. p. 5755; Dr. p. 1229; Gaz. vol. 133; p. 1068.
Pin tag or ticket. C. Winkler. No. 882,088; Mar. 17; Sp. p. 3224; Dr. p. 685; Gaz. vol. 133; p. 587.
Pipe. A. K. Bowman. No. 881,845; Mar. 10; Sp. p. 2663; Dr. p. 574; Gaz. vol. 133; p. 477.
Pipe. W. J. Williams. No. 882,281; Mar. 17; Sp. p. 3395; Dr. p. 762; Gaz. vol. 133; p. 648.
Pipe-cleaner. W. O'Sullivan. No. 880,749; Mar. 3; Sp. p. 529; Dr. p. 110; Gaz. vol. 133; p. 92.
Pipe-coupling. R. F. Nailler. No. 881,022; Mar. 3; Sp. p. 1066; Dr. p. 231; Gaz. vol. 133; p. 181.
Pipe-coupling attachment for boiler-heads, &c., Hand-hole. A. C. Badger. No. 881,045; Mar. 3; Sp. p. 1104; Dr. p. 238; Gaz. vol. 133; p. 189.
Pipe coupling, Automatic train-. C. H. Stamm. No. 881,632; Mar. 10; Sp. p. 2278; Dr. p. 494; Gaz. vol. 133; p. 410.
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Pipe-coupling, Enameled-. R. F. Nailler. No. 880,813; Mar. 3; Sp. p. 655; Dr. p. 138; Gaz. vol. 133; p. 113.
Pipe coupling, Train-. W. Z. Pulliam. No. 882,017; Mar. 17; Sp. p. 3084; Dr. p. 656; Gaz. vol. 133; p. 563.
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Pipe-grab. W. S. Seaman. No. 881,496; Mar. 10; Sp. p. 2003; Dr. p. 437; Gaz. vol. 133; p. 364.
Pipe-union. A. G. Anderson. No. 883,075; Mar. 24; Sp. p. 5125; Dr. p. 1094; Gaz. vol. 133; p. 940.
Pipe-union. E. Lienert-Market. No. 883,320; Mar. 31; Sp. p. 5643; Dr. p. 1204; Gaz. vol. 133; p. 1051.
Pipe-wrench. B. Whittaker. No. 880,612; Mar. 3; Sp. p. 249; Dr. p. 52; Gaz. vol. 133; p. 44.
Pipe-wrench. H. W. Simms. No. 882,272; Mar. 17; Sp. p. 3579; Dr. p. 759; Gaz. vol. 133; p. 645.
Pipe-wrench, Chain. G. Amborn. No. 881,216; Mar. 10; Sp. p. 1442; Dr. p. 311; Gaz. vol. 133; p. 273.
Pipes, Adjustable trap for soil-. E. T. Barker. No. 883,375; Mar. 31; Sp. p. 5555; Dr. p. 1185; Gaz. vol. 133; p. 1037.
Piston. K. Matheus and E. T. Hendee. No. 882,572; Mar. 24; Sp. p. 4135; Dr. p. 877; Gaz. vol. 133; p. 775.
Pitchfork. A. H. Knox. No. 883,545; Mar. 31; Sp. p. 6133; Dr. p. 1303; Gaz. vol. 133; p. 1123.
Planers, Cutter-guard for buzz-. C. O. and A. D. Porter. No. 882,122; Mar. 17; Sp. p. 3275; Dr. p. 698; Gaz. vol. 133; p. 596.
Planetarium. F. J. Trippensee. No. 881,875; Mar. 10; Sp. p. 2763; Dr. pp. 592–3; Gaz. vol. 133; p. 488.
Plant-cutter. S. F. Stoltzfus. No. 883,361; Mar. 31; Sp. p. 5723; Dr. p. 1220; Gaz. vol. 133; p. 1064.
Plant-receptacle, Electrical. H. S. Latshaw. No. 882,699; Mar. 24; Sp. p. 4382; Dr. p. 933; Gaz. vol. 133; p. 818.
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Planter and fertilizer-distributer, Combined. G. S. Sheffield. No. 883,493; Mar. 31; Sp. p. 6021; Dr. p. 1285; Gaz. vol. 133; p. 1109.
Planter attachment. W. D. Gilbreath. No. 882,379; Mar. 17; Sp. p. 3767; Dr. pp. 803–4; Gaz. vol. 133; p. 679.
Planter, Corn-. L. E. Waterman. No. 880,841; Mar 3; Sp. p. 728; Dr. pp. 153–4; Gaz. vol. 133; p. 123.
Planter, Corn-. W. P. Ibbitson. No. 880,909; Mar. 3; Sp. p. 1020; Dr. pp. 220–1; Gaz. vol. 133; p. 174.
Planter, Corn-. C. W. Sparks. No. 883,151; Mar. 24; Sp. p. 5287; Dr. pp. 1127–8; Gaz. vol. 133; p. 966.
Planter marker attachment. G. W. Goldsboro. No. 882,462; Mar. 17; Sp. p. 3907; Dr. pp. 835–6; Gaz. vol. 133; p. 707.
Planter, Potato-. C. F. Schmidt. No. 882,369; Mar. 17; Sp. p. 3723; Dr. pp. 791–2; Gaz. vol. 133; p. 671.
Planter row-marker. H. Shrader. No. 883,344; Mar. 31; Sp. p. 5490; Dr. p. 1171; Gaz. vol. 133; p. 1026.
Planters, Potato cutter and feeder for. C. Jenkins. No. 880,798; Mar. 3; Sp. p. 626; Dr. pp. 131–2; Gaz. vol. 133; p. 108.
Planters, Wireless attachment for check-row corn-. J. Elder and C. M. Scoggins. No. 883,394; Mar. 31; Sp. p. 5811; Dr. pp. 1239–40; Gaz. vol. 133; p. 1075.
Plastic. A. Sargent. No. 882,538; Mar. 17; Sp. p. 4068; Gaz. vol. 133; p. 733.
Plate-doubling-machine attachment. F. Westwood. No. 882,434; Mar. 17; Sp. p. 3856; Dr. p. 824; Gaz. vol. 133; p. 697.
Playing-hoop. J. G. Marsh. No. 881,427; Mar. 10; Sp. p. 1861; Dr. p. 405; Gaz. vol. 133; p. 341.
Pleasure-wheel. E. F. Chubbuck. No. 881,095; Mar. 3; Sp. p. 1202; Dr. p. 259; Gaz. vol. 133; p. 204.
Pliers. P. Broadbooks. No. 881,092; Mar. 3; Sp. p. 1198; Dr. p. 259; Gaz. vol. 133; p. 204.
Plow. J. W. Farrington. No. 881,391; Mar. 10; Sp. p. 1802; Dr. p. 389; Gaz. vol. 133; p. 331.
Plow. M. O. Bergstrom. No. 881,457; Mar. 10; Sp. p. 1922; Dr. p. 418; Gaz. vol. 133; p. 351.
Plow. C. C. Rankin. No. 882,839; Mar. 24; Sp. p. 4666; Dr. p. 993; Gaz. vol. 133; p. 863.
Plow attachment. R. S. Mattingley. No. 880,556; Mar. 3; Sp. p. 124; Dr. p. 28; Gaz. vol. 133; p. 25.
Plow, Disk. C. A. Hardy. No. 881,797; Mar. 10; Sp. p. 2583; Dr. p. 555; Gaz. vol. 133; p. 461.
Plow-disk and the like. P. Speirs. No. 882,353; Mar. 17; Sp. p. 3730; Dr. p. 793; Gaz. vol. 133; p. 672.
Plow-fender. J. A. Raiford. No. 881,341; Mar. 10; Sp. p. 1697; Dr. p. 364; Gaz. vol. 133; p. 314.
Plow harrow attachment. E. M. Kramer. No. 881,414; Mar. 10; Sp. p. 1840; Dr. p. 399; Gaz. vol. 133; p. 337.
Plow-lister. L. D. Flanary. No. 880,726; Mar. 3; Sp. p. 473; Dr. p. 99; Gaz. vol. 133; p. 83.
Plow runner attachment. E. E. Edwards. No. 882,751; Mar. 24; Sp. p. 4497; Dr. p. 958; Gaz. vol. 133; p. 835.
Plow shovel, Corn-. J. J. Conrad. No. 881,303; Mar. 10; Sp. p. 1629; Dr. p. 348; Gaz. vol. 133; p. 303.
Plow siding attachment. A. T. McIlwain. No. 882,768; Mar. 24; Sp. p. 4523; Dr. p. 965; Gaz. vol. 133; p. 840.
Plow-stock. J. A. Raiford. No. 881,340; Mar. 10; Sp. p. 1686; Dr. p. 363; Gaz. vol. 133; p. 314.
Plow, Subsoil-. T. J. Green. No. 880,729; Mar. 3; Sp. p. 477; Dr. p. 100; Gaz. vol. 133; p. 84.
Plow, Sulky-. C. R. Davis. No. 880,724; Mar. 3; Sp. p. 468; Dr. p. 99; Gaz. vol. 133; p. 82.
Plow, Wheel-. W. E. Johnson. No. 881,243; Mar. 10; Sp. p. 1500; Dr. pp. 323–4; Gaz. vol. 133; p. 283.
Plow, Wheel-. J. McMullan. No. 881,820; Mar. 10; Sp. p. 2628; Dr. p. 564; Gaz. vol. 133; p. 409.
Plow, Wheeled. I. A. Weaver. No. 883,365; Mar. 31; Sp. p. 5731; Dr. p. 1222; Gaz. vol. 133; p. 1065.
Plow, Wheeled. I. A. Weaver. No. 883,678; Mar. 31; Sp. p. 6394; Dr. p. 1362; Gaz. vol. 133; p. 1164.
Plows, Adjustable sole-plate for. P. Deevy. No. 880,636; Mar. 3; Sp. p. 298; Dr. p. 66; Gaz. vol. 133; p. 52.
Plows, Automatic releasing device for gang-. M. Joyce, Jr. No. 883,315; Mar. 31; Sp. p. 5636; Dr. p. 1202; Gaz. vol. 133; p. 1050.
Plowshare. J. B. Crapo. No. 881,379; Mar. 10; Sp. p. 1783; Dr. p. 384; Gaz. vol. 133; p. 327.
Plug and stop-cock, Combined. B. F. Palmer. No. 881,711; Mar. 10; Sp. p. 2434; Dr. p. 524; Gaz. vol. 133; p. 433.
Plug-seat switch. B. O. Wells. No. 881,964; Mar. 17; Sp. p. 2999; Dr. p. 640; Gaz. vol. 133; p. 552.
Plug, Wall-. M. Swintek. No. 880,699; Mar. 3; Sp. p. 410; Dr. p. 88; Gaz. vol. 133; p. 74.
Plugs, Device for replacing fusible. E. Oldman. No. 881,143; Mar. 10; Sp. p. 1304; Dr. p. 281; Gaz. vol. 133; p. 251.
Pneumatic action. H. Meyer. No. 882,402; Mar. 17; Sp. p. 3804; Dr. p. 813; Gaz. vol. 133; p. 687.
Pneumatic and other drill. M. Hardsocg. No. 880,880; Mar. 3; Sp. p. 815; Dr. p. 173; Gaz. vol. 133; p. 136.
Pneumatic and other drill. M. Hardsocg. No. 880,881; Mar. 3; Sp. p. 817; Dr. p. 173; Gaz. vol. 133; p. 137.
Pneumatic-despatch apparatus, Sending mechanism for. H. D. Waterhouse. No. 881,980; Mar. 17; Sp. p. 2991; Dr. p. 639; Gaz. vol. 133; p. 550.
Pneumatic-despatch-tube apparatus. C. F. Stoddard. No. 880,595; Mar. 3; Sp. p. 221; Dr. p. 46; Gaz. vol. 133; p. 38.
Pocket and garment-supporter, Combined. B. Ortell. No. 883,475; Mar. 31; Sp. p. 5985; Dr. p. 1276; Gaz. vol. 133; p. 1103.
Pocket-book. H. A. Dodge. No. 882,493; Mar. 17; Sp. p. 3957; Dr. p. 846; Gaz. vol. 133; p. 716.
Poke, Animal-. C. H. McCracken. No. 881,436; Mar. 10; Sp. p. 1879; Dr. p. 409; Gaz. vol. 133; p. 344.
Pole. R. S. Orr. No. 883,474; Mar. 31; Sp. p. 5983; Dr. p. 1276; Gaz. vol. 133; p. 1102.
Police-call, fire-alarm, and watchman's box, Combined. J. G. Nolen. No. 883,665; Mar. 31; Sp. p. 6358; Dr. pp. 1355–6; Gaz. vol. 133; p. 1160.
Pompadour-roll. H. H. Taylor. No. 882,655; Mar. 24; Sp. p. 4302; Dr. p. 913; Gaz. vol. 133; p. 804.
Post: *See* Bumping-post; Cement post; Fence-post; Tool-post.
Post. C. A. Fuller. No. 880,728; Mar. 3; Sp. p. 476; Dr. p. 100; Gaz. vol. 133; p. 84.
Post. J. H. Doddridge. No. 883,005; Mar. 24; Sp. p. 4999; Dr. p. 1063; Gaz. vol. 133; p. 917.
Post-brace. C. Krabill. No. 883,205; Mar. 31; Sp. p. 5407; Dr. p. 1152; Gaz. vol. 133; p. 1013.
Post hole digger. J. P. Andersen and E. G. Dean. No. 881,290; Mar. 10; Sp. p. 1582; Dr. p. 338; Gaz. vol. 133; p. 296.
Pot: *See* Coffee-pot.
Pot-lifter. H. O. Secrest. No. 880,582; Mar. 3; Sp. p. 188; Dr. p. 41; Gaz. vol. 133; p. 34.
Potato-bugs, Means for gathering and destroying. A. J. Buhler. No. 883,618; Mar. 31; Sp. p. 6258; Dr. pp. 1334–5; Gaz. vol. 133; p. 1146.
Potato-digger. J. N. Champagne. No. 880,861; Mar. 3; Sp. p. 776; Dr. pp. 164–5; Gaz. vol. 133; p. 130.
Potato-masher. W. A. Prindle. No. 882,078; Mar. 17; Sp. p. 3207; Dr. p. 681; Gaz. vol. 133; p. 583.
Poultry-fountain. J. Cullen. No. 881,906; Mar. 17; Sp. p. 2840; Dr. pp. 606–7; Gaz. vol. 133; p. 526.
Poultry-greaser. W. W. Wilson. No. 882,985; Mar. 24; Sp. p. 4961; Dr. p. 1056; Gaz. vol. 133; p. 912.
Poultry indicator and marker. C. M. Renshaw. No. 881,132; Mar. 10; Sp. p. 1319; Dr. p. 285; Gaz. vol. 133; p. 255.
Power electrically, Means for transmitting. G. Lewin. No. 881,864; Mar. 10; Sp. p. 2733; Dr. pp. 585–7; Gaz. vol. 133; p. 483.

Power from the axles of railway-cars, Means of transmitting. L. C. Maher. No. 881,599; Mar. 10; Sp. p. 2198; Dr. p. 479; Gaz. vol. 133; p. 399.
Power-shovel jack-arm and mounting. J. B. Webber, Jr. No. 882,086; Mar. 17; Sp. p. 3221; Dr. p. 684; Gaz. vol. 133; p. 586.
Power-transmission device. C. A. Schlachter. No. 881,444; Mar. 10; Sp. p. 1897; Dr. pp. 413–14; Gaz. vol. 133; p. 347.
Power-transmission device. C. P. Hollister. No. 881,472; Mar. 10; Sp. p. 1960; Dr. pp. 426–7; Gaz. vol. 133; p. 356.
Power-transmission device. J. W. Lundgren. No. 882,643; Mar. 24; Sp. p. 4283; Dr. p. 908; Gaz. vol. 133; p. 800.
Power-transmission device. R. M. and M. C. Thornburg. No. 883,431; Mar. 31; Sp. p. 5996; Dr. pp. 1257–9; Gaz. vol. 133; p. 1088.
Power-transmission means. J. E. and A. W. Caps. No. 881,545; Mar. 10; Sp. p. 2086; Dr. pp. 456–7; Gaz. vol. 133; p. 380.
Power-transmitting device. A. B. Cohn. No. 881,881; Mar. 10; Sp. 2774; Dr. p. 595; Gaz. vol. 133; p. 490.
Power-transmitting device, Reversible and variable-speed. J. Bartosik and P. Krummel. No. 880,856; Mar. 3; Sp. p. 756; Dr. p. 160; Gaz. vol. 133; p. 128.
Power-transmitting mechanism. F. R. and C. E. S. Burch. No. 881,846; Mar. 10; Sp. p. 2685; Dr. p. 574; Gaz. vol. 133; p. 477.
Power-transmitting mechanism. W. O. Worth. No. 882,513; Mar. 17; Sp. p. 3998; Dr. pp. 855–6; Gaz. vol. 133; p. 724.
Preserving-jar. A. Wilkin. No. 882,438; Mar. 17; Sp. p. 3866; Dr. p. 826; Gaz. vol. 133; p. 699.
Press: *See* Baling-press; Cheese-press; Cider-press; Copy-press; Copying-press; Drawing-press; Hydraulic press; Lead-press; Leather-rolling press; Printing-press.
Press. J. Beemster. No. 880,619; Mar. 3; Sp. p. 267; Dr. p. 56; Gaz. vol. 133; p. 47.
Press. J. Goodfellow. No. 880,877; Mar. 3; Sp. p. 810; Dr. p. 172; Gaz. vol. 133; p. 135.
Press for manufacturing briquets, blocks, artificial stone, &c. W. Surmann. No. 881,164; Mar. 10; Sp. p. 1335; Dr. pp. 287–8; Gaz. vol. 133; p. 257.
Pressure-gage. O. Arnold, Jr. No. 881,764; Mar. 10; Sp. p. 2520; Dr. p. 543; Gaz. vol. 133; p. 449.
Primary battery. W. M. McDougall and S. R. V. Robinson. No. 880,689; Mar. 3; Sp. p. 391; Dr. p. 85; Gaz. vol. 133; p. 70.
Printed-paper strips in true register, Device for assembling. P. Ashelm. No. 882,366; Mar. 17; Sp. p. 3750; Dr. p. 798; Gaz. vol. 133; p. 676.
Printing device. J. S. Duncan. No. 881,385; Mar. 10; Sp. p. 1790; Dr. p. 386; Gaz. vol. 133; p. 329.
Printing device, Blue-. C. de Lukacsevics. No. 883,214; Mar. 31; Sp. p. 5424; Dr. pp. 1155–6; Gaz. vol. 133; p. 1017.
Printing-machine. W. H. Thomas. No. 881,167; Mar. 10; Sp. p. 1342; Dr. pp. 289–90; Gaz. vol. 133; p. 258.
Printing-machine, Automatic. F. H. Nelson and L. Bard. No. 883,421; Mar. 31; Sp. p. 5871; Dr. p. 1251; Gaz. vol. 133; p. 1084.
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Printing machine, Web-. W. Scott. No. 882,800; Mar. 24; Sp. p. 4581; Dr. pp. 977–8; Gaz. vol. 133; p. 850.
Printing-press. H. T. Kingsbury. No. 881,133; Mar. 10; Sp. p. 1279; Dr. pp. 275–6; Gaz. vol. 133; p. 247.
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Printing-press. R. Miehle. No. 881,139; Mar. 10; Sp. p. 1296; Dr. pp. 279–80; Gaz. vol. 133; p. 250.
Printing-press. H. G. Barrett. No. 881,288; Mar. 10; Sp. p. 1599; Dr. pp. 342–3; Gaz. vol. 133; p. 299.
Printing-press cylinders, Means for securing sheets or blankets to. C. G. Harris. No. 880,523; Mar. 3; Sp. p. 58; Dr. p. 14; Gaz. vol. 133; p. 13.
Printing-press, especially of the bed-and-platen type. A. Burbach. No. 881,968; Mar. 17; Sp. p. 3042; Dr. pp. 647–8; Gaz. vol. 133; p. 556.
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Printing-press rotary folding mechanism. H. P. Husby. (Reissue.) No. 12,772; Mar. 31; Sp. p. 6399; Dr. p. 1364; Gaz. vol. 133; p. 1167.
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Printing-surfaces, Machine for producing. A. Lyle and C. Owens. No. 882,704; Mar. 24; Sp. p. 4389; Dr. pp. 934–5; Gaz. vol. 133; p. 820.
Projectile, Submarine. T. Tucker. No. 882,980; Mar. 24; Sp. p. 4951; Dr. p. 1053; Gaz. vol. 133; p. 910.
Projector. C. E. Lord. No. 881,597; Mar. 10; Sp. p. 2192; Dr. p. 478; Gaz. vol. 133; p. 399.
Propeller, Screw-. R. E. Coon. No. 881,775; Mar. 10; Sp. p. 2538; Dr. p. 546; Gaz. vol. 133; p. 453.
Propeller, Ship-. C. J. H. Flindt. No. 881,393; Mar. 10; Sp. p. 1804; Dr. p. 390; Gaz. vol. 133; p. 331.
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Pulley, Loose. C. M. Swanson. No. 882,028; Mar. 17; Sp. p. 3110; Dr. p. 661; Gaz. vol. 133; p. 566.
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Pump. P. A. Myers. No. 881,254; Mar. 10; Sp. p. 1523; Dr. p. 327; Gaz. vol. 133; p. 287.
Pump. M. Latta. No. 882,524; Mar. 17; Sp. p. 4044; Dr. p. 861; Gaz. vol. 133; p. 729.
Pump. J. Desmond. No. 882,874; Mar. 24; Sp. p. 4747; Dr. p. 1009; Gaz. vol. 133; p. 875.
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Pump, Air-. J. B. Meriam. No. 880,746; Mar. 3; Sp. p. 525; Dr. p. 109; Gaz. vol. 133; p. 91.
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Pump, Centrifugal. L. R. Alberger. No. 880,956; Mar. 3; Sp. p. 944; Dr. p. 204; Gaz. vol. 133; p. 159.
Pump-regulator, Electric. A. Koessche. No. 881,247; Mar. 10; Sp. p. 1508; Dr. p. 325; Gaz. vol. 133; p. 284.
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Pump-support. S. Milroy. No. 880,560; Mar. 3; Sp. p. 131; Dr. p. 29; Gaz. vol. 133; p. 27.
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Radiator wall-sections, Connection for. J. A. Holfelder. No. 882,315; Mar. 17; Sp. p. 3659; Dr. p. 776; Gaz. vol. 133; p. 659.
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Railway safety-indicator. O. Stankey and M. Christ. No. 882,802; Mar. 24; Sp. p. 4504; Dr. p. 979; Gaz. vol. 133; p. 851.
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Recording and duplicating device. J. C. Proebstel. No. 882,123; Mar. 17; Sp. p. 3276; Dr. pp. 698–9; Gaz. vol. 133; p. 597.
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Register. N. D. Nelson. No. 883,076; Mar. 17; Sp. p. 3203; Dr. p. 681; Gaz. vol. 133; p. 582.
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Sandpapering-machine. G. Herrmann. No. 880,663; Mar. 3; Sp. p. 347; Dr. pp. 76–7; Gaz. vol. 133; p. 61.
Sanitary appliance. J. H. McCall. No. 882,410; Mar. 17; Sp. p. 3817; Dr. p. 816; Gaz. vol. 133; p. 690.
Sash and blind lock, Combined. C. N. Kalstrom. No. 881,694; Mar. 10; Sp. p. 2380; Dr. p. 516; Gaz. vol. 133; p. 428.
Sash-balance. E. M. Erb. No. 881,783; Mar. 10; Sp. p. 2555; Dr. p. 549; Gaz. vol. 133; p. 456.
Sash-fastener. G. Zeliff. No. 882,135; Mar. 17; Sp. p. 3206; Dr. p. 704; Gaz. vol. 133; p. 601.
Sash-fastener. J. M. Urick. No. 883,593; Mar. 31; Sp. p. 6210; Dr. p. 1324; Gaz. vol. 133; p. 1137.
Sash fastener and lift, Combined. B. F. Thompson. No. 880,600; Mar. 3; Sp. p. 230; Dr. p. 48; Gaz. vol. 133; p. 40.
Sash fastener, Window-. W. J. Hills. No. 880,530; Mar. 3; Sp. p. 71; Dr. p. 17; Gaz. vol. 133; p. 15.
Sash-lock. W. H. Culp. No. 881,177; Mar. 10; Sp. p. 1361; Dr. p. 293; Gaz. vol. 133; p. 261.
Sash-lock. G. W. Stewart. No. 881,354; Mar. 10; Sp. p. 1722; Dr. p. 371; Gaz. vol. 133; p. 319.
Sash-lock. J. W. Bowman. No. 881,658; Mar. 10; Sp. p. 2328; Dr. p. 504; Gaz. vol. 133; p. 418.
Sash lock and adjuster. T. Richards. No. 881,719; Mar. 10; Sp. p. 2448; Dr. p. 526; Gaz. vol. 133; p. 436.
Saw attachment. I. H. Howe. No. 882,318; Mar. 17; Sp. p. 3664; Dr. p. 777; Gaz. vol. 133; p. 660.
Saw, Band-. W. Carey. No. 881,107; Mar. 10; Sp. p. 1227; Dr. p. 264; Gaz. vol. 133; p. 238.
Saw-gage and filing-tool. Z. N. Seelye. No. 882,213; Mar. 17; Sp. p. 3450; Dr. p. 734; Gaz. vol. 133; p. 624.
Saw-handle. C. M. Larkin. No. 881,188; Mar. 10; Sp. p. 1383; Dr. p. 288; Gaz. vol. 133; p. 265.
Saw, Jig-. A. Anderson. No. 882,044; Mar. 17; Sp. p. 3143; Dr. p. 667; Gaz. vol. 133; p. 571.
Saw-jointer. C. R. Pierce. No. 882,961; Mar. 24; Sp. p. 4922; Dr. p. 1044; Gaz. vol. 133; p. 905.
Saw jointer and gage, Combined. E. J. Hicks. No. 883,641; Mar. 31; Sp. p. 6303; Dr. p. 1345; Gaz. vol. 133; p. 1152.
Saw, Rip-. G. J. Schaller and V. B. Adams. No. 883,671; Mar. 31; Sp. p. 6372; Dr. p. 1359; Gaz. vol. 133; p. 1162.
Saw, Marble and stone. I. Ramboux. No. 880,822; Mar. 3; Sp. p. 676; Dr. p. 142; Gaz. vol. 133; p. 116.
Sawmill. D. I. Keough. No. 881,004; Mar. 3; Sp. p. 1028; Dr. p. 223; Gaz. vol. 133; p. 176.
Sawmill attachment. J. H. Coy. No. 880,722; Mar. 3; Sp. p. 462; Dr. p. 96; Gaz. vol. 133; p. 81.
Saw-tooth, Insertible. W. H. Askins. No. 883,076; Mar. 24; Sp. p. 5126; Dr. p. 1094; Gaz. vol. 133; p. 940.
Sawing machine, Segment-. W. W. McKee. No. 883,333; Mar. 31; Sp. p. 5660; Dr. p. 1208; Gaz. vol. 133; p. 1054.
Scaffold. D. Flatley. No. 881,232; Mar. 10; Sp. p. 1481; Dr. p. 319; Gaz. vol. 133; p. 279.
Scaffold. W. J. Murray. No. 882,208; Mar. 17; Sp. p. 3441; Dr. p. 732; Gaz. vol. 133; p. 622.
Scaffold-bracket. S. S. Richardson. No. 882,020; Mar. 17; Sp. p. 3093; Dr. p. 659; Gaz. vol. 133; p. 564.
Scaffold, Portable ladder-like. L. T. Olive. No. 882,161; Mar. 17; Sp. p. 3362; Dr. pp. 716–17; Gaz. vol. 133; p. 608.
Scaffolds or stages, Attachment for swinging. W. B. Stoops. No. 882,709; Mar. 24; Sp. p. 4523; Dr. p. 966; Gaz. vol. 133; p. 840.
Scale, Weighing-. C. W. McKee. No. 881,020; Mar. 3; Sp. p. 1061; Dr. p. 230; Gaz. vol. 133; p. 181.
Scarf-pin clutch. A. Rosenbaum. No. 881,622; Mar. 10; Sp. p. 2258; Dr. p. 490; Gaz. vol. 133; p. 407.
Scarf-pin-securing device. I. Reinesa. No. 883,422; Mar. 31; Sp. p. 5873; Dr. p. 1251; Gaz. vol. 133; p. 1085.
Scene-shifting device. E. Giulietti. No. 883,193; Mar. 31; Sp. p. 5379; Dr. pp. 1145–6; Gaz. vol. 133; p. 1009.
Scissors. A. L. Mosby. No. 881,704; Mar. 10; Sp. p. 2397; Dr. p. 520; Gaz. vol. 133; p. 431.
Scissors and shears. E. Hunold. No. 880,535; Mar. 3; Sp. p. 76; Dr. p. 18; Gaz. vol. 133; p. 17.
Scraper. R. Folkerts. No. 882,056; Mar. 17; Sp. p. 3161; Dr. p. 672; Gaz. vol. 133; p. 574.
Scraper and conveyer, Combined. L. Arms. No. 882,775; Mar. 24; Sp. p. 4531; Dr. p. 967; Gaz. vol. 133; p. 841.

Scraper and grader. O. E. Penwell. No. 881,027; Mar. 3; Sp. p. 1073; Dr. p. 233; Gaz. vol. 133; p. 183.
Scraper, Box-. J. Lobmiller. No. 880,745; Mar. 3; Sp. p. 523; Dr. p. 109; Gaz. vol. 133; p. 90.
Scraper, Drag-. A. Conkle. No. 882,053; Mar. 17; Sp. p. 3158; Dr. p. 671; Gaz. vol. 133; p. 574.
Scraper, Excavating-. J. G. Fairbanks. No. 880,643; Mar. 3; Sp. p. 306; Dr. p. 68; Gaz. vol. 133; p. 54.
Scraper, Wheeled. N. S. Dunaway. No. 881,669; Mar. 10; Sp. p. 2344; Dr. p. 508; Gaz. vol. 133; p. 421.
Screen: *See* Bed-screen; Extension-screen; Rolling screen; Wall-screen; Window-screen; Window or like screen.
Screen-fastener, Adjustable metallic. L. K. Devlin. No. 881,061; Mar. 3; Sp. p. 1130; Dr. p. 245; Gaz. vol. 133; p. 193.
Screen-hanger. E. G. Rust. No. 880,577; Mar. 3; Sp. p. 179; Dr. p. 39; Gaz. vol. 133; p. 32.
Screw-driver and attachment therefor. J. M. Chappel. No. 881,296; Mar. 10; Sp. p. 1619; Dr. p. 346; Gaz. vol. 133; p. 302.
Screw-eye driver. T. J. Fegley. No. 882,947; Mar. 24; Sp. p. 4877; Dr. p. 1066; Gaz. vol. 133; p. 897.
Screws, &c., Machine for cutting. J. Bowen. No. 882,293; Mar. 17; Sp. p. 3609; Dr. p. 765; Gaz. vol. 133; p. 650.
Scrubbing-machine. F. Bicklein. No. 883,512; Mar. 31; Sp. p. 6060; Dr. pp. 1292–3; Gaz. vol. 133; p. 1115.
Seal. J. G. Swallow. No. 883,501; Mar. 31; Sp. p. 6039; Dr. p. 1288; Gaz. vol. 133; p. 1112.
Seal, Bottle-. W. S. Dorman. No. 881,790; Mar. 10; Sp. p. 2546; Dr. p. 548; Gaz. vol. 133; p. 455.
Seal, Bottle-. M. Perez. No. 881,945; Mar. 17; Sp. p. 2924; Dr. p. 624; Gaz. vol. 133; p. 540.
Seal, Car-. H. C. Folger. No. 882,670; Mar. 24; Sp. p. 4333; Dr. p. 922; Gaz. vol. 133; p. 808.
Seal, Electrical socket-. L. T. Hatfield. No. 881,683; Mar. 10; Sp. p. 2362; Dr. p. 512; Gaz. vol. 133; p. 424.
Seal, Envelop-. W. R. Oneal. No. 880,909; Mar. 3; Sp. p. 868; Dr. p. 196; Gaz. vol. 133; p. 145.
Seal for pipe-joints. B. F. Shaughnessy. No. 882,350; Mar. 17; Sp. p. 3725; Dr. p. 792; Gaz. vol. 133; p. 671.
Seal-lock. C. S. Smith. No. 881,034; Mar. 3; Sp. p. 1084; Dr. p. 245; Gaz. vol. 133; p. 185.
Seal-lock. L. I. Hamilton. No. 883,638; Mar. 31; Sp. p. 6300; Dr. p. 1344; Gaz. vol. 133; p. 1152.
Seal, Metal. V. Mazzatenta. No. 882,525; Mar. 17; Sp. p. 4046; Dr. p. 861; Gaz. vol. 133; p. 729.
Seals, &c., Fastening-wire for. T. E. Murray. No. 880,668; Mar. 3; Sp. p. 390; Dr. p. 85; Gaz. vol. 133; p. 70.
Sealing cap, Bottle-. L. Kalling. No. 882,888; Mar. 24; Sp. p. 4773; Dr. p. 1016; Gaz. vol. 133; p. 879.
Sealing cap, Bottle-. L. Kalling. No. 882,889; Mar. 24; Sp. p. 4774; Dr. p. 1016; Gaz. vol. 133; p. 879.
Sealing device for money-bags. M. E. Jewett. No. 881,407; Mar. 10; Sp. p. 1826; Dr. p. 395; Gaz. vol. 133; p. 335.
Sealing fruit-cans and other receptacles, Device for. A. M. Butler. No. 880,909; Mar. 3; Sp. p. 971; Dr. p. 209; Gaz. vol. 133; p. 164.
Seam. S. Borton. No. 883,614; Mar. 31; Sp. p. 6247; Dr. p. 1333; Gaz. vol. 133; p. 1144.
Seam. S. Borton and L. D. Birge. No. 883,615; Mar. 31; Sp. p. 6252; Dr. p. 1333; Gaz. vol. 133; p. 1145.
Seam, Ornamental. R. Cornely. No. 881,903; Mar. 17; Sp. p. 2836; Dr. p. 606; Gaz. vol. 133; p. 525.
Seat: *See* Convertible and interchangeable seat; Telegraph and telephone pole seat.
Seat-iron. G. W. Luke. No. 883,215; Mar. 31; Sp. p. 5426; Dr. p. 1156; Gaz. vol. 133; p. 1017.
Sectional case. A. C. Abramson and W. Person. No. 883,506; Mar. 31; Sp. p. 6045; Dr. p. 1290; Gaz. vol. 133; p. 1113.
Seed-dropper. W. B. Parrish. No. 883,543; Mar. 31; Sp. p. 6162; Dr. p. 1311; Gaz. vol. 133; p. 1128.
Seed-linting machine, Cotton-. J. Davidson. No. 882,453; Mar. 17; Sp. p. 3891; Dr. p. 832; Gaz. vol. 133; p. 704.
Seeder. C. J. Kalkhurst. No. 881,131; Mar. 10; Sp. p. 1275; Dr. p. 274; Gaz. vol. 133; p. 246.
Separating incombustible materials having different melting temperatures. M. Leitch. No. 883,208; Mar. 31; Sp. p. 5411; Dr. p. 1153; Gaz. vol. 133; p. 1015.
Separating-machine. W. A. Trescott. No. 880,603; Mar. 3; Sp. p. 235; Dr. p. 49; Gaz. vol. 133; p. 41.
Separator: *See* Cream-separator; Dust-separator; Grain-separator; Ore-separator.
Separator. R. Scheibe. No. 881,723; Mar. 10; Sp. p. 2453; Dr. p. 528; Gaz. vol. 133; p. 437.
Separator. E. J. Vaudreuil. No. 882,084; Mar. 17; Sp. p. 3217; Dr. p. 663; Gaz. vol. 133; p. 585.
Separator. H. J. Sisty. No. 882,177; Mar. 17; Sp. p. 3397; Dr. p. 722; Gaz. vol. 133; p. 614.
Separator-liner, Centrifugal. O. Ohlsson. No. 882,119; Mar. 17; Sp. p. 3271; Dr. p. 696; Gaz. vol. 133; p. 595.
Sewage-disposal apparatus. J. H. Kinealy. No. 880,540; Mar. 3; Sp. p. 87; Dr. p. 20; Gaz. vol. 133; p. 19.
Sewer-cap, Artificial-stone. E. F. Kennelly. No. 881,003; Mar. 3; Sp. p. 1027; Dr. p. 222; Gaz. vol. 133; p. 175.
Sewer construction. A. J. Galvin. No. 882,940; Mar. 24; Sp. p. 4883; Dr. p. 1036; Gaz. vol. 133; p. 898.
Sewer construction. A. J. Galvin. No. 882,941; Mar. 24; Sp. p. 4885; Dr. p. 1037; Gaz. vol. 133; p. 898.
Sewer-mold. K. O. Guthrie. No. 883,194; Mar. 31; Sp. p. 5382; Dr. pp. 1146–7; Gaz. vol. 133; p. 1010.
Sewing attachment, Button-. W. S. and H. H. Holdaway. No. 882,314; Mar. 17; Sp. p. 3657; Dr. p. 776; Gaz. vol. 133; p. 650.
Sewing-machine. H. E. La Plant. No. 880,890; Mar. 3; Sp. p. 830; Dr. p. 176; Gaz. vol. 133; p. 130.
Sewing-machine. W. F. Arndt and H. M. Hamilton. No. 881,283; Mar. 10; Sp. p. 1587; Dr. pp. 339–41; Gaz. vol. 133; p. 296.
Sewing-machine. E. B. Allen. No. 882,484; Mar. 17; Sp. p. 3944; Dr. pp. 843–4; Gaz. vol. 133; p. 714.
Sewing-machine attachment. F. J. Kaufmann. No. 881,187; Mar. 10; Sp. p. 1380; Dr. pp. 297–8; Gaz. vol. 133; p. 264.
Sewing-machine binding attachment. A. Rontke. No. 882,480; Mar. 17; Sp. p. 3937; Dr. p. 842; Gaz. vol. 133; p. 712.
Sewing machine, Boot and shoe. M. T. Donne. No. 883,300; Mar. 31; Sp. p. 5610; Dr. p. 1196; Gaz. vol. 133; p. 1045.
Sewing-machine feeding mechanism. D. Noble and J. S. Finch. No. 882,266; Mar. 17; Sp. p. 3568; Dr. pp. 756–7; Gaz. vol. 133; p. 643.
Sewing-machine gage. M. Fose. No. 883,332; Mar. 31; Sp. p. 6097; Dr. p. 1297; Gaz. vol. 133; p. 1119.
Sewing-machine presser-foot. J. M. Merrow. No. 881,816; Mar. 10; Sp. p. 2622; Dr. p. 563; Gaz. vol. 133; p. 467.
Sewing-machine ruffler attachment. A. G. Lamb. No. 882,323; Mar. 17; Sp. p. 3672; Dr. p. 780; Gaz. vol. 133; p. 662.
Sewing-machine ruffling mechanism. A. Laubscher. No. 882,254; Mar. 17; Sp. p. 3534; Dr. pp. 749–50; Gaz. vol. 133; p. 638.
Sewing-machine strip-guide. A. Laubscher. No. 882,473; Mar. 17; Sp. p. 3929; Dr. p. 840; Gaz. vol. 133; p. 710.
Sewing-machine trimming mechanism. G. Scott. No. 880,829; Mar. 3; Sp. p. 701; Dr. pp. 147–8; Gaz. vol. 133; p. 119.
Sewing-machine tuck-marker. A. Laubscher. No. 882,255; Mar. 17; Sp. p. 3538; Dr. pp. 750–1; Gaz. vol. 133; p. 639.
Sewing machines, Upper-deflector for shoe-. C. A. Gilbert. No. 881,569; Mar. 10; Sp. p. 2136; Dr. p. 466; Gaz. vol. 133; p. 388.
Shade and curtain-pole holder, Adjustable window-. C. W., Jr., and G. H. Draper. No. 881,384; Mar. 10; Sp. p. 1780; Dr. p. 386; Gaz. vol. 133; p. 328.
Shade and lace-curtain hanger, Combined window-. P. F. Wagner. No. 881,977; Mar. 17; Sp. p. 2983; Dr. p. 635; Gaz. vol. 133; p. 549.
Shade-bracket. C. E. Waldorf. No. 880,941; Mar. 3; Sp. p. 918; Dr. p. 197; Gaz. vol. 133; p. 155.
Shade-bracket. L. Schachner. No. 883,574; Mar. 31; Sp. p. 6181; Dr. p. 1314; Gaz. vol. 133; p. 1132.
Shaft-coupling. A. H. Bommer and W. J. Robert. No. 882,730; Mar. 24; Sp. p. 4469; Dr. p. 952; Gaz. vol. 133; p. 831.
Shaft or journal box. H. E. Norbom. No. 882,579; Mar. 24; Sp. p. 4150; Dr. p. 880; Gaz. vol. 133; p. 778.
Shaft, Vehicle-. G. F. Skelton. No. 883,579; Mar. 31; Sp. p. 6190; Dr. p. 1318; Gaz. vol. 133; p. 1133.
Sharpener, Scissors-. M. Henry. No. 883,019; Mar. 24; Sp. p. 5023; Dr. p. 1069; Gaz. vol. 133; p. 922.
Sharpening machine, Saw-. E. C. Filstrup. No. 881,230; Mar. 10; Sp. p. 1477; Dr. p. 317; Gaz. vol. 133; p. 279.
Sharpening machine, Saw-. L. L. Filstrup. No. 881,231; Mar. 10; Sp. p. 1478; Dr. pp. 318–19; Gaz. vol. 133; p. 279.
Shaving appliance. E. D. Chaplin. No. 882,488; Mar. 17; Sp. p. 3951; Dr. p. 845; Gaz. vol. 133; p. 715.
Shaving-cup. C. M. Davis. No. 882,668; Mar. 24; Sp. p. 4330; Dr. p. 921; Gaz. vol. 133; p. 808.
Shears. P. Broadbooks. No. 880,967; Mar. 3; Sp. p. 967; Dr. p. 209; Gaz. vol. 133; p. 163.
Shears. C. Gels. No. 883,457; Mar. 31; Sp. p. 5951; Dr. p. 1269; Gaz. vol. 133; p. 1097.
Shears, Discharge mechanism for. A. R. McArthur. No. 880,811; Mar. 3; Sp. p. 651; Dr. pp. 136–7; Gaz. vol. 133; p. 113.
Shedding mechanism. W. W. Hubbard. No. 883,541; Mar. 31; Sp. p. 6121; Dr. p. 1302; Gaz. vol. 133; p. 1122.
Sheet-metal elbow. A. Dieckmann. No. 882,238; Mar. 17; Sp. p. 3505; Dr. p. 744; Gaz. vol. 133; p. 632.
Sheet-metal gutter. S. D. Shoemaker. No. 882,801; Mar. 24; Sp. p. 4593; Dr. p. 979; Gaz. vol. 133; p. 851.
Sheets, Means for controlling the feeding of. J. J. Rigby. No. 882,125; Mar. 17; Sp. p. 3280; Dr. p. 700; Gaz. vol. 133; p. 597.
Shelf. G. W. Curtis. No. 883,001; Mar. 24; Sp. p. 4994; Dr. p. 1062; Gaz. vol. 133; p. 916.
Sheller: *See* Corn-sheller.
Shelter-shed. F. O. Cary. No. 882,870; Mar. 24; Sp. p. 4740; Dr. p. 1008; Gaz. vol. 133; p. 873.
Shield, Chafing-. E. A. Tietjen. No. 882,357; Mar. 17; Sp. p. 3737; Dr. p. 794; Gaz. vol. 133; p. 673.
Shield for the use of linemen. G. E. Harrison and G. Burns. No. 881,682; Mar. 10; Sp. p. 2361; Dr. p. 512; Gaz. vol. 133; p. 424.
Shingle-butt-cutting machine. J. D. Caldwell. No. 882,233; Mar. 17; Sp. p. 3497; Dr. p. 742; Gaz. vol. 133; p. 631.
Ship-cleaning apparatus. A. R. Rogers. No. 883,423; Mar. 31; Sp. p. 5874; Dr. p. 1252; Gaz. vol. 133; p. 1085.
Ships, Distance and course recorder for. W. C. Forbes. No. 881,008; Mar. 3; Sp. p. 1145; Dr. p. 246; Gaz. vol. 133; p. 196.
Shipping case, Banana-. C. A. Wellman. No. 880,702; Mar. 3; Sp. p. 414; Dr. p. 89; Gaz. vol. 133; p. 74.
Shirt. E. J. Quigley. No. 881,261; Mar. 10; Sp. p. 1534; Dr. p. 330; Gaz. vol. 133; p. 289.
Shirt attachment. V. Hansen. No. 883,639; Mar. 31; Sp. p. 6301; Dr. p. 1344; Gaz. vol. 133; p. 1152.
Shock-absorbing device. G. R. Smith. No. 881,629; Mar. 10; Sp. p. 2275; Dr. p. 493; Gaz. vol. 133; p. 409.
Shock-gatherer. M. Ereckson and J. O. Jystad. No. 882,819; Mar. 24; Sp. p. 4624; Dr. p. 986; Gaz. vol. 133; p. 857.
Shock-handler. G. F. Pettit. No. 881,260; Mar. 10; Sp. p. 1533; Dr. p. 330; Gaz. vol. 133; p. 289.
Shoe. F. W. Homan. No. 883,190; Mar. 31; Sp. p. 5396; Dr. p. 1140; Gaz. vol. 133; p. 1012.
Shoe. L. L. Bloomington. No. 883,281; Mar. 31; Sp. p. 5568; Dr. p. 1188; Gaz. vol. 133; p. 1039.
Shoe-cleaner. O. T. Crites and H. T. Smoot. No. 881,280; Mar. 10; Sp. p. 1783; Dr. p. 385; Gaz. vol. 133; p. 327.
Shoe-polisher. L. J. Hardin. No. 882,197; Mar. 17; Sp. p. 3426; Dr. p. 729; Gaz. vol. 133; p. 630.
Shoe tree or last. T. W. Post. No. 881,338; Mar. 10; Sp. p. 1694; Dr. p. 368; Gaz. vol. 133; p. 314.
Shoe, Welt-. A. J. Gabriellan. No. 880,515; Mar. 3; Sp. p. 43; Dr. pp. 10–11; Gaz. vol. 133; p. 11.

Shoulder-brace. W. M. Elsen. No. 883,101; Mar. 24; Sp. p. 5174; Dr. p. 1105; Gaz. vol. 133; p. 948.
Shovel: *See* Digging-shovel; Plow-shovel.
Shovel and scoop. B. Zimmel. No. 883,071; Mar. 24; Sp. p. 5118; Dr. p. 1092; Gaz. vol. 133; p. 939.
Show-case. A. D. Resler. No. 880,827; Mar. 3; Sp. p. 698; Dr. p. 147; Gaz. vol. 133; p. 118.
Shut-off box. F. M. Elber. No. 882,145; Mar. 17; Sp. p. 3316; Dr. p. 706; Gaz. vol. 133; p. 604.
Shutter-worker. A. S. Pierson. No. 883,341; Mar. 31; Sp. p. 5676; Dr. p. 1212; Gaz. vol. 133; p. 1057.
Shuttle-binder. A. Tilch. No. 880,602; Mar. 3; Sp. p. 234; Dr. p. 48; Gaz. vol. 133; p. 41.
Sifter, Ash-. A. Manzo. No. 881,601; Mar. 10; Sp. p. 2202; Dr. p. 480; Gaz. vol. 133; p. 400.
Sign. E. B. Wolfe. No. 882,857; Mar. 24; Sp. p. 4714; Dr. p. 1002; Gaz. vol. 133; p. 869.
Sign, Electric. S. E. Doane. No. 882,555; Mar. 24; Sp. p. 4104; Dr. p. 870; Gaz. vol. 133; p. 770.
Sign, Electric-light. M. Norden. No. 881,943; Mar. 17; Sp. p. 2922; Dr. p. 624; Gaz. vol. 133; p. 539.
Sign, Illuminated. J. W. Ellis. No. 881,390; Mar. 10; Sp. p. 1800; Dr. p. 389; Gaz. vol. 133; p. 330.
Sign, Illuminated. J. Hotchner. No. 883,682; Mar. 31; Sp. p. 6390; Dr. p. 1363; Gaz. vol. 133; p. 1166.
Sign or illuminating device, Electric. W. N. McComb. No. 882,013; Mar. 17; Sp. p. 3079; Dr. p. 655; Gaz. vol. 133; p. 562.
Sign or the like, Advertising-. S. Krotoschin. No. 882,949; Mar. 24; Sp. p. 4902; Dr. p. 1039; Gaz. vol. 133; p. 901.
Sign receptacle, Electrical-. F. J. Russell. No. 881,344; Mar. 10; Sp. p. 1692; Dr. p. 366; Gaz. vol. 133; p. 315.
Signal: *See* Block-signal; Fire-alarm signal.
Signal. F. B. Corey. No. 882,554; Mar. 24; Sp. p. 4099; Dr. pp. 869–70; Gaz. vol. 133; p. 770.
Signal and train-stopping apparatus, Combination. A. L. Ruthven. No. 883,350; Mar. 31; Sp. p. 5694; Dr. p. 1216; Gaz. vol. 133; p. 1060.
Signal-blade clasp. H. C. Williams. No. 880,949; Mar. 3; Sp. p. 927; Dr. p. 200; Gaz. vol. 133; p. 157.
Signal device, Electric. E. Schermerhorn. No. 881,264; Mar. 10; Sp. p. 1541; Dr. p. 332; Gaz. vol. 133; p. 290.
Signaling and telephone system, Composite. H. O. Rugh. No. 882,347; Mar. 17; Sp. p. 3719; Dr. p. 791; Gaz. vol. 133; p. 670.
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Small-arm, Drop-down. W. Baker. No. 881,046; Mar. 3; Sp. p. 1105; Dr. pp. 239–40; Gaz. vol. 133; p. 189.
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Smoke-filtering attachment for pipes, &c. C. W. Rowe. No. 882,913; Mar. 24; Sp. p. 4826; Dr. p. 1024; Gaz. vol. 133; p. 888.
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Soap, Manufacture of floating. A. Stöhr. No. 883,360; Mar. 31; Sp. p. 5722; Gaz. vol. 133; p. 1063.
Soldering-furnace. N. W. Lundy. No. 883,216; Mar. 31; Sp. p. 5427; Dr. pp. 1156–7; Gaz. vol. 133; p. 1017.
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Sole-pressing machine. B. F. Mayo. No. 881,478; Mar. 10; Sp. p. 1971; Dr. pp. 429–30; Gaz. vol. 133; p. 358.
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Sound-muffler. J. F. and H. M. Hirsh. No. 882,684; Mar. 24; Sp. p. 4361; Dr. p. 928; Gaz. vol. 133; p. 814.
Sound-recording apparatus. F. W. H. Clay. No. 881,664; Mar. 10; Sp. p. 2333; Dr. p. 506; Gaz. vol. 133; p. 419.
Sound-reproducer. R. B. Smith. No. 881,831; Mar. 10; Sp. p. 2656; Dr. p. 569; Gaz. vol. 133; p. 472.
Sound-reproducing devices, Hearing-tube for. G. A. Lewis. No. 882,700; Mar. 24; Sp. p. 4383; Dr. p. 933; Gaz. vol. 133; p. 819.
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Spark-plug clip. C. A. Mezger. No. 882,260; Mar. 17; Sp. p. 3551; Dr. p. 753; Gaz. vol. 133; p. 641.
Spark-timing apparatus. C. C. Dodge. No. 882,876; Mar. 24; Sp. p. 4752; Dr. p. 1010; Gaz. vol. 133; p. 875
Sparking device. H. Maillard. No. 883,554; Mar. 31; Sp. p. 6151; Dr. p. 1307; Gaz. vol. 133; p. 1126.
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Speaking-tube. F. M. Chandler. No. 881,093; Mar. 3; Sp. p. 1199; Dr. p. 259; Gaz. vol. 133; p. 204.
Speed-change mechanism. A. Balloco. No. 882,091; Mar. 17; Sp. p. 3229; Dr. p. 686; Gaz. vol. 133; p. 587.
Speed-indicator. R. T. Haines. No. 882,382; Mar. 17; Sp. p. 3771; Dr. pp. 804–5; Gaz. vol. 133; p. 680.
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Spinning apparatus, Traverse-motion for yarn-. J. Northrop. No. 882,793; Mar. 24; Sp. p. 4562; Dr. p. 974; Gaz. vol. 133; p. 847.
Spinning-frames, Drawing-roll cleaner for. J. S. Deeley and W. W. Ollendorff. No. 882,951; Mar. 24; Sp. p. 4865; Dr. p. 1033; Gaz. vol. 133; p. 894.
Spoke-extractor. J. W. Gay. No. 881,070; Mar. 3; Sp. p. 1151; Dr. p. 250; Gaz. vol. 133; p. 196.
Spout, Flexible. J. H. Gilman. No. 883,109; Mar. 24; Sp. p. 5188; Dr. pp. 1107–8; Gaz. vol. 133; p. 951.
Spraying apparatus, Color-. H. Mikorey. No. 883,144; Mar. 24; Sp. p. 5274; Dr. p. 1125; Gaz. vol. 133; p. 963.
Spraying device for watering streets. A. Thomas. No. 883,257; Mar. 31; Sp. p. 5522; Dr. p. 1177; Gaz. vol. 133; p. 1031.
Spring: *See* Bed-spring; Bicycle-saddle spring; Elliptic spring; Furniture-spring; Vehicle-spring.
Spring-cushion. E. C. Washburn. No. 882,279; Mar. 17; Sp. p. 3592; Dr. p. 762; Gaz. vol. 133; p. 647.
Spring structure. W. R. Smith. No. 882,654; Mar. 24; Sp. p. 4301; Dr. p. 913; Gaz. vol. 133; p. 803.
Spring-wheel. H. E. Schindler. No. 882,348; Mar. 17; Sp. p. 3722; Dr. p. 791; Gaz. vol. 133; p. 670.
Springs, Machine for the manufacture of coiled. N. S. Harter. No. 882,385; Mar. 17; Sp. p. 3776; Dr. pp. 806–7; Gaz. vol. 133; p. 681.
Sprinkler: *See* clothes-sprinkler.
Sprinkling and fire-alarm system, Automatic. C. A. Jacoby. No. 880,889; Mar. 3; Sp. p. 827; Dr. pp. 175–6; Gaz. vol. 133; p. 139.
Square, Folding. A. G. Urban. No. 882,130; Mar. 17; Sp. p. 3289; Dr. p. 701; Gaz. vol. 133; p. 599.
Square, Try-. J. F. McCurdy. No. 883,041; Mar. 24; Sp. p. 5064; Dr. p. 1080; Gaz. vol. 133; p. 929.

Stable attachment. S. R. Kimball. No. 883,204; Mar. 31; Sp. p. 5405; Dr. pp. 1151–2; Gaz. vol. 133; p. 1013.
Stack-protecting apparatus, Grain-. J. P. A. Anderson. No. 881,453; Mar. 10; Sp. p. 1916; Dr. p. 416; Gaz. vol. 133; p. 350.
Stacker, Hay-. S. E. Fowler. No. 883,633; Mar. 31; Sp. p. 6285; Dr. p. 1340; Gaz. vol. 133; p. 1150.
Stacker, Swinging hay-. R. J. Sparks. No. 882,214; Mar. 17; Sp. p. 3432; Dr. pp. 734–5; Gaz. vol. 133; p. 624.
Stage apparatus. N. Burgess. No. 883,200; Mar. 31; Sp. p. 5592; Dr. p. 1192; Gaz. vol. 133; p. 1042.
Stalls, Sanitary floor for animal-. A. Turney. No. 880,700; Mar. 3; Sp. p. 411; Dr. p. 88; Gaz. vol. 133; p. 74.
Stamp. Automatic time-. F. Purdy. No. 882,166; Mar. 17; Sp. p. 3376; Dr. p. 718; Gaz. vol. 133; p. 610.
Stamp-mill guide-block. W. T. Byng. No. 882,624; Mar. 24; Sp. p. 4245; Dr. p. 899; Gaz. vol. 133; p. 794.
Stamp, Time-. F. Purdy. No. 882,165; Mar. 17; Sp. p. 3370; Dr. p. 718; Gaz. vol. 133; p. 610.
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Standing-matter holder. E. Domagen and F. L. Kujawa. No. 883,302; Mar. 31; Sp. p. 5613; Dr. p. 1197; Gaz. vol. 133; p. 1046.
Stannic chlorid, Making. E. A. Sperry. No. 882,354; Mar. 17; Sp. p. 3732; Dr. p. 793; Gaz. vol. 133; p. 672.
Stannic-chlorid solutions, Electrolyzing aqueous. F. von Kügelgen and G. O. Seward. No. 883,140; Mar. 24; Sp. p. 5269; Gaz. vol. 133; p. 963.
Stannic-chlorid solutions, Electrolyzing aqueous. F. von Kügelgen and G. O. Seward. No. 883,141; Mar. 24; Sp. p. 5270; Gaz. vol. 133; p. 963.
Stannic oxid, Apparatus for making. H. Foersterling. No. 880,873; Mar. 3; Sp. p. 801; Dr. p. 170; Gaz. vol. 133; p. 134.
Stapling mechanism. G. W. Church. No. 881,900; Mar. 17; Sp. p. 2831; Dr. p. 605; Gaz. vol. 133; p. 524.
Starch, Apparatus for making thin boiling. T. E. Breyer. No. 881,105; Mar. 10; Sp. p. 1224; Dr. p. 263; Gaz. vol. 133; p. 237.
Starch, Making thin boiling. T. E. Breyer. No. 881,104; Mar. 10; Sp. p. 1222; Dr. p. 263; Gaz. vol. 133; p. 237.
Station-indicator. R. Toennes. No. 883,491; Mar. 31; Sp. p. 6208; Dr. p. 1323; Gaz. vol. 133; p. 1137.
Stay-roller. F. Shimerda. No. 881,626; Mar. 10; Sp. p. 2270; Dr. p. 492; Gaz. vol. 133; p. 406.
Steam and hot-water boiler formed of circular sections. W. M. Mackay. No. 881,137; Mar. 10; Sp. p. 1292; Dr. pp. 278–9; Gaz. vol. 133; p. 249.
Steam-boiler, Oil-burning. C. A. Hammel. No. 882,756; Mar. 24; Sp. p. 4502; Dr. p. 959; Gaz. vol. 133; p. 836.
Steam-engine. W. H. Betts. No. 881,048; Mar. 3; Sp. p. 1110; Dr. p. 241; Gaz. vol. 133; p. 190.
Steam-generator. J. M. Clark. No. 881,047; Mar. 3; Sp. p. 1123; Dr. pp. 243–4; Gaz. vol. 133; p. 192.
Steam-generator. H. Del Mar. No. 883,095; Mar. 24; Sp. p. 5166; Dr. p. 1103; Gaz. vol. 133; p. 947.
Steam-generator. H. E. Penney. No. 883,229; Mar. 31; Sp. p. 5465; Dr. p. 1164; Gaz. vol. 133; p. 1022.
Steam-generator. G. W. Jessup, Jr. No. 883,407; Mar. 31; Sp. p. 5840; Dr. pp. 1245–6; Gaz. vol. 133; p. 1080.
Steam-meter. C. E. Sargent. No. 883,670; Mar. 31; Sp. p. 6370; Dr. pp. 1358–9; Gaz. vol. 133; p. 1162.
Steam-trap. I. and E. Mayer. No. 882,400; Mar. 17; Sp. p. 3800; Dr. pp. 811–12; Gaz. vol. 133; p. 686.
Steaming and pressing machine, Clothes. G. E. Tarbox. No. 880,934; Mar. 3; Sp. p. 907; Dr. p. 195; Gaz. vol. 133; p. 153.
Steel. R. H. Illingworth. No. 882,112; Mar. 17; Sp. p. 3262; Gaz. vol. 133; p. 593.
Steel, Hardening. W. A. Painter. No. 882,162; Mar. 17; Sp. p. 3364; Gaz. vol. 133; p. 609.
Steel or other metal wool, Apparatus for manufacturing. H. C. Gamage. No. 881,852; Mar. 10; Sp. p. 2695; Dr. pp. 576–8; Gaz. vol. 133; p. 479.
Steel tank. O. K. Harry. No. 882,678; Mar. 24; Sp. p. 4350; Dr. p. 925; Gaz. vol. 133; p. 811.
Steering device for power-boats. J. A. Garrett. No. 882,821; Mar. 24; Sp. p. 4627; Dr. p. 987; Gaz. vol. 133; p. 857.
Steering-wheel. R. W. Lowell. No. 881,324; Mar. 10; Sp. p. 1661; Dr. p. 356; Gaz. vol. 133; p. 310.
Stencil and frame. R. S. Bolger. No. 881,173; Mar. 10; Sp. p. 1355; Dr. p. 292; Gaz. vol. 133; p. 260.
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Stenciling-machine. S. T. Smith, Jr. No. 881,448; Mar. 10; Sp. p. 1907; Dr. p. 415; Gaz. vol. 133; p. 348.
Stentering-machine clip. A. A. Whitley. No. 880,946; Mar. 3; Sp. p. 923; Dr. pp. 199–200; Gaz. vol. 133; p. 156.
Sterilizing. E. P. Beckwith. No. 881,533; Mar. 10; Sp. p. 2068; Dr. p. 452; Gaz. vol. 133; p. 376.
Sterilizing apparatus. E. Kronman. No. 883,463; Mar. 31; Sp. p. 5961; Dr. pp. 1271–2; Gaz. vol. 133; p. 1099.
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Stirrup, Safety-. J. M. Hibbard. No. 882,683; Mar. 24; Sp. p. 4360; Dr. p. 928; Gaz. vol. 133; p. 813.
Stitch-separating machine. J. B. Hadaway. No. 880,792; Mar. 3; Sp. p. 611; Dr. pp. 129–30; Gaz. vol. 133; p. 106.
Stocking. E. H. McCulloch. No. 882,834; Mar. 24; Sp. p. 4658; Dr. p. 997; Gaz. vol. 133; p. 862.
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Stoker, Automatic. M. B. Brewster. No. 880,622; Mar. 3; Sp. p. 271; Dr. pp. 57–8; Gaz. vol. 133; p. 48.
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Stone-drilling machine. A. Weiss and E. Nagel. No. 882,805; Mar. 24; Sp. p. 4600; Dr. p. 980; Gaz. vol. 133; p. 852.
Stone, Manufacturing artificial. J. Staudt. No. 882,975; Mar. 24; Sp. p. 4942; Gaz. vol. 133; p. 909.
Stool and walking-stick, Combined camp-. G. S. Sherwood. No. 883,674; Mar. 31; Sp. p. 6377; Dr. p. 1360; Gaz. vol. 133; p. 1163.
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Stop-motion. F. Ott. No. 881,144; Mar. 10; Sp. p. 1306; Dr. pp. 281–2; Gaz. vol. 133; p. 252.
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Stopper-extractor. E. Renkenberger. No. 883,492; Mar. 31; Sp. p. 5998; Dr. p. 1279; Gaz. vol. 133; p. 1106.
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Store-front construction. J. J. Burke. No. 881,807; Mar. 17; Sp. p. 2826; Dr. pp. 603–4; Gaz. vol. 133; p. 523.
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Stove-ring. G. E. Palmer. No. 881,199; Mar. 10; Sp. p. 1400; Dr. p. 303; Gaz. vol. 133; p. 268.
Stovepipe-hanger. C. W. Shepard. No. 883,673; Mar. 31; Sp. p. 6376; Dr. p. 1359; Gaz. vol. 133; p. 1163.
Stovepipe-joint. O. M. Cowles. No. 881,378; Mar. 10; Sp. p. 1782; Dr. p. 384; Gaz. vol. 133; p. 327.
Strainer for coffee-urns. G. Epstein. No. 881,564; Mar. 10; Sp. p. 2126; Dr. p. 464; Gaz. vol. 133; p. 387.
Street-indicator, Automatic. T. Tighe and C. S. Cross. No. 881,503; Mar. 10; Sp. p. 2014; Dr. p. 440; Gaz. vol. 133; p. 366.
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String instruments, Resonant box of. G. Somerville. No. 881,206; Mar. 10; Sp. p. 1414; Dr. p. 305; Gaz. vol. 133; p. 270.
Stuffing-box. F. M. Beamer. No. 882,613; Mar. 24; Sp. p. 4220; Dr. p. 894; Gaz. vol. 133; p. 790.
Stuffing-box with reversible gland. G. S. Power. No. 881,867; Mar. 10; Sp. p. 2742; Dr. p. 587; Gaz. vol. 133; p. 485.
Stump and root puller. C. Bittner. No. 881,657; Mar. 10; Sp. p. 2327; Dr. p. 504; Gaz. vol. 133; p. 418.
Submerged bodies, Apparatus for examining. D. Pépin, Sr. No. 881,148; Mar. 10; Sp. p. 1313; Dr. p. 283; Gaz. vol. 133; p. 253.
Suction-machine, Centrifugal. C. Neumann. No. 882,477; Mar. 17; Sp. p. 3933; Dr. p. 841; Gaz. vol. 133; p. 712.
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Tree-holder. F. Rauch. No. 883,235; Mar. 31; Sp. p. 5473; Dr. p. 1166; Gaz. vol. 133; p. 1024.
Trestle. W. H. Hazzard. No. 880,525; Mar. 3; Sp. p. 60; Dr. p. 14; Gaz. vol. 133; p. 14.
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Truck. S. P. Knut. No. 881,008; Mar. 3; Sp. p. 1039; Dr. p. 225; Gaz. vol. 133; p. 177.
Truck-bolster. A. S. Blanchard and H. M. Foote. No. 881,220; Mar. 10; Sp. p. 1449; Dr. p. 313; Gaz. vol. 133; p. 275.
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Truck, Electrically-operated baggage-. T. V. Buckwalter. (Reissue.) No. 12,767; Mar. 24; Sp. p. 5311; Dr. p. 1133; Gaz. vol. 133; p. 970.
Truck for harvesters, Tongue-. L. G. Johnson. No. 882,113; Mar. 17; Sp. p. 3262; Dr. pp. 693–4; Gaz. vol. 133; p. 594.
Truck-frame. J. M. Rohlfing. No. 881,721; Mar. 10; Sp. p. 2450; Dr. p. 527; Gaz. vol. 133; p. 437.
Truck, Railway-car. M. Kennedy. No. 882,642; Mar. 24; Sp. p. 4279; Dr. pp. 907–8; Gaz. vol. 133; p. 800.
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Type-writer, Shipper's. W. W. Frantz. No. 883,636; Mar. 31; Sp. p. 6291; Dr. pp. 1342–3; Gaz. vol. 133; p. 1151.
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Wheel: *See* Car-replacing wheel; Ditching-wheel; Fifth-wheel; Fly-wheel; Pleasure-wheel; Spring-wheel; Steering-wheel; Traction-wheel; Trolley-wheel; Vehicle-wheel; Wagon-wheel; Water-wheel.
Wheel. M. D. Drake. No. 881,909; Mar. 17; Sp. p. 2845; Dr. p. 607; Gaz. vol. 133; p. 527.
Wheel-assembling machine. J. R. Welch. No. 882,855; Mar. 24; Sp. p. 4707; Dr. p. 1000–1; Gaz. vol. 133; p. 869.
Wheel brake, Vehicle-. B. F. Hornsby. No. 882,759; Mar. 24; Sp. p. 4509; Dr. p. 962; Gaz. vol. 133; p. 837.
Wheel-fork. A. Kormil and F. Radloff. No. 880,543; Mar. 3; Sp. p. 95; Dr. pp. 21–2; Gaz. vol. 133; p. 20.
Wheel guards, Mud-shield for vehicle-. G. W. Dunham. No. 883,454; Mar. 31; Sp. p. 5947; Dr. p. 1268; Gaz. vol. 133; p. 1096.
Wheel mud-guard, Vehicle-. W. E. Drake. No. 882,933; Mar. 24; Sp. p. 4872; Dr. p. 1034; Gaz. vol. 133; p. 895.
Wheels, Bolt-tightener and cutter for. B. M. Nation. No. 881,140; Mar. 10; Sp. p. 1300; Dr. p. 280; Gaz. vol. 133; p. 250.
Whiffletree. G. F. Danielson. No. 882,748; Mar. 24; Sp. p. 4490; Dr. p. 956; Gaz. vol. 133; p. 834.
Whip. W. E. Wright. No. 880,951; Mar. 3; Sp. p. 935; Dr. p. 202; Gaz. vol. 133; p. 158.
Whip-socket. L. Setzer. No. 881,203; Mar. 10; Sp. p. 1406; Dr. p. 304; Gaz. vol. 133; p. 269.
Winding-machine. S. W. Wardwell. No. 881,210; Mar. 10; Sp. p. 1420; Dr. p. 307; Gaz. vol. 133; p. 271.
Winding-machine. S. W. Wardwell. No. 881,211; Mar. 10; Sp. p. 1425; Dr. p. 308; Gaz. vol. 133; p. 272.
Winding machine, Coil-. F. R. Kunkel. No. 882,253; Mar. 17; Sp. p. 3532; Dr. p. 749; Gaz. vol. 133; p. 638.
Winding-machine reel. C. W. Pilescheur. No. 881,149; Mar. 10; Sp. p. 1314; Dr. p. 284; Gaz. vol. 133; p. 254.
Winding-machine stop-motion and regulator. T. Wright. No. 880,853; Mar. 3; Sp. p. 754; Dr. p. 160; Gaz. vol. 133; p. 127.
Winding machine, Twine-. C. P. Mitchell. No. 883,116; Mar. 24; Sp. p. 5208; Dr. p. 1113–14; Gaz. vol. 133; p. 954.
Windmill. A. F. George. No. 880,518; Mar. 3; Sp. p. 49; Dr. p. 12; Gaz. vol. 133; p. 12.
Windmill. H. H. Macomber. No. 882,644; Mar. 24; Sp. p. 4284; Dr. p. 908; Gaz. vol. 133; p. 801.
Windmill. B. E. Cassell. No. 882,871; Mar. 24; Sp. p. 4741; Dr. p. 1008; Gaz. vol. 133; p. 874.
Wind-shield. J. Webster. No. 883,261; Mar. 31; Sp. p. 5527; Dr. p. 1179; Gaz. vol. 133; p. 1032.
Window. J. Emenaker. No. 883,130; Mar. 24; Sp. p. 5244; Dr. pp. 1119–20; Gaz. vol. 133; p. 958.
Window. H. J. Davison. No. 883,177; Mar. 31; Sp. p. 5347; Dr. pp. 1138–9; Gaz. vol. 133; p. 1004.
Window-box support. L. G. Quackenboss. No. 880,644; Mar. 3; Sp. p. 398; Dr. p. 86; Gaz. vol. 133; p. 71.
Window-catch, Safety. L. D. Way. No. 880,610; Mar. 3; Sp. p. 247; Dr. p. 51; Gaz. vol. 133; p. 43.
Window construction, Metal. G. H. Forsyth. No. 882,671; Mar. 24; Sp. p. 4334; Dr. p. 923; Gaz. vol. 133; p. 809.
Window-frame. J. Lang. No. 882,152; Mar. 17; Sp. p. 3327; Dr. pp. 708–9; Gaz. vol. 133; p. 605.
Window frame and sash. T. A. Hodgson. No. 881,239; Mar. 10; Sp. p. 1494; Dr. p. 321; Gaz. vol. 133; p. 282.
Window-frame, Weatherproof. W. S. Brickell. No. 881,052; Mar. 3; Sp. p. 1117; Dr. p. 242; Gaz. vol. 133; p. 191.
Window lock or latch. E. A. Marsh. No. 883,555; Mar. 31; Sp. p. 6153; Dr. p. 1308; Gaz. vol. 133; p. 1126.
Window or like screen. C. C. Armstrong. No. 881,282; Mar. 10; Sp. p. 1586; Dr. p. 339; Gaz. vol. 133; p. 296.
Window or shutter operating device. A. K. Lovell. No. 881,477; Mar. 10; Sp. p. 1969; Dr. pp. 428–9; Gaz. vol. 133; p. 358.
Window protective shield. A. Bennerscheidt. No. 881,455; Mar. 10; Sp. p. 1919; Dr. p. 418; Gaz. vol. 133; p. 350.
Window-screen. F. Burckhardt. No. 882,778; Mar. 24; Sp. p. 4536; Dr. p. 968; Gaz. vol. 133; p. 842.
Window-screen. B. C. Rockwell. No. 883,346; Mar. 31; Sp. p. 5690; Dr. p. 1215; Gaz. vol. 133; p. 1059.
Window-screen, Roller. C. J. Wallen. No. 881,507; Mar. 10; Sp. p. 2023; Dr. p. 441; Gaz. vol. 133; p. 367.

Window-ventilator. G. W. Kennedy. No. 880,536; Mar. 3; Sp. p. 84; Dr. p. 20; Gaz. vol. 133; p. 18.
Winker-blind. W. L. Buerger. No. 883,267; Mar. 31; Sp. p. 5560; Dr. p. 1190; Gaz. vol. 133; p. 1041.
Wire, Apparatus for maintaining the tension of a moving. R. E. Manley. No. 881,812; Mar. 10; Sp. p. 2615; Dr. pp. 561–2; Gaz. vol. 133; p. 466.
Wire clamp or grip. J. H. Eubank. No. 881,311; Mar. 10; Sp. p. 1641; Dr. p. 351; Gaz. vol. 133; p. 306.
Wire-feed and nail-forming device. W. Wolfe. No. 883,126; Mar. 24; Sp. p. 5238; Dr. p. 1118; Gaz. vol. 133; p. 957.
Wire-grip. J. T. Gardner. No. 881,853; Mar. 10; Sp. p. 2698; Dr. p. 578; Gaz. vol. 133; p. 460.
Wire-stretcher. J. H. Williams. No. 880,613; Mar. 3; Sp. p. 250; Dr. p. 52; Gaz. vol. 133; p. 44.
Wire-stretcher. M. A. Johnson. No. 882,149; Mar. 17; Sp. p. 3323; Dr. p. 709; Gaz. vol. 133; p. 605.
Wire-stretching tool. T. A. Scott and H. E. Crawford. No. 880,830; Mar. 3; Sp. p. 707; Dr. p. 149; Gaz. vol. 133; p. 119.
Wireless receiving instrument. F. G. Sargent. No. 883,241; Mar. 31; Sp. p. 5485; Dr. p. 1170; Gaz. vol. 133; p. 1026.
Wood-member joint. F. A. Schossow. No. 883,499; Mar. 31; Sp. p. 6014; Dr. p. 1284; Gaz. vol. 133; p. 1108.
Wood-molding machine. F. D. Green. No. 881,793; Mar. 10; Sp. p. 2575; Dr. pp. 532–3; Gaz. vol. 133; p. 459.
Wood-trimming machine. C. E. Brown and W. J. Gibbs. (Reissue.) No. 12,763; Mar. 17; Sp. p. 4086; Dr. p. 868; Gaz. vol. 133; p. 736.
Wooden structures, Hollow built-up material for. J. Hoellig and M. Lidster. No. 881,074; Mar. 3; Sp. p. 1165; Dr. p. 251; Gaz. vol. 133; p. 198.
Woven fabric, Double-faced. J. C. Earnshaw. No. 881,386; Mar. 10; Sp. p. 1791; Dr. p. 387; Gaz. vol. 133; p. 329.
Wrapper for boxes and similar articles. F. Fettback. No. 882,241; Mar. 17; Sp. p. 3510; Dr. p. 745; Gaz. vol. 133; p. 633.
Wrapper for fruits. M. E. Woodard. No. 882,134; Mar. 17; Sp. p. 3297; Dr. p. 703; Gaz. vol. 133; p. 601.
Wrapping-machine. W. R. Williams. No. 882,659; Mar. 24; Sp. p. 4310; Dr. p. 915; Gaz. vol. 133; p. 805.
Wrapping-machine feeding mechanism. A. M. Price. No. 881,084; Mar. 3; Sp. p. 1180; Dr. pp. 255–6; Gaz. vol. 133; p. 201.
Wrapping-sheet. J. W. Lambert. No. 881,011; Mar. 3; Sp. p. 1047; Dr. p. 226; Gaz. vol. 133; p. 178.
Wreck-indicator. J. St. Antoine. No. 882,974; Mar. 24; Sp. p. 4941; Dr. p. 1049; Gaz. vol. 133; p. 909.
Wrench: *See* Pipe-wrench; Ratchet-wrench; Tool-wrench.
Wrench. C. Manning. No. 881,063; Mar. 3; Sp. p. 1179; Dr. p. 255; Gaz. vol. 133; p. 201.
Wrench. H. D. Sargent. No. 881,346; Mar. 10; Sp. p. 1695; Dr. p. 366; Gaz. vol. 133; p. 316.
Wrench. F. E. Rosekelly. No. 881,620; Mar. 10; Sp. p. 2256; Dr. p. 490; Gaz. vol. 133; p. 407.
Wrench. A. C. Smith. No. 881,627; Mar. 10; Sp. p. 2271; Dr. p. 493; Gaz. vol. 133; p. 408.
Wrench. G. W. Mason. No. 881,937; Mar. 17; Sp. p. 2906; Dr. p. 620; Gaz. vol. 133; p. 537.
Wrench. J. J. Wise. No. 882,362; Mar. 17; Sp. p. 3743; Dr. p. 796; Gaz. vol. 133; p. 674.
Wrench. L. Chapman. No. 883,166; Mar. 31; Sp. p. 5327; Dr. p. 1136; Gaz. vol. 133; p. 1000.
Wrench. J. Reif, Jr. No. 883,237; Mar. 31; Sp. p. 5475; Dr. p. 1167; Gaz. vol. 133; p. 1024.
Writing a plurality of signatures or inscriptions, Means for. W. R. Woodward. No. 880,950; Mar. 3; Sp. p. 928; Dr. p. 201; Gaz. vol. 133; p. 157.
Yard-meter. W. B. Schultz. No. 883,577; Mar. 31; Sp. p. 6186; Dr. p. 1317; Gaz. vol. 133; p. 1133.
Yarn and textile goods, Machine for drying. A. N. Marr. No. 881,602; Mar. 10; Sp. p. 2203; Dr. pp. 480–1; Gaz. vol. 133; p. 400.
Yarn, Manufacturing. J. S. Butterworth. No. 882,866; Mar. 24; Sp. p. 4732; Gaz. vol. 133; p. 872.
Yoke fastening, Neck-. W. W. Long. No. 883,656; Mar. 31; Sp. p. 6345; Dr. p. 1352; Gaz. vol. 133; p. 1157.
Zinc chlorid, Making. R. R. Rust. No. 883,426; Mar. 31; Sp. p. 5884; Dr. p. 1255; Gaz. vol. 133; p. 1086.
Zinc-retort residues, Treating. G. Stolzenwald. No. 881,355; Mar. 10; Sp. p. 1723; Gaz. vol. 133; p. 319.

ALPHABETICAL LIST OF PATENTEES

TO WHOM

PATENTS WERE ISSUED DURING THE MONTH OF APRIL, 1908.

[Abbreviations: "Sp."=Monthly Volume of Specifications; "Dr."=Monthly Volume of Drawings; "Gaz."=Official Gazette.]

A. B. Dick Company. (See Brasseur, E. J., assignor.)
A. B. Farquhar Company. (See Hallock, D. Y. and D. E., assignors.)
A. G. Wheeler, Jr., trustee. (See Compton, M. D., assignor.)
Aberle, E., New York, N. Y. Reproduction of maps and the like. No. 885,418; Apr. 21; Sp. p. 3607; Dr. p. 756; Gaz. vol. 133; p. 1823.
Abrahams, N., St. Louis, Mo. Builder's level. No. 885,658; Apr. 21; Sp. p. 4086; Dr. p. 855; Gaz. vol. 133; p. 1896.
Acorn Brass Manufacturing Company. (See Sumner, A. D., assignor.)
Actiengesellschaft Brown, Boveri & Co. (See Brown, C. E. L., assignor.)
Actiengesellschaft vormals F. Martini & Cie. (See Joos, C., assignor.)
Adams, E. C., Allegheny, Pa. Measuring device. No. 886,106; Apr. 28; Sp. p. 5024; Dr. p. 1056; Gaz. vol. 133; p. 2074.
Adams, G. S., Seaville, N. J. Rake. No. 885,309; Apr. 21; Sp. p. 3381; Dr. p. 707; Gaz. vol. 133; p. 1787.
Adams, J. M., Melrose, Mass. Snap-fastener. No. 885,419; Apr. 21; Sp. p. 3609; Dr. p. 756; Gaz. vol. 133; p. 1823.
Adams, F. X. (See Layman, P. J., assignor.)
Adams, L. M., Fort Steele, British Columbia, Canada. Clothes-washing machine. No. 886,168; Apr. 28; Sp. p. 5138; Dr. p. 1080; Gaz. vol. 133; p. 2093.
Adams, T. C., Freeport, Pa. Rail-joint. No. 886,107; Apr. 28; Sp. p. 5025; Dr. p. 1056; Gaz. vol. 133; p. 2075.
Adams, W. T., assignor to Reading Hardware Company, Reading, Pa. Door-check. No. 884,789; Apr. 14; Sp. p. 2317; Dr. p. 487; Gaz. vol. 133; p. 1588.
Addie, H. G., Cresco, Iowa. Clip. No. 884,256; Apr. 7; Sp. p. 1209; Dr. p. 254; Gaz. vol. 133; p. 1383.
Addis, F., *et al.* (See Thomas, L., assignor.)
Adelson, A., Oakland, Cal. Bottle-closure. No. 884,257; Apr. 7; Sp. p. 1210; Dr. p. 254; Gaz. vol. 133; p. 1383.
Adlam, E. G., Bristol, England. Apparatus for mailing. No. 883,848; Apr. 7; Sp. p. 350; Dr. p. 70; Gaz. vol. 133; p. 1248.
Adler, H., Pittsburg, assignor to H. Adler Company, Incorporated, Carnegie, Pa. Ladder. No. 884,120; Apr. 7; Sp. p. 944; Dr. p. 198; Gaz. vol. 133; p. 1339.
Adt, L. F., *et al.* (See Becker, L. B., assignor.)
Ahlberg, A., St. Paul, Minn. Door-catch. No. 885,213; Apr. 21; Sp. p. 3193; Dr. p. 668; Gaz. vol. 133; p. 1755.
Ahlberg, J., Chicago, Ill. Temporary binder. No. 884,351; Apr. 14; Sp. p. 1387; Dr. p. 297; Gaz. vol. 133; p. 1441.
Akerman, N. A., Astoria, Oreg. Fish-trap. No. 885,311; Apr. 21; Sp. p. 3389; Dr. pp. 708–9; Gaz. vol. 133; p. 1788.
Akers, E. C., Port Huron, Mich. Steering-gear for boats. No. 885,312; Apr. 21; Sp. p. 3392; Dr. p. 709; Gaz. vol. 133; p. 1789.
Akins, R. P. (See Evans and Akins.)
Aktiengesellschaft vormals Bloesch, Schwab & Cie., Firm of. (See Leuenberger, C. A., assignor.)
Albrecht, J. H., Madison, Wis. Dirt or manure loader. No. 884,059; Apr. 7; Sp. p. 786; Dr. pp. 164–5; Gaz. vol. 133; p. 1319.
Albree, C. B., assignor to Chester B. Albree Iron Works Company, Allegheny, Pa. Pneumatic tool. No. 884,971; Apr. 14; Sp. p. 2661; Dr. pp. 565–6; Gaz. vol. 133; p. 1643.
Alden, C. M. (See Alden, W. A. and C. M.)
Alden, W. A. and C. M., Minneapolis, Minn. Rug-fastener. No. 883,771; Apr. 7; Sp. p. 179; Dr. p. 33; Gaz. vol. 133; p. 1222.
Ale, E. C., Altoona, Pa. Railway-rail joint. No. 885,561; Apr. 21; Sp. p. 3902; Dr. p. 815; Gaz. vol. 133; p. 1866.
Alexander, M. W., and W. Johnson, Lynn, Mass., assignors to General Electric Company. Fastening for buckets of turbines. No. 883,926; Apr. 7; Sp. p. 515; Dr. p. 102; Gaz. vol. 133; p. 1275.
Alexander, T. J. (See Giesler and Alexander.)
Alexander, W. (See Temperley and Alexander.)
Alexanderson, E. F. W., Schenectady, N. Y., assignor to General Electric Company. Motor control. No. 885,128; Apr. 21; Sp. p. 2999; Dr. p. 633; Gaz. vol. 133; p. 1727.
Allano, F. S., New York, N. Y. Lock. No. 885,214; Apr. 21; Sp. p. 3194; Dr. p. 668; Gaz. vol. 133; p. 1755.
Allbright, W. B., Chicago, Ill. Apparatus for reducing soap materials to powder. No. 885,708; Apr. 28; Sp. p. 4193; Dr. p. 877; Gaz. vol. 133; p. 1943.
Allen, C. C., Kansas City, Mo. Necktie-shield for collars. No. 885,129; Apr. 21; Sp. p. 3002; Dr. p. 633; Gaz. vol. 133; p. 1728.
Allen, C. M. (See Baggaley, Allen, and Lindquist.)
Allen, E. B., Elizabeth, N. J., assignor to Singer Manufacturing Company. Thread-cutting mechanism for sewing-machines. No. 885,310; Apr. 21; Sp. p. 3383; Dr. pp. 707–8; Gaz. vol. 133; p. 1788.
Allen, W. G., South Bethlehem, Pa. Sash-lock. No. 886,108; Apr. 28; Sp. p. 5026; Dr. p. 1057; Gaz. vol. 133; p. 2075.
Allis-Chalmers Company. (See Stull, E. W., assignor.)
Allis-Chalmers Company *et al.* (See Behrend, B. A., assignor.)
Allis-Chalmers Company *et al.* (See Frankenfield, B., assignor.)
Allis-Chalmers Company *et al.* (See Tatum, L. L., assignor.)
Allphin, B. B. (See Cross, J. W., assignor.)
Alt, W. A. F., Brooklyn, assignor, by mesne assignments, to American Battery Company, Cedarhurst, N. Y. Secoudary battery. No. 885,562; Apr. 21; Sp. p. 3904; Dr. p. 815; Gaz. vol. 133; p. 1867.
Althouse, C. S., Reading, Pa. Hosiery figure dyeing and extracting machine. No. 885,709; Apr. 28; Sp. p. 4194; Dr. pp. 877–8; Gaz. vol. 133; p. 1943.
Ambler, G. B., South Framingham, assignor to Draper Company, Hopedale, Mass. Warp stop-motion for looms. No. 885,130; Apr. 21; Sp. p. 3003; Dr. pp. 633–4; Gaz. vol. 133; p. 1728.
Ambler, F., and H. Wallace, Queensbury, near Bradford, England. Thread-guide for spinning-machines. No. 884,700; Apr. 14; Sp. p. 2121; Dr. p. 452; Gaz. vol. 133; p. 1557.
Amer, W. M., Madera, Cal. Automatic adjuster for fan-boxes of combined harvesters. No. 885,215; Apr. 21; Sp. p. 3199; Dr. p. 668; Gaz. vol. 133; p. 1756.
American Battery Company. (See Alt, W. A. F., assignor.)
American Battery Company. (See Carpenter, G. A., assignor.)
American Butter Cutting Machine Company. (See Stewart, R. F., assignor.)
American Clay Machinery Company. (See Callaway, E. H., assignor.)
American Coin Register Company. (See Powell and Ellis, assignors.)
American Cupped Diamond Co. (See Wennstrom, J., assignor.)
American Implement Company. (See Bricker, E. J., assignor.)
American Lacing Hook Co. (See Taft, S. E., assignor.)
American Laundry Machinery Manufacturing Company. (See Andrée, W. E., assignor.)
American Sheet & Tin Plate Company. (See Robinson, C. A., assignor.)
American Shoe Finding Company. (See Jones, L. A., assignor.)
American Shoe Finding Company. (See Waterman, B. B., assignor.)
American Steel Package Company. (See Kruse, A. T., assignor.)
American Steel & Wire Company. (See Bates, Clapp, and Booth, assignors.)
American Steel & Wire Company. (See Sprague, A. W., assignor.)
American Steel & Wire Company. (See Tängring, O., assignor.)
American Thermos Bottle Company. (See Burger, R., assignor.)
American Thermos Bottle Company. (See Henn, H., assignor.)
American Train Stop Company. (See Sedgwick, H. G., assignor.) (Reissue.)
American Typographic Corporation. (See Richards, F. H., assignor.)
American Well & Prospecting Company. (See Milliron, C., assignor.)

Window-ventilator. G. W. Kennedy. No. 880,539; Mar. 3; Sp. p. 84; Dr. p. 20; Gaz. vol. 133; p. 18.
Winker-blind. W. L. Buerger. No. 883,287; Mar. 31; Sp. p. 5560; Dr. p. 1190; Gaz. vol. 133; p. 1041.
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Wire-grip. J. T. Gardner. No. 881,883; Mar. 10; Sp. p. 2608; Dr. p. 578; Gaz. vol. 133; p. 490.
Wire-stretcher. J. H. Williams. No. 880,613; Mar. 3; Sp. p. 250; Dr. p. 52; Gaz. vol. 133; p. 44.
Wire-stretcher. M. A. Johnson. No. 882,149; Mar. 17; Sp. p. 3323; Dr. p. 709; Gaz. vol. 133; p. 005.
Wire-stretching tool. T. A. Scott and H. E. Crawford. No. 880,830; Mar. 3; Sp. p. 707; Dr. p. 149; Gaz. vol. 133; p. 119.
Wireless receiving instrument. F. G. Sargent. No. 883,241; Mar. 31; Sp. p. 5485; Dr. p. 1170; Gaz. vol. 133; p. 1026.
Wood-member joint. F. A. Schoessow. No. 883,469; Mar. 31; Sp. p. 6014; Dr. p. 1234; Gaz. vol. 133; p. 1108.
Wood-molding machine. F. D. Green. No. 881,793; Mar. 10; Sp. p. 2575; Dr. pp. 552–3; Gaz. vol. 133; p. 459.
Wood-trimming machine. C. E. Brown and W. J. Gibbs. (Reissue.) No. 12,763; Mar. 17; Sp. p. 4086; Dr. p. 866; Gaz. vol. 133; p. 736.
Wooden structures, Hollow built-up material for. J. Hoellig and M. Lidster. No. 881,074; Mar. 3; Sp. p. 1165; Dr. p. 251; Gaz. vol. 133; p. 198.
Woven fabric, Double-faced. J. C. Earnshaw. No. 881,386; Mar. 10; Sp. p. 1791; Dr. p. 387; Gaz. vol. 133; p. 329.
Wrapper for boxes and similar articles. F. Fettback. No. 882,241; Mar. 17; Sp. p. 3510; Dr. p. 745; Gaz. vol. 133; p. 633.
Wrapper for fruits. M. E. Woodard. No. 882,134; Mar. 17; Sp. p. 3297; Dr. p. 703; Gaz. vol. 133; p. 601.
Wrapping-machine. W. R. Williams. No. 882,669; Mar. 24; Sp. p. 4310; Dr. p. 915; Gaz. vol. 133; p. 805.
Wrapping-machine feeding mechanism. A. M. Price. No. 881,084; Mar. 3; Sp. p. 1180; Dr. pp. 255–6; Gaz. vol. 133; p. 201.
Wrapping-sheet. J. W. Lambert. No. 881,011; Mar. 3; Sp. p. 1047; Dr. p. 226; Gaz. vol. 133; p. 178.
Wreck-indicator. J. St. Antoine. No. 882,974; Mar. 24; Sp. p. 4941; Dr. p. 1049; Gaz. vol. 133; p. 909.
Wrench: *See* Pipe-wrench; Ratchet-wrench; Tool-wrench.
Wrench. C. Manning. No. 881,063; Mar. 3; Sp. p. 1179; Dr. p. 255; Gaz. vol. 133; p. 201.
Wrench. H. D. Sargent. No. 881,346; Mar. 10; Sp. p. 1695; Dr. p. 366; Gaz. vol. 133; p. 316.
Wrench. F. E. Rosekelly. No. 881,620; Mar. 10; Sp. p. 2256; Dr. p. 490; Gaz. vol. 133; p. 407.
Wrench. A. C. Smith. No. 881,627; Mar. 10; Sp. p. 2271; Dr. p. 493; Gaz. vol. 133; p. 408.
Wrench. G. W. Mason. No. 881,937; Mar. 17; Sp. p. 2906; Dr. p. 620; Gaz. vol. 133; p. 537.
Wrench. J. J. Wise. No. 882,362; Mar. 17; Sp. p. 3743; Dr. p. 796; Gaz. vol. 133; p. 674.
Wrench. L. Chapman. No. 883,166; Mar. 31; Sp. p. 5327; Dr. p. 1136; Gaz. vol. 133; p. 1000.
Wrench. J. Reif, Jr. No. 883,237; Mar. 31; Sp. p. 5475; Dr. p. 1167; Gaz. vol. 133; p. 1024.
Writing a plurality of signatures or inscriptions, Means for. W. R. Woodward. No. 880,950; Mar. 3; Sp. p. 928; Dr. p. 201; Gaz. vol. 133; p. 157.
Yard-meter. W. B. Schultz. No. 883,577; Mar. 31; Sp. p. 6186; Dr. p. 1317; Gaz. vol. 133; p. 1133.
Yarn and textile goods, Machine for drying. A. N. Marr. No. 881,602; Mar. 10; Sp. p. 2203; Dr. pp. 480–1; Gaz. vol. 133; p. 400.
Yarn, Manufacturing. J. S. Butterworth. No. 882,866; Mar. 24; Sp. p. 4732; Gaz. vol. 133; p. 872.
Yoke fastening, Neck-. W. W. Long. No. 883,656; Mar. 31; Sp. p. 6345; Dr. p. 1352; Gaz. vol. 133; p. 1157.
Zinc chlorid, Making. R. R. Rust. No. 883,425; Mar. 31; Sp. p. 5884; Dr. p. 1255; Gaz. vol. 133; p. 1086.
Zinc-retort residues, Treating. G. Stolzenwald. No. 881,355; Mar. 10; Sp. p. 1723; Gaz. vol. 133; p. 319.

ALPHABETICAL LIST OF PATENTEES

TO WHOM

PATENTS WERE ISSUED DURING THE MONTH OF APRIL, 1908.

[Abbreviations: "Sp."=Monthly Volume of Specifications; "Dr."=Monthly Volume of Drawings; "Gaz."=Official Gazette.]

A. B. Dick Company. (See Brasseur, E. J., assignor.)
A. B. Farquhar Company. (See Hallock, D. Y. and D. E., assignors.)
A. G. Wheeler, Jr., trustee. (See Compton, M. D., assignor.)
Aberle, E., New York, N. Y. Reproduction of maps and the like. No. 885,418; Apr. 21; Sp. p. 3607; Dr. p. 756; Gaz. vol. 133; p. 1823.
Abrahams, N., St. Louis, Mo. Builder's level. No. 885,658; Apr. 21; Sp. p. 4086; Dr. p. 855; Gaz. vol. 133; p. 1896.
Acorn Brass Manufacturing Company. (See Sumner, A. D., assignor.)
Actiengesellschaft Brown, Boveri & Co. (See Brown, C. E. L., assignor.)
Actiengesellschaft vormals F. Martini & Cie. (See Joos, C., assignor.)
Adams, E. C., Allegheny, Pa. Measuring device. No. 886,106; Apr. 28; Sp. p. 5024; Dr. p. 1056; Gaz. vol. 133; p. 2074.
Adams, G. S., Seaville, N. J. Rake. No. 885,309; Apr. 21; Sp. p. 3381; Dr. p. 707; Gaz. vol. 133; p. 1787.
Adams, J. M., Melrose, Mass. Snap-fastener. No. 885,419; Apr. 21; Sp. p. 3609; Dr. p. 756; Gaz. vol. 133; p. 1823.
Adams, F. X. (See Layman, P. J., assignor.)
Adams, L. M., Fort Steele, British Columbia, Canada. Clothes-washing machine. No. 886,168; Apr. 28; Sp. p. 5138; Dr. p. 1080; Gaz. vol. 133; p. 2093.
Adams, T. C., Freeport, Pa. Rail-joint. No. 886,107; Apr. 28; Sp. p. 5025; Dr. p. 1056; Gaz. vol. 133; p. 2075.
Adams, W. T., assignor to Reading Hardware Company, Reading, Pa. Door-check. No. 884,789; Apr. 14; Sp. p. 2317; Dr. p. 487; Gaz. vol. 133; p. 1588.
Addie, H. G., Cresco, Iowa. Clip. No. 884,256; Apr. 7; Sp. p. 1209; Dr. p. 254; Gaz. vol. 133; p. 1383.
Addis, F., *et al.* (See Thomas, L., assignor.)
Adelson, A., Oakland, Cal. Bottle-closure. No. 884,257; Apr. 7; Sp. p. 1210; Dr. p. 254; Gaz. vol. 133; p. 1383.
Adlam, E. G., Bristol, England. Apparatus for malting. No. 883,848; Apr. 7; Sp. p. 359; Dr. p. 70; Gaz. vol. 133; p. 1248.
Adler, H., Pittsburg, assignor to H. Adler Company, Incorporated, Carnegie, Pa. Ladder. No. 884,120; Apr. 7; Sp. p. 944; Dr. p. 198; Gaz. vol. 133; p. 1339.
Adt, L. F., *et al.* (See Becker, L. B., assignor.)
Ahlberg, A., St. Paul, Minn. Door-catch. No. 885,213; Apr. 21; Sp. p. 3193; Dr. p. 668; Gaz. vol. 133; p. 1755.
Ahlberg, J., Chicago, Ill. Temporary binder. No. 884,351; Apr. 14; Sp. p. 1387; Dr. p. 297; Gaz. vol. 133; p. 1441.
Akerman, N. A., Astoria, Oreg. Fish-trap. No. 885,311; Apr. 21; Sp. p. 3389; Dr. pp. 708–9; Gaz. vol. 133; p. 1788.
Akers, E. C., Port Huron, Mich. Steering-gear for boats. No. 885,312; Apr. 21; Sp. p. 3392; Dr. p. 709; Gaz. vol. 133; p. 1789.
Akins, R. F. (See Evans and Akins.)
Aktiengesellschaft vormals Bloesch, Schwab & Cie., Firm of. (See Leuenberger, C. A., assignor.)
Albrecht, J. H., Madison, Wis. Dirt or manure loader. No. 884,059; Apr. 7; Sp. p. 786; Dr. pp. 164–5; Gaz. vol. 133; p. 1319.
Albree, C. B., assignor to Chester B. Albree Iron Works Company, Allegheny, Pa. Pneumatic tool. No. 884,971; Apr. 14; Sp. p. 2661; Dr. pp. 565–6; Gaz. vol. 133; p. 1643.
Alden, C. M. (See Alden, W. A. and C. M.)
Alden, W. A. and C. M., Minneapolis, Minn. Rug-fastener. No. 883,771; Apr. 7; Sp. p. 179; Dr. p. 33; Gaz. vol. 133; p. 1222.
Ale, E. C., Altoona, Pa. Railway-rail joint. No. 885,561; Apr. 21; Sp. p. 3902; Dr. p. 815; Gaz. vol. 133; p. 1866.
Alexander, M. W., and W. Johnson, Lynn, Mass., assignors to General Electric Company. Fastening for buckets of turbines. No. 883,926; Apr. 7; Sp. p. 515; Dr. p. 102; Gaz. vol. 133; p. 1275.
Alexander, T. J. (See Giesler and Alexander.)
Alexander, W. (See Temperley and Alexander.)
Alexanderson, E. F. W., Schenectady, N. Y., assignor to General Electric Company. Motor control. No. 885,128; Apr. 21; Sp. p. 2999; Dr. p. 633; Gaz. vol. 133; p. 1727.
Aliano, F. S., New York, N. Y. Lock. No. 885,214; Apr. 21; Sp. p. 3194; Dr. p. 668; Gaz. vol. 133; p. 1755.
Allbright, W. B., Chicago, Ill. Apparatus for reducing soap materials to powder. No. 885,708; Apr. 28; Sp. p. 4193; Dr. p. 877; Gaz. vol. 133; p. 1943.
Allen, C. C., Kansas City, Mo. Necktie-shield for collars. No. 885,129; Apr. 21; Sp. p. 3002; Dr. p. 633; Gaz. vol. 133; p. 1728.
Allen, C. M. (See Baggaley, Allen, and Lindquist.)
Allen, E. B., Elizabeth, N. J., assignor to Singer Manufacturing Company. Thread-cutting mechanism for sewing-machines. No. 885,310; Apr. 21; Sp. p. 3383; Dr. pp. 707–8; Gaz. vol. 133; p. 1788.
Allen, W. G., South Bethlehem, Pa. Sash-lock. No. 886,108; Apr. 28; Sp. p. 5026; Dr. p. 1057; Gaz. vol. 133; p. 2075.
Allis-Chalmers Company. (See Stull, E. W., assignor.)
Allis-Chalmers Company *et al.* (See Behrend, B. A., assignor.)
Allis-Chalmers Company *et al.* (See Frankenfield, B., assignor.)
Allis-Chalmers Company *et al.* (See Tatum, L. L., assignor.)
Allphin, B. B. (See Cross, J. W., assignor.)
Alt, W. A. F., Brooklyn, assignor, by mesne assignments, to American Battery Company, Cedarhurst, N. Y. Secondary battery. No. 885,562; Apr. 21; Sp. p. 3904; Dr. p. 815; Gaz. vol. 133; p. 1867.
Althouse, C. S., Reading, Pa. Hosiery figure dyeing and extracting machine. No. 885,709; Apr. 28; Sp. p. 4194; Dr. pp. 877–8; Gaz. vol. 133; p. 1943.
Ambler, G. B., South Framingham, assignor to Draper Company, Hopedale, Mass. Warp stop-motion for looms. No. 885,130; Apr. 21; Sp. p. 3003; Dr. pp. 633–4; Gaz. vol. 133; p. 1728.
Ambler, F., and H. Wallace, Queensbury, near Bradford, England. Thread-guide for spinning-machines. No. 884,700; Apr. 14; Sp. p. 2121; Dr. p. 452; Gaz. vol. 133; p. 1557.
Amer, W. M., Madera, Cal. Automatic adjuster for fan-boxes of combined harvesters. No. 885,215; Apr. 21; Sp. p. 3199; Dr. p. 668; Gaz. vol. 133; p. 1756.
American Battery Company. (See Alt, W. A. F., assignor.)
American Battery Company. (See Carpenter, G. A., assignor.)
American Butter Cutting Machine Company. (See Stewart, R. F., assignor.)
American Clay Machinery Company. (See Callaway, E. H., assignor.)
American Coin Register Company. (See Powell and Ellis, assignors.)
American Cupped Diamond Co. (See Wennstrom, J., assignor.)
American Implement Company. (See Bricker, E. J., assignor.)
American Lacing Hook Co. (See Taft, S. E., assignor.)
American Laundry Machinery Manufacturing Company. (See Andrée, W. E., assignor.)
American Sheet & Tin Plate Company. (See Robinson, C. A., assignor.)
American Shoe Finding Company. (See Jones, L. A., assignor.)
American Shoe Finding Company. (See Waterman, B. B., assignor.)
American Steel Package Company. (See Kruse, A. T., assignor.)
American Steel & Wire Company. (See Bates, Clapp, and Booth, assignors.)
American Steel & Wire Company. (See Sprague, A. W., assignor.)
American Steel & Wire Company. (See Tangring, O., assignor.)
American Thermos Bottle Company. (See Burger, R., assignor.)
American Thermos Bottle Company. (See Henn, H., assignor.)
American Train Stop Company. (See Sedgwick, H. G., assignor.) (Reissue.)
American Typographic Corporation. (See Richards, F. H., assignor.)
American Well & Prospecting Company. (See Milliron, C., assignor.)

Ames, J., assignor of one-half to E. Leech, Montrose, Iowa. Means for establishing electrical communication with moving trains. No. 886,169; Apr. 28; Sp. p. 5139; Dr. p. 1081; Gaz. vol. 133; p. 2094.
Amet, E. H., assignor to International Amet Company, Phœnix, Ariz. Producing gas. No. 885,903; Apr. 28; Sp. p. 4586; Dr. p. 962; Gaz. vol. 133; p. 2007.
Amet, E. H., assignor to International Amet Company, Phœnix, Ariz. Apparatus for producing gas. No. 885,904; Apr. 28; Sp. p. 4590; Dr. p. 962; Gaz. vol. 133; p. 2008.
Amet, E. H., assignor to International Amet Company, Phœnix, Ariz. Gas apparatus. No. 886,311; Apr. 28; Sp. p. 5411; Dr. p. 1136; Gaz. vol. 133; p. 2145.
Amundsen, K., *et al.* (See Elgen, M. P., assignor.)
Anderson, C. P., Brown Valley, Minn. Weed-destroyer. No. 885,825; Apr. 28; Sp. p. 4441; Dr. pp. 933–4; Gaz. vol. 133; p. 1982.
Anderson, G. A., assignor to Gleser Manufacturing Company, Waynesboro, Pa. Plow. No. 885,563; Apr. 21; Sp. p. 3905; Dr. pp. 815–16; Gaz. vol. 133; p. 1867.
Anderson, G. C., Springfield, Ill. Card system. No. 885,826; Apr. 28; Sp. p. 4443; Dr. p. 934; Gaz. vol. 133; p. 1982.
Anderson, J., Westfield, and H. Torjesen, Garwood, N. J. Convertible chair. No. 884,060; Apr. 7; Sp. p. 788; Dr. pp. 165–6; Gaz. vol. 133; p. 1319.
Anderson, J., Cleburne, Tex. Mail-bag catcher and deliverer. No. 885,216; Apr. 21; Sp. p. 3200; Dr. pp. 668–9; Gaz. vol. 133; p. 1756.
Anderson, J. A. E., Chicago, Ill. Ice-creeper. No. 885,827; Apr. 28; Sp. p. 4446; Dr. p. 934; Gaz. vol. 133; p. 1983.
Anderson, J. E. (See Wallen, A. B., assignor.)
Anderson, J. G., Rockhill, S. C. Hanger for vehicle-bodies. No. 885,659; Apr. 21; Sp. p. 4087; Dr. p. 855; Gaz. vol. 133; p. 1897.
Anderson, N. M., assignor of two-thirds to S. M. Hokom and P. A. Norborg, Galva, Ill. Corn gathering and husking machine. No. 884,308; Apr. 7; Sp. p. 1285; Dr. pp. 272–3; Gaz. vol. 133; p. 1398.
Andrée, W. E., Chicago, Ill., assignor, by mesne assignments, to American Laundry Machinery Manufacturing Company. Ironing-machine. No. 886,028; Apr. 28; Sp. p. 4874; Dr. p. 1026; Gaz. vol. 133; p. 2050.
Andrew, W. K., Milwaukee, Wis., assignor to International Harvester Company. Oil-pump for explosive-engines. No. 883,849; Apr. 7; Sp. p. 361; Dr. p. 70; Gaz. vol. 133; p. 1248.
Andrews, F. E., assignor of one-half to G. Mutscheler, Springfield, Mo. Churn. No. 884,452; Apr. 14; Sp. p. 1586; Dr. p. 342; Gaz. vol. 133; p. 1476.
Andrews, P. I., Kennebunk, Me. Buckle. No. 886,029; Apr. 28; Sp. p. 4876; Dr. p. 1027; Gaz. vol. 133; p. 2050.
Andrews, P. I., Kennebunk, Me. Buckle. No. 886,029; Apr. 28; Sp. p. 4876; Dr. p. 1027; Gaz. vol. 133; p. 2050.
Ansell, G. S., Berkley, Va. Writing-tablet. No. 885,420; Apr. 21; Sp. p. 3610; Dr. p. 757; Gaz. vol. 133; p. 1823.
Apgar, G., White House Station, N. J. Hydraulic jack. No. 884,884; Apr. 14; Sp. p. 2488; Dr. p. 525; Gaz. vol. 133; p. 1617.
Aplin, B. F., Texola, assignor of one-half to H. L. Cathey, Erick, Okla. Combined harrow and plow. No. 884,348; Apr. 7; Sp. p. 1368; Dr. p. 292; Gaz. vol. 133; p. 1411.
Apold, F., Philadelphia, Pa. Automatic electric alarm for beds to be occupied by patients, such as hospital-beds. No. 884,121; Apr. 7; Sp. p. 947; Dr. p. 198; Gaz. vol. 133; p. 1339.
Appler, A. B., *et al.* (See Willis, C. A., assignor.)
Aptekman, L., London, England. Apparatus for making cigarettes. No. 885,421; Apr. 21; Sp. p. 3611; Dr. p. 757; Gaz. vol. 133; p. 1823.
Arbat, J., New York, N. Y. Target. No. 884,972; Apr. 14; Sp. p. 2062; Dr. p. 566; Gaz. vol. 133; p. 1643.
Armstrong, C. D. (See Duffy and Irwin, assignors.)
Armstrong, C. G., Chicago, Ill., assignor to Automatic Heating Company, Jersey City, N. J. Heating device. No. 885,683; Apr. 21; Sp. p. 4132; Dr. p. 865; Gaz. vol. 133; p. 1905.
Armstrong, E. P., Portland, Oreg. Device for shaping swaged saw-teeth. No. 884,061; Apr. 7; Sp. p. 790; Dr. p. 166; Gaz. vol. 133; p. 1319.
Armstrong, J., Toronto, Ontario, Canada. Coffee-pot. No. 883,927; Apr. 7; Sp. p. 517; Dr. p. 102; Gaz. vol. 133; p. 1275.
Armstrong, W. D., Abingdon, Ill. Animal-trap. No. 883,772; Apr. 7; Sp. p. 180; Dr. p. 33; Gaz. vol. 133; p. 1222.
Arnesen, A., Des Moines, Iowa. Animal-trap. No. 884,453; Apr. 14; Sp. p. 1587; Dr. p. 342; Gaz. vol. 133; p. 1476.
Arnold, F. H., Reading, Pa. Safety-razor. No. 885,422; Apr. 21; Sp. p. 3612; Dr. p. 757; Gaz. vol. 133; p. 1824.
Arnold, H. A., Lake Geneva, Wis. Compost-spreader. No. 885,217; Apr. 21; Sp. p. 3202; Dr. p. 669; Gaz. vol. 133; p. 1757.
Art Metal Construction Company. (See Ekedahl and Sampson, assignors.)
Art Metal Construction Company. (See Ripson and Sampson, assignors.)
Ashley, D., Paterson, N. J. Apparatus for lustering skeins. No. 885,968; Apr. 28; Sp. p. 4749; Dr. pp. 997–8; Gaz. vol. 133; p. 2031.
Ashmore, F. F., Ottawa, Kans. Hydraulic jack. No. 883,773; Apr. 7; Sp. p. 181; Dr. p. 33; Gaz. vol. 133; p. 1223.
Aslakson, B. M., Salem, Ohio. Two-cycle explosion-motor. No. 885,313; Apr. 21; Sp. p. 3398; Dr. p. 710; Gaz. vol. 133; p. 1789.
Atkins, J. B. (See McCain, W. O., assignor.)
Atterbury, J. C., and C. La Plant, Madison; said La Plant assignor of one-fourth to J. W. Baker, Monroe county, Mo. Planter. No. 884,790; Apr. 14; Sp. p. 2318; Dr. p. 487; Gaz. vol. 133; p. 1588.
Atwood, E. W. (See Du Boise and Perry, assignors.)
Aubuchon, W. N., St. Louis, Mo. Display-receptacle. No. 883,850; Apr. 7; Sp. p. 362; Dr. pp. 70–1; Gaz. vol. 133; p. 1249.
Aumund, J. (See Karasek and Aumund.)
Austin Manufacturing Company. (See Bunnell, M. G., assignor.)
Austin Manufacturing Company. (See De Wind and Jones, assignors.)
Auto Stopper Company. (See Hicks, J. A., assignor.)
Autocoil Company. (See Varley, R., assignor.)
Automatic Boiler Cleaner Company. (See Gray, I. C., assignor.)
Automatic Electric Company. (See Erickson, C. J., assignor.)
Automatic Heating Company. (See Armstrong, C. G., assignor.)
Automatic Ventilator Company. (See Taylor, R., assignor.)
Autopiano Company. (See Danquard, T., assignor.)
Avansino, J., Pleasant Valley, Cal. Device for marking patterns. No. 886,170; Apr. 28; Sp. p. 5140; Dr. p. 1081; Gaz. vol. 133; p. 2094.
Averell, S. G. (See Griswold and Averell.)
Averell, S. G., New York, N. Y. Carburetor. No. 885,905; Apr. 28; Sp. p. 4593; Dr. pp. 962–3; Gaz. vol. 133; p. 2008.
Avery, F. C., Harvey, Ill. Power-transmission device for motor-vehicles. No. 883,774; Apr. 7; Sp. p. 182; Dr. p. 34; Gaz. vol. 133; p. 1223.
Ayer, A. E., Chelsea, assignor to R. L. Vose, Brookline, Mass. Machine for trimming the edges of boots and shoes. No. 883,684; Apr. 7; Sp. p. 1; Dr. p. 1; Gaz. vol. 133; p. 1195.
Ayer, J. I., Cambridge, assignor to Simplex Electric Heating Company, Boston, Mass. Automatic indicator or thermoscopic signal for heated tools and vessels. No. 884,973; Apr. 14; Sp. p. 2666; Dr. p. 567; Gaz. vol. 133; p. 1644.
Aymond, F. L. (See De Witt, C. C., assignor.)
B. F. Goodrich Company. (See Shaw, E. C., assignor.)
Babcock, W. I. (See Penton, H., assignor.)
Bach, C. H., Brooks, Minn. Composition for matches and stoppers. No. 884,885; Apr. 14; Sp. p. 2490; Gaz. vol. 133; p. 1617.
Backes, W. O., Independence, Kans. Wire-reel. No. 884,974; Apr. 14; Sp. p. 2668; Dr. p. 567; Gaz. vol. 133; p. 1644.
Badger Brass Manufacturing Company. (See Welles, R. H., assignor.) (Reissue.)
Badische Anilin & Soda Fabrik. (See Bazlen, M., assignor.)
Badische Anilin & Soda Fabrik. (See Becker, F., assignor.)
Badische Anilin and Soda Fabrik. (See Boner, J. H., assignor.)
Baer, J. H. (See Davis and Baer.)
Baer, J. K. (See Emrick and Baer.)
Baggaley, R., Pittsburg, Pa., C. A. Allen, Lo Lo, Mont., and E. W. Lindquist, Chicago, Ill.; said Allen and Lindquist assignors to said Baggaley. Smelting converter and forehearth. No. 886,030; Apr. 28; Sp. p. 4876; Dr. pp. 1027–8; Gaz. vol. 133; p. 2050.
Bailey, E., Leiters Ford, Ind. Sewing-chair. No. 884,554; Apr. 14; Sp. p. 1794; Dr. p. 386; Gaz. vol. 133; p. 1509.
Bailey, T. S., and F. T. Cable, Quincy, Mass., assignors to Electric Boat Company, New York, N. Y. Ignition mechanism for internal-combustion engines. No. 883,851; Apr. 7; Sp. p. 364; Dr. p. 71; Gaz. vol. 133; p. 1249.
Bailey, W. S. (See Woodward, A., assignor.)
Balner, J. M., Marysville, Ohio. Copy-holder. No. 884,886; Apr. 14; Sp. p. 2491; Dr. p. 525; Gaz. vol. 133; p. 1617.
Baird, E. P., Evanston, assignor to Baird Manufacturing Company, Chicago, Ill. Toll telephone system. No. 886,031; Apr. 28; Sp. p. 4882; Dr. pp. 1028–9; Gaz. vol. 133; p. 2051.
Baird Machine Company. (See Warner, C. L., assignor.)
Baird Manufacturing Company. (See Baird, E. P., assignor.)
Baker, C. W., Waverly township, Van Buren county, Mich. Pliers. No. 885,969; Apr. 28; Sp. p. 4751; Dr. p. 998; Gaz. vol. 133; p. 2031.
Baker, F., Sparta, Ky. Weed-cutter and cultivator. No. 884,258; Apr. 7; Sp. p. 1212; Dr. p. 254; Gaz. vol. 133; p. 1384.
Baker, J. W. (See Atterbury and La Plant, assignors.)
Baker, W. H., assignor of three-fifths to J. Peterson, Lockport, N. Y. Machine for forming fiber articles. No. 885,131; Apr. 21; Sp. p. 3006; Dr. p. 634; Gaz. vol. 133; p. 1728.
Bakersfield Iron Works. (See Willard, A. G., assignor.)
Baldwin, H., Chicago, Ill. Phonograph-reproducer. No. 884,062; Apr. 7; Sp. p. 793; Dr. p. 167; Gaz. vol. 133; p. 1320.

Baldwin, W. C. P., Holyoke, Mass. Combined butcher's apron and frock. No. 884,063; Apr. 7; Sp. p. 793; Dr. p. 167; Gaz. vol. 133; p. 1320.
Ball, A. W. (See Seymour and Ball.)
Ball, F. O., North Plainfield, N. J. Engine. No. 885,132; Apr. 21; Sp. p. 3010; Dr. p. 635; Gaz. vol. 133; p. 1729.
Ball, F. O., North Plainfield, N. J. Field-adjusting device for electric generators and motors. No. 886,109; Apr. 28; Sp. p. 5028; Dr. p. 1057; Gaz. vol. 133; p. 2075.
Ballin, F. A., Portland, Oreg. Boiler. No. 883,852; Apr. 7; Sp. p. 365; Dr. p. 71; Gaz. vol. 133; p. 1250.
Banner Rock Products Company. (See Booth, N., assignor.)
Banta, L. A., Ligonier, Ind. Refrigerator. No. 885,660; Apr. 21; Sp. p. 4088; Dr. p. 855; Gaz. vol. 133; p. 1897.
Barber, J. C., Chicago, Ill. Roller-bearing center-plate. No. 885,133; Apr. 21; Sp. p. 3012; Dr. p. 635; Gaz. vol. 133; p. 1729.
Barceloux, L., St. Guillaume Station, Quebec, Canada. Track-gage. No. 883,685; Apr. 7; Sp. p. 3; Dr. p. 1; Gaz. vol. 133; p. 1195.
Barekman, C. M., Vincennes, Ind. Sorghum-stripper. No. 885,314; Apr. 21; Sp. p. 3401; Dr. p. 711; Gaz. vol. 133; p. 1789.
Barker, A. (See Barker, J., A., and J. P.)
Barker, I., assignor of one-half to A. Booth, Springfield, Ill. Nut-lock. No. 884,349; Apr. 7; Sp. p. 1370; Dr. p. 293; Gaz. vol. 133; p. 1412.
Barker, J., A., and J. P., Philadelphia, Pa. Hydraulic elevator for chairs. No. 885,564; Apr. 21; Sp. p. 3908; Dr. pp. 816–17; Gaz. vol. 133; p. 1867.
Barker, J. E., Great Horton, Bradford, England. Variable-speed gear. No. 885,710; Apr. 28; Sp. p. 4196; Dr. p. 878; Gaz. vol. 133; p. 1943.
Barker, J. P. (See Barker, J., A., and J. P.)
Barlow, D. A., Orange, Conn. Electric gas-lighting machine. No. 885,134; Apr. 21; Sp. p. 3013; Dr. p. 635; Gaz. vol. 133; p. 1729.
Barna, J. W., Chicago, Ill. Shoe-fastener. No. 884,454; Apr. 14; Sp. p. 1588; Dr. p. 343; Gaz. vol. 133; p. 1476.
Barnes, E. E., Kansas City, Mo. Rotary explosive-engine. No. 885,006; Apr. 21; Sp. p. 2725; Dr. pp. 578–9; Gaz. vol. 133; p. 1687.
Barnes, F. S., Suffern, N. Y. Bottle. No. 885,661; Apr. 21; Sp. p. 4089; Dr. p. 855; Gaz. vol. 133; p. 1897.
Barnes, J., Portvue, Pa., assignor of two-thirds to H. Woods and C. Zimmerman, Steubenville, Ohio. Water-cooled reversing-valve. No. 886,285; Apr. 28; Sp. p. 5355; Dr. p. 1126; Gaz. vol. 133; p. 2134.
Barnett, J. S., Dallas, Tex. Cotton-chopper. No. 885,315; Apr. 21; Sp. p. 3404; Dr. p. 711; Gaz. vol. 133; p. 1790.
Barnett, M. J., San Francisco, Cal., assignor, by mesne assignments, to Whitson Autopress Company. Mechanism for raising and lowering platens of printing-presses. No. 883,853; Apr. 7; Sp. p. 368; Dr. p. 71; Gaz. vol. 133; p. 1250.
Barney, F. P., Chartley, assignor of one-half to C. D. Lyons, Mansfield, Mass. Separable cuff link-button. No. 885,135; Apr. 21; Sp. p. 3014; Dr. p. 636; Gaz. vol. 133; p. 1729.
Barnhart, J. H., Empire, Ohio. Rail-joint. No. 885,423; Apr. 21; Sp. p. 3613; Dr. p. 758; Gaz. vol. 133; p. 1824.
Barnum, T. E., and H. H. Cutler, assignors to Cutler-Hammer Mfg. Co., Milwaukee, Wis. Controller for electric motors. No. 884,002; Apr. 7; Sp. p. 676; Dr. p. 136; Gaz. vol. 133; p. 1300.
Barr, S. U., assignor to Wm. H. Jackson Company, New York, N. Y. Hanger for edgewise-movable doors. No. 885,970; Apr. 28; Sp. p. 4753; Dr. pp. 998–9; Gaz. vol. 133; p. 2032.
Barrett, W., Waltham, Mass. Exerciser. No. 886,032; Apr. 28; Sp. p. 4895; Dr. p. 1029; Gaz. vol. 133; p. 2051.
Barricklow, J. E. See Dwiggins, A. P., assignor.)
Barrie, W. E. (See Ogle and Barrie.)
Barron, W. F., Jacksonburg, W. Va. Pipe-gripper. No. 886,171; Apr. 28; Sp. p. 5141; Dr. p. 1081; Gaz. vol. 133; p. 2094.
Barry, C. E., Schenectady, N. Y., assignor to General Electric Company. Regulation of dynamo-electric machines. No. 884,555; Apr. 14; Sp. p. 1794; Dr. p. 386; Gaz. vol. 133; p. 1509.
Barry, M. H. (See Lowe, F., assignor.)
Barry, T. D. (See Hadsell, D. H., assignor.)
Bartlett, K. W., Chicago, Ill. Water-softening apparatus. No. 885,828; Apr. 28; Sp. p. 4447; Dr. p. 934; Gaz. vol. 133; p. 1983.
Barton, T. (See McGhie, T. B., assignor.)
Barton, T. E., Washington, D. C. Handle and fastener for fuel and other boxes. No. 884,003; Apr. 7; Sp. p. 680; Dr. p. 136; Gaz. vol. 133; p. 1300.
Bassler, E. M., Chicago, Ill. Dam. No. 885,218; Apr. 21; Sp. p. 3205; Dr. p. 669; Gaz. vol. 133; p. 1757.
Bastle, P. H. (See Moy and Bastle.)
Batchelder, A. F., Schenectady, N. Y., assignor to General Electric Company. Valve for air-compressors. No. 883,928; Apr. 7; Sp. p. 518; Dr. p. 103; Gaz. vol. 133; p. 1275.
Bates, D. N., S. E. Clapp, and L. E. Booth, Worcester, Mass., assignors to American Steel & Wire Company, Chicago, Ill. Stake-tie for railway-cars. No. 884,122; Apr. 7; Sp. p. 949; Dr. p. 199; Gaz. vol. 133; p. 1339.
Bates, H., Menands, N. Y. Time-controlled coin-operated locking device for type-writer machines. No. 883,854; Apr. 7; Sp. p. 370; Dr. p. 72; Gaz. vol. 133; p. 1250.
Batten, E., Kirkcaldy, Scotland. Pressing machinery for use in the manufacture of lulaid linoleum. No. 885,565; Apr. 21; Sp. p. 3912; Dr. p. 817; Gaz. vol. 133; p. 1868.
Bauer, A. F., Philadelphia, Pa. Trolley pole and head. No. 884,630; Apr. 14; Sp. p. 1945; Dr. p. 418; Gaz. vol. 133; p. 1533.
Bauer, G. A., Springfield, Ohio. Rotary cutter. No. 884,556; Apr. 14; Sp. p. 1796; Dr. p. 386; Gaz. vol. 133; p. 1509.
Baughman, A. C., Griswold, Iowa. Corn-husking implement. No. 886,033; Apr. 28; Sp. p. 4896; Dr. p. 1029; Gaz. vol. 133; p. 2051.
Baxter, E. F., Seattle, Wash. Jar-cover. No. 884,791; Apr. 14; Sp. p. 2319; Dr. p. 487; Gaz. vol. 133; p. 1588.
Baxter, S. J., Wamego, Kans. Car-chair. No. 883,929; Apr. 7; Sp. p. 521; Dr. p. 103; Gaz. vol. 133; p. 1275.
Bay State Metal Wheel Company. (See Turner, O. N., assignor.)
Bayne, E. D. C., and L. A. Subers, Cleveland, Ohio. Fabric. No. 883,219; Apr. 21; Sp. p. 3207; Dr. p. 670; Gaz. vol. 133; p. 1757.
Bayne, E. D. C., and L. A. Subers, Cleveland, Ohio. Machine for winding and placing under pressure a thread coated with non-fibrous and adhesive material. No. 885,220; Apr. 21; Sp. p. 3210; Dr. p. 670; Gaz. vol. 133; p. 1758.
Bazlen, M., assignor to Badische Anilin & Soda Fabrik, Ludwigshafen-on-the-Rhine, Germany. Production of aldehyde sulfoxylates. No. 885,566; Apr. 21; Sp. p. 3913; Gaz. vol. 133; p. 1868.
Beach, F. H. and F. S., Charlotte, Mich. Road-drag. No. 884,352; Apr. 14; Sp. p. 1389; Dr. p. 297; Gaz. vol. 133; p. 1441.
Beach, F. S. (See Beach, F. H. and F. S.)
Beachum, A. E., Polkton, N. C. Telephone-transmitter. No. 885,007; Apr. 21; Sp. p. 2731; Dr. p. 580; Gaz. vol. 133; p. 1688.
Bean, C. E., Garnett, Kans. Washing-machine. No. 884,064; Apr. 7; Sp. p. 794; Dr. p. 167; Gaz. vol. 133; p. 1320.
Beard, C. R. (See Davidson and Beard.)
Beard, E. M. and G. A., Baltimore, Md. Passenger-register for street-cars. No. 884,557; Apr. 14; Sp. p. 1798; Dr. p. 387; Gaz. vol. 133; p. 1510.
Beard, F. L., Mingo, W. Va. Securing device. No. 885,008; Apr. 21; Sp. p. 2733; Dr. p. 580; Gaz. vol. 133; p. 1688.
Beard, G. A. (See Beard, E. M. and G. A.)
Beatty, R. J., trustee. (See Gray, A. S., assignor.)
Beauchemin, A. (See Jutras, E., assignor.)
Beaumont, F., Jr., Argentine, Kans. Toy. No. 884,259; Apr. 7; Sp. p. 1213; Dr. p. 255; Gaz. vol. 133; p. 1384.
Bechman, H. F., assignor to Duplex Printing Press Company, Battle Creek, Mich. Printing-press. No. 884,123; Apr. 7; Sp. p. 949; Dr. p. 199; Gaz. vol. 133; p. 1340.
Bechtold, W. S., Newark, N. J. Puff-comb. No. 886,034; Apr. 28; Sp. p. 4897; Dr. pp. 1029–30; Gaz. vol. 133; p. 2051.
Beck Flaming Lamp Company. (See Beck, H., assignor.)
Beck, H., Frankfort-on-the-Main, Germany, assignor to Beck Flaming Lamp Company, Canton, N. Y. Electric-arc lamp. No. 885,906; Apr. 28; Sp. p. 4595; Dr. p. 963; Gaz. vol. 133; p. 2008.
Beck, H. U. (See Veronneau, L. H., dit Vernon, assignor.)
Becker, F. (See Dahn and Becker, assignors.)
Becker, F., Prague, Austria-Hungary, assignor to Badische Anilin & Soda Fabrik, Ludwigshafen-on-the-Rhine, Germany. Production of aldehyde sulfoxylates. No. 885,567; Apr. 21; Sp. p. 3916; Gaz. vol. 133; p. 1868.
Becker, L. B., New York, assignor to L. F. Adt, Albany, and E. Kirstein Sons Company, Rochester, N. Y. Eyeglasses. No. 885,829; Apr. 28; Sp. p. 4452; Dr. p. 935; Gaz. vol. 133; p. 1983.
Beckerdite, L. E. (See Blanck and Beckerdite.)
Beckwith, R. H., Sparta, Mich. Bean-puller. No. 884,887; Apr. 14; Sp. p. 2492; Dr. pp. 525–6; Gaz. vol. 133; p. 1618.
Beebe, L. C., Hamilton, N. Y. Cattle-stanchion. No. 885,711; Apr. 28; Sp. p. 4197; Dr. p. 878; Gaz. vol. 133; p. 1944.
Beeson, S. W., Buffalo, N. Y. Door-hanger. No. 883,775; Apr. 7; Sp. p. 184; Dr. p. 34; Gaz. vol. 133; p. 1223.
Behlen, C. A., assignor to Durham Buggy Company, Durham, N. C. Side-spring vehicle-gear. No. 883,686; Apr. 7; Sp. p. 6; Dr. p. 2; Gaz. vol. 133; p. 1196.
Behrend, B. A., Norwood, Ohio, assignor to Allis-Chalmers Company and Bullock Electric Manufacturing Company. Induction-motor. No. 885,009; Apr. 21; Sp. p. 2734; Dr. p. 580; Gaz. vol. 133; p. 1688.
Behrend, B. A., Norwood, Ohio, assignor to Allis-Chalmers Company and Bullock Electric Manufacturing Company. Direct-current turbo-generator. No. 886,035; Apr. 28; Sp. p. 4898; Dr. p. 1030; Gaz. vol. 133; p. 2052.
Beier, O. R., Oelde, Germany. Washing-machine. No. 883,776; Apr. 7; Sp. p. 185; Dr. p. 34; Gaz. vol. 133; p. 1223.
Bell, A. R., Scarborough, England. Closure device for jars, bottles, and the like. No. 885,424; Apr. 21; Sp. p. 3614; Dr. p. 758; Gaz. vol. 133; p. 1824.
Bell, I. A., Cedar Rapids, Iowa. Camera. No. 885,010; Apr. 21; Sp. p. 2735; Dr. pp. 580–1; Gaz. vol. 133; p. 1688.

Bellows, A. P., Portersville, Cal. Squirrel-exterminator. No. 884,888; Apr. 14; Sp. p. 2493; Dr. p. 526; Gaz. vol. 133; p. 1618.
Beman, H. C., Meadville, Pa. Dust-absorbing compound and making same. No. 884,558; Apr. 14; Sp. p. 1799; Gaz. vol. 133; p. 1510.
Bender, H. F., Harpster, Ohio. Rail-fastener. No. 885,712; Apr. 28; Sp. p. 4199; Dr. p. 878; Gaz. vol. 133; p. 1944.
Bendien, A., Almelo, Netherlands. Automatic machine for folding cloth and the like. No. 883,667; Apr. 7; Sp. p. 7; Dr. pp. 2–3; Gaz. vol. 133; p. 1196.
Benjamin Electric Manufacturing Company. (See Benjamin, R. B., assignor.)
Benjamin, G. H. (See Finck, W. C., assignor.)
Benjamin, J. E., Rochester, N. Y. Recording-desk and cash-holder. No. 885,713; Apr. 28; Sp. p. 4199; Dr. p. 879; Gaz. vol. 133; p. 1944.
Benjamin, R. B., assignor to Benjamin Electric Manufacturing Company, Chicago, Ill. Cluster-lamp socket. No. 883 777; Apr. 7; Sp. p. 187; Dr. p. 35; Gaz. vol. 133; p. 1224.
Bennerscheidt, A., San Francisco, Cal. Sash-lock and antirattler. No. 885,568; Apr. 21; Sp. p. 3917; Dr. p. 817; Gaz. vol. 133; p. 1868.
Bennett, A., Buffalo, N. Y. Non-refillable bottle. No. 885,425; Apr. 21; Sp. p. 3615; Dr. p. 758; Gaz. vol. 133; p. 1825.
Bennett, A. E. G., Fitzroy, and W. R. Findlay, St. Kilda, Victoria, Australia. Hingeable cuff attachment for shirts and the like. No. 885,971; Apr. 28; Sp. p. 4756; Dr. p. 999; Gaz. vol. 133; p. 2032.
Bennett, G. S., San Francisco, Cal. Steam-blast gas-burner. No. 885,972; Apr. 28; Sp. p. 4757; Dr. p. 999; Gaz. vol. 133; p. 2032.
Bennett, R. F., Portland, Me. Pile-driving machine. No. 884,631; Apr. 14; Sp. p. 1947; Dr. p. 418; Gaz. vol. 133; p. 1533.
Bennett, W. H., assignor to S. Wile, Rochester, N. Y. Work-clamp. No. 884,004; Apr. 7; Sp. p. 681; Dr. p. 137; Gaz. vol. 133; p. 1301.
Benton, A., and C. D. Jordan, Monticello, Ga. Planter. No. 885,136; Apr. 21; Sp. p. 3016; Dr. p. 636; Gaz. vol. 133; p. 1730.
Bergens, W. J., Pittsburg, Pa. Automatic vacuum cleaning apparatus. No. 885,011; Apr. 21; Sp. p. 2737; Dr. p. 581; Gaz. vol. 133; p. 1689.
Bergman, E. P., Concordia, Kans. Car-step. No. 884,889; Apr. 14; Sp. p. 2494; Dr. p. 526; Gaz. vol. 133; p. 1618.
Bergquist, A. E., Lindstrom, Minn. Strawberry-picker. No. 885,569; Apr. 21; Sp. p. 3918; Dr. p. 818; Gaz. vol. 133; p. 1869.
Bergquist, A. E., Lindstrom, Minn. Door-opener. No. 885,570; Apr. 21; Sp. p. 3919; Dr. p. 818; Gaz. vol. 133; p. 1869.
Bergthell and Young. (See Young, H. H., assignor.)
Berlin Machine Works. (See Ross, H. B., assignor.)
Bernardin, A. L., Evansville, Ind. Bottle-top. No. 885,571; Apr. 21; Sp. p. 3920; Dr. p. 818; Gaz. vol. 133; p. 1869.
Bernhardi Sohn G. E. Draenert, Firm of Dr. (See Wernicke, P., assignor.)
Bernheim, E. P., Louisville, Ky. Combined shipping-tag and stamp-protector. No. 885,316; Apr. 21; Sp. p. 3405; Dr. p. 711; Gaz. vol. 133; p. 1790.
Berry, A. L., Portland, Me. Paint. No. 885,973; Apr. 28; Sp. p. 4758; Gaz. vol. 133; p. 2033.
Berry, H. H., Enfield, England. Electric switch. No. 884,353; Apr. 14; Sp. p. 1390; Dr. p. 297; Gaz. vol. 133; p. 1441.
Berry, I. G., Madison, assignor, by mesne assignments, to J. I. Case Threshing Machine Company, Racine, Wis. Self-feeding device. No. 885,714; Apr. 28; Sp. p. 4203; Dr. p. 879; Gaz. vol. 133; p. 1944.
Bertrand, J. T., Isle Verte, Quebec, Canada. Marine concrete construction. No. 884,354; Apr. 14; Sp. p. 1391; Dr. p. 298; Gaz. vol. 133; p. 1442.
Best Manufacturing Company. (See Jones, D. G., assignor.)
Betts, L. F., New York, assignor of one-half to H. B. Gilmore and J. A. Kennedy, Brooklyn, N. Y. Manufacturing sheet-metal receptacles. No. 885,572; Apr. 21; Sp. p. 3921; Dr. p. 818; Gaz. vol. 133; p. 1870.
Bevans, J. W., Garrett Park, Md. Educational device. No. 886,172; Apr. 28; Sp. p. 5143; Dr. p. 1062; Gaz. vol. 133; p. 2095.
Bigler, F. R., Kansas City, Mo. Heat-deflector. No. 884,309; Apr. 7; Sp. p. 1288; Dr. p. 273; Gaz. vol. 133; p. 1398.
Billingsley, E. A., *et al.* (See Stewart, S., assignor.)
Binder, G., assignor to Kentucky Gear and Machine Company, Louisville, Ky. Sawing-machine. No. 886,173; Apr. 28; Sp. p. 5144; Dr. p. 1062; Gaz. vol. 133; p. 2095.
Binder, G., assignor to Kentucky Gear and Machine Company, Louisville, Ky. Carriage-feed for sawing-machines. No. 886,174; Apr. 28; Sp. p. 5147; Dr. p. 1063; Gaz. vol. 133; p. 2095.
Bingham, G. W., New York, N. Y. Spangle-machine. No. 885,012; Apr. 21; Sp. p. 2740; Dr. p. 582; Gaz. vol. 133; p. 1689.
Birch, J. H. (See Birch, J. H. and J. H.)
Birch, J. H. and J. H., Crawfordsville, Ind. Gas-engine. No. 883,688; Apr. 7; Sp. p. 10; Dr. p. 3; Gaz. vol. 133; p. 1196.
Birchwood, C. W. (See McBean and Birchwood.)
Bittle, G., Sharonville, Ohio. Sign. No. 885,426; Apr. 21; Sp. p. 3617; Dr. p. 758; Gaz. vol. 133; p. 1825.
Black, J. F. (See Bowers, J. C., assignor.)
Black, J. F., Greensburg, Pa. Mail-bag deliverer. No. 884,310; Apr. 7; Sp. p. 1289; Dr. p. 273; Gaz. vol. 133; p. 1398.
Blackmore, H. S., Mount Vernon, N. Y. Electrolysis of fluid salts or compounds. No. 884,124; Apr. 7; Sp. p. 552; Dr. p. 199; Gaz. vol. 133; p. 1340.
Blades, J. M., assignor to B. and H. Goodloe, St. Louis, Mo. Furnace-grate. No. 884,005; Apr. 7; Sp. p. 682; Dr. p. 137; Gaz. vol. 133; p. 1301.
Blaisdell Company. (See Brooks, H. A., assignor.)
Blaisdell, H. W., Los Angeles, Cal. Excavator. No. 884,559; Apr. 14; Sp. p. 1800; Dr. p. 387; Gaz. vol. 133; p. 1510.
Blaisdell, H. W., Los Angeles, Cal. Stacker. No. 884,560; Apr. 14; Sp. p. 1802; Dr. pp. 387–8; Gaz. vol. 133; p. 1510.
Blaisdell Paper Pencil Company. (See Smith, C. A., assignor.)
Blake, C. C., Round Grove township, McLeod county, Minn. Safety-envelop. No. 885,573; Apr. 21; Sp. p. 3922; Dr. p. 819; Gaz. vol. 133; p. 1870.
Blake, J. R., Bisbee, Ariz. Miner's candlestick. No. 884,632; Apr. 14; Sp. p. 1948; Dr. p. 418; Gaz. vol. 133; p. 1533.
Blanck, H., Phœnix, Ariz., and L. E. Beckerdite, Marshfield, Mo. Engine-stop. No. 884,455; Apr. 14; Sp. p. 1590; Dr. p. 343; Gaz. vol. 133; p. 1476.
Blanthorn, J. E. (See Donnelly and Blanthorn.)
Blausey, F. E. (See Booth, Blausey, and Smith.)
Bleach & Caustic Process Company. (See Gabriel, G. A., assignor.)
Bleckley, F. W., Hazleton, Pa. Vehicle-standard. No. 883,689; Apr. 7; Sp. p. 12; Dr. p. 3; Gaz. vol. 133; p. 1197.
Blessing, C. A., Philadelphia, Pa. Flush-tank. No. 885,574; Apr. 21; Sp. p. 3923; Dr. p. 819; Gaz. vol. 133; p. 1870.
Blevins, G. B., Little Rock, Ark. Switch-point lock. No. 884,006; Apr. 7; Sp. p. 685; Dr. p. 138; Gaz. vol. 133; p. 1302.
Bleyer, F. H., Brooklyn, N. Y. Purse and bag fastener. No. 886,175; Apr. 28; Sp. p. 5148; Dr. p. 1063; Gaz. vol. 133; p. 2096.
Blichert, P. A., Chicago, Ill. Sheet-metal box. No. 885,013; Apr. 21; Sp. p. 2744; Dr. p. 582; Gaz. vol. 133; p. 1690.
Bliss, A. W. (See Robertson and Delaney, assignors.)
Bliven, P. C., Danielson, Conn. Trolley-harp. No. 886,176; Apr. 28; Sp. p. 5149; Dr. p. 1063; Gaz. vol. 133; p. 2096.
Bloch, B. A., *et al.* (See Fitz Gerald, W. H., assignor.)
Bloch, E. M., *et al.* (See Fitz Gerald, W. H., assignor.)
Blood, G., assignor of one-half to G. Mead, Westhope, N. D. Staple-puller. No. 885,575; Apr. 21; Sp. p. 3924; Dr. p. 819; Gaz. vol. 133; p. 1870.
Bloom, J. E., New York, N. Y. Food product and making the same. No. 883,930; Apr. 7; Sp. p. 522; Gaz. vol. 133; p. 1276.
Bloomberg, C. (See Reznîček, A., assignor.)
Bloomer, C. T., Newark, N. J. Paper vessel. No. 883,855; Apr. 7; Sp. p. 374; Dr. p. 73; Gaz. vol. 133; p. 1251.
Blot, L. P., Springfield, Mass. Trimming-chair for forgings. No. 885,427; Apr. 21; Sp. p. 3618; Dr. p. 759; Gaz. vol. 133; p. 1825.
Blount, W. T., Jr., Thunderbolt, Ga. Combined latch and lock. No. 885,576; Apr. 21; Sp. p. 3925; Dr. p. 819; Gaz. vol. 133; p. 1871.
Blüth, S., *et al.* (See Hellbrunn, Blüth, and Pape.)
Bly, A. B., Des Moines, Iowa. Gyroscopic top. No. 884,975; Apr. 14; Sp. p. 2669; Dr. p. 567; Gaz. vol. 133; p. 1644.
Blythe, E. W., Decatur, Tex. Cloth-winding machine. No. 883,690; Apr. 7; Sp. p. 13; Dr. p. 3; Gaz. vol. 133; p. 1197.
Bobo, B. F., assignor of one-half to E. G. Jessee, Laurens, S. C. Stop-motion for looms. No 886,177; Apr. 28; Sp. p. 5150; Dr. p. 1083; Gaz. vol. 133; p. 2096.
Bode, K., New York, assignor of one-half to T. J. Buchanan, Yonkers, N. Y. Bottle-holder. No. 884,355; Apr. 14; Sp. p. 1393; Dr. p. 298; Gaz. vol. 133; p. 1442.
Bodmer, E. W., Harrisburg, Pa. Quill pen. No. 885,317; Apr. 21; Sp. p. 3406; Dr. p. 712; Gaz. vol. 133; p. 1790.
Boedecker, L. F., assignor to P. O. Stensland, Chicago, Ill. File. No. 884,997; Apr. 14; Sp. p. 2706; Dr. pp. 573–4; Gaz. vol. 133; p. 1650.
Boggio, P., West Hoboken, N. J. Swinging-window catch. No. 885,974; Apr. 28; Sp. p. 4760; Dr. p. 1000; Gaz. vol. 133; p. 2033.
Bohm, F. C., Boston, Mass. Ratchet-drill. No. 885,221; Apr. 21; Sp. p. 3212; Dr. p. 670; Gaz. vol. 133; p. 1758.
Böhm, O., Berlin, Germany. Train control for electric accumulator-locomotives. No. 884,007; Apr. 7; Sp. p. 687; Dr. p. 138; Gaz. vol. 133; p. 1302.
Boissonneault, G. and N., Manchester, N. H. Bobbin-holder. No. 884,356; Apr. 14; Sp. p. 1394; Dr. p. 298; Gaz. vol. 133; p. 1442.
Boissonneault, N. (See Boissonneault, G. and N.)
Bolton, H. N., Paterson, N. J. Watch-guard. No. 885,975; Apr. 28; Sp. p. 4760; Dr. p. 1000; Gaz. vol. 133; p. 2033.
Bond, C. J., assignor to Monarch Typewriter Company, Syracuse, N. Y. Type-writing machine. No. 885,715; Apr. 28; Sp. p. 4205; Dr. p. 880; Gaz. vol. 133; p. 1945.
Bond, C. T. H., Richmond, Ind. Feeder-governor. No. 884,357; Apr. 14; Sp. p. 1395; Dr. p. 299; Gaz. vol. 133; p. 1443.
Boner, J. H., assignor to Badische Anilin and Soda Fabrik, Ludwigshafen-on-the-Rhine, Germany. Making alizarin. No. 885,577; Apr. 21; Sp. p. 3926; Gaz. vol. 133; p. 1871.
Bonesteele, H. F., Iowa Falls, Iowa. Wire stretcher and splicer. No. 885,830; Apr. 28; Sp. p. 4464; Dr. pp. 935–6; Gaz. vol. 133; p. 1984.

Bonniksen, B., Coventry, and F. A. Chandler, Leamington, England. Electrically-synchronized time-measuring instrument. No. 884,358; Apr. 14; Sp. p. 1399; Dr. pp. 299–300; Gaz. vol. 133; p. 1443.
Bonvillain, P., Paris, France, assignor, by mesne assignments, to E. H. Mumford Company, Philadelphia, Pa. Apparatus for grinding or crushing foundry-sand, &c. (Reissue.) No. 12,778; Apr. 7; Sp. p. 1385; Dr. p. 296; Gaz. vol. 133; p. 1414.
Boos, C. M. B., Muscatine, Iowa. Crown and bridge work. No. 884,977; Apr. 14; Sp. p. 2672; Dr. p. 568; Gaz. vol. 133; p. 1645.
Booth, A. (See Barker, I., assignor.)
Booth, J. H., F. E. Blausey, and A. M. Smith, San Pedro, Cal. Cut-out. No. 884,978; Apr. 14; Sp. p. 2673; Dr. p. 568; Gaz. vol. 133; p. 1645.
Booth, L. E., *et al.* (See Bates, Clapp, and Booth.)
Booth, N., assignor to Banner Rock Products Company, Alexandria, Ind. Insulating compound. No. 884,456; Apr. 14; Sp. p. 1591; Gaz. vol. 133; p. 1477.
Booth, R. W., New York, assignor to R. W. Booth, Jr., Brooklyn, N. Y. Ornamental article. No. 884,998; Apr. 14; Sp. p. 2707; Dr. p. 574; Gaz. vol. 133; p. 1651.
Booth, R. W., Jr. (See Booth, R. W., assignor.)
Booth, W., Edgewater, N. J. Illuminated sign. No. 885,831; Apr. 28; Sp. p. 4459; Dr. p. 936; Gaz. vol. 133; p. 1984.
Borden, P. H., Portland, Me. Post-card shield. No. 884,701; Apr. 14; Sp. p. 2122; Dr. p. 452; Gaz. vol. 133; p. 1557.
Borgmeier, A. J. (See Nunamaker, J. W., assignor.)
Borland, B., Chicago, Ill. Calendar. No. 885,222; Apr. 21; Sp. p. 3213; Dr. p. 670; Gaz. vol. 133; p. 1758.
Boston Auto Gage Company. (See Martin, M., assignor.)
Boston, E. H. (See Ford and Boston.)
Boston, Paul, New Castle, Pa. Device for feeding tinning-machines. No. 884,008; Apr. 7; Sp. p. 688; Dr. pp. 138–9; Gaz. vol. 133; p. 1302.
Boston Telephone Selector Company. (See Mayberry and Holland, assignors.)
Böttcher, A., Benndorf, near Delitzsch, Germany. Band-cutter and feeder. No. 886,178; Apr. 28; Sp. p. 5152; Dr. p. 1084; Gaz. vol. 133; p. 2097.
Bottease, S. (See Koiner and Bottease.)
Boucher, H. S., Glade, Pa. Check-lock for cars. No. 885,907; Apr. 28; Sp. p. 4507; Dr. p. 963; Gaz. vol. 133; p. 2009.
Bowden, A. J., Minneapolis, Minn., assignor of one-half to A. B. Robbins, Elroy, Wis. Detachable boiler-flue. No. 885,662; Apr. 21; Sp. p. 4091; Dr. p. 856; Gaz. vol. 133; p. 1897.
Bowden, W., New York, N. Y. Tire and wheel therefor. No. 884,702; Apr. 14; Sp. p. 2124; Dr. p. 453; Gaz. vol. 133; p. 1557.
Bowers, J. C., assignor of one-half to J. F. Black, Taylor, Tex. Safety-discharge-valve mechanism. No. 885,578; Apr. 21; Sp. p. 3927; Dr. p. 820; Gaz. vol 133; p. 1871.
Bowman, C. M., Lebanon, Pa. Fire extinguisher and alarm. No. 883,856; Apr. 7; Sp. p. 376; Dr. p. 73; Gaz. vol. 133; p. 1251.
Bowman, E. C. (See Chreitzberg, H. F., assignor.)
Bowman, R. H., Canon City, Colo. Nut-lock. No. 883,691; Apr. 7; Sp. p. 15; Dr. p. 4; Gaz. vol. 133; p. 1198.
Bowness, W. S., Moncton, New Brunswick, Canada. Automatic hose-uncoupling. No. 884,561; Apr. 14; Sp. p. 1805; Dr. p. 388; Gaz. vol. 133; p. 1511.
Bowron, J., Hamilton, Ontario, Canada. Target-trap. No. 884,703; Apr. 14; Sp. p. 2126; Dr. p. 453; Gaz. vol. 133; p. 1558.
Bowsky, M., *et al.* (See McKee, W., assignor.)
Boyd, G. W., assignor to M. F. Boyd, Nashville, Tenn. Lock-nut. No. 884,260; Apr. 7; Sp. p. 1214; Dr. p. 255; Gaz. vol. 133; p. 1385.
Boyd, M. F. (See Boyd, G. W., assignor.)
Boyd, W. T., Ellenton, Fla. Receiver. No. 885,223; Apr. 21; Sp. p. 3215; Dr. p. 671; Gaz. vol. 133; p. 1759.
Boydelatour, G., Canton, Ohio. Drawer-carrier. No. 884,457; Apr. 14; Sp. p. 1592; Dr. p. 343; Gaz. vol. 133; p. 1477.
Boylan, A. B., *et al.* (See Thomas, L., assignor.)
Boyle, J. M., assignor to Sanderson & Porter, New York, N. Y. Identifying articles and such identified article. No. 883,778; Apr. 7; Sp. p. 189; Dr. p. 35; Gaz. vol. 133; p. 1224.
Bradbury, H. P., assignor of one-half to L. H. Pursell, Springfield, Ohio. Smoke-consumer. No. 885,579; Apr. 21; Sp. p. 3929; Dr. p. 820; Gaz. vol. 133; p. 1871.
Bradley, H., Caney, Kans. Transom regulating and securing mechanism. No. 884,261; Apr. 7; Sp. p. 1215; Dr. p. 255; Gaz. vol. 133; p. 1385.
Braemer, W. G. R., Buffalo, N. Y., assignor to Warren Webster & Company. Air-purifying apparatus. No. 885,137; Apr. 21; Sp. p. 3018; Dr. pp. 636–7; Gaz. vol. 133; p. 1730.
Bragdon, H. J., assignor to G. Heinlein, Chicago, Ill. Wire shaping and forming machine. No. 884,633; Apr. 14; Sp. p. 1949; Dr. p. 419; Gaz. vol. 133; p. 1534.
Bragdon, J. L., Chicago, Ill. Curtain-stretcher. No. 884,999; Apr. 14; Sp. p. 2709; Dr. p. 574; Gaz. vol. 133; p. 1651.
Bragg, F. A., assignor of one-half to D. J. Brown, Springfield, Mass. Tire construction. No. 884,562; Apr. 14; Sp. p. 1809; Dr. p. 388; Gaz. vol. 133; p. 1511.
Bragg, H. T., Yonkers, N. Y. Hose. No. 884,634; Apr. 14; Sp. p. 1955; Dr. p. 420; Gaz. vol. 133; p. 1534.
Bragunier, D. R., and A. B. Thompson, Columbia, Ala. Automatic electric cotton-chopper. No. 886,179; Apr. 28; Sp. p. 5155; Dr. p. 1085; Gaz. vol. 133; p. 2097.
Brandt, O. N., Bridgeport, Tex. Coupling. No. 886,180; Apr. 28; Sp. p. 5157; Dr. p. 1085; Gaz. vol. 133; p. 2098.
Brasseur, E. J., assignor to A. B. Dick Company, Chicago, Ill. Duplicating apparatus. No. 884,704; Apr. 14; Sp. p. 2128; Dr. pp. 453–4; Gaz. vol. 133; p. 1558.
Brassington, J. L., Mount Carmel, Pa. Placket-closer. No. 883,692; Apr. 7; Sp. p. 16; Dr. p. 4; Gaz. vol. 133; p. 1198.
Brauer, J., Menasha, Wis. Shipping-case-cover fastener. No. 884,890; Apr. 14; Sp. p. 2495; Dr. p. 527; Gaz. vol. 133; p. 1618.
Brüning, K. A., Zaandam, Netherlands. Hand-firearm. No. 884,065; Apr. 7; Sp. p. 796; Dr. pp. 167–8; Gaz. vol. 133; p. 1321.
Bray, M. N. (See Emery, V. J., assignor.)
Breckenridge, R. M., Hamilton, Ontario, Canada. Can-fork or can-lifter. No. 885,580; Apr. 21; Sp. p. 3931; Dr. p. 820; Gaz. vol. 133; p. 1872.
Breiding, A. W., Sterling, Ill. Carbureter. No. 885,832; Apr. 28; Sp. p. 4460; Dr. p. 936; Gaz. vol. 133; p. 1984.
Brennan Construction Company. (See Davis, H., assignor.)
Brennan, H., assignor of one-half to E. L. White, Brooklyn, N. Y. Shank for shoes. No. 886,181; Apr. 28; Sp. p. 5158; Dr. p. 1086; Gaz. vol. 133; p. 2098.
Brennan, J. A. (See Mann, G. E., assignor.)
Brennan, J. B., Sherman, Tex. Apparatus for bleaching seed-cotton. No. 884,359; Apr. 14; Sp. p. 1401; Dr. p. 300; Gaz. vol. 133; p. 1444.
Brett, J. T., Milwaukee, Wis. Harvester-reel. No. 885,833; Apr. 28; Sp. p. 4461; Dr. pp. 936–7; Gaz. vol. 133; p. 1984.
Brewer, M. L., and L. B. Miller, Denver, Colo. Burial-vault. No. 885,138; Apr. 21; Sp. p. 3021; Dr. p. 637; Gaz. vol. 133; p. 1731.
Brewer, R. B., Oxford, Kans. Corn-harvester. No. 884,891; Apr. 14; Sp. p. 2496; Dr. p. 527; Gaz. vol. 133; p. 1619.
Brice, A. W., assignor to Rochester Surgical Appliance Company, Rochester, N. Y. Electric-current regulator. No. 884,458; Apr. 14; Sp. p. 1593; Dr. p. 344; Gaz. vol. 133; p. 1477.
Bricker, E. J., assignor to American Implement Company, Minneapolis, Minn. Combined truck, scale, and bag-holder. No. 884,459; Apr. 14; Sp. p. 1596; Dr. p. 344; Gaz. vol. 133; p. 1477.
Bridge, W. G., Boston, Mass. Press for swaging seamless crowns. No. 884,311; Apr. 7; Sp. p. 1291; Dr. p. 274; Gaz. vol. 133; p. 1399.
Bridgeport Brass Company. (See Stapley, W. S., assignor.)
Bridges, D. M., *et al.* (See Sebree, W. T., assignor.)
Brierley, W. E., Cleveland, Ohio. Engraving-machine. No. 885,428; Apr. 21; Sp. p. 3620; Dr. p. 759; Gaz. vol. 133; p. 1826.
Briggs, L. R., Chambersburg, Ill. Mechanism for converting motion. No. 885,834; Apr. 28; Sp. p. 4463; Dr. p. 937; Gaz. vol. 133; p. 1985.
Brightman, L. H., Shelby, Ohio. Automatic turning and boring machine. No. 884,125; Apr. 7; Sp. p. 967; Dr. pp. 200–1; Gaz. vol. 133; p. 1341.
Brightmore, A. W., Burford, Egham, England. Front-driven motor-vehicle. No. 885,014; Apr. 21; Sp. p. 2745; Dr. p. 583; Gaz. vol. 133; p. 1690.
Brindley, G. F., Niagara Falls, Ontario, Canada, assignor to Roessler & Hasslacher Chemical Company, New York, N. Y. Fusing materials. No. 884,563; Apr. 14; Sp. p. 1810; Dr. p. 389; Gaz. vol. 133; p. 1511.
Bringk, F., Geesteminde, Germany. Receptacle for preserving fish and other alimentary substances. No. 884,892; Apr. 14; Sp. p. 2497; Dr. p. 528; Gaz. vol. 133; p. 1619.
Brisbois, O., assignor of two-thirds to R. W. Poelma and M. Dahl, Chicago, Ill. Telephone toll-box. No. 885,429; Apr. 21; Sp. p. 3622; Dr. p. 760; Gaz. vol. 133; p. 1826.
Bristol Brass Company. (See Carpenter, W. H., assignor.)
Bristol, W. H., New York, N. Y. Thermo-electric couple. No. 885,430; Apr. 21; Sp. p. 3624; Dr. p. 760; Gaz. vol. 133; p. 1826.
British Sigarera Limited. (See Broughton, D. M., assignor.)
Broadwell, E. C., assignor to J. W. Meaker, Jr., Chicago, Ill. Solvent for metals. No. 884,705; Apr. 14; Sp. p. 2131; Gaz. vol. 133; p. 1559.
Broga, F. D., Oneida, N. Y. Meat-hook. No. 884,360; Apr. 14; Sp. p. 1403; Dr. p. 301; Gaz. vol. 133; p. 1444.
Broga, F. D., Oneida, N. Y. Meat-hook. No. 884,361; Apr. 14; Sp. p. 1406; Dr. p. 301; Gaz. vol. 133; p. 1444.
Bromley, R. C., Ben Avon, Pa. Rotary pump. No. 886,110; Apr. 28; Sp. p. 5028; Dr. p. 1057; Gaz. vol. 133; p. 2075.
Brookfield Glass Company. (See Brookfield, H. M., assignor.)

Brookfield, H. M., New York, N. Y., assignor to Brookfield Glass Company. Glass-furnace and appurtenances thereof. No. 883,779; Apr. 7; Sp. p. 192; Dr. pp. 35-6; Gaz. vol. 133; p. 1224.
Brooks, H. A., assignor to Blaisdell Company, Los Angeles, Cal. Automatic overflow-gate. No. 884,564; Apr. 14; Sp. p. 1812; Dr. p. 389; Gaz. vol. 133: p. 1512.
Broome, H., Springfield, assignor of two-thirds to W. Dennick, Dayton, and C. W. Flick, Springfield, Ohio. Machine for slicing meats. No. 884,893; Apr. 14; Sp. p. 2499; Dr. p. 528; Gaz. vol. 133; p. 1619.
Brothers, W. B., Illiopolis, Ill. Road-working machine. No. 886,182; Apr. 28; Sp. p. 5160; Dr. p. 1086; Gaz. vol. 133; p. 2098.
Broughton, D. M., Woodford Green, assignor of one-half to British Sigarera Limited, London, England. Frictional driving-gear. No. 885,684; Apr. 21; Sp. p. 4135; Dr. pp. 865-6; Gaz. vol. 133; p. 1906.
Brown, A. T. (See Carhart, H. A., assignor.)
Brown, A. T., Syracuse, N. Y. Type-writing machine. No. 885,716; Apr. 28; Sp. p. 4207; Dr. pp. 880-1; Gaz. vol. 133; p. 1945.
Brown, C. E. L., assignor to Actiengesellschaft Brown, Boveri & Co., Baden, Switzerland. Automatic alternating-current contact apparatus. No. 884,066; Apr. 7; Sp. p. 798; Dr. p. 168; Gaz. vol. 133; p. 1321.
Brown, D. J. (See Bragg, F. A., assignor.)
Brown, E. A., Wealdstone, England. Pipe-bender. No. 885,139; Apr. 21; Sp. p. 3023; Dr. p. 637; Gaz. vol. 133; p. 1731.
Brown, F. S. (See Cleveland and Brown.)
Brown, J. G., Kingston, N. Y. Rock-crusher. No. 885,717; Apr. 23; Sp. p. 4212; Dr. p. 881; Gaz. vol. 133; p. 1945.
Brown, J. H. (See Dickie and Brown, assignors.)
Brown-Lipe Gear Company. (See Sponable, G. W., assignor.)
Brown, O. E., Washington, Iowa. Window-ventilator and curtain-fixture. No. 885,140; Apr. 21; Sp. p. 3024; Dr. p. 638; Gaz. vol. 133; p. 1731.
Brown, O. E., assignor of one-fourth to L. Vasbinder, Buffalo, N. Y. Water-motor. No. 885,141; Apr. 21; Sp. p. 3025; Dr. p. 638; Gaz. vol. 133; p. 1731.
Brown, S., Pittsburg, Kans. Composition of matter. No. 885,976; Apr. 28; Sp. p. 4761; Gaz. vol. 133; p. 2033.
Brown, S. A. (See O'Donnell, F., assignor.)
Brown, S. B., Cincinnati, Ohio. Coaster. No. 885,977; Apr. 28; Sp. p. 4762; Dr. p. 1000; Gaz. vol. 133; p. 2033.
Brown, W. C., Terre Haute, Ind. Combined lock and latch. No. 884,460; Apr. 14; Sp. p. 1508; Dr. pp. 344-5; Gaz. vol. 133; p. 1478.
Brown, W. L., assignor to Shaw-Kendall Engineering Company, Toledo, Ohio. Heating and bending pipes. No. 886,036; Apr. 28; Sp. p. 4900; Dr. p. 1030; Gaz. vol. 133; p. 2052.
Browne, C. F., Washington, D. C. Hose-coupling. No. 884,461; Apr. 14; Sp. p. 1601; Dr. p. 345; Gaz. vol. 133; p. 1478.
Browne, D. H., Copper Cliff, Ontario, Canada, assignor to The Canadian Copper Company, New York, N. Y. Smelting-furnace spout. No. 886,286; Apr. 28; Sp. p. 5356; Dr. p. 1126; Gaz. vol. 133; p. 2134.
Browne, H. M., Cheyney, Pa. Damper-regulator. No. 886,183; Apr. 28; Sp. p. 5161; Dr. p. 1086; Gaz. vol. 133; p. 2099.
Brownell, F. A., assignor to Eastman Kodak Company, Rochester, N. Y. Photographic-camera shutter. No. 885,142; Apr. 21; Sp. p. 3026; Dr. p. 638; Gaz. vol. 133; p. 1732.
Brownell-Trebert Company. (See Trebert, H. L. F., assignor.)
Brownlee, W. M., Jefferson City, Tenn. Hermetically-closed receptacle. No. 883,693; Apr. 7; Sp. p. 18; Dr. p. 4; Gaz. vol. 133; p. 1198.
Brubaker, H., York, assignor of two-thirds to H. D. Hershey, Columbia, Pa. Machine for making paper-roll plugs. No. 885,718; Apr. 28; Sp. p. 4215; Dr. pp. 881-2; Gaz. vol. 133; p. 1946.
Bruce, G. H., administrator. (See Ramsdell, W. H.)
Brunke, F. A., Chicago, Ill. Table-pad. No. 884,067; Apr. 7; Sp. p. 800; Dr. p. 169; Gaz. vol. 133; p. 1321.
Brunner, J. F., Pittsburg, Pa. Plumber's testing-plug. No. 884,262; Apr. 7; Sp. p. 1217; Dr. p. 255; Gaz. vol. 133; p. 1385.
Brunzwick, J., assignor to C. Schmidt Company, Cincinnati, Ohio. Door-actuating mechanism. No. 885,431; Apr. 21; Sp. p. 3625; Dr. p. 760; Gaz. vol. 133; p. 1826.
Brush, A. P., Detroit, Mich. Pulsating pump. No. 885,835; Apr. 28; Sp. p. 4464; Dr. p. 938; Gaz. vol. 133; p. 1985.
Bruzaud, C. N., Peekskill, N. Y. Roofing-tile. No. 885,663; Apr. 21; Sp. p. 4092; Dr. p. 856; Gaz. vol. 133; p. 1898.
Bryan, J. H. B., assignor of two-thirds to N. J. and N. Kelly, Buffalo, N. Y. Pipe-tapping device. No. 884,565; Apr. 14; Sp. p. 1813; Dr. pp. 389-90; Gaz. vol. 133; p. 1512.
Bryant, C. R., Manistee, Mich. Explosive-engine. No. 886,184; Apr. 28; Sp. p. 5163; Dr. pp. 1086-7; Gaz. vol. 133; p. 2099.
Bryant, F., Matteawan, N. Y. Silk-throwster spindle. No. 884,126; Apr. 7; Sp. p. 971; Dr. p. 201; Gaz. vol. 133; p. 1341.
Bryant, F. H. (See Hensley and Bryant.)
Bryant, H. E., Pawtucket, R. I. Fiber-separating machine. No. 884,635; Apr. 14; Sp. p. 1956; Dr. p. 420; Gaz. vol. 133; p. 1534.
Bryant, W. H., Boston, assignor to F. Hunt, trustee, Cambridge, Mass. Amusement apparatus. No. 884,462; Apr. 14; Sp. p. 1602. Dr. pp. 345-6; Gaz. vol. 133; p. 1478.
Buchanan, H. W., Minneapolis, Minn. Machine for stamping envelops. No. 884,263; Apr. 7; Sp. p. 1217; Dr. p. 256; Gaz. vol. 133; p. 1385.
Buchanan, T. J. (See Bode, K., assignor.)
Buckeye Engine Company. (See Thompson, J. W., assignor.)
Buckingham, C. L., assignor of one-half to R. B. McCouney, Denver, Colo. Submerged ore-concentrator. No. 884,636; Apr. 14; Sp. p. 1959; Dr. p. 421; Gaz. vol. 133; p. 1535.
Buckley, P. J., Waukesha, Wis. Limekiln. No. 885,719; Apr. 28; Sp. p. 4217; Dr. pp. 882-3; Gaz. vol. 133; p. 1946.
Bucknam, E. S., assignor to J. G. Brill Company, Philadelphia, Pa. Car-window. No. 883,780; Apr. 7; Sp. p. 196; Dr. p. 36; Gaz. vol. 133; p. 1225.
Budd, E. G. (See Kilburn and Budd.)
Budd, E. G., assignor to Hale-Kilburn Metal Company, Philadelphia, Pa. Cushion. No. 884,706; Apr. 14; Sp. p. 2132; Dr. p. 454; Gaz. vol. 133; p. 1559.
Budd, E. G., assignor to Hale-Kilburn Metal Company, Philadelphia, Pa. Cushion. No. 884,707; Apr. 14; Sp. p. 2136; Dr. p. 454; Gaz. vol. 133; p. 1559.
Budd, E. G., assignor to Hale-Kilburn Metal Company, Philadelphia, Pa. Cushion. No. 884,709; Apr. 14; Sp. p. 2140; Dr. p. 455; Gaz. vol. 133; p. 1560.
Budd, E. G., assignor to Hale-Kilburn Metal Company, Philadelphia, Pa. Seating. No. 884,710; Apr. 14; Sp. p. 2142; Dr. p. 455; Gaz. vol. 133; p. 1561.
Budd, E. G., assignor to Hale-Kilburn Metal Company, Philadelphia, Pa. Seating. No. 884,711; Apr. 14; Sp. p. 2144; Dr. p. 456; Gaz. vol. 133; p. 1561.
Budd, E. G., and J. A. Wollé, assignors to Hale-Kilburn Metal Company, Philadelphia, Pa. Cushion. No. 884,708; Apr. 14; Sp. p. 2138; Dr. p. 455; Gaz. vol. 133; p. 1560.
Budde, F. H. (See Christine and Budde.)
Buehler, L., Detroit, Mich. Automatic injector. No. 885,224; Apr. 21; Sp. p. 3216; Dr. p. 671; Gaz. vol. 133; p. 1759.
Bullard, L. H., assignor to O. Gumbinsky, Kalamazoo, Mich. Roof-flashing. No. 885,318; Apr. 21; Sp. p. 3406; Dr. p. 712; Gaz. vol. 133; p. 1791.
Bullion, W. G., *et al.* (See Wrench, E. F., assignor.)
Bullock, A. A., Williamsboro, N. C. Cotton-chopper. No. 885,432; Apr. 21; Sp. p. 3627; Dr. p. 760; Gaz. vol. 133; p. 1827.
Bullock Electric Manufacturing Company. (See Stull, E. W., assignor.)
Bullock Electric Manufacturing Company. (See Tatum, L. L., assignor.)
Bullock Electric Manufacturing Company *et al.* (See Behrend, B. A., assignor.)
Bullock Electric Manufacturing Company *et al.* (See Frankenfield, B., assignor.)
Bullock Electric Manufacturing Company *et al.* (See Tatum, L. L., assignor.)
Bullock, T. H., Jr., assignor to J. H. Dale, New York, N. Y. Insulated canopy-collar. No. 885,836; Apr. 28; Sp. p. 4466; Dr. p. 938; Gaz. vol. 133; p. 1986.
Bunker, W., Eaton Rapids, Mich. Egg-turner. No. 886,185; Apr. 28; Sp. p. 5166; Dr. p. 1087; Gaz. vol. 133; p. 2099.
Bunnell, M. G., Porter, Ind., assignor to Austin Manufacturing Company, Chicago, Ill. Ditching and grading machine. No. 884,068; Apr. 7; Sp. p. 801; Dr. pp. 169-70; Gaz. vol. 133; p. 1321.
Burcey, C. J. T., Syracuse, assignor of one-fourth to F. R. Hazard, Solway, N. Y. Apparatus for manufacturing charcoal. No. 883,781; Apr. 7; Sp. p. 197; Dr. pp. 36-7; Gaz. vol. 133; p. 1225.
Burchardi, B. T. (See Wahlstrom, V. J., assignor.)
Burdett, B. M., Roselle, N. J. Hod. No. 884,566; Apr. 14; Sp. p. 1820; Dr. pp. 390-1; Gaz. vol. 133; p. 1513.
Burgher, F. I., New York, N. Y. Shrinking and finishing woolen and other fabrics. No. 665,664; Apr. 21; Sp. p. 4093; Dr. p. 856; Gaz. vol. 133; p. 1898.
Burger, R., Berlin, Germany, assignor to American Thermos Bottle Company, New York, N. Y. Double-walled vessel. No. 884,567; Apr. 14; Sp. p. 1823; Dr. p. 391; Gaz. vol. 133; p. 1513.
Burgess, C. F., Madison, Wis. Making refractory articles. No. 884,463; Apr. 14; Sp. p. 1605; Dr. p. 346; Gaz. vol. 133; p. 1479.
Burgess & Sauerberg. (See Gröndahl, H., assignor.)
Burke, H. B., Youngwood, Pa. Metallic tie. No. 885,581; Apr. 21; Sp. p. 3932; Dr. p. 821; Gaz. vol. 133; p. 1872.
Burke, T. J., New Orleans, La. Railway-switch. No. 884,792; Apr. 14; Sp. p. 2320; Dr. p. 488; Gaz. vol. 133; p. 1589.
Burnham, J. H., Uniontown, Pa. Oscillating steam-balanced valve. No. 884,362; Apr. 14; Sp. p. 1408; Dr. p. 301; Gaz. vol. 133; p. 1445.

Burns, O., Chicago, Ill. Savings-bank. No. 884,069; Apr. 7; Sp. p. 806; Dr. p. 171; Gaz. vol. 133; p. 1322.
Burrell, W. C., Kankakee, Ill. Forming-machine. No. 884,464; Apr. 14; Sp. p. 1606; Dr. pp. 346-7; Gaz. vol. 133; p. 1479.
Burroughs Adding Machine Company. (See Swalm, W. E., assignor.)
Burroughs, J. H., *et al.* (See Davis, C. B., assignor.)
Burrows, W. R., Newark, N. J., assignor to General Electric Company. Machine for making incandescent lamps. No. 884,568; Apr. 14; Sp. p. 1824; Dr. p. 391; Gaz. vol. 133; p. 1513.
Bursik, F., Chicago, Ill. Holder and fastener for storm-sashes and the like. No. 885,015; Apr. 21; Sp. p. 2748; Dr. p. 583; Gaz. vol. 133; p. 1690.
Burtch, D. H., assignor of one-third to M. T. Gautreaux, Morgan City, La. Lock and latch. No. 885,225; Apr. 21; Sp. p. 3217; Dr. p. 671; Gaz. vol. 133; p. 1760.
Burtt, B. L., Jeffersonville, Ind. Coal-bucket. No. 885,582; Apr. 21; Sp. p. 3933; Dr. p. 821; Gaz. vol. 133; p. 1872.
Bury, T. J., Enid, Okla. Door-securer. No. 885,583; Apr. 21; Sp. p. 3934; Dr. p. 821; Gaz. vol. 133; p. 1872.
Busch-Freund Brewers Supply Company. (See Emrick and Baer, assignors.)
Busse, H. (See Schou and Busse.)
Buswell, E., Waterloo, Iowa. Manure-spreader. No. 885,908; Apr. 28; Sp. p. 4598; Dr. p. 963; Gaz. vol. 133; p. 2009.
Butcher, C., Cambridge, Mass. Hitching-post. No. 883,782; Apr. 7; Sp. p. 201; Dr. p. 37; Gaz. vol. 133; p. 1226.
Butler, W., Davis Junction, assignor of one-half to W. C. Doyle, Sycamore, Ill. Cigar-vending machine. No. 885,685; Apr. 21; Sp. p. 4137; Dr. p. 866; Gaz. vol. 133; p. 1906.
Butters, C. (See Hendryx, W. A., assignor.)
Buys, H. D., and J. M. Lyon, Pearl, Idaho. Folding square. No. 883,783; Apr. 7; Sp. p. 202; Dr. p. 37; Gaz. vol. 133; p. 1226.
Byham, C. W., Kane, Pa. Manifolding apparatus. No. 883,694; Apr. 7; Sp. p. 20; Dr. pp. 4-5; Gaz. vol. 133; p. 1199.
Bythiner, W. W., Philadelphia, Pa. Telephone attachment. No. 884,637; Apr. 14; Sp. p. 1964; Dr. p. 422; Gaz. vol. 133; p. 1536.
C. Schmidt Company. (See Brunzwick, J., assignor.)
C. B. Cottrell & Sons Company. (See McKee, M. A., assignor.)
C. G. Sargent's Sons Corporation. (See Sargent, F. G., assignor.)
C. O. Bartlett & Snow Co. (See Snow, K. F., assignor.)
Cable, F. T. (See Bailey and Cable.)
Cabot, S. (See Stone and Cabot.)
Cabot, S., Brookline, assignor to Stone Telegraph and Telephone Company, Boston, Mass. Space telegraphy. No. 884,070; Apr. 7; Sp. p. 806; Dr. p. 171; Gaz. vol. 133: p. 1322.
Cabot, S., Brookline, assignor to Stone Telegraph and Telephone Company, Boston, Mass. Space telegraphy. No. 884,071; Apr. 7; Sp. p. 811; Dr. p. 171; Gaz. vol. 133; p. 1322.
Caldwell, A. S., Inverkeithing, Scotland. Apparatus for treating pulp. No. 886,186; Apr. 28; Sp. p. 5168; Dr. pp. 1087-8; Gaz. vol. 133;. p. 2100.
Caldwell, C. H., Seattle, Wash. Chart for music students. No. 886,037; Apr. 28; Sp. p. 4901; Dr. pp. 1030-1; Gaz. vol. 133; p. 2052.
Caldwell, H. C., Buffalo, N. Y., assignor to C. T. Hanna, Philadelphia, Pa. Mold-jacket. No. 886,187; Apr. 28; Sp. p. 5171; Dr. pp. 1088-9; Gaz. vol. 133; p. 2100.
Caldwell, W. A., Jr., Roswell, N. Mex. Ter. Safety attachment for burners. No. 883,784; Apr. 7; Sp. p. 204; Dr. p. 38; Gaz. vol. 133; p. 1226.
Caley, C. J. (See Voight and Caley.)
Caley, C. J., and H. G. Voight, assignors to Russell & Erwin Manufacturing Company, New Britain, Conn. Cylinder-lock. No. 883,857; Apr. 7; Sp. p. 377; Dr. p. 73; Gaz. vol. 133; p. 1251.
Callaghan, M. M., Columbia, Nev. Mine-bucket-dumping attachment. No. 884,363; Apr. 14; Sp. p. 1410; Dr. pp. 301-2; Gaz. vol. 133; p. 1446.
Callan, J. G., Lynn, Mass., assignor to General Electric Company. Gear-pump. No. 883,931; Apr. 7; Sp. p. 526; Dr. p. 103; Gaz. vol. 133; p. 1276.
Callan, J. G., Lynn, Mass., assignor to General Electric Company. Elastic-fluid turbine. No. 883,932; Apr. 7; Sp. p. 529; Dr. p. 104; Gaz. vol. 133; p. 1276.
Callaway, E. H., Westfield, N. J., assignor to American Clay Machinery Company, Bucyrus, Ohio. Firing-tool for brick-kiln furnaces. No. 885,720; Apr. 28; Sp. p. 4220; Dr. p. 883; Gaz. vol. 133; p. 1947.
Calor Sterilizer Co. (See Moreau, E., assignor.)
Cameron, A. J. (See Cameron, E., assignor.)
Cameron, E., assignor to A. J. Cameron, Brooklyn, N. Y. Switch for trolleys. No. 885,000; Apr. 14; Sp. p. 2711; Dr. pp. 574-5; Gaz. vol. 133; p. 1651.
Cameron, E., assignor to A. J. Cameron, Brooklyn, N. Y. Track-support for overhead trolleys. No. 885,001; Apr. 14; Sp. p. 2713; Dr. p. 575; Gaz. vol. 133; p. 1652.
Cameron, E., assignor to A. J. Cameron, Brooklyn, N. Y. Trolley. No. 855,002; Apr. 14; Sp. p. 2714; Dr. p. 575; Gaz. vol. 133; p. 1652.
Campau, M. (See Nicklin and Campau.)
Campbell, A., assignor to Enterprise Railway Equipment Company, Chicago, Ill. Door-operating mechanism. No. 883,933; Apr. 7; Sp. p. 530; Dr. pp. 104-5; Gaz. vol. 133; p. 1277.
Campbell, B. F., assignor to Campbell Graphite Lubricator Co., Little Rock, Ark. Lubricating device. (Reissue.) No. 12,785; Apr. 28; Sp. p. 5496; Dr. p. 1149; Gaz. vol. 133; p. 2153.
Campbell Bosworth Machinery Company. (See Wilson, W., assignor.)
Campbell Graphite Lubricator Co. (See Campbell, B. F., assignor.) (Reissue.)
Campbell, N. H. (See Strachan, W., assignor.)
Campbell, R., New York, N. Y. Hair-cutting device. No. 885,584; Apr. 21; Sp. p. 3935; Dr. p. 821; Gaz. vol. 133; p. 1872.
Canadian Copper Company. (See Browne, D. H., assignor.)
Canda, F. E., New York, N. Y., assignor to Chrome Steel Works, Chrome, N. J. Die. No. 883,695; Apr. 7; Sp. p. 21; Dr. p. 5; Gaz. vol. 133; p. 1199.
Canfield, F., assignor of one-half to V. Howard, Denver, Colo. Can-opener. No. 885,686; Apr. 21; Sp. p. 4141; Dr. p. 867; Gaz. vol. 133; p. 1906.
Capitaine, W. G., Richmond, Va. Power perforating-machine. No. 885,587; Apr. 21; Sp. p. 3938; Dr. pp. 822-3; Gaz. vol. 133; p. 1873.
Cappelletti, A. (See Ganucci-Cancellieri and Cappelletti.)
Caracristi, V. Z., Granite, and G. W. Troxler, Richmond, Va. Screw-threading machine. No. 885,016; Apr. 21; Sp. p. 2750; Dr. pp. 583-4; Gaz. vol. 133; p. 1691.
Carey, J., Vickeryville, Mich. Road-culvert. No. 884,072; Apr. 7; Sp. p. 812; Dr. p. 172; Gaz. vol. 133; p. 1323.
Carhart, H. A., assignor to A. T. Brown, Syracuse, N. Y. Type-writing machine. No. 884,638; Apr. 14; Sp. p. 1964; Dr. p. 422; Gaz. vol. 133; p. 1536.
Carley Heater Company. (See Staley, H. W., assignor.)
Carlson, F. B., Holdrege, Nebr. Tooth for threshing-machines. No. 885,433; Apr. 21; Sp. p. 3628; Dr. p. 761; Gaz. vol. 133; p. 1827.
Carman, S. (See Carman, W., assignor.)
Carman, W., assignor to S. Carman, Napanoch, N. Y. Punch. No. 884,350; Apr. 7; Sp. p. 1371; Dr. p. 293; Gaz. vol. 133; p. 1412.
Carnall, J. L., New York, N. Y. Electrical connector. No. 884,312; Apr. 7; Sp. p. 1293; Dr. p. 274; Gaz. vol. 133; p. 1399.
Carney, T., assignor, by mesne assignments, to National Cash Register Company, Dayton, Ohio. Cash-register. No. 884,639; Apr. 14; Sp. p. 1967; Dr. pp. 422-6; Gaz. vol. 133; p. 1536.
Carney, T., assignor, by mesne assignments, to National Cash Register Company, Dayton, Ohio. Cash-register. No. 884,640; Apr. 14; Sp. p. 1986; Dr. pp. 426-8; Gaz. vol. 133; p. 1537.
Carothers, H. A. (See Freese, Romigh, and Carothers.)
Carpenter, G. A., adminstratrix. (See Carpenter, H. H.)
Carpenter, H. H., deceased; G. A. Carpenter, New York, administratrix, assignor, by mesne assignments, to American Battery Company, Cedarhurst, N. Y. Storage battery. No. 884,264; Apr. 7; Sp. p. 1219; Dr. p. 256; Gaz. vol. 133; p. 1386.
Carpenter, J. P., Ithaca, Mich. Combination steering and driving axle for motor-vehicles. No. 885,585; Apr. 21; Sp. p. 3936; Dr. pp. 821-2; Gaz. vol. 133; p. 1873.
Carpenter, W. H., assignor to Bristol Brass Company, Bristol, Conn. Machine for scouring sheet metal. No. 884,313; Apr. 7; Sp. p. 1295; Dr. p. 274; Gaz. vol. 133; p. 1400.
Carpenter, W. H., assignor to Bristol Brass Company, Bristol, Conn. Machine for coiling sheet metal. No. 884,314; Apr. 7; Sp. p. 1298; Dr. p. 275; Gaz. vol. 133; p. 1400.
Carr, F. S., Malden, assignor to Carr Fastener Company, Boston, Mass. Attaching means for fastening members. No. 885,434; Apr. 21; Sp. p. 3629; Dr. p. 761; Gaz. vol. 133; p. 1827.
Carr Fastener Company. (See Carr, F. S., assignor.)
Carroll, C., Chicago, Ill. Cart. No. 885,586; Apr. 21; Sp. p. 3937; Dr. p. 822; Gaz. vol. 133; p. 1873.
Carroll, G. P., Bridgeport Conn. Hydraulic air and gas compressor. No. 883,696; Apr. 7; Sp. p. 22; Dr. pp. 5-6; Gaz. vol. 133; p. 1199.
Carroll, H. M., San Antonio, Tex. Fan-deflector. No. 884,894; Apr. 14; Sp. p. 2500; Dr. p. 528; Gaz. vol. 133; p. 1620.
Carroll, L. A., assignor of one-half to E. B. Casady, Unionville, Mo. Ice-cream-can attachment. No. 884,315; Apr. 7; Sp. p. 1299; Dr. p. 275; Gaz. vol. 133; p. 1400.
Carroll, L. P., New York, N. Y. Combined wagon and truck. No. 884,127; Apr. 7; Sp. p. 972; Dr. p. 201; Gaz. vol. 133; p. 1341.

Carroll, T., assignor, by mesne assignments, to National Cash Register Company, Dayton, Ohio. Cash-register. (Reissue.) No. 12,774; Apr. 7; Sp. p. 1372; Dr. pp. 202–4; Gaz. vol. 133; p. 1412.
Carthage Machine Company. (See Powell, A. M., assignor.)
Casady, E. B. (See Carroll, L. A., assignor.)
Casale, J., New York, N. Y. Folding umbrella. No. 884,712; Apr. 14; Sp. p. 2147; Dr. p. 456; Gaz. vol. 133; p. 1561.
Casey, T., Frankfort, assignor of one-half to J. A. Taylor, Waco, Ky. Nut-lock. No. 885,909; Apr. 28; Sp. p. 4599; Dr. p. 964; Gaz. vol. 133; p. 2010.
Cash, W. F., Hiawatha, Kans. Quilting-frame. No. 884,793; Apr. 14; Sp. p. 2323; Dr. p. 488; Gaz. vol. 133; p. 1589.
Caspar, C., Stuttgart, Germany. Manufacturing crucible compounds. No. 886,111; Apr. 28; Sp. p. 5032; Gaz. vol. 133; p. 2076.
Cass, F. I., Clintonville, Wis. Traction-engine. No. 883,934; Apr. 7; Sp. p. 535; Dr. pp. 105–6; Gaz. vol. 133; p. 1277.
Cassidy, G. W., East Orange, N. J. Canopy attachment for lighting-fixtures. No. 885,017; Apr. 21; Sp. p. 2754; Dr. p. 584; Gaz. vol. 133; p. 1691.
Cast Steel Needle Beam Company. (See Frede, C. F., assignor.)
Casto, F. M. (See Teter, C. K., assignor.)
Cates, L. N., St. Louis, Mo. Protecting-casing for tires. No. 884,794; Apr. 14; Sp. p. 2324; Dr. p. 488; Gaz. vol. 133; p. 1589.
Cathey, H. L. (See Aplin, B. F., assignor.)
Caughey, A. E., Omaha, Nebr. Lighter. No. 884,128; Apr. 7; Sp. p. 973; Dr. p. 202; Gaz. vol. 133; p. 1342.
Causey, J. C. (See Metcalf, J. D., assignor.)
Cave, J., Philadelphia, Pa. Handkerchief-receptacle. No. 885,721; Apr. 28; Sp. p. 4222; Dr. pp. 883–4; Gaz. vol. 133; p. 1947.
Cazier, M. H., Chicago, Ill. Garment-hanger. No. 883,785; Apr. 7; Sp. p. 208; Dr. p. 38; Gaz. vol. 133; p. 1227.
Cederquist, N. H., Los Angeles, Cal. Dust-proof knockdown case. No. 884,509; Apr. 14; Sp. p. 1826; Dr. p. 391; Gaz. vol. 133; p. 1514.
Celfor Tool Company. (See Rich, G. R., assignor.)
Century Telephone Construction Company. (See Knight, H. L., assignor.)
Chambon, L. (See Frydmane and Chambon.)
Champ, J. H., Cleveland, Ohio. Motor. No. 883,935; Apr. 7; Sp. p. 536; Dr. pp. 106–7; Gaz. vol. 133; p. 1277.
Champ, J. H., Cleveland, Ohio. Hydraulic air-compressor. No. 883,936; Apr. 7; Sp. p. 539; Dr. p. 107; Gaz. vol. 133; p. 1278.
Chan, J., Lowry, Minn. Pump attachment. No. 884,265; Apr. 7; Sp. p. 1221; Dr. p. 257; Gaz. vol. 133; p. 1386.
Chandeson, A., Jette St. Pierre, assignor to Compagnie Internationale De Freinage (Systemé Luyers) Société Anonyme, Brussels, Belgium. Compressed-air brake. No. 884,364; Apr. 14; Sp. p. 1413; Dr. pp. 302–3; Gaz. vol. 133; p. 1446.
Chandler, F. A. (See Bonniksen and Chandler.)
Chandler & Price Company. (See Hand, S. A., assignor.)
Chandler & Price Co. (See Sixt and Reichart, assignors.)
Chapman, F., Vandalia, Mich. Animal-holder. No. 883,697; Apr. 7; Sp. p. 46; Dr. p. 7; Gaz. vol. 133; p. 1200.
Chapman, R., Findlay, Ill. Mail-carrier. No. 883,937; Apr. 7; Sp. p. 543; Dr. pp. 107–8; Gaz. vol. 133; p. 1279.
Charbonneaux, A. E., Los Angeles, Cal. Explosive. No. 886,038; Apr. 28; Sp. p. 4904; Gaz. vol. 133; p. 2053.
Charron, F., Puteaux, France. Elastic securing device for doors of automobiles and other vehicles. No. 883,938; Apr. 7; Sp. p. 544; Dr. p. 108; Gaz. vol. 133; p. 1279.
Chase, A. M., assignor to Syracuse Chilled Plow Company, Syracuse, N. Y. Plow. No. 884,365; Apr. 14; Sp. p. 1417; Dr. p. 203; Gaz. vol. 133; p. 1447.
Chase, C., Fall River, Mass. Hoisting-bucket. No. 885,910; Apr. 28; Sp. p. 4600; Dr. pp. 964–5; Gaz. vol. 133; p. 2010.
Chase, F. S., Bloomington, Ind. Harvester-reel. No. 884,465; Apr. 14; Sp. p. 1610; Dr. pp. 347–8; Gaz. vol. 133; p.1479.
Chatain, E. G., Flushing, N. Y. Fruit-cutter. No. 883,786; Apr. 7; Sp. p. 210; Dr. p. 38; Gaz. vol. 133; p. 1227.
Chaumat, H., Paris, France. Preparation of the indigo-vat employed in dyeing. No. 885,978; Apr. 28; Sp. p. 4763; Gaz. vol. 133; p. 2033.
Chayes, H. E. S., New York, N. Y. Artificial tooth. No. 885,018; Apr. 21; Sp. p. 2755; Dr. p. 584; Gaz. vol. 133; p. 1692.
Chemische Fabrik Griesheim-Elektron, Firm of. (See Wiss, E., assignor.)
Chenoweth, M. S., Denver, Colo. Device for attaching handles to doors. No. 885,687; Apr. 21; Sp. p. 4142; Dr. p. 867; Gaz. vol. 133; p. 1907.
Cherny, F., Cleveland, Ohio. Machine for molding cement blocks. No. 884,713; Apr. 14; Sp. p. 2149; Dr. pp. 456–7; Gaz. vol. 133; p. 1562.
Chester B. Albree Iron Works Company. (See Albree, C. B., assignor.)
Chicago Hardware Foundry Company. (See Sedgwick, E. P., assignor.)
Chicago Pneumatic Tool Company. (See Sergeant, C. H., assignor.)
Chicago Portrait Company. (See Nelson, J., assignor.)
Chicago Railway Equipment Company. (See Williams, C. H., Jr., assignor.)
Childress, G. F. (See Smith, E. L., assignor.)
Chilton, H. J., Chicago, Ill. Bottle-handling apparatus. No. 885,912; Apr. 28; Sp. p. 4603; Dr. pp. 965–6; Gaz. vol. 133; p. 2010.
Chipperfield, W. H., London, England. Apparatus for the compression of gas or air for lamps. No. 885,319; Apr. 21; Sp. p. 3408; Dr. pp. 712–13; Gaz. vol. 133; p. 1791.
Chreitzberg, H. F., assignor of one-half to E. C. Bowman, Winston Salem, N. C. Shutter-fastener. No. 884,895; Apr. 14; Sp. p. 2501; Dr. pp. 528–9; Gaz. vol. 133; p. 1620.
Chreitzberg, H. F., assignor of one-half to E. C. Bowman, Winston Salem, N. C. Shutter-fastener. No. 884,896; Apr. 14; Sp. p. 2503; Dr. p. 529; Gaz. vol. 133; p. 1620.
Christenson, M. A., Spring Valley, Minn. Neck-yoke. No. 885,837; Apr. 28; Sp. p. 4467; Dr. p. 938; Gaz. vol. 133; p. 1986.
Christiansen, C., Geisenkirchen, Germany. Thrust boring-machine. No. 883,858; Apr. 7; Sp. p. 378; Dr. p. 74; Gaz. vol. 133; p. 1251.
Christie, E., London, England. Collar-support. No. 885,722; Apr. 28; Sp. p. 4224; Dr. p. 884; Gaz. vol. 133; p. 1947.
Christine, W. T., Chicago, and T. H. Budde, Aurora, Ill. Tree-sawing machine. No. 883,787; Apr. 7; Sp. p. 211; Dr. pp. 38–9; Gaz. vol. 133; p. 1227.
Christopherson, A. G. (See Thomas and Christopherson.)
Christy, J., Chicago, Ill. Keeper for lock-bolts. No. 885,320; Apr. 21; Sp. p. 3410; Dr. p. 713; Gaz. vol. 133; p. 1792.
Chrome Steel Works. (See Canda, F. E., assignor.)
Chrul, T., Baltimore, Md. Heater for confectioners' use. No. 884,073; Apr. 7; Sp. p. 813; Dr. p. 172; Gaz. vol. 133; p. 1323.
Churchward, J., New York, N. Y. Hardening and toughening steel. No. 883,698; Apr. 7; Sp. p. 47; Gaz. vol. 133; p. 1200.
Churchward, J., New York, N. Y. Producing alloyed steels. No. 884,009; Apr. 7; Sp. p. 689; Dr. p. 139; Gaz. vol. 133; p. 1302.
Clapp, S. E., *et al.* (See Bates, Clapp, and Booth.)
Claridge, A. P., Baltimore, Md. Enamel sign. No. 884,570; Apr. 14; Sp. p. 1828; Dr. p. 392; Gaz. vol. 133; p. 1514.
Clark, C. W., and C. E. Yingling, Eaton, Ind. Attachment for trolley-pole clamps. No. 884,074; Apr. 7; Sp. p. 815; Dr. p. 172; Gaz. vol. 133; p. 1323.
Clark, M., Chicago, Ill. Duplex tracker-board for automatic musical instruments. No. 884,366; Apr. 14; Sp. p. 1419; Dr. p. 304; Gaz. vol. 133; p. 1448.
Clark, N. E., Plainville, Conn., assignor to National Metal-Fabric Company, New York, N. Y. Manufacture of expanded metal. No. 884,714; Apr. 14; Sp. p. 2151; Dr. p. 457; Gaz. vol. 133; p. 1562.
Clark, T. F., Seattle, Wash. Sidewalk coal-chute. No. 886,112; Apr. 28; Sp. p. 5033; Dr. p. 1058; Gaz. vol. 133; p. 2076.
Clark, W. G. (See Davies and Clark.)
Clark, W. G., New York, N. Y. Hanging insulator. No. 884,641; Apr. 14; Sp. p. 2002; Dr. p. 428; Gaz. vol. 133; p. 1537.
Clauss, H., Fremont, Ohio. Safety-razor. No. 886,039; Apr. 28; Sp. p. 4905; Dr. p. 1031; Gaz. vol. 133; p. 2053.
Clay, G. H. (See Neville, Clay, and Clewer.)
Clayton, T. A., Paris, France. Disinfecting apparatus. No. 885,435; Apr. 21; Sp. p. 3630; Dr. p. 761; Gaz. vol. 133; p. 1827.
Cleland, T. J., Chicago, Ill. Switch-box. No. 884,466; Apr. 14; Sp. p. 1611; Dr. p. 348; Gaz. vol. 133; p. 1480.
Clement, B. E., Humboldt, Tenn. Gun-cleaning rod. No. 886,188; Apr. 28; Sp. p. 5174; Dr. p. 1089; Gaz. vol. 133; p. 2101.
Clément, C. P., Liege, Belgium. Automatic pistol. No. 885,436; Apr. 21; Sp. p. 3632; Dr. pp. 761–2; Gaz. vol. 133; p. 1828.
Cleveland, A. J., and F. S. Brown, Minneapolis, Kans. Electric signal. No. 884,129; Apr. 7; Sp. p. 975; Dr. p. 202; Gaz. vol. 133; p. 1342.
Cleveland Pneumatic Tool Company. (See Richards, C. B., assignor.)
Clewer, J. H. (See Neville, Clay, and Clewer.)
Clifton, J. (See Clifton, L. R., assignor.)
Clifton, L. R., assignor of one-half to J. Clifton, Lawrenceburg, Tenn. Combined sickle-bar and cutter. No. 884,807; Apr. 14; Sp. p. 2504; Dr. p. 529; Gaz. vol. 133; p. 1621.
Clipper Plow Company. (See Klenk, G., assignor.) (Reissue.)
Clough, H. P., Providence, R. I. Hoisting apparatus. No. 886,113; Apr. 28; Sp. p. 5036; Dr. p. 1058; Gaz. vol. 133; p. 2076.
Clovis, E. F. (See Gage, E. C., assignor.)
Coachman, J. J., London, England. Electric time-switch. No. 884,130; Apr. 7; Sp. p. 977; Dr. p. 203; Gaz. vol. 133; p. 1342.
Coad, R. E., Omaha, Nebr. Lumber-loading device. No. 884,642; Apr. 14; Sp. p. 2003; Dr. p. 429; Gaz. vol. 133; p. 1537.
Coates, R., Washington, D. C. Horse-detacher. No. 884,795; Apr. 14; Sp. p. 2325; Dr. p. 489; Gaz. vol. 133; p. 1589.
Coats, F. R., Springfield, Ill. Jewel and pivot gage. No. 885,838; Apr. 28; Sp. p. 4468; Dr. p. 938; Gaz. vol. 133; p. 1986.
Cobb, H. F., Cleveland, Ohio. Corrugating sheet metal. No. 883,786; Apr. 7; Sp. p. 212; Dr. p. 39; Gaz. vol. 133; p. 1228.

Cochran, E. J., Sterling, Ill. Chimney-cap fastening. No. 885,321; Apr. 21; Sp. p. 3412; Dr. p. 713; Gaz. vol. 133; p. 1792.
Cochran, J. M., Paducah, Ky. Pipe-wrench. No. 885,322; Apr. 21; Sp. p. 3414; Dr. p. 713; Gaz. vol. 133; p. 1793.
Cockburn Barrow & Machine Company. (See Scott, J. A., assignor.)
Coe, A. I., New York, N. Y. Packing-case for hats. No. 885,979; Apr. 28; Sp. p. 4764; Dr. pp. 1000–1; Gaz. vol. 133; p. 2033.
Coffin, E. C., Coffinton, Ga. Whiffletree attachment. No. 884,715; Apr. 14; Sp. p. 2154; Dr. p. 458; Gaz. vol. 133; p. 1562.
Coffman, J. H., Manhattan, Kans. Sunshade. No. 885,438; Apr. 21; Sp. p. 3640; Dr. p. 764; Gaz. vol. 133; p. 1829.
Cohee, C. C., Indianapolis, Ind. Gate. No. 884,467; Apr. 14; Sp. p. 1613; Dr. p. 348; Gaz. vol. 133; p. 1480.
Cohn, S., New York, N. Y. Machine for gathering and sewing the heads of mantles. No. 885,437; Apr. 21; Sp. p. 3635; Dr. pp. 762–3; Gaz. vol. 133; p. 1828.
Cohn Witney & Goldfarb. (See Zempter, G. H., assignor.)
Cole, C. B., Bristol, England. Edge-runner grinding or mixing mill. No. 885,723; Apr. 28; Sp. p. 4225; Dr. pp. 884–5; Gaz. vol. 133; p. 1948.
Collings, G. W., assignor to Collings Paper Goods Company, Chicago, Ill. Coin-mailer. No. 885,724; Apr. 28; Sp. p. 4227; Dr. p. 886; Gaz. vol. 133; p. 1948.
Collings Paper Goods Company. (See Collings, G. W., assignor.)
Collingwood, A., assignor of two-half to J. N. and E. Harlan, Franklin, Pa. Oil-well packer. No. 886,114; Apr. 28; Sp. p. 5038; Dr. p. 1058; Gaz. vol. 133; p. 2077.
Collins, C., San Francisco, Cal. Fireproof building construction. No. 885,439; Apr. 21; Sp. p. 3641; Dr. p. 764; Gaz. vol. 133; p. 1829.
Collins, W. A., and W. Westbrook, Detroit, Mich. Air-pump for street-cars and analogous purposes. No. 885,440; Apr. 21; Sp. p. 3642; Dr. p. 764; Gaz. vol. 133; p. 1829.
Colquhoun, E. M., Philadelphia, Pa. Gas-burner. No. 885,441; Apr. 21; Sp. p. 3643; Dr. p. 765; Gaz. vol. 133; p. 1830.
Columbia Process Company. (See Pellew and Whipple, assignors.)
Combustion Utilities Company. (See Eldred, B. E., assignor.)
Common, W., Germiston, Transvaal. Friction-clutch. No. 885,323; Apr. 21; Sp. p. 3415; Dr. p. 714; Gaz. vol. 133; p. 1793.
Compagnie Internationale De Freinage (Systeme Luyers) Société Anonyme. (See Chandeson, A., assignor.)
Compton, M. D., New York, N. Y., assignor to A. G. Wheeler, Jr., trustee. Motor-driven exhauster and compressor. No. 884,131; Apr. 7; Sp. p. 980; Dr. pp. 204–5; Gaz. vol. 133; p. 1343.
Concrete Frame Company. (See Wheeler, H. H., assignor.)
Condon, E. J., assignor of two-thirds to E. I. Rains and G. W. Ruppert, New York, N. Y. Electrical water-heater. No. 884,367; Apr. 14; Sp. p. 1423; Dr. p. 304; Gaz. vol. 133; p. 1448.
Cone, A. C. (See Cone, A. D. and A. C.)
Cone, A. D. and A. C., Ansley, Nebr. Corn-sheller machine. No. 885,665; Apr. 21; Sp. p. 4095; Dr. p. 857; Gaz. vol. 133; p. 1858.
Conklin, C. M., Cincinnati, Ohio, assignor, by mesne assignments, to Lunken Steel Window Co. Window-screen and making the same. No. 885,725; Apr. 28; Sp. p. 4228; Dr. p. 886; Gaz. vol. 133; p. 1948.
Conklin, C. M., Cincinnati, Ohio, assignor, by mesne assignments, to Lunken Steel Window Co. Window-screen. No. 885,726; Apr. 28; Sp. p. 4230; Dr. p. 886; Gaz. vol. 133; p. 1949.
Conley, G., Caseville, Mich. Colter. No. 885,019; Apr. 21; Sp. p. 2757; Dr. p. 585; Gaz. vol. 133; p. 1692.
Connan, C. A., assignor of one-half to A. A. Greenwood, Los Angeles, Cal. Sewing-awl. No. 885,913; Apr. 28; Sp. p. 4608; Dr. p. 966; Gaz. vol. 133; p. 2011.
Connecticut Telephone & Electric Company. (See Williams, E. Q., assignor.)
Connell, W. H., Pittsburg, Pa. Manufacture of compound ingots. No. 885,839; Apr. 28; Sp. p. 4470; Dr. p. 939; Gaz. vol. 133; p. 1986.
Connett, C. W. (See Orebaugh and Connett.)
Connor, P. J. (See Libby and Connor.)
Conrad, F., Swissvale, Pa., assignor to Westinghouse Electric & Manufacturing Company. Automatic synchronizer. No. 885,143; Apr. 21; Sp. p. 3032; Dr. p. 639; Gaz. vol. 133; p. 1732.
Conrader, R., Erie, assignor to J. W. Waltz, Oil City, Pa. Apparatus for actuating fluids. No. 886,312; Apr. 28; Sp. p. 5414; Dr. pp. 1136–7; Gaz. vol. 133; p. 2145.
Conrard, C. A., Washington, D. C. Fastener. No. 884,316; Apr. 7; Sp. p. 1300; Dr. p. 275; Gaz. vol. 133; p. 1400.
Consolidated Car Heating Company. (See McElroy, J. F., assignor.)
Coogan, E. D., Caulksville, Ark. Grapple. No. 885,442; Apr. 21; Sp. p. 3645; Dr. p. 765; Gaz. vol. 133; p. 1830.
Cook, G. J., Port Huron, Mich. Water-trough for poultry crates or coops. No. 884,716; Apr. 14; Sp. p. 2155; Dr. p. 458; Gaz. vol. 133; p. 1563.
Cook, J., *et al.* (See Messer, J. C., assignor.)
Cook, S. G., East St. Louis, Ill., assignor to himself, trustee. Adding-machine. No. 884,468; Apr. 14; Sp. p. 1614; Dr. pp. 348–9; Gaz. vol. 133; p. 1480.
Cooke, W. B., Jenkintown, assignor to William Wharton, Jr., & Company, Incorporated, Philadelphia, Pa. Movable-point crossing. No. 884,717; Apr. 14; Sp. p. 2156; Dr. p. 458; Gaz. vol. 133; p. 1563.
Coply, G. B. (See Seems and Coply.)
Correll, A. T., Bradenville, Pa. Locking mechanism for end-gates. No. 884,898; Apr. 14; Sp. p. 2506; Dr. p. 530; Gaz. vol. 133; p. 1601.
Corris, T., Cleveland, Ohio. Framing-support for concrete construction. No. 883,859; Apr. 7; Sp. p. 380; Dr. p. 74; Gaz. vol. 133; p. 1252.
Corrugated Concrete Pile Company of America. (See Gilbreth, F. B., assignor.)
Cory, L., Gilman City, Mo. Sharpening or cutting machine. No. 885,020; Apr. 21; Sp. p. 2758; Dr. p. 585; Gaz. vol. 133; p. 1692.
Cosner, O. G., Kents Store, Va. Rail-joint. No. 884,796; Apr. 14; Sp. p. 2326; Dr. p. 489; Gaz. vol. 133; p. 1590.
Cotton, A., Newark, N. J. Furnace-door. No. 885,727; Apr. 28; Sp. p. 4232; Dr. pp. 886–7; Gaz. vol. 133; p. 1949.
Cottrill, F. H., Milwaukee, Wis. Alarm for paper-feed carriages. No. 885,443; Apr. 21; Sp. p. 3647; Dr. p. 765; Gaz. vol. 133; p. 1830.
Coulson, C. C. (See Coulson, H. G. and C. C.)
Coulson, H. G. and C. C., Jay county, Ind. Sparking mechanism. No. 885,324; Apr. 21; Sp. p. 3418; Dr. p. 714; Gaz. vol. 133; p. 1793.
Coventry, J. S., Des Moines, Iowa. Sifter-sieve. No. 884,899; Apr. 14; Sp. p. 2507; Dr. p. 530; Gaz. vol. 133; p. 1601.
Cowen, E., Barnesville, Ohio. Envelop. No. 884,317; Apr. 7; Sp. p. 1301; Dr. p. 275; Gaz. vol. 133; p. 1401.
Cowham, W. F. (See Miller, J. W., assignor.)
Cowhig, J. H., Bremerton, Wash. Cooking utensil. No. 884,718; Apr. 14; Sp. p. 2157; Dr. p. 458; Gaz. vol. 133; p. 1563.
Cowing, P. F., New York, N. Y. Forming metal into flakes. No. 884,571; Apr. 14; Sp. p. 1829; Dr. p. 392; Gaz. vol. 133; p. 1514.
Cowles, A. C., Auburn, N. Y. Combined square, gage, and rule. No. 885,226; Apr. 21; Sp. p. 3220; Dr. p. 672; Gaz. vol. 133; p. 1760.
Cowper-Coles, S. O., London, England. Electrodeposition of iron. No. 884,075; Apr. 7; Sp. p. 817; Gaz. vol. 133; p. 1324.
Cox, P. F., assignor to Jackson Printing Press Company, Jackson, Mich. Web-feeding device for printing-presses. No. 884,900; Apr. 14; Sp. p. 2509; Dr. p. 530; Gaz. vol. 133; p. 1622.
Cox, P. F., Jackson, Mich., assignor to Jackson Printing Press Company. Web-printing press. No. 884,901; Apr. 14; Sp. p. 2513; Dr. p. 531; Gaz. vol. 133; p. 1622.
Cox, W., Provo City, Utah. Combined antirattler thill coupling and support. No. 884,469; Apr. 14; Sp. p. 1620; Dr. p. 349; Gaz. vol. 133; p. 1481.
Craft, E. B., assignor to Western Electric Company, Chicago, Ill. Coin-collector. No. 884,470; Apr. 14; Sp. p. 1621; Dr. pp. 349–50; Gaz. vol. 133; p. 1481.
Craig, A. M., assignor to Rome Saddlery Hardware Manufacturing Co., Rome, N. Y. Harness. No. 885,911; Apr. 28; Sp. p. 4602; Dr. p. 965; Gaz. vol. 133; p. 2010.
Cram, A. W., Haverhill, Mass. Mixing spoon. No. 885,444; Apr. 21; Sp. p. 3648; Dr. p. 765; Gaz. vol. 133; p. 1831.
Cram, E. R., Cambridge, assignor to Stone Telegraph and Telephone Company, Boston, Mass. Space telegraphy. No. 884,076; Apr. 7; Sp. p. 818; Dr. p. 172; Gaz. vol. 133; p. 1324.
Cramer, A. W. P., Montclair, N. J., assignor to Wheeler Condenser and Engineering Co., New York, N. Y. Condenser. No. 884,077; Apr. 7; Sp. p. 821; Dr. p. 173; Gaz. vol. 133; p. 1324.
Cramp, R., London, England. Turbine. No. 884,719; Apr. 14; Sp. p. 2158; Dr. p. 459; Gaz. vol. 133; p. 1564.
Cranford, F. L., *et al.* (See Meem, J. C., assignor.)
Cranford, W. V., *et al.* (See Meem, J. C., assignor.)
Crawford, F. W., North Adams, Mass. Forming shoe-tongues. No. 884,471; Apr. 14; Sp. p. 1623; Dr. p. 350; Gaz. vol. 133; p. 1481.
Craven, A., East Providence, R. I. Toy. No. 883,860; Apr. 7; Sp. p. 382; Dr. p. 74; Gaz. vol. 133; p. 1252.
Creager, C. F., *et al.* (See Willis, C. A., assignor.)
Creamery Package Mfg. Company. (See Macnish, F. J., assignor.)
Creasy, J. A., Norborne, Mo. Apparatus for separating gold. No. 883,861; Apr. 7; Sp. p. 383; Dr. pp. 74–5; Gaz. vol. 133; p. 1252.
Crenshaw, J. R., Newborn, Ga. Spoke-puller. No. 885,445; Apr. 21; Sp. p. 3649; Dr. p. 766; Gaz. vol. 133; p. 1831.
Crimilsk, J. J., assignor of one-half to L. Delpino, Philadelphia, Pa. Cushioning-protector for hosiery-drying boards. No. 885,728; Apr. 28; Sp. p. 4234; Dr. p. 887; Gaz. vol. 133; p. 1950.
Crislip, E. T., *et al.* (See Stewart, S., assignor.)
Critchett, J. C., El Paso, Tex. Puzzle. No. 884,902; Apr. 14; Sp. p. 2515; Dr. pp. 531–2; Gaz. vol. 133; p. 1622.
Crocker, A. T., Schenectady, N. Y., assignor to General Electric Company. Controller. No. 885,446; Apr. 21; Sp. p. 3651; Dr. p. 766; Gaz. vol. 133; p. 1831.
Cromer, H. I. (See Zimmerman, J., assignor.)

Crompton & Knowles Loom Works. (See Crompton, R., assignor.)
Crompton & Knowles Loom Works. (See Ryon, E. H., assignor.)
Crompton, R., assignor to Crompton & Knowles Loom Works, Worcester, Mass. Weft-replenishing loom. No. 885,021; Apr. 21; Sp. p. 2760; Dr. pp. 585–6; Gaz. vol. 133; p. 1695.
Cronemeyer, E. L., Granite City, Ill. Tin-plate catcher. No. 885,729; Apr. 28; Sp. p. 4235; Dr. pp. 887–8; Gaz. vol. 133; p. 1950.
Crosby, C. W., assignor to International Stoker Company, Chicago, Ill. Conveying mechanism. No. 885,730; Apr. 28; Sp. p. 4238; Dr. pp. 888–9; Gaz. vol. 133; p. 1950.
Crosby, W. C., Cyril, Fla. Rail-splice. No. 885,666; Apr. 21; Sp. p. 4097; Dr. p. 857; Gaz. vol. 133; p. 1899.
Cross, J. W., assignor of one-half to B. B. Allphin, Walton, Ky. Brake. No. 885,447; Apr. 21; Sp. p. 3654; Dr. p. 766; Gaz. vol. 133; p. 1832.
Crossley, W. J., and T. Rigby, Openshaw, near Manchester, England. Recovering ammonia and heating air in the manufacture of producer-gas. No. 885,980; Apr. 28; Sp. p. 4766; Dr. p. 1001; Gaz. vol. 133; p. 2034.
Crouch, T. T., Chicago, Ill. Calculating device. No. 886,189; Apr. 28; Sp. p. 5174; Dr. pp. 1089–90; Gaz. vol. 133; p. 2101.
Crown Fire Extinguisher Company. (See McGinley, J. B., assignor.)
Croy, B. V., Cunot, Ind. Self-regulating damper. No. 883,789; Apr. 7; Sp. p. 216; Dr. p. 39; Gaz. vol. 133; p. 1228.
Crudginton, J. F., Bridgeport, Conn. Pipe-threading die. No. 885,144; Apr. 21; Sp. p. 3035; Dr. p. 639; Gaz. vol. 133; p. 1732.
Crump, F. H., Los Angeles, Cal. Excess-baggage coupon-check. No. 884,266; Apr. 7; Sp. p. 1222; Dr. p. 257; Gaz. vol. 133; p. 1386.
Crush, H. P., Charlton, assignor to A. James, London, England. Sectional filter for exhaust filtration. No. 884,797; Apr. 14; Sp. p. 2327; Dr. p. 489; Gaz. vol. 133; p. 1590.
Cubitt, A. S., Schenectady, N. Y., assignor to General Electric Company. Relay. No. 885,688; Apr. 21; Sp. p. 4143; Dr. p. 867; Gaz. vol. 133; p. 1907.
Cullen, F. H., Pittsburg, Pa. Seat. No. 886,115; Apr. 28; Sp. p. 5040; Dr. p. 1059; Gaz. vol. 133; p. 2078.
Cummings, H. H., Newton, assignor, by mesne assignments, to T. G. Plant, Boston, Mass. Nail forming and driving machine. No. 883,962; Apr. 7; Sp. p. 385; Dr. pp. 75–6; Gaz. vol. 133; p. 1253.
Cummings, H. H., Malden, Mass., assignor, by mesne assignments, to Manufacturers Machine Company, Montclair, N. J. Stitch separating and indenting machine. No. 885,022; Apr. 21; Sp. p. 2766; Dr. pp. 586–8; Gaz. vol. 133; p. 1693.
Cummings, R. A., Beaver, Pa. Unit reinforcement for concrete construction. No. 884,010; Apr. 7; Sp. p. 692; Dr. p. 139; Gaz. vol. 133; p. 1303.
Cummings, R. T., Maysville, Ky. Combined tie and rail-fastening. No. 884,132; Apr. 7; Sp. p. 985; Dr. p. 205; Gaz. vol. 133; p. 1343.
Cunningham, A. S., and E. Henley, Oskaloosa, Iowa. Adjustable tool-handle. No. 884,133; Apr. 7; Sp. p. 986; Dr. p. 205; Gaz. vol. 133; p. 1343.
Curtain Supply Company. (See Houghtaling, F. A., assignor.)
Curtain Supply Company. (See Whinery, D., assignor.)
Curtis, T. H., Louisville, Ky. Car-truck. No. 883,863; Apr. 7; Sp. p. 393; Dr. p. 76; Gaz. vol. 133; p. 1253.
Curtis, W. L., Worcester, Mass. Roller or wheel. No. 884,720; Apr. 14; Sp. p. 2162; Dr. p. 459; Gaz. vol. 133; p. 1564.
Curtiss, O. L. (See Draper and Curtiss.)
Curvin, G. W., Viva, Ky. Pump. No. 883,864; Apr. 7; Sp. p. 394; Dr. pp. 76–7; Gaz. vol. 133; p. 1253.
Cushman, J. W., New York, N. Y. Oil-can. No. 885,840; Apr. 28; Sp. p. 4471; Dr. p. 939; Gaz. vol. 133; p. 1987.
Cusick, J. B., Wellsburg, W. Va., and W. I. Scott, Mingo Junction, Ohio. Bag-holding device. No. 884,798; Apr. 14; Sp. p. 2329; Dr. p. 489; Gaz. vol. 133; p. 1590.
Custer, D. W., New York, N. Y. Garment-hanger. No. 886,116; Apr. 28; Sp. p. 5042; Dr. p. 1059; Gaz. vol. 133; p. 2078.
Cutler, H. H. (See Barnum and Cutler.)
Cutler-Hammer Mfg. Co. (See Barnum and Cutler, assignors.)
Cutler-Hammer Mfg. Co. (See Horton, A. J., assignor.)
Cutter, S. M., Ashland, Mass. assignor to United Shoe Machinery Company, Paterson, N. J., and Boston, Mass. Nailing-machine. No. 886,313; Apr. 28; Sp. p. 5424; Dr. p. 1137; Gaz. vol. 133; p. 2144.
Cyclone Drill Company. (See Smith, C., assignor.)
Cyphers Incubator Company. (See Davis and Baer, assignors.)
D'Olier Engineering Company. (See Salzer, R., assignor.)
Dahl, M., *et al.* (See Brisbois, O., assignor.)
Dahn, H., Edgewater, N. J., and F. Becker, New York, N. Y. Advertising apparatus. No. 883,865; Apr. 7; Sp. p. 396; Dr. p. 77; Gaz. vol. 133; p. 1254.
Dailey, F. A., St. Paul, and B. Long, Minneapolis, Minn. Stuffing-box. No. 884,318; Apr. 7; Sp. p. 1302; Dr. p. 276; Gaz. vol. 133; p. 1401.
Daily, G. P. (See Lehmann, E., assignor.)
Dale, J. H. (See Bullock, T. H., Jr., assignor.)
Dalgron, L. M. (See Nix, J. D., assignor.)
Dalton, J. A., Pawtucket, and E. D. Thompson, Central Falls, R. I.; said Dalton assignor to said Thompson. Reversible tapping-chuck. No. 885,914; Apr. 28; Sp. p. 4610; Dr. p. 966; Gaz. vol. 133; p. 2011.
Daly, M. J., and T. S. Leake, Chicago, Ill. Sash-balance. No. 884,472; Apr. 14; Sp. p. 1625; Dr. p. 350; Gaz. vol. 133; p. 1482.
Dan, L., Portland, Oreg. Car-fender. No. 885,325; Apr. 21; Sp. p. 3420; Dr. p. 714; Gaz. vol. 133; p. 1793.
Dana, W. H., assignor to L. Rauh, Dayton, Ohio. Voting-machine. No. 885,981; Apr. 28; Sp. p. 4767; Dr. pp. 1002–3; Gaz. vol. 133; p. 2034.
Dana, W. H., assignor to L. Rauh, Dayton, Ohio. Voting-machine. No. 886,314; Apr. 28; Sp. p. 5427; Dr. pp. 1137–8; Gaz. vol. 133; p. 2145.
Dandridge, E. P., Philadelphia, Pa. Twine-holder. No. 884,799; Apr. 14; Sp. p. 2330; Dr. p. 490; Gaz. vol. 133; p. 1591.
Dannenberg, M. E., Berlin, Germany. Lathe for billiard-cues or the like. No. 883,699; Apr. 7; Sp. p. 50; Dr. p. 7; Gaz. vol. 133; p. 1200.
Danquard, T., assignor to Autopiano Company, New York, N. Y. Folding pedal. No. 884,643; Apr. 14; Sp. p. 2005; Dr. p. 429; Gaz. vol. 133; p. 1538.
Dansby, T. M., Pine Bluff, Ark. Combined cover and follower for barrels, kegs, and the like. No. 886,040; Apr. 28; Sp. p. 4907; Dr. p. 1031; Gaz. vol. 133; p. 2053.
Darlington, P. J., Pittsburg, Pa. Rotary machine. No. 885,731; Apr. 28; Sp. p. 4243; Dr. p. 889; Gaz. vol. 133; p. 1950.
Darlington, P. J., Pittsburg, Pa. Rotary motor. No. 885,732; Apr. 28; Sp. p. 4244; Dr. p. 889; Gaz. vol. 133; p. 1951.
Darnell, G. W., near Edna, Tex. Insect-destroyer. No. 884,319; Apr. 7; Sp. p. 1304; Dr. p. 276; Gaz. vol. 133; p. 1401.
Davenport, R. P., *et al.* (See Lewis, S. T., assignor.)
Davidson, A. V., and C. R. Beard, Akron, Ohio. Grate. No. 885,667; Apr. 21; Sp. p. 4098; Dr. p. 858; Gaz. vol. 133; p. 1899.
Davidson, S. J., Lexington, Ky. Paper-rewind mechanism for adding-machines. No. 884,721; Apr. 14; Sp. p. 2163; Dr. p. 460; Gaz. vol. 133; p. 1565.
Davies, E. L., and W. G. Clark, Wessels Nek, Natal. Uniting iron or steel with each other and with other metals. No. 885,668; Apr. 21; Sp. p. 4100; Gaz. vol. 133; p. 1899.
Davis, A. V., Pasadena, Cal. Scaffold-bracket. No. 885,227; Apr. 21; Sp. p. 3221; Dr. p. 672; Gaz. vol. 133; p. 1760.
Davis, C. B., Chase City, Va., assignor of three-eighths to J. H. Burroughs, Asheville, N. C., T. E. Parnell, Chattanooga, Tenn., and A. T. Finch, Chase City, Va. Chewing-gum wrapper. No. 884,903; Apr. 14; Sp. p. 2331; Dr. p. 490; Gaz. vol. 133; p. 1591.
Davis, C. Z., and J. H. Baer, assignors to Cyphers Incubator Company, Buffalo, N. Y. Lamp-support for incubator-heaters. No. 883,939; Apr. 7; Sp. p. 545; Dr. p. 108; Gaz. vol. 133; p. 1280.
Davis, H., Washington, D. C., assignor to Brennan Construction Company. Unloading apparatus for concrete-mixers. No. 885,448; Apr. 21; Sp. p. 3655; Dr. pp. 766–7; Gaz. vol. 133; p. 1832.
Davis, H. A., Murfreesboro, Ark. Cultivator attachment. No. 885,228; Apr. 21; Sp. p. 3222; Dr. p. 672; Gaz. vol. 133; p. 1760.
Davis, J. W., assignor, by mesne assignments, to Davis Piano Player Company, Pulaski, Tenn. Manually and pneumatically operated automatic piano. No. 884,320; Apr. 7; Sp. p. 1306; Dr. pp. 276–7; Gaz. vol. 133; p. 1402.
Davis, M., assignor of one-half to O. W. Hutchison, Tonkawa, Okla. Grain weighing and bagging machine. No. 885,841; Apr. 28; Sp. p. 4473; Dr. pp. 939–40; Gaz. vol. 133; p. 1987.
Davis McGregor Manufacturing Company. (See Davis, S. J., assignor.)
Davis, N. S., Montrose, Colo. Book-holder. No. 884,722; Apr. 14; Sp. p. 2167; Dr. p. 460; Gaz. vol. 133; p. 1565.
Davis Piano Player Company. (See Davis, J. W., assignor.)
Davis, S. J., Ostrander, Wash. Friction-clutch mechanism. No. 885,449; Apr. 21; Sp. p. 3657; Dr. p. 767; Gaz. vol. 133; p. 1832.
Davis, S. J., Ostrander, Wash., assignor to Davis McGregor Manufacturing Company, Portland, Oreg. Logging means. No. 886,287; Apr. 28; Sp. p. 5358; Dr. pp. 1126–7; Gaz. vol. 133; p. 2135.
Davis, S. J., Ostrander, Wash., assignor to Davis McGregor Manufacturing Company, Portland, Oreg. Balance throttle-valve. No. 886,288; Apr. 28; Sp. p. 5361; Dr. p. 1127; Gaz. vol. 133; p. 2135.
Davis, V. F., Orange, assignor to W. B. Wadsworth, Plainfield N. J. Heat-regulating apparatus. No. 884 321; Apr. 7; Sp. p. 1308; Dr. p. 277; Gaz. vol. 133; p. 1402.
Davis, W. F., assignor of one-half to H. Mathews, Kansas City, Mo. Fluid-pressure valve. No. 885,145; Apr. 21; Sp. p. 3036; Dr. pp. 639–40; Gaz. vol. 133; p. 1733.
Dawson, E. C., Jackson, Tenn. Plant-protector. No. 884,473; Apr. 14; Sp. p. 1626; Dr. p. 350; Gaz. vol. 133; p. 1482.

Dawson, J. C., St. Louis, Mo. Coat-hanger. No. 886,041; Apr. 28; Sp. p. 4908; Dr. p. 1032; Gaz. vol. 133; p. 2054.
Dawson, W., Hawarden, Iowa. Reciprocating propeller. No. 884,474; Apr. 14; Sp. p. 1627; Dr. p. 351; Gaz. vol. 133; p. 1482.
Day, A., Leeds, England. Packaging-machine. No. 885,733; Apr. 28; Sp. p. 4248; Dr. p. 890; Gaz. vol. 133; p. 1951.
Daymude, C. D., Wichita, Kans. Oil-can. No. 883,790; Apr. 7; Sp. p. 217; Dr. p. 40; Gaz. vol. 133; p. 1228.
De Camp, E. (See Lefferts, H. D. B., assignor.)
De Canio, V. A., Union Hill, N. J. Self-closing drawer. No. 886,192; Apr. 28; Sp. p. 5183; Dr. p. 1091; Gaz. vol. 133; p. 2102.
De Frear, W., Albany, N. Y. Garment-hanger. No. 886,042; Apr. 28; Sp. p. 4909; Dr. p. 1032; Gaz. vol. 133; p. 2054.
De Give, J. L. (See Sisk, F. M., assignor.)
De Graw, F. A., Clifton Springs, N. Y. Loose-leaf binder. No. 884,134; Apr. 7; Sp. p. 987; Dr. p. 206; Gaz. vol. 133; p. 1344.
De Joannis, H., Chicago, Ill. Playing-card pack. No. 886,130; Apr. 28; Sp. p. 5079; Dr. p. 1066; Gaz. vol. 133; p. 2082.
De Kleist, E., North Tonawanda, N. Y. Organ. No. 884,094; Apr. 7; Sp. p. 859; Dr. p. 181; Gaz. vol. 133; p. 1330.
De Lashmutt, W. J., Astoria, Oreg. Rule. No. 884,904; Apr. 14; Sp. p. 2519; Dr. p. 532; Gaz. vol. 133; p. 1623.
De Léry, J. B., assignor to N. B. De Léry, New York, N. Y. Manufacture of cigars. No. 884,982; Apr. 14; Sp. p. 2680; Dr. p. 569; Gaz. vol. 133; p. 1646.
De Léry, N. B. (See De Léry, J. B., assignor.)
De Vlieger, E., Brussels, Belgium. Automatic coupling. No. 884,801; Apr. 14; Sp. p. 2333; Dr. p. 491; Gaz. vol. 133; p. 1591.
De Wind, N., and F. R. Jones, Harvey, assignors to Austin Manufacturing Company, Chicago, Ill. Gasolene road-roller. No. 885,984; Apr. 28; Sp. p. 4780; Dr. pp. 1004–5; Gaz. vol. 133; p. 2035.
De Witt, C. C., assignor of one-half to F. L. Aymond, St. Louis, Mo. Compressed-air-cushion block. No. 886,193; Apr. 28; Sp. p. 5185; Dr. p. 1091; Gaz. vol. 133; p. 2103.
De Witt, J. M., assignor of one-fourth to W. C. Johnston, Bloomsburg, Pa. Appliance to prevent railway-track rails from spreading. No. 886,315; Apr. 28; Sp. p. 5430; Dr. p. 1138; Gaz. vol. 133; p. 2145.
De Wolf, J. O., Cambridge, Mass. Apparatus for making printing-plates. No. 884,369; Apr. 14; Sp. p. 1428; Dr. p. 305; Gaz. vol. 133; p. 1449.
Deal, J. F., Tilton, Ga. Cultivator. No. 886,190; Apr. 28; Sp. p. 5179; Dr. p. 1091; Gaz. vol. 133; p. 2101.
Dean, R. E., Mason City, Iowa. Steam-engine. No. 883,866; Apr. 7; Sp. p. 398; Dr. pp. 77–8; Gaz. vol. 133; p. 1254.
Deardurff, C. D., and B. L. McDonough, Newark, Ohio. Railway-signal. No. 883,940; Apr. 7; Sp. p. 546; Dr. pp. 108–9; Gaz. vol. 133; p. 1280.
Dearing, D. M., Jackson, Mich. Variable-speed power-transmission device. No. 886,191; Apr. 28; Sp. p. 5180; Dr. p. 1091; Gaz. vol. 133; p. 2102.
Debacher, R. R., Hoboken, N. J. Frame for mirrors, brushes, and the like. No. 884,078; Apr. 7; Sp. p. 822; Dr. p. 173; Gaz. vol. 133; p. 1325.
Decker, H. L., El Paso, Tex. Pianissimo device. No. 884,903; Apr. 14; Sp. p. 2518; Dr. p. 532; Gaz. vol. 133; p. 1622.
Deemer, J. M., New York, N. Y. Bottle and sealing-cap. No. 885,734; Apr. 28; Sp. p. 4253; Dr. p. 890; Gaz. vol. 133; p. 1952.
Dehls, R., Jersey City, N. J. Game-board. No. 885,588; Apr. 21; Sp. p. 3940; Dr. p. 823; Gaz. vol. 133; p. 1874.
Del Grande, N., Petersburg, Va. Pyrotechnic device. No. 885,689; Apr. 21; Sp. p. 4144; Dr. p. 867; Gaz. vol. 133; p. 1907.
Delacroix, R. J. A., Besançon, France. Driving-gear for velocipedes. No. 885,982; Apr. 28; Sp. p. 4775; Dr. p. 1003; Gaz. vol. 133; p. 2034.
Delaney, J. S. (See Robertson and Delaney.)
Delloye, H. L., and A. E. Hénard, Paris, France. Means for obtaining illusionary decorative effects in rooms and the like. No. 885,609; Apr. 21; Sp. p. 4102; Dr. pp. 858–9; Gaz. vol. 133; p. 1900.
Delce, E. G., Roaring Spring, Pa. Door-check. No. 885,023; Apr. 21; Sp. p. 2774; Dr. p. 588; Gaz. vol. 133; p. 1693.
Delpino, L. (See Crimilsk, J. J., assignor.)
Deming, E. W., New York, N. Y. Apparatus for separating solids from liquids. No. 885,450; Apr. 21; Sp. p. 3659; Dr. p. 767; Gaz. vol. 133; p. 1833.
Deming, E. W., New York, N. Y. Separating solids from liquids. No. 885,451; Apr. 21; Sp. p. 3661; Dr. p. 768; Gaz. vol. 133; p. 1833.
Dempster, J. E., Mayodan, assignor of one-half to C. V. Pegram, Walkertown, N. C. Spark-arrester. No 883,791; Apr. 7; Sp. p. 218; Dr. p. 40; Gaz. vol. 133; p. 1229.
Dempster Mill Manufacturing Company. (See Smothers and Elliott, assignors.)
Dench, W. L., Pelham, assignor to Elliott-Fisher Company, New York, N. Y. Register for adding-machines. No. 885,326; Apr. 21; Sp. p. 3421; Dr. p. 714; Gaz. vol. 133; p. 1794.
Deneen, G. E., *et al.* (See Wirgman, J., assignor.)
Dengler, H. J., Rochester, N. Y. Roller-support. No. 885,146; Apr. 21; Sp. p. 3041; Dr. p. 640; Gaz. vol. 133; p. 1733.
Dengler, W. J., Atlantic City, N. J. Guard for eyeglasses. No. 885,735; Apr. 28; Sp. p. 4255; Dr. p. 891; Gaz. vol. 133; p. 1952.
Dennick, W., *et al.* (See Broome, H., assignor.)
Dennis, A. A., assignor to Veneer Machinery Company, Grand Rapids, Mich. Gluing veneers. No. 884,905; Apr. 14; Sp. p. 2520; Dr. pp. 532–3; Gaz. vol. 133; p. 1623.
Denton, W. S., New York, N. Y. Modulation-indicator for automatic music-playing mechanisms. No. 884,135; Apr. 7; Sp. p. 988; Dr. p. 206; Gaz. vol. 133; p. 1344.
Depew, J. C., Chicago, Ill. Railway-spreader. No. 885,736; Apr. 28; Sp. p. 4256; Dr. pp. 891–2; Gaz. vol. 133; p. 1952.
Depp, W. E., assignor of one-half to G. W. Stewart, Brookville, Pa. Shipping-box. No. 884,572; Apr. 14; Sp. p. 1831; Dr. p. 392; Gaz. vol. 133; p. 1515.
Deppe, D. F., *et al.* (See Hackburn, Willett, and Deppe.)
Derrick, H. W., Boston, Mass. Eyeglasses. No. 884,368; Apr. 14; Sp. p. 1426; Dr. p. 305; Gaz. vol. 133; p. 1449.
Dessolle, E. L. (See Jullien and Dessolle.)
Detmers, S., assignor to Republic Metalware Company, Buffalo, N. Y. Labeling device. No. 884,573; Apr. 14; Sp. p. 1833; Dr. p. 393; Gaz. vol. 133; p. 1515.
Deusch, C., Sterling, Ill. Cork-puller. No. 884,322; Apr. 7; Sp. p. 1310; Dr. p. 277; Gaz. vol. 133; p. 1403.
Deutsche Gasglühlicht Aktiengesellschaft (Auergesellschaft), Firm of. (See Süssmann, H., assignor.)
Devine, E., Chicago, Ill. Adjustable caster. No. 885,024; Apr. 21; Sp. p. 2776; Dr. p. 588; Gaz. vol. 133; p. 1694.
Dewberry, W. A., Center Hill, Ark. Cultivator. No. 885,983; Apr. 28; Sp. p. 4777; Dr. pp. 1003–4; Gaz. vol. 133; p. 2035.
Dexter, T. C., Pearl River, N. Y. Paper-feeding machine. No. 886,117; Apr. 28; Sp. p. 5044; Dr. pp. 1059–60; Gaz. vol. 133; p. 2078.
Dexter, T. C., Pearl River, N. Y. Paper-feeding machine. No. 886,118; Apr. 28; Sp. p. 5052; Dr. pp. 1060–1; Gaz. vol. 133; p. 2079.
Diboll, W. A. (See Fairchild, O. H., assignor.)
Dickens, O. R., Springfield, Mo. Beer-pipe cleaner. No. 885,452; Apr. 21; Sp. p. 3663; Dr. p. 768; Gaz. vol. 133; p. 1833.
Dickerson, C. B., Powhatan, W. Va. Suspender-hook and drawers-support. No. 884,906; Apr. 14; Sp. p. 2523; Dr. p. 533; Gaz. vol. 133; p. 1623.
Dickie, R. J., and J. H. Brown, Wellington, New Zealand, assignors, by mesne assignments, to United States Automatic Vending Company, New York, N. Y. Stamp or ticket vending machine. No. 884,802; Apr. 14; Sp. p. 2334; Dr. pp. 491–2; Gaz. vol. 133; p. 1591.
Dickinson, E. D. (See Emmet and Dickinson.)
Dickinson, J. H., Montclair, N. J. Hoisting and conveying apparatus. No. 885,025; Apr. 21; Sp. p. 2778; Dr. p. 589; Gaz. vol. 133; p. 1694.
Didier, L., assignor to Farbwerke, vorm. Meister, Lucius & Brüning, Höchst-on-the-Main, Germany. Manufacture of colored photographic images. No. 885,453; Apr. 21; Sp. p. 3664; Gaz. vol. 133; p. 1834.
Dietrich, M. A., Six Mile Run, Pa. Window and screen therefor. No. 884,803; Apr. 14; Sp. p. 2338; Dr. p. 492; Gaz. vol. 133; p. 1592.
Direct Motor-Drive Mfg. Co. (See Foss, W. O., assignor.)
Ditchburn, H., Rosseau, Ontario, Canada. Stovepipe-connector for nesting pipes. No. 886,043; Apr. 28; Sp. p. 4910; Dr. p. 1032; Gaz. vol. 133; p. 2054.
Dixon, C. H., Newark, N. J. Convertible chair and table. No. 884,136; Apr. 7; Sp. p. 991; Dr. p. 207; Gaz. vol. 133; p. 1344.
Dixon, R. M., East Orange, N. J., assignor to Safety Car Heating & Lighting Company. Mantle-burner. No. 884,137; Apr. 7; Sp. p. 992; Dr. p. 207; Gaz. vol. 133; p. 1344.
Doarnberger, J. A., Roanoke, Va. Steam-boiler. No. 885,229; Apr. 21; Sp. p. 3224; Dr. p. 673; Gaz. vol. 133; p. 1761.
Doble, M. E. (See Doble and Gfeller, assignors.)
Doble, W. A., and F. Gfeller, San Francisco, assignors, by mesne assignments, to M. E. Doble, Alameda, Cal. Impact water-wheel. No. 884,907; Apr. 14; Sp. p. 2524; Dr. p. 533; Gaz. vol. 133; p. 1623.
Dobson and Barlow. (See Myerscough and Gornall, assignors.)
Dobson, H. E., New York, N. Y. Liquid-depth gage. No. 884,370; Apr. 14; Sp. p. 1434; Dr. p. 306; Gaz. vol. 133; p. 1449.
Dodds, E. I., Avalon, Pa., assignor to Pullman Company, Chicago, Ill. Steel-car construction. No. 884,323; Apr. 7; Sp. p. 1311; Dr. pp. 277–8; Gaz. vol. 133; p. 1403.
Dodds, E. I., Pullman, assignor to Pullman Company, Chicago, Ill Drop-bottom car. No. 884,324; Apr. 7; Sp. p. 1313; Dr. p. 278; Gaz. vol. 133; p. 1403.
Dodds, E. I., Pullman, assignor to Pullman Company, Chicago, Ill. Steel-car construction. No. 884,325; Apr. 7; Sp. p. 1314; Dr. pp. 278–9; Gaz. vol. 133; p. 1403.
Dodge Coal Storage Company. (See Titcomb, G. E., assignor.)
Dodge, G. P., *et al.* (See Williams, D. L., assignor.)
Dodge, S. P., West Unity, Ohio. Hat hanger and marker. No. 885,026; Apr. 21; Sp. p. 2779; Dr. p. 589; Gaz. vol. 133; p. 1694.
Doerflinger, W. F., Niagara Falls, N. Y. Mixed paint and making same. No. 884,475; Apr. 14; Sp. p. 1629; Gaz. vol. 133; p. 1483.

Döhn, W. von, Berlin-Schöneberg, Germany, assignor to H. G. Taube, Montclair, N. J. Atomizer. No. 885,027; Apr. 21; Sp. p. 2780; Dr. pp. 589–90; Gaz. vol. 133; p. 1094.
Döhring, G. F., Cranford, N. J. Pneumatic valve. No. 885,737; Apr. 28; Sp. p. 4261; Dr. p. 892; Gaz. vol. 133; p. 1952.
Donnelly, F. A., Bayonne, N. J., and J. E. Blanthorn, Brooklyn, N. Y. Feed-bag. No. 885,454; Apr. 21; Sp. p. 3666; Dr. p. 768; Gaz. vol. 133; p. 1834.
Doppimaier, M. H., Eureka, Cal. Cartridge-reloading tool. No. 885,589; Apr. 21; Sp. p. 3941; Dr. p. 823; Gaz. vol. 133; p. 1874.
Dorman, G. W., assignor to Sumner Iron Works, Everett, Wash. Shingle-machine. No. 885,327; Apr. 21; Sp. p. 3423; Dr. p. 715; Gaz. vol. 133; p. 1794.
Dorsey, W. A., Liberty, W. Va. Safety-catch for elevators. No. 884,908; Apr. 14; Sp. p. 2525; Dr. p. 534; Gaz. vol. 133; p. 1624.
Dow, H. H., Midland, Mich., and W. S. Gates, assignors to Ontario Nickel Company, Limited, Worthington, Canada. Purifying precipitates. No. 883,792; Apr. 7; Sp. p. 221; Gaz. vol. 133; p. 1229.
Dowagiac Manufacturing Company. (See Fowle, C. L., assignor.)
Dowling, J., Olympia, Wash. Saw. No. 885,738; Apr. 28; Sp. p. 4264; Dr. p. 892; Gaz. vol. 133; p. 1953.
Downer, C., and E. H. Simpson, Blaine, Wash. Device for raising vessels. No. 886,194; Apr. 28; Sp. p. 5187; Dr. p. 1092; Gaz. vol. 133; p. 2103.
Downing, N. (See Michaels, S., assignor.)
Doyle, W. C. (See Butler, W., assignor.)
Dräger, A. B., assignor to Drägerwerk, Heinr. & Bernh. Dräger, Lübeck, and E. Wiss, Griesheim-on-the-Main, Germany. Hydraulic-seal safety-valve. No. 883,700; Apr. 7; Sp. p. 52; Dr. p. 7; Gaz. vol. 133; p. 1201.
Drägerwerk, Heinr. & Bernh. Dräger, *et al.* (See Dräger A. B., assignor.)
Drake, F. V., Bishop, Cal. Rope-carrier-direction-changing device. No. 885,455; Apr. 21; Sp. p. 3667; Dr. p. 768; Gaz. vol. 133; p. 1834.
Dralle, L. (See Melville, F. B., assignor.)
Draper Company. (See Ambler, G. B., assignor.)
Draper Company. (See Draper, G. O., assignor.)
Draper Company. (See Morse, A. D., assignor.)
Draper Company. (See Rhoades, A. E., assignor.)
Draper, F., and O. L. Curtiss, Cayuga, Ind. Exhaust-steam regenerator. No. 886,044; Apr. 28; Sp. p. 4911; Dr. pp. 1032–3; Gaz. vol. 133; p. 2054.
Draper, G. O., assignor to Draper Company, Hopedale, Mass. Filling-replenishing mechanism for looms. No. 884,723; Apr. 14; Sp. p. 2169; Dr. p. 461; Gaz. vol. 133; p. 1566.
Drayer, E. J., Dayton, Ohio. Rail-fastener for concrete ties. No. 885,456; Apr. 21; Sp. p. 3670; Dr. p. 769; Gaz. vol. 133; p. 1835.
Dresser, C. A., assignor to G. A. E. and F. W. Kohler, Chicago, Ill. Controlling device for electric motors. No. 885,147; Apr. 21; Sp. p. 3043; Dr. pp. 640–1; Gaz. vol. 133; p. 1734.
Dresser, S. R., assignor to S. R. Dresser Manufacturing Company, Bradford, Pa. Pipe-coupling. No. 884,371; Apr. 14; Sp. p. 1436; Dr. p. 306; Gaz. vol. 133; p. 1450.
Drew, C. A., Eureka, Cal. Saw-setting tool. No. 884,909; Apr. 14; Sp. p. 2527; Dr. pp. 534–5; Gaz. vol. 133; p. 1624.
Drexler, L., Munich, Germany. Cask-planing machine. No. 884,138; Apr. 7; Sp. p. 994; Dr. pp. 207–8; Gaz. vol. 133; p. 1345.
Dryden, W. J., St. Louis, Mo. Necktie-turner. No. 884,910; Apr. 14; Sp. p. 2528; Dr. p. 535; Gaz. vol. 133; p. 1624.
Dryden, W. J., St. Louis, Mo. Necktie-turner. No. 884,911; Apr. 14; Sp. p. 2529; Dr. p. 535; Gaz. vol. 133; p. 1624.
Du Boise, A. R., and L. F. Perry, Flint, Mich.; said Du Boise assignor to E. W. Atwood. Display-cabinet. No. 885,457; Apr. 21; Sp. p. 3672; Dr. p. 769; Gaz. vol. 133; p. 1835.
Du Perrex, R., St. Louis, Mo. Photograph-printing frame. No. 884,804; Apr. 14; Sp. p. 2340; Dr. p. 492; Gaz. vol. 133; p. 1592.
Dubois, W., assignor to Rand, McNally & Co., Chicago, Ill. Globe. No. 885,690; Apr. 21; Sp. p. 4145; Dr. p. 868; Gaz. vol. 133; p. 1907.
Duckham, A. M. (See Woodall and Duckham.)
Duff, E. J., Liverpool, England. Propulsion of ships. No. 884,079; Apr. 7; Sp. p. 824; Dr. pp. 173–4; Gaz. vol. 133; p. 1325.
Duffy, F., Kingston, Ontario, Canada. Steam-trap. No. 884,724; Apr. 14; Sp. p. 2171; Dr. p. 461; Gaz. vol. 133; p. 1566.
Duffy, J. A., and O. Irwin, assignors of six-tenths to C. D. Armstrong, Pittsburg, Pa. Switching device. No. 883,701; Apr. 7; Sp. p. 53; Dr. p. 8; Gaz. vol. 133; p. 1201.
Duiong, W. von, Witaschütz, Germany. Apparatus for the production of gases from hydrocarbon. No. 885,230; Apr. 21; Sp. p. 3226; Dr. p. 673; Gaz. vol. 133; p. 1761.
Duncan & Company, J. (See Hauptman, G. E., assignor.)
Duncan, J. T., Cardiff, England. Construction of screw-propelled ships. No. 884,912; Apr. 14; Sp. p. 2531; Dr. pp. 535–6; Gaz. vol. 133; p. 1625.
Dunham, C. A., Marshalltown, Iowa. Feed-water regulator. No. 884,913; Apr. 14; Sp. p. 2532; Dr. p. 536; Gaz. vol. 133; p. 1625.
Dunlap, H. M., Battle Creek, Mich. Pneumatic tool. No. 885,985; Apr. 28; Sp. p. 4783; Dr. p. 1005; Gaz. vol. 133; p. 2036.
Dunn, J. F., St. Joseph, Mo. Weed-killer. No. 885,691; Apr. 21; Sp. p. 4147; Dr. p. 868; Gaz. vol. 133; p. 1907.
Dunn, J. S., assignor of two-thirds to S. T. Langdon, Jr., Vincennes, Ind., and L. C. Langdon, Oak Park, Ill. Valve for tires. No. 886,316; Apr. 28; Sp. p. 5432; Dr. p. 1138; Gaz. vol. 133; p. 2146.
Duplex Printing Press Company. (See Bechman, H. F., assignor.)
Durham Buggy Company. (See Behlen, C. A., assignor.)
Durr, E. P. (See Steele, T. A., assignor.)
Duryea, J. F., and W. M. Remington, Springfield, Mass. Tubular base for motors. No. 885,231; Apr. 21; Sp. p. 3227; Dr. pp. 673–4; Gaz. vol. 133; p. 1761.
Duvall, R. M., *et al.* (See Patten, J. S., assignor.) (Reissue.)
Dwiggins, A. P., assignor to J. E. Barricklow, Waynetown, Ind. Steam-engine. No. 885,670; Apr. 21; Sp. p. 4104; Dr. p. 859; Gaz. vol. 133; p. 1906.
Dwyer, J. F., Jefferson City, Mo. Duster. No. 884,267; Apr. 7; Sp. p. 1223; Dr. p. 257; Gaz. vol. 133; p. 1380.
Dyer, C. E. and H. N., Abilene, Kans. Transplanting-machine. No. 884,139; Apr. 7; Sp. p. 996; Dr. p. 208; Gaz. vol. 133; p. 1345.
Dyer, H. N. (See Dyer, C. E. and H. N.)
Dyer, H. W., East Orange, N. J., assignor to Dyer Revolving Door Company. Revolving door. No. 886,317; Apr. 28; Sp. p. 5433; Dr. pp. 1138–9; Gaz. vol. 133; p. 2146.
Dyer, L. H., New York, N. Y. Transmission-gear for motor-vehicles. No. 885,986; Apr. 28; Sp. p. 4785; Dr. p. 1006; Gaz. vol. 133; p. 2036.
Dyer Revolving Door Company. (See Dyer, H. W., assignor.)
E. Goldman & Company. (See Paul, J. T. H., assignor.)
E. Green and Son. (See Liebert, H. A. E., assignor.)
E. Kirstein Sons Company *et al.* (See Becker, L. B., assignor.)
E. H. Mumford Company. (See Bonvillain, P., assignor.) (Reissue.)
Eagan, M. P., Newport, R. I. Hose-coupling. No. 883,941; Apr. 7; Sp. p. 548; Dr. p. 109; Gaz. vol. 133; p. 1280.
Eason, W. B., Era, Ark. Trap. No. 885,671; Apr. 21; Sp. p. 4106; Dr. pp. 859–60; Gaz. vol. 133; p. 1901.
Eastman Kodak Company. (See Brownell, F. A., assignor.)
Eastman Kodak Company. (See Folmer, W. F., assignor.)
Eastman Kodak Company. (See Lovejoy, F. W., assignor.)
Eastwood, A. C. (See Shover and Eastwood.)
Eastwood, A. C., Cleveland, Ohio. System for electric railways. No. 884,644; Apr. 14; Sp. p. 2007; Dr. pp. 429–30; Gaz. vol. 133; p. 1538.
Eastwood, A. C., Cleveland, Ohio. System for electric railways. No. 884,645; Apr. 14; Sp. p. 2011; Dr. pp. 430–1; Gaz. vol. 133; p. 1538.
Eastwood, A. C., Cleveland, Ohio. Electric railway. No. 884,646; Apr. 14; Sp. p. 2018; Dr. p. 431; Gaz. vol. 133; p. 1539.
Eaton, C. L., Binghamton, N. Y., assignor to United Shoe Machinery Company, Boston, Mass. Channeling and grooving machine. No. 885,232; Apr. 21; Sp. p. 3229; Dr. p. 674; Gaz. vol. 133; p. 1762.
Ebken, W. J., *et al.* (See Ferguson, D., assignor.)
Eckenroth, P., Jr., Philadelphia, Pa. Wood-splitting machine. No. 885,458; Apr. 21; Sp. p. 3674; Dr. pp. 769–70; Gaz. vol. 133; p. 1835.
Edens, J., assignor to H. F. Brammer Manufacturing Company, Davenport, Iowa. Casing for mechanical movements. No. 884,647; Apr. 14; Sp. p. 2020; Dr. p. 431; Gaz. vol. 133; p. 1539.
Edgcombe, R. L. (See Hopkinson and Edgcombe.)
Edgerton, G. L., Goldsboro, N. C. Bag-fastener. No. 885,739; Apr. 28; Sp. p. 4265; Dr. p. 892; Gaz. vol. 133; p. 1953.
Edman, J., Minneapolis, Minn. Grain-door for cars. No. 884,011; Apr. 7; Sp. p. 695; Dr. p. 140; Gaz. vol. 133; p. 1303.
Effront, J., Brussels, Belgium. Preparing malt by means of chlorid of lime or other hypochlorite salts. No. 884,725; Apr. 14; Sp. p. 2173; Gaz. vol. 133; p. 1566.
Eggers, J. H. (See Keen, E., assignor.)
Eggleston, L. W., Appleton, Wis. Venting-valve for radiators. No. 884,372; Apr. 14; Sp. p. 1439; Dr. p. 306; Gaz. vol. 133; p. 1450.
Egly, G. C., Philadelphia, Pa. Knitting-machine needle. No. 885,590; Apr. 21; Sp. p. 3942; Dr. p. 823; Gaz. vol. 133; p. 1874.
Egry Autographic Register Company. (See Schirmer and Stern, assignors.)
Ehrlich, F., assignor to A. Sultan and I. Stern, Berlin, Germany. Manufacture of fusel-oil and its components. No. 885,591; Apr. 21; Sp. p. 3943; Gaz. vol. 133; p. 1874.
Ehrlich, H. B. (See Ehrlich, H. J. and H. B.)

Ehrlich, H. J. and H. B., Brazil, Ind. Valve. No. 886,045; Apr. 28; Sp. p. 4913; Dr. p. 1033; Gaz. vol. 133; p. 2054.
Eichengrün, A., Dusseldorf, assignor to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany. Composition for generating formaldehyde. No. 885,233; Apr. 21; Sp. p. 3232; Gaz. vol. 133; p. 1762.
Eicher, A. L., Alliance, Ohio. Making lock-nuts. No. 886,318; Apr. 28; Sp. p. 5436; Dr. p. 1140; Gaz. vol. 133; p. 2146.
Ekedahl, E. A., and E. G. Sampson, assignors to Art Metal Construction Company, Jamestown, N. Y. Drawer for cabinets, &c. No. 884,476; Apr. 14; Sp. p. 1630; Dr. p. 351; Gaz. vol. 133; p. 1483.
Eldred, B. E., Bronxville, assignor to Combustion Utilities Company, New York, N. Y. Oxidizing ores. No. 885,328; Apr. 21; Sp. p. 3428; Dr. p. 715; Gaz. vol. 133; p. 1794.
Electric Boat Company. (See Bailey and Cable, assignors.)
Electric Controller & Supply Company. (See Fishback, F. R., assignor.)
Electric Controller and Supply Company. (See Wright, R. I., assignor.)
Electric Storage Battery Company. (See Rodman, H., assignor.)
Elgen, M. P., assignor of one-half to K. Amundsen and one-fourth to J. P. Nelson, St. Paul, Minn. Faucet. No. 884,648; Apr. 14; Sp. p. 2021; Dr. p. 432; Gaz. vol. 133; p. 1539.
Eliel, O. H., La Salle, Ill. Regenerative retort-furnace. No. 885,740; Apr. 28; Sp. p. 4267; Dr. p. 893; Gaz. vol. 133; p. 1954.
Elliott-Fisher Company. (See Dench, W. L., assignor.)
Elliott, S., Newton, Mass. Turn-table. No. 885,842; Apr. 28; Sp. p. 4476; Dr. p. 940; Gaz. vol. 133; p. 1987.
Elliott, W. (See Smethers and Elliott.)
Ellis, C. S. (See Powell and Ellis.)
Ellis, J. J., Portland, Oreg. Invalid hammock-lift and turner. No. 885,329; Apr. 21; Sp. p. 3432; Dr. p. 716; Gaz. vol. 133; p. 1795.
Ellis, T. H., Baltimore, Md. Hydrocarbon-still. No. 885,148; Apr. 21; Sp. p. 3047; Dr. p. 641; Gaz. vol. 133; p. 1734.
Ellison, J. W., Comstock, Tex. Shovel. No. 883,702; Apr. 7; Sp. p. 56; Dr. p. 8; Gaz. vol. 133; p. 1201.
Elsey, G., and B. J. Wayt, Chicago, Ill. Animal-trap. No. 883,867; Apr. 7; Sp. p. 400; Dr. p. 78; Gaz. vol. 133; p. 1254.
Emerson, H., Milton, Mass. Duplex tube. No. 885,741; Apr. 28; Sp. p. 4270; Dr. p. 893; Gaz. vol. 133; p. 1954.
Emery, V. J., Quincy, assignor of one-half to M. N. Bray, Boston, Mass. Means for distributing water to water-jackets of multiple-cylinder engines. No. 884,326; Apr. 7; Sp. p. 1316; Dr. p. 279; Gaz. vol. 133; p. 1404.
Emmet, W. L. R., and E. D. Dickinson, Schenectady, N. Y., assignors to General Electric Company. Shaft-bearing. No. 884,477; Apr. 14; Sp. p. 1632; Dr. p. 351; Gaz. vol. 133; p. 1483.
Emrick, F. C., and J. K. Baer, assignors to Busch-Freund Brewers Supply Company, St. Louis, Mo. Bottle-opener. No. 885,028; Apr. 21; Sp. p. 2784; Dr. p. 590; Gaz. vol. 133; p. 1695.
Enderle, S., Allegheny, Pa. Rail-joint. No. 884,268; Apr. 7; Sp. p. 1224; Dr. p. 258; Gaz. vol. 133; p. 1387.
Engberg, E. O., Salt Lake City, Utah, assignor to J. B. Patton, Kent, Ohio. Machine for making window-shades. No. 883,793; Apr. 7; Sp. p. 227; Dr. pp. 40–1; Gaz. vol. 133; p. 1230.
Engberg, E. O., Salt Lake City, Utah, assignor to J. B. Patton, Kent, Ohio. Measuring device. No. 883,794; Apr. 7; Sp. p. 236; Dr. pp. 41–2; Gaz. vol. 133; p. 1230.
Engberg, E. O., Salt Lake City, Utah, assignor to J. B. Patton, Kent, Ohio. Machine for making window-shades. No. 883,795; Apr. 7; Sp. p. 238; Dr. pp. 42–4; Gaz. vol. 133; p. 1230.
Engelmann, A. J., St. Louis, Mo. Musical instrument of the accordion type. No. 884,373; Apr. 14; Sp. p. 1440; Dr. p. 307; Gaz. vol. 133; p. 1450.
Engle, L. (See Gardner, J. T., assignor.)
Engler, W. B., and C. J. Kryzanowsky, Lansing, Mich. Valve for gas-engines. No. 885,450; Apr. 21; Sp. p. 3675; Dr. p. 770; Gaz. vol. 133; p. 1836.
English & Mersick Co. (See Pfleghar, F. P., assignor.)
Enright, P. J., Lowell, Mass. Razor-blade holder. No. 884,805; Apr. 14; Sp. p. 2342; Dr. p. 493; Gaz. vol. 133; p. 1593.
Ensminger, F. R. (See Roseland, T. C., assignor.)
Enterprise Railway Equipment Company. (See Campbell, A., assignor.)
Entrikin, C. T. (See Graeber and Entrikin.)
Erickson, C. J., assignor to Automatic Electric Company, Chicago, Ill. Busy-signal apparatus. No. 885,915; Apr. 28; Sp. p. 4613; Dr. p. 967; Gaz. vol. 133; p. 2012.
Eriksson, B. G., Christinehamn, Sweden. Household furniture. No. 885,234; Apr. 21; Sp. p. 3233; Dr. p. 674; Gaz. vol. 133; p. 1762.
Erlwein, G., Berlin, and E. Marquardt, Charlottenburg, Germany. Keeping aquatic animals alive during transportation. No. 884,140; Apr. 7; Sp. p. 999; Dr. pp. 208–9; Gaz. vol. 133; p. 1345.
Ernst, C. K. (See Farnoff, H., assignor.)
Espen-Lucas Machine Works. (See Lucas, W. H., assignor.)
Estes, L. H. (See Hargrove, A. S., assignor.)
Esty Sprinkler Company. (See Esty, W., assignor.)
Esty, W., assignor to Esty Sprinkler Company, Laconia, N. H. Open sprinkler. No. 885,029; Apr. 21; Sp. p. 2785; Dr. p. 590; Gaz. vol. 133; p. 1695.
Euclid Motor Company. (See Shanck, H. K., assignor.)
Evans, H. W., Chicago, Ill. Machine for finishing pipe bends, fittings, and the like. No. 883,942; Apr. 7; Sp. p. 549; Dr. pp. 109–10; Gaz. vol. 133; p. 1280.
Evans, I. N. (See Evans and Akins, assignors.)
Evans, J. P., and R. P. Akins, assignors of one-fifth to I. N. Evans, Denver, Colo. Concentrating apparatus. No. 885,692; Apr. 21; Sp. p. 4148; Dr. pp. 868–9; Gaz. vol. 133; p. 1908.
Evans, W. R., Youngstown, Ohio. Wheel-guard. No. 885,030; Apr. 21; Sp. p. 2788; Dr. p. 591; Gaz. vol. 133; p. 1696.
Evans, W. R., Eagleville, Mo. Shade and curtain fixture. No. 885,987; Apr. 28; Sp. p. 4793; Dr. p. 1007; Gaz. vol. 133; p. 2037.
Eveleth, C. E., Schenectady, N. Y., assignor to General Electric Company. Reverse-current circuit-breaker. No. 883,943; Apr. 7; Sp. p. 552; Dr. p. 110; Gaz. vol. 133; p. 1281.
Everett, H. Y., assignor to M. A. Everett, Renous Bridge, New Brunswick, Canada. Toot-guiding device. No. 884,374; Apr. 14; Sp. p. 1441; Dr. p. 307; Gaz. vol. 133; p. 1451.
Everett, J. A., Natick, Mass. Safety-razor. No. 884,375; Apr. 14; Sp. p. 1443; Dr. p. 307; Gaz. vol. 133; p. 1451.
Everett, M. A. (See Everett, H. Y., assignor.)
Everett, W. P., Hornbeck, La. Fly-trap. No. 885,592; Apr. 21; Sp. p. 3945; Dr. p. 824; Gaz. vol. 133; p. 1875.
Everhart, C. O., Girard, Ohio. Wrench. No. 883,704; Apr. 7; Sp. p. 58; Dr. p. 8; Gaz. vol. 133; p. 1202.
Evrett, A. L., North Fort Worth, Tex. Wood-sawing machine. No. 886,195; Apr. 28; Sp. p. 5188; Dr. p. 1092; Gaz. vol. 133; p. 2103.
Ewing, E. J., and T. M. Snyder, Coraopolis, Pa. Nut-lock. No. 885,593; Apr. 21; Sp. p. 3946; Dr. p. 824; Gaz. vol. 133; p. 1875.
F. C. Austin Drainage Excavator Company. (See Holcomb, A. E., assignor.)
F. C. Austin Drainage Excavator Company. (See Jacobs, C. C., assignor.)
Fabrique de Vernis et Produits Chimiques (Société Anonyme). (See Terrisse, H., assignor.)
Fairchild, O. H., assignor of two-thirds to W. A. Diboll, Denver, Colo. Automatically-operated filter. No. 884,914; Apr. 14; Sp. p. 2535; Dr. pp. 536–7; Gaz. vol. 133; p. 1626.
Faires, E. J. (See Martin and Faires.)
Faller, L. A., assignor of one-fourth to Stief Jewelry Co., Nashville, Tenn. Watch-barrel. No. 886,196; Apr. 28; Sp. p. 5189; Dr. p. 1092; Gaz. vol. 133; p. 2104.
Fallis, G. T., Los Angeles, Cal. Wave-motor. No. 884,080; Apr. 7; Sp. p. 825; Dr. p. 174; Gaz. vol. 133; p. 1325.
Fancher, C. J., and H. S. Parmelee, West Granby, Conn., assignors to Simplex Manufacturing Company, New York, N. Y. Envelop-sealing machine. No. 884,081; Apr. 7; Sp. p. 826; Dr. pp. 175–6; Gaz. vol. 133; p. 1326.
Fancher, C. J., and H. S. Parmelee, West Granby, Conn., assignors to Simplex Manufacturing Company, New York, N. Y. Envelop-sealing machine. No. 884,082; Apr. 7; Sp. p. 837; Dr. pp. 176–7; Gaz. vol. 133; p. 1326.
Farbenfabriken vorm. Friedr. Bayer & Co. (See Eichengrün, A., assignor.)
Farbenfabriken vorm. Friedr. Bayer & Co. (See Lommel, W., assignor.)
Farbwerke, vorm. Meister, Lucius & Brüning. (See Didier, L., assignor.)
Farnham, E. W., assignor to A. G. Mills, Chicago, Ill. Support for electric contact-shoes. No. 886,319; Apr. 28; Sp. p. 5438; Dr. p. 1140; Gaz. vol. 133; p. 2146.
Farnham, S. H., Chicago, Ill., assignor to Wyckoff, Seamans & Benedict, Ilion, N. Y. Type-writing machine. No. 884,915; Apr. 14; Sp. p. 2540; Dr. pp. 537–9; Gaz. vol. 133; p. 1626.
Farnoff, H., assignor to A. Wind and C. K. Ernst, Buffalo, N. Y. Auxiliary pressure-regulator for gas-burners. No. 884,012; Apr. 7; Sp. p. 696; Dr. p. 140; Gaz. vol. 133; p. 1304.
Faucette, C. C., Searcy, Ark. Corner-piece for picture-frames. No. 884,083; Apr. 7; Sp. p. 846; Dr. p. 178; Gaz. vol. 133; p. 1326.
Faverty, A. C. (See Faverty and Peterson, assignors.)
Faverty, W. N., and V. J. Peterson; said Peterson assignor to A. C. Faverty, Tilford, S. D. Gate-fastener. No. 884,269; Apr. 7; Sp. p. 1225; Dr. p. 258; Gaz. vol. 133; p. 1387.
Fay, H. L., Herkimer, N. Y. Door or drawer securer. No. 884,141; Apr. 7; Sp. p. 1001; Dr. p. 209; Gaz. vol. 133; p. 1346.
Feick, L. (See Gordnier, F. E., assignor.)
Feiner, E. J. (See Hamann, R. W., assignor.)
Felknor, S. J., Morristown, Tenn. Mail-box. No. 885,460; Apr. 21; Sp. p. 3679; Dr. pp. 770–1; Gaz. vol. 133; p. 1836.

Felsenstein, J., New York, N. Y. Safety attachment for pockets. No. 885,235; Apr. 21; Sp. p. 3234; Dr. p. 675; Gaz. vol. 133; p. 1763.
Ferguson, D., assignor of one-half to O. G. Ferguson and W. J. Ebken, Pittsburg, Pa. Coke-drawer. No. 883,705; Apr. 7; Sp. p. 59; Dr. pp. 8–9; Gaz. vol. 133; p. 1202.
Ferguson, O. G., *et al.* (See Ferguson, D., assignor.)
Ferrandini, L. A. (See Schneider, G., assignor.)
Ferranti, S. Z. de, Grindleford, England. Fluid packing. No. 885,032; Apr. 21; Sp. p. 2791; Dr. p. 591; Gaz. vol. 133; p. 1696.
Ferrero, C. P., Portland, Oreg., assignor, by mesne assignments, of one-half to Loose Card Book Company. Combined loose-leaf book and card system. No. 886,520; Apr. 28; Sp. p. 5459; Dr. p. 1140; Gaz. vol. 133; p. 2147.
Ferris, H. L., Harvard, Ill., assignor to Hunt, Helm, Ferris & Co npany. Feed and litter carrier. No. 884,649; Apr. 14; Sp. p. 2022; Dr. p. 432; Gaz. vol. 133; p. 1539.
Ferris, W. D., Sterling, Ill. Bale-tie-making machine. No. 885,916; Apr. 28; Sp. p. 4615; Dr. pp. 967–72; Gaz. vol. 133; p. 2012.
Ferris, W. D., Sterling, Ill. Bale-tie. No. 885,917; Apr. 28; Sp. p. 4630; Dr. p. 972; Gaz. vol. 133; p. 2013.
Fever, L. A., Secor, Ill. Sticky-fly-paper tray. No. 885,461; Apr. 21; Sp. p. 3080; Dr. p. 771; Gaz. vol. 133; p. 1837.
Fickett, R. N., Atlanta, Ga. Dusting-brush. No. 886,046; Apr. 28; Sp. p. 4913; Dr. p. 1033; Gaz. vol. 133; p. 2055.
Field, A. H., *et al.* (See Mitchell, W. H., assignor.)
Field, S. B., *et al.* (See Mitchell, W. H., assignor.)
Fiero, S. T., Pittsburg, Pa. Interlocking sheet-metal piling. No. 884,270; Apr. 7; Sp. p. 1226; Dr. p. 258; Gaz. vol. 133; p. 1387.
Filetz, J. W., Chicago, Ill. Pivot-screw for shears. No. 886,197; Apr. 28; Sp. p. 5190; Dr. p. 1093; Gaz. vol. 133; p. 2104.
Finch, A. T., *et al.* (See Davis, C. B., assignor.)
Finck, W. C., Elizabeth, N. J., assignor to G. H. Benjamin, New York, N. Y. Generating and delivering gas under uniform pressure. No. 886,289; Apr. 28; Sp. p. 5363; Dr. p. 1128; Gaz. vol. 133; p. 2135.
Findlay, A. C., Perth, Western Australia, Australia. Self-acting candle-extinguisher. No. 886,198; Apr. 28; Sp. p. 5191; Dr. p. 1093; Gaz. vol. 133; p. 2104.
Findlay, W. R. (See Bennett and Findlay.)
Fink, G. B. (See Frey, J. C., assignor.)
Firm, J. L., Berwyn, assignor to Goss Printing Press Company, Chicago, Ill. Printing-machine. No. 883,706; Apr. 7; Sp. p. 61; Dr. p. 9; Gaz. vol. 133; p. 1202.
Fischer, C. W., C. Zimmerman, and E. C. Walker, assignors to Theo. A. Kochs Company, Chicago, Ill. Chair. No. 885,843; Apr. 28; Sp. p. 4479; Dr. p. 940; Gaz. vol. 133; p. 1988.
Fish, W. C., Lynn, Mass., assignor to General Electric Company. Electric lighting. No. 883,944; Apr. 7; Sp. p. 554; Dr. p. 110; Gaz. vol. 133; p. 1281.
Fishback, F. R., assignor to Electric Controller & Supply Company, Cleveland, Ohio. Duplex motor-control system. No. 885,988; Apr. 28; Sp. p. 4794; Dr. p. 1007; Gaz. vol. 133; p. 2037.
Fishel, H. W., assignor to Fishel, Nessler & Company, New York, N. Y. Belt-buckle. No. 883,707; Apr. 7; Sp. p. 64; Dr. p. 9; Gaz. vol. 133; p. 1202.
Fishel, H. W., assignor to Fishel, Nessler & Company, New York, N. Y. Jewel-bar. No. 884,979; Apr. 14; Sp. p. 2675; Dr. p. 569; Gaz. vol. 133; p. 1645.
Fishel, Nessler & Company. (See Fishel, H. W., assignor.)
Fisher, J. W., Brunswick, Nebr. End-gate. No. 884,916; Apr. 14; Sp. p. 2562; Dr. p. 539; Gaz. vol. 133; p. 1626.
Fisher, W. B. (See Michael, A. C., assignor.)
Fisk, C. R., Los Angeles, Cal. Carpet-sewing machine. No. 885,672; Apr. 21; Sp. p. 4106; Dr. pp. 860–1; Gaz. vol. 133; p. 1901.
Fitz Gerald, W. H., New York, assignor of one-half to B. A. Bloch, Brooklyn, and E. M. Bloch, Sag Harbor, N. Y. Watchcase. No. 885,149; Apr. 21; Sp. p. 3048; Dr. p. 641; Gaz. vol. 133; p. 1734.
Fitzpatrick, W., Lowell, Mass. Graphophone-needle. No. 885,989; Apr. 28; Sp. p. 4796; Dr. p. 1007; Gaz. vol. 133; p. 2037.
Flaig, M. S., La Crosse, Wis. Combination gas and steam engine. No. 886,199; Apr. 28; Sp. p. 5193; Dr. p. 1093; Gaz. vol. 133; p. 2105.
Fleming, R., Lynn, Mass., assignor to General Electric Company. Regulator for dynamo-electric machines. No. 885,031; Apr. 21; Sp. p. 2789; Dr. p. 591; Gaz. vol. 133; p. 1696.
Fleshman, B. A., and J. M. Koontz, Fayetteville, W. Va. Rail-brace. No. 884,917; Apr. 14; Sp. p. 2563; Dr. p. 539; Gaz. vol. 133; p. 1627.
Fletcher, J. B., Newport, Ky. Fluid-motor. No. 885,462; Apr. 21; Sp. p. 3081; Dr. p. 771; Gaz. vol. 133; p. 1837.
Fletcher, W. F., Beaver Falls, Pa. Musical instrument. No. 884,806; Apr. 14; Sp. p. 2343; Dr. p. 493; Gaz. vol. 133; p. 1593.
Flick, C. W., *et al.* (See Broome, H., assignor.)
Flindall, J., Chicago, Ill. Time-lock. No. 884,807; Apr. 14; Sp. p. 2344; Dr. p. 493; Gaz. vol. 133; p. 1593.
Flindall, J., Chicago, Ill. Time-lock. No. 884,808; Apr. 14; Sp. p. 2346; Dr. pp. 493–4; Gaz. vol. 133; p. 1594.
Flindall, J., Chicago, Ill. Time-lock. No. 884,809; Apr. 14; Sp. p. 2348; Dr. p. 494; Gaz. vol. 133; p. 1594.
Flinn, R. J., Boston, Mass., assignor of one-third to T. F. Flinn, Brooklyn, N. Y. Variable-delivery pump. No. 886,047; Apr. 28; Sp. p. 4914; Dr. pp. 1033–4; Gaz. vol. 133; p. 2055.
Flinn, T. F. (See Flinn, R. J., assignor.)
Flippen, J. T., Greystone, Va. Hand fertilizer-dropper. No. 883,796; Apr. 7; Sp. p. 245; Dr. p. 44; Gaz. vol. 133; p. 1231.
Flynn, D. W., Viola, Ill. Device for facilitating the tying of corn-tops. No. 886,048; Apr. 28; Sp. p. 4917; Dr. p. 1034; Gaz. vol. 133; p. 2055.
Flynn, J. E., Austin, Pa. Grab-hook. No. 883,945; Apr. 7; Sp. p. 555; Dr. p. 111; Gaz. vol. 133; p. 1281.
Flynn, M. H., Hartford, Conn., assignor to Royal Typewriter Company, Hoboken, N. J. Type-writing machine. No. 885,742; Apr. 28; Sp. p. 4271; Dr. p. 893; Gaz. vol. 133; p. 1954.
Focketyn, J., Antwerp, Belgium. Life-belt apparatus. No. 885,918; Apr. 28; Sp. p. 4631; Dr. p. 973; Gaz. vol. 133; p. 2013.
Foley, J. E., Pontiac, Mich. Automobile-hub. No. 885,330; Apr. 21; Sp. p. 3435; Dr. p. 716; Gaz. vol. 133; p. 1795.
Folmer, W. F., assignor, by mesne assignments, to Eastman Kodak Company, Rochester, N. Y. Roller-blind shutter. No. 885,236; Apr. 21; Sp. p. 3235; Dr. p. 675; Gaz. vol. 133; p. 1763.
Fontana, R. G., San Francisco, Cal. Cherry-stemmer. No. 883,708; Apr. 7; Sp. p. 65; Dr. p. 10; Gaz. vol. 133; p. 1203.
Foote, F. M., Marshall, Mich. Roller-bearing. No. 886,200; Apr. 28; Sp. p. 5194; Dr. p. 1093; Gaz. vol. 133; p. 2105.
Ford, C. H., and E. H. Boston, Richmond, Ind. Napkin-holder. No. 885,331; Apr. 21; Sp. p. 3436; Dr. p. 717; Gaz. vol. 133; p. 1795.
Ford, J. H., U. S. Army. Microscope. No. 883,868; Apr. 7; Sp. p. 401; Dr. p. 78; Gaz. vol. 133; p. 1255.
Forde, T. J., Geneva, Ohio. Gasolene heating and lighting apparatus. No. 883,946; Apr. 7; Sp. p. 556; Dr. p. 111; Gaz. vol. 133; p. 1281.
Foreman, E. J., Trinidad Colo. Insulator. No. 884,142; Apr. 7; Sp. p. 1002; Dr. p. 209; Gaz. vol. 133; p. 1346.
Forhan, H. L., Portland, Me. Revolver for processing canned goods. No. 885,332; Apr. 21; Sp. p. 3436; Dr. p. 717; Gaz. vol. 133; p. 1796.
Forse, V. K., Los Angeles, Cal. Corset-clasp. No. 885,033; Apr. 21; Sp. p. 2794; Dr. p. 591; Gaz. vol. 133; p. 1696.
Fortin, B. P., Philadelphia, Pa. Machinist's jig. No. 883,869; Apr. 7; Sp. p. 405; Dr. pp. 78–9; Gaz. vol. 133; p. 1255.
Foss, W. O., assignor to Direct Motor-Drive Mfg. Co., Philadelphia, Pa. Speed-changing mechanism. No. 883,870; Apr. 7; Sp. p. 407; Dr. pp. 79–80; Gaz. vol. 133; p. 1255.
Foster, A., assignor of one-half to Powell Knitting Company, Philadelphia, Pa. Transferring device for knitting-machines. No. 885,150; Apr. 21; Sp. p. 3051; Dr. p. 641; Gaz. vol. 133; p. 1735.
Foster, C. J., Van Wert, Ohio. Device for curing ingrowing toe-nails. No. 884,376; Apr. 14; Sp. p. 1443; Dr. p. 308; Gaz. vol. 133; p. 1451.
Foster, E. H., New York, N. Y. Superheater. No. 883,871; Apr. 7; Sp. p. 409; Dr. p. 80; Gaz. vol. 133; p. 1256.
Foster, J. H., Tuscaloosa, Ala. Combined desk, chair, and receptacle. No. 885,504; Apr. 21; Sp. p. 3947; Dr. p. 824; Gaz. vol. 133; p. 1875.
Foster, L., New York, N. Y Advertising device. No. 885,333; Apr. 21; Sp. p. 3438; Dr. p. 717; Gaz. vol. 133; p. 1796.
Fournier, J. B., Paris, France. Means for using from a distance the variations in temperature. No. 886,201; Apr. 28; Sp. p. 5194; Dr. p. 1094; Gaz. vol. 133; p. 2105.
Foust, W., *et al.* (See King, J. R., assignor.)
Fowle, C. L., assignor to Dowagiac Manufacturing Company, Dowagiac, Mich. Axle and bearing for grain-seeding machines. No. 883,709; Apr. 7; Sp. p. 66; Dr. p. 10; Gaz. vol. 133; p. 1203.
Fowler, D. F., Melrose, Pa. Package for cotton-batting. No. 884,574; Apr. 14; Sp. p. 1835; Dr. p. 393; Gaz. vol. 133; p. 1515.
Fowler, M. B. (See Haas, G. W., assignor.)
Fox, C. M., New York, N. Y. Pin. No. 885,334; Apr. 21; Sp. p. 3439; Dr. p. 717; Gaz. vol 133; p. 1796.
Fox, J. C., Seattle, Wash. Display apparatus. No. 884,575; Apr. 14; Sp. p. 1835; Dr. p. 393; Gaz. vol. 133; p. 1515.
Fraley, O. M., Victor, Oreg. Vehicle-wheel. No. 883,947; Apr. 7; Sp. p. 556; Dr. p. 111; Gaz. vol. 133; p. 1282.
Frampton, J., Willis, Tex. Rail tie and brace. No. 885,505; Apr. 21; Sp. p. 3949; Dr. p. 824; Gaz. vol. 133; p. 1876.
Francis, G. S., F. O. Kaste, and H. W. Gross, Havre, Mont. Combined lock and brace for boxes. No. 884,377; Apr. 14; Sp. p. 1444; Dr. p. 308; Gaz. vol. 133; p. 1451.
Frank, J. J., Schenectady, N. Y., assignor to General Electric Company. Transformer. No. 885,034; Apr. 21; Sp. p. 2795; Dr. p. 592; Gaz. vol. 133; p. 1697.
Frankenfield, B., Norwood, Ohio, assignor to Allis-Chalmers Company and Bullock Electric Manufacturing Company. Multiple-voltage system of distribution. No. 886,049; Apr. 28; Sp. p. 4919; Dr. p. 1034; Gaz. vol. 133; p. 2056.
Franklin Manufacturing Company. (See Rabich, W., assignor.)
Frankofski, F., North Braddock, Pa. Electric-light socket. No. 884,271; Apr. 7; Sp. p. 1230; Dr. p. 259; Gaz. vol. 133; p. 1387.

Fraser, G., Topeka, Kans. Oil-burning reverberatory furnace. No. 886,050; Apr. 28; Sp. p. 4923; Dr. p. 1035; Gaz. vol. 133; p. 2056.
Fraser, H. W., Port Clinton, Ohio. Life-preserver. No. 884,143; Apr. 7; Sp. p. 1003; Dr. p. 210; Gaz. vol. 133; p. 1346.
Fraser, J., New Haven, Conn. Safety-valve. No. 886,051; Apr. 28; Sp. p. 4925; Dr. p. 1035; Gaz. vol. 133; p. 2057.
Fraser, J. J., Leith, Scotland. Grinding or crushing mill. No. 883,872; Apr. 7; Sp. p. 411; Dr. p. 80; Gaz. vol. 133; p. 1256.
Fraser Machine and Manufacturing Co. (See Fraser, W. F., assignor.)
Fraser, W. F., Dorchester, Mass., assignor to Fraser Machine and Manufacturing Co. Lacing-hook-setting machine. No. 885,919; Apr. 28; Sp. p. 4632; Dr. pp. 973–6; Gaz. vol. 133; p. 2013.
Frasier, W., Lynn, Mass., assignor to United Shoe Machinery Company. Sole-pressing machine. No. 884,144; Apr 7; Sp. p. 1005; Dr. pp. 210–11; Gaz. vol. 133; p. 1346.
Frede, C. F., assignor to Cast Steel Needle Beam Company, St. Louis, Mo. Car-needle-beam attachment. No. 884,327; Apr. 7; Sp. p. 1318; Dr. p. 279; Gaz. vol. 133; p. 1404.
Fredrick, H., Newark, N. J. Disk water-meter. No. 884,650; Apr. 14; Sp. p. 2024; Dr. p. 433; Gaz. vol. 133; p. 1540.
Freeman, W., assignor to Harris Suspender Company, New York, N. Y. Suspenders, braces, &c. No. 885,463; Apr. 21; Sp. p. 3682; Dr. p. 771; Gaz. vol. 133; p. 1837.
Freese, I. H., J. W. Romigh, and H. A. Carothers, Clarksburg, W. Va. Apparatus for fire finishing and polishing glassware. No. 884,478; Apr. 14; Sp. p. 1635; Dr. pp. 351–2; Gaz. vol. 133; p. 1483.
Frentzen, G., Aix-la-Chapelle, Germany. Mud-wing for motor-vehicles. No. 883,710; Apr. 7; Sp. p. 69; Dr. p. 10; Gaz. vol. 133; p. 1203.
Freschi, A., Chicago, Ill. Apparatus for manufacturing upholstery. No. 883,711; Apr. 7; Sp. p. 70; Dr. p. 10; Gaz. vol. 133; p. 1204.
Fretz, J. A. (See Mitchell and Fretz.)
Frey, C. N., assignor to J. M. Robinson Manufacturing Company, Cincinnati, Ohio. Clutch. No. 885,335; Apr. 21; Sp. p. 3440; Dr. p. 718; Gaz. vol. 133; p. 1796.
Frey, J. C., assignor of one-half to G. B. Fink, Rochester, N. Y. Wrench. No. 885,506; Apr. 21; Sp. p. 3951; Dr. p. 825; Gaz. vol. 133; p. 1876.
Frey, J. H., assignor one-half to F. C. Hardacre, Vincennes, Ind. Lawn-mower. No. 884,651; Apr. 14; Sp. p. 2026; Dr. p. 433; Gaz. vol. 133; p. 1540.
Fritsche, G., Strzebowitz, near Schönbrunn, Austria-Hungary, assignor to Roessler & Hasslacher Chemical Company, New York, N. Y. Manufacture of spirits. No. 884,576; Apr. 14; Sp. p. 1836; Gaz. vol. 133; p. 1516.
Friz, C. N., Baltimore, Md. Fly-screen. No. 885,597; Apr. 21; Sp. p. 3953; Dr. p. 825; Gaz. vol. 133; p. 1876.
Frost, W. H., Los Angeles, Cal. Internal-combustion engine. No. 885,598; Apr. 21; Sp. p. 3955; Dr. p. 895; Gaz. vol. 133; p. 1876.
Frothingham, D. D., Salem, Mass. Machine for cutting and punching sheet material. No. 885,237; Apr. 21; Sp. p. 3239; Dr. p. 676; Gaz. vol. 133; p. 1763.
Frydmane, J., and L. Chambon, Paris, France. Color-printing device in cash-registers. No. 885,464; Apr. 21; Sp. p. 3683; Dr. p. 772; Gaz. vol. 133; p. 1837.
Fudickar, E. (See Siepermann and Fudickar.)
Fuller T. H., Lafayette, Ala. Plow. No. 884,652; Apr. 14; Sp. p. 2029; Dr. p. 434; Gaz. vol. 133; p. 1541.
Furcolo, L. C., New Haven, Conn. Non-refillable bottle. No. 885,035; Apr. 21; Sp. p. 2799; Dr. p. 592; Gaz. vol. 133; p. 1697.
G. A. E. Kohler. (See Graham, G. M., assignor.)
Gaba, M. H., Dayton, Ohio. Window-sash lock. No. 883,712; Apr. 7; Sp. p. 71; Dr. p. 11; Gaz. vol. 133; p. 1204.
Gabriel, G. A., assignor to Bleach & Caustic Process Company, New York, N. Y. Electrolytic cell. No. 884,653; Apr. 14; Sp. p. 2030; Dr. p. 434; Gaz. vol. 133; p. 1541.
Gadient, E., assignor to Firm of Society of Chemical Industry in Basle, Basel, Switzerland. Making dibromindigo. No. 883,703; Apr. 7; Sp. p. 57; Gaz. vol. 133; p. 1201.
Gaertner, J., Newark, N. J. Horse-bit. No. 884,084; Apr. 7; Sp. p. 847; Dr. p. 178; Gaz. vol. 133; p. 1327.
Gage, E. C., assignor of one-half to E. F. Clovis, Shenandoah, Iowa. Reticulated curry-comb. No. 883,873; Apr. 7; Sp. p. 412; Dr. p. 81; Gaz. vol. 133; p. 1257.
Gage, J. J., Mansfield, Ohio. Locomotive-boiler. No. 884,013; Apr. 7; Sp. p. 698; Dr. p. 141; Gaz. vol. 133; p. 1304.
Galland, B., New York, N. Y. Garment. No. 884,479; Apr. 14; Sp. p. 1642; Dr. p. 352; Gaz. vol. 133; p. 1484.
Gallemore, J. G., Washington, Mo. Type-case. No. 885,599; Apr. 21; Sp. p. 3957; Dr. p. 826; Gaz. vol. 133; p. 1877.
Galloway, N., Vernal, Utah. Animal-trap. No. 885,600; Apr. 21; Sp. p. 3957; Dr. p. 826; Gaz. vol. 133; p. 1877.
Gambee, C., Rochester, N. Y. Fluid-mixer. No. 883,874; Apr. 7; Sp. p. 413; Dr. p. 81; Gaz. vol. 133; p. 1257.
Gamble, J. W., assignor to Harrison Safety Boiler Works, Philadelphia, Pa. Feed-water heating and purifying system. No. 883,948; Apr. 7; Sp. p. 560; Dr. p. 112; Gaz. vol. 133; p. 1282.
Ganucci-Cancellieri, L., and A. Cappelletti, Florence, Italy. Stopper for bottles and other receptacles. No. 885,743; Apr. 28; Sp. p. 4272; Dr. p. 894; Gaz. vol. 133; p. 1954.
Gardner, J. T., assignor to L. Engle, Buffalo, Mo. Wire-stretcher. No. 885,693; Apr. 21; Sp. p. 4153; Dr. p. 869; Gaz. vol. 133; p. 1908.
Gardner, W. A. (See Packard, H. F., assignor.)
Garlock, T. V., Custer, S. D. Table for cheese-cutters. No. 884,810; Apr. 14; Sp. p. 2350; Dr. p. 494; Gaz. vol. 133; p. 1504.
Garman, A. S. (See Werner, E., assignor.)
Garst, N., Wichita, Kans. Ironing-machine for laundry-work. No. 884,811; Apr. 14; Sp. p. 2352; Dr. p. 495; Gaz. vol. 133; p. 1595.
Garvey, W. E., Cleveland, Ohio. Tire-cushion for vehicles. No. 885,336; Apr. 21; Sp. p. 3441; Dr. p. 718; Gaz. vol. 133; p. 1797.
Gaskill, C. H., Jr., Peekskill, N. Y. Necktie. No. 886,119; Apr. 28; Sp. p. 5060; Dr. p. 1062; Gaz. vol. 133; p. 2079.
Gatchell, G. S., Elizabeth, N. J., assignor to Singer Manufacturing Company. Thread-cutting mechanism for sewing-machines. No. 885,990; Apr. 28; Sp. p. 4796; Dr. p. 1008; Gaz. vol. 133; p. 2037.
Gates, W. S. (See Dow and Gates.)
Gault, J. P., assignor of one-third to W. Phillips, Louisville, Ky. Engineer's brake-valve. No. 885,601; Apr. 21; Sp. p. 3959; Dr. p. 826; Gaz. vol. 133; p. 1877.
Gautreaux, M. T. (See Burtch, D. H., assignor.)
Geib, W. J., Booneville, Miss. Foldable umbrella. No. 885,602; Apr. 21; Sp. p. 3963; Dr. p. 827; Gaz. vol. 133; p. 1878.
Geldmacher, R., Cologne, Germany. Paper bag. No. 883,797; Apr. 7; Sp. p. 246; Dr. p. 44; Gaz. vol. 133; p. 1231.
Gelius, E., Rehau, Germany. Stone-saw. No. 885,603; Apr. 21; Sp. p. 3967; Dr. p. 827; Gaz. vol. 133; p. 1878.
Gem City Acetylene Generator Company. (See Mumma, I., assignor.)
General Chemical Company. (See Nield, J. H., assignor.)
General Electric Company. (See Alexander and Johnson, assignors.)
General Electric Company. (See Alexanderson, E. F. W., assignor.)
General Electric Company. (See Barry, C. E., assignor.)
General Electric Company. (See Batchelder, A. F., assignor.)
General Electric Company. (See Burrows, W. R., assignor.)
General Electric Company. (See Callan, J. G., assignor.)
General Electric Company. (See Crocker, A. T., assignor.)
General Electric Company. (See Cubitt, A. S., assignor.)
General Electric Company. (See Emmet and Dickinson, assignors.)
General Electric Company. (See Eveleth, C. E., assignor.)
General Electric Company. (See Fish, W. C., assignor.)
General Electric Company. (See Fleming, R., assignor.)
General Electric Company. (See Frank, J. J., assignor.)
General Electric Company. (See Graybill, J. E., assignor.)
General Electric Company. (See Härdén, J., assignor.)
General Electric Company. (See Keller, H., assignor.)
General Electric Company. (See Kieser, W., assignor.)
General Electric Company. (See Loudon, W. A., assignor.)
General Electric Company. (See Lum, W. O., assignor.)
General Electric Company. (See Pearson, M. M., assignor.)
General Electric Company. (See Steinmetz, C. P., assignor.)
General Electric Company. (See Thomson, E., assignor.)
General Electric Company. (See Tirrill, L. A., assignor.)
General Electric Company. (See Vollmer, J., assignor.)
General Electric Company. (See Weedon, W. S., assignor.)
General Fireproofing Company. (See White, A. P., assignor.)
General Railway Signal Company. (See Howe, W. K., assignor.)
Genge, F., Everett, Wash. Egg-whip. No. 884,085; Apr. 7; Sp. p. 848; Dr. p. 178; Gaz. vol. 133; p. 1327.
Gentalinger, G. (See Winemiller and Gentalinger.)
Geo. Ertel Co. (See Tuttle, J. S., assignor.)
George L. Mason Company. (See Mason, G. L., assignor.)
Geriach, C., assignor to John L. Gaumer Company, Philadelphia, Pa. Gas-fixture. No. 886,120; Apr. 28; Sp. p. 5061; Dr. p. 1062; Gaz. vol. 133; p. 2079.

Geserich, M. F., St. Louis, Mo. Vehicle. No. 884,014; Apr. 7; Sp. p. 700; Dr. p. 141; Gaz. vol. 133; p. 1304.
Gfeller, F. (See Doble and Gfeller.)
Gibbs, C., assignor to Underwood Typewriter Company, New York, N. Y. Type-writing machine. No. 884,980; Apr. 14; Sp. p. 2677; Dr. p. 569; Gaz. vol. 133; p. 1646.
Gibson, C. B. (See Randall and Gibson.)
Gibson, W. H., Grand Rapids, Mich. Wheel-lock. No. 885,036; Apr. 21; Sp. p. 2800; Dr. p. 592; Gaz. vol. 133; p. 1697.
Gieser Manufacturing Company. (See Anderson, G. A., assignor.)
Giesler, G., and T. J. Alexander, Madison, Ind. Nail-making machine. No. 884,577; Apr. 14; Sp. p. 1837; Dr. pp. 393–4; Gaz. vol. 133; p. 1516.
Giffin, M. F., Cove, Oreg. Nut-lock. No. 885,465; Apr. 21; Sp. p. 3686; Dr. p. 773; Gaz. vol. 133; p. 1838.
Giffin, M. F., Cove, Oreg. Nut-lock. No. 885,466; Apr. 21; Sp. p. 3687; Dr. p. 773; Gaz. vol. 133; p. 1838.
Giguere, T. D., assignor to A. M. and E. E. Hale, executors, North Attleboro, Mass. Bracelet. No. 886,121; Apr. 28; Sp. p. 5062; Dr. p. 1062; Gaz. vol. 133; p. 2080.
Gilbert, G. H., New York, N. Y. Means for operating clutches. No. 885,604; Apr. 21; Sp. p. 3968; Dr. p. 828; Gaz. vol. 133; p. 1879.
Gilbert, H. J., Saginaw, Mich., assignor to National Washboard Company, Chicago, Ill. Washboard. No. 885,605; Apr. 21; Sp. p. 3970; Dr. p. 828; Gaz. vol. 133; p. 1879.
Gilbert, N., Alexandria, Ontario, Canada. Carriage-body. No. 885,744; Apr. 28; Sp. p. 4273; Dr. p. 894; Gaz. vol. 133; p. 1954.
Gilbreth, F. B., assignor to Corrugated Concrete Pile Company of America, New York, N. Y. Concrete pile. No. 885,337; Apr. 21; Sp. p. 3443; Dr. p. 718; Gaz. vol. 133; p. 1797.
Giles, H. S., *et al.* (See Nielsen, R., assignor.)
Giller, G. L., New York, N. Y. Horseshoe. No. 885,238; Apr. 21; Sp. p. 3243; Dr. p. 677; Gaz. vol. 133; p. 1764.
Gillmor, H. G., Bath, and A. W. Sweet, Durham, Me.; said Sweet assignor to said Gillmor. Rotary motor. No. 884,812; Apr. 14; Sp. p. 2353; Dr. p. 495; Gaz. vol. 133; p. 1595.
Gilman, G. E., West Newbury, Mass. Curtain-fixture for open cars. No. 884,480; Apr. 14; Sp. p. 1643; Dr. p. 353; Gaz. vol. 133; p. 1484.
Gilmore, H. B., *et al.* (See Betts, L. F., assignor.)
Gilmore, W. S., New York, N. Y. Hanger-rack receptacle for clothing. No. 883,713; Apr. 7; Sp. p. 72; Dr. p. 11; Gaz. vol. 133; p. 1204.
Girod, P., Ugine, France. Electric furnace. No. 885,745; Apr. 28; Sp. p. 4275; Dr. p. 894; Gaz. vol. 133; p. 1955.
Giron, P., Paris, France. Apparatus for charging siphons with carbonic acid. No. 885,467; Apr. 21; Sp. p. 3688; Dr. p. 773; Gaz. vol. 133; p. 1838.
Gladish, J. P., *et al.* (See King, J. R., assignor.)
Glaus, G., Milwaukee, Wis. Box-cover fastener. No. 884,481; Apr. 14; Sp. p. 1644; Dr. p. 353; Gaz. vol. 133; p. 1485.
Gleason, W. (See Singleton and Gleason.)
Glens Falls Machine Works. (See Tromblee, A., assignor.)
Globe-Wernicke Company. (See Vosmer, G. W., assignor.)
Glock, E. F. (See Taylor, C. W., assignor.)
Glover, E. S., Chicago, Ill. Percolater. No. 885,037; Apr. 21; Sp. p. 2802; Dr. p. 593; Gaz. vol. 133; p. 1698.
Glover, J. S., Minnick, Tenn. Cotton-picker. No. 885,606; Apr. 21; Sp. p. 3971; Dr. pp. 828–9; Gaz. vol. 133; p. 1879.
Gnaegy, A., Chester, Ill. Propeller. No. 885,038; Apr. 21; Sp. p. 2803; Dr. p. 593; Gaz. vol. 133; p. 1698.
Gocher, J. W., Johnstown, Pa. Coke-oven construction. No. 885,468; Apr. 21; Sp. p. 3689; Dr. pp. 773–4; Gaz. vol. 133; p. 1838.
Godley, E., Springfield, Ill. Brake-setting device. (Reissue.) No. 12,780; Apr. 21; Sp. p. 4181; Dr. p. 875; Gaz. vol. 133; p. 1913.
Goehle, P. E., Sr., assignor of one-half to J. Kilacky, Sault Ste. Marie, Mich. Mop-wringer. No. 885,607; Apr. 21; Sp. p. 3972; Dr. p. 829; Gaz. vol. 133; p. 1880.
Goettel, J., Boston, Mass., assignor of one-half to C. E. Rood, New York, N. Y. Journal-box and lid. No. 884,918; Apr. 14; Sp. p. 2564; Dr. pp. 539–40; Gaz. vol. 133; p. 1627.
Goff, F. C., Denver, Colo. Treating animals. No. 885,694; Apr. 21; Sp. p. 4155; Dr. pp. 869–70; Gaz. vol. 133; p. 1908.
Gohy, J., Ensival, near Verviers, Belgium. Machine for the production of paper tubes. No. 883,949; Apr. 7; Sp. p. 563; Dr. pp. 112–15; Gaz. vol. 133; p. 1283.
Gold, E. H. (See Roth, E. N., assignor.)
Gold, F., Richmond, Victoria, Australia. Grate-surface of furnaces. No. 885,608; Apr. 21; Sp. p. 3974; Dr. pp. 829–30; Gaz. vol. 133; p. 1880.
Gold, F., Richmond, Victoria, Australia. Furnace. No. 886,205; Apr. 28; Sp. p. 5200; Dr. p. 1095; Gaz. vol. 133; p. 2106.
Goldey, F. B., Collingdale, Pa. Furnace-charging apparatus. No. 885,920; Apr. 28; Sp. p. 4642; Dr. p. 977; Gaz. vol. 133; p. 2013.
Goldie, W., Jr., Bay City, Mich. Spike and tie-plate. No. 884,578; Apr. 14; Sp. p. 1840; Dr. p. 394; Gaz. vol. 133; p. 1516.
Goodale, W. H., Leominster, Mass., and E. A. Stacy, New York, N. Y. Comb hat-fastener. No. 885,746; Apr. 28; Sp. p. 4276; Dr. p. 894; Gaz. vol. 133; p. 1955.
Goode, J. R., Washington, Pa. Nut-lock. No. 883,714; Apr. 7; Sp. p. 74; Dr. p. 11; Gaz. vol. 133; p. 1204.
Goodloe, B., *et al.* (See Blades, J. M., assignor.)
Goodloe, H., *et al.* (See Blades, J. M., assignor.)
Goodman, B., Wallace, Kans. Screen. No. 884,145; Apr. 7; Sp. p. 1011; Dr. p. 211; Gaz. vol. 133; p. 1347.
Goodrich, R. B., Cincinnati, Ohio. Hydraulic motor. No. 884,654; Apr. 14; Sp. p. 2035; Dr. pp. 434–5; Gaz. vol. 133; p. 1541.
Goodson Electric Galvanizing Company. (See Goodson, G. A., assignor.) (Reissue.)
Goodson, G. A., assignor to Goodson Electric Galvanizing Company, Minneapolis, Minn. Plating metallic bodies. (Reissue.) No. 12,779; Apr. 14; Sp. p. 2722; Dr. p. 577; Gaz. vol. 133; p. 1653.
Goodspeed, C. B., Columbus, Ohio. Truck side frame. No. 884,726; Apr. 14; Sp. p. 2175; Dr. p. 461; Gaz. vol. 133; p. 1566.
Goodwin, J. C. (See Wilkinson and Goodwin.)
Goodwin, J. C., Philadelphia, Pa. Sewing-machine. No. 884,579; Apr. 14; Sp. p. 1841; Dr. p. 395; Gaz. vol. 133; p. 1517.
Goodyear, N., assignor to J. B. Colt Company, New York, N. Y. Acetylene-generator. No. 884,328; Apr. 7; Sp. p. 1318; Dr. pp. 279–80; Gaz. vol. 133; p. 1404.
Goodyear, N., assignor to J. B. Colt Company, New York, N.Y. Acetylene-generator. No. 884,329; Apr. 7; Sp. p. 1324; Dr. pp. 281–2; Gaz. vol. 133; p. 1405.
Gordnier, F. E., Oakdale, assignor of one-half to L. Feick, Noblestown, Pa. Scaffold apparatus. No. 884,813; Apr. 14; Sp. p. 2358; Dr. p. 495; Gaz. vol. 133; p. 1596.
Gordon, E. R., and D. L. Wolfe, Harrington, Wash. Combined weeder and cultivator. No. 884,814; Apr. 14; Sp. p. 2360; Dr. p. 496; Gaz. vol. 133; p. 1596.
Gorham Company. (See Kirk, F. L., assignor.)
Gorman, A., St. Louis, Mo. Self-locking sash-lock. No. 885,239; Apr. 21; Sp. p. 3244; Dr. p. 677; Gaz. vol. 133; p. 1764.
Gornall, J. (See Myerscough and Gornall.)
Gorton, W. F. (See Smith and Gorton.)
Goss Printing Press Company. (See Firm, J. L., assignor.)
Goss Printing Press Company. (See Husby, H. P., assignor.)
Gossett, W., Falls City, Nebr. Screen-hinge. No. 884,146; Apr. 7; Sp. p. 1013; Dr. p. 211; Gaz. vol. 133; p. 1347.
Gottwals, W. O., Washington, D. C. File and index. No. 883,950; Apr. 7; Sp. p. 574; Dr. p. 115; Gaz. vol. 133; p. 1283.
Gough, M. L., Washington, D. C. Shoe-tree. No. 885,609; Apr. 21; Sp. p. 3977; Dr. p. 830; Gaz. vol. 133; p. 1881.
Gould, C. A., St. Louis, Mo. Underwear-garment. No. 884,815; Apr. 14; Sp. p. 2362; Dr. p. 496; Gaz. vol. 133; p. 1597.
Gould, C. T. E., assignor of one-third to E. Hilker, Chicago, Ill. Sewing-machine bed-plate or work-support. No. 884,482; Apr. 14; Sp. p. 1646; Dr. pp. 353–4; Gaz. vol. 133; p. 1485.
Gould, M., assignor to C. and H. McCloskey, Belfast, Ireland. Machine for doing open-work stitching. No. 884,330; Apr. 7; Sp. p. 1328; Dr. p. 282; Gaz. vol. 133; p. 1405.
Gould Storage Battery Company. (See Hubbard, A. S., assignor.)
Govers, F. X., Owego, N. Y. Paint-remover and making same. No. 885,151; Apr. 21; Sp. p. 3055; Gaz. vol. 133; p. 1735.
Gow, A. M., Edgewood Park, Pa., assignor, by mesne assignments, to Westinghouse Machine Company. Making gas. No. 884,655; Apr. 14; Sp. p. 2038; Dr. p. 435; Gaz. vol. 133; p. 1542.
Grabel, A. J., Jamestown, N. Y. Non-refillable bottle. No. 884,147; Apr. 7; Sp. p. 1014; Dr. p. 212; Gaz. vol. 133; p. 1347.
Grace, T., assignor of two-thirds to C. A. Jaques and A. J. Metcalfe, Darlington, near Sydney, New South Wales, Australia. Sheep-shearing machine. No. 885,991; Apr. 28; Sp. p. 4902; Dr. p. 1008; Gaz. vol. 133; p. 2038.
Grace, T. J., assignor of one-half to J. W. Rutherford, Mobile, Ala. Apparatus for delivering mail-sacks. No. 886,290; Apr. 28; Sp. p. 5366; Dr. p. 1128; Gaz. vol. 133; p. 2136.
Graeber, F. R., and C. T. Entrikin, Philadelphia, Pa. Coin-register. No. 885,610; Apr. 21; Sp. p. 3978; Dr. pp. 830–1; Gaz. vol. 133; p. 1881.
Graetz, M., Berlin, Germany. Lamp with inverted incandescent gas-burners. No. 884,816; Apr. 14; Sp. p. 2364; Dr. p. 496; Gaz. vol. 133; p. 1597.
Graft, J. A. (See Voigtlander, M. G., assignor.)
Graham, G. M., assignor to G. A. E. Kohler, Chicago, Ill. Fitting for reinforced concrete structures. No. 885,240; Apr. 21; Sp. p. 3246; Dr. p. 677; Gaz. vol. 133; p. 1764.
Graham, G. M., assignor to G. A. E. Kohler, Chicago, Ill. Fitting for reinforced concrete structures. No. 885,992; Apr. 28; Sp. p. 4903; Dr. p. 1009; Gaz. vol. 133; p. 2038.

Graham, J. N. C., New York, N. Y. Card-mount. No. 884,086; Apr. 7; Sp. p. 849; Dr. p. 178; Gaz. vol. 133; p. 1327.
Graham, J. W. (See Woods, J. O., assignor.)
Graham, W. S., assignor to Parlin and Orendorff Company, Canton, Ill. Riding beet-cultivator. No. 885,469; Apr. 21; Sp. p. 3692; Dr. pp. 774–5; Gaz. vol. 133; p. 1839.
Grand Rapids Show Case Company. (See Williams, W. K., assignor.)
Granger, H. F., *et al.* (See Mayette, E., assignor.)
Grant, A. G., Downey, Cal. Adjustable blackboard. No. 885,241; Apr. 21; Sp. p. 3247; Dr. p. 677; Gaz. vol. 133; p. 1765.
Grant, T. G. H. (See Wilson, W., assignor.)
Grantland, J. W., assignor to Haines, Jones & Cadbury Company, Philadelphia, Pa. Automatic periodic flushing apparatus. No. 884,483; Apr. 14; Sp. p. 1648; Dr. p. 354; Gaz. vol. 133; p. 1485.
Grantland, J. W., assignor to Haines, Jones & Cadbury Company, Philadelphia, Pa. Means for flushing receptacles. No. 884,484; Apr. 14; Sp. p. 1650; Dr. pp. 354–5; Gaz. vol. 133; p. 1486.
Grasser, W. H., Clarkston, Wash. Compound tool. No. 886,202; Apr. 28; Sp. p. 5196; Dr. p. 1094; Gaz. vol. 133; p. 2105.
Grasshaw, T., Columbia, Ill. Garden-hoe. No. 886,203; Apr. 28; Sp. p. 5198; Dr. p. 1094; Gaz. vol. 123; p. 2106.
Grattan, W., Dookie, Victoria, Australia. Furniture-drawer. No. 884,727; Apr. 14; Sp. p. 2176; Dr. p. 461; Gaz. vol. 133; p. 1567.
Grau, A., and F. Russ, Vienna, Austria-Hungary. Making nitrogen oxids from air. No. 884,919; Apr. 14; Sp. p. 2566; Dr. p. 540; Gaz. vol. 133; p. 1627.
Grau, A., and F. Russ, Vienna, Austria-Hungary. Apparatus for making nitrogen oxids from the air. No. 884,920; Apr. 14; Sp. p. 2567; Dr. p. 540; Gaz. vol. 133; p. 1627.
Graves, R. L., Sumter, Oreg. Miner's lamp. No. 886,204; Apr. 28; Sp. p. 5199; Dr. p. 1095; Gaz. vol. 133; p. 2106.
Gray, A. S., assignor to R. J. Beatty, trustee, Chicago, Ill. Electrolytic cell. No. 884,015; Apr. 7; Sp. p. 701; Dr. pp. 141–2; Gaz. vol. 133; p. 1304.
Gray, C. H., Silverton, England. Closing device for air-tight bottles, jars, and other receptacles. No. 884,378; Apr. 14; Sp. p. 1446; Dr. p. 308; Gaz. vol. 133; p. 1452.
Gray, I. C., assignor to Automatic Boiler Cleaner Company, Logansport, Ind. Cleaner for steam-boilers. No. 884,728; Apr. 14; Sp. p. 2177; Dr. p. 462; Gaz. vol. 133; p. 1567.
Gray, M. E. and W., Rochester, N. Y. Handle for dippers. No. 884,485; Apr. 14; Sp. p. 1653; Dr. p. 355; Gaz. vol. 133; p. 1486.
Gray, T. B. (See Roche, H. N., assignor.)
Gray, W. (See Gray, M. E. and W.)
Graybill, J. E., York, Pa., assignor to General Electric Company. Machine for manufacturing mount-tubes. No. 883,875; Apr. 7; Sp. p. 414; Dr. pp. 81–2; Gaz. vol. 133; p. 1257.
Graybill, J. E., York, Pa., assignor to General Electric Company. Machine for forming mount-tubes. No. 885,039; Apr. 21; Sp. p. 2804; Dr. pp. 593–4; Gaz. vol. 133; p. 1698.
Green, B. L., Mount Clemens, Mich. Clasp. No. 885,993; Apr. 28; Sp. p. 4805; Dr. p. 1009; Gaz. vol. 133; p. 2039.
Green, F. W., Wakefield, England. Apparatus for heating air. No. 883,951; Apr. 7; Sp. p. 578; Dr. p. 115; Gaz. vol. 133; p. 1283.
Green, J. H., Freeport, Pa. Window-shade and curtain-pole holder. No. 884,656; Apr. 14; Sp. p. 2042; Dr. p. 435; Gaz. vol. 133; p. 1542.
Green, W. L., New York, N. Y. Printing-press. No. 885,747; Apr. 28; Sp. p. 4277; Dr. pp. 895–7; Gaz. vol. 133; p. 1955.
Greenwood, A. A. (See Connan, C. A., assignor.)
Gregg, R., Hammond, Ind. Coil-spring. No. 886,052; Apr. 28; Sp. p. 4926; Dr. p. 1035; Gaz. vol. 133; p. 2057.
Gregory, H. E., Fruitvale, Cal. Combined protractor and level. No. 883,798; Apr. 7; Sp. p. 246; Dr. p. 44; Gaz. vol. 133; p. 1231.
Gregson, E. G. L., Fort Worth, Tex. Window shade and curtain hanger. No. 885,040; Apr. 21; Sp. p. 2808; Dr. p. 594; Gaz. vol. 133; p. 1699.
Gressner, H., Berlin, Germany. Needle-pad. No. 885,242; Apr. 21; Sp. p. 3249; Dr. p. 678; Gaz. vol. 133; p. 1765.
Gribbin, J. J. (See Smith, E. H., assignor.)
Griffith, W. H., Omaha, Nebr. Wire fencing. No. 884,379; Apr. 14; Sp. p. 1447; Dr. p. 308; Gaz. vol. 133; p. 1452.
Griggs, D. C., and R. H. Smith, assignors to Waterbury Farrel Foundry and Machine Company, Waterbury, Conn. Slotting-machine. No. 884,496; Apr. 14; Sp. p. 1654; Dr. pp. 355–6; Gaz. vol. 133; p. 1486.
Grim, J. M. (See Lukens, T. H., assignor.)
Grimm, G. H., Rutland, Vt. Evaporator. No. 884,272; Apr. 7; Sp. p. 1231; Dr. p. 259; Gaz. vol. 133; p. 1388.
Grimm, R. (See Kruse and Grimm.)
Griswold, C., and S. G. Averell, New York, N. Y. Gas-engine. No. 885,921; Apr. 28; Sp. p. 4645; Dr. pp. 977–8; Gaz. vol. 133; p. 2014.
Gröndahl, H., Chicago, Ill., assignor to Burgess & Sauerberg, Grand Rapids, Mich. Computing slide-rule. No. 884,729; Apr. 14; Sp. p. 2178; Dr. p. 462; Gaz. vol. 133; p. 1567.
Groshans, F., Baltimore, Md. Holder for dental flasks. No. 884,087; Apr. 7; Sp. p. 850; Dr. p. 179; Gaz. vol. 133; p. 1327.
Gross, H. W., *et al.* (See Francis, Kaste, and Gross.)
Grosshans, C. C. (See Mitchell, W. H., assignor.)
Groswith, H., Philadelphia, Pa. Telephone system for fire-hose. No. 885,922; Apr. 28; Sp. p. 4648; Dr. p. 978; Gaz. vol. 133; p. 2014.
Groves, C. L., Hartford City, Ind. Pneumatic conveyer. No. 884,016; Apr. 7; Sp. p. 704; Dr. p. 142; Gaz. vol. 133; p. 1305.
Gruber, S. A., Pittsburg, Pa. Wrench. No. 886,206; Apr. 28; Sp. p. 5202; Dr. p. 1095; Gaz. vol. 133; p. 2106.
Grzesiowski, K., assignor of one-third to J. P. Kaczorowski, Chicago, Ill. Automatic gate for railway-crossings. No. 886,321; Apr. 28; Sp. p. 5441; Dr. pp. 1140–1; Gaz. vol. 133; p. 2147.
Gumbinsky, O. (See Bullard, L. H., assignor.)
Gunther, J. E. (See Lyman, F. G., assignor.)
Gunther, J. W., Portland, Oreg. Tufting-button. No. 884,273; Apr. 7; Sp. p. 1233; Dr. p. 259; Gaz. vol. 133; p. 1388.
Gustafson, C. V., Austin, Tex. Wind-turbine. No. 884,817; Apr. 14; Sp. p. 2365; Dr. p. 497; Gaz. vol. 133; p. 1598.
Gutenkunst, W., Milwaukee, Wis. Cattle-stanchion. No. 884,148; Apr. 7; Sp. p. 1015; Dr. p. 212; Gaz. vol. 133; p. 1348.
Guthrie, B., assignor of one-half to J. P. Karch, Pittsburg, Pa. Flying-machine. No. 886,122; Apr. 28; Sp. p. 5063; Dr. pp. 1062–3; Gaz. vol. 133; p. 2080.
Guthrie, R., Lincoln, Nebr. Machine for boring post-holes. No. 885,041; Apr. 21; Sp. p. 2809; Dr. pp. 594–5; Gaz. vol. 133; p. 1699.
Guthrie, R., Lincoln, Nebr. Machine for erecting posts and poles. No. 885,042; Apr. 21; Sp. p. 2813; Dr. p. 595; Gaz. vol. 133; p. 1699.
Gworek, A., Aurora, Ill. Planer. No. 885,611; Apr. 21; Sp. p. 3979; Dr. p. 831; Gaz. vol. 133; p. 1881.
H. Adler Company. (See Adler, H., assignor.)
H. F. Brammer Manufacturing Company. (See Edens, J., assignor.)
Haas, G. W., Los Angeles, assignor of one-half to M. B. Fowler, Pasadena, Cal. Orthopedic operating-table. No. 885,243; Apr. 21; Sp. p. 3249; Dr. p. 678; Gaz. vol. 133; p. 1765.
Hackburn, E. B., W. C. Willett, and D. F. Deppe, Newbern, N. C. Fertilizer-distributer. No. 886,207; Apr. 28; Sp. p. 5204; Dr. p. 1096; Gaz. vol. 133; p. 2107.
Hackl, W. (See Szuk and Hackl.)
Hackley, S. A., Victor, Colo. Fly-trap. No. 884,487; Apr. 14; Sp. p. 1659; Dr. p. 356; Gaz. vol. 133; p. 1487.
Hadank, B., Buenos Ayres, Argentina. Carbonic-acid apparatus for beer-casks and the like. No. 884,017; Apr. 7; Sp. p. 706; Dr. pp. 142–3; Gaz. vol. 133; p. 1305.
Hadaway, J. B., Brockton, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Machine for operating upon welts of boots and shoes. No. 885,244; Apr. 21; Sp. p. 3251; Dr. pp. 678–9; Gaz. vol. 133; p. 1766.
Hadley, A. N., Indianapolis, Ind. Shock-lifter. No. 886,123; Apr. 28; Sp. p. 5065; Dr. p. 1063; Gaz. vol. 133; p. 2080.
Hadley, R. F., Slicker, W. Va. Trap. No. 884,380; Apr. 14; Sp. p. 1449; Dr. p. 309; Gaz. vol. 133; p. 1452.
Hadley, R. F., Slicker, W. Va. Casing-head for oil-wells. No. 886,208; Apr. 28; Sp. p. 5206; Dr. p. 1096; Gaz. vol. 133; p. 2107.
Hadsell, D. H., assignor of one-half to T. D. Barry, Brockton, Mass. Heel-seat trimmer for patent-leather. No. 886,291; Apr. 28; Sp. p. 5368; Dr. p. 1128; Gaz. vol. 133; p. 2136.
Hadsell, D. H., assignor of one-half to T. D. Barry, Brockton, Mass. Welt-beater. No. 886,292; Apr. 28; Sp. p. 5369; Dr. p. 1129; Gaz. vol. 133; p. 2136.
Hagerman, L. S., Mondamin, Iowa. Windmill-regulator. No. 885,844; Apr. 28; Sp. p. 4482; Dr. p. 941; Gaz. vol. 133; p. 1988.
Haggard, C. Y., Wheat, Tenn. Writing-desk. No. 885,748; Apr. 28; Sp. p. 4282; Dr. p. 897; Gaz. vol. 133; p. 1956.
Hagler, J. F., Shenandoah, Iowa. Wagon-brake. No. 885,749; Apr. 28; Sp. p. 4285; Dr. pp. 897–8; Gaz. vol. 133; p. 1956.
Hagmüller, J., Allensbach, Germany. Device for separating iron particles from chaff and the like by means of magnets. No. 885,245; Apr. 21; Sp. p. 3256; Dr. p. 680; Gaz. vol. 133; p. 1766.
Hahn, I., Pittsburg, Pa. Card-rack. No. 884,149; Apr. 7; Sp. p. 1017; Dr. p. 212; Gaz. vol. 133; p. 1348.
Hahnel, C. A. (See Martin and Hahnel.)
Haines, Jones & Cadbury Company. (See Grantland, J. W., assignor.)
Halbardier, J., Bar, Ethe, Belgium. Potato digger and separator. No. 883,876; Apr. 7; Sp. p. 419; Dr. pp. 82–3; Gaz. vol. 133; p. 1257.
Hale, A. M., *et al.*, executors. (See Giguere, T. D., assignor.)
Hale, E. E., *et al.*, executors. (See Giguere, T. D., assignor.)
Hale, H. S., assignor to Hale and Kilburn Manufacturing Company, Philadelphia, Pa. Cushion. No. 884,730; Apr. 14; Sp. p. 2180; Dr. p. 462; Gaz. vol. 133; p. 1567.
Hale and Kilburn Manufacturing Company. (See Hale, H. S., assignor.)
Hale-Kilburn Metal Company. (See Budd, E. G., assignor.)
Hale-Kilburn Metal Company. (See Budd and Wollé, assignors.)
Hale-Kilburn Metal Company. (See Kilburn and Budd assignors.)

Haling, M. S., Weaver, Minn. Telegraph-transmitter. No. 884,381; Apr. 14; Sp. p. 1450; Dr. p. 309; Gaz. vol. 133; p. 1453.
Hall, C. E., Rushville, Ind. Window-screen. No. 885,673; Apr. 21; Sp. p. 4111; Dr. p. 861; Gaz. vol. 133; p. 1901.
Hall, E. L., New York, N. Y. Photographic shutter. No. 885,612; Apr. 21; Sp. p. 3981; Dr. pp. 831–2; Gaz. vol. 133; p. 1882.
Hall, H. T., Greenville, Ohio. Electric fixture. No. 885,246; Apr. 21; Sp. p. 3256; Dr. p. 680; Gaz. vol. 133; p. 1766.
Hall, L. J. (See Morris and Hall.)
Hall, R. C. (See Solomon, W. T., assignor.)
Hall Signal Company. (See Lee, T. L., assignor.)
Halley, G., Nevada, Iowa. Heating-drum. No. 885,470; Apr. 21; Sp. p. 3695; Dr. p. 776; Gaz. vol. 133; p. 1839.
Halling, C. A. (See Lindahl, J. T., assignor.)
Hallock, A. T., assignor to Fireless Cooker Company, Grand Rapids, Mich. Fireless cooker. No. 883,715; Apr. 7; Sp. p. 75; Dr. p. 12; Gaz. vol. 133; p. 1204.
Hallock, D. E. (See Hallock, D. Y. and D. E.)
Hallock, D. Y. and D. E., assignors to A. B. Farquhar Company, Limited, York, Pa. Potato-digger. No. 886,322; Apr. 28; Sp. p. 5445; Dr. pp. 1141–2; Gaz. vol. 133; p. 2148.
Hallock Fireless Cooker Company. (See Hallock, A. T., assignor.)
Hallot, P. (See Mamet and Hallot.)
Hamann, R. W., assignor to E. J. Feiner, St. Louis, Mo. Boiler-flue cleaner. No. 884,818; Apr. 14; Sp. p. 2366; Dr. p. 497; Gaz. vol. 133; p. 1598.
Hambay, J. T., New York, N. Y. Foundation. No. 885,043; Apr. 21; Sp. p. 2819; Dr. p. 596; Gaz. vol. 133; p. 1700.
Hamilton, J., New York, N. Y. Dumping-bucket. No. 885,613; Apr. 21; Sp. p. 3985; Dr. p. 832; Gaz. vol. 133; p. 1882.
Hamilton, W. L., Chicago, Ill. Register-hook. No. 885,994; Apr. 28; Sp. p. 4806; Dr. p. 1009; Gaz. vol. 133; p. 2039.
Hammond, W. J., Jr., Pittsburg, Pa. Tumbling-machine. No. 885,044; Apr. 21; Sp. p. 2820; Dr. pp. 596–7; Gaz. vol. 133; p. 1700.
Hanchett Swage Works. (See Hedstrom, J. P., assignor.)
Hancock, H. W., Chicago, Ill. Running-gear for vehicles. No. 884,488; Apr. 14; Sp. p. 1660; Dr. p. 357; Gaz. vol. 133; p. 1487.
Hand, S. A., assignor to Chandler & Price Company, Cleveland, Ohio. Attachment for gear-cutting, planing, and milling machines. No. 883,952; Apr. 7; Sp. p. 579; Dr. p. 116; Gaz. vol. 133; p. 1284.
Hand, T., Walla Walla, Wash. Nut-lock. No. 885,614; Apr. 21; Sp. p. 3987; Dr. p. 832; Gaz. vol. 133; p. 1882.
Handford, R. S., Batesville, Ark. Rail-joint truss. No. 884,382; Apr. 14; Sp. p. 1452; Dr. p. 309; Gaz. vol. 133; p. 1453.
Händler, A. F., and K. A. Starke, New York, N. Y. Advertising fly-catcher. No. 885,615; Apr. 21; Sp. p. 3988; Dr. p. 833; Gaz. vol. 133; p. 1883.
Handy, R. G., Bay City, Mich. Vehicle suspension. No. 885,545; Apr. 28; Sp. p. 4484; Dr. p. 941; Gaz. vol. 133; p. 1989.
Hanks, C. M. (See Neville, Clay, and Clewer, assignors.)
Hanlon, G. W., assignor to Imperial Curtain Company, New York, N. Y. Means for producing theatrical stage effects. No. 883,953; Apr. 7; Sp. p. 580; Dr. p. 116; Gaz. vol. 133; p. 1284.
Hanna, C. T. (See Caldwell, H. C., assignor.)
Hannemann, F., Great Falls, Mont. Window-shade bracket. No. 884,274; Apr. 7; Sp. p. 1234; Dr. p. 259; Gaz. vol. 133; p. 1388.
Hansen-Ellehammer, J. C., and E. A. P. R. Lund, Copenhagen, Denmark. Printing and stamping machine. No. 885,616; Apr. 21; Sp. p. 3989; Dr. pp. 833–4; Gaz. vol. 133; p. 1883.
Hanson, B. M. W., assignor to Pratt & Whitney Company, Hartford, Conn. Back-rest for metal-reducing machines. No. 886,293; Apr. 28; Sp. p. 5370; Dr. p. 1129; Gaz. vol. 133; p. 2137.
Hanson, B. M. W., assignor to Pratt & Whitney Company, Hartford, Conn. Electrically-controlled feed mechanism. No. 886,294; Apr. 28; Sp. p. 5373; Dr. p. 1129; Gaz. vol. 133; p. 2135.
Hanson, C. A., Seattle, Wash. Motor-sleigh. No. 885,617; Apr. 21; Sp. p. 3992; Dr. pp. 834–5; Gaz. vol. 133; p. 1883.
Hanson, H. H., Tyler, Tex. Combined funnel and dipper. No. 884,489; Apr. 14; Sp. p. 1662; Dr. p. 357; Gaz. vol. 133; p. 1487.
Hanson, S. S., New York, N. Y. Knockdown bed. No. 885,995; Apr. 28; Sp. p. 4807; Dr. pp. 1009–10; Gaz. vol. 133; p. 2039.
Harbinger, W., London, England. Metallic packing for piston-rods, valve-rods, and the like. No. 883,799; Apr. 7; Sp. p. 248; Dr. p. 45; Gaz. vol. 133; p. 1232.
Hardacre, F. C. (See Frey, J. H., assignor.)
Härdén, J., Schenectady, N. Y., assignor to General Electric Company. Arc-lamp. No. 885,338; Apr. 21; Sp. p. 3447; Dr. p. 719; Gaz. vol. 133; p. 1797.
Harder, O., Hökendorf, Germany. Hoeing-machine. No. 885,471; Apr. 21; Sp. p. 3696; Dr. p. 776; Gaz. vol. 133; p. 1839.
Hardesty, J. C., Denver, Colo. Simple-syrup percolator. No. 884,921; Apr. 14; Sp. p. 2568; Dr. p. 540; Gaz. vol. 133; p. 1628.
Hardscog, M., Ottumwa, Iowa. Drill-head and bit or cutter. No. 884,150; Apr. 7; Sp. p. 1017; Dr. p. 213; Gaz. vol. 133; p. 1348.
Hardscog, M., Ottumwa, Iowa. Pneumatic hammer. No. 884,151; Apr. 7; Sp. p. 1019; Dr. p. 213; Gaz. vol. 133; p. 1349.
Hardscog, M., Ottumwa, Iowa. Pneumatic hammer. No. 884,152; Apr. 7; Sp. p. 1023; Dr. p. 213; Gaz. vol. 133; p. 1349.
Hardscog, M., Ottumwa, Iowa. Pneumatic and other drills. No. 884,331; Apr. 7; Sp. p. 1331; Dr. p. 283; Gaz. vol. 133; p. 1406.
Hardy, R. C., New York, N. Y. Electric igniting device. No. 884,731; Apr. 14; Sp. p. 2182; Dr. p. 463; Gaz. vol. 133; p. 1568.
Hargrove, A. S., assignor of one-half to L. H. Estes, Memphis, Tenn. Adjustable crutch. No. 885,339; Apr. 21; Sp. p. 3452; Dr. p. 719; Gaz. vol. 133; p. 1798.
Harlan, E., *et al.* (See Collingwood, A., assignor.)
Harlan, J. N., *et al.* (See Collingwood, A., assignor.)
Harland, A. P., Dyersburg, Tenn. Color-printing attachment for printing-presses. No. 885,340; Apr. 21; Sp. p. 3453; Dr. pp. 719–20; Gaz. vol. 133; p. 1798.
Harlow, W. S., Swampscott, Mass. Calculating-rule. No. 883,800; Apr. 7; Sp. p. 249; Dr. p. 45; Gaz. vol. 133; p. 1232.
Harpstrite, A. W., Moweaqua, Ill. Power-driven plow. No. 884,490; Apr. 14; Sp. p. 1662; Dr. p. 358; Gaz. vol. 133; p. 1487.
Harpstrite, H. P., Maroa, Ill. Grain-distributing apparatus. No. 883,801; Apr. 7; Sp. p. 251; Dr. pp. 45–6; Gaz. vol. 133; p. 1232.
Harris, F. R., Kenmare, N. D. Incubator-alarm. No. 884,018; Apr. 7; Sp. p. 709; Dr. pp. 143–4; Gaz. vol. 133; p. 1306.
Harris, G. W., Shelby, Ohio. Mail-bag catcher and deliverer. No. 883,877; Apr. 7; Sp. p. 421; Dr. p. 83; Gaz. vol. 133; p. 1257.
Harris, O. E., assignor of one-half to O. M. Pruitt, Indianapolis, Ind. Air-lift pump. No. 886,053; Apr. 28; Sp. p. 4928; Dr. p. 1036; Gaz. vol. 133; p. 2057.
Harris, S. P. (See Woods, R. L., assignor.)
Harris Suspender Company. (See Freeman, W., assignor.)
Harrison Safety Boiler Works. (See Gamble, J. W., assignor.)
Harrison, T. B., Philadelphia, Pa. Gas-burner. No. 884,819; Apr. 14; Sp. p. 2367; Dr. p. 498; Gaz. vol. 133; p. 1598.
Hart, A. F., Hickory, N. C. Track-tamping implement. No. 885,750; Apr. 28; Sp. p. 4287; Dr. p. 898; Gaz. vol. 133; p. 1956.
Hart, J. L., Valentine, Ind. Sod-line plow. No. 885,341; Apr. 21; Sp. p. 3458; Dr. p. 720; Gaz. vol. 133; p. 1799.
Hartman, G., assignor of two-fifths to E. Wenning, Cincinnati, Ohio. Printing-press. No. 883,802; Apr. 7; Sp. p. 253; Dr. p. 46; Gaz. vol. 133; p. 1233.
Hasbrouck, G. G., Nyack, N. Y. Piano-frame. No. 885,247; Apr. 21; Sp. p. 3258; Dr. p. 680; Gaz. vol. 133; p. 1767.
Haslett, W. S., Kiester, Minn. Corn-planter. No. 884,153; Apr. 7; Sp. p. 1028; Dr. pp. 213–14; Gaz. vol. 133; p. 1350.
Hatmaker, J. R. (See Merrett, J. A., assignor.)
Haughawout, J., H., Fairmont, Nebr. Incubator. No. 885,045; Apr. 21; Sp. p. 2821; Dr. p. 597; Gaz. vol. 133; p. 1700.
Hauptman, G. E., Omaha, Nebr., assignor to J. Duncan & Company, Boston, Mass. Switch for overhead carriers. No. 884,383; Apr. 14; Sp. p. 1453; Dr. pp. 309–10; Gaz. vol. 133; p. 1453.
Haviland, A., New Orleans, La. Garment-holder. No. 884,657; Apr. 14; Sp. p. 2043; Dr. p. 435; Gaz. vol. 133; p. 1542.
Hawkins, C. E., assignor of one-half to A. T. Thompson, Braddock, Pa. Wrench. No. 885,003; Apr. 14; Sp. p. 2715; Dr. p. 575; Gaz. vol. 133; p. 1652.
Hawkins, H. E., Parker, Kans. Loading device for grain, &c. No. 885,923; Apr. 28; Sp. p. 4649; Dr. p. 979; Gaz. vol. 133; p. 2015.
Haworth, R. D., Wellington, New Zealand. Manufacture of cardboard boxes. No. 884,384; Apr. 14; Sp. p. 1455; Dr. p. 310; Gaz. vol. 133; p. 1454.
Hawthorne & Sheble Manufacturing Company. (See Kraemer, T., assignor.)
Hawthorne & Sheble Manufacturing Company. (See Valiquet, L. P., assignor.)
Hayden, A. C., Brockton, Mass. Developing apparatus. No. 884,922; Apr. 14; Sp. p. 2570; Dr. p. 541; Gaz. vol. 133; p. 1628.
Hayes, A., Medina, Ohio. Combined harrow and roller. No. 884,658; Apr. 14; Sp. p. 2044; Dr. p. 436; Gaz. vol. 133; p. 1542.
Haywood, D. H., New York, N. Y., assignor to W. B. Wadsworth, Plainfield, N. J. Heat-regulating apparatus. No. 884,275; Apr. 7; Sp. p. 1235; Dr. p. 260; Gaz. vol. 133; p. 1388.
Hazard, F. R. (See Burcey, C. J. T., assignor.)
Heath, F. M., Portland, Oreg. Flue-damper. No. 883,878; Apr. 7; Sp. p. 422; Dr. p. 83; Gaz. vol. 133; p. 1258.
Heaton, H. E., Oroville, Cal. Spring-wheel. No. 885,342; Apr. 21; Sp. p. 3460; Dr. p. 721; Gaz. vol. 133; p. 1799.
Heaton, S. W., Philadelphia, Pa. Flooring. No. 885,751; Apr. 28; Sp. p. 4290; Dr. p. 898; Gaz. vol. 133; p. 1957.
Hecht, P. (See Willimann and Hecht.)
Heckman, C. E., assignor to James Cunningham, Son & Co., Rochester, N. Y. Device for securing axle-boxes to axles. No. 885,153; Apr. 21; Sp. p. 3058; Dr. p. 642; Gaz. vol. 133; p. 1735.
Hedstrom, J. P., assignor to Hanchett Swage Works, Big Rapids, Mich. Saw-sharpening machine. No. 884,385; Apr. 14; Sp. p. 1456; Dr. p. 310; Gaz. vol. 133; p. 1454.
Heffner, M. A., near Arenzville, Ill. Gathering and loading fork. No. 885,618; Apr. 21; Sp. p. 3996; Dr. p. 835; Gaz. vol. 133; p. 1883.

Hegarty, V., Dresden, Germany. Serving apparatus for postage-stamps, paper, and the like. No. 885,472; Apr. 21; Sp. p. 3697; Dr. p. 777; Gaz. vol. 133; p. 1840.
Heil, L. (See Walterbach and Heil.)
Heilbrunn, W., S. Blüth, and W. Pape, Berlin, Germany. Music-recorder. No. 884,580; Apr. 14; Sp. p. 1843; Dr. pp. 395–6; Gaz. vol. 133; p. 1517.
Helmlicher, J., Defiance, Ohio. Bolster-stake. No. 884,923; Apr. 14; Sp. p. 2572; Dr. p. 541; Gaz. vol. 133; p. 1628.
Heinle, R., Allegheny, Pa. Sash-lock. No. 884,581; Apr. 14; Sp. p. 1844; Dr. p. 396; Gaz. vol. 133; p. 1517.
Heinlein, G. (See Bragdon, H. J., assignor.)
Helm, C. D., Fort Worth, Tex. Lubricator for eccentrics. No. 885,046; Apr. 21; Sp. p. 2823; Dr. p. 597; Gaz. vol. 133; p. 1701.
Helm, H. C. (See Salter, C. F., assignor.)
Helmschmied, C. V., Meriden, Conn. Illuminated flower-pot. No. 884,924; Apr. 14; Sp. p. 2574; Dr. p. 541; Gaz. vol. 133; p. 1629.
Hemleb, M., Elizabeth, N. J., assignor to Singer Manufacturing Company. Hemstitch sewing-machine. No. 883,879; Apr. 7; Sp. p. 424; Dr. p. 84; Gaz. vol. 133; p. 1258.
Hemming Brothers. (See Potter, E., assignor.)
Hénard, A. E. (See Delloye and Hénard.)
Henderson, J. C., Oakland, Cal. Manufacture of artificial stone. No. 886,124; Apr. 28; Sp. p. 5067; Gaz. vol. 133; p. 2080.
Henderson, R. T. (See Piper, H. H., assignor.)
Hendrick, H. C., Lawrence, Mich. Potato-harvester. No. 884,386; Apr. 14; Sp. p. 1457; Dr. pp. 310–11; Gaz. vol. 133; p. 1454.
Hendrickson, J. C., Philadelphia, Pa. Combined register backing and damper. No. 884,088; Apr. 7; Sp. p. 851; Dr. p. 179; Gaz. vol. 133; p. 1328.
Hendrix, W. C., *et al.* (See Hollingsworth, R. L., assignor.)
Hendryx, W. A., Denver, Colo., assignor of one-half to C. Butters, Berkeley and San Francisco, Cal. Filtering apparatus. No. 885,047; Apr. 21; Sp. p. 2824; Dr. p. 597; Gaz. vol. 133; p. 1701.
Henley, E. (See Cunningham and Henley.)
Henn, H., Berlin, Germany, assignor, by mesne assignments, to American Thermos Bottle Company, Brooklyn, N. Y. Vessel with double walls and protective case. No. 884,582; Apr. 14; Sp. p. 1845; Dr. p. 396; Gaz. vol. 133; p. 1517.
Hennessy, J. B., New York, assignor to Monarch Typewriter Company, Syracuse, N. Y. Type-writing machine. No. 885,619; Apr. 21; Sp. p. 3998; Dr. pp. 835–6; Gaz. vol. 133; p. 1884.
Henninger, L. C. (See Jones, W., assignor.)
Henrich, P., assignor of one-half to A. Polson, Hoquiam, Wash. Berry-box. No. 884,820; Apr. 14; Sp. p. 2368; Dr. p. 498; Gaz. vol. 133; p. 1598.
Henry, G. E., Philadelphia, Pa. Eye-shield. No. 886,209; Apr. 28; Sp. p. 5207; Dr. p. 1097; Gaz. vol. 133; p. 2107.
Hensley, C. P., and F. H. Bryant, assignors to National Furnace Company, San Francisco, Cal. Gas-furnace. No. 883,880; Apr. 7; Sp. p. 428; Dr. p. 84; Gaz. vol. 133; p. 1259.
Henthorne, H., Newark, Ohio. Nut-lock. No. 885,996; Apr. 28; Sp. p. 4810; Dr. p. 1010; Gaz. vol. 133; p. 2040.
Heraeus, W. C., Firm of. (See Kilch, R., assignor.)
Herb, C. L. (See Salt and Herb.)
Herbert, A., *et al.* (See Siner, J. M., assignor.)
Herbert, J. W., Los Gatos, Cal. Cherry-pitting machine. No. 883,881; Apr. 7; Sp. p. 429; Dr. p. 85; Gaz. vol. 133; p. 1259.
Herdegen, H., Stuttgart, Germany. Paper-file. No. 884,019; Apr. 7; Sp. p. 710; Dr. p. 144; Gaz. vol. 133; p. 1306.
Herman, I. W., Cotesfield, Nebr. Latch. No. 884,925; Apr. 14; Sp. p. 2575; Dr. p. 542; Gaz. vol. 133; p. 1629.
Hermann, L. C., Evansville, Ind. Fire-starter. No. 884,583; Apr. 14; Sp. p. 1846; Dr. pp. 396–7; Gaz. vol. 133; p. 1518.
Herschmann, A., New York, N. Y. Brush. No. 884,276; Apr. 7; Sp. p. 1237; Dr. p. 260; Gaz. vol. 133; p. 1389.
Hersh & Bro. (See Hersh, H. E., assignor.)
Hersh, H. E., assignor to Hersh & Bro., Allentown, Pa. Ventilating-skylight and its sash-bars. No. 884,154; Apr. 7; Sp. p. 1031; Dr. pp. 214–15; Gaz. vol. 133; p. 1350.
Hershey, H. D. (See Brubaker, H., assignor.)
Hertzberg, H. (See Low and Hertzberg.)
Herz, A., New York, N. Y. Apparatus for incasing toothpicks and the like. No. 883,803; Apr. 7; Sp. p. 255; Dr. p. 47; Gaz. vol. 133; p. 1233.
Herzog Iron Works. (See Schuldt, F. G., assignor.)
Hess, E. B., New York, N. Y., assignor, by mesne assignments, to Union Typewriter Company, Jersey City, N. J. Type-writing machine. No. 884,155; Apr. 7; Sp. p. 1033; Dr. p. 215; Gaz. vol. 133; p. 1351.
Hessel, A., Golden, Colo. Gate. No. 884,584; Apr. 14; Sp. p. 1850; Dr. p. 397; Gaz. vol. 133; p. 1518.
Hestand, H., and C. Renas, Comanche, Okla. Wrench. No. 886,210; Apr. 28; Sp. p. 5209; Dr. p. 1097; Gaz. vol. 133; p. 2108.
Hettinger, J. H., Bridgeton, N. J. Toy. No. 884,387; Apr. 14; Sp. p. 1460; Dr. p. 311; Gaz. vol. 133; p. 1455.
Hewitt, H. H. (See Shultz, A. B., assignor.)
Hewitt, H. H. (See Sill, S. J., assignor.)
Heybach, F. J., assignor of one-half to Morehouse Manufacturing Co., Savannah, Ga. Weighing apparatus. No. 885,473; Apr. 21; Sp. p. 3699; Dr. p. 777; Gaz. vol. 133; p. 1840.
Hibbard, H. D., Plainfield, N. J. Utilizing the metalloids in crude iron for reducing metallic iron. No. 885,248; Apr. 21; Sp. p. 3260; Dr. p. 680; Gaz. vol. 133; p. 1767.
Hicks, J. A., Summit, N. J., assignor, by mesne assignments, to Auto Stopper Company, New York, N. Y. Means for sealing vessels. No. 885,846; Apr. 28; Sp. p. 4486; Dr. p. 942; Gaz. vol. 133; p. 1989.
Hieber, W. F. (See Korb and Hieber.)
Hiersing, O., assignor to Union Water Meter Company, Worcester, Mass. Water-meter. No. 884,491; Apr. 14; Sp. p. 1663; Dr. p. 358; Gaz. vol. 133; p. 1488.
Higdon, J. C., St. Louis, Mo. Steering-gear for automobiles. No. 885,249; Apr. 21; Sp. p. 3263; Dr. p. 681; Gaz. vol. 133; p. 1768.
Higgin Manufacturing Company. (See Steely, H. G., assignor.)
Highfield, J. S., London, England. Electrical distribution. No. 885,847; Apr. 28; Sp. p. 4487; Dr. p. 942; Gaz. vol. 133; p. 1989.
Highland, N., Lima, Ohio. Sled. No. 883,882; Apr. 7; Sp. p. 432; Dr. p. 85; Gaz. vol. 133; p. 1260.
Hildebrand, F., Deutsch-Wilmersdorf, Germany. Working expansion-engine. No. 886,054; Apr. 28; Sp. p. 4929; Dr. p. 1036; Gaz. vol. 133; p. 2058.
Hilgermann, O. A., Rhinelander, Wis. Bung-closure for barrels. No. 885,997; Apr. 28; Sp. p. 4811; Dr. p. 1010; Gaz. vol. 133; p. 2040.
Hilker, E. (See Gould, C. T. E., assignor.)
Hill, B. E., Pittsburg, Kans. Compressor. No. 883,332; Apr. 7; Sp. p. 1332; Dr. p. 283; Gaz. vol. 133; p. 1406.
Hill, C., Ogden, assignor of one-half to G. H. Nieman, Fithian, Ill. Gate. No. 884,333; Apr. 7; Sp. p. 1333; Dr. pp. 283–4; Gaz. vol. 133; p. 1406.
Hill, C. H., Scranton, Pa. Umbrella. No. 885,752; Apr. 28; Sp. p. 4291; Dr. p. 898; Gaz. vol. 133; p. 1957.
Hill, J. B., Findlay, Ohio. Digging-machine. No. 885,343; Apr. 21; Sp. p. 3461; Dr. p. 721; Gaz. vol. 133; p. 1799.
Hill, J. L., Williamsport, Pa. Lotion and toilet wash. No. 885,154; Apr. 21; Sp. p. 3059; Gaz. vol. 133; p. 1735.
Hillback, A. A., San Francisco, Cal. Power miter-saw. No. 886,055; Apr. 28; Sp. p. 4930; Dr. p. 1036; Gaz. vol. 133; p. 2058.
Hills, W. W., Kalkaska, Mich. Coupling for whiffletrees. No. 884,388; Apr. 14; Sp. p. 1461; Dr. p. 311; Gaz. vol. 133; p. 1455.
Hilprecht, R., assignor to Olds Gas Power Company, Lansing, Mich. Grate for gas-producers. No. 885,155; Apr. 21; Sp. p. 3060; Dr. p. 642; Gaz. vol. 133; p. 1736.
Hino, K., and T. Komuro, Ushigome, Tokyo, Japan. Pistol. No. 886,211; Apr. 28; Sp. p. 5210; Dr. pp. 1097–8; Gaz. vol. 133; p. 2108.
Hirschfelder, J. O., San Francisco, Cal. Graphophone, phonograph, and the like. No. 886,056; Apr. 28; Sp. p. 4932; Dr. p. 1036; Gaz. vol. 133; p. 2059.
Hirsh, H., Pittsburg, Pa. Spring-seat. No. 885,474; Apr. 21; Sp. p. 3703; Dr. p. 778; Gaz. vol. 133; p. 1840.
Hirtz, H., West Hampstead, England. Diaphragm and making the same. No. 885,998; Apr. 28; Sp. p. 4812; Gaz. vol. 133; p. 2040.
Hitchcock, D. A., assignor to Monarch Coupler Company, Ltd., Detroit, Mich. Draft-rigging. No. 884,585; Apr. 14; Sp. p. 1851; Dr. pp. 397–8; Gaz. vol. 133; p. 1518.
Hitchcock, S. W., Dixon, Ill. Chipped-ice bowl. No. 885,475; Apr. 21; Sp. p. 3703; Dr. p. 778; Gaz. vol. 133; p. 1841.
Hitt, E. L., Weiser, Idaho. Animal catching and holding tool. No. 884,156; Apr. 7; Sp. p. 1036; Dr. p. 215; Gaz. vol. 133; p. 1351.
Hixson, A. H., Columbus, Ohio. Umbrella. No. 886,125; Apr. 28; Sp. p. 5069; Dr. p. 1064; Gaz. vol. 133; p. 2081.
Hockaday, I. N., Wichita, Kans. Paint and color exhibiting device. No. 886,057; Apr. 28; Sp. p. 4933; Dr. p. 1037; Gaz. vol. 133; p. 2059.
Hodgson, W. D., assignor to A. J. McDonough, Detroit, Mich. Feed-water regulator and alarm. No. 886,295; Apr. 28; Sp. p. 5379; Dr. p. 1130; Gaz. vol. 133; p. 2137.
Hoe, R. (See Tucker, E. D., assignor.)
Hoffman, C. (See Waggaman, H. E., assignor.)
Hoffman, W. F., Minneapolis, Minn. Lens grinding and polishing machine. No. 886,212; Apr. 28; Sp. p. 5214; Dr. p. 1098; Gaz. vol. 133; p. 2108.
Hoffman, W. O., *et al.* (See Wirgman, J., assignor.)
Hoffmann-Pinther, C., Hameln-on-the-Weser, Germany. Box or holder for sticking-plaster. No. 885,048; Apr. 21; Sp. p. 2826; Dr. p. 598; Gaz. vol. 133; p. 1702.
Hofmeister, F., Racine, Wis. Placket-closure for skirts. No. 885,344; Apr. 21; Sp. p. 3463; Dr. p. 722; Gaz. vol. 133; p. 1799.

Hogan, R. (See Nichols and Hogan.)
Hogrebe, A. E., and V. O. Strobel, Philadelphia, Pa., assignors to Niles-Bement-Pond Company, Jersey City, N. J. Motor-controlling system. No. 885,476; Apr. 21; Sp. p. 3705; Dr. p. 778; Gaz. vol. 133; p. 1841.
Hokom, S. M., *et al.* (See Anderson, N. M., assignor.)
Holbein, J. E., Evans City, Pa. Newel-post. No. 885,477; Apr. 21; Sp. p. 3707; Dr. pp. 778–9; Gaz. vol. 133; p. 1841.
Holbourns, J. G., and H. A. Longhurst, assignors to Linotype and Machinery Limited, London, England. Linotype-machine. No. 885,156; Apr. 21; Sp. p. 3061; Dr. p. 643; Gaz. vol. 133; p. 1736.
Holcomb, A. E. (See Johnson, F. M., assignor.)
Holcomb, A. E., assignor to F. C. Austin Drainage Excavator Company, Chicago, Ill. Excavator-bucket. No. 885,049; Apr. 21; Sp. p. 2826; Dr. p. 598; Gaz. vol. 133; p. 1702.
Holcomb, F. L., Kingston, N. Y. Attachment for promoting fuel combustion in locomotive fire-boxes. No. 884,626; Apr. 14; Sp. p. 2576; Dr. p. 542; Gaz. vol. 133; p. 1629.
Holder, H. W., Durham, Conn. Cover for safe-deposit boxes. No. 886,213; Apr. 28; Sp. p. 5217; Dr. p. 1098; Gaz. vol. 133; p. 2109.
Holland, J. A., assignor to John Holland Gold Pen Company, Cincinnati, Ohio. Fountain-pen. No. 885,753; Apr. 28; Sp. p. 4292; Dr. p. 899; Gaz. vol. 133; p. 1957.
Holland, N. H. (See Mayberry and Holland.)
Hollett, I. W., Chicago, Ill., assignor to J. W. Sefton Manufacturing Company, Anderson, Ind. Paper vessel. No. 886,058; Apr. 28; Sp. p. 4934; Dr. p. 1037; Gaz. vol. 133; p. 2059.
Hollinger, A., Canton, Ohio. Safety device for elevators. No. 885,924; Apr. 28; Sp. p. 4650; Dr. p. 979; Gaz. vol. 133; p. 2015.
Hollinger, T. T., Detroit, Mich. Inlaid linoleum. No. 884,732; Apr. 14; Sp. p. 2183; Dr. p. 463; Gaz. vol. 133; p. 1508.
Hollingsworth, J. G., Lebanon, S. D. Grab-tool. No. 885,478; Apr. 21; Sp. p. 3709; Dr. p. 779; Gaz. vol. 133; p. 1842.
Hollingsworth, R. L., Decatur, assignor of three-fourths to J. R. Miller and W. C. Hendrix, Fulton county, Ga. Cotton cleaner and distributer. No. 884,157; Apr. 7; Sp. p. 1038; Dr. p. 216; Gaz. vol. 133; p. 1351.
Holman & Company, A. J. (See Holman, W. K., assignor.)
Holman, W. K., assignor to A. J. Holman & Company, Philadelphia, Pa. Filing-case. No. 884,659; Apr. 14; Sp. p. 2044; Dr. p. 436; Gaz. vol. 133; p. 1543.
Holmes, L. W., and C. V. Trautman, Medora, Ind. Controlling attachment for heating-lamps. No. 883,883; Apr. 7; Sp. p. 433; Dr. p. 85; Gaz. vol. 133; p. 1260.
Hooker, W. H., Manchester, N. H. Tobacco-pipe. No. 883,954; Apr. 7; Sp. p. 581; Dr. p. 116; Gaz. vol. 133; p. 1284.
Hooper, C. N., Dubuque, Iowa. Serving apparatus. No. 885,925; Apr. 28; Sp. p. 4632; Dr. pp. 979–80; Gaz. vol. 133; p. 2015.
Hooper, W. H., Lynn, assignor, by mesne assignments, to T. G. Plant, Boston, Mass. Last. No. 883,804; Apr. 7; Sp. p. 258; Dr. p. 48; Gaz. vol. 133; p. 1234.
Hoover, J. H., Decatur, Ill. Machine for cleaning and grading grain and seed. No. 884,660; Apr. 14; Sp. p. 2046; Dr. pp. 436–8; Gaz. vol. 133; p. 1543.
Hopkins, E. E., Philadelphia, Pa. Portable partition for beds. No. 883,884; Apr. 7; Sp. p. 434; Dr. p. 86; Gaz. vol. 133; p. 1260.
Hopkins, G. W., deceased, Brooklyn, N. Y.; M. Hopkins, administratrix. Rotary engine. No. 883,955; Apr. 7; Sp. p. 582; Dr. p. 117; Gaz. vol. 133; p. 1284.
Hopkins, G. W., deceased, Brooklyn, N. Y.; M. Hopkins, administratrix. Propeller. No. 885,250; Apr. 21; Sp. p. 3264; Dr. p. 681; Gaz. vol. 133; p. 1768.
Hopkins, M., administratrix. (See Hopkins, G. W.)
Hopkinson, R. O., and R. L. Edgcombe, Waterville, Quebec, Canada. Lifting-jack. No. 885,050; Apr. 21; Sp. p. 2828; Dr. p. 598; Gaz. vol. 133; p. 1702.
Horner, W. C., Indianapolis, Ind. Circuit-breaker for automobiles. No. 885,848; Apr. 28; Sp. p. 4489; Dr. p. 942; Gaz. vol. 133; p. 1990.
Hörselwerke. (See Zweigler, E., assignor.)
Horsfield, J., assignor of one-half to F. M. Stresenrenter, Chicago, Ill. Mold for concrete walls. No. 884,733; Apr. 14; Sp. p. 2184; Dr. p. 463; Gaz. vol. 133; p. 1569.
Horsfield, J., assignor of one-half to F. M. Stresenrenter, Chicago, Ill. Concrete-wall mold. No. 884,734; Apr. 14; Sp. p. 2185; Dr. p. 463; Gaz. vol. 133; p. 1569.
Horst, J., Hubbell, Mich. Pipe-wrench. No. 885,926; Apr. 28; Sp. p. 4656; Dr. p. 981; Gaz. vol. 133; p. 2015.
Horton, A. J., White Plains, N. Y., assignor to Cutler-Hammer Mfg. Co., Milwaukee, Wis. Motor-starter. No. 883,956; Apr. 7; Sp. p. 584; Dr. p. 117; Gaz. vol. 133; p. 1285.
Hoseason, J. H., Manchester, England. Urethral syringe. No. 885,999; Apr. 28; Sp. p. 4813; Dr. p. 1011; Gaz. vol. 133; p. 2041.
Houchin, J. R., assignor to Houchin Manufacturing Company, Atlanta, Ga. Pasting-machine. No. 884,927; Apr. 14; Sp. p. 2577; Dr. p. 542; Gaz. vol. 133; p. 1629.
Houchin Manufacturing Company. (See Houchin, J. R., assignor.)
Houck, A. F., Easton, Pa. Seam-closer. No. 886,214; Apr. 28; Sp. p. 5218; Dr. p. 1099; Gaz. vol. 133; p. 2109.
Hough, A. C., assignor to Hough Shade Corporation, Janesville, Wis. Mechanism for replacing weft units. No. 886,126; Apr. 28; Sp. p. 5071; Dr. pp. 1064–5; Gaz. vol. 133; p. 2081.
Hough, A. C., assignor to Hough Shade Corporation, Janesville, Wis. Replacing weft units. No. 886,127; Apr. 28; Sp. p. 5075; Dr. p. 1065; Gaz. vol. 133; p. 2081.
Hough Shade Corporation. (See Hough, A. C., assignor.)
Houghtaling, P. A., Riverton, assignor to Curtain Supply Company, Newark, N. J. Curtain-fixture. No. 883,957; Apr. 7; Sp. p. 590; Dr. p. 118; Gaz. vol. 133; p. 1285.
Houseman, H. A., assignor to Standard Machine Company, Philadelphia, Pa. Take-up device for circular-knitting machines. No. 883,958; Apr. 7; Sp. p. 592; Dr. p. 118; Gaz. vol. 133; p. 1286.
Hovland, A., Wanbay, S. D. Central-delivery reaper. No. 885,157; Apr. 21; Sp. p. 3063; Dr. p. 644; Gaz. vol. 133; p. 1736.
Howard, E. H., Providence, R. I. Valve. No. 886,128; Apr. 28; Sp. p. 5077; Dr. p. 1065; Gaz. vol. 133; p. 2082.
Howard, M. T., Clarendon, Tex. Ant-trap. No. 884,928; Apr. 14; Sp. p. 2578; Dr. p. 542; Gaz. vol. 133; p. 1630.
Howard, V. (See Canfield, F., assignor.)
Howatson, G. M., Clatskanie, Oreg. Crosscut-saw. No. 886,296; Apr. 28; Sp. p. 5380; Dr. p. 1130; Gaz. vol. 133; p. 2138.
Howe, E. L., assignor to Standard Malleable Iron Company, Muskegon, Mich. Pipe bracket or support. No. 884,661; Apr. 14; Sp. p. 2051; Dr. p. 438; Gaz. vol. 133; p. 1543.
Howe, W. K., Buffalo, N. Y., assignor to General Railway Signal Company. System of automatic block-signaling for electric railways. No. 884,158; Apr. 7; Sp. p. 1040; Dr. p. 216; Gaz. vol. 133; p. 1352.
Howell, C. W., Newark, N. J., assignor to Sun Typewriter Company. Type-writing machine. No. 884,735; Apr. 14; Sp. p. 2186; Dr. p. 464; Gaz. vol. 133; p. 1569.
Howland, D. W., Brookline, Mass., assignor to United States Fireless Cooker Company, Sanford, Me. Cooking apparatus. No. 885,051; Apr. 21; Sp. p. 2830; Dr. p. 599; Gaz. vol. 133; p. 1702.
Hrdlička-Csiazár, F., Vienna, Austria-Hungary. Support for flash-light lamps or the like. No. 885,251; Apr. 21; Sp. p. 3265; Dr. p. 681; Gaz. vol. 133; p. 1768.
Hubbard, A. S., Greenwich, Conn., assignor to Gould Storage Battery Company. System of electrical distribution. No. 885,754; Apr. 28; Sp. p. 4293; Dr. p. 899; Gaz. vol. 133; p. 1957.
Hubbard, A. S., Belleville, N. J., assignor to Gould Storage Battery Company. System of electrical distribution. No. 885,755; Apr. 28; Sp. p. 4296; Dr. pp. 899–900; Gaz. vol. 133; p. 1958.
Hubbard, W. S., Leicester, England. Supply and control of air for boiler and other furnaces. No. 883,885; Apr. 7; Sp. p. 436; Dr. p. 86; Gaz. vol. 133; p. 1261.
Huber, A., assignor of one-third to A. M. Jacobs, Hartford, Conn. Lock. No. 884,586; Apr. 14; Sp. p. 1852; Dr. p. 398; Gaz. vol. 133; p. 1519.
Huber, C. L. (See Lauber, R., assignor.)
Huber, J. F., Elida, Ohio. Ventilator. No. 885,479; Apr. 21; Sp. p. 3709; Dr. p. 779; Gaz. vol. 133; p. 1842.
Hudson, L. E., Ellisburg, N. Y. Cabinet. No. 886,000; Apr. 28; Sp. p. 4814; Dr. p. 1011; Gaz. vol. 133; p. 2041.
Hudson, P. A., New York, N. Y. Belt-fastener. No. 886,215; Apr. 28; Sp. p. 5219; Dr. p. 1099; Gaz. vol. 133; p. 2109.
Huff, N., Jackson township, Wells County, Ind. Grain-separator. No. 885,620; Apr. 21; Sp. p. 4002; Dr. p. 836; Gaz. vol. 133; p. 1884.
Huffman, J. G., Decatur, Ill. Vending-machine. No. 883,886; Apr. 7; Sp. p. 437; Dr. pp. 86–7; Gaz. vol. 133; p. 1261.
Hughes, B., Montreal, and H. N. Young, Rockfield, Quebec, Canada. Electric switch. No. 885,345; Apr. 21; Sp. p. 3464; Dr. p. 722; Gaz. vol. 133; p. 1800.
Hughes, H. E., Central Falls, R. I. Bobbin and spindle connector. No. 886,297; Apr. 28; Sp. p. 5381; Dr. p. 1130; Gaz. vol. 133; p. 2198.
Hughes, J. F., New York, N. Y. Game apparatus. No. 884,277; Apr. 7; Sp. p. 1238; Dr. p. 260; Gaz. vol. 133; p. 1389.
Hughes Manufacturing Company. (See Hughes, N., assignor.)
Hughes, N., assignor to Hughes Manufacturing Company, Portland, Oreg. Shoe for rakes. No. 885,252; Apr. 21; Sp. p. 3267; Dr. p. 681; Gaz. vol. 133; p. 1769.
Huhta, J., and F. Laurell, De Kalb, Ill. Wire-working tool. No. 884,821; Apr. 14; Sp. p. 2369; Dr. p. 498; Gaz. vol. 133; p. 1509.
Huillard, A. (See Mourgeon, L., assignor.)
Huitt, R., St. Louis, Mo. Combined shade-adjuster and sash-operator. No. 886,216; Apr. 28; Sp. p. 5219; Dr. p. 1099; Gaz. vol. 133; p. 2109.

Hull, E. F., Surveyor, W. Va. Mail-bag catching and delivering apparatus. No. 884,662; Apr. 14; Sp. p. 2052; Dr. pp. 438–9; Gaz. vol. 133; p. 1544.
Hüllinghorst, F. J. D., London, England. Radiator or cooler for motor road-vehicles. No. 884,929; Apr. 14; Sp. p. 2579; Dr. p. 543; Gaz. vol. 133; p. 1630.
Hulsmann, F., New York, N. Y. Punching-bag apparatus. No. 885,927; Apr. 28; Sp. p. 4657; Dr. p. 981; Gaz. vol. 133; p. 2016.
Hume, A. G., Hobart, N. Y. Advertising novelty. No. 884,822; Apr. 14; Sp. p. 2370; Dr. p. 498; Gaz. vol. 133; p. 1509.
Hummel, O., South Omaha, Nebr. Padlock. No. 885,253; Apr. 21; Sp. p. 3268; Dr. p. 682; Gaz. vol. 133; p. 1769.
Hunt, F., trustee. (See Bryant, W. H., assignor.)
Hunt, Helm, Ferris & Company. (See Ferris, H. L., assignor.)
Hunt, S. A., assignor to F. H. Meyer, Chicago, Ill. Chromatrope. No. 885,928; Apr. 28; Sp. p. 4659; Dr. p. 981; Gaz. vol. 133; p. 2016.
Husby, H. P., assignor to Goss Printing Press Company, Chicago, Ill. Folding apparatus for printing-presses. No. 884,587; Apr. 14; Sp. p. 1854; Dr. pp. 398–9; Gaz. vol. 133; p. 1519.
Hussey, J. A., Chicago, Ill. Pianoforte-case. No. 884,089; Apr. 7; Sp. p. 853; Dr. p. 179; Gaz. vol. 133; p. 1328.
Hussong Dyeing Machine Company. (See Hussong, J., assignor.) (Reissue.)
Hussong, J., Camden, assignor to Hussong Dyeing Machine Company, Groveville, N. J. Dyeing-machine. (Reissue.) No. 12,781; Apr. 21; Sp. p. 4182; Dr. p. 876; Gaz. vol. 133; p. 1913.
Hussong, J., Camden, assignor to Hussong Dyeing Machine Company, Groveville, N. J. Dyeing-machine. (Reissue.) No. 12,788; Apr. 28; Sp. p. 5504; Dr. p. 1151; Gaz. vol. 133; p. 2154.
Hutchinson, W. F., Nyack, N. Y. Machine for cutting forms from sheet stock. No. 885,254; Apr. 21; Sp. p. 3269; Dr. p. 682; Gaz. vol. 133; p. 1769.
Hutchison, O. W. (See Davis, M., assignor.)
Huttinger, W. F., Dunkirk, Ohio. Lifting device. No. 883,805; Apr. 7; Sp. p. 261; Dr. p. 48; Gaz. vol. 133; p. 1234.
Hyde, A. E. (See Taylor, G. J., assignor.)
Ideal Manufacturing Company. (See Robinson, W. W., assignor.)
Ihle, J., Chippewa Falls, Wis. Sawmill. No. 884,020; Apr. 7; Sp. p. 712; Dr. pp. 144–5; Gaz. vol. 133; p. 1306.
Imperial Curtain Company. (See Hanlon, G. W., assignor.)
International Amet Company. (See Amet, E. H., assignor.)
International Harvester Company. (See Andrew, W. K., assignor.)
International Harvester Company. (See Longenecker, C. I., assignor.)
International Nickel Company. (See Wood, E. F., assignor.)
International Patent Corporation. (See Radcliffe, C. R., assignor.)
International Register Company. (See Kirchhoff, W. G., assignor.)
International Stoker Company. (See Crosby, C. W., assignor.)
Interstate Drainage and Investment Company. (See Rood, E. O., assignor.)
Irwin, O. (See Duffy and Irwin.)
Isbell-Porter Company. (See Woodall and Duckham, assignors.)
Ittpenlatz, W. L., and E. R. Martin, assignors of one-third to O. N. Moore, Indianapolis, Ind. Automatic calendar and advertiser. No. 883,716; Apr. 7; Sp. p. 77; Dr. p. 12; Gaz. vol. 133; p. 1205.
Ives, J. (See Lyman and Ives.)
J. B. Colt Company. (See Goodyear, N., assignor.)
J. C. Prims Machinery Company. (See Prims, J. C., assignor.)
J. G. Brill Company. (See Bucknam, E. S., assignor.)
J. G. Brill Company. (See Senter, R. T., assignor.)
J. I. Case Threshing Machine Company. (See Berry, I. G., assignor.)
J. M. Robinson Manufacturing Company. (See Frey, C. N., assignor.)
J. R. Wood & Sons. (See Wood, R. L., assignor.)
J. W. Sefton Manufacturing Company. (See Hollett, I. W., assignor.)
J. W. Sefton Manufacturing Company. (See Reber, J. G., assignor.)
Jablonsby, E. A., New York, N. Y. Pipe or tube cleaner. No. 886,217; Apr. 28; Sp. p. 5221; Dr. p. 1100; Gaz. vol. 133; p. 2109.
Jackman, E. A., Hartington, Nebr. Dental plate. No. 884,159; Apr. 7; Sp. p. 1042; Dr. p. 217; Gaz. vol. 133; p. 1352.
Jackson, C. L., Sandusky, and E. N. Loy, Tippecanoe City, Ohio. Prison-bar. No. 886,129; Apr. 28; Sp. p. 5078; Dr. p. 1065; Gaz. vol. 133; p. 2082.
Jackson, F. H. (See Kerr, W. F., assignor.)
Jackson, J. H., Hamilton, Ontario, Canada. Type-writing machine. No. 885,346; Apr. 21; Sp. p. 3468; Dr. p. 722; Gaz. vol. 133; p. 1800.
Jackson, P. C., Lometa, Tex. Hay-rack. No. 884,334; Apr. 7; Sp. p. 1335; Dr. p. 284; Gaz. vol. 133; p. 1407.
Jackson Printing Press Company. (See Cox, P. F., assignor.)
Jacobowsky, M., *et al.* (See McKee, W., assignor.)
Jacobs, A. M. (See Huber, A., assignor.)
Jacobs, C. C., assignor to F. C. Austin Drainage Excavator Company, Chicago, Ill. Excavator. No. 885,756; Apr. 28; Sp. p. 4300; Dr. pp. 900–1; Gaz. vol. 133; p. 1958.
Jacobs, C. C., assignor to F. C. Austin Drainage Excavator Company, Chicago, Ill. Excavator. No. 885,757; Apr. 28; Sp. p. 4302; Dr. pp. 901–2; Gaz. vol. 133; p. 1959.
Jacobs, C. F., assignor to Jacobs Welding Company, Chicago, Ill. Uniting metal pieces. (Reissue.) No. 12,784; Apr. 21; Sp. p. 4189; Dr. p. 877; Gaz. vol. 133; p. 1914.
Jacobs Welding Company. (See Jacobs, C. F., assignor.) (Reissue.)
Jacobson, E. B., assignor to Pittsfield Spark Coil Company, Pittsfield, Mass. Magneto-electric machine. No. 885,255; Apr. 21; Sp. p. 3270; Dr. pp. 682–3; Gaz. vol. 133; p. 1769.
Jahns, F., von der Heydt, near Saarbrücken, Germany. Making producer-gas. No. 885,480; Apr. 21; Sp. p. 3711; Dr. p. 780; Gaz. vol. 133; p. 1842.
James, A. (See Crush, H. P., assignor.)
James Cunningham, Son & Co. (See Heckman, C. E., assignor.)
Jameson, W. M., Cambridge, Mass. Device for forming wire hat-frames. No. 884,588; Apr. 14; Sp. p. 1856; Dr. p. 399; Gaz. vol. 133; p. 1519.
James, S. E., *et al.* (See Stewart, S., assignor.)
Jaques, C. A., *et al.* (See Grace, T., assignor.)
Jarvis, D. J. (See Wadkin and Jarvis.)
Jefferson, A. J., Lodi, Cal. Swingletree. No. 884,389; Apr. 14; Sp. p. 1462; Dr. p. 312; Gaz. vol. 133; p. 1455.
Jefferson, E. M., Philadelphia, Pa. Device for applying counter-irritants. No. 884,160; Apr. 7; Sp. p. 1043; Dr. p. 217; Gaz. vol. 133; p. 1352.
Jenkins, S., Lansdale, Pa. Vending-machine. No. 884,589; Apr. 14; Sp. p. 1858; Dr. pp. 399–400; Gaz. vol. 133; p. 1520.
Jensen, J. J., Portland, N. D. Split washer. No. 885,052; Apr. 21; Sp. p. 2831; Dr. p. 599; Gaz. vol. 133; p. 1703.
Jensen, L., Chicago, Ill. Bottling-machine. No. 883,959; Apr. 7; Sp. p. 594; Dr. p. 118; Gaz. vol. 133; p. 1286.
Jensen, L. C., Oklahoma, Okla. Door-fastener. No. 884,161; Apr. 7; Sp. p. 1044; Dr. p. 217; Gaz. vol. 133; p. 1353.
Jerkins, W. L., Moultrie, Ga. Medicine-spoon. No. 884,390; Apr. 14; Sp. p. 1462; Dr. p. 312; Gaz. vol. 133; p. 1455.
Jessee, E. G. (See Bobo, B. F., assignor.)
Jett, J. F., *et al.* (See Sehree, W. T., assignor.)
Jewett, M. E., Keokuk, Iowa. Bag-tie. No. 885,695; Apr. 21; Sp. p. 4157; Dr. p. 870; Gaz. vol. 133; p. 1909.
Joachim, M., Mazeppa, Minn. Animal-trap. No. 885,481; Apr. 21; Sp. p. 3713; Dr. p. 780; Gaz. vol. 133; p. 1842.
Job, Z. T., Atlanta, Ga. Cotton-seed huller. No. 885,758; Apr. 28; Sp. p. 4305; Dr. p. 902; Gaz. vol. 133; p. 1959.
Johansson, K. E., Chicago, Ill. Spinning-holder for tops. No. 884,391; Apr. 14; Sp. p. 1464; Dr. p. 312; Gaz. vol. 133; p. 1455.
John Holland Gold Pen Company. (See Holland, J. A., assignor.)
John L. Gaumer Company. (See Gerlach, C., assignor.)
Johns, P. A., Philadelphia, Pa. Tube-cutter. No. 886,298; Apr. 28; Sp. p. 5382; Dr. p. 1131; Gaz. vol. 133; p. 2138.
Johnson, A., Duluth, Minn. Saw-set. No. 883,806; Apr. 7; Sp. p. 262; Dr. p. 48; Gaz. vol. 133; p. 1234.
Johnson, C. A., Noel, Mo. Gate-hinge. No. 883,960; Apr. 7; Sp. p. 597; Dr. p. 119; Gaz. vol. 133; p. 1286.
Johnson, C. E., Detroit, Mich. Bar for reinforcing concrete. No. 884,090; Apr. 7; Sp. p. 854; Dr. pp. 179–80; Gaz. vol. 133; p. 1328.
Johnson, C. P., Eureka, Kans. Wrench. No. 883,887; Apr. 7; Sp. p. 440; Dr. p. 87; Gaz. vol. 133; p. 1261.
Johnson, F. M., Oregon, assignor of one-half to A. E. Holcomb, Chicago, Ill. Excavating-machine. No. 884,492; Apr. 14; Sp. p. 1666; Dr. pp. 359–60; Gaz. vol. 133; p. 1488.
Johnson, G. C., assignor of one-half to H. Lange, Los Angeles, Cal. Door-operating mechanism for ore-cars. No. 884,091; Apr. 7; Sp. p. 856; Dr. p. 180; Gaz. vol. 133; p. 1329.
Johnson, P. B., Berkeley, Cal. Ledger-file. No. 885,482; Apr. 21; Sp. p. 3713; Dr. pp. 780–1; Gaz. vol. 133; p. 1842.
Johnson, S. W. (See Morton, M. A., assignor.)
Johnson, T. J., Williams, Iowa. Plow. No. 885,759; Apr. 28; Sp. p. 4306; Dr. p. 903; Gaz. vol. 133; p. 1959.
Johnson, W. (See Alexander and Johnson.)
Johnson, W. H., *et al.* (See Smoot, G., assignor.)

Johnston, F. J., Sacramento, Cal. Rotary target. No. 884,663; Apr. 14; Sp. p. 2055; Dr. p. 439; Gaz. vol. 133; p. 1544.
Johnston, J. K., Tyrone, Pa. Railway-signal. No. 885,621; Apr. 21; Sp. p. 4004; Dr. p. 837; Gaz. vol. 133; p. 1884.
Johnston, W. C. (See De Witt, J. M., assignor.)
Joliet Manufacturing Company. (See Steckel, W. J., assignor.)
Jolly, H. E., Columbus Ohio. Jar-closure. No. 886,218; Apr. 28; Sp. p. 5222; Dr. p. 1100; Gaz. vol. 133; p. 2110.
Jones, C. F., Newton Highlands, Mass. Mechanical movement. No. 884,590; Apr. 14; Sp. p. 1861; Dr. p. 400; Gaz. vol. 133; p. 1520.
Jones, D. G., assignor to Best Manufacturing Company, Pittsburg, Pa. Flexible pipe-union. No. 885,256; Apr. 21; Sp. p. 3274; Dr. p. 683; Gaz. vol. 133; p. 1770.
Jones, F. H. (See Warner and Jones.)
Jones, F. R. (See De Wind and Jones.)
Jones, J. M. C., Gibson City, Ill. Machine for cleaning cans. No. 885,849; Apr. 28; Sp. p. 4489; Dr. pp. 942–4; Gaz. vol. 133; p. 1990.
Jones, J. W., Roosevelt, Okla. Insect-exterminator. No. 885,483; Apr. 21; Sp. p. 3715; Dr. p. 781; Gaz. vol. 133; p. 1843.
Jones, L. A., Clyde, Ohio. Machine for grinding and polishing. No. 884,162; Apr. 7; Sp. p. 1045; Dr. p. 218; Gaz. vol. 133; p. 1353.
Jones, L. A., Cambridge, Mass., assignor to Shoe Finding Company. Machine for tacking shoe-shanks. No. 884,392; Apr. 14; Sp. p. 1465; Dr. pp. 312–13; Gaz. vol. 133; p. 1456.
Jones, W., assignor of one-half to L. C. Henninger, Bowling Green, Ky. Ladder. No. 884,163; Apr. 7; Sp. p. 1048; Dr. p. 218; Gaz. vol. 133; p. 1353.
Jones, W., Auburn, Me. Door-plate. No. 885,760; Apr. 28; Sp. p. 4308; Dr. p. 903; Gaz. vol. 133; p. 1960.
Jones, W. J., Martinsville, Va. Lever-power churn. No. 885,257; Apr. 21; Sp. p. 3275; Dr. p. 684; Gaz. vol. 133; p. 1770.
Joos, C., assignor to Actiengesellschaft vormals F. Martini & Cie., Frauenfeld, Switzerland. Book-sewing machine. No. 885,053; Apr. 21; Sp. p. 2832; Dr. pp. 599–603; Gaz. vol. 133; p. 1703.
Jordan, C. D. (See Benton and Jordan.)
Jordan, M. C., Ellisville, Miss. Plow. No. 884,164; Apr. 7; Sp. p. 1050; Dr. p. 219; Gaz. vol. 133; p. 1354.
Jorstad, M., Walker, Minn. Tender for traction-engines. No. 886,059; Apr. 28; Sp. p. 4937; Dr. p. 1038; Gaz. vol. 133; p. 2000.
Josenhans, T., Seattle, Wash. Surveyor's stake. No. 885,850; Apr. 28; Sp. p. 4494; Dr. p. 944; Gaz. vol. 133; p. 1990.
Joseph, E. (See Lacomme, G., assignor.)
Joslin, Schmidt & Co. (See Schmidt, H. B., assignor.)
Judson, F. I., Houston, Tex. Trick-pipe. No. 883,717; Apr. 7; Sp. p. 80; Dr. p. 12; Gaz. vol. 133; p. 1205.
Judson L. Thomson M'f'g Company. (See Leach, J. N., assignor.)
Julien, R. H., Otisville, Minn. Gun-stock. No. 886,131; Apr. 28; Sp. p. 5082; Dr. p. 1066; Gaz. vol. 133; p. 2083.
Julig, L., San Francisco, Cal. Clothes-hook. No. 884,165; Apr. 7; Sp. p. 1051; Dr. p. 219; Gaz. vol. 133; p. 1354.
Jullien, M. A., and E. L. Dessolle, Levallois-Perret, France. Apparatus for making copper. No. 884,021; Apr. 7; Sp. p. 715; Dr. p. 145; Gaz. vol. 133; p. 1307.
Jumau, L., Paris, France. Electrometallurgical process for extracting copper from its ores. No. 883,961; Apr. 7; Sp. p. 598; Gaz. vol. 133; p. 1287.
Jumau, L., Paris, France. Obtaining pure copper from a solution of copper. No. 883,962; Apr. 7; Sp. p. 599; Gaz. vol. 133; p. 1287.
Jumau, L., Paris, France. Obtaining pure copper. No. 885,622; Apr. 21; Sp. p. 4005; Gaz. vol. 133; p. 1885.
Jungner, E. W., Kneippbaden, Norrköping, Sweden. Depolarizer for galvanic batteries. No. 884,664; Apr. 14; Sp. p 2057; Dr. p. 439; Gaz. vol. 133; p. 1545.
Jungner, E. W., Kneippbaden, Norrköping, assignor to Nya Ackumulator-Aktiebolaget Jungner, Stockholm, Sweden. Electrode for reversible galvanic batteries. No. 884,930; Apr. 14; Sp. p. 2581; Dr. p. 544; Gaz. vol. 133; p. 1630.
Jungner, E. W., Kneippbaden, Norrköping, Sweden. Gas element for converting the energy of combustible or other suitable reducing substances to electric current. No. 885,054; Apr. 21; Sp. p. 2838; Dr. p. 603; Gaz. vol. 133; p. 1703.
Jutras, E., assignor to A. Beauchemin, Fall River, Mass. Harness-buckle guard. No. 883,807; Apr. 7; Sp. p. 263; Dr. p. 48; Gaz. vol. 133; p. 1235.
Kabatchnick, F. (See Risting and Kabatchnick.)
Kaczorowski, J. P. (See Grzeslowski, K., assignor.)
Kahn, J., Detroit, Mich. Stair-tread. No. 884,493; Apr. 14; Sp. p. 1675; Dr. p. 360; Gaz. vol. 133; p. 1489.
Kahn, J., assignor to Trussed Concrete Steel Company, Detroit, Mich. Expanded metal. No. 885,158; Apr. 21; Sp. p. 3067; Dr. p. 645; Gaz. vol. 133; p. 1737.
Kapun, E., Szigetvár-Szentnihalyfa, Austria-Hungary. Clasp with pencil-chain for note-books, documents, or the like. No. 883,718; Apr. 7; Sp. p. 82; Dr. p. 13; Gaz. vol. 133; p. 1206.
Karasek, K., and J. Aumund, Zurich, Switzerland. Adding-machine. No. 883,719; Apr. 7; Sp. p. 83; Dr. p. 13; Gaz. vol. 133; p. 1206.
Karch, J. P. (See Guthrie, B., assignor.)
Kaste, F. O., *et al.* (See Francis, Kaste, and Gross.)
Kearsey, F. W., Montreal, Quebec, Canada. Lamp. No. 883,720; Apr. 7; Sp. p. 86; Dr. p. 13; Gaz. vol. 133; p. 1206.
Keasey, E. A., Ligonier, Ind. Invalid-bed. No. 884,393; Apr. 14; Sp. p. 1470; Dr. p. 314; Gaz. vol. 133; p. 1456.
Keating, B. F., Hawthorn, Victoria, Australia. Talking-machine attachment. No. 885,484; Apr. 21; Sp. p. 3716; Dr. p. 781; Gaz. vol. 133; p. 1843.
Keegan, J. P., Somers Center, N. Y. Combination envelop and inclosure. No. 884,394; Apr. 14; Sp. p. 1471; Dr. p. 314; Gaz. vol. 133; p. 1456.
Keen, E., New York, N. Y., assignor to J. H. Eggers, Summit, N. J. Device for producing moving-picture effects. No. 885,674; Apr. 21; Sp. p. 4113; Dr. p. 861; Gaz. vol. 133; p. 1902.
Keil, H. F., Bronxville, N. Y. Reinforcing means for metal plates. No. 885,623; Apr. 21; Sp. p. 4008; Dr. p. 837; Gaz. vol. 133; p. 1885.
Keil, H. F., Bronxville, N. Y. Lock. No. 886,219; Apr. 28; Sp. p. 5223; Dr. p. 1100; Gaz. vol. 133; p. 2110.
Keith, J. G., Spokane, Wash. Sieve-adjuster. No. 885,929; Apr. 28; Sp. p. 4660; Dr. p. 982; Gaz. vol. 133; p. 2016.
Keller, A. T., assignor of one-half to Mesta Machine Company, Pittsburg, Pa. Rolling-mill. No. 884,278; Apr. 7; Sp. p. 1240; Dr. pp. 260–1; Gaz. vol. 133; p. 1389.
Keller, H., Berlin, Germany, assignor to General Electric Company. Air or gas compressor system. No. 883,888; Apr. 7; Sp. p. 441; Dr. p. 87; Gaz. vol. 133; p. 1262.
Kelley, C. E., assignor to Underwood Typewriter Company, New York, N. Y. Type-writing machine. No. 884,591; Apr. 14; Sp. p. 1862; Dr. p. 401; Gaz. vol. 133; p. 1520.
Kellogg, G. W., assignor to Wray Pump & Register Company, Rochester, N. Y. Air-pump. No. 885,485; Apr. 21; Sp. p. 3718; Dr. p. 782; Gaz. vol. 133; p. 1843.
Kellogg Switchboard & Supply Company. (See Knudsen, A. M., assignor.)
Kellogg Switchboard & Supply Company. (See Rupe, E. H., assignor.)
Kellogg Switchboard & Supply Company. (See Simpson, C. A., assignor.)
Kelly, J. F. (See Meskill, J. J., assignor.)
Kelly, N., *et al.* (See Bryan, J. H. B., assignor.)
Kelly, N. J., *et al.* (See Bryan, J. H. B., assignor.)
Kemper, E. G., Dallas, Tex. Mold-plate for concrete construction. No. 884,166; Apr. 7; Sp. p. 1052; Dr. p. 219; Gaz. vol. 133; p. 1354.
Kendall, F. D., and T. O. Robinson, Hanford, Cal. Fruit and vegetable drier. No. 883,721; Apr. 7; Sp. p. 87; Dr. p. 14; Gaz. vol. 133; p. 1206.
Kenly, G. T., Baltimore, Md., assignor to Plumbing Specialty Company. Faucet. No. 885,347; Apr. 21; Sp. p. 3472; Dr. p. 723; Gaz. vol. 133; p. 1800.
Kennedy, D. S., Brooklyn, N. Y., assignor to Mergenthaler Linotype Company. Galley for line-casting machines. No. 884,022; Apr. 7; Sp. p. 716; Dr. p. 145; Gaz. vol. 133; p. 1307.
Kennedy, J. A., *et al.* (See Betts, L. F., assignor.)
Kennedy, J. S., New York, N. Y. Pressure-gage. No. 884,592; Apr. 14; Sp. p. 1864; Dr. pp. 401–2; Gaz. vol. 133; p. 1521.
Kennedy, M. R., Dansville, assignor to National Straw Pulp Company, New York, N. Y. Use of hot air in extracting fiber from vegetable tissues. No. 885,851; Apr. 28; Sp. p. 4494; Dr. p. 944; Gaz. vol. 133; p. 1990.
Kennedy, W., Bellevue, Pa. Blast-furnace apparatus. No. 884,665; Apr. 14; Sp. p. 2058; Dr. pp. 439–40; Gaz. vol. 133; p. 1545.
Kennedy, W. A., Kansas City, Mo. Lister-cultivator. No. 885,258; Apr. 21; Sp. p. 3276; Dr. p. 684; Gaz. vol. 133; p. 1770.
Kenney, O. E., assignor to Yost Electric Manufacturing Company, Toledo, Ohio. Separable attachment-plug. No. 884,981; Apr. 14; Sp. p. 2678; Dr. p. 569; Gaz. vol. 133; p. 1646.
Kenney, W. F., Providence, R. I. Nut-lock. No. 886,299; Apr. 28; Sp. p. 5387; Dr. p. 1131; Gaz. vol. 133; p. 2139.
Kennon, R. L., Jr., Atlanta, Ga. Music-sheet turner. No. 884,167; Apr. 7; Sp. p. 1053; Dr. pp. 219–20; Gaz. vol. 133; p. 1354.
Kent, W. J., New York, N. Y. Machine for cutting sugar-cane trash, &c. No. 885,486; Apr. 21; Sp. p. 3719; Dr. pp. 782–3; Gaz. vol. 133; p. 1844.
Kent Machine Company. (See Post, A. L., assignor.)
Kentucky Gear and Machine Company. (See Binder, G., assignor.)
Kenyon, G. C., Mount Carroll, Ill. Shackle. No. 886,132; Apr. 28; Sp. p. 5083; Dr. p. 1066; Gaz. vol. 133; p. 2083.
Keogan, D. A., White Haven, Pa. Mold for making cementitious articles. No. 884,931; Apr. 14; Sp. p. 2583; Dr. p. 544; Gaz. vol. 133; p. 1631.
Kern, E. F., Knoxville, Tenn. Recovering metals from their sulfid ores. No. 885,761; Apr. 28; Sp. p. 4310; Dr. p. 903; Gaz. vol. 133; p. 1960.

Kerr, W. F., assignor to F. H. Jackson, Cleveland, Ohio. Clamp for carrying bricks by hand. No. 884,494; Apr. 14; Sp. p. 1675; Dr. p. 361; Gaz. vol. 133; p. 1489.
Kerwin, J., Detroit, Mich. Excavator. No. 884,932; Apr. 14; Sp. p. 2584; Dr. pp. 544–5; Gaz. vol. 133; p. 1631.
Kesler, C., Marion, Ohio. Nut-lock. No. 884,933; Apr. 14; Sp. p. 2586; Dr. p. 545; Gaz. vol. 133; p. 1631.
Kesler, N. T., Zion City, Ill. Pencil-sharpener. No. 884,495; Apr. 14; Sp. p. 1677; Dr. p. 361; Gaz. vol. 133; p. 1489.
Ketchum, E. C., Boston, Mass. Locomotive. No. 885,055; Apr. 21; Sp. p. 2840; Dr. p. 603; Gaz. vol. 133; p. 1703.
Keys, B., Chicago, Ill. Carton. No. 885,159; Apr. 21; Sp. p. 3068; Dr. p. 645; Gaz. vol. 133; p. 1737.
Kibbe, I. P., Cuero, Tex. Duplex door-check holder and buffer. No. 886,001; Apr. 28; Sp. p. 4816; Dr. p. 1011; Gaz. vol. 133; p. 2041.
Kidd, W. C., Suffern, N. Y., assignor to Standard Equipment Company, Mahwah, N. J. Switch-stand. No. 885,160; Apr. 21; Sp. p. 3070; Dr. p. 645; Gaz. vol. 133; p. 1737.
Kiefer, H. J., assignor to Laffargue Co., Inc., New York, N. Y. Case for player-pianos. No. 886,133; Apr. 28; Sp. p. 5083; Dr. pp. 1066–7; Gaz. vol. 133; p. 2083.
Kieffer, C. A., Swampscott, Mass. Collar-button. No. 884,092; Apr. 7; Sp. p. 857; Dr. p. 180; Gaz. vol. 133; p. 1329.
Kienast, T. W., New York, N. Y., assignor to Samuel Cupples Envelope Company, St. Louis, Mo. Envelop-machine. No. 884,335; Apr. 7; Sp. p. 1336; Dr. pp. 285–6; Gaz. vol. 133; p. 1407.
Kienast, T. W., New York, N. Y., assignor to Samuel Cupples Envelope Company, St. Louis, Mo. Feeding mechanism. No. 884,336; Apr. 7; Sp. p. 1342; Dr. pp. 286–7; Gaz. vol. 133; p. 1408.
Kienast, T. W., New York, N. Y., assignor to Samuel Cupples Envelope Company, St. Louis, Mo. Feeding mechanism. No. 884,337; Apr. 7; Sp. p. 1343; Dr. p. 287; Gaz. vol. 133; p. 1408.
Kies, D. (See Schram and Kies.)
Kieser, W., Berlin, Germany, assignor to General Electric Company. Turbine-bucket. No. 883,889; Apr. 7; Sp. p. 442; Dr. p. 88; Gaz. vol. 133; p. 1262.
Kieser, W., Berlin, Germany, assignor to General Electric Company. Turbine-wheel and bucket. No. 883,890; Apr. 7; Sp. p. 444; Dr. p. 88; Gaz. vol. 133; p. 1262.
Kieser, W., Berlin, Germany, assignor to General Electric Company. Turbine-wheel and bucket. No. 883,891; Apr. 7; Sp. p. 446; Dr. p. 88; Gaz. vol. 133; p. 1262.
Kieser, W., Berlin, Germany, assignor to General Electric Company. Nozzle for turbines. No. 883,892; Apr. 7; Sp. p. 448; Dr. p. 88; Gaz. vol. 133; p. 1263.
Kieser, W., Berlin, Germany, assignor to General Electric Company. Means for collecting lubricating-oil from ship-turbine shaft-bearings. No. 885,056; Apr. 21; Sp. p. 2842; Dr. p. 604; Gaz. vol. 133; p. 1704.
Kilburn, J. B., and E. G. Budd, assignors to Hale-Kilburn Metal Company, Philadelphia, Pa. Seating. No. 884,736; Apr. 14; Sp. p. 2188; Dr. p. 464; Gaz. vol. 133; p. 1570.
Killacky, J. (See Goehle, P. E., Sr., assignor.)
Kilstrom, A., Providence, R. I., assignor to D. M. Watkins & Company. Pin and pin-joint. No. 884,496; Apr. 14; Sp. p. 1677; Dr. p. 361; Gaz. vol. 133; p. 1489.
Kincaid, C. W., Ronceverte, W. Va. Station-indicator. No. 885,487; Apr. 21; Sp. p. 3725; Dr. pp. 783–4; Gaz. vol. 133; p. 1844.
Kind, M., *et al.* (See Loewenstein, M., assignor.)
King, D. W., Maitland, Mo. Road-grader. No. 884,497; Apr. 14; Sp. p. 1679; Dr. p. 362; Gaz. vol. 133; p. 1489.
King, J. R., assignor of one-fourth to J. P. Gladish and one-fourth to W. Foust, Petersburg, Ind. Concrete block. No. 884,498; Apr. 14; Sp. p. 1680; Dr. p. 362; Gaz. vol. 133; p. 1490.
King, M. J. (See Southward, D. H., assignor.)
Kingsbury, C. H., assignor, by mesne assignments, to H. L. Kingsbury, Danielson, Conn. Garment-hanger. No. 885,161; Apr. 21; Sp. p. 3072; Dr. p. 645; Gaz. vol. 133; p. 1738.
Kingsbury, H. L. (See Kingsbury, C. H., assignor.)
Kinraide, T. B., Jamaica Plain, Mass. Electric spark-gap for interrupters. No. 884,499; Apr. 14; Sp. p. 1682; Dr. p. 362; Gaz. vol. 133; p. 1490.
Kirchhoff, W. G., assignor to International Register Company, Chicago, Ill. Wheel. No. 884,093; Apr. 7; Sp. p. 858; Dr. p. 180; Gaz. vol. 133; p. 1330.
Kirchner, H. W., St. Louis, Mo., assignor to River & Rail Transportation Company, Guthrie, Okla. Freight-car. No. 885,162; Apr. 21; Sp. p. 3074; Dr. p. 646; Gaz. vol. 133; p. 1738.
Kirk, A. S., Monett, Mo. Bottle. No. 884,168; Apr. 7; Sp. p. 1055; Dr. p. 220; Gaz. vol. 133; p. 1354.
Kirk, F. L., assignor to Gorham Company, New York, N. Y. Bag. No. 885,488; Apr. 21; Sp. p. 3726; Dr. p. 784; Gaz. vol. 133; p. 1844.
Kirkland, F. S., Milwaukee, Wis. Stamp-mill shafting. No. 885,259; Apr. 21; Sp. p. 3278; Dr. p. 684; Gaz. vol. 133; p. 1771.
Kirtland, W., Safford, Ariz. Ter. Derrick. No. 884,666; Apr. 14; Sp. p. 2059; Dr. p. 440; Gaz. vol. 133; p. 1545.
Kiser, I. L., St. Charles, Mo. Hinge-joint. No. 883,893; Apr. 7; Sp. p. 450; Dr. p. 89; Gaz. vol. 133; p. 1263.
Kitchell, J. F., Newark, N. J., assignor to R. Neumann Hardware Co. Bag-frame. No. 884,593; Apr. 14; Sp. p. 1879; Dr. pp. 402–3; Gaz. vol. 133; p. 1521.
Kithen, J. M. W., East Orange, N. J. Sectional radiator. No. 883,808; Apr. 7; Sp. p. 264; Dr. p. 49; Gaz. vol. 133; p. 1235.
Kithen, J. M. W., East Orange, N. J. Power-generating system. No. 883,809; Apr. 7; Sp. p. 267; Dr. p. 49; Gaz. vol. 133; p. 1236.
Kitsee, I., Philadelphia, Pa. Manufacture of glue. No. 883,722; Apr. 7; Sp. p. 89; Dr. p. 14; Gaz. vol. 133; p. 1207.
Kitsee, I., Philadelphia, Pa. Electric transmission of intelligence. No. 883,723; Apr. 7; Sp. p. 90; Dr. p. 15; Gaz. vol. 133; p. 1207.
Kitsee, I., Philadelphia, Pa. Electric transmission of intelligence. No. 883,724; Apr. 7; Sp. p. 91; Dr. p. 15; Gaz. vol. 133; p. 1207.
Kitsee, I., Philadelphia, Pa. Registering telephone-calls. No. 886,220; Apr. 28; Sp. p. 5225; Dr. p. 1100; Gaz. vol. 133; p. 2110.
Kleber, G., *et al.* (See Wensauer, M., assignor.)
Kleinbauer, M., Chicago, Ill. Spirit-level. No. 885,762; Apr. 28; Sp. p. 4312; Dr. p. 904; Gaz. vol. 133; p. 1961.
Kleinschmidt, E. E., assignor to G. M. Seeley, New York, N. Y. Signaling system. No. 884,737; Apr. 14; Sp. p. 2191; Dr. pp. 464–5; Gaz. vol. 133; p. 1570.
Kleinschmidt, E. E., assignor to G. M. Seeley, New York, N. Y. Signaling system. No. 884,738; Apr. 14; Sp. p. 2197; Dr. p. 465; Gaz. vol. 133; p. 1570.
Klenk, G., assignor to Clipper Plow Company, Defiance, Ohio. Metal box. (Reissue.) No. 12,775; Apr. 7; Sp. p. 1379; Dr. pp. 294–5; Gaz. vol. 133; p. 1413.
Klewitter, W. F., Mosinee, Wis. Loading device. No. 886,221; Apr. 28; Sp. p. 5227; Dr. p. 1101; Gaz. vol. 133; p. 2111.
Kline, C. R., Beechwood, Pa. Radiator. No. 884,739; Apr. 14; Sp. p. 2203; Dr. p. 465; Gaz. vol. 133; p. 1571.
Klinkhammer, J., Hopkins, Minn. Spacing device for railway-tracks. No. 886,134; Apr. 28; Sp. p. 5085; Dr. p. 1067; Gaz. vol. 133; p. 2083.
Knapp, [illegible] H., Franklin, Ky. File and index. No. 884,823; Apr. 14; Sp. p. 2371; Dr. p. 499; Gaz. vol. 133; p. 1599.
Knapp, [illegible]., Norton, Kans. Chin-tug. No. 883,963; Apr. 7; Sp. p. 600; Dr. p. 119; Gaz. vol. 133; p. 1287.
Knight, H. L., Cleveland, Ohio, assignor, by mesne assignments, to Century Telephone Construction Company, Buffalo, N. Y. Telephone hook-switch. No. 885,348; Apr. 21; Sp. p. 3473; Dr. p. 723; Gaz. vol. 133; p. 1801.
Knights, W. R., Minneapolis, Minn. Hot-air register. No. 884,023; Apr. 7; Sp. p. 718; Dr. p. 146; Gaz. vol. 133; p. 1307.
Knittel, B., Dresden, Germany. Hair-fabric loom. No. 883,810; Apr. 7; Sp. p. 274; Dr. p. 50; Gaz. vol. 133; p. 1236.
Knopp, O. A., Oakland, Cal. Wattmeter-testing apparatus. No. 886,135; Apr. 28; Sp. p. 5085; Dr. p. 1067; Gaz. vol. 133; p. 2084.
Knott, L. E., assignor to L. E. Knott Apparatus Company, Boston, Mass. Physical laboratory apparatus. No. 885,763; Apr. 28; Sp. p. 4313; Dr. p. 904; Gaz. vol. 133; p. 1961.
Knowles, J., Denver, Colo. Rotary engine. No. 883,894; Apr. 7; Sp. p. 451; Dr. p. 89; Gaz. vol. 133; p. 1263.
Knowlton, A. D., *et al.*, administrators. (See Knowlton, M. D.)
Knowlton, F. K., *et al.*, administrators. (See Knowlton, M. D.)
Knowlton, M. D., deceased; A. D. and F. K. Knowlton, administrators, Rochester, N. Y. Box-covering machine. No. 885,260; Apr. 21; Sp. p. 3278; Dr. p. 685; Gaz. vol. 133; p. 1771.
Knox, D. S., Denver, Colo. Signal attachment for linotype-machines. No. 884, 934; Apr. 14; Sp. p. 2587; Dr. pp. 545–6; Gaz. vol. 133; p. 1632.
Knudsen, A. M., assignor to Kellogg Switchboard & Supply Company, Chicago, Ill. Telephone desk-stand. No. 884,500; Apr. 14; Sp. p. 1684; Dr. pp. 362–3; Gaz. vol. 133; p. 1490.
Koehring, P. A., Milwaukee, Wis. Concrete-mixer. No. 884,667; Apr. 14; Sp. p. 2060; Dr. p. 440; Gaz. vol. 133; p. 1545.
Koenig, A. G. (See Mott and Koenig.)
Koenig, H. A., Philadelphia, Pa. Gas and air pressing-iron. No. 884,169; Apr. 7; Sp. p. 1056; Dr. p. 220; Gaz. vol. 133; p. 1355.
Koerner, G. W., *et al.* (See Sassaman, A. H., assignor.)
Koerner, W. F., *et al.* (See Sassaman, A. H., assignor.)
Koetitz, F. A., San Francisco, Cal. Concrete pile-covering. No. 884,668; Apr. 14; Sp. p. 2061; Dr. p. 441; Gaz. vol. 133; p. 1546.
Kohler, F. W., *et al.* (See Dresser, C. A., assignor.)
Kohler, G. A. E., *et al.* (See Dresser, C. A., assignor.)
Kohler, G. A. E. (See Graham, G. M., assignor.)
Kohlmann, J. D., Milwaukee, Wis. Concentrating-table. No. 885,349; Apr. 21; Sp. p. 3475; Dr. pp. 723–4; Gaz. vol. 133; p. 1801.
Koiner, H. S., and S. Botteese, Washington, D. C. Removable support for vehicle-curtains. No. 886,222; Apr. 28; Sp. p. 5230; Dr. pp. 1101–2; Gaz. vol. 133; p. 2111.

Komuro, T. (See Hino and Komuro.)
Koontz, J. M. (See Fleshman and Koontz.)
Kopriva, F., New York, N. Y. Valve-seat grinder. No. 886,002; Apr. 28; Sp. p. 4818; Dr. p. 1012; Gaz. vol. 133; p. 2041.
Korb, F. W., and W. F. Hieber, assignors to United States Dental Manufacturing Company, Cleveland, Ohio. Dental vulcanizer. No. 886,300; Apr. 28; Sp. p. 5388; Dr. p. 1132; Gaz. vol. 133; p. 2139.
Korn, A., Munich, Germany. Means for measuring the degree of exposure of a selenium-cell. No. 884,501; Apr. 14; Sp. 1688; Dr. p. 363; Gaz. vol. 133; p. 1491.
Kozesnik, C., New York, N. Y. Third-rail electric-railway system. No. 884,170; Apr. 7; Sp. p. 1057; Dr. p. 220; Gaz. vol. 133; p. 1355.
Kraemer, T., assignor to Hawthorne & Sheble Manufacturing Company, Philadelphia, Pa. Talking-machine. No. 885,489; Apr. 21; Sp. p. 3727; Dr. p. 784; Gaz. vol. 133; p. 1845.
Kraemer, T., assignor to Hawthorne & Sheble Manufacturing Company, Philadelphia, Pa. Sound-box for talking-machines. No. 885,490; Apr. 21; Sp. p. 3730; Dr. p. 785; Gaz. vol. 133; p. 1845.
Kraft, C. H. F., assignor of one-half to V. H. Wattles, Battle Creek, Mich. Gaff-hook. No. 886,003; Apr. 28; Sp. p. 4818; Dr. p. 1012; Gaz. vol. 133; p. 2041.
Kraft, W., Baltimore, Md. Type-writing machine. No. 885,057; Apr. 21; Sp. p. 2843; Dr. p. 604; Gaz. vol. 133; p. 1704.
Kramer, C. G., assignor to Union Special Sewing Machine Company, Chicago, Ill. Sewing-machine. No. 885,624; Apr. 21; Sp. p. 4009; Dr. p. 837; Gaz. vol. 133; p. 1885.
Krase, H. C., and R. Grimm, Two Rivers, Wis. Straw or feed cutter. No. 886,223; Apr. 28; Sp. p. 5232; Dr. p. 1102; Gaz. vol. 133; p. 2112.
Kraus, O., New York, N. Y. Telephone-support. No. 883,811; Apr. 7; Sp. p. 276; Dr. p. 50; Gaz. vol. 133; p. 1236.
Krause, H., *et al.* (See Wensauer, M., assignor.)
Kreeger, C. A. (See Virgils, W. A., assignor.)
Krellwitz, D. W., St. Catharines, Ontario, Canada. Pole. No. 884,171; Apr. 7; Sp. p. 1059; Dr. p. 221; Gaz. vol. 133; p. 1355.
Krentler-Arnold Hinge Last Company. (See Porter, W. C., assignor.)
Kret, J. (See Wolynec, R. F., assignor.)
Krieger, W., New York, N. Y. Penholder. No. 886,060; Apr. 28; Sp. p. 4938; Dr. p. 1038; Gaz. vol. 133; p. 2060.
Krieghoff, A., Concord, N. H. Piano sounding-board. No. 885,261; Apr. 21; Sp. p. 3280; Dr. pp. 685–6; Gaz. vol. 133; p. 1771.
Kronenberg, C. W., and H. Stranzenbach, New York, N. Y. Insect-catcher. No. 884,095; Apr. 7; Sp. p. 863; Dr. p. 181; Gaz. vol. 133; p. 1320.
Kruse, A. T., assignor to American Steel Package Company, Defiance, Ohio. Sheet-metal packing-case. No. 884,669; Apr. 14; Sp. p. 2063; Dr. p. 441; Gaz. vol. 133; p. 1546.
Kruse, A. T., assignor to American Steel Package Company, Defiance, Ohio. Sheet-metal packing-case. No. 884,670; Apr. 14; Sp. p. 2065; Dr. p. 441; Gaz. vol. 133; p. 1547.
Kruse, J., St. Louis, Mo. Keyless lock for traveling-bags, &c. No. 886,136; Apr. 28; Sp. p. 5087; Dr. p. 1068; Gaz. vol. 133; p. 2084.
Kryzanowsky, C. J. (See Engler and Kryzanowsky.)
Küch, R., assignor to Firm of W. C. Heraeus, Hanau, Germany. Working of electric vapor-lamps. No. 883,725; Apr. 7; Sp. p. 91; Gaz. vol. 133; p. 1208.
Kuert, I. J., San Diego, Cal. Package-box. No. 884,338; Apr. 7; Sp. p. 1345; Dr. p. 287; Gaz. vol. 133; p. 1408.
Kyser, C. F., Saranac, Mich. Fence-post mold. No. 884,502; Apr. 14; Sp. p. 1691; Dr. p. 363; Gaz. vol. 133; p. 1491.
L. E. Knott Apparatus Company. (See Knott, L. E., assignor.)
La Berge, M. E., assignor to Murray's Patent Fixture Company, Los Angeles, Cal. Bracket-support. No. 884,503; Apr. 14; Sp. p. 1692; Dr. p. 363; Gaz. vol. 133; p. 1491.
La Marche, A., Toledo, Ohio. Barrel-head. No. 883,812; Apr. 7; Sp. p. 278; Dr. p. 50; Gaz. vol. 133; p. 1237.
La Plant, C. (See Atterbury and La Plant.)
La Rocque, J. E., Nominingue, Quebec, Canada. Air-brake hose-coupling. No. 883,814; Apr. 7; Sp. p. 282; Dr. p. 52; Gaz. vol. 133; p. 1238.
La Rue, M. E., Richmond, Ky. Curtain-ring. No. 885,932; Apr. 28; Sp. p. 4668; Dr. p. 984; Gaz. vol. 133; p. 2018.
La Société pour l'Utilisation de l'Air et de ses Dérivés. (See Méker, A. G., assignor.)
La Valette, H. de, Paris, France. Current-distributing device for igniting explosive-engines. No. 886,225; Apr. 28; Sp. p. 5238; Dr. p. 1103; Gaz. vol. 133; p. 2112.
Labofish, C. S., Washington, D. C., assignor to Wyckoff, Seamans & Benedict, Ilion, N. Y. Type-writing machine. No. 885,764; Apr 28; Sp. p. 4315; Dr. p. 905; Gaz. vol. 133; p. 1961.
Lackawanna Steel Company. (See Vanderloot, M. R., assignor.)
Lackey, J. A. (See McNees and Lackey.)
Lacomme, G., assignor of one-half to E. Joseph, New York, N. Y. Scenic railway. No. 884,594; Apr. 14; Sp. p. 1883; Dr. p. 403; Gaz. vol. 133; p. 1522.
Laflargue Co. (See Kiefer, H. J., assignor.)
Lake, R. H., Washington, D. C. Mechanical ball-thrower. No. 884,024; Apr. 7; Sp. p. 720; Dr. p. 146; Gaz. vol. 133; p. 1308.
Lake, S., Bridgeport, Conn. Dredging apparatus. No. 885,930; Apr. 28; Sp. p. 4661; Dr. pp. 982–3; Gaz. vol. 133; p. 2017.
Lamb, W. R., Bowie, Tex. Bur-cotton thresher, cleaner, and storage unloader. No. 884,671; Apr. 14; Sp. p. 2067; Dr. p. 442; Gaz. vol. 133; p. 1547.
Lamberger, H., Leipzig, Germany. Method of and apparatus for removing superfluous bronze. No. 885,491; Apr. 21; Sp. p. 3732; Dr. p. 785; Gaz. vol. 133; p. 1845.
Lambert, H. M., Portland, Oreg. Water-elevator. No. 885,931; Apr. 28; Sp. p. 4666; Dr. p. 983; Gaz. vol. 133; p. 2017.
Lamble, R. C., *et al.* (See Messer, J. C., assignor.)
Lamme, B. G., Pittsburg, Pa., assignor to Westinghouse Electric & Manufacturing Company. Armature-winding for high-speed dynamo-electric machines. No. 885,163; Apr. 21; Sp. p. 3076; Dr. p. 646; Gaz. vol. 133; p. 1738.
Landry, M., San Francisco, Cal. Electric heater. (Reissue.) No. 12,782; Apr. 21; Sp. p. 4185; Dr. p. 876; Gaz. vol. 133; p. 1913.
Lang, A., Eden Center, N. Y. Non-slipping horseshoe. No. 884,504; Apr. 14; Sp. p. 1694; Dr. p. 364; Gaz. vol. 133; p. 1492.
Lang, C. E., Erskine, Minn. Stacker. No. 884,505; Apr. 14; Sp. p. 1695; Dr. pp. 364–5; Gaz. vol. 133; p. 1492.
Lang, F., Chicago, Ill. Mandolin. No. 886,137; Apr. 28; Sp. p. 5090; Dr. p. 1068; Gaz. vol. 133; p. 2084.
Lang, G. R., Meadville, Pa. Tool-holder. No. 885,058; Apr. 21; Sp. p. 2844; Dr. p. 605; Gaz. vol. 133; p. 1704.
Langdon, L. C., *et al.* (See Dunn, J. S., assignor.)
Langdon, S. T., Jr., *et al.* (See Dunn, J. S., assignor.)
Lange, H. (See Johnson, G. C., assignor.)
Lange, P. M. H., Toledo, Ohio. Drawing-press. No. 883,813; Apr. 7; Sp. p. 279; Dr. pp. 50–1; Gaz. vol. 133; p. 1237.
Langer, A., Friedrichsberg, near Berlin, assignor to K. A. Lingner, Dresden, Germany. Manufacturing blood-albumin preparations. No. 884,025; Apr. 7; Sp. p. 725; Gaz. vol. 133; p. 1308.
Langer, A., Friedrichsberg, near Berlin, Germany. Blood compound of glycerophosphate of lime and calcium. No. 884,026; Apr. 7; Sp. p. 725; Gaz. vol. 133; p. 1308.
Langworthy, J. S., East Orange, N. J., assignor to Victor Mangle Company, Lowell, Mass. Ironing-machine. No. 885,765; Apr. 28; Sp. p. 4318; Dr. pp. 905–6; Gaz. vol. 133; p. 1961.
Lansinger, J. N., Kent, Ohio. Electric igniter. No. 886,138; Apr. 28; Sp. p. 5090; Dr. p. 1068; Gaz. vol. 133; p. 2085.
Lantery, F. B., Fort Worth, Tex. Nut-cracking machine. No. 885,262; Apr. 21; Sp. p. 3282; Dr. pp. 686–7; Gaz. vol. 133; p. 1772.
Lantz, M. J., *et al.* (See Stewart, S., assignor.)
Lapointe, E., New Haven, Conn. Folding lunch-box. No. 884,824; Apr. 14; Sp. p. 2172; Dr. p. 409; Gaz. vol. 133; p. 1599.
Lardinois-Pigeon, J., Daverdisse, near Wellin, Belgium. Brooder. No. 884,935; Apr. 14; Sp. p. 2589; Dr. p. 546; Gaz. vol. 133; p. 1632.
Lärn, T., Björneborg, Russia. Making bodies for wax matches. No. 884,506; Apr. 14; Sp. p. 1697; Dr. p. 365; Gaz. vol. 133; p. 1492.
Larson, A., La Fayette, Ind. Mechanical motor. No. 885,494; Apr. 21; Sp. p. 3736; Dr. p. 786; Gaz. vol. 133; p. 1846.
Larson, A. T., Wheeler, Wis. Developing-machine. No. 885,492; Apr. 21; Sp. p. 3733; Dr. pp. 785–6; Gaz. vol. 133; p. 1846.
Larson, O. L., Minneapolis, Minn. Smut-machine. No. 883,815; Apr. 7; Sp. p. 283; Dr. p. 52; Gaz. vol. 133; p. 1238.
Lasley, J., Whiteville, Tenn. Shingling-bracket. No. 884,507; Apr. 14; Sp. p. 1698; Dr. p. 365; Gaz. vol. 133; p. 1493.
Latey, H. N., New York, N. Y. Signaling system for electric railways. No. 883,964; Apr. 7; Sp. p. 601; Dr. p. 119; Gaz. vol. 133; p. 1287.
Lathrop, F. K., assignor to Ohio Rake Company, Dayton, Ohio. Clutch mechanism. No. 886,004; Apr. 28; Sp. p. 4821; Dr. p. 1012; Gaz. vol. 133; p. 2042.
Lathrop, F. K., assignor to Ohio Rake Company, Dayton, Ohio. Corn-planter. No. 886,005; Apr. 28; Sp. p. 4822; Dr. p. 1013; Gaz. vol. 133; p. 2042.
Latta, P., Chicago, Ill. Photographic-printing apparatus. No. 884,740; Apr. 14; Sp. p. 2204; Dr. p. 466; Gaz. vol. 133; p. 1571.
Laudahn, W., Los Angeles, Cal. Appliance for adding to the record speed of vessels. No. 884,936; Apr. 14; Sp. p. 2590; Dr. p. 546; Gaz. vol. 133; p. 1632.
Laufer, R., assignor of one-half to C. L. Huber, East Greenville, Pa. Measuring device. No. 886,224; Apr. 28; Sp. p. 5235; Dr. pp. 1102–3; Gaz. vol. 133; p. 2112.
Laurell, F. (See Huhta and Laurell.)
Laursen, J. B., Sorkness, N. D. Indicator for tanks. No. 885,059; Apr. 21; Sp. p. 2845; Dr. p. 605; Gaz. vol. 133; p. 1705.
Lausterer, W. J., Jamestown, assignor to U. S. Standard Voting Machine Company, Rochester, N. Y. Label-holder for voting-machines. No. 886,061; Apr. 28; Sp. p. 4939; Dr. pp. 1038–9; Gaz. vol. 133; p. 2060.

Laval, C. G. P. de, Stockholm, Sweden, assignor to Société Anonyme Métallurgique Procédés de Laval, Frankfort-on-the-Main, Germany. Obtaining a violent chemical reaction between materials. No. 885,766; Apr. 28; Sp. p. 4320; Dr. p. 906; Gaz. vol. 133; p. 1962.
Law, L. L., assignor of one-half to G. G. G. Peckham, Dayton, Ohio. Heater. No. 884,595; Apr. 14; Sp. p. 1472; Dr. pp. 314–15; Gaz. vol. 133; p. 1457.
Lawrence, A., assignor to Yale & Towne Manufacturing Company, Stamford, Conn. Lock. No. 886,139; Apr. 28; Sp. p. 5092; Dr. pp. 1068–9; Gaz. vol. 133; p. 2085.
Lawrence, F. M. (See Sherman and Lawrence.)
Lawrence, R. B., New York, N. Y. Fire-door fastener. No. 884,937; Apr. 14; Sp. p. 2591; Dr. p. 547; Gaz. vol. 133; p. 1632.
Layher, F. G., Jackson, Mich. Automatic electric crossing-gate. No. 884,825; Apr. 14; Sp. p. 2373; Dr. pp. 499–500; Gaz. vol. 133; p. 1599.
Layman, P. J., assignor to F. X. Adams, Akron, Ohio. Jar-closure. No. 884,826; Apr. 14; Sp. p. 2376; Dr. p. 500; Gaz. vol. 133; p. 1600.
Layng, H. G., New York, N. Y., assignor to J. Treadwell, San Francisco, Cal. Alcohol-gas lamp. No. 885,263; Apr. 21; Sp. p. 3285; Dr. p. 687; Gaz. vol. 133; p. 1772.
Layton, J. A., Elmore, Okla. Cotton-picking glove. No. 885,767; Apr. 28; Sp. p. 4322; Dr. p. 906; Gaz. vol. 133; p. 1962.
Le Bossé, E., New York, N. Y. Legging. No. 884,741; Apr. 14; Sp. p. 2205; Dr. p. 466; Gaz. vol. 133; p. 1541.
Le Gallais, W. C., Pensacola, Fla. End gate for press-boxes. No. 884,827; Apr. 14; Sp. p. 2377; Dr. p. 500; Gaz. vol. 133; p. 1600.
Le Vesconte, G. L., St. Cloud, Minn. Ram. No. 885,264; Apr. 21; Sp. p. 3288; Dr. pp. 687–8; Gaz. vol. 133; p. 1773.
Leach, J. N., Melrose, Mass., assignor to Judson L. Thomson M'f'g Company. Water relief-valve for engine-cylinders. No. 884,096; Apr. 7; Sp. p. 864; Dr. pp. 181–2; Gaz. vol. 133; p. 1331.
Leach, J. N., Melrose, Mass., assignor to Judson L. Thomson M'f'g Company. Steam-engine. No. 884,097; Apr. 7; Sp. p. 867; Dr. pp. 182–3; Gaz. vol. 133; p. 1331.
Leake, T. S. (See Daly and Leake.)
Leatherman, A., Butte, Nebr. Ratchet-cylinder pulley. No. 885,060; Apr. 21; Sp. p. 2847; Dr. p. 605; Gaz. vol. 133; p. 1705.
Lebwohl, E. N., San Francisco, Cal. Lamp. No. 885,495; Apr. 21; Sp. p. 3727; Dr. p. 787; Gaz. vol. 133; p. 1846.
Lee, T. L., Westfield, N. J., assignor to Hall Signal Company. Interlocking relay. No. 885,061; Apr. 21; Sp. p. 2849; Dr. p. 606; Gaz. vol. 133; p. 1705.
Leech, E. (See Ames, J., assignor.)
Leed, R. (See Montgomery and Leed.)
Lefebvre, P. F., Hartford, Conn. Ice-creeper. No. 883,816; Apr. 7; Sp. p. 285; Dr. p. 53; Gaz. vol. 133; p. 1238.
Lefferts, H. D. B., Orange, assignor of one-half to E. De Camp, Newark, N. J. Reinforced pneumatic tire. No. 885,062; Apr. 21; Sp. p. 2850; Dr. p. 606; Gaz. vol. 133; p. 1706.
Leffler, C., New York, N. Y., assignor to H. J. White, Westfield, N. J. Machine for coating can-covers. No. 885,625; Apr. 21; Sp. p. 4010; Dr. p. 838; Gaz. vol. 133; p. 1886.
Lehmann, E., assignor of one-half to G. P. Daily, Hammond, Ind. Crate. No. 884,508; Apr. 14; Sp. p. 1699; Dr. p. 365; Gaz. vol. 133; p. 1493.
Lehy, G. B., Boston, Mass. Advertising device. No. 885,350; Apr. 21; Sp. p. 3477; Dr. pp. 724–5; Gaz. vol. 133; p. 1802.
Leisel, A., Peekskill, N. Y., assignor to Leisel Manufacturing Company, Newark, N. J. Machine for making embossed wall-paper. No. 885,351; Apr. 21; Sp. p. 3479; Dr. p. 725; Gaz. vol. 133; p. 1802.
Leisel Manufacturing Company. (See Leisel, A., assignor.)
Lemblé, J., Sennheim, Germany. Electric type-writer. No. 884,742; Apr. 14; Sp. p. 2206; Dr. pp. 466–7; Gaz. vol. 133; p. 1571.
Lemmon, W. W., Junior, La. Cane-loader. No. 884,938; Apr. 14; Sp. p. 2592; Dr. p. 547; Gaz. vol. 133; p. 1632.
Lentz, J. A., Phœnix, Ariz. Ter. Apparatus for forming dental structures. No. 886,140; Apr. 28; Sp. p. 5093; Dr. p. 1069; Gaz. vol. 133; p. 2085.
Leondar, A. H., Roxbury, Mass. Automatic alarm for refrigerator drip-pans. No. 884,828; Apr. 14; Sp. p. 2379; Dr. p. 501; Gaz. vol. 133; p. 1600.
Leopold, L. C., Hancock, Iowa. Latch with pivoted case. No. 885,496; Apr. 21; Sp. p. 3738; Dr. p. 787; Gaz. vol. 133; p. 1847.
Lestage, F. T., New Haven, Conn. Pipe-wrench. No. 883,817; Apr. 7; Sp. p. 286; Dr. p. 53; Gaz. vol. 133; p. 1238.
Lester, H. W., assignor to Post & Lester Company, Hartford, Conn. Horn. No. 885,493; Apr. 21; Sp. p. 3735; Dr. p. 786; Gaz. vol. 133; p. 1846.
Leuenberger, C. A., Bözingen, near Bienne, assignor to Firm of Aktiengesellschaft vormals Bloesch, Schwab & Cie., Bözingen, Switzerland. Apparatus for filling packing-drawers with pins, nails, and the like. No. 884,743; Apr. 14; Sp. p. 2213; Dr. p. 467; Gaz. vol. 133; p. 1572.
Lewis, A. L., Petersburg, Va. Attachment for harness. No. 884,829; Apr. 14; Sp. p. 2380; Dr. p. 501; Gaz vol. 133; p. 1601.
Lewis, G. A., Detroit, Mich. Hearing-tube for sound-reproducing machines. No. 883,818; Apr. 7; Sp. p. 287; Dr. p. 53; Gaz. vol. 133; p. 1238.
Lewis, S. T., Milwaukee, Wis., assignor of two-thirds to R. P. Davenport and E. C. Rockwell, Chicago, Ill. Variable-speed gearing. No. 884,172; Apr. 7; Sp. p. 1060; Dr. p. 221; Gaz. vol. 133; p. 1356.
Lewis, W. G. (See Rowe, L., assignor.)
Leyner, C. F., Boston, Mass. Machine for measuring and cutting skirts. No. 883,726; Apr. 7; Sp. p. 93; Dr. p. 15; Gaz. vol. 133; p. 1208.
Libby, C. L., Indianapolis, Ind., and P. J. Connor, Madison, Wis. Sawing-machine. No. 884,744; Apr. 14; Sp. p. 2215; Dr. p. 468; Gaz. vol. 133; p. 1573.
Libby, S. H., East Orange, N. J., assignor to Sprague Electric Company. Carrier system. No. 884,595; Apr. 14; Sp. p. 1884; Dr. pp. 403–4; Gaz. vol. 133; p. 1522.
Liden, J., Rockford, Ill. Stool for sewing-machines. No. 884,280; Apr. 7; Sp. p. 1242; Dr. p. 261; Gaz. vol. 133; p. 1300.
Liebert, H. A. E., Rochdale, assignor to E. Green and Son Limited, Wakefield, England. Manhole-lid. No. 883,965; Apr. 7; Sp. p. 604; Dr. p. 120; Gaz. vol. 133; p. 1288.
Lieghley, E. O., Baltimore, Md. Apparatus for enlarging or reducing drawings. No. 883,895; Apr. 7; Sp. p. 457; Dr. p. 90; Gaz. vol. 133; p. 1264.
Lier, G. (See Schwarzenbach and Lier.)
Liles, J. W., North Platte, Nebr. Attachment for wagons. No. 884,173; Apr. 7; Sp. p. 1063; Dr. p. 221; Gaz. vol. 133; p. 1356.
Lilienthal, H. L., Spokane, Wash. Composition of matter. No. 885,768; Apr. 28; Sp. p. 4323; Gaz. vol. 133; p. 1962.
Lima Locomotive and Machine Company. (See Wall, G. L., assignor.)
Lindahl, J. T., assignor of one-half to C. A. Halling, Stockholm, Sweden. Centrifugal slime-separator. No. 884,830; Apr. 14; Sp. p. 2381; Dr. p. 501; Gaz. vol. 133; p. 1601.
Lindal, S. F. F., New York, assignor of one-half to A. Peterson, Brooklyn, N. Y. Scissors or shears. No. 884,281; Apr. 7; Sp. p. 1243; Dr. p. 261; Gaz. vol. 133; p. 1300.
Lindquist, E. W. (See Baggaley, Allen, and Lindquist.)
Lindsay, L. J., assignor of two-thirds to J. T. and J. C. Phillips, Seymour, Iowa. Nut-lock. No. 884,983; Apr. 14; Sp. p. 2681; Dr. p. 570; Gaz. vol. 133; p. 1646.
Lindsey, W. S., assignor of one-half to J. S. Norton, St. Petersburg, Fla. Baby-bed. No. 884,509; Apr. 14; Sp. p. 1700; Dr. p. 366; Gaz. vol. 133; p. 1493.
Lindskog, S. J., Los Angeles, Cal. Show-case. No. 884,098; Apr. 7; Sp. p. 871; Dr. p. 183; Gaz. vol. 133; p. 1331.
Lindt, F. C. (See Smith, J. M., assignor.)
Lindy, S., New Orleans, La. Waistband. No. 885,933; Apr. 28; Sp. p. 4669; Dr. p. 984; Gaz. vol. 133; p. 2018.
Lingner, K. A. (See Langer, A., assignor.)
Linotype and Machinery Limited. (See Holbourns and Longhurst, assignors.)
Lishman, T. (See Simpson and Lishman.)
Little, O. C., assignor of one-fourth to E. V. Treleven, Menasha, Wis. Spring-retainer for sliding shoes. No. 886,301; Apr. 28; Sp. p. 5390; Dr. p. 1132; Gaz. vol. 133; p. 2139.
Livengood, W. S., assignor to Smith & Sons Mfg. Co., Kansas City, Mo. Road-grader. No. 884,396; Apr. 14; Sp. p. 1474; Dr. p. 315; Gaz. vol. 133; p. 1457.
Lock, J. H., Rondo, Mich. Horseshoe. No. 885,352; Apr. 21; Sp. p. 3481; Dr. pp. 725–6; Gaz. vol. 133; p. 1803.
Locomotive Tender Frame Company. (See McIntosh, W., assignor.)
Lodmell, L. B., Flaxton, N. D. Hen's nest. No. 885,626; Apr. 21; Sp. p. 4014; Dr. p. 838; Gaz. vol. 133; p. 1886.
Loeb, M., assignor of one-half to M. May, New York, N. Y. Apparatus for separating fat from water. No. 885,353; Apr. 21; Sp. p. 3482; Dr. p. 726; Gaz. vol. 133; p. 1803.
Loehr, M. E., Claypool, Ind. Fishing-float. No. 885,627; Apr. 21; Sp. p. 4015; Dr. p. 839; Gaz. vol. 133; p. 1886.
Loewenstein, M., deceased, (S. Loewenstein, administrator,) assignor of two-thirds to M. Kind, New York, N. Y., and J. Stork, Brussels, Belgium. Carbureter. No. 885,265; Apr. 21; Sp. p. 3289; Dr. p. 688; Gaz. vol. 133; p. 1773.
Loewenstein, S., administrator. (See Loewenstein, M.)
Loguin, A. J., Wilkinsburg, Pa. Gearing. No. 885,354; Apr. 21; Sp. p. 3484; Dr. p. 726; Gaz. vol. 133; p. 1803.
Lohr, C. A., Wilkinsburg, Pa. Alternating-current generator. No. 884,831; Apr. 14; Sp. p. 2382; Dr. p. 501; Gaz. vol. 133; p. 1601.
Lombard, G. B. (See Wakefield, J. P., assignor.)
Lommel, W., assignor to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany. Leuco derivative of the gallocyanin series. No. 884,745; Apr. 14; Sp. p. 2218; Gaz. vol. 133; p. 1573.
Long, B. (See Dailey and Long.)

Longenecker, C. I., Milwaukee, Wis., assignor to International Harvester Company. Speed-controlling device. No. 883,727; Apr. 7; Sp. p. 95; Dr. pp. 15–16; Gaz. vol. 133; p. 1208.
Longhurst, H. A. (See Holbourns and Longhurst.)
Longtoft, W. W. L., Loogootee, Ind. Envelop. No. 884,174; Apr. 7; Sp. p. 1064; Dr. p. 221; Gaz. vol. 133; p. 1356.
Loomis, H. E. W., Dumont, Iowa. Apparatus for sharpening lawn-mowers. No. 884,672; Apr. 14; Sp. p. 2069; Dr. p. 442; Gaz. vol. 133; p. 1547.
Loose Card Book Company. (See Ferrero, C. P., assignor.)
Lopp, J. L., *et al.* (See Stafford, Whitaker, and Lopp.)
Lord, A. P., and N. Wilkins, Bradford, Pa. Overhead trolley. No. 884,397; Apr. 14; Sp. p. 1476; Dr. p. 316; Gaz. vol. 133; p. 1457.
Lorenson, C., Wausa, Nebr. Mower. No. 886,226; Apr. 28; Sp. p. 5239; Dr. pp. 1103–4; Gaz. vol. 133; p. 2113.
Lorentzen, P., Apenrade, Germany. Machine for producing moldings. No. 884,175; Apr. 7; Sp. p. 1065; Dr. p. 222; Gaz. vol. 133; p. 1357.
Lotter, F., Elkton, Mich. Beet topping and harvesting machine. No. 884,673; Apr. 14; Sp. p. 2071; Dr. p. 442; Gaz. vol. 133; p. 1548.
Loudon, W. A., Chicago, Ill., assignor to General Electric Company. Turbine. No. 883,966; Apr. 7; Sp. p. 604; Dr. p. 120; Gaz. vol. 133; p. 1288.
Loudon, W. A., Chicago, Ill., assignor to General Electric Company. Trolley-stand. No. 885,063; Apr. 21; Sp. p. 2852; Dr. p. 606; Gaz. vol. 133; p. 1706.
Loutzky, B., Berlin, Germany. Water-cooled valve for internal-combustion motors. No. 883,967; Apr. 7; Sp. p. 607; Dr. p. 120; Gaz. vol. 133; p. 1288.
Lovejoy, F. W., assignor to Eastman Kodak Company, Rochester, N. Y. Flexible photographic cartridge-film. No. 883,819; Apr. 7; Sp. p. 288; Dr. p. 53; Gaz. vol. 133; p. 1239.
Lovekin, L. D., Philadelphia, Pa. Assistant cylinder for steam-engines. No. 884,510; Apr. 14; Sp. p. 1702; Dr. p. 366; Gaz. vol. 133; p. 1493.
Loveless, A. A., Dacula, Ga. Level. No. 884,176; Apr. 7; Sp. p. 1066; Dr. p. 222; Gaz. vol. 133; p. 1357.
Low, A. A., Horseshoe, and H. Hertzberg, New York, N. Y.; said Hertzberg assignor to said Low. Element for electric heaters. No. 885,769; Apr. 28; Sp. p. 4323; Dr. p. 906; Gaz. vol. 133; p. 1962.
Lowe, F., Cambridge, assignor of one-half to M. H. Barry, Danvers, Mass. Music-sheet turner. No. 885,852; Apr. 28; Sp. p. 4496; Dr. pp. 944–5; Gaz. vol. 133; p. 1991.
Lowry, J. H., Lenoir City, Tenn. Post-hole digger. No. 884,177; Apr. 7; Sp. p. 1067; Dr. p. 222; Gaz. vol. 133; p. 1357.
Lowry, W. D., St. Louis, Mo. Car-bolster and draft-rigging. No. 884,596; Apr. 14; Sp. p. 1886; Dr. p. 404; Gaz. vol. 133; p. 1522.
Loy, E. N. (See Jackson and Loy.)
Ludwig, J. H. (See Maier, L. H., assignor.)
Lucas, C. F., Mayhill, N. Mex. Poultry-perch. No. 884,398; Apr. 14; Sp. p. 1477; Dr. p. 316; Gaz. vol. 133; p. 1458.
Lucas, C. F., Mayhill, N. Mex. Frame for hens' nests. No. 884,399; Apr. 14; Sp. p. 1478; Dr. p. 316; Gaz. vol. 133; p. 1458.
Lucas, W. H., assignor to Espen-Lucas Machine Works, Philadelphia, Pa. Metal-cutting saw. No. 885,770; Apr. 28; Sp. p. 4325; Dr. p. 907; Gaz. vol. 133; p. 1963.
Luhmann, H. W., San Francisco, Cal. Buckle. No. 885,064; Apr. 21; Sp. p. 2853; Dr. p. 607; Gaz. vol. 133; p. 1706.
Lukens, T. H., assignor of one-half to J. M. Grim, Rochester, Pa. Rotary engine. No. 884,984; Apr. 14; Sp. p. 2682; Dr. p. 570; Gaz. vol. 133; p. 1647.
Lum, W. O., Schenectady, N. Y., assignor to General Electric Company. Self-starter. No. 884,511; Apr. 14; Sp. p. 1706; Dr. p. 367; Gaz. vol. 133; p. 1494.
Lummus, J. N. (See Wells, E. F., assignor.)
Lund, E. A. P. R. (See Hansen-Ellehammer and Lund.)
Lundgren, C. A., assignor, by mesne assignments, to National Cash Register Company, Dayton, Ohio. Cash-register. No. 885,266; Apr. 21; Sp. p. 3292; Dr. pp. 688–9; Gaz. vol. 133; p. 1773.
Lunken Steel Window Co. (See Conklin, C. M., assignor.)
Lüscher, G., Aarau, Switzerland. Water-lock gate. No. 884,400; Apr. 14; Sp. p. 1479; Dr. p. 317; Gaz. vol. 133; p. 1458.
Luschka, A. R., River Forest, assignor to Western Electric Company, Chicago, Ill. Interrupter. No. 886,141; Apr. 28; Sp. p. 5095; Dr. pp. 1069–70; Gaz. vol. 133; p. 2086.
Luthardt, C. L., Baltimore, Md. Cabinet. No. 884,178; Apr. 7; Sp. p. 1068; Dr. p. 222; Gaz. vol. 133; p. 1357.
Lyman, E. M., and J. Ives, Peekskill, N. Y. Hat-curling machine. No. 886,142; Apr. 28; Sp. p. 5096; Dr. p. 1070; Gaz. vol. 133; p. 2086.
Lyman, F. G., assignor of one-half to J. E. Gunther, Wapakoneta, Ohio. Seed-separator. No. 886,006; Apr. 28; Sp. p. 4825; Dr. p. 1013; Gaz. vol. 133; p. 2043.
Lynch, E. P., Mill Valley, Cal. Separating the liquid from the solid portions of treated ores. No. 885,004; Apr. 14; Sp. p. 2716; Dr. p. 576; Gaz. vol. 133; p. 1652.
Lyon, J. M. (See Buys and Lyon.)
Lyon, O. B. (See Young and Lyon.)
Lyons, C. D. (See Barney, F. P., assignor.)
Lyons, J. W., Trenton, N. J. Floor connection for water-closets. No. 883,896; Apr. 7; Sp. p. 461; Dr. p. 90; Gaz. vol. 133; p. 1265.
Mabbott, J. C., Mount Vernon, S. D. Pen for holding swine. No. 884,179; Apr. 7; Sp. p. 1069; Dr. p. 223; Gaz. vol. 133; p. 1358.
Mable, W., assignor of one-half to W. B. Morris, Fort Collins, Colo. Traveling-case. No. 885,853; Apr. 28; Sp. p. 4499; Dr. p. 945; Gaz. vol. 133; p. 1991.
Machalske, F. J., Niagara Falls, N. Y., assignor of one-fourth to R. Modjeski, Chicago, Ill. Making artificial micas. No. 885,934; Apr. 28; Sp. p. 4670; Gaz. vol. 133; p. 2018.
Machlet, A. W., Elizabeth, N. J. Case-hardening apparatus. No. 884,180; Apr. 7; Sp. p. 1070; Dr. pp. 223–4; Gaz. vol. 133; p. 1358.
Machlet, A. W., Elizabeth, N. J. Case-hardening. No. 884,181; Apr. 7; Sp. p. 1076; Dr. p. 224; Gaz. vol. 133; p. 1358.
Mackenzie, H. W., Edinburgh, Scotland. Means for molding biscuits. No. 884,746; Apr. 14; Sp. p. 2219; Dr. pp. 468–9; Gaz. vol. 133; p. 1573.
Macnish, F. J., Oak Park, assignor to Creamery Package Mfg. Company, Chicago, Ill. Rotary pump. No. 884,747; Apr. 14; Sp. p. 2220; Dr. p. 469; Gaz. vol. 133; p. 1573.
Madden, G. and L., Kent, Iowa. Crude-oil burner for stoves. No. 884,939; Apr. 14; Sp. p. 2594; Dr. p. 548; Gaz. vol. 133; p. 1633.
Madden, L. (See Madden, G. and L.)
Madeo, G., New York, N. Y. Tailor's pattern. No. 884,940; Apr. 14; Sp. p. 2596; Dr. p. 548; Gaz. vol. 133; p. 1633.
Magic Curler Company. (See Martin, J. F., assignor.)
Magnuson, W., Michigan City, Ind. Turn-table. No. 885,164; Apr. 21; Sp. p. 3078; Dr. p. 647; Gaz. vol. 133; p. 1738.
Mahon, E. L., Bellaire, Ohio. Rheostat. No. 885,935; Apr. 28; Sp. p. 4672; Dr. p. 984; Gaz. vol. 133; p. 2018.
Maibaum, W., Cleveland, Ohio. Barber's cabinet. No. 885,497; Apr. 21; Sp. p. 3739; Dr. p. 787; Gaz. vol. 133; p. 1847.
Maier, L. H., assignor to J. H. Ludwig, New York, N. Y. Tracker or bridge for self-playing musical instruments. No. 883,728; Apr. 7; Sp. p. 96; Dr. p. 16; Gaz. vol. 133; p. 1208.
Malone, D. P., Rockwood, Ala. Fence-making machine. No. 884,182; Apr. 7; Sp. p. 1080; Dr. p. 204; Gaz. vol. 133; p. 1359.
Malloy, J. M., Depot Harbor, Ontario, Canada. Coupling-head. No. 886,007; Apr. 28; Sp. p. 4826; Dr. p. 1014; Gaz. vol. 133; p. 2043.
Mamet, J. F., Billancourt, and P. Hallot, Vincennes, France. Saddle-support for cycles. No. 886,227; Apr. 28; Sp. p. 5241; Dr. p. 1104; Gaz. vol. 133; p. 2138.
Manelik, F. L., Burton, Ohio. Means for cooling explosive-engines. No. 885,498; Apr. 21; Sp. p. 3740; Dr. p. 787; Gaz. vol. 133; p. 1847.
Manker, C. A., Pearl, Ill. Massaging-machine. No. 884,027; Apr. 7; Sp. p. 726; Dr. p. 147; Gaz. vol. 133; p. 1308.
Mann, G. E., assignor of one-half to J. A. Brennan, Randolph, Mass. Insole. No. 884,985; Apr. 14; Sp. p. 2684; Dr. p. 571; Gaz. vol. 133; p. 1647.
Manor, C. E., Stanleyton, assignor of one-half to J. D. Manor, Newmarket, Va. Grain-scrubber. No. 885,499; Apr. 21; Sp. p. 3743; Dr. p. 788; Gaz. vol. 133; p. 1848.
Manor, J. D. (See Manor, C. E., assignor.)
Mansfield, A. K., Batavia, Ill. Water-column. No. 885,165; Apr. 21; Sp. p. 3079; Dr. pp. 647–8; Gaz. vol. 133; p. 1739.
Manufacturers Machine Company. (See Cummings, H. H., assignor.)
Mapes, C. M., New York, N. Y. Fastening for railway-ties. No. 884,941; Apr. 14; Sp. p. 2599; Dr. p. 548; Gaz. vol. 133; p. 1633.
Marconi, G., London, England, assignor to Marconi Wireless Telegraph Company of America. Wireless telegraphy. No. 884,986; Apr. 14; Sp. p. 2685; Dr. p. 571; Gaz. vol. 133; p. 1647.
Marconi, G., London, England, assignor to Marconi Wireless Telegraph Company of America. Wireless telegraphy. No. 884,987; Apr. 14; Sp. p. 2689; Dr. p. 571; Gaz. vol. 133; p. 1647.
Marconi, G., London, England, assignor to Marconi Wireless Telegraph Company of America. Detecting electrical oscillations. No. 884,988; Apr. 14; Sp. p. 2691; Dr. p. 571; Gaz. vol. 133; p. 1648.
Marconi, G., London, England, assignor to Marconi Wireless Telegraph Company of America. Wireless telegraphy. No. 884,989; Apr. 14; Sp. p. 2694; Dr. p. 572; Gaz. vol. 133; p. 1648.
Marconi Wireless Telegraph Company of America. (See Marconi, G., assignor.)
Marden, A. H., North Cambridge, Mass. Sash-holder. No. 884,090; Apr. 7; Sp. p. 872; Dr. p. 183; Gaz. vol. 133; p. 1332.
Margulis, M., Odessa, Russia. Accumulator-plate. No. 884,028; Apr. 7; Sp. p. 729; Dr. p. 147; Gaz. vol. 133; p. 1308.
Margulis, P. H., New York, N. Y. Heelless overshoe. No. 885,628; Apr. 21; Sp. p. 4017; Dr. p. 830; Gaz. vol. 133; p. 1887.
Marion Incline Filter and Heater Company. (See Packard and Reidenbaugh, assignors.)
Marion Incline Filter and Heater Company. (See Stump, Reidenbaugh, and Packard, assignors.)

Markham, W. D., assignor of one-half to W. B. Morley, Friar Point, Miss. Lamp attachment. No. 886,323; Apr. 28; Sp. p. 5447; Dr. p. 1142; Gaz. vol. 133; p. 2148.
Marquardt, E. (See Erlwein and Marquardt.)
Marson, J., Rahway, assignor to H. W. Taylor, Montclair, N. J. Making felt for piano-hammers. No. 884,597; Apr. 14; Sp. p. 1888; Dr. p. 405; Gaz. vol. 133; p. 1523.
Marston, J., Braddock, Pa. Drill and bit holder for boring-machines. No. 886,228; Apr. 28; Sp. p. 5243; Dr. p. 1104; Gaz. vol. 133; p. 2114.
Martel, E. J., Ware, assignor of one-half to Z. Potvin, Webster, Mass. Clasp. No. 885,267; Apr. 21; Sp. p. 3295; Dr. p. 689; Gaz. vol. 133; p. 1774.
Marten, A. S., East Orange, N. J., assignor to Tea Tray Company of Newark, N. J. Horn. No. 885,268; Apr. 21; Sp. p. 3296; Dr. p. 689; Gaz. vol. 133; p. 1774.
Marten, W. F., Pine River, Wis. Door-latch. No. 886,143; Apr. 28; Sp. p. 5100; Dr. p. 1071; Gaz. vol. 133; p. 2086.
Martin, A. O., and C. A. Hahnel, Denison, Tex. Sanding apparatus for locomotives. No. 884,282; Apr. 7; Sp. p. 1245; Dr. p. 262; Gaz. vol. 133; p. 1390.
Martin, D., Forney, Tex. Bedclothes-clamp. No. 884,832; Apr. 14; Sp. p. 2385; Dr. p. 502; Gaz. vol. 133; p. 1601.
Martin, E. R. (See Ippeniatz and Martin.)
Martin, J. F., Philadelphia, Pa., assignor, by mesne assignments, to Magic Curler Company. Hair-crimper. No. 884,339; Apr. 7; Sp. p. 1346; Dr. p. 288; Gaz. vol. 133; p. 1409.
Martin, J. M., Byrneville, Ind. Timber-sawing machine. No. 884,183; Apr. 7; Sp. p. 1081; Dr. p. 225; Gaz. vol. 133; p. 1359.
Martin, J. M., and E. J. Faires, McKinney, Tex.; said Faires assignor to said Martin. Sash-cord guide. No. 884,184; Apr. 7; Sp. p. 1082; Dr. p. 225; Gaz. vol. 133; p. 1360.
Martin, L. S., Erie, Pa. Window-ventilator. No. 884,598; Apr. 14; Sp. p. 1889; Dr. p. 405; Gaz. vol. 133; p. 1523.
Martin, M., Malden, assignor to Boston Auto Gage Company, Boston, Mass. Fluid-gage. No. 885,629; Apr. 21; Sp. p. 4019; Dr. p. 830; Gaz. vol. 133; p. 1887.
Martin, M., assignor of one-half to Boston Auto Gage Company, Boston, Mass. Fluid-level indicator. No. 885,675; Apr. 21; Sp. p. 4115; Dr. p. 861; Gaz. vol. 133; p. 1902.
Martin, R. B., Brooklyn, N. Y. Shoe-polishing brush. No. 885,500; Apr. 21; Sp. p. 3749; Dr. p. 788; Gaz. vol. 133; p. 1848.
Marvin, F. B., Paterson, N. J. Refractory block for building purposes. No. 885,005; Apr. 21; Sp. p. 2855; Dr. p. 607; Gaz. vol. 133; p. 1707.
Marx, A. J., Holyoke, Mass. Furnace-door protector. No. 886,144; Apr. 28; Sp. p. 5101; Dr. p. 1071; Gaz. vol. 133; p. 2087.
Mason, E. B., Elmsford, N. Y. Game apparatus. No. 884,674; Apr. 14; Sp. p. 2072; Dr. p. 443; Gaz. vol. 133; p. 1548.
Mason, G. L., Newark, N. J., assignor to George L. Mason Company, New York, N. Y. Sign-letter. No. 885,936; Apr. 28; Sp. p. 4673; Dr. p. 984; Gaz. vol 133; p. 2018.
Mason, G. W., Sharon, Pa. Wrench. No. 884,748; Apr. 14; Sp. p. 2222; Dr. p. 469; Gaz. vol. 133; p. 1574.
Mason, G. W., Sharon, Pa. Pipe-coupling. No. 884,749; Apr. 14; Sp. p. 2224; Dr. p. 470; Gaz. vol. 133; p. 1574.
Mason, L., New York, N. Y. Poker-table. No. 885,630; Apr. 21; Sp. p. 4020; Dr. pp. 839–40; Gaz. vol. 133; p. 1887.
Mason, M. C., Waukegan, Ill. Milk-pail cover. No. 883,968; Apr. 7; Sp. p. 608; Dr. p. 121; Gaz. vol. 133; p. 1288.
Mason Regulator Company. (See Mason, W. B., assignor.)
Mason, W., assignor to Winchester Repeating Arms Co., New Haven, Conn. Gas-operated gun. No. 885,166; Apr. 21; Sp. p. 3083; Dr. pp. 648–9; Gaz. vol. 133; p. 1739.
Mason, W. B., assignor to Mason Regulator Company, Boston, Mass. Accumulator-controller. No. 886,145; Apr. 28; Sp. p. 5102; Dr. pp. 1071–2; Gaz. vol. 133; p. 2087.
Massie, W. W., assignor to Massie Wireless Telegraph Co., Providence, R. I. Combined tuning-coil and condenser. No. 886,302; Apr. 28; Sp. p. 5391; Dr. p. 1132; Gaz. vol. 133; p. 2140.
Massie, W. W., assignor to Massie Wireless Telegraph Co., Providence, R. I. Spark-gap apparatus. No. 886,303; Apr. 28; Sp. p. 5393; Dr. p. 1132; Gaz. vol. 133; p. 2140.
Massie Wireless Telegraph Co. (See Massie, W. W., assignor.)
Mateer, J. E., Wilkinsburg, Pa., assignor to Westinghouse Electric & Manufacturing Company. Transformer-coil insulation. No. 885,771; Apr. 28; Sp. p. 4326; Dr. p. 907; Gaz. vol. 133; p. 1963.
Mathers, A. S., Armington, Mont. Mop head and wringer. No. 885,937; Apr. 28; Sp. p. 4674; Dr. p. 985; Gaz. vol. 133; p. 2019.
Mathews, H. (See Davis, W. F., assignor.)
Mathey, A. E., Boston, Mass. Stringed instrument. No. 885,269; Apr. 21; Sp. p. 3298; Dr. p. 689; Gaz. vol. 133; p. 1774.
Matlak, A. (See Wisniewski and Matlak.)
Matthews, K., Auckland, New Zealand. Preparing fibers. No. 884,401; Apr. 14; Sp. p. 1482; Dr. p. 317; Gaz. vol. 133; p. 1459.
Maxant, F., Allegheny, Pa. Friction-clutch. No. 885,938; Apr. 28; Sp. p. 4676; Dr. p. 985; Gaz. vol. 133; p. 2019.
Maxwell, A. A., New York, N. Y. Guide-chart for garment-patterns. No. 885,167; Apr. 21; Sp. p. 3090; Dr. p. 650; Gaz. vol. 133; p. 1740.
Maxwell, M. P., Halsey, Oreg. Grinding attachment for check-valves. No. 884,942; Apr. 14; Sp. p. 2599; Dr. p. 549; Gaz. vol. 133; p. 1633.
May, J. S., Chicago, Ill. Mirror. No. 884,512; Apr. 14; Sp. p. 1709; Dr. p. 367; Gaz. vol. 133; p. 1494.
May, M. (See Loeb, M., assignor.)
Mayberry, F. E., West Medford, and N. H. Holland, Brookline, assignors to Boston Telephone Selector Company, Boston, Mass. Telephone system. No. 885,270; Apr. 21; Sp. p. 3300; Dr. p. 690; Gaz. vol. 133; p. 1775.
Mayberry, J. B., Houston, Tex. Housing for electric alarm mechanism. No. 885,631; Apr. 21; Sp. p. 4022; Dr. p. 840; Gaz. vol. 133; p. 1888.
Mayer, T. A., Washington, D. C. Refrigerator. No. 884,029; Apr. 7; Sp. p. 731; Dr. p. 147; Gaz. vol. 133; p. 1309.
Mayette, E., Canisteo, assignor to H. F. Granger and F. J. Nelson, Hornell, N. Y. Furniture. No. 885,271; Apr. 21; Sp. p. 3307; Dr. p. 690; Gaz. vol. 133; p. 1775.
Mayo, B. F., Salem, assignor to United Shoe Machinery Company, Boston, Mass. Heel-nailing machine. No. 884,513; Apr. 14; Sp. p. 1710; Dr. pp. 367–8; Gaz. vol. 133; p. 1494.
Mayo, T. H., Melrose, Mass. Counter. No. 886,008; Apr. 28; Sp. p. 4828; Dr. p. 1014; Gaz. vol. 133; p. 2043.
Mayper, H. M., New York, N. Y. Garment. No. 884,185; Apr. 7; Sp. p. 1083; Dr. p. 226; Gaz. vol. 133; p. 1360.
McBean, G. B., and C. W. Birchwood, assignors to Mechanical & Electrical Manufacturing Company, Chicago, Ill. Repair-tool. No. 884,751; Apr. 14; Sp. p. 2226; Dr. p. 470; Gaz. vol. 133; p. 1575.
McCain, W. O., assignor of one-half to J. B. Atkins, Mathiston, Miss. Trap-door. No. 884,192; Apr. 7; Sp. p. 1094; Dr. pp. 228–9; Gaz. vol. 133; p. 1362.
McClintock, W., New York, N. Y. Sewage-ejector. No. 884,406; Apr. 14; Sp. p. 1490; Dr. p. 320; Gaz. vol. 133; p. 1461.
McCloskey, C., *et al.* (See Gould, M., assignor.)
McCloskey, H., *et al.* (See Gould, M., assignor.)
McClure, J., Jr., Little Rock, Ark. Cleat. No. 885,506; Apr. 21; Sp. p. 3758; Dr. p. 791; Gaz. vol. 133; p. 1850.
McClure, M. L., Republic, Mo. Cultivator attachment. No. 884,676; Apr. 14; Sp. p. 2077; Dr. p. 443; Gaz. vol. 133; p. 1549.
McClure, R. C., Lethbridge, Alberta, Canada. Continuous rail-joint. No. 884,518; Apr. 14; Sp. p. 1723; Dr. p. 370; Gaz. vol. 133; p. 1496.
McComb, H. G., Detroit, Mich. Driving-gear for automobiles. No. 885,505; Apr. 21; Sp. p. 3756; Dr. p. 790; Gaz. vol. 133; p. 1849.
McComb, J. S., Dobbs Ferry, N. Y. Desk attachment. No. 885,364; Apr. 21; Sp. p. 3504; Dr. p. 732; Gaz. vol. 133; p. 1806.
McCool, H. G., Halstead, Kans. Syllabic keyboard for type-writers and type-setting machines. No. 886,149; Apr. 28; Sp. p. 5109; Dr. p. 1073; Gaz. vol. 133; p. 2088.
McCord, A. C., Chicago, Ill. Mail-crane. No. 884,407; Apr. 14; Sp. p. 1492; Dr. p. 320; Gaz. vol. 133; p. 1461.
McCouney, R. B. (See Buckingham, C. L., assignor.)
McCune, J., Santa Cruz, Cal. Meter-box. No. 886,238; Apr. 28; Sp. p. 5258; Dr. p. 1108; Gaz. vol. 133; p. 2117.
McDermott, C. A., Sultana, Cal. Fruit-picker's platform. No. 884,839; Apr. 14; Sp. p. 2424; Dr. p. 508; Gaz. vol. 133; p. 1604.
McDonald, J. B., Jacksonville, assignor of one-half to H. Partridge, Duval county, Fla. Vehicle-wheel. No. 884,840; Apr. 14; Sp. p. 2425; Dr. p. 509; Gaz. vol. 133; p. 1604.
McDonald, J. T., Geneva, N. Y. Shoe-polisher. No. 885,276; Apr. 21; Sp. p. 3315; Dr. p. 692; Gaz. vol. 133; p. 1777.
McDonald, P., assignor of one-half to G. H. Smith, Rochester, N. Y. Fuse-holder for electric-circuit conductors. No. 884,519; Apr. 14; Sp. p. 1724; Dr. p. 370; Gaz. vol. 133; p. 1496.
McDonough, A. J. (See Hodgson, W. D., assignor.)
McDonough, B. L. (See Deardurff and McDonough.)
McDowell, J. G., Pittsburg, Pa. Hydraulic motor. No. 885,070; Apr. 21; Sp. p. 2861; Dr. p. 608; Gaz. vol. 133; p. 1708.
McElroy, J. F., assignor to Consolidated Car Heating Company, Albany, N. Y. Regulating device for steam-heating systems. No. 884,287; Apr. 7; Sp. p. 1253; Dr. p. 263; Gaz. vol. 133; p. 1392.
McElwee, B. F., Dunmore, W. Va. Cutter-bar. No. 885,305; Apr. 21; Sp. p. 3506; Dr. p. 732; Gaz. vol. 133; p. 1807.
McEvoy, G. N., New York, N. Y. Game apparatus. No. 884,605; Apr. 14; Sp. p. 1901; Dr. p. 408; Gaz. vol. 133; p. 1525.
McFaddin, H. D., New York, N. Y. Combination light reflector and diffuser. No. 885,856; Apr. 28; Sp. p. 4503; Dr. p. 946; Gaz. vol. 133; p. 1992.
McFarland, R. H., Grand Rapids, Mich. Food compound. No. 884,606; Apr. 14; Sp. p. 1903; Gaz. vol. 133; p. 1526.
McGeorge, H. (See McGeorge, J. and H.)
McGeorge, J. and H., Cleveland, Ohio. Center-drive axle and wheel. No. 884,752; Apr. 14; Sp. p. 2228; Dr. pp. 470–1; Gaz. vol. 133; p. 1575.

McGhie, T. B., assignor of one-half to T. Barton, London, England. Treating ores containing arsenic. No. 885,071; Apr. 21; Sp. p. 2863; Gaz. vol. 133; p. 1708.
McGinley, J. B., Allegheny, assignor to Crown Fire Extinguisher Company, Pittsburg, Pa. Valve for fire-sprinkler systems. No. 884,841; Apr. 14; Sp. p. 2427; Dr. p. 509; Gaz. vol. 133; p. 1605.
McGlashan, W., assignor to Winton Motor Carriage Company, Cleveland, Ohio. Vehicle steering mechanism. No. 884,193; Apr. 7; Sp. p. 1095; Dr. p. 229; Gaz. vol. 133; p. 1362.
McGrath, P., Denver, Colo. Street-railway switch. No. 884,194; Apr. 7; Sp. p. 1097; Dr. pp. 229–30; Gaz. vol. 133; p. 1363.
McGrath, P., Denver, Colo. Street-railway switch. No. 884,195; Apr. 7; Sp. p. 1102; Dr. p. 231; Gaz. vol. 133; p. 1363.
McGuane, F. J., Chicago, Ill. Bowling-ball and handle. No. 884,991; Apr. 14; Sp. p. 2698; Dr. p. 572; Gaz. vol. 133; p. 1649.
McHargue, S. A. (See Ping, R. G., assignor.)
McIlhenny, J. S., Washington, D. C., assignor of one-half to P. Young, Pittsburg, Pa. Treating gas. No. 885,857; Apr. 28; Sp. p. 4504; Dr. p. 946; Gaz. vol. 133; p. 1992.
McInnis, J., Castor, La. Fence-post. No. 883,901; Apr. 7; Sp. p. 467; Dr. p. 92; Gaz. vol. 133; p. 1206.
McIntire, K. A., Richmond, Va. Attachment for slippers. No. 884,520; Apr. 14; Sp. p. 1725; Dr. p. 370; Gaz. vol. 133; p. 1496.
McIntosh, W., North Plainfield, N. J., assignor to Locomotive Tender Frame Company, St. Louis, Mo. Car-underframe. No. 886,063; Apr. 28; Sp. p. 4943; Dr. p. 1039; Gaz. vol. 133; p. 2061.
McIntyre, J., Edmonton, Alberta, Canada. Platform-scaffold. No. 885,507; Apr. 21; Sp. p. 3759; Dr. p. 791; Gaz. vol. 133; p. 1850.
McKay, J. W., and C. E. Waugh, Tatamagouche, Nova Scotia, Canada. Heating device for dinner-pails. No. 885,636; Apr. 21; Sp. p. 4030; Dr. p. 842; Gaz. vol. 133; p. 1899.
McKee, M. A., Westerly, R. I., assignor to C. B. Cottrell & Sons Company, New York, N. Y. Stereotype. No. 885,948; Apr. 28; Sp. p. 4706; Dr. p. 990; Gaz. vol. 133; p. 2024.
McKee, W., Elyria, Ohio. Rolling. No. 885,508; Apr. 21; Sp. p. 3760; Dr. p. 791; Gaz. vol. 133; p. 1850.
McKee, W., assignor of two-thirds to M. Jacobowsky and M. Bowsky, New York, N. Y. Manufacture of artificial marble from gypsum. No. 886,064; Apr. 28; Sp. p. 4944; Gaz. vol. 133; p. 2061.
McKennan, J. B., Pueblo, Colo. Furnace-valve. No. 884,033; Apr. 7; Sp. p. 740; Dr. p. 153; Gaz. vol. 133; p. 1310.
McKoy, E. A., New Orleans, La. Turpentine-cup. No. 885,697; Apr. 21; Sp. p. 4160; Dr. p. 870; Gaz. vol. 133; p. 1909.
McLaughlin, N., Jethro, Ark. Lumber-raft. No. 884,408; Apr. 14; Sp. p. 1494; Dr. p. 321; Gaz. vol. 133; p. 1462.
McLean, G. A., Atlanta, Ga., assignor to Underwood Typewriter Company, New York, N. Y. Type-writing machine. No. 885,509; Apr. 21; Sp. p. 3762; Dr. p. 791; Gaz. vol. 133; p. 1850.
McLellan, H. R. (See Stirling, W. H., assignor.)
McLewee, W. S., Yardley, Pa. Telephone fire-alarm system. No. 884,607; Apr. 14; Sp. p. 1904; Dr. pp. 408–9; Gaz. vol. 133; p. 1526.
McNeal, A. F. (See White, H., assignor.)
McNees, T. G., and J. A. Lackey, Slippery Rock, Pa. Nut-lock. No. 885,510; Apr. 21; Sp. p. 3764; Dr. p. 792; Gaz. vol. 133; p. 1851.
McPherson, L. O., Highland Park, Ill. Electric igniter for gas or vapor engines. No. 885,072; Apr. 21; Sp. p. 2864; Dr. p. 608; Gaz. vol. 133; p. 1708.
McTigue, P. H., Chicago, Ill. Nut-retaining device. No. 884,196; Apr. 7; Sp. p. 1104; Dr. p. 231; Gaz. vol. 133; p. 1364.
McTigue, S. P., Nemaha, Iowa. Safety-stirrup. No. 884,197; Apr. 7; Sp. p. 1105; Dr. p. 231; Gaz. vol. 133; p. 1364.
Mead, G. (See Blood, G., assignor.)
Meacham, G., and J. G. Sundblom, Longreach, Queensland, Australia. Power-transmission belt. No. 884,100; Apr. 7; Sp. p. 873; Dr. p. 183; Gaz. vol. 133; p. 1332.
Meahl, P. J., Bayonne, N. J. Master-sheet. No. 885,772; Apr. 28; Sp. p. 4328; Dr. pp. 907–8; Gaz. vol. 133; p. 1963.
Meaker, J. W., Jr. (See Broadwell, E. C., assignor.)
Mealus, R. L., *et al.* (See Williams, D. L., assignor.)
Mease, B. G., Vinton, Iowa. Apparatus for tipping seed-corn. No. 886,229; Apr. 28; Sp. p. 5245; Dr. p. 1105; Gaz. vol. 133; p. 2114.
Mechanical & Electrical Manufacturing Company. (See McBean and Birchwood, assignors.)
Meeker, G. B., Sapulpa, Okla. Sewing-machine attachment. No. 884,833; Apr. 14; Sp. p. 2386; Dr. p. 502; Gaz. vol. 133; p. 1602.
Meem, J. C., assignor of two-thirds to F. L. and W. V. Cranford, Brooklyn, N. Y. Method of construction. No. 884,990; Apr. 14; Sp. p. 2696; Dr. p. 572; Gaz. vol. 133; p. 1649.
Megill, E. L., New York, N. Y. Feed-gage. No. 885,773; Apr. 28; Sp. p. 4330; Dr. p. 908; Gaz. vol. 133; p. 1964.
Mehring, W. M., York Road, Md. Cow-milker. No. 885,355; Apr. 21; Sp. p. 3485; Dr. p. 727; Gaz. vol. 133; p. 1803.
Méker, A. G., Asnières, assignor to La Société pour l'Utilisation de l'Air et de ses Dérivés, Paris, France. Incandescent gas-burner. No. 884,834; Apr. 14; Sp. p. 2388; Dr. p. 503; Gaz. vol. 133; p. 1602.
Melville, F. B., assignor of one-half to L. Dralle, Milwaukee, Wis. Educational appliance. No. 885,272; Apr. 21; Sp. p. 3309; Dr. p. 691; Gaz. vol. 133; p. 1775.
Menere, E. S., Germfask, Mich. Cant-hook. No. 883,820; Apr. 7; Sp. p. 200; Dr. p. 54; Gaz. vol. 133; p. 1239.
Merckens, W., Mülhausen, Germany, and J. H. Smith, Zurich, Switzerland. Production of colored photographs. No. 885,066; Apr. 21; Sp. p. 2856; Gaz. vol. 133; p. 1707.
Meredith, M. R., Wabash, Ind. Cigar-vending machine. No. 884,186; Apr. 7; Sp. p. 1085; Dr. p. 226; Gaz. vol. 133; p. 1360.
Mergenthaler Linotype Company. (See Kennedy, D. S., assignor.)
Merrell, G. W. (See Shoffner, E. J., assignor.)
Merrett, J. A., London, England, assignor to J. R. Hatmaker, Paris, France. Cylinder drying machine. No. 883,729; Apr. 7; Sp. p. 100; Dr. pp. 16–17; Gaz. vol. 133; p. 1209.
Merrick, W. R., Evansville, Ind. Cooking-stove. No. 885,273; Apr. 21; Sp. p. 3310; Dr. p. 691; Gaz. vol. 133; p. 1776.
Merrifield, E., and W. A. Peck, Marysville, Mont.; said Merrifield assignor to said Peck. Envelop seal or fastener. No. 885,501; Apr. 21; Sp. p. 3751; Dr. p. 789; Gaz. vol. 133; p. 1848.
Mertz, J. W., Mount Clemens, Mich. Rheostat. No. 886,230; Apr. 28; Sp. p. 5246; Dr. p. 1105; Gaz. vol. 133; p. 2114.
Meskill, J. J., Philadelphia, Pa., assignor to J. F. Kelly, Washington, D. C. Nozzle-holder. No. 883,969; Apr. 7; Sp. p. 608; Dr. p. 121; Gaz. vol. 133; p. 965.
Messer, J. C., assignor of two-thirds to R. C. Lambie and J. Cook, Austin, Tex. Buggy-spindle. No. 885,502; Apr. 21; Sp. p. 3753; Dr. p. 789; Gaz. vol. 133; p. 1849.
Messmore, E. E., Epworth, Iowa. Jarring device. No. 886,231; Apr. 28; Sp. p. 5249; Dr. p. 1106; Gaz. vol. 133; p. 2115.
Mesta Machine Company. (See Keller, A. T., assignor.)
Metcalf, J. C., Mercersburg, Pa. Reversing mechanism for traction-engines. No. 886,232; Apr. 28; Sp. p. 5250; Dr. p. 1106; Gaz. vol. 133; p. 2115.
Metcalf, J. D., assignor of one-half to J. C. Causey, Gloster, Miss. Scrubbing-machine. No. 885,939; Apr. 28; Sp. p. 4678; Dr. p. 985; Gaz. vol. 133; p. 2020.
Metcalfe, A. J., *et al.* (See Grace, T., assignor.)
Meyer, A. O., *et al.* (See Sassaman, A. H., assignor.)
Meyer, E. (See Stricker and Meyer.)
Meyer, F. H. (See Hunt, S. A., assignor.)
Meyer, J. P., Rochester, N. Y. Photometer. No. 884,835; Apr. 14; Sp. p. 2390; Dr. p. 503; Gaz. vol. 133; p. 1602.
Michael, A. C., assignor of one-half to W. B. Fisher, Flora, Ind. Watering-trough. No. 885,632; Apr. 21; Sp. p. 4024; Dr. p. 840; Gaz. vol. 133; p. 1888.
Michaels, S., assignor of one-half to N. Downing, Mount Pulaski, Ill. Rail-joint and cross-tie. No. 886,233; Apr. 28; Sp. p. 5251; Dr. p. 1106; Gaz. vol. 133; p. 2115.
Milburn, G., assignor of one-half to W. G. Milburn, Baltimore, Md. Automatic signaling device. No. 885,168; Apr. 21; Sp. p. 3092; Dr. pp. 650–1; Gaz. vol. 133; p. 1740.
Milburn, W. G. (See Milburn, G., assignor.)
Miles, D. E., Recce, Kans. Cattle-stanchion. No. 884,599; Apr. 14; Sp. p. 1890; Dr. p. 405; Gaz. vol. 133; p. 1523.
Millar, E. R. (See Sims, J. S., assignor.)
Miller, A. F., Henderson, Tenn. Furnace. No. 885,356; Apr. 21; Sp. p. 3487; Dr. p. 727; Gaz. vol. 133; p. 1804.
Miller, A. H., Chesaning, Mich. Automatic electric switch. No. 884,514; Apr. 14; Sp. p. 1716; Dr. p. 368; Gaz. vol. 133; p. 1495.
Miller, B. E., Brandon, Iowa. Manure-spreader. No. 884,515; Apr. 14; Sp. p. 1718; Dr. p. 368; Gaz. vol. 133; p. 1495.
Miller, C., Wheeling, W. Va. Wrench. No. 884,836; Apr. 14; Sp. p. 2391; Dr. p. 503; Gaz. vol. 133; p. 1603.
Miller, C., Chicago, Ill. Station-indicator. No. 885,503; Apr. 21; Sp. p. 3754; Dr. p. 789; Gaz. vol. 133; p. 1849.
Miller, C. F., *et al.* (See Thomas, D. W., assignor.)
Miller, F. C. (See Sohn and Miller.)
Miller, F. F., Napanee, Ontario, Canada. Internal-combustion engine. No. 884,402; Apr. 14; Sp. p. 1483; Dr. p. 318; Gaz. vol. 133; p. 1459.
Miller, G. E., West Detroit, Mich. Steering-gear for automobiles. No. 885,940; Apr. 28; Sp. p. 4680; Dr. pp. 985–6; Gaz. vol. 133; p. 2020.
Miller, J. F., *et al.* (See Thomas, D. W., assignor.)
Miller, J. R., *et al.* (See Hollingsworth, R. L., assignor.)
Miller, J. W., assignor of one-half to W. F. Cowham, Jackson, Mich. Cement-block machine. No. 884,101; Apr. 7; Sp. p. 874; Dr. p. 184; Gaz. vol. 133; p. 1332.
Miller, L. B. (See Brewer and Miller.)
Miller, S., New York, N. Y. Press for neckties. No. 884,283; Apr. 7; Sp. p. 1247; Dr. p. 262; Gaz. vol. 133; p. 1391.

Miller, T. S., South Orange, N. J. Conveying apparatus. No. 885,774; Apr. 28; Sp. p. 4332; Dr. pp. 908–9; Gaz. vol. 133; p. 1964.
Miller, W. D., Saco, Mont. Riding-spur. No. 883,897; Apr. 7; Sp. p. 463; Dr. p. 91; Gaz. vol. 133; p. 1265.
Miller, W. H., Cleveland, Ohio. Pneumatic brake. No. 885,169; Apr. 21; Sp. p. 3097; Dr. p. 651; Gaz. vol. 133; p. 1740.
Miller, W. W., Shillington, Pa. Stop-cock. No. 885,775; Apr. 28; Sp. p. 4337; Dr. p. 909; Gaz. vol. 133; p. 1964.
Milliron, C., Bartlesville, Okla., assignor of one-half to American Well & Prospecting Company, Corsicana, Tex. Well-drilling apparatus. No. 885,170; Apr. 21; Sp. p. 3099; Dr. p. 652; Gaz. vol. 133; p. 1741.
Mills, A. G. (See Farnham, E. W., assignor.)
Mills Fly Catching Screen Company. (See Mills, N. W., assignor.)
Mills, N. W., assignor to Mills Fly Catching Screen Company, Boulder, Colo. Insect-trap. No. 884,403; Apr. 14; Sp. p. 1485; Dr. p. 318; Gaz. vol. 133; p. 1459.
Mills Woven Cartridge Belt Company. (See Stiles, W. C., assignor.)
Millstein, W., Beaver, Pa. Glass-mold. No. 886,146; Apr. 28; Sp. p. 5106; Dr. p. 1072; Gaz. vol. 133; p. 2087.
Minnis, S. H., Carrollton, Mo. Corn-husker. No. 886,147; Apr. 28; Sp. p. 5107; Dr. p. 1072; Gaz. vol. 133; p. 2088.
Minorsky, A. A., Wilkinsburg, Pa. Hose-coupling. No. 884,187; Apr. 7; Sp. p. 1087; Dr. p. 227; Gaz. vol. 133; p. 1360.
Mitchell, E. J. (See Mitchell and Fretz, assignors.)
Mitchell, H. S., Wilton, Ark. Bottle. No. 884,284; Apr. 7; Sp. p. 1248; Dr. p. 262; Gaz. vol. 133; p. 1391.
Mitchell, J., Auckland, New Zealand. Violin-mute. No. 885,067; Apr. 21; Sp. p. 2856; Dr. p. 607; Gaz. vol. 133; p. 1707.
Mitchell, J. F., Topeka, Kans. Drill. No. 883,730; Apr. 7; Sp. p. 101; Dr. p. 17; Gaz. vol. 133; p. 1209.
Mitchell, L. C. W., and J. A. Fretz, assignors of one-third to E. J. Mitchell, Philadelphia, Pa. Trolley. No. 884,750; Apr. 14; Sp. p. 2225; Dr. p. 470; Gaz. vol. 133; p. 1574.
Mitchell, W. H., assignor of one-half to C. C. Grosshans, Aurora, Nebr. Gate. No. 884,188; Apr. 7; Sp. p. 1088; Dr. p. 227; Gaz. vol. 133; p. 1361.
Mitchell, W. H., assignor of two-thirds to A. H. and S. B. Field, Cambridge, Mass. Sliding door. No. 883,731; Apr. 7; Sp. p. 103; Dr. pp. 17–18; Gaz. vol. 133; p. 1209.
Modjeski, R. (See Machalske, F. J., assignor.)
Molinari, E., assignor to Società in Partecipazione per la Combustione Liquida, Genoa, Italy. Hydrocarbon-burner. No. 885,357; Apr. 21; Sp. p. 3488; Dr. p. 727; Gaz. vol. 133; p. 1804.
Möller, L. (See Staples and Möller.)
Monahan, F. J., Joliet, Ill. Excavating-machine. No. 883,821; Apr. 7; Sp. p. 200; Dr. pp. 54–5; Gaz. vol. 133; p. 1239.
Monarch Coupler Company. (See Hitchcock, D. A., assignor.)
Monarch Typewriter Company. (See Bond, C. J., assignor.)
Monarch Typewriter Company. (See Hennessy, J. B., assignor.)
Mono Service Vessels, Limited. (See Taylor, E. Z., assignor.)
Monroe, F. A., Bemus Point, and B. W. Seymour, Falconer, N. Y. Device for cleaning oil-wells. No. 884,675; Apr. 14; Sp. p. 2074; Dr. p. 443; Gaz. vol. 133; p. 1548.
Montgomery, J., and R. Leed, Philadelphia, Pa. Door-hanger. No. 885,633; Apr. 21; Sp. p. 4025; Dr. p. 840; Gaz. vol. 133; p. 1888.
Moomaw, H. E., Salem, Va. Sheet-metal roofing. No. 884,285; Apr. 7; Sp. p. 1249; Dr. p. 262; Gaz. vol. 133; p. 1391.
Moore, A. T., New Orleans, La. Measuring-mold. No. 883,898; Apr. 7; Sp. p. 463; Dr. p. 91; Gaz. vol. 133; p. 1265.
Moore, A. T., New Orleans, La. Adjustable suspender-connector. No. 883,899; Apr. 7; Sp. p. 464; Dr. p. 91; Gaz. vol. 133; p. 1266.
Moore, A. T., New Orleans, La. Manifolding device. No. 883,900; Apr. 7; Sp. p. 465; Dr. pp. 91–2; Gaz. vol. 133; p. 1266.
Moore, C. E., Los Angeles, Cal. Elevator indicating system. No. 885,941; Apr. 28; Sp. p. 4683; Dr. p. 986; Gaz. vol. 133; p. 2020.
Moore, C. E., Los Angeles, Cal. Safety flash-light apparatus for elevators. No. 885,942; Apr. 28; Sp. p. 4686; Dr. p. 987; Gaz. vol. 133; p. 2021.
Moore, D. A., Harvey, Ill. Rail-drilling machine. No. 885,943; Apr. 28; Sp. p. 4688; Dr. pp. 987–8; Gaz. vol. 133; p. 2022.
Moore, D. A., Kalamazoo, Mich. Track-drill. No. 885,944; Apr. 28; Sp. p. 4694; Dr. p. 988; Gaz. vol. 133; p. 2022.
Moore, D. A., Kalamazoo, Mich. Drilling-machine. No. 885,945; Apr. 28; Sp. p. 4698; Dr. p. 989; Gaz. vol. 133; p. 2023.
Moore, D. A., Kalamazoo, Mich. Chuck. No. 885,946; Apr. 28; Sp. p. 4703; Dr. p. 989; Gaz. vol. 133; p. 2023.
Moore, O. N. (See Ruppenlatz and Martin, assignors.)
Moore, R. F., Williston, N. D. Lubricator. No. 886,062; Apr. 28; Sp. p. 4941; Dr. p. 1039; Gaz. vol. 133; p. 2060.
Moore, V. M., Cleveland, Ohio. Friction-clutch. No. 883,732; Apr. 7; Sp. p. 104; Dr. p. 18; Gaz. vol. 133; p. 1210.
Moreau, E., assignor to Calor Sterilizer Co., New York, N. Y. Temperature-exchanging apparatus. No. 884,600; Apr. 14; Sp. p. 1891; Dr. pp. 405–6; Gaz. vol. 133; p. 1523.
Morehead, J. (See Purser, J. E., assignor.)
Morehouse Manufacturing Co. (See Heybach, F. J., assignor.)
Morgan Crucible Company. (See Speirs, C. W., assignor.)
Morgan, C. G., Mount Vernon, Mo. Machine for printing from films or plates. No. 884,516; Apr. 14; Sp. p. 1719; Dr. p. 369; Gaz. vol. 133; p. 1495.
Morgan, J. B., Schenectady, N. Y. Radiator-valve. No. 884,601; Apr. 14; Sp. p. 1893; Dr. p. 406; Gaz. vol. 133; p. 1524.
Morgan, J. O., Oakland, Cal. Burner. No. 884,286; Apr. 7; Sp. p. 1250; Dr. p. 263; Gaz. vol. 133; p. 1391.
Morley, W. B. (See Markham, W. D., assignor.)
Morrell, T. W., Bloomfield, N. J. Apparatus for packing cames. No. 885,854; Apr. 28; Sp. p. 4500; Dr. p. 945; Gaz. vol. 133; p. 1991.
Morris, C. E., assignor of one-half to T. D. Morrow, Lane, Kans. Shooting-gallery. No. 885,358; Apr. 21; Sp. p. 3488; Dr. p. 728; Gaz. vol. 133; p. 1804.
Morris, E. C., and L. J. Hall, Chicago, Ill.; said Hall assignor to said Morris. Machine for stamping and sealing mail-matter. No. 884,837; Apr. 14; Sp. p. 2393; Dr. pp. 504–6; Gaz. vol. 133; p. 1603.
Morris, E. C., and L. J. Hall, Chicago, Ill.; said Hall assignor to said Morris. Machine for stamping and sealing mail-matter. No. 884,838; Apr. 14; Sp. p. 2411; Dr. pp. 506–8; Gaz. vol. 133; p. 1604.
Morris, E. T., Derwent, Ohio. Tombstone. No. 883,733; Apr. 7; Sp. p. 107; Dr. p. 18; Gaz. vol. 133; p. 1210.
Morris, P. H., Newtown, Pa. Store-window. No. 884,404; Apr. 14; Sp. p. 1486; Dr. pp. 318–19; Gaz. vol. 133; p. 1460.
Morris, W. B. (See Mable, W., assignor.)
Morrison, G. L., assignor to P. M. Storrey, Sampsel, Okla. Folded-blank box. No. 883,734; Apr. 7; Sp. p. 109; Dr. p. 19; Gaz. vol. 133; p. 1210.
Morrow, T. D. (See Morris, C. E., assignor.)
Morse, A. B., South Easton, Mass. Driving mechanism for motor-carriages. No. 883,735; Apr. 7; Sp. p. 110; Dr. pp. 19–20; Gaz. vol. 133; p. 1211.
Morse, A. D., assignor to Draper Company, Hopedale, Mass. Bobbin-driving means for rotatable spindles. No. 885,855; Apr. 28; Sp. p. 4501; Dr. p. 945; Gaz. vol. 133; p. 1992.
Morton, M. A., assignor of one-half to S. W. Johnson, Brownwood, Tex. Washboiler. No. 886,234; Apr. 28; Sp. p. 5252; Dr. p. 1107; Gaz. vol. 133; p. 2115.
Morton, W. I., Berwick, Nova Scotia, Canada. Knife-handle. No. 884,030; Apr. 7; Sp. p. 732; Dr. p. 147; Gaz. vol. 133; p. 1309.
Morway, J. W., Plainville, assignor to Sessions Clock Company, Forestville, Conn. Repeating alarm-clock. No. 885,359; Apr. 21; Sp. p. 3492; Dr. p. 728; Gaz. vol. 133; p. 1804.
Mosmeier, G., Apache, Okla. Draft-equalizer. No. 884,602; Apr. 14; Sp. p. 1895; Dr. p. 406; Gaz. vol. 133; p. 1524.
Mosteller, D. H., assignor to Mosteller Manufacturing Company, Chicago, Ill. Bread and meat slicer. No. 885,274; Apr. 21; Sp. p. 3310; Dr. p. 691; Gaz. vol. 133; p. 1776.
Mosteller Manufacturing Company. (See Mosteller, D. H., assignor.)
Mott, G., New York, N. Y., and A. G. Koenig, Weehawken, N. J. Trolley-pole head. No. 885,776; Apr. 28; Sp. p. 4338; Dr. p. 909; Gaz. vol. 133; p. 1964.
Mountford, F., Longton, England. Apparatus for decorating pottery and other ware. No. 884,031; Apr. 7; Sp. p. 733; Dr. pp. 148–52; Gaz. vol. 133; p. 1309.
Mourgeon, L., assignor to A. Huillard, Suresnes, France. Drying apparatus. No. 885,360; Apr. 21; Sp. p. 3494; Dr. p. 729; Gaz. vol. 133; p. 1805.
Moy, E. F., and P. H. Bastic, London, England. Apparatus for forming screw-threads. No. 885,068; Apr. 21; Sp. p. 2859; Dr. p. 607; Gaz. vol. 133; p. 1707.
Moyer, F. H., Clairton, Pa. Gas-washer. No. 886,009; Apr. 28; Sp. p. 4829; Dr. pp. 1014–15; Gaz. vol. 133; p. 2043.
Moyer, F. H., Clairton, Pa. Gas-washer. No. 886,304; Apr. 28; Sp. p. 5396; Dr. p. 1133; Gaz. vol. 133; p. 2140.
Mücke, G., Reisenberg, Austria-Hungary. Signaling device for incubators. No. 886,148; Apr. 28; Sp. p. 5108; Dr. p. 1073; Gaz. vol. 133; p. 2088.
Muhl, J., Strukkamp, Fehmarn, Germany. Nest for hens. No. 884,032; Apr. 7; Sp. p. 739; Dr. p. 152; Gaz. vol. 133; p. 1310.
Muldoon, T. F., Indianapolis, Ind. Cabinet for liners and blades for linotype-machines. No. 885,777; Apr. 28; Sp. p. 4339; Dr. p. 910; Gaz. vol. 133; p. 1965.
Mulkerins, T. M., Chicago, Ill. Cruet. No. 885,947; Apr. 28; Sp. p. 4794; Dr. p. 990; Gaz. vol. 133; p. 2024.
Mullikin, E. H., Dallas, Tex. Sanding-machine. No. 885,069; Apr. 21; Sp. p. 2860; Dr. p. 608; Gaz. vol. 133; p. 1708.
Mullin, J. R., and W. B. Williams, Rome, N. Y. Wire-fastener. No. 884,189; Apr. 7; Sp. p. 1090; Dr. p. 227; Gaz. vol. 133; p. 1361.
Mumma, I., assignor to Gem City Acetylene Generator Company, Dayton, Ohio. Acetylene-generator. No. 885,361; Apr. 21; Sp. p. 3495; Dr. pp. 729–31; Gaz. vol. 133; p. 1805.

Munch, W. (See Stose, C. E., assignor.)
Munch, W., Kansas City, Mo. Attachment for sanding-machines. No. 885,275; Apr. 21; Sp. p. 3312; Dr. p. 692; Gaz. vol. 133; p. 1776.
Mundhenk, C. J., Freeport, Ill. Internal-combustion engine. No. 886,235; Apr. 28; Sp. p. 5254; Dr. p. 1107; Gaz. vol. 133; p. 2116.
Munroe, A. L. (See Thornton and Munroe.)
Murchison, I. A., Manchester, N. C. Cotton-picker. No. 886,236; Apr. 28; Sp. p. 5250; Dr. p. 1107; Gaz. vol. 133; p. 2116.
Murphy, C. A., Chatfield, Minn. Rail-tie. No. 884,190; Apr. 7; Sp. p. 1091; Dr. p. 228; Gaz. vol. 133; p. 1361.
Murray, C., assignor of one-half to C. O'Connor, Trevorton, Pa. Miner's lamp. No. 884,191; Apr. 7; Sp. p. 1093; Dr. p. 228; Gaz. vol. 133; p. 1361.
Murray, T. E., New York, N. Y. Automatic stoking device for furnaces. No. 884,603; Apr. 14; Sp. p. 1896; Dr. p. 407; Gaz. vol. 133; p. 1525.
Murray, T. E., New York, N. Y. Seal-fastening. No. 884,604; Apr. 14; Sp. p. 1900; Dr. p. 408; Gaz. vol. 133; p. 1525.
Murray, T. E., New York, N. Y. Seal-fastening. No. 885,634; Apr. 21; Sp. p. 4026; Dr. p. 841; Gaz. vol. 133; p. 1889.
Murray, T. E., New York, N. Y. Automatic stoking device for furnaces. No. 885,635; Apr. 21; Sp. p. 4027; Dr. pp. 841-2; Gaz. vol. 133; p. 1889.
Murray, T. E., New York, N. Y. Seal-fastening. No. 886,010; Apr. 28; Sp. p. 4832; Dr. p. 1015; Gaz. vol. 133; p. 2044.
Murray, W. M., Sawtelle, Cal. Oil-spreader. No. 884,943, Apr. 14; Sp. p. 2600; Dr. pp. 549-50; Gaz. vol. 133; p. 1634.
Murray's Patent Fixture Company. (See La Berge, M. E., assignor.)
Murtha, J. P., Little Rock, Ark., assignor of one-half to J. H. Turcotte, St. Louis, Mo. Funnel. No. 886,237; Apr. 28; Sp. p. 5257; Dr. p. 1107; Gaz. vol. 133; p. 2117.
Musick, L. W., Crescent City, Cal. Conduit electric railway. No. 884,517; Apr. 14; Sp. p. 1721; Dr. pp. 360-70; Gaz. vol. 133; p. 1496.
Muszar, J., Cincinnati, Ohio. Coffee-mill. No. 885,504; Apr. 21; Sp. p. 3755; Dr. p. 790; Gaz. vol. 133; p. 1849.
Mutscheler, G. (See Andrews, F. E., assignor.)
Myers, C. H., Le Roy, Ill. Disk marker. No. 885,362; Apr. 21; Sp. p. 3502; Dr. p. 731; Gaz. vol. 133; p. 1806.
Myers, L., Fremont, Ohio. Combination-tool. No. 885,363; Apr. 21; Sp. p. 3503; Dr. p. 731; Gaz. vol. 133; p. 1806.
Myerscough, J., and J. Gornall, Preston, assignors to Dobsom and Barlow Limited, Bolton, England. Locking device for front-plate stripping-doors of carding-engines. No. 884,405; Apr. 14; Sp. p. 1489; Dr. pp. 319-20; Gaz. vol. 133; p. 1460.
Nash, W., Denver, Colo. Cooking apparatus. No. 884,288; Apr. 7; Sp. p. 1256; Dr. pp. 263-4; Gaz. vol. 133; p. 1392.
National Carbon Company. (See Richmond, C. T., assignor.)
National Cash Register Company. (See Carney, T., assignor.)
National Cash Register Company. (See Carroll, T., assignor.) (Reissue.)
National Cash Register Company. (See Lundgren, C. A., assignor.)
National Cash Register Company. (See Pein, E. J. Von, assignor.)
National Electric Time Switch Company. (See Nylander and Regensburger, assignors.)
National Furnace Company. (See Hensley and Bryant, assignors.)
National Metal-Fabric Company. (See Clark, N. E., assignor.)
National Patent Company. (See Roever, J., assignor.)
National Straw Pulp Company. (See Kennedy, M. R., assignor.)
National Washboard Company. (See Gilbert, H. J., assignor.)
Neddo, P., Barre, Vt. Lewis. No. 884,198; Apr. 7; Sp. p. 1106; Dr. p. 231; Gaz. vol. 133; p. 1364.
Neighbour, W. W., Denison, Tex. Trolley-wheel. No. 886,239; Apr. 28; Sp. p. 5260; Dr. p. 1108; Gaz. vol. 133; p. 2117.
Nelson, E., Longbeach, Cal. Bed-pan. No. 884,842; Apr. 14; Sp. p. 2429; Dr. p. 509; Gaz. vol. 133; p.1606.
Nelson, F. J., *et al.* (See Mayette, E., assignor.)
Nelson, G. B., Redfield, Iowa. Attachment for corn-shellers. No. 884,944; Apr. 14; Sp. p. 2608; Dr. p. 550; Gaz. vol. 133; p. 1634.
Nelson, I., Chicago, Ill. Coin-controlled apparatus. No. 885,277; Apr. 21; Sp. p. 3316; Dr. p. 692; Gaz. vol. 133; p. 1777.
Nelson, J. (See Sundberg and Nelson.)
Nelson, J., assignor to Chicago Portrait Company, Chicago, Ill. Photographic-printing frame. No. 885,637; Apr. 21; Sp. p. 4031; Dr. p. 845; Gaz. vol. 133; p. 1889.
Nelson, J. P., *et al.* (See Elgen, M. P., assignor.)
Nelson, N. J., Red Wing, Minn. Mail-bag catching and delivering apparatus. No. 884,034; Apr. 7; Sp. p. 741; Dr. p. 153; Gaz. vol. 133; p. 1310.
Nettenstrom, J. U., Chicago, Ill. Mechanism for locking roundhouse-doors. No. 885,858; Apr. 28; Sp. p. 4506; Dr. p. 946; Gaz. vol. 133; p. 1993.
Neuberger, O., Frankfort-on-the-Main, Germany. Pad. No. 885,778; Apr. 28; Sp. p. 4340; Dr. p. 910; Gaz. vol. 133; p. 1965.
Neumann, H. (See Winand and Neumann.)
Neville, D. D., G. H. Clay, and J. H. Clewer; said Clewer assignor to C. M. Hanks, Kansas City, Mo. Commutator wiper and oiler. No. 885,278; Apr. 21; Sp. p. 3317; Dr. p. 693; Gaz. vol. 133; p. 1777.
Newcom, A. and J., Terrell, Tex. Hair-tonic. No. 885,073; Apr. 21; Sp. p. 2808; Gaz. vol. 133; p. 1709.
Newcom, J. (See Newcom, A. and J.)
New Departure Manufacturing Company. (See Rockwell, E. D., assignor.)
Newlands, J. J., New York, N. Y. Reel-crank. No. 885,638; Apr. 21; Sp. p. 4032; Dr. p. 843; Gaz. vol. 133; p. 1890.
Newlin, S. C., and G. W. Williams, Anderson, Ind. Railway-tie. No. 885,555; Apr. 21; Sp. p. 3887; Dr. p. 812; Gaz. vol. 133; p. 1865.
Newman, A. A., assignor to Newman Clock Company, Chicago, Ill. Patrol-box for watchmen's time-keys. No. 883,736; Apr. 7; Sp. p. 114; Dr. p. 20; Gaz. vol. 133; p. 1211.
Newman, A. A., Chicago, Ill. Watchman's clock. No. 885,360; Apr. 21; Sp. p. 3507; Dr. p. 732; Gaz. vol. 133; p. 1807.
Newman Clock Company. (See Newman, A. A., assignor.)
Newman, S. D., Jellico, Tenn. Money-drawer alarm. No. 884,843; Apr. 14; Sp. p. 2430; Dr. p. 509; Gaz. vol. 133; p. 1606.
Newsome, W. R., Hartford, Conn. Fishing-fly holder. No. 885,511; Apr. 21; Sp. p. 3764; Dr. p. 792; Gaz. vol. 133; p. 1851.
Newson-Smith, C. C., London, England. Paper-binder. No. 884,409; Apr. 14; Sp. p. 1495; Dr. p. 321; Gaz. vol. 133; p. 1462.
Newton, B., Pardeeville, Wis. Garment-supporter. No. 884,289; Apr. 7; Sp. p. 1258; Dr. p. 264; Gaz. vol. 133; p. 1393.
Newton, C. R., East Rand, Transvaal. Coupling for percussive apparatus. No. 886,240; Apr. 28; Sp. p. 5262; Dr. p. 1108; Gaz. vol. 133; p. 2118.
New York Leather Belting Company. (See Usina, E. A., assignor.)
Niagara Forged Steel Company. (See Woodcock, W. H., assignor.)
Nichols, C. L., and R. Hogan, Franklin, Ind. Circle-drafting instrument. No. 884,844; Apr. 14; Sp. p. 2431; Dr. p. 510; Gaz. vol. 133; p. 1606.
Nichols, H. C. (See Whipple, C. S., assignor.)
Nichols, J. W., Chicago, Ill. Fail-seal. No. 886,011; Apr. 28; Sp. p. 4833; Dr. p. 1015; Gaz. vol. 133; p. 2044.
Nicholson, A., and I. T. Rude, Chicago, Ill. Hand-shears. No. 884,410; Apr. 14; Sp. p. 1496; Dr. p. 321; Gaz. vol. 133; p. 1462.
Nicholson, J. T., Wilkes-Barre, Pa. Conveyer-chain. No. 886,055; Apr. 28; Sp. p. 4940; Dr. p. 1039; Gaz. vol. 133; p. 2061.
Nicklin, E. T., and M. Campau, Los Angeles, Cal. Commodity-dividing apparatus. No. 884,845; Apr. 14; Sp. p. 2434; Dr. p. 510; Gaz. vol. 133; p. 1607.
Nidever, H. B., Monterey, Cal. Exerciser. No. 885,074; Apr. 21; Sp. p. 2809; Dr. p. 609; Gaz. vol. 133; p. 1709.
Niebuhr, W. C., St. James, Minn. Bundle-conveying attachment for threshing-machines. No. 884,753; Apr. 14; Sp. p. 2234; Dr. pp. 471-2; Gaz. vol. 133; p. 1575.
Nield, J. H., Hackensack, N. J., assignor to General Chemical Company, New York, N. Y. Producing mixtures of sulfuric and nitric acids. No. 884,035; Apr. 7; Sp. p. 743; Dr. p. 153; Gaz. vol. 133; p. 1311.
Nielsen, C., *et al.* (See Nielsen, R., assignor.)
Nielsen, R., assignor to C. Nielsen and H. S. Giles, Troy, N. Y. Ice-cream scraper. No. 884,411; Apr. 14; Sp. p. 1497; Dr. p. 322; Gaz. vol. 133; p. 1462.
Nieman, G. H. (See Hill, C., assignor.)
Nix, J. D., assignor of one-third to L. M. Dalgron, Natchez, Miss. Smoke-consumer for boiler-furnaces. No. 884,945; Apr. 14; Sp. p. 2610; Dr. p. 551; Gaz. vol. 133; p. 1634.
Niles-Bement-Pond Company. (See Hogrebe and Strobel, assignors.)
Niles-Bement-Pond Company. (See Wood, A., assignor.)
Noble, F. D., Pittsburg, Pa. Wrench. No. 885,512; Apr. 21; Sp. p. 3765; Dr. p. 792; Gaz. vol. 133; p. 1851.
Noel, J. A., Washington, D. C. Combined indicator and alarm. No. 883,902; Apr. 7; Sp. p. 468; Dr. pp. 92-3; Gaz. vol. 133; p. 1267.
Noera Manufacturing Company. (See Richard, G. J., assignor.)
Norborg, P. A., *et al.* (See Anderson, N. M., assignor.)
Norden, J. (See Norden, M., assignor.)
Norden, M., assignor to J. Norden, New York, N. Y. Electric-lamp socket. No. 884,102; Apr. 7; Sp. p. 877; Dr. p. 185; Gaz. vol. 133; p. 1333.
Norquist, E. F., Kansas City, Mo. Metal tank. No. 885,279; Apr. 21; Sp. p. 3320; Dr. p. 693; Gaz. vol. 133; p. 1778.
Norris, J. E., assignor to Standard Wire Co., New Castle, Pa. Sectional tray. No. 886,324; Apr. 28; Sp. p. 5448; Dr. p. 1143; Gaz. vol. 133; p. 2148.
North, J. W., Allegheny, Pa. Nut-lock. No. 884,199; Apr. 7; Sp. p. 1107; Dr. p. 232; Gaz. vol. 133; p. 1365.
Northcraft, A. J., St. Louis, Mo. Amusement device. No. 884,340; Apr. 7; Sp. p. 1348; Dr. p. 288; Gaz. vol. 133; p. 1409.

Norton, E., Milwaukee, Wis. Supporting device. No. 886,241; Apr. 28; Sp. p. 5263; Dr. p. 1109; Gaz. vol. 133; p. 2118.
Norton, F. E., Youngstown, Ohio. Valve-gear for gas-engines. No. 884,677; Apr. 14; Sp. p. 2078; Dr. p. 444; Gaz. vol. 133; p. 1549.
Norton, J., Springfield, Mass. Shutter-worker. No. 884,103; Apr. 7; Sp. p. 879; Dr. p. 185; Gaz. vol. 133; p. 1333.
Norton, J. S. (See Lindsey, W. S., assignor.)
Nuernberger, P. G., and G. Rettig, Jr., assignors to Universal Automatic Typecasting Machine Company, Chicago, Ill. Type-casting mold. No. 884,754; Apr. 14; Sp. p. 2237; Dr. p. 472; Gaz. vol. 133; p. 1576.
Nuhring, C., Cincinnati, Ohio. Flue-cleaner. No. 884,755; Apr. 14; Sp. p. 2238; Dr. p. 472; Gaz. vol. 133; p. 1576.
Nunamaker, J. W., assignor, by mesne assignments, to A. J. Borgmeier, Chicago, Ill. Voting-machine. No. 885,639; Apr. 21; Sp. p. 4033; Dr. pp. 843-7; Gaz. vol. 133; p. 1890.
Nunn, F. G. (See Rumery, J., assignor.)
Nuss, W. J., Cologne-Lindenthal, Germany. Water-cistern with purifier. No. 883,903; Apr. 7; Sp. p. 475; Dr. p. 93; Gaz. vol. 133; p. 1267.
Nya Ackumulator-Aktiebolaget Jungner. (See Jungner, E. W., assignor.)
Nylander, C. G., and F. J. Regensburger, assignors to National Electric Time Switch Company, McKeesport, Pa. Electric time-switch. No. 885,513; Apr. 21; Sp. p. 3767; Dr. pp. 792-3; Gaz. vol. 133; p. 1851.
O'Connell, J. J., Lima, N. Y. Fastening device. No. 885,171; Apr. 21; Sp. p. 3101; Dr. p. 652; Gaz. vol. 133; p. 1741.
O'Connor, C. (See Murray, C., assignor.)
O'Connor, S. F., New York, N. Y. Washing-machine. No. 884,946; Apr. 14; Sp. p. 2614; Dr. p. 551; Gaz. vol. 133; p. 1635.
O'Donnell, F., assignor of one-half to S. A. Brown, Pawtucket, R. I. Stop-motion for looms. No. 886,150; Apr. 28; Sp. p. 5110; Dr. p. 1073; Gaz. vol. 133; p. 2088.
O'Leary, J., assignor of one-half to E. Penrose, Cohoes, N. Y. Fender and brake attachment for automobiles. No. 884,201; Apr. 7; Sp. p. 1109; Dr. p. 232; Gaz. vol. 133; p. 1365.
Oakley, D. S., Parkersburg, W. Va. Clutch. No. 885,075; Apr. 21; Sp. p. 2870; Dr. p. 609; Gaz. vol. 133; p. 1709.
Oberdoerster, A. (See Oberdoerster, F. J. and A.)
Oberdoerster, F. J. and A., Akron, Ohio. Fountain-pen. No. 884,412; Apr. 14; Sp. p. 1499; Dr. p. 322; Gaz. vol. 133; p. 1463.
Oberg, C. J., Salt Lake City, Utah. Smokeless furnace. No. 885,779; Apr. 28; Sp. p. 4341; Dr. pp. 910-11; Gaz. vol. 133; p. 1965.
Obernesser, W. C., assignor to Princess Manufacturing Company, Newport, Ky. Hydraulic motor. No. 884,200; Apr. 7; Sp. p. 1108; Dr. p. 232; Gaz. vol. 133; p. 1365.
Obertrifter, E. D., Fredonia, N. Y. Display-case. No. 886,066; Apr. 28; Sp. p. 4947; Dr. p. 1040; Gaz. vol. 133; p. 2062.
Oca, A. M. de, Mexico, Mexico. Locking device. No. 884,290; Apr. 7; Sp. p. 1260; Dr. p. 264; Gaz. vol. 133; p. 1393.
Odenbach, F. L., assignor of one-half to J. C. Poore, Cleveland, Ohio. Railway signal and telephone system. No. 885,367; Apr. 21; Sp. p. 3509; Dr. p. 733; Gaz. vol. 133; p. 1807.
Odhner, V., St. Petersburg, Russia. Calculating-machine. No. 885,514; Apr. 21; Sp. p. 3769; Dr. p. 793; Gaz. vol. 133; p. 1852.
Oechelhaeuser, W. von, Dessau, and C. Steinbecker, Langfuhr, near Danzig, Germany. Pump. No. 884,291; Apr. 7; Sp. p. 1261; Dr. p. 265; Gaz. vol. 133; p. 1393.
Ofterdinger, H. T., assignor, by mesne assignments, to Ofte Radiator Company, Washington, D. C. Portable hot-fluid heating apparatus. No. 886,305; Apr. 28; Sp. p. 5398; Dr. p. 1133; Gaz. vol. 133; p. 2141.
Ofte Radiator Company. (See Ofterdinger, H. T., assignor.)
Ogle, J. B., Lancaster, and W. E. Barrie, Carroll, N. H. Non-refillable bottle. No. 885,640; Apr. 21; Sp. p. 4055; Dr. p. 847; Gaz. vol. 133; p. 1890.
Ogle, R., Pueblo, Colo. Turn-table deraller. No. 884,947; Apr. 14; Sp. p. 2615; Dr. pp. 551-2; Gaz. vol. 133; p. 1635.
Ohio Cultivator Company. (See Tuttle, J. S., assignor.)
Ohio Cultivator Company. (See Wygant, L. B., assignor.)
Ohio Rake Company. (See Lathrop, F. K., assignor.)
Ohmer Fare Register Company. (See Ohmer, J. F., assignor.)
Ohmer, J. F., Dayton, Ohio, assignor to Ohmer Fare Register Company, Rochester, N. Y. Actuating mechanism for fare-registers. No. 885,280; Apr. 21; Sp. p. 3321; Dr. pp. 693-4; Gaz. vol. 133; p. 1778.
Olds Gas Power Company. (See Hilprecht, R., assignor.)
Olinger, J. M., Springfield, Ohio. Ice-cleaner for trolley-poles. No. 885,368; Apr. 21; Sp. p. 3513; Dr. p. 733; Gaz. vol. 133; p. 1808.
Oliver Manufacturing Company. (See Oliver, W. B., assignor.)
Oliver, W. B., Collingswood, N. J., assignor to Oliver Manufacturing Company, Philadelphia, Pa. Telephone-stand. No. 885,859; Apr. 28; Sp. p. 4509; Dr. p. 947; Gaz. vol. 133; p. 1993.
Olschewski, L., and F. Trensch, Newark, N. J. Car-fender. No. 885,780; Apr. 28; Sp. p. 4343; Dr. pp. 911-12; Gaz. vol. 133; p. 1966.
Olson, A., Stockett, Mont. Combination-tool. No. 885,076; Apr. 21; Sp. p. 2872; Dr. p. 609; Gaz. vol. 133; p. 1709.
Olson, O. K., Clifford, N. D. Nest for poultry. No. 886,151; Apr. 28; Sp. p. 5112; Dr. p. 1074; Gaz. vol. 133; p. 2089.
Omelka, J. (See Tynis, F., assignor.)
Ontario Nickel Company. (See Dow and Gates, assignors.)
Opsal, A., Portland, Oreg., assignor to Opsal Lubricating Company, Oakland, Cal. Pulley-block. (Reissue.) No. 12,776; Apr. 7; Sp. p. 1382; Dr. p. 295; Gaz. vol. 133; p. 1413.
Opsal Lubricating Company. (See Opsal, A., assignor.) (Reissue.)
Ord, C. E., Cleveland, Ohio. Fluid-heated chamber. No. 885,781; Apr. 28; Sp. p. 4349; Dr. p. 913; Gaz. vol. 133; p. 1966.
Orebaugh, J. F., and C. W. Connett, Madison, Ind.; said Connett assignor to said Orebaugh. Gasolene turbine-motor. No. 884,846; Apr. 14; Sp. p. 2436; Dr. pp. 510-11; Gaz. vol. 133; p. 1607.
Orndoff, O. F., and L. T. Rasmussen, Council Bluffs, Iowa. Furrow-opener. No. 885,641; Apr. 21; Sp. p. 4056; Dr. pp. 847-8; Gaz. vol. 133; p. 1891.
Orr, R. P., New York, N. Y. Tent. No. 884,948; Apr. 14; Sp. p. 2617; Dr. p. 552; Gaz. vol. 133; p. 1636.
Osborne, E. F., assignor to Osborne Steam Engineering Company, Chicago, Ill. Heating and ventilating apparatus. No. 886,325; Apr. 28; Sp. p. 5450; Dr. pp. 1143-4; Gaz. vol. 133; p. 2149.
Osborne Steam Engineering Company. (See Osborne, E. F., assignor.)
Osgood, H. B., assignor to Osgood Scale Company, Binghamton, N. Y. Weighing apparatus. No. 885,698; Apr. 21; Sp. p. 4161; Dr. pp. 871-2; Gaz. vol. 133; p. 1909.
Osgood Scale Company. (See Osgood, H. B., assignor.)
Oslin, R. F., Washington, Ga. Skid-holder. No. 884,847; Apr. 14; Sp. p. 2438; Dr. p. 512; Gaz. vol. 133; p. 1607.
Osterhout, E. A., Ilion, N. Y. Bait-holder. No. 885,642; Apr. 21; Sp. p. 4058; Dr. p. 848; Gaz. vol. 133; p. 1891.
Ott, F. E., Indianapolis, Ind. Road-drag. No. 886,067; Apr. 28; Sp. p. 4948; Dr. p. 1040; Gaz. vol. 133; p. 2062.
Otto, C. E., New York, N. Y. Winding-machine. No. 884,104; Apr. 7; Sp. p. 880; Dr. pp. 185-6; Gaz. vol. 133; p. 1333.
Owen, J. (See Wood, J., assignor.)
Owens, J. M., assignor to J. M. Owens, Oolitic, and J. A. Rowe, Bedford, Ind. Stone-sawing machine. No. 884,949; Apr. 14; Sp. p. 2619; Dr. pp. 552-3; Gaz. vol. 133; p. 1636.
Owens, R. J., Minneapolis, Minn. Grain-separator. No. 886,306; Apr. 28; Sp. p. 5400; Dr. p. 1134; Gaz. vol. 133; p. 2141.
Owens, W. J., Utica, N. Y. Wall-register. No. 884,678; Apr. 14; Sp. p. 2080; Dr. p. 444; Gaz. vol. 133; p. 1549.
Packard, E. D. (See Stump, Reidenbaugh, and Packard.)
Packard, E. D., and J. Reidenbaugh, assignors to Marion Incline Filter and Heater Company, Marion, Ohio. Water-purifying apparatus. No. 885,369; Apr. 21; Sp. p. 3514; Dr. pp. 733-4; Gaz. vol. 133; p. 1808.
Packard, G. F., Pittsburg, Pa., assignor to Westinghouse Electric & Manufacturing Company. Rheostat. No. 885,782; Apr. 28; Sp. p. 4351; Dr. p. 913; Gaz. vol. 133; p. 1966.
Packard, H. F., assignor of one-half to W. A. Gardner, Wakefield, Mass. Apparatus for cutting endless grooves or slots. No. 884,036; Apr. 7; Sp. p. 745; Dr. p. 154; Gaz. vol. 133; p. 1311.
Packard, R. L., Tuckahoe, N. Y. Landmarking-monument. No. 885,281; Apr. 21; Sp. p. 3324; Dr. p. 694; Gaz. vol. 133; p. 1778.
Page, F. P., Syracuse, N. Y. Train-signal. No. 884,950; Apr. 14; Sp. p. 2621; Dr. p. 550; Gaz. vol. 133; p. 1636.
Page, G. L., Fayetteville, N. C. Knockdown display stand or rack. No. 884,848; Apr. 14; Sp. p. 2439; Dr. p. 512; Gaz. vol. 133; p. 1607.
Paige, L. R., Worcester, Mass. Talking-sign. No. 883,737; Apr. 7; Sp. p. 117; Dr. pp. 20-1; Gaz. vol. 133; p. 1211.
Palmer, C. C., New York, N. Y., assignor to Railway & Stationary Refrigerating Company. Heater for freight-cars. No. 885,700; Apr. 21; Sp. p. 4167; Dr. p. 872; Gaz. vol. 133; p. 1910.
Palmer, C. C., Cranford, N. J. Rotary compressor. No. 885,783; Apr. 28; Sp. p. 4352; Dr. p. 913; Gaz. vol. 133; p. 1967.
Palmer, E. H., and W. A. Willits, Detroit, Mich.; said Willits assignor to said Palmer. Lamp. No. 885,699; Apr. 21; Sp. p. 4166; Dr. p. 872; Gaz. vol. 133; p. 1909.
Palmer, H. A., Akron, Ohio. Resilient vehicle-tire. No. 885,800; Apr. 28; Sp. p. 4512; Dr. p. 947; Gaz. vol. 133; p. 1993.
Palmer, I. E., Middletown, Conn. Thread-guide. No. 884,037; Apr. 7; Sp. p. 748; Dr. p. 154; Gaz. vol. 133; p. 1312.
Palmer, I. E., Middletown, Conn. Hull of vessels. No. 885,370; Apr. 21; Sp. p. 3518; Dr. p. 734; Gaz. vol. 133; p. 1808.
Palmer, J. E., Lynn, Mass. Automatic fender. No. 884,413; Apr. 14; Sp. p. 1500; Dr. pp. 322-3; Gaz. vol. 133; p. 1463.
Pape, W., *et al.* (See Heilbrunn, Blüth, and Pape.)
Parent, F., Bagley, Minn. Car-stake. No. 885,643; Apr. 21; Sp. p. 4059; Dr. p. 848; Gaz. vol. 133; p. 1891.
Park, J. S., Rockport, Ind. Earth-auger. No. 886,242; Apr. 28; Sp. p. 5264; Dr. p. 1109; Gaz. vol. 133; p. 2118.
Park, W. (See Simpson and Park.)
Parker Machine Company. (See Sponsel, C. W., assignor.)

Parks, M. T., Lydd, England. Sea-sounding apparatus. No. 884,038; Apr. 7; Sp. p. 749; Dr. pp. 154–5; Gaz. vol. 133; p. 1312.
Parlin and Orendorff Company. (See Graham, W. S., assignor.)
Parmelee, H. S. (See Fancher and Parmelee.)
Parnell, T. E., *et al.* (See Davis, C. B., assignor.)
Parsons, C. A., Newcastle-upon-Tyne, England. Dynamo-electric machinery. No. 883,822; Apr. 7; Sp. p. 296; Dr. pp. 55–6; Gaz. vol. 133; p. 1240.
Parsons, H., Southampton, England. Tire-protector. No. 885,515; Apr. 21; Sp. p. 3771; Dr. pp. 793–4; Gaz. vol. 133; p. 1852.
Partridge, H. (See McDonald, J. B., assignor.)
Pasteur-Chamberland Filter Company. (See Wuichet, W. G., assignor.)
Patrick, H. N., Sheffield, Ala. Picture-hanger. No. 885,172; Apr. 21; Sp. p. 3102; Dr. pp. 652–3; Gaz. vol. 133; p. 1741.
Patten, J. S., assignor to R. M. Duvall and M. Schaeffer, Baltimore, Md. Lubricating-packing holder for car-axle boxes. (Reissue.) No. 12,786; Apr. 28; Sp. p. 5498; Dr. p. 1150; Gaz. vol. 133; p. 2153.
Patten, M. A., Milltown, Ga. Washing-machine. No. 886,243; Apr. 28; Sp. p. 5266; Dr. p. 1109; Gaz. vol. 133; p. 2119.
Patterson, C. A., Portland, Oreg. Buckle. No. 885,701; Apr. 21; Sp. p. 4109; Dr. p. 873; Gaz. vol. 133; p. 1910.
Patterson, G. H., and A. Watson, Newcastle-upon-Tyne, England. Package. No. 883,738; Apr. 7; Sp. p. 119; Dr. p. 21; Gaz. vol. 133; p. 1212.
Patterson, R. E., Rochester, N. Y. Rope-grip. No. 884,521; Apr. 14; Sp. p. 1727; Dr. p. 371; Gaz. vol. 133; p. 1497.
Patton, J. B. (See Engberg, E. O., assignor.)
Paul, J. T. H., assignor to E. Goldman & Company, Inc., Chicago, Ill. Pasteurizing apparatus. No. 886,012; Apr. 28; Sp. p. 4835; Dr. pp. 1015–17; Gaz. vol. 133; p. 2045.
Paul, J. T. H., assignor to E. Goldman & Co., Inc., Chicago, Ill. Pasteurizing apparatus. No. 886,013; Apr. 28; Sp. p. 4845; Dr. pp. 1017–20; Gaz. vol. 133; p. 2045.
Paul, W. L., assignor to Peru Plow & Wheel Company, Peru, Ill. Pivoted-axle cultivator. No. 885,077; Apr. 21; Sp. p. 2873; Dr. p. 609; Gaz. vol. 133; p. 1710.
Paul, W. L., assignor to Peru Plow & Wheel Company, Peru, Ill. Wheel-plow. No. 885,078; Apr. 21; Sp. p. 2874; Dr. p. 610; Gaz. vol. 133; p. 1710.
Paul, W. L., assignor to Peru Plow & Wheel Company, Peru, Ill. Pivoted-axle cultivator. No. 885,079; Apr. 21; Sp. p. 2878; Dr. p. 610; Gaz. vol. 133; p. 1710.
Paulson, H., Orting, Wash. Yard-truck. No. 883,904; Apr. 7; Sp. p. 476; Dr. p. 93; Gaz. vol. 133; p. 1268.
Pawlick, I. H., San Francisco, Cal. Baking-oven. No. 885,173; Apr. 21; Sp. p. 3103; Dr. pp. 653–4; Gaz. vol. 133; p. 1741.
Pearson, M. M., Schenectady, N. Y., assignor to General Electric Company. Elastic-fluid turbine. No. 883,905; Apr. 7; Sp. p. 477; Dr. p. 93; Gaz. vol. 133; p. 1268.
Pearson, W. J., Winchester, Oreg. Water-wheel. No. 884,202; Apr. 7; Sp. p. 1112; Dr. p. 233; Gaz. vol. 133; p. 1365.
Peckham, G. G. G. (See Law, L. L., assignor.)
Pederson, C. S., Grantsburg, Wis. Wrench. No. 884,203; Apr. 7; Sp. p. 1114; Dr. p. 233; Gaz. vol. 133; p. 1366.
Peek, W. A. (See Merrifield and Peek.)
Peeples, A. D., Kansas City, Mo. Ice-card holder. No. 885,282; Apr. 21; Sp. p. 3325; Dr. p. 694; Gaz. vol. 133; p. 1778.
Peerless Motor Car Company. (See Schmidt, C., assignor.)
Pegram, C. V. (See Dempster, J. E., assignor.)
Peickert, R. E., Dumont, Minn. Penholder. No. 884,849; Apr. 12; Sp. p. 2440; Dr. p. 512; Gaz. vol. 133; p. 1608.
Pein, E. J. Von, assignor, by mesne assignments, to National Cash Register Company, Dayton, Ohio. Cash-register. No. 885,550; Apr. 21; Sp. p. 3874; Dr. pp. 810–11; Gaz. vol. 133; p. 1863.
Peirce, C. L., Jr., Elkhart, Ind., assignor to Peirce Specialty Company, Chicago, Ill. Insulator-support. No. 883,823; Apr. 7; Sp. p. 299; Dr. p. 56; Gaz. vol. 133; p. 1240.
Peirce, J. R., assignor to Royden Marble Machinery Company, New York, N. Y. Machine for working marble or the like. No. 885,283; Apr. 21; Sp. p. 3326; Dr. p. 695; Gaz. vol. 133; p. 1779.
Peirce, J. R., assignor to Royden Marble Machinery Company, New York, N. Y. Clamp. No. 885,949; Apr. 28; Sp. p. 4709; Dr. p. 990; Gaz. vol. 133; p. 2024.
Peirce Specialty Company. (See Peirce, C. L., Jr., assignor.)
Pellew, C. E., and D. W. Whipple, New York, N. Y., assignors to Columbia Process Company. Chemical process. No. 884,756; Apr. 14; Sp. p. 2240; Gaz. vol. 133; p. 1576.
Pelton, C. H., assignor to Thomas Manufacturing Company, Springfield, Ohio. Disk drill. No. 885,080; Apr. 21; Sp. p. 2879; Dr. p. 611; Gaz. vol. 133; p. 1711.
Pennsylvania Globe Gas Light Company. (See Slinack, V. H., assignor.)
Penrose, E. (See O'Leary, J., assignor.)
Pentecost, J. T., Ensley, Ala. Framing or measuring instrument. No. 885,284; Apr. 21; Sp. p. 3328; Dr. p. 695; Gaz. vol. 133; p. 1779.
Penton, H., Detroit, Mich., assignor of one-half to W. I. Babcock, New York, N. Y. Steering-gear for ships. No. 884,292; Apr. 7; Sp. p. 1262; Dr. p. 265; Gaz. vol. 133; p. 1394.
Pepper, J. E., Rome, N. Y. Artificial bait. No. 885,861; Apr. 28; Sp. p. 4513; Dr. p. 947; Gaz. vol. 133; p. 1994.
Perigo, O. E., Oakland, Cal. Ventilated fruit-crate. No. 883,907; Apr. 7; Sp. p. 480; Dr. p. 94; Gaz. vol. 133; p. 1269.
Perkins, C. E., *et al.* (See Perkins, H. J., assignor.)
Perkins, F. L., *et al.* (See Perkins, H. J., assignor.)
Perkins, H. J., assignor of two-thirds to F. L. and C. E. Perkins, Grand Rapids, Mich. Propeller-wheel. No. 885,174; Apr 21; Sp. p. 3104; Dr. p. 654; Gaz. vol. 133; p. 1742.
Perrin, W. H., New Liskeard, Ontario, Canada. Shocking attachment for binders. No. 886,326; Apr. 28; Sp. p. 5457; Dr. p. 1144; Gaz. vol. 133; p. 2149.
Perrin, W. R., Chicago, Ill. Device for ejecting hogs from scalding vats. No. 884,608; Apr. 14; Sp. p. 1906; Dr. p. 409; Gaz. vol. 133; p. 1526.
Perry, F. W., Denver, Colo. Metal sign. No. 884,951; Apr. 14; Sp. p. 2622; Dr. pp. 553–4; Gaz. vol. 133; p. 1637.
Perry, G. E., assignor to Perry Time Stamp Company, Chicago, Ill. Time-stamp. No. 885,076; Apr. 21; Sp. p. 4116; Dr. p. 862; Gaz. vol. 133; p. 1902.
Perry, L. F. (See Du Boise and Perry.)
Perry Time Stamp Company. (See Perry, G. E., assignor.)
Peru Plow & Wheel Company. (See Paul, W. L., assignor.)
Peter, F. A., Newside, Pa. Snow guard or fender for roofs. No. 884,850; Apr. 14; Sp. p. 2441; Dr. p. 513; Gaz. vol. 133; p. 1608.
Peterson, A. (See Lindal, S. F. F., assignor.)
Peterson, F. A., Syracuse, N. Y. Voting-machine. No. 884,039; Apr. 7; Sp. p. 751; Dr. pp. 155–6; Gaz. vol. 133; p. 1312.
Peterson, H. L. E., Elgin, Ill. Pipe-threading machine. No. 885,175; Apr. 21; Sp. p. 3106; Dr. p. 654; Gaz. vol. 133; p. 1742.
Peterson, J. (See Baker, W. H., assignor.)
Peterson, V. J. (See Faverty and Peterson.)
Petracchi, A., Milan, Italy. Separable barrel or other receptacle. No. 885,371; Apr. 21; Sp. p. 3519; Dr. p. 734; Gaz. vol. 133; p. 1809.
Petri-Palmedo, D., Hoboken, N. J. Casting lines of single type. No. 884,293; Apr. 7; Sp. p. 1264; Dr. p. 266; Gaz. vol. 133; p. 1394.
Petsche, G. B., assignor to Southwark Foundry and Machine Company, Philadelphia, Pa. Condenser. No. 885,285; Apr. 21; Sp. p. 3329; Dr. p. 695; Gaz. vol. 133; p. 1779.
Petterson, S. G., Pine Bluff, Ark. Combined bevel and square. No. 883,908; Apr. 7; Sp. p. 481; Dr. pp. 94–5; Gaz. vol. 133; p. 1269.
Pettibone, H., New Rochelle, N. Y., assignor to Power and Mining Machinery Company. Apparatus for manufacturing gas. No. 885,372; Apr. 21; Sp. p. 3519; Dr. p. 735; Gaz. vol. 133; p. 1809.
Pettit, F. H., Rhea, Okla. Signal. No. 885,644; Apr. 21; Sp. p. 4060; Dr. p. 848; Gaz. vol. 133; p. 1892.
Pfau, E. G., assignor to Pfau Manufacturing Company, Cincinnati, Ohio. Foundry-separator. No. 886,152; Apr. 28; Sp. p. 5113; Dr. p. 1074; Gaz. vol. 133; p. 2089.
Pfau, J. B., Duluth, Minn. Horse-brush. No. 886,153; Apr. 28; Sp. p. 5115; Dr. p. 1074; Gaz. vol. 133; p. 2089.
Pfau Manufacturing Company. (See Pfau, E. G., assignor.)
Pfleghar, F. P., assignor to English & Mersick Co., New Haven, Conn. Combined lock and latch for vehicle-doors. No. 885,176; Apr. 21; Sp. p. 3107; Dr. p. 654; Gaz. vol. 133; p. 1742.
Phelan, M. D., Lynn, assignor, by mesne assignments, to T. G. Plant, Boston, Mass. Staple-tacker. No. 883,824; Apr. 7; Sp. p. 300; Dr. pp. 56–7; Gaz. vol. 133; p. 1240.
Phelps, C., Oskaloosa, Iowa. Smoke-consuming furnace. No. 885,950; Apr. 28; Sp. p. 4711; Dr. p. 990; Gaz. vol. 133; p. 2024.
Phelps, F., Wellston, Okla. Press-box. No. 885,784; Apr. 28; Sp. p. 4354; Dr. p. 914; Gaz. vol. 133; p. 1967.
Phelps, G. H., Downer, Colo. Manuscript or copy holder. No. 885,677; Apr. 21; Sp. p. 4120; Dr. p. 862; Gaz. vol 133; p. 1903.
Phillips, E. C., Chicago, Ill., assignor to L. P. Thompson, Cincinnati, Ohio. Platen for type-writing machines. No. 883,909; Apr. 7; Sp. p. 482; Dr. p. 95; Gaz. vol. 133; p. 1269.
Phillips, G. H., assignor of one-half to himself and G. F. Soule, Plymouth, Mass. Tire-sealing device. No. 884,294; Apr. 7; Sp. p. 1267; Dr. p. 267; Gaz. vol. 133; p. 1395.
Phillips, J., Midland, Ontario, Canada. Lock. No. 884,414; Apr. 14; Sp. p. 1505; Dr. p. 323; Gaz. vol. 133; p. 1463.
Phillips, J. C., *et al.* (See Lindsay, L. J., assignor.)
Phillips, J. T., *et al.* (See Lindsay, L. J., assignor.)
Phillips, W. (See Gault, J. P., assignor.)

Phillis, A. E., assignor to Wrightsville Hardware Company, Wrightsville, Pa. Handle-fastening. No. 885,286; Apr. 21; Sp. p. 3330; Dr. p. 695; Gaz. vol. 133; p. 1780.
Philp, C. von, New York, N. Y. Inking device. No. 885,287; Apr. 21; Sp. p. 3331; Dr. p. 696; Gaz. vol. 133; p. 1780.
Phipps, C. W., and W. J. Steele, Northampton, England; said Steele assignor to said Phipps. Cementing apparatus. No. 885,862; Apr. 28; Sp. p. 4514; Dr. pp. 947–8; Gaz. vol. 133; p. 1994.
Picard, R., Neuilly, Seine, France. Fare-indicator for carriages. No. 886,244; Apr. 28; Sp. p. 5267; Dr. pp. 1109–10; Gaz. vol. 133; p. 2119.
Pickard, G. W., Amesbury, Mass. Oscillation-receiver. No. 886,154; Apr. 28; Sp. p. 5116; Dr. p. 1075; Gaz. vol. 133; p. 2090.
Pierce, D. C., Nowrytown, Pa. Wrench. No. 884,851; Apr. 14; Sp. p. 2442; Dr. p. 513; Gaz. vol. 133; p. 1608.
Pierce, H., Seattle, Wash. Reversible turbine-engine. No. 883,910; Apr. 7; Sp. p. 483; Dr. pp. 95–6; Gaz. vol. 133; p. 1269.
Pierce, H., Seattle, Wash. Rotary engine. No. 883,911; Apr. 7; Sp. p. 486; Dr. pp. 96–7; Gaz. vol. 133; p. 1270.
Pierce, J. H., Chicago, Ill. Corn-silker. No. 885,373; Apr. 21; Sp. p. 3522; Dr. pp. 735–7; Gaz. vol. 133; p. 1809.
Pike, J. G., Silver City, N. C. Shingle-sawing machine. No. 883,912; Apr. 7; Sp. p. 489; Dr. p. 97; Gaz. vol. 133; p. 1270.
Pilkington, J. H., Waterbury, Conn. Garment-clasp. No. 884,040; Apr. 7; Sp. p. 765; Dr. p. 157; Gaz. vol. 133; p. 1313.
Pindstofte, A. A., Copenhagen, Denmark. Bottling apparatus. No. 885,785; Apr. 28; Sp. p. 4357; Dr. p. 914; Gaz. vol. 133; p. 1968.
Ping, R. G., assignor of one-half to S. A. McHargue, Audubon, Iowa. Gate. No. 885,288; Apr. 21; Sp. p. 3333; Dr. p. 696; Gaz. vol. 133; p. 1780.
Piper, H. H., assignor of thirteen-twentieths to R. T. Henderson, Jackson, Mo. Folding seat for vehicles. No. 884,204; Apr. 7; Sp. p. 1116; Dr. p. 233; Gaz. vol. 133; p. 1366.
Pittsburgh Equipment Company. (See Pulliam, O. S., assignor.)
Pittsfield Spark Coil Company. (See Jacobson, E. B., assignor.)
Plant, T. G. (See Cummings, H. H., assignor.)
Plant, T. G. (See Hooper, W. H., assignor.)
Plant, T. G. (See Phelan, M. D., assignor.)
Plant, T. G. (See Stewart, G. F., assignor.)
Plant, T. G. (See Stewart, W. C., assignor.)
Plumbing Specialty Company. (See Kenly, G. T., assignor.)
Plunkett, T. J., and W. Silvers, Nashville, Tenn. Chain-link. No. 884,415; Apr. 14; Sp. p. 1506; Dr. p. 323; Gaz. vol. 133; p. 1463.
Plympton, F. K., Wellesley, Mass. Closure for milk-jars and the like. No. 886,014; Apr. 28; Sp. p. 4852; Dr. p. 1020; Gaz. vol. 133; p. 2045.
Poehlein, G. J., Owensboro, Ky. Fastener. No. 885,645; Apr. 21; Sp. p. 4061; Dr. p. 849; Gaz. vol. 133; p. 1892.
Poelma, R. W., *et al.* (See Brisbois, O., assignor.)
Pohlig, E., Richmond, Va. Dispensing-box. No. 885,374; Apr. 21; Sp. p. 3526; Dr. p. 737; Gaz. vol. 133; p. 1810.
Pohlman, A. J. (See Youngman, C. A., assignor.)
Poindexter, R. E., Indianapolis, Ind. Sod-trimmer. No. 884,416; Apr. 14; Sp. p. 1507; Dr. p. 324; Gaz. vol. 133; p. 1464.
Pokorney, J. F., Hutchinson, Minn. Rack for farm-wagons. No. 884,679; Apr. 14; Sp. p. 2081; Dr. p. 444; Gaz. vol. 133; p. 1550.
Polakoskey, F. V., Peekskill, N. Y. Clothes-pin. No. 884,680; Apr. 14; Sp. p. 2083; Dr. p. 445; Gaz. vol. 133; p. 1550.
Polk, C. H., Kappa, Ind. End-gate. No. 883,730; Apr. 7; Sp. p. 120; Dr. p. 21; Gaz. vol. 133; p. 1212.
Polson, A. (See Henrich, P., assignor.)
Polzin, J., Davenport, Iowa. Filter. No. 885,516; Apr. 21; Sp. p. 3772; Dr. p. 794; Gaz. vol. 133; p. 1853.
Poore, J. C. (See Odenbach, F. L., assignor.)
Pope, J. H., Brockton, Mass., assignor to United Shoe Machinery Company. Heel-attaching machine. No. 884,524; Apr. 14; Sp. p. 1731; Dr. pp. 371–2; Gaz. vol. 133; p. 1498.
Poppe, P. A., Coventry, England. Spray-carburetor. No. 883,740; Apr. 7; Sp. p. 121; Dr. p. 21; Gaz. vol. 133; p. 1212.
Porter, W. C., Worcester, Mass., assignor to Krentler-Arnold Hinge Last Company, Detroit, Mich. Divided last. No. 884,757; Apr. 14; Sp. p. 2243; Dr. p. 473; Gaz. vol. 133; p. 1576.
Portuba, J., Allegheny, Pa. Balance-wheel for watches. No. 884,852; Apr. 14; Sp. p. 2443; Dr. p. 513; Gaz. vol. 133; p. 1608.
Post, A. L., assignor to Kent Machine Company, Kent, Ohio. Apparatus for feeding materials to a mixer. No. 885,951; Apr. 28; Sp. p. 4713; Dr. p. 991; Gaz. vol. 133; p. 2025.
Post, C. B., New London, Ohio. Detachable handle. No. 884,041; Apr. 7; Sp. p. 756; Dr. p. 157; Gaz. vol. 133; p. 1313.
Post & Lester Company. (See Lester, H. W., assignor.)
Potter, A., New York, N. Y. Apparatus for the chemical treatment of water. No. 886,068; Apr. 28; Sp. p. 4950; Dr. pp. 1040–1; Gaz. vol. 133; p. 2068.
Potter, E., South Meriden, assignor to Hemming Brothers, New Haven, Conn. Cutlery knife-holder. No. 885,081; Apr. 21; Sp. p. 2882; Dr. p. 611; Gaz. vol. 133; p. 1711.
Potter, F. W. (See Westcott and Potter.)
Potter, T. I., Oakland, Cal. Change-making machine. No. 886,307; Apr. 28; Sp. p. 5402; Dr. p. 1134; Gaz. vol. 133; p. 2141.
Potvin, Z. (See Martel, E. J., assignor.)
Poulson, P. O., Brigham, Utah., Rotary engine. No. 884,952; Apr. 14; Sp. p. 2624; Dr. p. 554; Gaz. vol. 133; p. 1637.
Powell, A. M., assignor to Carthage Machine Company, Carthage, N. Y. Wood-chipper. No. 885,177; Apr. 21; Sp. p. 3108; Dr. p. 655; Gaz. vol. 133; p. 1742.
Powell, F. D., and C. S. Ellis, assignors to American Coin Register Company, Chicago, Ill. Coin-box and registering mechanism for telephones. No. 885,375; Apr. 21; Sp. p. 3528; Dr. pp. 737–8; Gaz. vol. 133; p. 1810.
Powell Knitting Company. (See Foster, A., assignor.)
Power and Mining Machinery Company. (See Pettibone, H., assignor.)
Pratt & Whitney Company. (See Hanson, B. M. W., assignor.)
Prazak, E., Elizabeth, N. J. Attachment for talking-machines. No. 885,178; Apr. 21; Sp. p. 3109; Dr. p. 655; Gaz. vol. 133; p. 1743.
Prescott, E. S., San Francisco, Cal. Thread-holder for spools. No. 885,517; Apr. 21; Sp. p. 3774; Dr. p. 794; Gaz. vol. 133; p. 1853.
Presser, H. B., Memphis, Tenn. Alarm-gage. No. 885,289; Apr. 21; Sp. p. 3334; Dr. p. 696; Gaz. vol. 133; p. 1780.
Preston, W., Stratford, Ontario, Canada. Gyratory sifter. No. 885,062; Apr. 21; Sp. p. 2883; Dr. pp. 611–12; Gaz. vol. 133; p. 1712.
Priest, M. B., Milwaukee, Wis., assignor to Priest Tire Company. Vehicle-tire. No. 885,646; Apr. 21; Sp. p. 4063; Dr. p. 849; Gaz. vol. 133; p. 1892.
Priest, M. B., Milwaukee, Wis., assignor to Priest Tire Company. Pneumatic vehicle-tire. No. 885,647; Apr. 21; Sp. p. 4064; Dr. p. 849; Gaz. vol. 133; p. 1892.
Priest Tire Company. (See Priest, M. B., assignor.)
Priestman, A., Philadelphia, Pa. Apparatus for automatically discharging liquids. No. 884,522; Apr. 14; Sp. p. 1727; Dr. p. 371; Gaz. vol. 133; p. 1497.
Prima, J. C., assignor to J. C. Prima Machinery Company, Battle Creek, Mich. Roaster. No. 884,523; Apr. 14; Sp. p. 1729; Dr. p. 371; Gaz. vol. 133; p. 1497.
Princess Manufacturing Company. (See Obermesser, W. C., assignor.)
Prinz, W. H., Oak Park, assignor to Saladin Pneumatic Malting Construction Company, Chicago, Ill. Strainer for steep-tanks. No. 885,786; Apr. 28; Sp. p. 4358; Dr. p. 914; Gaz. vol. 133; p. 1968.
Pruitt, O. M. (See Harris, O. E., assignor.)
Pruyn, W. H., Jr., Chicago, Ill. Concrete railway-tie. No. 885,863; Apr. 28; Sp. p. 4516; Dr. p. 948; Gaz. vol. 133; p. 1994.
Pugh, W. A., Dadeville, Mo. Clothes-pin. No. 886,245; Apr. 28; Sp. p. 5272; Dr. p. 1110; Gaz. vol. 133; p. 2119.
Pulliam, O. S., assignor to Pittsburgh Equipment Company, Pittsburg, Pa. Car-bolster. No. 886,069; Apr. 28; Sp. p. 4955; Dr. p. 1041; Gaz. vol. 133; p. 2068.
Pulliam, O. S., assignor to Pittsburgh Equipment Company, Pittsburg, Pa. Car-bolster. No. 886,070; Apr. 28; Sp. p. 4956; Dr. p. 1041; Gaz. vol. 133; p. 2068.
Pulliam, O. S., assignor to Pittsburgh Equipment Company, Pittsburg, Pa. Side-frame construction. No. 886,071; Apr. 28; Sp. p. 4957; Dr. p. 1042; Gaz. vol. 133; p. 2068.
Pullman Company. (See Dodds, E. I., assignor.)
Pursell, L. H. (See Bradbury, H. P., assignor.)
Purser, J. E., Windsor, Ontario, Canada, assignor to J. Morehead, Detroit, Mich. Condensed water and steam separator. No. 883,825; Apr. 7; Sp. p. 306; Dr. pp. 57–8; Gaz. vol. 133; p. 1241.
Purser, J. E., Windsor, Ontario, Canada, assignor to J. Morehead, Detroit, Mich. Separator. No. 883,826; Apr. 7; Sp. p. 311; Dr. p. 58; Gaz. vol. 133; p. 1241.
Pyle, G. W., Geneva, Ind. Fence-post. No. 883,913; Apr. 7; Sp. p. 491; Dr. p. 97; Gaz. vol. 133; p. 1271.
Qualley, T. J., Decorah, Iowa. Loader. No. 885,952; Apr. 28; Sp. p. 4718; Dr. pp. 991–2; Gaz. vol. 133; p. 2026.
R. Neumann Hardware Company. (See Kitchell, J. F., assignor.)
Raban, J. B., Louisville, Ky. Horseshoe. No. 883,914; Apr. 7; Sp. p. 492; Dr. p. 97; Gaz. vol. 133; p. 1271.
Rabe, J. H., St. Louis, Mo. Whiffletree-hook. No. 885,518; Apr. 21; Sp. p. 3774; Dr. p. 794; Gaz. vol. 133; p. 1853.
Rabich, W., assignor to Franklin Manufacturing Company, St. Louis, Mo. Folding furniture. No. 886,072; Apr. 28; Sp. p. 4958; Dr. p. 1042; Gaz. vol. 133; p. 2068.
Rabideau, E. J., Inglewood, Wash. Tumbler-washer. No. 884,992; Apr. 14; Sp. p. 2701; Dr. pp. 572–3; Gaz. vol. 133; p. 1649.

Radcliffe, C. R., New York, N. Y., assignor to International Patent Corporation, Jersey City, N. J. Internal-combustion engine. No. 884,853; Apr. 14; Sp. p. 2444; Dr. pp. 513–14; Gaz. vol. 133; p. 1608.
Rader, G., Montclair, N. J. Molding-table for making plaster-boards. No. 884,953; Apr. 14; Sp. p. 2625; Dr. p. 554; Gaz. vol. 133; p. 1637.
Rader, G., Montclair, N. J. Plaster or composition board. No. 884,954; Apr. 14; Sp. p. 2628; Dr. p. 555; Gaz. vol. 133; p. 1638.
Ragan, O. P., Ridgeway, Mo. Electrical attachment for clocks. No. 885,953; Apr. 28; Sp. p. 4726; Dr. p. 902; Gaz. vol. 133; p. 2026.
Rail Joint Company. (See Wolhaupter, B., assignor.)
Railway & Stationary Refrigerating Company. (See Palmer, C. C., assignor.)
Raines, J. (See Terrell, N. A., assignor.)
Rains, E. I., *et al.* (See Condon, E. J., assignor.)
Rakestraw, G. W., Hollysprings, Ga. Car-door operator. No. 884,295; Apr. 7; Sp. p. 1268; Dr. p. 267; Gaz. vol. 133; p. 1395.
Ramsdell, W. H., deceased, New York, N. Y.; G. H. Bruce, administrator. Metallic washtub-cover. No. 885,707; Apr. 21; Sp. p. 4180; Dr. p. 875; Gaz. vol. 133; p. 1912.
Ramsey, J. A., Beatrice, Nebr. Husker. No. 884,609; Apr. 14; Sp. p. 1907; Dr. p. 409; Gaz. vol. 133; p. 1526.
Ramsey, W. W., Chicago, Ill. Metal reinforce for concrete. No. 884,341; Apr. 7; Sp. p. 1349; Dr. p. 288; Gaz. vol. 133; p. 1409.
Rand, McNally & Co. (See Dubois, W., assignor.)
Randall, K. C., Edgewood Park, Pa., assignor to Westinghouse Electric & Manufacturing Company. Cooling system for transformers. No. 886,246; Apr. 28; Sp. p. 5273; Dr. pp. 1110–11; Gaz. vol. 133; p. 2120.
Randall, K. C., Edgewood Park, and C. B. Gibson, Wilkinsburg, Pa., assignors to Westinghouse Electric & Manufacturing Company. Cooling system for electric apparatus. No. 886,073; Apr. 28; Sp. p. 4959; Dr. pp. 1042–3; Gaz. vol. 133; p. 2064.
Range, G., New York, N. Y. Cabinet. No. 884,758; Apr. 14; Sp. p. 2246; Dr. p. 473; Gaz. vol. 133; p. 1577.
Rasmussen, L. T. (See Orndoff and Rasmussen.)
Rateau, A. C. E., Paris, France. Utilizing hot liquids for power purposes. No. 884,417; Apr. 14; Sp. p. 1508; Dr. p. 324; Gaz. vol. 133; p. 1464.
Rateau, A. C. E., Paris, France. Steam-regenerator. No. 884,610; Apr. 14; Sp. p. 1908; Dr. p. 410; Gaz. vol. 133; p. 1526.
Rathbun, L. V., Kansas City, Mo. Means for facilitating the adjustment of balance-weights on gyrating machines. No. 883,827; Apr. 7; Sp. p. 313; Dr. p. 59; Gaz. vol. 133; p. 1242.
Rauh, L. (See Dana, W. H., assignor.)
Raum, W. Etna, Pa. Button. No. 884,265; Apr. 7; Sp. p. 1116; Dr. p. 234; Gaz. vol. 133; p. 1366.
Rawles, S. T., Galesburg, Ill. Brick-kiln. No. 885,954; Apr. 28; Sp. p. 4723; Dr. pp. 992–3; Gaz. vol. 133; p. 2026.
Ray, M. G., Perth Amboy, N. J. Fire and water proof building material. No. 885,376; Apr. 21; Sp. p. 3531; Gaz. vol. 133; p. 1810.
Rayford, C. E., St. Elmo, Ala. Turpentine-hack. No. 884,854; Apr. 14; Sp. p. 2446; Dr. p. 515; Gaz. vol. 133; p. 1609.
Read, H. R., Brooklyn, N. Y. Electrical connection. No. 885,864; Apr. 28; Sp. p. 4519; Dr. p. 948; Gaz. vol. 133; p. 1995.
Reading Hardware Company. (See Adams, W. T., assignor.)
Rebar, J., Smithdale, Pa. Electric signal. No. 885,519; Apr. 21; Sp. p. 3775; Dr. p. 795; Gaz. vol. 133; p. 1853.
Reber, J. G., Chicago, Ill., assignor to J. W. Sefton Manufacturing Company, Anderson, Ind. Oyster-pail. No. 886,074; Apr. 28; Sp. p. 4960; Dr. p. 1043; Gaz. vol. 133; p. 2064.
Rechtenbach, G. H., Bridgewater, Iowa. Grain-screen. No. 886,247; Apr. 28; Sp. p. 5274; Dr. p. 1111; Gaz. vol. 133; p. 2120.
Reckard, H. L., Peekskill, N. Y. Printing process. No. 884,418; Apr. 14; Sp. p. 1511; Dr. p. 324; Gaz. vol. 133; p. 1464.
Reddaway, F., Pendleton, Manchester, England. Manufacture of conveyer-belting and machine-belting. No. 885,955; Apr. 28; Sp. p. 4724; Dr. p. 993; Gaz. vol. 133; p. 2027.
Redles, I., (now by marriage I. R. Shill,) Swarthmore, Pa. Pin-fastener. No. 884,611; Apr. 14; Sp. p. 1910; Dr. p. 410; Gaz. vol. 133; p. 1527.
Reed, A. and D. A., Los Angeles, Cal. Shoe. No. 884,681; Apr. 14; Sp. p. 2084; Dr. p. 445; Gaz. vol. 133; p. 1550.
Reed, D. A. (See Reed, A. and D. A.)
Reed, J. A., Richmond, Ind. Metal railway-tie. No. 885,377; Apr. 21; Sp. p. 3532; Dr. p. 738; Gaz. vol. 133; p. 1811.
Reel, W. H., Pennsgrove, N. J. Railway-rail joint. No. 885,787; Apr. 28; Sp. p. 4360; Dr. p. 915; Gaz. vol. 133; p. 1909.
Reeves, C. R., Fairhaven, Mass. Car-fender. No. 884,206; Apr. 7; Sp. p. 1117; Dr. p. 234; Gaz. vol. 133; p. 1367.
Regensburger, F. J. (See Nylander and Regensburger.)
Rehfuss, J. G. (See Tily and Rehfuss.)
Rehfuss, M. O. (See Tily and Rehfuss.)
Reichart, W. M. (See Sixt and Reichart.)
Reichenbach, F., Charlottenburg, Germany. Device for igniting the charges of internal-combustion engines. No. 885,520; Apr. 21; Sp. p. 3776; Dr. p. 795; Gaz. vol. 133; p. 1853.
Reichert, J., Racine, Wis. Harness-buckle. No. 884,207; Apr. 7; Sp. p. 1118; Dr. p. 234; Gaz. vol. 133; p. 1367.
Reichner, W. K., Philadelphia, Pa. Street-railway automatic switch-iron. No. 885,788; Apr. 28; Sp. p. 4361; Dr. p. 915; Gaz. vol. 133; p. 1909.
Reidenbaugh, J. (See Packard and Reidenbaugh.)
Reidenbaugh, J. (See Stump, Reidenbaugh, and Packard.)
Reigh, M. S., Pittsburg, Pa. Means for making horseshoes. No. 884,855; Apr. 14; Sp. p. 2447; Dr. p. 515; Gaz. vol. 133; p. 1609.
Reinhardt, P., Omaha, Nebr. Metallic vehicle-hub. No. 884,612; Apr. 14; Sp. p. 1911; Dr. p. 410; Gaz. vol. 133; p. 1527.
Remington, A. M., assignor to Simonds Manufacturing Co., Fitchburg, Mass. Handsaw. No. 885,521; Apr. 21; Sp. p. 3777; Dr. p. 795; Gaz. vol. 133; p. 1854.
Remington, J. P., Philadelphia, Pa. Device for cleaning capsules. No. 886,075; Apr. 28; Sp. p. 4962; Dr. p. 1043; Gaz. vol. 133; p. 2064.
Remington, W. M. (See Duryea and Remington.)
Renas, C. (See Hestand and Renas.)
Renshaw, W. J., Newcastle, England. Means for producing motive fluid from the combustion of fuel. No. 884,042; Apr. 7; Sp. p. 757; Dr. pp. 157–8; Gaz. vol. 133; p. 1313.
Reppert, R. von, St. Louis, Mo. Computing-machine. No. 885,522; Apr. 21; Sp. p. 3778; Dr. pp. 795–9; Gaz. vol. 133; p. 1854.
Republic Metalware Company. (See Detmers, S., assignor.)
Réquillart, E., Levallois-Perret, France. Folding bit-stock. No. 884,856; Apr. 14; Sp. p. 2449; Dr. p. 515; Gaz. vol. 133; p. 1609.
Rettig, G., Jr. (See Nuernberger and Rettig.)
Reuter, J., Rochester, N. Y. Automatic signaling mechanism. No. 883,829; Apr. 7; Sp. p. 317; Dr. pp. 59–60; Gaz. vol. 133; p. 1242.
Reynolds, L. B. (See Reynolds, L. E. and L. B.)
Reynolds, L. E. and L. B., Grand Rapids, Mich.; said L. B. Reynolds assignor to said L. E. Reynolds. Basket. No. 886,308; Apr. 28; Sp. p. 5405; Dr. p. 1135; Gaz. vol. 133; p. 2142.
Reynolds, W. N., Litchfield, Conn. Rail-lock and tie-plate. No. 886,248; Apr. 28; Sp. p. 5276; Dr. p. 1111; Gaz. vol. 133; p. 2120.
Reznicek, A., Jersey City, N. J., assignor to C. Bloomberg, New York, N. Y. Garter-clasp. No. 885,290; Apr. 21; Sp. p. 3335; Dr. p. 696; Gaz. vol. 133; p. 1781.
Rhoades, A. E., assignor to Draper Company, Hopedale, Mass. Bobbin-holder. No. 884,759; Apr. 14; Sp. p. 2249; Dr. p. 473; Gaz. vol. 133; p. 1577.
Rhoades, A. E., assignor to Draper Company, Hopedale, Mass. Warp stop-motion for looms. No. 885,179; Apr. 21; Sp. p. 3110; Dr. p. 655; Gaz. vol. 133; p. 1743.
Rhodes, L., Spokane, Wash. Yieldable gearing for traction-wheels. No. 883,741; Apr. 7; Sp. p. 123; Dr. p. 22; Gaz. vol. 133; p. 1213.
Rhodes, R. L., assignor of one-half to G. B. Webb, Kinston, N. C. Smoke-conveyer for railway-trains. No. 884,342; Apr. 7; Sp. p. 1350; Dr. p. 288; Gaz. vol. 133; p. 1409.
Rhodin, B. E. F., Sault Ste. Marie, Ontario, Canada. Electrolytic apparatus. No. 885,083; Apr. 21; Sp. p. 2885; Dr. p. 612; Gaz. vol. 133; p. 1712.
Rice, A. L., Wright, Iowa. Bracket. No. 883,742; Apr. 7; Sp. p. 125; Dr. p. 22; Gaz. vol. 133; p. 1213.
Rice, H. L., Quincy, assignor to Rice & Hutchins, Incorporated, Boston, Mass. Channeling-tool. No. 884,043; Apr. 7; Sp. p. 760; Dr. p. 158; Gaz. vol. 133; p. 1314.
Rice & Hutchins. (See Rice, H. L., assignor.)
Rice, I. H., Los Angeles, Cal. Binder. No. 885,648; Apr. 21; Sp. p. 4065; Dr. p. 849; Gaz. vol. 133; p. 1893.
Rice, J. H., Ashtabula, Ohio. Greenhouse construction. No. 884,208; Apr. 7; Sp. p. 1120; Dr. p. 235; Gaz. vol. 133; p. 1367.
Rice, N. E., Zenia, Cal. Sawmill set-works. No. 884,209; Apr. 7; Sp. p. 1122; Dr. pp. 235–6; Gaz. vol. 133; p. 1368.
Rice, W. F., Chicago, Ill. Malting apparatus. No. 885,291; Apr. 21; Sp. p. 3336; Dr. pp. 697–8; Gaz. vol. 133; p. 1781.
Rice, W. T., Gravette, Ark. Device for cleaning combs. No. 884,044; Apr. 7; Sp. p. 761; Dr. p. 159; Gaz. vol. 133; p. 1314.
Rich, G. R., Buchanan, Mich., assignor to Calfor Tool Company. Drilling apparatus. No. 884,760; Apr. 14; Sp. p. 2250; Dr. p. 474; Gaz. vol. 133; p. 1578.
Richard, G. J., assignor to Noera Manufacturing Company, Waterbury, Conn. Can-spout. No. 884,761; Apr. 14; Sp. p. 2254; Dr. p. 474; Gaz. vol. 133; p. 1578.
Richards, C. B., assignor to Cleveland Pneumatic Tool Company, Cleveland, Ohio. Stoneworking-tool. No. 884,419; Apr. 14; Sp. p. 1512; Dr. p. 324; Gaz. vol. 133; p. 1464.
Richards, F. H., Hartford, Conn. Intermittent-feed device. No. 885,292; Apr. 21; Sp. p. 3341; Dr. p. 698; Gaz. vol. 133; p. 1781.
Richards, F. H., Hartford, Conn. Carving-machine. No. 885,293; Apr. 21; Sp. p. 3344; Dr. p. 699; Gaz. vol. 133; p. 1782.

Richards, F. H., Hartford, Conn., assignor, by mesne assignments, to American Typographic Corporation. Mechanism for making types. No. 886,327; Apr. 28; Sp. p. 5458; Dr. p. 1144; Gaz. vol. 133; p. 2149.
Richards, F. H., Hartford, Conn., assignor, by mesne assignments, to American Typographic Corporation. Apparatus for making types and lines of type. No. 886,328; Apr. 28; Sp. p. 5462; Dr. p. 1145; Gaz. vol. 133; p. 2150.
Richards, F. H., Hartford, Conn., assignor, by mesne assignments, to American Typographic Corporation. Manufacture of type-bars. No. 886,329; Apr. 28; Sp. p. 5467; Dr. p. 1145; Gaz. vol. 133; p. 2150.
Richards, F. H., Hartford, Conn., assignor, by mesne assignments, to American Typographic Corporation. Mechanism for making types and lines of type. No. 886,330; Apr. 28; Sp. p. 5470; Dr. p. 1146; Gaz. vol. 133; p. 2150.
Richards, F. H., Hartford, Conn., assignor, by mesne assignments, to American Typographic Corporation. Manufacture of type and type-bars. No. 886,331; Apr. 28; Sp. p. 5475; Dr. pp. 1146–7; Gaz. vol. 133; p. 2151.
Richards, W. T., Quincy, Mass. Lacing-hook. No. 884,682; Apr. 14; Sp. p. 2086; Dr. p. 445; Gaz. vol. 133; p. 1551.
Richardson, B. M., Waxhaw, N. C. Garment-supporter. No. 884,210; Apr. 7; Sp. p. 1125; Dr. p. 236; Gaz. vol. 133; p. 1368.
Richardson, E. P., Lawrence, assignor to Richardson Shoe Machinery Company, Boston, Mass. Treadle mechanism for shoe-sewing machines. No. 885,378; Apr. 21; Sp. p. 3534; Dr. p. 739; Gaz. vol. 133; p. 1811.
Richardson Shoe Machinery Company. (See Richardson, E. P., assignor.)
Riches, F. W., St. Petersburg, Russia. Telemeter for the use of photographers. No. 884,955; Apr. 14; Sp. p. 2629; Dr. pp. 555–6; Gaz. vol. 133; p. 1638.
Richmond, C. T., Cleveland, Ohio, assignor to National Carbon Company, Trenton, N. J. Battery-filling machine. No. 885,294; Apr. 21; Sp. p. 3347; Dr. pp. 699–700; Gaz. vol. 133; p. 1782.
Rickards, C. A., Portland, Oreg. Electric curling-iron. No. 884,296; Apr. 7; Sp. p. 1269; Dr. p. 268; Gaz. vol. 133; p. 1395.
Rickey, W. E., Rocky, Okla. Cotton-separator. No. 886,249; Apr. 28; Sp. p. 5278; Dr. p. 1112; Gaz. vol. 133; p. 2121.
Ricks, R. G., Murphy, Ga. Land-marker. No. 886,155; Apr. 28; Sp. p. 5118; Dr. p. 1075; Gaz. vol. 133; p. 2060.
Ridgeley, C. T., Springfield, Ohio. Straight-edge. No. 883,744; Apr. 7; Sp. p. 128; Dr. p. 23; Gaz. vol. 133; p. 1214.
Ridgeley, C. T., assignor to Standard Trimmer Company, Springfield, Ohio. Spirit-level. No. 883,743; Apr. 7; Sp. p. 127; Dr. p. 22; Gaz. vol. 133; p. 1213.
Ridgway, E. L., Kansas City, Mo. Ironing-board. No. 883,830; Apr. 7; Sp. p. 322; Dr. p. 60; Gaz. vol. 133; p. 1243.
Ridgway, H. N., Boston, Mass. Amusement apparatus. No. 884,045; Apr. 7; Sp. p. 762; Dr. p. 159; Gaz. vol. 133; p. 1314.
Ridgway, J. E., Atchison, Kans. Sewing-machine needle. No. 884,857; Apr. 14; Sp. p. 2450; Dr. p. 515; Gaz. vol. 133; p. 1610.
Rielly, P., Newark, N. J. Smoke-consuming furnace. No. 883,828; Apr. 7; Sp. p. 315; Dr. p. 59; Gaz. vol. 133; p. 1242.
Riessner, P., Wahren, near Leipzig, Germany. Note-sheet. No. 883,745; Apr. 7; Sp. p. 130; Dr. p. 23; Gaz. vol. 133; p. 1214.
Rigby, T. (See Crossley and Rigby.)
Riker, A. L., Bridgeport, Conn., assignor, by mesne assignments, to White Company, Cleveland, Ohio. Water-tube boiler. No. 885,295; Apr. 21; Sp. p. 3349; Dr. p. 700; Gaz. vol. 133; p. 1783.
Ringwald, C., Owego, N. Y. Garment-supporter. No. 884,858; Apr. 14; Sp. p. 2451; Dr. p. 516; Gaz. vol. 133; p. 1610.
Rinne, A. (See Schwanenberg and Rinne.)
Ripson, J. D., Rochester, and E. G. Sampson, assignors to Art Metal Construction Company, Jamestown, N. Y. Support for drawers of cabinets, &c. No. 884,525; Apr. 14; Sp. p. 1734; Dr. p. 372; Gaz. vol. 133; p. 1498.
Ripson, J. D., Rochester, and E. G. Sampson, assignors to Art Metal Construction Company, Jamestown, N. Y. Suspension for drawers of cabinets, &c. No. 884,526; Apr. 14; Sp. p. 1736; Dr. p. 372; Gaz. vol. 133; p. 1499.
Ripson, J. D., and E. G. Sampson, assignors to Art Metal Construction Company, Jamestown, N. Y. Document-filing case. No. 885,789; Apr. 28; Sp. p. 4362; Dr. p. 915; Gaz. vol. 133; p. 1909.
Ripson, J. D., Rochester, and E. G. Sampson, assignors to Art Metal Construction Company, Jamestown, N. Y. Locking device. No. 885,790; Apr. 28; Sp. p. 4364; Dr. p. 916; Gaz. vol. 133; p. 1909.
Risdon, J. F., Seattle, Wash. Car-fender. No. 884,683; Apr. 14; Sp. p. 2087; Dr. p. 445; Gaz. vol. 133; p. 1551.
Risk, M. E., Hartford, Conn. Corset attachment. No. 886,076; Apr. 28; Sp. p. 4963; Dr. p. 1044; Gaz. vol. 133; p. 2065.
Risting, E., and F. Kabatchnick, Chicago, Ill.; said Kabatchnick assignor to said Risting. Cutting and marking machine. No. 884,762; Apr. 14; Sp. p. 2255; Dr. pp. 474–5; Gaz. vol. 133; p. 1579.
Ritter, F. R., *et al.* (See Simpson, R. D., assignor.)
Rittweger, W., Gross Breitenbach, Germany. Penholder. No. 884,859; Apr. 14; Sp. p. 2452; Dr. p. 516; Gaz. vol. 133; p. 1610.
River & Rail Transportation Company. (See Kirchner, H. W., assignor.)
Rivett, E., Boston, Mass. Speed-changing mechanism. No. 885,296; Apr. 21; Sp. p. 3350; Dr. pp. 700–1; Gaz. vol. 133; p. 1783.
Robbins, A. B. (See Bowden, A. J., assignor.)
Robbins, A. D., London, England. Means for mounting a bicycle-wheel whereby it may be placed concentric or eccentric with axle. No. 883,746; Apr. 7; Sp. p. 130; Dr. pp. 23–4; Gaz. vol. 133; p. 1214.
Robbins, O. A., Charlotte, N. C. Braiding-machine stop-motion. No. 885,523; Apr. 21; Sp. p. 3807; Dr. p. 799; Gaz. vol. 133; p. 1855.
Roberts, E., Stillwater, Okla. Washing-machine. No. 885,956; Apr. 28; Sp. p. 4725; Dr. p. 993; Gaz. vol. 133; p. 2027.
Roberts, H. P., Louisville, Ky. Box. No. 886,250; Apr. 28; Sp. p. 5280; Dr. pp. 1112–13; Gaz. vol. 133; p. 2121.
Robertson, J., Woburn, and J. S. Delaney, Somerville, assignors of one-third to A. W. Bliss, Brookline, Mass. Instrument for measuring the thickness of leather and other sheet material. No. 883,831; Apr. 7; Sp. p. 324; Dr. pp. 60–1; Gaz. vol. 133; p. 1243.
Robertson, J., Woburn, and J. S. Delaney, Somerville, assignors of one-third to A. W. Bliss, Brookline, Mass. Thickness-measuring attachment for machines for measuring the areas of surfaces. No. 883,832; Apr. 7; Sp. p. 325; Dr. p. 61; Gaz. vol. 133; p. 1243.
Robinson, C. A., Wheeling, W. Va., assignor to American Sheet & Tin Plate Company, Pittsburg, Pa. Heating-furnace. No. 883,747; Apr. 7; Sp. p. 131; Dr. p. 24; Gaz. vol. 133; p. 1215.
Robinson, C. W., Hamilton, Ontario, Canada. Mowing-machine. No. 883,748; Apr. 7; Sp. p. 133; Dr. pp. 24–5; Gaz. vol. 133; p. 1215.
Robinson, H. M., Eversley, Sawbridgeworth, England. Paneling. No. 885,524; Apr. 21; Sp. p. 3809; Dr. p. 800; Gaz. vol. 133; p. 1855.
Robinson, H. O., Brookline, and C. Steadman, Salem, Mass. Drying-floor. No. 886,251; Apr. 28; Sp. p. 5282; Dr. p. 1113; Gaz. vol. 133; p. 2122.
Robinson, T. O. (See Kendall and Robinson.)
Robinson, W. W., assignor to Ideal Manufacturing Company, Des Moines, Iowa. Account-keeping device. No. 885,957; Apr. 28; Sp. p. 4726; Dr. p. 994; Gaz. vol. 133; p. 2027.
Robinson, W. W., assignor to Ideal Manufacturing Company, Des Moines, Iowa. Individual-account-keeping apparatus. No. 885,958; Apr. 28; Sp. p. 4728; Dr. p. 994; Gaz. vol. 133; p. 2027.
Roche, H. N., assignor of one-half to T. B. Gray, San Francisco, Cal. Electric water-heater. No. 884,343; Apr. 7; Sp. p. 1351; Dr. p. 289; Gaz. vol. 133; p. 1410.
Rochester Surgical Appliance Company. (See Brice, A. W., assignor.)
Rockwell, E. C., *et al.* (See Lewis, S. T., assignor.)
Rockwell, E. D., assignor, by mesne assignments, to New Departure Manufacturing Company, Bristol, Conn. Trolley harp and wheel. No. 884,684; Apr. 14; Sp. p. 2089; Dr. p. 446; Gaz. vol. 133; p. 1551.
Rodd, R. J., Cuyahoga Falls, Ohio. Nut-feeding mechanism. No. 884,211; Apr. 7; Sp. p. 1126; Dr. p. 236; Gaz. vol. 133; p. 1368.
Rodman, H., assignor to Electric Storage Battery Company, Philadelphia, Pa. Electrolytic reduction of metallic compounds. No. 884,763; Apr. 14; Sp. p. 2258; Gaz. vol. 133; p. 1579.
Rodman, O., Maxwell, Cal. Grapple. No. 885,297; Apr. 21; Sp. p. 3354; Dr. p. 701; Gaz. vol. 133; p. 1783.
Rodrigues, M. R., New York, N. Y. Combined seat and table. No. 885,649; Apr. 21; Sp. p. 4066; Dr. p. 850; Gaz. vol. 133; p. 1893.
Rodriguez, G., Castroville, Cal. Feed-bag. No. 886,252; Apr. 28; Sp. p. 5284; Dr. p. 1113; Gaz. vol. 133; p. 2122.
Roebling Construction Company. (See Wendell, F. J., assignor.)
Roessler & Hasslacher Chemical Company. (See Brindley, G. F., assignor.)
Roessler & Hasslacher Chemical Company. (See Fritsche, G., assignor.)
Roesti, P. G. (See Schneider and Roesti.)
Roever, J., assignor to National Patent Company, New York, N. Y. Registering mechanism for multiple phonographs. No. 883,970; Apr. 7; Sp. p. 610; Dr. p. 121; Gaz. vol. 133; p. 1280.
Roever, J., assignor to National Patent Company, New York, N. Y. Multiple phonograph-machine. No. 883,971; Apr. 7; Sp. p. 611; Dr. pp. 121–2; Gaz. vol. 133; p. 1280.
Röhrs, C., Landsberg-on-the-Warthe, Germany. Tubular steam-boiler. No. 884,956; Apr. 14; Sp. p. 2632; Dr. pp. 556–7; Gaz. vol. 133; p. 1639.
Rome Saddlery Hardware Manufacturing Co. (See Craig, A. M., assignor.)
Romigh, J. W. (See Freese, Romigh, and Carothers.)
Roney, W. H., Chicago, Ill. Column. No. 885,525; Apr. 21; Sp. p. 3812; Dr. p. 800; Gaz. vol. 133; p. 1855.
Rood, C. E. (See Goettel, J., assignor.)
Rood, E. O., assignor to Interstate Drainage & Investment Company, Britt, Iowa. Excavating-machine. No. 884,764; Apr. 14; Sp. p. 2259; Dr. pp. 475–6; Gaz. vol. 133; p. 1579.
Root Dairy Supply Company. (See Root, H. C., assignor.)
Root, G. C., deceased, New York, N. Y.; S. L. Root administrator. Advertising device. No. 883,749; Apr. 7; Sp. p. 135; Dr. p. 25; Gaz. vol. 133; p. 1215.
Root, H. C., assignor to Root Dairy Supply Company, Westgrove, Pa. Milk-cooler. No. 884,860; Apr. 14; Sp. p. 2453; Dr. p. 516; Gaz. vol. 133; p. 1611.
Root, S. L., administrator. (See Root, G. C.)

Rose, J. H., Dayton, Ohio. Hydraulic motor. No. 883,972; Apr. 7; Sp. p. 614; Dr. pp. 122-3; Gaz. vol. 133; p. 1289.
Rose Manufacturing Company. (See Rose, S. S., assignor.)
Rose, S. S., Amador City, assignor to Rose Manufacturing Company, San Jose, Cal. Traction-engine. No. 884,685; Apr. 14; Sp. p. 2090; Dr. p. 446; Gaz. vol. 133; p. 1562.
Roseland, T. C., assignor of one-third to F. R. Enminger, Gilman, Iowa. Dropping mechanism for corn-planters. No. 886,253; Apr. 28; Sp. p. 5285; Dr. p. 1114; Gaz. vol. 133; p. 2122.
Rosenbluth, E. M., Philadelphia, Pa. Lamp-bracket. No. 883,973; Apr. 7; Sp. p. 617; Dr. p. 123; Gaz. vol. 133; p. 1290.
Ross, H. B., assignor to Berlin Machine Works, Beloit, Wis. Adjusting means for planer-heads. No. 885,379; Apr. 21; Sp. p. 3539; Dr. pp. 740-1; Gaz. vol. 133; p. 1811.
Rose, J., Philadelphia, Pa. Incinerating-furnace. No. 885,380; Apr. 21; Sp. p. 3545; Dr. p. 741; Gaz. vol. 133; p. 1812.
Rossi, L., New York, N. Y. Detachable fastening device. No. 883,833; Apr. 7; Sp. p. 327; Dr. p. 61; Gaz. vol. 133; p. 1244.
Rost, O. F., Chicago, Ill. Railway-frog. No. 885,208; Apr. 21; Sp. p. 3355; Dr. p. 701; Gaz. vol. 133; p. 1783.
Rostock, R., Klosterneuburg, Austria-Hungary. Providing casks with a coating. No. 884,903; Apr. 14; Sp. p. 2702; Gaz. vol. 133; p. 1650.
Rostock, R., Klosterneuburg, Austria-Hungary. Providing cement or concrete casks with a protective coating. No. 884,904; Apr. 14; Sp. p. 2703; Gaz. vol. 133; p. 1650.
Roth, E. N., assignor to E. H. Gold, Chicago, Ill. Filling attachment. No. 885,865; Apr. 28; Sp. p. 4520; Dr. p. 948; Gaz. vol. 133; p. 1995.
Roughsedge, W. H., Ottawa, Ontario, Canada. Gold-washing screen. No. 883,974; Apr. 7; Sp. p. 619; Dr. pp. 123-4; Gaz. vol. 133; p. 1290.
Rounds, M., Boston, Mass. Articulated car. No. 884,620; Apr. 14; Sp. p. 1514; Dr. p. 325; Gaz. vol. 133; p. 1465.
Rowe, C. E., Austin, Tex. Calendar. No. 884,861; Apr. 14; Sp. p. 2455; Dr. p. 517; Gaz. vol. 133; p. 1611.
Rowe, J. A., *et al.* (See Owens, J. M., assignor.)
Rowe, L., assignor of one-half to W. G. Lewis, Homestead, Pa. Butcher's block. No. 886,077; Apr. 28; Sp. p. 4963; Dr. p. 1044; Gaz. vol. 133; p. 2065.
Roy, J. A., Montreal, Quebec, Canada. Door-bolt. No. 885,866; Apr. 28; Sp p. 4521; Dr. p. 949; Gaz. vol. 133; p. 1995.
Royal Typewriter Company. (See Flynn, M. H., assignor.)
Royden Marble Machinery Company. (See Peirce, J. R., assignor.)
Rude, I. T. (See Nicholson and Rude.)
Rue, K. O., Wolf Butte, N. D. Hame. No. 886,156; Apr. 28; Sp. p. 5119; Dr. p. 1075; Gaz. vol. 133; p. 2090.
Ruff, M. V., Smyrna, Ga. Street-sweeper. No. 884,421; Apr. 14; Sp. p. 1516; Dr. p. 325; Gaz. vol. 133; p. 1465.
Rugg, G. W., Newark, Ohio. Umbrella. No. 886,078; Apr. 28; Sp. p. 4964; Dr. pp. 1044-5; Gaz. vol. 133; p. 2067.
Rumery, J., assignor of one-half to F. G. Nunn, Cleveland, Ohio. Lock for window-sashes. No. 886,254; Apr. 28; Sp. p. 5289; Dr. p. 1114; Gaz. vol. 133; p. 2123.
Rundlöf, E. A., Stockaund, Sweden. Reversing device for internal-combustion engines. No. 883,750; Apr. 7; Sp. p. 137; Dr. p. 25; Gaz. vol. 133; p. 1216.
Rupe, E. H., assignor to Kellogg Switchboard & Supply Company, Chicago, Ill. Telephone trunking system. No. 885,180; Apr. 21; Sp. p. 3113; Dr. p. 656; Gaz. vol. 133; p. 1744.
Ruppel, C., Höchst-on-the-Main, Germany. Protected earthenware cock. No. 885,526; Apr. 21; Sp. p. 3814; Dr. p. 800; Gaz. vol. 133; p. 1856.
Ruppert, G. W., *et al.* (See Condon, E. J., assignor.)
Rush, A., Columbus, Ohio. Fire-resisting shutter or curtain. No. 883,834; Apr. 7; Sp. p. 328; Dr. p. 62; Gaz. vol. 133; p. 1244.
Rush, G. W., New York, N. Y. Saw-clamp. No. 885,084; Apr. 21; Sp. p. 2889; Dr. p. 613; Gaz. vol. 133; p. 1712.
Rush, J. H., Boston, Mass. Guide-lubricator. No. 884,957; Apr. 14; Sp. p. 2633; Dr. p. 557; Gaz. vol. 133; p. 1639.
Rush, W. S., San Francisco, Cal. Motion-indicator for engines. No. 885,527; Apr. 21; Sp. p. 3815; Dr. p. 801; Gaz. vol. 133; p. 1856.
Rush, W. S., San Francisco, Cal. Motion indicator and recorder. No. 885,528; Apr. 21; Sp. p. 3818; Dr. p. 801; Gaz. vol. 133; p. 1856.
Rush, W. S., San Francisco, Cal. Motion indicator and recorder. No. 885,529; Apr. 21; Sp. p. 3828; Dr. p. 802; Gaz. vol. 133; p. 1857.
Russ, F. (See Grau and Russ.)
Russell, A. J., and W. B. Terry, Sturgis, Mich. Sliding gate. No. 885,085; Apr. 21; Sp. p. 2890; Dr. p. 613; Gaz. vol. 133; p. 1713.
Russell, H. M., Jr., Wheeling, W. Va. Clutch. No. 885,086; Apr. 21; Sp. p. 2892; Dr. p. 613; Gaz. vol. 133; p. 1713.
Russell, M., Paw Paw, Mich. Adjustable scaffold. No. 885,791; Apr. 28; Sp. p. 4365; Dr. p. 916; Gaz. vol. 133; p. 1970.
Russell & Erwin Manufacturing Company. (See Caley and Voight, assignors.)
Russell & Erwin Manufacturing Company. (See Voight and Caley, assignors.)
Rutherford, J. W. (See Grace, T. J., assignor.)
Ryerson, E. J., and E. J. Schretter, Jackson, Mich. Resilient arm. No. 884,105; Apr. 7; Sp. p. 883; Dr. p. 186; Gaz. vol. 133; p. 1333.
Ryon, E. H., Worcester, Mass., assignor to Crompton & Knowles Loom Works. Shedding mechanism for looms. No. 884,613; Apr. 14; Sp. p. 1912; Dr. pp. 410-11; Gaz. vol. 133; p. 1527.
Ryon, E. H., Worcester, Mass., assignor to Crompton & Knowles Loom Works. Narrow-ware loom. No. 884,614; Apr. 14; Sp. p. 1915; Dr. p. 411; Gaz. vol. 133; p. 1528.
Ryon, E. H., Worcester, Mass., assignor to Crompton & Knowles Loom Works. Loom multiplier mechanism. No. 884,862; Apr. 14; Sp. p. 2458; Dr. pp. 517-18; Gaz. vol. 133; p. 1611.
S. R. Dresser Manufacturing Company. (See Dresser, S. R., assignor.)
Sabin, G. N., Fordland, Mo. Educational appliance. No. 884,863; Apr. 14; Sp. p. 2462; Dr. p. 518; Gaz. vol. 133; p. 1612.
Sabroe, T. T., Copenhagen, Denmark. Photographic-printing apparatus. No. 884,297; Apr. 7; Sp. p. 1269; Dr. p. 268; Gaz. vol. 133; p. 1395.
Sachse, W. F., Sheboygan, Wis. Horse-collar pad. No. 884,527; Apr. 14; Sp. p. 1737; Dr. p. 372; Gaz. vol. 133; p. 1499.
Sachsenröder, G. H., Barmen-Unterbarmen, Germany. Dress-preserver or dress-shield. No. 885,530; Apr. 21; Sp. p. 3840; Dr. p. 802; Gaz. vol. 133; p. 1858.
Safety Car Heating & Lighting Company. (See Dixon, R. M., assignor.)
Sager, J. H., Rochester, N. Y. Automobile-buffer. No. 885,181; Apr. 21; Sp. p. 3118; Dr. p. 656; Gaz. vol. 133; p. 1744.
Saladin Pneumatic Malting Construction Company. (See Prinz, W. H., assignor.)
Salmons, J. W., Philadelphia, Pa. Water-tank for poultry-shipping coops. No. 885,531; Apr. 21; Sp. p. 3841; Dr. p. 803; Gaz. vol. 133; p. 1858.
Salt, E. J., Darlington, and C. L. Herb, Millvale, Pa. Stuffing-box. No. 884,864; Apr. 14; Sp. p. 2463; Dr. p. 518; Gaz. vol. 133; p. 1612.
Salter, C. F., Knoxville, assignor of one-half to H. C. Helm, Harriman, Tenn. Grate for open fireplaces. No. 884,615; Apr. 14; Sp. p. 1917; Dr. pp. 411-12; Gaz. vol. 133; p. 1528.
Salzer, R., Philadelphia, Pa., assignor to D'Olier Engineering Company. Centrifugal pump. No. 885,867; Apr. 28; Sp. p. 4522; Dr. p. 949; Gaz. vol. 133; p. 1995.
Samaha, M., Washington, D. C. Submarine viewing apparatus. No. 885,067; Apr. 21; Sp. p. 2893; Dr. p. 614; Gaz. vol. 133; p. 1713.
Sampson, E. G. (See Ekedahl and Sampson.)
Sampson, E. G. (See Ripson and Sampson.)
Samuel Cupples Envelope Company. (See Klemast, T. W., assignor.)
Sanderson & Porter. (See Boyle, J. M., assignor.)
Sandretto, D., Ladd, Ill. Electrically-operated clock. No. 886,157; Apr. 28; Sp. p. 5120; Dr. p. 1076; Gaz. vol. 133; p. 2090.
Sands, E. L., Webb City, Mo. Pen and pencil holder. No. 884,865; Apr. 14; Sp. p. 2464; Dr. p. 519; Gaz. vol. 133; p. 1612.
Santa, G. A., Virginia, Minn. Splice-bar. No. 886,158; Apr. 28; Sp. p. 5122; Dr. p. 1076; Gaz. vol. 133; p. 2091.
Sargeant, E. F., Stroud, England. Manufacture of leather belting and machinery therefor. No. 884,828; Apr. 14; Sp. p. 1738; Dr. pp. 372-5; Gaz. vol. 133; p. 1499.
Sargent, C. E., assignor to Sargent Steam Meter Company, Chicago, Ill. Steam-meter. No. 886,255; Apr. 28; Sp. p. 5290; Dr. pp. 1114-15; Gaz. vol. 133; p. 2123.
Sargent, E. C., Fargo, N. D. Building. No. 885,088; Apr. 21; Sp. p. 2897; Dr. p. 614; Gaz. vol. 133; p. 1714.
Sargent, F. G., Westford, assignor to C. G. Sargent's Sons Corporation, Graniteville, Mass. Attachment for feeders for fibrous material. No. 885,381; Apr. 21; Sp. p. 3547; Dr. p. 741; Gaz. vol. 133; p. 1813.
Sargent, H. D., Worcester, Mass. Buckle. No. 885,382; Apr. 21; Sp. p. 3549; Dr. p. 742; Gaz. vol. 133; p. 1813.
Sargent Steam Meter Company. (See Sargent, C. E., assignor.)
Sassaman, A. H., assignor of three-fourths to A. O. Meyer, G. W. and W. F. Koerner, New York, N. Y. Journal-bearing. No. 884,866; Apr. 14; Sp. p. 2465; Dr. p. 519; Gaz. vol. 133; p. 1613.
Sauter, A., Pittsburg, Pa. Horse-checking device. No. 885,532; Apr. 21; Sp. p. 3842; Dr. p. 803; Gaz. vol. 133; p. 1858.
Savage, A. W., assignor to Savage Arms Company, Utica, N. Y. Magazine for firearms. No. 885,908; Apr. 28; Sp. p. 4525; Dr. p. 949; Gaz. vol. 133; p. 1995.
Savage Arms Company. (See Savage, A. W., assignor.)
Sayres, J. H., Brooklyn, N. Y. Sash-chain fastener. No. 884,344; Apr. 7; Sp. p. 1353; Dr. p. 289; Gaz. vol. 133; p. 1410.
Scanlan, D., Halifax, Nova Scotia, Canada. Exercising apparatus for oarsmen. No. 885,871; Apr. 28; Sp. p. 4531; Dr. p. 950; Gaz. vol. 133; p. 1997.
Scates, E. C., Knoxville, Tenn. Bias-fold cutter. No. 884,219; Apr. 7; Sp. p. 1141; Dr. p. 248; Gaz. vol. 133; p. 1371.
Schaefer, A. (See Schaefer, G. L. and A.)

Schaefer, G. L., New York, N. Y., and A. Schaefer, Basel, Switzerland. Preparing cuprammonia solution. No. 884,298; Apr. 7; Sp. p. 1271; Dr. p. 268; Gaz. vol. 133; p. 1305.
Schaeffer, M., *et al.* (See Patten, J. S., assignor.) (Reissue.)
Scheurer, W., West New York, N. J. Fan attachment for rocking-chairs. No. 884,212; Apr. 7; Sp. p. 1128; Dr. p. 236; Gaz. vol. 133; p. 1369.
Schlang, A., Brooklyn, N. Y. Garment-hanger. No. 884,616; Apr. 14; Sp. p. 1918; Dr. p. 412; Gaz. vol. 133; p. 1528.
Schlang, A., Brooklyn, N. Y. Garment-hanger. No. 884,617; Apr. 14; Sp. p. 1919; Dr. p. 412; Gaz. vol. 133; p. 1529.
Schlemmer, G., New York, N. Y. Filter. No. 884,765; Apr. 14; Sp. p. 2264; Dr. p. 476; Gaz. vol. 133; p. 1579.
Schlieman, J., Wabeno, Wis. Log-conveyer chain. No. 885,950; Apr. 28; Sp. p. 4731; Dr. p. 994; Gaz. vol. 133; p. 2028.
Schimmel u. Co., Firm of. (See Stalmann, G., assignor.)
Schirmer, T. F., and M. C. Stern, assignors to Egry Autographic Register Company, Dayton, Ohio. Autographic register. No. 886,015; Apr. 28; Sp. p. 4854; Dr. p. 1020; Gaz. vol. 133; p. 2046.
Schmid-Roost, J., Oerlikon, near Zurich, Switzerland. Ball-bearing. No. 884,046; Apr. 7; Sp. p. 764; Dr. p. 159; Gaz. vol. 133; p. 1314.
Schmidt, A., Indianapolis, Ind. Rotatable distributing-nozzle. No. 885,869; Apr. 28; Sp. p. 4527; Dr. p. 950; Gaz. vol. 133; p. 1996.
Schmidt, C., assignor to Peerless Motor Car Company, Cleveland, Ohio. Brake and clutch operating mechanism for automobiles. No. 883,835; Apr. 7; Sp. p. 330; Dr. p. 62; Gaz. vol. 133; p. 1244.
Schmidt, C., assignor to Peerless Motor Car Company, Cleveland, Ohio. Lubricating system for motor-cars. No. 885,182; Apr. 21; Sp. p. 3120; Dr. p. 656; Gaz. vol. 133; p. 1744.
Schmidt, C., assignor to Peerless Motor Car Company, Cleveland, Ohio. Automobile-radiator. No. 886,016; Apr. 28; Sp. p. 4856; Dr. p. 1021; Gaz. vol. 133; p. 2046.
Schmidt, F. M., Jacksonville, Fla. Combined fan and fly-catcher. No. 884,213; Apr. 7; Sp. p. 1130; Dr. p. 237; Gaz. vol. 133; p. 1369.
Schmidt, H. B., assignor to Joslin, Schmidt & Co., Cincinnati, Ohio. Manufacture of gray acetate of lime and wood-alcohol. No. 885,183; Apr. 21; Sp. p. 3122; Dr. p. 657; Gaz. vol. 133; p. 1745.
Schmidt, W., Pittsburg, Pa., assignor to Westinghouse Electric & Manufacturing Company. Winding for dynamo-electric machines. No. 885,184; Apr. 21; Sp. p. 3124; Dr. p. 657; Gaz. vol. 133; p. 1745.
Schmitt, W., Baltimore, Md. Wrench. No. 884,422; Apr. 14; Sp. p. 1517; Dr. p. 326; Gaz. vol. 133; p. 1465.
Schneider, G., assignor of one-half to L. A. Ferrandini, Baltimore, Md. Mechanism for shifting stage-scenery in theaters. No. 884,214; Apr. 7; Sp. p. 1131; Dr. p. 237; Gaz. vol. 133; p. 1369.
Schneider, R., and P. G. Roesti, Milwaukee, Wis. Releasing-gear for engines. No. 885,870; Apr. 28; Sp. p. 4529; Dr. p. 950; Gaz. vol. 133; p. 1996.
Schou, W., Copenhagen, Denmark, and H. Busse, Berlin, Germany. Machine for pinning leather on soles of wood. No. 884,215; Apr. 7; Sp. p. 1133; Dr. p. 238; Gaz. vol. 133; p. 1370.
Schram, L., and D. Kies, Chicago, Ill.; said Kies assignor to said Schram. Music-cabinet. No. 886,017; Apr. 28; Sp. p. 4857; Dr. p. 1021; Gaz. vol. 133; p. 2046.
Schretter, E. J. (See Ryerson and Schretter.)
Schröder, H., New York, N. Y. Phonograph. No. 884,216; Apr. 7; Sp. p. 1136; Dr. p. 239; Gaz. vol. 133; p. 1370.
Schubert, G., Fort Worth, Tex. Conveyer. No. 884,618; Apr. 14; Sp. p. 1920; Dr. p. 412; Gaz. vol. 133; p. 1529.
Schuessler, H., Peru, Ill. Laughing-mirror. No. 884,217; Apr. 7; Sp. p. 1138; Dr. p. 239; Gaz. vol. 133; p. 1371.
Schuldt, F. G., assignor of one-half to Herzog Iron Works, St. Paul, Minn. Door-movement regulator. No. 885,534; Apr. 21; Sp. p. 3845; Dr. pp. 803-4; Gaz. vol. 133; p. 1858.
Schuller, J., Gratz, Austria-Hungary. Device for preventing the creeping of railway-rails. No. 883,836; Apr. 7; Sp. p. 332; Dr. p. 63; Gaz. vol. 133; p. 1245.
Schüttauf, R., assignor to Firm of Carl Zeiss, Jena, Germany. Device for closing plate or film holders. No. 883,751; Apr. 7; Sp. p. 140; Dr. p. 26; Gaz. vol. 133; p. 1216.
Schwanenberg, E., and A. Rinne, Hanover, Germany. Hardening artificial stone. No. 886,258; Apr. 28; Sp. p. 5299; Gaz. vol. 133; p. 2124.
Schwarz, G. and R., New York, N. Y. Cutting-stick. No. 884,218; Apr. 7; Sp. p. 1139; Dr. pp. 239-40; Gaz. vol. 133; p. 1371.
Schwarz, R. (See Schwarz, G. and R.)
Schwarzenbach, H., and G. Lier, Langnau, Switzerland; said Lier assignor to said Schwarzenbach. Dobby for looms for weaving. No. 883,975; Apr. 7; Sp. p. 621; Dr. pp. 124-5; Gaz. vol. 133; p. 1291.
Schwede, W., assignor of one-half to H. Schwerdtfeger, Sanborn, Minn. Grain feeding and weighing apparatus. No. 885,299; Apr. 21; Sp. p. 3357; Dr. p. 702; Gaz. vol. 133; p. 1784.
Schwedtman, F. C., St. Louis, Mo. Sash-weight. No. 883,976; Apr. 7; Sp. p. 624; Dr. p. 125; Gaz. vol. 133; p. 1291.
Schwedtman, F. C., St. Louis, Mo. Sash-weight. No. 883,977; Apr. 7; Sp. p. 626; Dr. p. 125; Gaz. vol. 133; p. 1292.
Schwedtman, F. C., St. Louis, Mo. Sash-weight. No. 883,978; Apr. 7; Sp. p. 628; Dr. p. 125; Gaz. vol. 133; p. 1292.
Schwedtman, F. C., St. Louis, Mo. Sash-weight. No. 883,979; Apr. 7; Sp. p. 630; Dr. p. 126; Gaz. vol. 133; p. 1292.
Schwehm, P., Hanover, Germany. Starting mechanism for gas-engines. No. 884,619; Apr. 14; Sp. p. 1921; Dr. p. 413; Gaz. vol. 133; p. 1529.
Schwehm, P., Hanover, Germany. Cylinder for gas-engines. No. 884,995; Apr. 14; Sp. p. 2704; Dr. p. 573; Gaz. vol. 133; p. 1650.
Schwehr, A. and G. A., Sandusky, Ohio. Friction-clutch. No. 884,766; Apr. 14; Sp. p. 2265; Dr. p. 476; Gaz. vol. 133; p. 1580.
Schwehr, G. A. (See Schwehr, A. and G. A.)
Schwemer, F. L. (See Schwemer, W. W. and F. L.)
Schwemer, W. W. and F. L., Glendale, Cal. Awning. No. 886,256; Apr. 28; Sp. p. 5293; Dr. p. 1115; Gaz. vol. 133; p. 2124.
Schwerdtfeger, H. (See Schwede, W., assignor.)
Scollard, T. F., Warsaw, Ind. Heating system. No. 886,079; Apr. 28; Sp. p. 4967; Dr. p. 1045; Gaz. vol. 133; p. 2065.
Scott, D. J., *et. al.*, executors. (See Scott, W.)
Scott, H. G., Berkeley, Cal. Dispensing-stopper. No. 885,792; Apr. 28; Sp. p. 4366; Dr. p. 917; Gaz. vol. 133; p. 1970.
Scott, I., *et al.*, executors. (See Scott, W.)
Scott, J. A., New York, N. Y., assignor to Cockburn Barrow & Machine Company, Jersey City, N. J. Piston-valve. No. 885,650; Apr. 21; Sp. p. 4067; Dr. p. 850; Gaz. vol. 133; p. 1893.
Scott, J. A., New York, N. Y., assignor to Cockburn Barrow & Machine Company, Jersey City, N. J. Rod-packing. No. 885,651; Apr. 21; Sp. p. 4069; Dr. p. 850; Gaz. vol. 133; p. 1894.
Scott, J. A., New York, N. Y., assignor to Cockburn Barrow & Machine Company, Jersey City, N. J. Packing for pistons. No. 885,652; Apr. 21; Sp. p. 4071; Dr. p. 851; Gaz. vol. 133; p. 1894.
Scott, J. C., Portsmouth, Ohio. Muffler. No. 885,872; Apr. 28; Sp. p. 4533; Dr. p. 951; Gaz. vol. 133; p. 1997.
Scott, R. S., Kansas City, Mo. Rail-tie and fastening means. No. 884,867; Apr. 14; Sp. p. 2466; Dr. p. 519; Gaz. vol. 133; p. 1613.
Scott, W. I. (See Cusick and Scott.)
Scott, R. W., Leeds Point, N. J., assignor of one-half to L. N. D. Williams, Ogontz, Pa. Knitted fabric. No. 885,793; Apr. 28; Sp. p. 4369; Dr. p. 917; Gaz. vol. 133; p. 1970.
Scott, R. W., Leeds Point, N. J., assignor of one-half to L. N. D. Williams, Ogontz, Pa. Knitted fabric. No. 885,794; Apr. 28; Sp. p. 4370; Dr. p. 917; Gaz. vol. 133; p. 1971.
Scott, W., deceased, Plainfield, N. J.; I. and D. J. Scott, executors. Delivery mechanism. No. 885,383; Apr. 21; Sp. p. 3550; Dr. pp. 742-3; Gaz. vol. 133; p. 1813.
Scott, W. W., Fort Edward, N. Y. Switch-stand. No. 883,980; Apr. 7; Sp. p. 631; Dr. p. 126; Gaz. vol. 133; p. 1293.
Sebree, W. T., assignor of two-thirds to J. F. Jett, H. Smith, L. Thoma, and D. M. Bridges, Carrollton, Ky. Railway mail catcher and deliverer. No. 884,868; Apr. 14; Sp. p. 2468; Dr. pp. 519-20; Gaz. vol. 133; p. 1613.
Secor, G. D., South Bend, Ind. Guard-rail for street-cars. No. 885,089; Apr. 21; Sp. p. 2899; Dr. p. 615; Gaz. vol. 133; p. 1714.
Sedgwick, E. P., Highland Park, assignor to Chicago Hardware Foundry Company, North Chicago, Ill. Piano-pedal. No. 884,220; Apr. 7; Sp. p. 1142; Dr. p. 240; Gaz. vol. 133; p. 1371.
Sedgwick, H. G., Mill Valley, assignor to American Train Stop Company, San Francisco, Cal. Automatic train-stop. (Reissue.) No. 12,783; Apr. 21; Sp. p. 4186; Dr. p. 876; Gaz. vol. 133; p. 1914.
Seeberger, P., Jersey City, N. J. Envelop. No. 885,384; Apr. 21; Sp. p. 3552; Dr. p. 743; Gaz. vol. 133; p. 1814.
Seeds, J. W., *et al.* (See Simpson, R. D., assignor.)
Seeley, G. M. (See Kleinschmidt, E. E., assignor.)
Seemann, H. I., Denver, Colo. Amalgamator. No. 884,299; Apr. 7; Sp. p. 1273; Dr. p. 269; Gaz. vol. 133; p. 1396.
Seems, G. F., and G. B. Coply, Mitchellville, Iowa. Wireless check-row planter. No. 885,573; Apr. 28; Sp. p. 4534; Dr. p. 951; Gaz. vol. 133; p. 1998.
Seib, G. A., and I. A. Weston, Syracuse, N. Y. Drilling-machine. No. 884,529; Apr. 14; Sp. p. 1743; Dr. p. 375; Gaz. vol. 133; p. 1499.
Seiberling, F. A., Akron, Ohio. Vehicle-wheel rim. (Reissue.) No. 12,777; Apr. 7; Sp. p. 1383; Dr. p. 295; Gaz. vol. 133; p. 1413.
Seile, H. W., Chicago, Ill. Wood-shaving machine. No. 885,874; Apr. 28; Sp. p. 4536; Dr. pp. 951-2; Gaz. vol. 133; p. 1998.
Sellentine, R. J., Cleveland, Ohio. Concrete-mixing machine. No. 886,018; Apr. 28; Sp. p. 4858; Dr. pp. 1021-2; Gaz. vol. 133; p. 2047.
Sellers, M. B., Baltimore, Md. Aerial apparatus. No. 886,159; Apr. 28; Sp. p. 5123; Dr. pp. 1076-7; Gaz. vol. 133; p. 2091.
Sencindiver, J. H. (See Webb and Shilling, assignors.)
Seng Company. (See Seng, F. J., assignor.)
Seng, F. J., Chicago, Ill., assignor to Seng Company. Extension-table. No. 885,962; Apr. 28; Sp. p. 4739; Dr. p. 995; Gaz. vol. 133; p. 2029.

Senne, C., New York, N. Y. Tape-moistening machine. No. 885,385; Apr. 21; Sp. p. 3553; Dr. p. 743; Gaz. vol. 133; p. 1814.
Senseney, F. B., Chambersburg, Pa. Cooking utensil. No. 884,767; Apr. 14; Sp. p. 2269; Dr. p. 477; Gaz. vol. 133; p. 1580.
Senter, R. T., Chicago, Ill., assignor to J. G. Brill Company, Philadelphia, Pa. Lubricating device for center-bearings. No. 886,080; Apr. 28; Sp. p. 4970; Dr. p. 1045; Gaz. vol. 133; p. 2066.
Sergeant, C. H., Brooklyn, N. Y., assignor, by mesne assignments, to Chicago Pneumatic Tool Company, Chicago, Ill. Controlling mechanism for pneumatic tools. No. 886,257; Apr. 28; Sp. p. 5296; Dr. p. 1115; Gaz. vol. 133; p. 2124.
Serpek, O., Madulein, Switzerland. Producing ammonia. No. 884,423; Apr. 14; Sp. p. 1519; Gaz. vol. 133; p. 1466.
Serrell, J. A., Bayonne, N. J., assignor to Warren Webster and Company. Apparatus for purifying vapors and gases. No. 885,185; Apr. 21; Sp. p. 3125; Dr. p. 657; Gaz. vol. 133; p. 1745.
Sessions Clock Company. (See Morway, J. W., assignor.)
Seymour, B. W. (See Monroe and Seymour.)
Seymour, M. T., Bemus Point, and A. W. Hall, Stowe, N. Y. Electrical fluid-heater. No. 884,424; Apr. 14; Sp. p. 1520; Dr. p. 326; Gaz. vol. 133; p. 1466.
Shafer, H. R., Detroit, Mich. Foot-bolt for holding doors. No. 884,768; Apr. 14; Sp. p. 2269; Dr. p. 477; Gaz. vol. 133; p. 1580.
Shafer, W. H., Cincinnati, Ohio. Force-pump. No. 884,769; Apr. 14; Sp. p. 2270; Dr. p. 477; Gaz. vol. 133; p. 1581.
Shanck, H. K., assignor to Euclid Motor Company, Cleveland, Ohio. Gas-generator for explosive-engines. No. 883,981; Apr. 7; Sp. p. 633; Dr. p. 126; Gaz. vol 133; p. 1293.
Shanklin, G. R., Portland, Oreg. Burner. No. 884,869; Apr. 14; Sp. p. 2470; Dr. p. 520; Gaz. vol. 133; p. 1614.
Sharp Bridge Company, W. (See Sharp, W., assignor.)
Sharp, W., Eldorado, Kans., assignor to W. Sharp Bridge Company. Bridge construction. No. 885,386; Apr. 21; Sp. p. 3554; Dr. pp. 743–4; Gaz. vol. 133; p. 1814.
Shaw, C. R., Fitchburg, Mass. Shelf and ironing-board attachment. No. 885,387; Apr. 21; Sp. p. 3555; Dr. p. 744; Gaz. vol. 133; p. 1814.
Shaw, E. C., assignor to B. F. Goodrich Company, Akron, Ohio. Vehicle-wheel rim. No. 885,960; Apr. 28; Sp. p. 4732; Dr. p. 994; Gaz. vol. 133; p. 2028.
Shaw-Kendall Engineering Company. (See Brown, W. L., assignor.)
Shaw, N. H., Boston, Mass. Automatic gas-lighting mechanism. No. 885,795; Apr. 28; Sp. p. 4372; Dr. p. 948; Gaz. vol. 133; p. 1971.
Shearman, H. C., Providence, R. I. Pneumatic and other tires. No. 885,796; Apr. 28; Sp. p. 4374; Dr. pp. 918–19; Gaz. vol. 133; p. 1971.
Sheeran, E. M., Alameda, Cal. Score-card for games. No. 884,221; Apr. 7; Sp. p. 1143; Dr. p. 240; Gaz. vol. 133; p. 1372.
Sheldon, S. B., Buffalo, N. Y. Fuel-feeding device for gas-producing furnaces. No. 884,620; Apr. 14; Sp. p. 1922; Dr. pp. 413–14; Gaz. vol. 133; p. 1529.
Shepard, G. W., Tecumseh, Okla. Baling-press. No. 884,530; Apr. 14; Sp. p. 1746; Dr. pp. 375–6; Gaz. vol. 133; p. 1500.
Shepherd, J. E., Chicago, Ill. Automatic alarm system. No. 884,047; Apr. 7; Sp. p. 755; Dr. p. 159; Gaz. vol. 133; p. 1315.
Sherman, H. N. L., Lawrence, and F. M. Lawrence, Mastic, N. Y. Screen for open fireplaces. No. 884,222; Apr. 7; Sp. p. 1144; Dr. p. 241; Gaz. vol. 133; p. 1372.
Sherrill, S. T., Mexia, Tex. Harrow and cultivating implement. No. 885,535; Apr. 21; Sp. p. 3847; Dr. p. 804; Gaz. vol. 133; p. 1859.
Sherwin, C., Ayer, Mass. Bookkeeping system. No. 886,081; Apr. 28; Sp. p. 4972; Dr. p. 1046; Gaz. vol. 133; p. 2066.
Shideed, A. G., Lawrence, Mass. Stop-motion. No. 885,875; Apr. 28; Sp. p. 4538; Dr. p. 952; Gaz. vol. 133; p. 1999.
Shilling, G. (See Webb and Shilling.)
Shimer, H. L., Garden City, Kans. Ant-trap. No. 885,536; Apr. 21; Sp. p. 3848; Dr. p. 804; Gaz. vol. 133; p. 1859.
Shipley, A. E., Nelson, British Columbia, Canada. Instantaneous water-heater. No. 884,223; Apr. 7; Sp. p. 1144; Dr. p. 241; Gaz. vol. 133; p. 1372.
Shippen, J. N., Buffalo, Wyo. Horseshoe. No. 885,090; Apr. 21; Sp. p. 2902; Dr. p. 615; Gaz. vol. 133; p. 1714.
Shoffner, E. J., assignor of fifty-one one-hundredths to G. W. Merrell, Roanoke, Va. Pneumatic-tool retainer. No. 885,537; Apr. 21; Sp. p. 3848; Dr. p. 804; Gaz. vol. 133; p. 1859.
Shover, B. R., Chicago, Ill., and A. C. Eastwood, Cleveland, Ohio. Controlling system for hoists. No. 885,961; Apr. 28; Sp. p. 4734; Dr. p. 995; Gaz. vol. 133; p. 2029.
Shrock, H. E., Kokomo, Ind. Nut-lock. No. 884,531; Apr. 14; Sp. p. 1748; Dr. p. 376; Gaz. vol. 133; p. 1500.
Shultz, A. B., assignor of one-half to H. H. Hewitt, Buffalo, N. Y. Automobile. No. 883,982; Apr. 7; Sp. p. 635; Dr. p. 127; Gaz. vol. 133; p. 1294.
Sibley, G. H., Springfield, Mass. Roll-toilet-paper machine. No. 886,332; Apr. 28; Sp. p. 5482; Dr. p. 1148; Gaz. vol. 133; p. 2151.
Sichert, A., Karlsbad, Austria-Hungary. Smoke-consuming furnace. No. 885,300; Apr. 21; Sp. p. 3359; Dr. p. 703; Gaz. vol. 133; p. 1784.
Sickles, F. D., Maumee, Ohio. Invalid-support. No. 885,388; Apr. 21; Sp. p. 3556; Dr. p. 744; Gaz. vol. 133; p. 1814.
Sideman, R., San Francisco, Cal. Skirt-marker. No. 885,876; Apr. 28; Sp. p. 4540; Dr. pp. 952–3; Gaz. vol. 133; p. 1999.
Sieffert, J., Winnipegosis, Manitoba, Canada. Potato-planting machine. No. 885,963; Apr. 28; Sp. p. 4741; Dr. p. 996; Gaz. vol. 133; p. 2029.
Siepermann, J. W., and E. Fudickar, Elberfeld, Germany. Air-pump. No. 885,301; Apr. 21; Sp. p. 3361; Dr. p. 703; Gaz. vol. 133; p. 1784.
Sikes, S. J., Gainesville, Fla. Bucket. No. 884,870; Apr. 14; Sp. p. 2472; Dr. p. 520; Gaz. vol. 133; p. 1614.
Sill, S. J., assignor of one-half to H. H. Hewitt, Buffalo, N. Y. Apparatus for capping hose-sections. No. 885,797; Apr. 28; Sp. p. 4391; Dr. p. 919; Gaz. vol. 133; p. 1972.
Silvers, W. (See Plunkett and Silvers.)
Simmons, M. E., Portland, Oreg. Saw-tooth tool. No. 885,389; Apr. 21; Sp. p. 3557; Dr. p. 744; Gaz. vol. 133; p. 1814.
Simonds Manufacturing Co. (See Remington, A. M., assignor.)
Simplex Electric Heating Company. (See Ayer, J. I., assignor.)
Simplex Manufacturing Company. (See Fancher and Parmelee, assignors.)
Simpson, A. E., Corona, N. Mex. Cuspidor. No. 884,871; Apr. 14; Sp. p. 2472; Dr. pp. 520–1; Gaz. vol. 133; p. 1614.
Simpson, C. A., assignor to Kellogg Switchboard & Supply Company, Chicago, Ill. Three-wire central-energy telephone system. No. 885,186; Apr. 21; Sp. p. 3129; Dr. p. 658; Gaz. vol. 133; p. 1746.
Simpson, E. H. (See Downer and Simpson.)
Simpson, J. T., and T. Lishman, Durham, England. Air-compressor. No. 885,877; Apr. 28; Sp. p. 4542; Dr. p. 953; Gaz. vol. 133; p. 1999.
Simpson, R. D., assignor to J. W. Seeds and F. R. Ritter, Columbus, Ohio. Coin-controlled vending-machine. No. 885,187; Apr. 21; Sp. p. 3132; Dr. p. 658; Gaz. vol. 133; p. 1747.
Simpson, R. H., and W. Park, Rugby, England. Power-driven vehicle. No. 886,082; Apr. 28; Sp. p. 4973; Dr. p. 1046; Gaz. vol. 133; p. 2067.
Sims, J. S., assignor of one-half to E. R. Millar, Longbeach, Cal. Railway-signal. No. 884,224; Apr. 7; Sp. p. 1146; Dr. p. 241; Gaz. vol. 133; p. 1373.
Sinclair, J. L., San Antonio, Tex. Setting plants. No. 885,091; Apr. 21; Sp. p. 2903; Dr. p. 616; Gaz. vol. 133; p. 1715.
Siner, J. M., Brooklyn, N. Y. Garment-clasp. No. 884,625; Apr. 14; Sp. p. 1522; Dr. p. 326; Gaz. vol. 133; p. 1466.
Siner, J. M., assignor to A. Herbert and Venus Manufacturing Company, New York, N. Y. Clasp for garment-supporters. No. 885,188; Apr. 21; Sp. p. 3134; Dr. p. 658; Gaz. vol. 133; p. 1747.
Singer Manufacturing Company. (See Allen, E. B., assignor.)
Singer Manufacturing Company. (See Gatchell, G. S., assignor.)
Singer Manufacturing Company. (See Hemleb, M., assignor.)
Singleton, T. D., and W. Gleason, Providence, R. I. Spinning and twisting machine. No. 884,621; Apr. 14; Sp. p. 1927; Dr. p. 414; Gaz. vol. 133; p. 1530.
Sipser, S., New York, N. Y. Perpetual calendar. No. 884,532; Apr. 14; Sp. p. 1749; Dr. p. 376; Gaz. vol. 133; p. 1501.
Sirrine, G. W., Greenville, S. C. Wagon-hound. No. 884,225; Apr. 7; Sp. p. 1149; Dr. p. 242; Gaz. vol. 133; p. 1373.
Sisk, F. M., assignor to J. L. De Give, Atlanta, Ga. Gin-saw-filing machine. No. 884,770; Apr. 14; Sp. p. 2272; Dr. p. 478; Gaz. vol. 133; p. 1581.
Sittnann, G., New York, N. Y. Reversing mechanism. No. 885,390; Apr. 21; Sp. p. 3558; Dr. p. 745; Gaz. vol. 133; p. 1815.
Sixt, F. C., and W. M. Reichart, assignors to Chandler & Price Co., Cleveland, Ohio. Means for inking printing-rolls. No. 884,872; Apr. 14; Sp. p. 2473; Dr. p. 521; Gaz. vol. 133; p. 1614.
Sjoberg, K., West Lynn, Mass. Newspaper-holder. No. 884,226; Apr. 7; Sp. p. 1150; Dr. p. 242; Gaz. vol. 133; p. 1373.
Skelton, J. M., Chicago, Ill. Bottle-valve. No. 885,092; Apr. 21; Sp. p. 2906; Dr. p. 616; Gaz. vol. 133; p. 1715.
Skiles, C. G., Masontown, Pa. Rail-joint. No. 886,259; Apr. 28; Sp. p. 5300; Dr. p. 1116; Gaz. vol. 133; p. 2125.
Skirrow, J. F., East Orange, N. J. Steering-rod connection. No. 885,878; Apr. 28; Sp. p. 4544; Dr. p. 953; Gaz. vol. 133; p. 2000.
Slear, E. F., Harrisburg, Pa. Toy gun. No. 883,915; Apr. 7; Sp. p. 494; Dr. p. 98; Gaz. vol. 133; p. 1271.
Slinack, V. H., assignor to Pennsylvania Globe Gas Light Company, Philadelphia, Pa. Hydrocarbon incandescent light. No. 885,189; Apr. 21; Sp. p. 3136; Dr. p. 658; Gaz. vol. 133; p. 1747.
Smallwood, A., London, England. Furnace. No. 883,916; Apr. 7; Sp. p. 496; Dr. pp. 98–9; Gaz. vol. 133; p. 1271.
Smethers, J. A., and W. Elliott, assignors to Dempster Mill Manufacturing Company, Beatrice, Nebr. Cultivator. No. 885,093; Apr. 21; Sp. p. 2906; Dr. pp. 616–17; Gaz. vol. 133; p. 1715.
Smith, A., San Mateo, Cal. Well-tubing. No. 884,048; Apr. 7; Sp. p. 766; Dr. p. 160; Gaz. vol. 133; p. 1315.
Smith, A. B., Boston, Mass. Boiler-feed controller. No. 885,653; Apr. 21; Sp. p. 4074; Dr. pp. 861–2; Gaz. vol. 133; p. 1894.

Smith, A. J., Stamford, Conn., assignor to Underwood Typewriter Company, New York, N. Y. Stencilling-machine. No. 886,260; Apr. 28; Sp. p. 5301; Dr. p. 1116; Gaz. vol. 133; p. 2125.
Smith, A. M. (See Booth, Blausey, and Smith.)
Smith, A. P., Sumpter, Oreg. Balanced pump. No. 885,798; Apr. 28; Sp. p. 4394; Dr. p. 920; Gaz. vol. 133; p. 1972.
Smith, C., assignor to Cyclone Drill Company, Orrville, Ohio. Discharge-stem. No. 886,083; Apr. 28; Sp. p. 4975; Dr. p. 1046; Gaz. vol. 133; p. 2067.
Smith, C. A., assignor to Blaisdell Paper Pencil Company, Philadelphia, Pa. Pencil. No. 885,190; Apr. 21; Sp. p. 3136; Dr. p. 659; Gaz. vol. 133; p. 1748.
Smith, C. W., Cambridge, Mass. Furnace. No. 886,261; Apr. 28; Sp. p. 5303; Dr. p. 1116; Gaz. vol. 133; p. 2125.
Smith, D. C., and W. F. Gorton, Muncie, Ind. Rim for motor-car wheels. No. 886,019; Apr. 28; Sp. p. 4859; Dr. p. 1022; Gaz. vol. 133; p. 2047.
Smith, E. A., Loveland, Colo. Beet-puller. No. 885,538; Apr. 21; Sp. p. 3851; Dr. p. 805; Gaz. vol. 133; p. 1859.
Smith, F. H., assignor of one-half to J. J. Gribbin, Aberdeen, Wash. Wrench. No. 884,227; Apr. 7; Sp. p. 1151; Dr. p. 242; Gaz. vol. 133; p. 1373.
Smith, E. L., Oak Cliff, assignor of two-thirds to G. F. Childress, Wills Point, Tex. Switch-cord plug. No. 886,262; Apr. 28; Sp. p. 5305; Dr. p. 1117; Gaz. vol. 133; p. 2126.
Smith, G. H. (See McDonald, P., assignor.)
Smith, H., *et al.* (See Sebree, W. T., assignor.)
Smith, H. A., Elgin, Ill. Wrench. No. 885,191; Apr. 21; Sp. p. 3137; Dr. p. 659; Gaz. vol. 133; p. 1748.
Smith, I. T., Norfolk, Va. Gasolene-lamp. No. 885,799; Apr. 28; Sp. p. 4395; Dr. p. 920; Gaz. vol. 133; p. 1972.
Smith, J. A., Combs, Ark. Turbine water-wheel. No. 884,426; Apr. 14; Sp. p. 1524; Dr. p. 327; Gaz. vol. 133; p. 1467.
Smith, J. H. (See Merckens and Smith.)
Smith, J. M., Waite Park, assignor of one-half to F. C. Lindt, St. Cloud, Minn. Combined truck and jack. No. 885,302; Apr. 21; Sp. p. 3362; Dr. p. 703; Gaz. vol. 133; p. 1785.
Smith, J. W., Dayton, Ohio. Street-cleaner. No. 886,263; Apr. 28; Sp. p. 5307; Dr. p. 1117; Gaz. vol. 133; p. 2126.
Smith, L. Y., Parker, Kans. Detachable button. No. 885,879; Apr. 28; Sp. p. 4546; Dr. p. 954; Gaz. vol. 133; p. 2000.
Smith, R. A., Bay City, Mich. Cement-tie mold. No. 885,539; Apr. 21; Sp. p. 3852; Dr. p. 805; Gaz. vol. 133; p. 1859.
Smith, R. H. (See Griggs and Smith.)
Smith & Sons Mfg. Co. (See Livengood, W. S., assignor.)
Smith, T. J., Ensley, Ala. Cotton-chopper. No. 885,654; Apr. 21; Sp. p. 4076; Dr. pp. 852–3; Gaz. vol. 133; p. 1895.
Smith, U. S., Sacramento, Cal. Automatic air-brake-pressure adjuster. No. 883,917; Apr. 7; Sp. p. 497; Dr. p. 99; Gaz. vol. 133; p. 1272.
Smith, U. S., Sacramento, Cal. Air-brake system. No. 883,918; Apr. 7; Sp. p. 499; Dr. pp. 99–100; Gaz. vol. 133; p. 1272.
Smith, W. C., Campbell, Cal. Sheet-music. No. 885,192; Apr. 21; Sp. p. 3140; Dr. p. 659; Gaz. vol. 133; p. 1748.
Smither, C. J., *et al.* (See Smoot, G., assignor.)
Smoot, G., assignor of two-thirds to W. H. Johnson and C. J. Smither, Gratz, Ky. Mail-sack. No. 886,264; Apr. 28; Sp. p. 5309; Dr. p. 1118; Gaz. vol. 133; p. 2126.
Snow, K. F., assignor to C. O. Bartlett & Snow Co., Cleveland, Ohio. Drier. No. 884,771; Apr. 14; Sp. p. 2275; Dr. p. 479; Gaz. vol. 133; p. 1582.
Snyder, M., Beatty, and A. Zuzak, Baggaley, Pa. Safety-catch for cable-railways. No. 885,303; Apr. 21; Sp. p. 3363; Dr. p. 704; Gaz. vol. 133; p. 1785.
Snyder, T. M. (See Ewing and Snyder.)
Snyder, W. B., Wilkes-Barre, Pa. Curtain-pole. No. 885,540; Apr. 21; Sp. p. 3854; Dr. pp. 805–6; Gaz. vol. 133; p. 1860.
Sobinski, C. O., St. Louis, Mo. Valve mechanism for pumps. No. 885,193; Apr. 21; Sp. p. 3141; Dr. p. 660; Gaz. vol. 133; p. 1748.
Società in Partecipazione per la Combustione Liquida. (See Molinari, E., assignor.)
Société Anonyme Métallurgique Procédés de Laval. (See Laval, C. G. P. de, assignor.)
Society of Chemical Industry in Basle, Firm of. (See Engi, G., assignor.)
Soderblom, H. G., Brooklyn, N. Y. Coal-scuttle. No. 885,094; Apr. 21; Sp. p. 2909; Dr. p. 617; Gaz. vol. 133; p. 1716.
Sohn, H. B., and F. C. Miller, Allegheny, Pa. Wrench. No. 886,084; Apr. 28; Sp. p. 4976; Dr. p. 1047; Gaz. vol. 133; p. 2067.
Sollitt, R. T., Chicago, Ill. Concrete-mixing machine. No. 883,983; Apr. 7; Sp. p. 638; Dr. pp. 127–9; Gaz. vol. 133; p. 1294.
Solomon, W. T., assignor to R. C. Hall, Pittsburg, Pa. Producing gas from alcohol. No. 885,095; Apr. 21; Sp. p. 2910; Dr. p. 617; Gaz. vol. 133; p. 1716.
Solomon, W. T., assignor to R. C. Hall, Pittsburg, Pa. Compound to be used in the manufacture of gas. No. 885,096; Apr. 21; Sp. p. 2911; Gaz. vol. 133; p. 1716.
Sommer, F. F., Kalona, Iowa. Hay-elevator. No. 885,541; Apr. 21; Sp. p. 3856; Dr. p. 806; Gaz. vol. 133; p. 1860.
Sonnenberg, H., Brooklyn, N. Y. Molding-machine. No. 884,228; Apr. 7; Sp. p. 1152; Dr. pp. 242–3; Gaz. vol. 133; p. 1374.
Sorensen, C. M., Greenpoint, N. Y. Clamp. No. 884,772; Apr. 14; Sp. p. 2277; Dr. p. 479; Gaz. vol. 133; p. 1582.
Soule, G. F. (See Phillips, G. H., assignor.)
Soule, H. C., Wilkinsburg, Pa., assignor to Westinghouse Electric & Manufacturing Company. Coil-support for electric transformers. No. 885,800; Apr. 28; Sp. p. 4397; Dr. p. 920; Gaz. vol. 133; p. 1973.
Southward, D. H., assignor of one-half to M. J. King, Pittsburg, Pa. Attachment for levels. No. 886,333; Apr. 28; Sp. p. 5488; Dr. p. 1148; Gaz. vol. 133; p. 2151.
Southwark Foundry and Machine Company. (See Petsche, G. B., assignor.)
Sparks, J. E., Only, Tenn. Combination-tool. No. 884,229; Apr. 7; Sp. p. 1154; Dr. p. 243; Gaz. vol. 133; p. 1374.
Sparling, A. H., Aligarh, India. Lock. No. 885,964; Apr. 28; Sp. p. 4743; Dr. p. 996; Gaz. vol. 133; p. 2030.
Speed, J. A., assignor to Speed Manufacturing Company, Los Angeles, Cal. Rapid-fire carbureter. No. 886,265; Apr. 28; Sp. p. 5311; Dr. p. 1118; Gaz. vol. 133; p. 2127.
Speed Manufacturing Company. (See Speed, J. A., assignor.)
Speirs, C. W., Battersea, assignor to Morgan Crucible Company, Limited, London, England. Pneumatic holder for commutator-brushes. No. 884,040; Apr. 7; Sp. p. 768; Dr. p. 160; Gaz. vol. 133; p. 1315.
Spencer, A., London, England. Antifriction mechanism for railway-wagons and other vehicles. No. 885,801; Apr. 28; Sp. p. 4398; Dr. p. 921; Gaz. vol. 133; p. 1973.
Spencer, G. A. (See Spotz and Spencer.)
Sperry, E. A., Brooklyn, N. Y. Apparatus for effecting reactions. No. 885,391; Apr. 21; Sp. p. 3560; Dr. pp. 745–6; Gaz. vol. 133; p. 1815.
Spets, F. H., Chicago, Ill. Drill-chuck. No. 885,302; Apr. 21; Sp. p. 3564; Dr. p. 746; Gaz. vol. 133; p. 1815.
Spicer, C. R., Springfield, Ill. Brush-cleaner. No. 883,752; Apr. 7; Sp. p. 141; Dr. p. 26; Gaz. vol. 133; p. 1217.
Spivak, F. A., Sunrise, Minn. Grain-heater. No. 884,230; Apr. 7; Sp. p. 1155; Dr. p. 243; Gaz. vol. 133; p. 1374.
Sponable, G. W., assignor to Brown-Lipe Gear Company, Syracuse, N. Y. Gear. No. 885,194; Apr. 21; Sp. p. 3144; Dr. p. 660; Gaz. vol. 133; p. 1749.
Sponsel, C. W., Hartford, Conn., assignor to Parker Machine Company, Buffalo, N. Y. Carriage-shifting mechanism for type-writers. No. 883,753; Apr. 7; Sp. p. 142; Dr. p. 26; Gaz. vol. 133; p. 1217.
Spotz, C. H., and G. A. Spencer, Philadelphia, Pa. Back and head rest. No. 884,534; Apr. 14; Sp. p. 1751; Dr. p. 377; Gaz. vol. 133; p. 1501.
Sprague, A. W., La Grange, assignor to American Steel & Wire Company, Chicago, Ill. Wire-stretcher. No. 886,020; Apr. 28; Sp. p. 4963; Dr. p. 1022; Gaz. vol. 133; p. 2047.
Sprague Electric Company. (See Libby, S. H., assignor.)
Spraker, H. G., Rich Hill, Mo. Hame-strap attachment. No. 884,231; Apr. 7; Sp. p. 1156; Dr. p. 244; Gaz. vol. 133; p. 1375.
Standt, H., Dola, Ohio. Tank-heater. No. 884,232; Apr. 7; Sp. p. 1158; Dr. p. 244; Gaz. vol. 133; p. 1375.
Stacy, E. A. (See Goodale and Stacy.)
Stafford, G. A., Belcherville, I. P. Whitaker, Alvord, and J. L. Lopp, Greenwood, Tex. Electric railway-signal. No. 884,622; Apr. 14; Sp. p. 1929; Dr. p. 414; Gaz. vol. 133; p. 1530.
Stafford, W. K., Newton, Mass. Heater. No. 884,300; Apr. 7; Sp. p. 1274; Dr. p. 269; Gaz. vol. 133; p. 1396.
Stahl, F. W., Denver, Colo. Clarinet. No. 885,880; Apr. 28; Sp. p. 4546; Dr. p. 954; Gaz. vol. 133; p. 2000.
Staley, H. W., Knapp Creek, assignor of one-fourth to Carley Heater Company, Olean, N. Y. Tube catcher and support. No. 885,195; Apr. 21; Sp. p. 3145; Dr. p. 660; Gaz. vol. 133; p. 1749.
Stalker, N., West Hartford, Conn. Horse-check. No. 883,754; Apr. 7; Sp. p. 147; Dr. p. 26; Gaz. vol. 133; p. 1217.
Stalmann, G., Leipzig-Gohlis, assignor to Firm of Schimmel u. Co., Leipzig, Germany. Manufacturing protocatechuic aldehyde. No. 886,085; Apr. 28; Sp. p. 4977; Gaz. vol. 133; p. 2067.
Standard Equipment Company. (See Kidd, W. C., assignor.)
Standard Machine Company. (See Houseman, H. A., assignor.)
Standard Malleable Iron Company. (See Howe, E. L., assignor.)
Standard Trimmer Company. (See Ridgeley, C. T., assignor.)
Standard Wire Co. (See Norris, J. E., assignor.)
Standish, P. H., Cleveland, Ohio. Apparatus for carrying and heating chain-link blanks, &c. No. 884,427; Apr. 14; Sp. p. 1525; Dr. p. 327; Gaz. vol. 133; p. 1467.
Stanford, G. E., Chicago, Ill. Gage for drills and augers. No. 884,233; Apr. 7; Sp. p. 1159; Dr. p. 245; Gaz. vol. 133; p. 1375.

Stanley, J., New York, N. Y. Building material. No. 884,869; Apr. 14; Sp. p. 2626; Dr. p. 557; Gaz. vol. 133; p. 1639.
Stanton, W. J., Bayonne, N. J. Corkscrew. No. 884,573; Apr. 14; Sp. p. 2474; Dr. p. 521; Gaz. vol. 133; p. 1614.
Staples, A. F., Alliance, Ohio. Sales-book. No. 884,623; Apr. 14; Sp. p. 1930; Dr. p. 415; Gaz. vol. 133; p. 1530.
Staples, F. A., and L. Möller, San Francisco, Cal. Sash-fastener. No. 885,203; Apr. 21; Sp. p. 3566; Dr. p. 747; Gaz. vol. 133; p. 1816.
Stapley, W. S., assignor to Bridgeport Brass Company, Bridgeport, Conn. Socket-cap. No. 884,624; Apr. 14; Sp. p. 1931; Dr. p. 415; Gaz. vol. 133; p. 1530.
Stapp, S. G., Phillipsburg, Kans. Car-door. No. 884,234; Apr. 7; Sp. p. 1161; Dr. p. 245; Gaz. vol. 133; p. 1376.
Stark, C. H., Chicago, Ill. Square. No. 884,773; Apr. 14; Sp. p. 2279; Dr. p. 479; Gaz. vol. 133; p. 1582.
Stark, C. W., Mountain Lake, Minn. Wire-reel. No. 885,160; Apr. 28; Sp. p. 5127; Dr. p. 1077; Gaz. vol. 133; p. 2091.
Starke, K. A. (See Händler and Starke.)
Steadman, C. (See Robinson and Steadman.)
Steber, B. T., assignor to Steber Machine Company, Utica, N. Y. Dial knitting-machine. No. 885,384; Apr. 21; Sp. p. 3367; Dr. p. 704; Gaz. vol. 133; p. 1785.
Steber Machine Company. (See Steber, B. T., assignor.)
Steckel, W. J., assignor to Joliet Manufacturing Company, Joliet, Ill. Feed-regulator for corn-shellers. No. 885,881; Apr. 28; Sp. p. 4550; Dr. p. 954; Gaz. vol. 133; p. 2001.
Steckelberg, C. F., Lincoln, Nebr. Chin-rest for violins and violas. No. 883,755; Apr. 7; Sp. p. 148; Dr. p. 27; Gaz. vol. 133; p. 1217.
Steele, T. A., assignor of one-half to E. P. Durr, Point Marion, Pa. Vending-machine. No. 885,965; Apr. 28; Sp. p. 4743; Dr. p. 996; Gaz. vol. 133; p. 2030.
Steele, T. F., New Orleans, La. Label for cotton-bales. No. 886,086; Apr. 28; Sp. p. 4978; Dr. p. 1047; Gaz. vol. 133; p. 2068.
Steele, W. J. (See Phipps and Steele.)
Steely, H. G., Washington, D. C., assignor to Higgin Manufacturing Company, Newport, Ky. Window-screen. No. 885,097; Apr. 21; Sp. p. 2913; Dr. p. 618; Gaz. vol. 133; p. 1716.
Steil, C. P., assignor to H. Steil, Milwaukee, Wis. Antisnoring-shield. No. 885,196; Apr. 21; Sp. p. 3148; Dr. p. 661; Gaz. vol. 133; p. 1750.
Steil, H. (See Steil, C. P., assignor.)
Steinbecker, C. (See Oechelhaeuser and Steinbecker.)
Steinberger, L., New York, N. Y. Receiver for telephones. No. 884,235; Apr. 7; Sp. p. 1163; Dr. p. 245; Gaz. vol. 133; p. 1376.
Steinberger, L., New York, N. Y. Insulator for heavy currents. No. 885,678; Apr. 21; Sp. p. 4122; Dr. p. 863; Gaz. vol. 133; p. 1903.
Steiner, J. C., St. Louis, Mo. Portable support and power mechanism. No. 883,984; Apr. 7; Sp. p. 644; Dr. p. 129; Gaz. vol. 133; p. 1294.
Steiner, K. J., Pittsburg, Pa. Heat-radiator for hydrocarbon and other heat motors. No. 883,756; Apr. 7; Sp. p. 149; Dr. p. 27; Gaz. vol. 133; p. 1218.
Steinmetz, C. P., Schenectady, N. Y., assignor to General Electric Company. Reactive coil. No. 883,919; Apr. 7; Sp. p. 504; Dr. p. 100; Gaz. vol. 133; p. 1272.
Steinmetz, C. P., Schenectady, N. Y., assignor to General Electric Company. Bucket for turbines. No. 885,098; Apr. 21; Sp. p. 2915; Dr. p. 618; Gaz. vol. 133; p. 1717.
Steinmetz, C. P., Schenectady, N. Y., assignor to General Electric Company. Starting device for mercury-lamps. No. 885,882; Apr. 28; Sp. p. 4553; Dr. p. 954; Gaz. vol. 133; p. 2001.
Stensland, P. O. (See Boedecker, L. F., assignor.)
Stern, L., *et al.* (See Ehrlich, F., assignor.)
Stern, J. N., Falun, assignor of one-half to H. T. Tiliquist, Stockholm, Sweden. Steam-superheater. No. 886,087; Apr. 28; Sp. p. 4979; Dr. p. 1047; Gaz. vol. 133; p. 2068.
Stern, M. C. (See Schirmer and Stern.)
Sterrick, H. D., Pittsburg, Pa. Toy mask. No. 885,802; Apr. 28; Sp. p. 4399; Dr. p. 921; Gaz. vol. 133; p. 1974.
Stetler, D. E., Medford, Okla. Gate. No. 884,533; Apr. 14; Sp. p. 1750; Dr. p. 376; Gaz. vol. 133; p. 1501.
Steubing, W., Cincinnati, Ohio. Machine for cutting and mounting sheet-metal stripe. No. 883,838; Apr. 7; Sp. p. 342; Dr. pp. 65–6; Gaz. vol. 133; p. 1245.
Stevens, D. P., Rio, Wis. Egg-opener. No. 886,266; Apr. 28; Sp. p. 5313; Dr. p. 1118; Gaz. vol. 133; p. 2127.
Stevens, F. A., Providence, R. I. Eyeglasses. No. 885,197; Apr. 21; Sp. p. 3149; Dr. p. 661; Gaz. vol. 133; p. 1750.
Stevens, F. A., Providence, R. I. Eyeglasses. No. 885,198; Apr. 21; Sp. p. 3150; Dr. p. 661; Gaz. vol. 133; p. 1750.
Stevens, F. A., Providence, R. I. Eyeglasses. No. 885,199; Apr. 21; Sp. p. 3151; Dr. p. 661; Gaz. vol. 133; p. 1751.
Stevens, G. I., Essex, Conn. Metal-polish. No. 885,542; Apr. 21; Sp. p. 3859; Gaz. vol. 133; p. 1861.
Stewart, A. (See Stewart, J. S., assignor.)
Stewart, D., Chehalis, Wash. Burglary-preventing apparatus. No. 885,200; Apr. 21; Sp. p. 3152; Dr. p. 662; Gaz. vol. 133; p. 1751.
Stewart, G. F., Lynn, assignor, by mesne assignments, to T. G. Plant, Boston, Mass. Welt-marking machine. No. 885,099; Apr. 21; Sp. p. 2918; Dr. pp. 618–20; Gaz. vol. 133; p. 1717.
Stewart, G. W. (See Depp, W. E., assignor.)
Stewart, J., Codnor Park, England. Fire-grate. No. 885,100; Apr. 21; Sp. p. 2924; Dr. p. 620; Gaz. vol. 133; p. 1717.
Stewart, J. S., assignor to A. Stewart, New York, N. Y. Means for supporting lamp-receptacles. No. 886,267; Apr. 28; Sp. p. 5316; Dr. p. 1119; Gaz. vol. 133; p. 2128.
Stewart, R. F., Pocantico Hills, assignor to American Butter Cutting Machine Company, New York, N. Y. Butter-cutting machine. No. 886,088; Apr. 28; Sp. p. 4981; Dr. p. 1048; Gaz. vol. 133; p. 2068.
Stewart, S., *et al.* (See Stewart, S., assignor.)
Stewart, S., assignor to E. A. Billingslea, S. Stewart, E. T. Crisilp, S. E. Janes, and M. J. Lanta, Fairmont, W. Va. Box-opener. No. 884,301; Apr. 7; Sp. p. 1277; Dr. p. 270; Gaz. vol. 133; p. 1396.
Stewart, S., Newark, N. J. Portable revolving baker's gas-oven. No. 885,702; Apr. 21; Sp. p. 4170; Dr. pp. 873–4; Gaz. vol. 133; p. 1910.
Stewart, W., Elmira, N. Y. Box. No. 883,757; Apr. 7; Sp. p. 153; Dr. p. 27; Gaz. vol. 133; p. 1218.
Stewart, W. C., Lynn, assignor, by mesne assignments, to T. G. Plant, Boston, Mass. Reinforced-insole covering and shaping machine. No. 883,837; Apr. 7; Sp. p. 333; Dr. pp. 63–5; Gaz. vol. 133; p. 1245.
Stick, J. H., Littlestown, Pa. Steam-engine. No. 885,543; Apr. 21; Sp. p. 3860; Dr. p. 807; Gaz. vol. 133; p. 1861.
Stickels, E. H., Edgewater, N. J. Holder for spare tires. No. 885,655; Apr. 21; Sp. p. 4079; Dr. p. 853; Gaz. vol. 133; p. 1895.
Stickney, M. H., Kansas City, Mo. Car-door. No. 885,101; Apr. 21; Sp. p. 2926; Dr. p. 621; Gaz. vol. 133; p. 1718.
Stief Jewelry Co. (See Faller, L. A., assignor.)
Stiles, W. C., West Boylston, assignor to Mills Woven Cartridge Belt Company, Worcester, Mass. Snap-hook. No. 885,883; Apr. 28; Sp. p. 4553; Dr. p. 955; Gaz. vol. 133; p. 2001.
Stimpson, E. B., New York, N. Y., assignor to United States Envelope Co., Worcester, Mass. Envelop-fastener. No. 885,884; Apr. 28; Sp. p. 4554; Dr. p. 955; Gaz. vol. 133; p. 2001.
Stimpson, W. F., Detroit, Mich. Scale-bearing support. No. 885,885; Apr. 28; Sp. p. 4555; Dr. p. 955; Gaz. vol. 133; p. 2002.
Stirling, W. H., assignor to H. R. McLellan, St. John, New Brunswick, Canada. Injector. No. 884,625; Apr. 14; Sp. p. 1932; Dr. p. 415; Gaz. vol. 133; p. 1531.
Stitzell, J. D., Allegheny, Pa. Rail-joint. No. 884,774; Apr. 14; Sp. p. 2280; Dr. p. 480; Gaz. vol. 133; p. 1582.
Stocker, A. P., Struthers, Ohio. Brace for sheet-metal piles. No. 886,089; Apr. 28; Sp. p. 4985; Dr. p. 1048; Gaz. vol. 133; p. 2069.
Stocker, J. W. and O., Chicago, Ill. Graining card-painting machine. No. 885,102; Apr. 21; Sp. p. 2927; Dr. pp. 621–2; Gaz. vol. 133; p. 1718.
Stocker, O. (See Stocker, J. W. and O.)
Stoll, J. F., Cuyahoga Falls, Ohio. Head for surfacing-machines. No. 883,920; Apr. 7; Sp. p. 505; Dr. p. 100; Gaz. vol. 133; p. 1273.
Stone, J. S., Cambridge, assignor to W. W. Swan, trustee, Brookline, Mass. Space telegraphy. No. 884,106; Apr. 7; Sp. p. 884; Dr. pp. 186–8; Gaz. vol. 133; p. 1334.
Stone, J. S., Cambridge, assignor to W. W. Swan, trustee, Brookline, Mass. Space telegraphy. No. 884,107; Apr. 7; Sp. p. 889; Dr. pp. 188–91; Gaz. vol. 133; p. 1334.
Stone, J. S., Cambridge, assignor to W. W. Swan, trustee, Brookline, Mass. Space telegraphy. No. 884,108; Apr. 7; Sp. p. 909; Dr. p. 192; Gaz. vol. 133; p. 1335.
Stone, J. S., Cambridge, assignor to W. W. Swan, trustee, Brookline, Mass. Space telegraphy. No. 884,109; Apr. 7; Sp. p. 915; Dr. pp. 192–3; Gaz. vol. 133; p. 1335.
Stone, J. S., Boston, and S. Cabot, Brookline, assignors to W. W. Swan, trustee, Brookline, Mass. Space telegraphy. No. 884,110; Apr. 7; Sp. p. 923; Dr. p. 193; Gaz. vol. 133; p. 1336.
Stone Telegraph and Telephone Company. (See Cabot, S., assignor.)
Stone Telegraph and Telephone Company. (See Cram, E. R., assignor.)
Stonemetz, J. H., Boston, Mass. Printing-press. No. 884,302; Apr. 7; Sp. p. 1278; Dr. p. 270; Gaz. vol. 133; p. 1397.
Stonestreet, J. M., Marshalltown, Iowa. Retouching-cabinet. No. 884,535; Apr. 14; Sp. p. 1753; Dr. p. 377; Gaz. vol. 133; p. 1501.
Stopple, J. J., Dallas, Tex. Baling-press. No. 883,758; Apr. 7; Sp. p. 155; Dr. p. 28; Gaz. vol. 133; p. 1218.
Stork, J., *et al.* (See Loewenstein, M., assignor.)
Storrey, P. M. (See Morrison, G. L., assignor.)
Stoss, C. E., assignor of forty one-hundredths to W. Munch, Kansas City, Mo. Window construction. No. 885,708; Apr. 21; Sp. p. 4172; Dr. p. 874; Gaz. vol. 134; p. 1911.

Strachan, W., assignor of one-half to N. H. Campbell, St. Thomas, N. D. Jar-cover. No. 885,103; Apr. 21; Sp. p. 2929; Dr. p. 622; Gaz. vol. 133; p. 1718.
Stranzenbach, H. (See Kronenberg and Stranzenbach.)
Street, J. and J. H., Chattanooga, Tenn. Shingle and heading machine. No. 885,201; Apr. 21; Sp. p. 3153; Dr. p. 662; Gaz. vol. 133; p. 1751.
Street, J. H. (See Street, J. and J. H.)
Streeter, A. L., Chicago, Ill. Journal-bearing. No. 884,050; Apr. 7; Sp. p. 770; Dr. p. 160; Gaz. vol. 133; p. 1316.
Stresenreuter, F. M. (See Horsfield, J., assignor.)
Stricker, C. H. J., and E. Meyer, San Antonio, Tex. Time-strike for watch and clock movements. No. 884,686; Apr. 14; Sp. p. 2092; Dr. p. 447; Gaz. vol. 133; p. 1562.
Strobel, V. O. (See Hogrebe and Strobel.)
Strong, A., Muskegon, Mich. Pipe-cutter. No. 882,536; Apr. 14; Sp. p. 1756; Dr. p. 377; Gaz. vol. 133; p. 1502.
Strong, F. F., Boston, Mass. Apparatus for converting direct current into alternating current. No. 885,394; Apr. 21; Sp. p. 3566; Dr. p. 747; Gaz. vol. 133; p. 1816.
Strong, G., London, England. Cabinet or nest of trays. No. 884,428; Apr. 14; Sp. p. 1531; Dr. pp. 327–8; Gaz. vol. 133; p. 1467.
Struble, A., Carthage, Ill. Corn-grader. No. 885,395; Apr. 21; Sp. p. 3568; Dr. p. 747; Gaz. vol. 133; p. 1816.
Stryker, R. D., Huron, Ohio. Grain-door. No. 886,090; Apr. 28; Sp. p. 4985; Dr. p. 1049; Gaz. vol. 133; p. 2069.
Stuart, G. S., Hollidaysburg, Pa. Automatic force or suction draft. No. 886,268; Apr. 28; Sp. p. 5318; Dr. pp. 1119–20; Gaz. vol. 133; p. 2128.
Stuckle, H. W. de, Dieuze, Germany. Zinc sulfid pigment and producing the same. No. 884,874; Apr. 14; Sp. p. 2476; Gaz. vol. 133; p. 1615.
Stuebner, G. L., Flushing, N. Y. Self-closing dumping bucket. No. 884,687; Apr. 14; Sp. p. 2094; Dr. p. 447; Gaz. vol. 133; p. 1553.
Stuhlmiller, W., New York, N. Y. Preparation for removing paint and varnish. No. 885,396; Apr. 21; Sp. p. 3569; Gaz. vol. 133; p. 1816.
Stull, E. W., Norwood, Ohio, assignor to Allis-Chalmers Company and Bullock Electric Manufacturing Company. Controller. No. 884,345; Apr. 7; Sp. p. 1354; Dr. pp. 289–90; Gaz. vol. 133; p. 1410.
Stump, O. L., J. Reidenbaugh, and E. D. Packard, assignors to Marion Incline Filter and Heater Company, Marion, Ohio. Water-purifying apparatus. No. 885,397; Apr. 21; Sp. p. 3570; Dr. p. 747; Gaz. vol. 133; p. 1816.
Subers, L. A. (See Bayne and Subers.)
Sughroue, E., Bartley, Nebr. Railway danger-signaling and telephoning apparatus. No. 886,269; Apr. 28; Sp. p. 5320; Dr. p. 1120; Gaz. vol. 133; p. 2128.
Suiter, C., Billings, Mont. Excavator. No. 884,960; Apr. 14; Sp. p. 2634; Dr. pp. 558–61; Gaz. vol. 133; p. 1639.
Sullivan, J. J., Long Island City, N. Y. Pasting and feeding machine. No. 885,104; Apr. 21; Sp. p. 2930; Dr. p. 622; Gaz. vol. 133; p. 1719.
Sullivan, W. B., St. Louis, Mo. Coin-controlled vending apparatus. No. 884,236; Apr. 7; Sp. p. 1165; Dr. pp. 245–6; Gaz. vol. 133; p. 1376.
Sullivan, W. B., St. Louis, Mo. Coin-controlled cigar-vending apparatus. No. 884,237; Apr. 7; Sp. p. 1169; Dr. pp. 246–7; Gaz. vol. 133; p. 1377.
Sultan, A., *et al.* (See Ehrlich, F., assignor.)
Summons, N. H., Woodstock, Ohio. Lock-nut. No. 885,544; Apr. 21; Sp. p. 3862; Dr. p. 808; Gaz. vol. 133; p. 1861.
Sumner, A. D., assignor to Acorn Brass Manufacturing Company, Chicago, Ill. Hydrocarbon-gas generator. No. 885,886; Apr. 28; Sp. p. 4556; Dr. p. 955; Gaz. vol. 133; p. 2002.
Sumner Iron Works. (See Dorman, G. W., assignor.)
Sundberg, R. J., and J. Nelson, Aurora, Ill. Hydrocarbon-burner. No. 885,105; Apr. 21; Sp. p. 2932; Dr. p. 622; Gaz. vol. 133; p. 1719.
Sun Typewriter Company. (See Howell, C. W., assignor.)
Sundblom, J. G. (See Meacham and Sundblom.)
Surprenant, M. L., Indian Lake, N. Y. Holder for nursing-bottles. No. 886,270; Apr. 28; Sp. p. 5323; Dr. p. 1120; Gaz. vol. 133; p. 2129.
Süssmann, H., assignor to Firm of Deutsche Gasglühlicht Aktiengesellschaft (Auergesellschaft), Berlin, Germany. Incandescent gas-lamp. No. 886,271; Apr. 28; Sp. p. 5325; Dr. p. 1121; Gaz. vol. 133; p. 2129.
Suva, H., Invermay, Saskatchewan, Canada. Cleaner-rod for firearms. No. 883,985; Apr. 7; Sp. p. 646; Dr. p. 130; Gaz. vol. 133; p. 1295.
Suzuki, S., Ogden, Utah. Hose-nozzle. No. 886,272; Apr. 28; Sp. p. 5327; Dr. p. 1121; Gaz. vol. 133; p. 2130.
Swalm, W. E., Los Angeles, Cal., assignor to Burroughs Adding Machine Company, Detroit, Mich. Adding and listing machine. No. 885,202; Apr. 21; Sp. p. 3155; Dr. pp. 662–4; Gaz. vol. 133; p. 1751.
Swan, A. E., Waynesville, Ill. Ink-well. No. 886,161; Apr. 28; Sp. p. 5128; Dr. p. 1078; Gaz. vol. 133; p. 2092.
Swan, J., Seymour, Conn. Tool-box. No. 883,906; Apr. 7; Sp. p. 479; Dr. p. 94; Gaz. vol. 133; p. 1268.
Swan, W. W., trustee. (See Stone, J. S., assignor.)
Swan, W. W., trustee. (See Stone and Cabot, assignors.)
Swanson, P. A., Lynn Center, Ill. Hog-ring. No. 886,162; Apr. 28; Sp. p. 5129; Dr. p. 1078; Gaz. vol. 133; p. 2092.
Swasey, B. A., West Peru, Me. Fruit-picking basket. No. 883,839; Apr. 7; Sp. p. 345; Dr. p. 66; Gaz. vol. 133; p. 1216.
Swazey, G. A., Milo, Me. Gun-cleaner. No. 883,986; Apr. 7; Sp. p. 647; Dr. p. 130; Gaz. vol. 133; p. 1295.
Sweeney, J., Pittsburg, Pa. Car-fender. No. 884,238; Apr. 7; Sp. p. 1173; Dr. p. 247; Gaz. vol. 133; p. 1377.
Sweet, A. W. (See Gillmor and Sweet.)
Sweet, W., Fort Wayne, Ind. Mechanical movement. No. 885,203; Apr. 21; Sp. p. 3176; Dr. p. 664; Gaz. vol. 133; p. 1752.
Sweetland, E. J., Goldfield, Nev. Filter. No. 885,398; Apr. 21; Sp. p. 3572; Dr. p. 748; Gaz. vol. 133; p. 1817.
Swendeman, J. E., Boston, Mass. Steam-trap. No. 884,626; Apr. 14; Sp. p. 1935; Dr. pp. 415–16; Gaz. vol. 133; p. 1531.
Swoboda, A. R., Louisville, Ky. Electric switch. No. 884,775; Apr. 14; Sp. p. 2281; Dr. p. 480; Gaz. vol. 133; p. 1582.
Swomley, E. J., Monrovia, Md. Mail-pouch catcher. No. 886,163; Apr. 28; Sp. p. 5130; Dr. p. 1078; Gaz. vol. 133; p. 2092.
Sylvan, E. W. (See Sylvan, G., J. B., and E. W.)
Sylvan, G., J. B., and E. W., Columbia, S. C. Clock-movement. No. 884,961; Apr. 14; Sp. p. 2642; Dr. p. 561; Gaz. vol. 133; p. 1640.
Sylvan, J. B. (See Sylvan, G., J. B., and E. W.)
Syracuse Chilled Plow Company. (See Chase, A. M., assignor.)
Szántó, A., Paris, France. Lubricating apparatus. No. 885,399; Apr. 21; Sp. p. 3578; Dr. p. 748; Gaz. vol. 133; p. 1817.
Szpor, Z., Stanislawow, Austria-Hungary. Plunging furnace. No. 884,875; Apr. 14; Sp. p. 2477; Dr. p. 521; Gaz. vol. 133; p. 1615.
Szuk, G., and W. Hacki, Budapest, Austria-Hungary. Electric-arc lamp for alternating currents. No. 885,400; Apr. 21; Sp. p. 3580; Dr. p. 749; Gaz. vol. 133; p. 1818.
Tack, O., Newark, N. J., assignor to Tower & Lyon Company, New York, N. Y. Boring-tool. No. 884,111; Apr. 7; Sp. p. 924; Dr. p. 194; Gaz. vol. 133; p. 1336.
Tadini, G. F., New York, N. Y. Universal joint. No. 885,401; Apr. 21; Sp. p. 3581; Dr. p. 749; Gaz. vol. 133; p. 1818.
Taft, S. E., South Framingham, Mass., assignor to American Lacing Hook Co. Clutch mechanism for lacing-hook-setting machines. No. 884,051; Apr. 7; Sp. p. 772; Dr. p. 161; Gaz. vol. 133; p. 1316.
Taggart, M. V., Grenola, Kans. Combined dish pan and drainer. No. 883,840; Apr. 7; Sp. p. 346; Dr. p. 67; Gaz. vol. 133; p. 1216.
Tainter, S. S., Dixfield, Me. Machine for boxing toothpicks. No. 886,091; Apr. 28; Sp. p. 4987; Dr. p. 1049; Gaz. vol. 133; p. 2069.
Talt, H., Buffalo, N. Y. Rake-tooth cleaner. No. 886,164; Apr. 28; Sp. p. 5132; Dr. p. 1079; Gaz. vol. 133; p. 2092.
Taliaferro, W. B., Cape Girardeau, Mo. Rail-joint. No. 885,656; Apr. 21; Sp. p. 4080; Dr. p. 854; Gaz. vol. 133; p. 1896.
Tångring, O., assignor to American Steel & Wire Company, Worcester, Mass. Wire rope. No. 883,759; Apr. 7; Sp. p. 157; Dr. p. 28; Gaz. vol. 133; p. 1219.
Tanner, R. J., Lincoln, Nebr. Carpet-stretcher. No. 884,776; Apr. 14; Sp. p. 2282; Dr. pp. 480–1; Gaz. vol. 133; p. 1583.
Tanzey, J. J., assignor of one-half to G. Ulrich, Hartford, Conn. Suction device for securing glasses in place. No. 886,273; Apr. 28; Sp. p. 5328; Dr. p. 1121; Gaz. vol. 133; p. 2130.
Tate, J. L., Jersey City, N. J. Means for producing motive power. No. 886,274; Apr. 28; Sp. p. 5329; Dr. p. 1121; Gaz. vol. 133; p. 2130.
Tatum, L. L., Norwood, Ohio, assignor to Bullock Electric Manufacturing Company. System of distribution. No. 883,760; Apr. 7; Sp. p. 158; Dr. p. 28; Gaz. vol. 133; p. 1219.
Tatum, L. L., Norwood, Ohio, assignor to Allis-Chalmers Company and Bullock Electric Manufacturing Company. System of distribution. No. 885,106; Apr. 21; Sp. p. 2934; Dr. p. 623; Gaz. vol. 133; p. 1716.
Taube, H. G. (See Döhn, W. von, assignor.)
Taylor, C. W., assignor, by mesne assignments, to E. F. Glock, Detroit, Mich. Combined graphophone and picture-exhibitor. No. 884,239; Apr. 7; Sp. p. 1174; Dr. pp. 247–8; Gaz. vol. 133; p. 1378.
Taylor, E. Z., assignor to Mono Service Vessels, Limited, London, England. Milk-receptacle. No. 885,887; Apr. 28; Sp. p. 4558; Dr. p. 956; Gaz. vol. 133; p. 2002.
Taylor, G. J., assignor of one-half to A. E. Hyde, Salt Lake City, Utah. Motor-vehicle. No. 885,704; Apr. 21; Sp. p. 4176; Dr. p. 874; Gaz. vol. 133; p. 1911.
Taylor, H. W. (See Marson, J., assignor.)
Taylor, J. A. (See Casey, T., assignor.)
Taylor, J. Q., Cooper, Tex. Axle-straightener. No. 884,420; Apr. 14; Sp. p. 1532; Dr. p. 328; Gaz. vol. 133; p. 1467.
Taylor, J. W. and R. F., Burns, Tenn. Glove. No. 883,761; Apr. 7; Sp. p. 163; Dr. p. 29; Gaz. vol. 133; p. 1219.

Taylor, R., assignor to Automatic Ventilator Company, New York, N. Y. Window-ventilator. No. 884,052; Apr. 7; Sp. p. 775; Dr. pp. 161–2; Gaz. vol. 133; p. 1317.
Taylor, R. F. (See Taylor, J. W. and R. F.)
Tea Tray Company of Newark, N. J. (See Marten, A. S., assignor.)
Temperley, J. (See Temperley and Alexander.)
Temperley, J. R. and J., and W. Alexander, London, England. Transporting appliance and the like. No. 883,841; Apr. 7; Sp. p. 347; Dr. pp. 67–8; Gaz. vol. 133; p. 1216.
Terrell, N. A., assignor of one-half to J. Raines, Charlottesville, Va. Automatic reflector for locomotives. No. 885,679; Apr. 21; Sp. p. 4125; Dr. p. 863; Gaz. vol. 133; p. 1904.
Terrisse, H., assignor, by mesne assignments, to Fabrique de Vernis et Produits Chimiques (Société Anonyme), Vernier, Switzerland. Treatment of hard and semihard copals and the preparation of varnishes. No. 883,842; Apr. 7; Sp. p. 351; Gaz. vol. 133; p. 1247.
Terry, E. F., New York, N. Y. Collapsible wrecking derrick and car. No. 885,808; Apr. 28; Sp. p. 4400; Dr. pp. 921–3; Gaz. vol. 133; p. 1974.
Terry, W. B. (See Russell and Terry.)
Terry, W. H., Fall River, Mass. Culinary device. No. 884,688; Apr. 14; Sp. p. 2097; Dr. p. 448; Gaz. vol. 133; p. 1553.
Teter, C. K., assignor of one-half to F. M. Casto, Cleveland, Ohio. Apparatus for administering anesthetics. No. 883,987; Apr. 7; Sp. p. 649; Dr. pp. 130–1; Gaz. vol. 133; p. 1295.
Theo. A. Kochs Company. (See Fischer, Zimmerman, and Walker, assignors.)
Thiaville, J. E., Fair Haven, Vt., assignor of one-half to W. Thiaville, Upper Troy, N. Y. Bait-trap. No. 885,402; Apr. 21; Sp. p. 3582; Dr. pp. 749–50; Gaz. vol. 133; p. 1818.
Thiaville, W. (See Thiaville, J. E., assignor.)
Thines, W. B., Trenton, N. J. Umbrella. No. 885,804; Apr. 28; Sp. p. 4403; Dr. p. 923; Gaz. vol. 133; p. 1974.
Thoen, C., Maywood, Ill. Mail-bag-receiving device. No. 885,680; Apr. 21; Sp. p. 4127; Dr. p. 864; Gaz. vol. 133; p. 1904.
Thoma, L., *et al.* (See Sebree, W. T., assignor.)
Thomas, A. J., Harvey, Ill. Transmission-gearing for hoists. No. 884,777; Apr. 14; Sp. p. 2285; Dr. p. 481; Gaz. vol. 133; p. 1563.
Thomas, D. W., assignor of three-fourths to J. F. and C. F. Miller and J. H. Thomas, Monrovia, Cal. Railway-crossing alarm. No. 884,537; Apr. 14; Sp. p. 1758; Dr. pp. 377–8; Gaz. vol. 133; p. 1502.
Thomas, J. H., *et al.* (See Thomas, D. W., assignor.)
Thomas, J. J., Whiting, Iowa, and A. G. Christopherson, Scribner, Nebr. Telegraph-sounder. No. 885,545; Apr. 21; Sp. p. 3863; Dr. p. 808; Gaz. vol. 133; p. 1861.
Thomas, L., Denver, assignor of two-thirds to A. B. Boylan, Victor, and F. Addis, Denver, Colo. Picture-hanger. No. 884,538; Apr. 14; Sp. p. 1760; Dr. p. 378; Gaz. vol. 133; p. 1503.
Thomas Manufacturing Company. (See Pelton, C. H., assignor.)
Thomi, J., Burns, Kans. Axle-lubricator. No. 885,403; Apr. 21; Sp. p. 3584; Dr. p. 750; Gaz. vol. 133; p. 1819.
Thompson, A. B. (See Bragunier and Thompson.)
Thompson, A. J., North Wilmington, Mass. Music-turner. No. 885,546; Apr. 21; Sp. p. 3864; Dr. pp. 808–9; Gaz. vol. 133; p. 1861.
Thompson, A. T. (See Hawkins, C. E., assignor.)
Thompson, C. F., Safford, Ariz. Ter. Currycomb. No. 883,921; Apr. 7; Sp. p. 506; Dr. pp. 100–1; Gaz. vol. 133; p. 1273.
Thompson, E. D. (See Dalton and Thompson.)
Thompson, F., Brooklyn, N. Y. Pencil. No. 885,404; Apr. 21; Sp. p. 3585; Dr. p. 750; Gaz. vol. 133; p. 1819.
Thompson, J. J., Springfield, Okla. Farm-gate. No. 883,762; Apr. 7; Sp. p. 166; Dr. p. 29; Gaz. vol. 133; p. 1220.
Thompson, J. W., assignor to Buckeye Engine Company, Salem, Ohio. Engine-indicator. No. 886,021; Apr. 28; Sp. p. 4864; Dr. pp. 1022–3; Gaz. vol. 133; p. 2048.
Thompson, L. P. (See Phillips, E. C., assignor.)
Thomson, A. G., San Francisco, Cal. Concave vehicle-tire. No. 885,888; Apr. 28; Sp. p. 4559; Dr. p. 956; Gaz. vol. 133; p. 2003.
Thomson, E., Swampscott, Mass., assignor to General Electric Company. Motive-power engine. No. 884,539; Apr. 14; Sp. p. 1762; Dr. pp. 379–80; Gaz. vol. 133; p. 1503.
Thomson, E., Swampscott, Mass., assignor to General Electric Company. Electric heater. No. 884,540; Apr. 14; Sp. p. 1767; Dr. p. 380; Gaz. vol. 133; p. 1504.
Thornton, A. Y., and A. L. Munroe, Johnston, R. I. Device for plugging sprinkler-heads. No. 884,430; Apr. 14; Sp. p. 1534; Dr. p. 329; Gaz. vol. 133; p. 1468.
Thornton, W. C., Jefferson City, Mo. Mail-handling apparatus. No. 884,240; Apr. 7; Sp. p. 1178; Dr. pp. 248–9; Gaz. vol. 133; p. 1378.
Thorley, I. O., Philadelphia, Pa. Advertising device. No. 886,275; Apr. 28; Sp. p. 5331; Dr. p. 1122; Gaz. vol. 133; p. 2130.
Thrash, W. H., Columbus, Ohio. Composition of matter. No. 883,843; Apr. 7; Sp. p. 352; Gaz. vol. 133; p. 1247.
Tice, F. B., Polo, Ill. Track-support for carriers. No. 885,547; Apr. 21; Sp. p. 3867; Dr. p. 809; Gaz. vol. 133; p. 1862.
Tillinghast, W. E., Worcester, Mass. Water-seal vacuum return-pipe fitting. No. 885,805; Apr. 28; Sp. p. 4404; Dr. p. 923; Gaz. vol. 133; p. 1974.
Tillotson, J., Hebron, Nebr. Apparatus for cooling milk. No. 884,689; Apr. 14; Sp. p. 2098; Dr. p. 448; Gaz. vol. 133; p. 1553.
Tilquist, H. T. (See Stern, J. N., assignor.)
Tily, S. B., and M. O. and J. G. Rehfuss, Philadelphia, Pa., assignors to said Tily. Paper-holder. No. 886,092; Apr. 28; Sp. p. 4992; Dr. p. 1050; Gaz. vol. 133; p. 2069.
Timokhovitch, S., Moscow, Russia. Fan or ventilator. No. 884,876; Apr. 14; Sp. p. 2479; Dr. p. 522; Gaz. vol. 133; p. 1615.
Tirrill, L. A., Lynn, Mass., assignor to General Electric Company. System of control for electric motors. No. 884,541; Apr. 14; Sp. p. 1769; Dr. p. 380; Gaz. vol. 133; p. 1504.
Titcomb, G. E., Philadelphia, Pa., assignor to Lodge Coal Storage Company, Naugatuck, Conn. Contact-post system for transmitting electric power. No. 886,093; Apr. 28; Sp. p. 4997; Dr. pp. 1050–1; Gaz. vol. 133; p. 2070.
Tittmann, G., Foche, near Solingen, Germany. Safety-razor. No. 885,966; Apr. 28; Sp. p. 4746; Dr. p. 997; Gaz. vol. 133; p. 2031.
Tobin, C. J., Stuart, Iowa. Draft-equalizer. No. 884,542; Apr. 14; Sp. p. 1772; Dr. p. 381; Gaz. vol. 133; p. 1504.
Tolson, J., Kankakee, Ill. Cleaning-machine. No. 885,107; Apr. 21; Sp. p. 2940; Dr. p. 623; Gaz. vol. 133; p. 1720.
Tolton, D., Guelph, Ontario, Canada. Hanger for overhead tracks. No. 886,276; Apr. 28; Sp. p. 5333; Dr. p. 1122; Gaz. vol. 133; p. 2131.
Tompkins, W. A., Portland, Oreg. Feeding-off mechanism. No. 886,277; Apr. 28; Sp. p. 5335; Dr. p. 1122; Gaz. vol. 133; p. 2131.
Toomey, J. A., Chicago, Ill. Car-stake and attaching means therefor. No. 884,778; Apr. 14; Sp. p. 2289; Dr. pp. 481–2; Gaz. vol. 133; p. 1564.
Topping, A. S., Grand Rapids, Mich. Railway-tie. No. 884,241; Apr. 7; Sp. p. 1180; Dr. p. 249; Gaz. vol. 133; p. 1378.
Toquet, B. L., Westport, Conn. Apparatus for catching and delivering mail-bags and the like. No. 885,890; Apr. 28; Sp. p. 4560; Dr. p. 956; Gaz. vol. 133; p. 2003.
Torhorst, A., Waukesha, Wis. Stanchion. No. 884,962; Apr. 14; Sp. p. 2644; Dr. p. 562; Gaz. vol. 133; p. 1640.
Torjesen, H. (See Anderson and Torjesen.)
Tourtellotte, J. E., Hartford, Conn. Tire for vehicle-wheels. No. 883,763; Apr. 7; Sp. p. 167; Dr. p. 30; Gaz. vol. 133; p. 1220.
Tower & Lyon Company. (See Tack, O., assignor.)
Tracy, L. J., St. Louis, Mo. Steam-boiler. No. 884,431; Apr. 14; Sp. p. 1536; Dr. p. 329; Gaz. vol. 133; p. 1468.
Trask, A. S., Concord, N. H. Fire-alarm. No. 884,304; Apr. 7; Sp. p. 1280; Dr. p. 271; Gaz. vol. 133; p. 1397.
Trautman, C. V. (See Holmes and Trautman.)
Traxel, G. H. (See Whaley, G. H., assignor.)
Trebert, H. L. F., assignor to Brownell-Trebert Company, Rochester, N. Y. Explosive-engine. No. 884,053; Apr. 7; Sp. p. 777; Dr. p. 162; Gaz. vol. 133; p. 1317.
Treadwell, J. (See Layng, H. G., assignor.)
Treat, C. B., Buchanan, Mich. Coop. No. 884,278; Apr. 28; Sp. p. 5337; Dr. p. 1123; Gaz. vol. 133; p. 2132.
Trees, E. C., Denver, Colo. Collar and cuff button. No. 884,054; Apr. 7; Sp. p. 779; Dr. p. 162; Gaz. vol. 133; p. 1317.
Tregoning, W. C., Cleveland, Ohio. Lamp-socket. No. 885,890; Apr. 28; Sp. p. 4562; Dr. p. 957; Gaz. vol. 133; p. 2003.
Treleven, E. V. (See Little, O. C., assignor.)
Trensch, F. (See Olschewski and Trensch.)
Trent, S. V., Salt Lake City, Utah. Centrifugal pump. No. 875,108; Apr. 21; Sp. p. 2943; Dr. p. 624; Gaz. vol. 133; p. 1720.
Trevellian, F. H., Wellington, New Zealand. Cash-register. No. 884,627; Apr. 14; Sp. p. 1926; Dr. pp. 416–17; Gaz. vol. 133; p. 1531.
Trevor, F. N., assignor to Trevor Manufacturing Company, Lockport, N. Y. Sawing-machine. No. 883,922; Apr. 7; Sp. p. 508; Dr. p. 101; Gaz. vol. 133; p. 1273.
Trevor Manufacturing Company. (See Trevor, F. N., assignor.)
Triggs, G. A., Lake Park, Iowa. Hot-water-circulating system. No. 884,779; Apr. 14; Sp. p. 2293; Dr. p. 482; Gaz. vol. 133; p. 1584.
Trist, A. R., St. Albans, England. Packing for stuffing-boxes or similar devices. No. 885,405; Apr. 21; Sp. p. 3586; Dr. p. 751; Gaz. vol. 133; p. 1819.
Tromblee, A., assignor to Glens Falls Machine Works, Glens Falls, N. Y. Feeding device for sulfur-burners. No. 885,891; Apr. 28; Sp. p. 4563; Dr. p. 957; Gaz. vol. 133; p. 2004.
Troxler, G. W. (See Caracristi and Troxler.)
Truby, J. H., Starke, Fla. Handle for coffins, &c. No. 885,305; Apr. 21; Sp. p. 3372; Dr. p. 705; Gaz. vol. 133; p. 1786.
True, I. J., Providence, R. I. Bottle holder and rack. No. 885,806; Apr. 28; Sp. p. 4405; Dr. p. 923; Gaz. vol. 133; p. 1975.
Truss, T. F. J., London, England. Screw-propeller. No. 885,109; Apr. 21; Sp. p. 2945; Dr. p. 624; Gaz. vol. 133; p. 1720.
Trussed Concrete Steel Company. (See Kahn, J., assignor.)

Tucker, E. D., assignor to R. Hoe, New York, N. Y. Mold. No. 885,807; Apr. 28; Sp. p. 4408; Dr. p. 924; Gaz. vol. 133; p. 1975.
Turcotte, J. H. (See Murtha, J. P., assignor.)
Tures Manufacturing Company. (See Tures, W., assignor.)
Tures, W., assignor to Tures Manufacturing Company, Milwaukee, Wis. Gas-generator. No. 886,309; Apr. 28; Sp. p. 5408; Dr. p. 1135; Gaz. vol. 133; p. 2142.
Turnbull, G. A., Chicago, Ill. Metal cutting and forming machine. No. 885,548; Apr. 21; Sp. p. 3868; Dr. pp. 809–10; Gaz. vol. 133; p. 1862.
Turner, O. N., Templeton, assignor to Bay State Metal Wheel Company, East Templeton, Mass. Canopy-top attachment for perambulators. No. 884,543; Apr. 14; Sp. p. 1773; Dr. p. 381; Gaz. vol. 133; p. 1505.
Turpel, W. C., New Orleans, La. Heel for boots and shoes. No. 884,780; Apr. 14; Sp. p. 2294; Dr. p. 482; Gaz. vol. 133; p. 1584.
Tuttle, J. S., Bellevue, Ohio, assignor to Geo. Ertel Co., Quincy, Ill. Baling-press. No. 885,204; Apr. 21; Sp. p. 3178; Dr. p. 665; Gaz. vol. 133; p. 1752.
Tuttle, J. S., assignor to Ohio Cultivator Company, Bellevue, Ohio. Horse-power. No. 885,892; Apr. 28; Sp. p. 4565; Dr. p. 957; Gaz. vol. 133; p. 2004.
Tyler, J. C., Knoxville, Tenn. Refrigerator. No. 884,242; Apr. 7; Sp. p. 1182; Dr. p. 249; Gaz. vol. 133; p. 1378.
Tynis, F., assignor of one-half to J. Omelka, Glenallen, Va. Show-case clamp. No. 884,877; Apr. 14; Sp. p. 2480; Dr. pp. 522–3; Gaz. vol. 133; p. 1615.
U. S. Standard Voting Machine Company. (See Lausterer, W. J., assignor.)
Uebler, W. J., Schuyler, N. Y. Milking-machine. No. 884,781; Apr. 14; Sp. p. 2296; Dr. pp. 482–3; Gaz. vol. 133; p. 1585.
Uehling, F. F., Passaic, N. J. Speed indicator and recorder. No. 884,112; Apr. 7; Sp. p. 926; Dr. p. 194; Gaz. vol. 133; p. 1336.
Ulrich, G. (See Tanzey, J. J., assignor.)
Ulrich, T. D., Marion, Ohio. Ice-cleat for traction-wheels. No. 885,205; Apr. 21; Sp. p. 3181; Dr. p. 665; Gaz. vol. 133; p. 1753.
Underwood, T. M., May, Tex. Sand-box. No. 885,110; Apr. 21; Sp. p. 2947; Dr. p. 625; Gaz. vol. 133; p. 1720.
Underwood Typewriter Company. (See Gibbs, C., assignor.)
Underwood Typewriter Company. (See Kelley, C. E., assignor.)
Underwood Typewriter Company. (See McLean, G. A., assignor.)
Underwood Typewriter Company. (See Smith, A. J., assignor.)
Union Special Sewing Machine Company. (See Kramer, C. G., assignor.)
Union Typewriter Company. (See Hess, E. B., assignor.)
Union Water Meter Company. (See Hiersing, O., assignor.)
United Shoe Machinery Company. (See Cutter, S. M., assignor.)
United Shoe Machinery Company. (See Eaton, C. L., assignor.)
United Shoe Machinery Company. (See Frasier, W., assignor.)
United Shoe Machinery Company. (See Hadaway, J. B., assignor.)
United Shoe Machinery Company. (See Mayo, B. F., assignor.)
United Shoe Machinery Company. (See Pope, J. H., assignor.)
United States Automatic Vending Company. (See Dickie and Brown, assignors.)
United States Dental Manufacturing Company. (See Korb and Hieber, assignors.)
United States Envelope Co. (See Stimpson, E. B., assignor.)
United States Fireless Cooker Company. (See Howland, D. W., assignor.)
Universal Automatic Typecasting Machine Company. (See Nuernberger and Rettig, assignors.)
Unruh, A. A., Portland, Oreg. Shingle-gage. No. 885,705; Apr. 21; Sp. p. 4177; Dr. p. 875; Gaz. vol. 133; p. 1912.
Unruh, H. B., Great Bend, Kans. Railway-rail. No. 884,690; Apr. 14; Sp. p. 2099; Dr. p. 448; Gaz. vol. 133; p. 1554.
Updegraff, D. D., Port Ewen, N. Y. Eyeglass-stud. No. 885,808; Apr. 28; Sp. p. 4411; Dr. p. 924; Gaz. vol. 133; p. 1976.
Urquhart, J., Monterey, Cal. Fish-drying apparatus. No. 886,094; Apr. 28; Sp. p. 4999; Dr. p. 1052; Gaz. vol. 133; p. 2070.
Usina, E. A., East Orange, N. J., assignor to New York Leather Belting Company, New York, N. Y. Machine for making belts. No. 884,544; Apr. 14; Sp. p. 1776; Dr. pp. 381–2; Gaz. vol. 133; p. 1505.
Valiquet, L. P., Newark, N. J., assignor, by mesne assignments, to Hawthorne & Sheble Manufacturing Company, Philadelphia, Pa. Feeding apparatus for talking-machines. No. 884,963; Apr. 14; Sp. p. 2645; Dr. p. 562; Gaz. vol. 133; p. 1640.
Vallandingham, W. T., Oskaloosa, Iowa. Cork extractor. No. 883,988; Apr. 7; Sp. p. 654; Dr. p. 131; Gaz. vol. 133; p. 1296.
Van Cleve, G. T., *et al.* (See Waggoner, W. R., assignor.)
Van Cleve, O. O., *et al.* (See Waggoner, W. R., assignor.)
Van der Ploeg, J. P., Amsterdam, Netherlands. Manufacture of emulsions. No. 884,878; Apr. 14; Sp. p. 2482; Gaz. vol. 133; p. 1616.
Van Duzee, W., Jackson, Minn. Device for tightening the fabric of bed-springs. No. 885,549; Apr. 21; Sp. p. 3873; Dr. p. 810; Gaz. vol. 133; p. 1862.
Van Loan, I. S., New York, N. Y. Oil-cup. No. 885,893; Apr. 28; Sp. p. 4565; Dr. p. 957; Gaz. vol. 133; p. 2004.
Van Valkenburg, L. D., Holyoke, Mass. Fountain-pen retainer. No. 886,095; Apr. 28; Sp. p. 5001; Dr. p. 1052; Gaz. vol. 133; p. 2071.
Van Winkle, K. R., Hillsboro, Iowa. Combined shucking-rack and fodder-binder. No. 884,879; Apr. 14; Sp. p. 2483; Dr. p. 523; Gaz. vol. 133; p. 1616.
Vance, W. H., San Francisco, Cal. Pleasure-car and track. No. 885,406; Apr. 21; Sp. p. 3587; Dr. p. 751; Gaz. vol. 133; p. 1819.
Vanderkloot, M. R., Chicago, Ill., assignor, by mesne assignments, to Lackawanna Steel Company, New York, N. Y. Piling. No. 884,545; Apr. 14; Sp. p. 1779; Dr. p. 383; Gaz. vol. 133; p. 1506.
Vaniman, M., Genevilliers, France. Aeroplane. No. 884,432; Apr. 14; Sp. p. 1538; Dr. p. 330; Gaz. vol. 133; p. 1469.
Varder, H., Baltimore, Md. Music-leaf turner. No. 886,096; Apr. 28; Sp. p. 5002; Dr. pp. 1052–3; Gaz. vol. 133; p. 2071.
Varley, R., Englewood, N. J., assignor to Autocoil Company. Ignition system for explosion-engines. No. 885,894; Apr. 28; Sp. p. 4567; Dr. p. 958; Gaz. vol. 133; p. 2004.
Varnadore, C., Kinard, Fla. Sap-cup support. No. 884,055; Apr. 7; Sp. p. 780; Dr. p. 163; Gaz. vol. 133; p. 1318.
Vasbinder, L. (See Brown, O. E., assignor.)
Vaudreuil, E. J., Two Rivers, Wis. Blanching apparatus. No. 886,097; Apr. 28; Sp. p. 5004; Dr. p. 1053; Gaz. vol. 133; p. 2071.
Vaughn, A. W., Adel, Iowa. Printing-press. No. 885,895; Apr. 28; Sp. p. 4570; Dr. p. 958; Gaz. vol. 133; p. 2005.
Veneer Machinery Company. (See Dennis, A. A., assignor.)
Venus Manufacturing Company *et al.* (See Siner, J. M., assignor.)
Veronneau, L. H., dit Vernon, Vlauville, near Montreal, Quebec, assignor of one-half to H. U. Beck, Montreal, Canada. Floor-dressing apparatus. No. 884,433; Apr. 14; Sp. p. 1539; Dr. pp. 330–1; Gaz. vol. 133; p. 1469.
Verrell, C. F., Grand Rapids, Mich. Dust-collector. No. 885,206; Apr. 21; Sp. p. 3182; Dr. pp. 665–6; Gaz. vol. 133; p. 1753.
Vervoort, E. L., Apeldoorn, Netherlands. Rotating internal-combustion engine. No. 886,279; Apr. 28; Sp. p. 5338; Dr. p. 1123; Gaz. vol. 133; p. 2132.
Vla, H. W., South Boston, Va. Plow. No. 884,113; Apr. 7; Sp. p. 927; Dr. pp. 194–5; Gaz. vol. 133; p. 1337.
Vickers, J. W., London, England. Photographic-printing apparatus. No. 884,056; Apr. 7; Sp. p. 780; Dr. p. 163; Gaz. vol. 133; p. 1318.
Victor Mangle Company. (See Langworthy, J. S., assignor.)
Virgils, W. A., assignor of one-half to C. A. Kreeger, Chicago, Ill. Mail-pouch-delivery device. No. 884,782; Apr. 14; Sp. p. 2300; Dr. p. 484; Gaz. vol. 133; p. 1585.
Voight, H. G. (See Caley and Voight.)
Voight, H. G., and C. J. Caley, assignors to Russell & Erwin Manufacturing Company, New Britain, Conn. Indicator for door-locks. No. 884,996; Apr. 14; Sp. p. 2704; Dr. p. 573; Gaz. vol. 133; p. 1650.
Voigtlander, M. G., assignor of one-half to J. A. Graft, Harrison, Ohio. Signal system for railways. No. 884,783; Apr. 14; Sp. p. 2301; Dr. p. 484; Gaz. vol. 133; p. 1585.
Voigtlander, M. G., assignor of one-half to J. A. Graft, Harrison, Ohio. Signal system for railways. No. 884,784; Apr. 14; Sp. p. 2306; Dr. pp. 484–5; Gaz. vol. 133; p. 1586.
Volans, E. G., Cleveland, Ohio. Coal-storage plant. No. 883,764; April 7; Sp. p. 169; Dr. p. 30; Gaz. vol. 133; p. 1220.
Völker, J., Neu Isenburg, assignor to Firm of P. Weil & Co., Rodelheim, near Frankfort-on-the-Main, Germany. Ribbon-feed mechanism for type-writers. No. 884,691; Apr. 14; Sp. p. 2101; Dr. pp. 448–9; Gaz. vol. 133; p. 1554.
Vollmer, J., Berlin, Germany, assignor to General Electric Company. Steering-wheel pivot and pivot-bearing for automobiles. No. 885,111; Apr. 21; Sp. p. 2943; Dr. p. 625; Gaz. vol. 131; p. 1721.
Vore, E. E., Huntington Park, Cal. Locking device. No. 886,165; Apr. 28; Sp. p. 5133; Dr. p. 1079; Gaz. vol. 133; p. 2062.
Vorwerk, C., Barmen, Germany. Pattern for jacquard-weaving. No. 885,407; Apr. 21; Sp. p. 3588; Dr. p. 751; Gaz. vol. 133; p. 1820.
Vose, R. L. (See Ayer, A. E., assignor.)
Vosmer, G. W., Covington, Ky., assignor to Globe-Wernicke Company, Cincinnati, Ohio. Interlocking end iron for sectional furniture. No. 883,765; Apr. 7; Sp. p. 171; Dr. p. 30; Gaz. vol. 133; p. 1221.
Voss, W. H., Poynette, Wis. Mail-box signal. No. 884,964; Apr. 14; Sp. p. 2649; Dr. p. 563; Gaz. vol. 133; p. 1641.
Vulcan Iron Works Company. (See Webber, J. B., Jr., assignor.)
Wadkin, J. W., and D. J. Jarvis, Leicester, England. Woodworking-machine. No. 885,408; Apr. 21; Sp. p. 3591; Dr. pp. 752–3; Gaz. vol. 133; p. 1820.
Wadsworth, W. B. (See David, V. F., assignor.)
Wadsworth, W. B. (See Haywood, D. H., assignor.)

Waggaman, H. E., Annapolis, Md., assignor to C. Hoffman, Elyria, Ohio. Toy. No. 884,092; Apr. 14; Sp. p. 2103; Dr. p. 449; Gaz. vol. 133; p. 1554.
Waggoner, W. R., Brazil, assignor of two-thirds to G. T. and O. O. Van Cleve, Cory, Ind. Off-bearing machine. No. 885,809; Apr. 28; Sp. p. 4412; Dr. pp. 924–5; Gaz. vol. 133; p. 1976.
Wagner, A., Georgetown, Ohio. Hitching device. No. 886,166; Apr. 28; Sp. p. 5135; Dr. p. 1079; Gaz. vol. 133; p. 2093.
Wahlstrom, V. J., assignor of one-half to B. T. Burchardi, Brooklyn, N. Y. Milling-machine. No. 884,243; Apr. 7; Sp. p. 1183; Dr. p. 249; Gaz. vol. 133; p. 1379.
Wahlstrom, V. J., assignor of one-half to B. T. Burchardi, Brooklyn, N. Y. Chuck. No. 884,244; Apr. 7; Sp. p. 1185; Dr. p. 250; Gaz. vol. 133; p. 1379.
Wainwright, W. W., Connersville, Ind. Motor-vehicle. No. 886,096; Apr. 28; Sp. p. 5006; Dr. pp. 1053–4; Gaz. vol. 133; p. 2071.
Wais, C., Cincinnati, Ohio. Shearing-machine. No. 885,810; Apr. 28; Sp. p. 4416; Dr. p. 926; Gaz. vol. 133; p. 1976.
Waltz, J. W. (See Conrader, R., assignor.)
Waltz, J. W., Oil City, Pa. Apparatus for forcing fluid from wells. No. 886,250; Apr. 28; Sp. p. 5344; Dr. p. 1124; Gaz. vol. 133; p. 2132.
Wakefield, J. P., Winthrop, assignor of one-half to G. B. Lombard, Boston, Mass. Shoe-fastener. No. 884,628; Apr. 14; Sp. p. 1941; Dr. p. 417; Gaz. vol. 133; p. 1532.
Walch, G., Leipzig, Germany. Piano-violin. No. 884,785; Apr. 14; Sp. p. 2310; Dr. p. 485; Gaz. vol. 133; p. 1585.
Wales, L. C., Edgewood, R. I. Grinding-roll. No. 886,099; Apr. 28; Sp. p. 5008; Dr. p. 1054; Gaz. vol. 133; p. 2072.
Walker, C. J., North Fitzroy, near Melbourne, Victoria, Australia. Boot and shoe. No. 884,890; Apr. 14; Sp. p. 2484; Dr. p. 523; Gaz. vol. 133; p. 1616.
Walker, E. C. (See Fischer, Zimmerman, and Walker.)
Walker, E. M., Wichita, Kans. Mold. No. 884,965; Apr. 14; Sp. p. 2650; Dr. p. 563; Gaz. vol. 133; p. 1641.
Walker, F. G., Cleveland, Ohio. Trolley-wheel. No. 884,546; Apr. 14; Sp. p. 1780; Dr. p. 383; Gaz. vol. 133; p. 1506.
Walker, G. S., Wheeling, W. Va. Automatic water-heater. No. 886,100; Apr. 28; Sp. p. 5010; Dr. p. 1054; Gaz. vol. 133; p. 2072.
Wall, C., Philadelphia, Pa. Skate. No. 883,923; Apr. 7; Sp. p. 510; Dr. p. 101; Gaz. vol. 133; p. 1273.
Wall, G. L., assignor to Lima Locomotive and Machine Company, Lima, Ohio. Driving-wheel and gear-rim connection. No. 884,063; Apr. 14; Sp. p. 2104; Dr. p. 449; Gaz. vol. 133; p. 1555.
Wallace, H. (See Ambler and Wallace.)
Wallen, A. B., assignor to J. E. Anderson, Falconer, N. Y. Tobacco-pipe cleaner. No. 884,057; Apr. 7; Sp. p. 782; Dr. p. 163; Gaz. vol. 133; p. 1318.
Waller, M. E., Bethel, Vt. Foot-warmer. No. 885,112; Apr. 21; Sp. p. 2949; Dr. p. 625; Gaz. vol. 133; p. 1721.
Walsh, J. P., St. Paul, Minn. Rotary explosive-engine. No. 885,113; Apr. 21; Sp. p. 2950; Dr. pp. 625–6; Gaz. vol. 133; p. 1721.
Walter, H. J., Kane, Pa. Method of and apparatus for drawing sheets of glass. No. 885,896; Apr. 28; Sp. p. 4573; Dr. p. 959; Gaz. vol. 133; p. 2005.
Walterbach, A., South Milwaukee, and L. Heil, Marshfield, Wis. Fly-protector for screen-doors. No. 884,547; Apr. 14; Sp. p. 1782; Dr. p. 383; Gaz. vol. 133; p. 1506.
Walton, C., Woodbury, N. J. Railway-rail fastener. No. 884,435; Apr. 14; Sp. p. 1543; Dr. p. 331; Gaz. vol. 133; p. 1469.
Walton, J. S., Georgetown, Ky. Combined wagon-bed and hay-rack. No. 883,969; Apr. 7; Sp. p. 655; Dr. p. 132; Gaz. vol. 133; p. 1296.
Walton, W. T., Orlando, Okla. Brake-lever hanger. No. 884,881; Apr. 14; Sp. p. 2485; Dr. p. 524; Gaz. vol. 133; p. 1616.
Ward, B. L., Ottumwa, Iowa. Manacle. No. 885,811; Apr. 28; Sp. p. 4417; Dr. p. 926; Gaz. vol. 133; p. 1977.
Ward Equipment Company. (See Ward, J. E., assignor.)
Ward, H. B., Pittsburg, Pa. Cake-holder for conveyers. No. 886,101; Apr. 28; Sp. p. 5014; Dr. p. 1055; Gaz. vol. 133; p. 2073.
Ward, J. E., assignor to Ward Equipment Company, New York, N. Y. Pressure-regulator. No. 885,812; Apr. 28; Sp. p. 4418; Dr. p. 926; Gaz. vol. 133; p. 1977.
Ward, J. W., Larue, Ohio. Shaft-detaching means. No. 885,551; Apr. 21; Sp. p. 3879; Dr. p. 811; Gaz. vol. 133; p. 1863.
Ward, S. E., Allen, Nebr. Metal fastening device. No. 883,766; Apr. 7; Sp. p. 172; Dr. p. 31; Gaz. vol. 133; p. 1221.
Waring, S., Evanston, Ill. Paper measuring and rolling machine. No. 885,114; Apr. 21; Sp. p. 2953; Dr. pp. 626–7; Gaz. vol. 133; p. 1722.
Wark, R. M., Spokane, Wash. Automatic cattle-guard for railways. No. 885,552; Apr. 21; Sp. p. 3881; Dr. p. 811; Gaz. vol. 133; p. 1864.
Warner, A. O., Denver, Colo. Net. No. 886,281; Apr. 28; Sp. p. 5350; Dr. p. 1125; Gaz. vol. 133; p. 2133.
Warner, C. L., assignor to Baird Machine Company, Watertown, Conn. Drying-out barrel. No. 885,813; Apr. 28; Sp. p. 4420; Dr. p. 927; Gaz. vol. 133; p. 1978.
Warner, T. W., and F. H. Jones, Muncie, Ind. Selective lever. No. 885,814; Apr. 28; Sp. p 4423; Dr. pp. 927–8; Gaz. vol. 133; p. 1978.
Warren, G. B., Rockport, Ill. Feeder. No. 884,436; Apr. 14; Sp. p. 1545; Dr. p. 332; Gaz. vol. 133; p. 1470.
Warren, J. D., Chicago, Ill. Merchandise-bin. No. 883,990; Apr. 7; Sp. p. 655; Dr. p. 132; Gaz. vol. 133; p. 1296.
Warren Webster & Company. (See Braemer, W. G. R., assignor.)
Warren Webster and Company. (See Serrell, J. A., assignor.)
Warwick, T. F., Metter, Ga. Fluid-actuated vise. No. 884,548; Apr. 14; Sp. p. 1783; Dr. pp. 383–4; Gaz. vol. 133; p. 1507.
Waterbury Farrel Foundry and Machine Company. (See Griggs and Smith, assignors.)
Waterman, B. B., East Bridgewater, Mass., assignor to American Shoe Finding Company. Machine for tacking shoe-shanks. No. 884,437; Apr. 14; Sp. p. 1547; Dr. pp. 332–4; Gaz. vol. 133; p. 1470.
Waterman, B. B., East Bridgewater, Mass., assignor to American Shoe Finding Company. Machine for tacking shoe-shanks. No. 884,438; Apr. 14; Sp. p. 1554; Dr. pp. 334–5; Gaz. vol. 133; p. 1471.
Waterman, F. H., Norwell, Mass. Fraud-detecting bottle. No. 883,844; Apr. 7; Sp. p. 353; Dr. p. 68; Gaz. vol. 133; p. 1247.
Waters, J., West Sutton, Mass. Ladder. No. 886,282; Apr. 28; Sp. p. 5352; Dr. p. 1125; Gaz. vol. 133; p. 2133.
Watkins & Company, D. M. (See Kilstrom, A., assignor.)
Watkins, H. A., New York, N. Y. Lamp, lantern, and heater. No. 884,305; Apr. 7; Sp. p. 1281; Dr. p. 271; Gaz. vol. 133; p. 1397.
Watson, A. (See Patterson and Watson.)
Wattles, V. H. (See Kraft, C. H. F., assignor.)
Watts, A. K., London, England. Pocket-clip for fountain-pens and pencils. No. 883,767; Apr. 7; Sp. p. 173; Dr. p. 31; Gaz. vol. 133; p. 1221.
Waugh, C. E. (See McKay and Waugh.)
Waugh, F. A., Amherst, Mass. Surveying instrument. No. 884,245; Apr. 7; Sp. p. 1186; Dr. p. 250; Gaz. vol. 133; p. 1379.
Waymoth, C. H., Fitchburg, Mass. Feed mechanism for wood-turning lathes. No. 884,114; Apr. 7; Sp. p. 928; Dr. p. 195; Gaz. vol. 133; p. 1337.
Wayrynen, W. L., Dolph, S. D. Carbureter. No. 886,283; Apr. 28; Sp. p. 5354; Dr. p. 1125; Gaz. vol. 133; p. 2134.
Wayt, B. J. (See Elsey and Wayt.)
Weant, W. A., Mocksville, N. C. Air-brake. No. 884,604; Apr. 14; Sp. p. 2105; Dr. p. 449; Gaz. vol. 133; p. 1555.
Weaver, J. P., Terre Haute, Ind. Reel-holder. No. 885,115; Apr. 21; Sp. p. 2974; Dr. p. 628; Gaz. vol. 133; p. 1723.
Webb, G. B. (See Rhodes, R. L., assignor.)
Webb, S. D., and G. Shilling, assignors of one-fourth to J. H. Sencindiver, Washington, D. C. Bottle-seal. No. 885,409; Apr. 21; Sp. p. 3504; Dr. p. 753; Gaz. vol. 133; p. 1820.
Webber, J. B., Jr., Toledo, Ohio, assignor to Vulcan Iron Works Company, Toledo, Ohio. Power-excavator. No. 884,439; Apr. 14; Sp. p. 1559; Dr. p. 335; Gaz. vol. 133; p. 1471.
Weckerly, F., St. Davids, Pa. Fastening device for garments. No. 884,246; Apr. 7; Sp. p. 1188; Dr. p. 250; Gaz. vol. 133; p. 1380.
Wedgewood, D., Peterboro, Ontario, Canada. Coin-controlled apparatus. No. 884,247; Apr. 7; Sp. p. 1190; Dr. pp. 250–1; Gaz. vol. 133; p. 1380.
Weedon, W. S., Schenectady, N. Y., assignor to General Electric Company. Arc-lamp electrode. No. 883,924; Apr. 7; Sp. p. 513; Dr. p. 101; Gaz. vol. 133; p. 1274.
Weeks, J. W., Providence, R. I. Gas-pressure regulator. No. 885,681; Apr. 21; Sp. p. 4128; Dr. p. 864; Gaz. vol. 133; p. 1904.
Weeks, I. W., Richmond, Va. Flax-harvester. No. 885,897; Apr. 28; Sp. p. 4575; Dr. p. 959; Gaz. vol. 133; p. 2006.
Weikel, E. R. (See Weikel, O. C. and E. R.)
Weikel, O. C. and E. R., Ronceverte, W. Va. Mower. No. 886,167; Apr. 28; Sp. p. 5136; Dr. p. 1080; Gaz. vol. 133; p. 2093.
Weil & Co., Firm of P. (See Völker, J., assignor.)
Welden, W. T., *et al.* (See Wrench, E. F., assignor.)
Weller, B. J., New York, N. Y. Razor. No. 885,410; Apr. 21; Sp. p. 3696; Dr. p. 753; Gaz. vol. 133; p. 1821.
Welles, R. H., assignor to Badger Brass Manufacturing Company, Kenosha, Wis. Acetylene-generator. (Reissue.) No. 12,787; Apr. 28; Sp. p. 5500; Dr. p. 1150; Gaz. vol. 133; p. 2154.
Wellman, C. W., Toledo, Ohio, assignor to H. M. Wellman, South Boardman, Mich. Turbine. No. 884,058; Apr. 7; Sp. p. 783; Dr. p. 164; Gaz. vol. 133; p. 1319.
Wellman, H. M. (See Wellman, C. W., assignor.)
Wells, E. F., assignor of one-half to J. N. Lummus, Miami, Fla. Indicator-lock. No. 883,991; Apr. 7; Sp. p. 656; Dr. pp. 132–3; Gaz. vol. 133; p. 1296.
Wendell, F. J., assignor to Roebling Construction Company, New York, N. Y. Metal-slitting machine. No. 885,815; Apr. 28; Sp. p. 4426; Dr. pp. 928–9; Gaz. vol. 133; p. 1979.
Wenning, E. (See Hartman, G., assignor.)

Wennstrom, J., Brooklyn, N. Y., assignor to American Cupped Diamond Co. Jewel-cupping machine. No. 886,310; Apr. 28; Sp. p. 5409; Dr. p. 1135; Gaz. vol. 133; p. 2145.
Wensauer, M., assignor of two-thirds to H. Krause and G. Kleber, Sheboygan, Wis. Bed. No. 886,022; Apr. 28; Sp. p. 4986; Dr. p. 1024; Gaz. vol. 133; p. 2048.
Wentz, W. F., New York, N. Y. Electric time-indicating device. No. 883,992; Apr. 7; Sp. p. 661; Dr. p. 103; Gaz. vol. 133; p. 1297.
Werner, E., assignor of one-half to A. S. Garman, Philadelphia, Pa. T-square. No. 885,411; Apr. 21; Sp. p. 3507; Dr. p. 754; Gaz. vol. 133; p. 1821.
Werner, E., Philadelphia, Pa., assignor to Werner Manufacturing Company. T-square. No. 885,706; Apr. 21; Sp. p. 4178; Dr. p. 875; Gaz. vol. 133; p. 1912.
Werner Manufacturing Company. (See Werner, E., assignor.)
Wernicke, P., assignor to Firm of Dr. Bernhardi Sohn G. E. Draenert, Eilenburg, Germany. Brick-molding apparatus. No. 884,440; Apr. 14; Sp. p. 1562; Dr. p. 336; Gaz. vol. 133; p. 1471.
Wertz, A. H., Kansas City, Kans. Foot-power hammer. No. 884,786; Apr. 14; Sp. p. 2311; Dr. p. 486; Gaz. vol. 133; p. 1587.
Wertz, T., St. Louis, Mo. Sash-fastener. No. 884,115; Apr. 7; Sp. p. 931; Dr. p. 196; Gaz. vol. 133; p. 1337.
Wesser, J. A., New York, N. Y. Coin-controlled apparatus. No. 884,441; Apr. 14; Sp. p. 1562; Dr. p. 336; Gaz. vol. 133; p. 1472.
Westbrook, M. H., Port Huron, Mich. Crank-pin-turning machine. No. 884,966; Apr. 14; Sp. p. 2653; Dr. p. 564; Gaz. vol. 133; p. 1642.
Westbrook, W. (See Collins and Westbrook.)
Westcott, V. S., Pawtucket, and F. W. Potter, Central Falls, R. I. Silver-evening mechanism for drawing-frames. No. 884,442; Apr. 14; Sp. p. 1566; Dr. p. 337; Gaz. vol. 133; p. 1472.
Westenhaver, M. (See Westenhaver, M. and M.)
Westenhaver, M. and M., Sterling, Kans. Ditching apparatus. No. 885,306; Apr. 21; Sp. p. 3373; Dr. pp. 705–6; Gaz. vol. 133; p. 1786.
Western Electric Company. (See Craft, E. B., assignor.)
Western Electric Company. (See Luschka, A. R., assignor.)
Westinghouse Electric & Manufacturing Company. (See Conrad, F., assignor.)
Westinghouse Electric & Manufacturing Company. (See Lamme, B. G., assignor.)
Westinghouse Electric & Manufacturing Company. (See Mateer, J. E., assignor.)
Westinghouse Electric & Manufacturing Company. (See Packard, G. F., assignor.)
Westinghouse Electric & Manufacturing Company. (See Randall, K. C., assignor.)
Westinghouse Electric & Manufacturing Company. (See Randall and Gibson, assignors.)
Westinghouse Electric & Manufacturing Company. (See Schmidt, W., assignor.)
Westinghouse Electric & Manufacturing Company. (See Soule, H. C., assignor.)
Westinghouse Machine Company. (See Gow, A. M., assignor.)
Weston, E. B., Dayton, Ohio. Display-rack. No. 886,023; Apr. 28; Sp. p. 4867; Dr. p. 1024; Gaz. vol. 133; p. 2048.
Weston, I. A. (See Selb and Weston.)
Weyeneth, J. E., Danbury, Nebr. Fence-maker's combination-tool. No. 885,816; Apr. 28; Sp. p. 4428; Dr. p. 930; Gaz. vol. 133; p. 1979.
Whaley, G. H., Maysville, assignor of one-half to G. H. Traxel, Mason county, Ky. Invalid appliance. No. 885,307; Apr. 21; Sp. p. 3377; Dr. p. 706; Gaz. vol. 133; p. 1787.
Wheaton, C. N., Warren, R. I. Take-up hook for embroidering-machines. No. 885,817; Apr. 28; Sp. p. 4429; Dr. p. 930; Gaz. vol. 133; p. 1979.
Wheeler, A. G., Jr., trustee. (See Compton, M. D., assignor.)
Wheeler Condenser and Engineering Co. (See Cramer, A. W. P., assignor.)
Wheeler, H. H., Maywood, N. J., assignor to Concrete Frame Company, New York, N. Y. Reinforced concrete construction for buildings. No. 884,306; Apr. 7; Sp. p. 1292; Dr. p. 271; Gaz. vol. 133; p. 1397.
Wheeler, M. L. G., Seattle, Wash. Water-motor. No. 885,553; Apr. 21; Sp. p. 3882; Dr. p. 812; Gaz. vol. 133; p. 1864.
Wheeler, S., Castleton, N. Y. Head-rest for chairs. No. 886,102; Apr. 28; Sp. p. 5015; Dr. p. 1055; Gaz. vol. 133; p. 2073.
Whelan, H. W., Chicago, Ill. Grate. No. 883,896; Apr. 28; Sp. p. 4577; Dr. p. 960; Gaz. vol. 133; p. 2006.
Whinery, D., Hoboken, assignor to Curtain Supply Company, Newark, N. J. Shade-fixture. No. 883,993; Apr. 7; Sp. p. 663; Dr. p. 133; Gaz. vol. 133; p. 1297.
Whipple, C. S., Boston, assignor of one-half to H. C. Nichols, Brookline, Mass. Sash-fastener. No. 885,116; Apr. 21; Sp. p. 2976; Dr. p. 628; Gaz. vol. 133; p. 1723.
Whipple, D. W. (See Pellew and Whipple.)
Whitaker, I. P., *et al.* (See Stafford, Whitaker, and Lopp.)
Whitcomb, A. W., Worcester, Mass. Variable-speed driving mechanism. No. 885,207; Apr. 21; Sp. p. 3186; Dr. p. 666; Gaz. vol. 133; p. 1754.
White, A. P., Caldwell, N. J., assignor to General Fireproofing Company, Youngstown, Ohio. Reinforcing-frame and cementitious construction. No. 883,768; Apr. 7; Sp. p. 173; Dr. p. 31; Gaz. vol. 133; p. 1221.
White, B. P., Stroud, Okla. Cotton-chopper. No. 884,248; Apr. 7; Sp. p. 1194; Dr. p. 251; Gaz. vol. 133; p. 1380.
White Company. (See Riker, A. L., assignor.)
White, E. L. (See Brennan, H., assignor.)
White, G. W. J., Ryde, New South Wales, Australia. Feed-water heater. No. 885,005; Apr. 14; Sp. p. 2720; Dr. pp. 576–7; Gaz. vol. 133; p. 1652.
White, H., assignor, by mesne assignments, to A. F. McNeal, Marion, Ohio. Feed-water purifier. No. 885,554; Apr. 21; Sp. p. 3883; Dr. p. 812; Gaz. vol. 133; p. 1864.
White, H. J. (See Leffler, C., assignor.)
White, J., Penn Yan, N. Y. Two-wheeled cart. No. 884,695; Apr. 14; Sp. p. 2107; Dr. p. 450; Gaz. vol. 133; p. 1555.
White, N., Detroit, Mich. Drawing-board and drafting device. No. 883,994; Apr. 7; Sp. p. 664; Dr. pp. 133–4; Gaz. vol. 133; p. 1298.
White, R. H., assignor to White Sewing Machine Company, Cleveland, Ohio. Hydrocarbon-burner. No. 886,103; Apr. 28; Sp. p. 5018; Dr. p. 1055; Gaz. vol. 133; p. 2073.
White Sewing Machine Company. (See White, R. H., assignor.)
Whitfield, C., Kettering, England. Gas-producer plant. No. 883,845; Apr. 7; Sp. p. 355; Dr. p. 68; Gaz. vol. 133; p. 1247.
Whitmore, F. B., Alta, Utah. Bucket-loader for wire-rope tramways. No. 885,117; Apr. 21; Sp. p. 2978; Dr. p. 628; Gaz. vol. 133; p. 1723.
Whitson Autopress Company. (See Barnett, M. J., assignor.)
Whyte, F. M., Tarrytown, N. Y. Car-truck. No. 885,818; Apr. 28; Sp. p. 4430; Dr. pp. 930–1; Gaz. vol. 133; p. 1980.
Wieber, G., Pittsfield, Mass. Portable grinding-machine case. No. 884,249; Apr. 7; Sp. p. 1195; Dr. pp. 251–2; Gaz. vol. 133; p. 1380.
Wiebke, C., Newark, N. J. Ribbozine-machine. No. 886,024; Apr. 28; Sp. p. 4869; Dr. p. 1024; Gaz. vol. 133; p. 2048.
Wiechmann, F. G., New York, N. Y. Treating vegetable albumin for the production of an article of manufacture useful in the arts and a product. No. 883,995; Apr. 7; Sp. p. 666; Gaz. vol. 133; p. 1298.
Wilcox, C. A., Valley, Wash. Ax. No. 884,250; Apr. 7; Sp. p. 1197; Dr. p. 252; Gaz. vol. 133; p. 1381.
Wile, S. (See Bennett, W. H., assignor.)
Wiley, R. R., St. Catherines, Ontario, Canada. Illuminated sign. No. 885,118; Apr. 21; Sp. p. 2980; Dr. p. 629; Gaz. vol. 133; p. 1724.
Wilkin, T. S., Milwaukee, Wis. Gang-saw mill. No. 885,119; Apr. 21; Sp. p. 2981; Dr. p. 629; Gaz. vol. 133; p. 1724.
Wilkins, D. O., Oklahoma, Okla. Brace. No. 885,819; Apr. 28; Sp. p. 4432; Dr. p. 931; Gaz. vol. 133; p. 1980.
Wilkins, N. (See Lord and Wilkins.)
Wilkinson, G., Beech Mount, Harrogate, England. Feed-water heater. No. 883,925; Apr. 7; Sp. p. 514; Dr. p. 102; Gaz. vol. 133; p. 1274.
Wilkinson, L. A., and J. C. Goodwin, Philadelphia, Pa. Sewing-machine. No. 884,629; Apr. 14; Sp. p. 1943; Dr. pp. 417–18; Gaz. vol. 133; p. 1532.
Wilkinson, S., Osceola Mills, Pa. Wheel of mine-cars. No. 883,996; Apr. 7; Sp. p. 667; Dr. p. 134; Gaz. vol. 133; p. 1298.
Willans, T., deceased, Philadelphia, Pa.; W. Willans, administrator. Apparatus for utilizing wave-power. No. 886,104; Apr. 28; Sp. p. 5020; Dr. p. 1056; Gaz. vol. 133; p. 2074.
Willans, W., administrator. (See Willans, T.)
Willard, A. G., Bakersfield, Cal., assignor to Bakersfield Iron Works. Pump for oil-wells. No. 885,899; Apr. 28; Sp. p. 4578; Dr. p. 960; Gaz. vol. 133; p. 2006.
Willett, W. C., *et al.* (See Hackburn, Willett, and Deppe.)
William Wharton, Jr., & Company. (See Cooke, W. B., assignor.)
Williams, C. H., Jr., assignor to Chicago Railway Equipment Company, Chicago, Ill. Brake-head. No. 884,443; Apr. 14; Sp. p. 1570; Dr. p. 337; Gaz. vol. 133; p. 1473.
Williams, C. H., Jr., assignor to Chicago Railway Equipment Company, Chicago, Ill. Brake-beam. No. 884,444; Apr. 14; Sp. p. 1571; Dr. p. 338; Gaz. vol. 133; p. 1473.
Williams, C. H., Jr., assignor to Chicago Railway Equipment Company, Chicago, Ill. Trussed beam. No. 884,445; Apr. 14; Sp. p. 1572; Dr. p. 338; Gaz. vol. 133; p. 1473.
Williams, C. H., Jr., assignor to Chicago Railway Equipment Company, Chicago, Ill. Trussed beam. No. 884,446; Apr. 14; Sp. p. 1574; Dr. pp. 338–9; Gaz. vol. 133; p. 1474.

Williams, D. L., Trenton, assignor of one-half to G. P. Dodge and R. L. Mealus, Utica, N. Y. Spoke-extractor. No. 884,447; Apr. 14; Sp. p. 1575; Dr. p. 339; Gaz. vol. 133; p. 1474.
Williams, E. Q., Syracuse, N. Y., assignor to Connecticut Telephone & Electric Company, Incorporated, Meriden, Conn. Electrical-ignition spark-coil for gas or vapor engines. No. 884,116; Apr. 7; Sp. p. 932; Dr. p. 196; Gaz. vol. 133; p. 1338.
Williams Foundry & Machine Company. (See Williams, J. K., assignor.)
Williams, G. W. (See Newlin and Williams.)
Williams, J. K., assignor of one-half to Williams Foundry & Machine Company, Akron, Ohio. Cylinder-packing. No. 885,556; Apr. 21; Sp. p. 3888; Dr. p. 813; Gaz. vol. 133; p. 1805.
Williams, J. L., Philadelphia, Pa. Ice-tongs. No. 884,448; Apr. 14; Sp. p. 1577; Dr. p. 339; Gaz. vol. 133; p. 1474.
Williams, J. M., Pittsburg, Pa. Alarm for boilers. No. 885,413; Apr. 21; Sp. p. 3600; Dr. p. 755; Gaz. vol. 133; p. 1822.
Williams, J. R., Provincetown, Mass. Fish-trap. No. 885,412; Apr. 21; Sp. p. 3599; Dr. p. 754; Gaz. vol. 133; p. 1821.
Williams, J. S., Hurley, S. D. Jack for raising vehicles. No. 885,208; Apr. 21; Sp. p. 3188; Dr. p. 666; Gaz. vol. 133; p. 1754.
Williams, L. N. D. (See Scott, R. W., assignor.)
Williams, W. B. (See Mullin and Williams.)
Williams, W. K., assignor to Grand Rapids Show Case Company, Grand Rapids, Mich. Show-case. No. 884,549; Apr. 14; Sp. p. 1785; Dr. p. 384; Gaz. vol. 133; p. 1507.
Williamson, W. C., New York, N. Y. Shock-absorber for vehicles. No. 884,967; Apr. 14; Sp. p. 2035; Dr. p. 565; Gaz. vol. 133; p. 1642.
Willimann, A., and P. Hecht, Gossau, Switzerland. Sack cleaning and turning apparatus. No. 884,449; Apr. 14; Sp. p. 1577; Dr. pp. 339–40; Gaz. vol. 133; p. 1475.
Willis, C. A., assignor of one-half to C. F. Creeger, Washington, D. C., and A. B. Appler, Albany, N. Y. Mail-pouch-delivering apparatus. No. 886,334; Apr. 28; Sp. p. 5489; Dr. p. 1149; Gaz. vol. 133; p. 2152.
Willits, W. A. (See Palmer and Willits.)
Willoughby, V., Jeffersonville, Ind. Detachable jaw for car-brake rods. No. 883,997; Apr. 7; Sp. p. 669; Dr. p. 134; Gaz. vol. 133; p. 1298.
Wilmot, J. F., Detroit, Mich. Sectional knockdown cabinet. No. 884,550; Apr. 14; Sp. p. 1786; Dr. p. 384; Gaz. vol. 133; p. 1508.
Wilson, R. M., San Francisco, Cal. Means for utilizing waste power in dredges. No. 885,900; Apr. 28; Sp. p. 4582; Dr. p. 960; Gaz. vol. 133; p. 2007.
Wilson, S. A., Petoskey, Mich. Truck. No. 886,284; Apr. 28; Sp. p. 5355; Dr. p. 1126; Gaz. vol. 133; p. 2134.
Wilson, W., Seattle, assignor of one-half to T. G. H. Grant, Wenatchee, Wash. Grain-drier. No. 884,696; Apr. 14; Sp. p. 2109; Dr. p. 450; Gaz. vol. 133; p. 1555.
Wilson, W., Boston, Mass., assignor to Campbell Bosworth Machinery Company, Portland, Me. Welting attachment for sewing-machines. No. 886,025; Apr. 28; Sp. p. 4870; Dr. p. 1025; Gaz. vol. 133; p. 2049.
Winand, P., Cologne, and H. Neumann, Bergisch-Gladbach, Germany. Operating combustion-engines. No. 885,820; Apr. 28; Sp. p. 4434; Dr. p. 931; Gaz. vol. 133; p. 1980.
Winchester Repeating Arms Co. (See Mason, W., assignor.)
Wind, A. (See Farnoff, H., assignor.)
Winemiller, G., and G. Gentslinger, Wapakoneta, Ohio. Corn-shock loader. No. 884,307; Apr. 7; Sp. p. 1284; Dr. p. 272; Gaz. vol. 133; p. 1397.
Winkelströter, M., Hanover, Germany. Apparatus for manufacturing compound plates or tablets. No. 885,901; Apr. 28; Sp. p. 4583; Dr. pp. 960–1; Gaz. vol. 133; p. 2007.
Winslow, A. (See Winslow, W. W., assignor.)
Winslow, G. C., Kalamazoo, Mich. Pipe-wrench. No. 885,120; Apr. 21; Sp. p. 2984; Dr. p. 630; Gaz. vol. 133; p. 1724.
Winslow, W. W., Laredo, Tex. Lock. No. 885,558; Apr. 21; Sp. p. 3902; Dr. p. 814; Gaz. vol. 133; p. 1865.
Winslow, W. W., assignor of one-half to A. Winslow, Laredo, Tex. Lock. No. 885,557; Apr. 21; Sp. p. 3890; Dr. p. 813; Gaz. vol. 133; p. 1865.
Winter, C. A., New York, N. Y. Puncture-telltale. No. 885,121; Apr. 21; Sp. p. 2987; Dr. p. 630; Gaz. vol. 133; p. 1725.
Winter, R. G., Milwaukee, Wis. Hinge. No. 883,998; Apr. 7; Sp. p. 670; Dr. p. 134; Gaz. vol. 133; p. 1299.
Winter, R. G., Milwaukee, Wis. Hinge. No. 883,999; Apr. 7; Sp. p. 672; Dr. p. 135; Gaz. vol. 133; p. 1299.
Winton, A., Cleveland, Ohio. Motor-vehicle. No. 884,117; Apr. 7; Sp. p. 938; Dr. pp. 196–7; Gaz. vol. 133; p. 1338.
Winton, A., Cleveland, Ohio. Lubricator. No. 884,118; Apr. 7; Sp. p. 941; Dr. p. 197; Gaz. vol. 133; p. 1338.
Winton Motor Carriage Company. (See McGlashan, W., assignor.)
Wirgman, J., assignor of one-half to W. O. Hoffman and G. E. Deneen, Cumberland, Md. Automatic door-check. No. 884,697; Apr. 14; Sp. p. 2110; Dr. p. 451; Gaz. vol. 133; p. 1556.
Wise, H. H., Decatur, Ill. Cistern. No. 885,209; Apr. 21; Sp. p. 3189; Dr. p. 666; Gaz. vol. 133; p. 1754.
Wise, J. E., Butler, Pa. Well-operating apparatus. No. 883,769; Apr. 7; Sp. p. 175; Dr. p. 32; Gaz. vol. 133; p. 1221.
Wisniewski, K., and A. Matlak, Chicago, Ill. Safety-stop for elevators. No. 886,026; Apr. 28; Sp. p. 4871; Dr. p. 1025; Gaz. vol. 133; p. 2049.
Wiss, E., *et al.* (See Dräger, A. B., assignor.)
Wiss, E., Griesheim-on-the-Main, assignor to Firm of Chemische Fabrik Griesheim-Elektron, Frankfort-on-the-Main, Germany. Remedying defects, such as blowholes, in metal castings. No. 884,346; Apr. 7; Sp. p. 1356; Dr. p. 290; Gaz. vol. 133; p. 1410.
Withrow, J. F. D., Ottawa, Ontario, Canada. Apparatus for mixing concrete. No. 884,698; Apr. 14; Sp. p. 2111; Dr. p. 451; Gaz. vol. 133; p. 1556.
Wm. H. Jackson Company. (See Barr, S. U., assignor.)
Wolfarth, W., Mansfield, Ohio. Weather-strip. No. 884,251; Apr. 7; Sp. p. 1198; Dr. p. 252; Gaz. vol. 133; p. 1381.
Wolfe, D. L. (See Gordon and Wolfe.)
Wolgamott, D. S., Millersburg, Ohio. Device for carrying and setting concrete blocks. No. 884,434; Apr. 14; Sp. p. 1541; Dr. p. 331; Gaz. vol. 133; p. 1469.
Wolhaupter, B., assignor to Rail Joint Company, New York, N. Y. Rail-joint. No. 886,105; Apr. 28; Sp. p. 5021; Dr. p. 1056; Gaz. vol. 133; p. 2074.
Wollé, J. A. (See Budd and Wollé.)
Wolynec, R. F., McKeesport, assignor of one-half to J. Kret, Homestead, Pa. Rail-joint. No. 885,122; Apr. 21; Sp. p. 2989; Dr. p. 631; Gaz. vol. 133; p. 1725.
Wommelsdorf, H., Charlottenburg, Germany. Electrical multiple influence or condenser machine. No. 883,846; Apr. 7; Sp. p. 356; Dr. p. 69; Gaz. vol. 133; p. 1247.
Wood, A., Hamilton, Ohio, assignor to Niles-Bement-Pond Company, Jersey City, N. J. Bending-machine. No. 886,027; Apr. 28; Sp. p. 4873; Dr. p. 1026; Gaz. vol. 133; p. 2049.
Wood, E. F., assignor to International Nickel Company, New York, N. Y. Utilizing flue-dust. No. 884,970; Apr. 14; Sp. p. 2060; Gaz. vol. 133; p. 1643.
Wood, F. W., Baltimore, Md. Treating blast-furnace slag. No. 883,770; Apr. 7; Sp. p. 177; Dr. p. 32; Gaz. vol. 133; p. 1222.
Wood, J., assignor of one-half to J. Owen, Noblesville, Ind. Mail-bag catcher and deliverer. No. 885,657; Apr. 21; Sp. p. 4082; Dr. p. 854; Gaz. vol. 133; p. 1806.
Wood, R. L., assignor to J. R. Wood & Sons, New York, N. Y. Display-holder for gems. No. 884,968; Apr. 14; Sp. p. 2057; Dr. p. 565; Gaz. vol. 133; p. 1642.
Wood, W. H., Media, Pa. Steam-boiler. No. 885,123; Apr. 21; Sp. p. 2990; Dr. p. 631; Gaz. vol. 133; p. 1725.
Woodall, H. W., Wimborne, and A. M. Duckham, Upper Parkstone, England, assignors to Isbell-Porter Company. Apparatus for the manufacture of gas. No. 885,308; Apr. 21; Sp. p. 3379; Dr. pp. 706–7; Gaz. vol. 133; p. 1787.
Woodcock, W. H., assignor to Niagara Forged Steel Company, Buffalo, N. Y. Brake-beam. No. 884,080; Apr. 7; Sp. p. 674; Dr. p. 135; Gaz. vol. 133; p. 1300.
Wooding, B. F., Denver, Colo. Chemical-mixing attachment for hose. No. 885,902; Apr. 28; Sp. p. 4585; Dr. p. 961; Gaz. vol. 133; p. 2007.
Woods, E. S., Chicago, Ill. Brake-shoe. No. 885,414; Apr. 21; Sp. p. 3601; Dr. p. 755; Gaz. vol. 133; p. 1822.
Woods, H., *et al.* (See Barnes, J., assignor.)
Woods, J. O., assignor of one-half to J. W. Graham, Riverside, Wash. Thermostatic circuit-closer. No. 884,969; Apr. 14; Sp. p. 2058; Dr. p. 565; Gaz. vol. 133; p. 1642.
Woods, R., Grand Forks, N. D. Shocker. No. 885,821; Apr. 28; Sp. p. 4435; Dr. pp. 931–2; Gaz. vol. 133; p. 1981.
Woods, R. L., assignor of one-third to S. P. Harris, Nashville, Tenn. Overland steam-coach. No. 884,882; Apr. 14; Sp. p. 2496; Dr. p. 524; Gaz. vol. 133; p. 1616.
Woodward, A., assignor of one-half to W. S. Bailey, Looper, Mo. Name-clasp. No. 885,124; Apr. 21; Sp. p. 2992; Dr. p. 631; Gaz. vol. 133; p. 1726.
Woodward, C. J., New York, N. Y. Door-latch. No. 885,559; Apr. 21; Sp. p. 3893; Dr. p. 814; Gaz. vol. 133; p. 1865.
Woolfenden, J. J., Detroit, Mich. Hand-bag lock. No. 884,787; Apr. 14; Sp. p. 2313; Dr. p. 496; Gaz. vol. 133; p. 1587.
Worthington, E. A., Lincoln, Nebr. Safety-brake for elevators. No. 885,560; Apr. 21; Sp. p. 3898; Dr. pp. 814–15; Gaz. vol. 133; p. 1866.
Wray Pump & Register Company. (See Kellogg, G. W., assignor.)
Wrench, A. M., *et al.* (See Wrench, E. F., assignor.)
Wrench, B. P., *et al.* (See Wrench, E. F., assignor.)

Wrench, E. F., Whitesboro, N. Y., assignor of one-fourth to A. M. Wrench, Telluride, Colo., one-fourth to B. P. Wrench, Yorkville, and two-sixths to W. T. Welden and W. G. Bullion, Richfield Springs, N. Y. Clothes-line reel. No. 885,210; Apr. 21; Sp. p. 3190; Dr. p. 667; Gaz. vol. 133; p. 1755.
Wright, A. H., South St. Paul, Minn. Automobile. No. 885,822; Apr. 28; Sp. p. 4437; Dr. p. 932; Gaz. vol. 133; p. 1981.
Wright, C. A., Chicago, Ill. Grain-cleaner. No. 884,551; Apr. 14; Sp. p. 1790; Dr. p. 385; Gaz. vol. 133; p. 1508.
Wright, C. A., Chicago, Ill. Grain-cleaner. No. 884,552; Apr. 14; Sp. p. 1792; Dr. p. 385; Gaz. vol. 133; p. 1508.
Wright, G. M., Worcester, Mass. Woven-wire fence. No. 885,415; Apr. 21; Sp. p. 3604; Dr. p. 755; Gaz. vol. 133; p. 1822.
Wright, R. I., assignor to Electric Controller and Supply Company, Cleveland, Ohio. Electric controller. No. 885,967; Apr. 28; Sp. p. 4747; Dr. p. 997; Gaz. vol. 133; p. 2031.
Wright, S. M., Memphis, Tenn. Metallic barrel. No. 884,450; Apr. 14; Sp. p. 1579; Dr. p. 340; Gaz. vol. 133; p. 1475.
Wright, W. S., Newark, Ohio. Semiconvertible car. No. 884,786; Apr. 14; Sp. p. 2315; Dr. pp. 496–7; Gaz. vol. 133; p. 1587.
Wrightsville Hardware Company. (See Phillis, A. E., assignor.)
Wuichet, W. G., assignor to Pasteur-Chamberland Filter Company, Dayton, Ohio. Cooler. No. 885,125; Apr. 21; Sp. p. 2994; Dr. p. 632; Gaz. vol. 133; p. 1726.
Wyckoff, Seamans & Benedict. (See Farnham, S. H., assignor.)
Wyckoff, Seamans & Benedict. (See Labofish, C. S., assignor.)
Wygant, L. B., assignor of one-half to Ohio Cultivator Company, Bellevue, Ohio. Hay-press. No. 885,823; Apr. 28; Sp. p. 4438; Dr. pp. 932–3; Gaz. vol. 133; p. 1981.
Wygle, A. R. (See Wygle, J. R. and A. R.)
Wygle, J. R. and A. R., Leavenworth, Kans. Barber's pole. No. 884,252; Apr. 7; Sp. p. 1199; Dr. p. 252; Gaz. vol. 133; p. 1381.
Wylie, H. J., Kutatown, Pa. Collar-button. No. 885,416; Apr. 21; Sp. p. 3606; Dr. p. 756; Gaz. vol. 133; p. 1822.
Yale & Towne Manufacturing Company. (See Lawrence, A., assignor.)
Yarbrough, E. N., Okolona, Ark. Fertilizer-distributer. No. 885,126; Apr. 21; Sp. p. 2995; Dr. p. 632; Gaz. vol. 133; p. 1726.
Yetman, C. E., Oak Park, Ill., assignor, by mesne assignments, to Yetman Typewriter-Transmitter Company, New York, N. Y. Type-writing machine. No. 884,347; Apr. 7; Sp. p. 1357; Dr. pp. 290–2; Gaz. vol. 133; p. 1411.
Yetman Typewriter-Transmitter Company. (See Yetman, C. E., assignor.)
Yewell, H. O., Glenwood Springs, Colo. Pool-ball rack. No. 884,699; Apr. 14; Sp. p. 2120; Dr. p. 451; Gaz. vol. 133; p. 1556.
Yingling, C. E. (See Clark and Yingling.)
York, L. D., Portsmouth, Ohio. Pulverizing-mill. No. 885,211; Apr. 21; Sp. p. 3191; Dr. p. 667; Gaz. vol. 133; p. 1755.
Yost Electric Manufacturing Company. (See Kenney, O. E., assignor.)
Young, H. H., Colchester, assignor to himself, and Bergtheil and Young Limited, London, England. Electrically-operated punka and the like. No. 885,417; Apr. 21; Sp. p. 3606; Dr. p. 756; Gaz. vol. 133; p. 1823.
Young, H. N. (See Hughes and Young.)
Young, I. J., St. Louis, Mo. Woven-wire fabric. No. 884,883; Apr. 14; Sp. p. 2487; Dr. p. 525; Gaz. vol. 133; p. 1617.
Young, J., Woonsocket, R. I. Turning-machine. No. 884,451; Apr. 14; Sp. p. 1581; Dr. pp. 341–2; Gaz. vol. 133; p. 1475.
Young, J. S., Bethel, Vt. Stone-saw. No. 884,001; Apr. 7; Sp. p. 675; Dr. p. 135; Gaz. vol. 133; p. 1300.
Young, P. (See McIlhenny, J. S., assignor.)
Young, W. H., and O. B. Lyon, Modesto, Cal. Life-preserver and swimming-machine. No. 885,212; Apr. 21; Sp. p. 3193; Dr. p. 667; Gaz. vol. 133; p. 1755.
Youngman, C. A., assignor of one-half to A. J. Pohlman, Louisville, Ky. Filter. No. 884,253; Apr. 7; Sp. p. 1201; Dr. p. 253; Gaz. vol. 133; p. 1382.
Yount, C. E., Sr., Harrisburg, Pa. Sunbonnet. No. 884,553; Apr. 14; Sp. p. 1793; Dr. p. 385; Gaz. vol. 133; p. 1509.
Zalinski, E. L., New York, N. Y. Electric display apparatus. No. 885,127; Apr. 21; Sp. p. 2997; Dr. pp. 632–3; Gaz. vol. 133; p. 1727.
Zaiser, W. G., Solomon, Kans. Revolver. No. 884,119; Apr. 7; Sp. p. 943; Dr. pp. 197–8; Gaz. vol. 133; p. 1339.
Zander, C. G., Finsbury Park, London, England. Photomechanical reproduction of colors and the resultant article. No. 884,254; Apr. 7; Sp. p. 1205; Dr. p. 253; Gaz. vol. 133; p. 1382.
Zanzig, C. F., Milwaukee, Wis. Sewing-machine shuttle. No. 885,824; Apr. 28; Sp. p. 4440; Dr. p. 933; Gaz. vol. 133; p. 1982.
Zeiss, Firm of Carl. (See Schüttauf, R., assignor.)
Zempter, G. H., assignor of one-half to Cohn Witney & Goldfarb, Greenville, Miss. Cotton-harvesting machine. No. 886,335; Apr. 28; Sp. p. 5494; Dr. p. 1149; Gaz. vol. 133; p. 2152.
Ziegler, F. J., Berryton, Kans. Butter-cutting machine. No. 883,847; Apr. 7; Sp. p. 358; Dr. p. 69; Gaz. vol. 133; p. 1248.
Zimmerman, C. (See Fischer, Zimmerman, and Walker.)
Zimmerman, C., *et al.* (See Barnes, J., assignor.)
Zimmerman, J., assignor of one-half to H. I. Cromer, Chicago, Ill. Removable cover for boxes or cans. No. 885,682; Apr. 21; Sp. p. 4129; Dr. p. 864; Gaz. vol. 133; p. 1905.
Zuzak, A. (See Snyder and Zuzak.)
Zweigler, E., assignor to Hörselwerke, Eisenach, Germany. Folding rule with spring-joints. No. 884,255; Apr. 7; Sp. p. 1207; Dr. p. 254; Gaz. vol. 133; p. 1383.

ALPHABETICAL LIST OF INVENTIONS

FOR WHICH

PATENTS WERE ISSUED DURING THE MONTH OF APRIL, 1908.

[Abbreviations: "Sp."=Monthly Volume of Specifications; "Dr."=Monthly Volume of Drawings; "Gaz."=Official Gazette.]

Account-keeping apparatus, Individual-. W. W. Robinson. No. 885,958; Apr. 28; Sp. p. 4728; Dr. p. 994; Gaz. vol. 133; p. 2027.
Account-keeping device. W. W. Robinson. No. 885,957; Apr. 28; Sp. p. 4726; Dr. p. 994; Gaz. vol. 133; p. 2027.
Accumulator-controller. W. B. Mason. No. 886,145; Apr. 28; Sp. p. 5102; Dr. pp. 1071–2; Gaz. vol. 133; p. 2087.
Accumulator-plate. M. Margulis. No. 884,028; Apr. 7; Sp. p. 729; Dr. p. 147; Gaz. vol. 133; p. 1308.
Acetate of lime and wood-alcohol, Manufacture of gray. H. B. Schmidt. No. 885,183; Apr. 21; Sp. p. 3122; Dr. p. 657; Gaz. vol. 133; p. 1745.
Acetylene-generator. N. Goodyear. No. 884,328; Apr. 7; Sp. p. 1318; Dr. pp. 279–80; Gaz. vol. 133; p. 1404.
Acetylene-generator. N. Goodyear. No. 884,329; Apr. 7; Sp. p. 1324; Dr. pp. 281–2; Gaz. vol. 133; p. 1405.
Acetylene-generator. I. Mumma. No. 885,361; Apr. 21; Sp. p. 3495; Dr. pp. 729–31; Gaz. vol. 133; p. 1805.
Acetylene-generator. R. H. Welles. (Reissue.) No. 12,787; Apr. 28; Sp. p. 5500; Dr. p. 1150; Gaz. vol. 133; p. 2154.
Acid apparatus for beer-casks and the like, Carbonic-. B. Hadank. No. 884,017; Apr. 7; Sp. p. 706; Dr. pp. 142–3; Gaz. vol. 133; p. 1305.
Acid, Apparatus for charging siphons with carbonic. P. Giron. No. 885,467; Apr. 21; Sp. p. 3688; Dr. p. 773; Gaz. vol. 133; p. 1838.
Acids, Producing mixtures of sulfuric and nitric. J. H. Nield. No. 884,035; Apr. 7; Sp. p. 743; Dr. p. 153; Gaz. vol. 133; p. 1311.
Adding and listing machine. W. E. Swaim. No. 885,202; Apr. 21; Sp. p. 3155; Dr. pp. 662–4; Gaz. vol. 133; p. 1751.
Adding-machine. K. Karasek and J. Aumund. No. 883,719; Apr. 7; Sp. p. 83; Dr. p. 13; Gaz. vol. 133; p. 1206.
Adding-machine. S. G. Cook. No. 884,468; Apr. 14; Sp. p. 1614; Dr. pp. 348–9; Gaz. vol. 133; p. 1480.
Adding-machine register. W. L. Dench. No. 885,326; Apr. 21; Sp. p. 3421; Dr. p. 714; Gaz. vol. 133; p. 1794.
Adding-machines, Paper-rewind mechanism for. S. J. Davidson. No. 884,721; Apr. 14; Sp. p. 2163; Dr. p. 460; Gaz. vol. 133; p. 1565.
Advertising apparatus. H. Dahn and F. Becker. No. 883,865; Apr. 7; Sp. p. 396; Dr. p. 77; Gaz. vol. 133; p. 1254.
Advertising device. G. C. Root. No. 883,749; Apr. 7; Sp. p. 135; Dr. p. 25; Gaz. vol. 133; p. 1215.
Advertising device. L. Foster. No. 885,333; Apr. 21; Sp. p. 3438; Dr. p. 717; Gaz. vol. 133; p. 1796.
Advertising device. G. B. Lehy. No. 885,350; Apr. 21; Sp. p. 3477; Dr. pp. 724–5; Gaz. vol. 133; p. 1802.
Advertising device. I. O. Thorley. No. 886,275; Apr. 28; Sp. p. 5331; Dr. p. 1122; Gaz. vol. 133; p. 2130.
Advertising fly-catcher. A. F. Händler and K. A. Starke. No. 885,615; Apr. 21; Sp. p. 3988; Dr. p. 833; Gaz. vol. 133; p. 1883.
Advertising novelty. A. G. Hume. No. 884,822; Apr. 14; Sp. p. 2370; Dr. p. 498; Gaz. vol. 133; p. 1599.
Aerial apparatus. M. B. Sellers. No. 886,159; Apr. 28; Sp. p. 5123; Dr. pp. 1076–7; Gaz. vol. 133; p. 2091.
Aeroplane. M. Vaniman. No. 884,432; Apr. 14; Sp. p. 1538; Dr. p. 330; Gaz. vol. 133; p. 1469.
Air and gas compressor, Hydraulic. G. P. Carroll. No. 883,696; Apr. 7; Sp. p. 22; Dr. pp. 5–6; Gaz. vol. 133; p. 1199.
Air-brake. W. A. Weant. No. 884,694; Apr. 14; Sp. p. 2105; Dr. p. 449; Gaz. vol. 133; p. 1555.
Air brake, Compressed-. A. Chandeson. No. 884,364; Apr. 14; Sp. p. 1413; Dr. pp. 302–3; Gaz. vol. 133; p. 1446.
Air-brake-pressure adjuster, Automatic. U. S. Smith. No. 883,917; Apr. 7; Sp. p. 497; Dr. p. 99; Gaz. vol. 133; p. 1272.
Air-brake system. U. S. Smith. No. 883,918; Apr. 7; Sp. p. 499; Dr. pp. 99–100; Gaz. vol. 133; p. 1272.
Air-compressor. J. T. Simpson and T. Lishman. No. 885,877; Apr. 28; Sp. p. 4542; Dr. p. 953; Gaz. vol. 133; p. 1999.
Air-compressor, Hydraulic. J. H. Champ. No. 883,936; Apr. 7; Sp. p. 539; Dr. p. 107; Gaz. vol. 133; p. 1278.
Air-cushion block, Compressed-. C. C. De Witt. No. 886,193; Apr. 28; Sp. p. 5185; Dr. p. 1091; Gaz. vol. 133; p. 2103.
Air or gas compressor system. H. Keller. No. 883,888; Apr. 7; Sp. p. 441; Dr. p. 87; Gaz. vol. 133; p. 1262.
Air-purifying apparatus. W. G. R. Braemer. No. 885,137; Apr. 21; Sp. p. 3018; Dr. pp. 636–7; Gaz. vol. 133; p. 1730.
Alarm: *See* Boiler-alarm; Drawer-alarm; Electric alarm; Fire-alarm; Incubator-alarm; Paper-feed-carriage alarm; Railway-crossing alarm.
Alarm-gage. H. B. Presser. No. 885,289; Apr. 21; Sp. p. 3334; Dr. p. 696; Gaz. vol. 133; p. 1780.
Alarm system, Automatic. J. E. Shepherd. No. 884,047; Apr. 7; Sp. p. 765; Dr. p. 159; Gaz. vol. 133; p. 1315.
Albumin for the production of an article of manufacture useful in the arts and a product, Treating vegetable. F. G. Wiechmann. No. 883,995; Apr. 7; Sp. p. 666; Gaz. vol. 133; p. 1298.
Albumin preparations, Manufacturing blood-. A. Langer. No. 884,025; Apr. 7; Sp. p. 725; Gaz. vol. 133; p. 1308.
Aldehyde sulfoxylates, Production of. M. Bazlen. No. 885,566; Apr. 21; Sp. p. 3913; Gaz. vol. 133; p. 1868.
Aldehyde sulfoxylates, Production of. F. Becker. No. 885,567; Apr. 21; Sp. p. 3916; Gaz. vol. 133; p. 1868.
Alizarin, Making. J. H. Boner. No. 885,577; Apr. 21; Sp. p. 3926; Gaz. vol. 133; p. 1871.
Amalgamator. H. I. Seemann. No. 884,299; Apr. 7; Sp. p. 1273; Dr. p. 269; Gaz. vol. 133; p. 1396.
Ammonia, Producing. O. Serpek. No. 884,423; Apr. 14; Sp. p. 1519; Gaz. vol. 133; p. 1466.
Amusement apparatus. H. N. Ridgway. No. 884,045; Apr. 7; Sp. p. 762; Dr. p. 159; Gaz. vol. 133; p. 1314.
Amusement apparatus. W. H. Bryant. No. 884,462; Apr. 14; Sp. p. 1602; Dr. pp. 345–6; Gaz. vol. 133; p. 1478.
Amusement device. A. J. Northcraft. No. 884,340; Apr. 7; Sp. p. 1348; Dr. p. 288; Gaz. vol. 133; p. 1409.
Anesthetics, Apparatus for administering. C. K. Teter. No. 883,987; Apr. 7; Sp. p. 649; Dr. pp. 130–1; Gaz. vol. 133; p. 1295.
Animal catching and holding tool. E. L. Hitt. No. 884,156; Apr. 7; Sp. p. 1036; Dr. p. 215; Gaz. vol. 133; p. 1351.
Animal-holder. F. Chapman. No. 883,697; Apr. 7; Sp. p. 46; Dr. p. 7; Gaz. vol. 133; p. 1200.
Animal-trap. W. D. Armstrong. No. 883,772; Apr. 7; Sp. p. 180; Dr. p. 33; Gaz. vol. 133; p. 1222.
Animal-trap. G. Elsey and B. J. Wayt. No. 883,867; Apr. 7; Sp. p. 400; Dr. p. 78; Gaz. vol. 133; p. 1254.
Animal-trap. A. Arnesen. No. 884,453; Apr. 14; Sp. p. 1587; Dr. p. 342; Gaz. vol. 133; p. 1476.
Animal-trap. M. Joachim. No. 885,481; Apr. 21; Sp. p. 3713; Dr. p. 780; Gaz. vol. 133; p. 1842.
Animal-trap. N. Galloway. No. 885,600; Apr. 21; Sp. p. 3957; Dr. p. 826; Gaz. vol. 133; p. 1877.
Animals alive during transportation, Keeping aquatic. G. Erlwein and E. Marquardt. No. 884,140; Apr. 7; Sp. p. 999; Dr. pp. 208–9; Gaz. vol. 133; p. 1345.
Animals, Treating. F. C. Goff. No. 885,694; Apr. 21; Sp. p. 4155; Dr. pp. 869–70; Gaz. vol. 133; p. 1908.
Ant-trap. M. T. Howard. No. 884,928; Apr. 14; Sp. p. 2578; Dr. p. 542; Gaz. vol. 133; p. 1630.
Ant-trap. H. L. Shimer. No. 885,536; Apr. 21; Sp. p. 3848; Dr. p. 804; Gaz. vol. 133; p. 1859.
Antisnoring-shield. C. P. Steil. No. 885,196; Apr. 21; Sp. p. 3148; Dr. p. 661; Gaz. vol. 133; p. 1750.
Armature-winding for high-speed dynamo-electric machines. B. G. Lamme. No. 885,163; Apr. 21; Sp. p. 3076; Dr. p. 646; Gaz. vol. 133; p. 1738.
Atomizer. W. von Döhn. No. 885,027; Apr. 21; Sp. p. 2780; Dr. pp. 589–90; Gaz. vol. 133; p. 1694.
Auger, Earth-. J. S. Park. No. 886,242; Apr. 28; Sp. p. 5264; Dr. p. 1109; Gaz. vol. 133; p. 2118.
Autographic register. T. F. Schirmer and M. C. Stern. No. 886,015; Apr. 28; Sp. p. 4854; Dr. p. 1020; Gaz. vol. 133; p. 2046.
Automatic coupling. E. De Vlieger. No. 884,801; Apr. 14; Sp. p. 2333; Dr. p. 491; Gaz. vol. 133; p. 1591.
Automatic fender. J. E. Palmer. No. 884,413; Apr. 14; Sp. p. 1500; Dr. pp. 322–3; Gaz. vol. 133; p. 1463.
Automobile. A. B. Shultz. No. 883,982; Apr. 7; Sp. p. 635; Dr. p. 127; Gaz. vol. 133; p. 1294.
Automobile. A. H. Wright. No. 885,822; Apr. 28; Sp. p. 4437; Dr. p. 932; Gaz. vol. 133; p. 1981.
Automobile brake and clutch operating mechanism. C. Schmidt. No. 883,835; Apr. 7; Sp. p. 330; Dr. p. 62; Gaz. vol. 133; p. 1244.
Automobile-buffer. J. H. Sager. No. 885,181; Apr. 21; Sp. p. 3118; Dr. p. 656; Gaz. vol. 133; p. 1744.
Automobile circuit-breaker. W. C. Horner. No. 885,848; Apr. 28; Sp. p. 4489; Dr. p. 942; Gaz. vol. 133; p. 1990.
Automobile driving-gear. H. G. McComb. No. 885,505; Apr. 21; Sp. p. 3756; Dr. p. 790; Gaz. vol. 133; p. 1849.
Automobile fender and brake attachment. J. O'Leary. No. 884,301; Apr. 7; Sp. p. 1109; Dr. p. 232; Gaz. vol. 133; p. 1365.
Automobile steering-gear. J. C. Higdon. No. 855,249; Apr. 21; Sp. p. 3263; Dr. p. 681; Gaz. vol. 133; p. 1768.

Automobile steering-gear. G. E. Miller. No. 885,940; Apr. 28; Sp. p. 4680; Dr. pp. 985–6; Gaz. vol. 133; p. 2020.
Automobile-radiator. C. Schmidt. No. 886,016; Apr. 28; Sp. p. 4856; Dr. p. 1021; Gaz. vol. 133; p. 2046.
Automobiles and other vehicles, Elastic securing device for doors of. F. Charron. No. 883,938; Apr. 7; Sp. p. 544; Dr. p. 108; Gaz. vol. 133; p. 1279.
Automobiles, Steering-wheel pivot and pivot-bearing for. J. Vollmer. No. 885,111; Apr. 21; Sp. p. 2948; Dr. p. 625; Gaz. vol. 133; p. 1721.
Awl, Sewing-. C. A. Connan. No. 885,913; Apr. 28; Sp. p. 4608; Dr. p. 966; Gaz. vol. 133; p. 2011.
Awning. W. W. and F. L. Schwemer. No. 886,256; Apr. 28; Sp. p. 5293; Dr. p. 1115; Gaz. vol. 133; p. 2124.
Ax. C. A. Wilcox. No. 884,250; Apr. 7; Sp. p. 1197; Dr. p. 252; Gaz. vol. 133; p. 1381.
Axle and bearing for grain-seeding machines. C. L. Fowle. No. 883,709; Apr. 7; Sp. p. 66; Dr. p. 10; Gaz. vol. 133; p. 1203.
Axle and wheel, Center-drive. J. and H. McGeorge. No. 884,752; Apr. 14; Sp. p. 2228; Dr. pp. 470–1; Gaz. vol. 133; p. 1575.
Axle-box lubricating-packing holder, Car-. J. S. Patten. (Reissue.) No. 12,786; Apr. 28; Sp. p. 5498; Dr. p. 1150; Gaz. vol. 133; p. 2153.
Axle-boxes to axles, Device for securing. C. E. Heckman. No. 885,153; Apr. 21; Sp. p. 3058; Dr. p. 642; Gaz. vol. 133; p. 1735.
Axle for motor-vehicles, Combination steering and driving. J. P. Carpenter. No. 885,585; Apr. 21; Sp. p. 3936; Dr. pp. 821–2; Gaz. vol. 133; p. 1873.
Axle-lubricator. J. Thomi. No. 885,403; Apr. 21; Sp. p. 3584; Dr. p. 750; Gaz. vol. 133; p. 1819.
Axle-straightener. J. Q. Taylor. No. 884,429; Apr. 14; Sp. p. 1532; Dr. p. 328; Gaz. vol. 133; p. 1467.
Back and head rest. C. H. Spotz and G. A. Spencer. No. 884,534; Apr 14; Sp. p. 1751; Dr. p. 377; Gaz. vol. 133; p. 1501.
Bag: *See* Feed-bag; Paper bag.
Bag. F. L. Kirk. No. 885,488; Apr. 21; Sp. p. 3726; Dr. p. 784; Gaz. vol. 133; p. 1844.
Bag-fastener. G. L. Edgerton. No. 885,739; Apr. 28; Sp. p. 4265; Dr. p. 892; Gaz. vol. 133; p. 1953.
Bag-frame. J. F. Kitchell. No. 884,593; Apr. 14; Sp. p. 1879; Dr. pp. 402–3; Gaz. vol. 133; p. 1521.
Bag-holding device. J. B. Cusick and W. I. Scott. No. 884,798; Apr. 14; Sp. p. 2329; Dr. p. 489; Gaz. vol. 133; p. 1560.
Bag lock, Hand-. J. J. Woolfenden. No. 884,787; Apr. 14; Sp. p. 2313; Dr. p. 486; Gaz. vol. 133; p. 1587.
Bag-tie. M. E. Jewett. No. 885,695; Apr. 21; Sp. p. 4157; Dr. p. 870; Gaz. vol. 133; p. 1909.
Bait, Artificial. J. E. Pepper. No. 885,861; Apr. 28; Sp. p. 4513; Dr. p. 947; Gaz. vol. 133; p. 1994.
Bait-holder. E. A. Osterhout. No. 885,642; Apr. 21; Sp. p. 4058; Dr. p. 848; Gaz. vol. 133; p. 1891.
Bait-trap. J. E. Thiaville. No. 885,402; Apr. 21; Sp. p. 3582; Dr. pp. 749–50; Gaz. vol. 133; p. 1818.
Bale-tie. W. D. Ferris. No. 885,917; Apr. 28; Sp. p. 4630; Dr. p. 972; Gaz. vol. 133; p. 2013.
Bale-tie-making machine. W. D. Ferris. No. 885,916; Apr. 28; Sp. p. 4615; Dr. pp. 967–72; Gaz. vol. 133; p. 2012.
Baling-press. J. J. Stopple. No. 883,758; Apr. 7; Sp. p. 155; Dr. p. 28; Gaz. vol. 133; p. 1218.
Baling-press. G. W. Shepard. No. 884,530; Apr. 14; Sp. p. 1746; Dr. pp. 375–6; Gaz. vol. 133; p. 1500.
Baling-press. J. S. Tuttle. No. 885,204; Apr. 21; Sp. p. 3178; Dr. p. 665; Gaz. vol. 133; p. 1752.
Ball: *See* Bowling-ball.
Ball-thrower, Mechanical. R. H. Lake. No. 884,024; Apr. 7; Sp. p. 720; Dr. p. 146; Gaz. vol. 133; p. 1308.
Band-cutter and feeder. A. Böttcher. No. 886,178; Apr. 28; Sp. p. 5152; Dr. p. 1084; Gaz. vol 133; p. 2097.
Bank, Savings-. O. Burns. No. 884,069; Apr. 7; Sp. p. 806; Dr. p. 171; Gaz. vol. 133; p. 1322.
Bar: *See* Concrete-reinforcing bar; Cutter-bar; Jewel-bar; Prison-bar; Sickle-bar; Splice-bar.
Barber's pole. J. R. and A. R. Wygle. No. 884,252; Apr. 7; Sp. p. 1199; Dr. p. 252; Gaz. vol. 133; p. 1381.
Barrel, Drying-out. C. L. Warner. No. 885,813; Apr. 28; Sp. p. 4420; Dr. p. 927; Gaz. vol. 133; p. 1978.
Barrel-head. A. La Marche. No. 883,812; Apr. 7; Sp. p. 278; Dr. p. 50; Gaz. vol. 133; p. 1237.
Barrel, Metallic. S. M. Wright. No. 884,450; Apr. 14; Sp. p. 1579; Dr. p. 340; Gaz. vol. 133; p. 1475.
Barrel or other receptacle, Separable. A. Petracchi. No. 885,371; Apr. 21; Sp. p. 3519; Dr. p. 734; Gaz. vol. 133; p. 1809.
Barrels, kegs, and the like, Combined cover and follower for. T. M. Dansby. No. 886,040; Apr. 28; Sp. p. 4907; Dr. p. 1031; Gaz. vol. 133; p. 2053.
Basket. L. E. and L. B. Reynolds. No. 886,308; Apr. 28; Sp. p. 5405; Dr. p. 1135; Gaz. vol. 133; p. 2142.
Basket, Fruit-picking. B. A. Swasey. No. 883,839; Apr. 7; Sp. p. 345; Dr. p. 66; Gaz. vol. 133; p. 1246.
Batteries, Depolarizer for galvanic. E. W. Jungner. No. 884,664; Apr. 14; Sp. p. 2057; Dr. p. 439; Gaz. vol. 133; p. 1545.
Battery: *See* Secondary battery; Storage battery.
Battery-filling machine. C. T. Richmond. No. 885,294; Apr. 21; Sp. p. 3347; Dr. pp. 699–700; Gaz. vol. 133; p. 1782.
Beam, Trussed. C. H. Williams, Jr. No. 884,445; Apr. 14; Sp. p. 1572; Dr. p. 338; Gaz. vol. 133; p. 1473.
Beam, Trussed. C. H. Williams, Jr. No. 884,446; Apr. 14; Sp. p. 1574; Dr. pp. 338–9; Gaz. vol. 133; p. 1474.
Bean-puller. R. H. Beckwith. No. 884,887; Apr. 14; Sp. p. 2492; Dr. pp. 525–6; Gaz. vol. 133; p. 1618.
Bearing, Ball-. J. Schmid-Roost. No. 884,046; Apr. 7; Sp. p. 764; Dr. p. 159; Gaz. vol. 133; p. 1314.
Bearing center-plate, Roller-. J. C. Barber. No. 885,133; Apr. 21; Sp. p. 3012; Dr. p. 635; Gaz. vol. 133; p. 1729.
Bearing, Roller-. F. M. Foote. No. 886,200; Apr. 28; Sp. p. 5194; Dr. p. 1093; Gaz. vol. 133; p. 2105.
Bearing, Shaft- W. L. R. Emmet and E. D. Dickinson. No. 884,477; Apr. 14; Sp. p. 1632; Dr. p. 351; Gaz. vol. 133, p. 1483.
Bearings, Lubricating device for center-. R. T. Senter. No. 886,060; Apr. 28; Sp. p. 4970; Dr. p. 1045; Gaz. vol. 133; p. 2066.
Bed. M. Wensauer. No. 886,022; Apr. 28; Sp. p. 4866; Dr. p. 1024; Gaz. vol. 133; p. 2048.
Bed, Baby-. W. S. Lindsey. No. 884,509; Apr. 14; Sp. p. 1700; Dr. p. 366; Gaz. vol. 133; p. 1493.
Bed, Invalid-. E. A. Keasey. No. 884,393; Apr. 14; Sp. p. 1470; Dr. p. 314; Gaz. vol. 133; p. 1456.
Bed, Knockdown. S. S. Hanson. No. 883,995; Apr. 28; Sp. p. 4807; Dr. pp. 1009–10; Gaz. vol. 133; p. 2039.
Bed-pan. E. Nelson. No. 884,842; Apr. 14; Sp. p. 2429; Dr. p. 509; Gaz. vol. 133; p. 1606.
Bed-springs, Device for tightening the fabric of. W. Van Duzee. No. 885,549; Apr. 21; Sp. p. 3873; Dr. p. 810; Gaz. vol. 133; p. 1862.
Beds, Portable partition for. E. E. Hopkins. No. 883,884; Apr. 7; Sp. p. 434; Dr. p. 86; Gaz. vol. 133; p. 1260.
Bedclothes-clamp. D. Martin. No. 884,832; Apr. 14; Sp. p. 2385; Dr. p. 502; Gaz. vol. 133; p. 1601.
Beet-puller. E. A. Smith. No. 885,538; Apr. 21; Sp. p. 3851; Dr. p. 805; Gaz. vol. 133; p. 1859.
Beet topping and harvesting machine. F. Lotter. No. 884,673; Apr. 14; Sp. p. 2071; Dr. p. 442; Gaz. vol. 133; p. 1548.
Belt-fastener. P. A. Hudson. No. 886,215; Apr. 28; Sp. p. 5219; Dr. p. 1099; Gaz. vol. 133; p. 2109.
Belt-making machine. E. A. Usina. No. 884,544; Apr. 14; Sp. p. 1776; Dr. pp. 381–2; Gaz. vol. 133; p. 1505.
Belt, Power-transmission. G. Meacham and J. G. Sundblom. No. 884,100; Apr. 7; Sp. p. 873; Dr. p. 183; Gaz. vol. 133; p. 1332.
Belting and machinery therefor, Manufacture of leather. E. F. Sargeant. No. 884,528; Apr. 14; Sp. p. 1738; Dr. pp. 373–5; Gaz. vol. 133; p. 1499.
Bending-machine. A. Wood. No. 886,027; Apr. 28; Sp. p. 4873; Dr. p. 1026; Gaz. vol. 133; p. 2049.
Berry-box. P. Henrich. No. 884,820; Apr. 14; Sp. p. 2368; Dr. p. 498; Gaz. vol. 133; p. 1598.
Bevel and square, Combined. S. G. Petterson. No. 883,908; Apr. 7; Sp. p. 481; Dr. pp. 94–5; Gaz. vol. 133; p. 1269.
Bias-fold cutter. E. C. Scates. No. 884,219; Apr. 7; Sp. p. 1141; Dr. p. 240; Gaz. vol. 133; p. 1371.
Bicycle-wheel whereby it may be placed concentric or eccentric with axle, Means for mounting a. A. D. Robbins. No. 883,746; Apr. 7; Sp. p. 130; Dr. pp. 23–4; Gaz. vol. 133; p. 1214.
Bin: *See* Merchandise-bin.
Binder. I. H. Rice. No. 885,648; Apr. 21; Sp. p. 4065; Dr. p. 849; Gaz. vol. 133; p. 1893.
Binder, Loose-leaf. F. A. De Graw. No. 884,134; Apr. 7; Sp. p. 987; Dr. p. 206; Gaz. vol. 133; p. 1344.
Binder, Paper-. C. C. Newson-Smith. No. 884,409; Apr. 14; Sp. p. 1495; Dr. p. 321; Gaz. vol. 133; p. 1462.
Binder, Temporary. J. Ahlberg. No. 884,351; Apr. 14; Sp. p. 1387; Dr. p. 297; Gaz. vol. 133; p. 1441.
Binders, Shocking attachment for. W. H. Perrin. No. 886,326; Apr. 28; Sp. p. 5457; Dr. p. 1144; Gaz. vol. 133; p. 2149.
Biscuit-molding means. H. W. Mackenzie. No. 884,746; Apr. 14; Sp. p. 2219; Dr. pp. 468–9; Gaz. vol. 133; p. 1573.
Bit: *See* Horse-bit.
Bit-stock, Folding. E. Réquillart. No. 884,856; Apr. 14; Sp. p. 2440; Dr. p. 515; Gaz. vol. 133; p. 1609.
Blackboard, Adjustable. A. G. Grant. No. 885,241; Apr. 21; Sp. p. 3247; Dr. p. 677; Gaz. vol. 133; p. 1765.
Blanching apparatus. E. J. Vaudreuil. No. 886,097; Apr. 28; Sp. p. 5004; Dr. p. 1053; Gaz. vol. 133; p. 2071.
Block: *See* Air-cushion block; Building-block; Butcher's block; Concrete block.
Blood compound of glycerophosphate of lime and calcium. A. Langer. No. 884,026; Apr. 7; Sp. p. 725; Gaz. vol. 133; p. 1308.
Board: *See* Blackboard; Drawing-board; Game-board; Ironing-board; Piano sounding-board; Plaster or composition board; Wash-board.
Bobbin and spindle connector. H. E. Hughes. No. 886,297; Apr. 28; Sp. p. 5381; Dr. p. 1130; Gaz. vol. 133; p. 2138.
Bobbin-driving means for rotatable spindles. A. D. Morse. No. 885,855; Apr. 28; Sp. p. 4501; Dr. p. 945; Gaz. vol. 133; p. 1992.
Bobbin-holder. G. and N. Boissonneault. No. 884,356; Apr. 14; Sp. p. 1394; Dr. p. 298; Gaz. vol. 133; p. 1442.
Bobbin-holder. A. E. Rhoades. No. 884,759; Apr. 14; Sp. p. 2249; Dr. p. 473; Gaz. vol. 133; p. 1577.
Boiler: *See* Locomotive-boiler; Steam-boiler; Washboiler; Water-tube boiler.
Boiler. F. A. Ballin. No. 883,852; Apr. 7; Sp. p. 365; Dr. p. 71; Gaz. vol. 133; p. 1250.
Boiler-alarm. J. M. Williams. No. 885,413; Apr. 21; Sp. p. 3600; Dr. p. 755; Gaz. vol. 133; p. 1822.
Boiler cleaner, Steam-. I. C. Gray. No. 884,728; Apr. 14; Sp. p. 2177; Dr. p. 462; Gaz. vol. 133; p. 1567.
Boiler-flue cleaner. R. W. Hamann. No. 884,818; Apr. 14; Sp. p. 2366; Dr. p. 497; Gaz. vol. 133; p. 1598.
Boiler-flue, Detachable. A. J. Bowden. No. 885,662; Apr. 21; Sp. p. 4091; Dr. p. 856; Gaz. vol. 133; p. 1897.
Bolster-stake. J. Helmlicher. No. 884,923; Apr. 14; Sp. p. 2572; Dr. p. 541; Gaz. vol. 133; p. 1628.
Bolt: *See* Door-bolt; Foot-bolt.
Bolt keeper, Lock-. J. Christy. No. 885,320; Apr. 21; Sp. p. 3410; Dr. p. 713; Gaz. vol. 133; p. 1792.

Book and card system, Combined loose-leaf. C. P. Ferrero. No. 886,320; Apr. 28; Sp. p. 5439; Dr. p. 1140; Gaz. vol. 133; p. 2147.
Book-holder. N. S. Davis. No. 884,722; Apr. 14; Sp. p. 2167; Dr. p. 460; Gaz. vol. 133; p. 1565.
Book, Sales-. A. F. Staples. No. 884,623; Apr. 14; Sp. p. 1930; Dr. p. 415; Gaz. vol. 133; p. 1530.
Bookkeeping system. C. Sherwin. No. 886,081; Apr. 28; Sp. p. 4972; Dr. p. 1046; Gaz. vol. 133; p. 2066.
Boot and shoe. C. J. Walker. No. 884,880; Apr. 14; Sp. p. 2484; Dr. p. 523; Gaz. vol. 133; p. 1616.
Boot and shoe edge-trimming machine. A. E. Ayer. No. 883,684; Apr. 7; Sp. p. 1; Dr. p. 1; Gaz. vol. 133; p. 1195.
Boots and shoes, Machine for operating upon welts of. J. B. Hadaway. No. 885,244; Apr. 21; Sp. p. 3251; Dr. pp. 678–9; Gaz. vol. 133; p. 1706.
Boring-machine, Thrust. C. Christiansen. No. 883,858; Apr. 7; Sp. p. 378, Dr. p. 74; Gaz. vol. 133; p. 1251.
Boring-machines, Drill and bit holder for. J. Marston. No. 886,228; Apr. 28; Sp. p. 5243; Dr. p. 1104; Gaz. vol. 133; p. 2114.
Boring-tool. O. Tack. No. 884,111; Apr. 7; Sp. p. 924; Dr. p. 194; Gaz. vol. 133; p. 1336.
Bottle. A. S. Kirk. No. 884,168; Apr. 7; Sp. p. 1055; Dr. p. 220; Gaz. vol. 133; p. 1354.
Bottle. H. S. Mitchell. No. 884,284; Apr. 7; Sp. p. 1248; Dr. p. 262; Gaz. vol. 133; p. 1391.
Bottle. F. S. Barnes. No. 885,661; Apr. 21; Sp. p. 4089; Dr. p. 855; Gaz. vol. 133; p. 1897.
Bottle and sealing-cap. J. M. Deemer. No. 885,734; Apr. 28; Sp. p. 4253; Dr. p. 890; Gaz. vol. 133; p. 1952.
Bottle-closure. A. Adelson. No. 884,257; Apr. 7; Sp. p. 1210; Dr. p. 254; Gaz. vol. 133; p. 1383.
Bottle, Fraud-detecting. F. H. Waterman. No. 883,844; Apr. 7; Sp. p. 353; Dr. p. 68; Gaz. vol. 133; p. 1247.
Bottle-handling apparatus. H. J. Chilton. No. 885,912; Apr. 28; Sp. p. 4603; Dr. pp. 965–6; Gaz. vol. 133; p. 2010.
Bottle-holder. K. Bode. No. 884,355; Apr. 14; Sp. p. 1393; Dr. p. 298; Gaz. vol. 133; p. 1442.
Bottle holder and rack. I. J. True. No. 885,806; Apr. 28; Sp. p. 4706; Dr. p. 923; Gaz. vol. 133; p. 1975.
Bottle holder, Nursing-. M. L. Surprenant. No. 886,270; Apr. 28; Sp. p. 5323; Dr. p. 1120; Gaz. vol. 133; p. 2129.
Bottle, Non-refillable. A. J. Grabel. No. 884,147; Apr. 7; Sp. p. 1014; Dr. p. 212; Gaz. vol. 133; p. 1347.
Bottle, Non-refillable. L. C. Furcolo. No. 885,035; Apr. 21; Sp. p. 2799; Dr. p. 592; Gaz. vol. 133; p. 1697.
Bottle, Non-refillable. A. Bennett. No. 885,425; Apr. 21; Sp. p. 3615; Dr. p. 758; Gaz. vol. 133; p. 1825.
Bottle, Non-refillable. J. B. Ogle and W. E. Barrie. No. 885,640; Apr. 21; Sp. p. 4055; Dr. p. 847; Gaz. vol. 133; p. 1890.
Bottle-opener. F. C. Emrick and J. K. Baer. No. 885,028; Apr. 21; Sp. p. 2784; Dr. p. 590; Gaz. vol. 133; p. 1695.
Bottle-top. A. L. Bernardin. No. 885,571; Apr. 21; Sp. p. 3920; Dr. p. 818; Gaz. vol. 133; p. 1869.
Bottle-valve. J. M. Skelton. No. 885,092; Apr. 21; Sp. p. 2906; Dr. p. 616; Gaz. vol. 133; p. 1715.
Bottles and other receptacles, Stopper for. L. Gamucci-Cancellieri and A. Cappelletti. No. 885,743; Apr. 28; Sp. p. 4272; Dr. p. 894; Gaz. vol. 133; p. 1954.
Bottles, jars, and other receptacles, Closing device for air-tight. C. H. Gray. No. 884,378; Apr. 14; Sp. p. 1446; Dr. p. 308; Gaz. vol. 133; p. 1452.
Bottling apparatus. A. A. Pindstofte. No. 885,785; Apr. 28; Sp. p. 4357; Dr. p. 914; Gaz. vol. 133; p. 1968.
Bottling-machine. L. Jensen. No. 883,959; Apr. 7; Sp. p. 504; Dr. p. 118; Gaz. vol. 133; p. 1286.
Bowling-ball and handle. F. J. McGuane. No. 884,991; Apr. 14; Sp. p. 2698; Dr. p. 572; Gaz. vol. 133; p. 1640.
Box: *See* Berry-box; Dispensing-box; Folded-blank box; Lunch-box; Mail-box; Miter-box; Package-box; Patrol-box; Press-box; Sand-box; Sheet-metal box; Shipping-box; Sticking-plaster box; Stuffing-box; Switch-box; Talking-machine sound-box; Telephone toll-box.
Box. W. Stewart. No. 883,757; Apr. 7; Sp. p. 153; Dr. p. 27; Gaz. vol. 133; p. 1218.
Box. H. P. Roberts. No. 886,250; Apr. 28; Sp. p. 5280; Dr. pp. 1112–13; Gaz. vol. 133; p. 2121.
Box-cover fastener. G. Glaus. No. 884,481; Apr. 14; Sp. p. 1644; Dr. p. 353; Gaz. vol. 133; p. 1485.
Box-covering machine. M. D. Knowlton. No. 885,260; Apr. 21; Sp. p. 3278; Dr. p. 685; Gaz. vol. 133; p. 1771.
Box handle and fastener, Fuel and other. T. E. Barton. No. 884,003; Apr. 7; Sp. p. 680; Dr. p. 136; Gaz. vol. 133; p. 1300.
Box lock and brace, Combined. G. S. Francis, F. O. Kaste, and H. W. Gross. No. 884,377; Apr. 14; Sp. p. 1444; Dr. p. 308; Gaz. vol. 133; p. 1451.
Box-opener. S. Stewart. No. 884,301; Apr. 7; Sp. p. 1277; Dr. p. 270; Gaz. vol. 133; p. 1396.
Box or can cover, Removable. J. Zimmerman. No. 885,682; Apr. 21; Sp. p. 4129; Dr. p. 864; Gaz. vol. 133; p. 1905.
Boxes, Manufacture of cardboard. R. D. Haworth. No. 884,384; Apr. 14; Sp. p. 1455; Dr. p. 310; Gaz. vol. 133; p. 1454.
Brace: *See* Rail-brace.
Brace. D. O. Wilkins. No. 885,819; Apr. 28; Sp. p. 4432; Dr. p. 931; Gaz. vol. 133; p. 1980.
Bracelet. T. D. Giguere. No. 886,121; Apr. 28; Sp. p. 5062; Dr. p. 1062; Gaz. vol. 133; p. 2080.
Bracket: *See* Lamp-bracket; Pipe-bracket; Scaffold-bracket; Shade-bracket; Shingling-bracket.
Bracket. A. L. Rice. No. 883,742; Apr. 7; Sp. p. 125; Dr. p. 22; Gaz. vol. 133; p. 1213.
Bracket-support. M. E. La Berge. No. 884,503; Apr. 14; Sp. p. 1662; Dr. p. 363; Gaz. vol. 133; p. 1491.
Braiding-machine stop-motion. O. A. Robbins. No. 885,523; Apr. 21; Sp. p. 3807; Dr. p. 799; Gaz. vol. 133; p. 1855.
Brake: *See* Air-brake; Elevator safety-brake; Pneumatic brake; Wagon-brake.
Brake. J. W. Cross. No. 885,447; Apr. 21; Sp. p. 3654; Dr. p. 766; Gaz. vol. 133; p. 1832.
Brake-beam. W. H. Woodcock. No. 884,000; Apr. 7; Sp. p. 674; Dr. p. 135; Gaz. vol. 133; p. 1300.
Brake-beam. C. H. Williams, Jr. No. 884,444; Apr. 14; Sp. p. 1571; Dr. p. 338; Gaz. vol. 133; p. 1473.
Brake-head. C. H. Williams, Jr. No. 884,443; Apr. 14; Sp. p. 1570; Dr. p. 337; Gaz. vol. 133; p. 1473.
Brake-lever hanger. W. T. Walton. No. 884,881; Apr. 14; Sp. p. 2485; Dr. p. 524; Gaz. vol. 133; p. 1616.
Brake-setting device. E. Godley. (Reissue.) No. 12,780; Apr. 21; Sp. p. 4181; Dr. p. 875; Gaz. vol. 133; p. 1913.
Brake-shoe. E. S. Woods. No. 885,414; Apr. 21; Sp. p. 3601; Dr. p. 755; Gaz. vol. 133; p. 1822.
Brick-kiln. S. T. Rawles. No. 885,954; Apr. 28; Sp. p. 4723; Dr. pp. 992–3; Gaz. vol. 133; p. 2026.
Brick-kiln furnaces, Firing-tool for. E. H. Callaway. No. 885,720; Apr. 28; Sp. p. 4220; Dr. p. 883; Gaz. vol. 133; p. 1947.
Brick-molding apparatus. P. Wernicke. No. 884,440; Apr. 14; Sp. p. 1562; Dr. p. 336; Gaz. vol. 133; p. 1471.
Bricks by hand, Clamp for carrying. W. F. Kerr. No. 884,494; Apr. 14; Sp. p. 1675; Dr. p. 361; Gaz. vol. 133; p. 1489.
Bridge construction. W. Sharp. No. 885,386; Apr. 21; Sp. p. 3554; Dr. pp. 743–4; Gaz. vol. 133; p. 1814.
Bronze, Method of and apparatus for removing superfluous. H. Lamberger. No. 885,491; Apr. 21; Sp. p. 3732; Dr. p. 785; Gaz. vol. 133; p. 1845.
Brooder. J. Lardinois-Pigeon. No. 884,935; Apr. 14; Sp. p. 2589; Dr. p. 546; Gaz. vol. 133; p. 1632.
Brush. A. Herschmann. No. 884,276; Apr. 7; Sp. p. 1237; Dr. p. 260; Gaz. vol. 133; p. 1389.
Brush-cleaner. C. R. Spicer. No. 883,752; Apr. 7; Sp. p. 141; Dr. p. 26; Gaz. vol. 133; p. 1217.
Brush, Dusting-. R. N. Fickett. No. 886,046; Apr. 28; Sp. p. 4913; Dr. p. 1033; Gaz. vol. 133; p. 2055.
Brush, Horse-. J. B. Pfau. No. 886,153; Apr. 28; Sp. p. 5115; Dr. p. 1074; Gaz. vol. 133; p. 2089.
Brush, Shoe-polishing. R. B. Martin. No. 885,500; Apr. 21; Sp. p. 3749; Dr. p. 788; Gaz. vol. 133; p. 1848.
Bucket. S. J. Sikes. No. 884,870; Apr. 14; Sp. p. 2472; Dr. p. 520; Gaz. vol. 133; p. 1614.
Bucket, Coal-. B. L. Burtt. No. 885,582; Apr. 21; Sp. p. 3933; Dr. p. 821; Gaz. vol. 133; p. 1872.
Bucket, Dumping-. J. Hamilton. No. 885,613; Apr. 21; Sp. p. 3985; Dr. p. 832; Gaz. vol. 133; p. 1882.
Bucket-dumping attachment, Mine-. M. M. Callaghan. No. 884,363; Apr. 14; Sp. p. 1410; Dr. pp. 301–2; Gaz. vol. 133; p. 1446.
Bucket, Self-closing dumping-. G. L. Stuebner. No. 884,687; Apr. 14; Sp. p. 2094; Dr. p. 447; Gaz. vol. 133; p. 1553.
Buckle. H. W. Luhmann. No. 885,064; Apr. 21; Sp. p. 2853; Dr. p. 607; Gaz. vol. 133; p. 1706.
Buckle. H. D. Sargent. No. 885,382; Apr. 21; Sp. p. 3549; Dr. p. 742; Gaz. vol. 133; p. 1813.
Buckle. C. A. Patterson. No. 885,701; Apr. 21; Sp. p. 4169; Dr. p. 873; Gaz. vol. 133; p. 1910.
Buckle. P. I. Andrews. No. 886,029; Apr. 28; Sp. p. 4876; Dr. p. 1027; Gaz. vol. 133; p. 2050.
Buckle, Belt-. H. W. Fishel. No. 883,707; Apr. 7; Sp. p. 64; Dr. p. 9; Gaz. vol. 133; p. 1202.
Buckle guard, Harness-. E. Jutras. No. 883,807; Apr. 7; Sp. p. 263; Dr. p. 48; Gaz. vol. 133; p. 1235.
Buckle, Harness-. J. Reichert. No. 884,207; Apr. 7; Sp. p. 1118; Dr. p. 234; Gaz. vol. 133; p. 1367.
Buggy-spindle. J. C. Messer. No. 885,502; Apr. 21; Sp. p. 3753; Dr. p. 789; Gaz. vol. 133; p. 1849.
Building. E. C. Sargent. No. 885,088; Apr. 21; Sp. p. 2897; Dr. p. 614; Gaz. vol. 133; p. 1714.
Building-block, Refractory. F. B. Marvin. No. 885,065; Apr. 21; Sp. p. 2855; Dr. p. 607; Gaz. vol. 133; p. 1707.
Building material. J. Stanley. No. 884,959; Apr. 14; Sp. p. 2633; Dr. p. 557; Gaz. vol. 133; p. 1639.
Bung-closure for barrels. O. A. Hilgermann. No. 885,997; Apr. 28; Sp. p. 4811; Dr. p. 1010; Gaz. vol. 133; p. 2040.
Burglary-preventing apparatus. D. Stewart. No. 885,200; Apr. 21; Sp. p. 3152; Dr. p. 662; Gaz. vol. 133; p. 1751.
Burner: *See* Gas-burner; Hydrocarbon-burner; Mantle-burner.
Burner. J. O. Morgan. No. 884,286; Apr. 7; Sp. p. 1250; Dr. p. 263; Gaz. vol. 133; p. 1391.
Burner. G. R. Shanklin. No. 884,869; Apr. 14; Sp. p. 2470; Dr. p. 520; Gaz. vol. 133; p. 1614.
Burner safety attachment. W. A. Caldwell, Jr. No. 883,784; Apr. 7; Sp. p. 204; Dr. p. 38; Gaz. vol. 133; p. 1226.
Butcher's apron and frock, Combined. W. C. F. Baldwin. No. 884,063; Apr. 7; Sp. p. 793; Dr. p. 167; Gaz. vol. 133; p. 1320.
Butcher's block. L. Rowe. No. 886,077; Apr. 28; Sp. p. 4963; Dr. p. 1044; Gaz. vol. 133; p. 2065.
Butter-cutting machine. F. J. Ziegler. No. 883,847; Apr. 7; Sp. p. 358; Dr. p. 69; Gaz. vol. 133; p. 1248.
Butter-cutting machine. R. F. Stewart. No. 886,088; Apr. 28; Sp. p. 4981; Dr. p. 1048; Gaz. vol. 133; p. 2068.
Button. W. Raum. No. 884,205; Apr. 7; Sp. p. 1116; Dr. p. 234; Gaz. vol. 133; p. 1366.
Button, Collar-. C. A. Kieffer. No. 884,092; Apr. 7; Sp. p. 857; Dr. p. 180; Gaz. vol. 133; p. 1329.
Button, Collar-. H. J. Wylie. No. 885,416; Apr. 21; Sp. p. 3606; Dr. p. 756; Gaz. vol. 133; p. 1822.
Button, Collar and cuff. E. C. Trees. No. 884,054; Apr. 7; Sp. p. 779; Dr. p. 162; Gaz. vol. 133; p. 1317.

Button, Detachable. L. Y. Smith. No. 885,879; Apr. 28; Sp. p. 4546; Dr. p. 954; Gaz. vol. 133; p. 2000.
Button, Separable cuff link-. F. P. Barney. No. 885,135; Apr. 21; Sp. p. 3014; Dr. p. 636; Gaz. vol. 133; p. 1729.
Button, Tufting-. J. W. Gunther. No. 884,273; Apr. 7; Sp. p. 1233; Dr. p. 250; Gaz. vol. 133; p. 1388.
Cabinet. C. L. Luthardt. No. 884,178; Apr. 7; Sp. p. 1068; Dr. p. 222; Gaz. vol. 133; p. 1357.
Cabinet. G. Range. No. 884,758; Apr. 14; Sp. p. 2246; Dr. p. 473; Gaz. vol. 133; p. 1577.
Cabinet. L. E. Hudson. No. 886,000; Apr. 28; Sp. p. 4814; Dr. p. 1011; Gaz. vol. 133; p. 2041.
Cabinet, Barber's. W. Malbaum. No. 885,497; Apr. 21; Sp. p. 3739; Dr. p. 787; Gaz. vol. 133; p. 1847.
Cabinet or nest of trays. G. Strong. No. 884,428; Apr. 14; Sp. p. 1531; Dr. pp. 327–8; Gaz. vol. 133; p. 1467.
Cabinet, Retouching-. J. M. Stonestreet. No. 884,535; Apr. 14; Sp. p. 1753; Dr. p. 377; Gaz. vol. 133; p. 1501.
Cabinet, Sectional knockdown. J. F. Wilmot. No. 884,550; Apr. 14; Sp. p. 1786; Dr. p. 384; Gaz. vol. 133; p. 1508.
Cake-holder for conveyers. H. B. Ward. No. 886,101; Apr. 28; Sp. p. 5014; Dr. p. 1055; Gaz. vol. 133; p. 2073.
Calculating device. T. T. Crouch. No. 886,189; Apr. 28; Sp. p. 5174; Dr. pp. 1089–90; Gaz. vol. 133; p. 2101.
Calculating-machine. V. Odhner. No. 885,514; Apr. 21; Sp. p. 3769; Dr. p. 793; Gaz. vol. 133; p. 1852.
Calendar. C. E. Rowe. No. 884,861; Apr. 14; Sp. p. 2455; Dr. p. 517; Gaz. vol. 133; p. 1611.
Calendar. B. Borland. No. 885,222; Apr. 21; Sp. p. 3213; Dr. p. 670; Gaz. vol. 133; p. 1758.
Calendar and advertiser, Automatic. W. L. Ruppenlatz and E. R. Martin. No. 883,716; Apr. 7; Sp. p. 77; Dr. p. 12; Gaz. vol. 133; p. 1205.
Calendar, Perpetual. S. Sipser. No. 884,532; Apr. 14; Sp. p. 1749; Dr. p. 376; Gaz. vol. 133; p. 1501.
Camera. I. A. Bell. No. 885,010; Apr. 21; Sp. p. 2735; Dr. pp. 580–1; Gaz. vol. 133; p. 1688.
Camera shutter, Photographic-. F. A. Brownell. No. 885,142; Apr. 21; Sp. p. 3026; Dr. p. 638; Gaz. vol. 133; p. 1732.
Cames, Apparatus for packing. T. W. Morrell. No. 885,854; Apr. 28; Sp. p. 4500; Dr. p. 945; Gaz. vol. 133; p. 1991.
Can: *See* Oil-can.
Can-cleaning machine. J. M. C. Jones. No. 885,849; Apr. 28; Sp. p. 4489; Dr. pp. 942–4; Gaz. vol. 133; p. 1990.
Can-cover-coating machine. C. Leffler. No. 885,625; Apr. 21; Sp. p. 4010; Dr. p. 838; Gaz. vol. 133; p. 1886.
Can-fork or can-lifter. R. M. Breckenridge. No. 885,580; Apr. 21; Sp. p. 3931; Dr. p. 820; Gaz. vol. 133; p. 1872.
Can-opener. F. Canfield. No. 885,686; Apr. 21; Sp. p. 4141; Dr. p. 867; Gaz. vol. 133; p. 1906.
Can-spout. G. J. Richard. No. 884,761; Apr. 14; Sp. p. 2254; Dr. p. 474; Gaz. vol. 133; p. 1578.
Canned goods, Revolver for processing. H. L. Forhan. No. 885,332; Apr. 21; Sp. p. 3436; Dr. p. 717; Gaz. vol. 133; p. 1796.
Candle-extinguisher, Self-acting. A. C. Findlay. No. 886,196; Apr. 28; Sp. p. 5191; Dr. p. 1093; Gaz. vol. 133; p. 2104.
Candlestick, Miner's. J. R. Blake. No. 884,632; Apr. 14; Sp. p. 1948; Dr. p. 418; Gaz. vol. 133; p. 1533.
Cane-loader. W. W. Lemmon. No. 884,938; Apr. 14; Sp. p. 2592; Dr. p. 547; Gaz. vol. 133; p. 1632.
Cane trash, &c., Machine for cutting sugar-. W. J. Kent. No. 885,486; Apr. 21; Sp. p. 3719; Dr. pp. 782–3; Gaz. vol. 133; p. 1844.
Cant-hook. E. S. Menere. No. 883,820; Apr. 7; Sp. p. 290; Dr. p. 54; Gaz. vol. 133; p. 1239.
Capsule-cleaning device. J. P. Remington. No. 886,075; Apr. 28; Sp. p. 4962; Dr. p. 1043; Gaz. vol. 133; p. 2064.
Car and track, Pleasure-. W. H. Vance. No. 885,406; Apr. 21; Sp. p. 3587; Dr. p. 751; Gaz. vol. 133; p. 1819.
Car, Articulated. M. Rounds. No. 884,420; Apr. 14; Sp. p. 1514; Dr. p. 325; Gaz. vol. 133; p. 1465.
Car-bolster. O. S. Pulliam. No. 886,069; Apr. 28; Sp. p. 4955; Dr. p. 1041; Gaz. vol. 133; p. 2063.
Car-bolster. O. S. Pulliam. No. 886,070; Apr. 28; Sp. p. 4956; Dr. p. 1041; Gaz. vol. 133; p. 2063.
Car-bolster and draft-rigging. W. D. Lowry. No. 884,596; Apr. 14; Sp. p. 1886; Dr. p. 404; Gaz. vol. 133; p. 1522.
Car-brake rods, Detachable jaw for. V. Willoughby. No. 883,997; Apr. 7; Sp. p. 669; Dr. p. 134; Gaz. vol. 133; p. 1298.
Car-chair. S. J. Baxter. No. 883,929; Apr. 7; Sp. p. 521; Dr. p. 103; Gaz. vol. 133; p. 1275.
Car construction, Steel-. E. I. Dodds. No. 884,323; Apr. 7; Sp. p. 1311; Dr. pp. 277–8; Gaz. vol. 133; p. 1403.
Car construction, Steel-. E. I. Dodds. No. 884,325; Apr. 7; Sp. p. 1314; Dr. pp. 278–9; Gaz. vol. 133; p. 1403.
Car curtain-fixture, Open-. G. E. Gilman. No. 884,490; Apr. 14; Sp. p. 1643; Dr. p. 353; Gaz. vol. 133; p. 1484.
Car-door. S. G. Stapp. No. 884,234; Apr. 7; Sp. p. 1161; Dr. p. 245; Gaz. vol. 133; p. 1376.
Car-door. M. H. Stickney. No. 885,101; Apr. 21; Sp. p. 2926; Dr. p. 621; Gaz. vol. 133; p. 1718.
Car door-operating mechanism, Ore-. G. C. Johnson. No. 884,091; Apr. 7; Sp. p. 856; Dr. p. 180; Gaz. vol. 133; p. 1329.
Car-door operator. G. W. Rakestraw. No. 884,295; Apr. 7; Sp. p. 1268; Dr. p. 267; Gaz. vol. 133; p. 1395.
Car, Drop-bottom. E. I. Dodds. No. 884,324; Apr. 7; Sp. p. 1313; Dr. p. 278; Gaz. vol. 133; p. 1403.
Car-fender. C. R. Reeves. No. 884,206; Apr. 7; Sp. p. 1117; Dr. p. 234; Gaz. vol. 133; p. 1367.
Car-fender. J. Sweeney. No. 884,238; Apr. 7; Sp. p. 1173; Dr. p. 247; Gaz. vol. 133; p. 1377.
Car-fender. J. F. Risdon. No. 884,683; Apr. 14; Sp. p. 2087; Dr. p. 445; Gaz. vol. 133; p. 1551.
Car-fender. L. Dan. No. 885,325; Apr. 21; Sp. p. 3420; Dr. p. 714; Gaz. vol. 133; p. 1793.
Car-fender. L. Olschewski and F. Trenech. No. 885,780; Apr. 28; Sp. p. 4343; Dr. pp. 911–12; Gaz. vol. 133; p. 1966.
Car, Freight-. H. W. Kirchner. No. 885,182; Apr. 21; Sp. p. 3074; Dr. p. 646; Gaz. vol. 133; p. 1738.
Car grain-door. J. Edman. No. 884,011; Apr. 7; Sp. p. 695; Dr. p. 140; Gaz. vol. 133; p. 1303.
Car heater, Freight-. C. C. Palmer. No. 885,700; Apr. 21; Sp. p. 4167; Dr. p. 872; Gaz. vol. 133; p. 1910.
Car lubricating system, Motor-. C. Schmidt. No. 885,182; Apr. 21; Sp. p. 3120; Dr. p. 656; Gaz. vol. 133; p. 1744.
Car-needle-beam attachment. C. F. Freda. No. 884,327; Apr. 7; Sp. p. 1318; Dr. p. 279; Gaz. vol. 133; p. 1404.
Car passenger-register, Street-. E. M. and G. A. Beard. No. 884,557; Apr. 14; Sp. p. 1798; Dr. p. 387; Gaz. vol. 133; p. 1510.
Car, Semiconvertible. W. S. Wright. No. 884,788; Apr. 14; Sp. p. 2315; Dr. pp. 486–7; Gaz. vol. 133; p. 1587.
Car-stake. F. Parent. No. 885,643; Apr. 21; Sp. p. 4059; Dr. p. 848; Gaz. vol. 133; p. 1891.
Car-stake and attaching means therefor. J. A. Toomey. No. 884,778; Apr. 14; Sp. p. 2289; Dr. pp. 481–2; Gaz. vol. 133; p. 1584.
Car stake-tie, Railway-. D. N. Bates, S. E. Clapp, and L. E. Booth. No. 884,122; Apr. 7; Sp. p. 949; Dr. p. 199; Gaz. vol. 133; p. 1339.
Car-step. E. P. Bergman. No. 884,889; Apr. 14; Sp. p. 2494; Dr. p. 526; Gaz. vol. 133; p. 1618.
Car-underframe. W. McIntosh. No. 886,053; Apr. 28; Sp. p. 4943; Dr. p. 1039; Gaz. vol. 133; p. 2061.
Car wheel, Mine-. S. Wilkinson. No. 883,996; Apr. 7; Sp. p. 667; Dr. p. 134; Gaz. vol. 133; p. 1298.
Car-window. E. S. Bucknam. No. 883,780; Apr. 7; Sp. p. 196; Dr. p. 36; Gaz. vol. 133; p. 1225.
Cars, Check-lock for. H. S. Boucher. No. 885,907; Apr. 28; Sp. p. 4597; Dr. p. 963; Gaz. vol. 133; p. 2009.
Cars, Guard-rail for street-. G. D. Secor. No. 885,089; Apr. 21; Sp. p. 2899; Dr. p. 615; Gaz. vol. 133; p. 1714.
Carbureter. M. Loewenstein. No. 885,265; Apr. 21; Sp. p. 3289; Dr. p. 688; Gaz. vol. 133; p. 1773.
Carbureter. A. W. Breiding. No. 885,832; Apr. 28; Sp. p. 4460; Dr. p. 936; Gaz. vol. 133; p. 1984.
Carbureter. S. G. Averell. No. 885,905; Apr. 28; Sp. p. 4593; Dr. pp. 962–3; Gaz. vol. 133; p. 2008.
Carbureter. W. L. Wayrynen. No. 886,283; Apr. 28; Sp. p. 5354; Dr. p. 1125; Gaz. vol. 133; p. 2134.
Carbureter, Rapid-fire. J. A. Speed. No. 886,265; Apr. 28; Sp. p. 5311; Dr. p. 1118; Gaz. vol. 133; p. 2127.
Carburetor, Spray-. P. A. Poppe. No. 883,740; Apr. 7; Sp. p. 121; Dr. p. 21; Gaz. vol. 133; p. 1212.
Card-mount. J. N. C. Graham. No. 884,086; Apr. 7; Sp. p. 849; Dr. p. 178; Gaz. vol. 133; p. 1327.
Card-rack. I. Hahn. No. 884,149; Apr. 7; Sp. p. 1017; Dr. p. 212; Gaz. vol. 133; p. 1348.
Card-rack, Playing-. H. De Joannis. No. 886,130; Apr. 28; Sp. p. 5079; Dr. p. 1066; Gaz. vol. 133; p. 2082.
Card system. G. C. Anderson. No. 885,826; Apr. 28; Sp. p. 4443; Dr. p. 934; Gaz. vol. 133; p. 1982.
Carpet-stretcher. R. J. Tanner. No. 884,776; Apr. 14; Sp. p. 2282; Dr. pp. 480–1; Gaz. vol. 133; p. 1583.
Carriage-body. N. Gilbert. No. 885,744; Apr. 28; Sp. p. 4273; Dr. p. 894; Gaz. vol. 133; p. 1954.
Carriage driving mechanism, Motor-. A. B. Morse. No. 883,735; Apr. 7; Sp. p. 110; Dr. pp. 19–20; Gaz. vol. 133; p. 1211.
Carrier: *See* Drawer-carrier; Feed and litter carrier; Mail-carrier.
Carrier switch, Overhead-. G. E. Hauptman. No. 884,383; Apr. 14; Sp. p. 1453; Dr. pp. 309–10; Gaz. vol. 133; p. 1453.
Carrier system. S. H. Libby. No. 884,595; Apr. 14; Sp. p. 1884; Dr. pp. 403–4; Gaz. vol. 133; p. 1522.
Carriers, Track-support for. F. B. Tice. No. 885,547; Apr. 21; Sp. p. 3867; Dr. p. 809; Gaz. vol. 133; p. 1862.
Cart. C. Carroll. No. 885,586; Apr. 21; Sp. p. 3937; Dr. p. 822; Gaz. vol. 133; p. 1873.
Cart, Two-wheeled. J. White. No. 884,605; Apr. 14; Sp. p. 2107; Dr. p. 450; Gaz. vol. 133; p. 1555.
Carton. B. Keys. No. 885,159; Apr. 21; Sp. p. 3068; Dr. p. 645; Gaz. vol. 133; p. 1737.
Cartridge-reloading tool. M. H. Doppimaier. No. 885,589; Apr. 21; Sp. p. 3941; Dr. p. 823; Gaz. vol. 133; p. 1874.
Carving-machine. F. H. Richards. No. 885,293; Apr. 21; Sp. p. 3344; Dr. p. 699; Gaz. vol. 133; p. 1782.
Case: *See* Display-case; Filing-case; Grinding-machine case; Hat-packing case; Packing-case; Piano-case; Pianoforte-case; Show-case; Traveling-case; Type-case.
Case-hardening. A. W. Machlet. No. 884,181; Apr. 7; Sp. p. 1076; Dr. p. 224; Gaz. vol. 133; p. 1358.
Case-hardening apparatus. A. W. Machlet. No. 884,180; Apr. 7; Sp. p. 1070; Dr. pp. 223–4; Gaz. vol. 133; p. 1358.
Cash-register. T. Carroll. (Reissue.) No. 12,774; Apr. 7; Sp. p. 1372; Dr. pp. 293–4; Gaz. vol. 133; p. 1412.
Cash-register. F. H. Trevellian. No. 884,627; Apr. 14; Sp. p. 1936; Dr. pp. 416–17; Gaz. vol. 133; p. 1531.
Cash-register. T. Carney. No. 884,639; Apr. 14; Sp. p. 1967; Dr. pp. 422–6; Gaz. vol. 133; p. 1536.
Cash-register. T. Carney. No. 884,640; Apr. 14; Sp. p. 1996; Dr. pp. 426–8; Gaz. vol. 133; p. 1537.
Cash-register. C. A. Lundgren. No. 885,266; Apr. 21; Sp. p. 3292; Dr. pp. 688–9; Gaz. vol. 133; p. 1773.
Cash-register. E. J. Von Pein. No. 885,550; Apr. 21; Sp. p. 3874; Dr. pp. 810–11; Gaz. vol. 133; p. 1863.
Casks with a coating, Providing. R. Rostock. No. 884,993; Apr. 14; Sp. p. 2702; Gaz. vol. 133; p. 1650.
Casks with a protective coating, Providing cement or concrete. R. Rostock. No. 884,994; Apr. 14; Sp. p. 2703; Gaz. vol. 133; p. 1650.
Caster, Adjustable. E. Devine. No. 885,024; Apr. 21; Sp. p. 2776; Dr. p. 588; Gaz. vol. 133; p. 1694.
Castings, Remedying defects, such as blow-holes, in metal. E. Wiss. No. 884,346; Apr. 7; Sp. p. 1356; Dr. p. 290; Gaz. vol. 133; p. 1410.

Cement-block machine. J. W. Miller. No. 884,101; Apr. 7; Sp. p. 874; Dr. p. 184; Gaz. vol. 133; p. 1332.
Cement-block-molding machine. F. Cherny. No. 884,713; Apr. 14; Sp. p. 2149; Dr. pp. 456–7; Gaz. vol. 133; p. 1562.
Cement-tie mold. R. A. Smith. No. 885,539; Apr. 21; Sp. p. 3852; Dr. p. 805; Gaz. vol. 133; p. 1859.
Cementing apparatus. C. W. Phipps and W. J. Steele. No. 885,862; Apr. 28; Sp. p. 4514; Dr. pp. 947–8; Gaz. vol. 133; p. 1994.
Cementitious articles, Molds for making. D. A. Keogan. No. 884,931; Apr. 14; Sp. p. 2583; Dr. p. 544; Gaz. vol. 133; p. 1631.
Chain, Conveyer-. J. T. Nicholson. No. 886,065; Apr. 28; Sp. p. 4946; Dr. p. 1039; Gaz. vol. 133; p. 2061.
Chain-link. T. J. Plunkett and W. Silvers. No. 884,415; Apr. 14; Sp. p. 1506; Dr. p. 323; Gaz. vol. 133; p. 1463.
Chain-link blanks, &c., Apparatus for carrying and heating. P. H. Standish. No. 884,427; Apr. 14; Sp. p. 1525; Dr. p. 327; Gaz. vol. 133; p. 1467.
Chain, Log-conveyer. J. Schilleman. No. 885,959; Apr. 28; Sp. p. 4731; Dr. p. 994; Gaz. vol. 133; p. 2028.
Chair: *See* Car-chair; Convertible chair; Sewing-chair.
Chair. C. W. Fischer, C. Zimmerman, and E. C. Walker. No. 885,843; Apr. 28; Sp. p. 4479; Dr. p. 940; Gaz. vol. 133; p. 1988.
Chair-elevator, Hydraulic. J., A., and J. P. Barker. No. 885,564; Apr. 21; Sp. p. 3908; Dr. pp. 816–17; Gaz. vol. 133; p. 1867.
Chair fan attachment, Rocking-. W. Scheurer. No. 884,212; Apr. 7; Sp. p. 1128; Dr. p. 236; Gaz. vol. 133; p. 1360.
Chair head-rest. S. Wheeler. No. 886,102; Apr. 28; Sp. p. 5015; Dr. p. 1055; Gaz. vol. 133; p. 2073.
Change-making machine. T. I. Potter. No. 886,307; Apr. 28; Sp. p. 5402; Dr. p. 1134; Gaz. vol. 133; p. 2141.
Channeling and grooving machine. C. L. Eaton. No. 885,232; Apr. 21; Sp. p. 3229; Dr. p. 674; Gaz. vol. 133; p. 1762.
Channeling-tool. H. L. Rice. No. 884,043; Apr. 7; Sp. p. 760; Dr. p. 158; Gaz. vol. 133; p. 1314.
Charcoal-manufacturing apparatus. C. J. T. Burcey. No. 883,781; Apr. 7; Sp. p. 197; Dr. pp. 36–7; Gaz. vol. 133; p. 1225.
Chart for garment-patterns, Guide-. A. A. Maxwell. No. 885,167; Apr. 21; Sp. p. 3090; Dr. p. 650; Gaz. vol. 133; p. 1740.
Check, Excess-baggage coupon-. F. H. Crump. No. 884,260; Apr. 7; Sp. p. 1222; Dr. p. 257; Gaz. vol. 133; p. 1386.
Cheese-cutters, Table for. T. V. Garlock. No. 884,810; Apr. 14; Sp. p. 2350; Dr. p. 494; Gaz. vol. 133; p. 1594.
Chemical process. C. E. Pellew and D. W. Whipple. No. 884,756; Apr. 14; Sp. p. 2240; Gaz. vol. 133; p. 1576.
Chemical reaction between materials, Obtaining a violent. C. G. P. de Laval. No. 885,766; Apr. 28; Sp. p. 4320; Dr. p. 906; Gaz. vol. 133; p. 1962.
Cherry-pitting machine. J. W. Herbert. No. 883,881; Apr. 7; Sp. p. 429; Dr. p. 85; Gaz. vol. 133; p. 1259.
Cherry-stemmer. R. G. Fontana. No. 883,708; Apr. 7; Sp. p. 65; Dr. p. 10; Gaz. vol. 133; p. 1203.
Chimney-cap fastening. E. J. Cochran. No. 885,321; Apr. 21; Sp. p. 3412; Dr. p. 713; Gaz. vol. 133; p. 1792.
Chopper: *See* Cotton-chopper.
Chromatrope. S. A. Hunt. No. 885,928; Apr. 28; Sp. p. 4659; Dr. p. 981; Gaz. vol. 133; p. 2016.
Chuck. V. J. Wahlstrom. No. 884,244; Apr. 7; Sp. p. 1185; Dr. p. 250; Gaz. vol. 133; p. 1379.
Chuck. D. A. Moore. No. 885,946; Apr. 28; Sp. p. 4703; Dr. p. 989; Gaz. vol. 133; p. 2023.
Chuck, Drill-. F. H. Spets. No. 885,392; Apr. 21; Sp. p. 3564; Dr. p. 746; Gaz. vol. 133; p. 1815.
Chuck, Reversible tapping-. J. A. Dalton and E. D. Thompson. No. 885,914; Apr. 28; Sp. p. 4610; Dr. p. 966; Gaz. vol. 133; p. 2011.
Churn. F. E. Andrews. No. 884,452; Apr. 14; Sp. p. 1586; Dr. p. 342; Gaz. vol. 133; p. 1476.
Churn, Lever-power. W. J. Jones. No. 885,257; Apr. 21; Sp. p. 3275; Dr. p. 684; Gaz. vol. 133; p. 1770.
Chute, Sidewalk coal-. T. F. Clark. No. 886,112; Apr. 28; Sp. p. 5033; Dr. p. 1058; Gaz. vol. 133; p. 2076.
Cigarette-making apparatus. L. Aptekman. No. 885,421; Apr. 21; Sp. p. 3611; Dr. p. 757; Gaz. vol. 133; p. 1823.
Cigars, Manufacture of. J. B. De Léry. No. 884,982; Apr. 14; Sp. p. 2690; Dr. p. 569; Gaz. vol. 133; p. 1646.
Circuit-breaker, Reverse-current. C. E. Eveleth. No. 883,943; Apr. 7; Sp. p. 552; Dr. p. 110; Gaz. vol. 133; p. 1281.
Circuit-closer, Thermostatic. J. O. Woods. No. 884,969; Apr. 14; Sp. p. 2658; Dr. p. 565; Gaz. vol. 133; p. 1642.
Cistern. H. H. Wise. No. 885,209; Apr. 21; Sp. p. 3189; Dr. p. 666; Gaz. vol. 133; p. 1754.
Cistern with purifier, Water-. W. J. Kuss. No. 883,903; Apr. 7; Sp. p. 475; Dr. p. 93; Gaz. vol. 133; p. 1207.
Clamp: *See* Bedclothes-clamp; Saw-clamp; Show-case clamp; Work-clamp.
Clamp. C. M. Sorensen. No. 884,772; Apr. 14; Sp. p. 2277; Dr. p. 479; Gaz. vol. 133; p. 1582.
Clamp. J. R. Peirce. No. 885,940; Apr. 28; Sp. p. 4709; Dr. p. 990; Gaz. vol. 133; p. 2024.
Clarinet. F. W. Stahl. No. 885,880; Apr. 28; Sp. p. 4546; Dr. p. 954; Gaz. vol. 133; p. 2000.
Clasp: *See* Corset-clasp; Garment-supporter clasp; Garter-clasp; Hame-clasp.
Clasp. E. J. Martel. No. 885,267; Apr. 21; Sp. p. 3295; Dr. p. 689; Gaz. vol. 133; p. 1774.
Clasp. B. L. Green. No. 885,993; Apr. 28; Sp. p. 4805; Dr. p. 1009; Gaz. vol. 133; p. 2039.
Clasp with pencil-chain for note-books, documents, or the like. E. Kapun. No. 883,718; Apr. 7; Sp. p. 82; Dr. p. 13; Gaz. vol. 133; p. 1206.
Cleaner: *See* Boiler-cleaner; Boiler-flue cleaner; Brush-cleaner; Cotton-cleaner; Flue-cleaner; Grain-cleaner; Gun-cleaner; Pipe-cleaner; Pipe or tube cleaner; Rake-tooth cleaner; Street-cleaner; Tobacco-pipe cleaner.
Cleaning apparatus, Automatic vacuum. W. J. Bergens. No. 885,011; Apr. 21; Sp. p. 2737; Dr. p. 581; Gaz. vol. 133; p. 1689.
Cleaning-machine. J. Tolson. No. 885,107; Apr. 21; Sp. p. 2940; Dr. p. 623; Gaz. vol. 133; p. 1720.
Cleat. J. McClure, Jr. No. 885,506; Apr. 21; Sp. p. 3758; Dr. p. 791; Gaz. vol. 133; p. 1850.
Clip. H. G. Addie. No. 884,256; Apr. 7; Sp. p. 1209; Dr. p. 254; Gaz. vol. 133; p. 1383.
Clock attachment, Electrical. O. P. Ragan. No. 885,953; Apr. 28; Sp. p. 4720; Dr. p. 992; Gaz. vol. 133; p. 2026.
Clock, Electrically-operated. D. Sandretto. No. 886,157; Apr. 28; Sp. p. 5120; Dr. p. 1076; Gaz. vol. 133; p. 2090.
Clock-movement. G. J. B. and E. W. Sylvan. No. 884,961; Apr. 14; Sp. p. 2642; Dr. p. 561; Gaz. vol. 133; p. 1640.
Clock, Repeating-alarm. J. W. Morway. No. 885,350; Apr. 21; Sp. p. 3492; Dr. p. 728; Gaz. vol. 133; p. 1804.
Clock, Watchman's. A. A. Newman. No. 885,366; Apr. 21; Sp. p. 3507; Dr. p. 732; Gaz. vol. 133; p. 1807.
Cloth and the like, Automatic machine for folding. A. Bendien. No. 883,687; Apr. 7; Sp. p. 7; Dr. pp. 2–3; Gaz. vol. 133; p. 1196.
Cloth winding machine. E. W. Blythe. No. 883,690; Apr. 7; Sp. p. 13; Dr. p. 3; Gaz. vol. 133; p. 1197.
Clothes-hook. L. Julig. No. 884,165; Apr. 7; Sp. p. 1051; Dr. p. 219; Gaz. vol. 133; p. 1354.
Clothes-line reel. E. F. Wrench. No. 885,210; Apr. 21; Sp. p. 3190; Dr. p. 667; Gaz. vol. 133; p. 1755.
Clothes-pin. F. V. Polakoskey. No. 884,680; Apr. 14; Sp. p. 2083; Dr. p. 445; Gaz. vol. 133; p. 1550.
Clothes-pin. W. A. Pugh. No. 886,245; Apr. 28; Sp. p. 5272; Dr. p. 1110; Gaz. vol. 133; p. 2119.
Clutch. D. S. Oakley. No. 885,075; Apr. 21; Sp. p. 2870; Dr. p. 600; Gaz. vol. 133; p. 1709.
Clutch. H. M. Russell, Jr. No. 885,089; Apr. 21; Sp. p. 2892; Dr. p. 613; Gaz. vol. 133; p. 1713.
Clutch. C. N. Frey. No. 885,335; Apr. 21; Sp. p. 3440; Dr. p. 718; Gaz. vol. 133; p. 1796.
Clutch, Friction-. V. M. Moore. No. 883,732; Apr. 7; Sp. p. 104; Dr. p. 18; Gaz. vol. 133; p. 1210.
Clutch, Friction-. A. and G. A. Schwehr. No. 884,766; Apr. 14; Sp. p. 2265; Dr. p. 476; Gaz. vol. 133; p. 1580.
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Clutch, Friction-. F. Maxant. No. 885,938; Apr. 28; Sp. p. 4676; Dr. p. 985; Gaz. vol. 133; p. 2019.
Clutch mechanism. F. K. Lathrop. No. 886,004; Apr. 28; Sp. p. 4821; Dr. p. 1012; Gaz. vol. 133; p. 2042.
Clutch mechanism, Friction-. S. J. Davis. No. 885,449; Apr. 21; Sp. p. 3657; Dr. p. 767; Gaz. vol. 133; p. 1832.
Clutch-operating means. G. H. Gilbert. No. 885,604; Apr. 21; Sp. p. 3968; Dr. p. 828; Gaz. vol. 133; p. 1879.
Coach, Overland steam-. R. L. Woods. No. 884,882; Apr. 14; Sp. p. 2486; Dr. p. 524; Gaz. vol. 133; p. 1616.
Coal-scuttle. H. G. Soderblom. No. 885,094; Apr. 21; Sp. p. 2909; Dr. p. 617; Gaz. vol. 133; p. 1716.
Coal-storage plant. E. G. Volans. No. 883,764; Apr. 7; Sp. p. 169; Dr. p. 30; Gaz. vol. 133; p. 1220.
Coaster. S. B. Brown. No. 885,977; Apr. 28; Sp. p. 4762; Dr. p. 1000; Gaz. vol. 133; p. 2033.
Coat-hanger. J. C. Dawson. No. 886,041; Apr. 28; Sp. p. 4908; Dr. p. 1032; Gaz. vol. 133; p. 2054.
Cock, Protected earthenware. C. Ruppel. No. 885,526; Apr. 21; Sp. p. 3814; Dr. p. 800; Gaz. vol. 133; p. 1856.
Cock, Stop-. W. W. Miller. No. 885,775; Apr. 28; Sp. p. 4337; Dr. p. 909; Gaz. vol. 133; p. 1964.
Coffee-mill. J. Muzar. No. 885,504; Apr. 21; Sp. p. 3755; Dr. p. 790; Gaz. vol. 133; p. 1849.
Coffee-pot. J. Armstrong. No. 883,927; Apr. 7; Sp. p. 517; Dr. p. 102; Gaz. vol. 133; p. 1275.
Coffins, &c., Handle for. J. M. Truby. No. 885,305; Apr. 21; Sp. p. 3372; Dr. p. 705; Gaz. vol. 133; p. 1786.
Coil-spring. R. Gregg. No. 886,052; Apr. 28; Sp. p. 4926; Dr. p. 1035; Gaz. vol. 133; p. 2057.
Coin-collector. E. B. Craft. No. 884,470; Apr. 14; Sp. p. 1621; Dr. pp. 349–50; Gaz. vol. 133; p. 1481.
Coin-controlled apparatus. D. Wedgewood. No. 884,247; Apr. 7; Sp. p. 1190; Dr. pp. 250–1; Gaz. vol. 133; p. 1380.
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Coin-register. F. R. Graeber and C. T. Entrikin. No. 885,610; Apr. 21; Sp. p. 3978; Dr. pp. 830–1; Gaz. vol. 133; p. 1881.
Coke-drawer. D. Ferguson. No. 883,705; Apr. 7; Sp. p. 59; Dr. pp. 8–9; Gaz. vol. 133; p. 1202.
Coke-oven construction. J. W. Gocher. No. 885,468; Apr. 21; Sp. p. 3689; Dr. pp. 773–4; Gaz. vol. 133; p. 1838.
Collar pad, Horse-. W. F. Sachse. No. 884,527; Apr. 14; Sp. p. 1737; Dr. p. 372; Gaz. vol. 133; p. 1499.
Collar-support. E. Christie. No. 885,722; Apr. 28; Sp. p. 4224; Dr. p. 884; Gaz. vol. 133; p. 1947.
Colors and the resultant article, Photomechanical reproduction of. C. G. Zander. No. 884,254; Apr. 7; Sp. p. 1205; Dr. p. 253; Gaz. vol. 133; p. 1382.
Colter. G. Conley. No. 885,019; Apr. 21; Sp. p. 2757; Dr. p. 585; Gaz. vol. 133; p. 1692.
Column. W. H. Roney. No. 885,525; Apr. 21; Sp. p. 3812; Dr. p. 800; Gaz. vol. 133; p. 1855.
Comb: *See* Curry-comb; Puff-comb.
Comb-cleaning device. W. T. Rice. No. 884,044; Apr. 7; Sp. p. 761; Dr. p. 159; Gaz. vol. 133; p. 1314.
Commutator-brushes, Pneumatic holder for. C. W. Speirs. No. 884,049; Apr. 7; Sp. p. 768; Dr. p. 160; Gaz. vol. 133; p. 1315.

Commutator wiper and oiler. D. D. Neville, G. H. Clay, and J. H. Clewer. No. 885,278; Apr. 21; Sp. p. 3317; Dr. p. 603; Gaz. vol. 133; p. 1777.
Composition of matter. W. H. Thrash. No. 883,843; Apr. 7; Sp. p. 352; Gaz. vol. 133; p. 1247.
Composition of matter. H. L. Lilienthal. No. 885,768; Apr. 28; Sp. p. 4323; Gaz. vol. 133; p. 1962.
Composition of matter. S. Brown. No. 885,970; Apr. 28; Sp. p. 4761; Gaz. vol. 133; p. 2053.
Compost-spreader. H. A. Arnold. No. 885,217; Apr. 21; Sp. p. 3202; Dr. p. 609; Gaz. vol. 133; p. 1757.
Compressor. B. E. Hill. No. 884,332; Apr. 7; Sp. p. 1332; Dr. p. 283; Gaz. vol. 133; p. 1406.
Compressor, Rotary. C. C. Palmer. No. 885,788; Apr. 28; Sp. p. 4352; Dr. p. 913; Gaz. vol. 133; p. 1967.
Computing-machine. R. von Reppert. No. 885,522; Apr. 21; Sp. p. 3778; Dr. pp. 795–9; Gaz. vol. 133; p. 1854.
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Concentrating-table. J. D. Kohlmann. No. 885,349; Apr. 21; Sp. p. 3475; Dr. pp. 723–4; Gaz. vol. 133; p. 1801.
Concrete block. J. R. King. No. 884,498; Apr. 14; Sp. p. 1680; Dr. p. 362; Gaz. vol. 133; p. 1490.
Concrete blocks, Device for carrying and setting. D. S. Wolgamott. No. 884,434; Apr. 14; Sp. p. 1541; Dr. p. 331; Gaz. vol. 133; p. 1469.
Concrete construction for buildings, Reinforced. H. H. Wheeler. No. 884,306; Apr. 7; Sp. p. 1282; Dr. p. 271; Gaz. vol. 133; p. 1397.
Concrete construction, Framing-support for. T. Corris. No. 883,859; Apr. 7; Sp. p. 380; Dr. p. 74; Gaz. vol. 133; p. 1252.
Concrete construction, Marine. J. T. Bertrand. No. 884,354; Apr. 14; Sp. p. 1391; Dr. p. 298; Gaz. vol. 133; p. 1442.
Concrete construction, Mold-plate for. E. G. Kemper. No. 884,106; Apr. 7; Sp. p. 1052; Dr. p. 219; Gaz. vol. 133; p. 1354.
Concrete construction, Unit reinforcement for. R. A. Cummings. No. 884,010; Apr. 7; Sp. p. 962; Dr. p. 199; Gaz. vol. 133; p. 1303.
Concrete, Metal reinforce for. W. W. Ramsey. No. 884,341; Apr. 7; Sp. p. 1249; Dr. p. 288; Gaz. vol. 133; p. 1409.
Concrete-mixer. P. A. Koebring. No. 884,667; Apr. 14; Sp. p. 2060; Dr. p. 440; Gaz. vol. 133; p. 1545.
Concrete-mixers, Unloading apparatus for. H. Davis. No. 885,448; Apr. 21; Sp. p. 3655; Dr. pp. 766–7; Gaz. vol. 133; p. 1832.
Concrete-mixing apparatus. J. F. D. Withrow. No. 884,698; Apr. 14; Sp. p. 2111; Dr. p. 451; Gaz. vol. 133; p. 1556.
Concrete-mixing machine. R. T. Sollitt. No. 883,683; Apr. 7; Sp. p. 638; Dr. pp. 127–9; Gaz. vol. 133; p. 1294.
Concrete-mixing machine. R. J. Sellentine. No. 886,018; Apr. 28; Sp. p. 4858; Dr. pp. 1021–2; Gaz. vol. 133; p. 2047.
Concrete pile. F. B. Gilbreth. No. 885,337; Apr. 21; Sp. p. 3443; Dr. p. 718; Gaz. vol. 133; p. 1797.
Concrete pile-covering. F. A. Koetitz. No. 884,668; Apr. 14; Sp. p. 2061; Dr. p. 441; Gaz. vol. 133; p. 1546.
Concrete-reinforcing bar. C. E. Johnson. No. 884,090; Apr. 7; Sp. p. 854; Dr. pp. 179–80; Gaz. vol. 133; p. 1328.
Concrete structures, Fitting for reinforced. G. M. Graham. No. 885,240; Apr. 21; Sp. p. 3246; Dr. p. 677; Gaz. vol. 133; p. 1764.
Concrete structures, Fitting for reinforced. G. M. Graham. No. 885,992; Apr. 28; Sp. p. 4803; Dr. p. 1009; Gaz. vol. 133; p. 2038.
Concrete-wall mold. J. Horsfield. No. 884,733; Apr. 14; Sp. p. 2184; Dr. p. 463; Gaz. vol. 133; p. 1569.
Concrete-wall mold. J. Horsfield. No. 884,734; Apr. 14; Sp. p. 2185; Dr. p. 463; Gaz. vol. 133; p. 1569.
Condenser. A. W. P. Cramer. No. 884,077; Apr. 7; Sp. p. 821; Dr. p. 173; Gaz. vol. 133; p. 1324.
Condenser. G. B. Petsche. No. 885,285; Apr. 21; Sp. p. 3329; Dr. p. 695; Gaz. vol. 133; p. 1779.
Confectioner's heater. T. Chrul. No. 884,073; Apr. 7; Sp. p. 813; Dr. p. 172; Gaz. vol. 133; p. 1323.
Construction, Method of. J. C. Meem. No. 884,900; Apr. 14; Sp. p. 2096; Dr. p. 572; Gaz. vol. 133; p. 1649.
Controller. E. W. Stull. No. 884,345; Apr. 7; Sp. p. 1354; Dr. pp. 289–90; Gaz. vol. 133; p. 1410.
Controller. A. T. Crocker. No. 885,446; Apr. 21; Sp. p. 3651; Dr. p. 766; Gaz. vol. 133; p. 1831.
Convertible chair. J. Anderson and H. Torjesen. No. 884,060; Apr. 7; Sp. p. 788; Dr. pp. 165–6; Gaz. vol. 133; p. 1319.
Convertible chair and table. C. H. Dixon. No. 884,136; Apr. 7; Sp. p. 991; Dr. p. 206; Gaz. vol. 133; p. 1344.
Conveyer. G. Schubert. No. 884,618; Apr. 14; Sp. p. 1920; Dr. p. 412; Gaz. vol. 133; p. 1529.
Conveyer-belting and machine-belting, Manufacture of. F. Reddaway. No. 885,955; Apr. 28; Sp. p. 4724; Dr. p. 993; Gaz. vol. 133; p. 2027.
Conveyer, Pneumatic. C. L. Groves. No. 884,016; Apr. 7; Sp. p. 704; Dr. p. 142; Gaz. vol. 133; p. 1305.
Conveying apparatus. T. S. Miller. No. 885,774; Apr. 28; Sp. p. 4332; Dr. pp. 908–9; Gaz. vol. 133; p. 1964.
Conveying mechanism. C. W. Crosby. No. 885,730; Apr. 28; Sp. p. 4238; Dr. pp. 888–9; Gaz. vol. 133; p. 1950.
Cooker, Fireless. A. T. Hallock. No. 883,715; Apr. 7; Sp. p. 75; Dr. p. 12; Gaz. vol. 133; p. 1204.
Cooking apparatus. W. Nash. No. 884,288; Apr. 7; Sp. p. 1256; Dr. pp. 263–4; Gaz. vol. 133; p. 1392.
Cooking apparatus. D. W. Howland. No. 885,051; Apr. 21; Sp. p. 2830; Dr. p. 569; Gaz. vol. 133; p. 1702.
Cooking utensil. J. H. Cowhig. No. 884,718; Apr. 14; Sp. p. 2157; Dr. p. 458; Gaz. vol. 133; p. 1563.
Cooking utensil. F. B. Senseney. No. 884,767; Apr. 14; Sp. p. 2269; Dr. p. 477; Gaz. vol. 133; p. 1580.
Cooler: *See* Milk-cooler.
Cooler. W. G. Wuichet. No. 885,125; Apr. 21; Sp. p. 2994; Dr. p. 632; Gaz. vol. 133; p. 1726.
Coop. C. B. Treat. No. 886,278; Apr. 28; Sp. p. 5337; Dr. p. 1123; Gaz. vol. 133; p. 2132.
Coops, Water-tank for poultry-shipping. J. W. Salmons. No. 885,531; Apr. 21; Sp. p. 3841; Dr. p. 803; Gaz. vol. 133; p. 1858.
Copals and the preparation of varnishes, Treatment of hard and semihard. H. Terrisse. No. 883,842; Apr. 7; Sp. p. 351; Gaz. vol. 133; p. 1247.
Copper from a solution of copper, Obtaining pure. L. Jumau. No. 883,962; Apr. 7; Sp. p. 599; Gaz. vol. 133; p. 1287.
Copper from its ores, Electrometallurgical process for extracting. L. Jumau. No. 883,961; Apr. 7; Sp. p. 598; Gaz. vol. 133; p. 1287.
Copper-making apparatus. M. A. Jullien and E. L. Dessolle. No. 884,021; Apr. 7; Sp. p. 715; Dr. p. 145; Gaz. vol. 133; p. 1307.
Copper, Obtaining pure. L. Jumau. No. 885,022; Apr. 21; Sp. p. 4005; Gaz. vol. 133; p. 1885.
Copy-holder. J. M. Bainer. No. 884,886; Apr. 14; Sp. p. 2491; Dr. p. 525; Gaz. vol. 133; p. 1617.
Cork-extractor. W. T. Vallandingham. No. 883,988; Apr. 7; Sp. p. 654; Dr. p. 131; Gaz. vol. 133; p. 1296.
Cork-puller. C. Deusch. No. 884,322; Apr. 7; Sp. p. 1310; Dr. p. 277; Gaz. vol. 133; p. 1403.
Corkscrew. W. J. Stanton. No. 884,873; Apr. 14; Sp. p. 2474; Dr. p. 521; Gaz. vol. 133; p. 1614.
Corn, Apparatus for tipping seed-. B. G. Mease. No. 886,229; Apr. 28; Sp. p. 5245; Dr. p. 1105; Gaz. vol. 133; p. 2114.
Corn gathering and husking machine. N. M. Anderson. No. 884,308; Apr. 7; Sp. p. 1285; Dr. pp. 272–3; Gaz. vol. 133; p. 1398.
Corn-grader. A. Struble. No. 885,395; Apr. 21; Sp. p. 3568; Dr. p. 747; Gaz. vol. 133; p. 1816.
Corn-husker. S. H. Minnis. No. 886,147; Apr. 28; Sp. p. 5107; Dr. p. 1072; Gaz. vol. 133; p. 2088.
Corn-husking implement. A. C. Baughman. No. 886,033; Apr. 28; Sp. p. 4806; Dr. p. 1029; Gaz. vol. 133; p. 2051.
Corn-sheller attachment. G. B. Nelson. No. 884,944; Apr. 14; Sp. p. 2608; Dr. p. 550; Gaz. vol. 133; p. 1634.
Corn-sheller feed-regulator. W. J. Steckel. No. 885,881; Apr. 28; Sp. p. 4550; Dr. p. 954; Gaz. vol. 133; p. 2001.
Corn-sheller machine. A. D. and A. C. Cone. No. 885,665; Apr. 21; Sp. p. 4095; Dr. p. 857; Gaz. vol. 133; p. 1898.
Corn-shock loader. G. Winemiller and G. Gentslinger. No. 884,307; Apr. 7; Sp. p. 1284; Dr. p. 272; Gaz. vol. 133; p. 1397.
Corn-silker. J. H. Pierce. No. 885,373; Apr. 21; Sp. p. 3522; Dr. pp. 735–7; Gaz. vol. 133; p. 1809.
Corn-tops, Device for facilitating the tying of. D. W. Flynn. No. 886,048; Apr. 28; Sp. p. 4917; Dr. p. 1034; Gaz. vol. 133; p. 2055.
Corset attachment. M. E. Risk. No. 886,076; Apr. 28; Sp. p. 4963; Dr. p. 1044; Gaz. vol. 133; p. 2065.
Corset-clasp. V. K. Forse. No. 885,033; Apr. 21; Sp. p. 2794; Dr. p. 561; Gaz. vol. 133; p. 1666.
Cotton-bleaching apparatus, Seed-. J. B. Brennan. No. 884,336; Apr. 14; Sp. p. 1401; Dr. p. 300; Gaz. vol. 133; p. 1444.
Cotton-chopper. B. P. White. No. 884,248; Apr. 7; Sp. p. 1194; Dr. p. 251; Gaz. vol. 133; p. 1380.
Cotton-chopper. J. S. Barnett. No. 885,315; Apr. 21; Sp. p. 3404; Dr. p. 711; Gaz. vol. 133; p. 1790.
Cotton-chopper. A. A. Bullock. No. 885,472; Apr. 21; Sp. p. 3627; Dr. p. 760; Gaz. vol. 133; p. 1827.
Cotton-chopper. T. J. Smith. No. 885,654; Apr. 21; Sp. p. 4076; Dr. pp. 852–3; Gaz. vol. 133; p. 1895.
Cotton-chopper, Automatic electric. D. R. Bragunier and A. B. Thompson. No. 886,179; Apr. 28; Sp. p. 5155; Dr. p. 1085; Gaz. vol. 133; p. 2097.
Cotton cleaner and distributer. R. L. Hollingsworth. No. 884,157; Apr. 7; Sp. p. 1038; Dr. p. 216; Gaz. vol. 133; p. 1351.
Cotton-picker. J. S. Glover. No. 885,606; Apr. 21; Sp. p. 3971; Dr. pp. 828–9; Gaz. vol. 133; p. 1879.
Cotton-picker. J. A. Murchison. No. 886,236; Apr. 28; Sp. p. 5236; Dr. p. 1107; Gaz. vol. 133; p. 2116.
Cotton-separator. W. E. Rickey. No. 886,249; Apr. 28; Sp. p. 5278; Dr. p. 1112; Gaz. vol. 133; p. 2121.
Counter. T. H. Mayo. No. 886,008; Apr. 28; Sp. p. 4828; Dr. p. 1014; Gaz. vol. 133; p. 2043.
Counter-irritants, Device for applying. E. M. Jefferson. No. 884,160; Apr. 7; Sp. p. 1043; Dr. p. 217; Gaz. vol. 133; p. 1352.
Coupling: *See* Automatic coupling; Hose-coupling; Pipe-coupling; Thill-coupling; Whiffletree-coupling.
Coupling. O. N. Brandt. No. 886,180; Apr. 28; Sp. p. 5157; Dr. p. 1085; Gaz. vol. 133; p. 2098.
Coupling-head. J. M. Malloy. No. 886,007; Apr. 28; Sp. p. 4826; Dr. p. 1014; Gaz. vol. 133; p. 2043.
Crank-pin-turning machine. M. H. Westbrook. No. 884,966; Apr. 14; Sp. p. 2653; Dr. p. 564; Gaz. vol. 133; p. 1642.
Crate. E. Lehmann. No. 884,508; Apr. 14; Sp. p. 1690; Dr. p. 365; Gaz. vol. 133; p. 1493.
Crate, Ventilated fruit-. O. E. Perigo. No. 883,907; Apr. 7; Sp. p. 480; Dr. p. 94; Gaz. vol. 133; p. 1269.
Crates or coops, Water-trough for poultry. G. J. Cook. No. 884,716; Apr. 14; Sp. p. 2155; Dr. p. 458; Gaz. vol. 133; p. 1563.
Crossing-gate, Automatic electric. F. G. Layher. No. 884,825; Apr. 14; Sp. p. 2373; Dr. pp. 499–500; Gaz. vol. 133; p. 1599.
Crossing, Movable-point. W. B. Cooke. No. 884,717; Apr. 14; Sp. p. 2156; Dr. p. 458; Gaz. vol. 133; p. 1563.
Crown and bridge work. C. M. B. Boos. No. 884,977; Apr. 14; Sp. p. 2672; Dr. p. 568; Gaz. vol. 133; p. 1645.
Crucible compounds, Manufacturing. C. Caspar. No. 886,111; Apr. 28; Sp. p. 5032; Gaz. vol. 133; p. 2076.
Cruet. T. M. Mulkerins. No. 885,947; Apr. 28; Sp. p. 4704; Dr. p. 960; Gaz. vol. 133; p. 2024.
Crusher: *See* Rock-crusher.
Crutch, Adjustable. A. S. Hargrove. No. 883,339; Apr. 21; Sp. p. 3452; Dr. p. 719; Gaz. vol. 133; p. 1798.
Cuff attachment for shirts and the like, Hingeable. A. E. G. Bennett and W. R. Findlay. No. 885,971; Apr. 28; Sp. p. 4756; Dr. p. 999; Gaz. vol. 133; p. 2032.

Culinary device. W. H. Terry. No. 884,688; Apr. 14; Sp. p. 2097; Dr. p. 448; Gaz. vol. 133; p. 1553.
Cultivator. J. A. Smethers and W. Elliott. No. 885,093; Apr. 21; Sp. p. 2906; Dr. pp. 616–17; Gaz. vol. 133; p. 1715.
Cultivator. W. A. Dewberry. No. 885,983; Apr. 28; Sp. p. 4777; Dr. pp. 1003–4; Gaz. vol. 133; p. 2035.
Cultivator. J. F. Deal. No. 886,190; Apr. 28; Sp. p. 5179; Dr. p. 1091; Gaz. vol. 133; p. 2101.
Cultivator attachment. M. L. McClure. No. 884,676; Apr. 14; Sp. p. 2077; Dr. p. 443; Gaz. vol. 133; p. 1549.
Cultivator attachment. H. A. Davis. No. 885,228; Apr. 21; Sp. p. 3222; Dr. p. 672; Gaz. vol. 133; p. 1760.
Cultivator, Lister-. W. A. Kennedy. No. 885,258; Apr. 21; Sp. p. 3276; Dr. p. 684; Gaz. vol. 133; p. 1770.
Cultivator, Pivoted-axle. W. L. Paul. No. 885,077; Apr. 21; Sp. p. 2873; Dr. p. 609; Gaz. vol. 133; p. 1710.
Cultivator, Pivoted-axle. W. L. Paul. No. 885,079; Apr. 21; Sp. p. 2878; Dr. p. 610; Gaz. vol. 133; p. 1710.
Cultivator, Riding beet-. W. S. Graham. No. 885,469; Apr. 21; Sp. p. 3692; Dr. pp. 774–5; Gaz. vol. 133; p. 1839.
Culvert, Road-. J. Carey. No. 884,072; Apr. 7; Sp. p. 812; Dr. p. 172; Gaz. vol. 133; p. 1323.
Cup: *See* Oil-cup; Turpentine-cup.
Cuprammonia solution, Preparing. G. L. and A. Schaefer. No. 884,298; Apr. 7; Sp. p. 1271; Dr. p. 268; Gaz. vol. 133; p. 1395.
Curling-iron, Electric. C. A. Rickards. No. 884,296; Apr. 7; Sp. p. 1269; Dr. p. 268; Gaz. vol. 133; p. 1395.
Current, Apparatus for converting direct current into alternating. F. F. Strong. No. 885,304; Apr. 21; Sp. p. 3566; Dr. p. 747; Gaz. vol. 133; p. 1816.
Current contact apparatus, Automatic alternating-. C. E. L. Brown. No. 884,066; Apr. 7; Sp. p. 798; Dr. p. 168; Gaz. vol. 133; p. 1321.
Current generator, Alternating-. C. A. Lohr. No. 884,831; Apr. 14; Sp. p. 2382; Dr. p. 501; Gaz. vol. 133; p. 1601.
Current regulator, Electric-. A. W. Brice. No. 884,458; Apr. 14; Sp. p. 1593; Dr. p. 344; Gaz. vol. 133; p. 1477.
Current turbo-generator, Direct-. B. A. Behrend. No. 886,035; Apr. 28; Sp. p. 4898; Dr. p. 1030; Gaz. vol. 133; p. 2052.
Curry-comb. C. F. Thompson. No. 883,921; Apr. 7; Sp. p. 506; Dr. pp. 100–1; Gaz. vol. 133; p. 1273.
Curry-comb, Reticulated. E. C. Gage. No. 883,873; Apr. 7; Sp. p. 412; Dr. p. 81; Gaz. vol. 133; p. 1257.
Curtain-fixture. P. A. Houghtaling. No. 883,957; Apr. 7; Sp. p. 590; Dr. p. 118; Gaz. vol. 133; p. 1285.
Curtain-pole. W. B. Snyder. No. 885,540; Apr. 21; Sp. p. 3854; Dr. pp. 805–6; Gaz. vol. 133; p. 1860.
Curtain-ring. M. E. La Rue. No. 885,932; Apr. 28; Sp. p. 4668; Dr. p. 984; Gaz. vol. 133; p. 2018.
Curtain-stretcher. J. L. Bragdon. No. 884,999; Apr. 14; Sp. p. 2709; Dr. p. 574; Gaz. vol. 133; p. 1651.
Cushion. E. G. Budd. No. 884,706; Apr. 14; Sp. p. 2132; Dr. p. 454; Gaz. vol. 133; p. 1559.
Cushion. E. G. Budd. No. 884,707; Apr. 14; Sp. p. 2136; Dr. p. 454; Gaz. vol. 133; p. 1559.
Cushion. E. G. Budd and J. A. Wollé. No. 884,708; Apr. 14; Sp. p. 2138; Dr. p. 455; Gaz. vol. 133; p. 1560.
Cushion. E. G. Budd. No. 884,709; Apr. 14; Sp. p. 2140; Dr. p. 455; Gaz. vol. 133; p. 1560.
Cushion. H. S. Hale. No. 884,730; Apr. 14; Sp. p. 2180; Dr. p. 462; Gaz. vol. 133; p. 1567.
Cuspidor. A. E. Simpson. No. 884,871; Apr. 14; Sp. p. 2472; Dr. pp. 520–1; Gaz. vol. 133; p. 1614.
Cut-out. J. H. Booth, F. E. Blausey, and A. M. Smith. No. 884,978; Apr. 14; Sp. p. 2673; Dr. p. 568; Gaz. vol. 133; p. 1645.
Cutter: *See* Band-cutter; Bias-fold cutter; Fruit-cutter; Pipe-cutter; Rotary cutter; Tube-cutter; Weed-cutter.
Cutter-bar. B. F. McElwee. No. 885,365; Apr. 21; Sp. p. 3506; Dr. p. 732; Gaz. vol. 133; p. 1807.
Cutting and marking machine. E. Risting and F. Kabatchnick. No. 884,762; Apr. 14; Sp. p. 2255; Dr. pp. 474–5; Gaz. vol. 133; p. 1579.
Cutting and punching sheet material, Machine for. D. D. Frothingham. No. 885,237; Apr. 21; Sp. p. 3239; Dr. p. 676; Gaz. vol. 133; p. 1763.
Cutting endless grooves or slots, Apparatus for. H. F. Packard. No. 884,036; Apr. 7; Sp. p. 745; Dr. p. 154; Gaz. vol. 133; p. 1311.
Cutting endless grooves or slots, Apparatus for. G. and R. Schwarz. No. 884,218; Apr. 7; Sp. p. 1133; Dr. pp. 239–40; Gaz. vol. 133; p. 1371.
Cutting-stick. G. and R. Schwarz. No. 884,219; Apr. 7; Sp. p. 1134; Dr. pp. 239–40; Gaz. vol. 133; p. 1371.
Cycle saddle-support. J. F. Mamet and P. Hallot. No. 886,227; Apr. 28; Sp. p. 5241; Dr. p. 1104; Gaz. vol. 133; p. 2113.
Cylinder-lock. C. J. Caley and H. G. Voight. No. 883,857; Apr. 7; Sp. p. 377; Dr. p. 73; Gaz. vol. 133; p. 1251.
Dam. E. M. Bassler. No. 885,218; Apr. 21; Sp. p. 3205; Dr. p. 669; Gaz. vol. 133; p. 1757.
Damper, Flue-. F. M. Heath. No. 883,878; Apr. 7; Sp. p. 422; Dr. p. 83; Gaz. vol. 133; p. 1258.
Damper-regulator. H. M. Browne. No. 886,183; Apr. 28; Sp. p. 5161; Dr. p. 1086; Gaz. vol. 133; p. 2099.
Damper, Self-regulating. B. V. Croy. No. 883,789; Apr. 7; Sp. p. 216; Dr. p. 39; Gaz. vol. 133; p. 1228.
Decorative effects in rooms and the like, Means for obtaining illusionary. H. L. Delloye and A. E. Hénard. No. 885,669; Apr. 21; Sp. p. 4102; Dr. pp. 858–9; Gaz. vol. 133; p. 1900.
Delivery mechanism. W. Scott. No. 885,383; Apr. 21; Sp. p. 3550; Dr. pp. 742–3; Gaz. vol. 133; p. 1813.
Dental-flask holder. F. Groshans. No. 884,087; Apr. 7; Sp. p. 850; Dr. p. 179; Gaz. vol. 133; p. 1327.
Dental plate. E. A. Jackman. No. 884,159; Apr. 7; Sp. p. 1042; Dr. p. 217; Gaz. vol. 133; p. 1352.
Dental structures, Apparatus for forming. J. A. Lentz. No. 886,140; Apr. 28; Sp. p. 5093; Dr. p. 1069; Gaz. vol. 133; p. 2085.
Dental vulcanizer. F. W. Korb and W. F. Hieber. No. 886,300; Apr. 28; Sp. p. 5388; Dr. p. 1132; Gaz. vol. 133; p. 2139.
Derrick. W. Kirtland. No. 884,666; Apr. 14; Sp. p. 2059; Dr. p. 440; Gaz. vol. 133; p. 1545.
Derrick and car, Collapsible wrecking. E. F. Terry. No. 885,803; Apr. 28; Sp. p. 4400; Dr. pp. 921–3; Gaz. vol. 133; p. 1974.
Desk and cash-holder, Recording-. J. E. Benjamin. No. 885,713; Apr. 28; Sp. p. 4199; Dr. p. 879; Gaz. vol. 133; p. 1944.
Desk attachment. J. S. McComb. No. 885,364; Apr. 21; Sp. p. 3504; Dr. p. 732; Gaz. vol. 133; p. 1806.
Desk, chair, and receptacle, Combined. J. H. Foster. No. 885,594; Apr. 21; Sp. p. 3947; Dr. p. 824; Gaz. vol. 133; p. 1875.
Desk, Writing-. C. Y. Haggard. No. 885,748; Apr. 28; Sp. p. 4282; Dr. p. 897; Gaz. vol. 133; p. 1956.
Detachable handle. C. B. Post. No. 884,041; Apr. 7; Sp. p. 756; Dr. p. 157; Gaz. vol. 133; p. 1313.
Developing apparatus. A. C. Hayden. No. 884,922; Apr. 14; Sp. p. 2570; Dr. p. 541; Gaz. vol. 133; p. 1628.
Developing-machine. A. T. Larson. No. 885,492; Apr. 21; Sp. p. 3733; Dr. pp. 785–6; Gaz. vol. 133; p. 1846.
Diaphragm and making the same. H. Hirtz. No. 885,998; Apr. 28; Sp. p. 4812; Gaz. vol. 133; p. 2040.
Dibromindigo, Making. G. Engi. No. 883,703; Apr. 7; Sp. p. 57; Gaz. vol. 133; p. 1201.
Die: *See* Pipe-threading die.
Die. F. E. Canda. No. 883,695; Apr. 7; Sp. p. 21; Dr. p. 5; Gaz. vol. 133; p. 1199.
Digger: *See* Post-hole digger; Potato-digger.
Digging-machine. J. B. Hill. No. 885,343; Apr. 21; Sp. p. 3461; Dr. p. 721; Gaz. vol. 133; p. 1799.
Dipper-handle. M. E. and W. Gray. No. 884,485; Apr. 14; Sp. p. 1653; Dr. p. 355; Gaz. vol. 133; p. 1486.
Dirt or manure loader. J. H. Albrecht. No. 884,059; Apr. 7; Sp. p. 786; Dr. pp. 164–5; Gaz. vol. 133; p. 1319.
Discharge-stem. C. Smith. No. 886,083; Apr. 28; Sp. p. 4975; Dr. p. 1046; Gaz. vol. 133; p. 2067.
Dish pan and drainer, Combined. M. V. Taggart. No. 883,840; Apr. 7; Sp. p. 346; Dr. p. 67; Gaz. vol. 133; p. 1246.
Disinfecting apparatus. T. A. Clayton. No. 885,435; Apr. 21; Sp. p. 3650; Dr. p. 761; Gaz. vol. 133; p. 1827.
Disk drill. C. H. Pelton. No. 885,080; Apr. 21; Sp. p. 2879; Dr. p. 611; Gaz. vol. 133; p. 1711.
Dispensing-box. E. Pohlig. No. 885,374; Apr. 21; Sp. p. 3526; Dr. p. 737; Gaz. vol. 133; p. 1810.
Dispensing-stopper. H. G. Scott. No. 885,792; Apr. 28; Sp. p. 4264; Dr. p. 917; Gaz. vol. 133; p. 1970.
Display apparatus. J. C. Fox. No. 884,575; Apr. 14; Sp. p. 1835; Dr. p. 393; Gaz. vol. 133; p. 1515.
Display apparatus, Electric. E. L. Zalinski. No. 885,127; Apr. 21; Sp. p. 2997; Dr. pp. 632–3; Gaz. vol. 133; p. 1727.
Display-cabinet. A. R. Du Boise and L. F. Perry. No. 885,457; Apr. 21; Sp. p. 3672; Dr. p. 769; Gaz. vol. 133; p. 1835.
Display-case. E. D. Obertrifter. No. 886,066; Apr. 28; Sp. p. 4947; Dr. p. 1040; Gaz. vol. 133; p. 2062.
Display-holder for gems. R. L. Wood. No. 884,968; Apr. 14; Sp. p. 2657; Dr. p. 565; Gaz. vol. 133; p. 1642.
Display-rack. E. B. Weston. No. 886,023; Apr. 28; Sp. p. 4867; Dr. p. 1024; Gaz. vol. 133; p. 2048.
Display-receptacle. W. N. Aubuchon. No. 883,850; Apr. 7; Sp. p. 362; Dr. pp. 70–1; Gaz. vol. 133; p. 1249.
Display stand or rack, Knockdown. G. L. Page. No. 884,848; Apr. 14; Sp. p. 2439; Dr. p. 512; Gaz. vol. 133; p. 1607.
Distribution system. L. L. Tatum. No. 883,760; Apr. 7; Sp. p. 158; Dr. p. 28; Gaz. vol. 133; p. 1219.
Distribution system. L. L. Tatum. No. 885,106; Apr. 21; Sp. p. 2934; Dr. p. 623; Gaz. vol. 133; p. 1719.
Ditching and grading machine. M. G. Bunnell. No. 884,068; Apr. 7; Sp. p. 801; Dr. pp. 169–70; Gaz. vol. 133; p. 1321.
Ditching apparatus. M. and M. Westenhaver. No. 885,306; Apr. 21; Sp. p. 3373; Dr. pp. 705–6; Gaz. vol. 133; p. 1786.
Dividing apparatus, Commodity-. E. T. Nicklin and M. Campau. No. 884,845; Apr. 14; Sp. p. 2434; Dr. p. 510; Gaz. vol. 133; p. 1607.
Door-actuating mechanism. J. Brunzwick. No. 885,431; Apr. 21; Sp. p. 3625; Dr. p. 760; Gaz. vol. 133; p. 1826.
Door-bolt. J. A. Roy. No. 885,866; Apr. 28; Sp. p. 4521; Dr. p. 949; Gaz. vol. 133; p. 1995.
Door-catch. A. Ahlberg. No. 885,213; Apr. 21; Sp. p. 3193; Dr. p. 668; Gaz. vol. 133; p. 1755.
Door-check. W. T. Adams. No. 884,789; Apr. 14; Sp. p. 2317; Dr. p. 487; Gaz. vol. 133; p. 1588.
Door-check. E. G. Deloe. No. 885,023; Apr. 21; Sp. p. 2774; Dr. p. 588; Gaz. vol. 133; p. 1693.
Door-check, Automatic. J. Wirgman. No. 884,697; Apr. 14; Sp. p. 2110; Dr. p. 451; Gaz. vol. 133; p. 1556.
Door-check holder and buffer, Duplex. I. P. Klibbe. No. 886,001; Apr. 28; Sp. p. 4816; Dr. p. 1011; Gaz. vol. 133; p. 2041.
Door-fastener. L. C. Jensen. No. 884,161; Apr. 7; Sp. p. 1044; Dr. p. 217; Gaz. vol. 133; p. 1353.
Door, Grain-. R. D. Stryker. No. 886,090; Apr. 28; Sp. p. 4985; Dr. p. 1049; Gaz. vol. 133; p. 2069.
Door-hanger. S. W. Beeson. No. 883,775; Apr. 7; Sp. p. 184; Dr. p. 34; Gaz. vol. 133; p. 1223.
Door-hanger. J. Montgomery and R. Leed. No. 885,633; Apr. 21; Sp. p. 4025; Dr. p. 840; Gaz. vol. 133; p. 1888.
Door hanger, Edgewise-movable-. S. U. Barr. No. 885,970; Apr. 28; Sp. p. 4753; Dr. pp. 998–9; Gaz. vol. 133; p. 2032.
Door lock and latch, Combined vehicle-. F. P. Pfleghar. No. 885,176; Apr. 21; Sp. p. 3107; Dr. p. 654; Gaz. vol. 133; p. 1742.
Door-locking mechanism, Roundhouse-. J. U. Nettenstrom. No. 885,858; Apr. 28; Sp. p. 4506; Dr. p. 946; Gaz. vol. 133; p. 1993.
Door-movement regulator. F. G. Schuldt. No. 885,534; Apr. 21; Sp. p. 3845; Dr. pp. 803–4; Gaz. vol. 133; p. 1858.
Door-opener. A. E. Bergquist. No. 885,570; Apr. 21; Sp. p. 3919; Dr. p. 818; Gaz. vol. 133; p. 1869.
Door-operating mechanism. A. Campbell. No. 883,933; Apr. 7; Sp. p. 530; Dr. pp. 104–5; Gaz. vol. 133; p. 1277.

Door or drawer securer. H. L. Fay. No. 884,141; Apr. 7; Sp. p. 1001; Dr. p. 209; Gaz. vol. 133; p. 1346.
Door-plate. W. Jones. No. 885,760; Apr. 28; Sp. p. 4308; Dr. p. 903; Gaz. vol. 133; p. 1960.
Door, Revolving. H. W. Dyer. No. 886,317; Apr. 28; Sp. p. 5433; Dr. pp. 1138–9; Gaz. vol. 133; p. 2146.
Door-securer. T. C. Bury. No. 885,583; Apr. 21; Sp. p. 3934; Dr. p. 821; Gaz. vol. 133; p. 1872.
Door, Sliding. W. H. Mitchell. No. 883,734; Apr. 7; Sp. p. 163; Dr. pp. 17–18; Gaz. vol. 133; p. 1269.
Doors, Device for attaching handles to. M. S. Chenoweth. No. 885,687; Apr. 21; Sp. p. 4142; Dr. p. 867; Gaz. vol. 133; p. 1907.
Draft, Automatic force or suction. G. S. Stuart. No. 886,268; Apr. 28; Sp. p. 5318; Dr. pp. 1119–20; Gaz. vol. 133; p. 2128.
Draft-equalizer. C. J. Tobin. No. 884,542; Apr. 14; Sp. p. 1772; Dr. p. 381; Gaz. vol. 133; p. 1504.
Draft-equalizer. G. Mosmeier. No. 884,602; Apr. 14; Sp. p. 1895; Dr. p. 406; Gaz. vol. 133; p. 1524.
Draft-rigging. D. A. Hitchcock. No. 884,585; Apr. 14; Sp. p. 1851; Dr. pp. 397–8; Gaz. vol. 133; p. 1518.
Drafting instrument, Circle-. C. L. Nichols and R. Hogan. No. 884,844; Apr. 14; Sp. p. 2431; Dr. p. 510; Gaz. vol. 133; p. 1606.
Drag, Road-. F. H. and F. S. Beach. No. 884,352; Apr. 14; Sp. p. 1389; Dr. p. 297; Gaz. vol. 133; p. 1441.
Drag, Road-. F. E. Ott. No. 886,067; Apr. 28; Sp. p. 4948; Dr. p. 1040; Gaz. vol. 133; p. 2062.
Drawer alarm, Money-. S. D. Newman. No. 884,843; Apr. 14; Sp. p. 2430; Dr. p. 509; Gaz. vol. 133; p. 1606.
Drawer-carrier. G. Boydelatour. No. 884,457; Apr. 14; Sp. p. 1592; Dr. p. 343; Gaz. vol. 133; p. 1477.
Drawer for cabinets, &c. E. A. Ekedahl and E. G. Sampson. No. 884,476; Apr. 14; Sp. p. 1630; Dr. p. 351; Gaz. vol. 133; p. 1483.
Drawer, Furniture-. W. Grattan. No. 884,727; Apr. 14; Sp. p. 2176; Dr. p. 461; Gaz. vol. 133; p. 1567.
Drawer, Self-closing. V. A. De Canio. No. 886,192; Apr. 28; Sp. p. 5183; Dr. p. 1091; Gaz. vol. 133; p. 2102.
Drawers for cabinets, &c., Suspension for. J. D. Ripson and E. G. Sampson. No. 884,526; Apr. 14; Sp. p. 1736; Dr. p. 372; Gaz. vol. 133; p. 1499.
Drawers of cabinets, &c., Support for. J. D. Ripson and E. G. Sampson. No. 884,525; Apr. 14; Sp. p. 1734; Dr. p. 372; Gaz. vol. 133; p. 1498.
Drawing-board and drafting device. N. White. No. 883,994; Apr. 7; Sp. p. 604; Dr. pp. 133–4; Gaz. vol. 133; p. 1298.
Drawing-frames, Sliver-evening mechanism for. V. S. Westcott and F. W. Potter. No. 884,442; Apr. 14; Sp. p. 1566; Dr. p. 337; Gaz. vol. 133; p. 1472.
Drawing-press. P. M. H. Lange. No. 883,813; Apr. 7; Sp. p. 279; Dr. pp. 50–1; Gaz. vol. 133; p. 1237.
Drawings, Apparatus for enlarging or reducing. E. O. Lieghley. No. 883,895; Apr. 7; Sp. p. 457; Dr. p. 90; Gaz. vol. 133; p. 1264.
Dredging apparatus. S. Lake. No. 885,930; Apr. 28; Sp. p. 4661; Dr. pp. 982–3; Gaz. vol. 133; p. 2017.
Dress-preserver or dress-shield. G. H. Sachsenröder. No. 885,530; Apr. 21; Sp. p. 3840; Dr. p. 802; Gaz. vol. 133; p. 1858.
Drier: *See* Fruit and vegetable drier; Grain-drier.
Drier. K. F. Snow. No. 884,771; Apr. 14; Sp. p. 2275; Dr. p. 479; Gaz. vol. 133; p. 1582.
Drying apparatus. L. Mourgeon. No. 885,360; Apr. 21; Sp. p. 3494; Dr. p. 729; Gaz. vol. 133; p. 1805.
Drying-machine, Cylinder. J. A. Merrett. No. 883,729; Apr. 7; Sp. p. 105; Dr. pp. 16–17; Gaz. vol. 133; p. 1209.
Drill: *See* Disk drill; Pneumatic and other drill; Ratchet-drill; Track-drill.
Drill. J. F. Mitchell. No. 883,730; Apr. 7; Sp. p. 101; Dr. p. 17; Gaz. vol. 133; p. 1209.
Drill and auger gage. G. E. Stanford. No. 884,233; Apr. 7; Sp. p. 1159; Dr. p. 245; Gaz. vol. 133; p. 1375.
Drill-head and bit or cutter. M. Hardsocg. No. 884,150; Apr. 7; Sp. p. 1017; Dr. p. 213; Gaz. vol. 133; p. 1348.
Drilling apparatus. G. R. Rich. No. 884,760; Apr. 14; Sp. p. 2250; Dr. p. 474; Gaz. vol. 133; p. 1578.
Drilling-machine. G. A. Seib and I. A. Weston. No. 884,529; Apr. 14; Sp. p. 1743; Dr. p. 375; Gaz. vol. 133; p. 1499.
Drilling-machine. D. A. Moore. No. 885,945; Apr. 28; Sp. p. 4668; Dr. p. 989; Gaz. vol. 133; p. 2023.
Driving-gear, Frictional. D. M. Broughton. No. 885,684; Apr. 21; Sp. p. 4135; Dr. pp. 865–6; Gaz. vol. 133; p. 1906.
Driving mechanism, Variable-speed. A. W. Whitcomb. No. 885,207; Apr. 21; Sp. p. 3186; Dr. p. 666; Gaz. vol. 133; p. 1754.
Driving-wheel and gear-rim connection. G. L. Wall. No. 884,693; Apr. 14; Sp. p. 2104; Dr. p. 449; Gaz. vol. 133; p. 1555.
Dropper: *See* Fertilizer-dropper.
Drum, Heating-. G. Halley. No. 885,470; Apr. 21; Sp. p. 3695; Dr. p. 776; Gaz. vol. 133; p. 1839.
Duplex tube. H. Emerson. No. 885,741; Apr. 28; Sp. p. 4270; Dr. p. 893; Gaz. vol. 133; p. 1954.
Duplicating apparatus. E. J. Brasseur. No. 884,704; Apr. 14; Sp. p. 2128; Dr. pp. 453–4; Gaz. vol. 133; p. 1558.
Dust-absorbing compound and making same. H. C. Beman. No. 884,558; Apr. 14; Sp. p. 1799; Gaz. vol. 133; p. 1510.
Dust-collector. C. F. Verrell. No. 885,206; Apr. 21; Sp. p. 3182; Dr. pp. 665–6; Gaz. vol. 133; p. 1753.
Duster. J. F. Dwyer. No. 884,367; Apr. 7; Sp. p. 1223; Dr. p. 257; Gaz. vol. 133; p. 1386.
Dyeing and extracting machine, Hosiery figure. C. S. Althouse. No. 885,709; Apr. 28; Sp. p. 4194; Dr. pp. 877–8; Gaz. vol. 133; p. 1943.
Dyeing-machine. J. Hussong. (Reissue.) No. 12,781; Apr. 21; Sp. p. 4182; Dr. p. 876; Gaz. vol. 133; p. 1913.
Dyeing-machine. J. Hussong. (Reissue.) No. 12,788; Apr. 28; Sp. p. 5504; Dr. p. 1151; Gaz. vol. 133; p. 2154.
Dyeing, Preparation of the indigo-vat employed in. H. Chanmat. No. 885,978; Apr. 28; Sp. p. 4763; Gaz. vol. 133; p. 2033.
Eccentric-lubricator. C. D. Helm. No. 885,646; Apr. 21; Sp. p. 2823; Dr. p. 597; Gaz. vol. 133; p. 1701.
Educational appliance. G. N. Sabin. No. 884,863; Apr. 14; Sp. p. 2462; Dr. p. 518; Gaz. vol. 133; p. 1612.
Educational appliance. F. B. Melville. No. 885,272; Apr. 21; Sp. p. 3309; Dr. p. 691; Gaz. vol. 133; p. 1775.
Educational device. J. W. Bevans. No. 886,172; Apr. 28; Sp. p. 5143; Dr. p. 1082; Gaz. vol. 133; p. 2095.
Egg-opener. D. P. Stevens. No. 886,366; Apr. 28; Sp. p. 5313; Dr. p. 1118; Gaz. vol. 133; p. 2127.
Egg-turner. W. Bunker. No. 886,185; Apr. 28; Sp. p. 5166; Dr. p. 1087; Gaz. vol. 133; p. 2099.
Egg-whip. F. Genge. No. 884,085; Apr. 7; Sp. p. 848; Dr. p. 178; Gaz. vol. 133; p. 1327.
Electric alarm for beds to be occupied by patients, such as hospital-beds. F. Apold. No. 884,121; Apr. 7; Sp. p. 947; Dr. p. 198; Gaz. vol. 133; p. 1339.
Electric alarm mechanism, Housing for. J. B. Mayberry. No. 885,631; Apr. 21; Sp. p. 4022; Dr. p. 840; Gaz. vol. 133; p. 1888.
Electric apparatus, Cooling system for. K. C. Randall and C. B. Gibson. No. 886,073; Apr. 28; Sp. p. 4959; Dr. pp. 1042–3; Gaz. vol. 133; p. 2064.
Electric contact-shoes, Support for. E. W. Farnham. No. 886,319; Apr. 28; Sp. p. 5438; Dr. p. 1140; Gaz. vol. 133; p. 2146.
Electric controller. R. I. Wright. No. 885,967; Apr. 28; Sp. p. 4747; Dr. p. 997; Gaz. vol. 133; p. 2031.
Electric couple, Thermo-. W. H. Bristol. No. 885,430; Apr. 21; Sp. p. 3624; Dr. p. 760; Gaz. vol. 133; p. 1826.
Electric current, Gas element for converting the energy of combustible or other suitable reducing substances to. E. W. Jungner. No. 885,054; Apr. 21; Sp. p. 2838; Dr. p. 603; Gaz. vol. 133; p. 1703.
Electric fixture. H. T. Hall. No. 885,246; Apr. 21; Sp. p. 3256; Dr. p. 680; Gaz. vol. 133; p. 1766.
Electric furnace. P. Girod. No. 885,745; Apr. 28; Sp. p. 4275; Dr. p. 894; Gaz. vol. 133; p. 1955.
Electric generators and motors, Field-adjusting device for. F. O. Ball. No. 886,109; Apr. 28; Sp. p. 5028; Dr. p. 1057; Gaz. vol. 133; p. 2075.
Electric heater. E. Thomson. No. 884,540; Apr. 14; Sp. p. 1767; Dr. p. 380; Gaz. vol. 133; p. 1504.
Electric heater. M. Landry. (Reissue.) No. 12,782; Apr. 21; Sp. p. 4185; Dr. p. 876; Gaz. vol. 133; p. 1913.
Electric heaters, Element for. A. A. Low and H. Hertzberg. No. 885,709; Apr. 28; Sp. p. 4323; Dr. p. 906; Gaz. vol. 133; p. 1962.
Electric-light socket. F. Frankofski. No. 884,271; Apr. 7; Sp. p. 1230; Dr. p. 259; Gaz. vol. 133; p. 1387.
Electric lighting. W. C. Fish. No. 883,944; Apr. 7; Sp. p. 554; Dr. p. 110; Gaz. vol. 133; p. 1281.
Electric machine, Magneto-. E. B. Jacobson. No. 885,255; Apr. 21; Sp. p. 3270; Dr. pp. 682–3; Gaz. vol. 133; p. 1769.
Electric-machine regulator, Dynamo-. R. Fleming. No. 885,031; Apr. 21; Sp. p. 2789; Dr. p. 591; Gaz. vol. 133; p. 1699.
Electric machines, Regulation of dynamo-. C. E. Barry. No. 884,555; Apr. 14; Sp. p. 1794; Dr. p. 386; Gaz. vol. 133; p. 1509.
Electric machines, Winding for dynamo-. W. Schmidt. No. 885,184; Apr. 21; Sp. p. 3124; Dr. p. 657; Gaz. vol. 133; p. 1745.
Electric machinery, Dynamo-. C. A. Parsons. No. 883,822; Apr. 7; Sp. p. 296; Dr. pp. 55–6; Gaz. vol. 133; p. 1240.
Electric power, Contact-post system for transmitting. G. E. Titcomb. No. 886,093; Apr. 28; Sp. p. 4997; Dr. pp. 1050–1; Gaz. vol. 133; p. 2070.
Electric signal. A. J. Cleveland and F. S. Brown. No. 884,129; Apr. 7; Sp. p. 975; Dr. p. 202; Gaz. vol. 133; p. 1342.
Electric signal. J. Rebar. No. 885,519; Apr. 21; Sp. p. 3775; Dr. p. 795; Gaz. vol. 133; p. 1853.
Electric-spark gap for interrupters. T. B. Kinraide. No. 884,499; Apr. 14; Sp. p. 1692; Dr. p. 362; Gaz. vol. 133; p. 1490.
Electric switch. H. H. Berry. No. 884,353; Apr. 14; Sp. p. 1390; Dr. p. 297; Gaz. vol. 133; p. 1441.
Electric switch. A. R. Swoboda. No. 884,775; Apr. 14; Sp. p. 2281; Dr. p. 480; Gaz. vol. 133; p. 1583.
Electric switch. B. Hughes and H. N. Young. No. 885,345; Apr. 21; Sp. p. 3464; Dr. p. 722; Gaz. vol. 133; p. 1800.
Electric switch, Automatic. A. H. Miller. No. 884,514; Apr. 14; Sp. p. 1716; Dr. p. 368; Gaz. vol. 133; p. 1495.
Electric time-switch. J. J. Coachman. No. 884,130; Apr. 7; Sp. p. 977; Dr. p. 203; Gaz. vol. 133; p. 1342.
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Electric transmission of intelligence. I. Kitsee. No. 883,723; Apr. 7; Sp. p. 90; Dr. p. 15; Gaz. vol. 133; p. 1207.
Electric transmission of intelligence. I. Kitsee. No. 883,724; Apr. 7; Sp. p. 91; Dr. p. 15; Gaz. vol. 133; p. 1207.
Electrical connection. H. R. Read. No. 885,364; Apr. 28; Sp. p. 4519; Dr. p. 948; Gaz. vol. 133; p. 1995.
Electrical connector. J. L. Carnall. No. 884,312; Apr. 7; Sp. p. 1293; Dr. p. 274; Gaz. vol. 133; p. 1399.
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Electrical oscillations, Detecting. G. Marconi. No. 884,988; Apr. 14; Sp. p. 2691; Dr. p. 571; Gaz. vol. 133; p. 1648.
Electrode, Arc-lamp. W. S. Weedon. No. 883,924; Apr. 7; Sp. p. 513; Dr. p. 101; Gaz. vol. 133; p. 1274.
Electrode for reversible galvanic batteries. E. W. Jungner. No. 884,930; Apr. 14; Sp. p. 2581; Dr. p. 544; Gaz. vol. 133; p. 1630.

Electrolytic apparatus. B. E. F. Rhodin. No. 885,083; Apr. 21; Sp. p. 2885; Dr. p. 612; Gaz. vol. 133; p. 1712.
Electrolytic cell. A. S. Gray. No. 884,015; Apr. 7; Sp. p. 701; Dr. pp. 141–2; Gaz. vol. 133; p. 1304.
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Elevator: *See* Hay-elevator; Water-elevator.
Elevator indicating system. C. E. Moore. No. 885,941; Apr. 28; Sp. p. 4663; Dr. p. 986; Gaz. vol. 133; p. 2020.
Elevator safety-brake. E. A. Worthington. No. 885,560; Apr. 21; Sp. p. 3808; Dr. pp. 814–15; Gaz. vol. 133; p. 1866.
Elevator safety-catch. W. A. Dorsey. No. 884,908; Apr. 14; Sp. p. 2325; Dr. p. 534; Gaz. vol. 133; p. 1624.
Elevator safety device. A. Hollinger. No. 885,924; Apr. 28; Sp. p. 4650; Dr. p. 979; Gaz. vol. 133; p. 2015.
Elevator safety-stop. K. Wisniewski and A. Matlak. No. 886,026; Apr. 28; Sp. p. 4871; Dr. p. 1025; Gaz. vol. 133; p. 2049.
Elevators, Safety flash-light apparatus for. C. E. Moore. No. 885,942; Apr. 28; Sp. p. 4666; Dr. p. 987; Gaz. vol. 133; p. 2021.
Embroidering-machines, Take-up hook for. C. N. Wheaton. No. 885,817; Apr. 28; Sp. p. 4429; Dr. p. 930; Gaz. vol. 133; p. 1979.
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End-gate. C. H. Polk. No. 883,739; Apr. 7; Sp. p. 120; Dr. p. 21; Gaz. vol. 133; p. 1212.
End-gate. J. W. Fisher. No. 884,916; Apr. 14; Sp. p. 2562; Dr. p. 539; Gaz. vol. 133; p. 1626.
End gate for press-boxes. W. C. Le Gallais. No. 884,827; Apr. 14; Sp. p. 2377; Dr. p. 500; Gaz. vol. 133; p. 1600.
End-gate-locking mechanism. A. T. Correll. No. 884,808; Apr. 14; Sp. p. 2506; Dr. p. 530; Gaz. vol. 133; p. 1621.
Engine: *See* Explosive-engine; Gas-engine; Internal-combustion engine; Motive-power engine; Rotary engine; Rotary explosive-engine; Steam-engine; Traction-engine; Turbine-engine.
Engine. F. O. Ball. No. 885,132; Apr. 21; Sp. p. 3010; Dr. p. 635; Gaz. vol. 133; p. 1729.
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Engine cylinder, Gas-. P. Schwehm. No. 884,995; Apr. 14; Sp. p. 2704; Dr. p. 573; Gaz. vol. 133; p. 1650.
Engine-indicator. J. W. Thompson. No. 886,021; Apr. 28; Sp. p. 4864; Dr. pp. 1022–3; Gaz. vol. 133; p. 2048.
Engine motion-indicator. W. S. Rush. No. 885,527; Apr. 21; Sp. p. 3815; Dr. p. 801; Gaz. vol. 133; p. 1856.
Engine releasing-gear. R. Schneider and P. G. Roesti. No. 885,870; Apr. 28; Sp. p. 4529; Dr. p. 950; Gaz. vol. 133; p. 1996.
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Engine tender, Traction-. M. Jorstad. No. 886,059; Apr. 28; Sp. p. 4937; Dr. p. 1038; Gaz. vol. 133; p. 2060.
Engines, Assistant cylinder for steam-. L. D. Lovekin. No. 884,510; Apr. 14; Sp. p. 1702; Dr. p. 366; Gaz. vol. 133; p. 1493.
Engines, Current-distributing device for igniting explosive-. H. de La Valette. No. 886,225; Apr. 28; Sp. p. 5238; Dr. p. 1103; Gaz. vol. 133; p. 2112.
Engines, Device for igniting the charges of internal-combustion. F. Reichenbach. No. 885,520; Apr. 21; Sp. p. 3776; Dr. p. 795; Gaz. vol. 133; p. 1853.
Engines, Electric igniter for gas or vapor. L. O. McPherson. No. 885,072; Apr. 21; Sp. p. 2864; Dr. p. 608; Gaz. vol. 133; p. 1708.
Engines, Electrical-ignition spark-coil for gas or vapor. E. Q. Williams. No. 884,116; Apr. 7; Sp. p. 932; Dr. p. 196; Gaz. vol. 133; p. 1338.
Engines, Ignition for explosion-. R. Varley. No. 885,894; Apr. 28; Sp. p. 4567; Dr. p. 958; Gaz. vol. 133; p. 2004.
Engines, Ignition mechanism for internal-combustion. T. S. Bailey and F. T. Cable. No. 883,851; Apr. 7; Sp. p. 364; Dr. p. 71; Gaz. vol. 133; p. 1249.
Engines, Locking device for front-plate stripping-doors of cardings. J. Myerscough and J. Gornall. No. 884,405; Apr. 14; Sp. p. 1489; Dr. pp. 319–20; Gaz. vol. 133; p. 1460.
Engines, Means for distributing water to water-jackets of multiple-cylinder. V. J. Emery. No. 884,326; Apr. 7; Sp. p. 1316; Dr. p. 279; Gaz. vol. 133; p. 1404.
Engines, Operating combustion-. P. Winand and H. Neumann. No. 885,820; Apr. 28; Sp. p. 4434; Dr. p. 931; Gaz. vol. 133; p. 1980.
Engines, Reversing device for internal-combustion. E. A. Rundlöf. No. 883,750; Apr. 7; Sp. p. 137; Dr. p. 25; Gaz. vol. 133; p. 1216.
Engines, Working expansion-. F. Hildebrand. No. 886,054; Apr. 28; Sp. p. 4929; Dr. p. 1036; Gaz. vol. 133; p. 2058.
Engraving-machine. W. E. Brierley. No. 885,428; Apr. 21; Sp. p. 3620; Dr. p. 759; Gaz. vol. 133; p. 1826.
Envelop. W. W. L. Longtoft. No. 884,174; Apr. 7; Sp. p. 1064; Dr. p. 221; Gaz. vol. 133; p. 1356.
Envelop. E. Cowen. No. 884,317; Apr. 7; Sp. p. 1301; Dr. p. 275; Gaz. vol. 133; p. 1401.
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Envelop and inclosure, Combination. J. P. Keegan. No. 884,394; Apr. 14; Sp. p. 1471; Dr. p. 314; Gaz. vol. 133; p. 1456.
Envelop-fastener. E. B. Stimpson. No. 885,884; Apr. 28; Sp. p. 4554; Dr. p. 955; Gaz. vol. 133; p. 2001.
Envelop-machine. T. W. Kienast. No. 884,335; Apr. 7; Sp. p. 1336; Dr. pp. 285–6; Gaz. vol. 133; p. 1407.
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Evaporator. G. H. Grimm. No. 884,272; Apr. 7; Sp. p. 1231; Dr. p. 259; Gaz. vol. 133; p. 1388.
Excavating-machine. F. J. Monahan. No. 883,821; Apr. 7; Sp. p. 290; Dr. pp. 54–5; Gaz. vol. 133; p. 1239.
Excavating-machine. F. M. Johnson. No. 884,492; Apr. 14; Sp. p. 1666; Dr. pp. 359–60; Gaz. vol. 133; p. 1488.
Excavating-machine. E. O. Rood. No. 884,764; Apr. 14; Sp. p. 2259; Dr. pp. 475–6; Gaz. vol. 133; p. 1579.
Excavator. H. W. Blaisdell. No. 884,559; Apr. 14; Sp. p. 1800; Dr. p. 387; Gaz. vol. 133; p. 1510.
Excavator. J. Kerwin. No. 884,932; Apr. 14; Sp. p. 2584; Dr. pp. 544–5; Gaz. vol. 133; p. 1631.
Excavator. C. Sulter. No. 884,960; Apr. 14; Sp. p. 2634; Dr. pp. 558–61; Gaz. vol. 133; p. 1639.
Excavator. C. C. Jacobs. No. 885,756; Apr. 28; Sp. p. 4300; Dr. pp. 900–1; Gaz. vol. 133; p. 1958.
Excavator. C. C. Jacobs. No. 885,757; Apr. 28; Sp. p. 4302; Dr. pp. 901–2; Gaz. vol. 133; p. 1959.
Excavator-bucket. A. E. Holcomb. No. 885,049; Apr. 21; Sp. p. 2826; Dr. p. 598; Gaz. vol. 133; p. 1702.
Excavator, Power. J. B. Webber, Jr. No. 884,439; Apr. 14; Sp. p. 1559; Dr. p. 335; Gaz. vol. 133; p. 1471.
Exerciser. H. B. Sidever. No. 885,074; Apr. 21; Sp. p. 2869; Dr. p. 609; Gaz. vol. 133; p. 1709.
Exerciser. W. Barrett. No. 886,032; Apr. 28; Sp. p. 4895; Dr. p. 1029; Gaz. vol. 133; p. 2051.
Exercising apparatus for oarsmen. D. Scanlan. No. 885,871; Apr. 28; Sp. p. 4531; Dr. p. 950; Gaz. vol. 133; p. 1997.
Exhauster and compressor, Motor-driven. M. D. Compton. No. 884,131; Apr. 7; Sp. p. 980; Dr. pp. 204–5; Gaz. vol. 133; p. 1343.
Explosion-motor, Two-cycle. B. M. Aslakson. No. 885,313; Apr. 21; Sp. p. 3398; Dr. p. 710; Gaz. vol. 133; p. 1789.
Explosive. A. E. Charbonneaux. No. 886,038; Apr. 28; Sp. p. 4904; Gaz. vol. 133; p. 2053.
Explosive-engine. H. L. F. Trebert. No. 884,053; Apr. 7; Sp. p. 777; Dr. p. 162; Gaz. vol. 133; p. 1317.
Explosive-engine. C. R. Bryant. No. 886,184; Apr. 28; Sp. p. 5163; Dr. pp. 1086–7; Gaz. vol. 133; p. 2099.
Extension-table. F. J. Seng. No. 885,962; Apr. 28; Sp. p. 4739; Dr. p. 995; Gaz. vol. 133; p. 2029.
Extractor: *See* Cork-extractor; Spoke-extractor.
Eye-shield. G. E. Henry. No. 886,209; Apr. 28; Sp. p. 5207; Dr. p. 1097; Gaz. vol. 133; p. 2107.
Eyeglass-guard. W. I. Dengler. No. 885,735; Apr. 28; Sp. p. 4255; Dr. p. 891; Gaz. vol. 133; p. 1952.
Eyeglass-stud. D. D. Updegraff. No. 885,808; Apr. 28; Sp. p. 4411; Dr. p. 924; Gaz. vol. 133; p. 1976.
Eyeglasses. H. W. Derrick. No. 884,368; Apr. 14; Sp. p. 1426; Dr. p. 305; Gaz. vol. 133; p. 1449.
Eyeglasses. F. A. Stevens. No. 885,197; Apr. 21; Sp. p. 3149; Dr. p. 661; Gaz. vol. 133; p. 1750.
Eyeglasses. F. A. Stevens. No. 885,198; Apr. 21; Sp. p. 3150; Dr. p. 661; Gaz. vol. 133; p. 1750.
Eyeglasses. F. A. Stevens. No. 885,199; Apr. 21; Sp. p. 3151; Dr. p. 661; Gaz. vol. 133; p. 1751.
Eyeglasses. L. B. Becker. No. 885,829; Apr. 28; Sp. p. 4452; Dr. p. 935; Gaz. vol. 133; p. 1983.
Fabric: *See* Knitted fabric; Wire fabric.
Fabric. E. D. C. Bayne and L. A. Subers. No. 885,219; Apr. 21; Sp. p. 3207; Dr. p. 670; Gaz. vol. 133; p. 1757.
Fabrics, Shrinking and finishing woolen and other. F. I. Burgher. No. 885,664; Apr. 21; Sp. p. 4093; Dr. p. 856; Gaz. vol. 133; p. 1898.
Fan and fly-catcher, Combined. F. M. Schmidt. No. 884,213; Apr. 7; Sp. p. 1130; Dr. p. 237; Gaz. vol. 133; p. 1369.
Fan-deflector. H. M. Carroll. No. 884,894; Apr. 14; Sp. p. 2500; Dr. p. 528; Gaz. vol. 133; p. 1620.
Fan or ventilator. S. Timokhovitch. No. 884,876; Apr. 14; Sp. p. 2479; Dr. p. 522; Gaz. vol. 133; p. 1615.
Fare-indicator for carriages. R. Picard. No. 886,244; Apr. 28; Sp. p. 5267; Dr. pp. 1109–10; Gaz. vol. 133; p. 2119.
Fare-register-actuating mechanism. J. F. Ohmer. No. 885,280; Apr. 21; Sp. p. 3321; Dr. pp. 693–4; Gaz. vol. 133; p. 1778.
Farm-gate. J. J. Thompson. No. 883,762; Apr. 7; Sp. p. 166; Dr. p. 29; Gaz. vol. 133; p. 1220.
Fastener. C. A. Conrard. No. 884,316; Apr. 7; Sp. p. 1300; Dr. p. 275; Gaz. vol. 133; p. 1400.
Fastener. G. J. Poehlein. No. 885,645; Apr. 21; Sp. p. 4061; Dr. p. 849; Gaz. vol. 133; p. 1892.
Fastening device. J. J. O'Connell. No. 885,171; Apr. 21; Sp. p. 3101; Dr. p. 652; Gaz. vol. 133; p. 1741.
Fastening device, Detachable. L. Rossi. No. 883,833; Apr. 7; Sp. p. 327; Dr. p. 61; Gaz. vol. 133; p. 1244.
Fastening device, Metal. S. E. Ward. No. 883,766; Apr. 7; Sp. p. 172; Dr. p. 31; Gaz. vol. 133; p. 1221.
Fastening members, Attaching means for. F. S. Carr. No. 885,434; Apr. 21; Sp. p. 3629; Dr. p. 761; Gaz. vol. 133; p. 1827.
Fat from water, Apparatus for separating. M. Loeb. No. 885,353; Apr. 21; Sp. p. 3482; Dr. p. 726; Gaz. vol. 133; p. 1803.
Faucet. M. P. Eigen. No. 884,648; Apr. 14; Sp. p. 2021; Dr. p. 432; Gaz. vol. 133; p. 1539.
Faucet. G. T. Kenly. No. 885,347; Apr. 21; Sp. p. 3472; Dr. p. 723; Gaz. vol. 133; p. 1800.
Feed and litter carrier. H. L. Ferris. No. 884,649; Apr. 14; Sp. p. 2022; Dr. p. 432; Gaz. vol. 133; p. 1539.
Feed-bag. F. A. Donnelly and J. E. Blanthorn. No. 885,454; Apr. 21; Sp. p. 3666; Dr. p. 768; Gaz. vol. 133; p. 1834.
Feed-bag. G. Rodriguez. No. 886,262; Apr. 28; Sp. p. 5284; Dr. p. 1113; Gaz. vol. 133; p. 2122.
Feed controller, Boiler-. A. B. Smith. No. 885,653; Apr. 21; Sp. p. 4074; Dr. pp. 851–2; Gaz. vol. 133; p. 1894.

Feed device, Intermittent-. F. H. Richards. No. 885,292; Apr. 21; Sp. p. 3341; Dr. p. 698; Gaz. vol. 133; p. 1781.
Feed-gage. E. L. Megill. No. 885,773; Apr. 28; Sp. p. 4330; Dr. p. 908; Gaz. vol. 133; p. 1964.
Feed mechanism, Electrically-controlled. B. M. W. Hanson. No. 886,294; Apr. 28; Sp. p. 5373; Dr. p. 1129; Gaz. vol. 133; p. 2137.
Feed-water heater. G. Wilkinson. No. 883,925; Apr. 7; Sp. p. 514; Dr. p. 102; Gaz. vol. 133; p. 1274.
Feed-water heater. G. W. J. White. No. 885,005; Apr. 14; Sp. p. 2720; Dr. p. 576; Gaz. vol. 133; p. 1653.
Feed-water heating and purifying system. J. W. Gamble. No. 883,948; Apr. 7; Sp. p. 560; Dr. p. 112; Gaz. vol. 133; p. 1282.
Feed-water purifier. H. White. No. 885,554; Apr. 21; Sp. p. 3383; Dr. p. 812; Gaz. vol. 133; p. 1804.
Feed-water regulator. C. A. Dunham. No. 884,913; Apr. 14; Sp. p. 2532; Dr. p. 536; Gaz. vol. 133; p. 1625.
Feed-water regulator and alarm. W. D. Hodgson. No. 886,295; Apr. 28; Sp. p. 5379; Dr. p. 1130; Gaz. vol. 133; p. 2137.
Feeder. G. B. Warren. No. 884,436; Apr. 14; Sp. p. 1545; Dr. p. 352; Gaz. vol. 133; p. 1470.
Feeder-governor. C. T. H. Bond. No. 884,357; Apr. 14; Sp. p. 1395; Dr. p. 299; Gaz. vol. 133; p. 1443.
Feeding mechanism. T. W. Kienast. No. 884,336; Apr. 7; Sp. p. 1342; Dr. pp. 286–7; Gaz. vol. 133; p. 1408.
Feeding mechanism. T. W. Kienast. No. 884,337; Apr. 7; Sp. p. 1343; Dr. p. 287; Gaz. vol. 133; p. 1408.
Feeding-off mechanism. W. A. Tompkins. No. 886,277; Apr. 28; Sp. p. 5335; Dr. p. 1122; Gaz. vol. 133; p. 2131.
Fence-maker's combination-tool. J. E. Weyeneth. No. 885,816; Apr. 28; Sp. p. 4428; Dr. p. 930; Gaz. vol. 133; p. 1979.
Fence-making machine. D. P. Malone. No. 884,182; Apr. 7; Sp. p. 1060; Dr. p. 224; Gaz. vol. 133; p. 1359.
Fence-post. J. McInnis. No. 883,901; Apr. 7; Sp. p. 467; Dr. p. 92; Gaz. vol. 133; p. 1266.
Fence-post. G. W. Pyle. No. 883,913; Apr. 7; Sp. p. 491; Dr. p. 97; Gaz. vol. 133; p. 1271.
Fence-post mold. C. F. Kyser. No. 884,502; Apr. 14; Sp. p. 1691; Dr. p. 363; Gaz. vol. 133; p. 1491.
Fence, Woven-wire. G. M. Wright. No. 885,415; Apr. 21; Sp. p. 3604; Dr. p. 755; Gaz. vol. 133; p. 1822.
Fencing, Wire. W. H. Griffith. No. 884,379; Apr. 14; Sp. p. 1447; Dr. p. 308; Gaz. vol. 133; p. 1452.
Fender: *See* Automatic fender; Automobile-fender; Car-fender.
Fertilizer-distributer. E. N. Yarbrough. No. 885,126; Apr. 21; Sp. p. 2995; Dr. p. 632; Gaz. vol. 133; p. 1726.
Fertilizer-distributer. E. B. Hackburn, W. C. Willett, and D. F. Deppe. No. 886,207; Apr. 28; Sp. p. 5204; Dr. p. 1096; Gaz. vol. 133; p. 2107.
Fertilizer-dropper, Hand. J. T. Flippen. No. 883,796; Apr. 7; Sp. p. 245; Dr. p. 44; Gaz. vol. 133; p. 1231.
Fiber articles, Machine for forming. W. H. Baker. No. 885,131; Apr. 21; Sp. p. 3006; Dr. p. 634; Gaz. vol. 133; p. 1728.
Fiber from vegetable tissues, Use of hot air in extracting. M. R. Kennedy. No. 885,851; Apr. 28; Sp. p. 4494; Dr. p. 944; Gaz. vol. 133; p. 1990.
Fiber-separating machine. H. E. Bryant. No. 884,635; Apr. 14; Sp. p. 1956; Dr. p. 420; Gaz. vol. 133; p. 1534.
Fibers, Preparing. K. Matthews. No. 884,401; Apr. 14; Sp. p. 1482; Dr. p. 317; Gaz. vol. 133; p. 1459.
Fibrous material, Attachment for feeders for. F. G. Sargent. No. 885,381; Apr. 21; Sp. p. 3547; Dr. p. 741; Gaz. vol. 133; p. 1813.
File. L. F. Boedecker. No. 884,997; Apr. 14; Sp. p. 2706; Dr. pp. 573–4; Gaz. vol. 133; p. 1650.
File and index. W. O. Gottwals. No. 883,950; Apr. 7; Sp. p. 574; Dr. p. 115; Gaz. vol. 133; p. 1283.
File and index. H. H. Knapp. No. 884,823; Apr. 14; Sp. p. 2371; Dr. p. 499; Gaz. vol. 133; p. 1599.
File, Ledger-. P. B. Johnson. No. 885,482; Apr. 21; Sp. p. 3713; Dr. pp. 780–1; Gaz. vol. 133; p. 1842.
File, Paper-. H. Herdegen. No. 884,019; Apr. 7; Sp. p. 710; Dr. p. 144; Gaz. vol. 133; p. 1306.
Filing-case. W. K. Holman. No. 884,659; Apr. 14; Sp. p. 2044; Dr. p. 436; Gaz. vol. 133; p. 1543.
Filing case, Document-. J. D. Ripson and E. G. Sampson. No. 885,789; Apr. 28; Sp. p. 4362; Dr. p. 915; Gaz. vol. 133; p. 1960.
Filling attachment. E. N. Roth. No. 885,865; Apr. 28; Sp. p. 4520; Dr. p. 948; Gaz. vol. 133; p. 1995.
Filter. C. A. Youngman. No. 884,253; Apr. 7; Sp. p. 1201; Dr. p. 253; Gaz. vol 133; p. 1382.
Filter. G. Schlemmer. No. 884,765; Apr. 14; Sp. p. 2264; Dr. p. 476; Gaz. vol. 133; p. 1579.
Filter. E. J. Sweetland. No. 885,398; Apr. 21; Sp. p. 3572; Dr. p. 748; Gaz. vol. 133; p. 1817.
Filter. J. Polzin. No. 885,516; Apr. 21; Sp. p. 3772; Dr. p. 794; Gaz. vol. 133; p. 1853.
Filter, Automatically-operated. O. H. Fairchild. No. 884,914; Apr. 14; Sp. p. 2535; Dr. pp. 536–7; Gaz. vol. 133; p.1626.
Filter for exhaust filtration, Sectional. H. P. Crush. No. 884,797; Apr. 14; Sp. p. 2327; Dr. p. 489; Gaz. vol. 133; p. 1590.
Filtering apparatus. W. A. Hendryx. No. 885,047; Apr. 21; Sp. p. 2824; Dr. p. 597; Gaz. vol. 133; p. 1701.
Fire-alarm. A. S. Trask. No. 884,304; Apr. 7; Sp. p. 1280; Dr p. 271; Gaz. vol. 133; p. 1397.
Fire-alarm system, Telephone. W. S. McLewee. No. 884,607; Apr. 14; Sp. p. 1904; Dr. pp. 408–9; Gaz. vol. 133; p. 1526.
Fire and water proof building material. M. G. Ray. No. 885,376; Apr. 21; Sp. p. 3531; Gaz. vol. 133; p. 1810.
Fire-door fastener. R. B. Lawrence. No. 884,937; Apr. 14; Sp. p. 2591; Dr. p. 547; Gaz. vol. 133; p. 1632.
Fire extinguisher and alarm. C. M. Bowman. No. 883,856; Apr. 7; Sp. p. 376; Dr. p. 73; Gaz. vol. 133; p. 1251.
Fire-resisting shutter or curtain. A. Rush. No. 883,834; Apr. 7; Sp. p. 328; Dr. p. 62; Gaz. vol. 133; p. 1244.
Fire-starter. L. C. Hermann. No. 884,583; Apr. 14; Sp. p. 1846; Dr. pp. 396–7; Gaz. vol. 133; p. 1518.
Firearm, Hand-. K. A. Bräuning. No. 884,005; Apr. 7; Sp. p. 796; Dr. pp. 167–8; Gaz. vol. 133; p. 1321.
Firearm-magazine. A. W. Savage. No. 885,548; Apr. 28; Sp. p. 4525; Dr. p. 949; Gaz. vol. 133; p. 1995.
Firearms, Cleaner-rod for. H. Suva. No. 883,985; Apr. 7; Sp. p. 646; Dr. p. 130; Gaz. vol. 133; p. 1295.
Fireplace screen, Open-. H. N. L. Sherman and F. M. Lawrence. No. 884,222; Apr. 7; Sp. p. 1144; Dr. p. 240; Gaz. vol. 133; p. 1372.
Fireproof building construction. C. Collins. No. 885,439; Apr. 21; Sp. p. 3641; Dr. p. 764; Gaz. vol. 133; p. 1829.
Fish-drying apparatus. J. Urquhart. No. 886,094; Apr. 28; Sp. p. 4999; Dr. p. 1052; Gaz. vol. 133; p. 2070.
Fish-trap. N. A. Akerman. No. 885,311; Apr. 21; Sp. p. 3389; Dr. pp. 708–9; Gaz. vol. 133; p. 1788.
Fish-trap. J. R. Williams. No. 885,412; Apr. 21; Sp. p. 3599; Dr. p. 755; Gaz. vol. 133; p. 1821.
Fishing-boat. M. E. Loehr. No. 885,627; Apr. 21; Sp. p. 4015; Dr. p. 839; Gaz. vol. 133; p. 1886.
Fishing-fly holder. W. R. Newsome. No. 885,511; Apr. 21; Sp. p. 3764; Dr. p. 792; Gaz. vol. 133; p. 1851.
Floor-dressing apparatus. L. H. Veronneau, dit Vernon. No. 884,433; Apr. 14; Sp. p. 1539; Dr. pp. 330–1; Gaz. vol. 133; p. 1469.
Floor, Drying-. H. O. Robinson and C. Steadman. No. 886,251; Apr. 28; Sp. p. 5282; Dr. p. 1113; Gaz. vol. 133; p. 2122.
Flooring. S. W. Heaton. No. 885,751; Apr. 28; Sp. p. 4290; Dr. p. 898; Gaz. vol. 133; p. 1957.
Flower-pot, Illuminated. C. V. Helmschmied. No. 884,924; Apr. 14; Sp. p. 2574; Dr. p. 541; Gaz. vol. 133; p. 1629.
Flue-cleaner. C. Nuhring. No. 884,755; Apr. 14; Sp. p. 2238; Dr. p. 472; Gaz. vol. 133; p. 1576.
Flue-dust, Utilizing. E. F. Wood. No. 884,970; Apr. 14; Sp. p. 2665; Gaz. vol. 133; p. 1643.
Fluid-actuating apparatus. R. Conrader. No. 886,312; Apr. 28; Sp. p. 5414; Dr. pp. 1136–7; Gaz. vol. 133; p. 2143.
Fluid-gage. M. Martin. No. 885,629; Apr. 21; Sp. p. 4019; Dr. p. 8 9; Gaz. vol. 133; p. 1887.
Fluid-heater, Electrical. M. T. Seymour and A. W. Ball. No. 884,424; Apr. 14; Sp. p. 1520; Dr. p. 326; Gaz. vol. 133; p. 1466.
Fluid-level indicator. M. Martin. No. 885,673; Apr. 21; Sp. p. 4115; Dr. p. 861; Gaz. vol. 133; p. 1902.
Fluid-mixer. C. Gambee. No. 883,874; Apr. 7; Sp. p. 413; Dr. p. 81; Gaz. vol. 133; p. 1257.
Fluid-motor. J. B. Fletcher. No. 885,462; Apr. 21; Sp. p. 3681; Dr. p. 771; Gaz. vol. 133; p. 1837.
Flush-tank. C. A. Blessing. No. 885,574; Apr. 21; Sp. p. 3923; Dr. p. 819; Gaz. vol. 133; p. 1870.
Flushing apparatus, Automatic periodic. J. W. Grantland. No. 884,483; Apr. 14; Sp. p. 1648; Dr. p. 354; Gaz. vol. 133; p. 1485.
Flushing receptacles, Means for. J. W. Grantland. No. 884,484; Apr. 14; Sp. p. 1650; Dr. p. 354; Gaz. vol. 133; p. 1486.
Fly-paper tray, Sticky-. L. A. Fever. No. 885,461; Apr. 21; Sp. p. 3690; Dr. p. 771; Gaz. vol. 133; p. 1837.
Fly-screen. C. N. Friz. No. 885,597; Apr. 21; Sp. p. 3953; Dr. p. 825; Gaz. vol. 133; p. 1876.
Fly-trap. S. A. Hackley. No. 884,487; Apr. 14; Sp. p. 1659; Dr. p. 356; Gaz. vol. 133; p. 1487.
Fly-trap. W. P. Everett. No. 885,592; Apr. 21; Sp. p. 3945; Dr. p. 824; Gaz. vol. 133; p. 1875.
Flying-machine. B. Guthrie. No. 886,122; Apr. 28; Sp. p. 5063; Dr. pp. 1062–3; Gaz. vol. 133; p. 2080.
Folded-blank box. G. L. Morrison. No. 883,734; Apr. 7; Sp. p. 169; Dr. p. 19; Gaz. vol. 133; p. 1210.
Food compound. R. H. McFarland. No. 884,606; Apr. 14; Sp. p. 1903; Gaz. vol. 133; p. 1526.
Food product and making the same. J. E. Bloom. No. 883,933; Apr. 7; Sp. p. 522; Gaz. vol. 133; p. 1276.
Foot-bolt for holding doors. H. R. Shafer. No. 884,768; Apr. 14; Sp. p. 2269; Dr. p. 477; Gaz. vol. 133; p. 1580.
Foot-warmer. M. E. Waller. No. 885,112; Apr. 21; Sp. p. 2949; Dr. p. 625; Gaz. vol. 133; p. 1721.
Forgings, Trimming-chair for. L. P. Blot. No. 885,427; Apr. 21; Sp. p. 3618; Dr. p. 759; Gaz. vol. 133; p. 1825.
Fork: *See* Can-fork; Gathering and loading fork.
Formaldehyde-generating composition. A. Eichengrün. No. 885,233; Apr. 21; Sp. p. 3232; Gaz. vol. 133; p. 1762.
Forming-machine. W. C. Burrell. No. 884,464; Apr. 14; Sp. p. 1606; Dr. pp. 346–7; Gaz. vol. 133; p. 1479.
Foundation. J. T. Hambay. No. 885,043; Apr. 21; Sp. p. 2819; Dr. p. 596; Gaz. vol. 133; p. 1700.
Foundry-separator. E. G. Pfau. No. 886,152; Apr. 28; Sp. p. 5113; Dr. p. 1074; Gaz. vol. 133; p. 2089.
Frame: *See* Bag-frame; Nest-frame; Photographic-printing frame; Piano-frame; Quilting-frame; Reinforcing-frame; Truck side frame.
Framing or measuring instrument. J. T. Pentecost. No. 885,284; Apr. 21; Sp. p. 3328; Dr. p. 695; Gaz. vol. 133; p. 1779.
Fruit and vegetable drier. F. D. Kendall and T. O. Robinson. No. 883,721; Apr. 7; Sp. p. 87; Dr. p. 14; Gaz. vol. 133; p. 1206.
Fruit-cutter. E. G. Chatain. No. 883,786; Apr 7; Sp. p. 210; Dr. p. 38; Gaz. vol. 133; p. 1227.
Fruit-picker's platform. C. A. McDermott. No. 884,839; Apr. 14; Sp. p. 2424; Dr. p. 508; Gaz. vol. 133; p. 1604.
Funnel. J. P. Murtha. No. 886,237; Apr. 28; Sp. p. 5257; Dr. p. 1107; Gaz. vol. 133; p. 2117.
Funnel and dipper, Combined. H. H. Hanson. No. 884,489; Apr. 14; Sp. p. 1662; Dr. p. 357; Gaz. vol. 133; p. 1487.
Furnace: *See* Electric furnace; Gas-furnace; Glass-furnace; Heating-furnace; Incinerating-furnace; Plunging furnace; Retort-furnace; Reverberatory furnace; Smoke-consuming furnace; Smokeless furnace.
Furnace. A. Smallwood. No. 883,916; Apr. 7; Sp. p. 495; Dr. pp. 98–9; Gaz. vol. 133; p. 1271.

Furnace. A. F. Miller. No. 885,356; Apr. 21; Sp. p. 3487; Dr. p. 727; Gaz. vol. 133; p. 1804.
Furnace. F. Gold. No. 886,205; Apr. 28; Sp. p. 5200; Dr. p. 1095; Gaz. vol. 133; p. 2106.
Furnace. C. W. Smith. No. 886,261; Apr. 28; Sp. p. 5303; Dr. p. 1116; Gaz. vol. 133; p. 2125.
Furnace apparatus, Blast-. W. Kennedy. No. 884,665; Apr. 14; Sp. p. 2058; Dr. pp. 439–40; Gaz. vol. 133; p. 1545.
Furnace-charging apparatus. F. B. Goldey. No. 885,920; Apr. 28; Sp. p. 4642; Dr. p. 977; Gaz. vol. 133; p. 2013.
Furnace-door. A. Cotton. No. 885,727; Apr. 28; Sp. p. 4232; Dr. pp. 886–7; Gaz. vol. 133; p. 1949.
Furnace-door protector. H. J. Marx. No. 886,144; Apr. 28; Sp. p. 5101; Dr. p. 1071; Gaz. vol. 133; p. 2087.
Furnace-grate. J. M. Blades. No. 884,005; Apr. 7; Sp. p. 682; Dr. p. 137; Gaz. vol. 133; p. 1301.
Furnace spout, Smelting-. D. M. Browne. No. 886,286; Apr. 28; Sp. p. 5356; Dr. p. 1126; Gaz. vol. 133; p. 2134.
Furnace-stoking device, Automatic. T. E. Murray. No. 884,603; Apr. 14; Sp. p. 1896; Dr. p. 407; Gaz. vol. 133; p. 1525.
Furnace-stoking device, Automatic. T. E. Murray. No. 885,635; Apr. 21; Sp. p. 4027; Dr. pp. 841–2; Gaz. vol. 133; p. 1889.
Furnaces, Grate-surface of. F. Gold. No. 885,608; Apr. 21; Sp. p. 3974; Dr. pp. 829–30; Gaz. vol. 133; p. 1880.
Furnaces, Supply and control of air for boiler and other. W. S. Hubbard. No. 883,885; Apr. 7; Sp. p. 436; Dr. p. 86; Gaz. vol. 134; p. 1261.
Furniture. E. Mayette. No. 885,271; Apr. 21; Sp. p. 3307; Dr. p. 690; Gaz. vol. 133; p. 1775.
Furniture, Folding. W. Rabich. No. 886,072; Apr. 28; Sp. p. 4958; Dr. p. 1042; Gaz. vol. 133; p. 2063.
Furniture, Household. B. G. Eriksson. No. 885,234; Apr. 21; Sp. p. 3233; Dr. p. 674; Gaz. vol. 133; p. 1762.
Furniture, Interlocking end iron for sectional. G. W. Vosmer. No. 883,765; Apr. 7; Sp. p. 171; Dr. p. 30; Gaz. vol. 133; p. 1221.
Furrow-opener. O. F. Orndoff and L. T. Rasmussen. No. 885,641; Apr. 21; Sp. p. 4056; Dr. pp. 847–8; Gaz. vol. 133; p. 1891.
Fuse-holder for electric-circuit conductors. P. McDonald. No. 884,519; Apr. 14; Sp. p. 1724; Dr. p. 370; Gaz. vol. 133; p. 1496.
Fusing materials. G. F. Brindley. No. 884,563; Apr. 14; Sp. p. 1810; Dr. p. 389; Gaz. vol. 133; p. 1511.
Gaff-hook. C. H. F. Kraft. No. 886,003; Apr. 28; Sp. p. 4818; Dr. p. 1012; Gaz. vol. 133; p. 2041.
Gage: *See* Alarm-gage; Feed-gage; Fluid-gage; Jewel and pivot gage; Liquid-depth gage; Pressure-gage; Shingle-gage; Track-gage.
Game apparatus. J. F. Hughes. No. 884,277; Apr. 7; Sp. p. 1238; Dr. p. 260; Gaz. vol. 133; p. 1389.
Game apparatus. G. N. McEvoy. No. 884,605; Apr. 14; Sp. p. 1901; Dr. p. 408; Gaz. vol. 133; p. 1525.
Game apparatus. E. B. Mason. No. 884,674; Apr. 14; Sp. p. 2072; Dr. p. 443; Gaz. vol. 133; p. 1548.
Game-board. R. Dehls. No. 885,588; Apr. 21; Sp. p. 3940; Dr. p. 823; Gaz. vol. 133; p. 1874.
Game score-card. E. M. Sheeran. No. 884,221; Apr. 7; Sp. p. 1143; Dr. p. 240; Gaz vol. 133; p. 1372.
Garment. H. M. Mayper. No. 884,185; Apr. 7; Sp. p. 1083; Dr. p. 226; Gaz. vol. 133; p. 1260.
Garment. B. Galland. No. 884,479; Apr. 14; Sp. p. 1642; Dr. p. 352; Gaz. vol. 133; p. 1484.
Garment-clasp. J. H. Pilkington. No. 884,040; Apr. 7; Sp. p. 755; Dr. p. 157; Gaz. vol. 133; p. 1313.
Garment-clasp. J. M. Siner. No. 884,425; Apr. 14; Sp. p. 1522; Dr. p. 326; Gaz. vol. 133; p. 1466.
Garment-fastening device. F. Weckerly. No. 884,246; Apr. 7; Sp. p. 1188; Dr. p. 250; Gaz. vol. 133; p. 1380.
Garment-hanger. M. H. Cazier. No. 883,785; Apr. 7; Sp. p. 208; Dr. p. 38; Gaz. vol. 133; p. 1227.
Garment-hanger. A. Schlang. No. 884,616; Apr. 14; Sp. p. 1918; Dr. p. 412; Gaz. vol. 133; p. 1528.
Garment-hanger. A. Schlang. No. 884,617; Apr. 14; Sp. p. 1919; Dr. p. 412; Gaz. vol. 133; p. 1529.
Garment-hanger. C. H. Kingsbury. No. 885,161; Apr. 21; Sp. p. 3072; Dr. p. 645; Gaz. vol. 133; p. 1738.
Garment-hanger. W. De Frear. No. 886,042; Apr. 28; Sp. p. 4909; Dr. p. 1032; Gaz. vol. 133; p. 2054.
Garment-hanger. D. W. Custer. No. 886,116; Apr. 28; Sp. p. 5042; Dr. p. 1059; Gaz. vol. 133; p. 2078.
Garment-holder. A. Haviland. No. 884,657; Apr. 14; Sp. p. 2043; Dr. p. 435; Gaz. vol. 133; p. 1542.
Garment-supporter. B. M. Richardson. No. 884,210; Apr. 7; Sp. p. 1125; Dr. p. 236; Gaz. vol. 133; p. 1368.
Garment-supporter. B. Newton. No. 884,289; Apr. 7; Sp. p. 1258; Dr. p. 264; Gaz. vol. 133; p. 1393.
Garment-supporter. C. Ringwald. No. 884,858; Apr. 14; Sp. p. 2451; Dr. p. 516; Gaz. vol. 133; p. 1610.
Garment-supporter clasp. J. M. Siner. No. 885,188; Apr. 21; Sp. p. 3134; Dr. p. 658; Gaz. vol. 133; p. 1747.
Garment, Underwear-. C. A. Gould. No. 884,815; Apr. 14; Sp. p. 2362; Dr. p. 496; Gaz. vol. 133; p. 1597.
Garter-clasp. A. Reznicek. No. 885,290; Apr. 21; Sp. p. 3335; Dr. p. 696; Gaz. vol. 133; p. 1781.
Gas and steam engine, Combination. M. S. Flaig. No. 886,199; Apr. 28; Sp. p. 5193; Dr. p. 1093; Gaz. vol. 133; p. 2105.
Gas apparatus. E. H. Amet. No. 886,311; Apr. 28; Sp. p. 5411; Dr. p. 1136; Gaz. vol. 133; p. 2143.
Gas, Apparatus for the manufacture of. H. W. Woodall and A. M. Duckham. No. 885,308; Apr. 21; Sp. p. 3379; Dr. pp. 706–7; Gaz. vol. 133; p. 1787.
Gas-burner. T. B. Harrison. No. 884,819; Apr. 14; Sp. p. 2367; Dr. p. 498; Gaz. vol. 133; p. 1598.
Gas-burner. E. M. Colquhoun. No. 885,441; Apr. 21; Sp. p. 3643; Dr. p. 765; Gaz. vol. 133; p. 1830.
Gas-burner, Incandescent. A. G. Meker. No. 884,834; Apr. 14; Sp. p. 2388; Dr. p. 503; Gaz. vol. 133; p. 1602.
Gas-burner, Steam-blast. G. S. Bennett. No. 885,972; Apr. 28; Sp. p. 4757; Dr. p. 999; Gaz. vol. 133; p. 2032.
Gas-burners, Auxiliary pressure-regulator for. H. Farnoff. No. 884,012; Apr. 7; Sp. p. 696; Dr. p. 140; Gaz. vol. 133; p. 1304.
Gas, Compound to be used in the manufacture of. W. T. Solomon. No. 885,096; Apr. 21; Sp. p. 2911; Gaz. vol. 133; p. 1716.
Gas-engine. J. H. and J. H. Birch. No. 883,688; Apr. 7; Sp. p. 10; Dr. p. 3; Gaz. vol. 133; p. 1196.
Gas-engine. C. Griswold and S. G. Averell. No. 885,921; Apr. 28; Sp. p. 4645; Dr. pp. 977–8; Gaz. vol. 133; p. 2014.
Gas-fixture. C. Gerlach. No. 886,120; Apr. 28; Sp. p. 5061; Dr. p. 1062; Gaz. vol. 133; p. 2079.
Gas from alcohol, Producing. W. T. Solomon. No. 885,095; Apr. 21; Sp. p. 2910; Dr. p. 617; Gaz. vol. 133; p. 1716.
Gas-furnace. C. P. Hensley and F. H. Bryant. No. 883,880; Apr. 7; Sp. p. 428; Dr. p. 84; Gaz. vol. 133; p. 1259.
Gas-generator. W. Tures. No. 886,309; Apr. 28; Sp. p. 5408; Dr. p. 1135; Gaz. vol. 133; p. 2142.
Gas-generator for explosive-engines. H. K. Shanck. No. 883,981; Apr. 7; Sp. p. 633; Dr. p. 126; Gaz. vol. 133; p. 1293.
Gas generator, Hydrocarbon-. A. D. Sumner. No. 885,886; Apr. 28; Sp. p. 4556; Dr. p. 955; Gaz. vol. 133; p. 2002.
Gas-lighting mechanism, Automatic. N. H. Shaw. No. 885,795; Apr. 28; Sp. p. 4372; Dr. p. 918; Gaz. vol. 133; p. 1971.
Gas-lighting machine, Electric. D. A. Barlow. No. 885,134; Apr. 21; Sp. p. 3013; Dr. p. 635; Gaz. vol. 133; p. 1729.
Gas, Making. A. M. Gow. No. 884,655; Apr. 14; Sp. p. 2038; Dr. p. 435; Gaz. vol. 133; p. 1542.
Gas, Making producer-. F. Jahns. No. 885,480; Apr. 21; Sp. p. 3711; Dr. p. 780; Gaz. vol. 133; p. 1842.
Gas-manufacturing apparatus. H. Pettibone. No. 885,372; Apr. 21; Sp. p. 3519; Dr. p. 735; Gaz. vol. 133; p. 1809.
Gas-pressure regulator. J. W. Weeks. No. 885,681; Apr. 21; Sp. p. 4128; Dr. p. 864; Gaz. vol. 133; p. 1904.
Gas-producer plant. C. Whitfield. No. 883,845; Apr. 7; Sp. p. 355; Dr. p. 68; Gaz. vol. 133; p. 1247.
Gas-producers, Grate for. R. Hilprecht. No. 885,155; Apr. 21; Sp. p. 3060; Dr. p. 642; Gaz. vol. 133; p. 1736.
Gas, Producing. E. H. Amet. No. 885,903; Apr. 28; Sp. p. 4586; Dr. p. 962; Gaz. vol. 133; p. 2007.
Gas-producing apparatus. E. H. Amet. No. 885,904; Apr. 28; Sp. p. 4590; Dr. p. 962; Gaz. vol. 133; p. 2008.
Gas-producing furnaces, Fuel-feeding device for. S. B. Sheldon. No. 884,620; Apr. 14; Sp. p. 1922; Dr. pp. 413–14; Gaz. vol. 133; p. 1529.
Gas, Recovering ammonia and heating air in the manufacture of producer-. W. J. Crossley and T. Rigby. No. 885,980; Apr. 28; Sp. p. 4766; Dr. p. 1001; Gaz. vol. 133; p. 2034.
Gas, Treating. J. S. McIlhenny. No. 885,857; Apr. 28; Sp. p. 4504; Dr. p. 946; Gaz. vol. 133; p. 1992.
Gas under uniform pressure, Generating and delivering. W. C. Finck. No. 886,289; Apr. 28; Sp. p. 5363; Dr. p. 1128; Gaz. vol. 133; p. 2135.
Gas-washer. F. H. Moyer. No. 886,009; Apr. 28; Sp. p. 4829; Dr. pp. 1014–15; Gaz. vol. 133; p. 2043.
Gas-washer. F. H. Moyer. No. 886,304; Apr. 28; Sp. p. 5396; Dr. p. 1133; Gaz. vol. 133; p. 2140.
Gases from hydrocarbon, Apparatus for the production of. W. von Dulong. No. 885,230; Apr. 21; Sp. p. 3226; Dr. p. 673; Gaz. vol. 133; p. 1761.
Gate: *See* Crossing-gate; End-gate; Farm-gate; Overflow-gate; Sliding gate; Water-lock gate.
Gate. W. H. Mitchell. No. 884,188; Apr. 7; Sp. p. 1088; Dr. p. 227; Gaz. vol. 133; p. 1361.
Gate. C. Hill. No. 884,333; Apr. 7; Sp. p. 1333; Dr. pp. 285–6; Gaz. vol. 133; p. 1406.
Gate. C. C. Cohee. No. 884,467; Apr. 14; Sp. p. 1613; Dr. p. 348; Gaz. vol. 133; p. 1480.
Gate. D. E. Stetler. No. 884,533; Apr. 14; Sp. p. 1750; Dr. p. 376; Gaz. vol. 133; p. 1501.
Gate. A. Hessel. No. 884,584; Apr. 14; Sp. p. 1850; Dr. p. 397; Gaz. vol. 133; p. 1518.
Gate. R. G. Ping. No. 885,288; Apr. 21; Sp. p. 3333; Dr. p. 696; Gaz. vol. 133; p. 1780.
Gate-fastener. W. N. Faverty and V. J. Peterson. No. 884,269; Apr. 7; Sp. p. 1225; Dr. p. 258; Gaz. vol. 133; p. 1387.
Gathering and loading fork. M. A. Heffner. No. 885,618; Apr. 21; Sp. p. 3990; Dr. p. 835; Gaz. vol. 133; p. 1883.
Gear. G. W. Sponable. No. 885,194; Apr. 21; Sp. p. 3144; Dr. p. 660; Gaz. vol. 133; p. 1749.
Gear-cutting, planing, and milling machines, Attachment for. S. A. Hand. No. 883,952; Apr. 7; Sp. p. 579; Dr. p. 116; Gaz. vol. 133; p. 1284.
Gear for motor-vehicles, Transmission-. L. H. Dyer. No. 885,986; Apr. 28; Sp. p. 4785; Dr. p. 1006; Gaz. vol. 133; p. 2036.
Gear, Variable-speed. J. E. Barker. No. 885,710; Apr. 28; Sp. p. 4196; Dr. p. 878; Gaz. vol. 133; p. 1943.
Gearing. A. J. Loguin. No. 885,354; Apr. 21; Sp. p. 3484; Dr. p. 726; Gaz. vol. 133; p. 1803.
Gearing for hoists, Transmission-. A. J. Thomas. No. 884,777; Apr. 14; Sp. p. 2285; Dr. p. 481; Gaz. vol. 133; p. 1583.
Gearing for traction-wheels, Yieldable. L. Rhodes. No. 883,741; Apr. 7; Sp. p. 123; Dr. p. 22; Gaz. vol. 133; p. 1213.
Gearing, Variable-speed. S. T. Lewis. No. 884,172; Apr. 7; Sp. p. 1060; Dr. p. 221; Gaz. vol. 133; p. 1356.
Generator: *See* Acetylene-generator; Current-generator; Current turbo-generator; Gas-generator.
Gin-saw-filing machine. F. M. Sisk. No. 884,770; Apr. 14; Sp. p. 2272; Dr. p. 478; Gaz. vol. 133; p. 1581.
Glass-furnace and appurtenances thereof. H. M. Brookfield. No. 883,779; Apr. 7; Sp. p. 192; Dr. pp. 35–6; Gaz. vol. 133; p. 1224.
Glass, Method of and apparatus for drawing sheets of. H. J. Walter. No. 885,896; Apr. 28; Sp. p. 4573; Dr. p. 959; Gaz. vol. 133; p. 2005.

Glass-mold. W. Millstein. No. 886,146; Apr. 28; Sp. p. 5106; Dr. p. 1072; Gaz. vol. 133; p. 2087.
Glasses in place, Suction device for securing. J. J. Tanzey. No. 886,273; Apr. 28; Sp. p. 5328; Dr. p. 1121; Gaz. vol. 133; p. 2130.
Glassware, Apparatus for fire finishing and polishing. I. H. Freese, J. W. Romigh, and H. A. Carothers. No. 884,478; Apr. 14; Sp. p. 1635; Dr. pp. 351–2; Gaz. vol. 133; p. 1483.
Globe. W. Dubois. No. 885,690; Apr. 21; Sp. p. 4145; Dr. p. 868; Gaz. vol. 133; p. 1907.
Glove. J. W. and R. F. Taylor. No. 883,761; Apr. 7; Sp. p. 163; Dr. p. 29; Gaz. vol. 133; p. 1219.
Glove, Cotton-picking. J. A. Layton. No. 885,767; Apr. 28; Sp. p. 4322; Dr. p. 906; Gaz. vol. 133; p. 1962.
Glue, Manufacture of. I. Kitsee. No. 883,722; Apr. 7; Sp. p. 89; Dr. p. 14; Gaz. vol. 133; p. 1207.
Gold-separating apparatus. J. A. Creasy. No. 883,861; Apr. 7; Sp. p. 383; Dr. pp. 74–5; Gaz. vol. 133; p. 1252.
Gold-washing screen. W. H. Roughsedge. No. 883,974; Apr. 7; Sp. p. 619; Dr. pp. 123–4; Gaz. vol. 133; p. 1290.
Grab-hook. J. E. Flynn. No. 884,945; Apr. 7; Sp. p. 555; Dr. p. 111; Gaz. vol. 133; p. 1281.
Grab-tool. J. G. Hollingsworth. No. 885,478; Apr. 21; Sp. p. 3709; Dr. p. 779; Gaz. vol. 133; p. 1842.
Grader, Road-. W. S. Livengood. No. 884,396; Apr. 14; Sp. p. 1474; Dr. p. 315; Gaz. vol. 133; p. 1457.
Grader, Road-. D. W. King. No. 884,497; Apr. 14; Sp. p. 1679; Dr. p. 362; Gaz. vol. 133; p. 1489.
Grain and seed cleaning and grading machine. J. H. Hoover. No. 884,690; Apr. 14; Sp. p. 2046; Dr. pp. 436–8; Gaz. vol. 133; p. 1543.
Grain-cleaner. C. A. Wright. No. 884,551; Apr. 14; Sp. p. 1730; Dr. p. 385; Gaz. vol. 133; p. 1508.
Grain-cleaner. C. A. Wright. No. 884,552; Apr. 14; Sp. p. 1792; Dr. p. 385; Gaz. vol. 133; p. 1508.
Grain-distributing apparatus. H. P. Harpstrite. No. 883,801; Apr. 7; Sp. p. 251; Dr. pp. 45–6; Gaz. vol. 133; p. 1232.
Grain-drier. W. Wilson. No. 884,696; Apr. 14; Sp. p. 2109; Dr. p. 450; Gaz. vol. 133; p. 1555.
Grain feeding and weighing apparatus. W. Schwede. No. 885,299; Apr. 21; Sp. p. 3357; Dr. p. 702; Gaz. vol. 133; p. 1784.
Grain-heater. F. A. Spivak. No. 884,230; Apr. 7; Sp. p. 1155; Dr. p. 243; Gaz. vol. 133; p. 1374.
Grain-screen. G. H. Rechtenbach. No. 886,247; Apr. 28; Sp. p. 5274; Dr. p. 1111; Gaz. vol. 133; p. 2120.
Grain-scrubber. C. E. Manor. No. 885,499; Apr. 21; Sp. p. 3743; Dr. p. 788; Gaz. vol. 133; p. 1848.
Grain-separator. N. Huff. No. 885,620; Apr. 21; Sp. p. 4002; Dr. p. 836; Gaz. vol. 133; p. 1884.
Grain-separator. R. J. Owens. No. 886,306; Apr. 28; Sp. p. 5400; Dr. p. 1134; Gaz. vol. 133; p. 2141.
Graphophone and picture-exhibitor, Combined. C. W. Taylor. No. 884,239; Apr. 7; Sp. p. 1174; Dr. pp. 247–8; Gaz. vol. 133; p. 1378.
Graphophone-needle. W. Fitzpatrick. No. 885,989; Apr. 28; Sp. p. 4796; Dr. p. 1007; Gaz. vol. 133; p. 2037.
Graphophone, phonograph, and the like. J. O. Hirschfelder. No. 886,056; Apr. 28; Sp. p. 4932; Dr. p. 1036; Gaz. vol. 133; p. 2059.
Grapple. O. Rodman. No. 885,297; Apr. 21; Sp. p. 3354; Dr. p. 701; Gaz. vol. 133; p. 1783.
Grapple. E. D. Coogan. No. 885,442; Apr. 21; Sp. p. 3645; Dr. p. 765; Gaz. vol. 133; p. 1830.
Grate. A. V. Davidson and C. R. Beard. No. 885,667; Apr. 21; Sp. p. 4098; Dr. p. 858; Gaz. vol. 133; p. 1899.
Grate. H. W. Whelan. No. 885,898; Apr. 28; Sp. p. 4577; Dr. p. 960; Gaz. vol. 133; p. 2006.
Grate, Fire-. J. Stewart. No. 885,100; Apr. 21; Sp. p. 2924; Dr. p. 620; Gaz. vol. 133; p. 1717.
Grate for open fireplaces. C. F. Salter. No. 884,615; Apr. 14; Sp. p. 1917; Dr. pp. 411–12; Gaz. vol. 133; p. 1528.
Greenhouse construction. J. H. Rice. No. 884,208; Apr. 7; Sp. p. 1120; Dr. p. 235; Gaz. vol. 133; p. 1367.
Grinding and polishing machine. L. A. Jones. No. 884,162; Apr. 7; Sp. p. 1045; Dr. p. 218; Gaz. vol. 133; p. 1353.
Grinding-machine case, Portable. G. Wieber. No. 884,249; Apr. 7; Sp. p. 1195; Dr. pp. 251–2; Gaz. vol. 133; p. 1380.
Grinding or crushing foundry-sand, &c., Apparatus for. P. Bonvillain. (Reissue.) No. 12,778; Apr. 7; Sp. p. 1385; Dr. p. 296; Gaz. vol. 133; p. 1414.
Grinding or crushing mill. J. J. Fraser. No. 883,872; Apr. 7; Sp. p. 411; Dr. p. 80; Gaz. vol. 133; p. 1256.
Grinding or mixing mill, Edge-runner. C. B. Cole. No. 885,723; Apr. 28; Sp. p. 4225; Dr. pp. 884–5; Gaz. vol. 133; p. 1948.
Grinding-roll. L. C. Wales. No. 886,099; Apr. 28; Sp. p. 5008; Dr. p. 1054; Gaz. vol. 133; p. 2072.
Guide-lubricator. J. H. Rush. No. 884,957; Apr. 14; Sp. p. 2633; Dr. p. 557; Gaz. vol. 133; p. 1639.
Gum wrapper, Chewing-. C. B. Davis. No. 884,800; Apr. 14; Sp. p. 2331; Dr. p. 490; Gaz. vol. 133; p. 1591.
Gun-cleaner. G. A. Swazey. No. 883,986; Apr. 7; Sp. p. 647; Dr. p. 130; Gaz. vol. 133; p. 1295.
Gun-cleaning rod. B. E. Clement. No. 886,188; Apr. 28; Sp. p. 5174; Dr. p. 1089; Gaz. vol. 133; p. 2101.
Gun, Gas-operated. W. Mason. No. 885,166; Apr. 21; Sp. p. 3083; Dr. pp. 648–9; Gaz. vol. 133; p. 1739.
Gun-stock. R. H. Julien. No. 886,131; Apr. 28; Sp. p. 5082; Dr. p. 1066; Gaz. vol. 133; p. 2083.
Gyrating machines, Means for facilitating the adjustment of balance-weights on. L. V. Rathbun. No. 883,827; Apr. 7; Sp. p. 313; Dr. p. 59; Gaz. vol. 133; p. 1242.
Gyroscopic top. A. B. Bly. No. 884,975; Apr. 14; Sp. p. 2609; Dr. p. 567; Gaz. vol. 133; p. 1644.
Hair-crimper. J. F. Martin. No. 884,339; Apr. 7; Sp. p. 1346; Dr. p. 288; Gaz. vol. 133; p. 1409.
Hair-cutting device. R. Campbell. No. 885,584; Apr. 21; Sp. p. 3935; Dr. p. 821; Gaz. vol. 133; p. 1872.
Hair-tonic. A. and J. Newcom. No. 885,073; Apr. 21; Sp. p. 2868; Gaz. vol. 133; p. 1709.
Hame. K. O. Rue. No. 886,156; Apr. 28; Sp. p. 5119; Dr. pp. 1075–6; Gaz. vol. 133; p. 2090.
Hame-clasp. A. Woodward. No. 885,124; Apr. 21; Sp. p. 2992; Dr. p. 631; Gaz. vol. 133; p. 1726.
Hame-strap attachment. H. G. Spraker. No. 884,231; Apr. 7; Sp. p. 1156; Dr. p. 244; Gaz. vol. 133; p. 1375.
Hammer, Foot-power. A. H. Wertz. No. 884,786; Apr. 14; Sp. p. 2311; Dr. p. 486; Gaz. vol. 133; p. 1587.
Hammer, Pneumatic. M. Hardsocg. No. 884,151; Apr. 7; Sp. p. 1019; Dr. p. 213; Gaz. vol. 133; p. 1349.
Hammer, Pneumatic. M. Hardsocg. No. 884,152; Apr. 7; Sp. p. 1023; Dr. p. 213; Gaz. vol. 133; p. 1349.
Hammock lift and turner, Invalid. J. J. Ellis. No. 885,529; Apr. 21; Sp. p. 3452; Dr. p. 716; Gaz. vol. 133; p. 1795.
Hand-shears. A. Nicholson and I. T. Rude. No. 884,410; Apr. 14; Sp. p. 1496; Dr. p. 321; Gaz. vol. 133; p. 1462.
Handkerchief-receptacle. J. Cave. No. 885,721; Apr. 28; Sp. p. 4222; Dr. pp. 883–4; Gaz. vol. 133; p. 1947.
Handle: *See* Box-handle; Detachable handle; Dipper-handle; Knife-handle; Tool-handle.
Handle-fastening. A. E. Phillis. No. 885,246; Apr. 21; Sp. p. 3330; Dr. p. 695; Gaz. vol. 133; p. 1780.
Hanger: *See* Brake-lever hanger; Coat-hanger; Door-hanger; Garment-hanger; Hat-hanger; Picture-hanger; Shade and curtain hanger; Track-hanger; Vehicle-body hanger.
Hanger-rack receptacle for clothing. W. S. Gilmore. No. 883,713; Apr. 7; Sp. p. 72; Dr. p. 11; Gaz. vol. 133; p. 1204.
Harness. A. M. Craig. No. 885,911; Apr. 28; Sp. p. 4602; Dr. p. 965; Gaz. vol. 133; p. 2010.
Harness attachment. A. L. Lewis. No. 884,829; Apr. 14; Sp. p. 2386; Dr. p. 501; Gaz. vol. 133; p. 1601.
Harrow and cultivating implement. S. T. Sherrill. No. 885,595; Apr. 21; Sp. p. 3847; Dr. p. 804; Gaz. vol. 133; p. 1859.
Harrow and plow, Combined. B. F. Aplin. No. 884,348; Apr. 7; Sp. p. 1368; Dr. p. 292; Gaz. vol. 133; p. 1411.
Harrow and roller, Combined. A. Hayes. No. 884,658; Apr. 14; Sp. p. 2044; Dr. p. 436; Gaz. vol. 133; p. 1542.
Harvester, Corn-. R. B. Brewer. No. 884,801; Apr. 14; Sp. p. 2496; Dr. p. 527; Gaz. vol. 133; p. 1619.
Harvester, Flax-. I. W. Weeks. No. 885,867; Apr. 28; Sp. p. 4575; Dr. p. 959; Gaz. vol. 133; p. 2006.
Harvester, Potato-. H. C. Hendrick. No. 884,396; Apr. 14; Sp. p. 1457; Dr. pp. 310–11; Gaz. vol. 133; p. 1454.
Harvester-reel. F. S. Chase. No. 884,465; Apr. 14; Sp. p. 1610; Dr. pp. 347–8; Gaz. vol. 133; p. 1479.
Harvester-reel. J. T. Brett. No. 885,833; Apr. 28; Sp. p. 4461; Dr. pp. 936–7; Gaz. vol. 133; p. 1984.
Harvesters, Automatic adjuster for fan-boxes of combined. W. M. Amer. No. 885,215; Apr. 21; Sp. p. 3199; Dr. p. 668; Gaz. vol. 133; p. 1756.
Harvesting machine, Cotton-. G. H. Zempter. No. 886,335; Apr. 28; Sp. p. 5494; Dr. p. 1149; Gaz. vol. 133; p. 2152.
Hat-curling machine. E. M. Lyman and J. Ives. No. 886,142; Apr. 28; Sp. p. 5066; Dr. p. 1070; Gaz. vol. 133; p. 2086.
Hat-fastener, Comb. W. H. Goodale and E. A. Stacy. No. 885,746; Apr. 28; Sp. p. 4276; Dr. p. 894; Gaz. vol. 133; p. 1955.
Hat-frame-forming device, Wire-. W. M. Jameson. No. 884,588; Apr. 14; Sp. p. 1856; Dr. p. 369; Gaz. vol. 133; p. 1519.
Hat hanger and marker. S. P. Dodge. No. 885,026; Apr. 21; Sp. p. 2779; Dr. p. 589; Gaz. vol. 133; p. 1694.
Hat packing-case. A. I. Coe. No. 885,979; Apr. 28; Sp. p. 4764; Dr. pp. 1000–1; Gaz. vol. 133; p. 2033.
Hay-elevator. F. F. Sommer. No. 885,541; Apr. 21; Sp. p. 3856; Dr. p. 806; Gaz. vol. 133; p. 1860.
Hay-press. L. B. Wygant. No. 885,823; Apr. 28; Sp. p. 4438; Dr. pp. 932–3; Gaz. vol. 133; p. 1981.
Hay-rack. P. C. Jackson. No. 884,334; Apr. 7; Sp. p. 1335; Dr. p. 284; Gaz. vol. 133; p. 1407.
Heat-deflector. F. R. Bigler. No. 884,309; Apr. 7; Sp. p. 1288; Dr. p. 273; Gaz. vol. 133; p. 1398.
Heat-regulating apparatus. D. H. Haywood. No. 884,275; Apr. 7; Sp. p. 1235; Dr. p. 269; Gaz. vol. 133; p. 1388.
Heat-regulating apparatus. V. F. Davis. No. 884,321; Apr. 7; Sp. p. 1308; Dr. p. 277; Gaz. vol. 133; p. 1402.
Heated chamber, Fluid-. C. E. Ord. No. 885,781; Apr. 28; Sp. p. 4349; Dr. p. 913; Gaz. vol. 133; p. 1966.
Heated tools and vessels, Automatic indicator or thermoscopic signal for. J. I. Ayer. No. 884,973; Apr. 14; Sp. p. 2666; Dr. p. 567; Gaz. vol. 133; p. 1644.
Heater: *See* Car-heater; Confectioner's heater; Electric heater; Feed-water heater; Fluid-heater; Grain-heater; Tank-heater; Water-heater.
Heater. W. K. Stafford. No. 884,300; Apr. 7; Sp. p. 1274; Dr. p. 269; Gaz. vol. 133; p. 1396.
Heater. L. L. Law. No. 884,395; Apr. 14; Sp. p. 1472; Dr. pp. 314–15; Gaz. vol. 133; p. 1457.
Heating and lighting apparatus, Gasolene. T. J. Forde. No. 883,946; Apr. 7; Sp. p. 556; Dr. p. 111; Gaz. vol. 133; p. 1281.
Heating and ventilating apparatus. E. F. Osborne. No. 886,325; Apr. 28; Sp. p. 5450; Dr. pp. 1143–4; Gaz. vol. 133; p. 2140.
Heating apparatus, Air-. F. W. Green. No. 883,951; Apr. 7; Sp. p. 578; Dr. p. 115; Gaz. vol. 133; p. 1283.
Heating apparatus, Portable hot-fluid. H. T. Offterdinger. No. 886,305; Apr. 28; Sp. p. 5398; Dr. p. 1133; Gaz. vol. 133; p. 2141.
Heating device. C. G. Armstrong. No. 885,683; Apr. 21; Sp. p. 4132; Dr. p. 864; Gaz. vol. 133; p. 1905.
Heating-furnace. C. A. Robinson. No. 883,747; Apr. 7; Sp. p. 131; Dr. p. 24; Gaz. vol. 133; p. 1215.
Heating system. T. F. Scollard. No. 886,079; Apr. 28; Sp. p. 4967; Dr. p. 1045; Gaz. vol. 133; p. 2065.

Heating systems, Regulating device for steam-. J. F. McElroy. No. 884,287; Apr. 7; Sp. p. 1253; Dr. p. 263; Gaz. vol. 133; p. 1392.
Heel-attaching machine. J. H. Pope. No. 884,524; Apr. 14; Sp. p. 1731; Dr. pp. 371–2; Gaz. vol. 133; p. 1498.
Heel, Boot and shoe. W. C. Turpel. No. 884,780; Apr. 14; Sp. p. 2294; Dr. p. 482; Gaz. vol. 133; p. 1584.
Heel-nailing machine. B. F. Mayo. No. 884,513; Apr. 14; Sp. p. 1710; Dr. pp. 367–8; Gaz. vol. 133; p. 1494.
Heel-seat trimmer for patent-leather. D. H. Hadsell. No. 886,291; Apr. 28; Sp. p. 5368; Dr. p. 1128; Gaz. vol. 133; p. 2136.
Hinge. R. G. Winter. No. 883,998; Apr. 7; Sp. p. 670; Dr. p. 134; Gaz. vol. 133; p. 1299.
Hinge. R. G. Winter. No. 883,999; Apr. 7; Sp. p. 672; Dr. p. 135; Gaz. vol. 133; p. 1299.
Hinge, Gate-. C. A. Johnson. No. 883,960; Apr. 7; Sp. p. 597; Dr. p. 119; Gaz. vol. 133; p. 1286.
Hinge-joint. I. L. Kiser. No. 883,893; Apr. 7; Sp. p. 453; Dr. p. 89; Gaz. vol. 133; p. 1263.
Hinge, Screen-. W. Gossett. No. 884,146; Apr. 7; Sp. p. 1013; Dr. p. 211; Gaz. vol. 133; p. 1347.
Hitching device. A. Wagner. No. 886,166; Apr. 28; Sp. p. 5135; Dr. p. 1079; Gaz. vol. 133; p. 2093.
Hitching-post. C. Buteher. No. 883,782; Apr. 7; Sp. p. 201; Dr. p. 37; Gaz. vol. 133; p. 1226.
Hod. B. M. Burdett. No. 884,566; Apr. 14; Sp. p. 1820; Dr. pp. 390–1; Gaz. vol. 133; p. 1513.
Hoe, Garden-. T. Grasshaw. No. 886,203; Apr. 28; Sp. p. 5198; Dr. p. 1094; Gaz. vol. 133; p. 2106.
Hoeing-machine. O. Harder. No. 885,471; Apr. 21; Sp. p. 3696; Dr. p. 776; Gaz. vol. 133; p. 1839.
Hog-ring. P. A. Swanson. No. 886,102; Apr. 28; Sp. p. 5120; Dr. p. 1078; Gaz. vol. 133; p. 2092.
Hogs from scalding-vats, Device for ejecting. W. R. Perrin. No. 884,608; Apr. 14; Sp. p. 1906; Dr. p. 409; Gaz. vol. 133; p. 1526.
Hoist controlling system. B. R. Shover and A. C. Eastwood. No. 885,961; Apr. 28; Sp. p. 4734; Dr. p. 995; Gaz. vol. 133; p. 2029.
Hoisting and conveying apparatus. J. H. Dickinson. No. 885,025; Apr. 21; Sp. p. 2778; Dr. p. 589; Gaz. vol. 133; p. 1694.
Hoisting apparatus. H. P. Clough. No. 886,113; Apr. 28; Sp. p. 5036; Dr. p. 1058; Gaz. vol. 133; p. 2076.
Hoisting-bucket. C. Chase. No. 885,910; Apr. 28; Sp. p. 4600; Dr. pp. 964–5; Gaz. vol. 133; p. 2010.
Hook: *See* Cant-hook; Clothes-hook; Gaff-hook; Grab-hook; Lacing-hook; Meat-hook; Register-hook; Snap-hook; Suspender-hook; Whiffletree-hook.
Hoop: *See* Embroidery-hoop.
Horn. A. S. Marten. No. 885,268; Apr. 21; Sp. p. 3296; Dr. p. 689; Gaz. vol. 133; p. 1774.
Horn. H. W. Lester. No. 885,403; Apr. 21; Sp. p. 3735; Dr. p. 786; Gaz. vol. 133; p. 1846.
Horse-bit. J. Gaertner. No. 884,084; Apr. 7; Sp. p. 847; Dr. p. 178; Gaz. vol. 133; p. 1327.
Horse-check. N. Stalker. No. 883,754; Apr. 7; Sp. p. 147; Dr. p. 26; Gaz. vol. 133; p. 1217.
Horse-checking device. A. Sauter. No. 885,532; Apr. 21; Sp. p. 3842; Dr. p. 803; Gaz. vol. 133; p. 1858.
Horse-detacher. R. Coates. No. 884,795; Apr. 14; Sp. p. 2325; Dr. p. 489; Gaz. vol. 133; p. 1589.
Horse-power. J. S. Tuttle. No. 885,892; Apr. 28; Sp. p. 4565; Dr. p. 957; Gaz. vol. 133; p. 2004.
Horseshoe. J. B. Raban. No. 883,914; Apr. 7; Sp. p. 492; Dr. p. 97; Gaz. vol. 133; p. 1271.
Horseshoe. J. N. Shippen. No. 885,090; Apr. 21; Sp. p. 2902; Dr. p. 615; Gaz. vol. 133; p. 1714.
Horseshoe. G. L. Giller. No. 885,238; Apr. 21; Sp. p. 3243; Dr. p. 677; Gaz. vol. 133; p. 1764.
Horseshoe. J. H. Lock. No. 885,352; Apr. 21; Sp. p. 3481; Dr. pp. 725–6; Gaz. vol. 133; p. 1803.
Horseshoe, Non-slipping. A. Lang. No. 884,504; Apr. 14; Sp. p. 1604; Dr. p. 364; Gaz. vol. 133; p. 1492.
Horseshoes, Means for making. M. S. Reigh. No. 884,855; Apr. 14; Sp. p. 2447; Dr. p. 515; Gaz. vol. 133; p. 1609.
Hose. H. T. Bragg. No. 884,634; Apr. 14; Sp. p. 1955; Dr. p. 420; Gaz. vol. 133; p. 1534.
Hose, Chemical-mixing attachment for. B. F. Woodling. No. 885,902; Apr. 28; Sp. p. 4585; Dr. p. 961; Gaz. vol. 133; p. 2007.
Hose-coupling. M. P. Eagan. No. 883,941; Apr. 7; Sp. p. 548; Dr. p. 109; Gaz. vol. 133; p. 1280.
Hose-coupling. A. A. Minorsky. No. 884,187; Apr. 7; Sp. p. 1087; Dr. p. 227; Gaz. vol. 133; p. 1360.
Hose-coupling. C. F. Browne. No. 884,461; Apr. 14; Sp. p. 1601; Dr. p. 345; Gaz. vol. 133; p. 1478.
Hose-coupling, Air-brake. J. E. La Rocque. No. 883,814; Apr. 7; Sp. p. 282; Dr. p. 52; Gaz. vol. 133; p. 1238.
Hose-nozzle. S. Suzuki. No. 886,272; Apr. 28; Sp. p. 5327; Dr. p. 1121; Gaz. vol. 133; p. 2130.
Hose-sections, Apparatus for capping. S. J. Sill. No. 885,797; Apr. 28; Sp. p. 4391; Dr. p. 919; Gaz. vol. 133; p. 1972.
Hose-uncoupling, Automatic. W. S. Bowness. No. 884,561; Apr. 14; Sp. p. 1805; Dr. p. 388; Gaz. vol. 133; p. 1511.
Hosiery-drying boards, Cushioning-protector for. J. J. Crimlisk. No. 885,728; Apr. 28; Sp. p. 4234; Dr. p. 887; Gaz. vol. 133; p. 1950.
Hot-air register. W. R. Knights. No. 884,023; Apr. 7; Sp. p. 718; Dr. p. 146; Gaz. vol. 133; p. 1307.
Hot-water-circulating system. G. A. Triggs. No. 884,779; Apr. 14; Sp. p. 2293; Dr. p. 482; Gaz. vol. 133; p. 1584.
Hub, Automobile-. J. E. Foley. No. 885,330; Apr. 21; Sp. p. 3435; Dr. p. 716; Gaz. vol. 133; p. 1795.
Hub, Metallic vehicle-. P. Reinhardt. No. 884,612; Apr. 14; Sp. p. 1911; Dr. p. 410; Gaz. vol. 133; p. 1527.
Huller: *See* Seed-huller.
Husker. J. A. Ramsey. No. 884,609; Apr. 14; Sp. p. 1907; Dr. p. 409; Gaz. vol. 133; p. 1526.
Hydraulic jack. F. F. Ashmore. No. 883,773; Apr. 7; Sp. p. 181; Dr. p. 33; Gaz. vol. 133; p. 1223.
Hydraulic jack. G. Apgar. No. 884,884; Apr. 14; Sp. p. 2488; Dr. p. 525; Gaz. vol. 133; p. 1617.
Hydraulic motor. J. H. Rose. No. 883,972; Apr. 7; Sp. p. 614; Dr. pp. 122–3; Gaz. vol. 133; p. 1289.
Hydraulic motor. W. C. Obernesser. No. 884,200; Apr. 7; Sp. p. 1108; Dr. p. 232; Gaz. vol. 133; p. 1365.
Hydraulic motor. R. B. Goodrich. No. 884,654; Apr. 14; Sp. p. 2035; Dr. pp. 434–5; Gaz. vol. 133; p. 1541.
Hydraulic motor. J. G. McDowell. No. 885,070; Apr. 21; Sp. p. 2861; Dr. p. 608; Gaz. vol. 133; p. 1708.
Hydrocarbon-burner. R. J. Sundberg and J. Nelson. No. 885,105; Apr. 21; Sp. p. 2932; Dr. p. 622; Gaz. vol. 133; p. 1719.
Hydrocarbon-burner. E. Molinari. No. 885,357; Apr. 21; Sp. p. 3488; Dr. p. 727; Gaz. vol. 133; p. 1804.
Hydrocarbon-burner. R. H. White. No. 886,103; Apr. 28; Sp. p. 5018; Dr. p. 1055; Gaz. vol. 133; p. 2073.
Ice bowl, Chipped-. S. W. Hitchcock. No. 885,475; Apr. 21; Sp. p. 3703; Dr. p. 778; Gaz. vol. 133; p. 1841.
Ice-card holder. A. D. Peebles. No. 885,282; Apr. 21; Sp. p. 3325; Dr. p. 694; Gaz. vol. 133; p. 1778.
Ice-cleaner for trolley-poles. J. M. Olinger. No. 885,398; Apr. 21; Sp. p. 3513; Dr. p. 733; Gaz. vol. 133; p. 1808.
Ice-cream-can attachment. L. A. Carroll. No. 884,815; Apr. 7; Sp. p. 1290; Dr. p. 275; Gaz. vol. 133; p. 1400.
Ice-cream scraper. R. Nielsen. No. 884,411; Apr. 14; Sp. p. 1497; Dr. p. 322; Gaz. vol. 133; p. 1462.
Ice-creeper. F. F. Lefebvre. No. 883,816; Apr. 7; Sp. p. 285; Dr. p. 53; Gaz. vol. 133; p. 1238.
Ice-creeper. J. A. E. Anderson. No. 885,827; Apr. 28; Sp. p. 4446; Dr. p. 934; Gaz. vol. 133; p. 1983.
Ice-tongs. J. L. Williams. No. 884,448; Apr. 14; Sp. p. 1577; Dr. p. 339; Gaz. vol. 133; p. 1474.
Identifying articles and such identified article, Method of. J. M. Boyle. No. 883,778; Apr. 7; Sp. p. 189; Dr. p. 35; Gaz. vol. 133; p. 1224.
Igniter, Electric. J. N. Lansinger. No. 886,138; Apr. 28; Sp. p. 5090; Dr. p. 1068; Gaz. vol. 133; p. 2085.
Igniting device, Electric. R. E. Hardy. No. 884,731; Apr. 14; Sp. p. 2182; Dr. p. 463; Gaz. vol. 133; p. 1568.
Incandescent light, Hydrocarbon-. V. H. Slinack. No. 885,189; Apr. 21; Sp. p. 3136; Dr. p. 658; Gaz. vol. 133; p. 1747.
Incinerating-furnace. J. Ross. No. 885,380; Apr. 21; Sp. p. 3545; Dr. p. 741; Gaz. vol. 133; p. 1812.
Incubator. J. H. Haughawout. No. 885,045; Apr. 21; Sp. p. 2821; Dr. p. 597; Gaz. vol. 133; p. 1700.
Incubator-alarm. F. R. Harris. No. 884,018; Apr. 7; Sp. p. 769; Dr. pp. 143–4; Gaz. vol. 133; p. 1306.
Incubator-heaters, Lamp-support for. C. Z. Davis and J. H. Baer. No. 883,939; Apr. 7; Sp. p. 545; Dr. p. 108; Gaz. vol. 133; p. 1280.
Incubator signaling device. G. Mücke. No. 886,148; Apr. 28; Sp. p. 5108; Dr. p. 1073; Gaz. vol. 133; p. 2088.
Indicator: *See* Engine-indicator; Engine-motion indicator; Fare-indicator; Fluid-level indicator; Lock-indicator; Motion-indicator; Speed-indicator; Station-indicator; Tank-indicator.
Indicator and alarm, Combined. J. A. Noel. No. 883,902; Apr. 7; Sp. p. 468; Dr. pp. 92–3; Gaz. vol. 133; p. 1267.
Indicator-lock. E. F. Wells. No. 883,991; Apr. 7; Sp. p. 656; Dr. pp. 132–3; Gaz. vol. 133; p. 1296.
Induction-motor. B. A. Behrend. No. 885,009; Apr. 21; Sp. p. 2734; Dr. p. 580; Gaz. vol. 133; p. 1688.
Influence or condenser machine, Electrical multiple. H. Wommelsdorf. No. 883,846; Apr. 7; Sp. p. 356; Dr. p. 69; Gaz. vol. 133; p. 1247.
Ingots, Manufacture of compound. W. H. Connell. No. 885,839; Apr. 28; Sp. p. 4470; Dr. p. 939; Gaz. vol. 133; p. 1986.
Injector. W. H. Stirling. No. 884,625; Apr. 14; Sp. p. 1932; Dr. p. 415; Gaz. vol. 133; p. 1531.
Injector, Automatic. L. Buehler. No. 885,224; Apr. 21; Sp. p. 3216; Dr. p. 671; Gaz. vol. 133; p. 1759.
Ink-well. A. E. Swan. No. 886,161; Apr. 28; Sp. p. 5128; Dr. p. 1078; Gaz. vol. 133; p. 2092.
Inking device. C. von Philp. No. 885,287; Apr. 21; Sp. p. 3331; Dr. p. 696; Gaz. vol. 133; p. 1780.
Insect-catcher. C. W. Kronenberg and H. Stranzenbach. No. 884,095; Apr. 7; Sp. p. 863; Dr. p. 181; Gaz. vol. 133; p. 1330.
Insect-destroyer. G. W. Darnell. No. 884,319; Apr. 7; Sp. p. 1304; Dr. p. 276; Gaz. vol. 133; p. 1401.
Insect-exterminator. J. W. Jones. No. 885,483; Apr. 21; Sp. p. 3715; Dr. p. 781; Gaz. vol. 133; p. 1843.
Insect-trap. N. W. Mills. No. 884,403; Apr. 14; Sp. p. 1485; Dr. p. 318; Gaz. vol. 133; p. 1459.
Insole. G. E. Mann. No. 884,985; Apr. 14; Sp. p. 2684; Dr. p. 571; Gaz. vol. 133; p. 1647.
Insole covering and shaping machine, Reinforced-. W. C. Stewart. No. 883,837; Apr. 7; Sp. p. 333; Dr. pp. 63–5; Gaz. vol. 133; p. 1245.
Insulated canopy-collar. T. H. Bullock, Jr. No. 885,836; Apr. 28; Sp. p. 4466; Dr. p. 938; Gaz. vol. 133; p. 1986.
Insulating compound. N. Booth. No. 884,456; Apr. 14; Sp. p. 1591; Gaz. vol. 133; p. 1477.
Insulation, Transformer-coil. J. E. Mateer. No. 885,771; Apr. 28; Sp. p. 4326; Dr. p. 907; Gaz. vol. 133; p. 1963.
Insulator. E. J. Foreman. No. 884,142; Apr. 7; Sp. p. 1002; Dr. p. 209; Gaz. vol. 133; p. 1346.
Insulator for heavy currents. L. Steinberger. No. 885,678; Apr. 21; Sp. p. 4122; Dr. p. 863; Gaz. vol. 133; p. 1903.
Insulator, Hanging. W. G. Clark. No. 884,641; Apr. 14; Sp. p. 2002; Dr. p. 428; Gaz. vol. 133; p. 1537.
Insulator-support. C. L. Peirce, Jr. No. 883,823; Apr. 7; Sp. p. 299; Dr. p. 56; Gaz. vol. 133; p. 1240.
Internal-combustion engine. F. F. Miller. No. 884,402; Apr. 14; Sp. p. 1483; Dr. p. 318; Gaz. vol. 133; p. 1459.
Internal-combustion engine. C. R. Radcliffe. No. 884,853; Apr. 14; Sp. p. 2444; Dr. pp. 513–14; Gaz. vol. 133; p. 1608.
Internal-combustion engine. W. H. Frost. No. 885,598; Apr. 21; Sp. p. 3955; Dr. p. 825; Gaz. vol. 133; p. 1876.

Internal-combustion engine. C. J. Mundhenk. No. 886,235; Apr. 28; Sp. p. 5254; Dr. p. 1107; Gaz. vol. 133; p. 2116.
Internal-combustion engine, Rotating. E. L. Vervoort. No. 886,279; Apr. 28; Sp. p. 5338; Dr. p. 1123; Gaz. vol. 133; p. 2132.
Interrupter. A. R. Luschka. No. 886,141; Apr. 28; Sp. p. 5095; Dr. pp. 1069–70; Gaz. vol. 133; p. 2089.
Invalid appliance. G. H. Whaley. No. 885,307; Apr. 21; Sp. p. 3377; Dr. p. 706; Gaz. vol. 133; p. 1787.
Invalid-support. F. D. Sickles. No. 885,388; Apr. 21; Sp. p. 3556; Dr. p. 744; Gaz. vol. 133; p. 1814.
Iron: *See* Curling-iron; Pressing-iron.
Iron, Electrodeposition of. S. O. Cowper-Coles. No. 884,075; Apr. 7; Sp. p. 817; Gaz. vol. 133; p. 1324.
Iron or steel with each other and with other metals, Uniting. E. L. Davies and W. G. Clark. No. 885,668; Apr. 21; Sp. p. 4100; Gaz. vol. 133; p. 1899.
Iron, Utilizing the metalloids in crude iron for reducing metallic. H. D. Hibbard. No. 885,248; Apr. 21; Sp. p. 3260; Dr. p. 680; Gaz. vol. 133; p. 1767.
Ironing-board. E. L. Ridgway. No. 883,830; Apr. 7; Sp. p. 322; Dr. p. 60; Gaz. vol. 133; p. 1243.
Ironing-machine. J. S. Langworthy. No. 885,765; Apr. 28; Sp. p. 4118; Dr. pp. 905–6; Gaz. vol. 133; p. 1961.
Ironing-machine. W. E. Andrée. No. 886,028; Apr. 28; Sp. p. 4874; Dr. p. 1026; Gaz. vol. 133; p. 2050.
Ironing-machine for laundry-work. N. Garst. No. 884,811; Apr. 14; Sp. p. 2352; Dr. p. 495; Gaz. vol. 133; p. 1595.
Jack: *See* Hydraulic jack; Lifting-jack; Vehicle-raising jack.
Jar-closure. P. J. Layman. No. 884,826; Apr. 14; Sp. p. 2376; Dr. p. 500; Gaz. vol. 133; p. 1600.
Jar-closure. H. E. Jolly. No. 886,218; Apr. 28; Sp. p. 5222; Dr. p. 1100; Gaz. vol. 133; p. 2110.
Jar-cover. E. F. Baxter. No. 884,791; Apr. 14; Sp. p. 2319; Dr. p. 487; Gaz. vol. 133; p. 1588.
Jar-cover. W. Strachan. No. 885,103; Apr. 21; Sp. p. 2929; Dr. p. 622; Gaz. vol. 133; p. 1718.
Jars and the like, Closure for milk-. F. K. Plympton. No. 886,014; Apr. 28; Sp. p. 4852; Dr. p. 1020; Gaz. vol. 133; p. 2045.
Jars, bottles, and the like, Closure device for. A. R. Bell. No. 885,424; Apr. 21; Sp. p. 3614; Dr. p. 758; Gaz. vol. 133; p. 1824.
Jatring device. E. E. Messmore. No. 886,231; Apr. 28; Sp. p. 5249; Dr. p. 1106; Gaz. vol. 133; p. 2115.
Jewel and pivot gage. F. R. Coats. No. 885,838; Apr. 28; Sp. p. 4468; Dr. p. 938; Gaz. vol. 133; p. 1986.
Jewel-bar. H. W. Fishel. No. 884,979; Apr. 14; Sp. p. 2675; Dr. p. 569; Gaz. vol. 133; p. 1645.
Jewel-cupping machine. J. Wennstrom. No. 886,310; Apr. 28; Sp. p. 5409; Dr. p. 1135; Gaz. vol. 133; p. 2143.
Jig, Machinist's. B. P. Fortin. No. 883,891; Apr. 7; Sp. p. 405; Dr. pp. 78–9; Gaz. vol. 133; p. 1255.
Joint: *See* Hinge-joint; Rail-joint; Railway-rail joint; Universal joint.
Journal-bearing. A. L. Streeter. No. 884,050; Apr. 7; Sp. p. 770; Dr. p. 160; Gaz. vol. 133; p. 1316.
Journal-bearing. A. H. Sassaman. No. 884,866; Apr. 14; Sp. p. 2465; Dr. p. 519; Gaz. vol. 133; p. 1613.
Journal-box and lid. J. Goettel. No. 884,918; Apr. 14; Sp. p. 2564; Dr. pp. 539–40; Gaz. vol. 133; p. 1627.
Keyless lock for traveling-bags, &c. J. Kruse. No. 886,136; Apr. 28; Sp. p. 5087; Dr. p. 1068; Gaz. vol. 133; p. 2084.
Kiln: *See* Brick-kiln; Limekiln.
Knife-handle. W. I. Morton. No. 884,030; Apr. 7; Sp. p. 732; Dr. p. 147; Gaz. vol. 133; p. 1309.
Knife-holder, Cutlery. E. Potter. No. 885,081; Apr. 21; Sp. p. 2882; Dr. p. 611; Gaz. vol. 133; p. 1711.
Knitted fabric. R. W. Scott. No. 885,793; Apr. 28; Sp. p. 4369; Dr. p. 917; Gaz. vol. 133; p. 1970.
Knitted fabric. R. W. Scott. No. 885,794; Apr. 28; Sp. p. 4370; Dr. p. 917; Gaz. vol. 133; p. 1971.
Knitting-machine, Dial. B. T. Steber. No. 885,304; Apr. 21; Sp. p. 3367; Dr. p. 704; Gaz. vol. 133; p. 1785.
Knitting-machine needle. G. C. Egly. No. 885,590; Apr. 21; Sp. p. 3942; Dr. p. 823; Gaz. vol. 133; p. 1874.
Knitting-machine take-up device, Circular-. H. A. Houseman. No. 883,958; Apr. 7; Sp. p. 592; Dr. p. 118; Gaz. vol. 133; p. 1286.
Knitting-machines, Transferring device for. A. Foster. No. 885,150; Apr. 21; Sp. p. 3051; Dr. p. 641; Gaz. vol. 133; p. 1735.
Label for cotton-bales. T. F. Steele. No. 886,086; Apr. 28; Sp. p. 4978; Dr. p. 1047; Gaz. vol. 133; p. 2068.
Labeling device. S. Detmers. No. 884,573; Apr. 14; Sp. p. 1833; Dr. p. 393; Gaz. vol. 133; p. 1515.
Laboratory apparatus, Physical. L. E. Knott. No. 885,763; Apr. 28; Sp. p. 4313; Dr. p. 904; Gaz. vol. 133; p. 1961.
Lacing-hook. W. T. Richards. No. 884,682; Apr. 14; Sp. p. 2080; Dr. p. 445; Gaz. vol. 133; p. 1551.
Lacing-hook-setting machine. W. F. Fraser. No. 885,919; Apr. 28; Sp. p. 4632; Dr. pp. 973–6; Gaz. vol. 133; p. 2013.
Lacing-hook-setting machines, Clutch mechanism for. S. E. Taft. No. 884,051; Apr. 7; Sp. p. 772; Dr. p. 161; Gaz. vol. 133; p. 1316.
Ladder. H. Adler. No. 884,120; Apr. 7; Sp. p. 944; Dr. p. 198; Gaz. vol. 133; p. 1339.
Ladder. W. Jones. No. 884,163; Apr. 7; Sp. p. 1048; Dr. p. 218; Gaz. vol. 133; p. 1353.
Ladder. J. Waters. No. 886,282; Apr. 28; Sp. p. 5352; Dr. p. 1125; Gaz. vol. 133; p. 2133.
Lamp. F. W. Kearsey. No. 883,720; Apr. 7; Sp. p. 86; Dr. p. 13; Gaz. vol. 133; p. 1205.
Lamp. E. N. Lebwohl. No. 885,495; Apr. 21; Sp. p. 3737; Dr. p. 787; Gaz. vol. 133; p. 1846.
Lamp. E. H. Palmer and W. A. Willits. No. 885,699; Apr. 21; Sp. p. 4166; Dr. p. 872; Gaz. vol 133; p. 1909.
Lamp, Alcohol-gas. H. G. Layng. No. 885,263; Apr. 21; Sp. p. 3285; Dr. p. 687; Gaz. vol. 133; p. 1772.
Lamp, Arc-. J. Härdén. No. 885,338; Apr. 21; Sp. p. 3447; Dr. p. 719; Gaz. vol. 133; p. 1797.
Lamp attachment. W. D. Markham. No. 886,323; Apr. 28; Sp. p. 5447; Dr. p. 1142; Gaz. vol. 133; p. 2148.
Lamp-bracket. E. M. Rosenbluth. No. 883,973; Apr. 7; Sp. p. 617; Dr. p. 123; Gaz. vol. 133; p. 1290.
Lamp controlling attachment, Heating-. L. W. Holmes and C. V. Trantman. No. 883,883; Apr. 7; Sp. p. 433; Dr. p. 85; Gaz. vol. 133; p. 1260.
Lamp, Electric-arc. H. Beck. No. 885,906; Apr. 28; Sp. p. 4595; Dr. p. 963; Gaz. vol. 133; p. 2008.
Lamp for alternating currents, Electric-arc. G. Szuk and W. Hackl. No. 885,400; Apr. 21; Sp. p. 3580; Dr. p. 749; Gaz. vol. 133; p. 1818.
Lamp, Gasolene-. I. T. Smith. No. 885,799; Apr. 28; Sp. p. 4395; Dr. p. 920; Gaz. vol. 133; p. 1972.
Lamp, Incandescent gas-. H. Süssmann. No. 886,271; Apr. 28; Sp. p. 5325; Dr. p. 1121; Gaz. vol. 133; p. 2129.
Lamp, lantern, and heater. H. A. Watkins. No. 884,305; Apr. 7; Sp. p. 1281; Dr. p. 271; Gaz. vol. 133; p. 1397.
Lamp, Miner's. C. Murray. No. 884,191; Apr. 7; Sp. p. 1093; Dr. p. 228; Gaz. vol. 133; p. 1361.
Lamp, Miner's. R. L. Graves. No. 886,204; Apr. 28; Sp. p. 5199; Dr. p. 1095; Gaz. vol. 133; p. 2106.
Lamp-receptacles, Means for supporting. J. S. Stewart. No. 886,267; Apr. 28; Sp. p. 5316; Dr. p. 1119; Gaz. vol. 133; p. 2128.
Lamp-socket. W. C. Tregoning. No. 885,890; Apr. 28; Sp. p. 4562; Dr. p. 957; Gaz. vol. 133; p. 2003.
Lamp socket, Cluster-. R. B. Benjamin. No. 883,777; Apr. 7; Sp. p. 187; Dr. p. 35; Gaz. vol. 133; p. 1224.
Lamp socket, Electric-. M. Norden. No. 884,102; Apr. 7; Sp. p. 877; Dr. p. 185; Gaz. vol. 133; p. 1333.
Lamp starting device, Mercury-. C. P. Steinmetz. No. 885,882; Apr. 28; Sp. p. 4552; Dr. p. 954; Gaz. vol. 133; p. 2001.
Lamp with inverted incandescent gas-burners. M. Graetz. No. 884,816; Apr. 14; Sp. p. 2364; Dr. p. 496; Gaz. vol. 133; p. 1597.
Lamps, Apparatus for the compression of gas or air for. W. H. Chipperfield. No. 885,319; Apr. 21; Sp. p. 3408; Dr. pp. 712–13; Gaz. vol. 133; p. 1791.
Lamps, Machine for making incandescent. W. R. Burrows. No. 884,568; Apr. 14; Sp. p. 1824; Dr. p. 391; Gaz. vol. 133; p. 1513.
Lamps or the like, Support for flash-light. F. Hrdlička-Csiszár. No. 885,251; Apr. 21; Sp. p. 3265; Dr. p. 681; Gaz. vol. 133; p. 1768.
Lamps, Working of electric vapor-. R. Klich. No. 883,725; Apr. 7; Sp. p. 91; Gaz. vol. 133; p. 1208.
Last. W. H. Hooper. No. 883,804; Apr. 7; Sp. p. 258; Dr. p. 48; Gaz. vol. 133; p. 1234.
Last, Divided. W. C. Porter. No. 884,757; Apr. 14; Sp. p. 2243; Dr. p. 473; Gaz. vol. 133; p. 1576.
Latch. I. W. Herman. No. 884,925; Apr. 14; Sp. p. 2575; Dr. p. 542; Gaz. vol. 133; p. 1629.
Latch and lock, Combined. W. T. Blount, Jr. No. 885,576; Apr. 21; Sp. p. 3925; Dr. p. 819; Gaz. vol. 133; p. 1871.
Latch, Door-. C. J. Woodward. No. 885,559; Apr. 21; Sp. p. 3893; Dr. p. 814; Gaz. vol. 133; p. 1865.
Latch, Door-. W. F. Marten. No. 886,143; Apr. 28; Sp. p. 5100; Dr. p. 1071; Gaz. vol. 133; p. 2086.
Latch with pivoted case. L. C. Leopold. No. 885,496; Apr. 21; Sp. p. 3738; Dr. p. 787; Gaz. vol. 133; p. 1260.
Lathe for billiard-cues or the like. M. E. Dannenberg. No. 883,699; Apr. 7; Sp. p. 50; Dr. p. 7; Gaz. vol. 133; p. 1337.
Lathes, Feed mechanism for wood-turning. C. H. Waymoth. No. 884,114; Apr. 7; Sp. p. 928; Dr. p. 195; Gaz. vol. 133; p. 1337.
Legging. E. Le Bossé. No. 884,741; Apr. 14; Sp. p. 2205; Dr. p. 466; Gaz. vol. 133; p. 1571.
Lens grinding and polishing machine. W. F. Hoffman. No. 886,212; Apr. 28; Sp. p. 5214; Dr. p. 1098; Gaz. vol. 133; p. 2108.
Letter, Sign-. G. L. Mason. No. 885,936; Apr. 28; Sp. p. 4673; Dr. p. 984; Gaz. vol. 133; p. 2018.
Leuco derivative of the gallocyanin series. W. Lommel. No. 884,745; Apr. 14; Sp. p. 2218; Gaz. vol. 133; p. 1573.
Level. A. A. Loveless. No. 884,176; Apr. 7; Sp. p. 1066; Dr. p. 222; Gaz. vol. 133; p. 1357.
Level attachment. D. H. Southward. No. 886,333; Apr. 28; Sp. p. 5488; Dr. p. 1148; Gaz. vol. 133; p. 2151.
Level, Builder's. N. Abrahams. No. 885,658; Apr. 21; Sp. p. 4086; Dr. p. 855; Gaz. vol. 133; p. 1896.
Level, Spirit-. C. T. Ridgely. No. 883,743; Apr. 7; Sp. p. 127; Dr. p. 22; Gaz. vol. 133; p. 1213.
Level, Spirit-. M. Kleinbauer. No. 885,762; Apr. 28; Sp. p. 4312; Dr. p. 904; Gaz. vol. 133; p. 1961.
Lever, Selective. T. W. Warner and F. H. Jones. No. 885,814; Apr. 28; Sp. p. 4423; Dr. pp. 927–8; Gaz. vol. 133; p. 1978.
Lewis. P. Neddo. No. 884,198; Apr. 7; Sp. p. 1106; Dr. p. 231; Gaz. vol. 133; p. 1364.
Life-belt apparatus. J. Focketyn. No. 885,918; Apr. 28; Sp. p. 4631; Dr. p. 972; Gaz. vol. 133; p. 2013.
Life-preserver. H. W. Fraser. No. 884,143; Apr. 7; Sp. p. 1003; Dr. p. 210; Gaz. vol. 133; p. 1346.
Life-preserver and swimming-machine. W. H. Young and O. B. Lyon. No. 885,212; Apr. 21; Sp. p. 3193; Dr. p. 667; Gaz. vol. 133; p. 1755.
Lifter: *See* Shock-lifter.
Lifting device. W. F. Huttinger. No. 883,805; Apr. 7; Sp. p. 261; Dr. p. 48; Gaz. vol. 133; p. 1234.
Lifting-jack. R. O. Hopkinson and R. L. Edgcombe. No. 885,050; Apr. 21; Sp. p. 2828; Dr. p. 598; Gaz. vol. 133; p. 1702.
Light: *See* Incandescent light.

Lighter. A. E. Caughey. No. 884,128; Apr. 7; Sp. p. 973; Dr. p. 202; Gaz. vol. 133; p. 1342.
Lighting-fixtures, Canopy attachment for. G. W. Cassidy. No. 885,017; Apr. 21; Sp. p. 2754; Dr. p. 584; Gaz. vol. 133; p. 1691.
Limekiln. P. J. Buckley. No. 885,719; Apr. 28; Sp. p. 4217; Dr. pp. 882–3; Gaz. vol. 133; p. 1946.
Line-casting machines, Galley for. D. S. Kennedy. No. 884,022; Apr. 7; Sp. p. 716; Dr. p. 145; Gaz. vol. 133; p. 1307.
Linoleum, Inlaid. T. T. Hollinger. No. 884,732; Apr. 14; Sp. p. 2183; Dr. p. 463; Gaz. vol. 133; p. 1568.
Linoleum, Pressing machinery for use in the manufacture of inlaid. E. Batten. No. 885,565; Apr. 21; Sp. p 3912; Dr. p. 817; Gaz. vol. 133; p. 1868.
Linotype-machine. J. G. Holbourns and H. A. Longhurst. No. 885,156; Apr. 21; Sp. p. 3061; Dr. p. 643; Gaz. vol. 133; p. 1736.
Linotype-machines, Cabinet for liners and blades for. T. F. Muldoon. No. 885,777; Apr. 28; Sp. p. 4339; Dr. p. 910; Gaz. vol. 133; p. 1965.
Linotype-machines, Signal attachment for. D. S. Knox. No. 884,934; Apr. 14; Sp. p. 2587; Dr. pp. 545–6; Gaz. vol. 133; p. 1632.
Liquid-depth gage. H. E. Dobson. No. 884,370; Apr. 14; Sp. p. 1434; Dr. p. 306; Gaz. vol. 133; p. 1449.
Liquids, Apparatus for automatically discharging. A. Friestman. No. 884,522; Apr. 14; Sp. p. 1727; Dr. p. 371; Gaz. vol. 133; p. 1497.
Liquids, Apparatus for automatically discharging. E. W. Deming. No. 885,450; Apr. 21; Sp. p. 3659; Dr. p. 767; Gaz. vol. 133; p. 1833.
Liquids, Apparatus for separating solids from. E. W. Deming. No. 885,451; Apr. 21; Sp. p. 3661; Dr. p. 768; Gaz. vol. 133; p. 1833.
Liquids, Separating solids from. E. W. Deming. No. 885,452; Apr. 21; Sp. p. 4718; Dr. pp. 991–2; Gaz. vol. 133; p. 2026.
Loader. T. J. Qualley. No. 885,932; Apr. 28; Sp. p. 4727; Dr. p. 1101; Gaz. vol. 133; p. 2111.
Loading device. W. F. Klewitter. No. 886,221; Apr. 28; Sp. p. 5227; Dr. p. 1101; Gaz. vol. 133; p. 2111.
Loading device for grain, &c. H. E. Hawkins. No. 885,923; Apr. 28; Sp. p. 4649; Dr. p. 979; Gaz. vol. 133; p. 2015.
Lock: *See* Box-lock; Cylinder-lock; Door-lock; Indicator-lock; Keyless lock; Nut-lock; Padlock; Rail-lock; Sash-lock; Switch-point lock; Time-lock; Wheel-lock.
Lock. J. Phillips. No. 884,414; Apr. 14; Sp. p. 1505; Dr. p. 323; Gaz. vol. 133; p. 1463.
Lock. A. Huber. No. 884,586; Apr. 14; Sp. p. 1852; Dr. p. 398; Gaz. vol. 133; p. 1519.
Lock. F. S. Allano. No. 885,214; Apr. 21; Sp. p. 3194; Dr. p. 668; Gaz. vol. 133; p. 1755.
Lock. W. W. Winslow. No. 885,557; Apr. 21; Sp. p. 3890; Dr. p. 813; Gaz. vol. 133; p. 1865.
Lock. W. W. Winslow. No. 885,558; Apr. 21; Sp. p. 3892; Dr. p. 814; Gaz. vol. 133; p. 1865.
Lock. A. H. Sparling. No. 885,964; Apr. 28; Sp. p. 4743; Dr. p. 996; Gaz. vol. 133; p. 2030.
Lock. A. Lawrence. No. 886,139; Apr. 28; Sp. p. 5092; Dr. pp. 1068–9; Gaz. vol. 133; p. 2085.
Lock. H. F. Keil. No. 886,219; Apr. 28; Sp. p. 5223; Dr. p. 1100; Gaz. vol. 133; p. 2110.
Lock and latch. D. H. Burtch. No. 885,225; Apr. 21; Sp. p. 3217; Dr. p. 671; Gaz. vol. 133; p. 1760.
Lock and latch, Combined. W. C. Brown. No. 884,400; Apr. 14; Sp. p. 1598; Dr. pp. 344–5; Gaz. vol. 133; p. 1478.
Lock indicator, Door-. H. G. Voight and C. J. Caley. No. 884,996; Apr. 14; Sp. p. 2704; Dr. p. 573; Gaz. vol. 133; p. 1650.
Locking device. A. M. de Oca. No. 884,290; Apr. 7; Sp. p. 1260; Dr. p. 264; Gaz. vol. 133; p. 1393.
Locking device. J. D. Ripson and E. G. Sampson. No. 885,790; Apr. 28; Sp. p. 4364; Dr. p. 916; Gaz. vol. 133; p. 1969.
Locking device. E. E. Vore. No. 886,165; Apr. 28; Sp. p. 5133; Dr. p. 1079; Gaz. vol. 133; p. 2092.
Locomotive. E. C. Ketchum. No. 885,055; Apr. 21; Sp. p. 2840; Dr. p. 603; Gaz. vol. 133; p. 1703.
Locomotive-boiler. J. J. Gage. No. 884,013; Apr. 7; Sp. p. 698; Dr. p. 141; Gaz. vol. 133; p. 1304.
Locomotive fire-boxes: Attachment for promoting fuel combustion in. F. L. Holcomb. No. 884,926; Apr. 14; Sp. p. 2576; Dr. p. 542; Gaz. vol. 133; p. 1629.
Locomotive sanding apparatus. A. O. Martin and C. A. Hahnel. No. 884,282; Apr. 7; Sp. p. 1245; Dr. p. 262; Gaz. vol. 133; p. 1390.
Locomotives, Automatic reflector for. N. A. Terrell. No. 885,679; Apr. 21; Sp. p. 4125; Dr. p. 863; Gaz. vol. 133; p. 1904.
Locomotives, Train control for electric accumulator-. O. Böhm. No. 884,007; Apr. 7; Sp. p. 687; Dr. p. 138; Gaz. vol. 133; p. 1302.
Logging means. S. J. Davis. No. 886,287; Apr. 28; Sp. p. 5358; Dr. pp. 1126–7; Gaz. vol. 133; p. 2135.
Loom filling-replenishing mechanism. G. O. Draper. No. 884,723; Apr. 14; Sp. p. 2169; Dr. p. 461; Gaz. vol. 133; p. 1596.
Loom, Hair-fabric. B. Knittel. No. 883,810; Apr. 7; Sp. p. 274; Dr. p. 50; Gaz. vol. 133; p. 1239.
Loom multiplier mechanism. E. H. Ryon. No. 884,802; Apr. 14; Sp. p. 2458; Dr. pp. 517–18; Gaz. vol. 133; p. 1611.
Loom, Narrow-ware. E. H. Ryon. No. 884,614; Apr. 14; Sp. p. 1915; Dr. p. 411; Gaz. vol. 133; p. 1528.
Loom shedding mechanism. E. H. Ryon. No. 884,613; Apr. 14; Sp. p. 1912; Dr. pp. 410–11; Gaz. vol. 133; p. 1527.
Loom stop-motion. F. O'Donnell. No. 886,150; Apr. 28; Sp. p. 5110; Dr. p. 1073; Gaz. vol. 133; p. 2088.
Loom stop-motion. B. F. Bobo. No. 886,177; Apr. 28; Sp. p. 5150; Dr. p. 1083; Gaz. vol. 133; p. 2096.
Loom warp stop-motion. G. B. Ambler. No. 885,130; Apr. 21; Sp. p. 3093; Dr. pp. 633–4; Gaz. vol. 133; p. 1728.
Loom warp stop-motion. A. E. Rhoades. No. 885,179; Apr. 21; Sp. p. 3110; Dr. p. 655; Gaz. vol. 133; p. 1743.
Loom, Weft-replenishing. R. Crompton. No. 885,021; Apr. 21; Sp. p. 2760; Dr. pp. 585–6; Gaz. vol. 133; p. 1693.
Looms for weaving, Dobby for. H. Schwarzenbach and G. Lier. No. 883,975; Apr. 7; Sp. p. 621; Dr. pp. 124–5; Gaz. vol. 133; p. 1291.
Lotion and toilet wash. J. L. Hill. No. 885,154; Apr. 21; Sp. p. 3059; Gaz. vol. 133; p. 1735.
Lubricating apparatus. A. Szántó. No. 885,399; Apr. 21; Sp. p. 3578; Dr. p. 748; Gaz. vol. 133; p. 1817.
Lubricating device. B. F. Campbell. (Reissue.) No. 12,785; Apr. 28; Sp. p. 5496; Dr. p. 1149; Gaz. vol. 133; p. 2153.
Lubricator: *See* Axle-lubricator; Eccentric-lubricator; Guide-lubricator.
Lubricator. A. Winton. No. 884,118; Apr. 7; Sp. p. 941; Dr. p. 197; Gaz. vol. 133; p. 1338.
Lubricator. R. F. Moore. No. 886,062; Apr. 28; Sp. p. 4941; Dr. p. 1039; Gaz. vol. 133; p. 2060.
Lumber-loading device. R. E. Coad. No. 884,642; Apr. 14; Sp. p. 2003; Dr. p. 429; Gaz. vol. 133; p. 1537.
Lunch-box, Folding. E. Lapointe. No. 884,824; Apr. 14; Sp. p. 2372; Dr. p. 499; Gaz. vol. 133; p. 1599.
Mail-bag catcher and deliverer. G. W. Harris. No. 883,877; Apr. 7; Sp. p. 421; Dr. p. 83; Gaz. vol. 133; p. 1257.
Mail-bag catcher and deliverer. J. Anderson. No. 885,216; Apr. 21; Sp. p. 3200; Dr. pp. 668–9; Gaz. vol. 133; p. 1756.
Mail-bag catcher and deliverer. J. Wood. No. 885,657; Apr. 21; Sp. p. 4082; Dr. p. 854; Gaz. vol. 133; p. 1896.
Mail-bag catching and delivering apparatus. N. J. Nelson. No. 884,034; Apr. 7; Sp. p. 741; Dr. p. 153; Gaz. vol. 133; p. 1310.
Mail-bag catching and delivering apparatus. E. F. Hull. No. 884,602; Apr. 14; Sp. p. 2052; Dr. pp. 438–9; Gaz. vol. 133; p. 1544.
Mail-bag deliverer. J. F. Black. No. 884,310; Apr. 7; Sp. p. 1289; Dr. p. 273; Gaz. vol. 133; p. 1398.
Mail-bag-receiving device. C. Thoen. No. 885,690; Apr. 21; Sp. p. 4127; Dr. p. 864; Gaz. vol. 133; p. 1904.
Mail-bags and the like, Apparatus for catching and delivering. B. L. Toquet. No. 885,889; Apr. 28; Sp. p. 4560; Dr. p. 956; Gaz. vol. 133; p. 2003.
Mail-box. S. J. Felknor. No. 885,460; Apr. 21; Sp. p. 3679; Dr. pp. 770–1; Gaz. vol. 133; p. 1836.
Mail-box signal. W. H. Voss. No. 884,964; Apr. 14; Sp. p. 2649; Dr. p. 563; Gaz. vol. 133; p. 1641.
Mail-carrier. R. Chapman. No. 883,937; Apr. 7; Sp. p. 543; Dr. pp. 107–8; Gaz. vol. 133; p. 1279.
Mail catcher and deliverer, Railway. W. T. Sebree. No. 884,868; Apr. 14; Sp. p. 2468; Dr. pp. 519–20; Gaz. vol. 133; p. 1613.
Mail-crane. A. C. McCord. No. 884,407; Apr. 14; Sp. p. 1492; Dr. p. 320; Gaz. vol. 133; p. 1461.
Mail-handling apparatus. W. C. Thornton. No. 884,240; Apr. 7; Sp. p. 1178; Dr. pp. 248–9; Gaz. vol. 133; p. 1378.
Mail-matter stamping and sealing machine. E. C. Morris and L. J. Hall. No. 884,837; Apr. 14; Sp. p. 2393; Dr. pp. 504–6; Gaz. vol. 133; p. 1603.
Mail-matter stamping and sealing machine. E. C. Morris and L. J. Hall. No. 884,838; Apr. 14; Sp. p. 2411; Dr. pp. 506–8; Gaz. vol. 133; p. 1604.
Mail-pouch catcher. E. J. Swonley. No. 886,163; Apr. 28; Sp. p. 5130; Dr. p. 1078; Gaz. vol. 133; p. 2092.
Mail-pouch-delivering apparatus. C. A. Willis. No. 886,334; Apr. 28; Sp. p. 5489; Dr. p. 1149; Gaz. vol. 133; p. 2152.
Mail-pouch-delivery device. W. A. Virgils. No. 884,782; Apr. 14; Sp. p. 2300; Dr. p. 484; Gaz. vol. 133; p. 1585.
Mail-sack. G. Smoot. No. 886,264; Apr. 28; Sp. p. 5309; Dr. p. 1118; Gaz. vol. 133; p. 2126.
Mail-sack-delivering apparatus. T. J. Grace. No. 886,290; Apr. 28; Sp. p. 5366; Dr. p. 1128; Gaz. vol. 133; p. 2136.
Mailer, Coin-. G. W. Collings. No. 885,724; Apr. 28; Sp. p. 4227; Dr. p. 886; Gaz. vol. 133; p. 1948.
Malt by means of chlorid of lime or other hypochlorite salts, Preparing. J. Effront. No. 884,725; Apr. 14; Sp. p. 2173; Gaz. vol. 133; p. 1566.
Malting apparatus. E. G. Adlam. No. 883,848; Apr. 7; Sp. p. 359; Dr. p. 70; Gaz. vol. 133; p. 1248.
Malting apparatus. W. P. Rice. No. 885,291; Apr. 21; Sp. p. 3336; Dr. pp. 697–8; Gaz. vol. 133; p. 1781.
Manacle. B. L. Ward. No. 885,811; Apr. 28; Sp. p. 4417; Dr. p. 926; Gaz. vol. 133; p. 1977.
Mandolin. F. Lang. No. 886,137; Apr. 28; Sp. p. 5090; Dr. p. 1068; Gaz. vol. 133; p. 2084.
Manhole-lid. H. A. E. Liebert. No. 883,965; Apr. 7; Sp. p. 604; Dr. p. 120; Gaz. vol. 133; p. 1288.
Manifolding apparatus. C. W. Byham. No. 883,694; Apr. 7; Sp. p. 20; Dr. pp. 4–5; Gaz. vol. 133; p. 1199.
Manifolding device. A. T. Moore. No. 883,900; Apr. 7; Sp. p. 465; Dr. pp. 91–2; Gaz. vol. 133; p. 1266.
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Measuring device. E. C. Adams. No. 886,106; Apr. 28; Sp. p. 5024; Dr. p. 1056; Gaz. vol. 133; p. 2074.
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Measuring-mold. A. T. Moore. No. 883,898; Apr. 7; Sp. p. 463; Dr. p. 91; Gaz. vol. 133; p. 1265.
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Micas, Making artificial. F. J. Machalske. No. 885,934; Apr. 28; Sp. p. 4670; Gaz. vol. 133; p. 2018.
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Milk-cooling apparatus. J. Tillotson. No. 884,689; Apr. 14; Sp. p. 2098; Dr. p. 448; Gaz. vol. 133; p. 1553.
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Milker, Cow-. W. M. Mehring. No. 885,355; Apr. 21; Sp. p. 3485; Dr. p. 727; Gaz. vol. 133; p. 1803.
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Mill: *See* Coffee-mill; Grinding or crushing mill; Grinding or mixing mill; Pulverizing-mill; Rolling-mill; Sawmill.
Milling-machine. V. J. Wahlstrom. No. 884,243; Apr. 7; Sp. p. 1183; Dr. p. 240; Gaz. vol. 133; p. 1379.
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Miter-box. J. McCune. No. 886,238; Apr. 28; Sp. p. 5258; Dr. p. 1108; Gaz. vol. 133; p. 2117.
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Mixer, Apparatus for feeding materials to a. A. L. Post. No. 885,951; Apr. 28; Sp. p. 4713; Dr. p. 991; Gaz. vol. 133; p. 2025.
Moistening machine, Tape-. C. Senne. No. 885,385; Apr. 21; Sp. p. 3553; Dr. p. 743; Gaz. vol. 133; p. 1814.
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Mold. E. M. Walker. No. 884,965; Apr. 14; Sp. p. 2050; Dr. p. 503; Gaz. vol. 133; p. 1641.
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Ores containing arsenic, Treating. T. B. McGhie. No. 885,071; Apr. 21; Sp. p. 2863; Gaz. vol. 133; p. 1708.
Ores, Oxidizing. B. E. Eldred. No. 885,328; Apr. 21; Sp. p. 3428; Dr. p. 715; Gaz. vol. 133; p. 1794.
Ores, Separating the liquid from the solid portions of treated. E. P. Lynch. No. 885,004; Apr. 14; Sp. p. 2716; Dr. p. 576; Gaz. vol. 133; p. 1652.
Organ. E. de Kleist. No. 884,094; Apr. 7; Sp. p. 859; Dr. p. 181; Gaz. vol. 133; p. 1330.
Ornamental article. R. W. Booth. No. 884,998; Apr. 14; Sp. p. 2707; Dr. p. 574; Gaz. vol. 133; p. 1651.
Oscillation-receiver. G. W. Pickard. No. 886,154; Apr. 28; Sp. p. 5116; Dr. p. 1075; Gaz. vol. 133; p. 2090.
Oven, Baking-. I. H. Pawlick. No. 885,173; Apr. 21; Sp. p. 3103; Dr. pp. 653–4; Gaz. vol. 133; p. 1741.
Oven, Portable revolving baker's gas-. S. Stewart. No. 885,702; Apr. 21; Sp. p. 4170; Dr. pp. 873–4; Gaz. vol. 133; p. 1910.
Overflow-gate, Automatic. H. A. Brooks. No. 884,564; Apr. 14; Sp. p. 1812; Dr. p. 389; Gaz. vol. 133; p. 1512.
Overshoe, Heelless. P. H. Margulis. No. 885,628; Apr. 21; Sp. p. 4017; Dr. p. 839; Gaz. vol. 133; p. 1887.
Package. G. H. Patterson and A. Watson. No. 883,738; Apr. 7; Sp. p. 119; Dr. p. 21; Gaz. vol. 133; p. 1212.
Package-box. I. J. Kuert. No. 884,338; Apr. 7; Sp. p. 1345; Dr. p. 287; Gaz. vol. 133; p. 1408.
Package for cotton-batting. D. F. Fowler. No. 884,574; Apr. 14; Sp. p. 1835; Dr. p. 393; Gaz. vol. 133; p. 1515.
Packaging-machine. A. Day. No. 885,733; Apr. 28; Sp. p. 4248; Dr. p. 890; Gaz. vol. 133; p. 1951.
Packing-case, Sheet-metal. A. T. Kruse. No. 884,669; Apr. 14; Sp. p. 2063; Dr. p. 441; Gaz. vol. 133; p. 1546.
Packing-case, Sheet-metal. A. T. Kruse. No. 884,670; Apr. 14; Sp. p. 2065; Dr. p. 441; Gaz. vol. 133; p. 1547.
Packing, Cylinder-. J. K. Williams. No. 885,556; Apr. 21; Sp. p. 3888; Dr. p. 813; Gaz. vol. 133; p. 1865.
Packing, Fluid. S. Z. de Ferranti. No. 885,032; Apr. 21; Sp. p. 2791; Dr. p. 591; Gaz. vol. 133; p. 1696.
Packing for piston-rods, valve-rods, and the like, Metallic. W. Harbinger. No. 883,799; Apr. 7; Sp. p. 248; Dr. p. 45; Gaz. vol. 133; p. 1232.
Packing for stuffing-boxes or similar devices. A. R. Trist. No. 885,405; Apr. 21; Sp. p. 3586; Dr. p. 751; Gaz. vol. 133; p. 1819.
Packing, Piston-. J. A. Scott. No. 885,652; Apr. 21; Sp. p. 4071; Dr. p. 851; Gaz. vol. 133; p. 1894.
Packing, Rod-. J. A. Scott. No. 885,651; Apr. 21; Sp. p. 4069; Dr. p. 850; Gaz. vol. 133; p. 1894.
Pad: *See* Collar-pad; Needle-pad; Table-pad.
Pad. O. Neuberger. No. 885,778; Apr. 28; Sp. p. 4340; Dr. p. 910; Gaz. vol. 133; p. 1965.
Padlock. O. Hummel. No. 885,253; Apr. 21; Sp. p. 3268; Dr. p. 682; Gaz. vol. 133; p. 1769.
Pail cover, Milk-. M. C. Mason. No. 883,968; Apr. 7; Sp. p. 608; Dr. p. 121; Gaz. vol. 133; p. 1288.
Pail heating device, Dinner-. J. W. McKay and C. E. Waugh. No. 885,636; Apr. 21; Sp. p. 4030; Dr. p. 842; Gaz. vol. 133; p. 1889.
Pail, Oyster- J. G. Reber. No. 886,074; Apr. 28; Sp. p. 4960; Dr. p. 1043; Gaz. vol. 133; p. 2064.
Paint. A. L. Berry. No. 885,973; Apr. 28; Sp. p. 4769; Gaz. vol. 133; p. 2033.
Paint and color exhibiting device. I. N. Hockaday. No. 886,057; Apr. 28; Sp. p. 4933; Dr. p. 1037; Gaz. vol. 133; p. 2059.
Paint and making same, Mixed. W. F. Doerflinger. No. 884,475; Apr. 14; Sp. p. 1629; Gaz. vol. 133; p. 1483.
Paint and varnish removing preparation. W. Stuhlmiller. No. 885,396; Apr. 21; Sp. p. 3560; Gaz. vol. 133; p. 1816.
Paint-remover and making the same. F. X. Govers. No. 885,151; Apr. 21; Sp. p. 3055; Gaz. vol. 133; p. 1735.
Painting machine, Graining card-. J. W. and O. Stocker. No. 885,102; Apr. 21; Sp. p. 2927; Dr. pp. 621–2; Gaz. vol. 133; p. 1718.
Pan: *See* Bed-pan; Dish-pan.
Paneling. H. M. Robinson. No. 885,524; Apr. 21; Sp. p. 3809; Dr. p. 800; Gaz. vol. 133; p. 1855.
Paper bag. R. Geldmacher. No. 883,797; Apr. 7; Sp. p. 246; Dr. p. 44; Gaz. vol. 133; p. 1231.
Paper-feed-carriage alarm. E. H. Cottrill. No. 885,443; Apr. 21; Sp. p. 3647; Dr. p. 765; Gaz. vol. 133; p. 1830.
Paper-feeding machine. T. C. Dexter. No. 886,117; Apr. 28; Sp. p. 5044; Dr. p. 1059–60; Gaz. vol. 133; p. 2078.
Paper-feeding machine. T. C. Dexter. No. 886,118; Apr. 28; Sp. p. 5052; Dr. p. 1060–1; Gaz. vol. 133; p. 2079.
Paper-holder. S. B. Tilly, M. O. and J. G. Rehfuss. No. 886,092; Apr. 28; Sp. p. 4992; Dr. p. 1050; Gaz. vol. 133; p. 2069.
Paper machine, Roll-toilet-. G. H. Sibley. No. 886,332; Apr. 28; Sp. p. 5482; Dr. p. 1148; Gaz. vol. 133; p. 2151.
Paper-making machine, Embossed-wall-. A. Leisel. No. 885,351; Apr. 21; Sp. p. 3479; Dr. p. 725; Gaz. vol. 133; p. 1802.
Paper-roll plugs, Machine for making. H. Brubaker. No. 885,718; Apr. 28; Sp. p. 4215; Dr. pp. 881–2; Gaz. vol. 133; p. 1946.
Paper tubes, Machine for the production of. J. Goby. No. 883,949; Apr. 7; Sp. p. 563; Dr. pp. 112–15; Gaz. vol. 133; p. 1283.
Paper vessel. C. T. Bloomer. No. 883,855; Apr. 7; Sp. p. 374; Dr. p. 73; Gaz. vol. 133; p. 1251.
Paper vessel. I. W. Hollett. No. 886,058; Apr. 28; Sp. p. 4934; Dr. p. 1037; Gaz. vol. 133; p. 2059.
Pasteurizing apparatus. J. T. H. Paul. No. 886,012; Apr. 28; Sp. p. 4835; Dr. pp. 1015–17; Gaz. vol. 133; p. 2045.
Pasteurizing apparatus. J. T. H. Paul. No. 886,013; Apr. 28; Sp. p. 4845; Dr. pp. 1017–20; Gaz. vol. 133; p. 2045.
Pasting and feeding machine. J. J. Sullivan. No. 885,104; Apr. 21; Sp. p. 2930; Dr. p. 622; Gaz. vol. 133; p. 1719.
Pasting-machine. J. R. Houchin. No. 884,927; Apr. 14; Sp. p. 2577; Dr. p. 542; Gaz. vol. 133; p. 1629.
Patrol-box for watchmen's time-keys. A. A. Newman. No. 883,736; Apr. 7; Sp. p. 114; Dr. p. 20; Gaz. vol. 133; p. 1211.

Pattern-marking device. J. Avansino. No. 886,170; Apr. 28; Sp. p. 5140; Dr. p. 1081; Gaz. vol. 133; p. 2094.
Pattern, Tailor's. G. Madeo. No. 884,940; Apr. 14; Sp. p. 2596; Dr. p. 548; Gaz. vol. 133; p. 1633.
Pedal, Folding. T. Danquard. No. 884,643; Apr. 14; Sp. p. 2005; Dr. p. 429; Gaz. vol. 133; p. 1538.
Pen and pencil holder. E. L. Sanda. No. 884,865; Apr. 14; Sp. p. 2464; Dr. p. 519; Gaz. vol. 133; p. 1612.
Pen for holding swine. J. C. Mabbott. No. 884,179; Apr. 7; Sp. p. 1069; Dr. p. 223; Gaz. vol. 133; p. 1358.
Pen, Fountain-. F. J. and A. Oberdoerster. No. 884,412; Apr. 14; Sp. p. 1459; Dr. p. 322; Gaz. vol. 133; p. 1463.
Pen, Fountain-. J. A. Holland. No. 885,753; Apr. 28; Sp. p. 4292; Dr. p. 909; Gaz. vol. 133; p. 1957.
Pen, Quill. E. W. Bodmer. No. 885,317; Apr. 21; Sp. p. 3406; Dr. p. 712; Gaz. vol. 133; p. 1790.
Pen retainer, Fountain-. L. D. Van Valkenburg. No. 886,095; Apr. 28; Sp. p. 5001; Dr. p. 1052; Gaz. vol. 133; p. 2070.
Pens and pencils, Pocket-clip for fountain-. A. K. Watts. No. 883,767; Apr. 7; Sp. p. 173; Dr. p. 31; Gaz. vol. 133; p. 1221.
Penholder. R. E. Pelckert. No. 884,849; Apr. 14; Sp. p. 2440; Dr. p. 512; Gaz. vol. 133; p. 1608.
Penholder. W. Rittweger. No. 884,859; Apr. 14; Sp. p. 2452; Dr. p. 516; Gaz. vol. 133; p. 1610.
Penholder. W. Krieger. No. 886,060; Apr. 28; Sp. 4938; Dr. p. 1038; Gaz. vol. 133; p. 2060.
Pencil. C. A. Smith. No. 885,190; Apr. 21; Sp. p. 3136; Dr. p. 659; Gaz. vol. 133; p. 1748.
Pencil. F. Thompson. No. 885,404; Apr. 21; Sp. p. 3585; Dr. p. 750; Gaz. vol. 133; p. 1819.
Pencil-sharpener. N. T. Kesler. No. 883,495; Apr. 14; Sp. p. 1677; Dr. p. 361; Gaz. vol. 133; p. 1489.
Perambulators, Canopy-top attachment for. O. N. Turner. No. 884,543; Apr. 14; Sp. p. 1773; Dr. p. 381; Gaz. vol. 133; p. 1505.
Perch, Poultry-. C. F. Lucas. No. 884,396; Apr. 14; Sp. p. 1477; Dr. p. 316; Gaz. vol. 133; p. 1458.
Percolator. E. S. Glover. No. 885,037; Apr. 21; Sp. p. 2802; Dr. p. 593; Gaz. vol. 133; p. 1698.
Percussive-apparatus coupling. C. R. Newton. No. 886,240; Apr. 28; Sp. p. 5262; Dr. p. 1106; Gaz. vol. 133; p. 2118.
Perforating-machine, Power. W. G. Capitaine. No. 885,587; Apr. 21; Sp. p. 3938; Dr. pp. 822–3; Gaz. vol. 133; p. 1873.
Phonograph. H. Schröder. No. 884,216; Apr. 7; Sp. p. 1136; Dr. p. 239; Gaz. vol. 133; p. 1370.
Phonograph-machine, Multiple. J. Roever. No. 883,971; Apr. 7; Sp. p. 611; Dr. pp. 121–2; Gaz. vol. 133; p. 1289.
Phonograph registering mechanism, Multiple-. J. Roever. No. 883,970; Apr. 7; Sp. p. 610; Dr. p. 121; Gaz. vol. 133; p. 1289.
Phonograph-reproducer. H. Baldwin. No. 884,062; Apr. 7; Sp. p. 793; Dr. p. 167; Gaz. vol. 133; p. 1320.
Photograph-printing frame. R. Du Perrex. No. 884,804; Apr. 14; Sp. p. 2340; Dr. p. 492; Gaz. vol. 133; p. 1592.
Photographs, Production of colored. W. Merckens and J. H. Smith. No. 885,066; Apr. 21; Sp. p. 2856; Gaz. vol. 133; p. 1707.
Photographers, Telemeter for the use of. F. W. Riches. No. 884,955; Apr. 14; Sp. p. 2629; Dr. pp. 555–6; Gaz. vol. 133; p. 1638.
Photographic cartridge-film, Flexible. F. W. Lovejoy. No. 883,819; Apr. 7; Sp. p. 288; Dr. p. 53; Gaz. vol. 133; p. 1239.
Photographic images, Manufacture of colored. L. Didier. No. 885,453; Apr. 21; Sp. p. 3664; Gaz. vol. 133; p. 1834.
Photographic-printing apparatus. J. W. Vickers. No. 884,056; Apr. 7; Sp. p. 780; Dr. p. 163; Gaz. vol. 133; p. 1318.
Photographic-printing apparatus. T. T. Sabroe. No. 884,297; Apr. 7; Sp. p. 1269; Dr. p. 268; Gaz. vol. 133; p. 1395.
Photographic-printing apparatus. P. Latta. No. 884,740; Apr. 14; Sp. p. 2204; Dr. p. 466; Gaz. vol. 133; p. 1571.
Photographic-printing frame. J. Nelson. No. 885,637; Apr. 21; Sp. p. 4031; Dr. p. 843; Gaz. vol. 133; p. 1889.
Photographic shutter. E. L. Hall. No. 885,612; Apr. 21; Sp. p. 3981; Dr. pp. 831–2; Gaz. vol. 133; p. 1882.
Photometer. J. P. Meyer. No. 884,835; Apr. 14; Sp. p. 2390; Dr. p. 503; Gaz. vol. 133; p. 1602.
Pianissimo device. H. L. Decker. No. 884,903; Apr. 14; Sp. p. 2518; Dr. p. 532; Gaz. vol. 133; p. 1622.
Piano case, Player-. H. J. Kiefer. No. 886,133; Apr. 28; Sp. p. 5083; Dr. pp. 1066–7; Gaz. vol. 133; p. 2083.
Piano-frame. G. G. Hasbrouck. No. 885,247; Apr. 21; Sp. p. 3258; Dr. p. 680; Gaz. vol. 133; p. 1767.
Piano-hammers, Making felt for. J. Marson. No. 884,597; Apr. 14; Sp. p. 1888; Dr. p. 405; Gaz. vol. 133; p. 1523.
Piano, Manually and pneumatically operated automatic. J. W. Davis. No. 884,320; Apr. 7; Sp. p. 1306; Dr. pp. 276–7; Gaz. vol. 133; p. 1402.
Piano-pedal. E. P. Sedgwick. No. 884,220; Apr. 7; Sp. p. 1142; Dr. p. 240; Gaz. vol. 133; p. 1371.
Piano sounding-board. A. Krieghoff. No. 885,261; Apr. 21; Sp. p. 3280; Dr. pp. 685–6; Gaz. vol. 133; p. 1771.
Piano-violin. G. Walch. No. 884,785; Apr. 14; Sp. p. 2310; Dr. p. 485; Gaz. vol. 133; p. 1586.
Pianoforte-case. J. A. Hussey. No. 884,049; Apr. 7; Sp. p. 853; Dr. p. 179; Gaz. vol. 133; p. 1328.
Picker: *See* Cotton-picker; Strawberry-picker.
Picture effects, Producing moving-. E. Keen. No. 885,674; Apr. 21; Sp. p. 4113; Dr. p. 861; Gaz. vol. 133; p. 1902.
Picture-frame corner-piece. C. C. Faucette. No. 884,083; Apr. 7; Sp. p. 846; Dr. p. 178; Gaz. vol. 133; p. 1326.
Picture-hanger. L. Thomas. No. 884,538; Apr. 14; Sp. p. 1760; Dr. p. 378; Gaz. vol. 133; p. 1503.
Picture-hanger. H. McPatrick. No. 885,172; Apr. 21; Sp. p. 3102; Dr. pp. 652–3; Gaz. vol. 133; p. 1741.
Pile-driving machine. R. F. Bennett. No. 884,631; Apr. 14; Sp. p. 1947; Dr. p. 418; Gaz. vol. 133; p. 1533.
Piles, Brace for sheet-metal. A. P. Stocker. No. 886,089; Apr. 28; Sp. p. 4985; Dr. p. 1048; Gaz. vol. 133; p. 2060.
Piling. M. R. Vanderkloot. No. 884,545; Apr. 14; Sp. p. 1779; Dr. p. 383; Gaz. vol. 133; p. 1506.
Piling, Interlocking sheet-metal. S. T. Fiero. No. 884,270; Apr. 7; Sp. p. 1226; Dr. p. 258; Gaz. vol. 133; p. 1387.
Pin: *See* Clothes-pin.
Pin. C. M. Fox. No. 885,334; Apr. 21; Sp. p. 3439; Dr. p. 717; Gaz. vol. 133; p. 1796.
Pin and pin-joint. A. Kilstrom. No. 884,496; Apr. 14; Sp. p. 1677; Dr. p. 361; Gaz. vol. 133; p. 1489.
Pin-fastener. I. Redles, (now by marriage I. R. Shill.) No. 884,611; Apr. 14; Sp. p. 1910; Dr. p. 410; Gaz. vol. 133; p. 1527.
Pins, nails, and the like, Apparatus for filling packing-drawers with. C. A. Leuenberger. No. 884,743; Apr. 14; Sp. p. 2213; Dr. p. 467; Gaz. vol. 133; p. 1572.
Pipe: *See* Tobacco-pipe; Trick-pipe.
Pipe-bender. E. A. Brown. No. 885,139; Apr. 21; Sp. p. 3023; Dr. p. 637; Gaz. vol. 133; p. 1731.
Pipe bends, fittings, &c., Machine for finishing. H. W. Evans. No. 883,942; Apr. 7; Sp. p. 540; Dr. pp. 109–10; Gaz. vol. 133; p. 1280.
Pipe bracket or support. E. L. Howe. No. 884,661; Apr. 14; Sp. p. 2051; Dr. p. 438; Gaz. vol. 133; p. 1543.
Pipe cleaner, Beer-. O. R. Dickens. No. 885,452; Apr. 21; Sp. p. 3663; Dr. p. 768; Gaz. vol. 133; p. 1833.
Pipe-coupling. S. R. Dresser. No. 884,371; Apr. 14; Sp. p. 1436; Dr. p. 306; Gaz. vol. 133; p. 1450.
Pipe-coupling. G. W. Mason. No. 884,749; Apr. 14; Sp. p. 2224; Dr. p. 470; Gaz. vol. 133; p. 1574.
Pipe-cutter. A. Strong. No. 884,536; Apr. 14; Sp. p. 1756; Dr. p. 377; Gaz. vol. 133; p. 1502.
Pipe fitting, Water-seal vacuum return-. W. E. Tillinghast. No. 885,805; Apr. 28; Sp. p. 4404; Dr. p. 923; Gaz. vol. 133; p. 1974.
Pipe-gripper. W. F. Barron. No. 886,171; Apr. 28; Sp. p. 5141; Dr. p. 1081; Gaz. vol. 133; p. 2094.
Pipe or tube cleaner. E. A. Jablonsky. No. 886,217; Apr. 28; Sp. p. 5221; Dr. p. 1100; Gaz. vol. 133; p. 2109.
Pipe-threading die. J. F. Crudginton. No. 885,144; Apr. 21; Sp. p. 3035; Dr. p. 639; Gaz. vol. 133; p. 1732.
Pipe-threading machine. H. L. E. Peterson. No. 885,175; Apr. 21; Sp. p. 3274; Dr. p. 683; Gaz. vol. 133; p. 1742.
Pipe-union, Flexible. D. G. Jones. No. 885,256; Apr. 21; Sp. p. 3106; Dr. p. 654; Gaz. vol. 133; p. 1770.
Pipe-wrench. F. T. Lestage. No. 883,817; Apr. 7; Sp. p. 286; Dr. p. 53; Gaz. vol. 133; p. 1238.
Pipe-wrench. G. C. Winslow. No. 885,120; Apr. 21; Sp. p. 2984; Dr. p. 630; Gaz. vol. 133; p. 1724.
Pipe-wrench. J. M. Cochran. No. 885,322; Apr. 21; Sp. p. 3414; Dr. p. 713; Gaz. vol. 133; p. 1793.
Pipe-wrench. J. Horst. No. 885,926; Apr. 28; Sp. p. 4656; Dr. p. 981; Gaz. vol. 133; p. 2015.
Pipes, Heating and bending. W. L. Brown. No. 886,036; Apr. 28; Sp. p. 4900; Dr. p. 1030; Gaz. vol. 133; p. 2052.
Pistol. K. Hino and T. Komuro. No. 886,211; Apr. 28; Sp. p. 5210; Dr. pp. 1097–8; Gaz. vol. 133; p. 2108.
Pistol, Automatic. C. P. Clément. No. 885,436; Apr. 21; Sp. p. 3632; Dr. pp. 761–2; Gaz. vol. 133; p. 1828.
Placket-closer. J. L. Brassington. No. 883,692; Apr. 7; Sp. p. 16; Dr. p. 4; Gaz. vol. 133; p. 1198.
Placket-closure for skirts. F. Hofmeister. No. 885,344; Apr. 21; Sp. p. 3463; Dr. p. 722; Gaz. vol. 133; p. 1799.
Planer. A. Gworek. No. 885,611; Apr. 21; Sp. p. 3979; Dr. p. 831; Gaz. vol. 133; p. 1881.
Planer-heads, Adjusting means for. H. B. Ross. No. 885,379; Apr. 21; Sp. p. 3530; Dr. pp. 740–1; Gaz. vol. 133; p. 1811.
Planing machine, Cask-. L. Drexler. No. 884,138; Apr. 7; Sp. p. 994; Dr. pp. 207–8; Gaz. vol. 133; p. 1345.
Plant-protector. E. C. Dawson. No. 884,473; Apr. 14; Sp. p. 1626; Dr. p. 350; Gaz. vol. 133; p. 1482.
Plants, Setting. J. L. Sinclair. No. 885,091; Apr. 21; Sp. p. 2903; Dr. p. 616; Gaz. vol. 133; p. 1715.
Planter. J. C. Atterbury and C. La Plant. No. 884,790; Apr. 14; Sp. p. 2318; Dr. p. 487; Gaz. vol. 133; p. 1588.
Planter. A. Benton and C. D. Jordan. No. 885,136; Apr. 21; Sp. p. 3016; Dr. p. 636; Gaz. vol. 133; p. 1730.
Planter, Corn-. W. S. Hasleu. No. 884,153; Apr. 7; Sp. p. 1028; Dr. pp. 213–14; Gaz. vol. 133; p. 1350.
Planter, Corn-. F. K. Lathrop. No. 886,005; Apr. 28; Sp. p. 4822; Dr. p. 1013; Gaz. vol. 133; p. 2042.
Planter, Wireless check-row. G. F. Seems and G. B. Coply. No. 885,873; Apr. 28; Sp. p. 4534; Dr. p. 951; Gaz. vol. 133; p. 1998.
Planters, Dropping mechanism for corn-. T. C. Roseland. No. 886,253; Apr. 28; Sp. p. 5285; Dr. p. 1114; Gaz. vol. 133; p. 2122.
Planting machine, Potato-. J. Sieffert. No. 885,963; Apr. 28; Sp. p. 4741; Dr. p. 996; Gaz. vol. 133; p. 2029.
Plaster-boards, Molding-table for making. G. Rader. No. 884,953; Apr. 14; Sp. p. 2625; Dr. p. 554; Gaz. vol. 133; p. 1637.
Plaster or composition board. G. Rader. No. 884,954; Apr. 14; Sp. p. 2628; Dr. p. 555; Gaz. vol. 133; p. 1638.
Plate or film holders, Device for closing. R. Schüttauf. No. 883,751; Apr. 7; Sp. p. 140; Dr. p. 26; Gaz. vol. 133; p. 1216.
Plates or tablets, Apparatus for manufacturing compound. M. Winkelström. No. 885,901; Apr. 28; Sp. p. 4583; Dr. pp. 960–1; Gaz. vol. 133; p. 2007.
Plating metallic bodies. G. A. Goodson. (Reissue.) No. 12,779; Apr. 14; Sp. p. 2722; Dr. p. 577; Gaz. vol. 133; p. 1653.
Pliers. C. W. Baker. No. 885,969; Apr. 28; Sp. p. 4751; Dr. p. 998; Gaz. vol. 133; p. 2031.
Plow. H. W. Vla. No. 884,113; Apr. 7; Sp. p. 927; Dr. pp. 194–5; Gaz. vol. 133; p. 1337.
Plow. M. C. Jordan. No. 884,164; Apr. 7; Sp. p. 1050; Dr. p. 219; Gaz. vol. 133; p. 1354.
Plow. A. M. Chase. No. 884,365; Apr. 14; Sp. p. 1417; Dr. p. 303; Gaz. vol. 133; p. 1447.

Plow. T. H. Fuller. No. 884,652; Apr. 14; Sp. p. 2029; Dr. p. 434; Gaz. vol. 133; p. 1541.
Plow. G. A. Anderson. No. 885,563; Apr. 21; Sp. p. 3905; Dr. pp. 815–16; Gaz. vol. 133; p. 1867.
Plow. T. J. Johnson. No. 885,759; Apr. 28; Sp. p. 4306; Dr. p. 903; Gaz. vol. 133; p. 1959.
Plow, Power-driven. A. W. Harpstrite. No. 884,490; Apr. 14; Sp. p. 1662; Dr. p. 358; Gaz. vol. 133; p. 1487.
Plow, Sod-line. J. L. Hart. No. 885,341; Apr. 21; Sp. p. 3458; Dr. p. 720; Gaz. vol. 133; p. 1799.
Plow, Wheel-. W. L. Paul. No. 885,078; Apr. 21; Sp. p. 2874; Dr. p. 610; Gaz. vol. 133; p. 1710.
Plug, Plumber's testing-. J. F. Brunner. No. 884,262; Apr. 7; Sp. p. 1217; Dr. p. 255; Gaz. vol. 133; p. 1385.
Plug, Separable attachment-. O. E. Kenney. No. 884,981; Apr. 14; Sp. p. 2678; Dr. p. 569; Gaz. vol. 133; p. 1646.
Plunging furnace. Z. Szpor. No. 884,875; Apr. 14; Sp. p. 2477; Dr. p. 521; Gaz. vol. 133; p. 1615.
Pneumatic and other drills. M. Hardsocg. No. 884,331; Apr. 7; Sp. p. 1331; Dr. p. 283; Gaz. vol. 133; p. 1406.
Pneumatic brake. W. H. Miller. No. 885,169; Apr. 21; Sp. p. 3097; Dr. p. 651; Gaz. vol. 133; p. 1740.
Pocket safety attachment. J. Felsenstein. No. 885,235; Apr. 21; Sp. p. 3234; Dr. p. 675; Gaz. vol. 133; p. 1763.
Poker-table. I. Mason. No. 885,630; Apr. 21; Sp. p. 4020; Dr. pp. 839–40; Gaz. vol. 133; p. 1887.
Pole. D. W. Krellwitz. No. 884,171; Apr. 7; Sp. p. 1059; Dr. p. 221; Gaz. vol. 133; p. 1355.
Pool-ball rack. H. O. Yewell. No. 884,699; Apr. 14; Sp. p. 2120; Dr. p. 451; Gaz. vol. 133; p. 1556.
Post: *See* Fence-post; Hitching-post; Newel-post.
Post-card shield. P. H. Borden. No. 884,701; Apr. 14; Sp. p. 2122; Dr. p. 452; Gaz. vol. 133; p. 1557.
Post-hole-boring machine. R. Guthrie. No. 885,041; Apr. 21; Sp. p. 2900; Dr. pp. 594–5; Gaz. vol. 133; p. 1699.
Post-hole digger. J. H. Lowry. No. 884,177; Apr. 7; Sp. p. 1067; Dr. p. 222; Gaz. vol. 133; p. 1357.
Posts and poles, Machine for erecting. R. Guthrie. No. 885,042; Apr. 21; Sp. p. 2813; Dr. p. 595; Gaz. vol. 133; p. 1699.
Pot: *See* Coffee-pot; Flower-pot.
Potato-digger. D. Y. and D. E. Hallock. No. 886,322; Apr. 28; Sp. p. 5445; Dr. pp. 1141–2; Gaz. vol. 133; p. 2148.
Potato digger and separator. J. Halbardier. No. 883,876; Apr. 7; Sp. p. 419; Dr. pp. 82–3; Gaz. vol. 133; p. 1257.
Pottery and other ware, Apparatus for decorating. F. Mountford. No. 884,031; Apr. 7; Sp. p. 733; Dr. pp. 148–52; Gaz. vol. 133; p. 1309.
Power: *See* Horse-power.
Power-generating system. J. M. W. Kitchen. No. 883,809; Apr. 7; Sp. p. 267; Dr. p. 49; Gaz. vol. 133; p. 1236.
Power in dredges, Means for utilizing waste. R. M. Wilson. No. 885,900; Apr. 28; Sp. p. 4582; Dr. p. 960; Gaz. vol. 133; p. 2007.
Power, Means for producing motive. J. L. Tate. No. 886,274; Apr. 28; Sp. p. 5329; Dr. p. 1121; Gaz. vol. 133; p. 2125.
Power purposes, Utilizing hot liquids for. A. C. E. Rateau. No. 884,417; Apr. 14; Sp. p. 1508; Dr. p. 324; Gaz. vol. 133; p. 1464.
Power-transmission device for motor-vehicles. F. C. Avery. No. 883,774; Apr. 7; Sp. p. 182; Dr. p. 34; Gaz. vol. 133; p. 1223.
Power-transmission device, Variable-speed. D. M. Dearing. No. 886,191; Apr. 28; Sp. p. 5180; Dr. p. 1091; Gaz. vol. 133; p. 2102.
Precipitates, Purifying. H. H. Dow and W. S. Gates. No. 883,792; Apr. 7; Sp. p. 221; Gaz. vol. 133; p. 1229.
Preserving fish and other alimentary substances, Receptacle for. F. Bringk. No. 884,892; Apr. 14; Sp. p. 2497; Dr. p. 528; Gaz. vol. 133; p. 1619.
Press: *See* Baling-press; Drawing-press; Hay-press; Necktie-press; Printing-press.
Press-box. F. Phelps. No. 885,784; Apr. 28; Sp. p. 4354; Dr. p. 914; Gaz. vol. 133; p. 1907.
Pressing-iron, Gas and air. H. A. Koenig. No. 884,169; Apr. 7; Sp. p. 1056; Dr. p. 220; Gaz. vol. 133; p. 1355.
Pressure-gage. J. S. Kennedy. No. 884,592; Apr. 14; Sp. p. 1864; Dr. pp. 401–2; Gaz. vol. 133; p. 1521.
Pressure-regulator. J. E. Ward. No. 885,812; Apr. 28; Sp. p. 4418; Dr. p. 926; Gaz. vol. 133; p. 1977.
Printing. H. L. Reckard. No. 884,418; Apr. 14; Sp. p. 1511; Dr. p. 324; Gaz. vol. 133; p. 1464.
Printing and stamping machine. J. C. Hansen-Ellehammer and E. A. P. R. Lund. No. 885,616; Apr. 21; Sp. p. 3989; Dr. pp. 833–4; Gaz. vol. 133; p. 1883.
Printing device in cash-registers, Color-. J. Frydmane and L. Chambon. No. 885,464; Apr. 21; Sp. p. 3683; Dr. p. 772; Gaz. vol. 133; p. 1837.
Printing from films or plates, Machine for. C. G. Morgan. No. 884,516; Apr. 14; Sp. p. 1719; Dr. p. 369; Gaz. vol. 133; p. 1495.
Printing-machine. J. L. Firm. No. 883,706; Apr. 7; Sp. p. 61; Dr. p. 9; Gaz. vol. 133; p. 1202.
Printing-plate-making apparatus. J. O. De Wolf. No. 884,369; Apr. 14; Sp. p. 1428; Dr. p. 305; Gaz. vol. 133; p. 1449.
Printing-press. G. Hartman. No. 883,802; Apr. 7; Sp. p. 253; Dr. p. 46; Gaz. vol. 133; p. 1233.
Printing-press. H. F. Bechman. No. 884,123; Apr. 7; Sp. p. 949; Dr. p. 199; Gaz. vol. 133; p. 1340.
Printing-press. J. H. Stonemetz. No. 884,302; Apr. 7; Sp. p. 1278; Dr. p. 270; Gaz. vol. 133; p. 1397.
Printing-press. W. L. Green. No. 885,747; Apr. 28; Sp. p. 4277; Dr. pp. 895–7; Gaz. vol. 133; p. 1955.
Printing-press. A. W. Vaughn. No. 885,895; Apr. 28; Sp. p. 4570; Dr. p. 958; Gaz. vol. 133; p. 2005.
Printing-press folding apparatus. H. P. Hushy. No. 884,587; Apr. 14; Sp. p. 1854; Dr. pp. 398–9; Gaz. vol. 133; p. 1519.
Printing press, Web-. P. F. Cox. No. 884,901; Apr. 14; Sp. p. 2513; Dr. p. 531; Gaz. vol. 133; p. 1622.
Printing-press web-feeding device. P. F. Cox. No. 884,900; Apr. 14; Sp. p. 2509; Dr. p. 530; Gaz. vol. 133; p. 1622.
Printing-presses, Color-printing attachment for. A. P. Harland. No. 885,340; Apr. 21; Sp. p. 3453; Dr. pp. 719–20; Gaz. vol. 133; p. 1798.
Printing-presses, Mechanism for raising and lowering platens of. M. J. Barnett. No. 883,853; Apr. 7; Sp. p. 368; Dr. p. 71; Gaz. vol. 133; p. 1250.
Printing-rolls, Means for inking. F. C. Sixt and W. M. Reichart. No. 884,872; Apr. 14; Sp. p. 2473; Dr. p. 521; Gaz. vol. 133; p. 1614.
Prison-bar. C. L. Jackson and E. N. Loy. No. 886,129; Apr. 28; Sp. p. 5078; Dr. p. 1065; Gaz. vol. 133; p. 2082.
Propeller. A. Gnaegy. No. 885,038; Apr. 21; Sp. p. 2803; Dr. p. 593; Gaz. vol. 133; p. 1698.
Propeller. G. W. Hopkins. No. 885,250; Apr. 21; Sp. p. 3264; Dr. p. 681; Gaz. vol. 133; p. 1768.
Propeller, Reciprocating. W. Dawson. No. 884,474; Apr. 14; Sp. p. 1627; Dr. p. 351; Gaz. vol. 133; p. 1482.
Propeller, Screw-. T. F. J. Truss. No. 885,109; Apr. 21; Sp. p. 2945; Dr. p. 624; Gaz. vol. 133; p. 1720.
Propeller-wheel. H. J. Perkins. No. 885,174; Apr. 21; Sp. p. 3104; Dr. p. 654; Gaz. vol. 133; p. 1742.
Propulsion of ships. E. J. Duff. No. 884,079; Apr. 7; Sp. p. 824; Dr. pp. 173–4; Gaz. vol. 133; p. 1325.
Protocatechuic aldehyde, Manufacturing. G. Stalmann. No. 886,085; Apr. 28; Sp. p. 4977; Gaz. vol. 133; p. 2067.
Protractor and level, Combined. H. E. Gregory. No. 883,798; Apr. 7; Sp. p. 246; Dr. p. 44; Gaz. vol. 133; p. 1231.
Puff-comb. W. S. Bechtold. No. 886,034; Apr. 28; Sp. p. 4897; Dr. pp. 1029–30; Gaz. vol. 133; p. 2051.
Puller: *See* Bean-puller; Beet-puller; Spoke-puller; Staple-puller.
Pulley-block. A. Opsal. (Reissue.) No. 12,776; Apr. 7; Sp. p. 1382; Dr. p. 295; Gaz. vol. 133; p. 1413.
Pulley, Ratchet-cylinder. A. Leatherman. No. 885,060; Apr. 21; Sp. p. 2847; Dr. p. 605; Gaz. vol. 133; p. 1705.
Pulp-treating apparatus. A. S. Caldwell. No. 886,186; Apr. 28; Sp. p. 5168; Dr. pp. 1087–8; Gaz. vol. 133; p. 2100.
Pulverizing-mill. L. D. York. No. 885,211; Apr. 21; Sp. p. 3191; Dr. p. 667; Gaz. vol. 133; p. 1755.
Pump. G. W. Curvin. No. 883,864; Apr. 7; Sp. p. 394; Dr. pp. 76–7; Gaz. vol. 133; p. 1253.
Pump. W. von Oechelhaeuser and C. Steinbecker. No. 884,261; Apr. 7; Sp. p. 1261; Dr. p. 265; Gaz. vol. 133; p. 1393.
Pump, Air-. J. W. Siepermann and E. Fudickar. No. 885,301; Apr. 21; Sp. p. 3361; Dr. p. 703; Gaz. vol. 133; p. 1784.
Pump, Air-. G. W. Kellogg. No. 885,485; Apr. 21; Sp. p. 3718; Dr. p. 782; Gaz. vol. 133; p. 1843.
Pump, Air-lift. O. E. Harris. No. 886,053; Apr. 28; Sp. p. 4928; Dr. p. 1036; Gaz. vol. 133; p. 2057.
Pump attachment. J. Chan. No. 884,265; Apr. 7; Sp. p. 1221; Dr. p. 257; Gaz. vol. 133; p. 1386.
Pump, Balanced. A. P. Smith. No. 885,798; Apr. 28; Sp. p. 4394; Dr. p. 920; Gaz. vol. 133; p. 1972.
Pump, Centrifugal. S. V. Trent. No. 885,108; Apr. 21; Sp. p. 2943; Dr. p. 624; Gaz. vol. 133; p. 1720.
Pump, Centrifugal. R. Salzer. No. 885,867; Apr. 28; Sp. p. 4522; Dr. p. 949; Gaz. vol. 133; p. 1995.
Pump for explosive-engines, Oil-. W. K. Andrew. No. 883,849; Apr. 7; Sp. p. 361; Dr. p. 70; Gaz. vol. 133; p. 1248.
Pump for oil-wells. A. G. Willard. No. 885,809; Apr. 28; Sp. p. 4578; Dr. p. 960; Gaz. vol. 133; p. 2006.
Pump for street-cars and analogous purposes, Air-. W. A. Collins and W. Westbrook. No. 885,440; Apr. 21; Sp. p. 3642; Dr. p. 764; Gaz. vol. 133; p. 1829.
Pump, Force-. W. H. Shafer. No. 884,769; Apr. 14; Sp. p. 2270; Dr. p. 477; Gaz. vol. 133; p. 1581.
Pump, Gear-. J. G. Callan. No. 883,931; Apr. 7; Sp. p. 526; Dr. p. 103; Gaz. vol. 133; p. 1276.
Pump, Pulsating. A. P. Brush. No. 885,835; Apr. 28; Sp. p. 4464; Dr. p. 938; Gaz. vol. 133; p. 1985.
Pump, Rotary. F. J. Macniah. No. 884,747; Apr. 14; Sp. p. 2220; Dr. p. 469; Gaz. vol. 133; p. 1573.
Pump, Rotary. R. C. Bromley. No. 886,110; Apr. 28; Sp. p. 5028; Dr. p. 1057; Gaz. vol. 133; p. 2075.
Pump valve mechanism. C. O. Sobinski. No. 885,193; Apr. 21; Sp. p. 3141; Dr. p. 660; Gaz. vol. 133; p. 1748.
Pump, Variable-delivery. R. J. Flinn. No. 886,047; Apr. 28; Sp. p. 4914; Dr. pp. 1033–4; Gaz. vol. 133; p. 2055.
Punch. W. Carman. No. 884,350; Apr. 7; Sp. p. 1371; Dr. p. 293; Gaz. vol. 133; p. 1412.
Punching-bag apparatus. F. Hulsmann. No. 885,927; Apr. 28; Sp. p. 4657; Dr. p. 981; Gaz. vol. 133; p. 2016.
Puncture-telltale. C. A. Winter. No. 885,121; Apr. 21; Sp. p. 2985; Dr. p. 630; Gaz. vol. 133; p. 1725.
Punka and the like, Electrically-operated. H. H. Young. No. 885,417; Apr. 21; Sp. p. 3606; Dr. p. 756; Gaz. vol. 133; p. 1823.
Purse and bag fastener. F. H. Bleyer. No. 886,175; Apr. 28; Sp. p. 5148; Dr. p. 1083; Gaz. vol. 133; p. 2096.
Puzzle. J. C. Critchett. No. 884,902; Apr. 14; Sp. p. 2515; Dr. pp. 531–2; Gaz. vol. 133; p. 1622.
Pyrotechnic device. N. Del Grande. No. 885,689; Apr. 21; Sp. p. 4144; Dr. p. 867; Gaz. vol. 133; p. 1907.
Quilting-frame. W. F. Cash. No. 884,793; Apr. 14; Sp. p. 2323; Dr. p. 488; Gaz. vol. 133; p. 1589.
Rack: *See* Card-rack; Display-rack; Hay-rack; Pool-ball rack; Shucking-rack; Wagon-rack.
Radiator. C. R. Kline. No. 884,739; Apr. 14; Sp. p. 2203; Dr. p. 465; Gaz. vol. 133; p. 1571.

Radiator for hydrocarbon and other heat motors, Heat-. K. J. Steiner. No. 883,756; Apr. 7; Sp. p. 149; Dr. p. 27; Gaz. vol. 133; p. 1218.
Radiator, Sectional. J. M. W. Kitchen. No. 883,808; Apr. 7; Sp. p. 264; Dr. p. 49; Gaz. vol. 133; p. 1235.
Raft, Lumber-. N. McLaughlin. No. 884,408; Apr. 14; Sp. p. 1494; Dr. p. 321; Gaz. vol. 133; p. 1462.
Rail-brace. B. A. Fleshman and J. M. Koontz. No. 884,917; Apr. 14; Sp. p. 2563; Dr. p. 539; Gaz. vol. 133; p. 1627.
Rail-drilling machine. D. A. Moore. No. 885,943; Apr. 28; Sp. p. 4688; Dr. pp. 987-8; Gaz. vol. 133; p. 2022.
Rail-fastener. H. F. Bender. No. 885,712; Apr. 28; Sp. p. 4199; Dr. p. 878; Gaz. vol. 133; p. 1944.
Rail-fastener for concrete ties. E. J. Drayer. No. 885,456; Apr. 21; Sp. p. 3670; Dr. p. 769; Gaz. vol. 133; p. 1835.
Rail-joint. S. Enderle. No. 884,268; Apr. 7; Sp. p. 1224; Dr. p. 258; Gaz. vol. 133; p. 1387.
Rail-joint. J. D. Stitzell. No. 884,774; Apr. 14; Sp. p. 2280; Dr. p. 480; Gaz. vol. 133; p. 1582.
Rail-joint. O. G. Cosner. No. 884,796; Apr. 14; Sp. p. 2326; Dr. p. 489; Gaz. vol. 133; p. 1590.
Rail-joint. R. F. Wolynec. No. 885,122; Apr. 21; Sp. p. 2980; Dr. p. 631; Gaz. vol. 133; p. 1725.
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Rail-joint. W. B. Tallaferro. No. 885,666; Apr. 21; Sp. p. 4080; Dr. p. 854; Gaz. vol. 133; p. 1896.
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Rail-joint and cross-tie. S. Michaels. No. 886,233; Apr. 28; Sp. p. 5251; Dr. p. 1106; Gaz. vol. 133; p. 2115.
Rail-joint, Continuous. R. C. McClure. No. 884,518; Apr. 14; Sp. p. 1723; Dr. p. 370; Gaz. vol. 133; p. 1496.
Rail-joint truss. R. S. Handford. No. 884,382; Apr. 14; Sp. p. 1452; Dr. p. 309; Gaz. vol. 133; p. 1453.
Rail-lock and tie-plate. W. N. Reynolds. No. 886,248; Apr. 28; Sp. p. 5276; Dr. p. 1111; Gaz. vol. 133; p. 2120.
Rail-splice. W. C. Crosby. No. 885,666; Apr. 21; Sp. p. 4097; Dr. p. 857; Gaz. vol. 133; p. 1899.
Rail-tie. C. A. Murphy. No. 884,190; Apr. 7; Sp. p. 1091; Dr. p. 228; Gaz. vol. 133; p. 1361.
Rail tie and brace. J. Frampton. No. 885,505; Apr. 21; Sp. p. 3949; Dr. p. 824; Gaz. vol. 133; p. 1876.
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Railway automatic switch-iron, Street-. W. K. Reichner. No. 885,788; Apr. 28; Sp. p. 4361; Dr. p. 915; Gaz. vol. 133; p. 1969.
Railway cattle-guard, Automatic. R. M. Wark. No. 885,552; Apr. 21; Sp. p. 3881; Dr. p. 811; Gaz. vol. 133; p. 1864.
Railway, Conduit electric. L. W. Musick. No. 884,517; Apr. 14; Sp. p. 1721; Dr. pp. 369-70; Gaz. vol. 133; p. 1496.
Railway-crossing alarm. D. W. Thomas. No. 884,537; Apr. 14; Sp. p. 1758; Dr. pp. 377-8; Gaz. vol. 133; p. 1502.
Railway-crossing gates, Automatic. K. Grzesiowski. No. 886,321; Apr. 28; Sp. p. 5441; Dr. pp. 1140-1; Gaz. vol. 133; p. 2147.
Railway danger-signaling and telephoning apparatus. E. Sughrone. No. 886,269; Apr. 28; Sp. p. 5320; Dr. p. 1120; Gaz. vol. 133; p. 2128.
Railway, Electric. A. C. Eastwood. No. 884,646; Apr. 14; Sp. p. 2018; Dr. p. 431; Gaz. vol. 133; p. 1539.
Railway-frog. O. F. Rost. No. 885,298; Apr. 21; Sp. p. 3355; Dr. p. 701; Gaz. vol. 133; p. 1783.
Railway-rail. H. B. Unruh. No. 884,690; Apr. 14; Sp. p. 2099; Dr. p. 448; Gaz. vol. 133; p. 1554.
Railway-rail fastener. C. Walton. No. 884,435; Apr. 14; Sp. p. 1543; Dr. p. 331; Gaz. vol. 133; p. 1469.
Railway-rail joint. E. C. Ale. No. 885,561; Apr. 21; Sp. p. 3902; Dr. p. 815; Gaz. vol. 133; p. 1866.
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Ram. G. L. Le Vesconte. No. 885,264; Apr. 21; Sp. p. 3288; Dr. pp. 687-8; Gaz. vol. 133; p. 1773.
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Razor. B. J. Weller. No. 885,410; Apr. 21; Sp. p. 3596; Dr. p. 753; Gaz. vol. 133; p. 1821.
Razor-blade holder. P. J. Enright. No. 884,905; Apr. 14; Sp. p. 2342; Dr. p. 493; Gaz. vol. 133; p. 1593.
Razor, Safety-. J. A. Everett. No. 884,375; Apr. 14; Sp. p. 1443; Dr. p. 307; Gaz. vol. 133; p. 1451.
Razor, Safety-. F. H. Arnold. 885,422; Apr. 21; Sp. p. 3612; Dr. p. 757; Gaz. vol. 133; p. 1824.
Razor, Safety-. G. Tittmann. No. 885,966; Apr. 28; Sp. p. 4746; Dr. p. 997; Gaz. vol. 133; p. 2031.
Razor, Safety-. H. Clauss. No. 886,039; Apr. 28; Sp. p. 4905; Dr. p. 1031; Gaz. vol. 133; p. 2053.
Reactions, Apparatus for effecting. E. A. Sperry. No. 885,391; Apr. 21; Sp. p. 3560; Dr. pp. 745-6; Gaz. vol. 133; p. 1815.
Reactive coil. C. P. Steinmetz. No. 883,919; Apr. 7; Sp. p. 504; Dr. p. 100; Gaz. vol. 133; p. 1272.
Reaper, Central-delivery. A. Hovland. No. 885,157; Apr. 21; Sp. p. 3063; Dr. p. 644; Gaz. vol. 133; p. 1736.
Receiver. W. T. Boyd. No. 885,223; Apr. 21; Sp. p. 3215; Dr. p. 671; Gaz. vol. 133; p. 1759.
Receptacle, Hermetically-closed. W. M. Brownlee. No. 883,668; Apr. 7; Sp. p. 18; Dr. p. 4; Gaz. vol. 133; p. 1198.
Recorder: *See* Music-recorder.
Reel: *See* Clothes-line reel; Harvester-reel; Wire-reel.
Reel-crank. J. J. Newlands. No. 885,638; Apr. 21; Sp. p. 4032; Dr. p. 843; Gaz. vol. 133; p. 1800.
Reel-holder. J. P. Weaver. No. 885,115; Apr. 21; Sp. p. 2974; Dr. p. 628; Gaz. vol. 133; p. 1723.
Reflector and diffuser, Combination light. H. D. McFaddin. No. 885,856; Apr. 28; Sp. p. 4593; Dr. p. 946; Gaz. vol. 133; p. 1992.
Refractory articles, Making. C. F. Burgess. No. 884,463; Apr. 14; Sp. p. 1605; Dr. p. 346; Gaz. vol. 133; p. 1479.
Refrigerator. T. A. Mayer. No. 884,029; Apr. 7; Sp. p. 731; Dr. p. 147; Gaz. vol. 133; p. 1309.
Refrigerator. J. C. Tyler. No. 884,242; Apr. 7; Sp. p. 1182; Dr. p. 249; Gaz. vol. 133; p. 1378.
Refrigerator. L. A. Banta. No. 885,660; Apr. 21; Sp. p. 4083; Dr. p. 855; Gaz. vol. 133; p. 1897.
Refrigerator drip-pans, Automatic alarm for. A. H. Leondar. No. 884,828; Apr. 14; Sp. p. 2379; Dr. p. 501; Gaz. vol. 133; p. 1600.
Register: *See* Autographic register; Car passenger-register; Cash-register; Coin-register; Hot-air register; Wall-register.
Register backing and damper, Combined. J. C. Hendrickson. No. 884,088; Apr. 7; Sp. p. 851; Dr. p. 179; Gaz. vol. 133; p. 1328.
Register-hook. W. L. Hamilton. No. 885,904; Apr. 28; Sp. p. 4806; Dr. p. 1009; Gaz. vol. 133; p. 2039.
Regulator: *See* Corn-sheller feed-regulator; Current-regulator; Damper-regulator; Door-movement regulator; Electric-machine regulator; Feed-water regulator; Gas-pressure regulator; Pressure-regulator; Windmill-regulator.
Reinforcing-frame and cementitious construction. A. P. White. No. 883,768; Apr. 7; Sp. p. 173; Dr. p. 31; Gaz. vol. 133; p. 1221.
Relay. A. S. Cubitt. No. 885,688; Apr. 21; Sp. p. 4143; Dr. p. 867; Gaz. vol. 133; p. 1907.
Relay, Interlocking. T. L. Lee. No. 885,061; Apr. 21; Sp. p. 2949; Dr. p. 606; Gaz. vol. 133; p. 1705.
Repair-tool. G. B. McBean and C. W. Birchwood. No. 884,751; Apr. 14; Sp. p. 2226; Dr. p. 470; Gaz. vol. 133; p. 1575.
Resilient arm. E. J. Ryerson and E. J. Schretter. No. 884,105; Apr. 7; Sp. p. 883; Dr. p. 186; Gaz. vol. 133; p. 1333.
Retort-furnace, Regenerative. O. H. Ellel. No. 885,740; Apr. 28; Sp. p. 4267; Dr. p. 893; Gaz. vol. 133; p. 1954.
Reverberatory furnace, Oil-burning. G. Fraser. No. 886,050; Apr. 28; Sp. p. 4923; Dr. p. 1035; Gaz. vol. 133; p. 2056.

Reversing mechanism. G. Sittmann. No. 885,390; Apr. 21; Sp. p. 3558; Dr. p. 745; Gaz. vol. 133; p. 1815.
Revolver. W. G. Zafser. No. 884,119; Apr. 7; Sp. p. 943; Dr. pp. 197-8; Gaz. vol. 133; p. 1339.
Rheostat. G. F. Packard. No. 885,782; Apr. 28; Sp. p. 4351; Dr. p. 913; Gaz. vol. 133; p. 1966.
Rheostat. E. L. Mahon. No. 885,935; Apr. 28; Sp. p. 4672; Dr. p. 984; Gaz. vol. 133; p. 2018.
Rheostat. J. W. Mertz. No. 886,250; Apr. 28; Sp. p. 5246; Dr. p. 1105; Gaz. vol. 133; p. 2114.
Ribbozine-machine. C. Wiebke. No. 886,024; Apr. 28; Sp. p. 4869; Dr. p. 1024; Gaz. vol. 133; p. 2048.
Ring: *See* Curtain-ring; Hog-ring.
Road-roller, Gasolene. N. De Wind and F. R. Jones. No. 885,984; Apr. 28; Sp. p. 4780; Dr. pp. 1004-5; Gaz. vol. 133; p. 2035.
Road-working machine. W. B. Brothers. No. 886,182; Apr. 28; Sp. p. 5160; Dr. p. 1086; Gaz. vol. 133; p. 2098.
Roaster. J. C. Prims. No. 884,523; Apr. 14; Sp. p. 1729; Dr. p. 371; Gaz. vol. 133; p. 1497.
Rock-crusher. J. G. Brown. No. 885,717; Apr. 28; Sp. p. 4212; Dr. p. 881; Gaz. vol. 133; p. 1945.
Rod: *See* Car-brake rod; Gun-cleaning rod.
Roller: *See* Road-roller.
Roller or wheel. W. L. Curtis. No. 884,720; Apr. 14; Sp. p. 2162; Dr. p. 459; Gaz. vol. 133; p. 1564.
Roller-support. H. J. Dengler. No. 885,146; Apr. 21; Sp. p. 3041; Dr. p. 640; Gaz. vol. 133; p. 1733.
Rolling. W. McKee. No. 885,508; Apr. 21; Sp. p. 3760; Dr. p. 791; Gaz. vol. 133; p. 1850.
Rolling-mill. A. T. Keller. No. 884,278; Apr. 7; Sp. p. 1240; Dr. pp. 260-1; Gaz. vol. 133; p. 1389.
Roof-flashing. L. H. Bullard. No. 885,318; Apr. 21; Sp. p. 3406; Dr. p. 712; Gaz. vol. 133; p. 1791.
Roof snow guard or fender. F. A. Peter. No. 884,850; Apr. 14; Sp. p. 2441; Dr. p. 513; Gaz. vol. 133; p. 1608.
Roofing, Sheet-metal. H. E. Moomaw. No. 884,285; Apr. 7; Sp. p. 1249; Dr. p. 262; Gaz. vol. 133; p. 1391.
Rope-carrier-direction-changing device. F. V. Drake. No. 885,455; Apr. 21; Sp. p. 3667; Dr. p. 768; Gaz. vol. 133; p. 1834.
Rope-grip. R. E. Patterson. No. 884,521; Apr. 14; Sp. p. 1727; Dr. p. 371; Gaz. vol. 133; p. 1497.
Rotary cutter. G. A. Bauer. No. 884,556; Apr. 14; Sp. p. 1796; Dr. p. 386; Gaz. vol. 133; p. 1509.
Rotary engine. J. Knowles. No. 883,894; Apr. 7; Sp. p. 451; Dr. p. 89; Gaz. vol. 133; p. 1263.
Rotary engine. H. Pierce. No. 883,911; Apr. 7; Sp. p. 486; Dr. pp. 96-7; Gaz. vol. 133; p. 1270.
Rotary engine. G. W. Hopkins. No. 883,955; Apr. 7; Sp. p. 582; Dr. p. 117; Gaz. vol. 133; p. 1284.
Rotary engine. P. O. Poulson. No. 884,952; Apr. 14; Sp. p. 2624; Dr. p. 554; Gaz. vol. 133; p. 1637.
Rotary engine. T. H. Lukens. No. 884,964; Apr. 14; Sp. p. 2682; Dr. p. 570; Gaz. vol. 133; p. 1647.
Rotary explosive-engine. E. E. Barnes. No. 885,006; Apr. 21; Sp. p. 2725; Dr. pp. 578-9; Gaz. vol. 133; p. 1687.
Rotary explosive-engine. J. P. Walsh. No. 885,113; Apr. 21; Sp. p. 2950; Dr. pp. 625-6; Gaz. vol. 133; p. 1721.
Rotary machine. P. J. Darlington. No. 885,731; Apr. 28; Sp. p. 4243; Dr. p. 889; Gaz. vol. 133; p. 1950.
Rotary motor. H. G. Gillmor and A. W. Sweet. No. 884,812; Apr. 14; Sp. p. 2353; Dr. p. 495; Gaz. vol. 133; p. 1595.
Rotary motor. P. J. Darlington. No. 885,752; Apr. 28; Sp. p. 4244; Dr. p. 889; Gaz. vol. 133; p. 1951.
Rug-fastener. W. A. and C. M. Alden. No. 883,771; Apr. 7; Sp. p. 179; Dr. p. 33; Gaz. vol. 133; p. 1222.
Rule. W. J. De Lashmutt. No. 884,904; Apr. 14; Sp. p. 2519; Dr. p. 532; Gaz. vol. 133; p. 1623.
Rule, Calculating-. W. S. Harlow. No. 883,866; Apr. 7; Sp. p. 249; Dr. p. 45; Gaz. vol. 133; p. 1232.
Rule, Computing slide-. H. Gröndahl. No. 884,729; Apr. 14; Sp. p. 2178; Dr. p. 462; Gaz. vol. 133; p. 1567.
Rule with spring-joints, Folding. E. Zweigler. No. 884,255; Apr. 7; Sp. p. 1207; Dr. p. 254; Gaz. vol. 133; p. 1383.
Sack cleaning and turning apparatus. J. Willimann and P. Hecht. No. 884,449; Apr. 14; Sp. p. 1577; Dr. pp. 339-40; Gaz. vol. 133; p. 1475.
Safe-deposit boxes, Cover for. H. W. Holder. No. 886,213; Apr. 28; Sp. p. 5217; Dr. p. 1098; Gaz. vol. 133; p. 2109.
Salts of compounds, Electrolysis of fluid. H. S. Blackmore. No. 884,124; Apr. 7; Sp. p. 952; Dr. p. 199; Gaz. vol. 133; p. 1340
Sap-cup support. C. Varnadore. No. 884,055; Apr. 7; Sp. p. 780; Dr. p. 163; Gaz. vol. 133; p. 1318.
Sand-box. T. M. Underwood. No. 885,110; Apr. 21; Sp. p. 2947; Dr. p. 625; Gaz. vol. 133; p. 1720.
Sanding-machine. E. H. Mullikin. No. 885,060. Apr. 21; Sp. p. 2860; Dr. p. 608; Gaz. vol. 133; p. 1708.
Sanding-machine attachment. W. Munch. No. 885,275; Apr. 21; Sp. p. 3312; Dr. p. 692; Gaz. vol. 133; p. 1776.
Sash-balance. M. J. Daly and T. S. Leake. No. 884,472; Apr. 14; Sp. p. 1625; Dr. p. 350; Gaz. vol. 133; p. 1482.
Sash-chain fastener. J. H. Sayres. No. 884,344; Apr. 7; Sp. p. 1353; Dr. p. 289; Gaz. vol. 133; p. 1410.
Sash-cord guide. J. M. Martin and E. J. Faires. No. 884,184; Apr. 7; Sp. p. 1082; Dr. p. 225; Gaz. vol. 133; p. 1360.
Sash-fastener. T. Wertz. No. 884,115; Apr. 7; Sp. p. 931; Dr. p. 196; Gaz. vol. 133; p. 1337.
Sash-fastener. C. S. Whipple. No. 885,116; Apr. 21; Sp. p. 2976; Dr. p. 628; Gaz. vol. 133; p. 1723.
Sash-fastener. F. A. Staples and L. Möller. No. 885,393; Apr. 21; Sp. p. 3565; Dr. p. 747; Gaz. vol. 133; p. 1816.
Sash-holder. A. H. Marden. No. 884,099; Apr. 7; Sp. p. 872; Dr. p. 183; Gaz. vol. 133; p. 1332.
Sash-lock. R. Heinle. No. 884,581; Apr. 14; Sp. p. 1844; Dr. p. 396; Gaz. vol. 133; p. 1517.
Sash-lock. W. G. Allen. No. 886,108; Apr. 28; Sp. p. 5026; Dr. p. 1057; Gaz. vol. 133; p. 2075.
Sash-lock and antirattler. A. Bennerscheidt. No. 885,568; Apr. 21; Sp. p. 3917; Dr. p. 817; Gaz. vol. 133; p. 1868.
Sash-lock, Self-locking. A. Gorman. No. 885,239; Apr. 21; Sp. p. 3244; Dr. p. 677; Gaz. vol. 133; p. 1764.
Sash lock, Window-. M. H. Gaba. No. 883,712; Apr. 7; Sp. p. 71; Dr. p. 11; Gaz. vol. 133; p. 1204.
Sash lock, Window-. J. Rumery. No. 886,254; Apr. 28; Sp. p. 5289; Dr. p. 1114; Gaz. vol. 133; p. 2123.
Sash-weight. F. C. Schwedtman. No. 883,976; Apr. 7; Sp. p. 624; Dr. p. 125; Gaz. vol. 133; p. 1291.
Sash-weight. F. C. Schwedtman. No. 883,977; Apr. 7; Sp. p. 626; Dr. p. 125; Gaz. vol. 133; p. 1292.
Sash-weight. F. C. Schwedtman. No. 883,978; Apr. 7; Sp. p. 628; Dr. p. 125; Gaz. vol. 133; p. 1292.
Sash-weight. F. C. Schwedtman. No. 883,979; Apr. 7; Sp. p. 630; Dr. p. 126; Gaz. vol. 133; p. 1292.
Sashes and the like, Holder and fastener for storm-. F. Bursik. No. 885,015; Apr. 21; Sp. p. 2748; Dr. p. 583; Gaz. vol. 133; p. 1690.
Saw. J. Dowling. No. 885,738; Apr. 28; Sp. p. 4264; Dr. p. 892; Gaz. vol. 133; p. 1953.
Saw-clamp. G. W. Rush. No. 885,084; Apr. 21; Sp. p. 2889; Dr. p. 613; Gaz. vol. 133; p. 1712.
Saw, Crosscut-. G. M. Howatson. No. 886,296; Apr. 28; Sp. p. 5300; Dr. p. 1130; Gaz. vol. 133; p. 2138.
Saw, Hand-. A. M. Remington. No. 885,521; Apr. 21; Sp. p. 3777; Dr. p. 795; Gaz. vol. 133; p. 1854.
Saw, Metal-cutting. W. H. Lucas. No. 885,770; Apr. 28; Sp. p. 4325; Dr. p. 907; Gaz. vol. 133; p. 1963.
Saw mill, Gang-. T. S. Wilkin. No. 885,119; Apr. 21; Sp. p. 2981; Dr. p. 629; Gaz. vol. 133; p. 1724.
Saw, Power miter-. A. A. Hillback. No. 886,035; Apr. 28; Sp. p. 4930; Dr. p. 1036; Gaz. vol. 133; p. 2058.
Saw-set. A. Johnson. No. 883,806; Apr. 7; Sp. p. 262; Dr. p. 48; Gaz. vol. 133; p. 1234.
Saw-setting tool. C. A. Drew. No. 884,909; Apr. 14; Sp. p. 2527; Dr. pp. 534-5; Gaz. vol. 133; p. 1624.
Saw-tooth-shaping device, Swaged-. E. P. Armstrong. No. 884,061; Apr. 7; Sp. p. 790; Dr. p. 166; Gaz. vol. 133; p. 1319.
Saw-tooth tool. M. E. Simmons. No. 885,389; Apr. 21; Sp. p. 3557; Dr. p. 744; Gaz. vol. 133; p. 1814.
Sawing-machine. F. N. Trevor. No. 883,922; Apr. 7; Sp. p. 508; Dr. p. 101; Gaz. vol. 133; p. 1273.
Sawing-machine. C. L. Libby and P. J. Connor. No. 884,744; Apr. 14; Sp. p. 2215; Dr. p. 468; Gaz. vol. 133; p. 1573.
Sawing-machine. G. Binder. No. 886,173; Apr. 28; Sp. p. 5144; Dr. p. 1082; Gaz. vol. 133; p. 2095.
Sawing machine, Shingle-. J. G. Pike. No. 883,912; Apr. 7; Sp. p. 489; Dr. p. 97; Gaz. vol. 133; p. 1270.
Sawing machine, Timber-. J. M. Martin. No. 884,183; Apr. 7; Sp. p. 1081; Dr. p. 225; Gaz. vol. 133; p. 1359.
Sawing machine, Tree-. W. T. Christine and F. H. Budde. No. 883,787; Apr. 7; Sp. p. 211; Dr. pp. 38-9; Gaz. vol. 133; p. 1227.
Sawing machine, Wood-. A. L. Evrett. No. 886,195; Apr. 28; Sp. p. 5188; Dr. p. 1092; Gaz. vol. 133; p. 2103.
Sawing-machines, Carriage-feed for. G. Binder. No. 886,174; Apr. 28; Sp. p. 5147; Dr. p. 1083; Gaz. vol. 133; p. 2095.
Sawmill. J. Ible. No. 884,020; Apr. 7; Sp. p. 712; Dr. pp. 144-5; Gaz. vol. 133; p. 1306.
Sawmill set-works. N. E. Rice. No. 884,209; Apr. 7; Sp. p. 1122; Dr. pp. 235-6; Gaz. vol. 133; p. 1368.
Scaffold, Adjustable. M. Russell. No. 885,791; Apr. 28; Sp. p. 4365; Dr. p. 916; Gaz. vol. 133; p. 1970.
Scaffold apparatus. F. E. Gordnier. No. 884,813; Apr. 14; Sp. p. 2358; Dr. p. 495; Gaz. vol. 133; p. 1596.
Scaffold-bracket. A. V. Davis. No. 885,227; Apr. 21; Sp. p. 3221; Dr. p. 672; Gaz. vol. 133; p. 1760.
Scaffold, Platform-. J. McIntyre. No. 885,507; Apr. 21; Sp. p. 3759; Dr. p. 791; Gaz. vol. 133; p. 1850.
Scale-bearing support. W. F. Stimpson. No. 885,885; Apr. 28; Sp. p. 4555; Dr. p. 955; Gaz. vol. 133; p. 2002.
Scenery in theaters, Mechanism for shifting stage-. G. Schneider. No. 884,214; Apr. 7; Sp. p. 1131; Dr. p. 237; Gaz. vol. 133; p. 1369.
Scissors or shears. S. F. F. Lindal. No. 884,281; Apr. 7; Sp. p. 1243; Dr. p. 261; Gaz. vol. 133; p. 1390.
Screen: *See* Fireplace-screen; Fly-screen; Gold-washing screen; Grain-screen; Window-screen.
Screen. B. Goodman. No. 884,145; Apr. 7; Sp. p. 1011; Dr. p. 211; Gaz. vol. 133; p. 1347.
Screen-doors, Fly-protector for. A. Walterbach and L. Heil. No. 884,547; Apr. 14; Sp. p. 1782; Dr. p. 383; Gaz. vol. 133; p. 1506.
Screw-thread-forming apparatus. E. F. Moy and P. H. Bastie. No. 885,008; Apr. 21; Sp. p. 2859; Dr. p. 607; Gaz. vol. 133; p. 1707.
Screw-threading machine. V. Z. Caracristi and G. W. Troxler. No. 885,016; Apr. 21; Sp. p. 2750; Dr. pp. 583-4; Gaz. vol. 133; p. 1691.
Scrubbing-machine. J. D. Metcalf. No. 885,959; Apr. 28; Sp. p. 4678; Dr. p. 985; Gaz. vol. 133; p. 2020.
Seal, Bottle-. S. D. Webb and G. Shilling. No. 885,469; Apr. 21; Sp. p. 3594; Dr. p. 753; Gaz. vol. 133; p. 1820.
Seal-fastening. T. E. Murray. No. 884,604; Apr. 14; Sp. p. 1900; Dr. p. 408; Gaz. vol. 133; p. 1525.
Seal-fastening. T. E. Murray. No. 885,634; Apr. 21; Sp. p. 4026; Dr. p. 841; Gaz. vol. 133; p. 1889.
Seal-fastening. T. E. Murray. No. 886,010; Apr. 28; Sp. p. 4832; Dr. p. 1015; Gaz. vol. 133; p. 2044.
Seal or fastener, Envelop. E. Merrifield and W. A. Peck. No. 885,501; Apr. 21; Sp. p. 3751; Dr. p. 789; Gaz. vol. 133; p. 1848.
Seal, Pail-. J. W. Nichols. No. 886,011; Apr. 28; Sp. p. 4833; Dr. p. 1015; Gaz. vol. 133; p. 2044.
Sealing machine, Envelop-. C. J. Fancher and H. S. Parmelee. No. 884,081; Apr. 7; Sp. p. 826; Dr. pp. 175-6; Gaz. vol. 133; p. 1326.
Sealing machine, Envelop-. C. J. Fancher and H. S. Parmelee. No. 884,082; Apr. 7; Sp. p. 837; Dr. pp. 176-7; Gaz. vol. 133; p. 1326.

Sealing vessels, Means for. J. A. Hicks. No. 885,846; Apr. 28; Sp. p. 4486; Dr. p. 942; Gaz. vol. 133; p. 1989.
Seam-closer. A. F. Houck. No. 886,214; Apr. 28; Sp. p. 5218; Dr. p. 1099; Gaz. vol. 133; p. 2109.
Seat: *See* Spring-seat; Vehicle folding seat.
Seat. F. H. Cullen. No. 886,115; Apr. 28; Sp. p. 5040; Dr. p. 1059; Gaz. vol. 133; p. 2078.
Seat and table, Combined. M. R. Rodrigues. No. 885,649; Apr. 21; Sp. p. 4066; Dr. p. 850; Gaz. vol. 133; p. 1893.
Seating. E. G. Budd. No. 884,710; Apr. 14; Sp. p. 2142; Dr. p. 455; Gaz. vol. 133; p. 1561.
Seating. E. G. Budd. No. 884,711; Apr. 14; Sp. p. 2144; Dr. p. 456; Gaz. vol. 133; p. 1561.
Seating. J. B. Kilburn and E. G. Budd. No. 884,736; Apr. 14; Sp. p. 2188; Dr. p. 464; Gaz. vol. 133; p. 1570.
Secondary battery. W. A. F. Alt. No. 885,562; Apr. 21; Sp. p. 3904; Dr. p. 815; Gaz. vol. 133; p. 1867.
Securing device. F. L. Beard. No. 885,008; Apr. 21; Sp. p. 2733; Dr. p. 580; Gaz. vol. 133; p. 1688.
Seed huller, Cotton-. Z. T. Job. No. 885,758; Apr. 28; Sp. p. 4305; Dr. p. 902; Gaz. vol. 133; p. 1959.
Seed-separator. F. G. Lyman. No. 886,006; Apr. 28; Sp. p. 4825; Dr. p. 1013; Gaz. vol. 133; p. 2043.
Self-feeding device. I. G. Berry. No. 885,714; Apr. 28; Sp. p. 4203; Dr. p. 879; Gaz. vol. 133; p. 1944.
Self-starter. W. O. Lum. No. 884,511; Apr. 14; Sp. p. 1706; Dr. p. 367; Gaz. vol. 133; p. 1494.
Separating iron particles from chaff and the like by means of magnets, Device for. J. Hagmüller. No. 885,245; Apr. 21; Sp. p. 3256; Dr. p. 680; Gaz. vol. 133; p. 1766.
Separator: *See* Cotton-separator; Foundry-separator; Grain-separator; Seed-separator; Slime-separator; Water and steam separator.
Separator. J. E. Purser. No. 883,826; Apr. 7; Sp. p. 311; Dr. p. 58; Gaz. vol. 133; p. 1241.
Serving apparatus. C. N. Hooper. No. 885,925; Apr. 28; Sp. p. 4652; Dr. pp. 979–80; Gaz. vol. 133; p. 2015.
Sewage-ejector. W. McClintock. No. 884,406; Apr. 14; Sp. p. 1490; Dr. p. 320; Gaz. vol. 133; p. 1461.
Sewing-chair. E. Bailey. No. 884,554; Apr. 14; Sp. p. 1794; Dr. p. 386; Gaz. vol. 133; p. 1509.
Sewing-machine. J. C. Goodwin. No. 884,579; Apr. 14; Sp. p. 1841; Dr. p. 395; Gaz. vol. 133; p. 1517.
Sewing-machine. L. A. Wilkinson and J. C. Goodwin. No. 884,629; Apr. 14; Sp. p. 1943; Dr. pp. 417–18; Gaz. vol. 133; p. 1532.
Sewing-machine. C. G. Kramer. No. 885,624; Apr. 21; Sp. p. 4009; Dr. p. 837; Gaz. vol. 133; p. 1885.
Sewing-machine attachment. G. B. Meeker. No. 884,833; Apr. 14; Sp. p. 2386; Dr. p. 502; Gaz. vol. 133; p. 1602.
Sewing-machine bed-plate or work-support. C. T. E. Gould. No. 884,482; Apr. 14; Sp. p. 1646; Dr. pp. 353–4; Gaz. vol. 133; p. 1485.
Sewing machine, Book-. C. Joos. No. 885,033; Apr. 21; Sp. p. 2832; Dr. pp. 599–603; Gaz. vol. 133; p. 1703.
Sewing machine, Carpet-. C. R. Fisk. No. 885,672; Apr. 21; Sp. p. 4108; Dr. pp. 860–1; Gaz. vol. 133; p. 1901.
Sewing-machine, Hemstitch. M. Hemleb. No. 883,879; Apr. 7; Sp. p. 424; Dr. p. 84; Gaz. vol. 133; p. 1258.
Sewing-machine needle. J. E. Ridgway. No. 884,857; Apr. 14; Sp. p. 2450; Dr. p. 515; Gaz. vol. 133; p. 1610.
Sewing-machine shuttle. C. F. Zanzig. No. 885,924; Apr. 28; Sp. p. 4440; Dr. p. 933; Gaz. vol. 133; p. 1982.
Sewing-machine thread-cutting mechanism. E. B. Allen. No. 885,310; Apr. 21; Sp. p. 3383; Dr. pp. 707–8; Gaz. vol. 133; p. 1788.
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Sewing-machine treadle mechanism, Shoe-. E. P. Richardson. No. 885,378; Apr. 21; Sp. p. 3534; Dr. p. 739; Gaz. vol. 133; p. 1811.
Sewing-machine welting attachment. W. Wilson. No. 886,025; Apr. 28; Sp. p. 4870; Dr. p. 1025; Gaz. vol. 133; p. 2049.
Shackle. G. C. Kenyon. No. 886,132; Apr. 28; Sp. p. 5083; Dr. p. 1066; Gaz. vol. 133; p. 2083.
Shade-adjuster and sash-operator, Combined. R. Huitt. No. 886,216; Apr. 28; Sp. p. 5219; Dr. p. 1099; Gaz. vol. 133; p. 2109.
Shade and curtain fixture. W. R. Evans. No. 885,987; Apr. 28; Sp. p. 4793; Dr. p. 1007; Gaz. vol. 133; p. 2037.
Shade and curtain hanger, Window. E. G. L. Gregson. No. 885,040; Apr. 21; Sp. p. 2808; Dr. p. 594; Gaz. vol. 133; p. 1699.
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Sharpening machine, Saw-. J. P. Hedstrom. No. 884,385; Apr. 14; Sp. p. 1456; Dr. p. 310; Gaz. vol. 133; p. 1454.
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Shearing-machine. C. Wals. No. 885,810; Apr. 28; Sp. p. 4416; Dr. p. 926; Gaz. vol. 133; p. 1976.
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Shears, Pivot-screw for. J. W. Filetz. No. 886,197; Apr. 28; Sp. p. 5190; Dr. p. 1093; Gaz. vol. 133; p. 2104.
Sheet-metal box. P. A. Blichert. No. 885,013; Apr. 21; Sp. p. 2744; Dr. p. 582; Gaz. vol. 133; p. 1690.
Sheet-metal-coiling machine. W. H. Carpenter. No. 884,314; Apr. 7; Sp. p. 1298; Dr. p. 275; Gaz. vol. 133; p. 1400.
Sheet-metal, Corrugating. H. F. Cobb. No. 883,788; Apr. 7; Sp. p. 212; Dr. p. 39; Gaz. vol. 133; p. 1228.
Sheet-metal receptacles, Manufacturing. L. F. Betts. No. 885,572; Apr. 21; Sp. p. 3921; Dr. p. 818; Gaz. vol. 133; p. 1870.
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Sheet-metal strips, Machine for cutting and mounting. W. Stuebing. No. 883,838; Apr. 7; Sp. p. 342; Dr. pp. 65–6; Gaz. vol. 133; p. 1245.
Shelf and ironing-board attachment. C. R. Shaw. No. 885,387; Apr. 21; Sp. p. 3555; Dr. p. 744; Gaz. vol. 133; p. 1814.
Shingle and heading machine. J. and J. H. Street. No. 885,201; Apr. 21; Sp. p. 3153; Dr. p. 662; Gaz. vol. 133; p. 1751.
Shingle-gage. A. A. Unruh. No. 885,705; Apr. 21; Sp. p. 4177; Dr. p. 875; Gaz. vol. 133; p. 1912.
Shingle-machine. G. W. Dorman. No. 885,327; Apr. 21; Sp. p. 3423; Dr. p. 715; Gaz. vol. 133; p. 1794.
Shingling-bracket. J. Lasley. No. 884,507; Apr. 14; Sp. p. 1698; Dr. p. 365; Gaz. vol. 133; p. 1493.
Shipping-box. W. E. Depp. No. 884,572; Apr. 14; Sp. p. 1831; Dr. p. 392; Gaz. vol. 133; p. 1515.
Shipping-case-cover fastener. J. Brauer. No. 884,890; Apr. 14; Sp. p. 2465; Dr. p. 527; Gaz. vol. 133; p. 1618.
Ships, Construction of screw-propelled. J. T. Duncan. No. 884,912; Apr. 14; Sp. p. 2531; Dr. pp. 535–6; Gaz. vol. 133; p. 1625.
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Shocker. R. Woods. No. 885,821; Apr. 28; Sp. p. 4435; Dr. pp. 931–2; Gaz. vol. 133; p. 1961.
Shoe. A. and D. A. Reed. No. 884,681; Apr. 14; Sp. p. 2084; Dr. p. 445; Gaz. vol. 133; p. 1550.
Shoe-fastener. J. W. Barna. No. 884,454; Apr. 14; Sp. p. 1588; Dr. p. 343; Gaz. vol. 133; p. 1476.
Shoe-fastener. J. P. Wakefield. No. 884,623; Apr. 14; Sp. p. 1941; Dr. p. 417; Gaz. vol. 133; p. 1532.
Shoe-polisher. J. T. McDonald. No. 885,276; Apr. 21; Sp. p. 3315; Dr. p. 692; Gaz. vol. 133; p. 1777.
Shoe-shank. H. Brennan. No. 886,181; Apr. 28; Sp. p. 5158; Dr. p. 1086; Gaz. vol. 133; p. 2098.
Shoe-shank-tacking machine. L. A. Jones. No. 884,392; Apr. 14; Sp. p. 1465; Dr. pp. 312–13; Gaz. vol. 133; p. 1456.
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Shoe-tree. M. L. Gough. No. 885,609; Apr. 21; Sp. p. 3977; Dr. p. 830; Gaz. vol. 133; p. 1881.
Shoes, Spring-retainer for sliding. O. C. Little. No. 886,301; Apr. 28; Sp. p. 5390; Dr. p. 1132; Gaz. vol. 133; p. 2139.
Shooting-gallery. C. E. Morris. No. 885,338; Apr. 21; Sp. p. 3488; Dr. p. 728; Gaz. vol. 133; p. 1804.
Shovel. J. W. Ellison. No. 883,702; Apr. 7; Sp. p. 56; Dr. p. 8; Gaz. vol. 133; p. 1201.
Show-case. S. J. Lindskog. No. 884,088; Apr. 7; Sp. p. 871; Dr. p. 183; Gaz. vol. 133; p. 1331.
Show-case. W. K. Williams. No. 884,549; Apr. 14; Sp. p. 1785; Dr. p. 384; Gaz. vol. 133; p. 1507.
Show-case clamp. F. Tynis. No. 884,877; Apr. 14; Sp. p. 2480; Dr. pp. 522–3; Gaz. vol. 133; p. 1615.
Show-case, Dust-proof knockdown. N. H. Cederquist. No. 884,569; Apr. 14; Sp. p. 1826; Dr. p. 391; Gaz. vol. 133; p. 1514.
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Shutter-fastener. H. F. Chreitzberg. No. 884,895; Apr. 14; Sp. p. 2501; Dr. pp. 528–9; Gaz. vol. 133; p. 1620.
Shutter-fastener. H. F. Chreitzberg. No. 884,896; Apr. 14; Sp. p. 2503; Dr. p. 529; Gaz. vol. 133; p. 1620.
Shutter, Roller-blind. W. F. Folmer. No. 885,236; Apr. 21; Sp. p. 3235; Dr. p. 675; Gaz. vol. 133; p. 1763.
Shutter-worker. J. Norton. No. 884,103; Apr. 7; Sp. p. 879; Dr. p. 185; Gaz. vol. 133; p. 1333.
Sickle-bar and cutter, Combined. L. R. Clifton. No. 884,897; Apr. 14; Sp. p. 2504; Dr. p. 529; Gaz. vol. 133; p. 1621.
Sieve, Sifter-. J. S. Coventry. No. 884,899; Apr. 14; Sp. p. 2507; Dr. p. 530; Gaz. vol. 133; p. 1621.
Slide-frame construction. O. S. Pulliam. No. 886,071; Apr. 28; Sp. p. 4957; Dr. p. 1042; Gaz. vol. 133; p. 2063.
Sleeve-adjuster. J. G. Keith. No. 885,929; Apr. 28; Sp. p. 4660; Dr. p. 982; Gaz. vol. 133; p. 2016.
Sifter, Gyratory. W. Preston. No. 885,063; Apr. 21; Sp. p. 2883; Dr. pp. 611–12; Gaz. vol. 133; p. 1712.
Sign. G. Bittle. No. 885,426; Apr. 21; Sp. p. 3617; Dr. p. 758; Gaz. vol. 133; p. 1825.
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Sign, Illuminated. R. R. Wiley. No. 885,118; Apr. 21; Sp. p. 2980; Dr. p. 629; Gaz. vol. 133; p. 1724.
Sign, Illuminated. W. Booth. No. 885,831; Apr. 28; Sp. p. 4459; Dr. p. 936; Gaz. vol. 133; p. 1981.
Sign, Metal. F. W. Perry. No. 884,951; Apr. 14; Sp. p. 2622; Dr. pp. 553–4; Gaz. vol. 133; p. 1637.
Sign, Talking-. L. R. Paige. No. 883,737; Apr. 7; Sp. p. 117; Dr. pp. 20–1; Gaz. vol. 133; p. 1211.
Signal: *See* Electric signal; Mail-box signal; Railway-signal; Train-signal.
Signal. F. H. Pettit. No. 885,644; Apr. 21; Sp. p. 4060; Dr. p. 848; Gaz. vol. 133; p. 1892.
Signal apparatus, Busy-. C. J. Erickson. No. 885,915; Apr. 28; Sp. p. 4613; Dr. p. 967; Gaz. vol. 133; p. 2012.
Signaling device Automatic. G. Milburn. No. 885 168; Apr. 21; Sp. p. 3092; Dr. pp. 650–1; Gaz. vol. 133; p. 1740.

Signaling mechanism, Automatic. J. Reuter. No. 883,829; Apr. 7; Sp. p. 317; Dr. pp. 59–60; Gaz. vol. 133; p. 1242.
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Signaling system. E. E. Kleinschmidt. No. 884,738; Apr. 14; Sp. p. 2197; Dr. p. 465; Gaz. vol. 133; p. 1570.
Skate. C. Wall. No. 883,923; Apr. 7; Sp. p. 510; Dr. p. 101; Gaz. vol. 133; p. 1273.
Skeins, Apparatus for lustering. D. Ashley. No. 885,968; Apr. 28; Sp. p. 4749; Dr. pp. 997–8; Gaz. vol. 133; p. 2031.
Skid-holder. R. E. Oslin. No. 884,847; Apr. 14; Sp. p. 2438; Dr. p. 512; Gaz. vol. 133; p. 1607.
Skirt-marker. R. Sideman. No. 885,876; Apr. 28; Sp. p. 4540; Dr. pp. 952–3; Gaz. vol. 133; p. 1999.
Skylight and its sash-bars, Ventilating. H. E. Hersh. No. 884,154; Apr. 7; Sp. p. 1031; Dr. pp. 214–15; Gaz. vol. 133; p. 1350.
Slag, Treating blast-furnace. F. W. Wood. No. 883,770; Apr. 7; Sp. p. 177; Dr. p. 32; Gaz. vol. 133; p. 1222.
Sled. N. Highland. No. 883,882; Apr. 7; Sp. p. 432; Dr. p. 85; Gaz. vol. 133; p. 1260.
Sleigh, Motor-. C. A. Hanson. No. 885,617; Apr. 21; Sp. p. 3992; Dr. pp. 834–5; Gaz. vol. 133; p. 1883.
Slicer, Bread and meat. D. H. Mosteller. No. 885,274; Apr. 21; Sp. p. 3310; Dr. p. 691; Gaz. vol. 133; p. 1776.
Slicing machine, Meat-. H. Broome. No. 884,893; Apr. 14; Sp. p. 2499; Dr. p. 528; Gaz. vol. 133; p. 1619.
Sliding gate. A. J. Russell and W. B. Terry. No. 885,085; Apr. 21; Sp. p. 2890; Dr. p. 613; Gaz. vol. 133; p. 1713.
Slime-separator, Centrifugal. J. T. Lindahl. No. 884,830; Apr. 14; Sp. p. 2381; Dr. p. 501; Gaz. vol. 133; p. 1601.
Slipper attachment. K. A. McIntire. No. 884,520; Apr. 14; Sp. p. 1725; Dr. p. 370; Gaz. vol. 133; p. 1496.
Slotting-machine. D. C. Griggs and R. H. Smith. No. 884,486; Apr. 14; Sp. p. 1654; Dr. pp. 355–6; Gaz. vol. 133; p. 1486.
Smelting converter and forehearth. R. Baggaley, C. M. Allen, and E. W. Lindquist. No. 886,030; Apr. 28; Sp. p. 4876; Dr. pp. 1027–8; Gaz. vol. 133; p. 2050.
Smoke-consumer. H. P. Bradbury. No. 885,579; Apr. 21; Sp. p. 3929; Dr. p. 820; Gaz. vol. 133; p. 1871.
Smoke-consumer for boiler-furnaces. J. D. Nix. No. 884,945; Apr. 14; Sp. p. 2610; Dr. p. 551; Gaz. vol. 133; p. 1634.
Smoke-consuming furnace. P. Rielly. No. 883,828; Apr. 7; Sp. p. 315; Dr. p. 59; Gaz. vol. 133; p. 1242.
Smoke-consuming furnace. A. Sichert. No. 885,300; Apr. 21; Sp. p. 3359; Dr. p. 703; Gaz. vol. 133; p. 1784.
Smoke-consuming furnace. C. Phelps. No. 885,950; Apr. 28; Sp. p. 4711; Dr. p. 990; Gaz. vol. 133; p. 2024.
Smoke-conveyer for railway-trains. R. L. Rhodes. No. 884,342; Apr. 7; Sp. p. 1350; Dr. p. 289; Gaz. vol. 133; p. 1409.
Smokeless furnace. C. J. Oberg. No. 885,779; Apr. 28; Sp. p. 4341; Dr. pp. 910–11; Gaz. vol. 133; p. 1965.
Smut-machine. O. L. Larson. No. 883,815; Apr. 7; Sp. p. 283; Dr. p. 52; Gaz. vol. 133; p. 1238.
Snap-fastener. J. M. Adams. No. 885,419; Apr. 21; Sp. p. 3609; Dr. p. 756; Gaz. vol. 133; p. 1823.
Snap-hook. W. C. Stiles. No. 885,883; Apr. 28; Sp. p. 4553; Dr. p. 955; Gaz. vol. 133; p. 2001.
Soap materials to powder, Apparatus for reducing. W. B. Allbright. No. 885,708; Apr. 28; Sp. p. 4193; Dr. p. 877; Gaz. vol. 133; p. 1943.
Socket-cap. W. S. Stapley. No. 884,624; Apr. 14; Sp. p. 1931; Dr. p. 415; Gaz. vol. 133; p. 1530.
Sod-trimmer. R. E. Poindexter. No. 884,416; Apr. 14; Sp. p. 1507; Dr. p. 324; Gaz. vol. 133; p. 1464.
Sole-pressing machine. W. Frasier. No. 884,144; Apr. 7; Sp. p. 1005; Dr. pp. 210–11; Gaz. vol. 133; p. 1346.
Soles of wood, Machine for pinning leather on. W. Schou and H. Busse. No. 884,215; Apr. 7; Sp. p. 1133; Dr. p. 238; Gaz. vol. 133; p. 1370.
Sorghum-stripper. C. M. Barekman. No. 885,314; Apr. 21; Sp. p. 3401; Dr. p. 711; Gaz. vol. 133; p. 1789.
Sound-reproducing machines, Hearing-tube for. G. A. Lewis. No. 883,818; Apr. 7; Sp. p. 287; Dr. p. 53; Gaz. vol. 133; p. 1238.
Sounding apparatus, Sea-. M. T. Parks. No. 884,038; Apr. 7; Sp. p. 749; Dr. pp. 154–5; Gaz. vol. 133; p. 1312.
Spangle-machine. G. W. Bingham. No. 885,012; Apr. 21; Sp. p. 2740; Dr. p. 582; Gaz. vol. 133; p. 1689.
Spark-arrester. J. E. Dempster. No. 883,791; Apr. 7; Sp. p. 218; Dr. p. 40; Gaz. vol. 133; p. 1229.
Spark-gap apparatus. W. W. Massie. No. 886,303; Apr. 28; Sp. p. 5393; Dr. p. 1132; Gaz. vol. 133; p. 2140.
Sparking mechanism. H. G. and C. C. Coulson. No. 885,324; Apr. 21; Sp. p. 3418; Dr. p. 714; Gaz. vol. 133; p. 1793.
Speed-changing mechanism. W. O. Foss. No. 883,870; Apr. 7; Sp. p. 407; Dr. pp. 79–80; Gaz. vol. 133; p. 1255.
Speed-changing mechanism. E. Rivett. No. 885,296; Apr. 21; Sp. p. 3350; Dr. pp. 700–1; Gaz. vol. 133; p. 1783.
Speed-controlling device. C. I. Longenecker. No. 883,727; Apr. 7; Sp. p. 95; Dr. pp. 15–16; Gaz. vol. 133; p. 1208.
Speed indicator and recorder. F. F. Uehling. No. 884,112; Apr. 7; Sp. p. 926; Dr. p. 194; Gaz. vol. 133; p. 1336.
Spike and tie-plate. W. Goldie, Jr. No. 884,578; Apr. 14; Sp. p. 1840; Dr. p. 394; Gaz. vol. 133; p. 1516.
Spindle, Silk-throwster. F. Bryant. No. 884,126; Apr. 7; Sp. p. 971; Dr. p. 201; Gaz. vol. 133; p. 1341.
Spinning and twisting machine. T. D. Singleton and W. Gleason. No. 884,621; Apr. 14; Sp. p. 1927; Dr. p. 414; Gaz. vol. 133; p. 1530.
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Spirits, Manufacture of. G. Fritsche. No. 884,576; Apr. 14; Sp. p. 1836; Gaz. vol. 133; p. 1516.
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Split washer. J. J. Jensen. No. 885,052; Apr. 21; Sp. p. 2831; Dr. p. 599; Gaz. vol. 133; p. 1703.
Spoke-extractor. D. L. Williams. No. 884,447; Apr. 14; Sp. p. 1575; Dr. p. 339; Gaz. vol. 133; p. 1474.
Spoke-puller. J. R. Crenshaw. No. 885,445; Apr. 21; Sp. p. 3649; Dr. p. 766; Gaz. vol. 133; p. 1831.
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Spoon, Mixing-. A. W. Cram. No. 885,444; Apr. 21; Sp. p. 3648; Dr. p. 765; Gaz. vol. 133; p. 1831.
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Spring-seat. H. Hirsh. No. 885,474; Apr. 21; Sp. p. 3703; Dr. p. 778; Gaz. vol. 133; p. 1840.
Spring-wheel. H. E. Heaton. No. 885,342; Apr. 21; Sp. p. 3400; Dr. p. 721; Gaz. vol. 133; p. 1799.
Sprinkler-heads, Device for plugging. A. Y. Thornton and A. L. Munroe. No. 884,430; Apr. 14; Sp. p. 1534; Dr. p. 329; Gaz. vol. 133; p. 1468.
Sprinkler, Open. W. Esty. No. 885,029; Apr. 21; Sp. p. 2785; Dr. p. 590; Gaz. vol. 133; p. 1695.
Spur, Riding-. W. D. Miller. No. 883,897; Apr. 7; Sp. p. 463; Dr. p. 91; Gaz. vol. 133; p. 1265.
Square. C. H. Stark. No. 884,773; Apr. 14; Sp. p. 2279; Dr. p. 479; Gaz. vol. 133; p. 1582.
Square, Folding. H. D. Buys and J. M. Lyon. No. 883,783; Apr. 7; Sp. p. 202; Dr. p. 37; Gaz. vol. 133; p. 1226.
Square, gage, and rule, Combined. A. C. Cowles. No. 885,226; Apr. 21; Sp. p. 3220; Dr. p. 672; Gaz. vol. 133; p. 1760.
Square, T-. E. Werner. No. 885,411; Apr. 21; Sp. p. 3597; Dr. p. 754; Gaz. vol. 133; p. 1821.
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Stacker. C. E. Lang. No. 884,505; Apr. 14; Sp. p. 1695; Dr. pp. 364–5; Gaz. vol. 133; p. 1492.
Stacker. H. W. Blaisdell. No. 884,560; Apr. 14; Sp. p. 1802; Dr. pp. 387–8; Gaz. vol. 133; p. 1510.
Stage effects, Means for producing theatrical. G. W. Hanlon. No. 883,953; Apr. 7; Sp. p. 580; Dr. p. 116; Gaz. vol. 133; p. 1284.
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Stamp-mill shafting. F. S. Kirkland. No. 885,259; Apr. 21; Sp. p. 3278; Dr. p. 684; Gaz. vol. 133; p. 1771.
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Stanchion. A. Torhorst. No. 884,962; Apr. 14; Sp. p. 2644; Dr. p. 562; Gaz. vol. 133; p. 1640.
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Staple-puller. G. Blood. No. 885,575; Apr. 21; Sp. p. 3924; Dr. p. 819; Gaz. vol. 133; p. 1870.
Staple-tacker. M. D. Phelan. No. 883,824; Apr. 7; Sp. p. 300; Dr. pp. 56–7; Gaz. vol. 133; p. 1240.
Station-indicator. C. W. Kincaid. No. 885,487; Apr. 21; Sp. p. 3725; Dr. pp. 783–4; Gaz. vol. 133; p. 1844.
Station-indicator. C. Miller. No. 885,503; Apr. 21; Sp. p. 3754; Dr. p. 789; Gaz. vol. 133; p. 1849.
Steam-boiler. L. J. Tracy. No. 884,431; Apr. 14; Sp. p. 1536; Dr. p. 329; Gaz. vol. 133; p. 1468.
Steam-boiler. W. H. Wood. No. 885,123; Apr. 21; Sp. p. 2990; Dr. p. 631; Gaz. vol. 133; p. 1725.
Steam-boiler. J. A. Doarnberger. No. 885,229; Apr. 21; Sp. p. 3224; Dr. p. 673; Gaz. vol. 133; p. 1761.
Steam-boiler, Tubular. C. Röhrs. No. 884,956; Apr. 14; Sp. p. 2632; Dr. pp. 556–7; Gaz. vol. 133; p. 1639.
Steam-engine. R. E. Dean. No. 883,866; Apr. 7; Sp. p. 398; Dr. pp. 77–8; Gaz. vol. 133; p. 1254.
Steam-engine. J. N. Leach. No. 884,097; Apr. 7; Sp. p. 867; Dr. pp. 182–3; Gaz. vol. 133; p. 1331.
Steam-engine. J. H. Stick. No. 885,543; Apr. 21; Sp. p. 3890; Dr. p. 807; Gaz. vol. 133; p. 1861.
Steam-engine. A. P. Dwiggins. No. 885,670; Apr. 21; Sp. p. 4104; Dr. p. 859; Gaz. vol. 133; p. 1900.
Steam-meter. C. E. Sargent. No. 886,255; Apr. 28; Sp. p. 5200; Dr. pp. 1114–15; Gaz. vol. 133; p. 2123.
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Steam regenerator, Exhaust-. F. Draper and O. L. Curtiss. No. 886,044; Apr. 28; Sp. p. 4911; Dr. pp. 1032–3; Gaz. vol. 133; p. 2054.
Steam-superheater. J. N. Stern. No. 886,087; Apr. 28; Sp. p. 4979; Dr. p. 1047; Gaz. vol. 133; p. 2066.
Steam-trap. J. E. Swendeman. No. 884,626; Apr. 14; Sp. p. 1935; Dr. pp. 415–16; Gaz. vol. 133; p. 1531.
Steam-trap. F. Duffy. No. 884,724; Apr. 14; Sp. p. 2171; Dr. p. 461; Gaz. vol. 133; p. 1566.
Steel, Hardening and toughening. J. Churchward. No. 883,698; Apr. 7; Sp. p. 47; Gaz. vol. 133; p. 1200.
Steels, Producing alloyed. J. Churchward. No. 884,009; Apr. 7; Sp. p. 689; Dr. p. 139; Gaz. vol. 133; p. 1302.
Steering-gear for boats. E. C. Akers. No. 885,312; Apr. 21; Sp. p. 3392; Dr. p. 709; Gaz. vol. 133; p. 1789.

Steering-gear for ships. H. Penton. No. 884,292; Apr. 7; Sp. p. 1262; Dr. p. 265; Gaz. vol. 133; p. 1394.
Steering-rod connection. J. F. Skirrow. No. 885,878; Apr. 28; Sp. p. 4544; Dr. p. 953; Gaz. vol. 133; p. 2000.
Stencilling-machine. A. J. Smith. No. 886,260; Apr. 28; Sp. p. 5301; Dr. p. 1116; Gaz. vol. 133; p. 2125.
Stereotype. M. A. McKee. No. 885,948; Apr. 28; Sp. p. 4706; Dr. p. 990; Gaz. vol. 133; p. 2024.
Sticking-plaster box or holder. C. Hoffman-Pinther. No. 885,048; Apr. 21; Sp. p. 2826; Dr. p. 598; Gaz. vol. 133; p. 1702.
Still. Hydrocarbon-. T. H. Ellis. No. 885,148; Apr. 21; Sp. p. 3047; Dr. p. 641; Gaz. vol. 133; p. 1734.
Stirrup, Safety-. S. P. McTigue. No. 884,197; Apr. 7; Sp. p. 1105; Dr. p. 231; Gaz. vol. 133; p. 1364.
Stitch separating and indenting machine. H. H. Cummings. No. 885,022; Apr. 21; Sp. p. 2760; Dr. pp. 586–8; Gaz. vol. 133; p. 1693.
Stitching, Machine for doing openwork-. M. Gould. No. 884,330; Apr. 7; Sp. p. 1328; Dr. p. 282; Gaz. vol. 133; p. 1405.
Stock, Machine for cutting forms from sheet. W. F. Hutchinson. No. 885,254; Apr 21; Sp. p. 3269; Dr. p. 682; Gaz. vol. 133; p. 1769.
Stone, Hardening artificial. E. Shwanenberg and A. Rinne. No. 886,258; Apr. 28; Sp. p. 5290; Gaz. vol. 133; p. 2124.
Stone, Manufacture of artificial. J. C. Henderson. No. 886,124; Apr. 28; Sp. p. 5067; Gaz. vol. 133; p. 2080.
Stone-saw. J. S. Young. No. 884,001; Apr. 7; Sp. p. 675; Dr. p. 135; Gaz. vol. 133; p. 1300.
Stone-saw. E. Gellus. No. 885,603; Apr. 21; Sp. p. 3967; Dr. p. 827; Gaz. vol. 133; p. 1878.
Stone-sawing machine. J. M. Owens. No. 884,949; Apr. 14; Sp. p. 2619; Dr. pp. 552–3; Gaz. vol. 133; p. 1636.
Stoneworking-tool. C. B. Richards. No. 884,419; Apr. 14; Sp. p. 1512; Dr. p. 324; Gaz. vol. 133; p. 1464.
Stool, Sewing-machine. J. Liden. No. 884,280; Apr. 7; Sp. p. 1242; Dr. p. 261; Gaz. vol. 133; p. 1390.
Stop-motion. A. G. Shideed. No. 885,875; Apr. 28; Sp. p. 4538; Dr. p. 952; Gaz. vol. 133; p. 1999.
Stopper: *See* Dispensing-stopper.
Storage battery. H. H. Carpenter. No. 884,264; Apr. 7; Sp. p. 1219; Dr. p. 256; Gaz. vol. 133; p. 1380.
Stove, Cooking-. W. R. Merrick. No. 885,273; Apr. 21; Sp. p. 3310; Dr. p. 691; Gaz. vol. 133; p. 1776.
Stoves, Crude-oil burner for. G. and L. Madden. No. 884,939; Apr. 14; Sp. p. 2594; Dr. p. 548; Gaz. vol. 133; p. 1633.
Stovepipe-connector for nesting pipes. H. Ditchburn. No. 886,043; Apr. 28; Sp. p. 4910; Dr. p. 1032; Gaz. vol. 133; p. 2054.
Straight-edge. C. T. Ridgely. No. 883,744; Apr. 7; Sp. p. 128; Dr. p. 23; Gaz. vol. 133; p. 1214.
Strainer for steep-tanks. W. H. Prinz. No. 885,786; Apr. 28; Sp. p. 4358; Dr. p. 914; Gaz. vol. 133; p. 1968.
Straw or feed cutter. H. C. Krase and R. Grimm. No. 886,223; Apr. 28; Sp. p. 5232; Dr. p. 1102; Gaz. vol. 133; p. 2112.
Strawberry-picker. A. E. Bergquist. No. 885,509; Apr. 21; Sp. p. 3918; Dr. p. 818; Gaz. vol. 133; p. 1809.
Street-cleaner. J. W. Smith. No. 886,263; Apr. 28; Sp. p. 5307; Dr. p. 1117; Gaz. vol. 133; p. 2126.
Street-sweeper. M. V. Ruff. No. 884,421; Apr. 14; Sp. p. 1516; Dr. p. 325; Gaz. vol. 133; p. 1465.
Stringed instrument. A. E. Mathey. No. 885,269; Apr. 21; Sp. p. 3298; Dr. p. 689; Gaz. vol. 133; p. 1774.
Stuffing-box. F. A. Dailey and B. Long. No. 884,318; Apr. 7; Sp. p. 1302; Dr. p. 276; Gaz. vol. 133; p. 1401.
Stuffing-box. E. J. Salt and C. L. Herb. No. 884,864; Apr. 14; Sp. p. 2463; Dr. p. 518; Gaz. vol. 133; p. 1612.
Submarine viewing apparatus. M. Samaha. No. 885,087; Apr. 21; Sp. p. 2893; Dr. p. 614; Gaz. vol. 133; p. 1713.
Sulfur-burners, Feeding device for. A. Tromblee. No. 885,891; Apr. 28; Sp. p. 4563; Dr. p. 957; Gaz. vol. 133; p. 2004.
Sunbonnet. C. E. Yount, Sr. No. 884,553; Apr. 14; Sp. p. 1793; Dr. p. 385; Gaz. vol. 133; p. 1509.
Sunshade. J. H. Coffman. No. 885,438; Apr. 21; Sp. p. 3640; Dr. p. 764; Gaz. vol. 133; p. 1829.
Superheater. E. H. Foster. No. 883,871; Apr. 7; Sp. p. 409; Dr. p. 80; Gaz. vol. 133; p. 1256.
Support and power mechanism, Portable. J. C. Steiner. No. 883,984; Apr. 7; Sp. p. 644; Dr. p. 129; Gaz. vol. 133; p. 1294.
Supporting device. E. Norton. No. 886,241; Apr. 28; Sp. p. 5263; Dr. p. 1109; Gaz. vol. 133; p. 2118.
Surfacing-machine head. J. F. Stoll. No. 883,920; Apr. 7; Sp. p. 505; Dr. p. 100; Gaz. vol. 133; p. 1273.
Surveying instrument. F. A. Waugh. No. 884,245; Apr. 7; Sp. p. 1186; Dr. p. 250; Gaz. vol. 133; p. 1379.
Surveyor's stake. T. Josenhans. No. 885,850; Apr. 28; Sp. p. 4494; Dr. p. 944; Gaz. vol. 133; p. 1966.
Suspender-connector, Adjustable. A. T. Moore. No. 883,899; Apr. 7; Sp. p. 464; Dr. p. 91; Gaz. vol. 133; p. 1266.
Suspender-hook and drawers-support. C. B. Dickerson. No. 884,906; Apr. 14; Sp. p. 2523; Dr. p. 533; Gaz. vol. 133; p. 1623.
Suspenders, braces, &c. W. Freeman. No. 885,463; Apr. 21; Sp. p. 3682; Dr. p. 771; Gaz. vol. 133; p. 1837.
Swaging seamless crowns, Press for. W. G. Bridge. No. 884,311; Apr. 7; Sp. p. 1291; Dr. p. 274; Gaz. vol. 133; p. 1399.
Swingletree. A. J. Jefferson. No. 884,389; Apr. 14; Sp. p. 1462; Dr. p. 312; Gaz. vol. 133; p. 1455.
Switch: *See* Carrier-switch; Electric switch; Electric time-switch; Railway-switch; Telephone hook-switch; Trolley-switch.
Switch-box. T. J. Cleland. No. 884,466; Apr. 14; Sp. p. 1611; Dr. p. 348; Gaz. vol. 133; p. 1480.
Switch-cord plug. E. L. Smith. No. 886,262; Apr. 28; Sp. p. 5305; Dr. p. 1117; Gaz. vol. 133; p. 2126.
Switch-point lock. G. B. Blevins. No. 884,006; Apr. 7; Sp. p. 685; Dr. p. 138; Gaz. vol. 133; p. 1302
Switch-stand. W. W. Scott. No. 883,960; Apr. 7; Sp. p. 631; Dr. p. 126; Gaz. vol. 133; p. 1293.
Switch-stand. W. C. Kidd. No. 885,160; Apr. 21; Sp. p. 3070; Dr. p. 645; Gaz. vol. 133; p. 1737.
Switching device. J. A. Duffy and O. Irwin. No. 883,701; Apr. 7; Sp. p. 53; Dr. p. 8; Gaz. vol. 133; p. 1201.
Synchronizer, Automatic. F. Conrad. No. 885,143; Apr. 21; Sp. p. 3032; Dr. p. 639; Gaz. vol. 133; p. 1732.
Syringe, Urethral. J. H. Hoseason. No. 885,999; Apr. 28; Sp. p. 4813; Dr. p. 1011; Gaz. vol. 133; p. 2041.
Syrup percolator, Simple-. J. C. Hardesty. No. 884,921; Apr. 14; Sp. p. 2568; Dr. p. 540; Gaz. vol. 133; p. 1628.
Table: *See* Concentrating-table; Extension-table; Operating-table; Poker-table; Turn-table.
Table-pad. F. A. Brunke. No. 884,067; Apr. 7; Sp. p. 800; Dr. p. 169; Gaz. vol. 133; p. 1321.
Tablet, Writing-. G. S. Ansell. No. 885,410; Apr. 21; Sp. p. 3610; Dr. p. 757; Gaz. vol. 133; p. 1823.
Tag and stamp-protector, Combined shipping-. F. P. Bernheim. No. 885,316; Apr. 21; Sp. p. 3405; Dr. p. 711; Gaz. vol. 133; p. 1799.
Talking-machine. T. Kraemer. No. 885,499; Apr. 21; Sp. p. 3727; Dr. p. 784; Gaz. vol. 133; p. 1845.
Talking-machine attachment. E. Prazak. No. 885,175; Apr. 21; Sp. p. 3109; Dr. p. 655; Gaz. vol. 133; p. 1743.
Talking-machine attachment. B. F. Keating. No. 885,484; Apr. 21; Sp. p. 3716; Dr. p. 781; Gaz. vol. 133; p. 1843.
Talking-machine feeding apparatus. L. P. Valiquet. No. 884,963; Apr. 14; Sp. p. 2645; Dr. p. 562; Gaz. vol. 133; p. 1640.
Talking-machine sound-box. T. Kraemer. No. 885,490; Apr. 21; Sp. p. 3730; Dr. p. 785; Gaz. vol. 133; p. 1845.
Tank: *See* Flush-tank; Metal tank.
Tank-heater. H. Staadt. No. 884,232; Apr. 7; Sp. p. 1158; Dr. p. 244; Gaz. vol. 133; p. 1375.
Tank-indicator. J. B. Laursen. No. 885,059; Apr. 21; Sp. p. 2845; Dr. p. 605; Gaz. vol. 133; p. 1705.
Tapping device, Pipe-. J. H. B. Bryan. No. 884,565; Apr. 14; Sp. p. 1813; Dr. pp. 389–90; Gaz. vol. 133; p. 1512.
Target. J. Arbat. No. 884,972; Apr. 14; Sp. p. 2662; Dr. p. 566; Gaz. vol. 133; p. 1643.
Target, Rotary. F. J. Johnston. No. 884,663; Apr. 14; Sp. p. 2055; Dr. p. 439; Gaz. vol. 133; p. 1544.
Target-trap. J. Bowron. No. 884,703; Apr. 14; Sp. p. 2126; Dr. p. 453; Gaz. vol. 133; p. 1553.
Telegraph-sounder. J. J. Thomas and A. G. Christopherson. No. 885,545; Apr. 21; Sp. p. 3863; Dr. p. 808; Gaz. vol. 133; p. 1861.
Telegraph-transmitter. M. S. Haling. No. 884,381; Apr. 14; Sp. p. 1450; Dr. p. 309; Gaz. vol. 133; p. 1453.
Telegraphy, Space. S. Cabot. No. 884,070; Apr. 7; Sp. p. 808; Dr. p. 171; Gaz. vol. 133; p. 1322.
Telegraphy, Space. S. Cabot. No. 884,071; Apr. 7; Sp. p. 811; Dr. p. 171; Gaz. vol. 133; p. 1322.
Telegraphy, Space. E. R. Crani. No. 884,076; Apr. 7; Sp. p. 818; Dr. p. 172; Gaz. vol. 133; p. 1324.
Telegraphy, Space. J. S. Stone. No. 884,106; Apr. 7; Sp. p. 884; Dr. pp. 186–8; Gaz. vol. 133; p. 1334.
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Telegraphy, Space. J. S. Stone. No. 884,109; Apr. 7; Sp. p. 915; Dr. pp. 192–3; Gaz. vol. 133; p. 1335.
Telegraphy, Space. J. S. Stone and S. Cabot. No. 884,110; Apr. 7; Sp. p. 923; Dr. p. 193; Gaz. vol. 133; p. 1336.
Telegraphy, Wireless. G. Marconi. No. 884,986; Apr. 14; Sp. p. 2685; Dr. p. 571; Gaz. vol. 133; p. 1647.
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Telephone-calls, Registering. I. Kitsee. No. 886,220; Apr. 28; Sp. p. 5225; Dr. p. 1100; Gaz. vol. 133; p. 2110.
Telephone desk-stand. A. M. Knudsen. No. 884,500; Apr. 14; Sp. p. 1684; Dr. pp. 362–3; Gaz. vol. 133; p. 1490.
Telephone hook-switch. H. L. Knight. No. 885,348; Apr. 21; Sp. p. 3473; Dr. p. 723; Gaz. vol. 133; p. 1801.
Telephone-receiver. L. Steinberger. No. 884,235; Apr. 7; Sp. p. 1163; Dr. p. 245; Gaz. vol. 133; p. 1376.
Telephone-stand. W. B. Oliver. No. 885,859; Apr. 28; Sp. p. 4509; Dr. p. 947; Gaz. vol. 133; p. 1993.
Telephone-support. O. Kraus. No. 883,811; Apr. 7; Sp. p. 276; Dr. p. 50; Gaz. vol. 133; p. 1236.
Telephone system. F. E. Mayberry and N. H. Holland. No. 885,270; Apr. 21; Sp. p. 3300; Dr. p. 690; Gaz. vol. 133; p. 1775.
Telephone system for fire-hose. H. Groswith. No. 885,922; Apr. 28; Sp. p. 4648; Dr. p. 978; Gaz. vol. 133; p. 2014.
Telephone system, Three-wire central-energy. C. A. Simpson. No. 885,186; Apr. 21; Sp. p. 3129; Dr. p. 658; Gaz. vol. 133; p. 1746
Telephone system, Toll. E. P. Baird. No. 886,031; Apr. 28; Sp. p. 4882; Dr. pp. 1028–9; Gaz. vol. 133; p. 2051.
Telephone toll-box. O. Brisbois. No. 885,429; Apr. 21; Sp. p. 3622; Dr. p. 760; Gaz. vol. 133; p. 1826.
Telephone-transmitter. A. E. Beachnni. No. 885,007; Apr. 21; Sp. p. 2731; Dr. p. 580; Gaz. vol. 133; p. 1688.
Telephone trunking system. E. H. Rupe. No. 885,180; Apr. 21; Sp. p. 3113; Dr. p. 656; Gaz. vol. 133; p. 1744.
Telephones, Coin-box and registering mechanism for. F. D. Powell and C. S. Ellis. No. 885,375; Apr. 21; Sp. p. 3528; Dr. pp. 737–8 Gaz. vol. 133; p. 1810.
Temperature-exchanging apparatus. E. Morean. No. 884,600; Apr. 14; Sp. p. 1801; Dr. pp. 405–6; Gaz. vol. 133; p. 1523.
Temperature, Means for using from a distance the variations in. J. B. Fournier. No. 886,201; Apr. 28; Sp. p. 5194; Dr. p. 1094; Gaz. vol. 133; p. 2105.
Tent. R. P. Orr. No. 884,948; Apr. 14; Sp. p. 2617; Dr. p. 552; Gaz. vol. 133; p. 1636.

Thill coupling and support, Combined antirattler. W. Cox. No. 884,469; Apr. 14; Sp. p. 1620; Dr. p. 349; Gaz. vol. 133; p. 1481.
Thread-guide. I. E. Palmer. No. 884,037; Apr. 7; Sp. p. 748; Dr. p. 154; Gaz. vol. 133; p. 1312.
Thread-holder for spools. E. S. Prescott. No. 885,517; Apr. 21; Sp. p. 3774; Dr. p. 794; Gaz. vol. 133; p. 1853.
Thresher, cleaner, and storage unloader, Bur-cotton. W. R. Lamb. No. 884,671; Apr. 14; Sp. p. 2067; Dr. p. 442; Gaz. vol. 133; p. 1547.
Threshing-machine tooth. F. B. Carlson. No. 885,433; Apr. 21; Sp. p. 3628; Dr. p. 761; Gaz. vol. 133; p. 1827.
Threshing-machines, Bundle-conveying attachment for. W. C. Niebuhr. No. 884,753; Apr. 14; Sp. p. 2284; Dr. pp. 471–2; Gaz. vol. 133; p. 1575.
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Tie and rail-fastening, Combined. R. T. Cummings. No. 884,132; Apr. 7; Sp. p. 985; Dr. p. 205; Gaz. vol. 133; p. 1343.
Tile, Roofing-. C. N. Bruzaud. No. 885,663; Apr. 21; Sp. p. 4092; Dr. p. 856; Gaz. vol. 133; p. 1898.
Time-indicating device, Electric. W. F. Wentz. No. 883,992; Apr. 7; Sp. p. 661; Dr. p. 133; Gaz. vol. 133; p. 1297.
Time-lock. J. Flindall. No. 884,807; Apr. 14; Sp. p. 2344; Dr. p. 493; Gaz. vol. 133; p. 1593.
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Time-lock. J. Flindall. No. 884,809; Apr. 14; Sp. p. 2348; Dr. p. 494; Gaz. vol. 133; p. 1594.
Tin-plate catcher. E. L. Cronemeyer. No. 885,729; Apr. 28; Sp. p. 4235; Dr. pp. 887–8; Gaz. vol. 133; p. 1950.
Tinning-machines, Device for feeding. P. Boston. No. 884,008; Apr. 7; Sp. p. 688; Dr. pp. 138–9; Gaz. vol. 133; p. 1302.
Tire and wheel therefor. W. Bowden. No. 884,702; Apr. 14; Sp. p. 2124; Dr. pp. 452–3; Gaz. vol. 133; p. 1557.
Tire-cushion for vehicles. W. E. Garvey. No. 885,336; Apr. 21; Sp. p. 3441; Dr. p. 718; Gaz. vol. 133; p. 1797.
Tire, Concave vehicle-. A. G. Thomson. No. 885,888; Apr. 28; Sp. p. 4559; Dr. p. 956; Gaz. vol. 133; p. 2003.
Tire construction. F. A. Bragg. No. 884,562; Apr. 14; Sp. p. 1809; Dr. p. 388; Gaz. vol. 133; p. 1511.
Tire, Pneumatic vehicle-. M. B. Priest. No. 885,647; Apr. 21; Sp. p. 4064; Dr. p. 849; Gaz. vol. 133; p. 1892.
Tire-protecting casing. L. N. Cates. No. 884,794; Apr. 14; Sp. p. 2324; Dr. p. 488; Gaz. vol. 133; p. 1589.
Tire-protector. H. Parsons. No. 885,515; Apr. 21; Sp. p. 3771; Dr. pp. 793–4; Gaz. vol. 133; p. 1852.
Tire, Reinforced pneumatic. H. D. B. Lefferts. No. 885,062; Apr. 21; Sp. p. 2850; Dr. p. 606; Gaz. vol. 133; p. 1706.
Tire, Resilient vehicle-. H. A. Palmer. No. 885,800; Apr. 28; Sp. p. 4512; Dr. p. 947; Gaz. vol. 133; p. 1993.
Tire-sealing device. G. H. Phillips. No. 884,294; Apr. 7; Sp. p. 1207; Dr. p. 267; Gaz. vol. 133; p. 1395.
Tire, Vehicle-. M. B. Priest. No. 885,646; Apr. 21; Sp. p. 4063; Dr. p. 849; Gaz. vol. 133; p. 1892.
Tire, Vehicle-wheel. J. E. Tourtellotte. No. 883,763; Apr. 7; Sp. p. 167; Dr. p. 30; Gaz. vol. 133; p. 1220.
Tires, Holder for spare. E. H. Stickels. No. 885,655; Apr. 21; Sp. p. 4079; Dr. p. 853; Gaz. vol 133; p. 1895.
Tires, Pneumatic and other. H. C. Shearman. No. 885,796; Apr. 28; Sp. p. 4374; Dr. pp. 918–19; Gaz. vol. 133; p. 1971.
Tires, Valve for. J. S. Dunn. No. 886,316; Apr. 28; Sp. p. 5432; Dr. p. 1138; Gaz. vol. 133; p. 2146.
Tobacco-pipe. W. H. Hooker. No. 883,954; Apr. 7; Sp. p. 581; Dr. p. 116; Gaz. vol. 133; p. 1284.
Tobacco-pipe cleaner. A. B. Wallen. No. 884,057; Apr. 7; Sp. p. 782; Dr. p. 163; Gaz. vol. 133; p. 1318.
Toe-nails, Device for curing ingrowing. C. J. Foster. No. 884,376; Apr. 14; Sp. p. 1443; Dr. p. 308; Gaz. vol. 133; p. 1451.
Tombstone. E. T. Morris. No. 883,733; Apr. 7; Sp. p. 107; Dr. p. 18; Gaz. vol. 133; p. 1210.
Tool-box. J. Swan. No. 883,906; Apr. 7; Sp. p. 479; Dr. p. 94; Gaz. vol. 133; p. 1268.
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Tooth, Artificial. H. E. S. Chayes. No. 885,018; Apr. 21; Sp. p. 2755; Dr. p. 584; Gaz. vol. 133; p. 1692.
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Toy. A. Craven. No. 883,860; Apr. 7; Sp. p. 382; Dr. p. 74; Gaz. vol. 133; p. 1252.
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Toy. J. H. Hettinger. No. 884,387; Apr. 14; Sp. p. 1460; Dr. p. 311; Gaz. vol. 133; p. 1455.
Toy. H. E. Waggaman. No. 884,692; Apr. 14; Sp. p. 2103; Dr. p. 449; Gaz. vol. 133; p. 1554.
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Trap. R. F. Hadley. No. 884,380; Apr. 14; Sp. p. 1449; Dr. p. 309; Gaz. vol. 133; p. 1452.
Trap. W. B. Eason. No. 885,671; Apr. 21; Sp. p. 4106; Dr. pp. 859–60; Gaz. vol. 133; p. 1901.
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Tray, Sectional. J. E. Norris. No. 886,524; Apr. 28; Sp. p. 5448; Dr. p. 1143; Gaz. vol. 133; p. 2148.
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Trolley. L. C. W. Mitchell and J. A. Fretz. No. 884,750; Apr. 14; Sp. p. 2225; Dr. p. 470; Gaz. vol, 133; p. 1574.
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Truck. S. A. Wilson. No. 886,284; Apr. 28; Sp. p. 5355; Dr. p. 1126; Gaz. vol. 133; p. 2134.
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Tube catcher and support. H. W. Staley. No. 885,195; Apr. 21; Sp. p. 3145; Dr. p. 660; Gaz. vol. 133; p. 1749.

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Turbine. C. W. Wellman. No. 884,058; Apr. 7; Sp. p. 783; Dr. p. 164; Gaz. vol. 133; p. 1319.
Turbine. R. Cramp. No. 884,719; Apr. 14; Sp. p. 2158; Dr. p. 459; Gaz. vol. 133; p. 1564.
Turbine-bucket. W. Kieser. No. 883,889; Apr. 7; Sp. p. 442; Dr. p. 88; Gaz. vol. 133; p. 1262.
Turbine-bucket. C. P. Steinmetz. No. 885,088; Apr 21; Sp. p. 2915; Dr. p. 618; Gaz. vol. 133; p. 1717.
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Vehicle-body hanger. J. G. Anderson. No. 885,659; Apr. 21; Sp. p. 4087; Dr. p. 855; Gaz. vol. 133; p. 1897.
Vehicle-curtains, Removable support for. H. S. Kolner and S. Bottcese. No. 886,222; Apr. 28; Sp. p. 5230; Dr. pp. 1101–2; Gaz. vol 133; p. 2111.
Vehicle folding seat. H. H. Piper. No. 884,204; Apr. 7; Sp. p. 1115; Dr. p. 233; Gaz. vol. 133; p. 1366.
Vehicle, Front-driven motor-. A. W. Brightmore. No. 885,014; Apr. 21; Sp. p. 2745; Dr. p. 583; Gaz. vol. 133; p. 1690.
Vehicle-gear, Side-spring. C. A. Behlen. No. 883,686; Apr. 7; Sp. p. 6; Dr. p. 2; Gaz. vol. 133; p. 1196.
Vehicle, Motor-. A. Winton. No. 884,117; Apr. 7; Sp. p. 938; Dr. pp. 196–7; Gaz. vol. 133; p. 1338.
Vehicle, Motor-. G. J. Taylor. No. 885,704; Apr. 21; Sp. p. 4176; Dr. p. 874; Gaz. vol. 133; p. 1911.
Vehicle, Motor-. W. W. Wainwright. No. 886,096; Apr. 28; Sp. p. 5006; Dr. pp. 1053–4; Gaz. vol. 133; p. 2071.
Vehicle, Power-driven. R. H. Simpson and W. Park. No. 886,062; Apr. 28; Sp. p. 4973; Dr. p. 1046; Gaz. vol. 133; p. 2067.
Vehicle-raising jack. J. S. Williams. No. 885,208; Apr. 21; Sp. p. 3188; Dr. p. 666; Gaz. vol. 133; p. 1754.
Vehicle running-gear. H. W. Hancock. No. 884,488; Apr. 14; Sp. p. 1660; Dr. p. 357; Gaz. vol. 133; p. 1487.

Vehicle shock-absorber. W. C. Williamson. No. 884,967; Apr. 14; Sp. p. 2655; Dr. p. 565; Gaz. vol. 133; p. 1642.
Vehicle-standard. F. W. Bleckley. No. 883,689; Apr. 7; Sp. p. 12; Dr. p. 3; Gaz. vol. 133; p. 1197.
Vehicle steering mechanism. W. McGlashan. No. 884,193; Apr. 7; Sp. p. 1095; Dr. p. 229; Gaz. vol. 133; p. 1362.
Vehicle suspension. R. G. Handy. No. 885,845; Apr. 28; Sp. p. 4484; Dr. p. 941; Gaz. vol. 133; p. 1989.
Vehicle-wheel. O. M. Fraley. No. 883,947; Apr. 7; Sp. p. 558; Dr. p. 111; Gaz. vol. 133; p. 1282.
Vehicle-wheel. J. B. McDonald. No. 884,840; Apr. 14; Sp. p. 2425; Dr. p. 509; Gaz. vol. 133; p. 1604.
Vehicles, Mud-wing for motor. G. Frentzen. No. 883,710; Apr. 7; Sp. p. 69; Dr. p. 10; Gaz. vol. 133; p. 1203.
Vehicles, Radiator or cooler for motor road-. F. J. D. Hüllinghorst. No. 884,929; Apr. 14; Sp. p. 2579; Dr. p. 543; Gaz. vol. 133; p. 1630.
Velocipede driving-gear. R. J. A. Delacroix. No. 885,982; Apr. 28; Sp. p. 4775; Dr. p. 1003; Gaz. vol. 133; p. 2034.
Vending apparatus, Coin-controlled. W. B. Sullivan. No. 884,236; Apr. 7; Sp. p. 1165; Dr. pp. 245–6; Gaz. vol. 133; p. 1376.
Vending apparatus, Coin-controlled cigar-. W. B. Sullivan. No. 884,237; Apr. 7; Sp. p. 1169; Dr. pp. 246–7; Gaz. vol. 133; p. 1377.
Vending-machine. J. G. Huffman. No. 883,886; Apr. 7; Sp. p. 437; Dr. pp. 86–7; Gaz. vol. 133; p. 1261.
Vending-machine. S. Jenkins. No. 884,589; Apr. 14; Sp. p. 1858; Dr. pp. 399–400; Gaz. vol. 133; p. 1520.
Vending-machine. T. A. Steele. No. 885,965; Apr. 28; Sp. p. 4743; Dr. p. 996; Gaz. vol. 133; p. 2030.
Vending machine, Cigar-. M. R. Meredith. No. 884,180; Apr. 7; Sp. p. 1085; Dr. p. 226; Gaz. vol. 133; p. 1360.
Vending machine, Cigar-. W. Butler. No. 885,685; Apr. 21; Sp. p. 4157; Dr. p. 866; Gaz. vol. 133; p. 1906.
Vending-machine, Coin-controlled. R. D. Simpson. No. 885,187; Apr. 21; Sp. p. 3132; Dr. p. 658; Gaz. vol. 133; p. 1747.
Vending machine, Stamp or ticket. R. J. Dickie and J. H. Brown. No. 884,802; Apr. 14; Sp. p. 2334; Dr. pp. 491–2; Gaz. vol. 133; p. 1591.
Veneers, Gluing. A. A. Dennis. No. 884,905; Apr. 14; Sp. p. 2520; Dr. pp. 532–3; Gaz. vol. 133; p. 1623.
Ventilator: *See* Window-ventilator.
Ventilator. J. F. Huber. No. 885,479; Apr. 21; Sp. p. 3709; Dr. p. 779; Gaz. vol. 133; p. 1842.
Vessel, Double-walled. R. Burger. No. 884,567; Apr. 14; Sp. p. 1823; Dr. p. 391; Gaz. vol. 133; p. 1513.
Vessel-hull. J. E. Palmer. No. 885,370; Apr. 21; Sp. p. 3518; Dr. p. 734; Gaz. vol. 133; p. 1808.
Vessel-raising device. C. Downer and E. H. Simpson. No. 886,194; Apr. 28; Sp. p. 5187; Dr. p. 1092; Gaz. vol. 133; p. 2103.
Vessel with double walls and protective case. H. Henn. No. 884,582; Apr. 14; Sp. p. 1845; Dr. p. 396; Gaz. vol. 133; p. 1517.
Vessels, Appliance for adding to the record speed of. W. Laudahn. No. 884,936; Apr. 14; Sp. p. 2560; Dr. p. 546; Gaz. vol. 133; p. 1632.
Violin-mute. J. Mitchell. No. 885,067; Apr. 21; Sp. p. 2856; Dr. p. 607; Gaz. vol. 133; p. 1707.
Violins and violas, Chin-rest for. C. F. Steckelberg. No. 883,755; Apr. 7; Sp. p. 148; Dr. p. 27; Gaz. vol. 133; p. 1217.
Vise, Fluid-actuated. T. F. Warwick. No. 884,548; Apr. 14; Sp. p. 1783; Dr. pp. 383–4; Gaz. vol. 133; p. 1507.
Voltage system of distribution, Multiple-. B. Frankenfield. No. 886,049; Apr. 28; Sp. p. 4919; Dr. p. 1034; Gaz. vol. 133; p. 2056.
Voting-machine. F. A. Peterson. No. 884,039; Apr. 7; Sp. p. 751; Dr. pp. 155–6; Gaz. vol. 133; p. 1312.
Voting-machine. J. W. Nunamaker. No. 885,639; Apr. 21; Sp. p. 4033; Dr. pp. 843–7; Gaz. vol. 133; p. 1890.
Voting-machine. W. H. Dana. No. 885,981; Apr. 28; Sp. p. 4767; Dr. pp. 1002–3; Gaz. vol. 133; p. 2034.
Voting-machine. W. H. Dana. No. 886,314; Apr. 28; Sp. p. 5427; Dr. pp. 1137–8; Gaz. vol. 133; p. 2145.
Voting-machines, Label-holder for. W. J. Lausterer. No. 886,061; Apr. 28; Sp. p. 4939; Dr. pp. 1038–9; Gaz. vol. 133; p. 2060.
Wagon and truck, Combined. L. P. Carroll. No. 884,127; Apr. 7; Sp. p. 972; Dr. p. 201; Gaz. vol. 133; p. 1341.
Wagon attachment. J. W. Lles. No. 884,173; Apr. 7; Sp. p. 1063; Dr. p. 221; Gaz. vol. 133; p. 1356.
Wagon-bed and hay-rack, Combined. J. S. Walton. No. 883,989; Apr. 7; Sp. p. 655; Dr. p. 132; Gaz. vol. 133; p. 1296.
Wagon-brake. J. F. Hagler. No. 885,749; Apr. 28; Sp. p. 4285; Dr. pp. 897–8; Gaz. vol. 133; p. 1956.
Wagon-hound. G. W. Sirrine. No. 884,225; Apr. 7; Sp. p. 1149; Dr. p. 242; Gaz. vol. 133; p. 1373.
Wagon rack, Farm-. J. F. Pokorney. No. 884,679; Apr. 14; Sp. p. 2081; Dr. p. 444; Gaz. vol. 133; p. 1550.
Waistband. S. Lindy. No. 885,933; Apr. 28; Sp. p. 4669; Dr. p. 984; Gaz. vol. 133; p. 2018.
Wall-register. W. J. Owens. No. 884,678; Apr. 14; Sp. p. 2080; Dr. p. 444; Gaz. vol. 133; p. 1549.
Washer: *See* Gas-washer; Split washer; Tumbler-washer.
Washing-machine. O. R. Beier. No. 883,776; Apr. 7; Sp. p. 185; Dr. p. 34; Gaz. vol. 133; p. 1223.
Washing-machine. C. E. Bean. No. 884,064; Apr. 7; Sp. p. 794; Dr. p. 167; Gaz. vol. 133; p. 1320.
Washing-machine. S. F. O'Connor. No. 884,946; Apr. 14; Sp. p. 2614; Dr. p. 551; Gaz. vol. 133; p. 1635.
Washing-machine. E. Roberts. No. 885,956; Apr. 28; Sp. p. 4725; Dr. p. 993; Gaz. vol. 133; p. 2027.
Washing-machine. M. A. Patten. No. 886,243; Apr. 28; Sp. p. 5266; Dr. p. 1109; Gaz. vol. 133; p. 2119.
Washing machine, Clothes-. L. M. Adams. No. 886,168; Apr. 28; Sp. p. 5138; Dr. p. 1080; Gaz. vol. 133; p. 2093.
Washboard. H. J. Gilbert. No. 885,605; Apr. 21; Sp. p. 3970; Dr. p. 828; Gaz. vol. 133; p. 1879.
Washboiler. M. A. Morton. No. 886,234; Apr. 28; Sp. p. 5252; Dr. p. 1107; Gaz. vol. 133; p. 2115.
Washtub-cover, Metallic. W. H. Ramsdell. No. 885,707; Apr. 21; Sp. p. 4180; Dr. p. 875; Gaz. vol. 133; p. 1912.
Watch and clock movements, Time-strike for. C. H. J. Stricker and E. Meyer. No. 884,686; Apr. 14; Sp. p. 2092; Dr. p. 447; Gaz. vol. 133; p. 1552.
Watch balance-wheel. J. Porúba. No. 884,652; Apr. 14; Sp. p. 2443; Dr. p. 513; Gaz. vol. 133; p. 1608.
Watch-barrel. L. A. Faller. No. 886,196; Apr. 28; Sp. p. 5189; Dr. p. 1092; Gaz. vol. 133; p. 2104.
Watch-guard. H. N. Bolton. No. 885,975; Apr. 28; Sp. p. 4760; Dr. p. 1000; Gaz. vol. 133; p. 2033.
Watchcase. W. H. Fitz Gerald. No. 885,149; Apr. 21; Sp. p. 3048; Dr. p. 641; Gaz. vol. 133; p. 1734.
Water and steam separator, Condensed-. J. E. Purser. No. 883,825; Apr. 7; Sp. p. 306; Dr. pp. 57–8; Gaz. vol. 133; p. 1241.
Water, Apparatus for the chemical treatment of. A. Potter. No. 886,098; Apr. 28; Sp. p. 4950; Dr. pp. 1040–1; Gaz. vol. 133; p. 2062.
Water-closet floor connection. J. W. Lyons. No. 883,896; Apr. 7; Sp. p. 461; Dr. p. 90; Gaz. vol. 133; p. 1265.
Water-column. A. K. Mansfield. No. 885,165; Apr. 21; Sp. p. 3079; Dr. pp. 647–8; Gaz. vol. 133; p. 1739.
Water-elevator. H. M. Lambert. No. 885,931; Apr. 28; Sp. p. 4666; Dr. p. 983; Gaz. vol. 133; p. 2017.
Water-heater, Automatic. G. S. Walker. No. 886,100; Apr. 28; Sp. p. 5010; Dr. p. 1054; Gaz. vol. 133; p. 2072.
Water-heater, Electric. H. N. Roche. No. 884,343; Apr. 7; Sp. p. 1351; Dr. p. 289; Gaz. vol. 133; p. 1410.
Water-heater, Electrical. E. J. Condon. No. 884,367; Apr. 14; Sp. p. 1423; Dr. p. 304; Gaz. vol. 133; p. 1448.
Water-heater, Instantaneous. A. E. Shipley. No. 884,223; Apr. 7; Sp. p. 1144; Dr. p. 241; Gaz. vol. 133; p. 1372.
Water-lock gate. G. Lüscher. No. 884,400; Apr. 14; Sp. p. 1479; Dr. p. 317; Gaz. vol. 133; p. 1458.
Water-meter. O. Hiersing. No. 884,491; Apr. 14; Sp. p. 1663; Dr. p. 358; Gaz. vol. 133; p. 1488.
Water-meter, Disk. H. Fredrick. No. 884,650; Apr. 14; Sp. p. 2024; Dr. p. 433; Gaz. vol. 133; p. 1540.
Water-motor. O. E. Brown. No. 885,141; Apr. 21; Sp. p. 3025; Dr. p. 638; Gaz. vol. 133; p. 1731.
Water-motor. M. L. G. Wheeler. No. 885,553; Apr. 21; Sp. p. 3882; Dr. p. 812; Gaz. vol. 133; p. 1864.
Water-purifying apparatus. E. D. Packard and J. Reidenbaugh. No. 885,369; Apr. 21; Sp. p. 3514; Dr. pp. 733–4; Gaz. vol. 133; p. 1808.
Water-purifying apparatus. O. L. Stump, J. Reidenbaugh, and E. D. Packard. No. 885,397; Apr. 21; Sp. p. 3570; Dr. p. 747; Gaz. vol. 133; p. 1816.
Water-softening apparatus. K. W. Bartlett. No. 885,828; Apr. 28; Sp. p. 4447; Dr. p. 934; Gaz. vol. 133; p. 1983.
Water-tube boiler. A. L. Riker. No. 885,295; Apr. 21; Sp. p. 3349; Dr. p. 700; Gaz. vol. 133; p. 1783.
Water-wheel. W. J. Pearson. No. 884,202; Apr. 7; Sp. p. 1112; Dr. p. 233; Gaz. vol. 133; p. 1365.
Water-wheel, Impact. W. A. Doble and F. Gfeller. No. 884,907; Apr. 14; Sp. p. 2524; Dr. p. 533; Gaz. vol. 133; p. 1623.
Water-wheel, Turbine. J. A. Smith. No. 884,426; Apr. 14; Sp. p. 1524; Dr. p. 327; Gaz. vol. 133; p. 1467.
Watering-trough. A. C. Michael. No. 885,632; Apr. 21; Sp. p. 4024; Dr. p. 840; Gaz. vol. 133; p. 1888.
Wattmeter-testing apparatus. O. A. Knopp. No. 886,135; Apr. 28; Sp. p. 5085; Dr. p. 1067; Gaz. vol. 133; p. 2084.
Wave-motor. G. T. Fallis. No. 884,080; Apr. 7; Sp. p. 825; Dr. p. 174; Gaz. vol. 133; p. 1325.
Wave-power-utilizing apparatus. T. Willans. No. 886,104; Apr. 28; Sp. p. 5020; Dr. p. 1056; Gaz. vol. 133; p. 2074.
Weather-strip. W. Wolfarth. No. 884,251; Apr. 7; Sp. p. 1198; Dr. p. 252; Gaz. vol. 133; p. 1381.
Weaving, Pattern for jacquard-. C. Vorwerk. No. 885,407; Apr. 21; Sp. p. 3588; Dr. p. 751; Gaz. vol. 133; p. 1820.
Weed-cutter and cultivator. F. Baker. No. 884,258; Apr. 7; Sp. p. 1212; Dr. p. 254; Gaz. vol. 133; p. 1384.
Weed-destroyer. C. P. Anderson. No. 885,825; Apr. 28; Sp. p. 4441; Dr. pp. 933–4; Gaz. vol. 133; p. 1982.
Weed-killer. J. F. Dunn. No. 885,691; Apr. 21; Sp. p. 4147; Dr. p. 868; Gaz. vol. 133; p. 1907.
Weeder and cultivator, Combined. E. R. Gordon and D. L. Wolfe. No. 884,814; Apr. 14; Sp. p. 2360; Dr. p. 496; Gaz. vol. 133; p. 1596.
Weft units, Mechanism for replacing. A. C. Hough. No. 886,126; Apr. 28; Sp. p. 5071; Dr. pp. 1064–5; Gaz. vol. 133; p. 2081.
Weft units, Replacing. A. C. Hough. No. 886,127; Apr. 28; Sp. p. 5075; Dr. p. 1065; Gaz. vol. 133; p. 2081.
Weighing and bagging machine, Grain. M. Davis. No. 885,841; Apr. 28; Sp. p. 4473; Dr. pp. 939–40; Gaz. vol. 133; p. 1987.
Weighing apparatus. F. J. Heybach. No. 885,473; Apr. 21; Sp. p. 3699; Dr. p. 777; Gaz. vol. 133; p. 1840.
Weighing apparatus. H. B. Osgood. No. 885,698; Apr. 21; Sp. p. 4161; Dr. pp. 871–2; Gaz. vol. 133; p. 1909.
Well-cleaning device, Oil-. F. A. Monroe and B. W. Seymour. No. 884,675; Apr. 14; Sp. p. 2074; Dr. p. 443; Gaz. vol. 133; p. 1548.
Well-drilling apparatus. C. Milliron. No. 885,170; Apr. 21; Sp. p. 3099; Dr. p. 652; Gaz. vol. 133; p. 1741.
Well-operating apparatus. J. E. Wise. No. 883,769; Apr. 7; Sp. p. 175; Dr. p. 32; Gaz. vol. 133; p. 1221.
Well packer, Oil-. A. Collingwood. No. 886,114; Apr. 28; Sp. p. 5038; Dr. p. 1058; Gaz. vol. 133; p. 2077.
Well-tubing. A. Smith. No. 884,048; Apr. 7; Sp. p. 766; Dr. p. 160; Gaz. vol. 133; p. 1315.
Wells, Apparatus for forcing fluid from. J. W. Waltz. No. 886,280; Apr. 28; Sp. p. 5344; Dr. p. 1124; Gaz. vol. 133; p. 2132.
Wells, Casing-head for oil-. R. F. Hadley. No. 886,208; Apr. 28; Sp. p. 5206; Dr. p. 1096; Gaz. vol. 133; p. 2107.
Welt-beater. D. H. Hadsell. No. 886,292; Apr. 28; Sp. p. 5369; Dr. p. 1129; Gaz. vol. 133; p. 2136.

Welt-marking machine. G. F. Stewart. No. 885,039; Apr. 21; Sp. p. 2918; Dr. pp. 618–20; Gaz. vol. 133; p. 1717.
Wheel: *See* Bicycle-wheel; Car-wheel; Driving-wheel; Propeller-wheel; Spring-wheel; Trolley-wheel; Turbine-wheel; Vehicle-wheel; Water-wheel.
Wheel. W. G. Kirchhoff. No. 884,093; Apr. 7; Sp. p. 858; Dr. p. 180; Gaz. vol. 133; p. 1330.
Wheel-guard. W. R. Evans. No. 885,080; Apr. 21; Sp. p. 2788; Dr. p. 591; Gaz. vol. 133; p. 1696.
Wheel-lock. W. H. Gibson. No. 885,086; Apr. 21; Sp. p. 2800; Dr. p. 592; Gaz. vol. 133; p. 1697.
Wheel rim, Motor-car-. D. C. Smith and W. F. Gorton. No. 886,019; Apr. 28; Sp. p. 4850; Dr. p. 1022; Gaz. vol. 133; p. 2047.
Wheel rim, Vehicle-. F. A. Seiberling. (Reissue.) No. 12,777; Apr. 7; Sp. p. 1383; Dr. p. 295; Gaz. vol. 133; p. 1413.
Wheel rim, Vehicle-. E. C. Shaw. No. 885,940; Apr. 28; Sp. p. 4732; Dr. p. 994; Gaz. vol. 133; p. 2028.
Wheels, Ice-cleat for traction-. T. D. Ulrich. No. 885,206; Apr. 21; Sp. p. 2181; Dr. p. 666; Gaz. vol. 133; p. 1753.
Whiffletree attachment. E. C. Comin. No. 884,715; Apr. 14; Sp. p. 2154; Dr. p. 458; Gaz. vol. 133; p. 1562.
Whiffletree-coupling. W. W. Hills. No. 884,286; Apr. 14; Sp. p. 1461; Dr. p. 311; Gaz. vol. 133; p. 1455.
Whiffletree-hook. J. H. Rabe. No. 885,518; Apr. 21; Sp. p. 3774; Dr. p. 794; Gaz. vol. 133; p. 1853.
Winding and placing under pressure a thread coated with non-fibrous and adhesive material, Machine for. E. D. C. Bayne and L. A. Subers. No. 885,220; Apr. 21; Sp. p. 3210; Dr. p. 670; Gaz. vol. 133; p. 1758.
Winding-machine. C. E. Otto. No. 884,104; Apr. 7; Sp. p. 880; Dr. pp. 185–6; Gaz. vol. 133; p. 1333.
Windmill-regulator. L. S. Hagerman. No. 885,844; Apr. 28; Sp. p. 4482; Dr. p. 941; Gaz. vol. 133; p. 1988.
Window and screen therefor. M. A. Dietrick. No. 884,803; Apr. 14; Sp. p. 2338; Dr. p. 492; Gaz. vol. 133; p. 1592.
Window catch, Swinging-. P. Boggio. No. 885,974; Apr. 28; Sp. p. 4760; Dr. p. 1000; Gaz. vol. 133; p. 2033.
Window construction. C. E. Stoee. No. 885,703; Apr. 21; Sp. p. 4172; Dr. p. 874; Gaz. vol. 133; p. 1911.
Window-screen. H. G. Steely. No. 885,097; Apr. 21; Sp. p. 2913; Dr. p. 618; Gaz. vol. 133; p. 1716.
Window-screen. C. E. Hall. No. 885,673; Apr. 21; Sp. p. 4111; Dr. p. 861; Gaz. vol. 133; p. 1901.
Window-screen. C. M. Conklin. No. 885,726; Apr. 28; Sp. p. 4230; Dr. p. 886; Gaz. vol. 133; p. 1949.
Window-screen and making the same. C. M. Conklin. No. 885,725; Apr. 28; Sp. p. 4226; Dr. p. 886; Gaz. vol. 133; p. 1948.
Window, Store-. P. H. Morris. No. 884,404; Apr. 14; Sp. p. 1496; Dr. pp. 318–19; Gaz. vol. 133; p. 1490.
Window-ventilator. R. Taylor. No. 884,062; Apr. 7; Sp. p. 775; Dr. pp. 161–2; Gaz. vol. 133; p. 1317.
Window-ventilator. L. S. Martin. No. 884,598; Apr. 14; Sp. p. 1899; Dr. p. 405; Gaz. vol. 133; p. 1523.
Window-ventilator and curtain-fixture. O. E. Brown. No. 885,140; Apr. 21; Sp. p. 3024; Dr. p. 638; Gaz. vol. 133; p. 1731.
Wire fabric, Woven-. I. J. Young. No. 884,883; Apr. 14; Sp. p. 2467; Dr. p. 525; Gaz. vol. 133; p. 1617.
Wire-fastener. J. R. Mullin and W. B. Williams. No. 884,189; Apr. 7; Sp. p. 1090; Dr. p. 227; Gaz. vol. 133; p. 1361.
Wire-reel. W. O. Backes. No. 884,974; Apr. 14; Sp. p. 2098; Dr. p. 567; Gaz. vol. 133; p. 1644.
Wire-reel. C. W. Stark. No. 886,160; Apr. 28; Sp. p. 5127; Dr. p. 1077; Gaz. vol. 133; p. 2091.
Wire rope. O. Tangring. No. 885,756; Apr. 7; Sp. p. 157; Dr. p. 28; Gaz. vol. 133; p. 1219.
Wire shaping and forming machine. H. J. Bragdon. No. 884,633; Apr. 14; Sp. p. 1949; Dr. p. 419; Gaz. vol. 133; p. 1534.
Wire-stretcher. J. T. Gardner. No. 885,693; Apr. 21; Sp. p. 4153; Dr. p. 869; Gaz. vol. 133; p. 1908.
Wire-stretcher. A. W. Sprague. No. 886,020; Apr. 28; Sp. p. 4863; Dr. p. 1022; Gaz. vol. 133; p. 2047.
Wire stretcher and splicer. H. F. Bonesteele. No. 886,830; Apr. 28; Sp. p. 4454; Dr. pp. 935–6; Gaz. vol. 133; p. 1984.
Wire-working tool. J. Huhta and F. Laurell. No. 884,821; Apr. 14; Sp. p. 2369; Dr. p. 498; Gaz. vol. 133; p. 1599.
Wood-chipper. A. M. Powell. No. 885,177; Apr. 21; Sp. p. 3108; Dr. p. 655; Gaz. vol. 133; p. 1742.
Work-clamp. W. H. Bennett. No. 884,004; Apr. 7; Sp. p. 681; Dr. p. 137; Gaz. vol. 133; p. 1301.
Wood-shaving machine. H. W. Selle. No. 885,874; Apr. 28; Sp. p. 4536; Dr. pp. 951–2; Gaz. vol. 133; p. 1968.
Wood-splitting machine. P. Eckenroth, Jr. No. 885,458; Apr. 21; Sp. p. 3674; Dr. pp. 769–70; Gaz. vol. 133; p. 1885.
Woodworking-machine. J. W. Wadkin and D. J. Jarvis. No. 885,408; Apr. 21; Sp. p. 3591; Dr. pp. 752–3; Gaz. vol. 133; p. 1820.
Wrench: *See* Pipe-wrench.
Wrench. C. O. Everhart. No. 883,704; Apr. 7; Sp. p. 58; Dr. p. 8; Gaz. vol. 133; p. 1202.
Wrench. C. P. Johnson. No. 883,867; Apr. 7; Sp. p. 440; Dr. p. 87; Gaz. vol. 133; p. 1261.
Wrench. C. S. Pederson. No. 884,203; Apr. 7; Sp. p. 1114; Dr. p. 233; Gaz. vol. 133; p. 1366.
Wrench. E. H. Smith. No. 884,227; Apr. 7; Sp. p. 1151; Dr. p. 242; Gaz. vol. 133; p. 1373.
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